

Neutron monopole drift towards ^{78}Ni investigated by γ -spectroscopy following ^{81}Cu β -decay

Monday, 12 September 2011 14:15 (15 minutes)

We propose to investigate the beta decay of the neutron rich $N=52$ nucleus ^{81}Cu for EURICA campaign, in order to observe for the first time the low lying excited states in the $N=51$ isotone ^{81}Zn . $N=51$ odd isotones constitute the best cases to study the neutron single particle effective energy evolution towards ^{78}Ni . The study of ^{81}Zn level sequence will provide critical data to predict the neutron single particle sequence in the ^{78}Ni field. It is expected in that way to shed light on the structure of ^{78}Ni itself, which could be the most neutron rich example of a doubly magic nucleus in the nuclide chart. The study will be performed at RIBF with EURICA detectors.

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Session Classification: Neutron-Rich I