

Abstract Submitted
for the DNP11 Meeting of
The American Physical Society

Collinear Laser Spectroscopy at the BECOLA Facility ANTHONY SCHNEIDER, ANDREW KLOSE, PAUL MANTICA, SOPHIA VINNIKOVA, Michigan State University, KEI MINAMISONO, NSCL, BECOLA TEAM — The BEam COoler and LAser spectroscopy (BECOLA) facility has been constructed at NSCL to measure the hyperfine structure of nuclei and deduce moments and charge radii. A Colutron off-line ion source is being used to produce stable isotope beams to commission the collinear laser beam line. Laser light is transported to the beam line via fiber optic cable and is collinearly aligned with the stable, low-energy (< 60 keV) beam. The hyperfine structure is extracted by observing the fluorescence as a function of the acceleration voltage of the beam, which is equivalent to scanning the laser frequencies due to the Doppler Effect. The operational characteristics and controls of the off-line source and collinear beam line will be discussed. This work is supported in part by NSF grant PHY-06-06007.

Anthony Schneider
Michigan State University

Date submitted: 30 Jun 2011

Electronic form version 1.4