Adopted Levels, Gammas

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	B. Singh and S. Singh	ENSDF	31-Mar-2014

Q(β^-)=−5450 *SY*; S(n)=8120 *18*; S(p)=4300 *70*; Q(α)=7701 *4* 2012Wa38
Q(β^-): estimated uncertainty=90 keV (2012Wa38).
S(2n)=14527 *28*, S(2p)=7243 *16* (2012Wa38).
1973Vi10: ^{226}U produced and identified in ^{232}Th(α,10n) reaction at E=140 MeV, parent of ^{214}Rn (9040α).
1989An13: identified as parent of ^{222}Th (7982α).

Additional information 1.
Level scheme is tentative according to 1998Gr19, but first two excited states have been verified through the detection of internal conversion electrons.

^{226}U Levels

Cross Reference (XREF) Flags

A ^{230}Pu α decay (102 s)
B ^{208}Pb(^{22}Ne,4nγ)

E(level)†	J$^\pi$	T$_{1/2}$	XREF	Comments
0.0‡	0$^+$	268 ms *9*	AB	%α=100 Only α decay of ^{226}U has been observed. Evaluators estimate %ε<0.05 (from gross theory, 1973Ta30), <0.0093 (from calculated half-lives of >100 s for β decay and 9.3 ms for α decay in 1997Mo25). T$_{1/2}$: from α decay curves; weighted average of measured values: 258 ms *13* (2002CaZZ, from the same group as 2000He17 but seems an independent experiment), 281 ms *9* (2000He17), 260 ms 10 (1999Gr28, 1998Gr19), 200 ms *50* (1990An22). Others: 0.25 s *+15−10* (1989An13, from the same group as 1990An22), 0.5 s *2* (1973Vi10) are in agreement with the Adopted value but much less precise. Additional information 2.
81.3‡ *6*	(2$^+$)		AB	
250.0‡ *9*	(4$^+$)		B	
447.1# *9*	(5$^-$)		B	
483.2‡ *9*	(6$^+$)		B	
669.1# *10*	(7$^-$)		B	Magnitude of D$_0$/Q$_0$=5.5E−3 *11*.
766.4‡ *10*	(8$^+$)		B	Magnitude of D$_0$/Q$_0$=6.9E−3 *13*.
950.6# *10*	(9$^-$)		B	Magnitude of D$_0$/Q$_0$=8.7E−3 *21*.
1091.6‡ *10*	(10$^+$)		B	Magnitude of D$_0$/Q$_0$=10.5E−3 *12*.
1282.8# *10*	(11$^-$)		B	Magnitude of D$_0$/Q$_0$=9.0E−3 *18*.
1453.8‡ *10*	(12$^+$)		B	Magnitude of D$_0$/Q$_0$=8.2E−3 *17*.
1656.3# *11*	(13$^-$)		B	Magnitude of D$_0$/Q$_0$=8.6E−3 *15*.
1847.0?‡ *13*	(14$^+$)		B	

† From least-squares fit to Eγ data.
‡ Band(A): The g.s. band.
# Band(B): Octupole band based on (5$^-$). Weighted averaged magnitude of D$_0$/Q$_0$=7.9E−3 *5* in b$_{1/2}$ units.

Adopted Levels, Gammas (continued)

