Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 114, 1293 (2013)	1-Sep-2013

Q(β^-)=5907 *9*; S(n)=6452 *10*; S(p)=10075 *8*; Q(α)=−6278 *8* 2012Wa38
Q(βn)=132 *8* (2012Wa38).

Other experiments:
Isotopic shift and nuclear charge radius: 1981Th04, 1979Kl03.

Nuclear structure (theory, partial list): 1986Si20 (interacting boson-fermion model); 2010Ro31 (self-consistent Hartree-Fock, Gogni energy density functional); 2011Ho11 (FRDM + QRPA + Hauser-Feshbach calculations of β-delayed n and γ spectra; comparison with TAGS data).
Nuclear charge radius: 1987My01, 1980Ca23.

^{91}Rb Levels

Cross Reference (XREF) Flags

- A ^{91}Kr β^- decay
- B ^{252}Cf SF decay
- C ^{238}U(^{48}Ca,Xγ)

E(level)†	J$^\pi$‡	T$_{1/2}$#	XREF	Comments
0	3/2$^{(-)}$	58.2 s *3*	ABC	%β^-=100 μ=+2.1815 *15*; Q=+0.19 *5* Δ<r^2>(^{81}Rb−^{87}Rb)=−0.532 *12* (1979Kl03), 0.558 *4* (1981Th04). <r^2>$^{1/2}$(charge)=4.278 fm *13* (2004An14). J$^\pi$: J from nuclear radiation detected optical pumping (1978Bo38). Parity from shell-model systematics. Possible configuration: 1/2[321] (2010Ro31). T$_{1/2}$: unweighted average of 59.2 s *2* (1970OsZZ), 57.8 s *5* (1970ChYZ), 58.2 s *2* (1969Ca03), and 57.4 s *3* (1967Am01). Other measurements: 1971Kr22, 1972Eh02 (66.6 s *12*), 1974Ac01 (62 s *4*), 1974Gr29 (58.2 s *10*). μ: from high-resolution laser spectroscopy on atomic beams (1989Ra17 and 2011StZZ; from 1981Th04). No hfs anomaly allowed for in μ(^{87}Rb) standard. Other μ from hfs measurements: 2.177 *5* (1987Ra17 and 2011StZZ, from 1979Kl03), 2.177 *3* (if no hfs anomaly) (1989Ra17 and 2011StZZ, from 1979Ek02) or 2.18 *3* allowing 1% additional uncertainty from unknown hfs anomaly (1979Ek02)). Q: from high-resolution laser spectroscopy on atomic beams (2011StZZ from +0.154 *26* with Sternheimer correction, from 1981Th04 and 1989Ra17). Other Q: 0.14 *3* after Sternheimer correction; from continuous beam LASER spectroscopy (1989Ra17 and 2011StZZ, from 1979Kl03).
108.789 *6*	(5/2$^-$)	0.8 ns *3*	ABC	J$^\pi$: M1(+E2) transition to 3/2$^{(-)}$ g.s.; log *ft*=6.4, log $f^{1u}t$=8.4 from 5/2$^{(+)}$; systematics favor J=5/2. T$_{1/2}$: from centroid shift of $\beta\gamma$(t) in β^- decay (1976Gl02).
502.04 *9*			A	J$^\pi$: log *ft*=7.7, log $f^{1u}t$=9.6 from 5/2$^{(+)}$.
506.592 *9*	≤7/2$^{(-)}$	<0.3 ns	A	J$^\pi$: (M1,E2) γ to 3/2$^{(-)}$; log *ft*=6.9, log $f^{1u}t$=8.9 from 5/2$^{(+)}$.
555.55 *4*			A	J$^\pi$: log *ft*=7.5, log $f^{1u}t$=9.5 from 5/2$^{(+)}$.
662.42 *7*			A	J$^\pi$: log *ft*=7.4, log $f^{1u}t$=9.4 from 5/2$^{(+)}$.
721.67 *4*	(≤7/2$^-$)	<0.4 ns	ABC	J$^\pi$: (M1,E2) 613γ to (5/2$^-$) 109; 722γ to 3/2$^{(-)}$ g.s.; log *ft*=7.2, log $f^{1u}t$>9.6 from 5/2$^{(+)}$.
1133.79@ *6*	(9/2$^+$)&	16.6 ns *6*	ABC	%IT=100 J$^\pi$: by analogy with similar structures built on isomers in lower-mass odd-a Rb isotopes (2009Hw03,2009Pa20); supported by shell-model calculations

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Adopted Levels, Gammas (continued)

^{91}Rb Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$[#]	XREF	Comments
				(2010Si17). However, log *ft*=7.1, log $f^{1u}t$=9.0 from $5/2^{(+)}$ in β^- decay seems unreasonably low.
				$T_{1/2}$: weighted average of 16 ns *1* from $\gamma\gamma$(t) In ^{252}Cf SF decay and 17.0 ns *8* from $\beta\gamma$(t) (1986Si20) In β^- decay.
1136.74 *6*			A	Jπ: log *ft*=7.2, log $f^{1u}t$=9.1 from $5/2^{(+)}$.
1178.07 *6*			A	Jπ: log *ft*=7.4, log $f^{1u}t$=9.1 from $5/2^{(+)}$.
1211.10 *9*			A	Jπ: log *ft*=7.8, log $f^{1u}t$=9.7 from $5/2^{(+)}$.
1267.69 *6*			A	Jπ: log *ft*=7.0, log $f^{1u}t$=8.9 from $5/2^{(+)}$.
1304.25 *6*			A	Jπ: log *ft*=7.4, log $f^{1u}t$=9.4 from $5/2^{(+)}$.
1324.27 *9*			A	Jπ: log *ft*=7.3, log $f^{1u}t$=9.2 from $5/2^{(+)}$.
1401.83 *12*			A	Jπ: log *ft*=7.3, log $f^{1u}t$=9.1 from $5/2^{(+)}$.
1501.63 *6*	3/2,5/2,7/2		A	Jπ: log *ft*=6.7, log $f^{1u}t$=8.5 from $5/2^{(+)}$.
1547.65 *12*			A	Jπ: log *ft*=7.1, log $f^{1u}t$=8.9 from $5/2^{(+)}$.
1615.22 *6*	3/2,5/2,7/2	<0.5 ns	A	Jπ: log *ft*=6.3, log $f^{1u}t$=8.1 from $5/2^{(+)}$.
1637.07 *14*			A	Jπ: log *ft*=7.4, log $f^{1u}t$=9.2 from $5/2^{(+)}$.
1722.87? *14*			A	Jπ: 1614γ to $(5/2^-)$ 109.
1775.51? *14*			A	Jπ: log *ft*=7.2, log $f^{1u}t$=9.0 from $5/2^{(+)}$.
1779.05 *13*			A	Jπ: log *ft*=7.5, log $f^{1u}t$=9.3 from $5/2^{(+)}$.
1840.5[@] *4*	$(13/2^+)$[&]		BC	
1975.20 *12*			A	Jπ: log *ft*=6.9, log $f^{1u}t$=8.7 from $5/2^{(+)}$.
2002.80 *13*			A	Jπ: log *ft*=7.4, log $f^{1u}t$>8.5 from $5/2^{(+)}$.
2037.36 *12*			A	
2089.81 *6*	3/2,5/2,7/2		A	Jπ: log *ft*=6.5, log $f^{1u}t$=8.2 from $5/2^{(+)}$.
2195.79 *12*			A	Jπ: log *ft*=6.9, log $f^{1u}t$=8.7 from $5/2^{(+)}$.
2377.29 *18*			A	Jπ: log *ft*=7.1, log $f^{1u}t$=8.8 from $5/2^{(+)}$.
2381.60 *15*	3/2,5/2,7/2		A	Jπ: log *ft*=6.9, log $f^{1u}t$=8.6 from $5/2^{(+)}$.
2490.14 *8*	3/2,5/2,7/2		A	Jπ: log *ft*=6.3, log $f^{1u}t$=8.0 from $5/2^{(+)}$.
2559.45 *15*	3/2,5/2,7/2		A	Jπ: log *ft*=6.5, log $f^{1u}t$=8.2 from $5/2^{(+)}$.
2593.22 *9*	$3/2,5/2,7/2^{(-)}$		A	Jπ: log *ft*=6.0, log $f^{1u}t$=7.7 from $5/2^{(+)}$; 2593γ to $3/2^{(-)}$ g.s.
2686.81 *19*	3/2,5/2,7/2		A	Jπ: log *ft*=6.8, log $f^{1u}t$=8.5 from $5/2^{(+)}$.
2729.16 *19*	3/2,5/2,7/2		A	Jπ: log *ft*=6.8, log $f^{1u}t$=8.4 from $5/2^{(+)}$.
2844.57 *12*	3/2,5/2,7/2		A	Jπ: log *ft*=6.2, log $f^{1u}t$=7.8 from $5/2^{(+)}$.
2849			B	
2861.56 *8*	$3/2^{(+)}$ to $7/2^{(+)}$		A	Jπ: log *ft*=6.0, log $f^{1u}t$=7.6 from $5/2^{(+)}$.
2902			B	
2919.98 *12*	3/2,5/2,7/2		A	Jπ: log *ft*=6.2, log $f^{1u}t$=7.8 from $5/2^{(+)}$.
2926.9 *3*			A	Jπ: log *ft*=7.1, log $f^{1u}t$=8.7 from $5/2^{(+)}$.
2964.14 *13*	3/2,5/2,7/2		A	Jπ: log *ft*=6.4, log $f^{1u}t$=8.0 from $5/2^{(+)}$.
2979.4[@]	$(17/2^+)$[&]		BC	
2979.75 *13*	3/2,5/2,7/2		A	Jπ: log *ft*=6.3, log $f^{1u}t$=7.9 from $5/2^{(+)}$.
3002.32 *11*	$3/2,5/2,7/2^{(-)}$		A	Jπ: log *ft*=6.0, log $f^{1u}t$=7.6 from $5/2^{(+)}$; 3002γ to $3/2^{(-)}$ g.s.
3044.57? *19*			A	Jπ: log *ft*=7.2, log $f^{1u}t$=8.8 from $5/2^{(+)}$.
3046.23 *20*	3/2,5/2,7/2		A	Jπ: log *ft*=6.9, log $f^{1u}t$=8.5 from $5/2^{(+)}$.
3056.96 *16*	3/2,5/2,7/2		A	Jπ: log *ft*=6.3, log $f^{1u}t$=7.9 from $5/2^{(+)}$.
3090.67 *12*	3/2,5/2,7/2		A	Jπ: log *ft*=6.1, log $f^{1u}t$=7.6 from $5/2^{(+)}$.
3113.61 *13*	$3/2,5/2,7/2^{(-)}$		A	Jπ: log *ft*=5.9, log $f^{1u}t$=7.5 from $5/2^{(+)}$; 3114γ to $3/2^{(-)}$ g.s.
3206.19 *17*	3/2,5/2,7/2		A	Jπ: log *ft*=6.5, log $f^{1u}t$=8.0 from $5/2^{(+)}$.
3218.22 *24*			A	
3325.07 *25*	$3/2,5/2,7/2^{(-)}$		A	Jπ: log *ft*=6.5, log $f^{1u}t$=8.0 from $5/2^{(+)}$; 3325γ to $3/2^{(-)}$ g.s.
3349			B	
3573			BC	
3687.6 *4*	3/2,5/2,7/2		A	Jπ: log *ft*=6.6, log $f^{1u}t$=8.0 from $5/2^{(+)}$.
3878			BC	
3910.11 *25*	$3/2,5/2,7/2^{(-)}$		A	Jπ: log *ft*=6.1, log $f^{1u}t$=7.5 from $5/2^{(+)}$; 3910γ to $3/2^{(-)}$ g.s.

