Abstract Submitted
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Spectroscopy of Neutron-rich $^{248-250}$Cf Nuclei[1] S.S. HOTA, P. CHOWDHURY, A.Y. DEO, C.J. GUESS, E.G. JACKSON, C.J. LISTER, N. D'OLYMPIA, Univerisity of Massachusetts Lowell, T.L. KHOO, M.P. CARPENTER, R.V.F. JANSSENS, I. AHMAD, J.P. GREENE, D. SEWERYNIAK, S. ZHU, P.F. BERTONE, G. HENNING, C.R. HOFFMAN, F.G. KONDEV, T. LAURITSEN, C.K. NAIR, Argonne National Laboratory, C.J. CHIARA, University of Maryland, S.K. TANDEL, UM-DAE Centre for Excellence in Basic Sciences — In continuation of our high-spin studies in neutron-rich $^{244-246}$Pu, $^{246-249}$Cm nuclei, using deep-inelastic and transfer reactions [1], we report on new spectroscopic information in the N = 150-152 nuclei $^{248-250}$Cf. High-spin states in $^{248-250}$Cf nuclei were populated using a ^{208}Pb beam incident on a radioactive ^{249}Cf target, with prompt gamma rays detected by the Gammasphere array. The ground state bands of ^{248}Cf and ^{250}Cf have been extended to high-spins and the $K^{\pi} = 2^{-}$ octupole band in ^{248}Cf has been observed for the first time. In addition to the previously observed ground-state bands of ^{249}Cf [1], a new pair of bands built on a neutron single-particle orbital has been identified. The new data will be presented in the context of the extended systematics of this region and available theoretical predictions for the neutron-rich, transplutonium N $\geq$ 150 nuclei. Possible connections to non-axial octupole collective effects will be discussed.

[1] S. K. Tandel *et al.*, Phys. Rev. C **82**, 041301(R) (2010)

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S. S. Hota
Univerisity of Massachusetts Lowell

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