Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Ameenah R. Farhan, Balraj Singh	NDS 110,1917 (2009)	30-Jun-2009

Q(β^-)=−1.06×10^4 *syst*; S(n)=13442 *11*; S(p)=5632 *8*; Q(α)=−3267 *8* 2012Wa38
Note: Current evaluation has used the following Q record −10650 syst 13442 *11* 5632 8 −3267 *8* 2009AuZZ,2003Au03.
ΔQ(β^-)=400 (syst,2009AuZZ). S(2n)=25070 *40*, s(2p)=8738 *8* (2009AuZZ, 2003Au03).
Values in 2003Au03: S(n)=13441 *12*, S(p)=5638 *11*; others are same as in 2009AuZZ.
Q(β^-): 2007WeZX estimate −10940 *200* from ^{78}Y half-life and *ft* value from systematics of 0$^+$ to 0$^+$ superallowed β transitions.
Mass measurements: 1994Tr08.
Isotope shifts, mean-square radius: 1990Bu12, 1988Si06, 1987Ea01. Theory and syst: 1996Li25, 1994Bu06, 1992Ne09.
1986Ni07: ^{54}Fe(^{28}Si,X) at E=75-145 MeV, measured γ-ray multiplicity, evaporation residue σ(E).
Structure calculations (rotational band, identical bands, etc): 1997Pe18, 1994Na09, 1983Bu09, 1979Bu20.
Additional information 1.

^{78}Sr Levels

Cross Reference (XREF) Flags

- A ^{78}Y ε decay (53 ms)
- B ^{78}Y ε decay (5.8 s)
- C ^{58}Ni(^{28}Si,2$\alpha\gamma$)

E(level)[†]	J$^\pi$[‡]	T$_{1/2}$[#]	XREF	Comments
0.0[&]	0$^+$	160 s *8*	ABC	%ε+%β^+=100 <r^2>$^{1/2}$=4.255 fm *4* (2004An14 evaluation). T$_{1/2}$: weighted average of 168 s *12* (1997Mu02, timing of 46.8γ), 159 s *8* (1992Gr09, timing of 103.5γ) and 150 s *18* (1982Li17, timing of x-rays and γ-rays). Other: 170 s *30* (quoted by 1992Gr09 from H. Grawe et al., 1981 Ann Rep HMI B373, 89 (1982)). Note that 1982Li17 quote an uncertainty of 18 s in the abstract but 12 s in the text with no decay plot shown. Additional information 2. Isotope shift and mean-square radius determined (1990Bu12).
277.60[&] *10*	2$^+$	155 ps *19*	BC	J$^\pi$: ΔJ=2, E2 γ to g.s.
780.80[&] *15*	4$^+$	5.1 ps *5*	BC	J$^\pi$: ΔJ=2, E2 γ to 2$^+$.
1477.6?[a] *10*			C	
1493.19[&] *25*	6$^+$		C	J$^\pi$: ΔJ=2 γ to 4$^+$.
1903.3 *8*			C	
2243.6?[a] *15*			C	
2310.5?[d] *8*	(3$^-$)		C	J$^\pi$: γ to 4$^+$; possible bandhead of an octupole band.
2388.4[&] *4*	8$^+$		C	J$^\pi$: ΔJ=2 γ to 6$^+$.
2537.1?[b] *8*	(4$^-$)		C	J$^\pi$: γ to 4$^+$; possible bandhead; similar band structures in ^{74}Kr and ^{82}Zr.
2606.0[e] *5*	(4$^-$)		C	J$^\pi$: ΔJ=(0) γ to 4$^+$; possible member of octupole band.
2712.0?[c] *12*	(5$^-$)		C	J$^\pi$: γ to 4$^+$; possible bandhead; similar band structures in ^{74}Kr and ^{82}Zr.
2860.1[d] *5*	(5$^-$)		C	J$^\pi$: ΔJ=1 γ to (4$^-$); γ to 4$^+$.
3080.1 *6*	(6$^-$)		C	J$^\pi$: γ's to (4$^-$) and (5$^-$).
3138.9[b] *8*	(6$^-$)		C	J$^\pi$: ΔJ=(0) γ to 6$^+$; γ to (4$^-$).
3173.1[e] *6*	(6$^-$)		C	J$^\pi$: ΔJ=1 γ to (5$^-$); γ to (4$^-$).
3230.6?[a] *18*			C	
3385.0[c] *9*	(7$^-$)		C	J$^\pi$: ΔJ=2 γ to (5$^-$); ΔJ=1 γ to 6$^+$.
3446.2[&] *4*	10$^+$		C	J$^\pi$: ΔJ=2 γ to 8$^+$.
3525.6[d] *6*	(7$^-$)		C	J$^\pi$: γ's to (5$^-$) and (6$^-$).

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Adopted Levels, Gammas (continued)

^{78}Sr Levels (continued)

E(level)[†]	J^{π}[‡]	XREF	Comments
3927.3[b] *10*	(8⁻)	C	J^{π}: ΔJ=2 γ (6⁻).
3963.9[e] *9*	(8⁻)	C	J^{π}: γ's to (6⁻) and (7⁻).
4251.1[c] *9*	(9⁻)	C	J^{π}: γ's to (7⁻) and 8⁺.
4400.6[d] *12*	(9⁻)	C	J^{π}: γ to (7⁻).
4657.5[&] *5*	12⁺	C	J^{π}: ΔJ=(2) γ to 10⁺.
4883.3[b] *11*	(10⁻)	C	J^{π}: γ to (8⁻).
5281.1[c] *11*	(11⁻)	C	J^{π}: γ to (9⁻).
5468.6[d] *16*	(11⁻)	C	J^{π}: γ to (9⁻).
5982.0[b] *12*	(12⁻)	C	J^{π}: γ to (10⁻).
6025.4[&] *7*	14⁺	C	J^{π}: ΔJ=2 γ to 12⁺.
6035.8[@] *9*	(14⁺)	C	J^{π}: γ to 12⁺.
6436.3[c] *12*	(13⁻)	C	J^{π}: γ to (11⁻).
7190[b] *2*	(14⁻)	C	J^{π}: γ to (12⁻).
7559.1[&] *8*	16⁺	C	J^{π}: ΔJ=2 γ to 14⁺.
7671.3[c] *14*	(15⁻)	C	J^{π}: γ to (13⁻).
8474[b] *2*	(16⁻)	C	J^{π}: γ to (14⁻).
8987[c] *2*	(17⁻)	C	J^{π}: γ to (15⁻).
9253.8[&] *9*	18⁺	C	J^{π}: ΔJ=2 γ to 16⁺.
9870[b] *3*	(18⁻)	C	J^{π}: γ to (16⁻).
10448[c] *2*	(19⁻)	C	J^{π}: γ to (17⁻).
10995[&] *1*	(20⁺)	C	J^{π}: γ to 18⁺.
11195[@] *1*	(20⁺)	C	J^{π}: γ to 18⁺.
11428[b] *4*	(20⁻)	C	J^{π}: γ to (18⁻).
12109?[c] *3*	(21⁻)	C	J^{π}: possible γ to (19⁻).
12981[&] *2*	(22⁺)	C	J^{π}: γ to (20⁺).
13294[@] *2*	(22⁺)	C	J^{π}: γ to (20⁺).
15233?[&] *4*	(24⁺)	C	J^{π}: possible γ to (22⁺).
17764?[&] *6*	(26⁺)	C	J^{π}: possible γ to (24⁺).

[†] From least-squares fit to Eγ's.

[‡] As proposed by 1997Ru03 based on $\gamma\gamma(\theta)$(DCO) data and band associations, with the exception that parentheses have been added by the evaluators when strong arguments are lacking. It is assumed that the spin ascend with excitation energy in heavy-ion fusion reactions.

[#] For excited states, values are from neutron-gated recoil-distance method (1982Li08).

[@] Level connected with g.s. band.

[&] Band(A): $K^{\pi}=0^+$, g.s. band. Strongly deformed structure with a deformation parameter of $\beta_2\approx0.40$ and Q(transition)=3.29 *19* for 2⁺ state and 3.47 *17* for 4⁺ state.

[a] Band(B): ΔJ=2 band (?).

[b] Band(C): Band based on (4⁻).

[c] Band(D): Band based on (5⁻).

[d] Band(E): Possible octupole band, α=1.

[e] Band(e): Possible octupole band, α=0.

Adopted Levels, Gammas (continued)

$\gamma(^{78}Sr)$

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†#]	α[a]	Comments
277.60	2+	277.6 *1*	100	0.0	0+	E2	0.0252	B(E2)(W.u.)=103 *13* α(K)=0.0220 *3*; α(L)=0.00266 *4*; α(M)=0.000447 *7*; α(N+..)=5.76×10^{-5} *9* α(N)=5.45×10^{-5} *8*; α(O)=3.11×10^{-6} *5*
780.80	4+	503.2 *1*	100	277.60	2+	E2		B(E2)(W.u.)=169 *17*
1477.6?		1200[b] *1*	100	277.60	2+			
1493.19	6+	712.4 *2*	100	780.80	4+	Q		
1903.3		1626 *1*	100	277.60	2+			
2243.6?		766[b] *1*	100	1477.6?				
2310.5?	(3−)	1530[‡@b] *1*	100	780.80	4+			
2388.4	8+	895.2 *2*	100	1493.19	6+	Q		
2537.1?	(4−)	1756 *1*	100	780.80	4+			
2606.0	(4−)	703 *1*	18 *9*	1903.3				
		1825.0 *5*	100 *9*	780.80	4+	[&]		
2712.0?	(5−)	1931[‡] *2*	100	780.80	4+			
2860.1	(5−)	254.0 *2*	100 *14*	2606.0	(4−)	D		
		550 *1*	29 *14*	2310.5?	(3−)			
		2080 *2*	71 *14*	780.80	4+			
3080.1	(6−)	219.8 *3*	100 *50*	2860.1	(5−)			
		475 *1*	100 *50*	2606.0	(4−)			
3138.9	(6−)	601.7 *5*	67 *17*	2537.1?	(4−)			
		1646 *1*	100 *17*	1493.19	6+	[&]		
3173.1	(6−)	313.0 *4*	100 *33*	2860.1	(5−)	D		
		567 *1*	67 *33*	2606.0	(4−)			
3230.6?		987[b] *1*	100	2243.6?				
3385.0	(7−)	673 *1*	50 *17*	2712.0?	(5−)	Q		
		1892 *1*	100 *17*	1493.19	6+	D		
3446.2	10+	1057.8 *2*	100	2388.4	8+	Q		
3525.6	(7−)	352 *1*	17 *17*	3173.1	(6−)			
		445.4 *4*	33 *17*	3080.1	(6−)			
		665.6 *3*	100 *17*	2860.1	(5−)			
3927.3	(8−)	788.4 *5*	100	3138.9	(6−)	Q		
3963.9	(8−)	438 *1*	50 *50*	3525.6	(7−)			
		791 *1*	100 *50*	3173.1	(6−)			
4251.1	(9−)	866.1 *3*	100 *12*	3385.0	(7−)			
		1862 *2*	62 *12*	2388.4	8+			
4400.6	(9−)	875 *1*	100	3525.6	(7−)			
4657.5	12+	1211.3[‡] *3*	100	3446.2	10+	(Q)		
4883.3	(10−)	956.0 *5*	100	3927.3	(8−)			
5281.1	(11−)	1030.0 *5*	100	4251.1	(9−)			
5468.6	(11−)	1068 *1*	100	4400.6	(9−)			
5982.0	(12−)	1098.7 *6*	100	4883.3	(10−)			
6025.4	14+	1367.9 *4*	100	4657.5	12+	Q		
6035.8	(14+)	1378 *1*	100	4657.5	12+			
6436.3	(13−)	1155.2 *6*	100	5281.1	(11−)			
7190	(14−)	1208[‡] *1*	100	5982.0	(12−)			
7559.1	16+	1523 *1*	38 *5*	6035.8	(14+)			
		1533.7 *4*	100 *5*	6025.4	14+	Q		
7671.3	(15−)	1235.0 *7*	100	6436.3	(13−)			
8474	(16−)	1284 *1*	100	7190	(14−)			
8987	(17−)	1316 *1*	100	7671.3	(15−)			
9253.8	18+	1694.7 *5*	100	7559.1	16+	Q		

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Adopted Levels, Gammas (continued)

$\gamma(^{78}Sr)$ (continued)

E_i(level)	J_i^{π}	E_{γ}†	I_{γ}†	E_f	J_f^{π}	E_i(level)	J_i^{π}	E_{γ}†	I_{γ}†	E_f	J_f^{π}
9870	(18^-)	1396 *2*	100	8474	(16^-)	12109?	(21^-)	1661[b] *2*	100	10448	(19^-)
10448	(19^-)	1461 *1*	100	8987	(17^-)	12981	(22^+)	1986 *2*	100	10995	(20^+)
10995	(20^+)	1741 *1*	100	9253.8	18^+	13294	(22^+)	2099 *2*	100	11195	(20^+)
11195	(20^+)	1941‡ *1*	100	9253.8	18^+	15233?	(24^+)	2252[b] *3*	100	12981	(22^+)
11428	(20^-)	1558 *3*	100	9870	(18^-)	17764?	(26^+)	2531[b] *4*	100	15233?	(24^+)

† From ^{58}Ni(^{28}Si,2$\alpha\gamma$).

‡ Unresolved doublet structure.

From DCO ratios in ^{58}Ni(^{28}Si,2$\alpha\gamma$) and RUL (when level lifetime is known).

@ From level-energy difference.

& DCO consistent with ΔJ=0, dipole transition.

[a] 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.

[b] Placement of transition in the level scheme is uncertain.

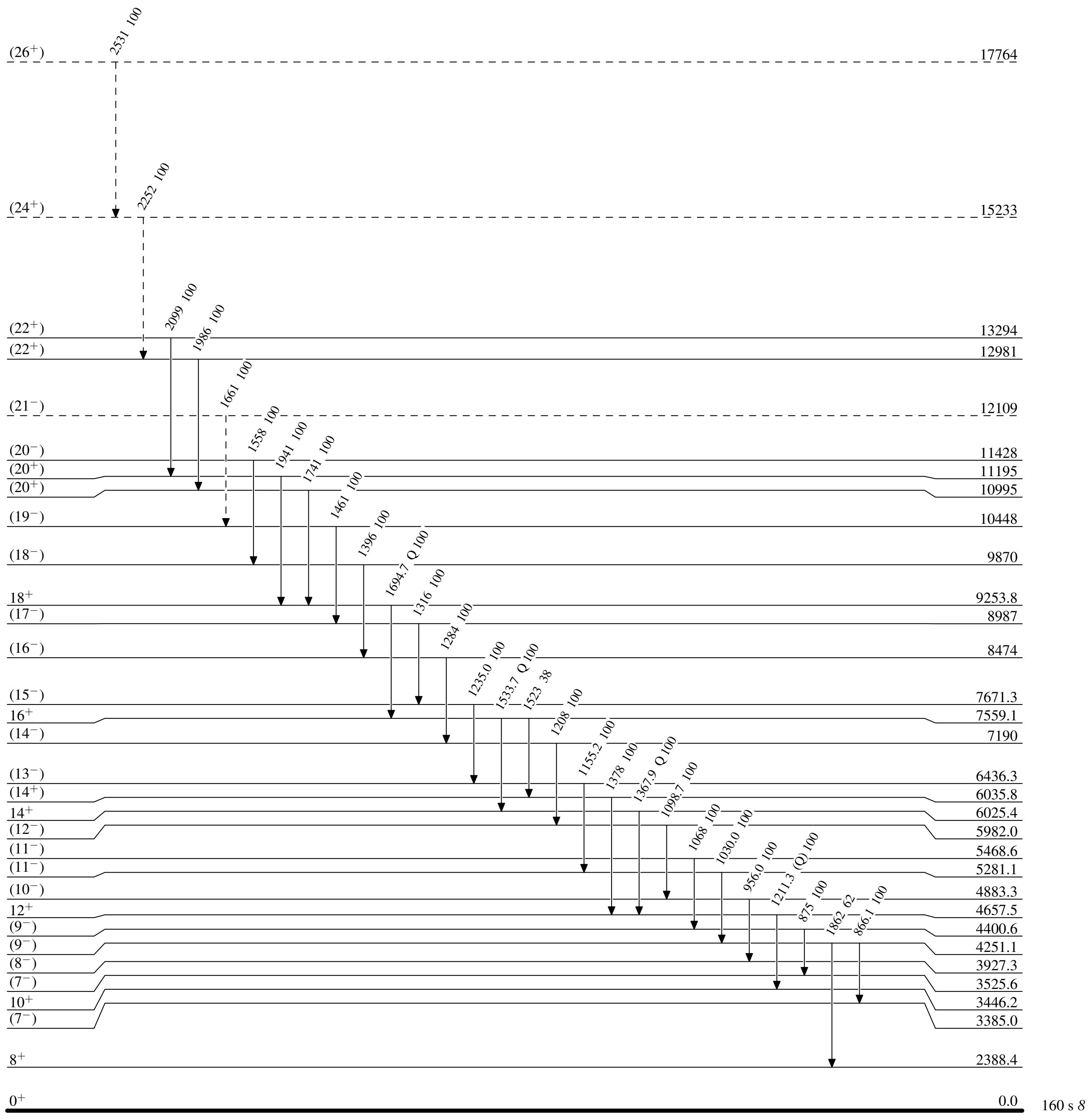
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level

γ Decay (Uncertain)

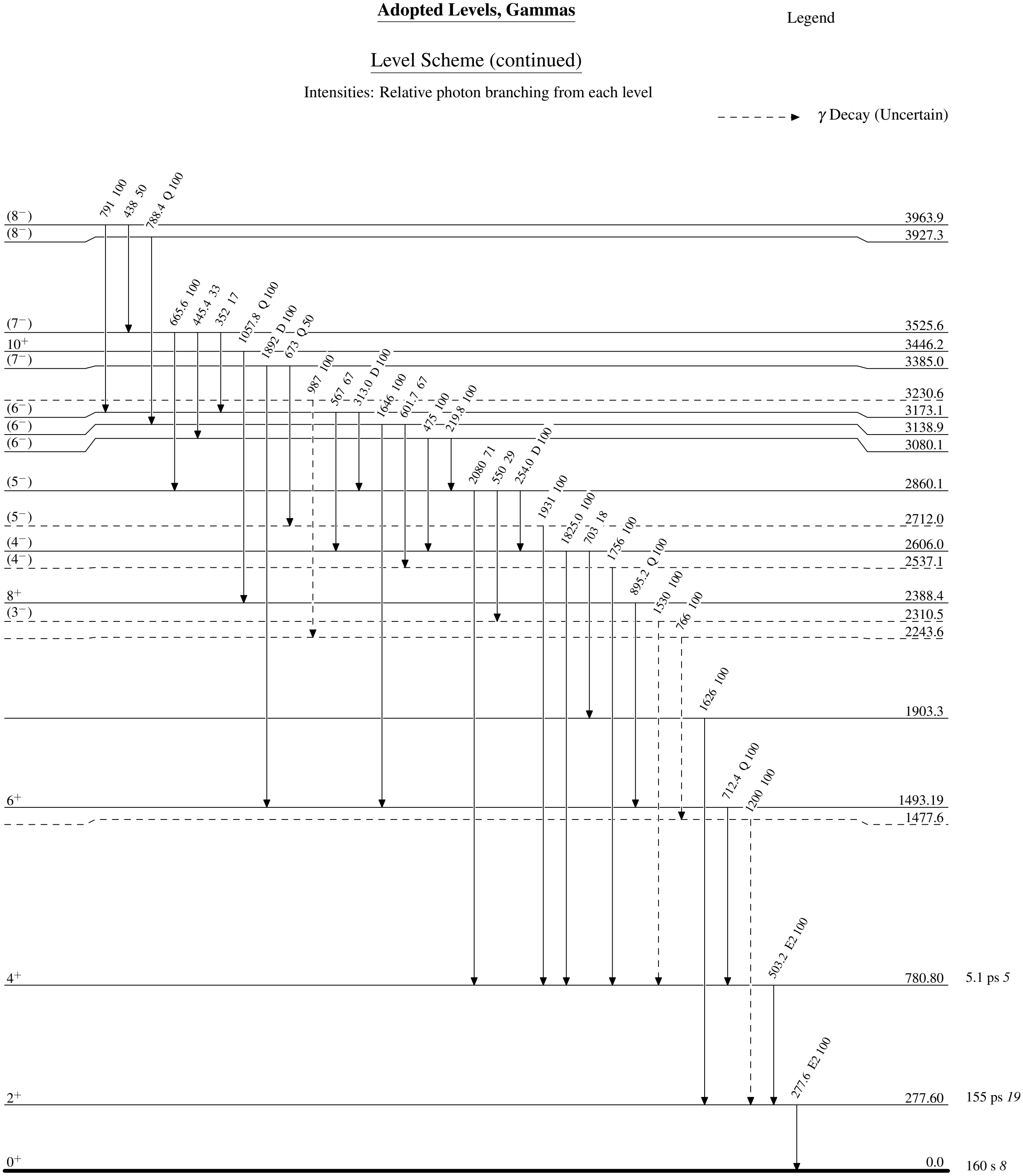


$^{78}_{38}Sr_{40}$

Adopted Levels, Gammas

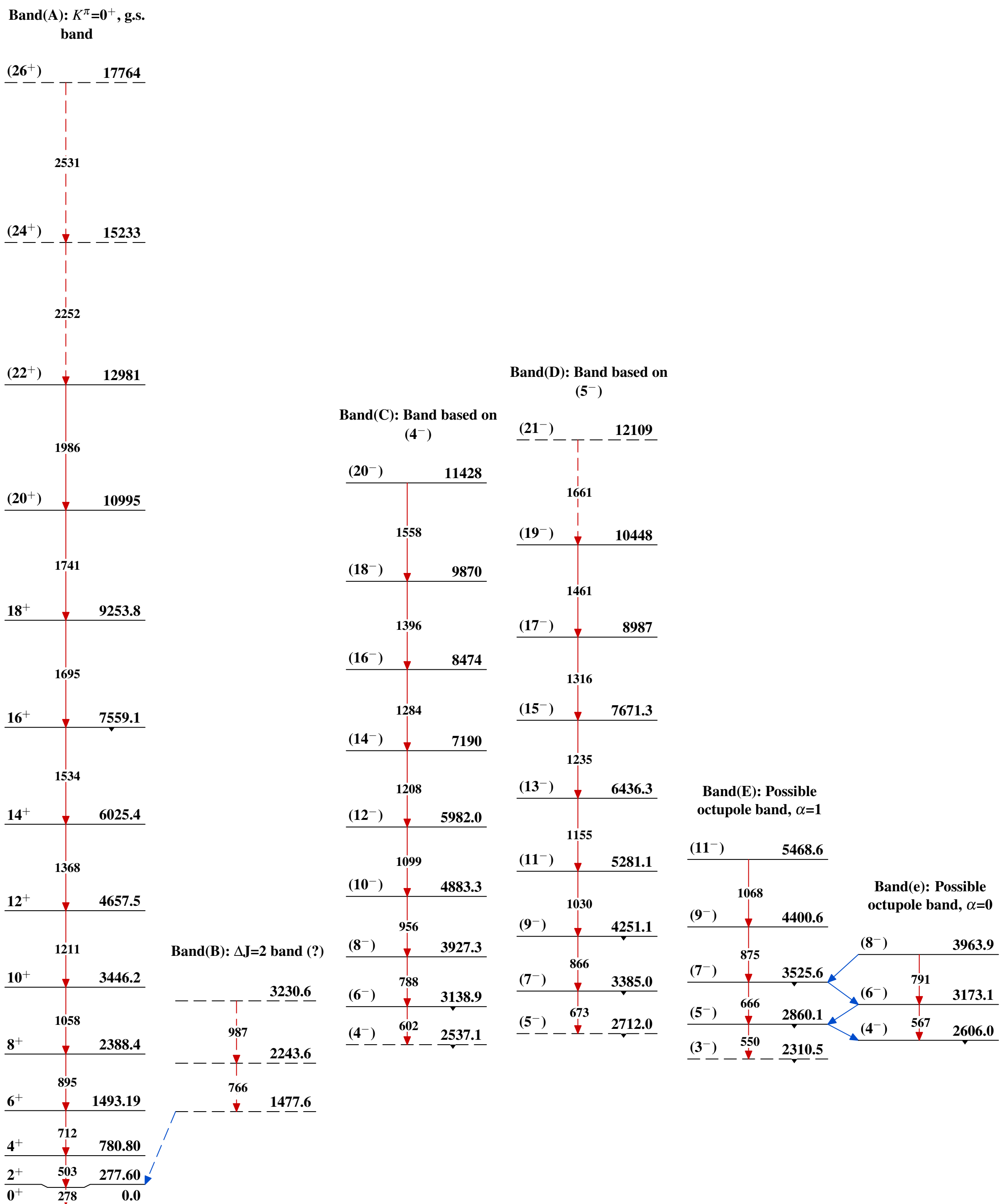
Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{78}_{38}Sr_{40}$

Adopted Levels, Gammas



$^{78}_{38}Sr_{40}$

Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. K. Tuli, E. Browne	NDS 157, 260 (2019)	1-Mar-2019

Q(β^-)=−7946 *8*; S(n)=12553 *7*; S(p)=7842 *8*; Q(α)=−4257 *6* 2017Wa10

1989Ku11: ^{12}C(^{72}Ge,2nγ), E=215 MeV. Transient-field method, deduced g-factors.

1979Al19: Measured $\sigma(\theta)$, neutron time-of-flight, for g.s. in (^{3}He,n), E=25.4 MeV,. Enriched target.

Isotope shift, RMS radii, hyperfine structure studies: 1993He12, 1993Hi11, 1993Ku19, 1994Bu06, 1994Lo12, 1990Bu12 (also 1988Si06), 1987Ea01 (also 1986Ea01), 1987An02 (also 1986An39).

Theoretical calculations:

2016Da01 SDB band-head spin.
2016Mo18 Charge and mass rms radii.
2015Sa26 Low-lying levels, bands pn interacting boson model.
2014Zh43 Deformation parameter.
2010Fa08,2010ZhZQ,2009Fa14 spin-dependence of g-factors in gs band.
2008Mi17 Half-life shell model.
2003Me26 2$^+$ states, g-factors.
2003ReZZ Studied SDB.
2002Bu13 SDB transition quadrupole moments.
2002Li18 SDB transition energies, moements of inertia.
1999Gu11 Calculated cluster-decay probability.
1999Sa46 Hartree-Fock plus RPA.
1997Da16 SD band data, cranked-shell model.
1995Ba45 RMS radii, mean field.
1995Ba78 level energy vs deformation, constrained Hartree-Fock.
1995La07 relativistic mean-filed theory.
1994Do19 levels, mean field.
1994Iw05 level energies, Hartree Fock.
1994Na09 quasi-particle RPA.
1991Ch01 structure of superdeformed GDR.
1991Bo27, 1985Bo36, 1985Na02 microscopic analysis of deformation.
1990Ba11, 1983Bu09, 1984He07, 1995Ke09, 1996Ca10,1997Su08 interacting-boson model.
1982Fu03 cranked-shell model.
1983Ta03 pairing vibrations.
1980Ca23 Hartree-Fock calculation of binding energy and charge radius.
1971Ki16, 1973Og01 shell-model calculations.

^{82}Sr Levels

Cross Reference (XREF) Flags

A	^{82}Y β^+ decay	E	^{84}Sr(p,t)
B	^{56}Fe(^{29}Si,2pnγ)	F	^{80}Kr(α,2nγ)
C	^{52}Cr(^{34}S,2p2nγ)	G	^{58}Ni(^{30}Si,α2pγ),(^{28}Si,4pγ):SD
D	^{70}Ge(^{16}O,2n2pγ)		

E(level)[†]	J$^\pi$[‡]	$T_{1/2}$[@]	XREF	Comments
0[d]	0$^+$	25.35 d *3*	ABCDEF	%ε=100 $T_{1/2}$: from $T_{1/2}$=25.36 d *3* (HPGe, 2009Pi02; Ge(Li) 1987Ho06), 25.34 d *2* (ic, 2009Pi02), 25.34 d *5* (1987Ju02). others: 25.55 d *15* (1978Gr17) 25.0 d *4* (1958Sa20), 25.5 d *5* (1953Kr10).

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Adopted Levels, Gammas (continued)

^{82}Sr Levels (continued)

E(level)†	Jπ‡	$T_{1/2}$@	XREF	Comments
				$\Delta<r^2>$(^{88}Sr−^{82}Sr)=0.179 fm^2 *24* (1990Bu12,1988Si06); 0.182 fm^2 *6* (1988Si06, deduced from data of 1987Ea01,1986Ea01); 0.169 fm^2 *13* or 0.220 fm^2 *15* (1987An02,1986An39). $\Delta<r^2>$(^{83}Sr−^{82}Sr)=−0.017 fm^2 *7* (1996Li25). $\Delta<r^2>$(^{82}Sr−^{81}Sr)=−0.053 fm^2 *8* (1996Li25).
573.54[d] *8*	2^+	8.9[&] ps *4*	ABCDEF	μ=+0.88 *38* (2014Ku10) g=+0.44 *19* (2014Ku10) measured using the transient-field (tf) technique in inverse kinematics with perturbed angular correlation method in ^{12}C(^{78}Kr,2$\alpha\gamma$). Other g=0.47 *7* (2008Yu04,2010Fa08); values of g factors were read from figure 1 of 2008Yu04. Jπ: L(p,t)=2. $T_{1/2}$: other: 10.7 ps *21* from 1996Jo05 In ^{58}Ni(^{27}Al,3p), while studying ^{82}Y.
1175.71[c] *8*	2^+	7.5[&] ps *24*	ABCDEF	Jπ: L(p,t)=2.
1310.89 *13*	0^+	<3.5 ns	A E	Jπ: L(p,t)=0. $T_{1/2}$: from $\gamma\gamma$ and $\beta\gamma$, ^{82}Y β^+ decay.
1328.54[d] *10*	4^+	1.0[&] ps *2*	BCD F	μ=+2.1 *16* (2014Ku10) g=+0.53 *39* (2014Ku10) measured using the transient-field (tf) technique in inverse kinematics with perturbed angular correlation method in ^{12}C(^{78}Kr,2$\alpha\gamma$). Other g=0.46 *8* (2008Yu04,2010Fa08); values of g factors were read from figure 1 of 2008Yu04. Jπ: stretched E2 cascade indicated by angular distribution and polarization in (^{16}O,2n2pγ).
1688.96[b] *11*	3^+		BCD F	Jπ: J=3 from $\gamma(\theta)$ of 1115γ in (^{16}O,2n2pγ); E1 γ from 4^-.
1865 *5*	2^+		A E	Jπ: L(p,t)=2.
1996.02[c] *10*	4^+	1.3[&] ps *4*	BCD F	Jπ: stretched E2 cascade indicated by angular distribution and polarization in (^{16}O,2n2pγ).
2195 *5*	2^+		E	Jπ: L(p,t)=2.
2229.47[d] *11*	6^+	0.37 ps *+15−11*	BCD F	μ=3.5 *5* (2008Yu04) μ: From g=0.58 *8* (2008Yu04,2010Fa08) measured by transient-magnetic field ion-implantation perturbed angular distribution method in ^{58}Ni(^{28}Si,4pγ); values of g factors were read from figure 1 of 2008Yu04. Jπ: stretched E2 cascade indicated by angular distribution and polarization in (^{16}O,2n2pγ). $T_{1/2}$: other value: 0.9 ps *1* from RDM, ^{70}Ge(^{16}O,2n2pγ).
2401.82[f] *10*	3^-		B DE	Jπ: L(p,t)=3.
2525.80[b] *12*	5^+		BCD	
2665 *5*	0^+		E	Jπ: L(p,t)=0.
2817.31[f] *11*	5^-	3.0[&] ps *6*	BCDEF	μ=+2 *2* (2014StZZ) Jπ: from $\gamma(\theta)$ and polarization in (^{16}O,2n2pγ) indicating E1 transition to 4^+. μ: From g-factor=+0.3 *4* (1989Ku11), transient-field method.
2824.40[j] *12*	4^-		BCD	Jπ: based on $\gamma(\theta)$ and polarization of the 1136-keV decay γ, ^{70}Ge(^{16}O,2p2nγ).
2836.26[c] *12*	6^+	0.6[&] ps *4*	BCD F	Jπ: stretched E2 cascade indicated by angular distribution and polarization in (^{16}O,2n2pγ).
2885 *5*	(2^+)		E	Jπ: L(p,t)=(2).
2920 *5*			E	
3006.91[i] *12*	4^-		B	Jπ: D γ′s to 3^+ and 4^+ levels; decays to 3^-.
3073.28[g] *14*	(5^-)		B	Jπ: tentative assignment from the seven linking gammas which connect this state to 4^+, 6^+, 5^-, 6^-, and 7^- states. The four DCO ratios measured in (^{29}Si,2pnγ) are consistent with this assignment.

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Adopted Levels, Gammas (continued)

^{82}Sr Levels (continued)

E(level)[†]	J^{π}[‡]	$T_{1/2}$[@]	XREF	Comments
3086.23[j] *12*	6^-		BCD	J^{π}: γ to $(5)^-$ shows ΔJ=1 angular distribution, (^{16}O,2p2nγ); γ to 4^- is consistent with stretched E2.
3142.30[h] *22*	(5^-)		B	J^{π}: fed by 465γ from 7^-, and decays to 4^+.
3242.82[d] *12*	8^+	0.24 ps *+10−6*	BCD F	μ=6.6 *10* (2008Yu04) μ: From g=0.82 *12* (2008Yu04,2010Fa08) measured by transient-magnetic field ion-implantation perturbed angular distribution method in ^{58}Ni(^{28}Si,4pγ); values of g factors were read from figure 1 of 2008Yu04. J^{π}: stretched E2 γ to 6^+ state. g-factor=+0.7 *1* (1989Ku11) transient-field method. $T_{1/2}$=0.76 ps *14* (1989Ku11).
3339.57[i] *12*	6^-		B F	μ=+5.4 *6* μ: From g-factor=+0.9 *1* (1989Ku11), transient-field method.
3476.96[b] *15*	7^+		BCD	
3511.15 *13*	$(7)^-$		CD	J^{π}: stretched E2 γ cascade indicated by angular distribution and polarization in (^{16}O,2n2pγ).
3525.75[f] *12*	7^-		BCD	J^{π}: from $\gamma(\theta)$ in (^{16}O,2n2pγ), consistent with DCO ratios of decay γ's obtained in (^{29}Si,2pnγ).
3565.75[g] *13*	7^-		BCD	J^{π}: DCO ratio of 801γ from 9^- state is consistent with Q.
3607.94[h] *13*	7^-		BCD	J^{π}: DCO ratio of 758γ from 9^- state is consistent with Q.
3622.78[c] *12*	8^+	0.7[&] ps *4*	BCD F	μ=+5.6 *8* (2014StZZ) J^{π}: stretched E2 cascade indicated by angular distribution and polarization in (^{16}O,2n2pγ). μ: From g-factor=+0.7 *1* (1989Ku11), transient-field method.
3686.07[e] *15*	(8^+)[#]		BCD F	J^{π}: $\gamma(\theta)$ indicates probable ΔJ=0 transition to 8^+. DCO ratio of γ to 6^+ is consistent with Q.
4033.49[i] *15*	8^-		B	J^{π}: DCO ratio of γ to 6^- is consistent with Q.
4142.60[j] *14*	8^-		B	J^{π}: stretched E2 γ to 6^- state.
4248.4 *10*			C	
4350.30[d] *15*	10^+	0.14 ps *+6−4*	BCD F	J^{π}: DCO ratio of γ to 8^+ is consistent with Q, M2 ruled out by RUL.
4366.82[f] *14*	9^-		BCD	J^{π}: 841γ to 7^- is consistent with Q.
4387.09 *14*	(9^-)		CD	J^{π}: stretched E2 cascade indicated by angular distribution in (^{16}O,2n2pγ).
4423.85[c] *14*	10^+	0.9[&] ps *2*	BCD	μ=+11 *5* (2014StZZ) J^{π}: stretched E2 cascade indicated by angular distribution and polarization in (^{16}O,2n2pγ). μ: From g-factor=+1.1 *5* (1989Ku11), transient-field method.
4472.85[g] *14*	9^-		B	J^{π}: from DCO ratios of decay γ's.
4492.5[b] *4*	9^+		B	J^{π}: DCO ratio of γ to 7^+ is consistent with Q.
4637.34[e] *18*	(10^+)[#]		BC	J^{π}: DCO ratio of 1395γ to 8^+ state is consistent with Q.
4909.39[i] *18*	10^-	0.36 ps *+11−8*	BC	J^{π}: stretched E2 γ to 8^- state.
5237.4[j] *4*	10^-		B	
5308.15[f] *17*	11^-	0.30 ps *+10−7*	BCD	J^{π}: stretched E2 γ to 9^- state.
5333.8 *15*			C	
5392.31? *18*			D	
5427.12[c] *17*	12^+	0.33 ps *+11−8*	BCD	J^{π}: stretched E2 γ to 10^+ state.
5468.9 *10*			B	
5479.09[g] *25*	(11^-)		B	
5569.0[d] *4*	12^+	0.06 ps *6*	BC	J^{π}: DCO ratio of γ to 10^+ is consistent with Q, M2 ruled out by RUL.
5738.2[e] *5*	(12^+)[#]		BC	
5913.9[i] *4*	12^-	0.27 ps *+11−8*	BCD	J^{π}: stretched E2 γ to 10^- state.
6367.2[f] *3*	13^-	0.15 ps *+8−6*	BCD	J^{π}: stretched E2 γ to 11^- state.
6450.1 *11*			B	

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{82}Sr Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$[@]	XREF	Comments
6543.6[c] *4*	14⁺	0.25 ps *+11−9*	BCD	Jπ: stretched E2 γ to 12⁺ state.
6556.4 *18*			C	
6564.8[g] *4*	(13⁻)		B	
6937.0[d] *5*	(14⁺)	0.04 ps *+6−3*	BC	
7066.5[i] *5*	14⁻	0.08 ps *+5−4*	BC	Jπ: stretched E2 γ to 12⁻ state.
7534.6 *11*			B	
7545.5[f] *4*	15⁻	0.12 ps *5*	BC	Jπ: stretched E2 γ to 13⁻ state.
7788.2[g] *5*	(15⁻)		B	Jπ: DCO ratio of γ to (13⁻) state is consistent with Q, M2 ruled out by RUL.
7812.0[c] *6*	16⁺	0.09 ps *+5−4*	BC	Jπ: stretched E2 γ to 14⁺ state.
7936.1 *20*			C	
8377.6[i] *6*	16⁻	0.14 ps *6*	BC	Jπ: stretched E2 γ to 14⁻ state.
8434.6[d] *6*	(16⁺)	<0.18 ps	BC	Jπ: stretched E2 γ to (14⁺) state.
8842.0[f] *7*	17⁻	0.08 ps *6*	BC	Jπ: stretched E2 γ to 15⁻ state.
9167.4[g] *7*	(17⁻)		B	
9237.8[c] *7*	18⁺	0.05 ps *+7−4*	BC	Jπ: DCO ratio of γ to 16⁺ is consistent with Q, M2 ruled out by RUL.
9478.1 *23*			C	
9842.6[i] *12*	(18⁻)	<0.19[a] ps	BC	
10061.6 *12*	(18⁺)		C	
10258.8[f] *9*	(19⁻)	0.08 ps *+6−4*	BC	
10709.4[g] *12*	(19⁻)		B	
10872.4[c] *9*	(20⁺)	<0.21[a] ps	BC	
11379.6[i] *16*	(20⁻)		BC	
11798.4[f] *10*	(21⁻)	<0.06[a] ps	BC	
11837.6? *16*	(20⁺)		C	
12758.8 *13*	(22⁺)		C	
13005.7[i] *19*	(22⁻)		BC	
13489.4[f] *14*	(23⁻)		BC	
14832.7? *21*	(24)		C	
14910.8 *17*	(24⁺)		C	
15409.4 *17*	(25)		C	
17246.9? *20*	(26⁻)		C	
17616.5 *20*	(27)		C	
x[k]	J		G	Additional information 1. Jπ: ≈18 from 2003Le08. Others: J≈(19) from 1995Sm08.
1432.0+x[k] *10*	J+2		G	
3027.0+x[k] *15*	J+4		G	
4783.0+x[k] *18*	J+6		G	
6703.1+x[k] *20*	J+8		G	
8780.1+x[k] *23*	J+10		G	
11010.1+x[k] *25*	J+12		G	
13393+x[k] *3*	J+14		G	
15938+x[k] *3*	J+16		G	
18674+x?[k] *3*	J+18		G	

† Levels with ΔE=5 keV are from (p,t), all others are deduced from the adopted gammas.
‡ Within each band, the firm assignments come from DCO ratios in (^{29}Si,2pnγ), except as noted otherwise, whereas the uncertain assignments for the high energy members indicate that the DCO ratios are either not available or not conclusive.

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{82}Sr Levels (continued)

[#] Tentative assignment in (^{29}Si,2pnγ) supported by DCO ratios; positive parity from decay to positive parity states only.
[@] From DSAM in ^{56}Fe(^{29}Si,2pnγ), unless stated otherwise.
[&] From recoil-distance Doppler shift, ^{66}Zn(^{19}F,p2nγ) (1981DeYW).
[a] Effective half-life, not corrected for direct or side feeding (1994Ta01).
[b] Band(A): π=+.
[c] Band(B): π=+.
[d] Band(C): π=+.
[e] Band(D): π=+.
[f] Band(E): π=−. Yrast odd-spin band.
[g] Band(F): π=−. Second odd-spin band.
[h] Band(G): π=−. Third odd-spin band.
[i] Band(H): π=−. Yrast even-spin band.
[j] Band(I): π=−. Second even-spin band.
[k] Band(J): SD band (1995Sm08,1998Yu01,2003Le08). Q(intrinsic)=3.54 *+15−14* (1999Le56,2003Le08,2004La18), 4.5 *9* (1998Yu01). β_2=0.50 from Q(intrinsic)=4.5 (1999Le56), calculated Q(intrinsic)=3.3 *2* (for ^{70}Ge+^{12}C cluster), 5.6 *2* (for ^{54}Cr+^{28}Si cluster) (2001Bu02). Percent population=1.0-1.5 (1995Sm08), ≈2.5 (1998Yu01), 0.63 (2003Le08). Probable configuration=$\nu 5^2 \pi 5^1$(π1/2[431] α=−1/2) with π=−, α=1 (1998Yu01), $\nu 5^1 \pi 5^0$ (1999Le56,2003Le08).

$\gamma(^{82}Sr)$

E_i(level)	J_i^{π}	E_{γ}[†]	I_{γ}[&]	E_f	J_f^{π}	Mult.[c]	δ[cf]	α[e]	Comments
573.54	2^+	573.64[#] *10*	100	0	0^+	E2		0.00245	α(K)=0.00216 *3*; α(L)=0.000243 *4*; α(M)=4.07×10^{-5} *6* α(N)=5.07×10^{-6} *7*; α(O)=3.16×10^{-7} *5* B(E2)(W.u.)=48.3 *22*
1175.71	2^+	602.15[#] *10*	100[b] *7*	573.54	2^+	M1(+E2)	+1.2 *14*	0.00196 *24*	B(M1)(W.u.)≤0.012; B(E2)(W.u.)≤49 α(K)=0.00173 *21*; α(L)=0.00019 *3*; α(M)=3.2×10^{-5} *5* α(N)=4.0×10^{-6} *6*; α(O)=2.6×10^{-7} *3*
		1175.6 *1*	10.4 *8*	0	0^+	[E2]		4.07×10^{-4}	B(E2)(W.u.)=0.15 *5* α(K)=0.000356 *5*; α(L)=3.86×10^{-5} *6*; α(M)=6.47×10^{-6} *9* α(N)=8.12×10^{-7} *12*; α(O)=5.28×10^{-8} *8*; α(IPF)=5.06×10^{-6} *8*
1310.89	0^+	737.35[‡] *10*	100	573.54	2^+				
1328.54	4^+	754.9 *1*	100	573.54	2^+	E2		1.15×10^{-3}	B(E2)(W.u.)=109 *22* α(K)=0.001020 *15*; α(L)=0.0001127 *16*; α(M)=1.89×10^{-5} *3* α(N)=2.36×10^{-6} *4*; α(O)=1.503×10^{-7} *21*
1688.96	3^+	359.9 *3*	9 *3*	1328.54	4^+				
		512.9 *2*	80 *12*	1175.71	2^+				
		1114.9 *1*	100 *15*	573.54	2^+				
1865	2^+	688.9[‡] *4*	31 *19*	1175.71	2^+				
		1291.0[‡] *6*	100 *19*	573.54	2^+				
		1865.3[‡] *15*	31 *19*	0	0^+				
1996.02	4^+	667.53[#] *10*	60 *9*	1328.54	4^+	M1(+E2)	+0.3 *7*	0.00137 *11*	B(M1)(W.u.)=0.019 *10*; B(E2)(W.u.)≤25 α(K)=0.00122 *10*; α(L)=0.000132 *12*; α(M)=2.22×10^{-5} *20* α(N)=2.79×10^{-6} *24*; α(O)=1.82×10^{-7} *12*
		820.25[#] *10*	100 *12*	1175.71	2^+	E2		9.34×10^{-4}	B(E2)(W.u.)=34 *12* α(K)=0.000826 *12*; α(L)=9.08×10^{-5} *13*; α(M)=1.524×10^{-5} *22* α(N)=1.91×10^{-6} *3*; α(O)=1.219×10^{-7} *17*
		1422.4 *3*	5 *2*	573.54	2^+				
2229.47	6^+	900.84[#] *10*	100	1328.54	4^+	E2		7.41×10^{-4}	B(E2)(W.u.)=1.2×10^{2} *+4−5* α(K)=0.000656 *10*; α(L)=7.18×10^{-5} *10*; α(M)=1.205×10^{-5} *17* α(N)=1.508×10^{-6} *22*; α(O)=9.70×10^{-8} *14*
2401.82	3^-	712.4[#] *1*	100[b] *8*	1688.96	3^+				
		1828.4[#] *1*	29[b] *8*	573.54	2^+				
2525.80	5^+	529.8 *2*	13 *4*	1996.02	4^+				
		837.1 *1*	100 *22*	1688.96	3^+				
		1197.1 *2*	21 *6*	1328.54	4^+				
2817.31	5^-	415.17[#] *10*	13[b] *13*	2401.82	3^-	[E2]		0.00655	α(K)=0.00576 *8*; α(L)=0.000664 *10*; α(M)=0.0001115 *16* α(N)=1.377×10^{-5} *20*; α(O)=8.31×10^{-7} *12*

$^{82}_{38}Sr_{44}$-6

Adopted Levels, Gammas (continued)

$\gamma(^{82}Sr)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[&]	E_f	J^π_f	Mult.[c]	δ[cf]	α[e]	Comments
2817.31	5^-	1489.00[#] *10*	100[b] *13*	1328.54	4^+	E1		3.59×10^{-4}	B(E1)(W.u.)=3.2×10^{-5} *10* α(K)=0.0001086 *16*; α(L)=1.154×10^{-5} *17*; α(M)=1.93×10^{-6} *3* α(N)=2.43×10^{-7} *4*; α(O)=1.602×10^{-8} *23*; α(IPF)=0.000237 *4*
2824.40	4^-	422.6 *3*	7 *2*	2401.82	3^-				
		828.4 *2*	16 *4*	1996.02	4^+				
		1135.52[#] *10*	100 *13*	1688.96	3^+	E1(+M2)	+0.03 *5*	2.11×10^{-4} *5*	α(K)=0.000175 *5*; α(L)=1.86×10^{-5} *5*; α(M)=3.12×10^{-6} *9* α(N)=3.93×10^{-7} *11*; α(O)=2.58×10^{-8} *7*; α(IPF)=1.430×10^{-5} *22*
		1494.9 *3*	5 *2*	1328.54	4^+				
2836.26	6^+	606.65[#] *10*	50[b] *3*	2229.47	6^+	M1(+E2)	+0.2 *3*	0.00170 *7*	B(M1)(W.u.)=0.05 *4*; B(E2)(W.u.)≤28 α(K)=0.00150 *6*; α(L)=0.000163 *8*; α(M)=2.74×10^{-5} *13* α(N)=3.45×10^{-6} *16*; α(O)=2.26×10^{-7} *8*
		840.24[#] *10*	100[b] *8*	1996.02	4^+	E2		8.79×10^{-4}	B(E2)(W.u.)=7.E+1 *5* α(K)=0.000778 *11*; α(L)=8.54×10^{-5} *12*; α(M)=1.434×10^{-5} *20* α(N)=1.79×10^{-6} *3*; α(O)=1.148×10^{-7} *16*
3006.91	4^-	605.1 *1*	60 *20*	2401.82	3^-				
		1010.7 *2*	20 *10*	1996.02	4^+				
		1318.3 *3*	100 *20*	1688.96	3^+				
		1677.6 *4*	40 *10*	1328.54	4^+				
3073.28	(5^-)	255.4 *3*	7 *7*	2817.31	5^-				
		843.6 *2*	64 *14*	2229.47	6^+				
		1077.4 *2*	100 *21*	1996.02	4^+				
3086.23	6^-	261.83[#] *10*	100 *9*	2824.40	4^-				
		269.02[#] *10*	78 *9*	2817.31	5^-				
		560.8 *2*	22 *4*	2525.80	5^+				
3142.30	(5^-)	1812.8 *4*	100	1328.54	4^+				
3242.82	8^+	1013.36[#] *10*	100	2229.47	6^+	E2		5.61×10^{-4}	B(E2)(W.u.)=1.0×10^{2} *+3−5* α(K)=0.000497 *7*; α(L)=5.41×10^{-5} *8*; α(M)=9.08×10^{-6} *13* α(N)=1.138×10^{-6} *16*; α(O)=7.36×10^{-8} *11*
3339.57	6^-	266.2 *2*	4 *1*	3073.28	(5^-)				
		332.5 *2*	8 *2*	3006.91	4^-				
		522.1 *1*	100 *12*	2817.31	5^-				
		813.9 *1*	16 *3*	2525.80	5^+				
		1110.3 *2*	16 *3*	2229.47	6^+				
3476.96	7^+	951.15[#] *10*	100	2525.80	5^+				
3511.15	$(7)^-$	424[@g]		3086.23	6^-				
		694.04 *10*	100 *7*	2817.31	5^-	E2		1.44×10^{-3}	α(K)=0.001273 *18*; α(L)=0.0001413 *20*; α(M)=2.37×10^{-5} *4* α(N)=2.96×10^{-6} *5*; α(O)=1.87×10^{-7} *3*

$^{82}_{38}Sr_{44}$-7

Adopted Levels, Gammas (continued)

$\gamma(^{82}Sr)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[&]	E_f	J^π_f	Mult.[c]	δ[c,f]	α[e]	Comments
3511.15	$(7)^-$	1281.1[#] *2*	4.6[b] *8*	2229.47	6^+				
3525.75	7^-	439.88[#] *10*	8 *2*	3086.23	6^-				
		451.9 *3*	4 *1*	3073.28	(5^-)				
		707.9 *2*	7 *2*	2817.31	5^-				
		1296.19[#] *10*	100 *12*	2229.47	6^+	D(+Q)	+0.5 *5*		
3565.75	7^-	479.3 *2*	17 *6*	3086.23	6^-				
		492.7 *4*	1 *1*	3073.28	(5^-)				
		748.3 *2*	14 *1*	2817.31	5^-				
		1336.5 *2*	100 *13*	2229.47	6^+				
3607.94	7^-	465.4 *2*	30 *8*	3142.30	(5^-)				
		522.09[#] *10*	100 *14*	3086.23	6^-	(M1+E2)	−0.7 *5*	0.0027 *3*	α(K)=0.00234 *22*; α(L)=0.00026 *3*; α(M)=4.4×10^{-5} *5* α(N)=5.5×10^{-6} *6*; α(O)=3.5×10^{-7} *3*
		534.6 *2*	35 *8*	3073.28	(5^-)				
		771.8 *2*	68 *68*	2836.26	6^+				
		790.6 *2*	32 *8*	2817.31	5^-				
		1378.6 *2*	73 *19*	2229.47	6^+				
3622.78	8^+	379.96[#] *10*	8.8[b] *9*	3242.82	8^+				
		786.36[#] *10*	100[b] *7*	2836.26	6^+	E2		1.04×10^{-3}	B(E2)(W.u.)=1.0×10^2 *6* α(K)=0.000918 *13*; α(L)=0.0001013 *15*; α(M)=1.699×10^{-5} *24* α(N)=2.12×10^{-6} *3*; α(O)=1.355×10^{-7} *19*
		1393.5[#] *1*	18[b] *6*	2229.47	6^+	[E2]		3.31×10^{-4}	B(E2)(W.u.)=1.0 *7* α(K)=0.000249 *4*; α(L)=2.68×10^{-5} *4*; α(M)=4.49×10^{-6} *7* α(N)=5.65×10^{-7} *8*; α(O)=3.69×10^{-8} *6*; α(IPF)=5.01×10^{-5} *7*
3686.07	(8^+)	443.28[#] *10*	100 *15*	3242.82	8^+				
		1456.2[#] *3*	36 *11*	2229.47	6^+				
4033.49	8^-	507.9 *3*	8 *2*	3525.75	7^-				
		693.9 *1*	100 *22*	3339.57	6^-				
4142.60	8^-	534.7 *2*	26 *8*	3607.94	7^-				
		577.0 *2*	31 *8*	3565.75	7^-				
		617.1 *4*	8 *3*	3525.75	7^-				
		1056.3 *1*	100 *23*	3086.23	6^-	E2[d]		5.10×10^{-4}	α(K)=0.000452 *7*; α(L)=4.91×10^{-5} *7*; α(M)=8.25×10^{-6} *12* α(N)=1.034×10^{-6} *15*; α(O)=6.69×10^{-8} *10*
4248.4		1005.6[@]	100	3242.82	8^+				
4350.30	10^+	1107.47[#] *10*	100	3242.82	8^+	(E2)		4.60×10^{-4}	B(E2)(W.u.)=1.1×10^2 *+4−5* α(K)=0.000406 *6*; α(L)=4.41×10^{-5} *7*; α(M)=7.40×10^{-6} *11* α(N)=9.28×10^{-7} *13*; α(O)=6.02×10^{-8} *9*; α(IPF)=8.58×10^{-7} *13*
4366.82	9^-	758.8[#] *1*	30[b] *3*	3607.94	7^-				

$^{82}_{38}Sr_{44}$-8

Adopted Levels, Gammas (continued)

$\gamma(^{82}Sr)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[&]	E_f	J^π_f	Mult.[c]	α[e]	Comments
4366.82	9^-	801.11[#] *10*	100[b] *8*	3565.75	7^-	(E2)	9.91×10^{-4}	α(K)=0.000876 *13*; α(L)=9.65×10^{-5} *14*; α(M)=1.620×10^{-5} *23* α(N)=2.02×10^{-6} *3*; α(O)=1.293×10^{-7} *19*
		841.3[#] *3*	32[b] *4*	3525.75	7^-			
4387.09	(9^-)	876.0[#] *1*	100[b] *18*	3511.15	$(7)^-$	(E2)	7.93×10^{-4}	α(K)=0.000702 *10*; α(L)=7.69×10^{-5} *11*; α(M)=1.291×10^{-5} *18* α(N)=1.616×10^{-6} *23*; α(O)=1.037×10^{-7} *15*
		1144.20[#] *10*	88[b] *7*	3242.82	8^+			
4423.85	10^+	801.11[#] *10*	100 *12*	3622.78	8^+	(E2)	9.91×10^{-4}	B(E2)(W.u.)=78 *22* α(K)=0.000876 *13*; α(L)=9.65×10^{-5} *14*; α(M)=1.620×10^{-5} *23* α(N)=2.02×10^{-6} *3*; α(O)=1.293×10^{-7} *19*
		1180.98[#] *10*	16 *2*	3242.82	8^+	[E2]	4.04×10^{-4}	α(K)=0.000353 *5*; α(L)=3.82×10^{-5} *6*; α(M)=6.41×10^{-6} *9* α(N)=8.04×10^{-7} *12*; α(O)=5.23×10^{-8} *8*; α(IPF)=5.65×10^{-6} *8* B(E2)(W.u.)=1.8 *5*
4472.85	9^-	907.0 *1*	62 *8*	3565.75	7^-			
		947.2 *2*	44 *4*	3525.75	7^-			
		1230.3 *2*	100 *8*	3242.82	8^+			
4492.5	9^+	1015.5 *3*	100	3476.96	7^+			
4637.34	(10^+)	213.5 *3*	10 *3*	4423.85	10^+			
		287.0 *2*	38 *7*	4350.30	10^+			
		951.2 *2*	100 *10*	3686.07	(8^+)			
		1394.7 *3*	72 *10*	3242.82	8^+			
4909.39	10^-	521.7[@g]		4387.09	(9^-)			
		875.9 *1*	100	4033.49	8^-	E2[d]	7.94×10^{-4}	B(E2)(W.u.)=1.4×10^2 *+4−5* α(K)=0.000702 *10*; α(L)=7.70×10^{-5} *11*; α(M)=1.292×10^{-5} *18* α(N)=1.616×10^{-6} *23*; α(O)=1.037×10^{-7} *15*
5237.4	10^-	1094.8 *3*	100	4142.60	8^-			
5308.15	11^-	941.32[#] *10*	100	4366.82	9^-	E2	6.67×10^{-4}	α(K)=0.000590 *9*; α(L)=6.45×10^{-5} *9*; α(M)=1.082×10^{-5} *16* α(N)=1.356×10^{-6} *19*; α(O)=8.73×10^{-8} *13* B(E2)(W.u.)=1.2×10^2 *+3−4*
5333.8		1085.4[@]	100	4248.4				
5392.31?		1005.43[#g] *10*	100	4387.09	(9^-)			
5427.12	12^+	1003.26[#] *10*	100	4423.85	10^+	E2	5.74×10^{-4}	B(E2)(W.u.)=80 *+20−27* α(K)=0.000508 *8*; α(L)=5.54×10^{-5} *8*; α(M)=9.30×10^{-6} *13* α(N)=1.165×10^{-6} *17*; α(O)=7.53×10^{-8} *11*
5468.9		1045 *1*	100	4423.85	10^+			
5479.09	(11^-)	1006.2 *3*	100 *7*	4472.85	9^-			
		1128.8 *3*	62 *4*	4350.30	10^+			
5569.0	12^+	1218.7 *3*	100	4350.30	10^+	[E2]	3.83×10^{-4}	α(K)=0.000330 *5*; α(L)=3.56×10^{-5} *5*; α(M)=5.98×10^{-6} *9* α(N)=7.51×10^{-7} *11*; α(O)=4.89×10^{-8} *7*; α(IPF)=1.093×10^{-5} *16*
5738.2	(12^+)	1100.9 *4*	100	4637.34	(10^+)			
5913.9	12^-	1004.5 *3*	100	4909.39	10^-	E2[d]	5.73×10^{-4}	B(E2)(W.u.)=1.0×10^2 *+3−4*

$^{82}_{38}Sr_{44}$-9

$\gamma(^{82}Sr)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[&]	E_f	J^π_f	Mult.[c]	α[e]	Comments
								α(K)=0.000507 *8*; α(L)=5.52×10^{-5} *8*; α(M)=9.27×10^{-6} *13* α(N)=1.162×10^{-6} *17*; α(O)=7.51×10^{-8} *11*
6367.2	13$^-$	1059.0 *2*	100	5308.15	11$^-$	E2	5.07×10^{-4}	α(K)=0.000449 *7*; α(L)=4.88×10^{-5} *7*; α(M)=8.20×10^{-6} *12* α(N)=1.028×10^{-6} *15*; α(O)=6.66×10^{-8} *10* B(E2)(W.u.)=1.3×10^2 *+6−8*
6450.1		1023 *1*	100	5427.12	12$^+$			
6543.6	14$^+$	1116.5 *3*	100	5427.12	12$^+$	E2[d]	4.52×10^{-4}	B(E2)(W.u.)=62 *+23−28* α(K)=0.000399 *6*; α(L)=4.33×10^{-5} *6*; α(M)=7.27×10^{-6} *11* α(N)=9.11×10^{-7} *13*; α(O)=5.91×10^{-8} *9*; α(IPF)=1.133×10^{-6} *19*
6556.4		1222.6[@]	100	5333.8				
6564.8	(13$^-$)	1085.7 *3*	100	5479.09	(11$^-$)			
6937.0	(14$^+$)	1368.0 *3*	100	5569.0	12$^+$	[E2]	3.35×10^{-4}	α(K)=0.000258 *4*; α(L)=2.78×10^{-5} *4*; α(M)=4.67×10^{-6} *7* α(N)=5.87×10^{-7} *9*; α(O)=3.84×10^{-8} *6*; α(IPF)=4.35×10^{-5} *7* B(E2)(W.u.)=1.4×10^2 *+42−8*
7066.5	14$^-$	1152.6 *3*	100	5913.9	12$^-$	E2[d]	4.23×10^{-4}	B(E2)(W.u.)=1.6×10^2 *+9−11* α(K)=0.000372 *6*; α(L)=4.03×10^{-5} *6*; α(M)=6.76×10^{-6} *10* α(N)=8.49×10^{-7} *12*; α(O)=5.52×10^{-8} *8*; α(IPF)=3.01×10^{-6} *5*
7534.6		991 *1*	100	6543.6	14$^+$			
7545.5	15$^-$	1178.3 *3*	100	6367.2	13$^-$	E2[d]	4.06×10^{-4}	B(E2)(W.u.)=1.0×10^2 *4* α(K)=0.000354 *5*; α(L)=3.84×10^{-5} *6*; α(M)=6.44×10^{-6} *9* α(N)=8.08×10^{-7} *12*; α(O)=5.26×10^{-8} *8*; α(IPF)=5.35×10^{-6} *9*
7788.2	(15$^-$)	1223.4 *3*	100	6564.8	(13$^-$)			
7812.0	16$^+$	1268.4 *4*	100	6543.6	14$^+$	E2[d]	3.62×10^{-4}	B(E2)(W.u.)=9.E+1 *+4−5* α(K)=0.000303 *5*; α(L)=3.27×10^{-5} *5*; α(M)=5.48×10^{-6} *8* α(N)=6.89×10^{-7} *10*; α(O)=4.49×10^{-8} *7*; α(IPF)=2.04×10^{-5} *3*
7936.1		1379.6[@]	100	6556.4				
8377.6	16$^-$	1311.1 *4*	100	7066.5	14$^-$	E2[d]	3.48×10^{-4}	B(E2)(W.u.)=49 *22* α(K)=0.000282 *4*; α(L)=3.05×10^{-5} *5*; α(M)=5.11×10^{-6} *8* α(N)=6.42×10^{-7} *9*; α(O)=4.19×10^{-8} *6*; α(IPF)=2.98×10^{-5} *5*
8434.6	(16$^+$)	1497.6 *3*	100	6937.0	(14$^+$)	E2[d]	3.26×10^{-4}	α(K)=0.000215 *3*; α(L)=2.31×10^{-5} *4*; α(M)=3.88×10^{-6} *6* α(N)=4.87×10^{-7} *7*; α(O)=3.19×10^{-8} *5*; α(IPF)=8.35×10^{-5} *12* B(E2)(W.u.)>20
8842.0	17$^-$	1296.5 *5*	100	7545.5	15$^-$	E2[d]	3.53×10^{-4}	B(E2)(W.u.)=9.E+1 *7* α(K)=0.000289 *4*; α(L)=3.12×10^{-5} *5*; α(M)=5.23×10^{-6} *8* α(N)=6.57×10^{-7} *10*; α(O)=4.29×10^{-8} *6*; α(IPF)=2.65×10^{-5} *4*
9167.4	(17$^-$)	1379.2 *4*	100	7788.2	(15$^-$)			
9237.8	18$^+$	1425.7 *4*	100	7812.0	16$^+$	[E2]	3.27×10^{-4}	B(E2)(W.u.)=9.E+1 *+36−5* α(K)=0.000237 *4*; α(L)=2.56×10^{-5} *4*; α(M)=4.29×10^{-6} *6* α(N)=5.39×10^{-7} *8*; α(O)=3.52×10^{-8} *5*; α(IPF)=5.93×10^{-5} *9*

$^{82}_{38}Sr_{44}$-10

Adopted Levels, Gammas (continued)

$\gamma(^{82}Sr)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[&]	E_f	J_f^π	Mult.[c]	α[e]	Comments
9478.1		1542[@]	100	7936.1				
9842.6	(18⁻)	1465 *1*	100	8377.6	16⁻	[E2]	3.25×10^{-4}	α(K)=0.000225 *4*; α(L)=2.42×10^{-5} *4*; α(M)=4.05×10^{-6} *6* α(N)=5.10×10^{-7} *8*; α(O)=3.34×10^{-8} *5*; α(IPF)=7.19×10^{-5} *11* B(E2)(W.u.)>21
10061.6	(18⁺)	1626.9[@]	100	8434.6	(16⁺)			
10258.8	(19⁻)	1416.8 *5*	100	8842.0	17⁻	[E2]	3.28×10^{-4}	B(E2)(W.u.)=6.E+1 *+3−5* α(K)=0.000240 *4*; α(L)=2.59×10^{-5} *4*; α(M)=4.34×10^{-6} *6* α(N)=5.46×10^{-7} *8*; α(O)=3.57×10^{-8} *5*; α(IPF)=5.67×10^{-5} *8*
10709.4	(19⁻)	1542 *1*	100	9167.4	(17⁻)			
10872.4	(20⁺)	1634.6 *5*	100	9237.8	18⁺	[E2]	3.44×10^{-4}	α(K)=0.000181 *3*; α(L)=1.94×10^{-5} *3*; α(M)=3.25×10^{-6} *5* α(N)=4.09×10^{-7} *6*; α(O)=2.69×10^{-8} *4*; α(IPF)=0.0001396 *20* B(E2)(W.u.)>11
11379.6	(20⁻)	1537 *1*	100	9842.6	(18⁻)			
11798.4	(21⁻)	1539.6 *5*	100	10258.8	(19⁻)	[E2]	3.29×10^{-4}	α(K)=0.000204 *3*; α(L)=2.19×10^{-5} *3*; α(M)=3.67×10^{-6} *6* α(N)=4.61×10^{-7} *7*; α(O)=3.02×10^{-8} *5*; α(IPF)=9.96×10^{-5} *14* B(E2)(W.u.)>51
11837.6?	(20⁺)	1776[@]	100	10061.6	(18⁺)			
12758.8	(22⁺)	1886.4[@]	100	10872.4	(20⁺)			
13005.7	(22⁻)	1626 *1*	100	11379.6	(20⁻)			
13489.4	(23⁻)	1691 *1*	100	11798.4	(21⁻)			
14832.7?	(24)	1827[@]	100	13005.7	(22⁻)			
14910.8	(24⁺)	2152[@]	100	12758.8	(22⁺)			
15409.4	(25)	1920[@]	100	13489.4	(23⁻)			
17246.9?	(26⁻)	2336[@]	100	14910.8	(24⁺)			
17616.5	(27)	2207[@]	100	15409.4	(25)			
1432.0+x	J+2	1432 *1*	100[a]	x	J			
3027.0+x	J+4	1595 *1*	100[a]	1432.0+x	J+2			
4783.0+x	J+6	1756 *1*	100[a]	3027.0+x	J+4			
6703.1+x	J+8	1920 *1*	100[a]	4783.0+x	J+6			
8780.1+x	J+10	2077 *1*	100[a]	6703.1+x	J+8			
11010.1+x	J+12	2230 *1*	100[a]	8780.1+x	J+10			
13393+x	J+14	2383 *1*	100[a]	11010.1+x	J+12			
15938+x	J+16	2545 *1*	100[a]	13393+x	J+14			
18674+x?	J+18	2736[g]	100[a]	15938+x	J+16			

† From $^{56}Fe(^{29}Si,2pn\gamma)$, unless otherwise stated. For SD band, values are from $^{58}Ni(^{30}Si,\alpha2p\gamma),(^{28}Si,4p\gamma)$:SD.
‡ From ^{82}Y β^+ decay.

