

Table 19.7 from (1978AJ03): Radiative transitions in ^{19}F ^a

E_i (MeV)	J_i^π	E_f (MeV)	J_f^π	Branching ratio (%)	δ	Refs.	
0.110	$\frac{1}{2}^+ \frac{1}{2}^-$	0	$\frac{1}{2}^+ \frac{1}{2}^+$	100			
0.197	$\frac{1}{2}^+ \frac{1}{2}^+$	0	$\frac{1}{2}^+ \frac{1}{2}^+$	100			
1.35	$\frac{1}{2}^-$	0.110	$\frac{1}{2}^+ \frac{1}{2}^+$	< 0.06		(1970CO22)	
		0	$\frac{1}{2}^+ \frac{1}{2}^+$	< 3		(1976BH03)	
1.46	$\frac{1}{2}^-$	0.110	$\frac{1}{2}^- \frac{1}{2}^-$	96.8 ± 1^A	0.0 ± 0.7	(1969PO03)	
			$\frac{1}{2}^- \frac{1}{2}^-$	96 ± 3		(1976BH03)	
		0.197	$\frac{1}{2}^+ \frac{1}{2}^+$	3.2 ± 1^A	$ \delta < 0.06$	(1972RO01)	
		0	$\frac{1}{2}^+ \frac{1}{2}^+$	4 ± 1		(1969PO03)	
1.55	$\frac{1}{2}^+$	0	$\frac{1}{2}^+ \frac{1}{2}^+$	22.5 ± 2	$0.30 < \delta < 0.38$	(1969PO03)	
				21 ± 1		(1970LA02)	
				20.0 ± 1		(1971HA30)	
				20 ± 2		(1976BH03)	
		0.110	$\frac{1}{2}^-$	$\frac{1}{2}^- \frac{1}{2}^-$	20.7 ± 0.7	mean	(1969PO03)
					66.3 ± 3		(1970LA02)
		0.197	$\frac{1}{2}^+$	$\frac{1}{2}^+ \frac{1}{2}^+$	68 ± 3	$\delta = 0.56 \pm 0.13$	(1971HA30)
					69.7 ± 1		(1976BH03)
					70 ± 4		mean
					69.3 ± 0.9		(1972RO33)
0.197	$\frac{1}{2}^+$	$\frac{1}{2}^+ \frac{1}{2}^+$	10.9 ± 2	$-0.1 < \delta < 0$	(1969PO03)		
			11 ± 0.5		(1970LA02)		
			10.2 ± 1		(1971HA30)		
			10 ± 2		(1976BH03)		
1.55	$\frac{1}{2}^+$	0	$\frac{1}{2}^+ \frac{1}{2}^+$	10.8 ± 0.5	mean	(1966OL01)	
				2.4 ± 0.5		(1969PO03)	
				2.0 ± 0.7		(1976BH03)	
				4 ± 2		mean	
0.110	$\frac{1}{2}^-$	$\frac{1}{2}^- \frac{1}{2}^-$	2.3 ± 0.4	mean	(1959JO26)		
			4.6 ± 0.5		(1966OL01)		
			5.2 ± 0.7		(1969PO03)		
			5.3 ± 1		(1976BH03)		
0.197	$\frac{1}{2}^+$	$\frac{1}{2}^+ \frac{1}{2}^+$	6 ± 2	mean	(1966OL01)		
			4.9 ± 0.4		(1969PO03)		
			92.4 ± 0.9		(1976BH03)		
			92.7 ± 1		mean		
2.78	$\frac{1}{2}^+ \frac{1}{2}^+$	0.197	$\frac{1}{2}^+ \frac{1}{2}^+$	90 ± 4	mean	(1966OL01)	
				92.5 ± 0.7		(1969PO03)	
				100		(1976BH03)	
				100		a	
3.91 ^b	$\frac{1}{2}^+ \frac{1}{2}^+$	0	$\frac{1}{2}^+ \frac{1}{2}^+$	48 ± 5	(1976BH03)		
		0.110	$\frac{1}{2}^- \frac{1}{2}^-$	18 ± 4	(1976BH03)		
		0.197	$\frac{1}{2}^+ \frac{1}{2}^+$	16 ± 4	(1976BH03)		
		1.35	$\frac{1}{2}^- \frac{1}{2}^-$	< 4	(1976BH03)		
		1.46	$\frac{1}{2}^- \frac{1}{2}^-$	< 4	(1976BH03)		
		1.55	$\frac{1}{2}^+ \frac{1}{2}^+$	18 ± 4	(1976BH03)		
4.00	$\frac{1}{2}^-$	2.78	$\frac{1}{2}^+ \frac{1}{2}^+$	< 2	(1965AL20)		
		0.197	$\frac{1}{2}^+ \frac{1}{2}^+$	18 ± 4	(1976BH03)		
		1.35	$\frac{1}{2}^- \frac{1}{2}^-$	70 ± 4	(1976BH03)		

