^{10}B(n,α) res 1990Sa24

History

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

1966To01: ^{10}B(n,α) E=thermal, measured branching ratio.
1967Ca02: ^{10}B(n,$\alpha\gamma$) E=thermal, measured E_γ, Doppler-shift attenuation.
1969An25: ^{10}B(n,α) E=14.4 MeV, measured $\sigma(E_\alpha,\theta)$.
1969Bo03: ^{10}B(n,α) E=10-800 keV, measured σ(E).
1971La10: ^{10}B(n,α) E=0.075-2.2 MeV, measured $\sigma(E,\theta)$, P(E,θ), $\sigma(E,E_\alpha,\theta)$. ^{11}B deduced resonances, J, π.
1973De48: ^{10}B(n,α) E=0.002-0.15 eV, measured σ(E).
1974De43: ^{10}B(n,α) E=0.005-0.1 eV, measured σ(E,E(fragment mass)), $\sigma(E,E_\alpha)$.
1975La08: ^{10}B(n,α) E=790 keV, measured branching ratios.
1976Se06: ^{10}B(n,α) E=0.2-1.25 MeV, measured $\sigma(E,E_\alpha,\theta)$.
1978Mo09: ^{10}B(n,α) E=13.9 MeV, measured $\sigma(E_\alpha,\theta)$.
1978Sc31: ^{10}B(n,$\alpha\gamma$) E=5-700 keV, measured σ, $\Delta\sigma$=3%.
1979St03: ^{10}B(n,α) E=thermal, 2.24 keV, measured $\sigma(\theta)$. R-matrix interpretation.
1979Vi04: ^{10}B(n,$\alpha\gamma$) E=0.1-2.2 MeV, measured σ(E) relative to source reaction. Tof.
1981Ve08: ^{10}B(pol. n,α) E=thermal, measured asymmetry. Deduced asymmetry coefficient.
1983Ve10: ^{10}B(pol. n,α) E=thermal, measured P-odd asymmetry, limits.
1984To04: ^{10}B(n,α) E=low, measured α-, ^{7}Li-spectra.
1986Ca28: ^{10}B(n,α) E≤20 MeV, compiled, evaluated reaction, fission σ(E).
1986Ca29: ^{10}B(n,α) E=1-45 eV, measured reaction σ ratio.
1986Er05: ^{10}B(pol. n,α) E=thermal, measured $\sigma(\theta)$, asymmetry.
1986Ko19: ^{10}B(n,α),(pol. n,α) E=0.088 eV, measured residual nucleus anisotropy, $\gamma(\theta)$, oriented nuclei. ^{11}B deduced J=$(7/2)^+$, j=$(5/2)^+$ state relative importance, interference effects role.
1991We11: ^{10}B(n,α),(n,$\alpha\gamma$) E=0.2-1 MeV, measured σ(E).
1993Sc20: ^{10}B(n,α) E=0.2-4 MeV, measured relative reaction σ.
1994Gl07: ^{10}B(pol. n,α) E=thermal, measured P-odd asymmetry, high accuracy.
1994Sa72: ^{10}B(n,α) E=cold, thermal, measured I_γ, line shapes following residual decay.
1996Sa44: ^{10}B(n,α) E=reactor, measured γ broadened line shapes following residual decay.
1996Ve02: ^{10}B(pol. n,α) E=thermal, measured P-odd asymmetry.
1999Ve03: ^{10}B(pol. n,α) E=reactor, measured γ asymmetry.
2000Go03: ^{10}B(n,α) E=thermal, measured E_α, I_α. Deduced branching ratio.
2002Zh35: ^{10}B(n,α) E=4.17, 5.02, 5.74, 6.52 MeV, measured $\sigma(\theta)$. Deduced angle-integrated σ.
2003GiZY: ^{10}B(n,α), E=1.5-4.5 MeV; measured σ.
2005Gi03, 2005GiZY, 2006Gi03: ^{10}B(n,α), E=1.5-5.6 MeV; measured σ, $\sigma(\theta)$.
2007Ha06: ^{10}B(n,α), E=0.1-2000 keV; measured E_α, σ(E), branching ratio for emission to ground, first excited state.
2008FiZZ: ^{10}B(n,α), E=thermal; measured cross sections.
2008La18: ^{10}B(n,α), deduced S-factors.
2008Zh20: ^{10}B(n,α), E=4.0, 5.0 MeV; measured σ.
2009Ha19: ^{10}B(n,α), (n,$\alpha\gamma$), E=0.0001-1 MeV, measured E_α, I_α, reaction fragments. Deduced $\sigma(\theta)$, ^{10}B(n,α)/^{10}B(n,$\alpha\gamma$) branching ratio.

