Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	NDS 113, 515 (2012)	1-Jan-2012

Q(β^-)=5.49×10^3 *8*; S(n)=6.42×10^3 *4*; S(p)=14699 *5*; Q(α)=−8098 *25* 2012Wa38
Note: Current evaluation has used the following Q record.
Q(β^-)=5.50×10^3 *7*; S(n)=6.41×10^3 *4*; S(p)=1.463×10^4 *10*; Q(α)=−8.09×10^3 *3* 2011AuZZ
2007Ha20: Measured mass excess=−70213 *13*, mismatched in −70215 *12* from 2011AuZZ, 1990AyZX.
Others (mostly superseded): 1992JoZN, 1992JoZX, 1991LeZU.

^{114}Ru Levels

Identified by mass separation IGISOL (1988AyZY,1991Le09).

Cross Reference (XREF) Flags

- A ^{248}Cm SF decay
- B ^{114}Tc β^- decay:100 ms
- C ^{114}Tc β^- decay:90 ms
- D ^{252}Cf SF decay

E(level)[&]	J$^\pi$[@]	$T_{1/2}$	XREF	Comments
0.0[†]	0$^+$	0.54 s *3*	ABCD	%β^-=100 $T_{1/2}$: Weighted average: 0.51 s *7* (2006Mo07), 0.53 s *6* (1992Jo05), 0.57 s *5* (1991Le09).
265.19[†] *17*	2$^+$		ABCD	
563.31[‡] *17*	(2$^+$)		ABC	
708.2[†] *3*	(4$^+$)		AB D	
828.50[‡] *25*	(3$^+$)		ABCD	
1056.1 *4*	(≥3)		B	
1081.9[‡] *5*	(4$^+$)		B D	
1298.8[†] *4*	(6$^+$)		AB D	
1372.5[‡] *4*	(5$^+$)		AB D	
1578.5[#] *6*	(4$^+$)		B D	
1602.4 *6*	(≥3)		B	
1761.4[‡] *7*	(6$^+$)		D	
1813.6[#] *5*	(5$^+$)		D	
1883.1 *5*	(2$^+$)		C	
2007.9[†] *6*	(8$^+$)		A D	
2057.1[‡] *6*	(7$^+$)		D	
2068.7 *10*	(≥3)		B D	
2792.4[†] *8*	(10$^+$)		A D	
2832.3[‡] *8*	(9$^+$)		D	
3573.4[†] *10*	12$^+$		D	
4319.5[†] *11*	14$^+$		D	

[†] Band(A): ΔJ=2 sequence built on g.s..
[‡] Band(B): γ band.

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{114}Ru Levels (continued)

Band(C): Band based on (4^+). Assigned to 2-phonon γ-vibrational band.
@ All J^π are from band assignments.
& From least-squares fit to Eγ's.

$\gamma(^{114}Ru)$

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult.
265.19	2^+	265.1 *2*	100	0.0	0^+	[E2]
563.31	(2^+)	298.0 *2*	100	265.19	2^+	[E2]
		563.4 *2*	66	0.0	0^+	[E2]
708.2	(4^+)	443.0 *2*	100	265.19	2^+	
828.50	(3^+)	265.1 *2*	100	563.31	(2^+)	[E2]
1056.1	(≥ 3)	227.6 *3*	100	828.50	(3^+)	[E2]
1081.9	(4^+)	518.7 *5*	100	563.31	(2^+)	
1298.8	(6^+)	590.6 *2*	100	708.2	(4^+)	
1372.5	(5^+)	544.0 *2*	100	828.50	(3^+)	
1578.5	(4^+)	870.3 *5*	100	708.2	(4^+)	
1602.4	(≥ 3)	773.9 *5*	100	828.50	(3^+)	
1761.4	(6^+)	679.5 *5*	100	1081.9	(4^+)	
1813.6	(5^+)	235.8‡		1578.5	(4^+)	
		731.9 *5*	39	1081.9	(4^+)	
		985.0 *5*	100	828.50	(3^+)	
1883.1	(2^+)	1054.2 *5*	23 *13*	828.50	(3^+)	
		1320.2 *9*	100 *25*	563.31	(2^+)	
		1618.7 *9*	45 *23*	265.19	2^+	
2007.9	(8^+)	709.1 *5*	100	1298.8	(6^+)	
2057.1	(7^+)	684.6 *5*	100	1372.5	(5^+)	
2068.7	(≥ 3)	1360.5 *9*	100	708.2	(4^+)	
2792.4	(10^+)	784.5 *5*	100	2007.9	(8^+)	
2832.3	(9^+)	775.2 *5*	100	2057.1	(7^+)	
3573.4	12^+	781.0 *5*	100	2792.4	(10^+)	
4319.5	14^+	746.1 *5*	100	3573.4	12^+	

