

Abstract Submitted  
for the DNP13 Meeting of  
The American Physical Society

**Status of the Beam Thermalization Area at the NSCL** KORTNEY COOPER, BRADLEY BARQUEST, DAVID MORRISSEY, MSU/NSCL, JOSE ALBERTO RODRIGUEZ, STEFAN SCHWARZ, CHANDANA SUMITHRARACHCHI, NSCL, JEFF KWARSICK, UC Berkeley, GUY SAVARD, ANL — Beam thermalization is a necessary process for the production of low-energy ion beams at projectile fragmentation facilities. Present beam thermalization techniques rely on passing high-energy ion beams through solid degraders followed by a gas cell where the remaining kinetic energy is dissipated through collisions with buffer gas atoms. Recently, the National Superconducting Cyclotron Laboratory (NSCL) upgraded its thermalization area with the implementation of new large acceptance beam lines and a large RF-gas catcher constructed by Argonne National Lab (ANL). Two high-energy beam lines were commissioned along with the installation and commissioning of this new device in late 2012. Low-energy radioactive ion beams have been successfully delivered to the Electron Beam Ion Trap (EBIT) charge breeder for the ReA3 reaccelerator, the SuN detector, the Low Energy Beam Ion Trap (LEBIT) penning trap, and the Beam Cooler and Laser Spectroscopy (BeCoLa) collinear laser beamline. Construction of a gas-filled reverse cyclotron dubbed the CycStopper is also underway. The status of the beam thermalization area will be presented and the overall efficiency of the system will be discussed.

Kortney Cooper  
MSU/NSCL

Date submitted: 01 Jul 2013

Electronic form version 1.4