

Table 17.17 from (1986AJ04): Energy levels of ^{17}F ^a

E_x in ^{17}F (MeV \pm keV)	$J^\pi; T$	τ or $\Gamma_{\text{c.m.}}$ (keV)	Decay	Reactions
0	$\frac{5}{2}^+; \frac{1}{2}$	$\tau_{1/2} = 64.49 \pm 0.16$ sec	β^+	1, 2, 3, 4, 5, 6, 12, 13, 14, 15, 16, 17, 18, 19, 20
0.49533 ± 0.10	$\frac{1}{2}^+$	$\tau_m = 412 \pm 9$ psec	γ	2, 3, 4, 5, 6, 12, 13, 14, 15, 16, 17, 19
3.104 ± 3	$\frac{1}{2}^-$	$\Gamma = 19 \pm 1$	γ, p	3, 4, 5, 6, 7, 12, 13, 17, 19
3.857 ± 4	$\frac{5}{2}^-$	1.5 ± 0.2	γ, p	3, 4, 5, 6, 7, 12, 13, 19
4.64 ± 20	$\frac{3}{2}^-$	225	p	4, 5, 7, 12, 15, 17
5.00 ± 20	$\frac{3}{2}^+$	1530	p	7
5.220 ± 10	$(\frac{9}{2}^-)$			4, 5, 14
5.488 ± 11	$\frac{3}{2}^-$	68	p	4, 5, 7, 17
5.672 ± 20	$\frac{7}{2}^-$	40	p	4, 5, 7
5.682 ± 20	$\frac{1}{2}^+$	< 0.6	p	4, 5, 7
5.82 ± 20	$\frac{3}{2}^+$	180	p	4, 7, 15
6.037 ± 9	$\frac{1}{2}^-$	30	p	4, 5, 7, 17
6.406 ± 30	$(\frac{1}{2}^-, \frac{3}{2}^-)$		p	17
6.56 ± 20	$\frac{1}{2}^+$	200	p	7
6.697 ± 7	$\frac{5}{2}^+$	$\leq 1.6 \pm 0.2$	p	4, 5, 7
6.774 ± 20	$\frac{3}{2}^+$	4.5	p	7
7.027 ± 20	$\frac{5}{2}^-$	3.8	p	5, 7
7.356 ± 20	$\frac{3}{2}^+$	10 ± 2	p, α	5, 7, 11
7.448 ± 20		≤ 5	p	7
7.454 ± 20		7 ± 2	p, α	7, 11
7.471 ± 20		5 ± 2	p	7
7.479 ± 20	$\frac{3}{2}^+$	795	p	7
7.546 ± 20	$\frac{7}{2}^-$	30	p	7
7.75 ± 40 ^b	$(\frac{1}{2}^+)$	179 ± 30	p, α	7, 11, 17
7.95 ± 30		10 ± 3	p	7
8.01 ± 40		50 ± 20	p, α	7, 11
8.07 ± 30	$\frac{5}{2}^{(+)}$	100 ± 20	p, α	5, 7, 11

Table 17.17 from (1986AJ04): Energy levels of ^{17}F ^a (continued)