$\gamma(^{226}U)$

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.[†]	α[‡]	Comments
81.3	(2^+)	81.3 *6*	100	0.0	0^+	[E2]	36.9 *13*	α(L)=26.9 *9*; α(M)=7.46 *25*; α(N)=2.03 *7*; α(O)=0.465 *16*; α(P)=0.0758 *25*; α(Q)=0.000250 *8*
250.0	(4^+)	168.7 *6*	100	81.3	(2^+)	[E2]	1.44 *3*	α(K)=0.197 *3*; α(L)=0.904 *19*; α(M)=0.250 *6*; α(N)=0.0678 *15*; α(O)=0.0156 *4*; α(P)=0.00260 *6*
447.1	(5^-)	197.0 *2*	100	250.0	(4^+)	(E1)	0.1020	α(K)=0.0801 *12*; α(L)=0.01658 *24*; α(M)=0.00402 *6*; α(N)=0.001073 *16*; α(O)=0.000254 *4*
483.2	(6^+)	233.3 *3*	100	250.0	(4^+)	[E2]	0.429	α(K)=0.1191 *17*; α(L)=0.227 *4*; α(M)=0.0621 *10*; α(N)=0.0169 *3*; α(O)=0.00390 *6*
669.1	(7^-)	185.7 *5*	100 *31*	483.2	(6^+)	(E1)	0.1172 *18*	α(K)=0.0917 *14*; α(L)=0.0192 *3*; α(M)=0.00466 *8*; α(N)=0.001243 *20*; α(O)=0.000294 *5*
		221.7 *5*	6.3 *19*	447.1	(5^-)	[E2]	0.514 *9*	α(K)=0.1303 *19*; α(L)=0.280 *5*; α(M)=0.0769 *13*; α(N)=0.0209 *4*; α(O)=0.00483 *9*
766.4	(8^+)	97.5 *5*	100 *33*	669.1	(7^-)	(E1)	0.133 *3*	α(L)=0.1003 *20*; α(M)=0.0245 *5*; α(N)=0.00652 *13*; α(O)=0.00152 *3*; α(P)=0.000263 *5*
		283.6 *4*	100 *20*	483.2	(6^+)	[E2]	0.224	α(K)=0.0833 *12*; α(L)=0.1033 *16*; α(M)=0.0281 *5*; α(N)=0.00761 *12*; α(O)=0.00177 *3*
950.6	(9^-)	184.4 *5*	100 *28*	766.4	(8^+)	(E1)	0.1191 *19*	α(K)=0.0932 *15*; α(L)=0.0195 *3*; α(M)=0.00474 *8*; α(N)=0.001265 *20*; α(O)=0.000299 *5*
		281.0 *4*	8.3 *33*	669.1	(7^-)	[E2]	0.231	α(K)=0.0848 *12*; α(L)=0.1071 *17*; α(M)=0.0291 *5*; α(N)=0.00790 *12*; α(O)=0.00183 *3*
1091.6	(10^+)	140.6 *3*	100 *10*	950.6	(9^-)	(E1)	0.226	α(K)=0.174 *3*; α(L)=0.0388 *6*; α(M)=0.00945 *15*; α(N)=0.00252 *4*; α(O)=0.000593 *9*
		325.6 *4*	27 *6*	766.4	(8^+)	[E2]	0.1470	α(K)=0.0643 *10*; α(L)=0.0607 *9*; α(M)=0.01638 *25*; α(N)=0.00444 *7*; α(O)=0.001034 *16*
1282.8	(11^-)	191.1 *4*	100 *18*	1091.6	(10^+)	(E1)	0.1096 *17*	α(K)=0.0859 *13*; α(L)=0.0179 *3*; α(M)=0.00433 *7*; α(N)=0.001157 *18*; α(O)=0.000274 *4*
		332.3 *4*	16 *6*	950.6	(9^-)	[E2]	0.1385	α(K)=0.0619 *9*; α(L)=0.0563 *9*; α(M)=0.01516 *23*; α(N)=0.00411 *6*; α(O)=0.000958 *14*
1453.8	(12^+)	171.0 *4*	100 *30*	1282.8	(11^-)	(E1)	0.1422 *22*	α(K)=0.1109 *17*; α(L)=0.0236 *4*; α(M)=0.00573 *9*; α(N)=0.001529 *24*; α(O)=0.000361 *6*
		362.2 *4*	42 *15*	1091.6	(10^+)	[E2]	0.1083	α(K)=0.0526 *8*; α(L)=0.0410 *6*; α(M)=0.01098 *16*; α(N)=0.00298 *5*; α(O)=0.000695 *11*
1656.3	(13^-)	202.4 *4*	100 *16*	1453.8	(12^+)	(E1)	0.0958	α(K)=0.0753 *11*; α(L)=0.01551 *23*; α(M)=0.00376 *6*; α(N)=0.001003 *15*; α(O)=0.000238 *4*
		373.6 *4*	27 *8*	1282.8	(11^-)	[E2]	0.0994	α(K)=0.0496 *7*; α(L)=0.0366 *6*; α(M)=0.00980 *15*; α(N)=0.00266 *4*; α(O)=0.000620 *9*
1847.0?	(14^+)	191[#]		1656.3	(13^-)			
		393[#]		1453.8	(12^+)			

[†] E1 assignments are based on intensity balances (1998Gr19), E2 assignments are assumed to be based on band structures.

[‡] 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.

[#] Placement of transition in the level scheme is uncertain.

