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First total-absorption spectroscopy measurement on the neutron-rich Cu isotopes F. NAQVI, A. SPYROU, S.N. LIDDICK, NSCL, Michigan State University, A.C. LARSEN, M. GUTTORMSEN, Department of Physics, University of Oslo, D.L. BLEUEL, Lawrence Livermore National Laboratory, L.C. CAMPO, Department of Physics, University of Oslo, A. COUTURE, Los Alamos National Laboratory, B.P. CRIDER, A.C. DOMBOS, T. GINTER, R. LEWIS, NSCL, Michigan State University, S. MOSBY, Los Alamos National Laboratory, G. PERDIKAKIS, Central Michigan University, C.P. PROKOP, S.J. QUINN, NSCL, Michigan State University, T. RENSTROM, Department of Physics, University of Oslo, B. RUBIO, IFIC, CSIC-Universidad de Valencia, S. SIEM, Department of Physics, University of Oslo — The first beta-decay studies of $^{73-71}$Cu isotopes using the Total Absorption Spectroscopy (TAS) will be reported. The Cu isotopes have one proton outside the $Z = 28$ shell and hence are good candidates to probe the single-particle structure in the region.Theories predict weakening of the $Z = 28$ shell gap due to the tensor interaction between the valence $\pi\nu$ single-particle orbitals. Comparing the beta-decay strength distributions in the daughter Zn isotopes to the theoretical calculations will provide a stringent test of the predictions. The experiment was performed at the National Superconducting Cyclotron Laboratory (NSCL) employing the TAS technique with the Summing NaI(Tl) detector, while beta decays were measured in the NSCL beta-counting system. The experimentally obtained total absorption spectra for the neutron-rich Cu isotopes will be presented and the implications of the extracted beta-feeding intensities will be discussed.

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