Coulomb Excitation of Radioactive Mo-Ru Isotopes

J.M. ALLMOND, ORNL, GRETINA-CHICO2 COLLABORATION — The study of shapes in atomic nuclei has been a major focus of nuclear structure ever since the observation of large electric quadrupole moments in the first half of the 20th century. A leading challenge has been to experimentally establish regions of oblate deformation, which are very limited, and triaxial deformation. The neutron-rich Mo-Ru region is expected to exhibit triaxial deformation in the low-lying states, mediated by a relatively rare instance of prolate-to-oblate shape evolution. A survey of equipment, techniques, and preliminary results from recent Coulomb-excitation and beta-decay experiments in the neutron-rich Mo-Ru region will be presented. These experiments were conducted at the CARIBU-ANL facility using GRETINA-CHICO2. An emphasis will be placed on unique opportunities with 3-MeV/u beams.

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