

Table 8.3 from (1959AJ76): Energy levels of  $^8\text{Be}$

$E_x$ in $^8\text{Be}$ (MeV)	$J^\pi; T$	$\Gamma$ (MeV)	Decay	Reactions
0	$0^+; 0$	$2.5 \pm 1 \text{ eV}$	$\alpha$	1, 3, 12, 13, 14, 21, 22, 24, 26, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42
2.90 <sup>a</sup>	$2^+; 0$	$1.2 \pm 0.3$ <sup>b</sup>	$\alpha$	3, 12, 14, 21, 26, 27, 28, 29, 30, 31, 32, 33, 35, 36, 37, 38, 39, 40
11.7	$4^+; 0$	$\approx 6.7$	$\alpha$	3, 12, 21, 27, 28
16.08		0.31	( $\alpha$ )	21, 39, 41
16.67	$(2^+; 1)$	0.19	$\alpha$	21, 39, 41
(17.6)	$(2^+; 1)$	(< 0.3)	( $\alpha$ )	39
17.64	$1^+; (1)$	$10.7 \pm 0.5 \text{ keV}$	$\gamma, p$	14, 16, 21
18.15	$1^+; (0)$	147 keV	$\gamma, p$	14, 16, 17, 21
18.9	$(2^-; 0)$	> 0.5	n, p	15, 16, 17, 25
19.1	$(3^-)$	0.4	$\gamma, p$	14, 15, 16
19.22	$3^+; (1)$	0.19	n, p	15, 16
19.9	$(2^+)$	$\approx 0.9$	(n), $\alpha, p$	15, 20
21.6		$\approx 0.8$	n, p	15
22.6	$(^+)$	$\approx 0.35$	d, n, $\alpha, p, \gamma$	5, 6, 10, 14

<sup>a</sup> A number of additional states from  $E_x = 2$  to 15 MeV have been reported by various observers: see, e.g.  $^7\text{Li}(d, n)^8\text{Be}$ ,  $^{10}\text{B}(d, \alpha)^8\text{Be}$ ,  $^{11}\text{B}(p, \alpha)^8\text{Be}$ ,  $^{12}\text{C}(\gamma, \alpha)^8\text{Be}$  and (1954TI1C).

<sup>b</sup> See Table 8.4.