† From ^{114}Tc β^- decay.
‡ Placement of transition in the level scheme is uncertain.

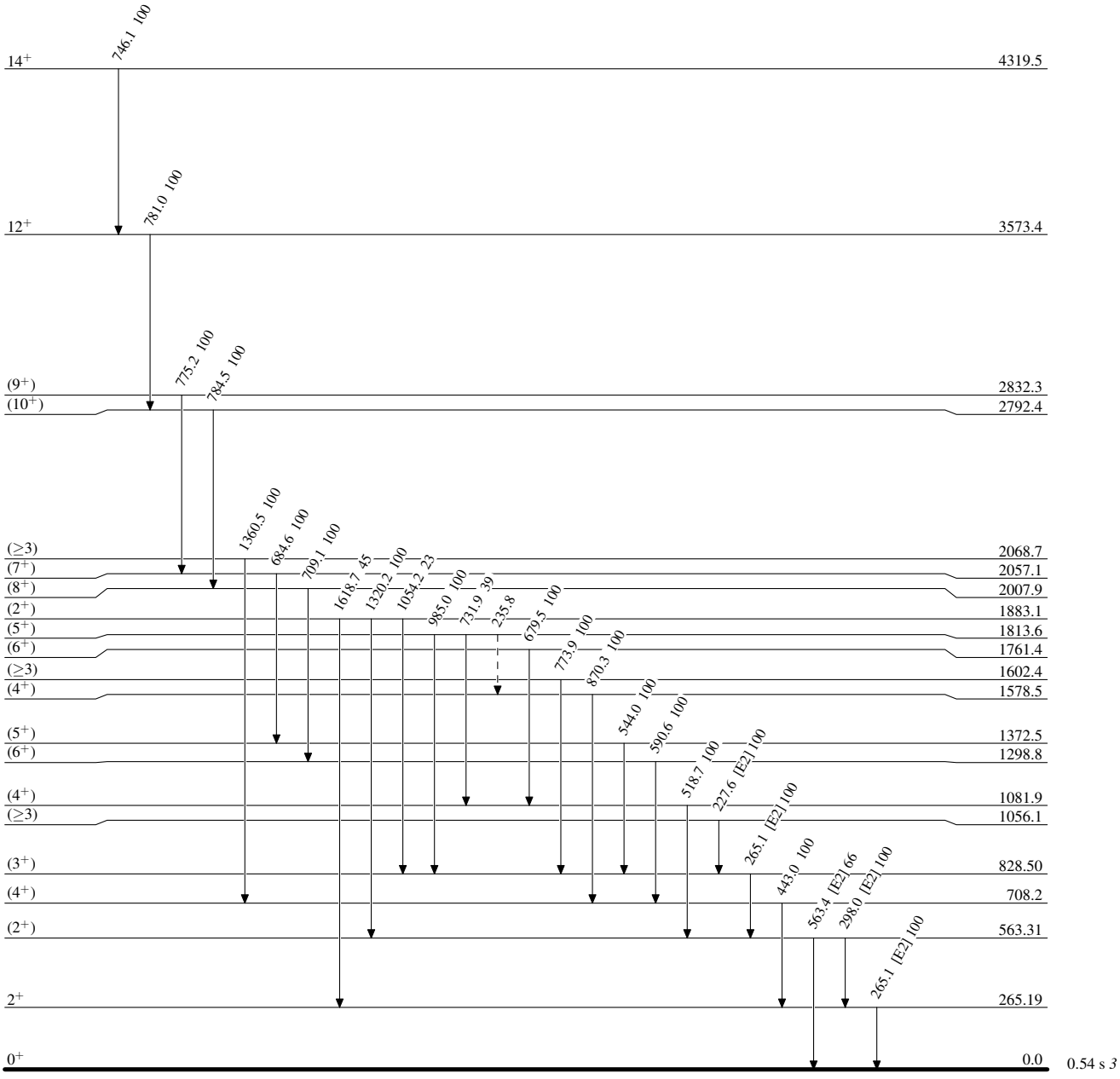
Adopted Levels, Gammas

Legend

Level Scheme

