

Table 17.17 from (1977AJ02): Energy levels of  $^{17}\text{F}$

$E_x$ in $^{17}\text{F}$ (MeV $\pm$ keV)	$J^\pi, T$	$\tau$ or $\Gamma_{\text{c.m.}}$ (keV)	Decay	Reactions
0	$\frac{5}{2}^+; \frac{1}{2}$	$\tau_{1/2} = 64.50 \pm 0.25$ sec	$\beta^+$	1, 2, 3, 4, 6, 7, 8, 9, 10, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 28, 29, 30
0.49533 $\pm$ 0.10	$\frac{1}{2}^+; \frac{1}{2}$	$\tau_m = 412 \pm 9$ psec	$\gamma$	4, 6, 7, 9, 10, 16, 17, 20, 21, 23, 25, 26, 29
3.104 $\pm$ 3	$\frac{1}{2}^-; \frac{1}{2}$	$\Gamma = 19 \pm 1$	$\gamma, p$	7, 9, 10, 11, 16, 17, 27, 29
3.857 $\pm$ 4	$\frac{5}{2}^-; \frac{1}{2}$	$\tau_m = 6 \pm 1$ fsec	$\gamma, p$	7, 9, 10, 11, 16, 17, 29
4.696 $\pm$ 10	$\frac{3}{2}^-; \frac{1}{2}$	$\Gamma = 225$	p	7, 9, 11, 16, 27
5.103 $\pm$ 10	$\frac{3}{2}^+; \frac{1}{2}$	1530	p	11, 20
5.212 $\pm$ 11	$(\frac{9}{2}); \frac{1}{2}$			7, 9
5.521 $\pm$ 10	$\frac{3}{2}^-; \frac{1}{2}$	68	p	7, 9, 11, 27
5.672 $\pm$ 10	$\frac{7}{2}^-; \frac{1}{2}$	40	p	7, 9, 11
5.682 $\pm$ 10	$\frac{1}{2}^+; \frac{1}{2}$	$< 0.6$	p	7, 9, 11
5.817 $\pm$ 10	$\frac{3}{2}^+; \frac{1}{2}$	180	p	7, 11
6.036 $\pm$ 10	$\frac{1}{2}^-; \frac{1}{2}$	30	p	7, 9, 11, 27
6.556 $\pm$ 10	$\frac{1}{2}^+; \frac{1}{2}$	200	p	11
6.699 $\pm$ 10	$\frac{3}{2}^-; \frac{1}{2}$	$< 3$	p	7, 9, 11
6.774 $\pm$ 10	$\frac{3}{2}^+; \frac{1}{2}$	4.5	p	11
7.027 $\pm$ 10	$\frac{5}{2}^-; \frac{1}{2}$	3.8	p	9, 11
7.356 $\pm$ 10	$\frac{3}{2}^+; \frac{1}{2}$	$10 \pm 2$	p, $\alpha$	9, 11, 15
7.448 $\pm$ 7		$\leq 5$	p	11
7.454 $\pm$ 7		$7 \pm 2$	p, $\alpha$	11, 15
7.471 $\pm$ 7		$5 \pm 2$	p	11
7.479 $\pm$ 10	$\frac{3}{2}^+; \frac{1}{2}$	795	p	11
7.546 $\pm$ 10	$\frac{7}{2}^-; \frac{1}{2}$	30	p	11
7.75 $\pm$ 20	$\frac{1}{2}^+; \frac{1}{2}$	$179 \pm 3$	p, $\alpha$	11, 15, 27
7.95 $\pm$ 15		$10 \pm 3$	p	11
8.01 $\pm$ 20		$50 \pm 20$	p, $\alpha$	11, 15
8.075 $\pm$ 10	$\frac{5}{2}^+; \frac{1}{2}$	$100 \pm 20$	p, $\alpha$	9, 11, 15, 27
8.2	$\frac{3}{2}^-; \frac{1}{2}$	$700 \pm 250$	p, $\alpha$	11, 15
8.383 $\pm$ 5	$\frac{5}{2}^-; \frac{1}{2}$	$11 \pm 5$	p, $\alpha$	11, 15

