Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 112,1163 (2011)	15-Dec-2010

Q(β^-)=2895 *11*; S(n)=7482 *14*; S(p)=8649 *12*; Q(α)=−4940 *12* 2012Wa38
Note: Current evaluation has used the following Q record 2895 10 *7482* 14 *8648* 11 −4939 *12* 2003Au03,2009AuZZ.
Q(β^-), S(n), S(p), Q(α): from 2009AuZZ (cf. 2894 *10*, 7481 *14*, 8644 *11*, −4936 *12*, respectively, from 2003Au03).

^{93}Y Levels

Cross Reference (XREF) Flags

A	^{93}Sr β^- decay	D	^{93}Nb(π^-,π^+)
B	^{94}Zr(d,^{3}He)	E	^{93}Y IT decay
C	^{96}Zr(p,α)	F	^{238}U(^{82}Se,Xγ)

E(level)†	J$^\pi$	T$_{1/2}$	XREF	Comments
0.0[a]	1/2$^-$	10.18[#] h *8*	ABC EF	%β^-=100 μ=−0.1390 *9* (2004Ni21) Δ<r^2>(^{93}Y,^{89}Y)=+0.526 (2007Ch07). J$^\pi$: ΔJ=2, yes shape for β spectrum for decay to ^{93}Zr g.s. (1959Kn38). L(d,^{3}He)=1 determines J^π=1/2$^-$,3/2$^-$. J^π(^{93}Zr)=3/2$^+$,5/2$^+$ from L(p,α)=2. Hence, J^π(^{93}Y)=1/2$^-$, J^π(^{93}Zr)=5/2$^+$. μ: from g=−0.2780 *17* (2004Ni21; NMRON, if hyperfine field for y in Fe is −29.4 *2* tesla). Other: −0.12 *3* from LASER spectroscopy (2007Ch07; see also 2006Ca38).
590.220[a] *21*	(3/2)$^-$	<0.13 ns	ABC EF	J$^\pi$: 1/2$^-$,3/2$^-$ from L(d,^{3}He)=1; shell-model calculations (2007Bu35) cannot account for two low-lying 1/2$^-$ states. J=3/2 for analogous states in ^{95}Y and ^{91}Y. T$_{1/2}$: from ^{93}Y β^- decay.
758.719[&] *21*	(9/2)$^+$	0.82 s *4*	ABC EF	%IT=100 μ=+6.04 *3*; Q=−0.64 *8* Δ<r^2>(759 level, g.s.)=+0.064 (2007Ch07). μ,Q: from LASER spectroscopy (2007Ch07). See also 2006Ca38. J$^\pi$: L(d,^{3}He)=4; E3 168γ to (3/2)$^-$ 590; J=9/2 analogous to ^{95}Y, ^{91}Y. However, $\sigma(\theta)$ is not well fitted by 9/2$^+$ DWBA prediction in (p,α) and apparent Iβ to this level from 5/2$^+$ in β^- decay favor J=7/2, contrary to the results of shell-model calculations which predict a low-lying 9/2$^+$ state but no 7/2$^+$ state (2007Bu35). T$_{1/2}$: from ^{93}Y IT decay.
875.88[a] *3*	5/2$^-$		ABC	J$^\pi$: L(d,^{3}He)=3; RUL requires T$_{1/2}$>39 μs if the 876γ feeding the 1/2$^-$ g.s. has M3 multipolarity.
1135.97 *4*	(3/2$^+$,5/2$^-$)		A C	J$^\pi$: γ to 1/2$^-$ and 7/2$^+$. 5/2$^-$ favored in (p,α).
1277.90 *6*	(1/2$^-$,3/2,5/2$^-$)		ABc	J$^\pi$: γ to 1/2$^-$; log *ft*=7.9 from 5/2$^+$. L(d,^{3}He)=1+3 for 1290 multiplet.
1300.522 *25*	(3/2$^+$,5/2$^-$)		ABc	J$^\pi$: γ to 1/2$^-$ and 7/2$^+$. L(d,^{3}He)=1+3 for 1290 multiplet.
1308.56 *5*	(1/2$^-$,3/2,5/2$^-$)		A c	J$^\pi$: γ to 1/2$^-$ and 5/2$^-$.
1542.70 *10*	(1/2,3/2,5/2$^-$)		A C	J$^\pi$: γ to J^π=1/2$^-$.
1550.42[&] *21*	(13/2$^+$)		F	J$^\pi$: suggested in ^{238}U(^{82}Se,Xγ) based on comparison with shell-model calculations (2007Bu35) and Q 792γ to (9/2)$^+$ 759 level.
1647.04 *4*	3/2,5/2,7/2		A	J$^\pi$: log *ft*=6.3, log $f^{1u}t$<8.5 from 5/2$^+$.
1695.78 *9*	(1/2$^-$,3/2,5/2)		A C	J$^\pi$: γ to 1/2$^-$; log *ft*=7.9 from 5/2$^+$. 5/2$^+$ favored in (p,α).
1786.39 *4*	(1/2$^-$,3/2,5/2$^-$)		A	J$^\pi$: γ to 1/2$^-$ and 5/2$^-$.