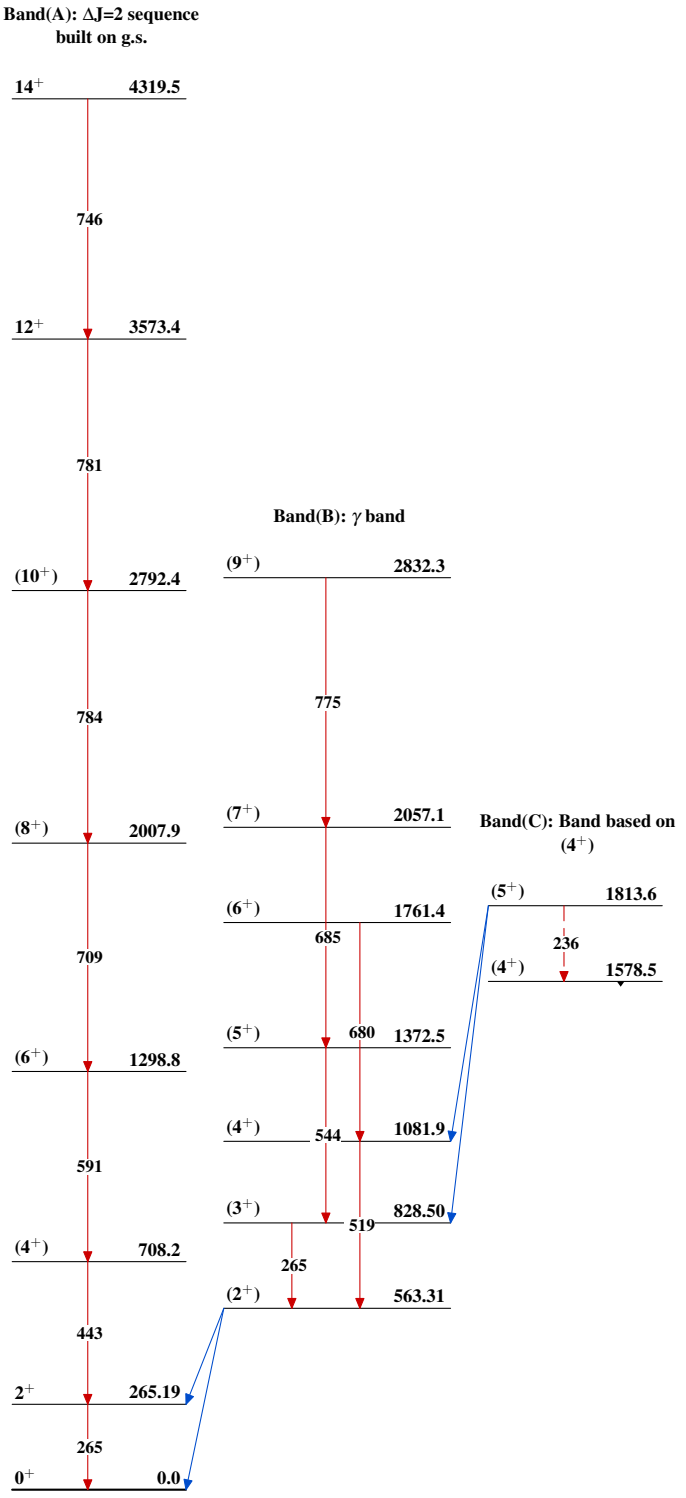
Intensities: Relative photon branching from each level

- - - - - - ► γ Decay (Uncertain)



$^{114}_{44}Ru_{70}$

Adopted Levels, Gammas



$^{114}_{44}Ru_{70}$