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RANGE AND STOPPING - POWER TABLES FOR HEAVY IONS*

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The electronic stopping power and range (corrected for nuclear stopping) are tabulated for representative ions of all atomic numbers $1 \leqslant z \leqslant 103$ in 24 different material media at 38 energies distributed logarithmically throughout the region $0.0125 \leqslant E/m \leqslant 12$ MeV/amu. The media include twelve solid elements (Be, C, Al, Ti, Ni, Ge, Zr, Ag, Eu, Ta, Au, and U), nine gaseous elements (H, He, N, O, Ne, Ar, Kr, Xe, and Rn), and three compounds (polyethylene, Mylar, and water). The tables are based on an investigation of the systematic relationships between observed data, guided by simple theoretical expectations and extrapolated into regions where no measurements have been made.

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CONTENTS

I. INTRODUCTION

The problem of determining the energy loss suffered by charged particles as they pass through material media has presented a long-standing and continuing challenge to both theorists and experimentalists. A major part of the attention has been focused on particles no more massive than the alpha particle. With the expanding interest in reactions involving heavier ions the need for range and stopping-power information for these ions has become urgent. Since all possible heavy ions and a large number of material media are of interest and since the range-energy relation differs for every ion and material medium, the number of range-energy curves required is extremely large, too large to be determined theoretically or experimentally on an individual basis. Fortunately, the stopping power is a relatively smoothly varying function of the atomic number, mass, and velocity of the ion and of the atomic constitution of the absorber. In a 1963 review[1] the theoretical guidelines for correlating existing data were discussed, and a method of predicting unknown stopping powers and ranges was proposed. This method was used later [2] to generate range-energy curves for ions of atomic number $2 \leqslant z \leqslant 13$ and $z=18$ in C, Al, Ni, Ag, and Au. No attempt was made to predict range-energy curves for gaseous materials because the data [3,4] then available were too limited.

Since then much valuable information has come to help fill the gaps in our knowledge. In particular, stopping-power measurements have been published for much heavier ions [5,6] and for gaseous absorbers. [7-9] The accumulation of data now seems sufficient to justify an attempt to utilize the methods of Ref. 1 to generate stopping-power and range values for any heavy ion in any material medium. While it cannot be expected that all of these values will be of high accuracy, they are anchored by experimental data and guided by theoretical expectations and should provide useful and reasonable estimates in the overwhelming number of cases where there are no data at all.

There is no clear limit to the energy region in which the energy-loss process is of interest and will be investigated. Some indication of this can be seen in Fig. 1, which shows the stopping power of aluminum for various ions over an energy region spanning ten orders of magnitude. (These curves are based on experimental data where they are available and on extrapolations, by means of simple theoretical models, into regions not explored experimentally. Their construction is described in Section IV B., below.) For practical reasons it is necessary to place arbitrary limits on the energy region to be covered in this tabulation. Since it was felt that the energy region likely to be of greatest value and interest to experimentalists at present and in the near future is that between 0.01 and 12 MeV/amu, the tables are limited to that region.

II. UNITS

In this paper E is the ion energy (MeV), v is the ion velocity (cm/sec), m is the ion mass (amu, ^{12}C scale), z and Z are the atomic number of the ion and the material medium, respectively, x is the material thickness (mg/cm^2), and R is the ion range (mg/cm^2). The term "stopping power" usually means the quantity, $-dE/dx$, but it is more convenient in the case of heavy ions to discuss the more general quantity, $(-dE/dx)/z^2$, which we will also call "stopping power."[10] Since z is dimensionless, both quantities have the same units (MeV cm^2/mg). Since the stopping power is primarily a function of v rather than E and since ions of different mass have the same velocity when they have the same value of E/m, it is convenient to use the hybrid unit, E/m (MeV/amu), rather than either E or v as a measure of the ion velocity or energy.[11]

III. GENERAL DISCUSSION OF HEAVY-ION ENERGY LOSS

The energy-loss mechanisms for heavier ions are not fundamentally different from those for protons and alpha particles. Certain phenomena, however, which are usually considered negligible in the consideration of proton and alpha-particle energy loss, play a large role in determining the rate of energy loss for heavy ions. In particular, the charge variation of the ion due to electron capture and loss at low velocities is usually of minor concern for hydrogen and helium ions but dominates the behavior of heavier ions. Similarly, elastic collisions with the screened nuclei of the absorber material (called "nuclear stopping") [12] are relatively unimportant for protons but not for heavy ions.

In the high-energy limit it is expected that the stopping power for different ions of the same velocity will differ only in being proportional to the square of the ion charge. While recent evidence [13] indicates that this is not strictly true, the measured deviations are small (~2% or less) and poorly understood. Since our calculations cannot claim that sort of accuracy on the whole, the deviations will be ignored. Thus, it is expected that a plot of $-(dE/dx)/z^2$ vs E/m will be the same for all ions of energy sufficient to produce complete stripping of orbital electrons. As shown in Fig. 1, the curves for heavy ions merge into the proton curve as the ions become completely stripped of electrons. It will be noted that complete stripping of the heaviest ions occurs only at energies above 1000 MeV/amu.

It is convenient to designate the proton curve (for which $z=1$) as a "universal" curve and to attribute departures from this curve to a decrease of the net charge of an ion from its nuclear charge z to some smaller "effective charge" γz. Then the effective charge parameter γ^2, defined empirically by the relation

$$\gamma^2 = [(1/z^2)\, dE/dx]_{\text{ion}} /(dE/dx)_{\text{proton}}$$

is a direct measure of the deviation from the universal curve. It is plausible to assume that the effective charge γz is identical to the rms charge of the ion, at least in first approximation. Thus, as the energy decreases and orbital electrons become attached to the ion, the rms charge deviates from the nuclear charge (atomic number) and the stopping-power curve falls off from the universal curve.

Bohr proposed[14] that the probability of capture of an orbital electron by an ion is determined by the ratio of the ion velocity in the material medium to the orbital velocity of the electron in the ion. Thus, the capture probability for the orbital K-electrons would be a function of the velocity ratio $\xi = v/(zc/137) = 137\,\beta/z$. The essential validity of this assumption has been shown for ions with $z \leqslant 10$ by the observation[15] that the deviations of the effective charge are well represented by the formula $\gamma^2 = 1 - 1.85\, e^{-2\xi}$. In the present work it is assumed that this dependence of the stopping-power deviations on ξ holds in the region of K-electron capture for all values of z. This assumption provides a means of estimating the initial departures from the universal curve shown by the stopping-power curves for high-z ions in Fig. 1.

Because the parameter ξ becomes inappropriate as the ion captures more electrons, it is commonly assumed[16,17] that the velocity ratio $\xi_{tf} = v/(z^{2/3}c/137) = 137\beta/z^{2/3}$ is a more suitable parameter since it represents the velocity of the ion relative to the Thomas-Fermi velocity of the captured electron in the ion.

At relatively low velocities the ion rapidly becomes neutralized and the energy-loss process changes character. As proposed by Bohr[12] and developed by Lindhard, Scharff, and Schiøtt (abbreviated LSS hereafter)[18] the stopping power may be split into two additive components, an "electronic" part proportional to ion velocity which arises from energy transfer to the electrons of the medium and a "nuclear" part arising from energy transfer to screened nuclei of the medium. LSS give formulas and curves for these contributions. The electronic part of the stopping power at low energies[19] is indicated in Fig. 1 by dashed lines and the total stopping power by solid lines.

A more extensive discussion of these matters and a partial list of references to the voluminous literature on the subject are given in Ref. 1.

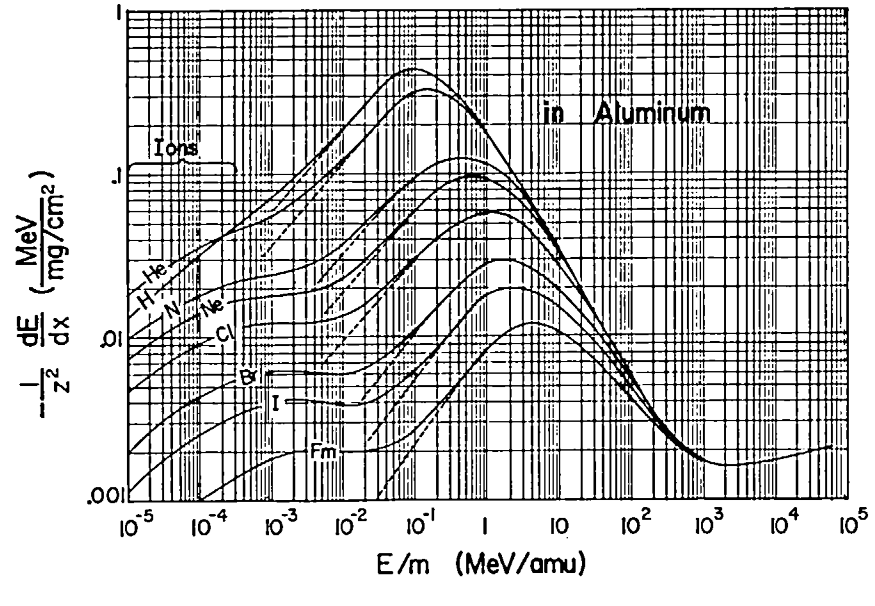

Fig. 1. Stopping-power curves for heavy ions in aluminum over a wide energy region

——— Semiempirical fit to available data
– – – – – Electronic contribution at low energies; semitheoretical (Refs. 18, 19)

IV. GENERATION OF ELECTRONIC STOPPING - POWER TABLES

A. Method

The basis for these calculations is the assumption that the relative stopping power of two materials is independent of ion identity at a given ion velocity (i.e., a given value of E/m). Explicitly, if the subscripts A, B denote two different materials and the subscripts p, q denote different ions, the basic assumption is that at equal ion velocities $(E_p/m_p = E_q/m_q)$ we have

$$\left[\frac{(dE/dx)_{p,\,A}}{(dE/dx)_{p,\,B}}\right]_{\text{at } E_p/m_p} = \left[\frac{(dE/dx)_{q,\,A}}{(dE/dx)_{q,\,B}}\right]_{\text{at } E_q/m_q} .$$

In addition it is assumed that: (1) the relative stopping power varies smoothly with Z and E/m, and (2) the stopping power of any material varies smoothly with z and E/m. The form of these variations is determined from such experimental data as are available and is guided by theory where it is believed to be applicable.

In Part B the construction of a set of master stopping-power curves for several ions in a chosen reference material (aluminum) is discussed. The complementary problem, the development of a set of relative stopping-power curves for several representative material media (relative to aluminum), is discussed in Part C. The interpolation to other ions and materials is discussed in Parts E and F.

B. Master Stopping-Power Curves for Representative Ions in Aluminum

The starting point for the present work was the set of electronic stopping-power curves for H, He, B, C, N, O, F, and Ne ions in aluminum, presented as Fig. 9 of Ref. 1. A reexamination of available data revealed no strong reason to alter any of these curves, so they were retained and are reproduced here as dash-dot lines in Fig. 2. The proton curve has been extended to higher energies by using stopping-power values for protons in aluminum as calculated by Barkas and Berger.[20]

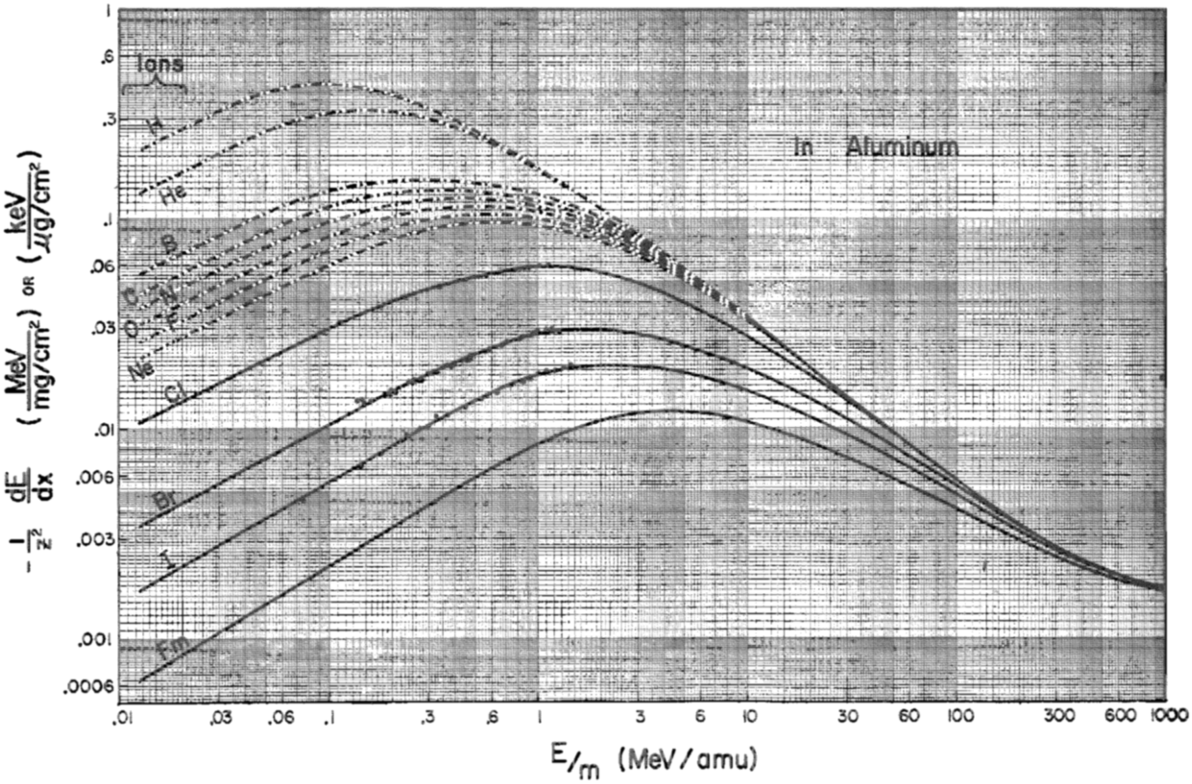

Fig. 2. Master stopping-power curves for heavy ions in aluminum

Also plotted in Fig. 2 are the new data for Cl ions[6] and for Br and I ions[5] in aluminum. The extrapolation of these curves and of those for other heavy ions to higher energy is based on the assumption that initial departures from the proton curve at high energy are given by the formula $\gamma^2 = 1 - 1.85e^{-2\xi}$ (see previous section) and that subsequent deviations of γ^2 from this dependence at lower energies vary smoothly with ξ and z in such a way as to join smoothly with the experimental data. Fig. 3a shows the dependences assumed.

The extrapolation of the curves to energies below 0.1 MeV/amu was guided by the LSS theoretical prediction[18] that the electronic stopping power decreases linearly with decreasing ion velocity at low velocities.[21]

In order to estimate the stopping power for ions more massive than iodine, several different methods of extrapolation to high z were tried. The curve shown for Fm ions in Fig. 2 is a best fit to these extrapolated values for $z = 100$. The smooth z-dependence of the stopping-power curves drawn in Fig. 2 is shown in Fig. 3b at several values of E/m.

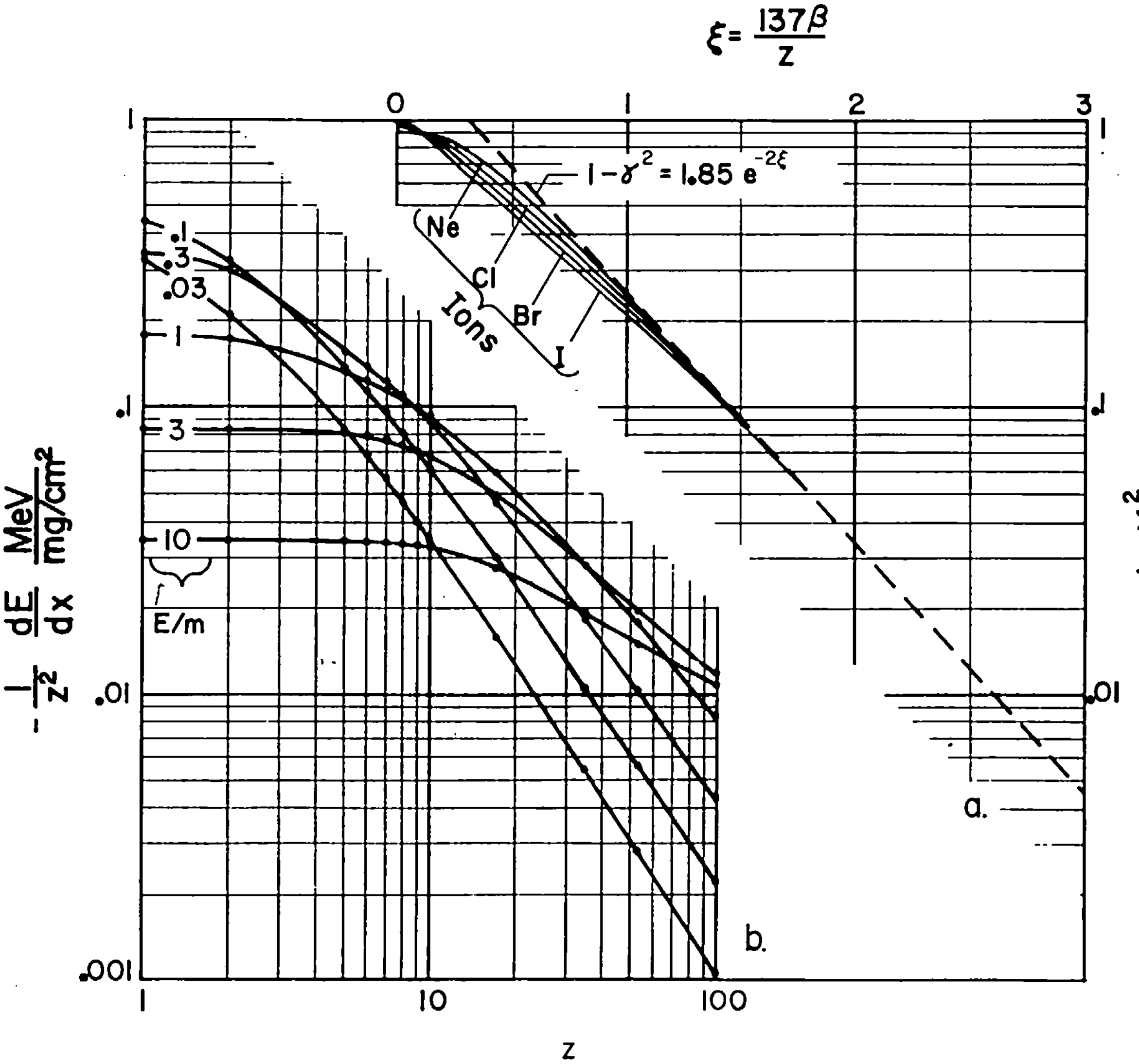

Fig. 3. (a) Adopted variation of effective charge parameter γ with ion-velocity parameter ξ for various ions. (b) Dependence of $(-dE/dx)/z^2$ on z-value of ion at several E/m values (from Fig. 2)

C. *Stopping Power of Representative Media Relative to Aluminum*

It is to be expected [22] that the stopping power of a medium will depend upon its state of condensation. Thus solid (or liquid) and gaseous media have been considered separately here, insofar as that is possible. A set of relative stopping-power curves for various solid materials is shown in Fig. 4. The curves for Al, Ni, Ag, and Au, essentially the same as those in Fig. 8 of Ref. 1, are based on stopping-power data for protons[20,23] and various heavier ions.[3,15,24] More recent measurements (not indicated in Fig. 4) in the energy region $0.5 \leqslant E/m \leqslant 2$ MeV/amu[25] (where few data existed previously) are in good agreement with these curves. The curve for C has been altered to make a better compromise between newer data[5,6,26] and the data used in Ref. 1.[23,24] These data for C are shown in greater detail in

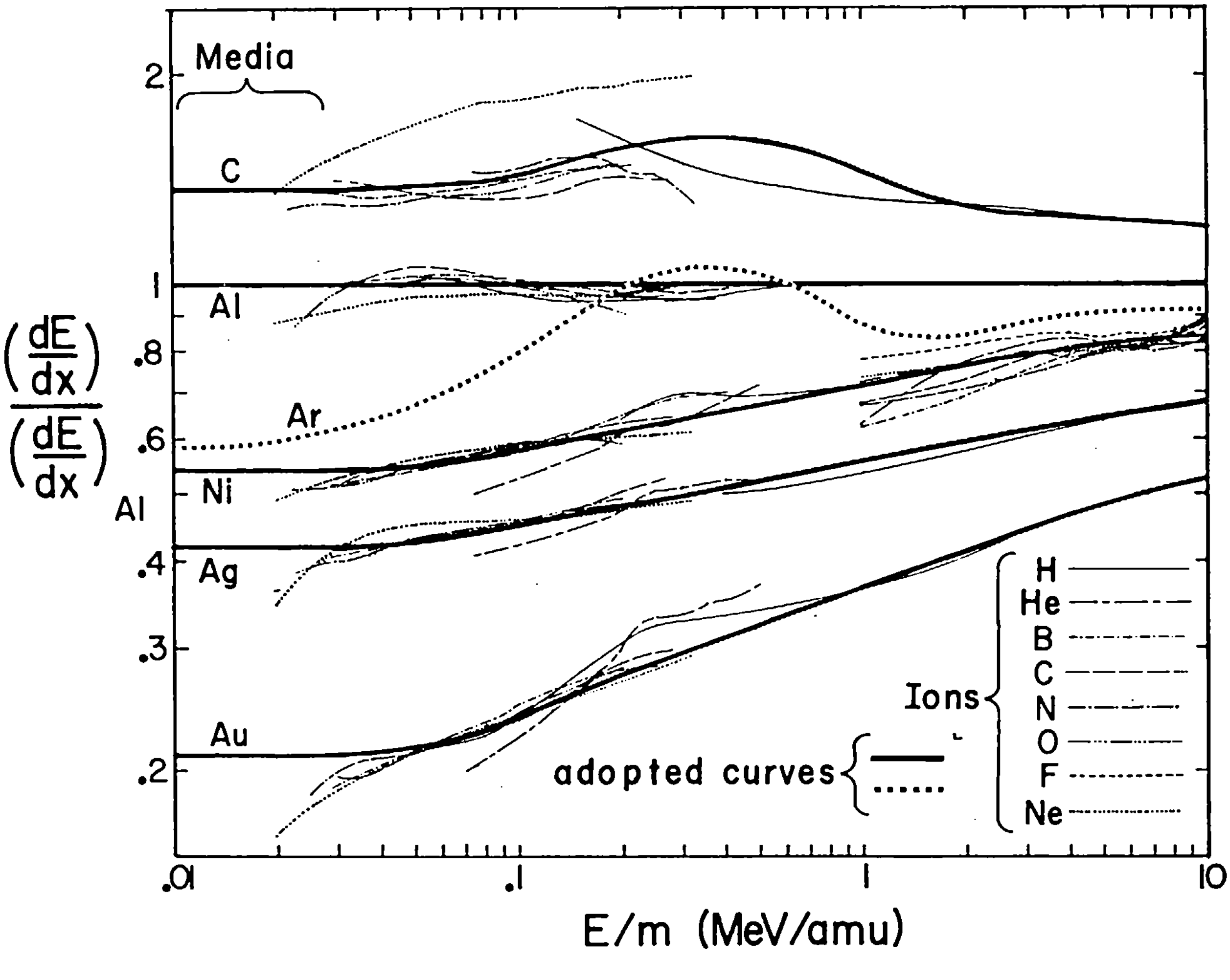

Fig. 4. Relative stopping-power data for various ions in solid media (relative to Al master curves, Fig. 2), with adopted curves for solids and for Ar. Adopted Ar curve is compared with Ar data in Fig. 6

H ions in all media: Refs. 20, 23
other ions in Ni ($E/m > 1$): Ref. 3
in all media ($0.02 \leqslant E/m \leqslant 0.5$): Ref. 24
in Al ($E/m > 1$): Ref. 15 (data curves are hidden by adopted curve)

Fig. 5 along with similar data for Be. Heavy smoothed curves have been drawn through the data displayed in Figs. 4 and 5. While a z-dependent deviation of individual data from the smoothed curves is apparent, the deviation is generally within the experimental accuracy of the data. In the interest of expediency the smoothed curves have been adopted as representative of the Z and E/m dependence to be expected for any heavy ion in a solid absorber.

When Ref. 1 was written the amount of available information on energy loss of heavy ions in gaseous media[3,4] was insufficient to determine relative stopping-power curves for gases. Recent measurements[7] have made the construction of such curves more feasible. As a starting point a stopping-power curve (relative to aluminum) for a representative gaseous absorber (argon) was constructed. This curve is shown as a dotted line in Fig. 4 and is adopted as a secondary standard for gaseous materials. Some of the stopping-power data[4,7,23,27,28] relative to this secondary standard are shown in Fig. 6.[29]

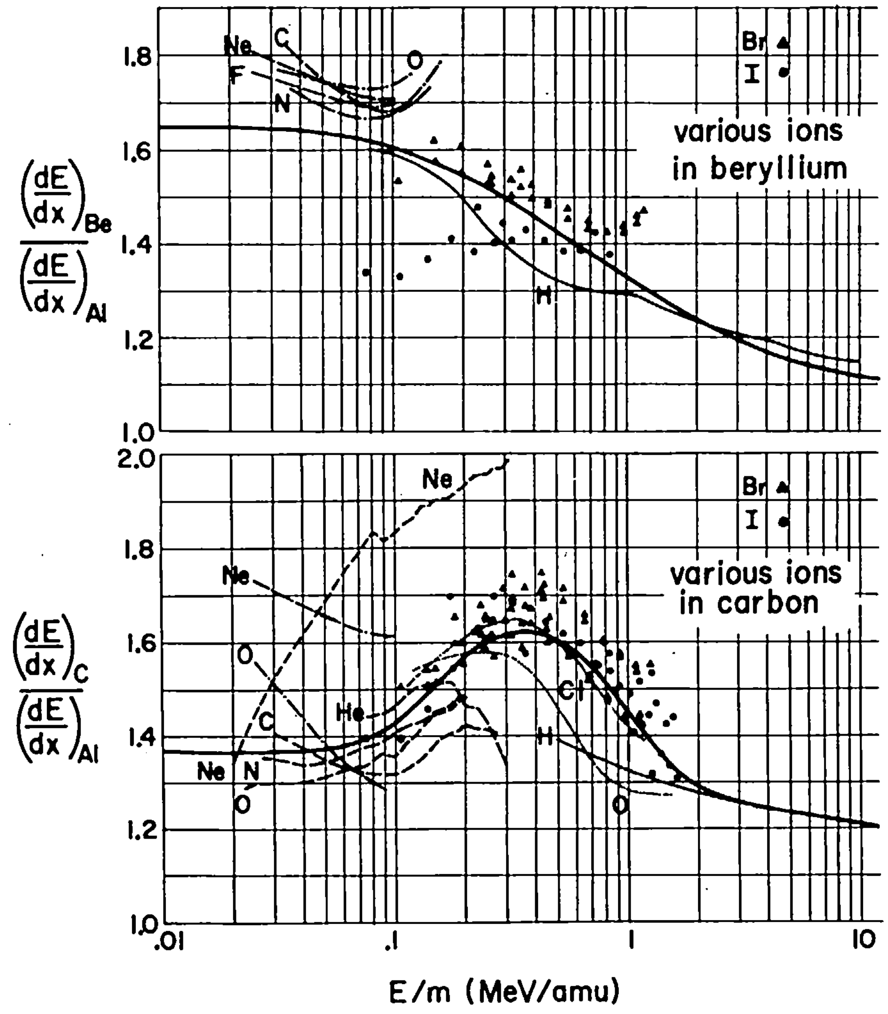

Fig. 5. Relative stopping-power data for heavy ions in Be and C. Individual points show the scatter typical of most data.

▲, ● Ref. 5 — —·—·—Ref. 26

. . . . Ref. 6 ———Ref. 23

– – – – – Ref. 24 ———Adopted curve

The heavy, smoothed curves of Fig. 6 have been adopted as the universal stopping-power curves for gases (relative to argon). They are converted to universal stopping-power curves for gases (relative to aluminum) by the transformation

$$\frac{(dE/dx)_{q,X}}{(dE/dx)_{q,\mathrm{Al}}} = \frac{(dE/dx)_{q,X}}{(dE/dx)_{q,\mathrm{Ar}}} \times \frac{(dE/dx)_{q,\mathrm{Ar}}}{(dE/dx)_{q,\mathrm{Al}}} .$$

The converted curves are not displayed.

D. *Fitting the Aluminum Master Curves*

Since the curves of Fig. 2 closely resemble conic sections in the energy region of interest ($0.0125 \leqslant E/m \leqslant 12$), it seemed reasonable to attempt to fit them with a general second-order polynomial of the form $AX^2 + BXY + CY^2 + DX + EY = 1$, where $X \equiv \log E/m$ and $Y \equiv \log[(-dE/dx)/z^2]$. Fitting the entire curve by the method of least squares gave calculated curves that deviated from the master curves by as much as 5%, while exact fitting to five selected points of each curve gave calculated curves that deviated by as much as 2%. Since a better fit was desired, more complex mathematical functions were tried. Eventually, it was found that the curves could be fitted within 1% by separately fitting the energies above 0.5 MeV/amu and those below 0.5 MeV/amu; the above polynomial was exactly fitted in each region to five selected points, the point at 0.5 MeV/amu being used as an end point of both fits. Thus, each of the aluminum master curves of Fig. 2 was represented by ten coefficients.

E. *Interpolation to Other Ions*

It is assumed that the stopping power of aluminum varies smoothly with z. As can be seen from Fig. 3b it is plausible (in the region $10 \leqslant z \leqslant 103$) to represent this variation (at a given value of E/m) by the general second-order polynomial given in Part D of this section (taking $X \equiv \log z$).

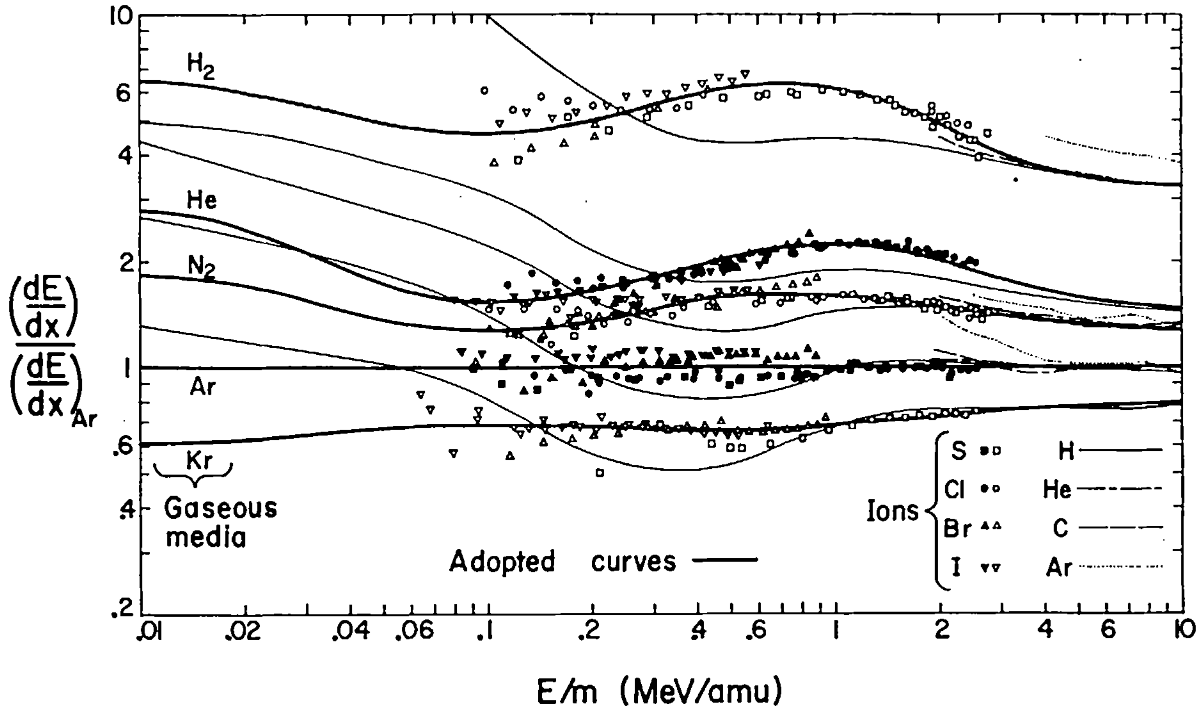

Fig. 6. Relative stopping-power data for heavy ions in gaseous media (relative to product of Al master curve and adopted Ar curve of Fig. 4), with the adopted curves for gases (relative to Ar)

H ions: Refs. 23, 27, 28
He, C, Ar ions ($E/m > 2$): Ref. 4
S, Cl, Br, I ions: Ref. 7

Thus, at each desired value of E/m the polynomial was fitted to the points calculated for Ne, Cl, Br, I, and Fm ions at that energy and the z-dependence thus reduced to five coefficients which were used to calculate the stopping power for other ions at the same value of E/m. In this way aluminum master curves for all ions ($10 \leqslant z \leqslant 103$) were obtained. Aluminum master curves for Li and Be ions were obtained by manual interpolation.

F. Interpolation to Other Media

The smoothed curves of Figs. 4, 5, and 6 give the relative stopping power for eleven material media for which substantial data are available. In order to estimate the relative stopping power for other media it is assumed that at any value of E/m the relative stopping power varies smoothly with Z, the atomic number of the material medium, although this variation is allowed to be different for gaseous and solid materials. This variation is shown for different values of E/m in Fig. 7 (solid media) and in Fig. 8 (gaseous media).

The points plotted in Fig. 7 are taken from the smoothed curves of Fig. 4 at the energies indicated. The dashed line shows the dependence on Z (for $z = 6$, a representative value) predicted by the LSS theory at low energies. The Z-dependence is seen to be smooth and consistent with the LSS theory except for the anomalous behavior of the Ag data at lower energies. In the interest of expediency we have arbitrarily warped the isoergic curves to pass through the experimental data for Ag. These curves serve to provide an estimate of the relative stopping power of Ti, Ge, Zr, Eu, Ta, and U, as well as of other solid materials for which there are no experimental data. The complete family of relative stopping-power curves for solids is shown in Fig. 9.

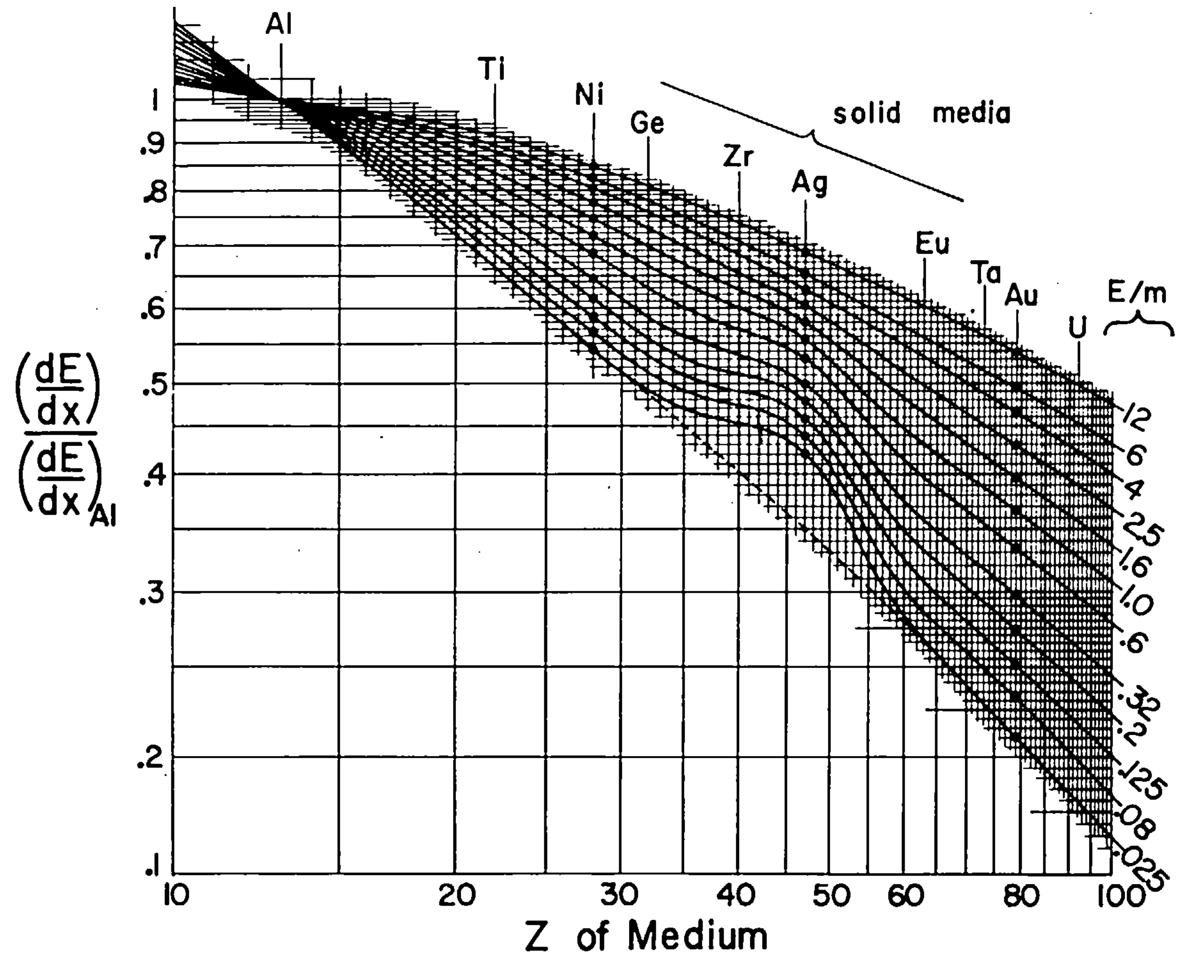

Fig. 7. Dependence of relative stopping power on Z-value of medium (solid), determined from Fig. 4

– – – – – Dependence predicted for C ions by Ref. 18

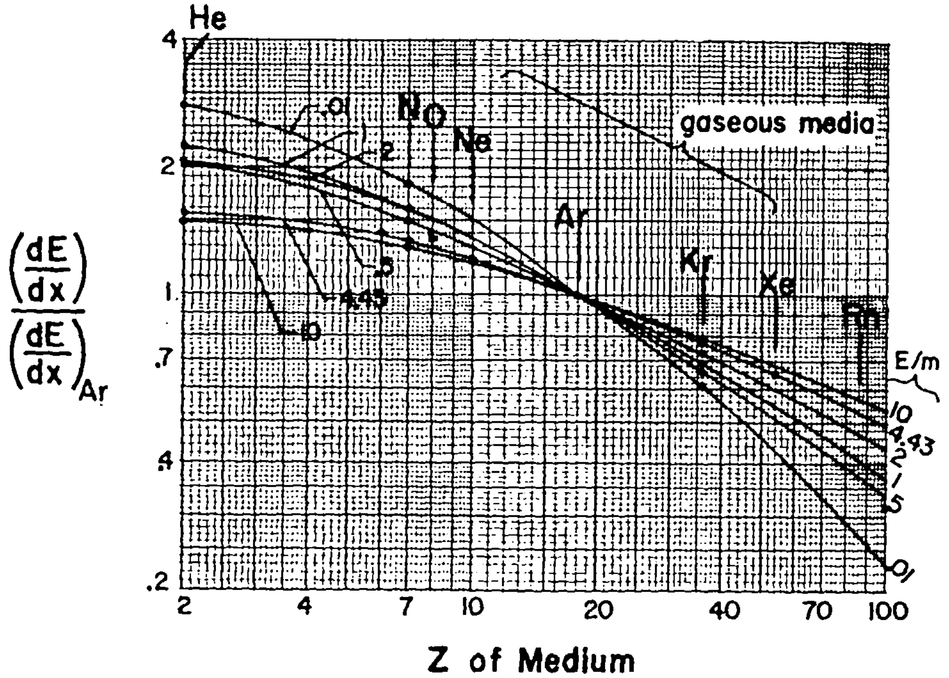

Fig. 8. Dependence of relative stopping power on Z-values of medium (gaseous), determined from Fig. 6. Points on curve for $E/m = 4.43$ are from Ref. 28

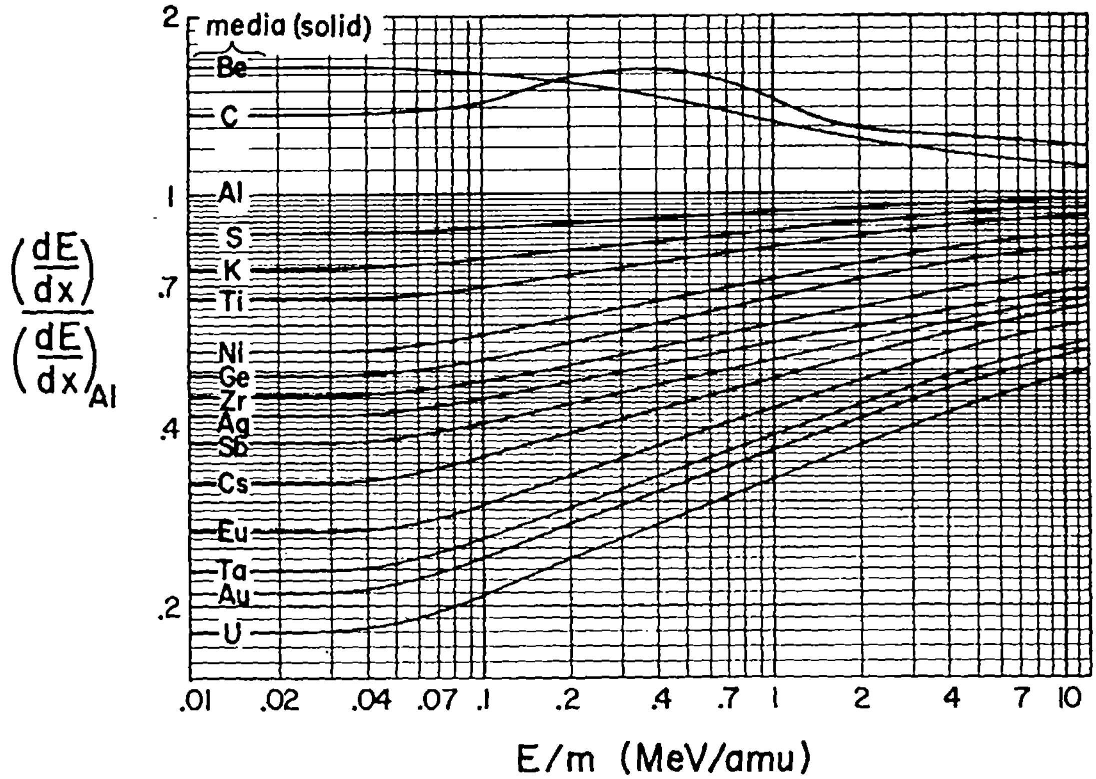

Fig. 9. Adopted curves for stopping power of various solids relative to Al

Similarly, most of the points plotted in Fig. 8 are taken from the smoothed curves of Fig. 6 at the six indicated energies. In addition, several values of the relative stopping power at 4.43 MeV[28] are shown to verify its Z-dependence. The smoothed, isoergic curves through the data provide an estimate of the relative stopping power of O, Ne, Xe, and Rn as well as of other gaseous media. The complete family of relative stopping-power curves for gases is shown in Fig. 10.

G. *Stopping Power of Compounds*

Although there is some evidence that the Bragg additivity rule relating the stopping power of a compound to that of its constituents does not strictly hold,[30] the deviations from the rule are not large and have been observed mainly in the stopping power of hydrocarbons for protons. These deviations are poorly understood and difficult to systematize, and they have little effect on the calculated range of a high-energy ion. For present purposes the additivity rule is assumed to hold well enough to use in the calculation of stopping powers of polyethylene, Mylar, and water.

According to this rule, the relative stopping power of a compound of molecular weight M containing N_i atoms of atomic weight A_i, etc., is given by the formula

$$\frac{(dE/dx)_{\text{compound}}}{(dE/dx)_{\text{Al}}} = \frac{1}{M} \sum_i \frac{N_i A_i (dE/dx)_i}{(dE/dx)_{\text{Al}}},$$

where $(dE/dx)_i$ is the stopping power of the pure element labeled by subscript i. In the case of Mylar ($C_{10}H_8O_4$) for example we have

$$\frac{(dE/dx)_{\text{Mylar}}}{(dE/dx)_{\text{Al}}} = \frac{1}{192}\left[120\,\frac{(dE/dx)_{\text{C}}}{(dE/dx)_{\text{Al}}} + 8\,\frac{(dE/dx)_{\text{H}}}{(dE/dx)_{\text{Al}}} + 64\,\frac{(dE/dx)_{\text{O}}}{(dE/dx)_{\text{Al}}}\right].$$

This formula for Mylar and the analogous formulas for polyethylene ($[CH_2]_n$) and water (H_2O) were used to calculate relative stopping powers for these compounds from the relative stopping-power curves for elements (Figs. 9 and 10).[31]

H. *Calculation of Stopping-Power Tables*

As described in Part D of this section, each stopping-power curve of Fig. 2 was fitted at nine points in two sections by a general second-order polynomial with five coefficients (yielding ten coefficients per curve). The nine points were approximately equispaced on the scale of log E/m in the region $0.0125 \leqslant E/m \leqslant 12$ MeV/amu. By the interpolation method described in Part E of this section the stopping power for an intermediate ion was determined at the same nine E/m values, and these nine points were fitted by the two-section polynomial (with $2 \times 5 = 10$ coefficients) which was used to calculate the stopping power for that ion in aluminum at any desired energy.

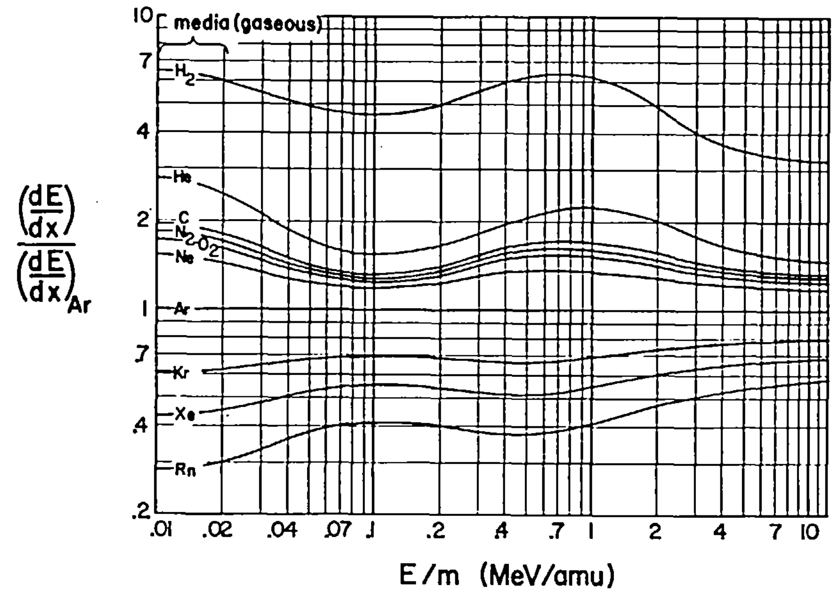

Fig. 10. Adopted curves for stopping power of various gases relative to Ar

The stopping power of a solid elementary absorber for that ion was obtained as the product of the stopping power of the ion in aluminum at that E/m value and the relative (to aluminum) stopping power of the absorber at the same E/m value, as shown in Fig. 9. The stopping power of a compound for that ion was obtained in a similar fashion, using the relative stopping power determined as described in Part G of this section. The stopping power of a gas for that ion was the product of three factors: the stopping power of the ion in aluminum, the relative (to argon) stopping power of the gas, and the relative (to aluminum) stopping power of argon, all at the same value of E/m.

For each ion (103 in all) in each material medium (24 in all) the electronic stopping power was calculated by these methods at 75 energies more or less equally spaced on the scale of $\log E/m$ in the region $0.0125 \leqslant E/m \leqslant 12$ MeV/amu. The results were stored for use in the range calculations (Section V) and for the stopping-power tabulation. (The tabulation includes values for only 38 of the 75 energies, every second value being omitted.)

I. *Electronic vs Total Stopping Power*

It should be emphasized that the electronic rather than the total (electronic + nuclear) stopping power is tabulated. This is done because (a) much of the stopping-power information has been reduced to this form by subtracting a theoretical correction for the nuclear contributions, and (b) the range tables (see Section V) include the nuclear stopping effect. In the average experimental situation what is desired is an energy loss rather than a stopping power, and this can be obtained readily from the range tables (or curves).

V. GENERATION OF RANGE TABLES

A. *Numerical Integration of Electronic Stopping Power*

For each ion-absorber combination at each of the 75 energies the reciprocal of the electronic stopping power was calculated. Values for the "electronic" range were then obtained by the integration

$$R(E) = \int_0^E (-dE/dx)^{-1}\, dE,$$

which was performed analytically to obtain the "electronic" range at 0.0125 MeV/amu and numerically for the 37 higher energies. The analytic integration spanned the region $0 \leqslant E/m \leqslant 0.0125$ MeV/amu and was performed assuming the dependence $-dE/dx = kE^{1/2}$ with the constant k being determined from the tabulated electronic stopping power at $E = 0.0125$ MeV/amu rather than from the LSS theory.[32] For the numerical integration the set of 75 reciprocal electronic stopping-power values was divided into 37 adjacent, three-value subsets (the third value of each subset being the first value of the next subset), and Simpson's rule was applied successively to adjacent subsets to obtain range differences, which were appropriately summed to give the 37 range values.

B. *Correction for Nuclear Stopping*

LSS give[18] a set of curves for the range correction due to "nuclear stopping" as a function of ϵ for several values of k, the coefficient of "electronic stopping power" (see Ref. 32, below). These curves are fitted within approximately a line width by the formula

$$\Delta R\,(k,\epsilon) = \Delta R\,(k,\infty)\, s/(s+1),$$

where

$$s = \exp\,(0.9 \ln \epsilon + 0.56 e^{-0.56 \ln \epsilon} - 1.29 + 0.5 \ln 10k)$$

and $\Delta R\,(k,\infty)$ can be obtained by fitting a general second-order polynomial through the discrete values given by LSS. See notes in Ref. 32 for definitions.

If the electronic stopping-power curve followed the $k\epsilon^{1/2}$ energy dependence predicted by LSS, it would be a straight line of slope 0.5 on a log-log plot of $(-dE/dx)/z^2$ vs E/m. With appropriate conversions[32] the value of the constant k would determine (or be determined by) any point on the curve. Then the correction $\Delta R\,(k,\epsilon)$ could be determined for any energy by straightforward use of the formulas given above. When the electronic stopping-power curves have variable slopes (as ours have), the calculation of a correction for nuclear stopping is more complicated. The procedure followed here was to calculate the k-value given by each of the 38 tabulated points on the stopping-power curve and to divide the curve (at these points) into 38 segments. The average of the k-values at the ends of each segment was taken as an effective k-value for the segment (in effect, approximating each segment by a short straight line of slope 0.5). Then a differential-range correction for the segment was determined using this k-value and the formulas given above. The differential corrections below any given energy were summed to give the range correction at that energy, which was subtracted from the calculated "electronic" range.

These range corrections are large ($\Delta R/R \approx 1$) at low energies where nuclear stopping is the dominant effect, but they approach the constant value, $\Delta R\,(k,\infty)$, as the ion energy increases. Since R increases with ion energy, $\Delta R/R$

diminishes and the range correction is correspondingly less important. At the highest tabulated energy the corrections ranged from $\Delta R/R \approx 10^{-4}$ (for protons in beryllium) to $\Delta R/R \approx 0.2$ (for ^{252}Fm ions in uranium).

C. *Multiple Scattering and Straggling*

The range values in this tabulation actually are integrated path lengths. The true range (mean depth of penetration) is somewhat shorter because of numerous small deflections (multiple scattering). Furthermore, the range distribution (distribution of penetration depths, arising from the statistical nature of the energy-loss process, called range straggling) is not, in general, symmetric, and is not well understood for heavy ions. Because of the uncertainties and complexities associated with corrections and interpretations for these effects, no such corrections have been included.

VI. USE OF TABLES AND CURVES

The electronic stopping power ($-dE/dx$) and the range R (corrected for nuclear stopping but not for multiple scattering or straggling) are tabulated for 24 different materials for ions of all atomic numbers $1 \leqslant z \leqslant 103$. For each z the tabulation is for the most abundant isotope. The range and stopping-power tabulations for a given ion appear on facing pages.

A sampling of the tabulated range values is displayed graphically at the end of the set of tables. The graphs are simply log-log plots of R vs E distorted so as to maximize the differences between the curves for different ions. Although curves are presented for ions of only 10 of the 103 tabulated z-values, the range for ions of other z can be estimated quickly by interpolation.

A. *Conversion for Different Ions*

The stopping-power tables for ions of given z are valid for any isotope of the ion, but the energy values listed in the last column apply only for the specified mass number A. For ions of the same z but different mass number A' the last column is corrected through multiplication by the ratio of atomic masses, $m'/m \approx A'/A$.

The range table is valid without conversion only for ions having the z- and A-values specified. Conversion of the table for ions of the same z but of different mass number A' is accomplished in this case by multiplying all columns, except the first, by the atomic mass ratio $m'/m \approx A'/A$.

As an example, Table I shows the conversion of the tabulated range and stopping-power values for $^{164}_{66}$Dy ions in aluminum to values appropriate for $^{149}_{66}$Dy ions in aluminum.

B. *Conversion of Units*

The tabulated range and stopping-power values are in units of mg/cm^2 and MeV/(mg/cm^2), respectively. The factors by which they must be multiplied in order to change them to other common units are given for convenience in Table II.

VII. COMPARISON WITH EXPERIMENTAL DATA

It is extremely difficult to estimate the accuracy of the tabulation because the calculated values were generated on the basis of simplified assumptions about stopping-power systematics, and the reliability of these assumptions is not fully known. Probably the most realistic means of estimating the accuracy is a comparison of the tabulated values with experimental data.

The attempt was made to include all available, appropriate data as input for the determination of the aluminum master curves and smoothed relative stopping-power curves. Since as a practical matter it was necessary to limit the number of these curves, some experimental data were not used as input (i.e., for ions or materials other than those included in Figs. 1, 2, 4-6). As expected, the tabulated values generally are in reasonably good agreement with data used as input. This is demonstrated, for example, in Ref. 1, where some of the input stopping-power data are compared with the calculated curves, and in Ref. 2, where range data were compared with the calculated range curves.

Since the existence of data not used as input provides a somewhat more stringent test of the reliability of the tables, Figs. 11-13 are included to demonstrate the extent of agreement in such cases.[33]

Aside from some investigations of the range in nuclear emulsion,[16,34,35] the only high-energy, heavy-ion range data not used as input (to our knowledge) are those of Schambra et al.,[36] for ^{12}C, ^{16}O, and ^{20}Ne in Mylar and polyethylene. These data are displayed in Fig. 11 against our calculated curves. The generally excellent agreement lends support to our use of the Bragg additivity rule (Section IV G).

At low energies ($E/m \leqslant 0.1$ MeV/amu) the calculations are expected to be somewhat unreliable because the relative stopping power is not independent of z as assumed. Unfortunately, most of the data available for comparison fall into this region. In Fig. 12 the combined range data of Powers et al., [26,37,38] are displayed against the calculated curves. [39] Fig. 13 shows a comparison of miscellaneous experimental data not used as input [40] with the corresponding calculated curves. The stopping-power data are those of Booth and Grant [6] (Fig. 13.a,b) and of Pierce et al. [41] (Fig. 13.c). The range data are taken from various published papers [42-53] and are identified in the caption. The agreement is generally excellent for Al and Ni (Fig. 13.d,e,f,g,h,j,k,l,m, n,r) but less good for H_2 (Fig. 13.i), Ag (Fig. 13.q), and Au (Fig. 13.o,p).

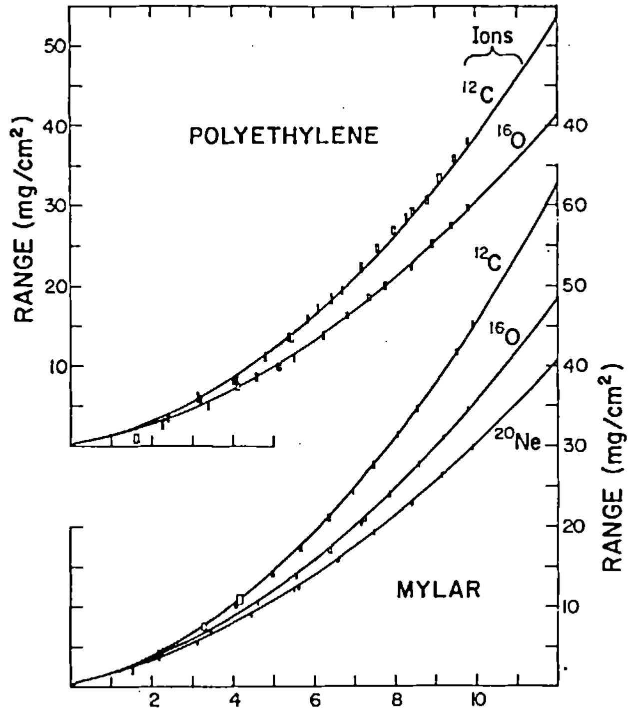

Fig. 11. Comparison of the tabulated range values (solid lines) with experimental data ▯ Ref. 36

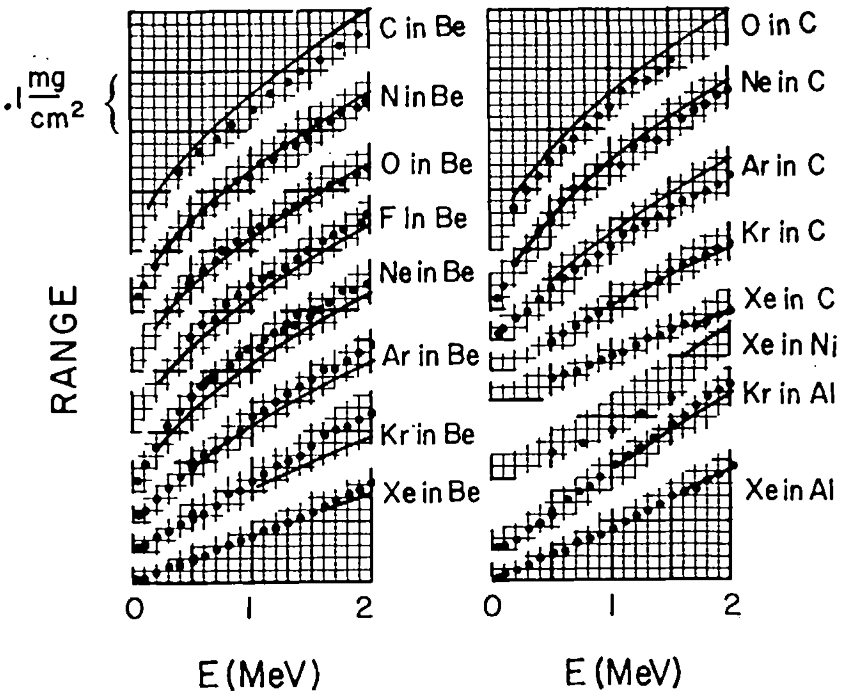

Fig. 12. Comparison of tabulated range values (solid lines) with experimental data ● Refs. 26, 37, 38

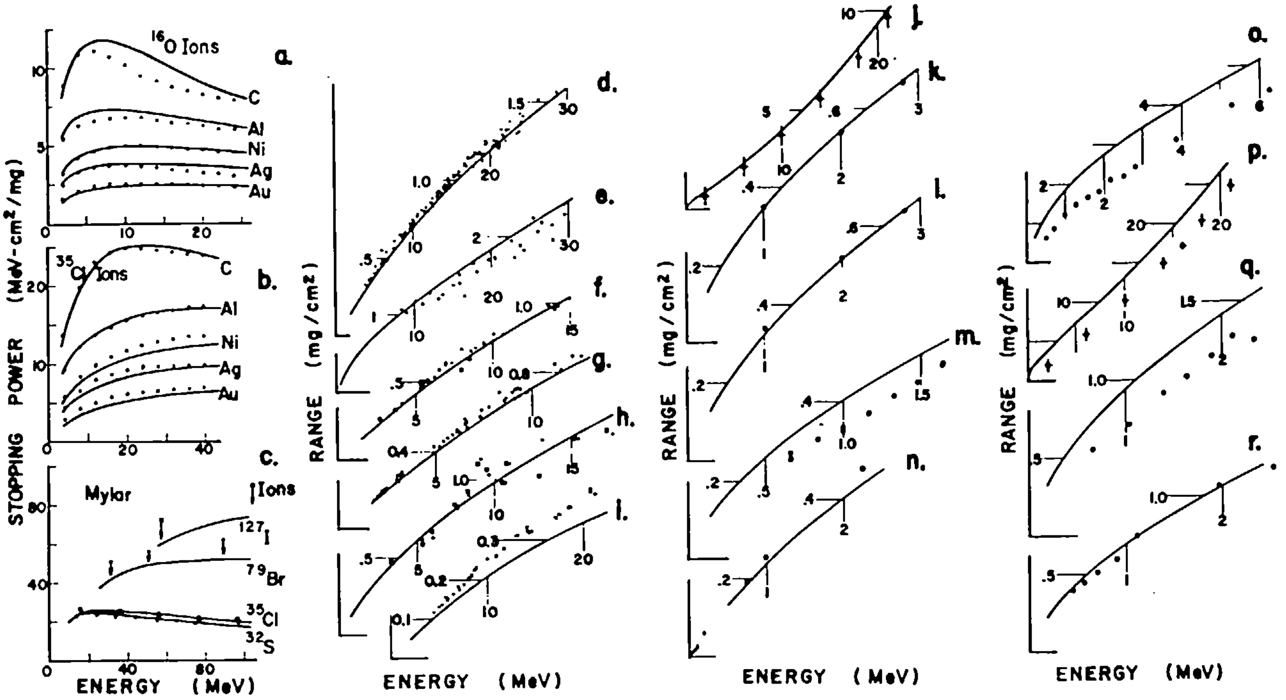

Fig. 13. Comparison of tabulated values (solid lines) with miscellaneous experimental data

a: Ref. 6

b: Ref. 6

c: Ref. 41

d: ^{149}Tb in Al: Ref. 42

e: ^{34}Cl in Al: Ref. 43

f: ● ^{126}Ba in Al, □ ^{128}Ba in Al: Ref. 44

— ^{126}Ba in Al

g: ^{142}Sm in Al: Ref. 45

h: □ ^{60}Cu in Al, ● ^{61}Cu in Al: Ref. 46

— ^{60}Cu in Al

i: ● ^{149}Tb, ^{149}Dy, ^{150}Dy, ^{151}Dy in H_2: Ref. 47

— ^{150}Dy in H_2

j: ^{9}Be in Al: Ref. 48

k: ^{22}Ne in Al: Ref. 49

l: ^{24}Na in Al: Ref. 49

m: ^{11}C in Al: Ref. 50

n: ^{41}Ar in Al: Ref. 51

o: ^{15}N in Au: Ref. 52

p: ^{9}Be in Au: Ref. 48

q: ^{15}N in Ag: Ref. 53

r: ^{15}N in Ni: Ref. 53

VIII. DISCUSSION AND CONCLUSION

In the course of this work, we noticed that various experimental data were in conflict with the simple working hypotheses outlined in Section IV A. Examples of such conflict are: (a) the apparent z-dependence of the relative stopping-power data at low energies (see notes in Ref. 29); (b) the disagreement between the adopted relative stopping-power curves and corresponding curves for protons as determined from Refs. 20, 23, 27, and 28 (see Figs. 4-6); (c) the discrepancy between certain heavy-ion data and the adopted relative stopping-power curves (e.g., Ne and O ions in C, Figs. 4 & 5).

The occurrence of such discrepancies raised several questions: (1) Could the conflict be decreased if the aluminum master curves or the adopted relative stopping-power curves were altered? In general, the answer was no, since any substantial change would increase disagreement with other data. (2) Were the discrepancies consistent with experimental uncertainties? As close inspection of the carbon relative stopping-power data will show (see Fig. 5) the disagreement between different measurements for the same ion (two for Ne ions, three for O ions, several for Br and I ions) often is as large as the deviations from the adopted curves. (3) Could z-dependence effects be taken into account in some way? Again, an inspection of the data reveals no simple systematic dependence on z. The z-dependence predicted by the LSS theory is not verified by experiment. Any attempt to account for such effects would be based on inadequate experimental evidence and would therefore be of dubious validity, would greatly complicate the computation, and would cause little or no change in the tabulations at high energy. (4) Should the attempt to generate this tabulation be abandoned? In view of the relatively large body of data consistent with the adopted curves, the reasonable agreement shown in Figs. 11-13, and the widespread need for such information, this negative view was rejected. It seemed best to ignore the poor fits to proton stopping power at low energy since the main objective of this tabulation was to cover heavier ions. In any event our proton range data are in good agreement with other tabulations[20,27] (typically, better than 1% at high energies).

Most of this tabulation extends into regions of energy and mass completely devoid of experimental data. It is to be expected that heavy-ion accelerators yet to be built will push into these regions and eventually determine the accuracy of the predictions, but in the meantime they should serve as a plausible and coherent reference for estimating the comparative behavior of very heavy ions at very high energies.

IX. REFERENCES

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19. The LSS theory predicts the electronic stopping power to have the form $kE^{1/2}$. The dashed lines of Fig. 1 follow the predicted energy dependence but not the predicted k-values. Since there is abundant experimental evidence of deviations from the k-values given by LSS, the k-values used in Fig. 1 have been chosen to give a smooth fit to experimental data.

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31. The relative stopping-power curves for H and O are for gaseous media while the compounds in question are liquid or solid. It is hoped nevertheless that curves calculated for the compounds will be reasonably valid, and in fact they are shown to be so in Section VII.

32. The LSS theory uses universal parameters ρ and ϵ as measures of range and energy, respectively. These parameters are related to our units through

$$\epsilon = 3.255 \times 10^4 \frac{mM/(m+M)}{zZ(z^{2/3}+Z^{2/3})^{1/2}}\left(\frac{E}{m}\right) \quad \text{and}$$

$$\rho = 1.659 \times 10^5 \frac{m}{(m+M)^2(z^{2/3}+Z^{2/3})}(R).$$

They give a universal electronic stopping-power formula

$-d\epsilon/d\rho = k\epsilon^{1/2}$, where

$$k = \xi_e \frac{0.0793\, z^{1/2} Z^{1/2} M}{(z^{2/3}+Z^{2/3})^{3/4}}\left(\frac{m+M}{mM}\right)^{3/2}$$

and $\xi_e \cong z^{1/6}$. The conversion formula between units is $\dfrac{d\epsilon}{d\rho} = 0.196 \dfrac{M(m+M)(z^{2/3}+Z^{2/3})^{1/2}}{zZm}\left(\dfrac{dE}{dx}\right)$.

33. The original intention was to include in Figs. 11 - 13 only data not used as input. A few of the input data were included inadvertently, however, and a few more

were changed to input data during a revision of the relative stopping-power curves for carbon and beryllium based on an expanded set of input data. These are identified in Refs. 39 and 40.

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X. RANGE AND STOPPING-POWER DATA

Table I. Conversion of tabulated values for ions of mass number A to values appropriate for mass number A'

Tabulated values are for ^{164}Dy ions in aluminum. These are converted into values appropriate for ^{149}Dy ions in aluminum by multiplication by $m'/m \approx A'/A$ which in this case is 148.93 / 163.93 = 0.90850 ≈ 149/164. Note that values of E/m and -dE/dx are not changed in the conversion.

E/m	$^{164}_{66}$Dy in Al Tabulated Values			$^{149}_{66}$Dy in Al Converted Values		
(MeV/amu)	E (MeV)	$\left(-\frac{dE}{dx}\right)_{el}$ $\left(\frac{MeV}{mg/cm^2}\right)$	R (mg/cm^2)	E (MeV)	$\left(-\frac{dE}{dx}\right)_{el}$ $\left(\frac{MeV}{mg/cm^2}\right)$	R (mg/cm^2)
0.0125	2.0491	5.306	0.156	1.8616	5.306	0.142
0.0160	2.6229	6.124	0.200	2.3829	6.124	0.182
0.0200	3.2786	6.971	0.249	2.9786	6.971	0.226
0.0250	4.0982	7.935	0.309	3.7232	7.935	0.281
0.0320	5.2458	9.157	0.391	4.7658	9.157	0.355
0.0400	6.5572	10.423	0.481	5.9572	10.423	0.437
0.0500	8.1965	11.865	0.587	7.4465	11.865	0.533
0.0600	9.8358	13.189	0.688	8.9358	13.189	0.625
0.0700	11.475	14.424	0.783	10.425	14.424	0.711
0.0800	13.114	15.586	0.873	11.914	15.586	0.793
0.0900	14.754	16.689	0.959	13.404	16.689	0.871
0.1000	16.393	17.742	1.042	14.893	17.742	0.947
0.1250	20.491	20.195	1.234	18.616	20.195	1.121
0.1600	26.229	23.307	1.475	23.829	23.307	1.340
0.2000	32.786	26.530	1.721	29.786	26.530	1.564
0.2500	40.983	30.199	1.996	37.233	30.199	1.813
0.3200	52.458	34.851	2.336	47.658	34.851	2.122
0.4000	65.572	39.671	2.678	59.572	39.671	2.433
0.5000	81.965	44.817	3.058	74.465	44.817	2.778
0.6000	98.358	49.444	3.400	89.358	49.444	3.089
0.7000	114.75	53.258	3.715	104.25	53.258	3.375
0.8000	131.14	56.421	4.014	119.14	56.421	3.647
0.9000	147.54	59.060	4.298	134.04	59.060	3.905
1.0000	163.93	61.271	4.570	148.93	61.271	4.152
1.2500	204.91	65.380	5.216	186.16	65.380	4.739
1.6000	262.29	68.842	6.069	238.29	68.842	5.514
2.0000	327.86	70.866	7.006	297.86	70.866	6.365
2.5000	409.83	71.791	8.153	372.33	71.791	7.407
3.2000	524.58	71.568	9.752	476.58	71.568	8.860
4.0000	655.72	70.334	11.599	595.72	70.334	10.538
5.0000	819.65	68.252	13.964	744.65	68.252	12.686
6.0000	983.58	66.029	16.406	893.58	66.029	14.905
7.0000	1147.5	63.851	18.931	1042.5	63.851	17.199
8.0000	1311.4	61.788	21.541	1191.4	61.788	19.570
9.0000	1475.4	59.860	24.237	1340.4	59.860	22.019
10.0000	1639.3	58.068	27.018	1489.3	58.068	24.546
11.0000	1803.2	56.403	29.883	1638.2	56.403	27.149
12.0000	1967.2	54.857	32.830	1787.2	54.857	29.826

Table II. Unit conversion factors

To convert range or stopping power values of the main tabulation into units specified at the head of a column, multiply by the column entry for the desired material medium. The formula for the conversion factor is given at the foot of each column.

The 1959 international atomic weights W are for natural isotopic abundances on the chemical scale and are taken from the "CRC Handbook of Chemistry and Physics" (Chemical Rubber Publishing Co., Cleveland, 1966) 47th edition.

The densities ρ (in units of g/cm^3 at 20° C and 760 torr) are from the same source (gas densities have been converted to these standard conditions). The density of Mylar is that specified by the manufacturer (E. I. DuPont de Nemours and Co., Wilmington, Delaware). That of polyethylene is taken from the 39th edition of the CRC Handbook.

	W	ρ	Range for (mm) multiply by	Stopping Power for (MeV/mm) multiply by	Stopping Power for $(eV\,cm^2/atom) \times 10^{-15}$ multiply by
Be	9.013	1.848	.005411	184.8	14.96
C	12.011	2.25	.004444	225	19.94
Al	26.98	2.6989	.003705	269.9	44.80
Ti	47.90	4.54	.002203	454	79.53
Ni	58.71	8.902	.001123	890.2	97.48
Ge	72.60	5.323	.001879	532.3	120.54
Zr	91.22	6.53	.001531	653	151.45
Ag	107.873	10.50	.0009524	1050	179.1
Eu	152.0	5.259	.0019015	525.9	252.4
Ta	180.95	16.6	.0006024	1660	300.4
Au	197.0	19.32	.0005176	1932	327.1
U	238.07	18.95	.0005277	1895	395.3
H	1.008	.00008375	119.4	.008375	1.674
He	4.003	.0001663	60.13	.01663	6.646
N	14.008	.0011652	8.582	.11652	23.26
O	16	.0013315	7.510	.13315	26.57
Ne	20.183	.0008388	11.92	.08388	33.51
Ar	39.944	.0016619	6.017	.1662	66.32
Kr	83.80	.003481	2.873	.3481	139.1
Xe	131.30	.005485	1.823	.5485	218.0
Rn	222	.009066	1.103	.9066	368.6
Mylar		1.395	.007168	139.5	
$(CH_2)_n$		.92	.01087	92	
Water		1.0	.01	100	
Conversion factor formula			$0.01/\rho$	100ρ	1.6603W

$^{1}_{1}$H IONS

ENERGY PER MASS UNIT	ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)												ENERGY FOR A=1
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.348	0.288	0.211	0.140	0.114	0.103	0.096	0.089	0.056	0.048	0.044	0.038	0.0126
0.0160	0.394	0.326	0.239	0.159	0.129	0.117	0.108	0.100	0.064	0.055	0.050	0.043	0.0161
0.0200	0.441	0.364	0.267	0.178	0.144	0.131	0.121	0.112	0.071	0.061	0.056	0.048	0.0202
0.0250	0.497	0.411	0.301	0.200	0.163	0.148	0.137	0.126	0.080	0.069	0.063	0.054	0.0252
0.0320	0.559	0.463	0.339	0.225	0.183	0.167	0.154	0.142	0.091	0.078	0.072	0.061	0.0322
0.0400	0.611	0.509	0.371	0.248	0.202	0.184	0.170	0.157	0.100	0.086	0.079	0.068	0.0403
0.0500	0.655	0.549	0.400	0.268	0.220	0.200	0.184	0.171	0.108	0.094	0.087	0.075	0.0504
0.0600	0.683	0.578	0.419	0.282	0.232	0.211	0.195	0.180	0.116	0.101	0.093	0.080	0.0605
0.0700	0.699	0.598	0.430	0.292	0.241	0.219	0.202	0.188	0.121	0.105	0.098	0.084	0.0705
0.0800	0.707	0.613	0.437	0.298	0.247	0.224	0.207	0.192	0.125	0.109	0.101	0.087	0.0806
0.0900	0.709	0.622	0.440	0.303	0.251	0.228	0.210	0.195	0.128	0.112	0.104	0.090	0.0907
0.1000	0.706	0.628	0.440	0.305	0.253	0.230	0.211	0.198	0.130	0.114	0.106	0.091	0.1008
0.1250	0.688	0.635	0.433	0.305	0.255	0.231	0.212	0.199	0.133	0.116	0.109	0.094	0.1260
0.1600	0.651	0.632	0.415	0.297	0.250	0.226	0.208	0.195	0.133	0.117	0.109	0.095	0.1612
0.2000	0.605	0.614	0.391	0.284	0.240	0.218	0.200	0.187	0.130	0.114	0.107	0.094	0.2016
0.2500	0.551	0.580	0.362	0.268	0.227	0.206	0.189	0.177	0.125	0.110	0.104	0.090	0.2519
0.3200	0.488	0.530	0.327	0.246	0.210	0.192	0.175	0.164	0.117	0.104	0.098	0.086	0.3225
0.4000	0.431	0.478	0.295	0.225	0.193	0.177	0.161	0.151	0.110	0.098	0.092	0.080	0.4031
0.5000	0.376	0.423	0.263	0.203	0.176	0.162	0.147	0.137	0.102	0.090	0.085	0.075	0.5039
0.6000	0.331	0.373	0.236	0.185	0.161	0.148	0.135	0.125	0.094	0.084	0.079	0.070	0.6047
0.7000	0.298	0.334	0.216	0.170	0.149	0.137	0.124	0.116	0.088	0.078	0.074	0.066	0.7055
0.8000	0.271	0.302	0.199	0.159	0.139	0.129	0.117	0.109	0.082	0.074	0.070	0.062	0.8062
0.9000	0.249	0.275	0.186	0.149	0.131	0.122	0.110	0.102	0.078	0.071	0.067	0.059	0.9070
1.0000	0.231	0.253	0.174	0.141	0.124	0.115	0.104	0.097	0.075	0.067	0.064	0.057	1.0078
1.2500	0.196	0.210	0.151	0.124	0.111	0.103	0.093	0.086	0.068	0.061	0.058	0.052	1.2597
1.6000	0.163	0.171	0.129	0.108	0.096	0.090	0.081	0.075	0.060	0.054	0.051	0.046	1.6125
2.0000	0.138	0.144	0.111	0.094	0.084	0.079	0.071	0.066	0.053	0.049	0.046	0.041	2.0156
2.5000	0.115	0.121	0.095	0.082	0.074	0.069	0.062	0.058	0.047	0.043	0.041	0.037	2.5195
3.2000	0.095	0.100	0.079	0.069	0.063	0.059	0.053	0.049	0.041	0.038	0.036	0.032	3.2250
4.0000	0.079	0.084	0.067	0.059	0.054	0.051	0.046	0.043	0.036	0.033	0.031	0.029	4.0312
5.0000	0.066	0.071	0.057	0.051	0.047	0.044	0.040	0.037	0.031	0.029	0.028	0.025	5.0390
6.0000	0.057	0.061	0.050	0.045	0.041	0.039	0.035	0.032	0.028	0.026	0.025	0.023	6.0468
7.0000	0.050	0.054	0.044	0.040	0.037	0.035	0.032	0.029	0.025	0.023	0.022	0.021	7.0546
8.0000	0.045	0.049	0.040	0.036	0.034	0.032	0.029	0.027	0.023	0.021	0.021	0.019	8.0624
9.0000	0.041	0.045	0.037	0.033	0.031	0.029	0.027	0.025	0.022	0.020	0.019	0.018	9.0702
10.0000	0.038	0.041	0.034	0.031	0.029	0.027	0.025	0.023	0.020	0.019	0.018	0.017	10.078
11.0000	0.035	0.038	0.032	0.029	0.027	0.025	0.023	0.022	0.019	0.018	0.017	0.016	11.086
12.0000	0.033	0.036	0.030	0.027	0.025	0.024	0.022	0.020	0.018	0.017	0.016	0.015	12.094

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.792	0.338	0.224	0.210	0.187	0.123	0.076	0.054	0.035	0.283	0.360	0.275	0.0126
0.0160	0.879	0.371	0.249	0.234	0.208	0.141	0.087	0.062	0.041	0.318	0.405	0.306	0.0161
0.0200	0.956	0.392	0.272	0.256	0.229	0.159	0.099	0.072	0.048	0.353	0.449	0.333	0.0202
0.0250	1.048	0.416	0.299	0.282	0.255	0.183	0.117	0.085	0.062	0.394	0.502	0.367	0.0252
0.0320	1.156	0.439	0.325	0.309	0.283	0.212	0.138	0.104	0.072	0.441	0.562	0.403	0.0322
0.0400	1.244	0.452	0.347	0.334	0.307	0.240	0.159	0.122	0.087	0.481	0.614	0.435	0.0403
0.0500	1.324	0.466	0.368	0.358	0.333	0.268	0.181	0.141	0.102	0.518	0.660	0.465	0.0504
0.0600	1.399	0.479	0.388	0.375	0.355	0.292	0.198	0.156	0.115	0.545	0.696	0.489	0.0605
0.0700	1.459	0.494	0.405	0.393	0.373	0.311	0.212	0.168	0.124	0.566	0.721	0.511	0.0705
0.0800	1.516	0.509	0.420	0.408	0.388	0.326	0.224	0.178	0.132	0.582	0.742	0.531	0.0806
0.0900	1.561	0.524	0.433	0.422	0.402	0.339	0.233	0.186	0.138	0.595	0.756	0.549	0.0907
0.1000	1.610	0.540	0.448	0.434	0.413	0.350	0.242	0.192	0.143	0.604	0.768	0.565	0.1008
0.1250	1.719	0.574	0.474	0.457	0.436	0.368	0.254	0.202	0.150	0.621	0.790	0.597	0.1260
0.1600	1.837	0.613	0.503	0.484	0.460	0.383	0.263	0.209	0.155	0.633	0.805	0.635	0.1612
0.2000	1.919	0.637	0.522	0.501	0.474	0.385	0.262	0.208	0.154	0.631	0.800	0.658	0.2016
0.2500	1.962	0.649	0.527	0.507	0.473	0.374	0.253	0.198	0.146	0.613	0.777	0.669	0.2519
0.3200	1.943	0.634	0.516	0.492	0.450	0.345	0.230	0.180	0.131	0.576	0.732	0.654	0.3225
0.4000	1.839	0.607	0.482	0.458	0.415	0.310	0.205	0.159	0.116	0.528	0.673	0.612	0.4031
0.5000	1.678	0.558	0.433	0.412	0.369	0.271	0.179	0.140	0.102	0.472	0.602	0.553	0.5039
0.6000	1.501	0.503	0.381	0.362	0.324	0.237	0.157	0.122	0.090	0.416	0.534	0.488	0.6047
0.7000	1.325	0.455	0.335	0.318	0.285	0.208	0.139	0.108	0.080	0.370	0.475	0.430	0.7055
0.8000	1.169	0.410	0.297	0.283	0.253	0.185	0.125	0.098	0.073	0.331	0.426	0.381	0.8062
0.9000	1.039	0.370	0.265	0.253	0.225	0.166	0.113	0.089	0.066	0.300	0.384	0.340	0.9070
1.0000	0.938	0.339	0.242	0.230	0.205	0.152	0.104	0.083	0.062	0.274	0.351	0.308	1.0078
1.2500	0.753	0.282	0.201	0.192	0.170	0.128	0.090	0.072	0.055	0.227	0.288	0.254	1.2597
1.6000	0.583	0.228	0.165	0.158	0.141	0.108	0.077	0.063	0.049	0.184	0.230	0.205	1.6125
2.0000	0.460	0.188	0.140	0.133	0.120	0.093	0.068	0.056	0.044	0.153	0.189	0.169	2.0156
2.5000	0.359	0.154	0.118	0.112	0.103	0.082	0.061	0.051	0.040	0.128	0.155	0.140	2.5195
3.2000	0.278	0.124	0.098	0.094	0.087	0.070	0.053	0.045	0.036	0.105	0.125	0.114	3.2250
4.0000	0.223	0.101	0.082	0.079	0.074	0.061	0.047	0.039	0.032	0.088	0.104	0.095	4.0312
5.0000	0.182	0.083	0.069	0.067	0.063	0.052	0.040	0.034	0.028	0.074	0.087	0.079	5.0390
6.0000	0.155	0.071	0.060	0.058	0.055	0.046	0.036	0.030	0.025	0.064	0.075	0.069	6.0468
7.0000	0.137	0.062	0.053	0.051	0.049	0.041	0.032	0.027	0.023	0.057	0.066	0.061	7.0546
8.0000	0.122	0.055	0.048	0.046	0.044	0.037	0.029	0.025	0.021	0.051	0.060	0.055	8.0624
9.0000	0.111	0.050	0.044	0.042	0.040	0.034	0.027	0.023	0.019	0.047	0.054	0.050	9.0702
10.0000	0.102	0.046	0.040	0.039	0.037	0.031	0.025	0.021	0.018	0.043	0.050	0.046	10.078
11.0000	0.094	0.043	0.038	0.036	0.034	0.029	0.023	0.020	0.017	0.040	0.046	0.043	11.086
12.0000	0.087	0.040	0.035	0.034	0.032	0.027	0.022	0.019	0.016	0.037	0.043	0.040	12.094

$^1_1$H IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=1 MEV
0.0125	0.059	0.070	0.102	0.158	0.193	0.216	0.231	0.246	0.373	0.421	0.449	0.491	0.0126
0.0160	0.068	0.082	0.118	0.181	0.222	0.247	0.265	0.283	0.430	0.488	0.521	0.575	0.0161
0.0200	0.078	0.093	0.134	0.205	0.251	0.279	0.300	0.320	0.489	0.556	0.595	0.661	0.0202
0.0250	0.089	0.106	0.151	0.231	0.283	0.315	0.338	0.362	0.554	0.632	0.678	0.757	0.0252
0.0320	0.102	0.122	0.173	0.264	0.323	0.360	0.386	0.414	0.635	0.727	0.781	0.877	0.0322
0.0400	0.116	0.139	0.196	0.298	0.365	0.406	0.436	0.468	0.719	0.824	0.886	0.999	0.0403
0.0500	0.132	0.158	0.222	0.337	0.413	0.458	0.493	0.529	0.815	0.935	1.006	1.139	0.0504
0.0600	0.147	0.175	0.246	0.374	0.458	0.507	0.546	0.586	0.905	1.038	1.117	1.268	0.0605
0.0700	0.161	0.193	0.270	0.409	0.500	0.554	0.597	0.641	0.990	1.136	1.223	1.391	0.0705
0.0800	0.175	0.209	0.293	0.443	0.541	0.600	0.646	0.694	1.072	1.230	1.324	1.509	0.0806
0.0900	0.190	0.226	0.316	0.476	0.582	0.644	0.694	0.746	1.152	1.321	1.423	1.623	0.0907
0.1000	0.204	0.242	0.339	0.510	0.622	0.688	0.742	0.797	1.230	1.410	1.519	1.734	0.1008
0.1250	0.240	0.281	0.397	0.592	0.721	0.798	0.861	0.924	1.421	1.629	1.754	2.006	0.1260
0.1600	0.293	0.337	0.480	0.709	0.861	0.952	1.029	1.103	1.686	1.931	2.077	2.378	0.1612
0.2000	0.357	0.402	0.580	0.848	1.025	1.133	1.227	1.314	1.993	2.280	2.448	2.804	0.2016
0.2500	0.444	0.486	0.714	1.031	1.241	1.371	1.486	1.591	2.389	2.728	2.926	3.351	0.2519
0.3200	0.580	0.614	0.919	1.306	1.564	1.726	1.874	2.006	2.973	3.387	3.628	4.151	0.3225
0.4000	0.756	0.774	1.179	1.649	1.964	2.164	2.355	2.520	3.685	4.188	4.481	5.122	0.4031
0.5000	1.007	0.998	1.542	2.122	2.511	2.761	3.010	3.222	4.642	5.262	5.624	6.422	0.5039
0.6000	1.293	1.253	1.947	2.642	3.110	3.412	3.727	3.992	5.676	6.421	6.855	7.814	0.6047
0.7000	1.615	1.539	2.394	3.210	3.761	4.119	4.506	4.828	6.789	7.666	8.174	9.301	0.7055
0.8000	1.971	1.857	2.881	3.824	4.461	4.877	5.344	5.726	7.976	8.990	9.577	10.881	0.8062
0.9000	2.359	2.207	3.405	4.480	5.207	5.682	6.235	6.684	9.230	10.385	11.054	12.541	0.9070
1.0000	2.780	2.589	3.967	5.177	5.997	6.533	7.178	7.697	10.546	11.848	12.602	14.275	1.0078
1.2500	3.967	3.685	5.524	7.088	8.153	8.851	9.746	10.461	14.095	15.789	16.769	18.935	1.2597
1.6000	5.944	5.552	8.056	10.148	11.584	12.529	13.827	14.869	19.647	21.933	23.269	26.189	1.6125
2.0000	8.643	8.132	11.435	14.165	16.068	17.317	19.155	20.629	26.796	29.798	31.589	35.443	2.0156
2.5000	12.661	11.975	16.361	19.938	22.471	24.137	26.772	28.843	36.865	40.850	43.256	48.349	2.5195
3.2000	19.456	18.433	24.518	29.373	32.867	35.196	39.120	42.169	52.948	58.480	61.830	68.810	3.2250
4.0000	28.827	27.268	35.569	42.008	46.704	49.898	55.475	59.875	74.010	81.494	86.028	95.428	4.0312
5.0000	42.846	40.387	51.855	60.461	66.794	71.210	79.124	85.476	104.075	114.385	120.447	133.199	5.0390
6.0000	59.307	55.720	70.767	81.732	89.870	95.609	106.176	114.724	138.207	151.568	159.272	175.591	6.0468
7.0000	78.125	73.180	92.199	105.704	115.830	122.961	136.444	147.441	176.200	192.816	202.300	222.377	7.0546
8.0000	99.234	92.701	116.062	132.276	144.562	153.185	169.769	183.485	217.769	237.963	249.315	273.414	8.0624
9.0000	122.542	114.237	142.282	161.361	175.962	186.185	206.058	222.734	262.856	286.831	300.174	328.493	9.0702
10.0000	147.989	137.754	170.795	192.866	209.966	221.870	245.277	265.037	311.387	339.290	354.688	387.461	10.078
11.0000	175.544	163.200	201.546	226.713	246.486	260.164	287.342	310.256	363.240	395.146	412.594	450.213	11.086
12.0000	205.152	190.534	234.483	262.868	285.442	300.978	332.155	358.304	418.272	454.277	473.872	516.684	12.094

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.022	0.056	0.089	0.095	0.109	0.174	0.292	0.403	0.562	0.068	0.052	0.067	0.0126
0.0160	0.026	0.065	0.104	0.111	0.126	0.200	0.334	0.463	0.651	0.080	0.061	0.079	0.0161
0.0200	0.030	0.076	0.119	0.127	0.144	0.227	0.377	0.522	0.739	0.092	0.070	0.091	0.0202
0.0250	0.035	0.088	0.136	0.146	0.165	0.256	0.423	0.585	0.829	0.105	0.081	0.105	0.0252
0.0320	0.041	0.104	0.159	0.169	0.191	0.292	0.478	0.659	0.933	0.122	0.094	0.123	0.0322
0.0400	0.048	0.122	0.182	0.194	0.218	0.327	0.533	0.730	1.033	0.139	0.107	0.142	0.0403
0.0500	0.056	0.144	0.210	0.223	0.249	0.367	0.592	0.807	1.139	0.159	0.123	0.164	0.0504
0.0600	0.063	0.166	0.237	0.251	0.279	0.403	0.645	0.875	1.232	0.178	0.138	0.185	0.0605
0.0700	0.070	0.186	0.263	0.277	0.306	0.436	0.694	0.937	1.316	0.196	0.152	0.206	0.0705
0.0800	0.077	0.206	0.287	0.302	0.333	0.468	0.740	0.995	1.394	0.214	0.166	0.225	0.0806
0.0900	0.083	0.226	0.311	0.326	0.358	0.498	0.784	1.050	1.469	0.231	0.179	0.244	0.0907
0.1000	0.090	0.245	0.333	0.350	0.383	0.527	0.827	1.103	1.541	0.248	0.193	0.262	0.1008
0.1250	0.105	0.290	0.388	0.406	0.442	0.597	0.928	1.231	1.712	0.289	0.225	0.305	0.1260
0.1600	0.125	0.349	0.460	0.481	0.521	0.691	1.065	1.402	1.943	0.345	0.269	0.362	0.1612
0.2000	0.146	0.414	0.539	0.563	0.607	0.796	1.219	1.596	2.204	0.409	0.319	0.424	0.2016
0.2500	0.172	0.492	0.635	0.663	0.714	0.929	1.414	1.844	2.541	0.490	0.383	0.500	0.2519
0.3200	0.208	0.602	0.770	0.804	0.867	1.125	1.707	2.218	3.051	0.609	0.477	0.607	0.3225
0.4000	0.251	0.732	0.932	0.974	1.053	1.372	2.079	2.695	3.706	0.755	0.592	0.735	0.4031
0.5000	0.308	0.906	1.153	1.206	1.311	1.721	2.606	3.372	4.635	0.957	0.750	0.908	0.5039
0.6000	0.372	1.096	1.402	1.468	1.604	2.120	3.209	4.144	5.692	1.185	0.928	1.103	0.6047
0.7000	0.444	1.307	1.684	1.765	1.936	2.575	3.892	5.021	6.885	1.442	1.129	1.323	0.7055
0.8000	0.525	1.540	2.004	2.101	2.312	3.089	4.657	6.002	8.209	1.730	1.353	1.572	0.8062
0.9000	0.616	1.799	2.364	2.479	2.736	3.665	5.505	7.082	9.662	2.050	1.602	1.852	0.9070
1.0000	0.718	2.084	2.762	2.897	3.206	4.301	6.433	8.251	11.237	2.403	1.877	2.164	1.0078
1.2500	1.019	2.902	3.909	4.102	4.560	6.119	9.045	11.508	15.585	3.418	2.673	3.067	1.2597
1.6000	1.554	4.298	5.856	6.140	6.845	9.138	13.298	16.756	22.446	5.153	4.050	4.620	1.6125
2.0000	2.336	6.248	8.522	8.934	9.948	13.167	18.863	23.567	31.173	7.563	5.992	6.792	2.0156
2.5000	3.582	9.216	12.465	13.075	14.479	18.947	26.709	33.053	43.166	11.178	8.953	10.083	2.5195
3.2000	5.827	14.351	19.060	19.995	21.953	28.283	39.129	47.972	61.844	17.293	14.045	15.702	3.2250
4.0000	9.081	21.609	28.071	29.413	32.030	40.662	55.340	67.335	85.883	25.701	21.140	23.481	4.0312
5.0000	14.110	32.706	41.483	43.369	46.857	58.666	78.649	94.977	119.798	38.231	31.808	35.137	5.0390
6.0000	20.125	45.939	57.172	59.674	64.112	79.413	105.264	126.386	157.996	52.904	44.359	48.838	6.0468
7.0000	27.062	61.206	75.032	78.221	83.712	102.808	135.109	161.429	200.471	69.628	58.705	64.477	7.0546
8.0000	34.874	78.444	94.976	98.900	105.595	128.788	168.137	200.041	247.074	88.323	74.781	81.953	8.0624
9.0000	43.542	97.563	116.955	121.671	129.683	157.304	204.352	242.228	297.738	108.953	92.552	101.233	9.0702
10.0000	53.047	118.429	140.896	146.465	155.891	188.297	243.626	287.921	352.412	131.476	111.983	122.269	10.078
11.0000	63.367	140.982	166.715	173.205	184.154	221.721	285.865	337.042	411.094	155.833	133.023	144.996	11.086
12.0000	74.495	165.192	194.371	201.846	214.428	257.523	330.985	389.490	473.713	181.985	155.646	169.377	12.094

$^{4}_{2}He$ IONS

ENERGY PER MASS UNIT	ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)												ENERGY FOR A=4
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.877	0.726	0.532	0.354	0.287	0.261	0.241	0.223	0.142	0.121	0.112	0.096	0.0500
0.0160	0.993	0.821	0.602	0.400	0.325	0.295	0.273	0.253	0.161	0.137	0.126	0.108	0.0640
0.0200	1.110	0.918	0.673	0.447	0.363	0.330	0.305	0.282	0.180	0.154	0.141	0.121	0.0801
0.0250	1.241	1.026	0.752	0.500	0.406	0.368	0.341	0.316	0.201	0.172	0.158	0.135	0.1001
0.0320	1.403	1.163	0.852	0.566	0.461	0.419	0.387	0.358	0.227	0.195	0.180	0.154	0.1281
0.0400	1.554	1.294	0.945	0.631	0.514	0.469	0.432	0.400	0.254	0.219	0.201	0.173	0.1601
0.0500	1.704	1.428	1.040	0.697	0.571	0.520	0.479	0.444	0.282	0.245	0.226	0.194	0.2001
0.0600	1.819	1.539	1.115	0.751	0.617	0.561	0.518	0.480	0.308	0.267	0.247	0.212	0.2402
0.0700	1.906	1.631	1.173	0.795	0.657	0.596	0.551	0.511	0.328	0.287	0.266	0.229	0.2802
0.0800	1.972	1.709	1.219	0.832	0.689	0.624	0.576	0.536	0.347	0.305	0.282	0.243	0.3202
0.0900	2.020	1.773	1.254	0.863	0.715	0.649	0.598	0.557	0.365	0.319	0.296	0.255	0.3602
0.1000	2.054	1.827	1.280	0.887	0.737	0.668	0.614	0.575	0.379	0.332	0.307	0.265	0.4003
0.1250	2.094	1.932	1.317	0.927	0.774	0.702	0.645	0.604	0.405	0.354	0.331	0.286	0.5003
0.1600	2.077	2.018	1.323	0.948	0.797	0.723	0.663	0.622	0.424	0.372	0.349	0.304	0.6404
0.2000	2.010	2.040	1.299	0.944	0.799	0.723	0.664	0.622	0.431	0.380	0.357	0.312	0.8005
0.2500	1.901	1.999	1.248	0.922	0.784	0.711	0.651	0.610	0.431	0.381	0.357	0.312	1.0007
0.3200	1.745	1.896	1.170	0.881	0.752	0.686	0.626	0.585	0.419	0.372	0.349	0.307	1.2808
0.4000	1.587	1.762	1.086	0.827	0.712	0.651	0.594	0.555	0.404	0.359	0.338	0.296	1.6010
0.5000	1.424	1.601	0.996	0.770	0.667	0.613	0.558	0.520	0.384	0.343	0.322	0.284	2.0013
0.6000	1.268	1.428	0.904	0.708	0.617	0.568	0.515	0.480	0.359	0.321	0.302	0.269	2.4016
0.7000	1.148	1.288	0.832	0.657	0.575	0.530	0.480	0.448	0.338	0.302	0.285	0.253	2.8018
0.8000	1.050	1.171	0.773	0.616	0.541	0.500	0.452	0.422	0.320	0.288	0.271	0.241	3.2021
0.9000	0.972	1.074	0.724	0.581	0.512	0.475	0.429	0.399	0.306	0.275	0.260	0.232	3.6023
1.0000	0.905	0.991	0.682	0.552	0.487	0.457	0.409	0.380	0.293	0.264	0.250	0.223	4.0026
1.2500	0.775	0.830	0.598	0.490	0.436	0.407	0.366	0.340	0.267	0.241	0.228	0.204	5.0033
1.6000	0.649	0.680	0.512	0.428	0.382	0.357	0.322	0.297	0.238	0.216	0.204	0.183	6.4042
2.0000	0.548	0.572	0.442	0.374	0.336	0.316	0.283	0.262	0.212	0.194	0.183	0.165	8.0052
2.5000	0.459	0.481	0.379	0.325	0.294	0.277	0.247	0.230	0.189	0.172	0.163	0.148	10.007
3.2000	0.378	0.399	0.318	0.276	0.252	0.237	0.212	0.196	0.164	0.150	0.142	0.129	12.808
4.0000	0.316	0.336	0.270	0.237	0.217	0.205	0.184	0.170	0.144	0.132	0.125	0.114	16.010
5.0000	0.264	0.283	0.229	0.203	0.187	0.176	0.159	0.147	0.126	0.115	0.110	0.100	20.013
6.0000	0.228	0.246	0.200	0.178	0.164	0.156	0.141	0.130	0.111	0.103	0.098	0.090	24.016
7.0000	0.202	0.218	0.178	0.159	0.147	0.140	0.127	0.117	0.101	0.093	0.089	0.082	28.018
8.0000	0.181	0.196	0.161	0.145	0.134	0.127	0.116	0.107	0.093	0.086	0.082	0.076	32.021
9.0000	0.165	0.179	0.147	0.133	0.123	0.117	0.107	0.099	0.086	0.080	0.076	0.071	36.023
10.0000	0.152	0.165	0.136	0.123	0.114	0.109	0.099	0.092	0.080	0.074	0.072	0.066	40.026
11.0000	0.141	0.153	0.127	0.115	0.107	0.102	0.093	0.086	0.075	0.070	0.068	0.062	44.029
12.0000	0.132	0.143	0.118	0.108	0.100	0.096	0.087	0.082	0.071	0.066	0.064	0.059	48.031

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	1.994	0.851	0.564	0.530	0.471	0.311	0.190	0.135	0.089	0.713	0.907	0.692	0.0500
0.0160	2.214	0.934	0.627	0.590	0.525	0.354	0.220	0.156	0.104	0.802	1.020	0.771	0.0640
0.0200	2.408	0.989	0.684	0.644	0.576	0.400	0.250	0.182	0.121	0.889	1.131	0.840	0.0801
0.0250	2.617	1.038	0.746	0.703	0.636	0.456	0.292	0.213	0.154	0.985	1.254	0.916	0.1001
0.0320	2.904	1.102	0.817	0.777	0.710	0.532	0.346	0.261	0.181	1.107	1.412	1.013	0.1281
0.0400	3.167	1.152	0.882	0.849	0.782	0.611	0.405	0.310	0.220	1.224	1.562	1.106	0.1601
0.0500	3.442	1.211	0.956	0.930	0.865	0.698	0.470	0.366	0.265	1.346	1.716	1.208	0.2001
0.0600	3.723	1.274	1.033	0.999	0.944	0.777	0.528	0.416	0.305	1.450	1.851	1.302	0.2402
0.0700	3.977	1.347	1.103	1.071	1.016	0.847	0.577	0.459	0.339	1.542	1.966	1.394	0.2802
0.0800	4.229	1.420	1.171	1.138	1.084	0.910	0.624	0.497	0.369	1.623	2.068	1.482	0.3202
0.0900	4.451	1.493	1.235	1.204	1.146	0.967	0.665	0.532	0.394	1.695	2.155	1.565	0.3602
0.1000	4.685	1.572	1.303	1.262	1.201	1.018	0.703	0.559	0.415	1.757	2.235	1.642	0.4003
0.1250	5.227	1.745	1.442	1.389	1.327	1.121	0.772	0.615	0.457	1.888	2.403	1.816	0.5003
0.1600	5.863	1.955	1.604	1.546	1.466	1.222	0.838	0.667	0.495	2.021	2.568	2.025	0.6404
0.2000	6.376	2.117	1.734	1.665	1.574	1.279	0.870	0.691	0.510	2.096	2.660	2.188	0.8005
0.2500	6.764	2.239	1.816	1.748	1.632	1.290	0.872	0.684	0.503	2.114	2.679	2.306	1.0007
0.3200	6.947	2.268	1.844	1.760	1.610	1.234	0.823	0.642	0.469	2.061	2.617	2.337	1.2808
0.4000	6.775	2.237	1.776	1.688	1.529	1.141	0.755	0.587	0.428	1.947	2.479	2.254	1.6010
0.5000	6.355	2.112	1.640	1.561	1.396	1.027	0.677	0.529	0.385	1.786	2.280	2.094	2.0013
0.6000	5.742	1.926	1.458	1.385	1.238	0.905	0.600	0.468	0.343	1.593	2.044	1.869	2.4016
0.7000	5.110	1.756	1.292	1.227	1.098	0.802	0.537	0.418	0.309	1.427	1.834	1.659	2.8018
0.8000	4.540	1.593	1.152	1.098	0.982	0.718	0.486	0.379	0.282	1.287	1.652	1.480	3.2021
0.9000	4.056	1.446	1.036	0.987	0.878	0.647	0.442	0.349	0.259	1.170	1.500	1.328	3.6023
1.0000	3.676	1.329	0.949	0.900	0.802	0.594	0.409	0.326	0.242	1.073	1.374	1.209	4.0026
1.2500	2.971	1.113	0.792	0.756	0.672	0.504	0.354	0.286	0.216	0.895	1.137	1.003	5.0033
1.6000	2.316	0.907	0.655	0.626	0.561	0.428	0.307	0.250	0.193	0.730	0.914	0.814	6.4042
2.0000	1.830	0.750	0.556	0.530	0.479	0.372	0.272	0.223	0.175	0.610	0.751	0.674	8.0052
2.5000	1.432	0.616	0.470	0.447	0.413	0.327	0.242	0.202	0.161	0.510	0.617	0.557	10.007
3.2000	1.112	0.494	0.392	0.374	0.347	0.281	0.214	0.178	0.143	0.420	0.501	0.456	12.808
4.0000	0.891	0.403	0.329	0.316	0.297	0.243	0.186	0.157	0.127	0.352	0.415	0.380	16.010
5.0000	0.728	0.331	0.277	0.266	0.251	0.208	0.162	0.137	0.112	0.296	0.347	0.318	20.013
6.0000	0.621	0.282	0.240	0.231	0.219	0.183	0.143	0.121	0.100	0.256	0.299	0.274	24.016
7.0000	0.546	0.248	0.213	0.206	0.194	0.163	0.128	0.110	0.091	0.228	0.265	0.243	28.018
8.0000	0.489	0.221	0.192	0.186	0.175	0.148	0.116	0.100	0.083	0.205	0.238	0.219	32.021
9.0000	0.443	0.201	0.175	0.169	0.160	0.135	0.107	0.092	0.077	0.187	0.217	0.200	36.023
10.0000	0.407	0.186	0.162	0.156	0.148	0.125	0.099	0.085	0.071	0.172	0.199	0.184	40.026
11.0000	0.376	0.172	0.151	0.146	0.138	0.116	0.092	0.079	0.066	0.160	0.185	0.171	44.029
12.0000	0.350	0.161	0.141	0.136	0.129	0.109	0.087	0.075	0.062	0.149	0.172	0.160	48.031

$^{4}_{2}$He IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=4 MEV
0.0125	0.085	0.099	0.142	0.219	0.267	0.307	0.337	0.371	0.583	0.685	0.746	0.874	0.0500
0.0160	0.100	0.117	0.166	0.255	0.310	0.356	0.390	0.428	0.673	0.790	0.860	1.007	0.0640
0.0200	0.114	0.135	0.190	0.292	0.356	0.406	0.444	0.487	0.764	0.897	0.976	1.143	0.0801
0.0250	0.131	0.155	0.218	0.333	0.406	0.462	0.505	0.552	0.867	1.017	1.107	1.296	0.1001
0.0320	0.152	0.180	0.252	0.385	0.470	0.532	0.580	0.634	0.996	1.167	1.269	1.486	0.1281
0.0400	0.174	0.206	0.288	0.438	0.534	0.603	0.658	0.718	1.127	1.320	1.435	1.679	0.1601
0.0500	0.198	0.235	0.327	0.498	0.607	0.684	0.745	0.812	1.275	1.490	1.620	1.895	0.2001
0.0600	0.221	0.262	0.365	0.553	0.674	0.758	0.825	0.898	1.410	1.645	1.788	2.090	0.2402
0.0700	0.243	0.287	0.400	0.604	0.737	0.827	0.900	0.979	1.535	1.789	1.944	2.271	0.2802
0.0800	0.263	0.311	0.433	0.654	0.796	0.892	0.971	1.055	1.654	1.924	2.090	2.441	0.3202
0.0900	0.283	0.334	0.465	0.701	0.853	0.955	1.039	1.128	1.766	2.053	2.229	2.602	0.3602
0.1000	0.303	0.356	0.497	0.747	0.908	1.016	1.105	1.199	1.874	2.176	2.362	2.756	0.4003
0.1250	0.351	0.409	0.574	0.857	1.041	1.162	1.263	1.369	2.129	2.467	2.675	3.118	0.5003
0.1600	0.418	0.480	0.680	1.006	1.218	1.358	1.477	1.597	2.466	2.852	3.086	3.591	0.6404
0.2000	0.496	0.559	0.802	1.175	1.419	1.579	1.718	1.854	2.840	3.277	3.539	4.110	0.8005
0.2500	0.599	0.658	0.959	1.389	1.672	1.858	2.022	2.178	3.304	3.802	4.099	4.751	1.0007
0.3200	0.752	0.802	1.191	1.700	2.036	2.259	2.461	2.647	3.964	4.547	4.892	5.656	1.2808
0.4000	0.945	0.977	1.475	2.075	2.474	2.738	2.986	3.209	4.743	5.423	5.825	6.718	1.6010
0.5000	1.211	1.216	1.860	2.577	3.055	3.372	3.682	3.955	5.759	6.564	7.039	8.099	2.0013
0.6000	1.510	1.481	2.283	3.120	3.680	4.052	4.430	4.758	6.838	7.773	8.323	9.551	2.4016
0.7000	1.842	1.777	2.745	3.708	4.353	4.782	5.236	5.622	7.989	9.060	9.687	11.088	2.8018
0.8000	2.207	2.103	3.244	4.337	5.072	5.560	6.095	6.544	9.207	10.418	11.126	12.709	3.2021
0.9000	2.604	2.460	3.779	5.006	5.833	6.381	7.004	7.521	10.485	11.842	12.633	14.402	3.6023
1.0000	3.031	2.848	4.349	5.714	6.635	7.245	7.961	8.549	11.821	13.328	14.205	16.164	4.0026
1.2500	4.228	3.955	5.920	7.642	8.811	9.584	10.553	11.339	15.403	17.304	18.411	20.866	5.0033
1.6000	6.211	5.826	8.460	10.711	12.251	13.272	14.645	15.759	20.971	23.466	24.929	28.141	6.4042
2.0000	8.906	8.403	11.835	14.723	16.729	18.054	19.967	21.512	28.111	31.320	33.237	37.383	8.0052
2.5000	12.910	12.232	16.742	20.475	23.109	24.850	27.556	29.696	38.143	42.332	44.862	50.241	10.007
3.2000	19.669	18.656	24.857	29.860	33.450	35.850	39.838	42.951	54.141	59.869	63.338	70.594	12.808
4.0000	28.981	27.434	35.838	42.415	47.199	50.459	56.090	60.545	75.070	82.738	87.383	97.044	16.010
5.0000	42.903	40.463	52.011	60.740	67.151	71.624	79.576	85.969	104.928	115.401	121.564	134.555	20.013
6.0000	59.245	55.686	70.787	81.859	90.060	95.848	106.434	115.008	138.814	152.317	160.110	176.642	24.016
7.0000	77.926	73.019	92.063	105.656	115.831	123.000	136.481	147.486	176.530	193.264	202.825	223.087	28.018
8.0000	98.882	92.397	115.752	132.035	144.354	153.004	169.563	183.268	217.797	238.083	249.497	273.752	32.021
9.0000	122.021	113.778	141.783	160.909	175.528	185.766	205.590	222.233	262.558	286.598	299.989	328.433	36.023
10.0000	147.287	137.127	170.092	192.190	209.289	221.197	244.530	264.234	310.742	338.683	354.114	386.980	40.026
11.0000	174.648	162.394	200.627	225.799	245.552	259.221	286.299	309.135	362.231	394.145	411.613	449.291	44.029
12.0000	204.051	189.540	233.337	261.704	284.239	299.753	330.801	356.851	416.882	452.868	472.467	515.303	48.031

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.032	0.081	0.123	0.132	0.149	0.237	0.409	0.596	0.917	0.097	0.075	0.095	0.0500
0.0160	0.038	0.097	0.146	0.156	0.176	0.277	0.474	0.688	1.056	0.115	0.089	0.113	0.0640
0.0200	0.045	0.113	0.170	0.181	0.204	0.318	0.540	0.780	1.194	0.133	0.103	0.133	0.0801
0.0250	0.053	0.132	0.197	0.210	0.236	0.364	0.613	0.879	1.337	0.154	0.120	0.155	0.1001
0.0320	0.062	0.158	0.232	0.247	0.277	0.420	0.699	0.996	1.501	0.180	0.140	0.183	0.1281
0.0400	0.073	0.186	0.269	0.286	0.319	0.475	0.783	1.107	1.659	0.207	0.162	0.213	0.1601
0.0500	0.085	0.219	0.312	0.330	0.367	0.536	0.874	1.225	1.822	0.238	0.186	0.247	0.2001
0.0600	0.096	0.251	0.352	0.371	0.411	0.590	0.954	1.327	1.963	0.267	0.208	0.279	0.2402
0.0700	0.106	0.282	0.390	0.410	0.452	0.639	1.027	1.419	2.087	0.294	0.229	0.309	0.2802
0.0800	0.116	0.311	0.425	0.446	0.490	0.685	1.093	1.503	2.200	0.319	0.249	0.336	0.3202
0.0900	0.125	0.338	0.458	0.480	0.526	0.727	1.156	1.580	2.305	0.343	0.268	0.363	0.3602
0.1000	0.134	0.364	0.490	0.513	0.560	0.768	1.214	1.654	2.404	0.366	0.286	0.388	0.4003
0.1250	0.154	0.425	0.563	0.588	0.639	0.861	1.350	1.824	2.633	0.421	0.329	0.445	0.5003
0.1600	0.179	0.500	0.654	0.684	0.739	0.981	1.523	2.042	2.927	0.493	0.386	0.518	0.6404
0.2000	0.206	0.579	0.750	0.783	0.844	1.109	1.711	2.278	3.245	0.570	0.447	0.594	0.8005
0.2500	0.236	0.671	0.863	0.900	0.969	1.264	1.940	2.569	3.640	0.665	0.522	0.683	1.0007
0.3200	0.277	0.795	1.016	1.060	1.142	1.486	2.271	2.991	4.217	0.799	0.627	0.804	1.2808
0.4000	0.323	0.937	1.193	1.246	1.346	1.756	2.677	3.513	4.932	0.959	0.753	0.943	1.6010
0.5000	0.385	1.121	1.428	1.493	1.620	2.126	3.238	4.232	5.919	1.174	0.922	1.128	2.0013
0.6000	0.451	1.320	1.687	1.765	1.925	2.542	3.867	5.038	7.022	1.412	1.107	1.330	2.4016
0.7000	0.525	1.538	1.979	2.073	2.269	3.013	4.573	5.944	8.255	1.678	1.314	1.558	2.8018
0.8000	0.608	1.778	2.308	2.418	2.655	3.541	5.357	6.951	9.614	1.973	1.545	1.814	3.2021
0.9000	0.701	2.042	2.674	2.803	3.087	4.128	6.222	8.052	11.096	2.300	1.799	2.099	3.6023
1.0000	0.805	2.331	3.079	3.227	3.564	4.774	7.164	9.239	12.695	2.658	2.078	2.416	4.0026
1.2500	1.109	3.156	4.236	4.444	4.931	6.608	9.801	12.526	17.083	3.682	2.881	3.328	5.0033
1.6000	1.645	4.556	6.189	6.487	7.222	9.636	14.065	17.789	23.963	5.422	4.262	4.885	6.4042
2.0000	2.426	6.504	8.851	9.277	10.321	13.660	19.623	24.590	32.679	7.829	6.201	7.054	8.0052
2.5000	3.668	9.461	12.779	13.403	14.836	19.419	27.441	34.042	44.628	11.431	9.151	10.333	10.007
3.2000	5.900	14.568	19.340	20.286	22.270	28.705	39.795	48.882	63.208	17.513	14.216	15.922	12.808
4.0000	9.134	21.781	28.294	29.645	32.283	41.006	55.903	68.123	87.095	25.868	21.267	23.652	16.010
5.0000	14.129	32.801	41.613	43.505	47.007	58.885	79.051	95.574	120.776	38.311	31.861	35.228	20.013
6.0000	20.100	45.939	57.189	59.692	64.139	79.483	105.475	126.758	158.699	52.879	44.322	48.830	24.016
7.0000	26.987	61.095	74.919	78.105	83.596	102.708	135.103	161.546	200.864	69.481	58.564	64.355	28.018
8.0000	34.742	78.207	94.718	98.633	105.319	128.499	167.891	199.876	247.128	88.040	74.522	81.703	32.021
9.0000	43.347	97.188	116.539	121.239	129.234	156.809	203.844	241.758	297.426	108.521	92.165	100.844	36.023
10.0000	52.785	117.905	140.308	145.857	155.254	187.581	242.838	287.126	351.710	130.883	111.457	121.730	40.026
11.0000	63.031	140.299	165.946	172.408	183.319	220.770	284.780	335.901	409.980	155.069	132.350	144.298	44.029
12.0000	74.083	164.342	193.410	200.852	213.383	256.324	329.587	387.987	472.165	181.040	154.816	168.510	48.031

$^{7}_{3}$Li IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=7 MEV
0.0125	1.355	1.121	0.821	0.546	0.444	0.402	0.373	0.345	0.219	0.188	0.172	0.148	0.0877
0.0160	1.533	1.268	0.929	0.618	0.502	0.455	0.422	0.390	0.248	0.212	0.195	0.167	0.1123
0.0200	1.714	1.418	1.039	0.691	0.561	0.509	0.472	0.436	0.277	0.237	0.218	0.187	0.1403
0.0250	1.917	1.586	1.162	0.772	0.627	0.569	0.527	0.488	0.310	0.265	0.245	0.209	0.1754
0.0320	2.167	1.796	1.315	0.874	0.711	0.647	0.597	0.552	0.351	0.301	0.277	0.238	0.2245
0.0400	2.407	2.004	1.464	0.976	0.796	0.726	0.669	0.619	0.394	0.339	0.312	0.268	0.2806
0.0500	2.654	2.224	1.620	1.085	0.889	0.810	0.747	0.692	0.439	0.382	0.352	0.302	0.3508
0.0600	2.854	2.415	1.749	1.179	0.969	0.880	0.813	0.754	0.483	0.420	0.387	0.333	0.4210
0.0700	3.015	2.579	1.856	1.258	1.039	0.943	0.872	0.809	0.520	0.455	0.421	0.362	0.4911
0.0800	3.144	2.724	1.943	1.327	1.098	0.995	0.919	0.855	0.554	0.486	0.449	0.387	0.5613
0.0900	3.244	2.847	2.014	1.385	1.148	1.043	0.960	0.894	0.586	0.512	0.475	0.410	0.6314
0.1000	3.322	2.954	2.070	1.435	1.192	1.081	0.994	0.929	0.613	0.536	0.497	0.428	0.7016
0.1250	3.437	3.171	2.162	1.522	1.271	1.152	1.059	0.992	0.665	0.581	0.544	0.470	0.8770
0.1600	3.467	3.370	2.210	1.582	1.330	1.206	1.107	1.038	0.707	0.621	0.582	0.508	1.1226
0.2000	3.412	3.463	2.204	1.602	1.355	1.228	1.126	1.056	0.732	0.646	0.606	0.529	1.4032
0.2500	3.290	3.460	2.160	1.596	1.356	1.231	1.128	1.056	0.745	0.659	0.618	0.540	1.7540
0.3200	3.103	3.371	2.080	1.566	1.337	1.221	1.113	1.040	0.745	0.661	0.621	0.546	2.2451
0.4000	2.908	3.229	1.989	1.516	1.305	1.194	1.088	1.017	0.740	0.658	0.619	0.543	2.8064
0.5000	2.703	3.037	1.890	1.461	1.266	1.162	1.058	0.987	0.730	0.650	0.611	0.539	3.5080
0.6000	2.497	2.812	1.781	1.395	1.215	1.118	1.015	0.946	0.707	0.632	0.596	0.529	4.2096
0.7000	2.321	2.605	1.683	1.329	1.163	1.072	0.971	0.905	0.683	0.611	0.577	0.512	4.9112
0.8000	2.164	2.413	1.594	1.270	1.114	1.031	0.932	0.869	0.660	0.593	0.559	0.497	5.6128
0.9000	2.031	2.244	1.513	1.214	1.070	0.993	0.896	0.834	0.640	0.575	0.543	0.484	6.3144
1.0000	1.911	2.092	1.440	1.165	1.028	0.955	0.863	0.802	0.619	0.557	0.527	0.471	7.0160
1.2500	1.665	1.784	1.284	1.053	0.937	0.873	0.787	0.731	0.574	0.517	0.489	0.438	8.7700
1.6000	1.412	1.480	1.116	0.932	0.832	0.778	0.701	0.647	0.519	0.470	0.444	0.398	11.226
2.0000	1.204	1.257	0.972	0.823	0.740	0.694	0.622	0.576	0.467	0.426	0.402	0.363	14.032
2.5000	1.019	1.067	0.840	0.721	0.653	0.613	0.548	0.509	0.418	0.380	0.361	0.328	17.540
3.2000	0.843	0.890	0.709	0.617	0.561	0.528	0.474	0.438	0.366	0.335	0.318	0.289	22.451
4.0000	0.708	0.754	0.605	0.532	0.487	0.458	0.413	0.381	0.322	0.295	0.281	0.256	28.064
5.0000	0.593	0.636	0.514	0.455	0.419	0.396	0.357	0.330	0.283	0.258	0.247	0.226	35.080
6.0000	0.513	0.552	0.449	0.400	0.369	0.350	0.316	0.292	0.250	0.231	0.221	0.203	42.096
7.0000	0.453	0.489	0.400	0.358	0.331	0.314	0.284	0.263	0.228	0.209	0.201	0.185	49.112
8.0000	0.407	0.440	0.361	0.325	0.301	0.286	0.260	0.240	0.209	0.192	0.185	0.170	56.128
9.0000	0.370	0.401	0.330	0.298	0.276	0.263	0.239	0.221	0.193	0.178	0.171	0.158	63.144
10.0000	0.340	0.368	0.304	0.276	0.256	0.244	0.222	0.206	0.179	0.166	0.160	0.148	70.160
11.0000	0.315	0.341	0.283	0.257	0.239	0.227	0.207	0.193	0.168	0.157	0.151	0.139	77.176
12.0000	0.293	0.318	0.264	0.241	0.224	0.214	0.195	0.182	0.159	0.148	0.143	0.132	84.192

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	3.080	1.314	0.871	0.818	0.727	0.480	0.294	0.209	0.138	1.101	1.401	1.069	0.0877
0.0160	3.420	1.442	0.969	0.912	0.810	0.547	0.339	0.242	0.160	1.239	1.576	1.190	0.1123
0.0200	3.719	1.527	1.057	0.995	0.890	0.618	0.385	0.281	0.188	1.373	1.746	1.298	0.1403
0.0250	4.042	1.604	1.152	1.086	0.983	0.705	0.451	0.329	0.238	1.522	1.936	1.415	0.1754
0.0320	4.483	1.701	1.261	1.200	1.097	0.822	0.534	0.402	0.280	1.709	2.180	1.565	0.2245
0.0400	4.904	1.783	1.366	1.315	1.211	0.946	0.627	0.480	0.341	1.896	2.418	1.713	0.2806
0.0500	5.362	1.886	1.489	1.448	1.348	1.087	0.732	0.570	0.413	2.096	2.673	1.882	0.3508
0.0600	5.842	1.999	1.621	1.567	1.481	1.219	0.829	0.652	0.479	2.275	2.905	2.043	0.4210
0.0700	6.290	2.130	1.744	1.694	1.607	1.340	0.913	0.726	0.536	2.438	3.110	2.204	0.4911
0.0800	6.742	2.263	1.867	1.815	1.727	1.451	0.995	0.793	0.589	2.588	3.297	2.363	0.5613
0.0900	7.148	2.398	1.983	1.933	1.840	1.552	1.067	0.854	0.632	2.722	3.461	2.513	0.6314
0.1000	7.576	2.542	2.107	2.041	1.942	1.646	1.136	0.905	0.671	2.842	3.614	2.656	0.7016
0.1250	8.581	2.864	2.367	2.280	2.179	1.839	1.267	1.009	0.750	3.100	3.945	2.981	0.8770
0.1600	9.788	3.263	2.678	2.581	2.448	2.039	1.399	1.114	0.826	3.374	4.286	3.381	1.1226
0.2000	10.822	3.593	2.942	2.826	2.671	2.171	1.477	1.173	0.866	3.557	4.514	3.714	1.4032
0.2500	11.707	3.875	3.143	3.026	2.825	2.233	1.510	1.184	0.870	3.659	4.638	3.992	1.7540
0.3200	12.353	4.032	3.280	3.130	2.864	2.194	1.464	1.142	0.834	3.664	4.654	4.155	2.2451
0.4000	12.413	4.098	3.255	3.093	2.801	2.091	1.383	1.076	0.784	3.567	4.542	4.130	2.8064
0.5000	12.058	4.007	3.113	2.962	2.650	1.949	1.285	1.004	0.731	3.389	4.326	3.973	3.5080
0.6000	11.310	3.794	2.871	2.729	2.438	1.783	1.183	0.923	0.675	3.138	4.027	3.681	4.2096
0.7000	10.332	3.551	2.612	2.482	2.221	1.622	1.085	0.845	0.624	2.886	3.709	3.354	4.9112
0.8000	9.356	3.283	2.373	2.263	2.023	1.479	1.001	0.781	0.580	2.652	3.404	3.051	5.6128
0.9000	8.474	3.020	2.164	2.063	1.834	1.353	0.923	0.729	0.542	2.444	3.134	2.775	6.3144
1.0000	7.762	2.807	2.003	1.901	1.693	1.254	0.864	0.688	0.511	2.265	2.902	2.552	7.0160
1.2500	6.382	2.390	1.701	1.624	1.443	1.082	0.760	0.614	0.464	1.922	2.441	2.153	8.7700
1.6000	5.043	1.975	1.426	1.363	1.221	0.932	0.668	0.543	0.421	1.590	1.989	1.772	11.226
2.0000	4.024	1.649	1.223	1.164	1.054	0.818	0.598	0.491	0.386	1.341	1.652	1.482	14.032
2.5000	3.175	1.365	1.042	0.992	0.915	0.724	0.537	0.448	0.356	1.130	1.368	1.235	17.540
3.2000	2.481	1.102	0.874	0.834	0.775	0.627	0.477	0.397	0.318	0.938	1.118	1.017	22.451
4.0000	1.996	0.902	0.738	0.708	0.665	0.544	0.417	0.351	0.284	0.790	0.931	0.851	28.064
5.0000	1.634	0.743	0.621	0.598	0.564	0.467	0.363	0.307	0.252	0.665	0.779	0.713	35.080
6.0000	1.396	0.635	.539	0.519	0.491	0.410	0.320	0.272	0.224	0.576	0.673	0.616	42.096
7.0000	1.227	0.557	0.479	0.461	0.436	0.367	0.288	0.246	0.203	0.511	0.595	0.547	49.112
8.0000	1.097	0.496	0.431	0.416	0.393	0.332	0.261	0.224	0.186	0.460	0.534	0.492	56.128
9.0000	0.993	0.451	0.393	0.379	0.359	0.303	0.239	0.206	0.172	0.418	0.485	0.448	63.144
10.0000	0.910	0.415	0.362	0.350	0.331	0.280	0.221	0.190	0.159	0.385	0.445	0.412	70.160
11.0000	0.839	0.385	0.337	0.325	0.307	0.260	0.206	0.177	0.148	0.356	0.412	0.382	77.176
12.0000	0.779	0.359	0.315	0.304	0.287	0.243	0.193	0.166	0.139	0.332	0.384	0.357	84.192

$^{7}_{3}Li$ IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=7
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.091	0.105	0.149	0.228	0.276	0.320	0.353	0.390	0.614	0.724	0.790	0.937	0.0877
0.0160	0.108	0.125	0.176	0.268	0.324	0.375	0.411	0.454	0.713	0.840	0.917	1.084	0.1123
0.0200	0.125	0.145	0.203	0.310	0.374	0.430	0.472	0.519	0.815	0.960	1.047	1.236	0.1403
0.0250	0.144	0.168	0.234	0.356	0.431	0.493	0.540	0.593	0.930	1.094	1.193	1.407	0.1754
0.0320	0.167	0.196	0.273	0.414	0.502	0.572	0.625	0.685	1.075	1.263	1.376	1.621	0.2245
0.0400	0.192	0.225	0.313	0.474	0.575	0.653	0.712	0.779	1.222	1.434	1.562	1.838	0.2806
0.0500	0.219	0.258	0.358	0.541	0.657	0.743	0.809	0.884	1.388	1.626	1.770	2.080	0.3508
0.0600	0.245	0.288	0.399	0.602	0.731	0.825	0.898	0.980	1.538	1.799	1.957	2.298	0.4210
0.0700	0.269	0.316	0.438	0.660	0.801	0.902	0.982	1.070	1.677	1.957	2.129	2.498	0.4911
0.0800	0.292	0.343	0.475	0.714	0.866	0.974	1.060	1.154	1.807	2.107	2.290	2.685	0.5613
0.0900	0.313	0.368	0.510	0.766	0.929	1.043	1.134	1.235	1.930	2.247	2.442	2.861	0.6314
0.1000	0.335	0.392	0.545	0.815	0.989	1.109	1.206	1.312	2.047	2.381	2.586	3.029	0.7016
0.1250	0.387	0.449	0.627	0.934	1.131	1.266	1.377	1.494	2.322	2.694	2.923	3.418	0.8770
0.1600	0.458	0.524	0.739	1.092	1.319	1.473	1.603	1.735	2.679	3.102	3.358	3.919	1.1226
0.2000	0.539	0.606	0.866	1.268	1.528	1.704	1.854	2.003	3.068	3.544	3.830	4.460	1.4032
0.2500	0.644	0.708	1.027	1.487	1.786	1.989	2.165	2.334	3.543	4.082	4.402	5.116	1.7540
0.3200	0.797	0.851	1.259	1.797	2.151	2.389	2.603	2.803	4.202	4.825	5.195	6.020	2.2451
0.4000	0.984	1.021	1.535	2.162	2.576	2.854	3.113	3.349	4.958	5.676	6.101	7.050	2.8064
0.5000	1.235	1.246	1.897	2.633	3.122	3.450	3.767	4.050	5.913	6.749	7.242	8.348	3.5080
0.6000	1.505	1.486	2.279	3.125	3.688	4.066	4.445	4.776	6.890	7.843	8.405	9.663	4.2096
0.7000	1.796	1.745	2.685	3.641	4.278	4.707	5.151	5.535	7.900	8.972	9.601	11.012	4.9112
0.8000	2.110	2.025	3.113	4.181	4.895	5.374	5.889	6.326	8.945	10.138	10.836	12.403	5.6128
0.9000	2.444	2.327	3.565	4.746	5.538	6.068	6.657	7.151	10.025	11.340	12.109	13.833	6.3144
1.0000	2.801	2.651	4.041	5.336	6.207	6.789	7.455	8.009	11.140	12.580	13.421	15.302	7.0160
1.2500	3.786	3.560	5.333	6.922	7.996	8.712	9.587	10.303	14.085	15.850	16.879	19.170	8.7700
1.6000	5.391	5.076	7.390	9.407	10.782	11.699	12.901	13.883	18.595	20.841	22.158	25.061	11.226
2.0000	7.549	7.139	10.092	12.620	14.368	15.528	17.162	18.489	24.312	27.129	28.811	32.461	14.032
2.5000	10.727	10.178	13.986	17.184	19.431	20.921	23.184	24.983	32.273	35.868	38.036	42.665	17.540
3.2000	16.050	15.237	20.377	24.576	27.575	29.584	32.858	35.424	44.873	49.681	52.588	58.696	22.451
4.0000	23.345	22.115	28.980	34.412	38.347	41.030	45.590	49.207	61.270	67.597	71.426	79.418	28.064
5.0000	34.219	32.291	41.612	48.725	53.931	57.561	63.935	69.066	84.591	93.110	98.124	108.717	35.080
6.0000	46.969	44.168	56.261	65.202	71.805	76.461	84.889	91.721	111.029	121.911	128.197	141.553	42.096
7.0000	61.546	57.693	72.863	83.772	91.915	97.648	108.335	117.065	140.460	153.864	161.529	177.795	49.112
8.0000	77.913	72.827	91.364	104.373	114.191	121.081	134.173	145.010	172.689	188.866	197.979	217.365	56.128
9.0000	96.006	89.546	111.719	126.952	138.567	146.699	162.344	175.480	207.690	226.803	237.462	260.122	63.144
10.0000	115.792	107.830	133.888	151.447	165.005	174.444	192.836	208.369	245.422	267.589	279.846	305.969	70.160
11.0000	137.251	127.647	157.836	177.806	193.446	204.266	225.596	243.585	285.804	311.088	324.942	354.839	77.176
12.0000	160.349	148.972	183.531	206.012	223.836	236.107	260.555	281.068	328.736	357.218	372.746	406.695	84.192

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.034	0.087	0.130	0.138	0.156	0.245	0.421	0.618	0.961	0.103	0.080	0.101	0.0877
0.0160	0.041	0.104	0.155	0.165	0.186	0.290	0.494	0.720	1.116	0.123	0.096	0.121	0.1123
0.0200	0.049	0.123	0.182	0.193	0.217	0.336	0.568	0.823	1.269	0.144	0.112	0.143	0.1403
0.0250	0.057	0.145	0.213	0.226	0.253	0.387	0.649	0.934	1.429	0.167	0.130	0.168	0.1754
0.0320	0.068	0.174	0.252	0.268	0.299	0.450	0.746	1.065	1.613	0.197	0.154	0.200	0.2245
0.0400	0.080	0.205	0.294	0.311	0.347	0.512	0.841	1.190	1.791	0.227	0.178	0.234	0.2806
0.0500	0.094	0.243	0.343	0.361	0.401	0.580	0.943	1.322	1.975	0.262	0.205	0.272	0.3508
0.0600	0.106	0.279	0.387	0.407	0.450	0.641	1.031	1.436	2.131	0.294	0.230	0.307	0.4210
0.0700	0.117	0.312	0.428	0.450	0.495	0.695	1.112	1.538	2.269	0.324	0.253	0.340	0.4911
0.0800	0.128	0.344	0.467	0.490	0.537	0.746	1.186	1.630	2.394	0.352	0.275	0.371	0.5613
0.0900	0.138	0.375	0.504	0.527	0.576	0.792	1.254	1.715	2.509	0.378	0.296	0.400	0.6314
0.1000	0.148	0.403	0.538	0.563	0.613	0.836	1.317	1.795	2.616	0.403	0.316	0.427	0.7016
0.1250	0.170	0.468	0.616	0.644	0.698	0.937	1.463	1.978	2.863	0.462	0.362	0.489	0.8770
0.1600	0.196	0.548	0.714	0.745	0.804	1.063	1.647	2.209	3.174	0.538	0.422	0.566	1.1226
0.2000	0.223	0.630	0.813	0.849	0.914	1.196	1.842	2.454	3.505	0.619	0.485	0.645	1.4032
0.2500	0.255	0.724	0.929	0.968	1.041	1.356	2.077	2.752	3.909	0.716	0.562	0.736	1.7540
0.3200	0.295	0.848	1.081	1.128	1.214	1.577	2.407	3.174	4.485	0.850	0.668	0.857	2.2451
0.4000	0.341	0.986	1.253	1.308	1.412	1.839	2.802	3.681	5.179	1.005	0.790	0.992	2.8064
0.5000	0.398	1.159	1.474	1.540	1.670	2.187	3.328	4.356	6.107	1.207	0.948	1.165	3.5080
0.6000	0.458	1.339	1.709	1.787	1.946	2.564	3.898	5.086	7.106	1.422	1.116	1.349	4.2096
0.7000	0.523	1.530	1.965	2.057	2.248	2.977	4.517	5.881	8.187	1.656	1.298	1.549	4.9112
0.8000	0.595	1.736	2.247	2.353	2.579	3.430	5.191	6.745	9.353	1.909	1.495	1.768	5.6128
0.9000	0.673	1.959	2.557	2.678	2.943	3.926	5.921	7.675	10.605	2.185	1.710	2.009	6.3144
1.0000	0.760	2.200	2.894	3.032	3.341	4.465	6.707	8.665	11.939	2.483	1.943	2.273	7.0160
1.2500	1.010	2.878	3.846	4.032	4.466	5.973	8.875	11.368	15.547	3.326	2.603	3.023	8.7700
1.6000	1.444	4.012	5.427	5.687	6.321	8.425	12.328	15.631	21.120	4.735	3.721	4.284	11.226
2.0000	2.069	5.572	7.558	7.921	8.802	11.647	16.779	21.076	28.099	6.662	5.274	6.021	14.032
2.5000	3.054	7.918	10.676	11.195	12.385	16.217	22.983	28.577	37.581	9.520	7.615	8.623	17.540
3.2000	4.813	11.941	15.843	16.617	18.240	23.531	32.713	40.266	52.215	14.311	11.604	13.025	22.451
4.0000	7.346	17.591	22.858	23.948	26.085	33.168	45.333	55.339	70.929	20.856	17.128	19.081	28.064
5.0000	11.247	26.198	33.261	34.774	37.585	47.133	63.413	76.781	97.236	30.575	25.403	28.122	35.080
6.0000	15.906	36.449	45.413	47.403	50.952	63.203	84.029	101.111	126.825	41.941	35.125	38.735	42.096
7.0000	21.280	48.275	59.249	61.771	66.134	81.327	107.149	128.256	159.727	54.896	46.238	50.849	49.112
8.0000	27.336	61.640	74.712	77.803	83.100	101.469	132.756	158.192	195.859	69.390	58.701	64.398	56.128
9.0000	34.066	76.482	91.774	95.480	101.800	123.606	160.869	190.942	235.189	85.406	72.497	79.365	63.144
10.0000	41.456	92.705	110.387	114.758	122.176	147.702	191.404	226.468	277.697	102.917	87.604	95.720	70.160
11.0000	49.492	110.269	130.495	135.582	144.187	173.733	224.299	264.722	323.398	121.886	103.990	113.420	77.176
12.0000	58.174	129.156	152.070	157.926	167.804	201.663	259.498	305.639	372.249	142.288	121.639	132.440	84.192

$^{9}_{4}Be$ IONS

ENERGY PER MASS UNIT	ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)												ENERGY FOR A=9
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	1.800	1.489	1.091	0.725	0.589	0.534	0.495	0.458	0.291	0.249	0.229	0.196	0.1127
0.0160	2.036	1.684	1.234	0.821	0.666	0.605	0.560	0.518	0.329	0.282	0.259	0.222	0.1442
0.0200	2.276	1.883	1.380	0.917	0.745	0.676	0.626	0.579	0.368	0.315	0.290	0.248	0.1802
0.0250	2.545	2.105	1.542	1.026	0.833	0.756	0.700	0.648	0.412	0.352	0.325	0.278	0.2253
0.0320	2.876	2.384	1.745	1.160	0.944	0.859	0.792	0.733	0.466	0.400	0.368	0.316	0.2884
0.0400	3.199	2.664	1.946	1.298	1.058	0.965	0.889	0.823	0.523	0.450	0.414	0.356	0.3605
0.0500	3.538	2.966	2.160	1.447	1.186	1.080	0.996	0.922	0.585	0.509	0.469	0.403	0.4506
0.0600	3.820	3.233	2.341	1.578	1.297	1.177	1.088	1.009	0.646	0.562	0.518	0.446	0.5407
0.0700	4.050	3.465	2.493	1.690	1.396	1.266	1.171	1.087	0.698	0.611	0.566	0.486	0.6309
0.0800	4.236	3.670	2.618	1.788	1.479	1.340	1.238	1.152	0.746	0.654	0.605	0.521	0.7210
0.0900	4.381	3.846	2.720	1.871	1.550	1.409	1.297	1.208	0.791	0.692	0.642	0.553	0.8111
0.1000	4.494	3.996	2.800	1.940	1.613	1.462	1.344	1.257	0.829	0.725	0.672	0.580	0.9012
0.1250	4.653	4.293	2.926	2.060	1.721	1.560	1.434	1.343	0.900	0.787	0.736	0.636	1.1265
0.1600	4.692	4.561	2.991	2.141	1.800	1.633	1.498	1.406	0.957	0.840	0.788	0.688	1.4420
0.2000	4.633	4.702	2.993	2.176	1.841	1.667	1.529	1.434	0.994	0.877	0.823	0.718	1.8024
0.2500	4.508	4.742	2.960	2.187	1.859	1.687	1.545	1.447	1.021	0.903	0.847	0.740	2.2530
0.3200	4.327	4.701	2.900	2.184	1.865	1.702	1.551	1.450	1.038	0.922	0.866	0.761	2.8839
0.4000	4.142	4.598	2.833	2.159	1.859	1.700	1.550	1.448	1.054	0.938	0.881	0.773	3.6049
0.5000	3.947	4.435	2.760	2.133	1.849	1.697	1.546	1.441	1.065	0.949	0.893	0.787	4.5061
0.6000	3.734	4.205	2.663	2.085	1.816	1.673	1.518	1.414	1.057	0.945	0.891	0.791	5.4073
0.7000	3.547	3.981	2.572	2.032	1.777	1.638	1.484	1.384	1.044	0.934	0.882	0.782	6.3085
0.8000	3.374	3.762	2.485	1.980	1.737	1.608	1.453	1.354	1.029	0.924	0.872	0.775	7.2098
0.9000	3.222	3.560	2.401	1.925	1.697	1.575	1.421	1.323	1.015	0.912	0.862	0.768	8.1110
1.0000	3.079	3.371	2.320	1.877	1.656	1.538	1.390	1.292	0.998	0.898	0.849	0.759	9.0122
1.2500	2.766	2.962	2.132	1.749	1.557	1.450	1.307	1.213	0.953	0.859	0.812	0.727	11.265
1.6000	2.410	2.526	1.904	1.590	1.420	1.327	1.195	1.104	0.885	0.801	0.758	0.680	14.420
2.0000	2.091	2.183	1.688	1.430	1.285	1.205	1.080	1.001	0.810	0.739	0.699	0.630	18.024
2.5000	1.789	1.875	1.475	1.267	1.146	1.077	0.963	0.894	0.735	0.668	0.634	0.575	22.530
3.2000	1.491	1.575	1.254	1.091	0.993	0.934	0.838	0.775	0.647	0.592	0.562	0.510	28.839
4.0000	1.256	1.337	1.073	0.943	0.864	0.814	0.733	0.676	0.572	0.524	0.499	0.454	36.049
5.0000	1.053	1.129	0.913	0.809	0.745	0.703	0.633	0.586	0.502	0.458	0.439	0.401	45.061
6.0000	0.912	0.980	0.797	0.711	0.656	0.622	0.561	0.519	0.445	0.410	0.393	0.361	54.073
7.0000	0.804	0.869	0.709	0.635	0.587	0.558	0.505	0.467	0.404	0.372	0.357	0.328	63.085
8.0000	0.721	0.781	0.640	0.576	0.533	0.507	0.461	0.426	0.370	0.341	0.328	0.302	72.098
9.0000	0.656	0.710	0.584	0.528	0.489	0.466	0.424	0.392	0.342	0.316	0.303	0.280	81.110
10.0000	0.602	0.651	0.538	0.488	0.452	0.431	0.392	0.364	0.318	0.295	0.284	0.262	90.122
11.0000	0.557	0.603	0.500	0.455	0.422	0.402	0.366	0.341	0.298	0.277	0.267	0.246	99.134
12.0000	0.519	0.562	0.467	0.426	0.395	0.378	0.344	0.321	0.281	0.261	0.252	0.232	108.15
MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	4.090	1.745	1.156	1.086	0.965	0.637	0.390	0.277	0.183	1.463	1.861	1.420	0.1127
0.0160	4.541	1.915	1.287	1.210	1.076	0.727	0.450	0.321	0.213	1.645	2.093	1.581	0.1442
0.0200	4.939	2.028	1.403	1.322	1.182	0.821	0.512	0.372	0.249	1.824	2.319	1.723	0.1802
0.0250	5.367	2.130	1.530	1.442	1.305	0.936	0.598	0.436	0.316	2.020	2.571	1.879	0.2253
0.0320	5.950	2.258	1.673	1.593	1.455	1.091	0.708	0.534	0.372	2.268	2.893	2.077	0.2884
0.0400	6.518	2.370	1.815	1.747	1.609	1.257	0.833	0.638	0.453	2.520	3.214	2.276	0.3605
0.0500	7.150	2.514	1.985	1.931	1.797	1.449	0.976	0.760	0.551	2.795	3.564	2.510	0.4506
0.0600	7.818	2.676	2.170	2.097	1.983	1.632	1.110	0.873	0.641	3.045	3.888	2.734	0.5407
0.0700	8.450	2.861	2.343	2.276	2.159	1.800	1.226	0.975	0.720	3.275	4.177	2.961	0.6309
0.0800	9.084	3.050	2.516	2.445	2.327	1.956	1.340	1.068	0.793	3.487	4.443	3.183	0.7210
0.0900	9.655	3.239	2.679	2.611	2.486	2.097	1.441	1.153	0.854	3.677	4.675	3.394	0.8111
0.1000	10.248	3.438	2.850	2.761	2.626	2.226	1.537	1.224	0.907	3.844	4.889	3.592	0.9012
0.1250	11.618	3.877	3.204	3.087	2.950	2.490	1.715	1.367	1.015	4.196	5.341	4.035	1.1265
0.1600	13.248	4.417	3.625	3.493	3.314	2.760	1.893	1.507	1.118	4.567	5.802	4.576	1.4420
0.2000	14.694	4.878	3.995	3.837	3.627	2.948	2.005	1.592	1.176	4.830	6.129	5.043	1.8024
0.2500	16.043	5.310	4.307	4.147	3.872	3.061	2.069	1.622	1.193	5.014	6.355	5.470	2.2530
0.3200	17.225	5.623	4.573	4.364	3.993	3.059	2.041	1.592	1.163	5.109	6.490	5.794	2.8839
0.4000	17.679	5.836	4.635	4.405	3.989	2.978	1.969	1.533	1.116	5.080	6.468	5.882	3.6049
0.5000	17.609	5.851	4.546	4.325	3.870	2.846	1.877	1.466	1.068	4.949	6.318	5.802	4.5061
0.6000	16.912	5.673	4.293	4.080	3.646	2.666	1.768	1.380	1.009	4.693	6.022	5.505	5.4073
0.7000	15.792	5.427	3.992	3.794	3.395	2.479	1.659	1.291	0.954	4.411	5.669	5.126	6.3085
0.8000	14.584	5.118	3.700	3.528	3.153	2.306	1.560	1.217	0.904	4.134	5.307	4.755	7.2098
0.9000	13.444	4.792	3.433	3.272	2.910	2.146	1.464	1.157	0.859	3.877	4.972	4.403	8.1110
1.0000	12.505	4.522	3.227	3.062	2.728	2.021	1.392	1.109	0.824	3.649	4.675	4.111	9.0122
1.2500	10.598	3.968	2.825	2.697	2.397	1.798	1.262	1.019	0.770	3.192	4.054	3.576	11.265
1.6000	8.604	3.369	2.433	2.326	2.083	1.590	1.140	0.927	0.718	2.713	3.394	3.023	14.420
2.0000	6.988	2.865	2.123	2.022	1.830	1.421	1.038	0.852	0.670	2.329	2.870	2.574	18.024
2.5000	5.577	2.397	1.831	1.742	1.608	1.272	0.944	0.786	0.626	1.986	2.403	2.169	22.530
3.2000	4.390	1.950	1.546	1.476	1.371	1.110	0.844	0.702	0.563	1.659	1.978	1.800	28.839
4.0000	3.542	1.601	1.309	1.256	1.181	0.966	0.741	0.624	0.504	1.402	1.652	1.510	36.049
5.0000	2.903	1.319	1.104	1.062	1.001	0.830	0.645	0.545	0.447	1.181	1.383	1.267	45.061
6.0000	2.478	1.127	0.958	0.921	0.873	0.728	0.569	0.484	0.398	1.023	1.194	1.094	54.073
7.0000	2.177	0.988	0.849	0.819	0.774	0.651	0.512	0.437	0.361	0.907	1.056	0.970	63.085
8.0000	1.946	0.880	0.765	0.738	0.697	0.588	0.463	0.397	0.330	0.815	0.947	0.872	72.098
9.0000	1.759	0.799	0.696	0.672	0.636	0.538	0.424	0.364	0.304	0.741	0.860	0.793	81.110
10.0000	1.610	0.735	0.641	0.619	0.586	0.495	0.391	0.336	0.282	0.681	0.788	0.729	90.122
11.0000	1.484	0.681	0.595	0.575	0.544	0.460	0.364	0.313	0.262	0.630	0.729	0.676	99.134
12.0000	1.377	0.634	0.556	0.537	0.508	0.429	0.341	0.294	0.246	0.587	0.678	0.630	108.15

$^{9}_{4}Be$ IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=9
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.085	0.097	0.137	0.210	0.252	0.295	0.325	0.360	0.566	0.669	0.730	0.868	0.1127
0.0160	0.101	0.116	0.163	0.248	0.298	0.346	0.381	0.421	0.660	0.779	0.850	1.009	0.1442
0.0200	0.117	0.136	0.189	0.287	0.346	0.400	0.438	0.483	0.758	0.893	0.974	1.154	0.1802
0.0250	0.135	0.157	0.219	0.332	0.400	0.460	0.503	0.554	0.868	1.022	1.114	1.318	0.2253
0.0320	0.158	0.185	0.256	0.388	0.469	0.536	0.585	0.642	1.006	1.183	1.289	1.522	0.2884
0.0400	0.182	0.213	0.295	0.445	0.539	0.613	0.669	0.733	1.148	1.348	1.468	1.731	0.3605
0.0500	0.208	0.245	0.338	0.510	0.617	0.699	0.762	0.834	1.307	1.532	1.667	1.963	0.4506
0.0600	0.233	0.273	0.378	0.568	0.689	0.778	0.848	0.926	1.451	1.697	1.847	2.172	0.5407
0.0700	0.256	0.300	0.414	0.623	0.754	0.851	0.926	1.011	1.583	1.849	2.011	2.362	0.6309
0.0800	0.277	0.325	0.450	0.675	0.816	0.920	1.001	1.091	1.706	1.989	2.163	2.539	0.7210
0.0900	0.298	0.349	0.483	0.724	0.876	0.986	1.072	1.168	1.823	2.123	2.307	2.707	0.8111
0.1000	0.319	0.372	0.516	0.771	0.933	1.048	1.140	1.241	1.935	2.250	2.444	2.866	0.9012
0.1250	0.368	0.427	0.595	0.884	1.068	1.197	1.302	1.414	2.195	2.548	2.764	3.236	1.1265
0.1600	0.435	0.498	0.701	1.033	1.246	1.394	1.517	1.643	2.534	2.934	3.177	3.711	1.4420
0.2000	0.512	0.575	0.821	1.200	1.444	1.612	1.755	1.896	2.903	3.354	3.624	4.224	1.8024
0.2500	0.611	0.671	0.973	1.407	1.688	1.881	2.048	2.209	3.350	3.860	4.163	4.841	2.2530
0.3200	0.754	0.804	1.188	1.695	2.027	2.253	2.455	2.644	3.963	4.551	4.900	5.682	2.8839
0.4000	0.924	0.960	1.440	2.027	2.414	2.677	2.920	3.142	4.652	5.326	5.726	6.621	3.6049
0.5000	1.147	1.159	1.762	2.447	2.900	3.208	3.503	3.766	5.503	6.282	6.742	7.777	4.5061
0.6000	1.382	1.368	2.094	2.875	3.392	3.743	4.091	4.398	6.352	7.233	7.753	8.919	5.4073
0.7000	1.629	1.588	2.439	3.313	3.894	4.287	4.691	5.042	7.209	8.192	8.769	10.065	6.3085
0.8000	1.890	1.821	2.795	3.762	4.407	4.842	5.305	5.700	8.079	9.162	9.797	11.223	7.2098
0.9000	2.163	2.067	3.164	4.223	4.931	5.409	5.932	6.374	8.961	10.144	10.836	12.391	8.1110
1.0000	2.450	2.328	3.546	4.698	5.469	5.988	6.573	7.063	9.856	11.140	11.890	13.571	9.0122
1.2500	3.222	3.041	4.560	5.942	6.872	7.497	8.246	8.863	12.167	13.705	14.603	16.605	11.265
1.6000	4.445	4.196	6.127	7.835	8.996	9.773	10.771	11.590	15.603	17.508	18.625	21.095	14.420
2.0000	6.054	5.734	8.141	10.230	11.668	12.627	13.947	15.024	19.865	22.196	23.585	26.611	18.024
2.5000	8.389	7.967	11.003	13.584	15.389	16.590	18.373	19.796	25.715	28.618	30.364	34.110	22.530
3.2000	12.265	11.650	15.656	18.967	21.320	22.898	25.417	27.399	34.890	38.676	40.960	45.783	28.839
4.0000	17.552	16.634	21.891	26.095	29.126	31.193	34.644	37.388	46.773	51.660	54.612	60.800	36.049
5.0000	25.417	23.996	31.029	36.449	40.399	43.152	47.914	51.753	63.643	70.115	73.925	81.994	45.061
6.0000	34.639	32.586	41.624	48.366	53.326	56.820	63.069	68.138	82.764	90.945	95.675	105.743	54.073
7.0000	45.188	42.373	53.637	61.803	67.878	72.152	80.035	86.477	104.061	114.067	119.795	131.968	63.085
8.0000	57.040	53.333	67.036	76.722	84.010	89.122	98.746	106.715	127.401	139.416	146.192	160.624	72.098
9.0000	70.155	65.451	81.789	93.088	101.678	107.691	119.165	128.800	152.770	166.913	174.809	191.616	81.110
10.0000	84.508	78.716	97.872	110.858	120.858	127.818	141.286	152.660	180.143	196.501	205.557	224.876	90.122
11.0000	100.089	93.104	115.259	129.997	141.508	149.471	165.072	178.229	209.464	228.085	238.300	260.359	99.134
12.0000	116.873	108.600	133.931	150.492	163.592	172.608	190.475	205.467	240.660	261.605	273.037	298.040	108.15

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.031	0.081	0.120	0.127	0.143	0.224	0.385	0.566	0.883	0.095	0.074	0.093	0.1127
0.0160	0.038	0.097	0.144	0.153	0.171	0.267	0.454	0.663	1.030	0.114	0.089	0.112	0.1442
0.0200	0.045	0.115	0.169	0.180	0.201	0.311	0.524	0.761	1.176	0.134	0.105	0.133	0.1802
0.0250	0.054	0.136	0.199	0.211	0.236	0.360	0.601	0.867	1.328	0.156	0.122	0.157	0.2253
0.0320	0.064	0.164	0.237	0.251	0.280	0.420	0.695	0.993	1.505	0.185	0.145	0.188	0.2884
0.0400	0.076	0.194	0.277	0.293	0.326	0.480	0.786	1.113	1.676	0.215	0.168	0.220	0.3605
0.0500	0.089	0.231	0.324	0.341	0.378	0.545	0.884	1.240	1.852	0.248	0.194	0.257	0.4506
0.0600	0.100	0.265	0.366	0.385	0.425	0.603	0.969	1.349	2.002	0.278	0.218	0.291	0.5407
0.0700	0.111	0.297	0.406	0.426	0.468	0.655	1.045	1.446	2.134	0.307	0.240	0.322	0.6309
0.0800	0.122	0.328	0.443	0.464	0.508	0.703	1.115	1.535	2.253	0.333	0.261	0.351	0.7210
0.0900	0.131	0.356	0.478	0.500	0.545	0.748	1.180	1.616	2.363	0.359	0.281	0.379	0.8111
0.1000	0.140	0.383	0.510	0.533	0.580	0.789	1.241	1.691	2.465	0.382	0.300	0.405	0.9012
0.1250	0.161	0.445	0.584	0.610	0.661	0.885	1.379	1.865	2.699	0.438	0.344	0.464	1.1265
0.1600	0.186	0.521	0.677	0.706	0.762	1.005	1.554	2.084	2.994	0.510	0.400	0.537	1.4420
0.2000	0.212	0.598	0.771	0.804	0.866	1.131	1.739	2.317	3.308	0.587	0.461	0.612	1.8024
0.2500	0.241	0.687	0.880	0.917	0.986	1.281	1.960	2.597	3.688	0.678	0.533	0.697	2.2530
0.3200	0.279	0.802	1.022	1.065	1.146	1.487	2.267	2.990	4.224	0.803	0.631	0.809	2.8839
0.4000	0.320	0.928	1.179	1.230	1.327	1.726	2.626	3.451	4.857	0.945	0.742	0.933	3.6049
0.5000	0.372	1.082	1.375	1.436	1.556	2.036	3.095	4.053	5.683	1.124	0.883	1.087	4.5061
0.6000	0.424	1.239	1.579	1.651	1.796	2.363	3.590	4.687	6.551	1.311	1.030	1.247	5.4073
0.7000	0.479	1.401	1.797	1.880	2.052	2.713	4.116	5.362	7.469	1.510	1.184	1.416	6.3085
0.8000	0.538	1.572	2.031	2.126	2.328	3.090	4.676	6.081	8.439	1.721	1.348	1.599	7.2098
0.9000	0.603	1.754	2.284	2.392	2.625	3.496	5.273	6.840	9.462	1.946	1.524	1.796	8.1110
1.0000	0.672	1.948	2.555	2.676	2.945	3.928	5.904	7.636	10.533	2.185	1.711	2.008	9.0122
1.2500	0.868	2.480	3.302	3.461	3.827	5.111	7.605	9.756	13.363	2.846	2.229	2.596	11.265
1.6000	1.199	3.344	4.506	4.722	5.241	6.980	10.236	13.004	17.610	3.919	3.080	3.557	14.420
2.0000	1.665	4.506	6.095	6.387	7.090	9.381	13.554	17.063	22.813	5.356	4.238	4.851	18.024
2.5000	2.389	6.230	8.386	8.793	9.723	12.739	18.113	22.575	29.781	7.456	5.958	6.763	22.530
3.2000	3.669	9.159	12.148	12.740	13.986	18.065	25.198	31.087	40.437	10.944	8.862	9.968	28.839
4.0000	5.505	13.254	17.232	18.053	19.672	25.049	34.344	42.011	53.999	15.688	12.866	14.357	36.049
5.0000	8.327	19.481	24.757	25.884	27.991	35.151	47.423	57.521	73.030	22.718	18.851	20.897	45.061
6.0000	11.697	26.894	33.547	35.019	37.658	46.774	62.333	75.117	94.429	30.939	25.883	28.573	54.073
7.0000	15.585	35.452	43.558	45.415	48.644	59.889	79.063	94.761	118.238	40.313	33.924	37.339	63.085
8.0000	19.971	45.131	54.756	57.026	60.931	74.476	97.607	116.440	144.404	50.810	42.950	47.151	72.098
9.0000	24.849	55.888	67.123	69.839	74.485	90.521	117.984	140.178	172.912	62.418	52.950	58.000	81.110
10.0000	30.210	67.658	80.627	83.823	89.267	108.002	140.136	165.950	203.749	75.122	63.909	69.865	90.122
11.0000	36.045	80.410	95.226	98.943	105.248	126.901	164.020	193.726	236.932	88.895	75.807	82.716	99.134
12.0000	42.353	94.135	110.904	115.180	122.410	147.197	189.598	223.458	272.429	103.720	88.631	96.537	108.15

$^{11}_{5}B$ IONS

ENERGY PER MASS UNIT	ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)												ENERGY FOR A=11
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	2.222	1.838	1.347	0.896	0.727	0.660	0.611	0.566	0.360	0.308	0.283	0.242	0.1376
0.0160	2.514	2.080	1.524	1.013	0.823	0.747	0.692	0.640	0.407	0.348	0.320	0.274	0.1761
0.0200	2.811	2.325	1.703	1.133	0.920	0.835	0.773	0.715	0.455	0.389	0.358	0.307	0.2202
0.0250	3.142	2.600	1.904	1.266	1.028	0.933	0.865	0.800	0.508	0.435	0.401	0.343	0.2752
0.0320	3.551	2.943	2.155	1.433	1.166	1.060	0.978	0.905	0.575	0.493	0.455	0.390	0.3523
0.0400	3.940	3.281	2.397	1.599	1.304	1.189	1.095	1.014	0.645	0.555	0.510	0.439	0.4404
0.0500	4.341	3.638	2.650	1.776	1.455	1.325	1.222	1.132	0.718	0.624	0.575	0.494	0.5504
0.0600	4.668	3.950	2.860	1.928	1.584	1.439	1.330	1.233	0.789	0.686	0.634	0.545	0.6605
0.0700	4.932	4.218	3.035	2.058	1.700	1.542	1.426	1.323	0.850	0.744	0.689	0.592	0.7706
0.0800	5.145	4.458	3.180	2.172	1.797	1.628	1.504	1.399	0.906	0.795	0.735	0.633	0.8807
0.0900	5.317	4.667	3.300	2.271	1.881	1.710	1.574	1.465	0.960	0.840	0.779	0.672	0.9908
0.1000	5.457	4.852	3.400	2.356	1.958	1.775	1.632	1.527	1.006	0.881	0.816	0.704	1.1009
0.1250	5.689	5.249	3.578	2.519	2.104	1.907	1.753	1.642	1.100	0.963	0.900	0.778	1.3761
0.1600	5.830	5.667	3.716	2.661	2.237	2.029	1.862	1.746	1.189	1.044	0.979	0.855	1.7614
0.2000	5.861	5.948	3.786	2.753	2.329	2.109	1.935	1.814	1.257	1.109	1.041	0.909	2.2018
0.2500	5.806	6.108	3.813	2.817	2.394	2.173	1.990	1.864	1.315	1.163	1.090	0.953	2.7522
0.3200	5.672	6.163	3.802	2.863	2.445	2.232	2.034	1.901	1.361	1.209	1.135	0.998	3.5229
0.4000	5.506	6.112	3.766	2.870	2.470	2.260	2.060	1.924	1.401	1.247	1.171	1.028	4.4036
0.5000	5.309	5.966	3.713	2.870	2.487	2.283	2.079	1.938	1.433	1.277	1.201	1.058	5.5045
0.6000	5.091	5.733	3.631	2.843	2.476	2.280	2.070	1.928	1.442	1.289	1.215	1.078	6.6054
0.7000	4.894	5.494	3.549	2.804	2.452	2.261	2.048	1.909	1.441	1.288	1.217	1.079	7.7063
0.8000	4.707	5.248	3.466	2.762	2.423	2.243	2.028	1.889	1.435	1.289	1.217	1.081	8.8072
0.9000	4.540	5.017	3.383	2.713	2.392	2.219	2.003	1.864	1.431	1.286	1.214	1.083	9.9081
1.0000	4.379	4.795	3.300	2.670	2.356	2.188	1.977	1.838	1.419	1.277	1.208	1.079	11.009
1.2500	4.015	4.300	3.096	2.538	2.260	2.105	1.898	1.761	1.384	1.248	1.179	1.056	13.761
1.6000	3.577	3.749	2.825	2.359	2.108	1.969	1.774	1.639	1.314	1.190	1.125	1.009	17.614
2.0000	3.159	3.297	2.550	2.160	1.941	1.821	1.632	1.512	1.224	1.117	1.056	0.951	22.018
2.5000	2.741	2.872	2.260	1.941	1.756	1.650	1.476	1.369	1.125	1.024	0.972	0.881	27.522
3.2000	2.309	2.439	1.942	1.689	1.538	1.447	1.297	1.200	1.002	0.916	0.870	0.790	35.229
4.0000	1.955	2.082	1.671	1.469	1.345	1.267	1.141	1.053	0.891	0.816	0.777	0.707	44.036
5.0000	1.644	1.763	1.425	1.263	1.163	1.097	0.989	0.915	0.784	0.715	0.685	0.626	55.045
6.0000	1.424	1.531	1.245	1.110	1.024	0.971	0.876	0.810	0.694	0.641	0.614	0.564	66.054
7.0000	1.255	1.356	1.107	0.992	0.916	0.871	0.788	0.729	0.631	0.580	0.557	0.512	77.063
8.0000	1.125	1.218	0.998	0.898	0.831	0.791	0.719	0.664	0.577	0.532	0.511	0.471	88.072
9.0000	1.022	1.106	0.910	0.822	0.762	0.725	0.660	0.611	0.532	0.492	0.472	0.437	99.081
10.0000	0.936	1.013	0.838	0.760	0.704	0.671	0.611	0.567	0.494	0.458	0.441	0.408	110.09
11.0000	0.865	0.937	0.776	0.706	0.655	0.625	0.569	0.530	0.463	0.430	0.415	0.383	121.10
12.0000	0.804	0.871	0.724	0.660	0.613	0.586	0.534	0.498	0.435	0.405	0.391	0.361	132.11

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	5.050	2.155	1.427	1.341	1.192	0.786	0.482	0.342	0.226	1.806	2.297	1.753	0.1376
0.0160	5.607	2.365	1.589	1.495	1.329	0.897	0.556	0.396	0.263	2.031	2.584	1.952	0.1761
0.0200	6.098	2.504	1.732	1.632	1.460	1.014	0.632	0.460	0.308	2.252	2.863	2.128	0.2202
0.0250	6.628	2.630	1.889	1.781	1.611	1.156	0.739	0.539	0.390	2.495	3.175	2.320	0.2752
0.0320	7.347	2.788	2.066	1.967	1.797	1.347	0.875	0.659	0.459	2.801	3.572	2.564	0.3523
0.0400	8.029	2.919	2.236	2.152	1.982	1.548	1.026	0.786	0.558	3.104	3.959	2.804	0.4404
0.0500	8.772	3.085	2.435	2.369	2.205	1.778	1.198	0.933	0.676	3.429	4.373	3.079	0.5504
0.0600	9.553	3.269	2.651	2.563	2.423	1.993	1.356	1.067	0.784	3.721	4.751	3.341	0.6605
0.0700	10.288	3.484	2.853	2.771	2.628	2.191	1.493	1.187	0.877	3.988	5.086	3.605	0.7706
0.0800	11.035	3.705	3.056	2.970	2.827	2.376	1.628	1.297	0.964	4.236	5.397	3.867	0.8807
0.0900	11.717	3.931	3.251	3.168	3.017	2.545	1.749	1.399	1.036	4.462	5.674	4.119	0.9908
0.1000	12.444	4.175	3.461	3.352	3.189	2.703	1.867	1.486	1.102	4.668	5.936	4.362	1.1009
0.1250	14.206	4.741	3.918	3.775	3.607	3.045	2.097	1.671	1.242	5.131	6.530	4.934	1.3761
0.1600	16.461	5.488	4.504	4.340	4.117	3.430	2.352	1.873	1.390	5.674	7.209	5.685	1.7614
0.2000	18.590	6.172	5.055	4.854	4.589	3.729	2.537	2.014	1.488	6.111	7.754	6.380	2.2018
0.2500	20.664	6.840	5.547	5.341	4.987	3.942	2.665	2.089	1.536	6.458	8.185	7.046	2.7522
0.3200	22.583	7.372	5.995	5.722	5.235	4.011	2.676	2.087	1.525	6.699	8.508	7.596	3.5229
0.4000	23.499	7.758	6.161	5.856	5.302	3.958	2.617	2.037	1.484	6.752	8.598	7.818	4.4036
0.5000	23.686	7.871	6.115	5.818	5.205	3.828	2.525	1.971	1.437	6.657	8.498	7.804	5.5045
0.6000	23.057	7.734	5.853	5.563	4.971	3.635	2.411	1.881	1.376	6.398	8.210	7.505	6.6054
0.7000	21.790	7.488	5.508	5.235	4.684	3.421	2.289	1.782	1.317	6.086	7.822	7.073	7.7063
0.8000	20.346	7.140	5.161	4.922	4.398	3.216	2.177	1.698	1.262	5.767	7.403	6.634	8.8072
0.9000	18.945	6.752	4.838	4.611	4.100	3.024	2.064	1.631	1.211	5.463	7.006	6.204	9.9081
1.0000	17.787	6.432	4.590	4.356	3.881	2.874	1.980	1.577	1.171	5.191	6.649	5.848	11.009
1.2500	15.386	5.761	4.102	3.916	3.480	2.610	1.833	1.480	1.118	4.634	5.885	5.191	13.761
1.6000	12.771	5.001	3.611	3.453	3.091	2.359	1.692	1.376	1.065	4.026	5.038	4.487	17.614
2.0000	10.557	4.327	3.208	3.055	2.764	2.147	1.568	1.288	1.012	3.519	4.335	3.889	22.018
2.5000	8.542	3.672	2.805	2.669	2.463	1.948	1.446	1.205	0.958	3.042	3.681	3.322	27.522
3.2000	6.796	3.019	2.394	2.285	2.122	1.718	1.307	1.087	0.872	2.569	3.062	2.786	35.229
4.0000	5.515	2.493	2.039	1.955	1.838	1.504	1.153	0.971	0.785	2.182	2.572	2.351	44.036
5.0000	4.532	2.059	1.723	1.659	1.563	1.295	1.007	0.851	0.698	1.844	2.159	1.978	55.045
6.0000	3.871	1.760	1.496	1.439	1.363	1.138	0.889	0.755	0.622	1.598	1.866	1.709	66.054
7.0000	3.398	1.543	1.326	1.278	1.209	1.016	0.799	0.682	0.563	1.416	1.648	1.514	77.063
8.0000	3.034	1.373	1.193	1.151	1.087	0.917	0.722	0.619	0.514	1.272	1.477	1.361	88.072
9.0000	2.740	1.245	1.084	1.047	0.990	0.837	0.660	0.567	0.473	1.154	1.339	1.235	99.081
10.0000	2.504	1.143	0.997	0.963	0.911	0.771	0.609	0.523	0.438	1.059	1.226	1.134	110.09
11.0000	2.306	1.057	0.925	0.893	0.845	0.714	0.566	0.487	0.408	0.979	1.133	1.050	121.10
12.0000	2.136	0.984	0.862	0.833	0.788	0.666	0.529	0.455	0.382	0.911	1.052	0.977	132.11

$^{11}_{5}B$ IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=11
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.082	0.093	0.130	0.199	0.237	0.278	0.307	0.341	0.535	0.633	0.691	0.824	0.1376
0.0160	0.097	0.111	0.155	0.236	0.282	0.329	0.361	0.400	0.627	0.740	0.808	0.961	0.1761
0.0200	0.113	0.130	0.181	0.274	0.329	0.381	0.418	0.461	0.722	0.851	0.929	1.103	0.2202
0.0250	0.131	0.152	0.210	0.318	0.382	0.440	0.481	0.530	0.829	0.977	1.065	1.263	0.2752
0.0320	0.154	0.179	0.247	0.373	0.449	0.514	0.562	0.617	0.965	1.135	1.237	1.463	0.3523
0.0400	0.177	0.206	0.285	0.429	0.517	0.590	0.644	0.706	1.104	1.297	1.413	1.668	0.4404
0.0500	0.203	0.238	0.328	0.493	0.595	0.676	0.737	0.806	1.261	1.478	1.610	1.898	0.5504
0.0600	0.227	0.266	0.367	0.551	0.666	0.754	0.821	0.897	1.404	1.643	1.788	2.105	0.6605
0.0700	0.250	0.293	0.404	0.606	0.732	0.827	0.900	0.982	1.536	1.794	1.951	2.295	0.7706
0.0800	0.272	0.318	0.439	0.657	0.794	0.895	0.974	1.062	1.659	1.935	2.103	2.472	0.8807
0.0900	0.293	0.342	0.473	0.707	0.854	0.961	1.045	1.139	1.776	2.069	2.246	2.640	0.9908
0.1000	0.313	0.365	0.506	0.754	0.911	1.024	1.114	1.212	1.887	2.197	2.384	2.800	1.1009
0.1250	0.363	0.420	0.585	0.867	1.046	1.173	1.276	1.386	2.148	2.495	2.705	3.172	1.3761
0.1600	0.429	0.490	0.690	1.015	1.223	1.369	1.489	1.613	2.485	2.879	3.115	3.643	1.7614
0.2000	0.505	0.566	0.808	1.178	1.416	1.582	1.721	1.860	2.844	3.288	3.550	4.142	2.2018
0.2500	0.599	0.657	0.952	1.375	1.649	1.838	2.001	2.159	3.272	3.772	4.066	4.733	2.7522
0.3200	0.733	0.783	1.155	1.647	1.967	2.188	2.384	2.568	3.847	4.421	4.758	5.522	3.5229
0.4000	0.891	0.926	1.387	1.954	2.326	2.580	2.814	3.028	4.485	5.138	5.522	6.391	4.4036
0.5000	1.094	1.109	1.682	2.337	2.770	3.065	3.346	3.598	5.262	6.011	6.450	7.447	5.5045
0.6000	1.306	1.297	1.981	2.723	3.213	3.547	3.877	4.168	6.028	6.869	7.361	8.477	6.6054
0.7000	1.527	1.493	2.288	3.113	3.660	4.032	4.411	4.742	6.792	7.723	8.267	9.498	7.7063
0.8000	1.756	1.698	2.602	3.508	4.112	4.521	4.952	5.321	7.557	8.577	9.171	10.517	8.8072
0.9000	1.994	1.913	2.924	3.910	4.569	5.014	5.498	5.908	8.325	9.432	10.077	11.534	9.9081
1.0000	2.241	2.137	3.253	4.319	5.033	5.514	6.051	6.503	9.098	10.291	10.986	12.553	11.009
1.2500	2.897	2.743	4.114	5.377	6.225	6.796	7.472	8.032	11.061	12.471	13.291	15.131	13.761
1.6000	3.915	3.703	5.417	6.951	7.991	8.689	9.572	10.300	13.919	15.634	16.637	18.864	17.614
2.0000	5.226	4.957	7.059	8.903	10.169	11.016	12.161	13.099	17.393	19.455	20.680	23.361	22.018
2.5000	7.099	6.749	9.355	11.595	13.155	14.196	15.713	16.929	22.088	24.609	26.120	29.379	27.522
3.2000	10.171	9.668	13.044	15.861	17.856	19.196	21.296	22.955	29.361	32.581	34.519	38.631	35.229
4.0000	14.329	13.588	17.947	21.467	23.995	25.719	28.553	30.811	38.706	42.792	45.256	50.442	44.036
5.0000	20.491	19.355	25.105	29.577	32.825	35.087	38.947	42.063	51.920	57.249	60.384	67.044	55.045
6.0000	27.704	26.073	33.392	38.899	42.937	45.778	50.801	54.880	66.877	73.542	77.396	85.620	66.054
7.0000	35.955	33.730	42.790	49.410	54.320	57.772	64.073	69.225	83.536	91.629	96.264	106.135	77.063
8.0000	45.234	42.310	53.279	61.090	66.950	71.057	78.722	85.069	101.808	111.474	116.930	128.568	88.072
9.0000	55.513	51.808	64.842	73.916	80.797	85.610	94.725	102.378	121.692	133.025	139.359	152.858	99.081
10.0000	66.777	62.217	77.463	87.862	95.849	101.406	112.085	121.103	143.173	156.245	163.489	178.960	110.09
11.0000	79.021	73.524	91.128	102.902	112.077	118.422	130.777	141.196	166.215	181.065	189.220	206.844	121.10
12.0000	92.230	85.719	105.822	119.031	129.455	136.629	150.768	162.631	190.765	207.444	216.556	236.498	132.11

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.030	0.077	0.113	0.120	0.135	0.211	0.362	0.533	0.832	0.090	0.070	0.088	0.1376
0.0160	0.036	0.093	0.137	0.145	0.162	0.253	0.429	0.627	0.974	0.109	0.085	0.107	0.1761
0.0200	0.043	0.110	0.162	0.171	0.192	0.295	0.497	0.722	1.116	0.128	0.100	0.127	0.2202
0.0250	0.052	0.131	0.191	0.202	0.226	0.343	0.572	0.825	1.265	0.150	0.118	0.150	0.2752
0.0320	0.062	0.159	0.228	0.242	0.269	0.402	0.664	0.949	1.438	0.179	0.140	0.181	0.3523
0.0400	0.073	0.189	0.268	0.283	0.314	0.461	0.754	1.067	1.606	0.208	0.163	0.213	0.4404
0.0500	0.086	0.225	0.314	0.331	0.365	0.526	0.850	1.192	1.780	0.241	0.189	0.249	0.5504
0.0600	0.098	0.259	0.356	0.374	0.412	0.584	0.935	1.300	1.929	0.271	0.212	0.283	0.6605
0.0700	0.109	0.291	0.396	0.415	0.455	0.636	1.011	1.397	2.060	0.299	0.235	0.314	0.7706
0.0800	0.119	0.321	0.432	0.453	0.495	0.684	1.082	1.485	2.179	0.326	0.256	0.343	0.8807
0.0900	0.129	0.350	0.467	0.489	0.533	0.728	1.147	1.567	2.289	0.351	0.275	0.371	0.9908
0.1000	0.138	0.377	0.500	0.523	0.568	0.770	1.208	1.643	2.392	0.376	0.294	0.397	1.1009
0.1250	0.158	0.439	0.575	0.600	0.649	0.866	1.347	1.818	2.627	0.432	0.339	0.456	1.3761
0.1600	0.184	0.514	0.666	0.695	0.749	0.985	1.520	2.035	2.920	0.503	0.395	0.528	1.7614
0.2000	0.209	0.590	0.758	0.790	0.850	1.108	1.700	2.261	3.226	0.578	0.453	0.601	2.2018
0.2500	0.237	0.674	0.862	0.898	0.965	1.251	1.911	2.530	3.589	0.665	0.522	0.683	2.7522
0.3200	0.272	0.783	0.996	1.038	1.115	1.445	2.199	2.898	4.092	0.782	0.615	0.789	3.5229
0.4000	0.311	0.899	1.141	1.190	1.283	1.666	2.532	3.325	4.678	0.913	0.718	0.903	4.4036
0.5000	0.357	1.040	1.320	1.378	1.492	1.949	2.960	3.875	5.432	1.077	0.846	1.044	5.5045
0.6000	0.404	1.181	1.504	1.572	1.709	2.244	3.407	4.446	6.215	1.246	0.978	1.188	6.6054
0.7000	0.453	1.326	1.698	1.776	1.937	2.556	3.875	5.048	7.033	1.422	1.116	1.339	7.7063
0.8000	0.506	1.476	1.904	1.993	2.179	2.888	4.368	5.681	7.887	1.608	1.260	1.500	8.8072
0.9000	0.562	1.635	2.125	2.224	2.438	3.241	4.888	6.342	8.777	1.804	1.413	1.671	9.9081
1.0000	0.622	1.802	2.358	2.470	2.714	3.615	5.433	7.029	9.702	2.011	1.574	1.854	11.009
1.2500	0.788	2.254	2.993	3.136	3.464	4.620	6.877	8.830	12.107	2.572	2.014	2.354	13.761
1.6000	1.063	2.973	3.994	4.184	4.639	6.173	9.066	11.531	15.638	3.465	2.723	3.152	17.614
2.0000	1.443	3.920	5.289	5.542	6.147	8.131	11.770	14.840	19.879	4.636	3.666	4.208	22.018
2.5000	2.024	5.303	7.127	7.472	8.259	10.826	15.429	19.263	25.472	6.321	5.046	5.742	27.522
3.2000	3.039	7.625	10.110	10.601	11.638	15.047	21.045	26.010	33.918	9.086	7.348	8.282	35.229
4.0000	4.482	10.845	14.108	14.780	16.110	20.540	28.238	34.601	44.585	12.816	10.497	11.734	44.036
5.0000	6.693	15.722	20.002	20.914	22.626	28.453	38.482	46.751	59.491	18.323	15.185	16.857	55.045
6.0000	9.329	21.521	26.877	28.058	30.188	37.544	50.145	60.514	76.230	24.753	20.685	22.861	66.054
7.0000	12.370	28.216	34.709	36.191	38.782	47.803	63.232	75.881	94.854	32.087	26.976	29.718	77.063
8.0000	15.804	35.793	43.476	45.281	48.401	59.223	77.750	92.852	115.339	40.304	34.042	37.400	88.072
9.0000	19.627	44.224	53.168	55.323	59.024	71.798	93.721	111.457	137.682	49.402	41.879	45.902	99.081
10.0000	23.834	53.460	63.765	66.298	70.624	85.517	111.105	131.683	161.883	59.372	50.480	55.213	110.09
11.0000	28.420	63.482	75.238	78.180	83.183	100.369	129.874	153.510	187.959	70.195	59.830	65.313	121.10
12.0000	33.384	74.283	87.576	90.957	96.689	116.341	150.003	176.908	215.894	81.862	69.922	76.189	132.11

$^{12}_{6}$C IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=12 MEV
0.0125	2.558	2.116	1.550	1.031	0.837	0.760	0.704	0.651	0.414	0.354	0.326	0.279	0.1500
0.0160	2.894	2.394	1.754	1.166	0.947	0.859	0.796	0.737	0.468	0.401	0.368	0.316	0.1920
0.0200	3.236	2.677	1.961	1.304	1.059	0.961	0.890	0.824	0.524	0.448	0.412	0.353	0.2400
0.0250	3.618	2.993	2.192	1.458	1.184	1.074	0.995	0.921	0.585	0.501	0.462	0.395	0.3000
0.0320	4.088	3.388	2.481	1.650	1.342	1.220	1.126	1.042	0.662	0.568	0.523	0.449	0.3840
0.0400	4.559	3.797	2.773	1.850	1.509	1.376	1.267	1.173	0.746	0.642	0.591	0.508	0.4800
0.0500	5.042	4.226	3.078	2.062	1.690	1.539	1.419	1.314	0.834	0.725	0.668	0.574	0.6000
0.0600	5.455	4.616	3.342	2.253	1.852	1.681	1.554	1.441	0.922	0.802	0.740	0.637	0.7200
0.0700	5.806	4.967	3.573	2.423	2.001	1.815	1.679	1.558	1.000	0.875	0.811	0.697	0.8400
0.0800	6.108	5.293	3.775	2.578	2.133	1.933	1.786	1.661	1.076	0.944	0.872	0.751	0.9600
0.0900	6.365	5.587	3.951	2.718	2.252	2.047	1.885	1.754	1.150	1.006	0.932	0.804	1.0800
0.1000	6.587	5.856	4.104	2.844	2.364	2.142	1.970	1.843	1.215	1.063	0.985	0.850	1.2000
0.1250	6.991	6.450	4.397	3.095	2.585	2.344	2.155	2.018	1.352	1.183	1.106	0.956	1.5000
0.1600	7.286	7.082	4.644	3.325	2.796	2.536	2.327	2.183	1.486	1.305	1.224	1.068	1.9200
0.2000	7.407	7.518	4.785	3.479	2.943	2.665	2.445	2.292	1.589	1.402	1.316	1.148	2.4000
0.2500	7.402	7.786	4.860	3.592	3.052	2.770	2.537	2.377	1.677	1.482	1.390	1.215	3.0000
0.3200	7.294	7.925	4.889	3.681	3.144	2.870	2.616	2.444	1.750	1.555	1.459	1.283	3.8400
0.4000	7.140	7.926	4.884	3.721	3.204	2.930	2.671	2.496	1.817	1.617	1.519	1.333	4.8000
0.5000	6.950	7.810	4.860	3.757	3.256	2.989	2.722	2.537	1.876	1.672	1.572	1.385	6.0000
0.6000	6.692	7.537	4.773	3.738	3.255	2.998	2.721	2.535	1.895	1.695	1.597	1.418	7.2000
0.7000	6.456	7.247	4.682	3.698	3.235	2.982	2.701	2.519	1.901	1.699	1.606	1.423	8.4000
0.8000	6.229	6.944	4.587	3.655	3.206	2.967	2.683	2.500	1.899	1.706	1.610	1.431	9.6000
0.9000	6.025	6.658	4.490	3.601	3.174	2.945	2.658	2.474	1.899	1.706	1.612	1.437	10.800
1.0000	5.828	6.382	4.392	3.553	3.136	2.912	2.631	2.446	1.889	1.700	1.607	1.436	12.000
1.2500	5.382	5.764	4.150	3.403	3.029	2.822	2.544	2.361	1.855	1.672	1.581	1.415	15.000
1.6000	4.844	5.077	3.826	3.195	2.854	2.667	2.403	2.219	1.779	1.611	1.523	1.366	19.200
2.0000	4.327	4.515	3.492	2.958	2.657	2.493	2.235	2.071	1.676	1.529	1.446	1.303	24.000
2.5000	3.799	3.981	3.132	2.690	2.434	2.286	2.045	1.898	1.560	1.419	1.347	1.222	30.000
3.2000	3.240	3.423	2.725	2.371	2.158	2.030	1.820	1.684	1.406	1.286	1.221	1.109	38.400
4.0000	2.770	2.950	2.368	2.081	1.906	1.795	1.617	1.492	1.262	1.156	1.101	1.002	48.000
5.0000	2.347	2.516	2.034	1.802	1.660	1.566	1.412	1.306	1.119	1.021	0.978	0.893	60.000
6.0000	2.041	2.194	1.784	1.591	1.468	1.392	1.256	1.161	0.995	0.919	0.880	0.808	72.000
7.0000	1.804	1.948	1.590	1.425	1.317	1.252	1.132	1.048	0.907	0.833	0.800	0.736	84.000
8.0000	1.619	1.752	1.436	1.293	1.196	1.137	1.034	0.955	0.830	0.766	0.735	0.678	96.000
9.0000	1.472	1.592	1.310	1.183	1.097	1.044	0.950	0.879	0.767	0.708	0.680	0.629	108.00
10.0000	1.348	1.459	1.206	1.094	1.013	0.966	0.879	0.816	0.712	0.660	0.636	0.587	120.00
11.0000	1.245	1.349	1.118	1.017	0.943	0.900	0.819	0.763	0.666	0.619	0.598	0.551	132.00
12.0000	1.158	1.254	1.042	0.950	0.883	0.843	0.768	0.717	0.626	0.584	0.563	0.519	144.00

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	5.814	2.481	1.643	1.544	1.372	0.905	0.555	0.394	0.260	2.079	2.645	2.019	0.1500
0.0160	6.455	2.722	1.829	1.721	1.529	1.033	0.640	0.456	0.303	2.338	2.975	2.247	0.1920
0.0200	7.020	2.883	1.994	1.879	1.681	1.167	0.728	0.529	0.354	2.592	3.296	2.449	0.2400
0.0250	7.630	3.028	2.175	2.050	1.855	1.331	0.851	0.620	0.449	2.872	3.655	2.670	0.3000
0.0320	8.459	3.210	2.379	2.265	2.069	1.550	1.007	0.759	0.528	3.225	4.113	2.952	0.3840
0.0400	9.291	3.378	2.587	2.490	2.294	1.792	1.187	0.910	0.646	3.591	4.582	3.245	0.4800
0.0500	10.188	3.583	2.829	2.752	2.561	2.065	1.391	1.083	0.785	3.983	5.079	3.577	0.6000
0.0600	11.163	3.820	3.098	2.995	2.831	2.330	1.584	1.247	0.916	4.348	5.551	3.904	0.7200
0.0700	12.113	4.102	3.359	3.262	3.094	2.580	1.758	1.397	1.033	4.695	5.989	4.245	0.8400
0.0800	13.100	4.398	3.628	3.526	3.356	2.820	1.933	1.540	1.144	5.028	6.406	4.591	0.9600
0.0900	14.027	4.706	3.892	3.793	3.611	3.046	2.094	1.675	1.241	5.342	6.792	4.931	1.0800
0.1000	15.021	5.040	4.178	4.047	3.850	3.263	2.253	1.793	1.330	5.635	7.166	5.265	1.2000
0.1250	17.456	5.826	4.815	4.639	4.432	3.742	2.577	2.053	1.526	6.305	8.024	6.063	1.5000
0.1600	20.573	6.859	5.628	5.424	5.146	4.286	2.940	2.341	1.737	7.091	9.009	7.105	1.9200
0.2000	23.495	7.800	6.388	6.135	5.800	4.713	3.206	2.546	1.881	7.723	9.800	8.063	2.4000
0.2500	26.341	8.719	7.071	6.809	6.357	5.025	3.397	2.663	1.959	8.233	10.434	8.981	3.0000
0.3200	29.040	9.480	7.710	7.358	6.732	5.158	3.442	2.684	1.960	8.614	10.941	9.768	3.8400
0.4000	30.475	10.061	7.990	7.594	6.876	5.133	3.394	2.642	1.924	8.757	11.150	10.139	4.8000
0.5000	31.007	10.303	8.004	7.616	6.814	5.011	3.305	2.581	1.881	8.714	11.125	10.216	6.0000
0.6000	30.311	10.167	7.695	7.313	6.535	4.778	3.170	2.473	1.809	8.411	10.793	9.867	7.2000
0.7000	28.745	9.878	7.266	6.905	6.180	4.513	3.020	2.350	1.737	8.029	10.318	9.330	8.4000
0.8000	26.923	9.448	6.829	6.513	5.820	4.256	2.880	2.247	1.669	7.632	9.797	8.779	9.6000
0.9000	25.142	8.961	6.420	6.119	5.441	4.014	2.739	2.164	1.607	7.251	9.298	8.234	10.800
1.0000	23.673	8.560	6.109	5.797	5.165	3.825	2.635	2.099	1.559	6.909	8.850	7.783	12.000
1.2500	20.623	7.722	5.498	5.249	4.664	3.498	2.457	1.984	1.498	6.212	7.888	6.959	15.000
1.6000	17.295	6.773	4.890	4.676	4.186	3.195	2.292	1.863	1.443	5.452	6.822	6.076	19.200
2.0000	14.457	5.926	4.393	4.183	3.785	2.940	2.148	1.763	1.386	4.819	5.936	5.325	24.000
2.5000	11.839	5.090	3.887	3.699	3.414	2.700	2.005	1.669	1.328	4.216	5.102	4.604	30.000
3.2000	9.538	4.238	3.360	3.208	2.979	2.412	1.834	1.526	1.224	3.605	4.298	3.911	38.400
4.0000	7.814	3.533	2.889	2.770	2.605	2.131	1.634	1.376	1.113	3.093	3.644	3.332	48.000
5.0000	6.468	2.939	2.459	2.368	2.231	1.849	1.438	1.214	0.997	2.632	3.081	2.823	60.000
6.0000	5.548	2.523	2.144	2.062	1.953	1.631	1.274	1.083	0.892	2.291	2.674	2.449	72.000
7.0000	4.883	2.217	1.905	1.837	1.737	1.460	1.148	0.980	0.810	2.034	2.368	2.176	84.000
8.0000	4.366	1.975	1.716	1.656	1.564	1.320	1.038	0.890	0.740	1.830	2.126	1.958	96.000
9.0000	3.945	1.793	1.561	1.507	1.426	1.206	0.950	0.816	0.681	1.662	1.928	1.778	108.00
10.0000	3.606	1.646	1.436	1.387	1.312	1.110	0.877	0.754	0.631	1.524	1.766	1.633	120.00
11.0000	3.320	1.522	1.331	1.285	1.216	1.028	0.815	0.701	0.587	1.409	1.631	1.511	132.00
12.0000	3.074	1.416	1.241	1.198	1.134	0.959	0.762	0.656	0.549	1.311	1.514	1.407	144.00

$^{12}_{6}C$ IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=12
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.075	0.085	0.119	0.181	0.216	0.255	0.282	0.313	0.491	0.581	0.635	0.758	0.1500
0.0160	0.089	0.102	0.143	0.216	0.258	0.302	0.332	0.368	0.576	0.681	0.744	0.886	0.1920
0.0200	0.104	0.120	0.167	0.252	0.302	0.350	0.385	0.425	0.665	0.785	0.857	1.019	0.2400
0.0250	0.121	0.140	0.194	0.293	0.351	0.406	0.444	0.490	0.766	0.903	0.985	1.169	0.3000
0.0320	0.143	0.165	0.229	0.345	0.414	0.476	0.520	0.572	0.893	1.051	1.146	1.357	0.3840
0.0400	0.164	0.191	0.264	0.398	0.478	0.547	0.597	0.655	1.024	1.203	1.311	1.549	0.4800
0.0500	0.189	0.221	0.304	0.457	0.551	0.627	0.684	0.749	1.171	1.373	1.495	1.764	0.6000
0.0600	0.212	0.247	0.341	0.512	0.617	0.700	0.763	0.834	1.304	1.526	1.661	1.957	0.7200
0.0700	0.233	0.272	0.375	0.562	0.678	0.767	0.836	0.913	1.426	1.666	1.812	2.133	0.8400
0.0800	0.253	0.296	0.408	0.609	0.735	0.830	0.904	0.986	1.539	1.795	1.952	2.295	0.9600
0.0900	0.272	0.318	0.439	0.655	0.789	0.891	0.968	1.056	1.645	1.916	2.083	2.447	1.0800
0.1000	0.291	0.339	0.468	0.698	0.841	0.948	1.030	1.123	1.747	2.032	2.208	2.592	1.2000
0.1250	0.335	0.387	0.539	0.799	0.962	1.082	1.176	1.278	1.981	2.299	2.494	2.925	1.5000
0.1600	0.394	0.449	0.631	0.929	1.118	1.253	1.363	1.478	2.276	2.636	2.854	3.339	1.9200
0.2000	0.459	0.515	0.733	1.070	1.285	1.438	1.564	1.692	2.588	2.991	3.232	3.771	2.4000
0.2500	0.540	0.593	0.857	1.240	1.485	1.658	1.804	1.949	2.955	3.406	3.675	4.279	3.0000
0.3200	0.654	0.700	1.030	1.471	1.756	1.956	2.130	2.297	3.445	3.959	4.264	4.951	3.8400
0.4000	0.787	0.821	1.226	1.730	2.058	2.287	2.493	2.685	3.983	4.564	4.909	5.684	4.8000
0.5000	0.957	0.974	1.472	2.051	2.429	2.692	2.938	3.162	4.633	5.294	5.685	6.567	6.0000
0.6000	1.133	1.130	1.721	2.371	2.798	3.093	3.379	3.635	5.269	6.007	6.442	7.423	7.2000
0.7000	1.316	1.292	1.975	2.694	3.168	3.494	3.821	4.110	5.901	6.714	7.192	8.268	8.4000
0.8000	1.505	1.462	2.234	3.020	3.540	3.898	4.267	4.589	6.533	7.419	7.938	9.109	9.6000
0.9000	1.701	1.638	2.498	3.351	3.916	4.303	4.716	5.071	7.165	8.122	8.683	9.946	10.800
1.0000	1.903	1.822	2.769	3.686	4.297	4.713	5.170	5.559	7.798	8.827	9.428	10.781	12.000
1.2500	2.439	2.317	3.471	4.549	5.270	5.760	6.330	6.807	9.401	10.605	11.310	12.885	15.000
1.6000	3.262	3.094	4.526	5.823	6.698	7.291	8.029	8.642	11.713	13.164	14.016	15.905	19.200
2.0000	4.311	4.097	5.840	7.385	8.442	9.153	10.101	10.882	14.493	16.223	17.252	19.504	24.000
2.5000	5.793	5.514	7.656	9.514	10.803	11.668	12.910	13.911	18.206	20.299	21.555	24.264	30.000
3.2000	8.193	7.795	10.537	12.846	14.476	15.574	17.271	18.618	23.888	26.527	28.116	31.492	38.400
4.0000	11.405	10.823	14.325	17.178	19.219	20.614	22.878	24.688	31.108	34.416	36.411	40.617	48.000
5.0000	16.125	15.240	19.809	23.391	25.984	27.791	30.841	33.308	41.232	45.491	48.001	53.336	60.000
6.0000	21.621	20.359	26.123	30.493	33.687	35.936	39.873	43.073	52.627	57.905	60.963	67.489	72.000
7.0000	27.887	26.173	33.259	38.475	42.332	45.044	49.951	53.967	65.278	71.640	75.291	83.068	84.000
8.0000	34.921	32.678	41.210	47.329	51.905	55.114	61.055	65.977	79.129	86.683	90.956	100.073	96.000
9.0000	42.705	39.870	49.967	57.042	62.392	66.136	73.175	79.085	94.186	103.004	107.942	118.468	108.00
10.0000	51.232	47.750	59.521	67.599	73.786	78.093	86.316	93.260	110.448	120.581	126.208	138.227	120.00
11.0000	60.500	56.310	69.865	78.984	86.071	90.974	100.466	108.470	127.890	139.370	145.686	159.335	132.00
12.0000	70.501	65.543	80.991	91.197	99.229	104.760	115.603	124.700	146.479	159.344	166.385	181.788	144.00

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.027	0.070	0.103	0.109	0.122	0.192	0.330	0.487	0.762	0.082	0.064	0.080	0.1500
0.0160	0.033	0.085	0.125	0.133	0.148	0.231	0.392	0.574	0.894	0.100	0.078	0.097	0.1920
0.0200	0.040	0.102	0.148	0.157	0.176	0.271	0.456	0.663	1.026	0.118	0.092	0.116	0.2400
0.0250	0.048	0.121	0.175	0.186	0.207	0.315	0.526	0.760	1.166	0.139	0.108	0.138	0.3000
0.0320	0.057	0.147	0.210	0.223	0.248	0.371	0.612	0.876	1.329	0.165	0.129	0.167	0.3840
0.0400	0.068	0.175	0.248	0.262	0.290	0.426	0.696	0.987	1.486	0.192	0.151	0.197	0.4800
0.0500	0.080	0.209	0.291	0.306	0.338	0.487	0.787	1.104	1.649	0.223	0.175	0.231	0.6000
0.0600	0.091	0.241	0.330	0.347	0.382	0.541	0.866	1.205	1.788	0.252	0.197	0.262	0.7200
0.0700	0.101	0.270	0.367	0.385	0.422	0.589	0.936	1.294	1.909	0.278	0.218	0.291	0.8400
0.0800	0.110	0.298	0.401	0.420	0.458	0.633	1.000	1.376	2.019	0.302	0.237	0.318	0.9600
0.0900	0.119	0.325	0.433	0.452	0.493	0.673	1.060	1.451	2.120	0.325	0.255	0.343	1.0800
0.1000	0.127	0.349	0.463	0.483	0.525	0.711	1.115	1.520	2.213	0.347	0.273	0.367	1.2000
0.1250	0.146	0.405	0.529	0.552	0.597	0.797	1.239	1.676	2.424	0.397	0.312	0.420	1.5000
0.1600	0.168	0.471	0.610	0.636	0.685	0.902	1.392	1.867	2.681	0.460	0.361	0.483	1.9200
0.2000	0.190	0.536	0.690	0.719	0.773	1.008	1.548	2.063	2.946	0.525	0.412	0.547	2.4000
0.2500	0.214	0.609	0.779	0.811	0.871	1.131	1.729	2.293	3.258	0.600	0.471	0.617	3.0000
0.3200	0.244	0.701	0.892	0.930	1.000	1.296	1.975	2.607	3.686	0.700	0.550	0.707	3.8400
0.4000	0.276	0.799	1.015	1.058	1.141	1.483	2.256	2.968	4.181	0.810	0.637	0.803	4.8000
0.5000	0.315	0.917	1.165	1.216	1.316	1.719	2.614	3.427	4.811	0.947	0.745	0.921	6.0000
0.6000	0.354	1.035	1.318	1.377	1.496	1.965	2.984	3.902	5.462	1.088	0.854	1.041	7.2000
0.7000	0.395	1.154	1.478	1.546	1.685	2.223	3.372	4.400	6.139	1.234	0.968	1.166	8.4000
0.8000	0.438	1.278	1.648	1.725	1.885	2.497	3.779	4.922	6.843	1.387	1.087	1.298	9.6000
0.9000	0.484	1.409	1.830	1.915	2.098	2.787	4.206	5.466	7.576	1.548	1.213	1.439	10.800
1.0000	0.534	1.546	2.021	2.116	2.324	3.093	4.653	6.029	8.334	1.718	1.345	1.589	12.000
1.2500	0.669	1.915	2.539	2.660	2.936	3.913	5.832	7.499	10.297	2.176	1.704	1.997	15.000
1.6000	0.892	2.496	3.349	3.508	3.887	5.170	7.603	9.684	13.153	2.898	2.277	2.643	19.200
2.0000	1.196	3.254	4.386	4.594	5.093	6.737	9.767	12.333	16.548	3.835	3.032	3.488	24.000
2.5000	1.655	4.348	5.839	6.121	6.764	8.868	12.661	15.831	20.971	5.168	4.124	4.701	30.000
3.2000	2.448	6.162	8.169	8.565	9.404	12.166	17.048	21.102	27.570	7.327	5.922	6.685	38.400
4.0000	3.563	8.650	11.258	11.794	12.858	16.410	22.605	27.739	35.811	10.210	8.354	9.352	48.000
5.0000	5.256	12.386	15.774	16.493	17.850	22.472	30.454	37.047	47.231	14.429	11.946	13.277	60.000
6.0000	7.265	16.804	21.011	21.936	23.611	29.398	39.339	47.534	59.984	19.327	16.136	17.851	72.000
7.0000	9.574	21.888	26.959	28.113	30.138	37.189	49.278	59.203	74.127	24.896	20.914	23.058	84.000
8.0000	12.177	27.631	33.604	35.003	37.429	45.845	60.283	72.068	89.655	31.125	26.270	28.881	96.000
9.0000	15.072	34.016	40.944	42.607	45.474	55.369	72.377	86.157	106.576	38.015	32.205	35.320	108.00
10.0000	18.257	41.008	48.966	50.915	54.255	65.754	85.537	101.468	124.896	45.562	38.716	42.369	120.00
11.0000	21.728	48.594	57.651	59.910	63.763	76.997	99.745	117.991	144.635	53.755	45.793	50.014	132.00
12.0000	25.487	56.772	66.993	69.585	73.989	89.090	114.986	135.707	165.787	62.589	53.435	58.249	144.00

$^{14}_{7}N$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=14 MEV
0.0125	2.972	2.458	1.801	1.198	0.973	0.882	0.818	0.756	0.481	0.412	0.378	0.324	0.1750
0.0160	3.362	2.781	2.038	1.355	1.100	0.998	0.925	0.856	0.544	0.466	0.428	0.367	0.2240
0.0200	3.759	3.110	2.278	1.515	1.230	1.116	1.034	0.957	0.608	0.521	0.478	0.410	0.2801
0.0250	4.202	3.477	2.547	1.694	1.375	1.248	1.156	1.070	0.680	0.582	0.536	0.458	0.3501
0.0320	4.749	3.936	2.881	1.916	1.559	1.418	1.308	1.210	0.769	0.660	0.608	0.522	0.4481
0.0400	5.296	4.410	3.222	2.149	1.753	1.598	1.472	1.363	0.867	0.746	0.686	0.590	0.5601
0.0500	5.843	4.898	3.567	2.390	1.958	1.784	1.644	1.523	0.967	0.840	0.774	0.665	0.7001
0.0600	6.306	5.337	3.864	2.604	2.141	1.944	1.797	1.665	1.067	0.927	0.856	0.736	0.8402
0.0700	6.700	5.731	4.123	2.795	2.309	2.094	1.938	1.798	1.154	1.010	0.936	0.804	0.9802
0.0800	7.038	6.099	4.350	2.971	2.458	2.227	2.058	1.914	1.240	1.088	1.005	0.866	1.1202
0.0900	7.331	6.435	4.551	3.131	2.594	2.357	2.171	2.020	1.324	1.158	1.074	0.926	1.2603
0.1000	7.589	6.748	4.729	3.277	2.724	2.468	2.270	2.123	1.400	1.225	1.135	0.979	1.4003
0.1250	8.096	7.470	5.092	3.585	2.994	2.714	2.495	2.337	1.566	1.370	1.281	1.107	1.7504
0.1600	8.557	8.317	5.454	3.905	3.283	2.978	2.732	2.563	1.745	1.533	1.437	1.254	2.2405
0.2000	8.862	8.994	5.725	4.162	3.521	3.189	2.925	2.742	1.901	1.677	1.574	1.374	2.8006
0.2500	9.030	9.498	5.929	4.382	3.723	3.380	3.095	2.899	2.046	1.808	1.696	1.482	3.5008
0.3200	9.058	9.841	6.071	4.571	3.904	3.564	3.248	3.035	2.173	1.931	1.812	1.594	4.4810
0.4000	8.958	9.944	6.127	4.669	4.019	3.676	3.352	3.131	2.279	2.028	1.906	1.673	5.6012
0.5000	8.759	9.843	6.125	4.735	4.104	3.767	3.430	3.197	2.364	2.107	1.981	1.746	7.0015
0.6000	8.476	9.546	6.046	4.734	4.123	3.797	3.446	3.210	2.400	2.146	2.022	1.796	8.4018
0.7000	8.209	9.215	5.953	4.703	4.114	3.792	3.435	3.203	2.417	2.161	2.042	1.810	9.8021
0.8000	7.947	8.860	5.852	4.664	4.091	3.786	3.424	3.189	2.423	2.177	2.054	1.826	11.202
0.9000	7.710	8.520	5.745	4.608	4.062	3.769	3.401	3.166	2.430	2.183	2.063	1.839	12.603
1.0000	7.478	8.188	5.635	4.559	4.023	3.736	3.375	3.139	2.423	2.181	2.062	1.843	14.003
1.2500	6.943	7.435	5.353	4.389	3.908	3.640	3.281	3.046	2.393	2.157	2.039	1.825	17.504
1.6000	6.286	6.589	4.966	4.146	3.704	3.461	3.118	2.880	2.309	2.090	1.976	1.773	22.405
2.0000	5.646	5.892	4.557	3.860	3.468	3.254	2.916	2.702	2.187	1.996	1.887	1.700	28.006
2.5000	4.986	5.225	4.111	3.531	3.194	3.001	2.684	2.491	2.047	1.862	1.768	1.603	35.007
3.2000	4.281	4.522	3.600	3.132	2.851	2.682	2.405	2.225	1.858	1.699	1.613	1.465	44.810
4.0000	3.682	3.921	3.147	2.766	2.533	2.386	2.150	1.983	1.677	1.536	1.463	1.331	56.012
5.0000	3.138	3.364	2.719	2.409	2.219	2.094	1.887	1.746	1.496	1.365	1.308	1.194	70.015
6.0000	2.742	2.948	2.397	2.138	1.973	1.869	1.687	1.560	1.337	1.234	1.182	1.086	84.018
7.0000	2.433	2.628	2.145	1.922	1.776	1.688	1.527	1.414	1.223	1.124	1.079	0.993	98.021
8.0000	2.191	2.372	1.944	1.750	1.619	1.540	1.400	1.293	1.124	1.036	0.995	0.918	112.02
9.0000	1.998	2.162	1.779	1.606	1.489	1.418	1.290	1.194	1.041	0.961	0.923	0.854	126.03
10.0000	1.835	1.986	1.641	1.489	1.379	1.315	1.197	1.111	0.968	0.898	0.865	0.799	140.03
11.0000	1.699	1.841	1.525	1.388	1.287	1.228	1.118	1.042	0.909	0.845	0.816	0.752	154.03
12.0000	1.583	1.714	1.425	1.299	1.207	1.153	1.050	0.980	0.856	0.798	0.769	0.710	168.04

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	6.754	2.881	1.909	1.794	1.594	1.052	0.645	0.457	0.302	2.415	3.072	2.345	0.1750
0.0160	7.498	3.162	2.125	1.999	1.777	1.200	0.744	0.530	0.352	2.716	3.456	2.610	0.2240
0.0200	8.155	3.349	2.317	2.182	1.952	1.355	0.845	0.615	0.411	3.012	3.829	2.845	0.2801
0.0250	8.863	3.517	2.527	2.381	2.155	1.546	0.988	0.721	0.522	3.336	4.246	3.102	0.3501
0.0320	9.826	3.729	2.763	2.631	2.403	1.801	1.170	0.882	0.614	3.746	4.778	3.429	0.4481
0.0400	10.792	3.924	3.006	2.893	2.664	2.081	1.379	1.057	0.751	4.172	5.322	3.769	0.5601
0.0500	11.807	4.152	3.278	3.189	2.968	2.394	1.612	1.256	0.910	4.616	5.886	4.145	0.7001
0.0600	12.907	4.417	3.582	3.462	3.273	2.693	1.832	1.441	1.059	5.027	6.418	4.513	0.8402
0.0700	13.977	4.733	3.876	3.764	3.570	2.977	2.028	1.612	1.192	5.417	6.910	4.898	0.9802
0.0800	15.095	5.068	4.180	4.063	3.867	3.249	2.227	1.775	1.318	5.794	7.382	5.290	1.1202
0.0900	16.155	5.420	4.482	4.369	4.159	3.509	2.412	1.929	1.429	6.152	7.823	5.679	1.2603
0.1000	17.306	5.807	4.814	4.662	4.435	3.759	2.596	2.066	1.532	6.492	8.256	6.067	1.4003
0.1250	20.214	6.747	5.576	5.372	5.133	4.333	2.984	2.378	1.767	7.302	9.293	7.022	1.7504
0.1600	24.160	8.055	6.610	6.370	6.043	5.034	3.452	2.749	2.040	8.328	10.580	8.344	2.2405
0.2000	28.110	9.332	7.643	7.339	6.939	5.639	3.836	3.046	2.250	9.240	11.725	9.647	2.8006
0.2500	32.135	10.637	8.627	8.307	7.755	6.131	4.144	3.249	2.389	10.044	12.730	10.957	3.5008
0.3200	36.060	11.771	9.574	9.137	8.359	6.405	4.274	3.333	2.434	10.697	13.586	12.129	4.4810
0.4000	38.233	12.622	10.024	9.528	8.627	6.440	4.258	3.315	2.414	10.986	13.988	12.720	5.6012
0.5000	39.078	12.985	10.088	9.598	8.587	6.315	4.165	3.252	2.370	10.982	14.020	12.875	7.0015
0.6000	38.389	12.877	9.745	9.262	8.276	6.052	4.014	3.132	2.291	10.652	13.669	12.496	8.4018
0.7000	36.552	12.561	9.239	8.781	7.858	5.739	3.840	2.988	2.209	10.210	13.121	11.865	9.8021
0.8000	34.352	12.055	8.714	8.310	7.426	5.431	3.675	2.868	2.130	9.738	12.500	11.201	11.202
0.9000	32.174	11.468	8.216	7.831	6.963	5.136	3.505	2.769	2.057	9.279	11.899	10.537	12.603
1.0000	30.373	10.983	7.838	7.438	6.627	4.908	3.381	2.694	2.000	8.864	11.355	9.985	14.003
1.2500	26.604	9.962	7.093	6.771	6.017	4.512	3.169	2.559	1.932	8.013	10.176	8.977	17.504
1.6000	22.444	8.789	6.346	6.068	5.432	4.146	2.974	2.418	1.872	7.076	8.854	7.885	22.405
2.0000	18.866	7.733	5.733	5.459	4.940	3.837	2.803	2.301	1.809	6.289	7.747	6.949	28.006
2.5000	15.539	6.680	5.102	4.855	4.481	3.544	2.631	2.191	1.743	5.533	6.697	6.043	35.007
3.2000	12.601	5.599	4.439	4.238	3.935	3.186	2.423	2.016	1.617	4.763	5.678	5.166	44.810
4.0000	10.386	4.696	3.840	3.682	3.462	2.832	2.172	1.828	1.479	4.110	4.843	4.428	56.012
5.0000	8.648	3.930	3.288	3.165	2.983	2.472	1.923	1.624	1.333	3.519	4.120	3.775	70.015
6.0000	7.454	3.389	2.881	2.771	2.624	2.191	1.711	1.455	1.198	3.077	3.593	3.291	84.018
7.0000	6.586	2.991	2.570	2.478	2.343	1.969	1.549	1.321	1.092	2.744	3.194	2.935	98.021
8.0000	5.909	2.673	2.323	2.241	2.117	1.786	1.405	1.205	1.001	2.477	2.877	2.650	112.02
9.0000	5.355	2.434	2.119	2.046	1.936	1.637	1.290	1.108	0.925	2.256	2.617	2.414	126.03
10.0000	4.908	2.241	1.955	1.888	1.786	1.510	1.193	1.026	0.859	2.075	2.403	2.223	140.03
11.0000	4.529	2.077	1.816	1.754	1.659	1.403	1.112	0.956	0.801	1.923	2.225	2.062	154.03
12.0000	4.203	1.936	1.697	1.639	1.550	1.311	1.042	0.896	0.751	1.792	2.070	1.924	168.04

$^{14}_{7}N$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=14 MEV
0.0125	0.073	0.083	0.116	0.176	0.209	0.247	0.272	0.303	0.474	0.561	0.614	0.734	0.1750
0.0160	0.088	0.100	0.139	0.210	0.250	0.293	0.322	0.358	0.559	0.661	0.721	0.861	0.2240
0.0200	0.103	0.118	0.163	0.246	0.293	0.341	0.375	0.414	0.647	0.763	0.833	0.992	0.2801
0.0250	0.120	0.138	0.191	0.287	0.342	0.396	0.434	0.479	0.747	0.880	0.960	1.141	0.3501
0.0320	0.141	0.163	0.225	0.338	0.405	0.466	0.509	0.560	0.874	1.028	1.120	1.328	0.4481
0.0400	0.163	0.189	0.261	0.391	0.469	0.537	0.586	0.644	1.004	1.180	1.285	1.520	0.5601
0.0500	0.188	0.219	0.301	0.451	0.542	0.617	0.673	0.737	1.151	1.349	1.469	1.734	0.7001
0.0600	0.211	0.245	0.338	0.505	0.608	0.691	0.752	0.823	1.284	1.503	1.635	1.928	0.8402
0.0700	0.232	0.270	0.372	0.556	0.669	0.758	0.826	0.902	1.407	1.643	1.787	2.105	0.9802
0.0800	0.252	0.294	0.405	0.604	0.727	0.822	0.894	0.976	1.521	1.774	1.928	2.269	1.1202
0.0900	0.272	0.316	0.436	0.649	0.781	0.882	0.960	1.046	1.628	1.896	2.060	2.422	1.2603
0.1000	0.291	0.337	0.466	0.693	0.833	0.940	1.023	1.114	1.730	2.012	2.185	2.567	1.4003
0.1250	0.335	0.387	0.538	0.795	0.956	1.075	1.169	1.271	1.966	2.282	2.475	2.903	1.7504
0.1600	0.394	0.449	0.630	0.926	1.112	1.247	1.357	1.470	2.261	2.619	2.835	3.317	2.2405
0.2000	0.458	0.513	0.730	1.064	1.276	1.429	1.554	1.681	2.568	2.968	3.207	3.743	2.8006
0.2500	0.536	0.589	0.850	1.228	1.469	1.642	1.787	1.929	2.923	3.369	3.635	4.283	3.5008
0.3200	0.644	0.690	1.013	1.447	1.726	1.924	2.095	2.259	3.387	3.893	4.193	4.870	4.4810
0.4000	0.769	0.803	1.197	1.689	2.008	2.233	2.435	2.622	3.890	4.458	4.795	5.555	5.6012
0.5000	0.927	0.945	1.425	1.987	2.353	2.609	2.847	3.064	4.493	5.135	5.515	6.374	7.0015
0.6000	1.089	1.089	1.655	2.282	2.693	2.979	3.254	3.501	5.080	5.794	6.215	7.165	8.4018
0.7000	1.257	1.238	1.889	2.579	3.033	3.348	3.661	3.938	5.662	6.444	6.904	7.941	9.8021
0.8000	1.430	1.393	2.126	2.878	3.374	3.717	4.070	4.376	6.240	7.089	7.587	8.712	11.202
0.9000	1.609	1.555	2.368	3.180	3.718	4.088	4.480	4.817	6.817	7.731	8.267	9.476	12.603
1.0000	1.793	1.722	2.614	3.485	4.064	4.461	4.893	5.261	7.394	8.373	8.946	10.236	14.003
1.2500	2.279	2.171	3.251	4.268	4.947	5.410	5.945	6.393	8.847	9.986	10.653	12.145	17.504
1.6000	3.021	2.871	4.202	5.417	6.235	6.791	7.477	8.047	10.932	12.294	13.093	14.868	22.405
2.0000	3.962	3.771	5.380	6.817	7.798	8.461	9.335	10.056	13.425	15.036	15.994	18.095	28.006
2.5000	5.283	5.034	6.999	8.715	9.904	10.703	11.839	12.756	16.736	18.670	19.830	22.339	35.007
3.2000	7.409	7.055	9.552	11.668	13.157	14.164	15.703	16.927	21.769	24.188	25.644	28.743	44.810
4.0000	10.237	9.721	12.887	15.481	17.333	18.601	20.640	22.271	28.126	31.134	32.948	36.777	56.012
5.0000	14.369	13.587	17.687	20.920	23.254	24.882	27.610	29.816	36.987	40.828	43.092	47.909	70.015
6.0000	19.153	18.044	23.183	27.102	29.961	31.974	35.472	38.317	46.907	51.635	54.376	60.230	84.018
7.0000	24.584	23.083	29.369	34.021	37.454	39.868	44.208	47.759	57.873	63.540	66.795	73.734	98.021
8.0000	30.658	28.700	36.235	41.667	45.721	48.564	53.797	58.131	69.834	76.530	80.323	88.419	112.02
9.0000	37.359	34.891	43.773	50.028	54.748	58.052	64.229	69.414	82.796	90.580	94.944	104.253	126.03
10.0000	44.678	41.656	51.974	59.090	64.529	68.316	75.510	81.582	96.755	105.669	110.624	121.215	140.03
11.0000	52.615	48.985	60.832	68.839	75.048	79.346	87.626	94.607	111.691	121.757	127.303	139.290	154.03
12.0000	61.160	56.874	70.337	79.273	86.290	91.125	100.559	108.473	127.573	138.822	144.987	158.473	168.04

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.027	0.069	0.100	0.106	0.119	0.186	0.318	0.469	0.733	0.080	0.063	0.077	0.1750
0.0160	0.033	0.084	0.122	0.129	0.144	0.224	0.379	0.555	0.863	0.097	0.076	0.095	0.2240
0.0200	0.039	0.100	0.145	0.154	0.171	0.263	0.442	0.643	0.994	0.116	0.090	0.114	0.2801
0.0250	0.047	0.119	0.172	0.182	0.203	0.308	0.512	0.739	1.133	0.136	0.107	0.136	0.3501
0.0320	0.057	0.145	0.207	0.219	0.244	0.363	0.597	0.854	1.295	0.163	0.128	0.164	0.4481
0.0400	0.067	0.173	0.244	0.258	0.286	0.419	0.681	0.965	1.452	0.190	0.149	0.194	0.5601
0.0500	0.079	0.207	0.288	0.303	0.334	0.479	0.772	1.082	1.615	0.221	0.173	0.228	0.7001
0.0600	0.090	0.239	0.327	0.344	0.378	0.533	0.851	1.184	1.754	0.250	0.196	0.260	0.8402
0.0700	0.100	0.269	0.364	0.382	0.418	0.582	0.922	1.274	1.876	0.276	0.216	0.289	0.9802
0.0800	0.110	0.297	0.398	0.417	0.455	0.626	0.987	1.355	1.986	0.301	0.236	0.316	1.1202
0.0900	0.119	0.324	0.430	0.450	0.489	0.667	1.048	1.431	2.088	0.324	0.254	0.341	1.2603
0.1000	0.127	0.349	0.460	0.481	0.522	0.706	1.104	1.501	2.183	0.346	0.272	0.365	1.4003
0.1250	0.146	0.405	0.528	0.550	0.595	0.792	1.229	1.658	2.395	0.397	0.312	0.419	1.7504
0.1600	0.168	0.471	0.608	0.634	0.683	0.897	1.381	1.850	2.653	0.460	0.361	0.483	2.2405
0.2000	0.189	0.535	0.687	0.716	0.769	1.002	1.535	2.043	2.914	0.523	0.411	0.545	2.8006
0.2500	0.212	0.606	0.773	0.805	0.864	1.121	1.710	2.265	3.215	0.596	0.468	0.613	3.5008
0.3200	0.241	0.693	0.881	0.918	0.986	1.277	1.943	2.562	3.621	0.690	0.543	0.698	4.4810
0.4000	0.271	0.785	0.995	1.038	1.118	1.451	2.205	2.899	4.082	0.794	0.624	0.788	5.6012
0.5000	0.308	0.894	1.134	1.184	1.280	1.671	2.537	3.325	4.667	0.921	0.724	0.897	7.0015
0.6000	0.344	1.002	1.275	1.332	1.446	1.897	2.880	3.764	5.268	1.050	0.825	1.007	8.4018
0.7000	0.381	1.112	1.423	1.488	1.620	2.135	3.236	4.222	5.890	1.185	0.929	1.122	9.8021
0.8000	0.421	1.226	1.579	1.652	1.803	2.386	3.609	4.700	6.536	1.325	1.039	1.244	11.202
0.9000	0.463	1.345	1.744	1.825	1.998	2.651	3.999	5.197	7.205	1.472	1.154	1.373	12.603
1.0000	0.507	1.470	1.919	2.009	2.204	2.930	4.406	5.710	7.895	1.627	1.274	1.509	14.003
1.2500	0.631	1.805	2.388	2.502	2.758	3.674	5.476	7.043	9.675	2.042	1.600	1.879	17.504
1.6000	0.831	2.329	3.119	3.267	3.616	4.807	7.072	9.013	12.251	2.693	2.116	2.462	22.405
2.0000	1.104	3.009	4.048	4.240	4.698	6.212	9.012	11.388	15.295	3.533	2.793	3.219	28.006
2.5000	1.513	3.984	5.344	5.602	6.187	8.112	11.592	14.507	19.239	4.722	3.766	4.301	35.007
3.2000	2.215	5.590	7.408	7.767	8.526	11.034	15.479	19.176	25.085	6.635	5.360	6.059	44.810
4.0000	3.197	7.781	10.128	10.610	11.568	14.770	20.372	25.021	32.341	9.173	7.501	8.406	56.012
5.0000	4.680	11.051	14.080	14.723	15.937	20.076	27.242	33.168	42.337	12.865	10.645	11.842	70.015
6.0000	6.428	14.897	18.640	19.461	20.952	26.106	34.977	42.297	53.439	17.130	14.293	15.824	84.018
7.0000	8.430	19.303	23.795	24.815	26.609	32.858	43.592	52.411	65.698	21.957	18.433	20.337	98.021
8.0000	10.678	24.263	29.534	30.765	32.905	40.334	53.095	63.521	79.107	27.336	23.059	25.366	112.02
9.0000	13.170	29.760	35.852	37.311	39.831	48.531	63.506	75.649	93.672	33.267	28.168	30.908	126.03
10.0000	15.904	35.762	42.739	44.443	47.369	57.446	74.803	88.792	109.399	39.745	33.757	36.959	140.03
11.0000	18.876	42.258	50.175	52.145	55.510	67.074	86.969	102.941	126.301	46.761	39.817	43.505	154.03
12.0000	22.087	49.245	58.157	60.410	64.246	77.406	99.990	118.077	144.373	54.308	46.346	50.542	168.04

$^{16}_{8}O$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=16 MEV
0.0125	3.228	2.671	1.956	1.301	1.056	0.959	0.888	0.822	0.522	0.447	0.411	0.352	0.1999
0.0160	3.652	3.021	2.213	1.472	1.195	1.085	1.005	0.930	0.591	0.506	0.465	0.398	0.2559
0.0200	4.083	3.378	2.475	1.646	1.336	1.213	1.124	1.039	0.661	0.565	0.520	0.445	0.3199
0.0250	4.565	3.777	2.767	1.840	1.494	1.356	1.256	1.162	0.739	0.632	0.582	0.498	0.3999
0.0320	5.159	4.276	3.130	2.082	1.694	1.540	1.421	1.315	0.836	0.717	0.660	0.567	0.5118
0.0400	5.754	4.791	3.500	2.334	1.904	1.736	1.599	1.480	0.941	0.810	0.745	0.640	0.6398
0.0500	6.363	5.334	3.885	2.603	2.133	1.942	1.791	1.659	1.053	0.915	0.843	0.725	0.7997
0.0600	6.890	5.830	4.222	2.846	2.339	2.124	1.963	1.820	1.165	1.013	0.935	0.804	0.9597
0.0700	7.347	6.284	4.521	3.065	2.532	2.297	2.125	1.971	1.266	1.108	1.026	0.882	1.1196
0.0800	7.748	6.714	4.789	3.271	2.706	2.452	2.265	2.107	1.365	1.197	1.106	0.953	1.2796
0.0900	8.103	7.113	5.030	3.461	2.867	2.606	2.399	2.233	1.464	1.280	1.187	1.024	1.4395
0.1000	8.423	7.489	5.248	3.637	3.023	2.739	2.519	2.356	1.553	1.359	1.260	1.086	1.5995
0.1250	9.075	8.373	5.707	4.018	3.356	3.042	2.797	2.620	1.755	1.535	1.435	1.241	1.9994
0.1600	9.710	9.438	6.189	4.431	3.726	3.379	3.101	2.909	1.980	1.739	1.631	1.423	2.5592
0.2000	10.171	10.323	6.571	4.777	4.041	3.660	3.358	3.147	2.181	1.925	1.807	1.577	3.1990
0.2500	10.478	11.022	6.880	5.084	4.321	3.922	3.591	3.364	2.374	2.098	1.968	1.720	3.9988
0.3200	10.635	11.555	7.128	5.367	4.583	4.184	3.814	3.564	2.552	2.267	2.128	1.871	5.1184
0.4000	10.635	11.806	7.274	5.543	4.772	4.364	3.979	3.717	2.706	2.408	2.262	1.986	6.3980
0.5000	10.525	11.828	7.360	5.689	4.931	4.526	4.122	3.842	2.841	2.532	2.381	2.098	7.9975
0.6000	10.274	11.571	7.328	5.738	4.998	4.602	4.177	3.891	2.909	2.601	2.451	2.176	9.5970
0.7000	10.004	11.230	7.255	5.731	5.013	4.621	4.186	3.903	2.945	2.633	2.488	2.205	11.196
0.8000	9.716	10.832	7.155	5.702	5.001	4.629	4.185	3.899	2.962	2.662	2.511	2.232	12.796
0.9000	9.445	10.438	7.038	5.645	4.976	4.617	4.167	3.878	2.977	2.675	2.527	2.252	14.395
1.0000	9.172	10.043	6.912	5.592	4.935	4.583	4.140	3.850	2.972	2.675	2.530	2.260	15.995
1.2500	8.532	9.137	6.578	5.394	4.802	4.473	4.033	3.743	2.941	2.651	2.506	2.243	19.994
1.6000	7.743	8.116	6.116	5.107	4.562	4.263	3.841	3.547	2.844	2.575	2.434	2.183	25.592
2.0000	6.978	7.282	5.632	4.770	4.286	4.021	3.604	3.340	2.703	2.467	2.332	2.101	31.990
2.5000	6.196	6.492	5.108	4.388	3.969	3.729	3.335	3.095	2.544	2.314	2.196	1.992	39.987
3.2000	5.360	5.662	4.508	3.922	3.570	3.358	3.011	2.786	2.326	2.128	2.020	1.835	51.184
4.0000	4.646	4.947	3.971	3.490	3.196	3.010	2.712	2.501	2.116	1.938	1.846	1.680	63.980
5.0000	3.988	4.275	3.456	3.062	2.820	2.661	2.398	2.219	1.901	1.735	1.662	1.517	79.975
6.0000	3.502	3.765	3.061	2.731	2.519	2.388	2.155	1.993	1.708	1.577	1.509	1.387	95.970
7.0000	3.118	3.368	2.749	2.463	2.276	2.164	1.957	1.812	1.567	1.441	1.383	1.273	111.96
8.0000	2.814	3.046	2.497	2.247	2.080	1.977	1.798	1.660	1.443	1.331	1.278	1.178	127.96
9.0000	2.569	2.779	2.288	2.066	1.915	1.823	1.659	1.535	1.338	1.235	1.187	1.098	143.95
10.0000	2.361	2.556	2.112	1.916	1.774	1.692	1.540	1.430	1.246	1.155	1.113	1.029	159.95
11.0000	2.186	2.368	1.962	1.786	1.656	1.580	1.438	1.340	1.169	1.087	1.050	0.967	175.94
12.0000	2.036	2.205	1.833	1.672	1.552	1.483	1.351	1.261	1.102	1.026	0.990	0.913	191.94

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	7.337	3.130	2.074	1.949	1.731	1.143	0.700	0.497	0.328	2.624	3.338	2.547	0.1999
0.0160	8.146	3.435	2.309	2.171	1.930	1.304	0.808	0.576	0.382	2.951	3.754	2.835	0.2559
0.0200	8.860	3.638	2.517	2.371	2.121	1.472	0.918	0.668	0.447	3.272	4.160	3.091	0.3199
0.0250	9.629	3.821	2.745	2.587	2.341	1.679	1.074	0.783	0.567	3.625	4.612	3.370	0.3999
0.0320	10.674	4.051	3.002	2.858	2.611	1.956	1.271	0.958	0.667	4.069	5.190	3.725	0.5118
0.0400	11.724	4.263	3.265	3.143	2.894	2.261	1.498	1.148	0.815	4.532	5.782	4.095	0.6398
0.0500	12.859	4.522	3.570	3.473	3.232	2.607	1.756	1.367	0.991	5.027	6.410	4.514	0.7997
0.0600	14.101	4.826	3.914	3.783	3.576	2.943	2.001	1.575	1.157	5.493	7.012	4.931	0.9597
0.0700	15.326	5.190	4.250	4.128	3.915	3.264	2.224	1.768	1.307	5.941	7.577	5.371	1.1196
0.0800	16.617	5.579	4.602	4.473	4.257	3.577	2.452	1.954	1.451	6.379	8.127	5.823	1.2796
0.0900	17.857	5.991	4.955	4.829	4.597	3.878	2.666	2.133	1.579	6.801	8.647	6.278	1.4395
0.1000	19.208	6.445	5.342	5.175	4.923	4.172	2.881	2.293	1.700	7.205	9.163	6.733	1.5995
0.1250	22.658	7.562	6.250	6.021	5.753	4.857	3.345	2.665	1.980	8.184	10.416	7.871	1.9994
0.1600	27.416	9.141	7.501	7.228	6.857	5.712	3.917	3.119	2.315	9.450	12.006	9.469	2.5592
0.2000	32.262	10.710	8.772	8.424	7.964	6.472	4.402	3.496	2.582	10.605	13.457	11.072	3.1990
0.2500	37.290	12.343	10.010	9.639	8.999	7.114	4.809	3.770	2.773	11.655	14.771	12.714	3.9988
0.3200	42.341	13.821	11.241	10.728	9.815	7.520	5.018	3.913	2.858	12.560	15.953	14.242	5.1184
0.4000	45.391	14.985	11.900	11.311	10.242	7.645	5.056	3.935	2.866	13.043	16.607	15.101	6.3980
0.5000	46.957	15.603	12.122	11.533	10.319	7.588	5.005	3.908	2.848	13.196	16.847	15.471	7.9975
0.6000	46.534	15.609	11.813	11.227	10.032	7.335	4.866	3.796	2.777	12.912	16.569	15.147	9.5970
0.7000	44.543	15.307	11.259	10.700	9.576	6.993	4.679	3.642	2.691	12.442	15.989	14.458	11.196
0.8000	41.998	14.739	10.653	10.160	9.079	6.639	4.493	3.506	2.604	11.905	15.282	13.694	12.796
0.9000	39.414	14.048	10.065	9.593	8.530	6.292	4.293	3.392	2.520	11.367	14.576	12.908	14.395
1.0000	37.256	13.471	9.615	9.124	8.129	6.020	4.147	3.304	2.454	10.873	13.928	12.248	15.995
1.2500	32.694	12.242	8.716	8.322	7.394	5.546	3.894	3.144	2.375	9.848	12.505	11.032	19.994
1.6000	27.644	10.825	7.816	7.474	6.691	5.107	3.663	2.978	2.306	8.715	10.905	9.712	25.592
2.0000	23.317	9.558	7.085	6.747	6.105	4.742	3.464	2.844	2.236	7.772	9.574	8.589	31.990
2.5000	19.307	8.300	6.339	6.032	5.567	4.403	3.269	2.722	2.166	6.875	8.320	7.508	39.987
3.2000	15.777	7.010	5.558	5.306	4.927	3.989	3.034	2.524	2.024	5.964	7.109	6.469	51.184
4.0000	13.103	5.924	4.844	4.646	4.368	3.574	2.740	2.307	1.866	5.186	6.111	5.587	63.980
5.0000	10.990	4.994	4.178	4.023	3.791	3.142	2.443	2.063	1.693	4.472	5.236	4.797	79.975
6.0000	9.520	4.329	3.680	3.539	3.352	2.798	2.186	1.858	1.531	3.931	4.589	4.203	95.970
7.0000	8.440	3.832	3.294	3.175	3.002	2.524	1.985	1.694	1.399	3.516	4.094	3.761	111.96
8.0000	7.590	3.433	2.983	2.879	2.719	2.294	1.805	1.548	1.286	3.181	3.695	3.403	127.96
9.0000	6.886	3.129	2.725	2.631	2.489	2.105	1.659	1.425	1.190	2.901	3.365	3.104	143.95
10.0000	6.315	2.883	2.515	2.429	2.298	1.943	1.535	1.320	1.105	2.670	3.092	2.860	159.95
11.0000	5.828	2.673	2.337	2.257	2.135	1.805	1.430	1.230	1.030	2.474	2.863	2.653	175.94
12.0000	5.407	2.491	2.183	2.108	1.994	1.686	1.340	1.153	0.966	2.306	2.663	2.474	191.94

$^{16}_{8}O$ IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=16
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.075	0.084	0.117	0.176	0.208	0.247	0.273	0.304	0.474	0.562	0.614	0.736	0.1999
0.0160	0.090	0.101	0.141	0.212	0.251	0.295	0.324	0.360	0.561	0.663	0.725	0.866	0.2559
0.0200	0.106	0.120	0.166	0.249	0.295	0.345	0.378	0.419	0.652	0.770	0.840	1.002	0.3199
0.0250	0.123	0.141	0.194	0.291	0.346	0.402	0.440	0.486	0.756	0.891	0.971	1.156	0.3999
0.0320	0.146	0.167	0.230	0.345	0.411	0.474	0.518	0.570	0.887	1.044	1.138	1.350	0.5118
0.0400	0.168	0.195	0.267	0.400	0.478	0.549	0.598	0.657	1.023	1.202	1.309	1.550	0.6398
0.0500	0.194	0.225	0.309	0.462	0.554	0.632	0.689	0.755	1.176	1.378	1.500	1.773	0.7997
0.0600	0.218	0.253	0.348	0.519	0.623	0.709	0.771	0.844	1.314	1.538	1.673	1.974	0.9597
0.0700	0.240	0.279	0.384	0.572	0.687	0.779	0.848	0.926	1.442	1.684	1.831	2.158	1.1196
0.0800	0.262	0.304	0.418	0.622	0.746	0.845	0.919	1.003	1.560	1.819	1.977	2.328	1.2796
0.0900	0.282	0.327	0.450	0.668	0.802	0.907	0.986	1.076	1.671	1.945	2.113	2.486	1.4395
0.1000	0.301	0.349	0.481	0.714	0.856	0.966	1.050	1.144	1.775	2.064	2.241	2.635	1.5995
0.1250	0.347	0.399	0.554	0.818	0.981	1.104	1.201	1.305	2.017	2.340	2.538	2.978	1.9994
0.1600	0.406	0.462	0.648	0.950	1.139	1.279	1.390	1.507	2.316	2.682	2.903	3.399	2.5592
0.2000	0.470	0.527	0.748	1.089	1.304	1.460	1.588	1.718	2.624	3.031	3.275	3.825	3.1990
0.2500	0.548	0.602	0.867	1.251	1.495	1.671	1.818	1.963	2.974	3.428	3.699	4.309	3.9988
0.3200	0.654	0.701	1.026	1.465	1.746	1.947	2.120	2.286	3.428	3.941	4.245	4.932	5.1184
0.4000	0.774	0.810	1.204	1.699	2.019	2.246	2.448	2.637	3.915	4.488	4.827	5.595	6.3980
0.5000	0.925	0.945	1.422	1.984	2.349	2.605	2.843	3.060	4.491	5.135	5.516	6.379	7.9975
0.6000	1.079	1.082	1.640	2.264	2.671	2.956	3.228	3.474	5.047	5.758	6.178	7.127	9.5970
0.7000	1.236	1.222	1.859	2.542	2.990	3.302	3.610	3.884	5.593	6.369	6.825	7.856	11.196
0.8000	1.398	1.367	2.081	2.822	3.309	3.648	3.992	4.294	6.135	6.973	7.465	8.577	12.796
0.9000	1.565	1.518	2.306	3.104	3.630	3.994	4.375	4.705	6.673	7.572	8.099	9.290	14.395
1.0000	1.737	1.674	2.536	3.389	3.953	4.342	4.760	5.119	7.211	8.170	8.732	9.999	15.995
1.2500	2.189	2.091	3.128	4.117	4.774	5.225	5.739	6.172	8.563	9.671	10.319	11.774	19.994
1.6000	2.878	2.741	4.011	5.183	5.970	6.507	7.161	7.708	10.498	11.813	12.585	14.303	25.592
2.0000	3.749	3.574	5.102	6.480	7.417	8.052	8.881	9.568	12.807	14.352	15.271	17.291	31.990
2.5000	4.967	4.739	6.594	8.230	9.358	10.119	11.190	12.057	15.858	17.702	18.808	21.202	39.987
3.2000	6.914	6.589	8.932	10.933	12.337	13.288	14.728	15.876	20.468	22.755	24.131	27.067	51.184
4.0000	9.483	9.012	11.963	14.398	16.132	17.320	19.214	20.732	26.244	29.067	30.768	34.367	63.980
5.0000	13.209	12.499	16.291	19.303	21.471	22.985	25.499	27.536	34.235	37.809	39.916	44.407	79.975
6.0000	17.497	16.493	21.218	24.844	27.483	29.342	32.547	35.156	43.128	47.496	50.031	55.451	95.970
7.0000	22.346	20.992	26.740	31.021	34.172	36.389	40.345	43.586	52.916	58.124	61.117	67.505	111.96
8.0000	27.753	25.992	32.852	37.828	41.532	44.131	48.882	52.819	63.565	69.689	73.160	80.579	127.96
9.0000	33.709	31.495	39.552	45.259	49.555	52.563	58.155	62.848	75.085	82.175	86.156	94.653	143.95
10.0000	40.209	37.502	46.835	53.306	58.240	61.678	68.172	73.653	87.481	95.574	100.080	109.714	159.95
11.0000	47.254	44.008	54.698	61.961	67.578	71.469	78.928	85.215	100.740	109.856	114.886	125.760	175.94
12.0000	54.840	51.012	63.137	71.224	77.559	81.926	90.409	97.525	114.840	125.007	130.587	142.791	191.94

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.027	0.070	0.101	0.107	0.119	0.185	0.316	0.466	0.729	0.081	0.063	0.078	0.1999
0.0160	0.033	0.085	0.123	0.131	0.145	0.225	0.379	0.555	0.863	0.099	0.077	0.096	0.2559
0.0200	0.040	0.102	0.147	0.156	0.174	0.266	0.444	0.645	0.998	0.118	0.092	0.116	0.3199
0.0250	0.048	0.122	0.175	0.186	0.206	0.312	0.517	0.745	1.141	0.139	0.109	0.138	0.3999
0.0320	0.058	0.149	0.212	0.224	0.249	0.370	0.605	0.865	1.309	0.167	0.131	0.168	0.5118
0.0400	0.069	0.179	0.251	0.265	0.293	0.427	0.693	0.980	1.473	0.195	0.153	0.199	0.6398
0.0500	0.082	0.214	0.296	0.311	0.343	0.491	0.787	1.102	1.643	0.228	0.179	0.235	0.7997
0.0600	0.093	0.248	0.337	0.354	0.388	0.547	0.870	1.208	1.787	0.258	0.202	0.268	0.9597
0.0700	0.104	0.279	0.376	0.394	0.430	0.597	0.944	1.302	1.914	0.285	0.224	0.298	1.1196
0.0800	0.113	0.308	0.411	0.430	0.469	0.643	1.011	1.386	2.028	0.311	0.244	0.326	1.2796
0.0900	0.123	0.335	0.444	0.464	0.504	0.685	1.073	1.464	2.134	0.335	0.263	0.352	1.4395
0.1000	0.131	0.361	0.475	0.496	0.538	0.725	1.130	1.537	2.231	0.357	0.281	0.377	1.5995
0.1250	0.150	0.418	0.544	0.567	0.613	0.814	1.259	1.698	2.449	0.409	0.322	0.432	1.9994
0.1600	0.173	0.485	0.626	0.652	0.702	0.920	1.413	1.892	2.710	0.473	0.372	0.496	2.5592
0.2000	0.194	0.550	0.705	0.734	0.788	1.025	1.567	2.085	2.971	0.537	0.422	0.559	3.1990
0.2500	0.217	0.619	0.790	0.822	0.882	1.143	1.740	2.305	3.269	0.609	0.479	0.626	3.9988
0.3200	0.245	0.705	0.895	0.932	1.001	1.295	1.968	2.596	3.666	0.701	0.551	0.709	5.1184
0.4000	0.274	0.794	1.006	1.048	1.129	1.464	2.222	2.922	4.113	0.801	0.630	0.796	6.3980
0.5000	0.309	0.898	1.139	1.188	1.284	1.674	2.539	3.329	4.672	0.923	0.725	0.901	7.9975
0.6000	0.343	1.001	1.272	1.329	1.441	1.888	2.863	3.744	5.240	1.045	0.821	1.005	9.5970
0.7000	0.378	1.104	1.411	1.475	1.604	2.111	3.198	4.174	5.825	1.171	0.919	1.113	11.196
0.8000	0.415	1.211	1.557	1.628	1.776	2.346	3.547	4.622	6.429	1.303	1.022	1.227	12.796
0.9000	0.455	1.322	1.711	1.790	1.958	2.593	3.911	5.085	7.054	1.440	1.129	1.347	14.395
1.0000	0.496	1.438	1.874	1.961	2.150	2.853	4.290	5.563	7.697	1.584	1.241	1.474	15.995
1.2500	0.611	1.749	2.311	2.420	2.665	3.545	5.285	6.803	9.353	1.970	1.544	1.818	19.994
1.6000	0.797	2.236	2.989	3.130	3.462	4.597	6.767	8.633	11.745	2.575	2.024	2.359	25.592
2.0000	1.049	2.865	3.849	4.031	4.463	5.898	8.564	10.831	14.563	3.353	2.650	3.060	31.990
2.5000	1.427	3.764	5.044	5.286	5.836	7.650	10.942	13.707	18.198	4.448	3.547	4.058	39.987
3.2000	2.070	5.235	6.934	7.269	7.978	10.325	14.502	17.983	23.551	6.200	5.006	5.667	51.184
4.0000	2.962	7.226	9.405	9.852	10.741	13.720	18.948	23.293	30.145	8.506	6.952	7.801	63.980
5.0000	4.299	10.175	12.970	13.561	14.682	18.505	25.143	30.640	39.159	11.836	9.787	10.898	79.975
6.0000	5.866	13.622	17.057	17.809	19.177	23.910	32.077	38.823	49.111	15.658	13.057	14.468	95.970
7.0000	7.653	17.556	21.658	22.587	24.227	29.938	39.767	47.852	60.055	19.967	16.753	18.497	111.96
8.0000	9.654	21.971	26.767	27.884	29.833	36.593	48.227	57.743	71.992	24.756	20.871	22.974	127.96
9.0000	11.869	26.856	32.383	33.703	35.988	43.879	57.480	68.522	84.938	30.028	25.412	27.900	143.95
10.0000	14.297	32.186	38.498	40.036	42.682	51.795	67.512	80.194	98.903	35.780	30.375	33.273	159.95
11.0000	16.935	37.953	45.100	46.873	49.908	60.342	78.312	92.754	113.908	42.008	35.755	39.084	175.94
12.0000	19.786	44.156	52.186	54.211	57.665	69.515	89.873	106.192	129.952	48.709	41.551	45.331	191.94

$^{19}_{9}F$ IONS

ENERGY PER MASS UNIT	ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)												ENERGY FOR A=19
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	3.408	2.819	2.066	1.374	1.115	1.012	0.938	0.868	0.551	0.472	0.434	0.372	0.2375
0.0160	3.856	3.190	2.337	1.554	1.262	1.145	1.061	0.981	0.624	0.534	0.491	0.421	0.3040
0.0200	4.311	3.566	2.613	1.737	1.411	1.280	1.186	1.097	0.698	0.597	0.549	0.470	0.3800
0.0250	4.820	3.987	2.921	1.943	1.577	1.431	1.326	1.227	0.780	0.667	0.615	0.526	0.4749
0.0320	5.446	4.514	3.305	2.198	1.788	1.626	1.500	1.388	0.882	0.757	0.697	0.598	0.6079
0.0400	6.074	5.058	3.695	2.464	2.010	1.833	1.689	1.563	0.994	0.855	0.787	0.676	0.7599
0.0500	6.767	5.672	4.131	2.768	2.268	2.066	1.904	1.764	1.120	0.973	0.896	0.770	0.9499
0.0600	7.350	6.220	4.504	3.036	2.495	2.265	2.094	1.941	1.243	1.081	0.998	0.858	1.1399
0.0700	7.862	6.725	4.838	3.280	2.710	2.458	2.274	2.110	1.355	1.185	1.098	0.943	1.3299
0.0800	8.319	7.208	5.141	3.512	2.905	2.632	2.432	2.262	1.465	1.285	1.188	1.023	1.5198
0.0900	8.727	7.660	5.417	3.727	3.088	2.806	2.584	2.405	1.576	1.379	1.279	1.102	1.7098
0.1000	9.100	8.091	5.670	3.929	3.266	2.960	2.722	2.546	1.678	1.469	1.361	1.174	1.8998
0.1250	9.882	9.117	6.215	4.375	3.654	3.313	3.045	2.853	1.911	1.672	1.563	1.352	2.3747
0.1600	10.685	10.386	6.810	4.876	4.100	3.718	3.412	3.201	2.179	1.914	1.794	1.566	3.0397
0.2000	11.313	11.481	7.308	5.313	4.495	4.071	3.734	3.501	2.426	2.141	2.010	1.754	3.7996
0.2500	11.781	12.392	7.735	5.717	4.858	4.409	4.038	3.783	2.669	2.359	2.212	1.934	4.7495
0.3200	12.090	13.135	8.103	6.102	5.210	4.757	4.335	4.052	2.901	2.577	2.419	2.127	6.0794
0.4000	12.195	13.538	8.341	6.356	5.472	5.005	4.563	4.262	3.103	2.761	2.594	2.277	7.5992
0.5000	12.162	13.668	8.505	6.574	5.698	5.231	4.763	4.440	3.283	2.926	2.751	2.424	9.4990
0.6000	11.924	13.430	8.505	6.660	5.801	5.341	4.848	4.516	3.377	3.019	2.845	2.526	11.399
0.7000	11.647	13.074	8.446	6.672	5.836	5.380	4.873	4.544	3.429	3.066	2.897	2.568	13.299
0.8000	11.339	12.642	8.350	6.655	5.837	5.402	4.885	4.551	3.457	3.106	2.931	2.605	15.198
0.9000	11.047	12.208	8.232	6.602	5.820	5.400	4.873	4.536	3.482	3.128	2.955	2.634	17.098
1.0000	10.749	11.769	8.100	6.553	5.783	5.370	4.852	4.512	3.483	3.135	2.965	2.649	18.998
1.2500	10.046	10.758	7.745	6.351	5.654	5.267	4.748	4.407	3.462	3.121	2.951	2.641	23.747
1.6000	9.176	9.618	7.248	6.052	5.407	5.052	4.552	4.204	3.370	3.051	2.885	2.587	30.397
2.0000	8.330	8.693	6.723	5.694	5.116	4.800	4.303	3.987	3.227	2.945	2.783	2.508	37.996
2.5000	7.459	7.816	6.149	5.282	4.778	4.489	4.015	3.726	3.062	2.786	2.644	2.398	47.495
3.2000	6.520	6.888	5.484	4.771	4.343	4.085	3.663	3.389	2.830	2.588	2.457	2.232	60.794
4.0000	5.706	6.077	4.877	4.287	3.926	3.697	3.331	3.073	2.600	2.380	2.268	2.063	75.992
5.0000	4.945	5.300	4.285	3.796	3.496	3.299	2.974	2.751	2.357	2.151	2.061	1.881	94.990
6.0000	4.372	4.701	3.822	3.409	3.145	2.981	2.691	2.488	2.133	1.968	1.884	1.731	113.99
7.0000	3.912	4.226	3.450	3.091	2.857	2.715	2.456	2.274	1.967	1.808	1.735	1.597	132.99
8.0000	3.544	3.837	3.145	2.830	2.620	2.491	2.264	2.091	1.818	1.676	1.610	1.484	151.98
9.0000	3.245	3.511	2.890	2.609	2.419	2.303	2.095	1.939	1.690	1.560	1.500	1.387	170.98
10.0000	2.988	3.234	2.673	2.424	2.245	2.141	1.949	1.810	1.577	1.462	1.409	1.302	189.98
11.0000	2.770	3.002	2.487	2.263	2.099	2.002	1.823	1.698	1.482	1.378	1.330	1.226	208.98
12.0000	2.583	2.797	2.325	2.120	1.969	1.881	1.713	1.600	1.397	1.302	1.255	1.158	227.98

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	7.746	3.305	2.189	2.057	1.828	1.206	0.739	0.525	0.346	2.770	3.524	2.689	0.2375
0.0160	8.600	3.627	2.437	2.292	2.038	1.376	0.853	0.608	0.403	3.115	3.963	2.994	0.3040
0.0200	9.353	3.841	2.657	2.503	2.239	1.555	0.969	0.705	0.472	3.454	4.392	3.263	0.3800
0.0250	10.165	4.034	2.898	2.731	2.471	1.773	1.133	0.827	0.599	3.827	4.869	3.558	0.4749
0.0320	11.269	4.276	3.169	3.017	2.756	2.066	1.342	1.011	0.704	4.296	5.479	3.933	0.6079
0.0400	12.378	4.500	3.447	3.318	3.056	2.387	1.581	1.212	0.861	4.785	6.104	4.323	0.7599
0.0500	13.674	4.808	3.796	3.693	3.437	2.772	1.867	1.454	1.053	5.346	6.816	4.800	0.9499
0.0600	15.043	5.148	4.175	4.035	3.815	3.139	2.135	1.680	1.234	5.860	7.481	5.261	1.1399
0.0700	16.402	5.554	4.548	4.417	4.190	3.493	2.380	1.892	1.398	6.358	8.109	5.748	1.3299
0.0800	17.840	5.990	4.941	4.802	4.571	3.841	2.632	2.098	1.558	6.848	8.725	6.252	1.5198
0.0900	19.232	6.452	5.336	5.201	4.951	4.177	2.871	2.297	1.701	7.324	9.312	6.761	1.7098
0.1000	20.752	6.963	5.772	5.591	5.318	4.508	3.113	2.478	1.837	7.785	9.900	7.275	1.8998
0.1250	24.673	8.235	6.805	6.557	6.265	5.289	3.642	2.902	2.157	8.912	11.342	8.570	2.3747
0.1600	30.169	10.059	8.254	7.954	7.546	6.286	4.311	3.432	2.547	10.399	13.212	10.420	3.0397
0.2000	35.883	11.912	9.756	9.369	8.858	7.199	4.896	3.888	2.872	11.795	14.967	12.314	3.7996
0.2500	41.926	13.877	11.255	10.837	10.118	7.998	5.407	4.239	3.117	13.104	16.608	14.295	4.7495
0.3200	48.133	15.712	12.779	12.195	11.158	8.549	5.705	4.449	3.249	14.278	18.135	16.190	6.0794
0.4000	52.050	17.183	13.646	12.971	11.745	8.767	5.797	4.513	3.286	14.956	19.043	17.317	7.5992
0.5000	54.262	18.031	14.008	13.327	11.924	8.769	5.783	4.516	3.291	15.249	19.468	17.877	9.4990
0.6000	54.009	18.116	13.711	13.030	11.644	8.514	5.648	4.406	3.224	14.986	19.230	17.580	11.399
0.7000	51.858	17.821	13.108	12.458	11.149	8.142	5.448	4.240	3.133	14.485	18.615	16.833	13.299
0.8000	49.015	17.201	12.433	11.857	10.596	7.749	5.244	4.092	3.039	13.894	17.836	15.982	15.198
0.9000	46.098	16.431	11.771	11.220	9.977	7.359	5.021	3.968	2.947	13.294	17.048	15.097	17.098
1.0000	43.659	15.787	11.267	10.692	9.526	7.055	4.860	3.872	2.876	12.741	16.322	14.353	18.998
1.2500	38.494	14.414	10.262	9.798	8.706	6.529	4.585	3.702	2.796	11.595	14.724	12.989	23.747
1.6000	32.760	12.828	9.263	8.857	7.929	6.052	4.341	3.530	2.732	10.328	12.923	11.509	30.397
2.0000	27.833	11.409	8.458	8.054	7.288	5.661	4.135	3.395	2.669	9.278	11.429	10.253	37.996
2.5000	23.244	9.992	7.631	7.262	6.703	5.301	3.935	3.278	2.607	8.277	10.017	9.039	47.495
3.2000	19.193	8.527	6.761	6.454	5.994	4.853	3.691	3.071	2.462	7.255	8.648	7.869	60.794
4.0000	16.095	7.277	5.950	5.706	5.365	4.389	3.365	2.834	2.292	6.370	7.506	6.862	75.992
5.0000	13.626	6.192	5.180	4.988	4.701	3.895	3.029	2.558	2.100	5.545	6.492	5.947	94.990
6.0000	11.886	5.404	4.594	4.418	4.185	3.493	2.729	2.320	1.911	4.907	5.729	5.247	113.99
7.0000	10.592	4.809	4.133	3.985	3.767	3.167	2.491	2.125	1.756	4.413	5.137	4.720	132.99
8.0000	9.560	4.324	3.758	3.626	3.425	2.890	2.274	1.950	1.620	4.006	4.654	4.286	151.98
9.0000	8.698	3.953	3.442	3.323	3.144	2.658	2.095	1.800	1.503	3.664	4.251	3.921	170.98
10.0000	7.992	3.649	3.184	3.074	2.908	2.459	1.943	1.671	1.398	3.379	3.913	3.619	189.98
11.0000	7.386	3.387	2.962	2.860	2.706	2.288	1.813	1.559	1.306	3.136	3.628	3.362	208.98
12.0000	6.858	3.160	2.769	2.674	2.529	2.139	1.700	1.462	1.225	2.925	3.378	3.139	227.98

$^{19}_{9}F$ IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=19
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.081	0.090	0.125	0.187	0.219	0.260	0.287	0.321	0.497	0.589	0.644	0.773	0.2375
0.0160	0.098	0.109	0.151	0.225	0.265	0.313	0.344	0.382	0.592	0.700	0.765	0.916	0.3040
0.0200	0.115	0.130	0.179	0.266	0.314	0.368	0.403	0.447	0.692	0.817	0.891	1.064	0.3800
0.0250	0.135	0.153	0.210	0.313	0.371	0.431	0.471	0.521	0.806	0.950	1.036	1.234	0.4749
0.0320	0.160	0.183	0.251	0.373	0.443	0.512	0.558	0.614	0.952	1.119	1.219	1.449	0.6079
0.0400	0.186	0.214	0.292	0.434	0.517	0.594	0.648	0.711	1.102	1.294	1.409	1.670	0.7599
0.0500	0.215	0.248	0.339	0.504	0.601	0.687	0.748	0.820	1.272	1.490	1.621	1.917	0.9499
0.0600	0.241	0.279	0.382	0.567	0.678	0.772	0.840	0.919	1.425	1.666	1.812	2.140	1.1399
0.0700	0.266	0.308	0.421	0.626	0.748	0.850	0.924	1.010	1.566	1.828	1.986	2.343	1.3299
0.0800	0.289	0.335	0.459	0.680	0.814	0.923	1.003	1.094	1.697	1.977	2.147	2.529	1.5198
0.0900	0.311	0.360	0.494	0.732	0.876	0.991	1.077	1.174	1.818	2.115	2.297	2.703	1.7098
0.1000	0.333	0.384	0.528	0.781	0.934	1.056	1.147	1.249	1.932	2.246	2.437	2.866	1.8998
0.1250	0.383	0.440	0.608	0.895	1.069	1.207	1.311	1.425	2.192	2.542	2.756	3.235	2.3747
0.1600	0.447	0.508	0.710	1.039	1.238	1.396	1.517	1.645	2.513	2.908	3.146	3.685	3.0397
0.2000	0.516	0.577	0.818	1.188	1.413	1.591	1.730	1.871	2.839	3.279	3.541	4.137	3.7996
0.2500	0.598	0.657	0.944	1.360	1.615	1.815	1.974	2.132	3.209	3.697	3.987	4.648	4.7495
0.3200	0.710	0.761	1.111	1.584	1.879	2.105	2.291	2.471	3.686	4.235	4.561	5.302	6.0794
0.4000	0.834	0.875	1.296	1.828	2.163	2.416	2.632	2.836	4.191	4.804	5.167	5.992	7.5992
0.5000	0.990	1.014	1.521	2.122	2.503	2.787	3.039	3.272	4.786	5.472	5.877	6.799	9.4990
0.6000	1.148	1.154	1.745	2.409	2.833	3.146	3.434	3.696	5.356	6.111	6.556	7.567	11.399
0.7000	1.309	1.298	1.969	2.693	3.159	3.500	3.825	4.115	5.914	6.735	7.217	8.312	13.299
0.8000	1.474	1.445	2.195	2.978	3.485	3.853	4.214	4.533	6.466	7.350	7.869	9.046	15.198
0.9000	1.644	1.598	2.424	3.265	3.811	4.204	4.604	4.951	7.013	7.960	8.514	9.772	17.098
1.0000	1.818	1.757	2.656	3.554	4.138	4.557	4.994	5.371	7.559	8.566	9.156	10.491	18.998
1.2500	2.275	2.179	3.256	4.290	4.968	5.450	5.984	6.436	8.926	10.084	10.761	12.285	23.747
1.6000	2.968	2.832	4.144	5.362	6.171	6.739	7.414	7.980	10.872	12.238	13.040	14.828	30.397
2.0000	3.838	3.664	5.233	6.657	7.616	8.282	9.131	9.837	13.177	14.773	15.722	17.812	37.996
2.5000	5.044	4.818	6.711	8.390	9.539	10.330	11.418	12.303	16.200	18.092	19.225	21.687	47.495
3.2000	6.954	6.633	9.005	11.043	12.462	13.439	14.890	16.051	20.723	23.050	24.449	27.441	60.794
4.0000	9.451	8.987	11.949	14.409	16.148	17.356	19.248	20.768	26.334	29.181	30.896	34.533	75.992
5.0000	13.035	12.341	16.113	19.128	21.286	22.806	25.295	27.314	34.023	37.593	39.698	44.193	94.990
6.0000	17.128	16.154	20.816	24.417	27.023	28.873	32.022	34.587	42.510	46.839	49.352	54.734	113.99
7.0000	21.728	20.422	26.055	30.277	33.369	35.559	39.421	42.585	51.798	56.922	59.870	66.171	132.99
8.0000	26.836	25.145	31.829	36.707	40.321	42.872	47.484	51.306	61.856	67.846	71.246	78.520	151.98
9.0000	32.443	30.326	38.136	43.704	47.876	50.812	56.215	60.749	72.703	79.602	83.482	91.771	170.98
10.0000	38.548	35.968	44.977	51.263	56.034	59.373	65.624	70.898	84.347	92.188	96.561	105.919	189.98
11.0000	45.156	42.070	52.351	59.379	64.791	68.556	75.711	81.741	96.780	105.582	110.446	120.966	208.98
12.0000	52.262	48.631	60.257	68.056	74.141	78.352	86.467	93.273	109.989	119.774	125.154	136.920	227.98

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.029	0.076	0.108	0.114	0.126	0.196	0.331	0.487	0.760	0.087	0.068	0.084	0.2375
0.0160	0.036	0.093	0.133	0.140	0.156	0.239	0.399	0.583	0.905	0.107	0.084	0.104	0.3040
0.0200	0.044	0.111	0.159	0.168	0.187	0.284	0.471	0.682	1.052	0.128	0.100	0.125	0.3800
0.0250	0.052	0.134	0.190	0.201	0.223	0.335	0.551	0.792	1.209	0.152	0.119	0.150	0.4749
0.0320	0.064	0.164	0.231	0.244	0.270	0.399	0.649	0.925	1.395	0.182	0.144	0.183	0.6079
0.0400	0.076	0.197	0.274	0.289	0.319	0.463	0.747	1.053	1.576	0.214	0.169	0.218	0.7599
0.0500	0.090	0.236	0.325	0.341	0.375	0.534	0.852	1.189	1.765	0.251	0.197	0.258	0.9499
0.0600	0.103	0.273	0.371	0.389	0.426	0.596	0.943	1.306	1.925	0.284	0.223	0.295	1.1399
0.0700	0.114	0.308	0.413	0.432	0.472	0.652	1.025	1.409	2.066	0.314	0.247	0.328	1.3299
0.0800	0.125	0.340	0.452	0.473	0.514	0.703	1.099	1.502	2.191	0.342	0.269	0.359	1.5198
0.0900	0.135	0.370	0.489	0.510	0.553	0.749	1.167	1.587	2.305	0.369	0.290	0.388	1.7098
0.1000	0.145	0.398	0.522	0.545	0.590	0.793	1.230	1.667	2.413	0.394	0.310	0.415	1.8998
0.1250	0.165	0.461	0.598	0.623	0.672	0.890	1.371	1.844	2.651	0.451	0.354	0.475	2.3747
0.1600	0.190	0.534	0.687	0.715	0.768	1.005	1.539	2.054	2.934	0.520	0.409	0.545	3.0397
0.2000	0.213	0.603	0.771	0.803	0.861	1.118	1.704	2.261	3.215	0.588	0.462	0.612	3.7996
0.2500	0.237	0.677	0.862	0.897	0.961	1.243	1.888	2.495	3.531	0.664	0.523	0.683	4.7495
0.3200	0.267	0.767	0.972	1.012	1.086	1.404	2.127	2.801	3.948	0.761	0.599	0.771	6.0794
0.4000	0.297	0.859	1.087	1.133	1.219	1.579	2.391	3.139	4.413	0.865	0.681	0.861	7.5992
0.5000	0.333	0.967	1.224	1.277	1.379	1.795	2.718	3.560	4.990	0.991	0.779	0.969	9.4990
0.6000	0.368	1.072	1.361	1.421	1.540	2.015	3.051	3.985	5.573	1.117	0.877	1.076	11.399
0.7000	0.404	1.178	1.503	1.570	1.707	2.243	3.393	4.425	6.170	1.245	0.978	1.187	13.299
0.8000	0.441	1.286	1.652	1.727	1.882	2.482	3.748	4.881	6.785	1.379	1.082	1.302	15.198
0.9000	0.481	1.399	1.809	1.891	2.066	2.734	4.118	5.352	7.420	1.519	1.191	1.425	17.098
1.0000	0.524	1.517	1.974	2.065	2.261	2.997	4.503	5.837	8.073	1.665	1.305	1.554	18.998
1.2500	0.640	1.832	2.415	2.529	2.783	3.697	5.509	7.091	9.747	2.056	1.611	1.901	23.747
1.6000	0.827	2.321	3.097	3.243	3.583	4.755	6.999	8.930	12.152	2.664	2.093	2.445	30.397
2.0000	1.079	2.950	3.957	4.143	4.583	6.054	8.793	11.126	14.966	3.440	2.719	3.145	37.996
2.5000	1.453	3.840	5.140	5.386	5.944	7.789	11.149	13.974	18.568	4.525	3.608	4.133	47.495
3.2000	2.084	5.284	6.994	7.332	8.045	10.414	14.642	18.170	23.821	6.244	5.039	5.713	60.794
4.0000	2.950	7.217	9.395	9.840	10.730	13.712	18.961	23.329	30.226	8.484	6.929	7.785	75.992
5.0000	4.236	10.054	12.824	13.409	14.521	18.316	24.922	30.398	38.899	11.688	9.657	10.765	94.990
6.0000	5.732	13.344	16.725	17.463	18.811	23.475	31.540	38.208	48.398	15.337	12.778	14.172	113.99
7.0000	7.427	17.076	21.091	21.997	23.602	29.194	38.836	46.774	58.781	19.425	16.285	17.995	132.99
8.0000	9.318	21.247	25.917	27.001	28.897	35.480	46.827	56.117	70.057	23.948	20.174	22.223	151.98
9.0000	11.403	25.847	31.204	32.479	34.692	42.340	55.539	66.266	82.245	28.911	24.450	26.862	170.98
10.0000	13.683	30.853	36.948	38.427	40.980	49.776	64.962	77.229	95.363	34.315	29.111	31.909	189.98
11.0000	16.158	36.261	43.139	44.839	47.757	57.791	75.091	89.008	109.434	40.156	34.157	37.358	208.98
12.0000	18.829	42.072	49.777	51.714	55.023	66.384	85.920	101.596	124.464	46.432	39.586	43.210	227.98

$^{20}_{10}$Ne IONS

ENERGY PER MASS UNIT	ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)												ENERGY FOR A=20
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	3.548	2.935	2.150	1.430	1.161	1.054	0.976	0.903	0.574	0.491	0.452	0.387	0.2499
0.0160	4.014	3.320	2.432	1.618	1.314	1.192	1.104	1.022	0.649	0.556	0.511	0.438	0.3199
0.0200	4.487	3.712	2.720	1.809	1.469	1.333	1.235	1.142	0.726	0.621	0.571	0.490	0.3998
0.0250	5.017	4.150	3.041	2.022	1.642	1.490	1.380	1.277	0.812	0.695	0.640	0.547	0.4998
0.0320	5.669	4.699	3.440	2.288	1.861	1.692	1.562	1.445	0.918	0.788	0.726	0.623	0.6397
0.0400	6.323	5.265	3.846	2.565	2.092	1.908	1.758	1.627	1.035	0.890	0.819	0.704	0.7997
0.0500	7.043	5.904	4.300	2.881	2.361	2.150	1.982	1.836	1.165	1.013	0.933	0.802	0.9996
0.0600	7.679	6.498	4.705	3.171	2.607	2.367	2.188	2.028	1.299	1.129	1.042	0.896	1.1995
0.0700	8.242	7.050	5.072	3.439	2.840	2.577	2.384	2.211	1.420	1.243	1.151	0.989	1.3994
0.0800	8.749	7.581	5.407	3.693	3.055	2.768	2.558	2.379	1.541	1.352	1.249	1.076	1.5994
0.0900	9.207	8.081	5.715	3.932	3.258	2.961	2.726	2.538	1.663	1.455	1.349	1.163	1.7993
0.1000	9.630	8.562	6.000	4.158	3.456	3.132	2.880	2.694	1.776	1.554	1.440	1.242	1.9992
0.1250	10.534	9.719	6.625	4.664	3.896	3.531	3.246	3.041	2.037	1.782	1.666	1.441	2.4990
0.1600	11.502	11.179	7.331	5.249	4.413	4.002	3.673	3.445	2.346	2.060	1.932	1.686	3.1987
0.2000	12.301	12.484	7.946	5.777	4.887	4.426	4.061	3.806	2.638	2.328	2.185	1.907	3.9984
0.2500	12.946	13.617	8.500	6.282	5.338	4.845	4.437	4.157	2.933	2.593	2.431	2.125	4.9980
0.3200	13.431	14.592	9.002	6.778	5.788	5.284	4.816	4.501	3.223	2.863	2.687	2.363	6.3974
0.4000	13.664	15.169	9.346	7.122	6.131	5.608	5.112	4.776	3.477	3.094	2.907	2.551	7.9968
0.5000	13.728	15.427	9.600	7.421	6.432	5.904	5.376	5.011	3.706	3.302	3.106	2.736	9.9960
0.6000	13.495	15.199	9.626	7.537	6.565	6.045	5.487	5.111	3.821	3.417	3.220	2.859	11.995
0.7000	13.214	14.833	9.582	7.570	6.621	6.104	5.529	5.155	3.890	3.478	3.287	2.913	13.994
0.8000	12.894	14.376	9.495	7.568	6.637	6.143	5.555	5.175	3.931	3.532	3.333	2.962	15.994
0.9000	12.589	13.912	9.381	7.524	6.632	6.154	5.554	5.169	3.968	3.565	3.368	3.002	17.993
1.0000	12.275	13.440	9.250	7.483	6.605	6.133	5.541	5.152	3.978	3.580	3.386	3.025	19.992
1.2500	11.526	12.343	8.886	7.287	6.487	6.043	5.447	5.056	3.972	3.581	3.386	3.030	24.990
1.6000	10.587	11.097	8.363	6.983	6.239	5.829	5.252	4.850	3.889	3.521	3.328	2.985	31.987
2.0000	9.664	10.085	7.800	6.607	5.936	5.569	4.992	4.625	3.744	3.416	3.229	2.909	39.984
2.5000	8.704	9.121	7.176	6.164	5.576	5.238	4.686	4.349	3.574	3.251	3.086	2.799	49.980
3.2000	7.661	8.092	6.443	5.605	5.103	4.800	4.304	3.982	3.325	3.041	2.886	2.622	63.974
4.0000	6.747	7.186	5.767	5.069	4.642	4.371	3.939	3.633	3.074	2.814	2.682	2.439	79.968
5.0000	5.885	6.309	5.100	4.519	4.162	3.927	3.539	3.274	2.805	2.560	2.453	2.239	99.960
6.0000	5.233	5.626	4.574	4.080	3.764	3.568	3.220	2.978	2.552	2.356	2.255	2.072	119.95
7.0000	4.704	5.082	4.148	3.717	3.435	3.265	2.954	2.734	2.365	2.174	2.087	1.921	139.94
8.0000	4.279	4.632	3.797	3.417	3.163	3.007	2.734	2.525	2.195	2.024	1.944	1.792	159.94
9.0000	3.932	4.255	3.502	3.162	2.931	2.791	2.539	2.350	2.049	1.891	1.817	1.681	179.93
10.0000	3.634	3.933	3.250	2.948	2.730	2.603	2.369	2.200	1.918	1.778	1.713	1.583	199.92
11.0000	3.378	3.660	3.033	2.760	2.560	2.441	2.223	2.071	1.807	1.680	1.622	1.495	219.91
12.0000	3.159	3.420	2.843	2.593	2.408	2.300	2.095	1.956	1.709	1.592	1.535	1.416	239.90

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	8.063	3.440	2.279	2.141	1.903	1.256	0.770	0.546	0.360	2.883	3.668	2.799	0.2499
0.0160	8.951	3.775	2.537	2.386	2.121	1.433	0.888	0.632	0.420	3.242	4.125	3.116	0.3199
0.0200	9.736	3.998	2.766	2.605	2.331	1.618	1.009	0.734	0.491	3.595	4.572	3.397	0.3998
0.0250	10.581	4.199	3.016	2.843	2.572	1.846	1.180	0.860	0.623	3.983	5.069	3.703	0.4998
0.0320	11.730	4.451	3.299	3.141	2.869	2.150	1.397	1.053	0.733	4.472	5.704	4.094	0.6397
0.0400	12.884	4.684	3.588	3.454	3.181	2.485	1.646	1.262	0.896	4.981	6.354	4.500	0.7997
0.0500	14.233	5.005	3.952	3.844	3.578	2.885	1.944	1.514	1.097	5.564	7.095	4.997	0.9996
0.0600	15.716	5.378	4.362	4.216	3.985	3.280	2.230	1.755	1.289	6.122	7.816	5.496	1.1995
0.0700	17.194	5.823	4.768	4.631	4.392	3.662	2.495	1.983	1.466	6.665	8.501	6.026	1.3994
0.0800	18.763	6.299	5.196	5.050	4.807	4.039	2.768	2.206	1.638	7.202	9.176	6.575	1.5994
0.0900	20.289	6.807	5.630	5.487	5.224	4.406	3.029	2.423	1.795	7.727	9.825	7.133	1.7993
0.1000	21.960	7.368	6.108	5.916	5.628	4.770	3.294	2.622	1.944	8.238	10.476	7.698	1.9992
0.1250	26.302	8.778	7.254	6.989	6.678	5.638	3.882	3.094	2.299	9.500	12.091	9.136	2.4990
0.1600	32.474	10.827	8.885	8.562	8.122	6.766	4.640	3.695	2.742	11.194	14.221	11.216	3.1987
0.2000	39.016	12.952	10.608	10.187	9.631	7.827	5.324	4.227	3.123	12.825	16.274	13.390	3.9984
0.2500	46.070	15.249	12.368	11.909	11.118	8.789	5.942	4.658	3.426	14.399	18.250	15.708	4.9980
0.3200	53.471	17.455	14.196	13.548	12.396	9.497	6.337	4.942	3.610	15.861	20.146	17.986	6.3974
0.4000	58.319	19.253	15.290	14.533	13.159	9.823	6.495	5.056	3.682	16.757	21.337	19.402	7.9968
0.5000	61.248	20.352	15.811	15.043	13.459	9.898	6.528	5.098	3.715	17.213	21.974	20.179	9.9960
0.6000	61.122	20.502	15.516	14.746	13.177	9.635	6.391	4.986	3.648	16.960	21.763	19.896	11.995
0.7000	58.833	20.218	14.871	14.133	12.648	9.237	6.180	4.810	3.555	16.433	21.119	19.097	13.994
0.8000	55.737	19.560	14.138	13.483	12.049	8.812	5.963	4.653	3.456	15.800	20.282	18.174	15.994
0.9000	52.534	18.725	13.415	12.786	11.370	8.387	5.722	4.522	3.358	15.151	19.428	17.205	17.993
1.0000	49.858	18.028	12.867	12.210	10.878	8.057	5.550	4.422	3.284	14.550	18.639	16.391	19.992
1.2500	44.165	16.538	11.774	11.241	9.988	7.491	5.261	4.248	3.208	13.303	16.893	14.902	24.990
1.6000	37.799	14.802	10.687	10.219	9.149	6.983	5.009	4.073	3.153	11.917	14.911	13.280	31.987
2.0000	32.292	13.237	9.812	9.344	8.455	6.568	4.797	3.939	3.097	10.764	13.260	11.895	39.984
2.5000	27.125	11.661	8.905	8.475	7.822	6.186	4.593	3.825	3.043	9.659	11.690	10.549	49.980
3.2000	22.550	10.019	7.944	7.583	7.042	5.702	4.336	3.608	2.893	8.524	10.160	9.245	63.974
4.0000	19.031	8.604	7.036	6.747	6.344	5.190	3.979	3.351	2.710	7.532	8.875	8.114	79.968
5.0000	16.218	7.369	6.166	5.936	5.595	4.636	3.606	3.045	2.499	6.599	7.726	7.079	99.960
6.0000	14.225	6.468	5.498	5.287	5.008	4.181	3.266	2.776	2.287	5.873	6.856	6.280	119.95
7.0000	12.736	5.783	4.970	4.791	4.530	3.808	2.995	2.555	2.112	5.306	6.177	5.675	139.94
8.0000	11.543	5.221	4.537	4.378	4.135	3.489	2.745	2.354	1.955	4.837	5.620	5.175	159.94
9.0000	10.540	4.790	4.171	4.027	3.810	3.222	2.539	2.182	1.821	4.440	5.151	4.752	179.93
10.0000	9.718	4.436	3.871	3.738	3.536	2.990	2.363	2.031	1.700	4.108	4.758	4.401	199.92
11.0000	9.007	4.130	3.612	3.488	3.300	2.790	2.211	1.901	1.592	3.824	4.425	4.100	219.91
12.0000	8.387	3.864	3.386	3.270	3.093	2.616	2.078	1.788	1.498	3.577	4.131	3.838	239.90

$^{20}_{10}$Ne IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=20 MEV
0.0125	0.079	0.087	0.121	0.181	0.212	0.253	0.279	0.312	0.483	0.573	0.626	0.753	0.2499
0.0160	0.096	0.107	0.147	0.220	0.257	0.305	0.335	0.373	0.577	0.683	0.745	0.894	0.3199
0.0200	0.114	0.127	0.175	0.260	0.306	0.360	0.394	0.437	0.676	0.798	0.871	1.041	0.3998
0.0250	0.133	0.151	0.207	0.307	0.362	0.423	0.462	0.511	0.790	0.930	1.014	1.210	0.4998
0.0320	0.158	0.181	0.247	0.367	0.434	0.503	0.549	0.604	0.935	1.100	1.198	1.424	0.6397
0.0400	0.184	0.211	0.289	0.428	0.509	0.586	0.638	0.701	1.085	1.274	1.387	1.645	0.7997
0.0500	0.213	0.246	0.336	0.498	0.593	0.679	0.739	0.811	1.255	1.470	1.600	1.893	0.9996
0.0600	0.240	0.277	0.379	0.562	0.670	0.764	0.831	0.910	1.409	1.647	1.791	2.116	1.1995
0.0700	0.265	0.306	0.418	0.620	0.740	0.842	0.915	1.001	1.550	1.808	1.965	2.319	1.3994
0.0800	0.288	0.333	0.456	0.675	0.806	0.915	0.994	1.085	1.680	1.957	2.125	2.505	1.5994
0.0900	0.310	0.358	0.491	0.726	0.867	0.983	1.067	1.164	1.801	2.095	2.274	2.678	1.7993
0.1000	0.331	0.382	0.525	0.775	0.925	1.047	1.137	1.239	1.914	2.224	2.414	2.840	1.9992
0.1250	0.381	0.437	0.604	0.888	1.059	1.195	1.297	1.410	2.171	2.517	2.729	3.204	2.4990
0.1600	0.444	0.504	0.704	1.029	1.225	1.378	1.497	1.623	2.485	2.876	3.111	3.645	3.1987
0.2000	0.511	0.571	0.808	1.174	1.395	1.566	1.701	1.841	2.802	3.236	3.495	4.084	3.9984
0.2500	0.591	0.648	0.930	1.340	1.588	1.781	1.935	2.090	3.158	3.638	3.924	4.575	4.9980
0.3200	0.696	0.747	1.089	1.553	1.839	2.057	2.237	2.413	3.612	4.151	4.470	5.198	6.3974
0.4000	0.814	0.854	1.263	1.783	2.107	2.351	2.558	2.757	4.089	4.687	5.041	5.849	7.9968
0.5000	0.960	0.985	1.474	2.058	2.425	2.698	2.939	3.165	4.645	5.312	5.706	6.605	9.9960
0.6000	1.107	1.115	1.682	2.325	2.733	3.032	3.307	3.560	5.176	5.907	6.338	7.319	11.995
0.7000	1.256	1.248	1.890	2.590	3.036	3.361	3.670	3.949	5.694	6.486	6.952	8.011	13.994
0.8000	1.410	1.385	2.100	2.854	3.337	3.687	4.031	4.336	6.205	7.056	7.556	8.692	15.994
0.9000	1.566	1.526	2.311	3.119	3.639	4.012	4.390	4.723	6.711	7.620	8.152	9.362	17.993
1.0000	1.727	1.673	2.526	3.385	3.941	4.338	4.751	5.110	7.214	8.179	8.744	10.025	19.992
1.2500	2.147	2.061	3.077	4.062	4.704	5.158	5.660	6.089	8.471	9.574	10.220	11.675	24.990
1.6000	2.781	2.658	3.889	5.042	5.804	6.337	6.968	7.502	10.251	11.544	12.304	14.001	31.987
2.0000	3.572	3.415	4.879	6.220	7.118	7.741	8.530	9.190	12.347	13.850	14.743	16.714	39.984
2.5000	4.662	4.458	6.216	7.787	8.857	9.593	10.598	11.420	15.081	16.851	17.911	20.218	49.980
3.2000	6.379	6.089	8.277	10.171	11.483	12.387	13.718	14.787	19.145	21.306	22.604	25.389	63.974
4.0000	8.607	8.190	10.905	13.176	14.774	15.883	17.608	18.998	24.154	26.780	28.360	31.720	79.968
5.0000	11.786	11.165	14.599	17.361	19.330	20.717	22.971	24.805	30.973	34.240	36.166	40.287	99.960
6.0000	15.395	14.526	18.744	22.024	24.389	26.066	28.902	31.216	38.456	42.391	44.678	49.580	119.95
7.0000	19.429	18.270	23.340	27.164	29.955	31.930	35.391	38.231	46.602	51.235	53.904	59.612	139.94
8.0000	23.890	22.395	28.382	32.779	36.026	38.317	42.433	45.848	55.386	60.775	63.838	70.397	159.94
9.0000	28.768	26.902	33.869	38.865	42.598	45.223	50.028	54.062	64.822	71.002	74.482	81.923	179.93
10.0000	34.060	31.793	39.799	45.418	49.670	52.645	58.185	62.860	74.915	81.913	85.820	94.188	199.92
11.0000	39.770	37.066	46.171	52.432	57.237	60.580	66.901	72.230	85.660	93.487	97.819	107.191	219.91
12.0000	45.893	42.719	52.984	59.909	65.294	69.021	76.169	82.167	97.042	105.717	110.492	120.938	239.90

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.028	0.074	0.104	0.110	0.122	0.189	0.320	0.471	0.735	0.084	0.066	0.081	0.2499
0.0160	0.035	0.091	0.129	0.136	0.151	0.231	0.387	0.566	0.879	0.104	0.082	0.101	0.3199
0.0200	0.043	0.109	0.155	0.164	0.182	0.276	0.458	0.664	1.024	0.125	0.098	0.122	0.3998
0.0250	0.051	0.132	0.186	0.197	0.218	0.327	0.538	0.774	1.181	0.149	0.117	0.147	0.4998
0.0320	0.063	0.162	0.227	0.240	0.265	0.391	0.636	0.906	1.366	0.180	0.141	0.180	0.6397
0.0400	0.075	0.195	0.271	0.285	0.314	0.456	0.733	1.034	1.547	0.212	0.167	0.215	0.7997
0.0500	0.089	0.235	0.321	0.337	0.371	0.527	0.839	1.170	1.737	0.248	0.195	0.255	0.9996
0.0600	0.102	0.272	0.368	0.385	0.421	0.589	0.930	1.288	1.897	0.281	0.221	0.292	1.1995
0.0700	0.113	0.307	0.410	0.429	0.467	0.645	1.012	1.391	2.038	0.312	0.245	0.326	1.3994
0.0800	0.124	0.339	0.449	0.469	0.510	0.696	1.086	1.484	2.163	0.340	0.267	0.357	1.5994
0.0900	0.134	0.369	0.485	0.506	0.549	0.742	1.154	1.569	2.277	0.366	0.288	0.385	1.7993
0.1000	0.144	0.397	0.519	0.541	0.585	0.786	1.216	1.648	2.384	0.392	0.308	0.412	1.9992
0.1250	0.164	0.459	0.594	0.618	0.666	0.882	1.355	1.823	2.620	0.448	0.352	0.471	2.4990
0.1600	0.188	0.530	0.681	0.709	0.761	0.995	1.520	2.030	2.898	0.516	0.405	0.540	3.1987
0.2000	0.211	0.598	0.763	0.794	0.851	1.105	1.680	2.232	3.171	0.582	0.458	0.605	3.9984
0.2500	0.234	0.669	0.850	0.885	0.948	1.225	1.858	2.457	3.476	0.656	0.516	0.674	4.9980
0.3200	0.262	0.754	0.955	0.994	1.067	1.378	2.085	2.747	3.873	0.748	0.589	0.757	6.3974
0.4000	0.291	0.841	1.064	1.108	1.192	1.543	2.334	3.067	4.311	0.846	0.666	0.843	7.9968
0.5000	0.324	0.942	1.192	1.243	1.342	1.746	2.641	3.460	4.850	0.964	0.758	0.944	9.9960
0.6000	0.357	1.040	1.320	1.377	1.492	1.950	2.950	3.856	5.393	1.080	0.849	1.043	11.995
0.7000	0.390	1.138	1.451	1.516	1.647	2.162	3.268	4.264	5.948	1.200	0.942	1.146	13.994
0.8000	0.425	1.239	1.589	1.661	1.808	2.384	3.597	4.687	6.518	1.324	1.039	1.253	15.994
0.9000	0.462	1.343	1.734	1.813	1.979	2.616	3.939	5.123	7.105	1.453	1.140	1.366	17.993
1.0000	0.501	1.452	1.886	1.973	2.159	2.859	4.294	5.570	7.707	1.588	1.245	1.485	19.992
1.2500	0.608	1.741	2.292	2.399	2.638	3.502	5.219	6.723	9.246	1.947	1.526	1.805	24.990
1.6000	0.779	2.189	2.916	3.052	3.370	4.470	6.582	8.405	11.446	2.503	1.967	2.302	31.987
2.0000	1.008	2.760	3.697	3.871	4.280	5.651	8.213	10.401	14.005	3.209	2.536	2.939	39.984
2.5000	1.346	3.566	4.768	4.995	5.510	7.220	10.344	12.977	17.262	4.191	3.340	3.832	49.980
3.2000	1.913	4.863	6.434	6.743	7.398	9.579	13.482	16.748	21.982	5.735	4.626	5.251	63.974
4.0000	2.686	6.588	8.577	8.983	9.795	12.523	17.338	21.353	27.699	7.735	6.313	7.101	79.968
5.0000	3.827	9.105	11.618	12.148	13.157	16.606	22.624	27.622	35.392	10.576	8.732	9.744	99.960
6.0000	5.145	12.005	15.057	15.722	16.940	21.154	28.459	34.508	43.766	13.792	11.484	12.748	119.95
7.0000	6.633	15.279	18.887	19.699	21.142	26.171	34.858	42.022	52.873	17.378	14.560	16.101	139.94
8.0000	8.283	18.921	23.101	24.068	25.766	31.660	41.837	50.180	62.721	21.329	17.956	19.793	159.94
9.0000	10.098	22.922	27.701	28.834	30.807	37.628	49.416	59.009	73.324	25.646	21.675	23.828	179.93
10.0000	12.074	27.262	32.680	33.990	36.258	44.074	57.584	68.513	84.695	30.330	25.717	28.203	199.92
11.0000	14.213	31.935	38.030	39.531	42.114	51.000	66.337	78.691	96.855	35.378	30.077	32.913	219.91
12.0000	16.514	36.942	43.750	45.455	48.375	58.405	75.668	89.539	109.805	40.786	34.755	37.955	239.90

