Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia	NDS 102,719 (2004)	1-Jun-2004

Q(β^-)=−4.34×10^3 *4*; S(n)=7.48×10^3 *4*; S(p)=5.18×10^3 *4*; Q(α)=3.37×10^3 *4* 2012Wa38
Note: Current evaluation has used the following Q record −4340 407480 405180 403370 40 2003Au03.

^{175}W Levels

Cross Reference (XREF) Flags

A ^{163}Dy(^{16}O,4nγ)
B ^{175}Re ε decay

E(level)†	J$^\pi$‡	T$_{1/2}$	XREF	Comments
0.0#	(1/2$^-$)	35.2 min *6*	AB	%ε+%β^+=100 T$_{1/2}$: from ^{175}Re ε decay (1984Sz07).
75.02# *10*	(3/2$^-$)		A	
89.21# *10*	(5/2$^-$)		A	
104.03@ *17*	(5/2$^-$)	45 ns *12*	A	T$_{1/2}$: from $\gamma\gamma$(t) in ^{163}Dy(^{16}O,4nγ).
196.27@ *17*	(7/2$^-$)		A	
234.96& *15*	(7/2$^+$)	216 ns *6*	A	μ=−0.655 *21* T$_{1/2}$: from nγ(t) in ^{163}Dy(^{16}O,4nγ). μ: From g factor=−0.187 *6*, observing γ precession in external magnetic field (2000Io03). The diamagnetic and Knight shift corrections were not applied, as those were small (about 1%).
259.65# *12*	(7/2$^-$)		A	
265.60& *23*	(9/2$^+$)		A	
284.14# *14*	(9/2$^-$)		A	
314.53@ *20*	(9/2$^-$)		A	
330.56& *21*	(11/2$^+$)		A	
409.12& *23*	(13/2$^+$)		A	
457.48@ *21*	(11/2$^-$)		A	
540.34# *17*	(11/2$^-$)		A	
550.80& *23*	(15/2$^+$)		A	
573.54# *17*	(13/2$^-$)		A	
623.70@ *22*	(13/2$^-$)		A	
660.71& *24*	(17/2$^+$)		A	
812.17@ *24*	(15/2$^-$)		A	
891.70& *24*	(19/2$^+$)		A	
905.26# *22*	(15/2$^-$)		A	
944.26# *21*	(17/2$^-$)		A	
1016.1& *3*	(21/2$^+$)		A	
1019.9@ *3*	(17/2$^-$)		A	
1246.5@ *3*	(19/2$^-$)		A	
1339.3& *3*	(23/2$^+$)		A	
1343.1# *3*	(19/2$^-$)		A	
1384.0# *3*	(21/2$^-$)		A	

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Adopted Levels, Gammas (continued)

^{175}W Levels (continued)

E(level)†	Jπ‡	XREF	E(level)†	Jπ‡	XREF	E(level)†	Jπ‡	XREF
1469.3& *3*	(25/2+)	A	2007.3@ *4*	(25/2−)	A	3142.3& *4*	(35/2+)	A
1488.0@ *3*	(21/2−)	A	2011.4& *4*	(29/2+)	A	3310.7& *4*	(37/2+)	A
1746.9?@ *3*	(23/2−)	A	2410.7# *4*	(29/2−)	A	3447.2# *5*	(37/2−)	A
1844.4# *3*	(23/2−)	A	2484.4& *4*	(31/2+)	A	4038.7& *5*	(41/2+)	A
1876.7& *3*	(27/2+)	A	2629.7& *4*	(33/2+)	A			
1881.7# *3*	(25/2−)	A	2908.4# *4*	(33/2−)	A			

† Deduced by evaluator from a least-squares fit to the adopted γ-ray energies.
‡ Spin assignments are based on rotational structure, γ-ray decay patterns, γ(θ) and systematics of N=101 nuclei.
# Band(A): 1/2(521) band.
@ Band(B): 5/2(512) band.
& Band(C): 7/2(633) band , strongly mixed by Coriolis coupling with the other members of the i13/2 intruder orbital.