$\gamma(^{82}Sr)$ (continued)

[#] From $^{70}Ge(^{16}O,2n2p\gamma)$.
[@] From $^{52}Cr(^{34}S,2p2n\gamma)$.
[&] γ branching from each level deduced from $(^{29}Si,2pn\gamma)$, except as noted otherwise.
[a] Relative intensity within the SD band.
[b] From $^{70}Ge(^{16}O,2n2p\gamma)$.
[c] From $\gamma(\theta)$ and linear polarization observed in $(^{16}O,2n2p\gamma)$, except as noted otherwise.
[d] From DCO ratios obtained in $^{56}Fe(^{29}Si,2pn\gamma)$ and RUL.
[e] Additional information 2.
[f] If No value given it was assumed δ=1.00 for E2/M1, δ=1.00 for E3/M2 and δ=0.10 for the other multipolarities.
[g] Placement of transition in the level scheme is uncertain.

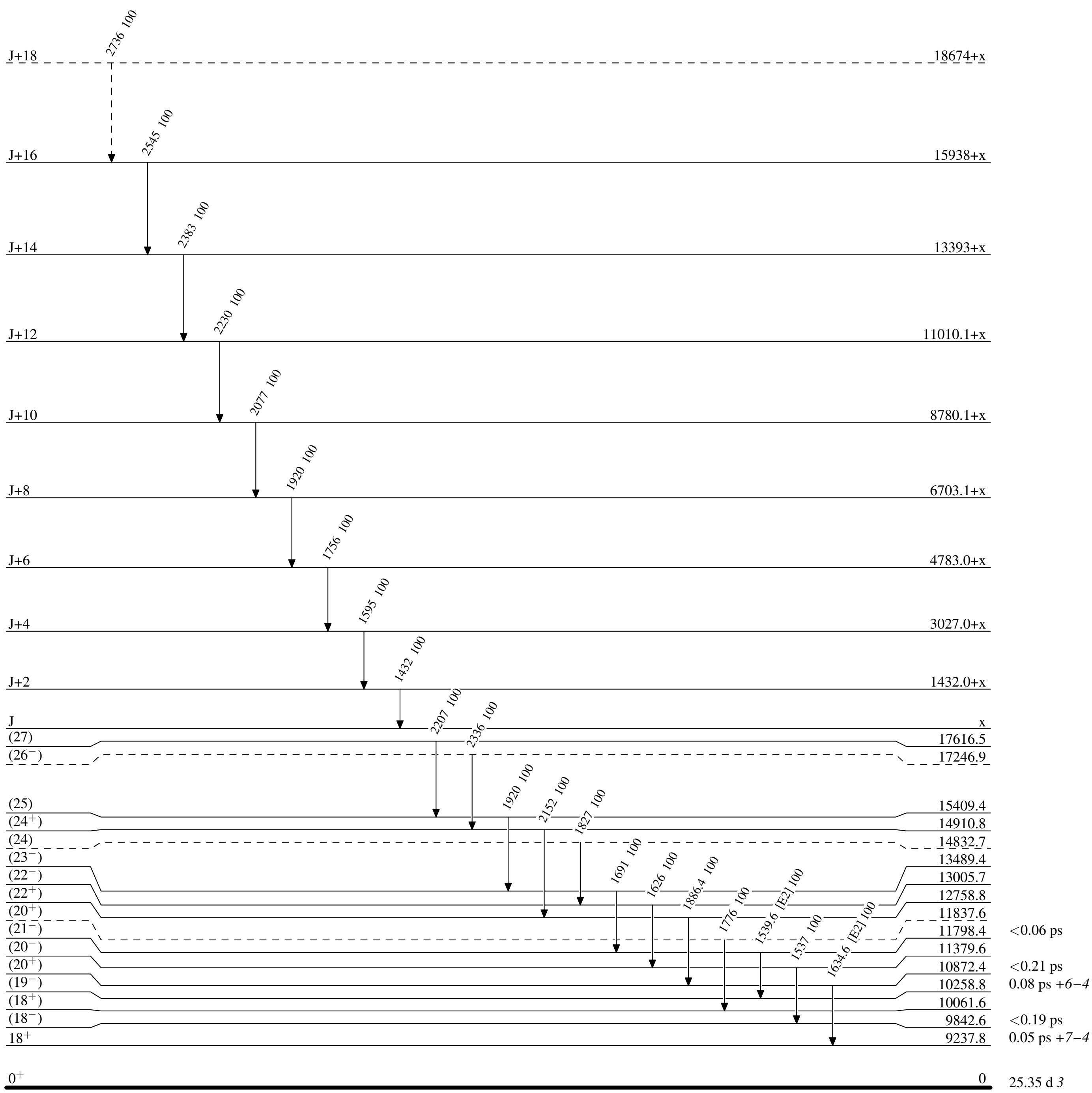
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level

γ Decay (Uncertain)

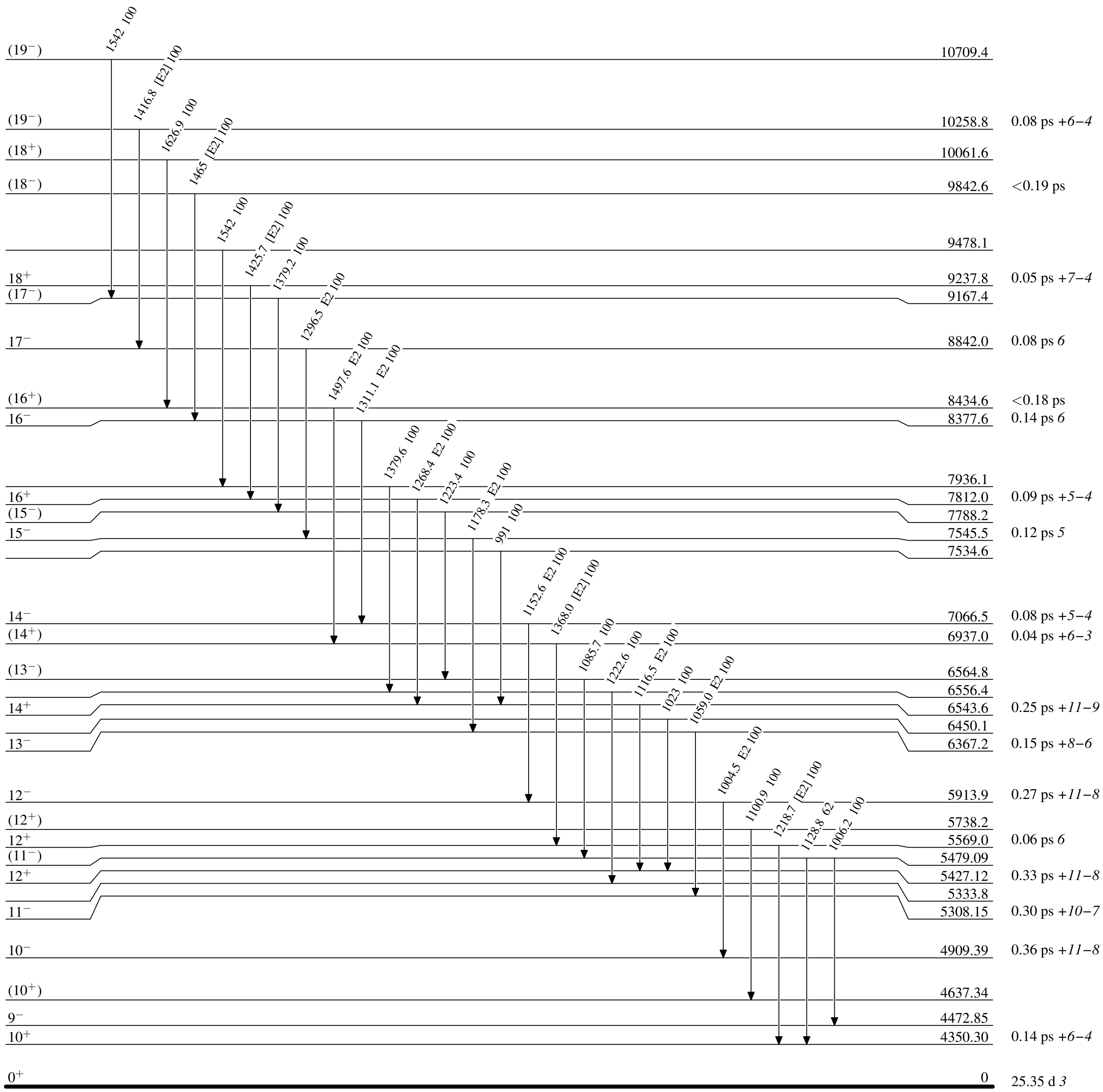


$^{82}_{38}Sr_{44}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

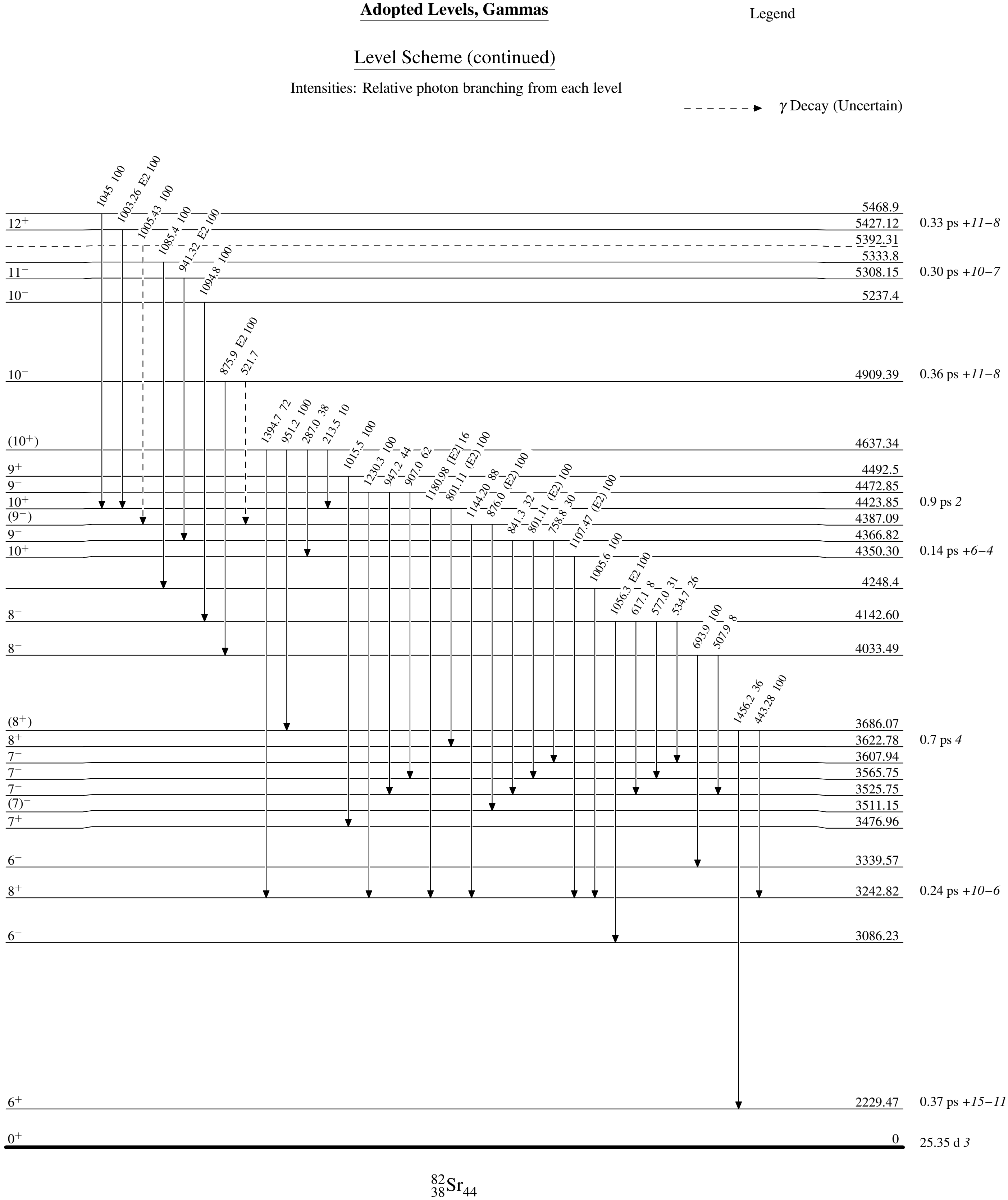


$^{82}_{38}Sr_{44}$

Adopted Levels, Gammas

Level Scheme (continued)

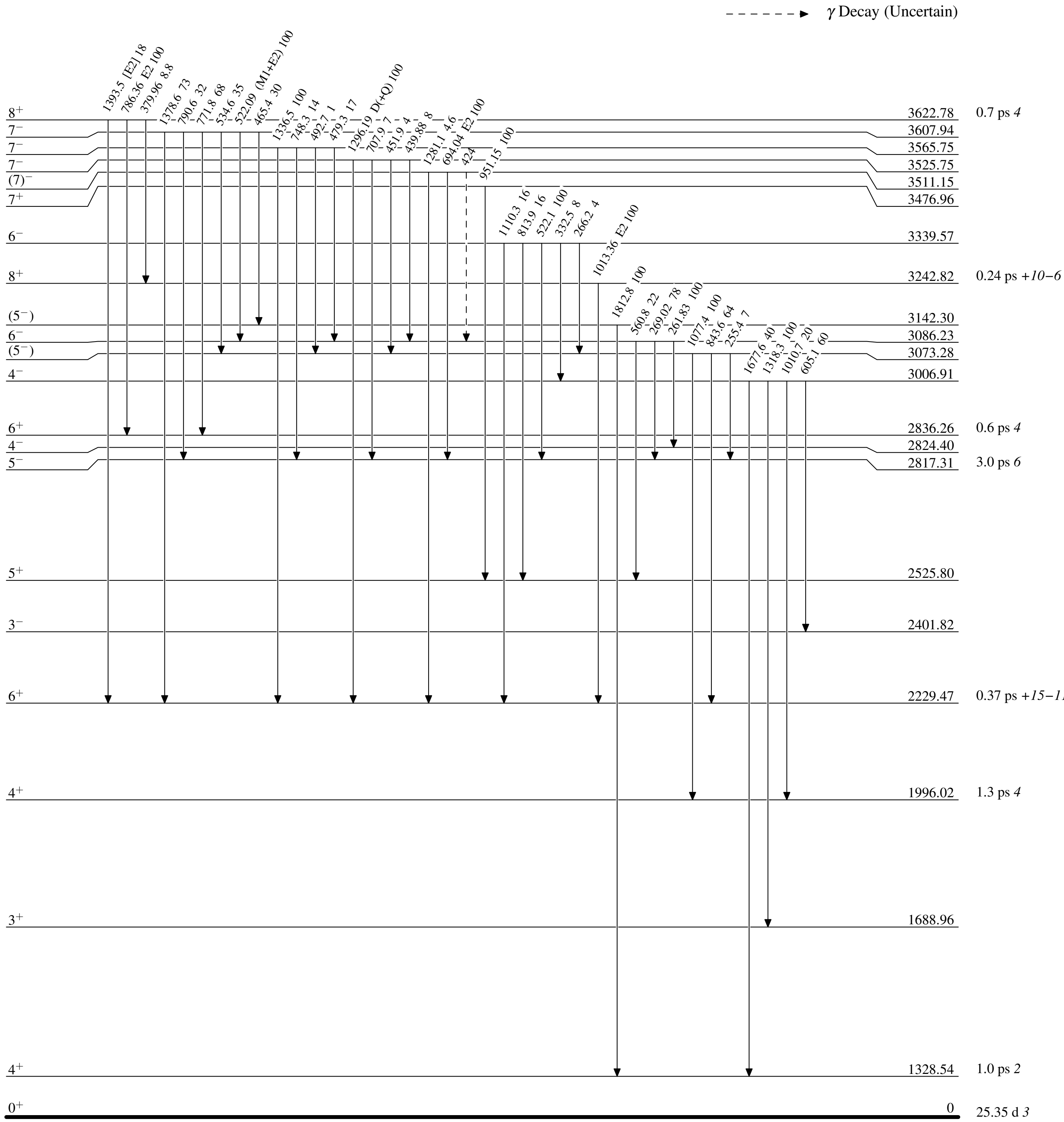
Intensities: Relative photon branching from each level



Adopted Levels, Gammas

Level Scheme (continued)

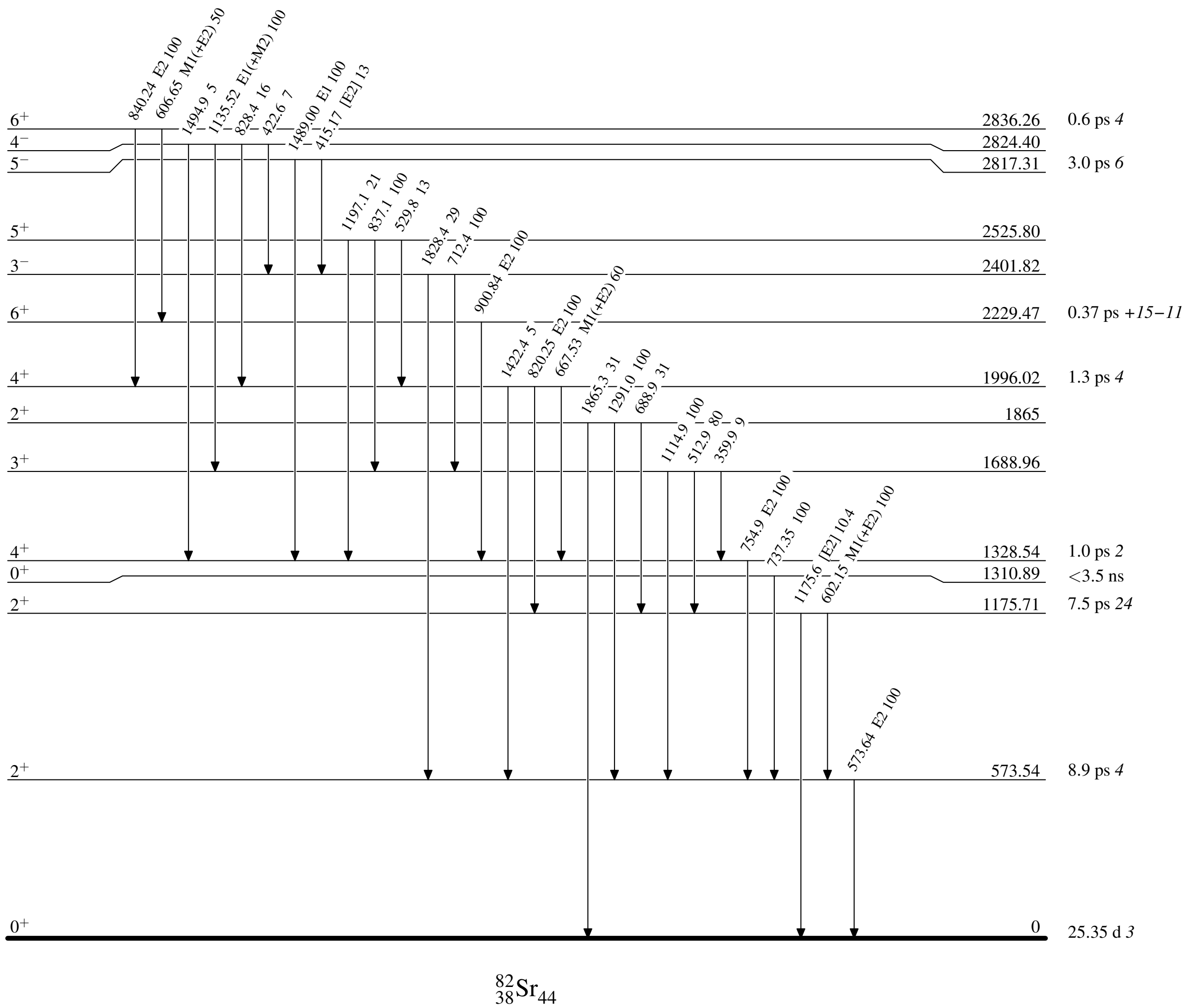
Intensities: Relative photon branching from each level



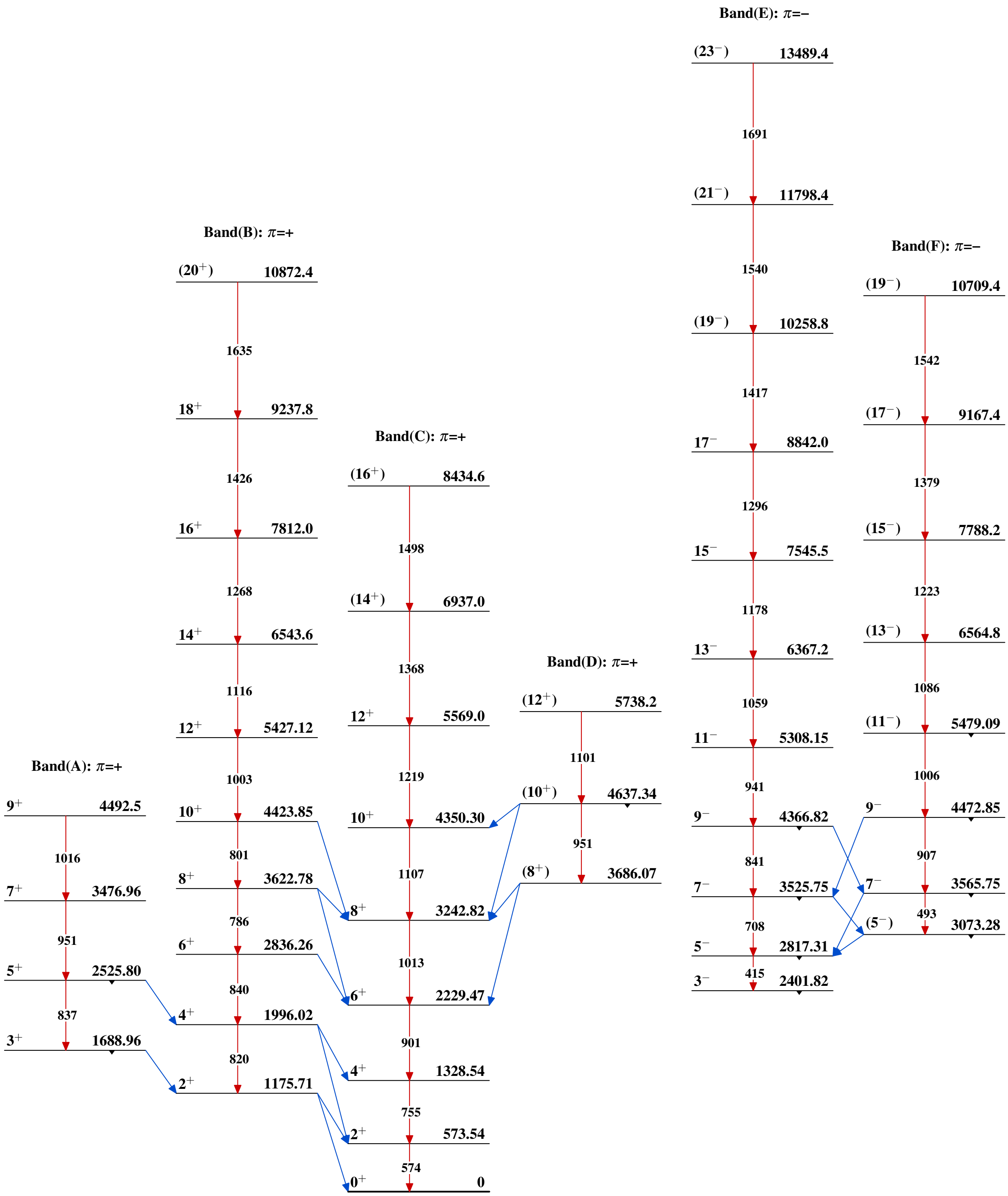
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

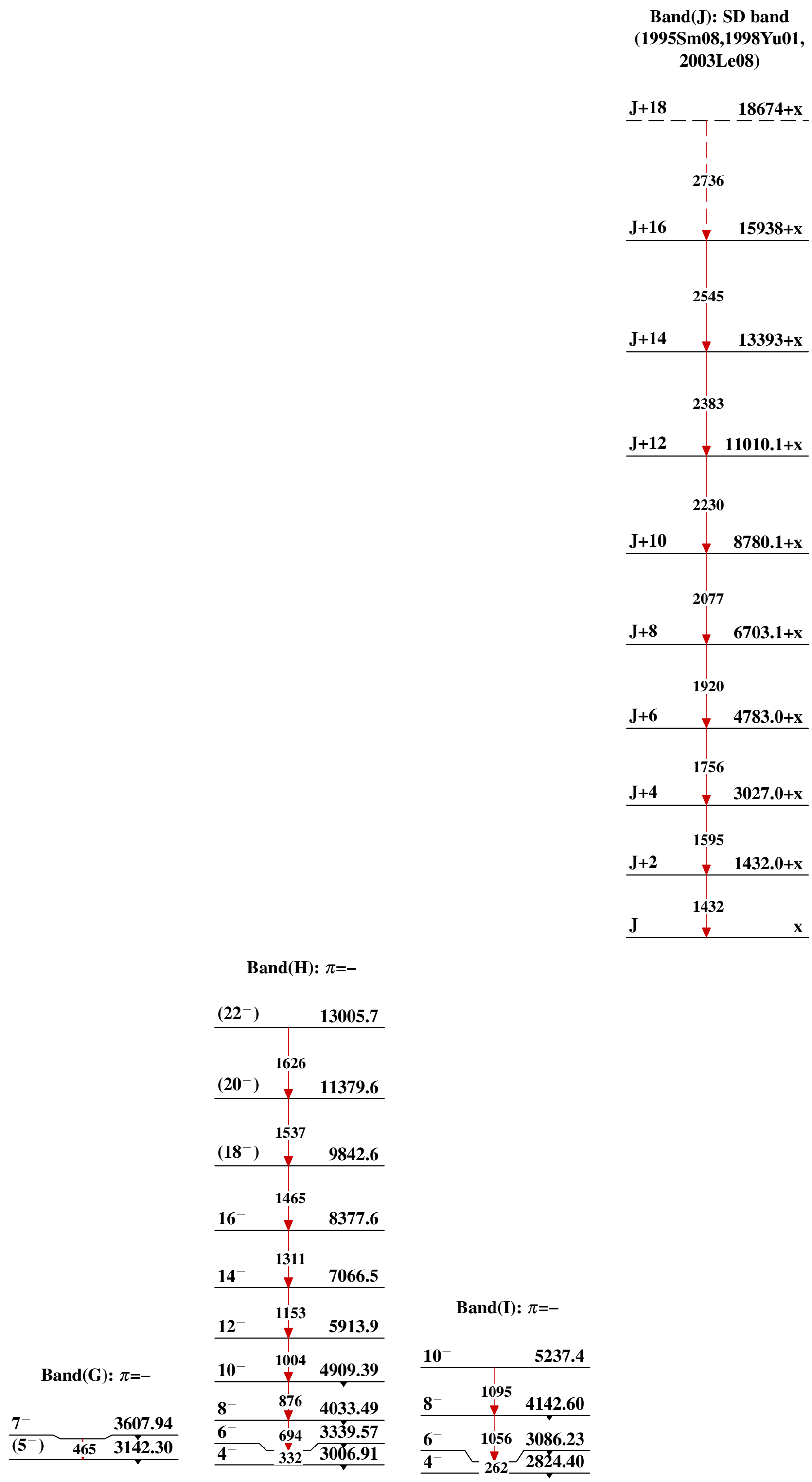


Adopted Levels, Gammas



$^{82}_{38}Sr_{44}$

Adopted Levels, Gammas (continued)



$^{82}_{38}Sr_{44}$

Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	B. Singh, A. Negret, and K. Zuber	NDS 110,2815 (2009)	30-Sep-2009

Q(β^-)=−6756 *5*; S(n)=11923 *7*; S(p)=8868 *3*; Q(α)=−5181.2 *15* 2012Wa38
Note: Current evaluation has used the following Q record −6757 5 *11923* 7 *8867.5* *27*−5181.6 *16* 2009AuZZ.
Additional information 1.
Values in 2003Au03 are: Q=−6490 *90*, S(n)=11920 *11*, S(p)=8858 *7*, Q(α)=−5176 *4*.
^{84}**Sr evaluated by B. Singh, A. Negret, and K. Zuber**.

Theory/calculations:
Additional information 2.
1997Su08: energies of ground state and γ band members, IBA.
1989Sa38: collective bands.
1989Co02: octupole excitation.
1986Ga04, 1979Bu20: nuclear deformation and potential energy surfaces.
1985Na02: microscopic study of high-spin states.
1982De05, 1983Bu09, 1984He07: interacting-boson model.
1971Ki16,1973Og01: shell-model calculations.
Other experiments:
Atomic mass measurements using Penning-trap system: 2007Ke09.
Measurements of isotope shift and mean square charge radius: 1992Ba55, 1990Bu12, 1988Si06, 1987An02, 1986An39, 1986Ea01, 1986Ma43, 1985Bu20, 1983El04, 1983Bo35, 1983Lo13.

^{84}Sr Levels

Cross Reference (XREF) Flags

A	^{84}Rb β^- decay (32.82 d)	F	^{59}Co(^{28}Si,3pγ)	K	^{84}Sr(d,d′)
B	^{84}Y ε decay (39.5 min)	G	^{76}Ge(^{12}C,4nγ),^{81}Br(^{6}Li,3nγ)	L	^{84}Sr(α,α'),(α,$\alpha'\gamma$)
C	^{84}Y ε decay (4.6 s)	H	^{82}Kr(^{3}He,n)	M	Coulomb excitation
D	^{51}V(^{36}S,p2nγ)	I	^{82}Kr(α,2nγ)	N	^{85}Rb(p,2nγ)
E	^{52}Cr(^{36}S,2p2nγ)	J	^{84}Sr(p,p′),(p,p′γ)	O	^{86}Sr(p,t)

E(level)[†]	J$^\pi$	T$_{1/2}$[‡]	XREF	Comments
0.0[&]	0$^+$	stable	ABCDEFGHIJKLMNO	<r^2>$^{1/2}$=4.2364 fm *17* (2004An14 evaluation). T$_{1/2}$: >7.3×10^{13} y (1952Fr23, double β decay). Other:>10^{17} y probably for neutrino-less double β/ε decay, preliminary result from H.J. Kim, presented at 16th Int. Conf. on Supersymmetry and the Unification of Fundamental Interactions, Seoul, June 2008 Communication with the author on April 16, 2009 revealed that the analysis of this experiment is still in progress. J$^\pi$: L(p,t)=0.
793.22[&] *6*	2$^+$	3.23 ps *35*	BCDEFG IJKLMNO	μ=+0.84 *9* (1988Ku01,1989Ra17) μ: from g−factor=+0.419 *47* measured in Coulomb ex. (1988Ku01). See also 2005St24 compilation. T$_{1/2}$: weighted average of 3.19 ps 35 (1982De05) and 4.2 ps +28−14 (1980Ek03). Other: 6.2 ps 21 (1982De05 value reanalyzed by 1994Ch28) 2001Ra27 evaluation gives adopted T$_{1/2}$=3.2 ps 5 and B(E2)(↑)=0.289 *44*. J$^\pi$: E2 γ to 0$^+$; L(p,t)=2.
1453.93[d] *10*	2$^+$		BC G IJ L NO	J$^\pi$: M1+E2 γ to 2$^+$; $\gamma(\theta)$ not consistent with ΔJ=1 and δ. Also L(p,t)=(2).

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Adopted Levels, Gammas (continued)

^{84}Sr Levels (continued)

E(level)[†]	J^π	$T_{1/2}$[‡]	XREF	Comments
1504.2 *10*	0^+		BC J L O	J^π: L(p,t)=0.
1767.69[&] *9*	4^+	1.4 ps *4*	B DEFG IJ L NO	J^π: ΔJ=2, E2 to 2^+. L(p,t)=(4) is consistent. $T_{1/2}$: unweighted average of 1.73 ps 21 (1982De05) and 0.97 ps 28 (1980Ek03). Other: 4.16 ps 14 (1982De05 value reanalyzed by 1994Ch28).
2056.07[d] *11*	$(3)^+$		B G I N	J^π: ΔJ=1, M1+E2 γ to 2^+; γ to 4^+; band member.
2071.6 *8*	0^+		C J L O	J^π: L(p,t)=0.
2297.93 *14*			G	
2390 *5*	2		O	J^π: L(p,t)=2.
2448.11[c] *11*	3^-		B G IJKL O	J^π: L(p,t)=L(d,d′)=3. Configuration=$(g_{9/2},f^{-1}_{5/2})$ or $(g_{9/2},p^{-1}_{3/2})$ (1982De05). B(E3)(↑)=0.043 *18* (2002Ki06 evaluation, data from 1973Re01). Deduced B(E3)(W.u.)=15 *6*.
2525 *5*	(0^+)		O	J^π: L(p,t)=(0).
2598.23[d] *22*	(4^+)		B G IJ L O	XREF: B(?). J^π: 2^+ or 4^+ from 1145$\gamma(\theta)$ indicating ΔJ=0 or 2; J=4 favored by excitation function and band assignment.
2735.25[d] *20*	(5^+)		B G J O	J^π: ΔJ=1 γ to 4^+; excitation function; band member.
2769.03 *10*	(5^-)	9.5[@] ps *6*	B DEFG IJ L NO	μ=+8.0 *10* (1989Ku11,2005St24) μ: transient-field integral perturbed-angular correlation in ^{74}Ge(^{12}C,2nγ) (1989Ku11). J^π: ΔJ=1, DIPOLE G TO 4^+; L(p,t)=(5).
2807.87[&] *11*	6^+	1.01 ps *21*	B DEFG IJ L N	J^π: ΔJ=2, E2 γ to 4^+. $T_{1/2}$: weighted average of 1.04 ps 21 (1982De05), 0.97 ps 28 (1994Ch28). Other: 2.6 ps 4 from (1982BrZO).
2886.99 *14*	2^+		B J L O	J^π: L(p,t)=2.
3041.25[c] *13*	(5^-)		FG J L O	XREF: J(?)L(?). J^π: ΔJ=(0), dipole γ to (5^-); γ to 3^-; L(p,t)=(4,5).
3098.67 *13*	$6^{(+)}$		B G	J^π: ΔJ=2 γ to 4^+; γ to 6^+.
3157.05[d] *22*	(7^+)		G	J^π: ΔJ=2 γ to (5^+); excitation function.
3175 *5*	(2^+)		J L O	J^π: L(p,t)=(2).
3255 *30*	3^-		J L O	J^π: L(p,t)=3.
3270.58 *17*	$(4,5,6)^+$		B G	J^π: γ to 4^+; M1,E2 γ to 6^+. The β feeding from (6^+) disfavors 4.
3279.15[c] *14*	(6^-)		FG I	J^π: ΔJ=1 γ to (5^-); band member.
3330 *30*	0^+		H J L	J^π: L(^{3}He,n)=0.
3331.91[b] *13*	8^+	157 ps *5*	DEFG I	μ=−1.2 *6* (1981Br20,1989Ra17) J^π: ΔJ=2, E2 γ to 6^+. μ: from g factor=−0.15 *7* from spin precession in polarized hyperfine fields of a tilted multi-foil target (1981Br20). Other: −0.8 *16* from g=−0.1 *2* (1989Ku11, transient-field integral perturbed-angular correlation in ^{74}Ge(^{12}C,2nγ)) See also 2005St24 compilation. J^π: Configuration=$(\nu g_{9/2})^{-2}{}_{8+}\otimes$(g.s. of ^{86}Sr core) (1982De05). $T_{1/2}$: from 1982De05. Others: 163 ps 3 (1982De05 value reanalyzed by 1994Ch28), 170 ps 7 (1982BrZO).
3455 *30*			J L O	
3487.92[c] *12*	(7^-)	4.4[@] ps *5*	DEFG IJ	μ=+4.2 *14* (1989Ku11,2005St24) μ: transient-field integral perturbed-angular correlation in ^{74}Ge(^{12}C,2nγ) (1989Ku11). J^π: ΔJ=2, E2 γ to (5^-); ΔJ=1 γ to 6^+.
3511.77 *16*	$(4^+,5^-)$		B J L	XREF: L(3520). J^π: γ′s to 3^- and 6^+; β feeding from (6^+) favors 5^-.

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Adopted Levels, Gammas (continued)

^{84}Sr Levels (continued)

E(level)[†]	J$^\pi$	T$_{1/2}$[‡]	XREF	Comments
3578.23? *25*			B	
3650.15[c] *13*	(7$^-$)		G L	J$^\pi$: ΔJ(2) γ to (5$^-$); ΔJ=1 γ to 6$^{(+)}$; band member.
3679.94[a] *13*	8$^+$	3.33[@] ps *14*	DEFG I	μ=+7.2 *8* (1989Ku11,2005St24) J$^\pi$: configuration=$\pi g_{9/2}$=2 $_{8+}$ ⊗ ^{82}Kr core (1982De05). μ: transient-field integral perturbed-angular correlation in ^{74}Ge(^{12}C,2nγ) (1989Ku11).
3749.07 *24*	(7)		G	J$^\pi$: ΔJ=1 γ to 6$^+$.
3750 *30*	(3$^-$,4$^+$)		O	J$^\pi$: L(p,t)=(3,4).
3819.58? *15*			B	
3918.08? *16*			B	
3960 *30*			L	
4028.78[&] *23*	(8$^+$)		G	J$^\pi$: ΔJ=2 γ to 6$^+$.
4062.78 *17*	4$^+$		B L O	XREF: L(?)O(4080). J$^\pi$: L(p,t)=4. Note that 4$^+$ is inconsistent with β feeding from (6$^+$).
4260 *30*			L O	
4268.05[c] *16*	(8$^-$)		FG	XREF: F(?). J$^\pi$: ΔJ=2 γ to (6$^-$); γ to (7$^-$); band member.
4365.95 *18*	(4$^+$)		B L	XREF: L(4360). J$^\pi$: γ's to 2$^+$ and 6$^+$. Note that (4$^+$) is inconsistent with β feeding from (6$^+$).
4370.4[d] *3*	(9$^+$)		G	J$^\pi$: ΔJ=(2) γ to (7$^+$); excitation function; band member.
4447.61[b] *14*	10$^+$	2.22[@] ps *35*	DEFG I	μ=+2.0 *10* (1989Ku11,2005St24) J$^\pi$: ΔJ=2, E2 γ to 8$^+$. configuration=$(\nu g_{9/2})^{-2}_{8+}$⊗(2$^+$ of ^{86}Sr core) (1982De05). μ: transient-field integral perturbed-angular correlation in ^{74}Ge(^{12}C,2nγ) (1989Ku11).
4534.06[a] *15*	10$^+$	1.66[@] ps *14*	DEFG I	μ=+8.0 *20* (1989Ku11,2005St24) μ: transient-field in ^{74}Ge(^{12}C,2nγ) (1989Ku11). J$^\pi$: ΔJ=2, E2 γ to 8$^+$.
4540 *30*			L O	
4636.13[c] *14*	(9$^-$)	2.5[@] ps *4*	DEFG I	μ=0.00 *36* (1989Ku11,2005St24) J$^\pi$: ΔJ=2, E2 γ to (7$^-$). Configuration=$\nu g_{9/2}^{-2}$ ⊗ (3$^-$) (1982De05). μ: transient-field integral perturbed-angular correlation in ^{74}Ge(^{12}C,2nγ) (1989Ku11).
4660 *30*			L	
4740 *30*			L	
4745.72 *24*	(8,9,10$^+$)		G	E(level): γ to 8$^+$. It is unlikely that this level is same as 4740 in (α,α').
5150.7? *3*			B	
5444.48[c] *15*	(11$^-$)	7.5[@] ps *10*	DEFG	J$^\pi$: ΔJ=2, E2 γ to (9$^-$); γ to 10$^+$.
5653.25[a] *16*	12$^+$	0.61 ps *21*	DEFG	J$^\pi$: ΔJ=2, E2 γ to 10$^+$. T$_{1/2}$: weighted average of 0.83 ps 28 (1982De05), 0.49 ps 21 (1994Ch28).
5891.6[b] *10*	(12$^+$)	0.24[#] ps *10*	D F	J$^\pi$: γ to 10$^+$; band member.
6069.43[c] *17*	(12$^-$)	0.42[#] ps *14*	EFG	J$^\pi$: ΔJ=1, dipole γ to (11$^-$); band member.
6484.34[c] *21*	(13$^-$)	0.62[#] ps *28*	F	J$^\pi$: γ to (12$^-$); possible γ's to 12$^+$ and (11$^-$); band member.
6739.65[a] *19*	14$^+$	0.42[#] ps *14*	DEFG	J$^\pi$: ΔJ=2, E2 γ to 12$^+$; band member.
6916.8[c] *4*	(14$^-$)		F	J$^\pi$: γ to (13$^-$); band member.
7822.8 *7*	(15$^+$)		D	J$^\pi$: γ to 14$^+$ and a low-energy γ from 16$^+$.
8006.4[a] *5*	16$^+$	0.21[#] ps *7*	DEF	J$^\pi$: γ to 14$^+$; band member.

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{84}Sr Levels (continued)

E(level)[†]	J^π	$T_{1/2}$[‡]	XREF	Comments
9098.4 *8*	(17^+)		D	J^π: γ's to 16^+ and (15^+).
9424.9[a] *10*	18^+	0.14[#] ps *6*	DEF	J^π: γ to 16^+; band member.
11059.9[a] *22*	20^+	<0.18 ps	DEF	J^π: γ to 18^+; band member. $T_{1/2}$: 0.14 ps 4, effective half-life from 1994Ch28, not corrected for side feeding.
12920[a] *3*	22^+		DE	J^π: γ to 20^+; band member.
15080?[a] *4*	(24^+)		E	J^π: possible γ to 22^+; band member.

[†] Level energies with ΔE<5 keV are deduced from least-square fit to the adopted gammas. The others are from (p,t), (α,α'), or weighted averages from (p,t), (α,α'), and (p,p').

[‡] From Doppler-shift attenuation method (DSAM) and/or recoil-distance Doppler shift (RDDS) methods. Measurements are from 1994Ch28 using line-shape analysis in DSA in ^{59}Co(^{28}Si,3pγ) reaction for levels above 5600 keV. For levels up to 5700 keV, measurements are from 1982De05 using recoil-distance Doppler-shift method in ^{76}Ge(^{12}C,4nγ) reaction. For the 5653.5 level, values are measured in both studies. Values from recoil-distance method are also available from 1980Ek03 for 793 and 1768 levels using (α,2nγ) reaction and from 1982BrZO for 2808 and 3331 levels using ^{76}Ge(^{12}C,4nγ) reaction.

[#] From 1994Ch28.

[@] From 1982De05.

[&] Band(A): g.s. band.

[a] Band(B): $\pi(g^2_{9/2})_{8+} \otimes$ (^{82}Kr core).

[b] Band(C): $\nu(g^{-2}_{9/2})_{8+} \otimes$ (^{86}Sr core).

[c] Band(D): Octupole band.

[d] Band(E): quasi γ band.

$\gamma(^{84}Sr)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[a]	δ[b]	α[d]	Comments
793.22	2^+	793.22 *6*	100	0.0	0^+	E2		0.00106	B(E2)(W.u.)=26 *3*
1453.93	2^+	660.85 *9*	100 *3*	793.22	2^+	M1+E2	+0.59 *5*	0.00145	
		1453.9 *3*	13.3 *9*	0.0	0^+				
1504.2	0^+	711[#]		793.22	2^+				
1767.69	4^+	974.48 *7*	100	793.22	2^+	E2[c]			B(E2)(W.u.)=21 *6*
2056.07	$(3)^+$	288.3[#] *5*	8.3[#] *21*	1767.69	4^+				
		602.3 *1*	100[#] *5*	1453.93	2^+	M1+E2[c]	+0.24 *8*		
		1262.6 *2*	28[#] *3*	793.22	2^+	D+Q[c]			I_γ: others: 11.3 *14* in (^{6}Li,3nγ); 57 in (p,2nγ).
2071.6	0^+	617[@]		1453.93	2^+				
		1279[@]		793.22	2^+				
2297.93		844.0 *1*	100	1453.93	2^+				
2448.11	3^-	994.4 *4*	100[#] *10*	1453.93	2^+	D[c]			
		1654.6[#] *2*	63[#] *5*	793.22	2^+				A 679γ with an intensity 3 times that of 994γ is reported only in (α,2nγ).
2598.23	(4^+)	1144.3 *2*	100 *9*	1453.93	2^+				
		1805.0[#e] *10*	5 *5*	793.22	2^+				
2735.25	(5^+)	680.6[#] *4*	100[#] *8*	2056.07	$(3)^+$				E_γ: poor fit, level-energy difference=679.2. Additional information 3.
		967.2[#] *2*	31[#] *3*	1767.69	4^+	D+Q[c]			Additional information 4.
2769.03	(5^-)	321.0 *1*	2.8[&] *5*	2448.11	3^-	[E2]		0.0153	B(E2)(W.u.)=22 *5*
		1001.28 *7*	100[&] *9*	1767.69	4^+	(E1)			B(E1)(W.u.)=3.6×10^{-5} *5* Mult.: ΔJ=1, dipole from $\gamma(\theta)$; ΔJ^π requires E1.
2807.87	6^+	1040.11 *9*	100	1767.69	4^+	E2			B(E2)(W.u.)=21 *5*
2886.99	2^+	1119.6[#] *2*	100[#] *10*	1767.69	4^+				
		2093.3[#] *2*	45[#] *15*	793.22	2^+				
3041.25	(5^-)	272.2 *1*	100[&] *3*	2769.03	(5^-)	(D)[c]			
		593.3 *2*	27[&] *3*	2448.11	3^-				
3098.67	$6^{(+)}$	290.8 *1*	37[&] *3*	2807.87	6^+				
		1331.0 *2*	100[&] *6*	1767.69	4^+	Q			
3157.05	(7^+)	421.8 *1*	100	2735.25	(5^+)	Q			
3270.58	$(4,5,6)^+$	462.8[#] *2*	100[#] *5*	2807.87	6^+	M1,E2			
		1502.8[#] *2*	62[#] *6*	1767.69	4^+				I_γ: other: 30 *10* in ^{76}Ge(^{12}C,4nγ),^{81}Br(^{6}Li,3nγ).
3279.15	(6^-)	237.9 *1*	17[&] *2*	3041.25	(5^-)	D			
		510.1[‡] *5*	≈100[‡&]	2769.03	(5^-)				
3331.91	8^+	524.0 *1*	100	2807.87	6^+	E2[c]			B(E2)(W.u.)=4.18 *14*

$^{84}_{38}Sr_{46}$-5

Adopted Levels, Gammas (continued)

γ(^{84}Sr) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[a]	Comments
3487.92	(7$^-$)	680.0 2	21.1 21	2807.87	6$^+$	(E1)[c]	B(E1)(W.u.)=4.4×10^{-5} 7 Mult.: ΔJ=1, dipole for a doublet (680.0+679.1); E1 from ΔJ^π.
		718.9 1	100 5	2769.03	(5$^-$)	E2[c]	B(E2)(W.u.)=25 4
3511.77	(4$^+$,5$^-$)	241.2[#] 5	5.1[#] 34	3270.58	(4,5,6)$^+$		
		703.6[#] 2	100[#] 10	2807.87	6$^+$		
		1063.5[#] 3	13[#] 4	2448.11	3$^-$		
		1744.4[#] 2	38[#] 4	1767.69	4$^+$		
3578.23?		980.2[#e] 10	82[#] 45	2598.23	(4$^+$)		
		1129.6[#e] 4	36[#] 18	2448.11	3$^-$		
		1810.8[#e] 3	100[#] 45	1767.69	4$^+$		
3650.15	(7$^-$)	162.2[&] 2	91[&] 4	3487.92	(7$^-$)		
		371.0[&] 1	22[&] 4	3279.15	(6$^-$)	D[c]	
		551.5[&] 2	39[&] 4	3098.67	6$^{(+)}$	D[c]	
		608.9[&] 1	100[&] 4	3041.25	(5$^-$)		
		881.1[&] 2	52[&] 4	2769.03	(5$^-$)	(Q)[c]	
3679.94	8$^+$	348.0 1	29.2 9	3331.91	8$^+$	(M1+E2)[c]	
		581.3 2	4.4 9	3098.67	6$^{(+)}$		
		872.1 1	100 3	2807.87	6$^+$	E2[c]	B(E2)(W.u.)=11.5 7
3749.07	(7)	650.4 2	100	3098.67	6$^{(+)}$	D+Q[c]	
3819.58?		932.2[#e] 2	60[#] 5	2886.99	2$^+$		
		1370.8[#e] 3	21[#] 11	2448.11	3$^-$		
		1763.6[#e] 2	100[#] 11	2056.07	(3)$^+$		
		2052.9[#e] 3	26[#] 13	1767.69	4$^+$		E_γ: poor fit, level-energy difference=2051.9.
3918.08?		1110.3[#e] 2	100[#] 10	2807.87	6$^+$		
		1469.9[#e] 2	29[#] 10	2448.11	3$^-$		
		2150.9[#e] 5	17[#] 8	1767.69	4$^+$		
4028.78	(8$^+$)	1220.9 2	100	2807.87	6$^+$	Q	
4062.78	4$^+$	1255.0[#] 2	100[#] 10	2807.87	6$^+$		
		1463.3[#e] 2	6[#] 3	2598.23	(4$^+$)		
		1614.5[#] 2	27[#] 3	2448.11	3$^-$		
		2006.7[#e] 5	4.5[#] 30	2056.07	(3)$^+$		
		2295.3[#] 4	33[#] 5	1767.69	4$^+$		
4268.05	(8$^-$)	780.1[&] 2	48[&] 4	3487.92	(7$^-$)		
		988.9[&] 1	100[&] 4	3279.15	(6$^-$)	Q[c]	

$^{84}_{38}$Sr$_{46}$-6

$\gamma(^{84}Sr)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[a]	α[d]	Comments
4365.95	(4^+)	1479.2[#] *2*	39[#] *13*	2886.99	2^+			
		1557.6[#] *3*	26[#] *13*	2807.87	6^+			
		1918.0[#] *4*	100[#] *13*	2448.11	3^-			
		2309.5[#] *4*	52[#] *9*	2056.07	$(3)^+$			
4370.4	(9^+)	1213.3 *2*	100	3157.05	(7^+)	(Q)[c]		
4447.61	10^+	1115.7 *1*	100	3331.91	8^+	E2[c]		B(E2)(W.u.)=6.7 *11*
4534.06	10^+	86.3 *2*	14 *5*	4447.61	10^+	[M1+E2]	1.0 *8*	E_γ,I_γ: from $(^{28}Si,3p\gamma)$.
		854.1 *1*	100 *5*	3679.94	8^+	E2[c]		B(E2)(W.u.)=27 *5* I_γ: from $(^{28}Si,3p\gamma)$.
4636.13	(9^-)	1148.2 *1*	100	3487.92	(7^-)	E2[c]		B(E2)(W.u.)=5.2 *9*
4745.72	$(8,9,10^+)$	1413.8 *2*	100	3331.91	8^+			
5150.7?		1232.9[#e] *3*	38[#] *3*	3918.08?				
		1330.7[#e] *4*	100[#] *10*	3819.58?				
		1638.6[#e] *7*	12[#] *9*	3511.77	$(4^+,5^-)$			
5444.48	(11^-)	808.35 *10*	100 *4*	4636.13	(9^-)	E2[c]		B(E2)(W.u.)=7.7 *12*
		996.9 *1*	30 *4*	4447.61	10^+			
5653.25	12^+	1119.2 *1*	100 *4*	4534.06	10^+	E2[c]		B(E2)(W.u.)=18 *7*
		1205.6 *2*	35 *4*	4447.61	10^+	E2[c]		B(E2)(W.u.)=4.3 *16*
5891.6	(12^+)	1444 *1*	100	4447.61	10^+	[E2]		B(E2)(W.u.)=17 *8*
6069.43	(12^-)	625.0 *1*	100	5444.48	(11^-)	(M1)[c]	0.00157	B(M1)(W.u.)=0.21 *8* Mult.: $\Delta J=1$, dipole from $\gamma(\theta)$, ΔJ^π requires M1.
6484.34	(13^-)	415.1 *2*	100 *13*	6069.43	(12^-)	[M1]	0.00407	B(M1)(W.u.)=0.44 *22*
		830.9 *2*	<12	5653.25	12^+	[E1]		B(E1)(W.u.)=5.E−5 *+6−5*
		1040 *1*	<12	5444.48	(11^-)	[E2]		B(E2)(W.u.)=1.8 *+21−18*
6739.65	14^+	1086.4 *1*	100	5653.25	12^+	E2[c]		B(E2)(W.u.)=41 *14*
6916.8	(14^-)	432.5 *3*	100	6484.34	(13^-)			
7822.8	(15^+)	1084		6739.65	14^+			
8006.4	16^+	184		7822.8	(15^+)	[M1]	0.0314	E_γ: from $(^{36}S,p2n\gamma)$ only.
		1266.5 *5*	100 *17*	6739.65	14^+	[E2]		B(E2)(W.u.)<54
9098.4	(17^+)	1092		8006.4	16^+			
		1276		7822.8	(15^+)			
9424.9	18^+	327		9098.4	(17^+)			E_γ: from $(^{36}S,p2n\gamma)$ only.
		1418 *1*	100 *25*	8006.4	16^+	[E2]		B(E2)(W.u.)<50
11059.9	20^+	1635 *2*	100	9424.9	18^+	[E2]		B(E2)(W.u.)>12
12920	22^+	1860 *2*	100	11059.9	20^+			
15080?	(24^+)	2160[e]	100	12920	22^+			E_γ: A 2125γ is tentatively assigned in $(^{36}S,p2n\gamma)$ from a 24^+ to 22^+.

$^{84}_{38}Sr_{46}$-7

$\gamma(^{84}Sr)$ (continued)

† From weighted averages of all available data. Energies from (α,2nγ) have not been used in the averaging procedure due to consistently low values.
‡ Doublet. Approximate intensity given.
# From ^{84}Y ε decay (39.5 min).
@ From ^{84}Y ε decay (4.6 s).
& From 1982De05 in $^{81}Br(^{6}Li,3n\gamma)$ reaction.
[a] From ce data in ^{84}Y ε decay (39.5 min) unless otherwise stated.
[b] From $\gamma\gamma(\theta)$ in ^{84}Y ε decay (39.5 min), unless otherwise stated.
[c] From $\gamma(\theta)$ data in in-beam γ-ray studies. From RUL, $\Delta J=2$, quadrupole transitions are assigned as E2.
[d] 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.
[e] Placement of transition in the level scheme is uncertain.

