

Abstract Submitted
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Testing and Characterization of the JENSA Gas Jet Target¹ K.A. CHIPPS, Colorado School of Mines, JENSA COLLABORATION — 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 system involves nearly two dozen pumps, a custom-built industrial compressor, and vacuum chambers designed to incorporate large arrays of both charged-particle and gamma-ray detectors. The JENSA gas jet target was originally constructed at Oak Ridge National Laboratory for testing and characterization, and will move to the ReA3 reaccelerated beam hall at the National Superconducting Cyclotron Laboratory (NSCL) for further characterization, optimization, and use. JENSA will form the main target for the proposed SEparator for CApture Reactions (SECAR), and together the two comprise the focus of the low energy experimental nuclear astrophysics community in the United States. Data on gas flow and jet characteristics of the current JENSA target system will be presented.

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Kelly Chipps
Colorado School of Mines

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