^{78}Ge β^- decay (88 min) 1972Fe10,1965Kv01,1965Fr04

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Ameenah R. Farhan, Balraj Singh	NDS 110, 1917 (2009)	30-Jun-2009

Parent: ^{78}Ge: E=0.0; $J^\pi=0^+$; $T_{1/2}$=88 min *1*; Q(β^-)=955 *10*; %β^- decay=100.0

^{78}Ge-Q(β^-): from 2009AuZZ, 2003Au03.

1972Fe10: measured Eγ, Iγ.

1965Kv01 and 1965Fr04: from ^{238}U(n,F); measured t, Eγ, $\beta\gamma$.

Total decay energy of 955 keV *10* calculated (by RADLIST code) from level scheme is the same as the expected value of 955 keV *10*.

^{78}As Levels

E(level)	J^π[†]
0.0	2^-
277.3 *3*	1^+
293.9 *5*	1^+

[†] From Adopted Levels.

β^- radiations

β and $\beta\gamma$ data are reported by 1965Kv01 and 1965Fr04.

E(decay)	E(level)	Iβ^-[†]	Log *ft*	Comments
(661 *10*)	293.9	4 *1*	5.61 *12*	av Eβ=220.8 *40*
710 *20*	277.3	96 *1*	4.264 *25*	av Eβ=227.4 *40*

[†] Absolute intensity per 100 decays.

$\gamma(^{78}As)$

Iγ normalization: β^- feeding to g.s. assumed zero As Iβ(g.s.) is<0.08% for log $f^{1u}t$<8.5. Internal conversion for both the γ rays is expected to Be negligible.

E$_\gamma$[†]	I$_\gamma$[†‡]	E$_i$(level)	J_i^π	E$_f$	J_f^π	Comments
277.3 *3*	100	277.3	1^+	0.0	2^-	
293.9 *5*	4.2 *8*	293.9	1^+	0.0	2^-	α for this γ is<0.02.

[†] From 1972Fe10.

[‡] For absolute intensity per 100 decays, multiply by 0.96 *1*.

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Decay Scheme

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