

Abstract Submitted
for the APR05 Meeting of
The American Physical Society

Evolution of collectivity approaching $N=28$ for silicon and sulfur isotopes C.M. CAMPBELL, D. BAZIN, M.D. BOWEN, B.A. BROWN, J.M. COOK, D.-C. DINCA, A. GADE, T. GLASMACHER, W.F. MUELLER, H. OLLIVER, K. STAROSTA, J.R. TERRY, K. YONEDA, Department of Physics and Astronomy and National Superconducting Cyclotron Laboratory, Michigan State University, N. AOI, H. SAKURAI, Department of Physics, University of Tokyo, S. KANNO, Department of Physics, Rikkyo University, T. MOTOBAYASHI, S. TAKEUCHI, RIKEN (Institute of Physical and Chemical Research), S.P. WEPPNER, Collegium of Natural Sciences, Eckerd College — Excited states in neutron-rich silicon and sulfur nuclei have been studied at NSCL using inverse kinematics inelastic proton scattering. Exotic cocktail beams impinged upon a RIKEN liquid hydrogen target placed at the target position of the S800 spectrograph. Gamma-rays collected by SeGA (Segmented Germanium Array) were used to tag scattering events that excited specific states in each nucleus, and the S800 spectrograph provided event-by-event isotopic and reaction channel identification. Analysis of (p,p') excitation cross-sections provided information on nuclear deformation, while analysis of the gamma-ray spectra has identified new levels in these neutron-rich nuclei. The evolution of collectivity with increasing neutron number will be discussed.

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Date submitted: 24 Jan 2005

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