Adopted Levels, Gammas (continued)

^{91}Rb Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$[#]	XREF	Comments
3974.3 *3*	(3/2,5/2,7/2)		A	Jπ: log *ft*=6.8, log $f^{1u}t$=8.2 from $5/2^{(+)}$.

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Adopted Levels, Gammas (continued)

^{91}Rb Levels (continued)

E(level)[†]	J$^{\pi}$[‡]	XREF	Comments
4072.07? *25*		A	J$^{\pi}$: log *ft*≥6.8, log $f^{1u}t$≥8.1 from 5/2$^{(+)}$.
4097[@]	(21/2^{+})[&]	BC	
4129.19 *21*	3/2,5/2,7/2$^{(-)}$	A	J$^{\pi}$: log *ft*=6.0, log $f^{1u}t$=7.3 from 5/2$^{(+)}$; 4129γ to 3/2$^{(-)}$ g.s.
4199.5? *3*	(3/2,5/2,7/2)	A	J$^{\pi}$: log *ft*=6.8, log $f^{1u}t$=8.1 from 5/2$^{(+)}$.
4211.7 *3*	3/2$^{(+)}$ to 7/2$^{(+)}$	A	J$^{\pi}$: log *ft*=6.0, log $f^{1u}t$=7.6 from 5/2$^{(+)}$.
4543.3 *3*	3/2$^{(+)}$ to 7/2$^{(+)}$	A	J$^{\pi}$: log *ft*=5.8, log $f^{1u}t$=6.9 from 5/2$^{(+)}$.
4545.9? *4*	(3/2^{+},5/2^{+},7/2^{+})	A	J$^{\pi}$: log *ft*=6.4, log $f^{1u}t$=7.6 from 5/2$^{(+)}$.
4569.7 *5*	3/2$^{(+)}$ to 7/2$^{(+)}$	A	J$^{\pi}$: log *ft*=5.9, log $f^{1u}t$=6.1 from 5/2$^{(+)}$.
4570		BC	
4683.6 *3*	3/2$^{(+)}$ to 7/2$^{(+)}$	A	J$^{\pi}$: log *ft*=5.7, log $f^{1u}t$=6.8 from 5/2$^{(+)}$.
4698.06? *24*		A	J$^{\pi}$: log *ft*≥5.6, log $f^{1u}t$≥6.6 from 5/2$^{(+)}$.
5298		BC	
6238.9		C	

[†] From least-squares fit to adopted Eγ.

[‡] Most J$^{\pi}$ arguments are based on log *ft* and/or log $f^{1u}t$ for β^{-} decay from 5/2$^{(+)}$; J$^{\pi}$=3/2$^{(+)}$ to 7/2$^{(+)}$ if log *ft*<5.9, J=3/2 to 7/2 if log $f^{1u}t$<8.5. Detailed arguments are given for each level.

[#] From $\beta\gamma$(t) in β^{-} decay (1986Si20), unless noted otherwise.

[@] Band(A): π g$_{9/2}$, α=+1/2 band. Member of cascade to (9/2^{+}) 1134-keV isomer. Level energies closely resemble those of g.s. band In ^{90}Kr but differ from g.s. band energies In ^{92}Sr so 2009Hw03 suggest that this band arises from weak coupling of π g$_{9/2}$ to ^{90}Kr g.s. band.

[&] Based on band assignment. Member of sequence connected by γ cascade to (9/2^{+}) 1134-keV isomer.

