Abstract Submitted
for the DNP11 Meeting of
The American Physical Society

Full distribution of dipole states below 9MeV in ^{76}Se[1] N. COOPER, V. WERNER, M.K. SMITH, Yale University, P.M. GODDARD, Yale, Surrey, F. REICHEL, J. BELLER, M. FRITZSCHE, N. PIETRALLA, C. ROMIG, D. SAVRAN, M. SCHECK, K. SONNABEND, J. WAGNER, TU-Darmstadt, A. CHAKRABORTY, B.P. CRIDER, E. PETERS, S.W. YATES, University of Kentucky, J. KELLY, R. RAUT, G. RUSEV, A.P. TONCHEV, W. TORNOW, TUNL, D. DELEANU, D. FILIPESCU, T. GLODARIU, IFIN-HH — Systematics of photoexcitation strength near the particle emission threshold has been of great interest in recent years due its importance in stellar nucleosynthesis of certain heavy nuclei. Theories such as the QRPA and its variants are currently used to calculate photoexcitation strength in this energy region, as well as the nuclear matrix element of the hypothetical $0\nu2\beta$-decay modes, such as ^{76}Ge$\rightarrow^{76}$Se$+2e^-$. Dipole states between 2 and 4MeV in ^{76}Se have been studied using linearly polarized, nearly monoenergetic photons produced by Compton-backscattering at the HI$\vec{\gamma}$S facility. The experiment completes a series of photon scattering experiments performed on this nucleus in the energy region below 9MeV, both at the S-DALINAC and at HI$\vec{\gamma}$S. Collective dipole excitations are investigated.

[1]Supported by U.S. DOE grant nos. DE-FG02-91ER40609 and DE-FG02-97ER41033, and NSF grant no. PHY-0956310.

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Date submitted: 22 Jul 2011 Electronic form version 1.4