



Contribution ID: 12

Type: **not specified**

Ongoing and planned β -delayed neutron measurements with BELEN for astrophysics, nuclear structure and reactor technology

Wednesday, 23 May 2012 11:00 (45 minutes)

A new neutron counter BELEN (BEta deLayEd Neutron) is being developed within the DESPEC-NUSTAR experiment for the future FAIR facility by the UPC-Barcelona, IFIC-Valencia and GSI-Darmstadt/Giessen U. collaboration. Meanwhile the detector is being employed at several installations for the study of beta-delayed neutron emission probabilities P_n . The commissioning of the detector and first experiment was performed at the IGISOL separator of JYFL-Jyvaskyla using the Penning trap to produce pure isotopic beams of nuclei relevant for reactor technology and nuclear structure studies. An enhanced version of the detector has been used at an experiment performed at the GSI fragment separator FRS to study delayed neutron emitters of astrophysical interest close to the r-process path regions leading to the 2nd and 3rd abundance peaks. The analysis of these experiments is still ongoing. New experiments are already scheduled at JYFL of interest in technology and astrophysics and new proposals are being discussed. The detector is currently being upgraded and a future enhancement thanks to the collaboration of JINR-Dubna is expected. A description of the detector and of the ongoing work will be presented.

Primary author: Dr TAIN, Jose L. (Instituto de Fisica Corpuscular, CSIC-Univ. Valencia)

Presenter: Dr TAIN, Jose L. (Instituto de Fisica Corpuscular, CSIC-Univ. Valencia)

Session Classification: beta-dn