

Table 20.4 from (1978AJ03): Energy levels of ^{20}F ^a

E_x (MeV \pm keV)	$J^\pi; T$	τ	Decay	Reactions
0	$2^+; 1$	$\tau_{1/2} = 11.0 \pm 0.02$ sec	β^-	1, 2, 3, 13, 16, 17, 25, 28, 31, 34, 37, 38, 39
0.65594 ± 0.15	3^+	$\tau_m = 0.39 \pm 0.03$ psec	γ	3, 13, 17, 25, 28, 34, 38
0.82288 ± 0.20	4^+	79 \pm 6 psec	γ	3, 12, 13, 17, 25, 34, 38
0.98371 ± 0.20	1^-	2.03 ± 0.20 psec	γ	3, 12, 13, 17, 25, 34, 38
1.05693 ± 0.20	1^+	45 \pm 13 fsec	γ	3, 13, 17, 25, 30, 34, 38
1.30923 ± 0.20	2^-	1.16 ± 0.20 psec	γ	3, 12, 13, 17, 25, 34, 38
1.8244 ± 1.2	5^+	≤ 65 fsec	γ	3, 12, 13, 25, 38
1.84337 ± 0.30	2^-	30 \pm 20 fsec	γ	3, 13, 17, 25, 34, 38
1.9707 ± 0.4	(3^-)		γ	3, 12, 13, 17, 38
2.04400 ± 0.30	2^+	37 \pm 16 fsec	γ	3, 13, 17, 25, 28, 34, 38
2.1948 ± 0.4	(3^+)	< 12 fsec	γ	3, 13, 17, 25, 34, 38
2.8649 ± 1.5	$(2, 3, 4)$		γ	3, 13, 25, 38
2.9661 ± 0.4	3^+	60 \pm 40 fsec	γ	3, 13, 17, 25, 38
3.1740 ± 1.5	(1^+)		γ	13, 25, 38
3.48843 ± 0.25	1^+	44 \pm 11 fsec	γ	13, 17, 25, 38
3.5260 ± 0.4	0^+	30 \pm 15 fsec	γ	13, 17, 25
3.5871 ± 0.3	$(1, 2, 3)^+$	≤ 60 fsec	γ	3, 13, 17, 25, 38
3.6810 ± 0.4	$(1, 2, 3)^+$		γ	3, 13, 17, 25, 38
3.7611 ± 1.9			γ	13, 25, 38
3.9660 ± 1.5	1^+		γ	13, 17, 25, 38
4.0823 ± 0.4	$(1)^+$		γ	13, 17, 25, 38
4.1989 ± 2.7			(γ)	3, 25, 38
4.2077 ± 2.6			(γ)	3, 25, 38
4.2766 ± 0.5	$(1, 2, 3)^+$		γ	17, 25, 38
4.313 ± 3	$(0, 1)^+$		(γ)	25, 38
4.372 ± 4			(γ)	38
4.518 ± 4			(γ)	3, 38
4.5838 ± 3.0			(γ)	3, 25, 38
4.5922 ± 2.9			(γ)	3, 25, 38
4.7302 ± 2.9			(γ)	25, 38
4.7638 ± 2.7			(γ)	3, 25, 38
4.8916 ± 2.8			(γ)	3, 25, 38

Table 20.4 from (1978AJ03): Energy levels of ^{20}F ^a (continued)

E_x (MeV \pm keV)	$J^\pi; T$	τ	Decay	Reactions
4.8982 \pm 2.8	(0, 1, 2) ⁻		(γ)	3, 25, 38
5.0402 \pm 3.1			(γ)	25, 38
5.0655 \pm 3.1			(γ)	25, 38
5.131 \pm 5			(γ)	38
5.2240 \pm 2.8	(0, 1, 2) ⁻		(γ)	25, 38
5.279 \pm 3	(0, 1, 2) ⁻		(γ)	25, 38
5.3171 \pm 2.7	(0, 1, 2) ⁻		(γ)	25, 38
5.3445 \pm 3.3			(γ)	25, 38
5.4131 \pm 0.6			γ	17, 38
5.4503 \pm 3.8			(γ)	25, 38
5.4554 \pm 3.2			(γ)	25, 38
5.4634 \pm 3.3			(γ)	25
5.556 \pm 4			γ	17, 38
5.574 \pm 6			(γ)	38
5.621 \pm 3			(γ)	25, 38
5.713 \pm 2			γ	17, 38
5.7640 \pm 2.5	(0, 1, 2) ⁻		(γ)	25, 38
5.8104 \pm 2.5			(γ)	25, 38
5.9361 \pm 0.3			γ	17, 25, 38
6.0174 \pm 0.3			γ	17, 25, 38
6.0446 \pm 0.4			γ	17, 25, 38
6.163 \pm 6			(γ)	38
6.205 \pm 6			(γ)	38
6.240 \pm 7			(γ)	38
6.300 \pm 5			(γ)	38
6.337 \pm 5			(γ)	38
6.370 \pm 6	(γ)	38		
6.407 \pm 12	(γ)	38		
6.441 \pm 9	(γ)	38		
6.480 \pm 5	(γ)	38		
6.519 \pm 3	0 ⁺ ; 2	γ	13, 37	
6.588 \pm 5	0 ⁺ , 1 ⁺		(γ)	38
6.6013 \pm 0.3			γ	17

