

Abstract Submitted
for the APR09 Meeting of
The American Physical Society

Performance of the Neutron Imaging Camera (NIC) SEUNGHEE SON, UMBC/CRESST/NASA, STANLEY HUNTER, NASA/Goddard Space Flight Center, JASON LINK, USRA/CRESST/NASA, GEORIGIA DE NOLFO, UMBC/CRESST/NASA, NOEL GUARDALA, Naval Surface Warfare Center — The Neutron Imaging Camera (NIC) is based on the Three-Dimensional Track Imager (3-DTI) technology developed at NASA/GSFC for gamma-ray astrophysics applications. The 3-DTI, a large volume time projection chamber, provides accurate, ~ 0.4 mm resolution, 3-D tracking of charged particles. The incident direction of fast neutrons, $E_n > 0.5$ MeV, are reconstructed from the momenta and energies of the proton and triton fragments resulting from ${}^3\text{He}(n,p){}^3\text{H}$ interactions in the 3-DTI volume. We will discuss the NIC performance, including the angular and energy response, derived from a 2~3 MeV neutron accelerator beam.

Seunghee Son
UMBC/CRESST/NASA

Date submitted: 12 Jan 2009

Electronic form version 1.4