

$^2\text{H}(^{13}\text{B}, ^{13}\text{B})$

2022Li15

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	J. H. Kelley, C. G. Sheu and J. E. Purcell		NDS 198,1 (2024)	1-Aug-2024

2022Li15: Elastic scattering of ^{13}B ions from a 3.98 mg/cm^2 CD_2 target (rotated by 20° with respect to the beam direction) was measured at the RCNP/Osaka. The 23 MeV/nucleon ^{13}B beam was produced by fragmentation of a ^{18}O beam and purified using an electromagnetic separator. The $\sigma(\theta)$ for $\theta_{\text{c.m.}}=20^\circ$ to 60° was determined from the measured deuteron scattering distribution and used an exclusive $\text{d}+^{13}\text{B}$ coincidence requirement. Scattered ^{13}B ions were identified using a position sensitive $\Delta\text{E}-\Delta\text{E}-\text{E}$ (Si-Si-CsI) telescope placed along the beam axis, while associated deuterons were measured using two additional position sensitive $\Delta\text{E}-\Delta\text{E}-\text{E}$ telescopes that covered $\theta_{\text{lab}}=31^\circ$ to 70° . Elastic scattering dominated the observations; though broad unresolved groups were evident at $E_x\approx 4$ and 6.5 MeV . The data were compared with optical model calculations obtained using FRESKO.

^{13}B Levels

E(level)

0