^{11}B(d,n) 1983Ne11,1968Aj02

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. H. Kelley, J. E. Purcell and C. G. Sheu	NP A968,71 (2017)	1-Jan-2017

1964Ku09: ^{11}B(d,n-γ) E_d=1.5-5.5 MeV, measured σ.
1965Al17: ^{11}B(d,n) E=1-11 MeV, measured $\sigma(E,E_n,\theta)$.
1965Cl02: ^{11}B(d,n_0),(d,n) E=1.5-3 MeV, measured $\sigma(E,\theta)$.
1965Si12,1968Te03: ^{11}B(d,n) E=1.1-3.2 MeV, measured $\sigma(E,E_n,\theta)$, Q. ^{12}C deduced L.
1966Ma21: ^{11}B(d,n) E=1.35 to 18.5 MeV, measured n-polarization (E_d,E_n,θ).
1967Di01: ^{11}B(d,n) E=1.1 to 2.9 MeV, measured $\sigma(E,E_n)$.
1967Fu07: ^{11}B(d,n) E=6 MeV, measured $\sigma(E_n,\theta)$. ^{12}C deduced levels, L, S.
1969Mi20: ^{11}B(d,n) E=2 MeV, measured $\sigma(E_N)$, $P_N(\theta)$.
1970Bu15: ^{11}B(d,n) E=5.5 MeV, measured $\sigma(\theta)$, $p_n(\theta)$.
1971Hi09: $^{11}\beta$(d,n) E_d=10.0,11.8 MeV, measured polarization parameter $iT_{11}(E_d,\theta)$, relative cross section $\sigma(E_d,\theta)$ for ^{12}C. ^{12}C level dediced J, π.
1971Mu18: ^{11}B(d,n) E=11.8 MeV, measured $\sigma(E_n,\theta)$. ^{12}C deduced absolute S.
1971Ri19: ^{11}B(pol. d,n) E=900 keV, measured analyzing power(θ).
1972Me06: ^{11}B(d,n) E=2.6-4.0 MeV, measured $P(E_n,\theta)$. DWBA comparison.
1972Se09: ^{11}B(d,n) E=0.2-1.02 MeV, analyzed polarization effects, resonant matrix elements.
1972Th14: ^{11}B(d,nγ) E=4-4.8 MeV, θ_n=0°, measured $\sigma(E,E_n,E_\gamma,\theta_{n\gamma})$. Deduced stripping reduced width amplitudes.
1974An19: ^{11}B(d,n)E=6 MeV, measured $\sigma(E_n,\theta)$. ^{12}C levels deduced p-width, γ-width, S.
1974Th02: ^{11}B(d,n) E=5.47,5.34 MeV, measured n-polarization(θ).
1975Si22: ^{11}B(d,n) E=0.9,1.2 MeV, measured polarization. Deduced reaction mechanism.
1981An16: ^{11}B(d,n) E=7-16 MeV, measured σ(E), thick target yields.
1983Ne11,1985NeZZ: ^{11}B(d,n) E=12 MeV, measured $\sigma(E_n)$, $\sigma(\theta)$. ^{12}C deduced levels, J, π, T, S. DWBA analysis.
1984Ol06: ^{11}B(d,n) E=5 MeV, measured $\sigma(E_n)$.
1985Fo05: ^{11}B(d,n) E=79 MeV, measured $\sigma(\theta)$. Deduced deuteron optical model parameters. ^{12}C levels deduced L, S. DWBA analysis.
1987Fo22: ^{11}B(pol d,n) E=79 MeV, measured $\sigma(\theta)$, vector analyzing power vs θ. Deduced ^{2}H D-state effects role. DWBA analysis.
2001Ho23: ^{11}B(d,n) E=24-111 keV, measured σ, S-factor.
2001Mi09: ^{11}B(d,n) E=19.1 MeV, measured E_γ, I_γ. Deduced efficiency of germanium cluster detector.
2006Pa27: ^{11}B(d,n) E=120-160 keV, measured E_n, yields, angular distributions. Deduced astrophysical S-factors.
See (1980Aj01) for spectroscopic factors.

^{12}C Levels

E(level)	J^π	L[†‡]	θ^2	Comments
0		1	0.11	
4.38×10^3[@] *7*		1	0.03	
7.57×10^3[@] *11*				
9.6×10^3[@] *1*		2	0.02	
10.8×10^3[@] *1*		0		Decays mainly via α_0 (1965Ol01).
11.1×10^3[@] *1*				
11.74×10^3[@] *8*		0		Decays via α_0(10%) and α_1(90%) (1965Ol01).
12.76×10^3[@] *8*	1$^+$	1		Decays via α_1 (1965Ol01).
13.36×10^3[@] *5*				E_x=13.21 MeV *5* and 13.36 MeV *5* are given in (1968Aj02) Table 12.12 footnotes with a comment that the two groups may represent one state.
14.16×10^3?[@] *5*				
15110 *3*		1		E_x=15.110 MeV *3* is given in the (1968Aj02) Table 12.12 footnotes with no reference.
15.52×10^3?[@] *3*				

Continued on next page (footnotes at end of table)

^{11}B(d,n) 1983Ne11,1968Aj02 (continued)

^{12}C Levels (continued)

E(level)	J^{π}	$T_{1/2}$	L[†‡]	Comments
16.07×10^3[@] *3*			1	Decays via α_0(3%) and α_1(97%) (1985Ne01).
17.23×10^3[@]				
18.38×10^3[#&] *6*	3^-	220[#] keV *50*		These unresolved groups decay via α_0(5%), α_1(32%), p_0(63%) (1983Ne11,1985Ne01).
18.38×10^3[#&] *6*	2^-	350[#] keV *50*		
19.55×10^3[&] *5*		575 keV *60*		Decays via α_0(1%), α_1(41%), p_0(52%), p_1(6%) (1983Ne11,1985Ne01).
20.62×10^3[&] *6*		525 keV *60*		Decays via α_0(2%), α_1(30%), p_0(56%), p_1(12%) (1983Ne11,1985Ne01).

[†] L_p.

[‡] See references in (1968Aj02) Table 12.12.

[#] (1983Ne11) find that the group at E_x=18.38 MeV is due to unresolved states with J^{π}; T=3$^-$; 1 and 2$^-$; 0+1. Γ(3$^-$)=220 keV *50* is from (1971Re03) while Γ(2$^-$) is from (1983Ne11,1985Ne01).

[@] From (1952Jo10,1954Gr53,1957Bi78 and Rosier et al., Congres Int. de Phys. Nucl., Paris, 1964); see (1968Aj02) Table 12.12.

[&] From (1983Ne11).