

Table 2 from (1988AJ01): Electromagnetic transitions in $A = 5 - 10$ ^a

Nucleus	$E_{xi} \rightarrow E_{xf}$ (MeV)	$J_i^\pi \rightarrow J_f^\pi$ ^b	Γ_γ (eV)	Mult.	S (W.u.)
⁵ He	16.75 \rightarrow 0	$\frac{3}{2}^+ \rightarrow \frac{3}{2}^-$	2.1 ± 0.4	E1	$(2.3 \pm 0.4) \times 10^{-3}$
⁵ Li	16.66 \rightarrow 0	$\frac{3}{2}^+ \rightarrow \frac{3}{2}^-$	5 ± 1	E1	$(5 \pm 1) \times 10^{-3}$
⁶ Li ^c	2.19 \rightarrow 0	$3^+ \rightarrow 1^+$	$(4.40 \pm 0.34) \times 10^{-4}$	E2	16.5 ± 1.3
	3.56 \rightarrow 0	$0^+; 1 \rightarrow 1^+; 0$	8.19 ± 0.17	M1	8.62 ± 0.18
	4.31 \rightarrow 0	$2^+ \rightarrow 1^+$	$(5.4 \pm 2.8) \times 10^{-3}$	E2	6.8 ± 3.5
	5.37 \rightarrow 0	$2^+; 1 \rightarrow 1^+; 0$	0.27 ± 0.05	M1	$(8.3 \pm 1.5) \times 10^{-2}$
⁷ Li ^d	0.48 \rightarrow 0	$\frac{1}{2}^- \rightarrow \frac{3}{2}^-$	$(6.30 \pm 0.31) \times 10^{-3}$	M1	2.75 ± 0.14
			$(3.3 \pm 0.2) \times 10^{-7}$	E2	19.7 ± 1.2
	4.63 \rightarrow 0	$\frac{7}{2}^- \rightarrow \frac{3}{2}^-$	6×10^{-3}	E2	4.3
⁷ Be	0.43 \rightarrow 0	$\frac{1}{2}^- \rightarrow \frac{3}{2}^-$	$(3.43 \pm 0.45) \times 10^{-3}$	M1	2.07 ± 0.27
⁸ Li	0.98 \rightarrow 0	$1^+ \rightarrow 2^+$	$(5.5 \pm 1.8) \times 10^{-2}$	M1	2.8 ± 0.9
	2.26 \rightarrow 0	$3^+ \rightarrow 2^+$	$(7.0 \pm 3.0) \times 10^{-2}$	M1	0.29 ± 0.13
⁸ Be ^e	16.75 \rightarrow 3.04	$2^+; 1 \rightarrow 2^+; 0$	6.4 ± 0.5	M1	0.12 ± 0.01
	17.64 \rightarrow 0	$1^+; 1 \rightarrow 0^+; 0$	16.7	M1	0.145
	\rightarrow 3.04	$\rightarrow 2^+; 0$	8.15 ± 0.07	M1	0.122 ± 0.001
			0.15 ± 0.07	E2	0.28 ± 0.13
	\rightarrow 16.63	$\rightarrow 2^+; 0 + 1$	$(3.2 \pm 0.3) \times 10^{-2}$	M1	1.5 ± 0.2
	\rightarrow 16.92	$\rightarrow 2^+; 0 + 1$	$(1.3 \pm 0.3) \times 10^{-3}$	M1	0.17 ± 0.04
	18.15 \rightarrow 0	$1^+; 0 \rightarrow 0^+; 0$	3.0	M1	2.4×10^{-2}
	\rightarrow 3.04	$\rightarrow 2^+; 0$	3.8	M1	5.1×10^{-2}
	\rightarrow 16.63	$\rightarrow 2^+; 0 + 1$	$(7.7 \pm 1.9) \times 10^{-2}$	M1	1.0 ± 0.3
	\rightarrow 16.92	$\rightarrow 2^+; 0 + 1$	$(6.2 \pm 0.7) \times 10^{-2}$	M1	1.6 ± 0.2
	18.91 \rightarrow 16.63	$2^-; 0 \rightarrow 2^+; 0 + 1$	0.168	E1	5.21×10^{-2}
	\rightarrow 16.92	$\rightarrow 2^+; 0 + 1$	9.9×10^{-2}	E1	4.6×10^{-2}
	19.07 \rightarrow 3.04	$3^+; (1) \rightarrow 2^+; 0$	10.5	M1	0.12
	27.49 \rightarrow 17.64	$0^+; 2 \rightarrow 1^+; 1$	21.9 ± 3.9	M1	1.1 ± 0.2
	⁸ B	0.78 \rightarrow 0	$1^+ \rightarrow 2^+$	$(5.0 \pm 2.5) \times 10^{-2}$	M1
⁹ Be ^{f,g}	1.68 \rightarrow 0	$\frac{1}{2}^+ \rightarrow \frac{3}{2}^-$	0.30 ± 0.12	E1	0.22 ± 0.09
	2.43 \rightarrow 0	$\frac{5}{2}^- \rightarrow \frac{3}{2}^-$	$(8.9 \pm 1.0) \times 10^{-2}$	M1	0.30 ± 0.03
			$(1.89 \pm 0.14) \times 10^{-3}$	E2	24.4 ± 1.8
	3.05 \rightarrow 0	$\frac{5}{2}^+ \rightarrow \frac{3}{2}^-$	0.30 ± 0.25	E1	$(3.6 \pm 3.0) \times 10^{-2}$
	6.76 \rightarrow 0	$\frac{7}{2}^- \rightarrow \frac{3}{2}^-$	$(8.2 \pm 3.5) \times 10^{-2}$	E2	6.3 ± 2.7
	14.39 \rightarrow 0	$\frac{3}{2}^-; \frac{3}{2} \rightarrow \frac{3}{2}^-; \frac{1}{2}$	6.9 ± 0.5	M1	0.11 ± 0.01
	\rightarrow 2.43	$\rightarrow \frac{5}{2}^-; \frac{1}{2}$	7.8 ± 0.9	M1	0.22 ± 0.03
	\rightarrow 3.04	$\rightarrow \frac{5}{2}^+; \frac{1}{2}$	1.3 ± 0.3	E1	$(3.0 \pm 0.7) \times 10^{-3}$
	\rightarrow 4.70	$\rightarrow (\frac{3}{2})^+; \frac{1}{2}$	0.88 ± 0.22	E1	$(3.3 \pm 0.8) \times 10^{-3}$
	16.98 \rightarrow 0	$\frac{1}{2}^-; \frac{3}{2} \rightarrow \frac{3}{2}^-; \frac{1}{2}$	16.6 ± 1.2	M1	0.161 ± 0.012
	\rightarrow 1.68	$\rightarrow \frac{1}{2}^+; \frac{1}{2}$	2.0 ± 0.2	E1	$(1.9 \pm 0.2) \times 10^{-3}$