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{93}Y Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$	XREF	Comments
1852.67 *5*			A C	Jπ: γ to 7/2+ and (3/2+,5/2−).
1911.42 *4*	(1/2−,3/2,5/2−)		A C	Jπ: γ to 1/2− and 5/2−.
2000[@]			C	
2056.56 *9*	(1/2−,3/2,5/2−)		A	Jπ: γ to 1/2− and 5/2−.
2070[@]	(11/2−)		C	Jπ: (11/2−) favored in (p,α).
2091.35 *5*			A	Jπ: γ to 7/2+ and 5/2−.
2093.27 *5*			A	Jπ: γ to 7/2+.
2129.12 *13*	(1/2−,3/2,5/2−)		A	Jπ: γ to 1/2−; log *ft*=7.5 from 5/2+.
≈2200			A	E(level): level(s) in the vicinity of 2200 fed in β− decay.
2355.58 *6*	(3/2,5/2−)		A C	Jπ: log $f^{1u}t$<8.5 from 5/2+; γ to 1/2−.
2364.88 *7*	(3/2,5/2−)		A C	Jπ: log $f^{1u}t$<8.5 from 5/2+; γ to 1/2−.
2543.93 *7*	3/2−		ABC	Jπ: L(d,^{3}He)=1; log $f^{1u}t$<8.5 from 5/2+.
2569.96 *5*	3/2+,5/2+,7/2+		A	Jπ: log *ft*=5.6 from 5/2+.
2574.98 *4*	(3/2+)		A	Jπ: log *ft*=5.6 from 5/2+; γ to 1/2−.
2622.8[&] *4*	(15/2+)[‡]		F	
2653.91 *12*	(1/2,3/2,5/2)		A	Jπ: (D) 2064γ to (3/2)− 590.
2687.55 *4*	3/2+,5/2+,7/2+		A	Jπ: log *ft*=5.3 from 5/2+; if 2689γ to 1/2− is correctly placed, Jπ=(3/2)+.
2769.82 *5*	(3/2+)		A C	XREF: c(2790). Jπ: log *ft*=5.5 from 5/2+; γ to 1/2−.
2777.98 *19*			A C	XREF: c(2790).
2783.54 *6*	3/2(+) to 7/2(+)		A C	XREF: c(2790). Jπ: log *ft*=5.9 from 5/2+.
2820.65 *7*	(3/2+)		A C	XREF: c(2790). Jπ: log *ft*=5.8 from 5/2+; γ to 1/2−.
2886.53 *9*	(3/2,5/2−)		A C	Jπ: log $f^{1u}t$<8.5 from 5/2+; γ to 1/2−.
2930 *20*	1/2−,3/2−		BC	Jπ: L=1 in (d,^{3}He). E(level): from (d,^{3}He).
3007.05 *9*	(3/2,5/2−)		A	Jπ: log $f^{1u}t$<8.5 from 5/2+; γ to 1/2−.
3116.03 *14*	(3/2,5/2−)		A	Jπ: log $f^{1u}t$<8.5 from 5/2+; γ to 1/2−.
3345.4[&] *5*	(19/2+)[‡]		F	
3636.8[&] *5*	(21/2+)[‡]		F	
3824.5? *4*			A	
3871.31? *22*			A	
3894.9? *3*			A	
4314.0[&] *6*	(+)		F	
20.9×10^3 *10*		8.5 MeV *20*	D	Double isovector giant dipole resonance; not a discrete level. E(level),$T_{1/2}$: from (π−,π+).

[†] From least-squares fit to adopted Eγ, except as noted. The normalized χ^2=2.0 cf. χ^2 (critical)=1.4, and 4 Eγ values are 3σ or 4σ from fitted value. Note that additional levels exist in the vicinity of 2200 keV and 3200-3800 keV as evidenced by the β− strength distribution deduced from absorption γ spectrometry (see ^{93}Sr β− decay); these are not included here because specific level energies have not been determined.

[‡] From ^{238}U(^{82}Se,Xγ); based on transition multipolarities and comparison of observed level energies and electromagnetic transition probabilities with those calculated using the shell model with the 'gwb' model space (4 valence proton- and 6 valence neutron-orbitals).

[#] Weighted average of 10.25 h *10* (1959Kn38), 10.1 h *1* (1960Fr05). Others: 9.56 h *19* (1972Eh02), 10.25 h *1* (1966No08). $T_{1/2}$(^{93}Sr) from 1972Eh02 also differs significantly from adopted value. Datum from 1966No08 results from least-squares fits to four-component decay curve for Y fraction, but authors do not themselves assume this value in later calculations.

[@] From (p,α). ΔE not stated by authors, but E is within 6 keV of adopted value for E≤1700 keV.

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{93}Y Levels (continued)

[&] Band(A): π=+ sequence (2007Bu35).
[a] Band(B): π=− sequence (2007Bu35).

Adopted Levels, Gammas (continued)

