

APR15-2015-000239

Abstract for an Invited Paper
for the APR15 Meeting of
the American Physical Society

Next-generation transfer reaction studies with JENSA¹

K.A. CHIPPS, Oak Ridge National Laboratory/University of Tennessee Knoxville

Next generation radioactive ion beam facilities are being planned and built across the globe, and with them an incredible new array of exotic isotopes will be available for study. To keep pace with the state of nuclear physics research, both new detector systems and new target systems are needed. The Jet Experiments in Nuclear Structure and Astrophysics (JENSA) gas jet target is one of these new target systems, designed to provide a target of light gas that is localized, dense, and pure. The JENSA gas jet target was originally constructed at Oak Ridge National Laboratory for testing and characterization, and has now moved to the ReA3 reaccelerated beam hall at the National Superconducting Cyclotron Laboratory (NSCL) at Michigan State University for use with radioactive beams. The availability of a pure, localized target of light gases will enable exceptional scattering and transfer reaction studies with these exotic beams. Some examples will be given, and future plans will be discussed.

¹This work is supported by the US DOE Office of Science (Office of Nuclear Physics) and the NSF