$^{23}_{11}Na$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=23 MEV
0.0125	3.796	3.140	2.300	1.530	1.242	1.127	1.044	0.966	0.614	0.526	0.483	0.414	0.2874
0.0160	4.294	3.553	2.603	1.731	1.405	1.275	1.182	1.093	0.695	0.595	0.547	0.468	0.3678
0.0200	4.801	3.972	2.910	1.935	1.571	1.426	1.321	1.222	0.777	0.665	0.611	0.524	0.4598
0.0250	5.368	4.441	3.253	2.163	1.757	1.594	1.477	1.366	0.869	0.743	0.685	0.586	0.5747
0.0320	6.066	5.028	3.681	2.448	1.991	1.811	1.671	1.546	0.983	0.843	0.777	0.666	0.7357
0.0400	6.765	5.634	4.115	2.745	2.239	2.041	1.881	1.741	1.107	0.953	0.877	0.753	0.9196
0.0500	7.536	6.317	4.601	3.083	2.526	2.300	2.121	1.965	1.247	1.084	0.998	0.858	1.1495
0.0600	8.217	6.953	5.035	3.393	2.789	2.533	2.341	2.170	1.390	1.208	1.115	0.959	1.3794
0.0700	8.819	7.544	5.427	3.680	3.039	2.757	2.551	2.366	1.520	1.330	1.232	1.058	1.6093
0.0800	9.361	8.111	5.786	3.952	3.269	2.962	2.737	2.546	1.649	1.446	1.336	1.151	1.8392
0.0900	9.851	8.647	6.115	4.207	3.486	3.168	2.917	2.715	1.779	1.556	1.443	1.244	2.0691
0.1000	10.303	9.160	6.419	4.448	3.697	3.351	3.081	2.882	1.900	1.663	1.541	1.329	2.2990
0.1250	11.266	10.394	7.085	4.988	4.166	3.776	3.472	3.252	2.179	1.906	1.782	1.541	2.8738
0.1600	12.293	11.948	7.835	5.610	4.717	4.278	3.925	3.682	2.507	2.202	2.065	1.802	3.6784
0.2000	13.141	13.336	8.489	6.171	5.221	4.728	4.338	4.066	2.818	2.487	2.334	2.037	4.5980
0.2500	13.833	14.551	9.083	6.712	5.704	5.177	4.741	4.442	3.134	2.770	2.598	2.271	5.7475
0.3200	14.388	15.633	9.644	7.262	6.201	5.661	5.159	4.822	3.452	3.067	2.879	2.531	7.3568
0.4000	14.713	16.333	10.063	7.668	6.602	6.038	5.505	5.142	3.744	3.331	3.130	2.747	9.1960
0.5000	14.894	16.737	10.415	8.051	6.978	6.405	5.833	5.437	4.020	3.583	3.369	2.968	11.495
0.6000	14.796	16.664	10.554	8.264	7.198	6.628	6.016	5.604	4.190	3.747	3.530	3.134	13.794
0.7000	14.602	16.392	10.589	8.365	7.317	6.745	6.110	5.697	4.299	3.844	3.632	3.219	16.093
0.8000	14.335	15.982	10.556	8.413	7.379	6.830	6.175	5.753	4.370	3.927	3.705	3.294	18.392
0.9000	14.061	15.539	10.478	8.403	7.408	6.874	6.203	5.773	4.432	3.982	3.762	3.353	20.691
1.0000	13.760	15.067	10.369	8.389	7.404	6.875	6.211	5.776	4.459	4.013	3.795	3.391	22.990
1.2500	13.001	13.923	10.024	8.220	7.317	6.816	6.145	5.704	4.481	4.040	3.819	3.418	28.737
1.6000	11.999	12.577	9.478	7.914	7.071	6.606	5.952	5.497	4.407	3.990	3.772	3.384	36.784
2.0000	10.983	11.462	8.865	7.508	6.746	6.329	5.673	5.257	4.255	3.883	3.670	3.307	45.980
2.5000	9.911	10.384	8.170	7.018	6.348	5.964	5.335	4.951	4.069	3.701	3.513	3.186	57.475
3.2000	8.736	9.228	7.347	6.392	5.819	5.474	4.908	4.540	3.791	3.468	3.291	2.990	73.568
4.0000	7.707	8.207	6.587	5.790	5.302	4.993	4.499	4.150	3.511	3.214	3.063	2.786	91.960
5.0000	6.737	7.222	5.838	5.173	4.764	4.496	4.052	3.748	3.211	2.931	2.808	2.563	114.95
6.0000	6.006	6.458	5.250	4.683	4.321	4.095	3.696	3.418	2.930	2.704	2.588	2.378	137.94
7.0000	5.416	5.850	4.776	4.279	3.954	3.759	3.400	3.147	2.722	2.503	2.402	2.211	160.93
8.0000	4.942	5.350	4.385	3.947	3.653	3.473	3.157	2.916	2.535	2.337	2.245	2.070	183.92
9.0000	4.556	4.930	4.057	3.664	3.396	3.234	2.942	2.723	2.374	2.191	2.106	1.948	206.91
10.0000	4.224	4.572	3.778	3.427	3.174	3.026	2.754	2.558	2.229	2.067	1.991	1.840	229.90
11.0000	3.941	4.270	3.538	3.219	2.986	2.848	2.593	2.416	2.108	1.960	1.893	1.744	252.89
12.0000	3.697	4.003	3.328	3.035	2.819	2.692	2.453	2.290	2.000	1.864	1.797	1.657	275.88

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	8.627	3.681	2.439	2.291	2.036	1.343	0.824	0.584	0.386	3.085	3.925	2.995	0.2874
0.0160	9.578	4.039	2.715	2.553	2.270	1.533	0.950	0.677	0.449	3.469	4.414	3.334	0.3678
0.0200	10.417	4.278	2.959	2.788	2.494	1.731	1.080	0.786	0.526	3.847	4.892	3.634	0.4598
0.0250	11.322	4.493	3.227	3.042	2.752	1.975	1.262	0.921	0.667	4.262	5.423	3.963	0.5747
0.0320	12.551	4.763	3.530	3.361	3.070	2.300	1.494	1.126	0.784	4.785	6.103	4.380	0.7357
0.0400	13.786	5.012	3.840	3.695	3.403	2.658	1.761	1.350	0.959	5.329	6.798	4.815	0.9196
0.0500	15.229	5.356	4.228	4.113	3.828	3.087	2.080	1.620	1.173	5.954	7.592	5.346	1.1495
0.0600	16.816	5.755	4.667	4.511	4.265	3.509	2.387	1.878	1.380	6.550	8.363	5.881	1.3794
0.0700	18.398	6.231	5.102	4.955	4.700	3.918	2.670	2.122	1.568	7.131	9.096	6.448	1.6093
0.0800	20.076	6.740	5.560	5.404	5.143	4.322	2.962	2.361	1.753	7.706	9.818	7.035	1.8392
0.0900	21.708	7.283	6.023	5.870	5.589	4.715	3.241	2.593	1.920	8.267	10.512	7.631	2.0691
0.1000	23.494	7.883	6.535	6.329	6.021	5.103	3.524	2.805	2.080	8.813	11.208	8.236	2.2990
0.1250	28.129	9.388	7.758	7.475	7.142	6.030	4.152	3.309	2.459	10.160	12.931	9.771	2.8738
0.1600	34.709	11.572	9.496	9.151	8.681	7.232	4.960	3.949	2.930	11.964	15.200	11.988	3.6784
0.2000	41.680	13.837	11.332	10.883	10.288	8.361	5.687	4.516	3.336	13.701	17.385	14.303	4.5980
0.2500	49.229	16.295	13.216	12.725	11.880	9.392	6.349	4.977	3.660	15.386	19.501	16.785	5.7475
0.3200	57.284	18.699	15.208	14.514	13.279	10.174	6.789	5.294	3.867	16.992	21.583	19.268	7.3568
0.4000	62.795	20.731	16.464	15.649	14.169	10.577	6.994	5.444	3.965	18.044	22.975	20.892	9.1960
0.5000	66.449	22.080	17.154	16.321	14.602	10.738	7.082	5.530	4.031	18.675	23.840	21.893	11.495
0.6000	67.016	22.479	17.013	16.168	14.448	10.564	7.008	5.467	4.000	18.596	23.862	21.814	13.794
0.7000	65.016	22.343	16.434	15.619	13.977	10.208	6.830	5.316	3.928	18.160	23.338	21.104	16.093
0.8000	61.965	21.746	15.718	14.990	13.396	9.796	6.629	5.173	3.842	17.565	22.548	20.204	18.392
0.9000	58.677	20.914	14.983	14.281	12.699	9.367	6.392	5.050	3.751	16.922	21.700	19.217	20.691
1.0000	55.891	20.210	14.424	13.688	12.194	9.032	6.222	4.957	3.681	16.311	20.894	18.374	22.990
1.2500	49.819	18.654	13.282	12.680	11.267	8.450	5.934	4.791	3.619	15.006	19.055	16.810	28.737
1.6000	42.840	16.776	12.113	11.582	10.369	7.914	5.677	4.616	3.573	13.506	16.899	15.051	36.784
2.0000	36.700	15.043	11.152	10.620	9.609	7.464	5.452	4.477	3.519	12.233	15.070	13.519	45.980
2.5000	30.884	13.277	10.139	9.649	8.906	7.043	5.229	4.355	3.464	10.997	13.309	12.010	57.475
3.2000	25.715	11.425	9.059	8.648	8.030	6.502	4.945	4.114	3.299	9.720	11.586	10.543	73.568
4.0000	21.736	9.828	8.036	7.707	7.245	5.928	4.545	3.827	3.096	8.602	10.137	9.268	91.960
5.0000	18.566	8.436	7.059	6.796	6.405	5.307	4.128	3.485	2.861	7.555	8.845	8.104	114.95
6.0000	16.328	7.424	6.311	6.069	5.749	4.799	3.749	3.187	2.625	6.741	7.870	7.208	137.94
7.0000	14.662	6.657	5.721	5.516	5.215	4.384	3.448	2.942	2.431	6.108	7.111	6.533	160.93
8.0000	13.331	6.030	5.240	5.056	4.775	4.030	3.170	2.719	2.258	5.587	6.490	5.977	183.92
9.0000	12.213	5.551	4.832	4.666	4.414	3.733	2.942	2.528	2.110	5.145	5.968	5.506	206.91
10.0000	11.297	5.157	4.500	4.345	4.111	3.476	2.747	2.361	1.976	4.776	5.532	5.116	229.90
11.0000	10.507	4.818	4.213	4.068	3.849	3.255	2.579	2.218	1.857	4.461	5.161	4.783	252.89
12.0000	9.817	4.523	3.963	3.827	3.621	3.062	2.433	2.093	1.754	4.186	4.835	4.493	275.88

$^{23}_{11}$Na IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=23 MEV
0.0125	0.083	0.091	0.125	0.186	0.216	0.259	0.286	0.319	0.492	0.582	0.636	0.766	0.2874
0.0160	0.101	0.112	0.153	0.227	0.264	0.314	0.344	0.383	0.590	0.697	0.761	0.913	0.3678
0.0200	0.120	0.134	0.182	0.270	0.316	0.371	0.407	0.451	0.694	0.819	0.893	1.068	0.4598
0.0250	0.141	0.159	0.216	0.319	0.375	0.438	0.478	0.529	0.814	0.958	1.044	1.246	0.5747
0.0320	0.168	0.190	0.259	0.383	0.451	0.524	0.570	0.628	0.968	1.137	1.238	1.473	0.7357
0.0400	0.195	0.223	0.304	0.449	0.531	0.612	0.666	0.731	1.127	1.323	1.439	1.707	0.9196
0.0500	0.226	0.260	0.354	0.523	0.621	0.712	0.773	0.848	1.308	1.531	1.665	1.971	1.1495
0.0600	0.255	0.294	0.400	0.591	0.702	0.802	0.871	0.954	1.472	1.720	1.869	2.208	1.3794
0.0700	0.282	0.325	0.443	0.654	0.778	0.886	0.962	1.051	1.623	1.892	2.055	2.424	1.6093
0.0800	0.306	0.353	0.483	0.712	0.848	0.964	1.046	1.141	1.762	2.051	2.226	2.624	1.8392
0.0900	0.330	0.380	0.520	0.767	0.914	1.037	1.125	1.226	1.891	2.198	2.385	2.808	2.0691
0.1000	0.353	0.406	0.557	0.819	0.976	1.106	1.199	1.306	2.012	2.337	2.535	2.981	2.2990
0.1250	0.406	0.465	0.642	0.939	1.119	1.264	1.371	1.490	2.287	2.651	2.872	3.372	2.8738
0.1600	0.475	0.537	0.749	1.089	1.297	1.461	1.585	1.718	2.625	3.035	3.282	3.844	3.6784
0.2000	0.547	0.610	0.862	1.243	1.480	1.662	1.805	1.953	2.965	3.422	3.694	4.317	4.5980
0.2500	0.632	0.692	0.992	1.420	1.688	1.892	2.056	2.220	3.347	3.854	4.155	4.844	5.7475
0.3200	0.746	0.799	1.164	1.650	1.958	2.189	2.380	2.567	3.836	4.401	4.738	5.514	7.3568
0.4000	0.872	0.914	1.350	1.896	2.245	2.503	2.725	2.936	4.346	4.976	5.350	6.211	9.1960
0.5000	1.027	1.052	1.575	2.188	2.584	2.872	3.130	3.370	4.938	5.640	6.057	7.015	11.495
0.6000	1.182	1.190	1.794	2.470	2.908	3.225	3.518	3.786	5.498	6.267	6.723	7.768	13.794
0.7000	1.338	1.329	2.011	2.746	3.224	3.569	3.897	4.193	6.039	6.873	7.364	8.491	16.093
0.8000	1.497	1.471	2.228	3.020	3.537	3.907	4.271	4.594	6.569	7.464	7.991	9.197	18.392
0.9000	1.659	1.617	2.447	3.294	3.848	4.243	4.642	4.993	7.092	8.045	8.606	9.888	20.691
1.0000	1.824	1.767	2.668	3.567	4.158	4.577	5.013	5.391	7.609	8.620	9.215	10.570	22.990
1.2500	2.253	2.164	3.231	4.259	4.939	5.416	5.942	6.392	8.894	10.047	10.723	12.257	28.737
1.6000	2.898	2.771	4.056	5.256	6.057	6.615	7.272	7.828	10.703	12.050	12.842	14.621	36.784
2.0000	3.699	3.538	5.060	6.449	7.388	8.037	8.855	9.539	12.827	14.386	15.313	17.370	45.980
2.5000	4.801	4.592	6.411	8.034	9.146	9.908	10.945	11.793	15.590	17.419	18.515	20.912	57.475
3.2000	6.534	6.238	8.491	10.439	11.796	12.728	14.094	15.191	19.692	21.915	23.252	26.130	73.568
4.0000	8.779	8.355	11.139	13.467	15.112	16.251	18.013	19.434	24.739	27.430	29.051	32.509	91.960
5.0000	11.976	11.347	14.853	17.676	19.695	21.112	23.407	25.273	31.597	34.933	36.902	41.126	114.95
6.0000	15.596	14.719	19.012	22.354	24.769	26.478	29.356	31.706	39.103	43.110	45.441	50.449	137.94
7.0000	19.632	18.464	23.609	27.495	30.338	32.345	35.849	38.723	47.253	51.958	54.670	60.484	160.93
8.0000	24.081	22.578	28.638	33.095	36.392	38.714	42.872	46.319	56.013	61.472	64.578	71.240	183.92
9.0000	28.930	27.058	34.093	39.146	42.925	45.580	50.421	54.485	65.393	71.639	75.159	82.699	206.91
10.0000	34.174	31.905	39.969	45.639	49.933	52.934	58.503	63.202	75.394	82.450	86.393	94.851	229.90
11.0000	39.812	37.111	46.261	52.564	57.405	60.769	67.111	72.455	86.004	93.878	98.242	107.691	252.89
12.0000	45.838	42.675	52.965	59.923	65.334	69.076	76.231	82.234	97.205	105.914	110.714	121.220	275.88

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.030	0.077	0.108	0.114	0.126	0.194	0.325	0.478	0.743	0.088	0.069	0.084	0.2874
0.0160	0.037	0.095	0.134	0.142	0.157	0.239	0.396	0.577	0.893	0.109	0.086	0.105	0.3678
0.0200	0.045	0.115	0.162	0.171	0.189	0.286	0.471	0.680	1.045	0.131	0.103	0.128	0.4598
0.0250	0.054	0.139	0.195	0.206	0.228	0.340	0.555	0.796	1.210	0.156	0.123	0.155	0.5747
0.0320	0.066	0.171	0.239	0.252	0.278	0.408	0.659	0.936	1.406	0.189	0.149	0.190	0.7357
0.0400	0.079	0.206	0.285	0.300	0.330	0.477	0.762	1.072	1.598	0.224	0.176	0.227	0.9196
0.0500	0.094	0.249	0.339	0.356	0.390	0.553	0.875	1.217	1.800	0.263	0.207	0.270	1.1495
0.0600	0.108	0.289	0.389	0.407	0.445	0.620	0.973	1.343	1.972	0.298	0.235	0.309	1.3794
0.0700	0.121	0.326	0.434	0.454	0.494	0.679	1.061	1.454	2.121	0.331	0.260	0.345	1.6093
0.0800	0.132	0.361	0.476	0.497	0.539	0.734	1.140	1.553	2.256	0.361	0.284	0.378	1.8392
0.0900	0.143	0.393	0.515	0.537	0.581	0.783	1.212	1.644	2.377	0.389	0.306	0.409	2.0691
0.1000	0.153	0.423	0.551	0.574	0.620	0.829	1.279	1.727	2.490	0.416	0.327	0.437	2.2990
0.1250	0.175	0.489	0.630	0.656	0.706	0.933	1.429	1.915	2.743	0.476	0.375	0.501	2.8738
0.1600	0.200	0.566	0.723	0.752	0.807	1.054	1.606	2.137	3.043	0.549	0.432	0.576	3.6784
0.2000	0.224	0.639	0.811	0.843	0.903	1.173	1.778	2.355	3.336	0.621	0.489	0.646	4.5980
0.2500	0.249	0.715	0.904	0.941	1.007	1.302	1.969	2.597	3.664	0.700	0.551	0.720	5.7475
0.3200	0.280	0.807	1.018	1.059	1.135	1.466	2.214	2.910	4.091	0.799	0.629	0.809	7.3568
0.4000	0.310	0.901	1.134	1.181	1.269	1.643	2.480	3.252	4.560	0.904	0.712	0.901	9.1960
0.5000	0.346	1.008	1.270	1.324	1.428	1.859	2.807	3.670	5.134	1.029	0.810	1.008	11.495
0.6000	0.380	1.111	1.405	1.466	1.587	2.074	3.133	4.088	5.706	1.152	0.906	1.113	13.794
0.7000	0.415	1.213	1.542	1.610	1.748	2.296	3.465	4.514	6.286	1.278	1.003	1.220	16.093
0.8000	0.451	1.318	1.685	1.760	1.916	2.525	3.806	4.952	6.877	1.406	1.104	1.331	18.392
0.9000	0.489	1.425	1.835	1.918	2.092	2.765	4.159	5.402	7.483	1.539	1.207	1.448	20.691
1.0000	0.530	1.537	1.991	2.082	2.277	3.015	4.524	5.861	8.101	1.678	1.315	1.570	22.990
1.2500	0.638	1.833	2.406	2.518	2.767	3.673	5.469	7.040	9.675	2.045	1.603	1.897	28.737
1.6000	0.812	2.288	3.041	3.182	3.511	4.656	6.855	8.750	11.911	2.610	2.052	2.403	36.784
2.0000	1.044	2.867	3.832	4.011	4.433	5.853	8.508	10.773	14.504	3.326	2.628	3.048	45.980
2.5000	1.386	3.681	4.914	5.148	5.676	7.439	10.661	13.377	17.796	4.318	3.440	3.951	57.475
3.2000	1.958	4.990	6.595	6.912	7.582	9.820	13.829	17.182	22.560	5.876	4.738	5.383	73.568
4.0000	2.738	6.729	8.754	9.168	9.996	12.786	17.713	21.822	28.321	7.891	6.438	7.247	91.960
5.0000	3.885	9.259	11.813	12.351	13.378	16.893	23.030	28.127	36.058	10.749	8.871	9.905	114.95
6.0000	5.207	12.169	15.263	15.937	17.173	21.455	28.883	35.035	44.458	13.975	11.631	12.918	137.94
7.0000	6.695	15.444	19.094	19.915	21.377	26.473	35.285	42.552	53.569	17.563	14.708	16.272	160.93
8.0000	8.342	19.076	23.297	24.273	25.988	31.948	42.245	50.688	63.390	21.502	18.096	19.955	183.92
9.0000	10.145	23.054	27.870	29.010	31.000	37.881	49.780	59.465	73.931	25.794	21.793	23.966	206.91
10.0000	12.104	27.354	32.803	34.120	36.400	44.268	57.873	68.881	85.197	30.435	25.797	28.301	229.90
11.0000	14.215	31.969	38.086	39.591	42.183	51.107	66.516	78.932	97.205	35.419	30.103	32.952	252.89
12.0000	16.480	36.896	43.715	45.420	48.345	58.393	75.699	89.607	109.949	40.742	34.707	37.914	275.88

$^{24}_{12}$Mg IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=24 MEV
0.0125	4.011	3.318	2.431	1.616	1.313	1.191	1.104	1.021	0.649	0.555	0.510	0.438	0.2998
0.0160	4.537	3.754	2.750	1.829	1.485	1.347	1.248	1.155	0.734	0.628	0.577	0.495	0.3838
0.0200	5.073	4.197	3.075	2.045	1.660	1.507	1.396	1.291	0.821	0.703	0.646	0.553	0.4797
0.0250	5.672	4.692	3.437	2.286	1.856	1.684	1.561	1.444	0.918	0.785	0.724	0.619	0.5996
0.0320	6.409	5.312	3.889	2.586	2.104	1.913	1.766	1.633	1.038	0.891	0.821	0.704	0.7675
0.0400	7.148	5.952	4.348	2.900	2.365	2.157	1.987	1.839	1.170	1.007	0.926	0.796	0.9594
0.0500	7.963	6.674	4.861	3.257	2.669	2.431	2.241	2.076	1.317	1.145	1.055	0.907	1.1992
0.0600	8.691	7.354	5.325	3.589	2.950	2.679	2.476	2.295	1.470	1.278	1.180	1.014	1.4391
0.0700	9.342	7.991	5.749	3.898	3.219	2.921	2.702	2.507	1.610	1.409	1.305	1.121	1.6789
0.0800	9.931	8.605	6.138	4.192	3.468	3.143	2.903	2.701	1.749	1.534	1.418	1.221	1.9188
0.0900	10.466	9.186	6.497	4.470	3.703	3.365	3.099	2.884	1.890	1.653	1.533	1.322	2.1586
0.1000	10.960	9.744	6.829	4.732	3.933	3.564	3.278	3.066	2.021	1.769	1.639	1.414	2.3985
0.1250	12.015	11.086	7.557	5.320	4.443	4.028	3.703	3.469	2.324	2.033	1.901	1.644	2.9981
0.1600	13.131	12.763	8.369	5.992	5.038	4.570	4.193	3.933	2.678	2.352	2.205	1.925	3.8376
0.2000	14.025	14.234	9.060	6.587	5.572	5.047	4.630	4.340	3.008	2.655	2.492	2.174	4.7970
0.2500	14.738	15.502	9.677	7.151	6.077	5.516	5.051	4.732	3.338	2.951	2.768	2.419	5.9962
0.3200	15.333	16.658	10.277	7.738	6.608	6.032	5.498	5.138	3.679	3.268	3.068	2.698	7.6752
0.4000	15.746	17.480	10.770	8.207	7.065	6.462	5.891	5.503	4.006	3.565	3.349	2.940	9.5940
0.5000	16.071	18.061	11.239	8.688	7.530	6.912	6.294	5.867	4.338	3.866	3.636	3.203	11.992
0.6000	16.101	18.134	11.484	8.992	7.832	7.212	6.546	6.098	4.559	4.077	3.842	3.411	14.391
0.7000	15.999	17.960	11.602	9.166	8.017	7.390	6.694	6.242	4.710	4.212	3.979	3.527	16.789
0.8000	15.796	17.610	11.632	9.270	8.131	7.526	6.805	6.339	4.816	4.327	4.083	3.629	19.188
0.9000	15.567	17.203	11.600	9.303	8.201	7.610	6.867	6.392	4.907	4.408	4.164	3.712	21.586
1.0000	15.294	16.746	11.525	9.324	8.229	7.641	6.904	6.420	4.956	4.460	4.218	3.769	23.985
1.2500	14.560	15.593	11.226	9.205	8.195	7.634	6.881	6.387	5.018	4.524	4.277	3.828	29.981
1.6000	13.531	14.183	10.688	8.925	7.973	7.450	6.712	6.199	4.970	4.500	4.254	3.816	38.376
2.0000	12.449	12.991	10.047	8.510	7.646	7.174	6.430	5.958	4.823	4.401	4.160	3.748	47.970
2.5000	11.279	11.818	9.299	7.987	7.225	6.788	6.072	5.635	4.631	4.212	3.998	3.626	59.962
3.2000	9.980	10.542	8.393	7.302	6.647	6.253	5.607	5.187	4.331	3.962	3.760	3.416	76.752
4.0000	8.830	9.404	7.547	6.634	6.076	5.721	5.155	4.755	4.023	3.683	3.510	3.193	95.940
5.0000	7.743	8.299	6.709	5.944	5.475	5.166	4.656	4.307	3.690	3.368	3.227	2.945	119.92
6.0000	6.919	7.439	6.048	5.395	4.978	4.718	4.258	3.937	3.375	3.115	2.982	2.740	143.91
7.0000	6.253	6.755	5.514	4.941	4.566	4.340	3.926	3.634	3.143	2.889	2.774	2.553	167.89
8.0000	5.718	6.190	5.074	4.566	4.226	4.018	3.653	3.374	2.933	2.704	2.598	2.395	191.88
9.0000	5.283	5.715	4.704	4.248	3.937	3.749	3.410	3.156	2.752	2.540	2.441	2.258	215.86
10.0000	4.907	5.310	4.389	3.981	3.687	3.515	3.199	2.971	2.589	2.401	2.313	2.137	239.85
11.0000	4.586	4.969	4.117	3.746	3.475	3.314	3.018	2.812	2.454	2.281	2.202	2.030	263.83
12.0000	4.310	4.667	3.879	3.538	3.286	3.138	2.859	2.669	2.332	2.172	2.095	1.932	287.82

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	9.115	3.889	2.576	2.421	2.151	1.419	0.870	0.617	0.407	3.259	4.147	3.165	0.2998
0.0160	10.120	4.268	2.868	2.698	2.398	1.620	1.004	0.715	0.475	3.666	4.664	3.523	0.3838
0.0200	11.007	4.520	3.127	2.945	2.635	1.829	1.141	0.830	0.555	4.065	5.168	3.840	0.4797
0.0250	11.962	4.747	3.410	3.214	2.908	2.087	1.334	0.973	0.705	4.503	5.730	4.187	0.5996
0.0320	13.261	5.032	3.730	3.551	3.243	2.431	1.579	1.190	0.828	5.056	6.448	4.628	0.7675
0.0400	14.566	5.296	4.057	3.905	3.596	2.809	1.861	1.426	1.013	5.631	7.183	5.087	0.9594
0.0500	16.091	5.658	4.467	4.346	4.045	3.262	2.197	1.711	1.240	6.290	8.021	5.649	1.1992
0.0600	17.786	6.087	4.936	4.771	4.510	3.712	2.524	1.986	1.459	6.928	8.845	6.220	1.4391
0.0700	19.489	6.600	5.404	5.249	4.979	4.151	2.829	2.248	1.661	7.554	9.635	6.830	1.6789
0.0800	21.298	7.151	5.899	5.733	5.457	4.585	3.143	2.504	1.860	8.176	10.416	7.464	1.9188
0.0900	23.063	7.737	6.399	6.237	5.938	5.009	3.443	2.755	2.040	8.783	11.168	8.108	2.1586
0.1000	24.992	8.385	6.951	6.733	6.405	5.429	3.749	2.984	2.212	9.376	11.923	8.761	2.3985
0.1250	30.001	10.013	8.275	7.973	7.617	6.431	4.428	3.529	2.622	10.837	13.791	10.421	2.9981
0.1600	37.075	12.361	10.143	9.775	9.273	7.725	5.298	4.218	3.130	12.780	16.236	12.805	3.8376
0.2000	44.486	14.768	12.095	11.615	10.981	8.924	6.070	4.820	3.561	14.623	18.555	15.266	4.7970
0.2500	52.448	17.360	14.080	13.557	12.657	10.006	6.764	5.303	3.900	16.392	20.776	17.883	5.9962
0.3200	61.043	19.926	16.206	15.466	14.151	10.842	7.235	5.642	4.121	18.107	22.999	20.533	7.6752
0.4000	67.204	22.186	17.620	16.747	15.164	11.319	7.485	5.827	4.243	19.310	24.588	22.358	9.5940
0.5000	71.703	23.826	18.510	17.611	15.757	11.587	7.642	5.968	4.349	20.151	25.725	23.624	11.992
0.6000	72.926	24.462	18.513	17.594	15.722	11.496	7.626	5.949	4.353	20.235	25.966	23.738	14.391
0.7000	71.236	24.480	18.006	17.113	15.315	11.184	7.483	5.824	4.304	19.897	25.571	23.123	16.789
0.8000	68.278	23.961	17.320	16.517	14.761	10.794	7.305	5.700	4.234	19.355	24.845	22.263	19.188
0.9000	64.960	23.154	16.588	15.811	14.059	10.370	7.076	5.591	4.153	18.734	24.024	21.275	21.586
1.0000	62.122	22.463	16.032	15.214	13.554	10.039	6.915	5.509	4.092	18.130	23.224	20.423	23.985
1.2500	55.792	20.891	14.874	14.201	12.618	9.463	6.646	5.366	4.053	16.805	21.340	18.826	29.981
1.6000	48.311	18.918	13.659	13.061	11.693	8.925	6.402	5.205	4.029	15.231	19.057	16.973	38.376
2.0000	41.596	17.050	12.640	12.037	10.891	8.460	6.179	5.074	3.989	13.865	17.081	15.322	47.970
2.5000	35.149	15.110	11.540	10.982	10.135	8.015	5.951	4.956	3.943	12.516	15.147	13.669	59.962
3.2000	29.376	13.052	10.349	9.879	9.174	7.428	5.649	4.700	3.769	11.104	13.236	12.044	76.752
4.0000	24.906	11.261	9.208	8.830	8.302	6.793	5.208	4.385	3.547	9.857	11.615	10.619	95.940
5.0000	21.336	9.695	8.112	7.810	7.360	6.099	4.744	4.005	3.288	8.682	10.165	9.313	119.92
6.0000	18.810	8.552	7.270	6.992	6.623	5.528	4.318	3.671	3.024	7.766	9.066	8.304	143.91
7.0000	16.929	7.687	6.606	6.369	6.022	5.062	3.981	3.397	2.807	7.053	8.211	7.544	167.89
8.0000	15.424	6.976	6.063	5.850	5.525	4.663	3.668	3.146	2.613	6.464	7.509	6.916	191.88
9.0000	14.159	6.435	5.602	5.410	5.118	4.328	3.410	2.931	2.446	5.965	6.920	6.383	215.86
10.0000	13.123	5.991	5.227	5.047	4.775	4.038	3.191	2.743	2.295	5.547	6.425	5.942	239.85
11.0000	12.227	5.607	4.903	4.734	4.479	3.787	3.001	2.581	2.161	5.191	6.006	5.566	263.83
12.0000	11.444	5.272	4.620	4.461	4.221	3.569	2.836	2.440	2.044	4.880	5.637	5.237	287.82

$^{24}_{12}$Mg IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=24 MEV
0.0125	0.080	0.088	0.121	0.179	0.207	0.249	0.274	0.307	0.472	0.559	0.611	0.736	0.2998
0.0160	0.098	0.108	0.148	0.218	0.254	0.302	0.332	0.369	0.568	0.671	0.732	0.879	0.3838
0.0200	0.116	0.129	0.176	0.260	0.304	0.358	0.392	0.435	0.669	0.789	0.860	1.030	0.4797
0.0250	0.137	0.154	0.209	0.309	0.361	0.423	0.462	0.511	0.786	0.925	1.008	1.204	0.5996
0.0320	0.163	0.185	0.251	0.371	0.436	0.507	0.552	0.608	0.936	1.100	1.197	1.425	0.7675
0.0400	0.190	0.217	0.295	0.435	0.514	0.593	0.646	0.710	1.092	1.281	1.394	1.655	0.9594
0.0500	0.221	0.253	0.344	0.508	0.602	0.691	0.751	0.824	1.269	1.486	1.615	1.913	1.1992
0.0600	0.249	0.286	0.390	0.575	0.682	0.780	0.847	0.928	1.430	1.671	1.815	2.146	1.4391
0.0700	0.275	0.317	0.432	0.637	0.756	0.862	0.936	1.023	1.578	1.839	1.998	2.358	1.6789
0.0800	0.300	0.345	0.471	0.694	0.825	0.939	1.018	1.112	1.714	1.995	2.165	2.553	1.9188
0.0900	0.323	0.372	0.508	0.748	0.890	1.010	1.096	1.195	1.841	2.139	2.321	2.734	2.1586
0.1000	0.345	0.396	0.543	0.799	0.951	1.078	1.169	1.273	1.959	2.275	2.467	2.903	2.3985
0.1250	0.398	0.454	0.625	0.916	1.090	1.232	1.337	1.453	2.228	2.582	2.797	3.285	2.9981
0.1600	0.464	0.524	0.729	1.062	1.264	1.424	1.546	1.676	2.557	2.957	3.197	3.745	3.8376
0.2000	0.535	0.596	0.838	1.213	1.442	1.621	1.760	1.904	2.889	3.334	3.599	4.206	4.7970
0.2500	0.618	0.676	0.966	1.386	1.646	1.846	2.005	2.166	3.263	3.757	4.050	4.722	5.9962
0.3200	0.729	0.780	1.134	1.611	1.908	2.137	2.321	2.503	3.737	4.292	4.620	5.372	7.6752
0.4000	0.853	0.893	1.316	1.852	2.189	2.444	2.658	2.864	4.236	4.853	5.218	6.053	9.5940
0.5000	1.003	1.028	1.534	2.135	2.517	2.802	3.051	3.285	4.811	5.499	5.904	6.834	11.992
0.6000	1.152	1.160	1.745	2.406	2.829	3.142	3.424	3.686	5.350	6.102	6.545	7.558	14.391
0.7000	1.302	1.293	1.953	2.670	3.132	3.470	3.786	4.074	5.867	6.681	7.158	8.249	16.789
0.8000	1.452	1.427	2.159	2.931	3.429	3.791	4.142	4.456	6.370	7.242	7.753	8.919	19.188
0.9000	1.605	1.565	2.365	3.189	3.722	4.108	4.492	4.832	6.863	7.791	8.335	9.573	21.586
1.0000	1.761	1.707	2.573	3.446	4.014	4.423	4.841	5.206	7.350	8.332	8.907	10.214	23.985
1.2500	2.162	2.077	3.099	4.093	4.744	5.207	5.710	6.142	8.551	9.665	10.317	11.791	29.981
1.6000	2.760	2.641	3.865	5.018	5.781	6.319	6.944	7.475	10.230	11.524	12.283	13.985	38.376
2.0000	3.499	3.348	4.791	6.119	7.010	7.631	8.404	9.053	12.190	13.680	14.563	16.521	47.970
2.5000	4.512	4.317	6.032	7.574	8.624	9.350	10.324	11.124	14.728	16.465	17.504	19.775	59.962
3.2000	6.096	5.823	7.935	9.775	11.049	11.930	13.204	14.232	18.480	20.579	21.837	24.548	76.752
4.0000	8.144	7.753	10.349	12.535	14.072	15.142	16.778	18.101	23.082	25.607	27.125	30.364	95.940
5.0000	11.050	10.473	13.726	16.362	18.238	19.562	21.682	23.409	29.317	32.428	34.263	38.197	119.92
6.0000	14.332	13.530	17.497	20.603	22.839	24.427	27.076	29.241	36.122	39.842	42.004	46.651	143.91
7.0000	17.983	16.918	21.655	25.254	27.876	29.733	32.948	35.589	43.494	47.845	50.353	55.728	167.89
8.0000	21.998	20.631	26.194	30.308	33.341	35.482	39.287	42.445	51.401	56.433	59.296	65.436	191.88
9.0000	26.366	24.666	31.108	35.759	39.225	41.667	46.088	49.801	59.850	65.591	68.827	75.758	215.86
10.0000	31.080	29.023	36.390	41.595	45.525	48.278	53.353	57.638	68.841	75.309	78.926	86.683	239.85
11.0000	36.140	33.695	42.036	47.810	52.230	55.309	61.077	65.940	78.362	85.565	89.558	98.204	263.83
12.0000	41.537	38.678	48.041	54.401	59.332	62.749	69.246	74.700	88.394	96.345	100.730	110.323	287.82

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.029	0.074	0.104	0.110	0.121	0.186	0.311	0.458	0.712	0.084	0.067	0.081	0.2998
0.0160	0.036	0.092	0.129	0.136	0.150	0.229	0.380	0.554	0.857	0.105	0.083	0.101	0.3838
0.0200	0.043	0.111	0.156	0.165	0.182	0.275	0.452	0.654	1.005	0.126	0.100	0.123	0.4797
0.0250	0.052	0.134	0.189	0.199	0.220	0.328	0.534	0.767	1.165	0.151	0.119	0.149	0.5996
0.0320	0.064	0.166	0.231	0.244	0.269	0.394	0.636	0.903	1.357	0.183	0.145	0.184	0.7675
0.0400	0.077	0.201	0.277	0.291	0.320	0.462	0.738	1.037	1.545	0.217	0.171	0.220	0.9594
0.0500	0.092	0.243	0.330	0.346	0.379	0.536	0.848	1.180	1.743	0.255	0.201	0.262	1.1992
0.0600	0.105	0.282	0.378	0.396	0.432	0.602	0.944	1.303	1.912	0.290	0.229	0.301	1.4391
0.0700	0.118	0.318	0.423	0.442	0.481	0.661	1.030	1.411	2.059	0.323	0.254	0.336	1.6789
0.0800	0.129	0.352	0.464	0.484	0.526	0.714	1.108	1.509	2.190	0.352	0.277	0.369	1.9188
0.0900	0.139	0.384	0.502	0.523	0.567	0.763	1.179	1.598	2.310	0.380	0.299	0.399	2.1586
0.1000	0.149	0.413	0.537	0.560	0.605	0.808	1.244	1.679	2.420	0.406	0.320	0.427	2.3985
0.1250	0.171	0.477	0.615	0.640	0.689	0.909	1.391	1.864	2.668	0.465	0.366	0.488	2.9981
0.1600	0.195	0.552	0.705	0.734	0.787	1.028	1.564	2.081	2.960	0.537	0.422	0.560	3.8376
0.2000	0.219	0.622	0.791	0.823	0.881	1.143	1.733	2.293	3.247	0.607	0.477	0.628	4.7970
0.2500	0.244	0.697	0.883	0.918	0.983	1.270	1.919	2.530	3.568	0.684	0.538	0.700	5.9962
0.3200	0.273	0.787	0.994	1.034	1.108	1.431	2.159	2.836	3.986	0.781	0.615	0.788	7.6752
0.4000	0.303	0.878	1.107	1.153	1.239	1.604	2.419	3.171	4.445	0.884	0.696	0.877	9.5940
0.5000	0.338	0.983	1.240	1.293	1.394	1.813	2.736	3.577	5.002	1.005	0.791	0.982	11.992
0.6000	0.371	1.082	1.369	1.429	1.546	2.021	3.050	3.979	5.553	1.124	0.884	1.083	14.391
0.7000	0.404	1.180	1.501	1.567	1.700	2.232	3.367	4.386	6.107	1.243	0.977	1.185	16.789
0.8000	0.438	1.279	1.636	1.709	1.860	2.450	3.691	4.802	6.668	1.365	1.072	1.291	19.188
0.9000	0.474	1.381	1.778	1.858	2.026	2.677	4.025	5.227	7.240	1.491	1.170	1.401	21.586
1.0000	0.512	1.486	1.925	2.012	2.200	2.912	4.368	5.659	7.822	1.621	1.271	1.516	23.985
1.2500	0.614	1.762	2.313	2.420	2.658	3.526	5.251	6.761	9.293	1.965	1.540	1.821	29.981
1.6000	0.776	2.184	2.901	3.036	3.349	4.439	6.538	8.348	11.368	2.489	1.956	2.291	38.376
2.0000	0.990	2.719	3.632	3.801	4.199	5.543	8.063	10.215	13.760	3.149	2.488	2.886	47.970
2.5000	1.303	3.466	4.625	4.845	5.341	7.000	10.040	12.606	16.784	4.060	3.234	3.715	59.962
3.2000	1.827	4.664	6.163	6.459	7.084	9.178	12.938	16.087	21.142	5.486	4.422	5.025	76.752
4.0000	2.537	6.249	8.132	8.516	9.286	11.883	16.480	20.318	26.395	7.323	5.972	6.725	95.940
5.0000	3.580	8.549	10.913	11.410	12.360	15.616	21.314	26.050	33.428	9.921	8.184	9.141	119.92
6.0000	4.779	11.188	14.041	14.661	15.800	19.752	26.620	32.313	41.045	12.846	10.686	11.873	143.91
7.0000	6.125	14.150	17.506	18.259	19.603	24.292	32.411	39.112	49.286	16.091	13.469	14.907	167.89
8.0000	7.611	17.429	21.300	22.193	23.765	29.233	38.693	46.456	58.151	19.647	16.527	18.231	191.88
9.0000	9.235	21.011	25.418	26.460	28.279	34.577	45.480	54.362	67.645	23.513	19.857	21.844	215.86
10.0000	10.996	24.877	29.854	31.053	33.135	40.319	52.756	62.827	77.774	27.686	23.457	25.741	239.85
11.0000	12.891	29.018	34.594	35.963	38.324	46.456	60.511	71.846	88.548	32.158	27.320	29.914	263.83
12.0000	14.920	33.432	39.636	41.184	43.843	52.983	68.737	81.408	99.964	36.926	31.444	34.359	287.82

$^{27}_{13}$Al IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=27 MEV
0.0125	4.226	3.496	2.561	1.703	1.383	1.255	1.163	1.076	0.684	0.585	0.538	0.461	0.3373
0.0160	4.782	3.956	2.898	1.927	1.565	1.420	1.316	1.217	0.774	0.662	0.609	0.522	0.4317
0.0200	5.346	4.423	3.240	2.155	1.750	1.588	1.471	1.361	0.865	0.740	0.680	0.583	0.5396
0.0250	5.977	4.945	3.622	2.409	1.956	1.775	1.645	1.521	0.967	0.828	0.763	0.652	0.6745
0.0320	6.754	5.598	4.098	2.725	2.217	2.016	1.861	1.721	1.094	0.939	0.865	0.742	0.8634
0.0400	7.533	6.273	4.582	3.056	2.493	2.273	2.094	1.938	1.233	1.061	0.976	0.839	1.0793
0.0500	8.391	7.034	5.123	3.432	2.812	2.561	2.362	2.187	1.388	1.206	1.112	0.955	1.3491
0.0600	9.159	7.750	5.612	3.782	3.109	2.823	2.610	2.419	1.549	1.347	1.243	1.069	1.6189
0.0700	9.855	8.430	6.065	4.112	3.396	3.081	2.850	2.644	1.698	1.486	1.377	1.183	1.8887
0.0800	10.487	9.087	6.482	4.427	3.662	3.319	3.066	2.852	1.847	1.620	1.497	1.290	2.1586
0.0900	11.063	9.710	6.867	4.725	3.914	3.557	3.276	3.049	1.998	1.748	1.621	1.398	2.4284
0.1000	11.597	10.311	7.226	5.007	4.162	3.772	3.468	3.244	2.139	1.871	1.734	1.496	2.6982
0.1250	12.741	11.756	8.013	5.641	4.712	4.271	3.927	3.678	2.464	2.156	2.015	1.743	3.3728
0.1600	13.946	13.554	8.888	6.364	5.351	4.853	4.453	4.177	2.844	2.498	2.342	2.044	4.3171
0.2000	14.892	15.113	9.620	6.994	5.916	5.358	4.916	4.608	3.194	2.819	2.646	2.309	5.3964
0.2500	15.643	16.455	10.271	7.590	6.450	5.855	5.362	5.023	3.544	3.133	2.938	2.568	6.7455
0.3200	16.304	17.714	10.928	8.229	7.027	6.415	5.846	5.464	3.912	3.475	3.262	2.869	8.6342
0.4000	16.809	18.660	11.497	8.761	7.542	6.898	6.289	5.875	4.277	3.806	3.576	3.139	10.793
0.5000	17.251	19.386	12.064	9.325	8.083	7.419	6.756	6.297	4.657	4.150	3.903	3.438	13.491
0.6000	17.390	19.585	12.404	9.712	8.459	7.789	7.070	6.586	4.924	4.403	4.149	3.684	16.189
0.7000	17.372	19.501	12.598	9.952	8.705	8.025	7.269	6.778	5.115	4.573	4.321	3.830	18.887
0.8000	17.230	19.210	12.688	10.112	8.869	8.209	7.423	6.915	5.253	4.720	4.454	3.959	21.586
0.9000	17.049	18.840	12.704	10.189	8.982	8.334	7.521	7.000	5.374	4.827	4.561	4.065	24.284
1.0000	16.807	18.403	12.666	10.246	9.043	8.397	7.587	7.055	5.446	4.902	4.636	4.142	26.982
1.2500	16.108	17.251	12.420	10.184	9.066	8.445	7.613	7.067	5.552	5.005	4.732	4.235	33.727
1.6000	15.067	15.793	11.901	9.937	8.878	8.295	7.474	6.903	5.534	5.010	4.737	4.249	43.171
2.0000	13.928	14.535	11.241	9.522	8.555	8.026	7.195	6.666	5.396	4.924	4.654	4.193	53.964
2.5000	12.670	13.276	10.445	8.972	8.116	7.625	6.821	6.330	5.202	4.732	4.491	4.074	67.455
3.2000	11.251	11.885	9.463	8.233	7.495	7.050	6.321	5.848	4.883	4.466	4.239	3.851	86.342
4.0000	9.985	10.634	8.534	7.502	6.870	6.469	5.829	5.377	4.549	4.165	3.968	3.610	107.93
5.0000	8.780	9.412	7.608	6.741	6.209	5.859	5.280	4.885	4.185	3.819	3.660	3.340	134.91
6.0000	7.865	8.457	6.875	6.133	5.658	5.363	4.840	4.476	3.836	3.541	3.390	3.115	161.89
7.0000	7.124	7.695	6.282	5.629	5.202	4.944	4.473	4.140	3.581	3.292	3.160	2.909	188.87
8.0000	6.527	7.066	5.792	5.213	4.825	4.587	4.170	3.852	3.348	3.087	2.965	2.734	215.86
9.0000	6.042	6.537	5.380	4.858	4.503	4.288	3.900	3.610	3.147	2.905	2.792	2.582	242.84
10.0000	5.622	6.085	5.029	4.561	4.224	4.028	3.666	3.404	2.967	2.751	2.650	2.449	269.82
11.0000	5.264	5.703	4.725	4.300	3.988	3.804	3.463	3.227	2.816	2.618	2.528	2.329	296.80
12.0000	4.955	5.365	4.460	4.067	3.777	3.608	3.287	3.068	2.680	2.498	2.408	2.221	323.78

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	9.606	4.098	2.715	2.551	2.267	1.496	0.917	0.651	0.429	3.435	4.370	3.335	0.3373
0.0160	10.665	4.498	3.023	2.843	2.527	1.707	1.058	0.753	0.500	3.863	4.915	3.712	0.4317
0.0200	11.599	4.763	3.295	3.104	2.777	1.928	1.202	0.875	0.585	4.283	5.446	4.047	0.5396
0.0250	12.606	5.003	3.593	3.387	3.065	2.199	1.406	1.025	0.743	4.745	6.039	4.412	0.6745
0.0320	13.975	5.303	3.930	3.742	3.418	2.561	1.664	1.254	0.873	5.328	6.795	4.877	0.8634
0.0400	15.350	5.581	4.275	4.115	3.789	2.960	1.961	1.503	1.068	5.934	7.570	5.361	1.0793
0.0500	16.957	5.963	4.708	4.580	4.262	3.437	2.316	1.803	1.306	6.629	8.453	5.953	1.3491
0.0600	18.744	6.414	5.202	5.028	4.753	3.911	2.660	2.093	1.538	7.301	9.321	6.555	1.6189
0.0700	20.560	6.962	5.701	5.537	5.252	4.379	2.984	2.371	1.753	7.969	10.165	7.205	1.8887
0.0800	22.491	7.551	6.229	6.054	5.762	4.842	3.319	2.644	1.964	8.633	10.999	7.882	2.1586
0.0900	24.379	8.179	6.764	6.593	6.277	5.295	3.640	2.912	2.156	9.285	11.805	8.570	2.4284
0.1000	26.445	8.873	7.356	7.124	6.778	5.744	3.967	3.158	2.341	9.921	12.616	9.270	2.6982
0.1250	31.813	10.618	8.775	8.454	8.078	6.819	4.696	3.742	2.781	11.491	14.625	11.051	3.3728
0.1600	39.375	13.128	10.772	10.381	9.848	8.204	5.626	4.480	3.324	13.572	17.243	13.599	4.3171
0.2000	47.234	15.681	12.843	12.333	11.659	9.476	6.445	5.118	3.781	15.527	19.702	16.210	5.3964
0.2500	55.670	18.427	14.945	14.390	13.435	10.621	7.180	5.629	4.139	17.400	22.052	18.981	6.7455
0.3200	64.911	21.189	17.233	16.446	15.047	11.529	7.693	5.999	4.382	19.255	24.456	21.834	8.6342
0.4000	71.741	23.684	18.809	17.878	16.188	12.083	7.990	6.220	4.530	20.614	26.248	23.868	10.793
0.5000	76.966	25.575	19.869	18.904	16.913	12.438	8.203	6.406	4.669	21.630	27.614	25.358	13.491
0.6000	78.763	26.420	19.995	19.002	16.981	12.416	8.236	6.425	4.701	21.855	28.045	25.638	16.189
0.7000	77.350	26.581	19.552	18.582	16.629	12.144	8.126	6.324	4.674	21.605	27.765	25.107	18.887
0.8000	74.479	26.138	18.893	18.017	16.101	11.775	7.968	6.217	4.618	21.113	27.102	24.285	21.586
0.9000	71.142	25.357	18.167	17.315	15.397	11.357	7.749	6.123	4.548	20.517	26.310	23.299	24.284
1.0000	68.267	24.685	17.618	16.719	14.895	11.032	7.599	6.054	4.496	19.923	25.521	22.443	26.982
1.2500	61.726	23.113	16.456	15.711	13.960	10.470	7.352	5.937	4.484	18.592	23.610	20.828	33.727
1.6000	53.793	21.065	15.209	14.543	13.020	9.937	7.129	5.796	4.487	16.959	21.219	18.899	43.171
2.0000	46.540	19.077	14.142	13.467	12.186	9.465	6.913	5.677	4.463	15.513	19.110	17.143	53.964
2.5000	39.482	16.973	12.962	12.336	11.385	9.004	6.685	5.567	4.429	14.059	17.015	15.354	67.455
3.2000	33.120	14.715	11.668	11.138	10.343	8.375	6.369	5.299	4.249	12.519	14.923	13.579	86.342
4.0000	28.163	12.733	10.412	9.985	9.388	7.681	5.889	4.958	4.011	11.146	13.134	12.008	107.93
5.0000	24.195	10.994	9.199	8.856	8.346	6.916	5.379	4.542	3.728	9.845	11.527	10.561	134.91
6.0000	21.383	9.722	8.264	7.948	7.529	6.284	4.909	4.173	3.438	8.828	10.306	9.440	161.89
7.0000	19.286	8.757	7.526	7.256	6.860	5.767	4.536	3.870	3.198	8.035	9.354	8.594	188.87
8.0000	17.607	7.964	6.921	6.678	6.307	5.323	4.188	3.591	2.983	7.379	8.572	7.894	215.86
9.0000	16.194	7.360	6.408	6.187	5.853	4.950	3.900	3.352	2.798	6.822	7.914	7.301	242.84
10.0000	15.035	6.864	5.989	5.783	5.471	4.626	3.656	3.143	2.630	6.356	7.362	6.809	269.82
11.0000	14.033	6.435	5.627	5.434	5.141	4.347	3.444	2.963	2.481	5.958	6.894	6.388	296.80
12.0000	13.156	6.061	5.312	5.129	4.852	4.103	3.260	2.805	2.350	5.610	6.480	6.021	323.78

$^{27}_{13}Al$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=27 MEV
0.0125	0.084	0.091	0.124	0.183	0.211	0.254	0.280	0.313	0.479	0.567	0.618	0.745	0.3373
0.0160	0.102	0.112	0.153	0.224	0.260	0.309	0.339	0.378	0.578	0.683	0.745	0.895	0.4317
0.0200	0.121	0.135	0.183	0.268	0.312	0.368	0.403	0.447	0.684	0.806	0.878	1.052	0.5396
0.0250	0.143	0.161	0.218	0.320	0.373	0.437	0.477	0.527	0.806	0.949	1.033	1.233	0.6745
0.0320	0.171	0.194	0.262	0.385	0.451	0.525	0.571	0.629	0.964	1.132	1.232	1.466	0.8634
0.0400	0.200	0.228	0.309	0.454	0.533	0.617	0.670	0.736	1.129	1.323	1.438	1.708	1.0793
0.0500	0.233	0.266	0.361	0.531	0.627	0.720	0.782	0.857	1.316	1.539	1.672	1.980	1.3491
0.0600	0.263	0.302	0.409	0.602	0.712	0.815	0.884	0.967	1.487	1.735	1.884	2.226	1.6189
0.0700	0.291	0.334	0.454	0.668	0.791	0.902	0.978	1.069	1.643	1.914	2.077	2.451	1.8887
0.0800	0.317	0.364	0.496	0.729	0.864	0.983	1.065	1.163	1.787	2.078	2.255	2.658	2.1586
0.0900	0.342	0.392	0.535	0.786	0.932	1.059	1.148	1.251	1.922	2.232	2.420	2.849	2.4284
0.1000	0.365	0.419	0.573	0.840	0.997	1.131	1.225	1.334	2.047	2.375	2.575	3.028	2.6982
0.1250	0.421	0.480	0.659	0.964	1.145	1.294	1.403	1.524	2.332	2.700	2.923	3.432	3.3728
0.1600	0.492	0.554	0.770	1.118	1.329	1.498	1.624	1.760	2.680	3.096	3.346	3.919	4.3171
0.2000	0.566	0.630	0.885	1.278	1.517	1.706	1.851	2.002	3.031	3.495	3.772	4.406	5.3964
0.2500	0.654	0.715	1.019	1.461	1.733	1.944	2.110	2.279	3.426	3.942	4.248	4.952	6.7455
0.3200	0.772	0.826	1.197	1.700	2.010	2.250	2.444	2.636	3.928	4.508	4.851	5.640	8.6342
0.4000	0.903	0.944	1.390	1.954	2.305	2.574	2.800	3.016	4.451	5.097	5.478	6.353	10.793
0.5000	1.061	1.086	1.619	2.252	2.650	2.951	3.213	3.459	5.055	5.775	6.200	7.174	13.491
0.6000	1.217	1.224	1.839	2.535	2.976	3.305	3.603	3.878	5.618	6.406	6.869	7.931	16.189
0.7000	1.372	1.362	2.054	2.809	3.290	3.646	3.979	4.281	6.155	7.007	7.506	8.649	18.887
0.8000	1.528	1.501	2.268	3.078	3.597	3.978	4.347	4.675	6.676	7.587	8.121	9.341	21.586
0.9000	1.685	1.643	2.480	3.344	3.899	4.304	4.708	5.063	7.183	8.152	8.719	10.014	24.284
1.0000	1.844	1.788	2.693	3.608	4.198	4.627	5.065	5.447	7.682	8.707	9.306	10.671	26.982
1.2500	2.254	2.166	3.230	4.267	4.943	5.427	5.951	6.401	8.907	10.067	10.744	12.280	33.727
1.6000	2.859	2.738	4.006	5.205	5.994	6.554	7.202	7.752	10.609	11.951	12.737	14.504	43.171
2.0000	3.604	3.450	4.939	6.314	7.232	7.876	8.673	9.342	12.583	14.122	15.035	17.059	53.964
2.5000	4.620	4.422	6.184	7.774	8.851	9.601	10.599	11.420	15.130	16.918	17.985	20.323	67.455
3.2000	6.204	5.927	8.086	9.974	11.275	12.179	13.478	14.527	18.880	21.029	22.316	25.094	86.342
4.0000	8.244	7.850	10.491	12.724	14.287	15.379	17.038	18.380	23.465	26.038	27.584	30.889	107.93
5.0000	11.131	10.552	13.846	16.525	18.425	19.769	21.910	23.654	29.658	32.814	34.674	38.670	134.91
6.0000	14.382	13.581	17.582	20.727	22.984	24.589	27.254	29.432	36.401	40.159	42.344	47.045	161.89
7.0000	17.991	16.929	21.692	25.325	27.963	29.835	33.059	35.707	43.688	48.071	50.597	56.018	188.87
8.0000	21.952	20.592	26.170	30.310	33.354	35.506	39.312	42.470	51.488	56.542	59.419	65.595	215.86
9.0000	26.252	24.565	31.007	35.676	39.147	41.595	46.007	49.711	59.806	65.558	68.802	75.757	242.84
10.0000	30.885	28.847	36.198	41.412	45.338	48.092	53.147	57.413	68.642	75.109	78.727	86.493	269.82
11.0000	35.848	33.430	41.737	47.509	51.916	54.989	60.724	65.558	77.981	85.169	89.157	97.795	296.80
12.0000	41.134	38.310	47.617	53.964	58.871	62.276	68.725	74.136	87.807	95.726	100.097	109.663	323.78

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.030	0.077	0.107	0.113	0.124	0.190	0.316	0.463	0.717	0.088	0.069	0.083	0.3373
0.0160	0.037	0.096	0.134	0.141	0.155	0.235	0.387	0.563	0.867	0.109	0.086	0.105	0.4317
0.0200	0.045	0.116	0.163	0.171	0.189	0.284	0.463	0.668	1.022	0.132	0.104	0.128	0.5396
0.0250	0.055	0.141	0.197	0.207	0.228	0.339	0.549	0.785	1.189	0.158	0.125	0.156	0.6745
0.0320	0.068	0.174	0.242	0.255	0.280	0.409	0.656	0.929	1.390	0.192	0.152	0.192	0.8634
0.0400	0.081	0.211	0.290	0.305	0.335	0.481	0.763	1.070	1.589	0.228	0.180	0.231	1.0793
0.0500	0.097	0.256	0.346	0.363	0.397	0.560	0.880	1.221	1.798	0.269	0.212	0.276	1.3491
0.0600	0.111	0.297	0.398	0.416	0.454	0.630	0.983	1.352	1.976	0.306	0.241	0.317	1.6189
0.0700	0.124	0.336	0.445	0.465	0.505	0.692	1.074	1.467	2.132	0.340	0.268	0.354	1.8887
0.0800	0.136	0.372	0.489	0.510	0.553	0.749	1.156	1.571	2.272	0.372	0.293	0.389	2.1586
0.0900	0.147	0.406	0.530	0.552	0.596	0.801	1.232	1.665	2.398	0.401	0.316	0.421	2.4284
0.1000	0.158	0.437	0.567	0.590	0.637	0.848	1.301	1.752	2.515	0.429	0.338	0.450	2.6982
0.1250	0.180	0.505	0.649	0.675	0.726	0.956	1.454	1.947	2.779	0.492	0.387	0.516	3.3728
0.1600	0.207	0.584	0.745	0.774	0.830	1.082	1.634	2.177	3.089	0.567	0.447	0.592	4.3171
0.2000	0.231	0.659	0.836	0.869	0.930	1.204	1.811	2.402	3.392	0.641	0.505	0.663	5.3964
0.2500	0.258	0.738	0.933	0.970	1.037	1.338	2.009	2.653	3.733	0.723	0.570	0.740	6.7455
0.3200	0.289	0.833	1.050	1.092	1.170	1.509	2.263	2.978	4.176	0.826	0.651	0.833	8.6342
0.4000	0.321	0.930	1.170	1.218	1.308	1.691	2.538	3.331	4.659	0.935	0.736	0.927	10.793
0.5000	0.357	1.039	1.310	1.365	1.471	1.911	2.871	3.758	5.246	1.062	0.836	1.037	13.491
0.6000	0.392	1.143	1.445	1.507	1.630	2.128	3.198	4.178	5.821	1.186	0.933	1.143	16.189
0.7000	0.426	1.245	1.581	1.650	1.790	2.348	3.528	4.601	6.396	1.310	1.029	1.249	18.887
0.8000	0.462	1.347	1.721	1.798	1.955	2.573	3.863	5.031	6.976	1.436	1.128	1.358	21.586
0.9000	0.499	1.452	1.867	1.950	2.126	2.806	4.206	5.468	7.565	1.566	1.229	1.471	24.284
1.0000	0.537	1.559	2.018	2.109	2.304	3.047	4.558	5.911	8.161	1.699	1.333	1.589	26.982
1.2500	0.641	1.842	2.413	2.525	2.772	3.674	5.459	7.035	9.662	2.050	1.607	1.901	33.727
1.6000	0.805	2.269	3.010	3.149	3.472	4.599	6.763	8.643	11.765	2.581	2.029	2.377	43.171
2.0000	1.021	2.808	3.746	3.920	4.328	5.712	8.299	10.524	14.176	3.246	2.565	2.976	53.964
2.5000	1.335	3.558	4.742	4.967	5.474	7.173	10.284	12.923	17.209	4.160	3.313	3.808	67.455
3.2000	1.858	4.754	6.280	6.580	7.216	9.350	13.180	16.402	21.565	5.585	4.500	5.118	86.342
4.0000	2.566	6.334	8.241	8.630	9.410	12.045	16.708	20.617	26.798	7.415	6.044	6.811	107.93
5.0000	3.602	8.619	11.003	11.504	12.463	15.753	21.510	26.311	33.785	9.996	8.241	9.211	134.91
6.0000	4.790	11.233	14.103	14.725	15.872	19.851	26.768	32.516	41.331	12.894	10.721	11.918	161.89
7.0000	6.121	14.161	17.528	18.282	19.631	24.339	32.492	39.238	49.478	16.102	13.472	14.917	188.87
8.0000	7.587	17.395	21.270	22.162	23.737	29.213	38.689	46.482	58.222	19.610	16.488	18.196	215.86
9.0000	9.186	20.923	25.325	26.364	28.181	34.474	45.371	54.266	67.570	23.416	19.767	21.753	242.84
10.0000	10.916	24.721	29.684	30.877	32.952	40.117	52.521	62.585	77.523	27.516	23.304	25.583	269.82
11.0000	12.775	28.783	34.334	35.694	38.043	46.137	60.129	71.432	88.093	31.903	27.094	29.676	296.80
12.0000	14.762	33.106	39.272	40.807	43.448	52.529	68.184	80.796	99.273	36.572	31.133	34.029	323.78

$^{28}_{14}$Si IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=28 MEV
0.0125	4.437	3.671	2.689	1.788	1.452	1.318	1.221	1.129	0.718	0.614	0.565	0.484	0.3497
0.0160	5.020	4.153	3.042	2.023	1.643	1.491	1.381	1.278	0.812	0.695	0.639	0.548	0.4476
0.0200	5.612	4.643	3.401	2.262	1.837	1.667	1.544	1.429	0.908	0.777	0.714	0.612	0.5595
0.0250	6.275	5.191	3.803	2.529	2.054	1.863	1.727	1.597	1.015	0.869	0.801	0.685	0.6994
0.0320	7.090	5.877	4.302	2.861	2.328	2.117	1.953	1.807	1.149	0.985	0.908	0.779	0.8953
0.0400	7.908	6.585	4.810	3.208	2.617	2.386	2.198	2.035	1.294	1.114	1.025	0.880	1.1191
0.0500	8.809	7.384	5.378	3.603	2.953	2.689	2.479	2.296	1.457	1.267	1.167	1.003	1.3988
0.0600	9.615	8.136	5.891	3.971	3.264	2.963	2.740	2.539	1.626	1.414	1.305	1.122	1.6786
0.0700	10.354	8.856	6.371	4.320	3.568	3.237	2.995	2.778	1.784	1.561	1.446	1.242	1.9584
0.0800	11.026	9.554	6.815	4.654	3.850	3.489	3.223	2.998	1.942	1.704	1.574	1.356	2.2382
0.0900	11.641	10.217	7.226	4.971	4.119	3.743	3.447	3.208	2.103	1.839	1.705	1.470	2.5179
0.1000	12.212	10.857	7.609	5.273	4.383	3.972	3.652	3.416	2.252	1.971	1.826	1.575	2.7977
0.1250	13.441	12.401	8.454	5.951	4.971	4.506	4.142	3.880	2.599	2.274	2.126	1.839	3.4971
0.1600	14.734	14.320	9.390	6.724	5.653	5.127	4.705	4.413	3.005	2.639	2.474	2.160	4.4763
0.2000	15.737	15.971	10.166	7.391	6.252	5.663	5.195	4.870	3.375	2.979	2.796	2.440	5.5954
0.2500	16.541	17.399	10.861	8.026	6.820	6.191	5.669	5.311	3.747	3.313	3.106	2.715	6.9942
0.3200	17.281	18.775	11.582	8.721	7.447	6.799	6.197	5.791	4.146	3.683	3.457	3.040	8.9526
0.4000	17.878	19.846	12.228	9.318	8.022	7.337	6.689	6.249	4.549	4.048	3.803	3.338	11.191
0.5000	18.427	20.708	12.886	9.961	8.634	7.925	7.216	6.727	4.974	4.433	4.169	3.673	13.988
0.6000	18.662	21.018	13.311	10.422	9.078	8.359	7.587	7.068	5.284	4.725	4.452	3.953	16.786
0.7000	18.722	21.016	13.576	10.725	9.381	8.648	7.834	7.304	5.512	4.928	4.657	4.127	19.584
0.8000	18.639	20.781	13.726	10.939	9.594	8.880	8.029	7.480	5.682	5.106	4.818	4.282	22.382
0.9000	18.505	20.449	13.789	11.059	9.749	9.046	8.163	7.598	5.833	5.240	4.950	4.412	25.179
1.0000	18.297	20.034	13.788	11.155	9.845	9.142	8.259	7.680	5.929	5.336	5.047	4.509	27.977
1.2500	17.642	18.894	13.602	11.154	9.930	9.250	8.338	7.740	6.080	5.482	5.182	4.638	34.971
1.6000	16.599	17.399	13.112	10.948	9.781	9.139	8.234	7.605	6.097	5.520	5.218	4.681	44.763
2.0000	15.415	16.087	12.442	10.538	9.468	8.883	7.963	7.378	5.972	5.449	5.151	4.641	55.954
2.5000	14.076	14.749	11.604	9.968	9.017	8.471	7.578	7.032	5.779	5.257	4.990	4.526	69.942
3.2000	12.545	13.252	10.551	9.179	8.356	7.860	7.048	6.520	5.444	4.980	4.727	4.294	89.526
4.0000	11.166	11.891	9.543	8.388	7.682	7.234	6.518	6.012	5.087	4.657	4.438	4.037	111.91
5.0000	9.846	10.554	8.532	7.559	6.962	6.569	5.921	5.477	4.692	4.283	4.104	3.745	139.88
6.0000	8.841	9.505	7.728	6.893	6.360	6.028	5.441	5.031	4.312	3.980	3.810	3.501	167.86
7.0000	8.024	8.668	7.076	6.340	5.859	5.569	5.038	4.663	4.033	3.708	3.559	3.276	195.84
8.0000	7.367	7.975	6.537	5.883	5.445	5.177	4.706	4.347	3.778	3.484	3.347	3.085	223.82
9.0000	6.831	7.390	6.083	5.493	5.091	4.848	4.410	4.081	3.558	3.285	3.157	2.920	251.79
10.0000	6.367	6.891	5.695	5.165	4.784	4.562	4.152	3.855	3.360	3.115	3.001	2.773	279.77
11.0000	5.971	6.469	5.360	4.877	4.524	4.315	3.929	3.661	3.194	2.969	2.867	2.642	307.75
12.0000	5.629	6.095	5.067	4.621	4.292	4.099	3.734	3.486	3.045	2.837	2.736	2.523	335.72

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	10.084	4.302	2.850	2.678	2.380	1.570	0.963	0.683	0.451	3.606	4.588	3.501	0.3497
0.0160	11.196	4.722	3.173	2.985	2.653	1.792	1.110	0.791	0.525	4.055	5.160	3.897	0.4476
0.0200	12.177	5.000	3.459	3.259	2.915	2.024	1.262	0.918	0.614	4.497	5.718	4.248	0.5595
0.0250	13.234	5.252	3.772	3.556	3.217	2.308	1.476	1.076	0.780	4.982	6.339	4.632	0.6994
0.0320	14.671	5.567	4.126	3.928	3.588	2.689	1.747	1.317	0.916	5.593	7.134	5.120	0.8953
0.0400	16.115	5.859	4.488	4.320	3.978	3.107	2.059	1.578	1.121	6.229	7.947	5.628	1.1191
0.0500	17.801	6.260	4.942	4.808	4.475	3.609	2.431	1.893	1.371	6.959	8.874	6.249	1.3988
0.0600	19.677	6.734	5.461	5.279	4.990	4.106	2.793	2.197	1.614	7.665	9.786	6.881	1.6786
0.0700	21.599	7.314	5.989	5.817	5.518	4.600	3.135	2.491	1.841	8.372	10.679	7.569	1.9584
0.0800	23.647	7.939	6.549	6.365	6.058	5.090	3.489	2.780	2.065	9.077	11.564	8.287	2.2382
0.0900	25.651	8.606	7.117	6.937	6.604	5.571	3.830	3.064	2.269	9.769	12.421	9.018	2.5179
0.1000	27.847	9.343	7.745	7.502	7.137	6.049	4.177	3.325	2.465	10.447	13.285	9.762	2.7977
0.1250	33.561	11.201	9.257	8.918	8.521	7.194	4.954	3.948	2.933	12.122	15.428	11.657	3.4971
0.1600	41.599	13.870	11.381	10.968	10.405	8.667	5.944	4.733	3.512	14.339	18.217	14.367	4.4763
0.2000	49.916	16.571	13.572	13.033	12.321	10.014	6.811	5.408	3.995	16.408	20.820	17.130	5.5954
0.2500	58.865	19.484	15.802	15.216	14.206	11.230	7.592	5.952	4.377	18.398	23.318	20.070	6.9942
0.3200	68.799	22.458	18.265	17.431	15.949	12.219	8.154	6.359	4.644	20.408	25.921	23.141	8.9526
0.4000	76.304	25.190	20.005	19.015	17.217	12.852	8.499	6.615	4.818	21.925	27.917	25.386	11.191
0.5000	82.214	27.319	21.223	20.193	18.066	13.286	8.763	6.843	4.987	23.105	29.496	27.087	13.988
0.6000	84.524	28.352	21.457	20.392	18.222	13.324	8.838	6.895	5.045	23.454	30.096	27.513	16.786
0.7000	83.358	28.646	21.070	20.025	17.921	13.088	8.757	6.815	5.037	23.283	29.922	27.057	19.584
0.8000	80.569	28.275	20.437	19.490	17.418	12.737	8.620	6.726	4.996	22.839	29.318	26.271	22.382
0.9000	77.218	27.523	19.718	18.794	16.712	12.327	8.411	6.646	4.936	22.269	28.557	25.289	25.179
1.0000	74.319	26.873	19.180	18.201	16.215	12.010	8.273	6.591	4.895	21.689	27.783	24.433	27.977
1.2500	67.603	25.314	18.023	17.207	15.289	11.467	8.053	6.502	4.910	20.363	25.858	22.811	34.971
1.6000	59.265	23.208	16.757	16.022	14.344	10.948	7.854	6.385	4.943	18.684	23.378	20.821	44.763
2.0000	51.508	21.113	15.651	14.905	13.487	10.476	7.652	6.283	4.939	17.169	21.151	18.973	55.954
2.5000	43.864	18.857	14.401	13.705	12.649	10.003	7.427	6.185	4.920	15.619	18.903	17.058	69.942
3.2000	36.928	16.407	13.009	12.418	11.532	9.337	7.101	5.908	4.737	13.959	16.639	15.140	89.526
4.0000	31.493	14.238	11.643	11.166	10.498	8.589	6.585	5.545	4.485	12.463	14.687	13.427	111.91
5.0000	27.131	12.328	10.315	9.931	9.359	7.755	6.032	5.093	4.181	11.040	12.926	11.842	139.88
6.0000	24.034	10.927	9.289	8.934	8.462	7.063	5.518	4.691	3.864	9.923	11.584	10.611	167.86
7.0000	21.723	9.864	8.477	8.173	7.727	6.496	5.109	4.359	3.602	9.050	10.536	9.680	195.84
8.0000	19.871	8.988	7.811	7.537	7.118	6.007	4.726	4.053	3.366	8.328	9.674	8.909	223.82
9.0000	18.309	8.321	7.244	6.995	6.618	5.596	4.410	3.789	3.163	7.713	8.947	8.254	251.79
10.0000	17.028	7.774	6.783	6.549	6.196	5.239	4.140	3.559	2.978	7.198	8.337	7.711	279.77
11.0000	15.919	7.300	6.384	6.164	5.831	4.931	3.907	3.361	2.814	6.759	7.820	7.246	307.75
12.0000	14.947	6.886	6.035	5.827	5.513	4.661	3.704	3.187	2.670	6.374	7.362	6.840	335.72

$^{28}_{14}$SI IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=28
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.081	0.088	0.120	0.177	0.203	0.245	0.270	0.302	0.461	0.546	0.596	0.718	0.3497
0.0160	0.099	0.109	0.148	0.217	0.250	0.299	0.328	0.365	0.558	0.659	0.719	0.864	0.4476
0.0200	0.118	0.131	0.177	0.260	0.301	0.356	0.390	0.432	0.661	0.779	0.849	1.017	0.5595
0.0250	0.140	0.156	0.211	0.310	0.360	0.423	0.462	0.510	0.780	0.918	1.000	1.194	0.6994
0.0320	0.167	0.188	0.255	0.374	0.437	0.510	0.554	0.611	0.935	1.097	1.194	1.422	0.8953
0.0400	0.196	0.222	0.300	0.441	0.518	0.599	0.651	0.716	1.096	1.284	1.396	1.658	1.1191
0.0500	0.228	0.260	0.352	0.517	0.609	0.701	0.761	0.834	1.280	1.496	1.626	1.925	1.3988
0.0600	0.258	0.295	0.400	0.587	0.693	0.794	0.861	0.943	1.447	1.688	1.833	2.167	1.6786
0.0700	0.285	0.327	0.443	0.651	0.770	0.880	0.954	1.042	1.600	1.864	2.023	2.388	1.9584
0.0800	0.311	0.356	0.485	0.711	0.842	0.959	1.040	1.135	1.742	2.026	2.197	2.591	2.2382
0.0900	0.335	0.384	0.523	0.768	0.909	1.034	1.120	1.221	1.874	2.176	2.360	2.779	2.5179
0.1000	0.358	0.410	0.560	0.821	0.973	1.104	1.196	1.303	1.998	2.317	2.511	2.955	2.7977
0.1250	0.413	0.470	0.646	0.942	1.118	1.265	1.371	1.490	2.277	2.636	2.853	3.351	3.4971
0.1600	0.482	0.543	0.754	1.094	1.298	1.465	1.588	1.721	2.618	3.024	3.268	3.828	4.4763
0.2000	0.556	0.617	0.867	1.251	1.483	1.669	1.810	1.958	2.962	3.415	3.685	4.305	5.5954
0.2500	0.642	0.701	0.998	1.430	1.694	1.902	2.064	2.229	3.349	3.853	4.152	4.840	6.9942
0.3200	0.758	0.809	1.173	1.662	1.966	2.201	2.391	2.579	3.840	4.407	4.742	5.513	8.9526
0.4000	0.885	0.925	1.361	1.910	2.253	2.518	2.736	2.948	4.351	4.982	5.354	6.209	11.191
0.5000	1.039	1.063	1.583	2.200	2.589	2.884	3.139	3.379	4.939	5.642	6.056	7.008	13.988
0.6000	1.189	1.197	1.797	2.474	2.905	3.228	3.516	3.784	5.484	6.252	6.704	7.741	16.786
0.7000	1.339	1.330	2.004	2.739	3.208	3.556	3.879	4.173	6.002	6.832	7.318	8.433	19.584
0.8000	1.489	1.464	2.209	2.997	3.503	3.875	4.231	4.552	6.501	7.389	7.908	9.098	22.382
0.9000	1.639	1.599	2.413	3.251	3.792	4.187	4.577	4.923	6.987	7.930	8.481	9.742	25.179
1.0000	1.791	1.737	2.615	3.503	4.077	4.495	4.917	5.289	7.463	8.458	9.041	10.369	27.977
1.2500	2.180	2.096	3.125	4.129	4.784	5.255	5.759	6.195	8.626	9.750	10.406	11.896	34.971
1.6000	2.752	2.636	3.858	5.014	5.776	6.318	6.939	7.469	10.232	11.528	12.287	13.995	44.763
2.0000	3.451	3.305	4.734	6.056	6.938	7.560	8.321	8.963	12.086	13.567	14.444	16.394	55.954
2.5000	4.401	4.213	5.898	7.421	8.452	9.172	10.122	10.905	14.467	16.180	17.203	19.446	69.942
3.2000	5.876	5.615	7.669	9.469	10.710	11.574	12.803	13.799	17.960	20.009	21.237	23.890	89.526
4.0000	7.770	7.400	9.903	12.023	13.507	14.545	16.109	17.377	22.217	24.661	26.128	29.270	111.91
5.0000	10.443	9.902	13.009	15.542	17.338	18.610	20.619	22.260	27.951	30.934	32.693	36.475	139.88
6.0000	13.446	12.699	16.459	19.423	21.548	23.061	25.555	27.596	34.179	37.718	39.777	44.209	167.86
7.0000	16.772	15.785	20.246	23.660	26.136	27.895	30.904	33.378	40.893	45.039	47.382	52.478	195.84
8.0000	20.414	19.153	24.364	28.245	31.094	33.111	36.655	39.598	48.066	52.799	55.494	61.285	223.82
9.0000	24.361	22.801	28.804	33.170	36.412	38.699	42.800	46.245	55.702	61.075	64.107	70.613	251.79
10.0000	28.606	26.724	33.561	38.426	42.084	44.652	49.343	53.302	63.798	69.826	73.202	80.450	279.77
11.0000	33.146	30.916	38.628	44.003	48.101	50.962	56.274	60.753	72.342	79.029	82.743	90.790	307.75
12.0000	37.975	35.374	43.999	49.899	54.454	57.617	63.581	68.588	81.316	88.672	92.735	101.629	335.72

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.029	0.075	0.103	0.109	0.120	0.183	0.304	0.445	0.689	0.084	0.067	0.080	0.3497
0.0160	0.036	0.093	0.129	0.136	0.150	0.227	0.373	0.543	0.835	0.105	0.083	0.101	0.4476
0.0200	0.044	0.113	0.157	0.166	0.183	0.274	0.447	0.644	0.985	0.127	0.101	0.124	0.5595
0.0250	0.053	0.137	0.191	0.201	0.221	0.328	0.531	0.759	1.149	0.153	0.121	0.151	0.6994
0.0320	0.066	0.170	0.235	0.247	0.272	0.397	0.635	0.899	1.345	0.187	0.148	0.187	0.8953
0.0400	0.079	0.206	0.282	0.296	0.325	0.467	0.740	1.037	1.540	0.222	0.175	0.225	1.1191
0.0500	0.094	0.250	0.337	0.353	0.387	0.544	0.855	1.186	1.745	0.262	0.207	0.268	1.3988
0.0600	0.108	0.291	0.388	0.406	0.442	0.613	0.956	1.314	1.920	0.299	0.236	0.309	1.6786
0.0700	0.121	0.329	0.435	0.454	0.493	0.674	1.045	1.428	2.073	0.332	0.262	0.346	1.9584
0.0800	0.133	0.365	0.478	0.498	0.540	0.730	1.126	1.529	2.211	0.363	0.286	0.380	2.2382
0.0900	0.144	0.398	0.518	0.539	0.582	0.781	1.200	1.622	2.335	0.392	0.309	0.411	2.5179
0.1000	0.154	0.428	0.554	0.577	0.622	0.828	1.268	1.707	2.450	0.419	0.331	0.440	2.7977
0.1250	0.177	0.495	0.635	0.660	0.710	0.932	1.418	1.895	2.703	0.480	0.379	0.504	3.4971
0.1600	0.202	0.573	0.729	0.758	0.812	1.054	1.595	2.118	3.002	0.554	0.436	0.579	4.4763
0.2000	0.227	0.646	0.818	0.850	0.909	1.173	1.769	2.336	3.296	0.626	0.493	0.649	5.5954
0.2500	0.252	0.723	0.913	0.949	1.015	1.304	1.963	2.582	3.630	0.706	0.556	0.725	6.9942
0.3200	0.283	0.817	1.028	1.069	1.145	1.471	2.212	2.900	4.063	0.807	0.636	0.815	8.9526
0.4000	0.314	0.911	1.145	1.192	1.280	1.650	2.480	3.245	4.536	0.913	0.719	0.908	11.191
0.5000	0.349	1.017	1.281	1.335	1.438	1.863	2.804	3.660	5.106	1.037	0.816	1.014	13.988
0.6000	0.383	1.118	1.412	1.473	1.592	2.073	3.122	4.067	5.663	1.157	0.910	1.117	16.786
0.7000	0.416	1.216	1.543	1.611	1.747	2.285	3.439	4.475	6.218	1.277	1.003	1.219	19.584
0.8000	0.450	1.314	1.678	1.752	1.905	2.502	3.761	4.887	6.775	1.398	1.098	1.324	22.382
0.9000	0.486	1.414	1.817	1.899	2.069	2.725	4.090	5.306	7.338	1.522	1.194	1.432	25.179
1.0000	0.523	1.517	1.961	2.050	2.239	2.955	4.425	5.728	7.907	1.649	1.294	1.545	27.977
1.2500	0.621	1.785	2.337	2.444	2.683	3.550	5.281	6.795	9.332	1.981	1.554	1.841	34.971
1.6000	0.776	2.189	2.900	3.034	3.343	4.423	6.511	8.313	11.317	2.483	1.952	2.290	44.763
2.0000	0.978	2.694	3.591	3.757	4.147	5.467	7.953	10.079	13.580	3.108	2.455	2.853	55.954
2.5000	1.273	3.395	4.523	4.736	5.219	6.834	9.809	12.322	16.416	3.962	3.155	3.630	69.942
3.2000	1.760	4.510	5.955	6.239	6.841	8.861	12.506	15.563	20.474	5.290	4.260	4.850	89.526
4.0000	2.417	5.976	7.776	8.142	8.878	11.363	15.783	19.477	25.333	6.989	5.694	6.422	111.91
5.0000	3.376	8.092	10.333	10.804	11.705	14.797	20.228	24.749	31.802	9.378	7.728	8.645	139.88
6.0000	4.473	10.506	13.195	13.778	14.854	18.582	25.084	30.480	38.771	12.055	10.018	11.144	167.86
7.0000	5.699	13.204	16.352	17.056	18.317	22.717	30.359	36.673	46.278	15.011	12.554	13.908	195.84
8.0000	7.047	16.179	19.793	20.624	22.093	27.200	36.058	43.335	54.320	18.236	15.327	16.924	223.82
9.0000	8.515	19.417	23.515	24.480	26.173	32.029	42.191	50.480	62.900	21.730	18.337	20.189	251.79
10.0000	10.101	22.897	27.509	28.617	30.545	37.199	48.743	58.102	72.020	25.487	21.578	23.698	279.77
11.0000	11.801	26.613	31.763	33.022	35.201	42.706	55.702	66.196	81.689	29.501	25.045	27.443	307.75
12.0000	13.616	30.561	36.273	37.693	40.138	48.544	63.060	74.749	91.900	33.765	28.734	31.418	335.72

$^{31}_{15}P$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=31 MEV
0.0125	4.649	3.846	2.818	1.874	1.522	1.381	1.279	1.183	0.752	0.644	0.592	0.507	0.3872
0.0160	5.260	4.351	3.188	2.120	1.721	1.562	1.447	1.339	0.851	0.728	0.669	0.574	0.4956
0.0200	5.881	4.865	3.564	2.370	1.925	1.746	1.618	1.497	0.952	0.814	0.748	0.642	0.6195
0.0250	6.575	5.439	3.985	2.650	2.152	1.953	1.809	1.674	1.064	0.911	0.839	0.717	0.7743
0.0320	7.430	6.158	4.508	2.998	2.439	2.218	2.047	1.893	1.204	1.032	0.951	0.816	0.9912
0.0400	8.286	6.900	5.040	3.362	2.742	2.500	2.303	2.132	1.356	1.167	1.074	0.922	1.2390
0.0500	9.231	7.737	5.635	3.776	3.094	2.818	2.598	2.406	1.527	1.327	1.223	1.051	1.5487
0.0600	10.075	8.525	6.173	4.161	3.420	3.105	2.871	2.661	1.704	1.482	1.367	1.176	1.8584
0.0700	10.835	9.268	6.668	4.521	3.734	3.387	3.134	2.907	1.867	1.634	1.514	1.300	2.1682
0.0800	11.546	10.004	7.136	4.874	4.032	3.654	3.375	3.140	2.034	1.784	1.648	1.420	2.4779
0.0900	12.197	10.705	7.571	5.209	4.315	3.922	3.611	3.362	2.203	1.927	1.787	1.541	2.7877
0.1000	12.803	11.383	7.977	5.528	4.595	4.164	3.829	3.582	2.361	2.066	1.914	1.651	3.0974
0.1250	14.114	13.022	8.877	6.249	5.219	4.731	4.350	4.074	2.730	2.388	2.232	1.931	3.8717
0.1600	15.494	15.060	9.875	7.071	5.945	5.392	4.947	4.641	3.160	2.775	2.602	2.271	4.9558
0.2000	16.560	16.806	10.698	7.777	6.579	5.959	5.467	5.124	3.552	3.134	2.942	2.567	6.1948
0.2500	17.426	18.330	11.442	8.455	7.185	6.522	5.973	5.595	3.947	3.490	3.272	2.860	7.7435
0.3200	18.252	19.831	12.234	9.212	7.866	7.181	6.545	6.117	4.380	3.890	3.652	3.211	9.9117
0.4000	18.943	21.029	12.957	9.873	8.500	7.774	7.087	6.621	4.820	4.289	4.030	3.537	12.390
0.5000	19.596	22.022	13.704	10.593	9.181	8.428	7.674	7.153	5.290	4.714	4.433	3.906	15.487
0.6000	19.917	22.431	14.206	11.123	9.688	8.921	8.097	7.543	5.640	5.043	4.752	4.219	18.584
0.7000	20.049	22.506	14.539	11.486	10.046	9.261	8.389	7.822	5.903	5.278	4.987	4.420	21.682
0.8000	20.024	22.324	14.745	11.752	10.307	9.540	8.626	8.036	6.104	5.485	5.175	4.600	24.779
0.9000	19.936	22.031	14.855	11.914	10.503	9.745	8.794	8.185	6.284	5.645	5.333	4.754	27.877
1.0000	19.763	21.640	14.893	12.049	10.634	9.874	8.921	8.296	6.404	5.764	5.451	4.870	30.974
1.2500	19.159	20.518	14.771	12.113	10.783	10.045	9.055	8.405	6.603	5.953	5.628	5.037	38.717
1.6000	18.125	18.998	14.317	11.954	10.680	9.979	8.991	8.304	6.657	6.027	5.698	5.111	49.558
2.0000	16.904	17.641	13.643	11.556	10.383	9.741	8.732	8.090	6.549	5.976	5.648	5.089	61.948
2.5000	15.492	16.233	12.772	10.971	9.924	9.324	8.340	7.740	6.360	5.786	5.492	4.981	77.435
3.2000	13.855	14.636	11.653	10.138	9.229	8.681	7.784	7.202	6.013	5.500	5.221	4.743	99.117
4.0000	12.367	13.170	10.570	9.291	8.509	8.012	7.219	6.659	5.634	5.158	4.915	4.471	123.90
5.0000	10.935	11.722	9.476	8.396	7.732	7.296	6.576	6.084	5.212	4.757	4.558	4.160	154.87
6.0000	9.842	10.582	8.603	7.674	7.080	6.710	6.057	5.601	4.800	4.431	4.241	3.897	185.84
7.0000	8.951	9.669	7.893	7.072	6.536	6.212	5.620	5.202	4.499	4.136	3.970	3.655	216.82
8.0000	8.233	8.912	7.305	6.575	6.085	5.786	5.260	4.858	4.222	3.894	3.740	3.448	247.79
9.0000	7.647	8.273	6.809	6.149	5.700	5.427	4.937	4.569	3.984	3.677	3.534	3.269	278.77
10.0000	7.139	7.727	6.386	5.792	5.364	5.115	4.655	4.323	3.768	3.493	3.365	3.110	309.74
11.0000	6.705	7.265	6.019	5.477	5.080	4.845	4.412	4.111	3.587	3.335	3.220	2.967	340.71
12.0000	6.331	6.855	5.698	5.197	4.826	4.610	4.199	3.920	3.425	3.191	3.077	2.838	371.69

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	10.566	4.508	2.987	2.806	2.494	1.646	1.009	0.716	0.472	3.779	4.807	3.669	0.3872
0.0160	11.731	4.948	3.325	3.127	2.780	1.878	1.164	0.829	0.550	4.249	5.407	4.084	0.4956
0.0200	12.760	5.239	3.625	3.414	3.054	2.121	1.322	0.962	0.644	4.712	5.991	4.452	0.6195
0.0250	13.867	5.503	3.953	3.726	3.371	2.419	1.546	1.128	0.817	5.220	6.643	4.854	0.7743
0.0320	15.373	5.834	4.323	4.116	3.760	2.818	1.830	1.380	0.960	5.861	7.475	5.365	0.9912
0.0400	16.885	6.139	4.703	4.526	4.168	3.256	2.157	1.653	1.174	6.527	8.327	5.897	1.2390
0.0500	18.653	6.560	5.179	5.038	4.689	3.781	2.547	1.984	1.437	7.292	9.298	6.548	1.5487
0.0600	20.619	7.056	5.723	5.531	5.229	4.303	2.926	2.303	1.691	8.031	10.254	7.210	1.8584
0.0700	22.604	7.655	6.268	6.088	5.774	4.814	3.281	2.607	1.927	8.762	11.175	7.921	2.1682
0.0800	24.761	8.313	6.857	6.665	6.344	5.330	3.654	2.911	2.162	9.505	12.109	8.677	2.4779
0.0900	26.877	9.017	7.457	7.268	6.920	5.837	4.013	3.210	2.377	10.236	13.014	9.449	2.7877
0.1000	29.196	9.796	8.121	7.865	7.482	6.342	4.379	3.486	2.585	10.952	13.928	10.235	3.0974
0.1250	35.240	11.762	9.720	9.365	8.948	7.554	5.202	4.145	3.080	12.729	16.200	12.241	3.8717
0.1600	43.747	14.586	11.969	11.534	10.942	9.115	6.251	4.977	3.693	15.079	19.158	15.109	4.9558
0.2000	52.526	17.437	14.281	13.714	12.966	10.537	7.167	5.691	4.204	17.266	21.909	18.026	6.1948
0.2500	62.014	20.526	16.648	16.030	14.966	11.831	7.998	6.270	4.611	19.382	24.565	21.144	7.7435
0.3200	72.667	23.721	19.292	18.411	16.846	12.906	8.612	6.716	4.906	21.555	27.379	24.443	9.9117
0.4000	80.851	26.691	21.197	20.148	18.243	13.618	9.005	7.010	5.105	23.232	29.581	26.898	12.390
0.5000	87.429	29.052	22.570	21.474	19.212	14.128	9.318	7.277	5.303	24.571	31.368	28.805	15.487
0.6000	90.208	30.259	22.900	21.763	19.448	14.220	9.433	7.359	5.384	25.031	32.120	29.364	18.584
0.7000	89.267	30.676	22.564	21.444	19.191	14.015	9.377	7.298	5.394	24.934	32.043	28.975	21.682
0.8000	86.552	30.374	21.955	20.938	18.711	13.683	9.260	7.225	5.367	24.535	31.495	28.222	24.779
0.9000	83.191	29.652	21.243	20.248	18.005	13.281	9.062	7.160	5.318	23.992	30.766	27.245	27.877
1.0000	80.275	29.027	20.717	19.659	17.514	12.972	8.936	7.119	5.287	23.427	30.010	26.391	30.974
1.2500	73.414	27.490	19.572	18.686	16.603	12.452	8.745	7.061	5.333	22.113	28.081	24.772	38.717
1.6000	64.711	25.340	18.297	17.495	15.662	11.954	8.576	6.972	5.397	20.401	25.527	22.735	49.558
2.0000	56.483	23.153	17.163	16.345	14.789	11.488	8.391	6.890	5.416	18.828	23.194	20.806	61.948
2.5000	48.278	20.754	15.850	15.084	13.921	11.009	8.174	6.807	5.415	17.191	20.806	18.775	77.435
3.2000	40.785	18.120	14.368	13.716	12.737	10.313	7.842	6.526	5.232	15.417	18.377	16.722	99.117
4.0000	34.881	15.771	12.895	12.367	11.627	9.513	7.293	6.141	4.968	13.805	16.267	14.872	123.90
5.0000	30.133	13.693	11.456	11.030	10.395	8.614	6.699	5.657	4.643	12.262	14.356	13.153	154.87
6.0000	26.755	12.165	10.341	9.945	9.420	7.863	6.143	5.222	4.302	11.046	12.896	11.812	185.84
7.0000	24.232	11.003	9.456	9.117	8.619	7.246	5.699	4.862	4.018	10.095	11.753	10.798	216.82
8.0000	22.207	10.044	8.730	8.423	7.955	6.713	5.282	4.529	3.762	9.307	10.811	9.957	247.79
9.0000	20.496	9.315	8.110	7.831	7.409	6.265	4.937	4.242	3.541	8.634	10.017	9.240	278.77
10.0000	19.093	8.717	7.605	7.344	6.948	5.875	4.642	3.991	3.340	8.072	9.349	8.646	309.74
11.0000	17.876	8.198	7.169	6.922	6.549	5.537	4.388	3.774	3.160	7.590	8.782	8.138	340.71
12.0000	16.809	7.744	6.786	6.553	6.200	5.242	4.165	3.584	3.003	7.168	8.279	7.692	371.69

$^{31}_{15}P$ IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=31
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.084	0.091	0.123	0.180	0.206	0.248	0.273	0.306	0.465	0.550	0.600	0.724	0.3872
0.0160	0.103	0.112	0.152	0.222	0.255	0.304	0.334	0.371	0.565	0.667	0.727	0.873	0.4956
0.0200	0.123	0.135	0.183	0.266	0.308	0.364	0.398	0.441	0.672	0.791	0.861	1.032	0.6195
0.0250	0.145	0.162	0.218	0.318	0.369	0.434	0.473	0.523	0.796	0.935	1.017	1.216	0.7743
0.0320	0.174	0.196	0.264	0.386	0.450	0.524	0.570	0.627	0.956	1.122	1.219	1.452	0.9912
0.0400	0.204	0.231	0.312	0.456	0.534	0.618	0.671	0.737	1.124	1.317	1.430	1.698	1.2390
0.0500	0.238	0.271	0.366	0.536	0.630	0.725	0.786	0.861	1.317	1.538	1.670	1.978	1.5487
0.0600	0.270	0.308	0.416	0.610	0.718	0.823	0.891	0.975	1.492	1.739	1.888	2.231	1.8584
0.0700	0.298	0.341	0.462	0.677	0.799	0.913	0.989	1.080	1.653	1.924	2.087	2.462	2.1682
0.0800	0.326	0.373	0.506	0.741	0.875	0.997	1.079	1.177	1.803	2.094	2.270	2.675	2.4779
0.0900	0.351	0.402	0.547	0.800	0.945	1.075	1.164	1.269	1.941	2.252	2.441	2.873	2.7877
0.1000	0.376	0.429	0.586	0.856	1.012	1.149	1.244	1.355	2.071	2.400	2.600	3.058	3.0974
0.1250	0.433	0.492	0.675	0.984	1.165	1.319	1.428	1.551	2.365	2.735	2.960	3.474	3.8717
0.1600	0.506	0.568	0.789	1.144	1.355	1.528	1.656	1.794	2.723	3.144	3.396	3.976	4.9558
0.2000	0.583	0.645	0.908	1.308	1.549	1.743	1.889	2.043	3.085	3.554	3.833	4.477	6.1948
0.2500	0.674	0.733	1.046	1.497	1.771	1.988	2.157	2.328	3.491	4.014	4.323	5.039	7.7435
0.3200	0.796	0.847	1.228	1.740	2.056	2.302	2.499	2.695	4.006	4.595	4.942	5.745	9.9117
0.4000	0.929	0.968	1.425	1.999	2.356	2.631	2.860	3.081	4.541	5.196	5.582	6.472	12.390
0.5000	1.089	1.112	1.657	2.302	2.707	3.013	3.280	3.530	5.153	5.884	6.314	7.305	15.487
0.6000	1.246	1.251	1.879	2.587	3.035	3.370	3.672	3.951	5.720	6.519	6.988	8.067	18.584
0.7000	1.401	1.389	2.094	2.861	3.348	3.711	4.048	4.354	6.256	7.119	7.624	8.784	21.682
0.8000	1.555	1.527	2.305	3.127	3.653	4.040	4.412	4.745	6.772	7.694	8.233	9.470	24.779
0.9000	1.710	1.666	2.515	3.389	3.950	4.361	4.767	5.127	7.272	8.250	8.822	10.132	27.877
1.0000	1.866	1.808	2.723	3.647	4.243	4.677	5.117	5.502	7.760	8.793	9.397	10.776	30.974
1.2500	2.264	2.175	3.244	4.287	4.965	5.453	5.977	6.428	8.949	10.113	10.793	12.337	38.717
1.6000	2.845	2.723	3.989	5.187	5.974	6.534	7.177	7.724	10.582	11.920	12.704	14.470	49.558
2.0000	3.552	3.400	4.875	6.241	7.150	7.790	8.574	9.235	12.457	13.983	14.887	16.898	61.948
2.5000	4.509	4.315	6.048	7.616	8.675	9.415	10.389	11.192	14.856	16.616	17.666	19.973	77.435
3.2000	5.990	5.723	7.826	9.673	10.942	11.826	13.081	14.097	18.363	20.461	21.717	24.435	99.117
4.0000	7.886	7.510	10.062	12.229	13.741	14.800	16.390	17.679	22.624	25.117	26.613	29.820	123.90
5.0000	10.554	10.007	13.162	15.741	17.565	18.857	20.892	22.553	28.348	31.378	33.165	37.011	154.87
6.0000	13.544	12.792	16.597	19.605	21.757	23.289	25.806	27.866	34.548	38.133	40.218	44.712	185.84
7.0000	16.848	15.858	20.360	23.814	26.315	28.092	31.120	33.610	41.219	45.376	47.773	52.927	216.82
8.0000	20.459	19.197	24.442	28.361	31.231	33.263	36.822	39.777	48.331	53.100	55.817	61.659	247.79
9.0000	24.366	22.807	28.837	33.236	36.494	38.795	42.905	46.356	55.889	61.291	64.342	70.892	278.77
10.0000	28.561	26.684	33.538	38.429	42.100	44.677	49.370	53.329	63.888	69.939	73.328	80.612	309.74
11.0000	33.040	30.820	38.536	43.931	48.036	50.902	56.208	60.680	72.318	79.019	82.742	90.813	340.71
12.0000	37.797	35.211	43.828	49.739	54.294	57.459	63.407	68.399	81.159	88.518	92.586	101.492	371.69

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.030	0.077	0.106	0.112	0.123	0.186	0.307	0.448	0.691	0.087	0.069	0.083	0.3872
0.0160	0.038	0.096	0.133	0.140	0.154	0.231	0.378	0.548	0.841	0.109	0.086	0.104	0.4956
0.0200	0.046	0.117	0.162	0.171	0.188	0.280	0.455	0.653	0.996	0.132	0.105	0.128	0.6195
0.0250	0.056	0.142	0.197	0.207	0.228	0.337	0.542	0.772	1.165	0.159	0.126	0.156	0.7743
0.0320	0.069	0.177	0.243	0.256	0.281	0.409	0.651	0.919	1.369	0.194	0.154	0.194	0.9912
0.0400	0.082	0.215	0.293	0.308	0.337	0.482	0.761	1.063	1.572	0.231	0.183	0.234	1.2390
0.0500	0.098	0.261	0.351	0.368	0.402	0.564	0.881	1.219	1.787	0.273	0.216	0.280	1.5487
0.0600	0.113	0.304	0.405	0.423	0.460	0.636	0.987	1.353	1.970	0.312	0.246	0.322	1.8584
0.0700	0.127	0.344	0.454	0.474	0.514	0.701	1.081	1.473	2.132	0.347	0.274	0.361	2.1682
0.0800	0.139	0.382	0.499	0.520	0.563	0.759	1.167	1.580	2.276	0.380	0.300	0.397	2.4779
0.0900	0.151	0.417	0.541	0.563	0.608	0.813	1.245	1.678	2.407	0.411	0.324	0.430	2.7877
0.1000	0.162	0.449	0.580	0.603	0.650	0.863	1.316	1.767	2.527	0.439	0.346	0.461	3.0974
0.1250	0.185	0.520	0.665	0.691	0.742	0.972	1.474	1.965	2.794	0.503	0.397	0.528	3.8717
0.1600	0.212	0.601	0.764	0.794	0.850	1.100	1.661	2.199	3.108	0.580	0.457	0.607	4.9558
0.2000	0.238	0.678	0.857	0.891	0.952	1.225	1.843	2.429	3.417	0.656	0.517	0.681	6.1948
0.2500	0.265	0.760	0.958	0.995	1.063	1.364	2.047	2.687	3.769	0.741	0.584	0.760	7.7435
0.3200	0.297	0.858	1.078	1.121	1.200	1.539	2.308	3.021	4.224	0.847	0.667	0.855	9.9117
0.4000	0.330	0.956	1.201	1.250	1.341	1.726	2.589	3.382	4.718	0.957	0.754	0.952	12.390
0.5000	0.366	1.067	1.342	1.398	1.506	1.949	2.927	3.815	5.313	1.087	0.856	1.063	15.487
0.6000	0.401	1.172	1.478	1.541	1.666	2.167	3.257	4.238	5.892	1.212	0.953	1.169	18.584
0.7000	0.436	1.273	1.614	1.685	1.826	2.386	3.586	4.660	6.466	1.336	1.050	1.275	21.682
0.8000	0.471	1.375	1.754	1.831	1.990	2.610	3.918	5.086	7.041	1.461	1.147	1.384	24.779
0.9000	0.507	1.478	1.897	1.981	2.158	2.839	4.256	5.517	7.621	1.588	1.247	1.495	27.877
1.0000	0.545	1.583	2.044	2.136	2.333	3.075	4.600	5.950	8.205	1.719	1.349	1.611	30.974
1.2500	0.646	1.857	2.428	2.540	2.786	3.684	5.475	7.041	9.661	2.059	1.615	1.913	38.717
1.6000	0.803	2.267	3.001	3.139	3.457	4.571	6.725	8.584	11.679	2.568	2.019	2.369	49.558
2.0000	1.008	2.778	3.699	3.871	4.271	5.628	8.185	10.370	13.968	3.200	2.528	2.939	61.948
2.5000	1.304	3.485	4.638	4.857	5.350	7.004	10.054	12.631	16.826	4.061	3.234	3.723	77.435
3.2000	1.794	4.604	6.076	6.366	6.980	9.040	12.763	15.884	20.900	5.394	4.343	4.947	99.117
4.0000	2.451	6.072	7.899	8.271	9.018	11.544	16.042	19.802	25.764	7.095	5.778	6.521	123.90
5.0000	3.409	8.184	10.452	10.927	11.840	14.971	20.479	25.064	32.220	9.480	7.809	8.739	154.87
6.0000	4.501	10.587	13.301	13.889	14.975	18.740	25.314	30.770	39.159	12.145	10.089	11.228	185.84
7.0000	5.719	13.268	16.437	17.145	18.416	22.848	30.554	36.923	46.617	15.081	12.607	13.973	216.82
8.0000	7.056	16.217	19.850	20.683	22.160	27.293	36.205	43.529	54.591	18.280	15.358	16.963	247.79
9.0000	8.509	19.422	23.534	24.500	26.197	32.073	42.275	50.600	63.083	21.738	18.336	20.195	278.77
10.0000	10.075	22.861	27.480	28.587	30.517	37.181	48.749	58.132	72.096	25.450	21.539	23.663	309.74
11.0000	11.753	26.527	31.677	32.934	35.112	42.615	55.616	66.117	81.635	29.410	24.960	27.357	340.71
12.0000	13.541	30.417	36.120	37.535	39.975	48.366	62.864	74.543	91.695	33.611	28.594	31.274	371.69

$^{32}_{16}S$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=32 MEV
0.0125	4.848	4.011	2.938	1.954	1.587	1.440	1.334	1.234	0.785	0.671	0.617	0.529	0.3996
0.0160	5.485	4.538	3.324	2.211	1.795	1.629	1.509	1.396	0.888	0.760	0.698	0.598	0.5116
0.0200	6.132	5.073	3.717	2.472	2.007	1.821	1.687	1.561	0.992	0.849	0.780	0.669	0.6394
0.0250	6.856	5.672	4.155	2.763	2.244	2.036	1.886	1.745	1.109	0.949	0.875	0.748	0.7993
0.0320	7.748	6.422	4.701	3.126	2.543	2.313	2.134	1.974	1.255	1.077	0.992	0.851	1.0231
0.0400	8.641	7.196	5.256	3.506	2.859	2.607	2.402	2.223	1.414	1.217	1.120	0.962	1.2789
0.0500	9.626	8.068	5.876	3.937	3.226	2.938	2.709	2.509	1.593	1.384	1.275	1.096	1.5986
0.0600	10.506	8.890	6.437	4.339	3.566	3.238	2.993	2.774	1.777	1.545	1.426	1.226	1.9183
0.0700	11.299	9.665	6.953	4.714	3.894	3.532	3.268	3.032	1.947	1.704	1.578	1.356	2.2380
0.0800	12.045	10.437	7.445	5.085	4.206	3.812	3.521	3.276	2.122	1.861	1.720	1.481	2.5578
0.0900	12.731	11.174	7.903	5.437	4.504	4.094	3.770	3.509	2.300	2.011	1.865	1.608	2.8775
0.1000	13.371	11.888	8.331	5.773	4.799	4.349	3.999	3.741	2.466	2.158	1.999	1.724	3.1972
0.1250	14.759	13.618	9.283	6.535	5.458	4.948	4.548	4.261	2.854	2.497	2.335	2.019	3.9965
0.1600	16.227	15.771	10.342	7.405	6.226	5.647	5.181	4.861	3.309	2.906	2.725	2.379	5.1155
0.2000	17.359	17.617	11.214	8.153	6.897	6.246	5.730	5.372	3.723	3.286	3.084	2.691	6.3944
0.2500	18.295	19.244	12.012	8.877	7.544	6.847	6.270	5.874	4.144	3.664	3.436	3.003	7.9930
0.3200	19.214	20.875	12.878	9.697	8.280	7.559	6.890	6.439	4.610	4.095	3.844	3.380	10.231
0.4000	19.999	22.202	13.679	10.424	8.974	8.208	7.483	6.990	5.089	4.528	4.254	3.734	12.789
0.5000	20.755	23.324	14.514	11.220	9.725	8.926	8.128	7.576	5.602	4.993	4.695	4.137	15.986
0.6000	21.155	23.826	15.089	11.815	10.291	9.476	8.601	8.012	5.990	5.357	5.047	4.481	19.183
0.7000	21.355	23.972	15.486	12.234	10.701	9.864	8.935	8.331	6.287	5.621	5.312	4.708	22.380
0.8000	21.384	23.841	15.747	12.550	11.007	10.188	9.212	8.582	6.519	5.858	5.527	4.913	25.578
0.9000	21.343	23.586	15.904	12.755	11.244	10.433	9.415	8.763	6.727	6.044	5.710	5.089	28.775
1.0000	21.206	23.220	15.981	12.928	11.410	10.595	9.572	8.901	6.872	6.184	5.849	5.226	31.972
1.2500	20.656	22.121	15.926	13.059	11.626	10.830	9.763	9.062	7.119	6.418	6.068	5.431	39.965
1.6000	19.640	20.586	15.513	12.954	11.573	10.813	9.742	8.998	7.214	6.531	6.174	5.538	51.155
2.0000	18.391	19.193	14.843	12.572	11.296	10.598	9.500	8.802	7.125	6.501	6.145	5.537	63.944
2.5000	16.914	17.723	13.944	11.978	10.835	10.179	9.106	8.450	6.944	6.317	5.996	5.438	79.930
3.2000	15.178	16.034	12.766	11.106	10.110	9.510	8.528	7.889	6.587	6.025	5.719	5.196	102.31
4.0000	13.586	14.468	11.612	10.207	9.347	8.802	7.931	7.315	6.189	5.667	5.399	4.912	127.89
5.0000	12.045	12.912	10.438	9.248	8.517	8.037	7.244	6.701	5.741	5.240	5.021	4.582	159.86
6.0000	10.866	11.682	9.498	8.472	7.817	7.408	6.686	6.183	5.300	4.891	4.682	4.303	191.83
7.0000	9.901	10.696	8.731	7.823	7.230	6.872	6.217	5.754	4.977	4.575	4.392	4.043	223.80
8.0000	9.123	9.876	8.095	7.286	6.743	6.411	5.828	5.383	4.679	4.315	4.145	3.821	255.78
9.0000	8.488	9.183	7.558	6.825	6.326	6.024	5.480	5.072	4.422	4.081	3.923	3.628	287.75
10.0000	7.936	8.589	7.099	6.439	5.963	5.686	5.175	4.806	4.188	3.883	3.741	3.457	319.72
11.0000	7.464	8.087	6.700	6.097	5.655	5.394	4.911	4.576	3.993	3.712	3.585	3.303	351.69
12.0000	7.057	7.641	6.352	5.793	5.380	5.138	4.681	4.370	3.817	3.557	3.430	3.163	383.66

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	11.018	4.701	3.115	2.926	2.600	1.716	1.052	0.746	0.492	3.940	5.013	3.826	0.3996
0.0160	12.233	5.159	3.467	3.261	2.899	1.958	1.213	0.864	0.574	4.431	5.638	4.258	0.5116
0.0200	13.305	5.463	3.780	3.561	3.185	2.211	1.379	1.003	0.671	4.913	6.248	4.642	0.6394
0.0250	14.460	5.738	4.122	3.885	3.515	2.522	1.612	1.176	0.852	5.443	6.927	5.061	0.7993
0.0320	16.031	6.083	4.508	4.292	3.921	2.938	1.909	1.439	1.001	6.112	7.795	5.594	1.0231
0.0400	17.608	6.402	4.904	4.720	4.347	3.395	2.250	1.724	1.225	6.807	8.683	6.150	1.2789
0.0500	19.451	6.840	5.400	5.254	4.889	3.943	2.656	2.069	1.498	7.604	9.696	6.828	1.5986
0.0600	21.501	7.358	5.967	5.768	5.452	4.487	3.051	2.401	1.764	8.375	10.692	7.519	1.9183
0.0700	23.571	7.982	6.536	6.348	6.021	5.020	3.421	2.719	2.009	9.136	11.653	8.260	2.2380
0.0800	25.833	8.673	7.154	6.953	6.618	5.561	3.812	3.037	2.256	9.916	12.634	9.053	2.5578
0.0900	28.054	9.412	7.784	7.587	7.223	6.093	4.188	3.351	2.481	10.684	13.585	9.862	2.8775
0.1000	30.491	10.230	8.481	8.214	7.814	6.623	4.574	3.641	2.699	11.438	14.546	10.688	3.1972
0.1250	36.852	12.300	10.164	9.793	9.357	7.900	5.440	4.335	3.221	13.311	16.941	12.801	3.9965
0.1600	45.815	15.275	12.534	12.079	11.459	9.546	6.546	5.212	3.868	15.792	20.063	15.823	5.1155
0.2000	55.061	18.279	14.971	14.376	13.591	11.046	7.513	5.966	4.407	18.100	22.966	18.896	6.3944
0.2500	65.107	21.550	17.478	16.829	15.712	12.421	8.397	6.583	4.841	20.349	25.790	22.199	7.9930
0.3200	76.494	24.970	20.308	19.381	17.733	13.586	9.066	7.070	5.164	22.691	28.821	25.730	10.231
0.4000	85.359	28.179	22.379	21.271	19.260	14.377	9.507	7.401	5.390	24.527	31.230	28.398	12.789
0.5000	92.601	30.770	23.905	22.744	20.349	14.964	9.870	7.707	5.617	26.024	33.223	30.509	15.986
0.6000	95.816	32.140	24.324	23.117	20.657	15.104	10.019	7.816	5.719	26.587	34.117	31.189	19.183
0.7000	95.082	32.675	24.034	22.841	20.441	14.928	9.988	7.774	5.745	26.558	34.130	30.863	22.380
0.8000	92.435	32.439	23.447	22.361	19.983	14.613	9.889	7.716	5.732	26.203	33.635	30.140	25.578
0.9000	89.063	31.745	22.743	21.677	19.276	14.218	9.702	7.666	5.694	25.685	32.937	29.168	28.775
1.0000	86.135	31.146	22.229	21.094	18.793	13.919	9.588	7.639	5.673	25.137	32.201	28.318	31.972
1.2500	79.153	29.639	21.102	20.147	17.901	13.426	9.428	7.613	5.749	23.841	30.276	26.708	39.965
1.6000	70.120	27.459	19.826	18.957	16.972	12.954	9.292	7.555	5.849	22.107	27.660	24.635	51.155
2.0000	61.452	25.189	18.673	17.782	16.090	12.498	9.129	7.496	5.893	20.484	25.234	22.636	63.944
2.5000	52.710	22.660	17.305	16.468	15.199	12.020	8.924	7.432	5.912	18.769	22.715	20.498	79.930
3.2000	44.680	19.851	15.740	15.025	13.953	11.298	8.591	7.149	5.732	16.889	20.132	18.319	102.31
4.0000	38.319	17.325	14.166	13.586	12.773	10.451	8.012	6.746	5.458	15.165	17.871	16.338	127.89
5.0000	33.193	15.083	12.620	12.150	11.450	9.488	7.380	6.231	5.115	13.507	15.814	14.488	159.86
6.0000	29.538	13.430	11.416	10.979	10.400	8.681	6.781	5.765	4.749	12.195	14.237	13.041	191.83
7.0000	26.805	12.172	10.460	10.085	9.535	8.015	6.304	5.379	4.444	11.167	13.001	11.945	223.80
8.0000	24.609	11.131	9.674	9.334	8.816	7.439	5.853	5.019	4.169	10.313	11.981	11.034	255.78
9.0000	22.750	10.340	9.002	8.692	8.223	6.954	5.480	4.709	3.930	9.584	11.118	10.257	287.75
10.0000	21.225	9.690	8.455	8.164	7.723	6.531	5.161	4.437	3.713	8.973	10.392	9.612	319.72
11.0000	19.900	9.126	7.980	7.706	7.290	6.164	4.885	4.201	3.518	8.449	9.776	9.059	351.69
12.0000	18.737	8.632	7.565	7.304	6.911	5.844	4.643	3.995	3.347	7.990	9.229	8.575	383.66

$^{32}_{16}$S IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=32 MEV
0.0125	0.082	0.088	0.120	0.174	0.199	0.241	0.265	0.296	0.450	0.532	0.580	0.700	0.3996
0.0160	0.100	0.109	0.148	0.215	0.247	0.295	0.323	0.360	0.548	0.646	0.704	0.846	0.5116
0.0200	0.120	0.132	0.178	0.259	0.298	0.354	0.386	0.429	0.651	0.767	0.835	1.001	0.6394
0.0250	0.142	0.158	0.213	0.310	0.359	0.422	0.460	0.508	0.773	0.908	0.988	1.181	0.7993
0.0320	0.171	0.191	0.258	0.376	0.437	0.510	0.554	0.611	0.930	1.091	1.186	1.412	1.0231
0.0400	0.200	0.226	0.305	0.445	0.520	0.603	0.654	0.719	1.095	1.282	1.393	1.654	1.2789
0.0500	0.234	0.265	0.358	0.524	0.614	0.708	0.767	0.841	1.284	1.500	1.628	1.928	1.5986
0.0600	0.265	0.301	0.407	0.596	0.701	0.804	0.871	0.953	1.457	1.698	1.842	2.177	1.9183
0.0700	0.293	0.335	0.453	0.663	0.781	0.893	0.967	1.056	1.615	1.879	2.038	2.405	2.2380
0.0800	0.320	0.366	0.496	0.725	0.855	0.976	1.056	1.152	1.762	2.047	2.219	2.615	2.5578
0.0900	0.345	0.394	0.536	0.784	0.925	1.053	1.140	1.242	1.899	2.203	2.387	2.810	2.8775
0.1000	0.369	0.422	0.575	0.839	0.991	1.126	1.219	1.327	2.027	2.349	2.544	2.992	3.1972
0.1250	0.426	0.483	0.663	0.965	1.142	1.293	1.400	1.521	2.316	2.679	2.898	3.402	3.9965
0.1600	0.498	0.558	0.775	1.122	1.328	1.500	1.624	1.760	2.669	3.081	3.327	3.896	5.1155
0.2000	0.574	0.634	0.892	1.284	1.519	1.711	1.854	2.005	3.025	3.484	3.757	4.389	6.3944
0.2500	0.664	0.721	1.028	1.470	1.738	1.952	2.117	2.285	3.424	3.937	4.239	4.941	7.9930
0.3200	0.783	0.832	1.207	1.708	2.017	2.260	2.453	2.645	3.930	4.507	4.846	5.633	10.231
0.4000	0.913	0.951	1.399	1.961	2.311	2.582	2.806	3.023	4.452	5.094	5.472	6.346	12.789
0.5000	1.070	1.091	1.626	2.256	2.653	2.955	3.216	3.462	5.051	5.766	6.187	7.158	15.986
0.6000	1.222	1.227	1.842	2.534	2.972	3.302	3.598	3.871	5.602	6.384	6.843	7.900	19.183
0.7000	1.373	1.360	2.051	2.799	3.277	3.633	3.962	4.262	6.122	6.966	7.460	8.596	22.380
0.8000	1.522	1.494	2.255	3.057	3.571	3.951	4.314	4.640	6.621	7.523	8.050	9.260	25.578
0.9000	1.672	1.629	2.457	3.310	3.859	4.261	4.658	5.009	7.104	8.060	8.619	9.899	28.775
1.0000	1.822	1.765	2.658	3.559	4.141	4.565	4.994	5.371	7.574	8.583	9.172	10.519	31.972
1.2500	2.203	2.118	3.158	4.173	4.834	5.310	5.820	6.259	8.715	9.849	10.511	12.017	39.965
1.6000	2.758	2.641	3.869	5.032	5.797	6.343	6.966	7.497	10.274	11.575	12.336	14.054	51.155
2.0000	3.431	3.284	4.711	6.033	6.915	7.537	8.294	8.933	12.057	13.536	14.411	16.361	63.944
2.5000	4.337	4.151	5.822	7.336	8.359	9.075	10.012	10.786	14.328	16.029	17.043	19.273	79.930
3.2000	5.735	5.479	7.500	9.277	10.498	11.351	12.553	13.528	17.638	19.658	20.866	23.484	102.31
4.0000	7.518	7.161	9.604	11.682	13.132	14.149	15.666	16.898	21.647	24.038	25.472	28.551	127.89
5.0000	10.021	9.504	12.512	14.978	16.720	17.956	19.890	21.470	27.018	29.913	31.620	35.298	159.86
6.0000	12.820	12.110	15.727	18.594	20.643	22.104	24.489	26.443	32.821	36.235	38.221	42.506	191.83
7.0000	15.906	14.974	19.242	22.525	24.901	26.590	29.453	31.809	39.052	43.000	45.278	50.179	223.80
8.0000	19.273	18.087	23.048	26.764	29.484	31.410	34.769	37.558	45.682	50.202	52.777	58.320	255.78
9.0000	22.909	21.447	27.139	31.301	34.382	36.559	40.430	43.681	52.716	57.825	60.712	66.913	287.75
10.0000	26.807	25.049	31.506	36.127	39.591	42.025	46.438	50.161	60.150	65.861	69.062	75.945	319.72
11.0000	30.963	28.887	36.145	41.232	45.099	47.801	52.783	56.982	67.971	74.286	77.797	85.411	351.69
12.0000	35.370	32.956	41.048	46.614	50.898	53.876	59.453	64.134	76.163	83.088	86.918	95.306	383.66

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.029	0.075	0.103	0.108	0.119	0.180	0.296	0.433	0.667	0.084	0.067	0.080	0.3996
0.0160	0.037	0.093	0.129	0.136	0.149	0.224	0.366	0.530	0.813	0.105	0.084	0.101	0.5116
0.0200	0.045	0.114	0.158	0.166	0.182	0.272	0.440	0.633	0.964	0.128	0.102	0.124	0.6394
0.0250	0.054	0.139	0.192	0.202	0.222	0.327	0.525	0.749	1.129	0.155	0.123	0.152	0.7993
0.0320	0.067	0.173	0.237	0.249	0.274	0.398	0.632	0.892	1.329	0.189	0.150	0.189	1.0231
0.0400	0.081	0.210	0.286	0.300	0.329	0.470	0.740	1.034	1.528	0.226	0.179	0.228	1.2789
0.0500	0.096	0.255	0.343	0.359	0.392	0.550	0.859	1.187	1.740	0.267	0.211	0.273	1.5986
0.0600	0.111	0.298	0.396	0.414	0.450	0.621	0.963	1.320	1.920	0.305	0.241	0.315	1.9183
0.0700	0.124	0.338	0.445	0.464	0.503	0.685	1.056	1.438	2.079	0.340	0.269	0.354	2.2380
0.0800	0.137	0.375	0.489	0.510	0.551	0.743	1.140	1.543	2.222	0.373	0.294	0.389	2.5578
0.0900	0.148	0.409	0.531	0.552	0.596	0.796	1.217	1.640	2.351	0.403	0.318	0.422	2.8775
0.1000	0.159	0.441	0.569	0.591	0.637	0.845	1.288	1.728	2.470	0.431	0.340	0.452	3.1972
0.1250	0.182	0.511	0.653	0.678	0.728	0.953	1.443	1.923	2.732	0.494	0.390	0.519	3.9965
0.1600	0.209	0.591	0.750	0.779	0.834	1.079	1.627	2.154	3.042	0.570	0.450	0.596	5.1155
0.2000	0.234	0.667	0.842	0.875	0.935	1.202	1.806	2.379	3.346	0.645	0.509	0.669	6.3944
0.2500	0.260	0.747	0.941	0.977	1.043	1.338	2.007	2.634	3.688	0.728	0.574	0.747	7.9930
0.3200	0.292	0.843	1.059	1.100	1.177	1.510	2.264	2.962	4.134	0.832	0.656	0.840	10.231
0.4000	0.324	0.940	1.179	1.226	1.315	1.693	2.539	3.315	4.619	0.941	0.741	0.935	12.789
0.5000	0.359	1.048	1.317	1.371	1.477	1.911	2.868	3.738	5.199	1.067	0.840	1.043	15.986
0.6000	0.393	1.150	1.450	1.511	1.632	2.123	3.189	4.149	5.763	1.188	0.935	1.147	19.183
0.7000	0.427	1.248	1.582	1.650	1.788	2.336	3.509	4.559	6.320	1.309	1.029	1.250	22.380
0.8000	0.461	1.346	1.717	1.791	1.946	2.552	3.830	4.971	6.877	1.430	1.123	1.354	25.578
0.9000	0.496	1.446	1.855	1.936	2.109	2.774	4.156	5.387	7.436	1.553	1.219	1.462	28.775
1.0000	0.533	1.548	1.997	2.086	2.277	3.001	4.488	5.805	7.998	1.679	1.317	1.573	31.972
1.2500	0.629	1.810	2.365	2.473	2.712	3.585	5.327	6.851	9.396	2.005	1.573	1.864	39.965
1.6000	0.779	2.202	2.912	3.045	3.353	4.432	6.521	8.325	11.322	2.491	1.959	2.299	51.155
2.0000	0.974	2.688	3.576	3.741	4.126	5.437	7.908	10.022	13.499	3.092	2.443	2.840	63.944
2.5000	1.255	3.357	4.465	4.675	5.148	6.741	9.679	12.163	16.205	3.907	3.110	3.583	79.930
3.2000	1.716	4.413	5.822	6.098	6.686	8.662	12.235	15.234	20.050	5.165	4.158	4.738	102.31
4.0000	2.335	5.794	7.537	7.891	8.604	11.018	15.320	18.919	24.626	6.765	5.508	6.219	127.89
5.0000	3.234	7.776	9.932	10.383	11.252	14.233	19.484	23.857	30.684	9.003	7.413	8.300	159.86
6.0000	4.256	10.025	12.599	13.155	14.185	17.761	24.009	29.197	37.179	11.497	9.547	10.630	191.83
7.0000	5.394	12.529	15.528	16.197	17.400	21.597	28.904	34.944	44.145	14.240	11.900	13.194	223.80
8.0000	6.640	15.279	18.710	19.495	20.890	25.741	34.172	41.103	51.578	17.222	14.464	15.982	255.78
9.0000	7.992	18.261	22.138	23.047	24.648	30.190	39.821	47.684	59.482	20.440	17.236	18.989	287.75
10.0000	9.448	21.457	25.805	26.845	28.662	34.937	45.837	54.684	67.857	23.890	20.212	22.211	319.72
11.0000	11.004	24.859	29.700	30.878	32.925	39.979	52.208	62.093	76.708	27.564	23.386	25.640	351.69
12.0000	12.661	28.463	33.817	35.142	37.432	45.308	58.925	69.900	86.030	31.457	26.753	29.269	383.66

$^{35}_{17}$Cl IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=35 MEV
0.0125	5.049	4.177	3.060	2.035	1.652	1.499	1.389	1.285	0.817	0.699	0.643	0.551	0.4371
0.0160	5.712	4.726	3.462	2.302	1.869	1.696	1.572	1.454	0.924	0.791	0.727	0.623	0.5595
0.0200	6.386	5.283	3.871	2.574	2.090	1.897	1.757	1.626	1.033	0.884	0.813	0.697	0.6994
0.0250	7.140	5.907	4.327	2.878	2.337	2.120	1.965	1.818	1.155	0.989	0.911	0.779	0.8742
0.0320	8.068	6.688	4.896	3.256	2.649	2.409	2.223	2.056	1.307	1.121	1.033	0.886	1.1190
0.0400	8.999	7.494	5.474	3.651	2.978	2.715	2.502	2.315	1.472	1.267	1.166	1.002	1.3988
0.0500	10.024	8.403	6.120	4.100	3.360	3.060	2.821	2.613	1.658	1.441	1.328	1.141	1.7484
0.0600	10.941	9.258	6.704	4.518	3.714	3.372	3.117	2.889	1.850	1.609	1.485	1.277	2.0981
0.0700	11.767	10.065	7.241	4.909	4.055	3.678	3.403	3.157	2.028	1.774	1.644	1.412	2.4478
0.0800	12.525	10.853	7.741	5.287	4.374	3.963	3.662	3.406	2.206	1.935	1.788	1.540	2.7975
0.0900	13.244	11.624	8.221	5.656	4.686	4.258	3.921	3.650	2.392	2.092	1.940	1.673	3.1472
0.1000	13.915	12.372	8.670	6.008	4.994	4.526	4.162	3.893	2.566	2.246	2.081	1.795	3.4969
0.1250	15.378	14.188	9.672	6.809	5.687	5.155	4.739	4.439	2.974	2.602	2.432	2.104	4.3711
0.1600	16.931	16.456	10.791	7.726	6.496	5.892	5.406	5.072	3.453	3.032	2.843	2.482	5.5950
0.2000	18.135	18.405	11.715	8.517	7.205	6.525	5.987	5.612	3.889	3.433	3.222	2.812	6.9938
0.2500	19.146	20.140	12.572	9.290	7.895	7.166	6.562	6.147	4.337	3.834	3.595	3.143	8.7422
0.3200	20.162	21.905	13.513	10.175	8.689	7.932	7.230	6.757	4.838	4.297	4.034	3.547	11.190
0.4000	21.044	23.361	14.394	10.968	9.442	8.636	7.873	7.355	5.354	4.764	4.476	3.930	13.988
0.5000	21.903	24.614	15.317	11.840	10.262	9.420	8.578	7.995	5.912	5.269	4.955	4.365	17.484
0.6000	22.377	25.202	15.961	12.497	10.885	10.023	9.098	8.475	6.336	5.666	5.339	4.740	20.981
0.7000	22.641	25.416	16.419	12.971	11.345	10.459	9.473	8.833	6.666	5.960	5.632	4.991	24.478
0.8000	22.724	25.334	16.733	13.336	11.696	10.826	9.789	9.120	6.927	6.225	5.873	5.221	27.975
0.9000	22.728	25.116	16.936	13.583	11.974	11.110	10.026	9.332	7.164	6.436	6.080	5.420	31.472
1.0000	22.627	24.775	17.051	13.794	12.174	11.305	10.214	9.497	7.332	6.599	6.241	5.576	34.969
1.2500	22.134	23.704	17.066	13.994	12.458	11.605	10.461	9.710	7.628	6.877	6.502	5.819	43.711
1.6000	21.142	22.161	16.700	13.944	12.458	11.640	10.488	9.686	7.765	7.031	6.647	5.962	55.950
2.0000	19.873	20.739	16.040	13.585	12.206	11.452	10.265	9.511	7.699	7.025	6.640	5.983	69.938
2.5000	18.339	19.216	15.119	12.987	11.747	11.037	9.872	9.162	7.529	6.849	6.501	5.896	87.422
3.2000	16.511	17.441	13.886	12.081	10.998	10.345	9.276	8.582	7.165	6.554	6.221	5.652	111.90
4.0000	14.819	15.781	12.666	11.133	10.196	9.601	8.651	7.979	6.751	6.181	5.890	5.358	139.88
5.0000	13.173	14.121	11.416	10.114	9.315	8.790	7.922	7.329	6.279	5.731	5.491	5.011	174.84
6.0000	11.909	12.804	10.410	9.286	8.567	8.120	7.329	6.777	5.809	5.361	5.132	4.716	209.81
7.0000	10.873	11.746	9.588	8.591	7.939	7.546	6.827	6.319	5.465	5.024	4.823	4.439	244.78
8.0000	10.036	10.864	8.905	8.014	7.418	7.053	6.411	5.922	5.147	4.746	4.559	4.203	279.75
9.0000	9.351	10.117	8.327	7.519	6.970	6.637	6.037	5.587	4.871	4.497	4.322	3.997	314.72
10.0000	8.756	9.477	7.832	7.104	6.579	6.273	5.709	5.302	4.621	4.284	4.127	3.814	349.69
11.0000	8.246	8.935	7.402	6.736	6.248	5.959	5.426	5.056	4.412	4.101	3.960	3.649	384.66
12.0000	7.806	8.452	7.026	6.407	5.951	5.684	5.178	4.834	4.222	3.934	3.794	3.499	419.63

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	11.475	4.896	3.244	3.048	2.708	1.787	1.095	0.777	0.513	4.103	5.220	3.984	0.4371
0.0160	12.740	5.373	3.611	3.396	3.019	2.039	1.264	0.900	0.598	4.615	5.871	4.435	0.5595
0.0200	13.857	5.690	3.936	3.708	3.317	2.303	1.436	1.045	0.699	5.117	6.506	4.834	0.6994
0.0250	15.059	5.976	4.293	4.046	3.661	2.627	1.679	1.225	0.887	5.669	7.214	5.271	0.8742
0.0320	16.695	6.335	4.695	4.470	4.083	3.060	1.988	1.498	1.043	6.365	8.117	5.826	1.1190
0.0400	18.337	6.667	5.107	4.915	4.527	3.536	2.343	1.795	1.275	7.089	9.043	6.404	1.3988
0.0500	20.257	7.124	5.624	5.471	5.092	4.106	2.766	2.154	1.561	7.919	10.098	7.111	1.7484
0.0600	22.391	7.663	6.215	6.007	5.678	4.673	3.178	2.501	1.837	8.722	11.135	7.830	2.0981
0.0700	24.547	8.313	6.807	6.611	6.271	5.228	3.563	2.831	2.093	9.515	12.136	8.602	2.4478
0.0800	26.862	9.018	7.439	7.230	6.882	5.783	3.963	3.158	2.346	10.311	13.137	9.413	2.7975
0.0900	29.184	9.791	8.098	7.892	7.514	6.338	4.357	3.486	2.581	11.115	14.132	10.260	3.1472
0.1000	31.732	10.647	8.826	8.549	8.132	6.893	4.760	3.789	2.809	11.904	15.138	11.124	3.4969
0.1250	38.397	12.815	10.591	10.204	9.749	8.231	5.668	4.517	3.356	13.869	17.651	13.337	4.3711
0.1600	47.804	15.938	13.079	12.604	11.956	9.960	6.831	5.439	4.036	16.478	20.934	16.510	5.5950
0.2000	57.522	19.096	15.640	15.019	14.199	11.540	7.849	6.233	4.604	18.909	23.993	19.740	6.9938
0.2500	68.138	22.553	18.292	17.613	16.444	12.999	8.787	6.889	5.066	21.296	26.991	23.232	8.7422
0.3200	80.268	26.202	21.310	20.337	18.608	14.256	9.513	7.419	5.419	23.810	30.242	26.999	11.190
0.4000	89.817	29.651	23.548	22.382	20.266	15.128	10.004	7.787	5.671	25.808	32.861	29.881	13.988
0.5000	97.722	32.472	25.227	24.002	21.474	15.792	10.416	8.133	5.928	27.463	35.061	32.196	17.484
0.6000	101.352	33.997	25.729	24.452	21.851	15.977	10.598	8.268	6.049	28.123	36.088	32.991	20.981
0.7000	100.810	34.643	25.482	24.217	21.672	15.827	10.590	8.242	6.091	28.158	36.186	32.722	24.478
0.8000	98.223	34.470	24.916	23.761	21.234	15.528	10.508	8.199	6.091	27.844	35.742	32.027	27.975
0.9000	94.841	33.804	24.218	23.084	20.526	15.141	10.331	8.163	6.063	27.352	35.074	31.061	31.472
1.0000	91.905	33.232	23.718	22.507	20.052	14.851	10.231	8.150	6.053	26.821	34.358	30.214	34.969
1.2500	84.817	31.759	22.612	21.588	19.182	14.386	10.103	8.157	6.161	25.547	32.442	28.619	43.711
1.6000	75.484	29.559	21.343	20.407	18.270	13.944	10.003	8.133	6.296	23.797	29.776	26.520	55.950
2.0000	66.404	27.219	20.178	19.215	17.387	13.505	9.864	8.100	6.368	22.135	27.267	24.460	69.938
2.5000	57.148	24.568	18.762	17.855	16.479	13.032	9.676	8.058	6.410	20.350	24.628	22.224	87.422
3.2000	48.602	21.593	17.122	16.344	15.178	12.289	9.346	7.776	6.235	18.372	21.899	19.927	111.90
4.0000	41.796	18.897	15.452	14.819	13.932	11.399	8.739	7.359	5.953	16.541	19.492	17.820	139.88
5.0000	36.301	16.495	13.801	13.288	12.523	10.377	8.071	6.815	5.594	14.772	17.294	15.845	174.84
6.0000	32.375	14.720	12.513	12.034	11.399	9.515	7.433	6.319	5.205	13.366	15.605	14.293	209.81
7.0000	29.436	13.366	11.487	11.074	10.470	8.802	6.923	5.906	4.880	12.263	14.277	13.117	244.78
8.0000	27.070	12.244	10.641	10.267	9.697	8.183	6.438	5.521	4.586	11.345	13.179	12.137	279.75
9.0000	25.064	11.391	9.917	9.576	9.060	7.661	6.037	5.188	4.330	10.559	12.249	11.300	314.72
10.0000	23.417	10.691	9.328	9.007	8.521	7.205	5.694	4.895	4.096	9.900	11.466	10.604	349.69
11.0000	21.985	10.082	8.816	8.513	8.054	6.810	5.396	4.641	3.886	9.334	10.800	10.008	384.66
12.0000	20.726	9.548	8.368	8.080	7.644	6.464	5.136	4.419	3.703	8.838	10.208	9.485	419.63

$^{35}_{17}Cl$ IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=35
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.084	0.090	0.122	0.177	0.202	0.244	0.268	0.300	0.453	0.535	0.583	0.703	0.4371
0.0160	0.104	0.112	0.151	0.219	0.251	0.300	0.328	0.365	0.553	0.652	0.710	0.853	0.5595
0.0200	0.124	0.136	0.183	0.264	0.304	0.360	0.393	0.436	0.660	0.776	0.845	1.012	0.6994
0.0250	0.147	0.163	0.219	0.317	0.366	0.431	0.469	0.518	0.785	0.922	1.002	1.197	0.8742
0.0320	0.177	0.198	0.266	0.386	0.448	0.523	0.567	0.625	0.948	1.111	1.206	1.437	1.1190
0.0400	0.208	0.234	0.315	0.458	0.534	0.619	0.671	0.737	1.119	1.309	1.421	1.687	1.3988
0.0500	0.243	0.275	0.371	0.540	0.632	0.729	0.789	0.865	1.316	1.535	1.666	1.972	1.7484
0.0600	0.275	0.313	0.422	0.616	0.722	0.829	0.897	0.981	1.495	1.741	1.888	2.231	2.0981
0.0700	0.305	0.348	0.470	0.686	0.806	0.922	0.997	1.089	1.661	1.931	2.093	2.469	2.4478
0.0800	0.333	0.380	0.515	0.751	0.884	1.009	1.091	1.190	1.815	2.106	2.281	2.688	2.7975
0.0900	0.360	0.411	0.557	0.813	0.957	1.090	1.179	1.284	1.958	2.269	2.457	2.892	3.1472
0.1000	0.385	0.439	0.598	0.870	1.026	1.167	1.261	1.373	2.092	2.421	2.622	3.083	3.4969
0.1250	0.445	0.504	0.691	1.003	1.184	1.342	1.451	1.575	2.394	2.767	2.992	3.511	4.3711
0.1600	0.521	0.583	0.808	1.168	1.380	1.558	1.686	1.826	2.763	3.187	3.441	4.028	5.5950
0.2000	0.600	0.662	0.930	1.337	1.579	1.779	1.927	2.082	3.135	3.610	3.891	4.543	6.9938
0.2500	0.694	0.753	1.073	1.531	1.807	2.031	2.201	2.375	3.553	4.082	4.394	5.120	8.7422
0.3200	0.818	0.869	1.259	1.780	2.099	2.352	2.552	2.750	4.080	4.676	5.027	5.841	11.190
0.4000	0.954	0.992	1.458	2.042	2.405	2.687	2.919	3.143	4.624	5.288	5.678	6.582	13.988
0.5000	1.117	1.138	1.693	2.349	2.760	3.074	3.344	3.599	5.244	5.985	6.420	7.426	17.484
0.6000	1.274	1.278	1.916	2.636	3.090	3.434	3.740	4.023	5.815	6.624	7.099	8.194	20.981
0.7000	1.430	1.416	2.132	2.911	3.405	3.775	4.116	4.427	6.353	7.225	7.736	8.912	24.478
0.8000	1.584	1.554	2.343	3.176	3.708	4.103	4.479	4.816	6.867	7.799	8.344	9.597	27.975
0.9000	1.737	1.693	2.551	3.436	4.003	4.422	4.832	5.195	7.363	8.351	8.929	10.254	31.472
1.0000	1.892	1.833	2.756	3.691	4.293	4.734	5.177	5.567	7.845	8.888	9.496	10.889	34.969
1.2500	2.282	2.193	3.268	4.320	5.002	5.496	6.022	6.475	9.013	10.183	10.866	12.422	43.711
1.6000	2.847	2.726	3.992	5.194	5.982	6.547	7.188	7.735	10.600	11.940	12.725	14.496	55.950
2.0000	3.528	3.378	4.846	6.210	7.116	7.758	8.535	9.191	12.407	13.929	14.828	16.836	69.938
2.5000	4.444	4.254	5.968	7.526	8.575	9.312	10.271	11.064	14.703	16.448	17.488	19.778	87.422
3.2000	5.852	5.592	7.659	9.480	10.730	11.604	12.830	13.825	18.036	20.102	21.338	24.019	111.90
4.0000	7.642	7.280	9.770	11.895	13.374	14.413	15.955	17.209	22.061	24.500	25.962	29.106	139.88
5.0000	10.149	9.626	12.683	15.195	16.967	18.225	20.185	21.787	27.439	30.383	32.118	35.862	174.84
6.0000	12.944	12.230	15.895	18.808	20.886	22.369	24.779	26.755	33.236	36.699	38.713	43.062	209.81
7.0000	16.021	15.084	19.398	22.727	25.130	26.841	29.728	32.104	39.447	43.443	45.748	50.712	244.78
8.0000	19.371	18.183	23.186	26.945	29.691	31.638	35.018	37.825	46.046	50.609	53.211	58.813	279.75
9.0000	22.984	21.521	27.250	31.452	34.558	36.753	40.642	43.909	53.034	58.183	61.093	67.350	314.72
10.0000	26.851	25.094	31.583	36.240	39.725	42.175	46.602	50.337	60.408	66.155	69.377	76.311	349.69
11.0000	30.968	28.896	36.178	41.298	45.182	47.898	52.888	57.094	68.157	74.501	78.030	85.688	384.66
12.0000	35.329	32.922	41.029	46.623	50.919	53.909	59.488	64.170	76.262	83.210	87.056	95.478	419.63

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.030	0.077	0.105	0.111	0.121	0.182	0.299	0.435	0.667	0.087	0.069	0.082	0.4371
0.0160	0.038	0.096	0.132	0.139	0.153	0.228	0.370	0.535	0.816	0.109	0.086	0.104	0.5595
0.0200	0.046	0.118	0.162	0.170	0.187	0.278	0.447	0.640	0.971	0.132	0.105	0.128	0.6994
0.0250	0.056	0.144	0.198	0.208	0.228	0.335	0.535	0.760	1.141	0.160	0.127	0.157	0.8742
0.0320	0.069	0.179	0.245	0.257	0.282	0.408	0.646	0.909	1.348	0.196	0.155	0.195	1.1190
0.0400	0.084	0.218	0.296	0.310	0.340	0.484	0.758	1.056	1.555	0.234	0.185	0.236	1.3988
0.0500	0.100	0.265	0.356	0.372	0.406	0.567	0.882	1.215	1.774	0.277	0.219	0.283	1.7484
0.0600	0.115	0.310	0.411	0.429	0.466	0.642	0.990	1.354	1.963	0.317	0.251	0.327	2.0981
0.0700	0.129	0.352	0.462	0.481	0.521	0.708	1.088	1.477	2.129	0.354	0.279	0.367	2.4478
0.0800	0.142	0.391	0.508	0.529	0.572	0.769	1.176	1.587	2.277	0.388	0.306	0.405	2.7975
0.0900	0.154	0.427	0.552	0.574	0.619	0.825	1.256	1.688	2.413	0.419	0.331	0.439	3.1472
0.1000	0.166	0.460	0.592	0.615	0.662	0.876	1.330	1.781	2.537	0.449	0.354	0.470	3.4969
0.1250	0.190	0.533	0.680	0.706	0.757	0.989	1.493	1.986	2.812	0.515	0.407	0.540	4.3711
0.1600	0.218	0.617	0.782	0.812	0.868	1.122	1.686	2.227	3.136	0.595	0.469	0.621	5.5950
0.2000	0.244	0.696	0.878	0.912	0.974	1.250	1.874	2.463	3.455	0.673	0.531	0.698	6.9938
0.2500	0.272	0.781	0.981	1.018	1.087	1.393	2.082	2.726	3.811	0.760	0.600	0.778	8.7422
0.3200	0.305	0.881	1.104	1.148	1.227	1.572	2.349	3.068	4.278	0.869	0.685	0.876	11.190
0.4000	0.338	0.981	1.229	1.279	1.371	1.763	2.635	3.436	4.782	0.981	0.774	0.974	13.988
0.5000	0.375	1.094	1.373	1.429	1.538	1.988	2.977	3.875	5.384	1.113	0.877	1.087	17.484
0.6000	0.410	1.199	1.510	1.573	1.700	2.208	3.310	4.301	5.968	1.238	0.975	1.194	20.981
0.7000	0.445	1.301	1.646	1.717	1.860	2.428	3.640	4.724	6.543	1.363	1.072	1.301	24.478
0.8000	0.480	1.402	1.785	1.863	2.023	2.651	3.971	5.149	7.117	1.487	1.169	1.409	27.975
0.9000	0.516	1.504	1.927	2.012	2.190	2.879	4.306	5.576	7.692	1.614	1.267	1.519	31.472
1.0000	0.553	1.609	2.073	2.165	2.363	3.112	4.646	6.005	8.269	1.743	1.368	1.633	34.969
1.2500	0.652	1.877	2.450	2.561	2.808	3.709	5.505	7.075	9.698	2.076	1.629	1.930	43.711
1.6000	0.805	2.276	3.006	3.143	3.460	4.572	6.720	8.575	11.660	2.572	2.023	2.374	55.950
2.0000	1.002	2.769	3.679	3.849	4.245	5.590	8.127	10.297	13.867	3.181	2.513	2.923	69.938
2.5000	1.286	3.445	4.578	4.793	5.277	6.908	9.916	12.460	16.602	4.005	3.188	3.672	87.422
3.2000	1.751	4.508	5.944	6.227	6.826	8.842	12.490	15.552	20.473	5.271	4.243	4.836	111.90
4.0000	2.372	5.895	7.666	8.026	8.751	11.208	15.588	19.253	25.067	6.878	5.598	6.322	139.88
5.0000	3.272	7.879	10.064	10.522	11.403	14.428	19.757	24.197	31.134	9.119	7.506	8.407	174.84
6.0000	4.293	10.126	12.729	13.291	14.333	17.951	24.277	29.531	37.622	11.610	9.637	10.734	209.81
7.0000	5.427	12.622	15.649	16.323	17.538	21.776	29.157	35.261	44.566	14.345	11.983	13.290	244.78
8.0000	6.667	15.358	18.814	19.605	21.011	25.900	34.399	41.390	51.964	17.312	14.534	16.064	279.75
9.0000	8.011	18.322	22.221	23.135	24.744	30.320	40.012	47.928	59.816	20.509	17.289	19.052	314.72
10.0000	9.455	21.492	25.859	26.902	28.727	35.029	45.980	54.872	68.124	23.932	20.241	22.249	349.69
11.0000	10.997	24.862	29.717	30.898	32.950	40.024	52.292	62.212	76.893	27.572	23.385	25.645	384.66
12.0000	12.636	28.428	33.790	35.116	37.409	45.297	58.937	69.936	86.116	31.423	26.717	29.236	419.63

$^{40}_{18}Ar$ IONS

ENERGY PER MASS UNIT	ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)												ENERGY FOR A=40
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	5.234	4.330	3.172	2.110	1.713	1.554	1.440	1.332	0.847	0.725	0.666	0.571	0.4995
0.0160	5.922	4.899	3.589	2.387	1.938	1.759	1.629	1.507	0.958	0.820	0.754	0.646	0.6394
0.0200	6.621	5.477	4.013	2.668	2.167	1.966	1.822	1.685	1.071	0.917	0.843	0.722	0.7992
0.0250	7.402	6.124	4.486	2.983	2.423	2.198	2.037	1.884	1.198	1.025	0.944	0.808	0.9990
0.0320	8.365	6.933	5.076	3.375	2.746	2.497	2.304	2.132	1.355	1.162	1.071	0.919	1.2788
0.0400	9.329	7.769	5.675	3.785	3.087	2.815	2.593	2.400	1.526	1.314	1.209	1.038	1.5985
0.0500	10.392	8.711	6.344	4.251	3.483	3.172	2.925	2.709	1.719	1.494	1.377	1.183	1.9981
0.0600	11.342	9.598	6.950	4.684	3.850	3.496	3.232	2.995	1.918	1.668	1.539	1.324	2.3977
0.0700	12.199	10.435	7.507	5.090	4.204	3.813	3.528	3.273	2.102	1.839	1.704	1.464	2.7973
0.0800	12.985	11.251	8.025	5.481	4.534	4.109	3.796	3.531	2.287	2.006	1.854	1.597	3.1970
0.0900	13.735	12.055	8.526	5.866	4.860	4.416	4.067	3.785	2.481	2.170	2.012	1.735	3.5966
0.1000	14.437	12.836	8.995	6.234	5.181	4.695	4.318	4.039	2.663	2.330	2.159	1.862	3.9962
0.1250	15.971	14.735	10.044	7.071	5.906	5.354	4.922	4.610	3.089	2.702	2.526	2.185	4.9952
0.1600	17.608	17.115	11.223	8.035	6.756	6.128	5.623	5.275	3.591	3.154	2.957	2.581	6.3939
0.2000	18.888	19.169	12.202	8.871	7.504	6.796	6.235	5.845	4.051	3.575	3.355	2.928	7.9924
0.2500	19.980	21.016	13.119	9.695	8.239	7.478	6.848	6.415	4.526	4.001	3.752	3.280	9.9905
0.3200	21.094	22.918	14.138	10.646	9.091	8.299	7.564	7.069	5.062	4.496	4.220	3.711	12.788
0.4000	22.075	24.506	15.099	11.505	9.905	9.059	8.259	7.716	5.617	4.998	4.696	4.122	15.985
0.5000	23.039	25.891	16.111	12.454	10.794	9.908	9.022	8.410	6.219	5.542	5.212	4.592	19.981
0.6000	23.584	26.561	16.821	13.171	11.472	10.564	9.588	8.932	6.678	5.972	5.627	4.996	23.977
0.7000	23.909	26.839	17.338	13.697	11.981	11.044	10.004	9.328	7.039	6.294	5.947	5.271	27.973
0.8000	24.043	26.804	17.704	14.110	12.375	11.455	10.357	9.649	7.330	6.586	6.214	5.524	31.970
0.9000	24.092	26.623	17.952	14.398	12.692	11.777	10.628	9.892	7.594	6.822	6.445	5.745	35.966
1.0000	24.026	26.307	18.105	14.647	12.927	12.004	10.845	10.085	7.785	7.007	6.627	5.920	39.962
1.2500	23.593	25.267	18.190	14.916	13.279	12.369	11.151	10.350	8.131	7.331	6.931	6.203	49.952
1.6000	22.630	23.721	17.876	14.926	13.335	12.459	11.226	10.368	8.312	7.526	7.114	6.382	63.939
2.0000	21.347	22.278	17.230	14.593	13.112	12.302	11.027	10.217	8.270	7.547	7.133	6.427	79.924
2.5000	19.763	20.708	16.293	13.995	12.659	11.894	10.639	9.873	8.114	7.381	7.006	6.354	99.905
3.2000	17.850	18.856	15.012	13.061	11.890	11.184	10.028	9.278	7.746	7.086	6.726	6.110	127.88
4.0000	16.063	17.107	13.729	12.068	11.052	10.407	9.377	8.649	7.318	6.700	6.384	5.807	159.85
5.0000	14.317	15.347	12.406	10.992	10.124	9.553	8.610	7.965	6.823	6.228	5.967	5.446	199.81
6.0000	12.970	13.945	11.338	10.113	9.331	8.843	7.982	7.381	6.326	5.839	5.589	5.136	239.77
7.0000	11.864	12.816	10.462	9.374	8.662	8.233	7.449	6.894	5.963	5.482	5.262	4.844	279.73
8.0000	10.968	11.873	9.732	8.759	8.107	7.708	7.007	6.472	5.625	5.187	4.983	4.593	319.70
9.0000	10.235	11.073	9.114	8.230	7.628	7.264	6.608	6.115	5.332	4.922	4.730	4.375	359.66
10.0000	9.597	10.386	8.584	7.785	7.210	6.876	6.257	5.811	5.064	4.695	4.524	4.180	399.62
11.0000	9.049	9.804	8.123	7.392	6.856	6.539	5.954	5.548	4.841	4.500	4.346	4.005	439.58
12.0000	8.575	9.286	7.719	7.039	6.538	6.244	5.689	5.310	4.639	4.322	4.168	3.844	479.54

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	11.896	5.076	3.363	3.160	2.807	1.853	1.136	0.806	0.532	4.254	5.412	4.130	0.4995
0.0160	13.207	5.570	3.743	3.521	3.130	2.114	1.310	0.933	0.619	4.784	6.087	4.597	0.6394
0.0200	14.365	5.899	4.081	3.844	3.439	2.387	1.489	1.083	0.725	5.305	6.745	5.012	0.7992
0.0250	15.612	6.195	4.450	4.195	3.795	2.723	1.741	1.270	0.920	5.877	7.479	5.464	0.9990
0.0320	17.308	6.568	4.867	4.634	4.233	3.172	2.061	1.553	1.081	6.598	8.415	6.040	1.2788
0.0400	19.010	6.912	5.294	5.096	4.693	3.666	2.429	1.861	1.322	7.349	9.375	6.639	1.5985
0.0500	21.000	7.385	5.831	5.672	5.279	4.257	2.868	2.233	1.618	8.210	10.468	7.372	1.9981
0.0600	23.213	7.944	6.443	6.227	5.887	4.844	3.294	2.592	1.904	9.042	11.544	8.118	2.3977
0.0700	25.448	8.618	7.056	6.854	6.501	5.420	3.693	2.935	2.169	9.864	12.582	8.918	2.7973
0.0800	27.847	9.349	7.712	7.496	7.134	5.995	4.109	3.274	2.432	10.690	13.619	9.759	3.1970
0.0900	30.266	10.154	8.398	8.185	7.793	6.573	4.519	3.615	2.677	11.527	14.656	10.640	3.5966
0.1000	32.922	11.046	9.157	8.869	8.437	7.151	4.938	3.931	2.914	12.350	15.705	11.541	3.9962
0.1250	39.877	13.309	10.999	10.597	10.125	8.548	5.886	4.691	3.485	14.404	18.331	13.851	4.9952
0.1600	49.716	16.576	13.602	13.108	12.435	10.359	7.104	5.656	4.197	17.137	21.772	17.171	6.3939
0.2000	59.910	19.889	16.289	15.642	14.788	12.019	8.175	6.491	4.795	19.693	24.989	20.560	7.9924
0.2500	71.103	23.535	19.088	18.379	17.159	13.565	9.170	7.189	5.287	22.223	28.166	24.243	9.9905
0.3200	83.982	27.414	22.296	21.278	19.469	14.916	9.953	7.762	5.669	24.912	31.642	28.248	12.788
0.4000	94.218	31.104	24.702	23.479	21.259	15.869	10.494	8.169	5.949	27.072	34.471	31.345	15.985
0.5000	102.789	34.156	26.535	25.246	22.588	16.611	10.956	8.555	6.235	28.887	36.878	33.866	19.981
0.6000	105.816	35.830	27.116	25.771	23.029	16.838	11.169	8.714	6.375	29.639	38.033	34.770	23.977
0.7000	106.456	36.583	26.909	25.574	22.886	16.714	11.183	8.704	6.432	29.735	38.213	34.555	27.973
0.8000	103.925	36.471	26.362	25.140	22.467	16.430	11.118	8.675	6.444	29.460	37.817	33.886	31.970
0.9000	100.532	35.832	25.671	24.469	21.758	16.049	10.951	8.653	6.427	28.993	37.179	32.924	35.966
1.0000	97.588	35.287	25.185	23.899	21.292	15.770	10.863	8.654	6.427	28.480	36.482	32.083	39.962
1.2500	90.406	33.852	24.102	23.011	20.446	15.335	10.769	8.695	6.567	27.231	34.580	30.505	49.952
1.6000	80.797	31.640	22.845	21.844	19.556	14.926	10.707	8.705	6.739	25.473	31.872	28.386	63.939
2.0000	71.331	29.239	21.675	20.641	18.677	14.507	10.596	8.701	6.840	23.777	29.290	26.275	79.924
2.5000	61.586	26.475	20.219	19.242	17.759	14.044	10.427	8.684	6.908	21.930	26.541	23.950	99.905
3.2000	52.543	23.344	18.510	17.670	16.409	13.286	10.103	8.407	6.741	19.861	23.675	21.543	127.88
4.0000	45.307	20.484	16.750	16.063	15.102	12.356	9.473	7.977	6.453	17.930	21.129	19.317	159.85
5.0000	39.452	17.927	14.999	14.441	13.610	11.277	8.771	7.407	6.079	16.054	18.796	17.220	199.81
6.0000	35.260	16.031	13.628	13.106	12.415	10.363	8.095	6.882	5.669	14.558	16.995	15.567	239.77
7.0000	32.118	14.584	12.533	12.083	11.424	9.604	7.553	6.444	5.325	13.381	15.578	14.312	279.73
8.0000	29.585	13.381	11.630	11.221	10.598	8.944	7.036	6.034	5.012	12.398	14.403	13.265	319.70
9.0000	27.433	12.468	10.855	10.481	9.916	8.385	6.608	5.678	4.739	11.557	13.407	12.368	359.66
10.0000	25.665	11.717	10.223	9.871	9.339	7.897	6.240	5.365	4.489	10.850	12.566	11.622	399.62
11.0000	24.125	11.064	9.675	9.341	8.838	7.473	5.922	5.093	4.265	10.243	11.851	10.982	439.58
12.0000	22.770	10.490	9.193	8.876	8.398	7.101	5.642	4.855	4.068	9.710	11.215	10.420	479.54

$^{40}_{18}$Ar IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=40
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.091	0.097	0.130	0.187	0.212	0.256	0.281	0.313	0.470	0.554	0.603	0.727	0.4995
0.0160	0.112	0.121	0.162	0.233	0.265	0.316	0.345	0.384	0.577	0.679	0.738	0.887	0.6394
0.0200	0.134	0.147	0.196	0.282	0.322	0.382	0.415	0.460	0.692	0.812	0.883	1.057	0.7992
0.0250	0.160	0.176	0.236	0.339	0.389	0.459	0.498	0.549	0.827	0.969	1.052	1.256	0.9990
0.0320	0.193	0.215	0.287	0.414	0.478	0.559	0.605	0.665	1.003	1.173	1.272	1.514	1.2788
0.0400	0.227	0.254	0.341	0.493	0.572	0.664	0.717	0.787	1.189	1.388	1.505	1.785	1.5985
0.0500	0.265	0.300	0.402	0.583	0.679	0.783	0.847	0.926	1.403	1.634	1.771	2.095	1.9981
0.0600	0.301	0.341	0.459	0.666	0.778	0.893	0.965	1.054	1.599	1.859	2.014	2.377	2.3977
0.0700	0.334	0.379	0.511	0.743	0.870	0.995	1.075	1.172	1.780	2.066	2.237	2.636	2.7973
0.0800	0.365	0.415	0.560	0.814	0.956	1.091	1.177	1.283	1.948	2.257	2.444	2.876	3.1970
0.0900	0.394	0.448	0.607	0.882	1.036	1.180	1.273	1.386	2.105	2.436	2.636	3.099	3.5966
0.1000	0.422	0.480	0.651	0.945	1.112	1.264	1.364	1.484	2.252	2.603	2.816	3.308	3.9962
0.1250	0.487	0.551	0.753	1.091	1.285	1.456	1.573	1.706	2.584	2.982	3.222	3.778	4.9952
0.1600	0.571	0.637	0.882	1.272	1.499	1.693	1.830	1.981	2.988	3.443	3.714	4.344	6.3939
0.2000	0.658	0.724	1.016	1.457	1.719	1.935	2.094	2.262	3.396	3.905	4.207	4.908	7.9924
0.2500	0.761	0.823	1.172	1.670	1.968	2.211	2.394	2.582	3.853	4.422	4.758	5.539	9.9905
0.3200	0.897	0.950	1.376	1.942	2.287	2.562	2.778	2.992	4.429	5.071	5.449	6.327	12.788
0.4000	1.045	1.085	1.593	2.228	2.620	2.927	3.178	3.421	5.021	5.738	6.158	7.135	15.985
0.5000	1.222	1.243	1.849	2.562	3.006	3.349	3.641	3.916	5.691	6.490	6.958	8.044	19.981
0.6000	1.393	1.396	2.091	2.873	3.365	3.739	4.070	4.377	6.311	7.184	7.695	8.878	23.977
0.7000	1.561	1.545	2.325	3.171	3.706	4.109	4.478	4.814	6.893	7.835	8.386	9.656	27.973
0.8000	1.728	1.694	2.553	3.458	4.034	4.464	4.870	5.235	7.449	8.455	9.043	10.396	31.970
0.9000	1.893	1.844	2.777	3.738	4.352	4.807	5.251	5.644	7.984	9.051	9.674	11.105	35.966
1.0000	2.060	1.995	2.999	4.013	4.664	5.143	5.623	6.044	8.504	9.629	10.285	11.790	39.962
1.2500	2.478	2.381	3.548	4.688	5.425	5.962	6.530	7.020	9.758	11.021	11.757	13.436	49.952
1.6000	3.083	2.952	4.323	5.624	6.475	7.087	7.778	8.368	11.456	12.900	13.745	15.655	63.939
2.0000	3.809	3.646	5.233	6.706	7.682	8.377	9.213	9.920	13.382	15.019	15.987	18.148	79.924
2.5000	4.782	4.576	6.425	8.103	9.233	10.028	11.057	11.908	15.820	17.695	18.811	21.273	99.905
3.2000	6.272	5.993	8.214	10.173	11.513	12.454	13.765	14.831	19.348	21.563	22.887	25.762	127.88
4.0000	8.162	7.774	10.443	12.721	14.304	15.419	17.065	18.403	23.597	26.206	27.768	31.132	159.85
5.0000	10.801	10.244	13.509	16.196	18.087	19.432	21.518	23.223	29.259	32.399	34.250	38.245	199.81
6.0000	13.737	12.980	16.883	19.990	22.203	23.785	26.344	28.441	35.348	39.033	41.176	45.808	239.77
7.0000	16.962	15.972	20.556	24.099	26.653	28.472	31.531	34.048	41.859	46.102	48.551	53.827	279.73
8.0000	20.469	19.214	24.519	28.513	31.425	33.493	37.067	40.036	48.764	53.602	56.360	62.305	319.70
9.0000	24.243	22.702	28.766	33.223	36.510	38.837	42.944	46.392	56.066	61.516	64.597	71.224	359.66
10.0000	28.278	26.431	33.286	38.218	41.902	44.495	49.162	53.099	63.760	69.833	73.240	80.574	399.62
11.0000	32.568	30.393	38.074	43.488	47.588	50.458	55.712	60.140	71.835	78.531	82.257	90.345	439.58
12.0000	37.107	34.583	43.123	49.030	53.560	56.714	62.581	67.505	80.270	87.595	91.650	100.534	479.54
MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.033	0.083	0.113	0.118	0.129	0.193	0.312	0.451	0.687	0.093	0.074	0.089	0.4995
0.0160	0.041	0.104	0.142	0.149	0.163	0.242	0.388	0.557	0.844	0.117	0.093	0.112	0.6394
0.0200	0.050	0.128	0.175	0.183	0.201	0.296	0.471	0.670	1.010	0.143	0.114	0.138	0.7992
0.0250	0.061	0.156	0.213	0.224	0.245	0.358	0.566	0.800	1.192	0.173	0.138	0.170	0.9990
0.0320	0.076	0.195	0.265	0.278	0.304	0.438	0.687	0.961	1.415	0.213	0.169	0.211	1.2788
0.0400	0.091	0.238	0.321	0.336	0.367	0.520	0.809	1.121	1.639	0.254	0.202	0.256	1.5985
0.0500	0.109	0.289	0.386	0.404	0.440	0.612	0.944	1.295	1.879	0.302	0.239	0.308	1.9981
0.0600	0.126	0.338	0.447	0.466	0.506	0.693	1.063	1.446	2.084	0.345	0.273	0.356	2.3977
0.0700	0.141	0.384	0.502	0.523	0.566	0.767	1.169	1.581	2.266	0.386	0.305	0.400	2.7973
0.0800	0.156	0.427	0.554	0.576	0.622	0.834	1.266	1.702	2.429	0.423	0.334	0.441	3.1970
0.0900	0.169	0.467	0.602	0.625	0.673	0.895	1.355	1.813	2.577	0.458	0.362	0.479	3.5966
0.1000	0.181	0.503	0.646	0.671	0.721	0.951	1.436	1.915	2.714	0.490	0.387	0.514	3.9962
0.1250	0.208	0.584	0.742	0.771	0.826	1.075	1.615	2.140	3.015	0.563	0.445	0.591	4.9952
0.1600	0.239	0.676	0.854	0.887	0.948	1.221	1.826	2.404	3.371	0.651	0.514	0.679	6.3939
0.2000	0.267	0.763	0.960	0.997	1.064	1.362	2.032	2.663	3.720	0.737	0.581	0.763	7.9924
0.2500	0.298	0.854	1.072	1.113	1.188	1.517	2.260	2.952	4.110	0.831	0.656	0.852	9.9905
0.3200	0.334	0.964	1.208	1.255	1.341	1.713	2.552	3.326	4.620	0.950	0.750	0.959	12.788
0.4000	0.370	1.074	1.344	1.398	1.497	1.920	2.865	3.727	5.170	1.073	0.846	1.066	15.985
0.5000	0.410	1.196	1.500	1.561	1.680	2.166	3.237	4.204	5.826	1.216	0.958	1.188	19.981
0.6000	0.448	1.310	1.649	1.718	1.855	2.405	3.598	4.666	6.459	1.352	1.065	1.305	23.977
0.7000	0.486	1.421	1.796	1.873	2.029	2.643	3.955	5.125	7.082	1.487	1.169	1.420	27.973
0.8000	0.524	1.530	1.946	2.031	2.205	2.884	4.313	5.584	7.702	1.622	1.275	1.537	31.970
0.9000	0.563	1.641	2.100	2.192	2.385	3.130	4.675	6.045	8.323	1.758	1.381	1.656	35.966
1.0000	0.603	1.753	2.257	2.357	2.571	3.381	5.041	6.507	8.944	1.897	1.489	1.779	39.962
1.2500	0.709	2.041	2.662	2.782	3.049	4.022	5.964	7.657	10.480	2.255	1.770	2.098	49.952
1.6000	0.873	2.468	3.257	3.405	3.747	4.945	7.264	9.262	12.578	2.785	2.191	2.572	63.939
2.0000	1.083	2.993	3.974	4.157	4.583	6.030	8.763	11.096	14.930	3.434	2.714	3.157	79.924
2.5000	1.384	3.711	4.929	5.160	5.680	7.430	10.663	13.393	17.834	4.309	3.430	3.953	99.905
3.2000	1.876	4.837	6.375	6.677	7.319	9.478	13.388	16.667	21.933	5.650	4.547	5.186	127.88
4.0000	2.532	6.301	8.193	8.577	9.351	11.975	16.658	20.573	26.783	7.346	5.977	6.754	159.85
5.0000	3.479	8.389	10.718	11.204	12.143	15.365	21.047	25.778	33.170	9.705	7.986	8.949	199.81
6.0000	4.552	10.750	13.516	14.113	15.221	19.066	25.795	31.381	39.984	12.322	10.225	11.393	239.77
7.0000	5.741	13.366	16.577	17.292	18.580	23.075	30.910	37.388	47.264	15.188	12.683	14.073	279.73
8.0000	7.038	16.229	19.890	20.726	22.215	27.391	36.396	43.801	55.005	18.294	15.353	16.976	319.70
9.0000	8.442	19.326	23.449	24.414	26.116	32.009	42.261	50.633	63.210	21.635	18.231	20.098	359.66
10.0000	9.949	22.634	27.245	28.345	30.271	36.922	48.488	57.878	71.878	25.206	21.312	23.433	399.62
11.0000	11.556	26.146	31.265	32.509	34.672	42.127	55.065	65.526	81.016	28.998	24.588	26.972	439.58
12.0000	13.262	29.857	35.504	36.899	39.312	47.615	61.981	73.566	90.614	33.007	28.056	30.709	479.54

$^{39}_{19}K$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=39 MEV
0.0125	5.412	4.477	3.280	2.181	1.771	1.607	1.489	1.378	0.876	0.749	0.689	0.590	0.4870
0.0160	6.123	5.065	3.711	2.468	2.004	1.818	1.685	1.558	0.991	0.848	0.779	0.668	0.6234
0.0200	6.845	5.663	4.149	2.759	2.240	2.033	1.883	1.742	1.108	0.948	0.871	0.747	0.7793
0.0250	7.653	6.331	4.638	3.084	2.505	2.273	2.106	1.948	1.238	1.060	0.976	0.835	0.9741
0.0320	8.648	7.168	5.248	3.490	2.839	2.582	2.382	2.204	1.401	1.202	1.107	0.950	1.2468
0.0400	9.645	8.032	5.867	3.913	3.192	2.910	2.681	2.482	1.578	1.358	1.250	1.074	1.5586
0.0500	10.745	9.006	6.560	4.395	3.601	3.280	3.024	2.801	1.778	1.545	1.423	1.223	1.9482
0.0600	11.727	9.923	7.186	4.843	3.981	3.614	3.341	3.097	1.983	1.725	1.592	1.369	2.3378
0.0700	12.612	10.788	7.761	5.262	4.346	3.943	3.648	3.384	2.173	1.902	1.762	1.513	2.7275
0.0800	13.425	11.633	8.297	5.667	4.688	4.248	3.925	3.651	2.365	2.074	1.917	1.651	3.1171
0.0900	14.205	12.468	8.818	6.067	5.026	4.568	4.206	3.915	2.566	2.244	2.081	1.794	3.5068
0.1000	14.937	13.280	9.306	6.449	5.360	4.858	4.467	4.179	2.755	2.410	2.234	1.926	3.8964
0.1250	16.538	15.259	10.401	7.323	6.116	5.544	5.097	4.774	3.198	2.798	2.616	2.262	4.8705
0.1600	18.259	17.747	11.637	8.332	7.006	6.354	5.830	5.470	3.724	3.270	3.066	2.677	6.2342
0.2000	19.618	19.909	12.673	9.213	7.794	7.059	6.476	6.070	4.207	3.713	3.485	3.042	7.7928
0.2500	20.794	21.873	13.653	10.090	8.574	7.782	7.127	6.677	4.710	4.164	3.905	3.413	9.7410
0.3200	22.011	23.914	14.753	11.109	9.486	8.660	7.893	7.376	5.282	4.691	4.404	3.873	12.468
0.4000	23.091	25.634	15.794	12.035	10.361	9.477	8.640	8.071	5.875	5.228	4.912	4.312	15.586
0.5000	24.161	27.152	16.896	13.061	11.320	10.391	9.462	8.820	6.522	5.812	5.466	4.815	19.482
0.6000	24.775	27.903	17.671	13.837	12.052	11.098	10.073	9.383	7.015	6.273	5.911	5.248	23.378
0.7000	25.160	28.244	18.245	14.414	12.608	11.622	10.528	9.816	7.408	6.623	6.258	5.547	27.275
0.8000	25.343	28.254	18.662	14.874	13.045	12.074	10.917	10.171	7.726	6.942	6.550	5.823	31.171
0.9000	25.436	28.108	18.954	15.201	13.400	12.434	11.221	10.444	8.017	7.202	6.804	6.065	35.068
1.0000	25.405	27.817	19.145	15.488	13.669	12.693	11.468	10.664	8.232	7.409	7.007	6.260	38.964
1.2500	25.033	26.808	19.301	15.826	14.089	13.124	11.831	10.982	8.627	7.778	7.354	6.581	48.705
1.6000	24.104	25.265	19.039	15.898	14.203	13.271	11.957	11.043	8.853	8.016	7.578	6.797	62.342
2.0000	22.813	23.807	18.412	15.595	14.012	13.147	11.784	10.919	8.838	8.065	7.623	6.868	77.928
2.5000	21.184	22.197	17.465	15.002	13.570	12.749	11.404	10.583	8.697	7.911	7.510	6.811	97.410
3.2000	19.193	20.274	16.142	14.044	12.785	12.026	10.783	9.976	8.329	7.619	7.232	6.570	124.68
4.0000	17.317	18.442	14.801	13.010	11.915	11.219	10.109	9.325	7.889	7.223	6.882	6.261	155.86
5.0000	15.474	16.587	13.409	11.880	10.941	10.325	9.306	8.608	7.375	6.731	6.450	5.886	194.82
6.0000	14.047	15.103	12.279	10.953	10.106	9.578	8.644	7.994	6.852	6.324	6.054	5.562	233.78
7.0000	12.872	13.904	11.351	10.170	9.398	8.933	8.082	7.480	6.470	5.948	5.709	5.255	272.75
8.0000	11.918	12.902	10.575	9.518	8.809	8.375	7.614	7.032	6.112	5.637	5.414	4.991	311.71
9.0000	11.137	12.050	9.918	8.956	8.301	7.904	7.190	6.655	5.802	5.355	5.147	4.760	350.68
10.0000	10.456	11.316	9.352	8.483	7.856	7.491	6.818	6.332	5.518	5.116	4.929	4.555	389.64
11.0000	9.871	10.695	8.861	8.063	7.479	7.133	6.495	6.052	5.281	4.909	4.741	4.368	428.60
12.0000	9.365	10.140	8.429	7.687	7.139	6.819	6.212	5.799	5.066	4.720	4.552	4.198	467.57

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	12.299	5.248	3.477	3.267	2.903	1.915	1.174	0.833	0.550	4.398	5.595	4.270	0.4870
0.0160	13.655	5.759	3.870	3.640	3.236	2.186	1.354	0.965	0.640	4.946	6.293	4.753	0.6234
0.0200	14.852	6.098	4.219	3.974	3.555	2.468	1.539	1.120	0.749	5.484	6.974	5.182	0.7793
0.0250	16.141	6.405	4.601	4.337	3.924	2.815	1.800	1.313	0.951	6.076	7.732	5.649	0.9741
0.0320	17.894	6.790	5.032	4.791	4.377	3.280	2.131	1.606	1.118	6.822	8.701	6.245	1.2468
0.0400	19.655	7.146	5.474	5.269	4.852	3.790	2.511	1.924	1.367	7.598	9.692	6.864	1.5586
0.0500	21.712	7.635	6.028	5.864	5.458	4.401	2.965	2.309	1.673	8.488	10.823	7.622	1.9482
0.0600	24.000	8.213	6.661	6.438	6.086	5.008	3.406	2.680	1.969	9.348	11.935	8.393	2.3378
0.0700	26.311	8.910	7.296	7.086	6.721	5.604	3.819	3.035	2.243	10.198	13.008	9.220	2.7275
0.0800	28.791	9.666	7.974	7.750	7.376	6.198	4.248	3.385	2.514	11.052	14.080	10.089	3.1171
0.0900	31.303	10.502	8.686	8.465	8.059	6.799	4.673	3.739	2.769	11.922	15.158	11.005	3.5068
0.1000	34.061	11.428	9.474	9.176	8.729	7.399	5.109	4.067	3.015	12.778	16.249	11.940	3.8964
0.1250	41.293	13.782	11.389	10.973	10.485	8.852	6.095	4.857	3.609	14.916	18.982	14.343	4.8705
0.1600	51.554	17.189	14.105	13.593	12.894	10.741	7.367	5.865	4.352	17.770	22.577	17.805	6.2342
0.2000	62.225	20.657	16.919	16.247	15.360	12.483	8.491	6.742	4.981	20.454	25.955	21.354	7.7928
0.2500	74.002	24.494	19.866	19.128	17.859	14.118	9.544	7.482	5.502	23.129	29.314	25.232	9.7410
0.3200	87.632	28.606	23.265	22.203	20.315	15.564	10.386	8.099	5.916	25.994	33.017	29.476	12.468
0.4000	98.557	32.536	25.840	24.560	22.238	16.600	10.977	8.545	6.223	28.319	36.058	32.789	15.586
0.5000	107.797	35.820	27.828	26.476	23.688	17.420	11.489	8.972	6.539	30.295	38.675	35.516	19.482
0.6000	112.213	37.640	28.486	27.072	24.192	17.689	11.734	9.154	6.697	31.137	39.955	36.527	23.378
0.7000	112.026	38.498	28.317	26.912	24.084	17.588	11.768	9.159	6.769	31.291	40.213	36.363	27.275
0.8000	109.546	38.444	27.788	26.500	23.682	17.318	11.720	9.144	6.793	31.054	39.862	35.719	31.171
0.9000	106.141	37.832	27.104	25.834	22.972	16.945	11.562	9.136	6.785	30.610	39.253	34.761	35.068
1.0000	103.191	37.313	26.630	25.271	22.514	16.675	11.487	9.151	6.796	30.115	38.577	33.925	38.964
1.2500	95.924	35.918	25.573	24.415	21.694	16.270	11.426	9.226	6.968	28.893	36.690	32.367	48.705
1.6000	86.058	33.700	24.332	23.266	20.829	15.898	11.405	9.272	7.178	27.131	33.947	30.235	62.342
2.0000	76.228	31.246	23.163	22.058	19.959	15.503	11.324	9.298	7.310	25.409	31.301	28.079	77.928
2.5000	66.016	28.380	21.673	20.626	19.036	15.054	11.177	9.309	7.405	23.507	28.450	25.673	97.410
3.2000	56.497	25.101	19.903	18.999	17.643	14.286	10.864	9.040	7.248	21.356	25.456	23.164	124.68
4.0000	48.843	22.083	18.057	17.317	16.281	13.321	10.213	8.599	6.956	19.330	22.779	20.825	155.86
5.0000	42.640	19.376	16.211	15.608	14.709	12.189	9.480	8.005	6.570	17.351	20.314	18.611	194.82
6.0000	38.188	17.363	14.759	14.195	13.446	11.223	8.767	7.453	6.140	15.766	18.406	16.859	233.78
7.0000	34.846	15.823	13.598	13.110	12.395	10.420	8.195	6.992	5.777	14.517	16.901	15.528	272.75
8.0000	32.148	14.541	12.637	12.193	11.516	9.718	7.646	6.557	5.446	13.473	15.651	14.414	311.71
9.0000	29.852	13.567	11.812	11.405	10.790	9.124	7.190	6.179	5.157	12.575	14.589	13.458	350.68
10.0000	27.964	12.766	11.139	10.755	10.175	8.604	6.799	5.845	4.891	11.821	13.692	12.663	389.64
11.0000	26.317	12.069	10.553	10.190	9.641	8.152	6.460	5.556	4.652	11.174	12.928	11.980	428.60
12.0000	24.865	11.455	10.039	9.693	9.171	7.755	6.162	5.302	4.442	10.604	12.247	11.379	467.57

$^{39}_{19}K$ IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=39
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.085	0.090	0.122	0.175	0.198	0.240	0.263	0.294	0.442	0.521	0.568	0.685	0.4870
0.0160	0.105	0.113	0.151	0.217	0.247	0.296	0.324	0.360	0.542	0.638	0.694	0.835	0.6234
0.0200	0.125	0.137	0.183	0.263	0.300	0.357	0.389	0.432	0.650	0.763	0.830	0.995	0.7793
0.0250	0.149	0.164	0.220	0.317	0.364	0.429	0.466	0.515	0.776	0.910	0.989	1.181	0.9741
0.0320	0.180	0.200	0.268	0.387	0.447	0.523	0.566	0.624	0.941	1.101	1.195	1.424	1.2468
0.0400	0.212	0.238	0.318	0.461	0.534	0.621	0.672	0.738	1.115	1.303	1.413	1.678	1.5586
0.0500	0.248	0.280	0.376	0.545	0.635	0.733	0.793	0.869	1.316	1.534	1.663	1.969	1.9482
0.0600	0.282	0.319	0.429	0.623	0.728	0.837	0.904	0.989	1.500	1.745	1.891	2.234	2.3378
0.0700	0.313	0.355	0.478	0.695	0.814	0.933	1.008	1.100	1.670	1.939	2.101	2.478	2.7275
0.0800	0.342	0.389	0.525	0.763	0.895	1.022	1.104	1.203	1.829	2.120	2.295	2.703	3.1171
0.0900	0.369	0.420	0.569	0.826	0.970	1.106	1.194	1.301	1.976	2.287	2.476	2.913	3.5068
0.1000	0.396	0.449	0.610	0.886	1.041	1.185	1.280	1.392	2.114	2.445	2.645	3.109	3.8964
0.1250	0.456	0.516	0.706	1.023	1.204	1.365	1.476	1.601	2.426	2.800	3.027	3.551	4.8705
0.1600	0.534	0.598	0.827	1.193	1.406	1.588	1.718	1.860	2.806	3.233	3.489	4.082	6.2342
0.2000	0.615	0.679	0.953	1.367	1.611	1.816	1.965	2.123	3.188	3.667	3.951	4.612	7.7928
0.2500	0.711	0.772	1.100	1.566	1.845	2.074	2.247	2.424	3.617	4.152	4.467	5.203	9.7410
0.3200	0.838	0.891	1.290	1.820	2.143	2.402	2.605	2.807	4.155	4.759	5.113	5.940	12.468
0.4000	0.976	1.017	1.492	2.087	2.454	2.743	2.979	3.207	4.707	5.380	5.775	6.693	15.586
0.5000	1.141	1.164	1.731	2.398	2.811	3.135	3.406	3.664	5.331	6.080	6.520	7.539	19.482
0.6000	1.300	1.306	1.956	2.687	3.144	3.498	3.805	4.092	5.906	6.725	7.204	8.314	23.378
0.7000	1.456	1.444	2.173	2.963	3.460	3.841	4.183	4.498	6.446	7.329	7.844	9.035	27.275
0.8000	1.610	1.582	2.384	3.229	3.763	4.169	4.546	4.888	6.961	7.903	8.453	9.720	31.171
0.9000	1.763	1.720	2.591	3.488	4.058	4.487	4.898	5.266	7.456	8.454	9.036	10.376	35.068
1.0000	1.917	1.860	2.795	3.742	4.346	4.797	5.241	5.635	7.935	8.987	9.600	11.008	38.964
1.2500	2.302	2.216	3.301	4.363	5.046	5.551	6.076	6.533	9.089	10.268	10.955	12.523	48.705
1.6000	2.856	2.739	4.011	5.221	6.009	6.582	7.221	7.769	10.647	11.992	12.778	14.558	62.342
2.0000	3.520	3.374	4.843	6.210	7.112	7.761	8.532	9.187	12.407	13.928	14.826	16.836	77.928
2.5000	4.406	4.221	5.929	7.483	8.524	9.265	10.212	10.999	14.627	16.365	17.400	19.683	97.410
3.2000	5.759	5.507	7.554	9.362	10.595	11.468	12.671	13.653	17.832	19.878	21.100	23.759	124.68
4.0000	7.471	7.120	9.572	11.670	13.123	14.153	15.659	16.887	21.679	24.082	25.521	28.622	155.86
5.0000	9.854	9.351	12.341	14.808	16.540	17.778	19.681	21.241	26.793	29.676	31.375	35.047	194.82
6.0000	12.501	11.816	15.382	18.228	20.249	21.700	24.030	25.943	32.280	35.654	37.617	41.862	233.78
7.0000	15.401	14.507	18.685	21.923	24.251	25.917	28.696	30.987	38.137	42.013	44.250	49.075	272.75
8.0000	18.550	17.419	22.244	25.887	28.537	30.425	33.667	36.363	44.337	48.747	51.263	56.687	311.71
9.0000	21.934	20.546	26.052	30.110	33.096	35.217	38.936	42.062	50.884	55.843	58.648	64.685	350.68
10.0000	25.547	23.885	30.100	34.583	37.924	40.283	44.504	48.068	57.774	63.291	66.388	73.057	389.64
11.0000	29.384	27.428	34.382	39.296	43.009	45.616	50.362	54.365	64.995	71.069	74.452	81.796	428.60
12.0000	33.438	31.171	38.892	44.247	48.344	51.205	56.499	60.945	72.531	79.167	82.843	90.899	467.57

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.031	0.077	0.105	0.110	0.120	0.179	0.292	0.423	0.646	0.087	0.069	0.082	0.4870
0.0160	0.038	0.097	0.132	0.139	0.152	0.226	0.363	0.523	0.794	0.109	0.087	0.104	0.6234
0.0200	0.047	0.119	0.162	0.170	0.186	0.275	0.440	0.629	0.949	0.133	0.106	0.128	0.7793
0.0250	0.057	0.145	0.198	0.208	0.228	0.334	0.529	0.750	1.121	0.161	0.128	0.158	0.9741
0.0320	0.070	0.182	0.247	0.259	0.283	0.409	0.642	0.900	1.330	0.198	0.157	0.197	1.2468
0.0400	0.085	0.222	0.299	0.313	0.342	0.486	0.757	1.050	1.540	0.237	0.188	0.239	1.5586
0.0500	0.102	0.270	0.360	0.377	0.410	0.571	0.883	1.214	1.765	0.282	0.223	0.287	1.9482
0.0600	0.118	0.316	0.417	0.435	0.472	0.648	0.995	1.356	1.958	0.323	0.255	0.332	2.3378
0.0700	0.132	0.360	0.470	0.489	0.529	0.717	1.095	1.482	2.129	0.361	0.285	0.374	2.7275
0.0800	0.146	0.400	0.518	0.539	0.582	0.780	1.186	1.597	2.282	0.396	0.313	0.412	3.1171
0.0900	0.158	0.437	0.563	0.585	0.630	0.837	1.269	1.701	2.421	0.429	0.339	0.448	3.5068
0.1000	0.169	0.471	0.604	0.628	0.674	0.890	1.346	1.796	2.550	0.459	0.363	0.481	3.8964
0.1250	0.195	0.547	0.695	0.722	0.773	1.007	1.514	2.008	2.834	0.528	0.417	0.553	4.8705
0.1600	0.224	0.634	0.801	0.831	0.888	1.144	1.713	2.257	3.168	0.610	0.482	0.636	6.2342
0.2000	0.251	0.716	0.900	0.934	0.997	1.276	1.906	2.500	3.495	0.691	0.545	0.715	7.7928
0.2500	0.279	0.801	1.005	1.043	1.113	1.421	2.119	2.770	3.861	0.779	0.615	0.798	9.7410
0.3200	0.313	0.904	1.132	1.176	1.256	1.605	2.393	3.120	4.333	0.890	0.703	0.898	12.468
0.4000	0.346	1.006	1.259	1.309	1.402	1.799	2.685	3.494	4.846	1.005	0.793	0.998	15.586
0.5000	0.384	1.120	1.404	1.462	1.572	2.028	3.031	3.939	5.456	1.138	0.897	1.112	19.482
0.6000	0.419	1.226	1.542	1.607	1.734	2.249	3.366	4.368	6.044	1.265	0.996	1.220	23.378
0.7000	0.454	1.329	1.679	1.751	1.896	2.470	3.697	4.793	6.623	1.389	1.093	1.327	27.275
0.8000	0.489	1.430	1.818	1.897	2.059	2.693	4.029	5.219	7.197	1.514	1.190	1.435	31.171
0.9000	0.525	1.532	1.960	2.046	2.226	2.920	4.364	5.645	7.770	1.641	1.289	1.546	35.068
1.0000	0.563	1.636	2.105	2.198	2.397	3.152	4.701	6.071	8.344	1.769	1.389	1.659	38.964
1.2500	0.660	1.901	2.477	2.590	2.837	3.742	5.550	7.129	9.757	2.099	1.647	1.952	48.705
1.6000	0.810	2.292	3.023	3.161	3.477	4.589	6.743	8.601	11.682	2.585	2.033	2.387	62.342
2.0000	1.002	2.772	3.679	3.848	4.241	5.581	8.113	10.278	13.831	3.178	2.511	2.922	77.928
2.5000	1.277	3.426	4.548	4.761	5.240	6.855	9.843	12.370	16.476	3.975	3.163	3.647	97.410
3.2000	1.724	4.449	5.862	6.139	6.729	8.715	12.318	15.343	20.198	5.192	4.177	4.766	124.68
4.0000	2.318	5.774	7.507	7.859	8.569	10.976	15.279	18.880	24.590	6.728	5.473	6.187	155.86
5.0000	3.173	7.661	9.788	10.233	11.090	14.038	19.244	23.581	30.359	8.859	7.287	8.169	194.82
6.0000	4.140	9.788	12.310	12.853	13.864	17.373	23.522	28.631	36.500	11.217	9.304	10.371	233.78
7.0000	5.209	12.141	15.063	15.713	16.886	20.980	28.123	34.033	43.048	13.795	11.516	12.782	272.75
8.0000	6.374	14.712	18.038	18.797	20.150	24.855	33.049	39.792	49.999	16.584	13.914	15.388	311.71
9.0000	7.633	17.488	21.229	22.103	23.647	28.995	38.308	45.918	57.356	19.579	16.494	18.188	350.68
10.0000	8.982	20.451	24.628	25.623	27.368	33.395	43.884	52.405	65.118	22.777	19.253	21.174	389.64
11.0000	10.419	23.591	28.224	29.347	31.304	38.050	49.766	59.246	73.290	26.169	22.183	24.339	428.60
12.0000	11.943	26.907	32.011	33.269	35.449	42.953	55.944	66.428	81.865	29.750	25.281	27.678	467.57

$^{40}_{20}Ca$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=40 MEV
0.0125	5.541	4.584	3.358	2.233	1.814	1.646	1.525	1.411	0.897	0.767	0.705	0.605	0.4995
0.0160	6.277	5.193	3.804	2.530	2.054	1.864	1.727	1.598	1.016	0.869	0.799	0.685	0.6394
0.0200	7.025	5.812	4.258	2.831	2.299	2.086	1.933	1.788	1.137	0.973	0.894	0.766	0.7993
0.0250	7.863	6.505	4.765	3.169	2.573	2.335	2.163	2.001	1.272	1.089	1.003	0.858	0.9991
0.0320	8.895	7.373	5.398	3.589	2.920	2.656	2.451	2.267	1.441	1.236	1.139	0.977	1.2788
0.0400	9.932	8.271	6.041	4.030	3.286	2.996	2.761	2.555	1.625	1.399	1.287	1.106	1.5985
0.0500	11.076	9.284	6.762	4.530	3.712	3.381	3.117	2.887	1.832	1.592	1.467	1.261	1.9981
0.0600	12.099	10.238	7.413	4.997	4.107	3.729	3.447	3.195	2.046	1.779	1.642	1.412	2.3978
0.0700	13.022	11.139	8.013	5.433	4.488	4.071	3.766	3.494	2.244	1.963	1.819	1.563	2.7974
0.0800	13.870	12.018	8.572	5.855	4.843	4.389	4.055	3.772	2.443	2.143	1.980	1.706	3.1970
0.0900	14.656	12.864	9.097	6.259	5.185	4.712	4.339	4.039	2.647	2.315	2.147	1.851	3.5967
0.1000	15.415	13.705	9.604	6.656	5.532	5.013	4.610	4.312	2.843	2.488	2.305	1.988	3.9963
0.1250	17.082	15.760	10.743	7.563	6.317	5.726	5.264	4.931	3.304	2.890	2.702	2.337	4.9954
0.1600	18.885	18.355	12.036	8.618	7.246	6.572	6.030	5.657	3.852	3.382	3.172	2.768	6.3941
0.2000	20.326	20.628	13.130	9.546	8.075	7.314	6.710	6.289	4.359	3.847	3.611	3.151	7.9926
0.2500	21.590	22.710	14.176	10.476	8.902	8.080	7.400	6.932	4.891	4.324	4.054	3.544	9.9907
0.3200	22.911	24.892	15.356	11.563	9.874	9.014	8.216	7.678	5.498	4.883	4.584	4.031	12.788
0.4000	24.093	26.746	16.479	12.557	10.810	9.888	9.014	8.421	6.130	5.455	5.125	4.499	15.985
0.5000	25.270	28.398	17.672	13.660	11.840	10.868	9.896	9.225	6.821	6.079	5.717	5.036	19.981
0.6000	25.952	29.228	18.511	14.494	12.624	11.625	10.551	9.829	7.349	6.571	6.192	5.498	23.978
0.7000	26.396	29.630	19.141	15.121	13.226	12.193	11.044	10.298	7.771	6.948	6.565	5.819	27.974
0.8000	26.627	29.685	19.607	15.627	13.706	12.686	11.470	10.686	8.117	7.294	6.882	6.117	31.970
0.9000	26.762	29.574	19.942	15.994	14.099	13.082	11.806	10.988	8.436	7.578	7.159	6.381	35.967
1.0000	26.766	29.308	20.171	16.318	14.402	13.373	12.082	11.235	8.673	7.806	7.382	6.596	39.963
1.2500	26.455	28.331	20.397	16.725	14.890	13.870	12.503	11.606	9.117	8.220	7.771	6.955	49.954
1.6000	25.563	26.794	20.192	16.860	15.063	14.074	12.680	11.711	9.389	8.501	8.036	7.208	63.941
2.0000	24.269	25.326	19.587	16.590	14.906	13.985	12.536	11.615	9.402	8.579	8.109	7.306	79.926
2.5000	22.602	23.683	18.633	16.006	14.478	13.602	12.167	11.292	9.279	8.441	8.012	7.267	99.907
3.2000	20.539	21.696	17.274	15.028	13.681	12.869	11.539	10.675	8.913	8.153	7.739	7.031	127.88
4.0000	18.579	19.786	15.879	13.958	12.783	12.037	10.846	10.004	8.464	7.749	7.384	6.717	159.85
5.0000	16.642	17.839	14.421	12.777	11.768	11.104	10.008	9.258	7.932	7.239	6.937	6.331	199.81
6.0000	15.138	16.276	13.233	11.804	10.891	10.322	9.316	8.615	7.384	6.815	6.524	5.994	239.78
7.0000	13.895	15.010	12.253	10.979	10.145	9.643	8.724	8.075	6.984	6.421	6.163	5.673	279.74
8.0000	12.885	13.948	11.433	10.290	9.524	9.055	8.232	7.603	6.608	6.094	5.854	5.396	319.70
9.0000	12.057	13.045	10.736	9.695	8.986	8.557	7.784	7.204	6.281	5.798	5.572	5.153	359.67
10.0000	11.333	12.265	10.137	9.194	8.515	8.120	7.390	6.863	5.981	5.545	5.342	4.937	399.63
11.0000	10.711	11.605	9.615	8.749	8.115	7.740	7.047	6.567	5.730	5.326	5.144	4.740	439.59
12.0000	10.171	11.014	9.155	8.350	7.754	7.407	6.747	6.299	5.502	5.127	4.944	4.559	479.56

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	12.594	5.373	3.560	3.345	2.972	1.961	1.202	0.853	0.563	4.504	5.729	4.373	0.4995
0.0160	13.999	5.904	3.968	3.732	3.317	2.241	1.388	0.989	0.657	5.071	6.452	4.873	0.6394
0.0200	15.242	6.259	4.330	4.079	3.649	2.533	1.580	1.150	0.769	5.629	7.157	5.318	0.7993
0.0250	16.583	6.581	4.727	4.456	4.031	2.893	1.849	1.349	0.977	6.243	7.944	5.804	0.9991
0.0320	18.406	6.985	5.176	4.928	4.502	3.374	2.191	1.652	1.150	7.017	8.949	6.423	1.2788
0.0400	20.238	7.358	5.637	5.425	4.996	3.903	2.586	1.982	1.408	7.824	9.980	7.068	1.5985
0.0500	22.381	7.871	6.214	6.045	5.626	4.537	3.056	2.380	1.724	8.750	11.157	7.857	1.9981
0.0600	24.761	8.474	6.872	6.642	6.279	5.167	3.514	2.765	2.031	9.645	12.314	8.659	2.3978
0.0700	27.165	9.199	7.533	7.316	6.940	5.786	3.943	3.133	2.316	10.530	13.430	9.520	2.7974
0.0800	29.746	9.987	8.238	8.006	7.621	6.403	4.389	3.497	2.597	11.418	14.547	10.424	3.1970
0.0900	32.296	10.835	8.961	8.733	8.315	7.014	4.822	3.857	2.857	12.300	15.638	11.353	3.5967
0.1000	35.152	11.794	9.777	9.470	9.009	7.635	5.273	4.197	3.112	13.187	16.769	12.322	3.9963
0.1250	42.651	14.235	11.764	11.334	10.829	9.142	6.296	5.017	3.728	15.406	19.606	14.815	4.9954
0.1600	53.320	17.777	14.588	14.058	13.336	11.109	7.619	6.066	4.502	18.379	23.350	18.415	6.3941
0.2000	64.469	21.402	17.529	16.833	15.914	12.933	8.797	6.985	5.160	21.192	26.891	22.124	7.9926
0.2500	76.833	25.431	20.626	19.860	18.542	14.658	9.909	7.768	5.713	24.014	30.435	26.197	9.9907
0.3200	91.216	29.776	24.217	23.111	21.145	16.201	10.811	8.431	6.158	27.058	34.367	30.682	12.788
0.4000	102.832	33.948	26.960	25.625	23.203	17.320	11.453	8.915	6.493	29.548	37.622	34.211	15.985
0.5000	112.745	37.464	29.105	27.691	24.776	18.219	12.017	9.384	6.839	31.685	40.450	37.146	19.981
0.6000	117.543	39.428	29.839	28.358	25.341	18.529	12.291	9.589	7.016	32.616	41.853	38.262	23.978
0.7000	117.526	40.388	29.707	28.233	25.266	18.452	12.346	9.609	7.101	32.827	42.187	38.148	27.974
0.8000	115.095	40.391	29.195	27.842	24.882	18.196	12.313	9.608	7.137	32.627	41.881	37.528	31.970
0.9000	111.676	39.804	28.517	27.181	24.170	17.828	12.165	9.612	7.139	32.207	41.300	36.574	35.967
1.0000	108.719	39.312	28.057	26.625	23.721	17.569	12.102	9.642	7.161	31.728	40.644	35.742	39.963
1.2500	101.373	37.959	27.026	25.802	22.926	17.195	12.075	9.750	7.363	30.534	38.774	34.206	49.954
1.6000	91.266	35.739	25.805	24.674	22.090	16.860	12.095	9.833	7.612	28.773	36.002	32.064	63.941
2.0000	81.092	33.240	24.641	23.466	21.233	16.493	12.046	9.892	7.776	27.031	33.298	29.871	79.926
2.5000	70.433	30.279	23.124	22.006	20.310	16.062	11.925	9.931	7.900	25.080	30.353	27.391	99.907
3.2000	60.459	26.861	21.299	20.331	18.880	15.287	11.625	9.673	7.756	22.853	27.241	24.788	127.88
4.0000	52.402	23.692	19.373	18.579	17.467	14.291	10.957	9.226	7.463	20.738	24.438	22.342	159.85
5.0000	45.859	20.839	17.435	16.786	15.820	13.109	10.196	8.609	7.066	18.661	21.848	20.017	199.81
6.0000	41.154	18.711	15.906	15.297	14.490	12.095	9.448	8.032	6.616	16.991	19.836	18.169	239.78
7.0000	37.617	17.081	14.679	14.152	13.380	11.248	8.847	7.548	6.237	15.672	18.245	16.762	279.74
8.0000	34.756	15.720	13.662	13.182	12.450	10.507	8.266	7.088	5.888	14.566	16.921	15.583	319.70
9.0000	32.316	14.687	12.787	12.347	11.681	9.877	7.784	6.689	5.583	13.614	15.793	14.569	359.67
10.0000	30.309	13.837	12.073	11.657	11.029	9.326	7.369	6.335	5.302	12.813	14.840	13.725	399.63
11.0000	28.555	13.095	11.451	11.057	10.461	8.845	7.009	6.028	5.048	12.124	14.028	12.999	439.59
12.0000	27.008	12.442	10.904	10.529	9.961	8.423	6.692	5.759	4.825	11.517	13.303	12.360	479.56

$^{40}_{20}$Ca IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=40 MEV
0.0125	0.084	0.089	0.119	0.171	0.194	0.234	0.257	0.288	0.432	0.509	0.554	0.668	0.4995
0.0160	0.103	0.111	0.148	0.213	0.242	0.290	0.317	0.353	0.530	0.624	0.679	0.817	0.6394
0.0200	0.124	0.134	0.180	0.258	0.294	0.350	0.382	0.423	0.636	0.747	0.813	0.974	0.7993
0.0250	0.147	0.162	0.216	0.311	0.357	0.421	0.458	0.506	0.761	0.892	0.969	1.158	0.9991
0.0320	0.178	0.197	0.264	0.381	0.439	0.514	0.557	0.613	0.924	1.081	1.173	1.397	1.2788
0.0400	0.210	0.234	0.314	0.454	0.525	0.611	0.661	0.726	1.096	1.280	1.388	1.648	1.5985
0.0500	0.246	0.277	0.371	0.537	0.625	0.722	0.781	0.855	1.294	1.508	1.635	1.936	1.9981
0.0600	0.279	0.315	0.424	0.614	0.717	0.824	0.891	0.974	1.476	1.717	1.860	2.197	2.3978
0.0700	0.310	0.351	0.472	0.686	0.802	0.919	0.993	1.084	1.644	1.909	2.067	2.438	2.7974
0.0800	0.338	0.384	0.518	0.753	0.881	1.008	1.088	1.186	1.800	2.087	2.259	2.661	3.1970
0.0900	0.366	0.415	0.562	0.815	0.956	1.091	1.178	1.283	1.946	2.253	2.438	2.868	3.5967
0.1000	0.392	0.444	0.603	0.875	1.027	1.169	1.262	1.374	2.083	2.408	2.605	3.063	3.9963
0.1250	0.452	0.511	0.698	1.010	1.188	1.348	1.456	1.581	2.392	2.761	2.983	3.500	4.9954
0.1600	0.529	0.591	0.818	1.178	1.387	1.569	1.696	1.837	2.768	3.189	3.441	4.026	6.3941
0.2000	0.609	0.672	0.943	1.351	1.591	1.794	1.941	2.098	3.147	3.619	3.898	4.550	7.9926
0.2500	0.704	0.764	1.088	1.547	1.822	2.049	2.219	2.394	3.570	4.097	4.408	5.134	9.9907
0.3200	0.829	0.881	1.275	1.798	2.116	2.373	2.573	2.772	4.100	4.695	5.045	5.860	12.788
0.4000	0.965	1.005	1.474	2.061	2.422	2.708	2.940	3.165	4.644	5.307	5.696	6.601	15.985
0.5000	1.127	1.150	1.708	2.366	2.772	3.093	3.359	3.615	5.256	5.994	6.426	7.432	19.981
0.6000	1.283	1.288	1.929	2.650	3.098	3.448	3.750	4.034	5.819	6.625	7.097	8.190	23.978
0.7000	1.436	1.424	2.141	2.920	3.407	3.784	4.120	4.431	6.348	7.216	7.723	8.896	27.974
0.8000	1.586	1.559	2.347	3.179	3.704	4.105	4.475	4.811	6.851	7.777	8.318	9.566	31.970
0.9000	1.736	1.694	2.549	3.432	3.991	4.415	4.818	5.180	7.333	8.314	8.887	10.205	35.967
1.0000	1.885	1.829	2.748	3.679	4.272	4.717	5.153	5.539	7.800	8.834	9.436	10.821	39.963
1.2500	2.260	2.175	3.240	4.283	4.953	5.449	5.964	6.413	8.922	10.079	10.753	12.293	49.954
1.6000	2.797	2.682	3.928	5.114	5.885	6.448	7.073	7.610	10.431	11.749	12.519	14.265	63.941
2.0000	3.438	3.295	4.731	6.069	6.950	7.586	8.339	8.979	12.130	13.618	14.497	16.465	79.926
2.5000	4.291	4.110	5.776	7.295	8.310	9.034	9.956	10.723	14.268	15.965	16.974	19.205	99.907
3.2000	5.589	5.345	7.336	9.098	10.297	11.149	12.317	13.271	17.343	19.336	20.526	23.118	127.88
4.0000	7.227	6.889	9.268	11.307	12.716	13.719	15.176	16.366	21.026	23.360	24.757	27.772	159.85
5.0000	9.503	9.019	11.912	14.303	15.979	17.180	19.016	20.523	25.908	28.701	30.346	33.906	199.81
6.0000	12.024	11.367	14.808	17.561	19.512	20.916	23.159	25.003	31.135	34.396	36.293	40.398	239.78
7.0000	14.782	13.926	17.949	21.075	23.318	24.925	27.596	29.799	36.705	40.442	42.600	47.257	279.74
8.0000	17.771	16.690	21.328	24.837	27.386	29.205	32.315	34.903	42.591	46.835	49.258	54.484	319.70
9.0000	20.980	19.655	24.938	28.841	31.709	33.748	37.311	40.306	48.798	53.563	56.259	62.066	359.67
10.0000	24.400	22.816	28.771	33.076	36.280	38.545	42.583	45.992	55.322	60.615	63.587	69.993	399.63
11.0000	28.029	26.168	32.821	37.534	41.090	43.589	48.123	51.948	62.151	67.971	71.214	78.258	439.59
12.0000	31.860	29.704	37.082	42.211	46.129	48.869	53.920	58.164	69.271	75.621	79.141	86.857	479.56

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.030	0.076	0.103	0.108	0.117	0.175	0.285	0.413	0.629	0.085	0.068	0.080	0.4995
0.0160	0.038	0.095	0.130	0.136	0.148	0.221	0.355	0.511	0.775	0.107	0.085	0.102	0.6394
0.0200	0.046	0.117	0.159	0.167	0.183	0.270	0.430	0.615	0.928	0.130	0.104	0.126	0.7993
0.0250	0.056	0.143	0.195	0.205	0.224	0.327	0.518	0.734	1.096	0.159	0.126	0.155	0.9991
0.0320	0.070	0.179	0.243	0.255	0.278	0.401	0.630	0.883	1.303	0.195	0.155	0.194	1.2788
0.0400	0.084	0.219	0.295	0.309	0.337	0.477	0.743	1.031	1.510	0.234	0.186	0.235	1.5985
0.0500	0.101	0.267	0.355	0.371	0.404	0.562	0.868	1.192	1.732	0.278	0.220	0.283	1.9981
0.0600	0.116	0.313	0.412	0.429	0.465	0.638	0.978	1.333	1.924	0.319	0.252	0.328	2.3978
0.0700	0.131	0.355	0.463	0.483	0.522	0.706	1.078	1.458	2.092	0.356	0.282	0.369	2.7974
0.0800	0.144	0.395	0.511	0.532	0.574	0.769	1.168	1.571	2.244	0.391	0.309	0.407	3.1970
0.0900	0.156	0.432	0.556	0.578	0.621	0.826	1.250	1.674	2.382	0.423	0.335	0.442	3.5967
0.1000	0.168	0.466	0.597	0.620	0.666	0.878	1.326	1.769	2.509	0.454	0.359	0.475	3.9963
0.1250	0.193	0.541	0.687	0.713	0.764	0.994	1.493	1.979	2.791	0.522	0.412	0.546	4.9954
0.1600	0.221	0.627	0.791	0.821	0.877	1.129	1.690	2.225	3.122	0.604	0.477	0.629	6.3941
0.2000	0.248	0.708	0.890	0.923	0.985	1.261	1.881	2.466	3.446	0.683	0.539	0.707	7.9926
0.2500	0.276	0.793	0.994	1.031	1.100	1.404	2.092	2.733	3.807	0.771	0.609	0.789	9.9907
0.3200	0.309	0.895	1.119	1.162	1.241	1.585	2.362	3.078	4.273	0.881	0.695	0.888	12.788
0.4000	0.342	0.995	1.244	1.293	1.385	1.776	2.649	3.447	4.778	0.993	0.784	0.986	15.985
0.5000	0.379	1.107	1.386	1.443	1.552	2.001	2.989	3.883	5.377	1.124	0.886	1.098	19.981
0.6000	0.414	1.211	1.522	1.585	1.711	2.218	3.317	4.304	5.953	1.248	0.983	1.204	23.978
0.7000	0.448	1.311	1.656	1.726	1.869	2.434	3.641	4.720	6.518	1.370	1.078	1.308	27.974
0.8000	0.482	1.410	1.791	1.869	2.028	2.652	3.965	5.135	7.079	1.492	1.173	1.414	31.970
0.9000	0.518	1.509	1.930	2.014	2.191	2.873	4.292	5.551	7.639	1.615	1.269	1.522	35.967
1.0000	0.554	1.610	2.071	2.163	2.358	3.099	4.621	5.966	8.198	1.740	1.367	1.632	39.963
1.2500	0.649	1.869	2.433	2.543	2.785	3.673	5.446	6.995	9.571	2.061	1.618	1.917	49.954
1.6000	0.794	2.248	2.962	3.096	3.406	4.493	6.601	8.420	11.436	2.532	1.991	2.339	63.941
2.0000	0.980	2.711	3.595	3.760	4.143	5.450	7.924	10.039	13.511	3.104	2.453	2.855	79.926
2.5000	1.244	3.340	4.432	4.639	5.105	6.677	9.590	12.054	16.058	3.871	3.081	3.553	99.907
3.2000	1.673	4.322	5.692	5.962	6.533	8.462	11.965	14.907	19.630	5.040	4.054	4.627	127.88
4.0000	2.241	5.590	7.268	7.608	8.295	10.627	14.799	18.292	23.833	6.510	5.294	5.987	159.85
5.0000	3.058	7.391	9.445	9.874	10.702	13.550	18.584	22.781	29.341	8.544	7.026	7.879	199.81
6.0000	3.979	9.418	11.847	12.371	13.345	16.727	22.660	27.591	35.191	10.791	8.948	9.977	239.78
7.0000	4.995	11.655	14.465	15.089	16.217	20.156	27.035	32.728	41.417	13.242	11.051	12.269	279.74
8.0000	6.102	14.096	17.290	18.017	19.316	23.835	31.712	38.196	48.017	15.890	13.327	14.744	319.70
9.0000	7.295	16.728	20.315	21.152	22.632	27.761	36.697	44.003	54.991	18.729	15.773	17.398	359.67
10.0000	8.573	19.533	23.533	24.485	26.155	31.927	41.977	50.146	62.341	21.757	18.385	20.226	399.63
11.0000	9.932	22.503	26.934	28.007	29.877	36.329	47.540	56.615	70.069	24.965	21.156	23.219	439.59
12.0000	11.371	25.635	30.512	31.712	33.794	40.961	53.377	63.400	78.171	28.348	24.083	26.373	479.56

$^{45}_{21}Sc$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=45 MEV
0.0125	5.672	4.692	3.438	2.286	1.856	1.684	1.561	1.444	0.918	0.786	0.722	0.619	0.5619
0.0160	6.429	5.319	3.897	2.591	2.104	1.909	1.769	1.637	1.040	0.890	0.818	0.701	0.7193
0.0200	7.201	5.957	4.364	2.902	2.357	2.138	1.981	1.833	1.165	0.997	0.916	0.786	0.8991
0.0250	8.064	6.671	4.888	3.250	2.639	2.395	2.219	2.053	1.305	1.117	1.029	0.880	1.1239
0.0320	9.130	7.568	5.540	3.684	2.997	2.726	2.515	2.327	1.479	1.269	1.169	1.003	1.4386
0.0400	10.200	8.494	6.205	4.138	3.375	3.077	2.835	2.625	1.669	1.436	1.322	1.135	1.7982
0.0500	11.382	9.541	6.949	4.656	3.815	3.474	3.203	2.967	1.883	1.636	1.508	1.296	2.2478
0.0600	12.440	10.527	7.623	5.138	4.223	3.834	3.545	3.285	2.104	1.829	1.688	1.452	2.6974
0.0700	13.395	11.458	8.243	5.589	4.616	4.188	3.874	3.594	2.308	2.020	1.871	1.607	3.1469
0.0800	14.273	12.368	8.821	6.025	4.984	4.517	4.172	3.881	2.514	2.205	2.038	1.755	3.5965
0.0900	15.087	13.242	9.365	6.443	5.338	4.851	4.467	4.158	2.725	2.383	2.210	1.906	4.0460
0.1000	15.873	14.113	9.890	6.854	5.697	5.162	4.747	4.441	2.927	2.561	2.374	2.047	4.4956
0.1250	17.603	16.241	11.071	7.794	6.510	5.901	5.425	5.082	3.404	2.978	2.784	2.408	5.6195
0.1600	19.486	18.940	12.419	8.892	7.477	6.781	6.222	5.837	3.974	3.490	3.273	2.856	7.1930
0.2000	21.012	21.324	13.573	9.868	8.348	7.560	6.936	6.502	4.506	3.977	3.733	3.258	8.9912
0.2500	22.367	23.527	14.686	10.853	9.223	8.371	7.666	7.181	5.067	4.479	4.200	3.671	11.239
0.3200	23.795	25.852	15.948	12.009	10.255	9.362	8.532	7.974	5.710	5.072	4.761	4.186	14.386
0.4000	25.079	27.841	17.154	13.071	11.253	10.292	9.383	8.766	6.381	5.678	5.335	4.683	17.982
0.5000	26.366	29.629	18.438	14.252	12.353	11.339	10.325	9.624	7.117	6.343	5.965	5.255	22.478
0.6000	27.115	30.538	19.340	15.143	13.190	12.146	11.024	10.270	7.678	6.866	6.469	5.744	26.974
0.7000	27.616	31.000	20.026	15.821	13.838	12.757	11.555	10.774	8.131	7.269	6.869	6.088	31.469
0.8000	27.895	31.099	20.541	16.371	14.358	13.290	12.017	11.195	8.504	7.641	7.210	6.409	35.965
0.9000	28.073	31.022	20.918	16.777	14.789	13.722	12.384	11.526	8.848	7.949	7.510	6.694	40.460
1.0000	28.111	30.780	21.184	17.138	15.125	14.045	12.689	11.799	9.109	8.198	7.753	6.927	44.956
1.2500	27.860	29.836	21.480	17.614	15.681	14.607	13.167	12.222	9.602	8.657	8.184	7.325	56.195
1.6000	27.007	28.308	21.332	17.813	15.914	14.869	13.397	12.373	9.920	8.981	8.490	7.616	71.930
2.0000	25.714	26.835	20.754	17.578	15.794	14.818	13.282	12.307	9.962	9.090	8.592	7.741	89.912
2.5000	24.015	25.163	19.798	17.006	15.383	14.452	12.928	11.997	9.859	8.968	8.513	7.721	112.39
3.2000	21.886	23.119	18.407	16.014	14.578	13.713	12.296	11.375	9.498	8.688	8.246	7.492	143.86
4.0000	19.847	21.136	16.963	14.910	13.655	12.858	11.586	10.687	9.041	8.278	7.888	7.175	179.82
5.0000	17.821	19.102	15.443	13.682	12.601	11.891	10.717	9.914	8.493	7.752	7.428	6.779	224.78
6.0000	16.242	17.463	14.198	12.664	11.685	11.074	9.995	9.243	7.922	7.312	6.999	6.431	269.74
7.0000	14.932	16.131	13.168	11.798	10.903	10.363	9.376	8.678	7.506	6.900	6.623	6.097	314.69
8.0000	13.867	15.011	12.304	11.074	10.249	9.745	8.859	8.182	7.112	6.558	6.300	5.808	359.65
9.0000	12.992	14.056	11.569	10.447	9.683	9.221	8.388	7.763	6.768	6.247	6.004	5.553	404.60
10.0000	12.226	13.232	10.935	9.918	9.186	8.759	7.972	7.403	6.452	5.982	5.763	5.326	449.56
11.0000	11.567	12.532	10.383	9.448	8.763	8.358	7.611	7.092	6.188	5.752	5.555	5.119	494.52
12.0000	10.995	11.905	9.896	9.025	8.382	8.006	7.294	6.809	5.948	5.542	5.344	4.928	539.47

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	12.891	5.500	3.644	3.424	3.042	2.008	1.231	0.873	0.576	4.610	5.865	4.476	0.5619
0.0160	14.340	6.048	4.064	3.823	3.398	2.295	1.422	1.013	0.673	5.194	6.609	4.992	0.7193
0.0200	15.623	6.415	4.438	4.181	3.740	2.597	1.619	1.178	0.788	5.769	7.336	5.451	0.8991
0.0250	17.009	6.750	4.848	4.570	4.135	2.967	1.896	1.383	1.002	6.403	8.147	5.953	1.1239
0.0320	18.892	7.169	5.313	5.058	4.620	3.463	2.249	1.695	1.180	7.202	9.185	6.593	1.4386
0.0400	20.785	7.557	5.789	5.572	5.131	4.008	2.656	2.035	1.446	8.035	10.250	7.259	1.7982
0.0500	23.001	8.088	6.386	6.212	5.781	4.663	3.141	2.446	1.772	8.992	11.466	8.075	2.2478
0.0600	25.460	8.713	7.066	6.830	6.456	5.313	3.613	2.843	2.089	9.917	12.661	8.903	2.6974
0.0700	27.944	9.463	7.749	7.526	7.139	5.952	4.056	3.223	2.382	10.832	13.816	9.793	3.1469
0.0800	30.610	10.277	8.477	8.239	7.842	6.590	4.517	3.599	2.673	11.750	14.970	10.727	3.5965
0.0900	33.245	11.154	9.224	8.990	8.560	7.220	4.963	3.971	2.941	12.661	16.098	11.687	4.0460
0.1000	36.197	12.145	10.068	9.751	9.277	7.862	5.430	4.322	3.204	13.579	17.268	12.689	4.4956
0.1250	43.951	14.669	12.123	11.680	11.159	9.421	6.488	5.170	3.842	15.876	20.204	15.267	5.6195
0.1600	55.018	18.344	15.052	14.506	13.761	11.463	7.862	6.259	4.645	18.965	24.094	19.002	7.1930
0.2000	66.646	22.125	18.121	17.401	16.451	13.370	9.094	7.221	5.334	21.908	27.798	22.871	8.9912
0.2500	79.597	26.346	21.368	20.575	19.209	15.185	10.265	8.048	5.918	24.878	31.531	27.139	11.239
0.3200	94.733	30.924	25.151	24.002	21.961	16.826	11.228	8.756	6.395	28.101	35.692	31.865	14.386
0.4000	107.042	35.337	28.064	26.675	24.153	18.029	11.922	9.280	6.759	30.757	39.163	35.612	17.982
0.5000	117.632	39.088	30.367	28.892	25.849	19.009	12.538	9.790	7.135	33.059	42.204	38.756	22.478
0.6000	122.809	41.194	31.176	29.629	26.477	19.359	12.842	10.018	7.330	34.077	43.728	39.976	26.974
0.7000	122.960	42.255	31.081	29.539	26.434	19.305	12.917	10.053	7.430	34.345	44.138	39.912	31.469
0.8000	120.576	42.315	30.586	29.168	26.067	19.062	12.900	10.065	7.477	34.180	43.876	39.316	35.965
0.9000	117.143	41.753	29.913	28.512	25.353	18.701	12.760	10.083	7.489	33.783	43.322	38.364	40.460
1.0000	114.180	41.287	29.466	27.962	24.912	18.451	12.710	10.126	7.520	33.322	42.685	37.537	44.956
1.2500	106.757	39.975	28.461	27.173	24.144	18.108	12.716	10.268	7.754	32.156	40.834	36.022	56.195
1.6000	96.422	37.758	27.263	26.068	23.338	17.813	12.778	10.389	8.042	30.399	38.036	33.876	71.930
2.0000	85.920	35.219	26.108	24.863	22.497	17.475	12.764	10.481	8.239	28.640	35.281	31.649	89.912
2.5000	74.835	32.171	24.569	23.381	21.579	17.066	12.671	10.552	8.394	26.648	32.250	29.103	112.39
3.2000	64.424	28.623	22.696	21.665	20.119	16.290	12.388	10.308	8.265	24.352	29.028	26.414	143.86
4.0000	55.978	25.309	20.695	19.847	18.659	15.267	11.704	9.855	7.973	22.154	26.106	23.867	179.82
5.0000	49.107	22.314	18.670	17.975	16.940	14.037	10.918	9.219	7.567	19.983	23.395	21.434	224.78
6.0000	44.154	20.075	17.065	16.412	15.546	12.977	10.137	8.618	7.099	18.230	21.282	19.493	269.74
7.0000	40.426	18.356	15.775	15.209	14.379	12.088	9.507	8.111	6.702	16.842	19.607	18.014	314.69
8.0000	37.405	16.918	14.703	14.187	13.399	11.308	8.896	7.629	6.337	15.676	18.210	16.771	359.65
9.0000	34.823	15.827	13.779	13.305	12.587	10.644	8.388	7.208	6.016	14.670	17.018	15.699	404.60
10.0000	32.697	14.927	13.024	12.576	11.898	10.061	7.950	6.835	5.719	13.822	16.010	14.807	449.56
11.0000	30.837	14.142	12.366	11.940	11.297	9.552	7.569	6.510	5.451	13.093	15.149	14.038	494.52
12.0000	29.194	13.449	11.787	11.381	10.767	9.105	7.234	6.225	5.215	12.450	14.379	13.360	539.47

$^{45}_{21}Sc$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=45 MEV
0.0125	0.090	0.095	0.127	0.181	0.203	0.246	0.269	0.300	0.448	0.526	0.572	0.689	0.5619
0.0160	0.111	0.119	0.158	0.225	0.254	0.305	0.333	0.370	0.552	0.648	0.705	0.846	0.7193
0.0200	0.134	0.145	0.192	0.274	0.311	0.370	0.402	0.445	0.665	0.780	0.847	1.014	0.8991
0.0250	0.160	0.174	0.232	0.332	0.378	0.447	0.484	0.534	0.799	0.934	1.014	1.211	1.1239
0.0320	0.193	0.213	0.284	0.407	0.466	0.547	0.591	0.650	0.973	1.137	1.233	1.467	1.4386
0.0400	0.227	0.254	0.338	0.486	0.560	0.652	0.704	0.772	1.159	1.352	1.464	1.737	1.7982
0.0500	0.267	0.300	0.400	0.577	0.669	0.773	0.834	0.912	1.374	1.598	1.730	2.047	2.2478
0.0600	0.303	0.342	0.457	0.661	0.768	0.884	0.953	1.041	1.571	1.824	1.974	2.330	2.6974
0.0700	0.336	0.381	0.511	0.739	0.861	0.987	1.064	1.161	1.753	2.032	2.198	2.591	3.1469
0.0800	0.368	0.417	0.561	0.811	0.947	1.083	1.168	1.272	1.923	2.225	2.407	2.832	3.5965
0.0900	0.398	0.451	0.608	0.880	1.029	1.174	1.265	1.377	2.081	2.405	2.601	3.057	4.0460
0.1000	0.426	0.483	0.653	0.944	1.106	1.259	1.358	1.476	2.230	2.575	2.783	3.268	4.4956
0.1250	0.492	0.555	0.757	1.092	1.281	1.454	1.569	1.701	2.566	2.958	3.194	3.743	5.6195
0.1600	0.576	0.643	0.888	1.275	1.499	1.694	1.830	1.980	2.975	3.424	3.691	4.315	7.1930
0.2000	0.663	0.731	1.024	1.463	1.720	1.939	2.096	2.264	3.386	3.890	4.188	4.885	8.9912
0.2500	0.766	0.830	1.181	1.676	1.971	2.217	2.398	2.586	3.845	4.410	4.741	5.518	11.239
0.3200	0.902	0.958	1.384	1.948	2.289	2.567	2.781	2.995	4.420	5.057	5.431	6.304	14.386
0.4000	1.049	1.092	1.599	2.233	2.620	2.929	3.178	3.420	5.008	5.718	6.134	7.105	17.982
0.5000	1.224	1.248	1.852	2.562	2.997	3.345	3.631	3.905	5.668	6.459	6.922	8.001	22.478
0.6000	1.392	1.397	2.090	2.867	3.349	3.728	4.052	4.356	6.275	7.140	7.645	8.818	26.974
0.7000	1.556	1.543	2.318	3.158	3.682	4.089	4.450	4.784	6.844	7.775	8.319	9.578	31.469
0.8000	1.718	1.688	2.539	3.437	4.000	4.434	4.831	5.193	7.384	8.378	8.958	10.297	35.965
0.9000	1.878	1.832	2.756	3.708	4.309	4.767	5.199	5.588	7.902	8.955	9.568	10.983	40.460
1.0000	2.038	1.978	2.970	3.973	4.609	5.090	5.558	5.974	8.403	9.511	10.157	11.643	44.956
1.2500	2.439	2.348	3.495	4.619	5.338	5.874	6.426	6.908	9.602	10.843	11.566	13.218	56.195
1.6000	3.012	2.888	4.229	5.505	6.332	6.939	7.608	8.185	11.211	12.624	13.449	15.321	71.930
2.0000	3.693	3.540	5.083	6.520	7.465	8.149	8.955	9.640	13.018	14.612	15.552	17.660	89.912
2.5000	4.597	4.405	6.191	7.819	8.906	9.684	10.669	11.489	15.284	17.099	18.178	20.565	112.39
3.2000	5.970	5.710	7.840	9.726	11.007	11.919	13.164	14.182	18.536	20.664	21.933	24.701	143.86
4.0000	7.697	7.338	9.876	12.055	13.558	14.629	16.179	17.446	22.418	24.906	26.394	29.608	179.82
5.0000	10.091	9.578	12.657	15.206	16.989	18.269	20.218	21.818	27.553	30.523	32.273	36.059	224.78
6.0000	12.736	12.042	15.697	18.625	20.697	22.190	24.566	26.519	33.039	36.500	38.513	42.873	269.74
7.0000	15.626	14.723	18.988	22.306	24.684	26.390	29.214	31.543	38.873	42.834	45.121	50.058	314.69
8.0000	18.752	17.614	22.522	26.242	28.939	30.867	34.150	36.882	45.031	49.522	52.085	57.618	359.65
9.0000	22.104	20.711	26.293	30.424	33.455	35.613	39.368	42.526	51.514	56.549	59.398	65.538	404.60
10.0000	25.673	24.010	30.292	34.843	38.224	40.618	44.869	48.459	58.321	63.906	67.044	73.809	449.56
11.0000	29.455	27.502	34.513	39.489	43.237	45.874	50.643	54.666	65.439	71.574	74.993	82.423	494.52
12.0000	33.443	31.184	38.949	44.359	48.484	51.372	56.679	61.138	72.851	79.539	83.247	91.377	539.47

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.032	0.082	0.110	0.115	0.125	0.185	0.297	0.427	0.646	0.091	0.073	0.086	0.5619
0.0160	0.041	0.103	0.139	0.145	0.158	0.233	0.371	0.531	0.800	0.115	0.092	0.110	0.7193
0.0200	0.050	0.126	0.171	0.179	0.195	0.286	0.452	0.642	0.962	0.140	0.112	0.136	0.8991
0.0250	0.061	0.155	0.210	0.220	0.240	0.349	0.547	0.770	1.142	0.171	0.136	0.167	1.1239
0.0320	0.075	0.194	0.262	0.274	0.299	0.429	0.667	0.930	1.363	0.211	0.168	0.209	1.4386
0.0400	0.091	0.237	0.318	0.333	0.362	0.511	0.790	1.090	1.587	0.253	0.201	0.254	1.7982
0.0500	0.109	0.290	0.384	0.401	0.436	0.604	0.925	1.265	1.827	0.301	0.239	0.307	2.2478
0.0600	0.126	0.340	0.445	0.464	0.503	0.686	1.045	1.418	2.034	0.345	0.274	0.355	2.6974
0.0700	0.142	0.386	0.502	0.522	0.564	0.761	1.153	1.554	2.217	0.386	0.306	0.400	3.1469
0.0800	0.156	0.429	0.554	0.576	0.620	0.828	1.251	1.677	2.382	0.424	0.336	0.441	3.5965
0.0900	0.170	0.470	0.602	0.626	0.672	0.890	1.341	1.789	2.532	0.460	0.364	0.480	4.0460
0.1000	0.182	0.507	0.647	0.672	0.721	0.948	1.423	1.892	2.670	0.493	0.390	0.515	4.4956
0.1250	0.209	0.589	0.746	0.773	0.827	1.074	1.606	2.121	2.976	0.567	0.448	0.593	5.6195
0.1600	0.241	0.683	0.859	0.891	0.951	1.222	1.820	2.389	3.336	0.656	0.518	0.683	7.1930
0.2000	0.270	0.771	0.966	1.002	1.068	1.364	2.028	2.651	3.689	0.743	0.587	0.768	8.9912
0.2500	0.300	0.863	1.079	1.120	1.193	1.520	2.257	2.941	4.081	0.838	0.662	0.857	11.239
0.3200	0.336	0.973	1.215	1.261	1.346	1.717	2.547	3.311	4.585	0.957	0.755	0.964	14.386
0.4000	0.372	1.081	1.350	1.403	1.502	1.923	2.857	3.709	5.126	1.079	0.851	1.071	17.982
0.5000	0.412	1.202	1.504	1.565	1.682	2.165	3.224	4.180	5.773	1.220	0.962	1.192	22.478
0.6000	0.449	1.314	1.650	1.718	1.853	2.399	3.578	4.634	6.394	1.354	1.066	1.306	26.974
0.7000	0.486	1.422	1.794	1.870	2.023	2.632	3.927	5.081	7.002	1.485	1.169	1.418	31.469
0.8000	0.523	1.528	1.940	2.023	2.194	2.866	4.275	5.528	7.605	1.616	1.271	1.532	35.965
0.9000	0.561	1.635	2.088	2.179	2.369	3.104	4.625	5.974	8.205	1.748	1.374	1.647	40.460
1.0000	0.600	1.743	2.239	2.338	2.548	3.346	4.978	6.419	8.804	1.882	1.478	1.766	44.956
1.2500	0.701	2.019	2.627	2.745	3.005	3.960	5.860	7.519	10.273	2.225	1.747	2.071	56.195
1.6000	0.856	2.424	3.191	3.335	3.667	4.834	7.092	9.040	12.262	2.727	2.145	2.520	71.930
2.0000	1.053	2.916	3.864	4.041	4.451	5.852	8.499	10.761	14.468	3.336	2.636	3.069	89.912
2.5000	1.333	3.584	4.751	4.973	5.470	7.153	10.265	12.896	17.168	4.149	3.302	3.809	112.39
3.2000	1.787	4.621	6.084	6.371	6.981	9.040	12.776	15.912	20.944	5.385	4.331	4.944	143.86
4.0000	2.386	5.958	7.744	8.106	8.838	11.322	15.764	19.482	25.376	6.934	5.638	6.378	179.82
5.0000	3.245	7.853	10.034	10.490	11.370	14.396	19.745	24.203	31.169	9.074	7.460	8.368	224.78
6.0000	4.211	9.979	12.556	13.110	14.143	17.731	24.022	29.251	37.309	11.432	9.477	10.570	269.74
7.0000	5.277	12.324	15.298	15.958	17.153	21.323	28.606	34.633	43.831	14.000	11.679	12.971	314.69
8.0000	6.434	14.877	18.252	19.021	20.394	25.171	33.498	40.352	50.734	16.769	14.060	15.560	359.65
9.0000	7.680	17.626	21.413	22.295	23.858	29.272	38.705	46.418	58.020	19.735	16.616	18.332	404.60
10.0000	9.013	20.552	24.771	25.773	27.533	33.618	44.213	52.827	65.688	22.894	19.341	21.282	449.56
11.0000	10.430	23.648	28.315	29.443	31.413	38.206	50.011	59.569	73.743	26.237	22.229	24.402	494.52
12.0000	11.928	26.909	32.040	33.301	35.491	43.029	56.089	66.634	82.177	29.760	25.276	27.686	539.47

$^{48}_{22}$Ti IONS

ENERGY PER MASS UNIT	ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)												ENERGY FOR A=48
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	5.802	4.800	3.516	2.338	1.899	1.723	1.596	1.477	0.939	0.803	0.738	0.633	0.5993
0.0160	6.581	5.444	3.988	2.652	2.154	1.954	1.811	1.675	1.065	0.911	0.838	0.718	0.7672
0.0200	7.375	6.101	4.470	2.972	2.414	2.190	2.029	1.877	1.193	1.021	0.939	0.805	0.9590
0.0250	8.265	6.837	5.009	3.331	2.705	2.454	2.274	2.104	1.337	1.145	1.054	0.902	1.1987
0.0320	9.363	7.761	5.681	3.778	3.074	2.795	2.579	2.386	1.517	1.301	1.199	1.028	1.5343
0.0400	10.467	8.716	6.367	4.247	3.464	3.158	2.910	2.693	1.713	1.474	1.356	1.165	1.9179
0.0500	11.687	9.796	7.135	4.780	3.917	3.567	3.289	3.047	1.934	1.680	1.548	1.331	2.3974
0.0600	12.780	10.814	7.831	5.278	4.338	3.939	3.641	3.375	2.161	1.879	1.734	1.492	2.8769
0.0700	13.766	11.776	8.472	5.744	4.744	4.304	3.982	3.694	2.372	2.076	1.923	1.652	3.3564
0.0800	14.674	12.715	9.069	6.194	5.124	4.643	4.290	3.990	2.585	2.267	2.095	1.805	3.8358
0.0900	15.516	13.618	9.631	6.626	5.490	4.989	4.594	4.276	2.803	2.451	2.273	1.960	4.3153
0.1000	16.312	14.503	10.163	7.043	5.854	5.305	4.878	4.563	3.008	2.632	2.439	2.104	4.7948
0.1250	18.102	16.702	11.385	8.015	6.694	6.068	5.579	5.226	3.501	3.063	2.863	2.476	5.9935
0.1600	20.065	19.502	12.788	9.156	7.699	6.982	6.407	6.011	4.092	3.594	3.370	2.941	7.6717
0.2000	21.677	21.999	14.003	10.180	8.612	7.800	7.156	6.708	4.649	4.103	3.851	3.361	9.5896
0.2500	23.125	24.324	15.184	11.221	9.535	8.655	7.926	7.425	5.238	4.631	4.343	3.796	11.987
0.3200	24.662	26.794	16.529	12.447	10.628	9.703	8.843	8.265	5.918	5.256	4.934	4.339	15.343
0.4000	26.050	28.919	17.818	13.578	11.689	10.691	9.747	9.105	6.628	5.898	5.541	4.864	19.179
0.5000	27.447	30.844	19.194	14.837	12.860	11.804	10.748	10.019	7.409	6.603	6.209	5.470	23.974
0.6000	28.264	31.832	20.160	15.785	13.749	12.660	11.491	10.705	8.003	7.157	6.743	5.987	28.769
0.7000	28.823	32.355	20.901	16.512	14.443	13.314	12.060	11.245	8.486	7.587	7.169	6.354	33.564
0.8000	29.149	32.497	21.464	17.107	15.004	13.887	12.557	11.698	8.886	7.985	7.534	6.697	38.358
0.9000	29.368	32.453	21.884	17.551	15.472	14.356	12.955	12.058	9.257	8.316	7.856	7.003	43.153
1.0000	29.440	32.235	22.185	17.948	15.840	14.709	13.289	12.357	9.540	8.586	8.120	7.255	47.948
1.2500	29.249	31.324	22.552	18.492	16.463	15.335	13.824	12.832	10.081	9.088	8.592	7.690	59.935
1.6000	28.437	29.807	22.462	18.756	16.757	15.656	14.106	13.028	10.445	9.456	8.940	8.019	76.717
2.0000	27.148	28.332	21.912	18.559	16.675	15.645	14.023	12.994	10.518	9.597	9.071	8.173	95.896
2.5000	25.421	26.637	20.957	18.002	16.284	15.299	13.685	12.700	10.437	9.494	9.012	8.173	119.87
3.2000	23.233	24.542	19.540	17.000	15.476	14.557	13.053	12.076	10.083	9.223	8.754	7.953	153.43
4.0000	21.120	22.491	18.051	15.867	14.531	13.683	12.329	11.372	9.621	8.809	8.394	7.636	191.79
5.0000	19.008	20.376	16.472	14.594	13.441	12.683	11.431	10.575	9.059	8.269	7.923	7.231	239.74
6.0000	17.357	18.662	15.172	13.534	12.487	11.834	10.681	9.877	8.466	7.814	7.480	6.873	287.69
7.0000	15.983	17.266	14.094	12.629	11.670	11.092	10.035	9.288	8.034	7.385	7.089	6.526	335.64
8.0000	14.863	16.089	13.188	11.869	10.985	10.445	9.495	8.770	7.623	7.029	6.752	6.225	383.58
9.0000	13.942	15.084	12.415	11.211	10.391	9.895	9.001	8.330	7.263	6.704	6.443	5.959	431.53
10.0000	13.134	14.215	11.748	10.655	9.868	9.410	8.564	7.953	6.931	6.426	6.191	5.721	479.48
11.0000	12.438	13.476	11.165	10.160	9.423	8.988	8.184	7.626	6.654	6.185	5.973	5.504	527.43
12.0000	11.833	12.813	10.651	9.714	9.022	8.617	7.850	7.328	6.401	5.965	5.752	5.304	575.38

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	13.186	5.626	3.727	3.502	3.112	2.054	1.259	0.893	0.589	4.715	5.999	4.578	0.5993
0.0160	14.678	6.190	4.160	3.913	3.478	2.349	1.456	1.037	0.688	5.317	6.764	5.109	0.7672
0.0200	16.001	6.570	4.546	4.282	3.830	2.659	1.658	1.207	0.807	5.909	7.513	5.583	0.9590
0.0250	17.431	6.917	4.969	4.683	4.237	3.040	1.943	1.417	1.027	6.562	8.350	6.101	1.1987
0.0320	19.374	7.352	5.448	5.187	4.738	3.551	2.307	1.739	1.210	7.386	9.420	6.761	1.5343
0.0400	21.329	7.755	5.940	5.717	5.265	4.113	2.725	2.088	1.483	8.245	10.518	7.449	1.9179
0.0500	23.616	8.305	6.557	6.379	5.936	4.787	3.225	2.511	1.819	9.232	11.772	8.291	2.3974
0.0600	26.154	8.950	7.259	7.016	6.633	5.458	3.712	2.921	2.146	10.188	13.007	9.146	2.8769
0.0700	28.719	9.725	7.963	7.735	7.336	6.116	4.168	3.312	2.448	11.132	14.198	10.064	3.3564
0.0800	31.470	10.566	8.715	8.471	8.062	6.775	4.643	3.700	2.748	12.080	15.390	11.028	3.8358
0.0900	34.190	11.471	9.487	9.246	8.803	7.426	5.104	4.084	3.024	13.021	16.556	12.020	4.3153
0.1000	37.197	12.480	10.346	10.021	9.533	8.080	5.580	4.441	3.293	13.954	17.745	13.039	4.7948
0.1250	45.198	15.085	12.466	12.011	11.476	9.689	6.672	5.317	3.951	16.326	20.777	15.700	5.9935
0.1600	56.652	18.888	15.499	14.937	14.169	11.804	8.095	6.445	4.783	19.528	24.809	19.566	7.6717
0.2000	68.756	22.825	18.694	17.952	16.972	13.793	9.382	7.450	5.503	22.601	28.679	23.595	9.5896
0.2500	82.296	27.240	22.092	21.272	19.860	15.700	10.613	8.321	6.119	25.721	32.600	28.060	11.987
0.3200	98.185	32.050	26.067	24.877	22.761	17.438	11.637	9.075	6.628	29.125	36.993	33.026	15.343
0.4000	111.186	36.706	29.151	27.707	25.088	18.727	12.384	9.640	7.020	31.948	40.679	36.991	19.179
0.5000	122.456	40.691	31.612	30.077	26.910	19.789	13.052	10.192	7.428	34.414	43.934	40.345	23.974
0.6000	128.015	42.940	32.498	30.885	27.599	20.180	13.386	10.443	7.641	35.522	45.581	41.670	28.769
0.7000	128.333	44.102	32.439	30.829	27.590	20.149	13.481	10.492	7.754	35.846	46.066	41.656	33.564
0.8000	125.996	44.217	31.961	30.479	27.238	19.919	13.480	10.518	7.813	35.717	45.848	41.083	38.358
0.9000	122.549	43.680	31.294	29.827	26.523	19.564	13.349	10.548	7.834	35.342	45.321	40.135	43.153
1.0000	119.578	43.239	30.860	29.284	26.090	19.323	13.311	10.605	7.876	34.897	44.703	39.312	47.948
1.2500	112.082	41.969	29.881	28.528	25.348	19.011	13.351	10.780	8.141	33.760	42.871	37.819	59.935
1.6000	101.528	39.758	28.706	27.448	24.573	18.756	13.455	10.939	8.468	32.008	40.050	35.669	76.717
2.0000	90.714	37.184	27.565	26.250	23.752	18.449	13.476	11.065	8.699	30.238	37.250	33.415	95.896
2.5000	79.219	34.056	26.008	24.751	22.844	18.065	13.413	11.170	8.886	28.209	34.140	30.807	119.87
3.2000	68.389	30.384	24.093	22.998	21.357	17.293	13.150	10.942	8.773	25.851	30.814	28.040	153.43
4.0000	59.568	26.932	22.022	21.120	19.856	16.246	12.455	10.488	8.484	23.575	27.780	25.398	191.79
5.0000	52.380	23.802	19.914	19.173	18.069	14.973	11.646	9.834	8.071	21.314	24.955	22.863	239.74
6.0000	47.186	21.454	18.237	17.539	16.614	13.868	10.833	9.210	7.586	19.481	22.743	20.832	287.69
7.0000	43.270	19.648	16.885	16.279	15.391	12.939	10.176	8.682	7.174	18.027	20.987	19.281	335.64
8.0000	40.091	18.133	15.759	15.206	14.362	12.120	9.535	8.176	6.792	16.801	19.518	17.975	383.58
9.0000	37.369	16.984	14.786	14.277	13.507	11.422	9.001	7.735	6.456	15.742	18.262	16.847	431.53
10.0000	35.125	16.035	13.991	13.510	12.781	10.808	8.541	7.342	6.144	14.849	17.198	15.906	479.48
11.0000	33.160	15.207	13.297	12.840	12.147	10.272	8.139	7.000	5.862	14.079	16.290	15.095	527.43
12.0000	31.421	14.475	12.686	12.249	11.588	9.799	7.786	6.700	5.613	13.399	15.476	14.379	575.38

$^{48}_{22}$Ti IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=48
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.092	0.097	0.129	0.183	0.205	0.248	0.271	0.303	0.449	0.527	0.573	0.690	0.5993
0.0160	0.114	0.122	0.161	0.229	0.257	0.309	0.336	0.374	0.555	0.651	0.707	0.849	0.7672
0.0200	0.137	0.148	0.196	0.279	0.315	0.375	0.407	0.451	0.671	0.785	0.852	1.020	0.9590
0.0250	0.164	0.179	0.237	0.338	0.384	0.454	0.491	0.542	0.807	0.943	1.023	1.221	1.1987
0.0320	0.199	0.219	0.291	0.415	0.475	0.557	0.601	0.661	0.986	1.151	1.247	1.483	1.5343
0.0400	0.234	0.261	0.347	0.497	0.571	0.665	0.717	0.787	1.177	1.371	1.484	1.760	1.9179
0.0500	0.275	0.308	0.411	0.591	0.683	0.790	0.851	0.931	1.397	1.624	1.758	2.078	2.3974
0.0600	0.312	0.352	0.470	0.678	0.786	0.905	0.975	1.064	1.601	1.857	2.009	2.370	2.8769
0.0700	0.347	0.392	0.525	0.758	0.882	1.011	1.089	1.187	1.789	2.071	2.240	2.638	3.3564
0.0800	0.380	0.430	0.577	0.833	0.971	1.111	1.196	1.303	1.964	2.270	2.454	2.887	3.8358
0.0900	0.411	0.465	0.626	0.904	1.055	1.204	1.297	1.411	2.127	2.456	2.655	3.119	4.3153
0.1000	0.440	0.498	0.673	0.971	1.134	1.292	1.392	1.513	2.281	2.631	2.843	3.337	4.7948
0.1250	0.509	0.573	0.780	1.124	1.316	1.494	1.611	1.746	2.628	3.027	3.267	3.828	5.9935
0.1600	0.595	0.664	0.916	1.313	1.541	1.743	1.881	2.034	3.051	3.509	3.781	4.419	7.6717
0.2000	0.686	0.755	1.056	1.507	1.769	1.996	2.156	2.327	3.476	3.991	4.294	5.007	9.5896
0.2500	0.792	0.857	1.218	1.727	2.028	2.282	2.467	2.660	3.949	4.526	4.864	5.659	11.987
0.3200	0.932	0.989	1.427	2.007	2.356	2.643	2.862	3.081	4.540	5.193	5.574	6.469	15.343
0.4000	1.083	1.126	1.649	2.299	2.696	3.015	3.270	3.518	5.144	5.871	6.297	7.291	19.179
0.5000	1.262	1.287	1.908	2.637	3.083	3.438	3.734	4.015	5.821	6.631	7.105	8.210	23.974
0.6000	1.434	1.439	2.151	2.950	3.443	3.830	4.165	4.477	6.443	7.328	7.845	9.046	28.769
0.7000	1.602	1.589	2.384	3.247	3.783	4.199	4.571	4.914	7.024	7.978	8.534	9.823	33.564
0.8000	1.767	1.736	2.611	3.532	4.109	4.551	4.961	5.332	7.576	8.594	9.186	10.558	38.358
0.9000	1.931	1.884	2.832	3.808	4.423	4.891	5.337	5.735	8.104	9.182	9.809	11.258	43.153
1.0000	2.094	2.032	3.049	4.078	4.729	5.221	5.702	6.128	8.614	9.749	10.409	11.930	47.948
1.2500	2.502	2.409	3.584	4.735	5.470	6.017	6.585	7.078	9.835	11.103	11.841	13.532	59.935
1.6000	3.083	2.957	4.329	5.634	6.479	7.098	7.784	8.373	11.467	12.910	13.752	15.665	76.717
2.0000	3.772	3.616	5.192	6.661	7.625	8.322	9.146	9.846	13.294	14.921	15.879	18.031	95.896
2.5000	4.684	4.488	6.310	7.972	9.078	9.871	10.875	11.710	15.581	17.430	18.529	20.961	119.87
3.2000	6.065	5.801	7.969	9.890	11.192	12.119	13.386	14.420	18.851	21.016	22.306	25.123	153.43
4.0000	7.798	7.435	10.012	12.227	13.752	14.838	16.411	17.695	22.747	25.273	26.782	30.047	191.79
5.0000	10.194	9.677	12.796	15.381	17.186	18.482	20.454	22.072	27.888	30.896	32.667	36.504	239.74
6.0000	12.837	12.139	15.832	18.796	20.891	22.399	24.797	26.768	33.368	36.866	38.901	43.311	287.69
7.0000	15.718	14.812	19.114	22.467	24.866	26.588	29.432	31.778	39.186	43.183	45.490	50.476	335.64
8.0000	18.832	17.691	22.633	26.386	29.104	31.045	34.348	37.094	45.317	49.841	52.424	58.004	383.58
9.0000	22.165	20.771	26.383	30.546	33.594	35.765	39.537	42.707	51.765	56.830	59.698	65.880	431.53
10.0000	25.710	24.047	30.355	34.935	38.331	40.736	45.001	48.600	58.526	64.139	67.292	74.096	479.48
11.0000	29.463	27.513	34.544	39.545	43.306	45.952	50.731	54.760	65.589	71.747	75.180	82.643	527.43
12.0000	33.417	31.163	38.942	44.373	48.508	51.403	56.715	61.176	72.938	79.643	83.363	91.520	575.38

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.033	0.084	0.112	0.117	0.127	0.187	0.298	0.428	0.644	0.093	0.075	0.088	0.5993
0.0160	0.042	0.105	0.142	0.148	0.161	0.237	0.374	0.533	0.800	0.117	0.094	0.112	0.7672
0.0200	0.051	0.129	0.175	0.183	0.199	0.291	0.457	0.646	0.965	0.144	0.115	0.139	0.9590
0.0250	0.062	0.159	0.215	0.225	0.245	0.355	0.554	0.777	1.149	0.175	0.140	0.171	1.1987
0.0320	0.077	0.199	0.268	0.281	0.306	0.437	0.677	0.941	1.375	0.216	0.172	0.214	1.5343
0.0400	0.094	0.244	0.326	0.341	0.371	0.522	0.803	1.106	1.605	0.260	0.207	0.261	1.9179
0.0500	0.113	0.299	0.394	0.412	0.447	0.618	0.943	1.286	1.851	0.310	0.246	0.315	2.3974
0.0600	0.130	0.350	0.458	0.477	0.516	0.703	1.067	1.444	2.065	0.355	0.282	0.365	2.8769
0.0700	0.146	0.398	0.516	0.537	0.579	0.780	1.179	1.584	2.254	0.398	0.315	0.412	3.3564
0.0800	0.161	0.443	0.570	0.593	0.638	0.850	1.280	1.712	2.424	0.437	0.346	0.454	3.8358
0.0900	0.175	0.485	0.620	0.644	0.692	0.914	1.373	1.827	2.579	0.474	0.375	0.494	4.3153
0.1000	0.188	0.523	0.667	0.692	0.742	0.974	1.458	1.934	2.722	0.508	0.402	0.531	4.7948
0.1250	0.216	0.608	0.769	0.797	0.852	1.104	1.646	2.170	3.038	0.585	0.463	0.612	5.9935
0.1600	0.248	0.705	0.886	0.919	0.980	1.257	1.868	2.448	3.411	0.677	0.535	0.705	7.6717
0.2000	0.279	0.796	0.997	1.034	1.101	1.405	2.083	2.719	3.775	0.767	0.606	0.793	9.5896
0.2500	0.310	0.891	1.113	1.155	1.230	1.565	2.319	3.018	4.180	0.865	0.683	0.885	11.987
0.3200	0.347	1.005	1.253	1.301	1.388	1.768	2.618	3.399	4.699	0.987	0.780	0.995	15.343
0.4000	0.384	1.116	1.392	1.447	1.548	1.980	2.937	3.809	5.254	1.113	0.879	1.104	19.179
0.5000	0.425	1.240	1.550	1.613	1.732	2.229	3.313	4.292	5.917	1.258	0.992	1.228	23.974
0.6000	0.463	1.355	1.699	1.770	1.908	2.468	3.676	4.756	6.553	1.394	1.099	1.345	28.769
0.7000	0.501	1.465	1.847	1.925	2.082	2.706	4.032	5.213	7.175	1.529	1.204	1.460	33.564
0.8000	0.538	1.573	1.996	2.081	2.257	2.945	4.388	5.670	7.791	1.663	1.308	1.576	38.358
0.9000	0.577	1.683	2.147	2.240	2.435	3.188	4.745	6.125	8.403	1.798	1.413	1.694	43.153
1.0000	0.616	1.793	2.301	2.402	2.617	3.434	5.105	6.578	9.013	1.934	1.519	1.815	47.948
1.2500	0.720	2.074	2.695	2.816	3.082	4.058	6.002	7.697	10.508	2.283	1.793	2.125	59.935
1.6000	0.877	2.484	3.267	3.415	3.753	4.946	7.252	9.239	12.525	2.792	2.197	2.581	76.717
2.0000	1.076	2.982	3.948	4.128	4.546	5.975	8.674	10.980	14.756	3.408	2.693	3.136	95.896
2.5000	1.359	3.655	4.843	5.068	5.575	7.287	10.456	13.134	17.480	4.228	3.365	3.883	119.87
3.2000	1.815	4.699	6.184	6.475	7.094	9.186	12.982	16.169	21.280	5.471	4.400	5.025	153.43
4.0000	2.416	6.041	7.850	8.217	8.958	11.476	15.981	19.751	25.727	7.026	5.712	6.463	191.79
5.0000	3.276	7.937	10.142	10.602	11.492	14.553	19.965	24.476	31.525	9.153	7.535	8.455	239.74
6.0000	4.242	10.061	12.661	13.220	14.263	17.884	24.238	29.519	37.658	11.523	9.550	10.655	287.69
7.0000	5.304	12.399	15.396	16.060	17.264	21.467	28.809	34.886	44.163	14.084	11.746	13.049	335.64
8.0000	6.456	14.941	18.338	19.110	20.491	25.298	33.680	40.581	51.036	16.841	14.117	15.627	383.58
9.0000	7.695	17.675	21.481	22.366	23.936	29.376	38.859	46.614	58.282	19.791	16.659	18.384	431.53
10.0000	9.020	20.582	24.816	25.820	27.587	33.694	44.331	52.979	65.899	22.929	19.366	21.315	479.48
11.0000	10.425	23.654	28.333	29.463	31.437	38.247	50.084	59.670	73.892	26.247	22.232	24.410	527.43
12.0000	11.911	26.887	32.026	33.287	35.479	43.028	56.109	66.674	82.254	29.739	25.253	27.666	575.38

$^{51}_{23}V$ IONS

ENERGY PER MASS UNIT | ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM) | ENERGY FOR A=51

MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	5.919	4.897	3.587	2.386	1.937	1.758	1.629	1.507	0.958	0.820	0.753	0.646	0.6368
0.0160	6.718	5.558	4.072	2.708	2.199	1.995	1.849	1.710	1.087	0.930	0.855	0.733	0.8151
0.0200	7.533	6.232	4.565	3.036	2.465	2.237	2.073	1.918	1.219	1.043	0.959	0.822	1.0189
0.0250	8.447	6.988	5.119	3.404	2.764	2.508	2.324	2.150	1.367	1.170	1.078	0.921	1.2736
0.0320	9.576	7.937	5.810	3.864	3.143	2.859	2.638	2.440	1.551	1.331	1.226	1.052	1.6302
0.0400	10.711	8.919	6.515	4.346	3.544	3.231	2.977	2.756	1.753	1.508	1.388	1.192	2.0378
0.0500	11.966	10.030	7.305	4.895	4.011	3.653	3.368	3.119	1.980	1.720	1.585	1.362	2.5472
0.0600	13.091	11.078	8.022	5.407	4.444	4.035	3.730	3.457	2.214	1.925	1.777	1.528	3.0566
0.0700	14.108	12.068	8.682	5.886	4.862	4.410	4.080	3.785	2.431	2.127	1.971	1.693	3.5661
0.0800	15.043	13.035	9.297	6.350	5.253	4.760	4.398	4.091	2.650	2.324	2.148	1.850	4.0755
0.0900	15.911	13.965	9.876	6.795	5.630	5.116	4.711	4.385	2.874	2.514	2.331	2.010	4.5850
0.1000	16.732	14.876	10.425	7.224	6.005	5.442	5.004	4.681	3.086	2.700	2.502	2.158	5.0944
0.1250	18.581	17.144	11.686	8.227	6.872	6.229	5.726	5.364	3.594	3.144	2.939	2.542	6.3680
0.1600	20.622	20.044	13.143	9.411	7.912	7.176	6.585	6.177	4.206	3.693	3.463	3.023	8.1510
0.2000	22.322	22.654	14.420	10.483	8.868	8.032	7.369	6.907	4.787	4.225	3.965	3.461	10.189
0.2500	23.865	25.103	15.670	11.580	9.841	8.932	8.180	7.663	5.406	4.779	4.482	3.917	12.736
0.3200	25.512	27.718	17.099	12.876	10.995	10.037	9.148	8.550	6.122	5.438	5.104	4.489	16.302
0.4000	27.006	29.980	18.472	14.076	12.118	11.083	10.104	9.439	6.872	6.114	5.745	5.043	20.378
0.5000	28.514	32.044	19.940	15.414	13.360	12.263	11.166	10.409	7.697	6.859	6.451	5.683	25.472
0.6000	29.400	33.112	20.970	16.420	14.302	13.169	11.953	11.135	8.325	7.444	7.015	6.228	30.566
0.7000	30.017	33.695	21.767	17.196	15.041	13.866	12.560	11.711	8.837	7.901	7.466	6.617	35.661
0.8000	30.390	33.881	22.378	17.835	15.642	14.479	13.091	12.196	9.265	8.325	7.855	6.982	40.755
0.9000	30.650	33.870	22.839	18.317	16.147	14.982	13.521	12.584	9.661	8.679	8.199	7.308	45.850
1.0000	30.755	33.675	23.176	18.750	16.548	15.366	13.883	12.909	9.966	8.969	8.483	7.579	50.944
1.2500	30.625	32.797	23.612	19.362	17.237	16.056	14.474	13.435	10.555	9.516	8.996	8.052	63.680
1.6000	29.853	31.292	23.581	19.690	17.591	16.436	14.809	13.677	10.965	9.928	9.385	8.418	81.510
2.0000	28.572	29.818	23.061	19.533	17.549	16.465	14.759	13.675	11.069	10.101	9.547	8.602	101.89
2.5000	26.822	28.104	22.112	18.994	17.181	16.142	14.439	13.400	11.012	10.017	9.508	8.624	127.36
3.2000	24.580	25.965	20.672	17.985	16.373	15.401	13.809	12.776	10.667	9.757	9.261	8.414	163.02
4.0000	22.397	23.852	19.143	16.826	15.410	14.510	13.074	12.060	10.203	9.342	8.901	8.097	203.78
5.0000	20.204	21.657	17.508	15.512	14.287	13.481	12.151	11.240	9.629	8.789	8.421	7.686	254.72
6.0000	18.483	19.872	16.156	14.412	13.297	12.602	11.374	10.518	9.015	8.321	7.965	7.319	305.66
7.0000	17.046	18.414	15.031	13.468	12.446	11.830	10.702	9.906	8.568	7.876	7.561	6.960	356.61
8.0000	15.872	17.181	14.083	12.675	11.731	11.154	10.140	9.365	8.140	7.506	7.211	6.647	407.55
9.0000	14.905	16.127	13.273	11.985	11.109	10.578	9.623	8.906	7.765	7.167	6.889	6.371	458.50
10.0000	14.056	15.212	12.572	11.403	10.561	10.070	9.165	8.511	7.418	6.877	6.626	6.123	509.44
11.0000	13.323	14.435	11.960	10.883	10.094	9.628	8.766	8.168	7.128	6.626	6.398	5.896	560.38
12.0000	12.686	13.737	11.419	10.414	9.672	9.238	8.416	7.856	6.863	6.395	6.166	5.687	611.33

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	13.452	5.740	3.803	3.573	3.175	2.095	1.284	0.911	0.601	4.811	6.120	4.671	0.6368
0.0160	14.984	6.319	4.247	3.994	3.550	2.398	1.486	1.059	0.703	5.427	6.906	5.216	0.8151
0.0200	16.344	6.711	4.643	4.374	3.913	2.716	1.694	1.233	0.825	6.036	7.675	5.702	1.0189
0.0250	17.815	7.070	5.078	4.786	4.331	3.107	1.986	1.449	1.049	6.706	8.534	6.235	1.2736
0.0320	19.813	7.519	5.572	5.305	4.846	3.631	2.359	1.778	1.238	7.553	9.634	6.914	1.6302
0.0400	21.826	7.935	6.079	5.851	5.388	4.209	2.788	2.137	1.518	8.437	10.763	7.623	2.0378
0.0500	24.181	8.503	6.714	6.531	6.078	4.902	3.302	2.571	1.863	9.453	12.054	8.489	2.5472
0.0600	26.792	9.169	7.436	7.187	6.794	5.591	3.802	2.992	2.198	10.436	13.324	9.369	3.0566
0.0700	29.431	9.967	8.161	7.926	7.518	6.268	4.271	3.395	2.509	11.408	14.551	10.314	3.5661
0.0800	32.262	10.831	8.935	8.684	8.265	6.945	4.760	3.793	2.817	12.384	15.778	11.306	4.0755
0.0900	35.061	11.763	9.728	9.481	9.027	7.615	5.235	4.188	3.101	13.353	16.978	12.326	4.5850
0.1000	38.155	12.802	10.613	10.279	9.779	8.288	5.723	4.556	3.378	14.313	18.202	13.375	5.0944
0.1250	46.394	15.484	12.796	12.329	11.780	9.945	6.848	5.457	4.055	16.758	21.327	16.115	6.3680
0.1600	58.225	19.413	15.930	15.352	14.563	12.131	8.320	6.624	4.916	20.070	25.498	20.109	8.1510
0.2000	70.802	23.504	19.251	18.486	17.477	14.204	9.661	7.671	5.667	23.274	29.532	24.297	10.189
0.2500	84.930	28.112	22.800	21.953	20.496	16.203	10.953	8.587	6.315	26.545	33.643	28.958	12.736
0.3200	101.570	33.156	26.966	25.735	23.546	18.040	12.038	9.388	6.857	30.129	38.268	34.165	16.302
0.4000	115.266	38.052	30.220	28.724	26.009	19.414	12.838	9.993	7.278	33.120	42.172	38.348	20.378
0.5000	127.218	42.273	32.841	31.246	27.956	20.558	13.559	10.588	7.717	35.753	45.643	41.914	25.472
0.6000	133.161	44.667	33.804	32.126	28.708	20.991	13.924	10.863	7.948	36.950	47.414	43.346	30.566
0.7000	133.649	45.928	33.782	32.106	28.732	20.983	14.040	10.927	8.076	37.330	47.974	43.382	35.661
0.8000	131.360	46.099	33.321	31.777	28.398	20.767	14.054	10.965	8.146	37.237	47.800	42.832	40.755
0.9000	127.898	45.587	32.660	31.130	27.681	20.418	13.932	11.008	8.176	36.885	47.300	41.887	45.850
1.0000	124.921	45.171	32.238	30.593	27.255	20.187	13.906	11.078	8.228	36.457	46.701	41.069	50.944
1.2500	117.352	43.942	31.286	29.869	26.540	19.905	13.978	11.287	8.524	35.347	44.886	39.597	63.680
1.6000	106.586	41.738	30.136	28.816	25.798	19.690	14.125	11.484	8.890	33.603	42.045	37.447	81.510
2.0000	95.472	39.134	29.011	27.627	24.998	19.417	14.182	11.646	9.155	31.824	39.203	35.168	101.89
2.5000	83.584	35.932	27.441	26.114	24.102	19.061	14.152	11.786	9.376	29.763	36.021	32.505	127.36
3.2000	72.354	32.146	25.489	24.331	22.595	18.295	13.913	11.577	9.282	27.350	32.600	29.665	163.02
4.0000	63.170	28.561	23.354	22.397	21.057	17.228	13.208	11.122	8.997	25.000	29.460	26.934	203.78
5.0000	55.675	25.299	21.167	20.379	19.206	15.915	12.378	10.452	8.579	22.655	26.525	24.301	254.72
6.0000	50.247	22.845	[illegible]	18.677	17.691	14.767	11.536	9.807	8.078	20.745	24.219	22.183	305.66
7.0000	46.147	20.954	16.008	17.361	16.414	13.799	10.853	9.259	7.651	19.225	22.382	20.563	356.61
8.0000	42.812	19.364	[illegible]	16.238	15.336	12.942	10.182	8.731	7.253	17.942	20.843	19.195	407.55
9.0000	39.951	18.157	15.808	15.264	14.441	12.211	9.623	8.269	6.902	16.830	19.524	18.011	458.50
10.0000	37.591	17.161	14.974	14.458	13.679	11.566	9.140	7.858	6.575	15.891	18.406	17.023	509.44
11.0000	35.520	16.289	14.244	13.754	13.012	11.003	8.719	7.499	6.279	15.081	17.449	16.169	560.38
12.0000	33.686	15.518	13.600	13.132	12.424	10.505	8.347	7.182	6.018	14.365	16.592	15.415	611.33

$^{51}_{23}V$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=51 MEV
0.0125	0.094	0.099	0.131	0.185	0.206	0.250	0.273	0.305	0.450	0.528	0.573	0.689	0.6368
0.0160	0.117	0.124	0.164	0.232	0.260	0.312	0.340	0.377	0.558	0.654	0.709	0.852	0.8151
0.0200	0.141	0.151	0.200	0.283	0.319	0.380	0.412	0.456	0.675	0.790	0.857	1.025	1.0189
0.0250	0.169	0.183	0.242	0.344	0.389	0.461	0.498	0.549	0.815	0.951	1.031	1.230	1.2736
0.0320	0.204	0.224	0.297	0.423	0.483	0.566	0.611	0.671	0.998	1.164	1.260	1.498	1.6302
0.0400	0.241	0.268	0.355	0.508	0.582	0.678	0.731	0.800	1.194	1.389	1.503	1.782	2.0378
0.0500	0.283	0.317	0.422	0.605	0.697	0.806	0.868	0.949	1.420	1.649	1.784	2.108	2.5472
0.0600	0.322	0.362	0.483	0.694	0.803	0.925	0.996	1.086	1.629	1.898	2.042	2.407	3.0566
0.0700	0.358	0.404	0.540	0.777	0.902	1.035	1.114	1.214	1.823	2.109	2.280	2.684	3.5661
0.0800	0.392	0.442	0.593	0.854	0.994	1.137	1.224	1.332	2.003	2.314	2.500	2.940	4.0755
0.0900	0.424	0.479	0.644	0.927	1.081	1.234	1.328	1.444	2.172	2.506	2.707	3.179	4.5850
0.1000	0.454	0.513	0.692	0.996	1.163	1.325	1.426	1.549	2.330	2.686	2.901	3.403	5.0944
0.1250	0.525	0.590	0.803	1.155	1.350	1.533	1.652	1.790	2.688	3.094	3.338	3.910	6.3680
0.1600	0.614	0.684	0.943	1.350	1.582	1.790	1.931	2.087	3.125	3.592	3.868	4.519	8.1510
0.2000	0.708	0.778	1.088	1.550	1.818	2.051	2.214	2.390	3.563	4.088	4.397	5.125	10.189
0.2500	0.817	0.884	1.255	1.777	2.084	2.346	2.535	2.732	4.050	4.639	4.984	5.796	12.736
0.3200	0.961	1.018	1.470	2.065	2.421	2.716	2.940	3.165	4.657	5.324	5.713	6.628	16.302
0.4000	1.117	1.159	1.697	2.365	2.769	3.098	3.358	3.612	5.276	6.020	6.454	7.471	20.378
0.5000	1.300	1.323	1.962	2.707	3.166	3.531	3.833	4.121	5.969	6.797	7.280	8.410	25.472
0.6000	1.476	1.479	2.211	3.027	3.534	3.932	4.274	4.594	6.604	7.503	8.030	9.258	30.566
0.7000	1.647	1.632	2.449	3.330	3.881	4.308	4.689	5.039	7.198	8.167	8.734	10.051	35.661
0.8000	1.815	1.782	2.680	3.621	4.213	4.668	5.086	5.465	7.761	8.794	9.399	10.800	40.755
0.9000	1.982	1.933	2.905	3.903	4.533	5.013	5.469	5.876	8.299	9.393	10.033	11.513	45.850
1.0000	2.148	2.084	3.126	4.177	4.845	5.349	5.841	6.276	8.818	9.971	10.644	12.197	50.944
1.2500	2.562	2.466	3.670	4.845	5.598	6.158	6.737	7.241	10.057	11.347	12.099	13.825	63.680
1.6000	3.151	3.021	4.424	5.756	6.619	7.254	7.953	8.554	11.711	13.177	14.036	15.986	81.510
2.0000	3.848	3.688	5.297	6.794	7.778	8.491	9.329	10.042	13.559	15.210	16.185	18.377	101.89
2.5000	4.767	4.567	6.424	8.115	9.243	10.052	11.073	11.922	15.864	17.740	18.856	21.332	127.36
3.2000	6.156	5.887	8.092	10.044	11.369	12.313	13.598	14.647	19.153	21.345	22.655	25.517	163.02
4.0000	7.894	7.526	10.141	12.388	13.936	15.041	16.632	17.932	23.060	25.615	27.145	30.455	203.78
5.0000	10.292	9.770	12.927	15.545	17.373	18.686	20.678	22.311	28.204	31.242	33.033	36.918	254.72
6.0000	12.931	12.228	15.959	18.955	21.072	22.599	25.015	27.001	33.677	37.204	39.259	43.715	305.66
7.0000	15.804	14.893	19.231	22.615	25.036	26.774	29.636	31.996	39.477	43.502	45.828	50.858	356.61
8.0000	18.903	17.760	22.735	26.517	29.255	31.212	34.529	37.289	45.581	50.131	52.732	58.353	407.55
9.0000	22.217	20.822	26.463	30.652	33.720	35.905	39.690	42.870	51.993	57.080	59.964	66.185	458.50
10.0000	25.739	24.076	30.409	35.012	38.425	40.843	45.117	48.724	58.709	64.340	67.508	74.345	509.44
11.0000	29.463	27.516	34.565	39.587	43.362	46.019	50.803	54.836	65.717	71.890	75.335	82.827	560.38
12.0000	33.383	31.135	38.926	44.374	48.519	51.423	56.736	61.198	73.004	79.719	83.448	91.628	611.33

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.034	0.086	0.114	0.119	0.129	0.189	0.299	0.429	0.642	0.095	0.076	0.089	0.6368
0.0160	0.043	0.108	0.144	0.151	0.164	0.240	0.377	0.536	0.800	0.120	0.096	0.114	0.8151
0.0200	0.052	0.133	0.178	0.186	0.203	0.295	0.461	0.651	0.967	0.147	0.118	0.142	1.0189
0.0250	0.064	0.163	0.219	0.229	0.250	0.361	0.560	0.784	1.154	0.179	0.143	0.175	1.2736
0.0320	0.080	0.205	0.274	0.287	0.313	0.445	0.687	0.952	1.386	0.222	0.177	0.219	1.6302
0.0400	0.096	0.251	0.334	0.349	0.380	0.533	0.816	1.121	1.621	0.267	0.212	0.267	2.0378
0.0500	0.116	0.307	0.405	0.422	0.458	0.632	0.960	1.307	1.875	0.318	0.253	0.323	2.5472
0.0600	0.134	0.360	0.470	0.489	0.529	0.720	1.088	1.469	2.094	0.365	0.290	0.375	3.0566
0.0700	0.151	0.410	0.530	0.552	0.595	0.799	1.203	1.614	2.289	0.409	0.325	0.423	3.5661
0.0800	0.166	0.456	0.586	0.609	0.655	0.871	1.308	1.745	2.464	0.450	0.357	0.467	4.0755
0.0900	0.180	0.499	0.638	0.662	0.711	0.938	1.404	1.865	2.624	0.488	0.386	0.508	4.5850
0.1000	0.194	0.539	0.686	0.711	0.762	0.999	1.492	1.975	2.772	0.523	0.414	0.546	5.0944
0.1250	0.223	0.627	0.791	0.820	0.876	1.134	1.686	2.219	3.099	0.603	0.477	0.630	6.3680
0.1600	0.256	0.727	0.913	0.946	1.009	1.292	1.915	2.506	3.483	0.698	0.552	0.726	8.1510
0.2000	0.287	0.821	1.027	1.065	1.134	1.444	2.137	2.785	3.858	0.791	0.625	0.817	10.189
0.2500	0.320	0.919	1.147	1.190	1.267	1.610	2.381	3.093	4.275	0.892	0.705	0.912	12.736
0.3200	0.358	1.036	1.291	1.339	1.427	1.818	2.687	3.485	4.808	1.018	0.804	1.025	16.302
0.4000	0.396	1.151	1.433	1.489	1.592	2.036	3.014	3.901	5.378	1.147	0.905	1.137	20.378
0.5000	0.438	1.277	1.595	1.659	1.780	2.290	3.400	4.395	6.057	1.294	1.021	1.264	25.472
0.6000	0.477	1.395	1.747	1.820	1.960	2.535	3.770	4.870	6.706	1.434	1.131	1.384	30.566
0.7000	0.515	1.507	1.898	1.978	2.137	2.778	4.134	5.337	7.342	1.571	1.237	1.501	35.661
0.8000	0.553	1.618	2.050	2.137	2.315	3.022	4.497	5.802	7.969	1.708	1.344	1.619	40.755
0.9000	0.593	1.729	2.204	2.299	2.497	3.269	4.861	6.265	8.593	1.845	1.451	1.739	45.850
1.0000	0.633	1.841	2.361	2.464	2.682	3.520	5.226	6.727	9.214	1.984	1.559	1.862	50.944
1.2500	0.738	2.126	2.761	2.885	3.155	4.154	6.138	7.863	10.732	2.338	1.837	2.177	63.680
1.6000	0.897	2.542	3.341	3.491	3.835	5.053	7.405	9.426	12.776	2.855	2.246	2.639	81.510
2.0000	1.099	3.045	4.029	4.213	4.636	6.093	8.843	11.186	15.032	3.477	2.748	3.200	101.89
2.5000	1.384	3.724	4.931	5.160	5.673	7.416	10.639	13.358	17.778	4.304	3.425	3.953	127.36
3.2000	1.842	4.773	6.279	6.575	7.201	9.325	13.179	16.410	21.598	5.554	4.466	5.101	163.02
4.0000	2.445	6.119	7.951	8.322	9.071	11.622	16.186	20.002	26.059	7.113	5.782	6.544	203.78
5.0000	3.306	8.017	10.245	10.709	11.607	14.702	20.174	24.731	31.862	9.256	7.606	8.538	254.72
6.0000	4.270	10.138	12.760	13.323	14.373	18.028	24.441	29.767	37.986	11.639	9.618	10.734	305.66
7.0000	5.329	12.469	15.487	16.154	17.365	21.600	28.998	35.117	44.471	14.162	11.808	13.122	356.61
8.0000	6.476	15.000	18.415	19.191	20.578	25.415	33.848	40.787	51.314	16.907	14.169	15.688	407.55
9.0000	7.708	17.719	21.540	22.429	24.004	29.469	38.997	46.786	58.519	19.841	16.696	18.429	458.50
10.0000	9.024	20.606	24.853	25.860	27.630	33.758	44.432	53.109	66.085	22.957	19.385	21.340	509.44
11.0000	10.418	23.654	28.343	29.474	31.450	38.276	50.141	59.749	74.016	26.250	22.228	24.412	560.38
12.0000	11.892	26.860	32.005	33.266	35.459	43.016	56.115	66.693	82.307	29.712	25.224	27.640	611.33

$^{52}_{24}Cr$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=52 MEV
0.0125	6.029	4.988	3.654	2.430	1.973	1.790	1.659	1.535	0.976	0.835	0.767	0.658	0.6493
0.0160	6.847	5.664	4.150	2.760	2.241	2.033	1.884	1.743	1.108	0.948	0.871	0.747	0.8311
0.0200	7.682	6.355	4.656	3.096	2.514	2.281	2.114	1.955	1.243	1.064	0.978	0.838	1.0388
0.0250	8.618	7.130	5.223	3.474	2.821	2.559	2.371	2.194	1.395	1.194	1.100	0.940	1.2985
0.0320	9.776	8.103	5.932	3.945	3.209	2.919	2.693	2.492	1.584	1.358	1.252	1.074	1.6621
0.0400	10.942	9.111	6.655	4.439	3.621	3.301	3.042	2.815	1.790	1.541	1.418	1.218	2.0776
0.0500	12.231	10.252	7.467	5.003	4.099	3.733	3.442	3.188	2.024	1.758	1.620	1.393	2.5970
0.0600	13.387	11.328	8.203	5.529	4.544	4.126	3.814	3.535	2.264	1.969	1.817	1.563	3.1165
0.0700	14.432	12.345	8.881	6.022	4.974	4.512	4.174	3.872	2.487	2.176	2.016	1.732	3.6359
0.0800	15.394	13.339	9.514	6.498	5.376	4.871	4.500	4.186	2.712	2.379	2.198	1.893	4.1553
0.0900	16.287	14.295	10.110	6.956	5.763	5.237	4.822	4.489	2.942	2.573	2.386	2.057	4.6747
0.1000	17.132	15.232	10.674	7.397	6.148	5.572	5.124	4.793	3.160	2.765	2.562	2.210	5.1941
0.1250	19.041	17.568	11.976	8.431	7.042	6.383	5.868	5.497	3.682	3.221	3.012	2.605	6.4926
0.1600	21.159	20.566	13.486	9.656	8.118	7.363	6.756	6.338	4.315	3.789	3.553	3.102	8.3106
0.2000	22.948	23.289	14.824	10.777	9.117	8.257	7.575	7.101	4.922	4.343	4.077	3.558	10.388
0.2500	24.588	25.863	16.144	11.931	10.139	9.202	8.427	7.895	5.570	4.924	4.617	4.036	12.985
0.3200	26.347	28.624	17.659	13.297	11.354	10.366	9.447	8.829	6.322	5.615	5.271	4.635	16.621
0.4000	27.947	31.025	19.116	14.566	12.540	11.469	10.456	9.768	7.111	6.327	5.945	5.219	20.776
0.5000	29.568	33.228	20.677	15.983	13.853	12.716	11.579	10.793	7.981	7.113	6.689	5.893	25.970
0.6000	30.524	34.378	21.772	17.047	14.848	13.673	12.410	11.561	8.643	7.729	7.283	6.466	31.165
0.7000	31.199	35.022	22.624	17.873	15.633	14.412	13.054	12.172	9.185	8.213	7.760	6.878	36.359
0.8000	31.619	35.251	23.283	18.557	16.275	15.064	13.621	12.689	9.639	8.661	8.172	7.264	41.553
0.9000	31.920	35.274	23.785	19.076	16.816	15.603	14.081	13.106	10.061	9.038	8.539	7.611	46.747
1.0000	32.058	35.102	24.158	19.544	17.249	16.017	14.471	13.456	10.388	9.349	8.842	7.900	51.941
1.2500	31.987	34.256	24.662	20.223	18.004	16.770	15.118	14.033	11.024	9.939	9.396	8.410	64.926
1.6000	31.258	32.764	24.690	20.616	18.419	17.209	15.505	14.320	11.481	10.395	9.827	8.814	83.106
2.0000	29.986	31.293	24.202	20.499	18.418	17.280	15.489	14.352	11.617	10.600	10.020	9.027	103.88
2.5000	28.216	29.566	23.262	19.982	18.074	16.981	15.190	14.097	11.584	10.538	10.003	9.072	129.85
3.2000	25.925	27.386	21.804	18.970	17.269	16.244	14.565	13.475	11.251	10.292	9.768	8.874	166.21
4.0000	23.678	25.216	20.237	17.789	16.291	15.340	13.822	12.749	10.786	9.876	9.410	8.560	207.76
5.0000	21.408	22.947	18.551	16.436	15.137	14.284	12.874	11.910	10.203	9.312	8.923	8.144	259.70
6.0000	19.619	21.094	17.149	15.297	14.114	13.376	12.073	11.164	9.569	8.832	8.455	7.769	311.65
7.0000	18.120	19.574	15.979	14.317	13.230	12.575	11.377	10.530	9.108	8.373	8.037	7.398	363.59
8.0000	16.893	18.287	14.989	13.490	12.486	11.871	10.792	9.968	8.664	7.989	7.674	7.075	415.53
9.0000	15.882	17.183	14.142	12.770	11.837	11.271	10.253	9.489	8.273	7.637	7.340	6.788	467.47
10.0000	14.991	16.224	13.409	12.162	11.263	10.740	9.775	9.078	7.911	7.334	7.066	6.530	519.41
11.0000	14.222	15.409	12.766	11.617	10.775	10.277	9.358	8.719	7.609	7.072	6.830	6.294	571.35
12.0000	13.553	14.675	12.198	11.125	10.332	9.869	8.990	8.393	7.331	6.831	6.587	6.075	623.29

