

${}^{20}\text{O}$ β^- decay 1998Ti06

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	D. R. Tilley, C. Cheves, J. Kelley, S. Raman, H. Weller		NP A636, 249 (1998)	21-Apr-1997

Parent: ${}^{20}\text{O}$: $E=0$; $J^\pi=0^+$; $T_{1/2}=13.51$ s 5; $Q(\beta^-)=3814.3$ 21; $\% \beta^-$ decay=100.0

E_γ values are from recoil-corrected $E(\text{level})$ differences, and the I_γ are deduced from the β feedings and γ branching ratios given in 1998Ti06 (J. H. Kelley).

 ${}^{20}\text{F}$ Levels

$E(\text{level})$	J^π	$T_{1/2}$
0	2^+	
656.02 3	3^+	305 fs 21
983.59 3	1^-	1.36 ps 6
1056.848 4	1^+	5.1 fs 11
1309.19 3	2^-	1.30 ps 6
1843.80 3	2^-	46 fs 3
3488.41 3	1^+	

 β^- radiations

$E(\text{decay})$	$E(\text{level})$	$I\beta^{-\dagger}$	$\text{Log } ft$	Comments
(325.9 21)	3488.41	0.027 3	3.64 6	av $E\beta=108.6$ 8
(2757.5 21)	1056.848	99.973 3	3.7340 6	av $E\beta=1197.7$ 10

\dagger Absolute intensity per 100 decays.

 $\gamma({}^{20}\text{F})$

E_γ	I_γ^\dagger	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.	δ
325.73 14	0.0001 1	1309.19	2^-	983.59	1^-	[M1]	
653.2 3	0.0001 1	1309.19	2^-	656.02	3^+	[E1]	
656.00 3	0.0002 2	656.02	3^+	0	2^+	[M1+E2]	0.10 5
983.53 4	0.0011 2	983.59	1^-	0	2^+	[E1]	
1056.78 3	99.975 3	1056.848	1^+	0	2^+	[M1]	
1187.70 6	0.0001 1	1843.80	2^-	656.02	3^+	[E1]	
1309.17 3	0.0023 1	1309.19	2^-	0	2^+	[E1]	
1644.50 8	0.0020 2	3488.41	1^+	1843.80	2^-	[E1]	
1843.74 3	0.0018 1	1843.80	2^-	0	2^+	[E1]	
2179.09 4	0.0025 2	3488.41	1^+	1309.19	2^-	[E1]	
2431.43 99	0.0019 8	3488.41	1^+	1056.848	1^+	[M1]	
2504.54 18	0.0010 1	3488.41	1^+	983.59	1^-	[E1]	
3488.13 4	0.0196 68	3488.41	1^+	0	2^+	[M1]	

\dagger Absolute intensity per 100 decays.

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Decay Scheme

Intensities: I_γ per 100 parent decays

Legend

