Adopted Levels, Gammas

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

Q(β^-)=7466 *9*; S(n)=5919 *10*; S(p)=11140 *9*; Q(α)=−6771 *9* 2012Wa38
Note: Current evaluation has used the following Q record 7465 9 *5919* 10 *11141* 8 −6670 *30* 2003Au03,2009AuZZ.
Q(β^-), S(n), S(p), Q(α): from 2009AuZZ (cf. 7467 *9*, 5917 *10*, 11121 *14*, −6470 *60*, respectively, from 2003Au03).
Q(β^-n)=2175 *9* (2009AuZZ) (cf. 2179 *8* (2003Au03)).

Other Reactions

^{238}U(n,Fγ) E=thermal: 1970Gr38; measured X(t), γ(t) from isomeric primary fission products in range 0.1 μs<$T_{1/2}$<100 μs.
^{232}Th(^{6}Li,Fγ), E=45 MeV: 2010Re01; observed 253γ from 57 μs *253*-keV level.
Isotopic shift measured by 1981Th04.

^{93}Rb Levels

Additional information 1.

Cross Reference (XREF) Flags

- A ^{93}Kr β^- decay
- B ^{94}Kr β^-n decay
- C ^{252}Cf SF decay
- D ^{248}Cm SF decay

E(level)†	J$^\pi$#	$T_{1/2}$‡	XREF	Comments
0@	5/2$^-$	5.84[a] s *2*	ABCD	%β^-=100; %β^-n=1.39 *7* μ=+1.4095 *16*; Q=+0.18 *4* J from hyperfine structure (1981Th04). π from comparison of μ with Schmidt values. %β^-n: Weighted average of: 1.43% *18* (1969Am01), 1.65% *30* (1969Ta04), 1.24% *14* (1974Ro15), 1.16% *8* (1975As03), 1.2% *1* (1975As04), 1.86% *13* (1977Re05), 1.40% *8* (1980Lu04), 1.36% *14* and 1.37% *10* (1980ReZQ), 1.97% *22* (1981En05), 1.53% *9* (1993Ru01). Others: 2.6% *4* (1968AmZZ), 2.1% *6* (1972Sc48; revised to 1.9 *5* in 1993Ru01). 1993Ru01 recommend %β^-n=1.35 *5*, but omit the 1977Re05 datum from the average. Additional information 2. μ, Q: from LASER induced optical pumping of thermal atomic beam with magnetic state selection (1989Ra17, based on 1981Th04). μ relative to ^{87}Rb. Others: μ=+1.400 *6*, Q=0.27 *6* from collinear fast-beam LASER spectroscopy (1979Kl03). $\Delta\langle r^2\rangle(^{93}Rb,^{87}Rb)$=0.813 *3* (1981Th04), 0.797 *12* (1979Kl03, recalculated by 1981Th04). $\langle r^2\rangle^{1/2}$(charge)=4.314 *19* (2004An14).
253.39 *3*	3/2$^-$,5/2$^-$		A	J$^\pi$: M1 γ to J^π=5/2$^-$; log *ft*≈6.5 from 1/2$^+$. $T_{1/2}$ 57 μs *15* from (fission fragment)-(257γ or x-ray) delayed coin (1970Gr38). Isomer not confirmed in recent work (2014Mi12).
266.86 *3*	1/2$^-$,3/2$^-$,5/2$^-$	2.0 ns *2*	A	J$^\pi$: E2 γ to J^π=5/2$^-$; log *ft*≈6.3 from 1/2$^+$.
323.95 *3*	3/2$^-$,5/2$^-$	<0.7 ns	A	J$^\pi$: M1 γ to J^π=5/2$^-$; log *ft*≈6.2 from 1/2$^+$.
506.01 *4*	1/2$^-$,3/2$^-$	<0.7 ns	A	J$^\pi$: M1+E2 γ to π=−; log $f^{1u}t$<8.5 from J^π=1/2$^+$.
733.40@ *24*	(7/2$^-$)		CD	J$^\pi$: D, ΔJ=1 552γ from (9/2$^+$) 1285 in 248Sm SF decay. 2009Hw03 suggest configuration of $\pi f_{5/2}\otimes(^{92}$Kr g.s. band).
820.52 *3*			A	

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Adopted Levels, Gammas (continued)

^{93}Rb Levels (continued)

E(level)[†]	J$^{\pi}$[#]	T$_{1/2}$[‡]	XREF	Comments
912.71 *24*	(7/2$^-$)		CD	J$^{\pi}$: D, ΔJ=1 372γ from (9/2$^+$) 1285.
1285.21[&] *22*	(9/2$^+$)		CD	J$^{\pi}$: Q, ΔJ=2 1285γ to (5/2$^-$) g.s.; likely configuration of π g$_{9/2}\otimes$(^{92}Kr g.s.) (2009Hw03); M2 transitions are observed to deexcite the low-lying 9/2$^+$ states in ^{91}Rb and ^{95}Rb also.
1350.17 *3*			A	
1557.39 *9*			A	
1563.02 *4*			A	
1641.06 *4*			A	
1642.08 *8*			A	
1688.71 *4*			A	
1850.20 *7*			A	
1880.39 *6*			A	
1964.64 *5*			A	
2009.33 *7*			A	
2015.8 *11*			D	
2031.6[&] *4*	(13/2$^+$)		CD	J$^{\pi}$: Q, ΔJ=2 746γ to (9/2$^+$) 1285.
2083.87 *6*			A	
2169.13 *8*			A	
2210.60 *6*			A	
2264.84 *12*			A	
2285.75 *4*			A	
2315.3 *4*			C	
2576.3 *15*			D	
2609.47 *6*			A	
2664.84 *6*			A	
2745.28 *12*			A	
2814.99 *7*	1/2,3/2		A	J$^{\pi}$: log *ft*=6.2, log $f^{1u}t$<8.5 from J^{π}=1/2$^+$.
2855.94 *3*	(3/2)$^+$		A	J$^{\pi}$: log *ft*=5.2 from J^{π}=1/2$^+$; 2856γ to 5/2$^-$ g.s.
2942.8[&] *5*	(17/2$^+$)		CD	
3002.11 *6*	1/2$^+$,3/2$^+$		A	J$^{\pi}$: log *ft*=5.81 *5* from J^{π}=1/2$^+$.
3032.3 *18*			D	
3063.35 *5*	1/2,3/2		A	J$^{\pi}$: log *ft*=6.0, log $f^{1u}t$<8.5 from J^{π}=1/2$^+$.
3234.7 *10*	(17/2$^+$)		CD	J$^{\pi}$: Q, ΔJ=2 1203γ to (13/2$^+$) 2031.
3245.15 *9*			A	
3265.18 *13*			A	
3280.03 *15*	1/2,3/2		A	J$^{\pi}$: log *ft*=6.4, log $f^{1u}t$<8.5 from J^{π}=1/2$^+$.
3308.32 *14*	1/2,3/2		A	J$^{\pi}$: log *ft*=6.5, log $f^{1u}t$<8.5 from J^{π}=1/2$^+$.
3358.76 *14*			A	
3406.2 *10*	(19/2)		CD	J$^{\pi}$: D, ΔJ=1 172γ to (17/2) 3234.
3464.7 *4*	1/2$^{(-)}$,3/2		A	J$^{\pi}$: log *ft*=6.4, log $f^{1u}t$<8.5 from J^{π}=1/2$^+$; 3464γ to 5/2$^-$ g.s.
3493.73 *12*	1/2,3/2		A	J$^{\pi}$: log *ft*=6.2, log $f^{1u}t$<8.5 from J^{π}=1/2$^+$.
3551.54 *7*	1/2,3/2		A	J$^{\pi}$: log *ft*=6.0, log $f^{1u}t$<8.5 from J^{π}=1/2$^+$.
3631.4 *3*	1/2,3/2		A	J$^{\pi}$: log *ft*=6.6, log $f^{1u}t$<8.5 from J^{π}=1/2$^+$.
3733.97 *15*			A	
3777.16 *8*			A	
3800.90 *9*			A	
3885.8 *11*			D	
3940.9[&] *6*	(21/2$^+$)		CD	
4050.68 *14*	1/2,3/2		A	J$^{\pi}$: log *ft*=6.4, log $f^{1u}t$<8.5 from J^{π}=1/2$^+$.
4080.57 *9*	1/2,3/2		A	J$^{\pi}$: log *ft*=6.1, log $f^{1u}t$<8.5 from J^{π}=1/2$^+$.
4086.9 *6*			CD	
4320.4 *12*			D	
4322.2 *10*	(23/2$^-$)		D	J$^{\pi}$: D ΔJ=1 381γ to (21/2$^+$) 3941.
4423.1 *15*	(27/2$^-$)	111 ns *11*	D	J$^{\pi}$: level T$_{1/2}$ is consistent with Weisskopf estimate for an E2 100-keV