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	13.702	5.846	3.873	3.639	3.234	2.134	1.308	0.928	0.612	4.900	6.234	4.757	0.6493
0.0160	15.271	6.440	4.328	4.071	3.619	2.444	1.515	1.079	0.716	5.532	7.038	5.316	0.8311
0.0200	16.667	6.844	4.735	4.460	3.990	2.770	1.727	1.257	0.841	6.155	7.826	5.815	1.0388
0.0250	18.177	7.213	5.182	4.884	4.419	3.171	2.027	1.478	1.071	6.843	8.707	6.362	1.2985
0.0320	20.229	7.676	5.689	5.416	4.947	3.708	2.408	1.815	1.264	7.712	9.836	7.059	1.6621
0.0400	22.296	8.106	6.210	5.977	5.504	4.299	2.849	2.183	1.551	8.619	10.995	7.787	2.0776
0.0500	24.715	8.691	6.862	6.675	6.212	5.010	3.375	2.628	1.904	9.662	12.320	8.677	2.5970
0.0600	27.397	9.376	7.604	7.350	6.948	5.717	3.888	3.060	2.248	10.672	13.625	9.581	3.1165
0.0700	30.108	10.196	8.348	8.109	7.691	6.412	4.370	3.473	2.567	11.670	14.885	10.551	3.6359
0.0800	33.014	11.084	9.143	8.886	8.458	7.107	4.871	3.882	2.883	12.673	16.146	11.569	4.1553
0.0900	35.890	12.041	9.958	9.705	9.240	7.795	5.358	4.287	3.174	13.668	17.379	12.617	4.6747
0.1000	39.067	13.108	10.866	10.525	10.012	8.486	5.860	4.665	3.458	14.656	18.637	13.695	5.1941
0.1250	47.543	15.868	13.113	12.634	12.071	10.191	7.018	5.593	4.156	17.173	21.855	16.514	6.4926
0.1600	59.741	19.918	16.345	15.751	14.942	12.447	8.536	6.797	5.044	20.593	26.162	20.633	8.3106
0.2000	72.786	24.163	19.790	19.004	17.967	14.602	9.932	7.886	5.826	23.926	30.360	24.979	10.388
0.2500	87.502	28.963	23.490	22.618	21.117	16.693	11.285	8.847	6.506	27.348	34.662	29.835	12.985
0.3200	104.892	34.240	27.848	26.576	24.316	18.630	12.432	9.695	7.081	31.114	39.520	35.282	16.621
0.4000	119.281	39.378	31.273	29.725	26.915	20.090	13.285	10.342	7.532	34.274	43.641	39.684	20.776
0.5000	131.918	43.835	34.055	32.401	28.989	21.318	14.060	10.979	8.002	37.074	47.329	43.463	25.970
0.6000	138.251	46.374	35.096	33.354	29.806	21.794	14.457	11.278	8.252	38.362	49.226	45.002	31.165
0.7000	138.912	47.737	35.113	33.371	29.864	21.810	14.593	11.357	8.394	38.800	49.864	45.090	36.359
0.8000	136.672	47.963	34.669	33.062	29.546	21.607	14.622	11.409	8.475	38.743	49.733	44.564	41.553
0.9000	133.198	47.475	34.013	32.419	28.828	21.264	14.509	11.465	8.515	38.413	49.259	43.622	46.747
1.0000	130.213	47.085	33.604	31.889	28.410	21.042	14.495	11.548	8.576	38.001	48.679	42.809	51.941
1.2500	122.572	45.897	32.678	31.198	27.720	20.790	14.600	11.789	8.903	36.920	46.883	41.359	64.926
1.6000	111.599	43.701	31.554	30.171	27.011	20.616	14.789	12.024	9.308	35.183	44.022	39.208	83.106
2.0000	100.196	41.071	30.446	28.994	26.235	20.378	14.884	12.222	9.608	33.399	41.143	36.908	103.88
2.5000	87.929	37.800	28.868	27.472	25.355	20.052	14.887	12.398	9.863	31.310	37.893	34.195	129.85
3.2000	76.315	33.906	26.885	25.664	23.832	19.297	14.674	12.210	9.790	28.847	34.385	31.289	166.21
4.0000	66.783	30.194	24.689	23.678	22.261	18.214	13.964	11.758	9.512	26.430	31.145	28.474	207.76
5.0000	58.991	26.806	22.428	21.593	20.350	16.863	13.115	11.075	9.090	24.005	28.104	25.748	259.70
6.0000	53.334	24.249	20.613	19.824	18.778	15.674	12.245	10.410	8.575	22.020	25.707	23.546	311.65
7.0000	49.054	22.274	19.142	18.455	17.449	14.668	11.536	9.843	8.133	20.437	23.792	21.859	363.59
8.0000	45.567	20.610	17.912	17.282	16.323	13.775	10.837	9.293	7.719	19.096	22.184	20.430	415.53
9.0000	42.568	19.346	16.843	16.263	15.387	13.011	10.253	8.811	7.354	17.932	20.803	19.191	467.47
10.0000	40.092	18.303	15.970	15.420	14.588	12.336	9.748	8.380	7.013	16.948	19.630	18.155	519.41
11.0000	37.916	17.388	15.205	14.681	13.890	11.745	9.307	8.004	6.702	16.098	18.626	17.260	571.35
12.0000	35.986	16.578	14.528	14.028	13.272	11.223	8.917	7.673	6.429	15.346	17.724	16.468	623.29

$^{52}_{24}Cr$ IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=52
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.093	0.097	0.129	0.181	0.202	0.245	0.267	0.299	0.440	0.516	0.560	0.674	0.6493
0.0160	0.115	0.122	0.161	0.228	0.255	0.306	0.333	0.370	0.547	0.640	0.694	0.834	0.8311
0.0200	0.139	0.149	0.197	0.278	0.313	0.373	0.404	0.448	0.662	0.774	0.840	1.005	1.0388
0.0250	0.167	0.181	0.239	0.338	0.382	0.453	0.489	0.540	0.800	0.934	1.011	1.207	1.2985
0.0320	0.202	0.222	0.293	0.417	0.474	0.557	0.601	0.660	0.981	1.143	1.237	1.471	1.6621
0.0400	0.239	0.264	0.351	0.500	0.573	0.668	0.719	0.788	1.174	1.366	1.478	1.752	2.0776
0.0500	0.281	0.313	0.417	0.596	0.687	0.795	0.856	0.936	1.398	1.623	1.756	2.075	2.5970
0.0600	0.319	0.358	0.477	0.685	0.792	0.912	0.982	1.072	1.605	1.860	2.011	2.371	3.1165
0.0700	0.355	0.400	0.534	0.767	0.889	1.022	1.099	1.198	1.797	2.079	2.246	2.645	3.6359
0.0800	0.389	0.438	0.587	0.845	0.981	1.124	1.209	1.316	1.976	2.282	2.465	2.899	4.1553
0.0900	0.421	0.474	0.638	0.917	1.067	1.219	1.312	1.427	2.143	2.472	2.670	3.136	4.6747
0.1000	0.451	0.508	0.685	0.986	1.149	1.310	1.410	1.531	2.300	2.651	2.862	3.358	5.1941
0.1250	0.521	0.585	0.796	1.143	1.335	1.517	1.634	1.770	2.656	3.056	3.296	3.861	6.4926
0.1600	0.610	0.679	0.935	1.337	1.565	1.772	1.910	2.065	3.089	3.549	3.822	4.465	8.3106
0.2000	0.703	0.772	1.078	1.535	1.799	2.030	2.192	2.365	3.523	4.041	4.346	5.065	10.388
0.2500	0.811	0.876	1.243	1.760	2.062	2.322	2.509	2.704	4.005	4.586	4.927	5.730	12.985
0.3200	0.953	1.009	1.456	2.044	2.395	2.688	2.909	3.131	4.605	5.263	5.647	6.551	16.621
0.4000	1.105	1.148	1.680	2.339	2.738	3.064	3.321	3.572	5.215	5.948	6.377	7.381	20.776
0.5000	1.286	1.310	1.941	2.677	3.128	3.490	3.788	4.073	5.896	6.713	7.190	8.306	25.970
0.6000	1.459	1.463	2.185	2.991	3.490	3.884	4.221	4.537	6.515	7.406	7.927	9.139	31.165
0.7000	1.627	1.613	2.419	3.288	3.831	4.254	4.629	4.975	7.098	8.058	8.617	9.917	36.359
0.8000	1.792	1.760	2.645	3.573	4.156	4.606	5.018	5.392	7.649	8.673	9.269	10.651	41.553
0.9000	1.955	1.908	2.866	3.849	4.470	4.945	5.393	5.795	8.176	9.260	9.890	11.349	46.747
1.0000	2.118	2.055	3.082	4.118	4.775	5.273	5.757	6.186	8.684	9.825	10.488	12.019	51.941
1.2500	2.522	2.429	3.613	4.770	5.510	6.064	6.633	7.129	9.896	11.170	11.910	13.609	64.926
1.6000	3.096	2.970	4.349	5.659	6.506	7.132	7.818	8.409	11.508	12.954	13.798	15.716	83.106
2.0000	3.774	3.618	5.197	6.668	7.633	8.335	9.157	9.856	13.305	14.931	15.889	18.042	103.88
2.5000	4.666	4.472	6.291	7.950	9.055	9.850	10.849	11.681	15.541	17.386	18.480	20.909	129.85
3.2000	6.010	5.749	7.905	9.817	11.113	12.038	13.292	14.318	18.725	20.875	22.157	24.959	166.21
4.0000	7.688	7.331	9.884	12.080	13.591	14.671	16.222	17.489	22.497	24.998	26.492	29.727	207.76
5.0000	9.998	9.493	12.568	15.121	16.901	18.184	20.119	21.708	27.452	30.418	32.164	35.953	259.70
6.0000	12.535	11.856	15.483	18.399	20.458	21.944	24.289	26.216	32.713	36.150	38.149	42.487	311.65
7.0000	15.292	14.414	18.623	21.912	24.262	25.952	28.724	31.010	38.281	42.194	44.454	49.343	363.59
8.0000	18.263	17.162	21.982	25.652	28.306	30.206	33.414	36.084	44.132	48.549	51.071	56.527	415.53
9.0000	21.436	20.094	25.551	29.612	32.581	34.699	38.355	41.427	50.270	55.202	57.996	64.026	467.47
10.0000	24.804	23.206	29.325	33.781	37.081	39.422	43.546	47.026	56.693	62.145	65.211	71.830	519.41
11.0000	28.363	26.493	33.297	38.153	41.798	44.368	48.979	52.867	63.391	69.360	72.690	79.936	571.35
12.0000	32.106	29.948	37.460	42.724	46.723	49.527	54.644	58.940	70.347	76.835	80.436	88.338	623.29

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.034	0.084	0.111	0.116	0.126	0.185	0.293	0.419	0.626	0.093	0.075	0.088	0.6493
0.0160	0.042	0.106	0.142	0.148	0.161	0.235	0.369	0.524	0.782	0.118	0.095	0.112	0.8311
0.0200	0.052	0.131	0.175	0.183	0.199	0.289	0.452	0.637	0.946	0.145	0.116	0.139	1.0388
0.0250	0.063	0.161	0.216	0.226	0.246	0.354	0.549	0.769	1.131	0.177	0.141	0.172	1.2985
0.0320	0.079	0.202	0.270	0.283	0.308	0.438	0.674	0.935	1.360	0.219	0.175	0.216	1.6621
0.0400	0.095	0.248	0.330	0.345	0.374	0.525	0.803	1.102	1.592	0.263	0.210	0.264	2.0776
0.0500	0.115	0.304	0.399	0.417	0.452	0.623	0.945	1.286	1.843	0.314	0.250	0.319	2.5970
0.0600	0.133	0.357	0.464	0.483	0.522	0.710	1.072	1.447	2.061	0.361	0.287	0.371	3.1165
0.0700	0.149	0.406	0.524	0.545	0.587	0.789	1.186	1.591	2.254	0.405	0.321	0.418	3.6359
0.0800	0.164	0.452	0.580	0.602	0.647	0.861	1.290	1.721	2.428	0.445	0.353	0.462	4.1553
0.0900	0.179	0.495	0.631	0.655	0.703	0.927	1.385	1.839	2.586	0.483	0.383	0.503	4.6747
0.1000	0.192	0.535	0.679	0.704	0.754	0.987	1.473	1.949	2.733	0.518	0.411	0.541	5.1941
0.1250	0.221	0.622	0.784	0.812	0.867	1.122	1.666	2.191	3.057	0.597	0.473	0.624	6.4926
0.1600	0.254	0.721	0.904	0.937	0.999	1.279	1.893	2.476	3.439	0.692	0.547	0.720	8.3106
0.2000	0.285	0.815	1.018	1.055	1.123	1.430	2.113	2.753	3.811	0.784	0.620	0.809	10.388
0.2500	0.317	0.912	1.136	1.178	1.254	1.593	2.354	3.058	4.224	0.884	0.699	0.903	12.985
0.3200	0.355	1.027	1.277	1.325	1.413	1.799	2.657	3.445	4.750	1.007	0.797	1.015	16.621
0.4000	0.392	1.140	1.418	1.473	1.575	2.014	2.977	3.855	5.312	1.134	0.897	1.126	20.776
0.5000	0.433	1.265	1.577	1.640	1.761	2.264	3.357	4.342	5.980	1.280	1.011	1.251	25.970
0.6000	0.472	1.380	1.727	1.798	1.937	2.505	3.720	4.808	6.618	1.418	1.118	1.368	31.165
0.7000	0.509	1.490	1.875	1.953	2.111	2.743	4.078	5.266	7.242	1.552	1.223	1.483	36.359
0.8000	0.547	1.599	2.023	2.110	2.286	2.982	4.433	5.722	7.857	1.686	1.327	1.599	41.553
0.9000	0.585	1.707	2.174	2.268	2.464	3.224	4.789	6.176	8.468	1.820	1.432	1.717	46.747
1.0000	0.625	1.817	2.328	2.430	2.645	3.470	5.147	6.627	9.076	1.956	1.538	1.837	51.941
1.2500	0.727	2.096	2.719	2.840	3.107	4.089	6.038	7.738	10.559	2.302	1.809	2.145	64.926
1.6000	0.882	2.501	3.284	3.432	3.770	4.966	7.273	9.262	12.552	2.806	2.209	2.595	83.106
2.0000	1.079	2.991	3.953	4.133	4.549	5.978	8.671	10.974	14.746	3.411	2.696	3.141	103.88
2.5000	1.355	3.649	4.829	5.053	5.556	7.262	10.414	13.081	17.410	4.213	3.354	3.871	129.85
3.2000	1.799	4.665	6.134	6.422	7.034	9.109	12.873	16.034	21.108	5.423	4.361	4.983	166.21
4.0000	2.381	5.965	7.747	8.108	8.839	11.327	15.777	19.503	25.414	6.929	5.631	6.376	207.76
5.0000	3.210	7.793	9.957	10.408	11.282	14.293	19.618	24.058	31.004	8.993	7.389	8.296	259.70
6.0000	4.137	9.832	12.375	12.921	13.942	17.491	23.720	28.900	36.892	11.255	9.323	10.408	311.65
7.0000	5.153	12.069	14.992	15.639	16.814	20.919	28.094	34.035	43.116	13.705	11.425	12.699	363.59
8.0000	6.253	14.495	17.799	18.549	19.893	24.576	32.742	39.469	49.676	16.336	13.688	15.159	415.53
9.0000	7.433	17.098	20.791	21.649	23.173	28.458	37.672	45.213	56.573	19.145	16.107	17.784	467.47
10.0000	8.691	19.859	23.960	24.931	26.641	32.560	42.870	51.260	63.809	22.126	18.679	20.568	519.41
11.0000	10.024	22.772	27.295	28.384	30.292	36.877	48.326	57.605	71.389	25.272	21.396	23.503	571.35
12.0000	11.430	25.833	30.791	32.005	34.119	41.403	54.030	64.235	79.305	28.578	24.256	26.585	623.29

$^{55}_{25}$Mn IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=55 MEV
0.0125	6.134	5.075	3.718	2.472	2.008	1.822	1.688	1.561	0.993	0.850	0.781	0.669	0.6867
0.0160	6.971	5.767	4.225	2.810	2.281	2.070	1.918	1.774	1.128	0.965	0.887	0.760	0.8790
0.0200	7.825	6.474	4.743	3.154	2.561	2.324	2.153	1.992	1.266	1.084	0.996	0.854	1.0988
0.0250	8.784	7.267	5.324	3.540	2.875	2.609	2.417	2.236	1.421	1.216	1.121	0.958	1.3734
0.0320	9.970	8.264	6.050	4.023	3.273	2.977	2.747	2.541	1.615	1.385	1.277	1.095	1.7580
0.0400	11.165	9.297	6.791	4.530	3.694	3.368	3.104	2.873	1.827	1.572	1.447	1.243	2.1975
0.0500	12.487	10.467	7.623	5.108	4.185	3.812	3.514	3.255	2.066	1.795	1.654	1.422	2.7469
0.0600	13.673	11.570	8.378	5.647	4.642	4.214	3.896	3.611	2.312	2.011	1.856	1.596	3.2963
0.0700	14.746	12.614	9.075	6.153	5.082	4.610	4.265	3.957	2.541	2.223	2.060	1.770	3.8457
0.0800	15.734	13.634	9.725	6.642	5.494	4.979	4.600	4.279	2.771	2.431	2.246	1.935	4.3950
0.0900	16.652	14.615	10.336	7.111	5.892	5.354	4.930	4.589	3.008	2.631	2.439	2.103	4.9444
0.1000	17.520	15.577	10.916	7.565	6.288	5.698	5.240	4.901	3.231	2.827	2.620	2.260	5.4938
0.1250	19.483	17.976	12.253	8.626	7.205	6.531	6.004	5.624	3.768	3.296	3.082	2.665	6.8673
0.1600	21.677	21.069	13.816	9.892	8.317	7.543	6.922	6.493	4.421	3.882	3.640	3.178	8.7901
0.2000	23.555	23.905	15.216	11.062	9.358	8.475	7.776	7.289	5.052	4.458	4.184	3.652	10.988
0.2500	25.293	26.605	16.608	12.273	10.430	9.466	8.669	8.121	5.730	5.065	4.750	4.152	13.735
0.3200	27.165	29.514	18.207	13.710	11.707	10.688	9.741	9.104	6.518	5.790	5.435	4.779	17.580
0.4000	28.873	32.053	19.749	15.049	12.955	11.849	10.803	10.092	7.347	6.537	6.142	5.391	21.975
0.5000	30.608	34.396	21.404	16.545	14.341	13.163	11.986	11.173	8.262	7.363	6.924	6.100	27.469
0.6000	31.636	35.630	22.565	17.668	15.389	14.171	12.862	11.982	8.958	8.011	7.548	6.702	32.963
0.7000	32.370	36.337	23.473	18.544	16.220	14.952	13.544	12.629	9.530	8.521	8.051	7.136	38.457
0.8000	32.837	36.609	24.180	19.272	16.902	15.645	14.145	13.178	10.011	8.995	8.487	7.544	43.950
0.9000	33.179	36.665	24.723	19.828	17.479	16.219	14.636	13.623	10.458	9.395	8.876	7.911	49.444
1.0000	33.350	36.516	25.132	20.332	17.944	16.662	15.054	13.998	10.807	9.726	9.198	8.218	54.938
1.2500	33.338	35.702	25.704	21.077	18.764	17.478	15.756	14.625	11.490	10.359	9.793	8.765	68.672
1.6000	32.650	34.224	25.790	21.535	19.240	17.976	16.196	14.958	11.992	10.858	10.265	9.207	87.901
2.0000	31.391	32.759	25.335	21.459	19.280	18.089	16.215	15.024	12.161	11.097	10.489	9.450	109.88
2.5000	29.605	31.020	24.406	20.965	18.964	17.817	15.937	14.790	12.154	11.056	10.495	9.518	137.34
3.2000	27.270	28.806	22.935	19.953	18.165	17.087	15.321	14.174	11.834	10.825	10.275	9.335	175.80
4.0000	24.962	26.583	21.335	18.753	17.174	16.172	14.572	13.441	11.371	10.411	9.921	9.025	219.75
5.0000	22.618	24.245	19.599	17.365	15.993	15.092	13.602	12.583	10.780	9.839	9.427	8.604	274.69
6.0000	20.764	22.324	18.150	16.190	14.937	14.157	12.778	11.816	10.128	9.347	8.948	8.222	329.63
7.0000	19.204	20.745	16.935	15.174	14.022	13.328	12.058	11.160	9.653	8.874	8.518	7.841	384.57
8.0000	17.925	19.405	15.905	14.315	13.249	12.597	11.452	10.577	9.193	8.478	8.144	7.507	439.50
9.0000	16.870	18.252	15.022	13.565	12.574	11.973	10.891	10.080	8.788	8.112	7.797	7.211	494.44
10.0000	15.938	17.250	14.256	12.930	11.975	11.419	10.393	9.651	8.411	7.798	7.513	6.943	549.38
11.0000	15.133	16.396	13.584	12.362	11.465	10.935	9.957	9.278	8.096	7.526	7.268	6.697	604.32
12.0000	14.431	15.627	12.990	11.847	11.002	10.509	9.573	8.937	7.807	7.274	7.014	6.469	659.26

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	13.942	5.949	3.941	3.703	3.290	2.171	1.331	0.944	0.623	4.986	6.343	4.841	0.6867
0.0160	15.548	6.557	4.407	4.145	3.684	2.489	1.542	1.098	0.729	5.632	7.166	5.412	0.8790
0.0200	16.979	6.972	4.823	4.543	4.064	2.822	1.760	1.281	0.857	6.270	7.972	5.924	1.0988
0.0250	18.527	7.352	5.281	4.978	4.504	3.231	2.066	1.507	1.091	6.974	8.875	6.484	1.3734
0.0320	20.630	7.829	5.802	5.524	5.046	3.781	2.456	1.851	1.289	7.865	10.031	7.199	1.7580
0.0400	22.750	8.272	6.336	6.098	5.616	4.387	2.907	2.227	1.582	8.795	11.219	7.946	2.1975
0.0500	25.233	8.873	7.006	6.815	6.343	5.115	3.446	2.683	1.944	9.864	12.578	8.858	2.7469
0.0600	27.983	9.576	7.767	7.507	7.096	5.840	3.971	3.125	2.296	10.900	13.916	9.786	3.2963
0.0700	30.763	10.418	8.530	8.285	7.859	6.552	4.465	3.548	2.623	11.924	15.209	10.781	3.8457
0.0800	33.744	11.329	9.345	9.083	8.645	7.264	4.979	3.968	2.947	12.953	16.502	11.825	4.3950
0.0900	36.694	12.310	10.181	9.923	9.447	7.969	5.478	4.383	3.246	13.975	17.768	12.900	4.9444
0.1000	39.953	13.405	11.112	10.763	10.239	8.678	5.993	4.770	3.537	14.988	19.059	14.005	5.4938
0.1250	48.646	16.236	13.418	12.927	12.352	10.428	7.181	5.722	4.252	17.572	22.363	16.898	6.8673
0.1600	61.203	20.406	16.745	16.137	15.308	12.752	8.745	6.963	5.167	21.096	26.802	21.138	8.7901
0.2000	74.712	24.803	20.314	19.507	18.442	14.988	10.195	8.095	5.980	24.559	31.163	25.639	10.988
0.2500	90.013	29.794	24.164	23.267	21.723	17.172	11.609	9.101	6.693	28.133	35.656	30.691	13.735
0.3200	108.151	35.304	28.713	27.402	25.071	19.209	12.818	9.996	7.301	32.081	40.748	36.378	17.580
0.4000	123.234	40.683	32.309	30.710	27.807	20.756	13.726	10.684	7.781	35.410	45.087	40.999	21.975
0.5000	136.557	45.376	35.252	33.540	30.008	22.067	14.555	11.365	8.283	38.377	48.994	44.991	27.469
0.6000	143.287	48.063	36.375	34.569	30.891	22.587	14.983	11.689	8.552	39.759	51.019	46.642	32.963
0.7000	144.126	49.529	36.430	34.623	30.985	22.628	15.140	11.784	8.709	40.257	51.735	46.782	38.457
0.8000	141.938	49.811	36.004	34.336	30.685	22.439	15.185	11.848	8.802	40.236	51.649	46.281	43.950
0.9000	138.451	49.348	35.354	33.698	29.965	22.103	15.081	11.917	8.851	39.928	51.202	45.343	49.444
1.0000	135.460	48.982	34.958	33.174	29.555	21.890	15.079	12.013	8.922	39.532	50.640	44.533	54.938
1.2500	127.747	47.834	34.057	32.515	28.891	21.668	15.217	12.286	9.279	38.478	48.863	43.105	68.672
1.6000	116.572	45.649	32.960	31.516	28.215	21.535	15.448	12.560	9.723	36.751	45.984	40.955	87.901
2.0000	104.888	42.994	31.872	30.352	27.464	21.332	15.581	12.794	10.058	34.963	43.070	38.636	109.88
2.5000	92.255	39.660	30.288	28.824	26.603	21.038	15.620	13.009	10.348	32.851	39.758	35.877	137.34
3.2000	80.272	35.664	28.279	26.994	25.068	20.297	15.435	12.844	10.298	30.343	36.168	32.912	175.80
4.0000	70.404	31.831	26.028	24.962	23.468	19.201	14.721	12.395	10.027	27.863	32.834	30.018	219.75
5.0000	62.326	28.321	23.696	22.814	21.501	17.816	13.857	11.701	9.604	25.362	29.693	27.204	274.69
6.0000	56.446	25.664	21.816	20.981	19.874	16.589	12.959	11.017	9.075	23.305	27.207	24.920	329.63
7.0000	51.990	23.607	20.288	19.560	18.493	15.546	12.227	10.432	8.620	21.660	25.216	23.167	384.57
8.0000	48.352	21.870	19.007	18.339	17.321	14.617	11.500	9.861	8.191	20.263	23.540	21.679	439.50
9.0000	45.217	20.550	17.892	17.276	16.344	13.820	10.891	9.359	7.812	19.048	22.098	20.385	494.44
10.0000	42.625	19.459	16.979	16.394	15.511	13.116	10.364	8.910	7.456	18.020	20.871	19.303	549.38
11.0000	40.345	18.502	16.179	15.622	14.780	12.497	9.903	8.517	7.132	17.130	19.819	18.366	604.32
12.0000	38.319	17.653	15.471	14.938	14.133	11.950	9.495	8.170	6.846	16.341	18.874	17.536	659.26

$^{55}_{25}Mn$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=55 MEV
0.0125	0.095	0.099	0.131	0.183	0.204	0.247	0.269	0.300	0.441	0.516	0.560	0.673	0.6867
0.0160	0.118	0.125	0.164	0.231	0.257	0.309	0.336	0.373	0.549	0.642	0.696	0.835	0.8790
0.0200	0.143	0.152	0.201	0.282	0.316	0.378	0.409	0.452	0.667	0.779	0.844	1.009	1.0988
0.0250	0.171	0.185	0.244	0.344	0.388	0.459	0.496	0.546	0.807	0.941	1.019	1.215	1.3734
0.0320	0.207	0.227	0.300	0.425	0.482	0.566	0.610	0.670	0.992	1.155	1.249	1.485	1.7580
0.0400	0.245	0.271	0.359	0.510	0.583	0.680	0.732	0.801	1.190	1.383	1.495	1.771	2.1975
0.0500	0.289	0.322	0.427	0.609	0.700	0.811	0.872	0.953	1.419	1.646	1.779	2.102	2.7469
0.0600	0.329	0.368	0.489	0.701	0.808	0.932	1.002	1.093	1.632	1.889	2.041	2.406	3.2963
0.0700	0.366	0.411	0.548	0.786	0.909	1.044	1.122	1.223	1.829	2.114	2.283	2.687	3.8457
0.0800	0.400	0.450	0.603	0.865	1.003	1.149	1.235	1.344	2.013	2.323	2.508	2.948	4.3950
0.0900	0.433	0.488	0.655	0.940	1.092	1.248	1.342	1.458	2.185	2.519	2.719	3.192	4.9444
0.1000	0.464	0.523	0.704	1.011	1.176	1.341	1.442	1.566	2.347	2.703	2.917	3.421	5.4938
0.1250	0.537	0.602	0.818	1.173	1.368	1.554	1.673	1.813	2.713	3.120	3.364	3.938	6.8673
0.1600	0.629	0.699	0.961	1.373	1.605	1.817	1.958	2.117	3.160	3.628	3.906	4.561	8.7901
0.2000	0.725	0.795	1.109	1.577	1.846	2.084	2.248	2.425	3.606	4.135	4.445	5.178	10.988
0.2500	0.836	0.902	1.279	1.808	2.117	2.384	2.574	2.773	4.102	4.695	5.041	5.861	13.735
0.3200	0.981	1.038	1.497	2.100	2.458	2.759	2.985	3.212	4.717	5.388	5.780	6.703	17.580
0.4000	1.138	1.181	1.727	2.402	2.810	3.145	3.407	3.664	5.342	6.091	6.528	7.554	21.975
0.5000	1.322	1.346	1.992	2.747	3.208	3.580	3.885	4.175	6.038	6.872	7.359	8.499	27.469
0.6000	1.499	1.503	2.241	3.068	3.575	3.982	4.323	4.646	6.670	7.580	8.111	9.349	32.963
0.7000	1.670	1.655	2.480	3.372	3.922	4.359	4.739	5.092	7.264	8.244	8.815	10.142	38.457
0.8000	1.839	1.806	2.710	3.662	4.254	4.718	5.136	5.518	7.826	8.872	9.479	10.891	43.950
0.9000	2.005	1.956	2.935	3.943	4.573	5.063	5.517	5.928	8.363	9.469	10.112	11.601	49.444
1.0000	2.170	2.106	3.155	4.216	4.883	5.397	5.887	6.325	8.880	10.043	10.719	12.282	54.938
1.2500	2.581	2.486	3.694	4.879	5.630	6.200	6.777	7.283	10.110	11.409	12.164	13.898	68.672
1.6000	3.163	3.034	4.440	5.779	6.640	7.283	7.979	8.581	11.745	13.219	14.078	16.034	87.901
2.0000	3.848	3.690	5.298	6.800	7.780	8.500	9.333	10.045	13.562	15.218	16.192	18.386	109.88
2.5000	4.749	4.551	6.402	8.094	9.215	10.029	11.040	11.886	15.819	17.695	18.808	21.279	137.34
3.2000	6.102	5.837	8.027	9.974	11.286	12.232	13.500	14.541	19.024	21.209	22.509	25.357	175.80
4.0000	7.787	7.426	10.015	12.247	13.775	14.877	16.442	17.726	22.813	25.349	26.863	30.146	219.75
5.0000	10.102	9.592	12.704	15.294	17.093	18.396	20.348	21.954	27.779	30.781	32.548	36.384	274.69
6.0000	12.639	11.956	15.619	18.573	20.650	22.158	24.519	26.463	33.041	36.514	38.534	42.921	329.63
7.0000	15.393	14.511	18.755	22.081	24.449	26.160	28.948	31.251	38.601	42.550	44.830	49.767	384.57
8.0000	18.356	17.251	22.105	25.811	28.483	30.403	33.626	36.310	44.436	48.888	51.430	56.932	439.50
9.0000	21.517	20.172	25.661	29.756	32.741	34.879	38.548	41.634	50.551	55.516	58.328	64.402	494.44
10.0000	24.869	23.270	29.417	33.906	37.221	39.579	43.714	47.206	56.944	62.426	65.509	72.170	549.38
11.0000	28.408	26.538	33.367	38.253	41.911	44.498	49.117	53.014	63.604	69.600	72.947	80.230	604.32
12.0000	32.127	29.971	37.504	42.794	46.804	49.624	54.745	59.049	70.516	77.028	80.644	88.579	659.26

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.035	0.086	0.113	0.118	0.128	0.187	0.294	0.419	0.624	0.095	0.077	0.089	0.6867
0.0160	0.043	0.109	0.144	0.151	0.163	0.238	0.371	0.526	0.781	0.120	0.097	0.114	0.8790
0.0200	0.053	0.134	0.179	0.187	0.203	0.293	0.456	0.641	0.948	0.148	0.119	0.142	1.0988
0.0250	0.065	0.165	0.220	0.230	0.250	0.360	0.555	0.775	1.136	0.181	0.145	0.176	1.3734
0.0320	0.081	0.208	0.276	0.289	0.314	0.446	0.683	0.945	1.369	0.224	0.179	0.221	1.7580
0.0400	0.098	0.255	0.337	0.352	0.383	0.535	0.815	1.116	1.607	0.270	0.215	0.270	2.1975
0.0500	0.118	0.312	0.409	0.427	0.462	0.636	0.962	1.305	1.864	0.323	0.257	0.327	2.7469
0.0600	0.136	0.367	0.476	0.495	0.535	0.726	1.092	1.470	2.088	0.371	0.295	0.380	3.2963
0.0700	0.153	0.418	0.538	0.559	0.602	0.807	1.210	1.618	2.287	0.416	0.330	0.430	3.8457
0.0800	0.169	0.465	0.595	0.618	0.664	0.881	1.317	1.753	2.466	0.458	0.363	0.475	4.3950
0.0900	0.184	0.509	0.648	0.672	0.721	0.949	1.415	1.875	2.629	0.497	0.394	0.517	4.9444
0.1000	0.197	0.550	0.697	0.723	0.774	1.012	1.505	1.988	2.780	0.533	0.422	0.556	5.4938
0.1250	0.227	0.640	0.805	0.835	0.891	1.150	1.704	2.238	3.114	0.615	0.487	0.641	6.8673
0.1600	0.262	0.743	0.930	0.964	1.026	1.312	1.939	2.531	3.508	0.712	0.563	0.740	8.7901
0.2000	0.293	0.839	1.047	1.085	1.154	1.468	2.166	2.816	3.891	0.807	0.638	0.833	10.988
0.2500	0.326	0.939	1.169	1.212	1.289	1.636	2.413	3.130	4.315	0.910	0.719	0.929	13.735
0.3200	0.365	1.057	1.313	1.363	1.452	1.846	2.724	3.527	4.855	1.037	0.819	1.043	17.580
0.4000	0.403	1.173	1.458	1.514	1.619	2.066	3.052	3.947	5.430	1.167	0.922	1.157	21.975
0.5000	0.445	1.301	1.620	1.685	1.808	2.322	3.440	4.445	6.114	1.316	1.039	1.285	27.469
0.6000	0.484	1.418	1.773	1.846	1.989	2.568	3.811	4.921	6.765	1.456	1.148	1.404	32.963
0.7000	0.523	1.531	1.924	2.005	2.166	2.810	4.176	5.389	7.401	1.593	1.255	1.522	38.457
0.8000	0.561	1.641	2.076	2.164	2.344	3.054	4.538	5.853	8.029	1.730	1.361	1.640	43.950
0.9000	0.600	1.752	2.230	2.325	2.525	3.300	4.901	6.315	8.651	1.867	1.468	1.760	49.444
1.0000	0.640	1.864	2.386	2.490	2.710	3.550	5.265	6.774	9.269	2.005	1.576	1.882	54.938
1.2500	0.744	2.147	2.783	2.907	3.179	4.180	6.170	7.903	10.775	2.356	1.851	2.195	68.672
1.6000	0.902	2.558	3.356	3.506	3.851	5.068	7.421	9.448	12.795	2.867	2.256	2.651	87.901
2.0000	1.100	3.053	4.033	4.216	4.639	6.092	8.836	11.179	15.014	3.479	2.749	3.203	109.88
2.5000	1.379	3.718	4.916	5.144	5.655	7.387	10.595	13.305	17.703	4.289	3.413	3.940	137.34
3.2000	1.826	4.740	6.230	6.522	7.143	9.247	13.070	16.279	21.426	5.507	4.427	5.059	175.80
4.0000	2.411	6.045	7.851	8.216	8.956	11.474	15.986	19.763	25.752	7.019	5.703	6.458	219.75
5.0000	3.241	7.877	10.065	10.521	11.404	14.447	19.836	24.328	31.353	9.088	7.464	8.383	274.69
6.0000	4.168	9.917	12.484	13.034	14.064	17.646	23.939	29.170	37.242	11.350	9.399	10.495	329.63
7.0000	5.183	12.151	15.097	15.748	16.932	21.069	28.307	34.298	43.458	13.797	11.498	12.783	384.57
8.0000	6.280	14.570	17.897	18.651	20.004	24.716	32.943	39.718	50.000	16.421	13.754	15.236	439.50
9.0000	7.456	17.163	20.878	21.739	23.271	28.584	37.854	45.440	56.872	19.219	16.165	17.851	494.44
10.0000	8.708	19.912	24.031	25.005	26.723	32.666	43.028	51.459	64.074	22.186	18.724	20.622	549.38
11.0000	10.033	22.809	27.347	28.439	30.353	36.959	48.453	57.768	71.611	25.314	21.426	23.541	604.32
12.0000	11.431	25.850	30.821	32.037	34.156	41.456	54.120	64.356	79.476	28.599	24.268	26.603	659.26

$^{56}_{26}Fe$ IONS

ENERGY PER MASS UNIT	ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)												ENERGY FOR A=56
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	6.235	5.158	3.778	2.513	2.040	1.851	1.715	1.587	1.009	0.863	0.793	0.680	0.6992
0.0160	7.089	5.865	4.296	2.857	2.320	2.105	1.951	1.804	1.147	0.982	0.902	0.773	0.8950
0.0200	7.962	6.587	4.825	3.209	2.606	2.364	2.191	2.027	1.288	1.103	1.013	0.869	1.1187
0.0250	8.942	7.397	5.419	3.604	2.926	2.655	2.460	2.276	1.447	1.238	1.141	0.975	1.3984
0.0320	10.155	8.417	6.162	4.098	3.334	3.032	2.798	2.588	1.645	1.411	1.300	1.115	1.7899
0.0400	11.378	9.475	6.921	4.616	3.765	3.433	3.163	2.927	1.862	1.602	1.474	1.266	2.2374
0.0500	12.732	10.672	7.773	5.208	4.267	3.886	3.583	3.319	2.106	1.830	1.687	1.450	2.7967
0.0600	13.947	11.802	8.546	5.760	4.735	4.299	3.974	3.683	2.359	2.051	1.893	1.628	3.3561
0.0700	15.047	12.871	9.260	6.278	5.186	4.704	4.352	4.037	2.593	2.269	2.102	1.806	3.9155
0.0800	16.061	13.917	9.926	6.780	5.608	5.082	4.695	4.368	2.829	2.482	2.293	1.975	4.4748
0.0900	17.002	14.923	10.554	7.261	6.016	5.467	5.034	4.686	3.071	2.686	2.491	2.148	5.0341
0.1000	17.893	15.909	11.148	7.726	6.421	5.819	5.351	5.006	3.300	2.887	2.676	2.308	5.5935
0.1250	19.908	18.368	12.521	8.815	7.362	6.674	6.135	5.747	3.850	3.368	3.149	2.723	6.9919
0.1600	22.176	21.555	14.134	10.120	8.509	7.717	7.081	6.643	4.523	3.972	3.724	3.251	8.9496
0.2000	24.144	24.503	15.597	11.339	9.592	8.687	7.970	7.471	5.178	4.570	4.289	3.743	11.187
0.2500	25.982	27.330	17.060	12.607	10.714	9.724	8.905	8.342	5.886	5.203	4.879	4.265	13.984
0.3200	27.968	30.386	18.745	14.115	12.053	11.004	10.029	9.373	6.711	5.961	5.595	4.921	17.899
0.4000	29.784	33.064	20.372	15.524	13.364	12.223	11.144	10.410	7.579	6.743	6.336	5.562	22.374
0.5000	31.633	35.549	22.121	17.100	14.821	13.605	12.388	11.547	8.539	7.610	7.156	6.305	27.967
0.6000	32.736	36.869	23.350	18.283	15.924	14.664	13.309	12.399	9.270	8.289	7.810	6.935	33.561
0.7000	33.530	37.639	24.315	19.209	16.801	15.488	14.030	13.081	9.872	8.826	8.340	7.392	39.155
0.8000	34.045	37.956	25.070	19.981	17.524	16.220	14.666	13.663	10.379	9.326	8.799	7.822	44.748
0.9000	34.428	38.045	25.654	20.575	18.137	16.829	15.187	14.135	10.852	9.749	9.210	8.209	50.341
1.0000	34.631	37.920	26.098	21.113	18.634	17.303	15.632	14.536	11.222	10.100	9.552	8.534	55.935
1.2500	34.678	37.137	26.737	21.924	19.518	18.181	16.390	15.213	11.951	10.775	10.187	9.117	69.919
1.6000	34.033	35.673	26.882	22.447	20.054	18.737	16.882	15.592	12.500	11.317	10.699	9.597	89.496
2.0000	32.786	34.215	26.462	22.413	20.137	18.894	16.935	15.692	12.702	11.590	10.955	9.870	111.87
2.5000	30.987	32.469	25.546	21.944	19.849	18.649	16.682	15.481	12.722	11.572	10.985	9.963	139.84
3.2000	28.613	30.225	24.065	20.936	19.059	17.928	16.075	14.872	12.417	11.359	10.781	9.794	178.99
4.0000	26.249	27.954	22.435	19.720	18.060	17.005	15.323	14.134	11.958	10.948	10.432	9.490	223.74
5.0000	23.835	25.549	20.654	18.299	16.854	15.903	14.334	13.260	11.360	10.368	9.934	9.067	279.67
6.0000	21.917	23.565	19.158	17.089	15.767	14.944	13.487	12.472	10.690	9.867	9.445	8.679	335.61
7.0000	20.299	21.928	17.900	16.039	14.821	14.088	12.745	11.796	10.203	9.380	9.004	8.288	391.54
8.0000	18.969	20.534	16.831	15.148	14.021	13.330	12.119	11.193	9.729	8.971	8.618	7.944	447.48
9.0000	17.870	19.334	15.913	14.369	13.319	12.682	11.537	10.677	9.309	8.593	8.259	7.638	503.41
10.0000	16.897	18.288	15.114	13.708	12.696	12.106	11.018	10.232	8.917	8.267	7.965	7.361	559.35
11.0000	16.056	17.396	14.413	13.116	12.164	11.602	10.565	9.844	8.590	7.985	7.711	7.106	615.28
12.0000	15.322	16.591	13.791	12.578	11.681	11.157	10.164	9.489	8.289	7.723	7.447	6.868	671.22

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	14.169	6.046	4.005	3.763	3.344	2.207	1.353	0.960	0.633	5.067	6.446	4.920	0.6992
0.0160	15.811	6.668	4.481	4.215	3.746	2.531	1.568	1.117	0.742	5.727	7.287	5.504	0.8950
0.0200	17.275	7.093	4.907	4.623	4.135	2.871	1.790	1.303	0.871	6.379	8.111	6.027	1.1187
0.0250	18.859	7.484	5.376	5.067	4.585	3.290	2.103	1.534	1.111	7.099	9.034	6.601	1.3984
0.0320	21.013	7.974	5.909	5.626	5.139	3.851	2.502	1.886	1.313	8.011	10.217	7.333	1.7899
0.0400	23.185	8.429	6.457	6.215	5.723	4.471	2.962	2.270	1.613	8.962	11.433	8.097	2.2374
0.0500	25.728	9.048	7.143	6.949	6.467	5.216	3.513	2.736	1.982	10.058	12.825	9.032	2.7967
0.0600	28.545	9.768	7.922	7.657	7.239	5.957	4.051	3.188	2.342	11.119	14.195	9.982	3.3561
0.0700	31.391	10.630	8.704	8.454	8.019	6.686	4.556	3.621	2.676	12.168	15.520	11.001	3.9155
0.0800	34.444	11.564	9.539	9.271	8.824	7.415	5.082	4.050	3.008	13.222	16.845	12.070	4.4748
0.0900	37.465	12.569	10.395	10.131	9.646	8.137	5.593	4.475	3.314	14.268	18.142	13.171	5.0341
0.1000	40.803	13.690	11.349	10.992	10.457	8.863	6.120	4.872	3.612	15.307	19.465	14.303	5.5935
0.1250	49.707	16.590	13.710	13.209	12.621	10.655	7.337	5.847	4.345	17.955	22.850	17.266	6.9919
0.1600	62.614	20.876	17.131	16.509	15.661	13.046	8.947	7.124	5.286	21.583	27.420	21.625	8.9496
0.2000	76.581	25.423	20.822	19.995	18.903	15.363	10.450	8.298	6.130	25.173	31.942	26.281	11.187
0.2500	92.464	30.605	24.822	23.901	22.314	17.640	11.925	9.349	6.875	28.899	36.627	31.527	13.984
0.3200	111.348	36.347	29.561	28.212	25.812	19.776	13.197	10.291	7.517	33.029	41.952	37.453	17.899
0.4000	127.124	41.967	33.329	31.679	28.684	21.411	14.159	11.021	8.027	36.528	46.510	42.293	22.374
0.5000	141.134	46.897	36.434	34.664	31.014	22.807	15.043	11.746	8.561	39.664	50.636	46.499	27.967
0.6000	148.270	49.735	37.639	35.772	31.966	23.373	15.504	12.095	8.849	41.142	52.793	48.264	33.561
0.7000	149.292	51.304	37.736	35.864	32.095	23.439	15.683	12.206	9.021	41.700	53.589	48.459	39.155
0.8000	147.159	51.644	37.329	35.599	31.813	23.265	15.744	12.284	9.125	41.716	53.549	47.983	44.748
0.9000	143.662	51.205	36.685	34.966	31.093	22.935	15.649	12.365	9.184	41.431	53.129	47.049	50.341
1.0000	140.666	50.864	36.302	34.449	30.691	22.731	15.659	12.475	9.265	41.051	52.586	46.245	55.935
1.2500	132.882	49.757	35.426	33.822	30.052	22.539	15.828	12.780	9.652	40.025	50.827	44.837	69.919
1.6000	121.507	47.581	34.355	32.850	29.409	22.447	16.102	13.092	10.135	38.307	47.931	42.689	89.496
2.0000	109.551	44.905	33.289	31.701	28.684	22.281	16.274	13.363	10.505	36.517	44.985	40.354	111.87
2.5000	96.564	41.512	31.703	30.170	27.845	22.021	16.349	13.616	10.831	34.385	41.614	37.553	139.84
3.2000	84.226	37.421	29.672	28.324	26.303	21.297	16.196	13.476	10.805	31.838	37.950	34.533	178.99
4.0000	74.034	33.473	27.370	26.249	24.678	20.191	15.480	13.035	10.544	29.300	34.527	31.566	223.74
5.0000	65.679	29.845	24.970	24.041	22.657	18.774	14.602	12.330	10.120	26.726	31.291	28.668	279.67
6.0000	59.583	27.090	23.028	22.147	20.978	17.511	13.679	11.629	9.579	24.599	28.718	26.304	335.61
7.0000	54.954	24.953	21.445	20.675	19.547	16.433	12.924	11.027	9.111	22.895	26.654	24.488	391.54
8.0000	51.167	23.143	20.114	19.407	18.329	15.468	12.169	10.435	8.668	21.443	24.910	22.941	447.48
9.0000	47.897	21.768	18.952	18.299	17.313	14.640	11.537	9.914	8.275	20.177	23.407	21.593	503.41
10.0000	45.191	20.631	18.001	17.381	16.444	13.905	10.988	9.446	7.905	19.104	22.127	20.464	559.35
11.0000	42.806	19.630	17.166	16.575	15.681	13.260	10.507	9.037	7.567	18.175	21.028	19.486	615.28
12.0000	40.685	18.743	16.426	15.860	15.005	12.688	10.082	8.675	7.268	17.350	20.039	18.618	671.22

$^{56}_{26}Fe$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=56 MEV
0.0125	0.094	0.098	0.129	0.180	0.200	0.242	0.264	0.295	0.432	0.506	0.548	0.659	0.6992
0.0160	0.117	0.123	0.162	0.227	0.252	0.304	0.330	0.367	0.538	0.630	0.682	0.819	0.8950
0.0200	0.141	0.150	0.198	0.278	0.311	0.371	0.402	0.445	0.654	0.764	0.828	0.991	1.1187
0.0250	0.169	0.183	0.240	0.338	0.381	0.452	0.488	0.538	0.793	0.924	1.001	1.194	1.3984
0.0320	0.205	0.224	0.296	0.419	0.474	0.558	0.601	0.660	0.976	1.136	1.228	1.460	1.7899
0.0400	0.243	0.268	0.355	0.504	0.574	0.670	0.721	0.790	1.171	1.361	1.472	1.744	2.2374
0.0500	0.286	0.319	0.422	0.602	0.690	0.800	0.861	0.941	1.399	1.622	1.753	2.071	2.7967
0.0600	0.326	0.364	0.484	0.693	0.798	0.920	0.989	1.079	1.610	1.863	2.013	2.372	3.3561
0.0700	0.363	0.407	0.543	0.777	0.897	1.032	1.109	1.208	1.805	2.086	2.253	2.651	3.9155
0.0800	0.397	0.447	0.597	0.856	0.991	1.136	1.221	1.329	1.988	2.294	2.476	2.910	4.4748
0.0900	0.430	0.484	0.649	0.930	1.079	1.235	1.327	1.442	2.159	2.488	2.685	3.152	5.0341
0.1000	0.461	0.519	0.698	1.001	1.163	1.327	1.427	1.549	2.319	2.670	2.881	3.379	5.5935
0.1250	0.534	0.598	0.811	1.162	1.354	1.539	1.657	1.795	2.683	3.085	3.326	3.893	6.9919
0.1600	0.625	0.694	0.954	1.361	1.589	1.801	1.940	2.097	3.127	3.589	3.863	4.511	8.9496
0.2000	0.720	0.789	1.101	1.564	1.828	2.065	2.228	2.403	3.570	4.092	4.399	5.124	11.187
0.2500	0.830	0.896	1.269	1.793	2.097	2.362	2.551	2.748	4.061	4.647	4.990	5.801	13.984
0.3200	0.974	1.030	1.485	2.082	2.435	2.734	2.957	3.182	4.670	5.333	5.720	6.634	17.899
0.4000	1.129	1.171	1.711	2.380	2.782	3.115	3.374	3.628	5.286	6.026	6.458	7.473	22.374
0.5000	1.311	1.334	1.973	2.720	3.175	3.544	3.845	4.132	5.973	6.797	7.277	8.404	27.967
0.6000	1.485	1.489	2.219	3.036	3.535	3.940	4.276	4.596	6.595	7.493	8.017	9.241	33.561
0.7000	1.653	1.639	2.453	3.334	3.877	4.311	4.685	5.034	7.179	8.147	8.710	10.022	39.155
0.8000	1.819	1.786	2.679	3.620	4.203	4.663	5.075	5.453	7.731	8.763	9.362	10.757	44.748
0.9000	1.982	1.934	2.900	3.896	4.516	5.002	5.450	5.855	8.258	9.349	9.983	11.454	50.341
1.0000	2.144	2.081	3.116	4.164	4.821	5.329	5.812	6.245	8.765	9.913	10.579	12.122	55.935
1.2500	2.547	2.453	3.644	4.813	5.552	6.116	6.684	7.183	9.970	11.251	11.994	13.705	69.919
1.6000	3.115	2.989	4.373	5.693	6.540	7.175	7.859	8.452	11.568	13.020	13.866	15.793	89.496
2.0000	3.784	3.629	5.211	6.689	7.652	8.362	9.180	9.880	13.341	14.971	15.929	18.089	111.87
2.5000	4.661	4.467	6.286	7.949	9.049	9.851	10.843	11.673	15.539	17.383	18.476	20.906	139.84
3.2000	5.976	5.717	7.864	9.775	11.062	11.991	13.233	14.253	18.653	20.796	22.072	24.867	178.99
4.0000	7.609	7.257	9.791	11.978	13.474	14.555	16.084	17.340	22.326	24.809	26.292	29.509	223.74
5.0000	9.848	9.352	12.392	14.925	16.683	17.959	19.862	21.429	27.128	30.063	31.790	35.543	279.67
6.0000	12.297	11.634	15.206	18.091	20.117	21.590	23.888	25.782	32.208	35.597	37.568	41.852	335.61
7.0000	14.951	14.096	18.229	21.472	23.778	25.448	28.157	30.396	37.567	41.415	43.637	48.452	391.54
8.0000	17.804	16.734	21.453	25.063	27.661	29.532	32.660	35.267	43.184	47.516	49.991	55.349	447.48
9.0000	20.843	19.543	24.873	28.856	31.756	33.836	37.393	40.386	49.065	53.890	56.624	62.533	503.41
10.0000	24.064	22.519	28.482	32.843	36.060	38.352	42.357	45.740	55.207	60.529	63.523	69.995	559.35
11.0000	27.461	25.656	32.273	37.016	40.563	43.074	47.543	51.315	61.600	67.416	70.663	77.733	615.28
12.0000	31.029	28.950	36.242	41.373	45.257	47.991	52.943	57.105	68.231	74.541	78.047	85.742	671.22

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.034	0.085	0.111	0.116	0.126	0.183	0.288	0.410	0.610	0.093	0.075	0.088	0.6992
0.0160	0.043	0.107	0.142	0.148	0.160	0.233	0.364	0.515	0.765	0.118	0.095	0.112	0.8950
0.0200	0.052	0.132	0.176	0.184	0.199	0.288	0.447	0.628	0.929	0.146	0.117	0.140	1.1187
0.0250	0.064	0.163	0.217	0.227	0.247	0.354	0.545	0.761	1.114	0.178	0.143	0.173	1.3984
0.0320	0.080	0.205	0.273	0.285	0.310	0.439	0.672	0.928	1.345	0.221	0.177	0.218	1.7899
0.0400	0.097	0.252	0.333	0.348	0.377	0.528	0.802	1.098	1.580	0.267	0.213	0.267	2.2374
0.0500	0.117	0.309	0.405	0.422	0.456	0.627	0.948	1.285	1.835	0.319	0.254	0.324	2.7967
0.0600	0.135	0.363	0.471	0.490	0.529	0.717	1.077	1.450	2.057	0.367	0.292	0.376	3.3561
0.0700	0.152	0.414	0.533	0.553	0.596	0.797	1.194	1.597	2.254	0.412	0.327	0.425	3.9155
0.0800	0.168	0.461	0.590	0.612	0.657	0.871	1.300	1.730	2.432	0.454	0.360	0.470	4.4748
0.0900	0.182	0.505	0.642	0.666	0.714	0.939	1.398	1.852	2.594	0.492	0.391	0.512	5.0341
0.1000	0.196	0.546	0.691	0.716	0.766	1.001	1.487	1.964	2.744	0.528	0.419	0.551	5.5935
0.1250	0.226	0.635	0.799	0.827	0.883	1.139	1.686	2.212	3.077	0.610	0.483	0.636	6.9919
0.1600	0.260	0.738	0.922	0.956	1.017	1.300	1.919	2.504	3.468	0.707	0.559	0.734	8.9496
0.2000	0.291	0.833	1.038	1.076	1.144	1.455	2.144	2.787	3.848	0.801	0.634	0.826	11.187
0.2500	0.324	0.932	1.160	1.202	1.278	1.622	2.390	3.098	4.269	0.903	0.714	0.922	13.984
0.3200	0.362	1.049	1.303	1.351	1.440	1.829	2.697	3.491	4.803	1.028	0.813	1.035	17.899
0.4000	0.400	1.164	1.445	1.501	1.604	2.046	3.021	3.906	5.371	1.157	0.914	1.147	22.374
0.5000	0.441	1.290	1.605	1.669	1.791	2.299	3.404	4.397	6.045	1.304	1.029	1.273	27.967
0.6000	0.480	1.405	1.756	1.828	1.969	2.541	3.769	4.866	6.686	1.442	1.137	1.391	33.561
0.7000	0.518	1.516	1.904	1.984	2.143	2.779	4.128	5.325	7.312	1.577	1.243	1.506	39.155
0.8000	0.555	1.625	2.053	2.140	2.318	3.019	4.483	5.782	7.928	1.711	1.347	1.622	44.748
0.9000	0.594	1.733	2.204	2.299	2.496	3.261	4.840	6.236	8.538	1.846	1.452	1.740	50.341
1.0000	0.633	1.843	2.357	2.460	2.677	3.506	5.197	6.686	9.145	1.981	1.557	1.860	55.935
1.2500	0.735	2.120	2.747	2.869	3.136	4.122	6.083	7.791	10.621	2.325	1.827	2.166	69.919
1.6000	0.889	2.522	3.307	3.455	3.793	4.991	7.307	9.302	12.596	2.824	2.223	2.613	89.496
2.0000	1.082	3.005	3.967	4.147	4.563	5.990	8.687	10.991	14.761	3.422	2.704	3.151	111.87
2.5000	1.354	3.652	4.828	5.051	5.551	7.251	10.400	13.062	17.380	4.210	3.350	3.869	139.84
3.2000	1.788	4.646	6.104	6.390	6.998	9.059	12.805	15.950	20.996	5.393	4.335	4.956	178.99
4.0000	2.355	5.911	7.675	8.032	8.755	11.217	15.631	19.327	25.188	6.859	5.572	6.312	223.74
5.0000	3.158	7.682	9.816	10.260	11.122	14.092	19.354	23.742	30.606	8.860	7.275	8.173	279.67
6.0000	4.053	9.651	12.151	12.687	13.690	17.180	23.315	28.417	36.291	11.043	9.143	10.212	335.61
7.0000	5.032	11.805	14.670	15.303	16.454	20.480	27.525	33.359	42.282	13.402	11.166	12.418	391.54
8.0000	6.087	14.134	17.365	18.097	19.411	23.990	31.988	38.577	48.580	15.928	13.339	14.779	447.48
9.0000	7.218	16.627	20.232	21.067	22.553	27.709	36.711	44.079	55.188	18.619	15.656	17.294	503.41
10.0000	8.420	19.268	23.261	24.204	25.870	31.632	41.682	49.862	62.107	21.469	18.115	19.956	559.35
11.0000	9.693	22.049	26.445	27.501	29.355	35.753	46.889	55.918	69.343	24.472	20.710	22.758	615.28
12.0000	11.034	24.966	29.777	30.952	33.002	40.067	52.326	62.238	76.888	27.624	23.435	25.696	671.22

$^{59}_{27}$Co IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=59 MEV
0.0125	6.330	5.236	3.836	2.551	2.072	1.880	1.742	1.611	1.024	0.877	0.806	0.691	0.7367
0.0160	7.201	5.957	4.364	2.902	2.357	2.139	1.981	1.833	1.165	0.997	0.917	0.786	0.9429
0.0200	8.092	6.694	4.904	3.261	2.648	2.403	2.226	2.060	1.309	1.121	1.030	0.883	1.1787
0.0250	9.093	7.522	5.511	3.665	2.976	2.700	2.502	2.314	1.471	1.259	1.160	0.992	1.4733
0.0320	10.332	8.564	6.269	4.169	3.392	3.085	2.846	2.633	1.674	1.436	1.323	1.135	1.8859
0.0400	11.582	9.644	7.045	4.699	3.832	3.494	3.220	2.980	1.895	1.631	1.501	1.289	2.3573
0.0500	12.967	10.869	7.916	5.304	4.346	3.958	3.649	3.380	2.145	1.864	1.718	1.476	2.9466
0.0600	14.211	12.025	8.707	5.869	4.824	4.380	4.049	3.753	2.403	2.090	1.929	1.659	3.5360
0.0700	15.337	13.119	9.438	6.399	5.285	4.794	4.436	4.115	2.643	2.312	2.142	1.840	4.1253
0.0800	16.374	14.188	10.120	6.912	5.718	5.181	4.787	4.453	2.884	2.530	2.338	2.014	4.7146
0.0900	17.338	15.218	10.763	7.405	6.135	5.575	5.134	4.779	3.132	2.739	2.540	2.190	5.3040
0.1000	18.252	16.227	11.372	7.881	6.550	5.936	5.458	5.106	3.366	2.945	2.729	2.354	5.8933
0.1250	20.317	18.746	12.778	8.996	7.514	6.811	6.261	5.865	3.929	3.437	3.214	2.779	7.3666
0.1600	22.660	22.025	14.442	10.341	8.694	7.886	7.236	6.788	4.622	4.058	3.806	3.322	9.4293
0.2000	24.717	25.084	15.967	11.608	9.820	8.894	8.159	7.648	5.301	4.678	4.391	3.832	11.787
0.2500	26.655	28.038	17.502	12.934	10.991	9.976	9.136	8.558	6.038	5.338	5.005	4.375	14.733
0.3200	28.756	31.243	19.274	14.513	12.393	11.314	10.311	9.637	6.900	6.129	5.753	5.059	18.859
0.4000	30.682	34.061	20.986	15.991	13.767	12.592	11.479	10.724	7.807	6.946	6.527	5.729	23.573
0.5000	32.646	36.687	22.829	17.647	15.296	14.040	12.785	11.917	8.812	7.853	7.385	6.506	29.467
0.6000	33.825	38.096	24.126	18.891	16.454	15.151	13.752	12.811	9.578	8.565	8.070	7.166	35.360
0.7000	34.680	38.930	25.149	19.868	17.378	16.020	14.511	13.530	10.210	9.129	8.626	7.645	41.253
0.8000	35.244	39.292	25.953	20.684	18.141	16.791	15.182	14.144	10.744	9.654	9.109	8.097	47.146
0.9000	35.668	39.415	26.578	21.316	18.791	17.435	15.734	14.644	11.242	10.100	9.541	8.505	53.040
1.0000	35.904	39.313	27.057	21.889	19.318	17.938	16.207	15.070	11.634	10.471	9.903	8.847	58.933
1.2500	36.008	38.562	27.763	22.765	20.267	18.879	17.018	15.797	12.410	11.188	10.578	9.467	73.666
1.6000	35.406	37.112	27.967	23.352	20.863	19.493	17.563	16.221	13.004	11.774	11.131	9.984	94.293
2.0000	34.173	35.663	27.581	23.361	20.989	19.693	17.652	16.356	13.239	12.081	11.419	10.288	117.87
2.5000	32.364	33.912	26.681	22.919	20.731	19.477	17.423	16.169	13.287	12.087	11.473	10.406	147.33
3.2000	29.955	31.643	25.193	21.918	19.953	18.769	16.829	15.569	13.000	11.891	11.287	10.254	188.59
4.0000	27.538	29.327	23.537	20.689	18.947	17.841	16.076	14.828	12.545	11.486	10.945	9.956	235.73
5.0000	25.057	26.860	21.713	19.238	17.718	16.719	15.069	13.940	11.942	10.900	10.444	9.532	294.66
6.0000	23.079	24.814	20.174	17.995	16.603	15.736	14.203	13.133	11.257	10.390	9.946	9.139	353.60
7.0000	21.403	23.121	18.874	16.911	15.628	14.854	13.439	12.438	10.758	9.890	9.494	8.739	412.53
8.0000	20.023	21.676	17.767	15.990	14.800	14.071	12.792	11.815	10.269	9.470	9.097	8.386	471.46
9.0000	18.881	20.428	16.813	15.182	14.072	13.400	12.189	11.281	9.836	9.079	8.726	8.070	530.40
10.0000	17.868	19.339	15.982	14.496	13.425	12.802	11.651	10.820	9.430	8.742	8.423	7.783	589.33
11.0000	16.991	18.409	15.252	13.879	12.873	12.278	11.180	10.417	9.090	8.449	8.160	7.519	648.26
12.0000	16.225	17.568	14.604	13.319	12.369	11.814	10.763	10.047	8.777	8.178	7.886	7.273	707.20

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	14.385	6.138	4.066	3.821	3.395	2.240	1.373	0.974	0.643	5.144	6.544	4.995	0.7367
0.0160	16.061	6.773	4.552	4.281	3.806	2.571	1.593	1.135	0.753	5.818	7.402	5.591	0.9429
0.0200	17.557	7.209	4.987	4.698	4.203	2.918	1.819	1.324	0.886	6.483	8.244	6.125	1.1787
0.0250	19.177	7.610	5.467	5.152	4.662	3.345	2.138	1.560	1.130	7.219	9.186	6.712	1.4733
0.0320	21.379	8.113	6.012	5.724	5.229	3.918	2.545	1.918	1.335	8.150	10.395	7.461	1.8859
0.0400	23.600	8.581	6.573	6.326	5.826	4.551	3.015	2.311	1.641	9.123	11.638	8.242	2.3573
0.0500	26.203	9.214	7.275	7.077	6.586	5.312	3.578	2.786	2.019	10.244	13.062	9.199	2.9466
0.0600	29.083	9.953	8.072	7.802	7.375	6.069	4.127	3.248	2.386	11.328	14.463	10.170	3.5360
0.0700	31.995	10.835	8.872	8.617	8.173	6.814	4.643	3.690	2.728	12.401	15.818	11.212	4.1253
0.0800	35.117	11.790	9.725	9.452	8.997	7.560	5.181	4.129	3.066	13.480	17.174	12.306	4.7146
0.0900	38.207	12.818	10.601	10.332	9.837	8.298	5.704	4.563	3.379	14.551	18.501	13.432	5.3040
0.1000	41.621	13.964	11.576	11.213	10.667	9.041	6.243	4.969	3.684	15.613	19.855	14.590	5.8933
0.1250	50.729	16.931	13.992	13.481	12.880	10.874	7.488	5.967	4.434	18.324	23.320	17.621	7.3666
0.1600	63.979	21.331	17.504	16.869	16.002	13.330	9.142	7.279	5.401	22.053	28.018	22.097	9.4293
0.2000	78.397	26.026	21.316	20.470	19.352	15.727	10.698	8.494	6.275	25.771	32.700	26.904	11.787
0.2500	94.859	31.398	25.465	24.520	22.892	18.097	12.234	9.591	7.053	29.648	37.576	32.343	14.733
0.3200	114.486	37.372	30.395	29.007	26.540	20.334	13.569	10.581	7.729	33.960	43.135	38.509	18.859
0.4000	130.954	43.232	34.333	32.634	29.549	22.057	14.585	11.354	8.269	37.628	47.912	43.567	23.573
0.5000	145.652	48.399	37.600	35.774	32.007	23.537	15.524	12.122	8.835	40.933	52.257	47.988	29.467
0.6000	153.202	51.389	38.892	36.962	33.029	24.150	16.020	12.497	9.144	42.511	54.550	49.869	35.360
0.7000	154.414	53.064	39.031	37.095	33.197	24.244	16.221	12.625	9.330	43.130	55.428	50.122	41.253
0.8000	152.341	53.462	38.643	36.853	32.934	24.084	16.298	12.717	9.447	43.185	55.435	49.673	47.146
0.9000	148.837	53.050	38.007	36.226	32.213	23.761	16.213	12.811	9.515	42.923	55.043	48.744	53.040
1.0000	145.835	52.733	37.636	35.715	31.818	23.566	16.234	12.933	9.605	42.560	54.519	47.944	58.933
1.2500	137.980	51.666	36.785	35.120	31.205	23.404	16.435	13.271	10.022	41.561	52.777	46.558	73.666
1.6000	126.409	49.501	35.741	34.175	30.595	23.352	16.752	13.620	10.543	39.852	49.864	44.411	94.293
2.0000	114.186	46.805	34.697	33.042	29.898	23.223	16.962	13.929	10.950	38.062	46.888	42.061	117.87
2.5000	100.855	43.357	33.111	31.511	29.083	22.999	17.076	14.221	11.313	35.913	43.464	39.221	147.33
3.2000	88.177	39.176	31.063	29.653	27.536	22.296	16.955	14.108	11.312	33.331	39.730	36.152	188.59
4.0000	77.672	35.117	28.715	27.538	25.891	21.183	16.240	13.675	11.062	30.739	36.223	33.116	235.73
5.0000	69.049	31.376	26.252	25.274	23.820	19.738	15.351	12.963	10.640	28.097	32.896	30.138	294.66
6.0000	62.741	28.526	24.249	23.321	22.091	18.439	14.404	12.246	10.087	25.904	30.241	27.699	353.60
7.0000	57.944	26.311	22.611	21.800	20.611	17.327	13.627	11.627	9.607	24.140	28.104	25.820	412.53
8.0000	54.011	24.429	21.231	20.485	19.348	16.328	12.845	11.015	9.150	22.635	26.295	24.216	471.46
9.0000	50.607	23.000	20.024	19.335	18.292	15.468	12.189	10.474	8.743	21.319	24.732	22.815	530.40
10.0000	47.787	21.816	19.035	18.380	17.389	14.704	11.619	9.989	8.359	20.202	23.398	21.640	589.33
11.0000	45.298	20.773	18.165	17.540	16.594	14.032	11.119	9.563	8.007	19.233	22.252	20.620	648.26
12.0000	43.081	19.847	17.393	16.794	15.889	13.435	10.675	9.186	7.696	18.372	21.219	19.715	707.20

$^{59}_{27}Co$ IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=59
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.096	0.100	0.131	0.182	0.201	0.244	0.266	0.296	0.432	0.506	0.548	0.658	0.7367
0.0160	0.119	0.126	0.164	0.229	0.255	0.307	0.333	0.369	0.540	0.631	0.684	0.820	0.9429
0.0200	0.144	0.154	0.201	0.282	0.314	0.376	0.406	0.449	0.658	0.768	0.831	0.994	1.1787
0.0250	0.173	0.187	0.245	0.344	0.386	0.458	0.494	0.544	0.799	0.931	1.007	1.200	1.4733
0.0320	0.211	0.230	0.302	0.426	0.481	0.566	0.609	0.669	0.986	1.146	1.239	1.472	1.8859
0.0400	0.250	0.275	0.362	0.513	0.584	0.682	0.733	0.802	1.186	1.377	1.487	1.761	2.3573
0.0500	0.294	0.326	0.432	0.614	0.703	0.815	0.876	0.957	1.419	1.644	1.775	2.096	2.9466
0.0600	0.335	0.374	0.496	0.708	0.813	0.939	1.008	1.099	1.635	1.890	2.041	2.405	3.5360
0.0700	0.373	0.418	0.556	0.794	0.916	1.053	1.131	1.232	1.836	2.119	2.287	2.690	4.1253
0.0800	0.409	0.459	0.612	0.876	1.012	1.161	1.246	1.356	2.023	2.332	2.516	2.956	4.7146
0.0900	0.443	0.497	0.665	0.952	1.103	1.262	1.355	1.472	2.199	2.532	2.731	3.205	5.3040
0.1000	0.475	0.533	0.716	1.025	1.189	1.357	1.458	1.583	2.364	2.720	2.933	3.438	5.8933
0.1250	0.549	0.614	0.833	1.191	1.385	1.576	1.695	1.835	2.738	3.146	3.390	3.966	7.3666
0.1600	0.643	0.713	0.980	1.396	1.628	1.845	1.986	2.146	3.194	3.665	3.943	4.602	9.4293
0.2000	0.741	0.812	1.131	1.605	1.874	2.117	2.282	2.461	3.650	4.182	4.493	5.232	11.787
0.2500	0.855	0.921	1.304	1.840	2.150	2.422	2.614	2.816	4.154	4.751	5.100	5.926	14.733
0.3200	1.002	1.059	1.525	2.136	2.496	2.803	3.030	3.260	4.778	5.454	5.849	6.780	18.859
0.4000	1.160	1.203	1.757	2.441	2.851	3.193	3.457	3.717	5.409	6.163	6.603	7.639	23.573
0.5000	1.346	1.370	2.024	2.789	3.252	3.631	3.938	4.232	6.110	6.950	7.440	8.590	29.467
0.6000	1.523	1.527	2.275	3.111	3.620	4.035	4.378	4.704	6.744	7.661	8.194	9.443	35.360
0.7000	1.695	1.680	2.514	3.415	3.968	4.413	4.795	5.151	7.340	8.327	8.900	10.238	41.253
0.8000	1.863	1.831	2.744	3.706	4.300	4.772	5.192	5.577	7.902	8.954	9.564	10.987	47.146
0.9000	2.029	1.980	2.968	3.986	4.619	5.116	5.573	5.986	8.438	9.550	10.196	11.697	53.040
1.0000	2.194	2.130	3.188	4.259	4.928	5.449	5.942	6.383	8.953	10.123	10.802	12.376	58.933
1.2500	2.603	2.508	3.725	4.918	5.671	6.248	6.827	7.336	10.177	11.482	12.239	13.982	73.666
1.6000	3.179	3.052	4.463	5.810	6.672	7.321	8.018	8.622	11.797	13.275	14.136	16.100	94.293
2.0000	3.856	3.699	5.311	6.818	7.797	8.523	9.355	10.067	13.591	15.249	16.224	18.422	117.87
2.5000	4.741	4.545	6.396	8.090	9.209	10.026	11.033	11.877	15.810	17.685	18.796	21.267	147.33
3.2000	6.066	5.804	7.987	9.930	11.236	12.182	13.441	14.476	18.947	21.124	22.419	25.258	188.59
4.0000	7.708	7.352	9.924	12.145	13.661	14.759	16.308	17.579	22.639	25.158	26.661	29.924	235.73
5.0000	9.953	9.454	12.533	15.101	16.880	18.174	20.097	21.681	27.457	30.428	32.176	35.977	294.66
6.0000	12.406	11.739	15.351	18.271	20.319	21.810	24.128	26.040	32.543	35.970	37.962	42.295	353.60
7.0000	15.060	14.201	18.373	21.651	23.980	25.667	28.397	30.654	37.902	41.787	44.030	48.893	412.53
8.0000	17.909	16.835	21.593	25.237	27.857	29.746	32.894	35.518	43.512	47.880	50.375	55.781	471.46
9.0000	20.941	19.638	25.005	29.022	31.943	34.040	37.616	40.625	49.378	54.239	56.993	62.948	530.40
10.0000	24.151	22.604	28.602	32.996	36.232	38.542	42.564	45.962	55.500	60.856	63.870	70.387	589.33
11.0000	27.535	25.729	32.378	37.152	40.717	43.244	47.729	51.515	61.868	67.716	70.981	78.093	648.26
12.0000	31.086	29.007	36.328	41.488	45.389	48.139	53.103	57.277	68.468	74.807	78.330	86.065	707.20

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.035	0.087	0.113	0.118	0.127	0.185	0.289	0.410	0.607	0.095	0.077	0.089	0.7367
0.0160	0.044	0.109	0.144	0.150	0.163	0.236	0.366	0.517	0.764	0.121	0.097	0.115	0.9429
0.0200	0.054	0.135	0.179	0.187	0.203	0.292	0.451	0.632	0.930	0.149	0.120	0.143	1.1787
0.0250	0.066	0.167	0.221	0.231	0.251	0.359	0.551	0.766	1.118	0.182	0.146	0.177	1.4733
0.0320	0.082	0.210	0.278	0.291	0.316	0.446	0.680	0.937	1.353	0.226	0.181	0.223	1.8859
0.0400	0.099	0.259	0.341	0.356	0.385	0.537	0.814	1.111	1.594	0.273	0.218	0.273	2.3573
0.0500	0.120	0.317	0.414	0.431	0.466	0.640	0.963	1.303	1.855	0.327	0.261	0.331	2.9466
0.0600	0.139	0.373	0.482	0.502	0.541	0.732	1.096	1.472	2.082	0.377	0.300	0.386	3.5360
0.0700	0.156	0.425	0.546	0.567	0.610	0.815	1.216	1.623	2.285	0.423	0.336	0.436	4.1253
0.0800	0.172	0.474	0.604	0.627	0.673	0.891	1.326	1.760	2.467	0.466	0.370	0.482	4.7146
0.0900	0.187	0.519	0.659	0.683	0.731	0.960	1.426	1.885	2.634	0.505	0.401	0.525	5.3040
0.1000	0.201	0.561	0.709	0.734	0.785	1.025	1.518	2.001	2.789	0.543	0.431	0.565	5.8933
0.1250	0.232	0.653	0.820	0.849	0.905	1.167	1.723	2.257	3.131	0.627	0.497	0.653	7.3666
0.1600	0.267	0.759	0.947	0.981	1.044	1.333	1.963	2.557	3.533	0.726	0.575	0.754	9.4293
0.2000	0.300	0.857	1.067	1.105	1.175	1.492	2.194	2.849	3.925	0.823	0.652	0.849	11.787
0.2500	0.333	0.959	1.191	1.235	1.313	1.664	2.447	3.168	4.357	0.928	0.735	0.947	14.733
0.3200	0.372	1.078	1.338	1.388	1.478	1.876	2.762	3.571	4.904	1.057	0.836	1.063	18.859
0.4000	0.411	1.195	1.484	1.541	1.646	2.098	3.093	3.995	5.485	1.189	0.939	1.178	23.573
0.5000	0.453	1.324	1.647	1.713	1.837	2.357	3.484	4.497	6.166	1.339	1.057	1.307	29.467
0.6000	0.493	1.442	1.801	1.875	2.018	2.603	3.857	4.975	6.821	1.480	1.167	1.427	35.360
0.7000	0.531	1.555	1.952	2.034	2.196	2.847	4.223	5.444	7.458	1.617	1.274	1.545	41.253
0.8000	0.569	1.665	2.104	2.193	2.374	3.090	4.585	5.908	8.085	1.754	1.381	1.663	47.146
0.9000	0.609	1.776	2.258	2.354	2.555	3.337	4.947	6.370	8.707	1.890	1.487	1.782	53.040
1.0000	0.649	1.887	2.414	2.518	2.739	3.585	5.310	6.828	9.323	2.028	1.595	1.904	58.933
1.2500	0.752	2.169	2.809	2.933	3.206	4.212	6.211	7.950	10.822	2.378	1.869	2.215	73.666
1.6000	0.908	2.576	3.376	3.527	3.872	5.092	7.451	9.481	12.824	2.884	2.270	2.668	94.293
2.0000	1.104	3.065	4.045	4.228	4.650	6.103	8.847	11.190	15.014	3.488	2.757	3.213	117.87
2.5000	1.378	3.719	4.913	5.140	5.649	7.377	10.577	13.281	17.659	4.284	3.409	3.937	147.33
3.2000	1.815	4.719	6.199	6.489	7.106	9.197	13.000	16.192	21.303	5.476	4.401	5.033	188.59
4.0000	2.385	5.991	7.778	8.140	8.872	11.367	15.841	19.586	25.517	6.950	5.645	6.396	235.73
5.0000	3.191	7.768	9.927	10.375	11.247	14.252	19.576	24.015	30.952	8.957	7.354	8.263	294.66
6.0000	4.087	9.740	12.265	12.805	13.818	17.343	23.542	28.696	36.644	11.143	9.224	10.304	353.60
7.0000	5.065	11.893	14.783	15.421	16.582	20.643	27.751	33.638	42.635	13.502	11.247	12.510	412.53
8.0000	6.120	14.219	17.475	18.211	19.535	24.149	32.208	38.849	48.924	16.024	13.416	14.868	471.46
9.0000	7.247	16.706	20.334	21.174	22.670	27.859	36.921	44.338	55.516	18.709	15.728	17.377	530.40
10.0000	8.446	19.339	23.354	24.302	25.976	31.768	41.875	50.102	62.413	21.550	18.179	20.030	589.33
11.0000	9.714	22.108	26.525	27.585	29.446	35.873	47.062	56.134	69.619	24.541	20.763	22.821	648.26
12.0000	11.048	25.012	29.842	31.020	33.077	40.167	52.473	62.424	77.129	27.677	23.476	25.745	707.20

$^{58}_{28}Ni$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=58 MEV
0.0125	6.420	5.311	3.891	2.587	2.101	1.907	1.766	1.634	1.039	0.889	0.817	0.700	0.7242
0.0160	7.308	6.046	4.429	2.945	2.392	2.170	2.011	1.860	1.183	1.012	0.930	0.797	0.9270
0.0200	8.216	6.797	4.979	3.311	2.689	2.440	2.261	2.091	1.329	1.138	1.046	0.896	1.1587
0.0250	9.236	7.641	5.598	3.722	3.023	2.743	2.541	2.351	1.495	1.279	1.178	1.008	1.4484
0.0320	10.501	8.704	6.372	4.237	3.447	3.135	2.893	2.676	1.701	1.459	1.344	1.153	1.8539
0.0400	11.777	9.807	7.164	4.778	3.897	3.553	3.274	3.030	1.927	1.658	1.526	1.311	2.3174
0.0500	13.192	11.057	8.053	5.396	4.421	4.027	3.713	3.439	2.182	1.897	1.748	1.502	2.8967
0.0600	14.463	12.239	8.862	5.973	4.910	4.458	4.121	3.820	2.446	2.127	1.963	1.688	3.4761
0.0700	15.614	13.356	9.609	6.515	5.381	4.881	4.516	4.189	2.690	2.354	2.181	1.874	4.0554
0.0800	16.675	14.449	10.306	7.039	5.823	5.277	4.875	4.535	2.937	2.577	2.381	2.051	4.6348
0.0900	17.662	15.502	10.963	7.543	6.249	5.679	5.230	4.868	3.190	2.790	2.587	2.231	5.2141
0.1000	18.596	16.534	11.587	8.029	6.674	6.048	5.562	5.202	3.430	3.001	2.781	2.398	5.7935
0.1250	20.711	19.109	13.026	9.170	7.659	6.943	6.383	5.979	4.005	3.504	3.276	2.833	7.2419
0.1600	23.127	22.478	14.740	10.554	8.873	8.048	7.385	6.928	4.717	4.142	3.884	3.390	9.2696
0.2000	25.273	25.648	16.326	11.869	10.040	9.094	8.343	7.820	5.420	4.784	4.490	3.918	11.587
0.2500	27.313	28.729	17.933	13.253	11.262	10.222	9.361	8.769	6.187	5.470	5.129	4.483	14.484
0.3200	29.530	32.084	19.793	14.904	12.727	11.618	10.589	9.896	7.086	6.294	5.908	5.196	18.539
0.4000	31.566	35.042	21.591	16.452	14.164	12.954	11.810	11.033	8.032	7.147	6.715	5.894	23.174
0.5000	33.646	37.810	23.528	18.187	15.764	14.470	13.176	12.282	9.082	8.094	7.611	6.706	28.967
0.6000	34.903	39.310	24.895	19.493	16.979	15.634	14.190	13.219	9.883	8.838	8.327	7.394	34.761
0.7000	35.821	40.211	25.976	20.521	17.950	16.547	14.988	13.975	10.546	9.429	8.910	7.897	40.555
0.8000	36.434	40.619	26.829	21.383	18.753	17.358	15.695	14.622	11.107	9.980	9.417	8.371	46.348
0.9000	36.899	40.776	27.496	22.052	19.439	18.037	16.277	15.150	11.631	10.448	9.871	8.799	52.141
1.0000	37.168	40.697	28.009	22.660	19.999	18.570	16.778	15.601	12.044	10.840	10.251	9.159	57.935
1.2500	37.330	39.978	28.782	23.601	21.011	19.572	17.643	16.377	12.866	11.599	10.966	9.815	72.419
1.6000	36.770	38.542	29.044	24.252	21.667	20.244	18.240	16.846	13.506	12.228	11.560	10.369	92.696
2.0000	35.553	37.103	28.695	24.305	21.837	20.488	18.365	17.016	13.774	12.568	11.880	10.703	115.87
2.5000	33.737	35.350	27.813	23.891	21.610	20.303	18.162	16.854	13.851	12.599	11.959	10.847	144.84
3.2000	31.296	33.059	26.321	22.899	20.846	19.609	17.583	16.266	13.582	12.424	11.792	10.713	185.39
4.0000	28.831	30.703	24.641	21.660	19.836	18.678	16.830	15.524	13.134	12.025	11.458	10.423	231.74
5.0000	26.286	28.177	22.778	20.182	18.587	17.539	15.808	14.624	12.528	11.435	10.956	10.000	289.67
6.0000	24.249	26.072	21.197	18.908	17.445	16.534	14.923	13.799	11.828	10.916	10.450	9.602	347.61
7.0000	22.517	24.324	19.857	17.792	16.441	15.627	14.138	13.086	11.318	10.405	9.988	9.194	405.54
8.0000	21.088	22.828	18.711	16.840	15.587	14.819	13.472	12.443	10.815	9.973	9.580	8.832	463.48
9.0000	19.903	21.533	17.723	16.004	14.834	14.125	12.849	11.892	10.368	9.570	9.198	8.507	521.41
10.0000	18.850	20.401	16.860	15.292	14.163	13.505	12.291	11.414	9.948	9.223	8.885	8.211	579.35
11.0000	17.936	19.434	16.101	14.652	13.589	12.961	11.802	10.997	9.596	8.920	8.614	7.938	637.28
12.0000	17.138	18.558	15.426	14.069	13.066	12.480	11.369	10.613	9.271	8.639	8.330	7.682	695.22

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	14.591	6.225	4.124	3.875	3.443	2.272	1.393	0.988	0.652	5.218	6.638	5.066	0.7242
0.0160	16.299	6.874	4.619	4.345	3.862	2.609	1.617	1.152	0.764	5.904	7.512	5.673	0.9270
0.0200	17.825	7.319	5.064	4.770	4.267	2.963	1.847	1.344	0.899	6.582	8.370	6.219	1.1587
0.0250	19.480	7.730	5.553	5.234	4.736	3.398	2.172	1.584	1.148	7.333	9.331	6.818	1.4484
0.0320	21.728	8.245	6.111	5.818	5.314	3.982	2.587	1.950	1.357	8.284	10.565	7.583	1.8539
0.0400	23.998	8.725	6.684	6.433	5.924	4.628	3.066	2.350	1.669	9.277	11.834	8.381	2.3174
0.0500	26.657	9.374	7.401	7.200	6.700	5.404	3.640	2.835	2.054	10.421	13.288	9.358	2.8967
0.0600	29.599	10.129	8.215	7.940	7.506	6.177	4.201	3.306	2.428	11.530	14.720	10.351	3.4761
0.0700	32.574	11.031	9.032	8.773	8.321	6.938	4.728	3.757	2.777	12.626	16.104	11.415	4.0554
0.0800	35.763	12.007	9.904	9.626	9.162	7.699	5.277	4.205	3.123	13.728	17.490	12.532	4.6348
0.0900	38.920	13.057	10.799	10.525	10.020	8.453	5.811	4.648	3.442	14.822	18.846	13.682	5.2141
0.1000	42.407	14.228	11.795	11.424	10.868	9.211	6.361	5.063	3.754	15.908	20.230	14.866	5.7935
0.1250	51.713	17.259	14.263	13.742	13.130	11.085	7.633	6.083	4.520	18.679	23.772	17.963	7.2419
0.1600	65.298	21.771	17.865	17.216	16.332	13.605	9.330	7.429	5.513	22.508	28.595	22.552	9.2696
0.2000	80.161	26.611	21.795	20.930	19.787	16.081	10.938	8.685	6.416	26.350	33.436	27.509	11.587
0.2500	97.199	32.173	26.093	25.125	23.457	18.543	12.535	9.828	7.227	30.379	38.503	33.141	14.484
0.3200	117.568	38.378	31.213	29.788	27.254	20.881	13.934	10.866	7.937	34.874	44.296	39.545	18.539
0.4000	134.726	44.477	35.322	33.574	30.400	22.692	15.006	11.681	8.507	38.712	49.292	44.822	23.174
0.5000	150.111	49.880	38.751	36.869	32.987	24.258	15.999	12.494	9.105	42.186	53.856	49.457	28.967
0.6000	158.085	53.027	40.131	38.140	34.082	24.920	16.531	12.896	9.435	43.866	56.288	51.459	34.761
0.7000	159.494	54.810	40.315	38.315	34.289	25.041	16.755	13.040	9.637	44.549	57.252	51.771	40.555
0.8000	157.486	55.268	39.948	38.097	34.046	24.897	16.849	13.146	9.766	44.643	57.307	51.351	46.348
0.9000	153.976	54.881	39.319	37.477	33.325	24.581	16.772	13.253	9.843	44.406	56.944	50.427	52.141
1.0000	150.970	54.590	38.961	36.972	32.939	24.396	16.806	13.388	9.943	44.059	56.439	49.632	57.935
1.2500	143.046	53.563	38.136	36.409	32.351	24.263	17.039	13.758	10.390	43.087	54.714	48.267	72.419
1.6000	131.280	51.408	37.119	35.492	31.774	24.252	17.398	14.145	10.950	41.388	51.786	46.122	92.696
2.0000	118.797	48.695	36.098	34.377	31.105	24.161	17.647	14.491	11.392	39.599	48.782	43.760	115.87
2.5000	105.132	45.196	34.515	32.847	30.316	23.974	17.800	14.824	11.793	37.436	45.307	40.885	144.84
3.2000	92.124	40.929	32.454	30.980	28.769	23.294	17.714	14.740	11.818	34.823	41.508	37.771	185.39
4.0000	81.317	36.765	30.063	28.831	27.106	22.177	17.003	14.317	11.581	32.182	37.923	34.671	231.74
5.0000	72.435	32.915	27.539	26.514	24.988	20.706	16.104	13.599	11.161	29.475	34.509	31.616	289.67
6.0000	65.923	29.973	25.479	24.504	23.211	19.374	15.135	12.867	10.599	27.217	31.774	29.104	347.61
7.0000	60.960	27.680	23.788	22.934	21.684	18.228	14.337	12.232	10.107	25.397	29.567	27.164	405.54
8.0000	56.883	25.728	22.360	21.574	20.377	17.196	13.528	11.601	9.636	23.838	27.693	25.504	463.48
9.0000	53.346	24.245	21.108	20.381	19.282	16.305	12.849	11.041	9.216	22.472	26.070	24.050	521.41
10.0000	50.412	23.014	20.081	19.389	18.344	15.511	12.257	10.538	8.818	21.311	24.684	22.829	579.35
11.0000	47.819	21.929	19.176	18.516	17.518	14.813	11.737	10.095	8.453	20.303	23.491	21.768	637.28
12.0000	45.507	20.964	18.372	17.740	16.784	14.192	11.276	9.703	8.130	19.406	22.414	20.825	695.22

$^{58}_{28}$Ni IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=58
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.092	0.095	0.125	0.174	0.193	0.234	0.255	0.285	0.416	0.486	0.526	0.632	0.7242
0.0160	0.114	0.120	0.157	0.220	0.244	0.294	0.319	0.355	0.519	0.607	0.658	0.789	0.9270
0.0200	0.138	0.147	0.193	0.270	0.301	0.360	0.390	0.431	0.633	0.738	0.800	0.957	1.1587
0.0250	0.166	0.179	0.234	0.329	0.369	0.439	0.474	0.522	0.768	0.895	0.968	1.155	1.4484
0.0320	0.202	0.220	0.289	0.408	0.461	0.543	0.585	0.642	0.947	1.101	1.191	1.416	1.8539
0.0400	0.240	0.263	0.347	0.492	0.559	0.654	0.703	0.771	1.139	1.323	1.429	1.694	2.3174
0.0500	0.283	0.313	0.414	0.589	0.673	0.782	0.841	0.919	1.363	1.579	1.706	2.016	2.8967
0.0600	0.322	0.359	0.476	0.679	0.779	0.901	0.968	1.056	1.570	1.816	1.961	2.312	3.4761
0.0700	0.359	0.401	0.534	0.762	0.878	1.011	1.086	1.183	1.763	2.036	2.198	2.587	4.0554
0.0800	0.393	0.440	0.588	0.840	0.971	1.114	1.197	1.302	1.944	2.241	2.418	2.843	4.6348
0.0900	0.426	0.477	0.639	0.914	1.058	1.212	1.302	1.415	2.112	2.433	2.625	3.082	5.2141
0.1000	0.456	0.512	0.688	0.984	1.140	1.303	1.401	1.521	2.271	2.613	2.819	3.306	5.7935
0.1250	0.528	0.590	0.800	1.144	1.330	1.514	1.628	1.764	2.631	3.024	3.258	3.814	7.2419
0.1600	0.619	0.686	0.942	1.341	1.563	1.773	1.909	2.063	3.070	3.523	3.790	4.426	9.2696
0.2000	0.713	0.780	1.087	1.542	1.799	2.034	2.193	2.366	3.508	4.019	4.319	5.031	11.587
0.2500	0.822	0.885	1.253	1.767	2.064	2.327	2.512	2.706	3.991	4.566	4.901	5.697	14.484
0.3200	0.963	1.017	1.465	2.051	2.395	2.692	2.910	3.132	4.589	5.239	5.618	6.514	18.539
0.4000	1.114	1.154	1.686	2.343	2.735	3.064	3.318	3.568	5.192	5.917	6.339	7.335	23.174
0.5000	1.291	1.313	1.941	2.674	3.118	3.483	3.777	4.059	5.860	6.667	7.137	8.242	28.967
0.6000	1.460	1.463	2.180	2.982	3.468	3.867	4.196	4.509	6.465	7.344	7.856	9.055	34.761
0.7000	1.624	1.609	2.408	3.271	3.800	4.227	4.593	4.935	7.032	7.979	8.528	9.813	40.555
0.8000	1.784	1.752	2.627	3.548	4.115	4.569	4.971	5.340	7.567	8.575	9.160	10.525	46.348
0.9000	1.942	1.895	2.840	3.814	4.419	4.896	5.333	5.729	8.077	9.142	9.761	11.200	52.141
1.0000	2.098	2.037	3.049	4.073	4.712	5.213	5.683	6.106	8.566	9.687	10.337	11.845	57.935
1.2500	2.487	2.395	3.558	4.698	5.418	5.971	6.524	7.011	9.727	10.976	11.700	13.370	72.419
1.6000	3.033	2.910	4.258	5.544	6.366	6.988	7.652	8.229	11.262	12.675	13.497	15.375	92.696
2.0000	3.673	3.522	5.060	6.497	7.430	8.124	8.916	9.596	12.959	14.541	15.472	17.572	115.87
2.5000	4.508	4.322	6.084	7.698	8.762	9.543	10.501	11.304	15.054	16.841	17.900	20.257	144.84
3.2000	5.756	5.507	7.582	9.431	10.672	11.574	12.769	13.752	18.009	20.080	21.312	24.017	185.39
4.0000	7.299	6.963	9.403	11.513	12.951	13.996	15.463	16.669	21.479	23.872	25.300	28.403	231.74
5.0000	9.406	8.934	11.850	14.286	15.971	17.199	19.017	20.517	25.998	28.816	30.473	34.080	289.67
6.0000	11.702	11.073	14.489	17.254	19.190	20.604	22.792	24.598	30.761	34.004	35.891	39.996	347.61
7.0000	14.184	13.375	17.314	20.415	22.613	24.210	26.783	28.912	35.771	39.444	41.565	46.165	405.54
8.0000	16.844	15.835	20.322	23.764	26.235	28.019	30.983	33.455	41.010	45.134	47.490	52.598	463.48
9.0000	19.673	18.450	23.505	27.294	30.046	32.026	35.389	38.220	46.483	51.066	53.665	59.285	521.41
10.0000	22.666	21.215	26.858	30.999	34.045	36.222	40.001	43.195	52.190	57.236	60.075	66.219	579.35
11.0000	25.818	24.126	30.376	34.871	38.223	40.603	44.813	48.367	58.122	63.625	66.700	73.398	637.28
12.0000	29.123	27.178	34.053	38.908	42.572	45.159	49.816	53.732	64.266	70.227	73.541	80.819	695.22

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.033	0.083	0.108	0.112	0.122	0.177	0.277	0.394	0.583	0.091	0.073	0.085	0.7242
0.0160	0.042	0.105	0.138	0.144	0.155	0.225	0.351	0.496	0.734	0.115	0.093	0.109	0.9270
0.0200	0.051	0.129	0.171	0.178	0.193	0.279	0.432	0.606	0.894	0.142	0.114	0.136	1.1587
0.0250	0.063	0.159	0.211	0.221	0.240	0.343	0.528	0.735	1.075	0.174	0.140	0.169	1.4484
0.0320	0.078	0.201	0.266	0.278	0.302	0.427	0.651	0.899	1.301	0.216	0.173	0.213	1.8539
0.0400	0.095	0.248	0.326	0.340	0.368	0.514	0.780	1.066	1.532	0.261	0.209	0.261	2.3174
0.0500	0.115	0.304	0.396	0.413	0.446	0.613	0.923	1.251	1.783	0.313	0.250	0.317	2.8967
0.0600	0.133	0.358	0.462	0.481	0.518	0.701	1.051	1.413	2.002	0.361	0.288	0.369	3.4761
0.0700	0.150	0.408	0.523	0.543	0.584	0.781	1.167	1.558	2.196	0.406	0.323	0.418	4.0554
0.0800	0.165	0.455	0.580	0.601	0.645	0.854	1.272	1.690	2.372	0.447	0.355	0.462	4.6348
0.0900	0.180	0.499	0.632	0.655	0.701	0.921	1.368	1.811	2.533	0.485	0.385	0.504	5.2141
0.1000	0.193	0.539	0.680	0.705	0.753	0.983	1.457	1.922	2.681	0.521	0.413	0.542	5.7935
0.1250	0.223	0.628	0.787	0.815	0.869	1.120	1.654	2.168	3.011	0.602	0.477	0.627	7.2419
0.1600	0.256	0.729	0.910	0.942	1.002	1.280	1.885	2.458	3.398	0.698	0.553	0.724	9.2696
0.2000	0.288	0.824	1.025	1.061	1.128	1.433	2.108	2.738	3.774	0.791	0.626	0.815	11.587
0.2500	0.320	0.921	1.144	1.186	1.260	1.597	2.350	3.044	4.189	0.892	0.706	0.910	14.484
0.3200	0.358	1.036	1.285	1.332	1.419	1.801	2.652	3.430	4.713	1.015	0.803	1.020	18.539
0.4000	0.394	1.148	1.424	1.479	1.579	2.013	2.968	3.836	5.268	1.141	0.902	1.130	23.174
0.5000	0.435	1.271	1.580	1.643	1.762	2.260	3.342	4.315	5.918	1.284	1.014	1.253	28.967
0.6000	0.473	1.383	1.727	1.797	1.935	2.495	3.698	4.770	6.542	1.419	1.119	1.368	34.761
0.7000	0.509	1.490	1.871	1.949	2.104	2.727	4.045	5.217	7.149	1.550	1.221	1.480	40.555
0.8000	0.546	1.596	2.015	2.100	2.273	2.959	4.390	5.659	7.746	1.679	1.322	1.592	46.348
0.9000	0.583	1.701	2.161	2.253	2.445	3.193	4.734	6.097	8.337	1.809	1.424	1.706	52.141
1.0000	0.621	1.807	2.309	2.409	2.620	3.429	5.079	6.532	8.922	1.940	1.526	1.822	57.935
1.2500	0.719	2.074	2.684	2.803	3.063	4.023	5.933	7.597	10.344	2.272	1.786	2.117	72.419
1.6000	0.867	2.459	3.222	3.366	3.694	4.858	7.109	9.048	12.241	2.751	2.166	2.546	92.696
2.0000	1.052	2.922	3.854	4.028	4.430	5.814	8.429	10.664	14.313	3.323	2.626	3.061	115.87
2.5000	1.311	3.539	4.674	4.890	5.372	7.016	10.062	12.638	16.809	4.075	3.242	3.745	144.84
3.2000	1.723	4.481	5.885	6.160	6.745	8.731	12.344	15.380	20.241	5.197	4.177	4.777	185.39
4.0000	2.259	5.677	7.370	7.712	8.405	10.770	15.015	18.570	24.203	6.582	5.345	6.058	231.74
5.0000	3.014	7.344	9.385	9.809	10.633	13.476	18.518	22.725	29.300	8.465	6.948	7.809	289.67
6.0000	3.853	9.190	11.574	12.084	13.041	16.371	22.232	27.107	34.631	10.512	8.699	9.721	347.61
7.0000	4.768	11.203	13.929	14.529	15.625	19.456	26.167	31.728	40.232	12.717	10.591	11.783	405.54
8.0000	5.752	13.375	16.442	17.135	18.383	22.730	30.330	36.595	46.105	15.073	12.617	13.985	463.48
9.0000	6.805	15.696	19.110	19.900	21.307	26.192	34.726	41.716	52.256	17.578	14.774	16.326	521.41
10.0000	7.922	18.150	21.926	22.815	24.389	29.836	39.345	47.090	58.685	20.226	17.059	18.800	579.35
11.0000	9.103	20.730	24.879	25.874	27.622	33.660	44.177	52.709	65.398	23.013	19.466	21.399	637.28
12.0000	10.345	23.433	27.967	29.072	31.002	37.657	49.214	58.564	72.389	25.932	21.992	24.121	695.22

$^{63}_{29}Cu$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=63 MEV
0.0125	6.472	5.354	3.922	2.608	2.118	1.922	1.781	1.647	1.047	0.896	0.824	0.706	0.7866
0.0160	7.371	6.098	4.467	2.971	2.412	2.189	2.028	1.876	1.193	1.021	0.938	0.804	1.0069
0.0200	8.290	6.858	5.024	3.341	2.713	2.462	2.281	2.110	1.342	1.148	1.055	0.904	1.2586
0.0250	9.325	7.714	5.651	3.758	3.052	2.769	2.566	2.374	1.509	1.291	1.190	1.017	1.5732
0.0320	10.607	8.792	6.436	4.280	3.482	3.167	2.922	2.703	1.718	1.474	1.358	1.165	2.0138
0.0400	11.901	9.911	7.239	4.829	3.938	3.591	3.308	3.062	1.947	1.676	1.542	1.325	2.5172
0.0500	13.337	11.180	8.143	5.455	4.470	4.071	3.754	3.477	2.207	1.918	1.767	1.519	3.1465
0.0600	14.629	12.379	8.964	6.041	4.966	4.509	4.168	3.863	2.474	2.151	1.985	1.708	3.7758
0.0700	15.798	13.514	9.722	6.591	5.444	4.939	4.569	4.239	2.722	2.382	2.207	1.896	4.4051
0.0800	16.877	14.624	10.431	7.124	5.893	5.340	4.934	4.589	2.973	2.608	2.409	2.076	5.0344
0.0900	17.880	15.693	11.098	7.636	6.326	5.749	5.294	4.928	3.230	2.825	2.619	2.259	5.6637
0.1000	18.830	16.742	11.732	8.130	6.758	6.124	5.631	5.268	3.473	3.039	2.816	2.429	6.2930
0.1250	20.981	19.358	13.196	9.290	7.759	7.033	6.466	6.057	4.058	3.550	3.319	2.870	7.8662
0.1600	23.580	22.919	15.029	10.761	9.047	8.206	7.529	7.063	4.809	4.223	3.960	3.457	10.069
0.2000	25.814	26.197	16.676	12.123	10.255	9.288	8.521	7.988	5.536	4.886	4.586	4.002	12.586
0.2500	27.955	29.405	18.355	13.565	11.527	10.462	9.581	8.976	6.333	5.598	5.250	4.589	15.732
0.3200	30.290	32.909	20.302	15.287	13.054	11.917	10.861	10.151	7.268	6.456	6.060	5.329	20.138
0.4000	32.435	36.007	22.186	16.906	14.554	13.311	12.136	11.337	8.253	7.343	6.900	6.057	25.172
0.5000	34.632	38.918	24.218	18.720	16.226	14.894	13.562	12.642	9.348	8.331	7.835	6.902	31.465
0.6000	35.971	40.512	25.657	20.089	17.498	16.113	14.625	13.624	10.186	9.108	8.582	7.620	37.758
0.7000	36.954	41.482	26.797	21.170	18.517	17.070	15.462	14.417	10.880	9.727	9.192	8.146	44.051
0.8000	37.616	41.937	27.700	22.077	19.362	17.922	16.204	15.096	11.468	10.304	9.723	8.642	50.344
0.9000	38.123	42.129	28.408	22.783	20.084	18.636	16.817	15.653	12.017	10.795	10.198	9.091	56.637
1.0000	38.425	42.074	28.956	23.426	20.675	19.198	17.345	16.129	12.451	11.206	10.598	9.469	62.930
1.2500	38.645	41.386	29.795	24.432	21.751	20.261	18.265	16.954	13.319	12.008	11.352	10.160	78.662
1.6000	38.127	39.964	30.116	25.147	22.467	20.991	18.913	17.467	14.004	12.679	11.986	10.751	100.69
2.0000	36.927	38.536	29.804	25.244	22.680	21.280	19.074	17.673	14.306	13.054	12.339	11.117	125.86
2.5000	35.105	36.783	28.940	24.860	22.487	21.127	18.898	17.538	14.412	13.110	12.444	11.287	157.32
3.2000	32.636	34.475	27.448	23.880	21.739	20.449	18.336	16.963	14.163	12.956	12.297	11.171	201.38
4.0000	30.126	32.083	25.748	22.633	20.728	19.517	17.586	16.222	13.724	12.565	11.973	10.892	251.72
5.0000	27.521	29.501	23.849	21.130	19.460	18.363	16.551	15.311	13.117	11.972	11.471	10.470	314.65
6.0000	25.428	27.339	22.227	19.826	18.293	17.337	15.648	14.470	12.403	11.447	10.958	10.069	377.58
7.0000	23.641	25.538	20.847	18.679	17.262	16.407	14.843	13.738	11.883	10.924	10.486	9.652	440.51
8.0000	22.163	23.991	19.665	17.699	16.381	15.575	14.159	13.077	11.366	10.481	10.069	9.282	503.44
9.0000	20.935	22.650	18.642	16.834	15.603	14.858	13.515	12.509	10.906	10.067	9.675	8.948	566.37
10.0000	19.842	21.475	17.748	16.097	14.908	14.216	12.938	12.015	10.471	9.708	9.353	8.643	629.30
11.0000	18.893	20.470	16.959	15.433	14.314	13.652	12.431	11.583	10.108	9.396	9.073	8.361	692.23
12.0000	18.063	19.558	16.258	14.827	13.771	13.153	11.982	11.186	9.771	9.105	8.779	8.097	755.16

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	14.708	6.276	4.158	3.907	3.471	2.291	1.404	0.996	0.657	5.260	6.691	5.107	0.7866
0.0160	16.439	6.933	4.659	4.382	3.895	2.631	1.630	1.161	0.771	5.955	7.576	5.722	1.0069
0.0200	17.987	7.386	5.110	4.813	4.306	2.990	1.864	1.357	0.907	6.642	8.446	6.276	1.2586
0.0250	19.666	7.804	5.606	5.284	4.781	3.430	2.193	1.599	1.159	7.403	9.421	6.883	1.5732
0.0320	21.948	8.329	6.172	5.876	5.368	4.023	2.613	1.970	1.371	8.367	10.671	7.659	2.0138
0.0400	24.252	8.817	6.754	6.501	5.987	4.677	3.098	2.374	1.687	9.375	11.959	8.470	2.5172
0.0500	26.952	9.478	7.483	7.279	6.775	5.464	3.680	2.866	2.076	10.536	13.435	9.462	3.1465
0.0600	29.938	10.245	8.309	8.031	7.592	6.248	4.249	3.343	2.456	11.662	14.888	10.469	3.7758
0.0700	32.957	11.161	9.139	8.876	8.419	7.019	4.783	3.801	2.810	12.775	16.294	11.550	4.4051
0.0800	36.194	12.152	10.024	9.742	9.273	7.792	5.340	4.256	3.160	13.894	17.701	12.684	5.0344
0.0900	39.399	13.218	10.932	10.655	10.144	8.557	5.882	4.706	3.485	15.005	19.078	13.851	5.6637
0.1000	42.939	14.407	11.943	11.568	11.005	9.327	6.441	5.127	3.801	16.108	20.484	15.052	6.2930
0.1250	52.387	17.484	14.449	13.921	13.301	11.230	7.733	6.162	4.579	18.923	24.082	18.197	7.8662
0.1600	66.577	22.197	18.215	17.554	16.652	13.871	9.513	7.574	5.621	22.949	29.156	22.994	10.069
0.2000	81.877	27.181	22.262	21.378	20.211	16.425	11.173	8.871	6.553	26.914	34.152	28.098	12.586
0.2500	99.485	32.929	26.707	25.716	24.009	18.979	12.830	10.059	7.397	31.094	39.409	33.920	15.732
0.3200	120.591	39.365	32.015	30.554	27.955	21.418	14.292	11.146	8.141	35.771	45.435	40.562	20.138
0.4000	138.439	45.703	36.296	34.499	31.237	23.317	15.419	12.002	8.741	39.779	50.650	46.058	25.172
0.5000	154.511	51.342	39.887	37.950	33.954	24.969	16.468	12.860	9.372	43.423	55.435	50.906	31.465
0.6000	162.922	54.649	41.359	39.307	35.124	25.683	17.036	13.290	9.724	45.208	58.011	53.033	37.758
0.7000	164.536	56.542	41.590	39.526	35.373	25.833	17.284	13.452	9.942	45.958	59.061	53.407	44.051
0.8000	162.596	57.061	41.245	39.333	35.151	25.705	17.395	13.573	10.083	46.092	59.166	53.017	50.344
0.9000	159.084	56.702	40.623	38.720	34.430	25.397	17.329	13.693	10.170	45.879	58.833	52.100	56.637
1.0000	156.075	56.436	40.278	38.223	34.053	25.221	17.374	13.841	10.280	45.549	58.347	51.311	62.930
1.2500	148.083	55.449	39.479	37.691	33.490	25.118	17.639	14.242	10.756	44.604	56.641	49.967	78.662
1.6000	136.125	53.305	38.488	36.802	32.947	25.147	18.040	14.667	11.354	42.915	53.697	47.824	100.69
2.0000	123.387	50.577	37.493	35.705	32.307	25.095	18.329	15.051	11.832	41.129	50.666	45.450	125.86
2.5000	109.395	47.028	35.915	34.179	31.545	24.947	18.522	15.425	12.271	38.954	47.144	42.542	157.32
3.2000	96.069	42.682	33.844	32.307	30.001	24.292	18.473	15.371	12.324	36.314	43.286	39.388	201.38
4.0000	84.970	38.417	31.413	30.126	28.323	23.174	17.766	14.960	12.102	33.627	39.627	36.228	251.72
5.0000	75.838	34.461	28.833	27.760	26.162	21.678	16.861	14.238	11.686	30.860	36.131	33.102	314.65
6.0000	69.126	31.429	26.717	25.694	24.339	20.315	15.870	13.492	11.113	28.539	33.318	30.518	377.58
7.0000	64.001	29.061	24.975	24.079	22.765	19.138	15.052	12.842	10.611	26.664	31.042	28.519	440.51
8.0000	59.782	27.039	23.500	22.674	21.415	18.072	14.218	12.192	10.128	25.053	29.104	26.803	503.44
9.0000	56.113	25.502	22.203	21.438	20.283	17.151	13.515	11.614	9.694	23.638	27.422	25.297	566.37
10.0000	53.067	24.226	21.138	20.410	19.310	16.328	12.903	11.093	9.282	22.434	25.983	24.031	629.30
11.0000	50.370	23.099	20.199	19.503	18.452	15.603	12.363	10.634	8.904	21.386	24.744	22.929	692.23
12.0000	47.961	22.095	19.363	18.697	17.689	14.957	11.885	10.226	8.568	20.453	23.623	21.948	755.16

$^{63}_{29}Cu$ IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=63
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.097	0.100	0.131	0.181	0.199	0.242	0.263	0.293	0.425	0.496	0.537	0.644	0.7866
0.0160	0.121	0.127	0.165	0.229	0.253	0.305	0.331	0.367	0.534	0.622	0.673	0.807	1.0069
0.0200	0.146	0.155	0.203	0.282	0.313	0.375	0.404	0.447	0.652	0.760	0.822	0.982	1.2586
0.0250	0.176	0.189	0.247	0.345	0.385	0.458	0.493	0.543	0.794	0.923	0.998	1.190	1.5732
0.0320	0.215	0.233	0.305	0.429	0.482	0.568	0.611	0.670	0.982	1.141	1.232	1.464	2.0138
0.0400	0.255	0.279	0.367	0.518	0.587	0.686	0.736	0.806	1.186	1.375	1.484	1.757	2.5172
0.0500	0.301	0.333	0.439	0.621	0.708	0.822	0.883	0.964	1.423	1.646	1.777	2.097	3.1465
0.0600	0.343	0.381	0.505	0.717	0.821	0.949	1.018	1.109	1.643	1.898	2.048	2.411	3.7758
0.0700	0.382	0.427	0.566	0.806	0.926	1.067	1.144	1.245	1.849	2.132	2.299	2.703	4.4051
0.0800	0.419	0.469	0.624	0.890	1.025	1.177	1.262	1.373	2.041	2.350	2.533	2.975	5.0344
0.0900	0.454	0.508	0.679	0.969	1.118	1.281	1.374	1.492	2.221	2.554	2.753	3.229	5.6637
0.1000	0.487	0.545	0.731	1.043	1.206	1.379	1.480	1.606	2.390	2.746	2.960	3.468	6.2930
0.1250	0.564	0.629	0.852	1.214	1.409	1.604	1.723	1.865	2.774	3.184	3.429	4.010	7.8662
0.1600	0.661	0.731	1.003	1.425	1.658	1.880	2.023	2.184	3.242	3.716	3.996	4.661	10.069
0.2000	0.761	0.832	1.157	1.638	1.909	2.158	2.325	2.506	3.707	4.243	4.557	5.304	12.586
0.2500	0.877	0.943	1.333	1.878	2.189	2.469	2.662	2.867	4.220	4.823	5.174	6.010	15.732
0.3200	1.026	1.083	1.558	2.178	2.540	2.855	3.085	3.318	4.852	5.535	5.933	6.875	20.138
0.4000	1.186	1.228	1.792	2.487	2.899	3.249	3.516	3.779	5.489	6.252	6.695	7.742	25.172
0.5000	1.373	1.396	2.061	2.837	3.304	3.691	4.000	4.298	6.195	7.044	7.538	8.700	31.465
0.6000	1.551	1.554	2.313	3.161	3.673	4.097	4.442	4.772	6.833	7.758	8.296	9.557	37.758
0.7000	1.724	1.708	2.553	3.466	4.023	4.476	4.860	5.221	7.430	8.426	9.003	10.355	44.051
0.8000	1.892	1.858	2.784	3.757	4.355	4.835	5.258	5.647	7.993	9.054	9.669	11.105	50.344
0.9000	2.058	2.008	3.008	4.037	4.674	5.179	5.639	6.057	8.529	9.650	10.300	11.814	56.637
1.0000	2.223	2.157	3.227	4.309	4.982	5.512	6.007	6.452	9.043	10.222	10.905	12.492	62.930
1.2500	2.630	2.534	3.762	4.966	5.723	6.308	6.889	7.402	10.263	11.576	12.337	14.093	78.662
1.6000	3.203	3.074	4.496	5.852	6.717	7.374	8.072	8.679	11.872	13.357	14.221	16.196	100.69
2.0000	3.873	3.715	5.335	6.850	7.831	8.563	9.395	10.110	13.648	15.311	16.288	18.495	125.86
2.5000	4.746	4.550	6.405	8.105	9.223	10.046	11.051	11.895	15.837	17.713	18.824	21.301	157.32
3.2000	6.047	5.786	7.967	9.912	11.214	12.164	13.416	14.448	18.918	21.091	22.383	25.221	201.38
4.0000	7.653	7.300	9.861	12.078	13.586	14.684	16.220	17.483	22.529	25.037	26.532	29.785	251.72
5.0000	9.840	9.347	12.403	14.957	16.721	18.010	19.911	21.478	27.221	30.170	31.904	35.680	314.65
6.0000	12.221	11.565	15.138	18.034	20.059	21.539	23.823	25.709	32.158	35.549	37.520	41.813	377.58
7.0000	14.789	13.948	18.063	21.306	23.602	25.273	27.955	30.175	37.345	41.180	43.394	48.199	440.51
8.0000	17.540	16.492	21.173	24.769	27.347	29.212	32.298	34.873	42.762	47.064	49.521	54.851	503.44
9.0000	20.463	19.193	24.462	28.417	31.285	33.351	36.850	39.795	48.417	53.193	55.900	61.759	566.37
10.0000	23.552	22.048	27.923	32.241	35.413	37.683	41.610	44.930	54.308	59.561	62.518	68.917	629.30
11.0000	26.804	25.050	31.551	36.235	39.722	42.201	46.574	50.266	60.427	66.152	69.351	76.322	692.23
12.0000	30.212	28.196	35.342	40.397	44.206	46.899	51.732	55.796	66.761	72.958	76.404	83.973	755.16

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.035	0.087	0.113	0.118	0.127	0.184	0.285	0.403	0.592	0.096	0.078	0.090	0.7866
0.0160	0.044	0.111	0.145	0.151	0.163	0.235	0.362	0.509	0.749	0.121	0.098	0.115	1.0069
0.0200	0.055	0.137	0.180	0.188	0.203	0.292	0.447	0.624	0.915	0.150	0.121	0.144	1.2586
0.0250	0.067	0.169	0.223	0.233	0.252	0.359	0.548	0.760	1.104	0.184	0.148	0.179	1.5732
0.0320	0.083	0.214	0.281	0.294	0.318	0.448	0.679	0.933	1.341	0.229	0.184	0.226	2.0138
0.0400	0.101	0.263	0.345	0.360	0.389	0.541	0.815	1.110	1.585	0.277	0.222	0.277	2.5172
0.0500	0.122	0.324	0.420	0.437	0.472	0.646	0.968	1.306	1.851	0.333	0.266	0.337	3.1465
0.0600	0.142	0.381	0.491	0.510	0.549	0.741	1.104	1.479	2.084	0.384	0.306	0.392	3.7758
0.0700	0.160	0.435	0.556	0.577	0.619	0.826	1.227	1.634	2.291	0.431	0.343	0.444	4.4051
0.0800	0.176	0.485	0.616	0.639	0.684	0.904	1.340	1.774	2.478	0.475	0.378	0.492	5.0344
0.0900	0.192	0.531	0.672	0.696	0.745	0.976	1.443	1.903	2.649	0.517	0.410	0.536	5.6637
0.1000	0.206	0.575	0.724	0.749	0.800	1.042	1.538	2.022	2.808	0.555	0.441	0.577	6.2930
0.1250	0.238	0.670	0.838	0.867	0.924	1.188	1.748	2.285	3.160	0.641	0.509	0.668	7.8662
0.1600	0.274	0.778	0.969	1.003	1.067	1.359	1.995	2.594	3.573	0.744	0.590	0.772	10.069
0.2000	0.307	0.879	1.091	1.130	1.200	1.522	2.232	2.891	3.972	0.843	0.668	0.868	12.586
0.2500	0.341	0.982	1.218	1.262	1.341	1.697	2.489	3.217	4.412	0.950	0.752	0.969	15.732
0.3200	0.381	1.103	1.367	1.417	1.508	1.912	2.809	3.625	4.967	1.081	0.855	1.086	20.138
0.4000	0.420	1.222	1.514	1.572	1.679	2.137	3.143	4.054	5.554	1.214	0.960	1.202	25.172
0.5000	0.463	1.352	1.679	1.746	1.871	2.397	3.538	4.560	6.240	1.365	1.079	1.332	31.465
0.6000	0.502	1.470	1.834	1.908	2.053	2.646	3.913	5.041	6.898	1.507	1.189	1.453	37.758
0.7000	0.541	1.584	1.986	2.068	2.232	2.890	4.279	5.511	7.538	1.645	1.297	1.571	44.051
0.8000	0.579	1.694	2.138	2.227	2.410	3.134	4.642	5.976	8.166	1.782	1.403	1.689	50.344
0.9000	0.618	1.805	2.291	2.388	2.591	3.380	5.004	6.438	8.787	1.918	1.510	1.809	56.637
1.0000	0.658	1.916	2.447	2.552	2.775	3.628	5.366	6.894	9.402	2.056	1.617	1.931	62.930
1.2500	0.761	2.197	2.840	2.966	3.239	4.252	6.263	8.013	10.896	2.404	1.890	2.241	78.662
1.6000	0.916	2.601	3.404	3.556	3.901	5.127	7.496	9.534	12.884	2.907	2.289	2.690	100.69
2.0000	1.110	3.085	4.066	4.249	4.672	6.127	8.878	11.225	15.053	3.505	2.771	3.229	125.86
2.5000	1.381	3.730	4.923	5.149	5.656	7.384	10.584	13.288	17.661	4.290	3.414	3.944	157.32
3.2000	1.810	4.712	6.186	6.474	7.087	9.172	12.963	16.146	21.240	5.461	4.389	5.020	201.38
4.0000	2.368	5.956	7.730	8.088	8.815	11.294	15.742	19.466	25.362	6.902	5.604	6.353	251.72
5.0000	3.152	7.687	9.823	10.266	11.128	14.103	19.380	23.780	30.655	8.857	7.269	8.172	314.65
6.0000	4.022	9.601	12.092	12.624	13.624	17.104	23.230	28.324	36.181	10.979	9.084	10.153	377.58
7.0000	4.969	11.685	14.530	15.156	16.299	20.298	27.304	33.108	41.979	13.262	11.042	12.288	440.51
8.0000	5.987	13.931	17.129	17.851	19.151	23.684	31.608	38.139	48.053	15.698	13.137	14.565	503.44
9.0000	7.074	16.329	19.885	20.706	22.172	27.260	36.150	43.430	54.407	18.286	15.366	16.983	566.37
10.0000	8.228	18.862	22.791	23.716	25.353	31.022	40.918	48.977	61.044	21.020	17.725	19.537	629.30
11.0000	9.446	21.523	25.838	26.871	28.689	34.966	45.902	54.773	67.968	23.894	20.207	22.219	692.23
12.0000	10.726	24.310	29.021	30.168	32.173	39.087	51.095	60.810	75.176	26.904	22.811	25.025	755.16

$^{64}_{30}Zn$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=64 MEV
0.0125	6.557	5.425	3.974	2.643	2.146	1.947	1.804	1.669	1.061	0.908	0.835	0.715	0.7991
0.0160	7.472	6.182	4.529	3.012	2.445	2.219	2.056	1.902	1.209	1.035	0.951	0.815	1.0229
0.0200	8.408	6.956	5.096	3.389	2.752	2.497	2.314	2.140	1.361	1.164	1.070	0.917	1.2786
0.0250	9.462	7.827	5.734	3.813	3.097	2.810	2.603	2.408	1.531	1.310	1.207	1.032	1.5982
0.0320	10.768	8.926	6.534	4.345	3.535	3.215	2.967	2.744	1.745	1.496	1.379	1.183	2.0457
0.0400	12.088	10.066	7.353	4.904	4.000	3.647	3.360	3.110	1.978	1.702	1.566	1.346	2.5572
0.0500	13.553	11.360	8.274	5.544	4.542	4.137	3.814	3.533	2.242	1.949	1.795	1.543	3.1964
0.0600	14.870	12.583	9.112	6.141	5.048	4.583	4.237	3.927	2.515	2.187	2.018	1.736	3.8357
0.0700	16.065	13.741	9.886	6.703	5.536	5.022	4.646	4.310	2.768	2.422	2.244	1.928	4.4750
0.0800	17.166	14.874	10.609	7.246	5.994	5.432	5.018	4.668	3.024	2.652	2.451	2.111	5.1143
0.0900	18.191	15.966	11.291	7.769	6.436	5.849	5.386	5.013	3.286	2.874	2.665	2.298	5.7536
0.1000	19.161	17.036	11.939	8.273	6.877	6.232	5.731	5.360	3.534	3.092	2.865	2.471	6.3929
0.1250	21.361	19.708	13.434	9.458	7.899	7.160	6.583	6.166	4.131	3.614	3.379	2.922	7.9911
0.1600	24.019	23.345	15.308	10.961	9.216	8.358	7.669	7.195	4.899	4.302	4.034	3.521	10.229
0.2000	26.340	26.731	17.015	12.370	10.465	9.478	8.695	8.150	5.649	4.986	4.679	4.084	12.786
0.2500	28.583	30.066	18.768	13.869	11.786	10.698	9.797	9.177	6.475	5.724	5.368	4.692	15.982
0.3200	31.037	33.720	20.802	15.664	13.376	12.211	11.129	10.401	7.447	6.615	6.209	5.461	20.457
0.4000	33.293	36.959	22.772	17.352	14.939	13.663	12.456	11.637	8.471	7.538	7.082	6.217	25.572
0.5000	35.605	40.012	24.899	19.247	16.682	15.313	13.943	12.997	9.611	8.565	8.055	7.096	31.964
0.6000	37.029	41.704	26.411	20.680	18.013	16.586	15.055	14.024	10.485	9.376	8.835	7.844	38.357
0.7000	38.077	42.744	27.612	21.814	19.080	17.589	15.932	14.855	11.211	10.023	9.471	8.394	44.750
0.8000	38.791	43.247	28.565	22.766	19.967	18.481	16.710	15.568	11.826	10.626	10.026	8.912	51.143
0.9000	39.340	43.474	29.315	23.510	20.726	19.230	17.354	16.152	12.400	11.140	10.524	9.381	57.536
1.0000	39.675	43.443	29.899	24.188	21.348	19.823	17.909	16.653	12.856	11.571	10.943	9.777	63.929
1.2500	39.952	42.786	30.804	25.259	22.487	20.947	18.883	17.527	13.769	12.414	11.736	10.504	79.911
1.6000	39.477	41.380	31.183	26.038	23.262	21.734	19.583	18.086	14.500	13.128	12.411	11.132	102.29
2.0000	38.294	39.963	30.908	26.179	23.521	22.068	19.781	18.328	14.836	13.538	12.796	11.529	127.86
2.5000	36.469	38.213	30.065	25.826	23.361	21.948	19.633	18.220	14.973	13.620	12.928	11.725	159.82
3.2000	33.976	35.891	28.575	24.860	22.632	21.289	19.088	17.660	14.745	13.488	12.802	11.630	204.57
4.0000	31.424	33.465	26.858	23.608	21.621	20.358	18.344	16.920	14.315	13.107	12.489	11.361	255.72
5.0000	28.762	30.831	24.924	22.082	20.338	19.191	17.297	16.001	13.708	12.512	11.988	10.942	319.64
6.0000	26.614	28.615	23.264	20.751	19.146	18.146	16.378	15.145	12.981	11.981	11.469	10.539	383.57
7.0000	24.773	26.761	21.846	19.574	18.089	17.193	15.554	14.397	12.452	11.447	10.989	10.115	447.50
8.0000	23.247	25.166	20.628	18.565	17.183	16.337	14.852	13.717	11.923	10.994	10.561	9.736	511.43
9.0000	21.978	23.778	19.571	17.672	16.381	15.598	14.189	13.132	11.449	10.568	10.157	9.394	575.36
10.0000	20.846	22.561	18.645	16.911	15.662	14.935	13.592	12.623	11.001	10.199	9.826	9.080	639.29
11.0000	19.860	21.518	17.828	16.223	15.047	14.352	13.068	12.177	10.625	9.877	9.538	8.789	703.22
12.0000	18.998	20.571	17.100	15.595	14.484	13.834	12.603	11.765	10.277	9.576	9.234	8.516	767.15

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	14.903	6.359	4.213	3.958	3.517	2.321	1.423	1.009	0.666	5.329	6.780	5.174	0.7991
0.0160	16.665	7.028	4.723	4.443	3.949	2.667	1.653	1.177	0.782	6.037	7.680	5.801	1.0229
0.0200	18.243	7.491	5.183	4.882	4.367	3.032	1.891	1.376	0.920	6.737	8.566	6.365	1.2786
0.0250	19.956	7.919	5.688	5.362	4.851	3.481	2.225	1.623	1.176	7.512	9.559	6.984	1.5982
0.0320	22.282	8.455	6.266	5.966	5.450	4.084	2.653	1.999	1.392	8.495	10.834	7.776	2.0457
0.0400	24.632	8.956	6.860	6.603	6.081	4.750	3.147	2.412	1.713	9.522	12.147	8.603	2.5572
0.0500	27.387	9.631	7.604	7.397	6.884	5.552	3.740	2.912	2.110	10.707	13.652	9.614	3.1964
0.0600	30.433	10.415	8.447	8.164	7.718	6.351	4.319	3.399	2.497	11.854	15.135	10.643	3.8357
0.0700	33.513	11.349	9.293	9.026	8.561	7.138	4.864	3.865	2.857	12.990	16.569	11.744	4.4750
0.0800	36.815	12.360	10.196	9.909	9.432	7.925	5.432	4.329	3.215	14.132	18.004	12.901	5.1143
0.0900	40.085	13.448	11.122	10.840	10.320	8.706	5.984	4.788	3.546	15.266	19.410	14.092	5.7536
0.1000	43.695	14.661	12.154	11.771	11.198	9.491	6.554	5.217	3.868	16.392	20.845	15.317	6.3929
0.1250	53.334	17.800	14.711	14.173	13.542	11.433	7.873	6.274	4.662	19.265	24.518	18.526	7.9911
0.1600	67.816	22.610	18.554	17.880	16.962	14.130	9.690	7.715	5.725	23.376	29.698	23.422	10.229
0.2000	83.546	27.735	22.716	21.814	20.623	16.760	11.400	9.052	6.687	27.463	34.848	28.671	12.786
0.2500	101.722	33.670	27.307	26.294	24.548	19.406	13.119	10.285	7.563	31.793	40.295	34.683	15.982
0.3200	123.564	40.335	32.805	31.307	28.644	21.946	14.645	11.420	8.342	36.653	46.555	41.562	20.457
0.4000	142.099	46.911	37.255	35.411	32.063	23.934	15.827	12.320	8.972	40.831	51.989	47.275	25.572
0.5000	158.855	52.786	41.008	39.016	34.908	25.671	16.931	13.221	9.636	44.644	56.993	52.337	31.964
0.6000	167.713	56.256	42.575	40.462	36.157	26.438	17.537	13.681	10.010	46.537	59.716	54.592	38.357
0.7000	169.539	58.262	42.854	40.728	36.448	26.618	17.810	13.861	10.244	47.355	60.857	55.031	44.750
0.8000	167.674	58.843	42.533	40.562	36.248	26.508	17.939	13.997	10.397	47.531	61.014	54.673	51.143
0.9000	164.162	58.512	41.920	39.956	35.529	26.207	17.882	14.130	10.495	47.343	60.711	53.763	57.536
1.0000	161.153	58.272	41.589	39.466	35.161	26.042	17.939	14.292	10.614	47.030	60.246	52.980	63.929
1.2500	153.095	57.326	40.815	38.967	34.623	25.968	18.236	14.724	11.120	46.113	58.558	51.658	79.911
1.6000	140.946	55.193	39.852	38.105	34.114	26.038	18.678	15.186	11.756	44.435	55.599	49.518	102.29
2.0000	127.957	52.450	38.882	37.027	33.504	26.024	19.008	15.608	12.270	42.652	52.543	47.134	127.86
2.5000	113.647	48.856	37.311	35.507	32.771	25.916	19.242	16.025	12.748	40.468	48.976	44.196	159.82
3.2000	100.013	44.435	35.233	33.633	31.233	25.289	19.231	16.002	12.830	37.805	45.063	41.006	204.57
4.0000	88.631	40.072	32.767	31.424	29.544	24.172	18.532	15.604	12.623	35.076	41.334	37.789	255.72
5.0000	79.258	36.015	30.133	29.011	27.341	22.656	17.621	14.880	12.213	32.251	37.760	34.594	319.64
6.0000	72.351	32.895	27.963	26.893	25.474	21.263	16.610	14.121	11.632	29.871	34.873	31.941	383.57
7.0000	67.067	30.453	26.172	25.232	23.856	20.055	15.773	13.457	11.120	27.941	32.529	29.885	447.50
8.0000	62.708	28.363	24.650	23.784	22.463	18.957	14.914	12.789	10.623	26.279	30.529	28.115	511.43
9.0000	58.908	26.773	23.309	22.506	21.293	18.005	14.189	12.193	10.177	24.816	28.788	26.557	575.36
10.0000	55.750	25.451	22.207	21.442	20.286	17.154	13.555	11.653	9.752	23.568	27.297	25.246	639.29
11.0000	52.949	24.282	21.233	20.502	19.397	16.402	12.997	11.178	9.360	22.481	26.011	24.103	703.22
12.0000	50.445	23.239	20.366	19.665	18.605	15.732	12.500	10.756	9.012	21.512	24.846	23.085	767.15

$^{64}_{30}Zn$ IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=64
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.096	0.099	0.129	0.178	0.196	0.238	0.259	0.288	0.418	0.487	0.527	0.632	0.7991
0.0160	0.120	0.125	0.163	0.226	0.249	0.300	0.325	0.361	0.524	0.612	0.661	0.792	1.0229
0.0200	0.145	0.153	0.200	0.278	0.308	0.369	0.398	0.441	0.641	0.747	0.808	0.966	1.2786
0.0250	0.175	0.187	0.244	0.340	0.380	0.451	0.486	0.536	0.781	0.909	0.982	1.171	1.5982
0.0320	0.213	0.231	0.302	0.423	0.476	0.561	0.602	0.661	0.968	1.124	1.214	1.442	2.0457
0.0400	0.253	0.277	0.364	0.512	0.579	0.678	0.727	0.796	1.169	1.355	1.463	1.732	2.5572
0.0500	0.299	0.330	0.435	0.615	0.700	0.813	0.872	0.953	1.404	1.625	1.753	2.069	3.1964
0.0600	0.341	0.378	0.500	0.710	0.812	0.939	1.007	1.097	1.623	1.874	2.022	2.381	3.8357
0.0700	0.380	0.423	0.562	0.799	0.916	1.056	1.132	1.233	1.827	2.106	2.271	2.670	4.4750
0.0800	0.417	0.465	0.619	0.882	1.015	1.166	1.250	1.359	2.018	2.323	2.504	2.940	5.1143
0.0900	0.452	0.505	0.674	0.960	1.107	1.269	1.361	1.478	2.197	2.526	2.723	3.193	5.7536
0.1000	0.485	0.542	0.726	1.034	1.195	1.367	1.466	1.591	2.365	2.717	2.928	3.431	6.3929
0.1250	0.561	0.626	0.846	1.205	1.396	1.590	1.708	1.849	2.747	3.153	3.394	3.969	7.9911
0.1600	0.658	0.727	0.996	1.415	1.644	1.866	2.006	2.167	3.213	3.682	3.958	4.618	10.229
0.2000	0.758	0.827	1.150	1.627	1.894	2.142	2.307	2.487	3.675	4.206	4.516	5.257	12.786
0.2500	0.872	0.938	1.325	1.865	2.173	2.451	2.643	2.845	4.185	4.782	5.129	5.958	15.982
0.3200	1.021	1.077	1.548	2.163	2.521	2.834	3.061	3.293	4.812	5.488	5.881	6.815	20.457
0.4000	1.179	1.220	1.780	2.468	2.876	3.224	3.488	3.749	5.443	6.197	6.636	7.674	25.572
0.5000	1.364	1.386	2.046	2.814	3.276	3.661	3.967	4.262	6.140	6.980	7.469	8.620	31.964
0.6000	1.540	1.543	2.295	3.134	3.641	4.058	4.403	4.731	6.770	7.685	8.217	9.466	38.357
0.7000	1.710	1.694	2.531	3.435	3.985	4.432	4.816	5.173	7.359	8.344	8.915	10.253	44.750
0.8000	1.876	1.843	2.759	3.722	4.313	4.786	5.207	5.593	7.914	8.963	9.571	10.992	51.143
0.9000	2.040	1.990	2.980	3.998	4.627	5.125	5.583	5.996	8.441	9.550	10.193	11.691	57.536
1.0000	2.202	2.137	3.195	4.266	4.930	5.453	5.945	6.386	8.947	10.113	10.788	12.358	63.929
1.2500	2.602	2.507	3.721	4.911	5.659	6.236	6.813	7.319	10.146	11.444	12.196	13.932	79.911
1.6000	3.164	3.037	4.441	5.782	6.635	7.282	7.974	8.573	11.726	13.193	14.046	15.997	102.29
2.0000	3.821	3.665	5.264	6.760	7.726	8.448	9.271	9.976	13.467	15.108	16.072	18.251	127.86
2.5000	4.676	4.482	6.311	7.988	9.089	9.899	10.891	11.723	15.610	17.460	18.555	20.997	159.82
3.2000	5.946	5.690	7.837	9.753	11.034	11.968	13.202	14.217	18.619	20.759	22.030	24.826	204.57
4.0000	7.512	7.166	9.684	11.864	13.346	14.425	15.935	17.175	22.139	24.605	26.075	29.275	255.72
5.0000	9.640	9.158	12.156	14.666	16.396	17.661	19.526	21.063	26.705	29.600	31.301	35.011	319.64
6.0000	11.952	11.312	14.813	17.655	19.638	21.089	23.326	25.172	31.500	34.824	36.756	40.967	383.57
7.0000	14.444	13.624	17.651	20.828	23.075	24.710	27.334	29.504	36.531	40.286	42.454	47.162	447.50
8.0000	17.109	16.089	20.664	24.184	26.704	28.527	31.542	34.055	41.780	45.987	48.391	53.607	511.43
9.0000	19.939	18.703	23.847	27.715	30.516	32.533	35.948	38.821	47.255	51.920	54.566	60.295	575.36
10.0000	22.927	21.465	27.195	31.414	34.509	36.724	40.553	43.788	52.953	58.080	60.967	67.219	639.29
11.0000	26.070	24.367	30.703	35.275	38.675	41.092	45.352	48.946	58.868	64.452	67.573	74.377	703.22
12.0000	29.362	27.407	34.366	39.296	43.006	45.630	50.335	54.289	64.988	71.027	74.387	81.769	767.15

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.035	0.086	0.112	0.116	0.125	0.181	0.280	0.395	0.580	0.094	0.077	0.089	0.7991
0.0160	0.044	0.109	0.143	0.149	0.161	0.231	0.356	0.500	0.734	0.120	0.097	0.114	1.0229
0.0200	0.054	0.135	0.178	0.185	0.200	0.287	0.440	0.614	0.898	0.148	0.120	0.142	1.2786
0.0250	0.066	0.167	0.220	0.230	0.249	0.354	0.539	0.747	1.085	0.182	0.147	0.176	1.5982
0.0320	0.083	0.212	0.278	0.290	0.314	0.442	0.669	0.919	1.320	0.227	0.182	0.223	2.0457
0.0400	0.100	0.261	0.341	0.356	0.385	0.534	0.804	1.094	1.561	0.275	0.220	0.274	2.5572
0.0500	0.121	0.321	0.416	0.433	0.467	0.639	0.956	1.288	1.825	0.330	0.264	0.333	3.1964
0.0600	0.140	0.378	0.486	0.505	0.543	0.733	1.091	1.460	2.056	0.381	0.304	0.389	3.8357
0.0700	0.158	0.432	0.551	0.572	0.614	0.818	1.214	1.614	2.262	0.428	0.341	0.440	4.4750
0.0800	0.175	0.481	0.611	0.633	0.678	0.895	1.325	1.754	2.448	0.472	0.375	0.488	5.1143
0.0900	0.190	0.528	0.667	0.690	0.738	0.967	1.428	1.882	2.619	0.513	0.408	0.532	5.7536
0.1000	0.205	0.571	0.718	0.743	0.794	1.033	1.523	2.001	2.776	0.551	0.438	0.573	6.3929
0.1250	0.236	0.666	0.832	0.861	0.917	1.179	1.732	2.263	3.126	0.637	0.506	0.663	7.9911
0.1600	0.272	0.774	0.963	0.996	1.059	1.348	1.977	2.570	3.538	0.740	0.586	0.767	10.229
0.2000	0.305	0.874	1.084	1.123	1.192	1.510	2.213	2.866	3.935	0.838	0.664	0.863	12.786
0.2500	0.339	0.977	1.210	1.254	1.331	1.684	2.469	3.190	4.372	0.945	0.748	0.962	15.982
0.3200	0.379	1.097	1.358	1.408	1.498	1.898	2.786	3.595	4.923	1.074	0.850	1.079	20.457
0.4000	0.417	1.214	1.504	1.561	1.665	2.119	3.117	4.020	5.504	1.205	0.954	1.194	25.572
0.5000	0.460	1.343	1.667	1.733	1.856	2.376	3.507	4.520	6.182	1.355	1.071	1.322	31.964
0.6000	0.499	1.460	1.820	1.893	2.035	2.621	3.878	4.994	6.832	1.495	1.181	1.442	38.357
0.7000	0.537	1.572	1.970	2.051	2.211	2.862	4.239	5.458	7.463	1.631	1.287	1.558	44.750
0.8000	0.575	1.681	2.119	2.208	2.387	3.103	4.597	5.917	8.081	1.765	1.391	1.675	51.143
0.9000	0.613	1.789	2.270	2.367	2.565	3.345	4.953	6.371	8.693	1.900	1.496	1.793	57.536
1.0000	0.652	1.899	2.423	2.527	2.746	3.590	5.310	6.821	9.299	2.035	1.602	1.912	63.929
1.2500	0.754	2.175	2.811	2.934	3.203	4.203	6.192	7.920	10.767	2.378	1.870	2.217	79.911
1.6000	0.906	2.572	3.364	3.514	3.853	5.062	7.402	9.413	12.720	2.871	2.262	2.659	102.29
2.0000	1.096	3.046	4.013	4.193	4.608	6.042	8.757	11.072	14.845	3.458	2.734	3.187	127.86
2.5000	1.361	3.677	4.851	5.074	5.572	7.272	10.426	13.091	17.398	4.226	3.364	3.887	159.82
3.2000	1.780	4.637	6.085	6.368	6.970	9.019	12.751	15.883	20.894	5.370	4.316	4.938	204.57
4.0000	2.324	5.850	7.590	7.942	8.653	11.087	15.460	19.119	24.912	6.775	5.501	6.237	255.72
5.0000	3.087	7.534	9.626	10.061	10.904	13.821	18.999	23.316	30.062	8.677	7.121	8.007	319.64
6.0000	3.932	9.393	11.830	12.351	13.328	16.736	22.738	27.729	35.429	10.738	8.884	9.931	383.57
7.0000	4.850	11.414	14.195	14.807	15.923	19.833	26.690	32.370	41.053	12.952	10.783	12.002	447.50
8.0000	5.837	13.591	16.713	17.418	18.687	23.114	30.861	37.245	46.938	15.313	12.813	14.208	511.43
9.0000	6.889	15.912	19.382	20.183	21.611	26.576	35.258	42.367	53.090	17.818	14.970	16.549	575.36
10.0000	8.005	18.362	22.193	23.094	24.688	30.215	39.869	47.733	59.509	20.462	17.252	19.019	639.29
11.0000	9.182	20.934	25.138	26.144	27.912	34.028	44.687	53.336	66.203	23.241	19.652	21.612	703.22
12.0000	10.420	23.626	28.213	29.329	31.279	38.009	49.705	59.168	73.166	26.148	22.168	24.323	767.15

$^{69}_{31}$Ga IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=69 MEV
0.0125	6.639	5.493	4.024	2.676	2.173	1.972	1.827	1.690	1.074	0.919	0.845	0.724	0.8616
0.0160	7.569	6.262	4.587	3.051	2.477	2.248	2.083	1.927	1.225	1.048	0.963	0.826	1.1028
0.0200	8.522	7.050	5.165	3.434	2.789	2.531	2.345	2.169	1.379	1.180	1.085	0.930	1.3785
0.0250	9.593	7.936	5.814	3.866	3.140	2.849	2.640	2.442	1.552	1.329	1.224	1.047	1.7231
0.0320	10.924	9.055	6.628	4.408	3.586	3.261	3.009	2.784	1.770	1.518	1.399	1.200	2.2056
0.0400	12.268	10.216	7.462	4.977	4.059	3.701	3.410	3.157	2.007	1.728	1.589	1.366	2.7570
0.0500	13.761	11.534	8.401	5.629	4.612	4.200	3.873	3.587	2.277	1.978	1.823	1.567	3.4463
0.0600	15.104	12.781	9.255	6.238	5.127	4.655	4.304	3.989	2.554	2.221	2.050	1.763	4.1356
0.0700	16.322	13.962	10.044	6.810	5.625	5.102	4.721	4.379	2.812	2.461	2.280	1.959	4.8248
0.0800	17.446	15.117	10.782	7.364	6.092	5.521	5.100	4.744	3.073	2.696	2.491	2.146	5.5141
0.0900	18.491	16.230	11.478	7.897	6.543	5.946	5.475	5.096	3.340	2.921	2.709	2.336	6.2033
0.1000	19.482	17.322	12.139	8.412	6.992	6.336	5.827	5.450	3.593	3.144	2.913	2.513	6.8926
0.1250	21.728	20.047	13.665	9.620	8.035	7.284	6.696	6.272	4.202	3.676	3.437	2.972	8.6157
0.1600	24.444	23.759	15.579	11.155	9.379	8.506	7.805	7.322	4.985	4.378	4.105	3.583	11.028
0.2000	26.852	27.251	17.346	12.611	10.668	9.662	8.864	8.309	5.759	5.082	4.770	4.163	13.785
0.2500	29.198	30.713	19.171	14.168	12.040	10.928	10.008	9.375	6.614	5.847	5.483	4.793	17.231
0.3200	31.771	34.518	21.294	16.034	13.692	12.500	11.392	10.647	7.623	6.771	6.356	5.590	22.056
0.4000	34.138	37.898	23.350	17.793	15.318	14.010	12.773	11.932	8.686	7.729	7.262	6.375	27.570
0.5000	36.567	41.093	25.571	19.766	17.133	15.726	14.320	13.348	9.870	8.796	8.272	7.288	34.463
0.6000	38.077	42.884	27.159	21.265	18.522	17.056	15.481	14.421	10.782	9.641	9.085	8.066	41.356
0.7000	39.193	43.996	28.421	22.453	19.639	18.104	16.399	15.291	11.539	10.317	9.748	8.640	48.248
0.8000	39.958	44.548	29.424	23.451	20.568	19.038	17.213	16.036	12.182	10.946	10.328	9.180	55.141
0.9000	40.551	44.811	30.217	24.234	21.363	19.822	17.888	16.649	12.782	11.482	10.848	9.669	62.033
1.0000	40.919	44.805	30.836	24.946	22.017	20.444	18.471	17.176	13.259	11.933	11.286	10.083	68.926
1.2500	41.254	44.181	31.807	26.082	23.219	21.629	19.498	18.098	14.218	12.818	12.119	10.846	86.157
1.6000	40.822	42.789	32.245	26.924	24.055	22.475	20.250	18.702	14.994	13.575	12.833	11.511	110.28
2.0000	39.657	41.386	32.008	27.110	24.358	22.853	20.485	18.981	15.364	14.019	13.251	11.939	137.85
2.5000	37.831	39.640	31.188	26.790	24.233	22.767	20.366	18.900	15.531	14.128	13.411	12.163	172.31
3.2000	35.316	37.306	29.702	25.841	23.524	22.128	19.841	18.356	15.326	14.019	13.307	12.089	220.56
4.0000	32.725	34.851	27.970	24.586	22.516	21.201	19.103	17.621	14.908	13.649	13.006	11.831	275.70
5.0000	30.009	32.167	26.004	23.040	21.219	20.023	18.047	16.695	14.302	13.054	12.508	11.416	344.63
6.0000	27.808	29.898	24.308	21.682	20.005	18.960	17.113	15.824	13.564	12.518	11.984	11.011	413.56
7.0000	25.915	27.995	22.853	20.476	18.922	17.985	16.271	15.060	13.026	11.975	11.495	10.581	482.48
8.0000	24.342	26.350	21.599	19.439	17.992	17.106	15.551	14.363	12.484	11.512	11.059	10.195	551.41
9.0000	23.031	24.918	20.509	18.519	17.166	16.345	14.869	13.761	11.997	11.075	10.644	9.844	620.33
10.0000	21.859	23.658	19.552	17.734	16.424	15.661	14.254	13.237	11.536	10.695	10.304	9.522	689.26
11.0000	20.839	22.578	18.706	17.022	15.788	15.058	13.712	12.776	11.149	10.363	10.008	9.222	758.19
12.0000	19.944	21.595	17.951	16.372	15.205	14.523	13.230	12.351	10.789	10.053	9.694	8.940	827.11

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	15.090	6.438	4.265	4.008	3.561	2.350	1.441	1.022	0.674	5.396	6.865	5.239	0.8616
0.0160	16.882	7.120	4.785	4.500	4.000	2.702	1.674	1.193	0.792	6.115	7.780	5.877	1.1028
0.0200	18.489	7.592	5.252	4.948	4.426	3.073	1.916	1.394	0.933	6.828	8.682	6.451	1.3785
0.0250	20.233	8.029	5.768	5.436	4.919	3.529	2.256	1.645	1.192	7.617	9.692	7.082	1.7231
0.0320	22.603	8.577	6.357	6.052	5.528	4.143	2.691	2.028	1.412	8.617	10.990	7.888	2.2056
0.0400	24.999	9.089	6.962	6.701	6.171	4.821	3.194	2.448	1.739	9.664	12.328	8.731	2.7570
0.0500	27.807	9.779	7.720	7.510	6.990	5.637	3.797	2.957	2.142	10.871	13.862	9.762	3.4463
0.0600	30.911	10.578	8.579	8.292	7.839	6.451	4.387	3.452	2.536	12.041	15.372	10.810	4.1356
0.0700	34.050	11.531	9.442	9.170	8.698	7.252	4.942	3.927	2.903	13.198	16.834	11.933	4.8248
0.0800	37.414	12.561	10.362	10.071	9.585	8.054	5.521	4.399	3.267	14.362	18.298	13.111	5.5141
0.0900	40.747	13.670	11.306	11.019	10.491	8.850	6.083	4.867	3.604	15.518	19.731	14.325	6.2033
0.1000	44.427	14.906	12.357	11.969	11.386	9.650	6.664	5.305	3.933	16.666	21.194	15.574	6.8926
0.1250	54.252	18.107	14.964	14.417	13.775	11.629	8.008	6.382	4.742	19.596	24.939	18.845	8.6157
0.1600	69.017	23.011	18.882	18.197	17.262	14.380	9.862	7.852	5.827	23.790	30.224	23.836	11.028
0.2000	85.170	28.274	23.157	22.238	21.024	17.086	11.622	9.228	6.817	27.997	35.525	29.229	13.785
0.2500	103.909	34.394	27.894	26.859	25.076	19.823	13.401	10.506	7.726	32.476	41.161	35.429	17.231
0.3200	126.486	41.289	33.581	32.047	29.322	22.465	14.991	11.690	8.539	37.520	47.656	42.545	22.056
0.4000	145.707	48.102	38.201	36.310	32.877	24.541	16.229	12.633	9.200	41.867	53.309	48.476	27.570
0.5000	163.144	54.211	42.116	40.070	35.851	26.364	17.388	13.578	9.896	45.849	58.532	53.750	34.463
0.6000	172.458	57.848	43.780	41.607	37.180	27.186	18.033	14.068	10.293	47.854	61.406	56.137	41.356
0.7000	174.506	59.969	44.110	41.921	37.516	27.398	18.332	14.267	10.544	48.742	62.640	56.643	48.248
0.8000	172.721	60.614	43.813	41.782	37.339	27.306	18.478	14.418	10.710	48.962	62.850	56.318	55.141
0.9000	169.213	60.312	43.210	41.185	36.623	27.014	18.432	14.564	10.818	48.800	62.579	55.417	62.033
1.0000	166.205	60.099	42.893	40.703	36.263	26.858	18.502	14.740	10.947	48.505	62.134	54.641	68.926
1.2500	158.083	59.194	42.145	40.236	35.752	26.814	18.830	15.204	11.482	47.616	60.466	53.341	86.157
1.6000	145.747	57.073	41.209	39.403	35.276	26.924	19.315	15.703	12.156	45.994	57.493	51.205	110.28
2.0000	132.512	54.317	40.266	38.345	34.696	26.950	19.685	16.164	12.707	44.171	54.413	48.812	137.85
2.5000	117.889	50.680	38.704	36.833	33.995	26.884	19.960	16.623	13.224	41.979	50.805	45.846	172.31
3.2000	103.958	46.187	36.623	34.959	32.464	26.286	19.990	16.633	13.336	39.296	46.840	42.623	220.56
4.0000	92.301	41.731	34.123	32.725	30.767	25.173	19.299	16.251	13.146	36.529	43.046	39.354	275.70
5.0000	82.693	37.576	31.439	30.269	28.527	23.638	18.385	15.524	12.742	33.649	39.396	36.094	344.63
6.0000	75.597	34.371	29.218	28.100	26.617	22.217	17.356	14.755	12.154	31.211	36.437	33.374	413.56
7.0000	70.158	31.857	27.378	26.395	24.955	20.979	16.500	14.077	11.632	29.229	34.028	31.263	482.48
8.0000	65.660	29.698	25.810	24.903	23.521	19.849	15.616	13.391	11.123	27.517	31.966	29.439	551.41
9.0000	61.731	28.056	24.426	23.585	22.313	18.868	14.869	12.777	10.664	26.005	30.168	27.830	620.33
10.0000	58.461	26.689	23.287	22.485	21.273	17.988	14.214	12.220	10.226	24.714	28.624	26.474	689.26
11.0000	55.557	25.478	22.279	21.512	20.352	17.210	13.637	11.729	9.821	23.588	27.292	25.291	758.19
12.0000	52.957	24.396	21.380	20.644	19.531	16.515	13.122	11.291	9.460	22.583	26.083	24.234	827.11

$^{69}_{31}$Ga IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=69
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.101	0.103	0.134	0.184	0.202	0.245	0.266	0.296	0.425	0.495	0.535	0.640	0.8616
0.0160	0.126	0.131	0.170	0.234	0.257	0.310	0.335	0.371	0.536	0.623	0.674	0.806	1.1028
0.0200	0.152	0.161	0.209	0.288	0.319	0.381	0.411	0.454	0.657	0.764	0.825	0.985	1.3785
0.0250	0.184	0.196	0.255	0.354	0.393	0.468	0.502	0.553	0.803	0.932	1.006	1.198	1.7231
0.0320	0.224	0.242	0.316	0.441	0.494	0.582	0.624	0.685	0.997	1.156	1.247	1.480	2.2056
0.0400	0.267	0.291	0.381	0.534	0.603	0.705	0.756	0.826	1.208	1.398	1.507	1.782	2.7570
0.0500	0.315	0.347	0.456	0.643	0.729	0.848	0.908	0.991	1.455	1.680	1.811	2.135	3.4463
0.0600	0.360	0.398	0.525	0.743	0.848	0.980	1.050	1.143	1.685	1.942	2.093	2.462	4.1356
0.0700	0.401	0.446	0.590	0.837	0.958	1.104	1.182	1.286	1.899	2.186	2.356	2.766	4.8248
0.0800	0.440	0.490	0.651	0.925	1.062	1.220	1.306	1.419	2.100	2.414	2.601	3.050	5.5141
0.0900	0.477	0.532	0.709	1.008	1.160	1.329	1.424	1.545	2.289	2.628	2.831	3.316	6.2033
0.1000	0.512	0.571	0.764	1.086	1.252	1.432	1.535	1.664	2.466	2.830	3.047	3.567	6.8926
0.1250	0.593	0.660	0.891	1.266	1.465	1.669	1.791	1.937	2.870	3.289	3.539	4.135	8.6157
0.1600	0.695	0.767	1.050	1.488	1.727	1.960	2.106	2.273	3.361	3.848	4.135	4.819	11.028
0.2000	0.801	0.873	1.213	1.713	1.991	2.252	2.423	2.611	3.850	4.402	4.724	5.494	13.785
0.2500	0.922	0.990	1.398	1.964	2.285	2.578	2.777	2.989	4.387	5.009	5.370	6.233	17.231
0.3200	1.079	1.137	1.632	2.278	2.652	2.982	3.218	3.460	5.047	5.753	6.162	7.136	22.056
0.4000	1.245	1.288	1.876	2.599	3.026	3.392	3.667	3.940	5.711	6.498	6.955	8.038	27.570
0.5000	1.439	1.462	2.156	2.963	3.445	3.850	4.170	4.479	6.443	7.320	7.830	9.032	34.463
0.6000	1.624	1.626	2.417	3.296	3.828	4.267	4.628	4.970	7.103	8.059	8.614	9.919	41.356
0.7000	1.802	1.784	2.665	3.611	4.189	4.659	5.060	5.434	7.721	8.750	9.346	10.744	48.248
0.8000	1.976	1.940	2.903	3.911	4.532	5.030	5.470	5.874	8.302	9.398	10.032	11.517	55.141
0.9000	2.147	2.094	3.134	4.200	4.860	5.385	5.863	6.295	8.854	10.012	10.683	12.249	62.033
1.0000	2.316	2.248	3.359	4.480	5.178	5.727	6.242	6.703	9.383	10.601	11.306	12.946	68.926
1.2500	2.735	2.634	3.909	5.154	5.939	6.545	7.148	7.678	10.635	11.992	12.777	14.591	86.157
1.6000	3.321	3.188	4.660	6.063	6.957	7.637	8.359	8.987	12.284	13.816	14.707	16.745	110.28
2.0000	4.006	3.842	5.517	7.082	8.095	8.851	9.711	10.448	14.098	15.812	16.818	19.093	137.85
2.5000	4.895	4.692	6.607	8.359	9.512	10.361	11.397	12.266	16.326	18.258	19.400	21.950	172.31
3.2000	6.214	5.946	8.191	10.192	11.531	12.509	13.795	14.854	19.451	21.683	23.009	25.926	220.56
4.0000	7.836	7.476	10.105	12.380	13.927	15.055	16.627	17.920	23.099	25.669	27.200	30.536	275.70
5.0000	10.037	9.536	12.662	15.277	17.082	18.402	20.341	21.941	27.821	30.835	32.606	36.468	344.63
6.0000	12.425	11.760	15.405	18.363	20.430	21.941	24.266	26.184	32.773	36.229	38.239	42.619	413.56
7.0000	14.994	14.144	18.332	21.636	23.974	25.676	28.399	30.651	37.961	41.862	44.114	49.008	482.48
8.0000	17.740	16.683	21.436	25.093	27.712	29.607	32.734	35.340	43.368	47.735	50.230	55.647	551.41
9.0000	20.653	19.374	24.712	28.727	31.636	33.731	37.269	40.245	49.002	53.842	56.586	62.530	620.33
10.0000	23.726	22.214	28.156	32.532	35.742	38.041	42.005	45.354	54.864	60.177	63.170	69.652	689.26
11.0000	26.956	25.198	31.761	36.501	40.024	42.531	46.937	50.656	60.943	66.726	69.959	77.009	758.19
12.0000	30.338	28.320	35.523	40.631	44.474	47.193	52.056	56.144	67.230	73.481	76.959	84.602	827.11

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.037	0.090	0.116	0.121	0.130	0.187	0.287	0.403	0.587	0.099	0.080	0.093	0.8616
0.0160	0.046	0.115	0.149	0.155	0.167	0.239	0.365	0.510	0.745	0.126	0.102	0.119	1.1028
0.0200	0.057	0.142	0.186	0.193	0.209	0.298	0.452	0.628	0.914	0.155	0.126	0.149	1.3785
0.0250	0.070	0.176	0.231	0.240	0.260	0.368	0.557	0.768	1.108	0.191	0.154	0.185	1.7231
0.0320	0.087	0.223	0.291	0.304	0.328	0.461	0.693	0.947	1.352	0.238	0.191	0.234	2.2056
0.0400	0.106	0.275	0.358	0.373	0.403	0.558	0.834	1.131	1.605	0.289	0.231	0.287	2.7570
0.0500	0.128	0.338	0.437	0.454	0.490	0.668	0.994	1.335	1.881	0.347	0.277	0.350	3.4463
0.0600	0.148	0.398	0.511	0.530	0.570	0.767	1.136	1.516	2.124	0.401	0.320	0.409	4.1356
0.0700	0.167	0.455	0.579	0.601	0.644	0.857	1.266	1.678	2.341	0.451	0.359	0.463	4.8248
0.0800	0.185	0.508	0.643	0.666	0.713	0.939	1.384	1.826	2.537	0.497	0.396	0.513	5.5141
0.0900	0.201	0.557	0.702	0.726	0.776	1.014	1.492	1.961	2.717	0.540	0.430	0.560	6.2033
0.1000	0.216	0.603	0.756	0.782	0.835	1.084	1.592	2.086	2.883	0.581	0.462	0.603	6.8926
0.1250	0.249	0.703	0.876	0.907	0.965	1.238	1.814	2.363	3.253	0.672	0.534	0.699	8.6157
0.1600	0.287	0.817	1.015	1.050	1.115	1.418	2.073	2.688	3.687	0.780	0.619	0.809	11.028
0.2000	0.322	0.923	1.143	1.184	1.256	1.589	2.322	3.001	4.107	0.885	0.701	0.910	13.785
0.2500	0.358	1.032	1.276	1.322	1.403	1.773	2.592	3.342	4.568	0.997	0.790	1.016	17.231
0.3200	0.400	1.158	1.432	1.484	1.579	1.998	2.926	3.769	5.148	1.134	0.897	1.138	22.056
0.4000	0.440	1.282	1.586	1.646	1.755	2.230	3.275	4.216	5.759	1.271	1.007	1.260	27.570
0.5000	0.485	1.417	1.757	1.826	1.955	2.501	3.685	4.741	6.471	1.428	1.130	1.394	34.463
0.6000	0.526	1.540	1.918	1.995	2.144	2.758	4.073	5.239	7.153	1.575	1.245	1.520	41.356
0.7000	0.566	1.657	2.074	2.160	2.328	3.010	4.452	5.725	7.814	1.718	1.356	1.642	48.248
0.8000	0.605	1.771	2.231	2.324	2.512	3.262	4.826	6.205	8.462	1.859	1.466	1.764	55.141
0.9000	0.646	1.885	2.389	2.490	2.698	3.516	5.199	6.681	9.102	2.000	1.575	1.887	62.033
1.0000	0.687	1.999	2.549	2.658	2.887	3.771	5.572	7.151	9.735	2.141	1.686	2.012	68.926
1.2500	0.793	2.287	2.954	3.083	3.365	4.412	6.494	8.300	11.269	2.499	1.966	2.331	86.157
1.6000	0.951	2.702	3.531	3.688	4.042	5.308	7.756	9.858	13.306	3.014	2.375	2.791	110.28
2.0000	1.149	3.196	4.207	4.396	4.829	6.330	9.168	11.586	15.521	3.625	2.867	3.342	137.85
2.5000	1.425	3.852	5.079	5.312	5.832	7.609	10.905	13.685	18.176	4.424	3.522	4.070	172.31
3.2000	1.860	4.849	6.360	6.656	7.283	9.423	13.318	16.585	21.806	5.612	4.510	5.161	220.56
4.0000	2.423	6.105	7.920	8.287	9.028	11.567	16.125	19.938	25.970	7.067	5.738	6.507	275.70
5.0000	3.213	7.847	10.026	10.478	11.356	14.394	19.786	24.279	31.297	9.035	7.413	8.337	344.63
6.0000	4.085	9.767	12.302	12.843	13.859	17.403	23.647	28.836	36.839	11.163	9.234	10.325	413.56
7.0000	5.033	11.851	14.740	15.375	16.535	20.598	27.722	33.621	42.639	13.447	11.193	12.460	482.48
8.0000	6.049	14.093	17.335	18.065	19.382	23.977	32.019	38.644	48.701	15.878	13.284	14.733	551.41
9.0000	7.132	16.482	20.081	20.911	22.392	27.541	36.544	43.916	55.032	18.456	15.504	17.142	620.33
10.0000	8.280	19.002	22.972	23.905	25.557	31.284	41.287	49.434	61.635	21.176	17.851	19.683	689.26
11.0000	9.490	21.646	26.000	27.040	28.871	35.202	46.239	55.193	68.515	24.032	20.318	22.348	758.19
12.0000	10.761	24.412	29.159	30.312	32.329	39.292	51.394	61.184	75.668	27.019	22.902	25.133	827.11

$^{74}_{32}$Ge IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=74 MEV
0.0125	6.718	5.558	4.072	2.708	2.199	1.995	1.849	1.710	1.087	0.930	0.855	0.733	0.9240
0.0160	7.663	6.339	4.644	3.088	2.508	2.276	2.108	1.951	1.240	1.061	0.975	0.836	1.1827
0.0200	8.630	7.140	5.231	3.478	2.825	2.563	2.375	2.197	1.397	1.195	1.098	0.942	1.4784
0.0250	9.720	8.041	5.891	3.918	3.181	2.887	2.675	2.474	1.573	1.346	1.240	1.060	1.8480
0.0320	11.074	9.179	6.719	4.468	3.635	3.306	3.051	2.822	1.794	1.539	1.418	1.216	2.3655
0.0400	12.442	10.361	7.568	5.048	4.117	3.754	3.459	3.201	2.036	1.752	1.612	1.385	2.9568
0.0500	13.962	11.703	8.524	5.711	4.679	4.262	3.929	3.640	2.310	2.007	1.850	1.590	3.6960
0.0600	15.330	12.972	9.393	6.331	5.204	4.725	4.368	4.049	2.593	2.254	2.081	1.789	4.4353
0.0700	16.571	14.175	10.198	6.914	5.711	5.180	4.793	4.446	2.855	2.498	2.315	1.989	5.1745
0.0800	17.717	15.352	10.950	7.479	6.187	5.606	5.179	4.818	3.121	2.737	2.529	2.179	5.9137
0.0900	18.783	16.486	11.659	8.021	6.646	6.039	5.561	5.177	3.393	2.967	2.752	2.373	6.6529
0.1000	19.794	17.599	12.333	8.546	7.104	6.438	5.920	5.537	3.650	3.194	2.960	2.553	7.3921
0.1250	22.085	20.376	13.890	9.778	8.167	7.403	6.806	6.375	4.271	3.736	3.493	3.021	9.2401
0.1600	24.857	24.160	15.843	11.344	9.537	8.650	7.937	7.446	5.070	4.452	4.175	3.644	11.827
0.2000	27.351	27.757	17.669	12.845	10.866	9.841	9.029	8.463	5.866	5.177	4.859	4.240	14.784
0.2500	29.799	31.345	19.566	14.459	12.288	11.153	10.214	9.568	6.750	5.968	5.596	4.892	18.480
0.3200	32.492	35.301	21.777	16.398	14.003	12.783	11.651	10.889	7.796	6.925	6.500	5.717	23.655
0.4000	34.971	38.822	23.920	18.227	15.692	14.352	13.084	12.223	8.898	7.918	7.439	6.530	29.568
0.5000	37.515	42.159	26.235	20.279	17.577	16.134	14.691	13.694	10.127	9.025	8.487	7.477	36.960
0.6000	39.115	44.053	27.899	21.845	19.027	17.521	15.903	14.815	11.076	9.904	9.332	8.286	44.353
0.7000	40.301	45.240	29.225	23.087	20.194	18.616	16.863	15.723	11.865	10.609	10.024	8.884	51.745
0.8000	41.119	45.843	30.279	24.132	21.165	19.591	17.713	16.502	12.536	11.264	10.628	9.447	59.137
0.9000	41.755	46.142	31.114	24.954	21.998	20.411	18.420	17.144	13.161	11.823	11.170	9.957	66.529
1.0000	42.157	46.160	31.769	25.701	22.683	21.063	19.030	17.695	13.661	12.295	11.627	10.388	73.921
1.2500	42.551	45.569	32.807	26.902	23.949	22.309	20.111	18.667	14.665	13.221	12.500	11.187	92.401
1.6000	42.162	44.193	33.303	27.808	24.844	23.212	20.914	19.316	15.486	14.021	13.255	11.889	118.27
2.0000	41.017	42.804	33.105	28.040	25.193	23.637	21.187	19.631	15.890	14.500	13.705	12.348	147.84
2.5000	39.190	41.064	32.308	27.753	25.104	23.585	21.097	19.579	16.090	14.636	13.893	12.600	184.80
3.2000	36.656	38.722	30.830	26.822	24.417	22.968	20.594	19.053	15.908	14.552	13.812	12.548	236.55
4.0000	34.030	36.240	29.085	25.566	23.413	22.046	19.865	18.324	15.502	14.194	13.525	12.303	295.68
5.0000	31.262	33.510	27.090	24.002	22.105	20.859	18.800	17.392	14.899	13.599	13.030	11.892	369.60
6.0000	29.010	31.191	25.358	22.620	20.870	19.780	17.852	16.508	14.150	13.060	12.502	11.487	443.53
7.0000	27.066	29.238	23.868	21.385	19.762	18.784	16.994	15.729	13.605	12.507	12.005	11.051	517.45
8.0000	25.446	27.546	22.579	20.321	18.808	17.882	16.257	15.015	13.051	12.035	11.560	10.657	591.37
9.0000	24.095	26.069	21.456	19.374	17.958	17.100	15.555	14.397	12.552	11.586	11.136	10.299	665.29
10.0000	22.884	24.767	20.469	18.565	17.194	16.395	14.922	13.857	12.076	11.196	10.787	9.968	739.21
11.0000	21.827	23.650	19.594	17.830	16.537	15.773	14.362	13.382	11.678	10.855	10.483	9.660	813.13
12.0000	20.901	22.631	18.812	17.157	15.934	15.219	13.865	12.943	11.306	10.535	10.159	9.369	887.05

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	15.269	6.515	4.316	4.055	3.603	2.378	1.458	1.034	0.682	5.460	6.946	5.301	0.9240
0.0160	17.090	7.208	4.844	4.556	4.050	2.735	1.695	1.207	0.802	6.191	7.876	5.949	1.1827
0.0200	18.726	7.689	5.320	5.011	4.483	3.112	1.941	1.412	0.945	6.915	8.793	6.533	1.4784
0.0250	20.501	8.136	5.844	5.508	4.984	3.576	2.286	1.667	1.208	7.717	9.820	7.175	1.8480
0.0320	22.913	8.695	6.444	6.135	5.604	4.200	2.728	2.056	1.431	8.735	11.141	7.996	2.3655
0.0400	25.353	9.218	7.061	6.796	6.259	4.889	3.239	2.482	1.763	9.800	12.502	8.855	2.9568
0.0500	28.213	9.922	7.833	7.620	7.092	5.719	3.853	3.000	2.174	11.030	14.064	9.904	3.6960
0.0600	31.374	10.737	8.708	8.416	7.956	6.547	4.452	3.504	2.574	12.221	15.602	10.971	4.4353
0.0700	34.570	11.707	9.586	9.310	8.831	7.363	5.017	3.987	2.947	13.400	17.091	12.115	5.1745
0.0800	37.996	12.757	10.523	10.227	9.734	8.180	5.606	4.468	3.318	14.585	18.582	13.315	5.9137
0.0900	41.390	13.886	11.484	11.193	10.656	8.989	6.179	4.943	3.661	15.763	20.042	14.551	6.6529
0.1000	45.137	15.144	12.555	12.160	11.568	9.804	6.771	5.389	3.996	16.933	21.533	15.823	7.3921
0.1250	55.143	18.404	15.209	14.654	14.001	11.820	8.139	6.487	4.820	19.918	25.349	19.154	9.2401
0.1600	70.184	23.400	19.202	18.504	17.554	14.623	10.029	7.985	5.925	24.192	30.735	24.240	11.827
0.2000	86.753	28.800	23.588	22.651	21.414	17.404	11.838	9.400	6.944	28.517	36.185	29.772	14.784
0.2500	106.049	35.102	28.469	27.412	25.593	20.231	13.677	10.722	7.885	33.145	42.009	36.158	18.480
0.3200	129.357	42.226	34.343	32.775	29.987	22.975	15.331	11.956	8.733	38.371	48.737	43.511	23.655
0.4000	149.261	49.275	39.133	37.196	33.679	25.140	16.624	12.941	9.424	42.889	54.609	49.658	29.568
0.5000	167.377	55.617	43.208	41.110	36.781	27.048	17.840	13.931	10.153	47.039	60.051	55.145	36.960
0.6000	177.161	59.426	44.974	42.742	38.194	27.927	18.525	14.452	10.574	49.159	63.081	57.668	44.353
0.7000	179.439	61.664	45.357	43.106	38.576	28.173	18.850	14.671	10.842	50.120	64.411	58.245	51.745
0.8000	177.739	62.375	45.086	42.996	38.424	28.099	19.015	14.837	11.022	50.385	64.676	57.954	59.137
0.9000	174.240	62.104	44.493	42.409	37.710	27.816	18.980	14.997	11.139	50.249	64.438	57.063	66.529
1.0000	171.235	61.918	44.191	41.935	37.360	27.671	19.061	15.186	11.278	49.973	64.015	56.295	73.921
1.2500	163.051	61.054	43.469	41.501	36.875	27.656	19.422	15.682	11.843	49.112	62.366	55.018	92.401
1.6000	150.531	58.947	42.562	40.697	36.434	27.808	19.949	16.219	12.555	47.457	59.380	52.886	118.27
2.0000	137.053	56.179	41.646	39.659	35.885	27.874	20.359	16.718	13.143	45.684	56.278	50.485	147.84
2.5000	122.125	52.501	40.095	38.156	35.216	27.850	20.677	17.220	13.699	43.487	52.630	47.493	184.80
3.2000	107.904	47.940	38.013	36.286	33.697	27.284	20.748	17.265	13.842	40.788	48.618	44.240	236.55
4.0000	95.981	43.395	35.484	34.030	31.994	26.177	20.069	16.898	13.670	37.985	44.762	40.923	295.68
5.0000	86.146	39.145	32.752	31.533	29.718	24.625	19.153	16.173	13.274	35.054	41.041	37.601	369.60
6.0000	78.865	35.857	30.481	29.314	27.767	23.178	18.106	15.393	12.679	32.560	38.012	34.817	443.53
7.0000	73.274	33.272	28.594	27.567	26.064	21.911	17.232	14.703	12.149	30.527	35.539	32.651	517.45
8.0000	68.640	31.046	26.982	26.033	24.588	20.750	16.324	13.999	11.628	28.765	33.417	30.775	591.37
9.0000	64.582	29.351	25.554	24.674	23.344	19.739	15.555	13.367	11.157	27.206	31.561	29.115	665.29
10.0000	61.201	27.940	24.378	23.539	22.270	18.831	14.881	12.793	10.705	25.872	29.966	27.714	739.21
11.0000	58.193	26.687	23.336	22.533	21.318	18.026	14.284	12.285	10.287	24.708	28.587	26.491	813.13
12.0000	55.497	25.566	22.406	21.634	20.468	17.307	13.752	11.833	9.914	23.666	27.334	25.397	887.05

$^{74}_{32}Ge$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=74 MEV
0.0125	0.105	0.108	0.139	0.190	0.207	0.251	0.272	0.302	0.432	0.502	0.541	0.647	0.9240
0.0160	0.131	0.136	0.176	0.241	0.264	0.318	0.343	0.380	0.546	0.634	0.684	0.818	1.1827
0.0200	0.159	0.168	0.217	0.298	0.328	0.393	0.422	0.466	0.671	0.779	0.840	1.002	1.4784
0.0250	0.192	0.205	0.265	0.367	0.406	0.483	0.518	0.569	0.822	0.953	1.027	1.221	1.8480
0.0320	0.235	0.253	0.329	0.458	0.511	0.603	0.645	0.707	1.024	1.185	1.277	1.514	2.3655
0.0400	0.280	0.305	0.398	0.556	0.625	0.731	0.782	0.854	1.244	1.437	1.548	1.828	2.9568
0.0500	0.331	0.363	0.476	0.669	0.758	0.881	0.942	1.027	1.501	1.732	1.865	2.196	3.6960
0.0600	0.378	0.418	0.550	0.775	0.882	1.020	1.091	1.187	1.742	2.006	2.160	2.538	4.4353
0.0700	0.421	0.468	0.618	0.874	0.998	1.150	1.230	1.336	1.967	2.261	2.434	2.856	5.1745
0.0800	0.462	0.514	0.682	0.966	1.107	1.272	1.360	1.476	2.178	2.500	2.691	3.153	5.9137
0.0900	0.501	0.558	0.743	1.053	1.209	1.386	1.483	1.609	2.376	2.725	2.932	3.432	6.6529
0.1000	0.538	0.599	0.801	1.136	1.307	1.495	1.600	1.734	2.562	2.936	3.159	3.695	7.3921
0.1250	0.624	0.693	0.935	1.325	1.531	1.744	1.869	2.021	2.986	3.419	3.676	4.291	9.2401
0.1600	0.731	0.806	1.102	1.559	1.807	2.050	2.201	2.374	3.503	4.006	4.302	5.010	11.827
0.2000	0.842	0.918	1.273	1.795	2.084	2.358	2.535	2.730	4.016	4.588	4.921	5.719	14.784
0.2500	0.970	1.041	1.468	2.059	2.393	2.700	2.907	3.127	4.580	5.225	5.599	6.495	18.480
0.3200	1.134	1.194	1.714	2.388	2.778	3.123	3.369	3.621	5.273	6.005	6.430	7.441	23.655
0.4000	1.308	1.353	1.969	2.725	3.169	3.553	3.839	4.124	5.967	6.786	7.260	8.386	29.568
0.5000	1.512	1.535	2.261	3.105	3.608	4.032	4.365	4.687	6.733	7.645	8.174	9.425	36.960
0.6000	1.705	1.706	2.534	3.453	4.008	4.468	4.843	5.200	7.422	8.417	8.993	10.351	44.353
0.7000	1.891	1.872	2.793	3.782	4.384	4.876	5.294	5.684	8.066	9.137	9.757	11.212	51.745
0.8000	2.072	2.034	3.041	4.095	4.742	5.263	5.721	6.142	8.672	9.813	10.473	12.018	59.137
0.9000	2.250	2.194	3.282	4.396	5.084	5.633	6.131	6.581	9.247	10.453	11.151	12.780	66.529
1.0000	2.426	2.355	3.517	4.688	5.415	5.989	6.525	7.006	9.798	11.066	11.799	13.506	73.921
1.2500	2.862	2.757	4.088	5.389	6.206	6.840	7.468	8.021	11.101	12.513	13.329	15.217	92.401
1.6000	3.471	3.332	4.869	6.333	7.265	7.974	8.727	9.380	12.815	14.409	15.335	17.456	118.27
2.0000	4.181	4.011	5.758	7.390	8.445	9.235	10.129	10.896	14.697	16.479	17.525	19.892	147.84
2.5000	5.102	4.891	6.887	8.714	9.913	10.799	11.876	12.780	17.006	19.014	20.201	22.852	184.80
3.2000	6.467	6.188	8.526	10.609	12.001	13.020	14.356	15.457	20.237	22.557	23.933	26.964	236.55
4.0000	8.141	7.767	10.501	12.867	14.475	15.648	17.280	18.622	24.003	26.671	28.259	31.722	295.68
5.0000	10.409	9.890	13.136	15.853	17.725	19.097	21.107	22.764	28.868	31.994	33.829	37.835	369.60
6.0000	12.866	12.178	15.958	19.028	21.169	22.738	25.144	27.129	33.962	37.543	39.624	44.162	443.53
7.0000	15.505	14.627	18.965	22.390	24.811	26.575	29.390	31.719	39.292	43.330	45.661	50.726	517.45
8.0000	18.324	17.233	22.151	25.938	28.647	30.611	33.840	36.532	44.842	49.358	51.938	57.541	591.37
9.0000	21.310	19.993	25.511	29.665	32.671	34.840	38.490	41.562	50.620	55.621	58.456	64.599	665.29
10.0000	24.460	22.903	29.039	33.565	36.879	39.256	43.344	46.797	56.627	62.113	65.203	71.898	739.21
11.0000	27.768	25.959	32.732	37.629	41.265	43.854	48.395	52.227	62.853	68.820	72.156	79.433	813.13
12.0000	31.230	29.155	36.583	41.856	45.820	48.627	53.635	57.845	69.288	75.735	79.321	87.206	887.05

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.039	0.094	0.121	0.126	0.135	0.192	0.293	0.409	0.592	0.103	0.084	0.096	0.9240
0.0160	0.049	0.120	0.155	0.161	0.173	0.247	0.374	0.520	0.754	0.131	0.106	0.124	1.1827
0.0200	0.060	0.148	0.193	0.201	0.217	0.308	0.464	0.642	0.928	0.162	0.131	0.155	1.4784
0.0250	0.073	0.184	0.240	0.250	0.270	0.381	0.573	0.786	1.128	0.199	0.161	0.193	1.8480
0.0320	0.091	0.233	0.304	0.317	0.342	0.478	0.714	0.973	1.381	0.249	0.200	0.244	2.3655
0.0400	0.111	0.288	0.374	0.389	0.420	0.580	0.862	1.165	1.644	0.302	0.242	0.300	2.9568
0.0500	0.134	0.354	0.457	0.475	0.512	0.595	1.029	1.378	1.933	0.363	0.291	0.367	3.6960
0.0600	0.155	0.418	0.535	0.555	0.596	0.799	1.179	1.568	2.187	0.420	0.335	0.428	4.4353
0.0700	0.175	0.477	0.607	0.629	0.674	0.894	1.315	1.738	2.414	0.473	0.377	0.485	5.1745
0.0800	0.194	0.533	0.673	0.697	0.746	0.980	1.439	1.893	2.620	0.521	0.415	0.538	5.9137
0.0900	0.211	0.585	0.735	0.761	0.813	1.060	1.553	2.035	2.808	0.567	0.451	0.587	6.6529
0.1000	0.227	0.633	0.793	0.820	0.874	1.133	1.658	2.167	2.983	0.610	0.485	0.633	7.3921
0.1250	0.262	0.738	0.919	0.951	1.011	1.296	1.891	2.458	3.372	0.706	0.561	0.733	9.2401
0.1600	0.302	0.859	1.065	1.102	1.170	1.485	2.165	2.800	3.829	0.820	0.651	0.849	11.827
0.2000	0.339	0.970	1.200	1.243	1.318	1.665	2.427	3.130	4.271	0.930	0.737	0.956	14.784
0.2500	0.377	1.085	1.340	1.388	1.473	1.858	2.710	3.488	4.754	1.048	0.830	1.067	18.480
0.3200	0.420	1.218	1.504	1.558	1.657	2.095	3.061	3.936	5.363	1.191	0.943	1.196	23.655
0.4000	0.463	1.347	1.665	1.726	1.841	2.338	3.426	4.404	6.002	1.335	1.057	1.323	29.568
0.5000	0.509	1.488	1.844	1.915	2.051	2.621	3.855	4.947	6.747	1.500	1.186	1.464	36.960
0.6000	0.552	1.617	2.012	2.091	2.247	2.889	4.261	5.467	7.451	1.653	1.306	1.595	44.353
0.7000	0.594	1.739	2.175	2.263	2.440	3.153	4.656	5.975	8.141	1.802	1.422	1.722	51.745
0.8000	0.635	1.858	2.339	2.434	2.632	3.415	5.046	6.475	8.816	1.949	1.536	1.849	59.137
0.9000	0.677	1.976	2.503	2.607	2.826	3.679	5.435	6.970	9.483	2.096	1.650	1.978	66.529
1.0000	0.720	2.096	2.670	2.782	3.023	3.946	5.823	7.460	10.142	2.243	1.765	2.108	73.921
1.2500	0.830	2.395	3.091	3.225	3.519	4.612	6.782	8.655	11.738	2.615	2.057	2.439	92.401
1.6000	0.995	2.826	3.691	3.853	4.224	5.543	8.093	10.274	13.855	3.150	2.481	2.918	118.27
2.0000	1.200	3.339	4.392	4.588	5.040	6.604	9.558	12.067	16.154	3.784	2.992	3.489	147.84
2.5000	1.486	4.019	5.296	5.537	6.079	7.929	11.358	14.243	18.905	4.613	3.671	4.243	184.80
3.2000	1.936	5.050	6.621	6.927	7.580	9.805	13.854	17.241	22.659	5.841	4.693	5.371	236.55
4.0000	2.517	6.346	8.231	8.610	9.381	12.017	16.751	20.703	26.957	7.343	5.961	6.762	295.68
5.0000	3.331	8.141	10.401	10.868	11.780	14.930	20.523	25.176	32.446	9.370	7.687	8.647	369.60
6.0000	4.228	10.116	12.742	13.301	14.355	18.027	24.495	29.863	38.146	11.560	9.559	10.692	443.53
7.0000	5.202	12.257	15.247	15.903	17.104	21.309	28.682	34.780	44.105	13.906	11.572	12.885	517.45
8.0000	6.244	14.559	17.910	18.663	20.026	24.777	33.092	39.935	50.328	16.402	13.718	15.219	591.37
9.0000	7.355	17.009	20.727	21.581	23.113	28.431	37.733	45.341	56.820	19.045	15.995	17.689	665.29
10.0000	8.532	19.591	23.689	24.650	26.356	32.267	42.593	50.996	63.587	21.833	18.400	20.293	739.21
11.0000	9.771	22.299	26.790	27.861	29.750	36.281	47.665	56.895	70.633	24.758	20.927	23.022	813.13
12.0000	11.072	25.130	30.023	31.210	33.290	40.467	52.941	63.027	77.955	27.815	23.572	25.873	887.05

$^{75}_{33}As$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=75 MEV
0.0125	6.794	5.620	4.117	2.738	2.223	2.018	1.869	1.729	1.099	0.941	0.865	0.741	0.9365
0.0160	7.753	6.414	4.699	3.125	2.537	2.302	2.133	1.973	1.255	1.074	0.987	0.846	1.1988
0.0200	8.735	7.226	5.294	3.521	2.859	2.594	2.404	2.224	1.414	1.210	1.112	0.953	1.4984
0.0250	9.843	8.142	5.965	3.967	3.221	2.923	2.708	2.505	1.593	1.363	1.256	1.074	1.8730
0.0320	11.218	9.299	6.807	4.527	3.683	3.349	3.090	2.859	1.818	1.559	1.436	1.232	2.3975
0.0400	12.609	10.500	7.670	5.116	4.172	3.804	3.505	3.244	2.063	1.776	1.634	1.404	2.9969
0.0500	14.156	11.866	8.642	5.790	4.745	4.321	3.984	3.690	2.342	2.035	1.875	1.612	3.7461
0.0600	15.549	13.157	9.527	6.421	5.278	4.792	4.430	4.106	2.630	2.287	2.110	1.815	4.4953
0.0700	16.813	14.381	10.346	7.015	5.794	5.256	4.863	4.511	2.897	2.535	2.349	2.018	5.2445
0.0800	17.979	15.579	11.112	7.590	6.278	5.689	5.256	4.889	3.167	2.778	2.567	2.211	5.9938
0.0900	19.066	16.734	11.835	8.142	6.746	6.130	5.645	5.255	3.444	3.012	2.793	2.408	6.7430
0.1000	20.096	17.867	12.521	8.677	7.212	6.536	6.010	5.622	3.706	3.243	3.005	2.592	7.4922
0.1250	22.431	20.696	14.108	9.932	8.295	7.519	6.913	6.475	4.338	3.795	3.548	3.068	9.3652
0.1600	25.259	24.551	16.099	11.527	9.692	8.790	8.066	7.567	5.152	4.524	4.242	3.703	11.988
0.2000	27.838	28.251	17.983	13.074	11.060	10.017	9.189	8.614	5.970	5.269	4.945	4.316	14.984
0.2500	30.388	31.964	19.953	14.745	12.530	11.373	10.415	9.757	6.884	6.086	5.707	4.988	18.730
0.3200	33.201	36.072	22.253	16.756	14.309	13.062	11.905	11.126	7.967	7.076	6.642	5.841	23.975
0.4000	35.793	39.734	24.482	18.655	16.060	14.689	13.392	12.510	9.107	8.104	7.614	6.684	29.969
0.5000	38.452	43.212	26.890	20.786	18.016	16.537	15.058	14.036	10.379	9.250	8.699	7.664	37.461
0.6000	40.144	45.212	28.633	22.420	19.528	17.982	16.321	15.204	11.367	10.165	9.578	8.504	44.953
0.7000	41.401	46.475	30.022	23.718	20.745	19.124	17.323	16.152	12.189	10.898	10.298	9.127	52.445
0.8000	42.273	47.129	31.129	24.810	21.759	20.141	18.211	16.965	12.887	11.580	10.926	9.712	59.938
0.9000	42.954	47.467	32.007	25.670	22.629	20.997	18.948	17.636	13.539	12.163	11.491	10.242	67.430
1.0000	43.390	47.510	32.698	26.453	23.346	21.679	19.586	18.213	14.060	12.654	11.967	10.692	74.922
1.2500	43.843	46.953	33.803	27.719	24.676	22.986	20.721	19.234	15.110	13.623	12.879	11.527	93.652
1.6000	43.498	45.593	34.358	28.689	25.631	23.948	21.577	19.928	15.977	14.465	13.675	12.266	119.88
2.0000	42.373	44.219	34.199	28.967	26.025	24.418	21.887	20.280	16.416	14.979	14.158	12.756	149.84
2.5000	40.548	42.487	33.428	28.714	25.973	24.402	21.828	20.257	16.647	15.143	14.374	13.037	187.30
3.2000	37.998	40.139	31.958	27.803	25.311	23.809	21.348	19.750	16.490	15.084	14.317	13.007	239.75
4.0000	35.338	37.633	30.203	26.549	24.314	22.894	20.629	19.028	16.098	14.739	14.044	12.776	299.69
5.0000	32.521	34.860	28.181	24.968	22.996	21.699	19.558	18.092	15.500	14.147	13.555	12.371	374.61
6.0000	30.220	32.492	26.416	23.563	21.740	20.605	18.597	17.197	14.740	13.604	13.023	11.967	449.53
7.0000	28.226	30.491	24.891	22.302	20.609	19.589	17.722	16.403	14.188	13.043	12.520	11.524	524.45
8.0000	26.561	28.752	23.568	21.211	19.632	18.666	16.969	15.672	13.622	12.562	12.067	11.124	599.38
9.0000	25.169	27.231	22.412	20.238	18.759	17.862	16.249	15.038	13.111	12.102	11.632	10.758	674.30
10.0000	23.919	25.887	21.394	19.405	17.971	17.137	15.596	14.484	12.623	11.703	11.275	10.419	749.22
11.0000	22.827	24.732	20.491	18.647	17.294	16.495	15.020	13.995	12.213	11.352	10.963	10.102	824.14
12.0000	21.868	23.679	19.683	17.951	16.671	15.924	14.506	13.542	11.829	11.022	10.629	9.802	899.06

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	15.440	6.588	4.364	4.101	3.644	2.405	1.474	1.046	0.690	5.521	7.024	5.361	0.9365
0.0160	17.291	7.292	4.901	4.609	4.097	2.767	1.715	1.222	0.811	6.263	7.969	6.019	1.1988
0.0200	18.953	7.782	5.384	5.072	4.537	3.150	1.964	1.429	0.956	6.999	8.899	6.612	1.4984
0.0250	20.759	8.238	5.917	5.577	5.047	3.621	2.314	1.688	1.223	7.814	9.944	7.266	1.8730
0.0320	23.212	8.808	6.528	6.215	5.677	4.254	2.764	2.083	1.450	8.849	11.286	8.100	2.3975
0.0400	25.695	9.342	7.156	6.888	6.343	4.955	3.283	2.516	1.787	9.933	12.671	8.974	2.9969
0.0500	28.606	10.060	7.942	7.726	7.190	5.799	3.906	3.042	2.204	11.183	14.260	10.042	3.7461
0.0600	31.822	10.890	8.832	8.537	8.070	6.641	4.516	3.554	2.611	12.395	15.825	11.128	4.4953
0.0700	35.074	11.877	9.725	9.446	8.960	7.470	5.090	4.045	2.990	13.595	17.340	12.291	5.2445
0.0800	38.559	12.946	10.679	10.379	9.879	8.301	5.689	4.534	3.367	14.801	18.857	13.512	5.9938
0.0900	42.013	14.095	11.657	11.361	10.817	9.125	6.272	5.018	3.716	16.000	20.344	14.770	6.7430
0.1000	45.826	15.375	12.746	12.345	11.744	9.954	6.874	5.472	4.057	17.191	21.861	16.064	7.4922
0.1250	56.008	18.693	15.448	14.884	14.221	12.006	8.267	6.588	4.895	20.231	25.747	19.455	9.3652
0.1600	71.319	23.778	19.512	18.804	17.838	14.859	10.191	8.114	6.021	24.583	31.232	24.631	11.988
0.2000	88.297	29.312	24.007	23.054	21.795	17.713	12.049	9.567	7.067	29.025	36.829	30.301	14.984
0.2500	108.144	35.795	29.031	27.954	26.098	20.631	13.947	10.934	8.041	33.800	42.839	36.873	18.730
0.3200	132.182	43.148	35.093	33.491	30.642	23.477	15.666	12.217	8.923	39.210	49.802	44.461	23.975
0.4000	152.767	50.433	40.052	38.069	34.471	25.731	17.015	13.245	9.646	43.896	55.892	50.824	29.969
0.5000	171.556	57.006	44.287	42.136	37.699	27.723	18.285	14.278	10.406	48.213	61.550	56.522	37.461
0.6000	181.821	60.989	46.157	43.866	39.199	28.662	19.012	14.832	10.852	50.452	64.740	59.185	44.953
0.7000	184.337	63.347	46.595	44.283	39.629	28.942	19.364	15.071	11.138	51.488	66.169	59.834	52.445
0.8000	182.728	64.126	46.351	44.203	39.503	28.888	19.549	15.253	11.331	51.799	66.492	59.581	59.938
0.9000	179.241	63.887	45.770	43.626	38.793	28.615	19.524	15.428	11.459	51.692	66.287	58.701	67.430
1.0000	176.242	63.728	45.483	43.161	38.453	28.480	19.619	15.630	11.608	51.434	65.886	57.941	74.922
1.2500	168.001	62.908	44.789	42.761	37.995	28.496	20.011	16.158	12.203	50.603	64.260	56.688	93.652
1.6000	155.300	60.814	43.910	41.986	37.588	28.689	20.581	16.732	12.953	48.961	61.261	54.561	119.88
2.0000	141.584	58.036	43.022	40.970	37.072	28.796	21.032	17.271	13.577	47.195	58.138	52.154	149.84
2.5000	126.357	54.320	41.484	39.478	36.436	28.815	21.394	17.817	14.173	44.994	54.454	49.139	187.30
3.2000	111.853	49.695	39.404	37.614	34.930	28.283	21.508	17.896	14.349	42.280	50.398	45.860	239.75
4.0000	99.671	45.063	36.848	35.338	33.224	27.183	20.840	17.548	14.196	39.445	46.483	42.496	299.69
5.0000	89.616	40.722	34.071	32.803	30.915	25.617	19.924	16.824	13.809	36.466	42.694	39.115	374.61
6.0000	82.154	37.352	31.752	30.537	28.926	24.144	18.861	16.035	13.208	33.918	39.598	36.269	449.53
7.0000	76.414	34.698	29.819	28.749	27.181	22.850	17.971	15.333	12.669	31.835	37.062	34.050	524.45
8.0000	71.646	32.405	28.163	27.173	25.665	21.659	17.039	14.612	12.137	30.025	34.880	32.123	599.38
9.0000	67.460	30.660	26.693	25.774	24.384	20.619	16.249	13.963	11.654	28.418	32.968	30.413	674.30
10.0000	63.969	29.203	25.481	24.603	23.277	19.683	15.554	13.371	11.189	27.042	31.321	28.968	749.22
11.0000	60.858	27.909	24.405	23.565	22.294	18.852	14.938	12.848	10.758	25.839	29.896	27.704	824.14
12.0000	58.065	26.749	23.442	22.635	21.415	18.108	14.388	12.381	10.373	24.761	28.599	26.572	899.06

$^{75}_{33}As$ IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=75
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.104	0.106	0.137	0.187	0.204	0.247	0.268	0.297	0.424	0.493	0.531	0.635	0.9365
0.0160	0.130	0.135	0.174	0.238	0.260	0.314	0.338	0.374	0.537	0.623	0.672	0.803	1.1988
0.0200	0.158	0.166	0.214	0.294	0.323	0.387	0.416	0.459	0.660	0.766	0.827	0.985	1.4984
0.0250	0.191	0.203	0.262	0.362	0.400	0.476	0.511	0.561	0.809	0.938	1.011	1.202	1.8730
0.0320	0.233	0.251	0.326	0.452	0.504	0.595	0.637	0.697	1.010	1.168	1.259	1.491	2.3975
0.0400	0.278	0.302	0.394	0.549	0.617	0.722	0.773	0.844	1.227	1.417	1.526	1.803	2.9969
0.0500	0.328	0.360	0.472	0.662	0.749	0.871	0.931	1.015	1.482	1.709	1.840	2.167	3.7461
0.0600	0.375	0.414	0.545	0.767	0.872	1.009	1.079	1.174	1.721	1.981	2.133	2.506	4.4953
0.0700	0.419	0.464	0.613	0.865	0.987	1.138	1.217	1.322	1.944	2.235	2.405	2.822	5.2445
0.0800	0.460	0.511	0.677	0.957	1.095	1.259	1.347	1.462	2.154	2.472	2.660	3.117	5.9938
0.0900	0.498	0.555	0.737	1.044	1.198	1.374	1.469	1.593	2.350	2.695	2.900	3.394	6.7430
0.1000	0.535	0.596	0.795	1.126	1.295	1.482	1.586	1.718	2.535	2.905	3.126	3.655	7.4922
0.1250	0.620	0.689	0.928	1.315	1.517	1.729	1.853	2.004	2.957	3.385	3.639	4.248	9.3652
0.1600	0.728	0.802	1.095	1.548	1.792	2.034	2.183	2.355	3.472	3.970	4.262	4.963	11.988
0.2000	0.839	0.913	1.266	1.783	2.068	2.341	2.516	2.710	3.983	4.548	4.878	5.668	14.984
0.2500	0.965	1.035	1.459	2.045	2.375	2.681	2.885	3.104	4.543	5.181	5.552	6.439	18.730
0.3200	1.128	1.187	1.703	2.372	2.757	3.101	3.344	3.594	5.229	5.955	6.375	7.378	23.975
0.4000	1.301	1.344	1.956	2.705	3.144	3.526	3.810	4.092	5.917	6.728	7.198	8.313	29.969
0.5000	1.502	1.525	2.245	3.081	3.578	4.000	4.330	4.649	6.675	7.578	8.101	9.340	37.461
0.6000	1.693	1.694	2.513	3.425	3.973	4.430	4.802	5.156	7.355	8.340	8.911	10.255	44.953
0.7000	1.876	1.857	2.768	3.750	4.345	4.834	5.247	5.633	7.991	9.051	9.664	11.105	52.445
0.8000	2.055	2.017	3.013	4.058	4.697	5.216	5.669	6.086	8.589	9.718	10.370	11.900	59.938
0.9000	2.231	2.175	3.250	4.355	5.035	5.580	6.072	6.518	9.156	10.349	11.038	12.651	67.430
1.0000	2.404	2.333	3.482	4.642	5.361	5.931	6.461	6.936	9.698	10.952	11.677	13.366	74.922
1.2500	2.833	2.729	4.044	5.333	6.140	6.768	7.389	7.935	10.981	12.376	13.183	15.050	93.652
1.6000	3.432	3.294	4.812	6.261	7.180	7.883	8.626	9.272	12.665	14.240	15.154	17.251	119.88
2.0000	4.129	3.961	5.685	7.299	8.339	9.121	10.003	10.760	14.513	16.273	17.305	19.643	149.84
2.5000	5.032	4.824	6.791	8.596	9.778	10.654	11.715	12.606	16.776	18.757	19.928	22.544	187.30
3.2000	6.367	6.093	8.395	10.451	11.822	12.828	14.143	15.227	19.939	22.225	23.581	26.569	239.75
4.0000	8.003	7.636	10.324	12.657	14.238	15.395	16.999	18.318	23.617	26.244	27.807	31.217	299.69
5.0000	10.215	9.705	12.894	15.568	17.408	18.758	20.730	22.358	28.362	31.434	33.238	37.178	374.61
6.0000	12.606	11.933	15.641	18.659	20.761	22.303	24.661	26.607	33.321	36.837	38.880	43.338	449.53
7.0000	15.173	14.315	18.565	21.929	24.302	26.034	28.790	31.071	38.504	42.464	44.750	49.721	524.45
8.0000	17.911	16.846	21.660	25.376	28.028	29.954	33.112	35.746	43.896	48.320	50.848	56.341	599.38
9.0000	20.810	19.525	24.921	28.993	31.934	34.059	37.626	40.628	49.504	54.399	57.174	63.192	674.30
10.0000	23.865	22.348	28.344	32.775	36.016	38.343	42.334	45.706	55.330	60.696	63.719	70.271	749.22
11.0000	27.072	25.310	31.924	36.715	40.268	42.801	47.231	50.970	61.366	67.198	70.460	77.576	824.14
12.0000	30.426	28.407	35.655	40.812	44.681	47.425	52.308	56.414	67.601	73.898	77.402	85.107	899.06

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.038	0.093	0.119	0.124	0.133	0.189	0.288	0.402	0.580	0.101	0.083	0.095	0.9365
0.0160	0.048	0.119	0.153	0.159	0.171	0.243	0.368	0.511	0.740	0.129	0.105	0.122	1.1988
0.0200	0.059	0.147	0.191	0.199	0.214	0.303	0.457	0.631	0.912	0.160	0.130	0.153	1.4984
0.0250	0.072	0.182	0.237	0.247	0.267	0.376	0.564	0.774	1.109	0.197	0.159	0.191	1.8730
0.0320	0.090	0.231	0.300	0.313	0.338	0.472	0.704	0.958	1.360	0.246	0.198	0.242	2.3975
0.0400	0.110	0.285	0.370	0.385	0.415	0.573	0.851	1.148	1.620	0.299	0.240	0.297	2.9969
0.0500	0.133	0.352	0.452	0.470	0.506	0.687	1.017	1.360	1.906	0.360	0.288	0.363	3.7461
0.0600	0.154	0.415	0.530	0.549	0.590	0.791	1.165	1.548	2.158	0.417	0.333	0.424	4.4953
0.0700	0.174	0.474	0.601	0.623	0.668	0.885	1.300	1.718	2.384	0.469	0.374	0.481	5.2445
0.0800	0.192	0.529	0.668	0.692	0.739	0.971	1.424	1.872	2.588	0.518	0.412	0.534	5.9938
0.0900	0.210	0.581	0.730	0.755	0.806	1.050	1.537	2.014	2.776	0.563	0.448	0.583	6.7430
0.1000	0.225	0.629	0.787	0.814	0.867	1.123	1.642	2.144	2.950	0.606	0.482	0.628	7.4922
0.1250	0.260	0.734	0.913	0.944	1.004	1.285	1.874	2.435	3.337	0.701	0.557	0.728	9.3652
0.1600	0.300	0.854	1.058	1.094	1.162	1.474	2.146	2.775	3.792	0.815	0.647	0.843	11.988
0.2000	0.337	0.965	1.193	1.234	1.309	1.653	2.407	3.103	4.231	0.924	0.733	0.950	14.984
0.2500	0.375	1.079	1.332	1.379	1.463	1.845	2.689	3.459	4.712	1.042	0.826	1.060	18.730
0.3200	0.418	1.211	1.494	1.548	1.645	2.080	3.037	3.903	5.316	1.184	0.938	1.188	23.975
0.4000	0.460	1.339	1.652	1.714	1.828	2.321	3.399	4.367	5.949	1.327	1.050	1.314	29.969
0.5000	0.506	1.479	1.830	1.901	2.035	2.601	3.823	4.905	6.685	1.490	1.178	1.453	37.461
0.6000	0.548	1.605	1.995	2.075	2.230	2.866	4.224	5.419	7.381	1.641	1.296	1.583	44.953
0.7000	0.589	1.726	2.157	2.245	2.420	3.126	4.614	5.919	8.062	1.788	1.411	1.709	52.445
0.8000	0.630	1.843	2.318	2.414	2.609	3.385	4.999	6.413	8.728	1.933	1.524	1.834	59.938
0.9000	0.672	1.960	2.480	2.584	2.800	3.645	5.382	6.901	9.386	2.078	1.636	1.960	67.430
1.0000	0.714	2.078	2.644	2.757	2.994	3.907	5.764	7.383	10.035	2.223	1.750	2.089	74.922
1.2500	0.822	2.373	3.058	3.192	3.483	4.564	6.708	8.560	11.606	2.589	2.037	2.415	93.652
1.6000	0.984	2.796	3.648	3.809	4.175	5.479	7.997	10.151	13.687	3.115	2.454	2.885	119.88
2.0000	1.186	3.300	4.337	4.531	4.977	6.520	9.435	11.911	15.943	3.737	2.955	3.446	149.84
2.5000	1.466	3.966	5.223	5.461	5.995	7.819	11.199	14.044	18.640	4.549	3.620	4.186	187.30
3.2000	1.907	4.975	6.519	6.822	7.464	9.655	13.642	16.978	22.314	5.751	4.621	5.290	239.75
4.0000	2.474	6.242	8.092	8.466	9.224	11.816	16.473	20.360	26.512	7.219	5.859	6.648	299.69
5.0000	3.268	7.992	10.208	10.667	11.563	14.657	20.151	24.722	31.865	9.196	7.542	8.486	374.61
6.0000	4.141	9.914	12.487	13.036	14.070	17.671	24.018	29.286	37.415	11.327	9.366	10.477	449.53
7.0000	5.088	11.997	14.924	15.566	16.743	20.863	28.090	34.066	43.210	13.609	11.323	12.610	524.45
8.0000	6.101	14.232	17.510	18.248	19.582	24.232	32.373	39.074	49.254	16.033	13.407	14.877	599.38
9.0000	7.179	16.610	20.244	21.081	22.578	27.779	36.878	44.322	55.556	18.599	15.618	17.275	674.30
10.0000	8.320	19.115	23.118	24.057	25.724	31.500	41.592	49.807	62.120	21.303	17.950	19.800	749.22
11.0000	9.521	21.740	26.124	27.170	29.014	35.390	46.509	55.525	68.951	24.138	20.400	22.446	824.14
12.0000	10.782	24.483	29.257	30.415	32.444	39.447	51.621	61.467	76.045	27.101	22.963	25.208	899.06

$^{80}_{34}$Se IONS

ENERGY PER MASS UNIT	ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)												ENERGY FOR A=80
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	6.866	5.680	4.161	2.767	2.247	2.039	1.889	1.748	1.111	0.951	0.874	0.749	0.9990
0.0160	7.839	6.485	4.751	3.159	2.566	2.328	2.157	1.995	1.269	1.086	0.998	0.855	1.2787
0.0200	8.836	7.310	5.355	3.561	2.892	2.624	2.431	2.249	1.430	1.224	1.125	0.964	1.5983
0.0250	9.961	8.240	6.037	4.014	3.260	2.958	2.741	2.535	1.612	1.379	1.271	1.087	1.9979
0.0320	11.358	9.414	6.892	4.583	3.729	3.391	3.129	2.895	1.840	1.578	1.454	1.247	2.5573
0.0400	12.772	10.635	7.769	5.182	4.226	3.853	3.550	3.286	2.090	1.798	1.655	1.422	3.1967
0.0500	14.344	12.024	8.757	5.867	4.808	4.379	4.037	3.739	2.373	2.062	1.900	1.633	3.9958
0.0600	15.761	13.337	9.657	6.509	5.350	4.858	4.491	4.162	2.665	2.318	2.139	1.840	4.7950
0.0700	17.047	14.582	10.490	7.112	5.875	5.329	4.930	4.574	2.937	2.570	2.381	2.046	5.5942
0.0800	18.234	15.800	11.270	7.697	6.367	5.770	5.331	4.959	3.212	2.817	2.603	2.243	6.3934
0.0900	19.340	16.975	12.005	8.260	6.843	6.219	5.726	5.330	3.493	3.055	2.833	2.443	7.1925
0.1000	20.389	18.128	12.704	8.804	7.317	6.631	6.098	5.704	3.760	3.290	3.049	2.630	7.9917
0.1250	22.768	21.007	14.320	10.081	8.420	7.632	7.017	6.573	4.403	3.852	3.601	3.115	9.9896
0.1600	25.651	24.931	16.348	11.705	9.842	8.926	8.191	7.684	5.231	4.594	4.308	3.760	12.787
0.2000	28.313	28.733	18.290	13.297	11.248	10.187	9.346	8.761	6.072	5.359	5.030	4.390	15.983
0.2500	30.965	32.571	20.331	15.025	12.768	11.589	10.613	9.942	7.014	6.201	5.815	5.083	19.979
0.3200	33.899	36.830	22.721	17.109	14.609	13.337	12.156	11.360	8.134	7.225	6.782	5.964	25.573
0.4000	36.603	40.633	25.036	19.077	16.424	15.022	13.695	12.793	9.313	8.287	7.786	6.835	31.967
0.5000	39.377	44.251	27.536	21.286	18.449	16.935	15.420	14.374	10.629	9.473	8.908	7.848	39.958
0.6000	41.164	46.361	29.361	22.989	20.024	18.439	16.736	15.591	11.656	10.423	9.821	8.720	47.950
0.7000	42.494	47.701	30.815	24.344	21.293	19.629	17.780	16.578	12.511	11.186	10.569	9.368	55.942
0.8000	43.422	48.410	31.975	25.484	22.350	20.688	18.705	17.426	13.238	11.895	11.223	9.976	63.934
0.9000	44.147	48.785	32.896	26.383	23.258	21.580	19.475	18.126	13.915	12.501	11.810	10.527	71.925
1.0000	44.618	48.855	33.623	27.201	24.007	22.292	20.140	18.728	14.458	13.012	12.306	10.995	79.917
1.2500	45.130	48.331	34.796	28.533	25.401	23.661	21.330	19.799	15.554	14.023	13.257	11.865	99.896
1.6000	44.830	46.990	35.411	29.568	26.416	24.681	22.238	20.538	16.466	14.908	14.093	12.642	127.87
2.0000	43.726	45.632	35.291	29.892	26.857	25.198	22.587	20.928	16.940	15.458	14.611	13.164	159.83
2.5000	41.905	43.908	34.546	29.675	26.842	25.219	22.559	20.935	17.204	15.649	14.855	13.473	199.79
3.2000	39.341	41.558	33.087	28.786	26.205	24.650	22.102	20.448	17.073	15.617	14.823	13.467	255.73
4.0000	36.650	39.031	31.325	27.534	25.216	23.744	21.395	19.735	16.696	15.286	14.566	13.250	319.67
5.0000	33.786	36.216	29.278	25.940	23.891	22.544	20.319	18.796	16.103	14.697	14.083	12.853	399.58
6.0000	31.438	33.802	27.481	24.513	22.617	21.435	19.347	17.890	15.334	14.153	13.548	12.449	479.50
7.0000	29.395	31.754	25.922	23.226	21.463	20.400	18.456	17.082	14.775	13.583	13.039	12.002	559.42
8.0000	27.685	29.970	24.565	22.109	20.463	19.456	17.687	16.336	14.199	13.093	12.577	11.595	639.34
9.0000	26.253	28.404	23.378	21.110	19.567	18.632	16.949	15.686	13.676	12.624	12.133	11.221	719.25
10.0000	24.965	27.019	22.330	20.253	18.757	17.886	16.278	15.117	13.175	12.214	11.768	10.875	799.17
11.0000	23.837	25.827	21.398	19.472	18.060	17.225	15.685	14.615	12.753	11.854	11.448	10.549	879.09
12.0000	22.846	24.738	20.563	18.754	17.417	16.636	15.155	14.148	12.359	11.516	11.104	10.241	959.00

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	15.605	6.658	4.411	4.145	3.683	2.430	1.490	1.057	0.697	5.580	7.099	5.418	0.9990
0.0160	17.484	7.373	4.955	4.661	4.143	2.798	1.734	1.235	0.820	6.333	8.058	6.086	1.2787
0.0200	19.172	7.872	5.446	5.130	4.590	3.186	1.987	1.446	0.967	7.080	9.002	6.689	1.5983
0.0250	21.008	8.337	5.988	5.644	5.107	3.664	2.342	1.708	1.238	7.908	10.063	7.353	1.9979
0.0320	23.502	8.918	6.609	6.292	5.748	4.307	2.798	2.109	1.468	8.960	11.427	8.201	2.5573
0.0400	26.025	9.462	7.248	6.976	6.425	5.019	3.325	2.548	1.810	10.061	12.834	9.089	3.1967
0.0500	28.986	10.193	8.048	7.829	7.286	5.876	3.958	3.083	2.233	11.332	14.449	10.176	3.9958
0.0600	32.256	11.038	8.952	8.653	8.180	6.731	4.578	3.602	2.646	12.564	16.041	11.280	4.7950
0.0700	35.562	12.043	9.861	9.578	9.085	7.574	5.161	4.102	3.032	13.784	17.582	12.463	5.5942
0.0800	39.106	13.129	10.830	10.526	10.019	8.419	5.770	4.598	3.415	15.011	19.125	13.704	6.3934
0.0900	42.618	14.298	11.825	11.525	10.973	9.256	6.363	5.090	3.770	16.231	20.637	14.982	7.1925
0.1000	46.495	15.600	12.932	12.526	11.916	10.099	6.974	5.551	4.116	17.442	22.180	16.299	7.9917
0.1250	56.850	18.974	15.680	15.107	14.434	12.186	8.391	6.687	4.969	20.535	26.134	19.747	9.9896
0.1600	72.423	24.147	19.814	19.095	18.114	15.090	10.349	8.240	6.114	24.964	31.716	25.013	12.787
0.2000	89.803	29.812	24.417	23.448	22.167	18.015	12.254	9.730	7.188	29.520	37.458	30.818	15.983
0.2500	110.196	36.475	29.582	28.484	26.593	21.023	14.212	11.142	8.194	34.441	43.652	37.572	19.979
0.3200	134.960	44.055	35.830	34.194	31.286	23.970	15.995	12.474	9.111	40.034	50.849	45.396	25.573
0.4000	156.225	51.574	40.959	38.931	35.251	26.313	17.400	13.544	9.864	44.890	57.157	51.975	31.967
0.5000	175.682	58.377	45.353	43.150	38.606	28.390	18.725	14.622	10.657	49.373	63.031	57.882	39.958
0.6000	186.441	62.538	47.330	44.981	40.195	29.390	19.496	15.209	11.128	51.734	66.385	60.689	47.950
0.7000	189.203	65.019	47.825	45.452	40.676	29.706	19.876	15.469	11.432	52.847	67.916	61.414	55.942
0.8000	187.691	65.868	47.610	45.404	40.576	29.672	20.080	15.668	11.639	53.206	68.298	61.199	63.934
0.9000	184.220	65.661	47.042	44.838	39.870	29.409	20.067	15.856	11.777	53.128	68.128	60.332	71.925
1.0000	181.230	65.532	46.770	44.383	39.541	29.286	20.174	16.072	11.936	52.889	67.751	59.581	79.917
1.2500	172.935	64.755	46.104	44.017	39.111	29.333	20.599	16.632	12.561	52.089	66.147	58.353	99.896
1.6000	160.056	62.677	45.255	43.272	38.739	29.568	21.211	17.245	13.350	50.460	63.137	56.232	127.87
2.0000	146.106	59.890	44.397	42.279	38.256	29.715	21.704	17.822	14.011	48.702	59.995	53.819	159.83
2.5000	130.585	56.138	42.872	40.799	37.655	29.779	22.110	18.413	14.648	46.499	56.276	50.783	199.79
3.2000	115.806	51.451	40.797	38.944	36.164	29.282	22.268	18.529	14.856	43.775	52.179	47.480	255.73
4.0000	103.372	46.736	38.216	36.650	34.457	28.192	21.614	18.200	14.723	40.910	48.209	44.074	319.67
5.0000	93.103	42.306	35.397	34.079	32.118	26.613	20.699	17.479	14.346	37.885	44.356	40.637	399.58
6.0000	85.466	38.858	33.032	31.768	30.092	25.118	19.621	16.681	13.741	35.286	41.194	37.731	479.50
7.0000	79.580	36.135	31.054	29.940	28.307	23.796	18.716	15.968	13.194	33.154	38.598	35.461	559.42
8.0000	74.679	33.777	29.356	28.324	26.752	22.576	17.761	15.231	12.651	31.296	36.357	33.483	639.34
9.0000	70.367	31.981	27.843	26.884	25.435	21.508	16.949	14.564	12.156	29.643	34.389	31.724	719.25
10.0000	66.766	30.480	26.595	25.679	24.295	20.543	16.234	13.956	11.678	28.225	32.691	30.235	799.17
11.0000	63.552	29.144	25.485	24.608	23.281	19.686	15.599	13.417	11.234	26.983	31.220	28.930	879.09
12.0000	60.662	27.946	24.491	23.648	22.373	18.918	15.032	12.934	10.837	25.869	29.879	27.761	959.00

$^{80}_{34}$Se IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=80 MEV
0.0125	0.108	0.110	0.142	0.192	0.209	0.253	0.273	0.303	0.431	0.499	0.537	0.641	0.9990
0.0160	0.135	0.140	0.180	0.245	0.267	0.321	0.346	0.382	0.546	0.632	0.682	0.813	1.2787
0.0200	0.165	0.172	0.222	0.303	0.332	0.398	0.427	0.470	0.673	0.779	0.840	1.000	1.5983
0.0250	0.199	0.211	0.272	0.374	0.412	0.490	0.525	0.576	0.827	0.956	1.030	1.223	1.9979
0.0320	0.243	0.261	0.339	0.468	0.520	0.614	0.656	0.717	1.034	1.194	1.286	1.521	2.5573
0.0400	0.290	0.315	0.409	0.569	0.637	0.746	0.797	0.870	1.259	1.452	1.563	1.844	3.1967
0.0500	0.343	0.376	0.491	0.687	0.775	0.902	0.963	1.048	1.525	1.756	1.889	2.222	3.9958
0.0600	0.392	0.433	0.568	0.797	0.904	1.046	1.117	1.214	1.774	2.039	2.193	2.574	4.7950
0.0700	0.438	0.485	0.639	0.900	1.024	1.181	1.261	1.370	2.007	2.303	2.477	2.903	5.5942
0.0800	0.481	0.534	0.706	0.996	1.138	1.308	1.397	1.515	2.225	2.551	2.743	3.211	6.3934
0.0900	0.522	0.580	0.769	1.087	1.245	1.428	1.525	1.653	2.431	2.784	2.994	3.501	7.1925
0.1000	0.560	0.623	0.830	1.173	1.346	1.541	1.647	1.784	2.625	3.004	3.230	3.773	7.9917
0.1250	0.650	0.721	0.970	1.371	1.579	1.800	1.928	2.083	3.066	3.506	3.767	4.393	9.9896
0.1600	0.763	0.839	1.145	1.615	1.867	2.120	2.274	2.451	3.605	4.118	4.419	5.142	12.787
0.2000	0.879	0.955	1.324	1.862	2.157	2.441	2.622	2.822	4.140	4.724	5.063	5.880	15.983
0.2500	1.012	1.084	1.526	2.136	2.478	2.797	3.009	3.235	4.726	5.386	5.768	6.685	19.979
0.3200	1.182	1.243	1.781	2.477	2.877	3.236	3.488	3.747	5.443	6.194	6.628	7.666	25.573
0.4000	1.362	1.406	2.045	2.826	3.281	3.679	3.973	4.266	6.160	7.000	7.486	8.641	31.967
0.5000	1.572	1.595	2.346	3.217	3.733	4.174	4.515	4.846	6.949	7.885	8.427	9.711	39.958
0.6000	1.770	1.771	2.625	3.575	4.144	4.621	5.007	5.374	7.658	8.678	9.269	10.663	47.950
0.7000	1.961	1.940	2.890	3.912	4.531	5.041	5.470	5.870	8.319	9.418	10.053	11.546	55.942
0.8000	2.147	2.107	3.144	4.233	4.897	5.437	5.907	6.340	8.939	10.110	10.786	12.373	63.934
0.9000	2.329	2.271	3.391	4.541	5.247	5.815	6.326	6.790	9.528	10.765	11.480	13.152	71.925
1.0000	2.509	2.435	3.631	4.839	5.585	6.179	6.729	7.223	10.091	11.391	12.142	13.894	79.917
1.2500	2.954	2.845	4.214	5.555	6.393	7.048	7.691	8.259	11.421	12.868	13.704	15.640	99.896
1.6000	3.574	3.430	5.009	6.516	7.470	8.203	8.973	9.643	13.165	14.798	15.745	17.919	127.87
2.0000	4.295	4.120	5.912	7.589	8.668	9.482	10.397	11.182	15.076	16.901	17.970	20.393	159.83
2.5000	5.227	5.012	7.055	8.930	10.155	11.066	12.165	13.089	17.414	19.467	20.679	23.390	199.79
3.2000	6.604	6.320	8.709	10.842	12.263	13.308	14.669	15.791	20.675	23.042	24.445	27.540	255.73
4.0000	8.288	7.908	10.695	13.113	14.750	15.950	17.608	18.973	24.461	27.179	28.795	32.325	319.67
5.0000	10.561	10.034	13.335	16.105	18.007	19.406	21.443	23.124	29.336	32.512	34.377	38.450	399.58
6.0000	13.014	12.320	16.154	19.276	21.447	23.043	25.476	27.485	34.425	38.056	40.165	44.770	479.50
7.0000	15.645	14.761	19.150	22.627	25.076	26.867	29.707	32.058	39.736	43.822	46.180	51.311	559.42
8.0000	18.447	17.353	22.318	26.155	28.891	30.880	34.132	36.844	45.256	49.817	52.423	58.088	639.34
9.0000	21.413	20.093	25.654	29.856	32.886	35.079	38.750	41.839	50.993	56.035	58.895	65.097	719.25
10.0000	24.536	22.979	29.154	33.722	37.059	39.458	43.563	47.030	56.949	62.473	65.585	72.333	799.17
11.0000	27.813	26.005	32.811	37.748	41.403	44.013	48.566	52.408	63.116	69.117	72.472	79.797	879.09
12.0000	31.239	29.168	36.622	41.931	45.910	48.735	53.750	57.967	69.483	75.958	79.562	87.488	959.00

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	HYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.040	0.097	0.124	0.128	0.137	0.194	0.293	0.407	0.585	0.105	0.086	0.099	0.9990
0.0160	0.050	0.123	0.158	0.165	0.177	0.250	0.376	0.520	0.748	0.134	0.109	0.127	1.2787
0.0200	0.062	0.153	0.198	0.206	0.221	0.313	0.468	0.643	0.924	0.166	0.135	0.159	1.5983
0.0250	0.076	0.190	0.246	0.256	0.276	0.388	0.578	0.790	1.127	0.205	0.166	0.198	1.9979
0.0320	0.094	0.241	0.312	0.325	0.351	0.488	0.724	0.981	1.385	0.257	0.207	0.251	2.5573
0.0400	0.115	0.298	0.385	0.401	0.432	0.593	0.877	1.179	1.655	0.312	0.251	0.310	3.1967
0.0500	0.139	0.367	0.471	0.489	0.526	0.713	1.050	1.400	1.953	0.376	0.301	0.378	3.9958
0.0600	0.161	0.433	0.552	0.572	0.614	0.822	1.205	1.596	2.215	0.435	0.348	0.443	4.7950
0.0700	0.182	0.495	0.627	0.650	0.696	0.920	1.346	1.774	2.451	0.490	0.391	0.502	5.5942
0.0800	0.201	0.554	0.697	0.721	0.771	1.010	1.476	1.935	2.665	0.541	0.431	0.557	6.3934
0.0900	0.219	0.608	0.762	0.788	0.840	1.093	1.594	2.083	2.861	0.588	0.469	0.609	7.1925
0.1000	0.236	0.658	0.822	0.849	0.905	1.170	1.704	2.220	3.043	0.633	0.504	0.656	7.9917
0.1250	0.272	0.768	0.954	0.986	1.048	1.340	1.947	2.524	3.448	0.733	0.583	0.761	9.9896
0.1600	0.314	0.894	1.106	1.144	1.213	1.537	2.233	2.881	3.924	0.853	0.677	0.882	12.787
0.2000	0.353	1.011	1.247	1.291	1.368	1.726	2.507	3.225	4.385	0.967	0.768	0.994	15.983
0.2500	0.392	1.130	1.393	1.442	1.529	1.927	2.801	3.597	4.888	1.090	0.865	1.109	19.979
0.3200	0.437	1.268	1.562	1.619	1.720	2.172	3.165	4.061	5.518	1.239	0.982	1.243	25.573
0.4000	0.481	1.402	1.728	1.792	1.910	2.423	3.542	4.545	6.179	1.388	1.099	1.373	31.967
0.5000	0.530	1.547	1.913	1.987	2.127	2.715	3.980	5.105	6.946	1.558	1.232	1.519	39.958
0.6000	0.574	1.679	2.085	2.168	2.329	2.991	4.397	5.640	7.670	1.716	1.355	1.653	47.950
0.7000	0.616	1.804	2.253	2.344	2.527	3.261	4.803	6.161	8.378	1.868	1.474	1.784	55.942
0.8000	0.659	1.926	2.420	2.520	2.723	3.530	5.202	6.674	9.070	2.019	1.592	1.914	63.934
0.9000	0.701	2.048	2.589	2.697	2.922	3.801	5.600	7.180	9.752	2.169	1.709	2.046	71.925
1.0000	0.745	2.170	2.759	2.876	3.123	4.073	5.997	7.681	10.426	2.320	1.826	2.179	79.917
1.2500	0.858	2.476	3.188	3.327	3.630	4.753	6.975	8.900	12.055	2.700	2.124	2.517	99.896
1.6000	1.025	2.914	3.799	3.967	4.347	5.701	8.311	10.548	14.210	3.244	2.556	3.004	127.87
2.0000	1.234	3.435	4.512	4.713	5.176	6.778	9.798	12.369	16.543	3.888	3.074	3.584	159.83
2.5000	1.523	4.123	5.427	5.674	6.228	8.119	11.620	14.572	19.329	4.727	3.761	4.348	199.79
3.2000	1.978	5.163	6.763	7.077	7.742	10.012	14.139	17.598	23.118	5.966	4.793	5.486	255.73
4.0000	2.562	6.467	8.383	8.769	9.554	12.237	17.053	21.079	27.439	7.477	6.068	6.884	319.67
5.0000	3.377	8.266	10.557	11.031	11.957	15.156	20.832	25.561	32.939	9.508	7.797	8.773	399.58
6.0000	4.274	10.238	12.895	13.462	14.529	18.249	24.800	30.243	38.634	11.695	9.668	10.816	479.50
7.0000	5.243	12.372	15.392	16.054	17.269	21.519	28.972	35.142	44.572	14.033	11.673	13.002	559.42
8.0000	6.281	14.661	18.040	18.800	20.175	24.969	33.358	40.269	50.760	16.515	13.808	15.322	639.34
9.0000	7.383	17.093	20.836	21.697	23.240	28.597	37.966	45.637	57.207	19.140	16.069	17.775	719.25
10.0000	8.550	19.654	23.774	24.740	26.456	32.401	42.785	51.245	63.916	21.904	18.453	20.357	799.17
11.0000	9.777	22.336	26.845	27.920	29.817	36.376	47.809	57.087	70.896	24.801	20.956	23.060	879.09
12.0000	11.065	25.137	30.045	31.234	33.320	40.518	53.029	63.155	78.141	27.826	23.573	25.881	959.00

$^{79}_{35}Br$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=79 MEV
0.0125	6.892	5.701	4.177	2.778	2.255	2.047	1.896	1.754	1.115	0.954	0.877	0.752	0.9865
0.0160	7.871	6.512	4.771	3.172	2.576	2.338	2.166	2.004	1.274	1.090	1.002	0.859	1.2627
0.0200	8.876	7.343	5.380	3.577	2.905	2.636	2.442	2.259	1.436	1.229	1.130	0.968	1.5784
0.0250	10.010	8.281	6.067	4.034	3.276	2.973	2.754	2.548	1.620	1.386	1.277	1.092	1.9729
0.0320	11.419	9.465	6.929	4.608	3.749	3.409	3.146	2.910	1.850	1.587	1.462	1.254	2.5254
0.0400	12.846	10.697	7.814	5.212	4.251	3.876	3.571	3.305	2.102	1.809	1.664	1.430	3.1567
0.0500	14.433	12.098	8.811	5.904	4.838	4.406	4.062	3.763	2.388	2.075	1.912	1.643	3.9459
0.0600	15.864	13.424	9.721	6.552	5.385	4.889	4.520	4.190	2.683	2.333	2.153	1.852	4.7351
0.0700	17.163	14.681	10.562	7.161	5.915	5.365	4.964	4.605	2.957	2.588	2.398	2.060	5.5243
0.0800	18.363	15.912	11.349	7.752	6.412	5.811	5.368	4.994	3.235	2.837	2.622	2.259	6.3134
0.0900	19.481	17.099	12.092	8.320	6.893	6.264	5.768	5.369	3.519	3.078	2.854	2.461	7.1026
0.1000	20.541	18.263	12.798	8.869	7.372	6.681	6.143	5.746	3.788	3.315	3.072	2.649	7.8918
0.1250	22.948	21.173	14.433	10.161	8.486	7.693	7.072	6.625	4.438	3.882	3.630	3.139	9.8648
0.1600	25.864	25.139	16.485	11.803	9.924	9.001	8.259	7.748	5.275	4.632	4.344	3.791	12.627
0.2000	28.776	29.204	18.589	13.514	11.432	10.354	9.499	8.904	6.172	5.447	5.112	4.461	15.784
0.2500	31.530	33.165	20.702	15.299	13.001	11.800	10.807	10.123	7.142	6.314	5.921	5.176	19.730
0.3200	34.586	37.577	23.181	17.455	14.905	13.607	12.402	11.591	8.299	7.372	6.920	6.085	25.254
0.4000	37.402	41.521	25.583	19.494	16.782	15.350	13.994	13.073	9.517	8.468	7.956	6.984	31.567
0.5000	40.290	45.277	28.175	21.779	18.877	17.328	15.778	14.707	10.876	9.692	9.115	8.030	39.459
0.6000	42.175	47.499	30.082	23.554	20.516	18.891	17.147	15.973	11.942	10.679	10.062	8.934	47.351
0.7000	43.579	48.920	31.602	24.966	21.837	20.130	18.234	17.002	12.830	11.472	10.839	9.607	55.243
0.8000	44.564	49.683	32.816	26.154	22.938	21.232	19.197	17.884	13.586	12.207	11.518	10.238	63.134
0.9000	45.335	50.098	33.781	27.093	23.883	22.161	19.999	18.614	14.290	12.837	12.128	10.810	71.026
1.0000	45.841	50.194	34.545	27.947	24.665	22.903	20.692	19.242	14.854	13.369	12.643	11.296	78.918
1.2500	46.414	49.706	35.786	29.344	26.124	24.334	21.937	20.362	15.996	14.422	13.634	12.203	98.648
1.6000	46.159	48.383	36.461	30.445	27.200	25.413	22.897	21.147	16.954	15.350	14.511	13.016	126.27
2.0000	45.078	47.043	36.383	30.816	27.687	25.977	23.285	21.575	17.464	15.936	15.062	13.571	157.84
2.5000	43.261	45.330	35.665	30.636	27.712	26.035	23.289	21.613	17.761	16.156	15.336	13.909	197.30
3.2000	40.686	42.979	34.219	29.770	27.101	25.493	22.858	21.147	17.657	16.151	15.330	13.927	252.54
4.0000	37.966	40.433	32.450	28.523	26.122	24.597	22.163	20.443	17.296	15.836	15.089	13.726	315.67
5.0000	35.059	37.580	30.380	26.917	24.790	23.393	21.084	19.504	16.709	15.251	14.613	13.337	394.59
6.0000	32.665	35.120	28.553	25.469	23.499	22.271	20.101	18.588	15.933	14.705	14.077	12.935	473.51
7.0000	30.574	33.027	26.961	24.157	22.324	21.218	19.196	17.767	15.368	14.128	13.561	12.483	552.43
8.0000	28.820	31.198	25.572	23.015	21.302	20.253	18.412	17.005	14.781	13.630	13.093	12.070	631.34
9.0000	27.348	29.589	24.353	21.991	20.383	19.409	17.656	16.341	14.246	13.151	12.639	11.689	710.26
10.0000	26.021	28.163	23.275	21.110	19.551	18.643	16.967	15.757	13.732	12.731	12.266	11.335	789.18
11.0000	24.859	26.934	22.315	20.306	18.834	17.963	16.357	15.241	13.300	12.362	11.938	11.001	868.10
12.0000	23.835	25.809	21.454	19.566	18.171	17.356	15.811	14.760	12.894	12.014	11.585	10.684	947.02

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	15.663	6.683	4.427	4.160	3.696	2.439	1.495	1.061	0.700	5.601	7.125	5.438	0.9865
0.0160	17.556	7.404	4.976	4.680	4.160	2.810	1.741	1.240	0.823	6.359	8.091	6.111	1.2627
0.0200	19.259	7.908	5.471	5.154	4.610	3.201	1.996	1.453	0.972	7.112	9.043	6.719	1.5784
0.0250	21.112	8.378	6.018	5.672	5.132	3.682	2.354	1.717	1.244	7.947	10.113	7.389	1.9729
0.0320	23.628	8.966	6.645	6.326	5.779	4.331	2.813	2.120	1.476	9.008	11.488	8.246	2.5254
0.0400	26.176	9.517	7.290	7.017	6.462	5.048	3.344	2.563	1.821	10.119	12.908	9.142	3.1567
0.0500	29.166	10.257	8.098	7.877	7.331	5.913	3.983	3.102	2.247	11.402	14.539	10.239	3.9459
0.0600	32.466	11.111	9.011	8.710	8.233	6.775	4.608	3.626	2.663	12.646	16.146	11.354	4.7351
0.0700	35.805	12.125	9.928	9.643	9.147	7.626	5.196	4.130	3.052	13.878	17.702	12.547	5.5243
0.0800	39.382	13.222	10.907	10.600	10.090	8.478	5.811	4.631	3.439	15.117	19.260	13.801	6.3134
0.0900	42.928	14.402	11.911	11.609	11.053	9.323	6.409	5.127	3.797	16.349	20.787	15.091	7.1026
0.1000	46.842	15.716	13.029	12.619	12.005	10.175	7.026	5.593	4.147	17.572	22.346	16.420	7.8918
0.1250	57.297	19.123	15.804	15.226	14.548	12.282	8.457	6.740	5.008	20.696	26.339	19.902	9.8648
0.1600	73.026	24.348	19.979	19.254	18.265	15.215	10.435	8.308	6.165	25.172	31.980	25.221	12.627
0.2000	91.274	30.301	24.817	23.832	22.530	18.310	12.455	9.890	7.306	30.003	38.071	31.323	15.784
0.2500	112.207	37.140	30.122	29.004	27.079	21.406	14.471	11.345	8.343	35.070	44.448	38.258	19.730
0.3200	137.696	44.948	36.557	34.888	31.920	24.456	16.320	12.726	9.296	40.845	51.879	46.316	25.254
0.4000	159.638	52.701	41.854	39.782	36.021	26.888	17.780	13.840	10.080	45.870	58.406	53.110	31.567
0.5000	179.757	59.731	46.404	44.150	39.502	29.049	19.159	14.961	10.904	50.518	64.493	59.224	39.459
0.6000	191.019	64.074	48.492	46.085	41.182	30.112	19.974	15.582	11.401	53.004	68.015	62.179	47.351
0.7000	194.036	66.680	49.046	46.613	41.715	30.464	20.383	15.864	11.724	54.197	69.651	62.983	55.243
0.8000	192.627	67.600	48.862	46.598	41.643	30.453	20.608	16.080	11.945	54.605	70.094	62.809	63.134
0.9000	189.176	67.428	48.307	46.044	40.943	30.201	20.607	16.283	12.094	54.557	69.961	61.955	71.026
1.0000	186.198	67.328	48.052	45.599	40.625	30.089	20.727	16.513	12.263	54.339	69.608	61.214	78.918
1.2500	177.855	66.597	47.416	45.269	40.223	30.167	21.185	17.106	12.919	53.571	68.029	60.013	98.648
1.6000	164.802	64.535	46.597	44.555	39.888	30.445	21.840	17.756	13.746	51.956	65.009	57.900	126.27
2.0000	150.624	61.741	45.769	43.586	39.439	30.634	22.375	18.373	14.444	50.208	61.850	55.483	157.84
2.5000	134.813	57.955	44.260	42.120	38.875	30.743	22.825	19.009	15.122	48.005	58.098	52.427	197.30
3.2000	119.765	53.210	42.192	40.275	37.401	30.283	23.029	19.162	15.364	45.271	53.963	49.104	252.54
4.0000	107.085	48.415	39.589	37.966	35.695	29.205	22.390	18.853	15.251	42.380	49.940	45.657	315.67
5.0000	96.608	43.899	36.729	35.362	33.327	27.615	21.479	18.137	14.886	39.312	46.026	42.167	394.59
6.0000	88.800	40.374	34.321	33.007	31.266	26.098	20.387	17.332	14.277	36.662	42.801	39.203	473.51
7.0000	82.771	37.584	32.299	31.140	29.442	24.750	19.466	16.608	13.723	34.483	40.145	36.883	552.43
8.0000	77.739	35.162	30.559	29.485	27.848	23.501	18.489	15.855	13.170	32.579	37.847	34.855	631.34
9.0000	73.302	33.315	29.004	28.006	26.496	22.405	17.656	15.172	12.663	30.879	35.823	33.047	710.26
10.0000	69.592	31.770	27.720	26.766	25.323	21.413	16.921	14.547	12.173	29.419	34.074	31.514	789.18
11.0000	66.275	30.393	26.577	25.662	24.279	20.530	16.267	13.991	11.715	28.139	32.557	30.170	868.10
12.0000	63.289	29.156	25.551	24.672	23.342	19.738	15.683	13.494	11.306	26.989	31.172	28.963	947.02

$^{79}_{35}$Br IONS

ENERGY PER MASS UNIT | RANGE IN UNITS OF MG/SQ CM | ENERGY FOR A=79

MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.105	0.107	0.137	0.186	0.202	0.245	0.265	0.294	0.418	0.484	0.521	0.622	0.9865
0.0160	0.131	0.136	0.174	0.237	0.258	0.312	0.336	0.371	0.530	0.614	0.662	0.790	1.2627
0.0200	0.160	0.167	0.215	0.294	0.322	0.385	0.414	0.456	0.653	0.757	0.816	0.972	1.5784
0.0250	0.193	0.204	0.264	0.362	0.399	0.475	0.509	0.559	0.803	0.929	1.001	1.189	1.9729
0.0320	0.237	0.254	0.329	0.454	0.504	0.595	0.636	0.697	1.004	1.160	1.249	1.479	2.5254
0.0400	0.282	0.306	0.398	0.552	0.618	0.725	0.774	0.845	1.223	1.411	1.519	1.793	3.1567
0.0500	0.334	0.366	0.478	0.668	0.752	0.876	0.935	1.019	1.482	1.706	1.836	2.161	3.9459
0.0600	0.382	0.421	0.552	0.775	0.877	1.016	1.086	1.181	1.724	1.982	2.132	2.504	4.7351
0.0700	0.427	0.472	0.622	0.875	0.995	1.148	1.226	1.332	1.951	2.240	2.409	2.825	5.5243
0.0800	0.469	0.520	0.687	0.969	1.105	1.272	1.359	1.474	2.164	2.481	2.668	3.125	6.3134
0.0900	0.509	0.565	0.749	1.058	1.210	1.389	1.484	1.609	2.365	2.709	2.913	3.407	7.1026
0.1000	0.547	0.607	0.808	1.142	1.309	1.499	1.603	1.736	2.554	2.923	3.143	3.673	7.8918
0.1250	0.634	0.703	0.945	1.335	1.537	1.753	1.877	2.028	2.985	3.413	3.667	4.278	9.8648
0.1600	0.745	0.818	1.116	1.574	1.818	2.066	2.215	2.389	3.511	4.011	4.304	5.010	12.627
0.2000	0.858	0.932	1.291	1.814	2.100	2.378	2.554	2.750	4.032	4.601	4.932	5.728	15.784
0.2500	0.987	1.056	1.487	2.080	2.412	2.723	2.929	3.150	4.600	5.243	5.615	6.509	19.730
0.3200	1.152	1.210	1.734	2.411	2.797	3.148	3.393	3.646	5.294	6.025	6.447	7.458	25.254
0.4000	1.326	1.369	1.989	2.747	3.188	3.577	3.863	4.148	5.988	6.804	7.276	8.401	31.567
0.5000	1.529	1.550	2.280	3.125	3.625	4.054	4.386	4.708	6.749	7.659	8.185	9.434	39.459
0.6000	1.720	1.720	2.548	3.470	4.021	4.486	4.860	5.216	7.432	8.423	8.997	10.351	47.351
0.7000	1.904	1.884	2.804	3.795	4.393	4.890	5.305	5.695	8.069	9.135	9.751	11.202	55.243
0.8000	2.083	2.044	3.049	4.104	4.746	5.271	5.727	6.147	8.666	9.802	10.457	11.997	63.134
0.9000	2.258	2.202	3.286	4.400	5.083	5.635	6.130	6.579	9.232	10.437	11.125	12.747	71.026
1.0000	2.431	2.359	3.517	4.687	5.408	5.985	6.517	6.996	9.774	11.034	11.762	13.461	78.918
1.2500	2.858	2.753	4.077	5.374	6.183	6.819	7.441	7.991	11.051	12.452	13.261	15.138	98.648
1.6000	3.453	3.315	4.840	6.297	7.217	7.928	8.671	9.319	12.725	14.335	15.221	17.325	126.27
2.0000	4.144	3.976	5.705	7.326	8.366	9.154	10.036	10.795	14.557	16.320	17.353	19.696	157.84
2.5000	5.037	4.829	6.799	8.608	9.789	10.670	11.729	12.620	16.795	18.776	19.946	22.565	197.30
3.2000	6.353	6.080	8.380	10.436	11.803	12.813	14.121	15.202	19.911	22.193	23.545	26.530	252.54
4.0000	7.959	7.595	10.274	12.603	14.176	15.334	16.926	18.238	23.523	26.140	27.695	31.095	315.67
5.0000	10.123	9.620	12.789	15.452	17.278	18.625	20.578	22.192	28.166	31.219	33.011	36.929	394.59
6.0000	12.457	11.794	15.470	18.468	20.549	22.084	24.413	26.338	33.005	36.491	38.516	42.940	473.51
7.0000	14.955	14.112	18.315	21.651	23.997	25.716	28.432	30.683	38.051	41.969	44.230	49.153	552.43
8.0000	17.615	16.572	21.322	24.999	27.617	29.524	32.632	35.225	43.289	47.658	50.155	55.585	631.34
9.0000	20.428	19.170	24.486	28.509	31.406	33.506	37.011	39.961	48.730	53.555	56.292	62.231	710.26
10.0000	23.387	21.905	27.802	32.173	35.361	37.656	41.572	44.881	54.374	59.656	62.632	69.089	789.18
11.0000	26.491	24.772	31.266	35.985	39.475	41.970	46.310	49.975	60.215	65.948	69.155	76.158	868.10
12.0000	29.734	27.766	34.874	39.946	43.742	46.441	51.219	55.238	66.243	72.425	75.867	83.439	947.02

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.039	0.094	0.119	0.124	0.133	0.188	0.284	0.395	0.566	0.102	0.083	0.095	0.9865
0.0160	0.049	0.119	0.153	0.159	0.171	0.242	0.364	0.504	0.725	0.130	0.106	0.123	1.2627
0.0200	0.060	0.148	0.192	0.199	0.214	0.302	0.453	0.623	0.896	0.161	0.131	0.154	1.5784
0.0250	0.073	0.184	0.239	0.248	0.267	0.376	0.560	0.766	1.094	0.199	0.161	0.192	1.9729
0.0320	0.092	0.234	0.303	0.315	0.339	0.472	0.701	0.952	1.346	0.249	0.201	0.244	2.5254
0.0400	0.111	0.289	0.373	0.388	0.418	0.575	0.850	1.144	1.608	0.303	0.243	0.300	3.1567
0.0500	0.135	0.357	0.458	0.475	0.511	0.692	1.019	1.359	1.898	0.365	0.293	0.367	3.9459
0.0600	0.157	0.421	0.536	0.556	0.597	0.798	1.170	1.551	2.154	0.423	0.338	0.430	4.7351
0.0700	0.177	0.482	0.610	0.631	0.676	0.894	1.308	1.724	2.384	0.476	0.380	0.488	5.5243
0.0800	0.196	0.539	0.678	0.701	0.749	0.982	1.434	1.881	2.592	0.526	0.420	0.542	6.3134
0.0900	0.213	0.592	0.741	0.766	0.817	1.063	1.550	2.026	2.784	0.573	0.457	0.592	7.1026
0.1000	0.230	0.641	0.800	0.826	0.880	1.138	1.657	2.160	2.962	0.617	0.491	0.638	7.8918
0.1250	0.266	0.749	0.929	0.960	1.020	1.304	1.895	2.457	3.357	0.715	0.568	0.741	9.8648
0.1600	0.306	0.872	1.078	1.115	1.182	1.497	2.174	2.806	3.823	0.831	0.660	0.859	12.627
0.2000	0.344	0.986	1.216	1.258	1.333	1.681	2.441	3.141	4.272	0.943	0.749	0.969	15.784
0.2500	0.382	1.101	1.357	1.404	1.489	1.876	2.727	3.502	4.760	1.063	0.843	1.080	19.730
0.3200	0.426	1.235	1.521	1.575	1.674	2.113	3.079	3.952	5.370	1.206	0.956	1.210	25.254
0.4000	0.468	1.364	1.681	1.743	1.858	2.356	3.444	4.419	6.009	1.351	1.070	1.336	31.567
0.5000	0.515	1.505	1.859	1.931	2.067	2.638	3.866	4.960	6.749	1.514	1.198	1.476	39.459
0.6000	0.557	1.632	2.026	2.106	2.262	2.904	4.269	5.476	7.447	1.667	1.317	1.606	47.351
0.7000	0.598	1.753	2.187	2.276	2.452	3.165	4.659	5.977	8.129	1.814	1.432	1.732	55.243
0.8000	0.639	1.870	2.348	2.445	2.641	3.423	5.044	6.471	8.796	1.959	1.544	1.857	63.134
0.9000	0.680	1.987	2.511	2.615	2.832	3.683	5.427	6.959	9.452	2.103	1.657	1.984	71.026
1.0000	0.722	2.104	2.674	2.787	3.026	3.945	5.808	7.440	10.099	2.248	1.770	2.112	78.918
1.2500	0.830	2.398	3.087	3.221	3.513	4.599	6.748	8.611	11.664	2.613	2.056	2.437	98.648
1.6000	0.991	2.818	3.673	3.834	4.201	5.508	8.029	10.193	13.732	3.135	2.470	2.904	126.27
2.0000	1.191	3.318	4.355	4.550	4.995	6.540	9.455	11.938	15.969	3.752	2.967	3.460	157.84
2.5000	1.468	3.977	5.231	5.470	6.002	7.824	11.199	14.046	18.635	4.555	3.625	4.191	197.30
3.2000	1.902	4.971	6.509	6.810	7.450	9.634	13.606	16.938	22.256	5.739	4.611	5.279	252.54
4.0000	2.460	6.215	8.054	8.424	9.178	11.756	16.386	20.259	26.379	7.181	5.827	6.612	315.67
5.0000	3.236	7.928	10.124	10.579	11.467	14.536	19.986	24.528	31.617	9.115	7.474	8.412	394.59
6.0000	4.089	9.803	12.348	12.890	13.913	17.477	23.759	28.981	37.033	11.195	9.253	10.354	473.51
7.0000	5.010	11.830	14.720	15.353	16.515	20.584	27.722	33.634	42.673	13.416	11.158	12.431	552.43
8.0000	5.994	14.002	17.233	17.959	19.273	23.858	31.884	38.500	48.546	15.772	13.184	14.633	631.34
9.0000	7.040	16.309	19.885	20.706	22.179	27.298	36.254	43.590	54.659	18.261	15.328	16.959	710.26
10.0000	8.145	18.736	22.669	23.590	25.227	30.903	40.821	48.904	61.018	20.880	17.588	19.405	789.18
11.0000	9.308	21.276	25.577	26.602	28.411	34.668	45.579	54.438	67.628	23.624	19.958	21.966	868.10
12.0000	10.527	23.928	28.607	29.739	31.727	38.590	50.522	60.183	74.487	26.488	22.436	24.636	947.02

$^{84}_{36}Kr$ IONS

ENERGY PER MASS UNIT	ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)												ENERGY FOR A=84
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	6.966	5.763	4.222	2.807	2.280	2.069	1.917	1.773	1.127	0.965	0.887	0.760	1.0489
0.0160	7.960	6.585	4.824	3.208	2.605	2.364	2.190	2.026	1.288	1.102	1.013	0.868	1.3426
0.0200	8.980	7.429	5.442	3.619	2.939	2.667	2.471	2.286	1.453	1.244	1.143	0.980	1.6782
0.0250	10.130	8.380	6.139	4.083	3.315	3.008	2.787	2.579	1.639	1.403	1.292	1.105	2.0978
0.0320	11.561	9.583	7.015	4.665	3.795	3.452	3.185	2.946	1.873	1.607	1.480	1.270	2.6852
0.0400	13.011	10.835	7.914	5.279	4.305	3.925	3.617	3.348	2.129	1.832	1.686	1.448	3.3565
0.0500	14.625	12.259	8.928	5.982	4.902	4.464	4.116	3.812	2.420	2.103	1.937	1.665	4.1956
0.0600	16.079	13.606	9.853	6.641	5.458	4.956	4.581	4.246	2.719	2.365	2.182	1.877	5.0347
0.0700	17.401	14.885	10.708	7.260	5.997	5.440	5.033	4.669	2.998	2.624	2.431	2.088	5.8738
0.0800	18.622	16.136	11.509	7.861	6.503	5.893	5.444	5.064	3.280	2.877	2.659	2.290	6.7130
0.0900	19.760	17.344	12.266	8.439	6.991	6.354	5.851	5.446	3.569	3.122	2.895	2.496	7.5521
0.1000	20.839	18.528	12.984	8.998	7.479	6.778	6.232	5.830	3.843	3.363	3.116	2.688	8.3912
0.1250	23.290	21.488	14.648	10.312	8.613	7.807	7.177	6.723	4.504	3.940	3.684	3.186	10.489
0.1600	26.261	25.525	16.738	11.984	10.076	9.139	8.386	7.867	5.356	4.703	4.410	3.850	13.426
0.2000	29.230	29.664	18.882	13.727	11.613	10.517	9.649	9.045	6.269	5.532	5.193	4.532	16.782
0.2500	32.084	33.748	21.066	15.568	13.230	12.008	10.997	10.301	7.268	6.425	6.025	5.267	20.978
0.3200	35.263	38.312	23.635	17.797	15.197	13.874	12.645	11.817	8.461	7.516	7.055	6.204	26.852
0.4000	38.192	42.398	26.123	19.906	17.137	15.674	14.289	13.349	9.718	8.647	8.124	7.132	33.565
0.5000	41.192	46.291	28.806	22.267	19.300	17.716	16.131	15.037	11.119	9.909	9.319	8.210	41.956
0.6000	43.177	48.628	30.796	24.114	21.003	19.340	17.554	16.353	12.226	10.933	10.301	9.147	50.347
0.7000	44.657	50.130	32.384	25.583	22.377	20.629	18.686	17.423	13.148	11.755	11.108	9.845	58.738
0.8000	45.699	50.949	33.652	26.821	23.523	21.773	19.686	18.340	13.932	12.519	11.812	10.499	67.130
0.9000	46.517	51.405	34.663	27.799	24.506	22.739	20.520	19.099	14.662	13.172	12.444	11.092	75.521
1.0000	47.060	51.528	35.463	28.690	25.321	23.512	21.242	19.753	15.249	13.724	12.980	11.596	83.912
1.2500	47.694	51.077	36.773	30.154	26.844	25.005	22.542	20.924	16.437	14.819	14.010	12.540	104.89
1.6000	47.486	49.774	37.509	31.320	27.982	26.144	23.556	21.755	17.442	15.791	14.929	13.391	134.26
2.0000	46.429	48.452	37.473	31.739	28.517	26.755	23.983	22.221	17.987	16.413	15.514	13.977	167.82
2.5000	44.619	46.752	36.784	31.597	28.581	26.852	24.020	22.291	18.318	16.663	15.817	14.346	209.78
3.2000	42.033	44.402	35.352	30.756	27.999	26.337	23.615	21.847	18.242	16.686	15.838	14.388	268.52
4.0000	39.287	41.839	33.579	29.516	27.031	25.453	22.934	21.155	17.898	16.387	15.614	14.204	335.65
5.0000	36.337	38.951	31.488	27.899	25.694	24.246	21.853	20.215	17.318	15.807	15.146	13.823	419.56
6.0000	33.899	36.448	29.632	26.432	24.387	23.113	20.861	19.291	16.535	15.261	14.609	13.423	503.47
7.0000	31.762	34.311	28.009	25.096	23.191	22.043	19.942	18.458	15.965	14.677	14.088	12.968	587.38
8.0000	29.965	32.437	26.588	23.929	22.148	21.058	19.143	17.681	15.368	14.171	13.613	12.550	671.30
9.0000	28.454	30.785	25.338	22.880	21.208	20.194	18.370	17.002	14.823	13.682	13.150	12.162	755.21
10.0000	27.089	29.318	24.230	21.977	20.353	19.408	17.664	16.404	14.296	13.254	12.769	11.800	839.12
11.0000	25.891	28.053	23.242	21.150	19.616	18.710	17.036	15.874	13.852	12.876	12.434	11.458	923.03
12.0000	24.836	26.892	22.354	20.387	18.934	18.085	16.475	15.380	13.435	12.519	12.071	11.133	1006.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	15.831	6.755	4.475	4.205	3.736	2.465	1.511	1.072	0.708	5.661	7.202	5.497	1.0489
0.0160	17.753	7.487	5.031	4.732	4.207	2.841	1.761	1.254	0.833	6.430	8.182	6.180	1.3426
0.0200	19.483	8.000	5.535	5.214	4.664	3.238	2.019	1.469	0.983	7.195	9.148	6.797	1.6782
0.0250	21.365	8.479	6.090	5.740	5.194	3.727	2.382	1.737	1.259	8.043	10.234	7.478	2.0978
0.0320	23.923	9.078	6.728	6.405	5.851	4.385	2.848	2.147	1.494	9.120	11.632	8.348	2.6852
0.0400	26.513	9.640	7.384	7.107	6.545	5.113	3.387	2.596	1.844	10.249	13.074	9.260	3.3565
0.0500	29.553	10.393	8.205	7.982	7.428	5.991	4.036	3.143	2.277	11.553	14.732	10.375	4.1956
0.0600	32.908	11.262	9.133	8.828	8.345	6.867	4.670	3.675	2.700	12.818	16.365	11.508	5.0347
0.0700	36.301	12.293	10.066	9.777	9.273	7.731	5.268	4.187	3.095	14.071	17.947	12.721	5.8738
0.0800	39.938	13.408	11.061	10.750	10.232	8.598	5.893	4.696	3.487	15.331	19.531	13.995	6.7130
0.0900	43.543	14.608	12.082	11.775	11.211	9.457	6.501	5.201	3.851	16.583	21.085	15.307	7.5521
0.1000	47.522	15.944	13.218	12.802	12.179	10.322	7.128	5.674	4.207	17.827	22.670	16.659	8.3912
0.1250	58.151	19.408	16.039	15.453	14.765	12.465	8.584	6.840	5.083	21.005	26.732	20.199	10.489
0.1600	74.148	24.721	20.286	19.550	18.545	15.449	10.595	8.436	6.260	25.558	32.471	25.609	13.426
0.2000	92.711	30.778	25.208	24.207	22.885	18.599	12.651	10.045	7.421	30.476	38.671	31.816	16.782
0.2500	114.179	37.793	30.651	29.514	27.555	21.783	14.725	11.544	8.490	35.686	45.229	38.930	20.978
0.3200	140.391	45.828	37.272	35.571	32.545	24.935	16.639	12.976	9.478	41.645	52.895	47.223	26.852
0.4000	163.008	53.814	42.737	40.621	36.781	27.455	18.156	14.133	10.292	46.839	59.639	54.232	33.565
0.5000	183.782	61.069	47.443	45.139	40.386	29.699	19.588	15.296	11.148	51.649	65.937	60.550	41.956
0.6000	195.557	65.596	49.644	47.180	42.160	30.827	20.449	15.953	11.672	54.263	69.631	63.656	50.347
0.7000	198.837	68.330	50.260	47.766	42.747	31.218	20.888	16.257	12.014	55.538	71.374	64.541	58.738
0.8000	197.537	69.323	50.108	47.786	42.704	31.229	21.133	16.489	12.249	55.997	71.881	64.410	67.130
0.9000	194.111	69.187	49.568	47.245	42.011	30.988	21.144	16.707	12.409	55.980	71.786	63.571	75.521
1.0000	191.147	69.118	49.329	46.811	41.705	30.888	21.278	16.951	12.589	55.784	71.458	62.841	83.912
1.2500	182.761	68.434	48.724	46.518	41.333	30.999	21.769	17.577	13.275	55.049	69.905	61.668	104.89
1.6000	169.540	66.391	47.936	45.836	41.035	31.320	22.468	18.267	14.141	53.450	66.878	59.564	134.26
2.0000	155.137	63.591	47.141	44.892	40.620	31.552	23.046	18.924	14.877	51.712	63.704	57.146	167.82
2.5000	139.042	59.773	45.648	43.441	40.094	31.707	23.542	19.606	15.596	49.511	59.921	54.072	209.78
3.2000	123.731	54.972	43.589	41.609	38.640	31.286	23.792	19.797	15.873	46.770	55.750	50.730	268.52
4.0000	110.811	50.100	40.966	39.287	36.937	30.221	23.170	19.509	15.782	43.854	51.678	47.246	335.65
5.0000	100.132	45.500	38.069	36.652	34.543	28.623	22.262	18.798	15.429	40.746	47.705	43.706	419.56
6.0000	92.157	41.900	35.618	34.255	32.447	27.084	21.158	17.987	14.816	38.048	44.419	40.685	503.47
7.0000	85.987	39.044	33.555	32.350	30.586	25.712	20.222	17.253	14.257	35.823	41.705	38.316	587.38
8.0000	80.827	36.558	31.773	30.656	28.954	24.434	19.223	16.485	13.693	33.873	39.350	36.239	671.30
9.0000	76.266	34.662	30.177	29.138	27.567	23.311	18.370	15.785	13.176	32.128	37.272	34.383	755.21
10.0000	72.448	33.074	28.858	27.865	26.362	22.292	17.615	15.144	12.672	30.627	35.473	32.807	839.12
11.0000	69.028	31.655	27.681	26.728	25.287	21.383	16.943	14.573	12.202	29.308	33.910	31.423	923.03
12.0000	65.946	30.380	26.624	25.708	24.322	20.566	16.341	14.061	11.781	28.122	32.481	30.179	1006.9

$^{84}_{36}Kr$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=84 MEV
0.0125	0.109	0.111	0.142	0.191	0.207	0.251	0.270	0.299	0.423	0.489	0.526	0.627	1.0489
0.0160	0.136	0.140	0.180	0.243	0.265	0.319	0.343	0.379	0.538	0.622	0.670	0.798	1.3426
0.0200	0.166	0.173	0.222	0.302	0.330	0.395	0.424	0.467	0.665	0.769	0.828	0.985	1.6782
0.0250	0.201	0.212	0.273	0.373	0.410	0.488	0.522	0.573	0.818	0.945	1.018	1.208	2.0978
0.0320	0.246	0.263	0.340	0.468	0.519	0.613	0.654	0.715	1.026	1.184	1.273	1.506	2.6852
0.0400	0.294	0.318	0.412	0.571	0.637	0.747	0.797	0.869	1.253	1.443	1.552	1.830	3.3565
0.0500	0.349	0.381	0.496	0.691	0.777	0.904	0.964	1.050	1.521	1.749	1.881	2.211	4.1956
0.0600	0.399	0.438	0.574	0.803	0.907	1.051	1.121	1.218	1.773	2.035	2.188	2.567	5.0347
0.0700	0.446	0.492	0.646	0.907	1.030	1.189	1.268	1.376	2.009	2.304	2.476	2.900	5.8738
0.0800	0.490	0.542	0.715	1.006	1.145	1.318	1.406	1.525	2.231	2.555	2.746	3.212	6.7130
0.0900	0.531	0.589	0.780	1.099	1.254	1.440	1.537	1.665	2.440	2.792	3.000	3.506	7.5521
0.1000	0.571	0.633	0.842	1.186	1.358	1.555	1.661	1.798	2.637	3.015	3.240	3.783	8.3912
0.1250	0.662	0.733	0.985	1.388	1.596	1.820	1.947	2.103	3.087	3.526	3.786	4.414	10.489
0.1600	0.778	0.854	1.164	1.638	1.890	2.147	2.300	2.479	3.636	4.150	4.451	5.177	13.426
0.2000	0.896	0.973	1.346	1.889	2.184	2.474	2.655	2.857	4.180	4.767	5.106	5.927	16.782
0.2500	1.031	1.103	1.551	2.167	2.510	2.834	3.047	3.275	4.774	5.437	5.820	6.742	20.978
0.3200	1.203	1.264	1.808	2.512	2.912	3.277	3.530	3.792	5.497	6.252	6.687	7.731	26.852
0.4000	1.384	1.428	2.074	2.862	3.319	3.724	4.019	4.314	6.219	7.063	7.550	8.713	33.565
0.5000	1.596	1.617	2.377	3.256	3.773	4.220	4.563	4.897	7.011	7.952	8.495	9.787	41.956
0.6000	1.794	1.794	2.656	3.614	4.185	4.668	5.055	5.425	7.721	8.746	9.338	10.740	50.347
0.7000	1.985	1.964	2.921	3.951	4.571	5.088	5.518	5.922	8.382	9.485	10.122	11.623	58.738
0.8000	2.171	2.130	3.175	4.271	4.937	5.484	5.956	6.391	9.001	10.176	10.854	12.448	67.130
0.9000	2.353	2.294	3.421	4.579	5.286	5.861	6.373	6.839	9.588	10.830	11.546	13.225	75.521
1.0000	2.532	2.457	3.660	4.876	5.623	6.223	6.775	7.271	10.149	11.453	12.206	13.964	83.912
1.2500	2.974	2.865	4.240	5.587	6.426	7.087	7.731	8.301	11.471	12.921	13.758	15.701	104.89
1.6000	3.589	3.446	5.029	6.541	7.495	8.233	9.003	9.674	13.202	14.837	15.785	17.962	134.26
2.0000	4.303	4.128	5.923	7.604	8.681	9.500	10.413	11.199	15.094	16.919	17.987	20.412	167.82
2.5000	5.224	5.009	7.052	8.927	10.149	11.064	12.159	13.082	17.403	19.453	20.662	23.371	209.78
3.2000	6.580	6.297	8.679	10.810	12.224	13.271	14.624	15.741	20.613	22.972	24.370	27.456	268.52
4.0000	8.231	7.854	10.628	13.038	14.664	15.863	17.508	18.863	24.328	27.031	28.637	32.150	335.65
5.0000	10.453	9.934	13.209	15.963	17.849	19.242	21.257	22.922	29.095	32.246	34.095	38.139	419.56
6.0000	12.845	12.162	15.958	19.055	21.203	22.788	25.189	27.173	34.056	37.650	39.738	44.301	503.47
7.0000	15.404	14.536	18.872	22.314	24.733	26.507	29.304	31.622	39.222	43.259	45.589	50.664	587.38
8.0000	18.125	17.053	21.948	25.740	28.437	30.404	33.601	36.269	44.581	49.080	51.651	57.244	671.30
9.0000	21.000	19.709	25.182	29.328	32.310	34.475	38.077	41.110	50.143	55.108	57.924	64.038	755.21
10.0000	24.024	22.503	28.570	33.071	36.350	38.715	42.737	46.136	55.909	61.341	64.402	71.045	839.12
11.0000	27.193	25.430	32.107	36.964	40.551	43.119	47.576	51.338	61.874	67.766	71.063	78.263	923.03
12.0000	30.503	28.486	35.790	41.006	44.906	47.682	52.586	56.710	68.026	74.377	77.913	85.694	1006.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.040	0.098	0.123	0.128	0.137	0.193	0.289	0.400	0.570	0.105	0.086	0.099	1.0489
0.0160	0.051	0.124	0.158	0.164	0.176	0.248	0.371	0.511	0.732	0.135	0.110	0.127	1.3426
0.0200	0.062	0.154	0.198	0.206	0.221	0.311	0.463	0.634	0.907	0.167	0.136	0.159	1.6782
0.0250	0.076	0.191	0.247	0.257	0.276	0.387	0.574	0.781	1.110	0.206	0.167	0.199	2.0978
0.0320	0.095	0.243	0.314	0.327	0.351	0.488	0.720	0.973	1.369	0.258	0.209	0.253	2.6852
0.0400	0.116	0.301	0.388	0.403	0.433	0.594	0.874	1.173	1.640	0.315	0.253	0.312	3.3565
0.0500	0.141	0.372	0.475	0.493	0.530	0.716	1.049	1.396	1.941	0.380	0.305	0.382	4.1956
0.0600	0.163	0.439	0.558	0.578	0.619	0.826	1.207	1.596	2.207	0.440	0.352	0.447	5.0347
0.0700	0.185	0.503	0.634	0.657	0.702	0.927	1.351	1.776	2.446	0.496	0.397	0.508	5.8738
0.0800	0.204	0.562	0.705	0.730	0.779	1.019	1.483	1.940	2.663	0.548	0.438	0.564	6.7130
0.0900	0.223	0.617	0.771	0.797	0.850	1.104	1.604	2.091	2.863	0.597	0.476	0.617	7.5521
0.1000	0.240	0.669	0.833	0.860	0.916	1.182	1.716	2.231	3.048	0.643	0.512	0.665	8.3912
0.1250	0.277	0.782	0.968	1.000	1.062	1.355	1.964	2.541	3.461	0.745	0.593	0.773	10.489
0.1600	0.320	0.911	1.124	1.162	1.231	1.558	2.256	2.906	3.948	0.867	0.689	0.896	13.426
0.2000	0.359	1.029	1.268	1.311	1.389	1.750	2.535	3.256	4.417	0.984	0.782	1.011	16.782
0.2500	0.399	1.150	1.415	1.465	1.552	1.953	2.834	3.633	4.926	1.109	0.880	1.127	20.978
0.3200	0.445	1.289	1.587	1.643	1.745	2.201	3.201	4.102	5.562	1.259	0.998	1.262	26.852
0.4000	0.489	1.424	1.753	1.818	1.937	2.454	3.581	4.589	6.227	1.410	1.117	1.393	33.565
0.5000	0.537	1.571	1.939	2.013	2.154	2.747	4.020	5.152	6.997	1.580	1.250	1.540	41.956
0.6000	0.581	1.703	2.112	2.195	2.357	3.024	4.439	5.688	7.723	1.738	1.374	1.675	50.347
0.7000	0.624	1.828	2.279	2.371	2.554	3.294	4.844	6.208	8.430	1.891	1.493	1.805	58.738
0.8000	0.666	1.950	2.446	2.547	2.751	3.563	5.243	6.720	9.121	2.041	1.610	1.935	67.130
0.9000	0.709	2.071	2.615	2.723	2.949	3.832	5.640	7.226	9.802	2.191	1.727	2.066	75.521
1.0000	0.753	2.192	2.784	2.902	3.149	4.104	6.035	7.724	10.473	2.341	1.844	2.199	83.912
1.2500	0.864	2.497	3.211	3.350	3.653	4.780	7.008	8.937	12.092	2.719	2.140	2.535	104.89
1.6000	1.031	2.931	3.818	3.985	4.365	5.720	8.333	10.572	14.231	3.259	2.568	3.019	134.26
2.0000	1.237	3.447	4.523	4.724	5.186	6.787	9.806	12.375	16.542	3.896	3.082	3.593	167.82
2.5000	1.523	4.127	5.426	5.673	6.224	8.112	11.605	14.550	19.292	4.725	3.760	4.347	209.78
3.2000	1.970	5.151	6.742	7.053	7.715	9.975	14.084	17.529	23.022	5.944	4.776	5.468	268.52
4.0000	2.544	6.430	8.330	8.714	9.492	12.158	16.943	20.944	27.261	7.427	6.026	6.839	335.65
5.0000	3.341	8.189	10.456	10.926	11.842	15.012	20.639	25.326	32.639	9.413	7.717	8.686	419.56
6.0000	4.215	10.111	12.736	13.295	14.350	18.027	24.507	29.891	38.191	11.545	9.541	10.678	503.47
7.0000	5.158	12.187	15.165	15.817	17.015	21.208	28.565	34.657	43.967	13.819	11.492	12.804	587.38
8.0000	6.165	14.409	17.736	18.483	19.836	24.558	32.823	39.635	49.975	16.229	13.564	15.057	671.30
9.0000	7.234	16.768	20.447	21.292	22.807	28.075	37.290	44.838	56.225	18.774	15.756	17.435	755.21
10.0000	8.363	19.247	23.291	24.238	25.921	31.757	41.957	50.267	62.721	21.450	18.065	19.934	839.12
11.0000	9.550	21.841	26.261	27.313	29.172	35.602	46.815	55.918	69.471	24.251	20.485	22.549	923.03
12.0000	10.794	24.548	29.353	30.515	32.557	39.605	51.859	61.781	76.472	27.175	23.014	25.274	1006.9

$^{85}_{37}Rb$ IONS

ENERGY PER MASS UNIT	ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)												ENERGY FOR A=85
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	7.038	5.822	4.265	2.836	2.303	2.090	1.936	1.791	1.139	0.975	0.896	0.768	1.0614
0.0160	8.045	6.656	4.876	3.242	2.633	2.389	2.214	2.048	1.302	1.114	1.024	0.878	1.3586
0.0200	9.080	7.511	5.503	3.659	2.971	2.696	2.498	2.311	1.469	1.257	1.156	0.990	1.6982
0.0250	10.247	8.477	6.210	4.130	3.354	3.043	2.819	2.608	1.658	1.419	1.307	1.118	2.1228
0.0320	11.700	9.698	7.099	4.721	3.841	3.493	3.223	2.982	1.896	1.626	1.498	1.285	2.7172
0.0400	13.172	10.968	8.012	5.344	4.359	3.974	3.661	3.389	2.155	1.855	1.707	1.466	3.3965
0.0500	14.811	12.415	9.042	6.058	4.964	4.521	4.168	3.861	2.450	2.129	1.962	1.686	4.2456
0.0600	16.289	13.784	9.981	6.727	5.530	5.021	4.641	4.302	2.755	2.395	2.211	1.901	5.0947
0.0700	17.633	15.083	10.851	7.357	6.077	5.512	5.100	4.731	3.038	2.658	2.463	2.116	5.9438
0.0800	18.875	16.355	11.665	7.968	6.591	5.973	5.518	5.133	3.325	2.916	2.695	2.321	6.7930
0.0900	20.032	17.582	12.434	8.555	7.088	6.441	5.931	5.521	3.618	3.165	2.935	2.530	7.6421
0.1000	21.130	18.787	13.165	9.124	7.583	6.872	6.319	5.911	3.897	3.410	3.160	2.725	8.4912
0.1250	23.624	21.796	14.858	10.460	8.736	7.919	7.280	6.820	4.569	3.997	3.737	3.232	10.614
0.1600	26.649	25.902	16.985	12.161	10.225	9.274	8.509	7.983	5.435	4.773	4.476	3.907	13.586
0.2000	29.673	30.114	19.169	13.936	11.789	10.677	9.795	9.182	6.364	5.616	5.271	4.600	16.982
0.2500	32.627	34.320	21.423	15.832	13.454	12.211	11.183	10.476	7.391	6.534	6.127	5.356	21.228
0.3200	35.929	39.036	24.081	18.133	15.484	14.136	12.884	12.041	8.621	7.658	7.188	6.321	27.172
0.4000	38.971	43.263	26.656	20.312	17.486	15.994	14.581	13.621	9.916	8.823	8.290	7.277	33.965
0.5000	42.083	47.292	29.429	22.749	19.717	18.099	16.480	15.362	11.360	10.124	9.520	8.387	42.456
0.6000	44.170	49.746	31.505	24.668	21.486	19.785	17.958	16.729	12.507	11.184	10.538	9.357	50.947
0.7000	45.729	51.333	33.161	26.197	22.914	21.123	19.134	17.841	13.463	12.037	11.374	10.081	59.438
0.8000	46.830	52.209	34.484	27.484	24.104	22.311	20.173	18.794	14.276	12.828	12.104	10.759	67.930
0.9000	47.695	52.706	35.540	28.503	25.127	23.314	21.040	19.583	15.033	13.505	12.759	11.373	76.421
1.0000	48.274	52.858	36.378	29.430	25.974	24.119	21.791	20.263	15.643	14.078	13.314	11.896	84.912
1.2500	48.972	52.445	37.758	30.961	27.563	25.675	23.145	21.484	16.878	15.216	14.386	12.875	106.14
1.6000	48.812	51.164	38.556	32.194	28.763	26.873	24.213	22.362	17.928	16.232	15.345	13.764	135.86
2.0000	47.779	49.861	38.563	32.662	29.346	27.534	24.680	22.868	18.510	16.890	15.965	14.384	169.82
2.5000	45.977	48.175	37.903	32.559	29.451	27.669	24.751	22.969	18.876	17.170	16.298	14.782	212.28
3.2000	43.384	45.829	36.488	31.744	28.898	27.183	24.374	22.549	18.828	17.222	16.346	14.850	271.72
4.0000	40.614	43.252	34.712	30.512	27.944	26.312	23.709	21.869	18.502	16.940	16.141	14.683	339.65
5.0000	37.623	40.329	32.602	28.886	26.604	25.104	22.626	20.931	17.931	16.366	15.682	14.312	424.56
6.0000	35.143	37.785	30.719	27.402	25.282	23.961	21.626	19.998	17.141	15.820	15.145	13.916	509.47
7.0000	32.960	35.605	29.065	26.042	24.066	22.874	20.694	19.154	16.567	15.230	14.620	13.457	594.38
8.0000	31.120	33.688	27.613	24.852	23.002	21.869	19.881	18.363	15.960	14.718	14.138	13.033	679.30
9.0000	29.571	31.993	26.332	23.778	22.040	20.987	19.091	17.669	15.404	14.219	13.666	12.639	764.21
10.0000	28.168	30.486	25.195	22.852	21.164	20.181	18.367	17.057	14.865	13.782	13.278	12.270	849.12
11.0000	26.935	29.184	24.179	22.003	20.407	19.464	17.723	16.514	14.411	13.395	12.936	11.920	934.03
12.0000	25.848	27.988	23.265	21.218	19.706	18.822	17.147	16.007	13.982	13.029	12.563	11.586	1018.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	15.995	6.824	4.521	4.248	3.775	2.491	1.527	1.083	0.715	5.720	7.276	5.553	1.0614
0.0160	17.943	7.567	5.086	4.783	4.252	2.872	1.780	1.268	0.842	6.500	8.269	6.246	1.3586
0.0200	19.700	8.089	5.596	5.272	4.716	3.274	2.042	1.486	0.994	7.275	9.250	6.873	1.6982
0.0250	21.611	8.576	6.161	5.807	5.254	3.770	2.410	1.757	1.273	8.135	10.352	7.564	2.1228
0.0320	24.209	9.186	6.808	6.482	5.921	4.437	2.882	2.172	1.512	9.229	11.771	8.448	2.7172
0.0400	26.840	9.759	7.475	7.195	6.626	5.176	3.429	2.628	1.867	10.376	13.236	9.374	3.3965
0.0500	29.929	10.525	8.310	8.084	7.523	6.067	4.087	3.183	2.306	11.700	14.919	10.507	4.2456
0.0600	33.337	11.409	9.253	8.943	8.454	6.957	4.731	3.723	2.735	12.986	16.579	11.658	5.0947
0.0700	36.785	12.457	10.200	9.907	9.397	7.834	5.339	4.243	3.136	14.258	18.186	12.891	5.9438
0.0800	40.479	13.590	11.211	10.896	10.371	8.714	5.973	4.760	3.535	15.538	19.796	14.185	6.7930
0.0900	44.142	14.809	12.248	11.937	11.365	9.587	6.590	5.272	3.904	16.811	21.375	15.518	7.6421
0.1000	48.185	16.167	13.402	12.981	12.349	10.466	7.228	5.753	4.266	18.076	22.987	16.891	8.4912
0.1250	58.986	19.687	16.269	15.675	14.977	12.644	8.707	6.939	5.156	21.306	27.116	20.489	10.614
0.1600	75.243	25.087	20.586	19.838	18.819	15.677	10.751	8.560	6.352	25.936	32.951	25.987	13.586
0.2000	94.118	31.245	25.590	24.574	23.232	18.881	12.843	10.198	7.533	30.938	39.257	32.299	16.982
0.2500	116.112	38.433	31.170	30.014	28.021	22.151	14.975	11.740	8.633	36.290	45.995	39.590	21.228
0.3200	143.043	46.694	37.976	36.242	33.160	25.406	16.953	13.221	9.657	42.431	53.894	48.115	27.172
0.4000	166.334	54.912	43.609	41.450	37.532	28.016	18.526	14.421	10.503	47.794	60.856	55.338	33.965
0.5000	187.757	62.390	48.470	46.115	41.259	30.341	20.012	15.627	11.389	52.766	67.363	61.860	42.456
0.6000	200.056	67.106	50.786	48.266	43.130	31.536	20.919	16.320	11.940	55.512	71.233	65.121	50.947
0.7000	203.607	69.969	51.466	48.912	43.772	31.967	21.389	16.647	12.303	56.871	73.086	66.089	59.438
0.8000	202.423	71.038	51.347	48.968	43.761	32.001	21.656	16.897	12.552	57.382	73.658	66.003	67.930
0.9000	199.025	70.938	50.822	48.441	43.075	31.773	21.680	17.130	12.723	57.397	73.604	65.181	76.421
1.0000	196.079	70.901	50.602	48.019	42.781	31.686	21.827	17.389	12.914	57.223	73.302	64.462	84.912
1.2500	187.655	70.267	50.029	47.763	42.440	31.830	22.353	18.048	13.631	56.523	71.777	63.320	106.14
1.6000	174.273	68.244	49.274	47.115	42.180	32.194	23.095	18.777	14.536	54.942	68.745	61.227	135.86
2.0000	159.649	65.441	48.512	46.198	41.802	32.470	23.716	19.474	15.309	53.216	65.556	58.808	169.82
2.5000	143.275	61.593	47.038	44.764	41.315	32.673	24.258	20.202	16.071	51.018	61.745	55.718	212.28
3.2000	127.707	56.738	44.989	42.946	39.881	32.292	24.556	20.433	16.383	48.273	57.541	52.360	271.72
4.0000	114.551	51.791	42.349	40.614	38.184	31.241	23.952	20.168	16.315	45.334	53.422	48.840	339.65
5.0000	103.676	47.111	39.416	37.949	35.765	29.636	23.050	19.464	15.975	42.188	49.393	45.252	424.56
6.0000	95.537	43.437	36.925	35.511	33.638	28.077	21.934	18.647	15.360	39.444	46.048	42.178	509.47
7.0000	89.230	40.517	34.820	33.570	31.739	26.682	20.985	17.904	14.794	37.174	43.278	39.761	594.38
8.0000	83.944	37.968	32.998	31.838	30.071	25.376	19.964	17.120	14.221	35.179	40.867	37.637	679.30
9.0000	79.260	36.022	31.362	30.282	28.649	24.226	19.091	16.405	13.693	33.389	38.735	35.733	764.21
10.0000	75.333	34.391	30.007	28.974	27.412	23.179	18.317	15.747	13.177	31.847	36.886	34.114	849.12
11.0000	71.812	32.932	28.797	27.806	26.307	22.245	17.627	15.160	12.694	30.490	35.277	32.690	934.03
12.0000	68.633	31.618	27.709	26.755	25.313	21.404	17.007	14.634	12.261	29.268	33.804	31.408	1018.9

