Abstract Submitted
for the DNP06 Meeting of
The American Physical Society

Search for highly deformed rotational structures in tungsten isotopes[1] S.K. TANDEL, A.J. KNOX, U.S. TANDEL, C. PARNELL-LAMPEN, P. CHOWDHURY, University of Massachusetts Lowell, D.J. HARTLEY, United States Naval Academy, JING-YE ZHANG, University of Tennessee, Knoxville, M.P. CARPENTER, R.V.F. JANSSENS, T.L. KHOO, T. LAURITSEN, C.J. LISTER, D. SEWERYNIAK, X. WANG, S. ZHU, Argonne National Laboratory — Highly excited states in tungsten isotopes ($^{172-175}$W) in the vicinity of N=100 were populated using a 225 MeV (on target) ^{50}Ti beam from the ATLAS accelerator at Argonne National Laboratory, incident on a 235 μg/cm^2 ^{128}Te target. The γ-rays emitted by the evaporation residues were detected using the Gammasphere array. New rotational structures have been identified and existing bands have been extended, in some cases, beyond the second nucleon alignment. Theoretical calculations [1, 2] predict that triaxial structures with large deformation become yrast at high spins in this region. Results from the ongoing analysis will be presented and discussed within the context of triaxial superdeformed structures observed and expected in this mass region. [1] T. Bengtsson, Nucl. Phys. A 512, 124 (1990). [2] M.K. Djongolov et al., Phys. Lett. B 560, 24 (2003).

[1]Supported by USDOE Grant DE-FG02-94ER40848 and W-31-109-ENG-38

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Date submitted: 30 Jun 2006 Electronic form version 1.4