Table 19.7 from (1978AJ03): Radiative transitions in ^{19}F ^a (continued)

E_i (MeV)	J_i^π	E_f (MeV)	J_f^π	Branching ratio (%)	δ	Refs.
4.03 4.38 ^c	$\frac{5}{2}^-$	1.46	$\frac{1}{2}^-$	12 ± 6	0.155 ± 0.022	(1976BH03)
		1.35	$\frac{3}{2}^-$	100		(1976BH03)
		0	$\frac{5}{2}^+$	< 5		(1966OL01)
		0.110	$\frac{3}{2}^-$	< 2		(1966OL01)
		0.197	$\frac{5}{2}^+$	85 ± 5		(1966TH02)
				82 ± 7		(1966OL01)
				89 ± 2 ^A		(1976RO07)
		1.35 + 1.46		< 0.8		(1976RO07)
		1.55	$\frac{3}{2}^+$	< 0.8		(1976RO07)
		2.78	$\frac{5}{2}^+$	15 ± 5		(1966TH02)
4.55 ^{d,e}	$\frac{5}{2}^+$			18 ± 7	-0.16 ± 0.07	(1966OL01)
				11 ± 2		(1976RO07)
		0	$\frac{1}{2}^+$	< 5		(1976BH03)
		0.110	$\frac{3}{2}^+$	< 5		(1976BH03)
		0.197	$\frac{5}{2}^+$	69 ± 7		(1976BH03)
		1.35	$\frac{3}{2}^+$	5 ± 3		(1976BH03)
		1.46	$\frac{5}{2}^+$	8 ± 3		(1976BH03)
		1.55	$\frac{7}{2}^+$	18 ± 4		(1976BH03)
		0	$\frac{3}{2}^-$	36 ± 4		(1976BH03)
		0.110	$\frac{5}{2}^-$	45 ± 5		(1976BH03)
4.56 ^d	$\frac{3}{2}^-$	0.197	$\frac{1}{2}^+$	9 ± 3	(1976BH03)	
		1.35	$\frac{3}{2}^-$	4 ± 3	(1976BH03)	
		1.46	$\frac{5}{2}^-$	< 4	(1976BH03)	
		1.55	$\frac{7}{2}^-$	6 ± 3	(1976BH03)	
		2.78	$\frac{5}{2}^+$	100	$ M ^2 = 5.5 \pm 1.8$ W.u. see (1972AJ02)	
		0	$\frac{1}{2}^+$	< 0.5	(1972RO01)	
		0.110	$\frac{3}{2}^+$	< 1.5	(1972RO01)	
		0.197	$\frac{5}{2}^+$	6 ± 1	0 < δ < 2.0 (1972RO01)	
				4 ± 2	(1976BH03)	
		1.35	$\frac{5}{2}^-$	63 ± 6	-0.22 ^{+0.14} _{-0.24} (1972RO01)	
4.65 4.68	$\frac{13}{2}^+$			64 ± 5	0.0 ± 0.24 or 2.0 ^{+1.5} _{-0.6}	(1976BH03)
				31 ± 3		(1972RO01)
				32 ± 3		(1976BH03)
		1.55	$\frac{3}{2}^+$	< 5		(1972RO01)
		2.78	$\frac{5}{2}^+$	< 2		(1972RO01)
		0.197	$\frac{7}{2}^+$	80		$\Gamma_\gamma/\Gamma = 0.83 \pm 0.10$ (1970AI01, 1976RO07)
		1.46	$\frac{9}{2}^+$	20		(1970AI01)
		0	$\frac{1}{2}^+$	37 ± 4		(1972RO33)
		0.110	$\frac{3}{2}^+$	42 ± 4		(1972RO33)
		0.197	$\frac{5}{2}^+$	< 1		(1972RO33)
5.11	$\frac{5}{2}^+$	1.35	$\frac{3}{2}^-$	< 1.5	(1972RO33)	
		1.46	$\frac{5}{2}^-$	20 ± 2	(1972RO33)	
		1.55	$\frac{7}{2}^-$	< 2	(1972RO33)	
		1.35	$\frac{5}{2}^-$	70	(1970AI01)	
		1.46	$\frac{7}{2}^-$	13	(1970AI01)	
		4.00	$\frac{9}{2}^-$	10	(1970AI01)	
5.34	$\frac{1}{2}^+$	4.03	$\frac{1}{2}^+$	6	(1970AI01)	
		0.197	$\frac{3}{2}^+$	4	(1971DI18)	