^{11}B Levels

E(level)[†]	J$^\pi$	$T_{1/2}$	Comments
10.6×10^3	$7/2^+$	9 keV	$\Gamma\alpha$=9 keV E(level): Γ: $\Gamma\alpha$: from R-matrix analysis In (1990Sa24).
11.6×10^3	$5/2^+$	400 keV	$\Gamma\alpha$=396 keV; Γ_n=4 keV E(level): Γ: $\Gamma\alpha$: Γ_n: from R-matrix analysis In (1990Sa24).
11.8×10^3	$7/2^+$	1.454 keV	$\Gamma\alpha$=115 keV; Γ_n=1.339 MeV E(level): Γ: $\Gamma\alpha$: Γ_n: from R-matrix analysis In (1990Sa24).

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^{10}B(n,α) res 1990Sa24 (continued)

^{11}B Levels (continued)

E(level)[†]	J$^{\pi}$	T$_{1/2}$	Comments
11.9×10^3	5/2$^-$	171 keV	$\Gamma\alpha$=170 keV; Γ_n=1 keV E(level): Γ: $\Gamma\alpha$: Γ_n: from R-matrix analysis In (1990Sa24).
13.1×10^3	9/2$^-$	525 keV	$\Gamma\alpha$=325 keV; Γ_n= 200 keV E(level): Γ: $\Gamma\alpha$: Γ_n: from R-matrix analysis In (1990Sa24).
13.2×10^3	5/2$^+$	363 keV	$\Gamma\alpha$=310 keV; Γ_n= 53 keV E(level): Γ: $\Gamma\alpha$: Γ_n: from R-matrix analysis In (1990Sa24).
13.7×10^3	3/2$^+$	750 keV	$\Gamma\alpha$=250 keV; Γ_n=500 keV E(level): Γ: $\Gamma\alpha$: Γ_n: from R-matrix analysis In (1990Sa24).
13.9×10^3	5/2$^-$	625 keV	Γ_n=625 keV E(level): Γ: $\Gamma\alpha$: Γ_n: from R-matrix analysis In (1990Sa24).
14.0×10^3	11/2$^+$	855 keV	$\Gamma\alpha$=55 keV; Γ_n=800 keV E(level): Γ: $\Gamma\alpha$: Γ_n: from R-matrix analysis In (1990Sa24).
15.2×10^3	7/2$^+$	562 keV	$\Gamma\alpha$=187 keV; Γ_n=375 keV E(level): Γ: $\Gamma\alpha$: Γ_n: from R-matrix analysis In (1990Sa24).
15.6×10^3	5/2$^+$	2.051 MeV	$\Gamma\alpha$=346 keV; Γ_n=1.705 MeV E(level): Γ: $\Gamma\alpha$: Γ_n: from R-matrix analysis In (1990Sa24).
15.8×10^3	9/2$^-$	98 keV	$\Gamma\alpha$=46 keV; Γ_n=52 keV E(level): Γ: $\Gamma\alpha$: Γ_n: from R-matrix analysis In (1990Sa24).
16.5×10^3	7/2$^-$		Γ_n=1.360 MeV E(level): Γ_n: from R-matrix analysis In (1990Sa24).
16.9×10^3	5/2$^-$		Γ_n=1.413 MeV E(level): Γ_n: from R-matrix analysis In (1990Sa24).
17.8×10^3	9/2$^-$		Γ_n=2.262 MeV E(level): Γ_n: from R-matrix analysis In (1990Sa24).
17.9×10^3	7/2$^-$		Γ_n=1.875 MeV E(level): Γ_n: from R-matrix analysis In (1990Sa24).
18.1×10^3	9/2$^+$		Γ_n=313 keV E(level): Γ_n: from R-matrix analysis In (1990Sa24).
19.5×10^3	5/2$^-$		Γ_n=1.0 MeV E(level): Γ_n: from R-matrix analysis In (1990Sa24).

[†] From (1990Sa24); also see (1960Da08, 1961Da16) and R-matrix analyses In (1970Ne03, 1971La10, 1973Co05) and (1973Ha64).