Contribution ID: **122** Type: **Oral presentation**

Investigating shape transitions in neutron rich ruthenium

Tuesday 17 June 2025 11:15 (15 minutes)

The changes of nuclear deformation across the nuclear chart are among the fundamental questions in nuclear structure. The neutron rich region around mass 100 is particularly interesting for its rapid shape transitions, which make it a good testing ground for various theoretical models. The ruthenium chain is believed to contain one of the strongest cases for highly deformed triaxial shape close to the ground state, but experimental transition probabilities in the γ band are needed to verify this. Through lifetime measurements with the recoil distance Doppler-shift method, conducted at GANIL in 2017, we have obtained new transition probabilities in the γ bands of ¹¹⁰Ru and ¹¹²Ru. We compare these with microscopic beyond-mean-field calculations and use the generalized triaxial rotor model to gain insight into the angular momenta.

Author: HEINES, Johannes Sørby (Nuclear Physics Group, University of Oslo)

Co-authors: GÖRGEN, Andreas (University of Oslo); MODAMIO, Victor (University of Oslo)

Presenter: HEINES, Johannes Sørby (Nuclear Physics Group, University of Oslo)

Session Classification: Parallell A2