$^{84}_{38}Sr_{46}$-8

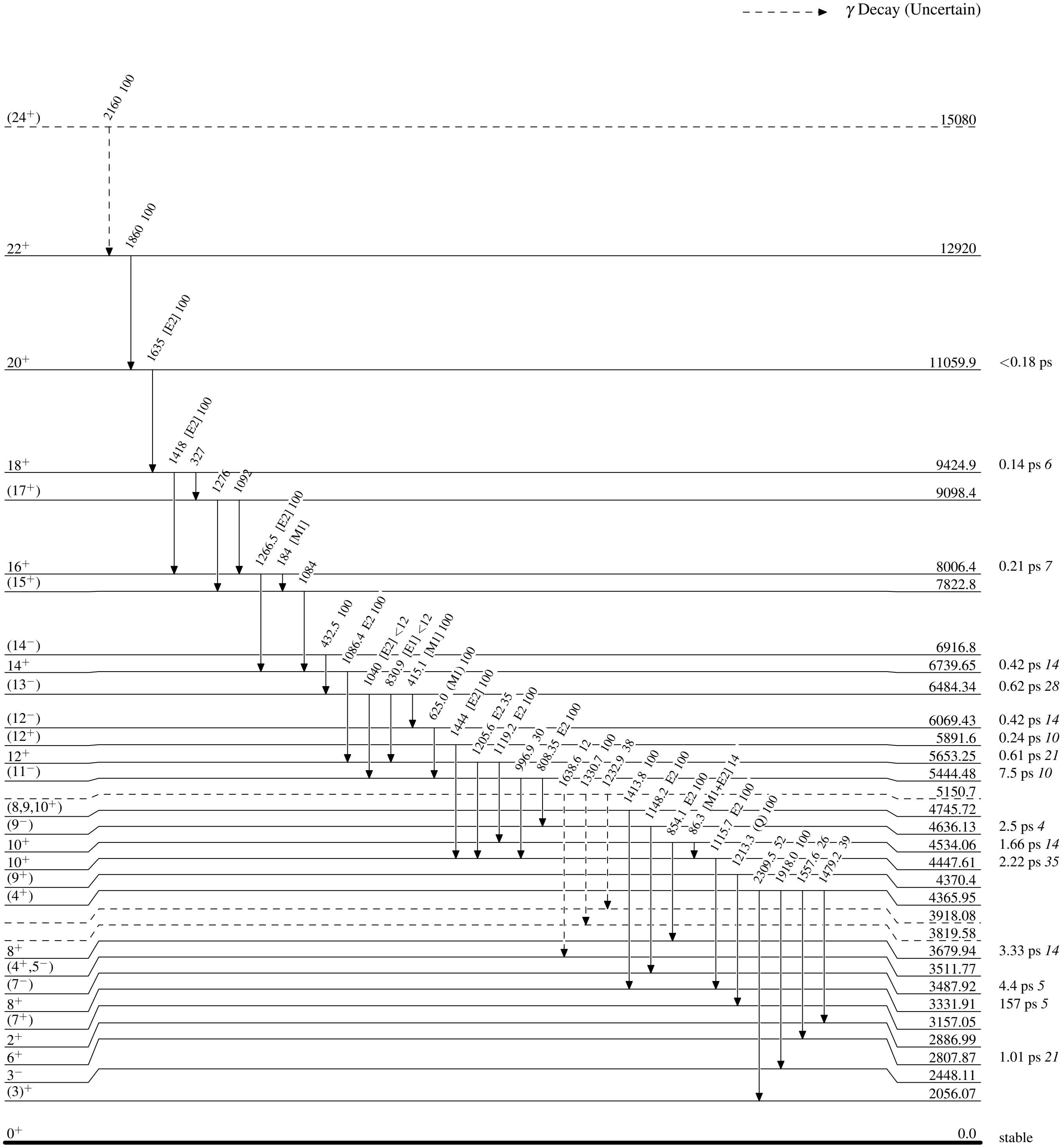
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



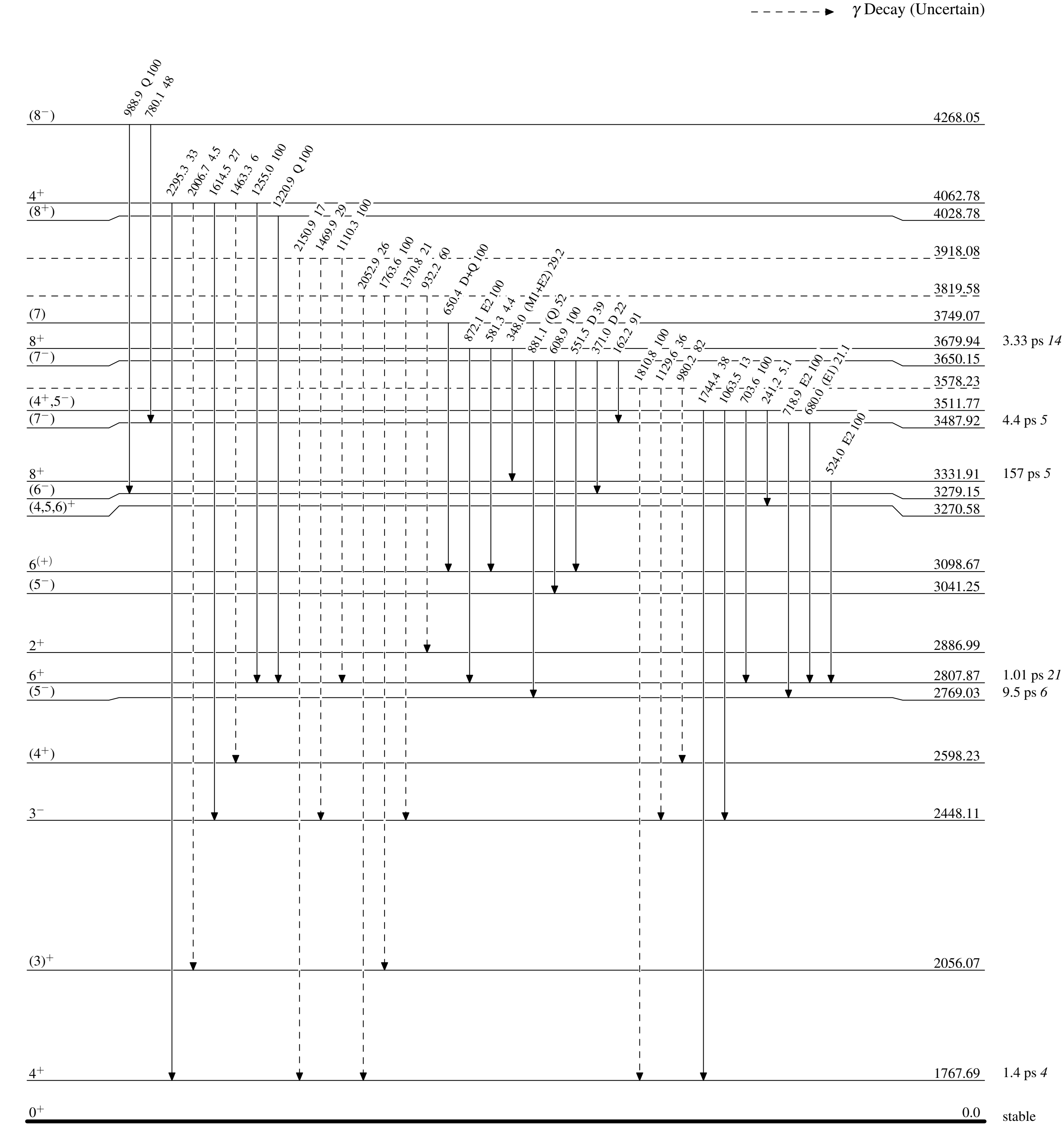
$^{84}_{38}Sr_{46}$

Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level



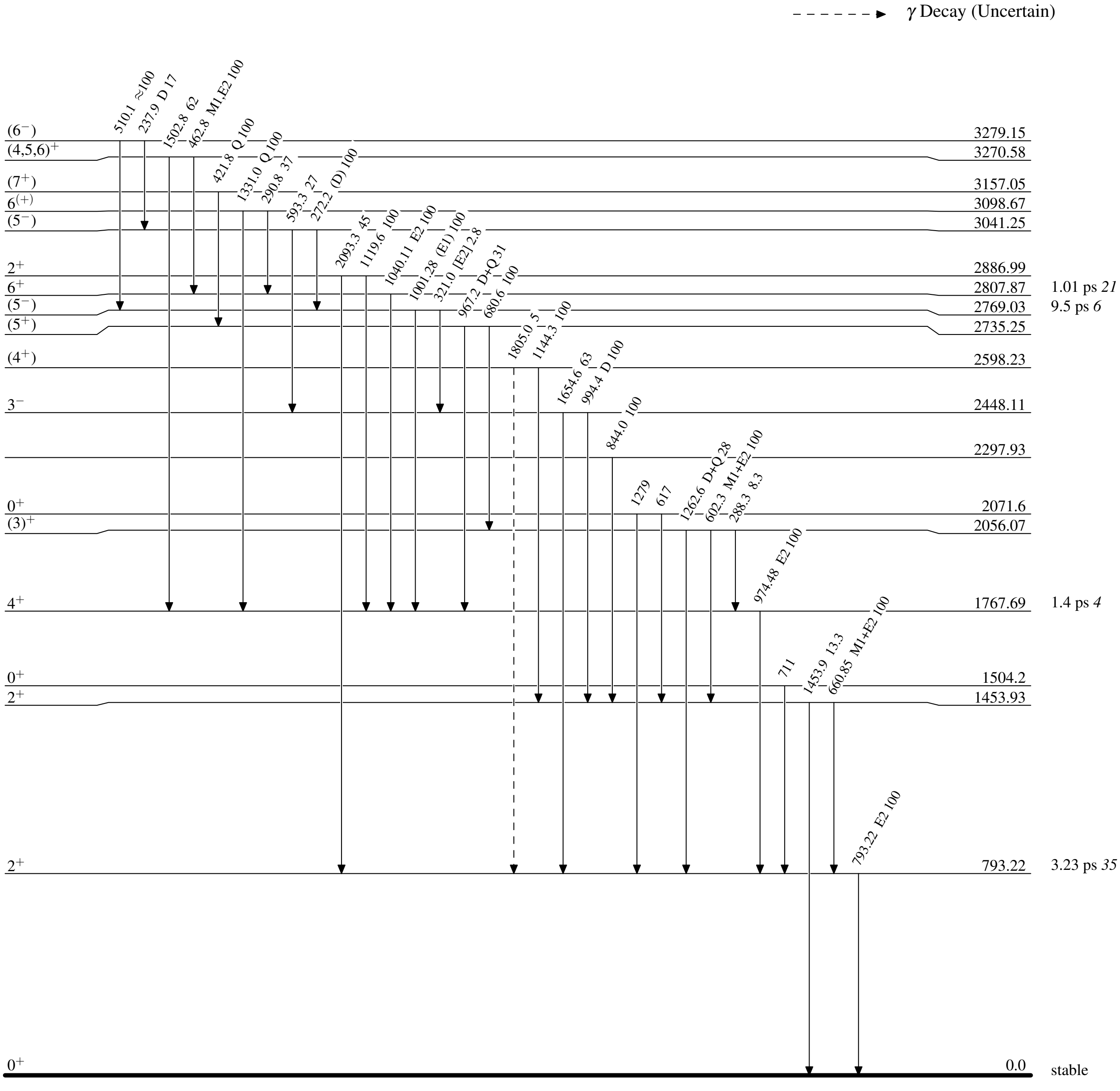
$^{84}_{38}Sr_{46}$

Adopted Levels, Gammas

Level Scheme (continued)

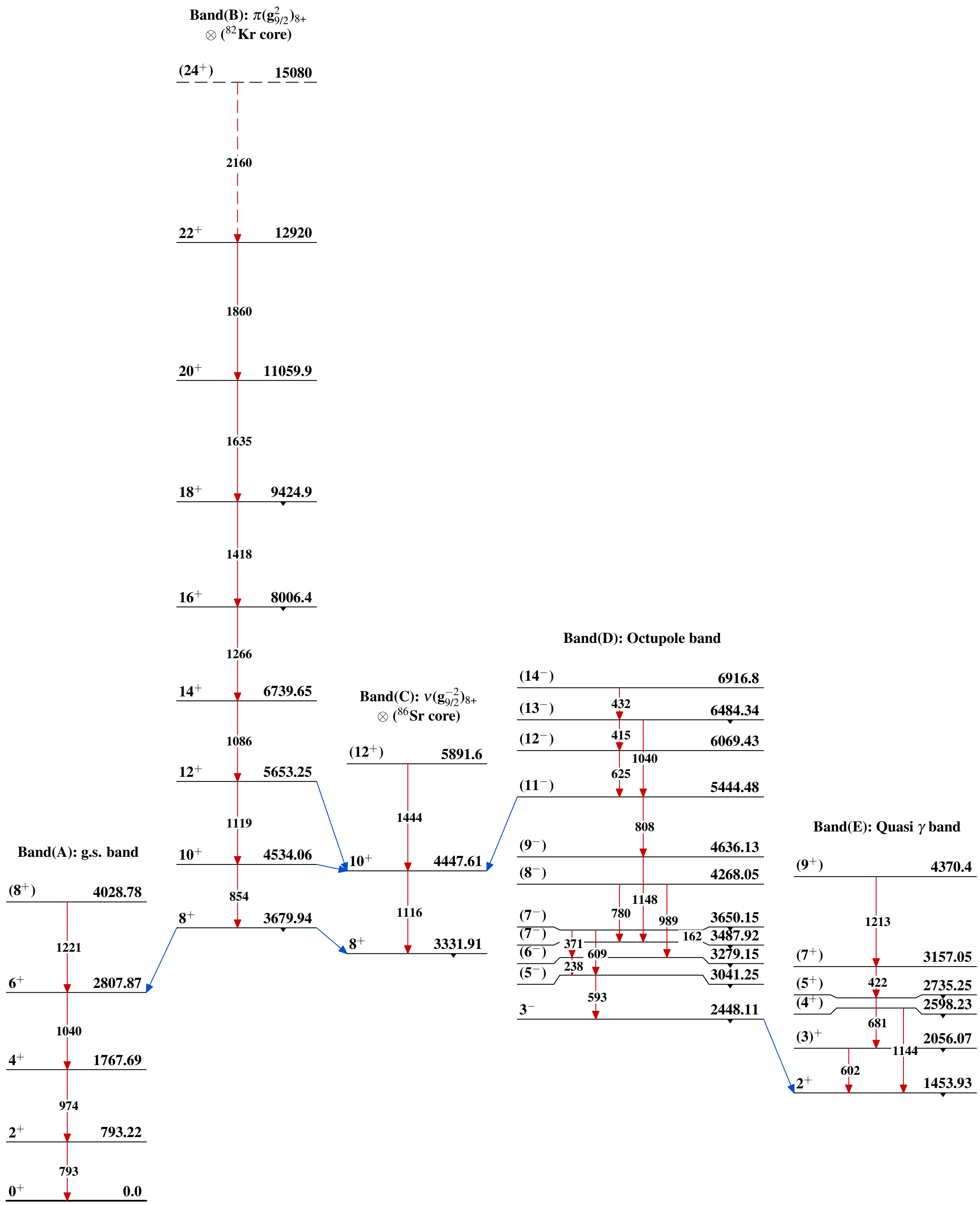
Intensities: Relative photon branching from each level

Legend



$^{84}_{38}Sr_{46}$

Adopted Levels, Gammas



$^{84}_{38}Sr_{46}$

Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Alexandru Negret, Balraj Singh	NDS 124,1 (2015)	30-Nov-2014

Q(β^-)=−5240 *14*; S(n)=11491 *3*; S(p)=9644.8 *11*; Q(α)=−6357.8 *14* 2012Wa38
S(2n)=20016.3 *16*, S(2p)=16661.8 *11* (2012Wa38).
^{86}Sr identified by mass spectrographic techniques by Aston, Nature 113, 856 (1924).
Other reactions:
^{85}Rb(p,n): IAR. Six resonances reported. See ^{85}Rb(p,n) dataset.
^{86}Sr(d,d): 1968Ko20.
^{86}Sr(t,t): 1970Ra10.
Measurements of isotope shifts, hyperfine structure, radii, etc.:
1992Ba55, 1991As06, 1990Bu12 (also 1988Si06), 1987Ea01, 1987An02, 1986Ma43, 1986An39, 1985Bu20, 1984Be44, 1983Lo13, 1983El04, 1983Bo35, 1981Be42, 1961He18.
^{88}Sr(^{12}C,^{14}C) E=87.5 MeV: 1995Ro11, Measured $\sigma(\theta)$, deduced reaction mechanisms.
^{92}Mo(n,X) E=2-250 MeV: 2000Ga46, measured excitation function for ^{86}Sr yield through the intensity of γ ray from the first excited state.
Additional information 1.

^{86}Sr Levels

All B(EL) values, given under comments, are from (e,e′).

Cross Reference (XREF) Flags

A	^{86}Rb β^- decay (18.642 d)	I	^{85}Rb(p,n) IAR	Q	^{87}Sr(d,t)
B	^{86}Y ε decay (14.74 h)	J	^{85}Rb(^{3}He,d)	R	^{88}Sr(p,t)
C	^{86}Y ε decay (47.4 min)	K	^{86}Sr(e,e′)	S	^{89}Y(μ^-,3nγ)
D	^{74}Ge(^{18}O,2n$\alpha\gamma$)	L	^{86}Sr(γ,γ')	T	^{89}Y(p,α)
E	^{76}Ge(^{13}C,3nγ)	M	^{86}Sr(p,p′),(pol p,p′)	U	^{90}Zr(d,^{6}Li)
F	^{82}Se(^{9}Be,5nγ)	N	^{86}Sr(d,d),(t,t)	V	^{90}Zr(^{3}He,^{7}Be)
G	^{84}Kr(^{3}He,n)	O	Coulomb excitation		
H	^{84}Kr(α,2nγ)	P	^{87}Sr(p,d),(pol p,d)		

E(level)[†]	J$^\pi$[‡]	T$_{1/2}$	XREF	Comments
0.0[&]	0$^+$	stable	ABCDEFGH JKLMNOPQRSTUV	J$^\pi$: optical spectroscopy (1931Fr01). RMS charge radius <r^2>$^{1/2}$=4.2307 fm *20* (2013An02). Δ<r^2>(^{86}Sr−^{88}Sr)=+0.050 fm^2 *8* (1990Bu12).
1076.68[&] *4*	2$^+$	1.46 ps +*9*−*8*	ABCDEF H JKLM OPQRSTUV	μ=+0.57 *3* (2012Ku14,2014StZZ) B(E2)↑=0.134 *8* (2013PrZY) β_2(p,p′)=0.158 *16*. J$^\pi$: L(p,t)=2; E2 γ to 0$^+$. T$_{1/2}$: weighted average of values from Coulomb excitation; 1.39 ps *7* (DSAM, 2012Ku14), 1.46 ps *15* (DSAM, 1988Ku01), B(E2)=0.118 *16* (1964Sy01), 0.087 *26* (1963Al31). Other: B(E2)=1.121 *5* in (e,e′) (1992Ki20). μ: transient field integral perturbed angular correlations. Other: +0.55 *10* (transient field, 1998Ku01).
1854.22 *7*	2$^+$	0.386 ps *20*	B EF H JKLM OPQR TUV	μ=+0.8 *3* (2012Ku14,2014StZZ) B(E2)↑=0.0145 *7* J$^\pi$: L(p,p′)=2. T$_{1/2}$: from B(E2) and adopted branching ratio. μ: transient field integral perturbed angular correlations.

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Adopted Levels, Gammas (continued)

^{86}Sr Levels (continued)

E(level)[†]	J^{π}[‡]	$T_{1/2}$	XREF	Comments
2106 6	0^+		J LM PQR Tu	E(level): from (p,t). J^{π}: L(p,t)=0.
2203 6	0^+		CD L PQR Tuv	E(level): from (p,t). J^{π}: L(p,t)=0.
2229.81[&] 7	4^+	1.73 ps 21	BCDEF H JK M O QR Tuv	μ=−2.7 20 (2012Ku14,2014StZZ) B(E4)↑=0.000308 22 XREF: T(2223). $T_{1/2}$: from DSAM in Coul. ex. (2012Ku14). J^{π}: L(p,t)=L(e,e′)=4; ΔJ=2, E2 γ to 2^+. μ: transient field integral perturbed angular correlations.
2365 12			T	E(level): very weakly populated level.
2481.96[a] 7	3^-	0.90 ps 7	B EF H JKLM OPQR TU	B(E3)↑=0.0497 18 (1992Ki20,2002Ki06) β_3(p,p′)=0.185 19. J^{π}: L(p,t)=L(p,p′)=L(e,e′)=3. $T_{1/2}$: from DSAM (2012Ku14).
2499 6			L	
2642.18 25	2^+	87 fs 19	B JKLM PQR T	B(E2)↑=0.0121 13 XREF: B(?). J^{π}: L(p,t)=2. $T_{1/2}$: from B(E2) and branching ratio as quoted here. $T_{1/2}$=182 fs 20 if the level decays by g.s. transition only.
2672.89[a] 8	5^-	<5[#] ns	B EF H JK M OPQR T v	B(E5)↑=0.000289 21 J^{π}: L(p,t)=L(e,e′)=5, L(p,d)=1 from $9/2^+$.
2788.9 6	2^+	25 fs 12	B JKLM PQR T V	B(E2)↑=0.0038 3 J^{π}: L(p,t)=2. $T_{1/2}$: from B(E2) in (e,e′) and adopted branching ratio.
2857.41[&] 12	6^+	<5[#] ns	CDEF H K PQR T	B(E6)↑=8.3×10^{-7} 76 J^{π}: L(p,t)=6, L(p,d)=4 from $9/2^+$.
2878.32 8	$(4)^+$		B J M Q T	J^{π}: L(^{3}He,d)=1 from $5/2^-$; γ to 2^+; γ from 5^-.
2956.09[&] 12	8^+	0.455 μs 7	CDEF H K PQR T	%IT=100 μ=−1.93 2 (1978Ha52,2014StZZ) μ: Differential perturbed angular distribution of γ rays (1978Ha52). Others: −1.944 32 (Stroboscopic method, 1975Ma02), 1.93 12 ($\gamma(\theta$,H,t), 1973Ha36). J^{π}: L(e,e′)=8; L(p,t)=(8). L(p,d)=4 from $9/2^+$. $T_{1/2}$: from γ(t). Weighted average of 0.40 μs 4 (1997Is13), 0.457 μs 7 (1978Ha52), 0.41 μs 5 (1975Ma02) and 0.46 μs 3 (1971Is04). Unweighted average is 0.432 μs 16.
2997.41 9	3^-		B G JKLM PQR T v	B(E3)↑=0.014 3 J^{π}: L(e,e′)=L(p,t)=3. L(p,α)=4 from $1/2^-$. L(p,d)=4+1 from $9/2^+$. E(level): doublet in (p,d) from L=4+1; other component with J=0 to 9, π=+.
3047 6			L v	
3055.87[a] 9	5^-	<5[#] ns	B EF H JK M PQR T v	B(E5)↑=0.00061 6 J^{π}: L(e,e′)=L(p,t)=5. Also L=4+1 in (p,d) from $9/2^+$. In ^{82}Se(^{9}Be,5nγ) J^{π} is assigned (6^-) based on an unlikely [M2+E3] multipolarity assigned for 826.02γ (2014Li25). E(level): doublet in (p,d) from L=4+1; other component with J=0 to 9, π=+.
3104 6	(0^+)		L QR t v	E(level): from (p,t). (p,t) and (p,α) indicate a doublet. J^{π}: L(p,t)=(0,3). Strong γ from (1).
3185	+		J m t	J^{π}: L(^{3}He,d)=1 from $5/2^-$.
3185.29 7	$(3)^-$	<5[#] ns	B H m PQR t	J^{π}: L(p,t)=3; L(p,d)=1 from $9/2^+$; M1 γ to $(3)^-$.

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Adopted Levels, Gammas (continued)

^{86}Sr Levels (continued)

E(level)[†]	J^{π}[‡]	$T_{1/2}$	XREF	Comments
3291.46[a] *13*	6^-	<5[#] ns	B EF H J Q	J^π: L(^{3}He,d)=4 from $5/2^-$; ΔJ=1, M1 γ from 7^-; ΔJ=1 γ to 5^-.
3317.70 *10*	$(5)^-$		B M PQR T	J^π: L(p,t)=5; L(p,d)=1 from $9/2^+$.
3362.11 *11*	4^+		B K M QR T	B(E4)↑=0.00197 *12* J^π: L(e,e′)=L(p,t)=4.
3392 *7*	$^+$		J T v	J^π: L(^{3}He,d)=1 from $5/2^-$.
3430 *2*	2^+		M R T v	E(level): from (p,t). J^π: L(p,t)=2.
3482.3 *4*	6^+	<5[#] ns	H K pQR v	B(E6)↑=5.4×10^{-6} *14* E(level): doublet indicated by L(d,t)=3+4 from $9/2^+$; other component with negative parity and J=1 to 8. J^π: L(e,e′)=6.
3500.00 *10*	$(3,4,5)^-$		B m pQ v	J^π: L(d,t)=1 from $9/2^+$. Also L(p,d)=3 from $9/2^+$.
3500.5 *4*	$^+$		J m v	J^π: L(^{3}He,d)=3 from $5/2^-$.
3555.87 *12*	(4^+)		B J M T	J^π: L(^{3}He,d)=(3) from $5/2^-$; γ rays to $(3)^-$ and 5^-.
3645.00 *8*	(3^-)		B M R T	J^π: L(p,t)=3.
3664.41[a] *20*	7^-		EF	J^π: ΔJ=1, E1 γ rays to 6^+ and 8^+.
3665.3 *13*	$(5,6,7)^-$	<5[#] ns	H P	J^π: L(p,d)=3 from $9/2^+$ gives J=2 to 8, π=−; γ to 6^+.
3686.0 *5*	2^+		J m R t	J^π: L(p,t)=2.
3686.84 *21*	3^-		B m P t	J^π: L(p,d)=3. log *ft*=7.0 (log $f^{1u}t$=8.0) from 4^-. γ to 2^+.
3765.74 *8*	$3^-,4^-,5^-$	<5[#] ns	B H M p r	XREF: r(3770). J^π: log *ft*=6.1 (log $f^{1u}t$=7.0) from 4^-. M1,E2 γ to 5^-. π=− from the L(p,d)=1 component from $9/2^+$.
3774.98 *18*	$(4,5)^+$		B p r T	XREF: B(?)r(3770). J^π: log *ft*=7.4 (log $f^{1u}t$=8.3) from 4^-. γ to 5^-. π=+ from the L(p,d)=4 component from $9/2^+$.
3782.70[b] *24*	6^+		EF	J^π: ΔJ=2, E2 γ to 4^+; γ to 6^+.
3831.12 *12*	$(3,4)^-$		B PQ T	J^π: log *ft*=5.8 from 4^-. (M1) γ to $(3)^-$. L(p,d)=1 from $9/2^+$.
3871.5 *4*	3^-		B P T	J^π: log *ft*=7.4 (log $f^{1u}t$=8.3) from 4^-. γ to 2^+. L(p,d)=3 from $9/2^+$.
3926.04 *9*	$(4)^+$		B M R v	J^π: E1 γ to $(5)^-$; γ to $(3)^-$.
3942.46 *20*	3^-		B P T v	J^π: log *ft*=7.1 (log $f^{1u}t$=7.9) from 4^-. γ to 2^+. L(p,d)=1 from $9/2^+$.
3968.96 *13*	$3^-,4^-,5^-$		B P v	J^π: log *ft*=6.8 (log $f^{1u}t$=7.5) from 4^-. γ rays to 3^- and 5^-. L(p,d)=3 from $9/2^+$.
3973.1 *5*	$(6,7,8^+)$	<5[#] ns	H v	J^π: γ to 6^+.
4096 *10*	$^-$		P	J^π: L(p,d)=1 from $9/2^+$.
4146.21 *23*	$3,4^+$		B r	XREF: r(4160). J^π: log *ft*=6.9 (log $f^{1u}t$=7.6) from 4^-. γ to 2^+.
4148.5 *5*	(9)	<5[#] ns	H r	XREF: r(4160). J^π: ΔJ=(1), dipole γ to 8^+.
4154.28[b] *18*	8^+		EF	J^π: ΔJ=2, E2 γ to 6^+; ΔJ=1, E1 G to 7^-.
4173 *10*			P	E(level),J^π: doublet from L(p,d)=(4+1) from $9/2^+$; one with J=0 to 9 with positive parity, other with J=3 to 6 with negative parity.
4206.11 *10*	$(3^-,4,5^-)$		B	J^π: log *ft*=6.8 (log $f^{1u}t$=7.4) from 4^-. γ rays to 3^- and 5^-.
4251 *10*	$^-$		P	J^π: L(p,d)=3 from $9/2^+$.
4270 *10*			T	
4285 *10*	$^-$		P	J^π: L(p,d)=3 from $9/2^+$.
4339.3? *15*			B	
4410.7 *5*	3^-		B P	J^π: log *ft*=7.3 (log $f^{1u}t$=7.7) from 4^-. γ to 2^+. L(p,d)=3+1 from $9/2^+$.

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Adopted Levels, Gammas (continued)

^{86}Sr Levels (continued)

E(level)[†]	J^{π}[‡]	$T_{1/2}$	XREF	Comments
4478 *15*	−		P	J^{π}: L(p,d)=3+1 from $9/2^+$.
4526 *15*	−		P	J^{π}: L(p,d)=3 from $9/2^+$.
4600.6 *11*	$(6,7,8)^-$	<5[#] ns	H P	J^{π}: L(p,d)=3 from $9/2^+$; γ to $(6,7,8^+)$.
4665 *15*			P	
4709.13[&] *19*	10^+	<14[@] ps	DEF H	J^{π}: ΔJ=2, E2 γ to 8^+; band member.
4718.0 *17*	$3,4^{(+)}$		B P	J^{π}: log *ft*=7.4 (log $f^{1u}t$=7.4) from 4^-. γ to 2^+.
4738 *15*			P	
4845 *20*	−		P	J^{π}: L(p,d)=3 from $9/2^+$.
4890 *15*	+		P	J^{π}: L(p,d)=4 from $9/2^+$.
4924.6[a] *7*	$(9)^-$		EF	J^{π}: ΔJ=2, E2 γ to 7^-; band member.
4954 *6*	$3,4^{(+)}$		B P	XREF: P(4963). J^{π}: log *ft*=6.9 (log $f^{1u}t$=6.3) from 4^-. γ to 2^+. E(level): doublet in (p,d) from L=4+1 from $9/2^+$; one with J=0 to 9 with positive parity, other with J=3 to 6 with negative parity.
4976.22[b] *24*	$(10)^+$		EF	J^{π}: ΔJ=2, E2 G to 8^+; band member.
5012.7 *4*	(11^-)	<5[#] ns	EF H	J^{π}: ΔJ=1, (E1) γ to (10^+).
5035 *20*			P	E(level),J^{π}: doublet from L(p,d)=4+1 from $9/2^+$; one with J=0 to 9 with positive parity, other with J=3 to 6 with negative parity.
5102 *15*			P	
5166 *20*			P	
5191 *20*			P	E(level),J^{π}: doublet from L(p,d)=(4+3) from $9/2^+$; one with J=0 to 9 with positive parity, other with J=1 to 8 with negative parity.
5300 *20*			P	
5357 *20*			P	E(level),J^{π}: doublet from L(p,d)=(4+1) from $9/2^+$; one with J=0 to 9 with positive parity, other with J=3 to 6 with negative parity.
5403 *20*			P	
5425.6 *15*		<5[#] ns	H	J^{π}: γ to $(6,7,8)^-$.
5454 *20*	−		P	J^{π}: L(p,d)=3 from $9/2^+$.
5544.0 *4*	$(9)^-$		EF	J^{π}: ΔJ=1, E1 γ to 8^+; γ to $(10)^+$.
5660.6 *6*	(12^-)		EF	J^{π}: ΔJ=1, D+Q γ to (11^-).
5834.6[d] *3*	$(11)^-$	<21[@] ps	DEF H	J^{π}: ΔJ=1, E1 γ to 10^+.
5847.9 *5*	$(10)^-$		EF	J^{π}: ΔJ=1, M1 γ to $(9)^-$.
5984.3 *8*			EF	XREF: E(5985.0). J^{π}: γ to $(9)^-$.
5984.8[a] *4*	$(11)^-$		E	J^{π}: ΔJ=1, E1 γ to 10^+.
6041.1 *6*	(11)		EF	J^{π}: ΔJ=1, D+Q γ to $(10)^-$.
6061.3[d] *3*	$(12)^-$	10[@] ps *3*	DEF H	J^{π}: ΔJ=1, M1(+E2) γ to $(11)^-$.
6191.2[d] *3*	$(13)^-$	4.9[@] ps *14*	DEF H	J^{π}: ΔJ=1, M1(+E2) γ to $(12)^-$.
6205.1[b] *3*	$(12)^+$		EF	J^{π}: ΔJ=2, E2 γ to $(10)^+$.
6315.3 *6*			E	J^{π}: γ to $(12)^-$.
6687.4 *5*	(13^-)		EF	J^{π}: ΔJ=1, D+Q γ to (12^-); γ to (11).
6879.0[c] *3*	12^+		E	J^{π}: ΔJ=2, E2 γ to 10^+; ΔJ=0 γ to $(12)^+$.
6890.6[d] *4*	$(14)^-$		E	J^{π}: ΔJ=1, M1 γ to $(13)^-$.
7071.7 *8*			E	
7241.1 *5*	(14^-)		E	J^{π}: ΔJ=1, (M1) γ to (13^-).
7336.7[c] *4*	(13^+)		E	J^{π}: ΔJ=1, (M1) γ to 12^+.
7461.8[d] *5*	(15^-)		EF	J^{π}: ΔJ=1, M1 transition to (14^-).
7640.7[b] *4*	(14^+)		EF	J^{π}: E2 transition to (12^+).
7822.0 *23*	(1)	4.6 fs *23*	L	J^{π}: from systematics of g.s. widths (see (γ,γ')).

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Adopted Levels, Gammas (continued)

^{86}Sr Levels (continued)

E(level)[†]	J^{π}[‡]	$T_{1/2}$	XREF	Comments
				$T_{1/2}$: from Γ=0.10 eV *5* measured in (γ,γ').
7844.4[c] *4*	(14$^+$)		E	J^{π}: (M1) transition to (13$^+$).
7895.0 *6*			E	
8158.8? *7*			F	
8267.4 *8*			E	
8338.0[c] *4*	(15$^+$)		E	J^{π}: (M1) transitions to (14$^+$) states.
8814.3[c] *5*	(16$^+$)		E	J^{π}: (M1) γ (15$^+$).
8964.7 *7*	(16$^-$)		E	J^{π}: (E2) γ to (14$^-$).
9402.7 *8*			E	
9431.0[c] *6*	(17$^+$)		E	J^{π}: M1 γ to (16$^+$).
10005.6[c] *7*	(18$^+$)		E	J^{π}: M1 γ to (17$^+$).
10873.8[c] *8*	(19$^+$)		E	J^{π}: (M1) γ to (18$^+$).
12064 *10*	(2$^-$)	47 keV *5*	I	E(level): analog of ^{86}Rb g.s., 2$^-$.
14328 *10*		36 keV *5*	I	
14437 *10*		25 keV *5*	I	
14857 *10*		26 keV *5*	I	
14960 *10*			I	
15079 *10*			I	

† From least-squares fit to Eγ values for levels populated in γ-ray studies.
‡ In (p,t), only L=0 and L=2 are considered as reliable.
\# From $\gamma\gamma$(t) in ^{84}Kr(α,2nγ).
@ From recoil-distance Doppler-shift observed in (^{18}O,2nγ) (1986Wa25).
& Band(A): Yrast cascade. Probable member of $\nu g_{9/2}^{-2}$ multiplet.
a Band(B): γ cascade based on 3$^-$.
b Band(C): Band based on 6$^+$.
c Band(D): Band based on 12$^+$.
d Band(E): Band based on 11$^-$.

Adopted Levels, Gammas (continued)

$\gamma(^{86}\mathrm{Sr})$

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.‡	δ‡	α#	Comments
1076.68	2+	1076.65 *4*	100	0.0	0+	E2			B(E2)(W.u.)=11.9 *7*
1854.22	2+	777.39 *12*	100 *3*	1076.68	2+	M1+E2	+0.251 *17*		B(M1)(W.u.)=0.065 *4*; B(E2)(W.u.)=7.7 *11*
		1854.38 *13*	76.5 *22*	0.0	0+	E2			B(E2)(W.u.)=1.28 *8*
2229.81	4+	1153.04 *8*	100	1076.68	2+	E2			B(E2)(W.u.)=7.1 *9*
2481.96	3−	252.05 *13*	1.14 *5*	2229.81	4+	E1		0.00690	α(K)=0.00611 *9*; α(L)=0.000665 *10*; α(M)=0.0001113 *16* α(N)=1.386×10^{-5} *20*; α(O)=8.73×10^{-7} *13* B(E1)(W.u.)=0.000269 *25*
		627.73 *9*	100 *3*	1854.22	2+	E1+M2	−0.07 *3*		B(E1)(W.u.)=0.00152 *12*; B(M2)(W.u.)=9.E+1 *8* B(M2)(W.u.): exceeds RUL(IV)=1.
		1404.8 *4*	0.56 *15*	1076.68	2+				
		2482.08 *17*	0.354 *25*	0.0	0+	[E3]			B(E3)(W.u.)=18.3 *20*
2642.18	2+	1564.4@ *5*	110 *30*	1076.68	2+				
		2641.9 *4*	100 *25*	0.0	0+	[E2]			B(E2)(W.u.)=1.1 *4*
2672.89	5−	190.73 *13*	6.00 *20*	2481.96	3−	E2		0.0958	α(K)=0.0831 *12*; α(L)=0.01073 *16*; α(M)=0.00180 *3* α(N)=0.000217 *3*; α(O)=1.135×10^{-5} *17* B(E2)(W.u.)>0.9 I_γ: from ^{86}Y ε decay (14.74 h). In in-beam γ-ray data, branching ratio of 11.0 *10* in (α,2nγ) (1983Fi05) and 22.1 *8* in (^{9}Be,5nγ) are high by a factor of 2 to 4 as compared to that in decay data.
		443.14 *8*	100 *3*	2229.81	4+	E1+M2	+0.083 *11*	0.00159 *3*	α(K)=0.00141 *3*; α(L)=0.000153 *3*; α(M)=2.56×10^{-5} *5* α(N)=3.20×10^{-6} *6*; α(O)=2.06×10^{-7} *4* B(E1)(W.u.)>7.4×10^{-7}; B(M2)(W.u.)>0.083
2788.9	2+	1711.6 *7*	100 *19*	1076.68	2+				
		2790.0 *10*	6 *3*	0.0	0+	[E2]			B(E2)(W.u.)=0.34 *24*
2857.41	6+	184.5 *4*	5.7 *25*	2672.89	5−	D			I_γ: unweighted average of values from (^{9}Be,5nγ) and (^{13}C,3nγ).
		627.61 *10*	100 *1*	2229.81	4+	E2		0.00190	α(K)=0.001675 *24*; α(L)=0.000187 *3*; α(M)=3.14×10^{-5} *5* α(N)=3.91×10^{-6} *6*; α(O)=2.46×10^{-7} *4* B(E2)(W.u.)>0.052 Mult.: from γ(θ) and γ(lin pol) in (^{18}O,2nγ).
2878.32	(4)+	648.6 *10*		2229.81	4+				
		1024.04 *10*	100 *4*	1854.22	2+	(E2)			Mult.: M1,E2 from α(K)exp. E2 from adopted ΔJ^π.
		1801.70 *10*	43.5 *13*	1076.68	2+	(E2)			Mult.: M1,E2 from α(K)exp. E2 from adopted ΔJ^π.
2956.09	8+	98.68 *3*	100	2857.41	6+	E2		1.068	α(K)=0.895 *13*; α(L)=0.1461 *21*; α(M)=0.0246 *4* α(N)=0.00284 *4*; α(O)=0.0001137 *16* B(E2)(W.u.)=2.85 *5* Mult.: from α deduced from intensity balance in IT decay.
2997.41	3−	355.1 *3*	0.48 *12*	2642.18	2+				
		515.18 *20*	23.5 *7*	2481.96	3−	M1,E2		0.0029 *5*	α(K)=0.0026 *4*; α(L)=0.00029 *5*; α(M)=4.8×10^{-5} *9* α(N)=6.0×10^{-6} *10*; α(O)=3.8×10^{-7} *6* α: overlaps M1 and E2.

$^{86}_{38}\mathrm{Sr}_{48}$-6

$\gamma(^{86}Sr)$ (continued)

E_i(level)	J^{π}_i	E_γ[†]	I_γ[†]	E_f	J^{π}_f	Mult.[‡]	δ[‡]	α[#]	Comments
2997.41	3^-	767.63 *13*	11.5 *16*	2229.81	4^+				
		1142.3[@] *10*	0.48 *16*	1854.22	2^+				
		1920.72 *13*	100 *3*	1076.68	2^+	E1(+M2)	−0.01 *3*		
		2997.6 *5*	0.040 *20*	0.0	0^+	[E3]			
3055.87	5^-	383.04 *18*	100 *3*	2672.89	5^-	M1		0.00494	α(K)=0.00437 *7*; α(L)=0.000481 *7*; α(M)=8.08×10^{-5} *12* α(N)=1.015×10^{-5} *15*; α(O)=6.61×10^{-7} *10* Mult.: from 2014KuZZ.
		826.04 *12*	90.9 *23*	2229.81	4^+	E1			B(E1)(W.u.)>5.9×10^{-8} Mult.: [M2+E3] in ^{82}Se(^{9}Be,5nγ) from DCO (2014Li25) seems unlikely in view of short half-life of 3055.87 level. δ(M2/E1)=+0.012 *19*.
3185.29	$(3)^-$	187.87 *13*	8.18 *27*	2997.41	3^-	M1		0.0297	α(K)=0.0262 *4*; α(L)=0.00294 *5*; α(M)=0.000495 *7* α(N)=6.20×10^{-5} *9*; α(O)=3.99×10^{-6} *6* B(M1)(W.u.)>3.9×10^{-5}
		307.00 *10*	22.5 *5*	2878.32	$(4)^+$	E1		0.00399	α(K)=0.00354 *5*; α(L)=0.000384 *6*; α(M)=6.43×10^{-5} *9* α(N)=8.02×10^{-6} *12*; α(O)=5.10×10^{-7} *8* B(E1)(W.u.)>3.9×10^{-7}
		512.42 *16*		2672.89	5^-				
		703.34 *10*	100 *3*	2481.96	3^-	M1+E2	+0.25 *5*	1.21×10^{-3} *2*	B(M1)(W.u.)>8.4×10^{-6}; B(E2)(W.u.)>0.00077 α(K)=0.001076 *16*; α(L)=0.0001167 *17*; α(M)=1.96×10^{-5} *3* α(N)=2.46×10^{-6} *4*; α(O)=1.614×10^{-7} *24*
		955.35 *20*	6.74 *27*	2229.81	4^+				
		2108.9 *3*	0.32 *5*	1076.68	2^+				
3291.46	6^-	235.47 *19*	100 *4*	3055.87	5^-	D+Q			Mult.: from DCO in ^{82}Se(^{9}Be,5nγ) (2014Li25) and in ^{76}Ge(^{13}C,3nγ) (2014KuZZ).
		503.0[@] *4*	23 *8*	2788.9	2^+	[M4]			E_γ: placement of 503.0γ to 2^+ level in ^{86}Y ε decay (14.74 h) is highly questionable as its implied M4 multipolarity is inconsistent with short half-life of 3291 level. Also this γ ray has not been confirmed in (α,2nγ) (1983Fi05), (^{9}Be,5nγ) (2014Li25) and (^{13}C,3nγ) (2014KuZZ) experiments.
		619.06 *23*	54 *8*	2672.89	5^-				
3317.70	$(5)^-$	132.34 *10*	3.77 *19*	3185.29	$(3)^-$				
		439.5 *3*	4.5 *15*	2878.32	$(4)^+$				
		644.8 *10*	50 *8*	2672.89	5^-	(M1+E2)	+0.27 *6*	1.48×10^{-3} *2*	α(K)=0.001313 *21*; α(L)=0.0001429 *23*; α(M)=2.40×10^{-5} *4* α(N)=3.02×10^{-6} *5*; α(O)=1.97×10^{-7} *3*
		835.7 *10*	100 *13*	2481.96	3^-	(E2)			
		1087.6 *5*	0.94 *19*	2229.81	4^+				
3362.11	4^+	689.29 *25*	49 *9*	2672.89	5^-				

$\gamma(^{86}Sr)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.‡	δ‡	α#	Comments
3362.11	4^+	1133.3 *10*	84 *7*	2229.81	4^+				
		1507.86 *10*	100 *12*	1854.22	2^+				
3482.3	6^+	809.4 *4*	100	2672.89	5^-				
3500.00	$(3,4,5)^-$	182.34@ *20*	16 *5*	3317.70	$(5)^-$				
		444.18 *23*	99 *25*	3055.87	5^-				
		1017.93 *23*	28 *18*	2481.96	3^-				
		1270.16 *13*	100 *15*	2229.81	4^+				
3555.87	(4^+)	237.9 *3*	25 *5*	3317.70	$(5)^-$				
		264.53 *13*	100 *5*	3291.46	6^-				
		882.96 *17*	46 *15*	2672.89	5^-				
3645.00	(3^-)	144.5 *3*	1.39 *15*	3500.00	$(3,4,5)^-$				
		1163.03 *10*	52.4 *18*	2481.96	3^-	M1+E2(+E0)			
		1415.20 *23*	15 *4*	2229.81	4^+				
		1790.90 *10*	44.3 *18*	1854.22	2^+	E1+M2	−0.16 *7*		
		2567.97 *18*	100 *5*	1076.68	2^+	E1+M2	+0.19 *2*	1.03×10^{-3}	α(K)=5.03×10^{-5} *10*; α(L)=5.32×10^{-6} *11*; α(M)=8.91×10^{-7} *18* α(N)=1.123×10^{-7} *22*; α(O)=7.43×10^{-9} *15*; α(IPF)=0.000971 *15*
3664.41	7^-	372.8 *4*	8 *4*	3291.46	6^-	M1		0.00528	α(K)=0.00467 *7*; α(L)=0.000514 *8*; α(M)=8.64×10^{-5} *13* α(N)=1.084×10^{-5} *16*; α(O)=7.06×10^{-7} *10*
		708.5 *5*	10 *3*	2956.09	8^+	E1			γ reported in (^{13}C,3nγ) only.
		807.0 *3*	100 *5*	2857.41	6^+	E1			
3665.3	$(5,6,7)^-$	183.0 *12*	100	3482.3	6^+				
3686.84	3^-	2610.11 *20*	100	1076.68	2^+				
3765.74	$3^-,4^-,5^-$	209.80@ *23*	8.3 *3*	3555.87	(4^+)				
		448.10@ *10*	1.6 *5*	3317.70	$(5)^-$				
		580.57 *10*	100.0 *29*	3185.29	$(3)^-$	(M1)		0.00186	B(M1)(W.u.)>1.1×10^{-5} α(K)=0.001644 *23*; α(L)=0.000179 *3*; α(M)=3.01×10^{-5} *5* α(N)=3.78×10^{-6} *6*; α(O)=2.47×10^{-7} *4*
		709.90 *10*	54.8 *16*	3055.87	5^-	M1,E2			
		768.3 *10*	6.7 *22*	2997.41	3^-				
		887.40 *17*	9.1 *9*	2878.32	$(4)^+$				
		1092.68 *13*	14.5 *9*	2672.89	5^-				
		1283.96 *13*	6.0 *22*	2481.96	3^-				
		1535.67 *13*	2.4 *7*	2229.81	4^+				
3774.98	$(4,5)^+$	719.17 *23*	100 *15*	3055.87	5^-				
		1102.02 *23*	89 *11*	2672.89	5^-				
3782.70	6^+	925.3 *4*	39 *5*	2857.41	6^+				

From ENSDF

Adopted Levels, Gammas (continued)

$\gamma(^{86}$Sr) (continued)

E_i(level)	J^{π}_i	E_γ†	I_γ†	E_f	J^{π}_f	Mult.‡	δ‡	α#	Comments
3782.70	6^+	1552.9 4	100 4	2229.81	4^+	E2			
3831.12	$(3,4)^-$	331.08 23	9.10 27	3500.00	$(3,4,5)^-$	M1(+E2)	0.3 3	0.0076 13	α(K)=0.0067 11; α(L)=0.00075 14; α(M)=0.000126 23 α(N)=1.6×10^{-5} 3; α(O)=1.01×10^{-6} 15
		645.9 10	100 12	3185.29	$(3)^-$	(M1)		1.46×10^{-3}	α(K)=0.001290 19; α(L)=0.0001401 21; α(M)=2.35×10^{-5} 4 α(N)=2.96×10^{-6} 5; α(O)=1.94×10^{-7} 3
		833.7 10	16 4	2997.41	3^-				
		1349.15 10	32.2 10	2481.96	3^-	M1,E2			
3871.5	3^-	2017.1 6	64 8	1854.22	2^+				
		2794.9 4	100 8	1076.68	2^+				
3926.04	$(4)^+$	370.28 17	41.0 20	3555.87	(4^+)				
		425.97 23	15.2 8	3500.00	$(3,4,5)^-$				
		608.29 10	100 7	3317.70	$(5)^-$	E1+M2	0.2 1	0.00087 19	α(K)=0.00077 17; α(L)=8.4×10^{-5} 19; α(M)=1.4×10^{-5} 4 α(N)=1.8×10^{-6} 4; α(O)=1.1×10^{-7} 3
		634.78@ 10	4.5 12	3291.46	6^-				
		740.81 13	67.6 25	3185.29	$(3)^-$				
		1253.11 10	76.2 25	2672.89	5^-	E1(+M2)	0.2 2		
		1696.25 13	31.6 8	2229.81	4^+				
3942.46	3^-	256.4@ 4	20 7	3686.84	3^-				
		2088.09 25	65 7	1854.22	2^+				
		2865.9 3	100 17	1076.68	2^+				
3968.96	$3^-,4^-,5^-$	469.24 25	55 5	3500.00	$(3,4,5)^-$				
		783.6 3	48 6	3185.29	$(3)^-$				
		971.43 18	50 6	2997.41	3^-				
		1296.03 23	100 6	2672.89	5^-				
3973.1	$(6,7,8^+)$	490.80 20	100	3482.3	6^+				
4146.21	$3,4^+$	380.4 3	100 7	3765.74	$3^-,4^-,5^-$				
		2291.8 5	27.3 18	1854.22	2^+				
		3069.7 4	25 4	1076.68	2^+				
4148.5	(9)	1192.4 4	100	2956.09	8^+	D			
4154.28	8^+	371.6 3	20 6	3782.70	6^+	E2		0.00938	α(K)=0.00824 12; α(L)=0.000961 14; α(M)=0.0001613 23 α(N)=1.99×10^{-5} 3; α(O)=1.182×10^{-6} 17
		489.85 23	100.0 18	3664.41	7^-	E1		1.18×10^{-3}	α(K)=0.001049 15; α(L)=0.0001133 16; α(M)=1.90×10^{-5} 3 α(N)=2.38×10^{-6} 4; α(O)=1.533×10^{-7} 22
		1198.15 21	35 11	2956.09	8^+	(E2)			
		1296.9 4	8.6 19	2857.41	6^+	E2			

$^{86}_{38}$Sr$_{48}$-9

Adopted Levels, Gammas (continued)

$\gamma(^{86}\mathrm{Sr})$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[‡]	α[#]	Comments
4206.11	$(3^-,4,5^-)$	1150.3 *10*		3055.87	5^-				
		1327.5 *5*	16 *7*	2878.32	$(4)^+$				
		1533.19 *13*	40 *6*	2672.89	5^-				
		1724.15 *10*	100 *7*	2481.96	3^-				
4339.3?		1154.0[@] *15*	100	3185.29	$(3)^-$				
4410.7	3^-	2180.8 *10*	27 *7*	2229.81	4^+				
		3334.0 *5*	100 *13*	1076.68	2^+				
4600.6	$(6,7,8)^-$	627.5 *10*	100	3973.1	$(6,7,8^+)$				
4709.13	10^+	1753.03 *15*	100	2956.09	8^+	E2			B(E2)(W.u.)>0.11 Mult.: from $\gamma(\theta)$ and γ(lin pol) in (^{18}O,2nγ), and from DCO in ^{76}Ge(^{13}C,3nγ).
4718.0	$3,4^{(+)}$	2862 *3*	22 *10*	1854.22	2^+				
		3642 *2*	100 *20*	1076.68	2^+				
4924.6	$(9)^-$	1260.2 *6*	100	3664.41	7^-	E2			Mult.: from DCO in ^{76}Ge(^{13}C,3nγ) (2014KuZZ).
4954	$3,4^{(+)}$	3877 *6*	100	1076.68	2^+				
4976.22	$(10)^+$	821.9 *2*	100	4154.28	8^+	E2			
5012.7	(11^-)	303.6 *3*	100	4709.13	10^+	(E1)		0.00412	α(K)=0.00365 *6*; α(L)=0.000396 *6*; α(M)=6.63×10^{-5} *10* α(N)=8.27×10^{-6} *12*; α(O)=5.25×10^{-7} *8*
5425.6		825.0 *10*	100	4600.6	$(6,7,8)^-$				
5544.0	$(9)^-$	567.8 *4*	72 *27*	4976.22	$(10)^+$				
		1389.8 *4*	100 *7*	4154.28	8^+	E1			
5660.6	(12^-)	648.0 *7*	100	5012.7	(11^-)	D+Q			
5834.6	$(11)^-$	1125.59 *22*	100	4709.13	10^+	E1			B(E1)(W.u.)>1.2×10^{-5} Mult.,δ: from $\gamma(\theta)$ and γ(lin pol) in (^{18}O,2nγ); δ(E2/M1)=−0.02 *4*.
5847.9	$(10)^-$	303.9 *4*	100	5544.0	$(9)^-$	M1		0.00871	α(K)=0.00770 *11*; α(L)=0.000852 *13*; α(M)=0.0001434 *21* α(N)=1.80×10^{-5} *3*; α(O)=1.166×10^{-6} *17*
5984.3		1059.7 *4*	100	4924.6	$(9)^-$				
5984.8	$(11)^-$	1275.5 *5*	100	4709.13	10^+	E1			
6041.1	(11)	193.4 *6*	100	5847.9	$(10)^-$	D+Q			
6061.3	$(12)^-$	76.3 *5*	13 *3*	5984.8	$(11)^-$				
		226.68 *4*	100 *5*	5834.6	$(11)^-$	M1(+E2)	−0.05 *5*	0.0183 *4*	α(K)=0.0162 *4*; α(L)=0.00181 *4*; α(M)=0.000304 *7* α(N)=3.82×10^{-5} *8*; α(O)=2.46×10^{-6} *5* B(M1)(W.u.)=0.19 *6*; B(E2)(W.u.)=10 *+21−10* Mult.,δ: from $\gamma(\theta)$ and γ(lin pol) in (^{18}O,2nγ).
6191.2	$(13)^-$	129.83 *3*	100	6061.3	$(12)^-$	M1(+E2)	−0.02 *3*	0.0795 *13*	α(K)=0.0701 *12*; α(L)=0.00796 *14*; α(M)=0.001340 *24* α(N)=0.000168 *3*; α(O)=1.069×10^{-5} *17* B(M1)(W.u.)=1.9 *5* B(M1)(W.u.)=1.9 *6*; B(E2)(W.u.)=5.E+1 *+16−5* Mult.,δ: from $\gamma(\theta)$; γ(lin pol) in (^{18}O,2nγ).

$\gamma(^{86}Sr)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α[#]	Comments
6205.1	$(12)^+$	1228.8 *2*	100	4976.22	$(10)^+$	E2		
6315.3		254.0 *5*	100	6061.3	$(12)^-$			
6687.4	(13^-)	646.4 *5*	77 *25*	6041.1	(11)			
		1026.8 *5*	100 *25*	5660.6	(12^-)			Mult.: D+Q in 2014Li25 and (E2) in 2014KuZZ.
6879.0	12^+	674.0 *5*	100 *11*	6205.1	$(12)^+$	(E2)		Mult.: ΔJ=0 transition (2014KuZZ).
		817.9 *7*	20 *8*	6061.3	$(12)^-$			
		894.2 *7*	23 *8*	5984.8	$(11)^-$			
		1044.0 *7*	16 *9*	5834.6	$(11)^-$			
		1902.6 *7*	19 *5*	4976.22	$(10)^+$	(E2)		
		2169.7 *5*	50 *11*	4709.13	10^+	E2		
6890.6	$(14)^-$	699.6 *3*	100	6191.2	$(13)^-$	M1		
7071.7		756.4 *5*	100	6315.3				
7241.1	(14^-)	554.0 *5*	100	6687.4	(13^-)	(M1)	0.00207	α(K)=0.00183 *3*; α(L)=0.000199 *3*; α(M)=3.35×10^{-5} *5* α(N)=4.21×10^{-6} *6*; α(O)=2.76×10^{-7} *4*
7336.7	(13^+)	457.6 *3*	100 *6*	6879.0	12^+	(M1)	0.00323	α(K)=0.00286 *4*; α(L)=0.000313 *5*; α(M)=5.26×10^{-5} *8* α(N)=6.61×10^{-6} *10*; α(O)=4.31×10^{-7} *6*
		649.0 *7*	27 *9*	6687.4	(13^-)			
		1131.8 *7*	15 *6*	6205.1	$(12)^+$	M1+E2		
7461.8	(15^-)	571.3 *3*	100	6890.6	$(14)^-$	M1	0.00193	α(K)=0.001706 *24*; α(L)=0.000186 *3*; α(M)=3.12×10^{-5} *5* α(N)=3.92×10^{-6} *6*; α(O)=2.57×10^{-7} *4*
7640.7	(14^+)	1435.5 *3*	100	6205.1	$(12)^+$	E2		
7822.0	(1)	4718 *5*	33 *9*	3104	(0^+)			
		4775 *5*	21 *7*	3047				
		5034 *5*	30 *8*	2788.9	2^+			
		5180 *5*	15 *7*	2642.18	2^+			
		5323 *5*	20 *7*	2499				
		5619 *5*	16 *7*	2203	0^+			
		5716 *5*	29 *6*	2106	0^+			
		5969 *5*	59 *8*	1854.22	2^+			
		6744 *5*	21 *5*	1076.68	2^+			
		7820 *5*	100 *9*	0.0	0^+			
7844.4	(14^+)	507.6 *3*	100 *12*	7336.7	(13^+)	(M1)	0.00253	α(K)=0.00224 *4*; α(L)=0.000245 *4*; α(M)=4.11×10^{-5} *6* α(N)=5.17×10^{-6} *8*; α(O)=3.38×10^{-7} *5*
		603.7 *5*	35.7 *22*	7241.1	(14^-)			
		1639.3 *7*	12 *4*	6205.1	$(12)^+$			
7895.0		1833.7 *5*	100	6061.3	$(12)^-$			
8158.8?		697.0[@] *5*		7461.8	(15^-)			
8267.4		1376.7 *7*	100	6890.6	$(14)^-$			
8338.0	(15^+)	493.5 *3*	100 *11*	7844.4	(14^+)	(M1)	0.00271	α(K)=0.00239 *4*; α(L)=0.000262 *4*; α(M)=4.40×10^{-5} *7* α(N)=5.52×10^{-6} *8*; α(O)=3.61×10^{-7} *5*

$^{86}_{38}Sr_{48}$-11

Adopted Levels, Gammas (continued)

$\gamma(^{86}Sr)$ (continued)

E_i(level)	J^{π}_i	E_{γ}[†]	I_{γ}[†]	E_f	J^{π}_f	Mult.[‡]	α[#]	Comments
8338.0	(15^+)	697.2 *3*	78 *8*	7640.7	(14^+)	(M1)	1.23×10^{-3}	α(K)=0.001087 *16*; α(L)=0.0001178 *17*; α(M)=1.98×10^{-5} *3* α(N)=2.49×10^{-6} *4*; α(O)=1.634×10^{-7} *23*
8814.3	(16^+)	476.2 *3*		8338.0	(15^+)	(M1)	0.00294	α(K)=0.00260 *4*; α(L)=0.000285 *4*; α(M)=4.78×10^{-5} *7* α(N)=6.01×10^{-6} *9*; α(O)=3.93×10^{-7} *6*
		1353.0 *7*		7461.8	(15^-)			
8964.7	(16^-)	2074.0 *5*	100	6890.6	$(14)^-$	(E2)		
9402.7		1507.6 *5*	100	7895.0				
9431.0	(17^+)	616.7 *3*	100	8814.3	(16^+)	M1	1.62×10^{-3}	α(K)=0.001433 *21*; α(L)=0.0001557 *22*; α(M)=2.62×10^{-5} *4* α(N)=3.29×10^{-6} *5*; α(O)=2.16×10^{-7} *3*
10005.6	(18^+)	574.6 *3*	100	9431.0	(17^+)	M1	0.00190	α(K)=0.001684 *24*; α(L)=0.000183 *3*; α(M)=3.08×10^{-5} *5* α(N)=3.87×10^{-6} *6*; α(O)=2.53×10^{-7} *4*
10873.8	(19^+)	868.2 *5*	100	10005.6	(18^+)	(M1)		

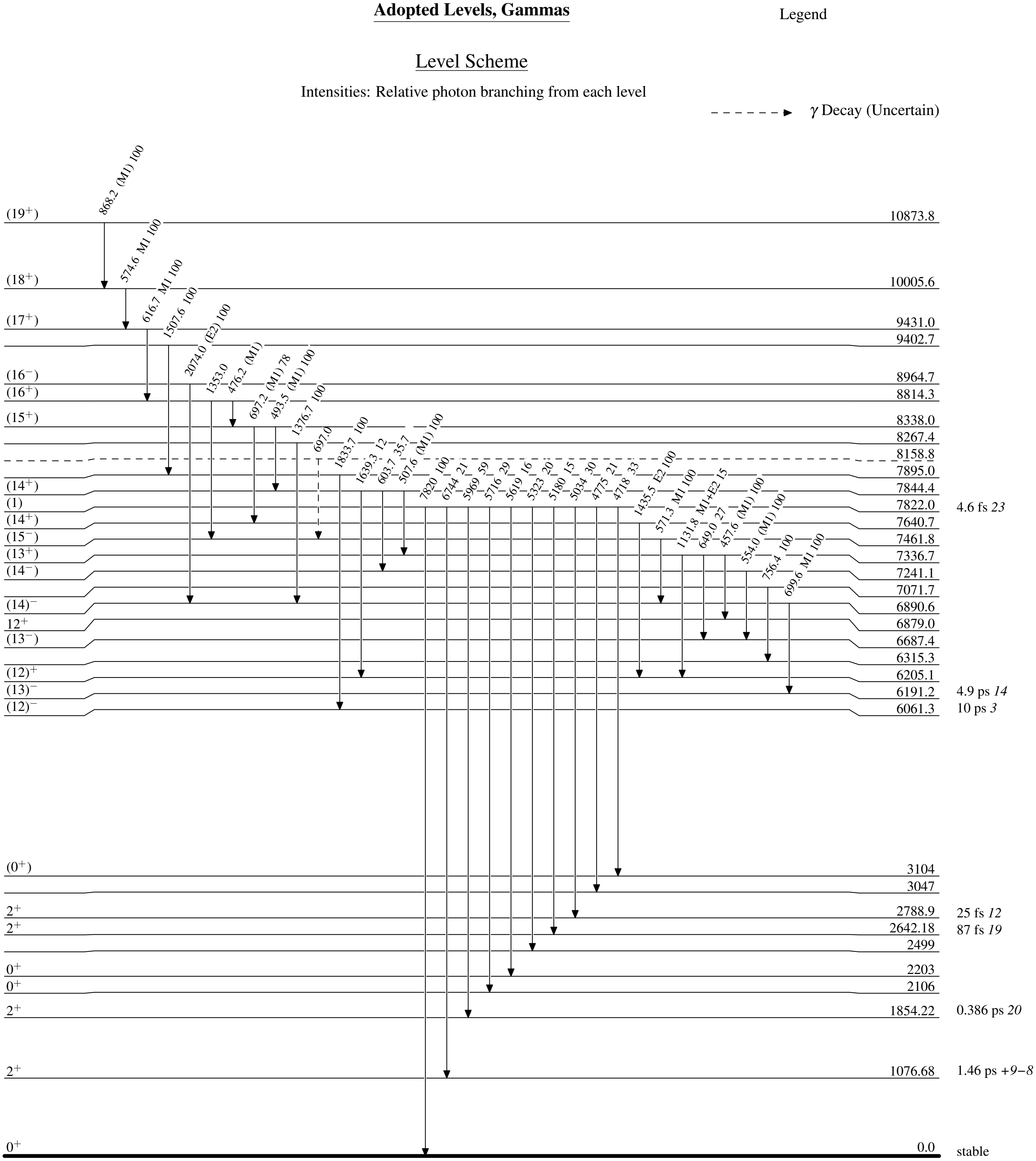
[†] Weighted averages taken when a level is populated in more than one decay or reaction.
[‡] From $\gamma\gamma(\theta)$ and ce data in ε decay (14.74 h), unless indicated otherwise.
[#] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.
[@] Placement of transition in the level scheme is uncertain.