Table 19.7 from (1978AJ03): Radiative transitions in $^{19}\text{F}^a$ (continued)

E_i (MeV)	J_i^π	E_f (MeV)	J_f^π	Branching ratio (%)	δ	Refs.
5.50	$\frac{3}{2}^+$	1.35	$\frac{1}{2}^-$	32		(1971DI18)
		1.55	$\frac{1}{2}^-$	5		(1971DI18)
		2.78	$\frac{1}{2}^-$	59		(1971DI18)
		0.110	$\frac{1}{2}^-$	25		(1970AI01)
		0.197	$\frac{1}{2}^-$	49		(1970AI01)
		1.35	$\frac{1}{2}^-$	16		(1970AI01)
5.54	$\frac{5}{2}^+$	1.55	$\frac{1}{2}^-$	11		(1970AI01)
		0	$\frac{1}{2}^-$	7		(1970AI01)
		0.197	$\frac{1}{2}^-$	47		(1970AI01)
		1.46	$\frac{1}{2}^-$	45		(1970AI01)
5.62	$\frac{3}{2}^-$	0	$\frac{1}{2}^-$	< 5		(1972RO33)
		0.110	$\frac{1}{2}^-$	< 2		(1972RO33)
		0.197	$\frac{1}{2}^-$	39 ± 4		(1972RO33)
		1.35	$\frac{1}{2}^-$	61 ± 4		(1972RO33)
		1.46	$\frac{1}{2}^-$	< 25		(1972RO33)
		1.55	$\frac{1}{2}^-$	< 25		(1972RO33)
5.94	$\frac{1}{2}^+$	0	$\frac{1}{2}^-$	7 ± 4		(1972RO33)
		0.110	$\frac{1}{2}^-$	20 ± 6		(1972RO33)
		0.197	$\frac{1}{2}^-$	2 ± 1		(1972RO33)
		1.46	$\frac{1}{2}^-$	63 ± 6	0.25 ± 0.02	(1972RO33)
		1.55	$\frac{1}{2}^-$	< 2		(1972RO33)
		3.91	$\frac{1}{2}^-$	8 ± 3	0.28 ± 0.09	(1972RO33)
		0.197	$\frac{1}{2}^-$	54 ± 5	-0.26 ± 0.02	(1972RO33)
		1.35	$\frac{1}{2}^-$	19 ± 2		(1972RO33)
		1.55	$\frac{1}{2}^-$	$1^{+1}_{-0.5}$	0.035 ± 0.023	(1972RO33)
		2.78	$\frac{1}{2}^-$	23 ± 3	0.06 ± 0.08	(1972RO33)
6.07	$\frac{7}{2}^+$	4.00	$\frac{1}{2}^-$	< 2		(1972RO33)
		4.03	$\frac{1}{2}^-$	< 1		(1972RO33)
		4.38	$\frac{1}{2}^-$	4 ± 1		(1972RO33)
		0	$\frac{1}{2}^-$	25 ± 4	-0.021 ± 0.014	(1972RO33)
		0.110	$\frac{1}{2}^-$	61 ± 5	0.045 ± 0.021	(1972RO33)
		0.197	$\frac{1}{2}^-$	14 ± 3	0.014 ± 0.043	(1972RO33)
		1.35	$\frac{1}{2}^-$	< 0.5		(1972RO33)
		1.46	$\frac{1}{2}^-$	< 1.5		(1972RO33)
		1.55	$\frac{1}{2}^-$	< 1		(1972RO33)
		0.197	$\frac{1}{2}^-$	31 ± 3	-0.045 ± 0.025	(1972RO33)
6.16	$\frac{7}{2}^-$	1.35	$\frac{1}{2}^-$	65 ± 4	0.077 ± 0.007	(1972RO33)
		1.46	$\frac{1}{2}^-$	1.3 ± 0.6		(1972RO33)
		2.78	$\frac{1}{2}^-$	< 1		(1972RO33)
		4.00	$\frac{1}{2}^-$	1.6 ± 0.6		(1972RO33)
		4.03	$\frac{1}{2}^-$	2.3 ± 0.3		(1972RO33)
		4.38	$\frac{1}{2}^-$	< 1		(1972RO33)
		4.68	$\frac{1}{2}^-$	< 2		(1972RO33)
		0	$\frac{1}{2}^-$	14 ± 2	-0.05 ± 0.07	(1977DI08)
		0.197	$\frac{1}{2}^-$	4.2 ± 1.0		(1977DI08)
		1.35	$\frac{1}{2}^-$	36 ± 2	-0.01 ± 0.09	(1977DI08)
6.28 ^f	$\frac{5}{2}^+$	1.46	$\frac{1}{2}^-$	26 ± 2	-0.02 ± 0.04	(1977DI08)
		1.55	$\frac{1}{2}^-$	20 ± 2	0.11 ± 0.06	(1977DI08)