γ(^{175}W)

E_i(level)	J_i^π	E_γ†	I_γ†	E_f	J_f^π	Mult.‡	δ‡	Comments
75.02	(3/2−)	75.00 *10*	100	0.0	(1/2−)			
89.21	(5/2−)	(14.2#)		75.02	(3/2−)			
		89.23 *10*		0.0	(1/2−)			
104.03	(5/2−)	(14.8#)		89.21	(5/2−)			
		(29.0#)		75.02	(3/2−)			
196.27	(7/2−)	92.25 *10*	100	104.03	(5/2−)			
234.96	(7/2+)	38.69 *10*	100 *11*	196.27	(7/2−)	E1		Mult.: from α(exp)<3, based on transition intensity balance.
		130.92 *10*	87 *9*	104.03	(5/2−)			
		145.74 *12*	6.0 *15*	89.21	(5/2−)			
259.65	(7/2−)	170.50 *20*	11 *4*	89.21	(5/2−)			
		184.62 *10*	100 *10*	75.02	(3/2−)			
265.60	(9/2+)	(30.7#)		234.96	(7/2+)			
284.14	(9/2−)	(24.5#)		259.65	(7/2−)			
		194.92 *10*	100	89.21	(5/2−)			
314.53	(9/2−)	118.26 *12*	100 *12*	196.27	(7/2−)	(M1+E2)	−0.7 +*3* −*7*	
		210.46[a] *20*	33 *10*	104.03	(5/2−)			
330.56	(11/2+)	64.91 *10*	100 *10*	265.60	(9/2+)	(M1+E2)	0.34 *6*	Mult.,δ: from intensity balance at 331-keV level and theoretical α.
		95.60 *15*	15@ *3*	234.96	(7/2+)			
409.12	(13/2+)	78.54 *10*	100 *10*	330.56	(11/2+)			
		143.80 *25*	≤208	265.60	(9/2+)			
457.48	(11/2−)	142.96 *16*	≤370	314.53	(9/2−)			
		261.21 *14*	100 *22*	196.27	(7/2−)			
540.34	(11/2−)	280.69 *12*	100	259.65	(7/2−)			
550.80	(15/2+)	141.73 *12*	94 *12*	409.12	(13/2+)			
		220.21 *10*	100 *8*	330.56	(11/2+)			
573.54	(13/2−)	289.40 *10*	100	284.14	(9/2−)			
623.70	(13/2−)	166.21 *15*	54 *7*	457.48	(11/2−)			
		309.15 *14*	100 *16*	314.53	(9/2−)			
660.71	(17/2+)	109.96 *15*	18 *5*	550.80	(15/2+)			
		251.58 *10*	100 *10*	409.12	(13/2+)			
812.17	(15/2−)	188.45 *14*	100 *14*	623.70	(13/2−)			

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Adopted Levels, Gammas (continued)

γ(^{175}W) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	Comments
812.17	(15/2$^-$)	354.74 *20*	≤1548	457.48	(11/2$^-$)		
891.70	(19/2$^+$)	231.00 *10*	37 *5*	660.71	(17/2$^+$)	(M1+E2)	δ: −0.38 *9* or −1.7 *2* from ^{163}Dy(^{16}O,4nγ).
		340.88 *12*	100 *11*	550.80	(15/2$^+$)		
905.26	(15/2$^-$)	364.92 *14*	100	540.34	(11/2$^-$)		
944.26	(17/2$^-$)	370.72 *12*	100	573.54	(13/2$^-$)		
1016.1	(21/2$^+$)	124.32 *15*	100 *13*	891.70	(19/2$^+$)		
		355.34 *15*	≤2031	660.71	(17/2$^+$)		
1019.9	(17/2$^-$)	207.74[a] *20*	20 *4*	812.17	(15/2$^-$)		
		396.22 *14*	100 *12*	623.70	(13/2$^-$)		
1246.5	(19/2$^-$)	434.35 *15*	100[@]	812.17	(15/2$^-$)		
1339.3	(23/2$^+$)	323.24 *15*	17 *3*	1016.1	(21/2$^+$)	(M1+E2)	δ: −0.34 *15* or −1.9 *8* from ^{163}Dy(^{16}O,4nγ).
		447.68 *14*	100 *17*	891.70	(19/2$^+$)		
1343.1	(19/2$^-$)	437.86 *15*	100[@]	905.26	(15/2$^-$)		
1384.0	(21/2$^-$)	439.76 *15*	100[@]	944.26	(17/2$^-$)		
1469.3	(25/2$^+$)	453.29 *14*	100	1016.1	(21/2$^+$)		
1488.0	(21/2$^-$)	468.10 *16*	100	1019.9	(17/2$^-$)		
1746.9?	(23/2$^-$)	500.34[a] *20*	≤128	1246.5	(19/2$^-$)		
1844.4	(23/2$^-$)	501.26 *15*	100	1343.1	(19/2$^-$)		
1876.7	(27/2$^+$)	537.40 *15*	100	1339.3	(23/2$^+$)		
1881.7	(25/2$^-$)	497.70[&] *15*	100[&@]	1384.0	(21/2$^-$)		
2007.3	(25/2$^-$)	519.28 *15*	100	1488.0	(21/2$^-$)		
2011.4	(29/2$^+$)	542.04 *15*	100	1469.3	(25/2$^+$)		
2410.7	(29/2$^-$)	528.96 *15*	100	1881.7	(25/2$^-$)		
2484.4	(31/2$^+$)	607.66 *15*	100	1876.7	(27/2$^+$)		
2629.7	(33/2$^+$)	618.29 *15*	100	2011.4	(29/2$^+$)		
2908.4	(33/2$^-$)	497.70[&] *15*	100[&@]	2410.7	(29/2$^-$)		
3142.3	(35/2$^+$)	657.90 *20*	100	2484.4	(31/2$^+$)		
3310.7	(37/2$^+$)	681.00 *20*	100	2629.7	(33/2$^+$)		
3447.2	(37/2$^-$)	538.80 *20*		2908.4	(33/2$^-$)		
4038.7	(41/2$^+$)	728.00 *25*	100	3310.7	(37/2$^+$)		