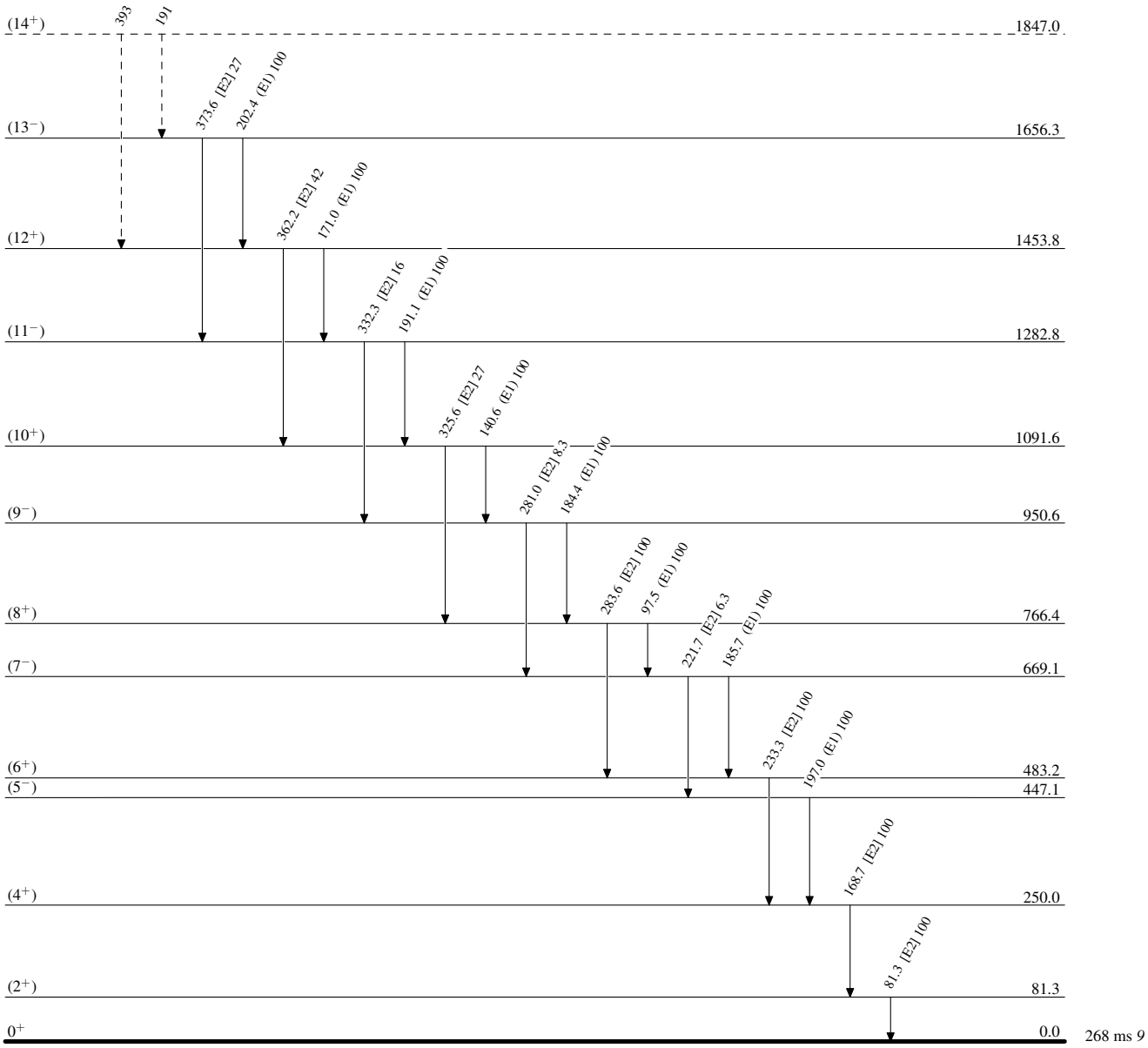
Adopted Levels, Gammas

Legend

Level Scheme

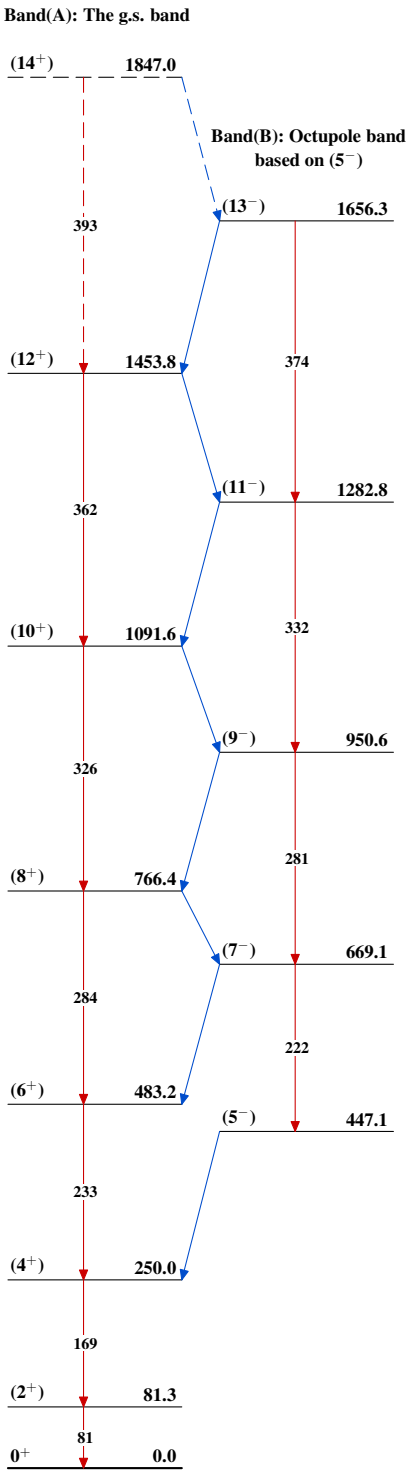
Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{226}_{92}U_{134}$

Adopted Levels, Gammas



$^{226}_{92}U_{134}$