Table 19.7 from (1978AJ03): Radiative transitions in ^{19}F ^a (continued)

E_i (MeV)	J_i^π	E_f (MeV)	J_f^π	Branching ratio (%)	δ	Refs.
6.33 ^f	$\frac{7}{2}^+$	0.197	$\frac{3}{2}^-$	56 ± 3	-0.27 ± 0.24	(1977DI08)
		1.35	$\frac{1}{2}^-$	17 ± 2	-0.02 ± 0.03	(1977DI08)
		1.55	$\frac{3}{2}^-$	8.5 ± 1.5	0.00 ± 0.14	(1977DI08)
		4.38	$\frac{1}{2}^-$	18 ± 2	0.04 ± 0.20	(1977DI08)
6.498 ^f	$\frac{3}{2}^+$	0	$\frac{3}{2}^-$	38 ± 2	-0.06 ± 0.04 or 2.00 ± 0.17	(1977DI08)
		0.110	$\frac{1}{2}^-$	14 ± 2	0.00 ± 0.03	(1977DI08)
		0.197	$\frac{1}{2}^-$	9 ± 2	$0.3 \rightarrow 1.8$	(1977DI08)
		1.35	$\frac{1}{2}^-$	14 ± 2	-0.11 ± 0.09	(1977DI08)
		1.46	$\frac{1}{2}^-$	25 ± 2	0.00 ± 0.07	(1977DI08)
		2.78	$\frac{1}{2}^-$	55		(1969AI01, 1970AI01, 1977DI08)
6.500	$\frac{11}{2}^+$	4.00	$\frac{1}{2}^-$	< 3		(1969AI01)
		4.03	$\frac{1}{2}^-$	< 3		(1969AI01)
		4.38	$\frac{1}{2}^-$	< 3		(1969AI01)
		4.65	$\frac{3}{2}^-$	45		(1969AI01, 1970AI01, 1977DI08)
		5.47	$\frac{1}{2}^-$	< 2		(1969AI01)
		0	$\frac{3}{2}^-$	29 ± 2	0.32 ± 0.04 or 0.90 ± 0.06	(1977DI08)
6.53	$\frac{3}{2}^+$	0.110	$\frac{1}{2}^-$	59 ± 3	0.00 ± 0.02	(1977DI08)
		4.55	$\frac{1}{2}^-$	12 ± 2	-0.23 ± 0.13	(1977DI08)
		0.197	$\frac{1}{2}^-$	19 ± 2	0.03 ± 0.05	(1977DI08)
6.55	$\frac{7}{2}^-$	1.35	$\frac{1}{2}^-$	55 ± 4	0.01 ± 0.03	(1977DI08)
		2.78	$\frac{1}{2}^-$	26 ± 3	0.05 ± 0.07	(1977DI08)