$^{85}_{37}$Rb IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=85 MEV
0.0125	0.108	0.109	0.140	0.188	0.204	0.247	0.266	0.295	0.416	0.481	0.517	0.615	1.0614
0.0160	0.135	0.139	0.178	0.240	0.261	0.314	0.338	0.373	0.529	0.612	0.659	0.785	1.3586
0.0200	0.165	0.171	0.220	0.298	0.325	0.390	0.418	0.460	0.655	0.757	0.815	0.969	1.6982
0.0250	0.199	0.210	0.270	0.369	0.405	0.482	0.515	0.565	0.807	0.932	1.003	1.190	2.1228
0.0320	0.245	0.261	0.337	0.463	0.512	0.605	0.646	0.706	1.012	1.167	1.255	1.485	2.7172
0.0400	0.292	0.315	0.408	0.565	0.629	0.738	0.787	0.859	1.237	1.424	1.531	1.806	3.3965
0.0500	0.346	0.377	0.492	0.684	0.768	0.894	0.954	1.038	1.502	1.727	1.857	2.183	4.2456
0.0600	0.396	0.435	0.569	0.795	0.897	1.040	1.109	1.206	1.752	2.011	2.161	2.536	5.0947
0.0700	0.443	0.488	0.641	0.899	1.019	1.177	1.255	1.362	1.986	2.277	2.447	2.866	5.9438
0.0800	0.487	0.538	0.709	0.997	1.134	1.305	1.392	1.510	2.207	2.527	2.715	3.176	6.7930
0.0900	0.528	0.585	0.774	1.089	1.242	1.427	1.523	1.649	2.414	2.762	2.967	3.467	7.6421
0.1000	0.568	0.629	0.835	1.177	1.345	1.542	1.646	1.782	2.610	2.984	3.205	3.743	8.4912
0.1250	0.659	0.728	0.978	1.378	1.582	1.805	1.931	2.085	3.057	3.492	3.749	4.370	10.614
0.1600	0.774	0.849	1.156	1.626	1.874	2.130	2.282	2.460	3.604	4.112	4.410	5.128	13.586
0.2000	0.892	0.967	1.338	1.876	2.168	2.456	2.635	2.836	4.145	4.726	5.062	5.875	16.982
0.2500	1.026	1.097	1.542	2.153	2.491	2.814	3.025	3.251	4.735	5.392	5.771	6.685	21.228
0.3200	1.197	1.257	1.798	2.495	2.891	3.255	3.505	3.764	5.454	6.202	6.633	7.667	27.172
0.4000	1.377	1.420	2.062	2.843	3.295	3.698	3.990	4.283	6.170	7.006	7.488	8.641	33.965
0.5000	1.586	1.607	2.361	3.233	3.744	4.189	4.529	4.860	6.955	7.886	8.424	9.705	42.456
0.6000	1.783	1.782	2.637	3.587	4.152	4.633	5.016	5.383	7.656	8.672	9.259	10.647	50.947
0.7000	1.972	1.950	2.900	3.921	4.534	5.048	5.474	5.874	8.310	9.403	10.033	11.521	59.438
0.8000	2.155	2.114	3.150	4.237	4.895	5.439	5.906	6.337	8.922	10.086	10.756	12.336	67.930
0.9000	2.335	2.276	3.393	4.540	5.240	5.811	6.317	6.779	9.501	10.730	11.439	13.103	76.421
1.0000	2.511	2.437	3.629	4.833	5.572	6.169	6.714	7.206	10.055	11.346	12.091	13.832	84.912
1.2500	2.947	2.839	4.200	5.535	6.364	7.020	7.657	8.221	11.359	12.794	13.621	15.544	106.14
1.6000	3.554	3.411	4.978	6.474	7.417	8.149	8.910	9.574	13.063	14.680	15.617	17.772	135.86
2.0000	4.256	4.083	5.857	7.520	8.584	9.396	10.297	11.074	14.925	16.728	17.784	20.182	169.82
2.5000	5.161	4.948	6.967	8.821	10.027	10.932	12.013	12.924	17.194	19.219	20.413	23.090	212.28
3.2000	6.491	6.212	8.564	10.668	12.063	13.098	14.431	15.534	20.344	22.672	24.051	27.098	271.72
4.0000	8.109	7.738	10.472	12.850	14.453	15.637	17.256	18.592	23.982	26.648	28.231	31.696	339.65
5.0000	10.282	9.772	12.997	15.711	17.568	18.942	20.923	22.562	28.645	31.748	33.569	37.554	424.56
6.0000	12.618	11.948	15.681	18.731	20.843	22.405	24.763	26.714	33.490	37.027	39.081	43.573	509.47
7.0000	15.115	14.264	18.525	21.911	24.287	26.034	28.779	31.054	38.531	42.499	44.789	49.780	594.38
8.0000	17.767	16.717	21.523	25.250	27.898	29.832	32.967	35.583	43.754	48.173	50.698	56.194	679.30
9.0000	20.567	19.304	24.673	28.744	31.670	33.797	37.327	40.299	49.172	54.044	56.808	62.811	764.21
10.0000	23.510	22.024	27.971	32.388	35.603	37.924	41.863	45.192	54.785	60.112	63.114	69.632	849.12
11.0000	26.594	24.872	31.412	36.176	39.690	42.210	46.570	50.252	60.588	66.363	69.594	76.655	934.03
12.0000	29.813	27.844	34.993	40.107	43.926	46.647	51.442	55.476	66.571	72.792	76.256	83.882	1018.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.040	0.096	0.122	0.126	0.135	0.190	0.285	0.393	0.559	0.104	0.085	0.098	1.0614
0.0160	0.050	0.123	0.157	0.162	0.174	0.245	0.365	0.503	0.719	0.133	0.109	0.126	1.3586
0.0200	0.062	0.153	0.196	0.203	0.218	0.307	0.456	0.625	0.892	0.165	0.135	0.157	1.6982
0.0250	0.076	0.190	0.244	0.254	0.273	0.382	0.565	0.770	1.092	0.204	0.166	0.197	2.1228
0.0320	0.095	0.241	0.310	0.323	0.347	0.481	0.710	0.960	1.348	0.256	0.207	0.250	2.7172
0.0400	0.115	0.299	0.384	0.399	0.429	0.587	0.863	1.157	1.617	0.312	0.251	0.309	3.3965
0.0500	0.140	0.369	0.471	0.488	0.525	0.708	1.037	1.378	1.915	0.376	0.302	0.378	4.2456
0.0600	0.162	0.436	0.553	0.572	0.613	0.818	1.194	1.577	2.179	0.436	0.350	0.443	5.0947
0.0700	0.183	0.499	0.629	0.651	0.696	0.918	1.337	1.756	2.416	0.492	0.394	0.504	5.9438
0.0800	0.203	0.558	0.699	0.724	0.772	1.009	1.467	1.919	2.632	0.544	0.435	0.560	6.7930
0.0900	0.221	0.613	0.765	0.791	0.842	1.094	1.588	2.069	2.831	0.593	0.473	0.612	7.6421
0.1000	0.238	0.664	0.826	0.854	0.908	1.172	1.699	2.208	3.015	0.638	0.509	0.660	8.4912
0.1250	0.275	0.777	0.961	0.993	1.054	1.344	1.947	2.517	3.426	0.741	0.589	0.767	10.614
0.1600	0.318	0.905	1.116	1.154	1.222	1.546	2.237	2.880	3.910	0.862	0.685	0.890	13.586
0.2000	0.357	1.024	1.260	1.303	1.380	1.737	2.515	3.229	4.377	0.979	0.777	1.004	16.982
0.2500	0.397	1.144	1.407	1.455	1.542	1.940	2.812	3.604	4.884	1.103	0.875	1.120	21.228
0.3200	0.442	1.282	1.577	1.633	1.734	2.186	3.177	4.070	5.516	1.252	0.993	1.254	27.172
0.4000	0.486	1.415	1.742	1.806	1.924	2.437	3.554	4.553	6.176	1.401	1.110	1.385	33.965
0.5000	0.534	1.560	1.926	2.000	2.139	2.728	3.989	5.110	6.938	1.570	1.243	1.529	42.456
0.6000	0.578	1.691	2.097	2.180	2.340	3.002	4.403	5.641	7.656	1.727	1.365	1.663	50.947
0.7000	0.620	1.815	2.263	2.354	2.535	3.269	4.804	6.156	8.356	1.877	1.482	1.792	59.438
0.8000	0.661	1.935	2.428	2.527	2.729	3.534	5.198	6.662	9.038	2.026	1.598	1.921	67.930
0.9000	0.704	2.055	2.594	2.702	2.924	3.800	5.590	7.160	9.710	2.174	1.713	2.050	76.421
1.0000	0.747	2.174	2.761	2.878	3.122	4.068	5.980	7.652	10.372	2.322	1.829	2.181	84.912
1.2500	0.857	2.474	3.182	3.320	3.619	4.735	6.939	8.848	11.969	2.694	2.121	2.513	106.14
1.6000	1.021	2.902	3.779	3.945	4.320	5.661	8.244	10.459	14.075	3.226	2.543	2.989	135.86
2.0000	1.274	3.410	4.473	4.672	5.128	6.710	9.693	12.232	16.349	3.854	3.048	3.554	169.82
2.5000	1.505	4.078	5.361	5.604	6.148	8.012	11.461	14.370	19.052	4.667	3.715	4.295	212.28
3.2000	1.944	5.083	6.652	6.959	7.611	9.840	13.894	17.292	22.711	5.864	4.711	5.394	271.72
4.0000	2.505	6.336	8.208	8.585	9.352	11.978	16.694	20.638	26.864	7.316	5.936	6.738	339.65
5.0000	3.285	8.056	10.287	10.749	11.650	14.770	20.309	24.924	32.124	9.259	7.590	8.545	424.56
6.0000	4.138	9.934	12.514	13.063	14.100	17.715	24.087	29.383	37.547	11.341	9.371	10.489	509.47
7.0000	5.059	11.959	14.883	15.524	16.700	20.819	28.046	34.032	43.182	13.560	11.274	12.564	594.38
8.0000	6.040	14.125	17.390	18.122	19.450	24.083	32.197	38.884	49.038	15.909	13.294	14.760	679.30
9.0000	7.082	16.422	20.030	20.858	22.344	27.509	36.548	43.953	55.125	18.388	15.429	17.076	764.21
10.0000	8.181	18.835	22.799	23.726	25.375	31.094	41.090	49.237	61.449	20.992	17.677	19.509	849.12
11.0000	9.336	21.359	25.688	26.718	28.538	34.834	45.817	54.735	68.016	23.718	20.031	22.052	934.03
12.0000	10.546	23.991	28.695	29.832	31.829	38.727	50.723	60.437	74.824	26.562	22.491	24.703	1018.9

$^{88}_{38}Sr$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=88 MEV
0.0125	7.107	5.880	4.307	2.864	2.326	2.111	1.956	1.809	1.150	0.984	0.905	0.775	1.0988
0.0160	8.128	6.724	4.926	3.276	2.660	2.414	2.236	2.069	1.315	1.126	1.034	0.887	1.4065
0.0200	9.176	7.591	5.561	3.698	3.003	2.725	2.525	2.336	1.485	1.271	1.168	1.001	1.7581
0.0250	10.360	8.571	6.279	4.175	3.391	3.077	2.851	2.637	1.676	1.435	1.322	1.130	2.1976
0.0320	11.834	9.809	7.181	4.775	3.885	3.533	3.260	3.016	1.917	1.644	1.515	1.300	2.8130
0.0400	13.328	11.099	8.107	5.407	4.410	4.021	3.705	3.429	2.181	1.877	1.727	1.484	3.5162
0.0500	14.992	12.567	9.153	6.132	5.025	4.576	4.219	3.908	2.480	2.155	1.986	1.707	4.3953
0.0600	16.494	13.957	10.107	6.812	5.599	5.084	4.700	4.356	2.789	2.426	2.239	1.925	5.2744
0.0700	17.859	15.276	10.990	7.451	6.155	5.583	5.165	4.792	3.077	2.693	2.495	2.143	6.1534
0.0800	19.121	16.569	11.818	8.072	6.677	6.051	5.590	5.200	3.368	2.954	2.730	2.352	7.0325
0.0900	20.298	17.815	12.599	8.668	7.182	6.526	6.010	5.594	3.666	3.207	2.973	2.564	7.9115
0.1000	21.414	19.039	13.342	9.246	7.685	6.965	6.404	5.991	3.949	3.456	3.202	2.762	8.7906
0.1250	23.950	22.098	15.063	10.604	8.857	8.029	7.381	6.914	4.632	4.052	3.788	3.276	10.988
0.1600	27.029	26.271	17.227	12.334	10.371	9.406	8.631	8.097	5.513	4.841	4.539	3.962	14.065
0.2000	30.107	30.554	19.449	14.139	11.961	10.833	9.938	9.316	6.457	5.699	5.348	4.668	17.581
0.2500	33.160	34.880	21.773	16.090	13.673	12.411	11.366	10.647	7.512	6.641	6.227	5.443	21.977
0.3200	36.587	39.750	24.522	18.465	15.768	14.394	13.119	12.261	8.779	7.798	7.320	6.437	28.130
0.4000	39.742	44.119	27.184	20.714	17.832	16.310	14.869	13.891	10.112	8.998	8.454	7.421	35.162
0.5000	42.965	48.283	30.045	23.225	20.130	18.478	16.825	15.684	11.598	10.336	9.720	8.563	43.953
0.6000	45.155	50.855	32.207	25.218	21.965	20.226	18.358	17.102	12.786	11.434	10.773	9.566	52.744
0.7000	46.793	52.527	33.932	26.807	23.447	21.615	19.579	18.256	13.777	12.317	11.639	10.315	61.534
0.8000	47.954	53.462	35.312	28.144	24.683	22.847	20.657	19.245	14.619	13.136	12.394	11.017	70.325
0.9000	48.867	54.002	36.414	29.204	25.745	23.887	21.557	20.064	15.403	13.837	13.073	11.652	79.115
1.0000	49.484	54.182	37.290	30.168	26.625	24.723	22.337	20.771	16.035	14.431	13.648	12.194	87.906
1.2500	50.246	53.810	38.740	31.767	28.280	26.343	23.748	22.043	17.317	15.612	14.760	13.210	109.88
1.6000	50.136	52.551	39.602	33.067	29.543	27.602	24.870	22.969	18.415	16.672	15.761	14.138	140.65
2.0000	49.129	51.270	39.652	33.586	30.175	28.312	25.378	23.514	19.033	17.368	16.416	14.790	175.81
2.5000	47.336	49.600	39.024	33.522	30.322	28.488	25.483	23.649	19.434	17.678	16.780	15.219	219.76
3.2000	44.738	47.259	37.626	32.735	29.800	28.032	25.134	23.253	19.415	17.760	16.857	15.314	281.30
4.0000	41.945	44.669	35.850	31.512	28.859	27.174	24.486	22.586	19.108	17.495	16.670	15.165	351.62
5.0000	38.916	41.715	33.723	29.878	27.518	25.967	23.404	21.650	18.548	16.929	16.221	14.804	439.53
6.0000	36.395	39.131	31.814	28.378	26.183	24.815	22.397	20.711	17.752	16.384	15.684	14.412	527.44
7.0000	34.167	36.909	30.130	26.996	24.948	23.712	21.452	19.856	17.174	15.788	15.155	13.950	615.34
8.0000	32.285	34.950	28.647	25.783	23.863	22.689	20.626	19.050	16.558	15.269	14.667	13.522	703.25
9.0000	30.699	33.214	27.336	24.685	22.880	21.787	19.819	18.343	15.992	14.762	14.188	13.121	791.15
10.0000	29.258	31.666	26.170	23.736	21.983	20.962	19.078	17.717	15.440	14.315	13.792	12.745	879.06
11.0000	27.991	30.328	25.127	22.865	21.207	20.227	18.418	17.161	14.975	13.920	13.443	12.387	966.97
12.0000	26.871	29.097	24.187	22.058	20.486	19.567	17.826	16.640	14.536	13.545	13.061	12.045	1054.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	16.153	6.892	4.566	4.290	3.812	2.515	1.542	1.094	0.722	5.776	7.348	5.608	1.0988
0.0160	18.128	7.645	5.138	4.832	4.296	2.901	1.798	1.281	0.850	6.566	8.355	6.310	1.4065
0.0200	19.910	8.175	5.656	5.328	4.766	3.309	2.063	1.502	1.004	7.352	9.349	6.946	1.7581
0.0250	21.851	8.671	6.229	5.871	5.312	3.811	2.436	1.777	1.287	8.225	10.467	7.648	2.1976
0.0320	24.487	9.292	6.886	6.556	5.989	4.488	2.915	2.197	1.530	9.335	11.906	8.545	2.8130
0.0400	27.159	9.874	7.564	7.280	6.705	5.237	3.470	2.659	1.889	10.499	13.393	9.485	3.5162
0.0500	30.296	10.654	8.411	8.183	7.615	6.142	4.137	3.222	2.334	11.844	15.102	10.636	4.3953
0.0600	33.756	11.552	9.369	9.056	8.560	7.044	4.791	3.770	2.769	13.149	16.787	11.805	5.2744
0.0700	37.257	12.617	10.331	10.034	9.518	7.935	5.407	4.297	3.176	14.441	18.420	13.056	6.1534
0.0800	41.008	13.768	11.357	11.038	10.506	8.828	6.051	4.822	3.581	15.741	20.055	14.370	7.0325
0.0900	44.728	15.006	12.410	12.095	11.516	9.714	6.678	5.342	3.956	17.034	21.658	15.724	7.9115
0.1000	48.832	16.384	13.582	13.155	12.515	10.607	7.325	5.831	4.323	18.319	23.295	17.118	8.7906
0.1250	59.801	19.959	16.494	15.892	15.184	12.819	8.827	7.035	5.227	21.601	27.490	20.772	10.988
0.1600	76.315	25.444	20.879	20.121	19.087	15.900	10.905	8.682	6.443	26.306	33.420	26.357	14.065
0.2000	95.495	31.702	25.965	24.934	23.572	19.157	13.031	10.347	7.643	31.391	39.832	32.772	17.581
0.2500	118.010	39.061	31.680	30.504	28.479	22.513	15.219	11.932	8.775	36.883	46.747	40.237	21.977
0.3200	145.659	47.548	38.671	36.905	33.767	25.870	17.263	13.462	9.833	43.207	54.880	48.995	28.130
0.4000	169.625	55.998	44.472	42.270	38.274	28.570	18.893	14.706	10.710	48.740	62.060	56.433	35.162
0.5000	191.690	63.696	49.485	47.081	42.124	30.977	20.431	15.954	11.628	53.871	68.774	63.156	43.953
0.6000	204.516	68.601	51.918	49.341	44.092	32.239	21.386	16.683	12.207	56.749	72.820	66.572	52.744
0.7000	208.345	71.597	52.663	50.050	44.791	32.711	21.886	17.034	12.589	58.194	74.787	67.627	61.534
0.8000	207.281	72.743	52.579	50.143	44.811	32.769	22.176	17.303	12.854	58.759	75.426	67.587	70.325
0.9000	203.917	72.682	52.072	49.632	44.134	32.554	22.212	17.551	13.036	58.808	75.413	66.783	79.115
1.0000	200.993	72.678	51.870	49.223	43.853	32.480	22.374	17.825	13.238	58.657	75.139	66.078	87.906
1.2500	192.539	72.095	51.331	49.006	43.544	32.658	22.934	18.518	13.985	57.994	73.645	64.967	109.88
1.6000	179.000	70.095	50.611	48.393	43.324	33.067	23.721	19.286	14.930	56.432	70.610	62.888	140.65
2.0000	164.161	67.290	49.883	47.504	42.983	33.387	24.386	20.024	15.742	54.720	67.409	60.470	175.81
2.5000	147.512	63.414	48.429	46.088	42.536	33.639	24.976	20.800	16.546	52.527	63.571	57.366	219.76
3.2000	131.692	58.509	46.393	44.286	41.126	33.299	25.323	21.071	16.894	49.780	59.337	53.994	281.30
4.0000	118.306	53.489	43.737	41.945	39.435	32.265	24.737	20.829	16.850	46.820	55.174	50.441	351.62
5.0000	107.239	48.730	40.771	39.253	36.994	30.654	23.842	20.133	16.524	43.637	51.090	46.807	439.53
6.0000	98.940	44.984	38.240	36.776	34.836	29.078	22.715	19.311	15.907	40.849	47.689	43.680	527.44
7.0000	92.499	42.001	36.096	34.800	32.902	27.659	21.754	18.560	15.336	38.536	44.863	41.218	615.34
8.0000	87.088	39.390	34.233	33.030	31.197	26.327	20.712	17.761	14.753	36.497	42.398	39.046	703.25
9.0000	82.282	37.396	32.558	31.437	29.742	25.149	19.819	17.031	14.215	34.662	40.212	37.095	791.15
10.0000	78.249	35.722	31.169	30.096	28.473	24.077	19.026	16.356	13.687	33.079	38.313	35.435	879.06
11.0000	74.626	34.222	29.926	28.896	27.338	23.117	18.317	15.754	13.191	31.685	36.660	33.971	966.97
12.0000	71.351	32.870	28.806	27.815	26.315	22.252	17.680	15.213	12.746	30.427	35.143	32.652	1054.9

$^{88}_{38}Sr$ IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=88
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.109	0.111	0.141	0.189	0.204	0.248	0.267	0.295	0.415	0.479	0.515	0.612	1.0988
0.0160	0.137	0.141	0.179	0.242	0.262	0.316	0.339	0.374	0.529	0.611	0.657	0.782	1.4065
0.0200	0.167	0.173	0.222	0.300	0.327	0.392	0.420	0.462	0.655	0.756	0.814	0.967	1.7581
0.0250	0.202	0.213	0.273	0.372	0.407	0.485	0.518	0.568	0.808	0.932	1.003	1.189	2.1976
0.0320	0.248	0.265	0.341	0.467	0.516	0.610	0.650	0.711	1.015	1.170	1.258	1.487	2.8130
0.0400	0.297	0.320	0.414	0.571	0.635	0.745	0.794	0.866	1.242	1.430	1.536	1.811	3.5162
0.0500	0.352	0.383	0.498	0.692	0.775	0.903	0.962	1.047	1.511	1.736	1.866	2.192	4.3953
0.0600	0.403	0.442	0.577	0.805	0.907	1.051	1.120	1.217	1.765	2.024	2.174	2.549	5.2744
0.0700	0.451	0.496	0.651	0.911	1.030	1.190	1.269	1.376	2.002	2.294	2.464	2.884	6.1534
0.0800	0.495	0.547	0.720	1.010	1.147	1.321	1.408	1.526	2.226	2.547	2.736	3.199	7.0325
0.0900	0.538	0.594	0.786	1.104	1.257	1.444	1.541	1.668	2.437	2.786	2.992	3.495	7.9115
0.1000	0.578	0.639	0.848	1.193	1.362	1.561	1.666	1.803	2.636	3.012	3.234	3.775	8.7906
0.1250	0.671	0.741	0.994	1.398	1.603	1.830	1.956	2.112	3.091	3.529	3.787	4.412	10.988
0.1600	0.788	0.864	1.175	1.651	1.901	2.161	2.314	2.493	3.648	4.160	4.459	5.184	14.065
0.2000	0.909	0.985	1.360	1.906	2.200	2.493	2.674	2.876	4.199	4.785	5.123	5.944	17.581
0.2500	1.045	1.116	1.568	2.188	2.530	2.858	3.070	3.300	4.800	5.463	5.845	6.769	21.977
0.3200	1.220	1.279	1.828	2.536	2.936	3.306	3.559	3.821	5.530	6.285	6.721	7.767	28.130
0.4000	1.402	1.445	2.096	2.889	3.346	3.755	4.051	4.348	6.257	7.102	7.589	8.754	35.162
0.5000	1.614	1.635	2.400	3.284	3.802	4.254	4.598	4.933	7.052	7.995	8.538	9.833	43.953
0.6000	1.814	1.812	2.680	3.643	4.214	4.703	5.091	5.462	7.763	8.790	9.383	10.788	52.744
0.7000	2.005	1.982	2.946	3.981	4.601	5.123	5.554	5.959	8.425	9.530	10.158	11.661	61.534
0.8000	2.190	2.148	3.199	4.301	4.966	5.519	5.991	6.428	9.044	10.221	10.889	12.485	70.325
0.9000	2.371	2.311	3.444	4.607	5.315	5.895	6.407	6.875	9.629	10.872	11.579	13.261	79.115
1.0000	2.550	2.474	3.683	4.903	5.650	6.256	6.808	7.305	10.188	11.494	12.237	13.998	87.906
1.2500	2.990	2.880	4.260	5.612	6.450	7.116	7.760	8.330	11.505	12.955	13.783	15.726	109.88
1.6000	3.602	3.457	5.044	6.559	7.512	8.254	9.023	9.695	13.224	14.858	15.795	17.972	140.65
2.0000	4.309	4.133	5.930	7.612	8.688	9.510	10.421	11.206	15.099	16.921	17.978	20.400	175.81
2.5000	5.219	5.004	7.046	8.921	10.139	11.056	12.147	13.067	17.382	19.427	20.623	23.326	219.76
3.2000	6.556	6.274	8.650	10.777	12.184	13.232	14.577	15.689	20.547	22.896	24.278	27.353	281.30
4.0000	8.179	7.804	10.565	12.966	14.582	15.779	17.411	18.757	24.197	26.885	28.472	31.966	351.62
5.0000	10.355	9.842	13.094	15.832	17.702	19.089	21.084	22.733	28.867	31.993	33.818	37.833	439.53
6.0000	12.692	12.018	15.779	18.852	20.978	22.553	24.925	26.886	33.713	37.273	39.331	43.853	527.44
7.0000	15.186	14.333	18.619	22.029	24.419	26.179	28.937	31.223	38.749	42.741	45.035	50.055	615.34
8.0000	17.834	16.781	21.613	25.363	28.023	29.970	33.117	35.744	43.964	48.405	50.933	56.457	703.25
9.0000	20.628	19.362	24.755	28.848	31.787	33.925	37.466	40.449	49.368	54.262	57.028	63.059	791.15
10.0000	23.562	22.074	28.043	32.481	35.708	38.040	41.989	45.326	54.964	60.311	63.314	69.858	879.06
11.0000	26.635	24.911	31.472	36.256	39.780	42.310	46.679	50.369	60.746	66.539	69.772	76.856	966.97
12.0000	29.841	27.871	35.039	40.171	43.999	46.730	51.532	55.572	66.705	72.943	76.408	84.054	1054.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.041	0.098	0.123	0.127	0.136	0.191	0.285	0.393	0.556	0.105	0.087	0.099	1.0988
0.0160	0.051	0.124	0.158	0.164	0.175	0.246	0.366	0.503	0.716	0.135	0.110	0.127	1.4065
0.0200	0.063	0.155	0.198	0.205	0.220	0.309	0.457	0.625	0.890	0.167	0.136	0.159	1.7581
0.0250	0.077	0.192	0.247	0.257	0.276	0.385	0.568	0.771	1.091	0.207	0.168	0.199	2.1976
0.0320	0.096	0.244	0.314	0.327	0.351	0.486	0.714	0.963	1.349	0.259	0.210	0.253	2.8130
0.0400	0.117	0.303	0.388	0.404	0.434	0.593	0.869	1.162	1.620	0.316	0.255	0.313	3.5162
0.0500	0.142	0.374	0.477	0.495	0.531	0.716	1.045	1.387	1.922	0.382	0.307	0.384	4.3953
0.0600	0.165	0.443	0.560	0.580	0.621	0.827	1.205	1.588	2.190	0.443	0.355	0.450	5.2744
0.0700	0.186	0.507	0.638	0.660	0.705	0.929	1.350	1.770	2.431	0.500	0.400	0.511	6.1534
0.0800	0.206	0.567	0.710	0.734	0.783	1.022	1.483	1.937	2.650	0.553	0.442	0.568	7.0325
0.0900	0.225	0.623	0.777	0.803	0.855	1.108	1.606	2.089	2.852	0.602	0.481	0.621	7.9115
0.1000	0.242	0.675	0.839	0.867	0.922	1.188	1.719	2.231	3.040	0.649	0.517	0.671	8.7906
0.1250	0.280	0.790	0.976	1.008	1.070	1.364	1.971	2.545	3.458	0.753	0.600	0.780	10.988
0.1600	0.324	0.921	1.134	1.172	1.242	1.569	2.267	2.915	3.951	0.877	0.697	0.905	14.065
0.2000	0.364	1.042	1.281	1.324	1.402	1.764	2.550	3.270	4.427	0.996	0.791	1.021	17.581
0.2500	0.404	1.164	1.431	1.480	1.567	1.970	2.853	3.653	4.943	1.122	0.891	1.140	21.977
0.3200	0.450	1.305	1.604	1.660	1.762	2.221	3.224	4.127	5.585	1.274	1.010	1.276	28.130
0.4000	0.495	1.440	1.771	1.836	1.955	2.476	3.606	4.617	6.255	1.425	1.130	1.408	35.162
0.5000	0.543	1.587	1.958	2.033	2.174	2.771	4.048	5.182	7.028	1.597	1.264	1.555	43.953
0.6000	0.588	1.720	2.131	2.215	2.378	3.048	4.468	5.720	7.755	1.755	1.388	1.691	52.744
0.7000	0.630	1.845	2.299	2.392	2.575	3.319	4.873	6.241	8.463	1.908	1.507	1.821	61.534
0.8000	0.672	1.967	2.466	2.567	2.771	3.587	5.272	6.752	9.154	2.058	1.624	1.951	70.325
0.9000	0.715	2.088	2.634	2.743	2.969	3.856	5.668	7.256	9.832	2.208	1.740	2.082	79.115
1.0000	0.758	2.208	2.803	2.921	3.168	4.126	6.062	7.753	10.501	2.357	1.857	2.214	87.906
1.2500	0.870	2.511	3.228	3.367	3.670	4.799	7.030	8.960	12.113	2.733	2.152	2.549	109.88
1.6000	1.035	2.943	3.830	3.998	4.377	5.734	8.346	10.585	14.238	3.270	2.577	3.029	140.65
2.0000	1.240	3.454	4.529	4.730	5.190	6.790	9.806	12.371	16.528	3.902	3.086	3.598	175.81
2.5000	1.522	4.126	5.422	5.668	6.217	8.100	11.585	14.522	19.247	4.721	3.757	4.344	219.76
3.2000	1.963	5.136	6.719	7.029	7.687	9.937	14.029	17.459	22.924	5.923	4.758	5.449	281.30
4.0000	2.526	6.393	8.280	8.661	9.433	12.082	16.838	20.814	27.090	7.380	5.987	6.796	351.62
5.0000	3.307	8.116	10.363	10.828	11.736	14.878	20.459	25.108	32.359	9.325	7.643	8.606	439.53
6.0000	4.161	9.994	12.590	13.143	14.185	17.824	24.237	29.567	37.782	11.408	9.425	10.551	527.44
7.0000	5.080	12.017	14.957	15.601	16.783	20.925	28.194	34.213	43.413	13.625	11.327	12.624	615.34
8.0000	6.060	14.180	17.459	18.195	19.528	24.184	32.337	39.056	49.259	15.970	13.343	14.816	703.25
9.0000	7.099	16.471	20.093	20.924	22.415	27.601	36.677	44.112	55.331	18.442	15.473	17.127	791.15
10.0000	8.195	18.877	22.854	23.783	25.437	31.175	41.205	49.381	61.635	21.039	17.713	19.552	879.06
11.0000	9.346	21.392	25.733	26.764	28.589	34.902	45.916	54.859	68.179	23.755	20.060	22.086	966.97
12.0000	10.551	24.014	28.728	29.866	31.867	38.779	50.802	60.538	74.960	26.587	22.509	24.727	1054.9

$^{89}_{39}Y$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=89 MEV
0.0125	7.174	5.935	4.348	2.892	2.348	2.131	1.974	1.826	1.161	0.994	0.913	0.783	1.1113
0.0160	8.208	6.791	4.975	3.308	2.686	2.438	2.259	2.089	1.328	1.137	1.045	0.895	1.4225
0.0200	9.271	7.669	5.619	3.736	3.034	2.753	2.551	2.360	1.500	1.284	1.180	1.011	1.7781
0.0250	10.470	8.662	6.346	4.220	3.427	3.109	2.881	2.665	1.694	1.450	1.336	1.142	2.2226
0.0320	11.965	9.917	7.260	4.828	3.928	3.572	3.296	3.049	1.938	1.663	1.532	1.314	2.8450
0.0400	13.480	11.225	8.200	5.469	4.461	4.067	3.747	3.468	2.206	1.898	1.747	1.501	3.5562
0.0500	15.169	12.715	9.261	6.205	5.084	4.630	4.269	3.954	2.510	2.181	2.010	1.727	4.4453
0.0600	16.694	14.126	10.229	6.894	5.667	5.145	4.756	4.409	2.823	2.455	2.266	1.949	5.3344
0.0700	18.080	15.465	11.126	7.543	6.231	5.652	5.229	4.851	3.115	2.726	2.526	2.170	6.2234
0.0800	19.362	16.777	11.967	8.173	6.761	6.127	5.660	5.265	3.410	2.992	2.764	2.381	7.1125
0.0900	20.557	18.043	12.760	8.779	7.273	6.610	6.087	5.666	3.713	3.248	3.011	2.597	8.0015
0.1000	21.692	19.286	13.515	9.366	7.785	7.055	6.487	6.068	4.000	3.500	3.244	2.798	8.8906
0.1250	24.270	22.392	15.264	10.746	8.975	8.136	7.479	7.006	4.694	4.106	3.839	3.320	11.113
0.1600	27.401	26.632	17.464	12.504	10.513	9.535	8.749	8.208	5.588	4.907	4.602	4.017	14.225
0.2000	30.532	30.986	19.724	14.339	12.130	10.986	10.079	9.448	6.548	5.779	5.424	4.734	17.781
0.2500	33.684	35.431	22.117	16.344	13.889	12.607	11.545	10.815	7.630	6.746	6.325	5.529	22.227
0.3200	37.234	40.453	24.956	18.792	16.047	14.649	13.351	12.478	8.934	7.936	7.449	6.551	28.450
0.4000	40.504	44.964	27.704	21.111	18.174	16.623	15.154	14.157	10.306	9.170	8.616	7.563	35.562
0.5000	43.834	49.260	30.653	23.695	20.538	18.852	17.166	16.001	11.832	10.545	9.916	8.736	44.453
0.6000	46.131	51.955	32.904	25.763	22.440	20.663	18.755	17.472	13.063	11.681	11.006	9.772	53.344
0.7000	47.850	53.714	34.699	27.412	23.977	22.103	20.021	18.668	14.088	12.596	11.902	10.548	62.234
0.8000	49.072	54.709	36.135	28.800	25.259	23.380	21.139	19.694	14.960	13.442	12.684	11.274	71.125
0.9000	50.035	55.292	37.284	29.902	26.360	24.458	22.072	20.543	15.771	14.168	13.385	11.931	80.015
1.0000	50.690	55.503	38.199	30.903	27.274	25.326	22.881	21.277	16.425	14.783	13.981	12.491	88.906
1.2500	51.518	55.172	39.721	32.571	28.996	27.010	24.349	22.601	17.755	16.007	15.134	13.545	111.13
1.6000	51.459	53.938	40.647	33.940	30.322	28.331	25.526	23.575	18.901	17.112	16.177	14.511	142.25
2.0000	50.480	52.680	40.743	34.509	31.005	29.090	26.075	24.160	19.556	17.845	16.867	15.197	177.81
2.5000	48.698	51.027	40.147	34.486	31.194	29.307	26.216	24.329	19.993	18.187	17.263	15.657	222.26
3.2000	46.095	48.693	38.768	33.728	30.704	28.882	25.897	23.959	20.004	18.299	17.368	15.779	284.50
4.0000	43.282	46.093	36.993	32.517	29.779	28.041	25.266	23.306	19.717	18.053	17.202	15.648	355.62
5.0000	40.217	43.109	34.850	30.877	28.438	26.834	24.186	22.374	19.167	17.495	16.763	15.299	444.53
6.0000	37.656	40.487	32.916	29.361	27.090	25.674	23.173	21.428	18.367	16.952	16.228	14.911	533.44
7.0000	35.385	38.224	31.204	27.958	25.837	24.557	22.217	20.563	17.786	16.351	15.695	14.447	622.34
8.0000	33.462	36.223	29.691	26.722	24.733	23.515	21.378	19.745	17.162	15.825	15.202	14.014	711.25
9.0000	31.838	34.446	28.351	25.601	23.730	22.596	20.554	19.023	16.585	15.309	14.714	13.608	800.15
10.0000	30.361	32.859	27.156	24.631	22.811	21.752	19.797	18.385	16.022	14.854	14.311	13.225	889.06
11.0000	29.059	31.485	26.085	23.737	22.016	20.998	19.120	17.816	15.547	14.451	13.955	12.860	977.97
12.0000	27.907	30.218	25.119	22.909	21.276	20.321	18.513	17.282	15.097	14.067	13.564	12.509	1066.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	16.306	6.957	4.609	4.331	3.848	2.539	1.557	1.104	0.729	5.831	7.418	5.661	1.1113
0.0160	18.307	7.721	5.189	4.880	4.338	2.930	1.816	1.293	0.859	6.631	8.437	6.373	1.4225
0.0200	20.114	8.259	5.714	5.383	4.815	3.343	2.084	1.517	1.015	7.428	9.445	7.018	1.7781
0.0250	22.083	8.763	6.295	5.933	5.368	3.852	2.462	1.796	1.301	8.313	10.578	7.729	2.2226
0.0320	24.757	9.395	6.962	6.629	6.055	4.538	2.948	2.222	1.546	9.438	12.037	8.640	2.8450
0.0400	27.469	9.987	7.650	7.363	6.781	5.297	3.509	2.689	1.911	10.619	13.546	9.594	3.5562
0.0500	30.653	10.780	8.511	8.279	7.705	6.214	4.186	3.260	2.361	11.983	15.280	10.761	4.4453
0.0600	34.165	11.692	9.482	9.165	8.664	7.130	4.849	3.815	2.803	13.308	16.990	11.947	5.3344
0.0700	37.717	12.773	10.458	10.158	9.635	8.033	5.474	4.350	3.215	14.620	18.647	13.218	6.2234
0.0800	41.524	13.941	11.500	11.177	10.638	8.939	6.127	4.882	3.626	15.939	20.307	14.551	7.1125
0.0900	45.299	15.198	12.569	12.250	11.663	9.838	6.763	5.410	4.007	17.252	21.935	15.925	8.0015
0.1000	49.465	16.597	13.758	13.326	12.677	10.744	7.420	5.906	4.379	18.556	23.597	17.340	8.8906
0.1250	60.598	20.225	16.714	16.104	15.386	12.990	8.945	7.128	5.297	21.889	27.857	21.049	11.113
0.1600	77.365	25.794	21.166	20.398	19.350	16.119	11.055	8.802	6.531	26.667	33.880	26.720	14.225
0.2000	96.844	32.150	26.331	25.286	23.905	19.428	13.215	10.493	7.751	31.834	40.394	33.235	17.781
0.2500	119.872	39.677	32.180	30.985	28.929	22.869	15.460	12.120	8.913	37.466	47.485	40.872	22.227
0.3200	148.237	48.389	39.355	37.558	34.364	26.328	17.569	13.701	10.007	43.972	55.851	49.862	28.450
0.4000	172.875	57.071	45.324	43.080	39.008	29.117	19.255	14.988	10.916	49.674	63.249	57.514	35.562
0.5000	195.568	64.985	50.486	48.034	42.976	31.604	20.844	16.277	11.863	54.961	70.165	64.433	44.453
0.6000	208.937	70.084	53.040	50.408	45.045	32.936	21.848	17.044	12.470	57.976	74.395	68.012	53.344
0.7000	213.052	73.215	53.853	51.181	45.803	33.450	22.381	17.419	12.873	59.509	76.477	69.155	62.234
0.8000	212.115	74.439	53.806	51.312	45.856	33.534	22.693	17.706	13.153	60.129	77.185	69.163	71.125
0.9000	208.789	74.419	53.316	50.818	45.188	33.332	22.743	17.971	13.348	60.213	77.215	68.379	80.015
1.0000	205.890	74.449	53.134	50.422	44.922	33.271	22.919	18.259	13.560	60.086	76.970	67.688	88.906
1.2500	197.412	73.920	52.630	50.247	44.646	33.485	23.515	18.986	14.339	59.462	75.509	66.612	111.13
1.6000	183.723	71.945	51.947	49.670	44.468	33.940	24.347	19.795	15.324	57.922	72.473	64.547	142.25
2.0000	168.674	69.140	51.254	48.810	44.165	34.305	25.057	20.575	16.175	56.225	69.262	62.132	177.81
2.5000	151.755	65.239	49.822	47.414	43.760	34.607	25.694	21.398	17.022	54.038	65.399	59.016	222.26
3.2000	135.689	60.285	47.801	45.630	42.374	34.310	26.091	21.710	17.407	51.290	61.138	55.632	284.50
4.0000	122.077	55.194	45.132	43.282	40.692	33.294	25.525	21.493	17.387	48.313	56.932	52.049	355.62
5.0000	110.823	50.358	42.134	40.565	38.230	31.679	24.639	20.805	17.076	45.096	52.798	48.372	444.53
6.0000	102.368	46.543	3[illegible].565	38.051	36.043	30.085	23.502	19.980	16.458	42.264	49.341	45.193	533.44
7.0000	95.795	43.498	37.382	36.040	34.074	28.645	22.529	19.221	15.883	39.909	46.462	42.687	622.34
8.0000	90.261	40.825	35.481	34.234	32.334	27.286	21.467	18.409	15.291	37.827	43.943	40.469	711.25
9.0000	85.336	38.784	33.766	32.603	30.846	26.083	20.554	17.663	14.742	35.949	41.704	38.472	800.15
10.0000	81.197	37.068	32.343	31.230	29.546	24.984	19.742	16.973	14.203	34.325	39.757	36.769	889.06
11.0000	77.473	35.528	31.067	29.998	28.381	23.998	19.016	16.355	13.695	32.893	38.058	35.267	977.97
12.0000	74.101	34.137	29.917	28.887	27.329	23.109	18.362	15.800	13.238	31.600	36.498	33.911	1066.9

$^{89}_{39}Y$ IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=89
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.108	0.110	0.139	0.187	0.201	0.244	0.263	0.291	0.409	0.471	0.506	0.601	1.1113
0.0160	0.136	0.139	0.177	0.239	0.258	0.312	0.335	0.369	0.521	0.602	0.647	0.770	1.4225
0.0200	0.166	0.172	0.220	0.297	0.323	0.387	0.414	0.456	0.646	0.745	0.802	0.953	1.7781
0.0250	0.201	0.211	0.270	0.367	0.402	0.479	0.511	0.561	0.797	0.919	0.989	1.172	2.2226
0.0320	0.247	0.262	0.338	0.462	0.509	0.602	0.642	0.702	1.002	1.154	1.241	1.467	2.8450
0.0400	0.295	0.317	0.410	0.565	0.627	0.737	0.785	0.856	1.227	1.412	1.517	1.787	3.5562
0.0500	0.350	0.380	0.494	0.685	0.766	0.894	0.952	1.036	1.494	1.715	1.843	2.165	4.4453
0.0600	0.401	0.439	0.572	0.797	0.897	1.041	1.109	1.205	1.745	2.001	2.149	2.520	5.3344
0.0700	0.448	0.493	0.646	0.903	1.020	1.179	1.256	1.363	1.981	2.269	2.436	2.852	6.2234
0.0800	0.493	0.543	0.715	1.002	1.136	1.309	1.395	1.512	2.203	2.520	2.706	3.164	7.1125
0.0900	0.535	0.591	0.780	1.095	1.246	1.432	1.527	1.654	2.413	2.758	2.961	3.458	8.0015
0.1000	0.575	0.635	0.843	1.184	1.350	1.548	1.652	1.787	2.611	2.982	3.202	3.736	8.8906
0.1250	0.668	0.737	0.987	1.388	1.590	1.816	1.940	2.095	3.064	3.496	3.751	4.370	11.113
0.1600	0.785	0.859	1.168	1.640	1.887	2.146	2.297	2.475	3.617	4.124	4.470	5.138	14.225
0.2000	0.905	0.980	1.353	1.894	2.184	2.476	2.655	2.856	4.166	4.746	5.081	5.894	17.781
0.2500	1.041	1.111	1.560	2.175	2.512	2.839	3.050	3.277	4.764	5.421	5.799	6.715	22.227
0.3200	1.214	1.273	1.818	2.521	2.916	3.284	3.535	3.796	5.489	6.238	6.669	7.707	28.450
0.4000	1.395	1.437	2.084	2.871	3.323	3.731	4.024	4.318	6.211	7.048	7.531	8.687	35.562
0.5000	1.606	1.626	2.386	3.263	3.775	4.225	4.566	4.899	6.999	7.933	8.472	9.756	44.453
0.6000	1.803	1.801	2.663	3.618	4.183	4.670	5.054	5.423	7.703	8.721	9.309	10.702	53.344
0.7000	1.992	1.969	2.925	3.953	4.566	5.086	5.513	5.915	8.358	9.445	10.075	11.565	62.234
0.8000	2.176	2.133	3.176	4.269	4.927	5.476	5.944	6.378	8.970	10.127	10.798	12.380	71.125
0.9000	2.355	2.295	3.418	4.572	5.272	5.848	6.356	6.820	9.548	10.771	11.480	13.146	80.015
1.0000	2.531	2.455	3.654	4.864	5.603	6.205	6.751	7.245	10.100	11.385	12.129	13.874	88.906
1.2500	2.965	2.856	4.223	5.563	6.392	7.053	7.691	8.256	11.399	12.827	13.654	15.579	111.13
1.6000	3.568	3.425	4.996	6.497	7.439	8.176	8.936	9.601	13.094	14.703	15.639	17.794	142.25
2.0000	4.265	4.091	5.869	7.534	8.597	9.412	10.313	11.089	14.941	16.735	17.788	20.185	177.81
2.5000	5.161	4.948	6.967	8.822	10.025	10.933	12.011	12.921	17.187	19.200	20.390	23.063	222.26
3.2000	6.473	6.195	8.543	10.645	12.034	13.070	14.397	15.496	20.295	22.608	23.981	27.019	284.50
4.0000	8.065	7.696	10.421	12.792	14.386	15.569	17.177	18.505	23.876	26.520	28.094	31.544	355.62
5.0000	10.197	9.691	12.897	15.598	17.441	18.811	20.774	22.399	28.449	31.523	33.330	37.290	444.53
6.0000	12.483	11.820	15.523	18.552	20.646	22.199	24.531	26.461	33.189	36.687	38.722	43.177	533.44
7.0000	14.919	14.081	18.299	21.657	24.008	25.741	28.451	30.698	38.110	42.029	44.295	49.237	622.34
8.0000	17.504	16.472	21.221	24.911	27.526	29.442	32.532	35.112	43.200	47.558	50.052	55.487	711.25
9.0000	20.229	18.989	24.286	28.311	31.197	33.300	36.774	39.701	48.472	53.271	55.999	61.927	800.15
10.0000	23.090	21.633	27.491	31.853	35.020	37.312	41.183	44.456	53.927	59.168	62.127	68.556	889.06
11.0000	26.084	24.398	30.833	35.530	38.988	41.473	45.754	49.370	59.562	65.238	68.419	75.374	977.97
12.0000	29.207	27.281	34.307	39.344	43.097	45.778	50.481	54.438	65.366	71.475	74.883	82.386	1066.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.040	0.097	0.122	0.126	0.134	0.188	0.281	0.386	0.545	0.104	0.086	0.098	1.1113
0.0160	0.051	0.123	0.156	0.162	0.173	0.243	0.361	0.495	0.704	0.133	0.109	0.126	1.4225
0.0200	0.062	0.153	0.196	0.203	0.218	0.305	0.451	0.616	0.875	0.166	0.135	0.157	1.7781
0.0250	0.076	0.190	0.244	0.254	0.273	0.380	0.560	0.760	1.074	0.205	0.166	0.197	2.2226
0.0320	0.095	0.242	0.311	0.323	0.347	0.480	0.705	0.950	1.330	0.257	0.208	0.251	2.8450
0.0400	0.116	0.301	0.385	0.400	0.429	0.586	0.858	1.148	1.599	0.313	0.253	0.310	3.5562
0.0500	0.141	0.372	0.473	0.490	0.526	0.709	1.033	1.371	1.898	0.379	0.305	0.380	4.4453
0.0600	0.164	0.440	0.556	0.575	0.616	0.819	1.192	1.570	2.164	0.440	0.353	0.446	5.3344
0.0700	0.185	0.504	0.633	0.655	0.699	0.921	1.336	1.751	2.403	0.496	0.397	0.507	6.2234
0.0800	0.205	0.564	0.704	0.728	0.776	1.013	1.469	1.917	2.621	0.549	0.439	0.564	7.1125
0.0900	0.224	0.620	0.771	0.797	0.848	1.099	1.591	2.069	2.822	0.598	0.478	0.617	8.0015
0.1000	0.241	0.671	0.833	0.860	0.914	1.178	1.704	2.209	3.009	0.645	0.514	0.666	8.8906
0.1250	0.279	0.786	0.970	1.002	1.062	1.353	1.954	2.523	3.425	0.749	0.596	0.775	11.113
0.1600	0.322	0.916	1.127	1.165	1.234	1.558	2.249	2.891	3.916	0.872	0.694	0.900	14.225
0.2000	0.362	1.036	1.273	1.316	1.393	1.752	2.531	3.245	4.390	0.990	0.787	1.015	17.781
0.2500	0.402	1.158	1.422	1.471	1.558	1.958	2.833	3.626	4.903	1.116	0.886	1.133	22.227
0.3200	0.448	1.298	1.594	1.651	1.752	2.207	3.201	4.096	5.542	1.267	1.005	1.269	28.450
0.4000	0.492	1.432	1.761	1.825	1.943	2.460	3.581	4.583	6.206	1.418	1.124	1.400	35.562
0.5000	0.540	1.578	1.946	2.020	2.160	2.752	4.019	5.144	6.973	1.587	1.257	1.546	44.453
0.6000	0.584	1.710	2.118	2.201	2.362	3.027	4.435	5.671	7.693	1.745	1.380	1.680	53.344
0.7000	0.626	1.834	2.284	2.375	2.557	3.295	4.836	6.186	8.394	1.896	1.497	1.809	62.234
0.8000	0.668	1.954	2.449	2.549	2.751	3.560	5.230	6.692	9.076	2.044	1.613	1.938	71.125
0.9000	0.710	2.073	2.615	2.723	2.946	3.826	5.621	7.190	9.747	2.192	1.728	2.067	80.015
1.0000	0.753	2.193	2.782	2.898	3.143	4.093	6.010	7.680	10.407	2.340	1.843	2.198	88.906
1.2500	0.863	2.492	3.201	3.339	3.639	4.757	6.966	8.872	11.998	2.711	2.134	2.528	111.13
1.6000	1.026	2.917	3.795	3.960	4.335	5.678	8.263	10.473	14.092	3.240	2.554	3.001	142.25
2.0000	1.228	3.421	4.483	4.681	5.137	6.719	9.701	12.233	16.348	3.862	3.055	3.562	177.81
2.5000	1.505	4.082	5.362	5.604	6.147	8.007	11.451	14.348	19.023	4.667	3.715	4.295	222.26
3.2000	1.938	5.074	6.636	6.941	7.591	9.812	13.852	17.233	22.635	5.849	4.698	5.380	284.50
4.0000	2.491	6.307	8.167	8.542	9.303	11.916	16.607	20.524	26.721	7.277	5.904	6.702	355.62
5.0000	3.256	7.994	10.206	10.664	11.558	14.654	20.153	24.729	31.881	9.183	7.526	8.474	444.53
6.0000	4.091	9.831	12.385	12.928	13.954	17.535	23.849	29.091	37.186	11.220	9.268	10.377	533.44
7.0000	4.989	11.808	14.698	15.330	16.492	20.565	27.714	33.629	42.686	13.386	11.126	12.402	622.34
8.0000	5.946	13.918	17.140	17.862	19.172	23.746	31.758	38.358	48.393	15.675	13.095	14.542	711.25
9.0000	6.959	16.154	19.710	20.524	21.988	27.080	35.992	43.290	54.317	18.087	15.172	16.796	800.15
10.0000	8.027	18.499	22.401	23.311	24.934	30.564	40.407	48.426	60.463	20.619	17.356	19.161	889.06
11.0000	9.149	20.950	25.206	26.217	28.005	34.196	44.997	53.764	66.839	23.265	19.643	21.630	977.97
12.0000	10.322	23.503	28.123	29.238	31.198	37.972	49.756	59.296	73.444	26.024	22.029	24.202	1066.9

$^{90}_{40}Zr$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=90 MEV
0.0125	7.240	5.989	4.388	2.918	2.369	2.150	1.992	1.843	1.172	1.003	0.921	0.790	1.1238
0.0160	8.286	6.855	5.022	3.340	2.712	2.461	2.280	2.109	1.341	1.148	1.055	0.904	1.4385
0.0200	9.362	7.745	5.674	3.773	3.064	2.780	2.576	2.383	1.515	1.297	1.192	1.021	1.7981
0.0250	10.578	8.751	6.411	4.263	3.462	3.141	2.910	2.692	1.712	1.465	1.349	1.154	2.2476
0.0320	12.092	10.023	7.337	4.879	3.970	3.610	3.331	3.082	1.959	1.680	1.548	1.328	2.8770
0.0400	13.629	11.349	8.290	5.529	4.510	4.112	3.789	3.507	2.230	1.919	1.766	1.517	3.5962
0.0500	15.342	12.860	9.366	6.275	5.142	4.683	4.318	3.999	2.538	2.206	2.032	1.747	4.4952
0.0600	16.889	14.291	10.348	6.975	5.733	5.205	4.812	4.460	2.856	2.484	2.292	1.971	5.3943
0.0700	18.296	15.650	11.259	7.633	6.305	5.719	5.292	4.909	3.152	2.758	2.556	2.195	6.2933
0.0800	19.597	16.981	12.112	8.272	6.843	6.201	5.729	5.329	3.452	3.028	2.798	2.410	7.1924
0.0900	20.811	18.266	12.918	8.888	7.363	6.691	6.162	5.736	3.759	3.288	3.049	2.629	8.0914
0.1000	21.963	19.527	13.684	9.483	7.882	7.143	6.568	6.144	4.051	3.544	3.284	2.833	8.9905
0.1250	24.583	22.681	15.461	10.884	9.091	8.241	7.576	7.096	4.754	4.159	3.888	3.363	11.238
0.1600	27.765	26.986	17.696	12.670	10.653	9.662	8.866	8.317	5.663	4.973	4.663	4.070	14.385
0.2000	30.949	31.409	19.993	14.535	12.296	11.136	10.217	9.577	6.638	5.858	5.498	4.798	17.981
0.2500	34.198	35.972	22.454	16.594	14.101	12.799	11.721	10.980	7.747	6.849	6.422	5.614	22.476
0.3200	37.872	41.147	25.384	19.114	16.322	14.900	13.580	12.692	9.087	8.072	7.577	6.663	28.770
0.4000	41.257	45.800	28.220	21.503	18.512	16.932	15.436	14.420	10.498	9.341	8.776	7.704	35.962
0.5000	44.694	50.226	31.254	24.160	20.940	19.221	17.502	16.315	12.064	10.752	10.111	8.907	44.952
0.6000	47.099	53.045	33.594	26.304	22.911	21.097	19.148	17.838	13.337	11.926	11.237	9.977	53.943
0.7000	48.900	54.893	35.460	28.014	24.503	22.588	20.461	19.078	14.397	12.872	12.163	10.780	62.933
0.8000	50.184	55.949	36.954	29.453	25.831	23.910	21.618	20.140	15.299	13.747	12.971	11.530	71.924
0.9000	51.197	56.577	38.150	30.596	26.972	25.026	22.585	21.021	16.137	14.497	13.696	12.208	80.914
1.0000	51.891	56.818	39.104	31.635	27.920	25.926	23.423	21.781	16.815	15.133	14.312	12.787	89.905
1.2500	52.787	56.531	40.699	33.373	29.710	27.675	24.949	23.158	18.193	16.402	15.506	13.878	112.38
1.6000	52.781	55.324	41.691	34.812	31.102	29.059	26.182	24.181	19.386	17.552	16.593	14.884	143.85
2.0000	51.832	54.091	41.834	35.433	31.835	29.869	26.773	24.807	20.080	18.323	17.319	15.604	179.81
2.5000	50.062	52.456	41.272	35.452	32.068	30.128	26.950	25.011	20.553	18.696	17.747	16.096	224.76
3.2000	47.457	50.132	39.914	34.725	31.612	29.736	26.662	24.667	20.595	18.839	17.881	16.245	287.70
4.0000	44.625	47.523	38.141	33.526	30.703	28.911	26.050	24.029	20.329	18.613	17.735	16.134	359.62
5.0000	41.525	44.512	35.984	31.881	29.363	27.707	24.973	23.101	19.791	18.064	17.308	15.797	449.52
6.0000	38.926	41.852	34.026	30.351	28.003	26.540	23.954	22.151	18.986	17.523	16.775	15.414	539.43
7.0000	36.612	39.550	32.286	28.928	26.733	25.409	22.988	21.277	18.403	16.918	16.240	14.948	629.33
8.0000	34.649	37.509	30.745	27.670	25.610	24.350	22.136	20.445	17.770	16.387	15.741	14.512	719.24
9.0000	32.988	35.691	29.375	26.526	24.587	23.412	21.297	19.711	17.185	15.863	15.246	14.100	809.14
10.0000	31.474	34.064	28.152	25.534	23.648	22.550	20.523	19.059	16.610	15.399	14.836	13.710	899.05
11.0000	30.138	32.655	27.054	24.619	22.834	21.779	19.831	18.478	16.124	14.988	14.474	13.338	988.95
12.0000	28.955	31.353	26.062	23.769	22.075	21.085	19.208	17.931	15.664	14.595	14.074	12.979	1078.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	16.454	7.020	4.651	4.370	3.883	2.562	1.571	1.114	0.735	5.884	7.486	5.713	1.1238
0.0160	18.481	7.794	5.238	4.927	4.379	2.958	1.833	1.306	0.867	6.694	8.517	6.433	1.4385
0.0200	20.313	8.341	5.771	5.436	4.863	3.376	2.105	1.532	1.025	7.501	9.538	7.087	1.7981
0.0250	22.309	8.853	6.359	5.994	5.423	3.891	2.487	1.814	1.314	8.398	10.687	7.808	2.2476
0.0320	25.021	9.495	7.037	6.699	6.119	4.586	2.979	2.245	1.563	9.539	12.165	8.732	2.8770
0.0400	27.771	10.097	7.735	7.444	6.856	5.355	3.548	2.719	1.932	10.736	13.695	9.699	3.5962
0.0500	31.002	10.902	8.608	8.373	7.793	6.285	4.234	3.297	2.388	12.120	15.454	10.883	4.4952
0.0600	34.564	11.828	9.593	9.272	8.765	7.213	4.905	3.860	2.835	13.463	17.189	12.087	5.3943
0.0700	38.167	12.925	10.583	10.279	9.750	8.129	5.539	4.402	3.254	14.794	18.870	13.375	6.2933
0.0800	42.028	14.110	11.640	11.313	10.768	9.048	6.201	4.942	3.670	16.133	20.554	14.728	7.1924
0.0900	45.859	15.385	12.724	12.401	11.807	9.960	6.847	5.477	4.056	17.465	22.206	16.122	8.0914
0.1000	50.084	16.804	13.931	13.493	12.836	10.879	7.513	5.980	4.434	18.789	23.893	17.557	8.9905
0.1250	61.379	20.485	16.930	16.311	15.584	13.157	9.060	7.220	5.365	22.171	28.216	21.320	11.238
0.1600	78.393	26.137	21.447	20.669	19.607	16.333	11.202	8.919	6.618	27.022	34.330	27.075	14.385
0.2000	98.166	32.589	26.691	25.631	24.232	19.693	13.395	10.636	7.857	32.269	40.946	33.688	17.981
0.2500	121.702	40.283	32.671	31.458	29.370	23.218	15.696	12.305	9.049	38.037	48.209	41.495	22.476
0.3200	150.778	49.219	40.030	38.202	34.953	26.780	17.870	13.936	10.179	44.726	56.808	50.716	28.770
0.4000	176.090	58.132	46.167	43.881	39.733	29.659	19.613	15.267	11.118	50.598	64.425	58.584	35.962
0.5000	199.403	66.259	51.476	48.976	43.819	32.223	21.253	16.596	12.095	56.039	71.541	65.697	44.952
0.6000	213.321	71.555	54.153	51.466	45.990	33.627	22.306	17.402	12.732	59.192	75.956	69.438	53.943
0.7000	217.727	74.822	55.035	52.304	46.808	34.184	22.872	17.801	13.156	60.815	78.155	70.673	62.933
0.8000	216.923	76.126	55.025	52.475	46.895	34.294	23.207	18.108	13.451	61.492	78.935	70.731	71.924
0.9000	213.640	76.148	54.555	51.999	46.238	34.106	23.272	18.388	13.658	61.612	79.009	69.967	80.914
1.0000	210.770	76.214	54.394	51.617	45.986	34.060	23.462	18.692	13.882	61.511	78.795	69.292	89.905
1.2500	202.275	75.741	53.927	51.485	45.746	34.309	24.094	19.454	14.692	60.927	77.369	68.253	112.38
1.6000	188.444	73.794	53.281	50.947	45.610	34.812	24.973	20.304	15.718	59.410	74.335	66.206	143.85
2.0000	173.191	70.992	52.627	50.117	45.348	35.224	25.728	21.126	16.608	57.730	71.117	63.796	179.81
2.5000	156.007	67.066	51.218	48.742	44.986	35.576	26.414	21.998	17.499	55.552	67.231	60.669	224.76
3.2000	139.698	62.066	49.214	46.978	43.626	35.324	26.862	22.352	17.921	52.806	62.944	57.276	287.70
4.0000	125.865	56.906	46.532	44.625	41.955	34.327	26.317	22.160	17.926	49.812	58.699	53.664	359.62
5.0000	114.428	51.996	43.504	41.885	39.474	32.709	25.440	21.482	17.632	46.563	54.515	49.945	449.52
6.0000	105.821	48.113	40.899	39.334	37.258	31.100	24.294	20.654	17.013	43.689	51.005	46.718	539.43
7.0000	99.118	45.007	38.679	37.290	35.256	29.639	23.311	19.888	16.434	41.294	48.074	44.167	629.33
8.0000	93.464	42.274	36.740	35.449	33.481	28.254	22.228	19.062	15.834	39.169	45.502	41.905	719.24
9.0000	88.420	40.185	34.986	33.782	31.960	27.025	21.297	18.301	15.275	37.248	43.211	39.862	809.14
10.0000	84.176	38.428	33.530	32.375	30.630	25.900	20.467	17.595	14.724	35.585	41.215	38.118	899.05
11.0000	80.351	36.848	32.222	31.112	29.435	24.890	19.723	16.963	14.203	34.115	39.472	36.577	988.95
12.0000	76.884	35.419	31.040	29.972	28.356	23.977	19.052	16.393	13.735	32.787	37.869	35.184	1078.9

$^{90}_{40}Zr$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=90 MEV
0.0125	0.107	0.108	0.138	0.185	0.199	0.241	0.259	0.287	0.402	0.464	0.498	0.591	1.1238
0.0160	0.135	0.138	0.175	0.236	0.255	0.308	0.330	0.365	0.514	0.593	0.637	0.758	1.4385
0.0200	0.164	0.170	0.217	0.293	0.319	0.382	0.409	0.450	0.637	0.735	0.790	0.939	1.7981
0.0250	0.199	0.209	0.268	0.363	0.397	0.473	0.505	0.554	0.786	0.907	0.975	1.156	2.2476
0.0320	0.245	0.260	0.334	0.457	0.503	0.596	0.635	0.694	0.989	1.140	1.225	1.448	2.8770
0.0400	0.293	0.315	0.406	0.559	0.620	0.729	0.776	0.847	1.212	1.394	1.498	1.765	3.5962
0.0500	0.348	0.377	0.490	0.679	0.758	0.885	0.942	1.026	1.477	1.695	1.821	2.139	4.4952
0.0600	0.399	0.436	0.568	0.790	0.888	1.031	1.098	1.193	1.726	1.978	2.125	2.491	5.3943
0.0700	0.446	0.489	0.641	0.895	1.011	1.169	1.245	1.351	1.960	2.244	2.410	2.821	6.2933
0.0800	0.490	0.540	0.710	0.994	1.126	1.298	1.383	1.499	2.181	2.495	2.678	3.131	7.1924
0.0900	0.532	0.587	0.775	1.087	1.235	1.420	1.514	1.640	2.390	2.731	2.931	3.423	8.0914
0.1000	0.572	0.632	0.837	1.175	1.339	1.536	1.639	1.773	2.587	2.954	3.171	3.700	8.9905
0.1250	0.665	0.733	0.982	1.378	1.578	1.803	1.926	2.079	3.037	3.465	3.717	4.330	11.238
0.1600	0.782	0.855	1.162	1.630	1.873	2.131	2.281	2.457	3.588	4.090	4.383	5.095	14.385
0.2000	0.901	0.975	1.346	1.883	2.170	2.460	2.637	2.837	4.135	4.709	5.041	5.847	17.981
0.2500	1.037	1.106	1.552	2.162	2.496	2.822	3.031	3.256	4.730	5.381	5.756	6.664	22.476
0.3200	1.209	1.267	1.809	2.506	2.898	3.264	3.513	3.772	5.451	6.193	6.621	7.650	28.770
0.4000	1.389	1.430	2.073	2.854	3.302	3.708	3.998	4.291	6.167	6.998	7.476	8.623	35.962
0.5000	1.596	1.617	2.372	3.243	3.750	4.198	4.535	4.866	6.949	7.875	8.409	9.683	44.952
0.6000	1.792	1.791	2.646	3.595	4.155	4.639	5.020	5.386	7.646	8.656	9.238	10.620	53.943
0.7000	1.979	1.958	2.907	3.926	4.534	5.050	5.473	5.872	8.295	9.372	9.996	11.475	62.933
0.8000	2.160	2.120	3.155	4.239	4.891	5.437	5.901	6.331	8.900	10.047	10.712	12.280	71.924
0.9000	2.338	2.279	3.394	4.538	5.231	5.804	6.307	6.767	9.472	10.684	11.386	13.038	80.914
1.0000	2.512	2.438	3.627	4.827	5.559	6.157	6.698	7.187	10.017	11.290	12.027	13.757	89.905
1.2500	2.941	2.833	4.189	5.517	6.337	6.994	7.626	8.186	11.300	12.714	13.533	15.441	112.38
1.6000	3.535	3.395	4.951	6.438	7.370	8.101	8.854	9.513	12.972	14.564	15.490	17.625	143.85
2.0000	4.222	4.051	5.811	7.461	8.511	9.320	10.210	10.979	14.792	16.567	17.609	19.981	179.81
2.5000	5.103	4.894	6.892	8.727	9.917	10.817	11.882	12.781	17.002	18.992	20.170	22.814	224.76
3.2000	6.393	6.120	8.441	10.520	11.892	12.918	14.228	15.313	20.057	22.342	23.699	26.702	287.70
4.0000	7.956	7.594	10.284	12.627	14.200	15.370	16.956	18.266	23.571	26.182	27.736	31.143	359.62
5.0000	10.045	9.549	12.711	15.378	17.194	18.547	20.481	22.083	28.054	31.085	32.868	36.775	449.52
6.0000	12.282	11.633	15.282	18.269	20.331	21.864	24.158	26.059	32.693	36.140	38.145	42.538	539.43
7.0000	14.665	13.844	17.995	21.304	23.618	25.327	27.991	30.201	37.504	41.363	43.594	48.462	629.33
8.0000	17.190	16.179	20.850	24.483	27.055	28.943	31.978	34.513	42.477	46.764	49.219	54.568	719.24
9.0000	19.851	18.637	23.843	27.803	30.639	32.709	36.120	38.993	47.624	52.342	55.024	60.855	809.14
10.0000	22.642	21.216	26.970	31.258	34.369	36.623	40.422	43.633	52.947	58.096	61.003	67.323	899.05
11.0000	25.561	23.913	30.229	34.845	38.239	40.681	44.879	48.425	58.442	64.015	67.140	73.973	988.95
12.0000	28.606	26.723	33.615	38.562	42.244	44.878	49.487	53.365	64.100	70.095	73.440	80.808	1078.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.040	0.096	0.120	0.124	0.133	0.186	0.277	0.380	0.536	0.103	0.085	0.096	1.1238
0.0160	0.050	0.122	0.155	0.160	0.171	0.240	0.356	0.488	0.693	0.132	0.108	0.124	1.4385
0.0200	0.062	0.152	0.194	0.201	0.215	0.301	0.444	0.607	0.862	0.164	0.134	0.156	1.7981
0.0250	0.076	0.189	0.242	0.251	0.269	0.375	0.552	0.750	1.059	0.203	0.165	0.195	2.2476
0.0320	0.095	0.240	0.308	0.320	0.344	0.474	0.696	0.937	1.312	0.255	0.206	0.248	2.8770
0.0400	0.115	0.298	0.381	0.396	0.425	0.580	0.848	1.134	1.578	0.311	0.251	0.307	3.5962
0.0500	0.140	0.369	0.469	0.486	0.521	0.702	1.022	1.355	1.875	0.376	0.302	0.377	4.4952
0.0600	0.163	0.437	0.551	0.570	0.610	0.812	1.179	1.553	2.139	0.437	0.350	0.442	5.3943
0.0700	0.184	0.501	0.628	0.649	0.693	0.912	1.323	1.733	2.377	0.493	0.395	0.503	6.2933
0.0800	0.204	0.560	0.699	0.723	0.770	1.005	1.455	1.898	2.594	0.545	0.436	0.560	7.1924
0.0900	0.222	0.616	0.766	0.791	0.841	1.090	1.576	2.049	2.794	0.595	0.475	0.613	8.0914
0.1000	0.240	0.668	0.827	0.854	0.908	1.169	1.689	2.189	2.979	0.641	0.511	0.661	8.9905
0.1250	0.277	0.781	0.964	0.995	1.055	1.344	1.938	2.501	3.393	0.744	0.593	0.770	11.238
0.1600	0.320	0.912	1.121	1.158	1.226	1.548	2.232	2.868	3.882	0.867	0.690	0.894	14.385
0.2000	0.360	1.031	1.266	1.309	1.385	1.741	2.513	3.221	4.354	0.985	0.783	1.010	17.981
0.2500	0.400	1.153	1.415	1.463	1.549	1.946	2.813	3.600	4.866	1.111	0.882	1.127	22.476
0.3200	0.446	1.292	1.586	1.641	1.742	2.193	3.180	4.068	5.501	1.261	1.001	1.262	28.770
0.4000	0.489	1.425	1.751	1.815	1.932	2.445	3.557	4.551	6.160	1.410	1.118	1.392	35.962
0.5000	0.537	1.570	1.935	2.008	2.147	2.735	3.991	5.107	6.921	1.579	1.250	1.537	44.952
0.6000	0.581	1.700	2.105	2.187	2.347	3.008	4.403	5.629	7.634	1.735	1.372	1.670	53.943
0.7000	0.623	1.823	2.270	2.360	2.541	3.273	4.801	6.140	8.328	1.884	1.489	1.798	62.933
0.8000	0.664	1.942	2.433	2.532	2.732	3.535	5.191	6.640	9.003	2.031	1.603	1.925	71.924
0.9000	0.706	2.060	2.597	2.704	2.925	3.798	5.577	7.132	9.666	2.177	1.717	2.053	80.914
1.0000	0.748	2.178	2.762	2.877	3.120	4.061	5.962	7.617	10.318	2.323	1.831	2.182	89.905
1.2500	0.857	2.473	3.176	3.312	3.609	4.717	6.905	8.793	11.889	2.689	2.118	2.508	112.38
1.6000	1.017	2.893	3.761	3.925	4.296	5.626	8.185	10.373	13.955	3.211	2.532	2.975	143.85
2.0000	1.216	3.389	4.439	4.636	5.086	6.651	9.602	12.107	16.177	3.824	3.025	3.527	179.81
2.5000	1.489	4.040	5.304	5.544	6.080	7.919	11.324	14.189	18.810	4.617	3.675	4.249	224.76
3.2000	1.915	5.015	6.557	6.858	7.499	9.693	13.684	17.024	22.360	5.778	4.641	5.316	287.70
4.0000	2.457	6.225	8.060	8.429	9.180	11.758	16.389	20.255	26.371	7.180	5.825	6.613	359.62
5.0000	3.207	7.878	10.058	10.509	11.390	14.442	19.863	24.376	31.428	9.048	7.414	8.350	449.52
6.0000	4.024	9.676	12.191	12.725	13.735	17.262	23.481	28.645	36.620	11.042	9.120	10.212	539.43
7.0000	4.902	11.609	14.452	15.073	16.217	20.224	27.260	33.083	41.999	13.159	10.937	12.192	629.33
8.0000	5.837	13.671	16.838	17.547	18.835	23.332	31.211	37.702	47.574	15.396	12.860	14.283	719.24
9.0000	6.826	15.853	19.346	20.146	21.584	26.587	35.345	42.517	53.357	17.750	14.888	16.483	809.14
10.0000	7.869	18.142	21.972	22.866	24.458	29.986	39.652	47.529	59.354	20.221	17.019	18.790	899.05
11.0000	8.962	20.532	24.708	25.699	27.453	33.528	44.129	52.734	65.572	22.802	19.249	21.199	988.95
12.0000	10.106	23.021	27.552	28.644	30.566	37.209	48.768	58.127	72.011	25.491	21.575	23.706	1078.9

$^{93}_{41}$Nb IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=93 MEV
0.0125	7.303	6.042	4.426	2.943	2.390	2.169	2.009	1.859	1.182	1.011	0.930	0.797	1.1613
0.0160	8.362	6.918	5.068	3.370	2.737	2.483	2.301	2.129	1.353	1.158	1.064	0.912	1.4865
0.0200	9.451	7.819	5.728	3.809	3.093	2.807	2.601	2.406	1.529	1.309	1.203	1.031	1.8581
0.0250	10.682	8.837	6.474	4.305	3.496	3.172	2.939	2.719	1.729	1.479	1.363	1.165	2.3226
0.0320	12.216	10.126	7.413	4.930	4.010	3.647	3.365	3.113	1.979	1.698	1.564	1.342	2.9730
0.0400	13.774	11.470	8.378	5.588	4.558	4.156	3.829	3.544	2.254	1.940	1.785	1.533	3.7162
0.0500	15.510	13.001	9.469	6.344	5.199	4.735	4.365	4.043	2.566	2.230	2.055	1.766	4.6453
0.0600	17.079	14.452	10.465	7.054	5.798	5.264	4.866	4.510	2.888	2.512	2.318	1.994	5.5744
0.0700	18.507	15.830	11.389	7.721	6.378	5.785	5.353	4.965	3.189	2.790	2.585	2.221	6.5034
0.0800	19.827	17.180	12.254	8.370	6.924	6.274	5.796	5.392	3.492	3.064	2.831	2.439	7.4325
0.0900	21.059	18.484	13.072	8.994	7.451	6.771	6.235	5.804	3.804	3.327	3.085	2.660	8.3615
0.1000	22.229	19.764	13.850	9.598	7.978	7.230	6.648	6.219	4.100	3.587	3.324	2.867	9.2906
0.1250	24.889	22.964	15.653	11.020	9.204	8.343	7.670	7.185	4.813	4.211	3.937	3.405	11.613
0.1600	28.122	27.333	17.923	12.833	10.790	9.786	8.980	8.424	5.736	5.036	4.723	4.122	14.865
0.2000	31.359	31.824	20.257	14.727	12.458	11.283	10.352	9.703	6.725	5.935	5.571	4.862	18.581
0.2500	34.703	36.503	22.786	16.839	14.310	12.988	11.894	11.142	7.861	6.950	6.517	5.696	23.227
0.3200	38.502	41.831	25.805	19.431	16.593	15.148	13.806	12.903	9.238	8.206	7.703	6.774	29.730
0.4000	42.002	46.627	28.729	21.892	18.846	17.237	15.715	14.681	10.687	9.509	8.935	7.843	37.162
0.5000	45.543	51.180	31.848	24.619	21.338	19.587	17.835	16.625	12.293	10.956	10.303	9.077	46.453
0.6000	48.058	54.125	34.278	26.840	23.378	21.527	19.538	18.202	13.608	12.169	11.466	10.181	55.744
0.7000	49.943	56.063	36.217	28.611	25.026	23.070	20.897	19.485	14.704	13.147	12.422	11.010	65.034
0.8000	51.290	57.182	37.769	30.102	26.401	24.437	22.095	20.584	15.636	14.050	13.257	11.784	74.325
0.9000	52.355	57.856	39.013	31.288	27.582	25.592	23.095	21.496	16.502	14.825	14.006	12.484	83.615
1.0000	53.088	58.129	40.006	32.365	28.564	26.524	23.964	22.283	17.203	15.482	14.642	13.082	92.906
1.2500	54.054	57.888	41.676	34.174	30.424	28.340	25.547	23.714	18.629	16.795	15.879	14.212	116.13
1.6000	54.103	56.710	42.736	35.684	31.881	29.787	26.838	24.787	19.872	17.992	17.009	15.257	148.65
2.0000	53.185	55.503	42.926	36.358	32.667	30.649	27.473	25.455	20.604	18.802	17.771	16.011	185.81
2.5000	51.430	53.889	42.399	36.421	32.944	30.951	27.686	25.694	21.115	19.207	18.231	16.536	232.26
3.2000	48.824	51.575	41.063	35.725	32.522	30.592	27.430	25.377	21.189	19.382	18.396	16.713	297.30
4.0000	45.974	48.960	39.294	34.539	31.632	29.785	26.838	24.755	20.944	19.175	18.272	16.621	371.62
5.0000	42.841	45.922	37.124	32.892	30.293	28.585	25.764	23.834	20.418	18.636	17.857	16.297	464.53
6.0000	40.205	43.227	35.144	31.349	28.924	27.412	24.741	22.879	19.610	18.099	17.326	15.920	557.44
7.0000	37.850	40.888	33.378	29.906	27.637	26.268	23.765	21.996	19.025	17.490	16.789	15.454	650.34
8.0000	35.848	38.806	31.808	28.627	26.496	25.192	22.902	21.152	18.385	16.954	16.286	15.013	743.25
9.0000	34.151	36.948	30.410	27.460	25.453	24.237	22.047	20.405	17.790	16.422	15.783	14.597	836.15
10.0000	32.600	35.283	29.160	26.448	24.494	23.357	21.257	19.741	17.204	15.950	15.367	14.201	929.06
11.0000	31.231	33.838	28.035	25.512	23.661	22.568	20.549	19.148	16.709	15.531	14.999	13.821	1022.0
12.0000	30.016	32.502	27.017	24.640	22.884	21.857	19.912	18.588	16.237	15.130	14.589	13.455	1114.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	16.598	7.082	4.692	4.409	3.917	2.585	1.585	1.124	0.742	5.936	7.551	5.763	1.1613
0.0160	18.651	7.866	5.286	4.972	4.419	2.985	1.850	1.318	0.875	6.756	8.595	6.492	1.4865
0.0200	20.506	8.420	5.825	5.487	4.909	3.408	2.125	1.547	1.034	7.572	9.629	7.154	1.8581
0.0250	22.529	8.941	6.422	6.053	5.477	3.930	2.512	1.832	1.327	8.481	10.792	7.885	2.3226
0.0320	25.278	9.592	7.109	6.768	6.182	4.633	3.010	2.268	1.579	9.637	12.290	8.821	2.9730
0.0400	28.067	10.205	7.817	7.524	6.929	5.412	3.586	2.748	1.952	10.850	13.841	9.802	3.7162
0.0500	31.343	11.022	8.702	8.465	7.878	6.354	4.280	3.333	2.415	12.253	15.624	11.003	4.6453
0.0600	34.954	11.962	9.701	9.377	8.864	7.294	4.960	3.904	2.867	13.615	17.383	12.223	5.5744
0.0700	38.607	13.074	10.705	10.398	9.863	8.223	5.603	4.453	3.291	14.965	19.087	13.530	6.5034
0.0800	42.522	14.276	11.776	11.445	10.894	9.154	6.274	5.000	3.713	16.323	20.795	14.901	7.4325
0.0900	46.406	15.569	12.876	12.549	11.948	10.079	6.928	5.543	4.105	17.673	22.471	16.314	8.3615
0.1000	50.691	17.008	14.099	13.656	12.991	11.011	7.604	6.052	4.487	19.016	24.182	17.769	9.2906
0.1250	62.144	20.741	17.141	16.514	15.779	13.321	9.173	7.310	5.432	22.447	28.568	21.586	11.613
0.1600	79.401	26.473	21.723	20.935	19.859	16.543	11.346	9.033	6.703	27.369	34.772	27.423	14.865
0.2000	99.464	33.020	27.044	25.970	24.552	19.954	13.572	10.777	7.961	32.696	41.487	34.134	18.581
0.2500	123.499	40.878	33.153	31.923	29.804	23.561	15.927	12.487	9.183	38.599	48.921	42.108	23.227
0.3200	153.284	50.037	40.695	38.837	36.534	27.225	18.167	14.167	10.348	45.469	57.752	51.559	29.730
0.4000	179.269	59.182	47.001	44.674	40.450	30.194	19.967	15.542	11.319	51.511	65.588	59.641	37.162
0.5000	203.192	67.518	52.454	49.906	44.651	32.835	21.657	16.911	12.325	57.104	72.901	66.945	46.453
0.6000	217.665	73.012	55.256	52.514	46.927	34.312	22.761	17.756	12.991	60.398	77.502	70.853	55.744
0.7000	222.371	76.417	56.208	53.420	47.806	34.913	23.360	18.181	13.436	62.112	79.822	72.180	65.034
0.8000	221.705	77.804	56.238	53.632	47.929	35.050	23.719	18.507	13.748	62.848	80.675	72.290	74.325
0.9000	218.470	77.869	55.788	53.174	47.283	34.877	23.798	18.804	13.967	63.005	80.795	71.549	83.615
1.0000	215.634	77.972	55.649	52.808	47.047	34.845	24.004	19.123	14.202	62.930	80.613	70.891	92.906
1.2500	207.130	77.559	55.221	52.720	46.844	35.133	24.672	19.921	15.045	62.389	79.226	69.891	116.13
1.6000	193.165	75.642	54.616	52.223	46.753	35.684	25.599	20.812	16.111	60.898	76.198	67.864	148.65
2.0000	177.713	72.845	54.001	51.425	46.532	36.144	26.399	21.678	17.042	59.238	72.974	65.462	185.81
2.5000	160.268	68.898	52.617	50.073	46.215	36.548	27.135	22.599	17.977	57.069	69.068	62.326	232.26
3.2000	143.721	63.853	50.631	48.331	44.882	36.341	27.636	22.995	18.437	54.327	64.757	58.926	297.30
4.0000	129.670	58.627	47.939	45.974	43.223	35.365	27.113	22.830	18.468	51.318	60.473	55.287	371.62
5.0000	118.054	53.644	44.883	43.212	40.725	33.746	26.247	22.163	18.191	48.038	56.243	51.528	464.53
6.0000	109.298	49.694	42.243	40.627	38.483	32.122	25.093	21.332	17.572	45.125	52.681	48.253	557.44
7.0000	102.469	46.528	39.986	38.551	36.448	30.641	24.099	20.561	16.989	42.690	49.699	45.661	650.34
8.0000	96.696	43.736	38.011	36.675	34.639	29.232	22.997	19.721	16.381	40.523	47.076	43.354	743.25
9.0000	91.535	41.601	36.219	34.972	33.086	27.977	22.047	18.946	15.813	38.560	44.733	41.267	836.15
10.0000	87.187	39.803	34.729	33.534	31.726	26.827	21.199	18.225	15.250	36.858	42.690	39.482	929.06
11.0000	83.263	38.183	33.389	32.240	30.502	25.792	20.437	17.578	14.718	35.352	40.903	37.903	1022.0
12.0000	79.701	36.716	32.177	31.070	29.395	24.856	19.750	16.994	14.238	33.988	39.256	36.473	1114.9

$^{93}_{41}$Nb IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=93 MEV
0.0125	0.109	0.110	0.139	0.186	0.200	0.242	0.260	0.288	0.402	0.462	0.496	0.588	1.1613
0.0160	0.136	0.139	0.177	0.237	0.256	0.309	0.331	0.366	0.513	0.592	0.636	0.756	1.4865
0.0200	0.167	0.172	0.219	0.295	0.320	0.384	0.411	0.452	0.637	0.735	0.790	0.938	1.8581
0.0250	0.202	0.212	0.270	0.366	0.399	0.476	0.508	0.557	0.788	0.908	0.976	1.156	2.3226
0.0320	0.249	0.264	0.338	0.461	0.507	0.600	0.639	0.699	0.993	1.142	1.227	1.450	2.9730
0.0400	0.297	0.319	0.411	0.565	0.625	0.735	0.782	0.853	1.218	1.399	1.503	1.770	3.7162
0.0500	0.353	0.383	0.496	0.686	0.765	0.893	0.951	1.034	1.485	1.704	1.829	2.148	4.6453
0.0600	0.405	0.442	0.576	0.800	0.897	1.042	1.109	1.204	1.738	1.991	2.137	2.504	5.5744
0.0700	0.453	0.497	0.650	0.906	1.021	1.182	1.258	1.364	1.976	2.260	2.426	2.838	6.5034
0.0800	0.499	0.548	0.720	1.007	1.139	1.313	1.398	1.515	2.200	2.514	2.698	3.153	7.4325
0.0900	0.541	0.596	0.787	1.101	1.250	1.438	1.532	1.658	2.412	2.754	2.955	3.450	8.3615
0.1000	0.582	0.642	0.850	1.191	1.355	1.556	1.658	1.793	2.612	2.981	3.198	3.730	9.2906
0.1250	0.677	0.745	0.997	1.398	1.598	1.827	1.950	2.105	3.070	3.500	3.754	4.371	11.613
0.1600	0.796	0.869	1.181	1.654	1.899	2.161	2.312	2.490	3.630	4.137	4.431	5.148	14.865
0.2000	0.918	0.992	1.368	1.912	2.201	2.496	2.675	2.877	4.187	4.766	5.101	5.914	18.581
0.2500	1.056	1.125	1.578	2.196	2.534	2.865	3.075	3.304	4.792	5.450	5.828	6.745	23.227
0.3200	1.231	1.289	1.839	2.546	2.942	3.314	3.566	3.828	5.525	6.275	6.707	7.746	29.730
0.4000	1.414	1.455	2.108	2.899	3.352	3.764	4.058	4.354	6.252	7.091	7.575	8.734	37.162
0.5000	1.624	1.644	2.411	3.293	3.806	4.262	4.603	4.938	7.045	7.981	8.521	9.809	46.453
0.6000	1.822	1.821	2.689	3.650	4.216	4.708	5.093	5.464	7.751	8.772	9.360	10.758	55.744
0.7000	2.012	1.989	2.952	3.985	4.600	5.125	5.553	5.957	8.400	9.496	10.127	11.623	65.034
0.8000	2.195	2.153	3.203	4.302	4.961	5.516	5.985	6.420	9.012	10.179	10.851	12.438	74.325
0.9000	2.374	2.314	3.445	4.604	5.305	5.887	6.396	6.862	9.590	10.823	11.532	13.203	83.615
1.0000	2.550	2.475	3.680	4.896	5.636	6.243	6.790	7.286	10.141	11.436	12.181	13.930	92.906
1.2500	2.983	2.874	4.248	5.593	6.422	7.089	7.727	8.294	11.436	12.873	13.701	15.630	116.13
1.6000	3.583	3.440	5.016	6.522	7.464	8.205	8.966	9.632	13.122	14.740	15.675	17.833	148.65
2.0000	4.275	4.102	5.883	7.552	8.614	9.434	10.333	11.110	14.956	16.757	17.809	20.207	185.81
2.5000	5.162	4.950	6.970	8.827	10.028	10.940	12.015	12.924	17.180	19.199	20.387	23.058	232.26
3.2000	6.459	6.183	8.528	10.629	12.013	13.052	14.373	15.468	20.252	22.566	23.934	26.967	297.30
4.0000	8.027	7.661	10.378	12.744	14.330	15.513	17.111	18.433	23.779	26.420	27.987	31.424	371.62
5.0000	10.121	9.621	12.811	15.501	17.332	18.697	20.645	22.258	28.271	31.334	33.130	37.069	464.53
6.0000	12.361	11.707	15.384	18.395	20.471	22.017	24.326	26.238	32.916	36.394	38.413	42.837	557.44
7.0000	14.743	13.918	18.097	21.430	23.759	25.481	28.159	30.381	37.727	41.618	43.862	48.762	650.34
8.0000	17.266	16.251	20.950	24.607	27.193	29.094	32.142	34.689	42.696	47.015	49.482	54.863	743.25
9.0000	19.923	18.706	23.938	27.921	30.772	32.855	36.278	39.163	47.835	52.584	55.279	61.141	836.15
10.0000	22.708	21.280	27.059	31.370	34.494	36.761	40.571	43.793	53.147	58.326	61.246	67.595	929.06
11.0000	25.620	23.969	30.309	34.947	38.354	40.808	45.017	48.573	58.628	64.230	67.367	74.229	1022.0
12.0000	28.656	26.771	33.686	38.654	42.347	44.992	49.611	53.498	64.269	70.292	73.649	81.043	1114.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.041	0.097	0.121	0.126	0.134	0.187	0.277	0.380	0.533	0.104	0.086	0.098	1.1613
0.0160	0.051	0.124	0.156	0.162	0.173	0.241	0.356	0.488	0.690	0.133	0.109	0.126	1.4865
0.0200	0.063	0.154	0.196	0.203	0.217	0.303	0.446	0.607	0.860	0.166	0.136	0.158	1.8581
0.0250	0.077	0.191	0.244	0.254	0.272	0.378	0.555	0.751	1.058	0.205	0.167	0.197	2.3226
0.0320	0.096	0.244	0.311	0.324	0.347	0.479	0.699	0.941	1.312	0.258	0.209	0.251	2.9730
0.0400	0.117	0.303	0.386	0.401	0.430	0.586	0.854	1.139	1.581	0.315	0.254	0.311	3.7162
0.0500	0.142	0.375	0.475	0.492	0.527	0.709	1.030	1.363	1.882	0.381	0.307	0.382	4.6453
0.0600	0.165	0.443	0.559	0.578	0.618	0.821	1.190	1.565	2.149	0.443	0.356	0.449	5.5744
0.0700	0.187	0.508	0.637	0.658	0.702	0.923	1.336	1.748	2.391	0.500	0.401	0.511	6.5034
0.0800	0.207	0.569	0.709	0.733	0.781	1.017	1.470	1.915	2.611	0.554	0.443	0.568	7.4325
0.0900	0.226	0.626	0.777	0.802	0.853	1.104	1.593	2.068	2.814	0.604	0.483	0.622	8.3615
0.1000	0.244	0.679	0.840	0.867	0.921	1.184	1.708	2.211	3.003	0.651	0.520	0.672	9.2906
0.1250	0.282	0.795	0.979	1.010	1.071	1.363	1.962	2.529	3.425	0.756	0.603	0.782	11.613
0.1600	0.326	0.927	1.139	1.176	1.245	1.570	2.261	2.903	3.922	0.882	0.702	0.909	14.865
0.2000	0.366	1.049	1.287	1.330	1.407	1.768	2.548	3.262	4.403	1.002	0.797	1.026	18.581
0.2500	0.407	1.173	1.438	1.487	1.574	1.976	2.853	3.648	4.923	1.130	0.898	1.146	23.227
0.3200	0.454	1.315	1.612	1.669	1.770	2.228	3.226	4.124	5.569	1.283	1.018	1.283	29.730
0.4000	0.498	1.450	1.780	1.845	1.963	2.483	3.609	4.614	6.238	1.434	1.137	1.415	37.162
0.5000	0.547	1.597	1.967	2.041	2.181	2.778	4.049	5.178	7.009	1.605	1.271	1.562	46.453
0.6000	0.591	1.729	2.139	2.222	2.384	3.054	4.467	5.707	7.731	1.763	1.395	1.697	55.744
0.7000	0.633	1.853	2.305	2.397	2.580	3.322	4.869	6.223	8.434	1.915	1.513	1.827	65.034
0.8000	0.675	1.973	2.470	2.571	2.774	3.587	5.264	6.729	9.117	2.063	1.628	1.955	74.325
0.9000	0.717	2.093	2.636	2.745	2.969	3.853	5.654	7.227	9.787	2.211	1.743	2.084	83.615
1.0000	0.760	2.212	2.803	2.920	3.166	4.119	6.043	7.717	10.446	2.358	1.859	2.215	92.906
1.2500	0.869	2.510	3.221	3.359	3.659	4.781	6.995	8.904	12.032	2.728	2.148	2.544	116.13
1.6000	1.031	2.933	3.812	3.977	4.352	5.698	8.286	10.497	14.116	3.254	2.566	3.015	148.65
2.0000	1.232	3.433	4.495	4.693	5.148	6.731	9.714	12.244	16.355	3.872	3.063	3.571	185.81
2.5000	1.506	4.088	5.365	5.608	6.149	8.008	11.447	14.340	19.005	4.670	3.717	4.298	232.26
3.2000	1.935	5.068	6.624	6.929	7.575	9.790	13.819	17.190	22.573	5.837	4.689	5.370	297.30
4.0000	2.479	6.282	8.133	8.505	9.262	11.863	16.534	20.433	26.599	7.244	5.876	6.672	371.62
5.0000	3.230	7.940	10.136	10.590	11.477	14.553	20.017	24.563	31.668	9.116	7.470	8.413	464.53
6.0000	4.048	9.740	12.270	12.808	13.825	17.376	23.638	28.837	36.865	11.112	9.177	10.277	557.44
7.0000	4.927	11.673	14.532	15.157	16.307	20.338	27.417	33.275	42.244	13.230	10.994	12.257	650.34
8.0000	5.860	13.733	16.916	17.628	18.922	23.444	31.365	37.890	47.815	15.465	12.915	14.346	743.25
9.0000	6.848	15.912	19.421	20.223	21.668	26.693	35.493	42.698	53.589	17.816	14.940	16.543	836.15
10.0000	7.889	18.196	22.041	22.937	24.536	30.086	39.791	47.699	59.574	20.281	17.067	18.846	929.06
11.0000	8.979	20.580	24.770	25.764	27.524	33.619	44.256	52.892	65.776	22.855	19.291	21.248	1022.0
12.0000	10.120	23.062	27.605	28.700	30.627	37.289	48.881	58.268	72.196	25.536	21.610	23.748	1114.9

$^{98}_{42}$Mo IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=98 MEV
0.0125	7.338	6.071	4.447	2.957	2.402	2.179	2.019	1.868	1.187	1.016	0.934	0.801	1.2238
0.0160	8.406	6.954	5.094	3.388	2.751	2.496	2.313	2.140	1.360	1.164	1.070	0.917	1.5665
0.0200	9.503	7.862	5.760	3.830	3.110	2.822	2.615	2.419	1.538	1.316	1.210	1.037	1.9581
0.0250	10.745	8.889	6.512	4.330	3.516	3.191	2.956	2.735	1.739	1.488	1.371	1.172	2.4476
0.0320	12.293	10.189	7.459	4.960	4.035	3.670	3.386	3.133	1.992	1.708	1.574	1.350	3.1330
0.0400	13.864	11.545	8.433	5.625	4.588	4.183	3.854	3.567	2.269	1.952	1.796	1.543	3.9162
0.0500	15.618	13.091	9.535	6.388	5.235	4.767	4.396	4.071	2.584	2.245	2.069	1.778	4.8952
0.0600	17.203	14.557	10.541	7.105	5.840	5.302	4.901	4.543	2.909	2.530	2.335	2.008	5.8743
0.0700	18.645	15.948	11.474	7.779	6.425	5.829	5.393	5.003	3.213	2.811	2.605	2.237	6.8533
0.0800	19.980	17.312	12.348	8.434	6.977	6.322	5.841	5.433	3.519	3.087	2.852	2.457	7.8324
0.0900	21.225	18.629	13.175	9.064	7.510	6.825	6.284	5.850	3.834	3.353	3.109	2.681	8.8114
0.1000	22.408	19.923	13.961	9.675	8.042	7.288	6.701	6.269	4.133	3.616	3.351	2.890	9.7905
0.1250	25.098	23.156	15.785	11.112	9.281	8.413	7.734	7.245	4.854	4.246	3.970	3.433	12.238
0.1600	28.369	27.573	18.081	12.946	10.885	9.872	9.058	8.498	5.786	5.081	4.764	4.159	15.665
0.2000	31.645	32.115	20.442	14.862	12.572	11.386	10.446	9.792	6.787	5.990	5.622	4.906	19.581
0.2500	35.200	37.026	23.112	17.080	14.515	13.174	12.065	11.302	7.974	7.049	6.610	5.778	24.476
0.3200	39.123	42.506	26.222	19.745	16.861	15.392	14.029	13.111	9.387	8.339	7.827	6.883	31.330
0.4000	42.740	47.447	29.234	22.276	19.178	17.540	15.991	14.939	10.875	9.676	9.092	7.981	39.162
0.5000	46.383	52.124	32.436	25.073	21.732	19.948	18.164	16.931	12.520	11.158	10.493	9.244	48.952
0.6000	49.009	55.196	34.956	27.371	23.840	21.953	19.925	18.562	13.878	12.410	11.693	10.382	58.743
0.7000	50.979	57.226	36.968	29.205	25.545	23.549	21.330	19.889	15.009	13.419	12.680	11.238	68.533
0.8000	52.391	58.409	38.579	30.748	26.967	24.961	22.569	21.026	15.972	14.352	13.541	12.037	78.324
0.9000	53.507	59.129	39.871	31.977	28.189	26.156	23.604	21.969	16.866	15.151	14.314	12.759	88.114
1.0000	54.281	59.436	40.905	33.092	29.206	27.120	24.502	22.784	17.589	15.830	14.971	13.376	97.905
1.2500	55.319	59.242	42.651	34.974	31.135	29.003	26.145	24.269	19.065	17.188	16.250	14.544	122.38
1.6000	55.425	58.096	43.780	36.556	32.660	30.514	27.494	25.392	20.358	18.431	17.424	15.629	156.65
2.0000	54.540	56.917	44.019	37.284	33.499	31.430	28.172	26.103	21.129	19.280	18.224	16.419	195.81
2.5000	52.800	55.325	43.529	37.391	33.822	31.776	28.424	26.378	21.677	19.718	18.717	16.976	244.76
3.2000	50.196	53.024	42.217	36.729	33.436	31.451	28.201	26.090	21.784	19.926	18.913	17.182	313.30
4.0000	47.330	50.404	40.453	35.558	32.564	30.663	27.629	25.485	21.561	19.741	18.811	17.112	391.62
5.0000	44.165	47.342	38.272	33.909	31.230	29.469	26.560	24.570	21.049	19.212	18.409	16.801	489.52
6.0000	41.493	44.613	36.271	32.353	29.851	28.291	25.534	23.612	20.239	18.679	17.881	16.431	587.43
7.0000	39.098	42.236	34.478	30.893	28.548	27.134	24.549	22.721	19.653	18.067	17.343	15.963	685.33
8.0000	37.057	40.115	32.881	29.593	27.390	26.042	23.675	21.866	19.005	17.526	16.835	15.520	783.24
9.0000	35.325	38.219	31.456	28.405	26.328	25.070	22.805	21.107	18.402	16.986	16.326	15.099	881.14
10.0000	33.739	36.515	30.178	27.371	25.349	24.172	22.000	20.430	17.805	16.507	15.904	14.697	979.05
11.0000	32.335	35.035	29.026	26.414	24.498	23.366	21.276	19.825	17.300	16.081	15.529	14.310	1077.0
12.0000	31.090	33.664	27.984	25.521	23.702	22.639	20.624	19.253	16.818	15.671	15.111	13.936	1174.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	16.678	7.116	4.714	4.430	3.936	2.597	1.592	1.130	0.745	5.964	7.587	5.790	1.2238
0.0160	18.747	7.906	5.313	4.997	4.442	3.001	1.859	1.325	0.879	6.791	8.640	6.526	1.5665
0.0200	20.619	8.467	5.858	5.518	4.936	3.427	2.137	1.555	1.040	7.614	9.682	7.194	1.9581
0.0250	22.661	8.993	6.460	6.089	5.509	3.953	2.527	1.843	1.335	8.531	10.855	7.931	2.4476
0.0320	25.436	9.652	7.153	6.810	6.221	4.662	3.028	2.282	1.589	9.697	12.367	8.876	3.1330
0.0400	28.252	10.272	7.868	7.573	6.974	5.448	3.609	2.766	1.965	10.921	13.932	9.867	3.9162
0.0500	31.560	11.099	8.763	8.524	7.933	6.398	4.310	3.356	2.431	12.338	15.733	11.080	4.8952
0.0600	35.206	12.048	9.771	9.445	8.928	7.347	4.996	3.932	2.888	13.714	17.508	12.312	5.8743
0.0700	38.896	13.172	10.785	10.476	9.936	8.284	5.645	4.486	3.316	15.076	19.230	13.631	6.8533
0.0800	42.849	14.386	11.867	11.533	10.978	9.224	6.322	5.038	3.742	16.448	20.955	15.016	7.8324
0.0900	46.771	15.691	12.977	12.648	12.042	10.158	6.983	5.586	4.137	17.813	22.648	16.442	8.8114
0.1000	51.098	17.144	14.212	13.766	13.096	11.099	7.665	6.101	4.523	19.169	24.376	17.912	9.7905
0.1250	62.665	20.915	17.284	16.653	15.911	13.433	9.250	7.371	5.477	22.635	28.807	21.767	12.238
0.1600	80.098	26.705	21.914	21.118	20.033	16.689	11.445	9.113	6.762	27.609	35.077	27.664	15.665
0.2000	100.372	33.321	27.290	26.207	24.776	20.136	13.696	10.875	8.034	32.994	41.866	34.445	19.581
0.2500	125.269	41.463	33.628	32.380	30.231	23.898	16.155	12.666	9.314	39.152	49.622	42.712	24.476
0.3200	155.759	50.845	41.352	39.464	36.108	27.664	18.460	14.396	10.515	46.203	58.685	52.392	31.330
0.4000	182.421	60.222	47.827	45.459	41.162	30.725	20.318	15.816	11.518	52.417	66.741	60.690	39.162
0.5000	206.940	68.764	53.422	50.827	45.475	33.441	22.056	17.223	12.553	58.157	74.245	68.180	48.952
0.6000	221.973	74.457	56.350	53.553	47.855	34.991	23.211	18.107	13.248	61.593	79.036	72.255	58.743
0.7000	226.983	78.002	57.374	54.528	48.798	35.637	23.844	18.558	13.715	63.400	81.477	73.677	68.533
0.8000	226.461	79.473	57.445	54.783	48.957	35.802	24.228	18.904	14.043	64.196	82.405	73.841	78.324
0.9000	223.279	79.583	57.016	54.345	48.324	35.645	24.321	19.218	14.274	64.392	82.573	73.124	88.114
1.0000	220.480	79.725	56.899	53.995	48.105	35.629	24.543	19.553	14.521	64.344	82.424	72.484	97.905
1.2500	211.976	79.374	56.513	53.954	47.940	35.955	25.249	20.387	15.397	63.849	81.080	71.526	122.38
1.6000	197.884	77.490	55.951	53.499	47.895	36.556	26.224	21.321	16.505	62.386	78.059	69.522	156.65
2.0000	182.239	74.701	55.376	52.735	47.717	37.064	27.072	22.230	17.476	60.746	74.833	67.129	195.81
2.5000	164.538	70.734	54.019	51.407	47.446	37.522	27.858	23.201	18.456	58.589	70.908	63.987	244.76
3.2000	147.759	65.647	52.053	49.689	46.143	37.362	28.412	23.641	18.955	55.853	66.576	60.581	313.30
4.0000	133.494	60.356	49.352	47.330	44.498	36.407	27.912	23.503	19.013	52.831	62.257	56.917	391.62
5.0000	121.704	55.302	46.270	44.548	41.984	34.789	27.058	22.848	18.753	49.523	57.981	53.121	489.52
6.0000	112.801	51.287	43.597	41.929	39.716	33.151	25.897	22.016	18.135	46.571	54.370	49.799	587.43
7.0000	105.848	48.063	41.305	39.822	37.650	31.651	24.893	21.239	17.549	44.098	51.338	47.166	685.33
8.0000	99.959	45.212	39.293	37.912	35.808	30.218	23.773	20.386	16.934	41.891	48.664	44.817	783.24
9.0000	94.682	43.031	37.464	36.174	34.224	28.939	22.805	19.597	16.357	39.886	46.271	42.685	881.14
10.0000	90.232	41.193	35.942	34.704	32.833	27.764	21.939	18.861	15.783	38.145	44.180	40.861	979.05
11.0000	86.208	39.534	34.570	33.380	31.581	26.704	21.160	18.200	15.239	36.602	42.350	39.244	1077.0
12.0000	82.552	38.030	33.328	32.181	30.446	25.745	20.456	17.602	14.747	35.203	40.660	37.778	1174.9

$^{98}_{42}$Mo IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=98 MEV
0.0125	0.112	0.113	0.143	0.190	0.204	0.247	0.265	0.292	0.406	0.467	0.500	0.592	1.2238
0.0160	0.141	0.144	0.182	0.243	0.262	0.316	0.338	0.372	0.520	0.599	0.643	0.763	1.5665
0.0200	0.173	0.178	0.226	0.303	0.328	0.393	0.420	0.461	0.647	0.745	0.800	0.949	1.9581
0.0250	0.210	0.219	0.279	0.376	0.409	0.488	0.519	0.569	0.802	0.922	0.990	1.172	2.4476
0.0320	0.258	0.273	0.349	0.475	0.520	0.616	0.655	0.715	1.012	1.163	1.248	1.473	3.1330
0.0400	0.309	0.331	0.425	0.582	0.643	0.755	0.803	0.875	1.244	1.428	1.532	1.802	3.9162
0.0500	0.367	0.397	0.514	0.708	0.788	0.920	0.978	1.063	1.521	1.742	1.869	2.192	4.8952
0.0600	0.421	0.459	0.596	0.826	0.925	1.074	1.142	1.239	1.782	2.039	2.187	2.560	5.8743
0.0700	0.471	0.516	0.674	0.937	1.054	1.219	1.297	1.405	2.029	2.318	2.486	2.906	6.8533
0.0800	0.519	0.570	0.747	1.041	1.176	1.356	1.443	1.562	2.262	2.582	2.769	3.232	7.8324
0.0900	0.563	0.620	0.816	1.140	1.292	1.486	1.581	1.711	2.482	2.830	3.035	3.540	8.8114
0.1000	0.606	0.667	0.882	1.234	1.402	1.609	1.713	1.852	2.690	3.066	3.288	3.831	9.7905
0.1250	0.705	0.775	1.035	1.450	1.655	1.891	2.017	2.176	3.166	3.606	3.865	4.497	12.238
0.1600	0.829	0.905	1.227	1.717	1.968	2.240	2.394	2.577	3.750	4.269	4.570	5.306	15.665
0.2000	0.956	1.032	1.422	1.985	2.283	2.589	2.772	2.980	4.329	4.925	5.267	6.103	19.581
0.2500	1.100	1.171	1.641	2.281	2.629	2.972	3.189	3.424	4.959	5.635	6.023	6.967	24.476
0.3200	1.282	1.341	1.912	2.644	3.052	3.439	3.698	3.968	5.719	6.491	6.934	8.005	31.330
0.4000	1.471	1.513	2.190	3.010	3.476	3.905	4.207	4.513	6.471	7.336	7.833	9.027	39.162
0.5000	1.689	1.708	2.503	3.417	3.947	4.419	4.771	5.117	7.291	8.256	8.811	10.139	48.952
0.6000	1.894	1.890	2.791	3.786	4.370	4.881	5.278	5.660	8.022	9.073	9.679	11.120	58.743
0.7000	2.089	2.064	3.063	4.132	4.767	5.311	5.752	6.164	8.691	9.821	10.471	12.012	68.533
0.8000	2.278	2.233	3.322	4.459	5.139	5.714	6.198	6.642	9.323	10.526	11.218	12.854	78.324
0.9000	2.463	2.399	3.572	4.771	5.494	6.097	6.622	7.097	9.919	11.190	11.921	13.643	88.114
1.0000	2.645	2.564	3.814	5.072	5.835	6.465	7.029	7.535	10.487	11.822	12.589	14.392	97.905
1.2500	3.090	2.976	4.399	5.790	6.645	7.336	7.994	8.574	11.821	13.303	14.155	16.143	122.38
1.6000	3.708	3.559	5.190	6.746	7.718	8.485	9.269	9.951	13.556	15.223	16.187	18.411	156.65
2.0000	4.419	4.239	6.081	7.805	8.900	9.748	10.674	11.470	15.442	17.298	18.381	20.852	195.81
2.5000	5.330	5.110	7.198	9.115	10.352	11.295	12.402	13.333	17.726	19.805	21.029	23.780	244.76
3.2000	6.660	6.374	8.795	10.962	12.388	13.461	14.821	15.943	20.877	23.259	24.667	27.789	313.30
4.0000	8.267	7.889	10.690	13.129	14.761	15.982	17.626	18.979	24.489	27.207	28.818	32.355	391.62
5.0000	10.409	9.894	13.178	15.949	17.832	19.239	21.240	22.892	29.085	32.234	34.079	38.129	489.52
6.0000	12.697	12.025	15.807	18.906	21.039	22.631	25.000	26.958	33.830	37.403	39.476	44.022	587.43
7.0000	15.128	14.281	18.577	22.004	24.394	26.166	28.912	31.186	38.740	42.734	45.038	50.069	685.33
8.0000	17.702	16.660	21.485	25.243	27.897	29.850	32.975	35.580	43.807	48.238	50.769	56.291	783.24
9.0000	20.409	19.162	24.531	28.621	31.544	33.683	37.189	40.139	49.044	53.914	56.676	62.688	881.14
10.0000	23.245	21.783	27.709	32.133	35.334	37.661	41.562	44.855	54.454	59.762	62.754	69.262	979.05
11.0000	26.210	24.521	31.018	35.775	39.264	41.782	46.088	49.721	60.034	65.772	68.985	76.015	1077.0
12.0000	29.299	27.373	34.454	39.547	43.328	46.039	50.763	54.733	65.775	71.941	75.377	82.949	1174.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.042	0.100	0.125	0.129	0.138	0.191	0.282	0.385	0.536	0.108	0.089	0.101	1.2238
0.0160	0.053	0.128	0.161	0.167	0.178	0.247	0.363	0.495	0.696	0.138	0.113	0.130	1.5665
0.0200	0.065	0.159	0.202	0.209	0.224	0.311	0.455	0.617	0.869	0.171	0.140	0.163	1.9581
0.0250	0.080	0.198	0.252	0.262	0.280	0.388	0.567	0.764	1.071	0.212	0.173	0.204	2.4476
0.0320	0.100	0.253	0.322	0.334	0.358	0.492	0.716	0.959	1.333	0.267	0.217	0.260	3.1330
0.0400	0.122	0.314	0.399	0.414	0.444	0.604	0.876	1.164	1.609	0.326	0.264	0.322	3.9162
0.0500	0.148	0.389	0.492	0.509	0.545	0.731	1.058	1.396	1.920	0.395	0.318	0.396	4.8952
0.0600	0.172	0.460	0.579	0.599	0.640	0.848	1.224	1.606	2.197	0.460	0.369	0.465	5.8743
0.0700	0.194	0.528	0.660	0.682	0.727	0.955	1.376	1.795	2.447	0.519	0.416	0.530	6.8533
0.0800	0.215	0.591	0.736	0.760	0.809	1.053	1.515	1.969	2.676	0.575	0.460	0.590	7.8324
0.0900	0.235	0.651	0.806	0.832	0.885	1.143	1.644	2.129	2.887	0.627	0.502	0.645	8.8114
0.1000	0.253	0.706	0.872	0.900	0.955	1.227	1.763	2.278	3.083	0.676	0.540	0.697	9.7905
0.1250	0.293	0.827	1.016	1.049	1.111	1.412	2.028	2.608	3.522	0.786	0.627	0.812	12.238
0.1600	0.339	0.965	1.183	1.222	1.293	1.629	2.340	2.998	4.040	0.917	0.730	0.945	15.665
0.2000	0.381	1.092	1.338	1.383	1.462	1.835	2.639	3.372	4.541	1.043	0.829	1.067	19.581
0.2500	0.424	1.221	1.496	1.546	1.636	2.052	2.957	3.774	5.082	1.176	0.934	1.192	24.476
0.3200	0.472	1.368	1.676	1.734	1.839	2.313	3.344	4.268	5.752	1.334	1.059	1.334	31.330
0.4000	0.518	1.508	1.850	1.917	2.039	2.577	3.740	4.776	6.445	1.491	1.183	1.471	39.162
0.5000	0.568	1.660	2.043	2.120	2.265	2.882	4.196	5.359	7.242	1.668	1.322	1.623	48.952
0.6000	0.614	1.797	2.221	2.307	2.475	3.168	4.627	5.906	7.989	1.832	1.449	1.763	58.743
0.7000	0.657	1.925	2.393	2.488	2.677	3.445	5.043	6.439	8.714	1.988	1.571	1.897	68.533
0.8000	0.701	2.049	2.564	2.667	2.877	3.719	5.450	6.961	9.419	2.141	1.691	2.029	78.324
0.9000	0.744	2.172	2.735	2.847	3.078	3.992	5.853	7.475	10.110	2.294	1.809	2.162	88.114
1.0000	0.788	2.295	2.906	3.027	3.281	4.267	6.253	7.979	10.790	2.446	1.928	2.297	97.905
1.2500	0.901	2.602	3.337	3.480	3.790	4.949	7.235	9.203	12.423	2.827	2.226	2.636	122.38
1.6000	1.068	3.038	3.945	4.116	4.503	5.892	8.563	10.843	14.568	3.368	2.656	3.121	156.65
2.0000	1.274	3.552	4.647	4.852	5.321	6.955	10.031	12.639	16.870	4.003	3.168	3.693	195.81
2.5000	1.556	4.225	5.541	5.791	6.349	8.266	11.811	14.791	19.592	4.823	3.839	4.439	244.76
3.2000	1.995	5.229	6.833	7.146	7.812	10.094	14.244	17.715	23.252	6.020	4.835	5.539	313.30
4.0000	2.553	6.474	8.378	8.761	9.540	12.217	17.025	21.036	27.376	7.462	6.052	6.872	391.62
5.0000	3.321	8.169	10.427	10.893	11.806	14.969	20.587	25.261	32.560	9.376	7.682	8.653	489.52
6.0000	4.157	10.008	12.608	13.160	14.204	17.852	24.287	29.627	37.871	11.415	9.426	10.558	587.43
7.0000	5.053	11.981	14.916	15.556	16.737	20.876	28.144	34.156	43.360	13.577	11.280	12.578	685.33
8.0000	6.006	14.082	17.347	18.077	19.404	24.043	32.170	38.863	49.041	15.855	13.240	14.709	783.24
9.0000	7.012	16.302	19.899	20.722	22.202	27.355	36.376	43.763	54.926	18.251	15.303	16.948	881.14
10.0000	8.072	18.628	22.568	23.486	25.124	30.810	40.755	48.857	61.021	20.762	17.470	19.293	979.05
11.0000	9.182	21.055	25.346	26.363	28.165	34.406	45.300	54.142	67.335	23.383	19.734	21.739	1077.0
12.0000	10.343	23.581	28.231	29.351	31.323	38.141	50.007	59.614	73.868	26.111	22.094	24.282	1174.9

$^{98}_{43}Tc$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=98 MEV
0.0125	7.406	6.127	4.489	2.985	2.424	2.199	2.038	1.885	1.198	1.026	0.943	0.808	1.2238
0.0160	8.487	7.021	5.143	3.420	2.777	2.520	2.335	2.160	1.373	1.175	1.080	0.926	1.5665
0.0200	9.598	7.940	5.817	3.868	3.141	2.850	2.641	2.443	1.553	1.329	1.222	1.047	1.9581
0.0250	10.856	8.981	6.579	4.375	3.553	3.224	2.987	2.763	1.757	1.503	1.385	1.184	2.4477
0.0320	12.424	10.298	7.539	5.013	4.079	3.709	3.423	3.166	2.013	1.726	1.591	1.365	3.1330
0.0400	14.018	11.673	8.527	5.687	4.638	4.229	3.897	3.607	2.294	1.974	1.816	1.560	3.9163
0.0500	15.796	13.241	9.644	6.461	5.294	4.822	4.446	4.118	2.613	2.271	2.093	1.799	4.8953
0.0600	17.404	14.727	10.664	7.188	5.908	5.364	4.959	4.596	2.943	2.559	2.362	2.031	5.8744
0.0700	18.867	16.139	11.611	7.872	6.502	5.898	5.457	5.062	3.251	2.845	2.636	2.264	6.8535
0.0800	20.222	17.522	12.498	8.536	7.061	6.399	5.912	5.499	3.562	3.125	2.887	2.487	7.8326
0.0900	21.486	18.859	13.337	9.176	7.602	6.909	6.362	5.922	3.881	3.394	3.148	2.714	8.8116
0.1000	22.687	20.171	14.135	9.796	8.142	7.379	6.785	6.347	4.184	3.661	3.392	2.926	9.7907
0.1250	25.419	23.453	15.987	11.255	9.400	8.521	7.834	7.338	4.916	4.301	4.021	3.477	12.238
0.1600	28.743	27.937	18.319	13.117	11.028	10.002	9.178	8.610	5.862	5.148	4.827	4.213	15.665
0.2000	32.073	32.550	20.719	15.063	12.742	11.541	10.588	9.924	6.879	6.071	5.698	4.973	19.581
0.2500	35.689	37.540	23.433	17.317	14.716	13.357	12.232	11.459	8.085	7.147	6.702	5.858	24.477
0.3200	39.737	43.173	26.633	20.055	17.125	15.634	14.249	13.317	9.535	8.469	7.950	6.991	31.330
0.4000	43.472	48.259	29.734	22.658	19.506	17.841	16.265	15.194	11.061	9.842	9.247	8.117	39.163
0.5000	47.213	53.057	33.016	25.522	22.121	20.305	18.489	17.235	12.744	11.358	10.681	9.410	48.953
0.6000	49.951	56.257	35.628	27.897	24.299	22.375	20.308	18.919	14.145	12.648	11.918	10.582	58.744
0.7000	52.007	58.381	37.714	29.794	26.060	24.024	21.761	20.290	15.312	13.690	12.936	11.465	68.535
0.8000	53.484	59.629	39.385	31.390	27.530	25.482	23.040	21.465	16.305	14.651	13.824	12.288	78.326
0.9000	54.654	60.397	40.726	32.662	28.793	26.716	24.110	22.440	17.227	15.476	14.621	13.032	88.116
1.0000	55.470	60.737	41.801	33.817	29.846	27.714	25.039	23.283	17.974	16.177	15.299	13.669	97.907
1.2500	56.581	60.594	43.624	35.772	31.846	29.665	26.742	24.822	19.500	17.581	16.621	14.876	122.38
1.6000	56.747	59.481	44.824	37.428	33.439	31.247	28.149	25.998	20.843	18.871	17.840	16.002	156.65
2.0000	55.697	58.333	45.114	38.212	34.332	32.212	28.873	26.753	21.655	19.760	18.677	16.828	195.81
2.5000	54.175	56.765	44.662	38.364	34.702	32.603	29.164	27.065	22.241	20.232	19.204	17.418	244.77
3.2000	51.573	54.479	43.375	37.736	34.353	32.314	28.975	26.806	22.382	20.473	19.432	17.654	313.30
4.0000	48.693	51.855	41.618	36.582	33.502	31.546	28.425	26.219	22.182	20.309	19.352	17.604	391.63
5.0000	45.498	48.771	39.426	34.932	32.172	30.358	27.362	25.312	21.685	19.792	18.964	17.308	489.53
6.0000	42.792	46.009	37.405	33.366	30.785	29.176	26.333	24.351	20.872	19.264	18.441	16.945	587.44
7.0000	40.357	43.596	35.588	31.887	29.467	28.008	25.339	23.453	20.285	18.648	17.901	16.477	685.35
8.0000	38.278	41.437	33.965	30.568	28.292	26.900	24.454	22.586	19.632	18.103	17.390	16.031	783.26
9.0000	36.511	39.502	32.512	29.358	27.212	25.912	23.571	21.815	19.019	17.556	16.874	15.606	881.16
10.0000	34.889	37.760	31.207	28.305	26.214	24.997	22.750	21.127	18.412	17.070	16.446	15.198	979.07
11.0000	33.453	36.245	30.029	27.327	25.345	24.174	22.012	20.510	17.898	16.636	16.066	14.804	1077.0
12.0000	32.176	34.841	28.961	26.413	24.530	23.430	21.345	19.925	17.406	16.218	15.639	14.423	1174.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	16.832	7.182	4.758	4.471	3.972	2.621	1.607	1.140	0.752	6.019	7.657	5.844	1.2238
0.0160	18.928	7.983	5.365	5.046	4.485	3.029	1.877	1.337	0.888	6.856	8.723	6.589	1.5665
0.0200	20.825	8.551	5.916	5.573	4.985	3.461	2.158	1.571	1.051	7.690	9.779	7.266	1.9581
0.0250	22.895	9.086	6.527	6.152	5.566	3.994	2.553	1.862	1.349	8.619	10.967	8.013	2.4477
0.0320	25.708	9.755	7.230	6.883	6.288	4.712	3.061	2.307	1.606	9.801	12.500	8.971	3.1330
0.0400	28.564	10.385	7.955	7.657	7.052	5.508	3.649	2.797	1.987	11.042	14.086	9.976	3.9163
0.0500	31.920	11.225	8.862	8.621	8.023	6.471	4.359	3.395	2.459	12.479	15.912	11.206	4.8953
0.0600	35.618	12.189	9.886	9.555	9.032	7.433	5.055	3.978	2.922	13.874	17.713	12.456	5.8744
0.0700	39.360	13.329	10.914	10.600	10.055	8.383	5.712	4.540	3.355	15.256	19.459	13.793	6.8535
0.0800	43.368	14.560	12.011	11.673	11.111	9.336	6.399	5.099	3.787	16.647	21.209	15.198	7.8326
0.0900	47.347	15.885	13.137	12.804	12.190	10.283	7.069	5.655	4.188	18.032	22.927	16.645	8.8116
0.1000	51.735	17.358	14.390	13.937	13.259	11.238	7.760	6.177	4.580	19.408	24.680	18.136	9.7907
0.1250	63.468	21.183	17.506	16.866	16.115	13.605	9.368	7.466	5.547	22.925	29.176	22.046	12.238
0.1600	81.155	27.058	22.203	21.397	20.298	16.909	11.596	9.233	6.851	27.974	35.540	28.029	15.665
0.2000	101.731	33.772	27.660	26.562	25.112	20.408	13.882	11.023	8.143	33.441	42.433	34.912	19.581
0.2500	127.009	42.039	34.096	32.830	30.651	24.230	16.380	12.841	9.444	39.696	50.311	43.305	24.477
0.3200	158.202	51.642	42.001	40.083	36.674	28.098	18.750	14.622	10.680	46.928	59.605	53.213	31.330
0.4000	185.542	61.253	48.645	46.237	41.866	31.251	20.665	16.086	11.715	53.314	67.884	61.729	39.163
0.5000	210.645	69.995	54.378	51.737	46.289	34.040	22.451	17.532	12.777	59.198	75.575	69.400	48.953
0.6000	226.241	75.889	57.433	54.583	48.775	35.664	23.657	18.456	13.503	62.777	80.556	73.644	58.744
0.7000	231.561	79.576	58.532	55.628	49.782	36.356	24.325	18.932	13.992	64.679	83.121	75.163	68.535
0.8000	231.188	81.133	58.644	55.926	49.979	36.549	24.734	19.299	14.336	65.536	84.126	75.382	78.326
0.9000	228.065	81.289	58.238	55.509	49.360	36.409	24.843	19.630	14.580	65.772	84.343	74.691	88.116
1.0000	225.308	81.470	58.145	55.177	49.158	36.409	25.081	19.981	14.839	65.753	84.229	74.072	97.907
1.2500	216.814	81.185	57.802	55.185	49.034	36.775	25.826	20.852	15.748	65.306	82.930	73.158	122.38
1.6000	202.604	79.338	57.285	54.775	49.037	37.428	26.850	21.829	16.899	63.874	79.921	71.181	156.65
2.0000	186.773	76.559	56.754	54.047	48.904	37.986	27.745	22.783	17.910	62.258	76.694	68.799	195.81
2.5000	168.821	72.575	55.425	52.745	48.681	38.498	28.583	23.805	18.937	60.114	72.754	65.653	244.77
3.2000	151.813	67.448	53.482	51.052	47.409	38.387	29.191	24.290	19.475	57.385	68.403	62.243	313.30
4.0000	137.338	62.093	50.773	48.693	45.779	37.456	28.716	24.180	19.560	54.353	64.049	58.556	391.63
5.0000	125.376	56.971	47.667	45.892	43.251	35.839	27.875	23.538	19.319	51.018	59.731	54.724	489.53
6.0000	116.331	52.891	44.961	43.241	40.959	34.189	26.707	22.705	18.703	48.028	56.071	51.358	587.44
7.0000	109.256	49.610	42.635	41.105	38.862	32.670	25.695	21.922	18.114	45.518	52.991	48.685	685.35
8.0000	103.252	46.701	40.588	39.161	36.987	31.213	24.556	21.058	17.492	43.271	50.268	46.294	783.26
9.0000	97.860	44.476	38.721	37.388	35.373	29.911	23.571	20.255	16.906	41.225	47.825	44.118	881.16
10.0000	93.309	42.597	37.167	35.888	33.953	28.710	22.687	19.504	16.321	39.446	45.687	42.254	979.07
11.0000	89.187	40.900	35.765	34.534	32.672	27.627	21.891	18.828	15.765	37.867	43.813	40.600	1077.0
12.0000	85.436	39.359	34.493	33.306	31.510	26.645	21.171	18.217	15.263	36.434	42.081	39.098	1174.9

$^{98}_{43}Tc$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=98 MEV
0.0125	0.110	0.111	0.140	0.186	0.200	0.242	0.259	0.287	0.398	0.457	0.489	0.579	1.2238
0.0160	0.139	0.141	0.179	0.238	0.256	0.309	0.331	0.365	0.510	0.587	0.630	0.747	1.5665
0.0200	0.170	0.175	0.222	0.297	0.321	0.385	0.411	0.452	0.634	0.730	0.784	0.929	1.9581
0.0250	0.206	0.215	0.274	0.369	0.401	0.478	0.509	0.558	0.786	0.904	0.970	1.149	2.4477
0.0320	0.253	0.268	0.343	0.466	0.510	0.604	0.642	0.701	0.992	1.140	1.223	1.444	3.1330
0.0400	0.304	0.325	0.417	0.571	0.630	0.741	0.787	0.858	1.220	1.400	1.502	1.767	3.9163
0.0500	0.361	0.390	0.504	0.695	0.773	0.902	0.959	1.043	1.491	1.708	1.833	2.150	4.8953
0.0600	0.414	0.451	0.586	0.811	0.907	1.054	1.121	1.216	1.748	2.000	2.145	2.511	5.8744
0.0700	0.464	0.507	0.662	0.920	1.034	1.197	1.273	1.380	1.990	2.274	2.439	2.851	6.8535
0.0800	0.511	0.560	0.734	1.023	1.154	1.332	1.416	1.534	2.219	2.533	2.716	3.172	7.8326
0.0900	0.555	0.610	0.802	1.120	1.268	1.459	1.553	1.680	2.436	2.778	2.979	3.475	8.8116
0.1000	0.597	0.656	0.868	1.212	1.376	1.580	1.683	1.819	2.640	3.010	3.227	3.761	9.7907
0.1250	0.694	0.762	1.018	1.425	1.625	1.858	1.982	2.138	3.109	3.542	3.796	4.416	12.238
0.1600	0.816	0.890	1.207	1.688	1.934	2.202	2.353	2.534	3.684	4.194	4.489	5.213	15.665
0.2000	0.942	1.016	1.400	1.953	2.244	2.546	2.726	2.931	4.255	4.840	5.176	5.998	19.581
0.2500	1.084	1.153	1.615	2.244	2.585	2.924	3.137	3.368	4.875	5.539	5.921	6.849	24.477
0.3200	1.263	1.320	1.883	2.602	3.001	3.383	3.637	3.903	5.623	6.382	6.817	7.870	31.330
0.4000	1.449	1.489	2.156	2.961	3.419	3.841	4.139	4.439	6.363	7.213	7.701	8.875	39.163
0.5000	1.663	1.681	2.464	3.362	3.881	4.347	4.692	5.032	7.169	8.117	8.662	9.967	48.953
0.6000	1.864	1.860	2.746	3.724	4.297	4.800	5.190	5.566	7.885	8.919	9.513	10.930	58.744
0.7000	2.056	2.030	3.013	4.063	4.685	5.222	5.655	6.060	8.541	9.652	10.290	11.805	68.535
0.8000	2.241	2.196	3.266	4.383	5.051	5.617	6.092	6.528	9.160	10.343	11.022	12.629	78.326
0.9000	2.422	2.359	3.511	4.689	5.398	5.992	6.507	6.974	9.744	10.993	11.710	13.403	88.116
1.0000	2.600	2.521	3.748	4.983	5.732	6.352	6.905	7.402	10.300	11.611	12.364	14.136	97.907
1.2500	3.036	2.923	4.320	5.686	6.524	7.204	7.849	8.418	11.605	13.059	13.896	15.849	122.38
1.6000	3.639	3.493	5.093	6.620	7.572	8.327	9.096	9.764	13.301	14.937	15.882	18.065	156.65
2.0000	4.334	4.156	5.963	7.654	8.726	9.559	10.467	11.247	15.141	16.961	18.024	20.447	195.81
2.5000	5.222	5.006	7.052	8.931	10.143	11.068	12.152	13.064	17.369	19.407	20.605	23.303	244.77
3.2000	6.518	6.238	8.608	10.731	12.126	13.178	14.508	15.606	20.438	22.771	24.149	27.207	313.30
4.0000	8.080	7.711	10.451	12.838	14.434	15.630	17.236	18.559	23.952	26.610	28.187	31.648	391.63
5.0000	10.161	9.658	12.868	15.577	17.416	18.794	20.747	22.360	28.415	31.493	33.297	37.257	489.53
6.0000	12.381	11.726	15.418	18.446	20.528	22.084	24.395	26.305	33.019	36.508	38.533	42.975	587.44
7.0000	14.737	13.913	18.103	21.448	23.780	25.510	28.186	30.403	37.778	41.676	43.924	48.835	685.35
8.0000	17.229	16.217	20.920	24.585	27.172	29.078	32.121	34.658	42.686	47.006	49.474	54.861	783.26
9.0000	19.849	18.638	23.867	27.855	30.701	32.788	36.200	39.070	47.754	52.499	55.191	61.053	881.16
10.0000	22.593	21.174	26.942	31.252	34.368	36.636	40.429	43.632	52.987	58.156	61.070	67.411	979.07
11.0000	25.460	23.821	30.141	34.773	38.168	40.620	44.805	48.336	58.382	63.967	67.094	73.940	1077.0
12.0000	28.445	26.577	33.462	38.418	42.095	44.735	49.323	53.180	63.930	69.929	73.272	80.642	1174.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.041	0.098	0.123	0.127	0.135	0.188	0.276	0.377	0.524	0.106	0.087	0.099	1.2238
0.0160	0.052	0.126	0.158	0.163	0.174	0.242	0.355	0.484	0.681	0.135	0.111	0.127	1.5665
0.0200	0.064	0.156	0.198	0.205	0.219	0.304	0.445	0.604	0.851	0.168	0.138	0.160	1.9581
0.0250	0.078	0.195	0.247	0.257	0.275	0.380	0.555	0.749	1.049	0.208	0.170	0.200	2.4477
0.0320	0.098	0.248	0.316	0.328	0.351	0.482	0.701	0.940	1.306	0.262	0.213	0.255	3.1330
0.0400	0.120	0.308	0.391	0.406	0.435	0.591	0.858	1.141	1.577	0.320	0.259	0.316	3.9163
0.0500	0.145	0.382	0.482	0.500	0.535	0.717	1.037	1.369	1.882	0.388	0.313	0.388	4.8953
0.0600	0.169	0.452	0.568	0.588	0.628	0.832	1.200	1.575	2.155	0.451	0.363	0.457	5.8744
0.0700	0.191	0.519	0.648	0.670	0.714	0.937	1.350	1.761	2.401	0.510	0.409	0.520	6.8535
0.0800	0.212	0.582	0.723	0.746	0.794	1.033	1.487	1.932	2.626	0.565	0.453	0.579	7.8326
0.0900	0.231	0.640	0.792	0.818	0.869	1.122	1.614	2.090	2.834	0.617	0.493	0.634	8.8116
0.1000	0.249	0.694	0.857	0.884	0.938	1.205	1.731	2.236	3.027	0.665	0.531	0.685	9.7907
0.1250	0.289	0.813	0.999	1.031	1.092	1.388	1.992	2.562	3.459	0.774	0.617	0.799	12.238
0.1600	0.334	0.950	1.164	1.202	1.271	1.601	2.300	2.946	3.970	0.903	0.719	0.929	15.665
0.2000	0.375	1.075	1.316	1.360	1.438	1.804	2.594	3.315	4.463	1.027	0.817	1.050	19.581
0.2500	0.417	1.203	1.472	1.521	1.609	2.018	2.907	3.711	4.997	1.158	0.920	1.173	24.477
0.3200	0.465	1.347	1.649	1.707	1.810	2.275	3.288	4.197	5.656	1.314	1.043	1.313	31.330
0.4000	0.510	1.485	1.820	1.886	2.006	2.535	3.678	4.696	6.337	1.468	1.165	1.448	39.163
0.5000	0.560	1.634	2.010	2.086	2.228	2.835	4.126	5.269	7.121	1.642	1.301	1.597	48.953
0.6000	0.604	1.768	2.185	2.270	2.434	3.115	4.545	5.806	7.853	1.802	1.426	1.734	58.744
0.7000	0.647	1.894	2.354	2.447	2.632	3.387	4.953	6.329	8.565	1.956	1.546	1.865	68.535
0.8000	0.689	2.016	2.521	2.623	2.829	3.655	5.351	6.841	9.255	2.106	1.663	1.995	78.326
0.9000	0.732	2.136	2.688	2.798	3.025	3.923	5.746	7.344	9.932	2.255	1.779	2.126	88.116
1.0000	0.775	2.257	2.856	2.975	3.224	4.192	6.138	7.838	10.597	2.404	1.895	2.257	97.907
1.2500	0.885	2.557	3.277	3.418	3.721	4.860	7.098	9.034	12.195	2.776	2.187	2.589	122.38
1.6000	1.048	2.983	3.872	4.039	4.419	5.781	8.396	10.637	14.291	3.306	2.607	3.063	156.65
2.0000	1.249	3.485	4.557	4.758	5.217	6.818	9.829	12.390	16.538	3.926	3.106	3.621	195.81
2.5000	1.525	4.140	5.429	5.674	6.219	8.097	11.565	14.489	19.193	4.725	3.761	4.349	244.77
3.2000	1.952	5.119	6.687	6.993	7.645	9.878	13.935	17.336	22.758	5.891	4.732	5.420	313.30
4.0000	2.495	6.329	8.190	8.564	9.325	11.943	16.639	20.567	26.769	7.293	5.915	6.717	391.63
5.0000	3.241	7.976	10.180	10.635	11.526	14.615	20.100	24.671	31.804	9.153	7.498	8.447	489.53
6.0000	4.052	9.760	12.296	12.834	13.853	17.413	23.689	28.907	36.956	11.131	9.190	10.295	587.44
7.0000	4.921	11.672	14.533	15.157	16.308	20.344	27.428	33.297	42.277	13.226	10.987	12.253	685.35
8.0000	5.843	13.707	16.887	17.598	18.891	23.411	31.327	37.855	47.779	15.433	12.885	14.316	783.26
9.0000	6.817	15.856	19.358	20.158	21.599	26.616	35.397	42.597	53.474	17.752	14.882	16.484	881.16
10.0000	7.842	18.106	21.939	22.831	24.425	29.958	39.632	47.524	59.370	20.180	16.978	18.752	979.07
11.0000	8.916	20.452	24.625	25.613	27.365	33.435	44.027	52.635	65.475	22.714	19.167	21.116	1077.0
12.0000	10.038	22.893	27.414	28.501	30.417	37.045	48.576	57.922	71.788	25.351	21.447	23.574	1174.9

$^{102}_{44}$Ru IONS

ENERGY PER MASS UNIT	ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)												ENERGY FOR A=102
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	7.472	6.182	4.529	3.012	2.445	2.219	2.056	1.902	1.209	1.035	0.951	0.815	1.2737
0.0160	8.566	7.086	5.191	3.452	2.803	2.544	2.357	2.180	1.386	1.186	1.090	0.934	1.6304
0.0200	9.691	8.017	5.873	3.906	3.172	2.878	2.666	2.467	1.568	1.342	1.233	1.057	2.0380
0.0250	10.964	9.070	6.645	4.419	3.588	3.256	3.017	2.791	1.774	1.518	1.399	1.196	2.5475
0.0320	12.553	10.405	7.617	5.065	4.121	3.748	3.458	3.199	2.034	1.744	1.607	1.379	3.2608
0.0400	14.168	11.798	8.618	5.748	4.688	4.274	3.938	3.645	2.318	1.995	1.836	1.577	4.0760
0.0500	15.971	13.387	9.750	6.533	5.353	4.875	4.495	4.163	2.642	2.296	2.116	1.818	5.0950
0.0600	17.601	14.894	10.785	7.269	5.975	5.425	5.015	4.648	2.977	2.588	2.389	2.054	6.1140
0.0700	19.085	16.325	11.745	7.963	6.577	5.966	5.520	5.121	3.288	2.877	2.666	2.290	7.1330
0.0800	20.460	17.728	12.645	8.637	7.144	6.474	5.981	5.564	3.604	3.161	2.921	2.516	8.1520
0.0900	21.743	19.084	13.496	9.285	7.693	6.991	6.438	5.992	3.927	3.435	3.185	2.746	9.1710
0.1000	22.962	20.415	14.306	9.914	8.240	7.468	6.867	6.424	4.235	3.705	3.433	2.961	10.190
0.1250	25.735	23.744	16.186	11.395	9.517	8.627	7.931	7.429	4.977	4.354	4.071	3.520	12.737
0.1600	29.111	28.295	18.554	13.285	11.169	10.130	9.296	8.720	5.937	5.214	4.889	4.267	16.304
0.2000	32.495	32.978	20.992	15.261	12.910	11.692	10.727	10.055	6.969	6.151	5.773	5.038	20.380
0.2500	36.170	38.046	23.749	17.551	14.915	13.537	12.397	11.613	8.194	7.244	6.792	5.937	25.475
0.3200	40.341	43.829	27.038	20.360	17.385	15.871	14.465	13.519	9.680	8.598	8.071	7.097	32.608
0.4000	44.194	49.060	30.228	23.034	19.830	18.137	16.535	15.447	11.245	10.006	9.401	8.252	40.760
0.5000	48.034	53.979	33.590	25.965	22.505	20.658	18.810	17.534	12.966	11.555	10.866	9.573	50.950
0.6000	50.885	57.309	36.295	28.419	24.753	22.793	20.688	19.272	14.409	12.885	12.141	10.780	61.140
0.7000	53.028	59.527	38.454	30.379	26.572	24.495	22.188	20.688	15.612	13.959	13.190	11.690	71.330
0.8000	54.572	60.841	40.186	32.028	28.090	26.000	23.509	21.901	16.637	14.949	14.105	12.538	81.520
0.9000	55.796	61.658	41.577	33.345	29.395	27.274	24.613	22.909	17.587	15.799	14.926	13.305	91.710
1.0000	56.654	62.034	42.694	34.539	30.483	28.306	25.574	23.780	18.358	16.522	15.626	13.961	101.90
1.2500	57.841	61.944	44.596	36.569	32.555	30.325	27.337	25.375	19.934	17.972	16.991	15.207	127.37
1.6000	58.069	60.867	45.868	38.300	34.218	31.970	28.805	26.604	21.329	19.311	18.256	16.375	163.04
2.0000	57.256	59.751	46.211	39.141	35.167	32.995	29.575	27.403	22.181	20.241	19.131	17.237	203.80
2.5000	55.553	58.209	45.798	39.340	35.585	33.432	29.906	27.753	22.807	20.746	19.693	17.861	254.75
3.2000	52.956	55.940	44.538	38.748	35.274	33.181	29.751	27.524	22.982	21.022	19.953	18.127	326.08
4.0000	50.062	53.314	42.788	37.611	34.444	32.433	29.224	26.956	22.806	20.881	19.896	18.099	407.60
5.0000	46.839	50.208	40.588	35.961	33.120	31.253	28.168	26.058	22.324	20.375	19.523	17.818	509.50
6.0000	44.099	47.415	38.548	34.385	31.725	30.068	27.138	25.095	21.510	19.852	19.004	17.462	611.40
7.0000	41.626	44.967	36.708	32.890	30.394	28.889	26.136	24.190	20.923	19.235	18.464	16.996	713.30
8.0000	39.510	42.771	35.058	31.552	29.203	27.766	25.242	23.313	20.263	18.686	17.950	16.547	815.20
9.0000	37.709	40.798	33.579	30.321	28.105	26.762	24.344	22.531	19.643	18.132	17.427	16.118	917.10
10.0000	36.053	39.019	32.247	29.248	27.088	25.830	23.508	21.831	19.026	17.639	16.994	15.704	1019.0
11.0000	34.583	37.470	31.044	28.250	26.201	24.991	22.755	21.203	18.502	17.199	16.609	15.305	1120.9
12.0000	33.276	36.032	29.952	27.316	25.369	24.231	22.074	20.607	18.001	16.773	16.174	14.916	1222.8

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	16.982	7.246	4.800	4.511	4.008	2.645	1.621	1.150	0.759	6.073	7.726	5.896	1.2737
0.0160	19.104	8.057	5.415	5.093	4.527	3.058	1.895	1.350	0.896	6.920	8.804	6.650	1.6304
0.0200	21.026	8.634	5.973	5.627	5.033	3.495	2.179	1.586	1.061	7.764	9.873	7.336	2.0380
0.0250	23.124	9.177	6.592	6.213	5.622	4.033	2.578	1.881	1.362	8.705	11.077	8.093	2.5475
0.0320	25.974	9.857	7.305	6.954	6.353	4.761	3.093	2.331	1.622	9.902	12.629	9.064	3.2608
0.0400	28.870	10.497	8.040	7.739	7.127	5.567	3.688	2.827	2.008	11.160	14.237	10.083	4.0760
0.0500	32.273	11.349	8.960	8.717	8.112	6.542	4.407	3.432	2.486	12.617	16.088	11.330	5.0950
0.0600	36.021	12.327	9.997	9.663	9.135	7.517	5.112	4.023	2.955	14.031	17.913	12.596	6.1140
0.0700	39.814	13.483	11.040	10.723	10.171	8.480	5.778	4.592	3.394	15.432	19.684	13.953	7.1330
0.0800	43.878	14.731	12.152	11.810	11.241	9.446	6.474	5.159	3.831	16.843	21.459	15.376	8.1520
0.0900	47.912	16.074	13.294	12.956	12.336	10.406	7.153	5.722	4.238	18.247	23.200	16.843	9.1710
0.1000	52.361	17.568	14.564	14.106	13.419	11.373	7.854	6.252	4.635	19.642	24.979	18.355	10.190
0.1250	64.257	21.446	17.723	17.076	16.315	13.774	9.485	7.559	5.616	23.210	29.539	22.320	12.737
0.1600	82.194	27.404	22.487	21.671	20.558	17.125	11.745	9.351	6.939	28.332	35.995	28.388	16.304
0.2000	103.068	34.216	28.024	26.911	25.442	20.677	14.064	11.167	8.250	33.880	42.991	35.371	20.380
0.2500	128.721	42.606	34.555	33.273	31.064	24.557	16.601	13.015	9.571	40.231	50.990	43.889	25.475
0.3200	160.605	52.427	42.639	40.692	37.231	28.525	19.035	14.844	10.842	47.641	60.511	54.022	32.608
0.4000	188.624	62.270	49.453	47.005	42.561	31.770	21.009	16.353	11.910	54.199	69.011	62.754	40.760
0.5000	214.305	71.211	55.323	52.636	47.093	34.631	22.841	17.836	12.999	60.227	76.888	70.606	50.950
0.6000	230.471	77.308	58.507	55.604	49.687	36.331	24.100	18.801	13.756	63.951	82.062	75.021	61.140
0.7000	236.108	81.138	59.681	56.720	50.759	37.070	24.803	19.304	14.266	65.949	84.753	76.639	71.330
0.8000	235.890	82.782	59.836	57.064	50.996	37.292	25.237	19.691	14.628	66.869	85.836	76.915	81.520
0.9000	232.830	82.987	59.455	56.669	50.391	37.170	25.362	20.040	14.884	67.146	86.105	76.252	91.710
1.0000	230.119	83.210	59.387	56.356	50.208	37.186	25.616	20.408	15.156	67.157	86.028	75.653	101.90
1.2500	221.643	82.993	59.090	56.414	50.126	37.595	26.401	21.317	16.099	66.760	84.777	74.788	127.37
1.6000	207.325	81.187	58.620	56.051	50.180	38.300	27.475	22.338	17.292	65.363	81.783	72.839	163.04
2.0000	191.314	78.420	58.134	55.361	50.093	38.910	28.420	23.337	18.346	63.771	78.559	70.472	203.80
2.5000	173.115	74.421	56.835	54.087	49.919	39.478	29.311	24.410	19.418	61.644	74.604	67.323	254.75
3.2000	155.883	69.256	54.915	52.421	48.680	39.416	29.974	24.941	19.998	58.924	70.236	63.912	326.08
4.0000	141.201	63.840	52.201	50.062	47.067	38.509	29.524	24.860	20.110	55.881	65.851	60.203	407.60
5.0000	129.071	58.650	49.071	47.245	44.526	36.895	28.696	24.231	19.888	52.521	61.492	56.337	509.50
6.0000	119.886	54.508	46.335	44.562	42.211	35.233	27.524	23.399	19.274	49.496	57.784	52.927	611.40
7.0000	112.692	51.170	43.976	42.397	40.085	33.698	26.503	22.612	18.684	46.949	54.658	50.216	713.30
8.0000	106.576	48.205	41.894	40.422	38.178	32.218	25.347	21.736	18.055	44.664	51.886	47.784	815.20
9.0000	101.071	45.935	39.992	38.615	36.533	30.892	24.344	20.919	17.461	42.578	49.394	45.566	917.10
10.0000	96.420	44.018	38.407	37.085	35.085	29.668	23.444	20.155	16.865	40.761	47.210	43.663	1019.0
11.0000	92.202	42.282	36.974	35.701	33.776	28.561	22.631	19.465	16.298	39.147	45.294	41.972	1120.9
12.0000	88.357	40.704	35.672	34.444	32.587	27.556	21.895	18.840	15.785	37.679	43.520	40.435	1222.8

$^{102}_{44}Ru$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=102 MEV
0.0125	0.113	0.113	0.143	0.189	0.202	0.244	0.262	0.289	0.399	0.458	0.490	0.579	1.2737
0.0160	0.142	0.144	0.182	0.242	0.259	0.313	0.334	0.368	0.513	0.589	0.632	0.748	1.6304
0.0200	0.173	0.178	0.226	0.301	0.325	0.390	0.416	0.456	0.638	0.734	0.787	0.933	2.0380
0.0250	0.211	0.219	0.279	0.374	0.406	0.484	0.515	0.564	0.792	0.910	0.976	1.154	2.5475
0.0320	0.259	0.274	0.349	0.473	0.517	0.612	0.650	0.710	1.001	1.149	1.233	1.453	3.2608
0.0400	0.311	0.332	0.426	0.581	0.640	0.752	0.799	0.870	1.233	1.413	1.515	1.781	4.0760
0.0500	0.370	0.399	0.515	0.707	0.785	0.917	0.974	1.058	1.509	1.728	1.852	2.171	5.0950
0.0600	0.424	0.461	0.598	0.826	0.923	1.073	1.139	1.236	1.771	2.025	2.170	2.539	6.1140
0.0700	0.475	0.519	0.676	0.938	1.053	1.219	1.295	1.403	2.019	2.305	2.471	2.886	7.1330
0.0800	0.523	0.573	0.750	1.043	1.176	1.357	1.442	1.561	2.253	2.569	2.754	3.213	8.1520
0.0900	0.568	0.624	0.820	1.143	1.292	1.487	1.582	1.710	2.474	2.820	3.022	3.522	9.1710
0.1000	0.612	0.672	0.887	1.238	1.403	1.611	1.715	1.853	2.684	3.057	3.276	3.816	10.190
0.1250	0.711	0.781	1.042	1.456	1.658	1.896	2.022	2.180	3.164	3.601	3.858	4.486	12.737
0.1600	0.837	0.912	1.236	1.726	1.975	2.249	2.402	2.585	3.753	4.269	4.569	5.301	16.304
0.2000	0.966	1.041	1.434	1.997	2.293	2.602	2.785	2.993	4.338	4.931	5.272	6.106	20.380
0.2500	1.112	1.182	1.654	2.297	2.643	2.989	3.205	3.441	4.974	5.649	6.036	6.978	25.475
0.3200	1.295	1.353	1.929	2.663	3.070	3.460	3.719	3.990	5.741	6.512	6.954	8.025	32.608
0.4000	1.486	1.527	2.208	3.031	3.497	3.929	4.232	4.538	6.498	7.362	7.859	9.053	40.760
0.5000	1.705	1.722	2.523	3.441	3.970	4.446	4.798	5.145	7.322	8.287	8.842	10.170	50.950
0.6000	1.911	1.905	2.812	3.811	4.395	4.909	5.307	5.690	8.054	9.106	9.712	11.154	61.140
0.7000	2.106	2.080	3.084	4.157	4.787	5.340	5.777	6.194	8.724	9.855	10.505	12.047	71.330
0.8000	2.296	2.249	3.343	4.484	5.160	5.744	6.222	6.673	9.356	10.560	11.251	12.888	81.520
0.9000	2.480	2.415	3.592	4.795	5.514	6.126	6.646	7.127	9.951	11.222	11.953	13.677	91.710
1.0000	2.661	2.580	3.834	5.096	5.854	6.493	7.052	7.564	10.518	11.853	12.620	14.424	101.90
1.2500	3.105	2.990	4.417	5.811	6.661	7.360	8.013	8.598	11.847	13.328	14.180	16.169	127.37
1.6000	3.719	3.569	5.203	6.762	7.728	8.503	9.281	9.968	13.572	15.238	16.200	18.424	163.04
2.0000	4.425	4.244	6.087	7.813	8.901	9.756	10.676	11.475	15.443	17.297	18.378	20.846	203.80
2.5000	5.327	5.107	7.194	9.110	10.339	11.288	12.387	13.321	17.706	19.780	21.000	23.746	254.75
3.2000	6.641	6.356	8.771	10.935	12.351	13.428	14.776	15.899	20.818	23.192	24.594	27.706	326.08
4.0000	8.224	7.848	10.638	13.070	14.689	15.912	17.539	18.891	24.377	27.081	28.684	32.204	407.60
5.0000	10.329	9.818	13.084	15.841	17.706	19.113	21.091	22.735	28.893	32.021	33.853	37.878	509.50
6.0000	12.572	11.907	15.661	18.739	20.850	22.438	24.777	26.721	33.544	37.088	39.145	43.656	611.40
7.0000	14.951	14.115	18.370	21.770	24.133	25.896	28.605	30.858	38.349	42.304	44.586	49.572	713.30
8.0000	17.465	16.439	21.212	24.934	27.554	29.495	32.573	35.150	43.299	47.681	50.184	55.650	815.20
9.0000	20.105	18.879	24.183	28.230	31.112	33.234	36.685	39.598	48.408	53.218	55.947	61.891	917.10
10.0000	22.870	21.434	27.280	31.653	34.806	37.111	40.946	44.193	53.680	58.917	61.870	68.297	1019.0
11.0000	25.756	24.099	30.502	35.198	38.632	41.123	45.352	48.930	59.112	64.769	67.936	74.871	1120.9
12.0000	28.761	26.873	33.844	38.867	42.585	45.265	49.900	53.806	64.697	70.770	74.155	81.617	1222.8

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.042	0.101	0.125	0.129	0.137	0.190	0.278	0.378	0.524	0.108	0.089	0.101	1.2737
0.0160	0.053	0.128	0.161	0.166	0.177	0.245	0.359	0.487	0.682	0.138	0.113	0.130	1.6304
0.0200	0.065	0.160	0.201	0.209	0.223	0.309	0.449	0.608	0.853	0.171	0.141	0.163	2.0380
0.0250	0.080	0.199	0.252	0.261	0.280	0.386	0.561	0.755	1.054	0.212	0.173	0.204	2.5475
0.0320	0.100	0.253	0.322	0.334	0.357	0.490	0.710	0.949	1.314	0.268	0.217	0.260	3.2608
0.0400	0.122	0.315	0.399	0.414	0.443	0.602	0.869	1.154	1.590	0.327	0.265	0.323	4.0760
0.0500	0.149	0.391	0.492	0.510	0.545	0.730	1.053	1.386	1.900	0.397	0.320	0.397	5.0950
0.0600	0.173	0.463	0.580	0.600	0.640	0.848	1.219	1.596	2.178	0.462	0.371	0.467	6.1140
0.0700	0.196	0.531	0.662	0.684	0.729	0.955	1.372	1.788	2.430	0.522	0.419	0.532	7.1330
0.0800	0.217	0.595	0.739	0.763	0.811	1.054	1.513	1.963	2.660	0.578	0.463	0.592	8.1520
0.0900	0.237	0.655	0.810	0.836	0.887	1.145	1.643	2.124	2.873	0.631	0.505	0.649	9.1710
0.1000	0.255	0.711	0.876	0.904	0.959	1.230	1.763	2.274	3.071	0.681	0.544	0.701	10.190
0.1250	0.296	0.833	1.022	1.055	1.117	1.417	2.031	2.608	3.513	0.792	0.632	0.818	12.737
0.1600	0.342	0.973	1.191	1.230	1.300	1.637	2.346	3.002	4.037	0.925	0.737	0.952	16.304
0.2000	0.385	1.102	1.348	1.392	1.471	1.845	2.648	3.380	4.543	1.052	0.837	1.076	20.380
0.2500	0.428	1.233	1.507	1.558	1.647	2.065	2.970	3.787	5.090	1.186	0.943	1.202	25.475
0.3200	0.477	1.381	1.689	1.748	1.853	2.328	3.360	4.285	5.765	1.346	1.069	1.345	32.608
0.4000	0.523	1.522	1.865	1.932	2.054	2.595	3.760	4.796	6.463	1.505	1.194	1.484	40.760
0.5000	0.573	1.675	2.059	2.136	2.282	2.898	4.217	5.382	7.264	1.683	1.333	1.636	50.950
0.6000	0.619	1.812	2.238	2.324	2.492	3.185	4.646	5.931	8.013	1.846	1.462	1.776	61.140
0.7000	0.663	1.941	2.410	2.505	2.694	3.462	5.062	6.465	8.739	2.003	1.584	1.910	71.330
0.8000	0.706	2.065	2.580	2.684	2.894	3.736	5.469	6.987	9.444	2.156	1.703	2.043	81.520
0.9000	0.749	2.188	2.751	2.863	3.095	4.009	5.872	7.499	10.134	2.308	1.821	2.176	91.710
1.0000	0.793	2.310	2.922	3.044	3.298	4.283	6.271	8.003	10.812	2.460	1.940	2.310	101.90
1.2500	0.906	2.616	3.351	3.494	3.804	4.963	7.249	9.222	12.440	2.840	2.237	2.648	127.37
1.6000	1.072	3.049	3.956	4.127	4.514	5.900	8.570	10.853	14.572	3.378	2.664	3.130	163.04
2.0000	1.276	3.559	4.653	4.858	5.326	6.955	10.026	12.635	16.857	4.008	3.172	3.698	203.80
2.5000	1.556	4.226	5.538	5.788	6.343	8.253	11.789	14.767	19.553	4.820	3.837	4.436	254.75
3.2000	1.989	5.218	6.814	7.126	7.789	10.060	14.193	17.655	23.168	6.003	4.821	5.523	326.08
4.0000	2.539	6.444	8.336	8.717	9.491	12.151	16.932	20.927	27.231	7.423	6.020	6.837	407.60
5.0000	3.294	8.110	10.350	10.812	11.718	14.855	20.433	25.078	32.326	9.304	7.621	8.587	509.50
6.0000	4.113	9.912	12.488	13.034	14.069	17.682	24.060	29.359	37.531	11.303	9.331	10.454	611.40
7.0000	4.990	11.843	14.746	15.379	16.547	20.640	27.834	33.790	42.902	13.418	11.145	12.431	713.30
8.0000	5.920	13.895	17.121	17.841	19.153	23.734	31.767	38.388	48.452	15.644	13.059	14.512	815.20
9.0000	6.903	16.061	19.611	20.421	21.882	26.965	35.870	43.168	54.192	17.981	15.073	16.696	917.10
10.0000	7.935	18.328	22.212	23.115	24.729	30.332	40.137	48.132	60.132	20.428	17.184	18.982	1019.0
11.0000	9.016	20.691	24.916	25.916	27.690	33.833	44.562	53.278	66.280	22.980	19.388	21.362	1120.9
12.0000	10.145	23.148	27.723	28.823	30.762	37.466	49.140	58.600	72.634	25.634	21.684	23.837	1222.8

$^{103}_{45}Rh$ IONS

ENERGY PER MASS UNIT	ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)												ENERGY FOR A=103
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	7.537	6.235	4.568	3.038	2.467	2.238	2.074	1.918	1.220	1.044	0.959	0.822	1.2864
0.0160	8.643	7.150	5.238	3.483	2.829	2.567	2.378	2.200	1.399	1.197	1.100	0.943	1.6466
0.0200	9.781	8.092	5.928	3.942	3.201	2.905	2.691	2.490	1.583	1.355	1.245	1.067	2.0582
0.0250	11.070	9.158	6.709	4.462	3.623	3.287	3.046	2.818	1.791	1.533	1.412	1.208	2.5727
0.0320	12.679	10.510	7.694	5.116	4.162	3.785	3.493	3.231	2.054	1.762	1.623	1.393	3.2931
0.0400	14.315	11.920	8.707	5.808	4.737	4.319	3.979	3.683	2.342	2.016	1.855	1.593	4.1164
0.0500	16.142	13.530	9.854	6.602	5.410	4.927	4.543	4.208	2.671	2.321	2.138	1.838	5.1455
0.0600	17.794	15.057	10.903	7.349	6.040	5.484	5.070	4.699	3.009	2.617	2.415	2.077	6.1746
0.0700	19.299	16.508	11.876	8.052	6.651	6.033	5.582	5.178	3.325	2.910	2.696	2.316	7.2037
0.0800	20.693	17.930	12.789	8.735	7.226	6.548	6.049	5.627	3.645	3.197	2.954	2.545	8.2328
0.0900	21.994	19.305	13.653	9.393	7.782	7.072	6.512	6.062	3.973	3.475	3.222	2.778	9.2619
0.1000	23.231	20.655	14.474	10.031	8.337	7.555	6.948	6.499	4.284	3.749	3.474	2.996	10.291
0.1250	26.046	24.031	16.381	11.532	9.632	8.731	8.027	7.519	5.037	4.407	4.120	3.563	12.864
0.1600	29.473	28.647	18.785	13.450	11.308	10.256	9.411	8.829	6.011	5.278	4.950	4.320	16.466
0.2000	32.910	33.399	21.260	15.456	13.075	11.842	10.864	10.183	7.058	6.229	5.846	5.102	20.582
0.2500	36.644	38.545	24.060	17.781	15.110	13.714	12.560	11.766	8.301	7.338	6.881	6.015	25.727
0.3200	40.938	44.477	27.438	20.661	17.643	16.106	14.679	13.719	9.823	8.725	8.190	7.203	32.931
0.4000	44.911	49.857	30.719	23.408	20.151	18.431	16.803	15.697	11.427	10.168	9.554	8.386	41.164
0.5000	48.845	54.891	34.158	26.404	22.886	21.007	19.128	17.830	13.185	11.750	11.050	9.735	51.455
0.6000	51.811	58.352	36.955	28.936	25.203	23.208	21.064	19.623	14.671	13.119	12.361	10.976	61.746
0.7000	54.042	60.665	39.189	30.959	27.080	24.963	22.612	21.084	15.911	14.226	13.442	11.913	72.037
0.8000	55.653	62.046	40.982	32.662	28.646	26.515	23.974	22.335	16.966	15.245	14.385	12.786	82.328
0.9000	56.932	62.914	42.423	34.023	29.993	27.830	25.115	23.375	17.945	16.121	15.230	13.575	92.619
1.0000	57.834	63.326	43.583	35.258	31.118	28.895	26.106	24.276	18.741	16.866	15.951	14.252	102.91
1.2500	59.099	63.291	45.566	37.364	33.263	30.985	27.932	25.927	20.368	18.363	17.361	15.538	128.64
1.6000	59.392	62.253	46.913	39.172	34.997	32.698	29.461	27.209	21.815	19.750	18.671	16.748	164.66
2.0000	58.617	61.172	47.310	40.071	36.003	33.779	30.278	28.055	22.709	20.722	19.586	17.647	205.82
2.5000	56.935	59.657	46.937	40.319	36.470	34.264	30.650	28.444	23.375	21.263	20.183	18.305	257.27
3.2000	54.344	57.406	45.706	39.764	36.199	34.051	30.531	28.246	23.584	21.573	20.476	18.602	329.31
4.0000	51.439	54.780	43.965	38.645	35.392	33.325	30.028	27.698	23.433	21.455	20.444	18.597	411.64
5.0000	48.189	51.655	41.758	36.998	34.075	32.154	28.980	26.809	22.967	20.963	20.086	18.332	514.55
6.0000	45.417	48.831	39.700	35.413	32.673	30.966	27.949	25.845	22.153	20.446	19.572	17.984	617.46
7.0000	42.907	46.350	37.836	33.901	31.329	29.777	26.940	24.934	21.567	19.826	19.032	17.518	720.37
8.0000	40.754	44.117	36.161	32.545	30.123	28.640	26.036	24.047	20.901	19.274	18.515	17.068	823.28
9.0000	38.919	42.107	34.656	31.295	29.007	27.621	25.126	23.254	20.274	18.714	17.987	16.635	926.19
10.0000	37.229	40.292	33.299	30.202	27.971	26.673	24.275	22.544	19.647	18.215	17.549	16.217	1029.1
11.0000	35.727	38.710	32.071	29.185	27.068	25.817	23.508	21.904	19.114	17.767	17.158	15.811	1132.0
12.0000	34.390	37.238	30.954	28.230	26.218	25.042	22.813	21.296	18.603	17.334	16.715	15.415	1234.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	17.129	7.308	4.842	4.550	4.043	2.668	1.635	1.160	0.766	6.125	7.793	5.947	1.2864
0.0160	19.276	8.129	5.463	5.139	4.568	3.085	1.912	1.362	0.904	6.982	8.884	6.710	1.6466
0.0200	21.223	8.714	6.029	5.679	5.080	3.527	2.199	1.601	1.071	7.837	9.965	7.404	2.0582
0.0250	23.348	9.265	6.656	6.273	5.676	4.072	2.603	1.899	1.375	8.789	11.184	8.172	2.5727
0.0320	26.235	9.956	7.378	7.024	6.416	4.809	3.124	2.354	1.639	10.002	12.756	9.155	3.2931
0.0400	29.169	10.605	8.124	7.819	7.201	5.625	3.727	2.856	2.029	11.276	14.384	10.187	4.1164
0.0500	32.618	11.471	9.056	8.810	8.199	6.612	4.454	3.469	2.513	12.752	16.260	11.451	5.1455
0.0600	36.416	12.462	10.107	9.769	9.235	7.599	5.168	4.067	2.987	14.185	18.110	12.735	6.1746
0.0700	40.260	13.634	11.164	10.843	10.285	8.575	5.843	4.644	3.432	15.605	19.905	14.109	7.2037
0.0800	44.378	14.899	12.290	11.945	11.370	9.554	6.548	5.218	3.875	17.035	21.703	15.552	8.2328
0.0900	48.467	16.260	13.448	13.106	12.478	10.526	7.236	5.789	4.287	18.458	23.469	17.038	9.2619
0.1000	52.975	17.774	14.735	14.271	13.577	11.507	7.946	6.325	4.690	19.873	25.272	18.570	10.291
0.1250	65.033	21.705	17.937	17.282	16.512	13.940	9.599	7.650	5.684	23.490	29.895	22.589	12.864
0.1600	83.216	27.745	22.767	21.941	20.813	17.338	11.891	9.467	7.025	28.684	36.442	28.741	16.466
0.2000	104.384	34.653	28.381	27.255	25.767	20.941	14.244	11.310	8.355	34.313	43.540	35.822	20.582
0.2500	130.407	43.164	35.008	33.709	31.471	24.878	16.818	13.185	9.696	40.758	51.658	44.464	25.727
0.3200	162.982	53.203	43.270	41.294	37.782	28.947	19.316	15.064	11.003	48.346	61.407	54.821	32.931
0.4000	191.685	63.281	50.256	47.768	43.252	32.285	21.350	16.619	12.103	55.079	70.131	63.772	41.164
0.5000	217.926	72.414	56.258	53.525	47.889	35.217	23.227	18.138	13.219	61.245	78.187	71.799	51.455
0.6000	234.665	78.714	59.572	56.615	50.591	36.992	24.538	19.143	14.006	65.115	83.555	76.386	61.746
0.7000	240.621	82.689	60.821	57.804	51.729	37.778	25.277	19.673	14.539	67.209	86.373	78.104	72.037
0.8000	240.562	84.422	61.022	58.194	52.006	38.031	25.736	20.081	14.917	68.193	87.537	78.439	82.328
0.9000	237.570	84.677	60.665	57.823	51.417	37.926	25.878	20.448	15.188	68.514	87.859	77.804	92.619
1.0000	234.910	84.943	60.623	57.529	51.253	37.960	26.150	20.833	15.472	68.555	87.819	77.228	102.91
1.2500	226.462	84.798	60.375	57.641	51.216	38.412	26.975	21.780	16.449	68.212	86.621	76.414	128.64
1.6000	212.046	83.036	59.955	57.328	51.323	39.172	28.101	22.847	17.686	66.851	83.646	74.498	164.66
2.0000	195.863	80.285	59.516	56.677	51.284	39.835	29.096	23.891	18.782	65.288	80.427	72.148	205.82
2.5000	177.422	76.273	58.249	55.433	51.161	40.460	30.040	25.017	19.901	63.177	76.461	68.998	257.27
3.2000	159.970	71.072	56.355	53.796	49.956	40.449	30.760	25.595	20.522	60.469	72.078	65.588	329.31
4.0000	145.084	65.596	53.637	51.439	48.361	39.568	30.336	25.544	20.664	57.418	67.662	61.859	411.64
5.0000	132.791	60.340	50.486	48.606	45.809	37.958	29.523	24.930	20.461	54.035	63.264	57.960	514.55
6.0000	123.468	56.136	47.720	45.894	43.472	36.286	28.346	24.098	19.850	50.975	59.511	54.508	617.46
7.0000	116.158	52.744	45.328	43.701	41.317	34.734	27.318	23.307	19.259	48.393	56.339	51.760	720.37
8.0000	109.931	49.722	43.213	41.694	39.380	33.232	26.145	22.420	18.623	46.070	53.519	49.288	823.28
9.0000	104.315	47.410	41.276	39.855	37.706	31.884	25.126	21.591	18.021	43.944	50.979	47.028	926.19
10.0000	99.565	45.454	39.659	38.294	36.230	30.635	24.209	20.812	17.416	42.090	48.750	45.087	1029.1
11.0000	95.251	43.681	38.196	36.882	34.893	29.505	23.380	20.108	16.837	40.441	46.791	43.360	1132.0
12.0000	91.314	42.066	36.866	35.597	33.678	28.478	22.627	19.470	16.313	38.940	44.976	41.788	1234.9

$^{103}_{45}$Rh IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=103
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.112	0.112	0.141	0.187	0.199	0.241	0.258	0.285	0.394	0.451	0.482	0.569	1.2864
0.0160	0.141	0.143	0.180	0.239	0.256	0.309	0.330	0.364	0.506	0.581	0.623	0.737	1.6466
0.0200	0.172	0.177	0.223	0.298	0.321	0.385	0.411	0.451	0.630	0.724	0.777	0.920	2.0582
0.0250	0.209	0.217	0.276	0.370	0.401	0.479	0.509	0.558	0.782	0.898	0.964	1.139	2.5727
0.0320	0.258	0.271	0.346	0.468	0.511	0.606	0.643	0.702	0.989	1.135	1.217	1.435	3.2931
0.0400	0.309	0.329	0.422	0.575	0.633	0.744	0.790	0.861	1.219	1.396	1.497	1.760	4.1164
0.0500	0.368	0.396	0.511	0.701	0.777	0.908	0.964	1.048	1.493	1.708	1.831	2.146	5.1455
0.0600	0.422	0.458	0.594	0.819	0.914	1.063	1.128	1.224	1.753	2.003	2.147	2.511	6.1746
0.0700	0.473	0.516	0.672	0.930	1.043	1.208	1.283	1.390	1.998	2.281	2.444	2.855	7.2037
0.0800	0.520	0.570	0.745	1.035	1.165	1.345	1.429	1.547	2.231	2.544	2.726	3.180	8.2328
0.0900	0.566	0.620	0.815	1.134	1.281	1.475	1.568	1.696	2.451	2.792	2.992	3.487	9.2619
0.1000	0.609	0.668	0.881	1.229	1.391	1.598	1.701	1.837	2.659	3.028	3.245	3.779	10.291
0.1250	0.708	0.776	1.036	1.446	1.646	1.882	2.006	2.163	3.136	3.569	3.823	4.445	12.864
0.1600	0.833	0.907	1.229	1.714	1.961	2.233	2.385	2.567	3.722	4.234	4.530	5.256	16.466
0.2000	0.962	1.036	1.426	1.985	2.277	2.585	2.766	2.972	4.305	4.893	5.230	6.057	20.582
0.2500	1.107	1.176	1.646	2.283	2.625	2.971	3.185	3.419	4.938	5.607	5.990	6.925	25.727
0.3200	1.290	1.347	1.919	2.648	3.050	3.439	3.696	3.965	5.701	6.466	6.904	7.967	32.931
0.4000	1.479	1.519	2.197	3.014	3.475	3.906	4.206	4.510	6.453	7.311	7.803	8.988	41.164
0.5000	1.697	1.714	2.509	3.420	3.944	4.419	4.768	5.112	7.271	8.229	8.779	10.097	51.455
0.6000	1.901	1.895	2.796	3.788	4.366	4.878	5.273	5.653	7.998	9.042	9.642	11.073	61.746
0.7000	2.095	2.068	3.066	4.131	4.755	5.305	5.738	6.153	8.662	9.784	10.428	11.958	72.037
0.8000	2.283	2.235	3.322	4.455	5.124	5.705	6.180	6.627	9.287	10.482	11.167	12.791	82.328
0.9000	2.465	2.400	3.569	4.763	5.475	6.084	6.599	7.077	9.877	11.138	11.862	13.572	92.619
1.0000	2.645	2.563	3.808	5.060	5.812	6.446	7.001	7.508	10.438	11.762	12.522	14.312	102.91
1.2500	3.084	2.968	4.384	5.767	6.610	7.304	7.951	8.532	11.752	13.221	14.065	16.037	128.64
1.6000	3.690	3.541	5.161	6.707	7.663	8.433	9.204	9.885	13.457	15.108	16.061	18.265	164.66
2.0000	4.387	4.207	6.034	7.744	8.821	9.670	10.580	11.372	15.303	17.139	18.210	20.655	205.82
2.5000	5.276	5.057	7.125	9.023	10.239	11.181	12.267	13.192	17.534	19.587	20.795	23.514	257.27
3.2000	6.570	6.287	8.678	10.820	12.220	13.288	14.620	15.731	20.599	22.947	24.334	27.414	329.31
4.0000	8.127	7.755	10.514	12.920	14.519	15.731	17.338	18.673	24.099	26.772	28.356	31.838	411.64
5.0000	10.194	9.690	12.916	15.641	17.482	18.874	20.826	22.449	28.535	31.624	33.434	37.411	514.55
6.0000	12.395	11.739	15.445	18.485	20.567	22.136	24.443	26.360	33.098	36.596	38.625	43.079	617.46
7.0000	14.727	13.903	18.101	21.456	23.785	25.526	28.194	30.415	37.807	41.709	43.958	48.878	720.37
8.0000	17.189	16.180	20.884	24.555	27.136	29.051	32.081	34.619	42.655	46.974	49.442	54.831	823.28
9.0000	19.773	18.568	23.792	27.781	30.618	32.711	36.106	38.972	47.656	52.394	55.083	60.940	926.19
10.0000	22.478	21.067	26.822	31.129	34.232	36.504	40.274	43.467	52.814	57.969	60.876	67.207	1029.1
11.0000	25.300	23.674	29.972	34.596	37.973	40.426	44.583	48.099	58.125	63.691	66.808	73.635	1132.0
12.0000	28.237	26.385	33.239	38.182	41.837	44.475	49.027	52.865	63.584	69.556	72.886	80.228	1234.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.042	0.100	0.124	0.128	0.136	0.188	0.275	0.373	0.515	0.107	0.088	0.100	1.2864
0.0160	0.053	0.127	0.159	0.164	0.175	0.243	0.354	0.480	0.672	0.136	0.112	0.128	1.6466
0.0200	0.065	0.158	0.199	0.206	0.220	0.305	0.444	0.600	0.841	0.170	0.139	0.161	2.0582
0.0250	0.080	0.197	0.250	0.259	0.277	0.382	0.554	0.745	1.040	0.211	0.172	0.202	2.5727
0.0320	0.100	0.252	0.319	0.331	0.354	0.485	0.701	0.937	1.297	0.265	0.216	0.258	3.2931
0.0400	0.122	0.313	0.396	0.410	0.439	0.595	0.860	1.140	1.570	0.324	0.263	0.320	4.1164
0.0500	0.148	0.388	0.488	0.505	0.540	0.723	1.041	1.371	1.878	0.394	0.318	0.394	5.1455
0.0600	0.172	0.460	0.576	0.595	0.635	0.840	1.207	1.580	2.154	0.458	0.369	0.463	6.1746
0.0700	0.195	0.528	0.657	0.679	0.723	0.947	1.359	1.770	2.404	0.518	0.416	0.528	7.2037
0.0800	0.216	0.592	0.733	0.757	0.805	1.045	1.499	1.944	2.633	0.575	0.461	0.588	8.2328
0.0900	0.235	0.651	0.804	0.830	0.881	1.136	1.628	2.104	2.844	0.627	0.502	0.644	9.2619
0.1000	0.254	0.706	0.870	0.897	0.952	1.220	1.748	2.253	3.041	0.676	0.541	0.696	10.291
0.1250	0.294	0.828	1.016	1.048	1.109	1.407	2.015	2.586	3.482	0.788	0.629	0.812	12.864
0.1600	0.340	0.968	1.184	1.222	1.292	1.626	2.329	2.978	4.003	0.920	0.733	0.946	16.466
0.2000	0.383	1.097	1.340	1.384	1.462	1.833	2.629	3.355	4.506	1.046	0.833	1.069	20.582
0.2500	0.426	1.227	1.499	1.549	1.638	2.052	2.950	3.760	5.051	1.180	0.939	1.195	25.727
0.3200	0.474	1.374	1.680	1.738	1.842	2.314	3.338	4.256	5.723	1.340	1.064	1.338	32.931
0.4000	0.520	1.515	1.854	1.921	2.043	2.579	3.735	4.764	6.417	1.497	1.188	1.475	41.164
0.5000	0.571	1.666	2.047	2.124	2.268	2.880	4.190	5.346	7.212	1.674	1.327	1.627	51.455
0.6000	0.616	1.802	2.225	2.311	2.477	3.165	4.615	5.890	7.955	1.836	1.454	1.766	61.746
0.7000	0.659	1.930	2.396	2.490	2.678	3.440	5.028	6.420	8.675	1.992	1.575	1.899	72.037
0.8000	0.702	2.053	2.564	2.668	2.876	3.711	5.431	6.937	9.373	2.144	1.693	2.030	82.328
0.9000	0.745	2.175	2.733	2.845	3.075	3.982	5.829	7.444	10.057	2.294	1.810	2.162	92.619
1.0000	0.789	2.296	2.903	3.023	3.275	4.253	6.225	7.943	10.728	2.444	1.927	2.295	102.91
1.2500	0.900	2.598	3.327	3.469	3.776	4.925	7.191	9.148	12.337	2.819	2.222	2.629	128.64
1.6000	1.064	3.026	3.924	4.094	4.477	5.851	8.496	10.759	14.444	3.351	2.644	3.105	164.66
2.0000	1.265	3.530	4.612	4.815	5.278	6.892	9.934	12.518	16.699	3.973	3.145	3.665	205.82
2.5000	1.541	4.186	5.485	5.732	6.281	8.172	11.672	14.620	19.356	4.774	3.800	4.394	257.27
3.2000	1.968	5.164	6.741	7.050	7.705	9.951	14.039	17.463	22.917	5.938	4.770	5.464	329.31
4.0000	2.508	6.369	8.238	8.614	9.379	12.008	16.733	20.682	26.912	7.335	5.948	6.756	411.64
5.0000	3.250	8.005	10.216	10.673	11.566	14.663	20.172	24.759	31.916	9.183	7.521	8.475	514.55
6.0000	4.054	9.774	12.314	12.852	13.873	17.437	23.730	28.959	37.024	11.144	9.199	10.306	617.46
7.0000	4.914	11.666	14.527	15.151	16.302	20.337	27.429	33.302	42.288	13.217	10.977	12.244	720.37
8.0000	5.825	13.676	16.853	17.562	18.854	23.367	31.281	37.805	47.724	15.397	12.852	14.282	823.28
9.0000	6.786	15.797	19.290	20.088	21.525	26.529	35.297	42.484	53.343	17.685	14.822	16.421	926.19
10.0000	7.796	18.014	21.835	22.723	24.310	29.823	39.471	47.340	59.153	20.079	16.887	18.656	1029.1
11.0000	8.853	20.324	24.479	25.462	27.206	33.246	43.798	52.372	65.164	22.573	19.043	20.984	1132.0
12.0000	9.957	22.726	27.222	28.303	30.208	36.797	48.273	57.574	71.375	25.167	21.286	23.402	1234.9

$^{106}_{46}Pd$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=106 MEV
0.0125	7.600	6.287	4.606	3.063	2.487	2.257	2.091	1.935	1.230	1.052	0.967	0.829	1.3237
0.0160	8.718	7.212	5.284	3.514	2.853	2.589	2.399	2.219	1.411	1.207	1.110	0.951	1.6944
0.0200	9.870	8.165	5.982	3.978	3.230	2.931	2.716	2.512	1.597	1.367	1.256	1.077	2.1180
0.0250	11.174	9.244	6.772	4.503	3.657	3.318	3.075	2.844	1.808	1.547	1.426	1.219	2.6475
0.0320	12.803	10.612	7.769	5.166	4.203	3.822	3.527	3.263	2.074	1.779	1.639	1.406	3.3888
0.0400	14.459	12.040	8.795	5.866	4.784	4.362	4.019	3.720	2.366	2.036	1.873	1.609	4.2360
0.0500	16.309	13.671	9.957	6.671	5.466	4.978	4.590	4.252	2.698	2.345	2.161	1.857	5.2950
0.0600	17.984	15.218	11.019	7.427	6.105	5.543	5.124	4.749	3.041	2.645	2.441	2.099	6.3540
0.0700	19.509	16.688	12.006	8.140	6.723	6.099	5.643	5.234	3.362	2.941	2.725	2.341	7.4130
0.0800	20.922	18.129	12.931	8.832	7.306	6.621	6.116	5.690	3.685	3.233	2.987	2.573	8.4720
0.0900	22.242	19.522	13.806	9.499	7.870	7.152	6.586	6.130	4.018	3.514	3.258	2.810	9.5310
0.1000	23.496	20.890	14.639	10.145	8.432	7.642	7.027	6.573	4.333	3.792	3.513	3.030	10.590
0.1250	26.352	24.313	16.573	11.668	9.745	8.834	8.121	7.607	5.096	4.458	4.168	3.605	13.237
0.1600	29.830	28.993	19.012	13.613	11.445	10.381	9.525	8.936	6.084	5.342	5.010	4.373	16.944
0.2000	33.319	33.814	21.524	15.648	13.237	11.989	10.999	10.310	7.146	6.306	5.919	5.166	21.180
0.2500	37.111	39.036	24.367	18.007	15.303	13.889	12.720	11.916	8.407	7.432	6.969	6.092	26.475
0.3200	41.527	45.117	27.833	20.958	17.897	16.338	14.891	13.916	9.964	8.851	8.308	7.306	33.888
0.4000	45.621	50.644	31.204	23.778	20.470	18.723	17.069	15.945	11.608	10.329	9.705	8.519	42.360
0.5000	49.648	55.793	34.719	26.838	23.262	21.352	19.443	18.123	13.401	11.943	11.232	9.895	52.950
0.6000	52.728	59.385	37.609	29.448	25.650	23.619	21.437	19.971	14.931	13.351	12.580	11.170	63.540
0.7000	55.048	61.794	39.918	31.536	27.584	25.428	23.033	21.476	16.207	14.490	13.692	12.135	74.130
0.8000	56.727	63.244	41.773	33.293	29.199	27.027	24.437	22.766	17.294	15.539	14.662	13.033	84.720
0.9000	58.063	64.163	43.266	34.699	30.589	28.382	25.613	23.839	18.301	16.441	15.532	13.845	95.310
1.0000	59.009	64.612	44.468	35.975	31.750	29.483	26.637	24.769	19.121	17.209	16.275	14.541	105.90
1.2500	60.355	64.636	46.534	38.158	33.970	31.643	28.525	26.478	20.801	18.753	17.730	15.868	132.37
1.6000	60.715	63.640	47.958	40.045	35.777	33.427	30.118	27.816	22.300	20.190	19.087	17.121	169.44
2.0000	59.981	62.595	48.411	41.004	36.841	34.565	30.983	28.708	23.237	21.204	20.042	18.057	211.80
2.5000	58.322	61.110	48.080	41.301	37.359	35.099	31.397	29.137	23.944	21.780	20.675	18.751	264.75
3.2000	55.739	58.880	46.879	40.785	37.128	34.925	31.315	28.971	24.189	22.127	21.002	19.080	338.88
4.0000	52.824	56.255	45.148	39.685	36.344	34.222	30.836	28.443	24.064	22.032	20.994	19.098	423.60
5.0000	49.548	53.111	42.935	38.041	35.035	33.060	29.797	27.565	23.615	21.554	20.652	18.849	529.50
6.0000	46.745	50.259	40.861	36.448	33.628	31.871	28.766	26.600	22.800	21.043	20.144	18.510	635.40
7.0000	44.198	47.744	38.975	34.922	32.271	30.673	27.750	25.685	22.216	20.423	19.604	18.045	741.30
8.0000	42.010	45.476	37.276	33.548	31.051	29.522	26.838	24.788	21.545	19.868	19.085	17.594	847.20
9.0000	40.142	43.430	35.745	32.278	29.919	28.489	25.915	23.985	20.911	19.302	18.552	17.158	953.10
10.0000	38.418	41.579	34.363	31.167	28.865	27.525	25.050	23.264	20.274	18.796	18.109	16.735	1059.0
11.0000	36.884	39.963	33.110	30.130	27.945	26.653	24.269	22.614	19.733	18.343	17.714	16.323	1164.9
12.0000	35.517	38.458	31.969	29.155	27.077	25.863	23.561	21.994	19.213	17.902	17.263	15.920	1270.8

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	17.273	7.370	4.882	4.588	4.076	2.690	1.649	1.170	0.772	6.177	7.858	5.997	1.3237
0.0160	19.445	8.201	5.511	5.183	4.608	3.112	1.929	1.374	0.912	7.043	8.961	6.769	1.6944
0.0200	21.415	8.793	6.084	5.731	5.126	3.559	2.219	1.615	1.080	7.908	10.056	7.471	2.1180
0.0250	23.567	9.352	6.718	6.332	5.729	4.111	2.628	1.917	1.388	8.872	11.289	8.249	2.6475
0.0320	26.491	10.053	7.450	7.093	6.479	4.855	3.154	2.377	1.655	10.099	12.880	9.245	3.3888
0.0400	29.463	10.712	8.206	7.898	7.273	5.682	3.764	2.885	2.049	11.389	14.529	10.290	4.2360
0.0500	32.957	11.590	9.150	8.901	8.284	6.681	4.501	3.505	2.539	12.884	16.429	11.570	5.2950
0.0600	36.805	12.595	10.215	9.873	9.333	7.680	5.223	4.110	3.019	14.336	18.303	12.871	6.3540
0.0700	40.699	13.782	11.285	10.961	10.397	8.668	5.907	4.694	3.470	15.775	20.121	14.263	7.4130
0.0800	44.870	15.065	12.427	12.078	11.496	9.659	6.621	5.276	3.918	17.224	21.944	15.724	8.4720
0.0900	49.012	16.443	13.599	13.254	12.619	10.645	7.317	5.854	4.335	18.666	23.733	17.230	9.5310
0.1000	53.580	17.977	14.903	14.434	13.732	11.638	8.037	6.397	4.743	20.100	25.560	18.782	10.590
0.1250	65.796	21.960	18.148	17.485	16.706	14.104	9.712	7.740	5.751	23.766	30.246	22.855	13.237
0.1600	84.223	28.081	23.042	22.206	21.065	17.548	12.035	9.582	7.110	29.031	36.883	29.088	16.944
0.2000	105.681	35.084	28.734	27.593	26.087	21.201	14.421	11.451	8.459	34.739	44.080	36.267	21.180
0.2500	132.070	43.715	35.454	34.138	31.872	25.196	17.033	13.353	9.820	41.278	52.316	45.031	26.475
0.3200	165.327	53.968	43.892	41.888	38.326	29.364	19.594	15.280	11.161	49.042	62.290	55.610	33.888
0.4000	194.714	64.281	51.050	48.523	43.935	32.796	21.687	16.881	12.294	55.949	71.239	64.780	42.360
0.5000	221.506	73.604	57.182	54.404	48.676	35.795	23.609	18.436	13.436	62.251	79.471	72.979	52.950
0.6000	238.819	80.108	60.626	57.617	51.487	37.647	24.973	19.482	14.254	66.268	85.035	77.738	63.540
0.7000	245.099	84.228	61.953	58.880	52.692	38.481	25.747	20.039	14.810	68.460	87.980	79.558	74.130
0.8000	245.206	86.052	62.200	59.317	53.010	38.765	26.233	20.469	15.205	69.510	89.227	79.953	84.720
0.9000	242.288	86.359	61.870	58.971	52.438	38.680	26.392	20.854	15.489	69.874	89.603	79.349	95.310
1.0000	239.684	86.669	61.855	58.698	52.295	38.732	26.681	21.256	15.786	69.949	89.604	78.798	105.90
1.2500	231.275	86.600	61.658	58.866	52.304	39.228	27.548	22.243	16.799	69.662	88.461	78.038	132.37
1.6000	216.770	84.886	61.290	58.605	52.466	40.045	28.727	23.356	18.080	68.340	85.509	76.157	169.44
2.0000	200.421	82.153	60.901	57.996	52.477	40.762	29.773	24.447	19.219	66.807	82.298	73.827	211.80
2.5000	181.744	78.131	59.668	56.783	52.408	41.445	30.771	25.627	20.386	64.716	78.323	70.678	264.75
3.2000	164.076	72.896	57.801	55.176	51.238	41.488	31.549	26.252	21.049	62.021	73.928	67.271	338.88
4.0000	148.989	67.361	55.081	52.824	49.663	40.633	31.152	26.231	21.220	58.964	69.483	63.524	423.60
5.0000	136.535	62.042	51.909	49.977	47.100	39.028	30.355	25.632	21.038	55.559	65.047	59.594	529.50
6.0000	127.077	57.777	49.115	47.235	44.743	37.347	29.175	24.803	20.430	52.465	61.250	56.102	635.40
7.0000	119.653	54.331	46.692	45.016	42.561	35.779	28.140	24.009	19.838	49.849	58.034	53.318	741.30
8.0000	113.318	51.254	44.544	42.979	40.593	34.256	26.950	23.111	19.197	47.489	55.168	50.807	847.20
9.0000	107.592	48.899	42.572	41.107	38.890	32.885	25.915	22.269	18.587	45.325	52.581	48.506	953.10
10.0000	102.745	46.905	40.926	39.517	37.387	31.614	24.982	21.477	17.972	43.435	50.307	46.527	1059.0
11.0000	98.336	45.095	39.434	38.076	36.023	30.461	24.137	20.760	17.383	41.751	48.307	44.764	1164.9
12.0000	94.308	43.445	38.075	36.764	34.782	29.411	23.369	20.108	16.847	40.217	46.450	43.158	1270.8

$^{106}_{46}Pd$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=106 MEV
0.0125	0.113	0.113	0.142	0.188	0.200	0.242	0.259	0.285	0.393	0.449	0.480	0.566	1.3237
0.0160	0.142	0.144	0.181	0.240	0.257	0.310	0.331	0.364	0.505	0.580	0.621	0.735	1.6944
0.0200	0.174	0.178	0.225	0.300	0.322	0.387	0.412	0.452	0.630	0.723	0.776	0.918	2.1180
0.0250	0.212	0.220	0.278	0.373	0.403	0.481	0.511	0.560	0.783	0.898	0.963	1.138	2.6475
0.0320	0.261	0.274	0.349	0.472	0.514	0.609	0.646	0.705	0.991	1.136	1.218	1.435	3.3888
0.0400	0.313	0.333	0.426	0.580	0.637	0.749	0.795	0.865	1.222	1.399	1.499	1.762	4.2360
0.0500	0.372	0.401	0.516	0.707	0.783	0.915	0.971	1.054	1.499	1.714	1.836	2.151	5.2950
0.0600	0.428	0.464	0.600	0.827	0.921	1.071	1.137	1.233	1.761	2.011	2.155	2.519	6.3540
0.0700	0.479	0.522	0.679	0.939	1.052	1.218	1.293	1.401	2.010	2.292	2.455	2.867	7.4130
0.0800	0.528	0.577	0.754	1.046	1.175	1.357	1.441	1.560	2.245	2.558	2.740	3.195	8.4720
0.0900	0.573	0.628	0.825	1.146	1.293	1.489	1.582	1.711	2.467	2.809	3.009	3.506	9.5310
0.1000	0.617	0.677	0.892	1.242	1.405	1.614	1.716	1.854	2.678	3.048	3.265	3.801	10.590
0.1250	0.718	0.787	1.049	1.462	1.663	1.902	2.026	2.184	3.162	3.596	3.851	4.476	13.237
0.1600	0.846	0.920	1.245	1.735	1.982	2.258	2.410	2.593	3.756	4.270	4.568	5.298	16.944
0.2000	0.976	1.051	1.445	2.009	2.303	2.615	2.797	3.005	4.347	4.938	5.278	6.110	21.180
0.2500	1.124	1.193	1.668	2.312	2.657	3.007	3.222	3.458	4.989	5.663	6.049	6.990	26.475
0.3200	1.309	1.366	1.945	2.682	3.088	3.482	3.741	4.012	5.763	6.534	6.976	8.046	33.888
0.4000	1.501	1.541	2.227	3.053	3.518	3.954	4.257	4.565	6.525	7.390	7.886	9.081	42.360
0.5000	1.721	1.738	2.543	3.465	3.993	4.474	4.826	5.174	7.353	8.319	8.873	10.203	52.950
0.6000	1.928	1.921	2.833	3.836	4.420	4.939	5.337	5.721	8.088	9.141	9.746	11.190	63.540
0.7000	2.124	2.096	3.106	4.183	4.813	5.370	5.807	6.226	8.758	9.891	10.540	12.084	74.130
0.8000	2.313	2.265	3.365	4.510	5.185	5.774	6.253	6.704	9.390	10.596	11.287	12.926	84.720
0.9000	2.498	2.431	3.614	4.821	5.540	6.156	6.676	7.159	9.985	11.258	11.988	13.714	95.310
1.0000	2.679	2.596	3.855	5.121	5.879	6.522	7.081	7.594	10.551	11.887	12.654	14.460	105.90
1.2500	3.121	3.004	4.436	5.834	6.684	7.387	8.040	8.626	11.876	13.358	14.209	16.199	132.37
1.6000	3.732	3.581	5.219	6.780	7.744	8.524	9.301	9.988	13.593	15.258	16.219	18.442	169.44
2.0000	4.433	4.251	6.096	7.824	8.909	9.768	10.686	11.485	15.451	17.302	18.381	20.848	211.80
2.5000	5.327	5.106	7.193	9.109	10.335	11.287	12.382	13.314	17.693	19.763	20.979	23.722	264.75
3.2000	6.626	6.341	8.753	10.913	12.323	13.402	14.743	15.863	20.770	23.136	24.533	27.636	338.88
4.0000	8.187	7.812	10.594	13.018	14.629	15.851	17.468	18.813	24.279	26.971	28.566	32.072	423.60
5.0000	10.257	9.750	12.999	15.744	17.596	19.000	20.962	22.595	28.721	31.830	33.651	37.653	529.50
6.0000	12.458	11.800	15.528	18.589	20.682	22.263	24.580	26.506	33.286	36.803	38.843	43.323	635.40
7.0000	14.789	13.963	18.182	21.558	23.898	25.651	28.329	30.559	37.992	41.913	44.174	49.119	741.30
8.0000	17.247	16.236	20.962	24.653	27.244	29.171	32.210	34.757	42.834	47.171	49.650	55.063	847.20
9.0000	19.827	18.620	23.864	27.872	30.720	32.823	36.227	39.101	47.825	52.581	55.279	61.160	953.10
10.0000	22.524	21.112	26.886	31.211	34.324	36.606	40.384	43.585	52.969	58.141	61.058	67.411	1059.0
11.0000	25.338	23.711	30.027	34.668	38.054	40.517	44.680	48.203	58.265	63.846	66.972	73.820	1164.9
12.0000	28.265	26.413	33.282	38.242	41.905	44.551	49.110	52.953	63.704	69.691	73.029	80.390	1270.8

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.043	0.101	0.125	0.129	0.137	0.189	0.275	0.372	0.512	0.108	0.089	0.101	1.3237
0.0160	0.054	0.128	0.160	0.166	0.176	0.244	0.355	0.480	0.669	0.138	0.114	0.130	1.6944
0.0200	0.066	0.160	0.201	0.208	0.222	0.307	0.445	0.600	0.839	0.172	0.141	0.163	2.1180
0.0250	0.081	0.199	0.252	0.261	0.279	0.384	0.555	0.746	1.038	0.213	0.174	0.204	2.6475
0.0320	0.101	0.254	0.322	0.334	0.357	0.488	0.704	0.939	1.296	0.268	0.218	0.260	3.3888
0.0400	0.123	0.317	0.400	0.414	0.443	0.600	0.864	1.144	1.571	0.328	0.266	0.323	4.2360
0.0500	0.150	0.392	0.493	0.511	0.546	0.729	1.048	1.377	1.882	0.398	0.322	0.398	5.2950
0.0600	0.174	0.465	0.582	0.601	0.641	0.847	1.215	1.588	2.161	0.464	0.373	0.468	6.3540
0.0700	0.197	0.534	0.664	0.686	0.731	0.956	1.369	1.780	2.414	0.525	0.422	0.534	7.4130
0.0800	0.219	0.599	0.742	0.766	0.813	1.056	1.511	1.957	2.645	0.582	0.467	0.595	8.4720
0.0900	0.239	0.660	0.814	0.839	0.891	1.148	1.642	2.119	2.860	0.635	0.509	0.652	9.5310
0.1000	0.257	0.716	0.880	0.908	0.962	1.233	1.763	2.270	3.059	0.685	0.548	0.705	10.590
0.1250	0.298	0.840	1.028	1.061	1.122	1.423	2.034	2.608	3.505	0.798	0.637	0.823	13.237
0.1600	0.345	0.982	1.199	1.238	1.308	1.645	2.353	3.006	4.034	0.932	0.743	0.958	16.944
0.2000	0.388	1.112	1.358	1.402	1.481	1.855	2.658	3.388	4.545	1.061	0.844	1.084	21.180
0.2500	0.432	1.244	1.519	1.570	1.659	2.078	2.983	3.799	5.098	1.197	0.952	1.211	26.475
0.3200	0.481	1.394	1.703	1.762	1.867	2.344	3.378	4.302	5.780	1.359	1.080	1.357	33.888
0.4000	0.528	1.536	1.880	1.947	2.070	2.612	3.780	4.817	6.482	1.518	1.205	1.496	42.360
0.5000	0.579	1.690	2.075	2.152	2.298	2.917	4.240	5.406	7.287	1.697	1.345	1.649	52.950
0.6000	0.625	1.828	2.255	2.341	2.509	3.205	4.670	5.957	8.039	1.862	1.474	1.790	63.540
0.7000	0.668	1.956	2.427	2.523	2.712	3.483	5.087	6.492	8.767	2.019	1.596	1.924	74.130
0.8000	0.712	2.081	2.598	2.702	2.912	3.757	5.494	7.014	9.472	2.172	1.716	2.057	84.720
0.9000	0.755	2.203	2.768	2.881	3.113	4.030	5.896	7.527	10.161	2.324	1.834	2.190	95.310
1.0000	0.799	2.326	2.939	3.061	3.315	4.303	6.295	8.029	10.838	2.475	1.952	2.324	105.90
1.2500	0.911	2.630	3.367	3.510	3.820	4.981	7.269	9.244	12.460	2.853	2.249	2.660	132.37
1.6000	1.076	3.062	3.968	4.139	4.526	5.914	8.584	10.867	14.582	3.389	2.674	3.140	169.44
2.0000	1.279	3.568	4.661	4.865	5.332	6.961	10.030	12.637	16.851	4.015	3.178	3.704	211.80
2.5000	1.556	4.228	5.538	5.786	6.341	8.248	11.777	14.749	19.522	4.819	3.837	4.436	264.75
3.2000	1.985	5.210	6.799	7.110	7.770	10.033	14.154	17.604	23.097	5.989	4.810	5.510	338.88
4.0000	2.526	6.418	8.300	8.678	9.449	12.096	16.855	20.831	27.103	7.389	5.992	6.806	423.60
5.0000	3.269	8.057	10.281	10.740	11.638	14.755	20.298	24.914	32.114	9.239	7.567	8.527	529.50
6.0000	4.073	9.826	12.379	12.920	13.946	17.530	23.858	29.115	37.223	11.201	9.245	10.359	635.40
7.0000	4.932	11.717	14.591	15.217	16.373	20.428	27.555	33.456	42.484	13.273	11.022	12.296	741.30
8.0000	5.842	13.724	16.913	17.625	18.922	23.453	31.401	37.953	47.912	15.450	12.894	14.331	847.20
9.0000	6.802	15.840	19.346	20.146	21.588	26.609	35.410	42.622	53.520	17.733	14.861	16.465	953.10
10.0000	7.809	18.052	21.884	22.774	24.366	29.895	39.573	47.466	59.315	20.121	16.921	18.695	1059.0
11.0000	8.863	20.355	24.521	25.505	27.252	33.308	43.886	52.482	65.308	22.608	19.069	21.016	1164.9
12.0000	9.963	22.748	27.254	28.336	30.245	36.847	48.346	57.667	71.498	25.193	21.306	23.426	1270.8

$^{107}_{47}Ag$ IONS

ENERGY PER MASS UNIT	ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)												ENERGY FOR A=107
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	7.662	6.338	4.643	3.088	2.507	2.275	2.108	1.950	1.240	1.061	0.975	0.836	1.3364
0.0160	8.792	7.273	5.329	3.543	2.877	2.611	2.419	2.238	1.423	1.218	1.119	0.959	1.7106
0.0200	9.957	8.237	6.034	4.013	3.259	2.957	2.740	2.534	1.611	1.379	1.267	1.086	2.1382
0.0250	11.276	9.328	6.834	4.544	3.690	3.349	3.103	2.870	1.825	1.562	1.439	1.230	2.6727
0.0320	12.924	10.712	7.842	5.215	4.243	3.858	3.560	3.294	2.094	1.796	1.655	1.419	3.4211
0.0400	14.600	12.158	8.881	5.924	4.831	4.405	4.059	3.757	2.389	2.056	1.892	1.625	4.2764
0.0500	16.474	13.809	10.057	6.738	5.522	5.029	4.636	4.295	2.726	2.369	2.182	1.876	5.3455
0.0600	18.170	15.375	11.133	7.504	6.168	5.600	5.177	4.799	3.073	2.672	2.466	2.121	6.4146
0.0700	19.715	16.864	12.133	8.226	6.794	6.163	5.702	5.290	3.397	2.972	2.754	2.366	7.4837
0.0800	21.148	18.324	13.070	8.927	7.385	6.692	6.182	5.751	3.725	3.268	3.019	2.601	8.5528
0.0900	22.485	19.736	13.957	9.603	7.956	7.230	6.658	6.197	4.062	3.552	3.294	2.840	9.6219
0.1000	23.757	21.122	14.802	10.258	8.526	7.726	7.105	6.646	4.381	3.834	3.552	3.064	10.691
0.1250	26.652	24.590	16.762	11.801	9.856	8.934	8.214	7.694	5.154	4.509	4.216	3.646	13.364
0.1600	30.181	29.334	19.236	13.773	11.580	10.503	9.637	9.041	6.155	5.405	5.069	4.424	17.106
0.2000	33.721	34.222	21.784	15.837	13.397	12.134	11.131	10.434	7.232	6.383	5.991	5.228	21.382
0.2500	37.572	39.520	24.669	18.231	15.492	14.062	12.877	12.063	8.511	7.524	7.055	6.167	26.727
0.3200	42.106	45.747	28.221	21.251	18.146	16.566	15.099	14.111	10.103	8.974	8.424	7.408	34.211
0.4000	46.321	51.422	31.683	24.143	20.784	19.010	17.331	16.190	11.786	10.487	9.854	8.650	42.764
0.5000	50.441	56.685	35.274	27.267	23.633	21.693	19.753	18.413	13.616	12.134	11.411	10.053	53.455
0.6000	53.637	60.409	38.258	29.956	26.092	24.026	21.807	20.315	15.188	13.581	12.797	11.363	64.146
0.7000	56.046	62.915	40.643	32.108	28.084	25.889	23.451	21.866	16.501	14.753	13.940	12.355	74.837
0.8000	57.795	64.435	42.559	33.920	29.749	27.536	24.897	23.195	17.620	15.832	14.938	13.278	85.528
0.9000	59.188	65.406	44.104	35.372	31.182	28.932	26.110	24.301	18.656	16.760	15.833	14.113	96.219
1.0000	60.180	65.894	45.351	36.689	32.380	30.067	27.165	25.260	19.501	17.551	16.598	14.830	106.91
1.2500	61.608	65.978	47.501	38.951	34.675	32.300	29.118	27.028	21.233	19.143	18.098	16.198	133.64
1.6000	62.038	65.027	49.003	40.918	36.557	34.155	30.774	28.422	22.787	20.630	19.503	17.494	171.06
2.0000	61.348	64.021	49.514	41.938	37.680	35.353	31.689	29.362	23.767	21.687	20.499	18.469	213.82
2.5000	59.713	62.568	49.227	42.286	38.250	35.936	32.146	29.832	24.515	22.300	21.168	19.199	267.27
3.2000	57.140	60.360	48.057	41.810	38.061	35.803	32.102	29.699	24.797	22.683	21.530	19.559	342.11
4.0000	54.216	57.738	46.338	40.731	37.302	35.124	31.649	29.193	24.698	22.613	21.547	19.601	427.64
5.0000	50.915	54.577	44.121	39.091	36.003	33.973	30.620	28.326	24.266	22.149	21.222	19.369	534.55
6.0000	48.083	51.697	42.030	37.491	34.591	32.784	29.589	27.362	23.453	21.646	20.721	19.040	641.46
7.0000	45.500	49.151	40.123	35.950	33.222	31.577	28.568	26.441	22.870	21.025	20.182	18.577	748.37
8.0000	43.277	46.848	38.400	34.560	31.987	30.413	27.648	25.536	22.195	20.467	19.661	18.125	855.28
9.0000	41.377	44.766	36.845	33.271	30.839	29.365	26.712	24.723	21.554	19.896	19.122	17.685	962.19
10.0000	39.619	42.880	35.438	32.142	29.768	28.386	25.834	23.991	20.908	19.384	18.676	17.258	1069.1
11.0000	38.054	41.231	34.160	31.086	28.831	27.499	25.039	23.331	20.359	18.925	18.276	16.841	1176.0
12.0000	36.658	39.694	32.996	30.092	27.947	26.693	24.318	22.701	19.830	18.478	17.818	16.432	1282.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	17.413	7.430	4.922	4.625	4.109	2.712	1.662	1.179	0.778	6.227	7.922	6.046	1.3364
0.0160	19.609	8.270	5.558	5.227	4.647	3.139	1.945	1.385	0.920	7.103	9.037	6.826	1.7106
0.0200	21.603	8.871	6.137	5.781	5.172	3.590	2.239	1.629	1.090	7.978	10.144	7.537	2.1382
0.0250	23.782	9.438	6.779	6.390	5.781	4.148	2.652	1.934	1.401	8.952	11.392	8.324	2.6727
0.0320	26.742	10.148	7.521	7.160	6.540	4.901	3.184	2.400	1.670	10.195	13.002	9.332	3.4211
0.0400	29.751	10.817	8.286	7.975	7.345	5.737	3.801	2.913	2.069	11.501	14.671	10.391	4.2764
0.0500	33.290	11.707	9.243	8.991	8.368	6.749	4.546	3.540	2.565	13.014	16.595	11.687	5.3455
0.0600	37.186	12.726	10.321	9.976	9.430	7.760	5.277	4.153	3.051	14.485	18.493	13.004	6.4146
0.0700	41.129	13.928	11.405	11.077	10.507	8.760	5.969	4.744	3.506	15.942	20.334	14.413	7.4837
0.0800	45.354	15.227	12.560	12.208	11.619	9.763	6.692	5.333	3.960	17.410	22.180	15.893	8.5528
0.0900	49.548	16.623	13.748	13.399	12.757	10.761	7.397	5.918	4.383	18.870	23.993	17.419	9.6219
0.1000	54.174	18.176	15.068	14.594	13.884	11.767	8.126	6.468	4.796	20.323	25.844	18.990	10.691
0.1250	66.547	22.210	18.355	17.684	16.897	14.265	9.823	7.828	5.817	24.037	30.591	23.115	13.364
0.1600	85.214	28.411	23.314	22.467	21.313	17.754	12.176	9.695	7.194	29.373	37.317	29.430	17.106
0.2000	106.958	35.507	29.081	27.927	26.402	21.457	14.595	11.589	8.561	35.159	44.613	36.706	21.382
0.2500	133.708	44.257	35.894	34.562	32.268	25.508	17.244	13.519	9.942	41.790	52.965	45.589	26.727
0.3200	167.636	54.721	44.505	42.473	38.861	29.774	19.868	15.494	11.317	49.726	63.160	56.387	34.211
0.4000	197.705	65.268	51.834	49.268	44.610	33.299	22.020	17.141	12.483	56.808	72.333	65.775	42.764
0.5000	225.047	74.780	58.096	55.274	49.454	36.367	23.986	18.730	13.651	63.246	80.742	74.145	53.455
0.6000	242.936	81.489	61.671	58.611	52.375	38.296	25.403	19.817	14.500	67.410	86.501	79.079	64.146
0.7000	249.545	85.756	63.077	59.948	53.648	39.179	26.214	20.403	15.078	69.702	89.576	81.001	74.837
0.8000	249.822	87.672	63.371	60.434	54.008	39.495	26.727	20.854	15.492	70.818	90.906	81.458	85.528
0.9000	246.983	88.032	63.069	60.114	53.454	39.429	26.904	21.258	15.789	71.228	91.340	80.887	96.219
1.0000	244.440	88.388	63.083	59.863	53.332	39.500	27.210	21.678	16.099	71.336	91.381	80.361	106.91
1.2500	236.078	88.399	62.938	60.088	53.391	40.043	28.120	22.705	17.148	71.108	90.299	79.659	133.64
1.6000	221.495	86.736	62.626	59.882	53.610	40.918	29.353	23.865	18.474	69.830	87.373	77.817	171.06
2.0000	204.987	84.025	62.288	59.318	53.673	41.691	30.451	25.005	19.657	68.329	84.174	75.509	213.82
2.5000	186.080	79.995	61.091	58.138	53.658	42.434	31.506	26.238	20.872	66.260	80.192	72.364	267.27
3.2000	168.200	74.729	59.254	56.563	52.526	42.531	32.342	26.912	21.578	63.580	75.786	68.962	342.11
4.0000	152.917	69.137	56.533	54.216	50.972	41.705	31.973	26.923	21.779	60.518	71.315	65.198	427.64
5.0000	140.304	63.755	53.342	51.357	48.401	40.106	31.193	26.340	21.619	57.092	66.843	61.240	534.55
6.0000	130.715	59.431	50.521	48.587	46.023	38.416	30.010	25.512	21.015	53.967	63.004	57.708	641.46
7.0000	123.178	55.932	48.068	46.342	43.815	36.833	28.969	24.716	20.423	51.318	59.744	54.889	748.37
8.0000	116.736	52.800	45.888	44.275	41.818	35.290	27.763	23.808	19.776	48.922	56.832	52.339	855.28
9.0000	110.902	50.404	43.882	42.371	40.087	33.897	26.712	22.954	19.159	46.719	54.199	49.998	962.19
10.0000	105.959	48.372	42.206	40.753	38.556	32.603	25.763	22.149	18.534	44.793	51.881	47.983	1069.1
11.0000	101.456	46.526	40.685	39.284	37.166	31.427	24.903	21.418	17.934	43.076	49.840	46.185	1176.0
12.0000	97.337	44.841	39.298	37.945	35.899	30.356	24.120	20.754	17.389	41.508	47.943	44.544	1282.9

$^{107}_{47}Ag$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=107 MEV
0.0125	0.112	0.112	0.141	0.186	0.198	0.239	0.256	0.282	0.387	0.443	0.473	0.557	1.3364
0.0160	0.141	0.143	0.180	0.238	0.254	0.306	0.327	0.360	0.499	0.572	0.613	0.724	1.7106
0.0200	0.173	0.177	0.223	0.297	0.319	0.382	0.407	0.447	0.622	0.714	0.766	0.905	2.1382
0.0250	0.210	0.218	0.276	0.369	0.399	0.476	0.506	0.554	0.773	0.887	0.951	1.123	2.6727
0.0320	0.259	0.272	0.347	0.467	0.509	0.603	0.640	0.698	0.980	1.123	1.203	1.418	3.4211
0.0400	0.311	0.330	0.423	0.574	0.630	0.742	0.787	0.856	1.208	1.383	1.482	1.741	4.2764
0.0500	0.370	0.398	0.512	0.701	0.775	0.906	0.961	1.044	1.483	1.695	1.816	2.127	5.3455
0.0600	0.425	0.461	0.596	0.820	0.913	1.062	1.126	1.221	1.743	1.990	2.132	2.492	6.4146
0.0700	0.477	0.519	0.674	0.932	1.042	1.208	1.282	1.388	1.990	2.269	2.430	2.837	7.4837
0.0800	0.525	0.573	0.749	1.038	1.165	1.346	1.429	1.547	2.224	2.533	2.713	3.163	8.5528
0.0900	0.571	0.625	0.819	1.138	1.282	1.477	1.569	1.697	2.445	2.783	2.981	3.472	9.6219
0.1000	0.614	0.673	0.887	1.233	1.394	1.602	1.703	1.839	2.655	3.020	3.235	3.765	10.691
0.1250	0.715	0.783	1.043	1.452	1.650	1.889	2.011	2.168	3.136	3.566	3.817	4.436	13.364
0.1600	0.842	0.915	1.238	1.724	1.968	2.243	2.394	2.576	3.727	4.236	4.531	5.255	17.106
0.2000	0.972	1.046	1.437	1.998	2.288	2.599	2.779	2.986	4.316	4.902	5.238	6.063	21.382
0.2500	1.119	1.187	1.660	2.299	2.640	2.989	3.203	3.437	4.955	5.623	6.005	6.940	26.727
0.3200	1.304	1.360	1.936	2.668	3.070	3.462	3.719	3.988	5.725	6.490	6.928	7.990	34.211
0.4000	1.495	1.534	2.216	3.036	3.497	3.932	4.232	4.538	6.483	7.341	7.832	9.019	42.764
0.5000	1.714	1.729	2.530	3.445	3.969	4.448	4.798	5.143	7.305	8.264	8.813	10.134	53.455
0.6000	1.919	1.912	2.818	3.814	4.393	4.909	5.304	5.686	8.034	9.080	9.680	11.113	64.146
0.7000	2.114	2.085	3.089	4.159	4.782	5.338	5.771	6.187	8.700	9.823	10.467	12.000	74.837
0.8000	2.301	2.253	3.345	4.482	5.152	5.738	6.213	6.661	9.326	10.522	11.207	12.834	85.528
0.9000	2.484	2.417	3.592	4.791	5.503	6.116	6.632	7.111	9.915	11.178	11.902	13.614	96.219
1.0000	2.663	2.580	3.831	5.087	5.839	6.478	7.033	7.542	10.476	11.801	12.561	14.353	106.91
1.2500	3.101	2.984	4.406	5.793	6.635	7.334	7.981	8.563	11.786	13.256	14.100	16.074	133.64
1.6000	3.705	3.554	5.179	6.728	7.683	8.458	9.228	9.910	13.484	15.134	16.087	18.292	171.06
2.0000	4.397	4.216	6.046	7.759	8.834	9.687	10.596	11.388	15.318	17.153	18.222	20.667	213.82
2.5000	5.279	5.059	7.128	9.027	10.240	11.185	12.268	13.192	17.530	19.581	20.785	23.502	267.27
3.2000	6.559	6.276	8.665	10.805	12.200	13.269	14.596	15.704	20.562	22.904	24.287	27.360	342.11
4.0000	8.095	7.724	10.476	12.876	14.468	15.680	17.278	18.607	24.016	26.679	28.256	31.725	427.64
5.0000	10.130	9.629	12.841	15.556	17.386	18.775	20.712	22.324	28.382	31.455	33.254	37.211	534.55
6.0000	12.291	11.642	15.324	18.349	20.416	21.979	24.264	26.165	32.865	36.339	38.353	42.779	641.46
7.0000	14.578	13.764	17.928	21.262	23.570	25.302	27.942	30.141	37.482	41.351	43.582	48.464	748.37
8.0000	16.988	15.992	20.653	24.296	26.851	28.753	31.747	34.256	42.228	46.506	48.950	54.292	855.28
9.0000	19.515	18.327	23.496	27.449	30.256	32.331	35.682	38.512	47.117	51.805	54.465	60.265	962.19
10.0000	22.156	20.768	26.455	30.719	33.785	36.035	39.753	42.903	52.154	57.250	60.124	66.385	1069.1
11.0000	24.910	23.311	29.529	34.102	37.435	39.863	43.957	47.423	57.337	62.833	65.912	72.657	1176.0
12.0000	27.773	25.955	32.714	37.598	41.202	43.810	48.291	52.069	62.659	68.551	71.837	79.085	1282.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.042	0.100	0.123	0.127	0.135	0.187	0.272	0.367	0.503	0.107	0.088	0.100	1.3364
0.0160	0.053	0.127	0.159	0.164	0.175	0.241	0.350	0.474	0.659	0.137	0.113	0.128	1.7106
0.0200	0.065	0.159	0.199	0.206	0.220	0.303	0.439	0.592	0.827	0.170	0.140	0.161	2.1382
0.0250	0.080	0.198	0.250	0.258	0.276	0.380	0.549	0.736	1.024	0.211	0.173	0.202	2.6727
0.0320	0.100	0.252	0.319	0.331	0.353	0.483	0.696	0.928	1.280	0.266	0.217	0.258	3.4211
0.0400	0.122	0.314	0.396	0.411	0.439	0.594	0.854	1.131	1.553	0.326	0.264	0.320	4.2764
0.0500	0.149	0.390	0.489	0.506	0.541	0.722	1.037	1.362	1.861	0.395	0.319	0.395	5.3455
0.0600	0.173	0.462	0.577	0.597	0.636	0.840	1.204	1.572	2.138	0.461	0.371	0.465	6.4146
0.0700	0.196	0.531	0.660	0.681	0.725	0.948	1.357	1.763	2.389	0.521	0.419	0.530	7.4837
0.0800	0.218	0.596	0.736	0.760	0.807	1.047	1.498	1.939	2.619	0.578	0.464	0.591	8.5528
0.0900	0.237	0.656	0.808	0.833	0.884	1.139	1.628	2.100	2.832	0.631	0.506	0.648	9.6219
0.1000	0.256	0.712	0.875	0.902	0.956	1.224	1.749	2.251	3.031	0.681	0.545	0.700	10.691
0.1250	0.297	0.835	1.022	1.054	1.115	1.413	2.018	2.587	3.475	0.794	0.634	0.818	13.364
0.1600	0.344	0.977	1.192	1.231	1.300	1.634	2.336	2.983	4.002	0.927	0.739	0.953	17.106
0.2000	0.387	1.107	1.350	1.394	1.472	1.844	2.640	3.364	4.511	1.055	0.841	1.078	21.382
0.2500	0.430	1.238	1.511	1.561	1.650	2.066	2.964	3.774	5.061	1.191	0.948	1.205	26.727
0.3200	0.479	1.388	1.694	1.753	1.857	2.331	3.357	4.275	5.740	1.352	1.075	1.350	34.211
0.4000	0.525	1.529	1.870	1.937	2.059	2.598	3.757	4.787	6.439	1.511	1.199	1.488	42.764
0.5000	0.576	1.682	2.064	2.141	2.283	2.901	4.214	5.372	7.238	1.689	1.339	1.641	53.455
0.6000	0.622	1.819	2.242	2.329	2.493	3.186	4.641	5.918	7.984	1.852	1.467	1.780	64.146
0.7000	0.665	1.946	2.414	2.509	2.694	3.462	5.055	6.449	8.706	2.008	1.588	1.914	74.837
0.8000	0.708	2.069	2.583	2.686	2.893	3.734	5.458	6.967	9.405	2.160	1.706	2.045	85.528
0.9000	0.751	2.191	2.751	2.863	3.091	4.004	5.856	7.474	10.088	2.310	1.824	2.177	96.219
1.0000	0.794	2.312	2.921	3.041	3.292	4.275	6.251	7.972	10.758	2.460	1.941	2.309	106.91
1.2500	0.905	2.614	3.344	3.486	3.791	4.945	7.215	9.174	12.363	2.834	2.234	2.642	133.64
1.6000	1.068	3.040	3.939	4.108	4.489	5.868	8.515	10.778	14.461	3.364	2.654	3.116	171.06
2.0000	1.269	3.540	4.622	4.825	5.285	6.901	9.943	12.526	16.701	3.982	3.152	3.673	213.82
2.5000	1.542	4.191	5.488	5.734	6.280	8.171	11.666	14.610	19.336	4.776	3.802	4.396	267.27
3.2000	1.965	5.158	6.730	7.037	7.688	9.930	14.008	17.423	22.859	5.928	4.761	5.454	342.11
4.0000	2.498	6.348	8.208	8.581	9.340	11.960	16.667	20.599	26.802	7.306	5.924	6.729	427.64
5.0000	3.228	7.958	10.154	10.608	11.493	14.574	20.051	24.613	31.727	9.125	7.472	8.421	534.55
6.0000	4.017	9.696	12.214	12.748	13.758	17.299	23.546	28.738	36.744	11.051	9.120	10.220	641.46
7.0000	4.860	11.551	14.385	15.002	16.140	20.142	27.173	32.996	41.905	13.084	10.863	12.120	748.37
8.0000	5.752	13.519	16.662	17.363	18.638	23.108	30.944	37.405	47.226	15.218	12.699	14.115	855.28
9.0000	6.692	15.592	19.045	19.832	21.250	26.200	34.871	41.979	52.720	17.455	14.626	16.206	962.19
10.0000	7.678	17.757	21.530	22.405	23.970	29.417	38.947	46.722	58.395	19.792	16.642	18.389	1069.1
11.0000	8.710	20.011	24.110	25.078	26.795	32.757	43.169	51.631	64.260	22.227	18.745	20.661	1176.0
12.0000	9.786	22.353	26.785	27.848	29.723	36.219	47.532	56.703	70.315	24.756	20.933	23.018	1282.9

$^{114}_{48}Cd$ IONS

ENERGY PER MASS UNIT	ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)												ENERGY FOR A=114
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	7.722	6.388	4.680	3.112	2.527	2.293	2.125	1.966	1.250	1.069	0.983	0.842	1.4237
0.0160	8.864	7.333	5.372	3.573	2.901	2.632	2.439	2.256	1.434	1.228	1.128	0.967	1.8224
0.0200	10.042	8.307	6.086	4.047	3.286	2.982	2.763	2.556	1.625	1.391	1.278	1.095	2.2780
0.0250	11.376	9.411	6.894	4.585	3.723	3.378	3.130	2.896	1.841	1.575	1.451	1.241	2.8475
0.0320	13.043	10.811	7.914	5.263	4.282	3.894	3.593	3.324	2.113	1.812	1.670	1.432	3.6448
0.0400	14.739	12.274	8.965	5.980	4.877	4.447	4.097	3.792	2.412	2.075	1.910	1.641	4.5560
0.0500	16.636	13.945	10.156	6.805	5.576	5.078	4.682	4.337	2.752	2.392	2.204	1.894	5.6950
0.0600	18.353	15.530	11.246	7.580	6.230	5.657	5.229	4.847	3.104	2.699	2.491	2.142	6.8340
0.0700	19.918	17.038	12.258	8.311	6.864	6.227	5.761	5.344	3.432	3.003	2.782	2.390	7.9730
0.0800	21.369	18.517	13.207	9.021	7.462	6.762	6.247	5.811	3.764	3.302	3.051	2.628	9.1120
0.0900	22.725	19.946	14.106	9.705	8.040	7.307	6.729	6.263	4.105	3.590	3.329	2.871	10.251
0.1000	24.013	21.350	14.962	10.368	8.618	7.810	7.182	6.718	4.429	3.875	3.591	3.097	11.390
0.1250	26.949	24.864	16.949	11.932	9.966	9.034	8.305	7.779	5.212	4.559	4.263	3.686	14.237
0.1600	30.527	29.671	19.456	13.931	11.713	10.623	9.748	9.144	6.226	5.467	5.127	4.475	18.224
0.2000	34.118	34.625	22.040	16.023	13.555	12.276	11.263	10.557	7.317	6.458	6.061	5.290	22.780
0.2500	38.026	39.998	24.968	18.451	15.680	14.232	13.033	12.209	8.614	7.615	7.141	6.242	28.475
0.3200	42.680	46.370	28.606	21.540	18.394	16.792	15.304	14.303	10.241	9.097	8.539	7.509	36.448
0.4000	47.017	52.195	32.159	24.505	21.097	19.296	17.591	16.433	11.963	10.645	10.002	8.779	45.560
0.5000	51.227	57.567	35.823	27.691	24.001	22.031	20.061	18.700	13.828	12.323	11.589	10.210	56.950
0.6000	54.538	61.423	38.900	30.459	26.530	24.429	22.173	20.656	15.443	13.809	13.012	11.553	68.340
0.7000	57.036	64.026	41.361	32.675	28.580	26.347	23.865	22.252	16.792	15.014	14.187	12.574	79.730
0.8000	58.856	65.617	43.340	34.542	30.295	28.041	25.354	23.620	17.943	16.123	15.212	13.522	91.120
0.9000	60.306	66.643	44.938	36.040	31.771	29.479	26.603	24.761	19.009	17.076	16.133	14.380	102.51
1.0000	61.346	67.170	46.229	37.399	33.007	30.650	27.691	25.749	19.878	17.891	16.920	15.117	113.90
1.2500	62.859	67.318	48.465	39.741	35.380	32.956	29.709	27.577	21.664	19.531	18.465	16.527	142.37
1.6000	63.362	66.415	50.049	41.791	37.336	34.884	31.431	29.028	23.273	21.071	19.919	17.867	182.24
2.0000	62.717	65.450	50.619	42.874	38.521	36.142	32.396	30.017	24.297	22.171	20.956	18.881	227.80
2.5000	61.109	64.031	50.378	43.275	39.144	36.776	32.897	30.529	25.088	22.821	21.663	19.648	284.75
3.2000	58.548	61.847	49.241	42.840	38.999	36.685	32.893	30.431	25.408	23.242	22.060	20.041	364.48
4.0000	55.616	59.229	47.535	41.783	38.266	36.032	32.467	29.947	25.336	23.197	22.104	20.107	455.60
5.0000	52.292	56.054	45.314	40.148	36.976	34.892	31.448	29.092	24.923	22.748	21.796	19.893	569.50
6.0000	49.431	53.147	43.209	38.542	35.561	33.703	30.419	28.129	24.111	22.253	21.302	19.574	683.40
7.0000	46.813	50.570	41.281	36.988	34.181	32.488	29.392	27.204	23.530	21.631	20.765	19.113	797.30
8.0000	44.556	48.233	39.535	35.582	32.933	31.312	28.465	26.291	22.851	21.072	20.242	18.661	911.20
9.0000	42.624	46.116	37.956	34.274	31.769	30.251	27.518	25.468	22.204	20.496	19.699	18.219	1025.1
10.0000	40.834	44.194	36.524	33.128	30.680	29.256	26.626	24.727	21.549	19.979	19.248	17.787	1139.0
11.0000	39.238	42.514	35.223	32.053	29.728	28.355	25.818	24.057	20.993	19.514	18.844	17.365	1252.9
12.0000	37.813	40.944	34.035	31.040	28.828	27.534	25.084	23.416	20.455	19.060	18.379	16.950	1366.8

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	17.550	7.488	4.961	4.661	4.142	2.733	1.675	1.189	0.784	6.276	7.984	6.093	1.4237
0.0160	19.770	8.338	5.603	5.270	4.685	3.164	1.961	1.397	0.927	7.161	9.112	6.882	1.8224
0.0200	21.788	8.946	6.189	5.830	5.216	3.621	2.258	1.643	1.099	8.046	10.231	7.601	2.2780
0.0250	23.992	9.521	6.839	6.446	5.833	4.185	2.675	1.951	1.413	9.032	11.493	8.397	2.8475
0.0320	26.988	10.241	7.590	7.226	6.600	4.946	3.213	2.422	1.686	10.289	13.122	9.418	3.6448
0.0400	30.034	10.920	8.365	8.051	7.414	5.792	3.837	2.941	2.089	11.610	14.811	10.490	4.5560
0.0500	33.617	11.822	9.334	9.080	8.450	6.815	4.591	3.575	2.590	13.142	16.758	11.802	5.6950
0.0600	37.561	12.854	10.425	10.076	9.525	7.838	5.330	4.195	3.081	14.631	18.679	13.135	6.8340
0.0700	41.553	14.072	11.522	11.191	10.615	8.850	6.031	4.793	3.542	16.106	20.544	14.562	7.9730
0.0800	45.829	15.386	12.692	12.336	11.741	9.866	6.762	5.389	4.002	17.592	22.413	16.060	9.1120
0.0900	50.076	16.800	13.894	13.542	12.893	10.876	7.476	5.981	4.429	19.071	24.248	17.604	10.251
0.1000	54.759	18.373	15.231	14.752	14.034	11.894	8.214	6.538	4.848	20.542	26.123	19.196	11.390
0.1250	67.287	22.457	18.559	17.881	17.084	14.423	9.932	7.915	5.881	24.305	30.931	23.372	14.237
0.1600	86.191	28.737	23.581	22.725	21.557	17.958	12.316	9.806	7.277	29.709	37.745	29.768	18.224
0.2000	108.218	35.926	29.424	28.256	26.713	21.710	14.767	11.725	8.662	35.573	45.139	37.138	22.780
0.2500	135.325	44.792	36.328	34.980	32.658	25.817	17.452	13.682	10.062	42.295	53.606	46.140	28.475
0.3200	169.919	55.467	45.112	43.052	39.390	30.179	20.139	15.705	11.471	50.404	64.020	57.155	36.448
0.4000	200.674	66.248	52.613	50.008	45.280	33.799	22.351	17.398	12.671	57.662	73.420	66.763	45.560
0.5000	228.550	75.945	59.000	56.135	50.224	36.933	24.360	19.022	13.863	64.230	81.999	75.300	56.950
0.6000	247.014	82.857	62.707	59.595	53.254	38.939	25.830	20.150	14.743	68.542	87.953	80.406	68.340
0.7000	253.955	87.271	64.192	61.007	54.596	39.872	26.678	20.763	15.345	70.934	91.159	82.432	79.730
0.8000	254.407	89.281	64.534	61.543	54.999	40.220	27.218	21.237	15.776	72.118	92.575	82.953	91.120
0.9000	251.651	89.696	64.261	61.250	54.465	40.174	27.412	21.660	16.088	72.574	93.066	82.416	102.51
1.0000	249.173	90.100	64.304	61.022	54.365	40.265	27.737	22.097	16.411	72.718	93.151	81.917	113.90
1.2500	240.871	90.194	64.216	61.308	54.475	40.856	28.691	23.166	17.496	72.552	92.132	81.276	142.37
1.6000	226.221	88.587	63.963	61.160	54.754	41.791	29.979	24.374	18.868	71.320	89.237	79.478	182.24
2.0000	209.563	85.901	63.679	60.642	54.871	42.621	31.131	25.563	20.096	69.854	86.052	77.194	227.80
2.5000	190.430	81.865	62.520	59.497	54.912	43.426	32.242	26.852	21.360	67.809	82.066	74.056	284.75
3.2000	172.343	76.570	60.714	57.957	53.820	43.578	33.139	27.575	22.109	65.146	77.653	70.661	364.48
4.0000	156.866	70.922	57.993	55.616	52.289	42.782	32.799	27.618	22.342	62.081	73.157	66.882	455.60
5.0000	144.099	65.479	54.785	52.746	49.710	41.191	32.037	27.053	22.204	58.636	68.651	62.896	569.50
6.0000	134.380	61.097	51.937	49.949	47.314	39.493	30.851	26.228	21.604	55.480	64.770	59.326	683.40
7.0000	126.734	57.546	49.455	47.680	45.079	37.896	29.805	25.429	21.012	52.799	61.468	56.473	797.30
8.0000	120.187	54.361	47.244	45.584	43.054	36.333	28.584	24.512	20.361	50.368	58.512	53.886	911.20
9.0000	114.246	51.923	45.205	43.649	41.296	34.919	27.518	23.646	19.737	48.128	55.833	51.506	1025.1
10.0000	109.208	49.856	43.501	42.003	39.739	33.602	26.553	22.828	19.102	46.167	53.472	49.454	1139.0
11.0000	104.612	47.974	41.951	40.506	38.323	32.405	25.678	22.085	18.492	44.416	51.390	47.622	1252.9
12.0000	100.404	46.254	40.536	39.140	37.030	31.312	24.880	21.408	17.937	42.816	49.453	45.947	1366.8

$^{114}_{48}$Cd IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=114
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.117	0.117	0.147	0.192	0.204	0.246	0.263	0.289	0.396	0.451	0.481	0.565	1.4237
0.0160	0.148	0.149	0.187	0.246	0.263	0.316	0.337	0.370	0.510	0.584	0.624	0.737	1.8224
0.0200	0.181	0.185	0.232	0.308	0.330	0.395	0.420	0.460	0.637	0.730	0.781	0.922	2.2780
0.0250	0.220	0.228	0.288	0.383	0.413	0.492	0.522	0.571	0.793	0.908	0.972	1.147	2.8475
0.0320	0.271	0.285	0.362	0.486	0.527	0.624	0.662	0.721	1.007	1.152	1.233	1.451	3.6448
0.0400	0.326	0.346	0.442	0.598	0.654	0.770	0.815	0.886	1.245	1.423	1.522	1.786	4.5560
0.0500	0.388	0.417	0.535	0.730	0.806	0.942	0.998	1.082	1.531	1.747	1.869	2.187	5.6950
0.0600	0.446	0.483	0.623	0.855	0.950	1.105	1.170	1.268	1.803	2.055	2.199	2.567	6.8340
0.0700	0.500	0.544	0.706	0.973	1.086	1.258	1.333	1.443	2.060	2.346	2.511	2.927	7.9730
0.0800	0.551	0.601	0.784	1.084	1.215	1.403	1.488	1.609	2.305	2.622	2.806	3.268	9.1120
0.0900	0.599	0.655	0.858	1.189	1.338	1.541	1.635	1.766	2.537	2.884	3.086	3.591	10.251
0.1000	0.645	0.706	0.929	1.289	1.454	1.671	1.775	1.916	2.757	3.133	3.352	3.897	11.390
0.1250	0.752	0.821	1.093	1.519	1.724	1.973	2.099	2.261	3.261	3.704	3.963	4.601	14.237
0.1600	0.885	0.961	1.298	1.805	2.058	2.345	2.501	2.689	3.882	4.408	4.712	5.459	18.224
0.2000	1.022	1.098	1.508	2.093	2.395	2.719	2.906	3.120	4.500	5.107	5.454	6.307	22.780
0.2500	1.177	1.247	1.742	2.410	2.765	3.129	3.351	3.595	5.172	5.865	6.260	7.229	28.475
0.3200	1.371	1.429	2.032	2.797	3.216	3.627	3.893	4.174	5.981	6.776	7.229	8.332	36.448
0.4000	1.571	1.611	2.326	3.184	3.665	4.120	4.432	4.750	6.776	7.668	8.178	9.411	45.560
0.5000	1.801	1.816	2.656	3.613	4.160	4.661	5.025	5.385	7.639	8.636	9.207	10.580	56.950
0.6000	2.016	2.007	2.957	4.000	4.603	5.145	5.556	5.954	8.403	9.491	10.114	11.605	68.340
0.7000	2.220	2.189	3.241	4.361	5.011	5.593	6.044	6.478	9.099	10.269	10.939	12.534	79.730
0.8000	2.416	2.364	3.510	4.699	5.398	6.012	6.507	6.975	9.755	11.000	11.713	13.407	91.120
0.9000	2.607	2.537	3.768	5.022	5.765	6.408	6.945	7.445	10.371	11.686	12.440	14.223	102.51
1.0000	2.794	2.707	4.017	5.332	6.116	6.786	7.365	7.896	10.957	12.338	13.129	14.995	113.90
1.2500	3.252	3.129	4.618	6.069	6.948	7.680	8.355	8.962	12.326	13.858	14.736	16.793	142.37
1.6000	3.882	3.724	5.425	7.045	8.042	8.853	9.657	10.368	14.097	15.818	16.810	19.108	182.24
2.0000	4.604	4.414	6.329	8.119	9.242	10.135	11.082	11.909	16.010	17.923	19.037	21.584	227.80
2.5000	5.522	5.292	7.455	9.440	10.707	11.695	12.825	13.788	18.314	20.451	21.706	24.537	284.75
3.2000	6.854	6.558	9.054	11.290	12.745	13.863	15.246	16.401	21.468	23.909	25.349	28.551	364.48
4.0000	8.450	8.063	10.937	13.443	15.103	16.368	18.033	19.418	25.058	27.831	29.473	33.087	455.60
5.0000	10.562	10.040	13.391	16.223	18.131	19.580	21.597	23.277	29.590	32.789	34.662	38.781	569.50
6.0000	12.803	12.127	15.966	19.119	21.272	22.902	25.280	27.259	34.237	37.852	39.948	44.553	683.40
7.0000	15.172	14.325	18.663	22.137	24.540	26.345	29.091	31.377	39.020	43.045	45.365	50.443	797.30
8.0000	17.667	16.632	21.484	25.277	27.936	29.917	33.029	35.637	43.933	48.381	50.921	56.475	911.20
9.0000	20.281	19.047	24.425	28.540	31.458	33.619	37.100	40.040	48.990	53.862	56.627	62.654	1025.1
10.0000	23.012	21.571	27.485	31.921	35.107	37.449	41.309	44.580	54.198	59.492	62.477	68.982	1139.0
11.0000	25.858	24.199	30.661	35.417	38.879	41.404	45.654	49.251	59.555	65.262	68.459	75.464	1252.9
12.0000	28.816	26.930	33.951	39.029	42.771	45.481	50.130	54.050	65.052	71.169	74.580	82.105	1366.8

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.044	0.105	0.129	0.133	0.141	0.193	0.279	0.376	0.512	0.111	0.093	0.104	1.4237
0.0160	0.056	0.133	0.166	0.171	0.182	0.250	0.360	0.485	0.671	0.143	0.118	0.134	1.8224
0.0200	0.069	0.166	0.208	0.215	0.229	0.314	0.453	0.607	0.843	0.178	0.146	0.169	2.2780
0.0250	0.084	0.207	0.260	0.270	0.288	0.394	0.566	0.756	1.045	0.221	0.181	0.211	2.8475
0.0320	0.105	0.264	0.333	0.345	0.369	0.502	0.719	0.955	1.310	0.278	0.227	0.270	3.6448
0.0400	0.128	0.329	0.414	0.429	0.458	0.618	0.885	1.166	1.593	0.341	0.277	0.335	4.5560
0.0500	0.156	0.409	0.512	0.529	0.565	0.753	1.075	1.408	1.914	0.414	0.335	0.413	5.6950
0.0600	0.182	0.485	0.604	0.624	0.665	0.876	1.250	1.627	2.202	0.483	0.389	0.487	6.8340
0.0700	0.206	0.557	0.690	0.713	0.758	0.989	1.410	1.827	2.465	0.546	0.439	0.555	7.9730
0.0800	0.228	0.625	0.771	0.796	0.845	1.094	1.558	2.011	2.706	0.606	0.487	0.619	9.1120
0.0900	0.249	0.688	0.847	0.873	0.925	1.190	1.695	2.181	2.929	0.662	0.531	0.679	10.251
0.1000	0.269	0.747	0.917	0.945	1.001	1.280	1.822	2.339	3.137	0.714	0.572	0.734	11.390
0.1250	0.312	0.877	1.072	1.105	1.168	1.478	2.105	2.692	3.604	0.833	0.666	0.858	14.237
0.1600	0.361	1.026	1.251	1.290	1.363	1.711	2.439	3.108	4.156	0.973	0.776	1.000	18.224
0.2000	0.406	1.163	1.417	1.463	1.544	1.932	2.759	3.509	4.691	1.108	0.883	1.132	22.780
0.2500	0.452	1.301	1.586	1.638	1.731	2.165	3.100	3.940	5.270	1.251	0.996	1.265	28.475
0.3200	0.504	1.458	1.779	1.839	1.948	2.444	3.513	4.466	5.983	1.420	1.129	1.417	36.448
0.4000	0.552	1.607	1.963	2.033	2.160	2.724	3.932	5.003	6.716	1.587	1.260	1.563	45.560
0.5000	0.605	1.767	2.167	2.247	2.396	3.041	4.412	5.617	7.555	1.772	1.407	1.723	56.950
0.6000	0.653	1.910	2.354	2.444	2.616	3.341	4.859	6.190	8.336	1.943	1.541	1.869	68.340
0.7000	0.698	2.044	2.533	2.632	2.826	3.630	5.292	6.746	9.081	2.106	1.668	2.009	79.730
0.8000	0.743	2.173	2.710	2.818	3.034	3.914	5.715	7.288	9.813	2.265	1.791	2.146	91.120
0.9000	0.788	2.300	2.886	3.003	3.242	4.197	6.131	7.818	10.527	2.423	1.914	2.284	102.51
1.0000	0.834	2.427	3.064	3.190	3.451	4.480	6.544	8.339	11.228	2.579	2.036	2.422	113.90
1.2500	0.950	2.742	3.506	3.654	3.973	5.180	7.551	9.594	12.904	2.970	2.343	2.771	142.37
1.6000	1.120	3.187	4.126	4.303	4.701	6.143	8.907	11.268	15.093	3.523	2.781	3.265	182.24
2.0000	1.329	3.708	4.839	5.050	5.531	7.221	10.396	13.090	17.429	4.167	3.300	3.846	227.80
2.5000	1.613	4.386	5.740	5.997	6.567	8.543	12.192	15.261	20.174	4.994	3.977	4.598	284.75
3.2000	2.053	5.392	7.033	7.354	8.033	10.374	14.628	18.188	23.839	6.192	4.975	5.699	364.48
4.0000	2.607	6.628	8.568	8.958	9.750	12.483	17.390	21.488	27.936	7.625	6.184	7.024	455.60
5.0000	3.365	8.300	10.589	11.061	11.984	15.196	20.904	25.654	33.049	9.513	7.791	8.781	569.50
6.0000	4.183	10.101	12.725	13.281	14.333	18.021	24.527	29.931	38.250	11.510	9.499	10.646	683.40
7.0000	5.056	12.023	14.973	15.615	16.800	20.966	28.284	34.342	43.596	13.615	11.305	12.614	797.30
8.0000	5.980	14.060	17.330	18.059	19.386	24.036	32.188	38.906	49.105	15.824	13.205	14.679	911.20
9.0000	6.952	16.204	19.795	20.613	22.088	27.235	36.250	43.638	54.788	18.138	15.198	16.842	1025.1
10.0000	7.972	18.443	22.364	23.274	24.900	30.561	40.465	48.541	60.655	20.555	17.283	19.099	1139.0
11.0000	9.038	20.773	25.031	26.036	27.820	34.013	44.827	53.615	66.717	23.071	19.457	21.447	1252.9
12.0000	10.149	23.191	27.794	28.897	30.844	37.589	49.335	58.854	72.972	25.684	21.716	23.882	1366.8

$^{115}_{49}$In IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=115 MEV
0.0125	7.781	6.437	4.716	3.136	2.547	2.311	2.141	1.981	1.259	1.078	0.990	0.849	1.4362
0.0160	8.935	7.392	5.415	3.601	2.924	2.653	2.459	2.274	1.446	1.237	1.137	0.975	1.8384
0.0200	10.125	8.376	6.136	4.081	3.314	3.007	2.786	2.577	1.638	1.402	1.289	1.105	2.2980
0.0250	11.473	9.492	6.954	4.624	3.755	3.407	3.157	2.921	1.857	1.589	1.464	1.252	2.8725
0.0320	13.159	10.908	7.985	5.310	4.320	3.929	3.625	3.354	2.132	1.829	1.685	1.445	3.6768
0.0400	14.876	12.387	9.048	6.035	4.922	4.488	4.135	3.827	2.434	2.095	1.927	1.656	4.5960
0.0500	16.795	14.078	10.253	6.870	5.629	5.127	4.727	4.378	2.779	2.415	2.225	1.912	5.7450
0.0600	18.533	15.683	11.356	7.654	6.291	5.712	5.281	4.894	3.134	2.725	2.515	2.163	6.8940
0.0700	20.118	17.209	12.380	8.394	6.933	6.289	5.819	5.398	3.467	3.033	2.810	2.414	8.0430
0.0800	21.588	18.706	13.342	9.113	7.538	6.831	6.311	5.871	3.803	3.336	3.082	2.655	9.1920
0.0900	22.960	20.153	14.252	9.806	8.124	7.383	6.798	6.328	4.147	3.627	3.364	2.900	10.341
0.1000	24.266	21.575	15.119	10.477	8.708	7.892	7.257	6.788	4.475	3.916	3.629	3.130	11.490
0.1250	27.240	25.133	17.132	12.061	10.074	9.131	8.395	7.864	5.268	4.609	4.309	3.726	14.362
0.1600	30.868	30.002	19.673	14.086	11.843	10.742	9.856	9.247	6.295	5.528	5.184	4.525	18.384
0.2000	34.510	35.023	22.293	16.207	13.710	12.417	11.392	10.678	7.401	6.532	6.131	5.350	22.980
0.2500	38.474	40.470	25.262	18.669	15.865	14.399	13.187	12.353	8.715	7.705	7.225	6.316	28.725
0.3200	43.244	46.983	28.984	21.825	18.637	17.013	15.506	14.492	10.376	9.217	8.652	7.608	36.768
0.4000	47.701	52.954	32.627	24.862	21.403	19.576	17.847	16.672	12.137	10.800	10.147	8.907	45.960
0.5000	52.003	58.440	36.366	28.111	24.365	22.365	20.365	18.983	14.037	12.510	11.764	10.364	57.450
0.6000	55.430	62.428	39.536	30.957	26.964	24.829	22.536	20.994	15.696	14.035	13.225	11.742	68.940
0.7000	58.019	65.130	42.073	33.238	29.073	26.801	24.276	22.635	17.082	15.273	14.431	12.790	80.430
0.8000	59.910	66.792	44.116	35.161	30.837	28.543	25.808	24.043	18.264	16.411	15.485	13.764	91.920
0.9000	61.419	67.873	45.767	36.705	32.357	30.023	27.094	25.218	19.359	17.392	16.430	14.645	103.41
1.0000	62.506	68.441	47.104	38.107	33.632	31.230	28.215	26.237	20.255	18.229	17.240	15.403	114.90
1.2500	64.108	68.655	49.428	40.531	36.082	33.611	30.299	28.124	22.094	19.919	18.832	16.855	143.62
1.6000	64.686	67.803	51.095	42.664	38.117	35.613	32.088	29.635	23.759	21.511	20.336	18.241	183.84
2.0000	64.089	66.883	51.727	43.812	39.364	36.933	33.105	30.674	24.829	22.656	21.415	19.294	229.80
2.5000	62.510	65.499	51.533	44.267	40.041	37.619	33.651	31.229	25.664	23.345	22.159	20.098	287.25
3.2000	59.962	63.341	50.431	43.875	39.941	37.571	33.688	31.166	26.022	23.803	22.593	20.525	367.68
4.0000	57.025	60.729	48.739	42.841	39.235	36.944	33.289	30.706	25.978	23.785	22.664	20.617	459.60
5.0000	53.679	57.540	46.516	41.213	37.957	35.817	32.282	29.863	25.584	23.351	22.374	20.420	574.50
6.0000	50.790	54.608	44.396	39.602	36.538	34.629	31.255	28.902	24.773	22.864	21.887	20.112	689.40
7.0000	48.138	52.000	42.449	38.035	35.148	33.408	30.224	27.974	24.196	22.243	21.352	19.654	804.30
8.0000	45.847	49.630	40.681	36.613	33.887	32.219	29.290	27.053	23.513	21.683	20.828	19.201	919.20
9.0000	43.884	47.479	39.078	35.287	32.708	31.145	28.331	26.221	22.860	21.102	20.281	18.757	1034.1
10.0000	42.062	45.523	37.623	34.124	31.603	30.136	27.427	25.471	22.197	20.580	19.827	18.322	1149.0
11.0000	40.436	43.812	36.298	33.031	30.635	29.220	26.606	24.792	21.634	20.109	19.419	17.895	1263.9
12.0000	38.982	42.210	35.087	32.000	29.719	28.386	25.859	24.140	21.087	19.649	18.947	17.473	1378.8

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	17.684	7.545	4.999	4.697	4.174	2.754	1.688	1.198	0.790	6.324	8.045	6.140	1.4362
0.0160	19.928	8.405	5.648	5.312	4.722	3.190	1.977	1.408	0.935	7.219	9.184	6.937	1.8384
0.0200	21.968	9.021	6.241	5.879	5.259	3.651	2.277	1.657	1.108	8.112	10.315	7.664	2.2980
0.0250	24.199	9.603	6.898	6.502	5.883	4.221	2.698	1.968	1.425	9.109	11.592	8.470	2.8725
0.0320	27.229	10.333	7.658	7.290	6.660	4.991	3.242	2.443	1.701	10.381	13.239	9.502	3.6768
0.0400	30.312	11.021	8.442	8.125	7.483	5.845	3.873	2.968	2.108	11.718	14.948	10.587	4.5960
0.0500	33.939	11.935	9.423	9.166	8.531	6.880	4.635	3.609	2.615	13.268	16.918	11.914	5.7450
0.0600	37.929	12.980	10.527	10.175	9.619	7.915	5.383	4.236	3.112	14.774	18.862	13.264	6.8940
0.0700	41.970	14.213	11.638	11.303	10.721	8.939	6.091	4.841	3.578	16.268	20.750	14.708	8.0430
0.0800	46.297	15.544	12.822	12.462	11.861	9.967	6.831	5.444	4.043	17.772	22.642	16.224	9.1920
0.0900	50.596	16.974	14.038	13.682	13.027	10.989	7.554	6.043	4.475	19.269	24.500	17.787	10.341
0.1000	55.335	18.566	15.391	14.907	14.182	12.020	8.300	6.607	4.899	20.758	26.398	19.398	11.490
0.1250	68.015	22.700	18.760	18.075	17.269	14.580	10.040	8.001	5.945	24.568	31.266	23.625	14.362
0.1600	87.153	29.058	23.844	22.979	21.798	18.159	12.453	9.915	7.358	30.041	38.166	30.100	18.384
0.2000	109.460	36.338	29.762	28.580	27.019	21.959	14.937	11.860	8.761	35.981	45.657	37.564	22.980
0.2500	136.920	45.320	36.756	35.392	33.043	26.121	17.658	13.844	10.181	42.794	54.238	46.684	28.725
0.3200	172.163	56.199	45.707	43.621	39.911	30.578	20.405	15.912	11.622	51.069	64.866	57.909	36.768
0.4000	203.593	67.212	53.378	50.735	45.939	34.291	22.676	17.651	12.855	58.500	74.488	67.734	45.960
0.5000	232.014	77.096	59.895	56.985	50.985	37.493	24.729	19.310	14.074	65.204	83.242	76.441	57.450
0.6000	251.055	84.212	63.732	60.569	54.125	39.576	26.252	20.480	14.984	69.663	89.391	81.721	68.940
0.7000	258.331	88.775	65.298	62.058	55.537	40.559	27.137	21.121	15.609	72.156	92.730	83.852	80.430
0.8000	258.962	90.879	65.689	62.645	55.983	40.940	27.705	21.617	16.058	73.409	94.232	84.438	91.920
0.9000	256.296	91.351	65.447	62.381	55.470	40.916	27.918	22.060	16.385	73.914	94.784	83.937	103.41
1.0000	253.888	91.805	65.521	62.177	55.394	41.027	28.262	22.515	16.722	74.094	94.914	83.467	114.90
1.2500	245.656	91.985	65.492	62.526	55.557	41.668	29.261	23.626	17.843	73.993	93.962	82.890	143.62
1.6000	230.949	90.438	65.299	62.438	55.898	42.664	30.606	24.883	19.263	72.810	91.102	81.139	183.84
2.0000	214.148	87.780	65.072	61.969	56.072	43.554	31.812	26.122	20.535	71.383	87.935	78.883	229.80
2.5000	194.796	83.742	63.953	60.861	56.171	44.422	32.981	27.467	21.850	69.364	83.948	75.754	287.25
3.2000	176.507	78.419	62.181	59.357	55.121	44.631	33.940	28.241	22.643	66.720	79.529	72.368	367.68
4.0000	160.838	72.718	59.461	57.025	53.613	43.865	33.630	28.317	22.907	63.653	75.009	68.576	459.60
5.0000	147.919	67.215	56.237	54.144	51.028	42.283	32.886	27.770	22.793	60.191	70.471	64.564	574.50
6.0000	138.073	62.777	53.365	51.322	48.614	40.578	31.699	26.949	22.198	57.005	66.550	60.956	689.40
7.0000	130.319	59.174	50.854	49.029	46.355	38.968	30.648	26.149	21.607	54.293	63.207	58.071	804.30
8.0000	123.669	55.936	48.613	46.905	44.301	37.385	29.412	25.222	20.951	51.827	60.207	55.448	919.20
9.0000	117.624	53.458	46.542	44.939	42.517	35.951	28.331	24.345	20.320	49.550	57.483	53.028	1034.1
10.0000	112.492	51.355	44.809	43.266	40.934	34.613	27.352	23.514	19.677	47.555	55.080	50.941	1149.0
11.0000	107.805	49.438	43.231	41.743	39.492	33.394	26.461	22.759	19.056	45.772	52.959	49.075	1263.9
12.0000	103.507	47.684	41.789	40.350	38.175	32.280	25.649	22.070	18.491	44.140	50.982	47.368	1378.8

$^{115}_{49}In$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=115 MEV
0.0125	0.116	0.116	0.145	0.190	0.202	0.244	0.260	0.286	0.390	0.445	0.474	0.557	1.4362
0.0160	0.147	0.148	0.185	0.244	0.260	0.313	0.333	0.366	0.503	0.576	0.616	0.726	1.8384
0.0200	0.180	0.183	0.230	0.305	0.326	0.391	0.415	0.455	0.629	0.721	0.771	0.910	2.2980
0.0250	0.219	0.226	0.285	0.379	0.408	0.487	0.517	0.564	0.784	0.897	0.961	1.132	2.8725
0.0320	0.270	0.283	0.358	0.481	0.522	0.618	0.655	0.713	0.996	1.139	1.219	1.433	3.6768
0.0400	0.324	0.343	0.438	0.592	0.648	0.762	0.807	0.877	1.231	1.406	1.505	1.765	4.5960
0.0500	0.386	0.414	0.531	0.724	0.798	0.933	0.988	1.072	1.514	1.728	1.849	2.162	5.7450
0.0600	0.444	0.480	0.619	0.848	0.941	1.095	1.160	1.256	1.784	2.033	2.175	2.540	6.8940
0.0700	0.498	0.541	0.701	0.965	1.076	1.247	1.322	1.430	2.040	2.323	2.485	2.897	8.0430
0.0800	0.549	0.598	0.779	1.075	1.204	1.392	1.475	1.595	2.283	2.597	2.778	3.235	9.1920
0.0900	0.597	0.651	0.852	1.180	1.326	1.529	1.622	1.751	2.514	2.857	3.057	3.556	10.341
0.1000	0.642	0.702	0.923	1.280	1.443	1.659	1.761	1.900	2.732	3.104	3.321	3.861	11.490
0.1250	0.748	0.817	1.086	1.509	1.711	1.958	2.083	2.244	3.234	3.673	3.929	4.560	14.362
0.1600	0.881	0.956	1.291	1.794	2.044	2.329	2.484	2.670	3.852	4.373	4.673	5.414	18.384
0.2000	1.018	1.093	1.500	2.080	2.379	2.702	2.886	3.099	4.467	5.068	5.412	6.258	22.980
0.2500	1.172	1.241	1.733	2.396	2.747	3.111	3.330	3.572	5.136	5.823	6.215	7.175	28.725
0.3200	1.365	1.422	2.022	2.782	3.196	3.606	3.870	4.148	5.941	6.729	7.179	8.273	36.768
0.4000	1.565	1.604	2.314	3.167	3.643	4.096	4.406	4.722	6.732	7.617	8.123	9.346	45.960
0.5000	1.793	1.807	2.642	3.593	4.134	4.634	4.995	5.352	7.588	8.577	9.144	10.507	57.450
0.6000	2.006	1.997	2.941	3.977	4.575	5.114	5.522	5.917	8.347	9.426	10.045	11.525	68.940
0.7000	2.209	2.177	3.223	4.335	4.980	5.559	6.006	6.437	9.038	10.198	10.862	12.446	80.430
0.8000	2.403	2.351	3.489	4.670	5.363	5.974	6.465	6.929	9.687	10.923	11.630	13.312	91.920
0.9000	2.593	2.522	3.745	4.990	5.726	6.366	6.899	7.395	10.298	11.603	12.350	14.120	103.41
1.0000	2.778	2.690	3.992	5.297	6.075	6.741	7.314	7.842	10.878	12.248	13.033	14.885	114.90
1.2500	3.231	3.108	4.586	6.026	6.897	7.626	8.295	8.897	12.233	13.752	14.623	16.664	143.62
1.6000	3.854	3.696	5.384	6.991	7.979	8.785	9.581	10.287	13.984	15.690	16.674	18.952	183.84
2.0000	4.566	4.378	6.277	8.053	9.164	10.051	10.989	11.809	15.873	17.769	18.872	21.398	229.80
2.5000	5.473	5.244	7.388	9.355	10.609	11.590	12.708	13.663	18.146	20.264	21.506	24.312	287.25
3.2000	6.785	6.492	8.964	11.179	12.618	13.727	15.095	16.238	21.255	23.672	25.097	28.267	367.68
4.0000	8.357	7.973	10.818	13.298	14.939	16.193	17.838	19.208	24.789	27.533	29.157	32.733	459.60
5.0000	10.433	9.917	13.231	16.032	17.916	19.351	21.343	23.002	29.245	32.408	34.258	38.331	574.50
6.0000	12.635	11.967	15.760	18.877	21.002	22.614	24.961	26.914	33.809	37.381	39.451	44.001	689.40
7.0000	14.959	14.124	18.407	21.838	24.209	25.993	28.700	30.955	38.503	42.476	44.767	49.782	804.30
8.0000	17.405	16.387	21.173	24.918	27.539	29.496	32.563	35.133	43.321	47.709	50.216	55.697	919.20
9.0000	19.968	18.754	24.055	28.115	30.991	33.124	36.552	39.448	48.278	53.082	55.808	61.753	1034.1
10.0000	22.643	21.226	27.053	31.427	34.566	36.876	40.675	43.895	53.380	58.597	61.539	67.952	1149.0
11.0000	25.430	23.800	30.163	34.850	38.259	40.749	44.929	48.468	58.624	64.246	67.395	74.299	1263.9
12.0000	28.324	26.472	33.383	38.385	42.068	44.739	49.310	53.166	64.005	70.027	73.386	80.797	1378.8

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.044	0.104	0.127	0.132	0.140	0.191	0.276	0.371	0.503	0.111	0.092	0.103	1.4362
0.0160	0.055	0.132	0.164	0.169	0.180	0.247	0.356	0.479	0.661	0.141	0.117	0.133	1.8384
0.0200	0.068	0.165	0.206	0.213	0.227	0.311	0.447	0.600	0.831	0.176	0.145	0.167	2.2980
0.0250	0.084	0.206	0.258	0.267	0.285	0.390	0.560	0.747	1.032	0.219	0.179	0.209	2.8725
0.0320	0.105	0.263	0.330	0.342	0.365	0.497	0.711	0.944	1.294	0.276	0.225	0.268	3.6768
0.0400	0.128	0.327	0.411	0.425	0.454	0.612	0.875	1.153	1.574	0.338	0.275	0.333	4.5960
0.0500	0.155	0.406	0.508	0.525	0.560	0.746	1.064	1.393	1.892	0.411	0.333	0.410	5.7450
0.0600	0.181	0.482	0.599	0.619	0.659	0.869	1.238	1.611	2.179	0.479	0.387	0.483	6.8940
0.0700	0.205	0.554	0.685	0.708	0.752	0.981	1.397	1.810	2.440	0.543	0.437	0.551	8.0430
0.0800	0.227	0.621	0.766	0.790	0.838	1.085	1.544	1.993	2.680	0.602	0.484	0.615	9.1920
0.0900	0.248	0.684	0.841	0.867	0.919	1.181	1.681	2.162	2.901	0.658	0.528	0.674	10.341
0.1000	0.267	0.743	0.910	0.938	0.994	1.270	1.807	2.319	3.108	0.710	0.569	0.730	11.490
0.1250	0.310	0.872	1.065	1.098	1.160	1.468	2.089	2.670	3.572	0.828	0.662	0.852	14.362
0.1600	0.359	1.020	1.243	1.283	1.354	1.700	2.421	3.085	4.123	0.968	0.773	0.994	18.384
0.2000	0.404	1.157	1.409	1.454	1.535	1.920	2.740	3.484	4.655	1.103	0.879	1.125	22.980
0.2500	0.450	1.295	1.577	1.629	1.721	2.152	3.080	3.913	5.232	1.245	0.991	1.259	28.725
0.3200	0.501	1.451	1.769	1.830	1.937	2.430	3.491	4.437	5.942	1.414	1.124	1.410	36.768
0.4000	0.550	1.599	1.953	2.022	2.148	2.708	3.908	4.971	6.670	1.579	1.254	1.555	45.960
0.5000	0.602	1.758	2.155	2.235	2.382	3.024	4.384	5.581	7.503	1.763	1.400	1.714	57.450
0.6000	0.650	1.901	2.341	2.430	2.601	3.321	4.829	6.150	8.279	1.933	1.533	1.859	68.940
0.7000	0.695	2.033	2.519	2.617	2.810	3.608	5.259	6.701	9.018	2.095	1.659	1.998	80.430
0.8000	0.739	2.161	2.694	2.801	3.016	3.889	5.677	7.238	9.743	2.253	1.782	2.134	91.920
0.9000	0.784	2.287	2.869	2.985	3.222	4.170	6.090	7.764	10.451	2.408	1.903	2.270	103.41
1.0000	0.829	2.412	3.044	3.169	3.429	4.450	6.499	8.279	11.145	2.564	2.024	2.407	114.90
1.2500	0.944	2.724	3.482	3.629	3.945	5.143	7.495	9.522	12.804	2.951	2.328	2.752	143.62
1.6000	1.112	3.164	4.095	4.271	4.665	6.095	8.836	11.177	14.968	3.497	2.761	3.241	183.84
2.0000	1.318	3.679	4.799	5.009	5.485	7.159	10.307	12.977	17.275	4.133	3.274	3.815	229.80
2.5000	1.599	4.348	5.689	5.943	6.507	8.464	12.078	15.118	19.984	4.949	3.941	4.557	287.25
3.2000	2.032	5.340	6.963	7.280	7.951	10.268	14.479	18.003	23.595	6.130	4.925	5.642	367.68
4.0000	2.578	6.556	8.474	8.859	9.641	12.345	17.198	21.251	27.629	7.540	6.115	6.946	459.60
5.0000	3.323	8.200	10.461	10.927	11.838	15.012	20.653	25.348	32.656	9.396	7.695	8.673	574.50
6.0000	4.127	9.969	12.559	13.107	14.146	17.787	24.212	29.549	37.764	11.358	9.373	10.505	689.40
7.0000	4.984	11.855	14.765	15.398	16.567	20.677	27.899	33.878	43.012	13.424	11.145	12.437	804.30
8.0000	5.889	13.853	17.076	17.795	19.103	23.688	31.727	38.353	48.413	15.591	13.008	14.462	919.20
9.0000	6.842	15.955	19.493	20.298	21.751	26.823	35.709	42.991	53.983	17.859	14.962	16.582	1034.1
10.0000	7.841	18.148	22.009	22.905	24.506	30.081	39.837	47.795	59.731	20.226	17.004	18.793	1149.0
11.0000	8.885	20.429	24.621	25.609	27.364	33.461	44.109	52.762	65.666	22.690	19.132	21.092	1263.9
12.0000	9.973	22.796	27.324	28.409	30.324	36.962	48.520	57.890	71.788	25.246	21.344	23.475	1378.8

$^{120}_{50}Sn$ IONS

ENERGY PER MASS UNIT | ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM) | ENERGY FOR A=120

MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	7.840	6.486	4.752	3.160	2.566	2.328	2.157	1.996	1.269	1.086	0.998	0.855	1.4987
0.0160	9.006	7.450	5.458	3.630	2.947	2.675	2.478	2.292	1.457	1.247	1.146	0.982	1.9184
0.0200	10.208	8.445	6.187	4.114	3.341	3.032	2.809	2.599	1.652	1.414	1.299	1.114	2.3980
0.0250	11.571	9.573	7.013	4.664	3.787	3.436	3.184	2.945	1.872	1.602	1.476	1.262	2.9975
0.0320	13.276	11.004	8.056	5.357	4.358	3.963	3.657	3.383	2.151	1.845	1.700	1.458	3.8368
0.0400	15.012	12.501	9.131	6.091	4.967	4.529	4.173	3.863	2.456	2.114	1.945	1.671	4.7960
0.0500	16.954	14.211	10.350	6.935	5.682	5.175	4.772	4.420	2.805	2.438	2.246	1.930	5.9950
0.0600	18.713	15.835	11.466	7.728	6.352	5.768	5.332	4.942	3.165	2.752	2.540	2.184	7.1940
0.0700	20.318	17.380	12.503	8.477	7.002	6.352	5.877	5.451	3.501	3.063	2.838	2.438	8.3930
0.0800	21.806	18.895	13.477	9.205	7.614	6.900	6.375	5.930	3.841	3.369	3.113	2.682	9.5920
0.0900	23.196	20.360	14.399	9.906	8.207	7.458	6.868	6.393	4.190	3.664	3.398	2.930	10.791
0.1000	24.518	21.799	15.276	10.586	8.799	7.974	7.333	6.859	4.522	3.957	3.666	3.162	11.990
0.1250	27.532	25.402	17.316	12.190	10.182	9.229	8.485	7.948	5.325	4.658	4.355	3.766	14.987
0.1600	31.209	30.333	19.891	14.242	11.974	10.860	9.965	9.349	6.365	5.589	5.241	4.575	19.184
0.2000	34.902	35.420	22.546	16.391	13.866	12.558	11.521	10.800	7.485	6.606	6.200	5.411	23.980
0.2500	38.923	40.942	25.557	18.886	16.049	14.567	13.341	12.497	8.817	7.795	7.309	6.389	29.975
0.3200	43.801	47.588	29.357	22.106	18.877	17.233	15.706	14.678	10.510	9.336	8.763	7.706	38.368
0.4000	48.378	53.706	33.090	25.215	21.707	19.854	18.100	16.909	12.310	10.953	10.291	9.034	47.960
0.5000	52.772	59.304	36.903	28.526	24.725	22.696	20.666	19.264	14.245	12.695	11.938	10.517	59.950
0.6000	56.313	63.423	40.166	31.450	27.394	25.225	22.895	21.328	15.946	14.259	13.436	11.929	71.940
0.7000	58.994	66.224	42.780	33.796	29.561	27.251	24.684	23.016	17.369	15.529	14.674	13.005	83.930
0.8000	60.956	67.959	44.887	35.775	31.376	29.042	26.259	24.463	18.583	16.698	15.755	14.005	95.920
0.9000	62.526	69.096	46.592	37.367	32.940	30.564	27.582	25.672	19.708	17.705	16.726	14.909	107.91
1.0000	63.662	69.707	47.974	38.811	34.254	31.807	28.737	26.722	20.629	18.566	17.559	15.688	119.90
1.2500	65.354	69.990	50.388	41.319	36.784	34.264	30.888	28.671	22.524	20.307	19.198	17.182	149.87
1.6000	66.011	69.191	52.141	43.538	38.897	36.342	32.745	30.242	24.246	21.951	20.752	18.614	191.84
2.0000	65.464	68.318	52.837	44.753	40.209	37.725	33.815	31.332	25.362	23.142	21.874	19.708	239.80
2.5000	63.916	66.972	52.692	45.263	40.942	38.465	34.408	31.932	26.241	23.870	22.658	20.550	299.75
3.2000	61.383	64.842	51.626	44.914	40.888	38.461	34.486	31.905	26.639	24.367	23.128	21.012	383.68
4.0000	58.441	62.237	49.950	43.906	40.209	37.862	34.116	31.468	26.623	24.375	23.227	21.129	479.60
5.0000	55.075	59.036	47.725	42.284	38.944	36.748	33.121	30.639	26.249	23.958	22.956	20.951	599.50
6.0000	52.159	56.080	45.593	40.669	37.523	35.563	32.098	29.681	25.441	23.480	22.477	20.654	719.40
7.0000	49.473	53.443	43.627	39.090	36.123	34.335	31.063	28.750	24.868	22.861	21.944	20.199	839.30
8.0000	47.150	51.041	41.837	37.653	34.850	33.135	30.123	27.822	24.182	22.299	21.420	19.747	959.20
9.0000	45.157	48.857	40.211	36.311	33.657	32.048	29.153	26.982	23.524	21.714	20.870	19.301	1079.1
10.0000	43.304	46.867	38.733	35.131	32.536	31.025	28.236	26.222	22.852	21.187	20.412	18.863	1199.0
11.0000	41.647	45.124	37.385	34.021	31.553	30.095	27.403	25.534	22.282	20.712	20.001	18.431	1318.9
12.0000	40.165	43.491	36.152	32.971	30.621	29.247	26.644	24.873	21.728	20.245	19.522	18.004	1438.8

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	17.818	7.603	5.037	4.733	4.205	2.775	1.701	1.207	0.796	6.372	8.106	6.187	1.4987
0.0160	20.086	8.471	5.693	5.354	4.760	3.215	1.992	1.419	0.942	7.276	9.257	6.992	1.9184
0.0200	22.149	9.095	6.292	5.927	5.302	3.681	2.295	1.670	1.117	8.179	10.400	7.727	2.3980
0.0250	24.405	9.685	6.957	6.557	5.933	4.257	2.721	1.985	1.438	9.187	11.691	8.542	2.9975
0.0320	27.470	10.424	7.726	7.355	6.719	5.035	3.271	2.465	1.716	10.473	13.356	9.586	3.8368
0.0400	30.590	11.122	8.520	8.200	7.552	5.899	3.908	2.995	2.128	11.825	15.085	10.684	4.7960
0.0500	34.260	12.048	9.512	9.253	8.612	6.945	4.678	3.643	2.639	13.393	17.078	12.027	5.9950
0.0600	38.298	13.106	10.629	10.274	9.712	7.992	5.435	4.277	3.142	14.918	19.046	13.393	7.1940
0.0700	42.386	14.354	11.753	11.415	10.828	9.027	6.152	4.889	3.613	16.429	20.955	14.854	8.3930
0.0800	46.765	15.701	12.951	12.587	11.981	10.067	6.900	5.499	4.084	17.951	22.870	16.388	9.5920
0.0900	51.115	17.149	14.183	13.823	13.160	11.101	7.631	6.105	4.521	19.467	24.751	17.969	10.791
0.1000	55.911	18.759	15.551	15.062	14.329	12.145	8.387	6.676	4.950	20.974	26.672	19.599	11.990
0.1250	68.744	22.943	18.961	18.268	17.454	14.736	10.147	8.086	6.009	24.831	31.601	23.878	14.987
0.1600	88.116	29.379	24.108	23.232	22.039	18.359	12.591	10.025	7.439	30.373	38.588	30.433	19.184
0.2000	110.703	36.751	30.099	28.904	27.326	22.208	15.106	11.995	8.861	36.390	46.175	37.991	23.980
0.2500	138.516	45.848	37.185	35.805	33.428	26.425	17.864	14.005	10.299	43.293	54.870	47.228	29.975
0.3200	174.380	56.923	46.296	44.182	40.425	30.972	20.667	16.117	11.772	51.727	65.701	58.655	38.368
0.4000	206.484	68.166	54.136	51.456	46.591	34.778	22.998	17.902	13.038	59.331	75.545	68.696	47.960
0.5000	235.443	78.235	60.780	57.828	51.738	38.047	25.094	19.596	14.282	66.168	84.472	77.571	59.950
0.6000	255.057	85.555	64.748	61.535	54.988	40.207	26.671	20.806	15.223	70.773	90.816	83.024	71.940
0.7000	262.670	90.266	66.395	63.101	56.470	41.240	27.593	21.476	15.871	73.368	94.287	85.261	83.930
0.8000	263.486	92.467	66.837	63.739	56.961	41.655	28.189	21.995	16.339	74.692	95.878	85.913	95.920
0.9000	260.914	92.997	66.626	63.505	56.469	41.653	28.421	22.457	16.680	75.246	96.492	85.449	107.91
1.0000	258.581	93.502	66.732	63.326	56.418	41.786	28.785	22.932	17.031	75.464	96.668	85.010	119.90
1.2500	250.430	93.773	66.765	63.741	56.637	42.477	29.830	24.086	18.190	75.431	95.788	84.501	149.87
1.6000	235.678	92.290	66.637	63.717	57.043	43.538	31.233	25.393	19.657	74.301	92.968	82.800	191.84
2.0000	218.743	89.664	66.468	63.298	57.275	44.488	32.494	26.682	20.976	72.914	89.822	80.576	239.80
2.5000	199.177	85.625	65.391	62.230	57.435	45.421	33.723	28.085	22.342	70.924	85.836	77.458	299.75
3.2000	180.690	80.278	63.654	60.763	56.427	45.689	34.744	28.910	23.180	68.301	81.414	74.083	383.68
4.0000	164.833	74.525	60.938	58.441	54.944	44.955	34.465	29.021	23.476	65.234	76.872	70.279	479.60
5.0000	151.766	68.963	57.700	55.552	52.354	43.382	33.742	28.492	23.385	61.756	72.303	66.242	599.50
6.0000	141.795	64.469	54.803	52.706	49.924	41.672	32.553	27.675	22.797	58.542	68.344	62.599	719.40
7.0000	133.935	60.816	52.265	50.389	47.641	40.050	31.499	26.874	22.206	55.799	64.961	59.682	839.30
8.0000	127.184	57.526	49.995	48.238	45.560	38.448	30.248	25.939	21.546	53.300	61.919	57.024	959.20
9.0000	121.035	55.009	47.891	46.243	43.750	36.994	29.153	25.052	20.910	50.988	59.151	54.566	1079.1
10.0000	115.812	52.871	46.131	44.543	42.142	35.634	28.159	24.208	20.257	48.959	56.705	52.445	1199.0
11.0000	111.035	50.919	44.526	42.993	40.675	34.395	27.254	23.441	19.627	47.143	54.545	50.545	1318.9
12.0000	106.649	49.131	43.057	41.575	39.334	33.260	26.427	22.740	19.052	45.480	52.529	48.806	1438.8

$^{120}_{50}Sn$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=120 MEV
0.0125	0.119	0.119	0.148	0.193	0.205	0.247	0.263	0.289	0.394	0.448	0.477	0.559	1.4987
0.0160	0.150	0.152	0.189	0.248	0.264	0.318	0.338	0.371	0.508	0.591	0.621	0.731	1.9184
0.0200	0.184	0.188	0.236	0.310	0.332	0.397	0.422	0.462	0.636	0.727	0.778	0.917	2.3980
0.0250	0.224	0.232	0.292	0.387	0.416	0.495	0.525	0.573	0.793	0.907	0.970	1.142	2.9975
0.0320	0.277	0.290	0.367	0.491	0.532	0.630	0.666	0.725	1.009	1.152	1.232	1.448	3.8368
0.0400	0.333	0.353	0.449	0.605	0.661	0.777	0.822	0.893	1.249	1.425	1.524	1.786	4.7960
0.0500	0.397	0.425	0.545	0.741	0.815	0.953	1.008	1.093	1.539	1.754	1.875	2.191	5.9950
0.0600	0.457	0.493	0.635	0.868	0.962	1.119	1.184	1.282	1.815	2.066	2.210	2.577	7.1940
0.0700	0.512	0.556	0.719	0.988	1.101	1.276	1.350	1.460	2.078	2.363	2.527	2.943	8.3930
0.0800	0.564	0.614	0.799	1.102	1.232	1.424	1.508	1.630	2.327	2.644	2.828	3.290	9.5920
0.0900	0.614	0.670	0.875	1.210	1.358	1.565	1.659	1.791	2.564	2.911	3.113	3.619	10.791
0.1000	0.661	0.722	0.948	1.312	1.477	1.699	1.802	1.944	2.788	3.165	3.385	3.932	11.990
0.1250	0.770	0.841	1.116	1.549	1.754	2.007	2.134	2.297	3.304	3.750	4.009	4.650	14.987
0.1600	0.908	0.984	1.327	1.842	2.097	2.389	2.546	2.736	3.940	4.470	4.775	5.528	19.184
0.2000	1.049	1.125	1.543	2.137	2.442	2.773	2.961	3.178	4.574	5.186	5.536	6.397	23.980
0.2500	1.207	1.278	1.783	2.463	2.821	3.194	3.418	3.665	5.263	5.963	6.362	7.341	29.975
0.3200	1.407	1.464	2.081	2.860	3.284	3.705	3.974	4.259	6.092	6.896	7.355	8.472	38.368
0.4000	1.612	1.651	2.382	3.256	3.743	4.209	4.526	4.849	6.905	7.809	8.326	9.575	47.960
0.5000	1.846	1.861	2.719	3.694	4.248	4.762	5.131	5.497	7.786	8.797	9.375	10.768	59.950
0.6000	2.066	2.056	3.026	4.089	4.701	5.255	5.672	6.078	8.565	9.669	10.301	11.814	71.940
0.7000	2.274	2.241	3.315	4.456	5.116	5.712	6.170	6.611	9.274	10.461	11.140	12.759	83.930
0.8000	2.473	2.419	3.588	4.800	5.510	6.138	6.640	7.116	9.940	11.205	11.928	13.647	95.920
0.9000	2.668	2.594	3.850	5.128	5.882	6.540	7.085	7.594	10.566	11.902	12.666	14.476	107.91
1.0000	2.857	2.767	4.104	5.443	6.239	6.924	7.511	8.051	11.161	12.563	13.365	15.260	119.90
1.2500	3.321	3.195	4.712	6.190	7.082	7.830	8.515	9.132	12.548	14.103	14.994	17.082	149.87
1.6000	3.958	3.796	5.529	7.177	8.189	9.016	9.831	10.554	14.340	16.086	17.092	19.423	191.84
2.0000	4.687	4.493	6.441	8.262	9.399	10.310	11.270	12.109	16.271	18.210	19.339	21.923	239.80
2.5000	5.612	5.378	7.576	9.592	10.875	11.881	13.026	14.002	18.592	20.758	22.028	24.898	299.75
3.2000	6.951	6.650	9.183	11.452	12.924	14.061	15.460	16.629	21.763	24.234	25.690	28.932	383.68
4.0000	8.552	8.159	11.071	13.611	15.289	16.574	18.255	19.655	25.362	28.167	29.826	33.482	479.60
5.0000	10.665	10.137	13.527	16.393	18.318	19.788	21.821	23.516	29.897	33.128	35.018	39.179	599.50
6.0000	12.903	12.222	16.098	19.285	21.455	23.105	25.499	27.492	34.537	38.183	40.296	44.943	719.40
7.0000	15.264	14.412	18.787	22.293	24.713	26.537	29.297	31.597	39.305	43.359	45.696	50.814	839.30
8.0000	17.747	16.709	21.594	25.419	28.093	30.092	33.217	35.838	44.195	48.671	51.227	56.818	959.20
9.0000	20.346	19.110	24.518	28.662	31.595	33.772	37.264	40.215	49.224	54.121	56.899	62.961	1079.1
10.0000	23.058	21.617	27.557	32.020	35.219	37.576	41.444	44.723	54.396	59.712	62.709	69.246	1199.0
11.0000	25.882	24.224	30.708	35.489	38.962	41.500	45.755	49.358	59.711	65.437	68.644	75.678	1318.9
12.0000	28.814	26.932	33.970	39.069	42.820	45.542	50.193	54.116	65.161	71.293	74.713	82.261	1438.8

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.045	0.106	0.130	0.135	0.143	0.195	0.280	0.374	0.506	0.113	0.094	0.106	1.4987
0.0160	0.057	0.136	0.168	0.173	0.184	0.252	0.361	0.484	0.666	0.145	0.120	0.136	1.9184
0.0200	0.070	0.169	0.211	0.218	0.232	0.317	0.454	0.607	0.837	0.181	0.149	0.171	2.3980
0.0250	0.086	0.211	0.264	0.273	0.291	0.398	0.568	0.756	1.041	0.224	0.184	0.215	2.9975
0.0320	0.108	0.270	0.338	0.350	0.374	0.507	0.723	0.957	1.307	0.283	0.231	0.275	3.8368
0.0400	0.131	0.336	0.421	0.436	0.465	0.626	0.891	1.171	1.593	0.347	0.282	0.341	4.7960
0.0500	0.159	0.417	0.521	0.538	0.574	0.763	1.085	1.417	1.918	0.422	0.342	0.421	5.9950
0.0600	0.186	0.495	0.615	0.635	0.676	0.889	1.263	1.640	2.212	0.492	0.397	0.496	7.1940
0.0700	0.211	0.569	0.703	0.726	0.771	1.005	1.427	1.844	2.479	0.558	0.449	0.566	8.3930
0.0800	0.234	0.639	0.786	0.811	0.860	1.112	1.578	2.032	2.725	0.619	0.497	0.632	9.5920
0.0900	0.255	0.703	0.863	0.890	0.943	1.210	1.718	2.206	2.953	0.676	0.543	0.693	10.791
0.1000	0.275	0.764	0.935	0.964	1.020	1.302	1.849	2.368	3.166	0.730	0.585	0.750	11.990
0.1250	0.319	0.897	1.094	1.128	1.192	1.506	2.139	2.729	3.643	0.852	0.681	0.876	14.987
0.1600	0.370	1.050	1.278	1.319	1.391	1.745	2.481	3.157	4.210	0.996	0.795	1.023	19.184
0.2000	0.416	1.191	1.449	1.495	1.578	1.972	2.810	3.568	4.758	1.135	0.905	1.158	23.980
0.2500	0.463	1.333	1.623	1.676	1.770	2.211	3.160	4.010	5.352	1.282	1.020	1.295	29.975
0.3200	0.516	1.494	1.821	1.882	1.993	2.497	3.583	4.550	6.083	1.455	1.158	1.451	38.368
0.4000	0.566	1.646	2.009	2.080	2.210	2.784	4.013	5.100	6.833	1.626	1.292	1.600	47.960
0.5000	0.620	1.810	2.218	2.300	2.450	3.109	4.502	5.727	7.689	1.815	1.441	1.764	59.950
0.6000	0.669	1.956	2.408	2.500	2.675	3.415	4.959	6.311	8.486	1.989	1.578	1.913	71.940
0.7000	0.715	2.093	2.591	2.692	2.890	3.709	5.400	6.877	9.245	2.156	1.707	2.055	83.930
0.8000	0.761	2.224	2.771	2.881	3.101	3.998	5.830	7.428	9.988	2.317	1.833	2.195	95.920
0.9000	0.807	2.353	2.950	3.069	3.312	4.285	6.253	7.967	10.714	2.477	1.958	2.335	107.91
1.0000	0.853	2.482	3.130	3.258	3.524	4.572	6.672	8.495	11.425	2.636	2.082	2.476	119.90
1.2500	0.970	2.801	3.578	3.729	4.053	5.282	7.693	9.768	13.124	3.033	2.393	2.828	149.87
1.6000	1.142	3.251	4.205	4.386	4.790	6.256	9.064	11.461	15.339	3.592	2.836	3.329	191.84
2.0000	1.353	3.777	4.925	5.140	5.627	7.344	10.567	13.300	17.697	4.242	3.360	3.915	239.80
2.5000	1.640	4.460	5.833	6.094	6.671	8.676	12.376	15.487	20.462	5.075	4.042	4.673	299.75
3.2000	2.082	5.472	7.133	7.457	8.144	10.516	14.825	18.429	24.145	6.279	5.045	5.779	383.68
4.0000	2.637	6.711	8.672	9.066	9.866	12.631	17.595	21.739	28.255	7.716	6.257	7.108	479.60
5.0000	3.396	8.384	10.694	11.170	12.101	15.346	21.111	25.908	33.370	9.605	7.865	8.866	599.50
6.0000	4.213	10.182	12.827	13.387	14.447	18.167	24.729	30.178	38.564	11.599	9.571	10.728	719.40
7.0000	5.083	12.098	15.068	15.714	16.906	21.102	28.474	34.575	43.894	13.698	11.371	12.690	839.30
8.0000	6.002	14.126	17.414	18.146	19.481	24.158	32.359	39.117	49.376	15.897	13.262	14.746	959.20
9.0000	6.969	16.258	19.865	20.686	22.167	27.338	36.398	43.822	55.026	18.197	15.244	16.896	1079.1
10.0000	7.982	18.481	22.416	23.328	24.960	30.641	40.584	48.692	60.853	20.598	17.315	19.138	1199.0
11.0000	9.039	20.793	25.062	26.069	27.857	34.067	44.913	53.726	66.868	23.094	19.471	21.467	1318.9
12.0000	10.142	23.190	27.801	28.905	30.855	37.613	49.381	58.921	73.069	25.684	21.711	23.882	1438.8

