

Abstract Submitted
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High-K Isomers and Band Structures in $^{244,245}\text{Pu}$ ¹ S. HOTA, P. CHOWDHURY, S. LAKSHMI, S.K. TANDEL, E. JACKSON, T. HARRINGTON, K. MORAN, U. SHIRWADKAR, UMass Lowell., I. AHMAD, M.P. CARPENTER, C.J. CHIARA, J. GREENE, C.R. HOFFMAN, R.V.F. JANSSENS, T.L. KHOO, S. ZHU, F.G. KONDEV, T. LAURITSEN, C.J. LISTER, E.A. MCCUTCHAN, D. SEWERYNIAK, I. STEFANESCU, ANL — In continuation of our study of high-K configurations in the heavier neutron-rich $N\sim 150$ $^{246-249}\text{Cm}$ and $^{247,249}\text{Cf}$ nuclei, using deep-inelastic and transfer reactions [1], we report on new results from Gammasphere in the $N=150,151$ nuclei $^{244,245}\text{Pu}$. High-spin states in $^{244,245}\text{Pu}$ were populated using a ^{208}Pb beam incident on a ^{244}Pu target. In ^{244}Pu , a high-K band is observed, most likely built on top of a $K^\pi = 8^-$ isomer, the half-life and decay of which was measured in an earlier experiment by our group. In ^{245}Pu , we find new rotational bands in coincidence with a 194 keV transition, which is presumably the known $7/2^+[624]$ to $9/2^- [734]$ (ground state) transition [2]. The new results will be discussed in the context of $2q\text{p } K^\pi = 8^-$ isomers observed in $N=150$ and 152 even-even isotones, along with expected high-K configurations and their decay modes in this region.

[1] U. Shirwadkar, Ph.D. Thesis, UMass Lowell, 2009.

[2] H. Makii et al., Phys. Rev. **C76**, 061301(R) (2007).

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