$\gamma(^{93}Y)$

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α[&]	Comments
590.220	$(3/2)^-$	590.238 *23*	100	0.0	$1/2^-$	M1	0.00197 *3*	B(M1)(W.u.)>0.00082 Mult.: M1(+E2) (δ<1.4) from α(K)exp in ^{93}Sr β^- decay. If present, an L=2 component would rule out J=1/2.
758.719	$(9/2)^+$	168.499 *4*	100	590.220	$(3/2)^-$	E3	0.952	B(E3)(W.u.)=0.383 *19*
875.88	$5/2^-$	285.65 *7*	1.11 *8*	590.220	$(3/2)^-$			
		875.73 *6*	100 *6*	0.0	$1/2^-$			
1135.97	$(3/2^+,5/2^-)$	260.12 *5*	100 *6*	875.88	$5/2^-$			
		377.36 *6*	20.0 *13*	758.719	$(9/2)^+$			
		545.81 *7*	5.3 *4*	590.220	$(3/2)^-$			
1277.90	$(1/2^-,3/2,5/2^-)$	687.79 *11*	77 *7*	590.220	$(3/2)^-$			
		1277.99 *9*	100 *7*	0.0	$1/2^-$			
1300.522	$(3/2^+,5/2^-)$	424.70 *13*	1.19 *16*	875.88	$5/2^-$			
		541.89 *6*	3.34 *19*	758.719	$(9/2)^+$			
		710.312 *17*	100 *5*	590.220	$(3/2)^-$			
1308.56	$(1/2^-,3/2,5/2^-)$	432.67 *6*	99 *6*	875.88	$5/2^-$			
		718.33 *12*	100 *14*	590.220	$(3/2)^-$			
		1308.60 *9*	26.8 *18*	0.0	$1/2^-$			
1542.70	$(1/2,3/2,5/2^-)$	406.71 *10*	100 *10*	1135.97	$(3/2^+,5/2^-)$			
		952.58 *23*	25 *5*	590.220	$(3/2)^-$			
		1543.4 *6*	10 *3*	0.0	$1/2^-$			
1550.42	$(13/2^+)$	791.7 *2*	100	758.719	$(9/2)^+$	Q		E_γ,Mult.: from (^{82}Se,Xγ).
1647.04	3/2,5/2,7/2	346.49 *5*	14.8 *8*	1300.522	$(3/2^+,5/2^-)$			
		771.19 *6*	5.3 *3*	875.88	$5/2^-$			
		888.13[@] *5*	100 *5*	758.719	$(9/2)^+$			
1695.78	$(1/2^-,3/2,5/2)$	559.92 *8*	100 *10*	1135.97	$(3/2^+,5/2^-)$			
		1104.69[@] *23*	73 *13*	590.220	$(3/2)^-$			
1786.39	$(1/2^-,3/2,5/2^-)$	650.56 *15*	19.4 *21*	1135.97	$(3/2^+,5/2^-)$			
		910.18[@] *8*	84 *5*	875.88	$5/2^-$			
		1196.23 *6*	100 *6*	590.220	$(3/2)^-$			
		1786.6 *3*	8.1 *13*	0.0	$1/2^-$			
1852.67		716.8 *5*	17 *9*	1135.97	$(3/2^+,5/2^-)$			
		1094.00 *7*	100 *6*	758.719	$(9/2)^+$			
1911.42	$(1/2^-,3/2,5/2^-)$	610.93 *6*	42 *3*	1300.522	$(3/2^+,5/2^-)$			
		633.5 *3*	4.2 *8*	1277.90	$(1/2^-,3/2,5/2^-)$			
		1035.5 *3*	7.8 *13*	875.88	$5/2^-$			
		1321.24 *7*	100 *5*	590.220	$(3/2)^-$			
2056.56	$(1/2^-,3/2,5/2^-)$	1180.76 *17*	100 *11*	875.88	$5/2^-$			
		1466.2 *3*	42 *8*	590.220	$(3/2)^-$			
2091.35		782.83 *15*	8.7 *11*	1308.56	$(1/2^-,3/2,5/2^-)$			
		791.10 *14*	10.4 *11*	1300.522	$(3/2^+,5/2^-)$			

$^{93}_{39}Y_{54}$-4

Adopted Levels, Gammas (continued)

γ(^{93}Y) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]
2091.35		1215.48 *7*	100 *5*	875.88	$5/2^-$	
		1332.5 *5*	19 *11*	758.719	$(9/2)^+$	
2093.27		446.20 *6*	100 *5*	1647.04	3/2,5/2,7/2	
		785.4 *4*	3.2 *9*	1308.56	$(1/2^-,3/2,5/2^-)$	
		1334.50 *10*	28.8 *20*	758.719	$(9/2)^+$	
2129.12	$(1/2^-,3/2,5/2^-)$	586.5 *4*	100 *35*	1542.70	$(1/2,3/2,5/2^-)$	
		1538.71 *25*	23 *5*	590.220	$(3/2)^-$	
		2129.2 *5*	23 *8*	0.0	$1/2^-$	
2355.58	$(3/2,5/2^-)$	1055.13 *11*	32.5 *25*	1300.522	$(3/2^+,5/2^-)$	
		1077.86 *16*	22.3 *25*	1277.90	$(1/2^-,3/2,5/2^-)$	
		1765.36 *9*	100 *5*	590.220	$(3/2)^-$	
2364.88	$(3/2,5/2^-)$	1064.37 *9*	23.7 *17*	1300.522	$(3/2^+,5/2^-)$	
		1774.83 *16*	10.3 *13*	590.220	$(3/2)^-$	
		2364.72 *11*	100 *6*	0.0	$1/2^-$	
2543.93	$3/2^-$	486.7 *4*	4.0 *16*	2056.56	$(1/2^-,3/2,5/2^-)$	
		1243.41 *8*	26.5 *16*	1300.522	$(3/2^+,5/2^-)$	
		1668.7 *5*	5 *3*	875.88	$5/2^-$	
		2543.84 *11*	100 *5*	0.0	$1/2^-$	
2569.96	$3/2^+,5/2^+,7/2^+$	440.80 *18*	2.8 *6*	2129.12	$(1/2^-,3/2,5/2^-)$	
		658.56 *11*	5.9 *6*	1911.42	$(1/2^-,3/2,5/2^-)$	
		922.70 *11*	4.7 *4*	1647.04	3/2,5/2,7/2	
		1261.3 *6*	1.1 *5*	1308.56	$(1/2^-,3/2,5/2^-)$	
		1269.47 *7*	100 *5*	1300.522	$(3/2^+,5/2^-)$	
		1434.01 *8*	12.7 *8*	1135.97	$(3/2^+,5/2^-)$	
		1694.07 *9*	36.2 *20*	875.88	$5/2^-$	
2574.98	$(3/2^+)$	481.96 *10*	34 *3*	2093.27		
		483.73 *8*	50 *4*	2091.35		
		518.50 *15*	3.9 *6*	2056.56	$(1/2^-,3/2,5/2^-)$	
		663.58 *6*	49 *3*	1911.42	$(1/2^-,3/2,5/2^-)$	
		788.68 *8*	23.1 *14*	1786.39	$(1/2^-,3/2,5/2^-)$	
		927.69 *8*	19.2 *14*	1647.04	3/2,5/2,7/2	
		1032.4 *5*	3.1 *10*	1542.70	$(1/2,3/2,5/2^-)$	
		1266.38 *10*	33.5 *24*	1308.56	$(1/2^-,3/2,5/2^-)$	
		1438.93 *9*	15.1 *10*	1135.97	$(3/2^+,5/2^-)$	
		1699.06 *9*	100 *6*	875.88	$5/2^-$	
		1816.12 *19*	6.9 *8*	758.719	$(9/2)^+$	
		1984.8 *3*	2.4 *4*	590.220	$(3/2)^-$	
		2574.2 *3*	3.9 *6*	0.0	$1/2^-$	
2622.8	$(15/2^+)$	1072.4[#] *3*	100[#]	1550.42	$(13/2^+)$	(D)[#]
2653.91	(1/2,3/2,5/2)	2063.64 *12*	100	590.220	$(3/2)^-$	
2687.55	$3/2^+,5/2^+,7/2^+$	332.04 *7*	10.2 *8*	2355.58	$(3/2,5/2^-)$	