		0.197	$\frac{1}{2}^-$	13 ± 2	-0.13 ± 0.13	(1971DI18, 1977DI08)
6.59	$\frac{9}{2}^+$	2.78	$\frac{1}{2}^-$	63 ± 3	-0.20 ± 0.20	(1971DI18, 1977DI08)
		4.00	$\frac{1}{2}^-$	< 4		(1971DI18)
		4.03	$\frac{1}{2}^-$	< 2		(1971DI18)
		4.38	$\frac{1}{2}^-$	24 ± 2	0.02 ± 0.07	(1971DI18, 1977DI08)
		4.55	$\frac{1}{2}^-$	< 2		(1971DI18)
		4.65	$\frac{1}{2}^-$	< 2		(1971DI18)
		5.43	$\frac{1}{2}^-$	< 3		(1971DI18)
		5.47	$\frac{1}{2}^-$	< 8		(1971DI18)
		0	$\frac{3}{2}^-$	15 ± 2	-0.08 ± 0.03	(1977DI08)
		0.110	$\frac{1}{2}^-$	39 ± 2	0.11 ± 0.02	(1977DI08)
6.79	$\frac{3}{2}^-$	0.197	$\frac{1}{2}^-$	13 ± 2	0.05 ± 0.06	(1977DI08)
		1.35	$\frac{1}{2}^-$	5.3 ± 0.8		(1977DI08)
		1.46	$\frac{1}{2}^-$	25 ± 2	-0.13 ± 0.08	(1977DI08)
		3.91	$\frac{1}{2}^-$	2.6 ± 1.0		(1977DI08)
		0	$\frac{5}{2}^-$	9 ± 5		(1977DI08)
		0.110	$\frac{1}{2}^-$	9 ± 5		(1977DI08)
		0.197	$\frac{1}{2}^-$	27 ± 6	-0.5 ± 0.5	(1977DI08)
6.84	$\frac{5}{2}^-$	1.35	$\frac{1}{2}^-$	10 ± 7		(1977DI08)
		1.46	$\frac{1}{2}^-$	45 ± 8	-0.02 ± 0.11	(1977DI08)
		0	$\frac{3}{2}^-$	9 ± 2		(1977DI08)
		0.110	$\frac{1}{2}^-$	< 8		(1977DI08)
6.89	$\frac{3}{2}^-$	0.197	$\frac{1}{2}^-$	< 5		(1977DI08)
		1.35	$\frac{1}{2}^-$	61 ± 5	$0.22 \rightarrow 2.2$	(1977DI08)
		1.46	$\frac{1}{2}^-$	30 ± 5	0.15 ± 0.12	(1977DI08)
		0.197	$\frac{1}{2}^-$	73 ± 3	-0.01 ± 0.03	(1977DI08)
6.93	$\frac{7}{2}^-$	1.35	$\frac{1}{2}^-$	22 ± 2	0.01 ± 0.02	(1977DI08)

