University of Pavia

Ph.D. School of Electrical and Electronics Engineering and Computer Science

SEMINAR

SPES: THE INFN RADIOACTIVE BEAM FACILITY FOR NUCLEAR PHYSICS

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Abstract:

The SPES project at Laboratori di Legnaro of INFN (Italy) is concentrating on the production of neutron-rich radioactive nuclei for nuclear physics experiment, by the Uranium fission at a rate of 1013 fission/s . The emphasis to neutron-rich isotopes is justified by the fact that this vast territory has been little explored. The Radioactive Ion Beam (RIB) will be produced by ISOL technique using the proton induced fission on a Direct Target of UCx.

The most critical element of the SPES project is the Multi-Foil Direct Target. Up to day the proposed target represents an innovation in term of capability to sustain the primary beam power.

During the talk will be presented the status of the project, financed by INFN, and in the construction phase at Legnaro. In particular developments related the target and the ion-source activities using the surface ion source, plasma ion source, laser ion source techniques it will be reported. Finally test e results on handling of the target system it will be shown.

Bio:

Alberto Andrighetto got the Master Degree and the PhD in Physics from Università di Padova. Since 2002, he is working at Laboratori Nazionali Legnaro Italy as INFN Researcher (Tecnologo). He is involved in the SPES Project an accelerator based facility to be built in Legnaro intended to provide intense neutron-rich radioactive ion beams, in the range of masses between A=80 and A=160. He is the Target Group Coordinator of this INFN Project . He is also the LNL Research and Development Coordinator and the SPES Target Group Leader.

Organizer

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