Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	NDS 110,507 (2009)	1-Oct-2008

Q(β^-)=−9122 *10*; S(n)=9744 *10*; S(p)=3.16×10^3 *3*; Q(α)=2557 *21* 2012Wa38
Note: Current evaluation has used the following Q record −9110 SY9780 603210 502510 50 2003Au03.
ΔQ(β^-)=300 syst (2003Au03).
1993To04: produced in ^{58}Ni (283 MeV) + ^{92}Mo irradiation, ms. Measured p, γ, pγ, Pb+, HPGe, scin.
2007RaZZ: measured mass.
1993Al02: Measured Q(ε)=7.30 MeV *20* using total gamma-absorption.

^{145}Dy Levels

Cross Reference (XREF) Flags

A (HI,xnγ)
B ^{145}Ho ε decay

E(level)	J$^\pi$ †	$T_{1/2}$	XREF	Comments
0.0	(1/2$^+$)	6 s *2*	B	%ε+%β^+=100; %εp≈50 (1993To04) Observed delayed protons with $T_{1/2}$=10 s and suggested that they may be assigned to ε decay of low-spin isomer (1984ScZT). $T_{1/2}$: from 108.1γ(t) in ^{145}Tb. Others: 10.5 s *15* (1993Al03), 10 s *1* (1984ScZT). J$^\pi$: configuration=(ν $3s_{1/2}$)$^{-1}$ (1989Vi02).
66.3 *1*	(3/2$^+$)		B	J$^\pi$: γ to (1/2$^+$) is M1. Configuration=(ν $2d_{3/2}$)$^{-1}$ (1989Vi02).
118.2 *2*	(11/2$^-$)	14.1 s *7*	AB	%ε+%β^+=100; %εp≈50 (1993To04) $T_{1/2}$: wt av: 14.5 s *10* (1993To04), 13.6 s *10* (1982No08). Other: 18 s *3* (1982Al07). J$^\pi$: configuration=(ν $1h_{11/2}$)$^{-1}$ (1989Vi02).
406.1 *2*	(5/2$^+$)		B	
431.1 *2*	(9/2$^-$)		B	
681.5 *3*	(15/2$^-$)		AB	
740.2 *2*	(7/2$^-$)		B	
818.7 *3*	(13/2$^-$)		B	
1142.0 *2*	(9/2$^-$)		B	
1283.4 *3*			B	
1636.2 *7*	(19/2$^-$)		A	
1640.3 *3*			B	
2744.2 *12*	(23/2$^-$)		A	

† From syst for N=79 odd-A nuclei.

γ(^{145}Dy)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	α †	Comments
66.3	(3/2$^+$)	66.3 *1*	100	0.0	(1/2$^+$)	M1	7.83	α(K)=6.58 *10*; α(L)=0.978 *15*; α(M)=0.215 *4*; α(N+..)=0.0574 *9* α(N)=0.0497 *8*; α(O)=0.00726 *11*; α(P)=0.000413 *6*
406.1	(5/2$^+$)	339.8 *1*	100	66.3	(3/2$^+$)			
431.1	(9/2$^-$)	312.9 *1*	100	118.2	(11/2$^-$)			
681.5	(15/2$^-$)	563.3 *2*	100	118.2	(11/2$^-$)			
740.2	(7/2$^-$)	309.1 *1*	28 *2*	431.1	(9/2$^-$)			
		334.1 *1*	100 *2*	406.1	(5/2$^+$)			

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

$\gamma(^{145}Dy)$ (continued)

