

ABNP 2014

Workshop on Accelerator based Neutron Production

April 14th-15th, 2014

Laboratori Nazionali di Legnaro (Padova), Italy

FIRST CIRCULAR

The workshop "ABNP2014" will be held from 14th to 15th April 2014, at Laboratori Nazionali di Legnaro, Legnaro ITALY. The Conference programme will begin on Monday, April 14th at 9.00 and will close on Tuesday, April 15th in the afternoon. The Workshop is organized in the framework of the Accelerator Application Network Activity (Work Package 4 of Eucard2 project), to foster knowledge of the applications capability of accelerators.

SCOPE OF THE WORKSHOP

The focus of the workshop will be on the perspectives of intense neutron sources, in particular the requirements for the neutron spectra, the technological challenge of target with concentrated power deposition, and on their applications. Subtopics are:

- Target cooling.
- High power beams (with cyclotrons or RFQ/ESQ or other accelerators).
- BNCT (boron neutron capture therapy).
- Isotope preparation.
- Spectra of neutrons (epithermal, thermal, few MeV, or other).

The scope of the workshop covers:

- comparison of liquid targets and strongly cooled solid targets, cooling by liquid metals, safety of target in relation to site;
- design of target for BNCT optimized spectra, spectra peaked to low energy neutron, neutron moderator;
- production of medical isotopes with accelerators, BNCT applications, high power beam accelerators;
- other applications of Accelerator based neutron production, including SEE (Single Event Effects) radiation damage studies in electronics and detectors calibration, Gen-IV-reactor-like neutron spectrum emulators for nuclear transmutation studies and integral cross section measurements, material science application, neutron sources for art and heritages investigations.

SCIENTIFIC PROGRAMME

The scientific programme will consist of invited and contributed oral presentations. Presenters are encouraged to submit the title and the abstract of their possible talk, as will be detailed in the second circular.

VENUE and TRAVEL

The meeting will be held at the Laboratori Nazionali di Legnaro of the INFN, Viale dell'Università 2, LEGNARO (Padova), Italy. Legnaro is only 10 Km (6 miles) from Padova. Details on transportation and routes to Legnaro are available on the [conference web page](#). A bus service between the hotels in Padova and Legnaro will be organized daily for Conference participants.

REGISTRATION and ACCOMMODATION

Details about registration and accommodation in Padova hotels will be soon available on the [Conference website](#). Registration will open from January 20, 2014.

The second circular will be available on the Conference website and e-mailed by January 20, 2014.

We would be grateful if you could bring this announcement to the attention of your colleagues.

Looking forward to seeing you at Laboratori Nazionali di Legnaro,
The Organizing Committee

International Scientific Committee

M. Cavenago (Chair), *INFN Legnaro, Italy*
R. Edgecock, *Uddersfield University, UK*
A. Lombardi, *CERN, Switzerland*
H. Owen, *Manchester University, UK*

Organizing Committee

M. Cavenago (Chair), *INFN Legnaro, Italy*
J. Esposito, *INFN Legnaro, Italy*
E. Fagotti, *INFN Legnaro, Italy*
T. Kulevoy, *ITEP Moscow, Russia*
A. Pisent, *INFN Legnaro, Italy*

Conference Secretaries

Anna D'Este, *INFN Legnaro, Italy*
Michela Menegolo, *INFN Legnaro, Italy*

Sponsored by:



and



**Accelerator Application Network Activity
Work Package 4**

EuCARD-2 is an Integrating Activity Project for coordinated Research and Development on Particle Accelerators, co-funded by the European Commission under the FP7 Capacities Programme

CONTACT ADDRESS

e-mail: abnp2014@lnl.infn.it

web page: <http://abnp2014.lnl.infn.it/>