

$^{11}\text{B(d,p):res}$

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

[1949Hu41](#): $^{11}\text{B(d,p)}$ $E=0.3\text{-}1.85$ MeV; no evidence of resonances.

[1957Ja37](#): $^{11}\text{B(d,p)}$ $E=0.2\text{-}1.8$ MeV; cross sections were measured with no evidence of resonances.

[1958Ka31](#): $^{11}\text{B(d,p}\gamma(15.1\text{ MeV}))$, the thin-target yield indicates $E_{\text{thresh.}}=1633$ keV with resonances at $E_d=2180$ and 3080 keV. At $E_d=1.5$ MeV, $\sigma\approx 0.38$ b.

[1967Pf02](#): $^{11}\text{B(d,p)}$, the polarization of ^{12}B recoils has been studied for $E_d=0.9$ to 3.2 MeV; resonances in the recoil polarization are observed at $E_d=1.5$, 2.1 and 3.0 MeV.

[1970Fi07](#): $^{11}\text{B(pol. d,p)}$ $E=10, 12$ MeV; measured analyzing power $A(\theta)$.

[1971HiZG](#): $^{11}\text{B(d,p)}$ $E=5.5$ MeV; measured $\sigma(\theta)$, DSA. ^{13}C deduced levels, Γ , $T_{1/2}$, J , π .

[1976Ta07](#): $^{11}\text{B(d,p)}$ $E=1.3\text{-}3.0$ MeV; measured polarization; deduced magnetic substate populations, J-mixing of transferred neutron, reaction mechanism.

[1977AnZO](#): $^{11}\text{B(d,p)}$ $E<1.4$ MeV; measured absolute $\sigma(E, \theta)$.

[1985Ab10](#): $^{11}\text{B(d,p)}$ $E=3\text{-}10$ MeV; measured $\sigma(E)$.

[1997Ya02](#): $^{11}\text{B(d,p}_0)$ $E_{\text{c.m.}}=76\text{-}144$ MeV; measured energy spectra, $\sigma(\theta)$; deduced σ , astrophysical S-factor vs E .

[1997Ya08](#): $^{11}\text{B(d,p}_0)$ $E_{\text{c.m.}}=57\text{-}141$ keV; measured astrophysical S-factors.

[2009Ko09](#): $^{11}\text{B(d,p}_0)$ $E=900\text{-}1200$ keV; measured $\sigma(\theta, E)$.

Theory:

[1970Vo09](#): $^{11}\text{B(d,p)}$ $E=0.7\text{-}3.5$ MeV; analyzed $\sigma(\theta)$. DWBA.

[1977Sa25](#): $^{11}\text{B(d,p)}$ $E=1.3\text{-}3.0$ MeV; calculated magnetic substate populations, optical model parameters. DWBA calculations.

[1982Go05](#): $^{11}\text{B(d,p)}$ $E=12$ MeV; analyzed data. ^{13}C level deduced S-factors. DWBA, nuclear vertex constants.

[2012Co01](#): $^{11}\text{B(d,p)}$ $E<10$ MeV; calculated astrophysical reaction rates. TALYS code, comparison with NACRE compilations.

 $^{13}\text{C Levels}$

E(level) [#]	Γ	$E_d(\text{res})$ (keV)
19946 [†]		1500 [†]
20521 [‡] 10	115 [‡] keV 10	2180 [‡] 10
21282 [‡] 15	160 [‡] keV 15	3080 [‡] 15

[†] From ([1967Pf02](#)); authors identified with $E_x=19.90$ and also reported $E_x=20.5$ and 21.28 MeV.

[‡] From ([1958Ka31](#));

[#] Level energies are deduced using $E_d(\text{res})$ and ^{11}B , d and ^{13}C masses from ([2021Wa16](#): AME-2020).

$E_x=S(^2\text{H})+E_{\text{c.m.}}(\text{relativistic})$.