

Table 8.20 from (2004TI06): Isospin triplet states ($T = 1$) in $A = 8$ nuclei ^a

⁸ Li		⁸ Be			⁸ B		
E_x (MeV)	J^π	E_x (MeV)	J^π	ΔE_x (MeV) ^b	E_x (MeV)	J^π	ΔE_x (MeV) ^c
0	2 ⁺	16.626 + 16.922 ^d	2 ⁺		0	2 ⁺	
0.9808	1 ⁺	17.640 ^e	1 ⁺	-0.143	0.7695	1 ⁺	-0.211
2.255	3 ⁺	19.07 ^f	3 ⁺	0.013	2.32	3 ⁺	0.065

^a As taken from [Tables 8.2, 8.9 and 8.15](#). The analogs of the broad 1⁺ levels near 3.2 and 5.4 MeV and the narrow 4⁺ level at 6.53 MeV in ⁸Li (see [Table 8.2](#)) are unknown in ⁸Be and ⁸B.

^b Defined as $E_x(^8\text{Be}) - E_x(^8\text{Li}) - 16.802$.

^c Defined as $E_x(^8\text{B}) - E_x(^8\text{Li})$.

^d The $T = 1$ centroid of the 16.626 and 16.922 MeV levels is 16.802 MeV in ⁸Be, assuming an isospin-mixed doublet with $T = 0$ intensities proportional to the observed α widths in [Table 8.9](#).

^e Predominantly $T = 1$. A small amount of isospin mixing improves the γ -ray branching ratios for the decay of the 17.64 and 18.15 MeV levels, and also the channel spin ratio for the formation of the 17.64 MeV level in the ⁷Li(p, γ) reaction.

^f Predominantly $T = 1$. Isospin mixing at the few % level is needed to reproduce the widths of the 19.07 and 19.24 MeV levels.