

^{30}Ne β^- decay **2007Tr08,1999Re16**

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia		NDS 111, 2331 (2010)	30-Jun-2010

Parent: ^{30}Ne : $E=0$; $J^\pi=0^+$; $T_{1/2}=7.3$ ms 3; $Q(\beta^-)=147.0\times 10^2$ 60; $\% \beta^-$ decay=100.0

Other: **2008TrZW**.

2007Tr08,2008TrZW: ^{30}Ne was produced by 140 MeV/nucleon ^{48}Ca beam on beryllium target; identified by a combination of energy loss and time-of-flight; Beta Counting System and Double-sided Si micro-Strip Detector used to detect high-energy fragments and the subsequent decay products; SeGA array consisting of 16 HPGe detectors; Measured: E_γ , I_γ , fragment- β^- - γ - γ coin.

1999Re16: ^{30}Ne was produced by 2.8 GeV ^{36}S beam on Ta target; Identified by time-of-flight and energy loss; Measured β^- - γ coincidence.

 ^{30}Na Levels

E(level) [†]	J^π [‡]	$T_{1/2}$	Comments
0	2^+	48 ms 2	J^π : From Adopted Levels.
150.62 20	1^+		
516.1 5	(2^+)		
926.0 6	1^+		
2113.6 6	1^+		

[†] From a least-squares fit to the γ -ray energies.

[‡] Based on ^{30}Ne β^- decay feeding from 0^+ g.s., except otherwise noted.

 β^- radiations

E(decay)	E(level)	$I\beta^-$ [†]	Log ft	Comments
(1.26×10^4) 6)	2113.6	14.0 18	4.39 12	av $E\beta=6.03\times 10^3$ 30
(1.38×10^4) 6)	926.0	7.7 12	4.84 12	av $E\beta=6.62\times 10^3$ 30
(1.45×10^4) 6)	150.62	63 11	4.04 12	av $E\beta=7.00\times 10^3$ 30

[†] Absolute intensity per 100 decays.

 $\gamma(^{30}\text{Na})$

E_γ [†]	I_γ [‡]	E_i (level)	J^π_i	E_f	J^π_f	Comments
150.6 2	78 10	150.62	1^+	0	2^+	E_γ : From 1999Re16 . $I_\gamma=95$ 10 (1999Re16).
365.5 5	9 2	516.1	(2^+)	150.62	1^+	
410.0 5	6.3 10	926.0	1^+	516.1	(2^+)	
775 1	1.4 5	926.0	1^+	150.62	1^+	
1597 1	5 1	2113.6	1^+	516.1	(2^+)	
1963 1	5 1	2113.6	1^+	150.62	1^+	
2114 1	4 1	2113.6	1^+	0	2^+	

[†] From **2007Tr08**, except otherwise noted. E_γ, I_γ uncertainty: from a private communication to the first author of **2007Tr08** (source XUNDL).

[‡] Absolute intensity per 100 decays.

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Decay Scheme

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays

Legend