$^{86}_{38}Sr_{48}$-12

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level

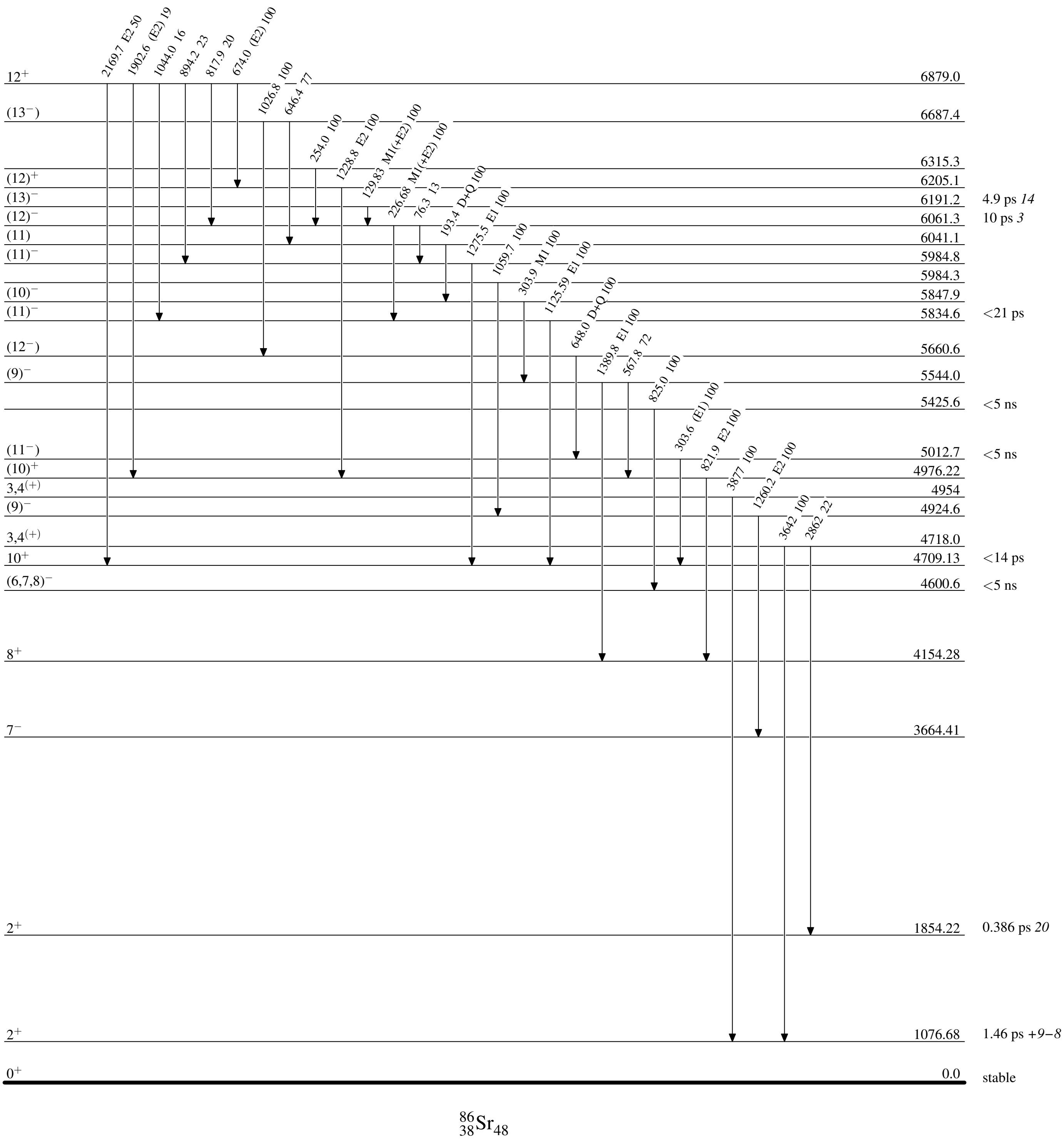


$^{86}_{38}Sr_{48}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

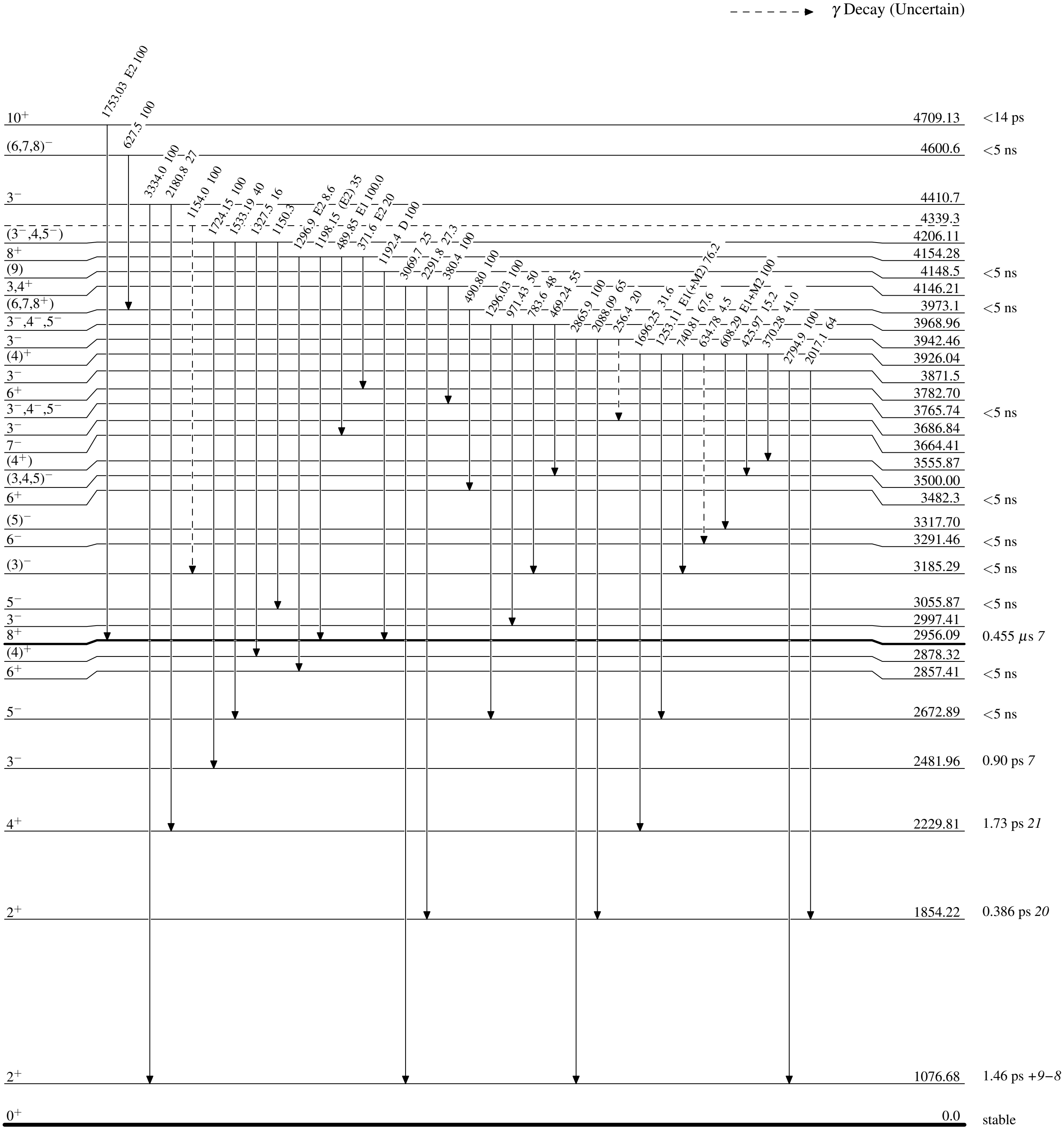


Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level



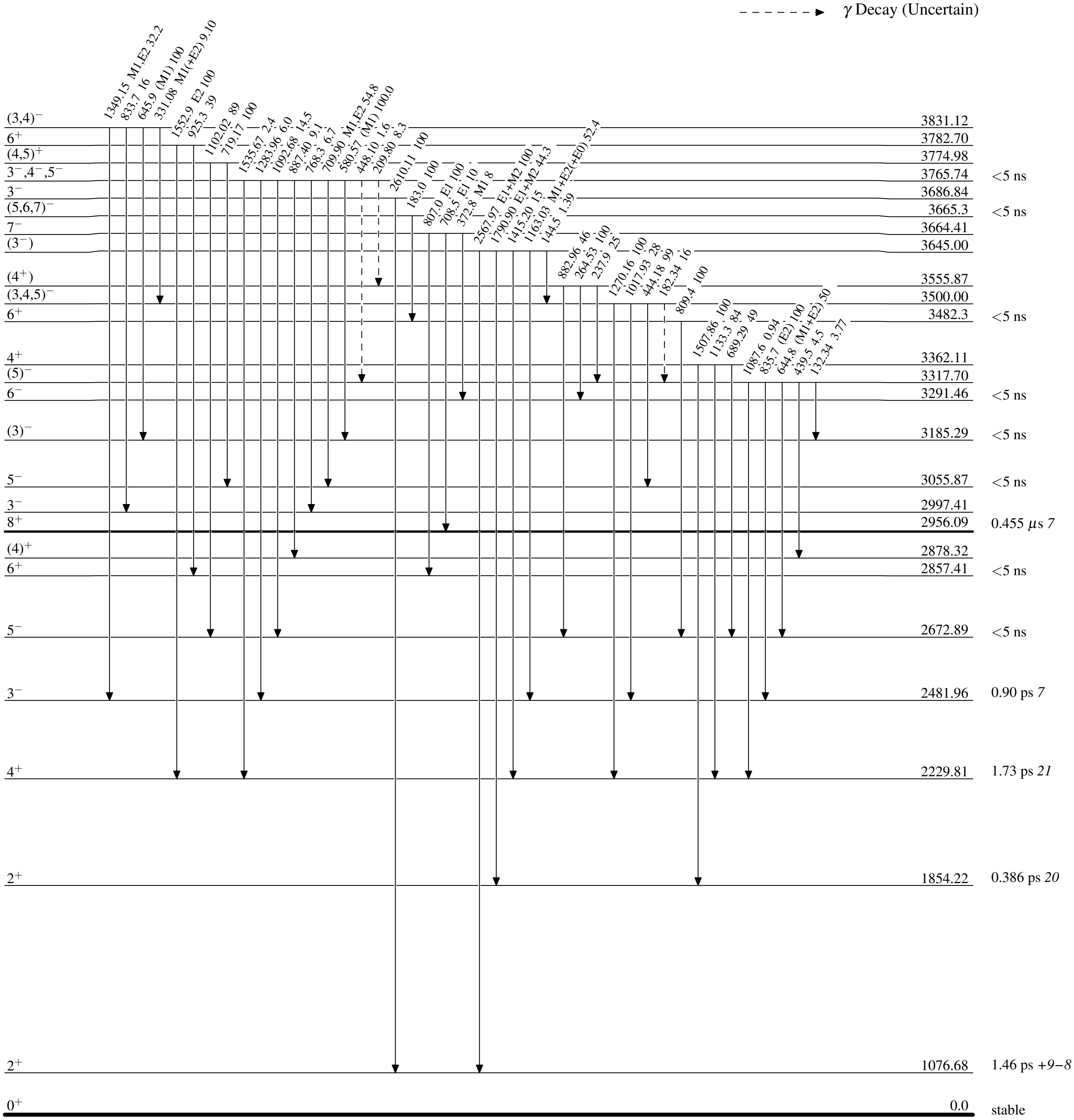
$^{86}_{38}Sr_{48}$

Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{86}_{38}Sr_{48}$

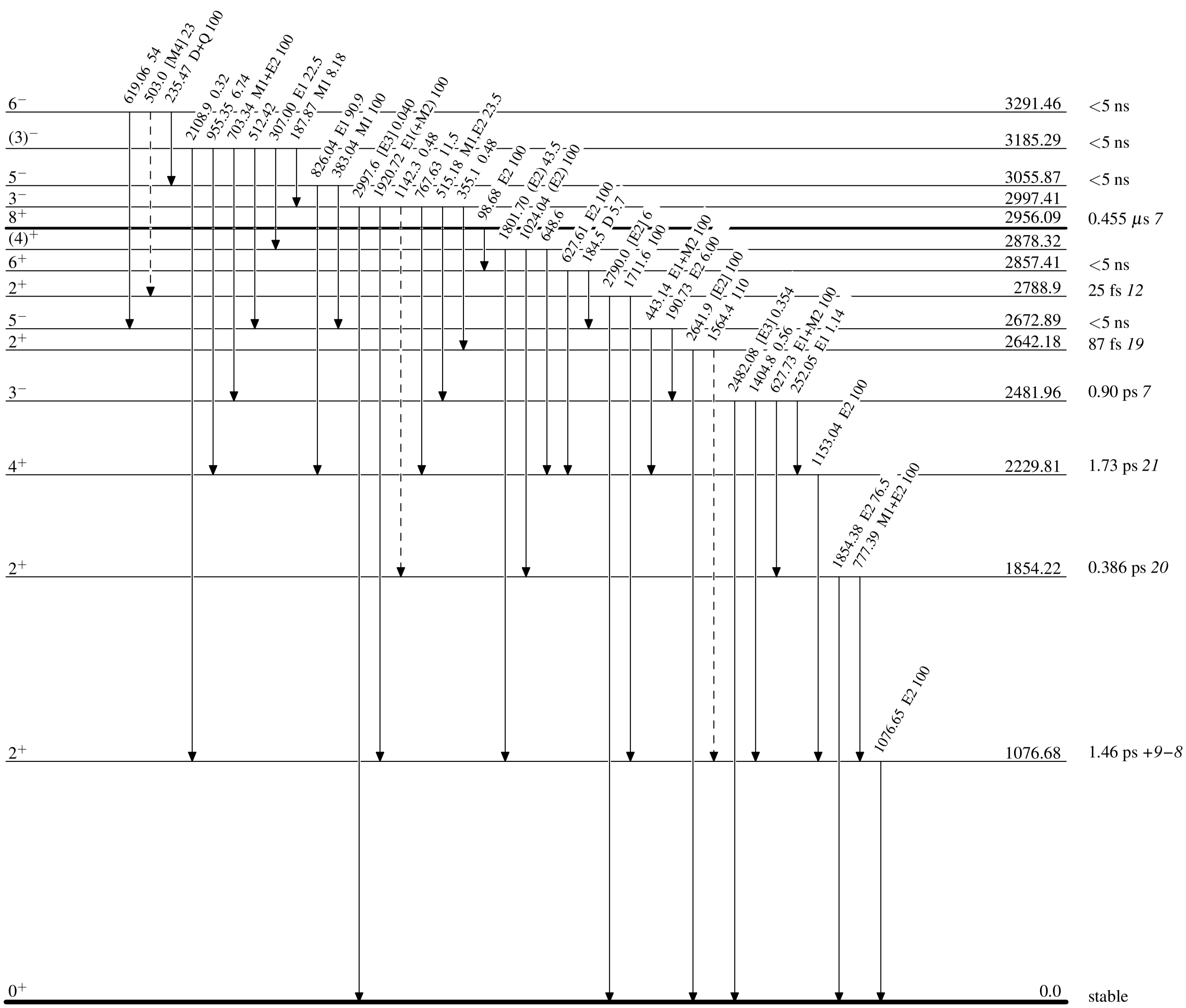
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

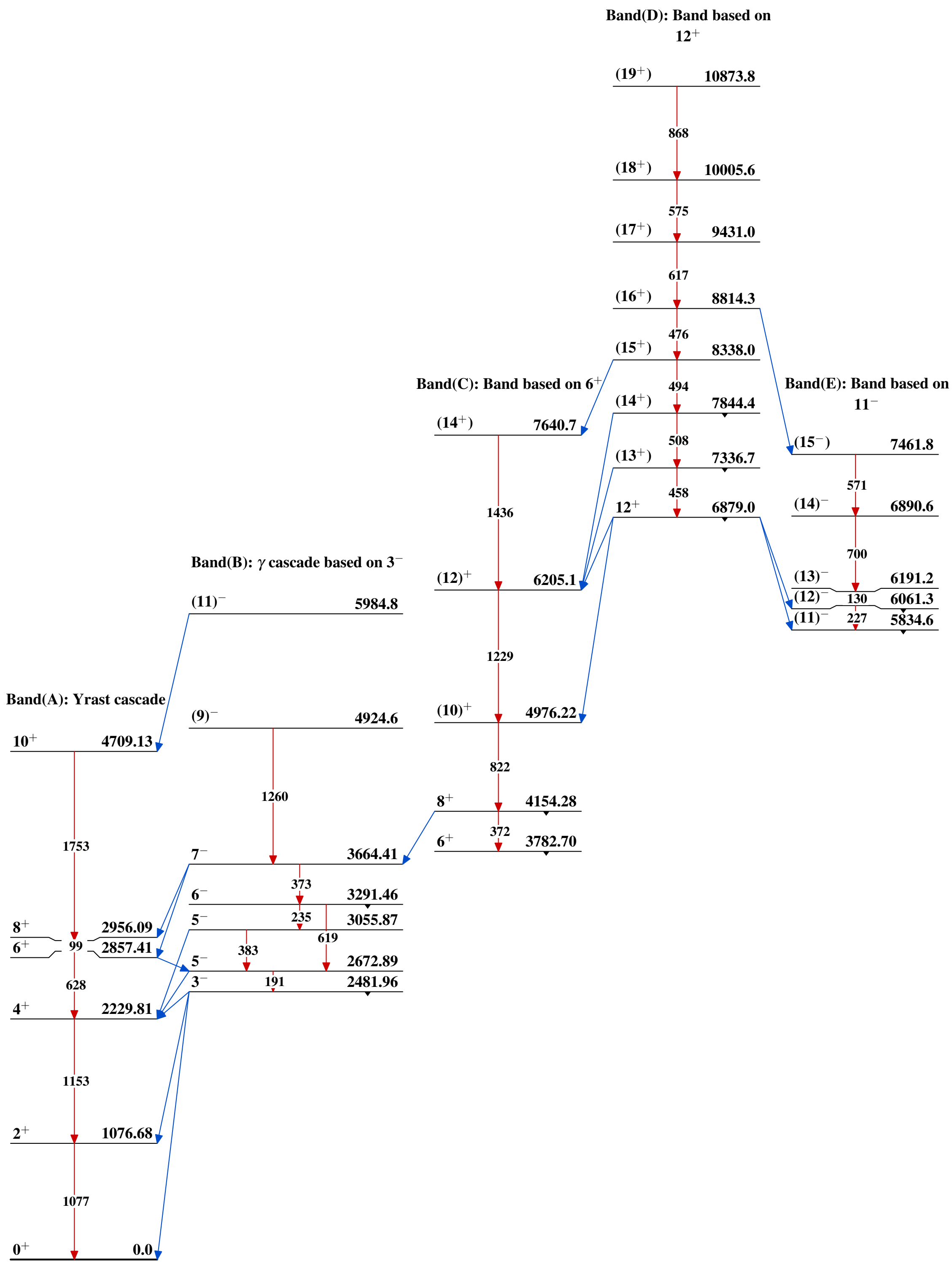
Legend

γ Decay (Uncertain)



$^{86}_{38}Sr_{48}$

Adopted Levels, Gammas



$^{86}_{38}$Sr$_{48}$

Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. A. Mccutchan and A. A. Sonzogni	NDS 115,135 (2014)	1-Nov-2013

Q(β^-)=−3622.6 *15*; S(n)=11112.64 *16*; S(p)=10612.5 *11*; Q(α)=−7906.9 *11* 2012Wa38
S(2n)=19540.79 *20*; S(2p)=19233.6 *11* (2012Wa38).
α: Additional information 1.

^{88}Sr Levels

Cross Reference (XREF) Flags

A	^{88}Rb β^- decay	I	^{88}Sr(γ,γ')	Q	^{88}Sr(n,n′)
B	^{88}Y β^+ decay	J	^{88}Sr(d,d′),(pol d,d′)	R	^{89}Y(d,^{3}He)
C	^{80}Se(^{11}B,p2nγ)	K	^{88}Sr(e,e′)	S	^{89}Y(μ^-,nγ)
D	^{86}Kr(α,2nγ)	L	^{88}Sr(p,p′),(pol p,p′)	T	^{89}Y(^{6}Li,^{7}Be)
E	^{86}Sr(t,p)	M	^{88}Sr(n,n′γ)	U	^{90}Zr(^{6}Li,^{8}B)
F	^{87}Sr(n,γ) E=thermal	N	Coulomb excitation	V	^{92}Zr(d,^{6}Li)
G	^{87}Rb(^{3}He,d)	O	^{86}Kr(^{3}He,n)	W	^{176}Yb(^{28}Si,Fγ),^{173}Yb(^{24}Mg,Fγ)
H	^{87}Sr(d,p)	P	^{87}Rb(p,n),(p,γ) IAR		

E(level)[†]	J$^\pi$	T$_{1/2}$[‡]	XREF	Comments
0	0$^+$	stable	ABCDEFGHIJKLMNO QRSTUVW	
1836.090 *8*	2$^+$	0.154 ps *8*	ABCDEFGHIJKLMNO QRSTUVW	μ=+2.44 *22* J$^\pi$: E2 1826γ to 0$^+$, L(p,t)=2. T$_{1/2}$: weighted average of 0.155 ps *8* from (γ,γ') and 0.152 ps *12* from DSAM in Coul. Ex. Others: 0.159 ps *13* from B(E2) in (e,e′) and 0.185 ps *14* from DSAM in (n,n′γ). μ: from transient field technique in Coul. Ex. (2012Ku14).
2734.137 *8*	3$^-$	0.70 ps *5*	ABCDEFGH JKLMNO Q S VW	J$^\pi$: L(t,p)=3. T$_{1/2}$: weighted average of 0.78 ps *5* from B(E3) in (e,e′) and 0.67 ps *3* from DSAM in Coul. Ex. Other: 0.67 ps *+19−13* from DSAM in (n,n′γ).
3156.19 *10*	0$^+$	1.5 ps *+8−4*	E G KLM O UV	J$^\pi$: L(t,p)=0.
3218.489 *22*	2$^+$	0.155 ps *10*	AB EFGHIJKLM R T	J$^\pi$: L(t,p)=2. T$_{1/2}$: Other: 0.13 ps *6* from B(E2)=0.0014 *7* in (e,e′).
3378.2 *10*	1	22[@] ps *3*	I	J$^\pi$: D 3378γ to 0$^+$.
3486.56 *4*	1$^+$	2.78[@] fs *24*	A FG I KLM R T	J$^\pi$: M1 3487γ to 0$^+$. T$_{1/2}$: Other: 4.6 fs *39* from DSAM in (n,n′γ).
3522.77 *7*	(2$^+$)	46 fs *15*	A F M	J$^\pi$: 3523γ to 0$^+$, 2167γ from 4$^+$.
3584.784 *19*	5$^-$	0.14[#] ns *4*	BCD FGH KLM S VW	J$^\pi$: L(p,p′)=5, E2 851γ to 3$^-$. T$_{1/2}$: Other: 1.7 ps *+6−3* from DSAM in (n,n′γ).
3635.09 *4*	(3)$^+$	0.76 ps *+21−14*	A FGH JKLM RST	J$^\pi$: L(^{3}He,d)=1 on 3/2$^-$ target; primary γ from 4$^+$,5$^+$ capture state; ΔJ=1, M1+E2 1779γ to 2$^+$.
3952.636 *22*	(4)$^-$	0.8 ps *+7−3*	FG KLM	J$^\pi$: L(p,p′)=5, M1+E2 1219γ to 3$^-$.
3990 *5*			E	J$^\pi$: May be identical to the 3993.8 level if L(t,p)=4,3 is incorrect.
3992.42 *7*	(0$^+$)	>0.48 ps	KLM	J$^\pi$: L(p,p′)=(0), $\gamma(\theta)$ in (n,n′γ).
4019.56 *4*	(6)$^-$	<10[#] ps	CD FG J M vW	J$^\pi$: L(^{3}He,d)=4 on 3/2$^-$ target, M1+E2 434γ to 5$^-$. T$_{1/2}$: Other: >1.9 ps from DSAM in (n,n′γ).
4035.52 *7*	2$^+$	15 fs *3*	A E I K M Uv	J$^\pi$: L(t,p)=2. T$_{1/2}$: weighted average of 21 fs *7* from DSAM in (n,n′γ), 13 fs *3* from (γ,γ'), and 20 fs *11* from

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Adopted Levels, Gammas (continued)

^{88}Sr Levels (continued)

E(level)[†]	J^π	$T_{1/2}$[‡]	XREF	Comments
				B(E2)=0.013 *7* in (e,e′).
4039.04 *3*	(3)$^+$	83 fs *7*	F H LM	J^π: L(p,p′)=(2), M1(+E2) 842γ from 4$^+$.
4170.41 *3*	(3$^-$)	1.6 ps *+22−6*	F K M	J^π: 586γ to 5$^-$, 1436γ to 3$^-$, 4171γ to 0$^+$.
4171? *4*	(6$^+$,7$^-$)		L	E(level): possibly identical to 4170.4 level if L(p,p′) is incorrect. J^π: L(p,p′)=(6,7).
4224.10 *10*			A k M	$T_{1/2}$: 170 ps *60* based on DSAM in (n,n′γ) of 1006γ which has only a tentative assignment to this level.
4226.98 *12*	1	0.15[@] ps *4*	I	J^π: D 4227γ to 0$^+$.
4227.20 *4*	(3$^-$)	84 fs *26*	EF kLM	J^π: L(p,p′)=3; D 2391γ to 2$^+$. L(t,p)=4 is discrepant.
4232 *10*	4$^+$		E	J^π: L(t,p)=4. Possibly identical to the 4227.2 level if L(t,p) is incorrect.
4262.9 *10*	(1,2$^+$)		I	J^π: 4263γ to 0$^+$.
4268.70 *4*	(3$^-$,4,5$^-$)	0.37 ps *4*	F JKLM	J^π: 684γ to 5$^-$, 1534γ to 3$^-$. Decay pattern inconsistent with L(p,p′)=(2).
4299.52 *5*	4$^+$	30 fs *5*	EF H KLM	J^π: L(t,p)=4.
4353.95 *7*	(3$^-$)	0.68 ps *+22−14*	KLM	J^π: D 1136γ to 2$^+$, 769γ to 5$^-$.
4367.94 *8*	(7$^-$)	<10[#] ps	CD KLM VW	J^π: L(d,^{6}Li)=(7) on 0$^+$ target, E2 783γ to 5$^-$. $T_{1/2}$: Other: >600 fs from DSAM in (n,n′γ).
4413.96 *4*	(2)$^+$	16 fs *3*	A EF H KLM	J^π: L(d,p)=2(+0) on 9/2$^+$ target. 1970Ra10 deduced L(t,p)=2+6 for an unresolved doublet. Also 1987Li02 concluded this level to be a doublet from the large L(d,p)=2 strength.
4440.72 *8*		367 fs *49*	F KLM	
4451.97 *3*	(4)$^+$	222 fs *42*	F H LM	J^π: L(d,p)=2(+0) on 9/2$^+$ target; 2616γ to 2$^+$.
4484.83 *7*	0$^+$	97 fs *7*	E KLM V	XREF: V(4470). J^π: L(t,p)=0.
4514.028 *17*	2$^-$	0.9 ps *3*	A k M	J^π: log *ft*=5.5 from 2$^-$. J=1,3 rejected by γγ(θ) in ^{88}Rb β^- decay.
4514.54 *7*	+	27 fs *8*	F H k M	J^π: L(d,p)=2 on 9/2$^+$ target indicates a positive parity level near the 4514-keV level.
4521.43 *12*	(6)$^-$		C LM W	J^π: L(p,p′)=5, M1(+E2) 936γ to 5$^-$.
4556 *3*	+		H	J^π: L(d,p)=2 on 9/2$^+$ target.
4613.8 *6*	(3$^-$)		H V	J^π: L(d,^{6}Li)=(3).
4622.19 *9*	2$^+$	21 fs *5*	E KLM	XREF: E(4619)L(4626). J^π: L(t,p)=2.
4632.0 *6*	+		H	J^π: L(d,p)=2 on 9/2$^+$ target.
4640.40 *7*		132 fs *14*	LM	XREF: L(4645).
4680.19 *10*		0.15 ps *+15−7*	M	
4687.38 *24*	(7)		C K	XREF: K(4695). J^π: D 2153γ from (8).
4742.50 *6*	1$^-$	2.6[@] fs *2*	A HI LM V	J^π: E1 γ to 0$^+$ g.s. E(level): Candidate for 2$^+$ x 3$^-$ two-phonon state (2002Pi08). $T_{1/2}$: Other: <6 fs from DSAM in (n,n′γ).
4743?	(6$^-$)		K	J^π: from (e,e′). Form factor is significantly different from that expected for a 1$^-$ level, suggesting this level is distinct from the 4742.5 level.
4761.8 *14*	2$^+$	70 fs *40*	E H K	J^π: L(t,p)=2. $T_{1/2}$: from B(E2)=0.0016 *8* measured in (e,e′) if level decays mainly to g.s.

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Adopted Levels, Gammas (continued)

^{88}Sr Levels (continued)

E(level)[†]	J^{π}	$T_{1/2}$[‡]	XREF	Comments
4770.12 *5*	2^{+}	6.2 fs *27*	I LM	J^{π}: L(p,p′)=2, 2036γ to 3^{-}, 4771γ to 0^{+}.
4801.3 *6*	0^{+}	16 fs *5*	E h KLM o	XREF: E(4794)h(4789)L(4804)o(4800). J^{π}: L(t,p)=0.
4801.4 *10*	1	0.13[@] ps *3*	hI k o	XREF: h(4789)k(4798)o(4800). J^{π}: D 4801γ to 0^{+}.
4845.62 *3*	(3)$^{-}$	19 fs *5*	A EF H K M V	XREF: E(4838)V(4850). J^{π}: L(t,p)=(3), log *ft*=5.5 from 2^{-}.
4853.026 *16*	1^{-}	0.17 ps *2*	A LM	J^{π}: log *ft*=5.2 from 2^{-}, 1366γ to 1^{+}, 4853γ to 0^{+}. L(p,p′)=(2) is discrepant.
4880.57 *5*	4^{+}	30 fs *3*	H KLM	XREF: H(4873)K(4873)L(4886). J^{π}: L(d,p)=0+2 on 9/2^{+} target, 3044γ to 2^{+}.
4914.6 *10*	1[&]	56[@] fs *9*	I	
4923.61 *6*	(2,3,1)	51 fs *10*	H M	J^{π}: (D+Q) 3088γ to 2^{+}.
4930.6 *5*	2^{+},3^{+},4^{+}	64 fs *+80−42*	KLM	J^{π}: L(p,p′)=2.
4988.23 *6*	2^{+}	12 fs *3*	E HI KLM	J^{π}: L(t,p)=2.
5010.59 *4*	(3,4^{+})	14 fs *3*	F KLM	J^{π}: 558γ to (4)$^{+}$, 1058γ to (4)$^{-}$, 1792γ to 2^{+}.
5076.65 *7*			EF H	
5085.49 *7*	(2)$^{+}$	6.3 fs *28*	KLM	XREF: L(5091). J^{π}: L(p,p′)=2, (E2) 5086γ to 0^{+}.
5092.12 *6*	(4^{+})	57 fs *8*	F H LM	J^{π}: D 1507γ to 5^{-}, D 2358γ to 3^{-},3256γ to 2^{+}.
5103.31 *19*	(7)		C Kl W	XREF: K(5109)l(5109). J^{π}: D 1084γ to (6)$^{-}$.
5113.06 *5*	(2^{+},3)	5.3 fs *35*	F KlM	XREF: K(5119)l(5109). J^{π}: fed by primary γ from 4^{+},5^{+} capture state, D 3277γ to 2^{+}.
5123.8 *3*	(1,2^{+})	0.16 ps *+8−5*	lM	J^{π}: 5124γ to 0^{+}.
5127.40 *9*	(2)	23 fs *7*	lM v	J^{π}: (Q) 5128γ to 0^{+}.
5136.95 *11*		33 fs *10*	H M v	
5163.91 *14*	2^{+}	51 fs *13*	E H k M	XREF: H(5157). J^{π}: L(t,p)=2.
5168.80? *5*		23 fs *3*	klM	
5170.1 *3*	(2^{+})	48 fs *23*	klM	J^{π}: (E2) 5170γ to 0^{+}. E(level): measured F(τ) of 5169.9 depopulating transition is sufficiently different from F(τ)′s of γ′s depopulating the 5168.8 level to suggest that the 5170.1 level is distinct.
5199 *8*	4^{+}		H V	J^{π}: L(d,^{6}Li)=4 on 0^{+} target.
5253.92 *7*	(3^{-})	33 fs *8*	E KLM	J^{π}: L(t,p)=(3), L(p,p′)=(3).
5263.06 *20*		18 fs *4*	M	
5275.98 *8*	(1^{-},2^{+})	17 fs *4*	M	J^{π}: 1284γ to 0^{+}, 2542γ to 3^{-}.
5307.53 *12*	(1)	35 fs *6*	H M	J^{π}: (D) 1315γ to 0^{+}.
5321.36 *3*	4^{+}		F KL	J^{π}: L(p,p′)=4, 1737γ to 5^{-}, 2103γ to 2^{+}.
5322.39 *7*	(2,3)	104 fs *28*	M	J^{π}: 1095γ to 1, 1687γ to (3^{+}), 2588γ to 3^{-}. Possibly identical to the 5321.36 level, however, depopulating transitions observed by (n,γ), E=thermal and (n,n′γ) are different.
5370.5 *3*			C W	
5383 *5*	4^{+}		E L V	XREF: E(5376)V(5360). J^{π}: L(t,p)=4.
5393.25 *7*	(2^{+})	32 fs *12*	M	J^{π}: 941γ to (4)$^{+}$, 5393γ to 0^{+}.
5396.0 *3*	(2^{+})	0.18 ps *+9−6*	M	J^{π}: (E2) 5396γ to 0^{+}.
5415.7 *28*	4^{+},5^{+}		H K	J^{π}: L(d,p)=0(+2) on 9/2^{+} target.
5424.61 *5*	(3^{-})	83 fs *35*	F LM	XREF: L(5419). J^{π}: L(p,p′)=(3), 3589γ to 2^{+}.
5427.6 *3*	(8)		C W	J^{π}: D 324γ to (7).

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Adopted Levels, Gammas (continued)

^{88}Sr Levels (continued)

E(level)[†]	J^π	$T_{1/2}$[‡]	XREF	Comments
5427.71 4	(4^-,5)		F	J^π: fed by primary γ from 4^+,5^+ capture state, 1408γ to $(6)^-$.
5465.0 21	4^+		E H K	XREF: E(5470). J^π: L(t,p)=4, L(d,p)=0 on $9/2^+$ target. E(level): from (d,p).
5472.88 10	(2^-,3^-,4^-)	<0.7 fs	LM	XREF: L(5467). L(p,p′)=(3).
5485.6 16	1	0.7 ps +30−4	H KLM	J^π: D 5486γ to 0^+.
5498.7 11	(1,2^+)	>0.7 ps	M	J^π: 5499γ to 0^+.
5517.2 3	(1,2,3)	19 fs +19−15	M	J^π: (D) 3681γ to 2^+.
5518.23 5	4^+		F H KL V	XREF: V(5490). J^π: L(d,p)=0 on $9/2^+$ target. 2300γ to 2^+.
5528.9 6			H K	E(level): from (d,p).
5537? 6	2^-,3^-,4^-		L	Possibly identical to 5529 level. J^π: L(p,p′)=3.
5542.20 10	(1)	29 fs 10	M	J^π: (D) 5542γ to 0^+.
5583.3 3		>3.3 ps	E LM	
5590.32 14	(1^-,2,3^+)	45 fs 15	M	J^π: 2103γ to 1^+, 2856γ to 3^-.
5600.6 10	(1,2^+)		I	J^π: 5600γ to 0^+.
5614 6			L	
5655.3 3	(8)	<10[#] ps	CD W	J^π: D 1287γ to (7^-).
5656.50 10	(2^+,3,4^+)	<12 fs	H LM	J^π: 1357γ to 4^+, 3821γ to 2^+.
5678.34 14	$(4)^+$	23 fs 6	H K M V	J^π: L(d,p)=2(+0) on $9/2^+$ target, L(d,^{6}Li)=(4) on 0^+ target.
5689.00 4	3^+,4^+	0.29 ps 8	EF H LM	J^π: L(p,p′)=4, 2955γ to 3^-.
5691.3 10	1	38[@] fs 9	I	J^π: D 5691γ to 0^+.
5693.93 9	2^+	67 fs 19	E M	XREF: E(5699). J^π: 1394γ to 4^+, 5693γ to 0^+.
5706.5 7			H	
5710.78 10		<9 fs	M	
5730.18 20	4^+	>0.2 ps	E H KLM	XREF: E(5724). J^π: L(d,p)=0 on $9/2^+$ target, 3894γ to 2^+.
5738.3 7			H	
5772.23 12	0^+	25 fs 11	E H KLM	XREF: E(5766). J^π: L(t,p)=0.
5800.71 10	(1^-,2,3^+)	32 fs 10	KLM	XREF: K(5806). J^π: 2314γ to 1^+, 3006γ to 3^-.
5812.08 6	3^-	7 fs 5	EF H KLM	XREF: K(5821). J^π: L(p,p′)=3, fed by primary γ from 4^+,5^+ capture state, 3976γ to 2^+.
5831.5 5	(1,2^+)	>1 ps	M	J^π: 5831γ to 0^+.
5835.58 6	(3^-,4^+)	33 fs 9	F H LM	J^π: 2251γ to 5^-, 4000γ to 2^+.
5858.5 6	4^+,5^+		E H KL	J^π: L(p,p′)=4, L(d,p)=2(+0) on $9/2^+$ target; L(t,p)=(3) is discrepant.
5866.0 4	(1,2^+)	0.9 ps +9−3	M	J^π: 5866γ to 0^+.
5876? 8			H	
5925 6			KL	E(level): from (p,p′).
5951.09 4	(4^-)		F KL	J^π: 1723γ to (3^-), 1912γ to (3^+), 1931γ to $(6)^-$.
5990.0 3	(1,2^+)	0.033 ps 9	I M	J^π: 5989γ to 0^+.
5996.24 6	4^+	23 fs 8	F H KLM	J^π: L(d,p)=0(+2) on $9/2^+$ target, 4160γ to 2^+.
6010.0 10	1^-	1.4[@] fs 1	I L	J^π: E1 6010γ to 0^+.
6011.15 6	(2^+)		EF	XREF: E(6005). J^π: L(t,p)=(2).
6011.5? 3	(3^-)	41 fs +29−22	M	E(level): possibly identical to 6011.15 level, however, depopulating transitions observed in (n,n′γ) are

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Adopted Levels, Gammas (continued)

^{88}Sr Levels (continued)

E(level)[†]	J^{π}	$T_{1/2}$[‡]	XREF	Comments
				different. J^{π}: 2058γ to 5$^-$, 2856γ to 0$^+$.
6021.5 5	+		H	J^{π}: L(d,p)=2 on 9/2$^+$ target.
6034? 6			KL	Possibly identical to 6021.5 level.
6052.2 3	(2$^+$)	>1.1 ps	E H KlM	XREF: H(6047). J^{π}: L(t,p)=(2).
6053.86 21	(2)$^+$	44 fs 16	lM	J^{π}: L(t,p)=(2); L(d,p)=2(+0) on 9/2$^+$ target.
6065.7 4	+		H	J^{π}: L(d,p)=2+0 on 9/2$^+$ target.
6074.5? 7		61 fs +91−45	H M	
6099.01 20	(3,4$^+$)	17 fs 8	M	J^{π}: D 2146γ to (4)$^-$, 4263γ to 2$^+$.
6101.4 3	(1,2$^+$)	>0.8 ps	M	J^{π}: 6101γ to 0$^+$.
6106.00 24	(1,2,3)	<0.2 ps	KLM	J^{π}: (D) 2070γ to 2$^+$.
6125.20 6			eF kl	J^{π}: L(t,p)=(3). E(level): depopulating transitions observed in (n,n′γ) and (n,γ), E=thermal for levels at ≈6125 keV are different, suggesting two closely spaced levels.
6126.6 4		0.26 ps +26−10	e klM	J^{π}: L(t,p)=(3). E(level): depopulating transitions observed in (n,n′γ) and (n,γ), E=thermal for levels at ≈6125 keV are different, suggesting two closely spaced levels.
6132.92 17		<29 fs	K M	
6140.4 5	+		H	J^{π}: L(d,p)=2 on 9/2$^+$ target.
6153.50 20	(1$^-$)	<0.3 ps	E LM	J^{π}: L(t,p)=(1).
6168.1 6	(1,2,3)	0.13 ps +8−5	M	J^{π}: (D) 4332γ to 2$^+$.
6173.06 9	(1,2$^+$)	15 fs 7	H M	J^{π}: 2180γ to 0$^+$.
6188.0 5			H	
6200.63 20	1$^+$	3.5[@] fs 5	I K M	J^{π}: M1 6202γ to 0$^+$.
6213.9 7	1$^-$	0.247[@] fs 15	E I lM	$T_{1/2}$: Other: 0.4 ps +43−2 from DSAM in (n,n′γ). J^{π}: E1 6214γ to 0$^+$.
6216 4	4$^+$,5$^+$		H l	J^{π}: L(d,p)=0 on 9/2$^+$ target.
6233.8 6	($^-$)		H	J^{π}: L(d,p)=(1) on 9/2$^+$ target.
6235.50 17	(7)		C W	J^{π}: D 1714γ to (6)$^-$.
6241.5 4			H	
6249.26 7	(2$^-$,3$^+$)		F H	J^{π}: 2297γ to (4)$^-$, 2764γ to 1$^+$.
6257.85 9	3$^+$		F H L	J^{π}: L(p,p′)=4, 2771γ to 1$^+$.
6270 4	(2$^+$)		E	J^{π}: L(t,p)=(2).
6282.8 4	3$^+$,4$^+$,5$^+$		H	J^{π}: L(p,p′)=4.
6292.9? 11			H L	E(level): from (d,p).
6302.1 4	(2$^+$)		E H	XREF: E(6307). J^{π}: L(t,p)=(2). E(level): from (d,p).
6333.44 10	1$^-$	0.160[@] fs 10	I	J^{π}: E1 6335γ to 0$^+$.
6346.45 20	1$^-$	1.4[@] fs 1	I	J^{π}: E1 6346γ to 0$^+$.
6350.7 5	+		H K	J^{π}: L(d,p)=2 on 9/2$^+$ target. E(level): from (d,p).
6362 6			E L	E(level): from (p,p′).
6367.0 10	(1,2$^+$)		I	J^{π}: 6367γ to 0$^+$.
6378.1 4	($^+$)		H	J^{π}: L(d,p)=(2) on 9/2$^+$ target.
6382.0 10	1[&]	18[@] fs 5	I	
6397.7 4			H	
6417.3 3	+		H KL	XREF: K(6411). J^{π}: L(d,p)=2 on 9/2$^+$ target.
6430.8 4			E H	

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Adopted Levels, Gammas (continued)

^{88}Sr Levels (continued)

E(level)[†]	J^π	$T_{1/2}$[‡]	XREF	Comments
6462 *3*	+		H	J^π: L(d,p)=2 on $9/2^+$ target.
6471.05 *22*	$(^+)$		H L	J^π: L(d,p)=(2) on $9/2^+$ target.
6507.74 *6*	(4^+)		F H K	XREF: K(6498). J^π: L(d,p)=(0) on $9/2^+$ target, 3773γ to 3^-.
6518.83 *21*	(2^+)		E H L	XREF: E(6512). J^π: L(t,p)=(2). E(level): from (d,p).
6542.9 *3*			H	
6551.5 *3*	$(3,4,5)^+$		H KL	XREF: K(6558). J^π: L(p,p′)=4.
6565.94 *22*			H v	
6575.25 *23*			H v	
6583.70 *5*	$(1^-,2,3^+)$		EF	J^π: 3850γ to 3^-, 3097γ to 1^+.
6591.7 *9*	1[&]	5.2[@] fs *13*	I K	
6612.75 *6*	$2^-,3^-$		EF L	XREF: E(6605). J^π: L(p,p′)=3, 3125γ to 1^+.
6618.12 *23*	+		H	J^π: L(d,p)=2 on $9/2^+$ target.
6622.96 *23*			H	
6627.24 *24*			H	
6634.59 *20*	+		H	J^π: L(d,p)=2 on $9/2^+$ target.
6640 *6*	$(0^-,1^-,2^-)$		L	J^π: L(p,p′)=(1).
6666.2? *3*			H l v	
6672.17 *26*			H l v	
6692.46 *7*	$(3^+,2^+)$		EF H	J^π: 2241γ to $(4)^+$, 3205γ to 1^+, fed by primary γ from $4^+,5^+$ capture state.
6710.4 *7*	1[&]	0.0025[@] ps *13*	HI L	XREF: L(6703).
6739 *5*	+		E H L	XREF: L(6746). J^π: L(d,p)=2 on $9/2^+$ target.
6770 *6*			L	
6782.69 *19*	+		H	J^π: L(d,p)=2 on $9/2^+$ target.
6798.23 *22*			H L	
6806.89 *6*	(4^+)		EF H	J^π: L(t,p)=(4).
6814.7 *3*			H	
6831.9 *4*	+		H	J^π: L(d,p)=2 on $9/2^+$ target.
6840.64 *17*	(8)		C W	J^π: D 605γ to (7).
6854.6 *3*	1[&]	2.1[@] fs *4*	HI l v	
6874 *10*			E l v	E(level): from (t,p).
6897 *5*			E L	E(level): weighted average of 6892 *10* from (t,p) and 6899 *6* from (p,p′).
6910.7 *4*			H	
6916.68 *7*	$(3^-,2^+)$		F H	J^π: fed by primary γ from $4^+,5^+$ capture state, weak 6916γ to 0^+.
6938.6 *5*	+		H	J^π: L(d,p)=2 on $9/2^+$ target.
6961.5 *5*	$3^+,4^+,5^+$		H L	XREF: L(6973). J^π: L(p,p′)=4. E(level): from (d,p).
6987	1^-[&]	0.81[@] fs *7*	I	
7011.2 *4*			e H K	XREF: K(7000).
7022.6 *4*	$3^+,4^+,5^+$		e H L	J^π: L(p,p′)=4.
7056 *8*	$2^-,3^-,4^-$		L	J^π: L(p,p′)=3.
7060.5 *5*	+		H	J^π: L(d,p)=(2) on $9/2^+$ target.
7071.64 *28*			H	
7089.11 *10*	1^-[&]	0.109[@] fs *7*	I	
7103.2 *4*			H L	
7119.3 *3*	(10)		C W	J^π: Q 1464γ to (8).

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{88}Sr Levels (continued)

E(level)†	J^π	$T_{1/2}$‡	XREF	Comments
7129.3 *7*			W	
7138.84 *6*	(4$^+$)		F H	J^π: L(d,p)=(2) on 9/2$^+$ target, 3554γ to 5$^-$, 5303γ to 2$^+$.
7169.21 *20*	1&	2.9@ fs *5*	I L	
7194.7 *4*	+		H L	J^π: L(d,p)=2 on 9/2$^+$ target. E(level): from (d,p).
7207.88 *6*	(3,4$^+$,2$^+$)		F	J^π: fed by primary γ from 4$^+$,5$^+$ capture state, 5372γ to 2$^+$.
7223 *5*	($^+$)		H	J^π: L(d,p)=(2) on 9/2$^+$ target.
7255 *6*			H L	E(level): weighted average of 7251 *10* in (d,p) and 7257 *8* in (p,p′).
7281.8 *3*	1$^-$&	0.55@ fs *5*	I	
7299.9 *3*	(1)$^-$&	1.11@ fs *16*	I K	
7330.55 *19*	(9)		C W	J^π: D 490γ to (8).
7333 *6*			H L	E(level): weighted average of 7337 *10* in (d,p) and 7330 *8* in (p,p′).
7360 *8*			L	
7402 *8*			L	
7427 *6*	+		H L	J^π: L(d,p)=4 on 9/2$^+$ target. E(level): weighted average of 7426 *10* in (d,p) and 7427 *8* in (p,p′).
7434.2 *3*	(10)		C W	J^π: Q 1779γ to (8).
7460 *8*			L	
7481 *8*			L	
7492.8 *3*	1$^-$&	2.5@ fs *7*	I	
7526 *8*			L	
7533.95 *20*	1$^-$&	0.32@ fs *3*	I	
7573.20 *6*	(3,4$^+$,2$^+$)		F H L	XREF: H(7561). J^π: fed by primary γ from 4$^+$,5$^+$ capture state, 5737γ to 2$^+$.
7591.4 *3*	1$^-$&	0.91@ fs *15*	HI	
7623 *8*			L	
7640 *10*			H	
7641.86 *21*	(10)		C W	J^π: D 311γ to (9).
7679 *6*			H L	E(level): weighted average of 7674 *10* in (d,p) and 7682 *8* in (p,p′).
7749 *6*			H KL	E(level): weighted average of 7742 *10* in (d,p) and 7753 *8* in (p,p′).
7774.8 *3*	(11)		C W	J^π: D 341γ to (10).
7807.8 *3*	1$^-$&	0.54@ fs *8*	I L	XREF: L(7819).
7838.27 *20*	1$^-$&	0.221@ fs *22*	HI L	XREF: L(7847).
7877.3 *3*	(1)$^-$&	0.65@ fs *11*	HI L	XREF: H(7889)L(7874).
7908.76 *23*	(11)		C W	J^π: (D) 267γ to (10).
7911 *8*			L	
7964.19 *20*	1$^-$&	0.31@ fs *3*	HI L	
7987.59 *20*	1$^-$&	0.52@ fs *7*	I	
8003 *10*			H	
8040.79 *10*	1$^-$&	0.138@ fs *13*	I L	
8069 *8*	(0$^+$,1$^+$)		L	J^π: L(p,p′)=(0).
8094.8 *4*	(12)	<5.1 ps	C W	J^π: (D) 320γ to (11). $T_{1/2}$: effective half-life from DSAM in ^{80}Se(^{11}B,p2nγ); feeding corrections have not been incorporated.

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Adopted Levels, Gammas (continued)

^{88}Sr Levels (continued)

E(level)[†]	J^π	$T_{1/2}$[‡]	XREF	Comments
8109.5 *3*	1^-[&]	0.54[@] fs *9*	HI L	XREF: H(8103)L(8119).
8142 *10*			H	
8171 *8*	$(0^+,1^+)$		L	J^π: L(p,p′)=(0).
8180.7 *3*	1^-[&]	0.48[@] fs *6*	I	
8191.11 *20*	1^-[&]	0.33[@] fs *4*	I L	XREF: L(8200).
8215.31 *20*	1^-[&]	0.35[@] fs *4*	I	
8228 *8*			L	
8271.5 *3*	1^-[&]	0.54[@] fs *9*	I L	XREF: L(8268). J^π: L(p,p′)=(0) is discrepant.
8276.1 *5*	(13)		C W	J^π: D 181γ to (12).
8302 *8*	$(0^+,1^+)$		L	J^π: L(p,p′)=(0).
8325.7 *3*	1^-[&]	0.39[@] fs *6*	I	
8336.3 *4*	(12)	<2.4 ps	C	$T_{1/2}$: effective half-life from DSAM in ^{80}Se(^{11}B,p2nγ); feeding corrections have not been incorporated. J^π: (D) 561γ to (11).
8374.9? *5*			C	
8375.8 *6*	1[&]	1.2[@] fs *4*	I	
8407.0 *4*	1[&]	0.75[@] fs *16*	I	
8437.2 *4*	(12)	0.55 ps *21*	C W	$T_{1/2}$: from DSAM in ^{80}Se(^{11}B,p2nγ). J^π: D 528γ to (11).
8453.4 *3*	1^-[&]	0.20[@] fs *3*	HI l	XREF: l(8470).
8469.0 *3*	1^-[&]	0.62[@] fs *12*	I l	XREF: l(8470).
8500.8 *3*	1[&]	0.35[@] fs *5*	HI	XREF: H(8493).
8517.9 *8*			W	
8518.8 *4*	1^-	0.67 fs *15*	HI	J^π: E1 8518γ to 0^+.
8553.0? *9*		1.7[@] fs *5*	I L	
8561.3? *6*		0.83[@] fs *18*	I	
8580.6? *5*		1.0[@] fs *2*	I	
8588.8 *4*		0.58[@] fs *12*	I	
8626.3 *10*		1.3[@] fs *4*	I	
8668.7 *6*	1[&]	1.2[@] fs *2*	I L	
8682.0 *6*	1[&]	2.5[@] fs *6*	I	
8713.7 *9*	1^-[&]	0.6[@] fs *3*	I	
8735.8 *9*		0.74[@] fs *12*	I	
8754.6 *8*	1[&]	0.52[@] fs *9*	I	
8764.7 *5*		2.4[@] fs *6*	I	
8779.8 *6*		0.95[@] fs *18*	I L	
8791.9 *6*	1[&]	0.97[@] fs *19*	I	
8840.1 *4*		0.61[@] fs *11*	I	
8850.6 *12*		2.9[@] fs *9*	I	
8874.4 *5*	1[&]	1.5[@] fs *3*	I	
8928.5 *3*	1^-[&]	0.21[@] fs *3*	I L	
8935.9 *4*	(13)		C	J^π: D 600γ to (12).
8980.8 *6*		0.67[@] fs *12*	I	
9019.2 *6*		1.6[@] fs *4*	I l	
9043.6 *4*	1^-[&]	0.33[a] fs *9*	I l	
9069.7 *6*	1^-[&]	0.61[@] fs *11*	I	

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Adopted Levels, Gammas (continued)

^{88}Sr Levels (continued)

E(level)[†]	J^π	$T_{1/2}$[‡]	XREF	Comments
9078.3 *3*	1^-[&]	0.37[@] fs *6*	I	
9098.3 *7*	1[&]	1.2[@] fs *4*	I	
9116.3 *5*		0.52[@] fs *8*	I	
9125.1 *3*	1[&]	0.34[@] fs *5*	I L	
9148.31 *20*	1^-[&]	0.183[@] fs *22*	I	
9191.42 *14*	1^-[&]	0.123[a] fs *23*	I	
9214.4 *7*	1[&]	0.72[@] fs *14*	I	
9255.2 *9*	1[&]	1.6[@] fs *6*	I L	
9305.7 *3*	1^-[&]	0.157[@] fs *22*	I	
9341.1 *3*	1^-[&]	0.55[@] fs *9*	I L	
9384.6 *7*	1[&]	0.71[@] fs *13*	I	
9393.3 *5*	1[&]	0.42[@] fs *7*	I	
9402.4 *5*	1[&]	0.55[@] fs *9*	I	
9410.1 *6*	(13)		C	J^π: D 973γ to (12).
9431.8 *10*	1[&]	0.58[@] fs *12*	I	
9445.5 *4*	1^-[&]	0.163[@] fs *23*	I L	
9470.5 *4*	(1^-)[&]	0.26[@] fs *4*	I	
9478.8 *4*	$1^{(-)}$[&]	0.33[a] fs *9*	I	
9497.05 *20*	1^-[&]	0.104[@] eV *12*	I	
9528.3 *4*	(14)	0.28 ps *10*	C	$T_{1/2}$: from DSAM in ^{80}Se(^{11}B,p2nγ). J^π: D 592γ to (13).
9550.8 *7*		1.1[@] fs *4*	I	
9568.3 *5*	1[&]	0.44[@] fs *8*	I	
9576.8 *11*		1.2[@] fs *3*	I L	
9597.9 *11*	1[&]	1.1[@] fs *3*	I	
9616.3 *6*	1[&]	0.54[@] fs *10*	I	
9646.1 *8*		1.8[@] fs *5*	I	
9704.1 *5*	1^-[&]	0.23[@] fs *5*	I L	
9728.2 *18*		2.3[@] fs *10*	I	
9738.1 *16*	1[&]	0.72[@] fs *18*	I	
9746.0 *6*	1^-[&]	0.18[@] fs *3*	I	
9804.7 *9*	1[&]	1.1[@] fs *3*	I	
9816.5 *3*	1^-[&]	0.39[@] fs *7*	I	
9881.2 *4*	$1^{(-)}$[&]	0.26[@] fs *4*	I L	
9944.1 *8*	1^-[&]	0.46[@] fs *8*	I	
9953.3 *5*		0.32[@] fs *5*	I	
9965.8 *6*	$1^{(-)}$[&]	0.52[@] fs *9*	I	
9977.9 *5*	(15)	0.17 ps *+10−3*	C	$T_{1/2}$: from DSAM in ^{80}Se(^{11}B,p2nγ). J^π: D 450γ to (14).
10056.3 *4*	1[&]	0.61[@] fs *10*	I	
10089.2 *10*		1.5[@] fs *5*	I	
10106.9 *8*	1[&]	0.86[@] fs *23*	I	
10128.2 *7*		0.93[@] fs *21*	I L	
10139.5 *8*		1.06[@] fs *24*	I	

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Adopted Levels, Gammas (continued)

^{88}Sr Levels (continued)

E(level)[†]	J$^{\pi}$	T$_{1/2}$[‡]	XREF	Comments
10150.3 *8*		0.88[@] fs *24*	I	
10184.0 *4*		3.5[@] fs *11*	I	
10248.6 *4*	1[&]	1.6[@] fs *4*	I	
10288.6 *7*	1$^{(-)}$[&]	0.45[@] fs *9*	I	
10297.7 *13*		1.1[@] fs *3*	I	
10326.7 *6*		1.9[@] fs *6*	I	
10341.3 *6*		1.7[@] fs *6*	I	
10372.5 *5*		0.5[@] fs *5*	I	
10406.6 *14*		0.35[@] fs *24*	I	
10421.1 *10*		0.8[@] fs *6*	I	
10453.2 *12*		1.3[@] fs *5*	I	
10481.1 *9*		1.1[@] fs *3*	I	
10512.1 *19*		0.77[@] fs *22*	I	
10522.7 *5*	1[&]	0.18[@] fs *3*	I	
10550.3 *5*	1[&]	0.40[@] fs *7*	I	
10600.2 *16*		0.61[@] fs *17*	I	
10608.7 *14*		0.41[@] fs *11*	I	
10644.1 *8*	1^{-}[&]	0.30[@] fs *6*	I	
10657.8 *16*	1[&]	0.38[@] fs *13*	I	
10698.4 *8*		1.2[@] fs *4*	I	
10726.4 *15*	1[&]	0.8[@] fs *3*	I	
10739.4 *6*	(16)	<4.2 ps	C	T$_{1/2}$: effective half-life from DSAM in ^{80}Se(^{11}B,p2nγ); feeding corrections have not been incorporated. J$^{\pi}$: D 762γ to (15).
10744.9 *8*		0.80[@] fs *22*	I	
10759.7 *16*		1.0[@] fs *3*	I	
10767.1 *15*	1[&]	0.7[@] fs *3*	I	
10783.6 *5*	1[&]	0.18[@] fs *4*	I	
10804.8 *4*		0.27[a] fs *11*	I	
10857.4 *4*		1.7[@] fs *4*	I	
10888.4 *9*		0.51[a] fs *22*	I	
10914.6 *5*	1[&]	0.35[@] fs *7*	I	
10929.9 *7*		0.50[@] fs *12*	I	
10950.4 *6*		0.43[@] fs *9*	I	
10979.7 *12*		0.9[@] fs *4*	I	
11012.0 *5*	1[&]	0.20[@] fs *3*	I	
11059.0 *11*		0.75[@] fs *23*	I	
11083.1 *8*		0.46[a] fs *18*	I	
11111.8 *16*	1[&]	0.53[@] fs *17*	I	
11125.4 *14*	1[&]	0.43[@] fs *14*	I	
11169.6 *8*		0.46[a] fs *18*	I	
11224.2 *13*		1.0[@] fs *5*	I	
11251.8 *12*		0.68[@] fs *21*	I	
11278.9 *10*	1[&]	0.30[@] fs *7*	I	

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Adopted Levels, Gammas (continued)

^{88}Sr Levels (continued)

E(level)[†]	J^π	$T_{1/2}$[‡]	XREF	Comments
11313.8 *6*		0.22[@] fs *12*	I	
11326 *3*		2.2[@] fs *8*	I	
11335.3 *13*	1[&]	0.11[@] fs *4*	I	
11355 *3*		0.15[@] fs *7*	I	
11356.1? *7*	(17)		C	J^π: D 617γ to (16).
11370 *3*	1[&]	0.14[@] fs *5*	I	
11393.6 *6*	1[&]	0.75[@] fs *18*	I	
11413.2 *15*		0.9[@] fs *4*	I	
11548.0 *7*		2.0[@] fs *6*	I	
11593.7 *16*		1.7[@] fs *6*	I	
11607.6 *12*		1.2[@] fs *4*	I	
11633.0 *14*		1.7[@] fs *5*	I	
11658.0 *16*		2.2[@] fs *8*	I	
11743.1 *14*		1.3[@] fs *4*	I	
11782.4 *14*		1.5[@] fs *6*	I	
11920.6 *7*		1.2[@] fs *3*	I	
11935.5 *10*		2.2[@] fs *7*	I	
11958.9 *14*		4.1[@] fs *19*	I	
12026.5 *10*		2.0[@] fs *7*	I	
15645[b]	(2^-)[b]	35 keV *5*	P	
15674[b]	(3^-)[b]	27 keV *5*	P	
15918[b]	(4^-)[b]	31 keV *4*	P	
16500[b]	(2^-)[b]	28 keV *5*	P	
17.2×10^3[b]			P	
17.8×10^3[b]			P	
19.2×10^3[b]			P	
20.5×10^3[b]			P	

† From least-squares fit to Eγ for levels with γ-ray information.
‡ From Doppler-shift attenuation method in (n,n′γ), except where noted.
# From Doppler-shift attenuation method in ^{86}Kr(α,2nγ).
@ From (γ,γ') assuming γ branching ratio to g.s. equal to 100%.
& From D, M1, or E1 γ to 0^+ g.s.
a Calculated from Γ_0^2/Γ using the adopted branching ratios.
b Isobaric analog resonance.

