Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh, E. Browne	NDS 109,2439 (2008)	31-Jul-2008

Q(β^-)=399 *18*; S(n)=5929 *5*; S(p)=7.91×10^3 *syst*; Q(α)=4036 *15* 2012Wa38
Note: Current evaluation has used the following Q record $ 400 *16* 5930 *5* 7910 syst 3840 syst 2003Au03.
ΔS(p)=ΔQ(α)=200 (syst,2003Au03).
Other reactions:
^{238}U(^{184}W,^{182}W): 1983Hi09.
Additional information 1.

^{240}U Levels

Cross Reference (XREF) Flags

- A ^{244}Pu α decay (8.11×10^7 y)
- B ^{238}U(t,p)
- C ^{238}U(^{18}O,^{16}Oγ)

E(level)	J$^\pi$ †	T$_{1/2}$	XREF	Comments
0‡	0$^+$	14.1 h *1*	ABC	%β^-=100 T$_{1/2}$: from 1981Hs02. Others: 14 h *2* (1948Hy61); 14.1 h *2* (1953Kn23). %α<10^{-10} (syst,1972El21), <10^{-16} (calculated,1997Mo25).
45‡ *1*	(2$^+$)		ABC	
150.60‡ *10*	(4$^+$)		BC	
313.19‡ *14*	(6$^+$)		C	
528.69‡ *18*	(8$^+$)		C	
792.9‡ *3*	(10$^+$)		C	
847.0# *4*	(3$^-$)		C	
944.7# *3*	(5$^-$)		C	
1040 *5*			B	
1087.7# *3*	(7$^-$)		C	
1100.5‡ *4*	(12$^+$)		C	
1160 *5*			B	
1276.1# *4*	(9$^-$)		C	
1545 *5*			B	
1596 *5*			B	
1670 *5*			B	
1708 *5*			B	
1756 *5*			B	
1792 *5*			B	
1893 *5*			B	
1929 *5*			B	
2010 *5*			B	

† From systematics and band assignments.
‡ Band(A): g.s. band.
# Band(B): K$^\pi$=0$^-$, octupole band.

Adopted Levels, Gammas (continued)

$\gamma(^{240}U)$

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult.	α ‡	Comments
45	(2^+)	(45 *1*)		0	0^+	[E2]	6.0×10^2 *7*	α(L)=4.4×10^2 *6*; α(M)=122 *15*; α(N+..)=42 *5* α(N)=33 *4*; α(O)=7.6 *9*; α(P)=1.22 *15*; α(Q)=0.0029 *3*
150.60	(4^+)	105.6 *1*	100	45	(2^+)	[E2]	10.34	α(L)=7.53 *11*; α(M)=2.09 *3*; α(N+..)=0.719 *11* α(N)=0.567 *9*; α(O)=0.1304 *20*; α(P)=0.0214 *4*; α(Q)=8.98×10^{-5} *13*
313.19	(6^+)	162.6 *1*	100	150.60	(4^+)	[E2]	1.663	α(K)=0.205 *3*; α(L)=1.063 *16*; α(M)=0.294 *5*; α(N+..)=0.1012 *15* α(N)=0.0798 *12*; α(O)=0.0184 *3*; α(P)=0.00305 *5*; α(Q)=2.23×10^{-5} *4*
528.69	(8^+)	215.5 *1*	100	313.19	(6^+)	[E2]	0.569	α(K)=0.1367 *20*; α(L)=0.316 *5*; α(M)=0.0867 *13*; α(N+..)=0.0299 *5* α(N)=0.0235 *4*; α(O)=0.00544 *8*; α(P)=0.000912 *13*; α(Q)=1.029×10^{-5} *15*
792.9	(10^+)	264.1 *2*	100	528.69	(8^+)	[E2]	0.282	α(K)=0.0951 *14*; α(L)=0.1370 *20*; α(M)=0.0373 *6*; α(N+..)=0.01288 *19* α(N)=0.01013 *15*; α(O)=0.00235 *4*; α(P)=0.000398 *6*; α(Q)=6.17×10^{-6} *9*
847.0	(3^-)	696.4 *5*	85 *19*	150.60	(4^+)			
		801.9 *5*	100 *19*	45	(2^+)			
944.7	(5^-)	631.6 *5*	63 *12*	313.19	(6^+)			
		794.0 *3*	100 *15*	150.60	(4^+)			
1087.7	(7^-)	558.9 *7*	24 *11*	528.69	(8^+)			
		774.5 *3*	100 *14*	313.19	(6^+)			
1100.5	(12^+)	307.6 *3*	100	792.9	(10^+)	[E2]	0.174	α(K)=0.0716 *11*; α(L)=0.0754 *11*; α(M)=0.0204 *3*; α(N+..)=0.00704 *11* α(N)=0.00553 *8*; α(O)=0.001286 *19*; α(P)=0.000220 *4*; α(Q)=4.29×10^{-6} *6*
1276.1	(9^-)	482.5 *7*	35 *11*	792.9	(10^+)			
		747.5 *3*	100 *15*	528.69	(8^+)			

† From $^{238}U(^{18}O,^{16}O\gamma)$.

‡ 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.