$^{121}_{51}$Sb IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=121 MEV
0.0125	7.905	6.539	4.791	3.186	2.587	2.347	2.175	2.012	1.279	1.095	1.006	0.862	1.5112
0.0160	9.083	7.514	5.505	3.661	2.973	2.697	2.499	2.312	1.470	1.258	1.156	0.991	1.9344
0.0200	10.299	8.520	6.242	4.151	3.370	3.058	2.834	2.621	1.667	1.426	1.311	1.123	2.4180
0.0250	11.677	9.660	7.077	4.706	3.822	3.468	3.213	2.972	1.890	1.617	1.490	1.274	3.0225
0.0320	13.402	11.108	8.132	5.408	4.399	4.001	3.692	3.415	2.171	1.862	1.716	1.472	3.8688
0.0400	15.159	12.623	9.220	6.150	5.016	4.573	4.214	3.900	2.480	2.135	1.964	1.687	4.8360
0.0500	17.125	14.354	10.455	7.005	5.740	5.227	4.820	4.464	2.833	2.462	2.269	1.950	6.0450
0.0600	18.906	15.998	11.585	7.808	6.418	5.827	5.387	4.993	3.197	2.780	2.566	2.207	7.2540
0.0700	20.531	17.562	12.635	8.566	7.075	6.418	5.938	5.509	3.538	3.096	2.868	2.464	8.4630
0.0800	22.039	19.097	13.621	9.303	7.696	6.974	6.443	5.993	3.882	3.405	3.146	2.711	9.6720
0.0900	23.448	20.581	14.555	10.014	8.296	7.539	6.943	6.462	4.235	3.704	3.435	2.962	10.881
0.1000	24.788	22.039	15.444	10.703	8.896	8.062	7.413	6.934	4.571	4.000	3.707	3.197	12.090
0.1250	27.843	25.689	17.511	12.328	10.297	9.334	8.581	8.038	5.385	4.711	4.404	3.809	15.112
0.1600	31.571	30.686	20.122	14.407	12.113	10.987	10.081	9.457	6.439	5.654	5.302	4.628	19.344
0.2000	35.318	35.843	22.815	16.587	14.031	12.708	11.659	10.928	7.575	6.685	6.274	5.476	24.180
0.2500	39.398	41.442	25.869	19.117	16.246	14.745	13.504	12.650	8.925	7.890	7.398	6.467	30.225
0.3700	44.350	48.185	29.725	22.383	19.113	17.449	15.903	14.863	10.642	9.453	8.873	7.803	38.688
0.4000	49.047	54.448	33.548	25.563	22.007	20.129	18.351	17.143	12.480	11.104	10.433	9.159	48.360
0.5000	53.532	60.158	37.435	28.937	25.081	23.022	20.964	19.541	14.450	12.878	12.110	10.669	60.450
0.6000	57.189	64.409	40.791	31.939	27.819	25.617	23.251	21.660	16.194	14.481	13.645	12.115	72.540
0.7000	59.961	67.309	43.481	34.350	30.045	27.697	25.089	23.393	17.653	15.784	14.914	13.218	84.630
0.8000	61.996	69.117	45.652	36.385	31.911	29.537	26.707	24.880	18.900	16.983	16.024	14.243	96.720
0.9000	63.627	70.312	47.412	38.024	33.520	31.102	28.068	26.124	20.055	18.016	17.021	15.172	108.81
1.0000	64.812	70.966	48.841	39.512	34.873	32.382	29.256	27.204	21.002	18.901	17.876	15.971	120.90
1.2500	66.597	71.321	51.347	42.104	37.483	34.916	31.476	29.216	22.952	20.693	19.563	17.509	151.12
1.6000	67.336	70.580	53.188	44.412	39.678	37.072	33.402	30.849	24.732	22.392	21.169	18.988	193.44
2.0000	66.842	69.756	53.949	45.694	41.055	38.519	34.527	31.992	25.895	23.629	22.335	20.123	241.80
2.5000	65.327	68.450	53.855	46.262	41.846	39.314	35.168	32.636	26.820	24.396	23.158	21.004	302.25
3.2000	62.811	66.350	52.827	45.959	41.839	39.356	35.288	32.647	27.259	24.934	23.666	21.500	386.88
4.0000	59.866	63.755	51.167	44.976	41.190	38.785	34.947	32.235	27.272	24.970	23.793	21.644	483.60
5.0000	56.480	60.542	48.943	43.363	39.937	37.686	33.966	31.421	26.919	24.569	23.542	21.486	604.50
6.0000	53.538	57.563	46.799	41.745	38.516	36.503	32.947	30.466	26.114	24.102	23.072	21.200	725.40
7.0000	50.820	54.899	44.815	40.154	37.107	35.270	31.908	29.533	25.545	23.483	22.542	20.749	846.30
8.0000	48.465	52.465	43.004	38.704	35.822	34.059	30.963	28.598	24.856	22.921	22.018	20.298	967.20
9.0000	46.443	50.247	41.356	37.344	34.615	32.961	29.983	27.750	24.193	22.332	21.464	19.851	1088.1
10.0000	44.558	48.225	39.855	36.149	33.478	31.924	29.054	26.982	23.515	21.801	21.004	19.409	1209.0
11.0000	42.872	46.451	38.485	35.021	32.481	30.980	28.209	26.285	22.937	21.321	20.589	18.973	1329.9
12.0000	41.362	44.788	37.230	33.954	31.534	30.119	27.438	25.614	22.375	20.849	20.104	18.541	1450.8

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	17.965	7.665	5.078	4.771	4.240	2.798	1.715	1.217	0.803	6.424	8.173	6.237	1.5112
0.0160	20.258	8.543	5.742	5.400	4.800	3.242	2.009	1.431	0.950	7.338	9.336	7.052	1.9344
0.0200	22.345	9.175	6.348	5.979	5.349	3.714	2.316	1.685	1.127	8.251	10.492	7.796	2.4180
0.0250	24.628	9.773	7.020	6.617	5.987	4.296	2.746	2.003	1.451	9.271	11.797	8.620	3.0225
0.0320	27.730	10.523	7.799	7.425	6.782	5.083	3.302	2.488	1.732	10.572	13.483	9.677	3.8688
0.0400	30.889	11.231	8.603	8.280	7.625	5.956	3.946	3.024	2.148	11.941	15.232	10.788	4.8360
0.0500	34.605	12.169	9.608	9.346	8.698	7.015	4.725	3.680	2.666	13.528	17.250	12.148	6.0450
0.0600	38.693	13.241	10.739	10.380	9.812	8.074	5.491	4.321	3.174	15.072	19.242	13.531	7.2540
0.0700	42.832	14.505	11.877	11.536	10.942	9.122	6.216	4.940	3.651	16.602	21.176	15.010	8.4630
0.0800	47.265	15.869	13.090	12.722	12.109	10.175	6.974	5.557	4.127	18.143	23.115	16.563	9.6720
0.0900	51.670	17.335	14.337	13.973	13.303	11.222	7.714	6.171	4.570	19.678	25.020	18.164	10.881
0.1000	56.526	18.965	15.722	15.228	14.487	12.278	8.479	6.749	5.004	21.205	26.966	19.815	12.090
0.1250	69.520	23.202	19.175	18.474	17.651	14.902	10.262	8.178	6.076	25.111	31.958	24.148	15.112
0.1600	89.140	29.720	24.388	23.502	22.295	18.573	12.737	10.141	7.526	30.726	39.037	30.787	19.344
0.2000	112.022	37.189	30.458	29.249	27.652	22.473	15.286	12.138	8.966	36.824	46.725	38.443	24.180
0.2500	140.209	46.409	37.639	36.242	33.836	26.748	18.082	14.176	10.425	43.822	55.540	47.806	30.225
0.3200	176.569	57.637	46.877	44.737	40.932	31.360	20.927	16.319	11.920	52.376	66.525	59.391	38.688
0.4000	209.338	69.108	54.884	52.167	47.235	35.259	23.316	18.149	13.218	60.151	76.590	69.645	48.360
0.5000	238.835	79.362	61.655	58.661	52.484	38.595	25.456	19.878	14.487	67.121	85.689	78.688	60.450
0.6000	259.021	86.884	65.755	62.491	55.843	40.832	27.085	21.130	15.460	71.873	92.228	84.315	72.540
0.7000	266.974	91.745	67.483	64.135	57.395	41.916	28.045	21.828	16.132	74.570	95.832	86.658	84.630
0.8000	267.978	94.044	67.976	64.826	57.933	42.365	28.670	22.370	16.617	75.965	97.513	87.378	96.720
0.9000	265.506	94.634	67.799	64.622	57.463	42.386	28.921	22.852	16.973	76.570	98.190	86.953	108.81
1.0000	263.253	95.191	67.938	64.470	57.437	42.541	29.305	23.346	17.339	76.827	98.415	86.546	120.90
1.2500	255.194	95.557	68.035	64.954	57.714	43.285	30.397	24.544	18.536	76.866	97.611	86.109	151.12
1.6000	240.409	94.142	67.974	64.995	58.187	44.412	31.859	25.902	20.052	75.793	94.834	84.462	193.44
2.0000	223.347	91.551	67.867	64.630	58.480	45.425	33.178	27.244	21.418	74.449	91.713	82.272	241.80
2.5000	203.573	87.515	66.834	63.603	58.702	46.423	34.467	28.705	22.835	72.489	87.730	79.167	302.25
3.2000	184.894	82.146	65.135	62.177	57.740	46.752	35.552	29.583	23.719	69.890	83.308	75.806	386.88
4.0000	168.852	76.342	62.424	59.866	56.284	46.051	35.305	29.728	24.049	66.825	78.747	71.993	483.60
5.0000	155.639	70.723	59.172	56.970	53.690	44.489	34.603	29.219	23.982	63.332	74.149	67.933	604.50
6.0000	145.545	66.174	56.253	54.100	51.245	42.774	33.415	28.407	23.400	60.090	70.152	64.255	725.40
7.0000	137.583	62.472	53.689	51.762	48.938	41.140	32.357	27.606	22.811	57.319	66.730	61.307	846.30
8.0000	130.732	59.130	51.390	49.584	46.831	39.521	31.092	26.662	22.147	54.787	63.646	58.614	967.20
9.0000	124.481	56.575	49.255	47.559	44.995	38.047	29.983	25.765	21.505	52.439	60.834	56.120	1088.1
10.0000	119.167	54.402	47.467	45.833	43.362	36.667	28.975	24.909	20.844	50.377	58.348	53.964	1209.0
11.0000	114.300	52.417	45.836	44.258	41.872	35.406	28.056	24.130	20.205	48.530	56.150	52.032	1329.9
12.0000	109.828	50.596	44.341	42.814	40.506	34.252	27.215	23.418	19.620	46.835	54.095	50.260	1450.8

$^{121}_{51}Sb$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=121 MEV
0.0125	0.118	0.118	0.147	0.191	0.203	0.245	0.260	0.286	0.388	0.442	0.470	0.550	1.5112
0.0160	0.149	0.150	0.188	0.246	0.261	0.314	0.334	0.366	0.502	0.573	0.612	0.721	1.9344
0.0200	0.183	0.186	0.233	0.307	0.328	0.393	0.417	0.457	0.628	0.718	0.768	0.905	2.4180
0.0250	0.223	0.230	0.289	0.383	0.411	0.490	0.519	0.567	0.784	0.896	0.958	1.128	3.0225
0.0320	0.275	0.288	0.364	0.486	0.526	0.623	0.659	0.718	0.997	1.139	1.218	1.430	3.8688
0.0400	0.331	0.350	0.445	0.600	0.654	0.769	0.814	0.884	1.235	1.409	1.507	1.765	4.8360
0.0500	0.395	0.422	0.540	0.734	0.807	0.944	0.998	1.082	1.522	1.734	1.854	2.167	6.0450
0.0600	0.454	0.489	0.630	0.861	0.952	1.108	1.173	1.269	1.796	2.044	2.186	2.549	7.2540
0.0700	0.509	0.552	0.714	0.980	1.090	1.264	1.338	1.447	2.057	2.339	2.500	2.912	8.4630
0.0800	0.561	0.610	0.794	1.093	1.221	1.412	1.495	1.615	2.304	2.618	2.799	3.256	9.6720
0.0900	0.611	0.666	0.869	1.200	1.346	1.552	1.644	1.775	2.539	2.883	3.082	3.583	10.881
0.1000	0.658	0.717	0.941	1.302	1.465	1.685	1.787	1.927	2.762	3.135	3.352	3.893	12.090
0.1250	0.766	0.836	1.109	1.537	1.740	1.992	2.117	2.279	3.275	3.716	3.972	4.607	15.112
0.1600	0.903	0.979	1.319	1.829	2.081	2.372	2.527	2.716	3.907	4.432	4.734	5.480	19.344
0.2000	1.043	1.119	1.534	2.123	2.424	2.754	2.940	3.155	4.538	5.144	5.490	6.344	24.180
0.2500	1.202	1.271	1.773	2.447	2.802	3.173	3.395	3.640	5.223	5.917	6.312	7.283	30.225
0.3200	1.400	1.457	2.069	2.842	3.262	3.681	3.948	4.231	6.048	6.846	7.300	8.408	38.688
0.4000	1.604	1.642	2.368	3.236	3.719	4.183	4.497	4.817	6.857	7.753	8.265	9.505	48.360
0.5000	1.837	1.851	2.703	3.672	4.221	4.732	5.098	5.461	7.732	8.734	9.308	10.690	60.450
0.6000	2.055	2.045	3.009	4.064	4.670	5.222	5.636	6.038	8.505	9.600	10.227	11.729	72.540
0.7000	2.262	2.228	3.295	4.428	5.083	5.670	6.129	6.567	9.209	10.386	11.059	12.667	84.630
0.8000	2.460	2.405	3.566	4.770	5.473	6.092	6.596	7.068	9.870	11.124	11.841	13.547	96.720
0.9000	2.652	2.578	3.826	5.095	5.842	6.491	7.037	7.542	10.490	11.815	12.572	14.369	108.81
1.0000	2.840	2.749	4.077	5.406	6.196	6.871	7.459	7.995	11.079	12.470	13.265	15.145	120.90
1.2500	3.299	3.173	4.679	6.146	7.030	7.768	8.453	9.065	12.453	13.995	14.878	16.949	151.12
1.6000	3.930	3.768	5.487	7.122	8.124	8.942	9.755	10.471	14.225	15.956	16.952	19.264	193.44
2.0000	4.649	4.456	6.388	8.194	9.321	10.219	11.176	12.008	16.133	18.055	19.173	21.734	241.80
2.5000	5.563	5.330	7.509	9.507	10.777	11.771	12.909	13.876	18.423	20.569	21.827	24.671	302.25
3.2000	6.883	6.584	9.094	11.340	12.798	13.920	15.309	16.466	21.550	23.996	25.438	28.648	386.88
4.0000	8.459	8.071	10.953	13.467	15.126	16.394	18.061	19.446	25.095	27.870	29.512	33.129	483.60
5.0000	10.538	10.017	13.369	16.204	18.107	19.556	21.570	23.244	29.556	32.750	34.619	38.734	604.50
6.0000	12.737	12.065	15.895	19.046	21.190	22.816	25.184	27.152	34.116	37.719	39.806	44.399	725.40
7.0000	15.056	14.216	18.536	22.000	24.388	26.186	28.914	31.184	38.798	42.802	45.109	50.164	846.30
8.0000	17.492	16.470	21.291	25.067	27.705	29.675	32.761	35.345	43.597	48.014	50.536	56.056	967.20
9.0000	20.041	18.825	24.158	28.248	31.139	33.284	36.730	39.637	48.528	53.358	56.099	62.080	1088.1
10.0000	22.700	21.281	27.137	31.539	34.692	37.012	40.827	44.056	53.598	58.839	61.794	68.240	1209.0
11.0000	25.467	23.836	30.224	34.938	38.359	40.857	45.051	48.597	58.805	64.447	67.609	74.542	1329.9
12.0000	28.338	26.488	33.419	38.444	42.137	44.816	49.397	53.257	64.142	70.183	73.552	80.989	1450.8

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.045	0.106	0.129	0.133	0.141	0.193	0.277	0.370	0.498	0.112	0.093	0.105	1.5112
0.0160	0.057	0.135	0.166	0.172	0.182	0.249	0.357	0.478	0.656	0.144	0.119	0.135	1.9344
0.0200	0.070	0.168	0.209	0.216	0.229	0.314	0.449	0.599	0.826	0.179	0.148	0.170	2.4180
0.0250	0.085	0.209	0.262	0.271	0.289	0.394	0.562	0.747	1.028	0.222	0.183	0.213	3.0225
0.0320	0.107	0.267	0.335	0.347	0.370	0.502	0.715	0.946	1.291	0.281	0.229	0.272	3.8688
0.0400	0.130	0.333	0.417	0.432	0.461	0.619	0.881	1.158	1.574	0.344	0.280	0.338	4.8360
0.0500	0.158	0.414	0.516	0.534	0.569	0.756	1.074	1.401	1.896	0.419	0.339	0.417	6.0450
0.0600	0.185	0.492	0.610	0.630	0.670	0.881	1.251	1.623	2.188	0.489	0.395	0.492	7.2540
0.0700	0.209	0.565	0.698	0.720	0.765	0.996	1.413	1.826	2.453	0.554	0.446	0.562	8.4630
0.0800	0.232	0.634	0.780	0.805	0.853	1.102	1.564	2.013	2.698	0.615	0.494	0.627	9.6720
0.0900	0.254	0.699	0.857	0.883	0.935	1.201	1.703	2.186	2.924	0.672	0.539	0.688	10.881
0.1000	0.273	0.759	0.929	0.957	1.012	1.292	1.832	2.346	3.136	0.725	0.582	0.745	12.090
0.1250	0.317	0.892	1.087	1.120	1.183	1.495	2.121	2.706	3.610	0.846	0.677	0.871	15.112
0.1600	0.368	1.044	1.270	1.310	1.382	1.733	2.462	3.131	4.174	0.990	0.791	1.016	19.344
0.2000	0.414	1.184	1.440	1.486	1.568	1.958	2.789	3.541	4.720	1.128	0.900	1.151	24.180
0.2500	0.461	1.326	1.613	1.666	1.759	2.197	3.138	3.981	5.311	1.274	1.015	1.287	30.225
0.3200	0.514	1.486	1.810	1.871	1.981	2.482	3.559	4.518	6.038	1.447	1.151	1.443	38.688
0.4000	0.563	1.638	1.998	2.068	2.197	2.767	3.986	5.065	6.784	1.617	1.285	1.591	48.360
0.5000	0.617	1.800	2.205	2.286	2.436	3.090	4.473	5.688	7.635	1.805	1.432	1.754	60.450
0.6000	0.666	1.946	2.394	2.485	2.659	3.393	4.926	6.268	8.426	1.978	1.568	1.902	72.540
0.7000	0.711	2.081	2.575	2.676	2.872	3.685	5.364	6.830	9.179	2.143	1.696	2.043	84.630
0.8000	0.757	2.211	2.754	2.863	3.081	3.972	5.790	7.376	9.916	2.304	1.821	2.182	96.720
0.9000	0.802	2.339	2.932	3.050	3.291	4.257	6.210	7.911	10.636	2.462	1.945	2.320	108.81
1.0000	0.848	2.466	3.110	3.237	3.501	4.541	6.625	8.434	11.340	2.620	2.068	2.460	120.90
1.2500	0.964	2.783	3.553	3.703	4.025	5.244	7.635	9.694	13.022	3.012	2.375	2.809	151.12
1.6000	1.134	3.227	4.174	4.353	4.753	6.207	8.992	11.368	15.212	3.565	2.814	3.304	193.44
2.0000	1.342	3.747	4.885	5.097	5.581	7.282	10.477	13.185	17.542	4.208	3.332	3.883	241.80
2.5000	1.626	4.422	5.781	6.039	6.611	8.596	12.262	15.344	20.271	5.029	4.005	4.631	302.25
3.2000	2.061	5.419	7.062	7.383	8.063	10.411	14.676	18.245	23.903	6.217	4.993	5.722	386.88
4.0000	2.608	6.640	8.579	8.968	9.759	12.494	17.405	21.504	27.950	7.632	6.187	7.031	483.60
5.0000	3.354	8.285	10.568	11.038	11.958	15.165	20.863	25.605	32.983	9.490	7.769	8.760	604.50
6.0000	4.158	10.053	12.664	13.216	14.263	17.937	24.419	29.802	38.087	11.450	9.446	10.590	725.40
7.0000	5.012	11.934	14.864	15.502	16.678	20.820	28.097	34.120	43.320	13.511	11.213	12.517	846.30
8.0000	5.914	13.924	17.166	17.889	19.204	23.819	31.909	38.578	48.701	15.669	13.069	14.534	967.20
9.0000	6.862	16.014	19.570	20.379	21.839	26.937	35.870	43.191	54.242	17.925	15.013	16.643	1088.1
10.0000	7.855	18.194	22.071	22.969	24.576	30.175	39.973	47.965	59.953	20.278	17.042	18.840	1209.0
11.0000	8.891	20.459	24.664	25.654	27.414	33.531	44.214	52.897	65.846	22.724	19.155	21.122	1329.9
12.0000	9.970	22.807	27.346	28.432	30.351	37.003	48.590	57.984	71.919	25.260	21.349	23.487	1450.8

$^{130}_{52}Te$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=130 MEV
0.0125	7.968	6.592	4.829	3.211	2.608	2.366	2.192	2.028	1.289	1.103	1.014	0.869	1.6239
0.0160	9.159	7.577	5.551	3.691	2.997	2.720	2.520	2.331	1.482	1.268	1.166	0.999	2.0786
0.0200	10.387	8.593	6.295	4.186	3.400	3.085	2.858	2.644	1.681	1.438	1.322	1.133	2.5982
0.0250	11.781	9.746	7.140	4.748	3.856	3.499	3.242	2.999	1.906	1.632	1.503	1.285	3.2477
0.0320	13.525	11.211	8.207	5.458	4.440	4.038	3.726	3.447	2.191	1.879	1.732	1.485	4.1571
0.0400	15.303	12.743	9.308	6.209	5.064	4.617	4.254	3.937	2.504	2.155	1.983	1.703	5.1964
0.0500	17.293	14.495	10.557	7.073	5.796	5.279	4.867	4.508	2.861	2.486	2.291	1.969	6.4955
0.0600	19.096	16.159	11.701	7.887	6.482	5.886	5.441	5.043	3.230	2.808	2.592	2.229	7.7946
0.0700	20.742	17.743	12.764	8.654	7.148	6.484	5.999	5.565	3.574	3.127	2.898	2.489	9.0937
0.0800	22.269	19.296	13.763	9.400	7.776	7.047	6.510	6.056	3.923	3.441	3.179	2.739	10.393
0.0900	23.696	20.799	14.709	10.120	8.384	7.619	7.016	6.531	4.280	3.743	3.471	2.993	11.692
0.1000	25.054	22.275	15.610	10.818	8.991	8.148	7.493	7.009	4.621	4.043	3.746	3.231	12.991
0.1250	28.150	25.972	17.704	12.464	10.410	9.436	8.675	8.126	5.444	4.762	4.453	3.851	16.239
0.1600	31.930	31.034	20.350	14.571	12.251	11.111	10.195	9.565	6.512	5.718	5.362	4.681	20.786
0.2000	35.729	36.260	23.081	16.780	14.195	12.856	11.794	11.056	7.663	6.763	6.347	5.539	25.982
0.2500	39.868	41.936	26.178	19.345	16.439	14.921	13.665	12.801	9.031	7.984	7.487	6.544	32.477
0.3200	44.894	48.776	30.090	27.658	19.348	17.663	16.098	15.045	10.772	9.569	8.982	7.899	41.571
0.4000	49.709	55.184	34.001	25.909	22.305	20.401	18.599	17.374	12.648	11.254	10.574	9.282	51.964
0.5000	54.285	61.004	37.961	29.344	25.434	23.346	21.258	19.816	14.653	13.059	12.281	10.819	64.955
0.6000	58.056	65.385	41.409	32.423	28.241	26.005	23.603	21.988	16.439	14.700	13.851	12.299	77.946
0.7000	60.919	68.385	44.176	34.899	30.526	28.140	25.490	23.767	17.936	16.036	15.152	13.430	90.937
0.8000	63.027	70.268	46.412	36.990	32.442	30.029	27.151	25.294	19.215	17.265	16.291	14.481	103.93
0.9000	64.720	71.520	48.227	38.678	34.096	31.637	28.550	26.573	20.400	18.326	17.313	15.433	116.92
1.0000	65.957	72.219	49.704	40.210	35.488	32.953	29.772	27.685	21.373	19.235	18.192	16.253	129.91
1.2500	67.837	72.649	52.303	42.889	38.181	35.566	32.062	29.761	23.380	21.078	19.928	17.835	162.39
1.6000	68.661	71.969	54.235	45.286	40.459	37.801	34.059	31.456	25.219	22.833	21.585	19.362	207.86
2.0000	68.223	71.197	55.063	46.639	41.903	39.315	35.240	32.652	26.430	24.118	22.796	20.539	259.82
2.5000	66.743	69.934	55.023	47.265	42.753	40.167	35.930	33.344	27.401	24.925	23.660	21.459	324.77
3.2000	64.246	67.866	54.034	47.009	42.795	40.255	36.095	33.393	27.881	25.504	24.207	21.992	415.71
4.0000	61.299	65.281	52.392	46.053	42.176	39.713	35.784	33.007	27.925	25.568	24.362	22.162	519.64
5.0000	57.895	62.059	50.169	44.450	40.938	38.630	34.817	32.209	27.593	25.185	24.131	22.024	649.55
6.0000	54.928	59.058	48.014	42.829	39.516	37.451	33.802	31.257	26.792	24.727	23.671	21.750	779.46
7.0000	52.179	56.366	46.013	41.228	38.099	36.212	32.761	30.323	26.227	24.111	23.145	21.304	909.37
8.0000	49.793	53.901	44.181	39.763	36.803	34.992	31.811	29.381	25.537	23.549	22.621	20.854	1039.3
9.0000	47.741	51.652	42.512	38.388	35.582	33.882	30.821	28.525	24.869	22.956	22.064	20.406	1169.2
10.0000	45.826	49.597	40.989	37.177	34.431	32.832	29.881	27.749	24.183	22.421	21.601	19.962	1299.1
11.0000	44.111	47.793	39.597	36.033	33.420	31.875	29.024	27.045	23.600	21.937	21.184	19.521	1429.0
12.0000	42.574	46.099	38.320	34.948	32.457	31.001	28.242	26.364	23.030	21.459	20.693	19.083	1558.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	18.109	7.726	5.119	4.810	4.274	2.820	1.729	1.227	0.809	6.476	8.238	6.287	1.6239
0.0160	20.426	8.615	5.789	5.445	4.840	3.269	2.026	1.443	0.958	7.399	9.414	7.110	2.0786
0.0200	22.538	9.254	6.402	6.031	5.395	3.746	2.336	1.700	1.137	8.323	10.583	7.863	2.5982
0.0250	24.847	9.860	7.083	6.676	6.040	4.334	2.770	2.021	1.464	9.353	11.902	8.697	3.2477
0.0320	27.986	10.620	7.871	7.493	6.845	5.129	3.332	2.511	1.748	10.669	13.607	9.767	4.1571
0.0400	31.183	11.338	8.685	8.359	7.698	6.013	3.984	3.053	2.169	12.054	15.377	10.891	5.1964
0.0500	34.945	12.289	9.702	9.438	8.784	7.084	4.772	3.716	2.692	13.661	17.419	12.268	6.4955
0.0600	39.082	13.374	10.847	10.484	9.911	8.156	5.546	4.365	3.206	15.223	19.436	13.667	7.7946
0.0700	43.271	14.654	11.999	11.654	11.054	9.216	6.280	4.991	3.689	16.772	21.393	15.164	9.0937
0.0800	47.758	16.034	13.226	12.855	12.236	10.281	7.047	5.615	4.170	18.333	23.356	16.736	10.393
0.0900	52.217	17.518	14.488	14.121	13.444	11.341	7.796	6.237	4.619	19.887	25.285	18.357	11.692
0.1000	57.132	19.169	15.891	15.391	14.642	12.410	8.570	6.822	5.058	21.432	27.255	20.028	12.991
0.1250	70.286	23.458	19.386	18.678	17.846	15.066	10.375	8.268	6.143	25.388	32.310	24.414	16.239
0.1600	90.152	30.057	24.665	23.769	22.548	18.783	12.882	10.257	7.611	31.075	39.480	31.136	20.786
0.2000	113.326	37.622	30.813	29.589	27.974	22.735	15.464	12.279	9.071	37.252	47.269	38.891	25.982
0.2500	141.882	46.962	38.088	36.675	34.240	27.068	18.298	14.345	10.550	44.345	56.203	48.376	32.477
0.3200	178.733	58.344	47.452	45.285	41.434	31.745	21.183	16.519	12.066	53.018	67.341	60.119	41.571
0.4000	212.166	70.042	55.626	52.872	47.873	35.735	23.631	18.395	13.396	60.964	77.624	70.586	51.964
0.5000	242.194	80.478	62.522	59.486	53.222	39.138	25.814	20.158	14.691	68.065	86.894	79.795	64.955
0.6000	262.948	88.201	66.751	63.439	56.689	41.451	27.496	21.450	15.694	72.963	93.626	85.593	77.946
0.7000	271.241	93.212	68.561	65.160	58.312	42.586	28.494	22.176	16.389	75.762	97.364	88.043	90.937
0.8000	272.438	95.609	69.107	65.905	58.897	43.070	29.147	22.742	16.894	77.229	99.136	88.832	103.93
0.9000	270.069	96.260	68.964	65.733	58.451	43.115	29.418	23.245	17.265	77.886	99.877	88.448	116.92
1.0000	267.902	96.872	69.138	65.609	58.451	43.292	29.822	23.758	17.645	78.184	100.153	88.075	129.91
1.2500	259.947	97.336	69.302	66.164	58.789	44.092	30.964	25.001	18.881	78.298	99.429	87.713	162.39
1.6000	245.140	95.995	69.312	66.275	59.333	45.286	32.487	26.412	20.446	77.284	96.700	86.124	207.86
2.0000	227.962	93.442	69.270	65.966	59.689	46.363	33.864	27.807	21.860	75.987	93.607	83.971	259.82
2.5000	207.986	89.412	68.283	64.982	59.975	47.430	35.215	29.327	23.330	74.061	89.632	80.883	324.77
3.2000	189.118	84.022	66.624	63.598	59.059	47.820	36.365	30.259	24.261	71.487	85.211	77.538	415.71
4.0000	172.895	78.170	63.919	61.299	57.632	47.153	36.151	30.440	24.624	68.425	80.632	73.716	519.64
5.0000	159.538	72.495	60.655	58.397	55.036	45.604	35.470	29.951	24.583	64.919	76.006	69.635	649.55
6.0000	149.324	67.892	57.713	55.504	52.576	43.885	34.282	29.145	24.007	61.650	71.973	65.924	779.46
7.0000	141.260	64.142	55.124	53.145	50.246	42.240	33.221	28.344	23.421	58.851	68.513	62.946	909.37
8.0000	134.312	60.750	52.797	50.941	48.114	40.603	31.943	27.393	22.753	56.287	65.389	60.219	1039.3
9.0000	127.960	58.156	50.631	48.888	46.253	39.111	30.821	26.485	22.106	53.905	62.535	57.688	1169.2
10.0000	122.557	55.950	48.818	47.137	44.596	37.710	29.799	25.618	21.437	51.810	60.008	55.499	1299.1
11.0000	117.603	53.931	47.160	45.536	43.081	36.429	28.866	24.827	20.788	49.932	57.772	53.535	1429.0
12.0000	113.045	52.077	45.639	44.068	41.692	35.255	28.012	24.103	20.195	48.207	55.679	51.732	1558.9

$^{130}_{52}Te$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=130 MEV
0.0125	0.125	0.124	0.154	0.200	0.211	0.254	0.270	0.296	0.400	0.454	0.482	0.563	1.6239
0.0160	0.158	0.159	0.197	0.257	0.272	0.327	0.347	0.380	0.517	0.589	0.629	0.738	2.0786
0.0200	0.193	0.197	0.245	0.321	0.342	0.409	0.433	0.474	0.648	0.739	0.790	0.928	2.5982
0.0250	0.236	0.243	0.304	0.401	0.430	0.511	0.540	0.589	0.810	0.923	0.987	1.159	3.2477
0.0320	0.291	0.304	0.383	0.510	0.550	0.651	0.687	0.747	1.033	1.177	1.257	1.473	4.1571
0.0400	0.350	0.370	0.469	0.629	0.685	0.805	0.850	0.922	1.282	1.460	1.559	1.822	5.1964
0.0500	0.418	0.446	0.570	0.771	0.846	0.989	1.044	1.131	1.583	1.801	1.923	2.243	6.4955
0.0600	0.481	0.517	0.664	0.905	1.000	1.163	1.229	1.328	1.872	2.127	2.271	2.644	7.7946
0.0700	0.539	0.584	0.754	1.032	1.146	1.328	1.403	1.516	2.147	2.437	2.602	3.026	9.0937
0.0800	0.595	0.646	0.838	1.152	1.284	1.484	1.569	1.694	2.408	2.731	2.917	3.388	10.393
0.0900	0.647	0.704	0.918	1.265	1.416	1.632	1.728	1.863	2.656	3.011	3.216	3.733	11.692
0.1000	0.697	0.759	0.995	1.373	1.542	1.773	1.878	2.024	2.892	3.277	3.501	4.060	12.991
0.1250	0.812	0.885	1.173	1.623	1.833	2.099	2.228	2.397	3.434	3.891	4.157	4.815	16.239
0.1600	0.958	1.036	1.396	1.932	2.195	2.502	2.662	2.859	4.104	4.649	4.962	5.738	20.786
0.2000	1.106	1.185	1.623	2.244	2.559	2.906	3.100	3.325	4.771	5.404	5.764	6.653	25.982
0.2500	1.274	1.347	1.877	2.588	2.960	3.351	3.583	3.839	5.498	6.223	6.635	7.648	32.477
0.3200	1.485	1.544	2.191	3.007	3.448	3.890	4.169	4.466	6.373	7.207	7.682	8.840	41.571
0.4000	1.702	1.741	2.509	3.425	3.932	4.422	4.751	5.088	7.230	8.169	8.705	10.003	51.964
0.5000	1.949	1.962	2.864	3.886	4.464	5.003	5.388	5.770	8.156	9.208	9.809	11.257	64.955
0.6000	2.178	2.167	3.187	4.301	4.940	5.522	5.957	6.380	8.975	10.125	10.782	12.357	77.946
0.7000	2.396	2.361	3.490	4.686	5.376	5.996	6.479	6.940	9.719	10.956	11.662	13.349	90.937
0.8000	2.605	2.548	3.777	5.048	5.788	6.442	6.972	7.469	10.418	11.736	12.488	14.279	103.93
0.9000	2.809	2.731	4.051	5.391	6.178	6.864	7.439	7.970	11.074	12.466	13.261	15.148	116.92
1.0000	3.007	2.912	4.316	5.720	6.552	7.266	7.884	8.449	11.696	13.157	13.993	15.968	129.91
1.2500	3.492	3.359	4.952	6.500	7.432	8.212	8.933	9.578	13.145	14.767	15.695	17.871	162.39
1.6000	4.156	3.986	5.803	7.530	8.586	9.449	10.306	11.060	15.014	16.834	17.882	20.312	207.86
2.0000	4.914	4.711	6.753	8.658	9.846	10.795	11.803	12.679	17.023	19.045	20.221	22.914	259.82
2.5000	5.875	5.630	7.931	10.040	11.379	12.428	13.626	14.645	19.433	21.691	23.014	26.003	324.77
3.2000	7.263	6.949	9.597	11.967	13.502	14.687	16.148	17.367	22.720	25.293	26.809	30.185	415.71
4.0000	8.918	8.510	11.550	14.200	15.947	17.285	19.039	20.496	26.442	29.361	31.086	34.889	519.64
5.0000	11.099	10.551	14.083	17.071	19.073	20.601	22.718	24.480	31.121	34.479	36.442	40.767	649.55
6.0000	13.403	12.697	16.731	20.048	22.303	24.016	26.506	28.574	35.899	39.685	41.878	46.703	779.46
7.0000	15.830	14.949	19.495	23.141	25.652	27.545	30.410	32.795	40.800	45.006	47.429	52.739	909.37
8.0000	18.379	17.306	22.377	26.350	29.122	31.195	34.435	37.148	45.821	50.459	53.107	58.903	1039.3
9.0000	21.044	19.769	25.375	29.676	32.713	34.969	38.585	41.636	50.977	56.047	58.924	65.202	1169.2
10.0000	23.823	22.336	28.488	33.115	36.425	38.865	42.866	46.255	56.275	61.775	64.875	71.640	1299.1
11.0000	26.713	25.005	31.713	36.665	40.256	42.881	47.279	50.998	61.714	67.633	70.949	78.222	1429.0
12.0000	29.711	27.773	35.049	40.327	44.201	47.014	51.817	55.863	67.287	73.622	77.155	84.953	1558.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.048	0.112	0.136	0.140	0.148	0.201	0.287	0.381	0.511	0.118	0.099	0.111	1.6239
0.0160	0.060	0.142	0.175	0.181	0.192	0.260	0.370	0.493	0.673	0.152	0.126	0.143	2.0786
0.0200	0.074	0.177	0.220	0.227	0.241	0.328	0.466	0.619	0.848	0.189	0.156	0.179	2.5982
0.0250	0.091	0.221	0.276	0.285	0.303	0.412	0.584	0.773	1.056	0.235	0.193	0.225	3.2477
0.0320	0.113	0.283	0.353	0.366	0.389	0.526	0.745	0.981	1.331	0.296	0.243	0.287	4.1571
0.0400	0.138	0.352	0.440	0.455	0.485	0.650	0.920	1.203	1.626	0.364	0.296	0.357	5.1964
0.0500	0.168	0.438	0.545	0.563	0.599	0.794	1.123	1.460	1.964	0.443	0.359	0.441	6.4955
0.0600	0.196	0.520	0.644	0.665	0.707	0.927	1.310	1.694	2.271	0.517	0.418	0.520	7.7946
0.0700	0.222	0.598	0.737	0.761	0.807	1.049	1.482	1.908	2.551	0.586	0.472	0.594	9.0937
0.0800	0.246	0.672	0.825	0.850	0.901	1.162	1.641	2.106	2.809	0.650	0.523	0.663	10.393
0.0900	0.269	0.740	0.906	0.933	0.988	1.266	1.789	2.288	3.048	0.711	0.571	0.728	11.692
0.1000	0.290	0.804	0.982	1.011	1.069	1.363	1.926	2.458	3.272	0.768	0.616	0.788	12.991
0.1250	0.336	0.945	1.150	1.185	1.251	1.578	2.232	2.840	3.774	0.896	0.717	0.921	16.239
0.1600	0.390	1.106	1.344	1.386	1.462	1.830	2.593	3.290	4.371	1.049	0.838	1.076	20.786
0.2000	0.439	1.255	1.524	1.573	1.659	2.070	2.940	3.724	4.949	1.195	0.953	1.219	25.982
0.2500	0.489	1.405	1.708	1.764	1.861	2.323	3.310	4.191	5.576	1.350	1.076	1.364	32.477
0.3200	0.545	1.576	1.917	1.982	2.097	2.625	3.757	4.761	6.347	1.534	1.221	1.529	41.571
0.4000	0.597	1.736	2.116	2.190	2.326	2.927	4.210	5.341	7.137	1.714	1.362	1.686	51.964
0.5000	0.654	1.909	2.336	2.419	2.579	3.269	4.725	6.000	8.038	1.913	1.518	1.858	64.955
0.6000	0.706	2.063	2.536	2.630	2.815	3.591	5.205	6.614	8.876	2.097	1.662	2.015	77.946
0.7000	0.754	2.206	2.728	2.832	3.041	3.900	5.669	7.209	9.672	2.271	1.798	2.165	90.937
0.8000	0.802	2.343	2.917	3.030	3.262	4.203	6.119	7.787	10.452	2.441	1.930	2.311	103.93
0.9000	0.850	2.478	3.105	3.227	3.483	4.504	6.562	8.352	11.212	2.608	2.061	2.458	116.92
1.0000	0.898	2.613	3.293	3.424	3.706	4.804	7.001	8.904	11.955	2.775	2.190	2.605	129.91
1.2500	1.021	2.946	3.761	3.916	4.258	5.546	8.067	10.234	13.731	3.189	2.515	2.973	162.39
1.6000	1.200	3.416	4.415	4.601	5.026	6.561	9.497	11.999	16.039	3.771	2.977	3.495	207.86
2.0000	1.420	3.963	5.164	5.386	5.898	7.693	11.061	13.913	18.493	4.448	3.523	4.105	259.82
2.5000	1.718	4.673	6.107	6.376	6.982	9.076	12.940	16.185	21.365	5.313	4.231	4.892	324.77
3.2000	2.176	5.721	7.454	7.790	8.508	10.984	15.478	19.233	25.183	6.562	5.270	6.039	415.71
4.0000	2.750	7.003	9.046	9.453	10.289	13.171	18.342	22.656	29.432	8.047	6.523	7.413	519.64
5.0000	3.532	8.729	11.132	11.624	12.595	15.972	21.970	26.957	34.710	9.996	8.183	9.226	649.55
6.0000	4.374	10.581	13.328	13.907	15.011	18.877	25.695	31.354	40.058	12.050	9.940	11.144	779.46
7.0000	5.269	12.550	15.632	16.299	17.539	21.895	29.545	35.875	45.538	14.207	11.790	13.161	909.37
8.0000	6.212	14.631	18.040	18.796	20.182	25.032	33.534	40.538	51.166	16.465	13.731	15.272	1039.3
9.0000	7.203	16.818	20.553	21.400	22.936	28.293	37.676	45.363	56.960	18.824	15.763	17.476	1169.2
10.0000	8.241	19.096	23.167	24.107	25.797	31.676	41.963	50.351	62.929	21.283	17.885	19.773	1299.1
11.0000	9.323	21.461	25.875	26.912	28.762	35.182	46.393	55.503	69.084	23.837	20.092	22.157	1429.0
12.0000	10.450	23.913	28.676	29.812	31.828	38.808	50.963	60.815	75.425	26.486	22.383	24.626	1558.9

$^{127}_{53}$I IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=127 MEV
0.0125	8.029	6.643	4.866	3.236	2.628	2.384	2.209	2.044	1.299	1.112	1.022	0.876	1.5862
0.0160	9.232	7.638	5.595	3.721	3.022	2.742	2.540	2.350	1.494	1.279	1.175	1.007	2.0304
0.0200	10.474	8.665	6.348	4.221	3.428	3.110	2.882	2.666	1.695	1.451	1.333	1.143	2.5380
0.0250	11.883	9.830	7.202	4.789	3.889	3.529	3.270	3.025	1.923	1.646	1.516	1.296	3.1725
0.0320	13.646	11.311	8.281	5.507	4.480	4.074	3.759	3.478	2.211	1.896	1.747	1.499	4.0608
0.0400	15.444	12.861	9.394	6.266	5.111	4.660	4.293	3.974	2.527	2.175	2.001	1.719	5.0760
0.0500	17.458	14.633	10.658	7.141	5.851	5.329	4.913	4.551	2.888	2.510	2.313	1.988	6.3450
0.0600	19.283	16.317	11.815	7.964	6.546	5.943	5.494	5.092	3.261	2.836	2.617	2.251	7.6140
0.0700	20.949	17.919	12.892	8.740	7.219	6.549	6.059	5.621	3.610	3.158	2.926	2.514	8.8830
0.0800	22.495	19.492	13.903	9.496	7.855	7.118	6.576	6.117	3.962	3.476	3.212	2.767	10.152
0.0900	23.940	21.012	14.860	10.224	8.470	7.698	7.088	6.598	4.324	3.782	3.507	3.024	11.421
0.1000	25.315	22.508	15.773	10.930	9.085	8.233	7.571	7.082	4.669	4.085	3.785	3.265	12.690
0.1250	28.451	26.251	17.894	12.597	10.522	9.538	8.768	8.213	5.502	4.813	4.500	3.892	15.862
0.1600	32.282	31.377	20.575	14.732	12.386	11.234	10.308	9.670	6.584	5.782	5.421	4.732	20.304
0.2000	36.133	36.670	23.342	16.970	14.355	13.002	11.928	11.181	7.750	6.839	6.419	5.602	25.380
0.2500	40.331	42.423	26.481	19.570	16.630	15.094	13.823	12.949	9.136	8.077	7.574	6.620	31.725
0.3200	45.430	49.357	30.449	22.928	19.579	17.873	16.290	15.224	10.901	9.683	9.089	7.993	40.608
0.4000	50.361	55.907	34.447	26.248	22.597	20.668	18.842	17.602	12.814	11.402	10.713	9.404	50.760
0.5000	55.029	61.841	38.482	29.747	25.783	23.666	21.550	20.088	14.854	13.238	12.449	10.967	63.450
0.6000	58.914	66.352	42.022	32.903	28.659	26.390	23.952	22.313	16.683	14.918	14.056	12.480	76.140
0.7000	61.869	69.451	44.865	35.444	31.002	28.579	25.887	24.138	18.215	16.286	15.389	13.639	88.830
0.8000	64.052	71.410	47.166	37.591	32.969	30.517	27.592	25.706	19.527	17.546	16.555	14.716	101.52
0.9000	65.807	72.722	49.037	39.328	34.669	32.168	29.030	27.019	20.743	18.634	17.604	15.692	114.21
1.0000	67.096	73.467	50.562	40.905	36.101	33.523	30.287	28.163	21.742	19.567	18.506	16.534	126.90
1.2500	69.075	73.974	53.257	43.671	38.878	36.215	32.647	30.303	23.806	21.463	20.291	18.161	158.62
1.6000	69.986	73.358	55.281	46.160	41.240	38.531	34.717	32.063	25.706	23.273	22.002	19.735	203.04
2.0000	69.607	72.640	56.180	47.584	42.753	40.112	35.955	33.315	26.966	24.607	23.258	20.955	253.80
2.5000	68.163	71.423	56.194	48.271	43.663	41.022	36.695	34.054	27.985	25.456	24.163	21.916	317.25
3.2000	65.688	69.390	55.247	48.065	43.755	41.159	36.905	34.142	28.507	26.076	24.750	22.485	406.08
4.0000	62.741	66.817	53.625	47.136	43.168	40.648	36.626	33.784	28.582	26.169	24.936	22.683	507.60
5.0000	59.320	63.587	51.404	45.544	41.946	39.581	35.674	33.001	28.272	25.805	24.725	22.566	634.50
6.0000	56.329	60.564	49.239	43.921	40.524	38.406	34.664	32.055	27.475	25.358	24.275	22.305	761.40
7.0000	53.549	57.846	47.221	42.310	39.099	37.163	33.622	31.119	26.916	24.744	23.752	21.863	888.30
8.0000	51.132	55.351	45.370	40.833	37.793	35.933	32.666	30.171	26.224	24.182	23.229	21.415	1015.2
9.0000	49.051	53.070	43.679	39.442	36.559	34.812	31.667	29.309	25.552	23.587	22.669	20.966	1142.1
10.0000	47.106	50.983	42.134	38.216	35.393	33.750	30.716	28.525	24.859	23.048	22.205	20.519	1269.0
11.0000	45.363	49.150	40.721	37.056	34.368	32.780	29.848	27.812	24.270	22.559	21.786	20.075	1395.9
12.0000	43.799	47.426	39.423	35.954	33.391	31.893	29.055	27.123	23.693	22.077	21.288	19.633	1522.8

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	18.249	7.786	5.158	4.847	4.307	2.842	1.742	1.236	0.816	6.526	8.302	6.336	1.5862
0.0160	20.591	8.684	5.836	5.489	4.879	3.296	2.042	1.455	0.966	7.459	9.490	7.168	2.0304
0.0200	22.726	9.331	6.456	6.081	5.440	3.777	2.355	1.714	1.146	8.392	10.671	7.929	2.5380
0.0250	25.062	9.946	7.144	6.734	6.093	4.371	2.794	2.038	1.476	9.434	12.005	8.772	3.1725
0.0320	28.237	10.715	7.941	7.560	6.906	5.175	3.362	2.534	1.764	10.765	13.729	9.854	4.0608
0.0400	31.471	11.442	8.765	8.436	7.769	6.069	4.021	3.081	2.189	12.166	15.519	10.991	5.0760
0.0500	35.278	12.406	9.795	9.528	8.867	7.151	4.817	3.752	2.718	13.791	17.585	12.384	6.3450
0.0600	39.463	13.505	10.953	10.587	10.008	8.235	5.600	4.407	3.237	15.372	19.625	13.800	7.6140
0.0700	43.702	14.800	12.118	11.770	11.164	9.308	6.343	5.041	3.726	16.940	21.606	15.315	8.8830
0.0800	48.243	16.197	13.361	12.985	12.360	10.385	7.118	5.672	4.213	18.518	23.593	16.906	10.152
0.0900	52.754	17.699	14.637	14.266	13.582	11.457	7.876	6.301	4.666	20.091	25.545	18.546	11.421
0.1000	57.728	19.369	16.057	15.552	14.795	12.539	8.659	6.893	5.110	21.656	27.539	20.236	12.690
0.1250	71.039	23.710	19.594	18.878	18.037	15.228	10.486	8.356	6.209	25.660	32.657	24.676	15.862
0.1600	91.146	30.389	24.937	24.031	22.797	18.991	13.024	10.370	7.695	31.418	39.915	31.479	20.304
0.2000	114.609	38.048	31.162	29.924	28.291	22.992	15.639	12.418	9.173	37.674	47.804	39.331	25.380
0.2500	143.530	47.508	38.531	37.101	34.638	27.382	18.511	14.512	10.672	44.860	56.856	48.938	31.725
0.3200	180.866	59.040	48.018	45.825	41.928	32.123	21.436	16.716	12.210	53.651	68.144	60.837	40.608
0.4000	214.947	70.960	56.355	53.564	48.501	36.203	23.940	18.636	13.572	61.763	78.642	71.511	50.760
0.5000	245.516	81.582	63.380	60.301	53.952	39.675	26.168	20.434	14.893	68.998	88.086	80.889	63.450
0.6000	266.837	89.506	67.739	64.377	57.527	42.064	27.902	21.767	15.926	74.042	95.011	86.858	76.140
0.7000	275.473	94.666	69.631	66.176	59.222	43.250	28.938	22.522	16.645	76.944	98.883	89.417	88.830
0.8000	276.866	97.162	70.231	66.976	59.854	43.770	29.620	23.111	17.169	78.485	100.747	90.276	101.52
0.9000	274.606	97.878	70.123	66.837	59.433	43.839	29.912	23.636	17.555	79.194	101.555	89.934	114.21
1.0000	272.529	98.545	70.332	66.742	59.461	44.039	30.337	24.169	17.950	79.534	101.882	89.596	126.90
1.2500	264.688	99.112	70.566	67.370	59.861	44.896	31.528	25.457	19.226	79.726	101.242	89.312	158.62
1.6000	249.871	97.848	70.649	67.554	60.478	46.160	33.113	26.922	20.841	78.776	98.566	87.787	203.04
2.0000	232.584	95.337	70.674	67.303	60.899	47.303	34.551	28.371	22.303	77.528	95.506	85.674	253.80
2.5000	212.414	91.315	69.737	66.365	61.252	48.439	35.964	29.951	23.826	75.637	91.540	82.605	317.25
3.2000	193.363	85.908	68.119	65.025	60.385	48.893	37.181	30.938	24.806	73.091	87.124	79.279	406.08
4.0000	176.962	80.008	65.422	62.741	58.987	48.262	37.001	31.156	25.204	70.034	82.529	75.450	507.60
5.0000	163.465	74.279	62.148	59.834	56.390	46.726	36.343	30.688	25.188	66.517	77.877	71.349	634.50
6.0000	153.133	69.624	59.185	56.920	53.917	45.004	35.157	29.888	24.620	63.223	73.809	67.605	761.40
7.0000	144.969	65.826	56.571	54.541	51.566	43.349	34.094	29.088	24.036	60.396	70.313	64.599	888.30
8.0000	137.925	62.384	54.217	52.312	49.408	41.695	32.802	28.129	23.366	57.801	67.148	61.839	1015.2
9.0000	131.474	59.753	52.022	50.231	47.523	40.185	31.667	27.212	22.713	55.385	64.252	59.272	1142.1
10.0000	125.982	57.514	50.182	48.455	45.842	38.764	30.632	26.334	22.036	53.258	61.685	57.050	1269.0
11.0000	120.941	55.462	48.498	46.829	44.304	37.463	29.685	25.532	21.378	51.349	59.412	55.054	1395.9
12.0000	116.298	53.576	46.953	45.336	42.892	36.269	28.818	24.797	20.776	49.594	57.282	53.221	1522.8

$^{127}_{53}I$ IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=127
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.120	0.120	0.149	0.193	0.204	0.245	0.261	0.286	0.386	0.438	0.466	0.544	1.5862
0.0160	0.152	0.153	0.190	0.248	0.263	0.315	0.335	0.367	0.500	0.570	0.609	0.715	2.0304
0.0200	0.186	0.189	0.236	0.310	0.330	0.395	0.419	0.458	0.627	0.716	0.765	0.900	2.5380
0.0250	0.227	0.233	0.293	0.386	0.414	0.493	0.522	0.569	0.783	0.894	0.955	1.123	3.1725
0.0320	0.280	0.292	0.369	0.491	0.530	0.628	0.663	0.721	0.998	1.138	1.216	1.427	4.0608
0.0400	0.337	0.356	0.451	0.606	0.659	0.776	0.820	0.890	1.238	1.411	1.507	1.764	5.0760
0.0500	0.403	0.430	0.549	0.743	0.815	0.953	1.007	1.091	1.529	1.739	1.858	2.169	6.3450
0.0600	0.463	0.498	0.640	0.872	0.963	1.121	1.184	1.281	1.806	2.053	2.194	2.556	7.6140
0.0700	0.520	0.562	0.726	0.994	1.103	1.279	1.353	1.462	2.071	2.352	2.513	2.923	8.8830
0.0800	0.573	0.622	0.807	1.109	1.237	1.430	1.513	1.633	2.323	2.635	2.816	3.273	10.152
0.0900	0.624	0.679	0.885	1.219	1.364	1.573	1.665	1.796	2.562	2.905	3.104	3.605	11.421
0.1000	0.672	0.732	0.959	1.323	1.485	1.709	1.811	1.952	2.789	3.162	3.379	3.921	12.690
0.1250	0.784	0.853	1.130	1.563	1.766	2.022	2.148	2.311	3.312	3.754	4.011	4.648	15.862
0.1600	0.924	0.999	1.345	1.862	2.114	2.411	2.567	2.757	3.957	4.485	4.787	5.538	20.304
0.2000	1.067	1.143	1.565	2.163	2.466	2.802	2.989	3.207	4.601	5.212	5.560	6.421	25.380
0.2500	1.229	1.299	1.810	2.494	2.852	3.231	3.454	3.703	5.302	6.002	6.400	7.380	31.725
0.3200	1.433	1.489	2.113	2.899	3.323	3.750	4.020	4.307	6.146	6.952	7.410	8.530	40.608
0.4000	1.642	1.679	2.419	3.302	3.790	4.263	4.581	4.906	6.972	7.879	8.396	9.651	50.760
0.5000	1.880	1.892	2.761	3.746	4.302	4.824	5.195	5.564	7.865	8.890	9.460	10.860	63.450
0.6000	2.100	2.090	3.072	4.146	4.760	5.323	5.743	6.151	8.653	9.762	10.396	11.918	76.140
0.7000	2.310	2.276	3.364	4.513	5.180	5.779	6.245	6.690	9.369	10.562	11.243	12.872	88.830
0.8000	2.512	2.456	3.640	4.860	5.576	6.208	6.719	7.199	10.041	11.312	12.038	13.767	101.52
0.9000	2.707	2.632	3.903	5.190	5.951	6.613	7.167	7.680	10.671	12.013	12.780	14.602	114.21
1.0000	2.898	2.806	4.158	5.506	6.310	6.999	7.595	8.140	11.268	12.677	13.483	15.389	126.90
1.2500	3.363	3.235	4.768	6.255	7.155	7.908	8.602	9.223	12.660	14.222	15.117	17.216	158.62
1.6000	4.000	3.836	5.585	7.242	8.261	9.094	9.918	10.645	14.451	16.205	17.214	19.556	203.04
2.0000	4.726	4.530	6.494	8.323	9.468	10.383	11.352	12.195	16.376	18.322	19.454	22.048	253.80
2.5000	5.646	5.410	7.622	9.645	10.935	11.945	13.097	14.077	18.682	20.854	22.127	25.005	317.25
3.2000	6.972	6.671	9.214	11.487	12.965	14.104	15.508	16.679	21.823	24.238	25.755	29.002	406.08
4.0000	8.553	8.161	11.078	13.619	15.299	16.585	18.268	19.666	25.378	28.182	29.839	33.494	507.60
5.0000	10.632	10.107	13.495	16.358	18.281	19.748	21.778	23.466	29.841	33.064	34.948	39.101	634.50
6.0000	12.828	12.153	16.018	19.195	21.359	23.003	25.386	27.368	34.394	38.024	40.128	44.757	761.40
7.0000	15.139	14.297	18.650	22.139	24.548	26.363	29.104	31.387	39.061	43.091	45.413	50.504	888.30
8.0000	17.565	16.540	21.392	25.193	27.850	29.836	32.934	35.529	43.838	48.280	50.816	56.370	1015.2
9.0000	20.099	18.882	24.244	28.356	31.265	33.425	36.880	39.797	48.741	53.594	56.347	62.360	1142.1
10.0000	22.740	21.322	27.202	31.625	34.793	37.128	40.950	44.187	53.777	59.038	62.004	68.479	1269.0
11.0000	25.486	23.858	30.267	34.998	38.432	40.944	45.142	48.693	58.945	64.604	67.775	74.732	1395.9
12.0000	28.333	26.487	33.434	38.475	42.179	44.869	49.452	53.314	64.238	70.291	73.668	81.125	1522.8

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.046	0.107	0.131	0.135	0.143	0.194	0.277	0.368	0.493	0.114	0.095	0.107	1.5862
0.0160	0.058	0.137	0.169	0.174	0.184	0.251	0.358	0.477	0.651	0.146	0.121	0.137	2.0304
0.0200	0.071	0.171	0.212	0.218	0.232	0.316	0.450	0.598	0.821	0.182	0.150	0.172	2.5380
0.0250	0.087	0.213	0.265	0.274	0.292	0.397	0.564	0.747	1.023	0.226	0.186	0.216	3.1725
0.0320	0.109	0.272	0.340	0.352	0.374	0.507	0.718	0.947	1.288	0.285	0.233	0.276	4.0608
0.0400	0.133	0.339	0.423	0.438	0.467	0.626	0.887	1.161	1.573	0.350	0.285	0.343	5.0760
0.0500	0.162	0.422	0.524	0.541	0.577	0.764	1.082	1.408	1.899	0.426	0.346	0.424	6.3450
0.0600	0.189	0.501	0.620	0.640	0.680	0.892	1.262	1.634	2.194	0.497	0.402	0.500	7.6140
0.0700	0.214	0.576	0.710	0.732	0.777	1.010	1.428	1.840	2.464	0.564	0.455	0.572	8.8830
0.0800	0.237	0.647	0.794	0.818	0.867	1.118	1.581	2.031	2.713	0.626	0.504	0.638	10.152
0.0900	0.259	0.713	0.872	0.898	0.951	1.219	1.723	2.207	2.944	0.685	0.550	0.700	11.421
0.1000	0.279	0.774	0.945	0.973	1.029	1.312	1.856	2.371	3.159	0.740	0.594	0.758	12.690
0.1250	0.324	0.910	1.107	1.141	1.204	1.520	2.151	2.739	3.644	0.863	0.691	0.887	15.862
0.1600	0.376	1.066	1.295	1.335	1.408	1.763	2.499	3.174	4.220	1.011	0.808	1.036	20.304
0.2000	0.423	1.210	1.469	1.515	1.598	1.994	2.834	3.592	4.778	1.152	0.919	1.174	25.380
0.2500	0.471	1.355	1.646	1.700	1.794	2.238	3.191	4.043	5.382	1.302	1.037	1.314	31.725
0.3200	0.525	1.519	1.848	1.910	2.021	2.530	3.622	4.593	6.127	1.479	1.177	1.473	40.608
0.4000	0.576	1.674	2.040	2.111	2.242	2.822	4.059	5.152	6.889	1.653	1.314	1.625	50.760
0.5000	0.631	1.840	2.251	2.331	2.486	3.151	4.556	5.787	7.756	1.844	1.464	1.791	63.450
0.6000	0.680	1.989	2.445	2.535	2.713	3.461	5.018	6.379	8.563	2.021	1.603	1.942	76.140
0.7000	0.727	2.126	2.629	2.729	2.930	3.758	5.464	6.951	9.329	2.189	1.733	2.086	88.830
0.8000	0.773	2.258	2.810	2.919	3.143	4.049	5.897	7.506	10.079	2.352	1.860	2.227	101.52
0.9000	0.819	2.388	2.991	3.109	3.356	4.339	6.323	8.049	10.809	2.513	1.986	2.368	114.21
1.0000	0.865	2.518	3.172	3.299	3.569	4.628	6.744	8.580	11.523	2.673	2.110	2.509	126.90
1.2500	0.983	2.838	3.621	3.770	4.099	5.339	7.767	9.856	13.227	3.070	2.422	2.863	158.62
1.6000	1.155	3.288	4.248	4.427	4.836	6.312	9.138	11.548	15.441	3.629	2.865	3.363	203.04
2.0000	1.365	3.812	4.965	5.179	5.671	7.397	10.637	13.382	17.791	4.278	3.387	3.947	253.80
2.5000	1.650	4.491	5.868	6.127	6.708	8.721	12.434	15.555	20.540	5.105	4.065	4.701	317.25
3.2000	2.088	5.493	7.155	7.478	8.167	10.544	14.860	18.470	24.189	6.299	5.059	5.797	406.08
4.0000	2.637	6.717	8.675	9.066	9.867	12.633	17.596	21.738	28.246	7.717	6.255	7.109	507.60
5.0000	3.383	8.363	10.665	11.137	12.067	15.305	21.055	25.841	33.281	9.576	7.838	8.838	634.50
6.0000	4.185	10.128	12.758	13.312	14.369	18.072	24.606	30.031	38.377	11.533	9.512	10.666	761.40
7.0000	5.037	12.003	14.952	15.590	16.776	20.946	28.272	34.335	43.594	13.587	11.274	12.587	888.30
8.0000	5.935	13.984	17.244	17.966	19.291	23.931	32.067	38.773	48.950	15.735	13.122	14.595	1015.2
9.0000	6.877	16.063	19.634	20.442	21.911	27.032	36.006	43.360	54.460	17.979	15.054	16.691	1142.1
10.0000	7.864	18.228	22.118	23.015	24.630	30.248	40.081	48.102	60.133	20.316	17.070	18.874	1269.0
11.0000	8.892	20.475	24.691	25.680	27.446	33.579	44.290	52.997	65.981	22.743	19.167	21.139	1395.9
12.0000	9.962	22.804	27.350	28.434	30.358	37.022	48.629	58.041	72.003	25.258	21.343	23.484	1522.8

$^{132}_{54}Xe$ IONS

ENERGY PER MASS UNIT	ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)												ENERGY FOR A=132
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	8.090	6.692	4.903	3.260	2.648	2.402	2.226	2.059	1.309	1.120	1.030	0.883	1.6487
0.0160	9.305	7.697	5.639	3.750	3.045	2.763	2.560	2.368	1.506	1.289	1.184	1.015	2.1104
0.0200	10.559	8.735	6.399	4.256	3.456	3.136	2.905	2.688	1.709	1.462	1.344	1.152	2.6380
0.0250	11.982	9.913	7.262	4.829	3.922	3.558	3.297	3.050	1.939	1.659	1.529	1.307	3.2975
0.0320	13.765	11.410	8.353	5.554	4.519	4.109	3.792	3.508	2.230	1.913	1.762	1.512	4.2208
0.0400	15.583	12.976	9.479	6.322	5.156	4.701	4.332	4.009	2.550	2.194	2.019	1.735	5.2760
0.0500	17.619	14.769	10.757	7.207	5.905	5.378	4.959	4.593	2.915	2.533	2.334	2.006	6.5950
0.0600	19.466	16.472	11.928	8.039	6.608	6.000	5.546	5.141	3.292	2.863	2.642	2.272	7.9140
0.0700	21.152	18.093	13.016	8.825	7.289	6.612	6.118	5.675	3.645	3.189	2.955	2.538	9.2330
0.0800	22.716	19.684	14.040	9.589	7.933	7.188	6.641	6.178	4.001	3.510	3.243	2.794	10.552
0.0900	24.180	21.223	15.009	10.326	8.555	7.775	7.159	6.664	4.368	3.820	3.542	3.054	11.871
0.1000	25.572	22.736	15.933	11.041	9.177	8.317	7.648	7.154	4.716	4.127	3.824	3.298	13.190
0.1250	28.748	26.524	18.081	12.729	10.631	9.637	8.859	8.299	5.560	4.864	4.547	3.933	16.487
0.1600	32.629	31.714	20.796	14.890	12.519	11.354	10.419	9.774	6.655	5.844	5.480	4.783	21.104
0.2000	36.532	37.075	23.599	17.157	14.514	13.145	12.059	11.304	7.835	6.915	6.490	5.664	26.380
0.2500	40.787	42.903	26.781	19.791	16.818	15.265	13.980	13.096	9.239	8.168	7.659	6.695	32.975
0.3200	45.958	49.931	30.803	23.194	19.806	18.081	16.479	15.401	11.027	9.795	9.195	8.086	42.208
0.4000	51.001	56.617	34.884	26.582	22.884	20.931	19.082	17.826	12.977	11.547	10.849	9.523	52.760
0.5000	55.768	62.671	38.999	30.146	26.129	23.984	21.839	20.357	15.054	13.416	12.616	11.115	65.950
0.6000	59.764	67.309	42.628	33.377	29.072	26.770	24.298	22.635	16.923	15.133	14.259	12.660	79.140
0.7000	62.811	70.508	45.548	35.983	31.474	29.014	26.281	24.505	18.492	16.534	15.623	13.847	92.330
0.8000	65.068	72.543	47.914	38.188	33.492	31.001	28.030	26.113	19.837	17.824	16.818	14.949	105.52
0.9000	66.887	73.915	49.842	39.973	35.238	32.696	29.506	27.463	21.083	18.940	17.893	15.949	118.71
1.0000	68.229	74.707	51.416	41.595	36.711	34.089	30.798	28.639	22.109	19.898	18.818	16.813	131.90
1.2500	70.309	75.296	54.209	44.451	39.572	36.862	33.230	30.845	24.231	21.846	20.654	18.485	164.87
1.6000	71.311	74.747	56.328	47.034	42.021	39.261	35.374	32.670	26.193	23.714	22.419	20.109	211.04
2.0000	70.993	74.087	57.299	48.532	43.604	40.911	36.671	33.978	27.503	25.097	23.722	21.372	263.80
2.5000	69.590	72.917	57.370	49.281	44.576	41.880	37.463	34.766	28.570	25.989	24.669	22.374	329.75
3.2000	67.138	70.921	56.466	49.125	44.721	42.067	37.719	34.896	29.136	26.652	25.297	22.982	422.08
4.0000	64.192	68.361	54.865	48.226	44.166	41.587	37.473	34.565	29.243	26.774	25.512	23.208	527.60
5.0000	60.755	65.125	52.647	46.646	42.960	40.539	36.537	33.800	28.956	26.429	25.323	23.112	659.50
6.0000	57.741	62.082	50.473	45.022	41.539	39.369	35.533	32.858	28.164	25.994	24.883	22.864	791.40
7.0000	54.930	59.338	48.439	43.402	40.108	38.122	34.489	31.922	27.610	25.382	24.365	22.427	923.30
8.0000	52.483	56.814	46.569	41.912	38.792	36.883	33.530	30.968	26.917	24.821	23.843	21.981	1055.2
9.0000	50.375	54.502	44.857	40.506	37.546	35.751	32.522	30.099	26.242	24.223	23.281	21.532	1187.1
10.0000	48.400	52.383	43.292	39.266	36.365	34.677	31.560	29.309	25.542	23.681	22.815	21.083	1319.0
11.0000	46.629	50.521	41.857	38.090	35.327	33.695	30.681	28.588	24.947	23.189	22.393	20.635	1450.9
12.0000	45.038	48.768	40.538	36.971	34.336	32.796	29.877	27.890	24.364	22.702	21.891	20.188	1582.8

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	18.386	7.845	5.197	4.883	4.339	2.863	1.755	1.245	0.822	6.575	8.364	6.383	1.6487
0.0160	20.752	8.752	5.882	5.532	4.917	3.321	2.058	1.466	0.973	7.517	9.564	7.224	2.1104
0.0200	22.910	9.407	6.508	6.131	5.484	3.808	2.374	1.728	1.156	8.460	10.757	7.993	2.6380
0.0250	25.272	10.029	7.204	6.790	6.144	4.408	2.818	2.055	1.489	9.513	12.106	8.845	3.2975
0.0320	28.482	10.808	8.010	7.626	6.966	5.220	3.391	2.556	1.779	10.858	13.849	9.940	4.2208
0.0400	31.754	11.545	8.844	8.512	7.839	6.123	4.057	3.109	2.209	12.275	15.659	11.090	5.2760
0.0500	35.604	12.521	9.885	9.616	8.949	7.218	4.862	3.786	2.743	13.919	17.748	12.499	6.5950
0.0600	39.838	13.633	11.057	10.687	10.103	8.313	5.654	4.449	3.268	15.518	19.812	13.931	7.9140
0.0700	44.126	14.943	12.236	11.884	11.272	9.398	6.404	5.089	3.762	17.104	21.816	15.464	9.2330
0.0800	48.718	16.356	13.492	13.113	12.481	10.488	7.188	5.728	4.254	18.701	23.826	17.072	10.552
0.0900	53.282	17.876	14.784	14.409	13.718	11.572	7.955	6.364	4.713	20.292	25.801	18.731	11.871
0.1000	58.313	19.565	16.219	15.710	14.945	12.666	8.747	6.963	5.162	21.875	27.818	20.442	13.190
0.1250	71.780	23.957	19.798	19.075	18.225	15.387	10.595	8.444	6.274	25.928	32.997	24.933	16.487
0.1600	92.125	30.715	25.204	24.289	23.042	19.195	13.164	10.481	7.778	31.755	40.344	31.818	21.104
0.2000	115.873	38.467	31.505	30.254	28.602	23.245	15.812	12.555	9.275	38.089	48.332	39.765	26.380
0.2500	145.153	48.045	38.966	37.520	35.029	27.691	18.720	14.676	10.793	45.367	57.499	49.491	32.975
0.3200	182.968	59.726	48.576	46.358	42.415	32.497	21.685	16.911	12.352	54.274	68.936	61.544	42.208
0.4000	217.679	71.862	57.071	54.245	49.117	36.664	24.245	18.872	13.744	62.548	79.641	72.420	52.760
0.5000	248.813	82.678	64.231	61.111	54.677	40.208	26.519	20.708	15.093	69.925	89.269	81.976	65.950
0.6000	270.685	90.797	68.716	65.305	58.357	42.670	28.305	22.081	16.156	75.110	96.381	88.111	79.140
0.7000	279.665	96.106	70.690	67.183	60.123	43.908	29.378	22.865	16.898	78.115	100.388	90.777	92.330
0.8000	281.258	98.704	71.345	68.039	60.803	44.465	30.090	23.478	17.441	79.730	102.345	91.708	105.52
0.9000	279.113	99.484	71.273	67.934	60.408	44.558	30.403	24.024	17.843	80.494	103.222	91.409	118.71
1.0000	277.131	100.209	71.519	67.869	60.465	44.783	30.849	24.577	18.253	80.877	103.603	91.109	131.90
1.2500	269.417	100.882	71.827	68.574	60.931	45.698	32.092	25.912	19.569	81.150	103.051	90.908	164.87
1.6000	254.603	99.701	71.987	68.833	61.623	47.034	33.741	27.432	21.236	80.268	100.433	89.449	211.04
2.0000	237.217	97.236	72.082	68.644	62.112	48.246	35.239	28.936	22.748	79.072	97.408	87.381	263.80
2.5000	216.858	93.226	71.196	67.754	62.533	49.453	36.717	30.578	24.325	77.220	93.456	84.334	329.75
3.2000	197.630	87.804	69.622	66.460	61.717	49.972	38.001	31.621	25.353	74.704	89.046	81.028	422.08
4.0000	181.054	81.858	66.935	64.192	60.351	49.378	37.857	31.876	25.786	71.653	84.437	77.195	527.60
5.0000	167.419	76.076	63.651	61.282	57.754	47.857	37.222	31.431	25.797	68.126	79.761	73.075	659.50
6.0000	156.971	71.369	60.669	58.347	55.268	46.132	36.038	30.637	25.237	64.807	75.659	69.299	791.40
7.0000	148.709	67.525	58.030	55.948	52.896	44.467	34.973	29.839	24.656	61.954	72.126	66.265	923.30
8.0000	141.570	64.032	55.650	53.694	50.714	42.797	33.669	28.873	23.983	59.329	68.922	63.474	1055.2
9.0000	135.021	61.365	53.425	51.586	48.805	41.269	32.522	27.946	23.326	56.879	65.985	60.872	1187.1
10.0000	129.442	59.093	51.561	49.786	47.101	39.828	31.473	27.057	22.642	54.721	63.379	58.617	1319.0
11.0000	124.315	57.009	49.852	48.136	45.540	38.508	30.514	26.244	21.975	52.782	61.069	56.591	1450.9
12.0000	119.588	55.092	48.281	46.619	44.106	37.295	29.634	25.499	21.364	50.997	58.902	54.727	1582.8

$^{132}_{54}$Xe IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=132 MEV
0.0125	0.123	0.122	0.152	0.196	0.207	0.249	0.264	0.289	0.389	0.441	0.469	0.546	1.6487
0.0160	0.155	0.156	0.194	0.252	0.267	0.320	0.339	0.371	0.505	0.575	0.613	0.718	2.1104
0.0200	0.191	0.193	0.241	0.315	0.335	0.401	0.424	0.464	0.633	0.722	0.771	0.905	2.6380
0.0250	0.232	0.239	0.299	0.393	0.421	0.501	0.529	0.577	0.791	0.902	0.963	1.131	3.2975
0.0320	0.287	0.299	0.377	0.500	0.539	0.638	0.673	0.732	1.010	1.150	1.228	1.439	4.2208
0.0400	0.345	0.364	0.461	0.618	0.671	0.789	0.833	0.904	1.254	1.427	1.523	1.781	5.2760
0.0500	0.413	0.440	0.561	0.758	0.830	0.970	1.024	1.109	1.550	1.762	1.881	2.193	6.5950
0.0600	0.475	0.510	0.654	0.890	0.981	1.142	1.206	1.304	1.833	2.082	2.223	2.588	7.9140
0.0700	0.533	0.576	0.743	1.015	1.125	1.305	1.378	1.489	2.104	2.387	2.549	2.963	9.2330
0.0800	0.588	0.638	0.826	1.133	1.262	1.459	1.542	1.664	2.361	2.677	2.859	3.320	10.552
0.0900	0.640	0.695	0.906	1.246	1.392	1.605	1.698	1.831	2.606	2.953	3.153	3.659	11.871
0.1000	0.689	0.750	0.982	1.352	1.516	1.745	1.847	1.991	2.839	3.215	3.434	3.982	13.190
0.1250	0.804	0.874	1.158	1.599	1.804	2.067	2.193	2.359	3.375	3.822	4.082	4.727	16.487
0.1600	0.948	1.025	1.379	1.906	2.162	2.466	2.623	2.817	4.036	4.571	4.878	5.639	21.104
0.2000	1.096	1.173	1.604	2.215	2.522	2.866	3.057	3.278	4.697	5.317	5.670	6.544	26.380
0.2500	1.262	1.333	1.856	2.555	2.919	3.307	3.534	3.787	5.416	6.128	6.532	7.529	32.975
0.3200	1.471	1.528	2.167	2.971	3.403	3.840	4.115	4.407	6.282	7.103	7.569	8.709	42.208
0.4000	1.686	1.723	2.481	3.384	3.882	4.367	4.691	5.023	7.130	8.054	8.580	9.858	52.760
0.5000	1.930	1.941	2.832	3.840	4.407	4.942	5.320	5.696	8.045	9.080	9.670	11.097	65.950
0.6000	2.156	2.144	3.151	4.249	4.877	5.453	5.881	6.299	8.853	9.984	10.630	12.182	79.140
0.7000	2.371	2.335	3.450	4.625	5.306	5.920	6.395	6.850	9.585	10.803	11.497	13.158	92.330
0.8000	2.577	2.519	3.732	4.980	5.712	6.359	6.881	7.371	10.273	11.570	12.310	14.074	105.52
0.9000	2.777	2.699	4.001	5.318	6.095	6.773	7.339	7.863	10.918	12.288	13.070	14.928	118.71
1.0000	2.972	2.877	4.262	5.641	6.462	7.168	7.777	8.333	11.528	12.967	13.788	15.733	131.90
1.2500	3.447	3.315	4.885	6.406	7.325	8.096	8.805	9.440	12.950	14.545	15.457	17.599	164.87
1.6000	4.097	3.929	5.718	7.413	8.455	9.307	10.148	10.891	14.778	16.568	17.598	19.988	211.04
2.0000	4.837	4.637	6.645	8.516	9.685	10.621	11.611	12.472	16.740	18.727	19.882	22.529	263.80
2.5000	5.774	5.533	7.794	9.862	11.179	12.213	13.388	14.388	19.090	21.306	22.604	25.541	329.75
3.2000	7.124	6.815	9.415	11.737	13.245	14.410	15.841	17.036	22.286	24.810	26.296	29.607	422.08
4.0000	8.730	8.330	11.310	13.904	15.618	16.931	18.646	20.073	25.899	28.758	30.447	34.173	527.60
5.0000	10.842	10.307	13.763	16.684	18.645	20.143	22.210	23.931	30.430	33.715	35.634	39.866	659.50
6.0000	13.069	12.381	16.322	19.563	21.768	23.445	25.871	27.889	35.049	38.747	40.889	45.604	791.40
7.0000	15.412	14.555	18.990	22.547	25.000	26.850	29.639	31.962	39.780	43.883	46.246	51.429	923.30
8.0000	17.869	16.827	21.768	25.640	28.344	30.368	33.519	36.158	44.619	49.138	51.719	57.371	1055.2
9.0000	20.435	19.198	24.655	28.842	31.801	34.001	37.514	40.479	49.583	54.519	57.319	63.435	1187.1
10.0000	23.107	21.667	27.648	32.150	35.371	37.748	41.632	44.921	54.678	60.027	63.043	69.626	1319.0
11.0000	25.884	24.232	30.748	35.561	39.052	41.608	45.871	49.478	59.905	65.656	68.879	75.951	1450.9
12.0000	28.763	26.889	33.950	39.077	42.840	45.576	50.229	54.150	65.256	71.406	74.837	82.414	1582.8

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.047	0.110	0.134	0.138	0.146	0.197	0.280	0.372	0.495	0.117	0.097	0.109	1.6487
0.0160	0.059	0.140	0.172	0.177	0.188	0.255	0.362	0.481	0.655	0.149	0.124	0.140	2.1104
0.0200	0.073	0.175	0.216	0.223	0.237	0.322	0.456	0.604	0.827	0.186	0.154	0.176	2.6380
0.0250	0.089	0.218	0.271	0.280	0.298	0.404	0.571	0.755	1.031	0.231	0.190	0.221	3.2975
0.0320	0.112	0.279	0.347	0.359	0.382	0.516	0.729	0.959	1.299	0.292	0.239	0.282	4.2208
0.0400	0.136	0.347	0.433	0.447	0.476	0.638	0.901	1.177	1.589	0.358	0.292	0.351	5.2760
0.0500	0.166	0.432	0.536	0.553	0.589	0.780	1.100	1.429	1.921	0.436	0.354	0.434	6.5950
0.0600	0.193	0.513	0.634	0.654	0.695	0.911	1.284	1.660	2.223	0.509	0.412	0.512	7.9140
0.0700	0.219	0.590	0.726	0.749	0.794	1.031	1.454	1.871	2.499	0.578	0.466	0.585	9.2330
0.0800	0.243	0.663	0.812	0.837	0.887	1.142	1.611	2.066	2.753	0.642	0.517	0.654	10.552
0.0900	0.266	0.731	0.893	0.920	0.973	1.245	1.757	2.247	2.989	0.702	0.564	0.717	11.871
0.1000	0.286	0.794	0.968	0.997	1.053	1.341	1.893	2.415	3.210	0.758	0.609	0.777	13.190
0.1250	0.333	0.933	1.134	1.168	1.233	1.555	2.196	2.792	3.707	0.885	0.709	0.909	16.487
0.1600	0.386	1.094	1.327	1.368	1.442	1.805	2.554	3.238	4.297	1.036	0.828	1.062	21.104
0.2000	0.434	1.241	1.505	1.553	1.637	2.042	2.897	3.668	4.870	1.182	0.943	1.204	26.380
0.2500	0.484	1.390	1.687	1.742	1.838	2.293	3.264	4.131	5.491	1.336	1.065	1.348	32.975
0.3200	0.539	1.559	1.895	1.958	2.071	2.592	3.707	4.695	6.255	1.517	1.208	1.511	42.208
0.4000	0.591	1.718	2.092	2.165	2.298	2.892	4.155	5.269	7.036	1.696	1.348	1.667	52.760
0.5000	0.648	1.888	2.307	2.391	2.549	3.229	4.664	5.921	7.926	1.892	1.503	1.837	65.950
0.6000	0.698	2.040	2.505	2.599	2.782	3.547	5.138	6.527	8.752	2.074	1.644	1.992	79.140
0.7000	0.746	2.181	2.694	2.798	3.004	3.851	5.595	7.113	9.536	2.246	1.778	2.139	92.330
0.8000	0.793	2.317	2.879	2.993	3.222	4.150	6.038	7.681	10.304	2.413	1.908	2.284	105.52
0.9000	0.840	2.450	3.064	3.187	3.439	4.446	6.473	8.236	11.051	2.577	2.037	2.428	118.71
1.0000	0.888	2.582	3.249	3.381	3.657	4.741	6.904	8.779	11.782	2.740	2.164	2.572	131.90
1.2500	1.008	2.909	3.707	3.863	4.199	5.468	7.949	10.082	13.522	3.146	2.482	2.934	164.87
1.6000	1.184	3.368	4.348	4.533	4.951	6.461	9.349	11.810	15.782	3.717	2.935	3.444	211.04
2.0000	1.398	3.903	5.079	5.299	5.802	7.567	10.876	13.679	18.178	4.378	3.467	4.040	263.80
2.5000	1.688	4.594	5.998	6.265	6.859	8.915	12.707	15.893	20.977	5.221	4.157	4.807	329.75
3.2000	2.134	5.614	7.308	7.639	8.344	10.770	15.176	18.859	24.690	6.435	5.168	5.923	422.08
4.0000	2.691	6.858	8.853	9.254	10.072	12.893	17.956	22.180	28.814	7.877	6.385	7.256	527.60
5.0000	3.449	8.529	10.874	11.357	12.305	15.606	21.469	26.346	33.927	9.764	7.992	9.012	659.50
6.0000	4.262	10.320	12.997	13.563	14.640	18.414	25.071	30.597	39.096	11.750	9.690	10.866	791.40
7.0000	5.126	12.220	15.220	15.872	17.080	21.326	28.787	34.960	44.385	13.832	11.476	12.813	923.30
8.0000	6.035	14.226	17.542	18.279	19.628	24.351	32.631	39.455	49.810	16.008	13.347	14.847	1055.2
9.0000	6.989	16.331	19.961	20.786	22.279	27.490	36.618	44.099	55.387	18.279	15.304	16.970	1187.1
10.0000	7.987	18.522	22.475	23.389	25.031	30.744	40.742	48.897	61.128	20.644	17.344	19.178	1319.0
11.0000	9.027	20.795	25.077	26.084	27.879	34.113	44.999	53.847	67.042	23.098	19.464	21.469	1450.9
12.0000	10.109	23.149	27.766	28.869	30.823	37.594	49.386	58.947	73.131	25.641	21.664	23.839	1582.8

$^{133}_{55}Cs$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=133 MEV
0.0125	8.149	6.741	4.939	3.284	2.667	2.420	2.242	2.074	1.319	1.128	1.037	0.889	1.6614
0.0160	9.375	7.756	5.682	3.778	3.068	2.784	2.580	2.386	1.517	1.298	1.193	1.023	2.1266
0.0200	10.642	8.804	6.450	4.289	3.483	3.160	2.928	2.709	1.722	1.474	1.354	1.161	2.6582
0.0250	12.080	9.993	7.321	4.869	3.953	3.587	3.324	3.075	1.955	1.673	1.541	1.318	3.3227
0.0320	13.882	11.506	8.423	5.601	4.557	4.144	3.824	3.538	2.249	1.929	1.777	1.525	4.2531
0.0400	15.719	13.090	9.561	6.378	5.201	4.742	4.370	4.045	2.572	2.213	2.037	1.750	5.3164
0.0500	17.778	14.902	10.854	7.272	5.959	5.427	5.003	4.634	2.941	2.556	2.355	2.024	6.6455
0.0600	19.646	16.624	12.038	8.113	6.669	6.055	5.598	5.188	3.322	2.889	2.666	2.293	7.9746
0.0700	21.351	18.264	13.139	8.908	7.358	6.675	6.175	5.729	3.679	3.219	2.983	2.562	9.3037
0.0800	22.935	19.873	14.175	9.681	8.009	7.257	6.705	6.237	4.040	3.544	3.274	2.821	10.633
0.0900	24.415	21.430	15.155	10.427	8.639	7.850	7.229	6.729	4.410	3.857	3.577	3.084	11.962
0.1000	25.824	22.960	16.090	11.150	9.268	8.399	7.723	7.224	4.763	4.167	3.862	3.331	13.291
0.1250	29.040	26.794	18.264	12.858	10.739	9.735	8.949	8.383	5.616	4.913	4.593	3.972	16.614
0.1600	32.970	32.046	21.013	15.046	12.650	11.473	10.528	9.876	6.724	5.905	5.537	4.833	21.266
0.2000	36.924	37.473	23.853	17.341	14.670	13.286	12.189	11.426	7.919	6.989	6.560	5.725	26.582
0.2500	41.237	43.376	27.076	20.009	17.004	15.433	14.134	13.240	9.341	8.258	7.744	6.769	33.227
0.3200	46.479	50.497	31.152	23.457	20.031	18.286	16.666	15.576	11.152	9.906	9.299	8.177	42.531
0.4000	51.631	57.317	35.315	26.910	23.167	21.189	19.318	18.046	13.137	11.689	10.983	9.641	53.164
0.5000	56.495	63.488	39.507	30.539	26.470	24.297	22.124	20.623	15.250	13.590	12.781	11.260	66.455
0.6000	60.606	68.257	43.228	33.848	29.482	27.147	24.640	22.954	17.162	15.346	14.460	12.839	79.746
0.7000	63.744	71.556	46.225	36.518	31.941	29.445	26.672	24.869	18.767	16.780	15.855	14.052	93.037
0.8000	66.076	73.667	48.657	38.780	34.011	31.481	28.464	26.518	20.144	18.100	17.079	15.181	106.33
0.9000	67.960	75.101	50.641	40.614	35.803	33.221	29.980	27.903	21.421	19.244	18.180	16.205	119.62
1.0000	69.356	75.941	52.265	42.282	37.317	34.652	31.307	29.112	22.474	20.227	19.129	17.091	132.91
1.2500	71.539	76.614	55.157	45.229	40.265	37.507	33.811	31.385	24.655	22.228	21.015	18.809	166.14
1.6000	72.636	76.136	57.375	47.908	42.802	39.990	36.031	33.277	26.679	24.155	22.835	20.483	212.66
2.0000	72.382	75.537	58.420	49.482	44.457	41.712	37.389	34.643	28.041	25.588	24.186	21.791	265.82
2.5000	71.021	74.417	58.550	50.294	45.493	42.741	38.233	35.481	29.158	26.523	25.176	22.834	332.27
3.2000	68.594	72.460	57.691	50.191	45.691	42.980	38.537	35.653	29.768	27.230	25.846	23.480	425.31
4.0000	65.651	69.916	56.112	49.323	45.170	42.533	38.325	35.351	29.908	27.383	26.092	23.735	531.64
5.0000	62.200	66.674	53.900	47.755	43.982	41.503	37.406	34.604	29.645	27.058	25.926	23.662	664.55
6.0000	59.164	63.612	51.717	46.131	42.563	40.339	36.409	33.668	28.858	26.634	25.496	23.428	797.46
7.0000	56.324	60.843	49.668	44.503	41.125	39.089	35.364	32.731	28.311	26.026	24.983	22.996	930.37
8.0000	53.847	58.291	47.779	43.001	39.800	37.841	34.401	31.773	27.616	25.466	24.463	22.552	1063.3
9.0000	51.711	55.948	46.047	41.581	38.542	36.700	33.384	30.898	26.938	24.866	23.899	22.103	1196.2
10.0000	49.707	53.798	44.461	40.326	37.347	35.613	32.412	30.100	26.232	24.320	23.431	21.652	1329.1
11.0000	47.908	51.907	43.005	39.135	36.296	34.619	31.523	29.373	25.631	23.825	23.008	21.202	1462.0
12.0000	46.291	50.124	41.666	38.000	35.291	33.708	30.708	28.666	25.041	23.333	22.500	20.750	1594.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	18.519	7.902	5.235	4.919	4.371	2.884	1.768	1.254	0.828	6.623	8.425	6.430	1.6614
0.0160	20.909	8.818	5.926	5.574	4.955	3.347	2.074	1.477	0.981	7.574	9.636	7.279	2.1266
0.0200	23.090	9.481	6.559	6.179	5.527	3.838	2.393	1.741	1.165	8.526	10.842	8.056	2.6582
0.0250	25.478	10.111	7.263	6.845	6.194	4.444	2.841	2.072	1.501	9.591	12.204	8.917	3.3227
0.0320	28.723	10.900	8.078	7.690	7.025	5.265	3.420	2.578	1.794	10.950	13.966	10.024	4.2531
0.0400	32.031	11.646	8.921	8.586	7.907	6.177	4.092	3.136	2.228	12.382	15.796	11.187	5.3164
0.0500	35.925	12.633	9.974	9.703	9.030	7.283	4.906	3.820	2.768	14.044	17.908	12.612	6.6455
0.0600	40.206	13.759	11.159	10.786	10.196	8.390	5.706	4.490	3.298	15.661	19.995	14.060	7.9746
0.0700	44.542	15.084	12.351	11.996	11.379	9.487	6.465	5.137	3.797	17.265	22.021	15.609	9.3037
0.0800	49.186	16.513	13.622	13.239	12.601	10.588	7.257	5.783	4.295	18.881	24.054	17.236	10.633
0.0900	53.802	18.050	14.928	14.549	13.852	11.685	8.032	6.426	4.759	20.490	26.052	18.914	11.962
0.1000	58.889	19.759	16.380	15.865	15.092	12.792	8.833	7.031	5.213	22.092	28.093	20.643	13.291
0.1250	72.509	24.200	19.999	19.269	18.410	15.543	10.703	8.529	6.338	26.191	33.332	25.186	16.614
0.1600	93.090	31.037	25.468	24.544	23.283	19.395	13.302	10.591	7.859	32.088	40.766	32.151	21.266
0.2000	117.118	38.880	31.844	30.580	28.910	23.495	15.982	12.690	9.374	38.499	48.851	40.192	26.582
0.2500	146.753	48.575	39.396	37.934	35.416	27.997	18.926	14.838	10.912	45.867	58.133	50.037	33.227
0.3200	185.042	60.403	49.126	46.884	42.896	32.865	21.931	17.102	12.492	54.890	69.718	62.241	42.531
0.4000	220.368	72.750	57.776	54.915	49.724	37.116	24.544	19.106	13.914	63.321	80.625	73.315	53.164
0.5000	252.056	83.755	65.068	61.908	55.389	40.732	26.865	20.978	15.289	70.836	90.432	83.044	66.455
0.6000	274.498	92.076	69.684	66.225	59.179	43.271	28.703	22.392	16.383	76.168	97.739	89.352	79.746
0.7000	283.821	97.535	71.741	68.182	61.017	44.561	29.815	23.205	17.149	79.276	101.880	92.126	93.037
0.8000	285.618	100.234	72.451	69.093	61.746	45.154	30.557	23.842	17.711	80.966	103.932	93.130	106.33
0.9000	283.591	101.080	72.417	69.024	61.377	45.273	30.891	24.409	18.130	81.786	104.878	92.876	119.62
1.0000	281.709	101.865	72.701	68.990	61.464	45.523	31.359	24.983	18.554	82.213	105.314	92.614	132.91
1.2500	274.132	102.648	73.084	69.774	61.997	46.498	32.653	26.365	19.912	82.571	104.854	92.499	166.14
1.6000	259.334	101.553	73.325	70.112	62.768	47.908	34.367	27.941	21.630	81.759	102.299	91.111	212.66
2.0000	241.858	99.138	73.492	69.987	63.327	49.189	35.928	29.502	23.193	80.619	99.314	89.090	265.82
2.5000	221.318	95.143	72.660	69.147	63.819	50.470	37.472	31.207	24.825	78.808	95.378	86.068	332.27
3.2000	201.918	89.709	71.133	67.902	63.056	51.056	38.826	32.307	25.903	76.325	90.978	82.786	425.31
4.0000	185.170	83.719	68.457	65.651	61.723	50.501	38.717	32.601	26.373	73.283	86.357	78.950	531.64
5.0000	171.401	77.885	65.165	62.739	59.128	48.995	38.107	32.178	26.411	69.746	81.658	74.813	664.55
6.0000	160.840	73.128	6[illegible].164	59.785	56.630	47.269	36.926	31.392	25.858	66.404	77.524	71.007	797.46
7.0000	152.481	69.237	59.502	57.367	54.238	45.595	35.860	30.596	25.281	63.526	73.956	67.946	930.37
8.0000	145.249	65.696	57.026	55.089	52.031	43.909	34.544	29.623	24.606	60.871	70.713	65.123	1063.3
9.0000	138.603	62.993	54.842	52.954	50.100	42.364	33.384	28.687	23.945	58.388	67.736	62.486	1196.2
10.0000	132.938	60.689	52.953	51.130	48.373	40.904	32.323	27.788	23.253	56.199	65.091	60.200	1329.1
11.0000	127.726	58.573	51.219	49.456	46.790	39.565	31.351	26.964	22.578	54.230	62.745	58.143	1462.0
12.0000	122.915	56.624	49.624	47.916	45.333	38.333	30.458	26.208	21.958	52.416	60.541	56.249	1594.9

$^{133}_{55}Cs$ IONS

ENERGY PER MASS UNIT — RANGE IN UNITS OF MG/SQ CM — ENERGY FOR A=133

MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.122	0.122	0.150	0.194	0.205	0.246	0.261	0.286	0.385	0.435	0.462	0.538	1.6614
0.0160	0.154	0.155	0.192	0.249	0.264	0.317	0.336	0.367	0.499	0.568	0.605	0.709	2.1266
0.0200	0.189	0.192	0.239	0.312	0.332	0.397	0.420	0.459	0.626	0.713	0.761	0.894	2.6582
0.0250	0.231	0.237	0.296	0.390	0.416	0.496	0.524	0.571	0.783	0.892	0.952	1.118	3.3227
0.0320	0.285	0.297	0.374	0.496	0.534	0.632	0.667	0.725	0.999	1.137	1.214	1.423	4.2531
0.0400	0.343	0.362	0.458	0.612	0.665	0.782	0.825	0.895	1.241	1.412	1.507	1.762	5.3164
0.0500	0.410	0.437	0.557	0.751	0.822	0.962	1.015	1.099	1.534	1.743	1.861	2.170	6.6455
0.0600	0.472	0.507	0.650	0.883	0.972	1.132	1.195	1.292	1.815	2.061	2.200	2.561	7.9746
0.0700	0.530	0.572	0.738	1.007	1.115	1.294	1.367	1.476	2.084	2.364	2.523	2.933	9.3037
0.0800	0.585	0.634	0.821	1.125	1.251	1.447	1.529	1.650	2.339	2.651	2.831	3.288	10.633
0.0900	0.637	0.691	0.900	1.236	1.381	1.593	1.685	1.817	2.583	2.925	3.124	3.625	11.962
0.1000	0.686	0.746	0.975	1.343	1.504	1.731	1.833	1.975	2.814	3.187	3.403	3.946	13.291
0.1250	0.800	0.870	1.151	1.588	1.791	2.052	2.177	2.341	3.347	3.789	4.046	4.686	16.614
0.1600	0.944	1.020	1.371	1.894	2.147	2.449	2.605	2.797	4.005	4.535	4.838	5.593	21.266
0.2000	1.091	1.167	1.595	2.201	2.506	2.848	3.036	3.256	4.662	5.277	5.627	6.493	26.582
0.2500	1.257	1.326	1.846	2.540	2.901	3.286	3.512	3.763	5.378	6.084	6.485	7.473	33.227
0.3200	1.465	1.521	2.156	2.954	3.382	3.818	4.090	4.381	6.240	7.054	7.516	8.647	42.531
0.4000	1.678	1.715	2.469	3.365	3.859	4.342	4.663	4.993	7.083	8.001	8.523	9.791	53.164
0.5000	1.921	1.932	2.817	3.819	4.381	4.913	5.289	5.663	7.993	9.021	9.607	11.023	66.455
0.6000	2.146	2.133	3.134	4.225	4.848	5.422	5.847	6.261	8.796	9.919	10.560	12.101	79.746
0.7000	2.359	2.323	3.428	4.599	5.274	5.885	6.357	6.809	9.524	10.732	11.421	13.071	93.037
0.8000	2.564	2.506	3.708	4.951	5.677	6.321	6.839	7.326	10.207	11.494	12.228	13.980	106.33
0.9000	2.762	2.685	3.976	5.286	6.058	6.732	7.294	7.814	10.846	12.206	12.982	14.827	119.62
1.0000	2.956	2.861	4.234	5.607	6.421	7.124	7.727	8.280	11.451	12.879	13.694	15.625	132.91
1.2500	3.426	3.295	4.851	6.365	7.276	8.043	8.746	9.377	12.860	14.442	15.348	17.474	166.14
1.6000	4.070	3.903	5.676	7.362	8.394	9.241	10.076	10.813	14.669	16.445	17.466	19.838	212.66
2.0000	4.802	4.602	6.593	8.452	9.611	10.541	11.522	12.376	16.610	18.580	19.725	22.350	265.82
2.5000	5.728	5.488	7.728	9.782	11.087	12.113	13.277	14.269	18.931	21.128	22.414	25.326	332.27
3.2000	7.059	6.753	9.327	11.632	13.125	14.281	15.698	16.882	22.085	24.585	26.057	29.338	425.31
4.0000	8.643	8.246	11.195	13.768	15.464	16.766	18.463	19.875	25.646	28.476	30.148	33.839	531.64
5.0000	10.722	10.193	13.611	16.506	18.445	19.929	21.973	23.674	30.108	33.358	35.257	39.446	664.55
6.0000	12.913	12.234	16.129	19.337	21.517	23.177	25.574	27.568	34.652	38.309	40.426	45.090	797.46
7.0000	15.216	14.370	18.751	22.271	24.694	26.525	29.279	31.573	39.303	43.357	45.693	50.817	930.37
8.0000	17.630	16.603	21.480	25.310	27.980	29.982	33.090	35.695	44.057	48.521	51.070	56.654	1063.3
9.0000	20.150	18.931	24.315	28.454	31.374	33.549	37.013	39.938	48.931	53.803	56.568	62.608	1196.2
10.0000	22.772	21.354	27.253	31.700	34.878	37.226	41.054	44.297	53.931	59.209	62.185	68.685	1329.1
11.0000	25.496	23.869	30.293	35.047	38.489	41.012	45.213	48.767	59.058	64.731	67.910	74.889	1462.0
12.0000	28.319	26.476	33.433	38.494	42.203	44.903	49.485	53.348	64.305	70.369	73.753	81.226	1594.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.047	0.109	0.133	0.137	0.144	0.195	0.277	0.367	0.488	0.116	0.097	0.108	1.6614
0.0160	0.059	0.139	0.171	0.176	0.186	0.253	0.358	0.476	0.646	0.148	0.123	0.139	2.1266
0.0200	0.072	0.173	0.214	0.221	0.235	0.318	0.451	0.598	0.816	0.184	0.153	0.175	2.6582
0.0250	0.089	0.216	0.269	0.278	0.295	0.400	0.565	0.747	1.018	0.229	0.189	0.219	3.3227
0.0320	0.111	0.277	0.344	0.356	0.379	0.511	0.721	0.948	1.284	0.290	0.237	0.280	4.2531
0.0400	0.136	0.345	0.429	0.444	0.472	0.632	0.892	1.165	1.571	0.355	0.290	0.349	5.3164
0.0500	0.165	0.429	0.532	0.549	0.584	0.773	1.090	1.415	1.901	0.433	0.352	0.430	6.6455
0.0600	0.192	0.510	0.629	0.649	0.689	0.903	1.273	1.644	2.200	0.506	0.409	0.508	7.9746
0.0700	0.218	0.586	0.721	0.743	0.788	1.023	1.441	1.854	2.474	0.574	0.463	0.581	9.3037
0.0800	0.242	0.659	0.807	0.831	0.880	1.133	1.598	2.048	2.727	0.638	0.513	0.649	10.633
0.0900	0.264	0.726	0.887	0.913	0.966	1.236	1.743	2.227	2.962	0.697	0.561	0.713	11.962
0.1000	0.285	0.789	0.961	0.990	1.046	1.331	1.877	2.395	3.182	0.753	0.605	0.772	13.291
0.1250	0.331	0.928	1.127	1.161	1.225	1.544	2.179	2.770	3.675	0.880	0.705	0.904	16.614
0.1600	0.384	1.088	1.319	1.360	1.433	1.793	2.535	3.214	4.263	1.031	0.824	1.056	21.266
0.2000	0.432	1.235	1.497	1.544	1.627	2.029	2.878	3.642	4.834	1.176	0.938	1.197	26.582
0.2500	0.481	1.383	1.678	1.732	1.827	2.279	3.242	4.103	5.451	1.329	1.059	1.340	33.227
0.3200	0.537	1.552	1.885	1.948	2.060	2.577	3.684	4.665	6.212	1.510	1.202	1.503	42.531
0.4000	0.588	1.710	2.081	2.153	2.286	2.875	4.130	5.236	6.990	1.687	1.342	1.658	53.164
0.5000	0.645	1.879	2.294	2.378	2.535	3.211	4.636	5.884	7.875	1.883	1.495	1.828	66.455
0.6000	0.695	2.030	2.491	2.585	2.766	3.527	5.107	6.486	8.696	2.063	1.636	1.982	79.746
0.7000	0.743	2.170	2.679	2.783	2.987	3.829	5.561	7.068	9.474	2.234	1.769	2.128	93.037
0.8000	0.789	2.305	2.863	2.976	3.204	4.125	6.000	7.633	10.236	2.400	1.898	2.271	106.33
0.9000	0.836	2.437	3.046	3.168	3.419	4.419	6.433	8.183	10.977	2.563	2.026	2.414	119.62
1.0000	0.883	2.568	3.229	3.361	3.635	4.712	6.859	8.721	11.701	2.725	2.152	2.557	132.91
1.2500	1.002	2.892	3.684	3.838	4.172	5.432	7.895	10.013	13.426	3.127	2.467	2.915	166.14
1.6000	1.176	3.346	4.318	4.502	4.916	6.415	9.281	11.723	15.662	3.692	2.915	3.421	212.66
2.0000	1.388	3.875	5.041	5.259	5.758	7.508	10.791	13.571	18.032	4.346	3.442	4.010	265.82
2.5000	1.675	4.558	5.949	6.213	6.802	8.840	12.600	15.758	20.797	5.178	4.124	4.768	332.27
3.2000	2.114	5.564	7.242	7.570	8.267	10.671	15.036	18.685	24.461	6.376	5.121	5.868	425.31
4.0000	2.664	6.790	8.765	9.161	9.970	12.764	17.776	21.959	28.526	7.797	6.320	7.183	531.64
5.0000	3.410	8.436	10.754	11.232	12.170	15.435	21.236	26.061	33.561	9.656	7.903	8.912	664.55
6.0000	4.210	10.198	12.843	13.402	14.467	18.197	24.779	30.243	38.646	11.609	9.573	10.736	797.46
7.0000	5.059	12.066	15.029	15.672	16.866	21.061	28.432	34.532	43.845	13.656	11.329	12.650	930.37
8.0000	5.952	14.037	17.309	18.037	19.368	24.032	32.209	38.948	49.175	15.794	13.167	14.648	1063.3
9.0000	6.889	16.103	19.685	20.498	21.972	27.114	36.124	43.508	54.652	18.024	15.088	16.732	1196.2
10.0000	7.869	18.254	22.152	23.053	24.672	30.307	40.170	48.216	60.285	20.345	17.090	18.900	1329.1
11.0000	8.889	20.483	24.705	25.697	27.467	33.612	44.346	53.073	66.087	22.753	19.171	21.147	1462.0
12.0000	9.950	22.791	27.341	28.428	30.353	37.025	48.648	58.073	72.057	25.246	21.327	23.471	1594.9

$^{138}_{56}Ba$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=138 MEV
0.0125	8.207	6.789	4.974	3.307	2.686	2.437	2.258	2.089	1.328	1.136	1.044	0.895	1.7237
0.0160	9.445	7.813	5.724	3.806	3.091	2.805	2.599	2.404	1.528	1.308	1.202	1.030	2.2064
0.0200	10.724	8.872	6.499	4.322	3.510	3.185	2.951	2.730	1.735	1.485	1.365	1.170	2.7580
0.0250	12.176	10.073	7.380	4.907	3.985	3.616	3.350	3.099	1.970	1.686	1.553	1.328	3.4475
0.0320	13.996	11.601	8.493	5.648	4.595	4.178	3.856	3.567	2.268	1.945	1.792	1.537	4.4128
0.0400	15.853	13.201	9.643	6.432	5.246	4.783	4.407	4.079	2.594	2.232	2.054	1.765	5.5160
0.0500	17.935	15.033	10.949	7.336	6.011	5.475	5.048	4.675	2.967	2.579	2.376	2.042	6.8950
0.0600	19.823	16.774	12.147	8.187	6.729	6.110	5.648	5.235	3.352	2.915	2.690	2.314	8.2740
0.0700	21.548	18.432	13.261	8.991	7.426	6.736	6.232	5.782	3.713	3.249	3.010	2.586	9.6530
0.0800	23.150	20.059	14.308	9.772	8.084	7.326	6.768	6.295	4.078	3.577	3.305	2.847	11.032
0.0900	24.648	21.634	15.300	10.526	8.721	7.925	7.298	6.793	4.452	3.894	3.611	3.114	12.411
0.1000	26.074	23.182	16.246	11.258	9.357	8.480	7.798	7.294	4.809	4.208	3.899	3.363	13.790
0.1250	29.329	27.060	18.446	12.986	10.846	9.832	9.038	8.467	5.672	4.962	4.639	4.012	17.237
0.1600	33.308	32.374	21.229	15.200	12.780	11.591	10.636	9.978	6.793	5.965	5.594	4.883	22.064
0.2000	37.313	37.867	24.104	17.524	14.824	13.426	12.317	11.546	8.003	7.062	6.629	5.785	27.580
0.2500	41.682	43.845	27.369	20.225	17.187	15.600	14.286	13.383	9.442	8.347	7.827	6.842	34.475
0.3200	46.995	51.058	31.498	23.718	20.253	18.489	16.851	15.749	11.276	10.016	9.402	8.268	44.128
0.4000	52.255	58.009	35.742	27.235	23.447	21.445	19.551	18.264	13.296	11.831	11.116	9.758	55.160
0.5000	57.221	64.303	40.015	30.931	26.810	24.609	22.408	20.888	15.446	13.765	12.945	11.404	68.950
0.6000	61.439	69.195	43.822	34.313	29.887	27.520	24.979	23.270	17.397	15.557	14.659	13.015	82.740
0.7000	64.669	72.594	46.896	37.047	32.405	29.872	27.059	25.230	19.040	17.023	16.085	14.256	96.530
0.8000	67.077	74.782	49.394	39.367	34.526	31.958	28.895	26.920	20.449	18.375	17.337	15.411	110.32
0.9000	69.026	76.279	51.435	41.251	36.365	33.742	30.450	28.341	21.757	19.545	18.465	16.459	124.11
1.0000	70.477	77.168	53.110	42.966	37.920	35.212	31.813	29.582	22.837	20.553	19.438	17.367	137.90
1.2500	72.766	77.928	56.103	46.005	40.956	38.150	34.391	31.923	25.078	22.610	21.375	19.131	172.37
1.6000	73.961	77.525	58.421	48.782	43.582	40.720	36.688	33.884	27.166	24.595	23.252	20.856	220.64
2.0000	73.774	76.989	59.543	50.433	45.312	42.514	38.107	35.309	28.581	26.080	24.651	22.209	275.80
2.5000	72.457	75.922	59.734	51.311	46.413	43.606	39.006	36.199	29.747	27.059	25.685	23.296	344.75
3.2000	70.058	74.006	58.922	51.262	46.666	43.897	39.360	36.414	30.404	27.811	26.397	23.981	441.28
4.0000	67.119	71.479	57.367	50.425	46.180	43.484	39.182	36.141	30.577	27.995	26.676	24.266	551.60
5.0000	63.655	68.233	55.160	48.872	45.011	42.473	38.281	35.413	30.338	27.690	26.532	24.215	689.50
6.0000	60.597	65.153	52.970	47.249	43.594	41.316	37.291	34.483	29.557	27.279	26.114	23.995	827.40
7.0000	57.728	62.361	50.907	45.612	42.151	40.063	36.245	33.547	29.017	26.675	25.606	23.570	965.30
8.0000	55.223	59.780	49.000	44.100	40.817	38.808	35.280	32.585	28.322	26.117	25.088	23.128	1103.2
9.0000	53.060	57.407	47.248	42.665	39.547	37.657	34.255	31.704	27.640	25.514	24.522	22.679	1241.1
10.0000	51.027	55.226	45.642	41.397	38.339	36.559	33.273	30.899	26.929	24.966	24.053	22.227	1379.0
11.0000	49.201	53.308	44.166	40.191	37.276	35.553	32.373	30.165	26.323	24.468	23.629	21.774	1516.9
12.0000	47.558	51.496	42.807	39.040	36.257	34.631	31.549	29.451	25.727	23.972	23.116	21.318	1654.8

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	18.651	7.958	5.272	4.954	4.402	2.905	1.781	1.263	0.834	6.670	8.485	6.476	1.7237
0.0160	21.064	8.884	5.970	5.615	4.991	3.371	2.089	1.488	0.988	7.630	9.708	7.332	2.2064
0.0200	23.267	9.554	6.610	6.226	5.570	3.867	2.411	1.755	1.174	8.592	10.925	8.118	2.7580
0.0250	25.681	10.191	7.320	6.900	6.243	4.479	2.863	2.088	1.513	9.667	12.302	8.988	3.4475
0.0320	28.961	10.990	8.145	7.754	7.083	5.308	3.448	2.599	1.809	11.041	14.081	10.107	4.4128
0.0400	32.305	11.745	8.997	8.660	7.975	6.229	4.127	3.163	2.247	12.488	15.930	11.282	5.5160
0.0500	36.242	12.745	10.062	9.789	9.110	7.347	4.949	3.854	2.792	14.168	18.066	12.723	6.8950
0.0600	40.570	13.884	11.260	10.883	10.288	8.466	5.757	4.531	3.328	15.803	20.175	14.187	8.2740
0.0700	44.953	15.223	12.465	12.107	11.484	9.574	6.524	5.185	3.832	17.424	22.225	15.754	9.6530
0.0800	49.648	16.669	13.750	13.363	12.720	10.688	7.326	5.838	4.335	19.058	24.280	17.398	11.032
0.0900	54.315	18.222	15.070	14.688	13.984	11.796	8.109	6.487	4.804	20.686	26.301	19.094	12.411
0.1000	59.459	19.950	16.538	16.018	15.238	12.915	8.919	7.099	5.264	22.305	28.365	20.843	13.790
0.1250	73.230	24.441	20.198	19.460	18.593	15.697	10.809	8.614	6.401	26.451	33.664	25.437	17.237
0.1600	94.044	31.355	25.729	24.795	23.522	19.594	13.438	10.699	7.940	32.416	41.184	32.480	22.064
0.2000	118.351	39.290	32.179	30.901	29.214	23.742	16.150	12.823	9.473	38.904	49.365	40.615	27.580
0.2500	148.338	49.099	39.821	38.343	35.798	28.299	19.131	14.998	11.030	46.362	58.760	50.577	34.475
0.3200	187.097	61.074	49.672	47.404	43.372	33.230	22.174	17.292	12.631	55.499	70.492	62.932	44.128
0.4000	223.031	73.629	58.474	55.579	50.325	37.565	24.841	19.336	14.082	64.086	81.599	74.201	55.160
0.5000	255.293	84.831	65.904	62.703	56.100	41.255	27.210	21.248	15.486	71.746	91.593	84.111	68.950
0.6000	278.271	93.341	70.641	67.136	59.993	43.866	29.098	22.700	16.609	77.215	99.082	90.581	82.740
0.7000	287.938	98.950	72.782	69.171	61.902	45.207	30.248	23.542	17.398	80.426	103.358	93.463	96.530
0.8000	289.942	101.751	73.547	70.139	62.681	45.837	31.019	24.203	17.979	82.191	105.505	94.540	110.32
0.9000	288.038	102.665	73.553	70.106	62.340	45.983	31.376	24.792	18.414	83.068	106.523	94.333	124.11
1.0000	286.261	103.511	73.876	70.105	62.457	46.259	31.866	25.386	18.854	83.542	107.016	94.110	137.90
1.2500	278.834	104.409	74.337	70.971	63.060	47.295	33.213	26.817	20.253	83.987	106.653	94.086	172.37
1.6000	264.064	103.405	74.662	71.391	63.913	48.782	34.994	28.451	22.025	83.250	104.165	92.773	220.64
2.0000	246.507	101.044	74.905	71.332	64.544	50.135	36.619	30.069	23.639	82.169	101.223	90.803	275.80
2.5000	225.793	97.067	74.130	70.545	65.110	51.490	38.230	31.838	25.327	80.402	97.306	87.809	344.75
3.2000	206.226	91.623	72.651	69.351	64.402	52.146	39.654	32.996	26.456	77.954	92.920	84.553	441.28
4.0000	189.310	85.591	69.988	67.119	63.103	51.630	39.583	33.330	26.962	74.921	88.288	80.715	551.60
5.0000	175.410	79.707	66.689	64.207	60.511	50.141	38.998	32.931	27.029	71.377	83.568	76.562	689.50
6.0000	164.736	74.899	63.670	61.233	58.002	48.414	37.820	32.153	26.485	68.013	79.402	72.727	827.40
7.0000	156.283	70.964	60.986	58.797	55.590	46.732	36.755	31.358	25.911	65.110	75.800	69.640	965.30
8.0000	148.959	67.374	58.555	56.497	53.361	45.031	35.427	30.380	25.235	62.426	72.519	66.786	1103.2
9.0000	142.217	64.636	56.273	54.336	51.406	43.468	34.255	29.436	24.569	59.911	69.502	64.116	1241.1
10.0000	136.468	62.301	54.359	52.488	49.658	41.990	33.181	28.526	23.871	57.691	66.819	61.799	1379.0
11.0000	131.172	60.154	52.601	50.791	48.052	40.632	32.197	27.692	23.187	55.693	64.438	59.712	1516.9
12.0000	126.280	58.174	50.983	49.228	46.574	39.382	31.292	26.925	22.559	53.851	62.198	57.789	1654.8

$^{138}_{56}Ba$ IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=138
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.125	0.124	0.153	0.197	0.208	0.249	0.264	0.289	0.387	0.438	0.465	0.540	1.7237
0.0160	0.158	0.158	0.196	0.253	0.268	0.321	0.340	0.372	0.503	0.572	0.609	0.713	2.2064
0.0200	0.194	0.196	0.244	0.317	0.337	0.402	0.425	0.464	0.632	0.719	0.767	0.899	2.7580
0.0250	0.236	0.242	0.302	0.396	0.423	0.503	0.531	0.578	0.790	0.899	0.960	1.125	3.4475
0.0320	0.292	0.303	0.381	0.504	0.542	0.642	0.676	0.735	1.010	1.148	1.225	1.434	4.4128
0.0400	0.351	0.370	0.467	0.624	0.676	0.795	0.838	0.908	1.256	1.427	1.522	1.778	5.5160
0.0500	0.420	0.447	0.568	0.766	0.836	0.978	1.032	1.116	1.554	1.764	1.882	2.193	6.8950
0.0600	0.484	0.519	0.664	0.900	0.990	1.153	1.216	1.314	1.841	2.088	2.228	2.591	8.2740
0.0700	0.543	0.586	0.754	1.027	1.136	1.318	1.391	1.501	2.115	2.397	2.557	2.970	9.6530
0.0800	0.599	0.649	0.839	1.148	1.275	1.475	1.558	1.680	2.376	2.691	2.871	3.332	11.032
0.0900	0.652	0.708	0.920	1.262	1.408	1.624	1.716	1.850	2.625	2.971	3.171	3.676	12.411
0.1000	0.703	0.763	0.997	1.371	1.534	1.766	1.868	2.012	2.861	3.237	3.456	4.004	13.790
0.1250	0.820	0.890	1.177	1.623	1.828	2.094	2.220	2.387	3.406	3.854	4.114	4.761	17.237
0.1600	0.967	1.044	1.403	1.936	2.193	2.501	2.659	2.854	4.080	4.617	4.924	5.689	22.064
0.2000	1.118	1.195	1.633	2.251	2.560	2.910	3.101	3.325	4.754	5.378	5.732	6.611	27.580
0.2500	1.289	1.359	1.890	2.599	2.965	3.360	3.589	3.844	5.487	6.205	6.611	7.615	34.475
0.3200	1.502	1.558	2.208	3.023	3.459	3.905	4.182	4.478	6.371	7.199	7.668	8.818	44.128
0.4000	1.721	1.758	2.529	3.445	3.948	4.442	4.769	5.105	7.235	8.169	8.699	9.991	55.160
0.5000	1.970	1.980	2.886	3.909	4.483	5.027	5.410	5.791	8.167	9.213	9.810	11.252	68.950
0.6000	2.200	2.184	3.210	4.325	4.960	5.548	5.981	6.404	8.989	10.133	10.785	12.354	82.740
0.7000	2.418	2.379	3.511	4.707	5.396	6.022	6.503	6.964	9.733	10.964	11.666	13.346	96.530
0.8000	2.627	2.566	3.797	5.068	5.808	6.468	6.996	7.492	10.431	11.743	12.491	14.276	110.32
0.9000	2.830	2.748	4.071	5.410	6.197	6.887	7.460	7.991	11.084	12.470	13.261	15.141	124.11
1.0000	3.028	2.928	4.334	5.737	6.568	7.287	7.903	8.467	11.703	13.158	13.988	15.956	137.90
1.2500	3.508	3.371	4.965	6.511	7.441	8.226	8.943	9.587	13.140	14.754	15.676	17.843	172.37
1.6000	4.164	3.990	5.805	7.527	8.581	9.447	10.298	11.051	14.985	16.795	17.836	20.254	220.64
2.0000	4.909	4.703	6.739	8.638	9.820	10.771	11.771	12.643	16.961	18.970	20.136	22.812	275.80
2.5000	5.851	5.604	7.894	9.991	11.321	12.370	13.557	14.569	19.322	21.562	22.872	25.839	344.75
3.2000	7.205	6.890	9.519	11.871	13.393	14.574	16.018	17.224	22.528	25.076	26.575	29.918	441.28
4.0000	8.812	8.406	11.415	14.040	15.768	17.097	18.825	20.263	26.144	29.027	30.729	34.488	551.60
5.0000	10.922	10.380	13.866	16.817	18.792	20.305	22.385	24.117	30.670	33.978	35.911	40.175	689.50
6.0000	13.142	12.449	16.418	19.687	21.905	23.597	26.035	28.063	35.275	38.995	41.150	45.895	827.40
7.0000	15.474	14.612	19.074	22.658	25.123	26.987	29.786	32.118	39.984	44.108	46.483	51.694	965.30
8.0000	17.917	16.872	21.835	25.733	28.448	30.485	33.643	36.290	44.795	49.333	51.924	57.601	1103.2
9.0000	20.465	19.226	24.702	28.913	31.881	34.093	37.611	40.581	49.725	54.676	57.485	63.623	1241.1
10.0000	23.116	21.676	27.672	32.195	35.423	37.810	41.696	44.988	54.780	60.141	63.164	69.766	1379.0
11.0000	25.869	24.218	30.744	35.576	39.071	41.636	45.899	49.505	59.961	65.721	68.949	76.036	1516.9
12.0000	28.720	26.850	33.916	39.058	42.823	45.567	50.214	54.133	65.261	71.416	74.850	82.437	1654.8
MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.048	0.112	0.135	0.139	0.147	0.199	0.281	0.371	0.490	0.118	0.099	0.110	1.7237
0.0160	0.060	0.142	0.174	0.179	0.190	0.257	0.363	0.480	0.650	0.151	0.126	0.142	2.2064
0.0200	0.074	0.177	0.219	0.225	0.239	0.324	0.456	0.603	0.821	0.188	0.156	0.178	2.7580
0.0250	0.091	0.221	0.274	0.283	0.301	0.407	0.573	0.755	1.026	0.234	0.193	0.224	3.4475
0.0320	0.114	0.283	0.351	0.363	0.386	0.520	0.732	0.959	1.295	0.296	0.243	0.286	4.4128
0.0400	0.139	0.353	0.438	0.453	0.482	0.643	0.905	1.179	1.587	0.363	0.296	0.356	5.5160
0.0500	0.169	0.439	0.543	0.561	0.596	0.787	1.107	1.435	1.922	0.443	0.360	0.440	6.8950
0.0600	0.197	0.521	0.643	0.663	0.704	0.921	1.294	1.668	2.227	0.517	0.419	0.519	8.2740
0.0700	0.223	0.600	0.737	0.759	0.805	1.043	1.467	1.883	2.507	0.587	0.474	0.594	9.6530
0.0800	0.248	0.674	0.824	0.849	0.899	1.157	1.627	2.081	2.765	0.652	0.526	0.664	11.032
0.0900	0.271	0.743	0.907	0.933	0.987	1.262	1.775	2.265	3.005	0.713	0.574	0.729	12.411
0.1000	0.292	0.808	0.983	1.012	1.069	1.359	1.913	2.436	3.230	0.771	0.620	0.790	13.790
0.1250	0.339	0.950	1.153	1.187	1.252	1.577	2.222	2.821	3.735	0.901	0.722	0.925	17.237
0.1600	0.393	1.114	1.350	1.391	1.466	1.833	2.588	3.276	4.338	1.056	0.844	1.081	22.064
0.2000	0.443	1.265	1.532	1.580	1.665	2.075	2.938	3.715	4.922	1.204	0.961	1.226	27.580
0.2500	0.493	1.417	1.718	1.774	1.870	2.331	3.313	4.187	5.555	1.361	1.086	1.373	34.475
0.3200	0.550	1.590	1.930	1.995	2.109	2.637	3.765	4.764	6.335	1.547	1.232	1.540	44.128
0.4000	0.603	1.752	2.131	2.206	2.340	2.943	4.223	5.349	7.132	1.729	1.375	1.699	55.160
0.5000	0.661	1.926	2.350	2.435	2.596	3.287	4.741	6.013	8.038	1.929	1.533	1.873	68.950
0.6000	0.712	2.081	2.552	2.648	2.833	3.610	5.223	6.629	8.879	2.114	1.677	2.030	82.740
0.7000	0.761	2.224	2.744	2.850	3.059	3.920	5.687	7.225	9.675	2.289	1.813	2.180	96.530
0.8000	0.809	2.361	2.932	3.047	3.280	4.222	6.137	7.802	10.454	2.458	1.945	2.326	110.32
0.9000	0.856	2.496	3.119	3.244	3.500	4.522	6.578	8.364	11.211	2.625	2.075	2.472	124.11
1.0000	0.904	2.630	3.306	3.440	3.721	4.821	7.014	8.914	11.951	2.791	2.204	2.618	137.90
1.2500	1.026	2.961	3.770	3.928	4.269	5.556	8.071	10.232	13.711	3.201	2.526	2.984	172.37
1.6000	1.203	3.424	4.416	4.604	5.027	6.559	9.484	11.975	15.991	3.777	2.982	3.499	220.64
2.0000	1.419	3.962	5.153	5.376	5.885	7.672	11.022	13.858	18.404	4.442	3.519	4.099	275.80
2.5000	1.711	4.658	6.077	6.346	6.947	9.027	12.862	16.083	21.218	5.289	4.212	4.870	344.75
3.2000	2.158	5.680	7.391	7.725	8.436	10.888	15.338	19.057	24.942	6.507	5.226	5.989	441.28
4.0000	2.716	6.925	8.937	9.341	10.165	13.013	18.121	22.382	29.069	7.950	6.444	7.324	551.60
5.0000	3.472	8.594	10.955	11.441	12.396	15.722	21.630	26.543	34.175	9.836	8.049	9.078	689.50
6.0000	4.284	10.379	13.072	13.641	14.724	18.521	25.221	30.781	39.329	11.815	9.742	10.926	827.40
7.0000	5.143	12.271	15.285	15.939	17.153	21.421	28.920	35.124	44.594	13.888	11.520	12.864	965.30
8.0000	6.047	14.266	17.593	18.333	19.686	24.428	32.742	39.593	49.988	16.051	13.380	14.886	1103.2
9.0000	6.995	16.356	19.996	20.822	22.319	27.545	36.701	44.205	55.527	18.307	15.323	16.994	1241.1
10.0000	7.985	18.530	22.490	23.405	25.049	30.774	40.793	48.965	61.222	20.653	17.347	19.185	1379.0
11.0000	9.016	20.783	25.069	26.076	27.873	34.113	45.012	53.872	67.085	23.086	19.449	21.456	1516.9
12.0000	10.087	23.114	27.732	28.834	30.788	37.561	49.358	58.923	73.115	25.604	21.628	23.804	1654.8

$^{139}_{57}La$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=139 MEV
0.0125	8.263	6.836	5.008	3.330	2.704	2.454	2.274	2.103	1.337	1.144	1.052	0.901	1.7364
0.0160	9.513	7.870	5.765	3.834	3.113	2.825	2.617	2.421	1.539	1.317	1.211	1.038	2.2226
0.0200	10.804	8.938	6.548	4.354	3.536	3.208	2.973	2.750	1.748	1.496	1.375	1.179	2.7782
0.0250	12.271	10.151	7.437	4.945	4.016	3.644	3.376	3.123	1.986	1.699	1.565	1.339	3.4727
0.0320	14.109	11.695	8.561	5.693	4.632	4.212	3.887	3.596	2.286	1.961	1.806	1.550	4.4451
0.0400	15.985	13.311	9.723	6.485	5.289	4.823	4.444	4.113	2.616	2.251	2.071	1.779	5.5564
0.0500	18.089	15.162	11.043	7.399	6.063	5.522	5.091	4.715	2.993	2.601	2.396	2.060	6.9455
0.0600	19.998	16.922	12.254	8.259	6.788	6.164	5.698	5.281	3.382	2.941	2.714	2.334	8.3346
0.0700	21.742	18.598	13.380	9.072	7.493	6.797	6.289	5.834	3.746	3.278	3.037	2.609	9.7237
0.0800	23.362	20.243	14.439	9.862	8.158	7.393	6.830	6.353	4.115	3.610	3.335	2.873	11.113
0.0900	24.877	21.835	15.442	10.624	8.802	7.999	7.366	6.856	4.494	3.930	3.644	3.142	12.502
0.1000	26.320	23.401	16.399	11.364	9.446	8.560	7.871	7.363	4.854	4.247	3.936	3.395	13.891
0.1250	29.613	27.322	18.625	13.112	10.951	9.927	9.126	8.549	5.727	5.010	4.684	4.051	17.364
0.1600	33.641	32.698	21.441	15.352	12.907	11.707	10.742	10.077	6.861	6.025	5.650	4.931	22.226
0.2000	37.696	38.256	24.351	17.704	14.976	13.564	12.444	11.664	8.085	7.135	6.697	5.844	27.782
0.2500	42.122	44.306	27.657	20.439	17.369	15.764	14.437	13.524	9.542	8.435	7.910	6.914	34.727
0.3200	47.504	51.611	31.839	23.975	20.473	18.690	17.034	15.920	11.398	10.125	9.504	8.358	44.451
0.4000	52.867	58.689	36.161	27.555	23.722	21.696	19.780	18.478	13.452	11.969	11.246	9.872	55.564
0.5000	57.935	65.107	40.514	31.318	27.145	24.916	22.688	21.148	15.639	13.937	13.106	11.547	69.455
0.6000	62.264	70.124	44.411	34.773	30.288	27.890	25.314	23.582	17.631	15.766	14.855	13.190	83.346
0.7000	65.585	73.623	47.560	37.572	32.864	30.296	27.442	25.587	19.309	17.264	16.313	14.458	97.237
0.8000	68.069	75.889	50.125	39.949	35.037	32.431	29.323	27.318	20.752	18.646	17.594	15.639	111.13
0.9000	70.085	77.449	52.224	41.884	36.923	34.259	30.917	28.776	22.091	19.845	18.749	16.712	125.02
1.0000	71.591	78.389	53.950	43.645	38.520	35.769	32.316	30.050	23.198	20.878	19.746	17.642	138.91
1.2500	73.990	79.238	57.047	46.778	41.644	38.792	34.970	32.460	25.500	22.990	21.735	19.453	173.64
1.6000	75.286	78.913	59.467	49.655	44.363	41.449	37.346	34.491	27.652	25.036	23.668	21.230	222.26
2.0000	75.168	78.444	60.668	51.386	46.168	43.317	38.828	35.976	29.121	26.573	25.117	22.629	277.82
2.5000	73.898	77.432	60.922	52.332	47.336	44.473	39.782	36.919	30.339	27.598	26.196	23.760	347.27
3.2000	71.529	75.560	60.159	52.339	47.646	44.819	40.186	37.178	31.042	28.395	26.951	24.485	444.51
4.0000	68.596	73.052	58.629	51.535	47.197	44.441	40.044	36.936	31.249	28.611	27.263	24.800	555.64
5.0000	65.120	69.804	56.430	49.997	46.047	43.451	39.162	36.228	31.036	28.328	27.143	24.773	694.55
6.0000	62.042	66.706	54.232	48.375	44.633	42.301	38.180	35.305	30.262	27.930	26.737	24.567	833.46
7.0000	59.144	63.890	52.155	46.731	43.185	41.046	37.135	34.370	29.729	27.329	26.234	24.148	972.37
8.0000	56.610	61.282	50.231	45.208	41.842	39.783	36.166	33.404	29.033	26.773	25.718	23.709	1111.3
9.0000	54.421	58.879	48.460	43.760	40.561	38.623	35.134	32.517	28.349	26.169	25.151	23.261	1250.2
10.0000	52.360	56.669	46.834	42.478	39.340	37.514	34.142	31.706	27.632	25.618	24.681	22.808	1389.1
11.0000	50.506	54.723	45.338	41.257	38.265	36.497	33.233	30.966	27.021	25.117	24.256	22.351	1528.0
12.0000	48.838	52.883	43.959	40.090	37.233	35.563	32.398	30.244	26.419	24.617	23.738	21.892	1666.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	18.780	8.013	5.308	4.988	4.432	2.925	1.793	1.272	0.839	6.716	8.544	6.520	1.7364
0.0160	21.216	8.948	6.013	5.656	5.027	3.396	2.104	1.499	0.995	7.685	9.778	7.385	2.2226
0.0200	23.441	9.625	6.659	6.273	5.612	3.896	2.429	1.768	1.183	8.656	11.007	8.178	2.7782
0.0250	25.880	10.270	7.377	6.953	6.291	4.514	2.885	2.105	1.525	9.742	12.397	9.058	3.4727
0.0320	29.194	11.078	8.210	7.816	7.140	5.351	3.476	2.620	1.824	11.130	14.194	10.188	4.4451
0.0400	32.573	11.843	9.072	8.732	8.041	6.281	4.162	3.189	2.266	12.592	16.063	11.376	5.5564
0.0500	36.553	12.854	10.149	9.873	9.188	7.410	4.992	3.887	2.816	14.290	18.221	12.832	6.9455
0.0600	40.927	14.006	11.359	10.979	10.379	8.541	5.808	4.571	3.357	15.942	20.353	14.312	8.3346
0.0700	45.358	15.360	12.577	12.216	11.587	9.660	6.583	5.232	3.867	17.581	22.425	15.895	9.7237
0.0800	50.102	16.821	13.876	13.486	12.836	10.786	7.393	5.891	4.375	19.232	24.503	17.558	11.113
0.0900	54.820	18.392	15.211	14.824	14.114	11.906	8.184	6.547	4.849	20.878	26.545	19.272	12.502
0.1000	60.019	20.138	16.694	16.169	15.382	13.037	9.003	7.166	5.313	22.515	28.632	21.040	13.891
0.1250	73.940	24.678	20.394	19.649	18.774	15.850	10.914	8.698	6.463	26.708	33.990	25.683	17.364
0.1600	94.984	31.668	25.986	25.043	23.757	19.790	13.572	10.806	8.019	32.740	41.596	32.805	22.226
0.2000	119.566	39.693	32.509	31.219	29.514	23.986	16.315	12.955	9.570	39.303	49.872	41.032	27.782
0.2500	149.901	49.617	40.241	38.747	36.175	28.597	19.332	15.156	11.146	46.851	59.380	51.110	34.727
0.3200	189.124	61.736	50.210	47.918	43.842	33.590	22.415	17.480	12.767	56.100	71.256	63.614	44.451
0.4000	225.644	74.491	59.159	56.230	50.914	38.005	25.132	19.563	14.247	64.836	82.555	75.070	55.564
0.5000	258.481	85.890	66.727	63.486	56.801	41.770	27.550	21.513	15.679	72.642	92.737	85.161	69.455
0.6000	282.007	94.595	71.590	68.037	60.798	44.455	29.489	23.005	16.832	78.251	100.412	91.797	83.346
0.7000	292.018	100.352	73.813	70.151	62.779	45.848	30.676	23.875	17.645	81.565	104.822	94.787	97.237
0.8000	294.232	103.257	74.636	71.177	63.608	46.516	31.478	24.561	18.245	83.407	107.066	95.939	111.13
0.9000	292.456	104.240	74.681	71.182	63.296	46.688	31.857	25.172	18.696	84.342	108.156	95.779	125.02
1.0000	290.788	105.148	75.044	71.213	63.445	46.990	32.370	25.788	19.152	84.863	108.708	95.599	138.91
1.2500	283.523	106.164	75.587	72.164	64.121	48.090	33.772	27.268	20.594	85.399	108.446	95.668	173.64
1.6000	268.793	105.257	75.999	72.669	65.057	49.655	35.621	28.961	22.419	84.741	106.030	94.434	222.26
2.0000	251.166	102.954	76.321	72.680	65.764	51.083	37.311	30.637	24.085	83.722	103.136	92.519	277.82
2.5000	230.285	98.998	75.604	71.949	66.405	52.515	38.990	32.471	25.831	82.001	99.242	89.555	347.27
3.2000	210.558	93.548	74.176	70.808	65.754	53.241	40.487	33.689	27.012	79.591	94.871	86.329	444.51
4.0000	193.477	87.475	71.528	68.596	64.492	52.766	40.454	34.064	27.556	76.570	90.231	82.492	555.64
5.0000	179.447	81.541	68.224	65.684	61.904	51.295	39.896	33.689	27.651	73.020	85.491	78.325	694.55
6.0000	168.663	76.685	65.187	62.693	59.385	49.568	38.722	32.919	27.116	69.634	81.294	74.461	833.46
7.0000	160.117	72.705	62.482	60.239	56.954	47.879	37.656	32.128	26.547	66.707	77.659	71.349	972.37
8.0000	152.702	69.067	60.026	57.916	54.701	46.162	36.317	31.143	25.869	63.994	74.342	68.465	1111.3
9.0000	145.865	66.294	57.716	55.729	52.725	44.583	35.134	30.191	25.199	61.448	71.285	65.761	1250.2
10.0000	140.033	63.928	55.779	53.859	50.955	43.087	34.048	29.271	24.494	59.198	68.564	63.413	1389.1
11.0000	134.653	61.750	53.997	52.138	49.327	41.711	33.051	28.427	23.802	57.171	66.148	61.297	1528.0
12.0000	129.679	59.740	52.355	50.553	47.827	40.442	32.134	27.650	23.166	55.300	63.872	59.344	1666.9

$^{139}_{57}La$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=139 MEV
0.0125	0.124	0.123	0.152	0.195	0.206	0.247	0.261	0.286	0.383	0.432	0.458	0.532	1.7364
0.0160	0.157	0.157	0.194	0.251	0.265	0.318	0.337	0.368	0.497	0.565	0.601	0.704	2.2226
0.0200	0.192	0.195	0.242	0.314	0.333	0.398	0.421	0.460	0.625	0.711	0.758	0.889	2.7782
0.0250	0.235	0.240	0.300	0.393	0.419	0.498	0.526	0.573	0.782	0.890	0.949	1.113	3.4727
0.0320	0.290	0.301	0.378	0.500	0.537	0.636	0.670	0.728	0.999	1.136	1.212	1.418	4.4451
0.0400	0.349	0.367	0.464	0.618	0.669	0.788	0.830	0.900	1.243	1.412	1.506	1.759	5.5564
0.0500	0.418	0.444	0.564	0.759	0.829	0.970	1.022	1.106	1.539	1.747	1.863	2.170	6.9455
0.0600	0.481	0.515	0.659	0.893	0.981	1.143	1.205	1.302	1.823	2.068	2.206	2.565	8.3346
0.0700	0.540	0.582	0.749	1.019	1.127	1.307	1.379	1.489	2.095	2.374	2.533	2.941	9.7237
0.0800	0.596	0.645	0.834	1.139	1.265	1.463	1.545	1.666	2.355	2.666	2.844	3.300	11.113
0.0900	0.649	0.704	0.914	1.253	1.397	1.611	1.703	1.835	2.601	2.944	3.142	3.642	12.502
0.1000	0.700	0.759	0.991	1.362	1.523	1.753	1.854	1.997	2.836	3.209	3.425	3.968	13.891
0.1250	0.816	0.886	1.170	1.612	1.814	2.079	2.204	2.370	3.379	3.822	4.079	4.720	17.364
0.1600	0.963	1.039	1.395	1.924	2.178	2.485	2.641	2.834	4.049	4.581	4.885	5.644	22.226
0.2000	1.114	1.189	1.624	2.238	2.544	2.892	3.081	3.303	4.720	5.338	5.689	6.561	27.782
0.2500	1.283	1.353	1.880	2.584	2.947	3.340	3.567	3.820	5.450	6.161	6.564	7.560	34.727
0.3200	1.496	1.551	2.197	3.007	3.438	3.882	4.157	4.451	6.330	7.151	7.616	8.758	44.451
0.4000	1.714	1.750	2.517	3.427	3.925	4.417	4.742	5.076	7.190	8.116	8.643	9.925	55.564
0.5000	1.961	1.971	2.872	3.888	4.457	4.999	5.379	5.758	8.117	9.155	9.747	11.179	69.455
0.6000	2.190	2.174	3.194	4.302	4.932	5.517	5.947	6.367	8.933	10.069	10.717	12.275	83.346
0.7000	2.407	2.367	3.493	4.682	5.365	5.988	6.465	6.923	9.672	10.895	11.591	13.260	97.237
0.8000	2.615	2.553	3.777	5.040	5.774	6.430	6.955	7.448	10.366	11.668	12.410	14.183	111.13
0.9000	2.816	2.734	4.049	5.379	6.160	6.847	7.416	7.943	11.014	12.390	13.175	15.042	125.02
1.0000	3.012	2.912	4.310	5.704	6.528	7.244	7.855	8.415	11.627	13.072	13.896	15.850	138.91
1.2500	3.488	3.351	4.935	6.471	7.393	8.174	8.886	9.525	13.052	14.654	15.569	17.721	173.64
1.6000	4.138	3.965	5.767	7.477	8.521	9.383	10.228	10.974	14.878	16.675	17.707	20.107	222.26
2.0000	4.875	4.670	6.691	8.575	9.747	10.692	11.684	12.549	16.833	18.826	19.982	22.638	277.82
2.5000	5.806	5.559	7.832	9.913	11.231	12.273	13.449	14.452	19.166	21.387	22.686	25.629	347.27
3.2000	7.141	6.829	9.436	11.768	13.276	14.448	15.878	17.074	22.331	24.856	26.341	29.655	444.51
4.0000	8.727	8.324	11.306	13.907	15.618	16.936	18.647	20.071	25.896	28.752	30.438	34.162	555.64
5.0000	10.805	10.269	13.721	16.643	18.597	20.097	22.153	23.867	30.355	33.630	35.542	39.764	694.55
6.0000	12.991	12.305	16.232	19.467	21.661	23.337	25.746	27.751	34.888	38.568	40.699	45.394	833.46
7.0000	15.284	14.433	18.844	22.389	24.825	26.671	29.435	31.739	39.520	43.596	45.944	51.098	972.37
8.0000	17.685	16.653	21.559	25.412	28.094	30.109	33.226	35.839	44.248	48.732	51.293	56.904	1111.3
9.0000	20.189	18.967	24.375	28.536	31.466	33.653	37.124	40.055	49.091	53.981	56.755	62.820	1250.2
10.0000	22.791	21.372	27.291	31.758	34.944	37.303	41.136	44.382	54.055	59.347	62.331	68.852	1389.1
11.0000	25.493	23.867	30.306	35.077	38.525	41.058	45.260	48.816	59.139	64.824	68.009	75.005	1528.0
12.0000	28.290	26.449	33.418	38.493	42.206	44.914	49.494	53.356	64.339	70.411	73.799	81.285	1666.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.048	0.111	0.134	0.138	0.146	0.197	0.278	0.366	0.483	0.117	0.098	0.110	1.7364
0.0160	0.060	0.141	0.173	0.178	0.188	0.254	0.359	0.475	0.642	0.150	0.125	0.141	2.2226
0.0200	0.074	0.176	0.217	0.224	0.237	0.321	0.452	0.597	0.812	0.187	0.155	0.177	2.7782
0.0250	0.091	0.220	0.272	0.281	0.298	0.403	0.567	0.746	1.014	0.232	0.192	0.222	3.4727
0.0320	0.113	0.281	0.348	0.360	0.383	0.515	0.724	0.949	1.281	0.294	0.241	0.284	4.4451
0.0400	0.138	0.350	0.435	0.449	0.478	0.638	0.896	1.167	1.570	0.361	0.294	0.353	5.5564
0.0500	0.168	0.436	0.539	0.556	0.591	0.781	1.097	1.421	1.902	0.440	0.357	0.437	6.9455
0.0600	0.196	0.518	0.638	0.658	0.698	0.913	1.282	1.653	2.205	0.514	0.416	0.516	8.3346
0.0700	0.222	0.596	0.731	0.754	0.799	1.035	1.454	1.866	2.483	0.583	0.471	0.590	9.7237
0.0800	0.246	0.670	0.819	0.843	0.892	1.148	1.613	2.063	2.740	0.648	0.523	0.659	11.113
0.0900	0.269	0.739	0.900	0.927	0.980	1.252	1.761	2.246	2.978	0.709	0.571	0.724	12.502
0.1000	0.290	0.803	0.977	1.005	1.062	1.350	1.898	2.416	3.202	0.767	0.616	0.785	13.891
0.1250	0.337	0.945	1.146	1.180	1.244	1.567	2.206	2.799	3.705	0.896	0.718	0.919	17.364
0.1600	0.391	1.108	1.342	1.383	1.457	1.821	2.569	3.252	4.304	1.050	0.840	1.075	22.226
0.2000	0.441	1.259	1.524	1.571	1.655	2.063	2.919	3.690	4.886	1.198	0.957	1.219	27.782
0.2500	0.491	1.410	1.709	1.764	1.860	2.318	3.292	4.160	5.517	1.355	1.081	1.366	34.727
0.3200	0.548	1.583	1.920	1.984	2.098	2.623	3.742	4.734	6.293	1.540	1.227	1.532	44.451
0.4000	0.600	1.744	2.120	2.194	2.328	2.927	4.198	5.317	7.087	1.721	1.369	1.690	55.564
0.5000	0.658	1.917	2.338	2.423	2.582	3.269	4.714	5.977	7.988	1.920	1.526	1.861	69.455
0.6000	0.709	2.071	2.539	2.634	2.818	3.587	5.193	6.590	8.823	2.104	1.669	2.018	83.346
0.7000	0.757	2.213	2.729	2.835	3.042	3.894	5.654	7.181	9.614	2.278	1.804	2.167	97.237
0.8000	0.805	2.350	2.916	3.031	3.262	4.195	6.100	7.754	10.387	2.446	1.935	2.312	111.13
0.9000	0.852	2.483	3.102	3.226	3.481	4.493	6.539	8.313	11.139	2.611	2.064	2.457	125.02
1.0000	0.900	2.616	3.288	3.421	3.700	4.789	6.971	8.858	11.872	2.775	2.192	2.602	138.91
1.2500	1.020	2.944	3.747	3.904	4.243	5.518	8.019	10.164	13.617	3.182	2.511	2.964	173.64
1.6000	1.196	3.402	4.387	4.574	4.993	6.510	9.417	11.890	15.874	3.752	2.963	3.474	222.26
2.0000	1.409	3.935	5.116	5.337	5.841	7.611	10.939	13.752	18.261	4.411	3.494	4.068	277.82
2.5000	1.697	4.622	6.029	6.296	6.891	8.951	12.757	15.951	21.042	5.248	4.179	4.829	347.27
3.2000	2.138	5.631	7.326	7.657	8.361	10.787	15.201	18.887	24.718	6.450	5.180	5.934	444.51
4.0000	2.689	6.859	8.850	9.250	10.066	12.883	17.945	22.165	28.788	7.873	6.381	7.250	555.64
5.0000	3.434	8.504	10.838	11.319	12.264	15.552	21.402	26.264	33.818	9.730	7.962	8.978	694.55
6.0000	4.233	10.260	12.922	13.484	14.556	18.307	24.936	30.435	38.891	11.678	9.628	10.797	833.46
7.0000	5.078	12.121	15.099	15.745	16.944	21.159	28.574	34.707	44.069	13.717	11.377	12.703	972.37
8.0000	5.967	14.082	17.367	18.097	19.434	24.114	32.331	39.100	49.370	15.843	13.206	14.691	1111.3
9.0000	6.898	16.135	19.728	20.543	22.021	27.177	36.221	43.631	54.812	18.059	15.114	16.762	1250.2
10.0000	7.870	18.269	22.176	23.079	24.701	30.347	40.238	48.304	60.404	20.363	17.101	18.913	1389.1
11.0000	8.882	20.481	24.708	25.701	27.473	33.624	44.380	53.121	66.158	22.751	19.165	21.142	1528.0
12.0000	9.933	22.768	27.321	28.407	30.333	37.007	48.643	58.076	72.075	25.222	21.302	23.445	1666.9

$^{140}_{58}Ce$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=140 MEV
0.0125	8.319	6.882	5.042	3.353	2.722	2.470	2.289	2.117	1.346	1.152	1.059	0.907	1.7489
0.0160	9.579	7.925	5.806	3.861	3.135	2.845	2.636	2.438	1.550	1.327	1.219	1.045	2.2386
0.0200	10.883	9.003	6.595	4.386	3.562	3.232	2.994	2.770	1.761	1.507	1.385	1.187	2.7982
0.0250	12.363	10.228	7.493	4.983	4.046	3.671	3.402	3.147	2.001	1.712	1.577	1.349	3.4977
0.0320	14.219	11.786	8.628	5.738	4.668	4.245	3.917	3.624	2.304	1.976	1.821	1.562	4.4771
0.0400	16.115	13.419	9.802	6.538	5.337	4.862	4.480	4.146	2.637	2.269	2.088	1.794	5.5964
0.0500	18.240	15.289	11.136	7.461	6.113	5.568	5.133	4.755	3.018	2.622	2.416	2.077	6.9955
0.0600	20.169	17.067	12.359	8.330	6.847	6.216	5.747	5.327	3.411	2.966	2.737	2.354	8.3946
0.0700	21.933	18.761	13.497	9.151	7.558	6.857	6.344	5.885	3.779	3.307	3.064	2.632	9.7937
0.0800	23.570	20.424	14.568	9.950	8.231	7.459	6.890	6.410	4.152	3.642	3.365	2.899	11.193
0.0900	25.103	22.033	15.582	10.721	8.882	8.072	7.433	6.918	4.534	3.966	3.677	3.171	12.592
0.1000	26.562	23.616	16.549	11.469	9.532	8.639	7.944	7.431	4.899	4.286	3.972	3.426	13.991
0.1250	29.893	27.581	18.801	13.236	11.055	10.021	9.212	8.630	5.781	5.057	4.728	4.089	17.489
0.1600	33.969	33.016	21.650	15.501	13.033	11.821	10.847	10.176	6.928	6.084	5.705	4.980	22.386
0.2000	38.074	38.639	24.595	17.881	15.126	13.700	12.568	11.781	8.166	7.206	6.764	5.903	27.982
0.2500	42.555	44.762	27.941	20.649	17.547	15.927	14.585	13.663	9.640	8.522	7.991	6.985	34.977
0.3200	48.006	52.157	32.176	24.228	20.689	18.887	17.214	16.088	11.519	10.232	9.605	8.446	44.771
0.4000	53.469	59.357	36.572	27.868	23.992	21.943	20.005	18.689	13.605	12.105	11.374	9.984	55.964
0.5000	58.645	65.904	41.010	31.701	27.477	25.221	22.966	21.407	15.830	14.108	13.267	11.688	69.955
0.6000	63.080	71.044	44.993	35.230	30.685	28.256	25.646	23.891	17.862	15.973	15.050	13.363	83.946
0.7000	66.493	74.642	48.218	38.093	33.319	30.715	27.822	25.941	19.577	17.503	16.539	14.658	97.937
0.8000	69.054	76.986	50.850	40.527	35.544	32.900	29.747	27.713	21.052	18.916	17.848	15.865	111.93
0.9000	71.136	78.610	53.008	42.512	37.476	34.773	31.381	29.207	22.422	20.143	19.030	16.962	125.92
1.0000	72.699	79.602	54.785	44.321	39.116	36.322	32.816	30.515	23.557	21.202	20.051	17.915	139.91
1.2500	75.209	80.544	57.987	47.550	42.331	39.431	35.546	32.995	25.920	23.369	22.093	19.774	174.89
1.6000	76.610	80.301	60.513	50.529	45.143	42.178	38.002	35.098	28.139	25.476	24.084	21.603	223.86
2.0000	76.564	79.901	61.795	52.341	47.026	44.122	39.549	36.645	29.662	27.066	25.583	23.050	279.82
2.5000	75.345	78.947	62.114	53.356	48.263	45.343	40.561	37.641	30.933	28.138	26.709	24.225	349.77
3.2000	73.008	77.122	61.403	53.420	48.631	45.745	41.017	37.947	31.684	28.982	27.508	24.991	447.71
4.0000	70.082	74.635	59.899	52.651	48.219	45.404	40.911	37.737	31.926	29.231	27.853	25.337	559.64
5.0000	66.595	71.385	57.708	51.129	47.090	44.435	40.049	37.049	31.739	28.969	27.758	25.334	699.55
6.0000	63.497	68.271	55.505	49.510	45.680	43.294	39.075	36.134	30.972	28.585	27.364	25.144	839.46
7.0000	60.572	65.433	53.414	47.859	44.227	42.037	38.031	35.200	30.446	27.989	26.867	24.731	979.37
8.0000	58.010	62.797	51.473	46.326	42.877	40.767	37.061	34.230	29.751	27.435	26.354	24.295	1119.3
9.0000	55.795	60.366	49.684	44.864	41.585	39.598	36.021	33.338	29.065	26.829	25.786	23.848	1259.2
10.0000	53.706	58.125	48.038	43.570	40.352	38.478	35.019	32.521	28.342	26.277	25.316	23.394	1399.1
11.0000	51.826	56.152	46.522	42.335	39.265	37.450	34.101	31.775	27.727	25.773	24.889	22.935	1539.0
12.0000	50.133	54.284	45.124	41.153	38.220	36.505	33.256	31.045	27.119	25.269	24.367	22.472	1678.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	18.906	8.067	5.344	5.021	4.462	2.944	1.805	1.281	0.845	6.761	8.601	6.564	1.7489
0.0160	21.365	9.010	6.055	5.695	5.063	3.420	2.119	1.509	1.002	7.739	9.846	7.437	2.2386
0.0200	23.612	9.695	6.708	6.318	5.652	3.924	2.447	1.781	1.191	8.719	11.087	8.238	2.7982
0.0250	26.075	10.347	7.433	7.006	6.339	4.548	2.907	2.120	1.536	9.816	12.490	9.126	3.4977
0.0320	29.422	11.165	8.275	7.878	7.196	5.393	3.503	2.640	1.838	11.217	14.306	10.268	4.4771
0.0400	32.837	11.939	9.145	8.802	8.106	6.332	4.195	3.215	2.284	12.694	16.193	11.468	5.5964
0.0500	36.859	12.962	10.234	9.955	9.265	7.472	5.033	3.920	2.840	14.409	18.374	12.940	6.9955
0.0600	41.278	14.126	11.457	11.073	10.468	8.614	5.858	4.610	3.386	16.079	20.528	14.435	8.3946
0.0700	45.755	15.495	12.687	12.323	11.688	9.745	6.641	5.277	3.901	17.735	22.621	16.035	9.7937
0.0800	50.550	16.971	13.999	13.606	12.951	10.882	7.459	5.944	4.414	19.404	24.721	17.714	11.193
0.0900	55.317	18.558	15.348	14.959	14.242	12.014	8.259	6.607	4.893	21.067	26.786	19.447	12.592
0.1000	60.571	20.323	16.847	16.318	15.523	13.157	9.086	7.232	5.362	22.722	28.895	21.233	13.991
0.1250	74.639	24.911	20.587	19.835	18.951	16.000	11.017	8.780	6.524	26.960	34.312	25.926	17.489
0.1600	95.910	31.977	26.240	25.287	23.988	19.983	13.705	10.912	8.097	33.060	42.001	33.125	22.386
0.2000	120.764	40.091	32.835	31.531	29.810	24.227	16.479	13.085	9.666	39.697	50.371	41.443	27.982
0.2500	151.443	50.127	40.655	39.146	36.547	28.891	19.531	15.312	11.260	47.333	59.990	51.636	34.977
0.3200	191.125	62.389	50.741	48.425	44.306	33.946	22.652	17.665	12.903	56.694	72.010	64.288	44.771
0.4000	228.212	75.339	59.832	56.870	51.494	38.438	25.418	19.786	14.410	65.574	83.495	75.924	55.964
0.5000	261.647	86.942	67.544	64.263	57.497	42.282	27.887	21.777	15.871	73.532	93.873	86.204	69.955
0.6000	285.707	95.835	72.529	68.930	61.596	45.038	29.875	23.306	17.052	79.278	101.730	93.001	83.946
0.7000	296.061	101.741	74.835	71.122	63.648	46.483	31.101	24.206	17.889	82.694	106.273	96.099	97.937
0.8000	298.487	104.750	75.715	72.206	64.528	47.188	31.934	24.916	18.509	84.614	108.615	97.326	111.93
0.9000	296.843	105.803	75.801	72.250	64.245	47.389	32.335	25.550	18.977	85.607	109.779	97.216	125.92
1.0000	295.290	106.775	76.206	72.316	64.427	47.718	32.871	26.187	19.449	86.176	110.391	97.079	139.91
1.2500	288.196	107.914	76.833	73.354	65.178	48.883	34.328	27.718	20.933	86.807	110.234	97.245	174.89
1.6000	273.520	107.108	77.336	73.947	66.201	50.529	36.247	29.470	22.813	86.231	107.895	96.095	223.86
2.0000	255.833	104.867	77.739	74.031	66.986	52.032	38.004	31.207	24.533	85.278	105.052	94.238	279.82
2.5000	234.792	100.936	77.084	73.357	67.705	53.543	39.753	33.107	26.336	83.606	101.184	91.308	349.77
3.2000	214.910	95.481	75.710	72.271	67.113	54.341	41.324	34.386	27.570	81.236	96.832	88.113	447.71
4.0000	197.668	89.370	73.077	70.082	65.889	53.909	41.331	34.801	28.153	78.228	92.185	84.278	559.64
5.0000	183.512	83.388	69.769	67.172	63.306	52.457	40.800	34.452	28.277	74.674	87.428	80.099	699.55
6.0000	172.620	78.484	66.717	64.163	60.778	50.731	39.630	33.691	27.752	71.268	83.202	76.208	839.46
7.0000	163.982	74.460	63.990	61.694	58.329	49.034	38.565	32.903	27.188	68.317	79.534	73.071	979.37
8.0000	156.478	70.775	61.510	59.348	56.054	47.304	37.215	31.913	26.509	65.577	76.180	70.158	1119.3
9.0000	149.548	67.967	59.173	57.136	54.056	45.709	36.021	30.953	25.836	62.999	73.085	67.421	1259.2
10.0000	143.632	65.571	57.213	55.243	52.265	44.195	34.923	30.023	25.124	60.720	70.327	65.043	1399.1
11.0000	138.170	63.363	55.408	53.500	50.616	42.800	33.915	29.169	24.424	58.664	67.876	62.898	1539.0
12.0000	133.115	61.323	53.743	51.892	49.095	41.514	32.986	28.383	23.780	56.766	65.565	60.917	1678.9

$^{140}_{58}Ce$ IONS

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=140 MEV
	RANGE IN UNITS OF MG/SQ CM												
0.0125	0.124	0.122	0.151	0.194	0.204	0.245	0.259	0.283	0.378	0.427	0.452	0.524	1.7489
0.0160	0.156	0.156	0.193	0.249	0.263	0.315	0.333	0.364	0.492	0.558	0.594	0.695	2.2386
0.0200	0.191	0.193	0.240	0.312	0.330	0.395	0.417	0.455	0.618	0.703	0.750	0.878	2.7982
0.0250	0.233	0.239	0.297	0.389	0.415	0.494	0.521	0.567	0.774	0.880	0.939	1.100	3.4977
0.0320	0.289	0.299	0.375	0.496	0.532	0.630	0.664	0.721	0.989	1.124	1.199	1.403	4.4771
0.0400	0.347	0.365	0.460	0.613	0.663	0.781	0.823	0.892	1.230	1.398	1.491	1.740	5.5964
0.0500	0.416	0.441	0.560	0.753	0.822	0.961	1.013	1.096	1.524	1.729	1.844	2.148	6.9955
0.0600	0.479	0.512	0.655	0.886	0.973	1.133	1.195	1.291	1.806	2.048	2.184	2.540	8.3946
0.0700	0.538	0.579	0.744	1.012	1.117	1.297	1.368	1.477	2.076	2.352	2.509	2.913	9.7937
0.0800	0.593	0.641	0.828	1.131	1.255	1.452	1.533	1.653	2.334	2.642	2.818	3.269	11.193
0.0900	0.646	0.700	0.909	1.244	1.386	1.599	1.690	1.821	2.579	2.918	3.113	3.609	12.592
0.1000	0.696	0.755	0.985	1.352	1.511	1.740	1.840	1.982	2.812	3.181	3.395	3.933	13.991
0.1250	0.813	0.881	1.164	1.602	1.801	2.065	2.189	2.353	3.352	3.791	4.045	4.680	17.489
0.1600	0.959	1.034	1.388	1.912	2.163	2.469	2.623	2.815	4.019	4.546	4.847	5.599	22.386
0.2000	1.109	1.184	1.616	2.225	2.528	2.874	3.062	3.282	4.686	5.299	5.647	6.512	27.982
0.2500	1.278	1.347	1.871	2.570	2.929	3.320	3.545	3.797	5.413	6.119	6.518	7.506	34.977
0.3200	1.490	1.544	2.187	2.991	3.418	3.861	4.133	4.425	6.289	7.104	7.566	8.699	44.771
0.4000	1.707	1.742	2.505	3.409	3.903	4.393	4.715	5.047	7.145	8.065	8.587	9.860	55.964
0.5000	1.953	1.962	2.858	3.868	4.432	4.972	5.349	5.726	8.067	9.099	9.686	11.108	69.955
0.6000	2.181	2.164	3.179	4.280	4.904	5.487	5.914	6.332	8.880	10.007	10.650	12.198	83.946
0.7000	2.397	2.356	3.476	4.657	5.335	5.955	6.429	6.884	9.614	10.828	11.519	13.177	97.937
0.8000	2.603	2.540	3.758	5.012	5.741	6.394	6.915	7.405	10.302	11.596	12.332	14.093	111.93
0.9000	2.802	2.720	4.027	5.349	6.124	6.808	7.373	7.897	10.946	12.312	13.091	14.946	125.92
1.0000	2.997	2.897	4.287	5.671	6.489	7.201	7.808	8.365	11.554	12.989	13.807	15.748	139.91
1.2500	3.469	3.332	4.906	6.432	7.347	8.123	8.830	9.465	12.966	14.557	15.465	17.602	174.89
1.6000	4.112	3.940	5.730	7.428	8.464	9.321	10.159	10.900	14.775	16.559	17.583	19.965	223.86
2.0000	4.841	4.637	6.644	8.514	9.677	10.616	11.600	12.458	16.709	18.686	19.833	22.469	279.82
2.5000	5.761	5.517	7.772	9.836	11.143	12.178	13.344	14.339	19.015	21.217	22.506	25.425	349.77
3.2000	7.080	6.770	9.355	11.669	13.162	14.326	15.743	16.927	22.140	24.643	26.114	29.400	447.71
4.0000	8.644	8.245	11.200	13.778	15.472	16.780	18.473	19.883	25.656	28.485	30.155	33.845	559.64
5.0000	10.692	10.161	13.579	16.474	18.407	19.894	21.929	23.624	30.050	33.291	35.185	39.365	699.55
6.0000	12.843	12.165	16.051	19.254	21.424	23.084	25.465	27.448	34.512	38.153	40.261	44.908	839.46
7.0000	15.100	14.259	18.621	22.129	24.537	26.364	29.095	31.371	39.069	43.100	45.421	50.519	979.37
8.0000	17.460	16.442	21.290	25.101	27.751	29.744	32.822	35.403	43.718	48.149	50.680	56.228	1119.3
9.0000	19.920	18.715	24.057	28.170	31.065	33.227	36.652	39.545	48.476	53.307	56.048	62.041	1259.2
10.0000	22.476	21.077	26.922	31.335	34.481	36.812	40.592	43.795	53.352	58.577	61.524	67.965	1399.1
11.0000	25.129	23.527	29.882	34.594	37.996	40.498	44.641	48.148	58.344	63.954	67.099	74.006	1539.0
12.0000	27.874	26.061	32.936	37.946	41.608	44.283	48.797	52.603	63.446	69.437	72.781	80.169	1678.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.047	0.110	0.133	0.137	0.145	0.195	0.275	0.362	0.476	0.116	0.097	0.109	1.7489
0.0160	0.060	0.140	0.171	0.176	0.187	0.252	0.355	0.470	0.633	0.149	0.124	0.140	2.2386
0.0200	0.073	0.175	0.215	0.722	0.235	0.318	0.447	0.591	0.802	0.186	0.154	0.176	2.7982
0.0250	0.090	0.218	0.270	0.278	0.296	0.399	0.561	0.739	1.002	0.231	0.190	0.220	3.4977
0.0320	0.113	0.279	0.346	0.357	0.380	0.510	0.717	0.939	1.267	0.292	0.239	0.282	4.4771
0.0400	0.137	0.348	0.431	0.446	0.474	0.632	0.887	1.156	1.553	0.358	0.293	0.351	5.5964
0.0500	0.167	0.433	0.535	0.552	0.587	0.774	1.087	1.407	1.883	0.437	0.355	0.434	6.9955
0.0600	0.195	0.515	0.633	0.653	0.693	0.906	1.271	1.637	2.184	0.511	0.414	0.512	8.3946
0.0700	0.221	0.593	0.726	0.748	0.793	1.027	1.441	1.850	2.460	0.580	0.468	0.586	9.7937
0.0800	0.245	0.666	0.813	0.838	0.886	1.139	1.600	2.046	2.715	0.644	0.520	0.655	11.193
0.0900	0.268	0.735	0.895	0.921	0.973	1.243	1.747	2.227	2.952	0.705	0.568	0.720	12.592
0.1000	0.289	0.799	0.971	0.999	1.055	1.340	1.883	2.397	3.174	0.762	0.613	0.780	13.991
0.1250	0.336	0.940	1.139	1.173	1.236	1.556	2.190	2.778	3.675	0.891	0.715	0.914	17.489
0.1600	0.390	1.103	1.334	1.375	1.448	1.810	2.552	3.229	4.272	1.045	0.836	1.069	22.386
0.2000	0.439	1.252	1.515	1.563	1.646	2.050	2.900	3.665	4.851	1.192	0.952	1.213	27.982
0.2500	0.489	1.404	1.700	1.755	1.850	2.305	3.271	4.133	5.479	1.348	1.076	1.359	34.977
0.3200	0.545	1.575	1.910	1.974	2.086	2.608	3.720	4.705	6.252	1.533	1.221	1.524	44.771
0.4000	0.598	1.736	2.110	2.183	2.316	2.911	4.174	5.285	7.042	1.713	1.363	1.682	55.964
0.5000	0.655	1.908	2.326	2.411	2.569	3.252	4.687	5.942	7.939	1.911	1.519	1.852	69.955
0.6000	0.706	2.061	2.526	2.621	2.803	3.568	5.163	6.551	8.769	2.094	1.662	2.008	83.946
0.7000	0.754	2.203	2.716	2.820	3.026	3.873	5.622	7.139	9.555	2.267	1.796	2.156	97.937
0.8000	0.801	2.338	2.901	3.015	3.244	4.172	6.065	7.708	10.323	2.434	1.926	2.300	111.93
0.9000	0.848	2.471	3.086	3.209	3.461	4.467	6.500	8.263	11.069	2.598	2.054	2.444	125.92
1.0000	0.895	2.602	3.270	3.402	3.679	4.761	6.929	8.803	11.797	2.761	2.181	2.588	139.91
1.2500	1.015	2.927	3.726	3.881	4.217	5.484	7.968	10.098	13.526	3.164	2.497	2.947	174.89
1.6000	1.189	3.382	4.359	4.544	4.961	6.467	9.352	11.807	15.762	3.728	2.945	3.452	223.86
2.0000	1.400	3.909	5.080	5.299	5.800	7.556	10.858	13.650	18.123	4.380	3.470	4.039	279.82
2.5000	1.685	4.588	5.982	6.247	6.837	8.880	12.655	15.823	20.871	5.207	4.147	4.792	349.77
3.2000	2.120	5.584	7.262	7.590	8.288	10.693	15.068	18.722	24.500	6.394	5.135	5.883	447.71
4.0000	2.663	6.795	8.766	9.162	9.970	12.760	17.775	21.955	28.515	7.797	6.319	7.181	559.64
5.0000	3.397	8.415	10.725	11.201	12.136	15.390	21.180	25.994	33.471	9.628	7.878	8.883	699.55
6.0000	4.183	10.145	12.776	13.332	14.392	18.102	24.660	30.101	38.466	11.546	9.518	10.674	839.46
7.0000	5.015	11.976	14.918	15.556	16.742	20.908	28.239	34.303	43.560	13.551	11.238	12.549	979.37
8.0000	5.889	13.903	17.148	17.869	19.189	23.813	31.933	38.621	48.772	15.642	13.036	14.504	1119.3
9.0000	6.803	15.921	19.468	20.272	21.731	26.823	35.755	43.074	54.119	17.819	14.912	16.539	1259.2
10.0000	7.758	18.017	21.873	22.763	24.364	29.936	39.700	47.664	59.611	20.082	16.863	18.652	1399.1
11.0000	8.752	20.188	24.358	25.337	27.085	33.154	43.766	52.393	65.260	22.426	18.889	20.839	1539.0
12.0000	9.783	22.433	26.923	27.993	29.892	36.473	47.950	57.256	71.067	24.851	20.986	23.100	1678.9

$^{141}_{59}Pr$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=141 MEV
0.0125	8.373	6.927	5.075	3.375	2.740	2.487	2.304	2.131	1.355	1.160	1.066	0.913	1.7614
0.0160	9.645	7.979	5.845	3.887	3.156	2.864	2.654	2.455	1.561	1.336	1.228	1.052	2.2546
0.0200	10.960	9.067	6.642	4.417	3.587	3.255	3.016	2.790	1.773	1.518	1.395	1.196	2.8182
0.0250	12.454	10.303	7.548	5.019	4.076	3.698	3.427	3.170	2.015	1.725	1.589	1.359	3.5227
0.0320	14.328	11.876	8.694	5.782	4.704	4.278	3.947	3.652	2.321	1.991	1.834	1.574	4.5091
0.0400	16.242	13.525	9.879	6.590	5.374	4.900	4.515	4.179	2.658	2.287	2.104	1.808	5.6364
0.0500	18.389	15.414	11.226	7.522	6.163	5.613	5.175	4.794	3.042	2.644	2.436	2.094	7.0455
0.0600	20.338	17.210	12.462	8.399	6.904	6.268	5.795	5.371	3.440	2.991	2.760	2.374	8.4546
0.0700	22.120	18.921	13.612	9.229	7.623	6.915	6.398	5.935	3.812	3.335	3.090	2.654	9.8637
0.0800	23.776	20.602	14.694	10.036	8.302	7.524	6.950	6.466	4.188	3.674	3.394	2.924	11.273
0.0900	25.325	22.228	15.720	10.815	8.960	8.143	7.498	6.980	4.575	4.001	3.710	3.199	12.682
0.1000	26.800	23.828	16.698	11.572	9.618	8.716	8.015	7.497	4.943	4.325	4.007	3.456	14.091
0.1250	30.169	27.835	18.974	13.358	11.157	10.113	9.297	8.709	5.835	5.104	4.772	4.127	17.614
0.1600	34.292	33.331	21.856	15.649	13.157	11.934	10.950	10.272	6.994	6.142	5.759	5.027	22.546
0.2000	38.446	39.017	24.836	18.056	15.274	13.834	12.691	11.896	8.246	7.277	6.830	5.961	28.182
0.2500	42.982	45.212	28.222	20.856	17.724	16.087	14.732	13.801	9.737	8.608	8.072	7.056	35.227
0.3200	48.503	52.696	32.509	24.479	20.903	19.083	17.392	16.254	11.638	10.338	9.704	8.533	45.091
0.4000	54.060	60.014	36.977	28.177	24.257	22.186	20.226	18.895	13.755	12.239	11.500	10.095	56.364
0.5000	59.346	66.692	41.501	32.080	27.806	25.523	23.241	21.664	16.019	14.276	13.426	11.828	70.455
0.6000	63.889	71.955	45.570	35.681	31.079	28.618	25.975	24.198	18.091	16.177	15.243	13.534	84.546
0.7000	67.392	75.651	48.870	38.608	33.769	31.130	28.198	26.292	19.841	17.740	16.763	14.857	98.637
0.8000	70.030	78.074	51.568	41.100	36.046	33.365	30.167	28.105	21.349	19.183	18.100	16.089	112.73
0.9000	72.180	79.763	53.785	43.136	38.026	35.283	31.841	29.636	22.751	20.438	19.309	17.211	126.82
1.0000	73.800	80.808	55.615	44.992	39.709	36.872	33.313	30.977	23.914	21.523	20.355	18.186	140.91
1.2500	76.424	81.845	58.924	48.318	43.015	40.068	36.120	33.528	26.339	23.746	22.450	20.093	176.14
1.6000	77.932	81.687	61.558	51.401	45.922	42.906	38.658	35.704	28.624	25.916	24.500	21.976	225.46
2.0000	77.963	81.361	62.924	53.297	47.885	44.928	40.271	37.314	30.203	27.561	26.050	23.471	281.82
2.5000	76.796	80.468	63.310	54.384	49.192	46.217	41.342	38.366	31.529	28.680	27.223	24.691	352.27
3.2000	74.493	78.691	62.652	54.507	49.621	46.676	41.852	38.719	32.329	29.572	28.068	25.499	450.91
4.0000	71.577	76.226	61.177	53.775	49.247	46.372	41.784	38.541	32.607	29.854	28.447	25.878	563.64
5.0000	68.081	72.977	58.995	52.270	48.140	45.426	40.943	37.875	32.447	29.616	28.377	25.899	704.55
6.0000	64.964	69.848	56.787	50.654	46.735	44.294	39.978	36.968	31.687	29.245	27.996	25.724	845.46
7.0000	62.011	66.988	54.684	48.997	45.278	43.036	38.935	36.037	31.170	28.654	27.506	25.319	986.37
8.0000	59.422	64.325	52.726	47.453	43.921	41.759	37.963	35.063	30.476	28.103	26.996	24.887	1127.3
9.0000	57.181	61.865	50.918	45.979	42.618	40.582	36.916	34.166	29.787	27.496	26.426	24.441	1268.2
10.0000	55.064	59.596	49.253	44.672	41.372	39.451	35.905	33.344	29.059	26.941	25.956	23.986	1409.1
11.0000	53.157	57.595	47.718	43.423	40.274	38.413	34.977	32.591	28.440	26.436	25.529	23.525	1550.0
12.0000	51.440	55.699	46.300	42.226	39.216	37.457	34.123	31.855	27.826	25.928	25.002	23.057	1690.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	19.030	8.119	5.379	5.054	4.491	2.964	1.817	1.289	0.850	6.805	8.657	6.607	1.7614
0.0160	21.511	9.072	6.097	5.734	5.097	3.443	2.134	1.520	1.009	7.792	9.914	7.488	2.2546
0.0200	23.779	9.764	6.755	6.363	5.692	3.952	2.464	1.793	1.200	8.781	11.166	8.296	2.8182
0.0250	26.266	10.423	7.487	7.057	6.385	4.581	2.929	2.136	1.547	9.888	12.582	9.193	3.5227
0.0320	29.647	11.250	8.338	7.938	7.251	5.434	3.530	2.660	1.852	11.302	14.415	10.346	4.5091
0.0400	33.096	12.033	9.218	8.872	8.170	6.382	4.228	3.240	2.302	12.794	16.321	11.559	5.6364
0.0500	37.159	13.068	10.317	10.036	9.340	7.533	5.074	3.952	2.863	14.527	18.524	13.045	7.0455
0.0600	41.624	14.244	11.552	11.166	10.555	8.686	5.907	4.648	3.415	16.213	20.700	14.556	8.4546
0.0700	46.146	15.627	12.796	12.428	11.788	9.828	6.697	5.322	3.934	17.887	22.815	16.172	9.8637
0.0800	50.990	17.119	14.121	13.725	13.063	10.977	7.524	5.995	4.452	19.573	24.937	17.868	11.273
0.0900	55.806	18.723	15.484	15.091	14.368	12.120	8.332	6.665	4.936	21.253	27.023	19.619	12.682
0.1000	61.114	20.505	16.998	16.464	15.663	13.275	9.167	7.297	5.410	22.926	29.155	21.423	14.091
0.1250	75.329	25.141	20.777	20.018	19.126	16.147	11.119	8.861	6.584	27.209	34.628	26.166	17.614
0.1600	96.823	32.282	26.490	25.528	24.217	20.173	13.835	11.016	8.174	33.375	42.401	33.440	22.546
0.2000	121.945	40.483	33.156	31.840	30.101	24.464	16.640	13.213	9.761	40.085	50.864	41.849	28.182
0.2500	152.964	50.631	41.063	39.539	36.915	29.182	19.727	15.466	11.374	47.808	60.593	52.155	35.227
0.3200	193.101	63.034	51.266	48.925	44.764	34.297	22.886	17.847	13.036	57.280	72.754	64.952	45.091
0.4000	230.737	76.173	60.494	57.499	52.064	38.863	25.699	20.005	14.569	66.300	84.419	76.764	56.364
0.5000	264.776	87.982	68.352	65.032	58.184	42.788	28.221	22.037	16.061	74.411	94.996	87.235	70.455
0.6000	289.368	97.063	73.458	69.813	62.385	45.615	30.258	23.605	17.271	80.294	103.033	94.193	84.546
0.7000	300.064	103.116	75.847	72.084	64.509	47.111	31.521	24.533	18.131	83.813	107.710	97.399	98.637
0.8000	302.705	106.230	76.785	73.227	65.440	47.855	32.385	25.268	18.771	85.809	110.149	98.701	112.73
0.9000	301.197	107.355	76.913	73.309	65.188	48.084	32.809	25.924	19.255	86.863	111.389	98.642	126.82
1.0000	299.762	108.393	77.360	73.411	65.403	48.440	33.369	26.584	19.743	87.482	112.063	98.549	140.91
1.2500	292.852	109.658	78.074	74.539	66.231	49.673	34.883	28.166	21.272	88.209	112.014	98.816	176.14
1.6000	278.242	108.958	78.671	75.224	67.344	51.401	36.873	29.979	23.207	87.720	109.758	97.754	225.46
2.0000	260.505	106.782	79.158	75.383	68.210	52.982	38.698	31.777	24.981	86.835	106.971	95.959	281.82
2.5000	239.313	102.879	78.568	74.770	69.008	54.574	40.519	33.744	26.844	85.216	103.133	93.066	352.27
3.2000	219.283	97.424	77.250	73.742	68.479	55.447	42.165	35.085	28.131	82.889	98.802	89.906	450.91
4.0000	201.884	91.276	74.636	71.577	67.295	55.059	42.212	35.544	28.753	79.897	94.151	86.076	563.64
5.0000	187.605	85.248	71.325	68.670	64.718	53.627	41.710	35.220	28.908	76.340	89.378	81.885	704.55
6.0000	176.607	80.296	68.258	65.645	62.181	51.903	40.546	34.470	28.393	72.914	85.123	77.968	845.46
7.0000	167.879	76.229	65.511	63.160	59.715	50.200	39.482	33.685	27.834	69.940	81.424	74.807	986.37
8.0000	160.286	72.498	63.007	60.793	57.418	48.455	38.121	32.690	27.154	67.173	78.034	71.865	1127.3
9.0000	153.263	69.656	60.643	58.556	55.399	46.845	36.916	31.722	26.477	64.564	74.900	69.096	1268.2
10.0000	147.265	67.230	58.660	56.641	53.587	45.312	35.807	30.783	25.759	62.255	72.106	66.688	1409.1
11.0000	141.721	64.991	56.832	54.875	51.917	43.900	34.786	29.919	25.052	60.172	69.620	64.514	1550.0
12.0000	136.586	62.922	55.144	53.245	50.375	42.596	33.845	29.123	24.400	58.246	67.274	62.505	1690.9

$^{141}_{59}Pr$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=141 MEV
0.0125	0.123	0.121	0.149	0.192	0.202	0.242	0.256	0.280	0.374	0.421	0.446	0.516	1.7614
0.0160	0.155	0.155	0.191	0.247	0.260	0.312	0.330	0.361	0.487	0.552	0.587	0.686	2.2546
0.0200	0.190	0.192	0.238	0.309	0.327	0.391	0.413	0.451	0.612	0.695	0.741	0.868	2.8182
0.0250	0.232	0.237	0.295	0.386	0.411	0.489	0.516	0.562	0.766	0.871	0.929	1.088	3.5227
0.0320	0.287	0.297	0.372	0.491	0.527	0.624	0.658	0.714	0.979	1.113	1.186	1.388	4.5091
0.0400	0.346	0.362	0.457	0.608	0.657	0.774	0.815	0.884	1.218	1.384	1.475	1.722	5.6364
0.0500	0.413	0.438	0.557	0.747	0.815	0.953	1.005	1.087	1.509	1.712	1.826	2.127	7.0455
0.0600	0.476	0.509	0.650	0.879	0.965	1.124	1.185	1.281	1.789	2.028	2.163	2.515	8.4546
0.0700	0.535	0.575	0.739	1.004	1.108	1.287	1.357	1.465	2.057	2.330	2.485	2.886	9.8637
0.0800	0.591	0.638	0.823	1.123	1.245	1.441	1.521	1.640	2.313	2.618	2.793	3.240	11.273
0.0900	0.643	0.696	0.903	1.236	1.375	1.588	1.677	1.807	2.557	2.893	3.086	3.577	12.682
0.1000	0.693	0.751	0.980	1.343	1.500	1.728	1.827	1.967	2.789	3.155	3.366	3.899	14.091
0.1250	0.809	0.877	1.157	1.592	1.789	2.051	2.174	2.337	3.326	3.761	4.013	4.642	17.614
0.1600	0.955	1.029	1.380	1.901	2.149	2.453	2.606	2.797	3.990	4.512	4.811	5.556	22.546
0.2000	1.105	1.178	1.608	2.212	2.512	2.857	3.043	3.262	4.654	5.262	5.607	6.465	28.182
0.2500	1.273	1.341	1.862	2.556	2.912	3.301	3.524	3.775	5.378	6.078	6.474	7.455	35.227
0.3200	1.484	1.538	2.177	2.975	3.399	3.840	4.110	4.400	6.250	7.059	7.517	8.643	45.091
0.4000	1.701	1.734	2.493	3.392	3.882	4.370	4.690	5.019	7.103	8.016	8.534	9.799	56.364
0.5000	1.946	1.954	2.845	3.849	4.409	4.946	5.321	5.695	8.020	9.045	9.627	11.040	70.455
0.6000	2.172	2.155	3.164	4.258	4.878	5.458	5.882	6.297	8.828	9.948	10.586	12.124	84.546
0.7000	2.387	2.345	3.459	4.633	5.306	5.923	6.394	6.847	9.557	10.763	11.449	13.096	98.637
0.8000	2.591	2.529	3.739	4.986	5.709	6.360	6.877	7.364	10.241	11.526	12.258	14.007	112.73
0.9000	2.789	2.707	4.007	5.321	6.090	6.770	7.331	7.852	10.880	12.237	13.011	14.853	126.82
1.0000	2.982	2.882	4.264	5.640	6.452	7.161	7.764	8.317	11.484	12.909	13.721	15.649	140.91
1.2500	3.450	3.314	4.878	6.394	7.302	8.075	8.777	9.408	12.885	14.464	15.365	17.488	176.14
1.6000	4.088	3.916	5.695	7.381	8.409	9.262	10.093	10.830	14.676	16.447	17.463	19.829	225.46
2.0000	4.809	4.606	6.599	8.456	9.609	10.543	11.519	12.371	16.590	18.552	19.690	22.307	281.82
2.5000	5.719	5.475	7.714	9.763	11.059	12.087	13.244	14.231	18.870	21.055	22.332	25.229	352.27
3.2000	7.021	6.713	9.278	11.573	13.053	14.208	15.612	16.787	21.955	24.437	25.896	29.155	450.91
4.0000	8.564	8.168	11.098	13.653	15.332	16.630	18.306	19.703	25.425	28.228	29.882	33.540	563.64
5.0000	10.582	10.057	13.443	16.311	18.225	19.699	21.712	23.390	29.755	32.965	34.840	38.980	704.55
6.0000	12.701	12.031	15.877	19.049	21.196	22.840	25.195	27.155	34.150	37.753	39.839	44.439	845.46
7.0000	14.922	14.091	18.406	21.878	24.259	26.068	28.766	31.016	38.633	42.621	44.917	49.961	986.37
8.0000	17.243	16.238	21.031	24.801	27.419	29.392	32.432	34.981	43.206	47.587	50.089	55.575	1127.3
9.0000	19.661	18.472	23.751	27.818	30.677	32.816	36.197	39.053	47.884	52.657	55.365	61.289	1268.2
10.0000	22.173	20.793	26.565	30.928	34.033	36.338	40.068	43.228	52.674	57.835	60.746	67.110	1409.1
11.0000	24.778	23.199	29.472	34.127	37.486	39.958	44.045	47.504	57.576	63.116	66.221	73.042	1550.0
12.0000	27.473	25.687	32.471	37.419	41.032	43.674	48.124	51.877	62.586	68.499	71.799	79.093	1690.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.047	0.109	0.132	0.136	0.144	0.193	0.272	0.358	0.469	0.116	0.097	0.108	1.7614
0.0160	0.059	0.139	0.170	0.175	0.185	0.250	0.352	0.465	0.626	0.148	0.123	0.139	2.2546
0.0200	0.073	0.174	0.213	0.220	0.233	0.315	0.443	0.584	0.793	0.184	0.153	0.174	2.8182
0.0250	0.090	0.217	0.268	0.276	0.293	0.395	0.556	0.731	0.991	0.229	0.189	0.218	3.5227
0.0320	0.112	0.277	0.343	0.355	0.377	0.506	0.710	0.930	1.253	0.290	0.238	0.280	4.5091
0.0400	0.137	0.346	0.428	0.442	0.470	0.627	0.879	1.145	1.537	0.356	0.291	0.348	5.6364
0.0500	0.166	0.430	0.531	0.548	0.582	0.768	1.077	1.394	1.864	0.434	0.353	0.431	7.0455
0.0600	0.194	0.512	0.629	0.648	0.688	0.899	1.260	1.623	2.163	0.507	0.411	0.509	8.4546
0.0700	0.220	0.589	0.721	0.743	0.787	1.019	1.430	1.834	2.437	0.576	0.466	0.582	9.8637
0.0800	0.244	0.662	0.808	0.832	0.880	1.131	1.587	2.029	2.691	0.641	0.517	0.651	11.273
0.0900	0.266	0.731	0.889	0.915	0.967	1.235	1.733	2.209	2.927	0.701	0.565	0.715	12.682
0.1000	0.288	0.794	0.965	0.992	1.048	1.331	1.869	2.378	3.148	0.758	0.610	0.775	14.091
0.1250	0.334	0.936	1.132	1.166	1.229	1.546	2.174	2.757	3.646	0.886	0.711	0.909	17.614
0.1600	0.388	1.098	1.327	1.367	1.440	1.799	2.535	3.207	4.240	1.039	0.832	1.063	22.546
0.2000	0.437	1.247	1.507	1.554	1.637	2.039	2.882	3.641	4.817	1.186	0.948	1.206	28.182
0.2500	0.487	1.397	1.691	1.746	1.840	2.292	3.252	4.107	5.442	1.342	1.071	1.352	35.227
0.3200	0.543	1.568	1.901	1.964	2.076	2.595	3.699	4.677	6.213	1.526	1.216	1.517	45.091
0.4000	0.595	1.728	2.100	2.172	2.304	2.897	4.151	5.255	6.999	1.705	1.357	1.674	56.364
0.5000	0.652	1.900	2.315	2.399	2.556	3.236	4.662	5.909	7.892	1.903	1.512	1.843	70.455
0.6000	0.703	2.052	2.514	2.608	2.789	3.550	5.135	6.515	8.718	2.085	1.654	1.999	84.546
0.7000	0.751	2.193	2.702	2.806	3.011	3.853	5.591	7.099	9.498	2.256	1.788	2.145	98.637
0.8000	0.797	2.327	2.887	3.000	3.228	4.150	6.031	7.665	10.261	2.422	1.917	2.289	112.73
0.9000	0.844	2.459	3.070	3.192	3.443	4.443	6.463	8.215	11.002	2.585	2.044	2.432	126.82
1.0000	0.891	2.590	3.252	3.384	3.659	4.735	6.889	8.751	11.724	2.747	2.170	2.574	140.91
1.2500	1.009	2.912	3.704	3.859	4.193	5.451	7.919	10.035	13.439	3.147	2.484	2.930	176.14
1.6000	1.182	3.362	4.332	4.516	4.929	6.425	9.291	11.728	15.653	3.706	2.927	3.431	225.46
2.0000	1.391	3.883	5.045	5.263	5.759	7.503	10.780	13.551	17.990	4.350	3.447	4.012	281.82
2.5000	1.672	4.555	5.937	6.200	6.785	8.812	12.557	15.700	20.707	5.168	4.116	4.756	352.27
3.2000	2.102	5.539	7.202	7.527	8.218	10.602	14.940	18.563	24.291	6.341	5.092	5.833	450.91
4.0000	2.638	6.733	8.685	9.077	9.878	12.641	17.610	21.752	28.252	7.725	6.260	7.114	563.64
5.0000	3.362	8.330	10.616	11.087	12.012	15.234	20.967	25.733	33.137	9.529	7.796	8.792	704.55
6.0000	4.136	10.034	12.636	13.186	14.234	17.905	24.394	29.777	38.055	11.418	9.412	10.555	845.46
7.0000	4.954	11.835	14.743	15.374	16.546	20.666	27.916	33.913	43.068	13.391	11.104	12.401	986.37
8.0000	5.813	13.731	16.937	17.649	18.953	23.523	31.549	38.160	48.194	15.447	12.873	14.323	1127.3
9.0000	6.713	15.714	19.217	20.011	21.452	26.481	35.306	42.537	53.450	17.587	14.716	16.323	1268.2
10.0000	7.651	17.774	21.580	22.458	24.039	29.540	39.182	47.047	58.847	19.810	16.634	18.399	1409.1
11.0000	8.626	19.906	24.021	24.986	26.711	32.700	43.175	51.691	64.395	22.113	18.623	20.548	1550.0
12.0000	9.639	22.110	26.538	27.593	29.467	35.959	47.282	56.465	70.095	24.494	20.682	22.767	1690.9

$^{142}_{60}$Nd IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=142 MEV
0.0125	8.427	6.971	5.107	3.396	2.758	2.502	2.319	2.145	1.364	1.167	1.072	0.919	1.7739
0.0160	9.709	8.032	5.884	3.913	3.178	2.883	2.671	2.471	1.571	1.345	1.236	1.059	2.2706
0.0200	11.036	9.130	6.688	4.448	3.612	3.277	3.036	2.809	1.786	1.528	1.405	1.204	2.8382
0.0250	12.543	10.377	7.602	5.055	4.105	3.725	3.451	3.193	2.030	1.737	1.600	1.368	3.5477
0.0320	14.435	11.965	8.759	5.825	4.739	4.310	3.977	3.679	2.339	2.006	1.848	1.585	4.5411
0.0400	16.368	13.630	9.956	6.641	5.416	4.938	4.550	4.211	2.678	2.305	2.121	1.822	5.6764
0.0500	18.536	15.537	11.316	7.582	6.213	5.658	5.217	4.832	3.067	2.665	2.456	2.110	7.0955
0.0600	20.505	17.352	12.565	8.468	6.961	6.320	5.842	5.415	3.468	3.015	2.783	2.394	8.5146
0.0700	22.306	19.080	13.727	9.307	7.687	6.973	6.452	5.985	3.843	3.363	3.116	2.677	9.9337
0.0800	23.979	20.778	14.820	10.122	8.373	7.588	7.010	6.521	4.224	3.705	3.423	2.949	11.353
0.0900	25.545	22.421	15.857	10.909	9.038	8.214	7.564	7.040	4.614	4.035	3.742	3.227	12.772
0.1000	27.036	24.038	16.845	11.674	9.703	8.793	8.086	7.563	4.986	4.363	4.043	3.487	14.191
0.1250	30.443	28.088	19.146	13.479	11.258	10.205	9.382	8.788	5.888	5.150	4.815	4.164	17.739
0.1600	34.613	33.642	22.061	15.795	13.280	12.045	11.052	10.368	7.059	6.199	5.813	5.074	22.706
0.2000	38.816	39.392	25.075	18.229	15.421	13.967	12.813	12.011	8.325	7.347	6.896	6.018	28.382
0.2500	43.406	45.658	28.501	21.062	17.898	16.245	14.877	13.937	9.833	8.693	8.151	7.125	35.477
0.3200	48.995	53.231	32.839	24.727	21.115	19.276	17.569	16.419	11.756	10.443	9.802	8.620	45.411
0.4000	54.646	60.663	37.377	28.482	24.520	22.426	20.445	19.100	13.904	12.372	11.624	10.204	56.764
0.5000	60.046	67.478	41.990	32.458	28.133	25.824	23.514	21.919	16.208	14.445	13.584	11.967	70.955
0.6000	64.689	72.856	46.141	36.128	31.468	28.976	26.300	24.501	18.318	16.380	15.434	13.704	85.146
0.7000	68.283	76.651	49.516	39.118	34.216	31.542	28.571	26.640	20.104	17.974	16.984	15.053	99.337
0.8000	70.997	79.153	52.281	41.668	36.544	33.826	30.584	28.493	21.644	19.448	18.351	16.312	113.53
0.9000	73.216	80.908	54.557	43.755	38.572	35.790	32.298	30.061	23.078	20.732	19.586	17.458	127.72
1.0000	74.895	82.006	56.439	45.659	40.298	37.419	33.807	31.437	24.269	21.842	20.657	18.456	141.91
1.2500	77.635	83.142	59.858	49.083	43.696	40.703	36.693	34.059	26.756	24.123	22.806	20.411	177.39
1.6000	79.255	83.073	62.602	52.273	46.701	43.634	39.314	36.309	29.110	26.356	24.916	22.349	227.06
2.0000	79.364	82.822	64.054	54.254	48.745	45.735	40.995	37.984	30.746	28.056	26.519	23.892	283.82
2.5000	78.252	81.993	64.511	55.415	50.125	47.093	42.126	39.094	32.126	29.223	27.740	25.159	354.77
3.2000	75.987	80.268	63.908	55.600	50.615	47.611	42.691	39.495	32.977	30.165	28.631	26.011	454.11
4.0000	73.081	77.828	62.462	54.904	50.282	47.347	42.662	39.351	33.292	30.482	29.045	26.422	567.64
5.0000	69.576	74.581	60.291	53.418	49.198	46.424	41.842	38.707	33.160	30.266	29.000	26.468	709.55
6.0000	66.442	71.437	58.079	51.806	47.799	45.301	40.887	37.809	32.408	29.910	28.633	26.310	851.46
7.0000	63.463	68.555	55.963	50.143	46.338	44.043	39.846	36.880	31.899	29.325	28.150	25.911	993.37
8.0000	60.846	65.867	53.989	48.590	44.973	42.760	38.872	35.903	31.206	28.776	27.643	25.483	1135.3
9.0000	58.580	63.379	52.164	47.104	43.661	41.574	37.819	35.002	30.516	28.168	27.073	25.038	1277.2
10.0000	56.436	61.080	50.479	45.785	42.403	40.434	36.799	34.174	29.783	27.612	26.603	24.583	1419.1
11.0000	54.503	59.053	48.925	44.522	41.293	39.385	35.862	33.416	29.159	27.105	26.175	24.120	1561.0
12.0000	52.760	57.129	47.489	43.310	40.223	38.418	34.999	32.672	28.541	26.594	25.644	23.649	1702.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	19.151	8.171	5.413	5.087	4.520	2.983	1.828	1.297	0.856	6.849	8.713	6.649	1.7739
0.0160	21.654	9.132	6.137	5.773	5.131	3.466	2.148	1.530	1.016	7.844	9.980	7.538	2.2706
0.0200	23.944	9.832	6.802	6.407	5.732	3.980	2.481	1.806	1.208	8.842	11.243	8.354	2.8382
0.0250	26.455	10.499	7.541	7.108	6.431	4.614	2.950	2.151	1.558	9.959	12.673	9.259	3.5477
0.0320	29.869	11.334	8.400	7.997	7.305	5.475	3.556	2.680	1.866	11.387	14.523	10.423	4.5411
0.0400	33.352	12.126	9.289	8.940	8.234	6.432	4.261	3.266	2.320	12.893	16.447	11.648	5.6764
0.0500	37.457	13.172	10.400	10.117	9.415	7.593	5.115	3.983	2.886	14.643	18.672	13.149	7.0955
0.0600	41.965	14.361	11.647	11.258	10.642	8.757	5.956	4.687	3.443	16.346	20.870	14.675	8.5146
0.0700	46.534	15.758	12.903	12.533	11.887	9.911	6.754	5.367	3.967	18.037	23.006	16.307	9.9337
0.0800	51.426	17.265	14.242	13.842	13.175	11.071	7.588	6.047	4.490	19.740	25.150	18.021	11.353
0.0900	56.291	18.885	15.619	15.222	14.493	12.225	8.404	6.723	4.979	21.438	27.257	19.789	12.772
0.1000	61.652	20.686	17.148	16.609	15.801	13.392	9.248	7.361	5.458	23.128	29.411	21.612	14.191
0.1250	76.011	25.369	20.965	20.199	19.300	16.294	11.220	8.941	6.644	27.456	34.942	26.403	17.739
0.1600	97.728	32.583	26.737	25.767	24.443	20.362	13.964	11.119	8.251	33.687	42.798	33.753	22.706
0.2000	123.117	40.872	33.475	32.146	30.391	24.699	16.800	13.340	9.854	40.471	51.353	42.251	28.382
0.2500	154.473	51.130	41.468	39.929	37.279	29.470	19.922	15.618	11.486	48.280	61.191	52.669	35.477
0.3200	195.061	63.674	51.786	49.422	45.219	34.645	23.118	18.028	13.168	57.862	73.493	65.611	45.411
0.4000	233.234	76.997	61.149	58.122	52.627	39.284	25.977	20.221	14.727	67.018	85.332	77.595	56.764
0.5000	267.897	89.019	69.158	65.798	58.870	43.292	28.553	22.297	16.250	75.288	96.115	88.263	70.955
0.6000	292.994	98.280	74.379	70.688	63.167	46.187	30.637	23.901	17.487	81.300	104.324	95.373	85.146
0.7000	304.030	104.479	76.849	73.037	65.362	47.734	31.938	24.857	18.371	84.921	109.134	98.686	99.337
0.8000	306.888	107.698	77.846	74.239	66.344	48.517	32.832	25.618	19.030	86.995	111.672	100.065	113.53
0.9000	305.521	108.896	78.017	74.362	66.123	48.774	33.280	26.297	19.531	88.110	112.988	100.058	127.72
1.0000	304.208	110.000	78.507	74.500	66.373	49.159	33.864	26.978	20.036	88.779	113.725	100.011	141.91
1.2500	297.493	111.395	79.311	75.720	67.280	50.460	35.436	28.612	21.609	89.607	113.790	100.381	177.39
1.6000	282.963	110.806	80.006	76.500	68.487	52.273	37.499	30.487	23.601	89.208	111.620	99.412	227.06
2.0000	265.186	108.700	80.581	76.737	69.435	53.934	39.394	32.348	25.430	88.395	108.893	97.683	283.82
2.5000	243.851	104.830	80.058	76.187	70.317	55.608	41.287	34.384	27.353	86.832	105.088	94.831	354.77
3.2000	223.678	99.377	78.799	75.220	69.851	56.559	43.010	35.788	28.695	84.550	100.783	91.708	454.11
4.0000	206.126	93.194	76.204	73.081	68.709	56.216	43.099	36.291	29.357	81.576	96.130	87.885	567.64
5.0000	191.727	87.121	72.892	70.179	66.140	54.805	42.626	35.994	29.543	78.017	91.342	83.685	709.55
6.0000	180.624	82.123	69.810	67.139	63.596	53.084	41.468	35.254	29.039	74.573	87.060	79.742	851.46
7.0000	171.808	78.013	67.044	64.638	61.112	51.374	40.406	34.473	28.485	71.577	83.330	76.558	993.37
8.0000	164.128	74.235	64.517	62.250	58.794	49.616	39.034	33.473	27.805	68.782	79.904	73.588	1135.3
9.0000	157.012	71.360	62.127	59.988	56.754	47.990	37.819	32.498	27.125	66.143	76.733	70.786	1277.2
10.0000	150.933	68.904	60.121	58.051	54.921	46.441	36.698	31.550	26.401	63.806	73.902	68.349	1419.1
11.0000	145.308	66.636	58.270	56.264	53.231	45.011	35.666	30.676	25.686	61.695	71.382	66.147	1561.0
12.0000	140.092	64.537	56.559	54.612	51.668	43.690	34.714	29.870	25.027	59.741	69.001	64.110	1702.9

$^{142}_{60}Nd$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=142 MEV
0.0125	0.122	0.121	0.148	0.190	0.200	0.240	0.254	0.277	0.369	0.416	0.440	0.509	1.7739
0.0160	0.154	0.154	0.190	0.245	0.258	0.309	0.327	0.357	0.481	0.546	0.581	0.678	2.2706
0.0200	0.189	0.191	0.236	0.306	0.324	0.388	0.410	0.447	0.605	0.688	0.733	0.859	2.8382
0.0250	0.231	0.235	0.293	0.383	0.407	0.485	0.511	0.557	0.758	0.862	0.919	1.077	3.5477
0.0320	0.285	0.295	0.370	0.487	0.522	0.619	0.652	0.708	0.969	1.101	1.174	1.374	4.5411
0.0400	0.344	0.360	0.454	0.603	0.652	0.767	0.808	0.876	1.206	1.370	1.461	1.705	5.6764
0.0500	0.411	0.436	0.553	0.742	0.808	0.946	0.996	1.078	1.495	1.696	1.809	2.106	7.0955
0.0600	0.474	0.506	0.646	0.873	0.957	1.115	1.176	1.270	1.773	2.009	2.143	2.491	8.5146
0.0700	0.533	0.572	0.735	0.997	1.100	1.277	1.347	1.453	2.039	2.309	2.463	2.859	9.9337
0.0800	0.588	0.634	0.818	1.115	1.236	1.430	1.509	1.628	2.294	2.595	2.768	3.211	11.353
0.0900	0.640	0.692	0.898	1.228	1.365	1.576	1.665	1.794	2.536	2.868	3.059	3.546	12.772
0.1000	0.690	0.747	0.974	1.335	1.489	1.716	1.814	1.953	2.767	3.129	3.338	3.866	14.191
0.1250	0.806	0.873	1.151	1.582	1.777	2.038	2.159	2.321	3.300	3.732	3.981	4.605	17.739
0.1600	0.951	1.024	1.373	1.890	2.135	2.438	2.590	2.779	3.961	4.479	4.775	5.514	22.706
0.2000	1.100	1.173	1.600	2.200	2.497	2.841	3.025	3.242	4.623	5.226	5.567	6.419	28.382
0.2500	1.268	1.335	1.853	2.543	2.895	3.283	3.504	3.753	5.344	6.038	6.431	7.405	35.477
0.3200	1.479	1.531	2.167	2.960	3.381	3.819	4.088	4.376	6.212	7.015	7.470	8.587	45.411
0.4000	1.694	1.727	2.482	3.375	3.861	4.347	4.665	4.993	7.062	7.968	8.483	9.739	56.764
0.5000	1.938	1.946	2.833	3.831	4.386	4.921	5.293	5.666	7.975	8.992	9.571	10.974	70.955
0.6000	2.164	2.146	3.150	4.238	4.853	5.430	5.852	6.265	8.778	9.891	10.524	12.052	85.146
0.7000	2.377	2.335	3.443	4.610	5.278	5.893	6.361	6.810	9.503	10.701	11.382	13.019	99.337
0.8000	2.580	2.517	3.722	4.961	5.679	6.327	6.840	7.325	10.183	11.459	12.172	13.908	113.53
0.9000	2.777	2.694	3.987	5.293	6.056	6.734	7.291	7.810	10.817	12.165	12.920	14.749	127.72
1.0000	2.969	2.868	4.243	5.611	6.416	7.122	7.721	8.271	11.417	12.832	13.626	15.539	141.91
1.2500	3.433	3.297	4.852	6.358	7.260	8.029	8.726	9.353	12.806	14.374	15.256	17.363	177.39
1.6000	4.064	3.893	5.661	7.336	8.356	9.204	10.030	10.761	14.581	16.339	17.335	19.682	227.06
2.0000	4.779	4.576	6.556	8.400	9.544	10.473	11.442	12.287	16.475	18.423	19.539	22.135	283.82
2.5000	5.678	5.436	7.658	9.693	10.978	12.000	13.147	14.126	18.729	20.897	22.152	25.024	354.77
3.2000	6.964	6.659	9.203	11.480	12.947	14.095	15.486	16.651	21.777	24.238	25.672	28.902	454.11
4.0000	8.487	8.094	10.999	13.533	15.196	16.484	18.144	19.529	25.201	27.980	29.606	33.230	567.64
5.0000	10.476	9.956	13.311	16.153	18.048	19.510	21.502	23.163	29.470	32.650	34.493	38.593	709.55
6.0000	12.564	11.901	15.709	18.851	20.975	22.605	24.933	26.873	33.799	37.366	39.417	43.970	851.46
7.0000	14.750	13.929	18.199	21.635	23.990	25.782	28.449	30.673	38.213	42.158	44.416	49.406	993.37
8.0000	17.034	16.041	20.781	24.511	27.099	29.052	32.055	34.574	42.711	47.044	49.504	54.929	1135.3
9.0000	19.411	18.238	23.455	27.477	30.302	32.419	35.757	38.578	47.311	52.029	54.692	60.548	1277.2
10.0000	21.880	20.519	26.221	30.534	33.601	35.881	39.562	42.681	52.019	57.118	59.981	66.268	1419.1
11.0000	24.439	22.882	29.077	33.677	36.993	39.437	43.469	46.881	56.835	62.306	65.359	72.097	1561.0
12.0000	27.086	25.326	32.022	36.910	40.476	43.086	47.475	51.177	61.755	67.592	70.838	78.039	1702.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.047	0.109	0.131	0.135	0.142	0.192	0.270	0.354	0.462	0.115	0.096	0.107	1.7739
0.0160	0.059	0.139	0.169	0.174	0.184	0.248	0.349	0.460	0.618	0.147	0.122	0.138	2.2706
0.0200	0.073	0.173	0.212	0.218	0.231	0.312	0.438	0.579	0.784	0.183	0.152	0.173	2.8382
0.0250	0.089	0.215	0.266	0.274	0.291	0.392	0.550	0.724	0.981	0.227	0.188	0.217	3.5477
0.0320	0.111	0.275	0.341	0.352	0.374	0.502	0.703	0.921	1.240	0.288	0.236	0.278	4.5411
0.0400	0.136	0.344	0.425	0.439	0.466	0.621	0.871	1.134	1.522	0.354	0.289	0.346	5.6764
0.0500	0.165	0.428	0.527	0.544	0.578	0.762	1.067	1.381	1.846	0.431	0.351	0.428	7.0955
0.0600	0.193	0.509	0.625	0.644	0.683	0.892	1.249	1.608	2.143	0.504	0.409	0.505	8.5146
0.0700	0.219	0.586	0.717	0.738	0.782	1.012	1.418	1.818	2.415	0.573	0.463	0.578	9.9337
0.0800	0.243	0.659	0.803	0.827	0.874	1.123	1.574	2.012	2.668	0.637	0.514	0.647	11.353
0.0900	0.265	0.727	0.883	0.909	0.960	1.226	1.720	2.192	2.902	0.697	0.562	0.711	12.772
0.1000	0.286	0.790	0.959	0.986	1.041	1.322	1.855	2.360	3.122	0.754	0.607	0.771	14.191
0.1250	0.333	0.931	1.126	1.159	1.221	1.537	2.159	2.737	3.618	0.882	0.708	0.904	17.739
0.1600	0.386	1.092	1.320	1.360	1.432	1.788	2.519	3.185	4.209	1.034	0.828	1.058	22.706
0.2000	0.435	1.241	1.500	1.546	1.628	2.027	2.864	3.617	4.784	1.181	0.944	1.200	28.382
0.2500	0.485	1.391	1.683	1.737	1.831	2.280	3.233	4.082	5.407	1.336	1.066	1.345	35.477
0.3200	0.541	1.562	1.892	1.955	2.066	2.581	3.678	4.650	6.174	1.519	1.211	1.510	45.411
0.4000	0.593	1.721	2.090	2.162	2.293	2.882	4.128	5.226	6.958	1.698	1.352	1.666	56.764
0.5000	0.650	1.892	2.305	2.388	2.544	3.220	4.637	5.877	7.846	1.895	1.506	1.835	70.955
0.6000	0.700	2.043	2.502	2.596	2.776	3.533	5.108	6.479	8.668	2.076	1.647	1.989	85.146
0.7000	0.748	2.183	2.690	2.793	2.996	3.834	5.561	7.052	9.444	2.246	1.780	2.135	99.337
0.8000	0.794	2.317	2.873	2.985	3.212	4.129	5.999	7.614	10.202	2.411	1.909	2.278	113.53
0.9000	0.840	2.448	3.055	3.176	3.426	4.420	6.428	8.160	10.937	2.573	2.035	2.420	127.72
1.0000	0.887	2.577	3.236	3.367	3.640	4.710	6.850	8.692	11.654	2.733	2.160	2.562	141.91
1.2500	1.004	2.897	3.684	3.838	4.169	5.420	7.872	9.966	13.355	3.130	2.471	2.915	177.39
1.6000	1.175	3.343	4.306	4.488	4.899	6.385	9.231	11.644	15.549	3.684	2.910	3.410	227.06
2.0000	1.382	3.859	5.012	5.228	5.721	7.452	10.705	13.448	17.862	4.322	3.424	3.985	283.82
2.5000	1.660	4.523	5.894	6.155	6.735	8.746	12.462	15.573	20.549	5.131	4.087	4.721	354.77
3.2000	2.085	5.495	7.143	7.465	8.150	10.515	14.816	18.400	24.089	6.289	5.051	5.785	454.11
4.0000	2.613	6.674	8.607	8.995	9.788	12.527	17.451	21.548	27.998	7.655	6.203	7.049	567.64
5.0000	3.327	8.248	10.511	10.976	11.893	15.083	20.761	25.473	32.814	9.433	7.717	8.703	709.55
6.0000	4.090	9.926	12.500	13.044	14.081	17.714	24.136	29.457	37.659	11.294	9.309	10.441	851.46
7.0000	4.895	11.699	14.575	15.198	16.357	20.431	27.603	33.528	42.593	13.237	10.975	12.257	993.37
8.0000	5.741	13.564	16.733	17.436	18.725	23.243	31.177	37.706	47.636	15.259	12.715	14.148	1135.3
9.0000	6.625	15.515	18.975	19.759	21.182	26.151	34.871	42.009	52.804	17.364	14.527	16.115	1277.2
10.0000	7.547	17.539	21.297	22.164	23.725	29.158	38.681	46.442	58.108	19.549	16.412	18.155	1419.1
11.0000	8.505	19.633	23.695	24.647	26.350	32.262	42.604	51.004	63.559	21.811	18.366	20.266	1561.0
12.0000	9.500	21.798	26.168	27.208	29.056	35.463	46.638	55.693	69.157	24.149	20.389	22.446	1702.9

$^{145}_{61}Pm$ IONS

ENERGY PER MASS UNIT	ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)												ENERGY FOR A=145
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	8.479	7.014	5.139	3.417	2.775	2.518	2.333	2.158	1.372	1.174	1.079	0.925	1.8114
0.0160	9.772	8.084	5.923	3.939	3.198	2.902	2.689	2.487	1.581	1.353	1.244	1.066	2.3186
0.0200	11.110	9.191	6.733	4.478	3.636	3.299	3.057	2.828	1.798	1.539	1.414	1.212	2.8982
0.0250	12.631	10.450	7.655	5.091	4.134	3.751	3.476	3.215	2.044	1.749	1.611	1.378	3.6227
0.0320	14.540	12.052	8.823	5.867	4.773	4.341	4.006	3.706	2.356	2.020	1.862	1.597	4.6371
0.0400	16.491	13.733	10.031	6.691	5.457	4.975	4.584	4.243	2.698	2.322	2.137	1.836	5.7964
0.0500	18.681	15.658	11.404	7.641	6.261	5.702	5.257	4.870	3.091	2.686	2.475	2.127	7.2455
0.0600	20.669	17.490	12.665	8.536	7.016	6.371	5.889	5.459	3.496	3.040	2.805	2.413	8.6946
0.0700	22.488	19.236	13.839	9.383	7.750	7.030	6.504	6.034	3.875	3.391	3.141	2.699	10.144
0.0800	24.179	20.951	14.944	10.206	8.443	7.651	7.068	6.575	4.259	3.736	3.452	2.974	11.593
0.0900	25.761	22.611	15.991	11.002	9.115	8.283	7.628	7.100	4.653	4.070	3.774	3.254	13.042
0.1000	27.268	24.244	16.990	11.774	9.786	8.869	8.155	7.628	5.029	4.400	4.077	3.517	14.491
0.1250	30.712	28.336	19.316	13.598	11.358	10.295	9.465	8.866	5.940	5.196	4.858	4.201	18.114
0.1600	34.929	33.949	22.262	15.939	13.402	12.155	11.153	10.463	7.124	6.256	5.866	5.120	23.186
0.2000	39.180	39.762	25.310	18.400	15.566	14.098	12.933	12.123	8.403	7.416	6.960	6.074	28.982
0.2500	43.825	46.098	28.775	21.265	18.071	16.402	15.021	14.071	9.927	8.776	8.230	7.194	36.227
0.3200	49.481	53.759	33.164	24.973	21.325	19.467	17.743	16.582	11.873	10.546	9.899	8.706	46.371
0.4000	55.219	61.300	37.770	28.781	24.777	22.662	20.660	19.300	14.050	12.502	11.746	10.311	57.964
0.5000	60.734	68.252	42.472	32.831	28.456	26.120	23.784	22.170	16.394	14.610	13.740	12.104	72.455
0.6000	65.481	73.748	46.705	36.570	31.853	29.331	26.622	24.801	18.542	16.580	15.623	13.872	86.946
0.7000	69.165	77.641	50.156	39.623	34.658	31.949	28.940	26.984	20.363	18.206	17.203	15.247	101.44
0.8000	71.956	80.222	52.987	42.231	37.038	34.283	30.997	28.878	21.937	19.711	18.598	16.532	115.93
0.9000	74.244	82.044	55.323	44.369	39.113	36.292	32.751	30.483	23.402	21.023	19.861	17.703	130.42
1.0000	75.982	83.197	57.259	46.322	40.883	37.963	34.298	31.893	24.621	22.159	20.957	18.724	144.91
1.2500	78.842	84.434	60.788	49.846	44.375	41.336	37.263	34.588	27.172	24.498	23.160	20.729	181.14
1.6000	80.576	84.458	63.646	53.144	47.480	44.361	39.970	36.915	29.595	26.795	25.331	22.722	231.86
2.0000	80.766	84.286	65.187	55.213	49.607	46.543	41.720	38.656	31.290	28.552	26.987	24.315	289.82
2.5000	79.712	83.524	65.715	56.449	51.061	47.972	42.912	39.823	32.726	29.769	28.257	25.629	362.27
3.2000	77.487	81.853	65.170	56.698	51.614	48.551	43.533	40.275	33.628	30.760	29.196	26.524	463.71
4.0000	74.594	79.439	63.755	56.041	51.323	48.326	43.545	40.166	33.982	31.113	29.646	26.968	579.64
5.0000	71.082	76.194	61.596	54.574	50.262	47.429	42.748	39.545	33.878	30.921	29.628	27.041	724.55
6.0000	67.930	73.037	59.379	52.966	48.869	46.316	41.803	38.656	33.134	30.580	29.274	26.899	869.46
7.0000	64.925	70.135	57.253	51.298	47.405	45.058	40.764	37.730	32.634	30.000	28.798	26.508	1014.4
8.0000	62.281	67.421	55.263	49.737	46.034	43.768	39.789	36.750	31.942	29.455	28.295	26.084	1159.3
9.0000	59.990	64.905	53.420	48.238	44.712	42.575	38.729	35.845	31.250	28.847	27.725	25.641	1304.2
10.0000	57.819	62.577	51.717	46.907	43.442	41.425	37.702	35.012	30.513	28.289	27.255	25.186	1449.1
11.0000	55.860	60.524	50.144	45.631	42.321	40.366	36.755	34.248	29.886	27.780	26.827	24.721	1594.0
12.0000	54.093	58.573	48.689	44.404	41.239	39.389	35.884	33.498	29.262	27.266	26.292	24.247	1738.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	19.270	8.222	5.447	5.118	4.548	3.001	1.840	1.305	0.861	6.891	8.767	6.691	1.8114
0.0160	21.795	9.192	6.177	5.810	5.165	3.488	2.162	1.540	1.022	7.895	10.045	7.587	2.3186
0.0200	24.106	9.898	6.848	6.451	5.771	4.006	2.498	1.818	1.216	8.902	11.319	8.410	2.8982
0.0250	26.641	10.572	7.594	7.158	6.476	4.647	2.970	2.166	1.569	10.029	12.762	9.324	3.6227
0.0320	30.087	11.417	8.461	8.055	7.358	5.514	3.582	2.700	1.879	11.470	14.629	10.499	4.6371
0.0400	33.604	12.218	9.359	9.008	8.296	6.480	4.293	3.290	2.337	12.990	16.571	11.736	5.7964
0.0500	37.749	13.275	10.481	10.196	9.489	7.652	5.155	4.014	2.908	14.757	18.817	13.252	7.2455
0.0600	42.301	14.476	11.741	11.348	10.727	8.828	6.003	4.724	3.470	16.477	21.037	14.793	8.6946
0.0700	46.914	15.887	13.009	12.635	11.985	9.992	6.809	5.411	3.999	18.185	23.194	16.441	10.144
0.0800	51.854	17.409	14.361	13.957	13.285	11.163	7.651	6.097	4.528	19.905	25.359	18.171	11.593
0.0900	56.767	19.045	15.751	15.351	14.616	12.329	8.475	6.780	5.021	21.620	27.488	19.956	13.042
0.1000	62.182	20.863	17.295	16.752	15.936	13.507	9.327	7.424	5.505	23.327	29.664	21.798	14.491
0.1250	76.683	25.593	21.151	20.378	19.470	16.438	11.319	9.020	6.703	27.699	35.251	26.636	18.114
0.1600	98.620	32.881	26.981	26.002	24.666	20.548	14.092	11.220	8.326	33.994	43.188	34.061	23.186
0.2000	124.271	41.255	33.789	32.447	30.676	24.930	16.958	13.465	9.947	40.850	51.835	42.647	28.982
0.2500	155.961	51.623	41.868	40.314	37.638	29.754	20.114	15.769	11.596	48.745	61.780	53.177	36.227
0.3200	196.995	64.305	52.300	49.912	45.667	34.988	23.348	18.207	13.299	58.435	74.221	66.262	46.371
0.4000	235.684	77.806	61.791	58.732	53.180	39.696	26.250	20.433	14.881	67.721	86.229	78.410	57.964
0.5000	270.969	90.040	69.951	66.553	59.545	43.788	28.881	22.552	16.437	76.152	97.218	89.275	72.455
0.6000	296.580	99.483	75.289	71.553	63.940	46.752	31.012	24.193	17.701	82.295	105.601	96.540	86.946
0.7000	307.955	105.828	77.842	73.980	66.205	48.350	32.350	25.178	18.608	86.017	110.543	99.960	101.44
0.8000	311.033	109.153	78.897	75.241	67.240	49.172	33.276	25.964	19.287	88.170	113.180	101.417	115.93
0.9000	309.809	110.425	79.112	75.405	67.052	49.459	33.747	26.666	19.806	89.347	114.574	101.463	130.42
1.0000	308.625	111.597	79.647	75.582	67.336	49.872	34.355	27.370	20.327	90.068	115.376	101.463	144.91
1.2500	302.116	113.126	80.544	76.897	68.326	51.244	35.986	29.057	21.944	91.000	115.558	101.941	181.14
1.6000	287.679	112.653	81.339	77.775	69.629	53.144	38.124	30.996	23.994	90.695	113.481	101.070	231.86
2.0000	269.873	110.622	82.005	78.094	70.662	54.887	40.090	32.919	25.879	89.958	110.818	99.410	289.82
2.5000	248.403	106.787	81.552	77.609	71.629	56.646	42.058	35.026	27.863	88.452	107.050	96.601	362.27
3.2000	228.094	101.339	80.354	76.705	71.231	57.675	43.859	36.495	29.261	86.220	102.773	93.519	463.71
4.0000	210.392	95.123	77.781	74.594	70.131	57.380	43.991	37.042	29.965	83.264	98.119	89.704	579.64
5.0000	195.875	89.006	74.470	71.698	67.571	55.991	43.548	36.773	30.182	79.705	93.318	85.495	724.55
6.0000	184.670	83.962	71.374	68.643	65.020	54.273	42.397	36.043	29.690	76.243	89.010	81.528	869.46
7.0000	175.766	79.810	68.589	66.127	62.520	52.558	41.336	35.268	29.142	73.226	85.249	78.322	1014.4
8.0000	168.000	75.987	66.039	63.718	60.181	50.787	39.955	34.263	28.460	70.405	81.789	75.324	1159.3
9.0000	160.793	73.078	63.623	61.433	58.120	49.146	38.729	33.280	27.778	67.736	78.580	72.490	1304.2
10.0000	154.633	70.593	61.595	59.474	56.268	47.579	37.598	32.323	27.048	65.370	75.713	70.024	1449.1
11.0000	148.927	68.296	59.721	57.665	54.557	46.132	36.555	31.440	26.326	63.231	73.160	67.795	1594.0
12.0000	143.632	66.168	57.988	55.992	52.973	44.794	35.592	30.625	25.659	61.251	70.745	65.730	1738.9

$^{145}_{61}Pm$ IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=145
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.123	0.121	0.149	0.191	0.200	0.240	0.254	0.277	0.368	0.415	0.438	0.506	1.8114
0.0160	0.155	0.155	0.191	0.246	0.259	0.310	0.328	0.357	0.481	0.545	0.579	0.675	2.3186
0.0200	0.190	0.192	0.238	0.308	0.325	0.388	0.410	0.447	0.605	0.687	0.732	0.857	2.8982
0.0250	0.232	0.237	0.295	0.384	0.408	0.486	0.513	0.558	0.758	0.861	0.918	1.075	3.6227
0.0320	0.288	0.298	0.372	0.490	0.524	0.621	0.654	0.710	0.970	1.101	1.174	1.372	4.6371
0.0400	0.347	0.363	0.457	0.606	0.654	0.770	0.811	0.879	1.208	1.371	1.461	1.704	5.7964
0.0500	0.415	0.439	0.557	0.746	0.811	0.950	1.000	1.082	1.498	1.698	1.810	2.107	7.2455
0.0600	0.478	0.510	0.651	0.878	0.962	1.121	1.181	1.275	1.777	2.013	2.146	2.493	8.6946
0.0700	0.538	0.577	0.740	1.004	1.105	1.284	1.353	1.460	2.045	2.315	2.468	2.864	10.144
0.0800	0.594	0.640	0.825	1.123	1.242	1.438	1.517	1.636	2.301	2.602	2.775	3.217	11.593
0.0900	0.646	0.698	0.905	1.236	1.373	1.586	1.674	1.803	2.545	2.877	3.068	3.555	13.042
0.1000	0.697	0.754	0.982	1.344	1.498	1.726	1.824	1.964	2.778	3.140	3.349	3.877	14.491
0.1250	0.814	0.881	1.161	1.594	1.788	2.051	2.173	2.335	3.316	3.748	3.997	4.622	18.114
0.1600	0.961	1.034	1.385	1.905	2.150	2.456	2.608	2.798	3.983	4.502	4.798	5.539	23.186
0.2000	1.112	1.184	1.615	2.218	2.516	2.862	3.047	3.265	4.651	5.256	5.598	6.452	28.982
0.2500	1.281	1.348	1.870	2.564	2.918	3.309	3.531	3.781	5.379	6.076	6.470	7.447	36.227
0.3200	1.494	1.547	2.187	2.986	3.409	3.851	4.121	4.411	6.257	7.063	7.519	8.642	46.371
0.4000	1.712	1.745	2.506	3.406	3.894	4.384	4.704	5.034	7.114	8.025	8.542	9.804	57.964
0.5000	1.958	1.965	2.860	3.865	4.424	4.964	5.338	5.713	8.036	9.059	9.640	11.052	72.455
0.6000	2.186	2.167	3.180	4.276	4.894	5.478	5.901	6.317	8.846	9.965	10.602	12.139	86.946
0.7000	2.401	2.358	3.475	4.651	5.323	5.944	6.415	6.867	9.577	10.782	11.467	13.113	101.44
0.8000	2.606	2.541	3.756	5.005	5.727	6.381	6.898	7.386	10.262	11.546	12.263	14.010	115.93
0.9000	2.804	2.720	4.024	5.340	6.108	6.792	7.352	7.874	10.901	12.258	13.017	14.856	130.42
1.0000	2.997	2.895	4.281	5.659	6.470	7.182	7.785	8.339	11.505	12.929	13.726	15.652	144.91
1.2500	3.464	3.326	4.894	6.411	7.318	8.094	8.796	9.427	12.902	14.480	15.367	17.486	181.14
1.6000	4.098	3.925	5.707	7.394	8.421	9.276	10.106	10.843	14.686	16.455	17.456	19.817	231.86
2.0000	4.815	4.611	6.605	8.463	9.613	10.549	11.523	12.374	16.588	18.547	19.669	22.279	289.82
2.5000	5.717	5.473	7.711	9.759	11.050	12.080	13.233	14.218	18.849	21.028	22.289	25.177	362.27
3.2000	7.006	6.698	9.259	11.549	13.024	14.179	15.577	16.748	21.902	24.376	25.816	29.063	463.71
4.0000	8.530	8.135	11.056	13.604	15.275	16.571	18.238	19.628	25.329	28.120	29.753	33.394	579.64
5.0000	10.520	9.997	13.368	16.224	18.127	19.597	21.595	23.263	29.598	32.790	34.640	38.757	724.55
6.0000	12.605	11.940	15.764	18.919	21.051	22.688	25.023	26.969	33.923	37.502	39.560	44.130	869.46
7.0000	14.787	13.965	18.249	21.699	24.062	25.861	28.534	30.764	38.330	42.287	44.551	49.557	1014.4
8.0000	17.067	16.072	20.826	24.569	27.164	29.124	32.133	34.656	42.819	47.162	49.628	55.068	1159.3
9.0000	19.438	18.263	23.494	27.528	30.359	32.482	35.825	38.649	47.406	52.134	54.803	60.672	1304.2
10.0000	21.899	20.538	26.251	30.575	33.647	35.933	39.617	42.740	52.099	57.207	60.075	66.375	1449.1
11.0000	24.449	22.893	29.097	33.707	37.027	39.477	43.511	46.926	56.899	62.377	65.435	72.183	1594.0
12.0000	27.086	25.327	32.030	36.927	40.496	43.112	47.501	51.204	61.800	67.643	70.892	78.103	1738.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.047	0.110	0.132	0.136	0.143	0.192	0.270	0.354	0.460	0.116	0.097	0.108	1.8114
0.0160	0.060	0.140	0.170	0.175	0.185	0.249	0.349	0.460	0.616	0.148	0.123	0.139	2.3186
0.0200	0.073	0.174	0.213	0.220	0.232	0.313	0.439	0.578	0.782	0.184	0.153	0.174	2.8982
0.0250	0.090	0.217	0.267	0.276	0.292	0.394	0.551	0.724	0.979	0.229	0.189	0.218	3.6227
0.0320	0.113	0.278	0.343	0.354	0.376	0.504	0.705	0.921	1.239	0.290	0.238	0.280	4.6371
0.0400	0.137	0.346	0.428	0.442	0.469	0.624	0.873	1.135	1.521	0.356	0.291	0.348	5.7964
0.0500	0.167	0.431	0.531	0.548	0.581	0.766	1.071	1.384	1.848	0.435	0.354	0.431	7.2455
0.0600	0.195	0.513	0.629	0.648	0.687	0.897	1.254	1.613	2.146	0.508	0.412	0.509	8.6946
0.0700	0.221	0.591	0.722	0.743	0.787	1.018	1.424	1.824	2.420	0.578	0.467	0.583	10.144
0.0800	0.245	0.664	0.809	0.833	0.880	1.130	1.582	2.020	2.674	0.642	0.519	0.652	11.593
0.0900	0.268	0.733	0.890	0.916	0.967	1.234	1.729	2.201	2.911	0.703	0.567	0.717	13.042
0.1000	0.289	0.797	0.966	0.994	1.049	1.331	1.866	2.371	3.133	0.760	0.612	0.777	14.491
0.1250	0.336	0.939	1.135	1.168	1.231	1.548	2.172	2.752	3.633	0.890	0.714	0.911	18.114
0.1600	0.390	1.103	1.331	1.371	1.443	1.802	2.535	3.204	4.230	1.044	0.836	1.067	23.186
0.2000	0.440	1.253	1.513	1.560	1.642	2.044	2.884	3.641	4.810	1.192	0.953	1.211	28.982
0.2500	0.490	1.405	1.698	1.752	1.847	2.299	3.257	4.110	5.440	1.349	1.077	1.358	36.227
0.3200	0.546	1.577	1.910	1.972	2.084	2.604	3.707	4.684	6.215	1.534	1.223	1.524	46.371
0.4000	0.599	1.738	2.110	2.182	2.314	2.908	4.162	5.266	7.006	1.715	1.365	1.682	57.964
0.5000	0.655	1.911	2.326	2.410	2.567	3.249	4.676	5.923	7.903	1.913	1.521	1.853	72.455
0.6000	0.706	2.064	2.526	2.620	2.802	3.564	5.151	6.531	8.732	2.096	1.664	2.008	86.946
0.7000	0.754	2.205	2.715	2.819	3.024	3.868	5.608	7.108	9.514	2.268	1.798	2.156	101.44
0.8000	0.801	2.339	2.899	3.013	3.241	4.165	6.049	7.674	10.278	2.434	1.927	2.299	115.93
0.9000	0.848	2.471	3.083	3.205	3.456	4.459	6.481	8.225	11.019	2.597	2.054	2.442	130.42
1.0000	0.895	2.602	3.265	3.397	3.672	4.750	6.906	8.761	11.741	2.759	2.180	2.585	144.91
1.2500	1.013	2.923	3.716	3.871	4.205	5.465	7.934	10.042	13.452	3.158	2.493	2.940	181.14
1.6000	1.184	3.371	4.341	4.525	4.938	6.434	9.300	11.728	15.657	3.714	2.935	3.438	231.86
2.0000	1.392	3.889	5.049	5.267	5.763	7.506	10.780	13.539	17.979	4.355	3.451	4.015	289.82
2.5000	1.671	4.555	5.934	6.196	6.780	8.803	12.542	15.670	20.673	5.166	4.115	4.754	362.27
3.2000	2.097	5.529	7.186	7.509	8.198	10.576	14.900	18.503	24.220	6.326	5.081	5.820	463.71
4.0000	2.626	6.709	8.651	9.041	9.837	12.589	17.538	21.654	28.132	7.693	6.234	7.084	579.64
5.0000	3.339	8.283	10.554	11.022	11.942	15.145	20.847	25.578	32.948	9.472	7.748	8.739	724.55
6.0000	4.101	9.960	12.542	13.087	14.128	17.774	24.219	29.559	37.788	11.331	9.338	10.474	869.46
7.0000	4.906	11.730	14.614	15.239	16.401	20.487	27.681	33.623	42.715	13.270	11.002	12.288	1014.4
8.0000	5.749	13.591	16.767	17.471	18.764	23.293	31.247	37.793	47.748	15.289	12.738	14.175	1159.3
9.0000	6.631	15.536	19.003	19.788	21.214	26.194	34.932	42.085	52.902	17.388	14.546	16.137	1304.2
10.0000	7.550	17.554	21.318	22.186	23.749	29.191	38.730	46.504	58.189	19.566	16.425	18.171	1449.1
11.0000	8.505	19.641	23.708	24.661	26.365	32.284	42.639	51.050	63.621	21.820	18.372	20.274	1594.0
12.0000	9.496	21.797	26.171	27.211	29.061	35.473	46.657	55.721	69.197	24.149	20.387	22.445	1738.9

$^{152}_{62}Sm$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=152 MEV
0.0125	8.548	7.072	5.181	3.445	2.798	2.539	2.352	2.176	1.383	1.184	1.088	0.933	1.8990
0.0160	9.855	8.153	5.973	3.972	3.225	2.927	2.712	2.509	1.595	1.365	1.254	1.075	2.4307
0.0200	11.207	9.271	6.792	4.517	3.668	3.328	3.084	2.853	1.813	1.552	1.426	1.223	3.0384
0.0250	12.744	10.543	7.724	5.136	4.171	3.785	3.507	3.244	2.062	1.765	1.626	1.390	3.7980
0.0320	14.675	12.164	8.904	5.921	4.817	4.381	4.043	3.740	2.377	2.039	1.879	1.612	4.8614
0.0400	16.647	13.863	10.126	6.754	5.509	5.023	4.628	4.283	2.724	2.344	2.157	1.853	6.0768
0.0500	18.862	15.811	11.515	7.715	6.322	5.758	5.309	4.917	3.121	2.712	2.499	2.148	7.5960
0.0600	20.875	17.664	12.791	8.621	7.086	6.434	5.948	5.513	3.530	3.070	2.833	2.437	9.1152
0.0700	22.716	19.431	13.979	9.478	7.828	7.101	6.570	6.095	3.914	3.425	3.173	2.726	10.634
0.0800	24.427	21.166	15.097	10.311	8.530	7.730	7.141	6.643	4.303	3.774	3.487	3.004	12.154
0.0900	26.029	22.846	16.157	11.116	9.209	8.369	7.707	7.174	4.702	4.112	3.813	3.288	13.673
0.1000	27.555	24.499	17.168	11.898	9.889	8.962	8.241	7.708	5.082	4.447	4.120	3.554	15.192
0.1250	31.042	28.641	19.524	13.745	11.480	10.406	9.567	8.961	6.003	5.252	4.910	4.246	18.990
0.1600	35.314	34.324	22.508	16.115	13.550	12.289	11.276	10.579	7.202	6.325	5.931	5.177	24.307
0.2000	39.622	40.211	25.596	18.608	15.741	14.257	13.079	12.260	8.498	7.500	7.039	6.143	30.384
0.2500	44.330	46.630	29.107	21.510	18.279	16.591	15.194	14.233	10.042	8.878	8.325	7.277	37.980
0.3200	50.066	54.394	33.556	25.268	21.577	19.697	17.953	16.778	12.013	10.671	10.017	8.808	48.614
0.4000	55.790	61.934	38.160	29.078	25.033	22.896	20.873	19.500	14.195	12.631	11.868	10.418	60.768
0.5000	61.411	69.013	42.945	33.197	28.773	26.411	24.049	22.417	16.577	14.773	13.893	12.239	75.960
0.6000	66.265	74.631	47.264	37.008	32.234	29.682	26.941	25.097	18.764	16.779	15.810	14.038	91.152
0.7000	70.037	78.621	50.789	40.123	35.095	32.352	29.305	27.324	20.620	18.436	17.420	15.440	106.34
0.8000	72.906	81.281	53.687	42.788	37.527	34.735	31.407	29.259	22.226	19.971	18.844	16.750	121.54
0.9000	75.263	83.171	56.083	44.978	39.651	36.790	33.201	30.902	23.723	21.311	20.134	17.946	136.73
1.0000	77.062	84.379	58.072	46.981	41.464	38.502	34.785	32.346	24.971	22.474	21.255	18.990	151.92
1.2500	80.043	85.721	61.714	50.606	45.051	41.966	37.831	35.115	27.586	24.871	23.513	21.045	189.90
1.6000	81.895	85.841	64.688	54.014	48.257	45.087	40.624	37.519	30.080	27.234	25.746	23.094	243.07
2.0000	82.171	85.752	66.320	56.173	50.470	47.353	42.445	39.328	31.834	29.048	27.457	24.737	303.84
2.5000	81.178	85.059	66.923	57.487	51.999	48.854	43.701	40.555	33.328	30.316	28.777	26.100	379.80
3.2000	78.994	83.446	66.438	57.801	52.619	49.496	44.380	41.058	34.282	31.359	29.764	27.040	486.14
4.0000	76.115	81.060	65.056	57.184	52.370	49.312	44.433	40.985	34.675	31.747	30.251	27.519	607.68
5.0000	72.598	77.819	62.910	55.738	51.334	48.441	43.659	40.388	34.600	31.581	30.260	27.617	759.60
6.0000	69.430	74.649	60.690	54.136	49.948	47.338	42.726	39.509	33.865	31.255	29.920	27.493	911.52
7.0000	66.399	71.727	58.552	52.463	48.481	46.081	41.689	38.586	33.375	30.682	29.452	27.110	1063.4
8.0000	63.729	68.988	56.548	50.893	47.104	44.786	40.714	37.604	32.684	30.140	28.952	26.690	1215.4
9.0000	61.413	66.444	54.687	49.382	45.773	43.585	39.648	36.695	31.992	29.531	28.382	26.250	1367.3
10.0000	59.215	64.088	52.965	48.040	44.491	42.425	38.612	35.858	31.250	28.972	27.913	25.794	1519.2
11.0000	57.230	62.008	51.374	46.750	43.359	41.356	37.657	35.088	30.619	28.461	27.485	25.327	1671.1
12.0000	55.439	60.030	49.900	45.509	42.265	40.369	36.776	34.331	29.990	27.944	26.946	24.850	1823.0

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	19.428	8.289	5.492	5.160	4.585	3.026	1.855	1.316	0.868	6.947	8.838	6.745	1.8990
0.0160	21.979	9.270	6.229	5.859	5.208	3.518	2.180	1.553	1.031	7.962	10.130	7.651	2.4307
0.0200	24.316	9.984	6.908	6.507	5.821	4.041	2.520	1.834	1.227	8.979	11.417	8.483	3.0384
0.0250	26.879	10.667	7.662	7.222	6.534	4.688	2.997	2.186	1.583	10.118	12.876	9.408	3.7980
0.0320	30.364	11.522	8.539	8.130	7.426	5.565	3.615	2.725	1.897	11.576	14.764	10.596	4.8614
0.0400	33.923	12.334	9.448	9.093	8.374	6.541	4.334	3.321	2.359	13.113	16.728	11.848	6.0768
0.0500	38.116	13.404	10.583	10.295	9.581	7.727	5.205	4.053	2.936	14.901	19.000	13.381	7.5960
0.0600	42.722	14.620	11.857	11.461	10.834	8.915	6.063	4.771	3.505	16.641	21.246	14.940	9.1152
0.0700	47.389	16.048	13.140	12.763	12.106	10.093	6.878	5.466	4.040	18.368	23.429	16.607	10.634
0.0800	52.386	17.588	14.508	14.100	13.421	11.277	7.730	6.160	4.574	20.109	25.619	18.358	12.154
0.0900	57.357	19.243	15.915	15.511	14.767	12.457	8.563	6.851	5.073	21.844	27.774	20.164	13.673
0.1000	62.835	21.082	17.477	16.928	16.104	13.649	9.425	7.502	5.562	23.572	29.976	22.027	15.192
0.1250	77.508	25.869	21.378	20.597	19.680	16.615	11.441	9.117	6.775	27.997	35.630	26.923	18.990
0.1600	99.709	33.244	27.279	26.289	24.938	20.775	14.247	11.344	8.418	34.369	43.665	34.437	24.307
0.2000	125.674	41.721	34.170	32.814	31.022	25.212	17.149	13.617	10.059	41.311	52.420	43.129	30.384
0.2500	157.761	52.218	42.351	40.779	38.072	30.097	20.346	15.951	11.730	49.308	62.493	53.790	37.980
0.3200	199.323	65.065	52.918	50.502	46.207	35.402	23.624	18.422	13.456	59.126	75.099	67.045	48.614
0.4000	238.118	78.609	62.430	59.339	53.729	40.106	26.521	20.645	15.035	68.421	87.119	79.220	60.768
0.5000	273.990	91.044	70.731	67.295	60.209	44.276	29.203	22.804	16.620	77.001	98.301	90.271	75.960
0.6000	300.129	100.673	76.190	72.409	64.705	47.312	31.384	24.483	17.913	83.280	106.865	97.696	91.152
0.7000	311.842	107.164	78.824	74.913	67.041	48.960	32.759	25.496	18.843	87.102	111.938	101.222	106.34
0.8000	315.140	110.594	79.939	76.235	68.128	49.821	33.715	26.306	19.542	89.334	114.674	102.756	121.54
0.9000	314.064	111.941	80.198	76.441	67.972	50.138	34.210	27.032	20.078	90.574	116.147	102.856	136.73
1.0000	313.011	113.183	80.779	76.656	68.293	50.581	34.843	27.759	20.616	91.348	117.016	102.904	151.92
1.2500	306.719	114.850	81.771	78.068	69.367	52.025	36.535	29.499	22.279	92.386	117.319	103.495	189.90
1.6000	292.389	114.498	82.671	79.049	70.769	54.014	38.748	31.503	24.387	92.180	115.339	102.724	243.07
2.0000	274.565	112.545	83.431	79.452	71.891	55.842	40.787	33.492	26.329	91.522	112.744	101.138	303.84
2.5000	252.969	108.750	83.051	79.036	72.946	57.688	42.831	35.670	28.375	90.078	109.018	98.377	379.80
3.2000	232.531	103.310	81.918	78.197	72.616	58.797	44.712	37.205	29.830	87.897	104.772	95.338	486.14
4.0000	214.684	97.063	79.368	76.115	71.561	58.550	44.889	37.797	30.576	84.963	100.121	91.534	607.68
5.0000	200.053	90.905	76.058	73.227	69.012	57.185	44.477	37.557	30.826	81.405	95.308	87.319	759.60
6.0000	188.747	85.816	72.950	70.158	66.456	55.471	43.333	36.839	30.345	77.926	90.975	83.328	911.52
7.0000	179.756	81.622	70.146	67.628	63.939	53.751	42.275	36.068	29.803	74.889	87.185	80.100	1063.4
8.0000	171.904	77.753	67.574	65.199	61.580	51.967	40.884	35.059	29.122	72.042	83.690	77.074	1215.4
9.0000	164.607	74.811	65.132	62.890	59.499	50.312	39.648	34.070	28.437	69.343	80.444	74.210	1367.3
10.0000	158.366	72.298	63.082	60.910	57.626	48.728	38.506	33.103	27.701	66.948	77.541	71.715	1519.2
11.0000	152.580	69.971	61.186	59.080	55.895	47.264	37.451	32.211	26.971	64.782	74.954	69.457	1671.1
12.0000	147.206	67.814	59.431	57.385	54.291	45.908	36.477	31.387	26.297	62.774	72.505	67.365	1823.0

$^{152}_{62}Sm$ IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=152
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.127	0.125	0.153	0.196	0.205	0.246	0.259	0.282	0.375	0.421	0.445	0.513	1.8990
0.0160	0.160	0.160	0.196	0.252	0.265	0.317	0.335	0.365	0.489	0.553	0.588	0.684	2.4307
0.0200	0.197	0.198	0.245	0.316	0.333	0.398	0.420	0.457	0.616	0.698	0.743	0.868	3.0384
0.0250	0.240	0.245	0.304	0.395	0.419	0.498	0.524	0.570	0.772	0.876	0.933	1.090	3.7980
0.0320	0.298	0.307	0.384	0.503	0.538	0.636	0.669	0.726	0.989	1.121	1.194	1.394	4.8614
0.0400	0.359	0.375	0.471	0.624	0.672	0.790	0.831	0.900	1.233	1.397	1.488	1.733	6.0768
0.0500	0.429	0.454	0.574	0.768	0.834	0.976	1.026	1.109	1.531	1.733	1.846	2.146	7.5960
0.0600	0.495	0.528	0.672	0.904	0.989	1.152	1.213	1.309	1.819	2.057	2.191	2.543	9.1152
0.0700	0.556	0.597	0.764	1.034	1.137	1.320	1.390	1.499	2.094	2.368	2.522	2.924	10.634
0.0800	0.614	0.661	0.851	1.157	1.279	1.480	1.560	1.681	2.359	2.664	2.839	3.288	12.154
0.0900	0.669	0.722	0.935	1.274	1.414	1.633	1.722	1.854	2.610	2.948	3.142	3.636	13.673
0.1000	0.721	0.780	1.014	1.386	1.543	1.778	1.877	2.019	2.851	3.219	3.431	3.968	15.192
0.1250	0.843	0.911	1.199	1.645	1.843	2.114	2.238	2.403	3.407	3.847	4.100	4.737	18.990
0.1600	0.995	1.070	1.432	1.967	2.218	2.533	2.688	2.882	4.096	4.626	4.928	5.685	24.307
0.2000	1.151	1.226	1.669	2.291	2.596	2.954	3.142	3.366	4.787	5.406	5.755	6.629	30.384
0.2500	1.327	1.395	1.934	2.650	3.013	3.416	3.644	3.900	5.540	6.255	6.657	7.658	37.980
0.3200	1.547	1.601	2.262	3.087	3.521	3.977	4.254	4.552	6.449	7.276	7.743	8.894	48.614
0.4000	1.773	1.806	2.593	3.521	4.024	4.530	4.858	5.198	7.338	8.273	8.803	10.099	60.768
0.5000	2.029	2.035	2.960	3.998	4.573	5.132	5.516	5.902	8.293	9.345	9.942	11.392	75.960
0.6000	2.264	2.244	3.292	4.424	5.061	5.663	6.100	6.528	9.132	10.284	10.938	12.518	91.152
0.7000	2.487	2.442	3.598	4.812	5.505	6.146	6.631	7.098	9.889	11.129	11.833	13.526	106.34
0.8000	2.699	2.632	3.888	5.178	5.923	6.599	7.131	7.634	10.598	11.907	12.657	14.454	121.54
0.9000	2.904	2.816	4.165	5.524	6.316	7.023	7.601	8.139	11.259	12.643	13.436	15.329	136.73
1.0000	3.104	2.997	4.431	5.855	6.691	7.427	8.048	8.619	11.883	13.337	14.170	16.152	151.92
1.2500	3.586	3.443	5.064	6.632	7.567	8.370	9.093	9.744	13.327	14.939	15.865	18.047	189.90
1.6000	4.241	4.061	5.903	7.646	8.705	9.589	10.446	11.205	15.168	16.977	18.021	20.453	243.07
2.0000	4.980	4.768	6.829	8.748	9.934	10.902	11.906	12.784	17.128	19.134	20.303	22.991	303.84
2.5000	5.909	5.656	7.968	10.082	11.415	12.479	13.668	14.683	19.457	21.690	23.001	25.976	379.80
3.2000	7.235	6.917	9.561	11.925	13.445	14.638	16.079	17.286	22.599	25.134	26.630	29.974	486.14
4.0000	8.802	8.393	11.408	14.037	15.759	17.097	18.814	20.247	26.121	28.983	30.677	34.425	607.68
5.0000	10.845	10.306	13.782	16.727	18.688	20.204	22.262	23.979	30.505	33.779	35.696	39.934	759.60
6.0000	12.985	12.299	16.241	19.493	21.688	23.376	25.779	27.782	34.943	38.614	40.744	45.446	911.52
7.0000	15.222	14.375	18.789	22.344	24.775	26.629	29.379	31.673	39.462	43.520	45.862	51.011	1063.4
8.0000	17.558	16.535	21.430	25.284	27.955	29.974	33.067	35.662	44.062	48.516	51.065	56.659	1215.4
9.0000	19.987	18.780	24.162	28.315	31.227	33.413	36.849	39.752	48.761	53.609	56.365	62.399	1367.3
10.0000	22.507	21.108	26.986	31.435	34.594	36.946	40.732	43.941	53.567	58.804	61.763	68.238	1519.2
11.0000	25.117	23.518	29.898	34.641	38.053	40.574	44.717	48.224	58.478	64.095	67.249	74.183	1671.1
12.0000	27.814	26.009	32.899	37.935	41.603	44.292	48.800	52.602	63.493	69.482	72.832	80.239	1823.0

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.049	0.113	0.136	0.140	0.147	0.198	0.276	0.360	0.467	0.119	0.100	0.112	1.8990
0.0160	0.062	0.144	0.175	0.180	0.190	0.255	0.357	0.469	0.625	0.153	0.128	0.143	2.4307
0.0200	0.076	0.180	0.220	0.226	0.239	0.322	0.449	0.589	0.794	0.190	0.158	0.180	3.0384
0.0250	0.093	0.224	0.276	0.284	0.301	0.404	0.564	0.738	0.994	0.236	0.196	0.225	3.7980
0.0320	0.116	0.287	0.353	0.365	0.387	0.518	0.722	0.940	1.260	0.299	0.246	0.289	4.8614
0.0400	0.142	0.358	0.441	0.456	0.483	0.642	0.895	1.160	1.549	0.368	0.301	0.360	6.0768
0.0500	0.173	0.446	0.548	0.565	0.599	0.788	1.099	1.416	1.884	0.449	0.366	0.445	7.5960
0.0600	0.201	0.530	0.650	0.669	0.709	0.924	1.288	1.652	2.190	0.525	0.427	0.526	9.1152
0.0700	0.228	0.611	0.745	0.768	0.812	1.049	1.463	1.870	2.473	0.597	0.483	0.602	10.634
0.0800	0.253	0.687	0.835	0.860	0.908	1.165	1.627	2.072	2.735	0.664	0.536	0.674	12.154
0.0900	0.277	0.758	0.920	0.946	0.999	1.273	1.778	2.260	2.979	0.727	0.586	0.741	13.673
0.1000	0.299	0.825	0.998	1.027	1.083	1.373	1.920	2.435	3.208	0.786	0.633	0.803	15.192
0.1250	0.348	0.972	1.173	1.207	1.272	1.597	2.237	2.829	3.725	0.920	0.739	0.942	18.990
0.1600	0.404	1.141	1.376	1.417	1.492	1.860	2.613	3.297	4.343	1.080	0.865	1.103	24.307
0.2000	0.455	1.296	1.565	1.613	1.697	2.111	2.974	3.749	4.943	1.233	0.986	1.253	30.384
0.2500	0.507	1.454	1.757	1.812	1.909	2.375	3.360	4.235	5.595	1.396	1.115	1.405	37.980
0.3200	0.566	1.632	1.975	2.040	2.155	2.691	3.826	4.829	6.397	1.588	1.266	1.577	48.614
0.4000	0.620	1.800	2.183	2.258	2.394	3.006	4.298	5.432	7.217	1.775	1.414	1.741	60.768
0.5000	0.679	1.977	2.408	2.494	2.656	3.360	4.830	6.114	8.147	1.981	1.575	1.918	75.960
0.6000	0.732	2.135	2.614	2.711	2.896	3.687	5.323	6.743	9.005	2.170	1.723	2.079	91.152
0.7000	0.781	2.281	2.810	2.917	3.127	4.002	5.796	7.341	9.815	2.348	1.862	2.232	106.34
0.8000	0.830	2.420	3.001	3.118	3.351	4.309	6.253	7.927	10.606	2.520	1.996	2.380	121.54
0.9000	0.878	2.557	3.191	3.317	3.574	4.613	6.699	8.496	11.372	2.689	2.127	2.528	136.73
1.0000	0.926	2.692	3.379	3.515	3.797	4.914	7.139	9.051	12.118	2.856	2.258	2.676	151.92
1.2500	1.049	3.024	3.845	4.005	4.347	5.653	8.201	10.375	13.886	3.268	2.581	3.043	189.90
1.6000	1.226	3.486	4.490	4.680	5.104	6.653	9.611	12.114	16.162	3.843	3.036	3.557	243.07
2.0000	1.440	4.021	5.220	5.445	5.954	7.757	11.136	13.982	18.556	4.503	3.568	4.152	303.84
2.5000	1.727	4.706	6.132	6.402	7.002	9.094	12.951	16.176	21.330	5.339	4.252	4.912	379.80
3.2000	2.165	5.708	7.419	7.753	8.461	10.917	15.378	19.091	24.980	6.532	5.246	6.009	486.14
4.0000	2.709	6.921	8.926	9.328	10.146	12.987	18.089	22.330	29.001	7.938	6.432	7.309	607.68
5.0000	3.441	8.538	10.880	11.362	12.307	15.612	21.487	26.360	33.947	9.764	7.987	9.008	759.60
6.0000	4.223	10.258	12.920	13.481	14.550	18.309	24.948	30.444	38.914	11.671	9.618	10.789	911.52
7.0000	5.048	12.073	15.044	15.687	16.881	21.092	28.497	34.612	43.966	13.660	11.324	12.649	1063.4
8.0000	5.913	13.981	17.251	17.975	19.303	23.966	32.152	38.885	49.123	15.729	13.103	14.582	1215.4
9.0000	6.816	15.973	19.541	20.348	21.813	26.938	35.926	43.281	54.403	17.879	14.955	16.592	1367.3
10.0000	7.757	18.039	21.912	22.803	24.408	30.007	39.815	47.806	59.817	20.109	16.879	18.674	1519.2
11.0000	8.734	20.175	24.357	25.336	27.085	33.173	43.816	52.459	65.375	22.416	18.872	20.827	1671.1
12.0000	9.748	22.381	26.877	27.946	29.843	36.435	47.927	57.237	71.080	24.799	20.933	23.049	1823.0

$^{153}_{63}$Eu IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=153 MEV
0.0125	8.602	7.116	5.213	3.467	2.815	2.554	2.367	2.190	1.392	1.191	1.095	0.938	1.9115
0.0160	9.919	8.206	6.012	3.998	3.246	2.946	2.729	2.525	1.605	1.374	1.262	1.082	2.4467
0.0200	11.283	9.334	6.838	4.547	3.693	3.351	3.104	2.872	1.826	1.562	1.436	1.231	3.0584
0.0250	12.834	10.617	7.778	5.172	4.200	3.811	3.531	3.267	2.077	1.777	1.637	1.400	3.8230
0.0320	14.782	12.252	8.969	5.965	4.852	4.413	4.072	3.767	2.395	2.054	1.893	1.623	4.8934
0.0400	16.773	13.967	10.202	6.805	5.550	5.060	4.663	4.316	2.744	2.362	2.173	1.867	6.1168
0.0500	19.009	15.934	11.605	7.775	6.371	5.803	5.350	4.955	3.145	2.733	2.518	2.164	7.6460
0.0600	21.042	17.805	12.893	8.690	7.143	6.485	5.995	5.557	3.558	3.094	2.856	2.456	9.1752
0.0700	22.901	19.589	14.093	9.555	7.892	7.159	6.624	6.145	3.946	3.453	3.199	2.748	10.704
0.0800	24.630	21.342	15.222	10.397	8.601	7.794	7.200	6.698	4.338	3.806	3.516	3.029	12.234
0.0900	26.248	23.039	16.293	11.210	9.287	8.440	7.772	7.234	4.741	4.147	3.845	3.316	13.763
0.1000	27.791	24.708	17.315	11.999	9.973	9.038	8.311	7.774	5.125	4.485	4.156	3.584	15.292
0.1250	31.316	28.893	19.695	13.866	11.581	10.498	9.651	9.040	6.056	5.298	4.953	4.284	19.115
0.1600	35.635	34.636	22.712	16.262	13.673	12.401	11.379	10.675	7.268	6.382	5.985	5.224	24.467
0.2000	39.991	40.585	25.834	18.781	15.888	14.390	13.201	12.375	8.577	7.569	7.104	6.200	30.584
0.2500	44.755	47.076	29.386	21.716	18.454	16.750	15.339	14.370	10.138	8.963	8.404	7.346	38.230
0.3200	50.558	54.930	33.886	25.516	21.789	19.891	18.129	16.943	12.131	10.776	10.115	8.895	48.934
0.4000	56.353	62.558	38.545	29.371	25.285	23.127	21.084	19.696	14.339	12.758	11.987	10.523	61.168
0.5000	62.094	69.779	43.422	33.565	29.093	26.705	24.316	22.666	16.761	14.937	14.047	12.375	76.460
0.6000	67.041	75.505	47.818	37.442	32.612	30.030	27.256	25.391	18.984	16.975	15.995	14.202	91.752
0.7000	70.902	79.591	51.416	40.618	35.528	32.752	29.667	27.662	20.875	18.664	17.636	15.630	107.04
0.8000	73.848	82.332	54.380	43.341	38.012	35.184	31.812	29.637	22.513	20.229	19.087	16.967	122.34
0.9000	76.275	84.289	56.837	45.583	40.184	37.285	33.647	31.317	24.042	21.598	20.404	18.188	137.63
1.0000	78.135	85.554	58.881	47.635	42.041	39.038	35.270	32.797	25.319	22.787	21.550	19.254	152.92
1.2500	81.240	87.002	62.637	51.362	45.725	42.593	38.396	35.640	27.999	25.243	23.865	21.359	191.15
1.6000	83.213	87.222	65.729	54.884	49.034	45.813	41.278	38.123	30.564	27.672	26.160	23.465	244.67
2.0000	83.577	87.219	67.455	57.134	51.333	48.163	43.171	40.001	32.378	29.545	27.926	25.161	305.84
2.5000	82.647	86.599	68.135	58.528	52.941	49.738	44.492	41.290	33.931	30.865	29.298	26.572	382.30
3.2000	80.509	85.045	67.711	58.909	53.627	50.445	45.231	41.846	34.939	31.960	30.335	27.559	489.34
4.0000	77.646	82.690	66.364	58.334	53.423	50.304	45.327	41.809	35.372	32.386	30.859	28.072	611.68
5.0000	74.124	79.455	64.232	56.910	52.414	49.459	44.577	41.237	35.328	32.245	30.896	28.198	764.60
6.0000	70.940	76.273	62.011	55.314	51.035	48.368	43.656	40.369	34.602	31.936	30.571	28.091	917.52
7.0000	67.884	73.331	59.862	53.637	49.566	47.112	42.622	39.449	34.122	31.368	30.111	27.716	1070.4
8.0000	65.188	70.568	57.842	52.058	48.183	45.811	41.647	38.465	33.433	30.830	29.615	27.302	1223.4
9.0000	62.848	67.997	55.964	50.536	46.842	44.604	40.574	37.552	32.739	30.221	29.046	26.863	1376.3
10.0000	60.623	65.612	54.225	49.182	45.549	43.434	39.530	36.710	31.993	29.661	28.577	26.408	1529.2
11.0000	58.613	63.506	52.615	47.880	44.407	42.355	38.567	35.936	31.358	29.149	28.149	25.939	1682.1
12.0000	56.798	61.501	51.123	46.624	43.301	41.358	37.678	35.173	30.725	28.629	27.606	25.459	1835.0

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	19.549	8.341	5.526	5.192	4.614	3.045	1.866	1.324	0.874	6.991	8.894	6.788	1.9115
0.0160	22.123	9.330	6.270	5.897	5.242	3.541	2.194	1.563	1.038	8.013	10.196	7.701	2.4467
0.0200	24.480	10.052	6.954	6.551	5.860	4.069	2.537	1.846	1.235	9.040	11.495	8.541	3.0584
0.0250	27.068	10.742	7.716	7.273	6.580	4.721	3.018	2.201	1.595	10.189	12.966	9.474	3.8230
0.0320	30.586	11.606	8.602	8.189	7.480	5.606	3.642	2.745	1.910	11.660	14.871	10.674	4.8934
0.0400	34.178	12.427	9.519	9.162	8.437	6.591	4.367	3.346	2.377	13.212	16.855	11.937	6.1168
0.0500	38.413	13.508	10.665	10.375	9.655	7.787	5.246	4.085	2.959	15.017	19.148	13.485	7.6460
0.0600	43.063	14.737	11.952	11.552	10.920	8.986	6.111	4.809	3.533	16.774	21.415	15.059	9.1752
0.0700	47.775	16.179	13.247	12.867	12.205	10.175	6.934	5.510	4.073	18.518	23.620	16.742	10.704
0.0800	52.821	17.734	14.629	14.218	13.533	11.371	7.794	6.211	4.612	20.276	25.832	18.510	12.234
0.0900	57.841	19.405	16.049	15.642	14.892	12.562	8.635	6.908	5.116	22.028	28.008	20.334	13.763
0.1000	63.373	21.263	17.627	17.073	16.241	13.765	9.506	7.567	5.610	23.773	30.232	22.215	15.292
0.1250	78.191	26.096	21.566	20.779	19.853	16.761	11.541	9.198	6.834	28.243	35.944	27.160	19.115
0.1600	100.613	33.545	27.527	26.527	25.165	20.963	14.377	11.447	8.494	34.681	44.061	34.749	24.467
0.2000	126.846	42.110	34.489	33.119	31.311	25.447	17.309	13.744	10.153	41.696	52.908	43.531	30.584
0.2500	159.271	52.718	42.756	41.169	38.437	30.385	20.541	16.103	11.842	49.779	63.091	54.305	38.230
0.3200	201.285	65.706	53.439	50.999	46.662	35.750	23.856	18.604	13.588	59.708	75.838	67.705	48.934
0.4000	240.520	79.403	63.060	59.937	54.271	40.511	26.789	20.853	15.187	69.111	87.998	80.019	61.168
0.5000	277.033	92.055	71.516	68.043	60.878	44.768	29.527	23.057	16.804	77.856	99.393	91.273	76.460
0.6000	303.645	101.853	77.083	73.257	65.463	47.866	31.751	24.770	18.123	84.256	108.117	98.840	91.752
0.7000	315.692	108.487	79.797	75.838	67.869	49.565	33.163	25.811	19.075	88.178	113.320	102.471	107.04
0.8000	319.212	112.023	80.972	77.220	69.009	50.465	34.151	26.646	19.794	90.489	116.156	104.084	122.34
0.9000	318.286	113.446	81.277	77.469	68.886	50.812	34.670	27.395	20.348	91.791	117.709	104.239	137.63
1.0000	317.368	114.759	81.903	77.723	69.244	51.285	35.329	28.145	20.903	92.620	118.645	104.337	152.92
1.2500	311.305	116.567	82.994	79.235	70.404	52.803	37.081	29.940	22.612	93.767	119.072	105.042	191.15
1.6000	297.094	116.340	84.001	80.321	71.907	54.884	39.372	32.010	24.780	93.663	117.194	104.377	244.67
2.0000	279.263	114.471	84.858	80.811	73.121	56.797	41.485	34.065	26.780	93.088	114.673	102.869	305.84
2.5000	257.549	110.719	84.555	80.467	74.267	58.732	43.606	36.316	28.889	91.709	110.991	100.158	382.30
3.2000	236.990	105.291	83.488	79.696	74.008	59.925	45.570	37.918	30.402	89.582	106.781	97.166	489.34
4.0000	219.002	99.015	80.964	77.646	73.001	59.728	45.791	38.558	31.191	86.672	102.134	93.374	611.68
5.0000	204.259	92.816	77.657	74.767	70.463	58.387	45.412	38.347	31.474	83.117	97.312	89.155	764.60
6.0000	192.853	87.683	74.537	71.684	67.902	56.678	44.276	37.641	31.005	79.622	92.954	85.141	917.52
7.0000	183.778	83.448	71.715	69.141	65.370	54.954	43.221	36.875	30.470	76.564	89.135	81.892	1070.4
8.0000	175.841	79.533	69.122	66.692	62.990	53.157	41.820	35.862	29.789	73.691	85.607	78.839	1223.4
9.0000	168.453	76.559	66.654	64.359	60.889	51.487	40.574	34.866	29.101	70.963	82.324	75.944	1376.3
10.0000	162.133	74.017	64.582	62.359	58.997	49.887	39.422	33.891	28.360	68.540	79.385	73.421	1529.2
11.0000	156.266	71.661	62.664	60.507	57.245	48.406	38.356	32.990	27.623	66.347	76.765	71.135	1682.1
12.0000	150.813	69.476	60.887	58.791	55.622	47.033	37.371	32.156	26.942	64.313	74.282	69.016	1835.0

$^{153}_{63}Eu$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=153 MEV
0.0125	0.126	0.125	0.152	0.194	0.203	0.244	0.257	0.279	0.370	0.416	0.439	0.505	1.9115
0.0160	0.159	0.159	0.195	0.250	0.263	0.314	0.332	0.361	0.484	0.547	0.581	0.676	2.4467
0.0200	0.196	0.197	0.243	0.313	0.331	0.394	0.416	0.453	0.610	0.691	0.735	0.859	3.0584
0.0250	0.239	0.243	0.301	0.392	0.415	0.494	0.520	0.565	0.765	0.867	0.923	1.079	3.8230
0.0320	0.296	0.305	0.381	0.499	0.533	0.631	0.664	0.720	0.979	1.110	1.182	1.380	4.8934
0.0400	0.357	0.372	0.468	0.619	0.666	0.784	0.824	0.892	1.221	1.384	1.473	1.716	6.1168
0.0500	0.427	0.451	0.570	0.762	0.827	0.968	1.018	1.100	1.517	1.717	1.828	2.125	7.6460
0.0600	0.492	0.525	0.667	0.898	0.981	1.143	1.203	1.298	1.802	2.038	2.171	2.519	9.1752
0.0700	0.554	0.593	0.759	1.027	1.128	1.310	1.380	1.487	2.076	2.347	2.500	2.897	10.704
0.0800	0.611	0.658	0.846	1.149	1.269	1.469	1.548	1.668	2.339	2.641	2.814	3.259	12.234
0.0900	0.666	0.718	0.929	1.266	1.404	1.621	1.709	1.840	2.589	2.923	3.115	3.604	13.763
0.1000	0.718	0.776	1.008	1.377	1.532	1.765	1.864	2.005	2.828	3.192	3.402	3.934	15.292
0.1250	0.839	0.906	1.193	1.634	1.831	2.100	2.222	2.387	3.381	3.817	4.068	4.699	19.115
0.1600	0.991	1.065	1.425	1.955	2.204	2.517	2.670	2.864	4.067	4.592	4.891	5.642	24.467
0.2000	1.145	1.220	1.661	2.279	2.580	2.936	3.123	3.345	4.754	5.368	5.715	6.581	30.584
0.2500	1.322	1.389	1.925	2.636	2.995	3.397	3.623	3.877	5.505	6.213	6.613	7.606	38.230
0.3200	1.541	1.594	2.252	3.071	3.501	3.956	4.231	4.526	6.409	7.230	7.694	8.837	48.934
0.4000	1.767	1.798	2.581	3.504	4.002	4.507	4.832	5.170	7.294	8.223	8.750	10.036	61.168
0.5000	2.021	2.026	2.947	3.979	4.549	5.105	5.487	5.871	8.246	9.290	9.883	11.323	76.460
0.6000	2.255	2.234	3.277	4.402	5.034	5.634	6.068	6.493	9.081	10.224	10.874	12.443	91.752
0.7000	2.477	2.431	3.581	4.788	5.476	6.114	6.596	7.060	9.833	11.065	11.764	13.446	107.04
0.8000	2.688	2.620	3.870	5.152	5.891	6.564	7.093	7.594	10.538	11.838	12.583	14.368	122.34
0.9000	2.891	2.803	4.145	5.496	6.282	6.986	7.560	8.095	11.195	12.569	13.357	15.238	137.63
1.0000	3.089	2.983	4.409	5.824	6.654	7.387	8.004	8.572	11.814	13.258	14.086	16.055	152.92
1.2500	3.568	3.425	5.037	6.595	7.524	8.322	9.041	9.688	13.247	14.848	15.768	17.935	191.15
1.6000	4.217	4.038	5.869	7.601	8.651	9.531	10.382	11.136	15.072	16.868	17.904	20.320	244.67
2.0000	4.949	4.738	6.786	8.691	9.868	10.831	11.628	12.699	17.013	19.004	20.163	22.833	305.84
2.5000	5.868	5.616	7.912	10.011	11.333	12.391	13.570	14.578	19.316	21.532	22.832	25.786	382.30
3.2000	7.178	6.862	9.486	11.832	13.339	14.525	15.953	17.150	22.421	24.935	26.418	29.736	489.34
4.0000	8.725	8.320	11.310	13.917	15.623	16.951	18.653	20.072	25.898	28.735	30.413	34.130	611.68
5.0000	10.740	10.206	13.651	16.570	18.512	20.016	22.053	23.754	30.222	33.465	35.363	39.563	764.60
6.0000	12.849	12.170	16.074	19.296	21.469	23.142	25.520	27.501	34.595	38.230	40.338	44.995	917.52
7.0000	15.052	14.215	18.584	22.104	24.509	26.346	29.065	31.334	39.045	43.061	45.379	50.476	1070.4
8.0000	17.352	16.341	21.183	24.998	27.639	29.638	32.695	35.260	43.573	47.979	50.500	56.035	1223.4
9.0000	19.741	18.549	23.871	27.980	30.858	33.021	36.415	39.284	48.196	52.989	55.715	61.683	1376.3
10.0000	22.219	20.839	26.648	31.048	34.169	36.496	40.234	43.403	52.922	58.098	61.023	67.425	1529.2
11.0000	24.785	23.208	29.511	34.199	37.570	40.062	44.151	47.614	57.750	63.299	66.415	73.268	1682.1
12.0000	27.435	25.655	32.460	37.436	41.058	43.716	48.163	51.916	62.678	68.593	71.902	79.220	1835.0

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.049	0.113	0.135	0.139	0.146	0.196	0.273	0.356	0.461	0.119	0.100	0.111	1.9115
0.0160	0.061	0.143	0.174	0.179	0.189	0.253	0.354	0.464	0.618	0.152	0.127	0.142	2.4467
0.0200	0.076	0.179	0.218	0.225	0.238	0.319	0.445	0.584	0.785	0.189	0.157	0.179	3.0584
0.0250	0.093	0.223	0.274	0.282	0.299	0.401	0.559	0.731	0.984	0.235	0.194	0.224	3.8230
0.0320	0.116	0.285	0.351	0.362	0.384	0.513	0.715	0.931	1.247	0.297	0.245	0.287	4.8934
0.0400	0.141	0.356	0.438	0.452	0.480	0.637	0.887	1.149	1.534	0.365	0.299	0.357	6.1168
0.0500	0.172	0.443	0.544	0.561	0.595	0.782	1.089	1.403	1.866	0.446	0.364	0.442	7.6460
0.0600	0.200	0.527	0.645	0.664	0.704	0.917	1.277	1.638	2.170	0.522	0.424	0.522	9.1752
0.0700	0.227	0.608	0.740	0.762	0.806	1.041	1.452	1.855	2.451	0.593	0.481	0.598	10.704
0.0800	0.252	0.683	0.830	0.854	0.902	1.157	1.614	2.055	2.712	0.660	0.533	0.670	12.234
0.0900	0.276	0.754	0.914	0.940	0.992	1.264	1.765	2.242	2.955	0.723	0.583	0.736	13.763
0.1000	0.298	0.820	0.992	1.020	1.076	1.364	1.906	2.416	3.182	0.782	0.630	0.798	15.292
0.1250	0.346	0.967	1.167	1.200	1.264	1.587	2.221	2.809	3.697	0.916	0.735	0.937	19.115
0.1600	0.402	1.135	1.369	1.410	1.483	1.849	2.596	3.275	4.311	1.075	0.861	1.098	24.467
0.2000	0.453	1.290	1.556	1.604	1.688	2.099	2.956	3.725	4.909	1.228	0.982	1.246	30.584
0.2500	0.505	1.447	1.748	1.803	1.899	2.362	3.340	4.209	5.558	1.389	1.110	1.398	38.230
0.3200	0.563	1.625	1.966	2.030	2.144	2.677	3.805	4.801	6.357	1.580	1.261	1.570	48.934
0.4000	0.618	1.792	2.172	2.247	2.382	2.991	4.274	5.402	7.174	1.767	1.408	1.733	61.168
0.5000	0.676	1.968	2.396	2.482	2.643	3.343	4.805	6.080	8.100	1.972	1.569	1.909	76.460
0.6000	0.729	2.126	2.602	2.698	2.882	3.668	5.295	6.707	8.954	2.161	1.716	2.070	91.752
0.7000	0.778	2.271	2.796	2.903	3.111	3.982	5.765	7.301	9.759	2.338	1.854	2.221	107.04
0.8000	0.826	2.410	2.986	3.103	3.334	4.287	6.219	7.884	10.545	2.509	1.987	2.369	122.34
0.9000	0.874	2.545	3.175	3.300	3.556	4.589	6.663	8.449	11.306	2.677	2.118	2.516	137.63
1.0000	0.922	2.679	3.362	3.497	3.777	4.888	7.100	8.999	12.047	2.842	2.247	2.662	152.92
1.2500	1.043	3.009	3.825	3.983	4.323	5.621	8.153	10.313	13.802	3.251	2.568	3.026	191.15
1.6000	1.219	3.467	4.464	4.652	5.073	6.612	9.550	12.038	16.057	3.821	3.019	3.536	244.67
2.0000	1.431	3.996	5.187	5.410	5.915	7.706	11.061	13.887	18.427	4.475	3.546	4.125	305.84
2.5000	1.715	4.674	6.088	6.357	6.951	9.028	12.856	16.057	21.172	5.301	4.223	4.877	382.30
3.2000	2.148	5.664	7.361	7.692	8.393	10.830	15.254	18.938	24.778	6.480	5.204	5.961	489.34
4.0000	2.684	6.861	8.847	9.246	10.057	12.873	17.930	22.135	28.748	7.868	6.375	7.244	611.68
5.0000	3.407	8.456	10.775	11.252	12.188	15.462	21.282	26.110	33.626	9.669	7.909	8.920	764.60
6.0000	4.178	10.151	12.785	13.341	14.399	18.120	24.692	30.134	38.520	11.549	9.516	10.675	917.52
7.0000	4.990	11.939	14.877	15.513	16.694	20.860	28.188	34.239	43.496	13.507	11.197	12.507	1070.4
8.0000	5.841	13.817	17.049	17.766	19.078	23.690	31.786	38.445	48.572	15.544	12.947	14.410	1223.4
9.0000	6.730	15.777	19.303	20.100	21.547	26.613	35.498	42.770	53.767	17.659	14.769	16.387	1376.3
10.0000	7.655	17.808	21.634	22.514	24.099	29.631	39.323	47.219	59.090	19.852	16.661	18.435	1529.2
11.0000	8.616	19.908	24.038	25.004	26.731	32.744	43.256	51.793	64.555	22.120	18.620	20.551	1682.1
12.0000	9.612	22.076	26.514	27.568	29.441	35.949	47.295	56.489	70.161	24.461	20.646	22.734	1835.0

$^{158}_{64}Gd$ IONS

ENERGY PER MASS UNIT	ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)											ENERGY FOR A=158
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	8.654	7.159	5.245	3.488	2.832	2.570	2.381	2.203	1.400	1.198	1.101	0.944	1.9740
0.0160	9.982	8.258	6.050	4.023	3.267	2.964	2.747	2.541	1.615	1.382	1.270	1.089	2.5267
0.0200	11.357	9.396	6.883	4.577	3.717	3.373	3.125	2.891	1.838	1.573	1.445	1.239	3.1584
0.0250	12.922	10.690	7.832	5.208	4.229	3.837	3.556	3.289	2.091	1.789	1.649	1.410	3.9480
0.0320	14.887	12.340	9.033	6.007	4.887	4.444	4.101	3.794	2.412	2.069	1.906	1.635	5.0534
0.0400	16.897	14.070	10.278	6.855	5.591	5.098	4.697	4.347	2.765	2.379	2.189	1.881	6.3168
0.0500	19.154	16.055	11.693	7.835	6.420	5.847	5.391	4.993	3.169	2.754	2.537	2.181	7.8960
0.0600	21.206	17.945	12.994	8.758	7.199	6.536	6.042	5.600	3.586	3.119	2.878	2.475	9.4752
0.0700	23.084	19.746	14.205	9.631	7.955	7.216	6.677	6.194	3.978	3.480	3.225	2.770	11.054
0.0800	24.830	21.515	15.346	10.481	8.670	7.857	7.259	6.752	4.374	3.836	3.545	3.054	12.634
0.0900	26.465	23.229	16.428	11.302	9.364	8.510	7.836	7.294	4.780	4.181	3.877	3.343	14.213
0.1000	28.023	24.915	17.460	12.100	10.057	9.114	8.381	7.840	5.168	4.522	4.190	3.614	15.792
0.1250	31.585	29.142	19.865	13.985	11.681	10.588	9.734	9.118	6.109	5.344	4.996	4.321	19.740
0.1600	35.951	34.943	22.914	16.406	13.794	12.511	11.480	10.769	7.332	6.439	6.038	5.270	25.267
0.2000	40.356	40.956	26.070	18.953	16.033	14.521	13.322	12.488	8.655	7.639	7.169	6.257	31.584
0.2500	45.174	47.517	29.661	21.920	18.627	16.907	15.483	14.504	10.233	9.047	8.483	7.415	39.480
0.3200	51.046	55.459	34.213	25.762	21.999	20.083	18.304	17.107	12.248	10.880	10.213	8.981	50.534
0.4000	56.910	63.177	38.926	29.662	25.535	23.356	21.292	19.891	14.480	12.884	12.106	10.627	63.168
0.5000	62.767	70.536	43.893	33.929	29.408	26.994	24.580	22.912	16.943	15.099	14.199	12.509	78.960
0.6000	67.809	76.369	48.366	37.870	32.985	30.374	27.568	25.682	19.201	17.170	16.178	14.365	94.752
0.7000	71.758	80.552	52.036	41.108	35.957	33.147	30.025	27.995	21.127	18.889	17.848	15.819	110.54
0.8000	74.781	83.372	55.067	43.889	38.492	35.628	32.214	30.012	22.798	20.485	19.329	17.181	126.34
0.9000	77.278	85.398	57.584	46.183	40.712	37.775	34.090	31.729	24.358	21.882	20.673	18.427	142.13
1.0000	79.200	86.720	59.684	48.284	42.614	39.570	35.750	33.244	25.664	23.098	21.844	19.517	157.92
1.2500	82.431	88.278	63.555	52.115	46.395	43.218	38.959	36.163	28.409	25.613	24.215	21.672	197.40
1.6000	84.529	88.602	66.768	55.752	49.809	46.538	41.931	38.726	31.047	28.109	26.574	23.836	252.67
2.0000	84.984	88.688	68.591	58.096	52.198	48.974	43.898	40.674	32.924	30.043	28.397	25.584	315.84
2.5000	84.121	88.144	69.350	59.571	53.885	50.625	45.285	42.026	34.536	31.415	29.820	27.046	394.80
3.2000	82.030	86.653	68.991	60.022	54.641	51.398	46.086	42.636	35.599	32.564	30.908	28.079	505.34
4.0000	79.185	84.329	67.680	59.490	54.482	51.301	46.225	42.638	36.073	33.028	31.471	28.629	631.68
5.0000	75.660	81.102	65.563	58.089	53.500	50.484	45.501	42.092	36.060	32.913	31.536	28.782	789.60
6.0000	72.461	77.909	63.340	56.500	52.129	49.406	44.592	41.235	35.344	32.620	31.227	28.693	947.52
7.0000	69.380	74.948	61.182	54.819	50.659	48.150	43.562	40.319	34.874	32.059	30.775	28.327	1105.4
8.0000	66.659	72.160	59.148	53.233	49.270	46.845	42.586	39.333	34.187	31.526	30.284	27.918	1263.4
9.0000	64.295	69.562	57.253	51.699	47.921	45.630	41.508	38.417	33.493	30.916	29.714	27.481	1421.3
10.0000	62.044	67.150	55.495	50.334	46.616	44.452	40.456	37.570	32.742	30.356	29.246	27.026	1579.2
11.0000	60.008	65.018	53.867	49.019	45.464	43.363	39.485	36.791	32.105	29.842	28.819	26.557	1737.1
12.0000	58.169	62.986	52.357	47.750	44.347	42.357	38.587	36.022	31.467	29.320	28.273	26.074	1895.0

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	19.669	8.392	5.560	5.224	4.642	3.063	1.878	1.332	0.879	7.034	8.948	6.829	1.9740
0.0160	22.264	9.390	6.310	5.935	5.276	3.563	2.208	1.573	1.044	8.065	10.261	7.750	2.5267
0.0200	24.642	10.118	7.000	6.594	5.899	4.096	2.554	1.858	1.243	9.100	11.571	8.597	3.1584
0.0250	27.254	10.815	7.769	7.322	6.625	4.754	3.039	2.216	1.605	10.259	13.055	9.539	3.9480
0.0320	30.804	11.689	8.663	8.247	7.534	5.646	3.668	2.764	1.924	11.743	14.977	10.750	5.0534
0.0400	34.430	12.518	9.589	9.229	8.500	6.639	4.399	3.371	2.395	13.310	16.979	12.025	6.3168
0.0500	38.705	13.611	10.746	10.454	9.729	7.846	5.285	4.116	2.982	15.131	19.294	13.588	7.8960
0.0600	43.399	14.852	12.045	11.642	11.006	9.057	6.159	4.847	3.560	16.905	21.583	15.177	9.4752
0.0700	48.157	16.308	13.353	12.970	12.302	10.256	6.989	5.554	4.105	18.666	23.808	16.876	11.054
0.0800	53.251	17.878	14.748	14.333	13.643	11.463	7.857	6.261	4.650	20.441	26.042	18.661	12.634
0.0900	58.319	19.565	16.181	15.771	15.015	12.666	8.707	6.965	5.158	22.210	28.239	20.502	14.213
0.1000	63.903	21.441	17.774	17.215	16.377	13.881	9.585	7.630	5.657	23.972	30.485	22.401	15.792
0.1250	78.864	26.321	21.752	20.958	20.024	16.905	11.641	9.277	6.893	28.486	36.254	27.394	19.740
0.1600	101.507	33.843	27.771	26.763	25.388	21.149	14.504	11.548	8.570	34.989	44.452	35.058	25.267
0.2000	128.004	42.494	34.803	33.422	31.597	25.679	17.467	13.869	10.246	42.077	53.391	43.928	31.584
0.2500	160.763	53.212	43.157	41.555	38.797	30.670	20.733	16.254	11.953	50.246	63.682	54.814	39.480
0.3200	203.226	66.339	53.954	51.491	47.111	36.095	24.086	18.783	13.719	60.283	76.569	68.358	50.534
0.4000	242.898	80.187	63.683	60.530	54.808	40.911	27.054	21.059	15.337	69.794	88.868	80.810	63.168
0.5000	280.036	93.053	72.291	68.780	61.538	45.253	29.847	23.307	16.987	78.700	100.471	92.263	78.960
0.6000	307.122	103.019	77.965	74.096	66.213	48.414	32.115	25.053	18.331	85.220	109.355	99.972	94.752
0.7000	319.500	109.796	80.760	76.753	68.687	50.163	33.563	26.122	19.305	89.242	114.687	103.708	110.54
0.8000	323.244	113.438	81.995	78.195	69.880	51.102	34.582	26.983	20.044	91.632	117.623	105.399	126.34
0.9000	322.473	114.938	82.346	78.488	69.792	51.480	35.126	27.756	20.615	92.999	119.257	105.610	142.13
1.0000	321.695	116.323	83.020	78.782	70.188	51.984	35.810	28.529	21.188	93.882	120.263	105.759	157.92
1.2500	315.870	118.277	84.211	80.398	71.436	53.577	37.625	30.379	22.943	95.142	120.819	106.582	197.40
1.6000	301.793	118.180	85.330	81.591	73.045	55.752	39.994	32.516	25.172	95.145	119.048	106.028	252.67
2.0000	283.966	116.399	86.287	82.172	74.352	57.753	42.183	34.638	27.231	94.655	116.604	104.601	315.84
2.5000	262.142	112.693	86.063	81.902	75.591	59.779	44.384	36.963	29.404	93.345	112.971	101.944	394.80
3.2000	241.468	107.281	85.066	81.202	75.407	61.057	46.431	38.635	30.977	91.275	108.799	99.002	505.34
4.0000	223.343	100.978	82.569	79.185	74.448	60.912	46.699	39.322	31.809	88.390	104.159	95.225	631.68
5.0000	208.492	94.739	79.266	76.316	71.923	59.597	46.353	39.141	32.126	84.839	99.329	91.002	789.60
6.0000	196.989	89.563	76.135	73.222	69.358	57.893	45.225	38.448	31.670	81.329	94.947	86.966	947.52
7.0000	187.829	85.288	73.296	70.665	66.811	56.165	44.173	37.688	31.142	78.252	91.100	83.697	1105.4
8.0000	179.809	81.328	70.681	68.197	64.412	54.357	42.764	36.672	30.461	75.354	87.538	80.618	1263.4
9.0000	172.331	78.322	68.188	65.841	62.291	52.673	41.508	35.668	29.771	72.596	84.219	77.692	1421.3
10.0000	165.932	75.751	66.095	63.820	60.379	51.056	40.345	34.685	29.024	70.146	81.245	75.141	1579.2
11.0000	159.986	73.367	64.156	61.947	58.608	49.558	39.269	33.775	28.280	67.927	78.592	72.829	1737.1
12.0000	154.454	71.153	62.357	60.211	56.965	48.169	38.273	32.933	27.592	65.865	76.075	70.682	1895.0