Adopted Levels, Gammas (continued)

$\gamma(^{88}Sr)$

E_i(level)	J_i^π	E_γ†	I_γ†	E_f	J_f^π	Mult.‡	δ	α	Comments
1836.090	2^+	1836.063 *12*	100	0	0^+	E2		3.93×10^{-4}	α(K)=0.0001449 *21*; α(L)=1.550×10^{-5} *22*; α(M)=2.60×10^{-6} *4*; α(N)=3.27×10^{-7} *5*; α(O)=2.15×10^{-8} *3* B(E2)(W.u.)=7.6 *4* Mult.: from $\gamma(\theta)$ and $\gamma(\theta)$(lin pol) in (γ,γ'); α(K)exp in ^{88}Y ε decay. E_γ: from ^{88}Y ε decay.
2734.137	3^-	898.042 *3*	100.00 *17*	1836.090	2^+	E1		3.07×10^{-4}	α(K)=0.000273 *4*; α(L)=2.92×10^{-5} *4*; α(M)=4.89×10^{-6} *7*; α(N)=6.14×10^{-7} *9*; α(O)=4.02×10^{-8} *6* B(E1)(W.u.)=6.6×10^{-4} *5* Mult.: from $\gamma(\theta)$ and α(K)exp in ^{88}Y ε decay. E_γ: from ^{88}Y ε decay. δ: δ(M2/E1)=−0.002 *9* from ^{88}Y ε decay.
		2734.086 *13*	0.69 *4*	0	0^+	(E3)		5.64×10^{-4}	α(K)=0.0001098 *16*; α(L)=1.176×10^{-5} *17*; α(M)=1.97×10^{-6} *3*; α(N)=2.48×10^{-7} *4* α(O)=1.639×10^{-8} *23* B(E3)(W.u.)=22.6 *21* E_γ: from ^{88}Rb β^- decay. Mult.: from α(IPF) in ^{88}Y ε decay.
3156.19	0^+	1320.1 *1*	100	1836.090	2^+	E2		3.46×10^{-4}	α(K)=0.000278 *4*; α(L)=3.00×10^{-5} *5*; α(M)=5.04×10^{-6} *7*; α(N)=6.33×10^{-7} *9*; α(O)=4.13×10^{-8} *6* B(E2)(W.u.)=4.0 *+15−14* Mult.: Q from $\gamma(\theta)$ in (n,n′γ), M2 excluded by comparison to RUL.
3218.489	2^+	484.44 *12*	2.3 *10*	2734.137	3^-	[E1]		1.22×10^{-3}	α(K)=0.001078 *16*; α(L)=0.0001165 *17*; α(M)=1.95×10^{-5} *3*; α(N)=2.44×10^{-6} *4* α(O)=1.575×10^{-7} *22* B(E1)(W.u.)=0.00034 *15*
		1382.41 *3*	100 *4*	1836.090	2^+	M1+E2	+0.04 *2*	3.25×10^{-4}	α(K)=0.000255 *4*; α(L)=2.73×10^{-5} *4*; α(M)=4.58×10^{-6} *7*; α(N)=5.77×10^{-7} *8*; α(O)=3.82×10^{-8} *6* B(E2)(W.u.)=0.038 *3*; B(M1)(W.u.)=0.041 *3* Mult.: D+Q from $\gamma\gamma(\theta)$ in ^{88}Rb β^- decay, $\Delta\pi$=no from level scheme. δ: from $\gamma\gamma(\theta)$ in ^{88}Rb β^- decay. Other: +0.01 *3* from $\gamma(\theta)$ in (n,n′γ).
		3218.46 *6*	28.9 *16*	0	0^+	E2		9.30×10^{-4}	α(K)=5.45×10^{-5} *8*; α(L)=5.77×10^{-6} *8*; α(M)=9.67×10^{-7} *14*; α(N)=1.219×10^{-7} *17*; α(O)=8.08×10^{-9} *12* B(E2)(W.u.)=0.100 *10*
3378.2	1	3378.1	100	0	0^+	D			
3486.56	1^+	3486.43 *8*	100	0	0^+	M1		9.66×10^{-4}	α(K)=4.69×10^{-5} *7*; α(L)=4.96×10^{-6} *7*; α(M)=8.32×10^{-7} *12*;

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$\gamma(^{88}Sr)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.‡	δ	α	Comments
									$\alpha(N)=1.049\times10^{-7}$ *15*; $\alpha(O)=6.97\times10^{-9}$ *10* B(M1)(W.u.)=0.187 *17*
3522.77	(2^+)	1687.35 *19*	100 *5*	1836.090	2^+				
		3523.4 *3*	57 *4*	0	0^+	(E2)		1.04×10^{-3}	$\alpha(K)=4.71\times10^{-5}$ *7*; $\alpha(L)=4.98\times10^{-6}$ *7*; $\alpha(M)=8.35\times10^{-7}$ *12*; $\alpha(N)=1.053\times10^{-7}$ *15*; $\alpha(O)=6.98\times10^{-9}$ *10* B(E2)(W.u.)=0.35 *12*
3584.784	5^-	850.647 *24*	100	2734.137	3^-	E2		8.53×10^{-4}	$\alpha(K)=0.000754$ *11*; $\alpha(L)=8.28\times10^{-5}$ *12*; $\alpha(M)=1.390\times10^{-5}$ *20*; $\alpha(N)=1.739\times10^{-6}$ *25* $\alpha(O)=1.114\times10^{-7}$ *16* B(E2)(W.u.)=0.39 *12* E_γ: from (n,γ), E=thermal. Mult.: Q from $\gamma(\theta)$ in $^{80}Se(^{11}B,p2n\gamma)$, M2 excluded by comparison to RUL.
3635.09	$(3)^+$	416.74 *18*	3.86 *22*	3218.489	2^+	M1(+E2)		0.0053 *13*	$\alpha(K)=0.0046$ *11*; $\alpha(L)=0.00052$ *14*; $\alpha(M)=8.8\times10^{-5}$ *23*; $\alpha(N)=1.1\times10^{-5}$ *3*; $\alpha(O)=6.8\times10^{-7}$ *15* B(M1)(W.u.)=0.015 *3* Mult.: D(+Q) from $\gamma(\theta)$ in (n,n′γ), $\Delta\pi$=no from level scheme.
		1799.04 *12*	100.0 *2*	1836.090	2^+	M1+E2&	−0.08@ *2*	3.53×10^{-4}	$\alpha(K)=0.0001525$ *22*; $\alpha(L)=1.626\times10^{-5}$ *23*; $\alpha(M)=2.73\times10^{-6}$ *4*; $\alpha(N)=3.44\times10^{-7}$ *5*; $\alpha(O)=2.28\times10^{-8}$ *4* B(E2)(W.u.)=0.010 *6*; B(M1)(W.u.)=0.0048 *+14−9*
3952.636	$(4)^-$	1218.505 *25*	100	2734.137	3^-	M1+E2&	−0.11@ *2*	3.80×10^{-4}	$\alpha(K)=0.000329$ *5*; $\alpha(L)=3.53\times10^{-5}$ *5*; $\alpha(M)=5.93\times10^{-6}$ *9*; $\alpha(N)=7.47\times10^{-7}$ *11*; $\alpha(O)=4.93\times10^{-8}$ *7* B(E2)(W.u.)=0.14 *+13−7*; B(M1)(W.u.)=0.015 *+14−6* E_γ: from (n,γ), E=thermal.
3992.42	(0^+)	505.9 *1*	100.0 *5*	3486.56	1^+	M1		0.00255	$\alpha(K)=0.00226$ *4*; $\alpha(L)=0.000247$ *4*; $\alpha(M)=4.15\times10^{-5}$ *6*; $\alpha(N)=5.21\times10^{-6}$ *8*; $\alpha(O)=3.41\times10^{-7}$ *5* B(M1)(W.u.)<0.31 Mult.: D from comparison to RUL, $\Delta\pi$=no from level scheme.
		2156.0 *2*	15.3 *5*	1836.090	2^+	[E2]		5.05×10^{-4}	$\alpha(K)=0.0001079$ *16*; $\alpha(L)=1.150\times10^{-5}$ *17*; $\alpha(M)=1.93\times10^{-6}$ *3*; $\alpha(N)=2.43\times10^{-7}$ *4* $\alpha(O)=1.602\times10^{-8}$ *23* B(E2)(W.u.)<0.14
4019.56	$(6)^-$	434.89 *6*	100	3584.784	5^-	M1+E2#	+0.25 *3*	0.00376	$\alpha(K)=0.00333$ *6*; $\alpha(L)=0.000366$ *6*; $\alpha(M)=6.16\times10^{-5}$ *10*; $\alpha(N)=7.72\times10^{-6}$ *13*; $\alpha(O)=5.00\times10^{-7}$ *8* B(E2)(W.u.)>7; B(M1)(W.u.)>0.025

From ENSDF

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Adopted Levels, Gammas (continued)

$\gamma(^{88}Sr)$ (continued)

E_i(level)	J^π_i	E_γ †	I_γ †	E_f	J^π_f	Mult. ‡	α	Comments
4035.52	2^+	2200.4	19 *4*	1836.090	2^+			
		4035.5 *1*	100	0	0^+	E2	1.23×10^{-3}	α(K)=3.81×10^{-5} *6*; α(L)=4.02×10^{-6} *6*; α(M)=6.74×10^{-7} *10*; α(N)=8.50×10^{-8} *12*; α(O)=5.64×10^{-9} *8* B(E2)(W.u.)=1.3 *3*
4039.04	$(3)^+$	1304.90 *4*	21.1 *5*	2734.137	3^-	E1@	2.66×10^{-4}	α(K)=0.0001359 *19*; α(L)=1.446×10^{-5} *21*; α(M)=2.42×10^{-6} *4*; α(N)=3.05×10^{-7} *5*; α(O)=2.00×10^{-8} *3* B(E1)(W.u.)=0.00032 *3* δ: δ(M2/E2)=+0.5 *+5−2* from $\gamma(\theta)$ in (n,n′γ) results in M2 transition strength which exceeds RUL.
		2202.92 *7*	100.00 *24*	1836.090	2^+	M1+E2&	5.01×10^{-4} *24*	α(K)=0.0001041 *15*; α(L)=1.109×10^{-5} *16*; α(M)=1.86×10^{-6} *3*; α(N)=2.34×10^{-7} *4* α(O)=1.550×10^{-8} *23* δ: +0.20 *10* or +1.5 *+3−2* from $\gamma(\theta)$ in (n,n′γ).
4170.41	(3^-)	585.626 *25*	100.0 *5*	3584.784	5^-	[E2]	0.00231	α(K)=0.00204 *3*; α(L)=0.000228 *4*; α(M)=3.83×10^{-5} *6*; α(N)=4.77×10^{-6} *7*; α(O)=2.98×10^{-7} *5* B(E2)(W.u.)=1.9×10^2 *+12−11* E_γ: from (n,γ), E=thermal.
		1436.27 *4*	12.8 *5*	2734.137	3^-			E_γ: from (n,γ), E=thermal. I_γ: from (n,n′γ). Other: 31 *5* in (n,γ), E=thermal.
		4170.71 *20*	0.71 *7*	0	0^+	[E3]	9.95×10^{-4}	α(K)=5.08×10^{-5} *8*; α(L)=5.39×10^{-6} *8*; α(M)=9.05×10^{-7} *13*; α(N)=1.140×10^{-7} *16*; α(O)=7.56×10^{-9} *11* B(E3)(W.u.)=0.5 *3* E_γ: not observed in (n,n′γ).
4224.10		1005.6d *1*		3218.489	2^+			E_γ: tentative placement from (n,n′γ) based solely on level energy differences.
		2388.0 *6*		1836.090	2^+			E_γ: not observed in (n,n′γ).
4226.98	1	4226.6	100	0	0^+	D		
4227.20	(3^-)	1008.7 *1*	6.4 *4*	3218.489	2^+	[E1]	2.45×10^{-4}	α(K)=0.000217 *3*; α(L)=2.32×10^{-5} *4*; α(M)=3.89×10^{-6} *6*; α(N)=4.89×10^{-7} *7*; α(O)=3.20×10^{-8} *5* B(E1)(W.u.)=1.8×10^{-4} *6*
		1493.01 *4*	33.1 *4*	2734.137	3^-			
		2391.0 *3*	100.0 *4*	1836.090	2^+	(E1)	9.43×10^{-4}	α(K)=5.23×10^{-5} *8*; α(L)=5.52×10^{-6} *8*; α(M)=9.25×10^{-7} *13*; α(N)=1.165×10^{-7} *17*; α(O)=7.71×10^{-9} *11* B(E1)(W.u.)=2.1×10^{-4} *7* Mult.: D from $\gamma(\theta)$ in (n,n′γ), $\Delta\pi$=no from level scheme.
4262.9	$(1,2^+)$	4262.8	100	0	0^+			
4268.70	$(3^-,4,5^-)$	683.97 *5*	31.6 *11*	3584.784	5^-			I_γ: from (n,n′γ). Other: <17 for multiply placed transition in (n,γ), E=thermal.
		1534.42 *7*	100.0 *11*	2734.137	3^-			

Adopted Levels, Gammas (continued)

$\gamma(^{88}Sr)$ (continued)

E_i(level)	J_i^π	E_γ†	I_γ†	E_f	J_f^π	Mult.‡	α	Comments
4299.52	4^+	1565.40 *9*	86.2 *9*	2734.137	3^-	E1@	4.10×10^{-4}	α(K)=0.0001000 *14*; α(L)=1.062×10^{-5} *15*; α(M)=1.779×10^{-6} *25*; α(N)=2.24×10^{-7} *4* α(O)=1.475×10^{-8} *21* B(E1)(W.u.)=0.00137 *23* I_γ: from (n,n′γ). δ: δ(M2/E1)=+0.05 *5* from $\gamma(\theta)$ in (n,n′γ).
		2463.51 *19*	100.0 *9*	1836.090	2^+	E2@	6.29×10^{-4}	α(K)=8.53×10^{-5} *12*; α(L)=9.07×10^{-6} *13*; α(M)=1.521×10^{-6} *22*; α(N)=1.92×10^{-7} *3*; α(O)=1.266×10^{-8} *18* B(E2)(W.u.)=4.8 *8* I_γ: from (n,n′γ).
4353.95	(3^-)	768.8 *1*	42.9 *6*	3584.784	5^-	[E2]	1.10×10^{-3}	α(K)=0.000973 *14*; α(L)=0.0001074 *15*; α(M)=1.80×10^{-5} *3*; α(N)=2.25×10^{-6} *4* α(O)=1.435×10^{-7} *20* B(E2)(W.u.)=38 *+10−9*
		1135.8 *1*	100.0 *5*	3218.489	2^+	(E1)	2.11×10^{-4}	α(K)=0.0001741 *25*; α(L)=1.86×10^{-5} *3*; α(M)=3.11×10^{-6} *5*; α(N)=3.91×10^{-7} *6*; α(O)=2.57×10^{-8} *4* B(E1)(W.u.)=2.2×10^{-4} *+6−5* Mult.: D from $\gamma(\theta)$ in (n,n′γ), $\Delta\pi$=no from level scheme.
		2518.1 *4*	8.6 *5*	1836.090	2^+	[E1]	1.02×10^{-3}	α(K)=4.85×10^{-5} *7*; α(L)=5.12×10^{-6} *8*; α(M)=8.58×10^{-7} *12*; α(N)=1.082×10^{-7} *16*; α(O)=7.16×10^{-9} *10* B(E1)(W.u.)=1.8×10^{-6} *+5−4*
4367.94	(7^-)	348.42 *8*	100.0 *20*	4019.56	$(6)^-$	(M1)	0.00622	α(K)=0.00550 *8*; α(L)=0.000607 *9*; α(M)=0.0001020 *15*; α(N)=1.280×10^{-5} *18* α(O)=8.32×10^{-7} *12* B(M1)(W.u.)>0.046 Mult.: D from $\gamma(\theta)$ in $^{80}Se(^{11}B,p2n\gamma)$, D(+Q) from $\gamma(\theta)$ in (n,n′γ), $\Delta\pi$=no from level scheme.
		782.9 *3*	11.8 *8*	3584.784	5^-	(E2)	1.05×10^{-3}	α(K)=0.000929 *13*; α(L)=0.0001024 *15*; α(M)=1.719×10^{-5} *25*; α(N)=2.15×10^{-6} *3* α(O)=1.370×10^{-7} *20* B(E2)(W.u.)>0.87
4413.96	$(2)^+$	891.31 *12*	11.9 *23*	3522.77	(2^+)			E_γ: observed only in (n,γ), E=thermal.
		1679.65 *9*	34.9 *10*	2734.137	3^-	[E1]	4.89×10^{-4}	α(K)=8.93×10^{-5} *13*; α(L)=9.47×10^{-6} *14*; α(M)=1.586×10^{-6} *23*; α(N)=2.00×10^{-7} *3*; α(O)=1.317×10^{-8} *19* B(E1)(W.u.)=0.00105 *20*
		2577.78 *5*	100.0 *4*	1836.090	2^+	(M1)	6.20×10^{-4}	α(K)=7.87×10^{-5} *11*; α(L)=8.36×10^{-6} *12*; α(M)=1.401×10^{-6} *20*; α(N)=1.767×10^{-7} *25* α(O)=1.172×10^{-8} *17*

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$\gamma(^{88}Sr)$ (continued)

E_i(level)	J^{π}_i	E_γ†	I_γ†	E_f	J^{π}_f	Mult.‡	δ	α	Comments
									B(M1)(W.u.)=0.053 *11* Mult.: D from $\gamma(\theta)$ in (n,n′γ), $\Delta\pi$=no from level scheme.
4413.96	(2)$^+$	4413.7[b] *3*	<7.0[b]	0	0$^+$	[E2]		1.34×10^{-3}	α(K)=3.32×10^{-5} *5*; α(L)=3.50×10^{-6} *5*; α(M)=5.87×10^{-7} *9*; α(N)=7.40×10^{-8} *11*; α(O)=4.92×10^{-9} *7* B(E2)(W.u.)<0.04 E_γ: observed only in (n,γ), E=thermal.
4440.72		1706.57 *12*	100	2734.137	3$^-$	Q[@]			
4451.97	(4)$^+$	867.09 *6*	7.5 *12*	3584.784	5$^-$	[E1]		3.30×10^{-4}	α(K)=0.000293 *4*; α(L)=3.13×10^{-5} *5*; α(M)=5.25×10^{-6} *8*; α(N)=6.60×10^{-7} *10*; α(O)=4.31×10^{-8} *6* B(E1)(W.u.)=0.00016 *5* E_γ: not observed in (n,n′γ).
		1717.71 *8*	100 *15*	2734.137	3$^-$	[E1]		5.14×10^{-4}	α(K)=8.61×10^{-5} *12*; α(L)=9.13×10^{-6} *13*; α(M)=1.530×10^{-6} *22*; α(N)=1.93×10^{-7} *3*; α(O)=1.271×10^{-8} *18* B(E1)(W.u.)=0.00028 *8*
		2615.91 *10*	1.31 *14*	1836.090	2$^+$	[E2]		6.90×10^{-4}	α(K)=7.69×10^{-5} *11*; α(L)=8.17×10^{-6} *12*; α(M)=1.370×10^{-6} *20*; α(N)=1.726×10^{-7} *25* α(O)=1.142×10^{-8} *16* B(E2)(W.u.)=0.011 *3* E_γ: not observed in (n,n′γ).
4484.83	0$^+$	998.4 *1*	100.0 *3*	3486.56	1$^+$				
		2648.5 *1*	8.6 *3*	1836.090	2$^+$	[E2]		7.04×10^{-4}	α(K)=7.53×10^{-5} *11*; α(L)=8.00×10^{-6} *12*; α(M)=1.342×10^{-6} *19*; α(N)=1.690×10^{-7} *24* α(O)=1.118×10^{-8} *16* B(E2)(W.u.)=0.152 *13*
4514.028	2$^-$	1027.3 *3*	0.55 *22*	3486.56	1$^+$	[E1]		2.37×10^{-4}	α(K)=0.000210 *3*; α(L)=2.24×10^{-5} *4*; α(M)=3.76×10^{-6} *6*; α(N)=4.72×10^{-7} *7*; α(O)=3.09×10^{-8} *5* B(E1)(W.u.)=1.7×10^{-6} *9*
		1779.870 *21*	11.0 *7*	2734.137	3$^-$				
		2677.892 *21*	100.0 *14*	1836.090	2$^+$	E1+M2	+0.073 *6*	1.10×10^{-3}	α(K)=4.49×10^{-5} *7*; α(L)=4.74×10^{-6} *7*; α(M)=7.94×10^{-7} *12*; α(N)=1.001×10^{-7} *15*; α(O)=6.63×10^{-9} *10* B(E1)(W.u.)=1.8×10^{-5} *6*; B(M2)(W.u.)=0.060 *23* Mult.,δ: from $\gamma\gamma(\theta)$ measured in ^{88}Rb β^- decay. Parity from adopted $\Delta\pi$. Other: −0.06 +*7*−*6* from $\gamma(\theta)$ in (n,n′γ).
4514.54	+	2678.38[d] *9*	100	1836.090	2$^+$				Possibly identical to 2677.89γ.
4521.43	(6)$^-$	936.61 *13*	100	3584.784	5$^-$	M1(+E2)	−0.03[@] *7*	6.44×10^{-4}	α(K)=0.000571 *8*; α(L)=6.15×10^{-5} *9*; α(M)=1.032×10^{-5} *15*; α(N)=1.300×10^{-6} *19*; α(O)=8.56×10^{-8} *12* Mult.: D(+Q) from $\gamma(\theta)$ in (n,n′γ), $\Delta\pi$=no from level scheme.
4622.19	2$^+$	1888.0 *1*	100.0 *6*	2734.137	3$^-$	E1		6.26×10^{-4}	α(K)=7.43×10^{-5} *11*; α(L)=7.87×10^{-6} *11*; α(M)=1.318×10^{-6}

From ENSDF

$\gamma(^{88}Sr)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ	α	Comments
									19; α(N)=1.660×10^{-7} *24* α(O)=1.096×10^{-8} *16* B(E1)(W.u.)=0.0020 *5* Mult.: D from $\gamma(\theta)$ in (n,n′γ), $\Delta\pi$=yes from level scheme.
4622.19	2^+	2786.2 *2*	20.3 *6*	1836.090	2^+				
4640.40		1906.2 *1*	100.0 *6*	2734.137	3^-	Q[@]			
		2804.3 *1*	46.0 *6*	1836.090	2^+	D+Q[@]	−0.18[@] *5*		
4680.19		1095.4[a] *1*	100	3584.784	5^-				
4687.38	(7)	319.6[c] *3*	100[c]	4367.94	(7^-)				
4742.50	1^-	1524.6	18 *5*	3218.489	2^+	[E1]		3.83×10^{-4}	α(K)=0.0001044 *15*; α(L)=1.109×10^{-5} *16*; α(M)=1.86×10^{-6} *3*; α(N)=2.34×10^{-7} *4* α(O)=1.541×10^{-8} *22* B(E1)(W.u.)=0.0055 *16*
		2906.1 *1*	3.5 *14*	1836.090	2^+	[E1]		1.22×10^{-3}	α(K)=3.97×10^{-5} *6*; α(L)=4.19×10^{-6} *6*; α(M)=7.02×10^{-7} *10*; α(N)=8.84×10^{-8} *13*; α(O)=5.86×10^{-9} *9* B(E1)(W.u.)=0.00015 *7* I_γ: from (γ,γ'). Other: 12.1 *3* from (n,n′γ). E_γ: from (n,n′γ).
		4742.52 *8*	100	0	0^+	E1		0.00195	α(K)=2.10×10^{-5} *3*; α(L)=2.21×10^{-6} *3*; α(M)=3.70×10^{-7} *6*; α(N)=4.66×10^{-8} *7*; α(O)=3.09×10^{-9} *5* B(E1)(W.u.)=0.00101 *9*
4770.12	2^+	734.7 *1*	3.7 *4*	4035.52	2^+	M1		1.09×10^{-3}	α(K)=0.000968 *14*; α(L)=0.0001048 *15*; α(M)=1.759×10^{-5} *25*; α(N)=2.21×10^{-6} *3* α(O)=1.454×10^{-7} *21* B(M1)(W.u.)=0.27 *12* Mult.: D from comparison to RUL, $\Delta\pi$=no from level scheme.
		1283.6[a] *1*	2.4 *4*	3486.56	1^+				
		2035.7[a] *1*	100.0 *4*	2734.137	3^-	[E1]		7.24×10^{-4}	α(K)=6.62×10^{-5} *10*; α(L)=7.01×10^{-6} *10*; α(M)=1.174×10^{-6} *17*; α(N)=1.479×10^{-7} *21* α(O)=9.77×10^{-9} *14* B(E1)(W.u.)=0.0053 *24*
		2933.9 *1*	16.2 *4*	1836.090	2^+	M1(+E2)		0.00079 *4*	α(K)=6.31×10^{-5} *10*; α(L)=6.69×10^{-6} *10*; α(M)=1.122×10^{-6} *17*; α(N)=1.414×10^{-7} *21* α(O)=9.38×10^{-9} *14* Mult.: D(+Q) from $\gamma(\theta)$ in (n,n′γ), $\Delta\pi$=no from level scheme.
		4770.7 *2*	0.7 *4*	0	0^+	E2		1.45×10^{-3}	α(K)=2.95×10^{-5} *5*; α(L)=3.11×10^{-6} *5*; α(M)=5.22×10^{-7}

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Adopted Levels, Gammas (continued)

$\gamma(^{88}Sr)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.‡	δ	α	Comments
									8; α(N)=6.58×10^{-8} *10*; α(O)=4.37×10^{-9} *7* B(E2)(W.u.)=0.009 *7* Mult.: Q from $\gamma(\theta)$ in (n,n′γ), $\Delta\pi$=no from level scheme.
4801.3	0^+	2965.2 *6*	100	1836.090	2^+	[E2]		8.32×10^{-4}	α(K)=6.23×10^{-5} *9*; α(L)=6.61×10^{-6} *10*; α(M)=1.108×10^{-6} *16*; α(N)=1.396×10^{-7} *20*; α(O)=9.25×10^{-9} *13* B(E2)(W.u.)=6.6 *21*
4801.4	1	4801.3	100	0	0^+	D			
4845.62	$(3)^-$	1627.01 *19*	3.7 *7*	3218.489	2^+				E_γ: observed only in (n,γ), E=thermal.
		2111.47 *5*	48.1 *12*	2734.137	3^-	M1+E2&	−2.0 +*12*−∞		B(E2)(W.u.)=7.7 *20*; B(M1)(W.u.)=0.0078 *21*
		3009.50 *4*	100.0 *6*	1836.090	2^+	E1+M2	+0.075 *15*	1.27×10^{-3}	α(K)=3.82×10^{-5} *6*; α(L)=4.03×10^{-6} *6*; α(M)=6.75×10^{-7} *10*; α(N)=8.51×10^{-8} *13*; α(O)=5.64×10^{-9} *9* B(E1)(W.u.)=0.00043 *12*; B(M2)(W.u.)=1.2 *6* Mult.,δ: D+Q from $\gamma\gamma(\theta)$ in ^{88}Rb β^- decay. $\Delta\pi$=yes from level scheme.
		4845.19 *18*	0.60 *5*	0	0^+	[E3]		1.18×10^{-3}	α(K)=3.93×10^{-5} *6*; α(L)=4.17×10^{-6} *6*; α(M)=6.99×10^{-7} *10*; α(N)=8.81×10^{-8} *13*; α(O)=5.85×10^{-9} *9* B(E3)(W.u.)=8.7 *24*
4853.026	1^-	338.95 *7*	12.8 *6*	4514.028	2^-	M1		0.00666	α(K)=0.00588 *9*; α(L)=0.000649 *9*; α(M)=0.0001092 *16*; α(N)=1.371×10^{-5} *20* α(O)=8.90×10^{-7} *13* B(M1)(W.u.)=0.26 *4* Mult.: D from comparison to RUL, $\Delta\pi$=no from level scheme. E_γ,I_γ: from ^{88}Rb β^- decay. I_γ: Other: 85.9 *9* in (n,n′γ).
		439.2 *3*	3.2 *9*	4413.96	$(2)^+$				
		1217.97 *18*	11.1 *9*	3635.09	$(3)^+$				
		1366.26 *12*	34 *5*	3486.56	1^+	E1+M2	−0.05 *2*	2.94×10^{-4}	α(K)=0.0001266 *21*; α(L)=1.347×10^{-5} *22*; α(M)=2.26×10^{-6} *4*; α(N)=2.84×10^{-7} *5*; α(O)=1.87×10^{-8} *3* B(E1)(W.u.)=0.00016 *4*; B(M2)(W.u.)=1.0 *9* Mult.,δ: D+Q from $\gamma\gamma(\theta)$ in ^{88}Rb β^- decay. $\Delta\pi$=yes from level scheme.
		2118.867 *20*	100.0 *13*	2734.137	3^-	(E2)		4.91×10^{-4}	α(K)=0.0001114 *16*; α(L)=1.187×10^{-5} *17*; α(M)=1.99×10^{-6} *3*; α(N)=2.51×10^{-7} *4*

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$\gamma(^{88}Sr)$ (continued)

E_i(level)	J^{π}_i	E_γ†	I_γ†	E_f	J^{π}_f	Mult.‡	α	Comments
								α(K)=0.0001114 *16*; α(L)=1.187×10^{-5} *17*; α(M)=1.99×10^{-6} *3*; α(N)=2.51×10^{-7} *4* α(O)=1.653×10^{-8} *24* B(E2)(W.u.)=2.0 *3* E_γ: from ^{88}Rb β^- decay. Mult.: (Q) from $\gamma(\theta)$ in (n,n′γ), $\Delta\pi$=no from level scheme.
4853.026	1^-	3017.19 *20*	1.0 *5*	1836.090	2^+	[E1]	1.27×10^{-3}	α(K)=3.77×10^{-5} *6*; α(L)=3.98×10^{-6} *6*; α(M)=6.67×10^{-7} *10*; α(N)=8.40×10^{-8} *12*; α(O)=5.56×10^{-9} *8* B(E1)(W.u.)=4.5×10^{-7} *23*
		4852.882 *24*	1.6 *9*	0	0^+	(E1)	0.00199	α(K)=2.04×10^{-5} *3*; α(L)=2.14×10^{-6} *3*; α(M)=3.59×10^{-7} *5*; α(N)=4.53×10^{-8} *7*; α(O)=3.01×10^{-9} *5* B(E1)(W.u.)=1.7×10^{-7} *10* E_γ: from ^{88}Rb β^- decay. Mult.: (D) from $\gamma(\theta)$ in (n,n′γ), $\Delta\pi$=yes from level scheme.
4880.57	4^+	581.2 *1*	19.2 *6*	4299.52	4^+	M1(+E2)	0.0021 *3*	α(K)=0.00186 *23*; α(L)=0.00021 *3*; α(M)=3.5×10^{-5} *5*; α(N)=4.3×10^{-6} *6*; α(O)=2.8×10^{-7} *3* Mult.: D from comparison to RUL, $\Delta\pi$=no from level scheme.
		841.6 *1*	58.3 *20*	4039.04	$(3)^+$	M1(+E2)	0.00084 *4*	α(K)=0.00075 *3*; α(L)=8.1×10^{-5} *4*; α(M)=1.37×10^{-5} *7*; α(N)=1.71×10^{-6} *8*; α(O)=1.11×10^{-7} *4* Mult.: D from comparison to RUL, $\Delta\pi$=no from level scheme.
		1245.5 *1*	0.6 *6*	3635.09	$(3)^+$			
		2146.2 *1*	17.6 *6*	2734.137	3^-	E1(+M2)	7.91×10^{-4} *12*	α(K)=6.26×10^{-5} *17*; α(L)=6.62×10^{-6} *18*; α(M)=1.11×10^{-6} *3*; α(N)=1.40×10^{-7} *4*; α(O)=9.23×10^{-9} *25* Mult.: D(Q) from $\gamma(\theta)$ in (n,n′γ), $\Delta\pi$=yes from level scheme.
		3044.4 *1*	100.0 *16*	1836.090	2^+	[E2]	8.63×10^{-4}	α(K)=5.97×10^{-5} *9*; α(L)=6.33×10^{-6} *9*; α(M)=1.060×10^{-6} *15*; α(N)=1.336×10^{-7} *19*; α(O)=8.85×10^{-9} *13* B(E2)(W.u.)=1.58 *17* Mult.: Q from $\gamma(\theta)$ in (n,n′γ), $\Delta\pi$=no from level scheme.
4914.6	1	4914.5	100	0	0^+	D		
4923.61	(2,3,1)	1288.5 *1*	16.7 *4*	3635.09	$(3)^+$			
		2189.3 *1*	8.0 *4*	2734.137	3^-			
		3087.6 *1*	100.0 *4*	1836.090	2^+	(D+Q)@		
4930.6	$2^+,3^+,4^+$	3094.5 *5*	100	1836.090	2^+			
4988.23	2^+	1769.6 *1*	53.8 *8*	3218.489	2^+			
		2253.9 *1*	26.4 *8*	2734.137	3^-	[E1]	8.61×10^{-4}	α(K)=5.69×10^{-5} *8*; α(L)=6.02×10^{-6} *9*; α(M)=1.008×10^{-6} *15*; α(N)=1.270×10^{-7} *18*; α(O)=8.40×10^{-9} *12* B(E1)(W.u.)=0.00031 *8*
		3152.2 *1*	100 *4*	1836.090	2^+	M1(+E2)	0.00087 *4*	α(K)=5.59×10^{-5} *9*; α(L)=5.93×10^{-6} *10*; α(M)=9.94×10^{-7} *16*;

Adopted Levels, Gammas (continued)

$\gamma(^{88}Sr)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α	Comments
								α(N)=1.253×10^{-7} *20*; α(O)=8.31×10^{-9} *13* Mult.: D(+Q) from $\gamma(\theta)$ in (n,n′γ), $\Delta\pi$=no from level scheme.
4988.23	2^+	4988.7 *2*	31 *3*	0	0^+	[E2]	1.51×10^{-3}	α(K)=2.76×10^{-5} *4*; α(L)=2.91×10^{-6} *4*; α(M)=4.88×10^{-7} *7*; α(N)=6.16×10^{-8} *9*; α(O)=4.09×10^{-9} *6* B(E2)(W.u.)=0.10 *3* E_γ: from (n,n′γ). Mult.: Q from $\gamma(\theta)$ in (n,n′γ), $\Delta\pi$=no from level scheme.
5010.59	$(3,4^+)$	558.49 *6*	19 *3*	4451.97	$(4)^+$			
		1058.06 *6*	22.7 *6*	3952.636	$(4)^-$			
		1791.69 *19*	3.1 *6*	3218.489	2^+			
		2276.44 *15*	100 *1*	2734.137	3^-	D(+Q)[@]		
5076.65		1442.06 *22*	1.0×10^2 *3*	3635.09	$(3)^+$			
		2342.82 *22*	22 *4*	2734.137	3^-			
5085.49	$(2)^+$	1450.4 *1*	9.5 *4*	3635.09	$(3)^+$			
		1866.9 *1*	10.2 *6*	3218.489	2^+			
		3249.5 *2*	100.0 *7*	1836.090	2^+			
		5086.1 *5*	3.7 *4*	0	0^+	(E2)	1.54×10^{-3}	α(K)=2.68×10^{-5} *4*; α(L)=2.83×10^{-6} *4*; α(M)=4.74×10^{-7} *7*; α(N)=5.98×10^{-8} *9*; α(O)=3.97×10^{-9} *6* B(E2)(W.u.)=0.034 *16* Mult.: (Q) from $\gamma(\theta)$ in (n,n′γ), $\Delta\pi$=no from level scheme.
5092.12	(4^+)	1052.90[b] *12*	<71[b]	4039.04	$(3)^+$			E_γ: observed only in (n,γ), E=thermal.
		1507.22 *9*	49.5 *15*	3584.784	5^-	(E1)	3.71×10^{-4}	α(K)=0.0001064 *15*; α(L)=1.130×10^{-5} *16*; α(M)=1.89×10^{-6} *3*; α(N)=2.38×10^{-7} *4* α(O)=1.570×10^{-8} *22* B(E1)(W.u.)=0.00037 *9* I_γ: from (n,n′γ). Other: <60 for multiply placed transition in (n,γ), E=thermal. Mult.: D from $\gamma(\theta)$ in (n,n′γ), $\Delta\pi$=yes from level scheme.
		1571.2[b] *7*	<23[b]	3522.77	(2^+)	[E2]	3.33×10^{-4}	α(K)=0.000196 *3*; α(L)=2.10×10^{-5} *3*; α(M)=3.52×10^{-6} *5*; α(N)=4.43×10^{-7} *7*; α(O)=2.90×10^{-8} *4* B(E2)(W.u.)<3.5 E_γ: observed only in (n,γ), E=thermal.
		1606.2[bd] *8*	<22[b]	3486.56	1^+			E_γ: placement is questionable, if J^π=(4^+) assignment to 5092 level is correct, as this transition would imply M3 multipolarity. E_γ: observed only in (n,γ), E=thermal.
		2358.08 *19*	100 *2*	2734.137	3^-	(E1)[@]	9.23×10^{-4}	α(K)=5.33×10^{-5} *8*; α(L)=5.63×10^{-6} *8*; α(M)=9.44×10^{-7} *14*; α(N)=1.189×10^{-7} *17*; α(O)=7.86×10^{-9} *11* B(E1)(W.u.)=0.00020 *5* Mult.: D from $\gamma(\theta)$ in (n,n′γ), $\Delta\pi$=yes from level scheme.

$\gamma(^{88}Sr)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[‡]	α	Comments
5092.12	(4^+)	3256.44 *21*	24 *3*	1836.090	2^+	[E2]	9.45×10^{-4}	α(K)=5.34×10^{-5} *8*; α(L)=5.66×10^{-6} *8*; α(M)=9.49×10^{-7} *14*; α(N)=1.196×10^{-7} *17*; α(O)=7.93×10^{-9} *11* B(E2)(W.u.)=0.12 *3* E_γ: observed only in (n,γ), E=thermal.
5103.31	(7)	581.8 *5*	18 *6*	4521.43	$(6)^-$	(D)[#]		
		1083.6 *3*	100 *6*	4019.56	$(6)^-$	D[#]		
5113.06	$(2^+,3)$	1074.12 *8*	50 *4*	4039.04	$(3)^+$			
		1477.99 *8*	130 *22*	3635.09	$(3)^+$			E_γ: observed only in (n,γ), E=thermal.
		1894.5 *3*	56 *4*	3218.489	2^+			
		2377.9 *4*	5.4 *14*	2734.137	3^-			E_γ: observed only in (n,γ), E=thermal.
		3276.80 *9*	100 *4*	1836.090	2^+	D[@]		
5123.8	$(1,2^+)$	3287.5 *5*	100.0 *8*	1836.090	2^+			
		5123.7 *3*	2.8 *8*	0	0^+			
5127.40	(2)	3291.1 *1*	100.0 *8*	1836.090	2^+			
		5127.8 *2*	4.1 *8*	0	0^+	(Q)[@]		
5136.95		1501.8 *1*	100	3635.09	$(3)^+$	D(+Q)[@]		
		5137.8 *5*	<1	0	0^+			
5163.91	2^+	2007.7[d] *1*	100	3156.19	0^+	[E2]	4.50×10^{-4}	α(K)=0.0001228 *18*; α(L)=1.311×10^{-5} *19*; α(M)=2.20×10^{-6} *3*; α(N)=2.77×10^{-7} *4*; α(O)=1.82×10^{-8} *3* B(E2)(W.u.)=15 *4*
5168.80?		1682.3 *1*	56 *6*	3486.56	1^+			
		1950.2 *1*	45 *11*	3218.489	2^+			
		2434.5 *1*	77 *4*	2734.137	3^-			
		3332.8 *1*	100 *6*	1836.090	2^+	D(+Q)[@]		
5170.1	(2^+)	5169.9 *3*	100	0	0^+	(E2)	1.56×10^{-3}	α(K)=2.62×10^{-5} *4*; α(L)=2.76×10^{-6} *4*; α(M)=4.63×10^{-7} *7*; α(N)=5.84×10^{-8} *9*; α(O)=3.88×10^{-9} *6* B(E2)(W.u.)=0.14 *7* Mult.: (Q) from $\gamma(\theta)$ in (n,n′γ), M2 excluded by comparison to RUL.
5253.92	(3^-)	2035.7[a] *1*	100 *4*	3218.489	2^+	[E1]	7.24×10^{-4}	α(K)=6.62×10^{-5} *10*; α(L)=7.01×10^{-6} *10*; α(M)=1.174×10^{-6} *17*; α(N)=1.479×10^{-7} *21* α(O)=9.77×10^{-9} *14* B(E1)(W.u.)=0.00087 *22*
		2519.6 *2*	22.5 *14*	2734.137	3^-			
		3417.5 *1*	18 *6*	1836.090	2^+	[E1]	1.47×10^{-3}	α(K)=3.19×10^{-5} *5*; α(L)=3.36×10^{-6} *5*; α(M)=5.64×10^{-7} *8*; α(N)=7.10×10^{-8} *10*; α(O)=4.71×10^{-9} *7* B(E1)(W.u.)=3.3×10^{-5} *14*
5263.06		3426.9 *2*	100	1836.090	2^+			
5275.98	$(1^-,2^+)$	1283.6[a] *1*	18.8 *18*	3992.42	(0^+)			
		2541.8 *1*	100 *7*	2734.137	3^-			

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Adopted Levels, Gammas (continued)

$\gamma(^{88}$Sr) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[‡]	α	Comments
5275.98	(1⁻,2⁺)	3439.5 *3*	1.9 *19*	1836.090	2⁺			
5307.53	(1)	1315.1 *1*	100	3992.42	(0⁺)	(D)[@]		
5321.36	4⁺	1052.90[b] *12*	<7.6[b]	4268.70	(3⁻,4,5⁻)			
		1368.67 *3*	100 *15*	3952.636	(4)⁻			
		1736.51[b] *8*	<48[b]	3584.784	5⁻			
		2103.14 *10*	4.4 *5*	3218.489	2⁺			
5322.39	(2,3)	1095.4[a] *1*	47 *6*	4227.20	(3⁻)			
		1687.2 *1*	100 *6*	3635.09	(3)⁺			
		2588.3 *1*	85 *5*	2734.137	3⁻			
5370.5		267.1 *3*	100	5103.31	(7)			
5393.25	(2⁺)	941.4 *1*	43 *4*	4451.97	(4)⁺	[E2]	6.67×10^{-4}	α(K)=0.000590 *9*; α(L)=6.45×10^{-5} *9*; α(M)=1.082×10^{-5} *16*; α(N)=1.355×10^{-6} *19*; α(O)=8.73×10^{-8} *13* B(E2)(W.u.)=2.2×10^{2} *9*
		2174.6 *1*	100 *6*	3218.489	2⁺			
		5393.2[d]	61 *8*	0	0⁺	[E2]	1.62×10^{-3}	α(K)=2.46×10^{-5} *4*; α(L)=2.60×10^{-6} *4*; α(M)=4.35×10^{-7} *6*; α(N)=5.49×10^{-8} *8*; α(O)=3.65×10^{-9} *6* B(E2)(W.u.)=0.050 *20*
5396.0	(2⁺)	5395.8 *3*	100	0	0⁺	(E2)	1.62×10^{-3}	α(K)=2.46×10^{-5} *4*; α(L)=2.60×10^{-6} *4*; α(M)=4.35×10^{-7} *6*; α(N)=5.48×10^{-8} *8*; α(O)=3.64×10^{-9} *6* B(E2)(W.u.)=0.030 *+15−10* Mult.: Q from $\gamma(\theta)$ in (n,n′γ); M2 excluded by comparison to RUL.
5424.61	(3⁻)	1404.98[d] *5*	450 *70*	4019.56	(6)⁻			E_γ: observed only in (n,γ), E=thermal. Tentative placement as transition would imply M3/E4 multipolarity if J^π=(3⁻) for 5424.61 level is correct.
		1471.76 *16*	113 *21*	3952.636	(4)⁻			E_γ: observed only in (n,γ), E=thermal.
		2690.64 *14*	100 *3*	2734.137	3⁻			
		3588.7 *2*	60.5 *22*	1836.090	2⁺	[E1]	1.54×10^{-3}	α(K)=2.99×10^{-5} *5*; α(L)=3.15×10^{-6} *5*; α(M)=5.28×10^{-7} *8*; α(N)=6.66×10^{-8} *10*; α(O)=4.41×10^{-9} *7* B(E1)(W.u.)=7.E−6 *4* E_γ: observed only in (n,n′γ).
5427.6	(8)	324.3 *3*	100	5103.31	(7)	D[#]		
5427.71	(4⁻,5)	975.64 *7*	50 *8*	4451.97	(4)⁺			
		1158.95 *11*	31 *6*	4268.70	(3⁻,4,5⁻)			
		1408.23 *5*	100 *16*	4019.56	(6)⁻			
		2693.41[b] *13*	<9.5[b]	2734.137	3⁻			
5472.88	(2⁻,3⁻,4⁻)	2738.7 *1*	100	2734.137	3⁻	M1,E2	0.00071 *3*	α(K)=7.09×10^{-5} *11*; α(L)=7.53×10^{-6} *11*; α(M)=1.263×10^{-6} *19*; α(N)=1.592×10^{-7} *23*

$\gamma(^{88}Sr)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.‡	α	Comments
								α(O)=1.055×10^{-8} *15* Mult.: from comparison to RUL.
5485.6	1	5485.4 *16*	100	0	0^+	D@		
5498.7	(1,2^+)	5498.5 *11*	100	0	0^+			
5517.2	(1,2,3)	3681.0 *3*	100	1836.090	2^+	(D)@		
5518.23	4^+	1565.49[b] *9*	<100[b]	3952.636	$(4)^-$			
		2299.78 *23*	2.3 *5*	3218.489	2^+			
		2784.12 *7*	16.7 *17*	2734.137	3^-			
5542.20	(1)	3706.0 *1*	100.0 *13*	1836.090	2^+			
		5542.5 *4*	5.6 *13*	0	0^+	(D)@		
5583.3		3747.1 *3*	100	1836.090	2^+			
5590.32	(1^-,2,3^+)	2103.2 *2*		3486.56	1^+			
		2856.0 *7*		2734.137	3^-			
		3754.7 *2*		1836.090	2^+			
5600.6	(1,2^+)	5600.4	100	0	0^+			
5655.3	(8)	1287.4 *3*	100	4367.94	(7^-)	D#		
5656.50	(2^+,3,4^+)	1356.7 *1*	100 *6*	4299.52	4^+			
		3821.4 *2*	85 *6*	1836.090	2^+			
5678.34	$(4)^+$	2944.1 *2*	35.5 *23*	2734.137	3^-	[E1]	1.24×10^{-3}	α(K)=3.90×10^{-5} *6*; α(L)=4.12×10^{-6} *6*; α(M)=6.89×10^{-7} *10*; α(N)=8.69×10^{-8} *13*; α(O)=5.75×10^{-9} *8* B(E1)(W.u.)=0.00015 *5*
		3842.2 *2*	100.0 *23*	1836.090	2^+	[E2]	1.15×10^{-3}	α(K)=4.11×10^{-5} *6*; α(L)=4.34×10^{-6} *6*; α(M)=7.28×10^{-7} *11*; α(N)=9.18×10^{-8} *13*; α(O)=6.09×10^{-9} *9* B(E2)(W.u.)=0.93 *25*
5689.00	3^+,4^+	1669.0[d] *5*	3.5 *12*	4019.56	$(6)^-$			E_γ: observed only in (n,γ), E=thermal. Tentative placement as transition would imply M2 or E3 multipolarity.
		1736.51[b] *7*	<100[b]	3952.636	$(4)^-$			E_γ: observed only in (n,γ), E=thermal.
		2166.50 *21*	4.3 *6*	3522.77	(2^+)			E_γ: observed only in (n,γ), E=thermal.
		2954.67 *7*	53 *5*	2734.137	3^-			
5691.3	1	5691.1	100	0	0^+	D		
5693.93	2^+	1394.5 *1*	27 *7*	4299.52	4^+	[E2]	3.31×10^{-4}	α(K)=0.000248 *4*; α(L)=2.68×10^{-5} *4*; α(M)=4.49×10^{-6} *7*; α(N)=5.64×10^{-7} *8*; α(O)=3.69×10^{-8} *6* B(E2)(W.u.)=8 *4*
		2960.2 *2*	57 *5*	2734.137	3^-	[E1]	1.25×10^{-3}	α(K)=3.87×10^{-5} *6*; α(L)=4.08×10^{-6} *6*; α(M)=6.84×10^{-7} *10*; α(N)=8.62×10^{-8} *12*; α(O)=5.71×10^{-9} *8* B(E1)(W.u.)=4.9×10^{-5} *15*
		3857.2 *2*	100 *9*	1836.090	2^+			
		5693.1 *3*	43 *7*	0	0^+	E2	1.69×10^{-3}	α(K)=2.28×10^{-5} *4*; α(L)=2.40×10^{-6} *4*; α(M)=4.02×10^{-7} *6*;

From ENSDF

$^{88}_{38}Sr_{50}$-23

Adopted Levels, Gammas (continued)

$\gamma(^{88}Sr)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[‡]	α	Comments
								α(N)=5.07×10^{-8} 8; α(O)=3.37×10^{-9} 5 B(E2)(W.u.)=0.011 4 Mult.: Q from $\gamma(\theta)$ in (n,n′γ), $\Delta\pi$=no from level scheme.
5710.78		3874.6 1	100	1836.090	2$^+$			
5730.18	4$^+$	3894.0 2	100	1836.090	2$^+$	[E2]	1.17×10^{-3}	α(K)=4.02×10^{-5} 6; α(L)=4.25×10^{-6} 6; α(M)=7.13×10^{-7} 10; α(N)=8.99×10^{-8} 13; α(O)=5.96×10^{-9} 9 B(E2)(W.u.)<0.14
5772.23	0$^+$	1736.7 1	100 14	4035.52	2$^+$	[E2]	3.66×10^{-4}	α(K)=0.0001610 23; α(L)=1.724×10^{-5} 25; α(M)=2.89×10^{-6} 4; α(N)=3.64×10^{-7} 5; α(O)=2.39×10^{-8} 4 B(E2)(W.u.)=36 18
		3935.8 6	69 14	1836.090	2$^+$	[E2]	1.19×10^{-3}	α(K)=3.96×10^{-5} 6; α(L)=4.18×10^{-6} 6; α(M)=7.01×10^{-7} 10; α(N)=8.84×10^{-8} 13; α(O)=5.86×10^{-9} 9 B(E2)(W.u.)=0.42 21
5800.71	(1$^-$,2,3$^+$)	2314.2 1		3486.56	1$^+$			
		3066.2 2		2734.137	3$^-$			
5812.08	3$^-$	1513.5 6	26 13	4299.52	4$^+$	[E1]	3.75×10^{-4}	α(K)=0.0001057 15; α(L)=1.123×10^{-5} 16; α(M)=1.88×10^{-6} 3; α(N)=2.37×10^{-7} 4 α(O)=1.559×10^{-8} 22 B(E1)(W.u.)=0.0012 11 E_γ: observed only in (n,γ), E=thermal.
		1643.1 7	20 10	4170.41	(3$^-$)			E_γ: observed only in (n,γ), E=thermal.
		2177.22 21	39 6	3635.09	(3)$^+$	[E1]	8.14×10^{-4}	α(K)=5.99×10^{-5} 9; α(L)=6.34×10^{-6} 9; α(M)=1.062×10^{-6} 15; α(N)=1.337×10^{-7} 19; α(O)=8.84×10^{-9} 13 B(E1)(W.u.)=0.0006 5 E_γ: observed only in (n,γ), E=thermal.
		3077.94 9	88 5	2734.137	3$^-$			
		3975.66 14	100 10	1836.090	2$^+$	[E1]	1.69×10^{-3}	α(K)=2.62×10^{-5} 4; α(L)=2.76×10^{-6} 4; α(M)=4.62×10^{-7} 7; α(N)=5.83×10^{-8} 9; α(O)=3.87×10^{-9} 6 B(E1)(W.u.)=0.00026 19
		5811.79 15	23.5 14	0	0$^+$	[E3]	1.43×10^{-3}	α(K)=2.91×10^{-5} 4; α(L)=3.08×10^{-6} 5; α(M)=5.17×10^{-7} 8; α(N)=6.52×10^{-8} 10; α(O)=4.33×10^{-9} 6 B(E3)(W.u.)=1.3×10^2 10 E_γ: observed only in (n,γ), E=thermal.
5831.5	(1,2$^+$)	5831.3 5	100	0	0$^+$			
5835.58	(3$^-$,4$^+$)	1608.2[b] 8	<26[b]	4227.20	(3$^-$)			E_γ: observed only in (n,γ), E=thermal.
		1665.31 13	100 17	4170.41	(3$^-$)			E_γ: observed only in (n,γ), E=thermal.
		2250.72 11	36 4	3584.784	5$^-$			E_γ: observed only in (n,γ), E=thermal.
		2349.21[d] 20	13.7 21	3486.56	1$^+$			E_γ: placement is questionable, if J^π=(4$^+$) assignment to 5835.58 level is correct, as this transition would imply M3 multipolarity. E_γ: observed only in (n,γ), E=thermal.

