Abstract Submitted
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γ-ray spectroscopy of ^{213,214}Th using SASSYER[1] TAN AHN, ANDREAS HEINZ, JING QIAN, RYAN WINKLER, ROBERT CASPERSON, GABRIELA ILIE, DAVID MCCARTHY, AXEL SCHMIDT, J. RUSSELL TERRY, ELIZABETH WILLIAMS, WNSL, Yale University — Data for excited states have been scarce in the proton-rich region above ^{208}Pb near the $N = 126$ shell closure due to the low fusion cross section and high fission background present when producing these nuclei, but measurements of new excited states have helped elucidate the local single particle structure and can be a good test for various nuclear models. A recent measurement by Khuyagbaatar et al. (Eur. Jour. Phys. A 34 335 (2007)) of the first excited states of ^{213,214}Th, including the discovery of an (8^+) isomer, helped shed light on the single particle structure in the region. These excited states have been identified through the observation of γ rays coming from the decay of the (8^+) isomeric state. An experiment to extend the known levels and transitions in these nuclides by measuring prompt γ rays from ^{213,214}Th has been performed at the WNSL at Yale University. The gas-filled separator SASSYER was used to identify γ rays from the nuclei of interest by gating on evaporation residue recoils and their subsequent known alpha decays, a technique known as recoil-decay tagging. Current results from this experiment will be presented.

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