

Exploring the collectivity around the $N = 82$ shell closure via relativistic Coulomb excitation of the $Z = 50$ $^{130,136}\text{Sn}$ isotopes

Friday, 12 April 2019 11:00 (15 minutes)

We propose to study excited states in the isotopes $^{130,136}\text{Sn}$ the direct neighbors of ^{132}Sn by gamma-ray spectroscopy following relativistic Coulomb excitation. The experiment aims to investigate the evolution of collectivity and nuclear structure around and the magic-shell closure at $N = 82$ for tin isotopes ($Z = 50$) via the determination of the reduced transition probabilities, in particular $B(E2; 0^+ \rightarrow 2^+)$. The fragments of interest are produced by impinging a 345 A MeV ^{238}U beam onto a ^9Be target and the following identification with the BigRIPS spectrometer. The identification of beam-like and target-like particles after the secondary target is performed by the ZeroDegree spectrometer. Gamma-rays from the deexcitation of beam and target-like particles are detected with the MINIBALL array.

Primary author: REITER, Peter

Presenter: REITER, Peter

Session Classification: Proposals