$^{93}_{39}Y_{54}$-5

$\gamma(^{93}Y)$ (continued)

E_i(level)	J^{π}_i	E_{γ}[†]	I_{γ}[†]	E_f	J^{π}_f
2687.55	3/2$^+$,5/2$^+$,7/2$^+$	593.81 *18*	32 *4*	2093.27	
		596.15 *13*	38 *4*	2091.35	
		630.97 *16*	5.7 *8*	2056.56	(1/2$^-$,3/2,5/2$^-$)
		776.07 *13*	7.6 *8*	1911.42	(1/2$^-$,3/2,5/2$^-$)
		834.89 *5*	48.2 *25*	1852.67	
		900.98 *7*	20.0 *12*	1786.39	(1/2$^-$,3/2,5/2$^-$)
		1040.63 *6*	92 *6*	1647.04	3/2,5/2,7/2
		1378.98 *10*	10.2 *8*	1308.56	(1/2$^-$,3/2,5/2$^-$)
		1387.11 *7*	100 *6*	1300.522	(3/2$^+$,5/2$^-$)
		1551.59 *9*	29.4 *18*	1135.97	(3/2$^+$,5/2$^-$)
		1811.45 *10*	40.6 *24*	875.88	5/2$^-$
		1928.79 *10*	33.7 *20*	758.719	(9/2)$^+$
		2688.65[a] *12*	61 *4*	0.0	1/2$^-$
2769.82	(3/2$^+$)	858.47 *7*	18.1 *12*	1911.42	(1/2$^-$,3/2,5/2$^-$)
		1122.48[@] *6*	100 *5*	1647.04	3/2,5/2,7/2
		1469.50 *12*	13.1 *8*	1300.522	(3/2$^+$,5/2$^-$)
		1492.13 *12*	13.7 *8*	1277.90	(1/2$^-$,3/2,5/2$^-$)
		1634.05 *8*	36.1 *20*	1135.97	(3/2$^+$,5/2$^-$)
		1894.1 *3*	3.1 *5*	875.88	5/2$^-$
		2179.49 *20*	7.3 *10*	590.220	(3/2)$^-$
2777.98		991.59 *21*	100 *17*	1786.39	(1/2$^-$,3/2,5/2$^-$)
		1642.0 *6*	36 *12*	1135.97	(3/2$^+$,5/2$^-$)
2783.54	3/2$^{(+)}$ to 7/2$^{(+)}$	428.03 *21*	15 *3*	2355.58	(3/2,5/2$^-$)
		690.06 *12*	100 *8*	2093.27	
		692.0 *4*	22 *6*	2091.35	
		930.91 *10*	40 *3*	1852.67	
		1136.77 *20*	19.5 *20*	1647.04	3/2,5/2,7/2
		1483.3 *3*	10.1 *20*	1300.522	(3/2$^+$,5/2$^-$)
		1647.53 *8*	88 *5*	1135.97	(3/2$^+$,5/2$^-$)
		1907.73 *23*	17.4 *20*	875.88	5/2$^-$
2820.65	(3/2$^+$)	166.6 *3*	40 *11*	2653.91	(1/2,3/2,5/2)
		764.8 *5*	1.9 *7*	2056.56	(1/2$^-$,3/2,5/2$^-$)
		1511.8 *4*	3.6 *9*	1308.56	(1/2$^-$,3/2,5/2$^-$)
		1520.1 *5*	21 *4*	1300.522	(3/2$^+$,5/2$^-$)
		1684.84 *13*	46 *4*	1135.97	(3/2$^+$,5/2$^-$)
		1944.75 *12*	36 *3*	875.88	5/2$^-$
		2230.27 *12*	100 *6*	590.220	(3/2)$^-$
2886.53	(3/2,5/2$^-$)	342.9 *4*	10 *4*	2543.93	3/2$^-$
		795.29 *12*	31 *3*	2091.35	
		1239.15 *25*	17 *4*	1647.04	3/2,5/2,7/2
		2010.80 *25*	16.4 *23*	875.88	5/2$^-$

