^{60}Co β^- decay (10.467 min) 1963Sc14

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	NDS 114, 1849 (2013)	31-Dec-2012

Parent: ^{60}Co: E=58.59 *1*; $J^\pi=2^+$; $T_{1/2}$=10.467 min *6*; Q(β^-)=2822.8 *2*; %β^- decay=0.25 *3*
^{60}Co-%β^- decay: from comparison of I(γ+ce) of isomeric decay with Iγ rays from β^- decay.
Activity from ^{59}Co(n,γ). Measured Eβ, Iβ, $T_{1/2}$, Eγ, Iγ. Scintillators (1963Sc14). Others: 2010Wa40, 2008Po05.
See 1973Ha69 for compilation and additional measurements.

^{60}Ni Levels

E(level)	J^π[†]	$T_{1/2}$
0.0	0^+	stable
1332.508 *4*	2^+	
2158.613 *22*	2^+	

[†] See Adopted Levels.

β^- radiations

β^- branches are obtained from I(γ+ce) imbalance at each level assuming no g.s. feeding (2^+ to 0^+ transition).

E(decay)	E(level)	Iβ^-[†‡]	Log *ft*	Comments
(722.78 *20*)	2158.613	0.0086	7.4	av Eβ=248.45 *9*
(1548.88 *20*)	1332.508	0.24	7.2	av Eβ=605.99 *9*

[†] β^- decay to g.s. $<5\times10^{-3}$ % (1963Sc14).
[‡] Absolute intensity per 100 decays.

γ(^{60}Ni)

E$_\gamma$[†]	I$_\gamma$[‡]	E$_i$(level)	J^π_i	E$_f$	J^π_f
826.10 *3*	≈3.1	2158.613	2^+	1332.508	2^+
1332.492 *4*	100	1332.508	2^+	0.0	0^+
2158.57 *3*	≈0.3	2158.613	2^+	0.0	0^+

[†] From ^{60}Co β^- decay (1925.28 d).
[‡] For absolute intensity per 100 decays, multiply by 0.0025 *3*.

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Decay Scheme

Intensities: I_γ per 100 parent decays