Table 18.11 from (1983AJ01): Energy levels of ^{18}F [a]

E_x (MeV ± keV)	$J^\pi; T$	K^π	τ or $\Gamma_{c.m.}$ (keV)	Decay	Reactions
0	$1^+; 0$	0^+	$\tau_{1/2} = 109.77 \pm 0.05$ min	β^+	1, 3, 4, 5, 6, 7, 8, 13, 14, 16, 19, 20, 22, 29, 30, 32, 35, 37, 42, 43, 45, 46, 47, 48, 50, 51, 52, 53, 55, 56, 58
0.93720 ± 0.06	$3^+; 0$	0^+	$\tau_m = 67.6 \pm 2.5$ psec $g = +0.56 \pm 0.05$	γ	8, 13, 14, 20, 30, 32, 37, 43, 45, 46, 47, 49, 51, 52, 53, 56
1.04155 ± 0.08	$0^+; 1$		2.7 ± 0.4 psec	γ	8, 13, 30, 37, 43, 45, 46, 48, 49, 51, 53, 55
1.08054 ± 0.12	$0^-; 0$	0^-	27.5 ± 1.9 fsec	γ	8, 13, 14, 30, 37, 45, 46, 48, 49, 51, 52, 53, 56
1.12136 ± 0.15	$5^+; 0$	0^+	218 ± 8 nsec $\mu = +2.86 \pm 0.03$ n.m. $Q = 0.13 \pm 0.036$	γ	8, 13, 14, 20, 30, 31, 34, 37, 43, 44, 45, 46, 51, 53, 56
1.70081 ± 0.18	$1^+; 0$	1^+	1.09 ± 0.10 psec	γ	8, 14, 30, 37, 45, 46, 48, 51, 53, 55, 56
2.10061 ± 0.10	$2^-; 0$	0^-	4.3 ± 1.4 psec	γ	8, 14, 20, 30, 32, 37, 45, 46, 51, 53, 56
2.52335 ± 0.18	$2^+; 0$	1^+	0.68 ± 0.11 psec	γ	8, 14, 30, 37, 43, 45, 51, 53
3.06184 ± 0.18	$2^+; 1$		< 1.5 fsec	γ	8, 30, 37, 43, 45, 46, 49, 51, 53, 55
3.13387 ± 0.15	$1^-; 0$	1^-	0.32 ± 0.10 psec	γ	8, 14, 30, 37, 46, 49, 51, 53
3.3582 ± 1.0	$3^+; 0$	1^+	0.49 ± 0.07 psec	γ	8, 14, 30, 46, 51, 53, 56
3.72419 ± 0.22	$1^+; 0$		4 ± 2 fsec	γ	8, 14, 30, 32, 37, 46, 51, 53, 56
3.79149 ± 0.22	$3^-; 0$	1^-	224 ± 35 fsec	γ	8, 14, 30, 32, 37, 46, 51, 53, 56
3.83917 ± 0.22	$2^+; 0$		29 ± 9 fsec	γ	8, 14, 30, 32, 37, 43, 46, 51, 53, 56
4.11590 ± 0.25	$3^+; 0$		91 ± 22 fsec	γ	8, 14, 30, 32, 37, 43, 46, 51, 53, 56
4.2258 ± 0.7	$2^-; 0$	(1^-)	110 ± 15 fsec	γ	8, 14, 30, 32, 46, 51, 53, 56
4.36015 ± 0.26	$1^+; 0$		27 ± 10 fsec	γ	14, 30, 37, 46, 51, 53, 56
4.3981 ± 0.7	$4^-; 0$	0^-	58 ± 12 fsec	γ	8, 14, 20, 21, 30, 46, 51, 53, 56
4.652 ± 2	$4^+; 1$		< 10 fsec	γ	8, 30, 33, 34, 43, 46, 51, 53
4.753 ± 3	$0^+; 1$			γ	30, 46, 49, 51, 53, 56
4.860 ± 2	$1^-; 0$		66 ± 18 fsec	γ, α	8, 30, 51, 53, 56
4.9636 ± 0.8	$2^+; 1$		< 4 fsec	γ	8, 30, 43, 51, 53
5.2976 ± 1.5	$4^+; 0$	1^+	30 ± 5 fsec	γ, α	8, 14, 15, 30, 51, 53
5.502 ± 2	$3^{(-)}; 0$		63 ± 25 fsec	γ, α	8, 14, 30, 51, 53