$^{93}_{39}Y_{54}$-6

Adopted Levels, Gammas (continued)

$\gamma(^{93}Y)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]
2886.53	(3/2,5/2$^-$)	2296.13 *14*	100 *6*	590.220	(3/2)$^-$	
3007.05	(3/2,5/2$^-$)	1706.59 *10*	100 *6*	1300.522	(3/2$^+$,5/2$^-$)	
		2416.3 *3*	9.8 *18*	590.220	(3/2)$^-$	
		3006.86 *22*	10.6 *10*	0.0	1/2$^-$	
3116.03	(3/2,5/2$^-$)	571.96 *16*	100 *13*	2543.93	3/2$^-$	
		1329.6 *3*	33 *6*	1786.39	(1/2$^-$,3/2,5/2$^-$)	
		1981.4 *8*	17 *6*	1135.97	(3/2$^+$,5/2$^-$)	
		3116.6 *4*	33 *4*	0.0	1/2$^-$	
3345.4	(19/2$^+$)	722.6[#] *3*	100[#]	2622.8	(15/2$^+$)	Q[#]
3636.8	(21/2$^+$)	291.4[#] *2*	100[#]	3345.4	(19/2$^+$)	D[#]
3824.5?		1046.4[a] *5*	100 *29*	2777.98		
		1249.2[a] *7*	79 *29*	2574.98	(3/2$^+$)	
		1972.2[a] *7*	36 *13*	1852.67		
3871.31?		1050.6[a] *3*	39 *16*	2820.65	(3/2$^+$)	
		1506.5[a] *6*	55 *18*	2364.88	(3/2,5/2$^-$)	
		1742.1[a] *4*	100 *18*	2129.12	(1/2$^-$,3/2,5/2$^-$)	
		2995.7[a] *6*	23 *5*	875.88	5/2$^-$	
3894.9?		1117.1[a] *7*	77 *31*	2777.98		
		1324.8[a] *7*	62 *23*	2569.96	3/2$^+$,5/2$^+$,7/2$^+$	
		2108.6[a] *4*	100 *18*	1786.39	(1/2$^-$,3/2,5/2$^-$)	
		2585.9[a] *6*	31 *9*	1308.56	(1/2$^-$,3/2,5/2$^-$)	
4314.0	(+)	677.2[#] *3*	100[#]	3636.8	(21/2$^+$)	(Q)[#]

† From ^{93}Sr β^- decay, except as noted.
‡ From α(K)exp in ^{93}Sr β^- decay, except as noted.
# From ^{238}U(^{82}Se,Xγ).
@ Eγ deviates from least-squares prediction by 3σ or 4σ.
& 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.
a Placement of transition in the level scheme is uncertain.

$^{93}_{39}Y_{54}$-7

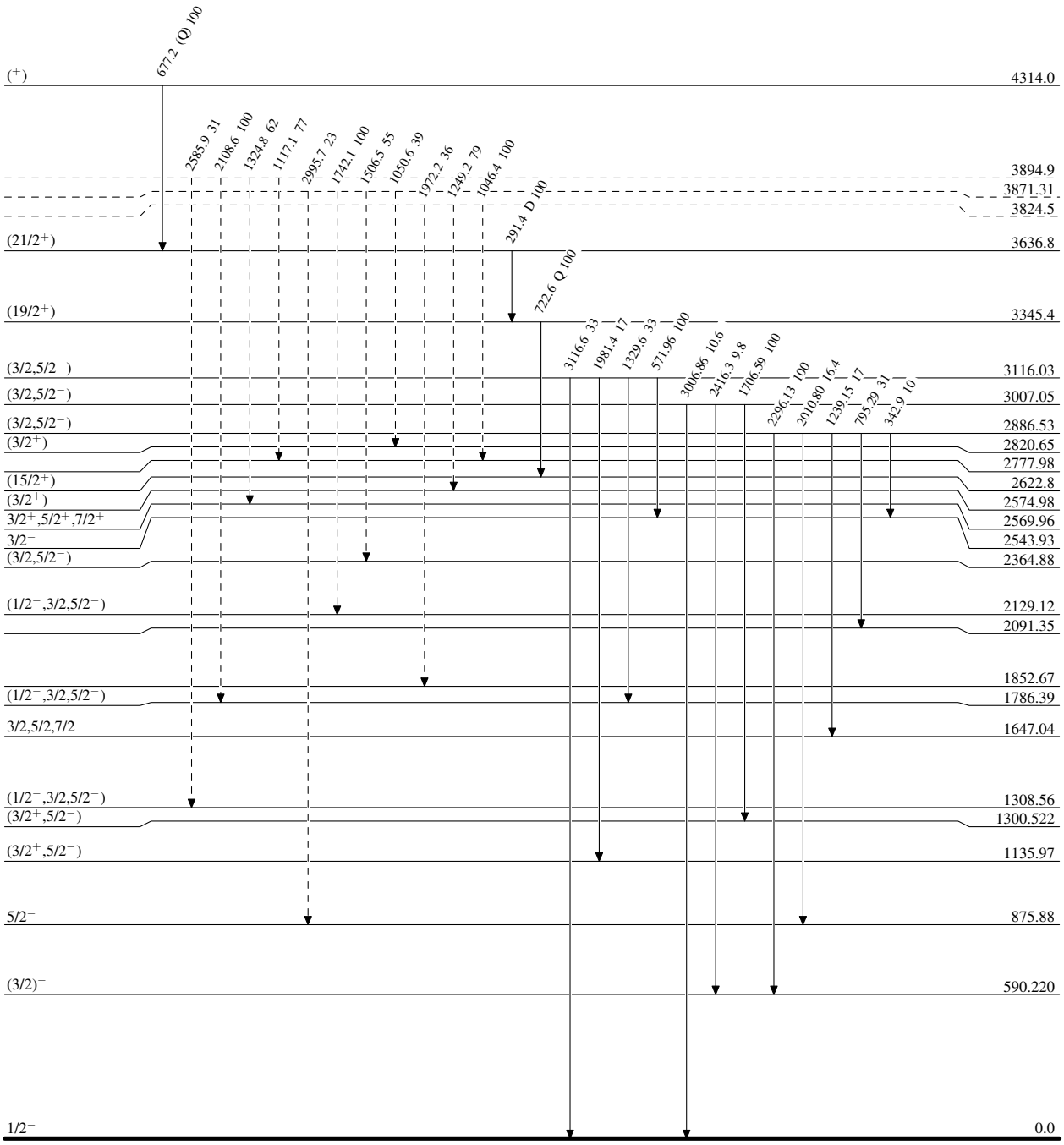
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



