

TRENDS IN ION PHYSICS

September 19-21, 2012, AlbaNova University Center, Physics Department, Stockholm University (SU), Stockholm Sweden

Scope: New trends in ion physics including reports on the trapping, storage, cooling, guiding, and focusing of ions and other charged particles for collision experiments, spectroscopy, and precision mass measurements and related theory. Relativistic and low energy ion collisions, interactions with photons including attosecond pulses, free electron laser pulses and antihydrogen formation.

Lectures in room FB42, AlbaNova University Center, main building

Participation in the scientific part of the symposium is open and free of charge.

Wednesday September 19th

18:00-20:00 Registration and Reception in the AlbaNova central hall at the main entrance.

Thursday September 20th, morning session (session chair Henrik Cederquist, SU)

09:15-09:30 Welcome address Sven Mannervik, Head of Department, Physics Department, Stockholm University

09:30-10:00 Hans Jürgen Kluge, University of Mainz/GSI, Germany
“From SMILETRAP to HITRAP: Penning trap mass spectrometry with highly charged ions”

10:00-10:30 COFFEE, posters

10:30-11:00 Klaus Blaum, MPIK, Heidelberg, Germany
“High precision mass measurements on exotic ions”

11:00-11:30 Roger Hutton, Fudan University, Shanghai, China
“Trapped in Shanghai – spectroscopy with the Shanghai Electron Beam Ion Trap”

11:30-13:00 Lunch at AlbaNova for invited guests

Thursday September 20th, afternoon session (session chair Eva Lindroth, SU)

13:00-13:30 Itzhak Tserruya, Weizmann Institute of Science, Rehovot, Israel
“Relativistic heavy ion collisions: from RHIC to LHC”

13:30-14:00 Paul Indelicato, Laboratoire Kastler Brossel, CNRS. Paris, France
“New ideas for tests of fundamental theories with ions”

14:00-14:30 Thomas Stöhlker, GSI, Germany ***“Relativistic and QED effects in atomic spectroscopy – experiments with ions at GSI”***

14:30-15:30 COFFEE, posters and discussions

15:30-16:00 Reinhard Dörner, Frankfurt University, Frankfurt, Germany
"Hot Ions Cold Recoils"

16:00-16:30 Stanislav Tashenov, GSI, Darmstadt, Germany
"Dynamics of radiative processes in relativistic atomic collisions studied via photon polarimetry"

16:30-17:00 Svante Jonsell, Stockholm University "Antihydrogen"

19:00- Dinner at AlbaNova for invited guests

Friday 21st, morning session (session chair Mats Larsson, SU)

09:00-09:30 Joachim Ullrich, Physikalische Technische Bundesanstalt, Braunschweig, Germany
"New science avenues at novel light sources"

09:30-10:00 Lew Cocke, Kansas State University, Manhattan, Kansas, USA
" Probing simple systems with Attosecond pulses"

10:00-10:30 COFFEE and posters

10:30-11:00 Alfred Müller, Giessen University, Giessen, Germany
"Interactions of free and quasi-free electrons with ions"

11:00-11:30 Andreas Wolf, MPIK, Heidelberg, Germany
"Electron cooling and electron-ion recombination"

11:30-13:00 Lunch at AlbaNova for invited guests

Friday 21st, afternoon session (session chair Henning Schmidt, SU)

13:00-13:30 Nikolaus Stolterfoht, Hahn Meitner Institute, Berlin
"Guided transmission of charged particles through nanocapillaries in insulating materials"

13:30 -14:00 Michael Schulz, University of Missouri, Rolla, Missouri, USA
"Interference and coherence phenomena in atomic collisions"

14:00-14:30 Håkan Danared, Lund University, Lund, Sweden
"The European Spallation Source ESS – a neutron factory for science in Lund"

14:30-15:00 COFFEE

15:00-15:30 Horst Schmidt-Böcking, Frankfurt University, Frankfurt, Germany
"The reaction microscope – recent results"

15:30-15:45 Henrik Cederquist, Stockholm University
"The cryogenic electrostatic ion storage ring DESIREE – a new user facility for Ion Physics"

15:45-16:15 Concluding Remarks, Henrik Cederquist and Reinhold Schuch

16:15-17:30 AlbaNova Laboratory visits – the DESIREE facility

17:30 End of Symposium