

Table 8.10 from (2004TI06): Electromagnetic transition strengths in ^8Be

$E_i \rightarrow E_f$ (MeV)	$J_i^\pi; T_i \rightarrow J_f^\pi; T_f$	Γ_γ (eV)	Mult.	Γ_γ/Γ_w
16.626 \rightarrow 0 ^a	$2^+; 0+1 \rightarrow 0^+; 0$	$(7.0 \pm 2.5) \times 10^{-2}$	E2	$(7.1 \pm 2.5) \times 10^{-2}$
16.92 \rightarrow 0 ^a	$2^+; 0+1 \rightarrow 0^+; 0$	$(8.4 \pm 1.4) \times 10^{-2}$	E2	$(7.8 \pm 1.3) \times 10^{-2}$
(16.626 + 16.92) \rightarrow 3.03 ^b	$2^+; 1 \rightarrow 2^+; 0$	2.80 ± 0.18	M1	$(5.3 \pm 0.3) \times 10^{-2}$
17.64 \rightarrow 0 ^c	$1^+; 1 \rightarrow 0^+; 0$	15.0 ± 1.8	M1	0.13 ± 0.02
\rightarrow 3.03 ^{c,d}	$\rightarrow 2^+; 0$	6.7 ± 1.3	M1	0.10 ± 0.02
		0.12 ± 0.05	E2	0.23 ± 0.10
\rightarrow 16.626 ^{e,f}	$\rightarrow 2^+; 0+1$	$(3.2 \pm 0.3) \times 10^{-2}$	M1	1.5 ± 0.2
\rightarrow 16.92 ^e	$\rightarrow 2^+; 0+1$	$(1.3 \pm 0.3) \times 10^{-3}$	M1	0.17 ± 0.04
18.15 \rightarrow 0 ^g	$1^+; 0 \rightarrow 0^+; 0$	1.9 ± 0.4	M1	$(1.5 \pm 0.3) \times 10^{-2}$
\rightarrow 3.03 ^g	$\rightarrow 2^+; 0$	4.3 ± 1.2	M1	$(5.9 \pm 1.7) \times 10^{-2}$
\rightarrow 16.626 ^e	$\rightarrow 2^+; 0+1$	$(7.7 \pm 1.9) \times 10^{-2}$	M1	1.0 ± 0.3
\rightarrow 16.92 ^e	$\rightarrow 2^+; 0+1$	$(6.2 \pm 0.7) \times 10^{-2}$	M1	1.6 ± 0.2
18.91 \rightarrow 16.626 ^h	$2^-; 0 \rightarrow 2^+; 0+1$	0.17 ± 0.07	E1	$(5.3 \pm 2.0) \times 10^{-2}$
\rightarrow 16.92 ^h	$\rightarrow 2^+; 0+1$	$(9.9 \pm 4.3) \times 10^{-2}$	E1	$(4.6 \pm 2.0) \times 10^{-2}$
19.07 \rightarrow 3.03 ⁱ	$3^+; (1) \rightarrow 2^+; 0$	10.5	M1	0.122
27.49 \rightarrow 17.64 ^j	$0^+; 2 \rightarrow 1^+; 1$	21.9 ± 3.9	M1	1.10 ± 0.20

^a From (1995DE18).

^b From (1995DE18). The $T = 1$ centroid of the isospin-mixed 16.626 MeV and 16.92 MeV levels is at 16.80 MeV. For mixing ratios, see reaction 2 or (1995DE18).

^c $\sigma_{\gamma_0+\gamma_1} = 5.9 \pm 0.5$ mb and $\sigma_{\gamma_0}/\sigma_{\gamma_0+\gamma_1} = 0.69 \pm 0.05$ from (1995ZA03). Using $\Gamma_{\text{cm}} = 10.7 \pm 0.5$ keV from Table 8.10 gives $\Gamma_{\gamma_0+\gamma_1} = 21.8 \pm 2.1$ eV.

^d From (1961ME10), the mixing ratio is 0.133 ± 0.027 .

^e From (1969SW01).

^f From (1969SW02), the mixing ratio is -0.014 ± 0.013 .

^g From (1995ZA03).

^h From the cross sections and $\Gamma_{\text{cm}} = 131 \pm 44$ keV of (1969SW01).

ⁱ From (1976FI05).

^j From (1979FR04).