From ENSDF

Adopted Levels, Gammas (continued)

$\gamma(^{88}Sr)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[‡]	α	Comments
5835.58	$(3^-,4^+)$	3999.64 *20*	26 *4*	1836.090	2^+		1	
5866.0	$(1,2^+)$	5865.8 *4*	100	0	0^+			
5951.09	(4^-)	1510.3 *3*	37 *9*	4440.72				
		1723.48 *15*	46 *8*	4227.20	(3^-)			
		1911.94 *12*	42 *7*	4039.04	$(3)^+$			
		1931.33 *16*	26 *5*	4019.56	$(6)^-$			
		1998.46 *9*	80 *12*	3952.636	$(4)^-$			
		2315.7[b] *3*	<23.0[b]	3635.09	$(3)^+$			
		2366.42 *7*	100 *10*	3584.784	5^-			
5990.0	$(1,2^+)$	4154.0 *4*	100 *3*	1836.090	2^+			E_γ,I_γ: from (n,n′γ).
		5989.1 *7*	71 *3*	0	0^+			E_γ,I_γ: from (n,n′γ).
5996.24	4^+	1150.55 *16*	109 *23*	4845.62	$(3)^-$	[E1]	2.11×10^{-4}	α(K)=0.0001701 *24*; α(L)=1.81×10^{-5} *3*; α(M)=3.04×10^{-6} *5*; α(N)=3.82×10^{-7} *6*; α(O)=2.51×10^{-8} *4* B(E1)(W.u.)=0.0020 *9* E_γ: observed only in (n,γ), E=thermal.
		1727.57 *24*	77 *18*	4268.70	$(3^-,4,5^-)$			E_γ: observed only in (n,γ), E=thermal.
		1977.17[d] *20*	51 *10*	4019.56	$(6)^-$			E_γ: observed only in (n,γ), E=thermal. E_γ: tentative as placement would require M2+E3 multipolarity for the transition.
		2043.5	46 *1*	3952.636	$(4)^-$	[E1]	7.29×10^{-4}	α(K)=6.59×10^{-5} *10*; α(L)=6.97×10^{-6} *10*; α(M)=1.168×10^{-6} *17*; α(N)=1.470×10^{-7} *21* α(O)=9.71×10^{-9} *14* B(E1)(W.u.)=0.00015 *6* E_γ: observed only in (n,n′γ).
		2473.49 *15*	33 *5*	3522.77	(2^+)	[E2]	6.33×10^{-4}	α(K)=8.47×10^{-5} *12*; α(L)=9.01×10^{-6} *13*; α(M)=1.510×10^{-6} *22*; α(N)=1.90×10^{-7} *3*; α(O)=1.257×10^{-8} *18* B(E2)(W.u.)=0.7 *3* E_γ: observed only in (n,γ), E=thermal.
		2509.49[d] *17*	25 *4*	3486.56	1^+			E_γ: observed only in (n,γ), E=thermal. E_γ: tentative as placement would require M3+E4 multipolarity for the transition.
		3261.8 *2*	98 *7*	2734.137	3^-	[E1]	1.39×10^{-3}	α(K)=3.40×10^{-5} *5*; α(L)=3.58×10^{-6} *5*; α(M)=6.00×10^{-7} *9*; α(N)=7.56×10^{-8} *11*; α(O)=5.01×10^{-9} *7* B(E1)(W.u.)=8.E−5 *3* E_γ: observed only in (n,n′γ).
		4160.05 *13*	100 *5*	1836.090	2^+	[E2]	1.26×10^{-3}	α(K)=3.63×10^{-5} *5*; α(L)=3.84×10^{-6} *6*; α(M)=6.43×10^{-7} *9*; α(N)=8.11×10^{-8} *12*; α(O)=5.38×10^{-9} *8* B(E2)(W.u.)=0.16 *6*
6010.0	1^-	6009.8	100	0	0^+	E1		B(E1)(W.u.)=0.00113 *8*
6011.15	(2^+)	934.50 *3*	100 *15*	5076.65				

$^{88}_{38}Sr_{50}$-25

Adopted Levels, Gammas (continued)

$\gamma(^{88}Sr)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[‡]	α	Comments
6011.15	(2+)	1595.6[b] 6	<5.4[b]	4413.96	(2)+			
		1972.7 5	1.5 5	4039.04	(3)+			
		4174.89 10	18 9	1836.090	2+			
6011.5?	(3−)	2058.7[d] 3		3952.636	(4)−			
		2856.0[a] 7		3156.19	0+			
6052.2	(2+)	6052.0 3	100	0	0+			
6053.86	(2)+	2567.0 3		3486.56	1+			
		3319.9 3		2734.137	3−			
		4218.2 19		1836.090	2+			
6074.5?		2856.0[a] 7	100	3218.489	2+			
6099.01	(3,4+)	2146.5		3952.636	(4)−	D[@]		
		4262.8 2		1836.090	2+			
6101.4	(1,2+)	6101.2 3	100	0	0+			
6106.00	(1,2,3)	2070.1 4		4035.52	2+	(D)		
		4270.0 3		1836.090	2+			
6125.20		1857.0 4	22 6	4268.70	(3−,4,5−)			
		2172.51 10	52 6	3952.636	(4)−			
		2602.3 3	6.8 14	3522.77	(2+)			
		3391.03 9	100 5	2734.137	3−			
6126.6		2091.1 4	100	4035.52	2+			
6132.92		2180.3[a] 2		3952.636	(4)−			
		4296.6 3		1836.090	2+			
6153.50	(1−)	4317.3 2	100	1836.090	2+	(E1)[@]	0.00181	α(K)=2.36×10^{-5} 4; α(L)=2.48×10^{-6} 4; α(M)=4.16×10^{-7} 6; α(N)=5.24×10^{-8} 8; α(O)=3.48×10^{-9} 5 B(E1)(W.u.)>1.4×10^{-5} Mult.: (D) from $\gamma(\theta)$ in (n,n′γ), $\Delta\pi$=yes from level scheme.
6168.1	(1,2,3)	4331.9 6	100	1836.090	2+	(D)[@]		
6173.06	(1,2+)	2180.3[a] 2		3992.42	(0+)			
		2954.6 1		3218.489	2+			
6200.63	1+	6200.4 2	100	0	0+	M1		B(M1)(W.u.)=0.026 4 E_γ,I_γ: from (γ,γ').
6213.9	1−	4377.8	2.4 4	1836.090	2+	[E1]	0.00184	α(K)=2.32×10^{-5} 4; α(L)=2.44×10^{-6} 4; α(M)=4.09×10^{-7} 6; α(N)=5.15×10^{-8} 8; α(O)=3.42×10^{-9} 5 B(E1)(W.u.)=0.00039 7 E_γ,I_γ: from (γ,γ').
		6213.6	100	0	0+	E1		B(E1)(W.u.)=0.0056 4 E_γ,I_γ: from (γ,γ').
6235.50	(7)	1132.1 3	88 8	5103.31	(7)			
		1713.9 3	100 17	4521.43	(6)−	D		
		1867.4 3	94 8	4367.94	(7−)			

Adopted Levels, Gammas (continued)

$\gamma(^{88}Sr)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[‡]	Comments
6249.26	$(2^-,3^+)$	560.9 *6*	100 *24*	5689.00	$3^+,4^+$		
		1980.13 *19*	41 *8*	4268.70	$(3^-,4,5^-)$		
		2020.6 *5*	20 *8*	4227.20	(3^-)		
		2079.4 *3*	22 *4*	4170.41	(3^-)		
		2297.4 *6*	10 *4*	3952.636	$(4)^-$		
		2763.7 *5*	6.9 *17*	3486.56	1^+		
		3030.84 *21*	29 *4*	3218.489	2^+		
		4413.7[b] *3*	<63[b]	1836.090	2^+		
6257.85	3^+	1742.74 *24*	100 *21*	4514.54	$^+$		
		1806.22 *25*	79 *18*	4451.97	$(4)^+$		
		2238.9[bd] *3*	<75[b]	4019.56	$(6)^-$		E_γ: tentative placement as transition would imply E3/M4 multipolarity if $J^\pi=3^+$ for 6257.85 level is correct.
		2770.9 *4*	20 *5*	3486.56	1^+		
6333.44	1^-	6333.2 *1*	100	0	0^+	E1	B(E1)(W.u.)=0.0084 *6*
6346.45	1^-	6346.2 *2*	100	0	0^+	E1	B(E1)(W.u.)=0.00096 *7*
6367.0	$(1,2^+)$	6366.8	100	0	0^+		
6382.0	1	6381.8	100	0	0^+	D	
6507.74	(4^+)	1662.15 *16*	46 *8*	4845.62	$(3)^-$		
		2055.4[b] *4*	<11.0[b]	4451.97	$(4)^+$		
		2067.5 *3*	12.3 *21*	4440.72			
		2093.4 *3*	30 *10*	4413.96	$(2)^+$		
		2208.41 *13*	17.4 *23*	4299.52	4^+		
		2238.9[b] *3*	<17.0[b]	4268.70	$(3^-,4,5^-)$		
		2337.56 *19*	8.4 *13*	4170.41	(3^-)		
		2469.2 *7*	100 *10*	4039.04	$(3)^+$		
		3773.38 *10*	56 *3*	2734.137	3^-		
6583.70	$(1^-,2,3^+)$	1507.30[b] *21*	<100[b]	5076.65			
		1571.2[b] *7*	<40[b]	5010.59	$(3,4^+)$		
		2169.62 *18*	53 *7*	4413.96	$(2)^+$		
		2315.7[b] *3*	<47[b]	4268.70	$(3^-,4,5^-)$		
		2544.43 *19*	35 *5*	4039.04	$(3)^+$		
		3097.15 *22*	21 *3*	3486.56	1^+		
		3849.53 *11*	48 *3*	2734.137	3^-		
		4747.32 *12*	46 *3*	1836.090	2^+		
6591.7	1	6591.4 *9*	100	0	0^+	D	
6612.75	$2^-,3^-$	1768.0 *4*	67 *18*	4845.62	$(3)^-$		
		2573.23 *19*	55 *7*	4039.04	$(3)^+$		
		2660.22 *8*	100 *11*	3952.636	$(4)^-$		
		3125.4 *3*	55 *13*	3486.56	1^+		
6692.46	$(3^+,2^+)$	2241.3 *6*	22 *8*	4451.97	$(4)^+$		

$\gamma(^{88}Sr)$ (continued)

E_i(level)	J_i^π	E_γ [†]	I_γ [†]	E_f	J_f^π	Mult. [‡]	Comments
6692.46	$(3^+,2^+)$	3205.42 *21*	28 *3*	3486.56	1^+		
		3958.36 *11*	100 *6*	2734.137	3^-		
6710.4	1	4874.2	42 *11*	1836.090	2^+	D	
		6710.0	100	0	0^+	D	
6806.89	(4^+)	1694.7 *4*	30 *10*	5113.06	$(2^+,3)$		
		1730.50 *17*	100 *18*	5076.65			
		2768.16 *17*	32 *4*	4039.04	$(3)^+$		
		3222.14 *11*	60 *4*	3584.784	5^-		
		4072.41 *16*	22.2 *16*	2734.137	3^-		
		4970.82 *25*	10.9 *16*	1836.090	2^+		
6840.64	(8)	605.1 *1*	100 *4*	6235.50	(7)	D[#]	
		1470.1 *3*	23 *5*	5370.5			
		2153.4 *3*	30 *4*	4687.38	(7)	D[#]	
		2473.3 *5*	11.2 *22*	4367.94	(7^-)		
6854.6	1	6854.3 *3*	100	0	0^+	D	
6916.68	$(3^-,2^+)$	1595.6[b] *6*	<100[b]	5321.36	4^+		
		2070.5 *3*	46 *8*	4845.62	$(3)^-$		
		2647.64 *13*	63 *8*	4268.70	$(3^-,4,5^-)$		
		4182.52 *18*	22.5 *19*	2734.137	3^-		
		6915.6 *7*	6.3 *13*	0	0^+		
6987	1^-	6987.6 *2*	100	0	0^+	E1	B(E1)(W.u.)=0.00124 *11*
7089.11	1^-	7088.8 *1*	100	0	0^+	E1	B(E1)(W.u.)=0.0088 *6*
7119.3	(10)	1464.0 *1*	100	5655.3	(8)	Q[#]	
7129.3		1474.0 *6*	100	5655.3	(8)		
7138.84	(4^+)	1449.77 *17*	100 *22*	5689.00	$3^+,4^+$		
		2127.9 *3*	6.6 *16*	5010.59	$(3,4^+)$		
		3099.76 *20*	10.9 *14*	4039.04	$(3)^+$		
		3554.02 *10*	24.8 *14*	3584.784	5^-		
		3616.17 *17*	90 *7*	3522.77	(2^+)		
		4404.62 *20*	5.2 *5*	2734.137	3^-		
		5302.61 *16*	35 *3*	1836.090	2^+		
7169.21	1	7168.9 *2*	100	0	0^+	D	
7207.88	$(3,4^+,2^+)$	2094.8 *4*	1.0×10^2 *5*	5113.06	$(2^+,3)$		
		2693.41[b] *13*	<84[b]	4514.54	$^+$		
		2793.96 *22*	27 *5*	4413.96	$(2)^+$		
		3989.11 *12*	84 *5*	3218.489	2^+		
		5371.59 *14*	63 *4*	1836.090	2^+		
7281.8	1^-	7281.5 *3*	100	0	0^+	E1	B(E1)(W.u.)=0.00161 *15*
7299.9	$(1)^-$	7299.6 *3*	100	0	0^+	(E1)	B(E1)(W.u.)=0.00079 *12*
7330.55	(9)	489.9 *1*	100 *4*	6840.64	(8)	D[#]	

$^{88}_{38}Sr_{50}$-28

Adopted Levels, Gammas (continued)

γ(^{88}Sr) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[‡]	Comments
7330.55	(9)	1902.9 3	13.3 18	5427.6	(8)		
7434.2	(10)	1778.9 1	100	5655.3	(8)	Q[#]	
7492.8	1^-	7492.5 3	100	0	0^+	E1	B(E1)(W.u.)=0.00033 10
7533.95	1^-	7533.6 2	100	0	0^+	E1	B(E1)(W.u.)=0.00250 24
7573.20	$(3,4^+,2^+)$	1323.95 6	100 16	6249.26	$(2^-,3^+)$		
		1761.6 3	7.1 17	5812.08	3^-		
		2055.4[b] 4	<4.8[b]	5518.23	4^+		
		2145.72 20	12.6 23	5427.71	$(4^-,5)$		
		2147.6 4	6.5 21	5424.61	(3^-)		
		3158.84 13	6.4 5	4413.96	$(2)^+$		
		4839.7 5	1.4 3	2734.137	3^-		
		5736.55 19	6.3 6	1836.090	2^+		
7591.4	1^-	7591.0 3	100	0	0^+	E1	B(E1)(W.u.)=0.00086 15
7641.86	(10)	311.3 1	100 4	7330.55	(9)	D[#]	
		522.7 5	10.9 11	7119.3	(10)	(D)[#]	
7774.8	(11)	340.5 3	100 4	7434.2	(10)	D[#]	
		655.4 3	98 5	7119.3	(10)	D[#]	
7807.8	1^-	7807.4 3	100	0	0^+	E1	B(E1)(W.u.)=0.00133 20
7838.27	1^-	7837.9 2	100	0	0^+	E1	B(E1)(W.u.)=0.0032 4
7877.3	$(1)^-$	7876.9 3	100	0	0^+	(E1)	B(E1)(W.u.)=0.00108 19
7908.76	(11)	266.9 1	100	7641.86	(10)	(D)[#]	
7964.19	1^-	7963.8 2	100	0	0^+	E1	B(E1)(W.u.)=0.00218 22
7987.59	1^-	7987.2 2	100	0	0^+	E1	B(E1)(W.u.)=0.00129 18
8040.79	1^-	8040.4 1	100	0	0^+	E1	B(E1)(W.u.)=0.0048 5
8094.8	(12)	319.6[c] 1	100[c] 4	7774.8	(11)	(D)[#]	
		661.3[d] 6	51 4	7434.2	(10)		E_γ: seen only in ^{176}Yb(^{28}Si,Fγ).
8109.5	1^-	8109.1 3	100	0	0^+	E1	B(E1)(W.u.)=0.00119 20
8180.7	1^-	8180.3 3	100	0	0^+	E1	B(E1)(W.u.)=0.00130 17
8191.11	1^-	8190.7 2	100	0	0^+	E1	B(E1)(W.u.)=0.00189 23
8215.31	1^-	8214.9 2	100	0	0^+	E1	B(E1)(W.u.)=0.00176 21
8271.5	1^-	8271.1 3	100	0	0^+	E1	B(E1)(W.u.)=0.00112 19
8276.1	(13)	181.4 3	100	8094.8	(12)	D[#]	
8325.7	1^-	8325.3 3	100	0	0^+	E1	B(E1)(W.u.)=0.00152 24
8336.3	(12)	241.6 3	100 9	8094.8	(12)	(D)[#]	
		561.3 3	88 6	7774.8	(11)	(D)[#]	
8374.9?		1255.5[d] 5	100	7119.3	(10)		
8375.8	1	8375.4 6	100	0	0^+	D	
8407.0	1	8406.6 4	100	0	0^+	D	

From ENSDF

γ(^{88}Sr) (continued)

E_i(level)	J^π_i	E_γ †	I_γ †	E_f	J^π_f	Mult. ‡	Comments
8437.2	(12)	528.4 *3*	100	7908.76	(11)	D#	
8453.4	1^-	8453.0 *3*	100	0	0^+	E1	B(E1)(W.u.)=0.0028 *5*
8469.0	1^-	8468.6 *3*	100	0	0^+	E1	B(E1)(W.u.)=0.00091 *18*
8500.8	1	8500.4 *3*	100	0	0^+	D	
8517.9		241.8 *6*	100	8276.1	(13)		
8518.8	1^-	8518.4 *4*	100	0	0^+	E1	B(E1)(W.u.)=0.00083 *19*
8553.0?		8552.6 *9*	100	0	0^+		
8561.3?		8560.9 *6*	100	0	0^+		
8580.6?		8580.2 *5*	100	0	0^+		
8588.8		8588.3 *4*	100	0	0^+		
8626.3		8625.8 *10*	100	0	0^+		
8668.7	1	8668.2 *6*	100	0	0^+	D	
8682.0	1	8681.5 *6*	100	0	0^+	D	
8713.7	1^-	8713.2 *9*	100	0	0^+	E1	B(E1)(W.u.)=0.0009 *5*
8735.8		8735.3 *9*	100	0	0^+		
8754.6	1	8754.1 *8*	100	0	0^+	D	
8764.7		8764.2 *5*	100	0	0^+		
8779.8		8779.3 *6*	100	0	0^+		
8791.9	1	8791.4 *6*	100	0	0^+	D	
8840.1		8839.6 *4*	100	0	0^+		
8850.6		8850.1 *12*	100	0	0^+		
8874.4	1	8873.9 *5*	100	0	0^+	D	
8928.5	1^-	8928.0 *3*	100	0	0^+	E1	B(E1)(W.u.)=0.0023 *4*
8935.9	(13)	560.9 *5*	≈9.8	8374.9?			
		599.5 *3*	100 *5*	8336.3	(12)	D#	
		659.8 *3*	46 *3*	8276.1	(13)	(D)#	
		841.2 *3*	46 *3*	8094.8	(12)	(D)#	
8980.8		8980.3 *6*	100	0	0^+		
9019.2		9018.7 *6*	100	0	0^+		
9043.6	1^-	7207.3 *5*	29 *8*	1836.090	2^+		
		9043.0 *5*	100	0	0^+	E1	B(E1)(W.u.)=0.0011 *3*
9069.7	1^-	9069.2 *6*	100	0	0^+	E1	B(E1)(W.u.)=0.00075 *14*
9078.3	1^-	9077.8 *3*	100	0	0^+	E1	B(E1)(W.u.)=0.00124 *20*
9098.3	1	9097.8 *7*	100	0	0^+	D	
9116.3		9115.8 *5*	100	0	0^+		
9125.1	1	9124.6 *3*	100	0	0^+	D	
9148.31	1^-	9147.8 *2*	100	0	0^+	E1	B(E1)(W.u.)=0.0024 *3*
9191.42	1^-	7355.1 *2*	16 *3*	1836.090	2^+		
		9190.8 *2*	100	0	0^+	E1	B(E1)(W.u.)=0.0031 *6*
9214.4	1	9213.9 *7*	100	0	0^+	D	
9255.2	1	9254.7 *9*	100	0	0^+	D	

$^{88}_{38}$Sr$_{50}$-30

Adopted Levels, Gammas (continued)

$\gamma(^{88}$Sr) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[‡]	Comments
9305.7	1^-	9305.2 3	100	0	0^+	E1	B(E1)(W.u.)=0.0027 4
9341.1	1^-	9340.6 3	100	0	0^+	E1	B(E1)(W.u.)=0.00076 13
9384.6	1	9384.1 7	100	0	0^+	D	
9393.3	1	9392.8 5	100	0	0^+	D	
9402.4	1	9401.9 5	100	0	0^+	D	
9410.1	(13)	972.9 5	100	8437.2	(12)	D[#]	
9431.8	1	9431.3 10	100	0	0^+	D	
9445.5	1^-	9445.0 4	100	0	0^+	E1	B(E1)(W.u.)=0.0025 4
9470.5	(1^-)	9470.0 4	100	0	0^+	(E1)	B(E1)(W.u.)=0.00155 24
9478.8	$1^{(-)}$	7642.5 5	14 4	1836.090	2^+		
		9478.2 5	100	0	0^+	(E1)	B(E1)(W.u.)=0.0011 3
9497.05	1^-	9496.5 2	100	0	0^+	E1	B(E1)(W.u.)=9.1×10^{-5} 11
9528.3	(14)	592.4 1	100	8935.9	(13)	D[#]	
9550.8		9550.2 7	100	0	0^+		
9568.3	1	9567.7 5	100	0	0^+	D	
9576.8		9576.2 11	100	0	0^+		
9597.9	1	9597.3 11	100	0	0^+	D	
9616.3	1	9615.7 6	100	0	0^+	D	
9646.1		9645.5 8	100	0	0^+		
9704.1	1^-	9703.5 5	100	0	0^+	E1	B(E1)(W.u.)=0.0016 4
9728.2		9727.6 18	100	0	0^+		
9738.1	1	9737.5 16	100	0	0^+	D	
9746.0	1^-	9745.4 6	100	0	0^+	E1	B(E1)(W.u.)=0.0021 4
9804.7	1	9804.1 9	100	0	0^+	D	
9816.5	1^-	9815.9 3	100	0	0^+	E1	B(E1)(W.u.)=0.00093 17
9881.2	$1^{(-)}$	9880.6 4	100	0	0^+	(E1)	B(E1)(W.u.)=0.00136 21
9944.1	1^-	9943.5 8	100	0	0^+	E1	B(E1)(W.u.)=0.00076 14
9953.3		9952.7 5	100	0	0^+		
9965.8	$1^{(-)}$	9965.2 6	100	0	0^+	(E1)	B(E1)(W.u.)=0.00066 12
9977.9	(15)	449.6 3	100	9528.3	(14)	D[#]	
10056.3	1	10055.7 4	100	0	0^+	D	
10089.2		10088.6 10	100	0	0^+		
10106.9	1	10106.3 8	100	0	0^+	D	
10128.2		10127.6 7	100	0	0^+		
10139.5		10138.9 8	100	0	0^+		
10150.3		10149.7 8	100	0	0^+		
10184.0		10183.4 4	100	0	0^+		
10248.6	1	10248.0 4	100	0	0^+	D	
10288.6	$1^{(-)}$	10288.0 7	100	0	0^+	(E1)	B(E1)(W.u.)=0.00070 14
10297.7		10297.1 13	100	0	0^+		

$^{88}_{38}$Sr$_{50}$-31

Adopted Levels, Gammas (continued)

$\gamma(^{88}Sr)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.‡	Comments
10326.7		10326.0 *6*	100	0	0^+		
10341.3		10340.6 *6*	100	0	0^+		
10372.5		10371.8 *5*	100	0	0^+		
10406.6		10405.9 *14*	100	0	0^+		
10421.1		10420.4 *10*	100	0	0^+		
10453.2		10452.5 *12*	100	0	0^+		
10481.1		10480.4 *9*	100	0	0^+		
10512.1		10511.4 *19*	100	0	0^+		
10522.7	1	10522.0 *5*	100	0	0^+	D	
10550.3	1	10549.6 *5*	100	0	0^+	D	
10600.2		10599.5 *16*	100	0	0^+		
10608.7		10608.0 *14*	100	0	0^+		
10644.1	1^-	10643.4 *8*	100	0	0^+	E1	B(E1)(W.u.)=0.00095 *19*
10657.8	1	10657.1 *16*	100	0	0^+	D	
10698.4		10697.7 *8*	100	0	0^+		
10726.4	1	10725.7 *15*	100	0	0^+	D	
10739.4	(16)	761.5 *3*	100	9977.9	(15)	D#	
10744.9		10744.2 *8*	100	0	0^+		
10759.7		10759.0 *16*	100	0	0^+		
10767.1	1	10766.4 *15*	100	0	0^+	D	
10783.6	1	10782.9 *5*	100	0	0^+	D	
10804.8		8968.3 *6*	26 *11*	1836.090	2^+		
		10804.0 *6*	100	0	0^+		
10857.4		7370.6 *6*	52 *18*	3486.56	1^+		
		10856.6 *6*	100	0	0^+		
10888.4		7669.7 *13*	33 *14*	3218.489	2^+		
		10887.6 *13*	100	0	0^+		
10914.6	1	10913.9 *5*	100	0	0^+	D	
10929.9		10929.2 *7*	100	0	0^+		
10950.4		10949.7 *6*	100	0	0^+		
10979.7		10979.0 *12*	100	0	0^+		
11012.0	1	11011.3 *5*	100	0	0^+	D	
11059.0		11058.3 *11*	100	0	0^+		
11083.1		7864.3 *11*	26 *11*	3218.489	2^+		
		11082.3 *11*	100	0	0^+		
11111.8	1	11111.0 *16*	100	0	0^+	D	
11125.4	1	11124.6 *14*	100	0	0^+	D	
11169.6		7682.9 *12*	35 *15*	3486.56	1^+		
		11168.7 *12*	100	0	0^+		
11224.2		11223.4 *13*	100	0	0^+		
11251.8		11251.0 *12*	100	0	0^+		

$^{88}_{38}Sr_{50}$-32

Adopted Levels, Gammas (continued)

γ(^{88}Sr) (continued)

E$_i$(level)	J$^\pi_i$	E$_\gamma$†	I$_\gamma$†	E$_f$	J$^\pi_f$	Mult.‡
11278.9	1	11278.1 *10*	100	0	0$^+$	D
11313.8		11313.0 *6*	100	0	0$^+$	
11326		11325 *3*	100	0	0$^+$	
11335.3	1	11334.5 *13*	100	0	0$^+$	D
11355		11354 *3*	100	0	0$^+$	
11356.1?	(17)	616.7[d] *3*	100	10739.4	(16)	D[#]
11370	1	11369 *3*	100	0	0$^+$	D
11393.6	1	11392.8 *6*	100	0	0$^+$	D
11413.2		11412.4 *15*	100	0	0$^+$	
11548.0		11547.2 *7*	100	0	0$^+$	

E$_i$(level)	J$^\pi_i$	E$_\gamma$†	I$_\gamma$†	E$_f$	J$^\pi_f$
11593.7		11592.9 *16*	100	0	0$^+$
11607.6		11606.8 *12*	100	0	0$^+$
11633.0		11632.2 *14*	100	0	0$^+$
11658.0		11657.2 *16*	100	0	0$^+$
11743.1		11742.3 *14*	100	0	0$^+$
11782.4		11781.6 *14*	100	0	0$^+$
11920.6		11919.7 *7*	100	0	0$^+$
11935.5		11934.6 *10*	100	0	0$^+$
11958.9		11958.0 *14*	100	0	0$^+$
12026.5		12025.6 *10*	100	0	0$^+$

† Weighted average of all available measurements, except where noted.
‡ From $\gamma(\theta)$, $\gamma(\theta)$(lin pol) in (γ,γ'), except where noted.
# From $\gamma(\theta)$ in ^{80}Se(^{11}B,p2nγ).
@ From $\gamma(\theta)$ in (n,n$'\gamma$).
& D+Q from $\gamma(\theta)$ in (n,n$'\gamma$), $\Delta\pi$=no from level scheme.
[a] Multiply placed.
[b] Multiply placed with undivided intensity.
[c] Multiply placed with intensity suitably divided.
[d] Placement of transition in the level scheme is uncertain.

$^{88}_{38}$Sr$_{50}$-33

Adopted Levels, Gammas

Level Scheme

Intensities: Type not specified

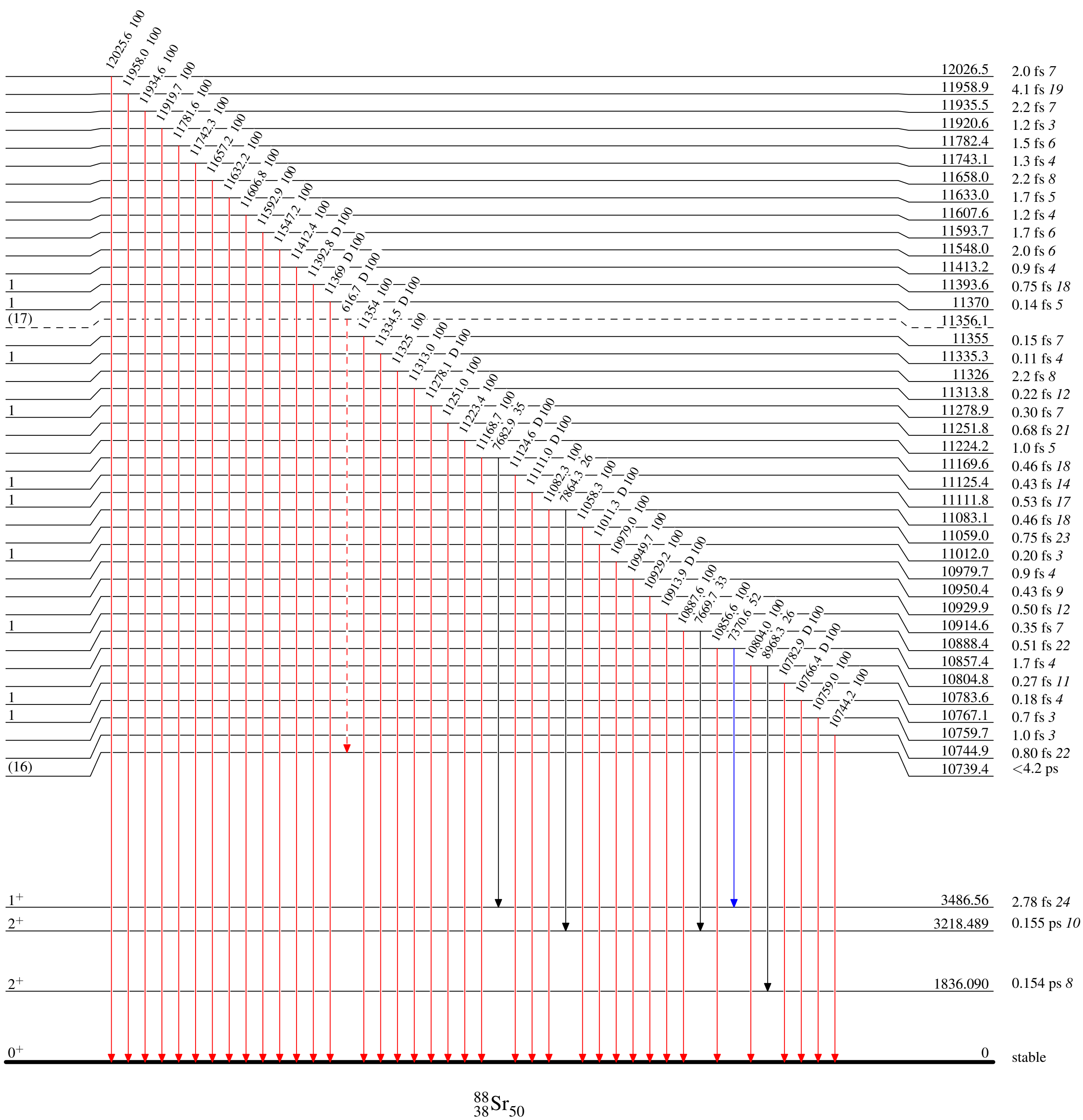
Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$

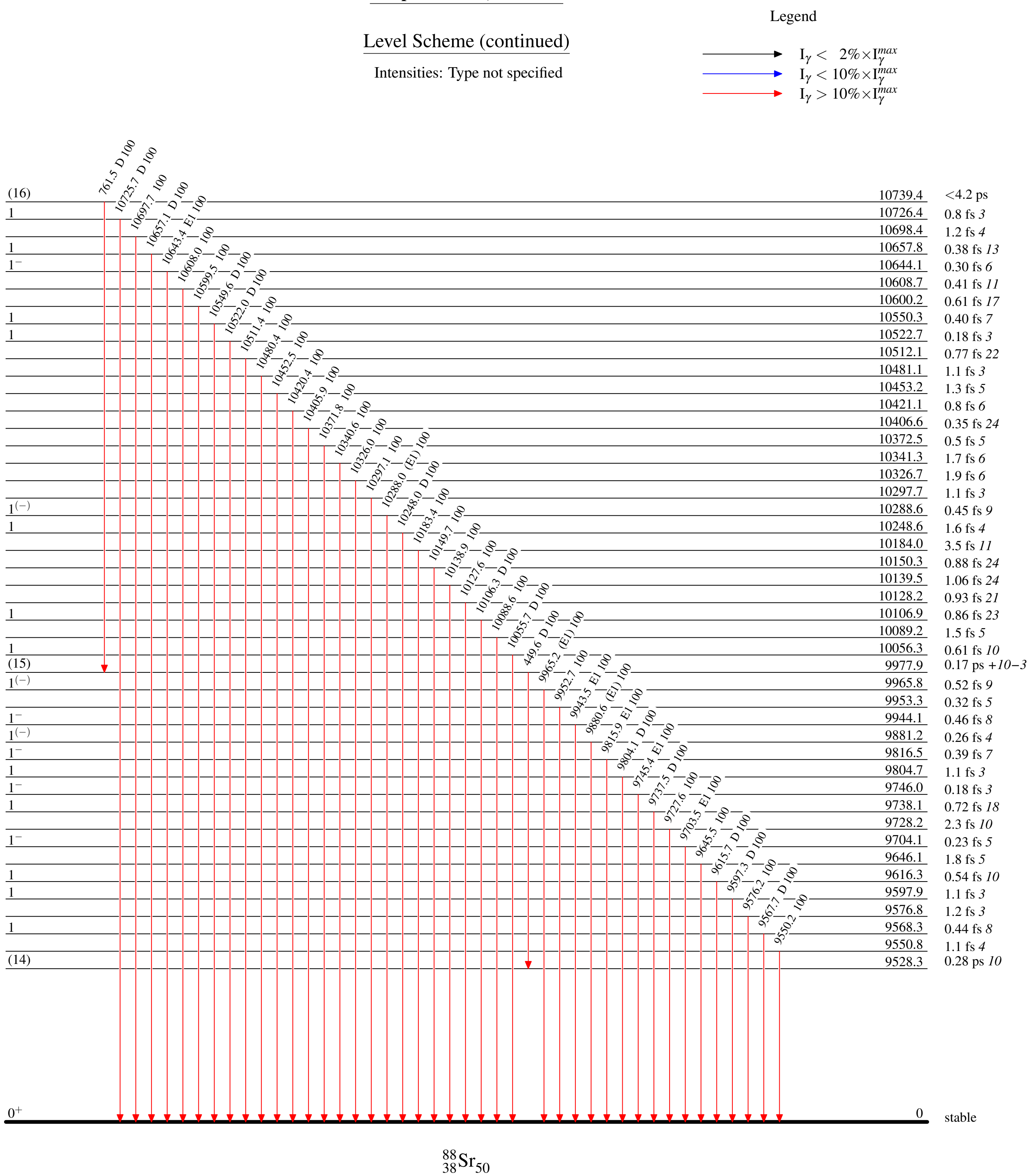
γ Decay (Uncertain)



Adopted Levels, Gammas

Level Scheme (continued)

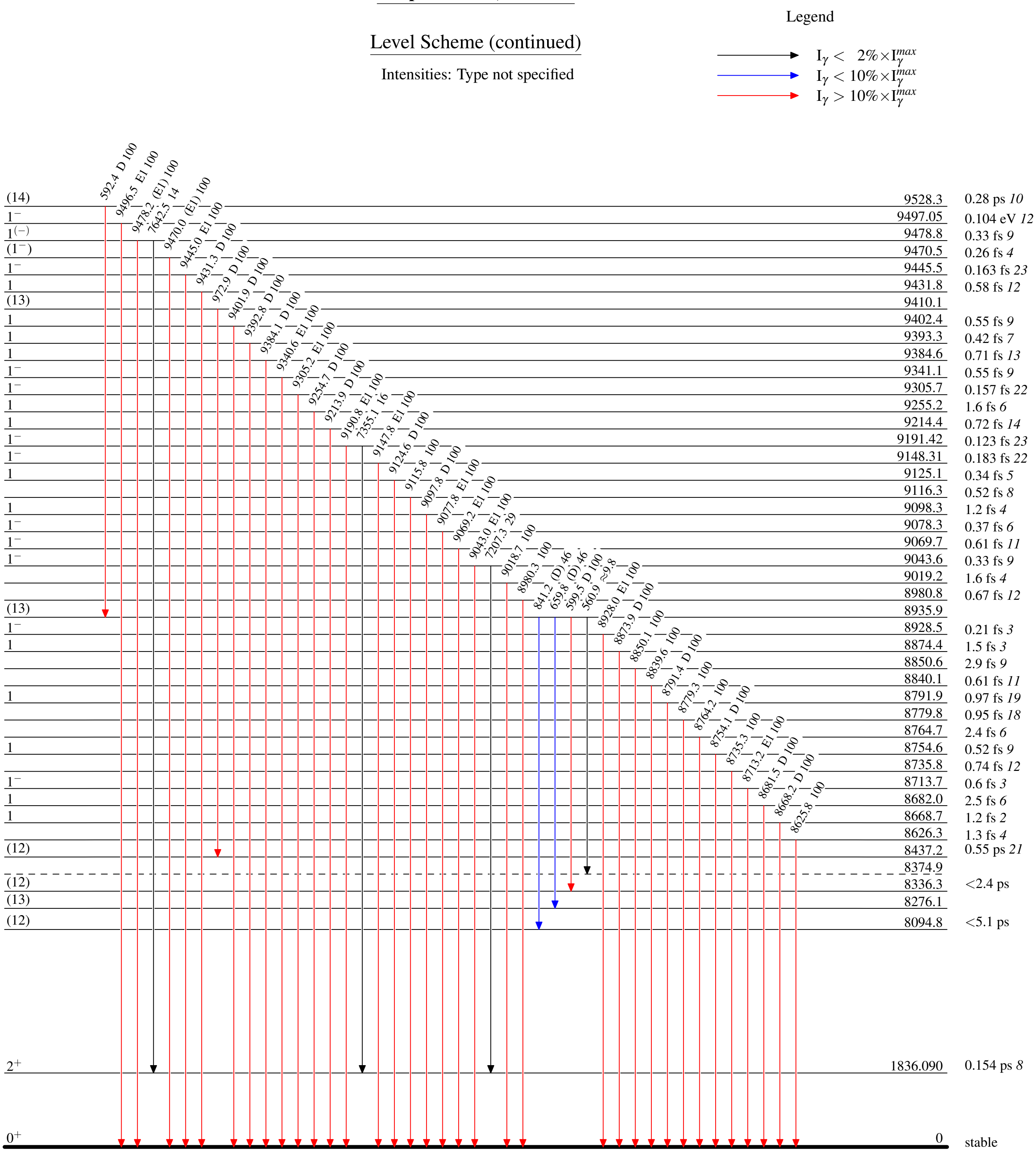
Intensities: Type not specified



Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified



$^{88}_{38}$Sr$_{50}$

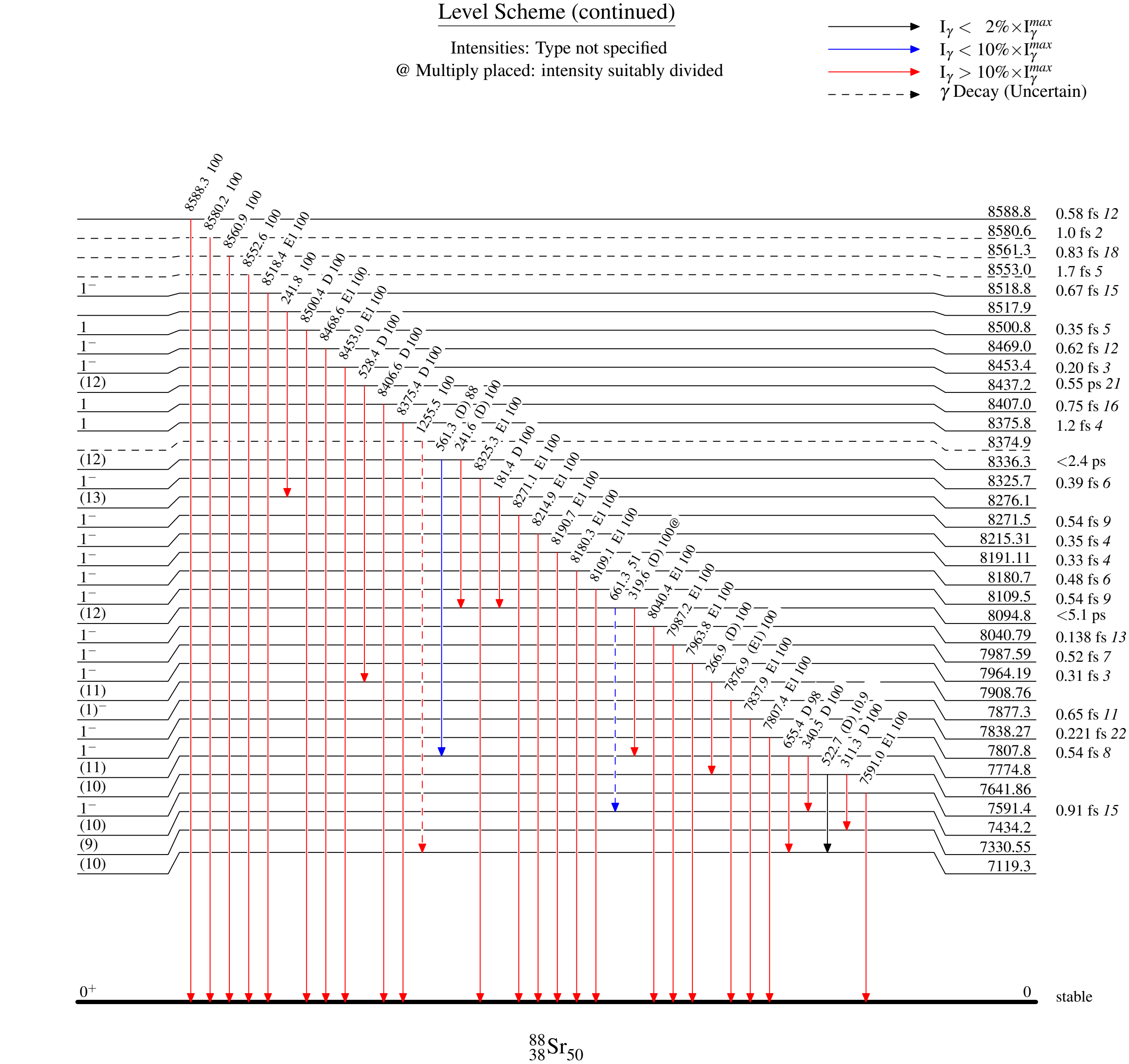
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Type not specified

@ Multiply placed: intensity suitably divided



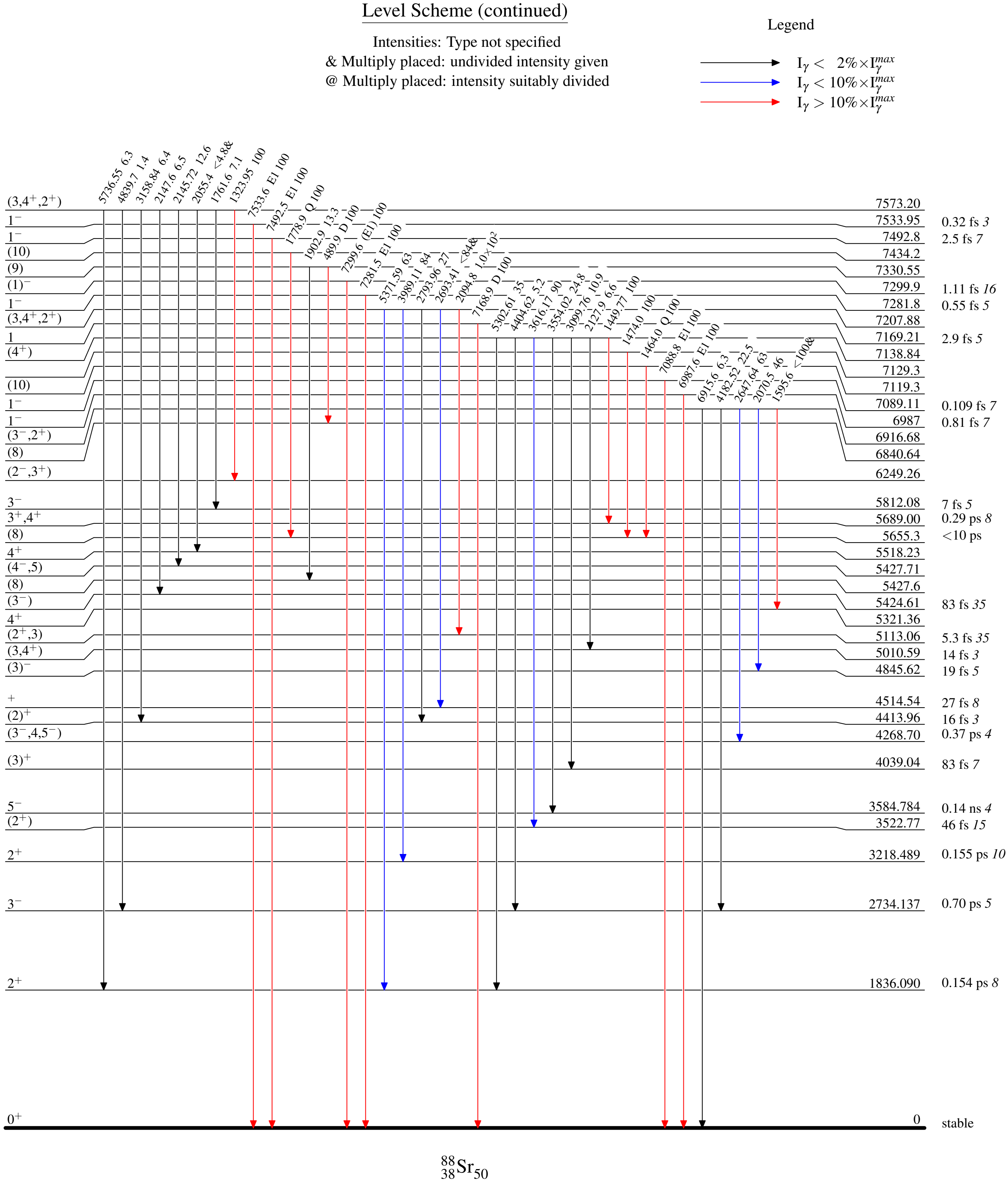
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

& Multiply placed: undivided intensity given

@ Multiply placed: intensity suitably divided



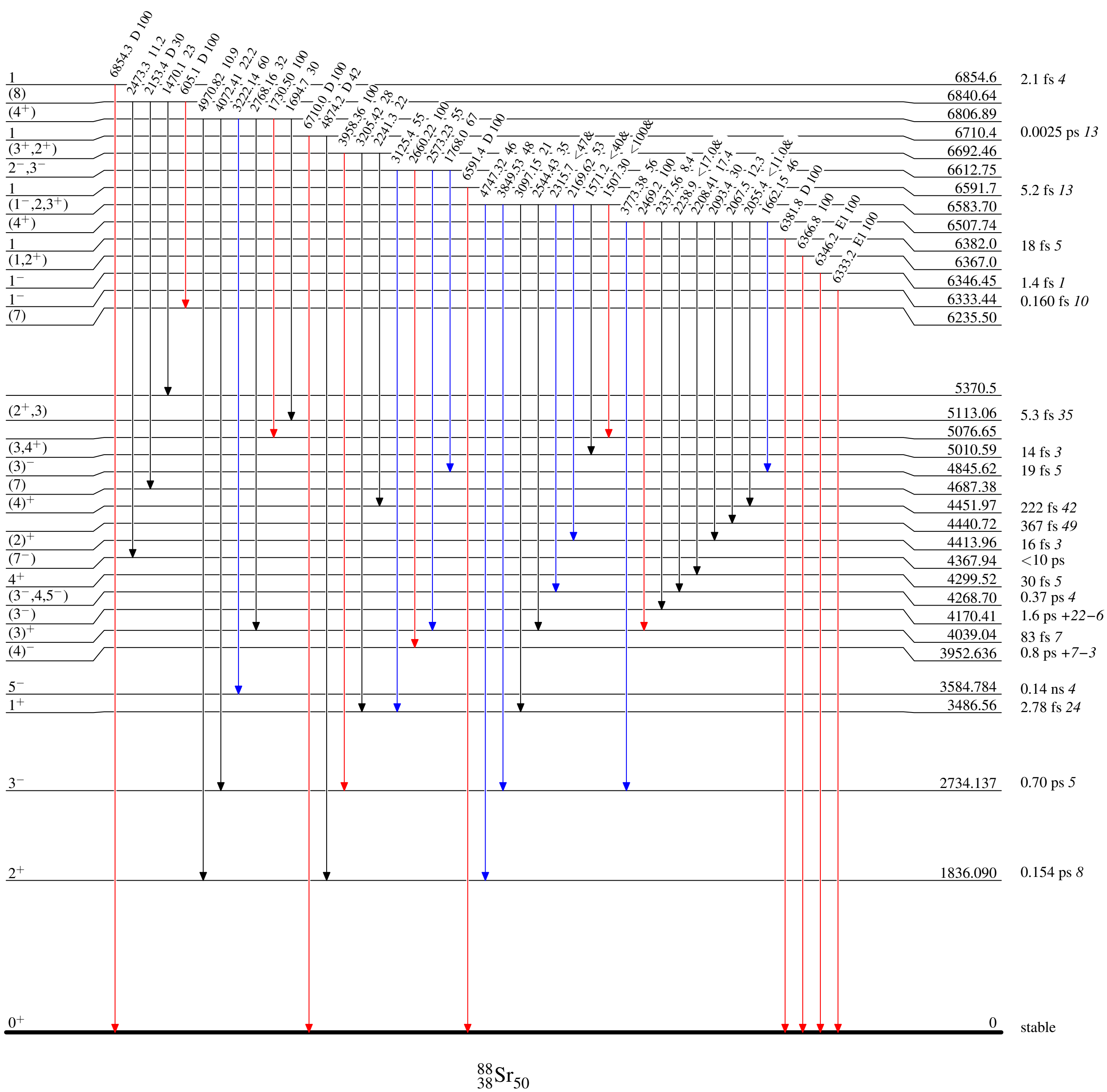
Adopted Levels, Gammas

Level Scheme (continued)

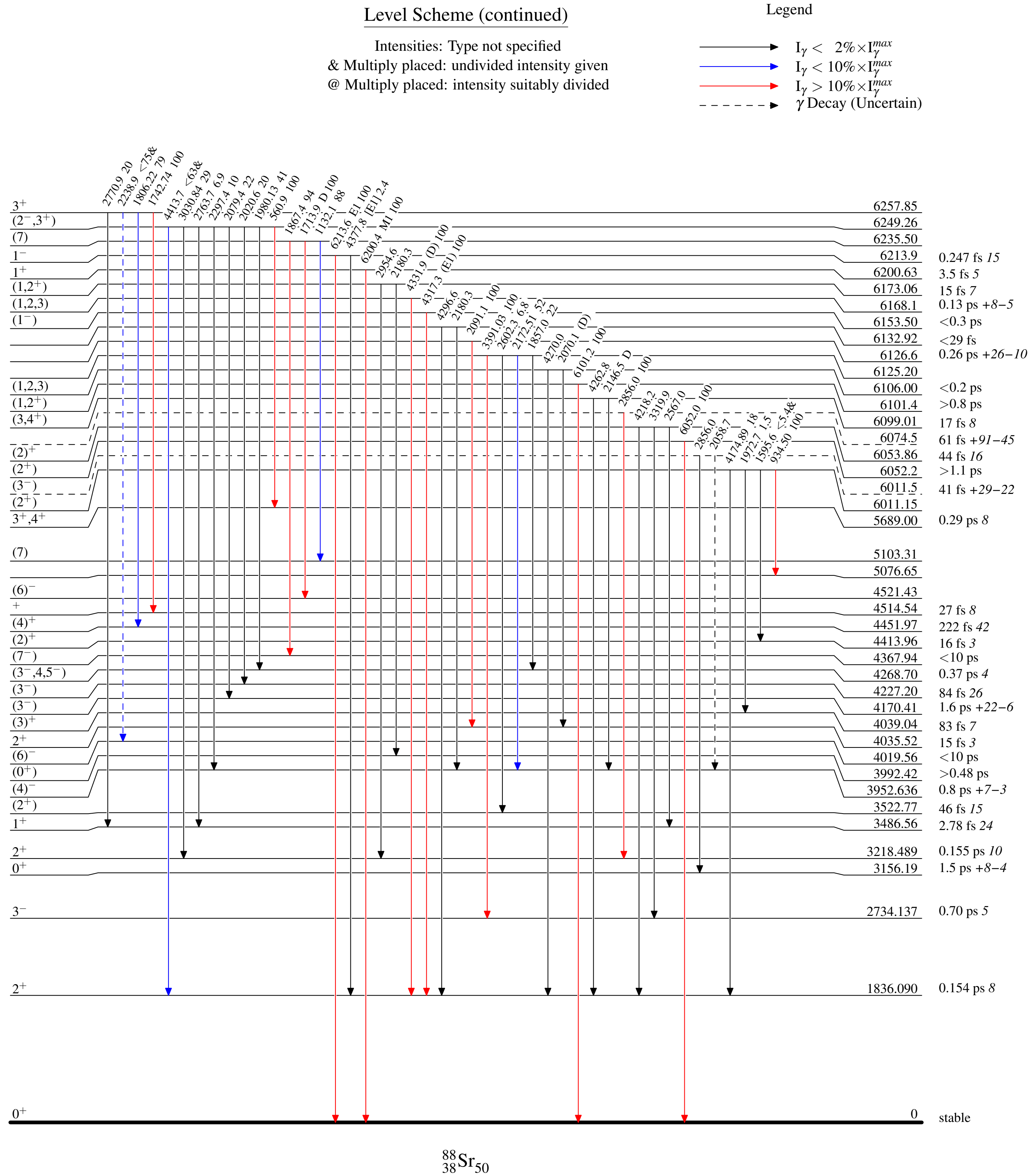
Intensities: Type not specified
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$



Adopted Levels, Gammas



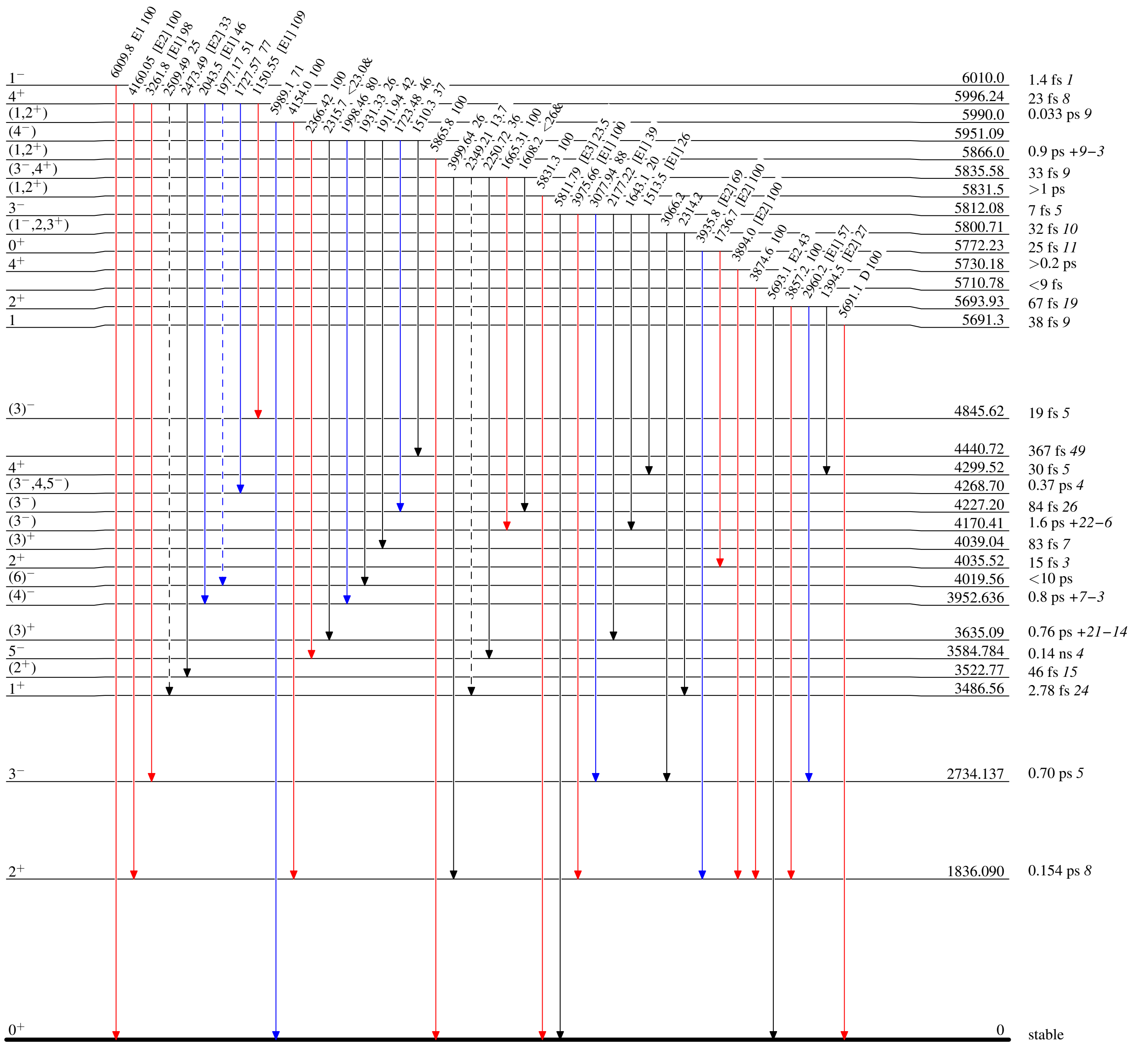
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
γ Decay (Uncertain)



$^{88}_{38}Sr_{50}$

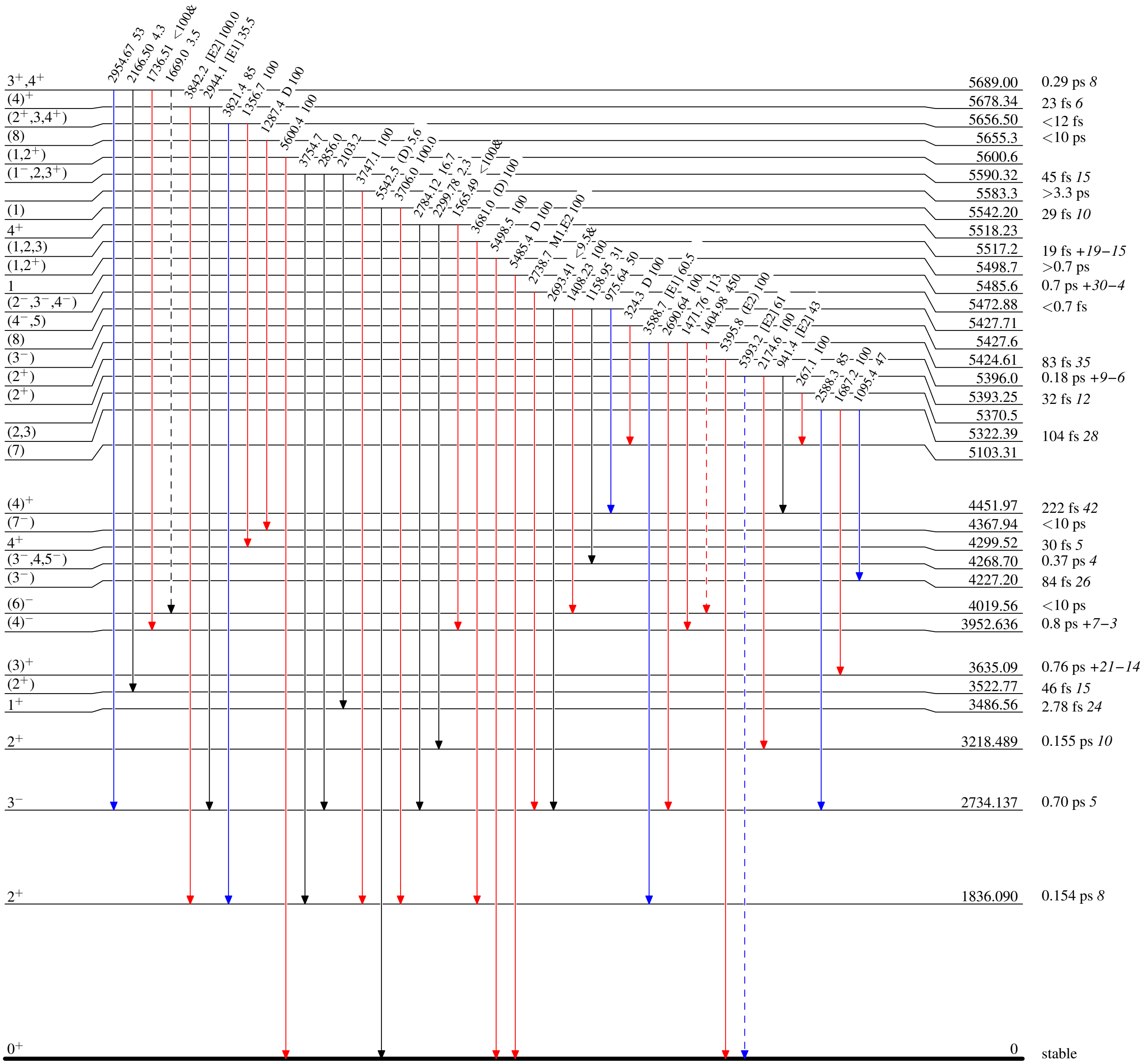
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
γ Decay (Uncertain)

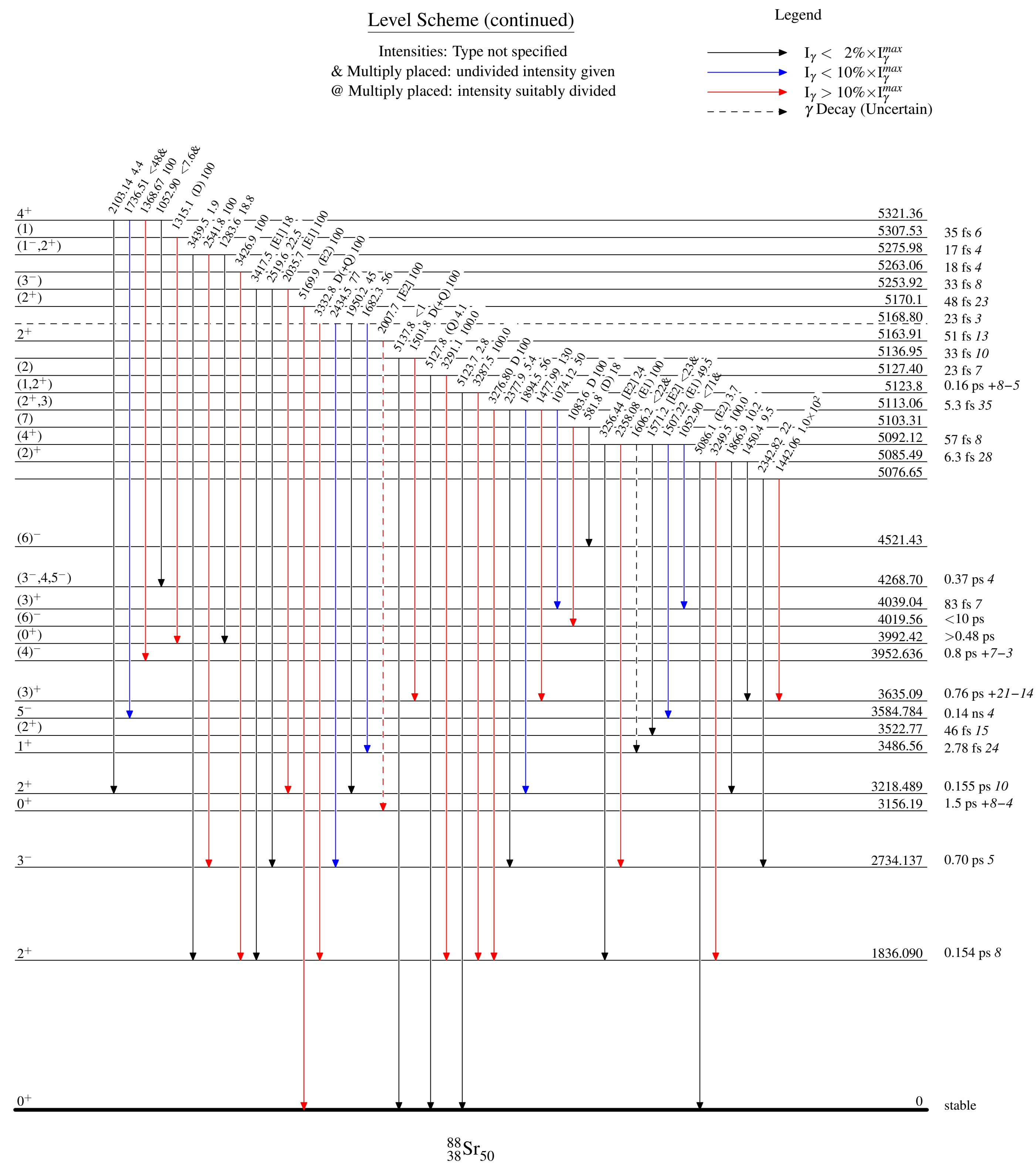


$^{88}_{38}Sr_{50}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided



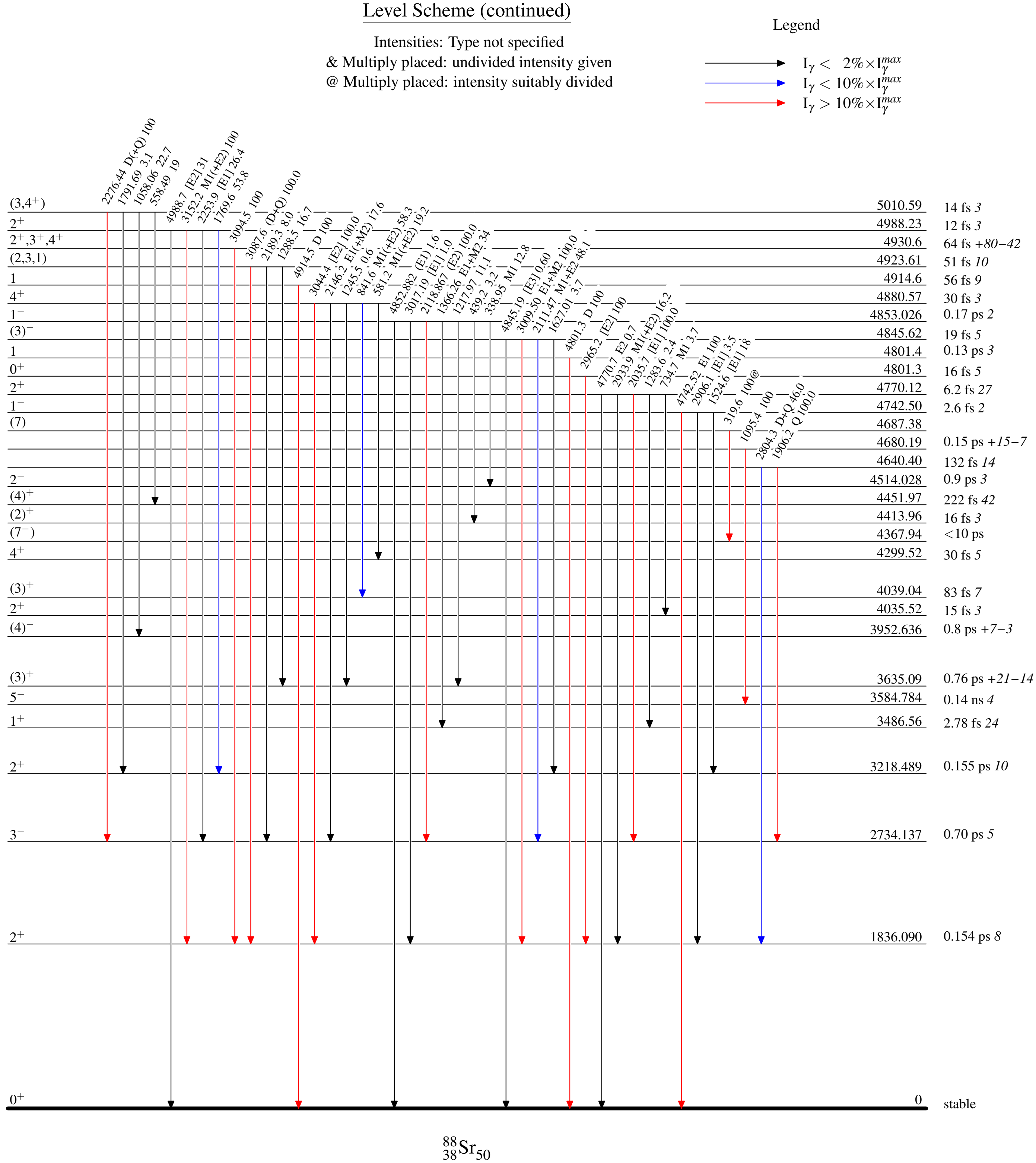
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

& Multiply placed: undivided intensity given

@ Multiply placed: intensity suitably divided



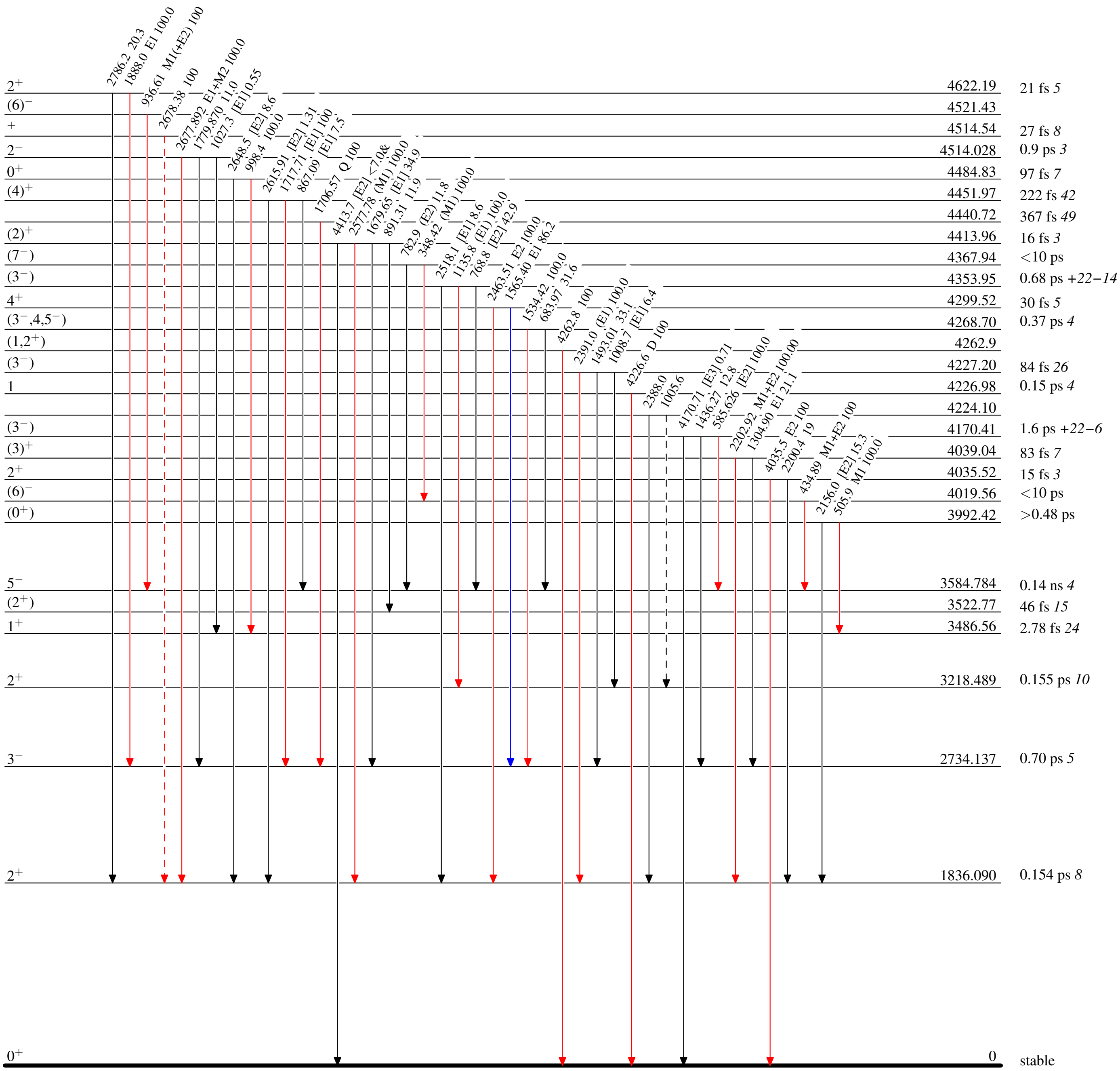
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

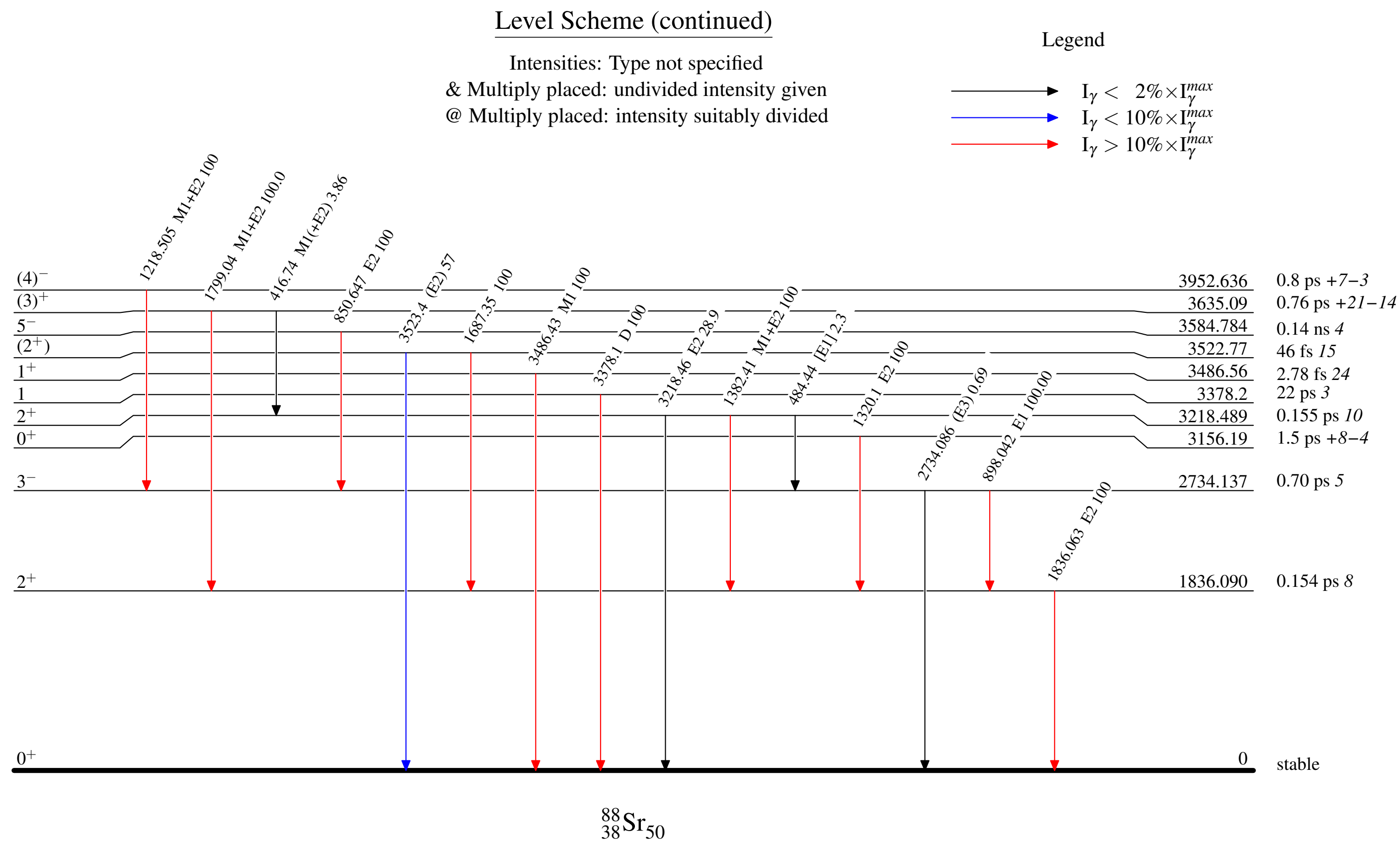
Legend

- $I_\gamma < 2\% \times I_\gamma^{max}$
- $I_\gamma < 10\% \times I_\gamma^{max}$
- $I_\gamma > 10\% \times I_\gamma^{max}$
- γ Decay (Uncertain)



$^{88}_{38}Sr_{50}$

Adopted Levels, Gammas



Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	S. K. Basu, E. A. Mccutchan	NDS 165, 1 (2020)	1-Mar-2020

Q(β^-)=545.9 *14*; S(n)=7810.4 *21*; S(p)=11525 *6*; Q(α)=−5107.4 *21* 2017Wa10
S(2n)=14169.1 *21*; S(2p)=20835 *6* (2017Wa10).
α: Additional information 1.

