

## Wilhelm and Else Heraeus – Physics School

### Highly Charged Ions and Antiprotons

Atomic physics, fundamental symmetries and interactions

April 4-12, 2008 – Physikzentrum Bad Honnef

Dear colleagues,

we would like to draw your attention to our WE Heraeus Physics School ' Highly Charged Ions and Antiprotons - Atomic physics, fundamental symmetries and interactions', which will be held April 4-12, 2008 at the Physikzentrum Bad Honnef.

The future accelerator facility FAIR (Facility for Antiproton and Ion Research) in Darmstadt, Germany, opens many new exciting possibilities in experimental atomic physics and related fields. The facility will not only supply beams of highly relativistic, highly charged heavy ions, but also beams of antiprotons with unprecedented intensities. This gives unique opportunities to test our most basic understanding of nature, like the standard model of particle physics (e.g. CPT-invariance) or QED in strong electromagnetic fields.

The physics school will give a comprehensive overview of the current state of atomic physics with heavy, highly charged ions and antiprotons as well as related fields like antimatter and gravitation. Future research programs at FAIR in the field of atomic physics with highly-charged ions (the SPARC-collaboration <http://www.gsi.de/sparc>) and with antiprotons (the FLAIR collaboration <http://www.gsi.de/flair> ) will be presented.

Topics include:

- Storage Rings and Traps
- Highly Charged Ions and Quantum Electrodynamics
- Antiprotons and Antihydrogen
- Gravity and Antimatter

Invited speakers:

- G. Baur, Forschungszentrum Jülich
- F. Bosch, GSI Darmstadt
- G. Gabrielse, Harvard University
- P. Indelicato, ENS Paris
- M. deKieviet, Heidelberg University
- C. Lämmerzahl, Bremen University
- R. Lehnert, MIT
- R. Schuch, Stockholm University
- J. Ullrich, MPIK Heidelberg
- E. Widmann, Akademie der Wissenschaften Wien
- Y. Yamazaki, Tokyo University

The school mainly addresses PhD students and Diploma students in their final semesters working in related fields. The students will also be given the opportunity to present their own research relevant to the field. Costs for students are €100,- including accommodations and meals. For further information and registration see

[www.gsi.de/forschung/ap/conferences/hcia/](http://www.gsi.de/forschung/ap/conferences/hcia/)

or contact S. Lüttges, E-Mail: s.luettg@gsi.de, Phone: +49-6159-712721

**The deadline for applications is February 15, 2007.**

Best regards

Harald Bräuning (GSI Darmstadt, Gießen University)  
Wolfgang Quint (GSI Darmstadt, Heidelberg University)  
Thomas Stöhlker (GSI Darmstadt, Heidelberg University)  
Jochen Walz (Mainz University)