

$^{22}\text{N} \beta^{-}\text{n}$ decay: 20 ms 2010Su03

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	R. B. Firestone	NDS 127, 1 (2015)	15-Jan-2015

Parent: ^{22}N : $E=0$; $J^{\pi}=(0^{-}, 1^{-})$; $T_{1/2}=20$ ms 2; $Q(\beta^{-}\text{n})=1.591 \times 10^4$ 19; $\% \beta^{-}\text{n}$ decay=33 3

^{22}N - $T_{1/2}$: Measured in 2010Su03, from average of several neutron-gated decay curves.

^{22}N - $Q(\beta^{-}\text{n})$: From 2009AuZZ, 2003Au03.

^{22}N - $\% \beta^{-}\text{n}$ decay: $\% \beta^{-}\text{n}=33$ 3 (2010Su03).

^{22}N beam from $\text{Be}(^{48}\text{Ca}, \text{X})$, $E=140$ MeV/nucleon and A1900 fragment separator at NSCL facility. Measured E_{γ} , I_{γ} , β , $\beta\gamma$ coin, β -delayed neutrons, $\beta(\text{n})$ coin, and half-life using an array of sixteen neutron detectors and eight detectors from the SeGA array of HPGe detectors.

A 5178 24 neutron group with emission probability of 3.1% 6 is unassigned.

 ^{21}O Levels

E(level)	J^{π}
0	(5/2 ⁺)
1221 3	(1/2 ⁺)
4878	

 $\gamma(^{21}\text{O})$

E_{γ}	$I_{\gamma}^{\dagger}$	$E_i(\text{level})$	J_i^{π}	E_f	J_f^{π}
1221 3	7.0 11	1221	(1/2 ⁺)	0	(5/2 ⁺)

[†] For absolute intensity per 100 decays, multiply by 0.33 3.

Delayed Neutrons (^{21}O)

E(n)	E(^{21}O)	I(n) [†]	E(^{22}O)	Comments
763 1	0	12 3	7649	E(n): Assignment of 1021 and 1498 neutron groups can be interchanged. The order was selected on the basis of the known level at 4926 keV.
1021 2	4878	9.6 16	13298	
1845 4	0	13 1	8783	
2370 6	1221	6.6 7	10554	

[†] For absolute intensity per 100 decays, multiply by 3.0 3.

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Decay Scheme

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

