Abstract Submitted
for the HAW09 Meeting of
The American Physical Society

Decay Detector For The Study of Isoscalar Giant Monopole Resonances[1] CALEIGH SAMUELS, Cyclotron Institute Texas A&M University, Radford University, DAVE YOUNGBLOOD, YIU-WING LUI, JONATHAN BUTTON, Cyclotron Institute Texas A&M University — The nuclear matter incompressibility is extracted from measurement of the energy of giant monopole resonances. This incompressibility term is incorporated in the nuclear matter equation of state, which can be used to physically describe supernovae and neutron stars. Progress has been made in the design, construction, and calibration of a decay particle detector mainly composed of plastic scintillator arrays, which we will use to study the Isoscalar Giant Monopole Resonance (ISGMR) in unstable nuclei. Nuclei excited to the ISGMR region are particle unstable and will p, alpha, or n decay shortly after excitation in light nuclei. We explore two method for predicting the light output by the scintillators of the detector due to energy loss by light ions.

[1]Funded by DOE and NSF-REU program.

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Date submitted: 03 Aug 2009 Electronic form version 1.4