

*** SPARC NEWSLETTER ***

With respect to the FAIR-project, we have busy weeks behind us. A recent financial evaluation of the FAIR Start Version in the summer revealed a considerable cost increase. Thus a new strategy towards the realization of FAIR was required. For this purpose a modular version of FAIR with modules 0-6 was created in order to proceed. For SPARC this means that some parts will be operational earlier (high energy cave) and some parts will be delayed (NESR). To ensure that projects can move forward, the ESR and HITRAP will be available for experiments until NESR is being built. A document about these changes in the time plan was produced in consultation with the collaboration spokespersons. An international committee reviewed these new plans and its impact on the science output of FAIR on October 15.-16. The report from the committee arrived a few days ago and was overwhelmingly positive. For more about the status of the FAIR project you may check the FAIR newsletter in <http://www-win.gsi.de/FAIR-newsletter/>.

Some working groups of SPARC have started to produce their "**Technical Design Reports (TDR)**" (e.g. electron target, internal target, charge separators). If you have questions and are eager to contribute please contact the person for the individual working group: (http://www.gsi.de/fair/experiments/sparc/workgroups_e.html)

A TDR is essential for obtaining financial support from FAIR and your local research agency.

Below please find the report of the 5th SPARC Symposium and Collaboration Meeting, September 1. to 4. 2009 in Lisbon

Stockholm/Darmstadt, Oct. 29. 2009
Reinhold Schuch and Thomas Stöhlker

Report on the 5th SPARC Collaboration Symposium

The 5th SPARC (Stored Particles Atomic physics Research) Collaboration Symposium, organized by the SPARC board and Atomic and Molecular Division of the Portuguese Physical Society, took place from the 1st to 4th of September in the Universidade de Lisboa in Costa Caparica south of Lisbon. The local coordinators were José Santos from the Universidade Nova de Lisboa and A. Costa from Universidade de Lisboa. The meeting was attended by 74 SPARC members.

The talks and some pictures are available on the conference web page <http://sparc2009.df.fct.unl.pt/>.

The symposium reviewed the present status of the scientific, technical, and financial issues of the SPARC collaboration. The new modular plan for FAIR and its implications for SPARC were discussed. Reviews on the latest progress in precision x-ray spectroscopy and their ramifications for HITRAP and other SPARC working groups were given. New theoretical results on nuclear excitation by electron capture plus several scenarios for corresponding nuclear physics experiments were presented. Enhanced sensitivity QED tests via hyperfine-structure experiments were proposed. The latest progress in very high resolution experiments for resonances in electron-ion collisions in

storage rings was discussed. The Institute of Modern Physics in Lanzhou described impressive progress they have made at the CSR storage rings and in the transition to full operation. The role of photoionization during high intensity laser-plasma interaction was analyzed. Correspondingly new results on the heating mechanism studied in laser-cluster interaction were presented. A large number of status reports on experiments from other active working groups were presented in talks and two poster sessions. At the collaboration meeting it was announced that TDRs are now being written for the micro-cluster target and micro-calorimeter detectors.



Numerous and fruitful discussions took place during the meeting and even continued during the conference tour to the picturesque Old Quarters of Lisboa and the remarkable Museu Nacional do Azulejo and the world famous museum of Fayence.

Lanzhou generously offered to host the next collaboration meeting next year in conjunction with the HCI in Shanghai. This was unanimously accepted by the collaboration. At a board meeting the spokesperson, deputy spokesperson and local contact persons were re-elected. The board also elected a second deputy spokesperson, Fred Currell from Belfast.