Table 19.7 from (1978AJ03): Radiative transitions in $^{19}\text{F}^a$ (continued)

E_i (MeV)	J_i^π	E_f (MeV)	J_f^π	Branching ratio (%)	δ	Refs.	
7.17	$\frac{11}{2}^-$	2.78	$\frac{1}{2}^+$	2.4 ± 0.5	0.00 ± 0.16	(1977DI08)	
		4.00	$\frac{1}{2}^-$	1.3 ± 0.5		(1977DI08)	
		4.03	$\frac{1}{2}^-$	1.3 ± 0.5		(1977DI08)	
		1.35	$\frac{1}{2}^-$	< 0.75		(1973RO09)	
		4.00	$\frac{1}{2}^-$	6 ± 2		(1973RO09, 1977DI08)	
				5 ± 1^A		(1977FI06)	
7.54	$\frac{5}{2}^+; T = \frac{3}{2}$	4.03	$\frac{1}{2}^-$	94 ± 2	$\Gamma_\gamma = 0.15 \pm 0.2 \text{ eV}^1$	(1973RO09, 1977DI08)	
				91 ± 1^A		(1977FI06)	
		4.65	$\frac{13}{2}^+$	3.6 ± 0.9^A		(1977FI06)	
		0	$\frac{1}{2}^+$	< 0.3		(1976RO07)	
		0.110	$\frac{1}{2}^+$	< 0.2		(1976RO07)	
		0.197	$\frac{1}{2}^+$	29 ± 3		0.09 ± 0.04	(1976RO07)
		1.35	$\frac{1}{2}^-$	1.2 ± 0.4		(1976RO07)	
		1.46	$\frac{1}{2}^-$	(< 0.4)		(1976RO07)	
		1.55	$\frac{1}{2}^+$	41 ± 3		0.017 ± 0.015	(1976RO07)
		2.78	$\frac{1}{2}^+$	(< 2)		(1976RO07)	
		3.91	$\frac{1}{2}^-$	< 0.2		(1976RO07)	
		4.00	$\frac{1}{2}^-$	< 0.2		(1976RO07)	
		4.38	$\frac{1}{2}^+$	27 ± 3		0.042 ± 0.030	(1976RO07)
4.55	$\frac{1}{2}^-$	< 0.3	(1976RO07)				
4.56	$\frac{1}{2}^-$	< 1.2	(1976RO07)				
4.68	$\frac{1}{2}^-$	< 1.2	(1976RO07)				
5.11	$\frac{1}{2}^-$	1.7 ± 0.4	(1976RO07)				
5.47	$\frac{1}{2}^+$	< 0.4	(1976RO07)				
6.07	$\frac{1}{2}^+$	< 0.9	(1976RO07)				
7.66 ^g	$\frac{3}{2}^+; T = \frac{3}{2}$	0	$\frac{1}{2}^+$	38 ± 4	0.06 ± 0.02 or 3.7 ± 1.0	(1976RO07)	
		0.110	$\frac{1}{2}^+$	< 0.4	(1976RO07)		
		0.197	$\frac{1}{2}^+$	13 ± 2	0.06 ± 0.07 or 3.5 ± 1.1	(1976RO07)	
		1.35	$\frac{1}{2}^-$	< 1.3	(1976RO07)		
		1.46	$\frac{1}{2}^-$	< 1	(1976RO07)		
		1.55	$\frac{1}{2}^+$	36 ± 2	0.06 ± 0.04 or -4.7 ± 1.0	(1976RO07)	
		3.91	$\frac{3}{2}^+$	(3^+_{-2})	(1976RO07)		
		4.38	$\frac{1}{2}^+$	< 1.3	(1976RO07)		
		4.55	$\frac{1}{2}^-$	5.1 ± 0.3	-0.11 ± 0.13	(1976RO07)	
		5.11	$\frac{1}{2}^-$	5.9 ± 0.5	-0.04 ± 0.16	(1976RO07)	
		7.93	$\frac{7}{2}^+, \frac{9}{2}$	0.197	$\frac{1}{2}^+$	4	(1971DI18)
2.78	$\frac{1}{2}^+$			96	(1971DI18)		
7.94	$\frac{11}{2}^+$	2.78	$\frac{1}{2}^+$	11	(1970RO1C)		
				10	(1971DI18)		
		4.00	$\frac{7}{2}^-$	< 7	(1971DI18)		
		4.03	$\frac{7}{2}^-$	< 7	(1971DI18)		
		4.38	$\frac{7}{2}^-$	< 7	(1971DI18)		
		4.65	$\frac{13}{2}^+$	89	(1970RO1C)		
				90	(1971DI18)		
		5.43	$\frac{7}{2}^-$	< 9	(1971DI18)		
		5.47	$\frac{1}{2}^+$	< 10	(1971DI18)		
		6.50	$\frac{1}{2}^+$	< 7	(1971DI18)		
		6.59	$\frac{1}{2}^+$	< 7	(1971DI18)		