Adopted Levels, Gammas (continued)

γ(^{91}Rb)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ[†]	α[&]	Comments
108.789	(5/2$^-$)	108.788 *6*	100	0	3/2$^{(-)}$	M1(+E2)	0.12 *+5−9*	0.123 *9*	B(M1)(W.u.)=0.019 *7*; B(E2)(W.u.)=24 *22*
502.04		501.97 *12*	100	0	3/2$^{(-)}$				
506.592	≤7/2$^{(-)}$	397.83 *13*	8.2 *6*	108.789	(5/2$^-$)				
		506.592 *9*	100 *7*	0	3/2$^{(-)}$	(M1,E2)			B(E2)(W.u.)>2.1 if pure E2.
555.55		446.78 *6*	85 *4*	108.789	(5/2$^-$)				
		555.57 *7*	100 *5*	0	3/2$^{(-)}$				
662.42		662.42 *7*	100	0	3/2$^{(-)}$				
721.67	(≤7/2$^-$)	215.46 *22*	13.6 *5*	506.592	≤7/2$^{(-)}$				
		612.87 *6*	100 *5*	108.789	(5/2$^-$)	(M1,E2)			B(E2)(W.u.)>0.61 if pure E2.
		721.55 *8*	8.6 *6*	0	3/2$^{(-)}$				
1133.79	(9/2$^+$)	412.04 *8*	82 *5*	721.67	(≤7/2$^-$)				
		1024.91 *15*	100 *8*	108.789	(5/2$^-$)	[M2]			B(M2)(W.u.)=0.042 *5*
		1134.1[‡]	13[‡] *4*	0	3/2$^{(-)}$	[E3]			B(E3)(W.u.)=4.1 *13*
1136.74		630.14 *7*	100 *6*	506.592	≤7/2$^{(-)}$				
		1028.3 *3*	29 *6*	108.789	(5/2$^-$)				
		1136.81 *14*	47 *4*	0	3/2$^{(-)}$				
1178.07		671.46 *8*	55 *4*	506.592	≤7/2$^{(-)}$				
		1069.0 *3*	6.8 *17*	108.789	(5/2$^-$)				
		1178.03 *11*	100 *5*	0	3/2$^{(-)}$				
1211.10		489.49 *15*	57 *7*	721.67	(≤7/2$^-$)				
		1102.18 *15*	100 *10*	108.789	(5/2$^-$)				
1267.69		545.96 *11*	39 *3*	721.67	(≤7/2$^-$)				
		712.39 *15*	21.3 *25*	555.55					
		761.01 *8*	100 *6*	506.592	≤7/2$^{(-)}$				
		766.0 *9*	5 *3*	502.04					
		1158.8 *7*	10 *5*	108.789	(5/2$^-$)				
		1267.83 *13*	64 *5*	0	3/2$^{(-)}$				
1304.25		748.64 *8*	45 *3*	555.55					
		797.68 *15*	19.4 *21*	506.592	≤7/2$^{(-)}$				
		802.17 *15*	9.7 *17*	502.04					
		1195.42 *20*	20.8 *21*	108.789	(5/2$^-$)				
		1304.28 *13*	100 *7*	0	3/2$^{(-)}$				
1324.27		817.64 *18*	70 *7*	506.592	≤7/2$^{(-)}$				
		1215.57 *14*	100 *8*	108.789	(5/2$^-$)				
		1324.22 *18*	83 *8*	0	3/2$^{(-)}$				
1401.83		680.0 *3*	24 *6*	721.67	(≤7/2$^-$)				
		846.7 *4*	22 *7*	555.55					
		895.0 *5*	59 *13*	506.592	≤7/2$^{(-)}$				
		1292.95 *17*	100 *11*	108.789	(5/2$^-$)				
		1402.0 *3*	46 *10*	0	3/2$^{(-)}$				
1501.63	3/2,5/2,7/2	780.2 *6*	2.2 *8*	721.67	(≤7/2$^-$)				

$^{91}_{37}Rb_{54}$-5

Adopted Levels, Gammas (continued)

γ(^{91}Rb) (continued)

E_i(level)	J_i^π	E_γ [†]	I_γ [†]	E_f	J_f^π	Mult.[†]
1501.63	3/2,5/2,7/2	995.08 *12*	16.6 *12*	506.592	≤7/2$^{(-)}$	
		1392.74 *17*	11.4 *11*	108.789	(5/2$^-$)	
		1501.60 *11*	100 *6*	0	3/2$^{(-)}$	
1547.65		825.82 *16*	100 *10*	721.67	(≤7/2$^-$)	
		992.1 *6*	31 *12*	555.55		
		1439.11 *21*	88 *10*	108.789	(5/2$^-$)	
		1547.65 *25*	89 *12*	0	3/2$^{(-)}$	
1615.22	3/2,5/2,7/2	481.39 *9*	17.3 *12*	1133.79	(9/2$^+$)	
		893.6 *4*	2.4 *6*	721.67	(≤7/2$^-$)	
		1108.68 *10*	100 *5*	506.592	≤7/2$^{(-)}$	
		1506.4 *4*	11.5 *24*	108.789	(5/2$^-$)	
1637.07		1528.29 *14*	100	108.789	(5/2$^-$)	
1722.87?		1614.07[b] *14*	100	108.789	(5/2$^-$)	
1775.51?		450.8[b] *4*	6.6 *22*	1324.27		
		1666.73[ab] *13*	100[a] *8*	108.789	(5/2$^-$)	
1779.05		1277.0 *4*	25 *4*	502.04		
		1778.85 *16*	100 *8*	0	3/2$^{(-)}$	
1840.5	(13/2$^+$)	706.7[#] *2*	100[#]	1133.79	(9/2$^+$)	Q[@]
1975.20		1419.72 *13*	100 *7*	555.55		
		1468.2 *6*	19 *5*	506.592	≤7/2$^{(-)}$	
		1866.2 *3*	20 *4*	108.789	(5/2$^-$)	
2002.80		1281.11 *15*	100	721.67	(≤7/2$^-$)	
2037.36		900.5 *4*	27 *7*	1136.74		
		1315.54 *17*	100 *10*	721.67	(≤7/2$^-$)	
2089.81	3/2,5/2,7/2	474.63 *10*	100 *7*	1615.22	3/2,5/2,7/2	
		541.9 *9*	6 *3*	1547.65		
		588.22 *7*	99 *6*	1501.63	3/2,5/2,7/2	
		785.25 *16*	51 *6*	1304.25		
		822.14 *18*	43 *4*	1267.69		
		953.24 *16*	36 *4*	1136.74		
		955.74 *16*	35 *4*	1133.79	(9/2$^+$)	
		1368.5 *3*	37 *6*	721.67	(≤7/2$^-$)	
		1583.51 *19*	42 *4*	506.592	≤7/2$^{(-)}$	
2195.79		1058.90 *15*	77 *7*	1136.74		
		1474.6 *5*	25 *7*	721.67	(≤7/2$^-$)	
		2087.0 *4*	49 *12*	108.789	(5/2$^-$)	
		2195.99 *23*	100 *12*	0	3/2$^{(-)}$	
2377.29		1198.9 *5*	27 *7*	1178.07		
		2268.6 *4*	63 *13*	108.789	(5/2$^-$)	
		2377.34 *23*	100 *10*	0	3/2$^{(-)}$	
2381.60	3/2,5/2,7/2	879.5 *3*	27 *5*	1501.63	3/2,5/2,7/2	
		1874.99 *24*	100 *13*	506.592	≤7/2$^{(-)}$	

$^{91}_{37}Rb_{54}$-6

Adopted Levels, Gammas (continued)