Table 18.11 from (1983AJ01): Energy levels of ^{18}F [a] (continued)

E_x (MeV ± keV)	$J^\pi; T$	K^π	τ or $\Gamma_{c.m.}$ (keV)	Decay	Reactions
5.60338 ± 0.27	1^+		15 ± 10 fsec	γ, α	8, 11, 37, 51, 56
5.60486 ± 0.28	$1^-; 0+1$		$\Gamma < 1.2$ keV	γ, α	8, 11, 14, 30, 37, 51, 56
5.674 ± 2	$1^-; 0+1$		< 0.8	γ, α	8, 11, 14, 30, 37, 51, 53, 56
5.786 ± 2.4	$2^-; 0$		$\tau_m = 15 \pm 10$ fsec	γ, α	8, 30, 37, 51, 53, 56
6.0964 ± 1.1	$4^-; 0$	1^-	$\Gamma = 0.24 \pm 0.03$	γ, p, α	8, 14, 30, 37, 41, 51, 53, 56
6.100 ± 7	$(1^+); 0$		0.034 ± 0.003	γ, p, α	8, 11, 30, 32, 41, 56
6.13647 ± 0.33	$0^+; 1$		≤ 1	γ, p	30, 37, 53, 56
6.1632 ± 0.9	$3^+; 1$		14 ± 0.5	γ, p, α	30, 37, 39, 41, 56
6.2409 ± 0.9	$3^-; 0+1$		0.19 ± 0.03	γ, p, α	8, 30, 37, 39, 41
6.242 ± 3	$3^-; 0+1$		0.18 ± 0.04	γ, p, α	8, 11, 41
6.262 ± 2.5	$1^+; 0$		0.60 ± 0.12	γ, p, α	8, 11, 14, 30, 41, 53
6.2832 ± 0.9	$2^+; 1$		10.0 ± 0.5	γ, p, α	30, 37, 39, 41
6.3105 ± 0.8	$3^+; 0$		0.95 ± 0.14	γ, p, α	8, 30, 37, 39, 41, 56
6.3855 ± 1.7	$2^+; 0+1$		0.40 ± 0.09	γ, p, α	8, 30, 37, 41, 53
6.480 ± 1.5	$3^+; 0$		0.40 ± 0.10	γ, p, α	8, 30, 37, 41, 53, 56
6.5670 ± 1.5	$5^+; 0$	1^+	0.56 ± 0.13	γ, p, α	8, 11, 14, 15, 30, 41
6.635	1		80 ± 2	p, α	41, 53
6.6437 ± 1.2	$2^-; 1$		0.60 ± 0.07	γ, p, α	8, 10, 30, 37
6.647 ± 4	1^-		91 ± 4	p, α	11, 14, 41
6.777 ± 2	$4^+; 0$		9.2 ± 1.0	γ, p, α	30, 37, 39, 41, 53
6.8031 ± 1.5	$1^+, 2, 3^+; 0$		≤ 2	γ, p	14, 30, 37, 39
6.810 ± 5	2^-		88 ± 2	p, α	10, 11, 41
6.811	(2^+)		3.0 ± 0.5	p, α	41
6.869	(3^-)		5.0 ± 1.0	p, α	41, 53
6.878 ± 2	$3, 4^-; 0$		≤ 2	γ, p, α	30, 37, 41
7.201 ± 2	$(4^+); 0$		6.5	p, α	11, 41, 53
7.248 ± 2	$(1^+); 0$		46.5	p, α	11, 41
7.292 ± 2	3^-		38	p, α	10, 11, 41
7.316 ± 4	$(3^-; 0)$		52	p, α	41, 53
7.338 ± 2	$1^-; 1$		16 ± 2	γ, p	37, 39
7.407 ± 2	1^+		14.6 ± 1.4	p	39
7.449 ± 10			140	p, α	41
7.455 ± 2	1^-		6	p	37
7.480 ± 2	(2)		12 ± 3	γ, p, α	37, 39, 41
(7.486 ± 2)	(1^-)		32	p	39
7.507 ± 2	4^-		12 ± 2	p, α	39, 41
7.515 ± 2			< 4	γ, p	37
7.530 ± 2	$2^-; 1$		16.5 ± 3.0	γ, p, α	37, 39, 41

