

Adopted Levels, Gammas 1993Ti07

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	J. H. Kelley, D. R. Tilley, H. R. Weller and C. M. Cheves		NP A564,1 (1993)	31-Dec-1992

Q(β⁻)=-14548.7 5; S(n)=16800 9; S(p)=600.27 25; Q(α)=-5818.7 4 2012Wa38

Note: Current evaluation has used the following Q record -14538 50 16800 8 600.27 23-5818.67 37 1997Au04.

See other reaction references in 1993Ti07.

¹⁷F Levels

Cross Reference (XREF) Flags

A	¹⁷ F β ⁺ decay	E	¹⁶ O(p,γ)	I	¹⁷ O(p,n)
B	¹⁴ N(³ He,γ)	F	¹⁶ O(p,p), ¹⁶ O(p,α)	J	¹⁷ Ne β ⁺ decay
C	¹⁴ N(⁶ Li,t)	G	¹⁶ O(d,n)		
D	¹⁵ N(³ He,n)	H	¹⁶ O(³ He,d)		

E(level)	J ^π	T _{1/2}	XREF	Comments
0.0	5/2 ⁺	64.49 s 16	ABCDE GHIJ	%ε+%β ⁺ =100 T=1/2; μ=+4.7223 12 (1989Ra17) T _{1/2} : weighted average of: 64.31 s 9 (1977Az01), 64.50 s 25 (1972Al42) 65.2 s 2 (1969Wo09).
495.33 10	1/2 ⁺	286 ps 6	BCDE GHIJ	
3104 3	1/2 ⁻	19 keV 1	BCDEFGH J	%IT=6.3×10 ⁻⁵ 11; %p=100 Γ _γ =0.012 eV 2
3857 4	5/2 ⁻	1.5 keV 2	BCDEFGH	%IT=0.0073 17; %p=100 Γ _γ =0.11 eV 2
4640 20	3/2 ⁻	225 keV	CD FG IJ	%p=100
5000 20	3/2 ⁺	1530 keV	F	%p=100
5220 [†] 10	9/2 ⁻		CD	
5488 11	3/2 ⁻	68 keV	CD F J	%p=100
5672 20	7/2 ⁻	40 keV	CD F	%p=100
5682 20	(5/2 ⁻)	<0.6 keV	CD F	%p=100
5820 20	3/2 ⁺	180 keV	C F I	%p=100
6037 9	1/2 ⁻	30 keV	CD F J	%p=100
6560 20	1/2 ⁺	200 keV	F	%p=100
6697 7	5/2 ⁺	≤1.8 keV	CD F	%p=100
6774 20	(3/2 ⁺)	4.5 keV	F	T _{1/2} : author quotes Γ≤1.6 2. %p=100
7027 20	5/2 ⁻	3.8 keV	D F	%p=100
7356 20	(3/2 ⁺)	10 keV 2	D F	%p=?; %α=?
7448 20		≤5 keV	F	%p=100
7454 20		7 keV 2	F	%p=?; %α=?
7471 20		5 keV 2	F	%p=100
7479 20	3/2 ⁺	795 keV	F	%p=100
7546 20	7/2 ⁻	30 keV	F	%p=100
7750 40	(1/2 ⁺)	179 keV 30	F	%p=?; %α=?
7950 30		10 keV 3	F	%p=100
8010 40		50 keV 20	E	%p=?; %α=?
8070 30	5/2 ⁽⁺⁾	100 keV 20	D F	%p=?; %α=?
8075 10	(1/2,3/2) ⁻		D J	%p=100
8200	3/2 ⁽⁻⁾	700 keV 250	F	%p=?; %α=?
8383 10	5/2 ⁽⁻⁾	11 keV 5	F	%p=?; %α=?
8416 20	(7/2 ⁺)	45 keV 10	F	%p=?; %α=?
8436 10	(1/2,3/2) ⁻		F	%p=100
8750 60	5/2 ⁽⁺⁾	170 keV 30	F	%p=?; %α=?