^{90}Sr Levels

For charge radii of strontium nuclei by LASER spectroscopy, see 1987An02 and 1992Ne09.

Cross Reference (XREF) Flags

A	^{90}Rb β^- decay (158 s)
B	^{90}Rb β^- decay (258 s)
C	^{88}Sr(t,p)
D	^{82}Se(^{11}B,p2nγ),^{12}C(^{86}Kr,2$\alpha\gamma$)

E(level)[†]	J$^\pi$	T$_{1/2}$	XREF	Comments
0.0[#]	0$^+$	28.91 y *3*	ABCD	%β^-=100 T$_{1/2}$: from 10558 y *11* obtained from weighted average of 10527 d *51* (1965An07, decay measured over 11.2 y), 10557 d *11* (2004Sc04, decay measured over 17 y), and 10561 d *14* (1994Ma50, decay measured over 33 y). Conversion from days to years calculated using tropic year (1 year =365.24 d). Others: 10702 d *584* (1958An40, specific activity), 10227 d *146* (1965Fl01, decay), 10410 d *329* (1965Fl01, specific activity), 10513 d *14* (1992ScZZ, decay measured over 4 y), 10495 d *4* (1996Wo06, decay measured over 6 y), 7270 d *110* (1950Po67, decay), 10117 d *146*, (1955Wi15, specific activity), 10282 d *13* (1978La21, decay), 10589 d *92* (1983Ra09, decay), 10665 d *37* (1989Ko57, decay). Δ<r^2>(^{89}Sr,^{90}Sr)=0.153 fm^2 *4*, LASER spectroscopy (1992Ne09).
831.68[#] *4*	2$^+$	7[‡] ps *2*	ABCD	μ=−0.24 *22* (2014Ku10) μ: from transient-field (TF) technique in inverse kinematics (2014Ku10). J$^\pi$: E2 832γ to 0$^+$.
1655.92[#] *7*	4$^+$	12[‡] ps *2*	ABCD	μ=−0.08 *68* (2014Ku10) μ: from transient-field (TF) technique in inverse kinematics (2014Ku10). J$^\pi$: E2 824γ to 2$^+$.
1892.36 *4*	2$^+$	2[‡] ps *1*	ABC	J$^\pi$: M1+E2 1060.7γ to 2$^+$, 1892.3γ to 0$^+$.
2207.02 *4*	(3$^-$)	≤1[‡] ps	ABCD	J$^\pi$: L(t,p)=3,(4); D(+Q) 1375.4γ to 2$^+$. $\gamma\gamma(\theta)$ in ^{90}Kr β^- decay yields J=2 or 3, with J=2 providing the better fit. Combined with data from (t,p) experiment, J=3 is tentatively adopted here.
2497.32 *6*	(2$^+$)	≤3[‡] ps	ABC	J$^\pi$: $\gamma\gamma(\theta)$ in ^{90}Kr β^- decay yields J=2 or 3; 2497.3γ to 0$^+$ makes J=3 less likely.
2527.92 *7*	3$^-$,4$^+$	≤6[‡] ps	BC	J$^\pi$: L(t,p)=3,4.
2570.60 *8*		10[‡] ps *7*	AB	
2586 *10*	2$^+$		C	J$^\pi$: L(t,p)=2.
2674.0 *5*	(0$^+$)		A C	J$^\pi$: L(t,p)=(0).
2927.70 *7*	4		AB D	J$^\pi$: D 720.7γ to (3$^-$), 1271.8γ to 4$^+$.
2971.12 *12*	0$^+$		ABC	J$^\pi$: L(t,p)=0.
3032.87 *7*		≤1[‡] ps	AB	
3039.26 *7*	1		ABC	J$^\pi$: from $\gamma\gamma(\theta)$ in ^{90}Kr β^- decay.
3144.45 *10*	(5$^-$)		ABCD	J$^\pi$: L(t,p)=(5).
3268.69 *24*	3$^-$,4$^+$		CD	J$^\pi$: L(t,p)=3,4.
3383.39 *7*			AB	

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Adopted Levels, Gammas (continued)

^{90}Sr Levels (continued)

E(level)[†]	J^π	$T_{1/2}$	XREF	Comments
3394 *10*			C	E(level): probable doublet.
3449.83 *5*	3	≤4[‡] ps	B	J^π: from $\gamma\gamma(\theta)$ in ^{90}Kr β^- decay.
3468.43 *22*	(5^-)		D	J^π: D 1812.5γ to 4^+, 55.6γ from (7^-).
3479 *10*	$3^-,4^+$		C	J^π: L(t,p)=3,4.
3494.84 *11*	$6^{(+)}$		D	J^π: Q 1838.9γ to 4^+.
3508 *10*	(5^-)		C	J^π: L(t,p)=(5).
3555.79 *13*			AB	
3584.43 *8*			B	
3594 *10*	$3^-,4^+$		C	J^π: L(t,p)=3,4. E(level): possibly the same as the 3584.4 level observed in ^{90}Kr β^- decay.
3627.01 *23*			AB	
3698.55 *12*	(7^-)		D	J^π: Q 554.1γ to (5^-).
3720 *10*	≥6		C	J^π: L(t,p)>5.
3742.16 *13*	6		D	J^π: Q 814.5γ to 4.
3764.36 *18*	(6^+)		D	J^π: Q 1291.2γ from (8^+), D 619.9γ to (5^-).
3784 *10*	(5^-)		C	J^π: L(t,p)=(5).
3804 *10*	2^+		C	J^π: L(t,p)=2.
3845 *10*			C	
3915 *10*			C	
3954.32 *18*			AB	
4019.4 *4*			A	
4036.88 *13*			B	
4037.12 *9*			A	
4043 *10*	$3^-,4^+$		C	J^π: L(t,p)=3,4.
4066.32[@] *16*	(7^-)		D	J^π: D 342.2γ to (6), Q 955.3γ from (9^-).
4073 *10*	$3^-,4^+$		C	J^π: L(t,p)=3,4.
4135.63 *10*	$(1,2^+)$		ABC	J^π: 4135.5γ to 0^+.
4137.6 *9*			A	
4148.85 *7*			AB	
4240 *10*	2^+		C	J^π: L(t,p)=2.
4288 *10*	$3^-,4^+$		C	J^π: L(t,p)=3,4.
4335.37 *7*			BC	
4366.06 *11*			AB	
4404.62 *18*			B	
4430.91 *24*			B	
4493 *10*			C	
4522 *10*			C	
4580.8 *3*			A C	
4646.35 *14*			A C	
4660 *10*			C	
4685.6 *3*			B	
4742 *10*	$3^-,4^+$		C	J^π: L(t,p)=3,4.
4748.93 *19*	8		D	J^π: Q 1006.7γ to 6, D 1050.3γ to (7^-).
4774 *10*	$3^-,4^+$		C	J^π: L(t,p)=3,4.
4790.3? *5*	$(1,2^+)$		A	J^π: 4790.2γ to 0^+.
4804.0 *5*			B	
4805.12 *22*			B	
4808.52 *23*			B	
4824 *10*	2^+		C	J^π: L(t,p)=2.
4854.2? *5*			B	
4881.7 *3*	8		D	J^π: D 1183.1γ to (7^-).
4919.07? *20*			A	
4947.5 *4*	(2^+)		BC	J^π: L(t,p)=(2).
4973.99 *17*			A C	
5021.62[@] *16*	(9^-)		D	J^π: Q 1323.1γ to (7^-), D 140.0γ to 8.

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Adopted Levels, Gammas (continued)

^{90}Sr Levels (continued)

E(level)†	J$^{\pi}$	XREF	Comments
5024.54 *23*		B	
5026.8? *4*		BC	
5041.01 *13*		AB	
5041.44 *12*		B	
5055.56 *14*	(8^+)	CD	J$^{\pi}$: Q 1560.7γ to $6^{(+)}$, D 1357.0γ to (7^-).
5089.46 *16*		B	
5095 *10*	3^-,4^+	C	J$^{\pi}$: L(t,p)=3,4.
5142 *10*		C	
5187.51 *6*	(1^-,2^+)	A C	J$^{\pi}$: 5187.4γ to 0^+, 2980.7γ to (3^-).
5239.2 *5*		B	
5254.32 *12*		A	
5285.89 *19*		BC	
5298.48 *21*	(9^-)	D	J$^{\pi}$: (E2) 1599.9γ to (7^-), D 549.6γ to 8.
5333.15? *23*		A	
5343 *10*		C	
5426.65 *13*		ABC	
5431.2 *3*		B	
5557.9 *3*		B	
5591.8 *3*	10	D	J$^{\pi}$: D 570.2γ to (9^-).
5600.3? *4*		A C	
5623.3 *3*		A	
5785.1? *7*		B	
5822.0 *5*		B	
5827.9 *3*		B	
5923.56 *16*	(10^+)	D	J$^{\pi}$: Q 868.0γ to (8^+).
5961.1@ *3*	(11^-)	D	J$^{\pi}$: Q 939.5γ to (9^-).
6712.3 *3*	12	D	J$^{\pi}$: Q 1120.5γ to 10, D 751.2γ to (11^-).
6794.56 *19*	(12^+)	D	J$^{\pi}$: Q 871.0γ to (10^+).
7371.2 *5*	13	D	J$^{\pi}$: D 658.9γ to 12.
7705.77 *21*		D	
7959.7 *3*		D	
8772.4 *3*		D	
9060.7 *5*		D	
9199.7 *4*		D	
9957.5 *5*		D	

† From least-squares fit to Eγ, by evaluators for levels connected by γ-ray transitions. Levels with uncertainty of 10 keV are from (t,p).

‡ From $\beta\gamma$(t) with scintillators in ^{90}Kr β^- decay.

Band(A): γ sequence based on g.s.

@ Seq.(B): γ sequence based on (7^-).

$\gamma(^{90}Sr)$

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.	δ	α	Comments
831.68	2^+	831.69 *5*	100	0.0	0^+	E2		9.02×10^{-4}	α(K)=0.000798 *12*; α(L)=8.77×10^{-5} *13*; α(M)=1.471×10^{-5} *21*; α(N)=1.84×10^{-6} *3* α(O)=1.178×10^{-7} *17* B(E2)(W.u.)=8.5 *+33−19* Mult.: Q from $\gamma(\theta)$ in ^{82}Se(^{11}B,p2nγ),^{12}C(^{86}Kr,2$\alpha\gamma$); M2 excluded by comparison to RUL.
1655.92	4^+	824.23 *10*	100	831.68	2^+	E2		9.22×10^{-4}	α(K)=0.000816 *12*; α(L)=8.97×10^{-5} *13*; α(M)=1.506×10^{-5} *21*; α(N)=1.88×10^{-6} *3* α(O)=1.204×10^{-7} *17* B(E2)(W.u.)=5.2 *+11−7* Mult.: Q from $\gamma(\theta)$ in ^{82}Se(^{11}B,p2nγ),^{12}C(^{86}Kr,2$\alpha\gamma$) and $\gamma\gamma(\theta)$ in ^{90}Kr β^- decay; M2 excluded by comparison to RUL.
1892.36	2^+	1060.70 *4*	100 *3*	831.68	2^+	M1+E2	+0.50 *3*	4.97×10^{-4}	α(K)=0.000440 *7*; α(L)=4.75×10^{-5} *7*; α(M)=7.97×10^{-6} *12*; α(N)=1.002×10^{-6} *14*; α(O)=6.59×10^{-8} *10* B(E2)(W.u.)=1.7 *+15−6*; B(M1)(W.u.)=0.0070 *+57−24* Mult.,δ: D+Q from $\gamma\gamma(\theta)$ in ^{90}Rb β^- decay, E1+M2 excluded by comparison to RUL.
		1892.28 *8*	6.0 *3*	0.0	0^+	[E2]		4.11×10^{-4}	α(K)=0.0001370 *20*; α(L)=1.464×10^{-5} *21*; α(M)=2.45×10^{-6} *4*; α(N)=3.09×10^{-7} *5*; α(O)=2.03×10^{-8} *3* B(E2)(W.u.)=0.028 *+24−10*
2207.02	(3^-)	314.5 *3*	4.97 *23*	1892.36	2^+	[E1]		0.00374	α(K)=0.00331 *5*; α(L)=0.000359 *6*; α(M)=6.02×10^{-5} *9*; α(N)=7.51×10^{-6} *11*; α(O)=4.78×10^{-7} *7* B(E1)(W.u.)>4.5×10^{-4}
		551.20 *25*	5.1 *4*	1655.92	4^+	[E1]		8.91×10^{-4}	α(K)=0.000790 *11*; α(L)=8.52×10^{-5} *12*; α(M)=1.427×10^{-5} *20*; α(N)=1.79×10^{-6} *3* α(O)=1.157×10^{-7} *17* B(E1)(W.u.)>8.3×10^{-5}
		1375.36 *3*	100 *4*	831.68	2^+	(E1(+M2))	−0.02 *6*	2.98×10^{-4}	α(K)=0.000124 *3*; α(L)=1.32×10^{-5} *4*; α(M)=2.22×10^{-6} *6*; α(N)=2.79×10^{-7} *7*; α(O)=1.83×10^{-8} *5* B(E1)(W.u.)>0.00012 Mult.,δ: D(+Q) from $\gamma\gamma(\theta)$ in ^{90}Rb β^- decay; $\Delta\pi$=yes from adopted level scheme.
2497.32	(2^+)	1665.61 *7*	100 *3*	831.68	2^+				
		2497.27 *15*	15.9 *16*	0.0	0^+				
2527.92	$3^-,4^+$	872.00 *15*	32.0 *23*	1655.92	4^+				
		1696.16 *7*	100 *4*	831.68	2^+				
2570.60		1738.93 *8*	100	831.68	2^+				
2674.0	(0^+)	1842.3@ *5*	100	831.68	2^+				
2927.70	4	720.70 *9*	35 *3*	2207.02	(3^-)	D#			

$^{90}_{38}Sr_{52}$-4

Adopted Levels, Gammas (continued)

$\gamma(^{90}Sr)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.	α	Comments
2927.70	4	1271.77 *7*	100 *7*	1655.92	4^+	D#		
2971.12	0^+	2139.33 *18*	100	831.68	2^+	E2	4.99×10^{-4}	α(K)=0.0001094 *16*; α(L)=1.167×10^{-5} *17*; α(M)=1.96×10^{-6} *3*; α(N)=2.46×10^{-7} *4* α(O)=1.625×10^{-8} *23* Mult.: Q from $\gamma\gamma(\theta)$ in ^{90}Kr β^- decay; $\Delta\pi$=no from level scheme.
3032.87		1140.50 *6*	100	1892.36	2^+			
3039.26	1	1146.96 *25*	5.7 *7*	1892.36	2^+			
		2207.47 *11*	61 *3*	831.68	2^+	D		Mult.: from $\gamma\gamma(\theta)$ in ^{90}Kr β^- decay.
		3039.17 *12*	100 *4*	0.0	0^+			
3144.45	(5^-)	216.8‡ *5*	0.70‡ *18*	2927.70	4			
		937.3‡ *5*	≈1.8‡	2207.02	(3^-)	(E2)	6.74×10^{-4}	Mult.: Q from $\gamma(\theta)$ in ^{82}Se(^{11}B,p2nγ),^{12}C(^{86}Kr,2$\alpha\gamma$), $\Delta\pi$=no from level scheme.
		1488.5‡ *1*	100.0‡ *14*	1655.92	4^+	(E1)	3.59×10^{-4}	Mult.: D from $\gamma(\theta)$ in ^{82}Se(^{11}B,p2nγ),^{12}C(^{86}Kr,2$\alpha\gamma$), $\Delta\pi$=yes from level scheme.
3268.69	$3^-,4^+$	1612.8‡ *3*	100‡	1655.92	4^+			
3383.39		886.3 *3*	0.95 *18*	2497.32	(2^+)			
		1176.9 *9*	0.60 *24*	2207.02	(3^-)			
		3383.24 *12*	100 *3*	0.0	0^+			
3449.83	3	522.10 *13*	13.0 *10*	2927.70	4			
		921.20 *24*	9.9 *22*	2527.92	$3^-,4^+$			
		952.44 *7*	55.6 *19*	2497.32	(2^+)			
		1242.84 *4*	100 *6*	2207.02	(3^-)	D		Mult.: from $\gamma\gamma(\theta)$ in ^{90}Kr β^- decay.
		1793.89 *11*	27.6 *16*	1655.92	4^+	D		Mult.: from $\gamma\gamma(\theta)$ in ^{90}Kr β^- decay.
		2617.8 *3*	20 *3*	831.68	2^+			
3468.43	(5^-)	324.0‡ *5*	‡	3144.45	(5^-)			
		1812.5‡ *3*	100‡	1655.92	4^+	D#		
3494.84	$6^{(+)}$	1838.9‡ *1*	100‡	1655.92	4^+	(E2)	3.94×10^{-4}	α(K)=0.0001445 *21*; α(L)=1.545×10^{-5} *22*; α(M)=2.59×10^{-6} *4*; α(N)=3.26×10^{-7} *5*; α(O)=2.15×10^{-8} *3* Mult.: Q from $\gamma\gamma(\theta)$ in ^{82}Se(^{11}B,p2nγ),^{12}C(^{86}Kr,2$\alpha\gamma$), assumed E2.
3555.79		985.4 *5*	18 *6*	2570.60				
		2724.26 *21*	100 *13*	831.68	2^+			
3584.43		1013.95 *19*	2.21 *25*	2570.60				
		1086.7 *8*	0.61 *12*	2497.32	(2^+)			
		1377.2 *5*	20 *7*	2207.02	(3^-)			
		1692.07 *25*	2.4 *4*	1892.36	2^+			
		2752.68 *8*	100 *4*	831.68	2^+			
3627.01		3627.4 *7*	100	0.0	0^+			
3698.55	(7^-)	203.7‡ *5*	≈3.0‡	3494.84	$6^{(+)}$			
		554.1‡ *1*	100.0‡ *18*	3144.45	(5^-)	(E2)	0.00271	α(K)=0.00239 *4*; α(L)=0.000269 *4*; α(M)=4.51×10^{-5} *7*; α(N)=5.61×10^{-6} *8*; α(O)=3.49×10^{-7} *5* Mult.: Q from $\gamma\gamma(\theta)$ in ^{82}Se(^{11}B,p2nγ),^{12}C(^{86}Kr,2$\alpha\gamma$); assumed E2.

$^{90}_{38}Sr_{52}$-5

$\gamma(^{90}Sr)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.	α	Comments
3698.55	(7⁻)	2042.6‡ *3*	19.3‡ *3*	1655.92	4⁺	(E3)	4.07×10⁻⁴	α(K)=0.000197 *3*; α(L)=2.13×10⁻⁵ *3*; α(M)=3.57×10⁻⁶ *5*; α(N)=4.49×10⁻⁷ *7*; α(O)=2.94×10⁻⁸ *5* Mult.: O from $\gamma\gamma(\theta)$ in ^{82}Se(^{11}B,p2nγ),^{12}C(^{86}Kr,2$\alpha\gamma$); assumed E3.
3742.16	6	597.7‡ *1*	100.0‡ *24*	3144.45	(5⁻)	D#		
		814.5‡ *3*	16.6‡ *12*	2927.70	4	Q#		
3764.36	(6⁺)	495.7‡ *3*	36‡ *6*	3268.69	3⁻,4⁺	Q#		α(K)=0.00332 *5*; α(L)=0.000377 *6*; α(M)=6.34×10⁻⁵ *9*; α(N)=7.85×10⁻⁶ *11*; α(O)=4.83×10⁻⁷ *7*
		619.9‡ *3*	82‡ *12*	3144.45	(5⁻)	D#		
		2108.4‡ *3*	100‡ *3*	1655.92	4⁺			
3954.32		1027.1 *4*	36 *5*	2927.70	4			
		1456.7 *3*	68 *7*	2497.32	(2⁺)			
		1747.3 *3*	68 *8*	2207.02	(3⁻)			
		2298.1 *9*	1.0×10² *5*	1655.92	4⁺			
4019.4		1522.1 *4*	100 *23*	2497.32	(2⁺)			
		4019.3 *13*	9.×10¹ *5*	0.0	0⁺			
4036.88		1109.2 *8*	12 *7*	2927.70	4			
		1829.82 *20*	31 *5*	2207.02	(3⁻)			
		2381.5 *5*	15 *6*	1655.92	4⁺			
		3205.09 *16*	100 *8*	831.68	2⁺			
4037.12		892.5 *7*	6 *3*	3144.45	(5⁻)			
		997.85 *6*	100 *4*	3039.26	1			
4066.32	(7⁻)	324.2‡ *3*	100.0‡ *10*	3742.16	6	D#		
		367.8‡ *3*	83.8‡ *20*	3698.55	(7⁻)	D#		
		571.5‡ *3*	14‡ *4*	3494.84	6⁽⁺⁾			
		597.9‡ *3*	55.6‡ *20*	3468.43	(5⁻)			
4135.63	(1,2⁺)	752.1 *3*	1.05 *13*	3383.39				
		3303.91 *13*	13.2 *6*	831.68	2⁺			
		4135.51 *17*	100 *4*	0.0	0⁺			
4137.6		2245.2 *9*	100	1892.36	2⁺			
4148.85		765.1 *7*	0.60 *20*	3383.39				
		1003.9 *9*	0.39 *20*	3144.45	(5⁻)			
		1941.81 *17*	4.4 *4*	2207.02	(3⁻)			
		2256.55 *17*	4.6 *3*	1892.36	2⁺			
		3317.00 *12*	100 *3*	831.68	2⁺			
4335.37		779.9 *4*	5.3 *11*	3555.79				
		1764.5 *9*	1.8 *9*	2570.60				
		1838.15 *14*	15.8 *11*	2497.32	(2⁺)			
		2128.30 *7*	100 *3*	2207.02	(3⁻)			
		2442.9 *5*	5.1 *13*	1892.36	2⁺			
		3503.52 *15*	45.5 *20*	831.68	2⁺			
4366.06		739.2 *4*	0.63 *11*	3627.01				

$\gamma(^{90}Sr)$ (continued)

E_i(level)	J^π_i	E_γ †	I_γ †	E_f	J^π_f	Mult.	α
4366.06		1326.46 *21*	1.65 *20*	3039.26	1		
		1438.3 *8*	0.40 *15*	2927.70	4		
		2473.94 *20*	7.7 *8*	1892.36	2^+		
		4365.90 *18*	100 *4*	0.0	0^+		
4404.62		1021.9 *7*	4.9 *19*	3383.39			
		3572.82 *18*	100 *7*	831.68	2^+		
4430.91		1391.6 *3*	100 *18*	3039.26	1		
		1460.1 *6*	43 *11*	2971.12	0^+		
		1903.1 *6*	30 *13*	2527.92	$3^-,4^+$		
		2537.8 *9*	39 *16*	1892.36	2^+		
4580.8		543.6 *10*	52 *23*	4037.12			
		1547.8 *5*	52 *13*	3032.87			
		2688.9 *5*	100 *20*	1892.36	2^+		
		2924.3 *7*	58 *20*	1655.92	4^+		
4646.35		3814.36 *20*	26.1 *18*	831.68	2^+		
		4646.45 *20*	100 *4*	0.0	0^+		
4685.6		1302.2 *3*	100 *25*	3383.39			
		4685.0 *14*	20 *15*	0.0	0^+		
4748.93	8	1006.7‡ *3*	100.0‡ *17*	3742.16	6	Q#	
		1050.3‡ *3*	86‡ *5*	3698.55	(7^-)	D#	5.05×10^{-4}
4790.3?	$(1,2^+)$	3958.4@ *8*	1.0×10^2 *3*	831.68	2^+		
		4790.2@ *7*	80 *20*	0.0	0^+		
4804.0		2911.7 *11*	34 *19*	1892.36	2^+		
		3972.2 *5*	100 *19*	831.68	2^+		
4805.12		1877.40 *21*	100	2927.70	4		
4808.52		442.3 *4*	39 *10*	4366.06			
		1425.2 *3*	94 *10*	3383.39			
		2311.2 *6*	1.0×10^2 *4*	2497.32	(2^+)		
4854.2?		1298.5@ *5*	100 *19*	3555.79			
		3197.9@ *10*	$7.\times10^1$ *3*	1655.92	4^+		
4881.7	8	1183.1‡ *3*	100‡	3698.55	(7^-)	D#	
4919.07?		4087.26@ *23*	100 *7*	831.68	2^+		
		4919.0@ *4*	30 *4*	0.0	0^+		
4947.5	(2^+)	2741.0@ *12*	41 *22*	2207.02	(3^-)		
		4115.6@ *4*	100 *17*	831.68	2^+		
4973.99		1590.3 *3*	67 *8*	3383.39			
		2476.7 *11*	$5.\times10^1$ *4*	2497.32	(2^+)		
		3081.3 *4*	75 *14*	1892.36	2^+		
		4974.14 *25*	100 *8*	0.0	0^+		
5021.62	(9^-)	140.0‡ *5*	4.8‡ *7*	4881.7	8	D#	

$^{90}_{38}Sr_{52}$-7

γ(^{90}Sr) (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.	α	Comments
5021.62	(9⁻)	272.5‡ *3*	23.8‡ *7*	4748.93	8	D#		
		955.3‡ *1*	100.0‡ *14*	4066.32	(7⁻)	(E2)		Mult.: Q from $\gamma\gamma(\theta)$ in ^{82}Se(^{11}B,p2nγ),^{12}C(^{86}Kr,2$\alpha\gamma$); assumed E2.
		1323.1‡ *3*	31.3‡ *7*	3698.55	(7⁻)	(E2)		Mult.: Q from $\gamma\gamma(\theta)$ in ^{82}Se(^{11}B,p2nγ),^{12}C(^{86}Kr,2$\alpha\gamma$); assumed E2.
5024.54		4192.75 *23*	100	831.68	2⁺			
5026.8?		1576.9@ *7*	29 *10*	3449.83	3			
		3370.8@ *4*	100 *15*	1655.92	4⁺			
5041.01		1485.6 *7*	16 *5*	3555.79				
		3148.58 *12*	100 *4*	1892.36	2⁺			
5041.44		2543.9 *3*	17.9 *21*	2497.32	(2⁺)			
		2834.43 *13*	100 *7*	2207.02	(3⁻)			
		4209.5 *3*	49 *5*	831.68	2⁺			
5055.56	(8⁺)	1291.2‡ *3*	32.6‡ *7*	3764.36	(6⁺)	(E2)	3.54×10^{-4}	α(K)=0.000291 *4*; α(L)=3.15×10^{-5} *5*; α(M)=5.28×10^{-6} *8*; α(N)=6.63×10^{-7} *10*; α(O)=4.32×10^{-8} *6* Mult.: Q from $\gamma\gamma(\theta)$ in ^{82}Se(^{11}B,p2nγ),^{12}C(^{86}Kr,2$\alpha\gamma$); assumed E2.
		1357.0‡ *1*	100.0‡ *21*	3698.55	(7⁻)	(E1)	2.89×10^{-4}	α(K)=0.0001270 *18*; α(L)=1.351×10^{-5} *19*; α(M)=2.26×10^{-6} *4*; α(N)=2.85×10^{-7} *4*; α(O)=1.87×10^{-8} *3* Mult.: D from $\gamma\gamma(\theta)$ in ^{82}Se(^{11}B,p2nγ),^{12}C(^{86}Kr,2$\alpha\gamma$); $\Delta\pi$= yes from level scheme.
		1560.7‡ *3*	69.5‡ *14*	3494.84	6⁽⁺⁾	(E2)	3.32×10^{-4}	α(K)=0.000198 *3*; α(L)=2.13×10^{-5} *3*; α(M)=3.57×10^{-6} *5*; α(N)=4.49×10^{-7} *7*; α(O)=2.94×10^{-8} *5* Mult.: Q from $\gamma\gamma(\theta)$ in ^{82}Se(^{11}B,p2nγ),^{12}C(^{86}Kr,2$\alpha\gamma$); assumed E2.
5089.46		2592.32 *20*	87 *9*	2497.32	(2⁺)			
		4257.34 *24*	100 *8*	831.68	2⁺			
5187.51	(1⁻,2⁺)	1038.63 *7*	26.7 *11*	4148.85				
		1631.78 *20*	7.2 *14*	3555.79				
		1804.10 *7*	52.1 *18*	3383.39				
		2148.2 *3*	18.8 *24*	3039.26	1			
		2216.29 *14*	42.8 *24*	2971.12	0⁺			
		2980.7 *6*	8.2 *18*	2207.02	(3⁻)			
		3295.09 *14*	74 *4*	1892.36	2⁺			
		4355.78 *22*	38.0 *21*	831.68	2⁺			
		5187.44 *23*	100 *5*	0.0	0⁺			
5239.2		3032.1 *5*	100	2207.02	(3⁻)			
5254.32		1870.7 *4*	7.8 *17*	3383.39				
		3361.88 *13*	100 *5*	1892.36	2⁺			
		5254.27 *25*	23.8 *17*	0.0	0⁺			
5285.89		1658.9 *3*	37 *5*	3627.01				
		4454.07 *21*	100 *7*	831.68	2⁺			
5298.48	(9⁻)	416.8‡ *5*	18‡ *3*	4881.7	8	D#	0.00403	α(K)=0.00357 *5*; α(L)=0.000392 *6*; α(M)=6.58×10^{-5} *10*; α(N)=8.27×10^{-6} *12*; α(O)=5.39×10^{-7} *8*
		549.6‡ *3*	71‡ *6*	4748.93	8	D#	0.00211	α(K)=0.00186 *3*; α(L)=0.000203 *3*; α(M)=3.41×10^{-5} *5*; α(N)=4.29×10^{-6} *6*; α(O)=2.81×10^{-7} *4*

$^{90}_{38}$Sr$_{52}$-8

γ(^{90}Sr) (continued)

E_i(level)	J^{π}_i	E_{γ}†	I_{γ}†	E_f	J^{π}_f	Mult.	α	Comments
5298.48	(9$^-$)	1599.9‡ *3*	100‡ *3*	3698.55	(7$^-$)	(E2)	3.37×10^{-4}	α(K)=0.000189 *3*; α(L)=2.02×10^{-5} *3*; α(M)=3.40×10^{-6} *5*; α(N)=4.27×10^{-7} *6*; α(O)=2.80×10^{-8} *4* Mult.: Q from $\gamma\gamma(\theta)$ in ^{82}Se(^{11}B,p2nγ),^{12}C(^{86}Kr,2$\alpha\gamma$); assumed E2.
5333.15?		4500.8@ *10*	8 *4*	831.68	2$^+$			
		5333.01@ *24*	100 *5*	0.0	0$^+$			
5426.65		3534.24 *13*	100	1892.36	2$^+$			
5431.2		3538.6@ *6*	100 *22*	1892.36	2$^+$			
		4599.4@ *3*	96 *8*	831.68	2$^+$			
5557.9		1603.52 *20*	100 *11*	3954.32				
		4726.1 *7*	24 *7*	831.68	2$^+$			
5591.8	10	570.2‡ *3*	100‡	5021.62	(9$^-$)	D#		
5600.3?		1973.3@ *10*	1.0×10^2 *4*	3627.01				
		5600.1@ *5*	83 *14*	0.0	0$^+$			
5623.3		196.8 *4*	59 *10*	5426.65				
		1668.9 *6*	9.×10^1 *3*	3954.32				
		1996.0 *10*	24 *10*	3627.01				
		2239.7 *8*	1.0×10^2 *6*	3383.39				
5785.1?		2335.2@ *10*	1.0×10^2 *4*	3449.83	3			
		3214.5@ *11*	6.×10^1 *3*	2570.60				
5822.0		395.8 *8*	27 *14*	5426.65				
		1686.2 *6*	43 *14*	4135.63	(1,2$^+$)			
		2789.1 *22*	1.0×10^2 *7*	3032.87				
		3929.4 *14*	5.×10^1 *3*	1892.36	2$^+$			
5827.9		2200.9 *3*	84 *10*	3627.01				
		2900.3 *13*	20 *12*	2927.70	4			
		3620.8 *11*	1.0×10^2 *4*	2207.02	(3$^-$)			
		4996.2 *11*	11 *5*	831.68	2$^+$			
5923.56	(10$^+$)	625.1‡ *3*	21.4‡ *16*	5298.48	(9$^-$)	D#		
		868.0‡ *1*	100.0‡ *19*	5055.56	(8$^+$)	(E2)		Mult.: Q from $\gamma\gamma(\theta)$ in ^{82}Se(^{11}B,p2nγ),^{12}C(^{86}Kr,2$\alpha\gamma$); assumed E2.
		901.9‡ *3*	8.2‡ *8*	5021.62	(9$^-$)			
5961.1	(11$^-$)	939.5‡ *3*	100‡	5021.62	(9$^-$)	(E2)	6.70×10^{-4}	α(K)=0.000593 *9*; α(L)=6.48×10^{-5} *9*; α(M)=1.088×10^{-5} *16*; α(N)=1.362×10^{-6} *19*; α(O)=8.77×10^{-8} *13* Mult.: Q from $\gamma\gamma(\theta)$ in ^{82}Se(^{11}B,p2nγ),^{12}C(^{86}Kr,2$\alpha\gamma$); assumed E2.
6712.3	12	751.2‡ *3*	100‡ *3*	5961.1	(11$^-$)	D#		
		1120.5‡ *3*	48‡ *3*	5591.8	10	Q#		
6794.56	(12$^+$)	871.0‡ *1*	100‡	5923.56	(10$^+$)	(E2)	8.05×10^{-4}	α(K)=0.000712 *10*; α(L)=7.80×10^{-5} *11*; α(M)=1.310×10^{-5} *19*;

$\gamma(^{90}\mathrm{Sr})$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.	Comments
							$\alpha(N)=1.639\times10^{-6}$ *23* $\alpha(O)=1.052\times10^{-7}$ *15* Mult.: Q from $\gamma\gamma(\theta)$ in ^{82}Se(^{11}B,p2nγ),^{12}C(^{86}Kr,2$\alpha\gamma$); assumed E2.
7371.2	13	658.9[‡] *3*	100[‡]	6712.3	12	D[#]	
7705.77		911.2[‡] *1*	100[‡]	6794.56	(12^+)		
7959.7		253.9[‡] *3*	100[‡]	7705.77		Q[#]	
8772.4		812.7[‡] *5*	20[‡] *7*	7959.7			
		1066.6[‡] *3*	100[‡] *13*	7705.77		Q[#]	
9060.7		288.3[‡] *3*	100[‡]	8772.4		D[#]	
9199.7		1493.9[‡] *3*	100[‡]	7705.77			
9957.5		757.8[‡] *3*	100[‡]	9199.7		D[#]	

† From ^{90}Rb β^- decay, except where noted.

‡ From ^{82}Se(^{11}B,p2nγ), ^{12}C(^{86}Kr,2$\alpha\gamma$).

From $\gamma\gamma(\theta)$ (DCO) in ^{82}Se(^{11}B,p2nγ), ^{12}C(^{86}Kr,2$\alpha\gamma$).

@ Placement of transition in the level scheme is uncertain.

$^{90}_{38}\mathrm{Sr}_{52}$-10

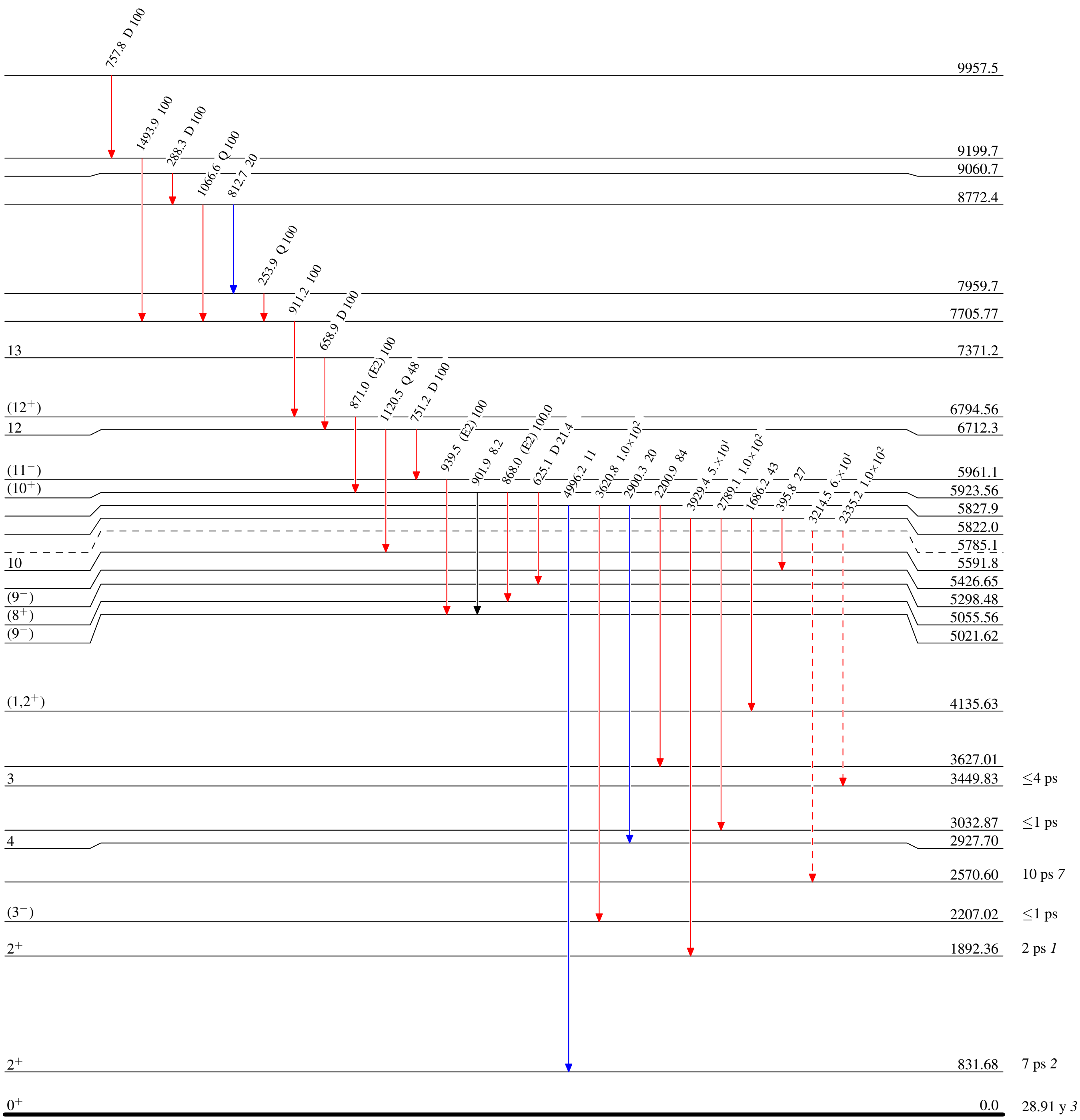
Adopted Levels, Gammas

Level Scheme

Intensities: Type not specified

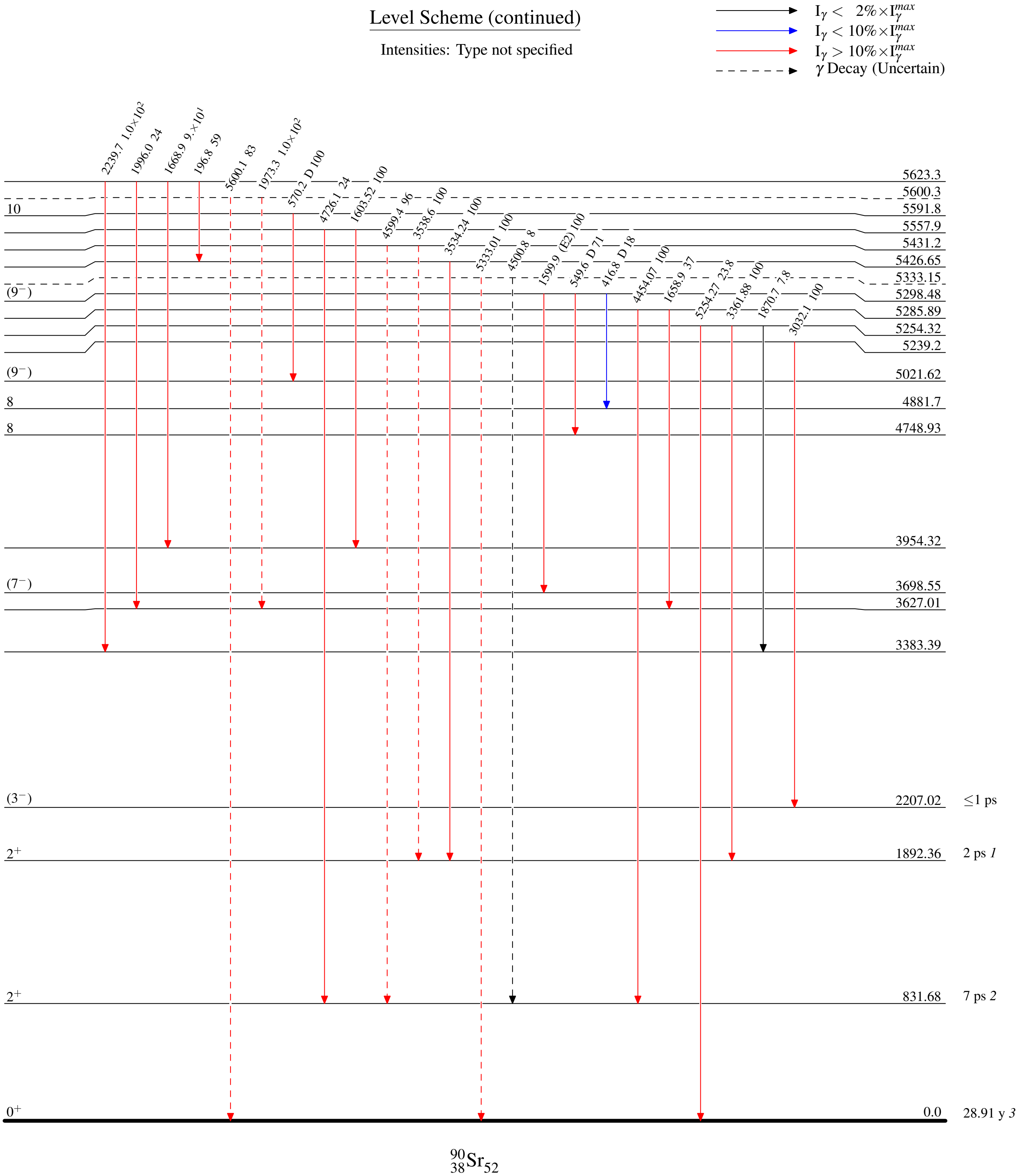
Legend

- $I_\gamma < 2\% \times I_\gamma^{max}$
- $I_\gamma < 10\% \times I_\gamma^{max}$
- $I_\gamma > 10\% \times I_\gamma^{max}$
- γ Decay (Uncertain)



$^{90}_{38}Sr_{52}$

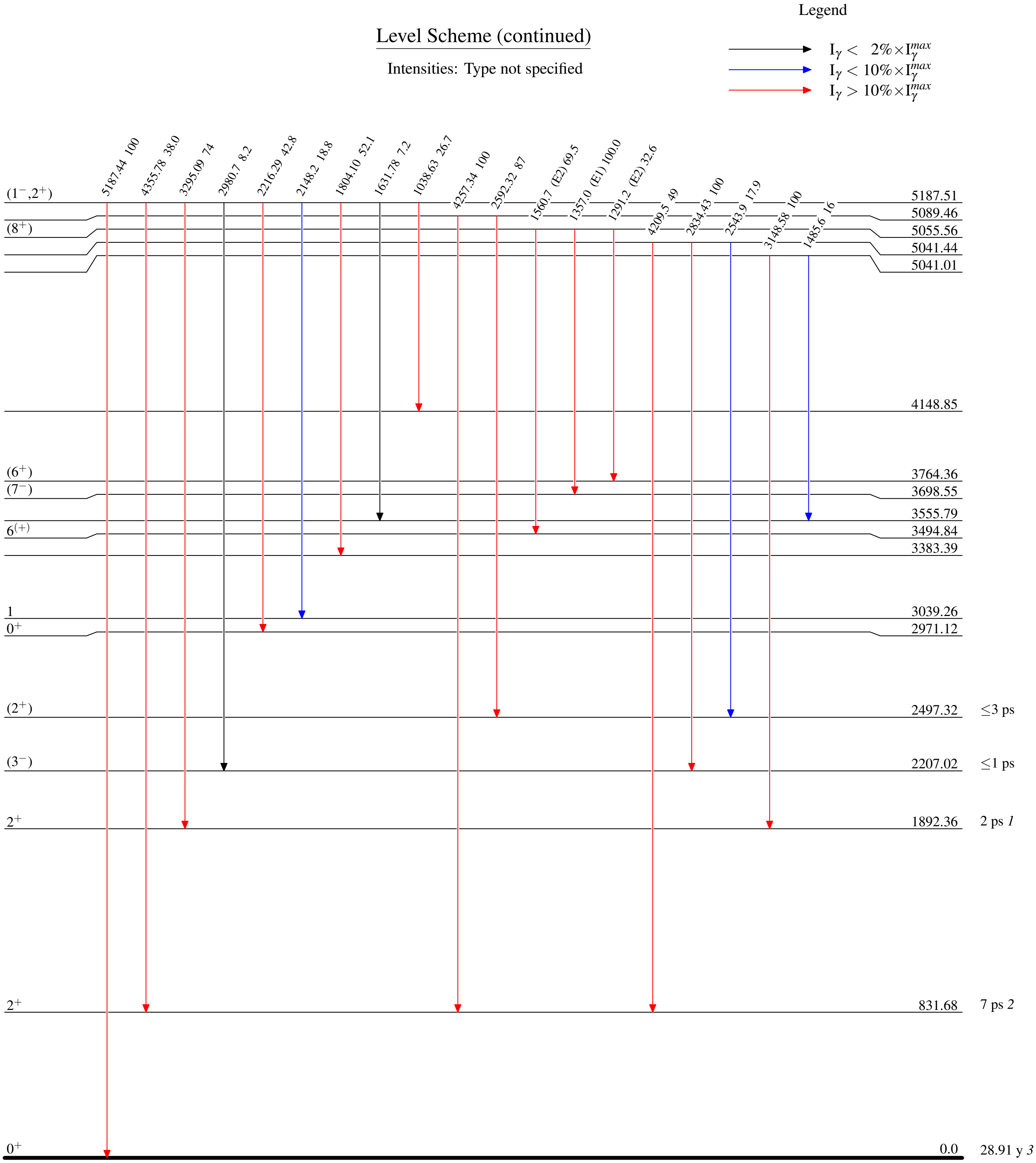
Adopted Levels, Gammas



Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

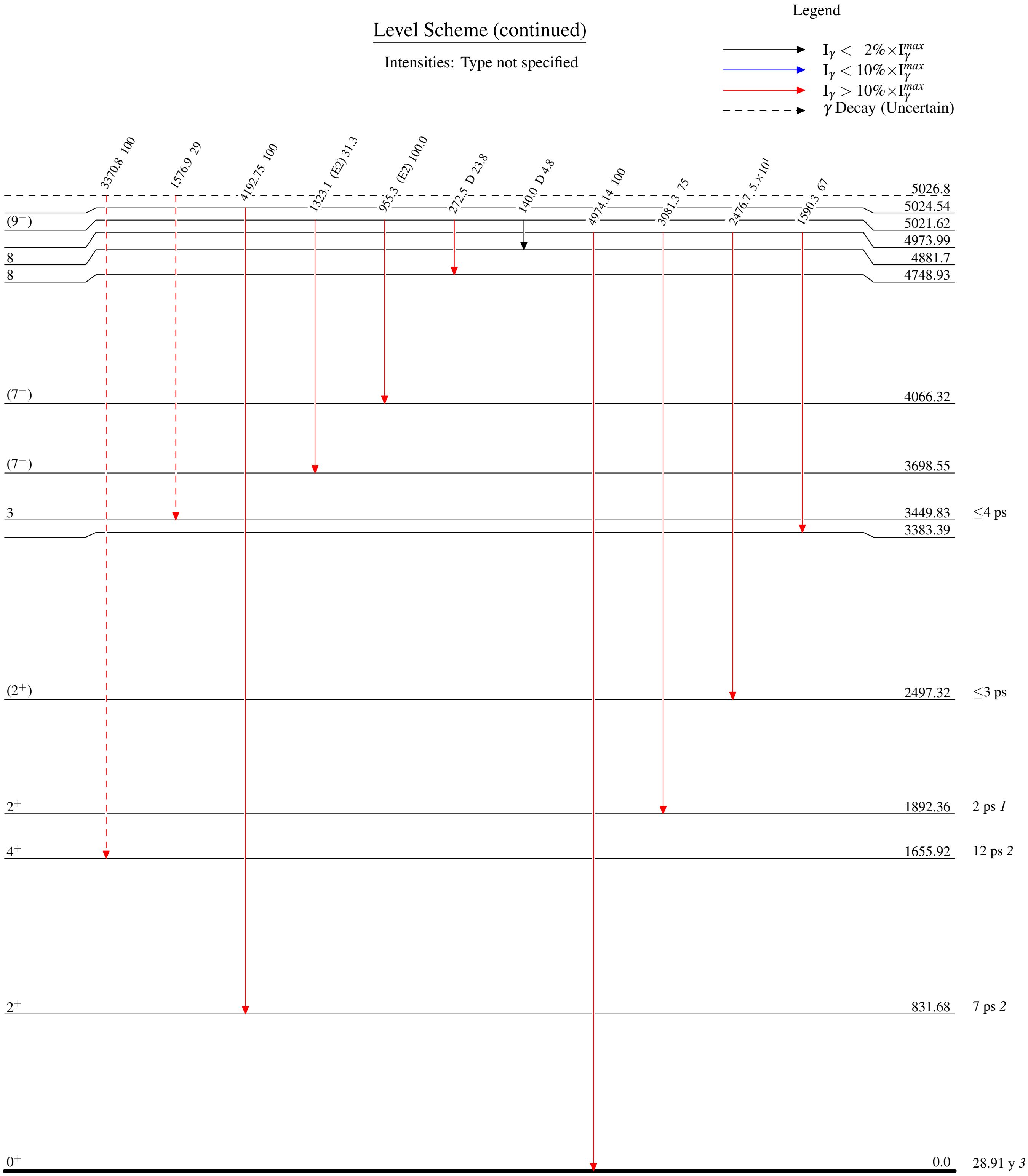


$^{90}_{38}Sr_{52}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

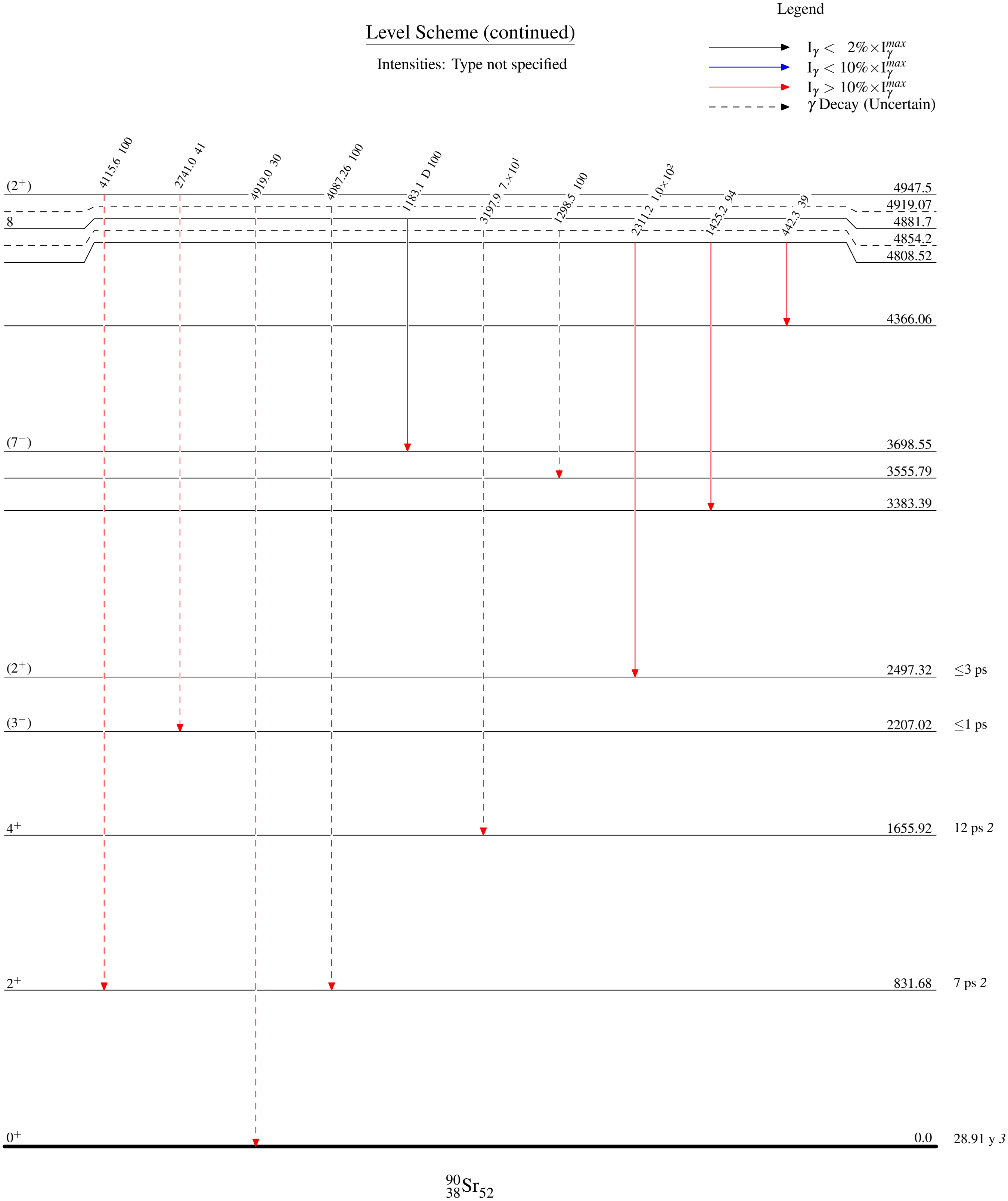


$^{90}_{38}Sr_{52}$

Adopted Levels, Gammas

Level Scheme (continued)

