

Abstract Submitted
for the APR21 Meeting of
The American Physical Society

Rigid triaxial deformation in ^{76}Ge ¹ A.D. AYANGEAKAA, Department of Physics and Astronomy, University of North Carolina at Chapel Hill/TUNL, R.V.F. JANSSENS, University of North Carolina at Chapel Hill/TUNL, J.M. ALLMOND, Oak Ridge National Laboratory, B.A. BROWN, Department of Physics and Astronomy, and National Superconducting Cyclotron Laboratory, Michigan State University, ANL TEAM, LLNL TEAM, LBNL TEAM, UMD TEAM — The possible existence of stable triaxial ground-state deformation in even-even nuclei has been a subject much interest in nuclear structure research. This interest has been motivated largely by the longstanding issue of whether axially-asymmetric nuclei are characterized by rigid or soft triaxiality in their ground-state configurations. Indeed, while signatures of static triaxial deformation has long been established at high angular momenta, the experimental observation of rigid triaxiality at low-spin has remained a challenge. In this study, experimental evidence for static triaxial ground-state deformation in ^{76}Ge will be presented from a model-independent perspective. This will be complemented by results of large-scale shell model calculations and multi-configuration mixing calculations carried out within the framework of the triaxial rotor model.

¹This work is supported in part by the U.S. DOE, Office of Science, Office of Nuclear Physics, under Grant Numbers DE-FG02-97ER41041 (UNC) and DE-FG02-97ER41033 (TUNL).

Akaa Ayangeakaa
Department of Physics and Astronomy, University of North Carolina at Chapel Hill

Date submitted: 30 Dec 2020

Electronic form version 1.4