γ(^{91}Rb) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π
2381.60	3/2,5/2,7/2	2381.87 *24*	46 *6*	0	$3/2^{(-)}$
2490.14	3/2,5/2,7/2	400.7 *3*	17 *4*	2089.81	3/2,5/2,7/2
		874.92 *8*	100 *5*	1615.22	3/2,5/2,7/2
		1353.54 *21*	47 *7*	1136.74	
		1356.17 *18*	59 *7*	1133.79	$(9/2^+)$
		1982.7 *5*	13 *3*	506.592	$\leq 7/2^{(-)}$
2559.45	3/2,5/2,7/2	470.0 *5*	10 *3*	2089.81	3/2,5/2,7/2
		1426.1 *6*	15 *5*	1133.79	$(9/2^+)$
		2004.1 *9*	6 *6*	555.55	
		2057.27 *18*	62 *5*	502.04	
		2450.7 *3*	100 *12*	108.789	$(5/2^-)$
		2559.4 *4*	52 *8*	0	$3/2^{(-)}$
2593.22	$3/2,5/2,7/2/2^{(-)}$	814.0 *4*	4.7 *11*	1779.05	
		1091.61 *14*	12.3 *11*	1501.63	3/2,5/2,7/2
		1456.5 *5*	13 *4*	1136.74	
		1459.0 *7*	10 *3*	1133.79	$(9/2^+)$
		1871.8 *3*	6.9 *20*	721.67	$(\leq 7/2^-)$
		2484.35 *13*	100 *6*	108.789	$(5/2^-)$
		2593.15 *20*	19.5 *19*	0	$3/2^{(-)}$
2686.81	3/2,5/2,7/2	1965.11 *19*	100 *9*	721.67	$(\leq 7/2^-)$
		2687.0 *9*	14 *7*	0	$3/2^{(-)}$
2729.16	3/2,5/2,7/2	1517.8 *5*	13 *4*	1211.10	
		2620.33 *23*	100 *9*	108.789	$(5/2^-)$
2844.57	3/2,5/2,7/2	807.14 *9*	39 *3*	2037.36	
		1633.5 *7*	10 *7*	1211.10	
		1666.73[a] *13*	18[a] *4*	1178.07	
		2735.83 *19*	100 *9*	108.789	$(5/2^-)$
		2845.0 *3*	23 *4*	0	$3/2^{(-)}$
2849		1008.7‡	100‡	1840.5	$(13/2^+)$
2861.56	$3/2^{(+)}$ to $7/2^{(+)}$	771.86 *16*	47 *5*	2089.81	3/2,5/2,7/2
		858.68 *22*	35 *6*	2002.80	
		1359.63 *22*	29 *6*	1501.63	3/2,5/2,7/2
		1537.34 *24*	45 *6*	1324.27	
		1557.2 *5*	65 *24*	1304.25	
		1650.22 *24*	23 *5*	1211.10	
		1725.2 *3*	26 *6*	1136.74	
		1727.85 *16*	68 *5*	1133.79	$(9/2^+)$
		2139.98 *21*	96 *11*	721.67	$(\leq 7/2^-)$
		2752.59 *19*	100 *8*	108.789	$(5/2^-)$
2902		1061.5‡	100‡	1840.5	$(13/2^+)$
2919.98	3/2,5/2,7/2	1741.78 *13*	100 *8*	1178.07	
		1783.4 *3*	47 *6*	1136.74	

$^{91}_{37}Rb_{54}$-7

Adopted Levels, Gammas (continued)

γ(^{91}Rb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]
2919.98	3/2,5/2,7/2	2413.7 *3*	42 *6*	506.592	$\leq 7/2^{(-)}$	
		2811.7 *6*	34 *4*	108.789	$(5/2^-)$	
		2919.9 *4*	34 *5*	0	$3/2^{(-)}$	
2926.9		1525.0 *5*	100 *24*	1401.83		
		2425.0 *7*	92 *27*	502.04		
		2926.7 *5*	54 *19*	0	$3/2^{(-)}$	
2964.14	3/2,5/2,7/2	1327.3 *6*	32 *10*	1637.07		
		1659.4 *5*	26 *6*	1304.25		
		1752.9 *3*	46 *8*	1211.10		
		1827.1 *4*	51 *10*	1136.74		
		2242.50 *25*	42 *6*	721.67	$(\leq 7/2^-)$	
		2457.7 *3*	87 *13*	506.592	$\leq 7/2^{(-)}$	
		2855.3 *3*	100 *13*	108.789	$(5/2^-)$	
2979.4	$(17/2^+)$	1138.2[‡] *3*	100[‡]	1840.5	$(13/2^+)$	Q[@]
2979.75	3/2,5/2,7/2	1577.6 *6*	11 *4*	1401.83		
		1675.83 *19*	45 *4*	1304.25		
		1843.1 *6*	15 *4*	1136.74		
		2473.1 *5*	48 *10*	506.592	$\leq 7/2^{(-)}$	
		2870.54 *21*	100 *9*	108.789	$(5/2^-)$	
3002.32	$3/2,5/2,7/2^{(-)}$	1365.3 *5*	33 *8*	1637.07		
		1386.99 *17*	79 *8*	1615.22	3/2,5/2,7/2	
		1500.6 *5*	100 *13*	1501.63	3/2,5/2,7/2	
		1697.6 *5*	21 *7*	1304.25		
		2281.1 *6*	21 *7*	721.67	$(\leq 7/2^-)$	
		2447.3 *7*	36 *10*	555.55		
		2495.82 *22*	99 *9*	506.592	$\leq 7/2^{(-)}$	
		2893.5 *3*	58 *7*	108.789	$(5/2^-)$	
		3001.9 *8*	37 *13*	0	$3/2^{(-)}$	
3044.57?		1041.80[b] *15*	100 *12*	2002.80		
		2322.6[b] *8*	50 *20*	721.67	$(\leq 7/2^-)$	
		3043.7[b] *9*	24 *22*	0	$3/2^{(-)}$	
3046.23	3/2,5/2,7/2	1008.98 *23*	100 *16*	2037.36		
		2539.4 *3*	91 *12*	506.592	$\leq 7/2^{(-)}$	
3056.96	3/2,5/2,7/2	1555.3 *4*	70 *20*	1501.63	3/2,5/2,7/2	
		2395.1 *7*	15 *5*	662.42		
		2550.6 *4*	21.0 *25*	506.592	$\leq 7/2^{(-)}$	
		3056.80 *22*	100 *10*	0	$3/2^{(-)}$	
3090.67	3/2,5/2,7/2	1311.34 *21*	34 *4*	1779.05		
		1589.2 *5*	8.3 *23*	1501.63	3/2,5/2,7/2	
		1823.05 *24*	23 *3*	1267.69		
		1880.1 *4*	19 *3*	1211.10		
		2981.85 *19*	100 *6*	108.789	$(5/2^-)$	

$^{91}_{37}Rb_{54}$-8

Adopted Levels, Gammas (continued)

γ(^{91}Rb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]
3113.61	3/2,5/2,7/2,7/2$^{(-)}$	384.3 *4*	3.1 *12*	2729.16	3/2,5/2,7/2	
		1338.0[b] *4*	8.2 *16*	1775.51?		
		1789.43 *21*	19.2 *20*	1324.27		
		2391.8 *9*	5.3 *20*	721.67	(≤7/2$^-$)	
		2558.0 *4*	8 *3*	555.55		
		2606.9 *5*	11.4 *22*	506.592	≤7/2$^{(-)}$	
		3005.1 *10*	5 *4*	108.789	(5/2$^-$)	
		3113.50 *20*	100 *6*	0	3/2$^{(-)}$	
3206.19	3/2,5/2,7/2,7/2	1231.1 *3*	14 *6*	1975.20		
		1995.0 *8*	12 *6*	1211.10		
		2072.25 *25*	85 *12*	1133.79	(9/2$^+$)	
		3097.4 *3*	100 *11*	108.789	(5/2$^-$)	
3218.22		1913.9 *8*	18 *8*	1304.25		
		2555.8[a] *6*	27[a] *12*	662.42		
		2663.0 *7*	24 *7*	555.55		
		3109.6 *5*	100 *22*	108.789	(5/2$^-$)	
3325.07	3/2,5/2,7/2,7/2$^{(-)}$	1710.0 *4*	100 *32*	1615.22	3/2,5/2,7/2	
		2769.4 *5*	86 *21*	555.55		
		3324.9 *4*	89 *13*	0	3/2$^{(-)}$	
3349		500.4[‡]	100[‡]	2849		
3573		592.2[#] *2*	100[#]	2979.4	(17/2$^+$)	
3687.6	3/2,5/2,7/2,7/2	2966.6 *7*	100 *28*	721.67	(≤7/2$^-$)	
		3180.9 *8*	86 *31*	506.592	≤7/2$^{(-)}$	
		3578.4 *5*	86 *21*	108.789	(5/2$^-$)	
3878		304.1[#] *3*	100[#]	3573		
3910.11	3/2,5/2,7/2,7/2$^{(-)}$	2585.6 *5*	42 *11*	1324.27		
		2642.5 *4*	85 *15*	1267.69		
		2732.1 *7*	100 *31*	1178.07		
		3403.4 *5*	67 *15*	506.592	≤7/2$^{(-)}$	
		3910.0 *11*	20 *7*	0	3/2$^{(-)}$	
3974.3	(3/2,5/2,7/2,7/2)	1129.8 *6*	76 *27*	2844.57	3/2,5/2,7/2	
		1884.3 *8*	73 *12*	2089.81	3/2,5/2,7/2	
		2251.4[b] *5*	100 *27*	1722.87?		
		3973.9 *10*	33 *12*	0	3/2$^{(-)}$	
4072.07?		1227.49[b] *22*	100	2844.57	3/2,5/2,7/2,7/2	
4097	(21/2$^+$)	1118.8[#] *2*	100[#]	2979.4	(17/2$^+$)	Q[@]
4129.19	3/2,5/2,7/2,7/2$^{(-)}$	1202.2 *4*	30 *7*	2926.9		
		2039.36 *24*	100 *11*	2089.81	3/2,5/2,7/2,7/2	
		2627.7 *8*	45 *6*	1501.63	3/2,5/2,7/2,7/2	
		4129.3 *10*	13 *4*	0	3/2$^{(-)}$	

