



Contribution ID: 52

Type: Oral

Coulomb excitation at LNL with the SPIDER-GALILEO set-up: present status and future perspective

Low-energy Coulomb excitation is one of the simplest and well known tools to study the nuclear shape, for this reason is widely used at radioactive beam facilities. In particular in the case of ISOL facilities the energy and the intensity of the available beams are suitable for low-energy Coulomb excitation. The SPES facility for the acceleration of radioactive beams will soon provide the first exotic beams at the INFN Legnaro National Laboratories (Padua). With this in mind, the gamma spectroscopy group in Florence has developed and assembled a new particle detector to be used for Coulomb excitation studies of both stable and radioactive beams at LNL. The Silicon Pie DETector (SPIDER) has been coupled to the GALILEO array of germanium detectors, and different experiments have been already performed.

In this talk the performances of the setup, a brief summary of the experiments already performed and the future perspectives with both the available stable beams at LNL and the future radioactive beams by SPES, will be presented.

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