



EINLADUNG  
zum  
VERA - SEMINAR  
von

**Eberhard WIDMANN**

Stefan Meyer Institute for Subatomic Physics  
Austrian Academy of Sciences, Vienna

## **FLAIR - A Facility for Low-energy Antiproton and Ion Research**

The future accelerator facility for beams of ions and antiprotons at Darmstadt [1] will provide antiproton beams of intensities that are two orders of magnitude higher than currently available. Within the foreseen scheme, antiprotons can be decelerated to 30 MeV. The low-energy antiproton community has recently formed a users group to make use of this opportunity to create a next-generation low-energy antiproton facility called FLAIR. A letter of intent [2] has been submitted for a new facility that goes far beyond the current Antiproton Decelerator at CERN by providing cooled antiproton beams using two storage rings of 300 keV and 20 keV minimum energy. The availability of low-emittance beams at these low energies will greatly enhance the density of antiprotons stopped in dilute gases or ion traps for precision spectroscopy. FLAIR will also provide slow extracted (i.e. continuous) beams of antiprotons, thereby enabling nuclear and particle physics type experiments which need coincidence techniques. Using internal targets in the storage rings, atomic collision experiments with ultra-low energy antiprotons and ions can be performed for the first time.

The letter of intent for FLAIR as well as the technical proposal [3] have been positively evaluated by the APPA PAC and the STI committee of FAIR, and FLAIR has been added to the core part of FAIR. If funding can be secured, FLAIR will provide antiproton and ion beams from the year 2014.

[1] *An International Accelerator Facility for Beams of Ions and Antiprotons, Baseline Technical Report* (2006), GSI. Available from <http://www.gsi.de/fair/index.html/>.

[2] *FLAIR letter of intent* (2004), available from <http://www.oeaw.ac.at/smi/flair/>.

[3] *FLAIR Technical Proposal* (2005), available from <http://www.oeaw.ac.at/smi/flair/>.

**Donnerstag, 8. März 2007, 16:30 Uhr**

**1090 Wien, Währinger Str. 17, "Kavalierstrakt",  
1. Stock, Seminarraum von VERA**