$^{91}_{37}Rb_{54}$-9

Adopted Levels, Gammas (continued)

γ(^{91}Rb) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π
4199.5?	(3/2,5/2,2,7/2)	1085.9[b] *3*	100 *19*	3113.61	3/2,5/2,7/2$^{(-)}$
		4199.6[b] *8*	63 *19*	0	3/2$^{(-)}$
4211.7	3/2$^{(+)}$ to 7/2$^{(+)}$	1247.4 *4*	100 *25*	2964.14	3/2,5/2,7/2
		1834.6 *4*	75 *15*	2377.29	
		2809.9 *12*	70 *40*	1401.83	
		3490.0 *11*	43 *20*	721.67	(≤7/2$^-$)
		3705.0 *11*	38 *15*	506.592	≤7/2$^{(-)}$
4543.3	3/2$^{(+)}$ to 7/2$^{(+)}$	569.00 *19*	100 *13*	3974.3	(3/2,5/2,7/2)
		1563.6 *4*	85 *17*	2979.75	3/2,5/2,7/2
		1856.6 *8*	40 *17*	2686.81	3/2,5/2,7/2
		3041.3 *10*	62 *28*	1501.63	3/2,5/2,7/2
4545.9?	(3/2$^+$,5/2$^+$,7/2$^+$)	2930.8[b] *5*	100 *22*	1615.22	3/2,5/2,7/2
		4436.8[b] *6*	36 *7*	108.789	(5/2$^-$)
4569.7	3/2$^{(+)}$ to 7/2$^{(+)}$	2480.0 *7*	100 *29*	2089.81	3/2,5/2,7/2
		3265.4 *10*	29 *10*	1304.25	
		3435.7 *10*	45 *18*	1133.79	(9/2$^+$)
4570		473.8[#] *2*	100[#]	4097	(21/2$^+$)
4683.6	3/2$^{(+)}$ to 7/2$^{(+)}$	1626.7 *4*	100 *29*	3056.96	3/2,5/2,7/2
		1681.2 *3*	53 *9*	3002.32	3/2,5/2,7/2$^{(-)}$
		2904.4 *11*	23 *12*	1779.05	
4698.06?		1479.90[b] *21*	100 *11*	3218.22	
		3393.6[b] *3*	52 *6*	1304.25	
5298		727.5[#] *2*	100[#]	4570	
6238.9		939.4[#] *3*	100[#]	5298	

† From ^{91}Kr β^- decay, except As noted.
‡ From ^{252}Cf SF decay.
# From ^{238}U(^{48}Ca,Xγ).
@ From ^{238}U(^{48}Ca,Xγ).
& 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] Multiply placed with intensity suitably divided.
[b] Placement of transition in the level scheme is uncertain.

$^{91}_{37}Rb_{54}$-10

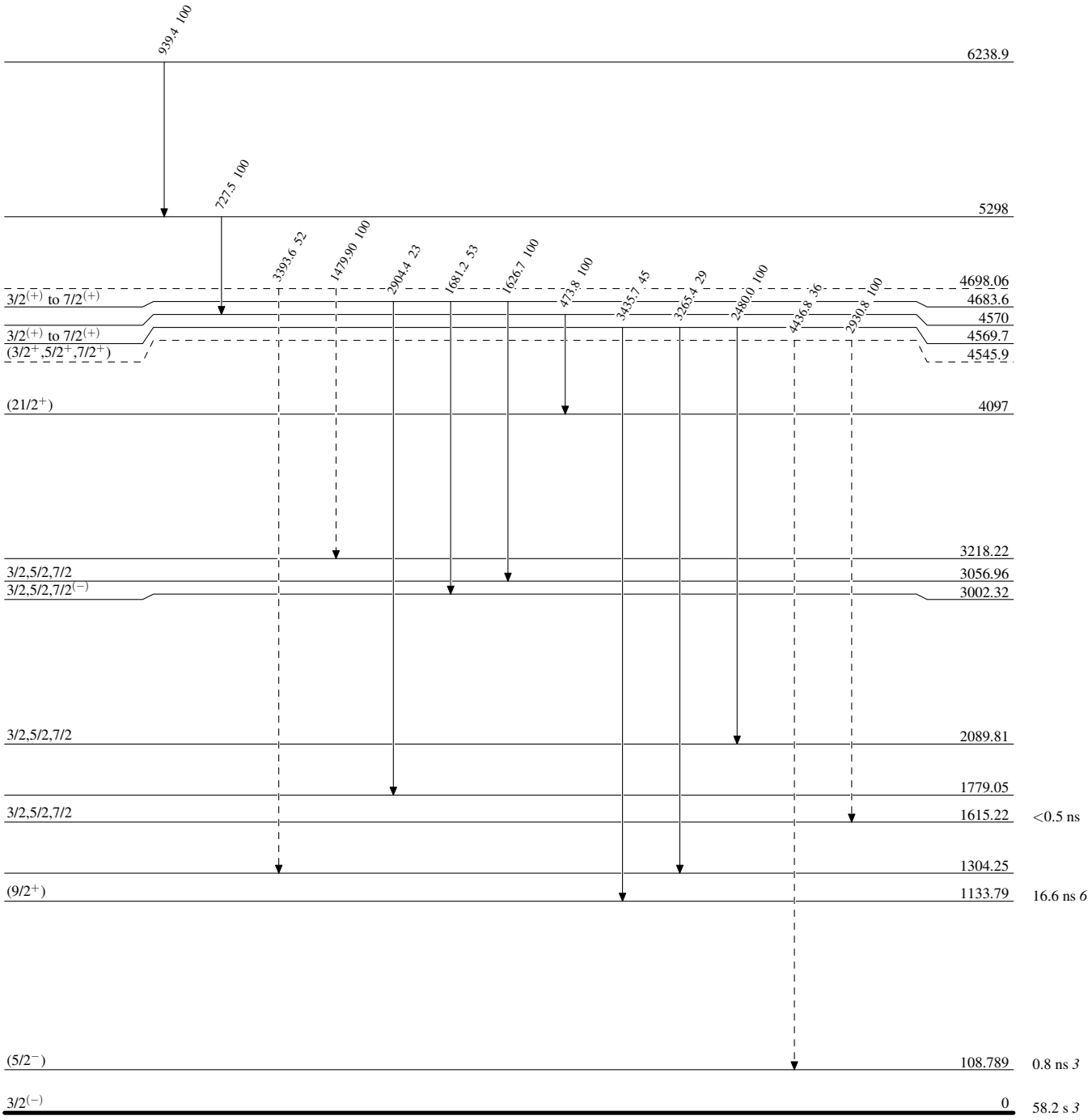
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{91}_{37}Rb_{54}$

