ID de Contribution: 58

## Nuclei at the mirror: study of energy differences between analogue excited states

lundi 8 octobre 2012 14:00 (40 minutes)

The study of isospin symmetry in nuclei as a function of angular momentum is a very powerful tool to understand nuclear

properties in rotating nuclei. These studies have become feasible in the last decade due to recent experimental developments in the identification of proton-rich nuclei produced with very low cross sections. Contemporaneously,

state-of-the-art shell-model codes have been produced for the description of these data. The synergy between theory and

experiment for the study of energy differences of mirror and isobaric analogue nuclei in the mass region between A  $\sim 30$ 

and A ~ 70 allows the investigation of the evolution of the nuclear wave functions with increasing spin. The alignment

process, changes of the nuclear shape and the intrinsic configuration, together with the evidence of isospin-non-conserving terms of the nuclear interaction are examples of the type of phenomena that can be studied from

the analysis of Coulomb energy differences.

A review of the different results on what we can learn from mirror energy differences will be given, together with an

outlook on current and future developments.

Auteur principal: LENZI, Silvia (University of Padua and INFN)

Orateur: LENZI, Silvia (University of Padua and INFN)

Classification de Session: Nuclear structure at the proton dripline

**Classification de thématique:** Nuclear structure at the proton dripline