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8.416 $\pm$ 10	$\frac{7}{2}^+; \frac{1}{2}$	45 $\pm$ 10	p, $\alpha$	11, 15, 27
8.75 $\pm$ 30	$\frac{5}{2}^+; \frac{1}{2}$	170 $\pm$ 30	p, $\alpha$	11, 15
8.76	$\frac{3}{2}^+; \frac{1}{2}$	90 $\pm$ 20	p	11
8.97	$\frac{7}{2}^-; \frac{1}{2}$	165 $\pm$ 30	p, $\alpha$	11, 15
9.27	$\frac{3}{2}^-; \frac{1}{2}$	140 $\pm$ 30	p, $\alpha$	11, 15
9.91	$\frac{9}{2}^+; \frac{1}{2}$	90 $\pm$ 30	p, $\alpha$	11, 15
10.04 $\pm$ 20	$\frac{7}{2}; \frac{1}{2}$	280 $\pm$ 100	p	11
10.22 $\pm$ 20		250 $\pm$ 80	p, $\alpha$	15
10.40 $\pm$ 20	$(\frac{5}{2}^+); \frac{1}{2}$	160 $\pm$ 40	p	11
10.499 $\pm$ 15	$\frac{7}{2}^-; \frac{1}{2}$	165 $\pm$ 25	p, $\alpha$	11, 15
10.79 $\pm$ 20		120 $\pm$ 40	p	11
10.91 $\pm$ 100	$\frac{1}{2}^-$	560 $\pm$ 100	p	11
10.95 $\pm$ 20		190 $\pm$ 50	p, $\alpha$	11, 15
11.1931 $\pm$ 2.3	$\frac{1}{2}^-; \frac{3}{2}$	0.20 $\pm$ 0.04	$\gamma$ , p, $\alpha$	9, 10, 11, 15, 27
11.43 $\pm$ 20		240 $\pm$ 50	p, $\alpha$	11, 15
11.58 $\pm$ 40		160 $\pm$ 30	p	11
12.00 $\pm$ 20		120 $\pm$ 40	p, $\alpha$	11, 15
12.25 $\pm$ 20	$\frac{3}{2}^-$	300 $\pm$ 30	p	11
12.355 $\pm$ 10	$\frac{1}{2}^-$	190 $\pm$ 20	p	11
$\approx$ 12.50	$\frac{7}{2}^-$	$\approx$ 660	p	11
12.550 $\pm$ 1.4	$\frac{3}{2}^-; \frac{3}{2}$	2.83 $\pm$ 0.12	$\gamma$ , p, $\alpha$	9, 10, 11, 15
13.061 $\pm$ 4	$\frac{5}{2}^-; \frac{3}{2}$	2 $\pm$ 1	$\gamma$ , p, $\alpha$	9, 10, 11, 15
13.080 $\pm$ 4	$(\frac{1}{2}^+); \frac{3}{2}$	2 $\pm$ 1	p, $\alpha$	11, 15
13.13	$\frac{5}{2}^-$	520 $\pm$ 50	p	11
13.781 $\pm$ 4	$\frac{5}{2}^+; \frac{3}{2}$	12 $\pm$ 5	p, $\alpha$	11, 15
14.00 $\pm$ 50	$\frac{7}{2}^-$	260 $\pm$ 30	p	11
14.176 $\pm$ 6	$\frac{3}{2}^-; \frac{3}{2}$	30 $\pm$ 5	$\gamma$ , p	10, 11
14.3040 $\pm$ 3.3	$\frac{7}{2}^-; \frac{3}{2}$	19.3 $\pm$ 1.6	$\gamma$ , p, $\alpha$	10, 11, 15
14.38 $\pm$ 50	$\frac{5}{2}^-$	610 $\pm$ 50	p	11
14.71 $\pm$ 100	$\frac{1}{2}^-$	470 $\pm$ 100	p	11

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14.809 $\pm$ 20	$\frac{1}{2}^+$	190 $\pm$ 25	p	11
15.6		$\approx$ 550	p	11
(16.9)	$\frac{7}{2}^-$		$\gamma$ , p	10
17.1	$\frac{5}{2}^-$	1500	p	11
(18.0)	$\frac{7}{2}^-$		$\gamma$ , p	10
19.42 $\pm$ 50	$\frac{5}{2}^+$	$\approx$ 300	$\gamma$ , $^3\text{He}$ , $\alpha$	4, 5
20.25 $\pm$ 50	$\frac{7}{2}^-$	$\approx$ 350	$\gamma$ , $^3\text{He}$ , $\alpha$	4, 5
20.9	$\frac{9}{2}^+$	600	p	11
21.01 $\pm$ 50	$\frac{1}{2}^+$	$\approx$ 280	$\gamma$ , $^3\text{He}$	4
21.8	$(\frac{9}{2}^+)$	400	p	11
22		$\approx$ 5000	$\gamma$ , p, $\alpha$	10, 15
22.7	$\frac{7}{2}^+$	600	p	11
23.8	$\frac{7}{2}^+$	600	p	11
25.4	$\frac{7}{2}^-$	1500	p, $\alpha$	11, 15
27.2	$\frac{5}{2}^-$	1500	p	11
28.9	$\frac{5}{2}^+$	2000	p	11