

Table 8.2 from (2004TI06): Energy levels of ${}^8\text{Li}$ ^a

E_x (MeV \pm keV)	$J^\pi; T$	τ or Γ_{cm} (keV)	Decay	Reactions
g.s.	$2^+; 1$	$\tau_{1/2} = 839.9 \pm 0.9$ msec ^c	β^-	1, 3, 4, 8, 9, 10, 14, 15, 16, 17, 18, 21, 22
0.9808 ± 0.1	$1^+; 1$	$\tau_m = 12 \pm 4$ fsec ^c	γ	3, 8, 9, 11, 14, 15, 16, 21, 22, 28
2.255 ± 3	$3^+; 1$	$\Gamma = 33 \pm 6$ keV ^c	γ, n	3, 4, 5, 8, 14, 15, 16, 31
3.21	$1^+; 1$	≈ 1000	n	6, 11
5.4 ^d	$1^+; 1$	≈ 650	n	6, 11
6.1 ± 100	(3); 1	≈ 1000	n	5
6.53 ± 20	$4^+; 1$	35 ± 15	n	3, 5, 8, 15, 16
7.1 ± 100		≈ 400	n	5
(9)		≈ 6000		14
≈ 9.67 ^{b,c}	1^+	≈ 1000 ^c	t	11
10.8222 ± 5.5	$0^+; 2$	< 12		19

^a For additional states see reactions 5 and 16.

^b From multi-level multi-channel R -matrix fit to ${}^8\text{He}$ decay spectra.

^c From information given in this evaluation.

^d A level at $E_x = 5.4$ MeV with uncertain $J^\pi = (2^+)$ was observed in ${}^7\text{Li}(n, n')$ (1972PR03).