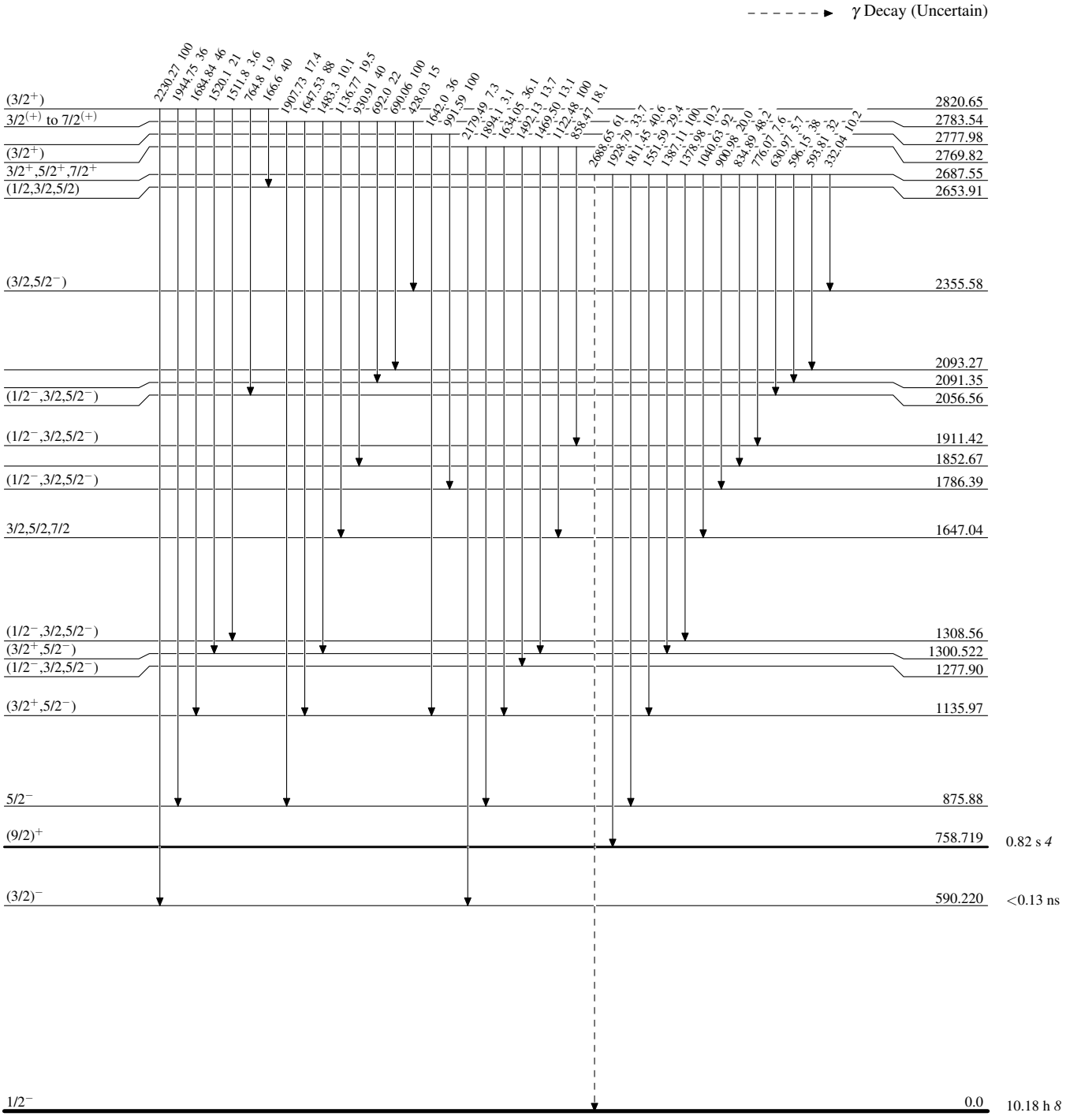
$^{93}_{39}Y_{54}$

Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

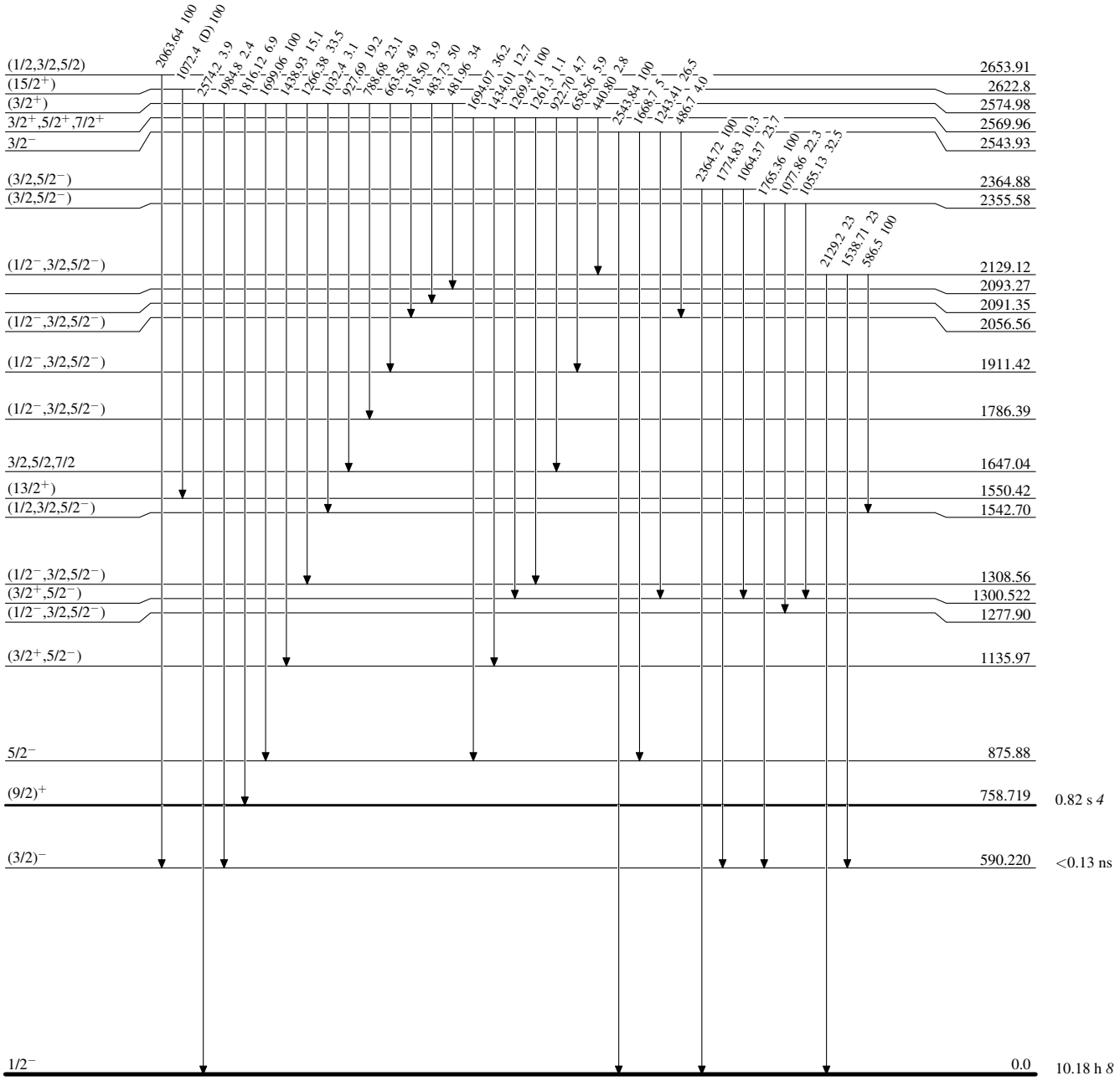


$^{93}_{39}Y_{54}