^{7}Li(α,γ) res 1962Gr07,1967Pa19,1984Ha13

History

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

1979An16: ^{7}Li(α,γ) E=0.96 MeV, measured E_γ, I_γ(THETA), DSA. ^{11}B levels deduced $T_{1/2}$.
1984Ha13: ^{7}Li(α,γ) E=401, 814, 953 keV, measured thick target γ yield, E_γ, I_γ. ^{11}B resonances deduced resonance Γ_γ, γ-α, γ-branching ratios.
1986Ce05: ^{7}Li(α,γ) E≤3.7 MeV, analyzed reaction σ, other parameters. Deduced fast α-particle confirment In tokamak plasmas.
1987Bu18: ^{7}Li(α,γ) E=0.7-2 MeV, measured E_γ, I_γ, $\sigma(\theta_\gamma)$.
2004Gy02: ^{7}Li(α,γ), E=810-820 keV; measured E_γ, I_γ. Deduced absolute resonance strengths.
See branching ratios In (1962Gr07) and (1984Ha13).

^{11}B Levels

E(level)	J^π	$T_{1/2}$	Comments
0			
4.445×10^3	5/2$^-$		J^π from (1962Gr07).
6.743×10^3	7/2$^-$		J^π from (1962Gr07).
6.792×10^3			
7286	5/2$^+$		J^π from Adopted Levels.
7978	3/2$^+$		J^π from Adopted Levels.
8920 *2*	5/2$^-$	4.374 eV *23*	$\Gamma_{\gamma 0}$=4.15 eV *2*; $\Gamma\alpha$=5.9×10^{-3} eV *9* E(level): from E_{res}=401 keV *3* (1984Ha13), also see E_{res}=401 keV *1* from (1951Be13). Γ: using Γ_γ=4.368 eV *21* from ref in (1984Ha13). Also see Γ<1 keV (1951Be13). $\omega\gamma$=8.8E−3 eV *14* (1984Ha13).
9183. *1*	7/2$^+$	1.8 eV *+15−11*	Γ_γ=0.17 eV *+6−3*; $\Gamma\alpha$=1.6 eV *+15−11* E(level): from E_{res}=814 keV *2* (1984Ha13), also see E_{res}=819 keV *1* from (1951Be13). Γ: from (1984Ha13), also see Γ<1 keV (1951Be13). Γ_γ from (1984Ha13). $\omega\gamma$=0.310 eV *47* (1984Ha13).
9271. *1*	5/2$^+$	4 keV	$\Gamma_{\gamma 0}$=0.20 eV *3*; Γ_γ=1.15 eV *16* E(level): from E_{res}=953 keV *2* (1984Ha13) also see E_{res}=958 keV *1* from (1951Be13). Γ: see (1984Ha13). Also see Γ≈6 keV (1951Be13). Γ_γ from (1984Ha13). $\omega\gamma$=1.72 eV *17* (1984Ha13).
9.88×10^3?	3/2$^+$	290 keV	$\Gamma_{\gamma 0}$<0.5 eV E(level): Γ: from E_{res}=1.90 MeV (1967Pa19).
10256 *12*	3/2$^-$	433 keV	$\Gamma_{\gamma 0}$=17 eV E(level): Γ: from E_{res}=2.50 MeV *2*(1967Pa19).
10332 *12*	5/2$^-$	100 keV	$\Gamma_{\gamma 0}$=1.0 eV E(level): Γ: from E_{res}=2.62 MeV *2* (1967Pa19).
10450? *50*		≈140 keV	E(level): Γ: from E_{res}=2.80 MeV *8* (1967Pa19). WIDTHG0*(2J+1)=10 eV.
10600?	7/2$^+$	90 keV	$\Gamma_{\gamma 0}$<0.2 eV E(level): Γ: from E_{res}=3.04 MeV (1967Pa19).

