

$^{18}\text{Ne} \beta^+$ decay

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Tilley, Weller, Cheves, Chasteler		NP A595, 1 (1995)	31-Oct-1994

Parent: ^{18}Ne : $E=0$; $J^\pi=0^+$; $T_{1/2}=1.672$ s 8; $Q(\beta^+)=4445.7$ 47; $\% \beta^+$ decay=100.0

E_γ values are from recoil-corrected $E(\text{level})$ differences, and the I_γ and the β feedings are from [1983Ad03](#) and [1982He04](#).

 ^{18}F Levels

$E(\text{level})$	J^π	$T_{1/2}$	Comments
0	1^+	109.77 min 5	T=0
1041.55 8	0^+		T=1
1080.54 12	0^-		T=0
1700.81 18	1^+		T=0

 ϵ, β^+ radiations

$E(\text{decay})$	$E(\text{level})$	$I\beta^{+\dagger}$	$I\epsilon^\dagger$	$\text{Log } ft$	$I(\epsilon + \beta^+)^\dagger$	Comments
(2745 5)	1700.81	0.188 6		4.470 15	0.188 6	av $E\beta=733.6$ 23; $\epsilon K=0.002007$ 18; $\epsilon L=0.00012$
(3365 5)	1080.54	0.0021 3		7.00 7	0.0021 3	av $E\beta=1023.2$ 24
(3404 5)	1041.55	7.69 21	0.0062 2	3.468 13	7.70 21	av $E\beta=1041.6$ 24; $\epsilon K=0.000758$ 5; $\epsilon L=4.56 \times 10^{-5}$ 3
(4446 5)	0	92.08 21	0.0251 3	3.091 4	92.11 21	av $E\beta=1539.6$ 25; $\epsilon K=0.00026$; $\epsilon L=1.546 \times 10^{-5}$ 7

† Absolute intensity per 100 decays.

 $\gamma(^{18}\text{F})$

E_γ	I_γ^\dagger	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.
659.25 20	0.135 5	1700.81	1^+	1041.55	0^+	[M1]
1041.52 8	7.83 21	1041.55	0^+	0	1^+	[M1]
1080.51 12	0.00226 21	1080.54	0^-	0	1^+	[E1]
1700.72 18	0.0538 18	1700.81	1^+	0	1^+	[M1]

† Absolute intensity per 100 decays.

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Decay Scheme

Intensities: I_γ per 100 parent decays

Legend

- $I_\gamma < 2\% \times I_\gamma^{max}$
- $I_\gamma < 10\% \times I_\gamma^{max}$
- $I_\gamma > 10\% \times I_\gamma^{max}$

