Abstract Submitted
for the DNP12 Meeting of
The American Physical Society

Design and Characterization of a Collimated Neutron Beam User Facility at SUNY Geneseo MICHAEL KRIEGER, STEPHEN PADALINO, MEGAN RUSS, DANAE POLSIN, MOLLIE BIENSTOCK, DREW ELLISON, ANGELA SIMONE, SUNY Geneseo — The Collimated Neutron Beam (CNB) Facility at SUNY Geneseo provides users an opportunity to perform neutron experiments that require a low neutron background. Neutrons with energies up to 10 MeV are produced by a Plutonium-Beryllium (Pu-Be) source and are collimated to form a well characterized beam. A six foot high, 18 inch thick shielding wall made of water-bricks was built to reduce neutron background in the target area. Neutron and gamma radiation were extensively mapped throughout the facility using a calibrated Bonner sphere, Geiger counter, plastic scintillator and an HPGe detector. Potential uses for the CNB include neutron activation, time-of-flight, attenuation and neutron detector calibration experiments. A detailed description and layout of the facility will be displayed on the poster. Funded in part by a grant from the DOE through the Laboratory for Laser Energetics.

Stephen Padalino
SUNY Geneseo

Date submitted: 09 Jul 2012 Electronic form version 1.4