$^{158}_{64}$Gd IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=158
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.129	0.127	0.155	0.197	0.206	0.247	0.259	0.282	0.373	0.418	0.441	0.507	1.9740
0.0160	0.162	0.162	0.198	0.254	0.266	0.318	0.335	0.365	0.488	0.551	0.585	0.679	2.5267
0.0200	0.199	0.201	0.247	0.318	0.335	0.399	0.421	0.457	0.615	0.696	0.740	0.863	3.1584
0.0250	0.244	0.248	0.307	0.397	0.421	0.500	0.526	0.571	0.771	0.874	0.930	1.085	3.9480
0.0320	0.302	0.311	0.387	0.507	0.541	0.640	0.672	0.728	0.988	1.119	1.191	1.389	5.0534
0.0400	0.364	0.380	0.476	0.629	0.676	0.795	0.835	0.903	1.234	1.396	1.486	1.730	6.3168
0.0500	0.436	0.460	0.581	0.774	0.839	0.982	1.032	1.115	1.534	1.734	1.846	2.144	7.8960
0.0600	0.503	0.535	0.680	0.913	0.996	1.161	1.221	1.317	1.824	2.061	2.194	2.544	9.4752
0.0700	0.565	0.605	0.773	1.044	1.146	1.331	1.401	1.509	2.103	2.374	2.528	2.928	11.054
0.0800	0.624	0.671	0.862	1.170	1.290	1.494	1.573	1.693	2.370	2.674	2.848	3.296	12.634
0.0900	0.680	0.733	0.947	1.289	1.427	1.648	1.737	1.869	2.625	2.961	3.154	3.647	14.213
0.1000	0.733	0.792	1.028	1.402	1.558	1.796	1.894	2.037	2.868	3.236	3.447	3.983	15.792
0.1250	0.857	0.925	1.217	1.665	1.863	2.138	2.261	2.427	3.432	3.872	4.125	4.763	19.740
0.1600	1.012	1.087	1.454	1.993	2.244	2.563	2.718	2.914	4.133	4.664	4.966	5.725	25.267
0.2000	1.172	1.246	1.695	2.323	2.629	2.992	3.181	3.406	4.835	5.456	5.806	6.684	31.584
0.2500	1.351	1.419	1.965	2.688	3.053	3.463	3.691	3.950	5.601	6.319	6.723	7.730	39.480
0.3200	1.575	1.628	2.299	3.133	3.570	4.034	4.313	4.613	6.525	7.358	7.828	8.987	50.534
0.4000	1.806	1.837	2.636	3.576	4.082	4.597	4.927	5.270	7.430	8.373	8.906	10.213	63.168
0.5000	2.066	2.070	3.009	4.061	4.641	5.208	5.597	5.987	8.402	9.462	10.064	11.527	78.960
0.6000	2.305	2.282	3.346	4.493	5.136	5.749	6.189	6.622	9.254	10.416	11.076	12.670	94.752
0.7000	2.531	2.483	3.657	4.887	5.586	6.238	6.728	7.200	10.022	11.273	11.984	13.694	110.54
0.8000	2.746	2.676	3.952	5.259	6.011	6.697	7.236	7.745	10.729	12.062	12.819	14.634	126.34
0.9000	2.954	2.863	4.232	5.609	6.409	7.128	7.712	8.256	11.399	12.807	13.608	15.520	142.13
1.0000	3.156	3.046	4.501	5.943	6.788	7.536	8.164	8.742	12.030	13.509	14.351	16.353	157.92
1.2500	3.643	3.496	5.140	6.729	7.674	8.488	9.219	9.878	13.489	15.129	16.063	18.268	197.40
1.6000	4.303	4.119	5.987	7.751	8.821	9.718	10.583	11.351	15.345	17.183	18.237	20.694	252.67
2.0000	5.047	4.831	6.918	8.859	10.057	11.038	12.053	12.940	17.317	19.353	20.532	23.247	315.84
2.5000	5.980	5.722	8.062	10.200	11.544	12.622	13.821	14.847	19.655	21.920	23.242	26.244	394.80
3.2000	7.309	6.986	9.658	12.046	13.578	14.786	16.238	17.455	22.803	25.371	26.878	30.250	505.34
4.0000	8.875	8.462	11.505	14.158	15.892	17.244	18.973	20.416	26.326	29.220	30.925	34.702	631.68
5.0000	10.915	10.371	13.875	16.844	18.816	20.346	22.415	24.142	30.702	34.007	35.935	40.200	789.60
6.0000	13.047	12.358	16.325	19.600	21.806	23.508	25.920	27.932	35.125	38.826	40.967	45.695	947.52
7.0000	15.275	14.425	18.862	22.438	24.879	26.746	29.504	31.805	39.624	43.710	46.061	51.234	1105.4
8.0000	17.597	16.573	21.488	25.362	28.041	30.072	33.171	35.771	44.198	48.678	51.234	56.850	1263.4
9.0000	20.010	18.802	24.202	28.372	31.291	33.488	36.927	39.834	48.865	53.737	56.499	62.552	1421.3
10.0000	22.511	21.113	27.004	31.468	34.633	36.995	40.781	43.992	53.634	58.892	61.857	68.347	1579.2
11.0000	25.099	23.503	29.893	34.648	38.064	40.592	44.733	48.240	58.506	64.140	67.297	74.242	1737.1
12.0000	27.773	25.971	32.867	37.913	41.581	44.277	48.779	52.578	63.475	69.479	72.830	80.244	1895.0

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.050	0.115	0.138	0.141	0.149	0.199	0.276	0.360	0.463	0.121	0.101	0.113	1.9740
0.0160	0.063	0.146	0.177	0.182	0.192	0.257	0.357	0.468	0.622	0.154	0.129	0.145	2.5267
0.0200	0.077	0.182	0.222	0.229	0.242	0.324	0.450	0.589	0.790	0.193	0.160	0.182	3.1584
0.0250	0.095	0.227	0.278	0.287	0.304	0.407	0.565	0.738	0.991	0.239	0.198	0.228	3.9480
0.0320	0.118	0.291	0.357	0.369	0.391	0.521	0.724	0.941	1.256	0.303	0.250	0.292	5.0534
0.0400	0.144	0.363	0.446	0.460	0.488	0.647	0.899	1.162	1.547	0.372	0.305	0.364	6.3168
0.0500	0.175	0.452	0.554	0.571	0.605	0.795	1.104	1.420	1.884	0.455	0.371	0.450	7.8960
0.0600	0.205	0.538	0.657	0.677	0.717	0.932	1.296	1.659	2.193	0.532	0.433	0.532	9.4752
0.0700	0.232	0.620	0.755	0.777	0.821	1.059	1.474	1.880	2.479	0.605	0.490	0.610	11.054
0.0800	0.258	0.697	0.846	0.870	0.919	1.177	1.639	2.084	2.744	0.673	0.544	0.683	12.634
0.0900	0.282	0.770	0.932	0.958	1.011	1.287	1.793	2.275	2.992	0.738	0.595	0.751	14.213
0.1000	0.304	0.837	1.012	1.040	1.097	1.389	1.937	2.453	3.224	0.798	0.643	0.814	15.792
0.1250	0.353	0.987	1.190	1.224	1.288	1.617	2.259	2.853	3.749	0.934	0.751	0.956	19.740
0.1600	0.410	1.159	1.396	1.438	1.512	1.885	2.642	3.329	4.376	1.097	0.879	1.120	25.267
0.2000	0.463	1.318	1.588	1.637	1.722	2.140	3.010	3.789	4.987	1.253	1.003	1.272	31.584
0.2500	0.516	1.478	1.784	1.840	1.938	2.409	3.403	4.284	5.650	1.419	1.134	1.427	39.480
0.3200	0.575	1.660	2.007	2.072	2.189	2.731	3.878	4.889	6.466	1.614	1.288	1.603	50.534
0.4000	0.631	1.830	2.218	2.294	2.432	3.052	4.358	5.503	7.302	1.805	1.438	1.770	63.168
0.5000	0.691	2.011	2.447	2.535	2.699	3.412	4.900	6.196	8.247	2.015	1.603	1.950	78.960
0.6000	0.745	2.172	2.657	2.755	2.943	3.744	5.400	6.836	9.119	2.205	1.753	2.114	94.752
0.7000	0.795	2.320	2.856	2.964	3.176	4.064	5.880	7.443	9.940	2.386	1.894	2.268	110.54
0.8000	0.844	2.461	3.049	3.168	3.404	4.375	6.343	8.037	10.742	2.561	2.030	2.419	126.34
0.9000	0.893	2.599	3.241	3.369	3.630	4.683	6.796	8.613	11.518	2.732	2.163	2.569	142.13
1.0000	0.942	2.736	3.432	3.570	3.855	4.988	7.241	9.174	12.273	2.900	2.295	2.718	157.92
1.2500	1.065	3.072	3.903	4.065	4.411	5.734	8.314	10.512	14.060	3.317	2.621	3.089	197.40
1.6000	1.244	3.538	4.553	4.745	5.174	6.743	9.735	12.266	16.354	3.896	3.081	3.607	252.67
2.0000	1.459	4.075	5.288	5.515	6.030	7.854	11.270	14.145	18.762	4.561	3.616	4.206	315.84
2.5000	1.748	4.764	6.203	6.476	7.082	9.196	13.092	16.348	21.548	5.399	4.303	4.969	394.80
3.2000	2.187	5.768	7.493	7.830	8.544	11.023	15.523	19.269	25.206	6.595	5.298	6.068	505.34
4.0000	2.730	6.980	9.000	9.404	10.229	13.093	18.234	22.508	29.227	8.001	6.484	7.369	631.68
5.0000	3.462	8.595	10.951	11.435	12.386	15.713	21.627	26.531	34.164	9.824	8.036	9.064	789.60
6.0000	4.241	10.309	12.984	13.548	14.622	18.401	25.076	30.602	39.114	11.725	9.662	10.840	947.52
7.0000	5.062	12.116	15.098	15.743	16.942	21.171	28.609	34.750	44.143	13.705	11.361	12.691	1105.4
8.0000	5.922	14.012	17.292	18.018	19.350	24.029	32.243	38.999	49.271	15.762	13.129	14.613	1263.4
9.0000	6.819	15.992	19.567	20.376	21.843	26.981	35.992	43.366	54.516	17.897	14.969	16.609	1421.3
10.0000	7.753	18.042	21.920	22.812	24.419	30.027	39.852	47.856	59.889	20.110	16.878	18.676	1579.2
11.0000	8.722	20.161	24.346	25.324	27.074	33.167	43.820	52.471	65.401	22.399	18.855	20.812	1737.1
12.0000	9.727	22.347	26.843	27.910	29.807	36.400	47.894	57.207	71.055	24.760	20.898	23.013	1895.0

$^{159}_{65}$Tb IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=159 MEV
0.0125	8.705	7.202	5.276	3.508	2.849	2.585	2.395	2.216	1.409	1.206	1.108	0.950	1.9866
0.0160	10.044	8.309	6.087	4.048	3.287	2.983	2.764	2.557	1.625	1.391	1.278	1.096	2.5429
0.0200	11.430	9.456	6.927	4.607	3.741	3.394	3.145	2.909	1.850	1.583	1.455	1.247	3.1786
0.0250	13.008	10.761	7.883	5.242	4.257	3.863	3.579	3.311	2.105	1.801	1.659	1.419	3.9732
0.0320	14.990	12.425	9.096	6.049	4.921	4.475	4.129	3.820	2.429	2.083	1.919	1.646	5.0858
0.0400	17.017	14.171	10.351	6.904	5.631	5.134	4.730	4.378	2.784	2.396	2.205	1.894	6.3572
0.0500	19.295	16.174	11.780	7.892	6.467	5.890	5.430	5.030	3.192	2.774	2.556	2.197	7.9465
0.0600	21.366	18.080	13.092	8.824	7.253	6.585	6.088	5.643	3.613	3.142	2.900	2.494	9.5358
0.0700	23.262	19.898	14.315	9.706	8.017	7.272	6.728	6.241	4.008	3.507	3.250	2.791	11.125
0.0800	25.025	21.685	15.467	10.564	8.739	7.919	7.316	6.805	4.408	3.867	3.573	3.078	12.714
0.0900	26.677	23.415	16.559	11.393	9.439	8.578	7.899	7.352	4.819	4.214	3.908	3.370	14.304
0.1000	28.251	25.118	17.602	12.198	10.139	9.188	8.449	7.903	5.210	4.559	4.224	3.644	15.893
0.1250	31.849	29.386	20.031	14.102	11.778	10.677	9.815	9.194	6.160	5.388	5.038	4.357	19.866
0.1600	36.261	35.245	23.111	16.548	13.913	12.619	11.579	10.862	7.396	6.494	6.090	5.316	25.429
0.2000	40.714	41.319	26.301	19.121	16.175	14.650	13.440	12.598	8.732	7.706	7.233	6.312	31.786
0.2500	45.585	47.950	29.931	22.119	18.797	17.061	15.624	14.636	10.326	9.129	8.560	7.483	39.733
0.3200	51.524	55.979	34.534	26.004	22.205	20.271	18.475	17.267	12.363	10.982	10.308	9.065	50.858
0.4000	57.457	63.784	39.300	29.947	25.781	23.580	21.497	20.082	14.620	13.008	12.222	10.729	63.572
0.5000	63.425	71.276	44.353	34.285	29.717	27.277	24.838	23.152	17.120	15.258	14.348	12.641	79.465
0.6000	68.569	77.226	48.908	38.295	33.355	30.714	27.877	25.970	19.416	17.362	16.360	14.526	95.358
0.7000	72.605	81.502	52.650	41.594	36.381	33.538	30.379	28.326	21.376	19.112	18.059	16.006	111.25
0.8000	75.706	84.402	55.748	44.431	38.968	36.069	32.612	30.383	23.080	20.738	19.567	17.393	127.14
0.9000	78.273	86.497	58.326	46.777	41.236	38.262	34.529	32.138	24.672	22.164	20.939	18.664	143.04
1.0000	80.258	87.878	60.480	48.929	43.183	40.099	36.228	33.688	26.007	23.406	22.136	19.777	158.93
1.2500	83.617	89.548	64.470	52.865	47.063	43.839	39.520	36.683	28.818	25.981	24.563	21.984	198.66
1.6000	85.843	89.979	67.806	56.618	50.583	47.261	42.582	39.328	31.530	28.546	26.987	24.207	254.29
2.0000	86.393	90.158	69.728	59.059	53.063	49.786	44.626	41.349	33.469	30.541	28.867	26.008	317.86
2.5000	85.600	89.693	70.569	60.618	54.832	51.515	46.081	42.765	35.143	31.968	30.344	27.522	397.33
3.2000	83.559	88.267	70.277	61.141	55.659	52.356	46.945	43.431	36.263	33.171	31.484	28.603	508.58
4.0000	80.734	85.978	69.003	60.654	55.548	52.304	47.129	43.472	36.779	33.674	32.087	29.188	635.72
5.0000	77.207	82.760	66.904	59.277	54.593	51.516	46.431	42.952	36.797	33.586	32.181	29.371	794.65
6.0000	73.994	79.556	64.680	57.695	53.232	50.450	45.535	42.107	36.091	33.310	31.887	29.300	953.58
7.0000	70.889	76.577	62.512	56.011	51.760	49.197	44.508	41.195	35.632	32.756	31.443	28.943	1112.5
8.0000	68.142	73.765	60.463	54.417	50.366	47.887	43.533	40.208	34.948	32.227	30.957	28.539	1271.4
9.0000	65.753	71.140	58.551	52.872	49.008	46.666	42.450	39.288	34.253	31.618	30.388	28.105	1430.4
10.0000	63.476	68.699	56.776	51.496	47.692	45.478	41.390	38.438	33.498	31.057	29.921	27.650	1589.3
11.0000	61.415	66.542	55.130	50.168	46.530	44.380	40.410	37.654	32.857	30.542	29.495	27.179	1748.2
12.0000	59.552	64.483	53.602	48.885	45.401	43.364	39.505	36.878	32.215	30.017	28.945	26.694	1907.2

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	19.785	8.441	5.592	5.255	4.669	3.081	1.889	1.340	0.884	7.075	9.001	6.869	1.9866
0.0160	22.401	9.447	6.349	5.971	5.308	3.585	2.222	1.583	1.051	8.114	10.324	7.798	2.5429
0.0200	24.800	10.183	7.045	6.636	5.937	4.122	2.570	1.870	1.251	9.158	11.645	8.652	3.1786
0.0250	27.434	10.887	7.820	7.371	6.669	4.785	3.059	2.231	1.616	10.327	13.142	9.602	3.9732
0.0320	31.016	11.770	8.723	8.304	7.586	5.685	3.693	2.783	1.937	11.824	15.081	10.824	5.0858
0.0400	34.676	12.608	9.658	9.295	8.560	6.687	4.430	3.395	2.412	13.405	17.100	12.111	6.3572
0.0500	38.991	13.712	10.826	10.531	9.801	7.904	5.324	4.146	3.004	15.243	19.436	13.688	7.9465
0.0600	43.728	14.964	12.136	11.731	11.089	9.125	6.206	4.883	3.587	17.033	21.746	15.292	9.5358
0.0700	48.529	16.434	13.456	13.070	12.397	10.336	7.043	5.597	4.137	18.810	23.993	17.007	11.125
0.0800	53.670	18.019	14.864	14.446	13.750	11.554	7.919	6.310	4.686	20.602	26.247	18.808	12.714
0.0900	58.785	19.722	16.311	15.897	15.135	12.767	8.776	7.021	5.200	22.388	28.465	20.666	14.304
0.1000	64.422	21.615	17.918	17.355	16.510	13.993	9.663	7.692	5.703	24.167	30.732	22.583	15.893
0.1250	79.523	26.541	21.934	21.133	20.191	17.046	11.738	9.355	6.951	28.725	36.557	27.623	19.866
0.1600	102.383	34.135	28.011	26.994	25.607	21.332	14.629	11.648	8.644	35.291	44.836	35.360	25.429
0.2000	129.138	42.871	35.112	33.718	31.877	25.907	17.622	13.992	10.336	42.450	53.865	44.317	31.786
0.2500	162.227	53.696	43.550	41.934	39.150	30.949	20.922	16.402	12.062	50.703	64.262	55.313	39.733
0.3200	205.130	66.961	54.459	51.973	47.553	36.433	24.312	18.959	13.848	60.848	77.286	68.998	50.858
0.4000	245.232	80.958	64.295	61.111	55.334	41.304	27.313	21.261	15.484	70.465	89.722	81.587	63.572
0.5000	282.975	94.029	73.050	69.502	62.184	45.728	30.160	23.552	17.165	79.526	101.525	93.231	79.465
0.6000	310.565	104.174	78.839	74.927	66.955	48.957	32.475	25.334	18.536	86.176	110.581	101.093	95.358
0.7000	323.272	111.092	81.713	77.659	69.498	50.755	33.959	26.430	19.533	90.295	116.041	104.932	111.25
0.8000	327.240	114.840	83.008	79.162	70.744	51.734	35.010	27.316	20.292	92.764	119.077	106.701	127.14
0.9000	326.625	116.418	83.406	79.498	70.691	52.143	35.579	28.113	20.881	94.196	120.793	106.970	143.04
1.0000	325.990	117.876	84.128	79.834	71.125	52.678	36.288	28.910	21.471	95.136	121.868	107.171	158.93
1.2500	320.415	119.978	85.422	81.554	72.464	54.348	38.166	30.817	23.274	96.511	122.557	108.116	198.66
1.6000	306.484	120.017	86.656	82.859	74.180	56.618	40.616	33.022	25.563	96.624	120.899	107.676	254.29
2.0000	288.673	118.328	87.717	83.534	75.585	58.711	42.883	35.212	27.682	96.224	118.537	106.335	317.86
2.5000	266.749	114.674	87.576	83.342	76.920	60.830	45.164	37.613	29.921	94.985	114.956	103.736	397.33
3.2000	245.968	109.280	86.651	82.716	76.812	62.195	47.296	39.355	31.554	92.976	110.826	100.847	508.58
4.0000	227.711	102.953	84.184	80.734	75.904	62.103	47.612	40.091	32.432	90.118	106.196	97.088	635.72
5.0000	212.754	96.676	80.887	77.876	73.393	60.816	47.301	39.942	32.783	86.573	101.359	92.862	794.65
6.0000	201.155	91.457	77.745	74.770	70.825	59.117	46.181	39.261	32.340	83.049	96.955	88.806	953.58
7.0000	191.912	87.142	74.889	72.201	68.263	57.386	45.134	38.507	31.819	79.953	93.080	85.516	1112.5
8.0000	183.808	83.137	72.253	69.714	65.844	55.566	43.715	37.487	31.139	77.030	89.485	82.411	1271.4
9.0000	176.240	80.098	69.735	67.334	63.704	53.867	42.450	36.478	30.447	74.243	86.129	79.454	1430.4
10.0000	169.761	77.500	67.621	65.293	61.773	52.234	41.276	35.485	29.694	71.765	83.121	76.875	1589.3
11.0000	163.736	75.087	65.660	63.399	59.981	50.720	40.190	34.567	28.943	69.519	80.435	74.536	1748.2
12.0000	158.125	72.845	63.840	61.642	58.319	49.314	39.183	33.716	28.248	67.431	77.883	72.362	1907.2

$^{159}_{65}$Tb IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=159
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.128	0.126	0.154	0.195	0.204	0.244	0.257	0.279	0.369	0.413	0.436	0.500	1.9866
0.0160	0.162	0.161	0.197	0.252	0.264	0.315	0.332	0.362	0.483	0.545	0.578	0.671	2.5429
0.0200	0.198	0.199	0.245	0.315	0.332	0.396	0.417	0.454	0.609	0.689	0.733	0.854	3.1786
0.0250	0.242	0.246	0.304	0.394	0.417	0.496	0.522	0.566	0.764	0.865	0.921	1.075	3.9732
0.0320	0.300	0.309	0.385	0.503	0.536	0.634	0.666	0.722	0.979	1.109	1.180	1.376	5.0858
0.0400	0.362	0.377	0.473	0.624	0.670	0.789	0.828	0.896	1.222	1.383	1.472	1.713	6.3572
0.0500	0.434	0.457	0.577	0.769	0.832	0.974	1.024	1.106	1.520	1.719	1.829	2.124	7.9465
0.0600	0.500	0.532	0.676	0.906	0.989	1.152	1.211	1.306	1.808	2.043	2.174	2.521	9.5358
0.0700	0.563	0.602	0.769	1.037	1.138	1.322	1.390	1.498	2.085	2.354	2.506	2.902	11.125
0.0800	0.621	0.667	0.857	1.162	1.281	1.483	1.561	1.681	2.350	2.652	2.824	3.267	12.714
0.0900	0.677	0.729	0.942	1.280	1.417	1.637	1.725	1.856	2.604	2.937	3.128	3.617	14.304
0.1000	0.730	0.788	1.023	1.393	1.548	1.784	1.881	2.023	2.846	3.210	3.419	3.951	15.893
0.1250	0.854	0.921	1.210	1.655	1.851	2.124	2.246	2.411	3.407	3.843	4.094	4.726	19.866
0.1600	1.008	1.082	1.446	1.982	2.230	2.548	2.702	2.896	4.104	4.631	4.930	5.683	25.429
0.2000	1.167	1.241	1.687	2.311	2.614	2.975	3.162	3.386	4.803	5.419	5.767	6.637	31.786
0.2500	1.346	1.413	1.956	2.675	3.036	3.444	3.671	3.928	5.566	6.279	6.680	7.679	39.733
0.3200	1.570	1.622	2.289	3.118	3.551	4.013	4.290	4.588	6.487	7.314	7.780	8.931	50.858
0.4000	1.799	1.830	2.625	3.559	4.061	4.574	4.902	5.243	7.388	8.325	8.854	10.152	63.572
0.5000	2.058	2.062	2.997	4.042	4.618	5.183	5.569	5.957	8.356	9.410	10.007	11.461	79.465
0.6000	2.296	2.273	3.332	4.472	5.111	5.721	6.159	6.589	9.204	10.358	11.014	12.599	95.358
0.7000	2.521	2.473	3.641	4.864	5.559	6.208	6.695	7.164	9.967	11.211	11.917	13.617	111.25
0.8000	2.735	2.665	3.934	5.234	5.980	6.665	7.199	7.698	10.671	11.995	12.747	14.551	127.14
0.9000	2.942	2.851	4.212	5.582	6.377	7.092	7.673	8.206	11.336	12.736	13.532	15.432	143.04
1.0000	3.142	3.033	4.480	5.914	6.753	7.498	8.122	8.689	11.963	13.434	14.269	16.259	158.93
1.2500	3.626	3.479	5.115	6.694	7.632	8.443	9.169	9.816	13.411	15.041	15.969	18.160	198.66
1.6000	4.281	4.097	5.954	7.708	8.769	9.662	10.522	11.277	15.252	17.078	18.124	20.565	254.29
2.0000	5.017	4.802	6.877	8.805	9.994	10.970	11.977	12.851	17.205	19.227	20.398	23.094	317.86
2.5000	5.940	5.684	8.008	10.131	11.465	12.537	13.727	14.738	19.519	21.767	23.079	26.060	397.33
3.2000	7.254	6.933	9.585	11.956	13.476	14.676	16.116	17.315	22.631	25.178	26.673	30.019	508.58
4.0000	8.801	8.391	11.410	14.042	15.761	17.104	18.817	20.239	26.109	28.979	30.670	34.416	635.72
5.0000	10.813	10.274	13.748	16.692	18.646	20.164	22.213	23.915	30.427	33.703	35.613	39.841	794.65
6.0000	12.916	12.233	16.164	19.409	21.594	23.281	25.669	27.652	34.788	38.454	40.574	45.258	953.58
7.0000	15.110	14.269	18.663	22.205	24.622	26.472	29.199	31.468	39.220	43.265	45.593	50.715	1112.5
8.0000	17.397	16.384	21.249	25.084	27.735	29.746	32.810	35.374	43.724	48.157	50.687	56.246	1271.4
9.0000	19.772	18.579	23.920	28.048	30.934	33.109	36.508	39.373	48.318	53.137	55.870	61.858	1430.4
10.0000	22.232	20.852	26.677	31.094	34.222	36.559	40.300	43.463	53.011	58.209	61.141	67.560	1589.3
11.0000	24.778	23.203	29.518	34.221	37.596	40.097	44.186	47.641	57.802	63.370	66.491	73.358	1748.2
12.0000	27.407	25.630	32.442	37.431	41.055	43.721	48.165	51.907	62.687	68.619	71.931	79.259	1907.2

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.049	0.114	0.137	0.140	0.148	0.197	0.274	0.356	0.457	0.120	0.101	0.112	1.9866
0.0160	0.062	0.145	0.176	0.181	0.191	0.255	0.354	0.463	0.615	0.154	0.129	0.144	2.5429
0.0200	0.077	0.181	0.220	0.227	0.240	0.321	0.446	0.583	0.782	0.191	0.159	0.181	3.1786
0.0250	0.094	0.226	0.276	0.285	0.302	0.404	0.560	0.731	0.981	0.238	0.197	0.227	3.9732
0.0320	0.118	0.289	0.355	0.366	0.388	0.517	0.718	0.932	1.244	0.301	0.248	0.290	5.0858
0.0400	0.144	0.361	0.443	0.457	0.484	0.642	0.891	1.152	1.532	0.370	0.304	0.361	6.3572
0.0500	0.174	0.449	0.550	0.567	0.601	0.789	1.095	1.408	1.866	0.452	0.369	0.447	7.9465
0.0600	0.204	0.535	0.653	0.672	0.712	0.925	1.285	1.645	2.174	0.529	0.430	0.529	9.5358
0.0700	0.231	0.616	0.750	0.772	0.816	1.052	1.462	1.865	2.458	0.602	0.488	0.606	11.125
0.0800	0.256	0.693	0.841	0.865	0.913	1.169	1.627	2.068	2.722	0.670	0.542	0.679	12.714
0.0900	0.280	0.766	0.926	0.952	1.004	1.278	1.780	2.258	2.968	0.734	0.592	0.746	14.304
0.1000	0.303	0.833	1.006	1.034	1.090	1.380	1.923	2.435	3.199	0.794	0.640	0.810	15.893
0.1250	0.352	0.982	1.183	1.217	1.281	1.607	2.244	2.833	3.721	0.930	0.747	0.951	19.866
0.1600	0.409	1.154	1.389	1.430	1.504	1.874	2.625	3.308	4.346	1.092	0.875	1.115	25.429
0.2000	0.461	1.312	1.580	1.629	1.713	2.128	2.992	3.766	4.954	1.248	0.999	1.266	31.786
0.2500	0.514	1.472	1.775	1.831	1.928	2.397	3.383	4.259	5.615	1.413	1.129	1.420	39.733
0.3200	0.573	1.653	1.998	2.063	2.178	2.717	3.857	4.862	6.428	1.608	1.283	1.596	50.858
0.4000	0.629	1.823	2.208	2.284	2.420	3.037	4.335	5.474	7.260	1.798	1.433	1.762	63.572
0.5000	0.688	2.003	2.436	2.523	2.686	3.396	4.875	6.164	8.202	2.007	1.596	1.941	79.465
0.6000	0.742	2.163	2.645	2.743	2.929	3.726	5.373	6.801	9.069	2.196	1.746	2.104	95.358
0.7000	0.792	2.310	2.843	2.951	3.162	4.045	5.844	7.404	9.886	2.376	1.886	2.259	111.25
0.8000	0.841	2.451	3.036	3.153	3.388	4.354	6.304	7.995	10.684	2.550	2.021	2.409	127.14
0.9000	0.889	2.588	3.226	3.354	3.613	4.660	6.754	8.568	11.455	2.719	2.154	2.557	143.04
1.0000	0.938	2.724	3.416	3.553	3.836	4.963	7.196	9.125	12.205	2.887	2.285	2.705	158.93
1.2500	1.060	3.057	3.883	4.044	4.388	5.704	8.261	10.453	13.978	3.301	2.609	3.074	198.66
1.6000	1.237	3.519	4.528	4.719	5.145	6.704	9.670	12.192	16.253	3.875	3.064	3.587	254.29
2.0000	1.451	4.052	5.256	5.481	5.992	7.804	11.191	14.053	18.639	4.533	3.594	4.180	317.86
2.5000	1.736	4.733	6.161	6.432	7.033	9.132	12.994	16.233	21.395	5.363	4.274	4.936	397.33
3.2000	2.170	5.725	7.436	7.770	8.478	10.938	15.397	19.120	25.010	6.545	5.258	6.022	508.58
4.0000	2.707	6.923	8.924	9.325	10.142	12.982	18.074	22.319	28.981	7.933	6.429	7.306	635.72
5.0000	3.429	8.515	10.849	11.329	12.271	15.567	21.422	26.288	33.853	9.732	7.961	8.979	794.65
6.0000	4.197	10.205	12.853	13.411	14.475	18.218	24.822	30.301	38.733	11.606	9.564	10.729	953.58
7.0000	5.006	11.986	14.936	15.575	16.761	20.947	28.303	34.389	43.688	13.557	11.237	12.553	1112.5
8.0000	5.852	13.853	17.097	17.815	19.132	23.762	31.882	38.572	48.737	15.582	12.979	14.447	1271.4
9.0000	6.735	15.801	19.337	20.135	21.586	26.667	35.572	42.871	53.900	17.684	14.789	16.411	1430.4
10.0000	7.654	17.819	21.651	22.533	24.120	29.664	39.369	47.289	59.186	19.862	16.668	18.445	1589.3
11.0000	8.608	19.903	24.037	25.003	26.731	32.752	43.272	51.828	64.608	22.112	18.612	20.545	1748.2
12.0000	9.596	22.052	26.492	27.546	29.419	35.930	47.277	56.484	70.167	24.434	20.620	22.709	1907.2

$^{164}_{66}Dy$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=164 MEV
0.0125	8.755	7.243	5.306	3.529	2.865	2.600	2.409	2.229	1.417	1.212	1.114	0.955	2.0491
0.0160	10.104	8.359	6.124	4.072	3.307	3.001	2.780	2.572	1.635	1.399	1.286	1.102	2.6229
0.0200	11.502	9.515	6.971	4.636	3.764	3.416	3.165	2.928	1.861	1.593	1.464	1.255	3.2786
0.0250	13.092	10.831	7.935	5.277	4.285	3.888	3.602	3.333	2.119	1.813	1.670	1.428	4.0982
0.0320	15.091	12.509	9.157	6.089	4.954	4.505	4.157	3.846	2.445	2.097	1.932	1.657	5.2458
0.0400	17.136	14.270	10.423	6.952	5.670	5.170	4.764	4.409	2.804	2.413	2.220	1.907	6.5572
0.0500	19.435	16.291	11.865	7.949	6.514	5.932	5.470	5.066	3.215	2.794	2.575	2.213	8.1965
0.0600	21.525	18.215	13.189	8.890	7.307	6.634	6.133	5.685	3.640	3.165	2.921	2.513	9.8358
0.0700	23.439	20.049	14.424	9.779	8.077	7.327	6.779	6.289	4.039	3.534	3.274	2.813	11.475
0.0800	25.219	21.852	15.586	10.646	8.806	7.980	7.372	6.858	4.442	3.897	3.600	3.102	13.114
0.0900	26.887	23.599	16.689	11.482	9.513	8.645	7.961	7.410	4.857	4.247	3.939	3.396	14.754
0.1000	28.476	25.318	17.742	12.295	10.219	9.261	8.516	7.966	5.252	4.595	4.258	3.673	16.393
0.1250	32.111	29.627	20.195	14.218	11.875	10.764	9.896	9.270	6.210	5.433	5.079	4.393	20.491
0.1600	36.568	35.543	23.307	16.688	14.031	12.726	11.677	10.954	7.458	6.549	6.141	5.361	26.229
0.2000	41.068	41.679	26.530	19.287	16.316	14.777	13.557	12.708	8.808	7.773	7.296	6.367	32.786
0.2500	45.993	48.378	30.199	22.317	18.965	17.213	15.764	14.767	10.419	9.211	8.637	7.550	40.983
0.3200	51.998	56.494	34.851	26.243	22.409	20.458	18.645	17.426	12.477	11.083	10.403	9.148	52.458
0.4000	57.999	64.386	39.671	30.229	26.024	23.803	21.700	20.272	14.758	13.131	12.338	10.830	65.572
0.5000	64.088	72.021	44.817	34.644	30.027	27.563	25.098	23.395	17.299	15.417	14.498	12.773	81.965
0.6000	69.320	78.072	49.444	38.715	33.721	31.051	28.183	26.255	19.629	17.553	16.539	14.685	98.358
0.7000	73.442	82.443	53.258	42.073	36.801	33.925	30.730	28.653	21.623	19.332	18.267	16.190	114.75
0.8000	76.620	85.422	56.421	44.968	39.439	36.505	33.007	30.750	23.358	20.989	19.804	17.603	131.14
0.9000	79.259	87.587	59.060	47.367	41.756	38.744	34.964	32.542	24.983	22.443	21.203	18.899	147.54
1.0000	81.307	89.027	61.271	49.568	43.748	40.623	36.701	34.128	26.347	23.712	22.425	20.036	163.93
1.2500	84.797	90.812	65.380	53.611	47.727	44.458	40.078	37.201	29.225	26.348	24.910	22.294	204.91
1.6000	87.154	91.354	68.842	57.483	51.356	47.983	43.233	39.929	32.012	28.983	27.399	24.577	262.29
2.0000	87.802	91.629	70.866	60.023	53.929	50.598	45.354	42.023	34.015	31.039	29.338	26.433	327.86
2.5000	87.082	91.246	71.791	61.668	55.781	52.407	46.879	43.505	35.752	32.521	30.870	27.998	409.83
3.2000	85.094	89.890	71.568	62.264	56.682	53.318	47.808	44.229	36.929	33.780	32.063	29.128	524.58
4.0000	82.291	87.636	70.334	61.824	56.619	53.313	48.038	44.310	37.488	34.323	32.705	29.751	655.72
5.0000	78.763	84.428	68.252	60.472	55.694	52.554	47.367	43.818	37.539	34.263	32.829	29.963	819.65
6.0000	75.537	81.215	66.029	58.897	54.341	51.502	46.484	42.985	36.844	34.005	32.552	29.911	983.58
7.0000	72.407	78.218	63.851	57.211	52.869	50.251	45.462	42.078	36.395	33.458	32.117	29.563	1147.5
8.0000	69.636	75.382	61.788	55.610	51.470	48.936	44.488	41.089	35.714	32.933	31.636	29.164	1311.4
9.0000	67.223	72.730	59.860	54.054	50.103	47.709	43.399	40.166	35.018	32.325	31.068	28.733	1475.4
10.0000	64.920	70.262	58.068	52.667	48.777	46.512	42.331	39.312	34.260	31.763	30.602	28.279	1639.3
11.0000	62.833	68.079	56.403	51.327	47.604	45.405	41.344	38.523	33.616	31.247	30.176	27.807	1803.2
12.0000	60.946	65.993	54.857	50.030	46.464	44.379	40.430	37.742	32.969	30.720	29.623	27.319	1967.2

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	19.899	8.490	5.625	5.285	4.696	3.099	1.900	1.348	0.889	7.116	9.053	6.909	2.0491
0.0160	22.536	9.504	6.387	6.007	5.340	3.607	2.235	1.592	1.057	8.163	10.386	7.845	2.6229
0.0200	24.955	10.247	7.089	6.678	5.974	4.148	2.586	1.882	1.259	9.215	11.718	8.706	3.2786
0.0250	27.613	10.958	7.871	7.419	6.713	4.816	3.079	2.246	1.627	10.394	13.227	9.664	4.0982
0.0320	31.226	11.849	8.782	8.360	7.637	5.723	3.718	2.802	1.950	11.904	15.183	10.897	5.2458
0.0400	34.919	12.696	9.725	9.360	8.620	6.734	4.461	3.419	2.429	13.498	17.220	12.195	6.5572
0.0500	39.273	13.811	10.904	10.607	9.872	7.961	5.363	4.176	3.026	15.353	19.577	13.787	8.1965
0.0600	44.053	15.076	12.227	11.818	11.171	9.193	6.252	4.920	3.614	17.159	21.908	15.405	9.8358
0.0700	48.897	16.559	13.559	13.169	12.491	10.414	7.097	5.640	4.169	18.953	24.175	17.136	11.475
0.0800	54.085	18.158	14.979	14.558	13.856	11.643	7.980	6.359	4.723	20.761	26.450	18.953	13.114
0.0900	59.247	19.877	16.439	16.022	15.254	12.868	8.845	7.076	5.240	22.564	28.689	20.828	14.754
0.1000	64.935	21.787	18.061	17.494	16.642	14.105	9.740	7.753	5.748	24.360	30.977	22.763	16.393
0.1250	80.176	26.759	22.114	21.306	20.357	17.186	11.835	9.431	7.008	28.960	36.857	27.849	20.491
0.1600	103.249	34.424	28.248	27.222	25.824	21.512	14.753	11.747	8.717	35.590	45.215	35.660	26.229
0.2000	130.262	43.244	35.417	34.011	32.154	26.132	17.775	14.114	10.426	42.819	54.333	44.703	32.786
0.2500	163.677	54.177	43.939	42.308	39.500	31.225	21.109	16.549	12.170	51.157	64.837	55.807	40.983
0.3200	207.017	67.577	54.961	52.451	47.990	36.768	24.535	19.133	13.975	61.408	77.997	69.633	52.458
0.4000	247.547	81.722	64.902	61.688	55.857	41.694	27.571	21.462	15.630	71.130	90.569	82.357	65.572
0.5000	285.933	95.012	73.814	70.228	62.834	46.206	30.476	23.798	17.344	80.357	102.586	94.206	81.965
0.6000	313.969	105.316	79.704	75.748	67.689	49.493	32.831	25.612	18.739	87.120	111.793	102.201	98.358
0.7000	327.001	112.373	82.656	78.555	70.300	51.340	34.351	26.735	19.759	91.337	117.380	106.142	114.75
0.8000	331.194	116.228	84.012	80.118	71.599	52.359	35.433	27.647	20.537	93.885	120.516	107.991	131.14
0.9000	330.739	117.885	84.457	80.499	71.581	52.800	36.027	28.467	21.144	95.383	122.314	108.317	147.54
1.0000	330.251	119.417	85.228	80.878	72.055	53.367	36.763	29.288	21.751	96.379	123.461	108.572	163.93
1.2500	324.937	121.671	86.628	82.705	73.487	55.115	38.705	31.251	23.602	97.873	124.287	109.642	204.91
1.6000	311.168	121.851	87.981	84.125	75.314	57.483	41.237	33.526	25.954	98.100	122.746	109.322	262.29
2.0000	293.383	120.259	89.149	84.897	76.818	59.669	43.582	35.787	28.134	97.794	120.471	108.070	327.86
2.5000	271.369	116.660	89.092	84.785	78.252	61.884	45.946	38.265	30.439	96.630	116.947	105.533	409.83
3.2000	250.488	111.288	88.243	84.236	78.224	63.338	48.165	40.078	32.134	94.685	112.863	102.700	524.58
4.0000	232.102	104.938	85.808	82.291	77.367	63.301	48.531	40.864	33.057	91.856	108.244	98.960	655.72
5.0000	217.043	98.625	82.517	79.446	74.873	62.041	48.254	40.747	33.444	88.319	103.402	94.734	819.65
6.0000	205.349	93.364	79.366	76.329	72.301	60.350	47.144	40.079	33.014	84.781	98.977	90.657	983.58
7.0000	196.023	89.009	76.494	73.748	69.726	58.615	46.101	39.332	32.500	81.666	95.075	87.349	1147.5
8.0000	187.837	84.959	73.837	71.242	67.288	56.784	44.673	38.309	31.821	78.718	91.447	84.218	1311.4
9.0000	180.180	81.889	71.294	68.839	65.128	55.071	43.399	37.293	31.127	75.903	88.055	81.230	1475.4
10.0000	173.622	79.262	69.159	66.778	63.178	53.422	42.215	36.292	30.369	73.397	85.011	78.624	1639.3
11.0000	167.518	76.821	67.176	64.864	61.367	51.891	41.118	35.365	29.612	71.124	82.292	76.257	1803.2
12.0000	161.828	74.551	65.335	63.086	59.684	50.468	40.101	34.505	28.910	69.010	79.707	74.057	1967.2

$^{164}_{66}Dy$ IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=164
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.130	0.128	0.156	0.198	0.207	0.247	0.260	0.282	0.371	0.415	0.438	0.502	2.0491
0.0160	0.165	0.164	0.200	0.255	0.267	0.319	0.336	0.365	0.487	0.549	0.582	0.674	2.6229
0.0200	0.202	0.203	0.249	0.320	0.336	0.401	0.422	0.458	0.614	0.694	0.737	0.859	3.2786
0.0250	0.247	0.251	0.309	0.400	0.423	0.502	0.528	0.573	0.770	0.872	0.927	1.081	4.0982
0.0320	0.306	0.315	0.391	0.510	0.543	0.643	0.675	0.730	0.988	1.118	1.189	1.385	5.2458
0.0400	0.369	0.384	0.481	0.633	0.679	0.799	0.839	0.907	1.234	1.396	1.484	1.726	6.5572
0.0500	0.442	0.466	0.587	0.781	0.845	0.988	1.038	1.120	1.536	1.736	1.846	2.142	8.1965
0.0600	0.510	0.542	0.688	0.921	1.003	1.169	1.228	1.324	1.829	2.064	2.196	2.544	9.8358
0.0700	0.574	0.613	0.783	1.055	1.155	1.342	1.411	1.519	2.110	2.381	2.533	2.931	11.475
0.0800	0.634	0.680	0.873	1.181	1.301	1.506	1.585	1.706	2.380	2.684	2.856	3.303	13.114
0.0900	0.691	0.744	0.959	1.302	1.440	1.663	1.751	1.884	2.638	2.974	3.166	3.658	14.754
0.1000	0.745	0.803	1.042	1.418	1.573	1.813	1.911	2.054	2.885	3.251	3.462	3.998	16.393
0.1250	0.871	0.939	1.234	1.685	1.883	2.160	2.283	2.450	3.457	3.897	4.149	4.787	20.491
0.1600	1.030	1.104	1.475	2.018	2.270	2.593	2.748	2.945	4.168	4.700	5.002	5.763	26.229
0.2000	1.192	1.266	1.721	2.355	2.661	3.029	3.218	3.445	4.881	5.504	5.855	6.736	32.786
0.2500	1.374	1.442	1.996	2.726	3.092	3.508	3.737	3.998	5.660	6.382	6.787	7.799	40.983
0.3200	1.603	1.655	2.336	3.179	3.618	4.089	4.370	4.673	6.600	7.438	7.910	9.077	52.458
0.4000	1.838	1.868	2.678	3.629	4.139	4.662	4.995	5.342	7.519	8.470	9.007	10.323	65.572
0.5000	2.102	2.105	3.058	4.122	4.707	5.284	5.676	6.070	8.508	9.578	10.184	11.660	81.965
0.6000	2.345	2.321	3.400	4.561	5.210	5.833	6.277	6.715	9.373	10.545	11.211	12.820	98.358
0.7000	2.575	2.525	3.715	4.961	5.667	6.329	6.824	7.302	10.151	11.415	12.132	13.858	114.75
0.8000	2.793	2.720	4.014	5.338	6.097	6.795	7.338	7.845	10.868	12.214	12.977	14.810	131.14
0.9000	3.003	2.909	4.298	5.693	6.501	7.230	7.821	8.363	11.546	12.969	13.777	15.708	147.54
1.0000	3.207	3.095	4.570	6.031	6.884	7.643	8.278	8.855	12.185	13.679	14.528	16.550	163.93
1.2500	3.699	3.549	5.216	6.824	7.779	8.605	9.344	10.002	13.658	15.315	16.258	18.484	204.91
1.6000	4.365	4.177	6.069	7.855	8.935	9.844	10.719	11.487	15.529	17.386	18.449	20.929	262.29
2.0000	5.113	4.893	7.006	8.969	10.178	11.173	12.197	13.085	17.513	19.568	20.757	23.497	327.86
2.5000	6.049	5.788	8.153	10.314	11.670	12.762	13.972	14.999	19.859	22.144	23.476	26.505	409.83
3.2000	7.380	7.053	9.752	12.164	13.708	14.930	16.392	17.611	23.013	25.601	27.118	30.518	524.58
4.0000	8.946	8.529	11.599	14.276	16.021	17.387	19.127	20.571	26.535	29.449	31.165	34.969	655.72
5.0000	10.982	10.434	13.964	16.956	18.939	20.483	22.562	24.290	30.902	34.227	36.165	40.456	819.65
6.0000	13.107	12.414	16.406	19.702	21.919	23.634	26.055	28.066	35.310	39.029	41.179	45.931	983.58
7.0000	15.324	14.471	18.931	22.526	24.978	26.856	29.621	31.921	39.786	43.889	46.249	51.444	1147.5
8.0000	17.633	16.606	21.541	25.433	28.120	30.162	33.266	35.864	44.334	48.827	51.392	57.027	1311.4
9.0000	20.029	18.820	24.237	28.423	31.349	33.555	36.998	39.900	48.969	53.852	56.621	62.690	1475.4
10.0000	22.511	21.114	27.018	31.496	34.665	37.036	40.823	44.026	53.703	58.969	61.938	68.442	1639.3
11.0000	25.078	23.485	29.883	34.650	38.068	40.603	44.742	48.238	58.534	64.173	67.334	74.288	1803.2
12.0000	27.727	25.931	32.830	37.885	41.554	44.256	48.752	52.538	63.459	69.464	72.817	80.237	1967.2

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.050	0.116	0.139	0.143	0.150	0.200	0.277	0.359	0.459	0.122	0.103	0.114	2.0491
0.0160	0.064	0.148	0.179	0.184	0.194	0.258	0.358	0.467	0.618	0.156	0.131	0.147	2.6229
0.0200	0.078	0.185	0.224	0.231	0.244	0.326	0.451	0.588	0.787	0.195	0.162	0.184	3.2786
0.0250	0.096	0.230	0.281	0.290	0.306	0.409	0.567	0.737	0.987	0.242	0.201	0.231	4.0982
0.0320	0.120	0.294	0.361	0.372	0.394	0.525	0.726	0.941	1.253	0.306	0.253	0.295	5.2458
0.0400	0.147	0.368	0.451	0.465	0.492	0.652	0.902	1.164	1.544	0.377	0.309	0.368	6.5572
0.0500	0.178	0.458	0.560	0.577	0.611	0.801	1.110	1.424	1.884	0.461	0.376	0.456	8.1965
0.0600	0.208	0.545	0.665	0.684	0.724	0.940	1.303	1.665	2.196	0.539	0.439	0.539	9.8358
0.0700	0.236	0.628	0.763	0.786	0.830	1.069	1.483	1.889	2.485	0.613	0.497	0.618	11.475
0.0800	0.262	0.707	0.856	0.881	0.930	1.189	1.651	2.096	2.753	0.683	0.552	0.691	13.114
0.0900	0.286	0.781	0.943	0.970	1.023	1.300	1.808	2.289	3.004	0.748	0.604	0.761	14.754
0.1000	0.309	0.849	1.025	1.053	1.110	1.404	1.953	2.470	3.239	0.809	0.653	0.825	16.393
0.1250	0.359	1.002	1.206	1.240	1.305	1.636	2.281	2.877	3.771	0.948	0.763	0.969	20.491
0.1600	0.417	1.177	1.416	1.458	1.533	1.909	2.670	3.361	4.409	1.114	0.893	1.137	26.229
0.2000	0.471	1.339	1.612	1.661	1.746	2.169	3.045	3.829	5.030	1.273	1.019	1.291	32.786
0.2500	0.525	1.502	1.811	1.868	1.966	2.443	3.444	4.332	5.704	1.442	1.152	1.449	40.983
0.3200	0.585	1.687	2.038	2.104	2.221	2.770	3.928	4.948	6.535	1.641	1.309	1.628	52.458
0.4000	0.642	1.861	2.253	2.330	2.469	3.097	4.416	5.573	7.384	1.835	1.463	1.798	65.572
0.5000	0.703	2.044	2.486	2.575	2.740	3.463	4.968	6.278	8.345	2.048	1.630	1.981	81.965
0.6000	0.757	2.208	2.699	2.799	2.988	3.800	5.476	6.927	9.230	2.242	1.783	2.148	98.358
0.7000	0.808	2.358	2.901	3.011	3.225	4.125	5.956	7.542	10.063	2.425	1.926	2.305	114.75
0.8000	0.858	2.502	3.097	3.217	3.456	4.441	6.425	8.145	10.876	2.602	2.063	2.458	131.14
0.9000	0.908	2.642	3.292	3.421	3.685	4.752	6.884	8.728	11.662	2.775	2.198	2.609	147.54
1.0000	0.957	2.780	3.485	3.624	3.913	5.061	7.334	9.296	12.426	2.946	2.331	2.760	163.93
1.2500	1.082	3.119	3.960	4.124	4.475	5.815	8.418	10.647	14.231	3.367	2.661	3.135	204.91
1.6000	1.262	3.588	4.616	4.810	5.244	6.831	9.850	12.415	16.543	3.951	3.124	3.657	262.29
2.0000	1.478	4.129	5.355	5.584	6.104	7.949	11.394	14.305	18.965	4.619	3.662	4.259	327.86
2.5000	1.768	4.820	6.273	6.549	7.160	9.295	13.223	16.516	21.761	5.461	4.352	5.026	409.83
3.2000	2.208	5.826	7.565	7.905	8.624	11.126	15.658	19.442	25.425	6.659	5.349	6.126	524.58
4.0000	2.751	7.038	9.071	9.479	10.309	13.195	18.369	22.680	29.445	8.064	6.535	7.426	655.72
5.0000	3.481	8.649	11.019	11.505	12.462	15.810	21.754	26.695	34.372	9.883	8.084	9.119	819.65
6.0000	4.258	10.357	13.044	13.610	14.690	18.489	25.191	30.751	39.305	11.777	9.704	10.887	983.58
7.0000	5.075	12.156	15.148	15.795	16.999	21.245	28.708	34.880	44.309	13.748	11.394	12.730	1147.5
8.0000	5.929	14.041	17.330	18.057	19.392	24.087	32.320	39.103	49.407	15.793	13.153	14.641	1311.4
9.0000	6.820	16.007	19.590	20.399	21.869	27.019	36.044	43.441	54.617	17.914	14.980	16.624	1475.4
10.0000	7.747	18.042	21.925	22.817	24.425	30.042	39.874	47.898	59.949	20.110	16.875	18.675	1639.3
11.0000	8.709	20.143	24.330	25.308	27.058	33.156	43.809	52.474	65.416	22.379	18.835	20.793	1803.2
12.0000	9.705	22.309	26.805	27.871	29.767	36.359	47.847	57.167	71.020	24.720	20.859	22.974	1967.2

$^{165}_{67}Ho$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=165 MEV
0.0125	8.805	7.284	5.336	3.549	2.882	2.615	2.423	2.241	1.425	1.219	1.121	0.961	2.0616
0.0160	10.164	8.409	6.160	4.096	3.326	3.018	2.797	2.587	1.645	1.408	1.294	1.109	2.6389
0.0200	11.572	9.574	7.014	4.664	3.787	3.437	3.184	2.946	1.873	1.603	1.473	1.262	3.2986
0.0250	13.176	10.900	7.985	5.310	4.312	3.913	3.625	3.354	2.132	1.825	1.681	1.437	4.1232
0.0320	15.191	12.592	9.218	6.130	4.987	4.535	4.185	3.872	2.461	2.111	1.945	1.668	5.2778
0.0400	17.254	14.368	10.495	7.000	5.709	5.206	4.796	4.439	2.823	2.430	2.235	1.921	6.5972
0.0500	19.573	16.406	11.949	8.006	6.560	5.975	5.509	5.102	3.238	2.814	2.593	2.229	8.2465
0.0600	21.682	18.348	13.286	8.955	7.360	6.683	6.178	5.726	3.667	3.189	2.943	2.531	9.8958
0.0700	23.614	20.199	14.532	9.852	8.138	7.382	6.830	6.336	4.069	3.560	3.299	2.834	11.545
0.0800	25.411	22.018	15.705	10.726	8.873	8.041	7.428	6.910	4.476	3.926	3.628	3.125	13.194
0.0900	27.094	23.781	16.818	11.571	9.586	8.712	8.022	7.467	4.894	4.280	3.969	3.423	14.844
0.1000	28.699	25.516	17.881	12.391	10.299	9.334	8.583	8.029	5.293	4.631	4.291	3.701	16.493
0.1250	32.370	29.866	20.358	14.332	11.971	10.851	9.976	9.344	6.260	5.476	5.120	4.428	20.616
0.1600	36.873	35.839	23.501	16.827	14.148	12.831	11.774	11.045	7.520	6.604	6.192	5.405	26.389
0.2000	41.420	42.035	26.757	19.452	16.456	14.904	13.673	12.817	8.883	7.840	7.358	6.422	32.986
0.2500	46.397	48.804	30.464	22.513	19.132	17.365	15.902	14.897	10.510	9.292	8.713	7.616	41.233
0.3200	52.469	57.005	35.167	26.481	22.612	20.643	18.814	17.583	12.590	11.183	10.497	9.231	52.778
0.4000	58.537	64.984	40.039	30.510	26.266	24.024	21.901	20.460	14.895	13.253	12.452	10.931	65.972
0.5000	64.743	72.756	45.275	34.997	30.334	27.844	25.354	23.633	17.476	15.574	14.646	12.903	82.465
0.6000	70.065	78.911	49.975	39.130	34.083	31.384	28.486	26.537	19.840	17.741	16.717	14.843	98.958
0.7000	74.272	83.374	53.859	42.549	37.217	34.308	31.077	28.976	21.867	19.551	18.474	16.373	115.45
0.8000	77.527	86.433	57.089	45.500	39.905	36.937	33.397	31.114	23.635	21.237	20.038	17.812	131.94
0.9000	80.237	88.667	59.789	47.951	42.271	39.222	35.395	32.944	25.291	22.720	21.464	19.133	148.44
1.0000	82.348	90.167	62.056	50.203	44.308	41.143	37.172	34.565	26.684	24.016	22.712	20.292	164.93
1.2500	85.972	92.070	66.285	54.354	48.388	45.074	40.633	37.716	29.629	26.713	25.255	22.603	206.16
1.6000	88.464	92.726	69.877	58.347	52.128	48.704	43.883	40.528	32.493	29.418	27.811	24.946	263.89
2.0000	89.213	93.101	72.004	60.987	54.795	51.411	46.083	42.698	34.562	31.538	29.810	26.858	329.86
2.5000	88.569	92.804	73.017	62.721	56.734	53.302	47.680	44.248	36.362	33.076	31.397	28.476	412.33
3.2000	86.637	91.519	72.866	63.393	57.710	54.285	48.674	45.031	37.599	34.393	32.644	29.656	527.78
4.0000	83.857	89.305	71.673	63.001	57.697	54.328	48.953	45.154	38.202	34.976	33.328	30.318	659.72
5.0000	80.331	86.108	69.611	61.675	56.802	53.600	48.310	44.690	38.286	34.945	33.483	30.559	824.65
6.0000	77.091	82.886	67.387	60.110	55.460	52.562	47.441	43.869	37.602	34.704	33.222	30.526	989.58
7.0000	73.938	79.871	65.201	58.420	53.987	51.313	46.423	42.968	37.165	34.165	32.796	30.188	1154.5
8.0000	71.141	77.012	63.124	56.812	52.583	49.995	45.450	41.978	36.486	33.645	32.320	29.795	1319.4
9.0000	68.705	74.333	61.180	55.245	51.207	48.760	44.355	41.052	35.790	33.037	31.752	29.366	1484.4
10.0000	66.375	71.837	59.369	53.848	49.870	47.555	43.280	40.193	35.028	32.475	31.288	28.913	1649.3
11.0000	64.263	69.628	57.687	52.495	48.688	46.438	42.284	39.400	34.381	31.958	30.862	28.440	1814.2
12.0000	62.352	67.515	56.123	51.184	47.536	45.403	41.362	38.612	33.730	31.429	30.306	27.949	1979.2

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	20.011	8.538	5.657	5.315	4.723	3.116	1.910	1.355	0.894	7.156	9.104	6.948	2.0616
0.0160	22.669	9.560	6.425	6.043	5.372	3.628	2.248	1.602	1.063	8.211	10.448	7.891	2.6389
0.0200	25.109	10.310	7.133	6.719	6.011	4.173	2.602	1.894	1.267	9.272	11.790	8.760	3.2986
0.0250	27.789	11.028	7.921	7.466	6.756	4.847	3.098	2.260	1.637	10.461	13.312	9.726	4.1232
0.0320	31.433	11.928	8.840	8.416	7.688	5.761	3.743	2.821	1.963	11.983	15.283	10.969	5.2778
0.0400	35.159	12.783	9.792	9.425	8.679	6.780	4.492	3.442	2.445	13.591	17.338	12.279	6.5972
0.0500	39.552	13.909	10.981	10.683	9.942	8.018	5.401	4.206	3.047	15.462	19.716	13.885	8.2465
0.0600	44.374	15.186	12.316	11.904	11.253	9.260	6.297	4.956	3.640	17.285	22.068	15.518	9.8958
0.0700	49.262	16.682	13.660	13.267	12.584	10.492	7.150	5.682	4.200	19.095	24.355	17.264	11.545
0.0800	54.496	18.296	15.092	14.668	13.962	11.732	8.041	6.408	4.759	20.919	26.651	19.097	13.194
0.0900	59.705	20.031	16.566	16.146	15.372	12.967	8.914	7.131	5.281	22.738	28.911	20.989	14.844
0.1000	65.444	21.958	18.203	17.631	16.772	14.215	9.817	7.814	5.793	24.550	31.220	22.941	16.493
0.1250	80.823	26.975	22.292	21.478	20.521	17.325	11.930	9.507	7.064	29.194	37.154	28.074	20.616
0.1600	104.109	34.711	28.483	27.449	26.039	21.691	14.876	11.844	8.789	35.886	45.592	35.956	26.389
0.2000	131.377	43.614	35.721	34.302	32.429	26.356	17.927	14.235	10.515	43.186	54.798	45.086	32.986
0.2500	165.116	54.653	44.325	42.680	39.847	31.500	21.294	16.694	12.277	51.606	65.407	56.298	41.233
0.3200	208.891	68.188	55.458	52.926	48.425	37.101	24.757	19.307	14.102	61.964	78.703	70.263	52.778
0.4000	249.844	82.481	65.504	62.261	56.375	42.081	27.827	21.661	15.775	71.790	91.409	83.121	65.972
0.5000	288.851	95.982	74.567	70.945	63.475	46.678	30.787	24.041	17.521	81.177	103.633	95.167	82.465
0.6000	317.342	106.447	80.560	76.562	68.416	50.025	33.183	25.887	18.941	88.056	112.994	103.298	98.958
0.7000	330.695	113.643	83.589	79.442	71.094	51.920	34.739	27.037	19.982	92.369	118.706	107.341	115.45
0.8000	335.113	117.603	85.006	81.066	72.446	52.979	35.852	27.974	20.780	94.996	121.942	109.268	131.94
0.9000	334.820	119.339	85.499	81.493	72.465	53.452	36.471	28.818	21.405	96.560	123.823	109.653	148.44
1.0000	334.482	120.947	86.320	81.914	72.978	54.051	37.234	29.663	22.030	97.614	125.043	109.963	164.93
1.2500	329.437	123.357	87.828	83.851	74.505	55.878	39.241	31.684	23.929	99.229	126.008	111.160	206.16
1.6000	315.842	123.682	89.302	85.389	76.445	58.347	41.856	34.030	26.343	99.574	124.590	110.964	263.89
2.0000	298.097	122.191	90.581	86.261	78.052	60.627	44.283	36.362	28.586	99.366	122.407	109.806	329.86
2.5000	276.002	118.652	90.613	86.233	79.588	62.940	46.731	38.918	30.959	98.280	118.944	107.334	412.33
3.2000	255.030	113.306	89.843	85.763	79.642	64.486	49.039	40.805	32.717	96.401	114.909	104.562	527.78
4.0000	236.521	106.936	87.441	83.857	78.840	64.506	49.454	41.642	33.686	93.605	110.305	100.844	659.72
5.0000	221.362	100.587	84.159	81.027	76.363	63.276	49.215	41.558	34.109	90.076	105.460	96.620	824.65
6.0000	209.575	95.286	81.000	77.900	73.789	61.592	48.115	40.904	33.694	86.525	101.014	92.523	989.58
7.0000	200.167	90.890	78.111	75.307	71.200	59.855	47.075	40.164	33.187	83.392	97.084	89.195	1154.5
8.0000	191.898	86.796	75.434	72.782	68.742	58.011	45.639	39.137	32.509	80.420	93.424	86.039	1319.4
9.0000	184.151	83.694	72.865	70.357	66.564	56.285	44.355	38.115	31.813	77.576	89.995	83.021	1484.4
10.0000	177.514	81.039	70.709	68.275	64.594	54.620	43.162	37.106	31.050	75.043	86.917	80.386	1649.3
11.0000	171.330	78.569	68.705	66.340	62.763	53.072	42.054	36.170	30.286	72.743	84.165	77.993	1814.2
12.0000	165.561	76.271	66.842	64.541	61.061	51.633	41.026	35.301	29.577	70.602	81.546	75.765	1979.2

$^{165}_{67}Ho$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=165 MEV
0.0125	0.130	0.128	0.155	0.197	0.205	0.245	0.257	0.279	0.367	0.410	0.432	0.495	2.0616
0.0160	0.164	0.163	0.199	0.253	0.265	0.317	0.333	0.362	0.482	0.543	0.575	0.667	2.6389
0.0200	0.201	0.202	0.248	0.317	0.334	0.397	0.418	0.454	0.608	0.687	0.730	0.850	3.2986
0.0250	0.246	0.249	0.307	0.397	0.419	0.498	0.523	0.568	0.763	0.863	0.918	1.070	4.1232
0.0320	0.304	0.313	0.389	0.507	0.539	0.637	0.669	0.724	0.979	1.107	1.178	1.372	5.2778
0.0400	0.367	0.382	0.478	0.629	0.674	0.793	0.832	0.900	1.223	1.383	1.471	1.710	6.5972
0.0500	0.440	0.463	0.584	0.775	0.838	0.981	1.030	1.111	1.523	1.720	1.829	2.122	8.2465
0.0600	0.508	0.539	0.684	0.915	0.996	1.161	1.219	1.314	1.813	2.046	2.177	2.522	9.8958
0.0700	0.571	0.610	0.778	1.047	1.147	1.332	1.400	1.508	2.093	2.361	2.511	2.906	11.545
0.0800	0.631	0.677	0.868	1.174	1.291	1.496	1.573	1.693	2.361	2.662	2.832	3.274	13.194
0.0900	0.688	0.740	0.954	1.294	1.430	1.652	1.739	1.871	2.618	2.950	3.140	3.627	14.844
0.1000	0.742	0.799	1.036	1.409	1.562	1.801	1.898	2.040	2.863	3.226	3.434	3.966	16.493
0.1250	0.868	0.935	1.227	1.675	1.871	2.147	2.268	2.434	3.432	3.868	4.118	4.750	20.616
0.1600	1.026	1.099	1.467	2.007	2.256	2.578	2.731	2.927	4.139	4.667	4.966	5.721	26.389
0.2000	1.187	1.261	1.713	2.342	2.645	3.012	3.200	3.425	4.849	5.468	5.816	6.690	32.986
0.2500	1.369	1.436	1.987	2.712	3.075	3.489	3.717	3.976	5.625	6.341	6.744	7.749	41.233
0.3200	1.597	1.649	2.325	3.163	3.599	4.068	4.347	4.648	6.561	7.394	7.862	9.022	52.778
0.4000	1.831	1.861	2.667	3.612	4.118	4.639	4.970	5.314	7.477	8.422	8.955	10.263	65.972
0.5000	2.095	2.097	3.045	4.104	4.684	5.259	5.648	6.040	8.462	9.525	10.127	11.593	82.465
0.6000	2.337	2.311	3.386	4.541	5.185	5.805	6.247	6.682	9.323	10.488	11.149	12.748	98.958
0.7000	2.565	2.514	3.699	4.938	5.639	6.299	6.791	7.265	10.097	11.353	12.065	13.780	115.45
0.8000	2.782	2.709	3.996	5.313	6.067	6.762	7.302	7.806	10.810	12.147	12.906	14.727	131.94
0.9000	2.991	2.897	4.278	5.666	6.468	7.195	7.781	8.321	11.484	12.898	13.700	15.620	148.44
1.0000	3.194	3.081	4.549	6.002	6.849	7.605	8.236	8.809	12.118	13.603	14.447	16.457	164.93
1.2500	3.682	3.532	5.190	6.789	7.737	8.560	9.294	9.948	13.581	15.227	16.165	18.377	206.16
1.6000	4.342	4.155	6.036	7.811	8.884	9.789	10.658	11.421	15.437	17.281	18.337	20.802	263.89
2.0000	5.084	4.864	6.965	8.915	10.116	11.105	12.122	13.004	17.402	19.443	20.624	23.346	329.86
2.5000	6.010	5.750	8.100	10.247	11.593	12.678	13.879	14.898	19.725	21.993	23.315	26.323	412.33
3.2000	7.326	7.001	9.681	12.075	13.607	14.821	16.272	17.481	22.842	25.410	26.916	30.290	527.78
4.0000	8.873	8.459	11.505	14.161	15.892	17.249	18.972	20.405	26.321	29.211	30.913	34.686	659.72
5.0000	10.881	10.339	13.839	16.806	18.772	20.304	22.362	24.074	30.631	33.926	35.847	40.102	824.65
6.0000	12.977	12.291	16.247	19.514	21.710	23.411	25.807	27.799	34.977	38.662	40.792	45.501	989.58
7.0000	15.162	14.318	18.735	22.298	24.724	26.586	29.322	31.598	39.389	43.451	45.788	50.934	1154.5
8.0000	17.436	16.422	21.306	25.161	27.820	29.843	32.912	35.482	43.868	48.316	50.854	56.433	1319.4
9.0000	19.796	18.602	23.961	28.105	30.999	33.184	36.586	39.455	48.433	53.264	56.003	62.010	1484.4
10.0000	22.238	20.859	26.698	31.130	34.263	36.609	40.351	43.516	53.092	58.300	61.237	67.670	1649.3
11.0000	24.764	23.191	29.516	34.232	37.611	40.120	44.207	47.661	57.845	63.420	66.545	73.423	1814.2
12.0000	27.370	25.597	32.415	37.414	41.039	43.712	48.151	51.890	62.689	68.624	71.938	79.273	1979.2

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.050	0.116	0.138	0.142	0.149	0.198	0.274	0.355	0.453	0.121	0.102	0.114	2.0616
0.0160	0.063	0.147	0.177	0.182	0.192	0.256	0.355	0.463	0.611	0.155	0.130	0.146	2.6389
0.0200	0.078	0.183	0.223	0.229	0.242	0.323	0.447	0.583	0.779	0.194	0.161	0.183	3.2986
0.0250	0.096	0.229	0.279	0.288	0.304	0.406	0.562	0.731	0.977	0.241	0.200	0.229	4.1232
0.0320	0.120	0.293	0.358	0.370	0.391	0.521	0.720	0.933	1.241	0.304	0.251	0.293	5.2778
0.0400	0.146	0.365	0.448	0.462	0.489	0.647	0.894	1.154	1.530	0.375	0.308	0.366	6.5972
0.0500	0.177	0.455	0.556	0.573	0.607	0.795	1.101	1.412	1.867	0.458	0.374	0.453	8.2465
0.0600	0.207	0.542	0.660	0.680	0.719	0.933	1.293	1.652	2.177	0.536	0.436	0.536	9.8958
0.0700	0.234	0.625	0.759	0.781	0.825	1.062	1.472	1.874	2.464	0.610	0.495	0.614	11.545
0.0800	0.260	0.703	0.851	0.875	0.924	1.181	1.639	2.080	2.731	0.679	0.550	0.687	13.194
0.0900	0.285	0.777	0.938	0.964	1.016	1.292	1.795	2.272	2.980	0.744	0.601	0.756	14.844
0.1000	0.307	0.845	1.019	1.047	1.103	1.395	1.940	2.452	3.214	0.805	0.650	0.821	16.493
0.1250	0.358	0.997	1.199	1.233	1.297	1.626	2.266	2.857	3.744	0.944	0.759	0.964	20.616
0.1600	0.415	1.172	1.409	1.450	1.525	1.898	2.654	3.339	4.379	1.109	0.889	1.131	26.389
0.2000	0.469	1.333	1.604	1.652	1.737	2.157	3.027	3.805	4.997	1.267	1.015	1.285	32.986
0.2500	0.523	1.496	1.802	1.859	1.956	2.430	3.425	4.307	5.669	1.435	1.148	1.442	41.233
0.3200	0.583	1.680	2.028	2.094	2.211	2.757	3.907	4.920	6.496	1.634	1.304	1.621	52.778
0.4000	0.640	1.853	2.243	2.319	2.457	3.082	4.394	5.543	7.343	1.828	1.457	1.790	65.972
0.5000	0.700	2.036	2.475	2.563	2.728	3.447	4.943	6.245	8.300	2.040	1.624	1.972	82.465
0.6000	0.754	2.199	2.687	2.786	2.975	3.783	5.449	6.892	9.181	2.233	1.776	2.138	98.958
0.7000	0.805	2.349	2.888	2.997	3.211	4.106	5.926	7.504	10.010	2.415	1.918	2.295	115.45
0.8000	0.855	2.491	3.083	3.203	3.440	4.420	6.393	8.103	10.804	2.591	2.055	2.447	131.94
0.9000	0.904	2.630	3.277	3.405	3.668	4.730	6.849	8.683	11.585	2.763	2.189	2.597	148.44
1.0000	0.953	2.767	3.468	3.607	3.894	5.036	7.296	9.247	12.344	2.933	2.321	2.748	164.93
1.2500	1.077	3.104	3.941	4.103	4.452	5.784	8.372	10.589	14.136	3.351	2.649	3.119	206.16
1.6000	1.255	3.570	4.591	4.783	5.214	6.793	9.793	12.342	16.429	3.930	3.108	3.638	263.89
2.0000	1.470	4.106	5.323	5.551	6.067	7.900	11.322	14.214	18.828	4.592	3.641	4.234	329.86
2.5000	1.757	4.789	6.231	6.505	7.112	9.233	13.132	16.403	21.596	5.425	4.323	4.992	412.33
3.2000	2.191	5.783	7.509	7.846	8.560	11.042	15.540	19.295	25.218	6.609	5.310	6.081	527.78
4.0000	2.728	6.981	8.997	9.401	10.223	13.086	18.217	22.493	29.189	7.997	6.481	7.364	659.72
5.0000	3.449	8.571	10.918	11.401	12.348	15.667	21.559	26.456	34.051	9.792	8.009	9.035	824.65
6.0000	4.214	10.255	12.916	13.476	14.545	18.308	24.948	30.456	38.916	11.661	9.607	10.779	989.58
7.0000	5.020	12.028	14.990	15.630	16.821	21.025	28.413	34.525	43.848	13.602	11.273	12.595	1154.5
8.0000	5.861	13.885	17.138	17.858	19.179	23.824	31.972	38.685	48.869	15.617	13.005	14.478	1319.4
9.0000	6.739	15.820	19.363	20.163	21.617	26.711	35.638	42.956	53.999	17.705	14.804	16.429	1484.4
10.0000	7.651	17.823	21.662	22.543	24.133	29.686	39.408	47.342	59.247	19.867	16.669	18.449	1649.3
11.0000	8.597	19.891	24.028	24.994	26.723	32.750	43.280	51.845	64.626	22.100	18.597	20.532	1814.2
12.0000	9.576	22.021	26.462	27.515	29.388	35.901	47.251	56.461	70.137	24.401	20.588	22.678	1979.2

$^{166}_{68}Er$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=166 MEV
0.0125	8.855	7.325	5.366	3.569	2.898	2.630	2.436	2.254	1.433	1.226	1.127	0.966	2.0741
0.0160	10.224	8.458	6.196	4.121	3.346	3.036	2.813	2.602	1.654	1.416	1.301	1.115	2.6549
0.0200	11.643	9.632	7.056	4.693	3.810	3.458	3.204	2.964	1.884	1.612	1.482	1.270	3.3186
0.0250	13.259	10.969	8.036	5.344	4.339	3.938	3.648	3.375	2.146	1.836	1.692	1.446	4.1482
0.0320	15.291	12.675	9.279	6.170	5.020	4.565	4.213	3.897	2.477	2.125	1.958	1.679	5.3098
0.0400	17.372	14.466	10.567	7.048	5.748	5.241	4.829	4.470	2.842	2.446	2.251	1.934	6.6372
0.0500	19.711	16.522	12.034	8.062	6.606	6.017	5.547	5.138	3.261	2.834	2.611	2.244	8.2965
0.0600	21.839	18.480	13.382	9.019	7.414	6.731	6.223	5.768	3.693	3.212	2.964	2.549	9.9558
0.0700	23.789	20.348	14.639	9.925	8.198	7.437	6.880	6.383	4.099	3.587	3.323	2.855	11.615
0.0800	25.602	22.184	15.823	10.807	8.940	8.102	7.484	6.962	4.510	3.956	3.655	3.149	13.274
0.0900	27.302	23.963	16.947	11.660	9.660	8.779	8.084	7.524	4.932	4.313	3.999	3.449	14.934
0.1000	28.922	25.714	18.020	12.488	10.379	9.406	8.649	8.091	5.334	4.667	4.325	3.730	16.593
0.1250	32.629	30.104	20.521	14.447	12.066	10.938	10.055	9.419	6.310	5.520	5.161	4.463	20.741
0.1600	37.177	36.134	23.695	16.965	14.264	12.937	11.871	11.137	7.582	6.658	6.244	5.450	26.549
0.2000	41.771	42.392	26.984	19.617	16.595	15.030	13.789	12.925	8.959	7.906	7.421	6.476	33.186
0.2500	46.801	49.229	30.730	22.709	19.298	17.516	16.041	15.027	10.602	9.372	8.789	7.682	41.483
0.3200	52.939	57.516	35.482	26.718	22.815	20.828	18.983	17.741	12.703	11.283	10.591	9.314	53.098
0.4000	59.075	65.581	40.407	30.790	26.507	24.244	22.103	20.648	15.031	13.375	12.567	11.031	66.372
0.5000	65.390	73.484	45.727	35.347	30.637	28.122	25.607	23.870	17.651	15.730	14.793	13.032	82.965
0.6000	70.802	79.740	50.501	39.542	34.441	31.714	28.785	26.816	20.049	17.928	16.892	14.999	99.558
0.7000	75.093	84.295	54.454	43.019	37.628	34.687	31.420	29.296	22.109	19.767	18.678	16.554	116.15
0.8000	78.424	87.433	57.750	46.027	40.367	37.364	33.784	31.474	23.908	21.483	20.270	18.018	132.74
0.9000	81.206	89.738	60.511	48.530	42.781	39.695	35.823	33.342	25.596	22.994	21.724	19.364	149.34
1.0000	83.382	91.299	62.835	50.833	44.864	41.659	37.638	34.999	27.019	24.317	22.997	20.547	165.93
1.2500	87.140	93.321	67.186	55.092	49.046	45.686	41.185	38.229	30.032	27.076	25.598	22.910	207.41
1.6000	89.770	94.096	70.908	59.209	52.898	49.423	44.531	41.127	32.972	29.852	28.222	25.314	265.49
2.0000	90.624	94.574	73.143	61.952	55.662	52.224	46.811	43.374	35.109	32.037	30.281	27.282	331.86
2.5000	90.059	94.365	74.245	63.776	57.688	54.199	48.482	44.992	36.974	33.633	31.925	28.956	414.83
3.2000	88.187	93.156	74.169	64.527	58.742	55.256	49.545	45.836	38.271	35.008	33.228	30.187	530.98
4.0000	85.432	90.982	73.019	64.184	58.780	55.348	49.872	46.002	38.919	35.633	33.954	30.887	663.72
5.0000	81.908	87.799	70.977	62.886	57.917	54.652	49.258	45.567	39.037	35.630	34.140	31.159	829.65
6.0000	78.656	84.569	68.755	61.330	56.586	53.629	48.404	44.760	38.365	35.409	33.896	31.146	995.58
7.0000	75.480	81.537	66.560	59.638	55.112	52.383	47.391	43.863	37.939	34.878	33.480	30.817	1161.5
8.0000	72.658	78.653	64.470	58.023	53.704	51.060	46.418	42.873	37.264	34.363	33.009	30.430	1327.4
9.0000	70.198	75.949	62.509	56.446	52.320	49.820	45.319	41.944	36.568	33.755	32.442	30.004	1493.4
10.0000	67.842	73.424	60.681	55.038	50.972	48.606	44.237	41.081	35.802	33.193	31.979	29.552	1659.3
11.0000	65.704	71.190	58.981	53.672	49.780	47.479	43.233	40.284	35.152	32.675	31.555	29.077	1825.2
12.0000	63.770	69.050	57.398	52.347	48.616	46.435	42.303	39.490	34.496	32.143	30.995	28.584	1991.2

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	20.124	8.586	5.688	5.345	4.749	3.134	1.921	1.363	0.899	7.196	9.155	6.987	2.0741
0.0160	22.802	9.617	6.463	6.079	5.403	3.650	2.262	1.611	1.069	8.260	10.509	7.937	2.6549
0.0200	25.262	10.373	7.176	6.760	6.047	4.199	2.618	1.905	1.274	9.329	11.862	8.813	3.3186
0.0250	27.965	11.098	7.972	7.514	6.798	4.878	3.118	2.274	1.647	10.527	13.396	9.788	4.1482
0.0320	31.640	12.007	8.898	8.471	7.738	5.799	3.767	2.839	1.976	12.062	15.384	11.042	5.3098
0.0400	35.399	12.870	9.859	9.489	8.739	6.826	4.523	3.466	2.462	13.684	17.456	12.363	6.6372
0.0500	39.831	14.007	11.059	10.758	10.012	8.074	5.439	4.236	3.069	15.571	19.855	13.983	8.2965
0.0600	44.695	15.295	12.405	11.990	11.334	9.327	6.343	4.991	3.667	17.410	22.227	15.630	9.9558
0.0700	49.627	16.806	13.761	13.366	12.677	10.569	7.202	5.724	4.231	19.236	24.535	17.391	11.615
0.0800	54.907	18.434	15.206	14.779	14.067	11.820	8.102	6.456	4.794	21.077	26.852	19.241	13.274
0.0900	60.162	20.184	16.693	16.269	15.490	13.066	8.982	7.186	5.321	22.912	29.132	21.150	14.934
0.1000	65.952	22.128	18.344	17.767	16.902	14.326	9.893	7.875	5.838	24.741	31.462	23.119	16.593
0.1250	81.469	27.190	22.471	21.650	20.685	17.463	12.025	9.583	7.121	29.427	37.451	28.299	20.741
0.1600	104.968	34.997	28.718	27.675	26.254	21.870	14.999	11.942	8.862	36.182	45.968	36.253	26.549
0.2000	132.491	43.984	36.023	34.593	32.704	26.579	18.079	14.355	10.605	43.552	55.263	45.468	33.186
0.2500	165.554	55.129	44.711	43.052	40.194	31.774	21.480	16.840	12.384	52.056	65.976	56.788	41.483
0.3200	210.763	68.799	55.955	53.400	48.859	37.433	24.979	19.480	14.228	62.519	79.409	70.893	53.098
0.4000	252.141	83.239	66.106	62.833	56.893	42.468	28.083	21.860	15.920	72.450	92.250	83.885	66.372
0.5000	291.740	96.942	75.313	71.655	64.110	47.145	31.095	24.281	17.696	81.989	104.670	96.119	82.965
0.6000	320.679	107.566	81.407	77.367	69.135	50.551	33.532	26.159	19.140	88.982	114.182	104.385	99.558
0.7000	334.350	114.899	84.513	80.320	71.880	52.494	35.123	27.336	20.203	93.389	120.018	108.528	116.15
0.8000	338.992	118.965	85.990	82.005	73.285	53.592	36.267	28.297	21.021	96.096	123.354	110.533	132.74
0.9000	338.863	120.781	86.531	82.477	73.340	54.097	36.912	29.166	21.663	97.726	125.319	110.978	149.34
1.0000	338.679	122.465	87.403	82.942	73.894	54.729	37.701	30.035	22.306	98.839	126.612	111.343	165.93
1.2500	333.914	125.033	89.021	84.990	75.517	56.638	39.774	32.115	24.254	100.577	127.720	112.671	207.41
1.6000	320.506	125.508	90.621	86.650	77.574	59.209	42.474	34.532	26.732	101.045	126.430	112.603	265.49
2.0000	302.812	124.124	92.014	87.625	79.287	61.586	44.983	36.937	29.038	100.937	124.343	111.543	331.86
2.5000	280.646	120.648	92.138	87.683	80.927	63.999	47.517	39.573	31.480	99.934	120.945	109.140	414.83
3.2000	259.590	115.332	91.450	87.296	81.066	65.639	49.915	41.534	33.302	98.125	116.964	106.432	530.98
4.0000	240.963	108.944	89.083	85.432	80.321	65.717	50.383	42.424	34.319	95.363	112.376	102.738	663.72
5.0000	225.707	102.562	85.811	82.617	77.862	64.518	50.181	42.373	34.779	91.844	107.530	98.516	829.65
6.0000	213.829	97.220	82.644	79.481	75.287	62.842	49.091	41.734	34.378	88.282	103.064	94.401	995.58
7.0000	204.341	92.785	79.739	76.877	72.684	61.103	48.057	41.001	33.879	85.131	99.109	91.055	1161.5
8.0000	195.989	88.646	77.042	74.334	70.208	59.248	46.612	39.971	33.202	82.135	95.416	87.873	1327.4
9.0000	188.153	85.513	74.448	71.886	68.010	57.508	45.319	38.943	32.505	79.262	91.951	84.825	1493.4
10.0000	181.437	82.830	72.271	69.783	66.021	55.827	44.115	37.926	31.736	76.701	88.837	82.162	1659.3
11.0000	175.173	80.332	70.246	67.828	64.171	54.262	42.997	36.981	30.965	74.375	86.053	79.742	1825.2
12.0000	169.325	78.004	68.362	66.008	62.449	52.807	41.958	36.104	30.249	72.207	83.400	77.488	1991.2

$^{166}_{68}Er$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=166 MEV
0.0125	0.129	0.127	0.154	0.195	0.203	0.243	0.255	0.277	0.363	0.406	0.427	0.488	2.0741
0.0160	0.163	0.162	0.197	0.251	0.263	0.314	0.330	0.359	0.477	0.537	0.569	0.659	2.6549
0.0200	0.200	0.200	0.246	0.315	0.331	0.394	0.415	0.450	0.602	0.681	0.723	0.841	3.3186
0.0250	0.244	0.248	0.305	0.394	0.416	0.494	0.519	0.563	0.756	0.855	0.910	1.060	4.1482
0.0320	0.303	0.311	0.386	0.503	0.535	0.632	0.664	0.719	0.970	1.097	1.167	1.359	5.3098
0.0400	0.365	0.380	0.475	0.624	0.669	0.787	0.826	0.892	1.213	1.370	1.457	1.694	6.6372
0.0500	0.438	0.461	0.580	0.770	0.831	0.973	1.022	1.103	1.510	1.705	1.813	2.103	8.2965
0.0600	0.506	0.536	0.679	0.908	0.988	1.152	1.210	1.304	1.798	2.029	2.158	2.500	9.9558
0.0700	0.569	0.607	0.774	1.041	1.138	1.323	1.390	1.497	2.076	2.341	2.490	2.881	11.615
0.0800	0.629	0.674	0.863	1.166	1.282	1.486	1.562	1.681	2.342	2.640	2.809	3.247	13.274
0.0900	0.685	0.736	0.949	1.286	1.420	1.641	1.727	1.858	2.597	2.926	3.114	3.598	14.934
0.1000	0.739	0.795	1.031	1.400	1.552	1.789	1.885	2.026	2.841	3.201	3.407	3.934	16.593
0.1250	0.864	0.931	1.221	1.665	1.859	2.134	2.254	2.419	3.407	3.839	4.087	4.714	20.741
0.1600	1.022	1.094	1.460	1.996	2.242	2.563	2.715	2.909	4.111	4.635	4.932	5.680	26.549
0.2000	1.183	1.255	1.705	2.330	2.630	2.995	3.181	3.405	4.818	5.432	5.777	6.645	33.186
0.2500	1.364	1.430	1.978	2.699	3.059	3.471	3.697	3.954	5.591	6.302	6.701	7.699	41.483
0.3200	1.592	1.642	2.315	3.148	3.581	4.048	4.324	4.624	6.523	7.350	7.816	8.967	53.098
0.4000	1.825	1.854	2.656	3.596	4.098	4.617	4.945	5.288	7.436	8.374	8.904	10.203	66.372
0.5000	2.087	2.089	3.032	4.085	4.661	5.234	5.620	6.010	8.417	9.473	10.071	11.529	82.965
0.6000	2.328	2.302	3.372	4.520	5.160	5.777	6.217	6.650	9.274	10.432	11.088	12.678	99.558
0.7000	2.555	2.505	3.684	4.916	5.612	6.269	6.758	7.230	10.044	11.293	12.000	13.705	116.15
0.8000	2.771	2.698	3.979	5.289	6.031	6.729	7.259	7.768	10.753	12.082	12.836	14.647	132.74
0.9000	2.979	2.885	4.260	5.639	6.430	7.160	7.736	8.279	11.423	12.828	13.626	15.534	149.34
1.0000	3.181	3.068	4.529	5.973	6.809	7.568	8.187	8.765	12.054	13.530	14.368	16.366	165.93
1.2500	3.666	3.516	5.165	6.755	7.691	8.516	9.238	9.896	13.507	15.143	16.074	18.273	207.41
1.6000	4.321	4.134	6.005	7.769	8.828	9.735	10.591	11.357	15.347	17.180	18.229	20.678	265.49
2.0000	5.055	4.836	6.924	8.863	10.049	11.039	12.042	12.926	17.295	19.322	20.495	23.199	331.86
2.5000	5.972	5.713	8.048	10.181	11.511	12.596	13.781	14.801	19.594	21.846	23.159	26.146	414.83
3.2000	7.273	6.950	9.611	11.989	13.503	14.716	16.147	17.355	22.677	25.226	26.720	30.069	530.98
4.0000	8.802	8.391	11.414	14.050	15.760	17.114	18.815	20.243	26.113	28.981	30.668	34.412	663.72
5.0000	10.784	10.246	13.718	16.661	18.603	20.129	22.161	23.865	30.368	33.635	35.539	39.758	829.65
6.0000	12.851	12.172	16.093	19.332	21.501	23.194	25.559	27.539	34.655	38.306	40.416	45.083	995.58
7.0000	15.005	14.170	18.546	22.076	24.472	26.325	29.024	31.284	39.004	43.027	45.341	50.439	1161.5
8.0000	17.246	16.243	21.079	24.897	27.523	29.533	32.562	35.111	43.417	47.821	50.333	55.858	1327.4
9.0000	19.570	18.390	23.693	27.797	30.653	32.824	36.180	39.024	47.913	52.693	55.404	61.349	1493.4
10.0000	21.975	20.612	26.388	30.774	33.867	36.196	39.886	43.022	52.499	57.651	60.556	66.922	1659.3
11.0000	24.460	22.907	29.162	33.827	37.161	39.651	43.681	47.101	57.177	62.690	65.780	72.583	1825.2
12.0000	27.024	25.274	32.014	36.958	40.535	43.185	47.562	51.262	61.942	67.810	71.086	78.339	1991.2

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.050	0.115	0.137	0.141	0.148	0.197	0.272	0.352	0.447	0.121	0.102	0.113	2.0741
0.0160	0.063	0.146	0.176	0.181	0.191	0.254	0.352	0.459	0.605	0.154	0.129	0.145	2.6549
0.0200	0.078	0.182	0.221	0.228	0.240	0.320	0.443	0.578	0.771	0.192	0.161	0.182	3.3186
0.0250	0.095	0.228	0.277	0.286	0.302	0.403	0.557	0.724	0.968	0.239	0.199	0.228	4.1482
0.0320	0.119	0.291	0.356	0.367	0.388	0.517	0.714	0.925	1.230	0.303	0.250	0.292	5.3098
0.0400	0.145	0.363	0.445	0.459	0.486	0.642	0.887	1.144	1.516	0.372	0.306	0.363	6.6372
0.0500	0.176	0.453	0.553	0.569	0.603	0.789	1.092	1.400	1.850	0.455	0.372	0.450	8.2965
0.0600	0.206	0.539	0.656	0.675	0.714	0.927	1.283	1.638	2.158	0.533	0.434	0.532	9.9558
0.0700	0.233	0.622	0.754	0.776	0.819	1.055	1.461	1.859	2.444	0.607	0.492	0.610	11.615
0.0800	0.259	0.700	0.846	0.870	0.918	1.173	1.627	2.064	2.709	0.675	0.547	0.684	13.274
0.0900	0.283	0.773	0.932	0.958	1.010	1.284	1.782	2.256	2.957	0.740	0.598	0.752	14.934
0.1000	0.306	0.841	1.013	1.041	1.096	1.387	1.927	2.434	3.190	0.801	0.646	0.816	16.593
0.1250	0.356	0.992	1.193	1.227	1.290	1.617	2.251	2.838	3.717	0.939	0.756	0.959	20.741
0.1600	0.414	1.166	1.402	1.443	1.516	1.888	2.638	3.318	4.349	1.104	0.886	1.125	26.549
0.2000	0.467	1.327	1.596	1.644	1.728	2.146	3.009	3.783	4.966	1.262	1.011	1.279	33.186
0.2500	0.520	1.490	1.794	1.850	1.947	2.418	3.406	4.283	5.635	1.429	1.143	1.436	41.483
0.3200	0.581	1.673	2.019	2.085	2.200	2.743	3.886	4.894	6.459	1.627	1.299	1.614	53.098
0.4000	0.637	1.846	2.233	2.309	2.446	3.068	4.372	5.514	7.302	1.820	1.451	1.782	66.372
0.5000	0.698	2.028	2.464	2.552	2.716	3.431	4.919	6.214	8.256	2.032	1.617	1.964	82.965
0.6000	0.752	2.190	2.676	2.774	2.961	3.765	5.422	6.857	9.132	2.224	1.769	2.129	99.558
0.7000	0.802	2.339	2.875	2.984	3.196	4.087	5.898	7.466	9.957	2.405	1.910	2.285	116.15
0.8000	0.851	2.481	3.070	3.189	3.425	4.399	6.362	8.062	10.747	2.580	2.046	2.436	132.74
0.9000	0.900	2.619	3.262	3.390	3.651	4.707	6.815	8.639	11.524	2.751	2.180	2.586	149.34
1.0000	0.949	2.756	3.453	3.591	3.876	5.012	7.260	9.200	12.278	2.920	2.311	2.735	165.93
1.2500	1.072	3.090	3.922	4.083	4.430	5.755	8.328	10.532	14.057	3.335	2.637	3.104	207.41
1.6000	1.249	3.552	4.566	4.758	5.186	6.755	9.737	12.271	16.332	3.909	3.092	3.618	265.49
2.0000	1.462	4.083	5.292	5.518	6.031	7.852	11.253	14.126	18.710	4.565	3.620	4.209	331.86
2.5000	1.746	4.760	6.191	6.463	7.065	9.172	13.045	16.293	21.449	5.390	4.296	4.960	414.83
3.2000	2.175	5.743	7.455	7.789	8.497	10.961	15.426	19.153	25.031	6.561	5.271	6.036	530.98
4.0000	2.706	6.926	8.924	9.325	10.141	12.981	18.070	22.313	28.954	7.932	6.428	7.305	663.72
5.0000	3.417	8.495	10.821	11.299	12.238	15.528	21.369	26.224	33.754	9.705	7.937	8.953	829.65
6.0000	4.172	10.157	12.792	13.346	14.405	18.133	24.711	30.169	38.552	11.547	9.513	10.674	995.58
7.0000	4.966	11.904	14.836	15.469	16.648	20.811	28.128	34.181	43.414	13.461	11.155	12.464	1161.5
8.0000	5.795	13.734	16.953	17.665	18.971	23.569	31.634	38.280	48.361	15.446	12.861	14.319	1327.4
9.0000	6.659	15.640	19.144	19.935	21.373	26.412	35.245	42.486	53.413	17.503	14.633	16.241	1493.4
10.0000	7.558	17.612	21.407	22.278	23.850	29.341	38.956	46.804	58.580	19.631	16.469	18.229	1659.3
11.0000	8.488	19.646	23.736	24.690	26.399	32.356	42.767	51.235	63.874	21.828	18.367	20.279	1825.2
12.0000	9.452	21.743	26.131	27.170	29.021	35.456	46.674	55.777	69.296	24.093	20.326	22.390	1991.2

$^{169}_{69}Tm$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=169 MEV
0.0125	8.902	7.364	5.395	3.588	2.913	2.644	2.449	2.266	1.441	1.233	1.133	0.971	2.1116
0.0160	10.281	8.506	6.231	4.144	3.365	3.053	2.829	2.617	1.664	1.424	1.309	1.122	2.7029
0.0200	11.711	9.688	7.098	4.720	3.833	3.478	3.222	2.981	1.895	1.622	1.491	1.278	3.3786
0.0250	13.340	11.036	8.085	5.376	4.366	3.962	3.670	3.396	2.159	1.847	1.702	1.455	4.2232
0.0320	15.388	12.755	9.337	6.209	5.052	4.594	4.239	3.922	2.493	2.138	1.970	1.690	5.4058
0.0400	17.486	14.561	10.636	7.094	5.786	5.275	4.861	4.499	2.861	2.462	2.265	1.946	6.7572
0.0500	19.845	16.634	12.115	8.117	6.651	6.058	5.585	5.173	3.283	2.853	2.629	2.259	8.4465
0.0600	21.991	18.609	13.475	9.082	7.465	6.778	6.266	5.808	3.719	3.234	2.985	2.567	10.136
0.0700	23.958	20.493	14.743	9.996	8.256	7.490	6.929	6.428	4.128	3.612	3.347	2.875	11.825
0.0800	25.788	22.345	15.938	10.886	9.005	8.160	7.539	7.013	4.542	3.985	3.682	3.172	13.514
0.0900	27.503	24.140	17.072	11.746	9.731	8.843	8.143	7.580	4.968	4.345	4.029	3.474	15.204
0.1000	29.138	25.907	18.155	12.581	10.457	9.477	8.714	8.151	5.374	4.702	4.357	3.758	16.893
0.1250	32.880	30.337	20.679	14.558	12.159	11.022	10.133	9.492	6.359	5.563	5.201	4.498	21.116
0.1600	37.473	36.422	23.883	17.101	14.378	13.040	11.966	11.225	7.643	6.711	6.293	5.493	27.029
0.2000	42.113	42.739	27.205	19.778	16.731	15.153	13.902	13.031	9.032	7.971	7.481	6.529	33.786
0.2500	47.195	49.643	30.988	22.900	19.461	17.663	16.176	15.153	10.691	9.451	8.863	7.747	42.233
0.3200	53.398	58.015	35.789	26.949	23.013	21.008	19.147	17.895	12.813	11.381	10.683	9.395	54.058
0.4000	59.601	66.164	40.767	31.064	26.743	24.460	22.299	20.832	15.165	13.494	12.678	11.129	67.572
0.5000	66.029	74.201	46.174	35.692	30.936	28.397	25.857	24.103	17.823	15.884	14.937	13.160	84.465
0.6000	71.531	80.561	51.020	39.949	34.796	32.041	29.082	27.092	20.255	18.112	17.066	15.153	101.36
0.7000	75.904	85.207	55.043	43.484	38.035	35.062	31.760	29.613	22.347	19.981	18.880	16.733	118.25
0.8000	79.313	88.424	58.404	46.548	40.824	37.787	34.166	31.830	24.179	21.726	20.500	18.222	135.14
0.9000	82.166	90.799	61.227	49.104	43.287	40.165	36.246	33.736	25.899	23.266	21.980	19.593	152.04
1.0000	84.406	92.421	63.607	51.458	45.415	42.171	38.101	35.429	27.351	24.616	23.280	20.799	168.93
1.2500	88.302	94.566	68.082	55.827	49.700	46.296	41.734	38.739	30.433	27.437	25.939	23.216	211.16
1.6000	91.074	95.462	71.938	60.069	53.666	50.141	45.177	41.724	33.451	30.286	28.631	25.682	270.29
2.0000	92.036	96.047	74.283	62.917	56.529	53.038	47.541	44.050	35.656	32.536	30.753	27.707	337.86
2.5000	91.554	95.931	75.477	64.835	58.646	55.098	49.286	45.739	37.588	34.191	32.455	29.436	422.33
3.2000	89.743	94.800	75.477	65.665	59.778	56.231	50.419	46.645	38.946	35.625	33.814	30.719	540.58
4.0000	87.016	92.668	74.372	65.373	59.870	56.374	50.796	46.855	39.640	36.294	34.583	31.460	675.72
5.0000	83.494	89.499	72.352	64.104	59.039	55.711	50.212	46.450	39.794	36.321	34.801	31.763	844.65
6.0000	80.231	86.262	70.132	62.558	57.719	54.703	49.373	45.656	39.134	36.118	34.575	31.770	1013.6
7.0000	77.032	83.213	67.929	60.865	56.245	53.460	48.366	44.765	38.720	35.595	34.168	31.451	1182.5
8.0000	74.185	80.307	65.825	59.243	54.833	52.134	47.394	43.774	38.047	35.085	33.703	31.070	1351.4
9.0000	71.702	77.576	63.848	57.655	53.441	50.887	46.290	42.842	37.351	34.478	33.137	30.647	1520.4
10.0000	69.319	75.024	62.003	56.237	52.083	49.664	45.200	41.976	36.582	33.916	32.676	30.195	1689.3
11.0000	67.157	72.764	60.285	54.859	50.880	48.529	44.189	41.174	35.930	33.398	32.252	29.720	1858.2
12.0000	65.198	70.597	58.684	53.520	49.706	47.476	43.250	40.375	35.269	32.863	31.690	29.225	2027.2

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	20.232	8.632	5.719	5.374	4.775	3.151	1.931	1.370	0.904	7.235	9.204	7.025	2.1116
0.0160	22.931	9.671	6.499	6.113	5.434	3.670	2.274	1.620	1.075	8.306	10.568	7.982	2.7029
0.0200	25.410	10.434	7.218	6.800	6.083	4.223	2.633	1.916	1.282	9.383	11.931	8.865	3.3786
0.0250	28.135	11.165	8.020	7.559	6.840	4.907	3.137	2.288	1.657	10.591	13.477	9.847	4.2232
0.0320	31.841	12.083	8.955	8.525	7.787	5.836	3.791	2.857	1.989	12.139	15.481	11.112	5.4058
0.0400	35.631	12.955	9.923	9.551	8.796	6.871	4.552	3.489	2.478	13.774	17.571	12.444	6.7572
0.0500	40.101	14.102	11.134	10.831	10.080	8.129	5.476	4.265	3.089	15.677	19.990	14.078	8.4465
0.0600	45.007	15.402	12.491	12.074	11.413	9.392	6.387	5.026	3.692	17.531	22.382	15.739	10.136
0.0700	49.980	16.925	13.859	13.461	12.768	10.645	7.254	5.765	4.261	19.373	24.710	17.515	11.825
0.0800	55.305	18.568	15.317	14.886	14.169	11.906	8.160	6.503	4.829	21.230	27.047	19.381	13.514
0.0900	60.606	20.333	16.816	16.389	15.604	13.163	9.048	7.239	5.361	23.081	29.347	21.306	15.204
0.1000	66.446	22.294	18.481	17.900	17.029	14.433	9.967	7.934	5.882	24.926	31.698	23.292	16.893
0.1250	82.097	27.400	22.644	21.817	20.845	17.598	12.118	9.657	7.176	29.654	37.740	28.517	21.116
0.1600	105.803	35.276	28.947	27.896	26.463	22.044	15.118	12.037	8.932	36.470	46.334	36.542	27.029
0.2000	133.576	44.344	36.318	34.877	32.972	26.797	18.227	14.473	10.691	43.909	55.715	45.840	33.786
0.2500	167.956	55.593	45.088	43.414	40.532	32.042	21.661	16.981	12.488	52.494	66.531	57.266	42.233
0.3200	212.589	69.396	56.440	53.863	49.282	37.758	25.196	19.648	14.352	63.061	80.097	71.507	54.058
0.4000	254.384	83.979	66.694	63.392	57.399	42.846	28.333	22.055	16.062	73.095	93.070	84.631	67.572
0.5000	294.589	97.889	76.048	72.354	64.736	47.605	31.398	24.518	17.869	82.790	105.692	97.057	84.465
0.6000	323.980	108.673	82.245	78.163	69.847	51.071	33.878	26.429	19.337	89.898	115.357	105.459	101.36
0.7000	337.965	116.141	85.427	81.189	72.657	53.062	35.503	27.632	20.421	94.399	121.315	109.701	118.25
0.8000	342.832	120.312	86.964	82.934	74.115	54.199	36.678	28.618	21.259	97.184	124.751	111.785	135.14
0.9000	342.869	122.208	87.554	83.452	74.207	54.737	37.348	29.511	21.919	98.881	126.800	112.290	152.04
1.0000	342.842	123.970	88.477	83.961	74.802	55.402	38.164	30.404	22.580	100.054	128.168	112.712	168.93
1.2500	338.368	126.701	90.209	86.124	76.524	57.393	40.305	32.543	24.578	101.919	129.424	114.174	211.16
1.6000	325.162	127.331	91.937	87.909	78.701	60.069	43.091	35.034	27.121	102.512	128.266	114.238	270.29
2.0000	307.530	126.058	93.448	88.991	80.522	62.546	45.684	37.513	29.490	102.510	126.280	113.281	337.86
2.5000	285.303	122.650	93.667	89.138	82.270	65.061	48.305	40.229	32.002	101.592	122.952	110.951	422.33
3.2000	264.171	117.367	93.064	88.837	82.497	66.798	50.796	42.267	33.889	99.857	119.028	108.310	540.58
4.0000	245.429	110.964	90.734	87.016	81.810	66.935	51.317	43.210	34.955	97.130	114.459	104.642	675.72
5.0000	230.079	104.549	87.474	84.218	79.370	65.768	51.153	43.194	35.452	93.624	109.613	100.425	844.65
6.0000	218.111	99.167	84.299	81.073	76.795	64.101	50.074	42.570	35.066	90.050	105.128	96.291	1013.6
7.0000	208.543	94.693	81.379	78.458	74.179	62.359	49.045	41.844	34.576	86.881	101.147	92.927	1182.5
8.0000	200.109	90.510	78.661	75.897	71.684	60.494	47.592	40.812	33.900	83.862	97.422	89.720	1351.4
9.0000	192.184	87.345	76.043	73.426	69.467	58.740	46.290	39.778	33.201	80.960	93.921	86.642	1520.4
10.0000	185.389	84.634	73.846	71.304	67.459	57.043	45.076	38.752	32.428	78.372	90.772	83.952	1689.3
11.0000	179.045	82.108	71.799	69.327	65.590	55.462	43.947	37.798	31.649	76.019	87.955	81.505	1858.2
12.0000	173.119	79.752	69.893	67.487	63.849	53.990	42.898	36.913	30.927	73.825	85.269	79.224	2027.2

$^{169}_{69}$Tm IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=169 MEV
0.0125	0.130	0.127	0.155	0.196	0.204	0.243	0.255	0.276	0.363	0.404	0.426	0.486	2.1116
0.0160	0.164	0.163	0.198	0.252	0.264	0.315	0.331	0.359	0.477	0.536	0.568	0.657	2.7029
0.0200	0.201	0.202	0.247	0.316	0.332	0.395	0.415	0.451	0.602	0.680	0.722	0.839	3.3786
0.0250	0.246	0.249	0.307	0.395	0.417	0.495	0.520	0.564	0.756	0.855	0.908	1.058	4.2232
0.0320	0.305	0.313	0.388	0.505	0.536	0.634	0.665	0.720	0.971	1.097	1.166	1.357	5.4058
0.0400	0.368	0.382	0.477	0.626	0.670	0.789	0.828	0.894	1.213	1.370	1.457	1.692	6.7572
0.0500	0.441	0.464	0.583	0.773	0.834	0.977	1.025	1.105	1.511	1.706	1.813	2.103	8.4465
0.0600	0.509	0.540	0.683	0.913	0.992	1.156	1.214	1.308	1.801	2.031	2.159	2.500	10.136
0.0700	0.573	0.611	0.778	1.046	1.143	1.328	1.395	1.502	2.080	2.344	2.493	2.883	11.825
0.0800	0.633	0.678	0.869	1.172	1.288	1.492	1.568	1.687	2.348	2.645	2.813	3.251	13.514
0.0900	0.691	0.741	0.955	1.293	1.426	1.648	1.734	1.865	2.604	2.933	3.120	3.603	15.204
0.1000	0.745	0.801	1.037	1.408	1.559	1.798	1.894	2.035	2.849	3.209	3.415	3.941	16.893
0.1250	0.871	0.938	1.229	1.675	1.868	2.145	2.265	2.430	3.419	3.851	4.099	4.726	21.116
0.1600	1.030	1.103	1.471	2.009	2.255	2.577	2.729	2.924	4.128	4.652	4.949	5.699	27.029
0.2000	1.193	1.265	1.717	2.345	2.646	3.013	3.200	3.425	4.841	5.456	5.801	6.671	33.786
0.2500	1.376	1.441	1.993	2.717	3.078	3.493	3.719	3.978	5.620	6.333	6.733	7.733	42.233
0.3200	1.605	1.655	2.333	3.171	3.604	4.075	4.352	4.653	6.560	7.390	7.856	9.011	54.058
0.4000	1.840	1.869	2.676	3.622	4.126	4.649	4.979	5.323	7.480	8.422	8.953	10.258	67.572
0.5000	2.105	2.106	3.057	4.116	4.694	5.271	5.659	6.051	8.469	9.529	10.130	11.594	84.465
0.6000	2.348	2.321	3.398	4.554	5.196	5.819	6.260	6.695	9.332	10.495	11.155	12.752	101.36
0.7000	2.577	2.525	3.712	4.953	5.652	6.314	6.805	7.280	10.108	11.362	12.073	13.786	118.25
0.8000	2.794	2.719	4.010	5.326	6.074	6.778	7.310	7.821	10.822	12.158	12.914	14.734	135.14
0.9000	3.004	2.908	4.292	5.681	6.475	7.211	7.789	8.336	11.496	12.908	13.710	15.627	152.04
1.0000	3.206	3.092	4.563	6.017	6.856	7.621	8.244	8.825	12.131	13.614	14.456	16.463	168.93
1.2500	3.694	3.542	5.203	6.803	7.743	8.575	9.300	9.962	13.591	15.235	16.170	18.381	211.16
1.6000	4.352	4.163	6.046	7.821	8.885	9.799	10.658	11.429	15.439	17.281	18.334	20.796	270.29
2.0000	5.088	4.867	6.968	8.918	10.109	11.106	12.114	13.002	17.392	19.429	20.607	23.324	337.86
2.5000	6.007	5.746	8.094	10.239	11.574	12.666	13.856	14.881	19.696	21.958	23.277	26.277	422.33
3.2000	7.309	6.984	9.659	12.048	13.568	14.788	16.224	17.437	22.782	25.341	26.841	30.203	540.58
4.0000	8.837	8.424	11.461	14.109	15.825	17.186	18.892	20.325	26.218	29.096	30.789	34.547	675.72
5.0000	10.818	10.279	13.763	16.717	18.665	20.199	22.236	23.944	30.469	33.746	35.655	39.887	844.65
6.0000	12.882	12.201	16.134	19.385	21.559	23.258	25.628	27.612	34.749	38.409	40.525	45.204	1013.6
7.0000	15.031	14.195	18.582	22.122	24.523	26.382	29.085	31.349	39.089	43.120	45.439	50.548	1182.5
8.0000	17.266	16.262	21.108	24.936	27.566	29.582	32.614	35.165	43.490	47.901	50.418	55.952	1351.4
9.0000	19.583	18.402	23.714	27.827	30.687	32.863	36.221	39.067	47.972	52.758	55.473	61.427	1520.4
10.0000	21.979	20.617	26.400	30.794	33.889	36.223	39.914	43.051	52.542	57.699	60.607	66.981	1689.3
11.0000	24.455	22.904	29.163	33.836	37.171	39.665	43.695	47.114	57.203	62.719	65.811	72.621	1858.2
12.0000	27.009	25.261	32.004	36.954	40.531	43.185	47.559	51.258	61.949	67.819	71.096	78.353	2027.2

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.050	0.116	0.138	0.141	0.149	0.198	0.272	0.351	0.445	0.121	0.102	0.113	2.1116
0.0160	0.063	0.147	0.177	0.182	0.192	0.255	0.353	0.459	0.603	0.155	0.130	0.146	2.7029
0.0200	0.078	0.184	0.222	0.229	0.241	0.321	0.444	0.578	0.769	0.193	0.162	0.183	3.3786
0.0250	0.096	0.229	0.279	0.287	0.303	0.404	0.558	0.724	0.967	0.240	0.200	0.229	4.2232
0.0320	0.120	0.293	0.358	0.369	0.390	0.518	0.715	0.925	1.228	0.304	0.252	0.293	5.4058
0.0400	0.146	0.366	0.447	0.461	0.488	0.644	0.889	1.145	1.516	0.375	0.308	0.365	6.7572
0.0500	0.178	0.456	0.556	0.572	0.606	0.793	1.095	1.403	1.851	0.458	0.375	0.452	8.4465
0.0600	0.207	0.543	0.660	0.679	0.718	0.931	1.287	1.642	2.160	0.537	0.437	0.536	10.136
0.0700	0.235	0.626	0.758	0.780	0.824	1.060	1.466	1.864	2.447	0.611	0.496	0.614	11.825
0.0800	0.261	0.704	0.851	0.875	0.923	1.179	1.633	2.070	2.713	0.680	0.551	0.688	13.514
0.0900	0.286	0.778	0.938	0.964	1.016	1.290	1.789	2.263	2.963	0.745	0.602	0.757	15.204
0.1000	0.308	0.847	1.019	1.048	1.103	1.394	1.935	2.443	3.197	0.807	0.651	0.821	16.893
0.1250	0.359	0.999	1.201	1.235	1.298	1.626	2.262	2.849	3.729	0.946	0.761	0.966	21.116
0.1600	0.417	1.175	1.412	1.453	1.526	1.899	2.652	3.334	4.366	1.112	0.892	1.133	27.029
0.2000	0.471	1.337	1.607	1.656	1.740	2.160	3.027	3.802	4.987	1.272	1.019	1.289	33.786
0.2500	0.525	1.501	1.807	1.863	1.961	2.434	3.427	4.306	5.661	1.441	1.152	1.447	42.233
0.3200	0.586	1.687	2.035	2.100	2.216	2.763	3.911	4.923	6.493	1.640	1.310	1.626	54.058
0.4000	0.643	1.861	2.250	2.326	2.465	3.090	4.401	5.548	7.343	1.835	1.463	1.796	67.572
0.5000	0.703	2.045	2.483	2.571	2.736	3.456	4.952	6.254	8.304	2.048	1.631	1.980	84.465
0.6000	0.758	2.208	2.696	2.796	2.984	3.793	5.459	6.902	9.187	2.242	1.782	2.146	101.36
0.7000	0.809	2.358	2.898	3.007	3.220	4.117	5.938	7.516	10.018	2.425	1.924	2.303	118.25
0.8000	0.858	2.501	3.093	3.213	3.450	4.432	6.406	8.116	10.813	2.601	2.062	2.455	135.14
0.9000	0.908	2.640	3.287	3.416	3.678	4.742	6.862	8.697	11.595	2.773	2.196	2.606	152.04
1.0000	0.957	2.777	3.479	3.617	3.905	5.048	7.309	9.260	12.354	2.943	2.328	2.756	168.93
1.2500	1.081	3.113	3.950	4.113	4.461	5.795	8.383	10.599	14.142	3.360	2.655	3.127	211.16
1.6000	1.258	3.577	4.597	4.790	5.221	6.799	9.798	12.346	16.426	3.937	3.112	3.643	270.29
2.0000	1.471	4.110	5.325	5.553	6.068	7.900	11.318	14.206	18.811	4.594	3.642	4.236	337.86
2.5000	1.756	4.788	6.226	6.499	7.104	9.222	13.113	16.377	21.556	5.421	4.319	4.988	422.33
3.2000	2.186	5.772	7.491	7.826	8.537	11.013	15.497	19.240	25.141	6.593	5.295	6.065	540.58
4.0000	2.716	6.955	8.960	9.362	10.181	13.032	18.141	22.399	29.064	7.964	6.452	7.334	675.72
5.0000	3.427	8.523	10.856	11.335	12.276	15.577	21.437	26.307	33.859	9.735	7.959	8.981	844.65
6.0000	4.181	10.182	12.823	13.379	14.440	18.178	24.774	30.246	38.650	11.574	9.533	10.699	1013.6
7.0000	4.973	11.925	14.862	15.497	16.678	20.850	28.183	34.249	43.501	13.484	11.171	12.485	1182.5
8.0000	5.800	13.750	16.974	17.686	18.995	23.601	31.680	38.337	48.436	15.464	12.873	14.335	1351.4
9.0000	6.662	15.650	19.159	19.950	21.389	26.435	35.280	42.530	53.471	17.514	14.639	16.251	1520.4
10.0000	7.557	17.615	21.413	22.285	23.858	29.354	38.978	46.834	58.621	19.635	16.469	18.232	1689.3
11.0000	8.484	19.642	23.734	24.688	26.397	32.358	42.774	51.248	63.894	21.824	18.360	20.275	1858.2
12.0000	9.444	21.730	26.119	27.158	29.008	35.445	46.665	55.771	69.294	24.079	20.311	22.377	2027.2

$^{174}_{70}$Yb IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=174 MEV
0.0125	8.949	7.404	5.424	3.607	2.929	2.658	2.462	2.278	1.448	1.239	1.139	0.976	2.1742
0.0160	10.339	8.553	6.266	4.167	3.384	3.070	2.845	2.632	1.673	1.432	1.316	1.128	2.7830
0.0200	11.779	9.744	7.139	4.747	3.855	3.498	3.241	2.998	1.906	1.631	1.499	1.285	3.4788
0.0250	13.420	11.102	8.133	5.409	4.392	3.985	3.693	3.416	2.172	1.858	1.712	1.464	4.3485
0.0320	15.484	12.835	9.396	6.248	5.083	4.623	4.266	3.946	2.509	2.152	1.983	1.701	5.5661
0.0400	17.599	14.655	10.705	7.140	5.823	5.310	4.892	4.528	2.880	2.478	2.280	1.959	6.9576
0.0500	19.978	16.746	12.196	8.172	6.696	6.098	5.623	5.208	3.305	2.872	2.647	2.275	8.6970
0.0600	22.143	18.737	13.568	9.145	7.517	6.825	6.309	5.848	3.745	3.256	3.005	2.585	10.436
0.0700	24.127	20.638	14.847	10.066	8.314	7.542	6.978	6.473	4.157	3.638	3.370	2.895	12.176
0.0800	25.973	22.506	16.052	10.964	9.070	8.219	7.593	7.063	4.575	4.013	3.708	3.194	13.915
0.0900	27.704	24.316	17.197	11.831	9.802	8.908	8.203	7.635	5.004	4.377	4.058	3.500	15.655
0.1000	29.354	26.098	18.289	12.674	10.534	9.547	8.779	8.212	5.414	4.737	4.389	3.786	17.394
0.1250	33.131	30.568	20.837	14.669	12.252	11.106	10.210	9.564	6.407	5.605	5.240	4.532	21.743
0.1600	37.768	36.709	24.071	17.235	14.491	13.143	12.060	11.314	7.703	6.764	6.343	5.536	27.830
0.2000	42.454	43.085	27.425	19.938	16.866	15.276	14.014	13.137	9.105	8.036	7.542	6.582	34.788
0.2500	47.587	50.056	31.246	23.091	19.622	17.810	16.310	15.279	10.780	9.530	8.936	7.811	43.485
0.3200	53.855	58.512	36.096	27.180	23.210	21.188	19.311	18.048	12.922	11.479	10.775	9.475	55.661
0.4000	60.125	66.746	41.125	31.337	26.978	24.675	22.495	21.015	15.298	13.612	12.790	11.227	69.576
0.5000	66.668	74.920	46.621	36.038	31.236	28.672	26.108	24.336	17.996	16.038	15.082	13.287	86.970
0.6000	72.252	81.374	51.535	40.352	35.147	32.364	29.375	27.365	20.459	18.295	17.239	15.306	104.36
0.7000	76.708	86.109	55.626	43.944	38.437	35.434	32.096	29.927	22.584	20.192	19.080	16.910	121.76
0.8000	80.192	89.405	59.052	47.064	41.277	38.207	34.545	32.183	24.447	21.967	20.727	18.424	139.15
0.9000	83.118	91.851	61.936	49.672	43.789	40.630	36.666	34.127	26.199	23.536	22.235	19.819	156.55
1.0000	85.423	93.534	64.373	52.078	45.962	42.679	38.560	35.856	27.680	24.912	23.561	21.050	173.94
1.2500	89.458	95.804	68.973	56.558	50.350	46.902	42.281	39.246	30.831	27.796	26.279	23.520	217.42
1.6000	92.375	96.826	72.966	60.926	54.432	50.857	45.822	42.320	33.929	30.719	29.040	26.049	278.30
2.0000	93.448	97.521	75.422	63.883	57.396	53.851	48.270	44.725	36.203	33.035	31.225	28.132	347.88
2.5000	93.051	97.501	76.712	65.895	59.605	56.000	50.093	46.487	38.202	34.750	32.986	29.918	434.85
3.2000	91.305	96.451	76.792	66.809	60.819	57.210	51.297	47.457	39.625	36.246	34.403	31.254	556.61
4.0000	88.608	94.364	75.733	66.570	60.965	57.406	51.726	47.712	40.366	36.958	35.216	32.035	695.76
5.0000	85.092	91.212	73.736	65.330	60.169	56.777	51.173	47.339	40.555	37.016	35.467	32.370	869.70
6.0000	81.818	87.968	71.519	63.795	58.860	55.785	50.349	46.559	39.908	36.832	35.259	32.398	1043.6
7.0000	78.595	84.902	69.308	62.100	57.387	54.546	49.347	45.674	39.506	36.317	34.862	32.090	1217.6
8.0000	75.724	81.973	67.191	60.472	55.970	53.215	48.378	44.682	38.836	35.813	34.402	31.714	1391.5
9.0000	73.217	79.215	65.198	58.874	54.571	51.963	47.268	43.748	38.141	35.207	33.838	31.295	1565.5
10.0000	70.808	76.635	63.335	57.445	53.201	50.731	46.171	42.878	37.368	34.644	33.378	30.844	1739.4
11.0000	68.621	74.349	61.598	56.055	51.989	49.587	45.152	42.072	36.713	34.126	32.955	30.368	1913.3
12.0000	66.638	72.156	59.980	54.702	50.803	48.524	44.205	41.266	36.048	33.589	32.389	29.870	2087.3

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	20.340	8.678	5.749	5.402	4.800	3.168	1.942	1.378	0.909	7.273	9.253	7.062	2.1742
0.0160	23.058	9.725	6.535	6.147	5.464	3.691	2.287	1.629	1.081	8.352	10.627	8.027	2.7830
0.0200	25.557	10.494	7.260	6.839	6.118	4.248	2.648	1.927	1.289	9.437	12.000	8.916	3.4788
0.0250	28.304	11.232	8.068	7.605	6.881	4.937	3.156	2.302	1.667	10.655	13.558	9.906	4.3485
0.0320	32.040	12.158	9.011	8.578	7.836	5.872	3.815	2.875	2.001	12.215	15.578	11.181	5.5661
0.0400	35.862	13.039	9.988	9.613	8.853	6.915	4.582	3.511	2.494	13.863	17.685	12.525	6.9576
0.0500	40.370	14.197	11.208	10.904	10.147	8.184	5.513	4.293	3.110	15.782	20.124	14.172	8.6970
0.0600	45.317	15.508	12.577	12.157	11.492	9.457	6.431	5.061	3.718	17.652	22.536	15.847	10.436
0.0700	50.332	17.045	13.956	13.555	12.858	10.720	7.305	5.805	4.291	19.509	24.884	17.638	12.176
0.0800	55.702	18.701	15.426	14.993	14.271	11.991	8.219	6.549	4.864	21.382	27.241	19.520	13.915
0.0900	61.048	20.481	16.939	16.509	15.718	13.259	9.114	7.291	5.400	23.250	29.561	21.461	15.655
0.1000	66.937	22.459	18.618	18.033	17.155	14.540	10.041	7.992	5.926	25.111	31.932	23.465	17.394
0.1250	82.723	27.609	22.816	21.983	21.004	17.732	12.210	9.731	7.230	29.880	38.027	28.734	21.743
0.1600	106.636	35.553	29.174	28.115	26.671	22.218	15.237	12.132	9.003	36.757	46.698	36.829	27.830
0.2000	134.657	44.703	36.612	35.159	33.239	27.014	18.375	14.590	10.778	44.264	56.166	46.211	34.788
0.2500	169.352	56.055	45.463	43.775	40.870	32.308	21.841	17.123	12.592	52.930	67.085	57.742	43.485
0.3200	214.410	69.990	56.923	54.324	49.704	38.081	25.412	19.817	14.474	63.601	80.783	72.120	55.661
0.4000	256.619	84.717	67.280	63.949	57.904	43.222	28.582	22.249	16.203	73.737	93.888	85.375	69.576
0.5000	297.443	98.837	76.785	73.055	65.363	48.066	31.702	24.756	18.042	83.592	106.716	97.998	86.970
0.6000	327.248	109.770	83.075	78.952	70.552	51.587	34.219	26.695	19.532	90.805	116.521	106.523	104.36
0.7000	341.543	117.371	86.331	82.048	73.426	53.623	35.879	27.924	20.637	95.398	122.599	110.862	121.76
0.8000	346.634	121.647	87.928	83.854	74.937	54.800	37.085	28.935	21.495	98.262	126.135	113.025	139.15
0.9000	346.840	123.624	88.568	84.418	75.066	55.371	37.781	29.853	22.173	100.026	128.269	113.590	156.55
1.0000	346.972	125.463	89.543	84.973	75.703	56.069	38.624	30.770	22.853	101.259	129.712	114.069	173.94
1.2500	342.797	128.359	91.389	87.251	77.526	58.144	40.832	32.969	24.899	103.253	131.118	115.668	217.42
1.6000	329.805	129.149	93.250	89.164	79.824	60.926	43.706	35.534	27.508	103.976	130.098	115.870	278.30
2.0000	312.248	127.992	94.881	90.356	81.758	63.506	46.385	38.088	29.943	104.083	128.218	115.019	347.88
2.5000	289.971	124.657	95.199	90.597	83.616	66.126	49.096	40.887	32.526	103.254	124.963	112.766	434.85
3.2000	268.771	119.411	94.684	90.384	83.933	67.961	51.681	43.003	34.480	101.596	121.101	110.196	556.61
4.0000	249.920	112.994	92.395	88.608	83.307	68.160	52.256	44.001	35.595	98.908	116.554	106.557	695.76
5.0000	234.481	106.549	89.147	85.829	80.889	67.026	52.131	44.020	36.131	95.415	111.710	102.346	869.70
6.0000	222.424	101.128	85.966	82.676	78.313	65.368	51.064	43.412	35.759	91.830	107.207	98.195	1043.6
7.0000	212.776	96.616	83.031	80.051	75.684	63.625	50.040	42.694	35.278	88.645	103.200	94.814	1217.6
8.0000	204.261	92.388	80.293	77.471	73.171	61.749	48.579	41.658	34.603	85.601	99.443	91.581	1391.5
9.0000	196.245	89.191	77.651	74.977	70.935	59.982	47.268	40.618	33.903	82.671	95.906	88.473	1565.5
10.0000	189.371	86.452	75.432	72.835	68.908	58.268	46.045	39.584	33.124	80.055	92.722	85.756	1739.4
11.0000	182.947	83.897	73.364	70.838	67.019	56.671	44.905	38.622	32.339	77.676	89.872	83.281	1913.3
12.0000	176.942	81.513	71.436	68.977	65.258	55.182	43.846	37.728	31.610	75.455	87.151	80.973	2087.3

$^{174}_{70}Yb$ IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=174
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.132	0.130	0.157	0.198	0.206	0.246	0.258	0.279	0.365	0.407	0.428	0.487	2.1742
0.0160	0.167	0.165	0.201	0.255	0.267	0.318	0.334	0.363	0.480	0.540	0.571	0.660	2.7830
0.0200	0.205	0.205	0.251	0.320	0.336	0.400	0.420	0.455	0.607	0.684	0.726	0.843	3.4788
0.0250	0.250	0.253	0.312	0.401	0.422	0.501	0.526	0.570	0.762	0.861	0.914	1.064	4.3485
0.0320	0.311	0.318	0.394	0.512	0.543	0.642	0.673	0.728	0.979	1.105	1.174	1.365	5.5661
0.0400	0.375	0.389	0.485	0.635	0.679	0.799	0.838	0.905	1.225	1.382	1.468	1.704	6.9576
0.0500	0.450	0.472	0.593	0.784	0.846	0.990	1.038	1.119	1.526	1.721	1.829	2.119	8.6970
0.0600	0.519	0.550	0.695	0.927	1.006	1.172	1.230	1.325	1.820	2.051	2.180	2.522	10.436
0.0700	0.584	0.622	0.792	1.062	1.160	1.347	1.414	1.522	2.103	2.369	2.518	2.910	12.176
0.0800	0.646	0.691	0.884	1.191	1.307	1.514	1.591	1.711	2.376	2.674	2.843	3.283	13.915
0.0900	0.704	0.755	0.972	1.314	1.448	1.673	1.760	1.891	2.636	2.967	3.156	3.641	15.655
0.1000	0.760	0.816	1.056	1.431	1.583	1.826	1.922	2.064	2.886	3.248	3.455	3.985	17.394
0.1250	0.888	0.955	1.251	1.704	1.898	2.179	2.300	2.467	3.466	3.902	4.151	4.784	21.743
0.1600	1.051	1.124	1.498	2.044	2.292	2.620	2.774	2.971	4.188	4.718	5.017	5.774	27.830
0.2000	1.217	1.290	1.749	2.387	2.691	3.065	3.253	3.481	4.915	5.536	5.885	6.764	34.788
0.2500	1.404	1.470	2.030	2.767	3.132	3.554	3.783	4.045	5.709	6.430	6.835	7.847	43.485
0.3200	1.638	1.688	2.378	3.229	3.669	4.148	4.429	4.734	6.667	7.508	7.980	9.150	55.661
0.4000	1.877	1.906	2.728	3.689	4.201	4.733	5.068	5.417	7.606	8.561	9.099	10.421	69.576
0.5000	2.148	2.147	3.116	4.193	4.780	5.368	5.762	6.160	8.614	9.690	10.298	11.783	86.970
0.6000	2.395	2.367	3.464	4.640	5.292	5.926	6.374	6.816	9.494	10.674	11.343	12.963	104.36
0.7000	2.628	2.575	3.784	5.046	5.756	6.431	6.929	7.412	10.285	11.558	12.278	14.017	121.76
0.8000	2.850	2.773	4.087	5.428	6.186	6.903	7.443	7.963	11.011	12.367	13.135	14.982	139.15
0.9000	3.063	2.964	4.375	5.788	6.595	7.344	7.932	8.487	11.698	13.132	13.945	15.891	156.55
1.0000	3.269	3.152	4.650	6.129	6.982	7.762	8.394	8.984	12.343	13.850	14.704	16.742	173.94
1.2500	3.765	3.610	5.301	6.929	7.884	8.731	9.468	10.141	13.829	15.498	16.448	18.692	217.42
1.6000	4.433	4.240	6.157	7.963	9.044	9.974	10.848	11.631	15.706	17.576	18.646	21.145	278.30
2.0000	5.180	4.955	7.093	9.076	10.286	11.301	12.324	13.227	17.687	19.756	20.952	23.710	347.88
2.5000	6.112	5.845	8.234	10.414	11.771	12.883	14.090	15.131	20.022	22.319	23.657	26.703	434.85
3.2000	7.430	7.099	9.818	12.247	13.790	15.030	16.488	17.719	23.147	25.744	27.266	30.679	556.61
4.0000	8.976	8.556	11.642	14.332	16.073	17.456	19.187	20.641	26.623	29.543	31.260	35.072	695.76
5.0000	10.978	10.430	13.968	16.968	18.943	20.501	22.566	24.299	30.919	34.243	36.179	40.470	869.70
6.0000	13.063	12.372	16.363	19.662	21.866	23.592	25.993	28.004	35.242	38.952	41.096	45.840	1043.6
7.0000	15.232	14.385	18.834	22.425	24.859	26.745	29.482	31.776	39.623	43.708	46.058	51.235	1217.6
8.0000	17.487	16.470	21.383	25.264	27.928	29.974	33.042	35.626	44.064	48.531	51.080	56.687	1391.5
9.0000	19.823	18.629	24.011	28.179	31.076	33.282	36.680	39.561	48.584	53.430	56.179	62.209	1565.5
10.0000	22.239	20.861	26.718	31.171	34.304	36.670	40.404	43.577	53.191	58.411	61.355	67.808	1739.4
11.0000	24.735	23.166	29.504	34.236	37.612	40.139	44.214	47.673	57.888	63.471	66.600	73.492	1913.3
12.0000	27.308	25.541	32.365	37.378	40.997	43.685	48.108	51.848	62.670	68.609	71.925	79.268	2087.3

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.051	0.118	0.140	0.144	0.151	0.200	0.275	0.354	0.448	0.123	0.104	0.115	2.1742
0.0160	0.065	0.150	0.180	0.185	0.195	0.259	0.356	0.463	0.607	0.158	0.133	0.148	2.7830
0.0200	0.080	0.187	0.226	0.232	0.245	0.326	0.449	0.583	0.774	0.197	0.164	0.186	3.4788
0.0250	0.098	0.233	0.283	0.292	0.308	0.410	0.564	0.731	0.973	0.245	0.203	0.233	4.3485
0.0320	0.122	0.298	0.364	0.375	0.396	0.525	0.723	0.934	1.237	0.310	0.256	0.298	5.5661
0.0400	0.149	0.372	0.454	0.468	0.495	0.653	0.899	1.156	1.527	0.381	0.313	0.372	6.9576
0.0500	0.181	0.464	0.565	0.582	0.616	0.804	1.108	1.418	1.867	0.466	0.381	0.460	8.6970
0.0600	0.211	0.553	0.671	0.690	0.730	0.945	1.304	1.661	2.181	0.546	0.445	0.545	10.436
0.0700	0.240	0.637	0.771	0.793	0.837	1.076	1.486	1.887	2.472	0.622	0.505	0.625	12.176
0.0800	0.266	0.717	0.866	0.890	0.938	1.198	1.656	2.097	2.743	0.692	0.561	0.700	13.915
0.0900	0.291	0.792	0.955	0.981	1.033	1.311	1.815	2.293	2.997	0.759	0.614	0.770	15.655
0.1000	0.314	0.863	1.038	1.066	1.122	1.417	1.963	2.476	3.235	0.822	0.663	0.836	17.394
0.1250	0.366	1.018	1.222	1.257	1.321	1.654	2.297	2.890	3.776	0.964	0.776	0.984	21.743
0.1600	0.425	1.198	1.437	1.479	1.554	1.933	2.694	3.384	4.425	1.133	0.910	1.154	27.830
0.2000	0.480	1.363	1.637	1.686	1.772	2.198	3.077	3.862	5.059	1.296	1.038	1.313	34.788
0.2500	0.535	1.531	1.841	1.898	1.997	2.478	3.485	4.376	5.747	1.468	1.175	1.474	43.485
0.3200	0.597	1.720	2.073	2.140	2.258	2.813	3.979	5.005	6.594	1.672	1.335	1.657	55.661
0.4000	0.655	1.897	2.293	2.371	2.511	3.148	4.479	5.643	7.462	1.871	1.492	1.831	69.576
0.5000	0.717	2.085	2.531	2.621	2.788	3.521	5.041	6.363	8.442	2.089	1.663	2.018	86.970
0.6000	0.773	2.252	2.749	2.847	3.041	3.865	5.558	7.024	9.342	2.286	1.817	2.188	104.36
0.7000	0.825	2.405	2.954	3.062	3.282	4.195	6.046	7.649	10.188	2.472	1.962	2.348	121.76
0.8000	0.876	2.550	3.153	3.272	3.516	4.515	6.523	8.260	10.998	2.652	2.102	2.503	139.15
0.9000	0.926	2.692	3.350	3.478	3.748	4.831	6.987	8.851	11.794	2.827	2.239	2.656	156.55
1.0000	0.976	2.831	3.545	3.684	3.978	5.143	7.442	9.425	12.566	3.000	2.373	2.809	173.94
1.2500	1.101	3.173	4.024	4.187	4.544	5.902	8.534	10.787	14.384	3.424	2.706	3.186	217.42
1.6000	1.282	3.644	4.682	4.875	5.316	6.922	9.971	12.560	16.705	4.010	3.171	3.711	278.30
2.0000	1.498	4.184	5.420	5.649	6.176	8.039	11.514	14.448	19.124	4.677	3.708	4.312	347.88
2.5000	1.787	4.872	6.334	6.609	7.226	9.379	13.333	16.648	21.906	5.515	4.394	5.074	434.85
3.2000	2.222	5.868	7.614	7.952	8.677	11.192	15.746	19.547	25.536	6.701	5.382	6.165	556.61
4.0000	2.758	7.065	9.101	9.506	10.340	13.235	18.422	22.743	29.504	8.088	6.552	7.448	695.76
5.0000	3.476	8.649	11.016	11.499	12.458	15.807	21.752	26.693	34.351	9.878	8.076	9.113	869.70
6.0000	4.238	10.325	13.003	13.564	14.643	18.434	25.123	30.671	39.190	11.736	9.665	10.848	1043.6
7.0000	5.038	12.085	15.062	15.702	16.902	21.132	28.564	34.712	44.087	13.664	11.319	12.651	1217.6
8.0000	5.872	13.926	17.192	17.911	19.240	23.907	32.092	38.836	49.065	15.661	13.036	14.517	1391.5
9.0000	6.741	15.843	19.396	20.194	21.654	26.765	35.723	43.065	54.144	17.729	14.818	16.450	1565.5
10.0000	7.643	17.824	21.669	22.548	24.143	29.708	39.451	47.404	59.335	19.868	16.662	18.447	1739.4
11.0000	8.578	19.866	24.007	24.970	26.703	32.735	43.277	51.853	64.651	22.074	18.568	20.506	1913.3
12.0000	9.545	21.970	26.410	27.458	29.333	35.846	47.198	56.410	70.092	24.346	20.534	22.624	2087.3

$^{175}_{71}$Lu IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=175 MEV
0.0125	8.997	7.443	5.453	3.626	2.944	2.672	2.475	2.290	1.456	1.246	1.145	0.981	2.1867
0.0160	10.396	8.600	6.301	4.190	3.402	3.087	2.860	2.646	1.682	1.440	1.323	1.134	2.7990
0.0200	11.847	9.801	7.180	4.775	3.877	3.518	3.260	3.016	1.917	1.641	1.508	1.292	3.4988
0.0250	13.500	11.168	8.182	5.441	4.418	4.009	3.715	3.436	2.185	1.870	1.722	1.473	4.3735
0.0320	15.581	12.915	9.454	6.287	5.115	4.652	4.292	3.971	2.524	2.165	1.995	1.711	5.5981
0.0400	17.712	14.749	10.774	7.186	5.861	5.344	4.924	4.557	2.898	2.494	2.295	1.972	6.9976
0.0500	20.111	16.857	12.278	8.226	6.740	6.139	5.660	5.242	3.327	2.891	2.664	2.290	8.7470
0.0600	22.294	18.865	13.661	9.207	7.568	6.871	6.352	5.888	3.770	3.279	3.026	2.602	10.496
0.0700	24.295	20.782	14.951	10.137	8.373	7.595	7.027	6.519	4.186	3.663	3.394	2.915	12.246
0.0800	26.158	22.666	16.167	11.042	9.134	8.277	7.647	7.113	4.608	4.042	3.735	3.217	13.995
0.0900	27.904	24.492	17.321	11.917	9.873	8.972	8.262	7.691	5.040	4.408	4.088	3.525	15.745
0.1000	29.569	26.290	18.423	12.767	10.612	9.617	8.843	8.272	5.453	4.772	4.422	3.814	17.494
0.1250	33.381	30.799	20.994	14.780	12.345	11.190	10.287	9.636	6.456	5.648	5.280	4.566	21.868
0.1600	38.063	36.995	24.259	17.370	14.604	13.246	12.154	11.402	7.763	6.817	6.392	5.580	27.990
0.2000	42.795	43.430	27.645	20.098	17.002	15.398	14.127	13.242	9.178	8.100	7.602	6.635	34.988
0.2500	47.980	50.469	31.503	23.281	19.784	17.957	16.445	15.405	10.869	9.609	9.010	7.876	43.735
0.3200	54.312	59.008	36.402	27.411	23.407	21.368	19.475	18.201	13.032	11.576	10.866	9.556	55.981
0.4000	60.648	67.327	41.483	31.610	27.213	24.890	22.691	21.198	15.432	13.731	12.901	11.325	69.976
0.5000	67.296	75.626	47.060	36.377	31.530	28.942	26.354	24.565	18.165	16.189	15.224	13.412	87.470
0.6000	72.966	82.178	52.044	40.751	35.494	32.684	29.665	27.636	20.662	18.476	17.409	15.457	104.96
0.7000	77.503	87.001	56.202	44.400	38.836	35.801	32.429	30.237	22.818	20.401	19.277	17.085	122.46
0.8000	81.063	90.375	59.693	47.575	41.725	38.621	34.920	32.532	24.713	22.206	20.952	18.624	139.95
0.9000	84.060	92.892	62.638	50.236	44.285	41.090	37.082	34.513	26.496	23.802	22.487	20.044	157.45
1.0000	86.431	94.638	65.133	52.692	46.505	43.183	39.015	36.279	28.007	25.206	23.839	21.298	174.94
1.2500	90.607	97.034	69.859	57.285	50.997	47.504	42.824	39.750	31.227	28.153	26.616	23.822	218.67
1.6000	93.672	98.185	73.991	61.782	55.197	51.571	46.466	42.915	34.406	31.150	29.448	26.415	279.90
2.0000	94.851	98.995	76.562	64.848	58.264	54.665	49.000	45.401	36.750	33.534	31.697	28.558	349.88
2.5000	94.553	99.074	77.950	66.959	60.567	56.903	50.901	47.238	38.819	35.311	33.518	30.400	437.35
3.2000	92.875	98.109	78.112	67.957	61.865	58.193	52.179	48.273	40.306	36.869	34.994	31.792	559.81
4.0000	90.209	96.069	77.102	67.773	62.067	58.443	52.661	48.574	41.095	37.626	35.852	32.614	699.76
5.0000	86.698	92.934	75.129	66.564	61.305	57.849	52.139	48.233	41.321	37.715	36.137	32.981	874.70
6.0000	83.414	89.685	72.914	65.040	60.009	56.873	51.332	47.467	40.686	37.551	35.947	33.030	1049.6
7.0000	80.169	86.603	70.696	63.344	58.536	55.638	50.336	46.589	40.297	37.045	35.560	32.732	1224.6
8.0000	77.274	83.650	68.566	61.709	57.115	54.304	49.367	45.596	39.631	36.546	35.106	32.363	1399.5
9.0000	74.743	80.866	66.556	60.100	55.708	53.046	48.253	44.659	38.936	35.940	34.543	31.947	1574.5
10.0000	72.308	78.258	64.676	58.661	54.328	51.806	47.149	43.786	38.159	35.378	34.084	31.497	1749.4
11.0000	70.095	75.946	62.922	57.259	53.106	50.652	46.122	42.975	37.501	34.859	33.663	31.020	1924.3
12.0000	68.088	73.726	61.285	55.892	51.909	49.580	45.167	42.164	36.832	34.320	33.094	30.520	2099.3

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	20.447	8.724	5.780	5.431	4.826	3.184	1.952	1.385	0.914	7.312	9.302	7.099	2.1867
0.0160	23.186	9.778	6.571	6.181	5.494	3.711	2.300	1.638	1.087	8.399	10.686	8.071	2.7990
0.0200	25.704	10.554	7.302	6.878	6.153	4.272	2.664	1.939	1.297	9.492	12.069	8.968	3.4988
0.0250	28.473	11.299	8.116	7.650	6.922	4.966	3.175	2.315	1.677	10.718	13.639	9.966	4.3735
0.0320	32.239	12.234	9.067	8.632	7.885	5.909	3.838	2.893	2.014	12.291	15.675	11.251	5.5981
0.0400	35.092	13.123	10.052	9.675	8.910	6.960	4.611	3.534	2.510	13.952	17.798	12.605	6.9976
0.0500	40.639	14.291	11.283	10.976	10.215	8.238	5.549	4.322	3.131	15.887	20.258	14.266	8.7470
0.0600	45.627	15.614	12.663	12.240	11.571	9.521	6.475	5.095	3.743	17.772	22.690	15.956	10.496
0.0700	50.684	17.164	14.054	13.650	12.948	10.795	7.356	5.846	4.321	19.646	25.058	17.762	12.246
0.0800	56.099	18.834	15.536	15.100	14.372	12.077	8.277	6.596	4.899	21.534	27.435	19.659	13.995*
0.0900	61.490	20.629	17.061	16.628	15.831	13.354	9.180	7.344	5.439	23.418	29.775	21.617	15.745
0.1000	67.429	22.624	18.755	18.165	17.281	14.646	10.114	8.051	5.969	25.295	32.167	23.637	17.494
0.1250	83.348	27.818	22.989	22.149	21.162	17.866	12.303	9.804	7.285	30.106	38.315	28.951	21.868
0.1600	107.468	35.831	29.402	28.335	26.879	22.391	15.356	12.227	9.073	37.044	47.063	37.117	27.990
0.2000	135.737	45.061	36.906	35.441	33.506	27.230	18.522	14.707	10.865	44.619	56.617	46.582	34.988
0.2500	170.749	56.517	45.838	44.136	41.207	32.575	22.021	17.264	12.696	53.367	67.638	58.218	43.735
0.3200	216.230	70.584	57.407	54.786	50.126	38.405	25.627	19.985	14.597	64.141	81.469	72.732	55.981
0.4000	258.854	85.455	67.866	64.506	58.408	43.599	28.831	22.442	16.344	74.379	94.706	86.119	69.976
0.5000	300.244	99.768	77.508	73.743	65.978	48.519	32.001	24.989	18.212	84.379	107.721	98.920	87.470
0.6000	330.481	110.854	83.895	79.732	71.249	52.096	34.557	26.959	19.725	91.702	117.672	107.575	104.96
0.7000	345.081	118.586	87.226	82.898	74.187	54.179	36.250	28.213	20.851	96.387	123.869	112.011	122.46
0.8000	350.396	122.967	88.882	84.764	75.750	55.395	37.487	29.249	21.728	99.329	127.503	114.252	139.95
0.9000	350.772	125.025	89.572	85.375	75.917	55.998	38.209	30.191	22.424	101.160	129.723	114.878	157.45
1.0000	351.066	126.944	90.600	85.975	76.596	56.731	39.080	31.133	23.122	102.454	131.243	115.415	174.94
1.2500	347.200	130.008	92.563	88.372	78.522	58.891	41.357	33.393	25.219	104.579	132.802	117.154	218.67
1.6000	334.437	130.963	94.560	90.416	80.946	61.782	44.320	36.033	27.894	105.437	131.925	117.497	279.90
2.0000	316.968	129.926	96.315	91.722	82.994	64.465	47.086	38.664	30.395	105.656	130.156	116.757	349.88
2.5000	294.650	126.668	96.736	92.059	84.965	67.193	49.888	41.547	33.051	104.920	126.980	114.586	437.35
3.2000	273.392	121.464	96.312	91.938	85.376	69.129	52.569	43.743	35.072	103.342	123.182	112.091	559.81
4.0000	254.436	115.036	94.064	90.209	84.812	69.392	53.200	44.796	36.238	100.695	118.660	108.482	699.76
5.0000	238.909	108.561	90.831	87.450	82.416	68.292	53.116	44.852	36.813	97.216	113.820	104.279	874.70
6.0000	226.764	103.101	8[illegible].643	84.289	79.841	66.644	52.061	44.259	36.457	93.622	109.299	100.112	1049.6
7.0000	217.037	98.550	84.694	81.654	77.200	64.899	51.043	43.549	35.984	90.420	105.267	96.712	1224.6
8.0000	208.440	94.278	81.936	79.056	74.668	63.012	49.573	42.511	35.311	87.353	101.477	93.455	1399.5
9.0000	200.335	91.049	79.269	76.540	72.413	61.232	48.253	41.465	34.609	84.394	97.905	90.317	1574.5
10.0000	193.382	88.283	77.029	74.378	70.368	59.502	47.020	40.423	33.826	81.751	94.686	87.571	1749.4
11.0000	186.877	85.699	74.940	72.360	68.459	57.888	45.870	39.452	33.034	79.344	91.803	85.070	1924.3
12.0000	180.792	83.287	72.991	70.478	66.678	56.383	44.800	38.548	32.297	77.097	89.048	82.735	2099.3

$^{175}_{71}Lu$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=175 MEV
0.0125	0.131	0.129	0.156	0.197	0.205	0.244	0.255	0.276	0.361	0.402	0.422	0.481	2.1867
0.0160	0.166	0.164	0.200	0.253	0.265	0.316	0.331	0.359	0.476	0.535	0.566	0.653	2.7990
0.0200	0.204	0.204	0.249	0.318	0.333	0.397	0.416	0.452	0.601	0.678	0.720	0.835	3.4988
0.0250	0.249	0.252	0.310	0.398	0.419	0.497	0.522	0.565	0.756	0.853	0.906	1.054	4.3735
0.0320	0.309	0.317	0.392	0.508	0.539	0.637	0.667	0.722	0.971	1.095	1.164	1.353	5.5981
0.0400	0.373	0.387	0.482	0.631	0.674	0.793	0.831	0.898	1.214	1.370	1.455	1.689	6.9976
0.0500	0.448	0.469	0.589	0.779	0.839	0.983	1.030	1.110	1.514	1.707	1.813	2.101	8.7470
0.0600	0.517	0.547	0.691	0.920	0.998	1.164	1.221	1.315	1.805	2.034	2.162	2.500	10.496
0.0700	0.582	0.619	0.787	1.055	1.151	1.338	1.404	1.511	2.087	2.350	2.498	2.886	12.246
0.0800	0.643	0.687	0.879	1.183	1.298	1.504	1.580	1.699	2.357	2.653	2.821	3.257	13.995
0.0900	0.701	0.752	0.966	1.306	1.438	1.662	1.748	1.879	2.617	2.944	3.131	3.613	15.745
0.1000	0.757	0.812	1.050	1.423	1.573	1.814	1.909	2.051	2.865	3.223	3.428	3.954	17.494
0.1250	0.885	0.951	1.245	1.694	1.886	2.166	2.286	2.452	3.442	3.874	4.121	4.748	21.868
0.1600	1.047	1.119	1.491	2.033	2.279	2.605	2.758	2.953	4.161	4.686	4.983	5.734	27.990
0.2000	1.212	1.284	1.742	2.375	2.676	3.048	3.235	3.462	4.884	5.501	5.847	6.720	34.988
0.2500	1.399	1.464	2.022	2.753	3.115	3.536	3.763	4.024	5.675	6.392	6.793	7.798	43.735
0.3200	1.632	1.681	2.368	3.215	3.650	4.128	4.407	4.710	6.630	7.465	7.934	9.096	55.981
0.4000	1.871	1.899	2.717	3.673	4.181	4.711	5.043	5.390	7.566	8.514	9.048	10.362	69.976
0.5000	2.140	2.139	3.103	4.175	4.758	5.343	5.735	6.131	8.570	9.639	10.243	11.719	87.470
0.6000	2.387	2.358	3.450	4.620	5.268	5.899	6.344	6.785	9.446	10.619	11.283	12.894	104.96
0.7000	2.619	2.565	3.769	5.024	5.729	6.402	6.897	7.377	10.233	11.498	12.214	13.943	122.46
0.8000	2.840	2.762	4.071	5.404	6.157	6.872	7.409	7.926	10.956	12.304	13.067	14.903	139.95
0.9000	3.051	2.953	4.357	5.762	6.564	7.310	7.894	8.447	11.639	13.064	13.872	15.808	157.45
1.0000	3.257	3.139	4.630	6.102	6.949	7.725	8.354	8.941	12.281	13.778	14.627	16.654	174.94
1.2500	3.749	3.594	5.277	6.896	7.845	8.689	9.421	10.090	13.756	15.416	16.360	18.591	218.67
1.6000	4.412	4.220	6.126	7.922	8.996	9.922	10.790	11.569	15.619	17.478	18.541	21.025	279.90
2.0000	5.153	4.928	7.054	9.026	10.227	11.238	12.254	13.151	17.583	19.639	20.827	23.568	349.88
2.5000	6.075	5.810	8.185	10.351	11.697	12.804	14.003	15.037	19.895	22.177	23.506	26.532	437.35
3.2000	7.380	7.050	9.752	12.164	13.695	14.928	16.375	17.597	22.986	25.565	27.076	30.465	559.81
4.0000	8.907	8.490	11.553	14.224	15.951	17.326	19.043	20.485	26.422	29.319	31.023	34.807	699.76
5.0000	10.885	10.341	13.851	16.827	18.786	20.333	22.379	24.097	30.664	33.960	35.880	40.137	874.70
6.0000	12.941	12.257	16.214	19.486	21.670	23.382	25.760	27.752	34.930	38.608	40.733	45.436	1049.6
7.0000	15.081	14.242	18.651	22.211	24.621	26.492	29.202	31.473	39.251	43.298	45.626	50.756	1224.6
8.0000	17.304	16.297	21.164	25.009	27.647	29.675	32.711	35.268	43.628	48.053	50.577	56.132	1399.5
9.0000	19.606	18.425	23.754	27.882	30.749	32.935	36.296	39.146	48.082	52.880	55.601	61.573	1574.5
10.0000	21.986	20.624	26.420	30.829	33.929	36.273	39.964	43.102	52.621	57.787	60.700	67.088	1749.4
11.0000	24.444	22.894	29.163	33.848	37.186	39.688	43.716	47.135	57.246	62.769	65.865	72.685	1924.3
12.0000	26.976	25.232	31.980	36.941	40.519	43.179	47.549	51.245	61.954	67.827	71.107	78.371	2099.3

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.051	0.117	0.139	0.143	0.150	0.199	0.273	0.351	0.442	0.123	0.103	0.115	2.1867
0.0160	0.064	0.149	0.179	0.184	0.193	0.257	0.354	0.459	0.600	0.157	0.132	0.147	2.7990
0.0200	0.079	0.186	0.224	0.231	0.243	0.323	0.445	0.578	0.767	0.196	0.164	0.185	3.4988
0.0250	0.097	0.232	0.282	0.290	0.306	0.407	0.559	0.725	0.964	0.243	0.202	0.231	4.3735
0.0320	0.122	0.296	0.361	0.372	0.393	0.522	0.717	0.926	1.226	0.308	0.255	0.296	5.5981
0.0400	0.148	0.370	0.451	0.465	0.492	0.648	0.892	1.147	1.514	0.379	0.312	0.369	6.9976
0.0500	0.180	0.461	0.562	0.578	0.611	0.799	1.100	1.406	1.851	0.464	0.379	0.457	8.7470
0.0600	0.210	0.550	0.667	0.686	0.725	0.939	1.294	1.648	2.163	0.543	0.443	0.542	10.496
0.0700	0.239	0.634	0.767	0.789	0.832	1.069	1.475	1.873	2.452	0.618	0.502	0.621	12.246
0.0800	0.265	0.714	0.861	0.885	0.933	1.190	1.645	2.082	2.722	0.689	0.558	0.696	13.995
0.0900	0.290	0.789	0.949	0.975	1.027	1.303	1.803	2.276	2.974	0.755	0.611	0.766	15.745
0.1000	0.313	0.858	1.032	1.060	1.116	1.409	1.950	2.459	3.212	0.818	0.660	0.832	17.494
0.1250	0.364	1.014	1.216	1.250	1.314	1.644	2.283	2.871	3.750	0.959	0.772	0.979	21.868
0.1600	0.424	1.193	1.430	1.472	1.546	1.922	2.679	3.363	4.397	1.128	0.906	1.149	27.990
0.2000	0.478	1.357	1.630	1.678	1.764	2.187	3.060	3.839	5.027	1.290	1.034	1.307	34.988
0.2500	0.533	1.524	1.833	1.890	1.988	2.466	3.467	4.352	5.713	1.462	1.170	1.468	43.735
0.3200	0.595	1.713	2.064	2.131	2.248	2.800	3.959	4.979	6.558	1.665	1.330	1.650	55.981
0.4000	0.653	1.890	2.284	2.361	2.500	3.133	4.457	5.615	7.422	1.864	1.487	1.823	69.976
0.5000	0.715	2.077	2.521	2.610	2.776	3.506	5.017	6.332	8.398	2.081	1.657	2.010	87.470
0.6000	0.770	2.243	2.737	2.835	3.028	3.848	5.532	6.990	9.295	2.277	1.810	2.179	104.96
0.7000	0.822	2.395	2.941	3.050	3.268	4.177	6.018	7.612	10.137	2.463	1.955	2.338	122.46
0.8000	0.872	2.540	3.140	3.258	3.501	4.495	6.492	8.220	10.942	2.641	2.094	2.493	139.95
0.9000	0.922	2.681	3.336	3.463	3.731	4.809	6.954	8.808	11.734	2.816	2.230	2.645	157.45
1.0000	0.972	2.820	3.530	3.667	3.961	5.119	7.406	9.379	12.502	2.987	2.364	2.797	174.94
1.2500	1.097	3.159	4.006	4.168	4.523	5.874	8.491	10.732	14.309	3.409	2.694	3.172	218.67
1.6000	1.276	3.627	4.658	4.851	5.289	6.886	9.918	12.492	16.611	3.990	3.155	3.692	279.90
2.0000	1.490	4.162	5.390	5.618	6.141	7.993	11.447	14.363	19.010	4.652	3.688	4.288	349.88
2.5000	1.776	4.843	6.295	6.568	7.181	9.320	13.248	16.542	21.765	5.481	4.367	5.043	437.35
3.2000	2.206	5.829	7.562	7.897	8.616	11.114	15.636	19.410	25.355	6.655	5.345	6.122	559.81
4.0000	2.737	7.011	9.031	9.432	10.260	13.133	18.280	22.568	29.277	8.026	6.501	7.390	699.76
5.0000	3.446	8.576	10.922	11.401	12.351	15.672	21.569	26.469	34.064	9.793	8.006	9.034	874.70
6.0000	4.197	10.229	12.883	13.438	14.507	18.265	24.895	30.395	38.838	11.627	9.574	10.746	1049.6
7.0000	4.986	11.965	14.913	15.547	16.736	20.925	28.288	34.379	43.668	13.528	11.205	12.524	1224.6
8.0000	5.809	13.780	17.014	17.725	19.040	23.661	31.767	38.445	48.576	15.497	12.898	14.364	1399.5
9.0000	6.665	15.669	19.185	19.974	21.419	26.478	35.344	42.613	53.580	17.534	14.653	16.269	1574.5
10.0000	7.554	17.620	21.424	22.293	23.870	29.376	39.017	46.886	58.694	19.641	16.471	18.236	1749.4
11.0000	8.474	19.632	23.726	24.678	26.391	32.358	42.784	51.267	63.928	21.813	18.347	20.263	1924.3
12.0000	9.426	21.703	26.092	27.128	28.981	35.420	46.644	55.754	69.284	24.050	20.282	22.349	2099.3

$^{180}_{72}$Hf IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=180 MEV
0.0125	9.043	7.481	5.481	3.645	2.959	2.685	2.488	2.302	1.463	1.252	1.151	0.986	2.2494
0.0160	10.452	8.646	6.334	4.212	3.421	3.104	2.876	2.660	1.691	1.447	1.330	1.140	2.8792
0.0200	11.913	9.855	7.220	4.801	3.899	3.538	3.278	3.032	1.928	1.650	1.516	1.300	3.5990
0.0250	13.578	11.233	8.229	5.473	4.444	4.032	3.736	3.456	2.197	1.880	1.732	1.481	4.4987
0.0320	15.675	12.993	9.511	6.325	5.146	4.680	4.318	3.995	2.540	2.178	2.007	1.722	5.7584
0.0400	17.823	14.842	10.841	7.231	5.898	5.377	4.954	4.586	2.916	2.510	2.309	1.984	7.1980
0.0500	20.241	16.966	12.357	8.279	6.784	6.178	5.697	5.276	3.349	2.910	2.681	2.305	8.9975
0.0600	22.442	18.991	13.751	9.268	7.618	6.917	6.394	5.927	3.795	3.300	3.046	2.620	10.797
0.0700	24.460	20.923	15.053	10.206	8.429	7.647	7.075	6.563	4.215	3.688	3.417	2.935	12.597
0.0800	26.339	22.823	16.279	11.118	9.198	8.335	7.700	7.163	4.639	4.070	3.760	3.239	14.396
0.0900	28.101	24.664	17.443	12.001	9.943	9.035	8.320	7.745	5.076	4.439	4.117	3.550	16.195
0.1000	29.780	26.478	18.555	12.858	10.688	9.686	8.906	8.331	5.492	4.806	4.453	3.841	17.995
0.1250	33.627	31.026	21.149	14.889	12.436	11.272	10.363	9.707	6.503	5.689	5.319	4.600	22.494
0.1600	38.352	37.277	24.444	17.502	14.715	13.346	12.246	11.489	7.822	6.869	6.441	5.622	28.792
0.2000	43.129	43.770	27.861	20.255	17.135	15.519	14.237	13.346	9.250	8.163	7.662	6.687	35.990
0.2500	48.365	50.874	31.757	23.468	19.943	18.101	16.577	15.529	10.956	9.686	9.082	7.939	44.988
0.3200	54.762	59.497	36.704	27.638	23.601	21.545	19.637	18.352	13.140	11.672	10.956	9.635	57.584
0.4000	61.164	67.899	41.836	31.879	27.444	25.101	22.884	21.378	15.563	13.848	13.011	11.421	71.980
0.5000	67.921	76.328	47.497	36.715	31.823	29.211	26.598	24.794	18.334	16.339	15.365	13.537	89.975
0.6000	73.672	82.973	52.548	41.145	35.838	33.000	29.952	27.903	20.862	18.655	17.577	15.607	107.97
0.7000	78.288	87.883	56.772	44.850	39.229	36.164	32.757	30.543	23.049	20.608	19.473	17.259	125.97
0.8000	81.924	91.334	60.327	48.080	42.168	39.031	35.291	32.878	24.975	22.441	21.175	18.822	143.96
0.9000	84.993	93.923	63.333	50.793	44.776	41.546	37.493	34.896	26.790	24.067	22.737	20.267	161.95
1.0000	87.430	95.732	65.886	53.301	47.042	43.682	39.465	36.698	28.331	25.498	24.114	21.545	179.95
1.2500	91.749	98.257	70.740	58.006	51.640	48.103	43.363	40.251	31.621	28.508	26.952	24.122	224.94
1.6000	94.965	99.541	75.012	62.635	55.959	52.284	47.108	43.507	34.881	31.580	29.855	26.779	287.92
2.0000	96.273	100.469	77.702	65.814	59.131	55.479	49.729	46.077	37.297	34.033	32.169	28.983	359.90
2.5000	96.058	100.651	79.190	68.024	61.531	57.809	51.711	47.989	39.437	35.873	34.052	30.884	449.88
3.2000	94.451	99.773	79.437	69.110	62.914	59.181	53.064	49.092	40.990	37.494	35.588	32.331	575.84
4.0000	91.819	97.783	78.478	68.982	63.175	59.486	53.600	49.441	41.829	38.297	36.492	33.196	719.80
5.0000	88.316	94.667	76.530	67.805	62.448	58.928	53.112	49.132	42.091	38.418	36.811	33.597	899.75
6.0000	85.021	91.413	74.319	66.293	61.165	57.969	52.321	48.382	41.470	38.275	36.640	33.667	1079.7
7.0000	81.754	88.315	72.094	64.596	59.694	56.738	51.331	47.510	41.094	37.777	36.263	33.379	1259.6
8.0000	78.834	85.339	69.950	62.955	58.269	55.401	50.364	46.517	40.431	37.284	35.815	33.017	1439.6
9.0000	76.280	82.529	67.925	61.336	56.853	54.136	49.246	45.578	39.736	36.680	35.253	32.604	1619.6
10.0000	73.818	79.893	66.027	59.887	55.463	52.888	48.134	44.700	38.956	36.117	34.796	32.155	1799.5
11.0000	71.580	77.555	64.255	58.472	54.231	51.725	47.099	43.886	38.296	35.597	34.376	31.677	1979.4
12.0000	69.549	75.308	62.600	57.091	53.022	50.643	46.136	43.069	37.623	35.056	33.804	31.175	2159.4

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	20.552	8.769	5.809	5.459	4.850	3.201	1.962	1.392	0.919	7.349	9.350	7.136	2.2494
0.0160	23.310	9.831	6.607	6.214	5.523	3.731	2.312	1.647	1.093	8.444	10.743	8.114	2.8792
0.0200	25.847	10.613	7.343	6.917	6.187	4.296	2.679	1.949	1.304	9.545	12.137	9.018	3.5990
0.0250	28.638	11.365	8.164	7.694	6.962	4.995	3.193	2.329	1.687	10.780	13.718	10.023	4.4987
0.0320	32.434	12.308	9.121	8.684	7.932	5.945	3.862	2.910	2.026	12.365	15.770	11.319	5.7584
0.0400	36.318	13.205	10.115	9.735	8.966	7.003	4.640	3.556	2.526	14.039	17.910	12.684	7.1980
0.0500	40.902	14.384	11.356	11.047	10.281	8.292	5.585	4.350	3.151	15.990	20.389	14.359	8.9975
0.0600	45.930	15.718	12.748	12.321	11.647	9.585	6.518	5.129	3.768	17.891	22.841	16.062	10.797
0.0700	51.028	17.280	14.149	13.743	13.036	10.868	7.406	5.886	4.350	19.779	25.228	17.882	12.597
0.0800	55.487	18.965	15.644	15.204	14.472	12.160	8.335	6.642	4.932	21.683	27.625	19.795	14.396
0.0900	61.923	20.775	17.181	16.745	15.943	13.449	9.245	7.396	5.477	23.583	29.985	21.769	16.195
0.1000	67.911	22.785	18.889	18.295	17.404	14.751	10.187	8.108	6.012	25.476	32.397	23.806	17.995
0.1250	83.962	28.023	23.158	22.312	21.318	17.998	12.393	9.877	7.339	30.328	38.597	29.165	22.494
0.1600	108.285	36.103	29.626	28.550	27.084	22.562	15.473	12.320	9.142	37.325	47.421	37.399	28.792
0.2000	136.799	45.414	37.195	35.718	33.768	27.443	18.667	14.822	10.949	44.968	57.060	46.946	35.990
0.2500	172.121	56.972	46.206	44.491	41.538	32.836	22.198	17.403	12.798	53.796	68.182	58.686	44.988
0.3200	218.021	71.169	57.882	55.239	50.541	38.722	25.839	20.150	14.718	64.672	82.143	73.334	57.584
0.4000	261.054	86.181	68.443	65.054	58.904	43.969	29.076	22.633	16.483	75.011	95.511	86.851	71.980
0.5000	303.033	100.694	78.228	74.428	66.591	48.970	32.298	25.221	18.381	85.163	108.721	99.839	89.975
0.6000	333.680	111.927	84.708	80.504	71.938	52.601	34.892	27.220	19.916	92.590	118.811	108.617	107.97
0.7000	348.579	119.789	88.110	83.739	74.939	54.728	36.618	28.499	21.062	97.364	125.125	113.146	125.97
0.8000	354.117	124.273	89.826	85.664	76.554	55.983	37.885	29.560	21.959	100.383	128.858	115.465	143.96
0.9000	354.665	126.413	90.566	86.323	76.760	56.620	38.633	30.526	22.673	102.283	131.163	116.153	161.95
1.0000	355.123	128.411	91.647	86.969	77.481	57.386	39.531	31.493	23.389	103.638	132.759	116.749	179.95
1.2500	351.576	131.646	93.730	89.486	79.511	59.633	41.878	33.814	25.537	105.897	134.476	118.630	224.94
1.6000	339.055	132.772	95.866	91.665	82.063	62.635	44.932	36.531	28.280	106.892	133.747	119.119	287.92
2.0000	321.686	131.860	97.749	93.087	84.229	65.425	47.787	39.240	30.848	107.229	132.093	118.496	359.90
2.5000	299.339	128.684	98.275	93.524	86.317	68.262	50.682	42.208	33.577	106.590	129.001	116.410	449.88
3.2000	278.031	123.525	97.946	93.498	86.825	70.302	53.461	44.485	35.667	105.096	125.273	113.993	575.84
4.0000	258.976	117.089	95.743	91.819	86.325	70.630	54.150	45.596	36.885	102.492	120.777	110.418	719.80
5.0000	243.365	110.586	92.525	89.081	83.953	69.566	54.107	45.688	37.500	99.030	115.943	106.223	899.75
6.0000	231.134	105.088	89.332	85.913	81.380	67.928	53.064	45.112	37.160	95.426	111.405	102.041	1079.7
7.0000	221.328	100.499	86.368	83.268	78.727	66.182	52.052	44.410	36.696	92.208	107.348	98.624	1259.6
8.0000	212.649	96.182	83.591	80.653	76.176	64.284	50.574	43.369	36.024	89.117	103.527	95.342	1439.6
9.0000	204.454	92.921	80.899	78.114	73.902	62.491	49.246	42.317	35.321	86.129	99.918	92.174	1619.6
10.0000	197.421	90.127	78.638	75.931	71.837	60.745	48.002	41.267	34.532	83.458	96.664	89.401	1799.5
11.0000	190.836	87.515	76.527	73.893	69.909	59.114	46.842	40.288	33.734	81.025	93.747	86.872	1979.4
12.0000	184.670	85.074	74.557	71.990	68.109	57.592	45.761	39.375	32.990	78.751	90.958	84.510	2159.4

$^{180}_{72}$Hf IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=180 MEV
0.0125	0.134	0.131	0.158	0.199	0.207	0.247	0.258	0.279	0.364	0.404	0.425	0.483	2.2494
0.0160	0.169	0.167	0.203	0.257	0.268	0.319	0.335	0.363	0.479	0.538	0.569	0.656	2.8792
0.0200	0.207	0.207	0.253	0.322	0.337	0.401	0.421	0.456	0.606	0.683	0.724	0.839	3.5990
0.0250	0.254	0.256	0.314	0.403	0.424	0.503	0.527	0.571	0.762	0.859	0.912	1.060	4.4987
0.0320	0.315	0.322	0.398	0.515	0.545	0.644	0.675	0.729	0.979	1.104	1.172	1.361	5.7584
0.0400	0.380	0.393	0.490	0.640	0.683	0.803	0.841	0.908	1.225	1.381	1.466	1.700	7.1980
0.0500	0.456	0.478	0.599	0.790	0.850	0.995	1.043	1.124	1.528	1.722	1.829	2.117	8.9975
0.0600	0.526	0.556	0.702	0.934	1.012	1.180	1.237	1.331	1.824	2.053	2.181	2.521	10.797
0.0700	0.592	0.630	0.800	1.071	1.167	1.357	1.423	1.531	2.109	2.374	2.522	2.912	12.597
0.0800	0.655	0.700	0.894	1.202	1.316	1.525	1.601	1.721	2.384	2.682	2.850	3.288	14.396
0.0900	0.714	0.765	0.983	1.326	1.459	1.687	1.773	1.904	2.648	2.977	3.165	3.649	16.195
0.1000	0.771	0.827	1.068	1.445	1.596	1.841	1.937	2.080	2.900	3.261	3.467	3.996	17.995
0.1250	0.902	0.968	1.267	1.722	1.915	2.200	2.320	2.487	3.487	3.922	4.171	4.804	22.494
0.1600	1.067	1.140	1.517	2.067	2.316	2.647	2.801	2.998	4.219	4.749	5.048	5.806	28.792
0.2000	1.236	1.308	1.773	2.416	2.720	3.099	3.287	3.516	4.956	5.579	5.928	6.810	35.990
0.2500	1.426	1.491	2.058	2.801	3.168	3.596	3.825	4.089	5.762	6.486	6.892	7.908	44.988
0.3200	1.664	1.713	2.412	3.272	3.713	4.199	4.481	4.789	6.735	7.580	8.054	9.230	57.584
0.4000	1.908	1.935	2.768	3.739	4.254	4.793	5.130	5.482	7.688	8.649	9.190	10.521	71.980
0.5000	2.182	2.180	3.161	4.250	4.842	5.438	5.835	6.237	8.711	9.795	10.407	11.903	89.975
0.6000	2.433	2.403	3.515	4.704	5.361	6.004	6.456	6.903	9.604	10.793	11.466	13.100	107.97
0.7000	2.670	2.614	3.839	5.116	5.831	6.516	7.019	7.506	10.405	11.688	12.414	14.167	125.97
0.8000	2.894	2.814	4.146	5.503	6.267	6.994	7.539	8.064	11.140	12.508	13.282	15.144	143.96
0.9000	3.110	3.008	4.437	5.867	6.680	7.441	8.033	8.595	11.836	13.282	14.102	16.065	161.95
1.0000	3.318	3.198	4.716	6.212	7.072	7.863	8.501	9.098	12.489	14.008	14.870	16.926	179.95
1.2500	3.819	3.661	5.373	7.019	7.983	8.842	9.586	10.265	13.988	15.673	16.630	18.895	224.94
1.6000	4.492	4.295	6.235	8.061	9.151	10.094	10.976	11.766	15.879	17.766	18.845	21.366	287.92
2.0000	5.243	5.014	7.176	9.180	10.400	11.428	12.460	13.371	17.871	19.958	21.163	23.945	359.90
2.5000	6.177	5.907	8.321	10.523	11.889	13.014	14.231	15.281	20.213	22.529	23.877	26.947	449.88
3.2000	7.498	7.162	9.907	12.357	13.911	15.165	16.632	17.872	23.341	25.958	27.489	30.927	575.84
4.0000	9.042	8.618	11.729	14.440	16.192	17.589	19.329	20.792	26.815	29.753	31.480	35.317	719.80
5.0000	11.039	10.487	14.049	17.070	19.055	20.626	22.700	24.441	31.101	34.441	36.387	40.702	899.75
6.0000	13.116	12.422	16.435	19.753	21.967	23.705	26.113	28.131	35.407	39.133	41.286	46.051	1079.7
7.0000	15.274	14.424	18.894	22.503	24.945	26.842	29.585	31.884	39.766	43.865	46.222	51.419	1259.6
8.0000	17.516	16.497	21.428	25.325	27.996	30.052	33.124	35.712	44.181	48.660	51.216	56.839	1439.6
9.0000	19.837	18.642	24.039	28.222	31.123	33.338	36.738	39.621	48.671	53.527	56.280	62.324	1619.6
10.0000	22.235	20.858	26.726	31.191	34.328	36.702	40.435	43.608	53.245	58.471	61.419	67.882	1799.5
11.0000	24.711	23.145	29.489	34.232	37.609	40.143	44.214	47.671	57.904	63.490	66.622	73.521	1979.4
12.0000	27.262	25.500	32.327	37.347	40.966	43.659	48.075	51.811	62.646	68.585	71.902	79.248	2159.4

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.052	0.119	0.141	0.145	0.152	0.201	0.276	0.354	0.444	0.125	0.105	0.117	2.2494
0.0160	0.066	0.152	0.182	0.187	0.196	0.260	0.357	0.463	0.604	0.160	0.134	0.150	2.8792
0.0200	0.081	0.189	0.228	0.234	0.247	0.328	0.450	0.583	0.772	0.199	0.166	0.188	3.5990
0.0250	0.099	0.236	0.286	0.294	0.311	0.412	0.565	0.731	0.970	0.247	0.206	0.235	4.4987
0.0320	0.124	0.302	0.367	0.378	0.399	0.529	0.725	0.934	1.235	0.313	0.259	0.301	5.7584
0.0400	0.151	0.377	0.459	0.472	0.500	0.657	0.902	1.158	1.526	0.385	0.317	0.375	7.1980
0.0500	0.184	0.469	0.571	0.587	0.621	0.810	1.113	1.421	1.867	0.471	0.386	0.465	8.9975
0.0600	0.214	0.559	0.678	0.697	0.736	0.953	1.310	1.666	2.183	0.553	0.451	0.551	10.797
0.0700	0.243	0.645	0.780	0.801	0.845	1.085	1.495	1.895	2.476	0.629	0.511	0.632	12.597
0.0800	0.270	0.726	0.875	0.900	0.948	1.209	1.667	2.107	2.750	0.701	0.568	0.708	14.396
0.0900	0.295	0.803	0.965	0.992	1.044	1.324	1.828	2.305	3.007	0.768	0.622	0.780	16.195
0.1000	0.319	0.874	1.049	1.078	1.134	1.431	1.978	2.491	3.248	0.832	0.672	0.846	17.995
0.1250	0.371	1.032	1.237	1.272	1.336	1.671	2.317	2.911	3.796	0.976	0.787	0.996	22.494
0.1600	0.432	1.215	1.456	1.498	1.573	1.954	2.720	3.412	4.455	1.149	0.923	1.170	28.792
0.2000	0.487	1.383	1.659	1.708	1.795	2.224	3.109	3.897	5.097	1.314	1.054	1.331	35.990
0.2500	0.543	1.553	1.866	1.924	2.023	2.509	3.524	4.420	5.796	1.490	1.192	1.495	44.988
0.3200	0.607	1.745	2.102	2.170	2.289	2.850	4.026	5.059	6.657	1.697	1.356	1.681	57.584
0.4000	0.666	1.926	2.326	2.404	2.546	3.189	4.533	5.707	7.537	1.899	1.515	1.857	71.980
0.5000	0.729	2.116	2.567	2.658	2.827	3.569	5.104	6.438	8.533	2.120	1.689	2.047	89.975
0.6000	0.785	2.286	2.788	2.887	3.083	3.917	5.629	7.108	9.445	2.320	1.845	2.220	107.97
0.7000	0.838	2.441	2.996	3.106	3.328	4.252	6.124	7.742	10.303	2.509	1.992	2.382	125.97
0.8000	0.889	2.588	3.198	3.318	3.565	4.577	6.606	8.361	11.123	2.691	2.134	2.539	143.96
0.9000	0.940	2.731	3.397	3.527	3.800	4.896	7.076	8.960	11.928	2.869	2.272	2.694	161.95
1.0000	0.990	2.873	3.595	3.735	4.033	5.212	7.536	9.540	12.709	3.043	2.408	2.849	179.95
1.2500	1.117	3.218	4.079	4.243	4.604	5.979	8.639	10.915	14.546	3.471	2.744	3.230	224.94
1.6000	1.299	3.693	4.741	4.937	5.382	7.006	10.087	12.702	16.883	4.061	3.212	3.758	287.92
2.0000	1.516	4.235	5.483	5.714	6.246	8.129	11.637	14.599	19.315	4.732	3.752	4.363	359.90
2.5000	1.806	4.925	6.400	6.677	7.299	9.473	13.463	16.807	22.106	5.573	4.440	5.127	449.88
3.2000	2.242	5.922	7.681	8.022	8.752	11.288	15.879	19.709	25.740	6.761	5.430	6.219	575.84
4.0000	2.778	7.118	9.167	9.574	10.414	13.329	18.552	22.902	29.705	8.147	6.599	7.501	719.80
5.0000	3.494	8.699	11.078	11.563	12.526	15.895	21.874	26.842	34.540	9.932	8.119	9.162	899.75
6.0000	4.253	10.368	13.057	13.620	14.703	18.512	25.232	30.805	39.360	11.783	9.702	10.890	1079.7
7.0000	5.048	12.119	15.105	15.747	16.951	21.196	28.656	34.826	44.233	13.701	11.348	12.684	1259.6
8.0000	5.878	13.950	17.224	17.943	19.275	23.955	32.163	38.926	49.182	15.687	13.055	14.540	1439.6
9.0000	6.741	15.853	19.412	20.211	21.674	26.795	35.770	43.127	54.227	17.741	14.824	16.460	1619.6
10.0000	7.637	17.820	21.669	22.548	24.144	29.716	39.471	47.434	59.381	19.864	16.656	18.442	1799.5
11.0000	8.564	19.846	23.988	24.950	26.683	32.719	43.267	51.848	64.654	22.052	18.546	20.484	1979.4
12.0000	9.523	21.932	26.371	27.418	29.292	35.804	47.154	56.366	70.048	24.305	20.495	22.585	2159.4

$^{181}_{73}$Ta IONS

ENERGY PER MASS UNIT — ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM) — ENERGY FOR A=181

MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	9.089	7.519	5.539	3.663	2.975	2.699	2.501	2.314	1.471	1.259	1.157	0.992	2.2619
0.0160	10.507	8.693	6.368	4.235	3.439	3.120	2.891	2.675	1.700	1.455	1.337	1.146	2.8952
0.0200	11.979	9.910	7.260	4.828	3.920	3.557	3.296	3.049	1.938	1.659	1.525	1.307	3.6190
0.0250	13.657	11.298	8.277	5.504	4.470	4.056	3.758	3.476	2.210	1.891	1.742	1.490	4.5237
0.0320	15.769	13.071	9.569	6.363	5.177	4.708	4.344	4.019	2.555	2.191	2.019	1.732	5.7904
0.0400	17.934	14.934	10.909	7.276	5.934	5.411	4.985	4.614	2.934	2.525	2.324	1.996	7.2380
0.0500	20.371	17.075	12.437	8.332	6.828	6.218	5.733	5.310	3.370	2.929	2.699	2.319	9.0475
0.0600	22.591	19.116	13.842	9.330	7.669	6.963	6.437	5.966	3.821	3.322	3.066	2.637	10.857
0.0700	24.626	21.065	15.154	10.275	8.486	7.698	7.123	6.607	4.243	3.713	3.440	2.955	12.667
0.0800	26.521	22.980	16.391	11.195	9.261	8.392	7.753	7.212	4.671	4.098	3.786	3.262	14.476
0.0900	28.297	24.837	17.565	12.085	10.012	9.099	8.379	7.799	5.111	4.470	4.145	3.575	16.285
0.1000	29.992	26.666	18.687	12.950	10.763	9.754	8.970	8.390	5.531	4.840	4.485	3.868	18.095
0.1250	33.873	31.253	21.304	14.998	12.527	11.355	10.439	9.778	6.551	5.731	5.358	4.634	22.619
0.1600	38.642	37.558	24.628	17.634	14.826	13.447	12.339	11.575	7.881	6.921	6.490	5.665	28.952
0.2000	43.464	44.110	28.078	20.413	17.268	15.639	14.348	13.449	9.322	8.227	7.721	6.739	36.190
0.2500	48.752	51.280	32.010	23.656	20.102	18.246	16.709	15.653	11.044	9.763	9.155	8.003	45.238
0.3200	55.212	59.986	37.006	27.865	23.795	21.722	19.798	18.503	13.248	11.768	11.046	9.714	57.904
0.4000	61.680	68.472	42.189	32.148	27.676	25.313	23.077	21.558	15.694	13.964	13.121	11.517	72.380
0.5000	68.544	77.028	47.933	37.052	32.115	29.479	26.842	25.021	18.502	16.489	15.506	13.661	90.475
0.6000	74.371	83.761	53.047	41.535	36.178	33.313	30.237	28.168	21.059	18.832	17.744	15.755	108.57
0.7000	79.066	88.755	57.335	45.295	39.619	36.523	33.083	30.846	23.278	20.813	19.666	17.430	126.67
0.8000	82.775	92.284	60.954	48.580	42.607	39.437	35.658	33.220	25.235	22.675	21.395	19.018	144.76
0.9000	85.916	94.943	64.021	51.345	45.263	41.998	37.901	35.276	27.081	24.328	22.984	20.487	162.85
1.0000	88.420	96.816	66.632	53.905	47.575	44.177	39.912	37.114	28.652	25.786	24.387	21.789	180.95
1.2500	92.884	99.473	71.615	58.724	52.279	48.698	43.900	40.749	32.012	28.861	27.285	24.421	226.19
1.6000	96.255	100.893	76.031	63.486	56.719	52.994	47.747	44.098	35.354	32.009	30.260	27.143	289.52
2.0000	97.685	101.942	78.841	66.779	59.998	56.293	50.459	46.753	37.844	34.533	32.640	29.408	361.90
2.5000	97.565	102.231	80.433	69.092	62.497	58.716	52.523	48.743	40.056	36.436	34.586	31.369	452.38
3.2000	96.033	101.445	80.768	70.268	63.968	60.172	53.953	49.915	41.676	38.123	36.184	32.873	579.04
4.0000	93.437	99.506	79.861	70.197	64.288	60.534	54.545	50.312	42.566	38.972	37.135	33.781	723.80
5.0000	89.942	96.411	77.939	69.054	63.598	60.013	54.090	50.037	42.867	39.126	37.489	34.215	904.75
6.0000	86.639	93.152	75.733	67.554	62.328	59.072	53.316	49.302	42.259	39.003	37.336	34.307	1085.7
7.0000	83.350	90.038	73.500	65.856	60.858	57.845	52.332	48.437	41.895	38.514	36.971	34.031	1266.6
8.0000	80.405	87.040	71.344	64.210	59.429	56.504	51.368	47.444	41.237	38.026	36.528	33.674	1447.6
9.0000	77.827	84.202	69.302	62.580	58.006	55.234	50.244	46.502	40.542	37.423	35.968	33.265	1628.6
10.0000	75.338	81.538	67.387	61.120	56.605	53.977	49.125	45.621	39.758	36.861	35.513	32.817	1809.5
11.0000	73.074	79.174	65.596	59.692	55.363	52.805	48.082	44.802	39.095	36.340	35.094	32.339	1990.4
12.0000	71.019	76.900	63.923	58.298	54.143	51.714	47.112	43.979	38.418	35.797	34.519	31.834	2171.4

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	20.657	8.814	5.839	5.486	4.875	3.217	1.972	1.399	0.923	7.387	9.398	7.172	2.2619
0.0160	23.435	9.883	6.642	6.247	5.553	3.751	2.324	1.656	1.099	8.489	10.800	8.158	2.8952
0.0200	25.991	10.672	7.383	6.955	6.222	4.320	2.693	1.960	1.311	9.598	12.204	9.068	3.6190
0.0250	28.804	11.430	8.211	7.739	7.002	5.024	3.211	2.342	1.697	10.843	13.798	10.081	4.5237
0.0320	32.629	12.382	9.176	8.736	7.980	5.980	3.885	2.928	2.038	12.439	15.865	11.387	5.7904
0.0400	36.544	13.287	10.178	9.796	9.021	7.047	4.669	3.578	2.542	14.127	18.021	12.763	7.2380
0.0500	41.165	14.476	11.429	11.118	10.347	8.345	5.621	4.378	3.171	16.093	20.520	14.451	9.0475
0.0600	46.234	15.822	12.832	12.403	11.725	9.648	6.561	5.163	3.793	18.009	22.992	16.168	10.857
0.0700	51.373	17.397	14.245	13.836	13.124	10.941	7.456	5.925	4.380	19.913	25.399	18.003	12.667
0.0800	56.876	19.095	15.752	15.309	14.572	12.244	8.392	6.687	4.966	21.833	27.815	19.931	14.476
0.0900	62.356	20.920	17.302	16.863	16.055	13.543	9.310	7.448	5.515	23.748	30.194	21.921	16.285
0.1000	68.393	22.947	19.023	18.425	17.528	14.856	10.259	8.166	6.054	25.657	32.627	23.975	18.095
0.1250	84.576	28.228	23.328	22.476	21.474	18.130	12.484	9.949	7.392	30.550	38.879	29.378	22.619
0.1600	109.104	36.376	29.850	28.766	27.288	22.732	15.590	12.413	9.211	37.607	47.779	37.681	28.952
0.2000	137.862	45.767	37.484	35.996	34.030	27.657	18.812	14.937	11.035	45.317	57.503	47.311	36.190
0.2500	173.496	57.426	46.575	44.846	41.869	33.099	22.375	17.542	12.900	54.225	68.726	59.155	45.238
0.3200	219.813	71.754	58.358	55.693	50.957	39.041	26.052	20.316	14.839	65.204	82.818	73.937	57.904
0.4000	263.256	86.908	69.020	65.603	59.401	44.340	29.321	22.824	16.622	75.644	96.316	87.583	72.380
0.5000	305.812	101.618	78.946	75.111	67.202	49.419	32.594	25.452	18.550	85.944	109.719	100.755	90.475
0.6000	336.846	112.989	85.511	81.267	72.621	53.100	35.223	27.478	20.105	93.468	119.938	109.647	108.57
0.7000	352.040	120.978	88.985	84.570	75.683	55.271	36.981	28.782	21.271	98.330	126.367	114.270	126.67
0.8000	357.799	125.565	90.760	86.554	77.350	56.565	38.279	29.867	22.187	101.427	130.197	116.666	144.76
0.9000	358.519	127.786	91.550	87.261	77.594	57.235	39.053	30.858	22.920	103.394	132.588	117.415	162.85
1.0000	359.145	129.865	92.685	87.954	78.359	58.036	39.979	31.850	23.654	104.812	134.263	118.071	180.95
1.2500	355.925	133.275	94.889	90.592	80.495	60.371	42.396	34.232	25.853	107.207	136.139	120.098	226.19
1.6000	343.660	134.575	97.168	92.910	83.178	63.486	45.543	37.027	28.664	108.344	135.563	120.737	289.52
2.0000	325.404	133.794	99.183	94.452	85.464	66.385	48.488	39.815	31.300	108.801	134.031	120.233	361.90
2.5000	304.037	130.704	99.818	94.992	87.672	69.333	51.477	42.871	34.104	108.263	131.026	118.237	452.38
3.2000	282.688	125.594	99.587	95.064	88.280	71.480	54.357	45.230	36.265	106.856	127.371	115.902	579.04
4.0000	263.540	119.152	97.430	93.437	87.847	71.874	55.104	46.399	37.534	104.298	122.905	112.364	723.80
5.0000	247.847	112.622	94.229	90.721	85.499	70.847	55.103	46.530	38.190	100.853	118.078	108.180	904.75
6.0000	235.530	107.087	91.031	87.548	82.928	69.220	54.073	45.970	37.867	97.241	113.524	103.982	1085.7
7.0000	225.646	102.460	88.054	84.893	80.262	67.473	53.067	45.276	37.412	94.007	109.442	100.549	1266.6
8.0000	216.885	98.098	85.256	82.260	77.694	65.565	51.582	44.233	36.742	90.892	105.589	97.242	1447.6
9.0000	208.600	94.806	82.539	79.698	75.401	63.758	50.244	43.175	36.037	87.875	101.944	94.043	1628.6
10.0000	201.487	91.983	80.258	77.495	73.317	61.996	48.990	42.117	35.243	85.177	98.654	91.242	1809.5
11.0000	194.820	89.342	78.125	75.435	71.368	60.348	47.819	41.129	34.438	82.717	95.705	88.686	1990.4
12.0000	188.574	86.872	76.133	73.512	69.549	58.810	46.728	40.208	33.688	80.416	92.881	86.297	2171.4

$^{181}_{73}Ta$ IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=181
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.133	0.130	0.157	0.198	0.205	0.245	0.256	0.276	0.360	0.400	0.419	0.476	2.2619
0.0160	0.168	0.166	0.202	0.255	0.266	0.317	0.332	0.360	0.475	0.533	0.563	0.649	2.8952
0.0200	0.206	0.206	0.251	0.320	0.335	0.398	0.418	0.452	0.601	0.676	0.717	0.831	3.6190
0.0250	0.252	0.255	0.312	0.400	0.421	0.499	0.523	0.566	0.755	0.852	0.904	1.050	4.5237
0.0320	0.313	0.320	0.395	0.511	0.541	0.640	0.670	0.724	0.970	1.094	1.162	1.349	5.7904
0.0400	0.378	0.391	0.487	0.635	0.678	0.797	0.835	0.901	1.215	1.369	1.454	1.686	7.2380
0.0500	0.454	0.475	0.595	0.785	0.844	0.988	1.035	1.115	1.516	1.708	1.813	2.099	9.0475
0.0600	0.524	0.553	0.698	0.928	1.005	1.172	1.228	1.322	1.809	2.037	2.163	2.500	10.857
0.0700	0.590	0.627	0.796	1.064	1.159	1.347	1.413	1.520	2.093	2.355	2.502	2.888	12.667
0.0800	0.652	0.696	0.889	1.194	1.308	1.515	1.591	1.710	2.366	2.661	2.827	3.262	14.476
0.0900	0.711	0.761	0.978	1.318	1.450	1.676	1.761	1.892	2.628	2.955	3.140	3.621	16.285
0.1000	0.768	0.823	1.063	1.437	1.586	1.830	1.924	2.066	2.879	3.237	3.441	3.966	18.095
0.1250	0.898	0.964	1.261	1.712	1.904	2.187	2.306	2.472	3.463	3.895	4.141	4.769	22.619
0.1600	1.063	1.135	1.510	2.056	2.302	2.632	2.785	2.981	4.192	4.718	5.014	5.767	28.952
0.2000	1.231	1.303	1.765	2.404	2.706	3.082	3.270	3.497	4.926	5.544	5.891	6.766	36.190
0.2500	1.421	1.486	2.050	2.788	3.151	3.578	3.806	4.068	5.728	6.448	6.850	7.860	45.238
0.3200	1.658	1.707	2.402	3.257	3.695	4.179	4.459	4.765	6.698	7.538	8.008	9.177	57.904
0.4000	1.901	1.928	2.757	3.723	4.234	4.771	5.106	5.456	7.648	8.603	9.140	10.463	72.380
0.5000	2.175	2.172	3.149	4.232	4.820	5.413	5.808	6.208	8.667	9.745	10.353	11.840	90.475
0.6000	2.425	2.394	3.501	4.684	5.337	5.977	6.426	6.871	9.556	10.739	11.408	13.032	108.57
0.7000	2.661	2.604	3.824	5.094	5.805	6.487	6.987	7.472	10.354	11.630	12.351	14.094	126.67
0.8000	2.684	2.804	4.130	5.479	6.238	6.963	7.505	8.027	11.086	12.446	13.215	15.067	144.76
0.9000	3.098	2.997	4.419	5.841	6.650	7.407	7.997	8.556	11.777	13.216	14.030	15.983	162.85
1.0000	3.306	3.185	4.696	6.185	7.040	7.827	8.462	9.055	12.427	13.938	14.794	16.839	180.95
1.2500	3.804	3.645	5.349	6.987	7.944	8.800	9.540	10.216	13.917	15.592	16.544	18.795	226.19
1.6000	4.472	4.275	6.205	8.021	9.104	10.044	10.919	11.706	15.794	17.670	18.742	21.249	289.52
2.0000	5.216	4.987	7.138	9.131	10.343	11.366	12.391	13.297	17.769	19.843	21.040	23.806	361.90
2.5000	6.142	5.872	8.273	10.461	11.818	12.937	14.146	15.189	20.089	22.389	23.729	26.779	452.38
3.2000	7.448	7.114	9.842	12.276	13.818	15.065	16.521	17.753	23.184	25.782	27.303	30.717	579.04
4.0000	8.975	8.554	11.642	14.335	16.073	17.461	19.187	20.639	26.618	29.534	31.248	35.057	723.80
5.0000	10.948	10.400	13.935	16.932	18.901	20.461	22.517	24.243	30.851	34.165	36.095	40.376	904.75
6.0000	12.997	12.309	16.289	19.581	21.775	23.500	25.885	27.885	35.102	38.796	40.930	45.656	1085.7
7.0000	15.127	14.285	18.715	22.294	24.713	26.595	29.311	31.588	39.402	43.465	45.800	50.951	1266.6
8.0000	17.337	16.329	21.214	25.077	27.722	29.761	32.801	35.363	43.756	48.193	50.724	56.297	1447.6
9.0000	19.625	18.443	23.788	27.932	30.804	33.000	36.363	39.216	48.181	52.990	55.717	61.704	1628.6
10.0000	21.988	20.627	26.436	30.858	33.962	36.314	40.006	43.145	52.689	57.863	60.780	67.181	1809.5
11.0000	24.428	22.880	29.158	33.854	37.195	39.704	43.730	47.148	57.279	62.807	65.906	72.736	1990.4
12.0000	26.940	25.199	31.952	36.922	40.500	43.167	47.532	51.224	61.949	67.825	71.106	78.376	2171.4

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	KN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.051	0.119	0.140	0.144	0.151	0.200	0.274	0.351	0.439	0.124	0.105	0.116	2.2619
0.0160	0.065	0.151	0.181	0.186	0.195	0.258	0.355	0.459	0.598	0.159	0.133	0.149	2.8952
0.0200	0.080	0.188	0.227	0.233	0.245	0.325	0.446	0.578	0.764	0.198	0.166	0.187	3.6190
0.0250	0.099	0.235	0.284	0.292	0.308	0.409	0.561	0.725	0.962	0.246	0.205	0.234	4.5237
0.0320	0.123	0.300	0.365	0.376	0.397	0.525	0.719	0.927	1.224	0.311	0.258	0.299	5.7904
0.0400	0.151	0.375	0.456	0.469	0.496	0.653	0.895	1.148	1.513	0.383	0.316	0.373	7.2380
0.0500	0.183	0.467	0.567	0.584	0.617	0.804	1.105	1.410	1.851	0.469	0.384	0.462	9.0475
0.0600	0.213	0.556	0.674	0.693	0.732	0.946	1.301	1.654	2.165	0.550	0.448	0.548	10.857
0.0700	0.242	0.642	0.775	0.797	0.840	1.078	1.484	1.881	2.457	0.626	0.509	0.628	12.667
0.0800	0.269	0.723	0.870	0.894	0.942	1.201	1.655	2.092	2.730	0.697	0.566	0.704	14.476
0.0900	0.294	0.799	0.960	0.986	1.038	1.316	1.816	2.289	2.985	0.765	0.619	0.775	16.285
0.1000	0.318	0.870	1.044	1.072	1.128	1.422	1.965	2.474	3.225	0.828	0.669	0.842	18.095
0.1250	0.370	1.028	1.231	1.265	1.329	1.662	2.303	2.893	3.770	0.972	0.783	0.991	22.619
0.1600	0.430	1.209	1.449	1.490	1.565	1.944	2.704	3.392	4.426	1.144	0.919	1.164	28.952
0.2000	0.485	1.377	1.651	1.700	1.786	2.213	3.092	3.875	5.066	1.309	1.049	1.325	36.190
0.2500	0.541	1.547	1.858	1.915	2.014	2.497	3.505	4.396	5.762	1.484	1.188	1.488	45.238
0.3200	0.604	1.739	2.093	2.160	2.278	2.837	4.006	5.033	6.620	1.690	1.351	1.674	57.904
0.4000	0.663	1.919	2.316	2.394	2.535	3.175	4.511	5.679	7.498	1.892	1.509	1.850	72.380
0.5000	0.726	2.108	2.557	2.647	2.815	3.554	5.081	6.407	8.490	2.112	1.682	2.039	90.475
0.6000	0.782	2.277	2.777	2.875	3.070	3.901	5.603	7.075	9.399	2.311	1.838	2.211	108.57
0.7000	0.835	2.432	2.984	3.093	3.314	4.234	6.096	7.706	10.252	2.500	1.985	2.372	126.67
0.8000	0.886	2.578	3.185	3.304	3.550	4.557	6.576	8.322	11.068	2.681	2.126	2.529	144.76
0.9000	0.936	2.721	3.383	3.512	3.784	4.875	7.044	8.918	11.870	2.857	2.263	2.683	162.85
1.0000	0.987	2.861	3.580	3.719	4.016	5.189	7.501	9.494	12.646	3.031	2.399	2.837	180.95
1.2500	1.113	3.204	4.060	4.224	4.583	5.951	8.597	10.861	14.471	3.456	2.733	3.216	226.19
1.6000	1.293	3.676	4.718	4.912	5.355	6.971	10.035	12.635	16.792	4.042	3.197	3.740	289.52
2.0000	1.509	4.214	5.454	5.683	6.212	8.084	11.572	14.517	19.203	4.707	3.733	4.339	361.90
2.5000	1.795	4.897	6.362	6.637	7.255	9.415	13.380	16.703	21.968	5.540	4.414	5.097	452.38
3.2000	2.227	5.884	7.630	7.968	8.693	11.212	15.770	19.574	25.563	6.715	5.393	6.177	579.04
4.0000	2.756	7.066	9.098	9.502	10.335	13.229	18.413	22.731	29.483	8.085	6.549	7.444	723.80
5.0000	3.464	8.627	10.986	11.467	12.422	15.764	21.694	26.623	34.259	9.849	8.051	9.085	904.75
6.0000	4.213	10.275	12.939	13.497	14.571	18.347	25.009	30.535	39.016	11.676	9.613	10.791	1085.7
7.0000	4.998	12.002	14.960	15.596	16.789	20.995	28.387	34.501	43.823	13.568	11.237	12.560	1266.6
8.0000	5.816	13.807	17.049	17.761	19.080	23.716	31.846	38.545	48.704	15.526	12.920	14.391	1447.6
9.0000	6.667	15.684	19.206	19.996	21.445	26.515	35.400	42.686	53.677	17.551	14.664	16.283	1628.6
10.0000	7.549	17.622	21.430	22.299	23.879	29.393	39.048	46.929	58.755	19.643	16.469	18.237	1809.5
11.0000	8.463	19.618	23.715	24.666	26.380	32.352	42.787	51.278	63.950	21.799	18.331	20.248	1990.4
12.0000	9.407	21.672	26.062	27.096	28.949	35.389	46.615	55.728	69.263	24.018	20.251	22.317	2171.4

$^{184}_{74}W$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=184 MEV
0.0125	9.135	7.557	5.536	3.682	2.990	2.713	2.513	2.325	1.478	1.265	1.163	0.997	2.2994
0.0160	10.563	8.738	6.402	4.257	3.457	3.137	2.906	2.689	1.709	1.463	1.344	1.152	2.9432
0.0200	12.045	9.964	7.300	4.854	3.942	3.577	3.314	3.066	1.949	1.668	1.533	1.314	3.6790
0.0250	13.735	11.362	8.324	5.535	4.495	4.079	3.779	3.496	2.223	1.902	1.752	1.498	4.5987
0.0320	15.862	13.148	9.625	6.401	5.207	4.736	4.370	4.043	2.570	2.204	2.031	1.742	5.8864
0.0400	18.044	15.026	10.976	7.321	5.971	5.444	5.016	4.643	2.952	2.541	2.338	2.009	7.3580
0.0500	20.500	17.184	12.515	8.385	6.871	6.258	5.770	5.344	3.392	2.947	2.716	2.334	9.1975
0.0600	22.738	19.241	13.933	9.391	7.719	7.008	6.479	6.005	3.845	3.344	3.086	2.654	11.037
0.0700	24.790	21.205	15.255	10.343	8.543	7.750	7.170	6.651	4.272	3.738	3.463	2.975	12.877
0.0800	26.701	23.136	16.502	11.271	9.324	8.449	7.806	7.261	4.703	4.126	3.812	3.284	14.716
0.0900	28.493	25.009	17.686	12.168	10.081	9.162	8.436	7.853	5.147	4.501	4.174	3.599	16.556
0.1000	30.202	26.853	18.817	13.041	10.839	9.823	9.032	8.449	5.570	4.874	4.516	3.895	18.395
0.1250	34.117	31.478	21.458	15.106	12.617	11.437	10.514	9.849	6.598	5.772	5.397	4.667	22.994
0.1600	38.930	37.838	24.812	17.765	14.937	13.547	12.431	11.662	7.940	6.972	6.538	5.707	29.432
0.2000	43.797	44.448	28.293	20.569	17.400	15.759	14.458	13.552	9.393	8.290	7.781	6.790	36.790
0.2500	49.135	51.684	32.262	23.842	20.261	18.390	16.841	15.776	11.130	9.840	9.227	8.066	45.988
0.3200	55.660	60.472	37.306	28.091	23.987	21.898	19.958	18.653	13.355	11.863	11.136	9.793	58.864
0.4000	62.193	69.042	42.539	32.415	27.906	25.524	23.269	21.738	15.825	14.081	13.230	11.613	73.580
0.5000	69.160	77.720	48.363	37.385	32.403	29.743	27.084	25.246	18.668	16.637	15.646	13.784	91.975
0.6000	75.063	84.540	53.540	41.922	36.514	33.623	30.518	28.430	21.255	19.007	17.909	15.901	110.37
0.7000	79.835	89.618	57.893	45.736	40.004	36.878	33.404	31.146	23.505	21.015	19.857	17.599	128.76
0.8000	83.618	93.224	61.574	49.075	43.041	39.839	36.021	33.558	25.492	22.936	21.613	19.211	147.16
0.9000	86.831	95.954	64.703	51.892	45.745	42.445	38.304	35.651	27.369	24.587	23.228	20.705	165.56
1.0000	89.402	97.890	67.371	54.503	48.103	44.667	40.355	37.526	28.970	26.073	24.658	22.030	183.95
1.2500	94.012	100.680	72.484	59.437	52.913	49.289	44.433	41.243	32.400	29.211	27.616	24.717	229.94
1.6000	97.541	102.241	77.047	64.334	57.477	53.702	48.385	44.687	35.827	32.437	30.665	27.506	294.32
2.0000	99.096	103.415	79.981	67.744	60.865	57.106	51.188	47.429	38.391	35.032	33.112	29.833	367.90
2.5000	99.077	103.814	81.679	70.162	63.465	59.626	53.336	49.497	40.676	37.001	35.122	31.855	459.88
3.2000	97.622	103.123	82.104	71.431	65.027	61.168	54.846	50.741	42.366	38.753	36.783	33.417	588.64
4.0000	95.064	101.239	81.251	71.420	65.407	61.588	55.494	51.188	43.307	39.650	37.782	34.369	735.80
5.0000	91.579	98.165	79.358	70.311	64.756	61.105	55.074	50.948	43.647	39.838	38.171	34.838	919.75
6.0000	88.267	94.902	77.156	68.823	63.500	60.182	54.318	50.229	43.053	39.736	38.038	34.952	1103.7
7.0000	84.956	91.773	74.917	67.125	62.031	58.959	53.341	49.370	42.703	39.256	37.683	34.686	1287.6
8.0000	81.986	88.752	72.747	65.472	60.598	57.616	52.378	48.377	42.048	38.774	37.247	34.337	1471.6
9.0000	79.384	85.888	70.689	63.832	59.167	56.339	51.250	47.433	41.353	38.172	36.688	33.931	1655.6
10.0000	76.869	83.195	68.756	62.362	57.755	55.074	50.123	46.548	40.566	37.610	36.234	33.484	1839.5
11.0000	74.579	80.805	66.947	60.922	56.503	53.892	49.072	45.725	39.900	37.089	35.817	33.005	2023.4
12.0000	72.499	78.503	65.256	59.513	55.272	52.792	48.094	44.896	39.219	36.543	35.238	32.497	2207.4

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	20.761	8.858	5.868	5.514	4.900	3.233	1.982	1.406	0.928	7.424	9.445	7.208	2.2994
0.0160	23.558	9.935	6.677	6.280	5.582	3.771	2.337	1.664	1.105	8.533	10.857	8.201	2.9432
0.0200	26.133	10.731	7.424	6.993	6.256	4.343	2.708	1.971	1.318	9.650	12.271	9.117	3.6790
0.0250	28.967	11.495	8.257	7.783	7.042	5.053	3.230	2.356	1.706	10.904	13.876	10.139	4.5987
0.0320	32.822	12.455	9.231	8.788	8.027	6.016	3.908	2.945	2.050	12.513	15.959	11.454	5.8864
0.0400	36.768	13.368	10.240	9.856	9.077	7.090	4.698	3.600	2.557	14.213	18.132	12.841	7.3580
0.0500	41.426	14.568	11.502	11.189	10.413	8.398	5.657	4.405	3.191	16.195	20.650	14.543	9.1975
0.0600	46.535	15.925	12.916	12.484	11.801	9.711	6.604	5.197	3.818	18.126	23.142	16.273	11.037
0.0700	51.716	17.513	14.340	13.928	13.211	11.014	7.506	5.965	4.409	20.046	25.568	18.123	12.877
0.0800	57.263	19.225	15.859	15.413	14.671	12.327	8.449	6.733	5.000	21.981	28.004	20.067	14.716
0.0900	62.787	21.065	17.421	16.979	16.165	13.636	9.374	7.499	5.554	23.912	30.403	22.073	16.556
0.1000	68.872	23.108	19.156	18.554	17.651	14.960	10.331	8.223	6.097	25.836	32.855	24.143	18.395
0.1250	85.186	28.431	23.496	22.638	21.629	18.260	12.574	10.021	7.446	30.770	39.160	29.590	22.994
0.1600	109.916	36.647	30.072	28.980	27.491	22.901	15.706	12.505	9.280	37.888	48.135	37.962	29.432
0.2000	138.918	46.117	37.771	36.271	34.291	27.868	18.956	15.052	11.119	45.665	57.944	47.673	36.790
0.2500	174.862	57.879	46.942	45.199	42.199	33.359	22.551	17.680	13.002	54.652	69.267	59.621	45.988
0.3200	221.595	72.336	58.831	56.145	51.370	39.357	26.263	20.481	14.960	65.732	83.490	74.537	58.864
0.4000	265.446	87.631	69.595	66.149	59.896	44.709	29.565	23.014	16.761	76.273	97.118	88.312	73.580
0.5000	308.558	102.530	79.655	75.785	67.805	49.863	32.887	25.681	18.717	86.716	110.704	101.660	91.975
0.6000	339.980	114.041	86.307	82.024	73.297	53.594	35.551	27.734	20.292	94.338	121.054	110.668	110.37
0.7000	355.463	122.154	89.850	85.392	76.419	55.809	37.341	29.062	21.478	99.287	127.596	115.381	128.76
0.8000	361.442	126.843	91.684	87.436	78.138	57.141	38.669	30.171	22.413	102.460	131.523	117.854	147.16
0.9000	362.336	129.147	92.525	88.190	78.420	57.844	39.469	31.187	23.164	104.495	133.999	118.665	165.56
1.0000	363.131	131.307	93.713	88.930	79.229	58.680	40.423	32.203	23.917	105.975	135.753	119.382	183.95
1.2500	360.246	134.893	96.041	91.692	81.472	61.104	42.911	34.647	26.167	108.509	137.792	121.556	229.94
1.6000	348.251	136.373	98.466	94.151	84.289	64.334	46.151	37.522	29.047	109.792	137.374	122.350	294.32
2.0000	331.120	135.727	100.616	95.817	86.699	67.344	49.188	40.390	31.752	110.373	135.967	121.971	367.90
2.5000	308.747	132.728	101.364	96.463	89.030	70.407	52.275	43.535	34.632	109.940	133.055	120.068	459.88
3.2000	287.366	127.672	101.235	96.637	89.740	72.662	55.256	45.978	36.865	108.624	129.479	117.820	588.64
4.0000	268.128	121.226	99.126	95.064	89.376	73.126	56.063	47.207	38.188	106.114	125.045	114.320	735.80
5.0000	252.357	114.672	95.943	92.372	87.055	72.136	56.106	47.377	38.885	102.689	120.227	110.148	919.75
6.0000	239.956	109.099	92.742	89.193	84.486	70.521	55.090	46.834	38.578	99.069	115.657	105.936	1103.7
7.0000	229.994	104.434	89.750	86.529	81.809	68.774	54.090	46.149	38.133	95.819	111.551	102.486	1287.6
8.0000	221.151	100.027	86.933	83.877	79.222	66.855	52.596	45.103	37.465	92.680	107.666	99.154	1471.6
9.0000	212.775	96.703	84.191	81.293	76.910	65.034	51.250	44.039	36.758	89.634	103.984	95.925	1655.6
10.0000	205.581	93.852	81.888	79.069	74.807	63.256	49.986	42.973	35.959	86.908	100.659	93.096	1839.5
11.0000	198.833	91.182	79.734	76.989	72.838	61.591	48.804	41.976	35.147	84.420	97.676	90.512	2023.4
12.0000	192.505	88.683	77.720	75.044	70.999	60.036	47.702	41.046	34.390	82.092	94.817	88.096	2207.4

$^{184}_{74}W$ IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=184
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.134	0.131	0.158	0.198	0.206	0.245	0.256	0.276	0.359	0.398	0.418	0.474	2.2994
0.0160	0.169	0.167	0.202	0.256	0.267	0.317	0.332	0.360	0.474	0.532	0.562	0.647	2.9432
0.0200	0.208	0.207	0.252	0.321	0.336	0.399	0.418	0.453	0.600	0.676	0.716	0.829	3.6790
0.0250	0.254	0.255	0.314	0.401	0.422	0.500	0.524	0.567	0.755	0.851	0.903	1.048	4.5987
0.0320	0.315	0.322	0.397	0.513	0.543	0.641	0.671	0.725	0.970	1.094	1.161	1.347	5.8864
0.0400	0.380	0.393	0.489	0.638	0.679	0.799	0.836	0.902	1.215	1.369	1.453	1.684	7.3580
0.0500	0.457	0.478	0.598	0.788	0.846	0.991	1.037	1.118	1.517	1.708	1.813	2.097	9.1975
0.0600	0.527	0.557	0.702	0.932	1.008	1.175	1.231	1.325	1.811	2.038	2.164	2.500	11.037
0.0700	0.594	0.631	0.800	1.069	1.163	1.352	1.417	1.524	2.096	2.357	2.503	2.889	12.877
0.0800	0.657	0.700	0.894	1.200	1.312	1.521	1.596	1.715	2.370	2.664	2.830	3.264	14.716
0.0900	0.716	0.766	0.983	1.324	1.455	1.682	1.767	1.898	2.634	2.959	3.145	3.625	16.556
0.1000	0.773	0.828	1.069	1.444	1.592	1.837	1.932	2.073	2.886	3.243	3.447	3.971	18.395
0.1250	0.905	0.970	1.268	1.721	1.912	2.196	2.316	2.482	3.473	3.905	4.151	4.778	22.994
0.1600	1.071	1.143	1.520	2.068	2.313	2.645	2.797	2.994	4.207	4.733	5.029	5.782	29.432
0.2000	1.241	1.312	1.777	2.418	2.720	3.099	3.286	3.514	4.945	5.565	5.911	6.788	36.790
0.2500	1.432	1.496	2.063	2.805	3.169	3.598	3.826	4.089	5.754	6.475	6.877	7.889	45.988
0.3200	1.671	1.719	2.418	3.277	3.716	4.204	4.484	4.791	6.731	7.572	8.044	9.216	58.864
0.4000	1.916	1.942	2.776	3.747	4.259	4.800	5.136	5.488	7.688	8.645	9.184	10.511	73.580
0.5000	2.192	2.188	3.171	4.260	4.850	5.447	5.843	6.245	8.714	9.795	10.405	11.898	91.975
0.6000	2.444	2.412	3.526	4.715	5.370	6.015	6.466	6.913	9.609	10.796	11.467	13.098	110.37
0.7000	2.681	2.623	3.851	5.128	5.842	6.528	7.030	7.518	10.412	11.693	12.417	14.168	128.76
0.8000	2.906	2.824	4.159	5.516	6.277	7.008	7.552	8.077	11.149	12.514	13.286	15.146	147.16
0.9000	3.121	3.018	4.450	5.880	6.692	7.455	8.046	8.608	11.845	13.289	14.107	16.068	165.56
1.0000	3.330	3.208	4.728	6.226	7.084	7.877	8.514	9.111	12.498	14.015	14.875	16.929	183.95
1.2500	3.830	3.670	5.385	7.032	7.993	8.855	9.597	10.277	13.995	15.677	16.633	18.895	229.94
1.6000	4.501	4.303	6.244	8.070	9.157	10.103	10.982	11.772	15.880	17.763	18.839	21.357	294.32
2.0000	5.248	5.017	7.179	9.182	10.399	11.429	12.458	13.368	17.860	19.942	21.144	23.921	367.90
2.5000	6.174	5.903	8.315	10.514	11.876	13.002	14.215	15.263	20.183	22.492	23.836	26.899	459.88
3.2000	7.481	7.145	9.885	12.330	13.877	15.131	16.592	17.828	23.280	25.887	27.413	30.839	588.64
4.0000	9.007	8.584	11.685	14.388	16.132	17.526	19.257	20.713	26.712	29.637	31.356	35.177	735.80
5.0000	10.978	10.428	13.975	16.983	18.956	20.523	22.582	24.312	30.940	34.263	36.197	40.489	919.75
6.0000	13.024	12.334	16.325	19.627	21.824	23.556	25.945	27.948	35.183	38.885	41.023	45.759	1103.7
7.0000	15.148	14.305	18.745	22.333	24.755	26.644	29.362	31.642	39.473	43.542	45.882	51.042	1287.6
8.0000	17.352	16.343	21.237	25.108	27.756	29.800	32.842	35.406	43.814	48.257	50.792	56.372	1471.6
9.0000	19.633	18.450	23.802	27.954	30.828	33.029	36.393	39.246	48.226	53.039	55.768	61.762	1655.6
10.0000	21.988	20.627	26.441	30.869	33.975	36.332	40.023	43.162	52.717	57.894	60.814	67.220	1839.5
11.0000	24.417	22.871	29.152	33.854	37.196	39.708	43.732	47.149	57.290	62.820	65.920	72.753	2023.4
12.0000	26.919	25.181	31.936	36.909	40.488	43.157	47.519	51.209	61.940	67.817	71.099	78.371	2207.4
MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.052	0.119	0.141	0.145	0.152	0.201	0.274	0.350	0.437	0.125	0.105	0.117	2.2994
0.0160	0.066	0.152	0.181	0.186	0.196	0.259	0.355	0.459	0.597	0.160	0.134	0.150	2.9432
0.0200	0.081	0.189	0.228	0.234	0.246	0.326	0.447	0.578	0.763	0.199	0.167	0.188	3.6790
0.0250	0.099	0.236	0.285	0.294	0.310	0.410	0.561	0.725	0.961	0.247	0.206	0.235	4.5987
0.0320	0.124	0.302	0.366	0.377	0.398	0.526	0.720	0.927	1.223	0.313	0.259	0.301	5.8864
0.0400	0.152	0.377	0.458	0.472	0.498	0.655	0.897	1.149	1.512	0.385	0.317	0.375	7.3580
0.0500	0.184	0.470	0.570	0.586	0.619	0.807	1.107	1.412	1.851	0.471	0.386	0.465	9.1975
0.0600	0.215	0.560	0.677	0.696	0.735	0.950	1.304	1.656	2.166	0.553	0.451	0.551	11.037
0.0700	0.244	0.646	0.779	0.801	0.844	1.083	1.488	1.884	2.459	0.629	0.512	0.632	12.877
0.0800	0.271	0.727	0.875	0.899	0.947	1.206	1.661	2.097	2.733	0.701	0.569	0.708	14.716
0.0900	0.296	0.804	0.965	0.991	1.043	1.321	1.822	2.296	2.990	0.769	0.623	0.780	16.556
0.1000	0.320	0.875	1.050	1.078	1.133	1.429	1.973	2.482	3.231	0.833	0.674	0.847	18.395
0.1250	0.372	1.034	1.238	1.272	1.336	1.670	2.312	2.903	3.780	0.978	0.789	0.997	22.994
0.1600	0.433	1.217	1.458	1.499	1.574	1.955	2.717	3.406	4.440	1.151	0.925	1.172	29.432
0.2000	0.489	1.386	1.662	1.711	1.797	2.226	3.107	3.893	5.085	1.318	1.057	1.333	36.790
0.2500	0.545	1.558	1.870	1.927	2.026	2.512	3.524	4.418	5.786	1.494	1.196	1.498	45.988
0.3200	0.609	1.751	2.107	2.174	2.293	2.855	4.028	5.059	6.651	1.702	1.361	1.685	58.864
0.4000	0.668	1.933	2.332	2.410	2.552	3.196	4.538	5.710	7.535	1.905	1.521	1.863	73.580
0.5000	0.732	2.124	2.575	2.665	2.834	3.577	5.111	6.444	8.534	2.128	1.695	2.054	91.975
0.6000	0.788	2.294	2.793	2.895	3.091	3.926	5.638	7.116	9.449	2.328	1.852	2.227	110.37
0.7000	0.841	2.449	3.002	3.115	3.337	4.262	6.133	7.751	10.308	2.518	2.000	2.389	128.76
0.8000	0.892	2.597	3.204	3.327	3.574	4.588	6.617	8.372	11.129	2.700	2.141	2.547	147.16
0.9000	0.943	2.740	3.404	3.536	3.809	4.907	7.087	8.971	11.936	2.878	2.280	2.702	165.56
1.0000	0.994	2.882	3.601	3.744	4.042	5.223	7.548	9.551	12.717	3.052	2.416	2.857	183.95
1.2500	1.121	3.226	4.085	4.252	4.613	5.989	8.649	10.924	14.551	3.480	2.751	3.237	229.94
1.6000	1.302	3.699	4.745	4.943	5.388	7.013	10.092	12.705	16.880	4.068	3.218	3.763	294.32
2.0000	1.518	4.239	5.482	5.716	6.247	8.128	11.633	14.591	19.298	4.735	3.755	4.364	367.90
2.5000	1.805	4.923	6.391	6.671	7.292	9.462	13.444	16.781	22.066	5.568	4.437	5.123	459.88
3.2000	2.236	5.910	7.661	8.002	8.730	11.259	15.835	19.654	25.664	6.745	5.417	6.204	588.64
4.0000	2.766	7.092	9.128	9.536	10.372	13.276	18.477	22.809	29.582	8.114	6.572	7.471	735.80
5.0000	3.473	8.651	11.013	11.498	12.456	15.807	21.755	26.697	34.352	9.875	8.072	9.109	919.75
6.0000	4.220	10.296	12.963	13.524	14.600	18.386	25.063	30.601	39.100	11.699	9.631	10.812	1103.7
7.0000	5.003	12.019	14.979	15.618	16.813	21.027	28.432	34.557	43.896	13.587	11.251	12.577	1287.6
8.0000	5.819	13.819	17.062	17.778	19.098	23.740	31.881	38.590	48.763	15.539	12.930	14.402	1471.6
9.0000	6.667	15.690	19.213	20.005	21.455	26.530	35.425	42.717	53.720	17.557	14.668	16.288	1655.6
10.0000	7.547	17.621	21.428	22.300	23.880	29.398	39.060	46.946	58.780	19.642	16.467	18.235	1839.5
11.0000	8.456	19.610	23.705	24.658	26.373	32.346	42.784	51.278	63.955	21.790	18.322	20.239	2023.4
12.0000	9.397	21.655	26.042	27.078	28.931	35.371	46.597	55.710	69.247	24.000	20.234	22.300	2207.4

$^{187}_{75}Re$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=187 MEV
0.0125	9.180	7.594	5.563	3.700	3.004	2.726	2.526	2.337	1.485	1.271	1.168	1.001	2.3370
0.0160	10.617	8.783	6.435	4.279	3.475	3.153	2.921	2.703	1.718	1.470	1.351	1.158	2.9914
0.0200	12.109	10.018	7.339	4.880	3.963	3.596	3.332	3.082	1.959	1.677	1.541	1.321	3.7392
0.0250	13.811	11.425	8.370	5.566	4.520	4.101	3.800	3.516	2.235	1.913	1.762	1.507	4.6740
0.0320	15.954	13.224	9.681	6.438	5.237	4.763	4.395	4.066	2.585	2.217	2.043	1.752	5.9827
0.0400	18.152	15.116	11.041	7.365	6.007	5.477	5.046	4.671	2.970	2.556	2.352	2.021	7.4784
0.0500	20.628	17.290	12.593	8.437	6.914	6.297	5.805	5.377	3.413	2.966	2.733	2.349	9.3480
0.0600	22.883	19.364	14.022	9.450	7.768	7.053	6.520	6.043	3.870	3.365	3.106	2.671	11.218
0.0700	24.952	21.343	15.355	10.411	8.599	7.800	7.217	6.695	4.299	3.762	3.486	2.994	13.087
0.0800	26.878	23.290	16.612	11.346	9.386	8.505	7.857	7.309	4.734	4.153	3.837	3.306	14.957
0.0900	28.685	25.178	17.806	12.250	10.149	9.223	8.493	7.906	5.182	4.532	4.202.	3.624	16.826
0.1000	30.409	27.037	18.946	13.130	10.913	9.890	9.094	8.507	5.608	4.907	4.547	3.922	18.696
0.1250	34.358	31.701	21.609	15.213	12.706	11.518	10.588	9.919	6.645	5.813	5.435	4.700	23.370
0.1600	39.214	38.114	24.993	17.895	15.046	13.646	12.521	11.747	7.998	7.023	6.586	5.748	29.914
0.2000	44.126	44.782	28.505	20.723	17.531	15.877	14.566	13.654	9.464	8.352	7.839	6.841	37.392
0.2500	49.514	52.083	32.511	24.026	20.417	18.531	16.971	15.898	11.216	9.916	9.298	8.128	46.740
0.3200	56.102	60.953	37.602	28.314	24.178	22.072	20.117	18.801	13.461	11.957	11.224	9.871	59.827
0.4000	62.700	69.604	42.886	32.679	28.133	25.732	23.459	21.915	15.954	14.195	13.338	11.708	74.784
0.5000	69.770	78.406	48.791	37.715	32.690	30.006	27.323	25.469	18.833	16.784	15.784	13.905	93.480
0.6000	75.748	85.311	54.029	42.305	36.848	33.930	30.796	28.689	21.449	19.180	18.073	16.047	112.18
0.7000	80.595	90.472	58.445	46.171	40.385	37.229	33.722	31.443	23.728	21.215	20.046	17.767	130.87
0.8000	84.452	94.153	62.188	49.564	43.470	40.236	36.380	33.893	25.746	23.134	21.828	19.403	149.57
0.9000	87.737	96.955	65.378	52.433	46.222	42.888	38.703	36.023	27.655	24.843	23.471	20.921	168.26
1.0000	90.374	98.955	68.104	55.096	48.626	45.153	40.794	37.934	29.285	26.356	24.926	22.270	186.96
1.2500	95.133	101.881	73.348	60.145	53.544	49.877	44.962	41.735	32.787	29.559	27.946	25.012	233.70
1.6000	98.823	103.585	78.059	65.179	58.232	54.407	49.021	45.274	36.298	32.863	31.068	27.867	299.14
2.0000	100.507	104.888	81.120	68.708	61.732	57.919	51.917	48.104	38.937	35.530	33.584	30.258	373.92
2.5000	100.591	105.401	82.927	71.235	64.435	60.537	54.152	50.254	41.298	37.566	35.659	32.342	467.40
3.2000	99.217	104.808	83.446	72.598	66.089	62.167	55.742	51.570	43.058	39.387	37.384	33.963	598.27
4.0000	96.699	102.980	82.649	72.648	66.532	62.648	56.449	52.069	44.052	40.333	38.432	34.960	747.84
5.0000	93.225	99.930	80.784	71.575	65.920	62.204	56.064	51.864	44.431	40.554	38.857	35.464	934.80
6.0000	89.905	96.664	78.589	70.101	64.678	61.299	55.326	51.161	43.852	40.473	38.744	35.601	1121.8
7.0000	86.572	93.519	76.342	68.403	63.211	60.081	54.356	50.310	43.515	40.003	38.400	35.347	1308.7
8.0000	83.578	90.475	74.160	66.744	61.775	58.735	53.395	49.316	42.864	39.527	37.970	35.003	1495.7
9.0000	80.952	87.584	72.086	65.093	60.336	57.452	52.262	48.370	42.170	38.926	37.412	34.601	1682.6
10.0000	78.411	84.863	70.135	63.612	58.913	56.178	51.128	47.481	41.379	38.364	36.961	34.156	1869.6
11.0000	76.094	82.447	68.307	62.159	57.651	54.987	50.069	46.654	40.711	37.842	36.544	33.675	2056.6
12.0000	73.990	80.117	66.598	60.737	56.408	53.878	49.083	45.819	40.025	37.295	35.963	33.166	2243.5

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	20.863	8.902	5.897	5.541	4.924	3.249	1.992	1.413	0.932	7.461	9.491	7.244	2.3370
0.0160	23.679	9.987	6.711	6.312	5.611	3.790	2.349	1.673	1.111	8.577	10.913	8.243	2.9914
0.0200	26.273	10.788	7.464	7.031	6.289	4.367	2.723	1.981	1.325	9.702	12.337	9.166	3.7392
0.0250	29.128	11.559	8.303	7.826	7.081	5.081	3.248	2.369	1.716	10.965	13.953	10.195	4.6740
0.0320	33.012	12.527	9.284	8.839	8.074	6.051	3.930	2.962	2.062	12.585	16.051	11.520	5.9827
0.0400	36.989	13.448	10.302	9.915	9.131	7.133	4.726	3.622	2.573	14.299	18.240	12.918	7.4784
0.0500	41.683	14.658	11.573	11.258	10.477	8.450	5.692	4.433	3.211	16.296	20.779	14.633	9.3480
0.0600	46.832	16.027	12.998	12.563	11.876	9.773	6.646	5.230	3.842	18.242	23.290	16.377	11.218
0.0700	52.053	17.627	14.434	14.019	13.297	11.086	7.555	6.004	4.438	20.176	25.735	18.242	13.087
0.0800	57.643	19.353	15.964	15.516	14.768	12.409	8.505	6.778	5.033	22.127	28.190	20.200	14.957
0.0900	63.211	21.207	17.539	17.094	16.275	13.728	9.437	7.550	5.591	24.074	30.608	22.222	16.826
0.1000	69.344	23.266	19.288	18.681	17.772	15.062	10.402	8.280	6.139	26.014	33.081	24.308	18.696
0.1250	85.788	28.632	23.662	22.798	21.782	18.389	12.663	10.091	7.498	30.987	39.437	29.799	23.370
0.1600	110.718	36.914	30.291	29.192	27.692	23.068	15.820	12.596	9.347	38.164	48.486	38.239	29.914
0.2000	139.960	46.463	38.054	36.544	34.548	28.378	19.098	15.165	11.203	46.007	58.379	48.031	37.392
0.2500	176.210	58.325	47.304	45.548	42.525	33.617	22.725	17.816	13.102	55.074	69.801	60.081	46.740
0.3200	223.355	72.910	59.298	56.591	51.778	39.670	26.472	20.643	15.078	66.255	84.153	75.129	59.827
0.4000	267.611	88.346	70.162	66.688	60.384	45.074	29.806	23.201	16.897	76.895	97.909	89.032	74.784
0.5000	311.283	103.436	80.358	76.455	68.404	50.303	33.178	25.908	18.882	87.481	111.681	102.558	93.480
0.6000	343.083	115.081	87.094	82.772	73.965	54.083	35.875	27.987	20.477	95.199	122.159	111.677	112.18
0.7000	358.849	123.318	90.706	86.206	77.147	56.341	37.697	29.339	21.683	100.232	128.812	116.480	130.87
0.8000	365.046	128.108	92.599	88.308	78.917	57.711	39.054	30.472	22.637	103.482	132.835	119.029	149.57
0.9000	366.114	130.494	93.490	89.110	79.238	58.448	39.880	31.512	23.405	105.585	135.397	119.902	168.26
1.0000	367.081	132.735	94.733	89.897	80.090	59.319	40.862	32.554	24.177	107.128	137.230	120.680	186.96
1.2500	364.540	136.501	97.186	92.785	82.443	61.832	43.422	35.060	26.479	109.802	139.435	123.005	233.70
1.6000	352.828	138.165	99.760	95.388	85.397	65.179	46.757	38.015	29.428	111.234	139.180	123.958	299.14
2.0000	335.836	137.660	102.049	97.181	87.934	68.303	49.889	40.965	32.205	111.945	137.904	123.708	373.92
2.5000	313.465	134.757	102.913	97.937	90.391	71.483	53.073	44.200	35.161	111.620	135.089	121.903	467.40
3.2000	292.062	129.759	102.889	98.216	91.207	73.850	56.159	46.730	37.467	110.399	131.595	119.745	598.27
4.0000	272.741	123.312	100.831	96.699	90.914	74.384	57.028	48.019	38.845	107.939	127.196	116.287	747.84
5.0000	256.895	116.734	97.668	94.033	88.621	73.433	57.115	48.228	39.584	104.535	122.388	112.129	934.80
6.0000	244.411	111.124	94.464	90.848	86.055	71.830	56.112	47.703	39.294	100.908	117.804	107.902	1121.8
7.0000	234.371	106.421	91.458	88.175	83.366	70.082	55.119	47.027	38.858	97.642	113.674	104.436	1308.7
8.0000	225.446	101.970	88.621	85.506	80.760	68.153	53.617	45.979	38.192	94.480	109.756	101.080	1495.7
9.0000	216.978	98.613	85.854	82.899	78.429	66.319	52.262	44.909	37.485	91.405	106.038	97.820	1682.6
10.0000	209.703	95.734	83.530	80.655	76.306	64.524	50.988	43.834	36.680	88.650	102.677	94.962	1869.6
11.0000	202.872	93.034	81.354	78.553	74.318	62.843	49.796	42.829	35.861	86.135	99.660	92.351	2056.6
12.0000	196.463	90.506	79.318	76.587	72.458	61.270	48.683	41.890	35.097	83.780	96.766	89.907	2243.5

$^{187}_{75}$Re IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=187 MEV
0.0125	0.135	0.132	0.158	0.199	0.206	0.245	0.256	0.276	0.358	0.397	0.416	0.471	2.3370
0.0160	0.170	0.168	0.203	0.256	0.267	0.318	0.333	0.360	0.474	0.531	0.561	0.645	2.9914
0.0200	0.209	0.208	0.253	0.322	0.336	0.399	0.419	0.453	0.600	0.675	0.715	0.828	3.7392
0.0250	0.255	0.257	0.315	0.403	0.423	0.501	0.525	0.568	0.755	0.850	0.902	1.046	4.6740
0.0320	0.317	0.324	0.399	0.514	0.544	0.642	0.672	0.726	0.970	1.093	1.160	1.345	5.9827
0.0400	0.383	0.396	0.491	0.640	0.681	0.801	0.838	0.904	1.215	1.369	1.452	1.682	7.4784
0.0500	0.459	0.480	0.601	0.791	0.849	0.994	1.040	1.120	1.518	1.708	1.813	2.096	9.3480
0.0600	0.531	0.560	0.705	0.935	1.011	1.179	1.234	1.328	1.813	2.039	2.164	2.499	11.218
0.0700	0.598	0.635	0.804	1.073	1.167	1.356	1.421	1.528	2.099	2.359	2.505	2.890	13.087
0.0800	0.661	0.705	0.899	1.205	1.317	1.526	1.601	1.720	2.374	2.668	2.833	3.266	14.957
0.0900	0.721	0.771	0.989	1.330	1.461	1.689	1.773	1.904	2.639	2.964	3.149	3.628	16.826
0.1000	0.779	0.834	1.075	1.451	1.599	1.844	1.939	2.080	2.892	3.249	3.452	3.976	18.696
0.1250	0.911	0.977	1.276	1.730	1.921	2.206	2.325	2.492	3.483	3.915	4.160	4.788	23.370
0.1600	1.079	1.151	1.529	2.079	2.325	2.658	2.810	3.008	4.221	4.747	5.044	5.797	29.914
0.2000	1.250	1.321	1.788	2.432	2.734	3.115	3.302	3.531	4.965	5.585	5.932	6.810	37.392
0.2500	1.442	1.507	2.077	2.822	3.186	3.618	3.846	4.110	5.779	6.501	6.905	7.919	46.740
0.3200	1.684	1.732	2.435	3.298	3.738	4.228	4.510	4.818	6.763	7.607	8.079	9.255	59.827
0.4000	1.931	1.956	2.795	3.771	4.285	4.830	5.166	5.519	7.727	8.688	9.228	10.559	74.784
0.5000	2.208	2.204	3.193	4.288	4.880	5.481	5.879	6.282	8.761	9.846	10.458	11.956	93.480
0.6000	2.462	2.430	3.550	4.746	5.404	6.053	6.506	6.955	9.662	10.854	11.527	13.164	112.18
0.7000	2.701	2.642	3.878	5.162	5.878	6.569	7.074	7.564	10.470	11.757	12.483	14.241	130.87
0.8000	2.927	2.844	4.188	5.552	6.317	7.052	7.598	8.126	11.212	12.583	13.358	15.225	149.57
0.9000	3.145	3.040	4.481	5.918	6.734	7.502	8.096	8.661	11.912	13.362	14.183	16.152	168.26
1.0000	3.354	3.231	4.761	6.266	7.128	7.926	8.566	9.166	12.568	14.092	14.956	17.018	186.96
1.2500	3.857	3.695	5.420	7.076	8.042	8.909	9.655	10.338	14.073	15.763	16.722	18.994	233.70
1.6000	4.530	4.330	6.283	8.118	9.210	10.162	11.045	11.839	15.965	17.857	18.937	21.466	299.14
2.0000	5.279	5.046	7.220	9.234	10.455	11.491	12.525	13.438	17.950	20.041	21.248	24.036	373.92
2.5000	6.207	5.933	8.358	10.567	11.935	13.067	14.285	15.337	20.277	22.595	23.944	27.019	467.40
3.2000	7.515	7.176	9.929	12.384	13.937	15.197	16.663	17.903	23.376	25.992	27.523	30.961	598.27
4.0000	9.040	8.615	11.728	14.442	16.190	17.591	19.326	20.787	26.806	29.741	31.465	35.297	747.84
5.0000	11.008	10.457	14.015	17.033	19.012	20.584	22.648	24.382	31.029	34.360	36.299	40.603	934.80
6.0000	13.050	12.358	16.361	19.672	21.874	23.611	26.004	28.011	35.264	38.974	41.116	45.863	1121.8
7.0000	15.169	14.325	18.775	22.372	24.798	26.692	29.413	31.696	39.543	43.620	45.963	51.133	1308.7
8.0000	17.367	16.357	21.259	25.139	27.790	29.839	32.883	35.449	43.872	48.322	50.859	56.448	1495.7
9.0000	19.640	18.458	23.817	27.976	30.853	33.058	36.423	39.277	48.270	53.088	55.820	61.821	1682.6
10.0000	21.987	20.627	26.446	30.881	33.989	36.349	40.040	43.179	52.746	57.927	60.848	67.260	1869.6
11.0000	24.408	22.862	29.148	33.855	37.197	39.713	43.736	47.152	57.302	62.834	65.936	72.773	2056.6
12.0000	26.900	25.163	31.920	36.898	40.476	43.149	47.507	51.196	61.934	67.811	71.093	78.368	2243.5

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.052	0.120	0.142	0.145	0.152	0.201	0.274	0.350	0.435	0.125	0.106	0.117	2.3370
0.0160	0.066	0.153	0.182	0.187	0.197	0.260	0.355	0.459	0.595	0.160	0.135	0.151	2.9914
0.0200	0.082	0.190	0.229	0.235	0.247	0.327	0.447	0.578	0.762	0.200	0.167	0.189	3.7392
0.0250	0.100	0.237	0.287	0.295	0.311	0.411	0.562	0.725	0.959	0.248	0.207	0.236	4.6740
0.0320	0.125	0.303	0.368	0.379	0.400	0.528	0.721	0.927	1.222	0.314	0.261	0.302	5.9827
0.0400	0.153	0.379	0.460	0.474	0.500	0.657	0.898	1.150	1.511	0.387	0.319	0.377	7.4784
0.0500	0.185	0.472	0.572	0.589	0.622	0.810	1.109	1.413	1.851	0.474	0.389	0.467	9.3480
0.0600	0.216	0.563	0.680	0.699	0.738	0.953	1.307	1.659	2.167	0.556	0.454	0.553	11.218
0.0700	0.245	0.650	0.783	0.805	0.848	1.087	1.492	1.888	2.462	0.633	0.515	0.635	13.087
0.0800	0.273	0.732	0.879	0.903	0.951	1.211	1.666	2.102	2.737	0.706	0.573	0.712	14.957
0.0900	0.298	0.809	0.970	0.996	1.048	1.327	1.828	2.302	2.994	0.774	0.627	0.784	16.826
0.1000	0.322	0.881	1.055	1.084	1.139	1.436	1.980	2.489	3.237	0.838	0.678	0.852	18.696
0.1250	0.375	1.041	1.245	1.279	1.344	1.679	2.322	2.913	3.790	0.984	0.794	1.003	23.370
0.1600	0.436	1.226	1.466	1.508	1.583	1.965	2.729	3.419	4.454	1.159	0.932	1.179	29.914
0.2000	0.493	1.396	1.672	1.722	1.808	2.239	3.122	3.910	5.103	1.327	1.064	1.342	37.392
0.2500	0.549	1.568	1.882	1.940	2.039	2.527	3.543	4.439	5.810	1.504	1.205	1.508	46.740
0.3200	0.613	1.764	2.121	2.189	2.308	2.872	4.051	5.085	6.681	1.714	1.370	1.697	59.827
0.4000	0.673	1.946	2.348	2.426	2.568	3.216	4.564	5.741	7.571	1.919	1.532	1.876	74.784
0.5000	0.737	2.139	2.592	2.683	2.853	3.600	5.142	6.480	8.577	2.143	1.707	2.068	93.480
0.6000	0.794	2.310	2.813	2.915	3.112	3.952	5.672	7.157	9.499	2.345	1.865	2.242	112.18
0.7000	0.847	2.467	3.023	3.136	3.359	4.290	6.171	7.797	10.364	2.536	2.014	2.406	130.87
0.8000	0.899	2.615	3.226	3.350	3.598	4.618	6.658	8.421	11.190	2.719	2.157	2.564	149.57
0.9000	0.950	2.760	3.427	3.560	3.835	4.939	7.131	9.024	12.002	2.898	2.296	2.721	168.26
1.0000	1.001	2.902	3.626	3.769	4.069	5.257	7.594	9.607	12.787	3.074	2.433	2.876	186.96
1.2500	1.128	3.248	4.111	4.279	4.643	6.026	8.701	10.987	14.630	3.503	2.770	3.259	233.70
1.6000	1.310	3.723	4.774	4.973	5.420	7.054	10.149	12.775	16.968	4.093	3.238	3.787	299.14
2.0000	1.527	4.264	5.513	5.748	6.281	8.173	11.694	14.666	19.392	4.762	3.777	4.389	373.92
2.5000	1.814	4.949	6.424	6.704	7.328	9.508	13.508	16.859	22.165	5.597	4.460	5.149	467.40
3.2000	2.246	5.937	7.694	8.037	8.767	11.306	15.901	19.734	25.764	6.774	5.440	6.231	598.27
4.0000	2.775	7.118	9.161	9.570	10.408	13.322	18.541	22.888	29.681	8.143	6.595	7.497	747.84
5.0000	3.481	8.676	11.044	11.529	12.490	15.850	21.815	26.770	34.445	9.902	8.093	9.133	934.80
6.0000	4.227	10.317	12.990	13.552	14.630	18.424	25.116	30.667	39.184	11.722	9.650	10.833	1121.8
7.0000	5.008	12.036	15.001	15.641	16.837	21.059	28.478	34.614	43.969	13.605	11.265	12.594	1308.7
8.0000	5.822	13.831	17.078	17.794	19.116	23.765	31.917	38.635	48.822	15.552	12.939	14.414	1495.7
9.0000	6.667	15.696	19.222	20.015	21.466	26.546	35.450	42.750	53.763	17.564	14.672	16.294	1682.6
10.0000	7.544	17.620	21.430	22.302	23.883	29.404	39.072	46.964	58.806	19.641	16.464	18.234	1869.6
11.0000	8.450	19.601	23.698	24.651	26.366	32.341	42.783	51.279	63.961	21.781	18.313	20.231	2056.6
12.0000	9.387	21.639	26.025	27.061	28.914	35.354	46.580	55.694	69.232	23.982	20.217	22.283	2243.5

$^{192}_{76}Os$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=192 MEV
0.0125	9.225	7.631	5.591	3.718	3.019	2.739	2.538	2.348	1.493	1.277	1.174	1.006	2.3995
0.0160	10.672	8.828	6.468	4.301	3.493	3.169	2.936	2.716	1.727	1.478	1.358	1.164	3.0714
0.0200	12.174	10.071	7.378	4.906	3.984	3.615	3.350	3.099	1.970	1.686	1.549	1.328	3.8392
0.0250	13.888	11.489	8.417	5.597	4.545	4.124	3.821	3.535	2.247	1.923	1.772	1.515	4.7990
0.0320	16.046	13.301	9.737	6.475	5.268	4.791	4.421	4.089	2.600	2.230	2.054	1.762	6.1427
0.0400	18.261	15.206	11.107	7.409	6.042	5.509	5.076	4.698	2.988	2.571	2.366	2.033	7.6784
0.0500	20.755	17.397	12.671	8.490	6.956	6.336	5.841	5.411	3.434	2.984	2.750	2.363	9.5980
0.0600	23.029	19.487	14.111	9.511	7.817	7.098	6.561	6.082	3.895	3.387	3.126	2.688	11.518
0.0700	25.114	21.482	15.455	10.478	8.655	7.851	7.264	6.738	4.327	3.786	3.508	3.014	13.437
0.0800	27.056	23.444	16.722	11.421	9.448	8.562	7.909	7.358	4.766	4.180	3.863	3.328	15.357
0.0900	28.878	25.347	17.926	12.333	10.218	9.286	8.551	7.959	5.216	4.562	4.230	3.648	17.276
0.1000	30.617	27.221	19.076	13.220	10.988	9.958	9.156	8.565	5.646	4.941	4.578	3.949	19.196
0.1250	34.600	31.924	21.761	15.320	12.796	11.599	10.663	9.988	6.692	5.854	5.473	4.733	23.995
0.1600	39.499	38.391	25.174	18.025	15.155	13.745	12.612	11.832	8.056	7.074	6.633	5.790	30.714
0.2000	44.456	45.116	28.718	20.878	17.662	15.996	14.675	13.756	9.534	8.414	7.897	6.892	38.392
0.2500	49.894	52.483	32.761	24.210	20.574	18.674	17.101	16.020	11.302	9.992	9.370	8.190	47.990
0.3200	56.545	61.434	37.899	28.538	24.369	22.247	20.276	18.950	13.568	12.052	11.313	9.949	61.427
0.4000	63.208	70.169	43.234	32.944	28.362	25.940	23.649	22.093	16.083	14.310	13.446	11.803	76.784
0.5000	70.376	79.087	49.214	38.042	32.973	30.267	27.560	25.690	18.997	16.930	15.921	14.026	95.980
0.6000	76.426	86.075	54.512	42.683	37.177	34.234	31.072	28.946	21.641	19.352	18.234	16.190	115.18
0.7000	81.347	91.316	58.990	46.602	40.762	37.576	34.037	31.736	23.950	21.413	20.233	17.933	134.37
0.8000	85.276	95.072	62.795	50.048	43.894	40.629	36.735	34.224	25.997	23.360	22.041	19.592	153.57
0.9000	88.632	97.945	66.045	52.968	46.694	43.326	39.099	36.391	27.937	25.097	23.710	21.134	172.76
1.0000	91.337	100.010	68.830	55.683	49.144	45.634	41.229	38.338	29.597	26.637	25.192	22.507	191.96
1.2500	96.245	103.072	74.206	60.849	54.170	50.460	45.488	42.223	33.170	29.905	28.272	25.304	239.95
1.6000	100.100	104.923	79.068	66.022	58.985	55.110	49.655	45.859	36.767	33.288	31.469	28.227	307.14
2.0000	101.917	106.359	82.258	69.672	62.598	58.732	52.645	48.779	39.484	36.029	34.055	30.682	383.92
2.5000	102.108	106.990	84.178	72.309	65.406	61.450	54.968	51.012	41.921	38.133	36.196	32.829	479.90
3.2000	100.819	106.500	84.793	73.770	67.156	63.171	56.642	52.402	43.753	40.022	37.987	34.511	614.27
4.0000	98.343	104.731	84.054	73.883	67.663	63.713	57.409	52.954	44.801	41.018	39.085	35.555	767.84
5.0000	94.881	101.706	82.220	72.847	67.091	63.309	57.060	52.785	45.221	41.274	39.548	36.094	959.80
6.0000	91.554	98.436	80.030	71.386	65.864	62.423	56.341	52.099	44.657	41.215	39.455	36.253	1151.8
7.0000	88.199	95.276	77.777	69.688	64.399	61.210	55.377	51.255	44.333	40.755	39.122	36.011	1343.7
8.0000	85.180	92.209	75.581	68.023	62.959	59.860	54.418	50.261	43.686	40.285	38.697	35.674	1535.7
9.0000	82.530	89.291	73.490	66.362	61.511	58.572	53.281	49.312	42.992	39.685	38.142	35.275	1727.6
10.0000	79.961	86.541	71.521	64.870	60.078	57.289	52.139	48.420	42.198	39.122	37.692	34.831	1919.6
11.0000	77.618	84.098	69.675	63.404	58.806	56.088	51.072	47.588	41.526	38.600	37.276	34.350	2111.6
12.0000	75.489	81.740	67.947	61.968	57.551	54.969	50.077	46.747	40.836	38.050	36.691	33.838	2303.5

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	20.965	8.945	5.926	5.568	4.948	3.265	2.001	1.420	0.937	7.497	9.538	7.279	2.3995
0.0160	23.801	10.038	6.746	6.345	5.640	3.809	2.361	1.682	1.116	8.621	10.969	8.285	3.0714
0.0200	26.414	10.846	7.504	7.068	6.323	4.390	2.737	1.992	1.332	9.754	12.403	9.215	3.8392
0.0250	29.290	11.623	8.349	7.870	7.121	5.109	3.266	2.382	1.725	11.026	14.031	10.252	4.7990
0.0320	33.203	12.599	9.338	8.890	8.121	6.086	3.953	2.979	2.074	12.658	16.144	11.587	6.1427
0.0400	37.210	13.529	10.363	9.975	9.186	7.175	4.754	3.643	2.588	14.384	18.350	12.996	7.6784
0.0500	41.941	14.749	11.645	11.328	10.542	8.502	5.727	4.460	3.231	16.396	20.907	14.724	9.5980
0.0600	47.130	16.128	13.081	12.643	11.952	9.835	6.688	5.263	3.866	18.358	23.438	16.481	11.518
0.0700	52.391	17.742	14.527	14.110	13.384	11.158	7.604	6.043	4.466	20.307	25.902	18.360	13.437
0.0800	58.025	19.481	16.070	15.618	14.866	12.491	8.562	6.823	5.067	22.274	28.377	20.334	15.357
0.0900	63.636	21.350	17.657	17.209	16.384	13.821	9.501	7.601	5.629	24.236	30.814	22.371	17.276
0.1000	69.818	23.425	19.419	18.809	17.893	15.165	10.473	8.336	6.181	26.191	33.306	24.474	19.196
0.1250	86.392	28.833	23.828	22.958	21.935	18.519	12.752	10.162	7.551	31.205	39.714	30.009	23.995
0.1600	111.522	37.182	30.511	29.404	27.893	23.236	15.935	12.688	9.415	38.441	48.838	38.517	30.714
0.2000	141.006	46.810	38.339	36.817	34.806	28.287	19.241	15.278	11.286	46.351	58.815	48.390	38.392
0.2500	177.563	58.773	47.667	45.898	42.851	33.875	22.900	17.953	13.203	55.497	70.337	60.542	47.990
0.3200	225.121	73.486	59.767	57.038	52.187	39.984	26.681	20.807	15.198	66.778	84.818	75.722	61.427
0.4000	269.781	89.062	70.731	67.229	60.874	45.439	30.048	23.390	17.034	77.519	98.703	89.754	76.784
0.5000	313.985	104.334	81.055	77.118	68.998	50.740	33.466	26.133	19.046	88.241	112.651	103.448	95.980
0.6000	346.152	116.111	87.874	83.513	74.627	54.567	36.196	28.237	20.660	96.050	123.252	112.677	115.18
0.7000	362.197	124.468	91.552	87.010	77.866	56.866	38.048	29.613	21.885	101.167	130.013	117.566	134.37
0.8000	368.610	129.359	93.502	89.170	79.687	58.274	39.436	30.770	22.858	104.492	134.131	120.191	153.57
0.9000	369.852	131.826	94.444	90.019	80.047	59.044	40.287	31.834	23.644	106.663	136.779	121.127	172.76
1.0000	370.992	134.149	95.742	90.855	80.944	59.951	41.298	32.901	24.435	108.269	138.692	121.966	191.96
1.2500	368.803	138.097	98.323	93.870	83.407	62.556	43.930	35.470	26.788	111.086	141.065	124.443	239.95
1.6000	357.387	139.950	101.049	96.621	86.500	66.022	47.362	38.506	29.809	112.672	140.978	125.560	307.14
2.0000	340.547	139.591	103.480	98.545	89.167	69.261	50.588	41.540	32.656	113.516	139.838	125.443	383.92
2.5000	318.192	136.789	104.465	99.414	91.754	72.561	53.874	44.867	35.691	113.303	137.126	123.741	479.90
3.2000	296.775	131.853	104.550	99.801	92.679	75.042	57.066	47.484	38.072	112.181	133.719	121.678	614.27
4.0000	277.377	125.408	102.545	98.343	92.459	75.648	57.997	48.835	39.505	109.774	129.358	118.263	767.84
5.0000	261.458	118.807	99.403	95.704	90.195	74.738	58.129	49.085	40.288	106.392	124.563	114.121	959.80
6.0000	248.892	113.162	96.196	92.514	87.632	73.147	57.141	48.578	40.015	102.758	119.964	109.881	1151.8
7.0000	238.774	108.421	93.176	89.832	84.932	71.399	56.155	47.910	39.588	99.476	115.809	106.398	1343.7
8.0000	229.766	103.924	90.319	87.145	82.308	69.459	54.645	46.860	38.924	96.290	111.860	103.017	1535.7
9.0000	221.206	100.535	87.527	84.514	79.958	67.611	53.281	45.785	38.215	93.186	108.104	99.726	1727.6
10.0000	213.849	97.627	85.182	82.249	77.815	65.800	51.996	44.701	37.406	90.403	104.707	96.840	1919.6
11.0000	206.935	94.897	82.983	80.126	75.806	64.101	50.793	43.686	36.579	87.860	101.656	94.201	2111.6
12.0000	200.443	92.340	80.925	78.139	73.926	62.511	49.669	42.739	35.808	85.477	98.727	91.728	2303.5

$^{192}_{76}$Os IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=192
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.137	0.134	0.161	0.201	0.208	0.248	0.258	0.278	0.361	0.399	0.418	0.473	2.3995
0.0160	0.173	0.170	0.206	0.259	0.270	0.321	0.336	0.363	0.477	0.534	0.564	0.648	3.0714
0.0200	0.212	0.211	0.257	0.325	0.340	0.404	0.423	0.457	0.604	0.679	0.719	0.832	3.8392
0.0250	0.259	0.261	0.319	0.407	0.428	0.506	0.530	0.573	0.760	0.856	0.907	1.052	4.7990
0.0320	0.322	0.329	0.404	0.521	0.550	0.649	0.679	0.733	0.978	1.100	1.167	1.353	6.1427
0.0400	0.389	0.402	0.498	0.648	0.689	0.810	0.847	0.913	1.225	1.379	1.462	1.692	7.6784
0.0500	0.467	0.488	0.610	0.801	0.859	1.005	1.051	1.132	1.531	1.722	1.827	2.110	9.5980
0.0600	0.540	0.569	0.716	0.948	1.024	1.193	1.249	1.343	1.830	2.057	2.182	2.518	11.518
0.0700	0.608	0.645	0.816	1.088	1.182	1.374	1.439	1.546	2.120	2.391	2.527	2.913	13.437
0.0800	0.673	0.716	0.912	1.222	1.334	1.546	1.621	1.741	2.399	2.694	2.860	3.295	15.357
0.0900	0.734	0.784	1.004	1.350	1.480	1.711	1.796	1.928	2.667	2.995	3.180	3.662	17.276
0.1000	0.792	0.848	1.092	1.472	1.621	1.870	1.964	2.107	2.925	3.284	3.488	4.014	19.196
0.1250	0.927	0.993	1.296	1.756	1.948	2.237	2.357	2.525	3.525	3.959	4.207	4.838	23.995
0.1600	1.098	1.170	1.554	2.111	2.359	2.697	2.850	3.050	4.275	4.806	5.104	5.864	30.714
0.2000	1.272	1.344	1.818	2.470	2.775	3.162	3.351	3.582	5.031	5.657	6.007	6.893	38.392
0.2500	1.468	1.533	2.112	2.867	3.235	3.674	3.905	4.172	5.860	6.589	6.996	8.021	47.990
0.3200	1.714	1.762	2.476	3.352	3.797	4.295	4.580	4.892	6.861	7.714	8.191	9.380	61.427
0.4000	1.965	1.990	2.843	3.833	4.354	4.907	5.248	5.606	7.842	8.814	9.360	10.707	76.784
0.5000	2.248	2.243	3.248	4.360	4.959	5.571	5.973	6.382	8.894	9.993	10.612	12.128	95.980
0.6000	2.506	2.472	3.612	4.826	5.492	6.153	6.611	7.066	9.811	11.018	11.700	13.357	115.18
0.7000	2.749	2.689	3.945	5.248	5.975	6.678	7.189	7.686	10.633	11.936	12.672	14.452	134.37
0.8000	2.980	2.894	4.260	5.645	6.421	7.168	7.722	8.258	11.386	12.776	13.561	15.453	153.57
0.9000	3.200	3.093	4.558	6.018	6.845	7.626	8.228	8.801	12.098	13.568	14.400	16.396	172.76
1.0000	3.414	3.287	4.842	6.371	7.245	8.057	8.706	9.315	12.765	14.310	15.185	17.276	191.96
1.2500	3.924	3.758	5.512	7.194	8.173	9.055	9.812	10.505	14.293	16.007	16.979	19.282	239.95
1.6000	4.606	4.402	6.387	8.251	9.358	10.325	11.221	12.027	16.212	18.130	19.225	21.789	307.14
2.0000	5.365	5.128	7.337	9.381	10.619	11.672	12.720	13.647	18.223	20.343	21.566	24.393	383.92
2.5000	6.304	6.026	8.488	10.731	12.117	13.267	14.501	15.568	20.578	22.928	24.295	27.412	479.90
3.2000	7.626	7.282	10.076	12.567	14.141	15.420	16.905	18.163	23.711	26.362	27.913	31.397	614.27
4.0000	9.167	8.735	11.893	14.645	16.417	17.838	19.596	21.075	27.176	30.148	31.894	35.776	767.84
5.0000	11.153	10.594	14.201	17.260	19.264	20.859	22.947	24.703	31.437	34.810	36.773	41.131	959.80
6.0000	13.212	12.512	16.567	19.922	22.151	23.912	26.332	28.363	35.708	39.463	41.631	46.436	1151.8
7.0000	15.348	14.494	19.000	22.643	25.098	27.017	29.769	32.078	40.022	44.146	46.517	51.748	1343.7
8.0000	17.563	16.542	21.504	25.431	28.113	30.188	33.266	35.860	44.384	48.884	51.450	57.104	1535.7
9.0000	19.853	18.658	24.080	28.289	31.198	33.431	36.831	39.716	48.814	53.685	56.447	62.515	1727.6
10.0000	22.216	20.842	26.728	31.215	34.356	36.745	40.473	43.645	53.321	58.557	61.510	67.992	1919.6
11.0000	24.653	23.092	29.447	34.208	37.586	40.132	44.194	47.644	57.907	63.498	66.632	73.542	2111.6
12.0000	27.161	25.408	32.238	37.271	40.886	43.589	47.990	51.714	62.569	68.507	71.823	79.173	2303.5
MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.053	0.122	0.144	0.147	0.154	0.204	0.277	0.353	0.438	0.127	0.108	0.119	2.3995
0.0160	0.067	0.155	0.185	0.190	0.199	0.263	0.359	0.462	0.599	0.163	0.137	0.153	3.0714
0.0200	0.083	0.193	0.232	0.238	0.251	0.331	0.452	0.583	0.767	0.203	0.170	0.192	3.8392
0.0250	0.102	0.241	0.291	0.299	0.315	0.416	0.568	0.731	0.965	0.252	0.210	0.240	4.7990
0.0320	0.127	0.308	0.373	0.384	0.405	0.534	0.729	0.935	1.230	0.319	0.265	0.307	6.1427
0.0400	0.155	0.385	0.467	0.480	0.507	0.665	0.908	1.160	1.522	0.393	0.324	0.383	7.6784
0.0500	0.189	0.480	0.581	0.597	0.631	0.821	1.122	1.427	1.866	0.481	0.395	0.474	9.5980
0.0600	0.220	0.572	0.691	0.710	0.749	0.966	1.322	1.676	2.186	0.565	0.461	0.562	11.518
0.0700	0.250	0.660	0.795	0.817	0.861	1.102	1.510	1.909	2.484	0.643	0.524	0.645	13.437
0.0800	0.277	0.744	0.893	0.917	0.966	1.228	1.687	2.126	2.763	0.717	0.582	0.723	15.357
0.0900	0.303	0.822	0.985	1.012	1.064	1.346	1.851	2.329	3.025	0.787	0.638	0.797	17.276
0.1000	0.328	0.895	1.072	1.100	1.157	1.457	2.006	2.519	3.271	0.852	0.690	0.865	19.196
0.1250	0.382	1.058	1.265	1.300	1.365	1.704	2.353	2.950	3.832	1.001	0.807	1.019	23.995
0.1600	0.444	1.246	1.490	1.533	1.608	1.996	2.768	3.465	4.508	1.178	0.948	1.198	30.714
0.2000	0.501	1.420	1.700	1.750	1.837	2.274	3.168	3.964	5.169	1.349	1.083	1.365	38.392
0.2500	0.559	1.596	1.914	1.972	2.073	2.568	3.596	4.503	5.887	1.530	1.226	1.534	47.990
0.3200	0.624	1.794	2.157	2.226	2.346	2.919	4.113	5.161	6.774	1.744	1.394	1.726	61.427
0.4000	0.685	1.980	2.388	2.467	2.612	3.269	4.636	5.829	7.680	1.952	1.559	1.908	76.784
0.5000	0.750	2.177	2.637	2.729	2.902	3.660	5.224	6.581	8.704	2.180	1.738	2.104	95.980
0.6000	0.808	2.351	2.861	2.965	3.165	4.018	5.763	7.269	9.641	2.386	1.898	2.281	115.18
0.7000	0.862	2.510	3.074	3.189	3.416	4.362	6.271	7.920	10.521	2.580	2.050	2.448	134.37
0.8000	0.915	2.661	3.282	3.407	3.660	4.695	6.766	8.555	11.361	2.767	2.195	2.609	153.57
0.9000	0.967	2.808	3.486	3.621	3.900	5.022	7.247	9.168	12.186	2.948	2.336	2.768	172.76
1.0000	1.019	2.952	3.687	3.833	4.138	5.345	7.718	9.760	12.984	3.127	2.476	2.926	191.96
1.2500	1.148	3.304	4.181	4.351	4.720	6.126	8.841	11.162	14.855	3.563	2.818	3.314	239.95
1.6000	1.332	3.786	4.853	5.055	5.509	7.169	10.310	12.975	17.226	4.162	3.293	3.850	307.14
2.0000	1.552	4.334	5.602	5.840	6.381	8.302	11.876	14.891	19.682	4.839	3.838	4.460	383.92
2.5000	1.843	5.027	6.523	6.808	7.441	9.653	13.711	17.110	22.489	5.684	4.530	5.229	479.90
3.2000	2.279	6.026	7.807	8.155	8.895	11.471	16.130	20.016	26.128	6.874	5.521	6.322	614.27
4.0000	2.814	7.219	9.289	9.703	10.553	13.507	18.797	23.202	30.083	8.256	6.687	7.601	767.84
5.0000	3.526	8.790	11.189	11.681	12.653	16.059	22.101	27.120	34.891	10.032	8.198	9.253	959.80
6.0000	4.279	10.446	13.152	13.720	14.812	18.654	25.430	31.050	39.671	11.867	9.768	10.966	1151.8
7.0000	5.066	12.179	15.179	15.826	17.037	21.311	28.819	35.029	44.493	13.766	11.397	12.742	1343.7
8.0000	5.886	13.987	17.272	17.996	19.333	24.037	32.285	39.080	49.383	15.727	13.084	14.575	1535.7
9.0000	6.737	15.866	19.431	20.233	21.700	26.838	35.843	43.225	54.361	17.754	14.830	16.470	1727.6
10.0000	7.620	17.803	21.654	22.535	24.134	29.716	39.490	47.468	59.439	19.846	16.634	18.423	1919.6
11.0000	8.532	19.798	23.938	24.900	26.633	32.672	43.226	51.813	64.629	22.000	18.495	20.433	2111.6
12.0000	9.475	21.849	26.281	27.327	29.198	35.705	47.048	56.256	69.933	24.215	20.411	22.498	2303.5

$^{193}_{77}$Ir IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=193 MEV
0.0125	9.253	7.654	5.608	3.729	3.028	2.748	2.546	2.355	1.497	1.281	1.178	1.009	2.4120
0.0160	10.706	8.857	6.489	4.315	3.504	3.179	2.946	2.725	1.732	1.483	1.363	1.168	3.0874
0.0200	12.216	10.106	7.404	4.923	3.998	3.628	3.361	3.109	1.977	1.692	1.555	1.333	3.8592
0.0250	13.938	11.531	8.447	5.618	4.562	4.139	3.835	3.548	2.255	1.930	1.778	1.521	4.8240
0.0320	16.109	13.352	9.775	6.500	5.288	4.809	4.438	4.105	2.610	2.238	2.062	1.769	6.1747
0.0400	18.335	15.268	11.153	7.439	6.067	5.532	5.097	4.718	3.000	2.582	2.376	2.041	7.7184
0.0500	20.844	17.472	12.725	8.526	6.986	6.363	5.866	5.434	3.449	2.997	2.761	2.373	9.6480
0.0600	23.131	19.573	14.173	9.553	7.852	7.129	6.591	6.109	3.912	3.402	3.139	2.700	11.578
0.0700	25.229	21.581	15.526	10.526	8.694	7.887	7.297	6.769	4.347	3.804	3.524	3.027	13.507
0.0800	27.184	23.555	16.801	11.475	9.492	8.602	7.947	7.392	4.788	4.200	3.881	3.343	15.437
0.0900	29.018	25.469	18.012	12.392	10.267	9.330	8.592	7.997	5.242	4.584	4.251	3.665	17.366
0.1000	30.767	27.355	19.170	13.285	11.042	10.007	9.201	8.607	5.674	4.965	4.601	3.968	19.296
0.1250	34.777	32.087	21.872	15.398	12.861	11.658	10.718	10.039	6.726	5.884	5.501	4.757	24.120
0.1600	39.709	38.596	25.309	18.121	15.236	13.819	12.680	11.895	8.099	7.112	6.669	5.821	30.874
0.2000	44.702	45.366	28.877	20.994	17.760	16.085	14.756	13.832	9.587	8.461	7.941	6.931	38.592
0.2500	50.181	52.784	32.949	24.349	20.692	18.781	17.199	16.112	11.367	10.049	9.423	8.237	48.240
0.3200	56.883	61.801	38.125	28.708	24.515	22.380	20.397	19.063	13.649	12.124	11.380	10.008	61.747
0.4000	63.598	70.602	43.501	33.148	28.537	26.101	23.795	22.229	16.182	14.399	13.529	11.876	77.184
0.5000	70.977	79.763	49.635	38.367	33.255	30.525	27.795	25.909	19.159	17.074	16.057	14.146	96.480
0.6000	77.096	86.830	54.990	43.057	37.503	34.534	31.344	29.200	21.831	19.522	18.394	16.332	115.78
0.7000	82.090	92.150	59.529	47.028	41.134	37.920	34.348	32.026	24.169	21.609	20.418	18.097	135.07
0.8000	86.091	95.981	63.396	50.526	44.314	41.017	37.086	34.551	26.246	23.583	22.252	19.779	154.37
0.9000	89.519	98.924	66.705	53.498	47.161	43.759	39.490	36.755	28.216	25.348	23.947	21.346	173.66
1.0000	92.291	101.054	69.548	56.265	49.658	46.111	41.659	38.738	29.906	26.915	25.455	22.742	192.96
1.2500	97.350	104.255	75.058	61.547	54.792	51.039	46.010	42.708	33.551	30.248	28.597	25.595	241.20
1.6000	101.373	106.257	80.073	66.861	59.735	55.811	50.286	46.443	37.234	33.711	31.869	28.586	308.74
2.0000	103.327	107.830	83.395	70.636	63.464	59.544	53.373	49.454	40.030	36.527	34.526	31.107	385.92
2.5000	103.628	108.583	85.431	73.385	66.380	62.365	55.786	51.771	42.545	38.700	36.735	33.318	482.40
3.2000	102.427	108.198	86.145	74.946	68.227	64.178	57.545	53.238	44.451	40.661	38.593	35.061	617.47
4.0000	99.995	106.490	85.466	75.124	68.800	64.783	58.373	53.843	45.553	41.707	39.741	36.152	771.84
5.0000	96.547	103.491	83.663	74.125	68.269	64.420	58.062	53.712	46.015	41.999	40.242	36.728	964.80
6.0000	93.212	100.219	81.479	72.680	67.057	63.554	57.361	53.043	45.465	41.962	40.169	36.910	1157.8
7.0000	89.835	97.044	79.220	70.981	65.594	62.346	56.405	52.206	45.155	41.511	39.848	36.679	1350.7
8.0000	86.792	93.954	77.011	69.310	64.150	60.993	55.448	51.212	44.512	41.047	39.430	36.349	1543.7
9.0000	84.117	91.009	74.904	67.639	62.695	59.699	54.306	50.261	43.819	40.448	38.875	35.954	1736.6
10.0000	81.521	88.230	72.917	66.136	61.250	58.407	53.157	49.365	43.021	39.886	38.427	35.511	1929.6
11.0000	79.152	85.760	71.052	64.658	59.968	57.197	52.081	48.529	42.347	39.363	38.013	35.029	2122.6
12.0000	76.999	83.375	69.306	63.207	58.702	56.068	51.078	47.682	41.653	38.811	37.425	34.514	2315.5

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	21.029	8.972	5.944	5.585	4.963	3.275	2.008	1.424	0.940	7.520	9.567	7.301	2.4120
0.0160	23.878	10.070	6.768	6.365	5.658	3.822	2.368	1.687	1.120	8.649	11.005	8.312	3.0874
0.0200	26.505	10.883	7.529	7.093	6.345	4.405	2.747	1.999	1.337	9.788	12.445	9.247	3.8592
0.0250	29.397	11.666	8.380	7.898	7.147	5.128	3.278	2.391	1.732	11.066	14.082	10.289	4.8240
0.0320	33.331	12.648	9.374	8.924	8.152	6.109	3.968	2.991	2.082	12.707	16.206	11.632	6.1747
0.0400	37.362	13.584	10.406	10.015	9.223	7.205	4.773	3.658	2.599	14.443	18.424	13.049	7.7184
0.0500	42.121	14.812	11.695	11.376	10.587	8.539	5.752	4.479	3.245	16.467	20.997	14.787	9.6480
0.0600	47.339	16.200	13.139	12.699	12.005	9.879	6.718	5.287	3.884	18.440	23.542	16.555	11.578
0.0700	52.632	17.823	14.594	14.175	13.445	11.209	7.639	6.070	4.487	20.401	26.021	18.444	13.507
0.0800	58.298	19.573	16.145	15.692	14.936	12.550	8.602	6.855	5.091	22.379	28.511	20.430	15.437
0.0900	63.943	21.452	17.742	17.292	16.463	13.887	9.546	7.637	5.656	24.352	30.963	22.479	17.366
0.1000	70.161	23.540	19.515	18.901	17.981	15.240	10.524	8.377	6.211	26.320	33.470	24.595	19.296
0.1250	86.834	28.981	23.950	23.075	22.047	18.613	12.817	10.214	7.590	31.365	39.917	30.162	24.120
0.1600	112.118	37.381	30.674	29.561	28.042	23.360	16.020	12.756	9.465	38.646	49.099	38.722	30.874
0.2000	141.787	47.070	38.551	37.021	34.999	28.444	19.348	15.363	11.349	46.608	59.141	48.658	38.592
0.2500	178.583	59.110	47.941	46.161	43.097	34.069	23.031	18.056	13.278	55.815	70.741	60.890	48.240
0.3200	226.465	73.925	60.124	57.379	52.499	40.222	26.840	20.931	15.288	67.177	85.325	76.174	61.747
0.4000	271.446	89.612	71.168	67.644	61.249	45.720	30.233	23.534	17.139	77.997	99.313	90.308	77.184
0.5000	316.668	105.225	81.748	77.777	69.588	51.173	33.751	26.356	19.209	88.995	113.613	104.332	96.480
0.6000	349.188	117.129	88.644	84.245	75.282	55.045	36.514	28.485	20.841	96.893	124.333	113.665	115.78
0.7000	365.505	125.605	92.388	87.805	78.578	57.385	38.396	29.883	22.085	102.091	131.201	118.640	135.07
0.8000	372.132	130.595	94.396	90.022	80.449	58.831	39.812	31.064	23.076	105.490	135.413	121.339	154.37
0.9000	373.550	133.144	95.389	90.919	80.847	59.635	40.690	32.152	23.881	107.729	138.147	122.338	173.66
1.0000	374.865	135.550	96.742	91.804	81.789	60.577	41.729	33.244	24.690	109.400	140.140	123.240	192.96
1.2500	373.038	139.683	99.452	94.948	84.365	63.274	44.434	35.878	27.096	112.362	142.685	125.872	241.20
1.6000	361.932	141.730	102.334	97.850	87.600	66.861	47.964	38.996	30.188	114.105	142.771	127.157	308.74
2.0000	345.257	141.522	104.912	99.908	90.401	70.219	51.288	42.115	33.108	115.086	141.772	127.178	385.92
2.5000	322.929	138.825	106.020	100.894	93.120	73.641	54.676	45.535	36.223	114.990	139.167	125.584	482.40
3.2000	301.508	133.956	106.217	101.393	94.157	76.239	57.976	48.241	38.679	113.970	135.851	123.618	617.47
4.0000	282.036	127.515	104.268	99.995	94.012	76.919	58.971	49.655	40.169	111.618	131.531	120.250	771.84
5.0000	266.048	120.893	101.148	97.384	91.778	76.050	59.150	49.947	40.995	108.260	126.749	116.124	964.80
6.0000	253.401	115.212	97.938	94.190	89.220	74.472	58.176	49.458	40.740	104.619	122.137	111.871	1157.8
7.0000	243.205	110.433	94.905	91.499	86.508	72.724	57.197	48.799	40.323	101.322	117.958	108.373	1350.7
8.0000	234.114	105.890	92.028	88.794	83.865	70.773	55.679	47.747	39.661	98.112	113.976	104.966	1543.7
9.0000	225.462	102.469	89.211	86.140	81.496	68.912	54.306	46.665	38.950	94.979	110.184	101.645	1736.6
10.0000	218.022	99.532	86.844	83.855	79.334	67.084	53.011	45.573	38.136	92.167	106.751	98.730	1929.6
11.0000	211.026	96.773	84.623	81.710	77.305	65.368	51.797	44.550	37.303	89.597	103.665	96.063	2122.6
12.0000	204.452	94.186	82.543	79.702	75.405	63.761	50.662	43.593	36.524	87.187	100.701	93.563	2315.5

$^{193}_{77}Ir$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=193 MEV
0.0125	0.136	0.133	0.160	0.199	0.207	0.246	0.256	0.276	0.357	0.395	0.414	0.467	2.4120
0.0160	0.172	0.170	0.205	0.258	0.268	0.319	0.333	0.360	0.473	0.529	0.559	0.641	3.0874
0.0200	0.211	0.210	0.256	0.323	0.338	0.401	0.420	0.454	0.600	0.674	0.713	0.824	3.8592
0.0250	0.258	0.260	0.318	0.405	0.425	0.503	0.526	0.569	0.755	0.849	0.900	1.043	4.8240
0.0320	0.321	0.327	0.402	0.518	0.547	0.645	0.674	0.728	0.971	1.092	1.158	1.342	6.1747
0.0400	0.388	0.400	0.496	0.644	0.685	0.805	0.841	0.907	1.216	1.368	1.451	1.679	7.7184
0.0500	0.466	0.486	0.607	0.797	0.854	0.999	1.045	1.125	1.520	1.709	1.813	2.094	9.6480
0.0600	0.538	0.567	0.713	0.943	1.017	1.186	1.241	1.335	1.818	2.042	2.166	2.500	11.578
0.0700	0.606	0.642	0.813	1.082	1.175	1.366	1.430	1.537	2.106	2.365	2.509	2.892	13.507
0.0800	0.671	0.714	0.909	1.216	1.327	1.538	1.612	1.731	2.384	2.676	2.840	3.272	15.437
0.0900	0.732	0.781	1.000	1.343	1.472	1.703	1.786	1.917	2.651	2.975	3.159	3.637	17.366
0.1000	0.790	0.845	1.088	1.465	1.612	1.860	1.954	2.096	2.907	3.263	3.465	3.988	19.296
0.1250	0.925	0.990	1.292	1.748	1.938	2.227	2.346	2.513	3.505	3.936	4.181	4.809	24.120
0.1600	1.095	1.167	1.549	2.103	2.348	2.686	2.838	3.036	4.253	4.780	5.076	5.831	30.874
0.2000	1.269	1.341	1.812	2.462	2.764	3.150	3.337	3.567	5.007	5.629	5.977	6.857	38.592
0.2500	1.466	1.529	2.106	2.858	3.223	3.661	3.890	4.156	5.834	6.559	6.964	7.983	48.240
0.3200	1.711	1.758	2.470	3.342	3.784	4.281	4.564	4.875	6.833	7.682	8.156	9.339	61.747
0.4000	1.962	1.986	2.836	3.823	4.340	4.892	5.231	5.588	7.812	8.780	9.323	10.664	77.184
0.5000	2.244	2.239	3.241	4.348	4.944	5.554	5.955	6.362	8.862	9.956	10.572	12.082	96.480
0.6000	2.502	2.467	3.603	4.812	5.475	6.134	6.590	7.044	9.775	10.977	11.655	13.305	115.78
0.7000	2.744	2.682	3.935	5.233	5.956	6.657	7.166	7.661	10.594	11.892	12.624	14.396	135.07
0.8000	2.973	2.887	4.248	5.629	6.400	7.146	7.697	8.230	11.345	12.728	13.509	15.393	154.37
0.9000	3.193	3.085	4.545	6.000	6.822	7.601	8.201	8.771	12.053	13.517	14.344	16.331	173.66
1.0000	3.405	3.278	4.828	6.351	7.220	8.030	8.676	9.282	12.717	14.255	15.125	17.206	192.96
1.2500	3.912	3.747	5.494	7.169	8.143	9.022	9.775	10.465	14.236	15.942	16.909	19.201	241.20
1.6000	4.590	4.386	6.363	8.219	9.320	10.284	11.175	11.978	16.142	18.051	19.140	21.691	308.74
2.0000	5.343	5.106	7.305	9.339	10.571	11.620	12.662	13.585	18.137	20.246	21.462	24.274	385.92
2.5000	6.273	5.996	8.446	10.677	12.055	13.201	14.427	15.488	20.471	22.808	24.167	27.266	482.40
3.2000	7.582	7.240	10.018	12.495	14.058	15.332	16.807	18.057	23.572	26.207	27.748	31.211	617.47
4.0000	9.106	8.676	11.815	14.550	16.309	17.724	19.468	20.937	26.998	29.951	31.685	35.542	771.84
5.0000	11.069	10.513	14.096	17.135	19.123	20.709	22.780	24.523	31.210	34.558	36.506	40.834	964.80
6.0000	13.102	12.408	16.432	19.763	21.974	23.724	26.123	28.137	35.427	39.153	41.304	46.073	1157.8
7.0000	15.211	14.364	18.834	22.449	24.883	26.789	29.515	31.803	39.686	43.776	46.127	51.316	1350.7
8.0000	17.396	16.385	21.305	25.201	27.858	29.918	32.965	35.535	43.990	48.451	50.995	56.601	1543.7
9.0000	19.655	18.472	23.845	28.019	30.901	33.116	36.482	39.339	48.359	53.187	55.924	61.939	1736.6
10.0000	21.985	20.626	26.457	30.904	34.015	36.384	40.074	43.213	52.804	57.991	60.917	67.339	1929.6
11.0000	24.388	22.844	29.138	33.855	37.199	39.723	43.742	47.156	57.325	62.861	65.966	72.811	2122.6
12.0000	26.860	25.127	31.888	36.874	40.452	43.131	47.483	51.168	61.920	67.799	71.082	78.361	2315.5

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.052	0.121	0.143	0.147	0.154	0.202	0.275	0.350	0.432	0.126	0.107	0.118	2.4120
0.0160	0.067	0.155	0.184	0.189	0.198	0.261	0.356	0.459	0.593	0.162	0.137	0.152	3.0874
0.0200	0.083	0.192	0.231	0.237	0.249	0.329	0.449	0.578	0.760	0.202	0.169	0.191	3.8592
0.0250	0.101	0.240	0.289	0.297	0.313	0.414	0.564	0.726	0.958	0.251	0.209	0.239	4.8240
0.0320	0.127	0.307	0.371	0.382	0.403	0.531	0.724	0.929	1.220	0.318	0.264	0.305	6.1747
0.0400	0.155	0.383	0.464	0.478	0.504	0.661	0.902	1.152	1.510	0.392	0.323	0.381	7.7184
0.0500	0.188	0.478	0.578	0.594	0.628	0.816	1.114	1.417	1.852	0.479	0.393	0.472	9.6480
0.0600	0.219	0.570	0.687	0.706	0.745	0.961	1.314	1.665	2.171	0.562	0.460	0.559	11.578
0.0700	0.249	0.658	0.791	0.813	0.856	1.096	1.501	1.897	2.467	0.641	0.522	0.642	13.507
0.0800	0.277	0.741	0.889	0.913	0.961	1.222	1.677	2.113	2.745	0.714	0.580	0.720	15.437
0.0900	0.302	0.819	0.981	1.007	1.059	1.340	1.841	2.315	3.006	0.784	0.635	0.793	17.366
0.1000	0.327	0.892	1.068	1.096	1.152	1.450	1.995	2.505	3.252	0.849	0.687	0.862	19.296
0.1250	0.381	1.055	1.260	1.295	1.359	1.697	2.342	2.935	3.811	0.998	0.805	1.016	24.120
0.1600	0.443	1.243	1.485	1.527	1.602	1.988	2.756	3.449	4.485	1.175	0.945	1.194	30.874
0.2000	0.500	1.416	1.694	1.744	1.831	2.266	3.155	3.947	5.144	1.346	1.080	1.360	38.592
0.2500	0.558	1.592	1.908	1.966	2.066	2.559	3.582	4.485	5.862	1.526	1.223	1.529	48.240
0.3200	0.623	1.790	2.151	2.219	2.340	2.910	4.099	5.142	6.746	1.740	1.391	1.721	61.747
0.4000	0.684	1.976	2.381	2.461	2.604	3.260	4.621	5.809	7.651	1.948	1.555	1.903	77.184
0.5000	0.749	2.172	2.630	2.722	2.894	3.650	5.208	6.559	8.673	2.176	1.734	2.098	96.480
0.6000	0.807	2.345	2.853	2.957	3.156	4.007	5.745	7.245	9.607	2.380	1.894	2.275	115.78
0.7000	0.861	2.504	3.066	3.181	3.407	4.350	6.251	7.893	10.483	2.574	2.045	2.441	135.07
0.8000	0.913	2.655	3.273	3.398	3.649	4.681	6.744	8.526	11.319	2.760	2.190	2.602	154.37
0.9000	0.964	2.801	3.476	3.611	3.888	5.007	7.223	9.136	12.140	2.941	2.331	2.760	173.66
1.0000	1.016	2.944	3.676	3.822	4.125	5.328	7.691	9.725	12.935	3.118	2.469	2.917	192.96
1.2500	1.145	3.294	4.167	4.337	4.704	6.105	8.808	11.119	14.795	3.552	2.809	3.303	241.20
1.6000	1.328	3.772	4.834	5.035	5.487	7.140	10.267	12.919	17.150	4.147	3.281	3.835	308.74
2.0000	1.545	4.316	5.577	5.814	6.353	8.264	11.820	14.820	19.587	4.819	3.822	4.441	385.92
2.5000	1.834	5.003	6.491	6.774	7.403	9.603	13.639	17.019	22.368	5.656	4.508	5.203	482.40
3.2000	2.266	5.992	7.761	8.107	8.843	11.403	16.033	19.896	25.970	6.834	5.488	6.285	617.47
4.0000	2.795	7.172	9.227	9.638	10.482	13.417	18.671	23.047	29.881	8.201	6.642	7.550	771.84
5.0000	3.498	8.725	11.104	11.592	12.558	15.938	21.936	26.918	34.633	9.955	8.135	9.182	964.80
6.0000	4.242	10.360	13.043	13.607	14.690	18.501	25.224	30.800	39.353	11.768	9.686	10.874	1157.8
7.0000	5.019	12.070	15.044	15.685	16.886	21.123	28.569	34.727	44.114	13.642	11.293	12.627	1350.7
8.0000	5.828	13.855	17.109	17.826	19.152	23.813	31.989	38.725	48.939	15.577	12.958	14.436	1543.7
9.0000	6.667	15.707	19.239	20.033	21.486	26.576	35.498	42.813	53.849	17.577	14.680	16.304	1736.6
10.0000	7.538	17.618	21.431	22.303	23.886	29.415	39.095	46.998	58.856	19.639	16.459	18.231	1929.6
11.0000	8.438	19.585	23.682	24.635	26.350	32.329	42.778	51.281	63.972	21.763	18.294	20.212	2122.6
12.0000	9.367	21.606	25.991	27.026	28.878	35.318	46.545	55.660	69.201	23.946	20.183	22.248	2315.5