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Adopted Levels, Gammas (continued)

^{93}Rb Levels (continued)

E(level)[†]	Jπ[#]	XREF	Comments
			transition to the (23/2⁻) 4322 level; similarity of this isomer to the $K^{\pi}=27/2^{-}$ π $g_{9/2}\otimes\nu$ ($g_{7/2}h_{11/2}$) isomer in the ^{95}Y isotone suggests the same dominant configuration for this level also. Supported by shell model calculations (2010Si17).
4861.52 *11*	1/2,3/2	A	Jπ: log *ft*=5.90 *9* from $J^{\pi}=1/2^{+}$.
5048.98 *12*	1/2,3/2	A	Jπ: log *ft*=6.1, log $f^{1u}t$<8.5 from $J^{\pi}=1/2^{+}$.
5159.3 *18*	(29/2,31/2)	D	
5237.65 *13*	$1/2^{+}$,$3/2^{+}$	A	Jπ: log *ft*=5.7 from $J^{\pi}=1/2^{+}$.
5491.78 *14*	$1/2^{+}$,$3/2^{+}$	A	Jπ: log *ft*=5.4 from $J^{\pi}=1/2^{+}$.
5496.26 *17*	$1/2^{+}$,$3/2^{+}$	A	Jπ: log *ft*=5.4 from $J^{\pi}=1/2^{+}$.
5665.51 *11*	$1/2^{+}$,$3/2^{+}$	A	Jπ: log *ft*=5.6 from $J^{\pi}=1/2^{+}$.
5759.7 *3*	$1/2^{+}$,$3/2^{+}$	A	Jπ: log *ft*=5.4 from $J^{\pi}=1/2^{+}$.
5859.83 *12*	$1/2^{+}$,$3/2^{+}$	A	Jπ: log *ft*=5.0 from $J^{\pi}=1/2^{+}$.
5920.33 *11*	$1/2^{+}$,$3/2^{+}$	A	Jπ: log *ft*=4.8 from $J^{\pi}=1/2^{+}$.
5965.48 *18*	$1/2^{+}$,$3/2^{+}$	A	Jπ: log *ft*=4.8 from $J^{\pi}=1/2^{+}$.
6070.51 *19*	$1/2^{+}$,$3/2^{+}$	A	Jπ: log *ft*=5.4 from $J^{\pi}=1/2^{+}$.
6260.1 *5*	$1/2^{+}$,$3/2^{+}$	A	Jπ: log *ft*=5.3 from $J^{\pi}=1/2^{+}$.
6572.20 *20*	$1/2^{+}$,$3/2^{+}$	A	Jπ: log *ft*=4.8 from $J^{\pi}=1/2^{+}$.
6725.56 *19*	$1/2^{+}$,$3/2^{+}$	A	Jπ: log *ft*=4.2 from $J^{\pi}=1/2^{+}$.

[†] From least-squares fit to adopted Eγ, assigning 1 keV uncertainty to Eγ data for which authors did not state an uncertainty.

[‡] From ^{93}Kr β^{-} decay.

[#] Values given without further comment are those suggested by 2009Hw03 in ^{252}Cf SF decay. They are based on a comparison of the deduced ^{93}Rb level structure with that of the ^{92}Kr core and, for the π=+ states, with that for ^{89}Rb (which was supported by measured ADO ratios).

[@] Band(A): (π $f_{5/2}$)⊗(^{92}Kr g.s. band) (2009Hw03). Assignment based on similarity between E(733 level) and E(2^{+} 769 level) in ^{92}Kr, assuming adopted J^{π}(g.s.).

[&] Band(B): (π $g_{9/2}$)⊗(^{92}Kr g.s. band) (2009Hw03). α=+1/2 band. Energies relative to the 1285 level are very similar to g.s. band energies for ^{90}Kr and ^{92}Kr, but differ from those of ^{92}Sr and ^{94}Sr.

[a] Weighted average of 5.86 s *3* (1993Ru01), 5.82 s *3* (1977Re05), 5.85 s *3* (1976Ru01), 5.86 s *5* (1975As04), 5.80 s *5* (1974Gr29), 5.8 s *1* (1972Am01), 5.86 s *13* (1969Ca03), 5.88 s *5* (1967Am01). Others: 5.60 s *5* (1968AmZZ), 6.12 s *8* (1975Re10), 6.01 s *2* (1979En02); these data are omitted from average because they are statistical outliers. If all data are included in the average, the limitation of relative statistical weight method gives $T_{1/2}$=5.89 s *12*.

Adopted Levels, Gammas (continued)

