

Abstract Submitted
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Cross-sections of alpha scattering on Boron 11 ANDREW SMITH,
Georgia College and State University — There has been a recent renewal in the interest of aneutronic fusion as a power source using the $^{11}\text{B}(p,\alpha)2\alpha$. In light of this, TUNL has been requested to measure accurate cross sections for the $^{11}\text{B}(p,\alpha)2\alpha$ reaction as well as $^{11}\text{B}(\alpha,\alpha)$. To measure the cross section of $^{11}\text{B}(\alpha,\alpha)$ the capture group at TUNL has collected data using a target with a 2-3 $\mu\text{g}/\text{cm}^2$ layer of isotopically pure ^{11}B between two layers of gold. A beam was generated using the TUNL alpha source and accelerated with the tandem accelerator producing beam energies up to 7 MeV. Silicon surface barrier detectors were placed at angles 45, 60, 75, 90, 90, 110, 130, 150 degrees. There are some discrepancies between the present data and the previous data that have yet to be resolved. Preliminary results as a function of energy and angle will be shown and compared to previous measurements.

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