Table 2 from (1988AJ01): Electromagnetic transitions in $A = 5 - 10$ ^a (continued)

Nucleus	$E_{xi} \rightarrow E_{xf}$ (MeV)	$J_i^\pi \rightarrow J_f^\pi$ ^b	Γ_γ (eV)	Mult.	S (W.u.)
¹⁰ Be	$\rightarrow 2.43$	$\rightarrow \frac{5}{2}^-; \frac{1}{2}$	0.55 ± 0.12	E2	0.92 ± 0.20
	$\rightarrow 2.78$	$\rightarrow \frac{1}{2}^-; \frac{1}{2}$	2.2 ± 0.7	M1	$(3.7 \pm 1.2) \times 10^{-2}$
	$\rightarrow 4.70$	$\rightarrow (\frac{3}{2})^+; \frac{1}{2}$	2.2 ± 0.3	E1	$(4.0 \pm 0.6) \times 10^{-3}$
	$3.37 \rightarrow 0$	$2^+ \rightarrow 0^+$	$(3.66 \pm 0.37) \times 10^{-3}$	E2	8.00 ± 0.80
	$6.18 \rightarrow 3.37$	$0^+ \rightarrow 2^+$	$(4.6 \pm 2.8) \times 10^{-4}$	E2	2.5 ± 1.5
¹⁰ B ^h	$\rightarrow 5.96$	$\rightarrow 1^-$	$(1.4 \pm 0.5) \times 10^{-4}$	E1	$(4.2 \pm 1.5) \times 10^{-2}$
	$0.72 \rightarrow 0$	$1^+ \rightarrow 3^+$	$(6.51 \pm 0.10) \times 10^{-7}$	E2	3.23 ± 0.05
	$1.74 \rightarrow 0.72$	$0^+; 1 \rightarrow 1^+; 0$	$> 2 \times 10^{-2}$	M1	> 0.9
	$2.15 \rightarrow 0$	$1^+; 0 \rightarrow 3^+; 0$	$(6.5 \pm 1.0) \times 10^{-5}$	E2	1.34 ± 0.20
	$\rightarrow 0.72$	$1^+; 0 \rightarrow 1^+; 0$	$(8.5 \pm 1.0) \times 10^{-5}$	M1	$(1.4 \pm 0.2) \times 10^{-3}$
			$(4.2 \pm 2.0) \times 10^{-6}$	E2	$(6.5 \pm 3.1) \times 10^{-1}$
	$\rightarrow 1.74$	$1^+; 0 \rightarrow 0^+; 1$	$(1.60 \pm 0.17) \times 10^{-4}$	M1	0.11 ± 0.01
	$3.59 \rightarrow 0$	$2^+ \rightarrow 3^+$	$(8.2 \pm 1.5) \times 10^{-4}$	M1	$(8.5 \pm 1.6) \times 10^{-4}$
	$\rightarrow 0.72$	$\rightarrow 1^+$	$(2.9 \pm 0.3) \times 10^{-3}$	M1	$(5.9 \pm 0.6) \times 10^{-3}$
	$\rightarrow 2.15$	$\rightarrow 1^+$	$(6.0 \pm 1.2) \times 10^{-4}$	M1	$(9.7 \pm 1.9) \times 10^{-3}$
	$4.77 \rightarrow 0$	$3^+ \rightarrow 3^+$	$(1.0 \pm 0.3) \times 10^{-4}$	M1	$(4.4 \pm 1.2) \times 10^{-5}$
	$\rightarrow 0.72$	$\rightarrow 1^+$	$(1.8 \pm 0.2) \times 10^{-2}$	E2	16 ± 2
	$5.16 \rightarrow 0$	$2^+; 1 \rightarrow 3^+; 0$	0.068 ± 0.007	M1	$(2.3 \pm 0.2) \times 10^{-2}$
	$\rightarrow 0.72$	$\rightarrow 1^+; 0$	0.33 ± 0.03	M1	0.18 ± 0.02
	$\rightarrow 1.74$	$\rightarrow 0^+; 1$	$(1.0 \pm 0.3) \times 10^{-2}$	M1	$(1.2 \pm 0.4) \times 10^{-2}$
	$\rightarrow 2.15$	$\rightarrow 1^+; 0$	0.94 ± 0.09	M1	1.6 ± 0.2
	$\rightarrow 3.59$	$\rightarrow 2^+; 0$	0.114 ± 0.015	M1	1.4 ± 0.2
	$5.18 \rightarrow 1.74$	$1^+; 0 \rightarrow 0^+; 1$	$(6 \pm 3) \times 10^{-2}$	M1	$(7.0 \pm 3.5) \times 10^{-2}$