γ(^{93}Rb)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[‡]	α[&]	Comments
253.39	3/2⁻,5/2⁻	253.42 *5*	100	0	5/2⁻	M1(+E2)	≤0.44	0.0140 *17*	
266.86	1/2⁻,3/2⁻,5/2⁻	266.83 *5*	100	0	5/2⁻	E2(+M1)	≥2.0	0.0256 *17*	B(E2)(W.u.)=6 *+2−0*; B(M1)(W.u.)<0.00012
323.95	3/2⁻,5/2⁻	57.11 *5*	1.070 *5*	266.86	1/2⁻,3/2⁻,5/2⁻	(M1)		0.700	B(M1)(W.u.)>0.0016 Mult.: D from RUL; adopted Δπ=no.
		70.57 *5*	6.40 *3*	253.39	3/2⁻,5/2⁻	(M1)		0.383	B(M1)(W.u.)>0.0051 Mult.: D from RUL; adopted Δπ=no.
		323.89 *5*	100 *5*	0	5/2⁻	M1		0.00671	B(M1)(W.u.)>0.00083
506.01	1/2⁻,3/2⁻	182.02 *5*	27.5 *15*	323.95	3/2⁻,5/2⁻	M1+E2	0.75 *15*	0.057 *8*	B(M1)(W.u.)>0.0006; B(E2)(W.u.)>9.1
		252.51 *6*	100 *5*	253.39	3/2⁻,5/2⁻	M1(+E2)	≤0.46	0.0143 *19*	B(M1)(W.u.)>0.0012
733.40	(7/2⁻)	733.4[@] *3*	100[@]	0	5/2⁻				
820.52		496.56 *5*	49 *3*	323.95	3/2⁻,5/2⁻				
		553.53 *20*	2.1 *3*	266.86	1/2⁻,3/2⁻,5/2⁻				
		567.05 *11*	4.5 *3*	253.39	3/2⁻,5/2⁻				
		820.45 *5*	100 *5*	0	5/2⁻				
912.71	(7/2⁻)	912.7[@] *3*	100[@]	0	5/2⁻				
1285.21	(9/2⁺)	372.5[@] *3*	100 *10*	912.71	(7/2⁻)	D			I_γ,Mult.: from ^{248}Cm SF decay (2010Si17).
		551.8[@] *3*	78 *8*	733.40	(7/2⁻)	D			I_γ,Mult.: from ^{248}Cm SF decay (2010Si17). However, Iγ=4.3 from ^{252}Cf SF decay (2009Hw03); reason for inconsistency is unclear (I(373γ) and I(552γ) are clearly comparable in figs. 3 and 9 of 2010Si17 in ^{248}Cm SF decay, but no published spectra from 2009Hw03 include the 552γ).
		1285.2[@] *3*	46 *8*	0	5/2⁻	(M2)			I_γ: from ^{248}Cm SF decay (2010Si17). Other: 43 from ^{252}Cf SF decay (2009Hw03). Mult.: Q, ΔJ=2 from ^{248}Cm SF decay (2010Si17); level scheme implies Δπ=yes.
1350.17		529.59 *5*	22.7 *12*	820.52					
		844.12 *6*	25.9 *13*	506.01	1/2⁻,3/2⁻				
		1026.19 *5*	100 *6*	323.95	3/2⁻,5/2⁻				
		1083.42 *6*	37.6 *20*	266.86	1/2⁻,3/2⁻,5/2⁻				
		1097.14 *9*	5.9 *11*	253.39	3/2⁻,5/2⁻				
		1350.19 *5*	34.4 *19*	0	5/2⁻				
1557.39		737.24 *23*	22 *3*	820.52					
		1051.7 *3*	31 *5*	506.01	1/2⁻,3/2⁻				
		1290.54 *23*	100 *14*	266.86	1/2⁻,3/2⁻,5/2⁻				
1563.02		1238.76 *6*	59 *3*	323.95	3/2⁻,5/2⁻				
		1296.08 *6*	100 *5*	266.86	1/2⁻,3/2⁻,5/2⁻				
		1309.51 *21*	5.5 *6*	253.39	3/2⁻,5/2⁻				
		1563.09 *6*	50 *3*	0	5/2⁻				

$^{93}_{37}Rb_{56}$-4

Adopted Levels, Gammas (continued)

γ(^{93}Rb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	Comments
1641.06		1387.92 *9*	93 *7*	253.39	3/2$^-$,5/2$^-$		
		1641.08 *6*	100 *5*	0	5/2$^-$		
1642.08		1136.1 *3*	8.4 *16*	506.01	1/2$^-$,3/2$^-$		
		1318.38 *14*	100 *8*	323.95	3/2$^-$,5/2$^-$		
1688.71		1364.77 *9*	67 *5*	323.95	3/2$^-$,5/2$^-$		
		1421.79 *6*	95 *5*	266.86	1/2$^-$,3/2$^-$,5/2$^-$		
		1435.35 *13*	100 *7*	253.39	3/2$^-$,5/2$^-$		
1850.20		292.88 *8*	6.6 *4*	1557.39			
		1525.89 *20*	15.6 *18*	323.95	3/2$^-$,5/2$^-$		
		1596.20 *6*	100 *5*	253.39	3/2$^-$,5/2$^-$		
		1850.1 *3*	7.0 *11*	0	5/2$^-$		
1880.39		239.26 *22*	8.0 *15*	1641.06			
		1613.33 *8*	17 *3*	266.86	1/2$^-$,3/2$^-$,5/2$^-$		
		1627.10 *6*	100 *5*	253.39	3/2$^-$,5/2$^-$		
1964.64		401.5 *3*	3.3 *5*	1563.02			
		1458.50 *9*	28.3 *19*	506.01	1/2$^-$,3/2$^-$		
		1697.84 *6*	100 *5*	266.86	1/2$^-$,3/2$^-$,5/2$^-$		
		1710.78 *18*	36 *4*	253.39	3/2$^-$,5/2$^-$		
2009.33		1685.07 *20*	43 *4*	323.95	3/2$^-$,5/2$^-$		
		1742.49 *8*	100 *6*	266.86	1/2$^-$,3/2$^-$,5/2$^-$		
		1755.88 *17*	24.7 *25*	253.39	3/2$^-$,5/2$^-$		
2015.8		730.6[#]	100[#]	1285.21	(9/2$^+$)		
2031.6	(13/2$^+$)	746.4[@] *3*	100[@]	1285.21	(9/2$^+$)	Q	Mult.: from ^{248}Cm SF decay (2010Si17).
2083.87		733.72 *5*	100	1350.17			
2169.13		480.44 *20*	21 *3*	1688.71			
		1662.74 *13*	100 *8*	506.01	1/2$^-$,3/2$^-$		
2210.60		1704.45 *18*	36 *3*	506.01	1/2$^-$,3/2$^-$		
		1886.79 *8*	100 *6*	323.95	3/2$^-$,5/2$^-$		
		1943.54 *11*	68 *4*	266.86	1/2$^-$,3/2$^-$,5/2$^-$		
		1957.10 *18*	50 *5*	253.39	3/2$^-$,5/2$^-$		
2264.84		623.64 *16*	22.5 *24*	1641.06			
		2011.68 *19*	100 *9*	253.39	3/2$^-$,5/2$^-$		
2285.75		643.18 *23*	5.1 *12*	1642.08			
		722.68 *8*	15.3 *9*	1563.02			
		1779.68 *8*	32.2 *19*	506.01	1/2$^-$,3/2$^-$		
		1961.83 *6*	100 *5*	323.95	3/2$^-$,5/2$^-$		
		2018.87 *7*	78 *4*	266.86	1/2$^-$,3/2$^-$,5/2$^-$		
2315.3		1402.6[@] *3*	100[@]	912.71	(7/2$^-$)		
2576.3		560.5[#]	100[#]	2015.8			
2609.47		399.01 *12*	38 *3*	2210.60			
		644.78 *9*	86 *9*	1964.64			

$^{93}_{37}Rb_{56}$-5

Adopted Levels, Gammas (continued)

