Adopted Levels, Gammas

History

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

Q(β^-)=−7852 (syst) *358*; S(n)=10680 (syst) *277*; S(p)=38 (syst) *198*; Q(α)=2322 (syst) *196* 2017Wa10
Q(ε)=11340 (syst) *196*; S(2n)=23868 (syst) *277*; S(2p)=3078 (syst) *198*; Q(εp)=7867 (syst) *196* 2017Wa10
Additional information 1.
α decay of ^{154}Lu has been reported (1981HoZM).

^{150}Tm Levels

Cross Reference (XREF) Flags

A ^{92}Mo(^{60}Ni,pnγ)

E(level)	J$^{\pi}$†	$T_{1/2}$	XREF	Comments
0.0	(6$^-$)	2.20 s *6*	A	%ε+%β^+=100; %εp=1.2 +2−4 (1988Ni02) J$^{\pi}$: This level feeds 6$^-$ and 5$^-$ levels in ^{150}Er following ε+β^+ decay with approximate log *ft* values corresponding to allowed transitions. $T_{1/2}$: from weighted average of 2.2 s *2* (1987To05), 2.15 s *10* (1988Ni02) and 2.22 s *7* (1996Ga24). Other 3.5 s *6* (1982No07).
16.89 *17*	(5$^-$)		A	J$^{\pi}$: (M1) decay from (6$^-$) level.
105.1? *3*	(5$^-$)		A	J$^{\pi}$: (M1) decay from (6$^-$) level.
219.99 *14*	(6$^-$)		A	J$^{\pi}$: (M1) decay from (7$^-$) level.
340.11 *15*	(7$^-$)		A	J$^{\pi}$: E3 from (10$^+$) level.
671.3 *10*	(10$^+$)	5.2 ms *3*	A	%IT=100 J$^{\pi}$: from shell model predictions and systematics. $T_{1/2}$: from 1989Br22.

† Based on 10$^+$ assignment to 671 level and (M1) nature of transitions to lower levels. J^{π}=10$^+$ isomers, with $T_{1/2}$ in the ms range decaying by E3 transitions of low energy predicted from shell-model considerations. E3 isomers found in ^{146}Tb, ^{148}Ho, ^{150}Tm were assumed to be the predicted J^{π}=10$^+$ isomers.

γ(^{150}Tm)

E_i(level)	J^{π}_i	E_γ	I_γ	E_f	J^{π}_f	Mult.	α†	Comments
16.89	(5$^-$)	17	100	0.0	(6$^-$)			
105.1?	(5$^-$)	88 *1*	8.×10^1 *4*	16.89	(5$^-$)	(M1)	4.48 *17*	α(K)=3.75 *14*; α(L)=0.569 *21*; α(M)=0.127 *5*; α(N)=0.0297 *11*; α(O)=0.00427 *16* α(P)=0.000231 *9*; α(N+..)=0.0342 *13*
		105.0 *6*	1.0×10^2 *5*	0.0	(6$^-$)	(M1)	2.70 *6*	α(K)=2.26 *5*; α(L)=0.342 *8*; α(M)=0.0762 *17*; α(N)=0.0178 *4*; α(O)=0.00256 *6* α(P)=0.000139 *3*; α(N+..)=0.0205 *5*
219.99	(6$^-$)	114.9 *3*	21 *4*	105.1?	(5$^-$)	(M1)	2.08 *4*	α(K)=1.74 *3*; α(L)=0.264 *5*; α(M)=0.0588 *10*; α(N)=0.01376 *22*; α(O)=0.00198 *4* α(P)=0.0001071 *17*; α(N+..)=0.0158 *3*
		203.1 *1*	100 *11*	16.89	(5$^-$)	(M1)	0.419	α(K)=0.352 *5*; α(L)=0.0527 *8*; α(M)=0.01174 *17*; α(N)=0.00275 *4*; α(O)=0.000395 *6* α(P)=2.15×10^{-5} *3*; α(N+..)=0.00316 *5*
		219.9 *2*	43 *7*	0.0	(6$^-$)	(M1)	0.337	α(K)=0.283 *4*; α(L)=0.0423 *6*; α(M)=0.00942 *14*; α(N)=0.00220 *4*; α(O)=0.000317 *5* α(P)=1.724×10^{-5} *25*; α(N+..)=0.00254 *4*

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

$\gamma(^{150}Tm)$ (continued)

E_i(level)	J^π_i	E_γ	I_γ	E_f	J^π_f	Mult.	α†	Comments
340.11	(7⁻)	120.1 *1*	51 *5*	219.99	(6⁻)	(M1)	1.84	α(K)=1.538 *22*; α(L)=0.232 *4*; α(M)=0.0518 *8*; α(N)=0.01212 *18*; α(O)=0.001742 *25* α(P)=9.43×10^{-5} *14*; α(N+..)=0.01396 *20*
		340.2 *2*	100 *12*	0.0	(6⁻)	(M1)	0.1036	α(K)=0.0870 *13*; α(L)=0.01287 *19*; α(M)=0.00286 *4*; α(N)=0.000670 *10*; α(O)=9.65×10^{-5} *14* α(P)=5.27×10^{-6} *8*; α(N+..)=0.000772 *11*
671.3	(10⁺)	331.2	100	340.11	(7⁻)	(E3)	0.209	α(K)=0.1131 *16*; α(L)=0.0732 *11*; α(M)=0.0180 *3*; α(N)=0.00413 *6*; α(O)=0.000504 *7* α(P)=6.91×10^{-6} *10*; α(N+..)=0.00464 *7* B(E3)(W.u.)=0.400 *25*

† 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.

Adopted Levels, Gammas

Level Scheme

Intensities: Type not specified