$^{195}_{78}$Pt IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=195 MEV
0.0125	9.300	7.693	5.636	3.748	3.044	2.762	2.559	2.367	1.505	1.288	1.184	1.015	2.4370
0.0160	10.763	8.904	6.523	4.338	3.523	3.196	2.962	2.740	1.742	1.491	1.370	1.174	3.1194
0.0200	12.283	10.162	7.444	4.951	4.020	3.648	3.380	3.127	1.988	1.701	1.563	1.340	3.8992
0.0250	14.018	11.597	8.496	5.650	4.588	4.163	3.857	3.568	2.268	1.941	1.788	1.529	4.8740
0.0320	16.204	13.431	9.833	6.539	5.319	4.838	4.464	4.130	2.625	2.252	2.075	1.780	6.2387
0.0400	18.448	15.362	11.221	7.485	6.104	5.566	5.128	4.747	3.019	2.598	2.390	2.053	7.7984
0.0500	20.976	17.583	12.806	8.580	7.030	6.403	5.904	5.468	3.470	3.016	2.779	2.388	9.7480
0.0600	23.281	19.701	14.266	9.615	7.903	7.176	6.633	6.148	3.937	3.424	3.160	2.718	11.698
0.0700	25.397	21.724	15.629	10.596	8.752	7.939	7.345	6.814	4.376	3.829	3.548	3.048	13.647
0.0800	27.367	23.714	16.914	11.552	9.557	8.660	8.000	7.442	4.821	4.229	3.907	3.366	15.597
0.0900	29.217	25.644	18.136	12.477	10.337	9.394	8.651	8.052	5.278	4.616	4.280	3.691	17.546
0.1000	30.981	27.545	19.303	13.377	11.119	10.076	9.265	8.667	5.714	4.999	4.633	3.996	19.496
0.1250	35.026	32.317	22.029	15.508	12.953	11.741	10.794	10.111	6.774	5.926	5.540	4.791	24.370
0.1600	40.003	38.881	25.496	18.255	15.348	13.921	12.773	11.983	8.159	7.164	6.718	5.864	31.194
0.2000	45.041	45.710	29.096	21.153	17.894	16.207	14.868	13.937	9.660	8.525	8.001	6.983	38.992
0.2500	50.572	53.195	33.205	24.539	20.853	18.927	17.333	16.237	11.456	10.128	9.497	8.301	48.740
0.3200	57.338	62.296	38.431	28.938	24.711	22.559	20.560	19.215	13.758	12.221	11.472	10.088	62.387
0.4000	64.120	71.181	43.858	33.420	28.771	26.315	23.990	22.411	16.315	14.517	13.640	11.973	77.984
0.5000	71.574	80.433	50.052	38.690	33.535	30.782	28.029	26.127	19.320	17.218	16.192	14.265	97.480
0.6000	77.761	87.578	55.464	43.428	37.826	34.831	31.615	29.451	22.019	19.690	18.553	16.473	116.98
0.7000	82.826	92.976	60.062	47.449	41.503	38.260	34.656	32.313	24.385	21.803	20.601	18.259	136.47
0.8000	86.898	96.880	63.990	51.000	44.729	41.401	37.434	34.874	26.492	23.804	22.460	19.965	155.97
0.9000	90.396	99.894	67.359	54.022	47.623	44.188	39.877	37.115	28.493	25.597	24.182	21.555	175.46
1.0000	93.236	102.088	70.260	56.841	50.166	46.583	42.086	39.135	30.212	27.191	25.715	22.975	194.96
1.2500	98.447	105.430	75.904	62.241	55.410	51.615	46.529	43.189	33.929	30.589	28.919	25.883	243.70
1.6000	102.641	107.586	81.075	67.697	60.482	56.509	50.915	47.023	37.700	34.133	32.268	28.944	311.94
2.0000	104.735	109.299	84.532	71.598	64.329	60.356	54.100	50.127	40.575	37.025	34.996	31.530	389.92
2.5000	105.150	110.177	86.686	74.463	67.355	63.280	56.606	52.531	43.169	39.269	37.275	33.807	487.40
3.2000	104.040	109.903	87.502	76.127	69.302	65.189	58.451	54.076	45.151	41.301	39.201	35.613	623.87
4.0000	101.655	108.258	86.884	76.371	69.942	65.858	59.342	54.737	46.309	42.400	40.401	36.752	779.84
5.0000	98.222	105.287	85.115	75.411	69.453	65.538	59.069	54.644	46.813	42.727	40.940	37.365	974.80
6.0000	94.881	102.014	82.938	73.981	68.258	64.692	58.388	53.993	46.279	42.713	40.888	37.571	1169.8
7.0000	91.482	98.824	80.672	72.282	66.797	63.489	57.439	53.163	45.983	42.272	40.578	37.351	1364.7
8.0000	88.414	95.709	78.450	70.605	65.349	62.133	56.484	52.170	45.344	41.814	40.167	37.029	1559.7
9.0000	85.715	92.737	76.327	68.923	63.886	60.833	55.337	51.215	44.651	41.217	39.614	36.637	1754.6
10.0000	83.091	89.929	74.322	67.410	62.430	59.532	54.180	50.316	43.850	40.654	39.167	36.195	1949.6
11.0000	80.696	87.433	72.438	65.918	61.138	58.312	53.097	49.475	43.173	40.131	38.754	35.712	2144.6
12.0000	78.517	85.019	70.672	64.453	59.859	57.174	52.085	48.622	42.474	39.576	38.163	35.195	2339.5

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	21.136	9.018	5.974	5.614	4.988	3.292	2.018	1.432	0.945	7.558	9.615	7.338	2.4370
0.0160	24.005	10.124	6.804	6.399	5.688	3.842	2.381	1.696	1.126	8.695	11.063	8.356	3.1194
0.0200	26.651	10.943	7.571	7.132	6.380	4.429	2.762	2.010	1.344	9.841	12.514	9.298	3.8992
0.0250	29.565	11.733	8.428	7.944	7.187	5.157	3.296	2.404	1.742	11.129	14.162	10.348	4.8740
0.0320	33.529	12.723	9.429	8.977	8.200	6.145	3.992	3.009	2.094	12.782	16.302	11.701	6.2387
0.0400	37.591	13.667	10.469	10.077	9.280	7.249	4.803	3.681	2.615	14.532	18.537	13.129	7.7984
0.0500	42.388	14.906	11.769	11.449	10.655	8.593	5.788	4.508	3.266	16.571	21.130	14.881	9.7480
0.0600	47.647	16.306	13.224	12.782	12.083	9.943	6.762	5.321	3.909	18.559	23.695	16.662	11.698
0.0700	52.981	17.942	14.691	14.269	13.534	11.284	7.689	6.111	4.517	20.536	26.194	18.567	13.647
0.0800	58.692	19.705	16.255	15.798	15.037	12.635	8.660	6.901	5.125	22.530	28.703	20.568	15.597
0.0900	64.382	21.600	17.864	17.410	16.576	13.983	9.612	7.690	5.695	24.520	31.175	22.633	17.546
0.1000	70.649	23.704	19.650	19.033	18.106	15.346	10.597	8.435	6.254	26.503	33.703	24.766	19.496
0.1250	87.455	29.189	24.122	23.241	22.205	18.747	12.909	10.288	7.644	31.590	40.203	30.378	24.370
0.1600	112.945	37.657	30.901	29.779	28.249	23.532	16.139	12.850	9.535	38.932	49.461	39.008	31.194
0.2000	142.862	47.427	38.843	37.301	35.265	28.660	19.494	15.479	11.435	46.961	59.589	49.027	38.992
0.2500	179.973	59.570	48.314	46.521	43.433	34.334	23.211	18.197	13.382	56.250	71.292	61.363	48.740
0.3200	228.278	74.517	60.605	57.838	52.919	40.544	27.055	21.098	15.411	67.715	86.008	76.784	62.387
0.4000	273.674	90.347	71.752	68.199	61.752	46.095	30.481	23.727	17.280	78.637	100.128	91.049	77.984
0.5000	319.331	106.110	82.435	78.431	70.173	51.603	34.035	26.578	19.370	89.743	114.569	105.209	97.480
0.6000	352.197	118.138	89.408	84.971	75.930	55.520	36.828	28.730	21.021	97.728	125.404	114.644	116.98
0.7000	368.781	126.731	93.216	88.591	79.282	57.900	38.740	30.151	22.283	103.006	132.377	119.704	136.47
0.8000	375.619	131.819	95.281	90.865	31.203	59.382	40.186	31.355	23.292	106.479	136.682	122.476	155.97
0.9000	377.212	134.449	96.324	91.811	81.640	60.219	41.089	32.467	24.115	108.785	139.501	123.537	175.46
1.0000	378.704	136.938	97.732	92.744	82.626	61.197	42.156	33.584	24.942	110.520	141.575	124.502	194.96
1.2500	377.242	141.257	100.573	96.018	85.316	63.987	44.935	36.282	27.401	113.628	144.293	127.291	243.70
1.6000	366.458	143.502	103.614	99.073	88.696	67.697	48.564	39.483	30.565	115.532	144.556	128.747	311.94
2.0000	349.961	143.450	106.341	101.269	91.632	71.176	51.987	42.688	33.559	116.654	143.704	128.911	389.92
2.5000	327.671	140.864	107.577	102.376	94.487	74.723	55.479	46.203	36.755	116.679	141.211	127.428	487.40
3.2000	306.257	136.066	107.890	102.990	95.640	77.439	58.889	49.001	39.288	115.765	137.991	125.565	623.87
4.0000	286.718	129.631	105.999	101.655	95.573	78.196	59.950	50.480	40.836	113.471	133.715	122.246	779.84
5.0000	270.664	122.991	102.903	99.073	93.371	77.369	60.176	50.813	41.706	110.138	128.949	118.139	974.80
6.0000	257.937	117.274	99.691	95.876	90.817	75.805	59.218	50.343	41.469	106.492	124.324	113.874	1169.8
7.0000	247.664	112.457	96.645	93.176	88.094	74.057	58.245	49.694	41.062	103.180	120.121	110.360	1364.7
8.0000	238.489	107.869	93.748	90.453	85.432	72.096	56.720	48.639	40.402	99.946	116.107	106.928	1559.7
9.0000	229.744	104.415	90.905	87.776	83.044	70.221	55.337	47.552	39.690	96.783	112.277	103.576	1754.6
10.0000	222.221	101.449	88.517	85.470	80.862	68.376	54.032	46.451	38.870	93.942	108.807	100.631	1949.6
11.0000	215.141	98.660	86.274	83.304	78.812	66.643	52.807	45.419	38.030	91.344	105.687	97.936	2144.6
12.0000	208.483	96.044	84.171	81.273	76.891	65.018	51.661	44.453	37.244	88.906	102.687	95.408	2339.5

$^{195}_{78}Pt$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=195 MEV
0.0125	0.136	0.133	0.159	0.199	0.206	0.245	0.255	0.274	0.355	0.392	0.410	0.463	2.4370
0.0160	0.172	0.170	0.205	0.257	0.268	0.318	0.332	0.359	0.471	0.527	0.556	0.637	3.1194
0.0200	0.211	0.210	0.255	0.323	0.337	0.400	0.418	0.452	0.597	0.670	0.710	0.820	3.8992
0.0250	0.259	0.260	0.317	0.404	0.424	0.502	0.525	0.567	0.752	0.845	0.896	1.038	4.8740
0.0320	0.321	0.327	0.402	0.517	0.545	0.643	0.672	0.726	0.967	1.087	1.153	1.335	6.2387
0.0400	0.388	0.400	0.495	0.643	0.683	0.803	0.839	0.904	1.212	1.362	1.445	1.671	7.7984
0.0500	0.466	0.486	0.606	0.795	0.852	0.997	1.042	1.122	1.515	1.702	1.805	2.085	9.7480
0.0600	0.539	0.567	0.712	0.941	1.015	1.184	1.238	1.332	1.811	2.034	2.158	2.489	11.698
0.0700	0.607	0.643	0.813	1.081	1.173	1.363	1.427	1.534	2.099	2.356	2.500	2.881	13.647
0.0800	0.671	0.714	0.908	1.214	1.324	1.535	1.609	1.727	2.376	2.667	2.830	3.259	15.597
0.0900	0.733	0.781	1.000	1.342	1.470	1.700	1.783	1.914	2.643	2.966	3.149	3.624	17.546
0.1000	0.791	0.845	1.088	1.464	1.610	1.858	1.951	2.092	2.899	3.254	3.455	3.975	19.496
0.1250	0.926	0.991	1.292	1.747	1.936	2.225	2.343	2.509	3.497	3.927	4.171	4.795	24.370
0.1600	1.097	1.168	1.550	2.102	2.347	2.684	2.835	3.033	4.246	4.771	5.065	5.818	31.194
0.2000	1.271	1.342	1.813	2.462	2.763	3.149	3.336	3.565	5.001	5.621	5.967	6.844	38.992
0.2500	1.468	1.531	2.108	2.859	3.223	3.661	3.889	4.154	5.828	6.552	6.955	7.971	48.740
0.3200	1.714	1.760	2.472	3.343	3.784	4.282	4.564	4.874	6.829	7.675	8.149	9.329	62.387
0.4000	1.965	1.989	2.839	3.825	4.341	4.894	5.232	5.588	7.809	8.775	9.317	10.655	77.984
0.5000	2.248	2.242	3.244	4.351	4.946	5.557	5.957	6.364	8.861	9.953	10.567	12.075	97.480
0.6000	2.506	2.471	3.607	4.816	5.478	6.138	6.593	7.047	9.775	10.975	11.652	13.300	116.98
0.7000	2.749	2.686	3.939	5.238	5.959	6.661	7.169	7.664	10.595	11.891	12.622	14.393	136.47
0.8000	2.978	2.891	4.253	5.634	6.404	7.151	7.701	8.234	11.346	12.728	13.508	15.390	155.97
0.9000	3.198	3.089	4.550	6.005	6.826	7.606	8.205	8.776	12.055	13.517	14.344	16.329	175.46
1.0000	3.410	3.282	4.833	6.356	7.224	8.036	8.681	9.287	12.719	14.256	15.125	17.205	194.96
1.2500	3.917	3.751	5.499	7.174	8.147	9.027	9.780	10.470	14.238	15.942	16.908	19.199	243.70
1.6000	4.594	4.389	6.366	8.222	9.322	10.287	11.178	11.979	16.141	18.048	19.136	21.685	311.94
2.0000	5.345	5.107	7.306	9.340	10.570	11.620	12.661	13.582	18.130	20.237	21.452	24.261	389.92
2.5000	6.272	5.994	8.443	10.673	12.048	13.194	14.419	15.479	20.455	22.789	24.146	27.242	487.40
3.2000	7.574	7.232	10.007	12.482	14.042	15.315	16.787	18.035	23.541	26.172	27.710	31.168	623.87
4.0000	9.089	8.660	11.794	14.525	16.280	17.693	19.433	20.899	26.948	29.895	31.624	35.474	779.84
5.0000	11.039	10.485	14.060	17.093	19.075	20.659	22.723	24.461	31.132	34.472	36.414	40.731	974.80
6.0000	13.058	12.366	16.380	19.702	21.906	23.652	26.042	28.049	35.320	39.034	41.178	45.932	1169.8
7.0000	15.151	14.307	18.763	22.368	24.793	26.694	29.409	31.688	39.546	43.622	45.964	51.136	1364.7
8.0000	17.319	16.312	21.214	25.097	27.744	29.798	32.831	35.390	43.815	48.259	50.793	56.378	1559.7
9.0000	19.559	18.382	23.734	27.892	30.762	32.970	36.319	39.162	48.148	52.956	55.681	61.672	1754.6
10.0000	21.869	20.517	26.322	30.753	33.849	36.210	39.880	43.003	52.555	57.719	60.631	67.026	1949.6
11.0000	24.250	22.716	28.980	33.678	37.005	39.519	43.515	46.911	57.036	62.546	65.635	72.449	2144.6
12.0000	26.700	24.977	31.705	36.669	40.228	42.896	47.222	50.886	61.589	67.438	70.705	77.949	2339.5

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.052	0.121	0.143	0.146	0.153	0.202	0.274	0.348	0.429	0.126	0.107	0.118	2.4370
0.0160	0.067	0.155	0.184	0.189	0.198	0.261	0.355	0.457	0.590	0.162	0.137	0.152	3.1194
0.0200	0.083	0.192	0.231	0.237	0.249	0.328	0.447	0.576	0.756	0.202	0.169	0.191	3.8992
0.0250	0.102	0.240	0.289	0.297	0.313	0.413	0.562	0.723	0.953	0.251	0.209	0.239	4.8740
0.0320	0.127	0.307	0.371	0.382	0.403	0.530	0.721	0.925	1.215	0.318	0.264	0.305	6.2387
0.0400	0.155	0.383	0.464	0.477	0.504	0.660	0.899	1.148	1.504	0.391	0.323	0.381	7.7984
0.0500	0.188	0.478	0.577	0.594	0.627	0.814	1.111	1.413	1.845	0.479	0.394	0.472	9.7480
0.0600	0.220	0.570	0.687	0.706	0.744	0.959	1.311	1.660	2.162	0.562	0.460	0.559	11.698
0.0700	0.249	0.658	0.791	0.812	0.855	1.095	1.498	1.891	2.459	0.641	0.522	0.642	13.647
0.0800	0.277	0.741	0.889	0.913	0.960	1.221	1.673	2.108	2.736	0.714	0.581	0.720	15.597
0.0900	0.303	0.819	0.981	1.007	1.059	1.339	1.838	2.310	2.997	0.784	0.636	0.793	17.546
0.1000	0.327	0.893	1.067	1.095	1.151	1.449	1.992	2.500	3.243	0.849	0.688	0.862	19.496
0.1250	0.381	1.056	1.260	1.295	1.359	1.696	2.339	2.930	3.802	0.998	0.806	1.016	24.370
0.1600	0.443	1.244	1.486	1.528	1.602	1.988	2.753	3.444	4.477	1.176	0.946	1.195	31.194
0.2000	0.501	1.417	1.695	1.745	1.831	2.266	3.154	3.944	5.137	1.347	1.081	1.361	38.992
0.2500	0.559	1.593	1.909	1.967	2.067	2.560	3.581	4.482	5.855	1.528	1.224	1.531	48.740
0.3200	0.624	1.792	2.153	2.221	2.341	2.911	4.099	5.140	6.741	1.742	1.393	1.723	62.387
0.4000	0.685	1.979	2.384	2.463	2.606	3.262	4.622	5.808	7.648	1.950	1.558	1.905	77.984
0.5000	0.750	2.175	2.633	2.725	2.896	3.652	5.210	6.560	8.671	2.178	1.737	2.101	97.480
0.6000	0.808	2.349	2.856	2.960	3.159	4.010	5.748	7.247	9.606	2.384	1.897	2.276	116.98
0.7000	0.862	2.508	3.070	3.184	3.410	4.353	6.254	7.896	10.483	2.578	2.048	2.442	136.47
0.8000	0.914	2.658	3.276	3.401	3.653	4.685	6.748	8.529	11.320	2.763	2.193	2.603	155.97
0.9000	0.966	2.805	3.479	3.614	3.892	5.011	7.227	9.139	12.142	2.944	2.334	2.761	175.46
1.0000	1.018	2.948	3.680	3.825	4.129	5.332	7.695	9.729	12.936	3.122	2.472	2.918	194.96
1.2500	1.146	3.298	4.170	4.340	4.708	6.109	8.812	11.122	14.796	3.556	2.812	3.304	243.70
1.6000	1.329	3.775	4.837	5.038	5.490	7.142	10.269	12.920	17.148	4.149	3.283	3.835	311.94
2.0000	1.546	4.318	5.578	5.815	6.353	8.264	11.817	14.816	19.578	4.820	3.823	4.439	389.92
2.5000	1.833	5.002	6.488	6.770	7.399	9.598	13.629	17.007	22.348	5.654	4.506	5.198	487.40
3.2000	2.263	5.986	7.752	8.097	8.832	11.389	16.013	19.870	25.933	6.826	5.482	6.275	623.87
4.0000	2.789	7.159	9.209	9.620	10.461	13.391	18.635	23.002	29.822	8.185	6.629	7.533	779.84
5.0000	3.488	8.702	11.075	11.561	12.524	15.896	21.878	26.849	34.543	9.928	8.113	9.154	974.80
6.0000	4.226	10.325	12.999	13.561	14.641	18.441	25.143	30.702	39.229	11.728	9.652	10.835	1169.8
7.0000	4.997	12.023	14.985	15.624	16.820	21.043	28.463	34.600	43.953	13.588	11.248	12.574	1364.7
8.0000	5.800	13.793	17.034	17.748	19.068	23.711	31.855	38.565	48.740	15.508	12.898	14.369	1559.7
9.0000	6.633	15.630	19.146	19.936	21.382	26.451	35.335	42.620	53.609	17.490	14.606	16.221	1754.6
10.0000	7.496	17.525	21.319	22.187	23.762	29.265	38.901	46.768	58.573	19.535	16.370	18.131	1949.6
11.0000	8.387	19.474	23.551	24.498	26.204	32.154	42.551	51.013	63.644	21.640	18.189	20.095	2144.6
12.0000	9.308	21.477	25.839	26.867	28.709	35.116	46.284	55.353	68.825	23.803	20.060	22.112	2339.5

$^{197}_{79}$Au IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=197 MEV
0.0125	9.346	7.732	5.664	3.767	3.059	2.776	2.572	2.379	1.512	1.294	1.190	1.020	2.4621
0.0160	10.819	8.950	6.557	4.360	3.541	3.213	2.977	2.754	1.751	1.498	1.377	1.180	3.1515
0.0200	12.350	10.217	7.485	4.977	4.042	3.667	3.398	3.144	1.998	1.710	1.572	1.347	3.9394
0.0250	14.096	11.662	8.543	5.681	4.613	4.186	3.879	3.588	2.281	1.952	1.798	1.538	4.9242
0.0320	16.298	13.510	9.890	6.577	5.350	4.866	4.490	4.154	2.641	2.265	2.087	1.790	6.3030
0.0400	18.559	15.454	11.289	7.530	6.141	5.599	5.159	4.775	3.037	2.613	2.405	2.066	7.8788
0.0500	21.107	17.692	12.886	8.633	7.074	6.443	5.940	5.502	3.492	3.035	2.796	2.403	9.8485
0.0600	23.430	19.826	14.357	9.676	7.954	7.221	6.676	6.188	3.962	3.446	3.180	2.735	11.818
0.0700	25.562	21.865	15.730	10.665	8.809	7.991	7.393	6.858	4.405	3.854	3.571	3.067	13.788
0.0800	27.549	23.871	17.026	11.629	9.620	8.718	8.054	7.492	4.853	4.257	3.933	3.388	15.758
0.0900	29.414	25.817	18.258	12.561	10.407	9.458	8.709	8.107	5.313	4.647	4.309	3.715	17.727
0.1000	31.193	27.734	19.435	13.468	11.194	10.145	9.329	8.726	5.753	5.034	4.664	4.023	19.697
0.1250	35.272	32.544	22.184	15.617	13.044	11.824	10.870	10.182	6.822	5.967	5.579	4.825	24.621
0.1600	40.293	39.163	25.680	18.387	15.460	14.021	12.866	12.070	8.218	7.216	6.767	5.906	31.515
0.2000	45.376	46.051	29.313	21.310	18.027	16.327	14.979	14.041	9.732	8.589	8.061	7.035	39.394
0.2500	50.958	53.602	33.459	24.726	21.012	19.072	17.466	16.362	11.543	10.205	9.569	8.365	49.242
0.3200	57.789	62.786	38.733	29.166	24.905	22.736	20.722	19.366	13.866	12.317	11.562	10.167	63.030
0.4000	64.637	71.755	44.212	33.689	29.003	26.527	24.184	22.592	16.447	14.634	13.750	12.070	78.788
0.5000	72.165	81.098	50.465	39.010	33.812	31.036	28.261	26.343	19.480	17.360	16.326	14.383	98.485
0.6000	78.417	88.317	55.932	43.795	38.146	35.125	31.881	29.700	22.205	19.856	18.709	16.612	118.18
0.7000	83.551	93.791	60.588	47.865	41.867	38.595	34.960	32.597	24.599	21.994	20.782	18.419	137.88
0.8000	87.694	97.768	64.576	51.467	45.139	41.781	37.777	35.194	26.734	24.022	22.666	20.148	157.58
0.9000	91.263	100.852	68.005	54.540	48.080	44.611	40.259	37.471	28.766	25.842	24.414	21.762	177.27
1.0000	94.170	103.111	70.965	57.410	50.669	47.049	42.508	39.527	30.515	27.463	25.973	23.205	196.97
1.2500	99.536	106.596	76.743	62.929	56.022	52.185	47.043	43.667	34.304	30.927	29.239	26.169	246.21
1.6000	103.903	108.910	82.072	68.530	61.226	57.204	51.541	47.602	38.164	34.552	32.665	29.300	315.15
2.0000	106.141	110.767	85.667	72.560	65.193	61.166	54.827	50.801	41.120	37.522	35.466	31.954	393.94
2.5000	106.674	111.775	87.943	75.543	68.331	64.198	57.427	53.293	43.795	39.838	37.815	34.298	492.42
3.2000	105.660	111.614	88.864	77.312	70.381	66.204	59.361	54.918	45.854	41.944	39.811	36.168	630.30
4.0000	103.323	110.035	88.310	77.625	71.090	66.939	60.316	55.636	47.069	43.096	41.064	37.355	787.88
5.0000	99.907	107.093	86.574	76.705	70.645	66.662	60.083	55.581	47.616	43.460	41.642	38.006	984.85
6.0000	96.559	103.818	84.405	75.289	69.465	65.836	59.421	54.948	47.098	43.469	41.612	38.235	1181.8
7.0000	93.139	100.613	82.133	73.591	68.006	64.639	58.479	54.126	46.816	43.038	41.313	38.028	1378.8
8.0000	90.045	97.476	79.898	71.908	66.555	63.279	57.527	53.132	46.181	42.586	40.908	37.712	1575.8
9.0000	87.322	94.476	77.758	70.215	65.083	61.973	56.374	52.175	45.488	41.989	40.356	37.324	1772.7
10.0000	84.670	91.638	75.734	68.691	63.616	60.663	55.210	51.272	44.683	41.426	39.912	36.882	1969.7
11.0000	82.248	89.114	73.831	67.186	62.314	59.434	54.118	50.427	44.003	40.902	39.500	36.399	2166.7
12.0000	80.044	86.672	72.047	65.706	61.023	58.286	53.098	49.568	43.300	40.346	38.905	35.879	2363.6

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	21.241	9.063	6.004	5.642	5.013	3.308	2.028	1.439	0.949	7.596	9.663	7.375	2.4621
0.0160	24.130	10.177	6.839	6.433	5.718	3.862	2.393	1.705	1.132	8.741	11.121	8.400	3.1515
0.0200	26.795	11.002	7.612	7.170	6.414	4.453	2.777	2.021	1.352	9.895	12.582	9.348	3.9394
0.0250	29.731	11.798	8.475	7.988	7.228	5.186	3.315	2.418	1.751	11.192	14.242	10.406	4.9242
0.0320	33.724	12.797	9.484	9.029	8.248	6.181	4.015	3.026	2.107	12.857	16.397	11.769	6.3030
0.0400	37.817	13.750	10.532	10.137	9.336	7.293	4.832	3.703	2.630	14.619	18.649	13.208	7.8788
0.0500	42.651	14.999	11.842	11.520	10.721	8.646	5.824	4.536	3.286	16.674	21.261	14.973	9.8485
0.0600	47.951	16.410	13.309	12.863	12.160	10.007	6.805	5.355	3.934	18.678	23.846	16.768	11.818
0.0700	53.326	18.059	14.787	14.362	13.623	11.357	7.739	6.151	4.546	20.670	26.364	18.688	13.788
0.0800	59.082	19.836	16.362	15.903	15.137	12.719	8.718	6.947	5.159	22.679	28.894	20.704	15.758
0.0900	64.816	21.745	17.984	17.528	16.688	14.077	9.677	7.741	5.733	24.685	31.385	22.786	17.727
0.1000	71.132	23.866	19.785	19.163	18.230	15.451	10.670	8.493	6.297	26.684	33.933	24.935	19.697
0.1250	88.070	29.394	24.291	23.404	22.361	18.879	13.000	10.360	7.698	31.812	40.486	30.592	24.621
0.1600	113.764	37.930	31.125	29.995	28.454	23.703	16.256	12.943	9.604	39.214	49.820	39.291	31.515
0.2000	143.926	47.780	39.133	37.579	35.527	28.873	19.640	15.594	11.520	47.311	60.033	49.392	39.394
0.2500	181.349	60.026	48.683	46.876	43.765	34.597	23.388	18.336	13.484	56.680	71.837	61.833	49.242
0.3200	230.073	75.103	61.082	58.293	53.335	40.863	27.268	21.264	15.532	68.247	86.684	77.388	63.030
0.4000	275.880	91.076	72.330	68.749	62.250	46.466	30.727	23.918	17.419	79.271	100.935	91.783	78.788
0.5000	321.968	106.986	83.116	79.079	70.752	52.030	34.316	26.797	19.530	90.484	115.515	106.078	98.485
0.6000	355.169	119.135	90.163	85.688	76.571	55.988	37.139	28.973	21.198	98.552	126.463	115.612	118.18
0.7000	372.013	127.842	94.033	89.368	79.977	58.407	39.080	30.415	22.478	103.909	133.537	120.753	137.88
0.8000	379.061	133.026	96.154	91.698	81.947	59.926	40.554	31.642	23.506	107.454	137.934	123.598	157.58
0.9000	380.829	135.738	97.247	92.691	82.422	60.797	41.483	32.779	24.346	109.828	140.839	124.722	177.27
1.0000	382.499	138.310	98.712	93.673	83.454	61.810	42.579	33.921	25.192	111.627	142.993	125.749	196.97
1.2500	381.413	142.819	101.684	97.080	86.259	64.694	45.432	36.683	27.704	114.884	145.888	128.698	246.21
1.6000	370.966	145.268	104.888	100.292	89.787	68.530	49.161	39.969	30.941	116.953	146.335	130.330	315.15
2.0000	354.661	145.377	107.769	102.629	92.863	72.132	52.685	43.262	34.010	118.220	145.634	130.642	393.94
2.5000	332.423	142.907	109.137	103.860	95.857	75.807	56.283	46.873	37.288	118.371	143.259	129.276	492.42
3.2000	311.025	138.184	109.570	104.593	97.129	78.645	59.806	49.764	39.900	117.568	140.139	127.520	630.30
4.0000	291.425	131.759	107.739	103.323	97.142	79.479	60.934	51.308	41.506	115.333	135.910	124.253	787.88
5.0000	275.307	125.100	104.669	100.773	94.972	78.696	61.208	51.685	42.421	112.027	131.160	120.165	984.85
6.0000	262.500	119.349	101.455	97.572	92.423	77.146	60.265	51.234	42.203	108.376	126.523	115.888	1181.8
7.0000	252.149	114.494	98.395	94.864	89.689	75.398	59.300	50.594	41.806	105.048	122.296	112.358	1378.8
8.0000	242.890	109.860	95.478	92.122	87.009	73.426	57.766	49.537	41.147	101.790	118.249	108.901	1575.8
9.0000	234.051	106.372	92.609	89.421	84.600	71.537	56.374	48.443	40.434	98.597	114.382	105.517	1772.7
10.0000	226.444	103.377	90.199	87.094	82.398	69.675	55.059	47.334	39.609	95.728	110.874	102.544	1969.7
11.0000	219.279	100.558	87.933	84.906	80.328	67.925	53.823	46.292	38.761	93.101	107.720	99.820	2166.7
12.0000	212.537	97.911	85.807	82.853	78.387	66.283	52.666	45.317	37.969	90.635	104.684	97.263	2363.6

$^{197}_{79}$Au IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=197
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.136	0.133	0.159	0.199	0.205	0.244	0.254	0.273	0.353	0.390	0.407	0.458	2.4621
0.0160	0.172	0.169	0.204	0.257	0.267	0.317	0.331	0.358	0.469	0.524	0.552	0.633	3.1515
0.0200	0.212	0.210	0.255	0.322	0.336	0.399	0.417	0.451	0.595	0.667	0.706	0.815	3.9394
0.0250	0.259	0.260	0.317	0.403	0.423	0.500	0.523	0.565	0.749	0.841	0.892	1.032	4.9242
0.0320	0.321	0.327	0.402	0.516	0.544	0.642	0.671	0.724	0.963	1.083	1.148	1.329	6.3030
0.0400	0.388	0.400	0.495	0.642	0.681	0.801	0.837	0.902	1.207	1.357	1.438	1.664	7.8788
0.0500	0.466	0.486	0.606	0.794	0.850	0.995	1.040	1.119	1.509	1.695	1.798	2.076	9.8485
0.0600	0.539	0.567	0.712	0.940	1.013	1.182	1.236	1.328	1.805	2.027	2.150	2.479	11.818
0.0700	0.608	0.643	0.812	1.080	1.171	1.361	1.424	1.530	2.092	2.348	2.491	2.870	13.788
0.0800	0.672	0.714	0.908	1.213	1.322	1.533	1.606	1.724	2.369	2.658	2.821	3.248	15.758
0.0900	0.733	0.782	1.000	1.341	1.468	1.698	1.780	1.910	2.636	2.957	3.139	3.612	17.727
0.1000	0.792	0.846	1.088	1.463	1.608	1.855	1.948	2.089	2.892	3.244	3.445	3.962	19.697
0.1250	0.928	0.992	1.292	1.747	1.934	2.223	2.340	2.506	3.490	3.917	4.160	4.782	24.621
0.1600	1.098	1.169	1.551	2.102	2.345	2.683	2.833	3.030	4.239	4.762	5.055	5.805	31.515
0.2000	1.274	1.344	1.815	2.462	2.762	3.148	3.334	3.563	4.994	5.612	5.957	6.832	39.394
0.2500	1.470	1.533	2.110	2.860	3.222	3.661	3.888	4.153	5.823	6.544	6.946	7.960	49.242
0.3200	1.717	1.763	2.475	3.345	3.785	4.283	4.564	4.874	6.825	7.670	8.142	9.319	63.030
0.4000	1.969	1.992	2.842	3.828	4.342	4.896	5.233	5.589	7.807	8.771	9.311	10.647	78.788
0.5000	2.252	2.245	3.248	4.355	4.948	5.560	5.959	6.366	8.860	9.950	10.564	12.070	98.485
0.6000	2.510	2.474	3.611	4.820	5.481	6.142	6.597	7.050	9.776	10.974	11.650	13.297	118.18
0.7000	2.753	2.690	3.944	5.243	5.963	6.666	7.174	7.669	10.596	11.891	12.621	14.390	137.88
0.8000	2.983	2.896	4.259	5.639	6.408	7.149	7.706	8.239	11.348	12.729	13.508	15.389	157.58
0.9000	3.203	3.094	4.556	6.011	6.831	7.605	8.211	8.781	12.058	13.519	14.345	16.329	177.27
1.0000	3.416	3.287	4.839	6.362	7.230	8.034	8.687	9.293	12.723	14.258	15.126	17.205	196.97
1.2500	3.923	3.755	5.505	7.180	8.152	9.026	9.785	10.475	14.241	15.944	16.909	19.198	246.21
1.6000	4.599	4.393	6.371	8.227	9.325	10.284	11.181	11.983	16.141	18.047	19.134	21.681	315.15
2.0000	5.347	5.109	7.309	9.342	10.570	11.613	12.660	13.582	18.126	20.231	21.444	24.251	393.94
2.5000	6.271	5.992	8.441	10.669	12.043	13.182	14.412	15.471	20.442	22.773	24.128	27.220	492.42
3.2000	7.567	7.225	9.998	12.470	14.027	15.293	16.770	18.015	23.514	26.140	27.675	31.128	630.30
4.0000	9.074	8.645	11.775	14.502	16.253	17.658	19.400	20.863	26.902	29.842	31.568	35.410	787.88
5.0000	11.011	10.458	14.026	17.053	19.030	20.604	22.670	24.402	31.059	34.390	36.328	40.633	984.85
6.0000	13.016	12.326	16.330	19.644	21.841	23.577	25.965	27.966	35.217	38.920	41.058	45.799	1181.8
7.0000	15.093	14.253	18.695	22.290	24.707	26.596	29.307	31.577	39.411	43.474	45.808	50.964	1378.8
8.0000	17.244	16.242	21.127	24.998	27.635	29.676	32.703	35.250	43.648	48.075	50.599	56.165	1575.8
9.0000	19.466	18.295	23.626	27.770	30.628	32.821	36.162	38.991	47.945	52.733	55.447	61.415	1772.7
10.0000	21.757	20.412	26.193	30.607	33.689	36.034	39.693	42.800	52.315	57.456	60.355	66.724	1969.7
11.0000	24.117	22.592	28.827	33.507	36.818	39.315	43.296	46.674	56.757	62.241	65.317	72.101	2166.7
12.0000	26.545	24.833	31.528	36.471	40.012	42.662	46.971	50.614	61.270	67.091	70.342	77.551	2363.6

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.052	0.121	0.143	0.146	0.153	0.201	0.273	0.346	0.425	0.126	0.107	0.118	2.4621
0.0160	0.067	0.155	0.184	0.188	0.198	0.260	0.354	0.455	0.587	0.162	0.137	0.152	3.1515
0.0200	0.083	0.192	0.230	0.237	0.249	0.328	0.446	0.574	0.753	0.202	0.169	0.190	3.9394
0.0250	0.102	0.240	0.289	0.297	0.313	0.412	0.560	0.720	0.949	0.251	0.210	0.238	4.9242
0.0320	0.127	0.307	0.371	0.381	0.402	0.529	0.719	0.922	1.209	0.318	0.264	0.305	6.3030
0.0400	0.155	0.383	0.463	0.477	0.503	0.659	0.896	1.144	1.498	0.391	0.323	0.380	7.8788
0.0500	0.188	0.478	0.577	0.593	0.626	0.813	1.108	1.408	1.838	0.479	0.394	0.472	9.8485
0.0600	0.220	0.570	0.686	0.705	0.743	0.958	1.308	1.655	2.155	0.562	0.460	0.559	11.818
0.0700	0.249	0.658	0.790	0.812	0.855	1.093	1.495	1.887	2.451	0.641	0.522	0.642	13.788
0.0800	0.277	0.741	0.888	0.912	0.959	1.219	1.670	2.103	2.728	0.715	0.581	0.720	15.758
0.0900	0.303	0.820	0.981	1.007	1.058	1.337	1.835	2.305	2.989	0.784	0.636	0.793	17.727
0.1000	0.327	0.893	1.067	1.095	1.150	1.448	1.989	2.495	3.234	0.850	0.688	0.862	19.697
0.1250	0.382	1.056	1.260	1.295	1.358	1.695	2.336	2.925	3.794	0.999	0.806	1.016	24.621
0.1600	0.444	1.245	1.486	1.528	1.603	1.987	2.751	3.441	4.469	1.177	0.947	1.196	31.515
0.2000	0.501	1.419	1.696	1.746	1.832	2.266	3.152	3.940	5.130	1.348	1.083	1.362	39.394
0.2500	0.560	1.595	1.911	1.968	2.068	2.561	3.581	4.480	5.849	1.530	1.226	1.532	49.242
0.3200	0.625	1.794	2.155	2.223	2.343	2.913	4.099	5.139	6.737	1.744	1.395	1.725	63.030
0.4000	0.686	1.981	2.386	2.465	2.608	3.264	4.623	5.808	7.645	1.953	1.560	1.907	78.788
0.5000	0.751	2.178	2.635	2.727	2.899	3.655	5.212	6.561	8.669	2.181	1.739	2.103	98.485
0.6000	0.809	2.352	2.860	2.963	3.162	4.014	5.751	7.249	9.606	2.387	1.900	2.279	118.18
0.7000	0.863	2.511	3.073	3.188	3.413	4.358	6.258	7.899	10.484	2.581	2.051	2.445	137.88
0.8000	0.916	2.662	3.280	3.405	3.656	4.690	6.752	8.533	11.322	2.767	2.196	2.606	157.58
0.9000	0.968	2.809	3.483	3.618	3.896	5.016	7.232	9.144	12.145	2.949	2.337	2.765	177.27
1.0000	1.019	2.952	3.684	3.830	4.133	5.337	7.700	9.734	12.940	3.126	2.476	2.922	196.97
1.2500	1.148	3.302	4.174	4.344	4.712	6.114	8.817	11.127	14.799	3.560	2.816	3.308	246.21
1.6000	1.330	3.779	4.840	5.041	5.493	7.146	10.271	12.922	17.147	4.153	3.286	3.838	315.15
2.0000	1.547	4.320	5.579	5.816	6.354	8.264	11.816	14.813	19.571	4.821	3.825	4.441	393.94
2.5000	1.833	5.001	6.486	6.768	7.396	9.594	13.622	16.996	22.332	5.652	4.505	5.197	492.42
3.2000	2.261	5.981	7.744	8.088	8.822	11.376	15.994	19.846	25.900	6.819	5.476	6.269	630.30
4.0000	2.784	7.147	9.193	9.603	10.443	13.367	18.601	22.961	29.767	8.171	6.617	7.519	787.88
5.0000	3.479	8.680	11.047	11.532	12.492	15.856	21.824	26.783	34.457	9.902	8.091	9.130	984.85
6.0000	4.211	10.292	12.958	13.518	14.594	18.383	25.066	30.609	39.111	11.689	9.620	10.799	1181.8
7.0000	4.977	11.977	14.929	15.565	16.757	20.966	28.361	34.478	43.800	13.535	11.203	12.525	1378.8
8.0000	5.773	13.733	16.961	17.672	18.987	23.613	31.727	38.412	48.549	15.440	12.841	14.306	1575.8
9.0000	6.599	15.556	19.056	19.842	21.283	26.331	35.178	42.433	53.378	17.407	14.535	16.143	1772.7
10.0000	7.455	17.434	21.211	22.075	23.642	29.121	38.714	46.547	58.301	19.434	16.284	18.037	1969.7
11.0000	8.339	19.366	23.423	24.365	26.064	31.985	42.333	50.755	63.328	21.521	18.087	19.984	2166.7
12.0000	9.251	21.352	25.691	26.714	28.546	34.921	46.033	55.056	68.463	23.666	19.942	21.984	2363.6

$^{202}_{80}Hg$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=202 MEV
0.0125	9.392	7.770	5.692	3.785	3.074	2.789	2.584	2.391	1.520	1.301	1.195	1.025	2.5246
0.0160	10.875	8.996	6.591	4.383	3.559	3.229	2.992	2.768	1.760	1.506	1.384	1.186	3.2315
0.0200	12.415	10.271	7.524	5.004	4.063	3.687	3.416	3.160	2.009	1.719	1.580	1.354	4.0394
0.0250	14.174	11.726	8.590	5.713	4.639	4.209	3.900	3.608	2.294	1.963	1.808	1.546	5.0492
0.0320	16.392	13.587	9.947	6.614	5.381	4.894	4.516	4.178	2.656	2.278	2.099	1.800	6.4630
0.0400	18.669	15.546	11.356	7.574	6.178	5.632	5.190	4.803	3.055	2.629	2.419	2.078	8.0788
0.0500	21.236	17.800	12.965	8.686	7.118	6.482	5.977	5.536	3.513	3.053	2.813	2.418	10.098
0.0600	23.577	19.951	14.447	9.737	8.004	7.267	6.718	6.227	3.987	3.467	3.200	2.752	12.118
0.0700	25.726	22.006	15.831	10.734	8.866	8.042	7.441	6.903	4.433	3.879	3.594	3.087	14.138
0.0800	27.729	24.027	17.138	11.705	9.683	8.775	8.106	7.541	4.884	4.284	3.959	3.410	16.158
0.0900	29.609	25.988	18.379	12.645	10.476	9.520	8.767	8.160	5.348	4.678	4.337	3.740	18.177
0.1000	31.403	27.920	19.566	13.559	11.270	10.213	9.392	8.785	5.791	5.068	4.696	4.050	20.197
0.1250	35.517	32.769	22.338	15.726	13.135	11.906	10.945	10.253	6.869	6.009	5.618	4.858	25.246
0.1600	40.580	39.442	25.864	18.519	15.570	14.122	12.958	12.156	8.276	7.268	6.815	5.949	32.315
0.2000	45.709	46.389	29.528	21.467	18.160	16.447	15.089	14.144	9.803	8.652	8.120	7.087	40.394
0.2500	51.342	54.006	33.711	24.913	21.171	19.215	17.597	16.485	11.630	10.282	9.641	8.428	50.492
0.3200	58.237	63.273	39.033	29.392	25.098	22.912	20.883	19.517	13.974	12.413	11.651	10.246	64.630
0.4000	65.151	72.326	44.563	33.957	29.233	26.738	24.376	22.772	16.577	14.750	13.859	12.166	80.788
0.5000	72.753	81.758	50.876	39.327	34.087	31.289	28.491	26.557	19.638	17.501	16.458	14.500	100.98
0.6000	79.067	89.050	56.396	44.158	38.462	35.417	32.146	29.946	22.389	20.021	18.865	16.750	121.18
0.7000	84.270	94.598	61.110	48.277	42.227	38.927	35.260	32.877	24.811	22.183	20.961	18.577	141.38
0.8000	88.482	98.647	65.156	51.930	45.544	42.156	38.116	35.510	26.975	24.238	22.870	20.329	161.58
0.9000	92.121	101.800	68.645	55.053	48.532	45.031	40.638	37.823	29.037	26.085	24.643	21.966	181.77
1.0000	95.095	104.125	71.662	57.975	51.167	47.512	42.926	39.916	30.815	27.733	26.228	23.433	201.97
1.2500	100.616	107.753	77.576	63.612	56.630	52.752	47.554	44.141	34.676	31.263	29.556	26.453	252.46
1.6000	105.160	110.227	83.065	69.359	61.966	57.896	52.165	48.178	38.625	34.970	33.060	29.654	323.15
2.0000	107.546	112.233	86.801	73.520	66.055	61.976	55.552	51.473	41.664	38.019	35.935	32.377	403.94
2.5000	108.201	113.374	89.201	76.624	69.309	65.117	58.248	54.056	44.422	40.408	38.356	34.788	504.92
3.2000	107.285	113.331	90.231	78.501	71.463	67.222	60.275	55.763	46.559	42.589	40.424	36.724	646.30
4.0000	105.000	111.820	89.744	78.885	72.244	68.026	61.295	56.538	47.833	43.795	41.731	37.962	807.88
5.0000	101.601	108.909	88.043	78.006	71.843	67.793	61.102	56.523	48.424	44.197	42.349	38.651	1009.8
6.0000	98.248	105.634	85.881	76.606	70.680	66.987	60.460	55.909	47.922	44.229	42.339	38.904	1211.8
7.0000	94.806	102.413	83.603	74.908	69.223	65.795	59.525	55.094	47.654	43.808	42.052	38.708	1413.8
8.0000	91.686	99.252	81.354	73.219	67.768	64.432	58.575	54.100	47.023	43.362	41.653	38.399	1615.8
9.0000	88.938	96.224	79.197	71.514	66.288	63.120	57.417	53.141	46.330	42.766	41.103	38.014	1817.7
10.0000	86.258	93.356	77.154	69.978	64.809	61.800	56.245	52.233	45.521	42.203	40.660	37.574	2019.7
11.0000	83.808	90.805	75.232	68.461	63.495	60.561	55.145	51.383	44.838	41.678	40.249	37.089	2221.7
12.0000	81.578	88.333	73.427	66.966	62.193	59.403	54.116	50.518	44.130	41.119	39.651	36.567	2423.6

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	21.346	9.107	6.034	5.669	5.038	3.324	2.038	1.446	0.954	7.633	9.711	7.411	2.5246
0.0160	24.254	10.229	6.874	6.466	5.747	3.882	2.406	1.714	1.138	8.785	11.178	8.443	3.2315
0.0200	26.938	11.061	7.652	7.208	6.448	4.477	2.792	2.032	1.359	9.947	12.649	9.398	4.0394
0.0250	29.895	11.863	8.522	8.032	7.268	5.214	3.333	2.431	1.761	11.254	14.320	10.463	5.0492
0.0320	33.918	12.871	9.539	9.081	8.295	6.217	4.038	3.044	2.119	12.931	16.491	11.836	6.4630
0.0400	38.042	13.831	10.595	10.197	9.391	7.336	4.860	3.725	2.646	14.706	18.760	13.286	8.0788
0.0500	42.913	15.091	11.914	11.590	10.786	8.699	5.860	4.564	3.306	16.776	21.391	15.065	10.098
0.0600	48.252	16.513	13.392	12.944	12.236	10.069	6.848	5.389	3.958	18.795	23.996	16.874	12.118
0.0700	53.669	18.175	14.882	14.454	13.710	11.430	7.789	6.190	4.575	20.803	26.534	18.808	14.138
0.0800	59.468	19.965	16.469	16.007	15.235	12.802	8.775	6.992	5.193	22.828	29.083	20.840	16.158
0.0900	65.246	21.890	18.104	17.644	16.799	14.170	9.741	7.793	5.771	24.849	31.594	22.937	18.177
0.1000	71.610	24.027	19.918	19.292	18.353	15.555	10.742	8.550	6.339	26.864	34.162	25.103	20.197
0.1250	88.680	29.597	24.460	23.566	22.516	19.009	13.090	10.432	7.751	32.032	40.766	30.804	25.246
0.1600	114.577	38.201	31.347	30.209	28.657	23.872	16.372	13.035	9.673	39.494	50.176	39.572	32.315
0.2000	144.983	48.131	39.420	37.855	35.788	29.085	19.784	15.709	11.605	47.658	60.473	49.755	40.394
0.2500	182.715	60.478	49.050	47.230	44.094	34.857	23.564	18.474	13.586	57.107	72.378	62.298	50.492
0.3200	231.856	75.685	61.555	58.745	53.749	41.180	27.479	21.429	15.652	68.776	87.356	77.988	64.630
0.4000	278.073	91.800	72.905	69.295	62.745	46.836	30.971	24.109	17.558	79.901	101.737	92.513	80.788
0.5000	324.590	107.858	83.793	79.723	71.328	52.453	34.596	27.015	19.689	91.221	116.456	106.942	100.98
0.6000	358.116	120.124	90.911	86.399	77.206	56.453	37.447	29.213	21.374	99.370	127.512	116.571	121.18
0.7000	375.214	128.942	94.842	90.137	80.665	58.910	39.416	30.677	22.672	104.803	134.686	121.792	141.38
0.8000	382.468	134.222	97.018	92.522	82.683	60.465	40.918	31.927	23.717	108.420	139.174	124.709	161.58
0.9000	384.410	137.015	98.162	93.563	83.197	61.368	41.873	33.087	24.575	110.861	142.163	125.894	181.77
1.0000	386.258	139.669	99.682	94.594	84.275	62.418	42.997	34.254	25.440	112.724	144.399	126.985	201.97
1.2500	385.552	144.369	102.788	98.133	87.195	65.396	45.925	37.081	28.005	116.131	147.472	130.095	252.46
1.6000	375.453	147.025	106.157	101.505	90.873	69.359	49.756	40.453	31.315	118.367	148.105	131.907	323.15
2.0000	359.354	147.300	109.195	103.987	94.092	73.086	53.382	43.834	34.460	119.785	147.561	132.371	403.94
2.5000	337.179	144.951	110.698	105.346	97.229	76.891	57.089	47.544	37.821	120.064	145.308	131.125	504.92
3.2000	315.810	140.310	111.255	106.202	98.623	79.855	60.726	50.530	40.514	119.376	142.295	129.482	646.30
4.0000	296.154	133.897	109.487	105.000	98.718	80.769	61.923	52.141	42.179	117.205	138.115	126.269	807.88
5.0000	279.976	127.222	106.444	102.482	96.583	80.031	62.246	52.562	43.141	113.927	133.385	122.203	1009.8
6.0000	267.090	121.436	103.229	99.278	94.040	78.495	61.319	52.130	42.941	110.271	128.736	117.915	1211.8
7.0000	256.660	116.542	100.156	96.561	91.294	76.747	60.361	51.499	42.554	106.928	124.485	114.369	1413.8
8.0000	247.316	111.862	97.218	93.801	88.595	74.764	58.819	50.440	41.897	103.645	120.404	110.886	1615.8
9.0000	238.382	108.341	94.323	91.076	86.166	72.861	57.417	49.339	41.182	100.421	116.498	107.470	1817.7
10.0000	230.690	105.315	91.890	88.727	83.943	70.981	56.091	48.221	40.351	97.522	112.953	104.466	2019.7
11.0000	223.438	102.465	89.601	86.516	81.852	69.213	54.844	47.170	39.497	94.867	109.763	101.713	2221.7
12.0000	216.611	99.788	87.452	84.441	79.889	67.553	53.675	46.186	38.696	92.372	106.690	99.127	2423.6

$^{202}_{80}Hg$ IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=202
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.138	0.135	0.161	0.201	0.207	0.247	0.256	0.275	0.355	0.392	0.409	0.460	2.5246
0.0160	0.175	0.172	0.207	0.260	0.270	0.320	0.334	0.361	0.472	0.527	0.555	0.636	3.2315
0.0200	0.215	0.213	0.258	0.326	0.340	0.403	0.421	0.455	0.599	0.671	0.710	0.819	4.0394
0.0250	0.263	0.264	0.321	0.408	0.427	0.505	0.528	0.570	0.754	0.847	0.897	1.037	5.0492
0.0320	0.326	0.332	0.407	0.522	0.550	0.649	0.677	0.730	0.970	1.090	1.155	1.336	6.4630
0.0400	0.394	0.406	0.502	0.649	0.689	0.810	0.845	0.910	1.216	1.366	1.448	1.673	8.0788
0.0500	0.474	0.493	0.615	0.804	0.860	1.006	1.051	1.130	1.522	1.708	1.811	2.089	10.098
0.0600	0.548	0.575	0.722	0.952	1.025	1.195	1.249	1.343	1.821	2.043	2.166	2.496	12.118
0.0700	0.617	0.653	0.824	1.094	1.185	1.377	1.441	1.547	2.111	2.368	2.511	2.892	14.138
0.0800	0.683	0.725	0.921	1.229	1.338	1.552	1.625	1.744	2.392	2.682	2.845	3.274	16.158
0.0900	0.745	0.794	1.014	1.359	1.486	1.719	1.802	1.933	2.663	2.985	3.167	3.643	18.177
0.1000	0.805	0.859	1.104	1.483	1.628	1.879	1.972	2.114	2.922	3.277	3.477	3.998	20.197
0.1250	0.943	1.007	1.312	1.771	1.960	2.252	2.370	2.538	3.529	3.959	4.203	4.829	25.246
0.1600	1.117	1.188	1.574	2.132	2.377	2.720	2.871	3.070	4.289	4.816	5.112	5.867	32.315
0.2000	1.295	1.365	1.843	2.498	2.801	3.192	3.380	3.611	5.057	5.680	6.027	6.910	40.394
0.2500	1.495	1.558	2.143	2.903	3.269	3.714	3.943	4.211	5.898	6.627	7.032	8.055	50.492
0.3200	1.746	1.792	2.514	3.396	3.841	4.346	4.631	4.944	6.917	7.771	8.247	9.437	64.630
0.4000	2.002	2.024	2.888	3.887	4.408	4.970	5.311	5.671	7.915	8.890	9.436	10.787	80.788
0.5000	2.290	2.282	3.301	4.423	5.024	5.645	6.049	6.461	8.985	10.089	10.709	12.232	100.98
0.6000	2.553	2.515	3.670	4.896	5.566	6.236	6.697	7.156	9.916	11.130	11.814	13.479	121.18
0.7000	2.800	2.735	4.008	5.326	6.055	6.769	7.284	7.785	10.751	12.062	12.800	14.591	141.38
0.8000	3.033	2.944	4.328	5.729	6.508	7.260	7.824	8.365	11.515	12.913	13.701	15.605	161.58
0.9000	3.257	3.145	4.630	6.106	6.937	7.723	8.337	8.915	12.236	13.716	14.551	16.560	181.77
1.0000	3.473	3.341	4.918	6.463	7.342	8.159	8.820	9.435	12.911	14.466	15.345	17.450	201.97
1.2500	3.987	3.816	5.593	7.293	8.278	9.165	9.935	10.635	14.452	16.177	17.155	19.473	252.46
1.6000	4.673	4.463	6.471	8.354	9.468	10.441	11.351	12.163	16.378	18.309	19.410	21.990	323.15
2.0000	5.431	5.188	7.420	9.483	10.728	11.787	12.848	13.782	18.388	20.520	21.749	24.592	403.94
2.5000	6.365	6.081	8.566	10.826	12.217	13.374	14.620	15.693	20.731	23.092	24.464	27.596	504.92
3.2000	7.675	7.326	10.139	12.646	14.223	15.507	17.002	18.264	23.834	26.494	28.048	31.544	646.30
4.0000	9.195	8.760	11.933	14.697	16.469	17.893	19.657	21.138	27.254	30.231	31.977	35.866	807.88
5.0000	11.149	10.589	14.203	17.269	19.270	20.865	22.955	24.708	31.447	34.818	36.778	41.135	1009.8
6.0000	13.170	12.471	16.525	19.881	22.104	23.862	26.277	28.300	35.638	39.384	41.546	46.341	1211.8
7.0000	15.263	14.413	18.909	22.547	24.991	26.904	29.643	31.939	39.864	43.972	46.332	51.545	1413.8
8.0000	17.429	16.416	21.358	25.275	27.940	30.006	33.064	35.638	44.131	48.606	51.158	56.784	1615.8
9.0000	19.666	18.483	23.874	28.066	30.954	33.173	36.547	39.405	48.458	53.296	56.039	62.070	1817.7
10.0000	21.972	20.615	26.458	30.921	34.035	36.407	40.101	43.239	52.857	58.051	60.980	67.415	2019.7
11.0000	24.348	22.808	29.110	33.840	37.184	39.709	43.728	47.138	57.327	62.867	65.973	72.825	2221.7
12.0000	26.791	25.064	31.827	36.823	40.398	43.076	47.426	51.102	61.868	67.746	71.029	78.310	2423.6

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.053	0.123	0.145	0.148	0.155	0.204	0.275	0.349	0.428	0.128	0.109	0.120	2.5246
0.0160	0.068	0.157	0.186	0.191	0.200	0.264	0.358	0.459	0.590	0.164	0.139	0.154	3.2315
0.0200	0.084	0.195	0.234	0.240	0.252	0.332	0.450	0.579	0.757	0.205	0.172	0.193	4.0394
0.0250	0.103	0.244	0.293	0.301	0.317	0.417	0.566	0.726	0.955	0.254	0.213	0.242	5.0492
0.0320	0.129	0.311	0.376	0.386	0.407	0.535	0.726	0.929	1.217	0.322	0.268	0.310	6.4630
0.0400	0.158	0.389	0.470	0.483	0.510	0.667	0.905	1.154	1.508	0.397	0.328	0.386	8.0788
0.0500	0.191	0.485	0.585	0.601	0.634	0.823	1.120	1.421	1.851	0.486	0.400	0.478	10.098
0.0600	0.223	0.578	0.696	0.715	0.754	0.970	1.322	1.671	2.172	0.571	0.467	0.567	12.118
0.0700	0.253	0.668	0.801	0.823	0.866	1.107	1.512	1.906	2.472	0.650	0.530	0.651	14.138
0.0800	0.282	0.753	0.901	0.925	0.973	1.236	1.690	2.125	2.753	0.725	0.590	0.731	16.158
0.0900	0.308	0.832	0.995	1.021	1.073	1.355	1.857	2.330	3.017	0.796	0.646	0.805	18.177
0.1000	0.333	0.907	1.083	1.111	1.167	1.467	2.013	2.523	3.266	0.863	0.699	0.875	20.197
0.1250	0.388	1.073	1.279	1.314	1.378	1.719	2.366	2.960	3.834	1.014	0.819	1.032	25.246
0.1600	0.451	1.265	1.509	1.551	1.627	2.016	2.788	3.484	4.520	1.195	0.962	1.214	32.315
0.2000	0.510	1.442	1.722	1.773	1.860	2.300	3.195	3.992	5.191	1.370	1.100	1.384	40.394
0.2500	0.569	1.621	1.940	1.999	2.100	2.599	3.631	4.540	5.922	1.554	1.246	1.556	50.492
0.3200	0.635	1.824	2.189	2.258	2.379	2.957	4.158	5.210	6.824	1.772	1.418	1.752	64.630
0.4000	0.698	2.014	2.424	2.504	2.650	3.314	4.691	5.891	7.747	1.985	1.586	1.938	80.788
0.5000	0.764	2.214	2.678	2.771	2.945	3.712	5.290	6.656	8.789	2.217	1.768	2.137	100.98
0.6000	0.823	2.391	2.906	3.010	3.213	4.077	5.838	7.356	9.741	2.426	1.931	2.316	121.18
0.7000	0.878	2.553	3.123	3.239	3.468	4.426	6.353	8.016	10.634	2.624	2.085	2.485	141.38
0.8000	0.931	2.706	3.333	3.460	3.715	4.764	6.856	8.661	11.485	2.813	2.233	2.648	161.58
0.9000	0.984	2.855	3.540	3.677	3.958	5.096	7.343	9.282	12.321	2.997	2.376	2.810	181.77
1.0000	1.036	3.001	3.744	3.891	4.199	5.422	7.819	9.881	13.128	3.178	2.517	2.969	201.97
1.2500	1.166	3.355	4.241	4.414	4.787	6.210	8.952	11.294	15.015	3.618	2.862	3.361	252.46
1.6000	1.352	3.839	4.916	5.120	5.578	7.256	10.427	13.114	17.396	4.218	3.339	3.899	323.15
2.0000	1.571	4.387	5.664	5.904	6.450	8.389	11.991	15.029	19.850	4.895	3.884	4.509	403.94
2.5000	1.860	5.076	6.581	6.867	7.504	9.733	13.817	17.237	22.642	5.736	4.572	5.274	504.92
3.2000	2.293	6.066	7.853	8.202	8.945	11.534	16.214	20.116	26.247	6.915	5.553	6.357	646.30
4.0000	2.820	7.243	9.315	9.730	10.581	13.544	18.846	23.260	30.151	8.279	6.705	7.619	807.88
5.0000	3.521	8.790	11.185	11.676	12.648	16.054	22.096	27.115	34.882	10.026	8.192	9.244	1009.8
6.0000	4.260	10.414	13.111	13.678	14.767	18.602	25.364	30.973	39.573	11.827	9.733	10.926	1211.8
7.0000	5.031	12.112	15.097	15.740	16.946	21.204	28.684	34.870	44.297	13.687	11.328	12.665	1413.8
8.0000	5.833	13.881	17.144	17.862	19.192	23.870	32.074	38.833	49.080	15.606	12.978	14.458	1615.8
9.0000	6.665	15.716	19.253	20.048	21.504	26.607	35.549	42.882	53.943	17.586	14.683	16.309	1817.7
10.0000	7.526	17.607	21.423	22.295	23.879	29.415	39.109	47.023	58.898	19.627	16.444	18.215	2019.7
11.0000	8.416	19.551	23.649	24.600	26.316	32.297	42.750	51.258	63.957	21.727	18.258	20.175	2221.7
12.0000	9.334	21.549	25.931	26.963	28.814	35.251	46.473	55.586	69.124	23.885	20.125	22.186	2423.6

$^{205}_{81}$Tl IONS

ENERGY PER MASS UNIT	ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)												ENERGY FOR A=205
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	9.438	7.807	5.720	3.804	3.089	2.803	2.597	2.402	1.527	1.307	1.201	1.030	2.5621
0.0160	10.930	9.042	6.624	4.405	3.577	3.246	3.007	2.782	1.769	1.514	1.391	1.192	3.2795
0.0200	12.480	10.325	7.564	5.030	4.085	3.706	3.434	3.177	2.020	1.728	1.588	1.362	4.0994
0.0250	14.251	11.790	8.637	5.744	4.664	4.232	3.921	3.628	2.306	1.974	1.818	1.555	5.1242
0.0320	16.485	13.664	10.003	6.652	5.412	4.921	4.541	4.201	2.671	2.291	2.111	1.811	6.5590
0.0400	18.778	15.637	11.422	7.619	6.214	5.665	5.220	4.832	3.073	2.644	2.433	2.090	8.1988
0.0500	21.364	17.908	13.043	8.739	7.160	6.521	6.013	5.569	3.535	3.072	2.830	2.432	10.248
0.0600	23.723	20.075	14.536	9.797	8.053	7.312	6.759	6.265	4.012	3.489	3.220	2.769	12.298
0.0700	25.889	22.145	15.932	10.802	8.922	8.093	7.488	6.946	4.461	3.903	3.616	3.107	14.348
0.0800	27.908	24.182	17.248	11.780	9.745	8.831	8.158	7.589	4.916	4.312	3.984	3.432	16.398
0.0900	29.803	26.158	18.499	12.728	10.545	9.583	8.824	8.214	5.383	4.708	4.366	3.765	18.447
0.1000	31.611	28.105	19.696	13.649	11.345	10.281	9.454	8.843	5.830	5.101	4.727	4.077	20.497
0.1250	35.759	32.993	22.490	15.833	13.224	11.987	11.020	10.323	6.916	6.050	5.656	4.892	25.621
0.1600	40.866	39.720	26.046	18.649	15.680	14.221	13.049	12.242	8.335	7.319	6.863	5.991	32.795
0.2000	46.040	46.724	29.742	21.622	18.291	16.566	15.198	14.246	9.874	8.714	8.179	7.138	40.994
0.2500	51.724	54.407	33.962	25.098	21.328	19.358	17.728	16.607	11.717	10.358	9.713	8.490	51.242
0.3200	58.682	63.756	39.331	29.616	25.290	23.087	21.042	19.666	14.081	12.507	11.740	10.324	65.590
0.4000	65.661	72.892	44.912	34.223	29.462	26.947	24.567	22.950	16.707	14.866	13.968	12.261	81.988
0.5000	73.337	82.414	51.285	39.643	34.361	31.540	28.719	26.771	19.796	17.642	16.591	14.616	102.48
0.6000	79.711	89.775	56.855	44.518	38.775	35.705	32.408	30.190	22.572	20.184	19.018	16.886	122.98
0.7000	84.981	95.396	61.625	48.684	42.583	39.255	35.558	33.154	25.020	22.370	21.137	18.734	143.48
0.8000	89.261	99.515	65.730	52.387	45.945	42.527	38.452	35.823	27.212	24.451	23.071	20.508	163.98
0.9000	92.970	102.738	69.277	55.560	48.979	45.446	41.012	38.172	29.304	26.325	24.870	22.169	184.47
1.0000	96.011	105.128	72.352	58.533	51.659	47.969	43.339	40.300	31.111	28.000	26.481	23.659	204.97
1.2500	101.688	108.901	78.402	64.290	57.234	53.314	48.061	44.611	35.046	31.596	29.871	26.735	256.21
1.6000	106.412	111.539	84.054	70.185	62.704	58.585	52.786	48.751	39.085	35.387	33.453	30.007	327.95
2.0000	108.949	113.698	87.933	74.479	66.917	62.784	56.277	52.144	42.208	38.515	36.404	32.799	409.94
2.5000	109.730	114.977	90.461	77.706	70.289	66.037	59.071	54.820	45.050	40.979	38.898	35.280	512.42
3.2000	108.916	115.054	91.603	79.695	72.550	68.244	61.191	56.611	47.267	43.237	41.038	37.283	655.90
4.0000	106.685	113.615	91.184	80.150	73.403	69.117	62.278	57.446	48.601	44.498	42.400	38.571	819.88
5.0000	103.305	110.735	89.519	79.314	73.047	68.930	62.126	57.471	49.235	44.939	43.059	39.299	1024.8
6.0000	99.946	107.459	87.365	77.930	71.902	68.145	61.505	56.875	48.750	44.993	43.071	39.576	1229.8
7.0000	96.482	104.224	85.081	76.232	70.447	66.959	60.578	56.068	48.496	44.582	42.796	39.392	1434.8
8.0000	93.337	101.039	82.819	74.537	68.988	65.592	59.629	55.074	47.869	44.142	42.403	39.090	1639.8
9.0000	90.563	97.982	80.644	72.822	67.499	64.273	58.467	54.112	47.177	43.548	41.854	38.709	1844.7
10.0000	87.855	95.085	78.582	71.274	66.009	62.945	57.287	53.200	46.364	42.985	41.413	38.270	2049.7
11.0000	85.378	92.505	76.641	69.743	64.685	61.696	56.178	52.346	45.678	42.459	41.003	37.784	2254.7
12.0000	83.122	90.005	74.817	68.233	63.370	60.527	55.140	51.474	44.965	41.898	40.401	37.259	2459.6

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	21.449	9.152	6.063	5.697	5.062	3.340	2.048	1.453	0.959	7.670	9.758	7.447	2.5621
0.0160	24.376	10.281	6.909	6.498	5.776	3.902	2.418	1.722	1.143	8.830	11.234	8.485	3.2795
0.0200	27.079	11.119	7.693	7.246	6.482	4.501	2.806	2.042	1.366	10.000	12.715	9.447	4.0994
0.0250	30.057	11.928	8.568	8.076	7.307	5.243	3.351	2.444	1.771	11.315	14.398	10.520	5.1242
0.0320	34.109	12.944	9.593	9.133	8.342	6.252	4.061	3.061	2.131	13.004	16.585	11.903	6.5590
0.0400	38.264	13.912	10.657	10.257	9.446	7.379	4.889	3.746	2.661	14.792	18.869	13.364	8.1988
0.0500	43.172	15.182	11.986	11.660	10.852	8.752	5.895	4.591	3.326	16.877	21.521	15.156	10.248
0.0600	48.551	16.615	13.475	13.024	12.312	10.132	6.890	5.422	3.983	18.912	24.145	16.978	12.298
0.0700	54.008	18.289	14.976	14.546	13.797	11.503	7.838	6.229	4.604	20.934	26.701	18.927	14.348
0.0800	59.851	20.094	16.575	16.110	15.334	12.884	8.831	7.037	5.226	22.975	29.270	20.974	16.398
0.0900	65.673	22.033	18.222	17.759	16.908	14.263	9.805	7.844	5.809	25.011	31.801	23.087	18.447
0.1000	72.086	24.186	20.050	19.420	18.474	15.658	10.813	8.607	6.381	27.042	34.388	25.269	20.497
0.1250	89.286	29.799	24.627	23.727	22.670	19.139	13.179	10.503	7.804	32.251	41.044	31.014	25.621
0.1600	115.384	38.470	31.568	30.422	28.859	24.040	16.487	13.127	9.741	39.772	50.529	39.850	32.795
0.2000	146.031	48.479	39.705	38.129	36.047	29.295	19.927	15.823	11.688	48.003	60.911	50.115	40.994
0.2500	184.072	60.927	49.414	47.580	44.422	35.116	23.739	18.611	13.687	57.531	72.916	62.761	51.242
0.3200	233.628	76.263	62.025	59.194	54.159	41.494	27.689	21.593	15.772	69.302	88.023	78.584	65.590
0.4000	280.251	92.519	73.476	69.838	63.236	47.202	31.214	24.297	17.695	80.527	102.534	93.237	81.988
0.5000	327.195	108.723	84.466	80.363	71.901	52.874	34.873	27.232	19.847	91.953	117.390	107.800	102.48
0.6000	361.032	121.102	91.651	87.103	77.835	56.912	37.752	29.451	21.548	100.179	128.550	117.520	122.98
0.7000	378.378	130.029	95.642	90.897	81.345	59.407	39.748	30.936	22.863	105.687	135.822	122.819	143.48
0.8000	385.833	135.403	97.872	93.336	83.411	60.997	41.278	32.208	23.926	109.374	140.399	125.807	163.98
0.9000	387.950	138.277	99.066	94.424	83.964	61.933	42.259	33.391	24.801	111.882	143.472	127.054	184.47
1.0000	389.978	141.014	100.642	95.505	85.086	63.019	43.411	34.584	25.685	113.810	145.789	128.208	204.97
1.2500	389.659	145.907	103.883	99.179	88.124	66.093	46.414	37.476	28.303	117.368	149.043	131.481	256.21
1.6000	379.923	148.775	107.421	102.714	91.955	70.185	50.348	40.934	31.688	119.777	149.868	133.477	327.95
2.0000	364.043	149.223	110.620	105.344	95.320	74.040	54.079	44.406	34.909	121.348	149.486	134.098	409.94
2.5000	341.944	147.000	112.263	106.835	98.603	77.978	57.895	48.216	38.356	121.761	147.362	132.978	512.42
3.2000	320.612	142.443	112.947	107.817	100.122	81.069	61.649	51.298	41.130	121.191	144.458	131.451	655.90
4.0000	300.906	136.046	111.244	106.685	100.302	82.065	62.917	52.978	42.856	119.086	140.331	128.295	819.88
5.0000	284.670	129.355	108.228	104.200	98.202	81.373	63.290	53.443	43.864	115.838	135.621	124.252	1024.8
6.0000	271.706	123.534	105.013	100.994	95.665	79.852	62.379	53.031	43.683	112.177	130.960	119.952	1229.8
7.0000	261.198	118.603	101.927	98.268	92.908	78.104	61.428	52.410	43.306	108.818	126.685	116.391	1434.8
8.0000	251.769	113.876	98.968	95.490	90.189	76.110	59.878	51.348	42.652	105.511	122.572	112.882	1639.8
9.0000	242.738	110.321	96.047	92.741	87.741	74.192	58.467	50.241	41.935	102.257	118.627	109.434	1844.7
10.0000	234.961	107.265	93.592	90.370	85.498	72.296	57.129	49.114	41.099	99.328	115.045	106.401	2049.7
11.0000	227.623	104.385	91.279	88.137	83.385	70.510	55.871	48.054	40.236	96.644	111.819	103.618	2254.7
12.0000	220.711	101.677	89.107	86.040	81.401	68.832	54.691	47.060	39.429	94.120	108.709	101.003	2459.6

$^{205}_{81}Tl$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=205 MEV
0.0125	0.139	0.135	0.162	0.201	0.208	0.247	0.256	0.275	0.354	0.390	0.408	0.458	2.5621
0.0160	0.176	0.173	0.208	0.260	0.270	0.321	0.334	0.361	0.471	0.526	0.554	0.634	3.2795
0.0200	0.216	0.214	0.259	0.327	0.341	0.403	0.421	0.455	0.598	0.671	0.709	0.817	4.0994
0.0250	0.264	0.265	0.322	0.409	0.428	0.506	0.529	0.571	0.754	0.846	0.896	1.036	5.1242
0.0320	0.328	0.333	0.409	0.523	0.551	0.650	0.678	0.731	0.970	1.089	1.154	1.334	6.5590
0.0400	0.396	0.408	0.503	0.651	0.690	0.811	0.847	0.911	1.216	1.366	1.447	1.671	8.1988
0.0500	0.476	0.496	0.617	0.806	0.861	1.008	1.053	1.132	1.522	1.708	1.810	2.087	10.248
0.0600	0.551	0.578	0.725	0.955	1.028	1.198	1.252	1.345	1.822	2.043	2.166	2.495	12.298
0.0700	0.621	0.656	0.827	1.097	1.188	1.381	1.444	1.550	2.113	2.369	2.512	2.891	14.348
0.0800	0.687	0.729	0.925	1.234	1.342	1.556	1.629	1.748	2.395	2.684	2.847	3.274	16.398
0.0900	0.750	0.798	1.019	1.364	1.491	1.724	1.806	1.937	2.666	2.988	3.170	3.644	18.447
0.1000	0.809	0.863	1.109	1.488	1.633	1.885	1.977	2.120	2.927	3.281	3.481	4.001	20.497
0.1250	0.949	1.013	1.318	1.779	1.967	2.260	2.378	2.545	3.536	3.966	4.210	4.835	25.621
0.1600	1.124	1.195	1.583	2.142	2.386	2.730	2.882	3.081	4.300	4.827	5.123	5.878	32.795
0.2000	1.303	1.373	1.853	2.510	2.812	3.206	3.394	3.625	5.072	5.696	6.043	6.927	40.994
0.2500	1.505	1.567	2.155	2.917	3.284	3.731	3.960	4.229	5.919	6.648	7.054	8.078	51.242
0.3200	1.757	1.802	2.528	3.414	3.859	4.367	4.652	4.966	6.944	7.799	8.276	9.468	65.590
0.4000	2.015	2.037	2.905	3.908	4.429	4.995	5.337	5.698	7.948	8.925	9.472	10.826	81.988
0.5000	2.305	2.296	3.320	4.447	5.049	5.674	6.079	6.493	9.025	10.131	10.753	12.280	102.48
0.6000	2.569	2.531	3.692	4.924	5.595	6.269	6.732	7.192	9.962	11.179	11.864	13.535	122.98
0.7000	2.816	2.752	4.032	5.356	6.088	6.806	7.322	7.825	10.801	12.116	12.857	14.654	143.48
0.8000	3.051	2.962	4.354	5.755	6.542	7.299	7.866	8.408	11.570	12.973	13.763	15.674	163.98
0.9000	3.276	3.165	4.657	6.135	6.974	7.765	8.381	8.962	12.295	13.780	14.619	16.635	184.47
1.0000	3.492	3.362	4.947	6.494	7.382	8.204	8.867	9.484	12.974	14.535	15.417	17.529	204.97
1.2500	4.010	3.839	5.625	7.327	8.322	9.215	9.987	10.690	14.522	16.254	17.234	19.562	256.21
1.6000	4.697	4.488	6.507	8.392	9.516	10.495	11.408	12.224	16.455	18.393	19.498	22.088	327.95
2.0000	5.457	5.214	7.458	9.524	10.779	11.844	12.909	13.847	18.469	20.609	21.842	24.696	409.94
2.5000	6.392	6.109	8.605	10.869	12.270	13.432	14.683	15.760	20.815	23.184	24.561	27.703	512.42
3.2000	7.702	7.354	10.178	12.688	14.276	15.566	17.065	18.331	23.919	26.587	28.145	31.652	655.90
4.0000	9.222	8.787	11.971	14.738	16.520	17.951	19.718	21.203	27.336	30.321	32.071	35.971	819.88
5.0000	11.173	10.613	14.238	17.307	19.317	20.918	23.011	24.767	31.523	34.900	36.864	41.231	1024.8
6.0000	13.189	12.491	16.555	19.913	22.145	23.908	26.326	28.352	35.705	39.457	41.622	46.426	1229.8
7.0000	15.277	14.428	18.932	22.572	25.025	26.942	29.684	31.981	39.920	44.033	46.396	51.617	1434.8
8.0000	17.437	16.426	21.374	25.291	27.965	30.035	33.094	35.670	44.174	48.654	51.207	56.840	1639.8
9.0000	19.666	18.486	23.882	28.074	30.969	33.192	36.566	39.424	48.488	53.329	56.073	62.109	1844.7
10.0000	21.964	20.610	26.457	30.919	34.040	36.415	40.108	43.245	52.871	58.067	60.997	67.435	2049.7
11.0000	24.331	22.795	29.099	33.827	37.177	39.704	43.721	47.129	57.325	62.865	65.971	72.826	2254.7
12.0000	26.765	25.042	31.806	36.798	40.379	43.058	47.404	51.078	61.848	67.725	71.007	78.289	2459.6

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.053	0.124	0.145	0.149	0.156	0.204	0.276	0.349	0.426	0.129	0.109	0.120	2.5621
0.0160	0.068	0.158	0.187	0.192	0.201	0.264	0.358	0.459	0.589	0.165	0.139	0.155	3.2795
0.0200	0.085	0.196	0.234	0.241	0.253	0.332	0.451	0.579	0.756	0.206	0.173	0.194	4.0994
0.0250	0.104	0.245	0.294	0.302	0.318	0.418	0.566	0.726	0.954	0.256	0.214	0.243	5.1242
0.0320	0.130	0.313	0.377	0.388	0.409	0.536	0.727	0.929	1.216	0.324	0.269	0.311	6.5590
0.0400	0.158	0.391	0.472	0.485	0.511	0.668	0.907	1.154	1.507	0.399	0.330	0.387	8.1988
0.0500	0.192	0.487	0.587	0.604	0.637	0.825	1.122	1.422	1.851	0.489	0.402	0.480	10.248
0.0600	0.225	0.581	0.699	0.718	0.756	0.973	1.324	1.673	2.172	0.573	0.469	0.570	12.298
0.0700	0.255	0.671	0.805	0.826	0.870	1.111	1.515	1.909	2.473	0.654	0.533	0.654	14.348
0.0800	0.283	0.756	0.905	0.929	0.977	1.240	1.694	2.129	2.755	0.729	0.593	0.734	16.398
0.0900	0.310	0.837	0.999	1.025	1.077	1.360	1.862	2.335	3.020	0.800	0.650	0.809	18.447
0.1000	0.335	0.912	1.088	1.116	1.172	1.473	2.019	2.529	3.271	0.867	0.703	0.879	20.497
0.1250	0.390	1.079	1.285	1.320	1.384	1.726	2.374	2.968	3.841	1.020	0.824	1.037	25.621
0.1600	0.454	1.272	1.516	1.559	1.634	2.025	2.798	3.495	4.531	1.202	0.968	1.221	32.795
0.2000	0.513	1.450	1.731	1.782	1.869	2.311	3.208	4.006	5.206	1.378	1.107	1.391	40.994
0.2500	0.572	1.630	1.951	2.010	2.111	2.612	3.647	4.558	5.942	1.563	1.254	1.565	51.242
0.3200	0.639	1.835	2.201	2.270	2.392	2.973	4.178	5.233	6.850	1.783	1.427	1.762	65.590
0.4000	0.702	2.026	2.438	2.518	2.664	3.332	4.714	5.917	7.778	1.997	1.595	1.949	81.988
0.5000	0.769	2.227	2.693	2.787	2.962	3.733	5.316	6.688	8.826	2.231	1.779	2.150	102.48
0.6000	0.828	2.405	2.922	3.028	3.231	4.099	5.868	7.392	9.785	2.441	1.944	2.329	122.98
0.7000	0.883	2.568	3.141	3.258	3.488	4.451	6.387	8.056	10.683	2.640	2.098	2.500	143.48
0.8000	0.937	2.723	3.353	3.480	3.737	4.791	6.892	8.705	11.539	2.830	2.247	2.664	163.98
0.9000	0.990	2.872	3.561	3.698	3.981	5.125	7.382	9.329	12.380	3.015	2.391	2.826	184.47
1.0000	1.043	3.019	3.766	3.914	4.224	5.452	7.861	9.932	13.191	3.197	2.533	2.987	204.97
1.2500	1.174	3.375	4.265	4.439	4.814	6.244	8.999	11.352	15.087	3.639	2.879	3.380	256.21
1.6000	1.359	3.861	4.942	5.147	5.608	7.294	10.479	13.178	17.476	4.242	3.357	3.920	327.95
2.0000	1.579	4.410	5.693	5.934	6.482	8.429	12.047	15.097	19.936	4.921	3.904	4.531	409.94
2.5000	1.869	5.100	6.611	6.898	7.537	9.776	13.875	17.308	22.732	5.762	4.593	5.297	512.42
3.2000	2.301	6.090	7.883	8.232	8.978	11.577	16.272	20.188	26.337	6.941	5.574	6.380	655.90
4.0000	2.829	7.266	9.344	9.760	10.613	13.585	18.902	23.329	30.238	8.304	6.725	7.642	819.88
5.0000	3.528	8.810	11.210	11.702	12.677	16.091	22.148	27.178	34.961	10.048	8.210	9.264	1024.8
6.0000	4.265	10.431	13.133	13.700	14.791	18.633	25.409	31.027	39.642	11.846	9.747	10.942	1229.8
7.0000	5.035	12.125	15.114	15.757	16.965	21.229	28.720	34.915	44.354	13.701	11.338	12.677	1434.8
8.0000	5.834	13.888	17.155	17.873	19.204	23.887	32.099	38.866	49.124	15.614	12.983	14.465	1639.8
9.0000	6.663	15.717	19.257	20.051	21.508	26.615	35.564	42.902	53.970	17.587	14.683	16.310	1844.7
10.0000	7.522	17.602	21.419	22.291	23.875	29.414	39.111	47.028	58.908	19.621	16.438	18.209	2049.7
11.0000	8.408	19.539	23.637	24.588	26.303	32.285	42.739	51.248	63.949	21.714	18.245	20.162	2254.7
12.0000	9.323	21.529	25.910	26.942	28.791	35.228	46.447	55.559	69.096	23.863	20.105	22.166	2459.6

$^{208}_{82}$Pb IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=208 MEV
0.0125	9.482	7.844	5.747	3.822	3.103	2.816	2.609	2.414	1.534	1.313	1.207	1.034	2.5997
0.0160	10.984	9.087	6.657	4.427	3.595	3.262	3.022	2.796	1.777	1.521	1.398	1.198	3.3277
0.0200	12.545	10.378	7.603	5.056	4.105	3.725	3.452	3.193	2.030	1.737	1.597	1.368	4.1596
0.0250	14.327	11.853	8.683	5.774	4.689	4.255	3.942	3.647	2.318	1.984	1.828	1.563	5.1995
0.0320	16.576	13.739	10.058	6.689	5.441	4.949	4.566	4.224	2.686	2.303	2.122	1.821	6.6554
0.0400	18.885	15.726	11.487	7.662	6.249	5.698	5.250	4.859	3.090	2.659	2.447	2.102	8.3192
0.0500	21.490	18.014	13.120	8.790	7.203	6.560	6.048	5.602	3.555	3.090	2.847	2.447	10.399
0.0600	23.867	20.196	14.624	9.857	8.102	7.356	6.800	6.303	4.036	3.510	3.239	2.786	12.479
0.0700	26.049	22.282	16.030	10.869	8.977	8.143	7.534	6.989	4.489	3.927	3.639	3.126	14.559
0.0800	28.084	24.335	17.357	11.855	9.807	8.887	8.210	7.637	4.947	4.339	4.009	3.454	16.638
0.0900	29.994	26.326	18.618	12.809	10.612	9.644	8.881	8.266	5.418	4.738	4.394	3.789	18.718
0.1000	31.817	28.288	19.824	13.738	11.418	10.348	9.515	8.901	5.868	5.134	4.758	4.103	20.798
0.1250	35.999	33.214	22.641	15.939	13.313	12.067	11.094	10.392	6.962	6.090	5.694	4.924	25.997
0.1600	41.148	39.994	26.226	18.778	15.788	14.319	13.139	12.326	8.392	7.369	6.911	6.032	33.277
0.2000	46.367	47.056	29.953	21.776	18.421	16.684	15.306	14.347	9.944	8.776	8.237	7.189	41.596
0.2500	52.101	54.803	34.209	25.281	21.483	19.499	17.857	16.728	11.802	10.434	9.784	8.552	51.995
0.3200	59.122	64.234	39.626	29.839	25.480	23.261	21.200	19.813	14.186	12.601	11.828	10.402	66.554
0.4000	66.166	73.453	45.257	34.486	29.689	27.154	24.756	23.126	16.836	14.980	14.075	12.355	83.192
0.5000	73.915	83.064	51.689	39.955	34.631	31.789	28.946	26.981	19.952	17.781	16.721	14.731	103.99
0.6000	80.348	90.492	57.309	44.873	39.085	35.990	32.666	30.431	22.752	20.345	19.170	17.021	124.79
0.7000	85.682	96.183	62.133	49.085	42.934	39.579	35.851	33.428	25.226	22.554	21.312	18.889	145.59
0.8000	90.029	100.371	66.295	52.837	46.341	42.893	38.783	36.131	27.446	24.662	23.270	20.684	166.38
0.9000	93.807	103.663	69.901	56.061	49.420	45.855	41.381	38.515	29.568	26.562	25.094	22.368	187.18
1.0000	96.916	106.119	73.034	59.085	52.146	48.422	43.747	40.680	31.405	28.264	26.730	23.882	207.98
1.2500	102.751	110.039	79.222	64.962	57.832	53.871	48.563	45.077	35.412	31.926	30.183	27.015	259.97
1.6000	107.658	112.846	85.038	71.007	63.439	59.272	53.404	49.322	39.543	35.801	33.845	30.359	332.77
2.0000	110.351	115.161	89.065	75.438	67.778	63.592	57.001	52.815	42.751	39.010	36.873	33.221	415.96
2.5000	111.262	116.582	91.724	78.791	71.270	66.959	59.896	55.585	45.679	41.551	39.442	35.773	519.95
3.2000	110.554	116.784	92.981	80.893	73.641	69.271	62.111	57.462	47.978	43.887	41.655	37.843	665.54
4.0000	108.378	115.417	92.630	81.422	74.567	70.214	63.267	58.357	49.372	45.204	43.073	39.183	831.92
5.0000	105.017	112.570	91.003	80.628	74.258	70.072	63.156	58.424	50.051	45.683	43.772	39.950	1039.9
6.0000	101.653	109.294	88.857	79.261	73.129	69.309	62.555	57.846	49.582	45.761	43.807	40.252	1247.9
7.0000	98.166	106.044	86.566	77.563	71.677	68.128	61.635	57.047	49.343	45.361	43.543	40.080	1455.9
8.0000	94.995	102.835	84.291	75.862	70.214	66.758	60.689	56.053	48.720	44.927	43.157	39.785	1663.8
9.0000	92.197	99.750	82.099	74.135	68.717	65.433	59.522	55.088	48.028	44.333	42.609	39.407	1871.8
10.0000	89.460	96.822	80.018	72.577	67.215	64.095	58.333	54.172	47.211	43.770	42.170	38.969	2079.8
11.0000	86.956	94.215	78.057	71.032	65.880	62.836	57.216	53.313	46.522	43.244	41.761	38.482	2287.8
12.0000	84.674	91.686	76.215	69.508	64.554	61.658	56.170	52.436	45.805	42.680	41.156	37.955	2495.8

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	21.550	9.195	6.092	5.724	5.086	3.356	2.057	1.460	0.963	7.706	9.804	7.482	2.5997
0.0160	24.497	10.331	6.943	6.530	5.805	3.921	2.430	1.731	1.149	8.874	11.290	8.527	3.3277
0.0200	27.218	11.176	7.732	7.283	6.516	4.524	2.821	2.053	1.373	10.051	12.780	9.496	4.1596
0.0250	30.217	11.991	8.614	8.119	7.346	5.271	3.369	2.457	1.780	11.375	14.475	10.576	5.1995
0.0320	34.298	13.015	9.646	9.183	8.388	6.286	4.084	3.078	2.142	13.076	16.676	11.969	6.6554
0.0400	38.483	13.992	10.718	10.316	9.500	7.421	4.917	3.768	2.677	14.876	18.977	13.440	8.3192
0.0500	43.427	15.272	12.057	11.729	10.916	8.803	5.930	4.618	3.346	16.977	21.648	15.245	10.399
0.0600	48.846	16.716	13.557	13.104	12.387	10.193	6.932	5.455	4.007	19.026	24.291	17.081	12.479
0.0700	54.343	18.403	15.069	14.636	13.882	11.574	7.887	6.268	4.633	21.064	26.867	19.044	14.559
0.0800	60.229	20.221	16.680	16.212	15.430	12.966	8.887	7.082	5.259	23.120	29.455	21.106	16.638
0.0900	66.094	22.174	18.339	17.873	17.017	14.355	9.868	7.894	5.846	25.172	32.005	23.235	18.718
0.1000	72.555	24.343	20.180	19.546	18.595	15.760	10.883	8.663	6.423	27.218	34.612	25.434	20.798
0.1250	89.884	29.999	24.792	23.886	22.822	19.267	13.267	10.573	7.856	32.467	41.319	31.222	25.997
0.1600	116.181	38.736	31.786	30.632	29.058	24.206	16.601	13.218	9.808	40.047	50.878	40.126	33.277
0.2000	147.068	48.823	39.987	38.399	36.303	29.503	20.068	15.935	11.771	48.344	61.343	50.470	41.596
0.2500	185.414	61.371	49.774	47.927	44.746	35.372	23.912	18.747	13.786	57.950	73.447	63.219	51.995
0.3200	235.380	76.835	62.490	59.637	54.565	41.806	27.897	21.755	15.890	69.821	88.683	79.173	66.554
0.4000	282.406	93.230	74.041	70.375	63.722	47.565	31.454	24.484	17.831	81.146	103.322	93.954	83.192
0.5000	329.774	109.580	85.131	80.996	72.467	53.291	35.148	27.447	20.004	92.678	118.315	108.650	103.99
0.6000	363.915	122.069	92.383	87.798	78.457	57.367	38.053	29.686	21.720	100.979	129.577	118.459	124.79
0.7000	381.499	131.102	96.431	91.647	82.016	59.897	40.076	31.191	23.051	106.559	136.942	123.832	145.59
0.8000	389.154	136.569	98.714	94.140	84.129	61.522	41.634	32.485	24.132	110.316	141.607	126.890	166.38
0.9000	391.445	139.522	99.958	95.275	84.720	62.491	42.640	33.692	25.025	112.890	144.765	128.198	187.18
1.0000	393.654	142.343	101.590	96.405	85.888	63.613	43.820	34.910	25.927	114.883	147.164	129.416	207.98
1.2500	393.732	147.432	104.969	100.215	89.045	66.784	46.899	37.868	28.599	118.595	150.600	132.855	259.97
1.6000	384.373	150.518	108.679	103.917	93.032	71.007	50.938	41.414	32.059	121.180	151.623	135.041	332.77
2.0000	368.728	151.143	112.043	106.700	96.546	74.993	54.775	44.978	35.359	122.909	151.410	135.824	415.96
2.5000	346.718	149.052	113.830	108.327	99.980	79.066	58.704	48.889	38.891	123.461	149.419	134.835	519.95
3.2000	325.432	144.585	114.645	109.438	101.628	82.288	62.576	52.069	41.748	123.013	146.631	133.427	665.54
4.0000	305.680	138.205	113.009	108.378	101.893	83.367	63.915	53.818	43.536	120.975	142.558	130.331	831.92
5.0000	289.389	131.499	110.022	105.927	99.830	82.721	64.339	54.329	44.591	117.757	137.869	126.312	1039.9
6.0000	276.346	125.644	106.806	102.719	97.299	81.215	63.444	53.936	44.429	114.093	133.197	122.001	1247.9
7.0000	265.759	120.674	103.707	99.984	94.530	79.468	62.501	53.325	44.062	110.718	128.897	118.423	1455.9
8.0000	256.243	115.900	100.727	97.187	91.792	77.463	60.942	52.260	43.410	107.386	124.750	114.888	1663.8
9.0000	247.117	112.311	97.780	94.414	89.323	75.531	59.522	51.148	42.691	104.101	120.767	111.408	1871.8
10.0000	239.255	109.225	95.302	92.021	87.060	73.617	58.173	50.011	41.850	101.143	117.147	108.345	2079.8
11.0000	231.830	106.314	92.966	89.766	84.926	71.813	56.904	48.942	40.980	98.430	113.886	105.534	2287.8
12.0000	224.833	103.576	90.772	87.647	82.921	70.117	55.713	47.939	40.165	95.878	110.740	102.890	2495.8

$^{208}_{82}Pb$ IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=208
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.140	0.136	0.162	0.201	0.208	0.247	0.256	0.275	0.353	0.389	0.406	0.455	2.5997
0.0160	0.176	0.173	0.209	0.261	0.271	0.321	0.335	0.361	0.471	0.525	0.553	0.632	3.3277
0.0200	0.217	0.215	0.260	0.327	0.341	0.404	0.422	0.455	0.598	0.670	0.709	0.816	4.1596
0.0250	0.265	0.266	0.324	0.410	0.429	0.507	0.529	0.571	0.753	0.845	0.895	1.034	5.1995
0.0320	0.330	0.335	0.410	0.525	0.552	0.651	0.679	0.732	0.970	1.088	1.153	1.332	6.6554
0.0400	0.398	0.410	0.505	0.653	0.692	0.813	0.848	0.913	1.216	1.365	1.446	1.669	8.3192
0.0500	0.479	0.498	0.619	0.809	0.863	1.010	1.054	1.133	1.523	1.708	1.809	2.086	10.399
0.0600	0.554	0.581	0.728	0.958	1.030	1.201	1.254	1.347	1.823	2.044	2.166	2.494	12.479
0.0700	0.624	0.659	0.831	1.101	1.191	1.384	1.447	1.553	2.115	2.370	2.512	2.891	14.559
0.0800	0.691	0.733	0.930	1.238	1.346	1.560	1.633	1.752	2.398	2.686	2.848	3.275	16.638
0.0900	0.754	0.802	1.024	1.369	1.495	1.729	1.811	1.942	2.670	2.991	3.172	3.646	18.718
0.1000	0.814	0.868	1.114	1.494	1.638	1.891	1.983	2.125	2.932	3.285	3.485	4.003	20.798
0.1250	0.954	1.019	1.325	1.786	1.974	2.268	2.386	2.553	3.544	3.973	4.216	4.841	25.997
0.1600	1.130	1.201	1.591	2.151	2.396	2.741	2.892	3.092	4.312	4.839	5.134	5.889	33.277
0.2000	1.311	1.381	1.863	2.522	2.824	3.220	3.407	3.639	5.088	5.712	6.059	6.943	41.596
0.2500	1.514	1.576	2.167	2.932	3.298	3.747	3.977	4.246	5.940	6.670	7.076	8.101	51.995
0.3200	1.768	1.813	2.543	3.432	3.877	4.388	4.673	4.989	6.970	7.827	8.305	9.499	66.554
0.4000	2.028	2.049	2.921	3.929	4.451	5.020	5.362	5.725	7.981	8.960	9.508	10.865	83.192
0.5000	2.320	2.310	3.340	4.471	5.075	5.704	6.110	6.525	9.065	10.174	10.797	12.329	103.99
0.6000	2.586	2.547	3.714	4.951	5.624	6.302	6.766	7.229	10.007	11.228	11.915	13.591	124.79
0.7000	2.834	2.769	4.056	5.386	6.120	6.842	7.360	7.865	10.852	12.171	12.914	14.716	145.59
0.8000	3.070	2.981	4.380	5.788	6.578	7.339	7.907	8.452	11.625	13.033	13.826	15.743	166.38
0.9000	3.297	3.184	4.685	6.170	7.012	7.807	8.426	9.009	12.355	13.845	14.686	16.709	187.18
1.0000	3.515	3.383	4.976	6.531	7.421	8.248	8.915	9.534	13.037	14.604	15.489	17.608	207.98
1.2500	4.034	3.862	5.658	7.368	8.366	9.264	10.040	10.745	14.592	16.330	17.315	19.651	259.97
1.6000	4.724	4.513	6.542	8.437	9.564	10.549	11.465	12.285	16.532	18.478	19.586	22.185	332.77
2.0000	5.486	5.241	7.496	9.571	10.830	11.901	12.970	13.911	18.551	20.699	21.936	24.800	415.96
2.5000	6.422	6.137	8.644	10.917	12.324	13.491	14.746	15.827	20.900	23.277	24.658	27.810	519.95
3.2000	7.732	7.383	10.218	12.737	14.330	15.625	17.129	18.398	24.004	26.680	28.243	31.760	665.54
4.0000	9.251	8.814	12.009	14.785	16.572	18.008	19.780	21.268	27.419	30.411	32.166	36.075	831.92
5.0000	11.199	10.637	14.272	17.350	19.365	20.971	23.067	24.827	31.599	34.984	36.952	41.328	1039.9
6.0000	13.211	12.512	16.585	19.951	22.186	23.954	26.375	28.404	35.773	39.531	41.700	46.512	1247.9
7.0000	15.293	14.444	18.956	22.603	25.059	26.981	29.724	32.024	39.977	44.095	46.461	51.689	1455.9
8.0000	17.447	16.435	21.391	25.315	27.991	30.065	33.125	35.702	44.219	48.702	51.259	56.897	1663.8
9.0000	19.669	18.489	23.891	28.088	30.985	33.212	36.586	39.445	48.518	53.363	56.109	62.150	1871.8
10.0000	21.960	20.605	26.457	30.924	34.046	36.423	40.116	43.252	52.886	58.084	61.016	67.458	2079.8
11.0000	24.318	22.783	29.089	33.821	37.171	39.701	43.716	47.123	57.325	62.865	65.972	72.829	2287.8
12.0000	26.742	25.021	31.786	36.781	40.361	43.043	47.385	51.057	61.830	67.707	70.989	78.271	2495.8

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.054	0.124	0.146	0.149	0.156	0.205	0.276	0.349	0.425	0.129	0.110	0.121	2.5997
0.0160	0.069	0.159	0.188	0.192	0.202	0.265	0.359	0.459	0.588	0.166	0.140	0.156	3.3277
0.0200	0.085	0.197	0.235	0.242	0.254	0.333	0.451	0.579	0.756	0.207	0.174	0.195	4.1596
0.0250	0.105	0.246	0.295	0.303	0.319	0.419	0.567	0.726	0.953	0.257	0.215	0.244	5.1995
0.0320	0.131	0.314	0.378	0.389	0.410	0.538	0.728	0.930	1.215	0.325	0.270	0.312	6.6554
0.0400	0.159	0.393	0.473	0.487	0.513	0.670	0.908	1.155	1.506	0.401	0.331	0.389	8.3192
0.0500	0.194	0.490	0.590	0.606	0.639	0.828	1.123	1.423	1.851	0.491	0.404	0.483	10.399
0.0600	0.226	0.584	0.702	0.721	0.759	0.976	1.327	1.675	2.173	0.576	0.472	0.572	12.479
0.0700	0.256	0.675	0.808	0.830	0.873	1.115	1.518	1.911	2.474	0.657	0.536	0.657	14.559
0.0800	0.285	0.760	0.909	0.933	0.981	1.244	1.698	2.132	2.757	0.733	0.596	0.737	16.638
0.0900	0.312	0.841	1.004	1.030	1.082	1.365	1.866	2.340	3.024	0.804	0.653	0.813	18.718
0.1000	0.337	0.916	1.093	1.121	1.177	1.479	2.025	2.534	3.275	0.872	0.707	0.884	20.798
0.1250	0.392	1.084	1.292	1.326	1.391	1.733	2.382	2.976	3.849	1.025	0.828	1.042	25.997
0.1600	0.457	1.279	1.524	1.566	1.642	2.034	2.809	3.506	4.542	1.209	0.973	1.227	33.277
0.2000	0.516	1.458	1.740	1.791	1.878	2.321	3.221	4.020	5.221	1.385	1.113	1.399	41.596
0.2500	0.576	1.640	1.961	2.020	2.122	2.625	3.663	4.576	5.961	1.573	1.261	1.574	51.995
0.3200	0.643	1.846	2.213	2.283	2.405	2.988	4.197	5.255	6.875	1.793	1.436	1.772	66.554
0.4000	0.706	2.038	2.452	2.533	2.679	3.350	4.736	5.944	7.809	2.009	1.605	1.960	83.192
0.5000	0.773	2.241	2.709	2.803	2.978	3.753	5.343	6.719	8.864	2.244	1.790	2.163	103.99
0.6000	0.833	2.420	2.939	3.045	3.249	4.122	5.898	7.428	9.828	2.456	1.956	2.343	124.79
0.7000	0.889	2.584	3.159	3.277	3.508	4.476	6.420	8.096	10.732	2.656	2.112	2.515	145.59
0.8000	0.943	2.740	3.372	3.500	3.758	4.818	6.928	8.737	11.593	2.848	2.261	2.680	166.38
0.9000	0.996	2.890	3.582	3.720	4.004	5.154	7.422	9.365	12.439	3.034	2.406	2.843	187.18
1.0000	1.049	3.038	3.788	3.937	4.248	5.483	7.902	9.972	13.255	3.216	2.548	3.005	207.98
1.2500	1.181	3.395	4.290	4.464	4.841	6.279	9.046	11.398	15.160	3.661	2.896	3.400	259.97
1.6000	1.367	3.882	4.969	5.175	5.638	7.333	10.531	13.231	17.557	4.266	3.376	3.941	332.77
2.0000	1.588	4.433	5.721	5.963	6.514	8.470	12.103	15.154	20.023	4.946	3.924	4.554	415.96
2.5000	1.878	5.124	6.640	6.929	7.570	9.818	13.933	17.368	22.822	5.788	4.614	5.321	519.95
3.2000	2.310	6.114	7.912	8.263	9.012	11.620	16.331	20.248	26.428	6.967	5.596	6.404	665.54
4.0000	2.837	7.289	9.372	9.789	10.645	13.626	18.959	23.387	30.325	8.330	6.745	7.665	831.92
5.0000	3.536	8.831	11.236	11.729	12.706	16.129	22.199	27.230	35.042	10.071	8.228	9.285	1039.9
6.0000	4.271	10.449	13.154	13.722	14.815	18.665	25.454	31.071	39.713	11.865	9.762	10.959	1247.9
7.0000	5.038	12.138	15.130	15.774	16.984	21.254	28.756	34.949	44.413	13.715	11.349	12.690	1455.9
8.0000	5.835	13.896	17.165	17.884	19.217	23.905	32.126	38.889	49.168	15.623	12.989	14.473	1663.8
9.0000	6.662	15.719	19.261	20.056	21.514	26.624	35.580	42.912	54.000	17.590	14.684	16.311	1871.8
10.0000	7.517	17.597	21.416	22.287	23.872	29.414	39.114	47.024	58.921	19.617	16.433	18.205	2079.8
11.0000	8.401	19.528	23.626	24.576	26.291	32.274	42.730	51.228	63.943	21.702	18.234	20.150	2287.8
12.0000	9.312	21.510	25.890	26.921	28.770	35.206	46.424	55.522	69.070	23.843	20.086	22.146	2495.8

$^{209}_{83}Bi$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=209 MEV
0.0125	9.527	7.881	5.774	3.839	3.118	2.829	2.621	2.425	1.542	1.319	1.212	1.039	2.6122
0.0160	11.037	9.131	6.689	4.448	3.612	3.278	3.037	2.809	1.786	1.529	1.405	1.204	3.3437
0.0200	12.608	10.430	7.641	5.081	4.126	3.744	3.469	3.209	2.040	1.746	1.605	1.375	4.1796
0.0250	14.403	11.915	8.729	5.805	4.714	4.277	3.963	3.666	2.331	1.995	1.837	1.571	5.2245
0.0320	16.666	13.814	10.113	6.725	5.471	4.976	4.591	4.247	2.700	2.316	2.134	1.830	6.6874
0.0400	18.992	15.815	11.552	7.705	6.284	5.730	5.279	4.887	3.108	2.674	2.461	2.114	8.3592
0.0500	21.616	18.119	13.197	8.842	7.245	6.598	6.084	5.635	3.576	3.108	2.864	2.461	10.449
0.0600	24.010	20.317	14.712	9.916	8.151	7.400	6.841	6.341	4.061	3.531	3.259	2.803	12.539
0.0700	26.209	22.419	16.129	10.935	9.032	8.193	7.580	7.032	4.516	3.951	3.661	3.145	14.629
0.0800	28.259	24.486	17.465	11.929	9.868	8.942	8.261	7.685	4.978	4.366	4.034	3.476	16.718
0.0900	30.184	26.493	18.736	12.890	10.680	9.705	8.937	8.319	5.452	4.768	4.422	3.813	18.808
0.1000	32.021	28.470	19.951	13.826	11.492	10.414	9.576	8.958	5.905	5.167	4.788	4.130	20.898
0.1250	36.237	33.433	22.790	16.044	13.401	12.147	11.167	10.461	7.008	6.131	5.732	4.957	26.122
0.1600	41.429	40.267	26.405	18.906	15.896	14.417	13.229	12.410	8.449	7.420	6.958	6.073	33.437
0.2000	45.692	47.385	30.163	21.928	18.550	16.801	15.413	14.448	10.014	8.838	8.295	7.239	41.796
0.2500	52.475	55.197	34.455	25.462	21.638	19.639	17.986	16.849	11.887	10.509	9.854	8.614	52.245
0.3200	59.560	64.709	39.919	30.059	25.668	23.433	21.357	19.960	14.291	12.694	11.916	10.479	66.874
0.4000	66.668	74.010	45.601	34.748	29.914	27.360	24.944	23.302	16.963	15.094	14.182	12.449	83.592
0.5000	74.490	83.710	52.091	40.266	34.901	32.036	29.171	27.191	20.107	17.919	16.851	14.846	104.49
0.6000	80.978	91.202	57.759	45.225	39.392	36.273	32.923	30.670	22.930	20.504	19.320	17.154	125.39
0.7000	86.376	96.962	62.637	49.483	43.282	39.900	36.141	33.699	25.431	22.737	21.484	19.042	146.29
0.8000	90.793	101.219	66.856	53.284	46.732	43.256	39.111	36.436	27.678	24.870	23.466	20.859	167.18
0.9000	94.636	104.579	70.519	56.556	49.857	46.260	41.747	38.856	29.829	26.797	25.316	22.566	188.08
1.0000	97.813	107.100	73.710	59.631	52.629	48.869	44.152	41.056	31.695	28.526	26.978	24.103	208.98
1.2500	103.805	111.168	80.035	65.628	58.425	54.424	49.061	45.540	35.775	32.254	30.493	27.292	261.22
1.6000	108.898	114.145	86.018	71.825	64.169	59.954	54.019	49.890	39.998	36.213	34.235	30.708	334.37
2.0000	111.750	116.620	90.194	76.394	68.637	64.398	57.724	53.485	43.293	39.505	37.340	33.642	417.96
2.5000	112.794	118.187	92.988	79.876	72.251	67.881	60.721	56.351	46.308	42.123	39.985	36.265	522.45
3.2000	112.197	118.519	94.362	82.095	74.735	70.300	63.034	58.316	48.691	44.539	42.274	38.405	668.74
4.0000	110.079	117.229	94.084	82.700	75.738	71.316	64.260	59.273	50.147	45.913	43.749	39.798	835.92
5.0000	106.739	114.417	92.495	81.951	75.476	71.221	64.192	59.382	50.872	46.433	44.490	40.605	1044.9
6.0000	103.370	111.141	90.359	80.600	74.365	70.480	63.612	58.823	50.420	46.535	44.547	40.932	1253.9
7.0000	99.862	107.875	88.062	78.903	72.915	69.304	62.700	58.033	50.195	46.144	44.295	40.773	1462.9
8.0000	96.665	104.642	85.772	77.195	71.448	67.931	61.756	57.038	49.576	45.716	43.915	40.484	1671.8
9.0000	93.840	101.528	83.562	75.457	69.942	66.599	60.583	56.070	48.884	45.124	43.369	40.110	1880.8
10.0000	91.075	98.570	81.462	73.886	68.428	65.251	59.386	55.150	48.063	44.560	42.931	39.672	2089.8
11.0000	88.542	95.934	79.482	72.328	67.082	63.983	58.260	54.286	47.371	44.033	42.523	39.184	2298.8
12.0000	86.234	93.375	77.619	70.788	65.743	62.794	57.205	53.402	46.649	43.467	41.914	38.654	2507.8

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	21.651	9.238	6.120	5.751	5.110	3.372	2.067	1.467	0.968	7.742	9.850	7.517	2.6122
0.0160	24.617	10.382	6.977	6.562	5.833	3.940	2.442	1.739	1.155	8.917	11.345	8.569	3.3437
0.0200	27.356	11.233	7.771	7.320	6.549	4.547	2.835	2.063	1.380	10.102	12.845	9.544	4.1796
0.0250	30.376	12.054	8.659	8.161	7.385	5.298	3.387	2.470	1.789	11.435	14.551	10.632	5.2245
0.0320	34.486	13.086	9.698	9.233	8.434	6.321	4.106	3.095	2.154	13.147	16.768	12.035	6.6874
0.0400	38.700	14.071	10.778	10.374	9.554	7.463	4.944	3.789	2.692	14.960	19.085	13.516	8.3592
0.0500	43.680	15.361	12.128	11.798	10.979	8.855	5.965	4.645	3.365	17.076	21.774	15.334	10.449
0.0600	49.138	16.816	13.638	13.182	12.461	10.254	6.974	5.488	4.031	19.140	24.437	17.184	12.539
0.0700	54.676	18.516	15.161	14.725	13.967	11.645	7.935	6.306	4.661	21.193	27.031	19.161	14.629
0.0800	60.605	20.347	16.784	16.313	15.527	13.047	8.942	7.126	5.292	23.264	29.639	21.238	16.718
0.0900	66.513	22.315	18.455	17.987	17.125	14.445	9.930	7.944	5.883	25.331	32.207	23.383	18.808
0.1000	73.020	24.500	20.310	19.672	18.714	15.861	10.953	8.719	6.464	27.393	34.834	25.597	20.898
0.1250	90.478	30.197	24.955	24.044	22.973	19.395	13.355	10.643	7.908	32.681	41.592	31.428	26.122
0.1600	116.973	39.000	32.002	30.841	29.256	24.371	16.714	13.308	9.875	40.320	51.225	40.399	33.437
0.2000	148.098	49.165	40.267	38.668	36.557	29.710	20.209	16.046	11.854	48.682	61.773	50.824	41.796
0.2500	186.747	61.813	50.132	48.272	45.067	35.627	24.084	18.881	13.885	58.367	73.975	63.673	52.245
0.3200	237.122	77.404	62.953	60.079	54.969	42.115	28.103	21.916	16.008	70.338	89.340	79.759	66.874
0.4000	284.549	93.938	74.603	70.909	64.206	47.926	31.693	24.670	17.967	81.762	104.107	94.667	83.592
0.5000	332.338	110.432	85.793	81.626	73.031	53.705	35.422	27.660	20.159	93.398	119.235	109.494	104.49
0.6000	366.770	123.027	93.108	88.487	79.072	57.817	38.352	29.919	21.891	101.771	130.593	119.388	125.39
0.7000	384.590	132.164	97.212	92.389	82.681	60.382	40.401	31.444	23.238	107.422	138.052	124.835	146.29
0.8000	392.442	137.723	99.548	94.935	84.840	62.042	41.985	32.759	24.335	111.248	142.804	127.962	167.18
0.9000	394.905	140.756	100.842	96.117	85.469	63.044	43.016	33.990	25.246	113.888	146.045	129.332	188.08
1.0000	397.295	143.660	102.530	97.297	86.682	64.201	44.226	35.233	26.167	115.945	148.525	130.613	208.98
1.2500	397.772	148.944	106.046	101.244	89.959	67.469	47.380	38.257	28.892	119.812	152.146	134.218	261.22
1.6000	388.799	152.251	109.930	105.113	94.103	71.825	51.525	41.891	32.429	122.575	153.369	136.596	334.37
2.0000	373.401	153.059	113.464	108.052	97.770	75.943	55.469	45.548	35.807	124.467	153.329	137.545	417.96
2.5000	351.494	151.105	115.398	109.819	101.357	80.155	59.512	49.562	39.427	125.162	151.477	136.692	522.45
3.2000	330.267	146.733	116.349	111.064	103.138	83.510	63.506	52.843	42.369	124.841	148.809	135.410	668.74
4.0000	310.478	140.374	114.783	110.079	103.493	84.676	64.918	54.663	44.220	122.874	144.796	132.376	835.92
5.0000	294.135	133.656	111.827	107.664	101.467	84.078	65.394	55.220	45.323	119.689	140.130	128.383	1044.9
6.0000	281.015	127.767	108.611	104.454	98.943	82.588	64.516	54.848	45.179	116.020	135.447	124.062	1253.9
7.0000	270.349	122.758	105.498	101.711	96.163	80.841	63.580	54.246	44.823	112.631	131.124	120.468	1462.9
8.0000	260.747	117.936	102.497	98.895	93.406	78.824	62.013	53.179	44.173	109.273	126.942	116.907	1671.8
9.0000	251.523	114.313	99.523	96.097	90.916	76.877	60.583	52.059	43.452	105.957	122.920	113.394	1880.8
10.0000	243.573	111.196	97.022	93.682	88.631	74.945	59.223	50.914	42.605	102.969	119.261	110.300	2089.8
11.0000	236.060	108.254	94.663	91.404	86.476	73.123	57.942	49.835	41.728	100.226	115.964	107.459	2298.8
12.0000	228.975	105.484	92.444	89.262	84.449	71.409	56.739	48.822	40.905	97.644	112.780	104.785	2507.8

$^{209}_{83}Bi$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=209 MEV
0.0125	0.139	0.135	0.161	0.200	0.206	0.245	0.254	0.272	0.350	0.385	0.401	0.449	2.6122
0.0160	0.176	0.173	0.207	0.259	0.269	0.319	0.332	0.358	0.467	0.521	0.548	0.626	3.3437
0.0200	0.216	0.214	0.259	0.325	0.339	0.401	0.419	0.452	0.594	0.665	0.703	0.809	4.1796
0.0250	0.264	0.265	0.322	0.408	0.426	0.504	0.526	0.567	0.748	0.839	0.888	1.026	5.2245
0.0320	0.328	0.333	0.408	0.521	0.548	0.646	0.674	0.727	0.962	1.080	1.144	1.322	6.6874
0.0400	0.397	0.408	0.503	0.649	0.687	0.807	0.842	0.906	1.207	1.355	1.435	1.656	8.3592
0.0500	0.477	0.496	0.616	0.804	0.858	1.004	1.047	1.126	1.511	1.695	1.795	2.070	10.449
0.0600	0.552	0.578	0.724	0.952	1.023	1.193	1.246	1.338	1.810	2.029	2.149	2.475	12.539
0.0700	0.622	0.656	0.827	1.095	1.183	1.376	1.438	1.543	2.100	2.353	2.494	2.869	14.629
0.0800	0.688	0.729	0.925	1.231	1.338	1.551	1.622	1.741	2.381	2.667	2.827	3.251	16.718
0.0900	0.751	0.799	1.019	1.361	1.486	1.719	1.800	1.930	2.652	2.970	3.150	3.620	18.808
0.1000	0.811	0.864	1.109	1.486	1.629	1.880	1.971	2.112	2.912	3.262	3.460	3.975	20.898
0.1250	0.951	1.014	1.319	1.777	1.962	2.256	2.372	2.539	3.521	3.947	4.188	4.809	26.122
0.1600	1.127	1.197	1.584	2.141	2.383	2.727	2.877	3.075	4.286	4.809	5.101	5.851	33.437
0.2000	1.307	1.376	1.855	2.510	2.810	3.204	3.390	3.621	5.059	5.679	6.023	6.901	41.796
0.2500	1.509	1.571	2.158	2.918	3.282	3.730	3.958	4.225	5.907	6.633	7.035	8.055	52.245
0.3200	1.763	1.807	2.533	3.417	3.859	4.368	4.652	4.965	6.934	7.786	8.260	9.447	66.874
0.4000	2.022	2.042	2.910	3.912	4.431	4.998	5.338	5.699	7.941	8.915	9.459	10.809	83.592
0.5000	2.313	2.302	3.327	4.453	5.053	5.679	6.083	6.496	9.021	10.124	10.744	12.267	104.49
0.6000	2.578	2.538	3.700	4.931	5.600	6.276	6.737	7.198	9.961	11.175	11.858	13.525	125.39
0.7000	2.825	2.760	4.041	5.364	6.094	6.814	7.329	7.832	10.803	12.115	12.853	14.646	146.29
0.8000	3.061	2.970	4.360	5.765	6.550	7.309	7.874	8.417	11.573	12.973	13.762	15.669	167.18
0.9000	3.286	3.173	4.664	6.145	6.983	7.776	8.391	8.972	12.299	13.782	14.618	16.631	188.08
1.0000	3.503	3.371	4.954	6.505	7.391	8.215	8.878	9.494	12.979	14.537	15.418	17.527	208.98
1.2500	4.020	3.848	5.632	7.338	8.331	9.225	9.997	10.700	14.527	16.256	17.235	19.559	261.22
1.6000	4.706	4.495	6.511	8.401	9.522	10.502	11.414	12.230	16.455	18.390	19.492	22.079	334.37
2.0000	5.462	5.218	7.458	9.527	10.779	11.845	12.908	13.845	18.459	20.596	21.826	24.674	417.96
2.5000	6.391	6.106	8.597	10.862	12.260	13.422	14.670	15.744	20.789	23.152	24.525	27.660	522.45
3.2000	7.689	7.340	10.156	12.665	14.247	15.536	17.030	18.291	23.864	26.523	28.076	31.572	668.74
4.0000	9.191	8.757	11.928	14.691	16.466	17.894	19.653	21.132	27.243	30.215	31.959	35.843	835.92
5.0000	11.118	10.560	14.166	17.228	19.228	20.824	22.905	24.651	31.377	34.738	36.691	41.037	1044.9
6.0000	13.107	12.412	16.451	19.798	22.016	23.773	26.174	28.186	35.502	39.232	41.384	46.161	1253.9
7.0000	15.163	14.321	18.794	22.419	24.854	26.763	29.482	31.762	39.655	43.741	46.088	51.276	1462.9
8.0000	17.290	16.288	21.199	25.096	27.750	29.808	32.841	35.395	43.844	48.291	50.826	56.419	1671.8
9.0000	19.485	18.316	23.667	27.835	30.706	32.915	36.258	39.090	48.090	52.892	55.615	61.605	1880.8
10.0000	21.745	20.405	26.200	30.634	33.727	36.086	39.742	42.849	52.401	57.553	60.458	66.844	2089.8
11.0000	24.073	22.554	28.798	33.493	36.812	39.320	43.295	46.668	56.781	62.271	65.349	72.145	2298.8
12.0000	26.465	24.762	31.459	36.414	39.959	42.618	46.915	50.550	61.227	67.048	70.300	77.515	2507.8

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.053	0.124	0.145	0.148	0.155	0.203	0.274	0.345	0.419	0.129	0.109	0.120	2.6122
0.0160	0.068	0.158	0.187	0.191	0.201	0.263	0.356	0.455	0.583	0.165	0.139	0.155	3.3437
0.0200	0.085	0.196	0.234	0.240	0.252	0.331	0.448	0.575	0.749	0.206	0.173	0.194	4.1796
0.0250	0.104	0.245	0.293	0.301	0.317	0.416	0.563	0.721	0.946	0.255	0.214	0.243	5.2245
0.0320	0.130	0.313	0.376	0.387	0.408	0.534	0.723	0.923	1.206	0.323	0.269	0.311	6.6874
0.0400	0.159	0.391	0.471	0.484	0.510	0.666	0.902	1.147	1.495	0.399	0.330	0.387	8.3592
0.0500	0.193	0.487	0.586	0.603	0.635	0.823	1.116	1.413	1.837	0.488	0.402	0.480	10.449
0.0600	0.225	0.581	0.698	0.717	0.755	0.970	1.318	1.664	2.157	0.573	0.470	0.569	12.539
0.0700	0.255	0.671	0.804	0.825	0.868	1.108	1.509	1.899	2.457	0.654	0.534	0.654	14.629
0.0800	0.284	0.757	0.904	0.928	0.975	1.237	1.687	2.118	2.738	0.729	0.594	0.734	16.718
0.0900	0.311	0.837	0.999	1.024	1.076	1.358	1.855	2.325	3.003	0.801	0.650	0.809	18.808
0.1000	0.335	0.912	1.087	1.115	1.171	1.471	2.012	2.518	3.254	0.868	0.704	0.879	20.898
0.1250	0.391	1.080	1.285	1.320	1.384	1.724	2.368	2.958	3.825	1.021	0.825	1.037	26.122
0.1600	0.455	1.274	1.517	1.559	1.634	2.024	2.793	3.486	4.515	1.204	0.970	1.222	33.437
0.2000	0.514	1.452	1.733	1.783	1.870	2.311	3.205	3.999	5.192	1.380	1.109	1.393	41.796
0.2500	0.574	1.634	1.953	2.012	2.113	2.613	3.645	4.553	5.929	1.566	1.257	1.567	52.245
0.3200	0.641	1.839	2.204	2.273	2.395	2.975	4.177	5.229	6.840	1.787	1.431	1.765	66.874
0.4000	0.704	2.031	2.442	2.522	2.668	3.336	4.715	5.916	7.771	2.002	1.600	1.953	83.592
0.5000	0.771	2.233	2.698	2.792	2.966	3.738	5.320	6.689	8.822	2.236	1.784	2.154	104.49
0.6000	0.831	2.412	2.928	3.034	3.236	4.106	5.873	7.395	9.783	2.447	1.949	2.334	125.39
0.7000	0.886	2.575	3.148	3.264	3.495	4.459	6.393	8.061	10.684	2.647	2.104	2.505	146.29
0.8000	0.940	2.730	3.360	3.487	3.744	4.800	6.900	8.700	11.542	2.838	2.253	2.670	167.18
0.9000	0.993	2.880	3.568	3.706	3.989	5.134	7.391	9.326	12.384	3.023	2.398	2.833	188.08
1.0000	1.046	3.027	3.773	3.922	4.231	5.462	7.870	9.929	13.197	3.205	2.539	2.993	208.98
1.2500	1.177	3.383	4.273	4.447	4.821	6.253	9.008	11.349	15.092	3.647	2.886	3.387	261.22
1.6000	1.362	3.867	4.948	5.153	5.614	7.301	10.484	13.171	17.475	4.248	3.363	3.925	334.37
2.0000	1.581	4.413	5.695	5.936	6.483	8.430	12.045	15.080	19.923	4.924	3.907	4.533	417.96
2.5000	1.868	5.099	6.606	6.893	7.531	9.767	13.860	17.275	22.699	5.759	4.591	5.294	522.45
3.2000	2.297	6.079	7.866	8.215	8.959	11.552	16.235	20.128	26.271	6.927	5.563	6.367	668.74
4.0000	2.818	7.243	9.311	9.725	10.575	13.537	18.835	23.235	30.128	8.275	6.701	7.614	835.92
5.0000	3.509	8.767	11.155	11.644	12.613	16.012	22.040	27.036	34.792	9.997	8.167	9.216	1044.9
6.0000	4.236	10.366	13.050	13.614	14.698	18.519	25.256	30.832	39.409	11.770	9.683	10.872	1253.9
7.0000	4.994	12.035	15.003	15.641	16.841	21.077	28.519	34.663	44.052	13.598	11.251	12.581	1462.9
8.0000	5.781	13.771	17.012	17.725	19.046	23.695	31.847	38.554	48.749	15.482	12.871	14.342	1671.8
9.0000	6.597	15.571	19.082	19.869	21.314	26.379	35.257	42.526	53.519	17.424	14.544	16.157	1880.8
10.0000	7.442	17.425	21.208	22.071	23.642	29.133	38.746	46.585	58.376	19.425	16.271	18.026	2089.8
11.0000	8.313	19.330	23.389	24.330	26.029	31.956	42.314	50.734	63.333	21.483	18.048	19.946	2298.8
12.0000	9.212	21.286	25.623	26.644	28.475	34.848	45.959	54.971	68.392	23.595	19.875	21.915	2507.8

${}^{210}_{84}$Po IONS

ENERGY PER MASS UNIT	ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)												ENERGY FOR A=210
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	9.570	7.917	5.800	3.857	3.132	2.842	2.633	2.436	1.549	1.325	1.218	1.044	2.6247
0.0160	11.090	9.175	6.721	4.470	3.630	3.293	3.051	2.823	1.795	1.536	1.411	1.210	3.3597
0.0200	12.671	10.482	7.679	5.107	4.147	3.763	3.486	3.225	2.050	1.755	1.613	1.382	4.1996
0.0250	14.477	11.976	8.774	5.835	4.738	4.299	3.983	3.685	2.343	2.005	1.847	1.579	5.2495
0.0320	16.756	13.889	10.167	6.761	5.501	5.002	4.616	4.270	2.715	2.328	2.145	1.840	6.7194
0.0400	19.097	15.903	11.616	7.748	6.319	5.762	5.309	4.914	3.125	2.689	2.474	2.126	8.3992
0.0500	21.740	18.223	13.272	8.892	7.286	6.636	6.118	5.667	3.597	3.126	2.880	2.475	10.499
0.0600	24.151	20.437	14.799	9.974	8.198	7.444	6.881	6.378	4.084	3.552	3.278	2.819	12.599
0.0700	26.366	22.553	16.226	11.001	9.086	8.243	7.626	7.074	4.543	3.975	3.683	3.164	14.699
0.0800	28.432	24.636	17.572	12.002	9.928	8.997	8.312	7.732	5.008	4.393	4.059	3.497	16.798
0.0900	30.372	26.658	18.853	12.971	10.746	9.766	8.993	8.371	5.486	4.798	4.449	3.837	18.898
0.1000	32.223	28.650	20.077	13.913	11.564	10.480	9.637	9.014	5.943	5.200	4.818	4.156	20.998
0.1250	36.472	33.651	22.938	16.149	13.488	12.226	11.240	10.529	7.054	6.170	5.769	4.989	26.247
0.1600	41.706	40.537	26.582	19.032	16.002	14.514	13.317	12.493	8.506	7.469	7.004	6.114	33.597
0.2000	47.013	47.712	30.370	22.079	18.678	16.916	15.519	14.547	10.083	8.898	8.352	7.289	41.996
0.2500	52.846	55.588	34.699	25.642	21.791	19.778	18.113	16.968	11.971	10.583	9.924	8.675	52.495
0.3200	59.993	65.180	40.210	30.278	25.855	23.603	21.512	20.105	14.395	12.787	12.003	10.555	67.194
0.4000	67.166	74.562	45.941	35.007	30.137	27.565	25.130	23.476	17.090	15.206	14.288	12.542	83.992
0.5000	75.059	84.350	52.489	40.574	35.168	32.281	29.394	27.399	20.261	18.056	16.980	14.959	104.99
0.6000	81.602	91.905	58.204	45.574	39.695	36.552	33.176	30.907	23.107	20.663	19.469	17.287	125.99
0.7000	87.062	97.732	63.134	49.876	43.626	40.217	36.428	33.966	25.632	22.918	21.655	19.193	146.99
0.8000	91.541	102.057	67.409	53.725	47.119	43.613	39.434	36.738	27.907	25.076	23.660	21.031	167.98
0.9000	95.455	105.484	71.129	57.046	50.288	46.661	42.108	39.192	30.088	27.029	25.535	22.761	188.98
1.0000	98.699	108.070	74.377	60.171	53.105	49.312	44.552	41.428	31.982	28.784	27.222	24.321	209.98
1.2500	104.850	112.287	80.840	66.289	59.014	54.972	49.555	45.998	36.136	32.579	30.800	27.567	262.47
1.6000	110.133	115.439	86.993	72.639	64.896	60.634	54.631	50.456	40.452	36.624	34.623	31.056	335.97
2.0000	113.147	118.079	91.322	77.349	69.496	65.204	58.446	54.154	43.834	39.999	37.807	34.063	419.96
2.5000	114.330	119.796	94.254	80.964	73.235	68.805	61.548	57.118	46.938	42.697	40.529	36.759	524.95
3.2000	113.845	120.261	95.749	83.302	75.833	71.333	63.960	59.173	49.406	45.194	42.896	38.970	671.94
4.0000	111.787	119.049	95.545	83.984	76.914	72.423	65.257	60.193	50.925	46.626	44.428	40.415	839.92
5.0000	108.470	116.272	93.995	83.280	76.700	72.376	65.233	60.345	51.697	47.186	45.212	41.264	1049.9
6.0000	105.096	112.997	91.867	81.945	75.607	71.656	64.674	59.805	51.262	47.312	45.290	41.616	1259.9
7.0000	101.565	109.716	89.564	80.249	74.159	70.487	63.769	59.023	51.051	46.931	45.051	41.468	1469.9
8.0000	98.342	106.457	87.260	78.534	72.688	69.110	62.827	58.028	50.436	46.510	44.677	41.187	1679.8
9.0000	95.492	103.315	85.033	76.785	71.172	67.771	61.649	57.057	49.744	45.918	44.132	40.816	1889.8
10.0000	92.697	100.325	82.914	75.203	69.647	66.414	60.444	56.132	48.919	45.354	43.695	40.379	2099.8
11.0000	90.137	97.662	80.913	73.631	68.290	65.135	59.309	55.263	48.224	44.826	43.288	39.890	2309.8
12.0000	87.803	95.074	79.030	72.076	66.939	63.936	58.245	54.373	47.497	44.257	42.676	39.357	2519.8

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	21.750	9.280	6.148	5.777	5.133	3.387	2.076	1.473	0.972	7.778	9.895	7.552	2.6247
0.0160	24.734	10.431	7.010	6.594	5.861	3.959	2.453	1.748	1.160	8.959	11.399	8.610	3.3597
0.0200	27.492	11.289	7.810	7.357	6.581	4.569	2.849	2.073	1.387	10.152	12.909	9.591	4.1996
0.0250	30.533	12.117	8.704	8.204	7.423	5.326	3.404	2.483	1.799	11.494	14.626	10.687	5.2495
0.0320	34.671	13.157	9.750	9.283	8.480	6.355	4.128	3.111	2.166	13.218	16.857	12.099	6.7194
0.0400	38.915	14.149	10.838	10.432	9.607	7.504	4.972	3.810	2.707	15.043	19.190	13.591	8.3992
0.0500	43.931	15.449	12.197	11.865	11.042	8.906	5.999	4.672	3.384	17.174	21.899	15.422	10.499
0.0600	49.428	16.915	13.718	13.260	12.534	10.315	7.015	5.520	4.055	19.253	24.581	17.285	12.599
0.0700	55.005	18.627	15.252	14.814	14.051	11.715	7.983	6.344	4.689	21.320	27.194	19.276	14.699
0.0800	60.976	20.472	16.887	16.412	15.622	13.126	8.997	7.169	5.324	23.406	29.820	21.368	16.798
0.0900	66.927	22.453	18.570	18.099	17.231	14.535	9.992	7.994	5.920	25.489	32.408	23.528	18.898
0.1000	73.481	24.654	20.438	19.796	18.832	15.961	11.022	8.774	6.505	27.565	35.054	25.759	20.998
0.1250	91.065	30.393	25.117	24.200	23.122	19.521	13.442	10.712	7.960	32.894	41.862	31.632	26.247
0.1600	117.756	39.261	32.217	31.047	29.452	24.535	16.826	13.397	9.941	40.590	51.568	40.670	33.597
0.2000	149.118	49.503	40.544	38.935	36.809	29.915	20.348	16.157	11.935	49.017	62.198	51.174	41.996
0.2500	188.068	62.250	50.487	48.613	45.386	35.879	24.254	19.015	13.984	58.780	74.498	64.123	52.495
0.3200	238.847	77.967	63.411	60.516	55.369	42.421	28.308	22.075	16.124	70.850	89.990	80.339	67.194
0.4000	286.672	94.638	75.159	71.438	64.685	48.284	31.929	24.854	18.101	82.372	104.883	95.374	83.992
0.5000	334.880	111.277	86.449	82.250	73.590	54.116	35.693	27.872	20.313	94.113	120.147	110.332	104.99
0.6000	369.598	123.975	93.825	89.169	79.682	58.263	38.648	30.150	22.059	102.556	131.600	120.308	125.99
0.7000	387.644	133.213	97.984	93.123	83.337	60.861	40.722	31.693	23.423	108.275	139.148	125.827	146.99
0.8000	395.688	138.862	100.371	95.720	85.541	62.555	42.333	33.030	24.537	112.168	143.985	129.020	167.98
0.9000	398.323	141.974	101.715	96.949	86.208	63.589	43.389	34.284	25.464	114.873	147.308	130.451	188.98
1.0000	400.893	144.961	103.459	98.178	87.468	64.783	44.626	35.552	26.404	116.995	149.870	131.797	209.98
1.2500	401.777	150.444	107.114	102.263	90.865	68.149	47.858	38.642	29.183	121.018	153.678	135.570	262.47
1.6000	393.207	153.977	111.177	106.305	95.170	72.639	52.109	42.365	32.796	123.964	155.108	138.144	335.97
2.0000	378.071	154.973	114.882	109.403	98.993	76.893	56.163	46.117	36.255	126.024	155.247	139.265	419.96
2.5000	356.279	153.162	116.969	111.313	102.736	81.247	60.322	50.237	39.964	126.865	153.539	138.553	524.95
3.2000	335.121	148.890	118.058	112.697	104.654	84.738	64.439	53.619	42.991	126.676	150.996	137.400	671.94
4.0000	315.298	142.553	116.565	111.787	105.099	85.990	65.926	55.512	44.906	124.782	147.043	134.432	839.92
5.0000	298.904	135.823	113.640	109.410	103.113	85.441	66.454	56.115	46.058	121.630	142.402	130.465	1049.9
6.0000	285.707	129.900	110.424	106.198	100.594	83.967	65.593	55.763	45.934	117.957	137.709	126.134	1259.9
7.0000	274.961	124.852	107.297	103.446	97.804	82.220	64.665	55.171	45.588	114.552	133.360	122.523	1469.9
8.0000	265.271	119.983	104.276	100.611	95.026	80.192	63.089	54.101	44.939	111.169	129.145	118.935	1679.8
9.0000	255.949	116.325	101.274	97.788	92.516	78.230	61.649	52.975	44.217	107.822	125.083	115.389	1889.8
10.0000	247.912	113.177	98.750	95.351	90.210	76.280	60.278	51.821	43.364	104.803	121.385	112.265	2099.8
11.0000	240.311	110.203	96.367	93.050	88.033	74.440	58.985	50.732	42.479	102.031	118.052	109.394	2309.8
12.0000	233.140	107.402	94.125	90.885	85.985	72.708	57.771	49.710	41.649	99.420	114.831	106.691	2519.8

$^{210}_{84}Po$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=210 MEV
0.0125	0.138	0.134	0.160	0.199	0.205	0.243	0.252	0.270	0.346	0.381	0.397	0.443	2.6247
0.0160	0.175	0.172	0.206	0.258	0.267	0.317	0.330	0.356	0.463	0.516	0.543	0.619	3.3597
0.0200	0.215	0.213	0.257	0.323	0.337	0.399	0.416	0.449	0.589	0.659	0.697	0.802	4.1996
0.0250	0.263	0.264	0.320	0.405	0.423	0.500	0.522	0.563	0.742	0.833	0.882	1.018	5.2495
0.0320	0.327	0.332	0.406	0.518	0.545	0.642	0.670	0.722	0.955	1.072	1.135	1.312	6.7194
0.0400	0.395	0.406	0.500	0.645	0.683	0.802	0.837	0.900	1.199	1.345	1.424	1.644	8.3992
0.0500	0.475	0.493	0.613	0.799	0.852	0.997	1.041	1.119	1.500	1.682	1.782	2.054	10.499
0.0600	0.549	0.576	0.720	0.947	1.017	1.186	1.238	1.330	1.797	2.014	2.134	2.456	12.599
0.0700	0.619	0.653	0.823	1.088	1.176	1.367	1.429	1.534	2.085	2.336	2.476	2.848	14.699
0.0800	0.686	0.726	0.920	1.224	1.329	1.542	1.613	1.730	2.365	2.648	2.807	3.227	16.798
0.0900	0.748	0.795	1.014	1.354	1.477	1.709	1.789	1.919	2.634	2.950	3.128	3.594	18.898
0.1000	0.808	0.861	1.103	1.478	1.619	1.869	1.960	2.100	2.893	3.240	3.437	3.947	20.998
0.1250	0.948	1.010	1.313	1.768	1.952	2.244	2.359	2.524	3.499	3.922	4.161	4.777	26.247
0.1600	1.123	1.192	1.577	2.131	2.370	2.713	2.861	3.059	4.260	4.779	5.070	5.814	33.597
0.2000	1.302	1.371	1.847	2.499	2.796	3.188	3.373	3.602	5.030	5.646	5.988	6.860	41.996
0.2500	1.504	1.565	2.149	2.906	3.266	3.712	3.939	4.205	5.876	6.596	6.996	8.009	52.495
0.3200	1.757	1.801	2.523	3.402	3.842	4.349	4.630	4.942	6.899	7.745	8.217	9.397	67.194
0.4000	2.015	2.035	2.900	3.896	4.412	4.976	5.315	5.674	7.903	8.870	9.412	10.753	83.992
0.5000	2.306	2.295	3.315	4.436	5.032	5.656	6.057	6.468	8.979	10.076	10.692	12.206	104.99
0.6000	2.570	2.529	3.687	4.912	5.577	6.251	6.709	7.167	9.915	11.123	11.802	13.461	125.99
0.7000	2.816	2.751	4.027	5.344	6.070	6.787	7.299	7.800	10.754	12.060	12.794	14.578	146.99
0.8000	3.051	2.961	4.344	5.743	6.524	7.280	7.842	8.382	11.522	12.915	13.699	15.597	167.98
0.9000	3.276	3.163	4.647	6.122	6.955	7.745	8.357	8.935	12.246	13.721	14.553	16.556	188.98
1.0000	3.492	3.359	4.936	6.480	7.361	8.182	8.842	9.456	12.923	14.473	15.349	17.448	209.98
1.2500	4.006	3.834	5.611	7.310	8.296	9.188	9.956	10.656	14.463	16.184	17.158	19.470	262.47
1.6000	4.688	4.478	6.485	8.366	9.481	10.458	11.365	12.177	16.380	18.305	19.402	21.975	335.97
2.0000	5.439	5.196	7.425	9.484	10.729	11.790	12.848	13.780	18.370	20.495	21.718	24.552	419.96
2.5000	6.360	6.077	8.555	10.808	12.197	13.355	14.595	15.664	20.681	23.031	24.395	27.513	524.95
3.2000	7.646	7.299	10.099	12.594	14.166	15.449	16.933	18.188	23.727	26.370	27.914	31.389	671.94
4.0000	9.133	8.701	11.853	14.600	16.363	17.783	19.530	20.999	27.072	30.025	31.757	35.617	839.92
5.0000	11.039	10.484	14.067	17.109	19.094	20.681	22.746	24.480	31.160	34.498	36.438	40.754	1049.9
6.0000	13.005	12.316	16.326	19.650	21.851	23.596	25.978	27.974	35.238	38.941	41.076	45.819	1259.9
7.0000	15.037	14.201	18.641	22.239	24.655	26.550	29.247	31.508	39.342	43.396	45.724	50.873	1469.9
8.0000	17.138	16.144	21.016	24.884	27.515	29.559	32.564	35.096	43.480	47.890	50.405	55.954	1679.8
9.0000	19.305	18.147	23.454	27.588	30.435	32.627	35.938	38.745	47.672	52.434	55.134	61.075	1889.8
10.0000	21.537	20.209	25.955	30.352	33.417	35.757	39.379	42.456	51.929	57.036	59.916	66.248	2099.8
11.0000	23.834	22.331	28.519	33.174	36.462	38.950	42.886	46.226	56.253	61.693	64.744	71.480	2309.8
12.0000	26.195	24.510	31.145	36.057	39.568	42.204	46.459	50.057	60.641	66.408	69.630	76.780	2519.8

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.053	0.123	0.144	0.148	0.154	0.202	0.272	0.342	0.414	0.128	0.109	0.120	2.6247
0.0160	0.068	0.157	0.186	0.190	0.200	0.262	0.354	0.452	0.577	0.164	0.139	0.154	3.3597
0.0200	0.084	0.196	0.233	0.239	0.251	0.329	0.445	0.571	0.743	0.205	0.172	0.193	4.1996
0.0250	0.104	0.244	0.292	0.300	0.315	0.414	0.559	0.716	0.938	0.254	0.213	0.241	5.2495
0.0320	0.130	0.311	0.374	0.385	0.405	0.531	0.718	0.917	1.197	0.322	0.268	0.309	6.7194
0.0400	0.158	0.389	0.468	0.481	0.507	0.662	0.895	1.139	1.484	0.397	0.328	0.385	8.3992
0.0500	0.192	0.485	0.583	0.599	0.631	0.818	1.108	1.404	1.824	0.486	0.400	0.477	10.499
0.0600	0.224	0.579	0.694	0.713	0.750	0.964	1.310	1.653	2.142	0.571	0.468	0.566	12.599
0.0700	0.254	0.668	0.800	0.821	0.863	1.102	1.499	1.886	2.440	0.651	0.531	0.651	14.699
0.0800	0.283	0.753	0.899	0.923	0.970	1.230	1.677	2.105	2.720	0.726	0.591	0.730	16.798
0.0900	0.309	0.833	0.994	1.019	1.070	1.350	1.844	2.310	2.983	0.797	0.648	0.805	18.898
0.1000	0.334	0.908	1.082	1.110	1.165	1.463	2.000	2.503	3.233	0.864	0.701	0.875	20.998
0.1250	0.390	1.075	1.279	1.313	1.377	1.715	2.355	2.941	3.801	1.016	0.822	1.033	26.247
0.1600	0.454	1.268	1.510	1.552	1.627	2.014	2.779	3.467	4.489	1.199	0.966	1.216	33.597
0.2000	0.513	1.447	1.725	1.775	1.861	2.300	3.189	3.978	5.163	1.375	1.105	1.387	41.996
0.2500	0.572	1.628	1.945	2.003	2.104	2.602	3.627	4.530	5.898	1.561	1.252	1.561	52.495
0.3200	0.639	1.832	2.195	2.264	2.385	2.963	4.158	5.205	6.806	1.780	1.426	1.758	67.194
0.4000	0.702	2.023	2.432	2.513	2.657	3.322	4.694	5.889	7.734	1.995	1.594	1.946	83.992
0.5000	0.768	2.225	2.688	2.781	2.955	3.723	5.297	6.660	8.781	2.228	1.778	2.146	104.99
0.6000	0.828	2.403	2.917	3.022	3.224	4.090	5.848	7.364	9.739	2.439	1.942	2.326	125.99
0.7000	0.883	2.566	3.136	3.252	3.481	4.442	6.367	8.028	10.637	2.638	2.097	2.496	146.99
0.8000	0.937	2.721	3.347	3.474	3.730	4.782	6.872	8.664	11.492	2.828	2.246	2.661	167.98
0.9000	0.990	2.870	3.555	3.692	3.974	5.114	7.362	9.288	12.331	3.013	2.390	2.823	188.98
1.0000	1.042	3.016	3.760	3.907	4.216	5.441	7.838	9.889	13.140	3.194	2.531	2.983	209.98
1.2500	1.173	3.371	4.257	4.430	4.803	6.229	8.971	11.301	15.027	3.634	2.876	3.374	262.47
1.6000	1.357	3.852	4.928	5.132	5.591	7.270	10.439	13.113	17.396	4.232	3.350	3.909	335.97
2.0000	1.574	4.394	5.670	5.909	6.454	8.392	11.988	15.009	19.826	4.902	3.890	4.513	419.96
2.5000	1.859	5.074	6.574	6.859	7.493	9.718	13.788	17.186	22.579	5.731	4.569	5.268	524.95
3.2000	2.284	6.046	7.822	8.168	8.908	11.486	16.141	20.012	26.118	6.888	5.532	6.331	671.94
4.0000	2.800	7.197	9.252	9.663	10.508	13.451	18.715	23.087	29.937	8.222	6.658	7.565	839.92
5.0000	3.483	8.705	11.075	11.560	12.523	15.899	21.885	26.846	34.549	9.926	8.108	9.150	1049.9
6.0000	4.202	10.286	12.949	13.508	14.584	18.377	25.065	30.599	39.113	11.678	9.607	10.786	1259.9
7.0000	4.951	11.934	14.878	15.511	16.701	20.904	28.288	34.384	43.701	13.484	11.156	12.475	1469.9
8.0000	5.728	13.650	16.863	17.569	18.879	23.490	31.576	38.228	48.340	15.345	12.756	14.214	1679.8
9.0000	6.534	15.427	18.907	19.687	21.119	26.141	34.943	42.150	53.051	17.263	14.409	16.007	1889.8
10.0000	7.368	17.258	21.007	21.861	23.418	28.860	38.388	46.158	57.847	19.239	16.113	17.852	2099.8
11.0000	8.228	19.138	23.159	24.091	25.774	31.647	41.910	50.254	62.740	21.270	17.867	19.747	2309.8
12.0000	9.116	21.068	25.364	26.374	28.188	34.501	45.507	54.435	67.732	23.355	19.671	21.691	2519.8

$^{211}_{85}At$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=211 MEV
0.0125	9.613	7.953	5.826	3.874	3.146	2.855	2.645	2.447	1.556	1.331	1.224	1.049	2.6374
0.0160	11.142	9.218	6.753	4.491	3.647	3.309	3.066	2.836	1.803	1.543	1.418	1.216	3.3758
0.0200	12.733	10.534	7.717	5.132	4.167	3.781	3.503	3.241	2.060	1.763	1.621	1.389	4.2198
0.0250	14.550	12.037	8.818	5.864	4.762	4.321	4.004	3.704	2.355	2.015	1.856	1.587	5.2747
0.0320	16.844	13.962	10.221	6.797	5.530	5.029	4.640	4.293	2.729	2.341	2.157	1.850	6.7517
0.0400	19.202	15.990	11.680	7.791	6.354	5.793	5.338	4.941	3.142	2.704	2.488	2.137	8.4396
0.0500	21.863	18.326	13.347	8.943	7.328	6.674	6.153	5.699	3.617	3.143	2.896	2.489	10.549
0.0600	24.292	20.556	14.885	10.032	8.246	7.487	6.921	6.415	4.108	3.572	3.297	2.835	12.659
0.0700	26.523	22.687	16.322	11.066	9.140	8.291	7.671	7.116	4.570	3.999	3.705	3.183	14.769
0.0800	28.603	24.785	17.678	12.074	9.988	9.051	8.362	7.778	5.038	4.420	4.084	3.518	16.879
0.0900	30.558	26.821	18.968	13.050	10.812	9.826	9.048	8.422	5.520	4.827	4.477	3.860	18.989
0.1000	32.424	28.828	20.202	14.000	11.636	10.545	9.697	9.071	5.980	5.232	4.848	4.182	21.099
0.1250	36.705	33.866	23.085	16.252	13.574	12.304	11.312	10.596	7.099	6.210	5.806	5.021	26.374
0.1600	41.982	40.805	26.757	19.158	16.108	14.609	13.405	12.576	8.562	7.519	7.050	6.154	33.758
0.2000	47.332	48.035	30.576	22.229	18.804	17.031	15.625	14.646	10.151	8.959	8.408	7.338	42.198
0.2500	53.215	55.975	34.941	25.821	21.943	19.916	18.239	17.086	12.055	10.657	9.993	8.735	52.747
0.3200	60.424	65.648	40.498	30.495	26.040	23.773	21.667	20.249	14.498	12.878	12.089	10.631	67.517
0.4000	67.660	75.111	46.279	35.265	30.359	27.767	25.315	23.649	17.216	15.318	14.393	12.634	84.396
0.5000	75.625	84.986	52.885	40.880	35.433	32.524	29.615	27.606	20.414	18.192	17.108	15.072	105.49
0.6000	82.219	92.599	58.644	45.918	39.995	36.829	33.427	31.140	23.282	20.819	19.617	17.417	126.59
0.7000	87.739	98.492	63.625	50.264	43.965	40.529	36.712	34.230	25.832	23.096	21.823	19.342	147.69
0.8000	92.282	102.883	67.954	54.159	47.500	43.966	39.753	37.035	28.133	25.279	23.852	21.202	168.79
0.9000	96.263	106.378	71.731	57.529	50.714	47.056	42.465	39.524	30.342	27.258	25.752	22.954	189.89
1.0000	99.574	109.028	75.037	60.705	53.576	49.749	44.947	41.795	32.266	29.039	27.463	24.537	210.99
1.2500	105.885	113.396	81.639	66.944	59.596	55.514	50.044	46.452	36.492	32.900	31.104	27.839	263.74
1.6000	111.360	116.725	87.962	73.448	65.620	61.309	55.240	51.018	40.902	37.032	35.009	31.402	337.58
2.0000	114.542	119.534	92.447	78.302	70.352	66.007	59.166	54.821	44.374	40.492	38.273	34.483	421.98
2.5000	115.866	121.406	95.520	82.052	74.219	69.730	62.375	57.885	47.569	43.271	41.074	37.253	527.47
3.2000	115.499	122.008	97.140	84.512	76.935	72.369	64.889	60.032	50.124	45.850	43.519	39.536	675.17
4.0000	113.504	120.877	97.012	85.273	78.094	73.535	66.259	61.117	51.707	47.342	45.110	41.036	843.96
5.0000	110.210	118.136	95.502	84.615	77.930	73.537	66.279	61.312	52.526	47.942	45.937	41.925	1054.9
6.0000	106.831	114.861	93.383	83.298	76.854	72.839	65.742	60.793	52.108	48.092	46.038	42.303	1265.9
7.0000	103.277	111.565	91.073	81.602	75.409	71.675	64.844	60.017	51.912	47.722	45.810	42.167	1476.9
8.0000	100.027	108.282	88.755	79.880	73.933	70.294	63.904	59.022	51.301	47.307	45.443	41.893	1687.9
9.0000	97.151	105.110	86.510	78.119	72.409	68.949	62.720	58.048	50.608	46.715	44.899	41.525	1898.9
10.0000	94.327	102.089	84.371	76.525	70.872	67.581	61.507	57.119	49.779	46.151	44.464	41.089	2109.9
11.0000	91.739	99.397	82.351	74.939	69.504	66.292	60.363	56.245	49.081	45.622	44.058	40.599	2320.9
12.0000	89.378	96.779	80.448	73.369	68.140	65.083	59.290	55.348	48.349	45.051	43.442	40.063	2531.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	21.849	9.322	6.176	5.803	5.156	3.403	2.086	1.480	0.976	7.813	9.940	7.586	2.6374
0.0160	24.851	10.481	7.043	6.625	5.889	3.978	2.465	1.756	1.166	9.002	11.453	8.651	3.3758
0.0200	27.627	11.344	7.848	7.393	6.613	4.592	2.863	2.084	1.394	10.202	12.972	9.638	4.2198
0.0250	30.688	12.178	8.748	8.245	7.460	5.353	3.422	2.496	1.808	11.552	14.700	10.741	5.2747
0.0320	34.854	13.226	9.802	9.332	8.524	6.388	4.150	3.128	2.177	13.287	16.947	12.163	6.7517
0.0400	39.128	14.226	10.897	10.489	9.659	7.545	4.999	3.831	2.721	15.126	19.295	13.666	8.4396
0.0500	44.179	15.536	12.266	11.932	11.105	8.956	6.033	4.698	3.404	17.271	22.023	15.509	10.549
0.0600	49.714	17.013	13.798	13.337	12.607	10.375	7.055	5.552	4.078	19.365	24.723	17.385	12.659
0.0700	55.330	18.737	15.342	14.902	14.135	11.784	8.030	6.382	4.717	21.447	27.355	19.390	14.769
0.0800	61.344	20.595	16.989	16.512	15.716	13.206	9.051	7.213	5.357	23.548	30.000	21.497	16.879
0.0900	67.337	22.591	18.684	18.210	17.337	14.625	10.053	8.043	5.956	25.645	32.606	23.672	18.989
0.1000	73.938	24.808	20.565	19.919	18.949	16.060	11.091	8.828	6.545	27.737	35.272	25.919	21.099
0.1250	91.648	30.588	25.278	24.355	23.270	19.646	13.528	10.781	8.011	33.104	42.130	31.834	26.374
0.1600	118.534	39.520	32.430	31.252	29.647	24.697	16.937	13.486	10.007	40.858	51.909	40.938	33.758
0.2000	150.130	49.839	40.819	39.199	37.059	30.118	20.486	16.267	12.017	49.350	62.620	51.521	42.198
0.2500	189.379	62.684	50.839	48.952	45.702	36.129	24.424	19.148	14.081	59.190	75.018	64.570	52.747
0.3200	240.560	78.526	63.866	60.950	55.766	42.726	28.511	22.234	16.240	71.358	90.635	80.916	67.517
0.4000	288.781	95.335	75.712	71.964	65.161	48.639	32.164	25.037	18.234	82.978	105.655	96.075	84.396
0.5000	337.405	112.116	87.101	82.870	74.144	54.524	35.962	28.082	20.466	94.822	121.053	111.164	105.49
0.6000	372.391	124.912	94.535	89.843	80.284	58.703	38.940	30.378	22.226	103.331	132.595	121.218	126.59
0.7000	390.658	134.249	98.746	93.847	83.985	61.335	41.038	31.940	23.605	109.117	140.230	126.805	147.69
0.8000	398.891	139.985	101.184	96.495	86.234	63.061	42.675	33.298	24.735	113.076	145.150	130.064	168.79
0.9000	401.695	143.176	102.576	97.770	86.938	64.128	43.756	34.574	25.680	115.846	148.556	131.555	189.89
1.0000	404.448	146.246	104.376	99.048	88.243	65.357	45.022	35.868	26.638	118.033	151.199	132.965	210.99
1.2500	405.744	151.929	108.171	103.273	91.762	68.821	48.330	39.023	29.472	122.213	155.195	136.908	263.74
1.6000	397.588	155.693	112.415	107.489	96.230	73.448	52.689	42.837	33.162	125.346	156.836	139.684	337.58
2.0000	382.730	156.882	116.298	110.751	100.212	77.840	56.855	46.686	36.701	127.577	157.159	140.981	421.98
2.5000	361.066	155.220	118.541	112.809	104.117	82.338	61.133	50.912	40.501	128.570	155.602	140.415	527.47
3.2000	339.990	151.053	119.774	114.334	106.174	85.969	65.375	54.398	43.616	128.516	153.190	139.396	675.17
4.0000	320.139	144.741	118.354	113.504	106.713	87.311	66.938	56.364	45.596	126.697	149.301	136.495	843.96
5.0000	303.697	138.001	115.462	111.165	104.766	86.812	67.520	57.015	46.796	123.580	144.686	132.557	1054.9
6.0000	290.422	132.044	112.247	107.951	102.255	85.352	66.676	56.684	46.692	119.904	139.982	128.215	1265.9
7.0000	279.595	126.956	109.106	105.190	99.452	83.605	65.755	56.101	46.356	116.483	135.608	124.588	1476.9
8.0000	269.816	122.039	106.063	102.335	96.655	81.566	64.170	55.028	45.709	113.074	131.358	120.974	1687.9
9.0000	260.396	118.346	103.034	99.487	94.123	79.589	62.720	53.896	44.985	109.695	127.256	117.394	1898.9
10.0000	252.270	115.167	100.486	97.027	91.796	77.622	61.338	52.732	44.126	106.645	123.520	114.239	2109.9
11.0000	244.581	112.162	98.080	94.703	89.597	75.763	60.034	51.634	43.234	103.844	120.150	111.338	2320.9
12.0000	237.323	109.329	95.814	92.516	87.528	74.013	58.808	50.602	42.396	101.204	116.891	108.605	2531.9

$^{211}_{85}$At IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=211 MEV
0.0125	0.138	0.134	0.160	0.197	0.203	0.242	0.250	0.268	0.343	0.377	0.392	0.437	2.6374
0.0160	0.174	0.171	0.205	0.256	0.266	0.315	0.328	0.353	0.460	0.512	0.538	0.613	3.3758
0.0200	0.214	0.212	0.256	0.322	0.335	0.396	0.413	0.446	0.585	0.654	0.692	0.795	4.2198
0.0250	0.262	0.262	0.318	0.403	0.421	0.497	0.519	0.560	0.737	0.827	0.875	1.010	5.2747
0.0320	0.325	0.330	0.404	0.515	0.541	0.638	0.666	0.717	0.949	1.064	1.127	1.302	6.7517
0.0400	0.394	0.404	0.497	0.641	0.678	0.797	0.831	0.895	1.190	1.335	1.414	1.631	8.4396
0.0500	0.473	0.491	0.610	0.794	0.847	0.991	1.034	1.111	1.490	1.670	1.769	2.039	10.549
0.0600	0.547	0.573	0.717	0.941	1.011	1.179	1.231	1.322	1.784	1.999	2.118	2.438	12.659
0.0700	0.617	0.650	0.819	1.082	1.169	1.359	1.420	1.524	2.071	2.320	2.458	2.827	14.769
0.0800	0.683	0.723	0.916	1.217	1.322	1.533	1.603	1.719	2.349	2.630	2.788	3.204	16.879
0.0900	0.746	0.792	1.009	1.347	1.469	1.699	1.779	1.907	2.617	2.930	3.106	3.569	18.989
0.1000	0.805	0.857	1.098	1.470	1.610	1.859	1.948	2.088	2.874	3.219	3.414	3.921	21.099
0.1250	0.944	1.006	1.307	1.759	1.941	2.232	2.346	2.510	3.477	3.897	4.134	4.746	26.374
0.1600	1.119	1.188	1.571	2.121	2.358	2.699	2.847	3.043	4.236	4.751	5.039	5.779	33.758
0.2000	1.298	1.366	1.840	2.487	2.782	3.173	3.356	3.584	5.002	5.614	5.953	6.820	42.198
0.2500	1.500	1.560	2.141	2.893	3.251	3.695	3.921	4.185	5.845	6.561	6.958	7.965	52.747
0.3200	1.752	1.794	2.514	3.389	3.825	4.330	4.610	4.920	6.865	7.706	8.175	9.348	67.517
0.4000	2.009	2.028	2.889	3.881	4.393	4.956	5.292	5.649	7.865	8.828	9.365	10.700	84.396
0.5000	2.299	2.287	3.304	4.419	5.011	5.633	6.032	6.441	8.938	10.029	10.641	12.148	105.49
0.6000	2.562	2.521	3.674	4.894	5.554	6.226	6.682	7.138	9.872	11.073	11.748	13.398	126.59
0.7000	2.808	2.742	4.013	5.324	6.046	6.761	7.270	7.768	10.708	12.007	12.737	14.512	147.69
0.8000	3.042	2.951	4.330	5.722	6.498	7.252	7.812	8.349	11.473	12.859	13.639	15.527	168.79
0.9000	3.266	3.153	4.632	6.100	6.928	7.715	8.325	8.900	12.194	13.662	14.490	16.483	189.89
1.0000	3.481	3.349	4.919	6.457	7.332	8.151	8.807	9.419	12.868	14.412	15.283	17.371	210.99
1.2500	3.993	3.822	5.591	7.282	8.264	9.152	9.917	10.613	14.402	16.114	17.083	19.385	263.74
1.6000	4.671	4.461	6.460	8.332	9.441	10.415	11.317	12.126	16.308	18.224	19.315	21.876	337.58
2.0000	5.417	5.174	7.394	9.443	10.681	11.738	12.791	13.718	18.285	20.399	21.616	24.435	421.98
2.5000	6.331	6.048	8.514	10.756	12.138	13.290	14.524	15.587	20.577	22.914	24.271	27.373	527.47
3.2000	7.605	7.259	10.045	12.526	14.088	15.365	16.841	18.088	23.595	26.223	27.758	31.213	675.17
4.0000	9.077	8.647	11.781	14.512	16.263	17.676	19.412	20.871	26.907	29.842	31.562	35.399	843.96
5.0000	10.962	10.411	13.971	16.994	18.966	20.543	22.593	24.315	30.951	34.267	36.193	40.481	1054.9
6.0000	12.906	12.222	16.205	19.506	21.691	23.425	25.788	27.769	34.983	38.659	40.779	45.489	1265.9
7.0000	14.915	14.086	18.493	22.065	24.462	26.345	29.019	31.262	39.039	43.062	45.373	50.483	1476.9
8.0000	16.991	16.006	20.839	24.679	27.288	29.317	32.297	34.807	43.127	47.503	49.997	55.503	1687.9
9.0000	19.131	17.983	23.247	27.350	30.172	32.348	35.630	38.412	47.268	51.991	54.668	60.562	1898.9
10.0000	21.335	20.020	25.717	30.079	33.117	35.439	39.027	42.076	51.472	56.535	59.390	65.670	2109.9
11.0000	23.604	22.115	28.249	32.865	36.124	38.592	42.490	45.799	55.741	61.134	64.158	70.836	2320.9
12.0000	25.934	24.267	30.841	35.711	39.190	41.804	46.017	49.581	60.073	65.788	68.981	76.068	2531.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.053	0.123	0.143	0.147	0.153	0.201	0.270	0.339	0.408	0.127	0.108	0.119	2.6374
0.0160	0.068	0.156	0.185	0.189	0.198	0.260	0.351	0.449	0.572	0.163	0.138	0.153	3.3758
0.0200	0.084	0.195	0.232	0.238	0.250	0.327	0.442	0.567	0.737	0.204	0.171	0.192	4.2198
0.0250	0.103	0.243	0.290	0.298	0.314	0.411	0.556	0.711	0.931	0.253	0.212	0.240	5.2747
0.0320	0.129	0.310	0.372	0.383	0.403	0.528	0.713	0.910	1.188	0.320	0.267	0.307	6.7517
0.0400	0.158	0.387	0.466	0.479	0.504	0.658	0.889	1.131	1.473	0.395	0.327	0.383	8.4396
0.0500	0.191	0.483	0.580	0.596	0.628	0.813	1.101	1.394	1.811	0.484	0.398	0.475	10.549
0.0600	0.223	0.576	0.690	0.709	0.746	0.959	1.301	1.642	2.127	0.568	0.466	0.563	12.659
0.0700	0.254	0.665	0.796	0.817	0.859	1.095	1.490	1.874	2.423	0.648	0.529	0.647	14.769
0.0800	0.282	0.750	0.895	0.918	0.965	1.223	1.667	2.092	2.702	0.723	0.589	0.727	16.879
0.0900	0.308	0.830	0.989	1.014	1.065	1.343	1.833	2.296	2.964	0.794	0.645	0.801	18.989
0.1000	0.333	0.904	1.077	1.104	1.159	1.455	1.989	2.488	3.212	0.860	0.698	0.871	21.099
0.1250	0.388	1.071	1.274	1.307	1.370	1.707	2.342	2.925	3.778	1.012	0.819	1.028	26.374
0.1600	0.452	1.264	1.504	1.545	1.619	2.005	2.764	3.449	4.463	1.194	0.962	1.211	33.758
0.2000	0.511	1.441	1.718	1.768	1.853	2.290	3.173	3.958	5.135	1.369	1.101	1.381	42.198
0.2500	0.570	1.622	1.937	1.995	2.095	2.591	3.610	4.508	5.868	1.555	1.248	1.555	52.747
0.3200	0.637	1.826	2.187	2.255	2.375	2.951	4.140	5.181	6.772	1.774	1.421	1.752	67.517
0.4000	0.700	2.016	2.423	2.503	2.647	3.309	4.674	5.864	7.698	1.988	1.589	1.938	84.396
0.5000	0.766	2.217	2.678	2.771	2.944	3.709	5.275	6.631	8.742	2.221	1.772	2.139	105.49
0.6000	0.825	2.395	2.907	3.011	3.212	4.074	5.825	7.333	9.697	2.431	1.936	2.318	126.59
0.7000	0.881	2.558	3.125	3.241	3.469	4.420	6.342	7.995	10.592	2.629	2.091	2.488	147.69
0.8000	0.934	2.712	3.336	3.462	3.716	4.759	6.845	8.630	11.444	2.819	2.239	2.652	168.79
0.9000	0.987	2.861	3.543	3.679	3.960	5.091	7.333	9.251	12.280	3.003	2.382	2.813	189.89
1.0000	1.039	3.006	3.746	3.893	4.200	5.416	7.808	9.850	13.086	3.183	2.523	2.972	210.99
1.2500	1.169	3.359	4.241	4.413	4.785	6.200	8.936	11.256	14.964	3.621	2.866	3.362	263.74
1.6000	1.352	3.838	4.909	5.112	5.568	7.236	10.395	13.057	17.320	4.216	3.338	3.894	337.58
2.0000	1.568	4.376	5.645	5.884	6.426	8.350	11.934	14.940	19.734	4.882	3.874	4.494	421.98
2.5000	1.851	5.051	6.542	6.826	7.457	9.665	13.720	17.100	22.465	5.704	4.547	5.242	527.47
3.2000	2.271	6.013	7.779	8.123	8.858	11.417	16.051	19.901	25.972	6.850	5.502	6.296	675.17
4.0000	2.782	7.153	9.195	9.603	10.442	13.363	18.600	22.945	29.752	8.171	6.616	7.518	843.96
5.0000	3.458	8.645	10.998	11.480	12.436	15.784	21.735	26.664	34.315	9.856	8.051	9.085	1054.9
6.0000	4.169	10.208	12.851	13.406	14.474	18.234	24.879	30.374	38.827	11.589	9.533	10.703	1265.9
7.0000	4.909	11.837	14.757	15.385	16.566	20.732	28.065	34.115	43.362	13.374	11.064	12.372	1476.9
8.0000	5.677	13.532	16.719	17.419	18.718	23.287	31.313	37.912	47.945	15.213	12.645	14.091	1687.9
9.0000	6.473	15.288	18.737	19.510	20.930	25.906	34.639	41.786	52.598	17.107	14.277	15.862	1898.9
10.0000	7.296	17.095	20.811	21.658	23.200	28.590	38.041	45.745	57.334	19.058	15.960	17.684	2109.9
11.0000	8.146	18.952	22.937	23.859	25.527	31.342	41.518	49.788	62.165	21.063	17.692	19.555	2320.9
12.0000	9.022	20.858	25.113	26.113	27.910	34.160	45.070	53.916	67.094	23.122	19.473	21.474	2531.9

$^{211}_{86}Rn$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=211 MEV
0.0125	9.656	7.988	5.852	3.892	3.160	2.868	2.657	2.458	1.562	1.337	1.229	1.053	2.6374
0.0160	11.194	9.260	6.784	4.512	3.663	3.324	3.080	2.849	1.811	1.550	1.425	1.221	3.3758
0.0200	12.794	10.584	7.754	5.156	4.187	3.799	3.520	3.257	2.070	1.772	1.628	1.396	4.2198
0.0250	14.623	12.097	8.862	5.893	4.786	4.343	4.024	3.722	2.366	2.025	1.866	1.595	5.2747
0.0320	16.932	14.034	10.274	6.832	5.558	5.055	4.664	4.315	2.743	2.353	2.168	1.860	6.7517
0.0400	19.305	16.076	11.743	7.832	6.388	5.824	5.366	4.967	3.159	2.718	2.501	2.149	8.4396
0.0500	21.984	18.427	13.421	8.992	7.368	6.711	6.187	5.731	3.637	3.161	2.912	2.503	10.549
0.0600	24.430	20.672	14.969	10.089	8.293	7.530	6.961	6.452	4.132	3.593	3.316	2.852	12.659
0.0700	26.677	22.819	16.417	11.130	9.193	8.340	7.716	7.158	4.597	4.022	3.727	3.201	14.769
0.0800	28.773	24.932	17.783	12.146	10.047	9.105	8.411	7.825	5.068	4.446	4.108	3.539	16.879
0.0900	30.742	26.983	19.082	13.129	10.877	9.885	9.102	8.473	5.553	4.856	4.503	3.883	18.989
0.1000	32.622	29.004	20.325	14.085	11.707	10.610	9.756	9.126	6.016	5.264	4.878	4.207	21.099
0.1250	36.936	34.079	23.230	16.354	13.659	12.382	11.383	10.663	7.143	6.249	5.842	5.053	26.374
0.1600	42.254	41.069	26.931	19.282	16.212	14.704	13.492	12.657	8.618	7.567	7.096	6.194	33.758
0.2000	47.648	48.356	30.780	22.377	18.930	17.145	15.729	14.744	10.219	9.019	8.465	7.387	42.198
0.2500	53.579	56.358	35.180	25.998	22.093	20.053	18.364	17.203	12.137	10.730	10.061	8.795	52.747
0.3200	60.849	66.110	40.784	30.710	26.224	23.940	21.819	20.392	14.601	12.969	12.174	10.706	67.517
0.4000	68.149	75.654	46.613	35.519	30.578	27.968	25.498	23.819	17.340	15.429	14.497	12.725	84.396
0.5000	76.185	85.615	53.277	41.183	35.695	32.765	29.835	27.810	20.565	18.327	17.235	15.184	105.49
0.6000	82.831	93.288	59.081	46.260	40.293	37.103	33.676	31.372	23.455	20.974	19.762	17.547	126.59
0.7000	88.409	99.244	64.111	50.648	44.301	40.839	36.992	34.492	26.029	23.272	21.990	19.490	147.69
0.8000	93.014	103.699	68.494	54.589	47.877	44.315	40.069	37.329	28.356	25.480	24.041	21.370	168.79
0.9000	97.063	107.261	72.327	58.006	51.135	47.446	42.818	39.852	30.594	27.484	25.965	23.145	189.89
1.0000	100.439	109.976	75.689	61.232	54.042	50.182	45.338	42.159	32.546	29.292	27.702	24.750	210.99
1.2500	106.911	114.495	82.430	67.592	60.174	56.052	50.529	46.903	36.846	33.219	31.406	28.109	263.74
1.6000	112.580	118.005	88.926	74.253	66.339	61.981	55.846	51.577	41.351	37.438	35.393	31.747	337.58
2.0000	115.933	120.986	93.570	79.253	71.206	66.809	59.885	55.487	44.913	40.984	38.738	34.901	421.98
2.5000	117.404	123.017	96.788	83.141	75.204	70.655	63.202	58.653	48.200	43.845	41.619	37.747	527.47
3.2000	117.159	123.761	98.535	85.726	78.040	73.409	65.822	60.895	50.844	46.509	44.144	40.104	675.17
4.0000	115.228	122.713	98.486	86.569	79.281	74.652	67.266	62.046	52.493	48.061	45.796	41.659	843.96
5.0000	111.958	120.011	97.018	85.958	79.166	74.704	67.330	62.285	53.360	48.703	46.665	42.591	1054.9
6.0000	108.575	116.737	94.908	84.658	78.109	74.028	66.815	61.785	52.959	48.878	46.790	42.993	1265.9
7.0000	104.999	113.425	92.592	82.962	76.666	72.870	65.925	61.018	52.777	48.518	46.574	42.870	1476.9
8.0000	101.722	110.116	90.259	81.233	75.186	71.485	64.987	60.022	52.170	48.108	46.213	42.602	1687.9
9.0000	98.819	106.915	87.996	79.460	73.652	70.133	63.797	59.045	51.477	47.518	45.670	42.238	1898.9
10.0000	95.966	103.863	85.837	77.854	72.103	68.756	62.575	58.112	50.644	46.953	45.236	41.803	2109.9
11.0000	93.349	101.142	83.796	76.254	70.724	67.456	61.423	57.233	49.942	46.423	44.831	41.311	2320.9
12.0000	90.962	98.494	81.874	74.669	69.347	66.236	60.341	56.329	49.206	45.849	44.212	40.773	2531.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	21.945	9.363	6.203	5.829	5.179	3.418	2.095	1.486	0.981	7.848	9.984	7.619	2.6374
0.0160	24.966	10.529	7.076	6.655	5.916	3.996	2.476	1.764	1.171	9.043	11.506	8.691	3.3758
0.0200	27.759	11.398	7.886	7.428	6.645	4.614	2.877	2.094	1.400	10.251	13.034	9.685	4.2198
0.0250	30.841	12.239	8.791	8.286	7.498	5.379	3.439	2.508	1.817	11.610	14.774	10.794	5.2747
0.0320	35.034	13.295	9.853	9.380	8.569	6.421	4.171	3.144	2.188	13.356	17.034	12.226	6.7517
0.0400	39.338	14.303	10.956	10.545	9.711	7.586	5.026	3.852	2.736	15.207	19.399	13.739	8.4396
0.0500	44.424	15.622	12.334	11.998	11.166	9.006	6.066	4.724	3.422	17.367	22.145	15.595	10.549
0.0600	49.997	17.110	13.876	13.412	12.679	10.434	7.095	5.584	4.102	19.475	24.864	17.484	12.659
0.0700	55.652	18.846	15.432	14.988	14.217	11.853	8.077	6.419	4.744	21.571	27.514	19.503	14.769
0.0800	61.707	20.717	17.089	16.609	15.809	13.284	9.105	7.255	5.388	23.687	30.178	21.624	16.879
0.0900	67.742	22.727	18.796	18.319	17.441	14.713	10.114	8.091	5.992	25.799	32.803	23.815	18.989
0.1000	74.389	24.959	20.691	20.040	19.065	16.158	11.158	8.882	6.585	27.906	35.487	26.077	21.099
0.1250	92.224	30.780	25.437	24.508	23.416	19.769	13.613	10.849	8.061	33.312	42.395	32.035	26.374
0.1600	119.303	39.776	32.640	31.455	29.839	24.857	17.047	13.573	10.072	41.123	52.245	41.204	33.758
0.2000	151.130	50.172	41.091	39.460	37.306	30.318	20.623	16.375	12.097	49.679	63.038	51.865	42.198
0.2500	190.675	63.113	51.187	49.287	46.015	36.376	24.591	19.279	14.178	59.595	75.531	65.013	52.747
0.3200	242.255	79.080	64.316	61.379	56.159	43.027	28.712	22.390	16.354	71.861	91.274	81.486	67.517
0.4000	290.868	96.024	76.260	72.484	65.632	48.991	32.396	25.218	18.366	83.578	106.418	96.770	84.396
0.5000	339.904	112.946	87.746	83.484	74.694	54.928	36.228	28.290	20.618	95.525	121.950	111.987	105.49
0.6000	375.161	125.841	95.238	90.511	80.881	59.140	39.229	30.604	22.392	104.100	133.581	122.119	126.59
0.7000	393.641	135.274	99.500	94.564	84.626	61.803	41.352	32.184	23.785	109.950	141.300	127.773	147.69
0.8000	402.058	141.097	101.987	97.261	86.919	63.562	43.014	33.562	24.932	113.974	146.303	131.097	168.79
0.9000	405.031	144.365	103.428	98.582	87.660	64.660	44.119	34.862	25.893	116.808	149.789	132.648	189.89
1.0000	407.964	147.518	105.284	99.910	89.010	65.925	45.413	36.179	26.870	119.059	152.514	134.121	210.99
1.2500	409.676	153.402	109.219	104.274	92.651	69.488	48.798	39.401	29.757	123.397	156.699	138.235	263.74
1.6000	401.946	157.399	113.648	108.668	97.285	74.253	53.267	43.307	33.525	126.720	158.555	141.215	337.58
2.0000	387.378	158.788	117.711	112.096	101.429	78.786	57.545	47.253	37.147	129.126	159.068	142.694	421.98
2.5000	365.858	157.280	120.114	114.306	105.499	83.431	61.944	51.588	41.038	130.276	157.667	142.278	527.47
3.2000	344.874	153.223	121.494	115.976	107.699	87.204	66.314	55.180	44.242	130.362	155.390	141.398	675.17
4.0000	325.002	146.940	120.152	115.228	108.334	88.637	67.955	57.220	46.288	128.622	151.569	138.569	843.96
5.0000	308.516	140.191	117.294	112.929	106.428	88.189	68.591	57.920	47.539	125.541	146.982	134.660	1054.9
6.0000	295.164	134.200	114.080	109.714	103.924	86.746	67.764	57.609	47.454	121.862	142.267	130.309	1265.9
7.0000	284.256	129.073	110.925	106.943	101.110	84.999	66.851	57.036	47.129	118.425	137.869	126.665	1476.9
8.0000	274.388	124.106	107.860	104.069	98.292	82.948	65.257	55.961	46.483	114.990	133.584	123.023	1687.9
9.0000	264.867	120.378	104.803	101.195	95.739	80.956	63.797	54.821	45.758	111.579	129.442	119.410	1898.9
10.0000	256.653	117.168	102.232	98.713	93.391	78.970	62.404	53.648	44.893	108.498	125.666	116.223	2109.9
11.0000	248.874	114.130	99.801	96.365	91.170	77.092	61.087	52.540	43.993	105.667	122.258	113.292	2320.9
12.0000	241.528	111.267	97.512	94.155	89.079	75.324	59.850	51.499	43.147	102.997	118.963	110.530	2531.9

$^{211}_{86}Rn$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=211 MEV
0.0125	0.137	0.132	0.158	0.195	0.201	0.239	0.247	0.265	0.338	0.371	0.386	0.430	2.6374
0.0160	0.173	0.169	0.203	0.253	0.263	0.311	0.324	0.349	0.454	0.505	0.532	0.605	3.3758
0.0200	0.212	0.210	0.254	0.318	0.331	0.392	0.409	0.441	0.578	0.647	0.684	0.786	4.2198
0.0250	0.260	0.260	0.315	0.399	0.417	0.492	0.514	0.554	0.729	0.818	0.866	0.998	5.2747
0.0320	0.323	0.327	0.400	0.510	0.536	0.632	0.659	0.710	0.939	1.053	1.115	1.288	6.7517
0.0400	0.390	0.400	0.493	0.635	0.671	0.789	0.823	0.885	1.178	1.321	1.399	1.614	8.4396
0.0500	0.469	0.487	0.604	0.786	0.838	0.981	1.023	1.100	1.474	1.652	1.750	2.017	10.549
0.0600	0.543	0.568	0.710	0.932	1.000	1.167	1.218	1.308	1.765	1.978	2.095	2.412	12.659
0.0700	0.612	0.645	0.811	1.072	1.157	1.345	1.406	1.509	2.049	2.295	2.432	2.797	14.769
0.0800	0.677	0.717	0.908	1.206	1.308	1.517	1.587	1.702	2.324	2.602	2.758	3.170	16.879
0.0900	0.740	0.785	1.000	1.334	1.454	1.682	1.761	1.888	2.589	2.899	3.073	3.531	18.989
0.1000	0.799	0.850	1.089	1.456	1.594	1.841	1.929	2.067	2.844	3.185	3.378	3.879	21.099
0.1250	0.937	0.998	1.296	1.742	1.922	2.210	2.323	2.486	3.442	3.857	4.091	4.696	26.374
0.1600	1.110	1.178	1.557	2.101	2.335	2.674	2.820	3.014	4.193	4.703	4.988	5.720	33.758
0.2000	1.288	1.355	1.824	2.465	2.756	3.144	3.325	3.551	4.954	5.559	5.895	6.753	42.198
0.2500	1.488	1.547	2.123	2.868	3.222	3.662	3.885	4.147	5.789	6.498	6.891	7.888	52.747
0.3200	1.738	1.780	2.493	3.359	3.790	4.292	4.569	4.876	6.801	7.634	8.098	9.260	67.517
0.4000	1.994	2.012	2.866	3.848	4.354	4.913	5.246	5.600	7.794	8.747	9.279	10.601	84.396
0.5000	2.281	2.269	3.277	4.382	4.968	5.585	5.980	6.386	8.858	9.939	10.545	12.038	105.49
0.6000	2.543	2.501	3.644	4.853	5.507	6.173	6.625	7.077	9.784	10.974	11.643	13.278	126.59
0.7000	2.787	2.720	3.981	5.280	5.994	6.704	7.209	7.703	10.614	11.901	12.624	14.383	147.69
0.8000	3.019	2.928	4.295	5.675	6.443	7.191	7.746	8.278	11.373	12.746	13.519	15.390	168.79
0.9000	3.241	3.128	4.595	6.050	6.869	7.651	8.255	8.825	12.089	13.543	14.363	16.319	189.89
1.0000	3.454	3.322	4.879	6.403	7.271	8.083	8.733	9.340	12.757	14.286	15.149	17.200	210.99
1.2500	3.962	3.791	5.546	7.221	8.193	9.075	9.833	10.523	14.277	15.973	16.933	19.195	263.74
1.6000	4.633	4.424	6.406	8.261	9.359	10.324	11.219	12.020	16.163	18.062	19.142	21.660	337.58
2.0000	5.370	5.129	7.329	9.358	10.584	11.633	12.675	13.594	18.117	20.211	21.417	24.190	421.98
2.5000	6.272	5.992	8.435	10.656	12.023	13.166	14.387	15.440	20.380	22.695	24.039	27.091	527.47
3.2000	7.529	7.186	9.944	12.401	13.947	15.212	16.672	17.906	23.358	25.959	27.478	30.879	675.17
4.0000	8.980	8.554	11.656	14.358	16.090	17.490	19.205	20.649	26.621	29.525	31.227	35.003	843.96
5.0000	10.836	10.291	13.812	16.802	18.751	20.312	22.338	24.040	30.604	33.882	35.786	40.007	1054.9
6.0000	12.749	12.073	16.010	19.275	21.433	23.149	25.482	27.440	34.571	38.205	40.300	44.936	1265.9
7.0000	14.725	13.907	18.261	21.792	24.159	26.021	28.661	30.875	38.562	42.537	44.819	49.850	1476.9
8.0000	16.767	15.795	20.569	24.362	26.938	28.944	31.884	34.362	42.582	46.904	49.367	54.787	1687.9
9.0000	18.871	17.739	22.936	26.988	29.774	31.924	35.161	37.906	46.654	51.317	53.960	59.760	1898.9
10.0000	21.038	19.742	25.364	29.671	32.669	34.963	38.501	41.508	50.786	55.784	58.602	64.782	2109.9
11.0000	23.267	21.801	27.852	32.410	35.624	38.061	41.904	45.167	54.982	60.303	63.287	69.859	2320.9
12.0000	25.557	23.915	30.400	35.206	38.637	41.218	45.370	48.883	59.238	64.877	68.027	75.001	2531.9

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.052	0.122	0.142	0.145	0.152	0.199	0.266	0.335	0.401	0.126	0.107	0.118	2.6374
0.0160	0.067	0.155	0.183	0.188	0.197	0.257	0.348	0.444	0.564	0.162	0.137	0.152	3.3758
0.0200	0.083	0.193	0.230	0.235	0.247	0.324	0.438	0.561	0.729	0.202	0.170	0.190	4.2198
0.0250	0.103	0.240	0.288	0.295	0.310	0.407	0.550	0.704	0.921	0.251	0.210	0.238	5.2747
0.0320	0.128	0.307	0.369	0.379	0.399	0.522	0.706	0.901	1.176	0.317	0.264	0.304	6.7517
0.0400	0.156	0.384	0.461	0.474	0.499	0.651	0.880	1.119	1.457	0.391	0.324	0.379	8.4396
0.0500	0.190	0.478	0.574	0.590	0.622	0.804	1.090	1.379	1.791	0.479	0.395	0.471	10.549
0.0600	0.222	0.571	0.684	0.702	0.739	0.949	1.288	1.624	2.104	0.563	0.462	0.558	12.659
0.0700	0.251	0.659	0.788	0.809	0.850	1.084	1.474	1.854	2.398	0.642	0.524	0.641	14.769
0.0800	0.279	0.743	0.886	0.910	0.955	1.211	1.650	2.070	2.674	0.716	0.584	0.720	16.879
0.0900	0.306	0.822	0.979	1.005	1.054	1.330	1.814	2.273	2.934	0.786	0.639	0.794	18.989
0.1000	0.330	0.896	1.067	1.094	1.148	1.441	1.969	2.463	3.179	0.853	0.692	0.863	21.099
0.1250	0.385	1.062	1.262	1.295	1.358	1.691	2.319	2.896	3.741	1.004	0.812	1.019	26.374
0.1600	0.448	1.253	1.490	1.531	1.605	1.987	2.738	3.416	4.420	1.184	0.955	1.201	33.758
0.2000	0.507	1.429	1.703	1.752	1.837	2.269	3.144	3.921	5.087	1.358	1.092	1.370	42.198
0.2500	0.566	1.608	1.921	1.978	2.077	2.568	3.578	4.467	5.814	1.542	1.238	1.542	52.747
0.3200	0.632	1.811	2.169	2.236	2.355	2.925	4.103	5.134	6.711	1.760	1.409	1.737	67.517
0.4000	0.694	2.000	2.403	2.482	2.625	3.281	4.634	5.812	7.629	1.972	1.577	1.922	84.396
0.5000	0.760	2.200	2.656	2.748	2.919	3.677	5.230	6.574	8.665	2.203	1.758	2.121	105.49
0.6000	0.819	2.376	2.883	2.986	3.186	4.040	5.775	7.271	9.613	2.411	1.921	2.299	126.59
0.7000	0.874	2.538	3.099	3.214	3.440	4.384	6.288	7.927	10.500	2.608	2.074	2.468	147.69
0.8000	0.927	2.690	3.309	3.434	3.686	4.720	6.788	8.557	11.346	2.797	2.221	2.630	168.79
0.9000	0.979	2.838	3.514	3.649	3.927	5.049	7.272	9.173	12.175	2.979	2.363	2.790	189.89
1.0000	1.031	2.982	3.716	3.862	4.166	5.372	7.743	9.767	12.975	3.158	2.503	2.948	210.99
1.2500	1.160	3.332	4.206	4.377	4.745	6.149	8.860	11.160	14.836	3.592	2.843	3.334	263.74
1.6000	1.341	3.806	4.867	5.068	5.521	7.174	10.305	12.943	17.167	4.180	3.310	3.861	337.58
2.0000	1.554	4.338	5.595	5.831	6.368	8.275	11.826	14.804	19.554	4.839	3.840	4.454	421.98
2.5000	1.834	5.004	6.480	6.761	7.386	9.573	13.589	16.937	22.250	5.650	4.505	5.193	527.47
3.2000	2.248	5.954	7.701	8.041	8.769	11.301	15.889	19.699	25.709	6.781	5.446	6.232	675.17
4.0000	2.752	7.077	9.096	9.500	10.329	13.219	18.400	22.699	29.434	8.083	6.545	7.436	843.96
5.0000	3.418	8.546	10.872	11.348	12.293	15.603	21.488	26.361	33.927	9.742	7.957	8.980	1054.9
6.0000	4.117	10.084	12.695	13.243	14.298	18.015	24.581	30.012	38.368	11.447	9.416	10.572	1265.9
7.0000	4.845	11.687	14.570	15.190	16.356	20.471	27.716	33.693	42.829	13.204	10.922	12.214	1476.9
8.0000	5.600	13.354	16.499	17.190	18.473	22.984	30.910	37.427	47.337	15.012	12.477	13.904	1687.9
9.0000	6.383	15.080	18.484	19.246	20.648	25.559	34.180	41.237	51.912	16.875	14.082	15.645	1898.9
10.0000	7.192	16.857	20.523	21.358	22.879	28.198	37.525	45.127	56.567	18.792	15.736	17.436	2109.9
11.0000	8.027	18.681	22.612	23.521	25.166	30.903	40.942	49.102	61.315	20.763	17.438	19.275	2320.9
12.0000	8.888	20.554	24.751	25.736	27.508	33.672	44.432	53.158	66.158	22.786	19.188	21.161	2531.9

$^{221}_{87}Fr$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=221 MEV
0.0125	9.698	8.023	5.878	3.909	3.174	2.880	2.669	2.469	1.569	1.343	1.234	1.058	2.7626
0.0160	11.246	9.303	6.815	4.532	3.680	3.340	3.094	2.862	1.820	1.557	1.431	1.227	3.5362
0.0200	12.855	10.635	7.791	5.181	4.207	3.818	3.537	3.272	2.080	1.780	1.636	1.402	4.4202
0.0250	14.695	12.157	8.906	5.923	4.809	4.364	4.043	3.741	2.378	2.035	1.875	1.603	5.5252
0.0320	17.019	14.107	10.327	6.867	5.587	5.081	4.688	4.337	2.757	2.365	2.179	1.869	7.0723
0.0400	19.408	16.161	11.805	7.874	6.422	5.855	5.395	4.994	3.176	2.733	2.515	2.160	8.8404
0.0500	22.105	18.529	13.495	9.042	7.409	6.748	6.221	5.762	3.657	3.178	2.928	2.517	11.050
0.0600	24.568	20.790	15.054	10.146	8.340	7.572	7.000	6.488	4.155	3.613	3.334	2.868	13.261
0.0700	26.831	22.951	16.512	11.195	9.246	8.388	7.760	7.199	4.623	4.045	3.748	3.220	15.471
0.0800	28.942	25.079	17.888	12.217	10.107	9.159	8.461	7.871	5.098	4.472	4.132	3.560	17.681
0.0900	30.926	27.144	19.197	13.207	10.942	9.944	9.157	8.523	5.586	4.896	4.530	3.907	19.891
0.1000	32.820	29.180	20.448	14.171	11.778	10.674	9.815	9.181	6.053	5.296	4.908	4.233	22.101
0.1250	37.167	34.292	23.375	16.456	13.745	12.459	11.454	10.729	7.188	6.288	5.879	5.084	27.626
0.1600	42.526	41.334	27.104	19.407	16.317	14.799	13.579	12.739	8.673	7.616	7.142	6.234	35.362
0.2000	47.963	48.676	30.984	22.525	19.055	17.258	15.833	14.841	10.287	9.078	8.521	7.436	44.202
0.2500	53.944	56.742	35.419	26.175	22.243	20.189	18.489	17.320	12.220	10.803	10.130	8.855	55.253
0.3200	61.275	66.573	41.069	30.925	26.407	24.108	21.972	20.535	14.703	13.060	12.259	10.781	70.723
0.4000	68.638	76.197	46.948	35.774	30.798	28.169	25.681	23.990	17.465	15.540	14.601	12.817	88.404
0.5000	76.746	86.245	53.668	41.486	35.958	33.006	30.054	28.015	20.716	18.462	17.362	15.296	110.51
0.6000	83.436	93.970	59.512	46.598	40.587	37.374	33.922	31.601	23.626	21.127	19.907	17.675	132.61
0.7000	89.071	99.987	64.591	51.027	44.632	41.144	37.269	34.750	26.224	23.447	22.155	19.636	154.71
0.8000	93.738	104.506	69.027	55.014	48.250	44.660	40.381	37.620	28.577	25.678	24.228	21.536	176.81
0.9000	97.852	108.133	72.915	58.478	51.551	47.832	43.166	40.176	30.843	27.708	26.177	23.333	198.91
1.0000	101.295	110.913	76.334	61.754	54.503	50.609	45.724	42.518	32.824	29.541	27.938	24.961	221.01
1.2500	107.929	115.584	83.214	68.235	60.746	56.585	51.010	47.349	37.197	33.535	31.705	28.376	276.26
1.6000	113.795	119.278	89.886	75.054	67.055	62.650	56.448	52.134	41.797	37.842	35.774	32.089	353.62
2.0000	117.322	122.436	94.691	80.203	72.060	67.609	60.602	56.152	45.452	41.475	39.202	35.320	442.02
2.5000	118.944	124.631	98.058	84.231	76.191	71.582	64.032	59.423	48.833	44.420	42.165	38.242	552.52
3.2000	118.824	125.520	99.936	86.945	79.150	74.453	66.758	61.761	51.567	47.170	44.772	40.674	707.23
4.0000	116.961	124.558	99.966	87.870	80.473	75.775	68.277	62.979	53.282	48.784	46.484	42.286	884.04
5.0000	113.716	121.895	98.541	87.307	80.409	75.876	68.387	63.263	54.197	49.467	47.398	43.259	1105.0
6.0000	110.328	118.622	96.440	86.025	79.370	75.224	67.894	62.783	53.814	49.667	47.545	43.687	1326.1
7.0000	106.729	115.293	94.117	84.329	77.929	74.070	67.011	62.023	53.647	49.317	47.341	43.576	1547.1
8.0000	103.424	111.959	91.770	82.593	76.444	72.682	66.074	61.027	53.043	48.913	46.986	43.315	1768.1
9.0000	100.495	108.728	89.488	80.807	74.901	71.322	64.879	60.046	52.350	48.323	46.444	42.954	1989.1
10.0000	97.612	105.644	87.309	79.189	73.340	69.935	63.648	59.108	51.512	47.758	46.012	42.520	2210.1
11.0000	94.966	102.894	85.248	77.575	71.949	68.624	62.487	58.224	50.808	47.227	45.608	42.027	2431.1
12.0000	92.552	100.216	83.305	75.975	70.560	67.394	61.396	57.314	50.067	46.651	44.985	41.486	2652.1

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	22.042	9.405	6.231	5.854	5.202	3.433	2.104	1.493	0.985	7.882	10.028	7.653	2.7626
0.0160	25.081	10.578	7.109	6.686	5.943	4.014	2.488	1.772	1.176	9.085	11.559	8.731	3.5362
0.0200	27.892	11.453	7.924	7.464	6.677	4.636	2.890	2.104	1.407	10.300	13.097	9.731	4.4202
0.0250	30.994	12.300	8.835	8.327	7.535	5.406	3.456	2.520	1.826	11.667	14.847	10.848	5.5252
0.0320	35.215	13.363	9.904	9.429	8.613	6.454	4.193	3.160	2.200	13.425	17.122	12.289	7.0723
0.0400	39.548	14.379	11.014	10.601	9.763	7.626	5.053	3.872	2.751	15.288	19.502	13.812	8.8404
0.0500	44.669	15.708	12.402	12.065	11.228	9.055	6.100	4.750	3.441	17.463	22.267	15.681	11.050
0.0600	50.280	17.207	13.955	13.488	12.751	10.493	7.136	5.615	4.125	19.585	25.005	17.583	13.261
0.0700	55.974	18.955	15.521	15.075	14.299	11.921	8.124	6.456	4.772	21.696	27.673	19.616	15.471
0.0800	62.071	20.839	17.190	16.707	15.902	13.362	9.159	7.298	5.420	23.827	30.356	21.752	17.681
0.0900	68.148	22.863	18.909	18.429	17.546	14.801	10.174	8.139	6.028	25.954	32.999	23.957	19.891
0.1000	74.841	25.111	20.816	20.162	19.181	16.256	11.226	8.936	6.625	28.076	35.703	26.235	22.101
0.1250	92.800	30.972	25.596	24.661	23.562	19.892	13.698	10.916	8.111	33.520	42.660	32.235	27.626
0.1600	120.071	40.033	32.850	31.658	30.031	25.017	17.157	13.661	10.137	41.388	52.582	41.469	35.362
0.2000	152.132	50.504	41.364	39.722	37.553	30.519	20.759	16.483	12.177	50.008	63.455	52.208	44.202
0.2500	191.972	63.542	51.535	49.622	46.328	36.623	24.758	19.410	14.274	60.000	76.045	65.455	55.253
0.3200	243.951	79.633	64.766	61.809	56.552	43.328	28.913	22.547	16.469	72.364	91.913	82.056	70.723
0.4000	292.956	96.713	76.807	73.004	66.103	49.342	32.629	25.399	18.498	84.178	107.182	97.464	88.404
0.5000	342.405	113.777	88.392	84.098	75.243	55.332	36.495	28.498	20.770	96.228	122.847	112.811	110.51
0.6000	377.903	126.761	95.934	91.173	81.472	59.572	39.516	30.827	22.555	104.861	134.557	123.012	132.61
0.7000	396.588	136.287	100.245	95.272	85.260	62.266	41.661	32.425	23.963	110.773	142.358	128.730	154.71
0.8000	405.186	142.195	102.781	98.018	87.595	64.057	43.349	33.823	25.126	114.860	147.441	132.117	176.81
0.9000	408.326	145.539	104.269	99.384	88.373	65.186	44.478	35.145	26.104	117.758	151.008	133.727	198.91
1.0000	411.441	148.775	106.181	100.761	89.769	66.487	45.800	36.488	27.099	120.074	153.813	135.264	221.01
1.2500	413.573	154.861	110.259	105.266	93.532	70.149	49.263	39.776	30.040	124.571	158.190	139.550	276.26
1.6000	406.283	159.097	114.874	109.840	98.335	75.054	53.841	43.774	33.887	128.087	160.266	142.738	353.62
2.0000	392.021	160.691	119.121	113.440	102.645	79.730	58.235	47.819	37.592	130.674	160.975	144.404	442.02
2.5000	370.658	159.344	121.689	115.806	106.883	84.526	62.757	52.265	41.576	131.986	159.736	144.145	552.52
3.2000	349.777	155.401	123.222	117.625	109.230	88.444	67.257	55.964	44.871	132.216	157.600	143.409	707.23
4.0000	329.889	149.150	121.959	116.961	109.963	89.970	68.977	58.080	46.984	130.556	153.848	140.653	884.04
5.0000	313.359	142.391	119.136	114.701	108.099	89.574	69.668	58.829	48.285	127.512	149.289	136.775	1105.0
6.0000	299.930	136.367	115.921	111.485	105.602	88.147	68.858	58.539	48.220	123.829	144.564	132.413	1326.1
7.0000	288.939	131.199	112.752	108.705	102.776	86.399	67.952	57.976	47.906	120.376	140.140	128.752	1547.1
8.0000	278.980	126.183	109.665	105.810	99.937	84.336	66.350	56.897	47.261	116.915	135.819	125.082	1768.1
9.0000	269.358	122.419	106.580	102.911	97.363	82.329	64.879	55.751	46.534	113.470	131.636	121.435	1989.1
10.0000	261.054	119.177	103.985	100.405	94.992	80.324	63.474	54.568	45.663	110.359	127.820	118.216	2210.1
11.0000	253.186	116.107	101.530	98.035	92.750	78.428	62.146	53.450	44.755	107.497	124.376	115.255	2431.1
12.0000	245.751	113.212	99.217	95.801	90.636	76.641	60.896	52.399	43.902	104.798	121.043	112.462	2652.1

$^{221}_{87}Fr$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=221 MEV
0.0125	0.142	0.137	0.163	0.202	0.207	0.246	0.254	0.271	0.347	0.380	0.396	0.440	2.7626
0.0160	0.179	0.176	0.210	0.261	0.271	0.321	0.333	0.358	0.466	0.518	0.544	0.619	3.5362
0.0200	0.220	0.218	0.262	0.329	0.342	0.404	0.421	0.453	0.593	0.662	0.700	0.803	4.4202
0.0250	0.269	0.270	0.326	0.412	0.429	0.507	0.528	0.569	0.747	0.837	0.885	1.020	5.5252
0.0320	0.335	0.339	0.414	0.527	0.552	0.651	0.678	0.730	0.962	1.078	1.141	1.315	7.0723
0.0400	0.405	0.415	0.510	0.656	0.693	0.813	0.847	0.911	1.208	1.353	1.431	1.650	8.8404
0.0500	0.487	0.505	0.626	0.813	0.865	1.012	1.055	1.132	1.513	1.694	1.793	2.063	11.050
0.0600	0.563	0.589	0.736	0.964	1.033	1.204	1.256	1.348	1.814	2.030	2.149	2.470	13.261
0.0700	0.635	0.669	0.841	1.109	1.195	1.390	1.450	1.555	2.107	2.357	2.496	2.867	15.471
0.0800	0.703	0.744	0.941	1.247	1.352	1.568	1.638	1.756	2.391	2.675	2.833	3.253	17.681
0.0900	0.768	0.815	1.037	1.380	1.503	1.739	1.819	1.949	2.666	2.981	3.159	3.625	19.891
0.1000	0.830	0.882	1.129	1.508	1.648	1.903	1.993	2.134	2.930	3.278	3.474	3.986	22.101
0.1250	0.973	1.036	1.344	1.805	1.989	2.287	2.402	2.569	3.549	3.974	4.213	4.831	27.626
0.1600	1.154	1.223	1.615	2.178	2.418	2.768	2.917	3.117	4.329	4.852	5.143	5.893	35.362
0.2000	1.339	1.407	1.893	2.556	2.855	3.256	3.442	3.675	5.118	5.740	6.084	6.964	44.202
0.2500	1.547	1.607	2.204	2.974	3.339	3.795	4.024	4.294	5.986	6.715	7.118	8.142	55.253
0.3200	1.807	1.849	2.589	3.485	3.930	4.450	4.735	5.052	7.037	7.895	8.372	9.567	70.723
0.4000	2.073	2.091	2.976	3.993	4.516	5.095	5.438	5.803	8.069	9.051	9.599	10.960	88.404
0.5000	2.371	2.358	3.403	4.548	5.154	5.793	6.201	6.620	9.175	10.290	10.914	12.453	110.51
0.6000	2.643	2.599	3.786	5.038	5.714	6.405	6.872	7.339	10.137	11.366	12.056	13.742	132.61
0.7000	2.897	2.827	4.136	5.482	6.221	6.957	7.478	7.989	11.000	12.329	13.075	14.890	154.71
0.8000	3.138	3.043	4.462	5.892	6.687	7.463	8.037	8.588	11.788	13.207	14.005	15.937	176.81
0.9000	3.369	3.251	4.773	6.282	7.130	7.941	8.566	9.156	12.532	14.035	14.864	16.901	198.91
1.0000	3.591	3.452	5.069	6.649	7.547	8.390	9.063	9.690	13.227	14.807	15.681	17.817	221.01
1.2500	4.118	3.939	5.761	7.498	8.505	9.420	10.204	10.919	14.804	16.559	17.533	19.888	276.26
1.6000	4.813	4.596	6.652	8.576	9.714	10.715	11.642	12.471	16.760	18.724	19.823	22.444	353.62
2.0000	5.577	5.325	7.608	9.713	10.982	12.071	13.150	14.101	18.784	20.951	22.179	25.065	442.02
2.5000	6.510	6.218	8.753	11.055	12.471	13.656	14.920	16.011	21.125	23.520	24.891	28.065	552.52
3.2000	7.809	7.452	10.312	12.859	14.459	15.771	17.282	18.559	24.202	26.893	28.445	31.980	707.23
4.0000	9.307	8.865	12.079	14.879	16.672	18.122	19.897	21.391	27.571	30.574	32.315	36.238	884.04
5.0000	11.221	10.657	14.304	17.400	19.417	21.034	23.128	24.889	31.679	35.069	37.019	41.400	1105.0
6.0000	13.194	12.494	16.570	19.949	22.182	23.958	26.371	28.394	35.770	39.526	41.673	46.481	1326.1
7.0000	15.230	14.384	18.890	22.544	24.992	26.919	29.647	31.935	39.883	43.991	46.331	51.546	1547.1
8.0000	17.334	16.329	21.268	25.192	27.855	29.931	32.968	35.528	44.026	48.490	51.016	56.633	1768.1
9.0000	19.502	18.332	23.707	27.898	30.776	33.001	36.344	39.179	48.220	53.036	55.748	61.757	1989.1
10.0000	21.734	20.395	26.207	30.661	33.758	36.130	39.783	42.889	52.476	57.637	60.529	66.928	2210.1
11.0000	24.029	22.515	28.769	33.481	36.801	39.321	43.288	46.656	56.797	62.291	65.354	72.157	2431.1
12.0000	26.387	24.691	31.392	36.360	39.903	42.571	46.857	50.483	61.179	67.000	70.233	77.450	2652.1

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.054	0.126	0.147	0.150	0.157	0.205	0.274	0.344	0.413	0.131	0.111	0.122	2.7626
0.0160	0.070	0.161	0.190	0.194	0.203	0.266	0.358	0.456	0.579	0.168	0.142	0.158	3.5362
0.0200	0.087	0.200	0.238	0.244	0.256	0.335	0.450	0.575	0.747	0.209	0.176	0.197	4.4202
0.0250	0.107	0.250	0.298	0.306	0.321	0.420	0.566	0.722	0.943	0.260	0.218	0.247	5.5252
0.0320	0.133	0.319	0.382	0.393	0.413	0.540	0.726	0.925	1.203	0.329	0.274	0.316	7.0723
0.0400	0.162	0.398	0.478	0.491	0.517	0.673	0.906	1.149	1.493	0.406	0.336	0.393	8.8404
0.0500	0.197	0.496	0.595	0.611	0.644	0.832	1.123	1.418	1.836	0.497	0.410	0.488	11.050
0.0600	0.230	0.592	0.709	0.727	0.765	0.982	1.328	1.672	2.159	0.584	0.479	0.579	13.261
0.0700	0.261	0.684	0.817	0.838	0.881	1.122	1.521	1.910	2.462	0.666	0.544	0.665	15.471
0.0800	0.290	0.771	0.919	0.943	0.990	1.254	1.703	2.133	2.748	0.743	0.606	0.747	17.681
0.0900	0.318	0.854	1.016	1.042	1.093	1.377	1.874	2.343	3.017	0.816	0.664	0.824	19.891
0.1000	0.343	0.931	1.106	1.134	1.190	1.492	2.035	2.540	3.271	0.885	0.719	0.896	22.101
0.1250	0.400	1.102	1.309	1.343	1.408	1.752	2.398	2.990	3.853	1.042	0.843	1.057	27.626
0.1600	0.466	1.301	1.547	1.589	1.665	2.059	2.833	3.529	4.558	1.230	0.991	1.246	35.362
0.2000	0.527	1.485	1.768	1.818	1.906	2.353	3.255	4.054	5.250	1.410	1.134	1.422	44.202
0.2500	0.588	1.671	1.994	2.053	2.155	2.664	3.706	4.622	6.005	1.602	1.286	1.601	55.253
0.3200	0.657	1.881	2.252	2.322	2.445	3.035	4.252	5.315	6.937	1.828	1.465	1.804	70.723
0.4000	0.722	2.078	2.496	2.577	2.725	3.405	4.803	6.020	7.891	2.049	1.638	1.997	88.404
0.5000	0.790	2.285	2.758	2.854	3.031	3.817	5.423	6.811	8.968	2.289	1.827	2.204	110.51
0.6000	0.851	2.469	2.995	3.102	3.308	4.194	5.990	7.536	9.953	2.506	1.997	2.388	132.61
0.7000	0.908	2.637	3.220	3.338	3.573	4.551	6.523	8.218	10.875	2.710	2.156	2.564	154.71
0.8000	0.964	2.796	3.437	3.567	3.828	4.901	7.043	8.872	11.754	2.906	2.308	2.733	176.81
0.9000	1.018	2.949	3.650	3.791	4.079	5.242	7.546	9.513	12.598	3.096	2.456	2.899	198.91
1.0000	1.072	3.099	3.860	4.011	4.327	5.578	8.035	10.129	13.428	3.282	2.601	3.063	221.01
1.2500	1.205	3.462	4.369	4.546	4.928	6.385	9.195	11.576	15.360	3.732	2.954	3.464	276.26
1.6000	1.393	3.953	5.054	5.263	5.732	7.447	10.693	13.425	17.778	4.342	3.438	4.010	353.62
2.0000	1.614	4.505	5.808	6.053	6.610	8.588	12.268	15.353	20.250	5.024	3.987	4.625	442.02
2.5000	1.903	5.194	6.724	7.016	7.663	9.931	14.092	17.559	23.039	5.864	4.675	5.389	552.52
3.2000	2.332	6.175	7.985	8.338	9.092	11.717	16.469	20.413	26.613	7.032	5.648	6.463	707.23
4.0000	2.851	7.335	9.426	9.844	10.703	13.696	19.061	23.510	30.459	8.376	6.782	7.706	884.04
5.0000	3.538	8.850	11.257	11.750	12.729	16.156	22.246	27.288	35.094	10.088	8.239	9.298	1105.0
6.0000	4.259	10.435	13.138	13.704	14.796	18.642	25.436	31.052	39.673	11.846	9.743	10.940	1326.1
7.0000	5.010	12.088	15.070	15.711	16.918	21.175	28.667	34.846	44.270	13.656	11.296	12.632	1547.1
8.0000	5.788	13.805	17.058	17.772	19.098	23.764	31.958	38.694	48.915	15.519	12.898	14.374	1768.1
9.0000	6.594	15.584	19.102	19.890	21.339	26.416	35.327	42.618	53.628	17.438	14.551	16.167	1989.1
10.0000	7.428	17.414	21.202	22.065	23.637	29.134	38.771	46.625	58.423	19.413	16.255	18.012	2210.1
11.0000	8.288	19.293	23.353	24.292	25.992	31.919	42.290	50.718	63.312	21.443	18.008	19.905	2431.1
12.0000	9.174	21.220	25.555	26.573	28.403	34.770	45.883	54.894	68.299	23.525	19.809	21.847	2652.1

$^{226}_{88}Ra$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=226 MEV
0.0125	9.740	8.058	5.903	3.926	3.188	2.892	2.680	2.479	1.576	1.349	1.240	1.063	2.8254
0.0160	11.296	9.345	6.846	4.553	3.697	3.355	3.108	2.875	1.828	1.564	1.438	1.232	3.6165
0.0200	12.915	10.684	7.827	5.205	4.227	3.835	3.554	3.287	2.090	1.789	1.644	1.409	4.5206
0.0250	14.766	12.216	8.949	5.951	4.833	4.385	4.063	3.759	2.389	2.045	1.884	1.611	5.6507
0.0320	17.104	14.178	10.379	6.902	5.615	5.106	4.712	4.359	2.771	2.377	2.190	1.879	7.2330
0.0400	19.509	16.245	11.867	7.915	6.455	5.886	5.423	5.020	3.192	2.747	2.528	2.172	9.0412
0.0500	22.224	18.628	13.568	9.090	7.449	6.784	6.255	5.793	3.677	3.195	2.944	2.530	11.301
0.0600	24.704	20.904	15.137	10.202	8.386	7.614	7.039	6.524	4.178	3.633	3.353	2.884	13.562
0.0700	26.983	23.080	16.605	11.258	9.299	8.435	7.804	7.240	4.649	4.068	3.769	3.238	15.822
0.0800	29.109	25.223	17.991	12.288	10.165	9.211	8.510	7.916	5.127	4.498	4.156	3.580	18.082
0.0900	31.106	27.302	19.309	13.284	11.006	10.002	9.210	8.573	5.619	4.914	4.557	3.929	20.343
0.1000	33.014	29.353	20.569	14.255	11.848	10.737	9.873	9.236	6.089	5.327	4.937	4.258	22.603
0.1250	37.394	34.501	23.518	16.557	13.829	12.535	11.524	10.795	7.232	6.326	5.915	5.115	28.254
0.1600	42.794	41.594	27.275	19.529	16.419	14.892	13.665	12.819	8.728	7.664	7.187	6.273	36.165
0.2000	48.274	48.991	31.184	22.671	19.178	17.370	15.935	14.937	10.353	9.137	8.576	7.484	45.206
0.2500	54.302	57.119	35.655	26.349	22.391	20.323	18.612	17.435	12.301	10.875	10.197	8.914	56.508
0.3200	61.694	67.028	41.350	31.137	26.588	24.272	22.122	20.675	14.803	13.149	12.343	10.854	72.330
0.4000	69.120	76.731	47.277	36.025	31.014	28.366	25.861	24.159	17.587	15.649	14.703	12.907	90.412
0.5000	77.298	86.865	54.054	41.784	36.216	33.243	30.270	28.216	20.865	18.595	17.487	15.406	113.02
0.6000	84.035	94.644	59.939	46.932	40.878	37.642	34.165	31.828	23.796	21.278	20.050	17.802	135.62
0.7000	89.724	100.720	65.065	51.401	44.960	41.446	37.542	35.005	26.416	23.619	22.317	19.780	158.22
0.8000	94.452	105.302	69.552	55.433	48.617	45.000	40.688	37.906	28.795	25.873	24.413	21.700	180.82
0.9000	98.631	108.994	73.496	58.944	51.961	48.213	43.509	40.496	31.089	27.928	26.385	23.519	203.43
1.0000	102.140	111.838	76.971	62.269	54.957	51.032	46.105	42.873	33.097	29.788	28.171	25.169	226.03
1.2500	108.935	116.662	83.990	68.872	61.313	57.113	51.486	47.790	37.544	33.848	32.000	28.641	282.54
1.6000	115.002	120.543	90.839	75.850	67.766	63.315	57.047	52.686	42.240	38.243	36.154	32.429	361.65
2.0000	118.708	123.882	95.809	81.151	72.911	68.408	61.318	56.815	45.989	41.965	39.665	35.737	452.06
2.5000	120.485	126.246	99.328	85.323	77.178	72.509	64.861	60.193	49.465	44.996	42.711	38.738	565.07
3.2000	120.495	127.285	101.342	88.167	80.263	75.500	67.696	62.629	52.292	47.833	45.401	41.246	723.30
4.0000	118.701	126.412	101.454	89.178	81.671	76.902	69.293	63.916	54.075	49.510	47.176	42.915	904.12
5.0000	115.483	123.789	100.072	88.664	81.659	77.055	69.450	64.246	55.039	50.236	48.135	43.931	1130.1
6.0000	112.090	120.516	97.981	87.399	80.638	76.425	68.979	63.786	54.673	50.460	48.305	44.385	1356.2
7.0000	108.467	117.172	95.650	85.703	79.198	75.277	68.103	63.034	54.521	50.121	48.112	44.286	1582.2
8.0000	105.135	113.811	93.288	83.959	77.709	73.884	67.167	62.036	53.920	49.722	47.763	44.032	1808.2
9.0000	102.178	110.549	90.987	82.161	76.156	72.517	65.965	61.052	53.227	49.133	47.222	43.674	2034.3
10.0000	99.265	107.433	88.788	80.531	74.582	71.119	64.726	60.109	52.385	48.567	46.791	43.240	2260.3
11.0000	96.590	104.654	86.706	78.902	73.180	69.798	63.555	59.220	51.677	48.035	46.388	42.746	2486.3
12.0000	94.150	101.946	84.743	77.286	71.778	68.557	62.456	58.303	50.931	47.456	45.761	42.202	2712.4

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	22.136	9.445	6.257	5.879	5.224	3.447	2.113	1.499	0.989	7.916	10.071	7.686	2.8254
0.0160	25.193	10.625	7.140	6.716	5.970	4.032	2.499	1.780	1.182	9.126	11.611	8.770	3.6165
0.0200	28.022	11.506	7.960	7.499	6.708	4.657	2.904	2.113	1.414	10.348	13.158	9.776	4.5206
0.0250	31.144	12.359	8.878	8.368	7.571	5.432	3.472	2.533	1.835	11.724	14.919	10.900	5.6507
0.0320	35.392	13.430	9.953	9.476	8.656	6.487	4.214	3.176	2.211	13.493	17.208	12.351	7.2330
0.0400	39.753	14.454	11.072	10.656	9.814	7.666	5.079	3.892	2.765	15.367	19.604	13.884	9.0412
0.0500	44.909	15.793	12.469	12.130	11.288	9.104	6.133	4.776	3.460	17.557	22.387	15.766	11.301
0.0600	50.558	17.302	14.032	13.563	12.821	10.551	7.175	5.646	4.148	19.693	25.143	17.680	13.562
0.0700	56.290	19.062	15.608	15.160	14.380	11.989	8.169	6.492	4.799	21.819	27.829	19.726	15.822
0.0800	62.427	20.959	17.289	16.803	15.994	13.439	9.211	7.340	5.451	23.963	30.530	21.877	18.082
0.0900	68.546	22.997	19.019	18.536	17.648	14.887	10.234	8.187	6.063	26.105	33.192	24.097	20.343
0.1000	75.284	25.259	20.940	20.281	19.294	16.353	11.293	8.989	6.664	28.242	35.914	26.391	22.603
0.1250	93.366	31.161	25.752	24.811	23.706	20.014	13.782	10.983	8.161	33.725	42.920	32.431	28.254
0.1600	120.827	40.285	33.057	31.857	30.220	25.175	17.265	13.746	10.201	41.648	52.913	41.730	36.165
0.2000	153.116	50.831	41.631	39.978	37.796	30.717	20.894	16.590	12.255	50.332	63.866	52.546	45.206
0.2500	193.248	63.964	51.877	49.952	46.636	36.867	24.923	19.539	14.369	60.399	76.550	65.890	56.508
0.3200	245.619	80.178	65.209	62.232	56.939	43.624	29.110	22.701	16.581	72.859	92.541	82.617	72.330
0.4000	295.011	97.392	77.346	73.516	66.567	49.689	32.858	25.577	18.627	84.768	107.934	98.148	90.412
0.5000	344.867	114.595	89.028	84.703	75.784	55.730	36.757	28.703	20.919	96.920	123.731	113.622	113.02
0.6000	380.613	127.670	96.622	91.827	82.057	59.999	39.800	31.048	22.717	105.613	135.522	123.894	135.62
0.7000	399.498	137.287	100.981	95.971	85.885	62.722	41.967	32.663	24.139	111.586	143.403	129.674	158.22
0.8000	408.272	143.278	103.563	98.764	88.262	64.545	43.679	34.081	25.317	115.735	148.564	133.123	180.82
0.9000	411.576	146.697	105.099	100.175	89.077	65.705	44.832	35.425	26.311	118.696	152.210	134.791	203.43
1.0000	414.872	150.016	107.066	101.601	90.518	67.041	46.182	36.792	27.325	121.075	155.096	136.392	226.03
1.2500	417.430	156.305	111.287	106.247	94.405	70.804	49.722	40.147	30.320	125.733	159.665	140.851	282.54
1.6000	410.591	160.785	116.092	111.005	99.378	75.850	54.412	44.238	34.246	129.445	161.965	144.252	361.65
2.0000	396.651	162.589	120.528	114.780	103.857	80.672	58.923	48.384	38.036	132.217	162.876	146.109	452.06
2.5000	375.460	161.408	123.266	117.306	108.268	85.621	63.570	52.942	42.115	133.695	161.805	146.012	565.07
3.2000	354.696	157.586	124.954	119.279	110.767	89.687	68.203	56.751	45.502	134.075	159.816	145.425	723.30
4.0000	334.799	151.370	123.774	118.701	111.600	91.309	70.003	58.945	47.683	132.499	156.138	142.746	904.12
5.0000	318.228	144.604	120.987	116.484	109.779	90.965	70.751	59.743	49.035	129.493	151.609	138.900	1130.1
6.0000	304.720	138.545	117.773	113.266	107.289	89.554	69.958	59.474	48.990	125.807	146.873	134.528	1356.2
7.0000	293.646	133.337	114.589	110.476	104.450	87.807	69.060	58.921	48.686	122.337	142.423	130.850	1582.2
8.0000	283.595	128.271	111.479	107.561	101.590	85.732	67.447	57.838	48.043	118.849	138.066	127.151	1808.2
9.0000	273.871	124.470	108.365	104.635	98.994	83.708	65.965	56.685	47.313	115.371	133.842	123.469	2034.3
10.0000	265.476	121.196	105.746	102.106	96.601	81.685	64.549	55.492	46.436	112.228	129.986	120.219	2260.3
11.0000	257.517	118.094	103.267	99.712	94.336	79.769	63.209	54.365	45.521	109.336	126.504	117.226	2486.3
12.0000	249.993	115.166	100.929	97.455	92.201	77.964	61.947	53.304	44.660	106.607	123.132	114.404	2712.4

$^{226}_{88}Ra$ IONS

ENERGY PER MASS UNIT | RANGE IN UNITS OF MG/SQ CM | ENERGY FOR A=226

MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.144	0.139	0.165	0.203	0.209	0.248	0.256	0.273	0.349	0.382	0.397	0.442	2.8254
0.0160	0.182	0.178	0.213	0.264	0.273	0.323	0.336	0.361	0.468	0.520	0.547	0.622	3.6165
0.0200	0.223	0.221	0.266	0.332	0.345	0.407	0.424	0.457	0.597	0.666	0.703	0.806	4.5206
0.0250	0.273	0.273	0.330	0.416	0.434	0.512	0.533	0.574	0.752	0.842	0.890	1.025	5.6507
0.0320	0.339	0.344	0.419	0.532	0.558	0.657	0.684	0.736	0.969	1.085	1.147	1.322	7.2330
0.0400	0.411	0.421	0.516	0.663	0.699	0.821	0.855	0.919	1.216	1.361	1.440	1.658	9.0412
0.0500	0.494	0.512	0.633	0.822	0.874	1.022	1.064	1.143	1.524	1.706	1.804	2.075	11.301
0.0600	0.571	0.597	0.745	0.975	1.044	1.217	1.268	1.360	1.828	2.044	2.163	2.486	13.562
0.0700	0.644	0.678	0.851	1.121	1.208	1.404	1.465	1.571	2.124	2.375	2.514	2.886	15.822
0.0800	0.714	0.754	0.953	1.262	1.367	1.585	1.655	1.773	2.412	2.696	2.855	3.276	18.082
0.0900	0.779	0.826	1.050	1.397	1.520	1.758	1.838	1.969	2.689	3.006	3.184	3.653	20.343
0.1000	0.842	0.894	1.143	1.526	1.667	1.925	2.015	2.157	2.957	3.306	3.503	4.017	22.603
0.1250	0.987	1.050	1.362	1.827	2.012	2.314	2.429	2.597	3.584	4.011	4.251	4.873	28.254
0.1600	1.171	1.240	1.637	2.206	2.448	2.802	2.952	3.153	4.374	4.901	5.194	5.948	36.165
0.2000	1.358	1.427	1.919	2.589	2.891	3.297	3.484	3.719	5.175	5.801	6.147	7.034	45.206
0.2500	1.570	1.630	2.235	3.014	3.382	3.844	4.075	4.347	6.055	6.790	7.197	8.229	56.508
0.3200	1.834	1.876	2.625	3.533	3.982	4.508	4.796	5.116	7.122	7.987	8.468	9.674	72.330
0.4000	2.104	2.122	3.018	4.048	4.577	5.163	5.510	5.879	8.168	9.160	9.713	11.088	90.412
0.5000	2.407	2.393	3.452	4.612	5.224	5.872	6.284	6.708	9.291	10.417	11.048	12.602	113.02
0.6000	2.683	2.638	3.840	5.109	5.793	6.493	6.965	7.438	10.268	11.509	12.206	13.911	135.62
0.7000	2.940	2.866	4.196	5.560	6.307	7.053	7.581	8.097	11.143	12.487	13.241	15.076	158.22
0.8000	3.186	3.086	4.527	5.976	6.780	7.567	8.147	8.705	11.943	13.378	14.184	16.138	180.82
0.9000	3.420	3.296	4.843	6.371	7.230	8.052	8.684	9.281	12.698	14.201	15.056	17.116	203.43
1.0000	3.645	3.501	5.143	6.744	7.653	8.507	9.188	9.824	13.402	14.985	15.884	18.045	226.03
1.2500	4.179	3.994	5.844	7.605	8.624	9.552	10.345	11.069	15.002	16.760	17.762	20.145	282.54
1.6000	4.884	4.659	6.747	8.696	9.848	10.863	11.801	12.641	16.983	18.953	20.081	22.733	361.65
2.0000	5.655	5.397	7.714	9.846	11.131	12.234	13.326	14.290	19.030	21.205	22.464	25.383	452.06
2.5000	6.598	6.299	8.870	11.201	12.635	13.836	15.115	16.219	21.394	23.801	25.204	28.415	565.07
3.2000	7.909	7.544	10.444	13.022	14.641	15.970	17.498	18.790	24.499	27.204	28.790	32.365	723.30
4.0000	9.419	8.968	12.225	15.059	16.871	18.340	20.134	21.644	27.895	30.915	32.691	36.657	904.12
5.0000	11.348	10.773	14.466	17.598	19.636	21.273	23.389	25.168	32.034	35.442	37.430	41.857	1130.1
6.0000	13.334	12.623	16.748	20.165	22.421	24.217	26.654	28.698	36.153	39.930	42.116	46.973	1356.2
7.0000	15.383	14.525	19.082	22.776	25.249	27.197	29.951	32.262	40.292	44.424	46.803	52.071	1582.2
8.0000	17.500	16.482	21.475	25.441	28.130	30.228	33.293	35.876	44.461	48.951	51.518	57.189	1808.2
9.0000	19.681	18.498	23.929	28.162	31.068	33.316	36.689	39.549	48.680	53.524	56.278	62.343	2034.3
10.0000	21.925	20.572	26.444	30.941	34.068	36.463	40.148	43.281	52.961	58.152	61.086	67.545	2260.3
11.0000	24.234	22.704	29.020	33.777	37.127	39.672	43.673	47.069	57.305	62.832	65.938	72.803	2486.3
12.0000	26.604	24.892	31.657	36.672	40.246	42.940	47.261	50.916	61.711	67.566	70.844	78.125	2712.4

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.055	0.128	0.149	0.152	0.159	0.207	0.277	0.347	0.416	0.132	0.113	0.124	2.8254
0.0160	0.071	0.163	0.192	0.197	0.206	0.269	0.361	0.459	0.583	0.170	0.144	0.160	3.6165
0.0200	0.088	0.203	0.241	0.247	0.259	0.338	0.454	0.580	0.751	0.212	0.179	0.200	4.5206
0.0250	0.108	0.253	0.302	0.310	0.325	0.425	0.571	0.727	0.949	0.263	0.221	0.250	5.6507
0.0320	0.135	0.323	0.387	0.397	0.418	0.545	0.733	0.932	1.211	0.333	0.278	0.320	7.2330
0.0400	0.165	0.403	0.484	0.497	0.523	0.680	0.915	1.158	1.502	0.411	0.341	0.399	9.0412
0.0500	0.200	0.503	0.603	0.619	0.651	0.841	1.134	1.430	1.849	0.504	0.415	0.494	11.301
0.0600	0.234	0.600	0.718	0.736	0.775	0.993	1.341	1.686	2.175	0.592	0.486	0.586	13.562
0.0700	0.265	0.693	0.827	0.849	0.892	1.135	1.537	1.927	2.481	0.675	0.552	0.674	15.822
0.0800	0.295	0.782	0.931	0.955	1.002	1.268	1.721	2.153	2.770	0.753	0.614	0.757	18.082
0.0900	0.322	0.865	1.029	1.055	1.107	1.393	1.894	2.366	3.042	0.827	0.673	0.835	20.343
0.1000	0.348	0.943	1.121	1.149	1.205	1.510	2.057	2.566	3.300	0.897	0.729	0.908	22.603
0.1250	0.406	1.118	1.327	1.361	1.426	1.774	2.425	3.021	3.889	1.056	0.855	1.072	28.254
0.1600	0.473	1.320	1.568	1.610	1.687	2.086	2.867	3.569	4.604	1.247	1.006	1.264	36.165
0.2000	0.534	1.506	1.792	1.843	1.932	2.384	3.295	4.102	5.306	1.430	1.151	1.442	45.206
0.2500	0.597	1.695	2.022	2.082	2.185	2.699	3.752	4.677	6.072	1.625	1.305	1.624	56.508
0.3200	0.667	1.909	2.284	2.354	2.479	3.076	4.307	5.381	7.018	1.855	1.486	1.830	72.330
0.4000	0.732	2.109	2.531	2.614	2.763	3.452	4.867	6.096	7.986	2.078	1.662	2.026	90.412
0.5000	0.802	2.319	2.798	2.894	3.074	3.870	5.496	6.900	9.079	2.323	1.854	2.236	113.02
0.6000	0.864	2.506	3.038	3.146	3.355	4.253	6.071	7.635	10.078	2.543	2.026	2.423	135.62
0.7000	0.922	2.676	3.266	3.387	3.624	4.616	6.613	8.328	11.015	2.750	2.188	2.601	158.22
0.8000	0.978	2.837	3.487	3.619	3.883	4.970	7.140	8.991	11.906	2.949	2.343	2.773	180.82
0.9000	1.033	2.993	3.703	3.846	4.138	5.317	7.650	9.641	12.763	3.142	2.493	2.942	203.43
1.0000	1.088	3.145	3.916	4.069	4.390	5.657	8.147	10.267	13.605	3.330	2.640	3.108	226.03
1.2500	1.223	3.513	4.433	4.612	4.999	6.475	9.323	11.734	15.564	3.787	2.998	3.515	282.54
1.6000	1.413	4.010	5.126	5.338	5.813	7.552	10.839	13.606	18.012	4.405	3.488	4.068	361.65
2.0000	1.637	4.568	5.889	6.137	6.701	8.705	12.433	15.556	20.511	5.094	4.043	4.689	452.06
2.5000	1.929	5.264	6.814	7.109	7.765	10.062	14.275	17.784	23.329	5.942	4.738	5.461	565.07
3.2000	2.361	6.254	8.086	8.444	9.207	11.864	16.673	20.664	26.936	7.122	5.720	6.544	723.30
4.0000	2.885	7.423	9.538	9.961	10.831	13.859	19.287	23.787	30.813	8.477	6.863	7.798	904.12
5.0000	3.577	8.950	11.384	11.882	12.871	16.337	22.495	27.592	35.482	10.201	8.331	9.401	1130.1
6.0000	4.303	10.546	13.277	13.849	14.953	18.840	25.707	31.382	40.092	11.971	9.845	11.054	1356.2
7.0000	5.058	12.209	15.222	15.869	17.088	21.389	28.958	35.200	44.719	13.793	11.408	12.758	1582.2
8.0000	5.842	13.937	17.222	17.943	19.282	23.994	32.270	39.072	49.393	15.667	13.019	14.510	1808.2
9.0000	6.653	15.726	19.278	20.074	21.536	26.662	35.659	43.019	54.134	17.598	14.682	16.314	2034.3
10.0000	7.491	17.567	21.390	22.260	23.848	29.396	39.123	47.050	58.956	19.584	16.396	18.170	2260.3
11.0000	8.356	19.456	23.553	24.501	26.216	32.197	42.662	51.165	63.873	21.625	18.159	20.074	2486.3
12.0000	9.247	21.395	25.768	26.794	28.640	35.063	46.275	55.365	68.886	23.719	19.970	22.026	2712.4

$^{225}_{89}Ac$ IONS

ENERGY PER MASS UNIT	ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)												ENERGY FOR A=225
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	9.781	8.092	5.928	3.942	3.201	2.905	2.691	2.490	1.583	1.355	1.245	1.067	2.8127
0.0160	11.346	9.386	6.876	4.573	3.713	3.369	3.122	2.888	1.836	1.571	1.444	1.238	3.6003
0.0200	12.974	10.733	7.863	5.229	4.246	3.853	3.570	3.303	2.100	1.797	1.651	1.415	4.5004
0.0250	14.837	12.274	8.992	5.980	4.856	4.406	4.082	3.777	2.401	2.055	1.893	1.619	5.6255
0.0320	17.189	14.248	10.430	6.936	5.643	5.132	4.735	4.381	2.785	2.389	2.201	1.888	7.2006
0.0400	19.609	16.329	11.928	7.956	6.489	5.916	5.451	5.045	3.209	2.761	2.541	2.183	9.0008
0.0500	22.342	18.727	13.640	9.139	7.488	6.820	6.288	5.824	3.696	3.212	2.960	2.544	11.251
0.0600	24.838	21.018	15.220	10.258	8.432	7.655	7.077	6.560	4.201	3.653	3.371	2.899	13.501
0.0700	27.133	23.209	16.697	11.321	9.350	8.482	7.848	7.280	4.675	4.091	3.790	3.256	15.751
0.0800	29.274	25.366	18.093	12.357	10.222	9.263	8.558	7.961	5.156	4.523	4.179	3.600	18.002
0.0900	31.286	27.460	19.420	13.361	11.069	10.060	9.263	8.623	5.651	4.942	4.583	3.952	20.252
0.1000	33.207	29.524	20.690	14.338	11.917	10.800	9.931	9.290	6.124	5.359	4.966	4.283	22.502
0.1250	37.619	34.709	23.660	16.656	13.912	12.611	11.593	10.860	7.275	6.364	5.950	5.146	28.128
0.1600	43.060	41.853	27.444	19.650	16.521	14.985	13.750	12.899	8.782	7.712	7.232	6.312	36.003
0.2000	48.582	49.304	31.384	22.816	19.301	17.481	16.037	15.033	10.419	9.195	8.631	7.532	45.004
0.2500	54.658	57.494	35.889	26.522	22.538	20.457	18.734	17.550	12.382	10.946	10.264	8.972	56.255
0.3200	62.111	67.481	41.630	31.347	26.768	24.437	22.272	20.815	14.903	13.238	12.426	10.928	72.006
0.4000	69.599	77.263	47.605	36.275	31.229	28.563	26.040	24.326	17.709	15.757	14.805	12.996	90.008
0.5000	77.847	87.483	54.439	42.081	36.474	33.480	30.486	28.417	21.013	18.727	17.611	15.515	112.51
0.6000	84.628	95.312	60.362	47.264	41.167	37.908	34.407	32.052	23.964	21.429	20.191	17.928	135.01
0.7000	90.371	101.446	65.534	51.772	45.284	41.745	37.813	35.257	26.607	23.789	22.478	19.922	157.51
0.8000	95.158	106.089	70.072	55.848	48.980	45.337	40.992	38.189	29.010	26.067	24.595	21.863	180.02
0.9000	99.402	109.845	74.070	59.404	52.367	48.590	43.849	40.812	31.332	28.147	26.591	23.702	202.52
1.0000	102.976	112.754	77.601	62.779	55.407	51.449	46.483	43.223	33.368	30.031	28.402	25.375	225.02
1.2500	109.933	117.731	84.759	69.503	61.874	57.636	51.957	48.228	37.887	34.158	32.293	28.903	281.27
1.6000	116.203	121.802	91.787	76.642	68.473	63.976	57.642	53.237	42.681	38.642	36.531	32.768	360.03
2.0000	120.092	125.326	96.926	82.096	73.761	69.205	62.033	57.477	46.525	42.454	40.127	36.153	450.04
2.5000	122.028	127.863	100.600	86.416	78.166	73.438	65.692	60.964	50.099	45.572	43.258	39.234	562.55
3.2000	122.172	129.056	102.752	89.394	81.380	76.550	68.638	63.501	53.020	48.499	46.033	41.820	720.06
4.0000	120.450	128.274	102.948	90.492	82.873	78.035	70.314	64.858	54.872	50.239	47.871	43.547	900.08
5.0000	117.258	125.691	101.610	90.026	82.914	78.240	70.517	65.234	55.885	51.008	48.874	44.607	1125.1
6.0000	113.860	122.420	99.528	88.779	81.912	77.632	70.068	64.793	55.537	51.257	49.068	45.086	1350.1
7.0000	110.214	119.059	97.191	87.083	80.474	76.489	69.200	64.049	55.399	50.928	48.887	44.999	1575.1
8.0000	106.854	115.672	94.813	85.332	78.979	75.092	68.265	63.051	54.802	50.535	48.544	44.752	1800.2
9.0000	103.870	112.379	92.493	83.521	77.417	73.717	67.058	62.063	54.109	49.946	48.004	44.397	2025.2
10.0000	100.927	109.232	90.274	81.879	75.830	72.310	65.810	61.116	53.262	49.380	47.574	43.964	2250.2
11.0000	98.223	106.423	88.172	80.236	74.417	70.978	64.630	60.221	52.550	48.847	47.172	43.469	2475.2
12.0000	95.756	103.686	86.189	78.605	73.002	69.727	63.522	59.298	51.800	48.266	46.542	42.922	2700.2

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	22.230	9.485	6.284	5.904	5.246	3.462	2.122	1.506	0.994	7.949	10.113	7.718	2.8127
0.0160	25.305	10.672	7.172	6.746	5.996	4.050	2.510	1.788	1.187	9.166	11.662	8.808	3.6003
0.0200	28.151	11.559	7.997	7.533	6.739	4.679	2.917	2.123	1.420	10.395	13.218	9.821	4.5004
0.0250	31.292	12.418	8.920	8.408	7.607	5.458	3.489	2.545	1.843	11.780	14.990	10.952	5.6255
0.0320	35.568	13.497	10.003	9.523	8.699	6.519	4.235	3.192	2.222	13.560	17.294	12.412	7.2006
0.0400	39.958	14.528	11.128	10.711	9.864	7.705	5.105	3.912	2.779	15.446	19.704	13.955	9.0008
0.0500	45.148	15.877	12.535	12.194	11.348	9.152	6.165	4.801	3.478	17.650	22.506	15.849	11.251
0.0600	50.833	17.396	14.109	13.637	12.891	10.608	7.214	5.677	4.170	19.801	25.280	17.776	13.501
0.0700	56.604	19.168	15.695	15.245	14.460	12.055	8.215	6.529	4.825	21.940	27.985	19.836	15.751
0.0800	62.782	21.078	17.387	16.899	16.084	13.515	9.263	7.382	5.482	24.099	30.703	22.001	18.002
0.0900	68.941	23.129	19.129	18.643	17.750	14.973	10.293	8.234	6.098	26.256	33.383	24.236	20.252
0.1000	75.725	25.407	21.062	20.400	19.407	16.448	11.359	9.041	6.703	28.407	36.124	26.545	22.502
0.1250	93.929	31.349	25.907	24.961	23.849	20.134	13.865	11.049	8.210	33.928	43.179	32.627	28.128
0.1600	121.578	40.535	33.262	32.055	30.408	25.331	17.372	13.832	10.264	41.907	53.242	41.990	36.003
0.2000	154.094	51.156	41.897	40.234	38.037	30.913	21.027	16.696	12.334	50.653	64.274	52.882	45.004
0.2500	194.517	64.384	52.218	50.280	46.942	37.109	25.086	19.667	14.463	60.795	77.053	66.322	56.255
0.3200	247.279	80.720	65.650	62.652	57.324	43.919	29.307	22.855	16.693	73.351	93.167	83.176	72.006
0.4000	297.056	98.067	77.882	74.026	67.028	50.033	33.086	25.754	18.756	85.356	108.683	98.828	90.008
0.5000	347.318	115.410	89.660	85.305	76.323	56.126	37.018	28.907	21.068	97.608	124.610	114.430	112.51
0.6000	383.301	128.572	97.304	92.475	82.636	60.423	40.081	31.268	22.877	106.358	136.479	124.769	135.01
0.7000	402.378	138.276	101.709	96.662	86.505	63.175	42.269	32.898	24.313	112.391	144.437	130.609	157.51
0.8000	411.324	144.349	104.337	99.503	88.922	65.027	44.005	34.335	25.506	116.600	149.674	134.118	180.02
0.9000	414.791	147.843	105.920	100.957	89.773	66.218	45.183	35.702	26.517	119.623	153.398	135.844	202.52
1.0000	418.267	151.243	107.942	102.433	91.258	67.590	46.560	37.093	27.548	122.066	156.365	137.508	225.02
1.2500	421.254	157.737	112.306	107.221	95.270	71.452	50.178	40.515	30.598	126.885	161.128	142.141	281.27
1.6000	414.879	162.464	117.304	112.164	100.415	76.642	54.981	44.700	34.604	130.797	163.657	145.758	360.03
2.0000	401.274	164.484	121.933	116.118	105.068	81.612	59.610	48.948	38.480	133.758	164.775	147.812	450.04
2.5000	380.269	163.475	124.845	118.809	109.654	86.717	64.384	53.620	42.654	135.408	163.878	147.882	562.55
3.2000	359.632	159.779	126.693	120.939	112.308	90.936	69.152	57.541	46.136	135.941	162.040	147.449	720.06
4.0000	339.730	153.599	125.597	120.450	113.243	92.654	71.034	59.813	48.386	134.451	158.438	144.848	900.08
5.0000	323.120	146.826	122.846	118.274	111.466	92.363	71.838	60.661	49.789	131.483	153.939	141.035	1125.1
6.0000	309.533	140.733	119.633	115.055	108.984	90.969	71.063	60.414	49.764	127.794	149.193	136.652	1350.1
7.0000	298.375	135.484	116.434	112.255	106.132	89.221	70.172	59.869	49.470	124.307	144.717	132.957	1575.1
8.0000	288.231	130.368	113.301	109.319	103.251	87.133	68.550	58.784	48.829	120.792	140.323	129.230	1800.2
9.0000	278.405	126.531	110.159	106.367	100.633	85.094	67.058	57.623	48.096	117.281	136.058	125.513	2025.2
10.0000	269.920	123.224	107.517	103.815	98.218	83.052	65.629	56.421	47.213	114.107	132.161	122.231	2250.2
11.0000	261.870	120.090	105.013	101.398	95.931	81.118	64.277	55.284	46.290	111.185	128.643	119.208	2475.2
12.0000	254.259	117.131	102.652	99.118	93.774	79.294	63.004	54.213	45.422	108.426	125.233	116.356	2700.2

$^{225}_{89}Ac$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=225 MEV.
0.0125	0.142	0.137	0.163	0.201	0.206	0.244	0.252	0.269	0.343	0.375	0.390	0.432	2.8127
0.0160	0.179	0.175	0.210	0.261	0.270	0.319	0.331	0.356	0.462	0.513	0.539	0.611	3.6003
0.0200	0.220	0.218	0.262	0.327	0.340	0.402	0.418	0.451	0.588	0.657	0.693	0.795	4.5004
0.0250	0.270	0.269	0.326	0.410	0.428	0.505	0.526	0.566	0.742	0.830	0.878	1.011	5.6255
0.0320	0.335	0.339	0.413	0.525	0.550	0.648	0.675	0.726	0.956	1.070	1.132	1.304	7.2006
0.0400	0.405	0.415	0.509	0.654	0.690	0.810	0.843	0.906	1.200	1.343	1.421	1.636	9.0008
0.0500	0.488	0.505	0.625	0.810	0.861	1.008	1.050	1.127	1.503	1.682	1.780	2.047	11.251
0.0600	0.564	0.589	0.735	0.961	1.029	1.200	1.251	1.342	1.802	2.016	2.133	2.451	13.501
0.0700	0.636	0.669	0.840	1.106	1.191	1.385	1.445	1.549	2.094	2.342	2.479	2.846	15.751
0.0800	0.705	0.744	0.940	1.245	1.348	1.563	1.632	1.749	2.378	2.658	2.815	3.230	18.002
0.0900	0.770	0.816	1.036	1.378	1.499	1.734	1.813	1.942	2.652	2.964	3.140	3.602	20.252
0.1000	0.832	0.883	1.129	1.505	1.644	1.898	1.987	2.127	2.916	3.260	3.454	3.961	22.502
0.1250	0.975	1.037	1.344	1.803	1.985	2.282	2.396	2.562	3.535	3.956	4.193	4.806	28.128
0.1600	1.157	1.225	1.616	2.177	2.415	2.765	2.912	3.111	4.315	4.834	5.123	5.867	36.003
0.2000	1.342	1.410	1.895	2.556	2.852	3.254	3.438	3.670	5.105	5.723	6.064	6.939	45.004
0.2500	1.551	1.610	2.207	2.976	3.337	3.794	4.022	4.291	5.975	6.699	7.100	8.119	56.255
0.3200	1.812	1.854	2.593	3.488	3.930	4.451	4.734	5.050	7.028	7.882	8.356	9.547	72.006
0.4000	2.079	2.096	2.981	3.998	4.518	5.098	5.440	5.804	8.062	9.041	9.587	10.943	90.008
0.5000	2.379	2.364	3.410	4.554	5.157	5.798	6.205	6.623	9.171	10.283	10.905	12.440	112.51
0.6000	2.652	2.606	3.794	5.046	5.720	6.412	6.878	7.344	10.137	11.362	12.050	13.733	135.01
0.7000	2.906	2.832	4.145	5.491	6.228	6.965	7.486	7.996	11.002	12.328	13.072	14.884	157.51
0.8000	3.148	3.049	4.472	5.902	6.696	7.473	8.046	8.596	11.792	13.209	14.004	15.933	180.02
0.9000	3.380	3.257	4.784	6.293	7.140	7.952	8.576	9.166	12.538	14.022	14.865	16.900	202.52
1.0000	3.602	3.459	5.081	6.661	7.557	8.402	9.074	9.702	13.234	14.795	15.683	17.817	225.02
1.2500	4.129	3.946	5.773	7.511	8.516	9.433	10.216	10.931	14.812	16.548	17.537	19.889	281.27
1.6000	4.824	4.601	6.663	8.587	9.722	10.726	11.651	12.481	16.765	18.709	19.823	22.441	360.03
2.0000	5.584	5.328	7.615	9.719	10.986	12.076	13.153	14.104	18.781	20.927	22.169	25.050	450.04
2.5000	6.511	6.215	8.752	11.052	12.465	13.651	14.912	16.001	21.106	23.480	24.864	28.032	562.55
3.2000	7.798	7.438	10.298	12.840	14.435	15.747	17.253	18.527	24.156	26.823	28.386	31.912	720.06
4.0000	9.280	8.836	12.046	14.839	16.624	18.073	19.840	21.328	27.489	30.465	32.216	36.125	900.08
5.0000	11.172	10.606	14.244	17.330	19.336	20.950	23.033	24.785	31.548	34.905	36.863	41.225	1125.1
6.0000	13.119	12.420	16.481	19.846	22.066	23.836	26.233	28.244	35.586	39.304	41.456	46.240	1350.1
7.0000	15.127	14.283	18.768	22.405	24.837	26.756	29.464	31.737	39.642	43.708	46.050	51.235	1575.1
8.0000	17.201	16.201	21.112	25.015	27.659	29.725	32.738	35.278	43.725	48.143	50.668	56.249	1800.2
9.0000	19.337	18.174	23.515	27.680	30.537	32.749	36.064	38.875	47.858	52.622	55.330	61.297	2025.2
10.0000	21.535	20.206	25.978	30.402	33.474	35.832	39.451	42.529	52.050	57.153	60.039	66.391	2250.2
11.0000	23.795	22.293	28.500	33.178	36.470	38.973	42.902	46.238	56.303	61.735	64.789	71.538	2475.2
12.0000	26.115	24.435	31.082	36.012	39.523	42.172	46.414	50.004	60.616	66.370	69.592	76.748	2700.2

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.054	0.126	0.147	0.150	0.157	0.204	0.272	0.341	0.406	0.131	0.111	0.122	2.8127
0.0160	0.070	0.161	0.189	0.194	0.203	0.265	0.356	0.452	0.573	0.168	0.142	0.157	3.6003
0.0200	0.087	0.200	0.237	0.243	0.255	0.333	0.448	0.572	0.740	0.209	0.176	0.197	4.5004
0.0250	0.107	0.250	0.297	0.305	0.321	0.419	0.563	0.718	0.936	0.260	0.218	0.247	5.6255
0.0320	0.134	0.319	0.381	0.392	0.412	0.538	0.723	0.919	1.194	0.329	0.274	0.315	7.2006
0.0400	0.163	0.398	0.477	0.490	0.516	0.670	0.902	1.142	1.482	0.405	0.336	0.393	9.0008
0.0500	0.198	0.496	0.594	0.610	0.642	0.829	1.118	1.410	1.824	0.497	0.410	0.488	11.251
0.0600	0.231	0.592	0.708	0.726	0.764	0.979	1.322	1.663	2.145	0.584	0.479	0.578	13.501
0.0700	0.262	0.684	0.816	0.837	0.879	1.119	1.515	1.900	2.448	0.666	0.545	0.665	15.751
0.0800	0.291	0.772	0.918	0.942	0.989	1.251	1.697	2.124	2.732	0.743	0.606	0.747	18.002
0.0900	0.318	0.854	1.015	1.041	1.091	1.374	1.868	2.333	3.001	0.817	0.665	0.823	20.252
0.1000	0.344	0.931	1.106	1.134	1.188	1.490	2.028	2.531	3.255	0.886	0.720	0.896	22.502
0.1250	0.401	1.103	1.309	1.343	1.407	1.750	2.392	2.981	3.837	1.043	0.844	1.058	28.128
0.1600	0.467	1.303	1.547	1.589	1.664	2.058	2.829	3.521	4.543	1.231	0.993	1.247	36.003
0.2000	0.528	1.487	1.769	1.820	1.907	2.353	3.251	4.048	5.237	1.413	1.137	1.424	45.004
0.2500	0.590	1.674	1.996	2.055	2.157	2.665	3.704	4.617	5.993	1.605	1.289	1.603	56.255
0.3200	0.659	1.885	2.255	2.325	2.447	3.037	4.251	5.312	6.928	1.832	1.468	1.807	72.006
0.4000	0.724	2.083	2.500	2.581	2.729	3.408	4.805	6.019	7.885	2.053	1.642	2.001	90.008
0.5000	0.792	2.291	2.763	2.858	3.036	3.822	5.426	6.813	8.965	2.295	1.832	2.208	112.51
0.6000	0.853	2.475	3.000	3.107	3.314	4.201	5.995	7.539	9.952	2.512	2.002	2.393	135.01
0.7000	0.910	2.644	3.226	3.345	3.579	4.559	6.530	8.224	10.877	2.717	2.162	2.569	157.51
0.8000	0.966	2.803	3.444	3.574	3.836	4.909	7.051	8.880	11.758	2.914	2.315	2.739	180.02
0.9000	1.020	2.957	3.658	3.799	4.087	5.252	7.556	9.522	12.604	3.104	2.463	2.906	202.52
1.0000	1.074	3.107	3.868	4.020	4.336	5.588	8.046	10.140	13.436	3.290	2.608	3.070	225.02
1.2500	1.208	3.470	4.378	4.555	4.937	6.395	9.207	11.588	15.369	3.741	2.962	3.471	281.27
1.6000	1.395	3.961	5.062	5.271	5.740	7.456	10.702	13.433	17.783	4.350	3.445	4.017	360.03
2.0000	1.615	4.510	5.813	6.057	6.614	8.592	12.270	15.353	20.244	5.029	3.992	4.628	450.04
2.5000	1.902	5.194	6.723	7.013	7.660	9.926	14.083	17.545	23.015	5.863	4.675	5.388	562.55
3.2000	2.327	6.167	7.972	8.325	9.077	11.696	16.439	20.374	26.558	7.021	5.639	6.452	720.06
4.0000	2.842	7.314	9.397	9.814	10.671	13.655	19.003	23.438	30.363	8.351	6.761	7.682	900.08
5.0000	3.520	8.811	11.207	11.698	12.672	16.085	22.150	27.170	34.943	10.042	8.201	9.255	1125.1
6.0000	4.231	10.376	13.063	13.626	14.712	18.539	25.299	30.886	39.461	11.777	9.685	10.875	1350.1
7.0000	4.972	12.006	14.969	15.606	16.805	21.036	28.485	34.627	43.996	13.562	11.216	12.544	1575.1
8.0000	5.739	13.699	16.928	17.637	18.954	23.588	31.729	38.420	48.574	15.399	12.795	14.261	1800.2
9.0000	6.533	15.451	18.943	19.724	21.162	26.202	35.048	42.286	53.217	17.290	14.424	16.028	2025.2
10.0000	7.354	17.253	21.010	21.865	23.425	28.879	38.440	46.233	57.940	19.235	16.102	17.845	2250.2
11.0000	8.201	19.103	23.128	24.059	25.744	31.620	41.905	50.262	62.753	21.233	17.828	19.709	2475.2
12.0000	9.073	21.000	25.296	26.303	28.116	34.426	45.441	54.373	67.661	23.282	19.601	21.620	2700.2

$^{232}_{90}Th$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=232 MEV
0.0125	9.822	8.126	5.953	3.959	3.215	2.917	2.703	2.500	1.589	1.360	1.250	1.072	2.9005
0.0160	11.395	9.427	6.906	4.593	3.729	3.384	3.135	2.901	1.844	1.578	1.450	1.243	3.7126
0.0200	13.033	10.782	7.899	5.253	4.265	3.871	3.586	3.318	2.109	1.805	1.659	1.422	4.6408
0.0250	14.907	12.332	9.034	6.008	4.879	4.427	4.102	3.794	2.412	2.064	1.902	1.626	5.8010
0.0320	17.274	14.318	10.482	6.970	5.671	5.157	4.759	4.402	2.799	2.400	2.212	1.897	7.4253
0.0400	19.709	16.412	11.988	7.996	6.522	5.946	5.479	5.071	3.225	2.775	2.553	2.194	9.2816
0.0500	22.459	18.826	13.711	9.187	7.528	6.856	6.321	5.855	3.716	3.229	2.975	2.557	11.602
0.0600	24.972	21.131	15.302	10.313	8.477	7.697	7.115	6.595	4.223	3.672	3.389	2.915	13.922
0.0700	27.282	23.337	16.789	11.383	9.402	8.529	7.891	7.320	4.701	4.113	3.811	3.274	16.243
0.0800	29.438	25.508	18.194	12.427	10.280	9.315	8.606	8.005	5.185	4.549	4.203	3.621	18.563
0.0900	31.464	27.616	19.531	13.437	11.133	10.117	9.316	8.672	5.683	4.971	4.609	3.975	20.884
0.1000	33.399	29.695	20.809	14.421	11.986	10.862	9.988	9.343	6.160	5.390	4.994	4.308	23.204
0.1250	37.843	34.915	23.800	16.756	13.995	12.686	11.662	10.924	7.319	6.402	5.986	5.177	29.005
0.1600	43.325	42.110	27.613	19.771	16.623	15.077	13.834	12.978	8.836	7.759	7.276	6.351	37.126
0.2000	48.889	49.615	31.582	22.960	19.423	17.591	16.138	15.128	10.485	9.253	8.685	7.580	46.408
0.2500	55.013	57.866	36.121	26.694	22.684	20.589	18.855	17.663	12.462	11.017	10.331	9.030	58.010
0.3200	62.526	67.932	41.907	31.556	26.946	24.600	22.420	20.954	15.003	13.327	12.509	11.001	74.253
0.4000	70.075	77.792	47.931	36.523	31.443	28.759	26.218	24.493	17.830	15.865	14.907	13.085	92.816
0.5000	78.393	88.097	54.821	42.376	36.730	33.715	30.700	28.616	21.161	18.858	17.734	15.624	116.02
0.6000	85.215	95.974	60.781	47.592	41.453	38.171	34.645	32.275	24.130	21.577	20.331	18.052	139.22
0.7000	91.010	102.163	65.997	52.138	45.604	42.040	38.080	35.506	26.795	23.957	22.637	20.063	162.43
0.8000	95.854	106.866	70.585	56.256	49.339	45.668	41.292	38.469	29.222	26.258	24.775	22.023	185.63
0.9000	100.161	110.685	74.636	59.858	52.767	48.961	44.184	41.124	31.571	28.362	26.794	23.883	208.84
1.0000	103.800	113.656	78.222	63.281	55.850	51.861	46.855	43.570	33.635	30.272	28.629	25.579	232.04
1.2500	110.920	118.787	85.520	70.126	62.430	58.154	52.424	48.661	38.227	34.465	32.583	29.162	290.05
1.6000	117.395	123.051	92.729	77.429	69.176	64.632	58.234	53.783	43.119	39.039	36.906	33.104	371.26
2.0000	121.471	126.765	98.039	83.039	74.608	70.000	62.745	58.137	47.059	42.941	40.588	36.569	464.08
2.5000	123.571	129.480	101.873	87.509	79.155	74.367	66.523	61.735	50.733	46.148	43.805	39.730	580.10
3.2000	123.854	130.833	104.166	90.625	82.500	77.604	69.583	64.375	53.750	49.166	46.667	42.396	742.53
4.0000	122.205	130.143	104.449	91.811	84.081	79.172	71.339	65.803	55.671	50.971	48.569	44.182	928.16
5.0000	119.041	127.603	103.155	91.396	84.175	79.430	71.590	66.226	56.735	51.784	49.618	45.285	1160.2
6.0000	115.639	124.332	101.083	90.166	83.191	78.845	71.162	65.805	56.404	52.058	49.834	45.791	1392.2
7.0000	111.968	120.953	98.738	88.469	81.755	77.706	70.301	65.068	56.280	51.738	49.665	45.715	1624.3
8.0000	108.580	117.540	96.344	86.710	80.255	76.305	69.368	64.069	55.687	51.351	49.328	45.474	1856.3
9.0000	105.568	114.216	94.005	84.887	78.682	74.922	68.154	63.078	54.993	50.763	48.789	45.123	2088.4
10.0000	102.594	111.037	91.766	83.232	77.083	73.504	66.897	62.125	54.142	50.196	48.361	44.690	2320.4
11.0000	99.862	108.199	89.643	81.575	75.659	72.163	65.708	61.226	53.427	49.662	47.959	44.194	2552.4
12.0000	97.369	105.432	87.640	79.928	74.231	70.901	64.591	60.297	52.672	49.079	47.326	43.645	2784.5

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	22.323	9.524	6.310	5.929	5.268	3.476	2.131	1.512	0.998	7.983	10.155	7.751	2.9005
0.0160	25.415	10.719	7.203	6.775	6.022	4.068	2.521	1.796	1.192	9.206	11.713	8.847	3.7126
0.0200	28.278	11.612	8.033	7.567	6.769	4.700	2.931	2.133	1.427	10.443	13.278	9.866	4.6408
0.0250	31.440	12.477	8.962	8.447	7.643	5.484	3.505	2.557	1.852	11.835	15.060	11.004	5.8010
0.0320	35.742	13.563	10.052	9.570	8.742	6.551	4.256	3.207	2.233	13.626	17.378	12.473	7.4253
0.0400	40.160	14.602	11.185	10.765	9.914	7.744	5.131	3.932	2.793	15.525	19.804	14.026	9.2816
0.0500	45.384	15.960	12.601	12.258	11.408	9.200	6.198	4.826	3.496	17.742	22.624	15.933	11.602
0.0600	51.107	17.490	14.185	13.710	12.960	10.665	7.253	5.707	4.193	19.907	25.416	17.872	13.922
0.0700	56.915	19.274	15.782	15.328	14.539	12.122	8.260	6.565	4.852	22.061	28.139	19.945	16.243
0.0800	63.134	21.196	17.485	16.993	16.175	13.591	9.315	7.423	5.513	24.235	30.875	22.124	18.563
0.0900	69.334	23.261	19.238	18.750	17.851	15.058	10.351	8.281	6.133	26.406	33.573	24.374	20.884
0.1000	76.162	25.554	21.184	20.518	19.519	16.543	11.424	9.094	6.742	28.571	36.333	26.698	23.204
0.1250	94.488	31.536	26.061	25.109	23.991	20.254	13.947	11.115	8.259	34.130	43.436	32.821	29.005
0.1600	122.325	40.784	33.467	32.252	30.595	25.487	17.479	13.917	10.327	42.165	53.569	42.248	37.126
0.2000	155.067	51.478	42.162	40.488	38.277	31.108	21.160	16.802	12.412	50.973	64.680	53.215	46.408
0.2500	195.778	64.802	52.557	50.606	47.247	37.350	25.249	19.795	14.557	61.190	77.553	66.752	58.010
0.3200	248.930	81.258	66.088	63.071	57.706	44.212	29.503	23.007	16.805	73.841	93.789	83.731	74.253
0.4000	299.090	98.738	78.415	74.533	67.487	50.376	33.312	25.931	18.885	85.940	109.427	99.505	92.816
0.5000	349.755	116.220	90.290	85.904	76.858	56.520	37.278	29.110	21.216	98.293	125.484	115.233	116.02
0.6000	385.961	129.464	97.979	93.117	83.210	60.842	40.359	31.485	23.036	107.097	137.426	125.635	139.22
0.7000	405.221	139.254	102.427	97.346	87.116	63.621	42.568	33.130	24.485	113.185	145.457	131.532	162.43
0.8000	414.334	145.405	105.101	100.231	89.572	65.503	44.327	34.587	25.693	117.453	150.769	135.100	185.63
0.9000	417.960	148.973	106.729	101.729	90.459	66.724	45.528	35.974	26.720	120.537	154.571	136.882	208.84
1.0000	421.615	152.454	108.806	103.253	91.989	68.131	46.933	37.390	27.769	123.043	157.617	138.609	232.04
1.2500	425.035	159.153	113.314	108.183	96.125	72.093	50.628	40.879	30.873	128.024	162.574	143.417	290.05
1.6000	419.135	164.130	118.508	113.315	101.445	77.429	55.545	45.159	34.959	132.139	165.336	147.254	371.26
2.0000	405.882	166.373	123.333	117.451	106.275	82.549	60.294	49.510	38.922	135.294	166.667	149.510	464.08
2.5000	385.078	165.543	126.424	120.312	111.041	87.814	65.198	54.298	43.194	137.120	165.950	149.753	580.10
3.2000	364.582	161.979	128.437	122.604	113.854	92.187	70.104	58.333	46.771	137.812	164.270	149.479	742.53
4.0000	344.682	155.838	127.428	122.205	114.894	94.004	72.070	60.685	49.091	136.410	160.747	146.960	928.16
5.0000	328.034	149.059	124.715	120.073	113.161	93.768	72.931	61.584	50.546	133.483	156.280	143.179	1160.2
6.0000	314.368	142.931	121.502	116.852	110.686	92.390	72.173	61.357	50.541	129.791	151.523	138.787	1392.2
7.0000	303.124	137.640	118.288	114.042	107.821	90.641	71.289	60.822	50.257	126.285	147.020	135.073	1624.3
8.0000	292.886	132.473	115.131	111.085	104.919	88.540	69.657	59.733	49.617	122.743	142.589	131.317	1856.3
9.0000	282.956	128.599	111.960	108.106	102.278	86.485	68.154	58.565	48.883	119.199	138.282	127.565	2088.4
10.0000	274.380	125.260	109.293	105.531	99.841	84.425	66.714	57.354	47.994	115.992	134.345	124.251	2320.4
11.0000	266.240	122.094	106.765	103.089	97.532	82.472	65.350	56.206	47.063	113.040	130.789	121.197	2552.4
12.0000	258.539	119.103	104.380	100.787	95.353	80.629	64.065	55.126	46.187	110.252	127.342	118.315	2784.5

$^{232}_{90}$Th IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=232
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.145	0.140	0.166	0.204	0.209	0.248	0.255	0.273	0.347	0.380	0.394	0.437	2.9005
0.0160	0.183	0.179	0.214	0.265	0.274	0.324	0.336	0.361	0.468	0.519	0.545	0.618	3.7126
0.0200	0.225	0.223	0.267	0.333	0.346	0.409	0.425	0.457	0.596	0.665	0.702	0.804	4.6408
0.0250	0.276	0.275	0.332	0.418	0.435	0.513	0.534	0.575	0.752	0.841	0.889	1.022	5.8010
0.0320	0.343	0.346	0.421	0.535	0.560	0.659	0.685	0.737	0.968	1.083	1.146	1.319	7.4253
0.0400	0.414	0.424	0.520	0.666	0.702	0.824	0.857	0.920	1.216	1.360	1.438	1.655	9.2816
0.0500	0.499	0.516	0.638	0.826	0.877	1.026	1.068	1.145	1.525	1.705	1.803	2.072	11.602
0.0600	0.577	0.602	0.750	0.980	1.048	1.221	1.272	1.364	1.829	2.044	2.162	2.483	13.922
0.0700	0.651	0.684	0.858	1.128	1.213	1.410	1.471	1.576	2.127	2.376	2.514	2.884	16.243
0.0800	0.721	0.761	0.960	1.270	1.373	1.592	1.662	1.780	2.416	2.699	2.856	3.275	18.563
0.0900	0.787	0.834	1.059	1.406	1.527	1.767	1.846	1.977	2.695	3.011	3.188	3.654	20.884
0.1000	0.851	0.903	1.153	1.536	1.676	1.935	2.024	2.166	2.964	3.312	3.508	4.020	23.204
0.1250	0.998	1.061	1.373	1.840	2.024	2.328	2.442	2.611	3.596	4.022	4.262	4.882	29.005
0.1600	1.184	1.253	1.652	2.223	2.464	2.821	2.970	3.172	4.393	4.919	5.212	5.966	37.126
0.2000	1.374	1.442	1.938	2.611	2.912	3.322	3.508	3.743	5.202	5.828	6.174	7.061	46.408
0.2500	1.588	1.648	2.257	3.040	3.408	3.874	4.105	4.379	6.091	6.827	7.234	8.268	58.010
0.3200	1.855	1.897	2.652	3.565	4.015	4.546	4.834	5.156	7.169	8.037	8.518	9.728	74.253
0.4000	2.128	2.145	3.049	4.087	4.617	5.209	5.557	5.928	8.227	9.223	9.777	11.157	92.816
0.5000	2.435	2.419	3.488	4.656	5.271	5.926	6.340	6.766	9.362	10.494	11.127	12.688	116.02
0.6000	2.715	2.667	3.881	5.159	5.846	6.554	7.029	7.504	10.350	11.598	12.298	14.011	139.22
0.7000	2.975	2.898	4.241	5.615	6.367	7.120	7.651	8.172	11.236	12.587	13.345	15.190	162.43
0.8000	3.223	3.120	4.575	6.037	6.846	7.640	8.224	8.786	12.045	13.488	14.299	16.264	185.63
0.9000	3.460	3.333	4.895	6.436	7.300	8.131	8.767	9.369	12.808	14.320	15.179	17.252	208.84
1.0000	3.687	3.540	5.198	6.813	7.727	8.591	9.277	9.917	13.520	15.112	16.017	18.191	232.04
1.2500	4.226	4.038	5.906	7.682	8.707	9.645	10.444	11.174	15.134	16.904	17.912	20.310	290.05
1.6000	4.936	4.707	6.815	8.781	9.940	10.966	11.910	12.757	17.129	19.111	20.247	22.916	371.26
2.0000	5.711	5.449	7.786	9.935	11.229	12.342	13.442	14.413	19.185	21.373	22.640	25.578	464.08
2.5000	6.656	6.352	8.945	11.294	12.735	13.947	15.234	16.345	21.554	23.974	25.386	28.616	580.10
3.2000	7.966	7.598	10.518	13.114	14.741	16.081	17.616	18.916	24.658	27.377	28.971	32.565	742.53
4.0000	9.473	9.018	12.295	15.146	16.967	18.446	20.247	21.765	28.047	31.080	32.864	36.848	928.16
5.0000	11.395	10.817	14.529	17.677	19.722	21.369	23.491	25.276	32.171	35.592	37.586	42.030	1160.2
6.0000	13.372	12.659	16.800	20.232	22.494	24.300	26.741	28.790	36.271	40.059	42.250	47.123	1392.2
7.0000	15.411	14.551	19.123	22.829	25.307	27.264	30.021	32.335	40.389	44.529	46.914	52.194	1624.3
8.0000	17.515	16.497	21.502	25.479	28.172	30.277	33.344	35.929	44.534	49.031	51.601	57.283	1856.3
9.0000	19.683	18.499	23.940	28.183	31.092	33.346	36.718	39.579	48.727	53.576	56.331	62.405	2088.4
10.0000	21.912	20.560	26.438	30.944	34.072	36.473	40.155	43.286	52.980	58.173	61.109	67.573	2320.4
11.0000	24.205	22.677	28.997	33.761	37.110	39.659	43.655	47.049	57.294	62.820	65.927	72.794	2552.4
12.0000	26.558	24.850	31.615	36.634	40.207	42.904	47.217	50.868	61.669	67.521	70.798	78.078	2784.5

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.055	0.129	0.150	0.153	0.160	0.208	0.277	0.346	0.413	0.133	0.113	0.125	2.9005
0.0160	0.071	0.165	0.193	0.198	0.207	0.270	0.362	0.459	0.581	0.171	0.145	0.161	3.7126
0.0200	0.089	0.205	0.242	0.248	0.260	0.340	0.455	0.580	0.750	0.214	0.180	0.201	4.6408
0.0250	0.109	0.255	0.304	0.312	0.327	0.427	0.572	0.728	0.948	0.265	0.223	0.252	5.8010
0.0320	0.137	0.326	0.389	0.400	0.420	0.548	0.734	0.932	1.210	0.336	0.281	0.322	7.4253
0.0400	0.167	0.407	0.487	0.500	0.526	0.683	0.917	1.159	1.501	0.414	0.344	0.402	9.2816
0.0500	0.202	0.507	0.607	0.623	0.655	0.845	1.137	1.432	1.848	0.508	0.419	0.498	11.602
0.0600	0.236	0.605	0.723	0.741	0.780	0.998	1.345	1.689	2.176	0.596	0.490	0.591	13.922
0.0700	0.268	0.699	0.833	0.855	0.898	1.141	1.542	1.932	2.484	0.680	0.557	0.679	16.243
0.0800	0.298	0.789	0.938	0.962	1.009	1.276	1.728	2.160	2.774	0.760	0.620	0.763	18.563
0.0900	0.326	0.873	1.037	1.063	1.114	1.402	1.903	2.374	3.048	0.835	0.680	0.841	20.884
0.1000	0.352	0.952	1.129	1.158	1.214	1.520	2.067	2.576	3.307	0.905	0.736	0.915	23.204
0.1250	0.410	1.128	1.338	1.372	1.437	1.786	2.439	3.035	3.902	1.066	0.863	1.081	29.005
0.1600	0.478	1.332	1.581	1.624	1.701	2.102	2.885	3.588	4.623	1.259	1.016	1.275	37.126
0.2000	0.540	1.521	1.809	1.860	1.949	2.404	3.318	4.127	5.333	1.445	1.163	1.456	46.408
0.2500	0.603	1.712	2.041	2.101	2.205	2.723	3.781	4.709	6.107	1.642	1.319	1.640	58.010
0.3200	0.674	1.929	2.306	2.377	2.502	3.104	4.342	5.421	7.063	1.874	1.502	1.849	74.253
0.4000	0.741	2.131	2.557	2.640	2.790	3.484	4.908	6.144	8.042	2.101	1.681	2.047	92.816
0.5000	0.811	2.344	2.827	2.924	3.105	3.908	5.544	6.957	9.147	2.348	1.875	2.259	116.02
0.6000	0.873	2.531	3.069	3.179	3.389	4.295	6.127	7.701	10.158	2.570	2.049	2.449	139.22
0.7000	0.932	2.704	3.301	3.422	3.661	4.662	6.674	8.402	11.105	2.781	2.213	2.629	162.43
0.8000	0.989	2.866	3.524	3.657	3.924	5.021	7.199	9.073	12.006	2.982	2.369	2.803	185.63
0.9000	1.044	3.024	3.743	3.886	4.181	5.372	7.715	9.730	12.872	3.177	2.521	2.973	208.84
1.0000	1.099	3.178	3.958	4.112	4.435	5.715	8.216	10.363	13.723	3.367	2.670	3.142	232.04
1.2500	1.236	3.549	4.479	4.660	5.051	6.541	9.403	11.843	15.700	3.828	3.031	3.552	290.05
1.6000	1.428	4.050	5.177	5.391	5.870	7.624	10.930	13.727	18.165	4.450	3.525	4.109	371.26
2.0000	1.652	4.610	5.943	6.193	6.762	8.783	12.531	15.686	20.676	5.143	4.082	4.733	464.08
2.5000	1.945	5.308	6.870	7.167	7.828	10.143	14.377	17.919	23.499	5.993	4.778	5.506	580.10
3.2000	2.377	6.297	8.142	8.502	9.269	11.944	16.775	20.799	27.105	7.171	5.760	6.589	742.53
4.0000	2.900	7.464	9.591	10.016	10.890	13.935	19.382	23.915	30.974	8.524	6.901	7.840	928.16
5.0000	3.589	8.985	11.430	11.930	12.923	16.405	22.580	27.706	35.627	10.241	8.363	9.438	1160.2
6.0000	4.312	10.574	13.315	13.888	14.996	18.897	25.777	31.480	40.216	12.004	9.870	11.084	1392.2
7.0000	5.063	12.228	15.250	15.898	17.120	21.432	29.011	35.277	44.819	13.816	11.425	12.778	1624.3
8.0000	5.842	13.947	17.238	17.960	19.301	24.022	32.304	39.127	49.466	15.680	13.028	14.521	1856.3
9.0000	6.648	15.724	19.282	20.077	21.541	26.674	35.672	43.050	54.177	17.598	14.680	16.313	2088.4
10.0000	7.481	17.553	21.380	22.250	23.838	29.390	39.113	47.054	58.968	19.572	16.383	18.157	2320.4
11.0000	8.340	19.429	23.528	24.475	26.189	32.171	42.628	51.141	63.851	21.598	18.133	20.048	2552.4
12.0000	9.224	21.354	25.726	26.751	28.596	35.016	46.214	55.310	68.828	23.677	19.932	21.986	2784.5

$^{231}_{91}Pa$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=231 MEV
0.0125	9.863	8.159	5.977	3.975	3.228	2.929	2.714	2.510	1.596	1.366	1.255	1.076	2.8880
0.0160	11.444	9.468	6.936	4.612	3.745	3.399	3.149	2.913	1.852	1.585	1.457	1.248	3.6966
0.0200	13.092	10.830	7.934	5.276	4.285	3.888	3.602	3.332	2.118	1.813	1.666	1.428	4.6208
0.0250	14.976	12.389	9.076	6.036	4.901	4.447	4.121	3.812	2.423	2.074	1.911	1.634	5.7760
0.0320	17.357	14.387	10.532	7.004	5.698	5.182	4.782	4.424	2.812	2.412	2.222	1.906	7.3933
0.0400	19.807	16.494	12.048	8.036	6.554	5.976	5.506	5.096	3.241	2.789	2.566	2.205	9.2416
0.0500	22.575	18.923	13.782	9.234	7.566	6.891	6.354	5.885	3.735	3.246	2.991	2.570	11.552
0.0600	25.105	21.244	15.383	10.368	8.522	7.738	7.153	6.630	4.246	3.692	3.407	2.930	13.862
0.0700	27.430	23.463	16.880	11.445	9.453	8.575	7.934	7.360	4.726	4.136	3.832	3.292	16.173
0.0800	29.601	25.649	18.295	12.495	10.336	9.367	8.653	8.050	5.214	4.574	4.226	3.641	18.483
0.0900	31.641	27.772	19.640	13.513	11.195	10.174	9.368	8.720	5.715	4.998	4.635	3.997	20.794
0.1000	33.589	29.864	20.928	14.503	12.054	10.924	10.045	9.397	6.195	5.420	5.023	4.332	23.104
0.1250	38.065	35.120	23.940	16.854	14.077	12.760	11.731	10.988	7.362	6.440	6.021	5.207	28.880
0.1600	43.587	42.364	27.780	19.890	16.724	15.168	13.918	13.057	8.890	7.806	7.320	6.389	36.966
0.2000	49.193	49.924	31.778	23.103	19.544	17.701	16.239	15.222	10.550	9.311	8.739	7.627	46.208
0.2500	55.364	58.236	36.352	26.864	22.829	20.721	18.976	17.776	12.542	11.087	10.397	9.088	57.760
0.3200	62.937	68.379	42.183	31.764	27.124	24.761	22.568	21.092	15.102	13.414	12.592	11.073	73.933
0.4000	70.548	78.317	48.255	36.770	31.655	28.953	26.395	24.658	17.951	15.972	15.007	13.173	92.416
0.5000	78.936	88.706	55.200	42.669	36.984	33.948	30.912	28.814	21.307	18.989	17.857	15.732	115.52
0.6000	85.796	96.627	61.195	47.916	41.735	38.431	34.881	32.495	24.295	21.724	20.470	18.175	138.62
0.7000	91.640	102.871	66.454	52.499	45.920	42.331	38.344	35.752	26.980	24.123	22.794	20.202	161.73
0.8000	96.541	107.631	71.091	56.659	49.692	45.996	41.588	38.744	29.432	26.446	24.953	22.180	184.83
0.9000	100.911	111.513	75.194	60.306	53.162	49.327	44.515	41.432	31.807	28.574	26.995	24.062	207.94
1.0000	104.614	114.547	78.835	63.778	56.288	52.268	47.222	43.911	33.899	30.509	28.854	25.779	231.04
1.2500	111.896	119.833	86.273	70.744	62.979	58.666	52.885	49.089	38.564	34.768	32.870	29.419	288.80
1.6000	118.580	124.294	93.665	78.210	69.874	65.285	58.822	54.326	43.554	39.433	37.279	33.438	369.66
2.0000	122.847	128.201	99.150	83.980	75.453	70.793	63.456	58.796	47.592	43.428	41.048	36.983	462.08
2.5000	125.117	131.099	103.147	88.603	80.145	75.297	67.355	62.507	51.367	46.725	44.353	40.227	577.60
3.2000	125.541	132.615	105.585	91.859	83.624	78.661	70.531	65.252	54.482	49.836	47.302	42.973	739.33
4.0000	123.969	132.021	105.956	93.135	85.295	80.315	72.368	66.752	56.475	51.707	49.270	44.819	924.16
5.0000	120.832	129.523	104.707	92.771	85.441	80.625	72.667	67.222	57.589	52.563	50.364	45.967	1155.2
6.0000	117.425	126.253	102.644	91.559	84.476	80.063	72.262	66.821	57.276	52.862	50.604	46.498	1386.2
7.0000	113.730	122.856	100.291	89.861	83.041	78.929	71.407	66.092	57.166	52.552	50.446	46.435	1617.3
8.0000	110.313	119.416	97.882	88.094	81.536	77.522	70.475	65.091	56.576	52.171	50.115	46.200	1848.3
9.0000	107.273	116.061	95.524	86.258	79.953	76.132	69.255	64.096	55.881	51.583	49.577	45.851	2079.4
10.0000	104.269	112.849	93.264	84.590	78.342	74.704	67.989	63.140	55.026	51.015	49.150	45.420	2310.4
11.0000	101.509	109.983	91.121	82.920	76.906	73.352	66.792	62.236	54.308	50.481	48.750	44.923	2541.4
12.0000	98.989	107.186	89.099	81.258	75.467	72.081	65.666	61.300	53.548	49.895	48.113	44.371	2772.5