γ(^{93}Rb) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π
2609.47		1046.57 *14*	38 *4*	1563.02	
		1788.96 *17*	100 *9*	820.52	
		2342.4 *8*	56 *19*	266.86	$1/2^-,3/2^-,5/2^-$
2664.84		976.08 *6*	100 *5*	1688.71	
		2411.44 *15*	44 *3*	253.39	$3/2^-,5/2^-$
2745.28		895.05 *13*	97 *8*	1850.20	
		2239.2 *3*	100 *14*	506.01	$1/2^-,3/2^-$
2814.99	1/2,3/2	965.01 *11*	21.7 *17*	1850.20	
		1126.3 *3*	6.8 *12*	1688.71	
		1994.41 *21*	26 *3*	820.52	
		2491.2 *3*	46 *7*	323.95	$3/2^-,5/2^-$
		2548.02 *17*	62 *5*	266.86	$1/2^-,3/2^-,5/2^-$
		2561.33 *12*	100 *6*	253.39	$3/2^-,5/2^-$
2855.94	$(3/2)^+$	191.06 *8*	1.05 *10*	2664.84	
		570.16 *5*	16.1 *8*	2285.75	
		686.51 *11*	1.83 *13*	2169.13	
		891.5 *6*	0.42 *13*	1964.64	
		1005.65 *9*	2.22 *16*	1850.20	
		1214.98 *5*	23.9 *13*	1641.06	
		1505.76 *6*	30.4 *16*	1350.17	
		2035.26 *7*	24.5 *13*	820.52	
		2349.96 *10*	100 *5*	506.01	$1/2^-,3/2^-$
		2531.9 *3*	1.76 *20*	323.95	$3/2^-,5/2^-$
		2589.18 *15*	6.9 *5*	266.86	$1/2^-,3/2^-,5/2^-$
		2602.61 *11*	57 *3*	253.39	$3/2^-,5/2^-$
		2855.95 *11*	29.4 *16*	0	$5/2^-$
2942.8	$(17/2^+)$	911.2@ *3*	100@	2031.6	$(13/2^+)$
3002.11	$1/2^+,3/2^+$	1313.44 *14*	12.8 *11*	1688.71	
		1360.26 *11*	9.9 *7*	1642.08	
		1651.87 *8*	30.2 *18*	1350.17	
		2181.54 *12*	51 *4*	820.52	
		2496.05 *10*	100 *5*	506.01	$1/2^-,3/2^-$
		2678.0 *4*	11.4 *20*	323.95	$3/2^-,5/2^-$
3032.3		456.0#	100#	2576.3	
3063.35	1/2,3/2	777.57 *10*	34.2 *25*	2285.75	
		852.66 *12*	16.0 *12*	2210.60	
		1374.78 *9*	72 *5*	1688.71	
		1713.4 *3*	53 *8*	1350.17	
		2557.26 *16*	100 *7*	506.01	$1/2^-,3/2^-$
		2739.14 *12*	87 *5*	323.95	$3/2^-,5/2^-$
		2796.56 *16*	62 *4*	266.86	$1/2^-,3/2^-,5/2^-$
		2809.92 *12*	75 *4*	253.39	$3/2^-,5/2^-$

$^{93}_{37}Rb_{56}$-6

Adopted Levels, Gammas (continued)

γ(^{93}Rb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	Comments
3234.7	(17/2$^+$)	202.1[#]	71[#] *14*	3032.3			
		1203.4[#]	100[#] *14*	2031.6	(13/2$^+$)	Q	Mult.: from ^{248}Cm SF decay (2010Si17).
3245.15		1235.5 *3*	53 *9*	2009.33			
		1556.32 *12*	100 *8*	1688.71			
		1681.9 *7*	39 *10*	1563.02			
		1687.4 *5*	58 *19*	1557.39			
		2424.26 *25*	70 *8*	820.52			
3265.18		519.78 *19*	15.4 *19*	2745.28			
		1000.5 *3*	7.3 *15*	2264.84			
		1054.55 *23*	16.9 *19*	2210.60			
		1576.6 *6*	14 *4*	1688.71			
		2998.5 *3*	100 *23*	266.86	1/2$^-$,3/2$^-$,5/2$^-$		
3280.03	1/2,3/2	1638.04 *19*	100 *9*	1642.08			
		1929.7 *3*	63 *10*	1350.17			
		3026.5 *3*	34 *5*	253.39	3/2$^-$,5/2$^-$		
3308.32	1/2,3/2	1139.17 *18*	47 *4*	2169.13			
		1666.3 *6*	20 *5*	1642.08			
		1745.28 *20*	100 *10*	1563.02			
3358.76		1508.41 *23*	74 *11*	1850.20			
		2852.6 *5*	65 *15*	506.01	1/2$^-$,3/2$^-$		
		3105.40 *20*	100 *8*	253.39	3/2$^-$,5/2$^-$		
		3358.8 *10*	41 *20*	0	5/2$^-$		
3406.2	(19/2)	171.5[@] *3*	100[@]	3234.7	(17/2$^+$)	D	Mult.: from ^{248}Cm SF decay (2010Si17).
3464.7	1/2$^{(-)}$,3/2	1822.3 *12*	50 *43*	1642.08			
		1823.8 *8*	100 *43*	1641.06			
		3464.4 *12*	93 *29*	0	5/2$^-$		
3493.73	1/2,3/2	491.93 *22*	8.0 *12*	3002.11	1/2$^+$,3/2$^+$		
		1528.9 *3*	14.6 *22*	1964.64			
		3226.70 *15*	100 *7*	266.86	1/2$^-$,3/2$^-$,5/2$^-$		
3551.54	1/2,3/2	1382.7 *3*	22 *5*	2169.13			
		1586.89 *7*	100 *6*	1964.64			
		1862.68 *12*	31.3 *23*	1688.71			
		3298.31 *19*	76 *6*	253.39	3/2$^-$,5/2$^-$		
3631.4	1/2,3/2	1989.3 *3*	100 *12*	1642.08			
		3307.2 *7*	36 *12*	323.95	3/2$^-$,5/2$^-$		
3733.97		2913.5 *3*	78 *9*	820.52			
		3467.2 *10*	100 *45*	266.86	1/2$^-$,3/2$^-$,5/2$^-$		
3777.16		921.19 *10*	38 *3*	2855.94	(3/2)$^+$		
		2088.24 *19*	46 *4*	1688.71			
		2956.68 *16*	100 *7*	820.52			
		3453.3 *3*	34 *4*	323.95	3/2$^-$,5/2$^-$		

$^{93}_{37}Rb_{56}$-7

Adopted Levels, Gammas (continued)

γ(^{93}Rb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α[&]	Comments
3800.90		555.41 *15*	45 *5*	3245.15				
		1191.49 *9*	100 *6*	2609.47				
		2160.0 *5*	29 *6*	1641.06				
		3294.8 *8*	90 *16*	506.01	1/2⁻,3/2⁻			
3885.8		479.9[#]	100[#]	3406.2	(19/2)			
3940.9	(21/2⁺)	998.0[@] *3*	100[@]	2942.8	(17/2⁺)			
4050.68	1/2,3/2	316.72 *9*	91 *7*	3733.97				
		770.7 *4*	52 *9*	3280.03	1/2,3/2			
		1785.8 *4*	46 *9*	2264.84				
		1840.1 *3*	100 *27*	2210.60				
		2700.5 *3*	83 *10*	1350.17				
		3229.9 *7*	55 *18*	820.52				
4080.57	1/2,3/2	1471.3 *3*	44 *5*	2609.47				
		1794.80 *8*	100 *6*	2285.75				
		2517.4 *6*	8.9 *19*	1563.02				
4086.9		1144.1[@] *3*	100[@]	2942.8	(17/2⁺)			
4320.4		233.5[#]	100[#]	4086.9				
4322.2	(23/2⁻)	381.0[#]	100[#] *20*	3940.9	(21/2⁺)	D		Mult.: from 998γ-381γ(θ) in ^{248}Cm SF decay assuming that 998γ is Q as suggested by similarity of Eγ for ^{92}Kr and ^{93}Rb (2010Si17).
		436.6[#]	80[#] *20*	3885.8				
4423.1	(27/2⁻)	100.9[#]	100[#]	4322.2	(23/2⁻)	[E2]	0.940	B(E2)(W.u.)=10.0 *12*
4861.52	1/2,3/2	1060.53 *13*	100 *11*	3800.90				
		1616.9 *8*	18 *6*	3245.15				
		1798.3 *3*	47 *6*	3063.35	1/2,3/2			
		3220.3 *3*	47 *5*	1641.06				
		3303.9 *8*	28 *8*	1557.39				
5048.98	1/2,3/2	1803.71 *17*	100 *9*	3245.15				
		2838.5 *3*	82 *10*	2210.60				
5159.3	(29/2,31/2)	736.2[#]	100[#]	4423.1	(27/2⁻)			
5237.65	1/2⁺,3/2⁺	1157.09 *11*	100 *8*	4080.57	1/2,3/2			
		2235.4 *8*	23 *7*	3002.11	1/2⁺,3/2⁺			
		3887.1 *4*	40 *6*	1350.17				
5491.78	1/2⁺,3/2⁺	2826.62 *24*	43 *4*	2664.84				
		3281.1 *7*	17 *4*	2210.60				
		3408.09 *22*	100 *7*	2083.87				
		3482.4 *5*	26 *4*	2009.33				
5496.26	1/2⁺,3/2⁺	1445.64 *18*	87 *9*	4050.68	1/2,3/2			
		3285.3 *3*	75 *8*	2210.60				
		3412.7 *5*	60 *10*	2083.87				
		3645.9 *5*	100 *23*	1850.20				

