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## Evolution of triaxiality in the mass 110 region

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Strong triaxiality is rare in the nuclear chart, and such nuclei can serve as useful tests of theoretical predictions. The breaking of axial symmetry also enables phenomena which cannot occur in symmetrically deformed nuclei, making it an interesting phenomenon to study. The neutron rich region around mass 110 presents several cases of strong triaxiality, namely in the ruthenium, molybdenum and palladium chains. Ruthenium especially is considered one of the best examples of strong triaxial deformation near the ground state in the entire nuclear chart.

This contribution presents new results from an experiment performed at GANIL to measure lifetimes of excited states in this region with the recoil distance Doppler-shift method. The studied nuclei were populated in a fusion-fission reaction, and identified event by event in the Variable Mode Spectrometer (VAMOS++). The Advanced Gamma Tracking Array (AGATA) provided high resolution gamma spectra of the decaying fission fragments.

We present new  $B(E2)$  values for transitions in 108–112Ru, and compare them with phenomenological triaxial rotor predictions and fully microscopic symmetry conserving configuration mixing calculations. Triaxiality is shown to be increasing from 108Ru to 112Ru, with the latter exhibiting near maximum triaxiality. The results are consistent with a simultaneous transition from  $\gamma$  soft to  $\gamma$  rigid deformation. New results for molybdenum and palladium isotopes will also be presented.

### Type of contribution

Regular Abstract

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