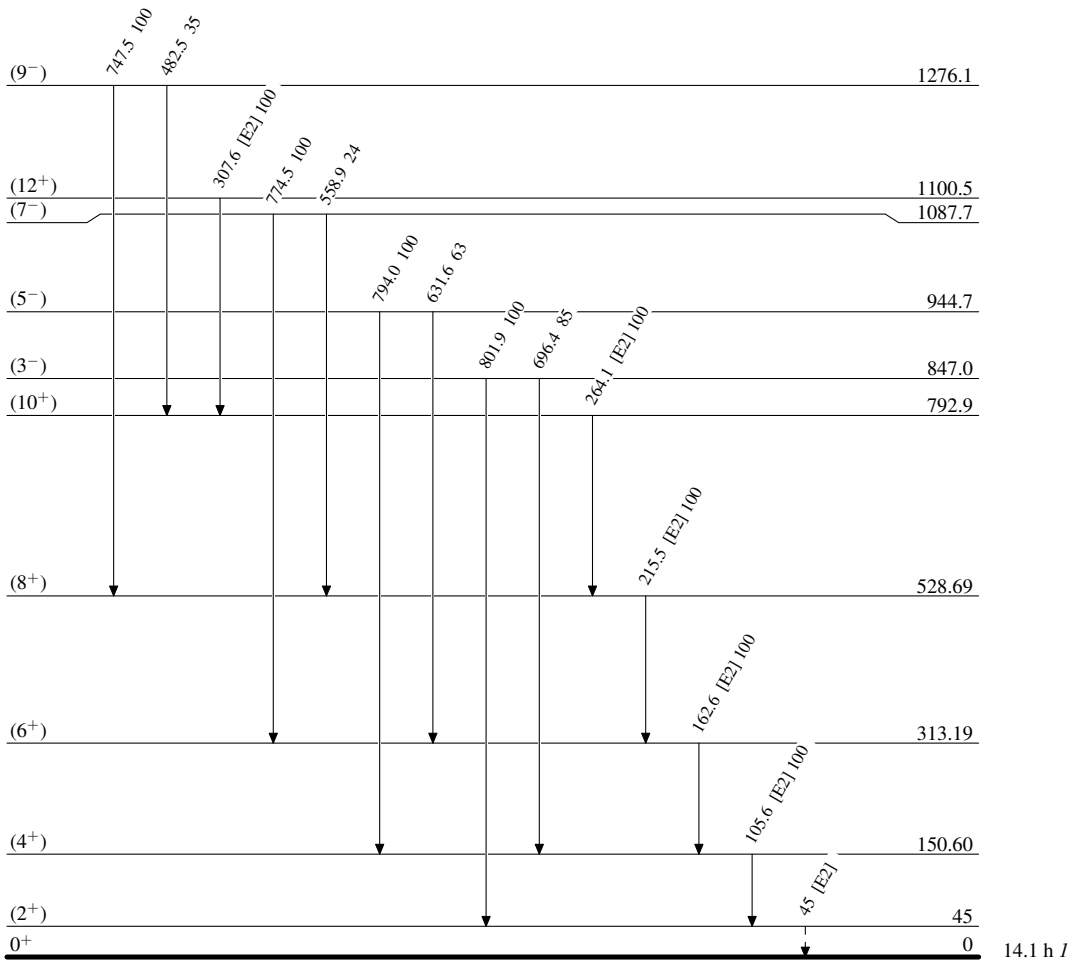
Adopted Levels, Gammas

Legend

Level Scheme

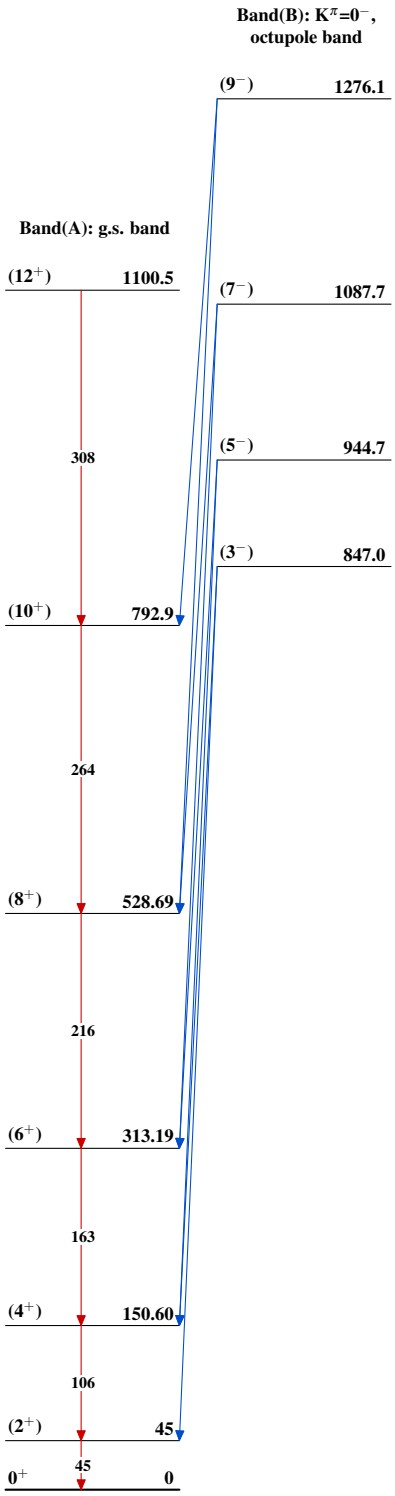
Intensities: Relative photon branching from each level

- - - - - - ► γ Decay (Uncertain)



$^{240}_{92}U_{148}$

Adopted Levels, Gammas



$^{240}_{92}U_{148}$