$^{93}_{37}Rb_{56}$-8

Adopted Levels, Gammas (continued)

γ(^{93}Rb) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π
5665.51	1/2$^+$,3/2$^+$	616.51 *11*	19.8 *14*	5048.98	1/2,3/2
		2663.49 *20*	100 *10*	3002.11	1/2$^+$,3/2$^+$
		3000.5 *5*	66 *28*	2664.84	
		3379.7 *4*	33 *5*	2285.75	
5759.7	1/2$^+$,3/2$^+$	898.0 *5*	14 *3*	4861.52	1/2,3/2
		2944.6 *4*	56 *9*	2814.99	1/2,3/2
		3014.7 *5*	100 *31*	2745.28	
5859.83	1/2$^+$,3/2$^+$	2082.62 *14*	97 *7*	3777.16	
		2308.3 *5*	24 *6*	3551.54	1/2,3/2
		2366.0 *6*	42 *16*	3493.73	1/2,3/2
		3250.3 *3*	51 *6*	2609.47	
		3649.2 *4*	100 *17*	2210.60	
		3776.0 *3*	48 *6*	2083.87	
5920.33	1/2$^+$,3/2$^+$	254.83 *5*	100 *10*	5665.51	1/2$^+$,3/2$^+$
		1058.71 *17*	44 *6*	4861.52	1/2,3/2
		2368.5 *6*	20 *7*	3551.54	1/2,3/2
		3634.7 *3*	27 *3*	2285.75	
5920.33	1/2$^+$,3/2$^+$	3655.5 *5*	20 *3*	2264.84	
5965.48	1/2$^+$,3/2$^+$	2606.65 *19*	100 *8*	3358.76	
		2720.2 *4*	28 *3*	3245.15	
		3150.8 *5*	29 *7*	2814.99	1/2,3/2
		3356.0 *5*	31 *10*	2609.47	
		3795.8 *11*	5.4 *17*	2169.13	
6070.51	1/2$^+$,3/2$^+$	578.73 *17*	39 *4*	5491.78	1/2$^+$,3/2$^+$
		3214.5 *3*	100 *10*	2855.94	(3/2)$^+$
6260.1	1/2$^+$,3/2$^+$	2179.3 *12*	67 *50*	4080.57	1/2,3/2
		3196.8 *7*	100 *32*	3063.35	1/2,3/2
		3445.1 *6*	45 *8*	2814.99	1/2,3/2
6572.20	1/2$^+$,3/2$^+$	1080.6 *7*	9 *3*	5491.78	1/2$^+$,3/2$^+$
		2521.47 *16*	100 *6*	4050.68	1/2,3/2
6725.56	1/2$^+$,3/2$^+$	2948.32 *19*	87 *6*	3777.16	
		3260.7 *5*	12.4 *21*	3464.7	1/2$^{(-)}$,3/2
		3460.7 *6*	100 *17*	3265.18	

† From ^{93}Kr β^- decay, except as noted.

‡ Based on α(K)exp data from ^{93}Kr β^- decay.

From ^{248}Cm SF decay; uncertainty in Eγ unstated by authors.

@ From ^{252}Cf SF decay.

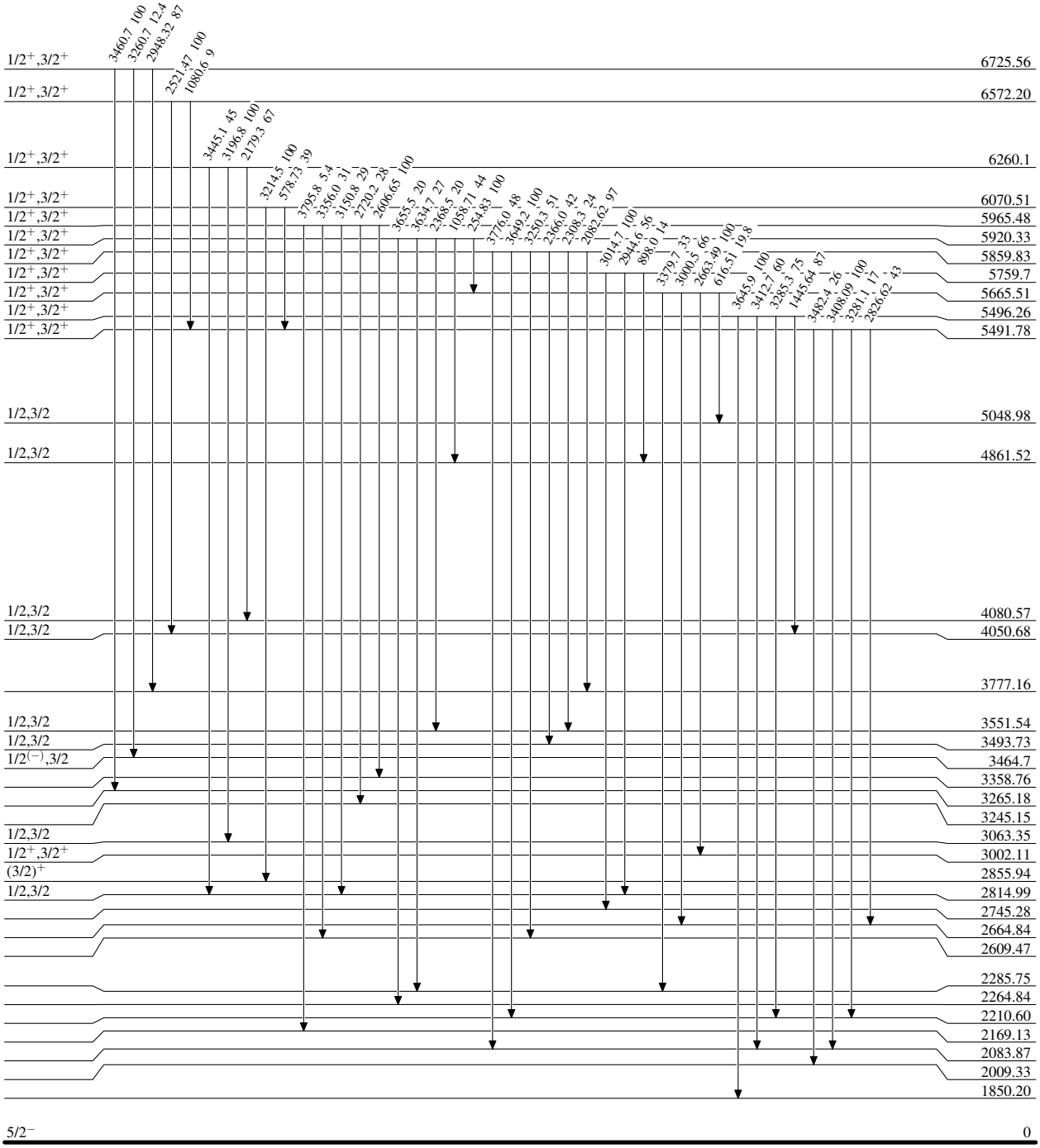
& Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