Table 18.11 from (1983AJ01): Energy levels of ^{18}F [a] (continued)

E_x (MeV ± keV)	$J^\pi; T$	K^π	τ or $\Gamma_{c.m.}$ (keV)	Decay	Reactions
7.534 ± 5			75	p, α	39, 41
7.556 ± 2	(1^-)		30	p	39
7.586 ± 2			9 ± 2	γ, p, α	37, 39, 41
7.687 ± 2	$3^+, 4^+$		36 ± 4	p, α	39, 41
7.730 ± 4	≥ 1		66 ± 5	p, α	39, 41
7.764 ± 4			70	p	39
7.879 ± 3	≥ 2		20	p, α	39, 41
7.901 ± 2	(2^-)		38	p, α	10, 11, 41
7.943 ± 12	(1^+)		112	p, α	10, 11, 41
8.065 ± 6	≥ 4		60	p, α	39, 41
8.116 ± 8			96	p	39
8.211 ± 2	2^-		52	p, α	39, 41
8.240 ± 2	4^+		20	p	39
9.207 ± 15 [b]	$3, 4^-; 0$			p, d, α	24, 25, 27
9.50	$2, 3^+; 0$			n, d, α	23, 27
9.58 ± 20 [c]	6^+	1^+			14, 15
10.58 ± 50					15
11.22 ± 30	7^+	1^+			14, 15
13.83	$4^-, 5^+$		60	d, α	27
14.02	$4^-, 5^+$		60	d, α	27
14.10	$4^-, 5^+$		60	d, α	27
14.18 ± 40					14, 15
15.09	$4^-, 5^+$			d, α	27
15.34	$5^+, 6^-$			d, α	27
15.79 ± 100					15
16.07	$4^-, 5^+$		220	d, α	27
16.72	$4^-, 5^+$		60	d, α	27
17.43	$4^-, 5^+, 6^-$		70	d, α	27
18.62 ± 120					15
(19.00 ± 150)			(500 ± 150)	γ, ^{3}He	17
20.1 ± 200	$(2^-; 1)$		1600 ± 100	γ, ^{3}He	17
22.7 ± 200	$(2^-; 1)$		1200 ± 100	γ, ^{3}He	17
(24.1 ± 200)			(1400 ± 300)	γ, ^{3}He	17

[a] See also Table 18.12 for radiative transitions and Table 18.13 for $\tau_{\rm m}$.

[b] Uncertainty estimated by reviewer.

[c] For other states with $E_{\rm x} < 9.6$ MeV see footnote [e] in Table 18.17 of (1978AJ03) and Table 18.14 here. For other states with $10.0 < E_{\rm x} < 19.6$ MeV see Table 18.14 here, and Tables 18.14 and 18.16 in (1978AJ03). These two tables in (1978AJ03) display the states deduced from the yields of the isospin-forbidden α_1 groups in ^{14}N + α and ^{16}O + d, respectively. (1976CH24) reports 151 isospin mixed natural-parity states with $10.4 < E_{\rm x} < 17.5$ MeV [^{14}N(α, α_1)] and (1973JO13) reports 138 such states with $9.2 < E_{\rm x} < 19.4$ MeV [^{16}O(d, α_1)] of which 16 have $E_{\rm x} > 17.5$ MeV. In the region $10.4 < E_{\rm x} < 20.8$ MeV some 167 states with mixed isospin and natural parity have been reported.