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	22.415	9.564	6.336	5.953	5.290	3.491	2.140	1.518	1.002	8.016	10.197	7.782	2.8880
0.0160	25.525	10.765	7.234	6.804	6.048	4.085	2.532	1.803	1.197	9.246	11.764	8.885	3.6966
0.0200	28.405	11.664	8.069	7.601	6.800	4.721	2.944	2.142	1.433	10.489	13.338	9.910	4.6208
0.0250	31.586	12.534	9.004	8.486	7.679	5.509	3.522	2.569	1.861	11.890	15.130	11.055	5.7760
0.0320	35.915	13.629	10.100	9.616	8.784	6.583	4.276	3.223	2.243	13.692	17.462	12.533	7.3933
0.0400	40.361	14.675	11.241	10.819	9.964	7.783	5.157	3.952	2.807	15.602	19.903	14.096	9.2416
0.0500	45.619	16.042	12.666	12.321	11.467	9.248	6.230	4.851	3.514	17.834	22.741	16.015	11.552
0.0600	51.378	17.582	14.260	13.783	13.029	10.722	7.291	5.738	4.215	20.013	25.551	17.967	13.862
0.0700	57.224	19.378	15.867	15.412	14.618	12.188	8.305	6.600	4.878	22.181	28.291	20.054	16.173
0.0800	63.483	21.313	17.581	17.087	16.264	13.666	9.367	7.464	5.543	24.369	31.046	22.246	18.483
0.0900	69.723	23.392	19.346	18.855	17.951	15.143	10.409	8.328	6.167	26.554	33.762	24.511	20.794
0.1000	76.596	25.699	21.305	20.635	19.630	16.638	11.489	9.145	6.781	28.734	36.540	26.850	23.104
0.1250	95.042	31.721	26.214	25.257	24.132	20.373	14.029	11.180	8.307	34.330	43.691	33.013	28.880
0.1600	123.065	41.031	33.669	32.447	30.780	25.641	17.585	14.001	10.390	42.420	53.893	42.503	36.966
0.2000	156.032	51.799	42.424	40.740	38.515	31.302	21.291	16.906	12.489	51.290	65.082	53.547	46.208
0.2500	197.029	65.216	52.893	50.930	47.549	37.588	25.410	19.921	14.650	61.581	78.048	67.179	57.760
0.3200	250.567	81.793	66.523	63.486	58.086	44.503	29.697	23.159	16.915	74.327	94.406	84.282	73.933
0.4000	301.108	99.404	78.944	75.036	67.942	50.716	33.537	26.106	19.012	86.520	110.165	100.176	92.416
0.5000	352.175	117.024	90.914	86.498	77.390	56.911	37.536	29.311	21.362	98.973	126.352	116.030	115.52
0.6000	388.590	130.346	98.647	93.751	83.776	61.257	40.634	31.699	23.193	107.826	138.363	126.491	138.62
0.7000	408.028	140.218	103.137	98.020	87.719	64.062	42.863	33.360	24.654	113.969	146.465	132.443	161.73
0.8000	417.303	146.447	105.854	100.949	90.214	65.972	44.645	34.834	25.877	118.295	151.850	136.068	184.83
0.9000	421.087	150.088	107.528	102.490	91.135	67.224	45.868	36.244	26.920	121.439	155.727	137.906	207.94
1.0000	424.921	153.650	109.660	104.062	92.710	68.665	47.301	37.683	27.986	124.008	158.853	139.696	231.04
1.2500	428.778	160.554	114.312	109.136	96.971	72.728	51.074	41.239	31.145	129.151	164.005	144.680	288.80
1.6000	423.366	165.787	119.704	114.459	102.470	78.210	56.105	45.615	35.312	133.473	167.005	148.740	369.66
2.0000	410.481	168.258	124.731	118.782	107.479	83.484	60.977	50.071	39.363	136.827	168.555	151.204	462.08
2.5000	389.894	167.613	128.005	121.816	112.430	88.912	66.014	54.977	43.734	138.835	168.026	151.625	577.60
3.2000	369.549	164.185	130.187	124.274	115.405	93.443	71.059	59.128	47.408	139.690	166.508	151.515	739.33
4.0000	349.655	158.086	129.266	123.969	116.552	95.360	73.110	61.560	49.799	138.379	163.066	149.080	924.16
5.0000	332.970	151.302	126.591	121.880	114.864	95.179	74.028	62.510	51.307	135.491	158.632	145.334	1155.2
6.0000	319.224	145.139	123.378	118.657	112.396	93.817	73.288	62.305	51.322	131.795	153.864	140.931	1386.2
7.0000	307.893	139.806	120.149	115.836	109.518	92.067	72.410	61.779	51.048	128.272	149.333	137.198	1617.3
8.0000	297.561	134.587	116.969	112.858	106.593	89.953	70.769	60.687	50.409	124.701	144.865	133.413	1848.3
9.0000	287.526	130.676	113.769	109.852	103.930	87.882	69.255	59.511	49.672	121.124	140.515	129.626	2079.4
10.0000	278.859	127.305	111.077	107.254	101.471	85.803	67.803	58.290	48.777	117.886	136.538	126.279	2310.4
11.0000	270.629	124.107	108.525	104.789	99.140	83.831	66.427	57.133	47.838	114.903	132.945	123.195	2541.4
12.0000	262.841	121.085	106.117	102.464	96.939	81.971	65.131	56.043	46.955	112.086	129.461	120.283	2772.5

$^{231}_{91}Pa$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=231 MEV
0.0125	0.143	0.138	0.164	0.201	0.206	0.245	0.252	0.268	0.341	0.373	0.387	0.428	2.8880
0.0160	0.181	0.177	0.211	0.262	0.270	0.320	0.332	0.356	0.461	0.511	0.537	0.608	3.6966
0.0200	0.222	0.220	0.264	0.329	0.341	0.403	0.419	0.451	0.588	0.656	0.692	0.792	4.6208
0.0250	0.272	0.272	0.328	0.412	0.429	0.506	0.527	0.567	0.742	0.830	0.877	1.008	5.7760
0.0320	0.338	0.342	0.416	0.527	0.552	0.650	0.676	0.727	0.956	1.069	1.131	1.302	7.3933
0.0400	0.409	0.419	0.513	0.657	0.692	0.813	0.846	0.908	1.200	1.342	1.419	1.633	9.2416
0.0500	0.492	0.509	0.629	0.815	0.865	1.012	1.053	1.130	1.504	1.682	1.779	2.044	11.552
0.0600	0.570	0.595	0.741	0.967	1.033	1.205	1.255	1.346	1.804	2.017	2.133	2.449	13.862
0.0700	0.643	0.675	0.847	1.113	1.197	1.391	1.451	1.555	2.098	2.344	2.480	2.846	16.173
0.0800	0.712	0.751	0.948	1.253	1.354	1.571	1.639	1.756	2.383	2.662	2.817	3.231	18.483
0.0900	0.778	0.823	1.045	1.387	1.507	1.743	1.822	1.950	2.658	2.970	3.144	3.604	20.794
0.1000	0.841	0.892	1.138	1.516	1.653	1.909	1.997	2.138	2.924	3.267	3.460	3.966	23.104
0.1250	0.986	1.048	1.356	1.816	1.997	2.297	2.410	2.576	3.548	3.968	4.204	4.816	28.880
0.1600	1.170	1.238	1.632	2.194	2.432	2.784	2.932	3.130	4.335	4.854	5.142	5.886	36.966
0.2000	1.358	1.425	1.914	2.578	2.874	3.279	3.463	3.695	5.133	5.751	6.093	6.968	46.208
0.2500	1.569	1.628	2.229	3.002	3.365	3.826	4.053	4.323	6.012	6.738	7.140	8.161	57.760
0.3200	1.834	1.874	2.620	3.521	3.964	4.490	4.774	5.092	7.077	7.934	8.409	9.603	73.933
0.4000	2.104	2.120	3.013	4.037	4.559	5.144	5.488	5.854	8.123	9.106	9.653	11.015	92.416
0.5000	2.407	2.391	3.447	4.600	5.206	5.853	6.262	6.683	9.245	10.362	10.987	12.529	115.52
0.6000	2.684	2.636	3.835	5.097	5.775	6.474	6.943	7.413	10.222	11.453	12.145	13.836	138.62
0.7000	2.941	2.865	4.191	5.548	6.289	7.034	7.558	8.072	11.097	12.431	13.179	15.001	161.73
0.8000	3.186	3.084	4.522	5.964	6.762	7.548	8.124	8.680	11.896	13.322	14.122	16.063	184.83
0.9000	3.420	3.295	4.837	6.359	7.212	8.033	8.661	9.256	12.636	14.144	14.992	17.040	207.94
1.0000	3.645	3.499	5.137	6.732	7.634	8.488	9.165	9.797	13.339	14.926	15.820	17.967	231.04
1.2500	4.177	3.991	5.836	7.590	8.601	9.528	10.318	11.038	14.933	16.696	17.691	20.060	288.80
1.6000	4.877	4.651	6.733	8.673	9.817	10.831	11.763	12.600	16.901	18.873	19.995	22.631	369.66
2.0000	5.641	5.381	7.690	9.811	11.087	12.187	13.273	14.231	18.926	21.102	22.352	25.253	462.08
2.5000	6.571	6.270	8.829	11.148	12.569	13.766	15.036	16.133	21.258	23.661	25.054	28.242	577.60
3.2000	7.858	7.494	10.376	12.936	14.541	15.863	17.377	18.660	24.308	27.005	28.577	32.123	739.33
4.0000	9.338	8.889	12.121	14.932	16.726	18.185	19.961	21.456	27.635	30.641	32.400	36.329	924.16
5.0000	11.224	10.654	14.312	17.415	19.430	21.054	23.144	24.902	31.682	35.068	37.033	41.413	1155.2
6.0000	13.162	12.460	16.540	19.921	22.148	23.928	26.331	28.348	35.704	39.449	41.607	46.408	1386.2
7.0000	15.161	14.315	18.817	22.468	24.906	26.834	29.546	31.824	39.740	43.832	46.179	51.379	1617.3
8.0000	17.224	16.223	21.148	25.064	27.714	29.788	32.803	35.346	43.803	48.244	50.774	56.367	1848.3
9.0000	19.348	18.185	23.538	27.715	30.575	32.795	36.110	38.923	47.912	52.698	55.409	61.387	2079.4
10.0000	21.533	20.204	25.986	30.420	33.495	35.859	39.478	42.555	52.079	57.202	60.090	66.450	2310.4
11.0000	23.779	22.278	28.492	33.179	36.472	38.980	42.906	46.241	56.305	61.755	64.810	71.565	2541.4
12.0000	26.084	24.406	31.057	35.993	39.505	42.158	46.395	49.982	60.590	66.358	69.581	76.741	2772.5

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.055	0.127	0.148	0.151	0.158	0.205	0.273	0.341	0.403	0.132	0.112	0.123	2.8880
0.0160	0.071	0.162	0.191	0.195	0.204	0.266	0.357	0.453	0.571	0.169	0.143	0.159	3.6966
0.0200	0.088	0.202	0.239	0.245	0.257	0.335	0.449	0.572	0.739	0.211	0.178	0.199	4.6208
0.0250	0.108	0.252	0.300	0.307	0.323	0.421	0.564	0.718	0.935	0.262	0.220	0.249	5.7760
0.0320	0.135	0.322	0.384	0.395	0.415	0.540	0.724	0.920	1.194	0.332	0.277	0.318	7.3933
0.0400	0.165	0.402	0.480	0.494	0.519	0.674	0.904	1.144	1.481	0.409	0.339	0.396	9.2416
0.0500	0.200	0.501	0.599	0.615	0.646	0.833	1.121	1.413	1.824	0.501	0.414	0.491	11.552
0.0600	0.233	0.598	0.713	0.731	0.769	0.984	1.327	1.667	2.147	0.589	0.484	0.583	13.862
0.0700	0.265	0.691	0.822	0.843	0.885	1.126	1.521	1.906	2.450	0.672	0.550	0.670	16.173
0.0800	0.294	0.779	0.925	0.949	0.996	1.259	1.705	2.131	2.737	0.750	0.612	0.753	18.483
0.0900	0.322	0.862	1.023	1.049	1.100	1.383	1.877	2.342	3.007	0.824	0.671	0.830	20.794
0.1000	0.348	0.940	1.115	1.143	1.198	1.500	2.039	2.541	3.264	0.894	0.727	0.903	23.104
0.1250	0.405	1.114	1.320	1.355	1.418	1.763	2.407	2.995	3.851	1.053	0.853	1.067	28.880
0.1600	0.472	1.316	1.561	1.604	1.679	2.075	2.848	3.542	4.564	1.244	1.004	1.259	36.966
0.2000	0.534	1.503	1.786	1.837	1.924	2.373	3.275	4.074	5.264	1.427	1.149	1.438	46.208
0.2500	0.596	1.692	2.016	2.075	2.177	2.689	3.733	4.650	6.030	1.622	1.303	1.620	57.760
0.3200	0.667	1.906	2.278	2.348	2.471	3.066	4.287	5.354	6.975	1.852	1.485	1.826	73.933
0.4000	0.732	2.106	2.526	2.608	2.756	3.442	4.847	6.069	7.943	2.076	1.661	2.022	92.416
0.5000	0.802	2.317	2.793	2.888	3.067	3.860	5.476	6.872	9.035	2.320	1.853	2.232	115.52
0.6000	0.863	2.501	3.032	3.140	3.348	4.243	6.052	7.607	10.034	2.540	2.025	2.419	138.62
0.7000	0.921	2.672	3.261	3.381	3.618	4.606	6.593	8.300	10.970	2.748	2.187	2.598	161.73
0.8000	0.977	2.833	3.482	3.613	3.877	4.961	7.112	8.964	11.861	2.947	2.342	2.770	184.83
0.9000	1.032	2.989	3.698	3.840	4.132	5.308	7.622	9.613	12.717	3.140	2.492	2.938	207.94
1.0000	1.087	3.141	3.911	4.064	4.383	5.647	8.118	10.238	13.558	3.328	2.639	3.104	231.04
1.2500	1.222	3.507	4.425	4.604	4.990	6.462	9.290	11.700	15.510	3.783	2.996	3.510	288.80
1.6000	1.411	4.001	5.114	5.325	5.799	7.531	10.796	13.559	17.941	4.397	3.482	4.059	369.66
2.0000	1.632	4.553	5.869	6.116	6.677	8.672	12.372	15.488	20.414	5.079	4.032	4.673	462.08
2.5000	1.920	5.239	6.781	7.074	7.726	10.010	14.189	17.685	23.193	5.915	4.717	5.435	577.60
3.2000	2.345	6.212	8.031	8.386	9.143	11.781	16.545	20.516	26.737	7.074	5.681	6.499	739.33
4.0000	2.858	7.358	9.454	9.873	10.734	13.736	19.106	23.575	30.535	8.401	6.801	7.727	924.16
5.0000	3.534	8.850	11.258	11.750	12.729	16.159	22.243	27.296	35.101	10.087	8.236	9.295	1155.2
6.0000	4.243	10.408	13.106	13.671	14.761	18.603	25.379	30.996	39.601	11.815	9.715	10.909	1386.2
7.0000	4.980	12.030	15.004	15.641	16.844	21.088	28.550	34.719	44.114	13.592	11.239	12.570	1617.3
8.0000	5.743	13.714	16.953	17.662	18.982	23.627	31.777	38.492	48.669	15.419	12.810	14.278	1848.3
9.0000	6.533	15.457	18.955	19.737	21.177	26.226	35.078	42.337	53.286	17.299	14.429	16.035	2079.4
10.0000	7.349	17.248	21.011	21.866	23.427	28.887	38.450	46.260	57.980	19.232	16.097	17.841	2310.4
11.0000	8.190	19.086	23.115	24.045	25.731	31.611	41.892	50.264	62.763	21.218	17.812	19.694	2541.4
12.0000	9.056	20.971	25.268	26.275	28.088	34.398	45.405	54.347	67.638	23.254	19.573	21.592	2772.5

$^{238}_{92}U$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=238 MEV
0.0125	9.903	8.192	6.002	3.991	3.241	2.941	2.725	2.521	1.602	1.371	1.260	1.080	2.9756
0.0160	11.493	9.508	6.966	4.632	3.761	3.413	3.162	2.926	1.860	1.592	1.463	1.254	3.8088
0.0200	13.150	10.878	7.970	5.300	4.304	3.905	3.618	3.347	2.128	1.821	1.674	1.435	4.7610
0.0250	15.045	12.446	9.118	6.064	4.924	4.468	4.140	3.830	2.435	2.083	1.919	1.641	5.9512
0.0320	17.440	14.456	10.583	7.037	5.725	5.207	4.804	4.445	2.826	2.423	2.233	1.915	7.6176
0.0400	19.905	16.576	12.108	8.076	6.587	6.005	5.533	5.122	3.257	2.803	2.579	2.216	9.5220
0.0500	22.691	19.020	13.853	9.281	7.605	6.926	6.386	5.915	3.754	3.262	3.006	2.584	11.902
0.0600	25.237	21.355	15.464	10.422	8.567	7.778	7.191	6.665	4.268	3.711	3.425	2.946	14.283
0.0700	27.578	23.590	16.971	11.506	9.504	8.621	7.976	7.399	4.752	4.158	3.852	3.309	16.663
0.0800	29.763	25.789	18.395	12.564	10.393	9.418	8.701	8.094	5.243	4.599	4.249	3.661	19.044
0.0900	31.817	27.926	19.750	13.588	11.257	10.230	9.421	8.769	5.747	5.026	4.661	4.019	21.424
0.1000	33.779	30.032	21.046	14.585	12.122	10.986	10.102	9.450	6.230	5.451	5.051	4.356	23.805
0.1250	38.286	35.324	24.079	16.952	14.158	12.834	11.799	11.052	7.404	6.477	6.056	5.237	29.756
0.1600	43.848	42.618	27.946	20.010	16.824	15.259	14.001	13.135	8.943	7.853	7.364	6.428	38.088
0.2000	49.496	50.231	31.974	23.245	19.664	17.810	16.339	15.316	10.615	9.368	8.793	7.674	47.610
0.2500	55.715	58.605	36.582	27.034	22.974	20.852	19.096	17.889	12.621	11.158	10.463	9.146	59.512
0.3200	63.347	68.824	42.458	31.971	27.300	24.923	22.715	21.229	15.200	13.502	12.674	11.145	76.176
0.4000	71.019	78.840	48.577	37.015	31.866	29.146	26.571	24.823	18.071	16.079	15.107	13.261	95.220
0.5000	79.476	89.313	55.578	42.962	37.237	34.180	31.124	29.012	21.453	19.119	17.979	15.840	119.02
0.6000	86.371	97.276	61.606	48.237	42.015	38.688	35.115	32.713	24.458	21.870	20.607	18.297	142.83
0.7000	92.264	103.571	66.906	52.856	46.232	42.619	38.605	35.995	27.164	24.287	22.949	20.339	166.63
0.8000	97.220	108.388	71.590	57.057	50.042	46.319	41.880	39.017	29.638	26.632	25.128	22.336	190.44
0.9000	101.650	112.330	75.745	60.748	53.552	49.689	44.841	41.736	32.040	28.783	27.193	24.239	214.24
1.0000	105.418	115.427	79.441	64.267	56.721	52.669	47.585	44.248	34.159	30.744	29.075	25.977	238.05
1.2500	112.863	120.868	87.018	71.355	63.523	59.172	53.342	49.513	38.897	35.068	33.154	29.673	297.56
1.6000	119.757	125.527	94.595	78.987	70.568	65.933	59.406	54.865	43.987	39.824	37.649	33.770	380.88
2.0000	124.220	129.633	100.258	84.918	76.296	71.584	64.165	59.453	48.124	43.913	41.507	37.396	476.10
2.5000	126.663	132.720	104.421	89.698	81.135	76.228	68.187	63.279	52.002	47.303	44.901	40.724	595.12
3.2000	127.234	134.404	107.010	93.098	84.752	79.722	71.482	66.132	55.217	50.509	47.940	43.553	761.76
4.0000	125.740	133.908	107.470	94.466	86.514	81.462	73.402	67.706	57.282	52.445	49.974	45.460	952.20
5.0000	122.633	131.453	106.267	94.153	86.714	81.826	73.750	68.224	58.447	53.346	51.115	46.651	1190.2
6.0000	119.220	128.182	104.213	92.958	85.767	81.286	73.366	67.843	58.151	53.670	51.377	47.209	1428.3
7.0000	115.499	124.768	101.851	91.259	84.333	80.157	72.518	67.120	58.055	53.370	51.231	47.157	1666.3
8.0000	112.053	121.300	99.426	89.483	82.822	78.745	71.587	66.118	57.468	52.994	50.906	46.929	1904.4
9.0000	108.985	117.914	97.048	87.635	81.229	77.348	70.360	65.119	56.773	52.406	50.368	46.583	2142.4
10.0000	105.951	114.670	94.768	85.955	79.605	75.909	69.086	64.158	55.913	51.838	49.943	46.152	2380.5
11.0000	103.162	111.774	92.605	84.270	78.159	74.547	67.879	63.249	55.193	51.303	49.544	45.654	2618.5
12.0000	100.616	108.948	90.563	82.594	76.707	73.266	66.745	62.307	54.428	50.715	48.904	45.100	2856.6

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	22.506	9.603	6.362	5.978	5.311	3.505	2.149	1.524	1.006	8.048	10.239	7.814	2.9756
0.0160	25.634	10.811	7.265	6.833	6.074	4.103	2.542	1.811	1.202	9.285	11.814	8.923	3.8088
0.0200	28.531	11.715	8.105	7.635	6.830	4.742	2.957	2.152	1.439	10.536	13.397	9.954	4.7610
0.0250	31.731	12.592	9.045	8.525	7.714	5.535	3.538	2.580	1.869	11.945	15.200	11.106	5.9512
0.0320	36.087	13.694	10.149	9.662	8.826	6.614	4.297	3.238	2.254	13.757	17.546	12.593	7.6176
0.0400	40.561	14.747	11.297	10.873	10.013	7.822	5.182	3.971	2.821	15.680	20.002	14.166	9.5220
0.0500	45.853	16.125	12.731	12.384	11.525	9.295	6.261	4.876	3.532	17.925	22.857	16.097	11.902
0.0600	51.648	17.675	14.335	13.855	13.098	10.778	7.330	5.768	4.237	20.118	25.685	18.061	14.283
0.0700	57.531	19.483	15.953	15.494	14.697	12.253	8.350	6.636	4.905	22.300	28.443	20.161	16.663
0.0800	63.830	21.430	17.677	17.181	16.353	13.741	9.418	7.505	5.574	24.502	31.216	22.368	19.044
0.0900	70.111	23.522	19.453	18.960	18.051	15.227	10.467	8.374	6.201	26.701	33.950	24.647	21.424
0.1000	77.028	25.844	21.425	20.751	19.741	16.731	11.554	9.197	6.819	28.896	36.746	27.002	23.805
0.1250	95.594	31.905	26.367	25.403	24.272	20.491	14.110	11.245	8.355	34.529	43.944	33.205	29.756
0.1600	123.802	41.277	33.871	32.641	30.965	25.794	17.690	14.085	10.452	42.674	54.216	42.758	38.088
0.2000	156.993	52.118	42.685	40.991	38.753	31.494	21.423	17.010	12.566	51.696	65.483	53.876	47.610
0.2500	198.275	65.628	53.227	51.252	47.849	37.826	25.571	20.047	14.743	61.970	78.542	67.604	59.512
0.3200	252.199	82.325	66.956	63.899	58.464	44.793	29.890	23.309	17.026	74.810	95.020	84.830	76.176
0.4000	303.119	100.068	79.472	75.537	68.396	51.054	33.761	26.280	19.139	87.098	110.901	100.845	95.220
0.5000	354.586	117.825	91.536	87.090	77.920	57.301	37.793	29.512	21.509	99.651	127.217	116.824	119.02
0.6000	391.197	131.221	99.309	94.380	84.338	61.667	40.906	31.912	23.349	108.550	139.291	127.339	142.83
0.7000	410.803	141.172	103.838	98.687	88.316	64.497	43.154	33.587	24.822	114.744	147.461	133.344	166.63
0.8000	420.235	147.476	106.598	101.658	90.848	66.436	44.959	35.079	26.059	119.126	152.917	137.024	190.44
0.9000	424.174	151.188	108.316	103.241	91.803	67.716	46.205	36.509	27.117	122.329	156.869	138.917	214.24
1.0000	428.185	154.830	110.502	104.862	93.422	69.193	47.664	37.973	28.201	124.960	160.073	140.769	238.05
1.2500	432.480	161.941	115.299	110.078	97.808	73.356	51.515	41.595	31.414	130.266	165.422	145.929	297.56
1.6000	427.569	167.433	120.892	115.595	103.487	78.987	56.662	46.068	35.662	134.798	168.663	150.217	380.88
2.0000	415.068	170.138	126.124	120.109	108.680	84.417	61.659	50.630	39.802	138.356	170.438	152.893	476.10
2.5000	394.713	169.685	129.587	123.322	113.819	90.011	66.830	55.657	44.275	140.551	170.103	153.500	595.12
3.2000	374.534	166.400	131.943	125.950	116.962	94.704	72.017	59.925	48.047	141.574	168.754	153.559	761.76
4.0000	354.652	160.346	131.114	125.740	118.217	96.723	74.154	62.440	50.511	140.356	165.397	151.211	952.20
5.0000	337.930	153.556	128.477	123.695	116.575	96.597	75.131	63.442	52.071	137.510	160.995	147.499	1190.2
6.0000	324.103	147.357	125.264	120.470	114.113	95.251	74.408	63.257	52.107	133.810	156.215	143.085	1428.3
7.0000	312.683	141.981	122.018	117.638	111.222	93.499	73.537	62.740	51.842	130.268	151.656	139.332	1666.3
8.0000	302.255	136.711	118.814	114.638	108.275	91.372	71.885	61.644	51.204	126.669	147.150	135.517	1904.4
9.0000	292.116	132.762	115.585	111.606	105.589	89.285	70.360	60.461	50.465	123.057	142.758	131.695	2142.4
10.0000	283.357	129.359	112.869	108.983	103.108	87.187	68.896	59.230	49.564	119.787	138.741	128.316	2380.5
11.0000	275.037	126.128	110.292	106.496	100.754	85.197	67.509	58.063	48.618	116.775	135.111	125.202	2618.5
12.0000	267.162	123.075	107.861	104.148	98.533	83.318	66.202	56.964	47.727	113.929	131.588	122.260	2856.6

$^{238}_{92}U$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=238 MEV
0.0125	0.146	0.141	0.167	0.205	0.209	0.248	0.255	0.272	0.345	0.377	0.391	0.433	2.9756
0.0160	0.185	0.181	0.215	0.266	0.275	0.325	0.337	0.361	0.467	0.517	0.543	0.615	3.8088
0.0200	0.227	0.224	0.269	0.335	0.347	0.410	0.426	0.458	0.596	0.664	0.700	0.801	4.7610
0.0250	0.278	0.277	0.334	0.419	0.437	0.514	0.535	0.575	0.752	0.840	0.887	1.019	5.9512
0.0320	0.346	0.349	0.424	0.537	0.562	0.661	0.687	0.738	0.968	1.082	1.144	1.316	7.6176
0.0400	0.418	0.427	0.523	0.669	0.704	0.826	0.859	0.922	1.216	1.359	1.436	1.652	9.5220
0.0500	0.503	0.520	0.642	0.830	0.880	1.029	1.071	1.148	1.525	1.704	1.801	2.068	11.902
0.0600	0.583	0.607	0.756	0.985	1.052	1.226	1.276	1.368	1.830	2.044	2.161	2.480	14.283
0.0700	0.657	0.690	0.864	1.134	1.219	1.416	1.476	1.581	2.129	2.377	2.514	2.882	16.663
0.0800	0.728	0.768	0.967	1.277	1.379	1.600	1.668	1.786	2.419	2.701	2.857	3.274	19.044
0.0900	0.795	0.841	1.067	1.414	1.535	1.776	1.854	1.985	2.700	3.015	3.190	3.655	21.424
0.1000	0.859	0.911	1.162	1.546	1.684	1.945	2.034	2.176	2.971	3.318	3.513	4.023	23.805
0.1250	1.008	1.071	1.385	1.853	2.036	2.341	2.455	2.624	3.608	4.033	4.271	4.890	29.756
0.1600	1.196	1.265	1.667	2.239	2.480	2.839	2.988	3.190	4.412	4.937	5.229	5.982	38.088
0.2000	1.389	1.456	1.955	2.631	2.932	3.345	3.532	3.767	5.227	5.854	6.200	7.087	47.610
0.2500	1.605	1.664	2.278	3.066	3.434	3.904	4.135	4.409	6.125	6.863	7.269	8.305	59.512
0.3200	1.876	1.917	2.678	3.596	4.047	4.583	4.872	5.195	7.215	8.085	8.567	9.780	76.176
0.4000	2.152	2.168	3.080	4.124	4.655	5.253	5.602	5.975	8.284	9.283	9.839	11.224	95.220
0.5000	2.463	2.445	3.524	4.700	5.317	5.978	6.394	6.823	9.431	10.568	11.203	12.771	119.02
0.6000	2.745	2.696	3.921	5.209	5.899	6.614	7.090	7.569	10.431	11.684	12.388	14.109	142.83
0.7000	3.009	2.930	4.285	5.670	6.425	7.186	7.720	8.244	11.326	12.684	13.446	15.301	166.63
0.8000	3.260	3.154	4.623	6.096	6.909	7.712	8.299	8.865	12.144	13.596	14.410	16.386	190.44
0.9000	3.499	3.370	4.946	6.500	7.369	8.208	8.848	9.444	12.900	14.437	15.300	17.386	214.24
1.0000	3.729	3.579	5.253	6.881	7.801	8.673	9.363	9.998	13.620	15.236	16.146	18.334	238.05
1.2500	4.273	4.081	5.967	7.758	8.790	9.737	10.542	11.266	15.249	17.045	18.059	20.472	297.56
1.6000	4.987	4.755	6.883	8.864	10.031	11.067	12.018	12.860	17.257	19.268	20.411	23.097	380.88
2.0000	5.766	5.500	7.858	10.024	11.325	12.450	13.557	14.524	19.322	21.540	22.814	25.771	476.10
2.5000	6.713	6.405	9.019	11.385	12.835	14.058	15.352	16.460	21.696	24.146	25.565	28.814	595.12
3.2000	8.022	7.650	10.592	13.204	14.840	16.190	17.734	19.030	24.799	27.548	29.149	32.762	761.76
4.0000	9.526	9.068	12.365	15.232	17.061	18.550	20.359	21.872	28.180	31.242	33.034	37.036	952.20
5.0000	11.441	10.860	14.590	17.754	19.806	21.463	23.591	25.371	32.290	35.738	37.739	42.199	1190.2
6.0000	13.409	12.693	16.851	20.297	22.566	24.380	26.826	28.869	36.372	40.185	42.382	47.269	1428.3
7.0000	15.437	14.575	19.162	22.881	25.364	27.329	30.089	32.396	40.468	44.632	47.021	52.313	1666.3
8.0000	17.530	16.510	21.527	25.516	28.212	30.325	33.393	35.969	44.589	49.108	51.682	57.373	1904.4
9.0000	19.684	18.501	23.951	28.204	31.115	33.376	36.747	39.597	48.757	53.625	56.383	62.465	2142.4
10.0000	21.900	20.548	26.433	30.947	34.075	36.482	40.162	43.280	52.982	58.192	61.130	67.599	2380.5
11.0000	24.177	22.651	28.974	33.744	37.093	39.647	43.638	47.017	57.267	62.809	65.916	72.785	2618.5
12.0000	26.514	24.809	31.574	36.598	40.168	42.868	47.175	50.809	61.611	67.476	70.752	78.032	2856.6

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.056	0.130	0.151	0.154	0.161	0.209	0.277	0.346	0.410	0.134	0.114	0.125	2.9756
0.0160	0.072	0.166	0.195	0.199	0.208	0.271	0.362	0.459	0.579	0.173	0.146	0.162	3.8088
0.0200	0.090	0.206	0.244	0.250	0.262	0.341	0.457	0.581	0.749	0.215	0.182	0.203	4.7610
0.0250	0.110	0.257	0.306	0.314	0.329	0.429	0.573	0.729	0.947	0.267	0.225	0.254	5.9512
0.0320	0.138	0.329	0.392	0.403	0.423	0.550	0.736	0.933	1.209	0.339	0.283	0.325	7.6176
0.0400	0.168	0.410	0.490	0.503	0.529	0.686	0.919	1.160	1.500	0.417	0.347	0.404	9.5220
0.0500	0.204	0.511	0.611	0.627	0.659	0.849	1.140	1.434	1.848	0.512	0.423	0.502	11.902
0.0600	0.238	0.610	0.728	0.746	0.784	1.003	1.349	1.693	2.176	0.601	0.494	0.595	14.283
0.0700	0.271	0.705	0.839	0.860	0.903	1.148	1.548	1.936	2.485	0.686	0.562	0.684	16.663
0.0800	0.301	0.796	0.945	0.968	1.016	1.283	1.735	2.166	2.777	0.766	0.626	0.769	19.044
0.0900	0.329	0.881	1.044	1.070	1.122	1.411	1.911	2.381	3.053	0.842	0.686	0.848	21.424
0.1000	0.355	0.960	1.138	1.166	1.222	1.530	2.076	2.585	3.315	0.913	0.743	0.923	23.805
0.1250	0.415	1.139	1.348	1.383	1.448	1.799	2.452	3.049	3.914	1.076	0.872	1.090	29.756
0.1600	0.483	1.345	1.595	1.638	1.714	2.118	2.903	3.607	4.642	1.271	1.026	1.287	38.088
0.2000	0.546	1.536	1.825	1.876	1.965	2.423	3.340	4.152	5.358	1.459	1.175	1.469	47.610
0.2500	0.610	1.730	2.060	2.121	2.224	2.746	3.808	4.740	6.140	1.658	1.332	1.655	59.512
0.3200	0.682	1.949	2.328	2.399	2.525	3.132	4.375	5.460	7.107	1.893	1.518	1.867	76.176
0.4000	0.749	2.153	2.582	2.665	2.817	3.516	4.948	6.191	8.097	2.123	1.699	2.067	95.220
0.5000	0.820	2.369	2.855	2.952	3.135	3.944	5.592	7.013	9.214	2.373	1.895	2.282	119.02
0.6000	0.883	2.558	3.100	3.210	3.423	4.336	6.181	7.765	10.236	2.598	2.071	2.474	142.83
0.7000	0.942	2.732	3.334	3.457	3.698	4.707	6.735	8.474	11.193	2.811	2.237	2.656	166.63
0.8000	1.000	2.897	3.560	3.694	3.963	5.070	7.265	9.153	12.105	3.014	2.395	2.832	190.44
0.9000	1.056	3.057	3.782	3.926	4.224	5.425	7.787	9.818	12.980	3.211	2.549	3.005	214.24
1.0000	1.112	3.212	3.999	4.155	4.481	5.773	8.294	10.457	13.840	3.403	2.699	3.175	238.05
1.2500	1.250	3.587	4.525	4.707	5.101	6.606	9.492	11.951	15.835	3.869	3.064	3.589	297.56
1.6000	1.443	4.091	5.228	5.443	5.927	7.697	11.029	13.848	18.317	4.495	3.561	4.149	380.88
2.0000	1.668	4.654	5.997	6.249	6.823	8.860	12.637	15.816	20.839	5.191	4.121	4.776	476.10
2.5000	1.961	5.353	6.926	7.225	7.891	10.223	14.487	18.053	23.668	6.042	4.818	5.551	595.12
3.2000	2.393	6.342	8.198	8.559	9.332	12.024	16.883	20.932	27.273	7.221	5.799	6.634	761.76
4.0000	2.915	7.506	9.644	10.070	10.949	14.011	19.486	24.041	31.133	8.570	6.938	7.882	952.20
5.0000	3.602	9.021	11.476	11.977	12.975	16.471	22.672	27.819	35.769	10.282	8.395	9.474	1190.2
6.0000	4.321	10.603	13.352	13.926	15.038	18.951	25.854	31.575	40.337	12.036	9.695	11.112	1428.3
7.0000	5.069	12.249	15.277	15.926	17.150	21.474	29.072	35.353	44.916	13.839	11.442	12.798	1666.3
8.0000	5.843	13.958	17.254	17.976	19.320	24.049	32.346	39.181	49.537	15.692	13.035	14.530	1904.4
9.0000	6.644	15.725	19.285	20.080	21.546	26.685	35.693	43.080	54.220	17.599	14.678	16.312	2142.4
10.0000	7.472	17.541	21.370	22.239	23.828	29.383	39.112	47.058	58.980	19.559	16.369	18.144	2380.5
11.0000	8.325	19.405	23.503	24.449	26.163	32.145	42.603	51.118	63.830	21.572	18.108	20.022	2618.5
12.0000	9.203	21.316	25.686	26.709	28.553	34.971	46.164	55.257	68.772	23.636	19.894	21.946	2856.6

$^{239}_{93}Np$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=239 MEV
0.0125	9.942	8.225	6.026	4.007	3.254	2.953	2.736	2.531	1.609	1.377	1.265	1.085	2.9881
0.0160	11.541	9.548	6.995	4.651	3.777	3.427	3.176	2.938	1.868	1.598	1.469	1.259	3.8248
0.0200	13.207	10.926	8.004	5.323	4.322	3.922	3.634	3.362	2.137	1.829	1.681	1.441	4.7810
0.0250	15.113	12.502	9.159	6.091	4.946	4.488	4.158	3.847	2.445	2.093	1.928	1.649	5.9762
0.0320	17.522	14.523	10.632	7.070	5.752	5.231	4.827	4.465	2.839	2.435	2.243	1.924	7.6496
0.0400	20.002	16.656	12.166	8.115	6.619	6.035	5.560	5.146	3.273	2.817	2.591	2.226	9.5620
0.0500	22.805	19.115	13.922	9.328	7.643	6.961	6.418	5.945	3.773	3.279	3.021	2.596	11.952
0.0600	25.366	21.465	15.543	10.476	8.611	7.818	7.228	6.699	4.290	3.730	3.443	2.961	14.343
0.0700	27.723	23.714	17.060	11.567	9.554	8.667	8.018	7.438	4.777	4.180	3.873	3.327	16.734
0.0800	29.922	25.928	18.493	12.631	10.449	9.469	8.747	8.137	5.271	4.623	4.272	3.680	19.124
0.0900	31.990	28.078	19.857	13.662	11.319	10.286	9.472	8.817	5.778	5.054	4.686	4.041	21.514
0.1000	33.965	30.198	21.162	14.665	12.189	11.047	10.158	9.502	6.264	5.481	5.079	4.381	23.905
0.1250	38.503	35.525	24.216	17.048	14.239	12.907	11.866	11.115	7.446	6.514	6.090	5.267	29.881
0.1600	44.105	42.869	28.110	20.127	16.923	15.348	14.083	13.212	8.995	7.899	7.407	6.465	38.248
0.2000	49.795	50.535	32.167	23.385	19.783	17.917	16.437	15.408	10.679	9.425	8.846	7.720	47.810
0.2500	56.060	58.968	36.809	27.202	23.116	20.981	19.214	18.000	12.699	11.227	10.527	9.202	59.762
0.3200	63.751	69.263	42.729	32.175	27.475	25.082	22.860	21.364	15.297	13.588	12.755	11.216	76.496
0.4000	71.485	79.357	48.895	37.258	32.075	29.337	26.746	24.985	18.189	16.184	15.206	13.348	95.620
0.5000	80.010	89.913	55.951	43.250	37.487	34.410	31.333	29.206	21.597	19.247	18.100	15.946	119.52
0.6000	86.942	97.918	62.012	48.556	42.293	38.944	35.347	32.929	24.619	22.014	20.743	18.418	143.43
0.7000	92.880	104.263	67.353	53.209	46.541	42.904	38.863	36.236	27.345	24.449	23.102	20.475	167.33
0.8000	97.890	109.135	72.084	57.451	50.387	46.638	42.169	39.286	29.843	26.815	25.301	22.490	191.24
0.9000	102.381	113.138	76.290	61.184	53.937	50.046	45.163	42.036	32.271	28.990	27.388	24.413	215.14
1.0000	106.211	116.296	80.039	64.751	57.148	53.066	47.943	44.582	34.417	30.975	29.294	26.173	239.05
1.2500	113.818	121.892	87.755	71.959	64.061	59.673	53.794	49.933	39.227	35.365	33.435	29.924	298.81
1.6000	120.926	126.752	95.518	79.758	71.256	66.576	59.985	55.400	44.416	40.213	38.016	34.100	382.48
2.0000	125.587	131.061	101.362	85.853	77.136	72.372	64.872	60.108	48.654	44.396	41.964	37.808	478.10
2.5000	128.210	134.340	105.696	90.793	82.126	77.158	69.020	64.052	52.637	47.880	45.449	41.222	597.62
3.2000	128.933	136.198	108.438	94.341	85.883	80.786	72.436	67.015	55.954	51.183	48.580	44.134	764.96
4.0000	127.519	135.803	108.991	95.803	87.738	82.615	74.441	68.664	58.092	53.188	50.681	46.103	956.20
5.0000	124.441	133.392	107.835	95.542	87.993	83.033	74.837	69.230	59.309	54.133	51.869	47.339	1195.2
6.0000	121.023	130.121	105.789	94.364	87.064	82.515	74.476	68.869	59.030	54.481	52.154	47.922	1434.3
7.0000	117.276	126.688	103.418	92.663	85.630	81.390	73.634	68.153	58.948	54.191	52.019	47.883	1673.3
8.0000	113.800	123.191	100.976	90.879	84.113	79.973	72.703	67.149	58.364	53.820	51.700	47.661	1912.4
9.0000	110.704	119.773	98.579	89.017	82.511	78.567	71.470	66.146	57.669	53.233	51.162	47.318	2151.4
10.0000	107.639	116.496	96.278	87.324	80.873	77.119	70.187	65.180	56.804	52.664	50.738	46.887	2390.5
11.0000	104.821	113.572	94.094	85.626	79.415	75.746	68.971	64.266	56.080	52.128	50.340	46.388	2629.5
12.0000	102.248	110.715	92.033	83.934	77.952	74.454	67.828	63.318	55.312	51.538	49.698	45.832	2868.6

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	22.596	9.641	6.387	6.002	5.333	3.519	2.157	1.531	1.010	8.080	10.280	7.845	2.9881
0.0160	25.740	10.856	7.295	6.862	6.099	4.120	2.553	1.819	1.207	9.324	11.863	8.960	3.8248
0.0200	28.655	11.766	8.140	7.668	6.859	4.762	2.970	2.161	1.446	10.581	13.455	9.997	4.7810
0.0250	31.874	12.649	9.086	8.564	7.749	5.560	3.554	2.592	1.878	11.998	15.268	11.156	5.9762
0.0320	36.256	13.758	10.196	9.707	8.867	6.645	4.317	3.253	2.265	13.822	17.628	12.652	7.6496
0.0400	40.758	14.819	11.351	10.925	10.062	7.860	5.207	3.991	2.835	15.756	20.099	14.235	9.5620
0.0500	46.082	16.205	12.794	12.446	11.583	9.342	6.293	4.901	3.550	18.015	22.972	16.178	11.952
0.0600	51.914	17.766	14.409	13.927	13.165	10.834	7.367	5.798	4.259	20.222	25.817	18.154	14.343
0.0700	57.834	19.585	16.037	15.576	14.774	12.317	8.394	6.671	4.930	22.417	28.593	20.267	16.734
0.0800	64.172	21.545	17.772	17.273	16.441	13.815	9.469	7.545	5.603	24.633	31.383	22.488	19.124
0.0900	70.493	23.650	19.559	19.063	18.149	15.310	10.524	8.419	6.235	26.847	34.134	24.782	21.514
0.1000	77.453	25.987	21.543	20.866	19.850	16.824	11.618	9.248	6.857	29.056	36.949	27.151	23.905
0.1250	96.138	32.086	26.517	25.548	24.410	20.608	14.191	11.309	8.403	34.726	44.194	33.394	29.881
0.1600	124.529	41.519	34.070	32.833	31.146	25.946	17.794	14.168	10.513	42.925	54.534	43.009	38.248
0.2000	157.940	52.432	42.943	41.238	38.987	31.685	21.552	17.113	12.642	51.918	65.878	54.202	47.810
0.2500	199.505	66.036	53.557	51.570	48.146	38.061	25.730	20.171	14.834	62.355	79.029	68.023	59.762
0.3200	253.809	82.851	67.383	64.307	58.838	45.079	30.081	23.458	17.134	75.288	95.627	85.372	76.496
0.4000	305.105	100.724	79.992	76.032	68.844	51.389	33.982	26.452	19.265	87.669	111.627	101.506	95.620
0.5000	356.968	118.616	92.151	87.675	78.443	57.686	38.047	29.710	21.653	100.320	128.072	117.609	119.52
0.6000	393.779	132.087	99.964	95.003	84.895	62.075	41.176	32.122	23.503	109.266	140.210	128.180	143.43
0.7000	413.548	142.115	104.532	99.346	88.906	64.928	43.443	33.811	24.988	115.511	148.446	134.235	167.33
0.8000	423.132	148.493	107.333	102.359	91.474	66.894	45.269	35.321	26.238	119.947	153.971	137.968	191.24
0.9000	427.222	152.274	109.094	103.983	92.463	68.203	46.537	36.772	27.312	123.208	157.996	139.915	215.14
1.0000	431.408	155.995	111.334	105.651	94.125	69.714	48.023	38.258	28.414	125.901	161.278	141.829	239.05
1.2500	436.143	163.312	116.276	111.010	98.637	73.978	51.951	41.947	31.680	131.369	166.822	147.165	298.81
1.6000	431.741	169.067	122.072	116.723	104.497	79.758	57.215	46.517	36.010	136.113	170.309	151.683	382.48
2.0000	419.638	172.011	127.513	121.432	109.876	85.347	62.338	51.188	40.241	139.879	172.315	154.577	478.10
2.5000	399.533	171.757	131.169	124.827	115.209	91.110	67.646	56.336	44.815	142.267	172.179	155.374	597.62
3.2000	379.532	168.621	133.704	127.631	118.523	95.967	72.979	60.725	48.689	143.463	171.006	155.608	764.96
4.0000	359.670	162.614	132.969	127.519	119.890	98.092	75.204	63.324	51.226	142.342	167.737	153.350	956.20
5.0000	342.914	155.821	130.372	125.520	118.295	98.022	76.239	64.377	52.839	139.538	163.370	149.675	1195.2
6.0000	329.004	149.586	127.158	122.292	115.839	96.691	75.533	64.214	52.895	135.833	158.578	145.248	1434.3
7.0000	317.494	144.165	123.895	119.448	112.933	94.938	74.668	63.706	52.640	132.272	153.990	141.476	1673.3
8.0000	306.968	138.842	120.667	116.426	109.963	92.797	73.006	62.605	52.003	128.644	149.445	137.631	1912.4
9.0000	296.722	134.856	117.407	113.366	107.254	90.693	71.470	61.415	51.261	124.998	145.010	133.772	2151.4
10.0000	287.871	131.419	114.667	110.720	104.750	88.576	69.994	60.174	50.353	121.695	140.951	130.360	2390.5
11.0000	279.460	128.156	112.066	108.208	102.374	86.567	68.595	58.997	49.399	118.653	137.283	127.215	2629.5
12.0000	271.496	125.072	109.611	105.838	100.132	84.670	67.276	57.889	48.501	115.777	133.724	124.244	2868.6

$^{239}_{93}$Np IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=239
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.145	0.140	0.166	0.203	0.208	0.247	0.253	0.270	0.342	0.373	0.387	0.427	2.9881
0.0160	0.184	0.180	0.214	0.265	0.273	0.323	0.334	0.359	0.463	0.513	0.539	0.609	3.8248
0.0200	0.226	0.223	0.268	0.333	0.345	0.407	0.423	0.455	0.592	0.659	0.695	0.795	4.7810
0.0250	0.277	0.276	0.333	0.417	0.434	0.511	0.532	0.572	0.747	0.834	0.881	1.012	5.9762
0.0320	0.344	0.348	0.422	0.534	0.558	0.657	0.683	0.734	0.962	1.075	1.136	1.307	7.6496
0.0400	0.417	0.425	0.521	0.665	0.700	C.821	0.854	0.917	1.208	1.350	1.427	1.640	9.5620
0.0500	0.501	0.518	0.639	0.825	0.875	1.023	1.064	1.141	1.515	1.692	1.789	2.054	11.952
0.0600	0.580	0.605	0.752	0.980	1.046	1.219	1.269	1.360	1.818	2.031	2.147	2.463	14.343
0.0700	0.655	0.687	0.860	1.128	1.212	1.408	1.467	1.572	2.115	2.362	2.497	2.863	16.734
0.0800	0.725	0.764	0.963	1.270	1.372	1.591	1.659	1.776	2.404	2.683	2.839	3.253	19.124
0.0900	0.792	0.838	1.062	1.407	1.526	1.766	1.844	1.973	2.683	2.995	3.170	3.631	21.514
0.1000	0.856	0.907	1.157	1.538	1.675	1.935	2.023	2.164	2.953	3.297	3.490	3.997	23.905
0.1250	1.005	1.067	1.379	1.844	2.025	2.329	2.443	2.610	3.587	4.008	4.245	4.860	29.881
0.1600	1.192	1.261	1.660	2.229	2.468	2.826	2.974	3.174	4.387	4.909	5.199	5.947	38.248
0.2000	1.384	1.452	1.948	2.620	2.919	3.330	3.515	3.750	5.200	5.822	6.166	7.048	47.810
0.2500	1.600	1.659	2.270	3.053	3.419	3.887	4.116	4.389	6.095	6.828	7.232	8.262	59.762
0.3200	1.870	1.910	2.668	3.582	4.030	4.564	4.851	5.173	7.181	8.046	8.525	9.731	76.496
0.4000	2.146	2.161	3.069	4.108	4.637	5.232	5.579	5.951	8.247	9.241	9.793	11.171	95.620
0.5000	2.456	2.438	3.512	4.683	5.296	5.955	6.369	6.796	9.391	10.521	11.153	12.713	119.52
0.6000	2.738	2.688	3.908	5.190	5.876	6.589	7.063	7.540	10.387	11.635	12.334	14.047	143.43
0.7000	3.000	2.921	4.271	5.650	6.401	7.160	7.691	8.213	11.280	12.631	13.389	15.235	167.33
0.8000	3.251	3.145	4.609	6.075	6.884	7.685	8.269	8.833	12.096	13.540	14.351	16.318	191.24
0.9000	3.489	3.360	4.931	6.478	7.342	8.179	8.816	9.410	12.850	14.379	15.238	17.314	215.14
1.0000	3.719	3.568	5.237	6.858	7.773	8.643	9.330	9.962	13.567	15.176	16.082	18.259	239.05
1.2500	4.261	4.069	5.948	7.731	8.758	9.702	10.504	11.225	15.189	16.978	17.987	20.390	298.81
1.6000	4.971	4.740	6.859	8.832	9.993	11.026	11.973	12.811	17.188	19.190	20.327	23.002	382.48
2.0000	5.745	5.480	7.828	9.985	11.280	12.400	13.502	14.465	19.241	21.448	22.716	25.659	478.10
2.5000	6.685	6.378	8.981	11.336	12.778	13.996	15.284	16.387	21.597	24.035	25.447	28.680	597.62
3.2000	7.984	7.613	10.540	13.140	14.766	16.111	17.646	18.935	24.674	27.408	29.000	32.594	764.96
4.0000	9.473	9.017	12.297	15.149	16.966	18.448	20.246	21.750	28.023	31.067	32.848	36.828	956.20
5.0000	11.369	10.791	14.499	17.645	19.684	21.332	23.445	25.214	32.091	35.518	37.506	41.939	1195.2
6.0000	13.316	12.605	16.737	20.161	22.414	24.218	26.646	28.674	36.129	39.917	42.100	46.955	1434.3
7.0000	15.322	14.466	19.022	22.717	25.182	27.135	29.874	32.163	40.181	44.316	46.688	51.944	1673.3
8.0000	17.391	16.380	21.361	25.322	27.999	30.098	33.141	35.696	44.256	48.742	51.297	56.948	1912.4
9.0000	19.521	18.348	23.757	27.980	30.868	33.114	36.457	39.283	48.377	53.208	55.945	61.982	2151.4
10.0000	21.711	20.372	26.211	30.692	33.795	36.185	39.832	42.924	52.554	57.723	60.637	67.057	2390.5
11.0000	23.962	22.450	28.723	33.456	36.778	39.313	43.268	46.618	56.789	62.286	65.368	72.183	2629.5
12.0000	26.271	24.582	31.292	36.276	39.816	42.496	46.764	50.366	61.082	66.898	70.147	77.368	2868.6

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.055	0.129	0.150	0.153	0.160	0.207	0.275	0.343	0.404	0.134	0.114	0.125	2.9881
0.0160	0.072	0.165	0.194	0.198	0.207	0.270	0.360	0.456	0.574	0.172	0.146	0.161	3.8248
0.0200	0.089	0.206	0.243	0.249	0.261	0.339	0.454	0.577	0.744	0.214	0.181	0.202	4.7810
0.0250	0.110	0.256	0.304	0.312	0.327	0.426	0.570	0.724	0.940	0.266	0.224	0.253	5.9762
0.0320	0.138	0.327	0.390	0.401	0.421	0.547	0.731	0.927	1.201	0.337	0.282	0.323	7.6496
0.0400	0.168	0.408	0.488	0.501	0.526	0.682	0.913	1.153	1.490	0.416	0.345	0.403	9.5620
0.0500	0.204	0.509	0.608	0.624	0.656	0.844	1.133	1.425	1.836	0.509	0.421	0.499	11.952
0.0600	0.238	0.608	0.724	0.743	0.780	0.997	1.341	1.682	2.162	0.599	0.492	0.593	14.343
0.0700	0.270	0.702	0.835	0.856	0.899	1.142	1.539	1.925	2.470	0.683	0.560	0.681	16.734
0.0800	0.300	0.792	0.940	0.964	1.011	1.277	1.725	2.153	2.760	0.763	0.623	0.765	19.124
0.0900	0.328	0.877	1.039	1.065	1.117	1.403	1.900	2.368	3.035	0.838	0.683	0.844	21.514
0.1000	0.354	0.957	1.133	1.161	1.216	1.522	2.065	2.570	3.295	0.910	0.740	0.919	23.905
0.1250	0.413	1.134	1.343	1.377	1.441	1.790	2.439	3.032	3.892	1.072	0.869	1.086	29.881
0.1600	0.481	1.340	1.588	1.631	1.707	2.108	2.889	3.589	4.617	1.266	1.023	1.281	38.248
0.2000	0.544	1.531	1.818	1.869	1.957	2.413	3.325	4.132	5.331	1.454	1.171	1.464	47.810
0.2500	0.608	1.724	2.052	2.112	2.216	2.735	3.792	4.718	6.111	1.652	1.328	1.649	59.762
0.3200	0.680	1.942	2.319	2.391	2.516	3.120	4.357	5.437	7.074	1.887	1.513	1.860	76.496
0.4000	0.747	2.146	2.572	2.656	2.806	3.503	4.928	6.166	8.061	2.116	1.694	2.060	95.620
0.5000	0.818	2.361	2.845	2.942	3.123	3.930	5.570	6.985	9.175	2.365	1.889	2.274	119.52
0.6000	0.881	2.550	3.090	3.199	3.411	4.321	6.157	7.735	10.194	2.590	2.065	2.466	143.43
0.7000	0.940	2.724	3.323	3.445	3.685	4.691	6.710	8.442	11.149	2.802	2.230	2.648	167.33
0.8000	0.997	2.888	3.549	3.682	3.950	5.053	7.239	9.119	12.058	3.005	2.388	2.823	191.24
0.9000	1.053	3.047	3.769	3.913	4.210	5.407	7.759	9.782	12.930	3.201	2.542	2.995	215.14
1.0000	1.109	3.202	3.986	4.141	4.466	5.753	8.264	10.419	13.787	3.393	2.691	3.165	239.05
1.2500	1.246	3.576	4.510	4.691	5.084	6.583	9.458	11.907	15.775	3.856	3.054	3.577	298.81
1.6000	1.438	4.077	5.210	5.424	5.906	7.669	10.988	13.796	18.245	4.480	3.549	4.135	382.48
2.0000	1.662	4.637	5.974	6.225	6.796	8.825	12.585	15.751	20.751	5.171	4.106	4.758	478.10
2.5000	1.953	5.330	6.896	7.194	7.856	10.178	14.422	17.972	23.560	6.017	4.798	5.527	597.62
3.2000	2.382	6.311	8.157	8.517	9.285	11.963	16.798	20.826	27.134	7.185	5.771	6.601	764.96
4.0000	2.898	7.464	9.589	10.013	10.887	13.932	19.376	23.906	30.957	8.521	6.898	7.837	956.20
5.0000	3.578	8.964	11.403	11.901	12.892	16.367	22.530	27.646	35.547	10.216	8.341	9.413	1195.2
6.0000	4.290	10.530	13.259	13.830	14.933	18.821	25.678	31.362	40.066	11.951	9.825	11.034	1434.3
7.0000	5.029	12.157	15.163	15.807	17.023	21.316	28.861	35.099	44.596	13.735	11.355	12.701	1673.3
8.0000	5.795	13.847	17.118	17.834	19.168	23.863	32.098	38.884	49.165	15.567	12.931	14.414	1912.4
9.0000	6.587	15.594	19.127	19.915	21.369	26.469	35.408	42.739	53.795	17.452	14.555	16.176	2151.4
10.0000	7.405	17.390	21.187	22.049	23.625	29.136	38.788	46.672	58.500	19.391	16.227	17.987	2390.5
11.0000	8.248	19.232	23.296	24.233	25.933	31.866	42.238	50.684	63.294	21.380	17.946	19.843	2629.5
12.0000	9.116	21.120	25.453	26.467	28.295	34.659	45.758	54.775	68.178	23.420	19.710	21.745	2868.6

$^{239}_{94}$Pu IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=239 MEV
0.0125	9.981	8.257	6.049	4.023	3.267	2.964	2.746	2.541	1.615	1.382	1.270	1.089	2.9881
0.0160	11.589	9.587	7.023	4.671	3.793	3.441	3.189	2.950	1.875	1.605	1.475	1.264	3.8248
0.0200	13.263	10.972	8.038	5.345	4.341	3.939	3.649	3.376	2.146	1.837	1.688	1.447	4.7810
0.0250	15.179	12.558	9.200	6.118	4.968	4.508	4.177	3.864	2.456	2.102	1.937	1.656	5.9762
0.0320	17.602	14.590	10.681	7.103	5.778	5.255	4.849	4.486	2.852	2.446	2.254	1.933	7.6496
0.0400	20.097	16.735	12.224	8.154	6.650	6.063	5.587	5.171	3.288	2.830	2.604	2.237	9.5620
0.0500	22.917	19.209	13.991	9.374	7.681	6.995	6.450	5.974	3.792	3.295	3.036	2.609	11.952
0.0600	25.495	21.574	15.622	10.529	8.655	7.858	7.264	6.733	4.312	3.749	3.460	2.976	14.343
0.0700	27.866	23.836	17.148	11.627	9.603	8.711	8.060	7.477	4.802	4.201	3.893	3.344	16.734
0.0800	30.080	26.064	18.591	12.698	10.504	9.519	8.794	8.180	5.298	4.648	4.295	3.700	19.124
0.0900	32.161	28.229	19.964	13.735	11.379	10.341	9.523	8.864	5.809	5.081	4.711	4.063	21.514
0.1000	34.150	30.363	21.277	14.745	12.256	11.107	10.213	9.553	6.298	5.511	5.107	4.404	23.905
0.1250	38.719	35.724	24.352	17.144	14.319	12.979	11.932	11.177	7.488	6.551	6.124	5.296	29.881
0.1600	44.360	43.116	28.273	20.243	17.020	15.437	14.165	13.288	9.047	7.945	7.450	6.503	38.248
0.2000	50.091	50.835	32.358	23.525	19.900	18.024	16.535	15.500	10.743	9.481	8.899	7.766	47.810
0.2500	56.403	59.328	37.034	27.368	23.257	21.109	19.332	18.110	12.777	11.295	10.592	9.258	59.762
0.3200	64.152	69.699	42.998	32.377	27.647	25.240	23.004	21.499	15.393	13.673	12.835	11.287	76.496
0.4000	71.946	79.869	49.211	37.498	32.282	29.526	26.918	25.147	18.306	16.289	15.304	13.434	95.620
0.5000	80.539	90.508	56.321	43.536	37.735	34.638	31.540	29.400	21.740	19.374	18.220	16.052	119.52
0.6000	87.505	98.553	62.415	48.871	42.567	39.196	35.576	33.142	24.779	22.157	20.878	18.537	143.43
0.7000	93.488	104.945	67.794	53.557	46.846	43.185	39.117	36.473	27.524	24.609	23.253	20.609	167.33
0.8000	98.550	109.871	72.570	57.838	50.727	46.953	42.454	39.551	30.044	26.996	25.472	22.642	191.24
0.9000	103.101	113.933	76.826	61.615	54.316	50.398	45.481	42.331	32.497	29.194	27.581	24.584	215.14
1.0000	106.994	117.153	80.628	65.228	57.569	53.457	48.296	44.910	34.670	31.203	29.510	26.366	239.05
1.2500	114.764	122.904	88.484	72.557	64.593	60.169	54.241	50.347	39.552	35.659	33.712	30.173	298.81
1.6000	122.087	127.970	96.435	80.524	71.941	67.215	60.561	55.933	44.842	40.599	38.381	34.427	382.48
2.0000	126.953	132.486	102.464	86.787	77.975	73.159	65.577	60.761	49.183	44.879	42.420	38.219	478.10
2.5000	129.759	135.964	106.974	91.890	83.119	78.091	69.854	64.826	53.273	48.459	45.999	41.720	597.62
3.2000	130.638	137.999	109.872	95.589	87.019	81.855	73.394	67.901	56.694	51.860	49.223	44.718	764.96
4.0000	129.307	137.706	110.519	97.146	88.968	83.773	75.484	69.627	58.906	53.933	51.391	46.749	956.20
5.0000	126.258	135.339	109.409	96.936	89.278	84.245	75.930	70.241	60.175	54.923	52.626	48.031	1195.2
6.0000	122.833	132.067	107.371	95.775	88.367	83.750	75.589	69.899	59.913	55.296	52.934	48.639	1434.3
7.0000	119.060	128.614	104.991	94.072	86.933	82.628	74.754	69.189	59.845	55.015	52.811	48.611	1673.3
8.0000	115.554	125.090	102.532	92.279	85.410	81.206	73.823	68.184	59.264	54.650	52.497	48.395	1912.4
9.0000	112.430	121.640	100.115	90.404	83.797	79.792	72.584	67.177	58.567	54.062	51.960	48.055	2151.4
10.0000	109.334	118.331	97.794	88.699	82.147	78.333	71.292	66.207	57.699	53.493	51.538	47.626	2390.5
11.0000	106.488	115.378	95.590	86.987	80.678	76.950	70.068	65.288	56.972	52.957	51.141	47.126	2629.5
12.0000	103.890	112.493	93.510	85.281	79.203	75.650	68.917	64.335	56.200	52.366	50.495	46.568	2868.6

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	22.685	9.679	6.412	6.025	5.354	3.533	2.166	1.537	1.014	8.112	10.320	7.876	2.9881
0.0160	25.846	10.900	7.325	6.890	6.124	4.137	2.564	1.826	1.212	9.362	11.912	8.997	3.8248
0.0200	28.777	11.816	8.175	7.701	6.889	4.783	2.982	2.170	1.452	10.626	13.512	10.040	4.7810
0.0250	32.015	12.705	9.126	8.602	7.783	5.584	3.569	2.604	1.886	12.052	15.336	11.205	5.9762
0.0320	36.423	13.821	10.243	9.752	8.908	6.676	4.337	3.268	2.275	13.885	17.709	12.711	7.6496
0.0400	40.952	14.889	11.405	10.978	10.110	7.897	5.232	4.010	2.848	15.831	20.195	14.303	9.5620
0.0500	46.310	16.285	12.858	12.508	11.640	9.388	6.324	4.925	3.568	18.104	23.085	16.257	11.952
0.0600	52.177	17.856	14.482	13.997	13.232	10.888	7.405	5.827	4.280	20.324	25.948	18.246	14.343
0.0700	58.133	19.686	16.120	15.657	14.851	12.381	8.437	6.705	4.956	22.533	28.741	20.372	16.734
0.0800	64.511	21.658	17.866	17.364	16.527	13.887	9.519	7.585	5.633	24.763	31.549	22.607	19.124
0.0900	70.871	23.777	19.664	19.165	18.247	15.392	10.581	8.465	6.269	26.991	34.317	24.915	21.514
0.1000	77.875	26.128	21.660	20.979	19.958	16.915	11.681	9.298	6.894	29.214	37.150	27.299	23.905
0.1250	96.676	32.266	26.665	25.691	24.546	20.723	14.270	11.372	8.450	34.920	44.442	33.581	29.881
0.1600	125.250	41.759	34.267	33.023	31.327	26.096	17.897	14.250	10.574	43.173	54.850	43.258	38.248
0.2000	158.880	52.744	43.198	41.483	39.218	31.873	21.680	17.215	12.717	52.226	66.270	54.524	47.810
0.2500	200.724	66.439	53.884	51.885	48.440	38.293	25.887	20.295	14.925	62.736	79.512	68.439	59.762
0.3200	255.406	83.372	67.807	64.711	59.208	45.362	30.270	23.606	17.242	75.762	96.229	85.909	76.496
0.4000	307.074	101.374	80.508	76.522	69.288	51.720	34.201	26.623	19.389	88.234	112.348	102.161	95.620
0.5000	359.329	119.401	92.761	88.255	78.962	58.067	38.298	29.907	21.796	100.984	128.919	118.387	119.52
0.6000	396.333	132.943	100.612	95.619	85.446	62.477	41.443	32.331	23.655	109.974	141.119	129.011	143.43
0.7000	416.256	143.046	105.217	99.996	89.488	65.354	43.727	34.033	25.152	116.267	149.418	135.114	167.33
0.8000	425.987	149.495	108.057	103.050	92.092	67.345	45.574	35.559	26.416	120.757	155.010	138.899	191.24
0.9000	430.227	153.345	109.861	104.714	93.113	68.683	46.864	37.030	27.504	124.074	159.107	140.899	215.14
1.0000	434.587	157.145	112.154	106.430	94.819	70.227	48.377	38.540	28.623	126.829	162.466	142.874	239.05
1.2500	439.766	164.669	117.241	111.932	99.456	74.592	52.383	42.295	31.943	132.461	168.208	148.388	298.81
1.6000	435.888	170.691	123.244	117.844	105.500	80.524	57.765	46.964	36.356	137.420	171.944	153.139	382.48
2.0000	424.201	173.881	128.900	122.752	111.071	86.275	63.015	51.744	40.678	141.400	174.189	156.258	478.10
2.5000	404.361	173.832	132.754	126.336	116.601	92.211	68.463	57.017	45.357	143.987	174.260	157.251	597.62
3.2000	384.552	170.851	135.472	129.319	120.090	97.237	73.944	61.528	49.332	145.361	173.268	157.666	764.96
4.0000	364.712	164.894	134.833	129.307	121.571	99.467	76.258	64.211	51.944	144.337	170.088	155.500	956.20
5.0000	347.921	158.096	132.276	127.352	120.022	99.453	77.352	65.317	53.610	141.575	165.755	151.860	1195.2
6.0000	333.925	151.823	129.060	124.121	117.572	98.137	76.663	65.174	53.686	137.865	160.950	147.421	1434.3
7.0000	322.323	146.358	125.780	121.265	114.651	96.382	75.804	64.675	53.441	134.284	156.332	143.628	1673.3
8.0000	311.699	140.982	122.526	118.220	111.658	94.227	74.131	63.570	52.804	130.626	151.748	139.752	1912.4
9.0000	301.347	136.958	119.237	115.133	108.925	92.106	72.584	62.372	52.060	126.946	147.270	135.857	2151.4
10.0000	292.404	133.489	116.473	112.463	106.400	89.971	71.096	61.121	51.146	123.612	143.171	132.413	2390.5
11.0000	283.904	130.194	113.848	109.929	104.002	87.943	69.685	59.935	50.185	120.540	139.467	129.238	2629.5
12.0000	275.855	127.080	111.371	107.537	101.739	86.029	68.356	58.818	49.280	117.636	135.870	126.239	2868.6

$^{239}_{94}$Pu IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=239
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.144	0.139	0.164	0.201	0.206	0.244	0.250	0.267	0.338	0.368	0.381	0.420	2.9881
0.0160	0.183	0.178	0.212	0.262	0.271	0.320	0.331	0.355	0.458	0.507	0.532	0.602	3.8248
0.0200	0.225	0.221	0.265	0.330	0.342	0.403	0.419	0.450	0.586	0.653	0.688	0.786	4.7810
0.0250	0.275	0.274	0.330	0.413	0.430	0.507	0.527	0.566	0.739	0.826	0.873	1.002	5.9762
0.0320	0.342	0.345	0.418	0.529	0.553	0.651	0.676	0.727	0.953	1.065	1.125	1.294	7.6496
0.0400	0.413	0.422	0.516	0.659	0.694	0.814	0.846	0.908	1.196	1.337	1.413	1.624	9.5620
0.0500	0.497	0.514	0.634	0.818	0.867	1.013	1.054	1.131	1.500	1.676	1.771	2.034	11.952
0.0600	0.576	0.600	0.746	0.971	1.036	1.208	1.257	1.347	1.801	2.011	2.126	2.438	14.343
0.0700	0.650	0.681	0.853	1.118	1.200	1.395	1.454	1.557	2.095	2.338	2.473	2.835	16.734
0.0800	0.720	0.758	0.955	1.259	1.359	1.576	1.644	1.760	2.381	2.657	2.811	3.221	19.124
0.0900	0.787	0.831	1.053	1.395	1.512	1.750	1.827	1.955	2.657	2.966	3.139	3.595	21.514
0.1000	0.850	0.900	1.147	1.525	1.660	1.917	2.004	2.144	2.925	3.265	3.456	3.958	23.905
0.1250	0.998	1.058	1.368	1.829	2.007	2.309	2.421	2.586	3.553	3.970	4.205	4.814	29.881
0.1600	1.184	1.251	1.647	2.211	2.446	2.802	2.948	3.146	4.347	4.864	5.150	5.892	38.248
0.2000	1.375	1.441	1.933	2.599	2.894	3.302	3.485	3.718	5.153	5.770	6.110	6.984	47.810
0.2500	1.589	1.647	2.252	3.029	3.390	3.855	4.082	4.353	6.042	6.768	7.168	8.188	59.762
0.3200	1.857	1.897	2.648	3.554	3.997	4.528	4.812	5.131	7.120	7.977	8.452	9.647	76.496
0.4000	2.131	2.145	3.047	4.077	4.599	5.191	5.535	5.903	8.178	9.163	9.711	11.076	95.620
0.5000	2.439	2.420	3.486	4.647	5.254	5.909	6.319	6.742	9.314	10.434	11.061	12.608	119.52
0.6000	2.719	2.669	3.880	5.151	5.831	6.538	7.008	7.481	10.303	11.540	12.233	13.932	143.43
0.7000	2.980	2.901	4.240	5.608	6.352	7.106	7.632	8.150	11.190	12.530	13.281	15.112	167.33
0.8000	3.229	3.123	4.575	6.030	6.832	7.626	8.206	8.765	12.000	13.433	14.236	16.187	191.24
0.9000	3.466	3.336	4.895	6.430	7.287	8.117	8.750	9.338	12.749	14.265	15.117	17.176	215.14
1.0000	3.693	3.543	5.199	6.807	7.714	8.578	9.259	9.886	13.461	15.057	15.955	18.115	239.05
1.2500	4.231	4.040	5.905	7.674	8.692	9.629	10.424	11.140	15.071	16.845	17.845	20.229	298.81
1.6000	4.936	4.705	6.808	8.765	9.916	10.941	11.880	12.712	17.052	19.037	20.165	22.818	382.48
2.0000	5.702	5.437	7.767	9.906	11.189	12.301	13.394	14.348	19.084	21.272	22.529	25.448	478.10
2.5000	6.631	6.326	8.906	11.242	12.671	13.879	15.156	16.249	21.414	23.830	25.229	28.435	597.62
3.2000	7.913	7.544	10.446	13.023	14.634	15.968	17.488	18.765	24.451	27.160	28.738	32.300	764.96
4.0000	9.382	8.930	12.179	15.005	16.804	18.274	20.053	21.542	27.756	30.771	32.534	36.476	956.20
5.0000	11.251	10.679	14.351	17.465	19.483	21.116	23.207	24.957	31.766	35.158	37.126	41.515	1195.2
6.0000	13.170	12.466	16.555	19.945	22.174	23.961	26.361	28.367	35.746	39.494	41.653	46.458	1434.3
7.0000	15.146	14.300	18.807	22.463	24.901	26.834	29.541	31.804	39.737	43.827	46.173	51.373	1673.3
8.0000	17.184	16.185	21.111	25.029	27.675	29.752	32.758	35.284	43.751	48.186	50.713	56.302	1912.4
9.0000	19.282	18.123	23.470	27.646	30.500	32.722	36.024	38.816	47.808	52.584	55.290	61.259	2151.4
10.0000	21.438	20.115	25.886	30.316	33.382	35.746	39.347	42.401	51.921	57.030	59.910	66.256	2390.5
11.0000	23.654	22.161	28.359	33.038	36.318	38.825	42.730	46.037	56.090	61.521	64.566	71.302	2629.5
12.0000	25.927	24.260	30.887	35.813	39.309	41.958	46.170	49.726	60.315	66.061	69.271	76.405	2868.6

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.055	0.128	0.148	0.152	0.158	0.205	0.272	0.339	0.397	0.132	0.113	0.124	2.9881
0.0160	0.071	0.164	0.192	0.196	0.205	0.267	0.357	0.451	0.567	0.170	0.145	0.160	3.8248
0.0200	0.089	0.204	0.241	0.247	0.258	0.336	0.450	0.571	0.736	0.212	0.180	0.200	4.7810
0.0250	0.109	0.254	0.302	0.309	0.324	0.422	0.565	0.717	0.931	0.264	0.222	0.251	5.9762
0.0320	0.137	0.325	0.387	0.397	0.417	0.542	0.725	0.918	1.189	0.334	0.279	0.320	7.6496
0.0400	0.166	0.405	0.483	0.496	0.522	0.676	0.904	1.142	1.476	0.412	0.343	0.399	9.5620
0.0500	0.202	0.505	0.602	0.618	0.650	0.836	1.122	1.411	1.818	0.505	0.418	0.495	11.952
0.0600	0.236	0.603	0.718	0.736	0.773	0.988	1.329	1.666	2.141	0.594	0.488	0.587	14.343
0.0700	0.268	0.697	0.828	0.849	0.891	1.131	1.524	1.906	2.446	0.677	0.555	0.675	16.734
0.0800	0.297	0.786	0.932	0.955	1.002	1.265	1.709	2.133	2.734	0.757	0.618	0.759	19.124
0.0900	0.325	0.870	1.031	1.056	1.107	1.391	1.883	2.346	3.006	0.832	0.678	0.837	21.514
0.1000	0.352	0.949	1.123	1.151	1.206	1.509	2.046	2.547	3.264	0.902	0.734	0.911	23.905
0.1250	0.410	1.125	1.331	1.365	1.429	1.775	2.418	3.005	3.856	1.063	0.862	1.077	29.881
0.1600	0.478	1.330	1.575	1.618	1.693	2.091	2.864	3.558	4.576	1.256	1.015	1.271	38.248
0.2000	0.541	1.519	1.803	1.854	1.941	2.393	3.296	4.096	5.285	1.443	1.162	1.452	47.810
0.2500	0.604	1.711	2.036	2.096	2.198	2.713	3.760	4.679	6.059	1.640	1.318	1.637	59.762
0.3200	0.675	1.928	2.302	2.372	2.496	3.095	4.322	5.392	7.016	1.873	1.502	1.846	76.496
0.4000	0.741	2.131	2.553	2.636	2.785	3.476	4.889	6.116	7.996	2.100	1.681	2.045	95.620
0.5000	0.812	2.344	2.823	2.920	3.100	3.900	5.526	6.930	9.101	2.348	1.876	2.257	119.52
0.6000	0.874	2.531	3.067	3.175	3.385	4.288	6.110	7.675	10.113	2.571	2.050	2.448	143.43
0.7000	0.933	2.704	3.299	3.420	3.658	4.656	6.659	8.377	11.062	2.782	2.215	2.628	167.33
0.8000	0.990	2.868	3.523	3.655	3.921	5.016	7.184	9.050	11.964	2.984	2.372	2.803	191.24
0.9000	1.046	3.026	3.742	3.885	4.179	5.367	7.701	9.708	12.830	3.179	2.524	2.973	215.14
1.0000	1.101	3.179	3.957	4.111	4.433	5.711	8.202	10.340	13.682	3.369	2.672	3.142	239.05
1.2500	1.237	3.550	4.477	4.657	5.047	6.534	9.386	11.817	15.654	3.829	3.033	3.551	298.81
1.6000	1.428	4.047	5.170	5.383	5.861	7.611	10.903	13.689	18.102	4.447	3.523	4.104	382.48
2.0000	1.649	4.601	5.927	6.176	6.742	8.755	12.484	15.624	20.583	5.131	4.074	4.720	478.10
2.5000	1.937	5.287	6.839	7.134	7.790	10.092	14.300	17.820	23.359	5.967	4.758	5.481	597.62
3.2000	2.360	6.255	8.084	8.440	9.201	11.855	16.646	20.638	26.889	7.121	5.719	6.541	764.96
4.0000	2.870	7.393	9.496	9.916	10.781	13.797	19.189	23.676	30.661	8.439	6.831	7.761	956.20
5.0000	3.540	8.872	11.285	11.777	12.758	16.198	22.298	27.363	35.185	10.109	8.253	9.315	1195.2
6.0000	4.241	10.414	13.113	13.678	14.770	18.617	25.401	31.025	39.639	11.820	9.716	10.912	1434.3
7.0000	4.970	12.017	14.989	15.626	16.828	21.074	28.537	34.707	44.101	13.576	11.223	12.554	1673.3
8.0000	5.724	13.682	16.915	17.623	18.941	23.583	31.725	38.435	48.601	15.381	12.775	14.242	1912.4
9.0000	6.504	15.402	18.893	19.672	21.109	26.149	34.984	42.231	53.160	17.238	14.374	15.977	2151.4
10.0000	7.309	17.170	20.921	21.773	23.329	28.775	38.312	46.103	57.793	19.146	16.021	17.759	2390.5
11.0000	8.139	18.984	22.997	23.923	25.602	31.462	41.709	50.053	62.512	21.105	17.713	19.587	2629.5
12.0000	8.993	20.842	25.121	26.122	27.926	34.211	45.173	54.080	67.319	23.112	19.449	21.458	2868.6

$^{243}_{95}$Am IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=243 MEV
0.0125	10.020	8.289	6.073	4.038	3.279	2.976	2.757	2.551	1.621	1.388	1.275	1.093	3.0382
0.0160	11.636	9.626	7.052	4.690	3.808	3.455	3.202	2.962	1.883	1.611	1.481	1.269	3.8890
0.0200	13.319	11.019	8.072	5.368	4.359	3.955	3.665	3.390	2.155	1.844	1.695	1.453	4.8612
0.0250	15.246	12.613	9.240	6.145	4.990	4.528	4.195	3.881	2.467	2.111	1.945	1.663	6.0765
0.0320	17.683	14.657	10.730	7.135	5.805	5.279	4.871	4.507	2.865	2.457	2.264	1.942	7.7779
0.0400	20.192	16.814	12.282	8.192	6.682	6.092	5.613	5.195	3.304	2.843	2.616	2.248	9.7224
0.0500	23.029	19.303	14.059	9.420	7.719	7.030	6.481	6.003	3.810	3.311	3.051	2.622	12.153
0.0600	25.623	21.682	15.700	10.582	8.698	7.897	7.301	6.767	4.333	3.768	3.478	2.991	14.584
0.0700	28.009	23.959	17.237	11.686	9.652	8.756	8.101	7.515	4.826	4.223	3.913	3.361	17.014
0.0800	30.237	26.201	18.688	12.764	10.559	9.568	8.840	8.223	5.326	4.672	4.317	3.719	19.445
0.0900	32.332	28.379	20.070	13.808	11.440	10.396	9.573	8.911	5.840	5.108	4.736	4.084	21.875
0.1000	34.334	30.526	21.392	14.825	12.322	11.167	10.268	9.605	6.332	5.541	5.134	4.428	24.306
0.1250	38.934	35.922	24.487	17.239	14.398	13.052	11.999	11.239	7.530	6.587	6.158	5.326	30.382
0.1600	44.615	43.363	28.435	20.360	17.118	15.526	14.246	13.364	9.099	7.990	7.493	6.540	38.890
0.2000	50.386	51.135	32.549	23.663	20.018	18.130	16.633	15.591	10.806	9.537	8.951	7.812	48.612
0.2500	56.744	59.688	37.258	27.534	23.398	21.237	19.449	18.219	12.854	11.364	10.656	9.315	60.765
0.3200	64.552	70.133	43.266	32.579	27.820	25.397	23.147	21.633	15.489	13.758	12.915	11.357	77.779
0.4000	72.406	80.379	49.525	37.738	32.488	29.715	27.090	25.307	18.423	16.393	15.402	13.520	97.224
0.5000	81.067	91.101	56.690	43.822	37.983	34.865	31.747	29.592	21.882	19.501	18.339	16.157	121.53
0.6000	88.064	99.182	62.813	49.183	42.839	39.447	35.804	33.354	24.937	22.299	21.011	18.656	145.84
0.7000	94.090	105.621	68.230	53.902	47.147	43.463	39.369	36.708	27.702	24.768	23.403	20.742	170.14
0.8000	99.203	110.599	73.051	58.221	51.062	47.264	42.735	39.813	30.243	27.175	25.641	22.792	194.45
0.9000	103.811	114.719	77.356	62.039	54.691	50.745	45.795	42.623	32.721	29.395	27.771	24.754	218.75
1.0000	107.766	117.999	81.211	65.699	57.984	53.843	48.645	45.234	34.921	31.428	29.723	26.556	243.06
1.2500	115.698	123.905	89.205	73.148	65.119	60.659	54.682	50.757	39.874	35.949	33.987	30.419	303.82
1.6000	123.239	129.177	97.346	81.284	72.620	67.850	61.133	56.460	45.266	40.982	38.744	34.752	388.90
2.0000	128.313	133.905	103.562	87.717	78.811	73.943	66.280	61.412	49.710	45.360	42.875	38.629	486.12
2.5000	131.308	137.587	108.251	92.988	84.111	79.023	70.688	65.600	53.909	49.038	46.548	42.218	607.65
3.2000	132.348	139.805	111.310	96.840	88.158	82.926	74.355	68.790	57.436	52.538	49.867	45.303	777.79
4.0000	131.102	139.618	112.053	98.494	90.202	84.936	76.532	70.593	59.724	54.682	52.105	47.398	972.24
5.0000	128.083	137.295	110.990	98.337	90.568	85.463	77.027	71.256	61.045	55.717	53.386	48.725	1215.3
6.0000	124.651	134.021	108.960	97.193	89.674	84.989	76.708	70.933	60.800	56.115	53.717	49.359	1458.4
7.0000	120.851	130.549	106.570	95.487	88.240	83.871	75.878	70.230	60.745	55.843	53.605	49.342	1701.4
8.0000	117.314	126.995	104.094	93.685	86.710	82.443	74.948	69.223	60.166	55.482	53.296	49.132	1944.5
9.0000	114.161	123.513	101.657	91.796	85.087	81.021	73.701	68.212	59.469	54.895	52.760	48.795	2187.5
10.0000	111.035	120.172	99.316	90.079	83.425	79.552	72.401	67.237	58.596	54.326	52.339	48.367	2430.6
11.0000	108.161	117.190	97.092	88.354	81.946	78.159	71.168	66.314	57.867	53.789	51.944	47.866	2673.7
12.0000	105.537	114.276	94.993	86.633	80.459	76.849	70.010	65.355	57.091	53.196	51.296	47.306	2916.7

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	22.773	9.716	6.437	6.048	5.374	3.547	2.174	1.542	1.018	8.144	10.360	7.907	3.0382
0.0160	25.951	10.945	7.355	6.918	6.149	4.154	2.574	1.834	1.217	9.400	11.960	9.034	3.8890
0.0200	28.898	11.866	8.209	7.733	6.918	4.803	2.995	2.179	1.458	10.671	13.569	10.082	4.8612
0.0250	32.155	12.761	9.166	8.639	7.817	5.609	3.585	2.615	1.894	12.104	15.403	11.254	6.0765
0.0320	36.589	13.885	10.290	9.796	8.949	6.706	4.356	3.283	2.285	13.949	17.790	12.769	7.7779
0.0400	41.146	14.960	11.459	11.029	10.157	7.934	5.257	4.029	2.862	15.906	20.290	14.370	9.7224
0.0500	46.536	16.365	12.920	12.569	11.697	9.434	6.355	4.949	3.585	18.193	23.198	16.337	12.153
0.0600	52.439	17.946	14.554	14.068	13.298	10.943	7.442	5.856	4.302	20.426	26.078	18.338	14.584
0.0700	58.432	19.788	16.202	15.737	14.927	12.445	8.480	6.739	4.981	22.649	28.888	20.477	17.014
0.0800	64.848	21.772	17.959	17.455	16.614	13.960	9.568	7.625	5.663	24.893	31.714	22.725	19.445
0.0900	71.248	23.903	19.769	19.267	18.344	15.474	10.637	8.510	6.302	27.134	34.500	25.047	21.875
0.1000	78.295	26.269	21.777	21.092	20.066	17.007	11.744	9.348	6.931	29.371	37.350	27.446	24.306
0.1250	97.213	32.445	26.813	25.834	24.683	20.838	14.349	11.435	8.497	35.114	44.689	33.767	30.382
0.1600	125.967	41.999	34.463	33.212	31.506	26.246	17.999	14.331	10.635	43.420	55.164	43.506	38.890
0.2000	159.816	53.055	43.453	41.728	39.449	32.061	21.808	17.316	12.792	52.534	66.660	54.845	48.612
0.2500	201.939	66.841	54.211	52.199	48.734	38.525	26.043	20.417	15.015	63.115	79.993	68.853	60.765
0.3200	256.997	83.892	68.230	65.115	59.577	45.645	30.459	23.753	17.349	76.234	96.828	86.445	77.779
0.4000	309.037	102.022	81.023	77.012	69.731	52.051	34.420	26.793	19.513	88.799	113.066	102.814	97.224
0.5000	361.684	120.183	93.369	88.834	79.480	58.448	38.549	30.103	21.939	101.646	129.764	119.163	121.53
0.6000	398.864	133.792	101.255	96.230	85.991	62.876	41.708	32.537	23.806	110.677	142.021	129.835	145.84
0.7000	418.935	143.966	105.894	100.640	90.064	65.774	44.009	34.252	25.314	117.015	150.380	135.983	170.14
0.8000	428.807	150.484	108.772	103.732	92.701	67.791	45.876	35.795	26.590	121.556	156.036	139.819	194.45
0.9000	433.192	154.402	110.619	105.436	93.755	69.156	47.187	37.285	27.693	124.930	160.204	141.870	218.75
1.0000	437.725	158.279	112.964	107.198	95.504	70.734	48.726	38.819	28.830	127.744	163.639	143.905	243.06
1.2500	443.346	166.010	118.196	112.844	100.266	75.199	52.809	42.640	32.203	133.539	169.578	149.596	303.82
1.6000	440.002	172.302	124.408	118.956	106.496	81.284	58.310	47.407	36.699	138.717	173.567	154.585	388.90
2.0000	428.746	175.744	130.281	124.067	112.261	87.199	63.691	52.299	41.114	142.915	176.055	157.932	486.12
2.5000	409.189	175.908	134.340	127.844	117.994	93.312	69.281	57.698	45.898	145.706	176.341	159.129	607.65
3.2000	389.585	173.087	137.245	131.012	121.662	98.509	74.912	62.334	49.978	147.263	175.536	159.730	777.79
4.0000	369.774	167.183	136.704	131.102	123.258	100.848	77.316	65.103	52.665	146.341	172.449	157.658	972.24
5.0000	352.949	160.381	134.187	129.193	121.756	100.890	78.470	66.261	54.385	143.621	168.150	154.055	1215.3
6.0000	338.866	154.070	130.970	125.958	119.312	99.590	77.798	66.139	54.480	139.905	163.331	149.602	1458.4
7.0000	327.171	148.559	127.671	123.089	116.375	97.832	76.944	65.647	54.244	136.304	158.683	145.788	1701.4
8.0000	316.446	143.129	124.393	120.021	113.359	95.663	75.260	64.538	53.609	132.616	154.059	141.880	1944.5
9.0000	305.988	139.067	121.074	116.906	110.603	93.525	73.701	63.332	52.862	128.901	149.538	137.949	2187.5
10.0000	296.953	135.566	118.285	114.213	108.055	91.370	72.202	62.072	51.942	125.535	145.398	134.473	2430.6
11.0000	288.363	132.239	115.637	111.656	105.636	89.325	70.780	60.877	50.973	122.433	141.657	131.268	2673.7
12.0000	280.229	129.095	113.137	109.242	103.352	87.393	69.440	59.751	50.061	119.501	138.025	128.240	2916.7

$^{243}_{95}$Am IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=243
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.145	0.140	0.165	0.202	0.206	0.245	0.251	0.267	0.338	0.368	0.381	0.419	3.0382
0.0160	0.184	0.180	0.214	0.264	0.272	0.321	0.332	0.356	0.459	0.508	0.533	0.602	3.8890
0.0200	0.227	0.223	0.267	0.332	0.344	0.405	0.421	0.452	0.587	0.654	0.690	0.787	4.8612
0.0250	0.277	0.276	0.332	0.416	0.432	0.509	0.529	0.569	0.742	0.828	0.875	1.004	6.0765
0.0320	0.345	0.347	0.421	0.532	0.556	0.654	0.680	0.730	0.956	1.068	1.128	1.297	7.7779
0.0400	0.417	0.425	0.520	0.663	0.697	0.818	0.850	0.912	1.200	1.341	1.417	1.628	9.7224
0.0500	0.502	0.518	0.638	0.823	0.872	1.019	1.060	1.136	1.506	1.681	1.776	2.039	12.153
0.0600	0.581	0.605	0.751	0.977	1.042	1.215	1.264	1.354	1.808	2.017	2.132	2.445	14.584
0.0700	0.656	0.687	0.859	1.125	1.207	1.404	1.462	1.565	2.103	2.347	2.481	2.843	17.014
0.0800	0.727	0.765	0.962	1.268	1.367	1.586	1.653	1.769	2.391	2.668	2.821	3.231	19.445
0.0900	0.794	0.838	1.062	1.404	1.522	1.761	1.838	1.967	2.670	2.979	3.151	3.608	21.875
0.1000	0.858	0.908	1.157	1.536	1.671	1.930	2.017	2.157	2.939	3.280	3.471	3.973	24.306
0.1250	1.007	1.068	1.379	1.842	2.021	2.325	2.437	2.603	3.572	3.990	4.225	4.835	30.382
0.1600	1.195	1.262	1.661	2.228	2.464	2.822	2.968	3.168	4.373	4.891	5.178	5.921	38.890
0.2000	1.388	1.454	1.949	2.620	2.915	3.327	3.511	3.744	5.186	5.805	6.146	7.022	48.612
0.2500	1.605	1.662	2.272	3.054	3.416	3.885	4.113	4.385	6.083	6.812	7.213	8.238	60.765
0.3200	1.875	1.914	2.672	3.585	4.029	4.564	4.850	5.171	7.171	8.032	8.509	9.710	77.779
0.4000	2.152	2.166	3.074	4.112	4.638	5.234	5.580	5.950	8.239	9.229	9.780	11.152	97.224
0.5000	2.463	2.443	3.518	4.688	5.299	5.959	6.371	6.798	9.386	10.513	11.142	12.698	121.53
0.6000	2.746	2.694	3.916	5.197	5.881	6.595	7.068	7.544	10.385	11.629	12.326	14.035	145.84
0.7000	3.009	2.928	4.280	5.659	6.407	7.168	7.698	8.219	11.280	12.629	13.385	15.227	170.14
0.8000	3.261	3.153	4.618	6.085	6.892	7.694	8.277	8.841	12.098	13.541	14.349	16.313	194.45
0.9000	3.500	3.369	4.942	6.489	7.343	8.190	8.817	9.419	12.854	14.381	15.239	17.312	218.75
1.0000	3.730	3.577	5.248	6.869	7.775	8.655	9.331	9.972	13.573	15.180	16.084	18.259	243.06
1.2500	4.272	4.079	5.960	7.744	8.761	9.715	10.507	11.238	15.198	16.984	17.992	20.392	303.82
1.6000	4.982	4.749	6.870	8.844	9.995	11.038	11.974	12.822	17.195	19.194	20.330	23.002	388.90
2.0000	5.754	5.486	7.836	9.993	11.277	12.407	13.498	14.470	19.240	21.444	22.710	25.649	486.12
2.5000	6.688	6.379	8.982	11.335	12.766	13.993	15.269	16.380	21.582	24.015	25.424	28.652	607.65
3.2000	7.975	7.603	10.528	13.124	14.737	16.090	17.611	18.907	24.633	27.360	28.948	32.533	777.79
4.0000	9.449	8.993	12.266	15.112	16.915	18.404	20.184	21.693	27.947	30.982	32.756	36.723	972.24
5.0000	11.323	10.746	14.443	17.579	19.601	21.253	23.347	25.116	31.968	35.380	37.359	41.775	1215.3
6.0000	13.246	12.537	16.653	20.064	22.297	24.104	26.507	28.533	35.956	39.725	41.896	46.728	1458.4
7.0000	15.226	14.375	18.908	22.587	25.029	26.982	29.692	31.976	39.955	44.066	46.424	51.653	1701.4
8.0000	17.267	16.262	21.216	25.157	27.807	29.905	32.915	35.462	43.975	48.432	50.971	56.589	1944.5
9.0000	19.367	18.203	23.579	27.778	30.637	32.879	36.186	39.000	48.038	52.837	55.555	61.553	2187.5
10.0000	21.526	20.198	25.998	30.451	33.522	35.907	39.513	42.589	52.156	57.288	60.181	66.556	2430.6
11.0000	23.745	22.247	28.473	33.175	36.462	38.990	42.900	46.229	56.330	61.784	64.842	71.608	2673.7
12.0000	26.020	24.347	31.004	35.954	39.456	42.126	46.343	49.921	60.559	66.329	69.551	76.716	2916.7
MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.055	0.129	0.149	0.153	0.159	0.207	0.273	0.340	0.397	0.133	0.114	0.125	3.0382
0.0160	0.072	0.165	0.193	0.198	0.207	0.269	0.358	0.453	0.568	0.172	0.146	0.161	3.8890
0.0200	0.089	0.206	0.243	0.248	0.260	0.338	0.452	0.574	0.738	0.214	0.181	0.202	4.8612
0.0250	0.110	0.256	0.304	0.312	0.327	0.425	0.567	0.720	0.934	0.266	0.224	0.253	6.0765
0.0320	0.138	0.327	0.389	0.400	0.420	0.545	0.728	0.922	1.192	0.337	0.282	0.323	7.7779
0.0400	0.168	0.408	0.487	0.500	0.525	0.680	0.909	1.147	1.480	0.415	0.345	0.402	9.7224
0.0500	0.204	0.509	0.607	0.623	0.654	0.842	1.128	1.417	1.824	0.509	0.421	0.499	12.153
0.0600	0.238	0.608	0.723	0.741	0.779	0.995	1.336	1.674	2.149	0.599	0.493	0.592	14.584
0.0700	0.270	0.702	0.834	0.855	0.897	1.139	1.533	1.916	2.456	0.683	0.560	0.681	17.014
0.0800	0.300	0.792	0.939	0.963	1.009	1.274	1.719	2.144	2.745	0.763	0.624	0.765	19.445
0.0900	0.328	0.877	1.039	1.064	1.115	1.401	1.894	2.358	3.019	0.839	0.684	0.844	21.875
0.1000	0.355	0.957	1.132	1.160	1.215	1.520	2.059	2.561	3.280	0.910	0.741	0.919	24.306
0.1250	0.414	1.135	1.342	1.377	1.441	1.788	2.434	3.023	3.876	1.073	0.870	1.086	30.382
0.1600	0.482	1.342	1.589	1.631	1.707	2.107	2.884	3.581	4.602	1.268	1.024	1.282	38.890
0.2000	0.546	1.533	1.819	1.870	1.958	2.412	3.321	4.125	5.317	1.456	1.173	1.465	48.612
0.2500	0.610	1.727	2.054	2.114	2.217	2.735	3.789	4.713	6.099	1.655	1.331	1.651	60.765
0.3200	0.682	1.946	2.322	2.393	2.518	3.121	4.356	5.433	7.065	1.890	1.517	1.863	77.779
0.4000	0.749	2.151	2.576	2.659	2.809	3.506	4.929	6.164	8.054	2.120	1.697	2.063	97.224
0.5000	0.820	2.366	2.849	2.946	3.128	3.935	5.573	6.986	9.170	2.370	1.894	2.278	121.53
0.6000	0.883	2.555	3.095	3.205	3.416	4.327	6.162	7.738	10.192	2.595	2.070	2.470	145.84
0.7000	0.942	2.730	3.329	3.451	3.692	4.698	6.716	8.447	11.150	2.809	2.236	2.653	170.14
0.8000	1.000	2.895	3.555	3.689	3.957	5.061	7.247	9.126	12.061	3.012	2.395	2.829	194.45
0.9000	1.056	3.055	3.777	3.921	4.218	5.416	7.768	9.791	12.936	3.209	2.548	3.001	218.75
1.0000	1.112	3.210	3.994	4.149	4.474	5.763	8.275	10.430	13.795	3.402	2.698	3.171	243.06
1.2500	1.249	3.584	4.518	4.700	5.094	6.594	9.470	11.920	15.785	3.865	3.062	3.584	303.82
1.6000	1.441	4.085	5.218	5.432	5.914	7.679	10.998	13.806	18.253	4.488	3.556	4.142	388.90
2.0000	1.664	4.642	5.979	6.230	6.801	8.831	12.590	15.754	20.750	5.177	4.111	4.762	486.12
2.5000	1.953	5.332	6.896	7.193	7.855	10.175	14.416	17.962	23.542	6.017	4.799	5.527	607.65
3.2000	2.378	6.304	8.146	8.505	9.271	11.946	16.772	20.792	27.086	7.176	5.763	6.592	777.79
4.0000	2.890	7.445	9.563	9.986	10.857	13.894	19.323	23.840	30.870	8.498	6.879	7.815	972.24
5.0000	3.562	8.928	11.356	11.852	12.839	16.301	22.440	27.537	35.406	10.173	8.305	9.373	1215.3
6.0000	4.264	10.474	13.189	13.756	14.855	18.725	25.549	31.206	39.869	11.887	9.771	10.973	1458.4
7.0000	4.994	12.080	15.068	15.708	16.917	21.187	28.690	34.894	44.339	13.647	11.281	12.619	1701.4
8.0000	5.750	13.747	16.997	17.708	19.033	23.699	31.884	38.628	48.846	15.455	12.835	14.309	1944.5
9.0000	6.531	15.470	18.977	19.760	21.204	26.269	35.148	42.430	53.412	17.314	14.437	16.046	2187.5
10.0000	7.337	17.240	21.009	21.863	23.427	28.898	38.480	46.307	58.051	19.225	16.085	17.831	2430.6
11.0000	8.168	19.056	23.087	24.016	25.703	31.589	41.880	50.261	62.775	21.185	17.779	19.661	2673.7
12.0000	9.023	20.916	25.212	26.217	28.029	34.340	45.348	54.292	67.587	23.195	19.517	21.534	2916.7

$^{245}_{96}$Cm IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=245 MEV
0.0125	10.058	8.321	6.096	4.054	3.292	2.987	2.768	2.560	1.628	1.393	1.280	1.097	3.0634
0.0160	11.682	9.664	7.080	4.708	3.823	3.469	3.214	2.974	1.890	1.618	1.487	1.274	3.9211
0.0200	13.374	11.064	8.106	5.390	4.377	3.972	3.680	3.404	2.164	1.852	1.702	1.459	4.9014
0.0250	15.312	12.667	9.280	6.171	5.011	4.547	4.213	3.898	2.478	2.120	1.953	1.670	6.1267
0.0320	17.762	14.723	10.778	7.167	5.831	5.303	4.893	4.527	2.878	2.468	2.274	1.951	7.8422
0.0400	20.286	16.892	12.339	8.230	6.713	6.120	5.639	5.219	3.319	2.857	2.628	2.258	9.8028
0.0500	23.139	19.396	14.127	9.465	7.756	7.063	6.512	6.032	3.828	3.327	3.065	2.635	12.253
0.0600	25.749	21.789	15.778	10.634	8.741	7.936	7.337	6.800	4.355	3.787	3.495	3.006	14.704
0.0700	28.150	24.079	17.323	11.745	9.701	8.800	8.142	7.553	4.851	4.244	3.932	3.378	17.155
0.0800	30.393	26.335	18.784	12.829	10.613	9.617	8.885	8.265	5.353	4.696	4.339	3.738	19.606
0.0900	32.501	28.527	20.174	13.880	11.499	10.450	9.623	8.957	5.871	5.134	4.761	4.105	22.056
0.1000	34.516	30.688	21.505	14.903	12.387	11.226	10.322	9.656	6.365	5.570	5.161	4.452	24.507
0.1250	39.146	36.118	24.620	17.333	14.477	13.123	12.064	11.301	7.571	6.623	6.192	5.355	30.634
0.1600	44.865	43.607	28.595	20.474	17.214	15.613	14.326	13.440	9.150	8.035	7.535	6.577	39.211
0.2000	50.677	51.430	32.737	23.800	20.133	18.235	16.729	15.681	10.869	9.592	9.003	7.857	49.014
0.2500	57.081	60.042	37.479	27.697	23.537	21.363	19.564	18.327	12.930	11.431	10.719	9.370	61.267
0.3200	64.947	70.562	43.530	32.778	27.990	25.552	23.289	21.765	15.584	13.843	12.994	11.427	78.422
0.4000	72.860	80.884	49.836	37.975	32.692	29.902	27.260	25.466	18.539	16.496	15.499	13.605	98.028
0.5000	81.589	91.687	57.055	44.104	38.227	35.089	31.951	29.783	22.023	19.627	18.457	16.261	122.53
0.6000	88.617	99.805	63.208	49.492	43.108	39.695	36.028	33.563	25.094	22.439	21.143	18.773	147.04
0.7000	94.684	106.288	68.661	54.243	47.445	43.737	39.618	36.940	27.877	24.924	23.551	20.873	171.55
0.8000	99.846	111.316	73.525	58.599	51.394	47.570	43.012	40.071	30.439	27.351	25.807	22.940	196.06
0.9000	104.512	115.493	77.878	62.458	55.060	51.088	46.104	42.911	32.942	29.594	27.958	24.921	220.56
1.0000	108.528	118.833	81.785	66.164	58.394	54.223	48.989	45.554	35.167	31.651	29.933	26.744	245.07
1.2500	116.622	124.894	89.917	73.732	65.639	61.143	55.119	51.163	40.193	36.236	34.258	30.662	306.34
1.6000	124.383	130.377	98.249	82.038	73.294	68.480	61.700	56.984	45.686	41.363	39.103	35.075	392.11
2.0000	129.670	135.321	104.657	88.644	79.644	74.725	66.980	62.061	50.235	45.840	43.328	39.037	490.14
2.5000	132.859	139.212	109.530	94.086	85.105	79.957	71.523	66.375	54.546	49.617	47.098	42.717	612.67
3.2000	134.064	141.618	112.753	98.096	89.301	84.001	75.319	69.682	58.181	53.220	50.514	45.891	784.22
4.0000	132.904	141.538	113.594	99.849	91.443	86.104	77.584	71.564	60.545	55.434	52.821	48.050	980.28
5.0000	129.915	139.259	112.578	99.744	91.864	86.685	78.129	72.275	61.918	56.514	54.150	49.422	1225.3
6.0000	126.475	135.982	110.555	98.615	90.987	86.233	77.831	71.971	61.690	56.936	54.503	50.081	1470.4
7.0000	122.647	132.489	108.154	96.906	89.552	85.117	77.006	71.274	61.648	56.673	54.402	50.075	1715.5
8.0000	119.080	128.906	105.661	95.095	88.015	83.683	76.076	70.264	61.072	56.317	54.098	49.872	1960.6
9.0000	115.898	125.393	103.204	93.193	86.382	82.253	74.823	69.250	60.374	55.730	53.563	49.538	2205.6
10.0000	112.742	122.019	100.842	91.464	84.707	80.775	73.514	68.270	59.497	55.161	53.144	49.110	2450.7
11.0000	109.840	119.010	98.600	89.726	83.218	79.373	72.273	67.343	58.765	54.624	52.751	48.610	2695.8
12.0000	107.192	116.068	96.482	87.992	81.721	78.054	71.107	66.380	57.986	54.030	52.100	48.048	2940.8

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	22.860	9.753	6.462	6.072	5.395	3.560	2.182	1.548	1.022	8.175	10.400	7.937	3.0634
0.0160	26.054	10.988	7.384	6.945	6.174	4.170	2.584	1.841	1.222	9.438	12.008	9.070	3.9211
0.0200	29.018	11.915	8.243	7.765	6.947	4.823	3.007	2.189	1.464	10.716	13.626	10.124	4.9014
0.0250	32.294	12.815	9.206	8.677	7.851	5.633	3.601	2.626	1.902	12.157	15.469	11.303	6.1267
0.0320	36.753	13.947	10.336	9.840	8.989	6.736	4.376	3.298	2.296	14.011	17.870	12.826	7.8422
0.0400	41.336	15.029	11.512	11.081	10.205	7.971	5.281	4.047	2.875	15.979	20.384	14.437	9.8028
0.0500	46.759	16.443	12.982	12.629	11.753	9.479	6.385	4.973	3.602	18.280	23.309	16.415	12.253
0.0600	52.698	18.034	14.626	14.137	13.364	10.997	7.479	5.885	4.323	20.527	26.207	18.428	14.704
0.0700	58.726	19.887	16.284	15.816	15.002	12.507	8.523	6.773	5.006	22.763	29.034	20.580	17.155
0.0800	65.181	21.883	18.051	17.544	16.699	14.032	9.617	7.664	5.692	25.020	31.876	22.841	19.606
0.0900	71.619	24.028	19.872	19.367	18.439	15.554	10.692	8.554	6.335	27.276	34.680	25.178	22.056
0.1000	78.708	26.408	21.892	21.204	20.172	17.097	11.806	9.398	6.968	29.526	37.548	27.591	24.507
0.1250	97.742	32.622	26.959	25.974	24.817	20.952	14.427	11.498	8.543	35.305	44.932	33.951	30.634
0.1600	126.676	42.235	34.657	33.399	31.683	26.393	18.101	14.412	10.695	43.664	55.474	43.750	39.211
0.2000	160.740	53.362	43.704	41.969	39.677	32.246	21.934	17.416	12.866	52.838	67.046	55.162	49.014
0.2500	203.139	67.238	54.533	52.509	49.023	38.754	26.198	20.539	15.104	63.490	80.468	69.262	61.267
0.3200	258.569	84.405	68.647	65.513	59.941	45.924	30.645	23.898	17.456	76.700	97.420	86.973	78.422
0.4000	310.976	102.662	81.531	77.495	70.169	52.377	34.636	26.961	19.635	89.356	113.775	103.459	98.028
0.5000	364.011	120.957	93.970	89.405	79.991	58.824	38.797	30.296	22.080	102.300	130.599	119.930	122.53
0.6000	401.370	134.633	101.891	96.834	86.532	63.271	41.970	32.742	23.956	111.372	142.913	130.651	147.04
0.7000	421.581	144.876	106.563	101.276	90.633	66.190	44.287	34.468	25.473	117.754	151.330	136.842	171.55
0.8000	431.589	151.461	109.478	104.405	93.303	68.231	46.173	36.027	26.763	122.345	157.049	140.726	196.06
0.9000	436.116	155.444	111.365	106.147	94.388	69.623	47.505	37.537	27.880	125.773	161.285	142.828	220.56
1.0000	440.819	159.398	113.762	107.956	96.179	71.234	49.071	39.093	29.034	128.647	164.796	144.922	245.07
1.2500	446.886	167.335	119.140	113.745	101.066	75.800	53.231	42.980	32.460	134.605	170.932	150.790	306.34
1.6000	444.086	173.901	125.562	120.060	107.485	82.038	58.851	47.847	37.040	140.005	175.178	156.020	392.11
2.0000	433.279	177.602	131.658	125.379	113.448	88.121	64.364	52.852	41.549	144.426	177.916	159.602	490.14
2.5000	414.022	177.986	135.926	129.355	119.387	94.415	70.099	58.379	46.441	147.427	178.424	161.009	612.67
3.2000	394.637	175.332	139.025	132.711	123.240	99.787	75.883	63.142	50.626	149.173	177.812	161.801	784.22
4.0000	374.859	169.482	138.584	132.904	124.953	102.234	78.380	65.998	53.389	148.353	174.820	159.826	980.28
5.0000	357.998	162.675	136.107	131.041	123.498	102.333	79.593	67.209	55.163	145.676	170.555	156.258	1225.3
6.0000	343.825	156.324	132.887	127.801	121.057	101.047	78.936	67.107	55.277	141.952	165.722	151.792	1470.4
7.0000	332.034	150.767	129.569	124.918	118.105	99.286	78.087	66.623	55.051	138.329	161.042	147.955	1715.5
8.0000	321.208	145.283	126.264	121.827	115.064	97.102	76.393	65.510	54.415	134.612	156.378	144.015	1960.6
9.0000	310.643	141.183	122.916	118.684	112.286	94.948	74.823	64.296	53.666	130.862	151.813	140.048	2205.6
10.0000	301.518	137.650	120.103	115.969	109.716	92.775	73.312	63.026	52.740	127.465	147.633	136.540	2450.7
11.0000	292.841	134.293	117.432	113.389	107.276	90.712	71.879	61.822	51.765	124.334	143.857	133.307	2695.8
12.0000	284.623	131.119	114.910	110.955	104.973	88.764	70.529	60.687	50.846	121.375	140.189	130.251	2940.8

$^{245}_{96}Cm$ IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=245
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.145	0.140	0.165	0.202	0.206	0.244	0.250	0.266	0.336	0.365	0.378	0.415	3.0634
0.0160	0.184	0.180	0.213	0.263	0.271	0.320	0.331	0.355	0.458	0.506	0.531	0.599	3.9211
0.0200	0.227	0.223	0.267	0.331	0.343	0.405	0.420	0.451	0.585	0.652	0.687	0.784	4.9014
0.0250	0.277	0.276	0.332	0.415	0.432	0.508	0.528	0.567	0.740	0.825	0.872	1.000	6.1267
0.0320	0.345	0.347	0.421	0.532	0.555	0.653	0.678	0.728	0.953	1.064	1.124	1.292	7.8422
0.0400	0.417	0.425	0.520	0.662	0.696	0.816	0.848	0.910	1.197	1.336	1.412	1.622	9.8028
0.0500	0.502	0.518	0.638	0.822	0.870	1.017	1.057	1.133	1.501	1.676	1.770	2.031	12.253
0.0600	0.582	0.605	0.751	0.976	1.040	1.212	1.261	1.351	1.802	2.011	2.125	2.436	14.704
0.0700	0.656	0.687	0.859	1.124	1.205	1.401	1.459	1.562	2.097	2.340	2.473	2.833	17.155
0.0800	0.727	0.765	0.962	1.267	1.365	1.583	1.650	1.766	2.385	2.660	2.813	3.221	19.606
0.0900	0.795	0.839	1.061	1.403	1.520	1.759	1.835	1.963	2.663	2.971	3.142	3.597	22.056
0.1000	0.859	0.908	1.157	1.535	1.669	1.927	2.014	2.153	2.932	3.271	3.462	3.962	24.507
0.1250	1.008	1.068	1.379	1.841	2.019	2.323	2.434	2.600	3.565	3.982	4.215	4.823	30.634
0.1600	1.197	1.263	1.661	2.227	2.462	2.820	2.966	3.165	4.366	4.882	5.168	5.909	39.211
0.2000	1.390	1.455	1.950	2.620	2.914	3.326	3.509	3.742	5.180	5.796	6.136	7.010	49.014
0.2500	1.607	1.664	2.274	3.054	3.416	3.885	4.112	4.383	6.077	6.804	7.204	8.226	61.267
0.3200	1.878	1.916	2.674	3.586	4.029	4.565	4.849	5.170	7.166	8.026	8.501	9.700	78.422
0.4000	2.155	2.168	3.077	4.114	4.638	5.236	5.580	5.951	8.236	9.224	9.774	11.144	98.028
0.5000	2.466	2.446	3.522	4.691	5.300	5.962	6.373	6.799	9.384	10.509	11.138	12.692	122.53
0.6000	2.750	2.698	3.920	5.201	5.884	6.598	7.071	7.547	10.384	11.627	12.324	14.031	147.04
0.7000	3.014	2.932	4.284	5.663	6.411	7.172	7.702	8.223	11.281	12.629	13.384	15.224	171.55
0.8000	3.266	3.157	4.624	6.090	6.896	7.699	8.282	8.845	12.101	13.542	14.349	16.312	196.06
0.9000	3.505	3.373	4.947	6.495	7.348	8.196	8.822	9.425	12.858	14.383	15.240	17.312	220.56
1.0000	3.735	3.582	5.254	6.876	7.780	8.661	9.337	9.979	13.577	15.184	16.087	18.260	245.07
1.2500	4.279	4.084	5.967	7.751	8.767	9.723	10.514	11.245	15.203	16.989	17.996	20.395	306.34
1.6000	4.988	4.754	6.877	8.851	10.000	11.045	11.980	12.829	17.199	19.198	20.333	23.004	392.11
2.0000	5.758	5.490	7.841	9.997	11.281	12.412	13.502	14.473	19.241	21.444	22.709	25.647	490.14
2.5000	6.690	6.381	8.983	11.336	12.766	13.993	15.268	16.378	21.577	24.008	25.416	28.641	612.67
3.2000	7.972	7.599	10.523	13.118	14.729	16.082	17.600	18.895	24.615	27.339	28.924	32.506	784.22
4.0000	9.438	8.982	12.253	15.096	16.895	18.383	20.161	21.667	27.913	30.942	32.714	36.675	980.28
5.0000	11.301	10.726	14.417	17.548	19.566	21.217	23.305	25.070	31.911	35.316	37.291	41.698	1225.3
6.0000	13.212	12.506	16.613	20.018	22.245	24.050	26.446	28.467	35.874	39.634	41.799	46.621	1470.4
7.0000	15.180	14.331	18.854	22.525	24.960	26.910	29.611	31.888	39.847	43.947	46.299	51.514	1715.5
8.0000	17.208	16.206	21.146	25.078	27.720	29.814	32.813	35.351	43.841	48.285	50.816	56.417	1960.6
9.0000	19.294	18.134	23.493	27.681	30.531	32.768	36.061	38.864	47.877	52.659	55.369	61.348	2205.6
10.0000	21.438	20.115	25.896	30.336	33.396	35.774	39.365	42.428	51.966	57.080	59.962	66.317	2450.7
11.0000	23.640	22.149	28.354	33.041	36.315	38.835	42.728	46.043	56.111	61.544	64.591	71.333	2695.8
12.0000	25.899	24.235	30.866	35.799	39.287	41.949	46.147	49.709	60.309	66.056	69.266	76.404	2940.8

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.055	0.129	0.149	0.153	0.159	0.206	0.272	0.338	0.394	0.133	0.114	0.124	3.0634
0.0160	0.072	0.165	0.193	0.198	0.207	0.268	0.358	0.452	0.566	0.172	0.146	0.161	3.9211
0.0200	0.089	0.206	0.242	0.248	0.260	0.338	0.451	0.572	0.735	0.214	0.181	0.202	4.9014
0.0250	0.110	0.256	0.304	0.311	0.326	0.424	0.566	0.718	0.931	0.266	0.224	0.253	6.1267
0.0320	0.138	0.327	0.389	0.400	0.419	0.544	0.726	0.919	1.189	0.337	0.282	0.323	7.8422
0.0400	0.168	0.408	0.487	0.500	0.525	0.679	0.907	1.144	1.475	0.415	0.345	0.402	9.8028
0.0500	0.204	0.509	0.607	0.622	0.654	0.840	1.125	1.414	1.818	0.509	0.421	0.499	12.253
0.0600	0.238	0.608	0.723	0.741	0.778	0.993	1.333	1.670	2.143	0.599	0.493	0.592	14.704
0.0700	0.270	0.702	0.833	0.854	0.896	1.137	1.530	1.911	2.449	0.683	0.560	0.681	17.155
0.0800	0.300	0.792	0.939	0.962	1.009	1.273	1.716	2.139	2.738	0.763	0.624	0.765	19.606
0.0900	0.329	0.877	1.038	1.064	1.114	1.400	1.891	2.354	3.012	0.839	0.684	0.844	22.056
0.1000	0.355	0.957	1.132	1.160	1.214	1.519	2.056	2.557	3.272	0.910	0.741	0.919	24.507
0.1250	0.414	1.136	1.342	1.376	1.440	1.787	2.431	3.019	3.869	1.073	0.870	1.086	30.634
0.1600	0.483	1.342	1.589	1.631	1.707	2.107	2.882	3.577	4.595	1.268	1.025	1.283	39.211
0.2000	0.546	1.534	1.819	1.870	1.958	2.412	3.319	4.121	5.311	1.457	1.174	1.466	49.014
0.2500	0.610	1.728	2.055	2.115	2.218	2.736	3.788	4.711	6.093	1.657	1.332	1.652	61.267
0.3200	0.682	1.948	2.324	2.395	2.519	3.123	4.356	5.432	7.060	1.892	1.518	1.864	78.422
0.4000	0.750	2.153	2.578	2.661	2.811	3.508	4.930	6.164	8.051	2.122	1.699	2.065	98.028
0.5000	0.821	2.369	2.852	2.949	3.130	3.937	5.574	6.987	9.169	2.373	1.896	2.280	122.53
0.6000	0.884	2.558	3.098	3.207	3.419	4.330	6.164	7.740	10.192	2.598	2.073	2.473	147.04
0.7000	0.944	2.734	3.333	3.454	3.691	4.702	6.720	8.451	11.151	2.812	2.239	2.656	171.55
0.8000	1.001	2.899	3.559	3.692	3.957	5.066	7.251	9.131	12.064	3.016	2.398	2.832	196.06
0.9000	1.058	3.058	3.781	3.925	4.218	5.421	7.774	9.797	12.940	3.213	2.552	3.005	220.56
1.0000	1.113	3.214	3.998	4.154	4.475	5.769	8.281	10.436	13.801	3.406	2.702	3.175	245.07
1.2500	1.251	3.588	4.523	4.705	5.094	6.600	9.477	11.927	15.792	3.870	3.066	3.588	306.34
1.6000	1.443	4.089	5.222	5.437	5.915	7.685	11.005	13.813	18.259	4.493	3.560	4.146	392.11
2.0000	1.665	4.645	5.983	6.234	6.800	8.835	12.594	15.758	20.752	5.180	4.114	4.765	490.14
2.5000	1.954	5.333	6.897	7.194	7.851	10.175	14.414	17.959	23.535	6.018	4.800	5.528	612.67
3.2000	2.377	6.302	8.141	8.500	9.262	11.939	16.761	20.778	27.065	7.172	5.760	6.588	784.22
4.0000	2.886	7.437	9.552	9.974	10.839	13.877	19.299	23.810	30.829	8.488	6.871	7.805	980.28
5.0000	3.554	8.911	11.334	11.829	12.810	16.270	22.398	27.485	35.340	10.153	8.288	9.354	1225.3
6.0000	4.252	10.447	13.156	13.722	14.813	18.679	25.488	31.133	39.776	11.857	9.745	10.945	1470.4
7.0000	4.978	12.043	15.023	15.661	16.862	21.125	28.609	34.797	44.217	13.605	11.245	12.580	1715.5
8.0000	5.728	13.699	16.939	17.647	18.965	23.621	31.782	38.507	48.695	15.401	12.789	14.259	1960.6
9.0000	6.504	15.411	18.906	19.685	21.121	26.173	35.024	42.283	53.230	17.248	14.380	15.984	2205.6
10.0000	7.305	17.169	20.923	21.775	23.329	28.785	38.333	46.133	57.836	19.145	16.017	17.757	2450.7
11.0000	8.130	18.971	22.987	23.912	25.588	31.456	41.709	50.059	62.527	21.092	17.699	19.573	2695.8
12.0000	8.979	20.818	25.097	26.097	27.897	34.188	45.151	54.061	67.304	23.087	19.425	21.433	2940.8

$^{248}_{97}Bk$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=248 MEV
0.0125	10.097	8.353	6.119	4.069	3.304	2.999	2.778	2.570	1.634	1.398	1.285	1.101	3.1009
0.0160	11.729	9.703	7.109	4.727	3.839	3.483	3.227	2.986	1.898	1.624	1.493	1.280	3.9691
0.0200	13.430	11.111	8.140	5.413	4.395	3.988	3.695	3.419	2.173	1.860	1.709	1.465	4.9614
0.0250	15.378	12.722	9.320	6.198	5.033	4.567	4.231	3.914	2.488	2.130	1.962	1.678	6.2017
0.0320	17.842	14.789	10.827	7.200	5.857	5.327	4.915	4.547	2.891	2.479	2.284	1.960	7.9382
0.0400	20.380	16.971	12.397	8.269	6.744	6.149	5.665	5.244	3.335	2.870	2.641	2.269	9.9228
0.0500	23.251	19.490	14.195	9.511	7.793	7.097	6.544	6.061	3.847	3.343	3.080	2.647	12.403
0.0600	25.877	21.897	15.856	10.687	8.784	7.976	7.373	6.834	4.376	3.805	3.512	3.021	14.884
0.0700	28.293	24.201	17.411	11.805	9.750	8.845	8.183	7.591	4.875	4.266	3.952	3.395	17.365
0.0800	30.549	26.471	18.881	12.896	10.668	9.667	8.931	8.308	5.381	4.720	4.362	3.757	19.846
0.0900	32.671	28.676	20.280	13.953	11.560	10.505	9.674	9.004	5.902	5.161	4.786	4.127	22.326
0.1000	34.699	30.851	21.619	14.982	12.453	11.285	10.377	9.707	6.399	5.599	5.189	4.475	24.807
0.1250	39.361	36.316	24.755	17.428	14.556	13.194	12.130	11.363	7.612	6.659	6.226	5.384	31.009
0.1600	45.119	43.854	28.756	20.590	17.311	15.701	14.407	13.516	9.202	8.081	7.577	6.614	39.691
0.2000	50.971	51.729	32.927	23.938	20.250	18.340	16.826	15.772	10.932	9.648	9.055	7.903	49.614
0.2500	57.422	60.400	37.703	27.862	23.677	21.491	19.681	18.437	13.008	11.499	10.783	9.426	62.017
0.3200	65.346	70.995	43.797	32.979	28.162	25.709	23.432	21.899	15.679	13.928	13.073	11.497	79.382
0.4000	73.319	81.393	50.150	38.214	32.898	30.090	27.432	25.626	18.656	16.599	15.597	13.691	99.228
0.5000	82.115	92.279	57.423	44.388	38.473	35.315	32.157	29.975	22.165	19.754	18.576	16.366	124.03
0.6000	89.166	100.423	63.599	49.798	43.375	39.940	36.252	33.771	25.249	22.578	21.274	18.889	148.84
0.7000	95.272	106.947	69.088	54.579	47.739	44.009	39.863	37.169	28.050	25.079	23.697	21.003	173.65
0.8000	100.482	112.024	73.992	58.972	51.721	47.873	43.285	40.326	30.633	27.525	25.971	23.086	198.46
0.9000	105.203	116.256	78.393	62.871	55.424	51.426	46.408	43.194	33.160	29.789	28.143	25.086	223.26
1.0000	109.279	119.655	82.350	66.621	58.798	54.598	49.328	45.869	35.411	31.870	30.140	26.929	248.07
1.2500	117.534	125.871	90.620	74.308	66.152	61.621	55.550	51.563	40.507	36.520	34.526	30.901	310.09
1.6000	125.518	131.566	99.145	82.786	73.962	69.104	62.263	57.504	46.102	41.740	39.460	35.395	396.91
2.0000	131.021	136.732	105.748	89.568	80.474	75.504	67.678	62.708	50.759	46.317	43.780	39.444	496.14
2.5000	134.411	140.838	110.809	95.185	86.099	80.891	72.358	67.150	55.183	50.196	47.648	43.215	620.17
3.2000	135.786	143.438	114.202	99.356	90.448	85.080	76.287	70.577	58.928	53.903	51.162	46.480	793.82
4.0000	134.715	143.466	115.141	101.209	92.689	87.277	78.642	72.539	61.370	56.189	53.541	48.705	992.28
5.0000	131.755	141.231	114.172	101.157	93.165	87.913	79.236	73.299	62.795	57.315	54.917	50.122	1240.3
6.0000	128.306	137.951	112.155	100.043	92.304	87.481	78.957	73.013	62.583	57.760	55.293	50.806	1488.4
7.0000	124.450	134.436	109.744	98.331	90.868	86.368	78.138	72.321	62.554	57.506	55.201	50.811	1736.5
8.0000	120.851	130.824	107.232	96.509	89.325	84.928	77.207	71.310	61.980	57.155	54.903	50.614	1984.6
9.0000	117.641	127.278	104.756	94.594	87.681	83.490	75.948	70.291	61.282	56.568	54.368	50.283	2232.6
10.0000	114.455	123.873	102.374	92.854	85.995	82.002	74.631	69.308	60.401	55.999	53.951	49.856	2480.7
11.0000	111.526	120.836	100.113	91.103	84.495	80.591	73.383	68.377	59.667	55.463	53.560	49.356	2728.8
12.0000	108.854	117.868	97.978	89.356	82.988	79.264	72.210	67.409	58.885	54.868	52.908	48.793	2976.8

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	22.948	9.791	6.487	6.095	5.416	3.574	2.191	1.554	1.026	8.206	10.440	7.967	3.1009
0.0160	26.159	11.032	7.414	6.973	6.199	4.187	2.595	1.848	1.227	9.476	12.056	9.106	3.9691
0.0200	29.140	11.965	8.278	7.798	6.976	4.843	3.020	2.198	1.470	10.761	13.683	10.166	4.9614
0.0250	32.434	12.871	9.246	8.714	7.885	5.657	3.616	2.638	1.911	12.209	15.537	11.352	6.2017
0.0320	36.919	14.010	10.383	9.885	9.029	6.767	4.396	3.313	2.306	14.075	17.951	12.884	7.9382
0.0400	41.530	15.099	11.566	11.132	10.252	8.008	5.306	4.066	2.888	16.054	20.480	14.504	9.9228
0.0500	46.985	16.523	13.045	12.690	11.810	9.525	6.416	4.997	3.620	18.368	23.422	16.494	12.403
0.0600	52.959	18.123	14.698	14.207	13.430	11.052	7.516	5.914	4.345	20.629	26.337	18.520	14.884
0.0700	59.024	19.988	16.366	15.896	15.078	12.571	8.566	6.808	5.032	22.878	29.181	20.684	17.365
0.0800	65.517	21.996	18.145	17.635	16.785	14.104	9.667	7.703	5.721	25.149	32.041	22.959	19.846
0.0900	71.995	24.154	19.976	19.469	18.536	15.636	10.748	8.599	6.368	27.419	34.862	25.310	22.326
0.1000	79.127	26.549	22.009	21.317	20.279	17.187	11.869	9.448	7.005	29.683	37.748	27.738	24.807
0.1250	98.278	32.800	27.107	26.117	24.953	21.067	14.506	11.561	8.590	35.499	45.178	34.137	31.009
0.1600	127.391	42.473	34.853	33.588	31.862	26.542	18.203	14.493	10.755	43.911	55.788	43.997	39.691
0.2000	161.673	53.671	43.958	42.213	39.908	32.433	22.061	17.517	12.940	53.145	67.435	55.482	49.614
0.2500	204.350	67.639	54.858	52.822	49.315	38.985	26.354	20.661	15.194	63.869	80.948	69.675	62.017
0.3200	260.156	84.923	69.068	65.915	60.309	46.206	30.833	24.045	17.563	77.171	98.018	87.507	79.382
0.4000	312.933	103.308	82.045	77.983	70.611	52.707	34.854	27.131	19.759	89.918	114.491	104.110	99.228
0.5000	366.359	121.737	94.576	89.982	80.507	59.203	39.048	30.492	22.223	102.960	131.442	120.703	124.03
0.6000	403.855	135.466	102.522	97.434	87.067	63.663	42.230	32.944	24.104	112.062	143.798	131.460	148.84
0.7000	424.197	145.775	107.224	101.904	91.196	66.600	44.561	34.682	25.631	118.485	152.269	137.691	173.65
0.8000	434.335	152.424	110.175	105.069	93.896	68.665	46.467	36.256	26.933	123.123	158.048	141.621	198.46
0.9000	438.998	156.472	112.101	106.849	95.012	70.083	47.819	37.785	28.065	126.604	162.351	143.772	223.26
1.0000	443.868	160.501	114.549	108.702	96.844	71.727	49.410	39.363	29.234	129.537	165.936	145.925	248.07
1.2500	450.380	168.643	120.071	114.634	101.857	76.392	53.647	43.316	32.714	135.658	172.268	151.969	310.09
1.6000	448.136	175.487	126.707	121.155	108.465	82.786	59.388	48.284	37.378	141.282	176.776	157.442	396.91
2.0000	437.795	179.454	133.031	126.686	114.630	89.040	65.035	53.403	41.982	145.932	179.771	161.265	496.14
2.5000	418.858	180.064	137.514	130.865	120.782	95.517	70.918	59.061	46.983	149.149	180.508	162.889	620.17
3.2000	399.706	177.584	140.811	134.416	124.823	101.069	76.858	63.953	51.277	151.089	180.096	163.880	793.82
4.0000	379.966	171.791	140.472	134.715	126.655	103.627	79.447	66.897	54.116	150.375	177.202	162.004	992.28
5.0000	363.068	164.979	138.034	132.897	125.247	103.783	80.720	68.161	55.944	147.739	172.971	158.471	1240.3
6.0000	348.803	158.588	134.811	129.652	122.810	102.510	80.079	68.078	56.078	144.008	168.121	153.989	1488.4
7.0000	336.914	152.983	131.473	126.754	119.840	100.745	79.235	67.602	55.860	140.362	163.409	150.130	1736.5
8.0000	325.987	147.445	128.143	123.639	116.776	98.547	77.529	66.484	55.225	136.614	158.704	146.158	1984.6
9.0000	315.315	143.306	124.764	120.469	113.974	96.375	75.948	65.263	54.473	132.830	154.096	142.154	2232.6
10.0000	306.100	139.741	121.928	117.731	111.383	94.185	74.426	63.984	53.542	129.401	149.876	138.615	2480.7
11.0000	297.336	136.354	119.235	115.130	108.923	92.104	72.982	62.771	52.559	126.243	146.065	135.353	2728.8
12.0000	289.036	133.153	116.692	112.675	106.600	90.140	71.622	61.628	51.635	123.257	142.363	132.271	2976.8

$^{248}_{97}Bk$ IONS

ENERGY PER MASS UNIT | RANGE IN UNITS OF MG/SQ CM | ENERGY FOR A=248

MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.146	0.140	0.165	0.202	0.206	0.244	0.250	0.266	0.335	0.364	0.376	0.413	3.1009
0.0160	0.185	0.180	0.214	0.264	0.272	0.321	0.332	0.355	0.457	0.505	0.530	0.597	3.9691
0.0200	0.228	0.224	0.268	0.332	0.344	0.405	0.420	0.451	0.585	0.651	0.686	0.782	4.9614
0.0250	0.278	0.277	0.333	0.416	0.432	0.509	0.529	0.568	0.740	0.825	0.871	0.998	6.2017
0.0320	0.346	0.349	0.422	0.533	0.556	0.654	0.679	0.729	0.953	1.064	1.124	1.290	7.9382
0.0400	0.419	0.427	0.521	0.664	0.697	0.818	0.849	0.911	1.197	1.336	1.411	1.620	9.9228
0.0500	0.504	0.520	0.640	0.824	0.872	1.019	1.059	1.135	1.502	1.675	1.770	2.030	12.403
0.0600	0.584	0.607	0.753	0.978	1.042	1.215	1.263	1.353	1.803	2.011	2.125	2.435	14.884
0.0700	0.659	0.690	0.862	1.127	1.208	1.404	1.462	1.565	2.099	2.340	2.473	2.833	17.365
0.0800	0.731	0.768	0.966	1.270	1.368	1.587	1.653	1.769	2.387	2.661	2.813	3.221	19.846
0.0900	0.798	0.842	1.065	1.407	1.523	1.763	1.839	1.967	2.666	2.973	3.144	3.598	22.326
0.1000	0.863	0.912	1.161	1.539	1.673	1.932	2.018	2.158	2.935	3.274	3.464	3.963	24.807
0.1250	1.013	1.073	1.385	1.847	2.024	2.329	2.440	2.606	3.570	3.987	4.220	4.827	31.009
0.1600	1.203	1.269	1.668	2.235	2.470	2.829	2.974	3.173	4.374	4.890	5.176	5.917	39.691
0.2000	1.397	1.462	1.959	2.630	2.924	3.337	3.520	3.753	5.192	5.809	6.148	7.023	49.614
0.2500	1.615	1.672	2.284	3.067	3.428	3.899	4.126	4.398	6.093	6.821	7.221	8.244	62.017
0.3200	1.888	1.926	2.687	3.601	4.045	4.583	4.867	5.189	7.188	8.049	8.525	9.725	79.382
0.4000	2.167	2.179	3.092	4.132	4.657	5.257	5.602	5.973	8.263	9.253	9.803	11.176	99.228
0.5000	2.480	2.459	3.539	4.712	5.323	5.987	6.399	6.826	9.417	10.545	11.175	12.732	124.03
0.6000	2.765	2.712	3.939	5.225	5.909	6.627	7.101	7.578	10.423	11.669	12.367	14.078	148.84
0.7000	3.030	2.948	4.306	5.690	6.439	7.204	7.735	8.258	11.325	12.676	13.433	15.278	173.65
0.8000	3.284	3.174	4.647	6.119	6.927	7.734	8.319	8.884	12.149	13.594	14.404	16.371	198.46
0.9000	3.525	3.391	4.973	6.526	7.382	8.234	8.862	9.467	12.910	14.440	15.299	17.377	223.26
1.0000	3.756	3.601	5.281	6.909	7.816	8.702	9.380	10.024	13.634	15.245	16.151	18.331	248.07
1.2500	4.302	4.105	5.997	7.789	8.808	9.768	10.562	11.296	15.268	17.059	18.069	20.476	310.09
1.6000	5.014	4.778	6.911	8.892	10.046	11.095	12.034	12.886	17.271	19.277	20.415	23.094	396.91
2.0000	5.786	5.516	7.877	10.042	11.329	12.466	13.559	14.534	19.318	21.528	22.797	25.744	496.14
2.5000	6.719	6.407	9.020	11.382	12.816	14.049	15.328	16.442	21.656	24.095	25.507	28.741	620.17
3.2000	8.001	7.626	10.560	13.164	14.779	16.137	17.659	18.958	24.694	27.425	29.015	32.607	793.82
4.0000	9.466	9.007	12.288	15.140	16.943	18.437	20.217	21.727	27.989	31.025	32.801	36.771	992.28
5.0000	11.326	10.748	14.449	17.588	19.609	21.265	23.356	25.125	31.980	35.392	37.370	41.786	1240.3
6.0000	13.233	12.524	16.641	20.053	22.283	24.093	26.491	28.514	35.935	39.701	41.869	46.699	1488.4
7.0000	15.195	14.346	18.876	22.554	24.991	26.946	29.649	31.928	39.899	44.004	46.359	51.580	1736.5
8.0000	17.218	16.216	21.163	25.100	27.745	29.842	32.842	35.382	43.883	48.331	50.864	56.471	1984.6
9.0000	19.299	18.139	23.504	27.697	30.548	32.788	36.082	38.886	47.908	52.694	55.405	61.389	2232.6
10.0000	21.437	20.115	25.899	30.344	33.405	35.787	39.377	42.440	51.986	57.101	59.985	66.343	2480.7
11.0000	23.633	22.142	28.350	33.041	36.315	38.839	42.729	46.044	56.118	61.553	64.600	71.344	2728.8
12.0000	25.884	24.221	30.855	35.791	39.278	41.943	46.138	49.698	60.303	66.050	69.261	76.400	2976.8

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.055	0.130	0.150	0.153	0.159	0.206	0.272	0.338	0.393	0.134	0.114	0.125	3.1009
0.0160	0.072	0.166	0.194	0.198	0.207	0.269	0.358	0.452	0.565	0.172	0.146	0.162	3.9691
0.0200	0.090	0.207	0.243	0.249	0.261	0.339	0.451	0.572	0.735	0.215	0.182	0.203	4.9614
0.0250	0.111	0.257	0.305	0.312	0.327	0.425	0.567	0.718	0.930	0.267	0.225	0.253	6.2017
0.0320	0.139	0.329	0.390	0.401	0.421	0.546	0.727	0.920	1.188	0.338	0.283	0.324	7.9382
0.0400	0.169	0.410	0.488	0.501	0.526	0.680	0.908	1.144	1.475	0.417	0.347	0.404	9.9228
0.0500	0.205	0.511	0.608	0.624	0.656	0.842	1.127	1.415	1.819	0.511	0.423	0.501	12.403
0.0600	0.239	0.610	0.725	0.743	0.780	0.996	1.335	1.671	2.143	0.601	0.495	0.594	14.884
0.0700	0.272	0.705	0.836	0.857	0.899	1.140	1.533	1.914	2.450	0.686	0.563	0.683	17.365
0.0800	0.302	0.796	0.942	0.965	1.012	1.276	1.719	2.142	2.740	0.766	0.627	0.768	19.846
0.0900	0.330	0.881	1.042	1.068	1.118	1.404	1.895	2.358	3.015	0.842	0.687	0.847	22.326
0.1000	0.357	0.961	1.136	1.164	1.219	1.523	2.061	2.561	3.276	0.914	0.744	0.922	24.807
0.1250	0.417	1.141	1.347	1.382	1.445	1.793	2.437	3.026	3.875	1.078	0.874	1.091	31.009
0.1600	0.485	1.349	1.595	1.638	1.713	2.114	2.890	3.586	4.604	1.274	1.030	1.288	39.691
0.2000	0.549	1.541	1.827	1.878	1.966	2.422	3.330	4.133	5.323	1.464	1.180	1.472	49.614
0.2500	0.614	1.736	2.064	2.124	2.227	2.747	3.801	4.726	6.109	1.664	1.339	1.660	62.017
0.3200	0.686	1.957	2.334	2.405	2.530	3.136	4.372	5.450	7.082	1.902	1.526	1.873	79.382
0.4000	0.754	2.164	2.590	2.674	2.824	3.523	4.949	6.187	8.077	2.133	1.708	2.075	99.228
0.5000	0.825	2.381	2.865	2.963	3.144	3.955	5.597	7.014	9.201	2.385	1.906	2.291	124.03
0.6000	0.889	2.571	3.113	3.223	3.435	4.350	6.191	7.772	10.230	2.612	2.084	2.485	148.84
0.7000	0.949	2.748	3.349	3.471	3.708	4.724	6.749	8.486	11.195	2.827	2.251	2.669	173.65
0.8000	1.007	2.914	3.577	3.711	3.976	5.090	7.283	9.170	12.112	3.032	2.411	2.847	198.46
0.9000	1.063	3.074	3.800	3.945	4.239	5.448	7.809	9.840	12.993	3.230	2.566	3.020	223.26
1.0000	1.119	3.231	4.019	4.175	4.497	5.797	8.319	10.483	13.858	3.424	2.717	3.191	248.07
1.2500	1.258	3.607	4.546	4.729	5.120	6.633	9.521	11.981	15.859	3.890	3.082	3.607	310.09
1.6000	1.450	4.110	5.248	5.463	5.943	7.721	11.055	13.874	18.335	4.515	3.578	4.166	396.91
2.0000	1.673	4.667	6.010	6.262	6.831	8.874	12.648	15.823	20.834	5.205	4.133	4.787	496.14
2.5000	1.962	5.356	6.925	7.223	7.882	10.216	14.470	18.027	23.621	6.043	4.820	5.550	620.17
3.2000	2.385	6.324	8.170	8.529	9.293	11.979	16.816	20.846	27.150	7.197	5.780	6.611	793.82
4.0000	2.894	7.458	9.578	10.001	10.869	13.915	19.352	23.875	30.911	8.512	6.890	7.827	992.28
5.0000	3.561	8.930	11.358	11.853	12.836	16.305	22.446	27.544	35.414	10.174	8.305	9.373	1240.3
6.0000	4.258	10.463	13.176	13.742	14.836	18.708	25.530	31.184	39.841	11.874	9.759	10.960	1488.4
7.0000	4.981	12.056	15.039	15.677	16.880	21.149	28.644	34.840	44.272	13.619	11.255	12.592	1736.5
8.0000	5.730	13.707	16.950	17.659	18.977	23.639	31.808	38.540	48.738	15.410	12.796	14.266	1984.6
9.0000	6.504	15.414	18.912	19.691	21.127	26.184	35.041	42.306	53.261	17.252	14.382	15.987	2232.6
10.0000	7.302	17.167	20.923	21.774	23.329	28.788	38.341	46.145	57.855	19.144	16.015	17.755	2480.7
11.0000	8.124	18.964	22.981	23.905	25.582	31.452	41.707	50.060	62.532	21.085	17.691	19.566	2728.8
12.0000	8.971	20.806	25.084	26.084	27.884	34.175	45.139	54.049	67.294	23.074	19.412	21.420	2976.8

$^{249}_{98}Cf$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=249 MEV
0.0125	10.135	8.384	6.142	4.085	3.317	3.010	2.789	2.580	1.640	1.404	1.290	1.106	3.1134
0.0160	11.775	9.741	7.136	4.746	3.854	3.497	3.240	2.997	1.905	1.631	1.499	1.285	3.9851
0.0200	13.485	11.156	8.173	5.435	4.413	4.005	3.710	3.433	2.182	1.867	1.716	1.471	4.9814
0.0250	15.443	12.776	9.359	6.224	5.054	4.586	4.249	3.931	2.499	2.139	1.970	1.685	6.2267
0.0320	17.921	14.854	10.874	7.231	5.883	5.350	4.937	4.567	2.903	2.490	2.294	1.968	7.9702
0.0400	20.473	17.048	12.453	8.306	6.775	6.177	5.691	5.268	3.350	2.883	2.653	2.279	9.9628
0.0500	23.361	19.581	14.262	9.555	7.830	7.131	6.575	6.090	3.865	3.359	3.095	2.660	12.453
0.0600	26.002	22.003	15.932	10.738	8.827	8.014	7.409	6.867	4.397	3.824	3.529	3.035	14.944
0.0700	28.433	24.321	17.497	11.863	9.798	8.888	8.224	7.629	4.899	4.287	3.972	3.412	17.435
0.0800	30.703	26.604	18.976	12.960	10.721	9.716	8.976	8.349	5.408	4.744	4.383	3.776	19.926
0.0900	32.838	28.823	20.384	14.024	11.619	10.559	9.723	9.050	5.932	5.188	4.811	4.148	22.416
0.1000	34.879	31.011	21.731	15.060	12.517	11.344	10.431	9.757	6.432	5.628	5.216	4.498	24.907
0.1250	39.571	36.509	24.887	17.521	14.634	13.265	12.195	11.423	7.653	6.695	6.259	5.413	31.134
0.1600	45.367	44.095	28.915	20.703	17.407	15.787	14.486	13.590	9.253	8.125	7.619	6.650	39.851
0.2000	51.260	52.022	33.114	24.074	20.365	18.444	16.921	15.861	10.994	9.702	9.106	7.947	49.814
0.2500	57.756	60.751	37.922	28.025	23.815	21.616	19.795	18.544	13.083	11.566	10.846	9.481	62.267
0.3200	65.737	71.420	44.060	33.177	28.330	25.863	23.572	22.030	15.773	14.011	13.152	11.566	79.702
0.4000	73.769	81.893	50.458	38.449	33.100	30.275	27.600	25.784	18.770	16.701	15.692	13.775	99.628
0.5000	82.632	92.860	57.785	44.668	38.716	35.538	32.359	30.164	22.305	19.878	18.693	16.469	124.53
0.6000	89.708	101.034	63.986	50.101	43.638	40.183	36.472	33.977	25.402	22.715	21.403	19.004	149.44
0.7000	95.852	107.599	69.508	54.911	48.030	44.277	40.106	37.395	28.220	25.231	23.841	21.130	174.35
0.8000	101.108	112.723	74.454	59.340	52.043	48.171	43.555	40.577	30.824	27.697	26.133	23.230	199.26
0.9000	105.884	117.009	78.900	63.278	55.782	51.759	46.709	43.474	33.375	29.982	28.325	25.248	224.16
1.0000	110.020	120.466	82.908	67.073	59.197	54.968	49.662	46.180	35.651	32.086	30.345	27.111	249.07
1.2500	118.435	126.836	91.315	74.878	66.660	62.094	55.976	51.958	40.818	36.800	34.791	31.138	311.34
1.6000	126.644	132.746	100.035	83.529	74.626	69.724	62.822	58.020	46.516	42.115	39.814	35.712	398.51
2.0000	132.370	138.139	106.836	90.490	81.302	76.281	68.375	63.354	51.281	46.794	44.230	39.850	498.14
2.5000	135.965	142.467	112.090	96.285	87.094	81.826	73.195	67.927	55.821	50.777	48.199	43.715	622.67
3.2000	137.516	145.265	115.656	100.621	91.600	86.164	77.259	71.476	59.679	54.590	51.814	47.072	797.02
4.0000	136.535	145.404	116.697	102.577	93.941	88.456	79.704	73.519	62.199	56.948	54.264	49.363	996.28
5.0000	133.604	143.213	115.774	102.576	94.472	89.146	80.347	74.327	63.676	58.119	55.687	50.825	1245.3
6.0000	130.144	139.928	113.762	101.476	93.626	88.735	80.089	74.059	63.479	58.588	56.085	51.534	1494.4
7.0000	126.258	136.390	111.339	99.760	92.189	87.624	79.273	73.372	63.463	58.342	56.003	51.550	1743.5
8.0000	122.628	132.747	108.809	97.928	90.638	86.177	78.342	72.358	62.892	57.995	55.710	51.358	1992.6
9.0000	119.389	129.170	106.312	96.000	88.983	84.731	77.076	71.336	62.193	57.409	55.176	51.030	2241.6
10.0000	116.173	125.733	103.911	94.248	87.286	83.233	75.751	70.348	61.308	56.840	54.761	50.605	2490.7
11.0000	113.218	122.669	101.632	92.485	85.777	81.813	74.496	69.414	60.572	56.304	54.373	50.104	2739.8
12.0000	110.522	119.674	99.480	90.726	84.259	80.479	73.317	68.442	59.787	55.709	53.719	49.541	2988.8

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	23.034	9.828	6.511	6.118	5.436	3.587	2.199	1.560	1.029	8.237	10.479	7.997	3.1134
0.0160	26.262	11.076	7.443	7.001	6.223	4.203	2.605	1.855	1.232	9.513	12.103	9.142	3.9851
0.0200	29.258	12.014	8.312	7.829	7.004	4.863	3.032	2.207	1.476	10.804	13.738	10.208	4.9814
0.0250	32.571	12.925	9.285	8.751	7.918	5.681	3.631	2.649	1.919	12.261	15.602	11.400	6.2267
0.0320	37.081	14.071	10.428	9.928	9.069	6.796	4.415	3.327	2.316	14.136	18.029	12.940	7.9702
0.0400	41.718	15.168	11.619	11.183	10.299	8.045	5.330	4.085	2.902	16.127	20.573	14.570	9.9628
0.0500	47.206	16.601	13.106	12.750	11.866	9.570	6.446	5.020	3.637	18.455	23.532	16.572	12.453
0.0600	53.214	18.211	14.769	14.275	13.495	11.105	7.552	5.943	4.365	20.728	26.464	18.609	14.944
0.0700	59.315	20.087	16.447	15.975	15.152	12.633	8.609	6.841	5.057	22.991	29.325	20.786	17.435
0.0800	65.846	22.107	18.236	17.723	16.870	14.175	9.716	7.742	5.750	25.276	32.202	23.075	19.926
0.0900	72.362	24.277	20.078	19.568	18.631	15.716	10.803	8.643	6.400	27.559	35.040	25.439	22.416
0.1000	79.537	26.686	22.123	21.427	20.384	17.276	11.931	9.497	7.041	29.837	37.943	27.881	24.907
0.1250	98.802	32.975	27.251	26.256	25.086	21.179	14.584	11.622	8.636	35.688	45.419	34.319	31.134
0.1600	128.093	42.707	35.045	33.773	32.038	26.688	18.303	14.573	10.814	44.153	56.095	44.240	39.851
0.2000	162.588	53.975	44.207	42.452	40.134	32.617	22.186	17.616	13.014	53.445	67.817	55.797	49.814
0.2500	205.539	68.033	55.177	53.129	49.602	39.212	26.508	20.781	15.283	64.240	81.419	70.080	62.267
0.3200	261.714	85.431	69.482	66.310	60.670	46.483	31.018	24.189	17.668	77.633	98.605	88.031	79.702
0.4000	314.856	103.943	82.549	78.462	71.044	53.031	35.068	27.298	19.880	90.471	115.195	104.750	99.628
0.5000	368.667	122.504	95.172	90.549	81.014	59.576	39.294	30.684	22.363	103.608	132.269	121.464	124.53
0.6000	406.311	136.290	103.146	98.027	87.597	64.050	42.487	33.145	24.251	112.743	144.672	132.259	149.44
0.7000	426.780	146.662	107.877	102.524	91.751	67.006	44.833	34.893	25.788	119.206	153.196	138.530	174.35
0.8000	437.043	153.374	110.861	105.724	94.482	69.093	46.757	36.482	27.101	123.891	159.033	142.504	199.26
0.9000	441.841	157.485	112.827	107.541	95.627	70.537	48.129	38.030	28.246	127.424	163.402	144.703	224.16
1.0000	446.877	161.589	115.326	109.439	97.500	72.213	49.745	39.630	29.433	130.415	167.061	146.914	249.07
1.2500	453.835	169.937	120.992	115.513	102.638	76.978	54.058	43.648	32.965	136.698	173.589	153.135	311.34
1.6000	452.158	177.062	127.845	122.243	109.438	83.529	59.921	48.717	37.713	142.550	178.362	158.855	398.51
2.0000	442.301	181.301	134.400	127.989	115.810	89.956	65.704	53.952	42.414	147.434	181.621	162.925	498.14
2.5000	423.701	182.147	139.104	132.379	122.178	96.622	71.738	59.744	47.526	150.873	182.595	164.773	622.67
3.2000	404.798	179.846	142.604	136.128	126.413	102.356	77.837	64.768	51.930	153.013	182.390	165.967	797.02
4.0000	385.100	174.112	142.370	136.535	128.367	105.027	80.521	67.801	54.848	152.406	179.596	164.192	996.28
5.0000	368.163	167.294	139.971	134.761	127.004	105.239	81.852	69.117	56.729	149.812	175.398	160.695	1245.3
6.0000	353.801	160.860	136.742	131.509	124.570	103.979	81.226	69.054	56.881	146.071	170.530	156.196	1494.4
7.0000	341.810	155.206	133.384	128.596	121.582	102.209	80.387	68.585	56.671	142.402	165.784	152.312	1743.5
8.0000	330.779	149.612	130.027	125.457	118.493	99.995	78.669	67.462	56.037	138.623	161.037	148.307	1992.6
9.0000	320.000	145.435	126.618	122.259	115.668	97.807	77.076	66.233	55.282	134.804	156.386	144.266	2241.6
10.0000	310.695	141.839	123.759	119.498	113.056	95.599	75.544	64.945	54.346	131.344	152.126	140.696	2490.7
11.0000	301.846	138.422	121.043	116.876	110.575	93.501	74.089	63.723	53.357	128.157	148.281	137.406	2739.8
12.0000	293.466	135.193	118.481	114.402	108.234	91.522	72.720	62.573	52.426	125.146	144.544	134.298	2988.8

$^{249}_{98}$Cf IONS

ENERGY PER MASS UNIT	RANGE IN UNITS OF MG/SQ CM												ENERGY FOR A=249
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	0.145	0.140	0.165	0.201	0.204	0.242	0.248	0.263	0.332	0.360	0.372	0.407	3.1134
0.0160	0.184	0.179	0.213	0.262	0.270	0.319	0.330	0.353	0.454	0.501	0.525	0.592	3.9851
0.0200	0.227	0.223	0.266	0.330	0.342	0.403	0.418	0.448	0.582	0.647	0.681	0.777	4.9814
0.0250	0.277	0.276	0.332	0.414	0.430	0.506	0.526	0.565	0.735	0.820	0.865	0.992	6.2267
0.0320	0.345	0.347	0.420	0.530	0.553	0.650	0.675	0.725	0.947	1.057	1.117	1.282	7.9702
0.0400	0.418	0.425	0.519	0.661	0.694	0.813	0.845	0.906	1.189	1.328	1.402	1.610	9.9628
0.0500	0.503	0.518	0.637	0.820	0.867	1.013	1.053	1.128	1.492	1.665	1.759	2.017	12.453
0.0600	0.582	0.605	0.750	0.974	1.037	1.208	1.256	1.346	1.792	1.999	2.111	2.419	14.944
0.0700	0.657	0.687	0.858	1.122	1.202	1.397	1.454	1.556	2.086	2.326	2.458	2.815	17.435
0.0800	0.728	0.765	0.962	1.264	1.361	1.579	1.645	1.760	2.372	2.645	2.796	3.200	19.926
0.0900	0.796	0.839	1.061	1.401	1.515	1.754	1.829	1.957	2.650	2.955	3.124	3.575	22.416
0.1000	0.860	0.909	1.156	1.532	1.664	1.923	2.008	2.147	2.918	3.255	3.443	3.939	24.907
0.1250	1.010	1.070	1.380	1.839	2.015	2.318	2.428	2.593	3.551	3.964	4.195	4.798	31.134
0.1600	1.199	1.265	1.662	2.226	2.458	2.816	2.961	3.159	4.352	4.864	5.148	5.884	39.851
0.2000	1.393	1.458	1.952	2.619	2.911	3.323	3.504	3.737	5.166	5.779	6.117	6.986	49.814
0.2500	1.611	1.667	2.276	3.055	3.414	3.883	4.109	4.380	6.065	6.788	7.186	8.203	62.267
0.3200	1.883	1.920	2.678	3.588	4.029	4.565	4.848	5.168	7.156	8.012	8.485	9.679	79.702
0.4000	2.161	2.173	3.082	4.118	4.639	5.237	5.581	5.950	8.228	9.213	9.760	11.126	99.628
0.5000	2.473	2.452	3.528	4.696	5.303	5.966	6.376	6.801	9.379	10.501	11.128	12.677	124.53
0.6000	2.758	2.704	3.927	5.208	5.888	6.604	7.075	7.551	10.382	11.622	12.317	14.020	149.44
0.7000	3.023	2.940	4.293	5.672	6.417	7.180	7.708	8.229	11.282	12.627	13.380	15.217	174.35
0.8000	3.276	3.166	4.634	6.100	6.904	7.708	8.291	8.854	12.104	13.543	14.349	16.308	199.26
0.9000	3.516	3.382	4.958	6.506	7.357	8.207	8.832	9.435	12.863	14.387	15.242	17.311	224.16
1.0000	3.747	3.592	5.266	6.888	7.790	8.674	9.349	9.990	13.585	15.190	16.091	18.262	249.07
1.2500	4.291	4.094	5.980	7.765	8.780	9.737	10.527	11.259	15.214	16.998	18.003	20.401	311.34
1.6000	5.000	4.764	6.889	8.864	10.012	11.058	11.993	12.842	17.209	19.206	20.339	23.008	398.51
2.0000	5.768	5.498	7.851	10.007	11.288	12.421	13.510	14.481	19.244	21.445	22.708	25.643	498.14
2.5000	6.694	6.383	8.986	11.338	12.765	13.994	15.266	16.375	21.566	23.994	25.399	28.620	622.67
3.2000	7.966	7.592	10.514	13.105	14.712	16.065	17.579	18.871	24.580	27.298	28.879	32.454	797.02
4.0000	9.417	8.961	12.226	15.063	16.856	18.344	20.114	21.616	27.845	30.865	32.631	36.580	996.28
5.0000	11.259	10.685	14.366	17.488	19.497	21.145	23.223	24.981	31.798	35.189	37.156	41.547	1245.3
6.0000	13.147	12.443	16.535	19.929	22.144	23.944	26.326	28.336	35.713	39.455	41.610	46.411	1494.4
7.0000	15.090	14.246	18.748	22.404	24.824	26.768	29.451	31.714	39.636	43.715	46.054	51.242	1743.5
8.0000	17.092	16.097	21.011	24.923	27.549	29.634	32.612	35.132	43.578	47.996	50.512	56.082	1992.6
9.0000	19.150	17.999	23.327	27.492	30.322	32.549	35.817	38.599	47.561	52.313	55.005	60.947	2241.6
10.0000	21.265	19.954	25.697	30.111	33.149	35.515	39.077	42.115	51.595	56.673	59.536	65.849	2490.7
11.0000	23.437	21.959	28.121	32.779	36.028	38.534	42.393	45.680	55.682	61.076	64.101	70.795	2739.8
12.0000	25.664	24.015	30.598	35.498	38.957	41.604	45.763	49.294	59.821	65.524	68.710	75.795	2988.8

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.055	0.129	0.149	0.152	0.158	0.205	0.270	0.335	0.387	0.133	0.113	0.124	3.1134
0.0160	0.072	0.165	0.193	0.197	0.206	0.267	0.356	0.449	0.560	0.172	0.146	0.161	3.9851
0.0200	0.089	0.206	0.242	0.248	0.260	0.337	0.449	0.569	0.729	0.214	0.181	0.202	4.9814
0.0250	0.110	0.256	0.303	0.311	0.326	0.423	0.564	0.714	0.924	0.266	0.224	0.252	6.2267
0.0320	0.138	0.327	0.389	0.399	0.418	0.543	0.723	0.914	1.181	0.337	0.282	0.323	7.9702
0.0400	0.168	0.408	0.486	0.499	0.524	0.677	0.903	1.138	1.466	0.415	0.346	0.402	9.9628
0.0500	0.205	0.509	0.606	0.621	0.653	0.838	1.120	1.406	1.807	0.509	0.421	0.498	12.453
0.0600	0.239	0.608	0.722	0.740	0.777	0.991	1.328	1.662	2.130	0.598	0.493	0.591	14.944
0.0700	0.271	0.703	0.833	0.853	0.895	1.135	1.524	1.903	2.436	0.683	0.561	0.680	17.435
0.0800	0.301	0.793	0.938	0.961	1.007	1.270	1.710	2.130	2.724	0.763	0.624	0.764	19.926
0.0900	0.329	0.878	1.037	1.063	1.113	1.397	1.885	2.345	2.998	0.839	0.685	0.844	22.416
0.1000	0.356	0.958	1.131	1.159	1.213	1.516	2.050	2.548	3.257	0.911	0.742	0.918	24.907
0.1250	0.415	1.136	1.342	1.376	1.439	1.786	2.425	3.010	3.854	1.074	0.871	1.087	31.134
0.1600	0.484	1.344	1.589	1.632	1.706	2.105	2.877	3.569	4.581	1.270	1.026	1.283	39.851
0.2000	0.548	1.536	1.820	1.871	1.958	2.412	3.316	4.115	5.298	1.459	1.176	1.467	49.814
0.2500	0.612	1.731	2.057	2.117	2.219	2.737	3.786	4.705	6.082	1.659	1.335	1.654	62.267
0.3200	0.684	1.951	2.326	2.397	2.521	3.125	4.355	5.428	7.051	1.896	1.522	1.867	79.702
0.4000	0.752	2.157	2.581	2.665	2.814	3.511	4.931	6.163	8.044	2.126	1.703	2.068	99.628
0.5000	0.823	2.374	2.856	2.953	3.134	3.941	5.577	6.988	9.165	2.378	1.901	2.284	124.53
0.6000	0.887	2.564	3.103	3.213	3.424	4.336	6.169	7.743	10.191	2.604	2.078	2.477	149.44
0.7000	0.946	2.740	3.339	3.461	3.697	4.709	6.726	8.456	11.153	2.819	2.245	2.661	174.35
0.8000	1.004	2.906	3.566	3.700	3.964	5.074	7.259	9.139	12.069	3.023	2.404	2.838	199.26
0.9000	1.061	3.066	3.789	3.933	4.226	5.431	7.784	9.807	12.947	3.221	2.559	3.012	224.16
1.0000	1.117	3.222	4.007	4.162	4.484	5.780	8.293	10.448	13.810	3.415	2.709	3.182	249.07
1.2500	1.254	3.597	4.533	4.715	5.104	6.612	9.490	11.941	15.805	3.880	3.074	3.596	311.34
1.6000	1.446	4.097	5.231	5.446	5.924	7.696	11.017	13.826	18.270	4.502	3.568	4.153	398.51
2.0000	1.668	4.652	5.989	6.240	6.807	8.843	12.602	15.765	20.756	5.187	4.119	4.771	498.14
2.5000	1.955	5.336	6.898	7.195	7.851	10.176	14.411	17.954	23.523	6.020	4.802	5.529	622.67
3.2000	2.375	6.296	8.133	8.490	9.251	11.924	16.739	20.750	27.024	7.165	5.754	6.580	797.02
4.0000	2.878	7.420	9.529	9.949	10.812	13.843	19.252	23.752	30.751	8.467	6.854	7.785	996.28
5.0000	3.539	8.878	11.291	11.783	12.761	16.209	22.316	27.386	35.211	10.114	8.255	9.317	1245.3
6.0000	4.229	10.395	13.091	13.653	14.740	18.589	25.369	30.989	39.593	11.797	9.695	10.888	1494.4
7.0000	4.945	11.972	14.934	15.568	16.763	21.005	28.451	34.607	43.979	13.523	11.176	12.503	1743.5
8.0000	5.686	13.606	16.826	17.529	18.839	23.468	31.583	38.269	48.398	15.296	12.700	14.160	1992.6
9.0000	6.451	15.295	18.767	19.540	20.966	25.987	34.781	41.995	52.873	17.118	14.270	15.863	2241.6
10.0000	7.241	17.029	20.757	21.601	23.144	28.563	38.046	45.793	57.418	18.990	15.885	17.611	2490.7
11.0000	8.055	18.807	22.792	23.709	25.372	31.198	41.375	49.665	62.043	20.910	17.543	19.403	2739.8
12.0000	8.892	20.627	24.872	25.863	27.649	33.890	44.769	53.610	66.753	22.877	19.245	21.236	2988.8

$^{254}_{99}Es$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=254 MEV
0.0125	10.172	8.415	6.165	4.099	3.329	3.021	2.799	2.589	1.646	1.409	1.295	1.110	3.1761
0.0160	11.820	9.778	7.164	4.764	3.868	3.510	3.252	3.009	1.913	1.637	1.504	1.289	4.0654
0.0200	13.538	11.200	8.205	5.456	4.431	4.020	3.725	3.446	2.191	1.875	1.723	1.477	5.0818
0.0250	15.507	12.828	9.398	6.250	5.075	4.605	4.267	3.947	2.509	2.147	1.978	1.692	6.3522
0.0320	17.997	14.918	10.921	7.262	5.908	5.373	4.958	4.587	2.916	2.501	2.304	1.977	8.1309
0.0400	20.564	17.124	12.508	8.343	6.805	6.204	5.716	5.291	3.365	2.896	2.664	2.289	10.164
0.0500	23.468	19.671	14.327	9.599	7.866	7.164	6.605	6.118	3.883	3.374	3.109	2.672	12.704
0.0600	25.124	22.106	16.008	10.789	8.868	8.052	7.444	6.899	4.418	3.842	3.546	3.049	15.245
0.0700	28.570	24.438	17.581	11.920	9.846	8.931	8.263	7.665	4.923	4.307	3.991	3.428	17.786
0.0800	30.854	26.735	19.069	13.024	10.774	9.763	9.020	8.390	5.435	4.767	4.405	3.795	20.327
0.0900	33.002	28.967	20.486	14.094	11.677	10.611	9.772	9.096	5.961	5.214	4.835	4.169	22.868
0.1000	35.056	31.168	21.841	15.136	12.581	11.401	10.484	9.807	6.465	5.657	5.242	4.521	25.409
0.1250	39.777	36.700	25.017	17.612	14.710	13.334	12.258	11.483	7.693	6.730	6.292	5.441	31.761
0.1600	45.612	44.333	29.071	20.815	17.500	15.873	14.564	13.663	9.303	8.169	7.660	6.686	40.654
0.2000	51.544	52.310	33.297	24.207	20.478	18.547	17.015	15.949	11.055	9.756	9.157	7.991	50.818
0.2500	58.084	61.097	38.138	28.184	23.951	21.739	19.908	18.650	13.158	11.632	10.908	9.535	63.523
0.3200	66.122	71.839	44.318	33.371	28.496	26.015	23.710	22.159	15.866	14.093	13.229	11.633	81.309
0.4000	74.213	82.385	50.761	38.680	33.299	30.457	27.766	25.939	18.883	16.802	15.787	13.858	101.64
0.5000	83.142	93.433	58.141	44.943	38.955	35.757	32.559	30.350	22.443	20.001	18.809	16.570	127.05
0.6000	90.246	101.640	64.370	50.401	43.900	40.424	36.691	34.180	25.555	22.851	21.532	19.118	152.45
0.7000	96.424	108.242	69.923	55.240	48.317	44.541	40.346	37.619	28.389	25.382	23.984	21.257	177.86
0.8000	101.725	113.411	74.908	59.702	52.361	48.466	43.821	40.825	31.012	27.866	26.293	23.371	203.27
0.9000	106.554	117.750	79.400	63.679	56.136	52.086	47.005	43.749	33.586	30.172	28.504	25.408	228.68
1.0000	110.748	121.264	83.458	67.517	59.589	55.332	49.991	46.486	35.887	32.298	30.545	27.291	254.09
1.2500	119.324	127.788	92.000	75.440	67.160	62.560	56.396	52.348	41.124	37.076	35.052	31.372	317.61
1.6000	127.760	133.916	100.916	84.265	75.284	70.339	63.375	58.531	46.926	42.486	40.165	36.027	406.54
2.0000	133.713	139.540	107.920	91.408	82.127	77.055	69.069	63.996	51.802	47.269	44.679	40.254	508.18
2.5000	137.521	144.096	113.372	97.387	88.090	82.762	74.032	68.704	56.459	51.358	48.750	44.215	635.22
3.2000	139.252	147.099	117.117	101.892	92.756	87.252	78.234	72.378	60.432	55.279	52.468	47.666	813.09
4.0000	138.364	147.351	118.260	103.950	95.199	89.641	80.771	74.504	63.032	57.711	54.991	50.024	1016.4
5.0000	135.460	145.202	117.383	104.001	95.784	90.385	81.464	75.360	64.561	58.926	56.461	51.531	1270.4
6.0000	131.988	141.911	115.375	102.914	94.953	89.992	81.224	75.109	64.379	59.418	56.880	52.265	1524.5
7.0000	128.072	138.349	112.938	101.193	93.513	88.882	80.412	74.426	64.375	59.180	56.808	52.290	1778.6
8.0000	124.409	134.676	110.390	99.351	91.955	87.429	79.481	73.409	63.805	58.838	56.520	52.104	2032.7
9.0000	121.142	131.067	107.874	97.410	90.290	85.975	78.208	72.383	63.106	58.252	55.986	51.779	2286.8
10.0000	117.898	127.599	105.454	95.647	88.581	84.469	76.876	71.392	62.218	57.683	55.574	51.356	2540.9
11.0000	114.917	124.510	103.157	93.873	87.064	83.041	75.614	70.456	61.481	57.149	55.189	50.856	2795.0
12.0000	112.199	121.490	100.989	92.102	85.538	81.700	74.429	69.481	60.694	56.554	54.534	50.293	3049.1

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	23.117	9.863	6.535	6.140	5.456	3.600	2.207	1.566	1.033	8.267	10.517	8.026	3.1761
0.0160	26.362	11.118	7.472	7.027	6.247	4.219	2.615	1.863	1.236	9.549	12.149	9.176	4.0654
0.0200	29.374	12.061	8.345	7.860	7.032	4.882	3.044	2.215	1.482	10.847	13.793	10.248	5.0818
0.0250	32.705	12.979	9.323	8.787	7.951	5.705	3.646	2.660	1.927	12.311	15.666	11.447	6.3522
0.0320	37.240	14.131	10.473	9.971	9.108	6.825	4.434	3.342	2.326	14.197	18.107	12.996	8.1309
0.0400	41.903	15.235	11.670	11.233	10.345	8.080	5.354	4.103	2.914	16.198	20.664	14.635	10.164
0.0500	47.423	16.677	13.167	12.808	11.920	9.613	6.476	5.043	3.653	18.539	23.640	16.648	12.704
0.0600	53.465	18.297	14.839	14.343	13.558	11.157	7.588	5.971	4.386	20.826	26.589	18.697	15.245
0.0700	59.601	20.183	16.526	16.052	15.225	12.694	8.650	6.874	5.081	23.102	29.466	20.887	17.786
0.0800	66.170	22.215	18.325	17.810	16.952	14.245	9.763	7.780	5.778	25.400	32.360	23.188	20.327
0.0900	72.724	24.398	20.178	19.666	18.724	15.794	10.857	8.686	6.432	27.696	35.215	25.566	22.868
0.1000	79.940	26.821	22.235	21.536	20.487	17.364	11.991	9.545	7.077	29.988	38.135	28.023	25.409
0.1250	99.317	33.148	27.394	26.393	25.217	21.289	14.660	11.683	8.681	35.874	45.656	34.498	31.761
0.1600	128.783	42.937	35.234	33.954	32.210	26.832	18.402	14.652	10.872	44.391	56.397	44.478	40.654
0.2000	163.489	54.274	44.452	42.687	40.356	32.798	22.309	17.714	13.086	53.742	68.193	56.106	50.818
0.2500	206.709	68.420	55.491	53.432	49.885	39.435	26.659	20.900	15.370	64.606	81.883	70.479	63.523
0.3200	263.248	85.932	69.889	66.698	61.026	46.755	31.200	24.330	17.771	78.088	99.183	88.547	81.309
0.4000	316.750	104.568	83.045	78.934	71.472	53.350	35.279	27.462	20.000	91.015	115.888	105.380	101.64
0.5000	370.941	123.260	95.759	91.107	81.514	59.944	39.536	30.873	22.501	104.247	133.085	122.213	127.05
0.6000	408.747	137.107	103.764	98.614	88.122	64.434	42.741	33.343	24.396	113.419	145.540	133.052	152.45
0.7000	429.330	147.539	108.521	103.137	92.299	67.406	45.101	35.102	25.942	119.919	154.111	139.358	177.86
0.8000	439.710	154.311	111.538	106.369	95.058	69.515	47.042	36.705	27.267	124.647	160.004	143.374	203.27
0.9000	444.638	158.482	113.541	108.222	96.232	70.983	48.434	38.271	28.425	128.230	164.437	145.619	228.68
1.0000	449.836	162.659	116.089	110.164	98.146	72.691	50.075	39.893	29.627	131.279	168.167	147.887	254.09
1.2500	457.239	171.212	121.900	116.380	103.408	77.556	54.464	43.976	33.212	137.724	174.892	154.284	317.61
1.6000	456.141	178.622	128.971	123.320	110.402	84.265	60.449	49.146	38.045	143.806	179.934	160.255	406.54
2.0000	446.788	183.140	135.763	129.288	116.985	90.869	66.371	54.500	42.844	148.929	183.464	164.578	508.18
2.5000	428.548	184.230	140.695	133.893	123.576	97.727	72.558	60.428	48.070	152.599	184.684	166.657	635.22
3.2000	409.908	182.116	144.405	137.846	128.009	103.648	78.820	65.585	52.585	154.945	184.693	168.062	813.09
4.0000	390.257	176.443	144.277	138.364	130.086	106.434	81.599	68.709	55.582	154.447	182.001	166.391	1016.4
5.0000	373.277	169.618	141.916	136.634	128.769	106.701	82.990	70.078	57.518	151.893	177.835	162.927	1270.4
6.0000	358.815	163.140	138.680	133.373	126.335	105.452	82.377	70.032	57.687	148.141	172.946	158.409	1524.5
7.0000	346.720	157.436	135.300	130.444	123.329	103.677	81.541	69.570	57.486	144.448	168.165	154.500	1778.6
8.0000	335.585	151.786	131.916	127.280	120.215	101.448	79.812	68.442	56.851	140.637	163.377	150.461	2032.7
9.0000	324.700	147.571	128.478	124.055	117.367	99.244	78.208	67.205	56.094	136.784	158.682	146.385	2286.8
10.0000	315.307	143.945	125.596	121.272	114.734	97.018	76.665	65.909	55.152	133.294	154.385	142.785	2540.9
11.0000	306.375	140.499	122.860	118.630	112.234	94.904	75.201	64.679	54.157	130.081	150.506	139.468	2795.0
12.0000	297.918	137.244	120.278	116.137	109.876	92.910	73.823	63.522	53.221	127.044	146.737	136.335	3049.1

$^{254}_{99}Es$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=254 MEV
0.0125	0.147	0.141	0.166	0.202	0.206	0.244	0.249	0.265	0.333	0.362	0.373	0.408	3.1761
0.0160	0.187	0.182	0.215	0.265	0.272	0.321	0.332	0.355	0.456	0.504	0.528	0.594	4.0654
0.0200	0.230	0.226	0.269	0.333	0.345	0.406	0.421	0.452	0.585	0.651	0.685	0.780	5.0818
0.0250	0.281	0.279	0.335	0.418	0.434	0.511	0.530	0.569	0.740	0.825	0.870	0.996	6.3522
0.0320	0.349	0.351	0.425	0.535	0.558	0.656	0.681	0.730	0.953	1.063	1.123	1.288	8.1309
0.0400	0.423	0.430	0.525	0.667	0.700	0.820	0.852	0.913	1.197	1.336	1.410	1.618	10.164
0.0500	0.509	0.524	0.644	0.828	0.875	1.022	1.062	1.138	1.502	1.675	1.769	2.027	12.704
0.0600	0.590	0.612	0.759	0.983	1.046	1.219	1.267	1.357	1.805	2.012	2.125	2.433	15.245
0.0700	0.666	0.696	0.868	1.133	1.213	1.410	1.467	1.570	2.101	2.342	2.474	2.831	17.786
0.0800	0.738	0.775	0.973	1.277	1.374	1.594	1.660	1.776	2.391	2.664	2.815	3.221	20.327
0.0900	0.806	0.849	1.073	1.416	1.531	1.771	1.847	1.975	2.671	2.977	3.147	3.599	22.868
0.1000	0.871	0.920	1.170	1.549	1.681	1.942	2.027	2.167	2.942	3.280	3.469	3.966	25.409
0.1250	1.023	1.083	1.396	1.860	2.036	2.342	2.452	2.618	3.582	3.997	4.229	4.835	31.761
0.1600	1.215	1.281	1.682	2.251	2.485	2.847	2.992	3.191	4.392	4.907	5.193	5.933	40.654
0.2000	1.411	1.476	1.976	2.650	2.944	3.360	3.543	3.776	5.217	5.834	6.173	7.048	50.818
0.2500	1.632	1.688	2.305	3.091	3.453	3.928	4.155	4.428	6.127	6.855	7.256	8.281	63.523
0.3200	1.909	1.945	2.712	3.631	4.076	4.619	4.904	5.226	7.232	8.095	8.572	9.775	81.309
0.4000	2.190	2.201	3.121	4.168	4.695	5.300	5.646	6.020	8.319	9.312	9.864	11.241	101.64
0.5000	2.507	2.484	3.574	4.755	5.368	6.038	6.452	6.881	9.485	10.617	11.249	12.813	127.05
0.6000	2.795	2.740	3.978	5.273	5.960	6.685	7.161	7.641	10.501	11.754	12.454	14.173	152.45
0.7000	3.064	2.979	4.349	5.744	6.497	7.269	7.803	8.329	11.414	12.772	13.532	15.387	177.86
0.8000	3.320	3.208	4.694	6.178	6.990	7.805	8.393	8.962	12.247	13.700	14.514	16.492	203.27
0.9000	3.564	3.428	5.024	6.590	7.450	8.310	8.942	9.551	13.016	14.556	15.419	17.509	228.68
1.0000	3.798	3.640	5.336	6.977	7.889	8.783	9.466	10.114	13.748	15.369	16.280	18.473	254.09
1.2500	4.349	4.149	6.059	7.865	8.891	9.861	10.660	11.399	15.398	17.201	18.217	20.640	317.61
1.6000	5.067	4.826	6.979	8.977	10.138	11.197	12.143	13.001	17.417	19.436	20.581	23.278	406.54
2.0000	5.843	5.568	7.951	10.132	11.427	12.575	13.676	14.658	19.473	21.698	22.974	25.940	508.18
2.5000	6.777	6.462	9.096	11.476	12.918	14.162	15.448	16.570	21.817	24.271	25.691	28.945	635.22
3.2000	8.059	7.680	10.636	13.257	14.880	16.250	17.779	19.086	24.855	27.601	29.198	32.810	813.09
4.0000	9.521	9.059	12.360	15.229	17.040	18.544	20.332	21.849	28.143	31.194	32.976	36.965	1016.4
5.0000	11.375	10.794	14.514	17.669	19.698	21.364	23.461	25.236	32.121	35.545	37.531	41.963	1270.4
6.0000	13.274	12.563	16.697	20.124	22.360	24.180	26.583	28.611	36.060	39.837	42.012	46.857	1524.5
7.0000	15.228	14.376	18.922	22.614	25.056	27.020	29.726	32.009	40.006	44.121	46.481	51.716	1778.6
8.0000	17.241	16.237	21.198	25.148	27.796	29.902	32.904	35.446	43.970	48.427	50.965	56.583	2032.7
9.0000	19.311	18.150	23.526	27.731	30.585	32.833	36.127	38.932	47.974	52.767	55.481	61.475	2286.8
10.0000	21.437	20.115	25.909	30.363	33.426	35.815	39.404	42.467	52.030	57.150	60.037	66.403	2540.9
11.0000	23.620	22.131	28.345	33.045	36.320	38.849	42.737	46.050	56.138	61.576	64.625	71.375	2795.0
12.0000	25.858	24.197	30.835	35.778	39.264	41.934	46.124	49.682	60.298	66.046	69.257	76.399	3049.1

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.056	0.131	0.151	0.154	0.160	0.207	0.272	0.337	0.389	0.135	0.115	0.126	3.1761
0.0160	0.073	0.167	0.195	0.199	0.208	0.270	0.359	0.452	0.564	0.174	0.147	0.163	4.0654
0.0200	0.091	0.208	0.245	0.251	0.262	0.340	0.453	0.573	0.734	0.217	0.183	0.204	5.0818
0.0250	0.112	0.260	0.307	0.314	0.329	0.427	0.568	0.719	0.930	0.269	0.227	0.255	6.3522
0.0320	0.140	0.331	0.393	0.403	0.423	0.548	0.729	0.921	1.188	0.341	0.285	0.326	8.1309
0.0400	0.171	0.413	0.491	0.504	0.529	0.683	0.910	1.146	1.475	0.420	0.350	0.406	10.164
0.0500	0.207	0.515	0.612	0.628	0.660	0.846	1.130	1.417	1.819	0.515	0.427	0.504	12.704
0.0600	0.242	0.615	0.730	0.748	0.785	1.001	1.339	1.675	2.145	0.606	0.499	0.598	15.245
0.0700	0.274	0.711	0.842	0.863	0.905	1.147	1.538	1.918	2.453	0.691	0.568	0.688	17.786
0.0800	0.305	0.802	0.949	0.972	1.018	1.283	1.726	2.149	2.744	0.772	0.632	0.773	20.327
0.0900	0.334	0.889	1.049	1.075	1.126	1.412	1.903	2.365	3.021	0.849	0.693	0.854	22.868
0.1000	0.361	0.970	1.144	1.172	1.227	1.533	2.070	2.571	3.283	0.922	0.751	0.929	25.409
0.1250	0.421	1.151	1.358	1.392	1.456	1.805	2.450	3.039	3.887	1.087	0.882	1.100	31.761
0.1600	0.490	1.361	1.608	1.651	1.727	2.130	2.908	3.605	4.623	1.286	1.040	1.299	40.654
0.2000	0.555	1.556	1.843	1.894	1.982	2.440	3.352	4.158	5.348	1.477	1.191	1.485	50.818
0.2500	0.620	1.753	2.083	2.143	2.246	2.769	3.828	4.756	6.142	1.681	1.352	1.675	63.523
0.3200	0.693	1.977	2.356	2.427	2.553	3.163	4.406	5.489	7.125	1.920	1.542	1.891	81.309
0.4000	0.762	2.185	2.614	2.698	2.850	3.554	4.989	6.233	8.131	2.154	1.726	2.095	101.64
0.5000	0.834	2.405	2.893	2.991	3.174	3.991	5.644	7.069	9.266	2.409	1.926	2.314	127.05
0.6000	0.899	2.598	3.143	3.254	3.467	4.390	6.244	7.835	10.306	2.638	2.106	2.510	152.45
0.7000	0.959	2.776	3.382	3.505	3.744	4.769	6.809	8.558	11.282	2.856	2.275	2.696	177.86
0.8000	1.018	2.944	3.613	3.748	4.015	5.139	7.349	9.249	12.210	3.064	2.437	2.876	203.27
0.9000	1.075	3.107	3.838	3.984	4.281	5.501	7.881	9.927	13.100	3.264	2.593	3.051	228.68
1.0000	1.132	3.265	4.060	4.217	4.542	5.854	8.397	10.577	13.975	3.460	2.746	3.224	254.09
1.2500	1.271	3.645	4.592	4.776	5.171	6.698	9.610	12.090	15.995	3.931	3.115	3.644	317.61
1.6000	1.465	4.151	5.299	5.516	6.000	7.795	11.155	13.997	18.490	4.561	3.615	4.207	406.54
2.0000	1.690	4.712	6.065	6.319	6.892	8.953	12.756	15.956	21.002	5.254	4.172	4.831	508.18
2.5000	1.979	5.402	6.982	7.282	7.947	10.298	14.583	18.165	23.795	6.094	4.861	5.596	635.22
3.2000	2.402	6.370	8.227	8.588	9.357	12.061	16.929	20.983	27.324	7.248	5.821	6.656	813.09
4.0000	2.910	7.502	9.633	10.058	10.930	13.993	19.459	24.006	31.077	8.560	6.928	7.870	1016.4
5.0000	3.574	8.969	11.406	11.903	12.891	16.375	22.543	27.664	35.565	10.217	8.339	9.411	1270.4
6.0000	4.268	10.496	13.216	13.785	14.882	18.769	25.615	31.289	39.974	11.910	9.787	10.992	1524.5
7.0000	4.989	12.081	15.071	15.711	16.917	21.199	28.714	34.928	44.385	13.646	11.277	12.616	1778.6
8.0000	5.734	13.724	16.973	17.683	19.004	23.676	31.864	38.610	48.830	15.429	12.809	14.282	2032.7
9.0000	6.503	15.422	18.925	19.705	21.143	26.208	35.080	42.357	53.329	17.261	14.388	15.995	2286.8
10.0000	7.297	17.166	20.925	21.776	23.333	28.798	38.362	46.175	57.898	19.143	16.011	17.752	2540.9
11.0000	8.115	18.953	22.971	23.895	25.572	31.446	41.708	50.067	62.547	21.073	17.678	19.553	2795.0
12.0000	8.956	20.782	25.061	26.060	27.860	34.152	45.119	54.031	67.280	23.050	19.388	21.396	3049.1

$^{252}_{100}Fm$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=252 MEV
0.0125	10.209	8.445	6.187	4.114	3.341	3.032	2.809	2.599	1.652	1.414	1.299	1.114	3.1510
0.0160	11.865	9.815	7.191	4.782	3.883	3.523	3.265	3.020	1.920	1.643	1.510	1.294	4.0333
0.0200	13.592	11.244	8.237	5.478	4.448	4.036	3.740	3.460	2.199	1.882	1.730	1.483	5.0416
0.0250	15.570	12.881	9.436	6.275	5.096	4.624	4.284	3.963	2.520	2.156	1.986	1.699	6.3020
0.0320	18.074	14.981	10.967	7.293	5.933	5.396	4.979	4.606	2.928	2.512	2.314	1.985	8.0666
0.0400	20.655	17.200	12.564	8.380	6.835	6.232	5.742	5.314	3.380	2.908	2.676	2.299	10.083
0.0500	23.575	19.761	14.392	9.643	7.901	7.196	6.635	6.146	3.900	3.389	3.123	2.684	12.604
0.0600	26.247	22.210	16.083	10.840	8.910	8.090	7.478	6.932	4.439	3.860	3.562	3.064	15.125
0.0700	28.706	24.555	17.666	11.977	9.893	8.974	8.303	7.702	4.946	4.328	4.010	3.445	17.646
0.0800	31.004	26.865	19.162	13.088	10.827	9.811	9.064	8.431	5.461	4.791	4.426	3.813	20.166
0.0900	33.166	29.110	20.587	14.164	11.735	10.664	9.820	9.141	5.991	5.239	4.859	4.189	22.687
0.1000	35.232	31.325	21.951	15.212	12.644	11.459	10.537	9.856	6.498	5.685	5.268	4.544	25.208
0.1250	39.983	36.890	25.147	17.703	14.786	13.403	12.322	11.542	7.733	6.764	6.324	5.469	31.510
0.1600	45.856	44.570	29.226	20.926	17.594	15.957	14.642	13.736	9.352	8.213	7.701	6.722	40.333
0.2000	51.828	52.598	33.480	24.340	20.590	18.649	17.108	16.037	11.115	9.810	9.207	8.035	50.416
0.2500	58.413	61.443	38.354	28.343	24.086	21.862	20.021	18.755	13.232	11.698	10.969	9.588	63.020
0.3200	66.507	72.257	44.576	33.566	28.662	26.166	23.848	22.288	15.958	14.175	13.306	11.701	80.666
0.4000	74.656	82.877	51.064	38.911	33.498	30.639	27.932	26.094	18.996	16.902	15.881	13.941	100.83
0.5000	83.651	94.005	58.497	45.218	39.193	35.976	32.758	30.536	22.580	20.123	18.924	16.672	126.04
0.6000	90.778	102.239	64.749	50.698	44.159	40.662	36.907	34.382	25.705	22.986	21.659	19.230	151.25
0.7000	96.990	108.877	70.334	55.564	48.601	44.803	40.583	37.840	28.556	25.531	24.125	21.381	176.46
0.8000	102.334	114.090	75.357	60.059	52.674	48.756	44.084	41.069	31.198	28.033	26.450	23.511	201.66
0.9000	107.215	118.480	79.892	64.074	56.484	52.409	47.296	44.021	33.794	30.359	28.681	25.566	226.87
1.0000	111.467	122.050	83.999	67.955	59.975	55.691	50.315	46.787	36.120	32.508	30.744	27.468	252.08
1.2500	120.201	128.727	92.676	75.995	67.654	63.020	56.811	52.733	41.426	37.349	35.310	31.603	315.10
1.6000	128.866	135.075	101.790	84.994	75.935	70.947	63.924	59.038	47.332	42.853	40.512	36.339	403.33
2.0000	135.050	140.935	108.999	92.322	82.948	77.825	69.759	64.636	52.319	47.741	45.126	40.657	504.16
2.5000	139.076	145.725	114.654	98.488	89.086	83.698	74.869	69.480	57.098	51.938	49.301	44.715	630.20
3.2000	140.993	148.938	118.581	103.165	93.916	88.343	79.212	73.283	61.188	55.970	53.124	48.262	806.66
4.0000	140.199	149.306	119.828	105.329	96.462	90.830	81.843	75.492	63.868	58.476	55.720	50.687	1008.3
5.0000	137.322	147.199	118.997	105.431	97.101	91.628	82.584	76.396	65.448	59.736	57.237	52.240	1260.4
6.0000	133.838	143.900	116.992	104.356	96.284	91.253	82.362	76.161	65.281	60.251	57.677	52.997	1512.5
7.0000	129.890	140.314	114.542	102.629	94.841	90.144	81.554	75.483	65.289	60.020	57.615	53.033	1764.6
8.0000	126.196	136.609	111.975	100.777	93.275	88.684	80.622	74.463	64.721	59.683	57.331	52.852	2016.6
9.0000	122.900	132.968	109.439	98.823	91.600	87.223	79.343	73.434	64.022	59.097	56.799	52.531	2268.7
10.0000	119.627	129.471	107.001	97.050	89.881	85.708	78.004	72.440	63.130	58.529	56.389	52.109	2520.8
11.0000	116.621	126.357	104.687	95.265	88.355	84.273	76.735	71.501	62.393	57.996	56.007	51.610	2772.9
12.0000	113.882	123.312	102.504	93.484	86.821	82.926	75.545	70.523	61.605	57.402	55.352	51.047	3025.0

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	23.201	9.899	6.558	6.162	5.475	3.613	2.215	1.571	1.037	8.297	10.555	8.055	3.1510
0.0160	26.462	11.160	7.500	7.054	6.270	4.235	2.625	1.870	1.241	9.585	12.195	9.211	4.0333
0.0200	29.490	12.109	8.377	7.891	7.059	4.901	3.056	2.224	1.488	10.890	13.847	10.288	5.0416
0.0250	32.839	13.032	9.361	8.823	7.983	5.728	3.661	2.671	1.934	12.362	15.731	11.494	6.3020
0.0320	37.398	14.192	10.518	10.013	9.147	6.855	4.453	3.356	2.336	14.257	18.184	13.051	8.0666
0.0400	42.088	15.303	11.722	11.282	10.390	8.116	5.377	4.121	2.927	16.270	20.755	14.699	10.083
0.0500	47.639	16.753	13.227	12.867	11.975	9.657	6.505	5.066	3.670	18.624	23.748	16.724	12.604
0.0600	53.716	18.382	14.909	14.410	13.622	11.210	7.623	5.999	4.407	20.923	26.713	18.784	15.125
0.0700	59.886	20.280	16.606	16.129	15.298	12.755	8.691	6.907	5.105	23.213	29.607	20.987	17.646
0.0800	66.493	22.324	18.415	17.897	17.035	14.314	9.811	7.818	5.806	25.524	32.518	23.301	20.166
0.0900	73.084	24.519	20.278	19.764	18.817	15.873	10.911	8.729	6.464	27.834	35.389	25.693	22.687
0.1000	80.342	26.956	22.347	21.644	20.590	17.451	12.051	9.593	7.112	30.139	38.327	28.164	25.208
0.1250	99.832	33.319	27.536	26.530	25.348	21.400	14.736	11.743	8.726	36.060	45.893	34.677	31.510
0.1600	129.472	43.167	35.422	34.136	32.383	26.976	18.500	14.730	10.931	44.628	56.699	44.716	40.333
0.2000	164.388	54.573	44.696	42.922	40.578	32.978	22.432	17.812	13.158	54.037	68.568	56.414	50.416
0.2500	207.877	68.807	55.805	53.734	50.167	39.658	26.809	21.018	15.457	64.971	82.346	70.878	63.020
0.3200	264.780	86.432	70.296	67.087	61.381	47.027	31.381	24.472	17.875	78.543	99.761	89.062	80.666
0.4000	318.641	105.192	83.541	79.405	71.898	53.669	35.490	27.626	20.119	91.558	116.580	106.009	100.83
0.5000	373.212	124.014	96.345	91.665	82.013	60.311	39.778	31.062	22.638	104.886	133.900	122.961	126.04
0.6000	411.156	137.915	104.375	99.195	88.641	64.814	42.993	33.540	24.540	114.088	146.397	133.836	151.25
0.7000	431.850	148.404	109.158	103.742	92.841	67.802	45.365	35.308	26.094	120.623	155.016	140.175	176.46
0.8000	442.343	155.235	112.206	107.006	95.628	69.931	47.324	36.925	27.430	125.393	160.962	144.233	201.66
0.9000	447.397	159.465	114.246	108.893	96.829	71.424	48.734	38.508	28.601	129.026	165.457	146.522	226.87
1.0000	452.754	163.714	116.842	110.879	98.783	73.163	50.399	40.151	29.820	132.130	169.258	148.846	252.08
1.2500	460.601	172.470	122.796	117.235	104.168	78.126	54.864	44.299	33.456	138.736	176.178	155.418	315.10
1.6000	460.089	180.168	130.087	124.387	111.358	84.994	60.972	49.572	38.375	145.050	181.491	161.642	403.33
2.0000	451.255	184.971	137.121	130.581	118.155	91.777	67.034	55.044	43.273	150.418	185.298	166.223	504.16
2.5000	433.393	186.313	142.286	135.407	124.973	98.832	73.379	61.111	48.613	154.325	186.772	168.542	630.20
3.2000	415.033	184.393	146.210	139.570	129.609	104.944	79.805	66.405	53.243	156.883	187.002	170.164	806.66
4.0000	395.433	178.783	146.190	140.199	131.811	107.845	82.681	69.620	56.319	156.495	184.415	168.598	1008.3
5.0000	378.410	171.950	143.867	138.512	130.539	108.168	84.131	71.041	58.308	153.982	180.280	165.168	1260.4
6.0000	363.844	165.426	140.624	135.242	128.106	106.930	83.532	71.014	58.496	150.217	175.370	160.629	1512.5
7.0000	351.643	159.671	137.221	132.296	125.080	105.149	82.699	70.558	58.302	146.499	170.553	156.693	1764.6
8.0000	340.403	153.965	133.810	129.107	121.941	102.905	80.958	69.424	57.667	142.656	165.723	152.622	2016.6
9.0000	329.412	149.713	130.342	125.855	119.070	100.684	79.343	68.181	56.908	138.769	160.985	148.509	2268.7
10.0000	319.932	146.056	127.438	123.051	116.417	98.441	77.790	66.875	55.961	135.249	156.649	144.879	2520.8
11.0000	310.919	142.583	124.682	120.390	113.899	96.312	76.317	65.639	54.960	132.010	152.738	141.536	2772.9
12.0000	302.386	139.303	122.082	117.879	111.524	94.304	74.930	64.475	54.020	128.950	148.938	138.380	3025.0

$^{252}_{100}Fm$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=252 MEV
0.0125	0.145	0.139	0.164	0.199	0.202	0.240	0.245	0.260	0.326	0.353	0.365	0.398	3.1510
0.0160	0.184	0.179	0.212	0.260	0.268	0.316	0.327	0.349	0.449	0.495	0.518	0.583	4.0333
0.0200	0.226	0.222	0.265	0.328	0.339	0.400	0.415	0.445	0.576	0.640	0.674	0.767	5.0416
0.0250	0.277	0.275	0.330	0.412	0.427	0.503	0.522	0.560	0.728	0.812	0.857	0.981	6.3020
0.0320	0.344	0.346	0.418	0.527	0.549	0.646	0.670	0.719	0.939	1.047	1.106	1.269	8.0666
0.0400	0.416	0.424	0.516	0.656	0.689	0.807	0.838	0.899	1.179	1.315	1.389	1.594	10.083
0.0500	0.501	0.516	0.634	0.815	0.861	1.006	1.045	1.120	1.479	1.650	1.742	1.997	12.604
0.0600	0.581	0.603	0.747	0.968	1.030	1.200	1.247	1.336	1.776	1.980	2.092	2.396	15.125
0.0700	0.656	0.685	0.854	1.115	1.193	1.388	1.444	1.545	2.068	2.305	2.436	2.788	17.646
0.0800	0.727	0.763	0.958	1.257	1.352	1.569	1.634	1.748	2.353	2.622	2.771	3.171	20.166
0.0900	0.794	0.837	1.057	1.393	1.506	1.743	1.817	1.944	2.629	2.930	3.097	3.543	22.687
0.1000	0.859	0.906	1.152	1.524	1.654	1.911	1.995	2.133	2.896	3.228	3.414	3.905	25.208
0.1250	1.009	1.067	1.375	1.831	2.003	2.305	2.414	2.578	3.525	3.934	4.162	4.759	31.510
0.1600	1.197	1.262	1.657	2.216	2.446	2.802	2.945	3.141	4.323	4.830	5.111	5.841	40.333
0.2000	1.391	1.454	1.946	2.609	2.898	3.308	3.488	3.718	5.135	5.743	6.077	6.939	50.416
0.2500	1.609	1.664	2.270	3.045	3.399	3.868	4.091	4.360	6.032	6.749	7.144	8.153	63.020
0.3200	1.881	1.917	2.672	3.577	4.014	4.549	4.829	5.147	7.121	7.971	8.440	9.626	80.666
0.4000	2.159	2.170	3.075	4.106	4.624	5.220	5.561	5.929	8.192	9.170	9.713	11.070	100.83
0.5000	2.471	2.448	3.521	4.684	5.287	5.948	6.355	6.778	9.341	10.457	11.079	12.619	126.04
0.6000	2.755	2.701	3.920	5.195	5.871	6.586	7.054	7.528	10.343	11.577	12.266	13.960	151.25
0.7000	3.020	2.936	4.286	5.659	6.400	7.161	7.687	8.206	11.243	12.581	13.329	15.157	176.46
0.8000	3.273	3.162	4.626	6.087	6.886	7.690	8.269	8.830	12.064	13.496	14.297	16.247	201.66
0.9000	3.514	3.379	4.951	6.493	7.339	8.188	8.810	9.411	12.823	14.339	15.190	17.249	226.87
1.0000	3.744	3.588	5.259	6.875	7.772	8.654	9.327	9.966	13.544	15.141	16.038	18.200	252.08
1.2500	4.287	4.089	5.971	7.750	8.759	9.716	10.503	11.232	15.170	16.946	17.947	20.334	315.10
1.6000	4.994	4.756	6.877	8.845	9.987	11.032	11.963	12.808	17.157	19.145	20.273	22.931	403.33
2.0000	5.756	5.485	7.832	9.980	11.254	12.385	13.469	14.437	19.178	21.369	22.626	25.548	504.16
2.5000	6.674	6.362	8.956	11.299	12.717	13.944	15.209	16.313	21.479	23.895	25.292	28.497	630.20
3.2000	7.930	7.557	10.466	13.045	14.641	15.990	17.495	18.780	24.457	27.159	28.731	32.286	806.66
4.0000	9.362	8.907	12.155	14.976	16.757	18.238	19.995	21.486	27.677	30.678	32.432	36.356	1008.3
5.0000	11.177	10.605	14.263	17.365	19.358	20.998	23.057	24.802	31.571	34.938	36.889	41.249	1260.4
6.0000	13.035	12.336	16.399	19.767	21.964	23.753	26.112	28.105	35.425	39.137	41.274	46.037	1512.5
7.0000	14.947	14.110	18.576	22.203	24.601	26.532	29.187	31.429	39.286	43.328	45.646	50.790	1764.6
8.0000	16.916	15.931	20.801	24.681	27.281	29.351	32.296	34.791	43.163	47.540	50.032	55.551	2016.6
9.0000	18.940	17.801	23.079	27.207	30.008	32.217	35.448	38.200	47.079	51.784	54.449	60.335	2268.7
10.0000	21.019	19.723	25.408	29.781	32.787	35.133	38.652	41.656	51.045	56.070	58.904	65.154	2520.8
11.0000	23.153	21.694	27.790	32.403	35.615	38.099	41.911	45.159	55.061	60.397	63.389	70.015	2772.9
12.0000	25.341	23.713	30.224	35.075	38.494	41.115	45.222	48.709	59.128	64.767	67.917	74.926	3025.0

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.055	0.129	0.148	0.151	0.157	0.204	0.267	0.330	0.379	0.132	0.113	0.124	3.1510
0.0160	0.071	0.165	0.192	0.196	0.205	0.266	0.353	0.444	0.552	0.171	0.145	0.160	4.0333
0.0200	0.089	0.205	0.241	0.247	0.258	0.335	0.446	0.564	0.722	0.213	0.181	0.201	5.0416
0.0250	0.110	0.256	0.302	0.309	0.324	0.420	0.559	0.708	0.916	0.265	0.223	0.251	6.3020
0.0320	0.138	0.326	0.387	0.397	0.416	0.539	0.718	0.907	1.170	0.335	0.281	0.321	8.0666
0.0400	0.168	0.407	0.483	0.496	0.521	0.672	0.896	1.128	1.453	0.413	0.344	0.400	10.083
0.0500	0.204	0.507	0.603	0.618	0.649	0.833	1.112	1.395	1.791	0.507	0.420	0.496	12.604
0.0600	0.238	0.606	0.718	0.736	0.772	0.985	1.318	1.649	2.112	0.596	0.491	0.589	15.125
0.0700	0.270	0.700	0.829	0.849	0.890	1.128	1.514	1.888	2.415	0.681	0.559	0.677	17.646
0.0800	0.300	0.790	0.934	0.957	1.002	1.263	1.698	2.115	2.702	0.761	0.623	0.761	20.166
0.0900	0.329	0.875	1.033	1.058	1.108	1.389	1.873	2.328	2.974	0.836	0.683	0.840	22.687
0.1000	0.355	0.955	1.126	1.154	1.207	1.508	2.037	2.530	3.233	0.908	0.740	0.915	25.208
0.1250	0.415	1.133	1.337	1.370	1.433	1.777	2.412	2.992	3.827	1.071	0.869	1.083	31.510
0.1600	0.483	1.340	1.584	1.626	1.700	2.097	2.862	3.549	4.552	1.266	1.024	1.279	40.333
0.2000	0.547	1.532	1.815	1.865	1.952	2.403	3.300	4.094	5.267	1.455	1.174	1.463	50.416
0.2500	0.611	1.727	2.051	2.110	2.217	2.727	3.770	4.684	6.050	1.656	1.332	1.650	63.020
0.3200	0.683	1.947	2.320	2.391	2.514	3.115	4.339	5.406	7.018	1.892	1.519	1.863	80.666
0.4000	0.751	2.153	2.575	2.658	2.807	3.501	4.914	6.140	8.009	2.123	1.701	2.064	100.83
0.5000	0.822	2.370	2.850	2.946	3.127	3.931	5.560	6.964	9.129	2.374	1.898	2.280	126.04
0.6000	0.886	2.560	3.097	3.206	3.416	4.325	6.151	7.719	10.154	2.600	2.075	2.473	151.25
0.7000	0.945	2.736	3.332	3.454	3.689	4.698	6.708	8.432	11.116	2.812	2.242	2.657	176.46
0.8000	1.003	2.902	3.560	3.693	3.956	5.064	7.241	9.113	12.031	3.017	2.402	2.834	201.66
0.9000	1.060	3.062	3.782	3.926	4.218	5.420	7.765	9.782	12.908	3.215	2.556	3.007	226.87
1.0000	1.116	3.218	4.000	4.155	4.476	5.769	8.274	10.422	13.771	3.408	2.707	3.178	252.08
1.2500	1.253	3.592	4.525	4.707	5.095	6.600	9.469	11.913	15.762	3.872	3.070	3.591	315.10
1.6000	1.444	4.091	5.221	5.435	5.912	7.680	10.990	13.790	18.217	4.491	3.562	4.145	403.33
2.0000	1.665	4.641	5.974	6.224	6.788	8.819	12.564	15.716	20.686	5.172	4.110	4.759	504.16
2.5000	1.949	5.319	6.874	7.170	7.823	10.139	14.357	17.884	23.428	5.997	4.786	5.510	630.20
3.2000	2.364	6.268	8.094	8.450	9.206	11.867	16.657	20.647	26.887	7.128	5.728	6.549	806.66
4.0000	2.860	7.377	9.471	9.889	10.746	13.759	19.135	23.608	30.563	8.413	6.812	7.737	1008.3
5.0000	3.511	8.812	11.207	11.696	12.666	16.091	22.154	27.188	34.956	10.035	8.192	9.246	1260.4
6.0000	4.190	10.306	12.979	13.536	14.614	18.433	25.159	30.735	39.270	11.692	9.609	10.793	1512.5
7.0000	4.895	11.857	14.793	15.421	16.605	20.810	28.191	34.295	43.586	13.391	11.067	12.382	1764.6
8.0000	5.623	13.465	16.653	17.349	18.646	23.233	31.272	37.897	47.933	15.134	12.566	14.012	2016.6
9.0000	6.376	15.125	18.562	19.327	20.738	25.710	34.417	41.561	52.333	16.926	14.110	15.686	2268.7
10.0000	7.153	16.830	20.518	21.353	22.879	28.242	37.626	45.294	56.801	18.766	15.697	17.405	2520.8
11.0000	7.952	18.577	22.518	23.424	25.069	30.831	40.898	49.099	61.346	20.653	17.327	19.165	2772.9
12.0000	8.774	20.366	24.561	25.540	27.306	33.476	44.232	52.975	65.973	22.585	18.998	20.967	3025.0

$^{255}_{101}$Md IONS

ENERGY PER MASS UNIT	ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)												ENERGY FOR A=255
MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	MEV
0.0125	10.246	8.476	6.210	4.130	3.353	3.043	2.819	2.608	1.658	1.419	1.304	1.118	3.1886
0.0160	11.910	9.853	7.218	4.800	3.898	3.537	3.277	3.032	1.927	1.649	1.516	1.299	4.0814
0.0200	13.646	11.289	8.270	5.500	4.466	4.053	3.755	3.474	2.208	1.890	1.737	1.489	5.1018
0.0250	15.635	12.934	9.476	6.301	5.117	4.643	4.302	3.980	2.530	2.165	1.995	1.706	6.3772
0.0320	18.152	15.046	11.015	7.325	5.959	5.419	5.001	4.626	2.941	2.522	2.324	1.994	8.1629
0.0400	20.747	17.277	12.620	8.417	6.865	6.259	5.767	5.338	3.395	2.922	2.688	2.309	10.204
0.0500	23.684	19.852	14.459	9.688	7.938	7.229	6.666	6.174	3.918	3.405	3.138	2.697	12.754
0.0600	26.371	22.315	16.159	10.891	8.952	8.128	7.514	6.964	4.460	3.878	3.579	3.078	15.305
0.0700	28.846	24.674	17.751	12.035	9.941	9.018	8.343	7.740	4.970	4.349	4.030	3.461	17.856
0.0800	31.157	26.998	19.257	13.152	10.880	9.859	9.108	8.473	5.488	4.814	4.448	3.832	20.407
0.0900	33.332	29.256	20.690	14.235	11.794	10.718	9.869	9.187	6.021	5.266	4.883	4.211	22.958
0.1000	35.411	31.484	22.063	15.290	12.708	11.517	10.590	9.906	6.531	5.714	5.295	4.567	25.509
0.1250	40.193	37.083	25.278	17.796	14.864	13.473	12.386	11.603	7.773	6.800	6.358	5.498	31.886
0.1600	46.104	44.811	29.384	21.039	17.689	16.044	14.721	13.810	9.403	8.257	7.743	6.758	40.814
0.2000	52.115	52.890	33.666	24.475	20.705	18.752	17.203	16.126	11.177	9.864	9.258	8.080	51.018
0.2500	58.746	61.793	38.572	28.505	24.223	21.986	20.135	18.862	13.307	11.765	11.032	9.643	63.773
0.3200	66.897	72.681	44.837	33.762	28.830	26.319	23.988	22.419	16.052	14.258	13.384	11.770	81.629
0.4000	75.105	83.376	51.371	39.145	33.700	30.823	28.100	26.251	19.110	17.004	15.977	14.024	102.04
0.5000	84.167	94.585	58.858	45.497	39.435	36.198	32.960	30.724	22.719	20.247	19.041	16.774	127.55
0.6000	91.305	102.833	65.125	50.993	44.415	40.899	37.121	34.581	25.855	23.119	21.784	19.342	153.05
0.7000	97.550	109.505	70.740	55.884	48.881	45.061	40.817	38.058	28.720	25.679	24.264	21.505	178.56
0.8000	102.936	114.760	75.799	60.412	52.984	49.042	44.343	41.311	31.381	28.197	26.606	23.649	204.07
0.9000	107.867	119.201	80.378	64.463	56.827	52.728	47.584	44.288	34.000	30.544	28.856	25.721	229.58
1.0000	112.175	122.826	84.533	68.387	60.356	56.045	50.635	47.085	36.349	32.714	30.939	27.642	255.09
1.2500	121.067	129.655	93.344	76.542	68.141	63.474	57.220	53.113	41.725	37.618	35.564	31.830	318.86
1.6000	129.963	136.225	102.656	85.718	76.581	71.551	64.468	59.541	47.735	43.218	40.857	36.648	408.14
2.0000	136.383	142.327	110.075	93.234	83.767	78.594	70.448	65.274	52.836	48.213	45.571	41.058	510.18
2.5000	140.634	147.358	115.939	99.591	90.084	84.635	75.708	70.259	57.738	52.520	49.854	45.216	637.72
3.2000	142.743	150.786	120.053	104.446	95.082	89.439	80.195	74.193	61.947	56.665	53.784	48.862	816.29
4.0000	142.045	151.272	121.406	106.716	97.732	92.026	82.920	76.486	64.709	59.246	56.454	51.355	1020.4
5.0000	139.194	149.206	120.619	106.868	98.425	92.877	83.709	77.437	66.340	60.551	58.018	52.952	1275.4
6.0000	135.695	145.896	118.615	105.804	97.620	92.520	83.505	77.218	66.187	61.087	58.477	53.733	1530.5
7.0000	131.715	142.284	116.151	104.071	96.173	91.411	82.699	76.543	66.206	60.863	58.424	53.778	1785.6
8.0000	127.987	138.549	113.564	102.208	94.599	89.943	81.766	75.520	65.640	60.530	58.145	53.602	2040.7
9.0000	124.663	134.876	111.009	100.241	92.915	88.474	80.482	74.487	64.940	59.945	57.614	53.284	2295.8
10.0000	121.362	131.349	108.553	98.458	91.185	86.951	79.135	73.490	64.046	59.379	57.207	52.865	2550.9
11.0000	118.332	128.211	106.223	96.663	89.652	85.509	77.861	72.550	63.309	58.847	56.829	52.368	2806.0
12.0000	115.573	125.143	104.026	94.872	88.110	84.157	76.667	71.570	62.520	58.254	56.174	51.805	3061.1

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	23.287	9.936	6.582	6.185	5.496	3.627	2.223	1.577	1.041	8.327	10.594	8.085	3.1886
0.0160	25.564	11.203	7.529	7.081	6.295	4.252	2.635	1.877	1.246	9.622	12.243	9.247	4.0814
0.0200	29.608	12.158	8.411	7.923	7.088	4.921	3.068	2.233	1.494	10.933	13.903	10.330	5.1018
0.0250	32.975	13.086	9.400	8.860	8.016	5.752	3.677	2.682	1.943	12.413	15.796	11.541	6.3772
0.0320	37.560	14.253	10.563	10.056	9.186	6.884	4.472	3.370	2.346	14.319	18.262	13.107	8.1629
0.0400	42.277	15.371	11.774	11.333	10.437	8.152	5.401	4.139	2.940	16.343	20.848	14.765	10.204
0.0500	47.859	16.830	13.288	12.926	12.030	9.702	6.535	5.090	3.687	18.710	23.857	16.801	12.754
0.0600	53.971	18.470	14.979	14.478	13.687	11.263	7.659	6.027	4.428	21.023	26.840	18.874	15.305
0.0700	60.177	20.378	16.686	16.207	15.373	12.816	8.734	6.941	5.130	23.325	29.751	21.088	17.856
0.0800	66.821	22.434	18.506	17.986	17.119	14.385	9.859	7.857	5.835	25.650	32.679	23.416	20.407
0.0900	73.451	24.642	20.380	19.863	18.911	15.952	10.966	8.773	6.497	27.973	35.567	25.822	22.958
0.1000	80.751	27.093	22.460	21.754	20.695	17.540	12.113	9.642	7.148	30.293	38.522	28.307	25.509
0.1250	100.355	33.494	27.680	26.669	25.481	21.512	14.813	11.805	8.772	36.249	46.133	34.859	31.886
0.1600	130.171	43.400	35.613	34.321	32.557	27.121	18.600	14.810	10.990	44.869	57.005	44.958	40.814
0.2000	165.301	54.876	44.944	43.160	40.803	33.161	22.556	17.910	13.231	54.337	68.948	56.728	51.018
0.2500	209.062	69.199	56.123	54.040	50.453	39.884	26.962	21.138	15.545	65.342	82.815	71.282	63.773
0.3200	266.333	86.939	70.708	67.480	61.741	47.303	31.565	24.616	17.980	79.003	100.346	89.585	81.629
0.4000	320.558	105.825	84.044	79.883	72.331	53.991	35.703	27.792	20.240	92.109	117.281	106.647	102.04
0.5000	375.513	124.779	96.939	92.230	82.519	60.682	40.023	31.254	22.778	105.532	134.726	123.719	127.55
0.6000	413.545	138.717	104.982	99.772	89.156	65.190	43.243	33.735	24.682	114.750	147.248	134.614	153.05
0.7000	434.342	149.261	109.788	104.341	93.376	68.193	45.627	35.511	26.244	121.319	155.910	140.984	178.56
0.8000	444.942	156.147	112.865	107.635	96.189	70.342	47.602	37.142	27.591	126.130	161.908	145.080	204.07
0.9000	450.117	160.435	114.941	109.555	97.418	71.858	49.031	38.742	28.775	129.811	166.463	147.413	229.58
1.0000	455.631	164.754	117.585	111.583	99.410	73.628	50.720	40.407	30.009	132.970	170.333	149.792	255.09
1.2500	463.920	173.713	123.681	118.080	104.919	78.689	55.260	44.618	33.697	139.736	177.447	156.538	318.86
1.6000	464.006	181.701	131.194	125.446	112.306	85.718	61.491	49.994	38.701	146.285	183.036	163.018	408.14
2.0000	455.711	186.797	138.474	131.870	119.321	92.683	67.696	55.588	43.700	151.904	187.128	167.864	510.18
2.5000	438.249	188.401	143.880	136.924	126.373	99.939	74.201	61.795	49.158	156.054	188.864	170.430	637.72
3.2000	420.185	186.682	148.025	141.302	131.218	106.247	80.796	67.230	53.904	158.830	189.323	172.276	816.29
4.0000	403.639	181.137	148.115	142.045	133.546	109.265	83.770	70.537	57.061	158.556	186.844	170.818	1020.4
5.0000	383.568	174.294	145.828	140.400	132.319	109.643	85.278	72.009	59.103	156.081	182.738	167.419	1275.4
6.0000	368.892	167.721	142.575	137.119	129.883	108.414	84.691	71.999	59.307	152.301	177.804	162.858	1530.5
7.0000	356.582	161.914	139.148	134.154	126.836	106.626	83.861	71.549	59.121	148.557	172.948	158.894	1785.6
8.0000	345.236	156.151	135.709	130.940	123.672	104.366	82.107	70.410	58.486	144.681	168.075	154.788	2040.7
9.0000	334.138	151.861	132.212	127.661	120.778	102.129	80.482	69.159	57.725	140.760	163.295	150.640	2295.8
10.0000	324.574	148.175	129.287	124.836	118.106	99.869	78.918	67.846	56.773	137.211	158.922	146.981	2550.9
11.0000	315.482	144.675	126.511	122.156	115.570	97.725	77.436	66.602	55.767	133.947	154.979	143.613	2806.0
12.0000	306.876	141.371	123.895	119.630	113.180	95.704	76.043	65.432	54.822	130.865	151.150	140.435	3061.1

$^{255}_{101}Md$ IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=255 MEV
0.0125	0.146	0.140	0.164	0.199	0.202	0.240	0.245	0.260	0.326	0.352	0.363	0.396	3.1886
0.0160	0.185	0.179	0.212	0.261	0.268	0.317	0.327	0.349	0.448	0.494	0.517	0.581	4.0814
0.0200	0.227	0.223	0.266	0.329	0.340	0.401	0.415	0.445	0.576	0.640	0.674	0.766	5.1018
0.0250	0.278	0.276	0.331	0.412	0.428	0.504	0.522	0.561	0.729	0.812	0.857	0.980	6.3772
0.0320	0.345	0.347	0.420	0.528	0.550	0.647	0.671	0.720	0.939	1.047	1.106	1.268	8.1629
0.0400	0.418	0.425	0.518	0.658	0.690	0.809	0.839	0.900	1.179	1.315	1.389	1.593	10.204
0.0500	0.504	0.518	0.636	0.817	0.863	1.008	1.047	1.121	1.480	1.650	1.742	1.996	12.754
0.0600	0.584	0.605	0.749	0.970	1.032	1.202	1.250	1.338	1.777	1.981	2.092	2.395	15.305
0.0700	0.659	0.688	0.857	1.118	1.196	1.390	1.446	1.548	2.070	2.306	2.436	2.788	17.856
0.0800	0.730	0.766	0.961	1.261	1.355	1.572	1.637	1.751	2.355	2.624	2.772	3.171	20.407
0.0900	0.798	0.840	1.061	1.397	1.510	1.747	1.821	1.947	2.632	2.932	3.099	3.544	22.958
0.1000	0.863	0.910	1.156	1.529	1.658	1.916	2.000	2.137	2.899	3.231	3.417	3.907	25.509
0.1250	1.014	1.071	1.380	1.837	2.009	2.312	2.420	2.584	3.531	3.939	4.167	4.764	31.886
0.1600	1.204	1.268	1.664	2.224	2.453	2.811	2.954	3.150	4.332	4.839	5.120	5.849	40.814
0.2000	1.398	1.461	1.955	2.619	2.907	3.319	3.499	3.730	5.148	5.755	6.089	6.951	51.018
0.2500	1.617	1.672	2.281	3.057	3.412	3.882	4.105	4.375	6.048	6.766	7.161	8.171	63.773
0.3200	1.891	1.927	2.684	3.592	4.029	4.566	4.847	5.166	7.143	7.994	8.464	9.651	81.629
0.4000	2.171	2.181	3.090	4.124	4.642	5.242	5.583	5.952	8.219	9.199	9.743	11.103	102.04
0.5000	2.484	2.461	3.538	4.705	5.309	5.973	6.381	6.806	9.374	10.492	11.115	12.659	127.55
0.6000	2.770	2.715	3.939	5.219	5.896	6.615	7.084	7.559	10.382	11.618	12.310	14.008	153.05
0.7000	3.037	2.951	4.307	5.686	6.428	7.194	7.721	8.241	11.287	12.628	13.378	15.211	178.56
0.8000	3.291	3.179	4.650	6.116	6.918	7.725	8.306	8.869	12.113	13.549	14.352	16.307	204.07
0.9000	3.533	3.397	4.976	6.525	7.373	8.226	8.850	9.453	12.876	14.397	15.250	17.315	229.58
1.0000	3.765	3.607	5.286	6.909	7.809	8.695	9.370	10.011	13.601	15.203	16.103	18.271	255.09
1.2500	4.311	4.111	6.002	7.788	8.801	9.762	10.552	11.284	15.235	17.017	18.021	20.417	318.86
1.6000	5.020	4.781	6.911	8.887	10.033	11.083	12.018	12.867	17.230	19.226	20.357	23.024	408.14
2.0000	5.785	5.512	7.869	10.026	11.304	12.441	13.528	14.500	19.257	21.456	22.716	25.648	510.18
2.5000	6.703	6.390	8.995	11.346	12.769	14.001	15.271	16.379	21.561	23.985	25.386	28.601	637.72
3.2000	7.960	7.585	10.505	13.093	14.693	16.048	17.556	18.845	24.539	27.249	28.826	32.390	816.29
4.0000	9.391	8.934	12.192	15.022	16.807	18.293	20.054	21.550	27.757	30.765	32.523	36.457	1020.4
5.0000	11.203	10.629	14.297	17.408	19.404	21.049	23.112	24.860	31.645	35.019	36.974	41.342	1275.4
6.0000	13.058	12.357	16.429	19.805	22.005	23.799	26.162	28.157	35.492	39.210	41.351	46.122	1530.5
7.0000	14.966	14.128	18.602	22.236	24.637	26.573	29.231	31.474	39.345	43.393	45.714	50.866	1785.6
8.0000	16.930	15.944	20.823	24.709	27.312	29.386	32.333	34.829	43.214	47.595	50.090	55.617	2040.7
9.0000	18.950	17.811	23.095	27.229	30.033	32.245	35.477	38.230	47.121	51.830	54.498	60.390	2295.8
10.0000	21.024	19.727	25.419	29.797	32.804	35.154	38.674	41.678	51.077	56.106	58.941	65.196	2550.9
11.0000	23.153	21.693	27.794	32.412	35.626	38.113	41.924	45.172	55.083	60.422	63.415	70.044	2806.0
12.0000	25.334	23.707	30.221	35.076	38.496	41.120	45.226	48.712	59.138	64.779	67.930	74.942	3061.1

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.055	0.129	0.148	0.152	0.158	0.204	0.267	0.330	0.377	0.133	0.113	0.124	3.1886
0.0160	0.072	0.165	0.193	0.197	0.206	0.266	0.353	0.445	0.552	0.171	0.146	0.161	4.0814
0.0200	0.090	0.206	0.242	0.248	0.259	0.336	0.446	0.565	0.721	0.214	0.181	0.202	5.1018
0.0250	0.111	0.257	0.303	0.310	0.325	0.421	0.560	0.709	0.916	0.266	0.224	0.252	6.3772
0.0320	0.139	0.327	0.388	0.398	0.417	0.541	0.719	0.908	1.170	0.337	0.282	0.322	8.1629
0.0400	0.169	0.409	0.485	0.498	0.522	0.674	0.897	1.129	1.453	0.415	0.346	0.401	10.204
0.0500	0.205	0.509	0.605	0.620	0.651	0.835	1.114	1.396	1.792	0.509	0.422	0.498	12.754
0.0600	0.239	0.608	0.721	0.738	0.775	0.987	1.320	1.650	2.113	0.598	0.494	0.591	15.305
0.0700	0.272	0.703	0.831	0.852	0.893	1.131	1.516	1.891	2.417	0.683	0.561	0.680	17.856
0.0800	0.302	0.793	0.937	0.960	1.005	1.267	1.702	2.118	2.704	0.764	0.625	0.764	20.407
0.0900	0.330	0.878	1.037	1.062	1.111	1.394	1.877	2.332	2.977	0.840	0.686	0.844	22.958
0.1000	0.357	0.959	1.131	1.158	1.212	1.513	2.042	2.535	3.237	0.911	0.743	0.919	25.509
0.1250	0.417	1.138	1.342	1.376	1.438	1.783	2.418	2.998	3.833	1.075	0.873	1.087	31.886
0.1600	0.486	1.346	1.590	1.632	1.707	2.104	2.871	3.559	4.561	1.272	1.029	1.285	40.814
0.2000	0.550	1.539	1.822	1.873	1.960	2.412	3.311	4.106	5.280	1.462	1.179	1.469	51.018
0.2500	0.614	1.735	2.060	2.120	2.221	2.738	3.783	4.699	6.066	1.664	1.339	1.658	63.773
0.3200	0.687	1.957	2.331	2.402	2.525	3.128	4.355	5.425	7.039	1.901	1.527	1.871	81.629
0.4000	0.755	2.164	2.587	2.670	2.820	3.517	4.933	6.162	8.036	2.133	1.709	2.074	102.04
0.5000	0.827	2.382	2.863	2.960	3.141	3.949	5.583	6.991	9.161	2.386	1.908	2.291	127.55
0.6000	0.890	2.573	3.112	3.221	3.432	4.345	6.178	7.750	10.192	2.613	2.086	2.485	153.05
0.7000	0.951	2.750	3.349	3.471	3.707	4.721	6.738	8.467	11.159	2.826	2.254	2.670	178.56
0.8000	1.009	2.917	3.578	3.711	3.976	5.089	7.274	9.153	12.080	3.032	2.415	2.848	204.07
0.9000	1.065	3.078	3.802	3.946	4.239	5.447	7.801	9.825	12.962	3.232	2.570	3.022	229.58
1.0000	1.122	3.235	4.021	4.177	4.498	5.797	8.313	10.469	13.829	3.426	2.721	3.194	255.09
1.2500	1.260	3.611	4.548	4.731	5.121	6.633	9.514	11.968	15.830	3.892	3.087	3.609	318.86
1.6000	1.452	4.111	5.247	5.462	5.941	7.717	11.041	13.853	18.296	4.514	3.580	4.166	408.14
2.0000	1.673	4.664	6.002	6.253	6.820	8.859	12.619	15.784	20.771	5.197	4.130	4.781	510.18
2.5000	1.957	5.342	6.903	7.200	7.856	10.181	14.415	17.955	23.517	6.023	4.807	5.533	637.72
3.2000	2.372	6.291	8.123	8.480	9.239	11.909	16.715	20.718	26.977	7.154	5.749	6.573	816.29
4.0000	2.869	7.399	9.499	9.918	10.778	13.800	19.191	23.676	30.650	8.438	6.832	7.760	1020.4
5.0000	3.518	8.833	11.233	11.722	12.694	16.128	22.205	27.251	35.036	10.058	8.210	9.267	1275.4
6.0000	4.196	10.324	13.001	13.560	14.639	18.466	25.205	30.792	39.343	11.711	9.625	10.811	1530.5
7.0000	4.899	11.872	14.812	15.440	16.626	20.838	28.231	34.345	43.649	13.407	11.079	12.396	1785.6
8.0000	5.626	13.476	16.668	17.365	18.663	23.256	31.305	37.939	47.987	15.147	12.575	14.023	2040.7
9.0000	6.378	15.132	18.572	19.338	20.750	25.727	34.443	41.594	52.378	16.934	14.115	15.693	2295.8
10.0000	7.152	16.833	20.524	21.359	22.886	28.253	37.644	45.319	56.834	18.770	15.699	17.408	2550.9
11.0000	7.949	18.576	22.518	23.424	25.070	30.836	40.908	49.114	61.368	20.652	17.324	19.164	2806.0
12.0000	8.769	20.359	24.556	25.535	27.300	33.473	44.232	52.978	65.981	22.579	18.991	20.960	3061.1

$^{254}_{102}No$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=254 MEV
0.0125	10.283	8.507	6.232	4.144	3.365	3.054	2.829	2.617	1.664	1.424	1.309	1.122	3.1761
0.0160	11.955	9.890	7.245	4.818	3.912	3.550	3.289	3.043	1.934	1.656	1.522	1.304	4.0654
0.0200	13.699	11.333	8.302	5.521	4.483	4.068	3.769	3.487	2.217	1.897	1.743	1.494	5.0818
0.0250	15.698	12.986	9.514	6.327	5.137	4.662	4.319	3.996	2.540	2.174	2.003	1.712	6.3522
0.0320	18.228	15.109	11.061	7.355	5.984	5.442	5.022	4.645	2.953	2.533	2.334	2.002	8.1309
0.0400	20.837	17.351	12.674	8.454	6.895	6.287	5.792	5.361	3.409	2.934	2.700	2.319	10.164
0.0500	23.790	19.941	14.524	9.731	7.973	7.262	6.695	6.202	3.936	3.420	3.152	2.709	12.704
0.0600	26.492	22.418	16.233	10.941	8.993	8.165	7.548	6.996	4.480	3.896	3.596	3.092	15.245
0.0700	28.981	24.790	17.834	12.092	9.987	9.060	8.382	7.776	4.994	4.369	4.048	3.478	17.786
0.0800	31.306	27.127	19.349	13.215	10.932	9.907	9.152	8.513	5.514	4.837	4.470	3.850	20.327
0.0900	33.494	29.398	20.791	14.304	11.851	10.770	9.917	9.231	6.050	5.291	4.907	4.231	22.868
0.1000	35.586	31.639	22.172	15.365	12.771	11.574	10.642	9.955	6.563	5.742	5.321	4.590	25.409
0.1250	40.396	37.271	25.407	17.886	14.939	13.542	12.449	11.662	7.813	6.834	6.390	5.526	31.761
0.1600	46.345	45.045	29.538	21.149	17.782	16.128	14.798	13.883	9.452	8.300	7.783	6.794	40.654
0.2000	52.396	53.174	33.847	24.607	20.816	18.853	17.296	16.213	11.237	9.917	9.308	8.123	50.818
0.2500	59.071	62.135	38.786	28.663	24.357	22.108	20.246	18.966	13.381	11.830	11.093	9.696	63.523
0.3200	67.278	73.095	45.093	33.955	28.994	26.469	24.124	22.546	16.143	14.339	13.460	11.837	81.309
0.4000	75.544	83.863	51.671	39.374	33.896	31.003	28.264	26.404	19.222	17.103	16.070	14.106	101.64
0.5000	84.671	95.151	59.210	45.770	39.671	36.414	33.158	30.908	22.855	20.368	19.155	16.875	127.05
0.6000	91.829	103.422	65.498	51.285	44.670	41.133	37.334	34.780	26.003	23.252	21.909	19.453	152.45
0.7000	98.103	110.126	71.141	56.201	49.158	45.317	41.048	38.274	28.883	25.824	24.401	21.627	177.86
0.8000	103.528	115.421	76.236	60.760	53.289	49.325	44.598	41.549	31.562	28.360	26.759	23.786	203.27
0.9000	108.509	119.910	80.856	64.847	57.165	53.042	47.867	44.552	34.202	30.725	29.027	25.874	228.68
1.0000	112.872	123.589	85.058	68.812	60.731	56.393	50.950	47.377	36.575	32.917	31.131	27.814	254.09
1.2500	121.921	130.569	94.002	77.082	68.622	63.922	57.623	53.487	42.019	37.883	35.815	32.055	317.61
1.6000	131.049	137.363	103.514	86.434	77.222	72.149	65.007	60.038	48.134	43.579	41.199	36.955	406.54
2.0000	137.711	143.713	111.147	94.142	84.583	79.359	71.134	65.910	53.351	48.682	46.015	41.458	508.18
2.5000	142.194	148.993	117.225	100.696	91.084	85.574	76.548	71.038	58.378	53.103	50.407	45.718	635.22
3.2000	144.501	152.643	121.531	105.732	96.253	90.541	81.183	75.106	62.710	57.363	54.446	49.463	813.09
4.0000	143.899	153.246	122.991	108.109	99.007	93.227	84.003	77.484	65.554	60.019	57.191	52.025	1016.4
5.0000	141.072	151.218	122.246	108.310	99.753	94.129	84.839	78.482	67.235	61.368	58.800	53.666	1270.4
6.0000	137.556	147.897	120.241	107.255	98.959	93.788	84.650	78.277	67.095	61.924	59.279	54.469	1524.5
7.0000	133.541	144.258	117.761	105.514	97.506	92.678	83.846	77.605	67.124	61.707	59.234	54.524	1778.6
8.0000	129.781	140.490	115.156	103.640	95.925	91.203	82.912	76.579	66.560	61.378	58.960	54.354	2032.7
9.0000	126.429	136.787	112.582	101.661	94.231	89.728	81.622	75.542	65.860	60.794	58.430	54.039	2286.8
10.0000	123.102	133.232	110.109	99.869	92.491	88.197	80.269	74.544	64.964	60.229	58.027	53.623	2540.9
11.0000	120.049	130.071	107.764	98.065	90.953	86.750	78.991	73.603	64.227	59.701	57.654	53.128	2795.0
12.0000	117.271	126.982	105.554	96.265	89.404	85.393	77.793	72.621	63.438	59.110	56.999	52.566	3049.1

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	23.370	9.971	6.606	6.207	5.515	3.639	2.231	1.583	1.044	8.357	10.632	8.114	3.1761
0.0160	26.663	11.245	7.557	7.108	6.318	4.267	2.645	1.884	1.251	9.658	12.288	9.281	4.0654
0.0200	29.723	12.204	8.444	7.954	7.115	4.940	3.080	2.242	1.499	10.976	13.956	10.370	5.0818
0.0250	33.108	13.138	9.438	8.895	8.049	5.775	3.691	2.692	1.950	12.463	15.859	11.588	6.3522
0.0320	37.717	14.313	10.607	10.098	9.225	6.913	4.491	3.385	2.356	14.379	18.339	13.162	8.1309
0.0400	42.459	15.437	11.825	11.382	10.482	8.188	5.425	4.157	2.953	16.413	20.938	14.829	10.164
0.0500	48.073	16.905	13.347	12.984	12.084	9.745	6.565	5.112	3.704	18.794	23.964	16.876	12.704
0.0600	54.218	18.554	15.048	14.545	13.749	11.314	7.694	6.055	4.448	21.119	26.963	18.960	15.245
0.0700	60.459	20.474	16.764	16.283	15.445	12.876	8.775	6.973	5.154	23.434	29.891	21.187	17.786
0.0800	67.140	22.541	18.594	18.072	17.201	14.454	9.907	7.894	5.863	25.773	32.835	23.528	20.327
0.0900	73.808	24.762	20.479	19.959	19.003	16.030	11.019	8.815	6.528	28.109	35.740	25.947	22.868
0.1000	81.149	27.227	22.571	21.861	20.797	17.627	12.172	9.689	7.184	30.442	38.712	28.446	25.409
0.1250	100.864	33.664	27.820	26.804	25.610	21.621	14.888	11.865	8.816	36.433	46.367	35.036	31.761
0.1600	130.853	43.627	35.800	34.500	32.728	27.263	18.697	14.887	11.047	45.104	57.303	45.193	40.654
0.2000	166.191	55.171	45.186	43.392	41.023	33.340	22.678	18.007	13.302	54.630	69.319	57.033	50.818
0.2500	210.219	69.582	56.433	54.339	50.732	40.104	27.111	21.255	15.631	65.703	83.273	71.676	63.523
0.3200	267.849	87.434	71.111	67.864	62.092	47.573	31.745	24.756	18.082	79.453	100.917	90.095	81.309
0.4000	322.430	106.443	84.535	80.349	72.753	54.307	35.912	27.954	20.359	92.647	117.966	107.270	101.64
0.5000	377.762	125.526	97.519	92.783	83.013	61.046	40.263	31.441	22.914	106.164	135.532	124.460	127.05
0.6000	415.915	139.511	105.583	100.343	89.667	65.564	43.491	33.928	24.824	115.408	148.092	135.385	152.45
0.7000	436.805	150.107	110.411	104.933	93.906	68.580	45.886	35.713	26.393	122.007	156.795	141.784	177.86
0.8000	447.505	157.046	113.515	108.255	96.743	70.747	47.876	37.356	27.750	126.857	162.840	145.916	203.27
0.9000	452.796	161.389	115.625	110.207	97.998	72.286	49.322	38.973	28.947	130.583	167.454	148.291	228.68
1.0000	458.462	165.778	118.316	112.276	100.028	74.085	51.035	40.658	30.196	133.796	171.392	150.723	254.09
1.2500	467.191	174.938	124.553	118.913	105.658	79.244	55.649	44.933	33.935	140.721	178.698	157.642	317.61
1.6000	467.884	183.220	132.291	126.494	113.244	86.434	62.005	50.411	39.025	147.508	184.566	164.380	406.54
2.0000	460.149	188.616	139.823	133.154	120.483	93.586	68.355	56.129	44.125	153.383	188.950	169.499	508.18
2.5000	443.110	190.490	145.476	138.443	127.775	101.048	75.024	62.481	49.703	157.785	190.959	172.321	635.22
3.2000	425.359	188.981	149.848	143.042	132.834	107.555	81.790	68.057	54.567	160.786	191.655	174.397	813.09
4.0000	405.869	183.502	150.049	143.899	135.290	110.692	84.864	71.458	57.806	160.626	189.283	173.048	1016.4
5.0000	388.742	176.646	147.795	142.294	134.104	111.122	86.428	72.981	59.901	158.186	185.203	169.677	1270.4
6.0000	373.950	170.021	144.530	138.999	131.664	109.901	85.852	72.986	60.121	154.390	180.242	165.091	1524.5
7.0000	361.527	164.159	141.078	136.014	128.595	108.105	85.024	72.541	59.941	150.617	175.347	161.098	1778.6
8.0000	350.074	158.339	137.611	132.775	125.405	105.828	83.258	71.397	59.305	146.708	170.431	156.957	2032.7
9.0000	338.871	154.012	134.085	129.469	122.489	103.575	81.622	70.138	58.543	142.754	165.608	152.774	2286.8
10.0000	329.225	150.298	131.139	126.625	119.798	101.300	80.049	68.818	57.587	139.177	161.199	149.087	2540.9
11.0000	320.058	146.774	128.347	123.928	117.247	99.143	78.560	67.568	56.576	135.890	157.227	145.697	2795.0
12.0000	311.385	143.448	125.715	121.387	114.843	97.110	77.160	66.394	55.627	132.787	153.370	142.498	3049.1

$^{254}_{102}$No IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=254 MEV
0.0125	0.144	0.138	0.162	0.197	0.199	0.237	0.241	0.256	0.320	0.346	0.356	0.387	3.1761
0.0160	0.182	0.177	0.210	0.258	0.265	0.313	0.323	0.345	0.442	0.487	0.510	0.572	4.0654
0.0200	0.225	0.221	0.263	0.325	0.336	0.396	0.410	0.440	0.569	0.632	0.665	0.756	5.0818
0.0250	0.275	0.273	0.327	0.408	0.423	0.498	0.516	0.554	0.720	0.802	0.846	0.968	6.3522
0.0320	0.342	0.343	0.415	0.522	0.544	0.639	0.663	0.711	0.928	1.035	1.093	1.253	8.1309
0.0400	0.414	0.421	0.512	0.650	0.682	0.799	0.829	0.889	1.165	1.300	1.372	1.574	10.164
0.0500	0.498	0.512	0.629	0.807	0.852	0.996	1.034	1.108	1.462	1.630	1.721	1.972	12.704
0.0600	0.577	0.599	0.741	0.959	1.019	1.188	1.234	1.321	1.756	1.957	2.067	2.367	15.245
0.0700	0.652	0.680	0.848	1.105	1.181	1.374	1.429	1.529	2.044	2.278	2.406	2.754	17.786
0.0800	0.722	0.758	0.950	1.246	1.339	1.553	1.617	1.730	2.326	2.591	2.738	3.133	20.327
0.0900	0.789	0.831	1.048	1.381	1.491	1.726	1.799	1.924	2.599	2.896	3.061	3.501	22.868
0.1000	0.854	0.900	1.143	1.511	1.638	1.893	1.976	2.112	2.864	3.192	3.375	3.859	25.409
0.1250	1.003	1.060	1.365	1.815	1.985	2.284	2.391	2.553	3.488	3.891	4.117	4.706	31.761
0.1600	1.191	1.254	1.645	2.199	2.424	2.778	2.919	3.113	4.280	4.781	5.058	5.779	40.654
0.2000	1.384	1.446	1.933	2.589	2.873	3.281	3.459	3.687	5.087	5.687	6.017	6.869	50.818
0.2500	1.601	1.654	2.256	3.023	3.373	3.838	4.058	4.325	5.978	6.687	7.077	8.076	63.523
0.3200	1.872	1.906	2.655	3.552	3.984	4.515	4.793	5.108	7.061	7.902	8.366	9.540	81.309
0.4000	2.149	2.158	3.057	4.079	4.590	5.184	5.521	5.885	8.126	9.095	9.632	10.976	101.64
0.5000	2.459	2.435	3.501	4.654	5.250	5.907	6.311	6.731	9.269	10.374	10.990	12.517	127.05
0.6000	2.742	2.686	3.898	5.163	5.832	6.543	7.007	7.476	10.267	11.489	12.172	13.851	152.45
0.7000	3.006	2.921	4.262	5.625	6.358	7.116	7.637	8.152	11.162	12.488	13.230	15.043	177.86
0.8000	3.258	3.146	4.601	6.051	6.843	7.642	8.217	8.773	11.980	13.400	14.194	16.128	203.27
0.9000	3.498	3.362	4.925	6.456	7.294	8.139	8.755	9.352	12.735	14.239	15.083	17.125	228.68
1.0000	3.727	3.570	5.231	6.836	7.725	8.603	9.270	9.904	13.454	15.038	15.928	18.072	254.09
1.2500	4.267	4.069	5.940	7.706	8.707	9.659	10.440	11.163	15.071	16.833	17.826	20.195	317.61
1.6000	4.969	4.731	6.839	8.793	9.925	10.965	11.889	12.728	17.043	19.016	20.135	22.772	406.54
2.0000	5.723	5.452	7.784	9.917	11.180	12.305	13.380	14.340	19.044	21.217	22.464	25.363	508.18
2.5000	6.629	6.318	8.894	11.218	12.624	13.843	15.097	16.192	21.315	23.710	25.096	28.274	635.22
3.2000	7.866	7.495	10.380	12.938	14.518	15.858	17.347	18.621	24.247	26.924	28.482	32.004	813.09
4.0000	9.273	8.821	12.040	14.835	16.597	18.066	19.804	21.281	27.411	30.382	32.118	36.004	1016.4
5.0000	11.054	10.488	14.109	17.181	19.150	20.775	22.810	24.535	31.233	34.564	36.494	40.807	1270.4
6.0000	12.877	12.186	16.204	19.537	21.706	23.478	25.807	27.775	35.014	38.683	40.795	45.503	1524.5
7.0000	14.752	13.926	18.339	21.925	24.292	26.203	28.822	31.034	38.800	42.792	45.082	50.165	1778.6
8.0000	16.682	15.710	20.521	24.354	26.920	28.966	31.870	34.330	42.601	46.921	49.381	54.832	2032.7
9.0000	18.665	17.543	22.752	26.830	29.592	31.775	34.958	37.671	46.438	51.080	53.710	59.520	2286.8
10.0000	20.702	19.426	25.035	29.352	32.314	34.632	38.098	41.057	50.323	55.280	58.074	64.240	2540.9
11.0000	22.793	21.356	27.368	31.919	35.085	37.537	41.289	44.488	54.257	59.517	62.467	69.001	2795.0
12.0000	24.934	23.333	29.750	34.535	37.903	40.489	44.531	47.963	58.238	63.795	66.900	73.809	3049.1

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.054	0.128	0.147	0.150	0.156	0.201	0.264	0.324	0.368	0.131	0.112	0.122	3.1761
0.0160	0.071	0.164	0.190	0.195	0.203	0.263	0.349	0.439	0.543	0.169	0.144	0.159	4.0654
0.0200	0.089	0.204	0.239	0.245	0.256	0.332	0.441	0.558	0.712	0.212	0.179	0.199	5.0818
0.0250	0.109	0.254	0.299	0.307	0.321	0.416	0.554	0.701	0.904	0.263	0.222	0.249	6.3522
0.0320	0.137	0.324	0.383	0.393	0.412	0.534	0.710	0.897	1.156	0.333	0.279	0.319	8.1309
0.0400	0.167	0.404	0.479	0.492	0.516	0.666	0.886	1.116	1.436	0.410	0.342	0.397	10.164
0.0500	0.203	0.504	0.597	0.613	0.643	0.825	1.100	1.380	1.770	0.503	0.417	0.492	12.704
0.0600	0.237	0.601	0.712	0.730	0.765	0.975	1.304	1.630	2.087	0.592	0.488	0.584	15.245
0.0700	0.269	0.695	0.822	0.842	0.882	1.118	1.498	1.868	2.388	0.676	0.555	0.672	17.786
0.0800	0.299	0.784	0.926	0.948	0.993	1.251	1.681	2.093	2.672	0.755	0.618	0.755	20.327
0.0900	0.327	0.868	1.024	1.049	1.098	1.377	1.854	2.304	2.942	0.830	0.678	0.834	22.868
0.1000	0.353	0.948	1.117	1.144	1.197	1.495	2.018	2.505	3.198	0.901	0.735	0.908	25.409
0.1250	0.412	1.125	1.326	1.360	1.422	1.762	2.389	2.963	3.788	1.063	0.864	1.075	31.761
0.1600	0.481	1.332	1.572	1.614	1.687	2.080	2.837	3.517	4.508	1.258	1.018	1.270	40.654
0.2000	0.544	1.523	1.802	1.852	1.937	2.385	3.273	4.059	5.219	1.446	1.167	1.453	50.818
0.2500	0.608	1.717	2.037	2.096	2.196	2.708	3.740	4.646	5.997	1.646	1.325	1.639	63.523
0.3200	0.680	1.936	2.306	2.375	2.498	3.094	4.307	5.364	6.960	1.881	1.511	1.851	81.309
0.4000	0.747	2.141	2.559	2.641	2.789	3.478	4.879	6.094	7.947	2.111	1.692	2.052	101.64
0.5000	0.818	2.357	2.833	2.928	3.107	3.906	5.522	6.915	9.060	2.361	1.888	2.266	127.05
0.6000	0.881	2.546	3.078	3.187	3.395	4.299	6.110	7.666	10.080	2.586	2.064	2.459	152.45
0.7000	0.941	2.721	3.313	3.434	3.667	4.670	6.665	8.376	11.038	2.797	2.231	2.642	177.86
0.8000	0.998	2.887	3.540	3.672	3.934	5.035	7.196	9.055	11.950	3.001	2.390	2.818	203.27
0.9000	1.055	3.046	3.762	3.904	4.194	5.390	7.718	9.720	12.823	3.198	2.544	2.991	228.68
1.0000	1.110	3.201	3.979	4.133	4.451	5.737	8.224	10.358	13.682	3.390	2.693	3.161	254.09
1.2500	1.247	3.573	4.501	4.681	5.067	6.563	9.414	11.841	15.662	3.852	3.055	3.572	317.61
1.6000	1.437	4.068	5.191	5.404	5.877	7.635	10.923	13.704	18.099	4.467	3.543	4.122	406.54
2.0000	1.655	4.614	5.936	6.185	6.745	8.762	12.481	15.611	20.543	5.141	4.086	4.729	508.18
2.5000	1.935	5.282	6.825	7.118	7.767	10.065	14.251	17.751	23.249	5.956	4.753	5.471	635.22
3.2000	2.344	6.217	8.026	8.379	9.128	11.767	16.515	20.471	26.656	7.069	5.680	6.494	813.09
4.0000	2.832	7.306	9.380	9.793	10.642	13.627	18.951	23.381	30.268	8.332	6.745	7.662	1016.4
5.0000	3.471	8.716	11.084	11.566	12.526	15.915	21.913	26.895	34.580	9.924	8.101	9.143	1270.4
6.0000	4.137	10.181	12.821	13.372	14.437	18.213	24.862	30.374	38.812	11.549	9.491	10.660	1524.5
7.0000	4.828	11.702	14.600	15.220	16.389	20.543	27.835	33.865	43.044	13.215	10.920	12.218	1778.6
8.0000	5.542	13.278	16.424	17.110	18.390	22.919	30.855	37.396	47.305	14.924	12.389	13.816	2032.7
9.0000	6.280	14.905	18.294	19.048	20.440	25.346	33.937	40.987	51.617	16.680	13.902	15.457	2286.8
10.0000	7.041	16.575	20.211	21.033	22.538	27.827	37.081	44.644	55.994	18.483	15.457	17.140	2540.9
11.0000	7.823	18.286	22.169	23.062	24.682	30.362	40.285	48.371	60.446	20.330	17.053	18.864	2795.0
12.0000	8.628	20.037	24.170	25.133	26.872	32.952	43.549	52.165	64.975	22.222	18.690	20.628	3049.1

$^{257}_{103}Lw$ IONS

ELECTRONIC STOPPING POWER IN UNITS OF MEV/(MG/SQ CM)

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=257 MEV
0.0125	10.319	8.536	6.254	4.159	3.377	3.064	2.839	2.627	1.670	1.429	1.313	1.126	3.2137
0.0160	11.999	9.926	7.272	4.836	3.927	3.563	3.301	3.054	1.942	1.662	1.527	1.309	4.1136
0.0200	13.751	11.376	8.334	5.542	4.500	4.084	3.784	3.500	2.225	1.904	1.750	1.500	5.1420
0.0250	15.760	13.038	9.551	6.352	5.158	4.680	4.336	4.012	2.550	2.182	2.011	1.719	6.4275
0.0320	18.303	15.171	11.106	7.386	6.008	5.464	5.042	4.665	2.965	2.543	2.343	2.010	8.2272
0.0400	20.926	17.425	12.728	8.490	6.924	6.313	5.817	5.384	3.424	2.947	2.711	2.329	10.284
0.0500	23.895	20.029	14.588	9.774	8.009	7.294	6.725	6.229	3.953	3.435	3.166	2.721	12.855
0.0600	26.612	22.519	16.307	10.991	9.034	8.202	7.583	7.028	4.501	3.914	3.612	3.106	15.426
0.0700	29.115	24.905	17.917	12.148	10.034	9.102	8.421	7.812	5.017	4.390	4.067	3.494	17.997
0.0800	31.454	27.255	19.440	13.278	10.984	9.953	9.195	8.554	5.540	4.860	4.491	3.869	20.568
0.0900	33.655	29.539	20.891	14.373	11.908	10.821	9.965	9.275	6.079	5.317	4.930	4.251	23.139
0.1000	35.759	31.793	22.280	15.440	12.833	11.630	10.694	10.003	6.595	5.770	5.347	4.612	25.710
0.1250	40.599	37.458	25.534	17.976	15.014	13.609	12.512	11.720	7.852	6.869	6.422	5.554	32.137
0.1600	46.584	45.278	29.690	21.258	17.874	16.211	14.875	13.955	9.501	8.343	7.823	6.829	41.136
0.2000	52.674	53.457	34.027	24.738	20.927	18.953	17.388	16.299	11.297	9.970	9.357	8.167	51.420
0.2500	59.393	62.474	38.997	28.819	24.490	22.229	20.357	19.070	13.454	11.894	11.153	9.749	64.275
0.3200	67.656	73.506	45.346	34.145	29.157	26.618	24.260	22.673	16.234	14.420	13.536	11.903	82.272
0.4000	75.979	84.346	51.969	39.601	34.092	31.182	28.427	26.556	19.333	17.202	16.162	14.188	102.84
0.5000	85.171	95.713	59.560	46.040	39.905	36.630	33.354	31.090	22.990	20.489	19.268	16.975	128.55
0.6000	92.346	104.004	65.867	51.574	44.921	41.365	37.544	34.976	26.149	23.383	22.033	19.563	154.26
0.7000	98.650	110.739	71.537	56.514	49.432	45.569	41.277	38.487	29.044	25.968	24.537	21.747	179.97
0.8000	104.113	116.073	76.667	61.103	53.590	49.603	44.850	41.783	31.740	28.520	26.910	23.920	205.68
0.9000	109.142	120.609	81.328	65.225	57.499	53.351	48.146	44.812	34.402	30.905	29.197	26.025	231.39
1.0000	113.559	124.341	85.575	69.230	61.101	56.736	51.260	47.665	36.797	33.118	31.321	27.983	257.10
1.2500	122.763	131.471	94.651	77.614	69.096	64.363	58.021	53.857	42.309	38.145	36.062	32.276	321.37
1.6000	132.125	138.491	104.364	87.144	77.856	72.742	65.541	60.531	48.529	43.937	41.537	37.258	411.36
2.0000	139.034	145.093	112.215	95.046	85.395	80.121	71.817	66.543	53.863	49.150	46.457	41.856	514.20
2.5000	143.755	150.629	118.512	101.802	92.084	86.514	77.388	71.818	59.019	53.686	50.960	46.220	642.75
3.2000	146.266	154.508	123.016	107.024	97.429	91.647	82.175	76.024	63.476	58.063	55.111	50.067	822.72
4.0000	145.763	155.231	124.584	109.509	100.290	94.434	85.091	78.488	66.403	60.797	57.931	52.699	1028.4
5.0000	142.958	153.240	123.880	109.758	101.086	95.388	85.973	79.531	68.134	62.188	59.586	54.383	1285.5
6.0000	139.423	149.904	121.873	108.711	100.302	95.061	85.799	79.339	68.005	62.765	60.083	55.209	1542.6
7.0000	135.373	146.236	119.376	106.961	98.844	93.949	84.996	78.669	68.045	62.553	60.046	55.271	1799.7
8.0000	131.579	142.437	116.751	105.076	97.254	92.467	84.061	77.640	67.482	62.228	59.777	55.107	2056.8
9.0000	128.200	138.703	114.159	103.085	95.551	90.984	82.765	76.601	66.783	61.646	59.248	54.796	2313.9
10.0000	124.846	135.120	111.669	101.284	93.802	89.447	81.407	75.600	65.885	61.083	58.850	54.383	2571.0
11.0000	121.772	131.938	109.310	99.472	92.258	87.995	80.124	74.659	65.149	60.558	58.481	53.890	2828.1
12.0000	118.976	128.828	107.089	97.665	90.704	86.635	78.925	73.677	64.360	59.970	57.828	53.330	3085.2

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	23.452	10.006	6.629	6.229	5.535	3.652	2.239	1.588	1.048	8.386	10.669	8.142	3.2137
0.0160	26.760	11.286	7.585	7.134	6.341	4.283	2.654	1.891	1.255	9.693	12.333	9.315	4.1136
0.0200	29.836	12.251	8.476	7.984	7.142	4.959	3.092	2.250	1.505	11.018	14.010	10.409	5.1420
0.0250	33.239	13.190	9.475	8.931	8.080	5.798	3.706	2.703	1.958	12.512	15.922	11.634	6.4275
0.0320	37.872	14.371	10.651	10.140	9.263	6.941	4.509	3.399	2.366	14.438	18.414	13.216	8.2272
0.0400	42.640	15.503	11.876	11.430	10.526	8.223	5.448	4.175	2.966	16.483	21.027	14.892	10.284
0.0500	48.285	16.980	13.406	13.041	12.137	9.788	6.594	5.135	3.720	18.876	24.070	16.951	12.855
0.0600	54.464	18.638	15.116	14.611	13.812	11.366	7.729	6.082	4.468	21.215	27.085	19.046	15.426
0.0700	60.739	20.569	16.842	16.358	15.516	12.936	8.815	7.006	5.178	23.543	30.029	21.285	17.997
0.0800	67.457	22.648	18.682	18.157	17.282	14.522	9.953	7.932	5.890	25.894	32.990	23.639	20.568
0.0900	74.161	24.881	20.577	20.055	19.094	16.107	11.072	8.858	6.560	28.244	35.911	26.071	23.139
0.1000	81.543	27.359	22.681	21.968	20.898	17.712	12.231	9.736	7.219	30.590	38.900	28.585	25.710
0.1250	101.369	33.832	27.959	26.938	25.738	21.729	14.963	11.924	8.860	36.615	46.599	35.211	32.137
0.1600	131.529	43.853	35.985	34.678	32.897	27.404	18.794	14.964	11.104	45.337	57.600	45.426	41.136
0.2000	167.074	55.464	45.426	43.623	41.241	33.517	22.798	18.102	13.373	54.920	69.688	57.336	51.420
0.2500	211.366	69.961	56.741	54.635	51.009	40.323	27.259	21.371	15.716	66.062	83.727	72.067	64.275
0.3200	269.354	87.926	71.510	68.246	62.441	47.840	31.923	24.895	18.184	79.899	101.484	90.601	82.272
0.4000	324.288	107.057	85.022	80.812	73.173	54.620	36.119	28.115	20.476	93.181	118.646	107.888	102.84
0.5000	379.994	126.268	98.096	93.331	83.503	61.407	40.501	31.626	23.050	106.791	136.333	125.196	128.55
0.6000	418.257	140.297	106.178	100.909	90.172	65.933	43.736	34.119	24.964	116.058	148.926	136.148	154.26
0.7000	439.237	150.943	111.025	105.517	94.429	68.962	46.141	35.912	26.540	122.686	157.668	142.573	179.97
0.8000	450.032	157.933	114.156	108.866	97.290	71.147	48.147	37.567	27.907	127.573	163.760	146.740	205.68
0.9000	455.435	162.330	116.299	110.850	98.569	72.707	49.610	39.200	29.115	131.344	168.430	149.155	231.39
1.0000	461.251	166.786	119.035	112.959	100.637	74.536	51.345	40.905	30.379	134.610	172.434	151.640	257.10
1.2500	470.417	176.146	125.413	119.734	106.388	79.791	56.034	45.243	34.169	141.693	179.932	158.730	321.37
1.6000	471.726	184.724	133.377	127.533	114.174	87.144	62.514	50.825	39.345	148.719	186.081	165.730	411.36
2.0000	464.568	190.428	141.166	134.433	121.641	94.485	69.012	56.668	44.549	154.856	190.765	171.127	514.20
2.5000	447.976	192.582	147.074	139.963	129.178	102.157	75.848	63.167	50.249	159.517	193.056	174.213	642.75
3.2000	430.555	191.290	151.679	144.790	134.456	108.869	82.790	68.889	55.234	162.750	193.996	176.528	822.72
4.0000	411.126	185.879	151.992	145.763	137.042	112.125	85.963	72.383	58.554	162.706	191.734	175.289	1028.4
5.0000	393.939	179.007	149.771	144.197	135.897	112.607	87.583	73.956	60.701	160.301	187.679	171.946	1285.5
6.0000	379.025	172.329	14[illegible].491	140.885	133.451	111.392	87.017	73.977	60.937	156.485	182.688	167.332	1542.6
7.0000	366.485	166.411	143.013	137.880	130.359	109.588	86.190	73.536	60.763	152.683	177.752	163.307	1799.7
8.0000	354.924	160.533	139.518	134.614	127.142	107.294	84.411	72.386	60.127	148.741	172.792	159.132	2056.8
9.0000	343.618	156.169	135.963	131.283	124.205	105.026	82.765	71.121	59.363	144.753	167.927	154.913	2313.9
10.0000	333.891	152.429	132.998	128.420	121.496	102.736	81.184	69.793	58.403	141.150	163.484	151.200	2571.0
11.0000	324.652	148.881	130.189	125.707	118.930	100.565	79.687	68.538	57.388	137.840	159.484	147.788	2828.1
12.0000	315.912	145.534	127.543	123.152	116.513	98.522	78.282	67.359	56.436	134.718	155.600	144.570	3085.2

$^{257}_{103}$Lw IONS

RANGE IN UNITS OF MG/SQ CM

ENERGY PER MASS UNIT MEV/AMU	BE	C	AL	TI	NI	GE	ZR	AG	EU	TA	AU	U	ENERGY FOR A=257 MEV
0.0125	0.144	0.138	0.162	0.197	0.199	0.237	0.241	0.255	0.319	0.344	0.354	0.385	3.2137
0.0160	0.183	0.178	0.211	0.258	0.265	0.313	0.323	0.345	0.442	0.487	0.509	0.571	4.1136
0.0200	0.226	0.221	0.264	0.326	0.337	0.396	0.411	0.440	0.569	0.632	0.665	0.755	5.1420
0.0250	0.276	0.274	0.328	0.409	0.424	0.498	0.517	0.555	0.720	0.802	0.846	0.968	6.4275
0.0320	0.343	0.345	0.416	0.523	0.545	0.640	0.664	0.712	0.928	1.035	1.093	1.253	8.2272
0.0400	0.416	0.422	0.514	0.652	0.683	0.801	0.831	0.890	1.166	1.300	1.372	1.573	10.284
0.0500	0.500	0.514	0.631	0.809	0.854	0.998	1.036	1.110	1.463	1.630	1.721	1.972	12.855
0.0600	0.580	0.601	0.743	0.961	1.021	1.190	1.237	1.324	1.757	1.958	2.067	2.366	15.426
0.0700	0.655	0.683	0.851	1.108	1.184	1.377	1.432	1.532	2.046	2.279	2.407	2.754	17.997
0.0800	0.726	0.761	0.954	1.249	1.342	1.557	1.621	1.733	2.328	2.593	2.740	3.133	20.568
0.0900	0.793	0.834	1.052	1.385	1.495	1.731	1.804	1.928	2.602	2.899	3.064	3.503	23.139
0.1000	0.858	0.904	1.147	1.516	1.643	1.898	1.981	2.116	2.868	3.195	3.378	3.861	25.710
0.1250	1.008	1.065	1.370	1.821	1.991	2.291	2.398	2.560	3.494	3.897	4.122	4.711	32.137
0.1600	1.197	1.260	1.652	2.207	2.432	2.788	2.928	3.122	4.289	4.790	5.067	5.788	41.136
0.2000	1.391	1.453	1.942	2.600	2.884	3.293	3.470	3.699	5.100	5.700	6.030	6.883	51.420
0.2500	1.609	1.662	2.266	3.035	3.385	3.852	4.073	4.340	5.995	6.705	7.095	8.095	64.275
0.3200	1.882	1.916	2.668	3.568	4.000	4.533	4.811	5.127	7.084	7.926	8.390	9.566	82.272
0.4000	2.160	2.169	3.072	4.097	4.610	5.206	5.543	5.909	8.154	9.125	9.663	11.009	102.84
0.5000	2.473	2.448	3.518	4.676	5.273	5.933	6.338	6.759	9.304	10.411	11.028	12.558	128.55
0.6000	2.758	2.701	3.918	5.187	5.858	6.572	7.037	7.509	10.306	11.532	12.216	13.900	154.26
0.7000	3.023	2.937	4.284	5.652	6.387	7.149	7.671	8.188	11.207	12.537	13.281	15.098	179.97
0.8000	3.277	3.163	4.625	6.081	6.875	7.678	8.254	8.813	12.030	13.454	14.250	16.190	205.68
0.9000	3.518	3.380	4.951	6.488	7.329	8.178	8.796	9.395	12.790	14.299	15.144	17.193	231.39
1.0000	3.748	3.590	5.259	6.870	7.762	8.645	9.314	9.951	13.512	15.102	15.994	18.145	257.10
1.2500	4.291	4.091	5.971	7.745	8.749	9.706	10.490	11.217	15.138	16.907	17.903	20.280	321.37
1.6000	4.996	4.756	6.874	8.836	9.973	11.018	11.945	12.788	17.118	19.099	20.221	22.868	411.36
2.0000	5.752	5.480	7.822	9.964	11.231	12.361	13.440	14.405	19.125	21.307	22.557	25.466	514.20
2.5000	6.659	6.347	8.934	11.267	12.677	13.902	15.160	16.260	21.400	23.803	25.193	28.382	642.75
3.2000	7.897	7.523	10.420	12.987	14.572	15.917	17.411	18.689	24.332	27.018	28.580	32.113	822.72
4.0000	9.303	8.849	12.079	14.883	16.649	18.124	19.866	21.347	27.494	30.473	32.213	36.110	1028.4
5.0000	11.082	10.514	14.145	17.225	19.199	20.830	22.868	24.596	31.311	34.649	36.583	40.905	1285.5
6.0000	12.902	12.209	16.237	19.578	21.751	23.528	25.860	27.831	35.086	38.762	40.877	45.595	1542.6
7.0000	14.773	13.945	18.368	21.961	24.333	26.248	28.870	31.085	38.865	42.864	45.156	50.248	1799.7
8.0000	16.699	15.727	20.545	24.386	26.955	29.006	31.912	34.374	42.659	46.984	49.447	54.906	2056.8
9.0000	18.679	17.556	22.773	26.857	29.622	31.809	34.994	37.708	46.488	51.135	53.768	59.584	2313.9
10.0000	20.711	19.434	25.050	29.373	32.338	34.659	38.126	41.087	50.365	55.325	58.122	64.294	2571.0
11.0000	22.797	21.360	27.377	31.935	35.102	37.558	41.310	44.509	54.289	59.553	62.504	69.044	2828.1
12.0000	24.933	23.332	29.754	34.543	37.912	40.502	44.543	47.976	58.260	63.819	66.926	73.840	3085.2

MEV/AMU	H	HE	N	O	NE	AR	KR	XE	RN	MYLAR	$(CH_2)_n$	WATER	MEV
0.0125	0.054	0.128	0.147	0.150	0.156	0.202	0.264	0.324	0.367	0.132	0.112	0.123	3.2137
0.0160	0.071	0.164	0.191	0.195	0.204	0.264	0.349	0.439	0.542	0.170	0.145	0.159	4.1136
0.0200	0.089	0.205	0.240	0.245	0.257	0.332	0.442	0.558	0.712	0.212	0.180	0.200	5.1420
0.0250	0.110	0.255	0.300	0.308	0.322	0.417	0.555	0.701	0.904	0.264	0.223	0.250	6.4275
0.0320	0.138	0.325	0.385	0.395	0.414	0.535	0.711	0.898	1.156	0.334	0.280	0.320	8.2272
0.0400	0.168	0.406	0.481	0.493	0.518	0.667	0.888	1.117	1.436	0.412	0.343	0.398	10.284
0.0500	0.204	0.506	0.599	0.615	0.645	0.827	1.102	1.381	1.771	0.505	0.419	0.494	12.855
0.0600	0.238	0.603	0.714	0.732	0.768	0.978	1.306	1.633	2.089	0.594	0.490	0.586	15.426
0.0700	0.270	0.698	0.824	0.845	0.885	1.121	1.501	1.871	2.390	0.678	0.557	0.675	17.997
0.0800	0.300	0.787	0.929	0.952	0.997	1.255	1.685	2.096	2.675	0.758	0.621	0.758	20.568
0.0900	0.329	0.872	1.028	1.053	1.102	1.381	1.859	2.309	2.945	0.834	0.681	0.837	23.139
0.1000	0.355	0.952	1.122	1.149	1.202	1.500	2.023	2.510	3.203	0.905	0.738	0.912	25.710
0.1250	0.414	1.130	1.332	1.365	1.427	1.769	2.396	2.970	3.795	1.068	0.868	1.079	32.137
0.1600	0.483	1.338	1.579	1.620	1.694	2.088	2.846	3.527	4.518	1.264	1.023	1.276	41.136
0.2000	0.547	1.530	1.810	1.860	1.946	2.394	3.284	4.071	5.232	1.453	1.173	1.460	51.420
0.2500	0.611	1.725	2.047	2.106	2.206	2.719	3.754	4.661	6.014	1.654	1.331	1.647	64.275
0.3200	0.683	1.946	2.316	2.386	2.509	3.107	4.324	5.384	6.982	1.891	1.519	1.860	82.272
0.4000	0.751	2.152	2.572	2.654	2.802	3.494	4.899	6.118	7.974	2.121	1.701	2.062	102.84
0.5000	0.823	2.369	2.846	2.943	3.122	3.925	5.545	6.943	9.094	2.373	1.898	2.278	128.55
0.6000	0.886	2.559	3.094	3.202	3.412	4.319	6.137	7.699	10.120	2.600	2.075	2.471	154.26
0.7000	0.946	2.736	3.330	3.451	3.685	4.693	6.695	8.412	11.083	2.812	2.243	2.655	179.97
0.8000	1.004	2.902	3.558	3.691	3.953	5.060	7.229	9.096	12.000	3.017	2.403	2.833	205.68
0.9000	1.061	3.063	3.781	3.925	4.216	5.417	7.755	9.765	12.878	3.216	2.558	3.007	231.39
1.0000	1.117	3.219	4.000	4.154	4.474	5.766	8.264	10.407	13.742	3.409	2.708	3.177	257.10
1.2500	1.254	3.593	4.524	4.705	5.093	6.597	9.459	11.897	15.733	3.873	3.072	3.591	321.37
1.6000	1.444	4.090	5.218	5.431	5.907	7.673	10.976	13.769	18.180	4.491	3.562	4.143	411.36
2.0000	1.663	4.637	5.965	6.215	6.777	8.803	12.538	15.680	20.631	5.166	4.106	4.752	514.20
2.5000	1.944	5.306	6.855	7.149	7.800	10.109	14.310	17.824	23.342	5.982	4.774	5.495	642.75
3.2000	2.353	6.241	8.057	8.410	9.162	11.811	16.575	20.545	26.748	7.096	5.702	6.518	822.72
4.0000	2.841	7.329	9.409	9.823	10.675	13.669	19.009	23.452	30.358	8.358	6.766	7.685	1028.4
5.0000	3.479	8.737	11.111	11.594	12.556	15.954	21.968	26.961	34.665	9.947	8.120	9.164	1285.5
6.0000	4.144	10.200	12.845	13.397	14.464	18.248	24.911	30.435	38.890	11.570	9.507	10.679	1542.6
7.0000	4.833	11.718	14.621	15.241	16.413	20.575	27.879	33.920	43.114	13.233	10.934	12.234	1799.7
8.0000	5.546	13.291	16.441	17.129	18.410	22.946	30.893	37.444	47.367	14.939	12.401	13.829	2056.8
9.0000	6.282	14.915	18.308	19.063	20.456	25.368	33.969	41.027	51.670	16.691	13.910	15.466	2313.9
10.0000	7.041	16.581	20.220	21.043	22.549	27.843	37.106	44.677	56.037	18.490	15.462	17.146	2571.0
11.0000	7.822	18.288	22.174	23.067	24.688	30.373	40.303	48.394	60.478	20.333	17.054	18.867	2828.1
12.0000	8.625	20.035	24.170	25.133	26.872	32.956	43.558	52.179	64.996	22.220	18.687	20.626	3085.2

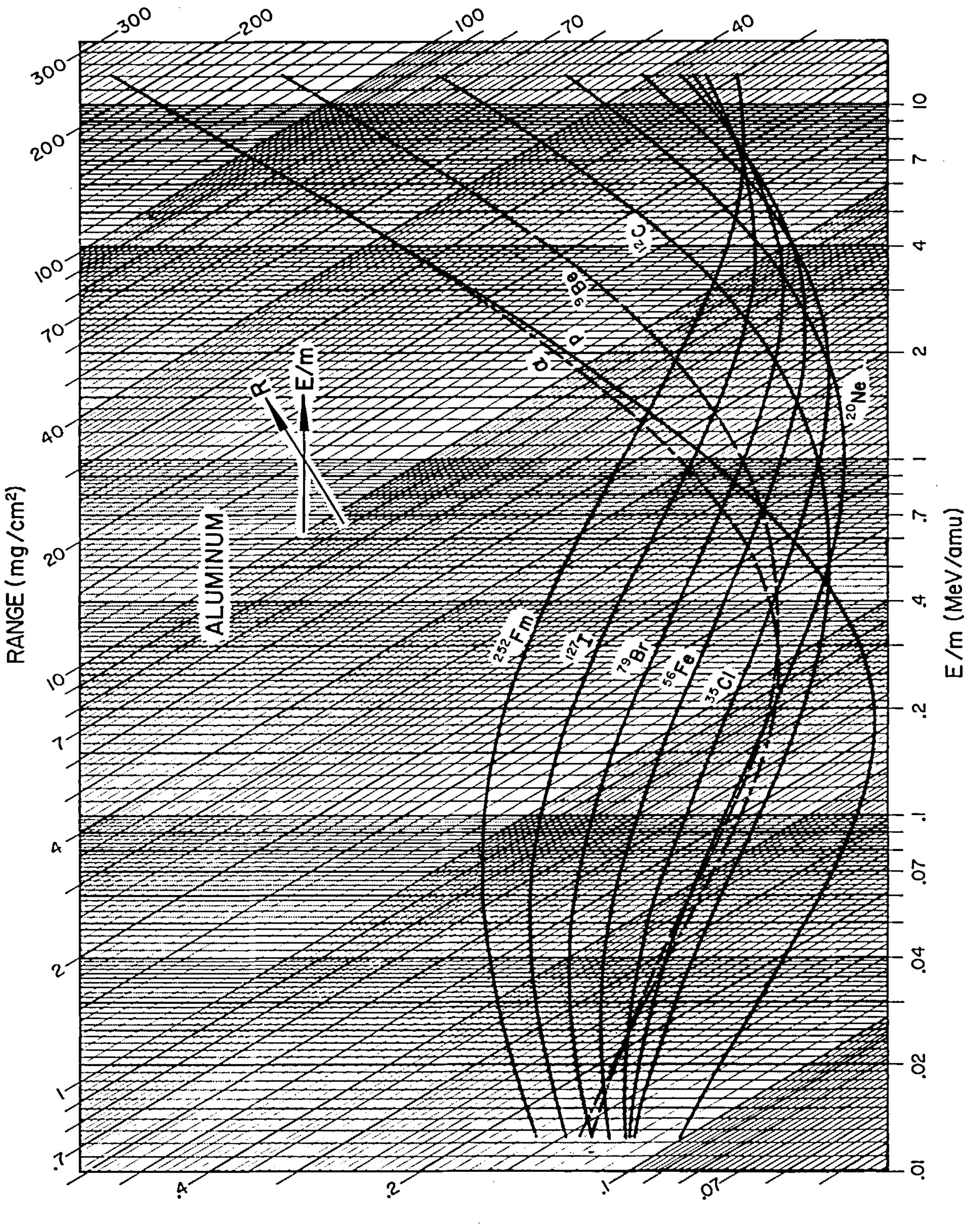

Fig. 14. Range - Energy Curves for Various Ions in Aluminum

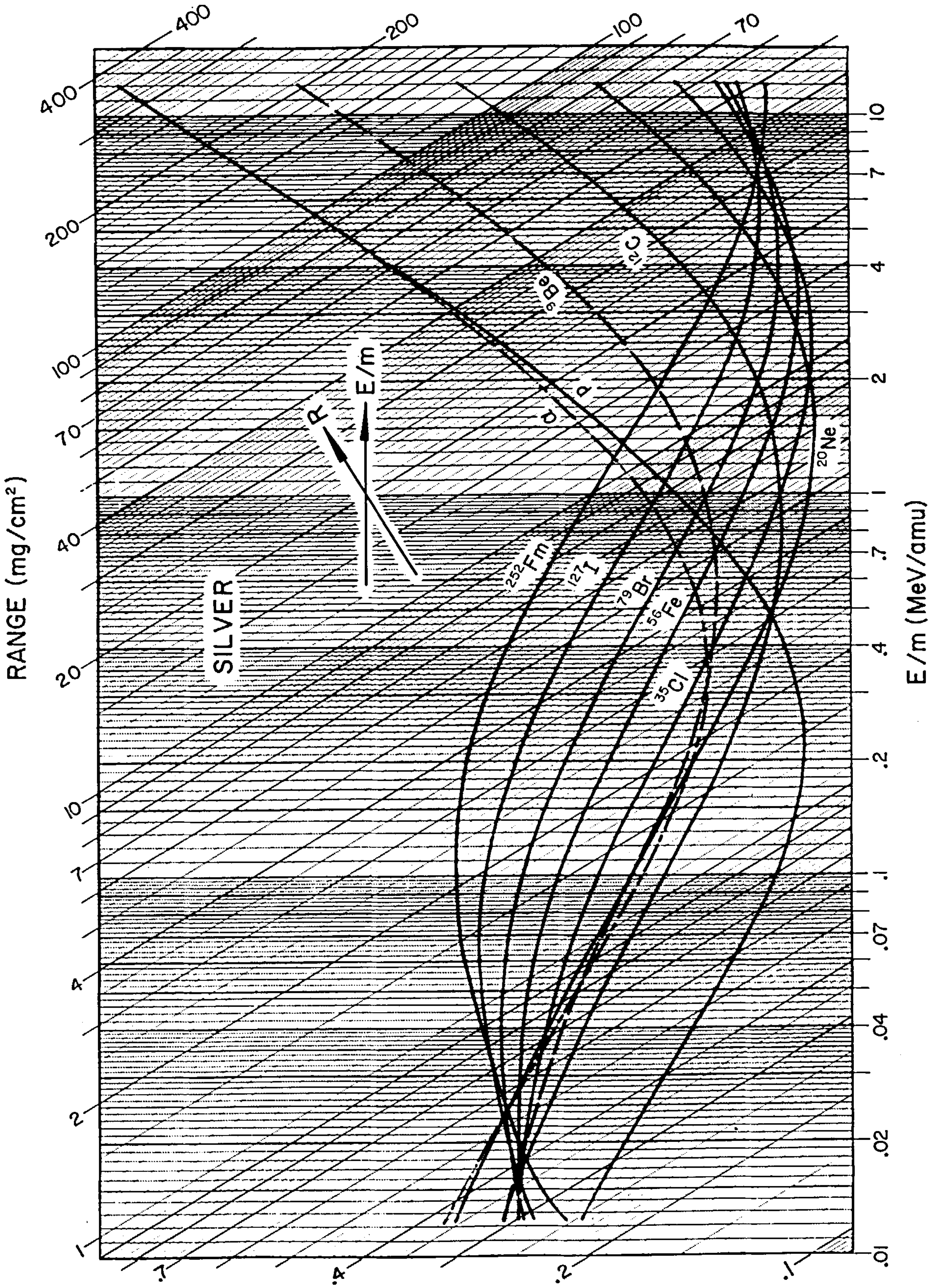

Fig. 15. Range – Energy Curves for Various Ions in Silver

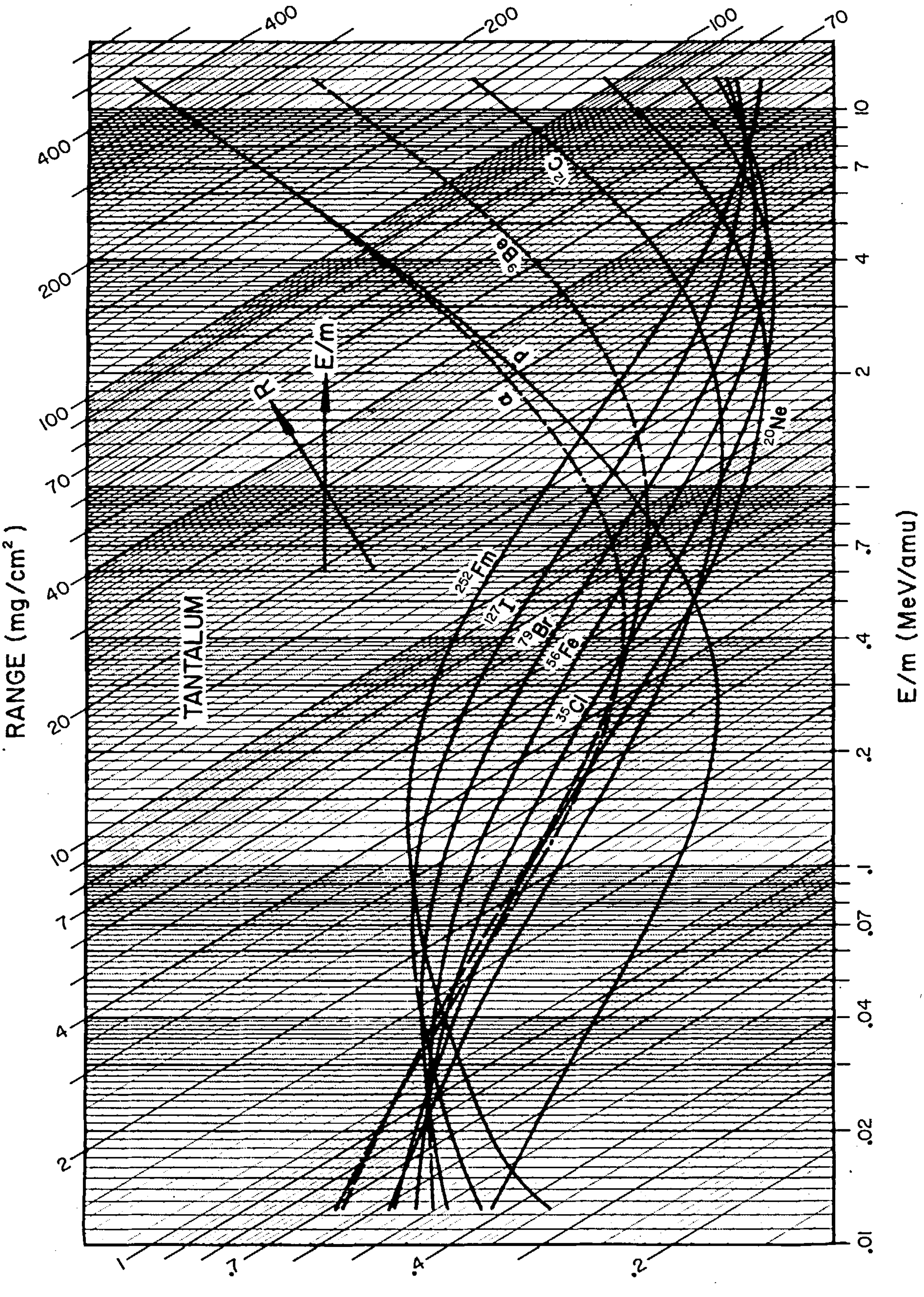

Fig. 16. Range - Energy Curves for Various Ions in Tantalum

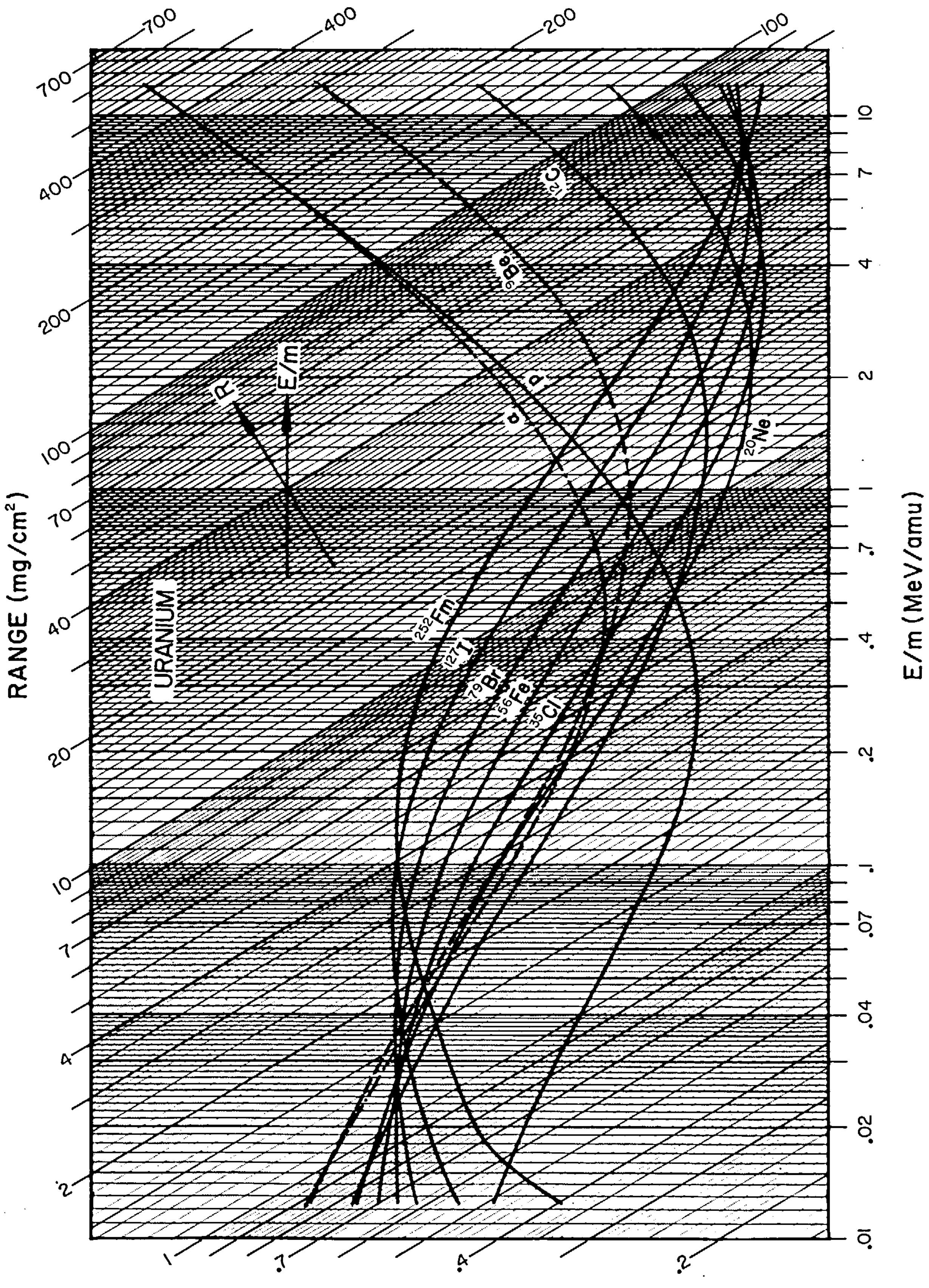

Fig. 17. Range - Energy Curves for Various Ions in Uranium