

Table 9.8 from (1988AJ01): Levels of ${}^9\text{Be}$ from ${}^9\text{Be}(e, e'){}^9\text{Be}^*$ ^a

E_x in ${}^9\text{Be}$ (MeV \pm keV)	$\Gamma_{\text{c.m.}}$ (keV)	Transition	J^π	Γ_{γ_0} (eV)
1.684 ± 7 ^b	217 ± 10 ^b	C1	$\frac{1}{2}^+$	0.30 ± 0.12
2.44 ± 20	< 30	M1	$\frac{5}{2}^-$	0.089 ± 0.010
		C2		$(1.89 \pm 0.14) \times 10^{-3}$ ^c
3.04 ± 20	450 ± 150	C1 ^d	$\frac{5}{2}^+$ ^d	0.30 ± 0.25 ^e
4.7 ± 200	700 ± 300	C(1)		2.4 ± 1.2 ^f
6.4 ± 100	1000 ± 300	C2	$\frac{7}{2}^-$	0.082 ± 0.035
13.84 ± 50 ^g				
14.388 ± 15 ^h	< 70	M1	$\frac{3}{2}^-$	6.9 ± 0.5
15.10 ± 50 ^g				
15.97 ± 30 ^g	≈ 300	M1		3.7 ± 0.8 ^f
16.631 ± 15 ^h	< 70	M2 ⁱ	$\leq \frac{7}{2}^+$	0.26 ± 0.02 ^f
		M1	$\leq \frac{5}{2}^-$	2.0 ± 0.5 ^f
16.961 ± 15 ^h	< 70	M1	$\frac{1}{2}^-$	11.5 ± 1.4
17.28		M1	$\leq \frac{5}{2}^-$	7.3 ± 1.3 ^f
17.480 ± 20 ^h	≈ 100	M2 ⁱ	$\leq \frac{7}{2}^+$	0.40 ± 0.03 ^f
18.02 ± 50 ^g				
18.62 ± 50 ^g				
19.51 ± 50 ^g				
20.76 ± 50 ^g				
j				

^a For references see [Table 9.8 in \(1979AJ01\)](#). See also [\(1984AJ01\)](#).

^b $B(\text{C1})\uparrow = 0.027 \pm 0.002 e^2 \cdot \text{fm}^2$ and $B(\text{M2})\uparrow = 8.8 \pm 1.5 \mu_N^2 \cdot \text{fm}^2$ [\(1987KU05\)](#).

^c $B(\text{C2}, \omega)\uparrow = 45.7 \pm 3.5 e^2 \cdot \text{fm}^4$.

^d Assumed.

^e The group may consist of two unresolved states, the second one reached by an M1 transition [$J^\pi = (\frac{1}{2})^-$] with $\Gamma_{\gamma_0} = 0.18 \pm 0.09$ eV. I am indebted to Dr. L.W. Fagg for his help in understanding this point.

^f $g\Gamma_{\gamma_0}$; where $g = (2J_f + 1)/(2J_i + 1)$.

^g Weak transition.

^h [\(1983LO11\)](#).

ⁱ Or pure spin-flip E1. [\(1984WO09\)](#) assign $J^\pi = \frac{5}{2}^+$ and $\frac{7}{2}^+$, respectively, for ${}^9\text{Be}^*(16.67, 17.49)$.

^j See [\(1974AJ01, 1984AJ01\)](#) for states reported at higher excitation energies.