E_x in ^{17}F (MeV \pm keV)	$J^\pi; T$	τ or $\Gamma_{\text{c.m.}}$ (keV)	Decay	Reactions
8.075 \pm 10	$(\frac{1}{2}, \frac{3}{2})^-$		p	5, 17
8.2	$\frac{3}{2}^{(-)}$	700 \pm 250	p, α	7, 11
8.383 \pm 10	$\frac{5}{2}^{(-)}$	11 \pm 5	p, α	7, 11
8.416 \pm 20	$(\frac{7}{2}^+)$	45 \pm 10	p, α	7, 11
8.436 \pm 10	$(\frac{1}{2}, \frac{3}{2})^-$		p	17
8.75 \pm 60	$\frac{5}{2}^{(+)}$	170 \pm 30	p, α	7, 11
8.76	$\frac{3}{2}^+$	90 \pm 20	p	7
8.825 \pm 25	$(\frac{1}{2}, \frac{3}{2})^-$		p	17
8.98 \pm 20	$\frac{7}{2}^-$	165 \pm 30	p, α	7, 11
9.17 \pm 60	$\frac{3}{2}^{(+)}$	140 \pm 30	p, α	7, 11, 15
9.92	$\frac{9}{2}^+$	90 \pm 30	p, α	7, 11
10.04 \pm 40	$\frac{7}{2}$	280 \pm 100	p	7
10.22 \pm 40		250 \pm 80	α	11
10.40 \pm 40	$(\frac{5}{2}^+)$	160 \pm 40	p	7
10.499 \pm 30	$\frac{7}{2}^-$	165 \pm 25	p, α	7, 11
10.79 \pm 40		120 \pm 40	p, (α)	7, 11
10.91 \pm 100	$\frac{1}{2}^-$	560 \pm 100	p	7
10.95 \pm 40		190 \pm 50	p, (α)	7, 11
11.1929 \pm 2.3	$\frac{1}{2}^-; \frac{3}{2}$	0.20 \pm 0.04	γ , p, α	5, 6, 7, 11, 17
11.43 \pm 40		240 \pm 50	p, α	7, 11
11.58 \pm 50		160 \pm 30	p	7
12.00 \pm 40		120 \pm 40	p, α	7, 11
12.25 \pm 40	$\frac{3}{2}^-$	300 \pm 30	p	7
12.355 \pm 20	$\frac{1}{2}^-$	190 \pm 20	p	7
\approx 12.50	$\frac{7}{2}^-$	\approx 600	p	7
12.5501 \pm 0.9	$\frac{3}{2}^-; \frac{3}{2}$	2.83 \pm 0.12	γ , p, α	5, 6, 7, 11
13.061 \pm 4	$\frac{5}{2}^-; \frac{3}{2}$	2 \pm 1	γ , p, α	5, 6, 7, 11
13.080 \pm 4	$(\frac{1}{2}^+); \frac{3}{2}$	2 \pm 1	p, α	7, 11
13.13 \pm 100	$\frac{5}{2}^-$	520 \pm 50	p	7
13.781 \pm 4	$\frac{5}{2}^+; \frac{3}{2}$	12 \pm 5	p, α	7, 11
14.00 \pm 50	$\frac{7}{2}^-$	260 \pm 30	p	7

Table 17.17 from (1986AJ04): Energy levels of ^{17}F ^a (continued)

E_x in ^{17}F (MeV \pm keV)	$J^\pi; T$	τ or $\Gamma_{\text{c.m.}}$ (keV)	Decay	Reactions
14.176 \pm 6	$\frac{3}{2}^-; \frac{3}{2}$	30 \pm 5	γ, p	6, 7
14.3038 \pm 3.1	$\frac{7}{2}^-; \frac{3}{2}$	19.3 \pm 1.6	γ, p, α	6, 7, 11
14.38 \pm 50	$\frac{5}{2}^-$	610 \pm 50	p	7, 15
14.71 \pm 100	$\frac{1}{2}^-$	470 \pm 100	p	7
14.809 \pm 20	$\frac{1}{2}^+$	190 \pm 25	p	7
15.6		\approx 550	p	7
17.1	$\frac{5}{2}^-$	1500	p	7
20.1 \pm 200		1070 \pm 160	$\gamma, ^3\text{He}$	3
20.4 \pm 100		700 \pm 100	$\gamma, ^3\text{He}$	3
20.9	$\frac{9}{2}^+$	600	p	7
21.3 \pm 100		900 \pm 100	$\gamma, ^3\text{He}$	3
21.8	$(\frac{9}{2}^+)$	400	p	7
22.7	$\frac{7}{2}^+$	600	p	7
23.8	$\frac{7}{2}^+$	600	p	7
25.4	$\frac{7}{2}^-$	1500	p	7
27.2	$\frac{5}{2}^-$	1500	p	7
28.9	$\frac{5}{2}^+$	2000	p	7

^a See also [Table 17.19](#). I am very indebted to Drs. H.T. Richards and E.K. Warburton for their comments.

^b May be a doublet: compare [Tables 17.19](#) and [17.21](#).