

Abstract Submitted
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Targets for Inverse ($^3\text{He},d$) Reaction Studies with Radioactive Ion Beams J.L. WHEELER, R.L. KOZUB, S.A. GRAVES, D.J. SISSOM, Tenn. Tech. U., D.W. STRACENER, D.W. BARDAYAN, ORNL, C. JOST, U. Tenn.-Knoxville, P.D. O'MALLEY, Rutgers U. — Proton transfer reactions, such as ($^3\text{He},d$), are extremely important for measuring the properties of single particle states and resonances. Many such resonances are important in the rp process of explosive nucleosynthesis, but cannot be measured via resonance scattering directly. For the ($^3\text{He},d$) reaction, it is necessary to use localized ^3He targets, and gas jet targets are expensive and difficult to construct. We are continuing^{1,2} an alternate approach - implanting ^3He into 0.65 μm thick aluminum foils at the On-Line Test Facility (OLTF) at ORNL. Target profiles are analyzed using Rutherford backscattering to determine the concentration and distribution of the implanted ^3He . An update of these results and a detailed description of new procedures will be presented. This research is supported by the U. S. Department of Energy.

¹D.J. Sissom et al., <http://meetings.aps.org/link/BAPS.2008.DNP.DA.92>

²J.L. Wheeler et al., <http://meetings.aps.org/Meeting/DNP10/Event/132092>

Raymond Kozub
Tennessee Technological Univ.

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