

Table 20.4 from (1972AJ02): Energy levels of ^{20}F ^a

E_x (MeV \pm keV)	$J^\pi; T$	τ or Γ_{cm} (keV)	Decay	Reactions
0	$2^+; 1$	$\tau_{1/2} = 11.03 \pm 0.06$ sec	β^-	1, 8, 11, 19, 20, 21, 23, 28, 29, 30
0.65595 \pm 0.15	3^+	$\tau_m = 0.40 \pm 0.05$ psec	γ	7, 8, 10, 11, 19, 29
0.8229 \pm 0.2	$4^+, 2^+$	79 ± 6 psec	γ	7, 8, 10, 11, 19, 29
0.9838 \pm 0.2	$(1^+, 2^+, 3^+)$	1.6 ± 0.3 psec	γ	8, 11, 19, 29
1.05693 \pm 0.16	1^+	45 ± 13 fsec	γ	8, 11, 19, 22, 29
1.30922 \pm 0.16	2^+	0.9 ± 0.2 psec	γ	8, 11, 19, 23
1.8244 \pm 1.3	(3^-)		γ	8, 28, 29
1.8434 \pm 0.3	$2, 1^+$	30 ± 20 fsec	γ	8, 11, 19, 29
1.9706 \pm 0.3			γ	8, 11
2.0439 \pm 0.3	2^+	37 ± 16 fsec	γ	8, 11, 19
2.1946 \pm 0.5	2^+	< 12 fsec	γ	8, 11, 19
2.865 \pm 1.5	$(2, 3, 4)^-$		γ	8, 11, 19
2.9662 \pm 0.4	$2^+, 3^+$	60 ± 40 fsec	γ	8, 11, 19
3.1746 \pm 1.2			γ	19
3.4884 \pm 0.2	1^+	44 ± 11 fsec	γ	8, 11, 19, 29
3.5259 \pm 0.4	0^+	30 ± 15 fsec	γ	11, 19, 29
3.5871 \pm 0.3	$(1, 2, 3)^+$	30 ± 30 fsec	γ	8, 11, 19
3.6810 \pm 0.4			γ	8, 11, 19
3.761 \pm 2			(γ)	8, 19, 29
3.9662 \pm 1.4			γ	8, 11, 19
4.0824 \pm 0.4	1^+		γ	8, 11, 19
4.1989 \pm 2.7			(γ)	19, 29
4.2077 \pm 2.6			(γ)	19
4.2766 \pm 0.5	$1^+, 2^+$		γ	11, 19
4.3115 \pm 2.6	$0^+, 1^+$		(γ)	19
4.5838 \pm 3.0			(γ)	19
4.5922 \pm 2.9			(γ)	19
4.7302 \pm 2.9			(γ)	19
4.7638 \pm 2.7			(γ)	19
4.8916 \pm 2.8			(γ)	19
4.8982 \pm 2.8			(γ)	19
5.0402 \pm 3.1	$(0, 1, 2)^-$		(γ)	11, 19

Table 20.4 from (1972AJ02): Energy levels of ^{20}F ^a (continued)

E_x (MeV \pm keV)	$J^\pi; T$	τ or Γ_{cm} (keV)	Decay	Reactions
5.0655 \pm 3.1			(γ)	19
5.2240 \pm 3.1	(0, 1, 2) ⁻		(γ)	19
5.2810 \pm 3.3	(0, 1, 2) ⁻		(γ)	19
5.3171 \pm 2.7			(γ)	19
5.3445 \pm 3.3			(γ)	19
5.4131 \pm 0.6			γ	11
5.4503 \pm 3.8			(γ)	19
5.4554 \pm 3.2			(γ)	19
5.4634 \pm 3.3			(γ)	19
5.5547 \pm 0.6			γ	11
5.6203 \pm 3.3			(γ)	19
(5.713 \pm 2)			γ	11
5.7628 \pm 3.4			(γ)	19
5.8091 \pm 2.9	(0, 1, 2) ⁻		(γ)	19
5.9361 \pm 0.3	1 ⁻ , 2 ⁻		γ	11, 19
6.0173 \pm 0.3	1 ⁻ , 2 ⁻		γ	11, 19
6.0446 \pm 0.4			γ	11, 19
6.25 \pm 20			(γ)	9
6.513 \pm 33	0 ⁺ ; 2		(γ)	19, 28
6.6013 \pm 0.3	0 ⁺ , 1 ⁺		γ	11
6.616			n	12
6.627	2 ⁻	$\Gamma = 0.29$ keV	γ , n	11, 12, 19
6.632			n	12
6.634			n	12
6.637			n	12
6.648	1 ⁻	1.62	γ , n	11, 12
6.668			n	12
6.685	0 ⁻	3.80	n	12
6.692	1 ⁻	5.23	(γ), n	11, 12, 13
6.696	2 ⁻	1.05	(γ), n	11, 12
6.699	1 ⁺	2.85	(γ), n	11, 12
6.709	0 ⁻	1.14	n	12
6.717	0 ⁻	0.95	n	12

Table 20.4 from (1972AJ02): Energy levels of ^{20}F ^a (continued)

E_x (MeV \pm keV)	$J^\pi; T$	τ or Γ_{cm} (keV)	Decay	Reactions
6.729	(0 ⁻)		n	12
6.732	(0 ⁻)		n	12
6.737	(0 ⁻)		n	12
6.742	(0 ⁻)		n	12
6.746	(0 ⁻)		n	12
6.791	0 ⁺	1.9	n	12
6.835	1 ⁺	1.7	n	12
6.837	1 ⁺	0.4	n	12
6.856	1 ⁺	1.3	n	12
6.858	1	19	γ , n	11, 12, 13
7.005	0 ⁽⁻⁾	24	γ , n	11, 12, 13, 19
7.076	(1 ⁺)	24	γ , n	11, 12, 13
7.171	(2 ⁺)	14	γ , n	11, 12
7.311	(1)	33	γ , n	11, 12
(7.355)	(1)	19	n	12, 13
7.410	(2 ⁺)	10	γ , n	11, 12, 13
7.489	(2)	57	n	12
7.503	(0)	85	γ , n	11, 13
7.670	(2 ⁺)	60	γ , n	11, 12
7.80	(1, 2)	100	γ , n	11, 12
8.05 \pm 100	2 ⁺ ; 2			28
8.15	(1)	190	γ , n	11, 12
8.50		140	n	12
8.74		\leq 30	n	12
8.77		76	n	12
8.99		140	n	12
9.69		140	n	12
9.85		120	n, α	12, 18
10.024 \pm 10		200	n, α	12, 18
10.10 \pm 50			n, α	18
10.228 \pm 10	0 ⁻ , 1	\approx 200	n, α	12, 18
10.480 \pm 10		\approx 10	n, α	12, 18
(10.641 \pm 10)	1, 2	\approx 60	n	12

Table 20.4 from (1972AJ02): Energy levels of ^{20}F ^a (continued)

E_x (MeV \pm keV)	$J^\pi; T$	τ or Γ_{cm} (keV)	Decay	Reactions
10.807 \pm 10 (10.89)	$0^-, 1$	≈ 330	n, α	12, 18
(11.045 \pm 10)		≈ 30	n, α	18
(11.130 \pm 10)		< 25	n	12
(11.244 \pm 10)		< 25	n	12, 18
11.49 \pm 50 (11.73)		n, α	18	
12.0		n, α	18	
12.2		n, α	18	
12.39		n, α	18	
12.82		n, α	18	
13.2		n, α	18	
13.66		n, α	18	
14.0		n, α	18	

^a See also Tables [20.6](#), [20.9](#) and [20.14](#).