$^{93}_{37}Rb_{56}$-9

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level

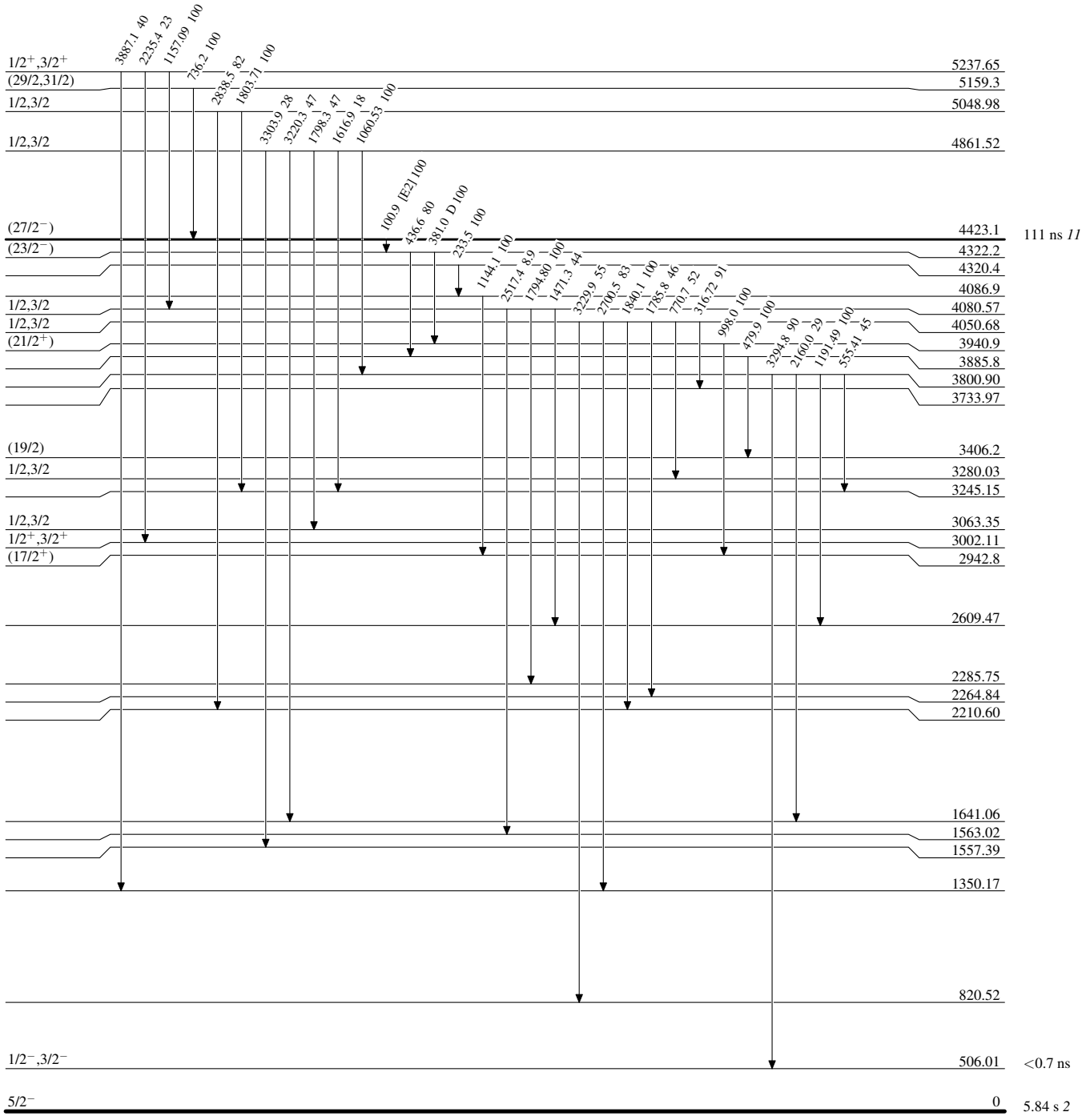


$^{93}_{37}Rb_{56}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

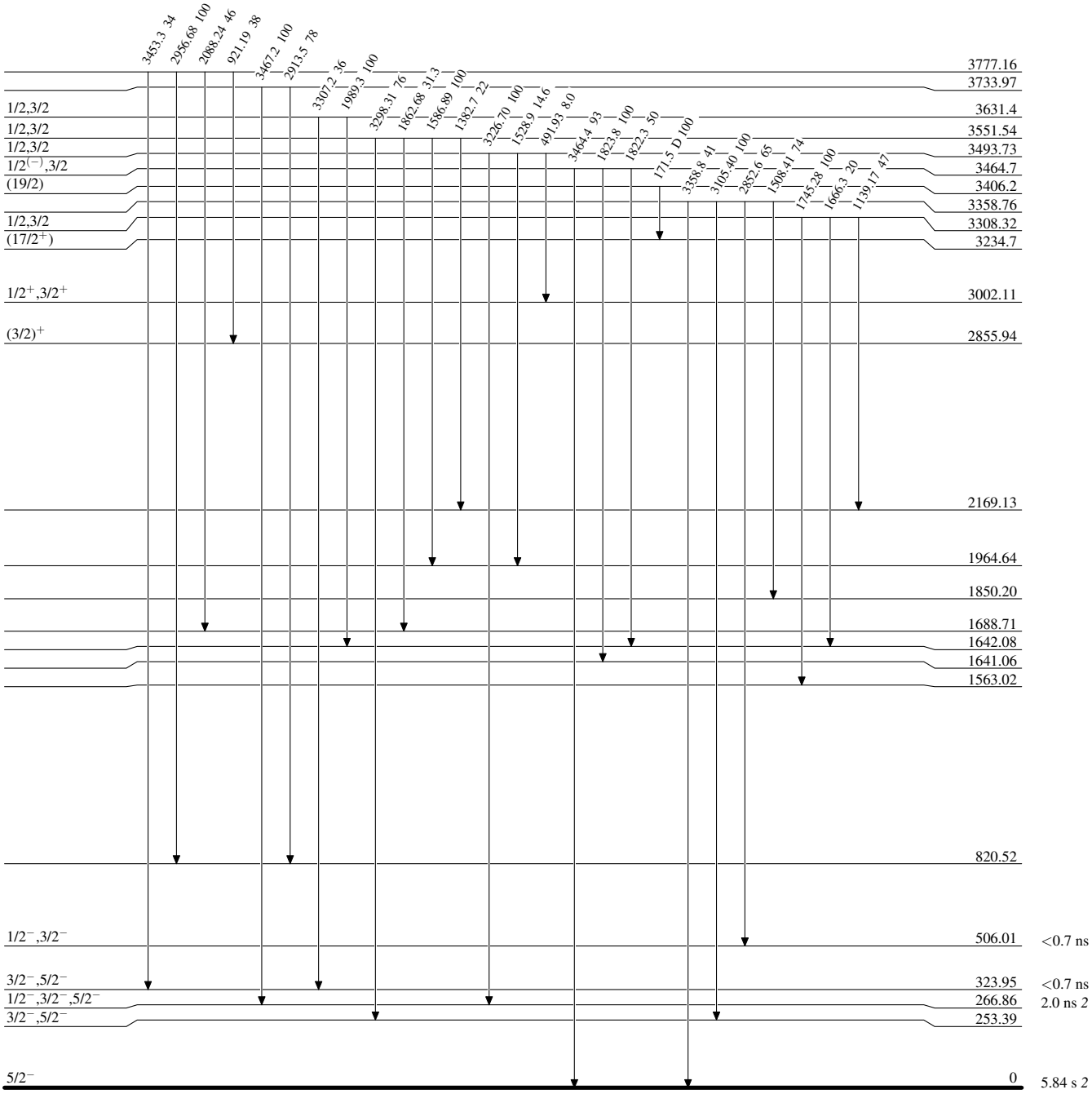