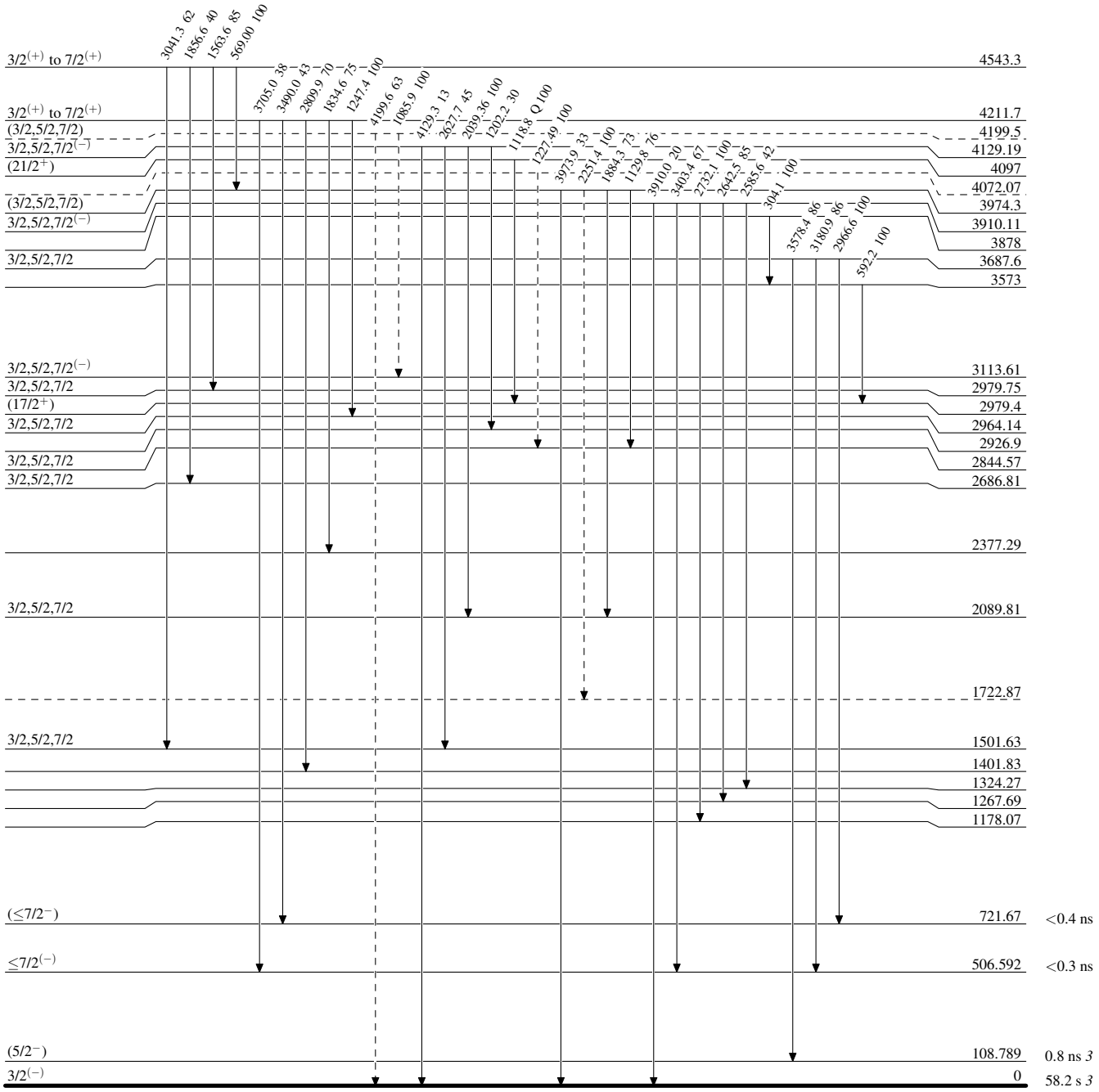
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{91}_{37}Rb_{54}$

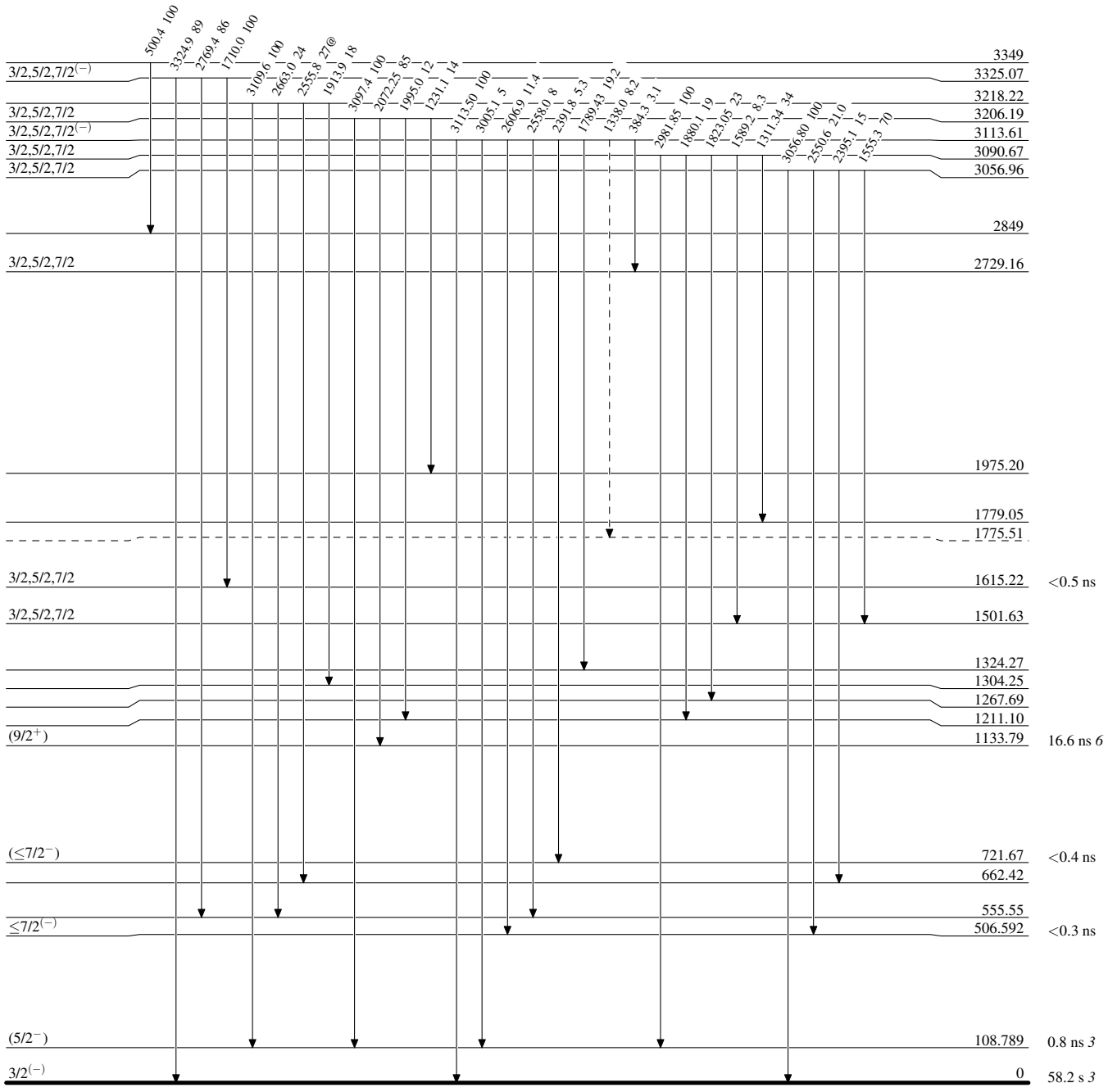
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided

γ Decay (Uncertain)



