^{11}B(n,n),(n,n′):res 1951Bo45,1958Hu18,1964St25

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

1951Bo45: ^{11}B(n,n′), deduced levels.
1958Hu18: ^{11}B(n,n′), deduced levels.
1964St25: ^{11}B(n,n′), deduced levels.
1969Mo10: ^{11}B(n,n) E=20.8 keV, measured σ(N). ^{12}B deduced resonances, levels, J, π, Γ.
1970Al08: ^{11}B(n,n),(n,n′) E=14.1 MeV, measured $\sigma(E_{n'},\theta)$.
1970Co12: ^{11}B(n,n),(n,n′) E=9.72 MeV, measured $\sigma(E_{n'},\theta)$.
1970La21: ^{11}B($\vec{n}$,n) E=0.075-2.2 MeV, measured $\sigma(E,\theta)$, P(E,θ). ^{12}B deduced resonances, J, π, isobaric analogs.
1971Ot03: ^{11}B(n,n) E=14.1 MeV, analyzed $\sigma(\theta)$. Deduced optical model parameters.
1973Ne19: ^{11}B(n,n) 2.2<E_N<4.5 MeV, measured $\sigma(E,\theta)$. ^{12}B deduced levels J, π, L, resonance parameters.
1974Hy01: ^{11}B(n,n),(n,n′) E=14.1 MeV, measured $\sigma(E_N,\theta)$. Deduced optical parameters.
1979Au07: ^{11}B(n,X) E=1.0-14 MeV; Measured σ; deduced resonances.
1980Wh01: ^{11}B(n,n) E=2.6-8 MeV, measured $\sigma(\theta)$. ^{12}B deduced levels, J, π, reduced Γ. R-matrix analysis.
1981Mu07: ^{11}B(n,n) E=14 MeV, analyzed $\sigma(\theta)$, σ(nonelastic), σ(total).
1982Gl02: ^{11}B(n,n),(n,n′) E=8,9,9.7,9.9,11-14 MeV, measured $\sigma(\theta)$. Deduced integrated σ(E).
1983Da22: ^{11}B(n,n) E=7-15 MeV, measured $\sigma(\theta)$. Deduced optical model parameters.
1983Ko03: ^{11}B(n,n),(n,n′) E=4.8-7.6 MeV, measured $\sigma(\theta)$. ^{12}B deduced levels, J, π, reduced Γ. R-matrix analysis.
1983Ko17: ^{11}B(n,n) E=slow. Deduced complex spin state scattering lengths, bound atoms.
1986Mu08: ^{11}B(n,n) E=10-17 MeV, measured $\sigma(\theta)$. ^{11}B($\vec{n}$,n) E=10,15 MeV, measured analyzing power vs. θ.
1996Ch33: ^{11}B(n,n) E≤200 MeV, analyzed reaction, total σ(E).

^{12}B Levels

E(level)[†]	J^π	Γ	L	E_n (MeV)	Comments
3389.1 *16*	3⁻	<1.4 keV	2	0.0208 *5*	Γ_n=3.1 eV *6* E(level): From E_n=20.8 keV *5* (1969Mo10).
3763 *10*	2⁺	37 keV *5*	1	0.43 *1*	
4310 *10*	1⁻	9 keV *4*	0	1.027 *11*	E(level): From (1962Im01).
4.46×10^3	2⁻		0,2	1.19	Γ: Broad.
4.54×10^3 *2*	4⁻	130 keV *20*	2	1.28 *2*	
5.00×10^3 *2*	1⁺	60 keV *20*	1	1.78 *2*	
5.61×10^3 *2*	3⁺	110 keV *40*	1	2.45 *2*	
5.74×10^3 *2*	3⁻	55 keV *20*	2	2.58 *2*	
6.0×10^3	1⁻		0,2	2.9	Γ: Broad.
6.6×10^3	1⁺	140 keV	1	3.5	
7.06×10^3	1⁻		0,2	4.03	Γ: Broad.
7.54×10^3		≤14 keV		4.55	
7.67×10^3	2⁻	45 keV	0,2	4.70	
7.77×10^3	1⁻	90 keV	0,2	4.80	
7.88×10^3?[‡]	1⁻		0,2	4.93	
8.12×10^3?[‡]	3⁻		2	5.19	
8.23×10^3	3⁻	65 keV	2	5.31	
8.49×10^3	3⁻	75 keV	2	5.59	
8.70×10^3?	3⁻		2	5.82	
9.03×10^3	1⁻	120 keV	0,2	6.18	
9.09×10^3?	2⁻		0,2	6.25	
9578 *5*	3⁻	34 keV *5*	2	6.78	E(level): From (1979Au07).
9.94×10^3		100 keV		7.18	

Continued on next page (footnotes at end of table)

^{11}B(n,n),(n,n′):res 1951Bo45,1958Hu18,1964St25 (continued)

^{12}B Levels (continued)

E(level)†	Γ	E_n (MeV)
10.53×10^3	65 keV	7.83
12.27×10^3	120 keV	9.72

† Mainly from (1951Bo45,1958Hu18,1964St25). Other results reported in (1995Do36) suggest resonances corresponding to ^{12}B*(10115,10181,10304,10383,10525,10563,10640,10939,11017,11060) (±35 keV).

‡ Previously identified as a state at E_n=5.01 MeV with Γ=27 keV (1961Fo07).