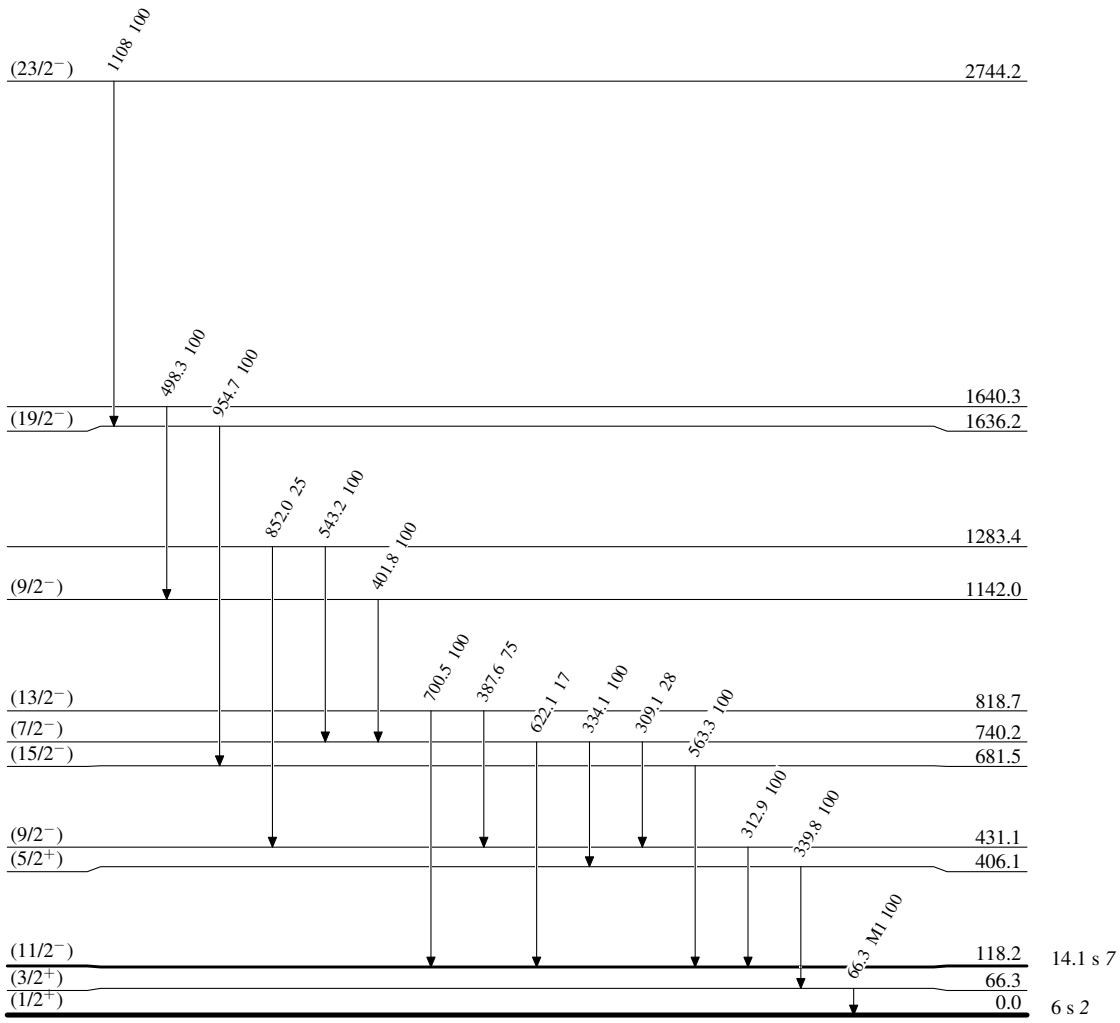
E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π
740.2	$(7/2^-)$	622.1 *2*	17 *6*	118.2	$(11/2^-)$	1283.4		852.0 *5*	25	431.1	$(9/2^-)$
818.7	$(13/2^-)$	387.6 *2*	75 *25*	431.1	$(9/2^-)$	1636.2	$(19/2^-)$	954.7 *6*	100	681.5	$(15/2^-)$
		700.5 *3*	100 *25*	118.2	$(11/2^-)$	1640.3		498.3 *2*	100	1142.0	$(9/2^-)$
1142.0	$(9/2^-)$	401.8 *1*	100	740.2	$(7/2^-)$	2744.2	$(23/2^-)$	1108 *1*	100	1636.2	$(19/2^-)$
1283.4		543.2 *2*	100	740.2	$(7/2^-)$						

† Additional information 1.

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level



$^{145}_{66}Dy_{79}$