

Physics opportunities with the SPIRAL upgrade



ID de Contribution: 18

Type: **Oral contribution**

Mass measurements of light neutron-rich nuclei with SPIRAL1 beams

mardi 9 février 2016 11:00 (25 minutes)

Mass spectrometry of short-lived neutron-rich nuclei give access to observables like $2n$ separation energies, which are sensitive to nuclear structure (shell effects, deformations, ...) and therefore allows to probe the nuclear force far from stability. The SPIRAL1 upgrade offers the possibility to access masses of exotic nuclei which are currently either unknown or measured with large uncertainties. Different physics cases will be presented.

Penning traps and MR-TOFs are nowadays the instruments of choice to measure atomic masses with high precision. Performances of these two different systems will be described. The possibility of installing PILGRIM at LIRAT for the commissioning would allow to measure masses in the near future. On a longer term, such measurements are foreseen at DESIR with MLLTRAP or an MR-TOF with more possibilities thanks to the high-quality and high-purity beams delivered to DESIR.

Auteur principal: Mme ASCHER, Pauline (CENBG)

Orateur: Mme ASCHER, Pauline (CENBG)

Classification de Session: DESIR Physics