Table 10.22 from (2004TI06): Levels of ^{10}B from ^{6}Li(α, γ)^{10}B [a]

E_x (MeV)	$J^\pi; T$	Γ_{cm}	$\omega\gamma_{cm}$ (eV) [b]	Γ_γ (eV) [b]
4.774 [c]	$3^+; 0$	7.8 ± 1.2 eV	$(4.20 \pm 0.36) \times 10^{-2}$	$(1.80 \pm 0.15) \times 10^{-2}$
5.112 [d]	$2^-; 0$	0.98 ± 0.07 keV	0.055 ± 0.010	0.033 ± 0.006
5.164 [e]	$2^+; 1$	1.8 ± 0.4 eV	0.40 ± 0.04	1.50 ± 0.40
5.180 [f]	$1^+; 0$	200 ± 30 keV	0.06 ± 0.03	0.06 ± 0.03
5.920 [g]	$2^+; 0$	6 ± 1 keV	0.228 ± 0.038	0.135 ± 0.023
6.024 [h]	$4^+; 0$		0.342 ± 0.048	0.114 ± 0.016
6.873 [i]	$1^-; 0+1$	120 ± 5 keV	0.48 ± 0.11	1.44 ± 0.34
7.440 [j]	$2^-; 0$	90 ± 10 keV	0.29 ± 0.13	

[a] E_x from adopted level energies: see Table 10.8 in (1988AJ01) for resonance energies and measured branching ratios. The measured branching ratios also appear in Table 10.19. Values of $\omega\gamma$ from (1966AL06, 1966FO05) have been multiplied by 0.6 to convert them to the cm system (1979SP01).

[b] $\omega\gamma_{cm}$ and Γ_γ represent the sum for all transitions from a given level.

[c] Average of $\omega\gamma_{cm} = 0.041 \pm 0.004$ (1985NE05) and $\omega\gamma_{cm} = 0.046 \pm 0.008$ (1966AL06); $\Gamma_{cm} = \Gamma_\alpha = 7.8 \pm 1.2$ eV (1981HE05). $\Gamma_\gamma/\Gamma = (2.3 \pm 0.3) \times 10^{-3}$ (1966AL06).

[d] $\Gamma_\alpha = \Gamma_{cm} = 0.98 \pm 0.07$ keV (1984NA07); $\omega\gamma_{cm}$ (1966FO05).

[e] $\omega\gamma_{cm}$ (1979SP01) and $\Gamma_\alpha/\Gamma = 0.16 \pm 0.04$ from averaging $\Gamma_\alpha/\Gamma = 0.13 \pm 0.04$ (1966AL06) and $\Gamma_\alpha/\Gamma = 0.27 \pm 0.15$ (1966SE03). Then $\Gamma_\alpha = 0.29 \pm 0.03$ eV, $\Gamma_\gamma = 1.50 \pm 0.40$ eV and $\Gamma_{cm} = 1.79 \pm 0.40$ eV. Using just the more precise value $\Gamma_\alpha/\Gamma = 0.13 \pm 0.04$, itself an average of two measurements, gives $\Gamma_\alpha = 0.28 \pm 0.03$ eV, $\Gamma_\gamma = 1.85 \pm 0.60$ eV and $\Gamma_{cm} = 2.13 \pm 0.60$ eV. This would raise the transition strengths in Table 10.19 by 23%.

[f] (1961SP02). The accepted width is $\Gamma_{cm} = 110 \pm 10$ keV: see Table 10.18.

[g] (1966FO05). $\Gamma_\alpha = 5.82 \pm 0.06$ keV: see Table 10.23.

[h] (1966FO05). $\Gamma_\alpha = 0.054 \pm 0.024$ keV: see Table 10.23.

[i] (1975AU02). $\omega\gamma_{cm}$ from $\sigma(\alpha, \gamma) = 1.8 \pm 0.4$ μb and Γ_{cm}. Relative intensities at 0° are 13 ± 3% ($\rightarrow 0.72$), 66 ± 4% ($\rightarrow 1.74$), and 8 ± 3% ($\rightarrow 2.15$). $\Gamma_\alpha/\Gamma = 0.33 \pm 0.02$ (1997ZA06) is used to get Γ_γ.

[j] (1975AU02). $E_x = 7.440 \pm 0.020$ MeV. Relative intensities at 0° are 50 ± 12% ($\rightarrow 0$), and 50 ± 12% ($\rightarrow 0.72$). $\omega\gamma_{cm}$ from $\sigma(\alpha, \gamma) = 0.07 \pm 0.03$ μb/sr at 0°, angular correlations for $J^\pi = 2^-$ (assumed), and Γ_{cm}. This level may not exist because the cross section to the first excited state can be accounted for by the decay of the 7.43 MeV 1^- level and that to the ground state by the tail of the 7.48 MeV 2^- level: see Tables 10.20 and 10.24.