[†] From ^{163}Dy(^{16}O,4nγ).
[‡] From angular distributions, except as noted.
[#] Inferred from coincidence relationships.
[@] Contaminated with lines in neighboring Hf and W isotopes.
[&] Multiply placed with undivided intensity.
[a] Placement of transition in the level scheme is uncertain.

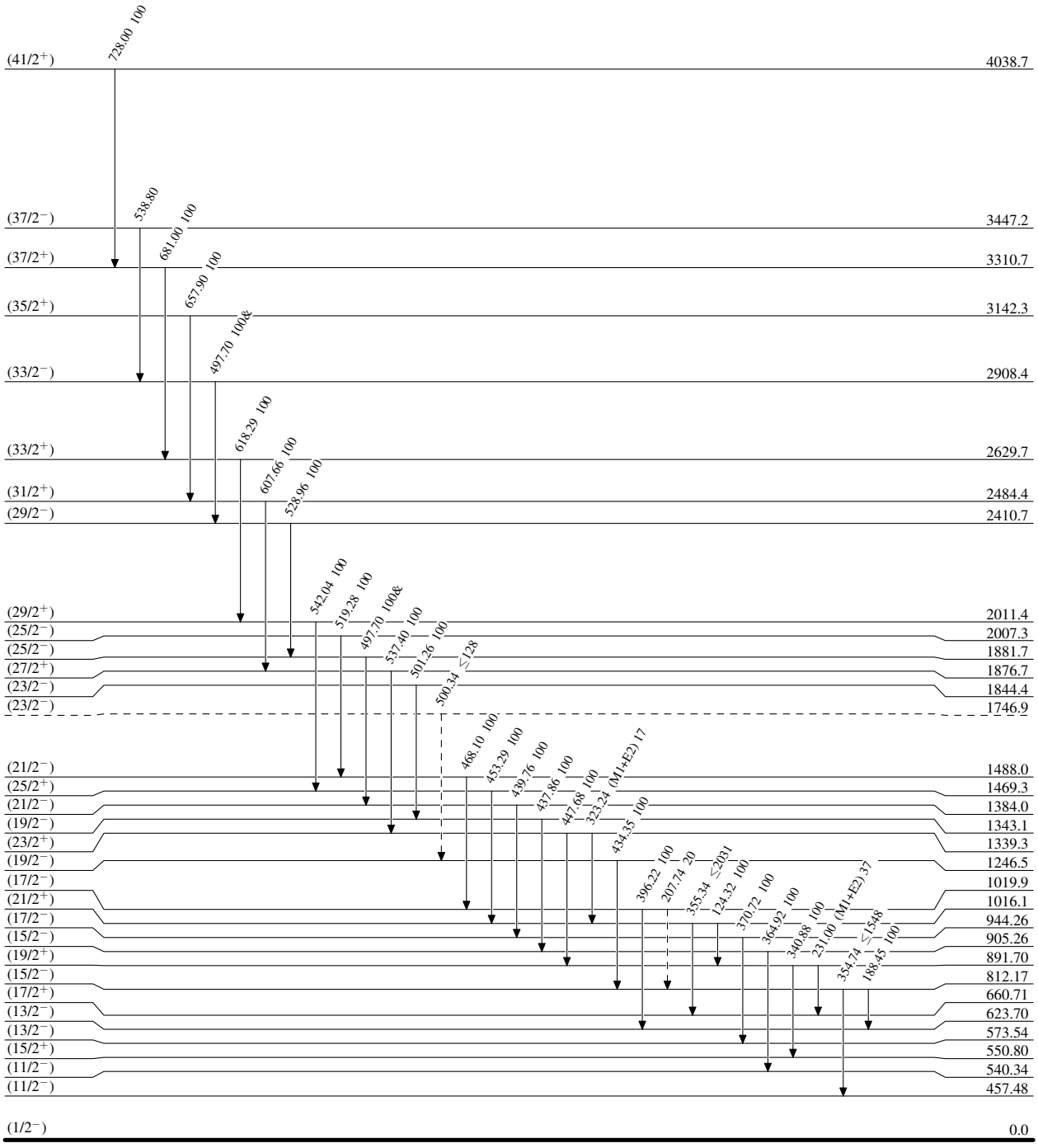
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