Table 20.4 from (1978AJ03): Energy levels of ^{20}F ^a (continued)

E_x (MeV \pm keV)	$J^\pi; T$	τ	Decay	Reactions
6.6269 \pm 0.6	2 ⁻	0.310 \pm 0.020	γ , n	17, 18
6.6425 \pm 0.6	(3, 4)	< 0.08	γ , n	17, 38
6.6474 \pm 0.7	1 ⁻	1.59 \pm 0.10	γ , n	17, 18, 38
6.6933 \pm 0.8	1 ⁻	13.8 \pm 0.8	γ , n	17, 18, 38
6.7660 \pm 1.1		\leq 0.6	γ , n	17, 38
6.829			n	19
6.8566 \pm 1.2	2	10 \pm 2	γ , n	17, 19, 38
(6.858 \pm 8)	1		γ , n	17
6.905 \pm 8				38
6.9677 \pm 1.2	1 ⁻	5 \pm 1	γ , n	17, 19
(7.0670 \pm 1.2)	0 ⁻	(2.4 \pm 0.6)	γ , n	17, 19
7.076	(1 ⁺)	24	n	18
7.166 \pm 2	2 ⁽⁺⁾	8 \pm 1	γ , n	17, 18, 19
7.311	(1)	33	γ , n	17, 18
7.361	(1)	19	n	18, 19
7.410	(2 ⁺)	10	γ , n	17, 18, 19
7.50	(2)	80	γ , n	17, 18
7.67	(2 ⁺)	65	γ , n	17, 18, 19
7.79		140	n	18, 19
(7.831 \pm 12)	1 ⁻	(50 \pm 10)	γ , n	17
7.988 \pm 3	1	14 \pm 2	γ , n	17
8.05 \pm 100	2 ⁺ ; 2			37
8.13		195	γ , n	17, 18, 19
8.163		15	n	19
8.421		27	n	19
8.50		140	n	18
8.728		\leq 30	n	18, 19
8.77		76	n	18
8.942		73	n	18, 19
9.165			n	19
9.521		110	n	19
9.654		100	n	18, 19
9.830		33	n	19

Table 20.4 from (1978AJ03): Energy levels of ^{20}F ^a (continued)

E_x (MeV \pm keV)	$J^\pi; T$	τ	Decay	Reactions
9.85		120	n	18
(9.886 \pm 10)			n	18
9.901		≤ 30	n	19
(9.929 \pm 10)			n	18
(9.981 \pm 10)			n	18
10.024 \pm 10		150	n, α	18, 19, 24
10.10 \pm 50			n, α	24
10.228 \pm 10	$0^-, 1$	≈ 200	n, α	18, 24
10.480 \pm 10		≈ 10	n, α	18, 24
10.641 \pm 10	1, 2	70	n	18, 19
10.807 \pm 10	$0^-, 1$	≈ 310	n, α	18, 24
10.988		190	n	19
(11.045 \pm 10)		≈ 30	n	18
(11.130 \pm 10)		< 25	n	18
(11.244 \pm 10)		< 25	n	18, 19
(11.287 \pm 10)			n	18
11.49 \pm 50			n, α	24
12.0			n, α	24
12.2 \pm 100			n, α	24
12.39			n, α	24
12.82			n, α	24
13.2			n, α	24
13.66			n, α	19, 24
14.0			n, α	24

^a See also [Tables 20.5](#) and [20.6](#).