

SPARC WORKSHOP

September 6 – 11, 2005, Piaski, Poland

PROGRAM

Tuesday, September 6

20:00

Welcome

Wednesday, September 7

9.00 Gerhard Soff's Contribution to Atomic Physics in Strong Fields J. Kluge, GSI-Darmstadt
Status of the SPARC Project Th. Stöhlker, GSI-Darmstadt
The FAIR-Project: A Status Report T. Beier, GSI-Darmstadt
Storage Rings at FAIR P. Beller, GSI-Darmstadt

11:00 *Coffee Break*

11:30 Relativistic Quantum Dynamics of Ions in Extremely Strong Laser Pulses C. Keitel, MPI Heidelberg
High Energy Density Physics Opportunities at New Lasers and Accelerators D. Schneider, LLNL Livermore
Atoms and Ions in Intense Laser Fields R. Moshhammer, MPI Heidelberg

13:00 *Lunch Break*

16:30 STATUS REPORTS FROM THE WORKING GROUPS

18:00 *Dinner Break*

19:30 RELATED FIELDS

Physics Program of the LASPEC Collaboration J. Kluge, GSI-Darmstadt
(Laser Spec. for the Study of Nucl. Properties)
Nuclear Physics Program at NESR H. Simon, GSI-Darmstadt

Thursday, September 8

9:00 Laser Cooling and Laser Experiments at SIS300 U. Schramm, LMU München
Precision Laser Spectroscopy at SIS300 H. Backe, Univ. Mainz
High Resolution Laser Spectroscopy and Test of G. Huber, Univ. Mainz
Special Relativity

11:00 *Coffee Break*

11:30 High Quality X-Ray Lasers J. Dunn, LLNL Livermore
High Repetition Rate X-Ray Lasers J. Janulewicz, MBI. Berlin
Microcalorimeters E. Silver, Harvard Smithsonian

13:00 *Lunch Break*

16:30 WORKING GROUP THEORY
Convener: S. Fritzsche, G. Plunien

Double-Photoionization of Inner-Shell Electrons A. Nefiodov, TU Dresden
QED Calculations of Transition Probabilities in A. Volotka, TU Dresden
Multicharged Ions

Additional Contributions and Discussion

18:00 *Dinner Break*

19:30 RELATED FIELDS

Physics Program of the MATS Collaboration K. Blaum, Univ. Mainz
(Measurements with Adv. Trapping Systems)
Biophysics Program at FAIR M. Scholz, GSI-Darmstadt
Plasma Physics Program at FAIR J. Jacoby, Univ. Frankfurt

Friday, September 9

- 9:00 Ion-Electron Collisions
Relativistic Atomic Collisions
Atomic Physics Experiments at Relativistic Energies
A. Müller, Univ. Giessen
A. Voitkiv, MPI Heidelberg
R. Schuch, Univ. Stockholm
- 11:00 *Coffee Break*
- 11:30 Pair Creation in Strong Laser Pulses
Photon Spectroscopy at Electron Coolers/Targets
Experiments Using In-Ring Electron Targets
C. Müller, MPI Heidelberg
M. Pajek, AS-Kielce
M. Lestinsky, MPI Heidelberg
- 13:00 *Lunch Break*
- 16:30 HITRAP: A Status Report
g-Factor Experiments
The Program of the FLAIR Collaboration
O. Kester, Univ. Frankfurt
W. Quint, GSI Darmstadt
E. Widmann, Univ. Wien
- 18:00 *Dinner Break*
- 19:30 - 21:00 WORKING GROUP ELECTRON/RECOIL SPECTROSCOPY
Convener: S. Hagmann, R. Mann
- Effects of Relativistic Collisions in Solids
Techniques for Kinematically Complete
Experiments at Storage Rings
Electron Spectroscopy in Relativistic Collisions
Additional Contributions and Discussion
H. Rothard, CIRIL-GANIL
A. Dorn, MPI Heidelberg
G. Lanzano, Univ. Catania

Saturday, September 10

- 9:00 Theory of g-factor in HCl
QED in Laser Fields
QED Calculations of He-like Ions
- 11:00 *Coffee Break*
- 11:30 Test of Fundamental Symmetries in HCl
Polarization and Alignment
Photon Spectroscopy of Cooled HCl
- 13:00 *Lunch Break*
- 16:30 WORKING GROUP PHOTON SPECTROSCOPY
Convener: Th. Stöhlker
- Correlated Double Electron Capture
State Selective Population of HCl at Relativistic
Energies
Recombination into Bare and H-like Uranium
at Cooling Conditions
- Additional Contributions and Discussion*
- 18:00-
19:30 COLLABORATION MEETING ON ORGANIZATION
AND FINANCES OF SPARC
- 19:45 Farewell Dinner
- V. Yerokin, St. Petersburg
State University
U. Jentschura, MPI Heidelberg
A. Artemyev, St. Petersburg
State University
- G. Plunien, TU Dresden
S. Fritzsche, Univ. Kassel
Th. Stöhlker, GSI-Darmstadt
- A. Warczak, Univ. Cracow
J. Rzakiewicz, A. Soltan Inst.
of Nucl. Studies, Swierk
R. Reuschl, GSI-Darmstadt