^{60}Cr β^- decay 2006Li15

History

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

Parent: ^{60}Cr: E=0; $J^\pi=0^+$; $T_{1/2}$=0.49 s *1*; Q(β^-)=6.46×10^3 *21*; %β^- decay=100.0

^{60}Cr-$T_{1/2}$: From 2006Li15.

Additional information 1.

2006Li15 suggest that the previous study of 1988Bo06 was affected by possible contamination from ^{120}In.

2006Li15 produced the source from projectile fragmentation of ^{86}Kr at E=140 MeV/A incident on Be and mass separation.

Fully-stripped ^{60}Cr fragments were implanted in double-sided Si microstrip detector which was part of beta counting system.

Measured fragment-$\beta\gamma$, $\beta\gamma$(t).

Other: 1988Bo06.

^{60}Mn Levels

E(level)	J^π	$T_{1/2}$	Comments
0.0	1^+	0.28 s *2*	$T_{1/2}$: from 2006Li15. Other: 51 s *6* (1988Bo06); however, 1993ScZS were not able to confirm the value of 1988Bo06 since $T_{1/2}$ was very similar to that of Indium isomers detected in the spectra.
349?	(2^+)		
759	(1^+)		

β^- radiations

E(decay)	E(level)	Iβ^-[†][‡]	Log *ft*	Comments
(5.70×10^3 *21*)	759	10.2 *6*	5.0 *1*	av Eβ=2601 *103*
(6.11×10^3[#] *21*)	349?	1.2 *6*	6.0 *2*	av Eβ=2801 *103*
(6.46×10^3 *21*)	0.0	88.6 *6*	4.2 *1*	av Eβ=2972 *103*

† These are upper limits due to possible unobserved transitions (2006Li15).

‡ Absolute intensity per 100 decays.

Existence of this branch is questionable.

γ(^{60}Mn)

Eγ	E$_i$(level)	J_i^π	E$_f$	J_f^π	I$_{(\gamma+ce)}$[‡]
348.6[†]	349?	(2^+)	0.0	1^+	6.4 *5*
410.1[†]	759	(1^+)	349?	(2^+)	5.2 *4*
758.2	759	(1^+)	0.0	1^+	5.0 *5*

† The order of placement of 348γ and 410γ in the β^- decay scheme could be reversed.

‡ Absolute intensity per 100 decays.

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Decay Scheme