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Strongly deformed structures in ^{172,171}Hf[1] W.C. MA, Y. ZHANG, E. NGIJOI-YOGO, D.G. ROUX, J.A. WINGER, R.B. YADAV, Mississippi State Univ., M.P. CARPENTER, R.V.F. JANSSENS, T.L. KHOO, F.G. KONDEV, T. LAURITSEN, E.F. MOORE, S. ZHU, Argonne National Lab, D.J. HARTLEY, US Naval Academy, D. CULLEN, S.V. RIGBY, D.T. SCHOLES, Univ. of Manchester, UK, P. CHOWDHURY, Univ. of Massachusetts (Lowell), S. ODEGARD, Univ. of Oslo, Norway, M.K. DJONGOLOV, Univ. of Tennessee (Knoxville)
— Three possible strongly deformed (SD) bands in ^{172}Hf and one in ^{171}Hf were identified from our recent Gammasphere experiment at ANL using the ^{48}Ca(^{128}Te, xn) reactions at 209 MeV. Further, the band in ^{171}Hf has been linked to the known normal deformed structures. The spin/parity of levels in this band as well as other properties, such as the alignment and excitation energy, could be determined, and the intrinsic quasiparticle configuration of the band proposed. The wobbling mode, a characteristic motion of triaxial nuclei originally predicted for even-even nuclei, has been established in ^{161,163,165,167}Lu (Z=71). The SD bands observed in several Hf isotopes appear to be quite different from the triaxial strongly deformed (TSD) bands in Lu isotopes. Possible difference of high- j intruder orbitals involved in these excitations will be discussed.

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