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Investigation of the structure of neutron-deficient Cd isotopes
ANNA SIMON, P. HUMBY, C.W. BEAUSANG, University of Richmond, J.T. BURKE, R.J. CASPERSON, Lawrence Livermore National Laboratory, M. MCCLESKEY, A. SAASTAMOINEN, Texas A&M University, J.M. ALLMOND, Oak Ridge National Laboratory, R. CHYZH, M. DAG, Texas A&M University, J. KOGLIN, Lawrence Livermore National Laboratory, S. OTA, Rutgers University, T.J. ROSS, University of Kentucky — The STARLITER setup at Texas A&M University consists of an array of six Compton suppressed HPGe clover γ-ray detectors coupled with a segmented Si ΔE-E charged particle telescope. The combination allows for coincident γ ray and particle spectroscopy and provides a powerful tool for precise determination of the nuclear level structure. A recent experiment conducted using STARLITER aimed at the investigation of structures of neutron-deficient Cd isotopes (A = 104, 105, 106) using an enriched ^{106}Cd target and 35 MeV proton beam supplied by the K-150 Cyclotron at TAMU. Low mass cadmium isotopes are a great environment for analysis of the evolution from vibrational to rotational sequences in A$\sim$100-110 region and provide insight into the structure phenomena around Z=50 shell closure. Here, the first results of the experiment will be presented. This work was partly supported by the US Department of Energy Grants No. DE-FG52-06NA26206 and No. DE-FG02-05ER41379.

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