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$\gamma(^{11}B)$

E_γ	I_γ	E_i(level)	J_i^π	E_f	J_f^π	Comments
1293.	≈1	9271.	$5/2^+$	7978	$3/2^+$	
1985.	≈0.03	9271.	$5/2^+$	7286	$5/2^+$	
2391.	<1.3	9183.	$7/2^+$	6.792×10^3		
2440.	8.3 *10*	9183.	$7/2^+$	6.743×10^3	$7/2^-$	
2480.	<0.6	9271.	$5/2^+$	6.792×10^3		
2529.	11.2 *6*	9271.	$5/2^+$	6.743×10^3	$7/2^-$	
4474	4.5 *5*	8920	$5/2^-$	4.445×10^3	$5/2^-$	
4737.	90.8 *40*	9183.	$7/2^+$	4.445×10^3	$5/2^-$	
4826.	71.7 *18*	9271.	$5/2^+$	4.445×10^3	$5/2^-$	
8916	95 *1*	8920	$5/2^-$	0		the branching ratio from (1965Ol03) (=95 *1*) gives $\Gamma_{\gamma0}$=4.15 eV *5*.
9179.	0.9 *3*	9183.	$7/2^+$	0		
9269.	17.1 *10*	9271.	$5/2^+$	0		

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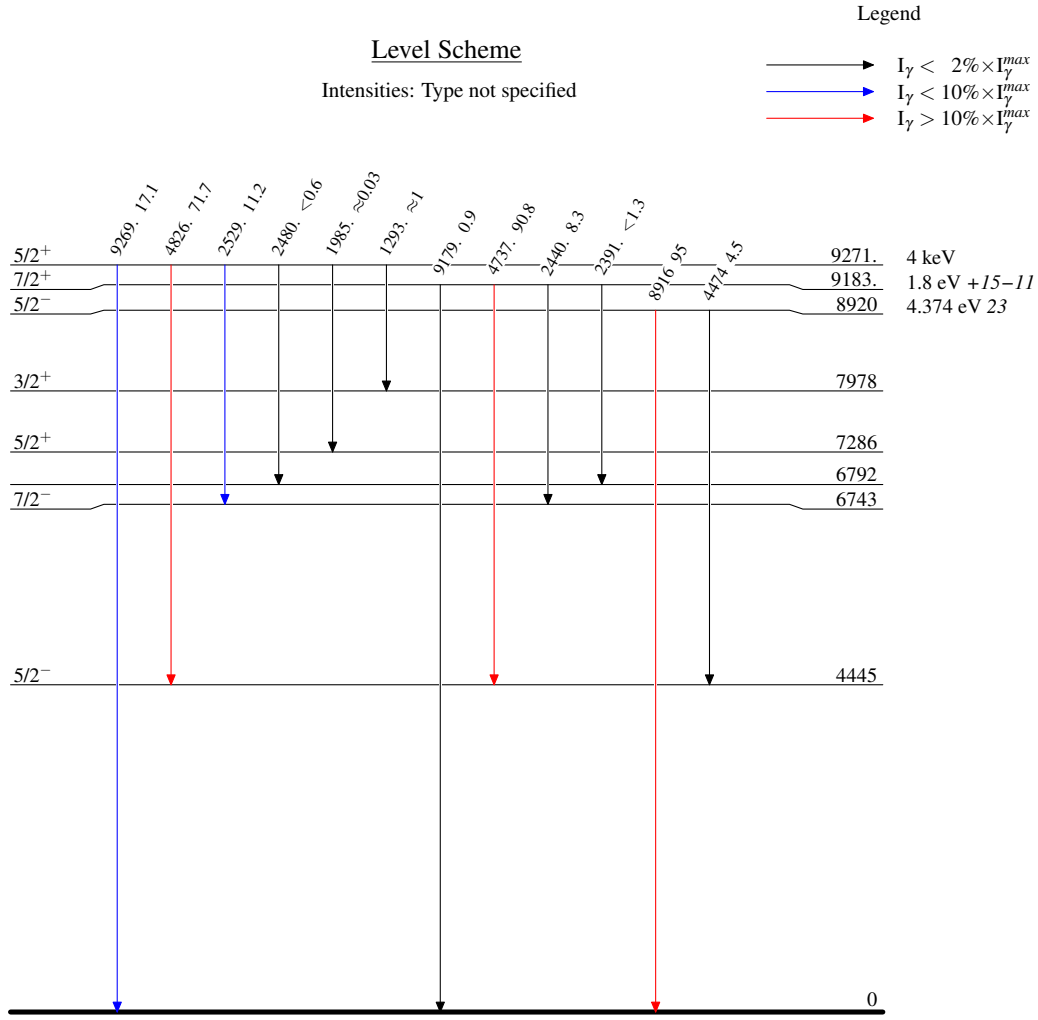
Level Scheme

Intensities: Type not specified



$^{11}_{5}B_{6}$