

Service de Physique Nucléaire



Séminaire

le vendredi 14 decembre 2012 à 11h

CEA Saclay, Orme des Merisiers, Bât. 703, Salle 135

Gamma-ray spectroscopy experiments at the RIBF : Recent results and perspectives

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In the Radioactive Isotope Beam Factory (RIBF) stable primary beams of energies up to 345 MeV/nucleon are used to produce radioactive isotope beams via in-flight separation with the BigRIPS fragment separator. For gamma-ray spectroscopy experiments these radioactive beams are either incident on a secondary target for in-beam experiments or stopped to measure isomeric or beta-delayed gamma-emission.

The first in-beam gamma-ray experiments performed at the RIBF targeted the "Island of Inversion", a region in which the standard ordering of shells is disturbed by neutron intruder configuration across the N=20 shell gap. Recent experiments include the first spectroscopy of ^{54}Ca and the regions around the doubly-magic ^{78}Ni , and $^{100,132}\text{Sn}$ nuclei. For stopped beams, the EURICA spectrometer has been commissioned in April 2012 and first experiments were performed around ^{100}Sn in July 2012 and ^{238}U fission fragments were studied in November/December 2012.

Besides showing (preliminary) selected results from these first experiments and a description of the gamma-ray spectroscopy setups, an outlook on future gamma-ray spectroscopy campaigns at the RIBF will be given.

Le café sera servi 10 minutes avant

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