$^{93}_{37}Rb_{56}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

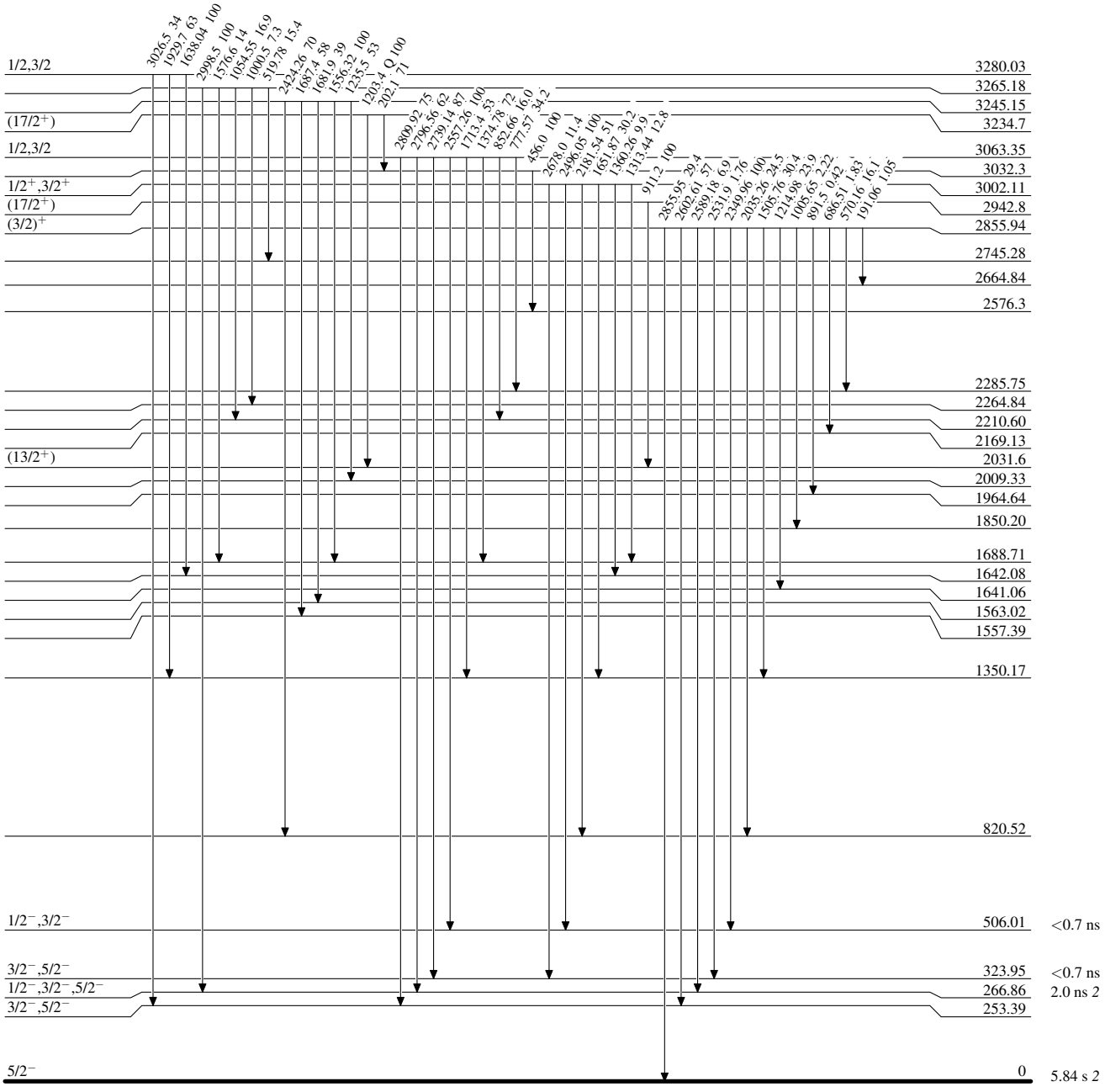


$^{93}_{37}Rb_{56}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

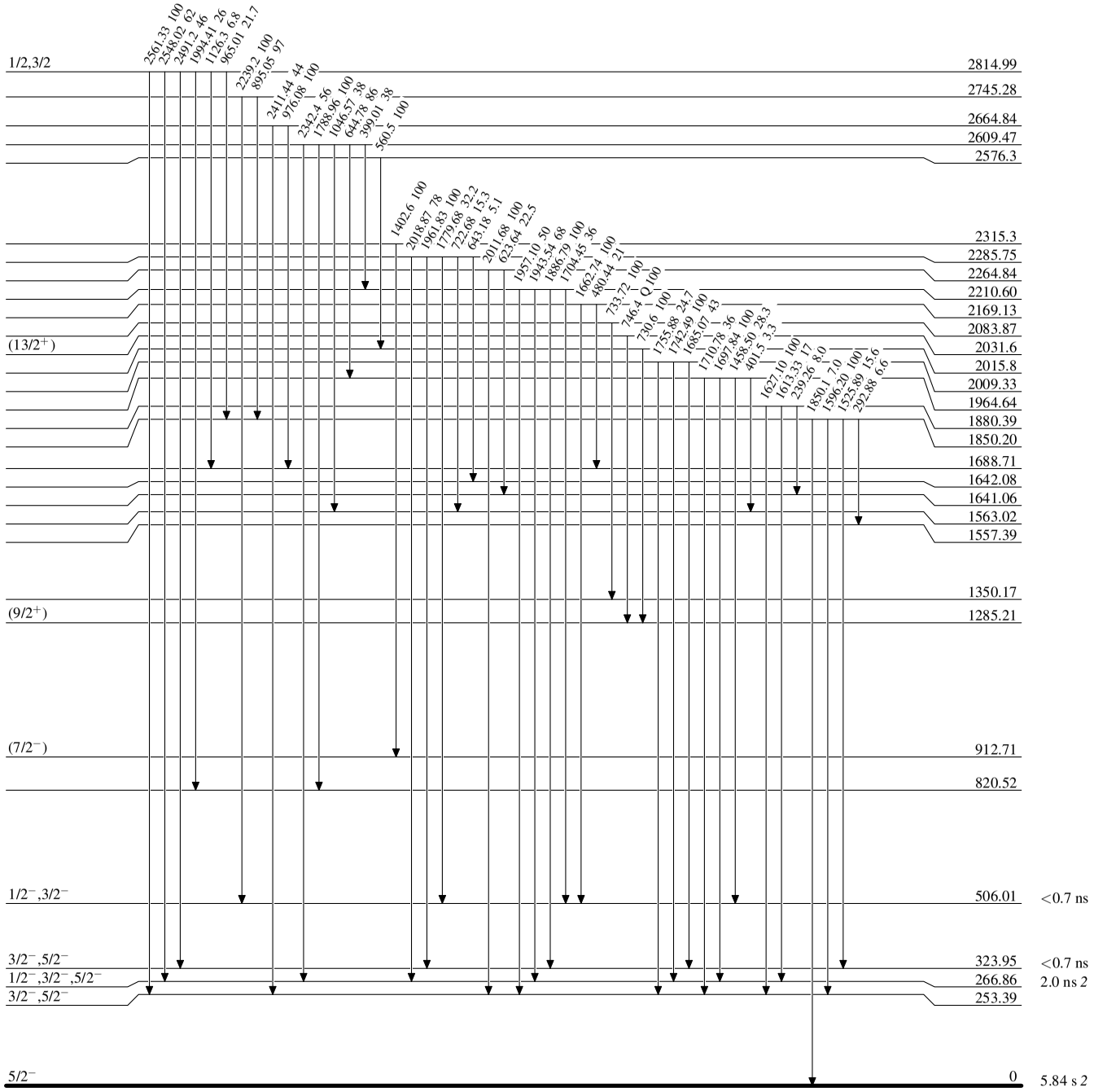


$^{93}_{37}Rb_{56}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