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas $^{1993}\text{Ti07}$ (continued)

^{17}F Levels (continued)

E(level)	J ^π	T _{1/2}	XREF	Comments
8760	3/2 ⁺	90 keV 20	F	%p=100
8825 25	(1/2,3/2) ⁻			%p=100
8980 20	7/2 ⁻	165 keV 30	F	%p=?; %α=?
9170 60	3/2 ⁽⁺⁾	140 keV 30	F I	%p=?; %α=?
9450 50		200 keV 40	J	%p=100
9920	9/2 ⁺	90 keV 30	F	%p=?; %α=?
10030 60		170 keV 40	J	%p=100
10040 40	7/2	280 keV 100	F	%p=100
10220 40		250 keV 80	F	%α=100
10400 40	5/2 ⁽⁺⁾	160 keV 40	F	%p=100
10499 30	7/2 ⁻	165 keV 25	F	%p=?; %α=?
10660 20		90 keV 60	J	%p=100
10790 40		120 keV 40	F	%p=?; %α=?
				The α decay mode is tentative.
1091×10 ¹ 10	1/2 ⁻	560 keV 100	F	%p=100
10950 40		190 keV 50	F	%p=?; %α=?
				The α decay mode is tentative.
11192.9 23	1/2 ⁻	0.18 keV 3	DEF J	%IT=3.3 15; %p=?; %α=? T=3/2; Γ _γ =6.0 eV 25
11430 40		240 keV 50	F	%p=?; %α=?
11580 50		160 keV 30	F	%p=100
12000 40		120 keV 40	F	%p=?; %α=?
12250 40	3/2 ⁻	300 keV 30	F	%p=100
12355 20	1/2 ⁻	190 keV 20	F	%p=100
≈12500	7/2 ⁻	≈600 keV	F	%p=100
12550.1 9	3/2 ⁻	2.83 keV 12	DEF	%IT=?; %p=?; %α=? T=3/2
13061 4	5/2 ⁻	2 keV 1	DEF	%IT=?; %p=?; %α=? T=3/2
13080 4	(1/2 ⁺)	2 keV 1	F	%p=?; %α=? T=3/2
1313×10 ¹ 10	5/2 ⁻	520 keV 50	F	%p=100
13781 4	5/2 ⁺	12 keV 5	F	%p=?; %α=? T=3/2
14000 50	7/2 ⁻	260 keV 30	F	%p=100
14176 6	3/2 ⁻	30 keV 5	EF	%IT=?; %p=? T=3/2
14304 3	7/2 ⁻	19.3 keV 16	EF	%IT=?; %p=?; %α=? T=3/2
14380 50	5/2 ⁻	610 keV 50	F I	%p=100
1471×10 ¹ 10	1/2 ⁻	470 keV 100	F	%p=100
14809 20	1/2 ⁺	190 keV 25	F	%p=100
15600		≈550 keV	F	%p=100
17100	5/2 ⁻	1500 keV	F	%p=100
2010×10 ¹ 20		1070 keV 60	B	%IT=?; % ³ He=?
2040×10 ¹ 10		700 keV 100	B	%IT=?; % ³ He=?
20900	9/2 ⁺	600 keV	F	%p=100
2130×10 ¹ 10		900 keV 100	B	%IT=?; % ³ He=?
21800	(9/2 ⁺)	400 keV	F	%p=100
22700	7/2 ⁺	600 keV	F	%p=100
23800	7/2 ⁺	600 keV	F	%p=100
25400	7/2 ⁻	1500 keV	F	%p=100
27200	5/2 ⁻	1500 keV	F	%p=100
28900	5/2 ⁺	2000 keV	F	%p=100

† Decay mode not specified.

Adopted Levels, Gammas 1993Ti07 (continued) $\gamma(^{17}\text{F})$

$E_i(\text{level})$	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	Comments
495.33	1/2 ⁺	495.32 10	100	0.0	5/2 ⁺	[E2]	B(E2)(W.u.)=25.0 5
3104	1/2 ⁻	2609 3	100	495.33	1/2 ⁺	[E1]	B(E1)(W.u.)=0.0015 3
3857	5/2 ⁻	3857 4	100	0.0	5/2 ⁺	[E1]	B(E1)(W.u.)=0.0043 8
11192.9	1/2 ⁻	10694.0 23	100	495.33	1/2 ⁺	[E1]	B(E1)(W.u.)=0.011 5

Adopted Levels, Gammas 1993Ti07Level Scheme

Intensities: Relative photon branching from each level

