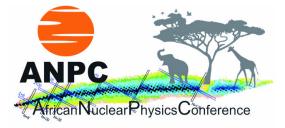
African Nuclear Physics Conference



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Type: Invited Talk

In-beam gamma spectroscopy with fast RI beams at RIKEN

The presentation will address nuclear structure and shell evolution at extreme isospin values, studied via in-beam gamma-ray spectroscopy at intermediate energies following knockout reactions on a thick liquid hydrogen target. Besides an introduction of the setup, key results will be presented that demonstrate the close cooperation between experiment and nuclear structure and reaction theory.

Particular emphasis will be laid on spectroscopy of the neutron-rich Ca isotopes 54,56Ca, in which the significance of 3N forces can be studied, and the assumed doubly magic nucleus 78Ni. The excitation spectrum of the latter provides first hints of the breakdown of magic neutron number N=50 and magic proton number Z=28 towards more excotic isotones and isotopes.

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