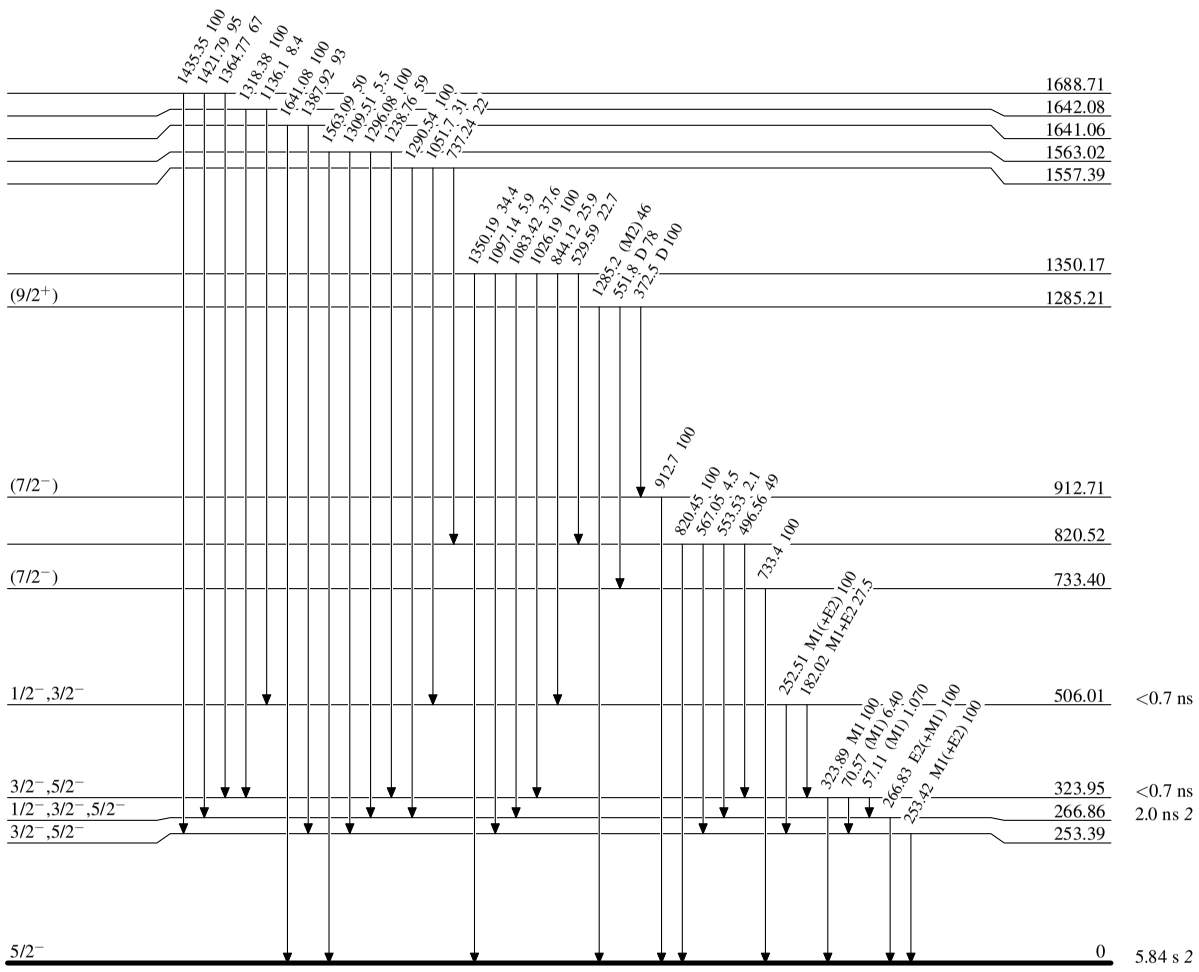


$^{93}_{37}Rb_{56}$

Adopted Levels, Gammas

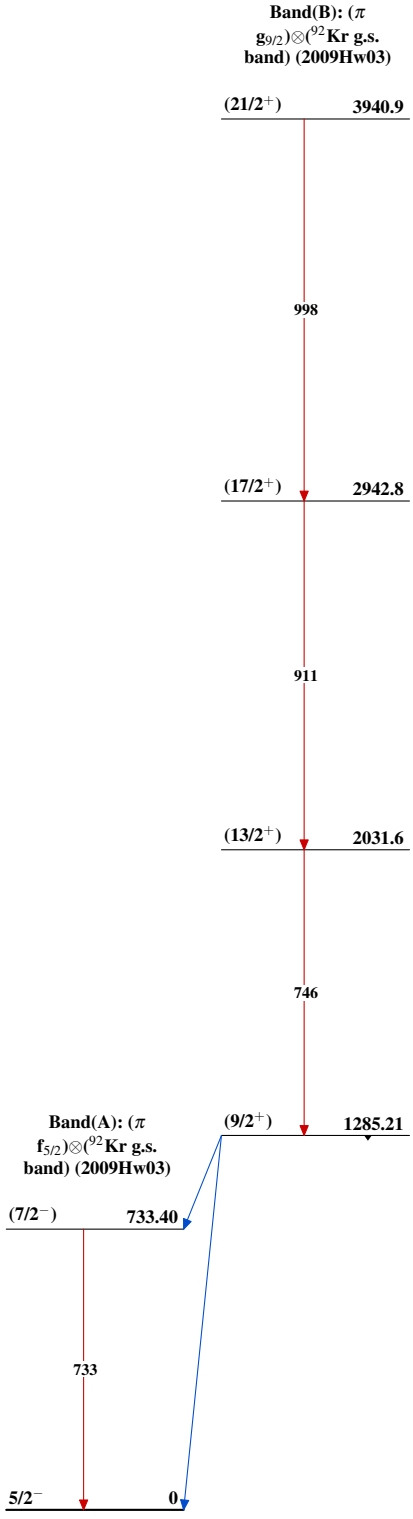
Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{93}_{37}Rb_{56}$

Adopted Levels, Gammas



$^{93}_{37}Rb_{56}$