$^{91}_{37}Rb_{54}$

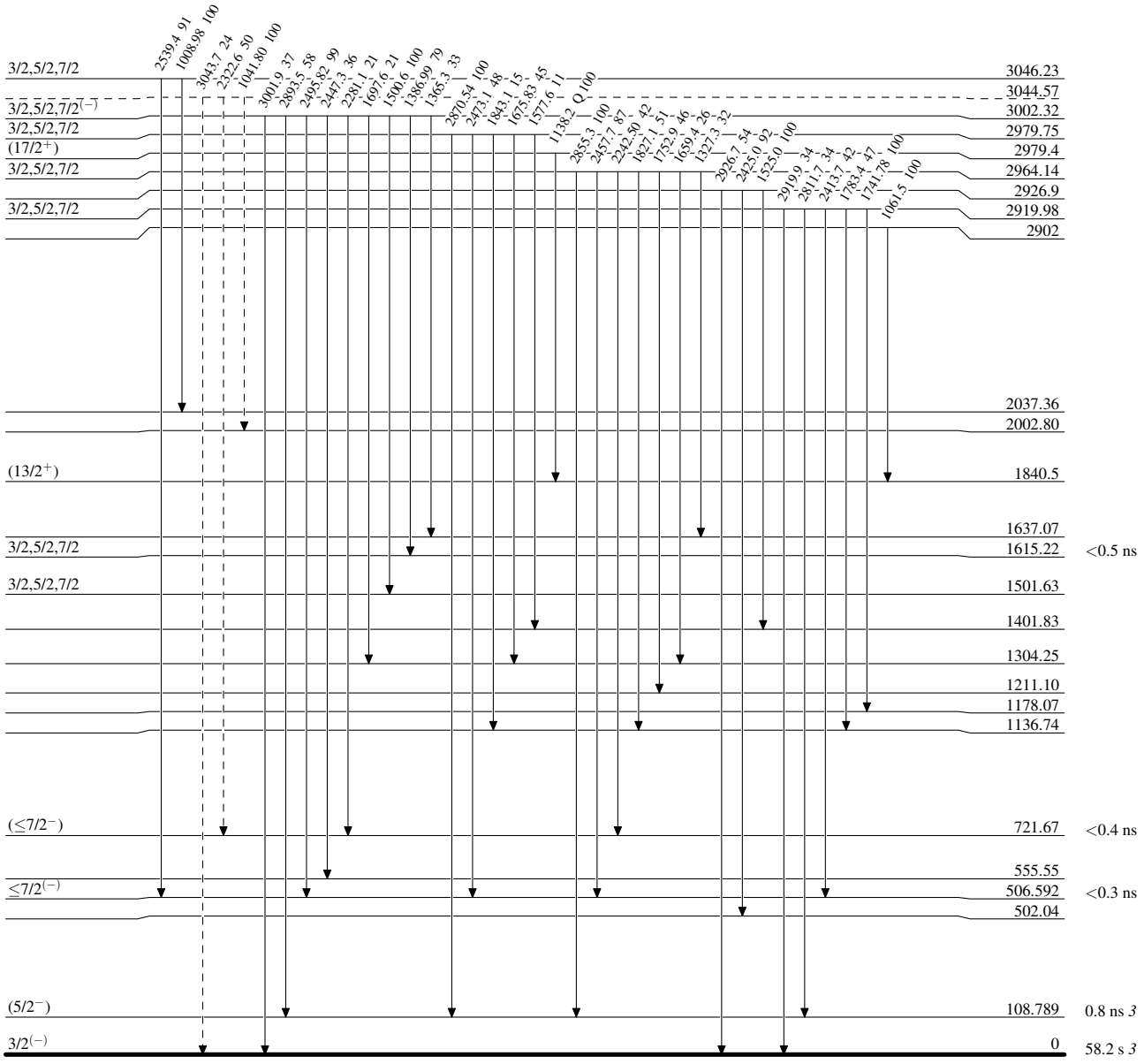
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided

γ Decay (Uncertain)

