Abstract Submitted
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Nuclear structure studies of ^{202}Hg and ^{203}Tl using deep-inelastic collisions[1] EMILY GASS, Stony Brook University, E. A. MCCUTCHAN, A. A. SONZOGNI, Brookhaven National Laboratory, J. S. BARRETT, W. LOVELAND, R. YANEZ, Oregon State University, S. ZHU, A. D. AYANGEAKAA, M. P. CARPENTER, J. P. GREENE, R. V. F. JANSSENS, T. LAURITSEN, Argonne National Laboratory, C. J. CHIARA, J. L. HARKER, W. B. WALTERS, University of Maryland — Nuclei with a few valence nucleons outside ^{208}Pb are crucial for testing the nuclear shell model and guiding our understanding of single particle structure. Data in this region are also potentially relevant to nuclear astrophysics. This analysis focused on the high-spin structure of ^{202}Hg and ^{203}Tl. Excited states in these nuclei were populated through deep-inelastic reactions from a beam of ^{136}Xe and that was incident on a thick target of ^{208}Pb in the Gammasphere array at Argonne National Laboratory. The level schemes of ^{202}Hg and ^{203}Tl were extended by locating a new isomer in each nucleus and a number of new high-spin states built on top of the isomers. The newly-observed states will be discussed in the context of the shell model.

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