

Abstract Submitted
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New Structures in ^{178}Hf and Coulomb Excitation of Isomers A.B. HAYES, D. CLINE, U. Rochester, C.Y. WU, LLNL, M.P. CARPENTER, ANL, J.J. CARROLL, YSU, D.M. CULLEN, U. Manchester, B. DETWILER, YSU, J.P. GREENE, ANL, T. HARLE, YSU, A.M. HURST, LLNL, R.V.F. JANSSENS, ANL, S.A. KARAMIAN, JINR, T. LAURITSEN, ANL, N.M. LUMLEY, P. MASON, U. Manchester, I. MILLS, YSU, S.V. RIGBY, U. Liverpool, D. SEWERYNIAK, ANL, T.P.D. SWAN, U. Surrey, G. TREES, YSU, P.M. WALKER, U. Surrey, S. ZHU, ANL — Recent Coulomb excitation of a 985 MeV ^{178}Hf beam (ATLAS) by a $500\ \mu\text{g}/\text{cm}^2$ ^{208}Pb target with CHICO+Gammasphere has yielded $\sim 3 \times 10^9$ p-p- γ events and approximately 368 γ -decay transitions involving 185 levels in 18 rotational bands, about 57 of which are newly identified. High-K isomer bands were populated at the 10^{-3} level normalized to the ground-state band (GSB). A new “tilted” band crossing in the GSB provides a mechanism for the previously reported direct Coulomb excitation of the $K^\pi=6^+$ and 8^- two-quasiparticle isomer bands. Direct γ -decay feeding to some of the isomer band states has been observed, which could confirm previously postulated breakdown of K conservation in the low-K bands. There is evidence of a new band connected with the 16^+ , 31 year isomer band, which may be consistent with a γ -vibration built on the isomer.

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