^{10}B(d,p) 1951Va08,1966Br18,1953El12

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. H. Kelley, C. G. Sheu	NP A880,88 (2012)	1-Jan-2011

1951Va08: ^{10}B(d,p).
1953El12: ^{10}B(d,p).
1960Bi08: ^{11}B; measured not abstracted; deduced nuclear properties.
1962Hi07: ; measured not abstracted; deduced nuclear properties.
1965Ba31: ^{10}B(d,P_0) E=13.5 MeV, measured $\sigma(\theta)$. ^{11}B deduced Γ-level, L, S.
1966Br18: ^{11}B, measured not abstracted; deduced nuclear properties.
1966Go12: ^{10}B(d,pγ) E=4.2 MeV, measured E+E− coincidences (θ). ^{11}B levels deduced J, π.
1967Po01: ^{10}B(d,P) E=1.75 to 3.0 MeV, measured σ(E,E_P,θ). ^{11}B levels deduced reduced widths, S, L_N, π.
1969Cu10: ^{10}B(pol. d,P) E=10 MeV, measured vector analyzing power.
1969Di08: ^{10}B(d,P) E=1.15, 1.4, 1.85 MeV, measured P(E,θ).
1970Bl09: ^{10}B(d,P) E=2.605-2.960 MeV, measured σ(E).
1970De35: ^{10}B(d,pγ) E=1.5-3 MeV, measured nothing, analyzed σ(E,θ_P,θ(pγ)). ^{11}B levels deduced S. DWBA.
1970Fi07: ^{10}B(vector-pol. d,P) E=10, 12 MeV, measured analyzing power A(θ).
1970Po03: ^{10}B(d,P) E=4.5-5.5 MeV, measured σ(E,E_P,θ).
1972Ar31: ^{10}B(d,P) E<2.5 MeV, measured σ(E).
1975Za06: ^{10}B(d,P), analyzed data. Deduced J dependence of σ.
1977Ar12: ^{10}B(d,P) E=1-2 MeV, measured σ(E,E_P,θ). ^{11}B levels deduced S.
1978Co22: ^{10}B(d,P) E=0.8-2.4 MeV, measured σ(E,θ). ^{11}B levels deduced S. DWBA analysis.
1981Ce04: ^{10}B(d,P) E=29-170 keV, measured thick target yield. Deduced $\sigma(\theta)$.
1993Ce02: ^{10}B(d,P) $E_{C.M.}$=58-142 keV, measured spectra, yield ratios.
1997Ya02,1997Ya08: ^{10}B(d,P) $E_{C.M.}$=57-141 keV, measured energy spectra, $\sigma(\theta)$. Deduced σ, astrophysical S-factor vs E.
2001Ho22: ^{10}B(d,P) E=120-340 keV, measured $\sigma(\theta)$, S-factor.
2004Ru10: ^{10}B(d,p), $E_{C.M.}$=100-300 keV; measured σ, angular distributions. Deduced resonance contributions.
2005Ga59: ^{10}B(d,p), E=15.3 MeV; measured E_γ, E_p, pγ-coin, σ(E,θ). ^{11}B deduced deformation parameters.
2007Ko69: ^{10}B(d,p), E=900-2000 keV; measured σ and angular distributions.
L from (1960Bi08, 1962Hi07,1967Po01).
J^π from (1960Bi08), except for the 8.927 MeV state.

^{11}B Levels

E(level)	J^π	L	Comments
0	3/2−	1	E(level): from (1966Br18) Q=9232.9 keV *34*, however the presently calculated Q(β^-)value=9229.55 keV *16* (2003Au03). Excited states up to E_x=6793.8 keV are from (1966Br18); it is presumed that the systematic error affecting the ground state energy measurement equally affected those excitation energies. The present ground state Q(β^-)value is used with the measured resonance energies to determine E_x for the higher-lying states. E(level): significant discussion is given In (1966Br18) about the Q-value for the ^{10}B(d,p) reaction and variations In earlier measurements. Of specific concern was placement of a γ-ray observed by (1964Al22) In ^{11}Be decay. The γ-ray energy (6792 keV *6*) placed the parent level between two known ^{11}B levels and caused a correction of past measurements, due to an error In calibration source energy, and refinement In subsequent measurements.
2124.6 *11*	1/2−		E(level): from E_x= 2124.6 keV *11* (1966Br18), also see E_x=2140 keV *14* (1951Va08,1966Br18), E_x=2128 keV *10* (see 1975Aj02).
4445.8 *21*	5/2−	1	E(level): from E_x= 4445.8 keV *21* (1966Br18), also see E_x=4464 keV *14* (1951Va08,1966Br18), E_x=4449 keV *8* (see 1975Aj02).
5019.2 *24*	3/2−	(1)	E(level): from E_x= 5019.2 keV *24* (1966Br18), also see E_x=5039 keV *14* (1951Va08,1966Br18), E_x=5023 keV *8* (see 1975Aj02).
6743.9 *22*	7/2−	1	E(level): from E_x= 6743.9 keV *22* (1966Br18), also see E_x=6765 keV *13* (1951Va08,1966Br18).
6793.8 *22*			E(level): from E_x= 6793.8 keV *22* (1966Br18), also see E_x=6815 keV *13* (1951Va08,1966Br18).
7292 *12*		(2)	E(level): from Q=1937 keV *6*, see reference In (1959Aj76). Also see (1966Br18) who analyze

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^{10}B(d,p) 1951Va08,1966Br18,1953El12 (continued)

^{11}B Levels (continued)

E(level)	J^{π}	$T_{1/2}$	L	Comments
				significant systematic effects In (1953El12, and references cited In 1959Aj76).
7982 *9*				E(level): from Q=1248 keV *9* (1953El12). Also see (1966Br18) who analyze significant systematic effects In (1953El12, and references cited In 1959Aj76).
8563 *4*	$(1/2^{+})$		2	E(level): from Q=667 keV *5* (see reference In 1959Aj76), Q=667 keV *8* (1953El12) and ex=8563 keV *10* (see reference In 1975Ja02). Also see (1966Br18) who analyze significant systematic effects In (1953El12, and references cited In 1959Aj76).
8922 *4*			1	E(level): from Q=309 keV *5* (see reference In 1959Aj76), Q=306 keV *8* (1953El12) and ex=8924 keV *10* (see reference In 1975Ja02). Also see (1966Br18) who analyze significant systematic effects In (1953El12, and references cited In 1959Aj76). L from (1962Hi07, 1967Po01). Also see L=0,2 (1960Bi08). This leads to conflict In the deduced J^{π}; (1960Bi08) reports $J^{\pi}=5/2^{+}$, while (1962Hi07,1967Po01) deduce $(3/2^{-},5/2^{-})$.
9186 *4*	$7/2^{+}$		0	E(level): from Q=45 keV *5* (see reference In 1959Aj76), Q=42 keV *8* (1953El12) and ex=9188 keV *10* (see reference In 1975Ja02). Also see (1966Br18) who analyze significant systematic effects In (1953El12, and references cited In 1959Aj76).
9272 *4*	$5/2^{+}$		0	E(level): from Q=−41 keV *5* (see reference In 1959Aj76), Q=−42 keV *7* (1953El12) and ex=9276 keV *10* (see reference In 1975Ja02). Also see (1966Br18) who analyze significant systematic effects In (1953El12, and references cited In 1959Aj76).
10.31×10^{3} *2*		54 keV *17*		E(level): from Q=−1080 keV *20* (1953El12). Γ: from (1953El12), but see (1966Br18) who analyze significant systematic effects In (1953El12).