

Table 8.4 from (1988AJ01): Energy levels of  ${}^8\text{Be}$  <sup>a</sup>

$E_x$ (MeV $\pm$ keV)	$J^\pi; T$	$\Gamma_{\text{c.m.}}$ (keV)	Decay	Reactions
g.s.	$0^+; 0$	$6.8 \pm 1.7$ eV	$\alpha$	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
$3.04 \pm 30$	$2^+; 0$	$1500 \pm 20$	$\alpha$	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
$11.4 \pm 300$	$4^+; 0$	$\approx 3500$ <sup>b</sup>	$\alpha$	4, 12, 13, 19, 21, 27, 28, 29, 42, 44, 45
$16.626 \pm 3$	$2^+; 0 + 1$	$108.1 \pm 0.5$	$\gamma, \alpha$	2, 4, 10, 11, 13, 14, 19, 20, 21, 25, 28, 29, 34, 35, 38, 42, 44
$16.922 \pm 3$	$2^+; 0 + 1$	$74.0 \pm 0.4$	$\gamma, \alpha$	2, 4, 10, 11, 13, 14, 19, 20, 21, 27, 28, 29, 34, 35, 38, 42, 44
$17.640 \pm 1.0$	$1^+; 1$	$10.7 \pm 0.5$	$\gamma, \text{p}$	5, 11, 14, 16, 19, 20, 27, 28, 35, 44
$18.150 \pm 4$	$1^+; 0$	$138 \pm 6$	$\gamma, \text{p}$	11, 14, 16, 19, 20, 27, 28, 35, 38
18.91	$2^-$	122 <sup>e</sup>	$\gamma, \text{n}, \text{p}$	11, 14, 15, 16, 19, 23
$19.07 \pm 30$	$3^+; (1)$	$270 \pm 20$	$\gamma, \text{p}$	11, 14, 16, 19, 27, 28
$19.24 \pm 25$	$3^+; (0)$	$230 \pm 30$	$\text{n}, \text{p}$	15, 16, 19, 27, 28, 29, 35
19.4	$1^-$	$\approx 650$	$\text{n}, \text{p}$	11, 15, 16
$19.86 \pm 50$	$4^+; 0$	$700 \pm 100$	$\text{p}, \alpha$	4, 11, 18, 21, 22, 28, 29, 35
20.1	$2^+; 0$	$\approx 1100$	$\text{n}, \text{p}, \alpha$	4, 15, 16, 18, 22, 35
20.2	$0^+; 0$	$< 1000$	$\alpha$	4, 35
20.9	$4^-$	$1600 \pm 200$	$\text{p}$	16
21.5	$3^{(+)}$	1000	$\gamma, \text{n}, \text{p}$	14, 15

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

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

<sup>a</sup> See also [Table 8.5](#) and [reaction 4](#).

<sup>b</sup> See, however, [reaction 27](#).

<sup>c</sup> Giant resonance: see [reaction 14](#).

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

<sup>e</sup> See [reaction 23](#).