Table 10.20 from (2004TI06): Electromagnetic transition strengths for levels above the proton threshold in ^{10}B [a]

$E_i \rightarrow E_f$ (MeV)	$J_i^\pi; T_i \rightarrow J_f^\pi; T_f$	Branch (%)	$\omega\gamma_{cm}$ (eV)	Γ_γ (eV)	Mult.	Γ_γ/Γ_W
$6.87^{b} \rightarrow 0$	$1^-; 0$ [c] $\rightarrow 3^+; 0$	< 4.6		< 0.09	M2	< 84
$\rightarrow 0.718$	$\rightarrow 1^+; 0$	20 ± 2		0.31 ± 0.08	E1	$(4.2 \pm 1.1) \times 10^{-3}$
$\rightarrow 1.740$	$\rightarrow 0^+; 1$	53 ± 2		0.82 ± 0.20	E1	$(1.9 \pm 0.5) \times 10^{-2}$
$\rightarrow 2.154$	$\rightarrow 1^+; 0$	13 ± 1		0.20 ± 0.5	E1	$(6.0 \pm 1.5) \times 10^{-3}$
$\rightarrow 5.110$	$\rightarrow 2^-; 0$	4 ± 1		0.062 ± 0.022	M1	0.54 ± 0.19
$\rightarrow 5.164$	$\rightarrow 2^+; 1$	3 ± 1		0.046 ± 0.019	E1	$(2.9 \pm 1.2) \times 10^{-2}$
$\rightarrow 5.920$	$\rightarrow 2^+; 0$	3.5 ± 1.0		0.054 ± 0.021	E1	0.20 ± 0.08
7.43 [d] $\rightarrow 0.718$	$1^-; 1$ [c] $\rightarrow 1^+; 0$	46	0.58 ± 0.13	2.21 ± 0.50	E1	$(2.3 \pm 0.5) \times 10^{-2}$
$\rightarrow 1.740$	$\rightarrow 0^+; 1$	< 5	< 0.06	< 0.23	E1	$< 4.0 \times 10^{-3}$
$\rightarrow 2.154$	$\rightarrow 1^+; 0$	22	0.27 ± 0.08	1.03 ± 0.30	E1	$(2.2 \pm 0.7) \times 10^{-2}$
$\rightarrow 5.110$	$\rightarrow 2^-; 0$	32	0.4 ± 0.1 [e]	1.52 ± 0.38	M1	5.8 ± 1.5
7.47 [f] $\rightarrow 0$	$2^+; 1 \rightarrow 3^+; 0$	[f]	7.3 ± 0.5	11.7 ± 0.7	M1	1.34 ± 0.08
7.48 [f] $\rightarrow 0$	$2^-; 1$ [i] $\rightarrow 3^+; 0$	[f]	2.8 ± 1.4	5.0 ± 2.5	E1	$(3.8 \pm 1.9) \times 10^{-2}$
$\rightarrow 2.154$	$\rightarrow 1^+; 0$	1.9	0.20 ± 0.07	0.32 ± 0.11	M1	0.10 ± 0.03
7.56 [g] $\rightarrow 0.718$	$0^+; 1 \rightarrow 1^+; 0$	77 ± 5		4.8 ± 0.6	M1	0.72 ± 0.09
$\rightarrow 2.154$	$\rightarrow 1^+; 0$	9 ± 2		0.57 ± 0.14	M1	0.17 ± 0.05
$\rightarrow 5.180$	$\rightarrow 1^+; 0$	14 ± 2		0.87 ± 0.15	M1	3.1 ± 0.6
7.75 [h] $\rightarrow 0$	$2^-; 1$ [i] $\rightarrow 3^+; 0$	77	2.7 ± 0.7	4.32 ± 1.12	E1	$(2.9 \pm 0.8) \times 10^{-2}$
$\rightarrow 0.718$	$\rightarrow 1^+; 0$	11	0.40 ± 0.18	0.64 ± 0.29	E1	$(5.8 \pm 2.6) \times 10^{-3}$
$\rightarrow 2.154$	$\rightarrow 1^+; 0$	3.7	0.13 ± 0.07	0.21 ± 0.11	E1	$(3.8 \pm 2.0) \times 10^{-3}$
$\rightarrow 3.587$	$\rightarrow 2^+; 0$	3.4	0.12 ± 0.07	0.19 ± 0.11	E1	$(8.3 \pm 4.8) \times 10^{-3}$
$\rightarrow 5.110$	$\rightarrow 2^-; 0$	4.8	0.17 ± 0.09	0.27 ± 0.14	M1	0.70 ± 0.35

[a] The $\omega\gamma_{\rm cm}$ values for individual transitions are for the ^{9}Be(p, γ)^{10}B reaction (1964HO02) and the corresponding γ-ray branches are given without errors. Otherwise the total $\omega\gamma_{\rm cm}$ or Γ_γ value is given in a footnote and the branches are given with errors.