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

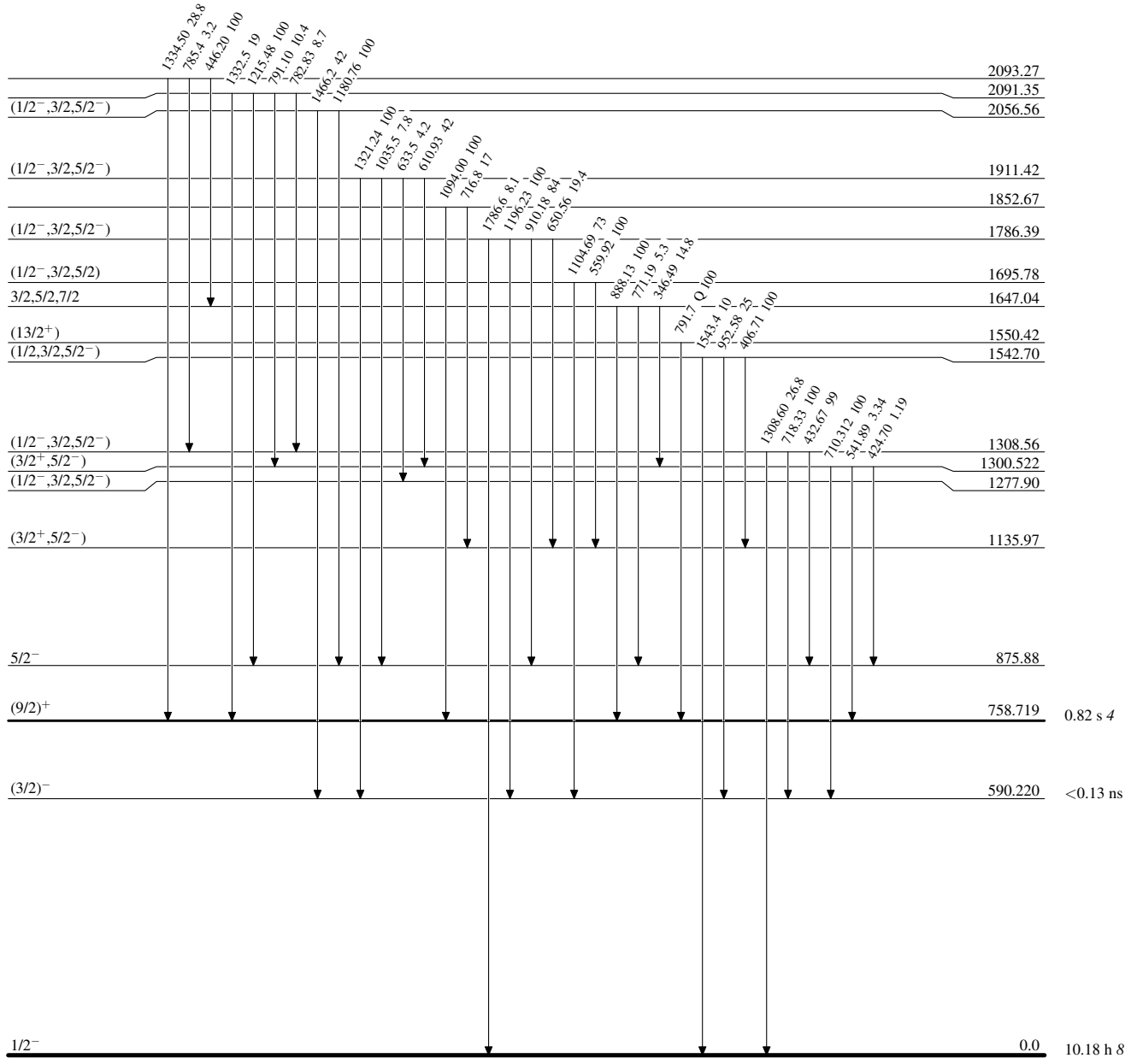


$^{93}_{39}Y_{54}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

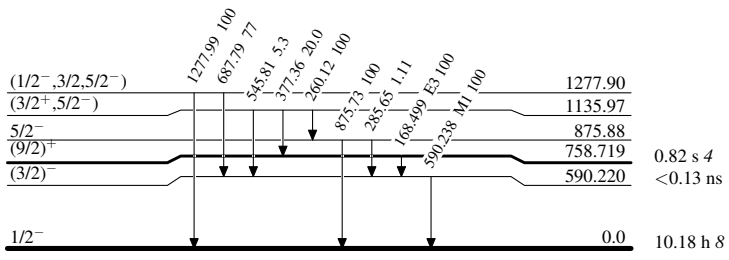


