Abstract Submitted for the DNP11 Meeting of The American Physical Society

 α -induced cross section of ¹²⁰Te for the astrophysical p process¹ S.R. LESHER, A. AREND, Univ. of Wisconsin - La Crosse, A. APRAHAMIAN, S. ALMARAZ-CALDERON, A. KONTOS, W.P. TAN, Univ. of Notre Dame, R.T. GÜRAY, N. ÖZKAN, Kocaeli University, Turkey — There are about 35 nuclei found in nature, which are not susceptible to neutron capture and are explained by the p-process. The modeling for this process requires thousands of nuclear reactions involving both stable and unstable nuclei including $(\alpha, \alpha), (\alpha, p)$ and (α, γ) reactions. In a recent experiment, the cross section of the reaction ¹²⁰Te (α, p) ¹²³I was measured in the energy range of astrophysical interest for the p-process. The α beam from the Notre Dame FN Tandem Van de Graaff accelerator bombarded highly enriched selfsupporting ¹²⁰Te targets and the γ -rays from the activated ¹²³I was counted with a pair of Ge clover detectors in close geometry. Preliminary results will be presented.

¹This work is supported by the NSF under grant No. PHY07-58100 and PHY08-22648.

Shelly Lesher Univ. of Wisconsin - La Crosse

Date submitted: 30 Jun 2011

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