

An international ATHENA workshop “Prospects in Neutron Time-of-Flight” will be held March 18-21 2013 at the Darmstadtium in Darmstadt, Germany. This workshop will bring together researchers to discuss recent developments in the science, techniques, and facilities for neutron-induced reaction measurements, with a particular focus on neutron capture. Facilities such as n\_TOF, GELINA, and FRANZ in Europe and LANSCE and DANCE in North America make new measurements and science accessible with unprecedented neutron intensities and sophisticated detector schemes. Together with the new opportunities, come new challenges in all phases of the measurements, from the sample, to data acquisition, to interpretation and maximizing the physics output.

The workshop at the Darmstadtium will focus on questions of new opportunities these facilities provide and the science questions they can answer

- Instrumentation in place and being developed to fully utilize the neutron beams
- Challenges encountered in background suppression, event reconstruction, and signal processing
- Reconstruction of correlated information whether all from photons such as Q-value, multiplicity, and single energies or from a combination of photons and charged particles detected in coincidence
- Development of auxiliary or hybrid detector schemes to extract additional physics from the reaction
- Nuclear theory being developed or used to interpret the results and more fully exploit them
- Opportunities for enhanced collaboration between facilities

It is planned that there will be overviews of the different facilities to discuss their strengths and limitations as well as to give an introduction to how run an experiment at the facility. Further, the workshop will be designed to give ample time for informal discussions for a free-form exchange of ideas and build collaborations. We particularly encourage PhD students, post-docs, and young researchers to attend.

**Date and Place:**

The Workshop will be held at the Darmstadtium in Darmstadt, Germany, which is easy to reach from the most important German Airport Frankfurt/Main (FRA). Talks will be scheduled from Monday morning, the 19th, through Wednesday afternoon.

**Registration:**

Registration is through the [workshop website](http://exp-astro.physik.uni-frankfurt.de/meetings/athena-neutron-time-of-flight/)

<http://exp-astro.physik.uni-frankfurt.de/meetings/athena-neutron-time-of-flight/>

The registration deadline is

**28. February 2013, 24:00 Central European Time**

**Costs, Support, and Lodging:**

There is no registration fee for the workshop, and all local costs (meals and accommodations) will be covered. Recommendations for local hotels in walking distance of the Darmstadtium will be provided. The financial support during the workshop is limited to 50 participants. If there are more than 50 registrants, those registrants offering a contribution will be accepted

first.

**Organizers:**

**Aaron Couture**

LANSCE-NS

Los Alamos National Laboratory

Phone: +01 505 667 1730

Email: [acouture@lanl.gov](mailto:acouture@lanl.gov)

**René Reifarth**

Institut für Angewandte Physik

Goethe-Universität Frankfurt am Main

Phone: +49 69 798 47442

Email: [reifarth@physik.uni-frankfurt.de](mailto:reifarth@physik.uni-frankfurt.de)

**Kerstin Sonnabend**

Institut für Angewandte Physik

Goethe-Universität Frankfurt am Main

Phone: +49 69 798 47467

Email: [sonnabend@iap.uni-frankfurt.de](mailto:sonnabend@iap.uni-frankfurt.de)