

Table 8.4 from (1988AJ01): Energy levels of ^8Be ^a

E_x (MeV \pm keV)	$J^\pi; T$	$\Gamma_{\text{c.m.}}$ (keV)	Decay	Reactions
g.s.	$0^+; 0$	6.8 ± 1.7 eV	α	1, 2, 4, 10, 11, 12, 13, 14, 19, 20, 21, 22, 23, 26, 27, 28, 29, 30, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52
3.04 ± 30	$2^+; 0$	1500 ± 20	α	2, 4, 10, 11, 12, 13, 14, 19, 20, 21, 22, 24, 25, 26, 27, 28, 29, 30, 32, 34, 35, 36, 37, 38, 41, 42, 44, 45
11.4 ± 300	$4^+; 0$	≈ 3500 ^b	α	4, 12, 13, 19, 21, 27, 28, 29, 42, 44, 45
16.626 ± 3	$2^+; 0 + 1$	108.1 ± 0.5	γ, α	2, 4, 10, 11, 13, 14, 19, 20, 21, 25, 28, 29, 34, 35, 38, 42, 44
16.922 ± 3	$2^+; 0 + 1$	74.0 ± 0.4	γ, α	2, 4, 10, 11, 13, 14, 19, 20, 21, 27, 28, 29, 34, 35, 38, 42, 44
17.640 ± 1.0	$1^+; 1$	10.7 ± 0.5	γ, p	5, 11, 14, 16, 19, 20, 27, 28, 35, 44
18.150 ± 4	$1^+; 0$	138 ± 6	γ, p	11, 14, 16, 19, 20, 27, 28, 35, 38
18.91	2^-	122 ^e	γ, n, p	11, 14, 15, 16, 19, 23
19.07 ± 30	$3^+; (1)$	270 ± 20	γ, p	11, 14, 16, 19, 27, 28
19.24 ± 25	$3^+; (0)$	230 ± 30	n, p	15, 16, 19, 27, 28, 29, 35
19.4	1^-	≈ 650	n, p	11, 15, 16
19.86 ± 50	$4^+; 0$	700 ± 100	p, α	4, 11, 18, 21, 22, 28, 29, 35
20.1	$2^+; 0$	≈ 1100	n, p, α	4, 15, 16, 18, 22, 35
20.2	$0^+; 0$	< 1000	α	4, 35
20.9	4^-	1600 ± 200	p	16

Table 8.4 from (1988AJ01): Energy Levels of ${}^8\text{Be}$ ^a (continued)

E_x (MeV \pm keV)	$J^\pi; T$	$\Gamma_{\text{c.m.}}$ (keV)	Decay	Reactions
21.5	$3^{(+)}$	1000	γ, n, p	14, 15
22.0 ^c	$1^-; 1$	≈ 4000	γ, p	14
22.05 ± 100		270 ± 70		29
22.2	$2^+; 0$	≈ 800	n, p, d, α	4, 9, 13, 15, 16, 18
22.63 ± 100		100 ± 50		29
22.98 ± 100		230 ± 50		29
24.0 ^c	$(1, 2)^-; 1$	≈ 7000	γ, p, α	14, 18
25.2	$2^+; 0$		p, d, α	4, 9, 18
25.5	$4^+; 0$	broad	d, α	9
27.4941 ± 1.8 ^d	$0^+; 2$	5.5 ± 2.0	$\gamma, n, p, d, t, {}^3\text{He}, \alpha$	5, 7, 9, 31
(28.6)		broad	γ, p	14

^a See also [Table 8.5](#) and [reaction 4](#).

^b See, however, [reaction 27](#).

^c Giant resonance: see [reaction 14](#).

^d For the parameters of this state please see [Table 8.5 in \(1984AJ01\)](#).

^e See [reaction 23](#).