$^{93}_{39}Y_{54}$

Adopted Levels, Gammas

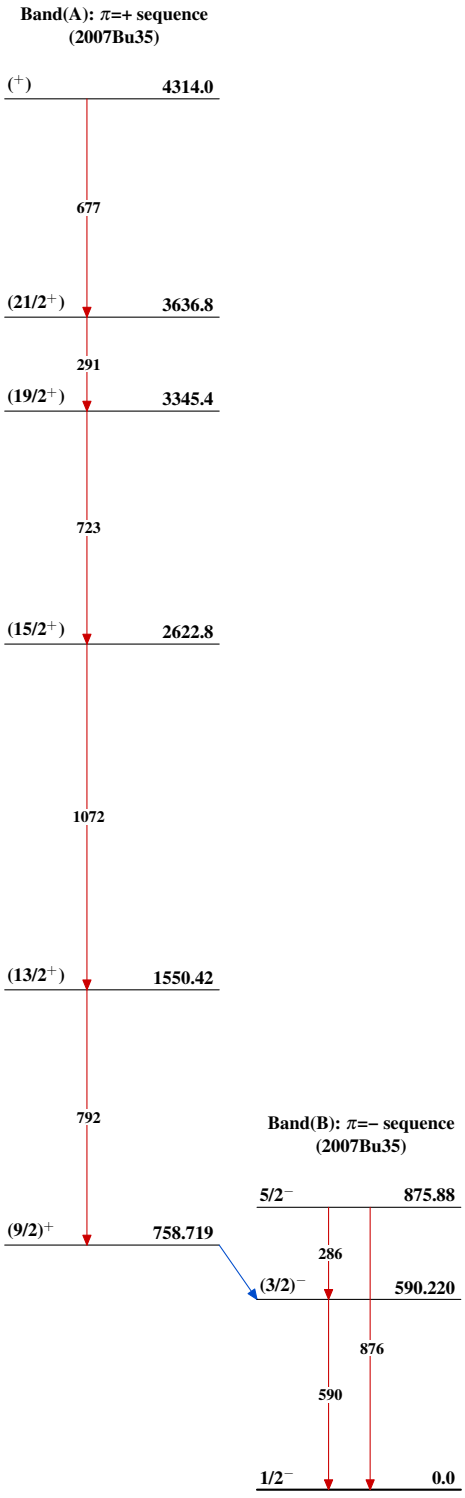
Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{93}_{39}Y_{54}$

Adopted Levels, Gammas



$^{93}_{39}Y_{54}$