^{150}Ce β^- decay 1999KuZY

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	S. K. Basu, A. A. Sonzogni	NDS 114, 435 (2013)	1-Apr-2013

Parent: ^{150}Ce: E=0.0; $J^\pi=0^+$; $T_{1/2}$=4.0 s *6*; Q(β^-)=3454 *14*; %β^- decay=100.0

1999KuZY: source produced from ^{238}U(p,f), E=25 MeV, fission fragments separated using KUR− ISOL source, 2 plastic scintillators and 3 Ge detectors, only preliminary results were published.

^{150}Pr Levels

E(level)	J^π	$T_{1/2}$	Comments
0.0	(1^-)	6.19 s *16*	%β^-=100
109.9	(1^+)		
209.7			
488.1 *12*			
717.3 *14*			
897.0 *13*			

$\gamma(^{150}Pr)$

Iγ normalization: From Σ Iγ+Ice =100 to g.s. and no β^- feeding to g.s.

E_γ	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.	α[‡]	Comments
100.3	7.4	209.7		109.9	(1^+)			
109.9	100	109.9	(1^+)	0.0	(1^-)	(E1)	0.990	α(K)exp=0.8 *5* α(K)=0.843 *12*; α(L)=0.1161 *17*; α(M)=0.0245 *4*; α(N)=0.00547 *8*; α(O)=0.000881 *13* α(P)=6.47×10^{-5} *9*; α(N+..)=0.00642 *9* Mult.: from α(K)exp=0.8 *5*, the calculated α(K) for M1 is 0.84 and for E1=0.16, due to the large α(K)exp uncertainty, the multipolarity assignment is somewhat uncertain. 1986Fo05 gives M=E1 without providing arguments and that assignment is retained.
180.4	1.9	897.0		717.3				
230.0	2.6	717.3		488.1				
278.8	3.7	488.1		209.7				
378.4	0.7	488.1		109.9	(1^+)			
786.4		897.0		109.9	(1^+)			

[†] For absolute intensity per 100 decays, multiply by 0.5025.

[‡] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

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Decay Scheme

Intensities: I_γ per 100 parent decays