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Quadrupole moments of normal deformed and triaxial strongly deformed bands in ^{167}Lu E. NGIJOI-YOGO, W.C. MA, D.G. ROUX, R.B. YADAV, Y. ZHANG, Mississippi State Univ., G.B. HAGEMANN, C.R. HANSEN, B. HERSKIND, G. SLETTEN, NBI, H. AMRO, D.A. MEYER, Yale Univ., G. GÜRDAL, Clark Univ., C.W. BEAUSANG, Univ. of Richmond, D.J. HARTLEY, US Naval Academy, C. ENGELHARDT, H. HÜBEL, A. NEUSSER, P. BRINGEL, Univ. of Bonn, M.P. CARPENTER, T.L. KHOO, T. LAURITSEN, E.F. MOORE, ANL — ^{167}Lu is the heaviest Lu isotope in which wobbling motion, a characteristic excitation mode of triaxial structures, has been identified [1,2]. In order to further quantify the quadrupole moments (Q_t) of these structures, lifetime measurements were performed at ANL using fusion-evaporation reaction and GAMMASPHERE. Previously, the Q_t of TSD1 was analyzed [3]. In this work, the γ-ray lineshapes were analyzed with the Doppler-shift attenuation method and Q_t extracted for bands TSD3, $[404]7/2^+$ and $[541]1/2^-$. The measured Q_t of TSD3 is much smaller than the predicted Q_t=10.1 eb by CSM calculations using the Ultimate Cranker code, and supports the suggestion that the barrier between normal deformed and TSD potential energy minima is rather small [2]. *Work supported by US DOE and NSF.

[1] H. Amro et al., Phys. Lett. B 553, 197 (2003).
[2] H. Amro et al., Phys. Rev. C 71, 011302 (2005).
[3] G. G"urdal et al., J. Phys. G 31, S1873 (2005).

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