[b] $\Gamma_{\rm cm} = 120 \pm 5$ keV, $\Gamma_{\rm p}\Gamma_\gamma/\Gamma = 0.38 \pm 0.10$ eV, $\Gamma_\alpha\Gamma_\gamma/\Gamma = 0.48 \pm 0.11$ eV from (1975AU02). $\Gamma_{\rm p}/\Gamma = 0.23 \pm 0.04$, $\Gamma_\alpha/\Gamma = 0.33 \pm 0.02$ from (1997ZA06). $\Gamma_\gamma = 1.54 \pm 0.40$ eV is an equally weighted average from (p, γ) and (α, γ). The three major branches and the non-observation of a ground-state branch are in agreement with earlier work (1979AJ01).

[c] $\approx$ 20% isospin mixed (1956WI16). See discussion of reaction 12.

[d] $\Gamma_{\rm cm} = 140 \pm 30$ keV, $\Gamma_{\rm p}/\Gamma = 0.7$ (1964HO02). Note, however, $\Gamma_{\rm p}/\Gamma = 0.38 \pm 0.06$ in Table 10.25.

[e] Some of this strength could be due to the 7.48 MeV doublet (1964HO02).

[f] The doublet analyzed as a single state gives $\Gamma_{\rm cm} = 72 \pm 4$ keV and a ground-state branch of 96.8% with $\omega\gamma_{\rm cm} = 10.1 \pm 1.3$ eV (1964HO02). Small branches with $\omega\gamma_{\rm cm} = 0.13 \pm 0.04$ eV and $\omega\gamma_{\rm cm} = 0.20 \pm 0.07$ eV to the 0.718 and 2.154 MeV 1^+ states could be due to either or both members of the doublet. Analysis of elastic proton scattering shows a doublet of 2^+ ($E_{\rm x} = 7.469$ MeV, $\Gamma_{\rm cm} = 65 \pm 10$ keV, $\Gamma_{\rm p}/\Gamma = 1$) and 2^- ($E_{\rm x} = 7.480$ MeV, $\Gamma_{\rm cm} = 80 \pm 8$ keV, $\Gamma_{\rm p}/\Gamma = 0.90 \pm 0.05$) levels (1969MO29). $\Gamma_{\gamma_0} = 11.7 \pm 0.7$ eV for M1 excitation in (e, e′) and $\Gamma_{\rm p}/\Gamma = 1$ gives $\omega\gamma_{\rm cm} = 7.3 \pm 0.5$ eV for the 2^+; 1 level.

[g] Branches are averages of (1961SP04, 1964HO02). $\Gamma_{\rm cm} = 2.65 \pm 0.18$ keV (1972HA63). Using σ(p, γ) $= 920 \pm 84$ μb (1964HO02) gives $\omega\gamma_{\rm cm} = 0.82 \pm 0.10$ eV. This is averaged with $\omega\gamma_{\rm cm} = 0.73 \pm 0.11$ eV (1995ZA04) to give $\omega\gamma_{\rm cm} = 0.78 \pm 0.08$ eV.

[h] $\Gamma_{\rm cm} = 210 \pm 60$ keV (1964HO02). The transition strengths are for $\Gamma_{\rm p}/\Gamma = 1.0$ instead of $\Gamma_{\rm p}/\Gamma = 0.7$ (1964HO02). Analysis of elastic proton scattering gives $E_{\rm x} = 7.79$ MeV, $\Gamma_{\rm cm} = 265 \pm 30$ keV, $\Gamma_{\rm p}/\Gamma = 0.90 \pm 0.05$ (1969MO29).

[i] The 7.48 MeV and 7.75 MeV 2^- levels may form an isospin mixed pair because both possess strong ground-state E1 transitions and only one 2^-; $T = 1$ level, corresponding to the analog of the 6.26 MeV level of ^{10}Be, is expected.