Table 19.7 from (1978AJ03): Radiative transitions in $^{19}\text{F}^a$ (continued)

E_i (MeV)	J_i^π	E_f (MeV)	J_f^π	Branching ratio (%)	δ	Refs.
8.29	$\frac{13}{2}^-$	1.35	$\frac{13}{2}^-$	< 2	$\Gamma_\gamma = 76 \pm 11 \text{ meV}$ $\Gamma_\gamma = 70 \pm 10 \text{ meV}$	(1974UN01)
		4.00	$\frac{13}{2}^-$	< 5		(1974UN01)
		4.03	$\frac{13}{2}^-$	100		(1974UN01)
		4.65	$\frac{13}{2}^+$	91 ± 1^A		(1977FI06)
				< 7		(1974UN01)
8.59	$\frac{3}{2}$	0	$\frac{13}{2}^+$	9 ± 1^A		(1977FI06)
		0.110	$\frac{3}{2}^+$	51 \pm 4		(1962NE03)
		0.197	$\frac{3}{2}^+$	9 \pm 3		(1962NE03)
8.80	$\frac{1}{2}^+; T = \frac{3}{2}$	0	$\frac{1}{2}^+$	40 \pm 3		(1962NE03)
		0.110	$\frac{1}{2}^+$	< 10		(1965AL20)
		0.197	$\frac{1}{2}^+$	42 \pm 4	(1965AL20)	
		1.35	$\frac{1}{2}^+$	< 5	(1965AL20)	
		1.46	$\frac{1}{2}^+$	< 5	(1965AL20)	
		1.55	$\frac{1}{2}^+$	21 \pm 5	(1965AL20)	
		2.78	$\frac{1}{2}^+$	19 \pm 5	(1965AL20)	
		3.91	$\frac{1}{2}^+$	< 1	(1965AL20)	
8.96 ^h	$\frac{11}{2}^+$	2.78	$\frac{11}{2}^+$	18 \pm 2	$\Gamma_\gamma(\text{total}) = 230 \pm 30 \text{ meV}$	(1965AL20)
		4.00	$\frac{11}{2}^+$	51 \pm 3		(1977FI06)
		4.03	$\frac{11}{2}^+$	26 \pm 3		(1977FI06)
		4.65	$\frac{11}{2}^+$	8 \pm 1		(1977FI06)
		5.43	$\frac{11}{2}^+$	13 \pm 2		(1977FI06)
		5.43	$\frac{11}{2}^+$	3 \pm 1		(1977FI06)
9.10	$\frac{7}{2}^+; T = \frac{3}{2}$	0.110	$\frac{7}{2}^+$	(< 0.5)		(1965AL20)
		0.197	$\frac{7}{2}^+$	11 \pm 2		(1965AL20)
		1.35	$\frac{7}{2}^+$	4 \pm 1		(1965AL20)
		2.78	$\frac{7}{2}^+$	64 \pm 4 ^k		(1965AL20)
		4.00	$\frac{7}{2}^+$	8 \pm 2	(1965AL20)	
		5.43	$\frac{7}{2}^+$	(8 \pm 2)	(1965AL20)	
		6.07	$\frac{7}{2}^+$	(5 \pm 2)	(1965AL20)	
		6.07	$\frac{7}{2}^+$	86 \pm 4	(1962NE03)	
9.32	$\frac{1}{2}^+$	0	$\frac{1}{2}^+$	4 \pm 2	(1962NE03)	
		0.110	$\frac{1}{2}^+$	10 \pm 2	(1962NE03)	
		0.197	$\frac{1}{2}^+$	10 \pm 2	(1962NE03)	
9.87	$\frac{11}{2}^-$	2.78	$\frac{11}{2}^-$	68 \pm 2	$\Gamma_\gamma = 0.58 \pm 0.08 \text{ eV}$	(1977FI06)
		4.00	$\frac{11}{2}^-$	6 \pm 1		(1977FI06)
		4.03	$\frac{11}{2}^-$	24 \pm 2		(1977FI06)
		4.65	$\frac{11}{2}^-$	2.5 \pm 0.6		(1977FI06)
10.136 ⁱ	$\frac{3}{2}^-$	0	$\frac{3}{2}^-$	84 \pm 3	(1962NE03)	
		0.110	$\frac{3}{2}^-$	4 \pm 2	(1962NE03)	
		0.197	$\frac{3}{2}^-$	12 \pm 2	(1962NE03)	
10.41	$\frac{13}{2}^+$		$\frac{13}{2}^+$			(1976SY01, 1977SY1A)
11.217	$\frac{11}{2}^+$	2.78	$\frac{11}{2}^+$	2.4	$\Gamma_\gamma = 1.1 \pm 0.1 \text{ eV}$	(1977SY1A)
		4.65	$\frac{11}{2}^+$	(98)		(1977SY1A)