- - - - - - ► γ Decay (Uncertain)



$^{175}_{74}W_{101}$

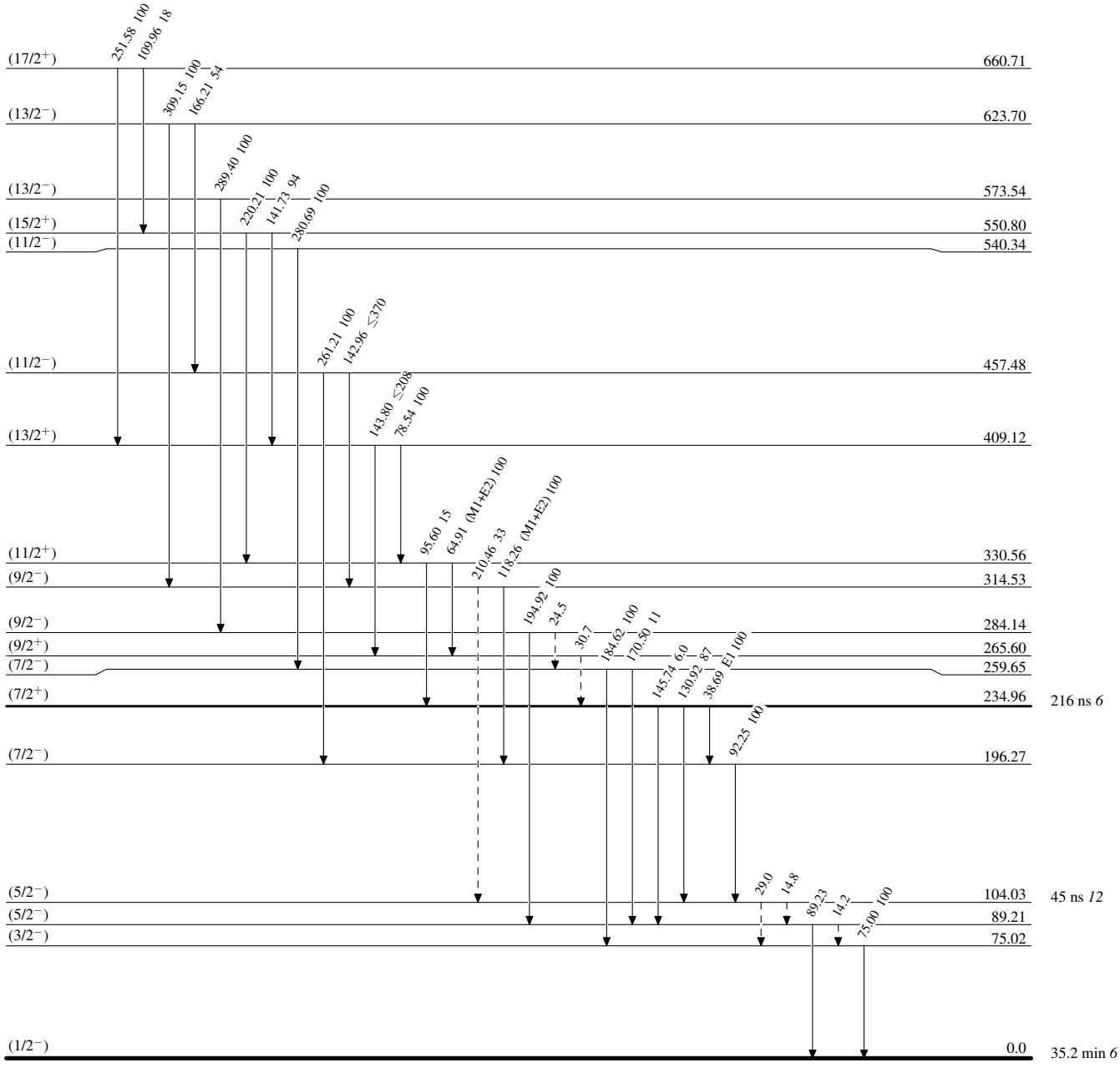
Adopted Levels, Gammas

Legend

Level Scheme (continued)