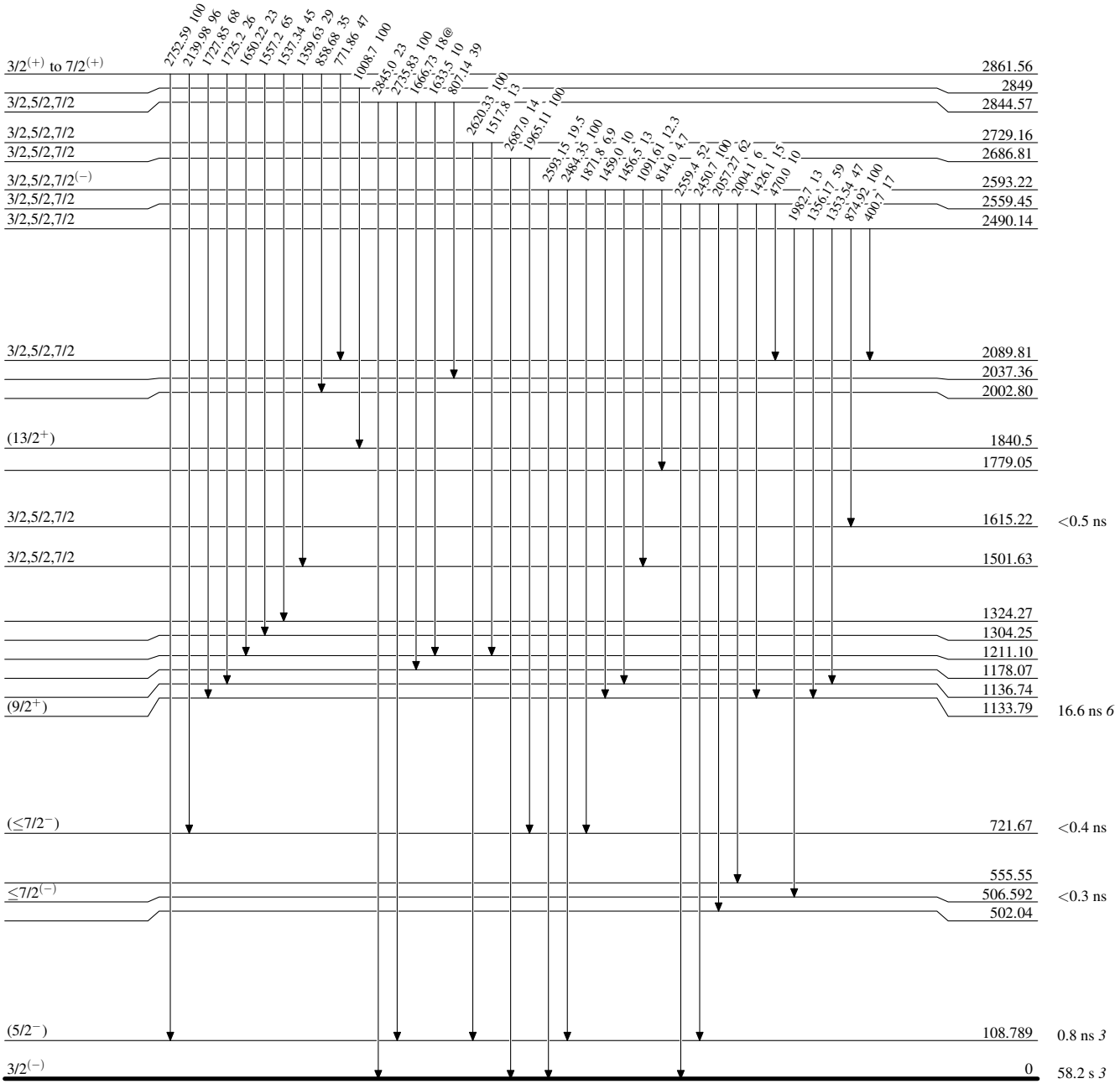


$^{91}_{37}Rb_{54}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided



$^{91}_{37}Rb_{54}$

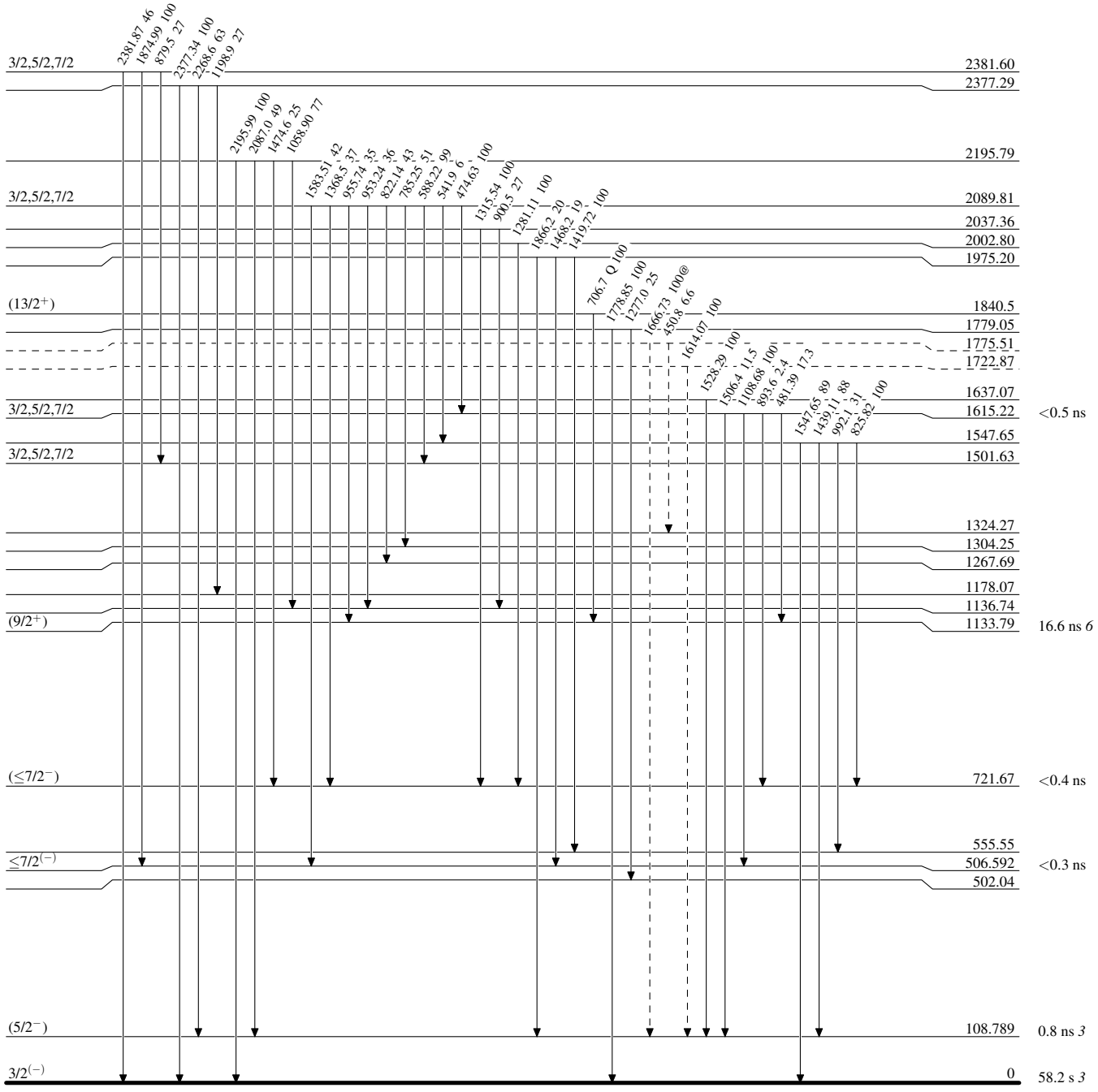
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided

- - - - - - ► γ Decay (Uncertain)

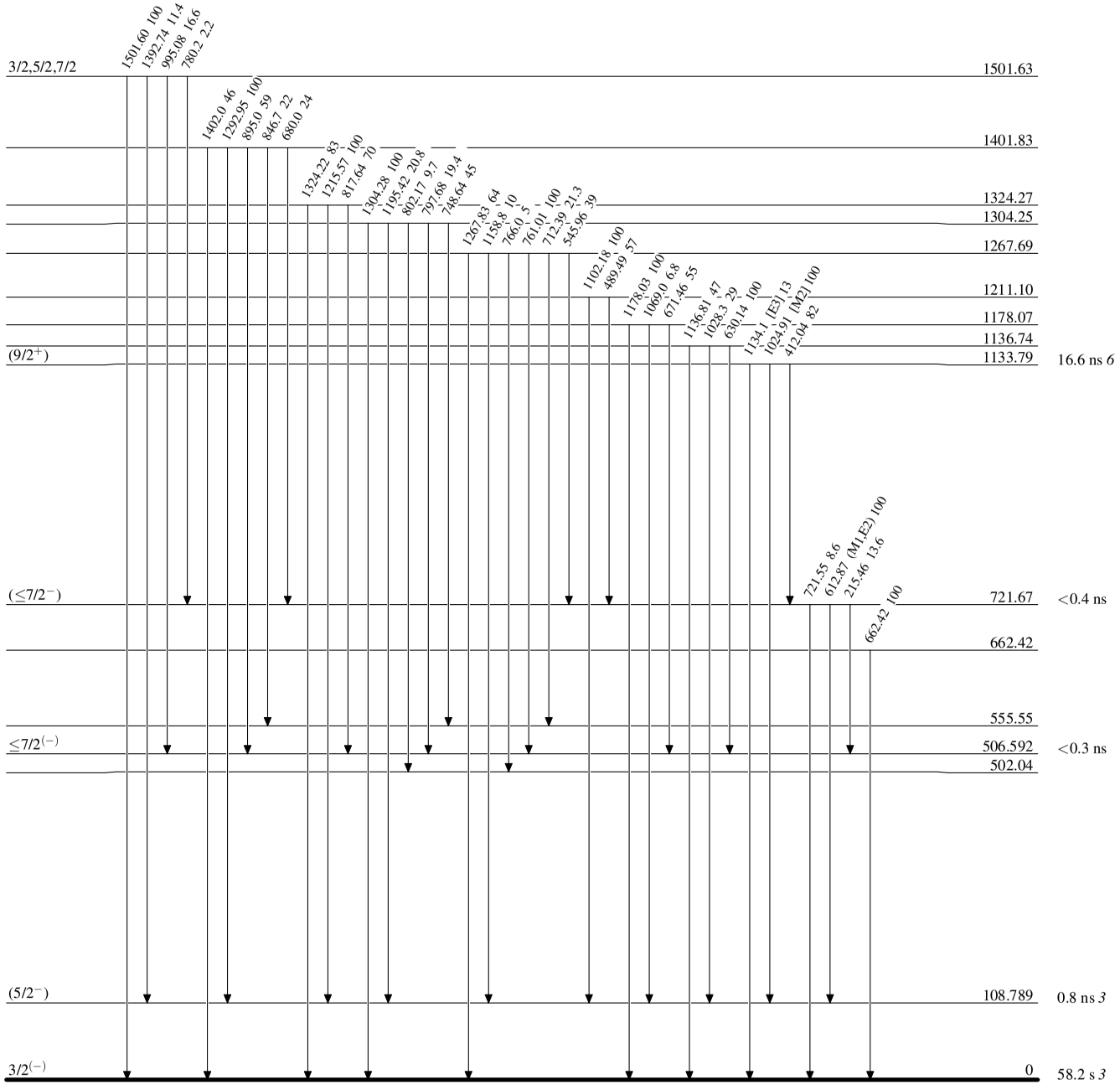


$^{91}_{37}Rb_{54}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided

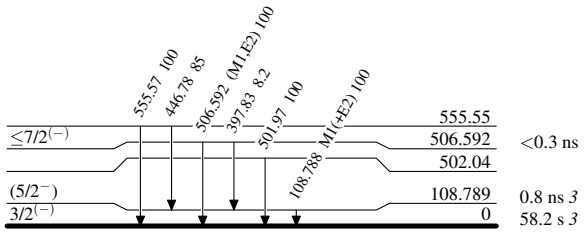


$^{91}_{37}Rb_{54}$

Adopted Levels, Gammas

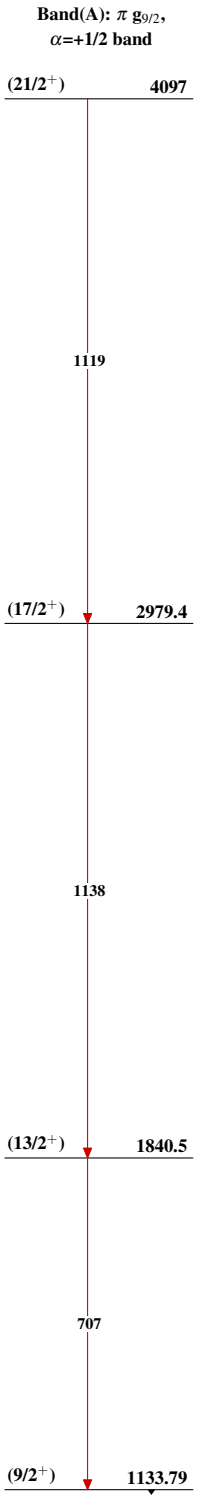
Level Scheme (continued)

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided



$^{91}_{37}Rb_{54}$

Adopted Levels, Gammas



$^{91}_{37}Rb_{54}$