A = adopted.

^a See also [Table 19.9 in \(1972AJ02\)](#) and [Tables 19.8, 19.10, 19.15 and 19.20](#) here.

^b See also [\(1965AL20\)](#).

^c $\Gamma_\gamma/\Gamma = 0.91 \pm 0.05$ ([1976RO07](#)).

^d See also [\(1972LE20\)](#).

^e $\Gamma_\gamma/\Gamma = 0.76 \pm 0.15$ ([1976RO07](#)).

^f See also [\(1970AI01\)](#).

^g $\Gamma_\gamma = 4.7$ eV, $\Gamma_\gamma/\Gamma = 0.65 \pm 0.10$; see [Table 19.9 in \(1972AJ02\)](#).

^h See also [\(1974UN01\)](#).

ⁱ See also [\(1971WO12, 1972WO15\)](#).

^j Strong decay to $^{19}\text{F}^*(4.65, 6.50)$ [$J^\pi = \frac{13}{2}^+, \frac{11}{2}^+$, respectively]. Weak decay to $^{19}\text{F}^*(2.78)$ [$\frac{9}{2}^+$]; from (α, γ) measurement $\delta = 0.08 \pm 0.08$ if $J = \frac{13}{2}$, 0.47 ± 0.06 if $J = \frac{11}{2}$. If $^{19}\text{F}^*(10.41)$, $J = \frac{11}{2}$, $|M|^2(\text{M1}) = 0.010 \pm 0.003$, 0.46 ± 0.10 and 0.18 ± 0.03 W.u. for the transitions to $^{19}\text{F}^*(2.78, 4.65, 6.50)$ and $|M|^2(\text{E2}) = 25 \pm 7$ W.u. for transition to $^{19}\text{F}^*(4.65)$ ([1976SY01](#)).

^k $\Gamma_\gamma = 0.84 \pm 0.19$ eV. Total $\Gamma_\gamma(9.10) = 1.31 \pm 0.31$ eV.

^l See also [Table 19.8](#).