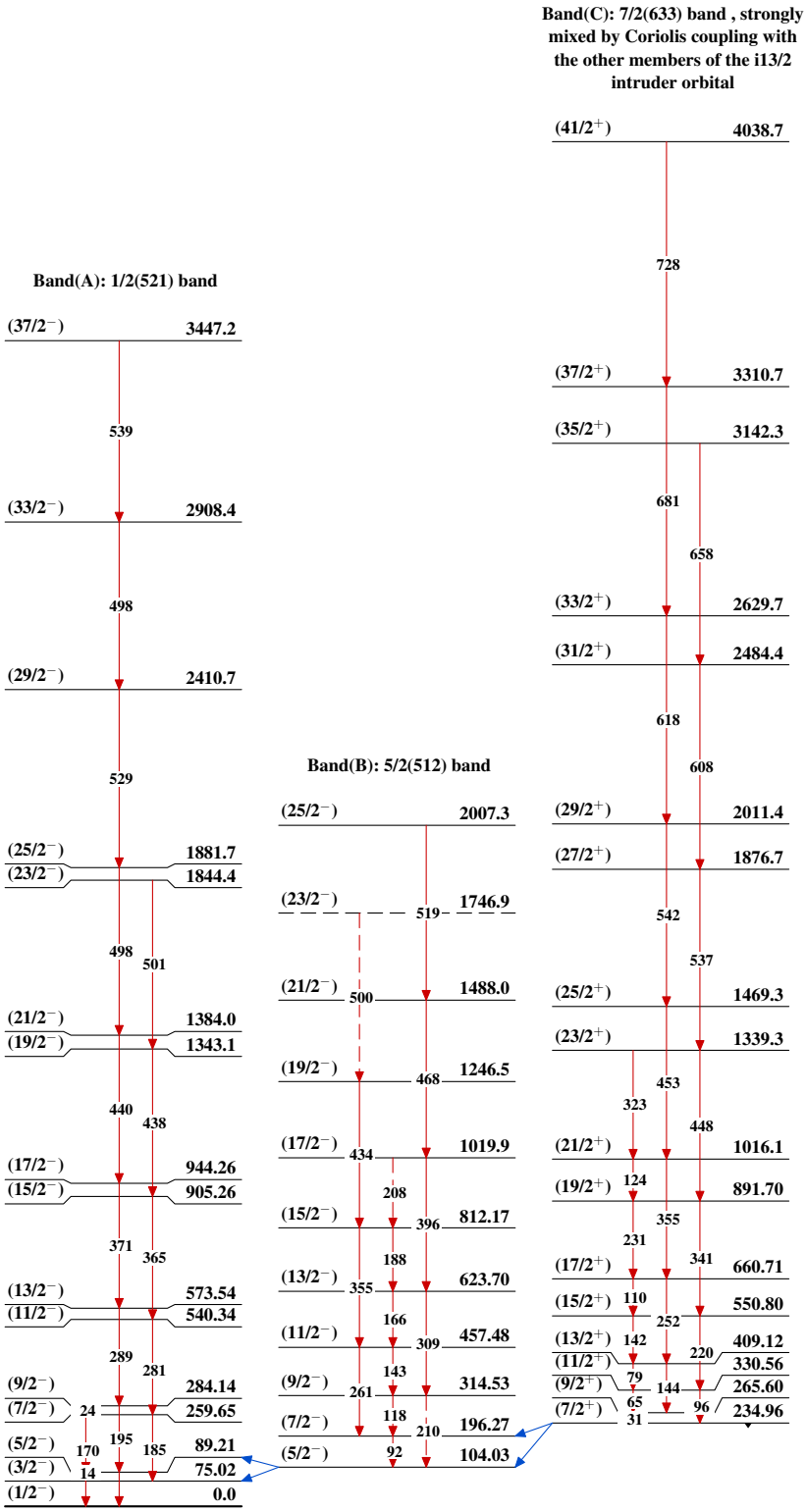
Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

– – – – – – ► γ Decay (Uncertain)



$^{175}_{74}W_{101}$

Adopted Levels, Gammas



$^{175}_{74}W_{101}$