Abstract Submitted
for the APR08 Meeting of
The American Physical Society

The commissioning of the O-TPC at TUNL P.-N. SEO, M.W. AHMED, E.R. CLINTON, C.R. HOWELL, S.C. STAVE, H.R. WELLER, TUNL, A.H. YOUNG, M. GAI, U. Conn., B. BROMBERGER, V. DANGENDORF, K. TITTELMEIER, PTB, Braunschweig — We are commissioning the Optical Readout Time Projection Chamber (O-TPC) that will be used in an experiment at the HIgS facility at TUNL for studying oxygen formation during stellar helium burning by studying the time reversed $^{16}O(\gamma,\alpha)^{12}C$ reaction. The initial calibration of the O-TPC was carried out at the LNS at Avery Point with a CMAC based data acquisition system. The tests at TUNL used a VME based data acquisition system that also controls a CCD camera. Under stable conditions an energy resolution as good as 2.6% was measured for the charge signal and single and double tracks of alpha particles from a ^{148}Gd source were recorded in the CCD camera. These tracks were analyzed using an automated pattern recognition algorithm that allows us to extract that track centroid (from which the scattering angle is deduced) as well as DE/DX along the track. The azimuthal angle of the track is deduced from the Time Projection. The O-TPC is found to be ready for accepting beams from the HIgS facility.

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Date submitted: 15 Jan 2008 Electronic form version 1.4