	$5.92 \rightarrow 0$	$2^+ \rightarrow 3^+$	0.12 ± 0.03	M1	$(2.8 \pm 0.7) \times 10^{-2}$
	$\rightarrow 0.72$	$\rightarrow 1^+$	0.03 ± 0.01	M1	$(1.0 \pm 0.3) \times 10^{-2}$
	$6.03 \rightarrow 0$	$4^+ \rightarrow 3^+$	0.11 ± 0.02	M1	$(2.4 \pm 0.4) \times 10^{-2}$
	$6.87 \rightarrow 0.72$	$1^-; 0 + 1 \rightarrow 1^+; 0$	0.96	E1	1.3×10^{-2}
	$\rightarrow 1.74$	$\rightarrow 0^+; 1$	2.6	E1	6.1×10^{-2}
	$\rightarrow 2.15$	$\rightarrow 1^+; 0$	0.62	E1	1.9×10^{-2}
	$\rightarrow 5.11$	$\rightarrow 2^-; 0$	0.19	M1	1.7
	$\rightarrow 5.16$	$\rightarrow 2^+; 1$	0.15	E1	9.5×10^{-2}
	$\rightarrow 5.92$	$\rightarrow 2^+; 0$	0.17	E1	0.62
	$7.56 \rightarrow 0.72$	$0^+; 1 \rightarrow 1^+; 0$	6.7	M1	1.0
	$\rightarrow 2.15$	$\rightarrow 1^+; 0$	0.8	M1	0.24
	$\rightarrow 5.18$	$\rightarrow 1^+; 0$	1.0	M1	3.5
	$8.893 \rightarrow 0$	$2^+; 1 \rightarrow 3^+; 0$	0.5 ± 0.2	E2	8.5 ± 3.4
	¹⁰ C	$3.35 \rightarrow 0$	$2^+ \rightarrow 0^+$	$(4.3 \pm 0.7) \times 10^{-3}$	E2

^a The last column gives the γ -ray strengths expressed in Weisskopf units (see D.H. Wilkinson, in *Nuclear spectroscopy B*, ed. F. Ajzenberg-Selove (Academic Press, New York, 1960)). The Weisskopf estimates (Γ_w in eV, E_γ in MeV) are:

$$\begin{aligned}\Gamma_w(\text{E1}) &= 6.8 \times 10^{-2} A^{2/3} E_\gamma^3, & \Gamma_w(\text{E2}) &= 4.9 \times 10^{-8} A^{4/3} E_\gamma^5, \\ \Gamma_w(\text{E3}) &= 2.3 \times 10^{-14} A^2 E_\gamma^7, & \Gamma_w(\text{E4}) &= 6.8 \times 10^{-21} A^{8/3} E_\gamma^9, \\ \Gamma_w(\text{M1}) &= 2.1 \times 10^{-2} E_\gamma^3, & \Gamma_w(\text{M2}) &= 1.5 \times 10^{-8} A^{2/3} E_\gamma^5.\end{aligned}$$

The values for these γ -ray strengths are occasionally different from those listed in other tables of this paper because different values of r_0 were used. In this table $r_0 = 1.2$ fm is used consistently. The multiplicities in the next to the last column were used to calculate the Γ_w . See also (1979EN05).

^b T shown in usual convention [$J^\pi; T$] only if transitions from the initial state involve a change in T .

^c See Table 6.4.

^d See Table 7.5. See also (1984MO1D).

^e See Table 8.5. See also reaction 2 in ^8Be .

^f See Tables 9.3, 9.4 and 9.8.

^g See also (1984MO1D).

^h See Tables 10.6, 10.8, 10.10, 10.11 and 10.15.