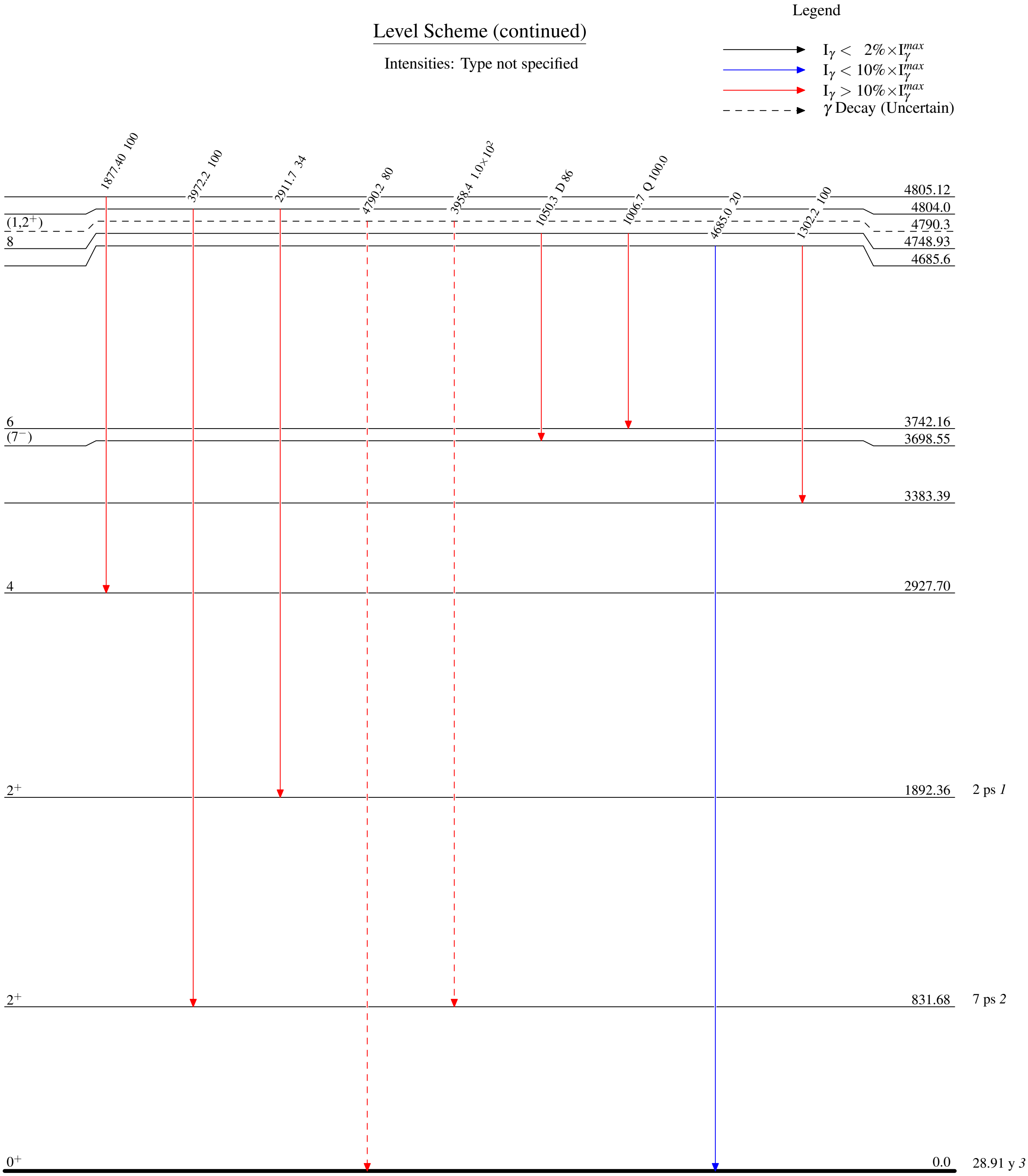
Intensities: Type not specified



Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified



$^{90}_{38}Sr_{52}$

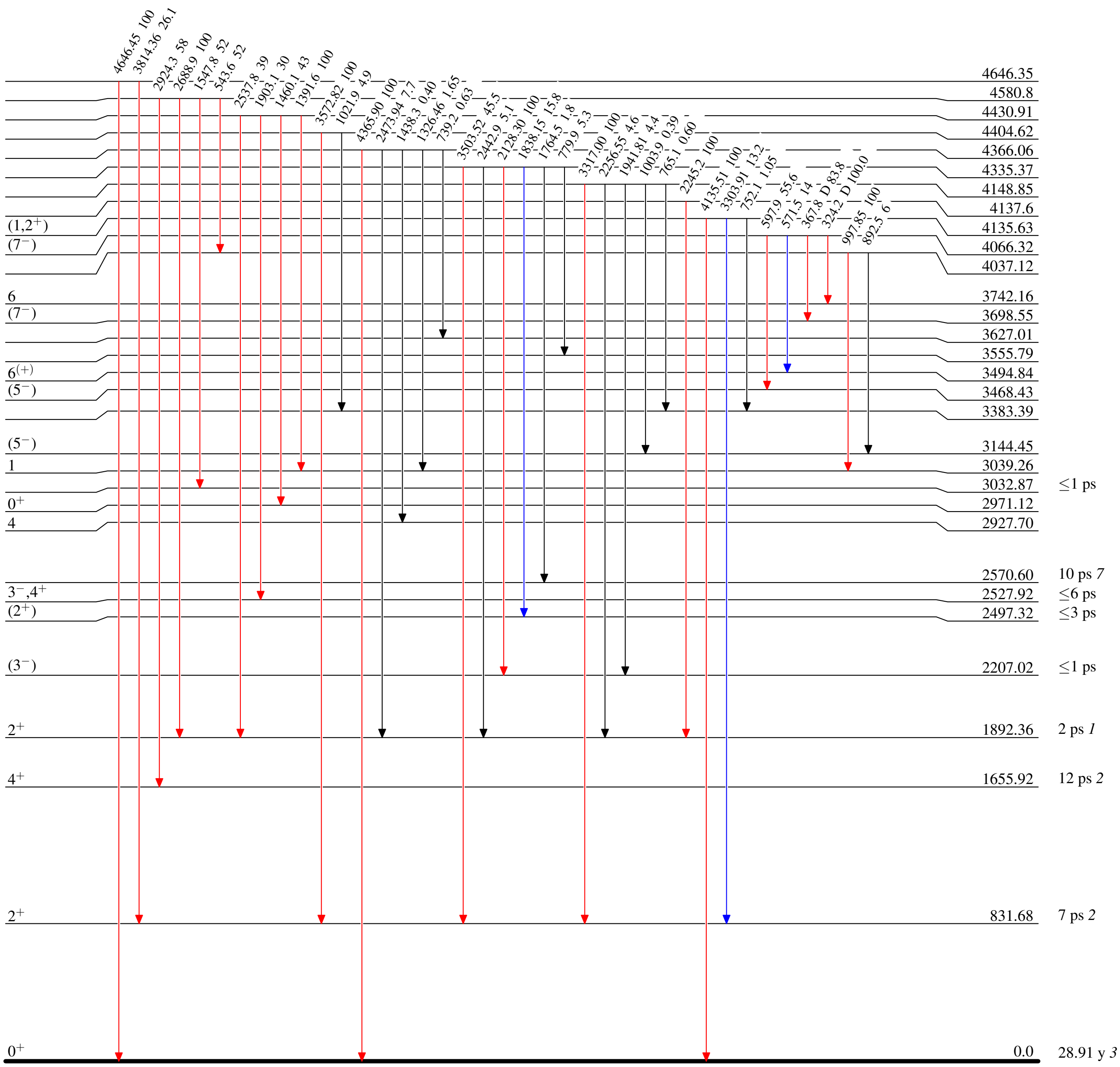
Adopted Levels, Gammas

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$

Level Scheme (continued)

Intensities: Type not specified

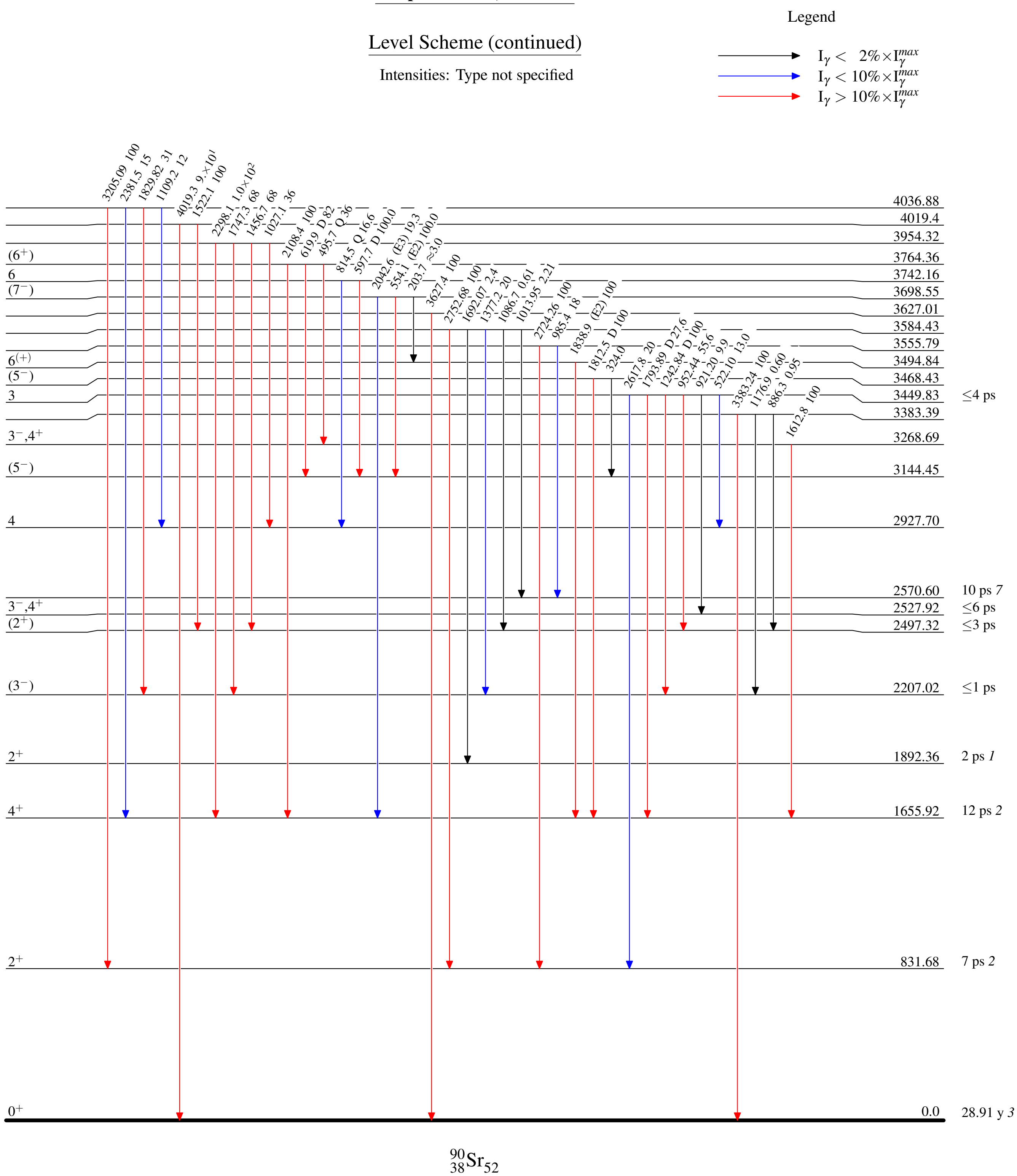


$^{90}_{38}Sr_{52}$

Adopted Levels, Gammas

Level Scheme (continued)

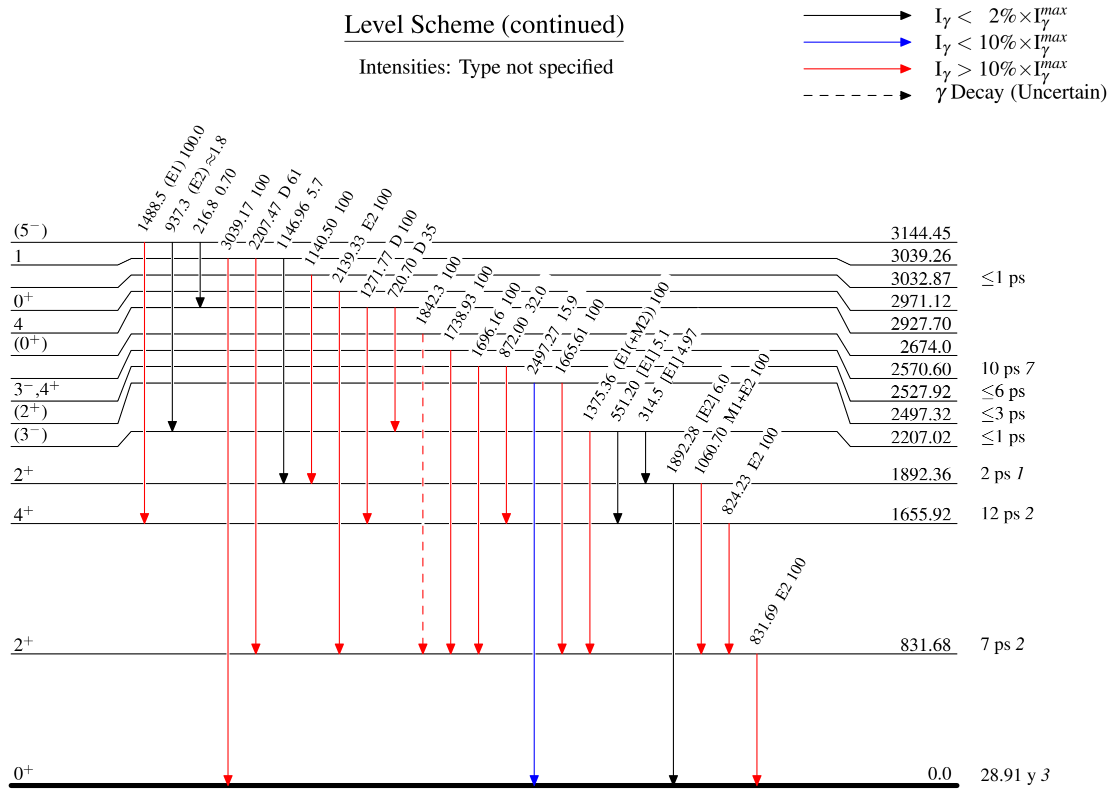
Intensities: Type not specified



Adopted Levels, Gammas

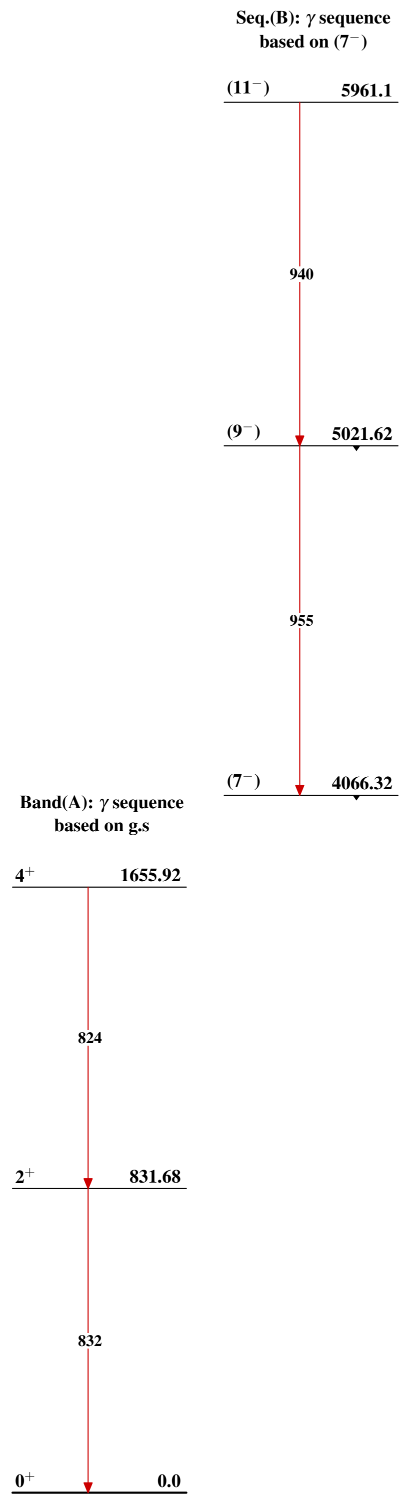
Level Scheme (continued)

Intensities: Type not specified



$^{90}_{38}Sr_{52}$

Adopted Levels, Gammas



$^{90}_{38}Sr_{52}$

Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 113,2187 (2012)	15-Sep-2012

Q(β^-)=1950 *10*; S(n)=7286 *7*; S(p)=12411 *9*; Q(α)=−5601 *5* 2012Wa38

Note: Current evaluation has used the following Q record 1951 9 *7286* 7 *12410* 9 −5601 4 2011AuZZ.

Q(β^-),S(n),S(p),Q(α): from 2011AuZZ; values are 1946 *9*, 7294 *6*, 12411 *9*, −5600 *14*, respectively, from 2003Au03.

For isotope shift data, see 1990Bu12.

For shell-model calculations see, e.g., 1973Wa36, 1978Ba70, 2002St06, 2003Hw01, 2009Rz01.

^{92}Sr Levels

Cross Reference (XREF) Flags

A	^{92}Rb β^- decay	D	^{208}Pb(^{18}O,Fxnγ)
B	^{93}Rb β^-n decay	E	^{159}Tb(^{36}S,fxng)
C	^{94}Zr(^{6}Li,^{8}B)	F	^{248}Cm SF decay

E(level)[†]	J$^\pi$[#]	T$_{1/2}$[‡]	XREF	Comments
0.0[&]	0$^+$	2.611 h *17*	ABCDEF	%β^-=100 Δ<r^2>(^{88}Sr,^{92}Sr)=0.512; uncertainty is 0.005 (statistical only), 0.021 (systematic included) (1990Bu12). For discussion of differential changes in Δ<r^2>, see 1996Li25. J$^\pi$: see comment on 815 level. T$_{1/2}$: unweighted average of 2.594 h *6* (2008Le19) and 2.627 h *9* (2003NiZY) (the weighted average is 2.604 h *15*), the two highest precision measurements available. Other GeLi data: 2.71 h *1* (1971Pa31). Other NaI scin data: 2.71 h *2* (1960Fr05), 2.84 h *22*, 2.73 h *10*, 2.79 h *19*, 2.77 h *17*, 2.74 h *18*, 2.45 h *7*, 2.57 h *7* (1956He77). The weighted average of all data is 2.667 h *16*; this rises to 2.669 h *15* if the statistical outlier datum (2.45 h *7*) is excluded. However, these averages may not be reliable since these data are discrepant. <r^2>$^{1/2}$(charge)=4.295 fm *6* (2004An14).
814.98[&] *3*	2$^+$	8 ps *3*	ABCDEF	J$^\pi$: from 1273γ-815$\gamma(\theta)$ and 1712γ-815$\gamma(\theta)$ which indicate 0-2-0$^+$ cascades; E2 γ to 0$^+$.
1384.79 *9*	2$^+$	5.1 ps *24*	ABC	J$^\pi$: 704γ-1385$\gamma(\theta)$ establishes J(2088 level)=0, J(1385 level)=2; E2 γ to 0$^+$ level.
1673.3[&] *4*	(4)$^+$		DEF	J$^\pi$: E2, ΔJ=2 858γ to 2$^+$ 815; energy is close to that for 4$^+$ level in ^{90}Sr (2000Fo13).
1778.33 *12*	2$^{(+)}$	≤5.0 ps	AB	J$^\pi$: 964γ-815$\gamma(\theta)$ allows J=2, not 1,3,4; 1778γ to 0$^+$.
2053.9 *6*	(2$^+$)		A	J$^\pi$: 1239γ-815$\gamma(\theta)$ allows J=2; datum ≈2σ from J=1,3,4 ellipses. (E2+M1) γ to 2$^+$.
2088.39 *17*	0$^{(+)}$		A	J$^\pi$: 704γ-1385$\gamma(\theta)$ establishes J(2088 level)=0, J(1385 level)=2; Q γ to 2$^+$ level.
2140.82 *14*	1$^+$	7.1 ps *25*	A	J$^\pi$: 756γ-$\gamma(\theta)$ allows J=1, not 2,3,4; E2+M1 γ to 2$^+$.
2185.0 *4*	(3$^-$)		DEF	J$^\pi$: analogous to 3$^-$ states in ^{88}Sr and ^{90}Sr at 2734 and 2207, respectively; D 1371γ to 2$^+$ 815.
2527.18 *18*	0$^+$	6 ps *4*	A	J$^\pi$: 1712γ-815$\gamma(\theta)$ establishes J(2527 level)=0, J(815 level)=2; E2 γ to 2$^+$.
2765.7 *5*	(5$^-$)		DEF	J$^\pi$: energy systematics of lower-N Sr isotopes suggest a 5$^-$ level in this vicinity (2000Fo13); D 1092γ to (4)$^+$ 1673.
2783.6 *4*			A	
2820.89 *18*	2$^{(+)}$,(1)		A	J$^\pi$: $\gamma\gamma(\theta)$ rules out J=4, favors J=2, but also permits 1,3; strong γ to 0$^+$ g.s. If J=2, $\gamma\gamma(\theta)$ implies δ(2007γ)<−0.53, favoring π=+.
2849.6 *6*			A	
2924.8 *7*			E	

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Adopted Levels, Gammas (continued)

^{92}Sr Levels (continued)

E(level)†	J$^{\pi}$#	XREF	Comments
3014.6 *6*		EF	J$^{\pi}$: 1341γ to (4)$^+$ 1673 so J=(2 to 6). J^{π}=(4$^+$) proposed in (^{36}S,Fxnγ) but (5,6$^+$) in ^{248}Cm SF decay. Possible dominant configuration: π $(1p^{-1}_{3/2}\ 1p_{1/2})_2\ \nu(1d^4_{5/2})_2)$ (2002St06) if J=4.
3128.8 *7*	(6$^+$)	EF	J$^{\pi}$: 1455γ to (4)$^+$ 1673; (5,6$^+$) from ^{248}Cm SF decay; possible configuration: π $(1p^{-1}_{3/2}\ 1p_{1/2})_2\ \nu(1d^4_{5/2})_4)$ (2002St06).
3362.4 *5*	(5$^-$)	EF	J$^{\pi}$: 1177γ to (3$^-$) 2185, 1689γ to (4)$^+$ 1673; 597γ to (5$^-$) 2766 in ^{248}Cm SF decay.
3558.5 *7*	(6$^-$,7$^-$)@	DEF	XREF: D(4579).
3786.0 *7*	(6$^-$,7$^-$)@	DEF	
4021.4 *9*	(6$^-$,7$^-$)@	EF	
4637.8 *5*	1	A	J$^{\pi}$: log *ft*≈6.6 from 0$^-$ ^{92}Rb; γ to 2$^+$ and 0$^+$.
4928.5 *9*	(8$^-$,9$^-$)@	EF	Configuration involves (ν $g_{7/2}$)⊗(ν $h_{11/2}$) (2009Rz01).
5053.8 *4*	1	A	J$^{\pi}$: log *ft*≈6.5 from 0$^-$ ^{92}Rb; γ to 2$^+$.
5056.7 *10*		E	
5727.2 *10*		E	
5738.4 *9*	1	A	J$^{\pi}$: log *ft*≈6.1 from 0$^-$ ^{92}Rb; γ to 2$^+$ and 0$^+$.
5893.6 *7*	1$^{(-)}$	A	J$^{\pi}$: log *ft*≈6.0 from 0$^-$ ^{92}Rb; γ to 2$^+$.
5901.1 *10*	1$^{(-)}$	A	J$^{\pi}$: log *ft*≈6.0 from 0$^-$ ^{92}Rb; γ to 0$^+$ and 2$^+$.
6003.5 *7*	1$^-$	A	J$^{\pi}$: log *ft*≈5.7 from 0$^-$ ^{92}Rb; γ to 0$^+$ and 2$^+$.
6030.0 *8*	1$^-$	A	J$^{\pi}$: log *ft*≈5.8 from 0$^-$ ^{92}Rb; γ to 0$^+$ and 2$^+$.
6116.1 *10*	1$^-$	A	J$^{\pi}$: log *ft*≈5.8 from 0$^-$ ^{92}Rb; γ to 0$^+$ and 2$^+$.
6527.7? *12*		E	
6949.1? *7*	0$^-$,1$^-$	A	
7363.0 *8*	1$^-$	A	J$^{\pi}$: log *ft*≈4.0 from 0$^-$ ^{92}Rb; γ to 2$^{(+)}$ and 0$^+$.

† From least-squares fit to Eγ, allowing 1 keV uncertainty in Eγ data (3 lines) for which the authors do not state the uncertainty.
‡ From $\beta\gamma\gamma$(t) in Rb β^- decay, except as noted.
# Values given without comment are tentative values from ^{159}Tb(^{36}S,Fxnγ), consistent with DCO measurements but suggested primarily by analogy with ^{90}Sr which exhibits a very similar level sequence.
@ From ^{248}Cm SF decay, assuming that M2 transitions are unlikely if Eγ<1200, and that such a reaction predominantly populates yrast states in the secondary fission fragments so J is expected to rise with increasing level energy.
& Band(A): π=+ sequence. Based on 0$^+$ g.s. Principal configuration: ν $1d^4_{5/2}$ (2002St06).

γ(^{92}Sr)

E$_i$(level)	J$^{\pi}_i$	E$_{\gamma}$†	I$_{\gamma}$†	E$_f$	J$^{\pi}_f$	Mult.	δ‡	Comments
814.98	2$^+$	814.98 *3*	100	0.0	0$^+$	E2		B(E2)(W.u.)=8 *3* Other Eγ: 814.4 in ^{208}Pb(^{18}O,Fxnγ). Mult.: Q ΔJ=2 from $\gamma\gamma(\theta)$ in ^{248}Cm SF decay; not M2 from RUL.
1384.79	2$^+$	569.8 *1*	100 *6*	814.98	2$^+$	(M1+E2)	+0.21 *2*	B(M1)(W.u.)=0.014 *7*; B(E2)(W.u.)=1.9 *10* Mult.: D+Q from $\gamma\gamma(\theta)$; adopted Δπ=no.
		1384.6 *3*	65 *12*	0.0	0$^+$	E2		B(E2)(W.u.)=0.35 *18* Mult.: Q to 0$^+$ in $\gamma\gamma(\theta)$; not M2 from RUL.
1673.3	(4)$^+$	858.4@ *5*	100	814.98	2$^+$	E2		Mult.: Q from DCO ratio in ^{159}Tb(^{36}S,Fxnγ); partial T$_{1/2}$<5 ns because seen in prompt coin in ^{248}Cm SF decay, so not M2 from RUL.
1778.33	2$^{(+)}$	393.5 *1*	83 *4*	1384.79	2$^+$	(M1)		B(M1)(W.u.)≥0.029 Mult.: D from $\gamma\gamma(\theta)$ in β^- decay; Δπ=(no) from level scheme.

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

$\gamma(^{92}Sr)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.	δ‡	Comments
1778.33	$2^{(+)}$	963.5 *2*	100 *9*	814.98	2^+	(E2+M1)	+1.7 *+13−15*	B(E2)(W.u.)≥1.2 Mult.: Q(+D) with significant Q component (from $\gamma\gamma(\theta)$).
		1778.3 *10*	24 *13*	0.0	0^+			
2053.9	(2^+)	1238.9 *6*	100	814.98	2^+	(E2+M1)		Mult.: Q(+D) from $\gamma\gamma(\theta)$ with large Q component. δ: <−3.3 or >+11.8.
2088.39	$0^{(+)}$	703.6 *3*	47 *10*	1384.79	2^+	(E2)		Mult.: Q from $\gamma\gamma(\theta)$; J=0 to $J^\pi=2^+$ transition.
		1273.4 *2*	100 *13*	814.98	2^+	(E2)		Mult.: Q from $\gamma\gamma(\theta)$; J=0 to $J^\pi=2^+$ transition.
2140.82	1^+	756.0 *2*	81 *7*	1384.79	2^+	M1(+E2)	−0.09 *3*	B(M1)(W.u.)=0.0032 *12*; B(E2)(W.u.)=0.05 *4* Mult.: D(+Q) from $\gamma\gamma(\theta)$; adopted $\Delta\pi$=no.
		1325.8 *2*	100 *12*	814.98	2^+	E2+M1	−0.27 *5*	B(M1)(W.u.)=0.0007 *3*; B(E2)(W.u.)=0.030 *16* Mult.: D+Q from $\gamma\gamma(\theta)$; not E1+M2 from RUL.
2185.0	(3^-)	512.2#		1673.3	$(4)^+$			
		1370.0@ *5*		814.98	2^+	D		Other Eγ: 1371.1 in ^{208}Pb(^{18}O,Fxnγ). Mult.: D ΔJ=1 from $\gamma\gamma(\theta)$ in ^{248}Cm SF decay.
2527.18	0^+	386.1 *3*	5.8 *10*	2140.82	1^+	(M1)		B(M1)(W.u.)=0.0035 *25* Mult.,δ: pure D from $\gamma\gamma(\theta)$ in β^- decay: $\Delta\pi$=no from level scheme.
		1712.3 *2*	100 *8*	814.98	2^+	E2		B(E2)(W.u.)=0.25 *17* Mult.,δ: pure Q from $\gamma\gamma(\theta)$; not M2 from RUL.
2765.7	(5^-)	580.7@ *5*	58.0@ *17*	2185.0	(3^-)			
		1092.3@ *5*	100.0@ *22*	1673.3	$(4)^+$	D		Mult.: from DCO ratio in ^{159}Tb(^{36}S,Fxnγ).
2783.6		1399.0 *6*	76 *24*	1384.79	2^+			
		1968.6 *6*	100 *29*	814.98	2^+			
2820.89	$2^{(+)}$,(1)	2006.5 *5*	12 *3*	814.98	2^+			Mult=Q(+D), δ<−0.53 if J(2821 level)=2; from β^- decay.
		2820.6 *2*	100 *7*	0.0	0^+			
2849.6		1071.4	33	1778.33	$2^{(+)}$			
		1464.7 *6*	100 *33*	1384.79	2^+			
2924.8		1251.4@ *5*	100	1673.3	$(4)^+$			
3014.6		1341.2@ *5*	100	1673.3	$(4)^+$			E_γ: for contaminated line; Eγ=1342.3 in ^{248}Cm SF decay.
3128.8	(6^+)	1455.4@ *5*	100	1673.3	$(4)^+$			
3362.4	(5^-)	597.2		2765.7	(5^-)			E_γ: from ^{248}Cm SF decay.
		1177.4@ *5*	100@ *3*	2185.0	(3^-)			
		1689.0@ *5*	36.4@ *21*	1673.3	$(4)^+$			
3558.5	$(6^-,7^-)$	792.8@ *5*	100	2765.7	(5^-)			E_γ: for contaminated line; 792.8 from ^{248}Cm SF decay also. γ is placed differently in ^{208}Pb(^{18}O,Fxnγ) (feeding a 3786 level), implying a 4579 level

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

$\gamma(^{92}Sr)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.	Comments
							which has not been adopted by the evaluator.
3786.0	(6⁻,7⁻)	771.3[@] *5*	≥24[@]	3014.6			$E\gamma$: for contaminated line. Other $E\gamma$: 771.3 in ^{248}Cm SF decay.
		1020.6[#]	100 *3*	2765.7	(5⁻)		Other $E\gamma$: 1020.2 *5* in ^{159}Tb(^{36}S,Fxnγ), but may be a doublet in that reaction; 1020.8 in ^{248}Cm SF decay. I_γ: from ^{159}Tb(^{36}S,Fxnγ).
4021.4	(6⁻,7⁻)	235.4[@] *5*	59.6[@] *22*	3786.0	(6⁻,7⁻)	(D)	$E\gamma$: for contaminated line. Mult.: from DCO ratio in ^{159}Tb(^{36}S,Fxnγ).
		658.9[@] *5*	100[@] *4*	3362.4	(5⁻)		
4637.8	1	1816.7 *5*	27 *6*	2820.89	$2^{(+)}$,(1)		
		2860.3 *21*	12 *12*	1778.33	$2^{(+)}$		
		3823.6 *16*	16 *10*	814.98	2⁺		
		4637.7 *9*	100 *13*	0.0	0⁺		
4928.5	(8⁻,9⁻)	1142.5[@] *5*	100[@] *4*	3786.0	(6⁻,7⁻)		
		1799.6[@&] *5*	31[@] *3*	3128.8	(6⁺)		
5053.8	1	2232.0 *5*	100 *25*	2820.89	$2^{(+)}$,(1)		
		2913.2 *6*	92 *25*	2140.82	1⁺		
		3670.8 *12*	54 *25*	1384.79	2⁺		
		4240.4 *16*	42 *25*	814.98	2⁺		
5056.7		1035.3[@] *5*	100	4021.4	(6⁻,7⁻)		
5727.2		798.7[@] *5*	100	4928.5	(8⁻,9⁻)		
5738.4	1	4922.6 *11*	100 *18*	814.98	2⁺		
		5739.4 *14*	64 *24*	0.0	0⁺		
5893.6	$1^{(-)}$	3110.0 *7*	100 *30*	2783.6			
		4508.2 *12*	63 *17*	1384.79	2⁺		
5901.1	$1^{(-)}$	5086.2 *12*	93 *43*	814.98	2⁺		
		5900.6 *14*	100 *29*	0.0	0⁺		
6003.5	1⁻	5188.1 *8*	100 *17*	814.98	2⁺		
		6004.1 *15*	24 *8*	0.0	0⁺		
6030.0	1⁻	3502.0 *16*	33 *21*	2527.18	0⁺		
		5215.1 *10*	100 *36*	814.98	2⁺		
		6030.0 *15*	73 *21*	0.0	0⁺		
6116.1	1⁻	5301.7 *13*	100 *32*	814.98	2⁺		
		6114.8 *15*	100 *32*	0.0	0⁺		
6527.7?		800.5[@&] *5*	100	5727.2			
6949.1?	0⁻,1⁻	1895.1[&] *6*	53 *16*	5053.8	1		
		4809.3[&] *15*	100 *50*	2140.82	1⁺		
7363.0	1⁻	4835.9 *11*	62 *16*	2527.18	0⁺		
		5584.2 *11*	100 *20*	1778.33	$2^{(+)}$		

† From ^{92}Rb β^- decay, except as noted.
‡ From $\gamma\gamma(\theta)$ in Rb β^- decay.
\# From ^{208}Pb(^{18}O,Fxnγ).
@ From ^{159}Tb(^{36}S,Fxnγ).
& Placement of transition in the level scheme is uncertain.

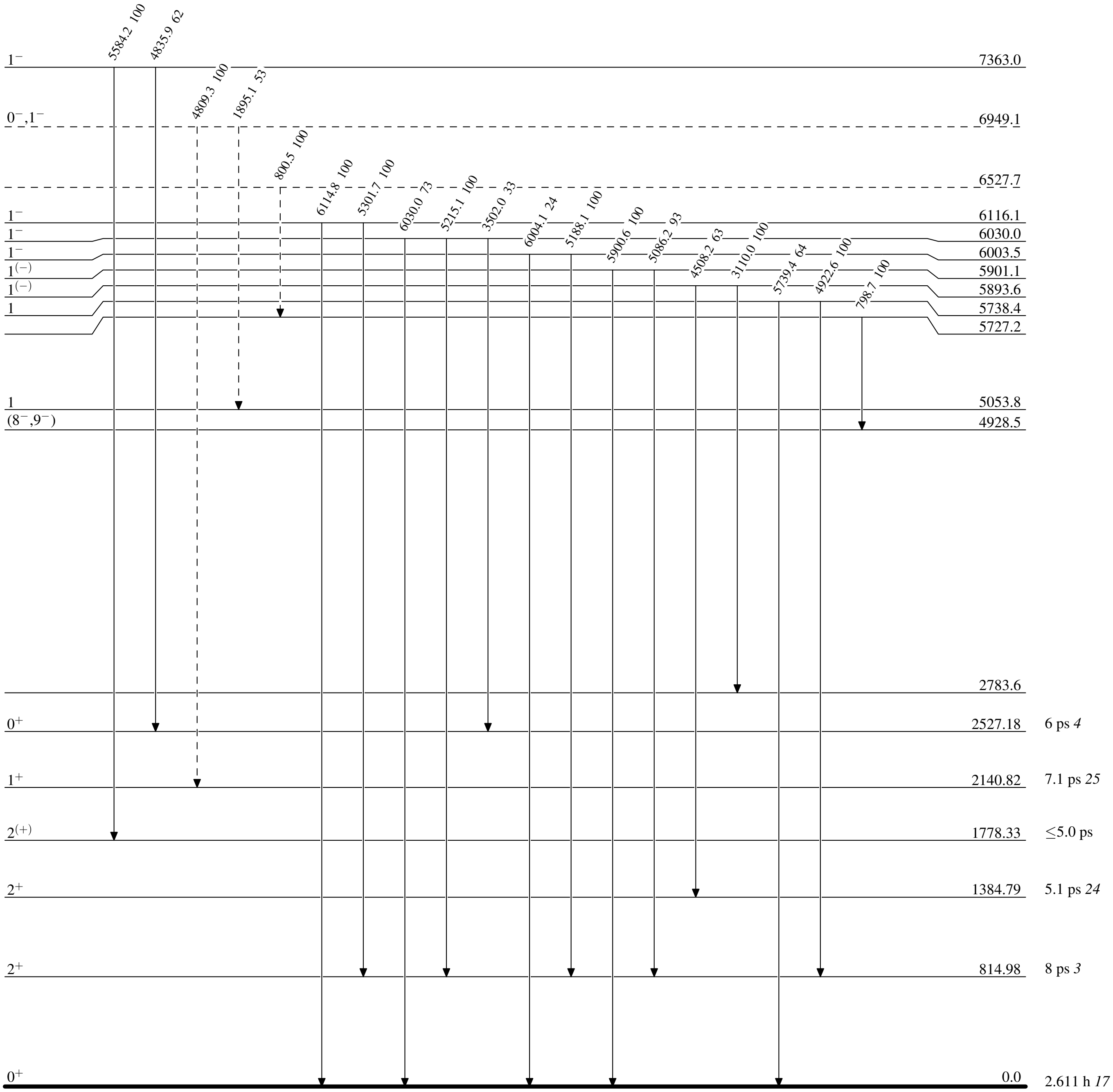
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level

γ Decay (Uncertain)

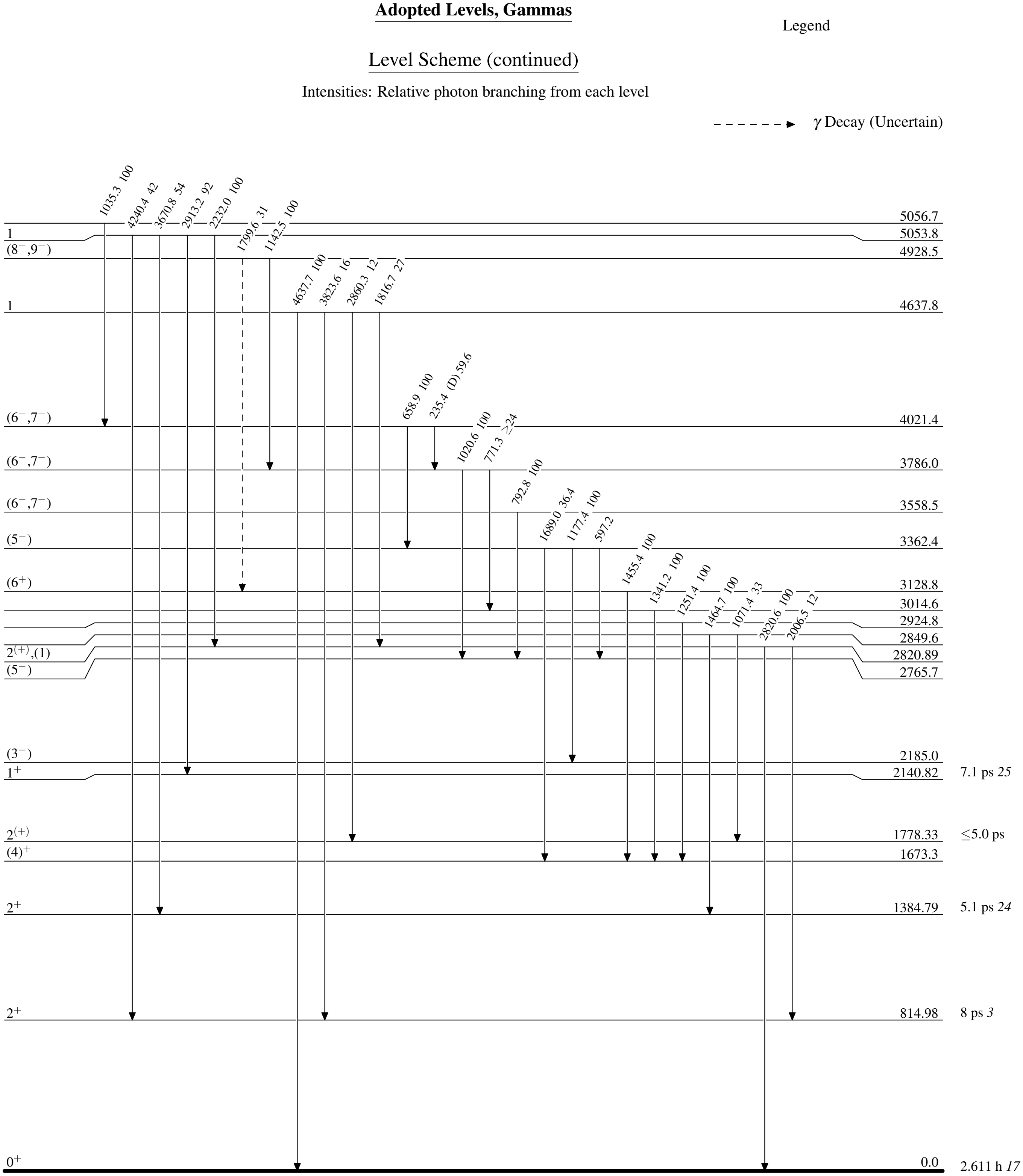


$^{92}_{38}Sr_{54}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

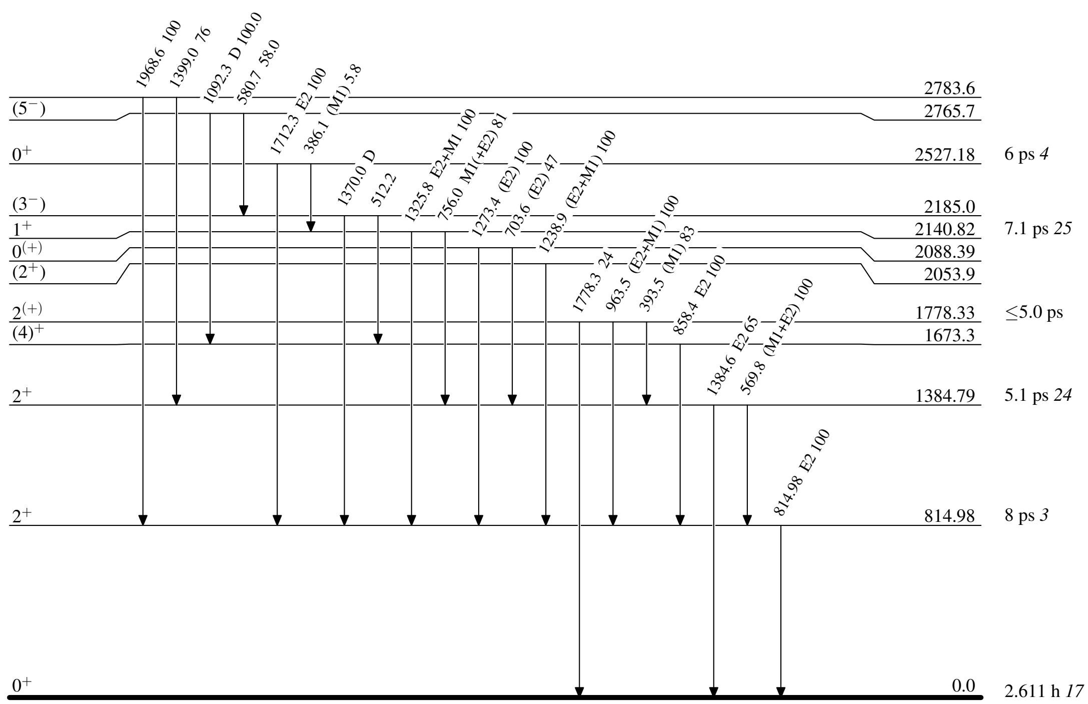


$^{92}_{38}Sr_{54}$

Adopted Levels, Gammas

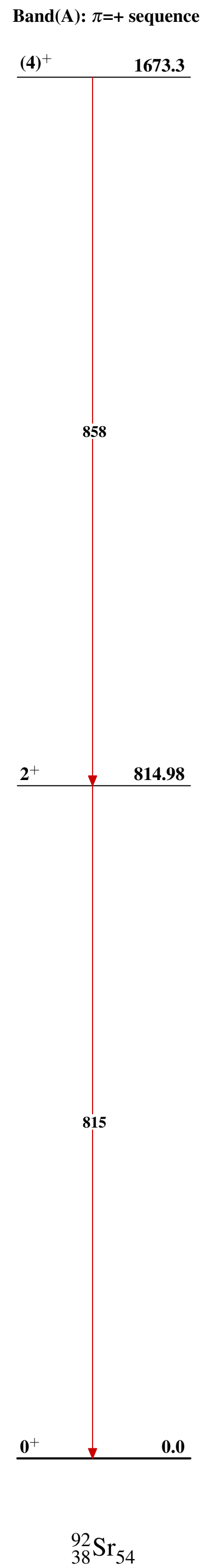
Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{92}_{38}Sr_{54}$

Adopted Levels, Gammas



Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	A. Negret, A. A. Sonzogni	ENSDF	31-Mar-2011

Q(β^-)=3507 *7*; S(n)=6831 *8*; S(p)=13515 *8*; Q(α)=−6311.4 *25* 2012Wa38
Note: Current evaluation has used the following Q record 3510 8 *6828* 10 *13512* 11 −6309 7 2011AuZZ.
S(2n)=12118 *8*, S(2p)=24652 *8* (2011AuZZ).
α: Additional information 1.

^{94}Sr Levels

Cross Reference (XREF) Flags

A	^{94}Rb β^- decay
B	^{95}Rb β^-n decay
C	^{248}Cm SF decay
D	^{252}Cf SF decay

E(level)	J$^\pi$	T$_{1/2}$	XREF	Comments
0.0‡	0$^+$	75.3 s *2*	ABCD	%β^-=100 T$_{1/2}$: from 1986Ok03. Others: 75.1 s *4* (1983Ok07), 76.7 s *9* (1979En02), 78.9 s *10* (1976KiZK), 75.3 s *7* (1974Gr29), 74.1 s *3* (1973Gr14), 78.9 s *8* (1973Ta09). <r^2>$^{1/2}$=4.324 fm *8* (2004An14).
836.9‡ *1*	2$^+$	6.9† ps *28*	ABCD	J$^\pi$: E2 γ to 0$^+$.
1926.28 *14*	(3$^-$)	≤4.9† ps	ABCD	J$^\pi$: (E1) γ to 2$^+$, no γ to 0$^+$.
2146.00‡ *14*	4$^+$	≤4.2† ps	ABCD	J$^\pi$: E2 γ to 2$^+$, member of g.s. cascade.
2271.22 *16*	(2$^+$)		A	J$^\pi$: log *ft*=7.16 in β^- decay of 3$^{(-)}$ parent, γ's to 0$^+$ and 2$^+$.
2414.11 *18*	(3$^-$)	4.2† ps *14*	AB D	J$^\pi$: (E1) γ to 2$^+$, no γ to 0$^+$.
2603.94 *14*	(4$^-$)#	≤7.6† ps	ABCD	J$^\pi$: (E1) G to 3$^{(-)}$.
2614.1 *4*	(2,3,4)#		AB	
2649.78 *15*	4$^{(+)}$#	≤4.2† ps	ABCD	
2703.94 *16*	(2,3,4)#		AB	
2710.6 *4*	(2,3,4)#		AB	
2739.19 *16*	(4$^-$)#	≤5.5† ps	ABC	
2788.1?			D	
2851.27 *17*	(2,3,4)#		A	
2856.89 *15*	(5)$^-$	25† ps *11*	A CD	J$^\pi$: assignment adopted from 2009Rz01 based on E1 γ to 4$^+$. 1980Ju03 (94Rb β^- decay makes the (4$^+$) assignment based on log *ft*=7.21 from 3$^{(-)}$ parent.
2921.8 *4*	(2$^+$)		A	J$^\pi$: log *ft*=7.4 in β^- decay of 3$^{(-)}$ parent, γ to 0$^+$ level.
2929.81 *16*	(2,3,4)#		AB	
2965.0 *5*	(2,3,4)#		A	
2972.07 *16*	(5$^-$)	≤6.2† ps	A CD	J$^\pi$: Q γ to 3$^{(-)}$ and D+Q γ to 4$^+$ reported in 2009Rz01; Based on log *ft*=7.34 in β^- decay from 3$^{(-)}$ parent J^π should be (2,3,4).
2981.1 *5*	(2,3,4)#		A	
3047.38 *19*	(2,3,4)#		A	
3077.70 *15*	2$^+$		A	J$^\pi$: γ's to 0$^+$ and 4$^+$.
3155.3‡	6$^+$		CD	J$^\pi$: E2 G to 4$^+$, member of g.s. cascade.
3262.34 *21*	(2,3,4)#		A	

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{94}Sr Levels (continued)

E(level)	J$^\pi$	T$_{1/2}$	XREF	Comments
3310.73 *21*	(5$^-$)[#]		A C	J$^\pi$: adopted from 2009Rz01 based on (Q) γ to 3$^{(-)}$; from the log *ft*=7.28 in the β^- decay from 3$^{(-)}$ parent the spin should be (2,3,4).
3338.42 *17*	(2,3,4)[#]		A	
3340.9? *3*	(2,3,4)[#]		A	
3438.61 *24*	(2,3,4)[#]	≤9.7[†] ps	AB	
3485.41? *24*	(2,3,4)[#]		A	
3580.35? *25*	(2,3,4)[#]		A	
3705.4	(6$^+$)		C	J$^\pi$: G to 4$^+$.
3724.7? *3*	(2,3,4)[#]		A	
3768.9 *7*	(2,3,4)[#]		A	
3793.1	(6$^-$)		C	J$^\pi$: D G to 6$^+$, G to 4$^-$.
3815.7? *8*	(2,3,4)[#]		A	
3922.8	(7)$^-$		CD	J$^\pi$: E1 G to 6$^+$.
3948.63 *19*	(2,3,4)[#]	≤4.2[†] ps	A	
3953.3? *10*	(2,3,4)[#]		A	
3968.9 *10*	(2,3,4)[#]		A	
3982.5 *10*	(2,3,4)[#]		A	
4024.2? *10*	(2,3,4)[#]		A	
4034.5	(7$^-$)		C	J$^\pi$: G to 6$^+$ and 5$^-$.
4066.4? *10*	(2,3,4)[#]		A	
4087.1? *10*	(2,3,4)[#]		A	
4117.4? *5*	(2,3,4)[#]		A	
4142.5? *10*	(2,3,4)[#]		A	
4168.2 *4*	(2,3,4)[#]		A	
4198.49 *23*	(2,3,4)[#]		A	
4211.0? *10*	(2,3,4)[#]		A	
4268.4? *10*	(2,3,4)[#]		A	
4281.65? *23*	(2,3,4)[#]		A	
4308.4? *10*	(2,3,4)[#]		A	
4361.0 *5*	(2,3,4)[#]		A	
4366.8? *10*	(2,3,4)[#]		A	
4382.8	(8$^-$)		CD	J$^\pi$: D G to (7)$^-$.
4481.1 *7*	(2,3,4)[#]		A	
4631.6	(8$^-$)		CD	
4653.5? *6*	(2,3,4)		A	
4673.7 *4*	(2,3,4)[#]		A	
4838.4 *3*	(2,3,4)[#]		A	
4857.4	(9$^-$)		CD	
5213.0? *10*	(2,3,4)[#]		A	
5223.2? *10*	(2,3,4)[#]		A	
5267.3? *10*	(2,3,4)[#]		A	
5289.1 *4*	(2,3,4)[#]		A	
5312.9? *10*	(2,3,4)[#]		A	
5402.4? *8*	(2,3,4)[#]		A	
5735.4? *10*	(2,3,4)[#]		A	

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Adopted Levels, Gammas (continued)

^{94}Sr Levels (continued)

E(level)	J^{π}	XREF
5739.7	$(10^{+},11^{-})$	CD
5828.2? *9*	(2,3,4)#	A
5831.1? *5*	(2,3,4)#	A
6063.7? *10*	(2,3,4)#	A

† From ^{94}Rb β^- decay.

‡ Band(A): Ground-state band.

From log *ft*=6.7-8.1 in β^- decay of $3^{(-)}$ parent.

$\gamma(^{94}Sr)$

E_i(level)	J^π_i	E_γ‡	I_γ	E_f	J^π_f	Mult.†	δ†	α	Comments
836.9	2^+	836.9 *1*	100	0.0	0^+	E2		0.000888 *13*	α(K)=0.000785 *11*; α(L)=8.63×10^{-5} *12*; α(M)=1.448×10^{-5} *21* α(O)=1.160×10^{-7} *17*; α(N+..)=1.93×10^{-6} B(E2)(W.u.)=8 *4* Mult.: From $\gamma\gamma(\theta)$ and B(E2)=8.4.
1926.28	(3^-)	1089.4 *2*	100	836.9	2^+	(E1)		0.000212 *3*	α(K)=0.000188 *3*; α(L)=2.01×10^{-5} *3*; α(M)=3.36×10^{-6} *5*; α(N)=4.23×10^{-7} *6* α(O)=2.77×10^{-8} *4*; α(N+..)=4.50×10^{-7} *7*
2146.00	4^+	1309.1 *2*	100	836.9	2^+	E2		0.000349 *5*	α(K)=0.000283 *4*; α(L)=3.06×10^{-5} *5*; α(M)=5.13×10^{-6} *8*; α(N)=6.44×10^{-7} *9* α(O)=4.20×10^{-8} *6*; α(N+..)=3.01×10^{-5} *5*
2271.22	(2^+)	1434.4 *2*	20.8 *17*	836.9	2^+				
		2271.4 *5*	100 *13*	0.0	0^+				
2414.11	(3^-)	1577.5 *2*	100	836.9	2^+	(E1+M2)	−0.02 *2*	0.000419 *6*	α(K)=9.89×10^{-5} *15*; α(L)=1.050×10^{-5} *16*; α(M)=1.76×10^{-6} *3*; α(N)=2.21×10^{-7} *4* α(O)=1.459×10^{-8} *22*; α(N+..)=0.000308 *5* B(E1)(W.u.)=(2.0×10^{-5} *7*); B(M2)(W.u.)=(0.015 *+30−15*)
2603.94	(4^-)	458.0 *1*	14.6 *13*	2146.00	4^+				
		677.7 *1*	100 *4*	1926.28	(3^-)	(M1+E2)	−0.54 *24*	0.001308 *19*	α(K)=0.001158 *17*; α(L)=0.0001256 *18*; α(M)=2.11×10^{-5} *3* α(O)=1.742×10^{-7} *25*; α(N+..)=2.83×10^{-6}
		1766.8# *4*	3.6 *5*	836.9	2^+				
2614.1	(2,3,4)	1777.2 *3*	100	836.9	2^+				
2649.78	$4^{(+)}$	503.8 *1*	100 *4*	2146.00	4^+	(M1+E2)	−0.35 *8*	0.00269 *6*	α(K)=0.00238 *6*; α(L)=0.000261 *7*; α(M)=4.39×10^{-5} *11*; α(N)=5.50×10^{-6} *13*; α(O)=3.57×10^{-7} *8* α(N+..)=5.86×10^{-6} *14*
		723.7 *2*	27 *5*	1926.28	(3^-)				
		1812.74 *24*	89 *6*	836.9	2^+	(E2)		0.000386 *6*	α(K)=0.0001485 *21*; α(L)=1.588×10^{-5} *23*; α(M)=2.66×10^{-6} *4* α(O)=2.20×10^{-8} *3*; α(N+..)=0.000219 Mult.: measured to be Q in ^{248}Cm SF decay.
2703.94	(2,3,4)	558.0 *1*	5.8 *6*	2146.00	4^+				
		1866.9 *3*	100 *9*	836.9	2^+				
2710.6	(2,3,4)	1873.7 *3*	100	836.9	2^+				
2739.19	(4^-)	812.9 *1*	100 *7*	1926.28	(3^-)				
		1902.2 *3*	8.5 *11*	836.9	2^+				
2788.1?		374.0#	100	2414.11	(3^-)				
2851.27	(2,3,4)	925.0 *1*	60 *5*	1926.28	(3^-)				
		2014.0 *4*	100 *12*	836.9	2^+				
2856.89	$(5)^-$	117.7 *2*	14 *3*	2739.19	(4^-)				
		207.14# *9*	29 *4*	2649.78	$4^{(+)}$				

$^{94}_{38}Sr_{56}$-4

$\gamma(^{94}$Sr) (continued)

E_i(level)	J_i^π	E_γ‡	I_γ	E_f	J_f^π	Mult.†	α	Comments
2856.89	(5)$^-$	253.0 *1*	95 *4*	2603.94	(4$^-$)			
		710.76 *2*	100 *8*	2146.00	4$^+$	E1	0.000500 *7*	α(K)=0.000444 *7*; α(L)=4.77×10^{-5} *7*; α(M)=7.99×10^{-6} *12*; α(N)=1.002×10^{-6} *14* α(O)=6.52×10^{-8} *10*; α(N+..)=1.068×10^{-6} *15* B(E1)(W.u.)=1.5×10^{-5} *7*
2921.8	(2$^+$)	2084.7 *4*	100 *10*	836.9	2$^+$			
		2922.3 *7*	24.4 *24*	0.0	0$^+$			
2929.81	(2,3,4)	783.8 *1*	27.4 *17*	2146.00	4$^+$			
		2093.0 *4*	100 *9*	836.9	2$^+$			
2965.0	(2,3,4)	2128.1 *4*	100	836.9	2$^+$			
2972.07	(5$^-$)	826.1 *1*	100 *8*	2146.00	4$^+$	D+Q		
		1045.7 *2*	82 *6*	1926.28	(3$^-$)	Q		
2981.1	(2,3,4)	2144.2 *4*	100	836.9	2$^+$			
3047.38	(2,3,4)	633.7 *2*	7.5 *10*	2414.11	(3$^-$)			
		1120.8 *2*	10.5 *10*	1926.28	(3$^-$)			
		2209.9 *4*	100 *10*	836.9	2$^+$			
3077.70	2$^+$	806.5 *1*	22 *8*	2271.22	(2$^+$)			
		931.6 *1*	50 *3*	2146.00	4$^+$			
		1151.7 *2*	100 *9*	1926.28	(3$^-$)			
		3076.6# *9*	41 *5*	0.0	0$^+$			
3155.3	6$^+$	183.5 *2*	15.6 *17*	2972.07	(5$^-$)			
		299.2	100 *11*	2856.89	(5)$^-$	D		
		1009.7	67 *6*	2146.00	4$^+$	E2	0.000566 *8*	α(K)=0.000501 *7*; α(L)=5.46×10^{-5} *8*; α(M)=9.16×10^{-6} *13*; α(N)=1.148×10^{-6} *16* α(O)=7.42×10^{-8} *11*; α(N+..)=1.222×10^{-6} *18*
3262.34	(2,3,4)	658.5 *2*	21 *3*	2603.94	(4$^-$)			
		1336.0 *3*	30 *3*	1926.28	(3$^-$)			
		2424.9 *5*	100 *10*	836.9	2$^+$			
3310.73	(5$^-$)	660.7 *4*	44 *6*	2649.78	4$^{(+)}$			
		1384.40 *24*	100 *6*	1926.28	(3$^-$)	(Q)		
		2474.2# *5*	25 *3*	836.9	2$^+$			
3338.42	(2,3,4)	734.5 *1*	55 *8*	2603.94	(4$^-$)			
		2501.0 *5*	100 *11*	836.9	2$^+$			
3340.9?	(2,3,4)	601.7 *2*	100	2739.19	(4$^-$)			
3438.61	(2,3,4)	1292.6 *2*	100	2146.00	4$^+$			
3485.41?	(2,3,4)	1339.4# *2*	100	2146.00	4$^+$			
3580.35?	(2,3,4)	976.4# *2*	100	2603.94	(4$^-$)			
3705.4	(6$^+$)	1559.4 *4*	100	2146.00	4$^+$			
3724.7?	(2,3,4)	1453.5# *2*	100	2271.22	(2$^+$)			

Adopted Levels, Gammas (continued)

$\gamma(^{94}\mathrm{Sr})$ (continued)

E_i(level)	J_i^π	E_γ‡	I_γ	E_f	J_f^π	Mult.†	α	Comments
3768.9	(2,3,4)	2931.9 7	100	836.9	2^+			
3793.1	(6^-)	482.3 4	60 8	3310.73	(5^-)			
		637.5 4	100 12	3155.3	6^+	D		
		1189.0	100 12	2603.94	(4^-)			
3815.7?	(2,3,4)	2978.7# 8	100	836.9	2^+			
3922.8	$(7)^-$	130.0 2	44 4	3793.1	(6^-)			
		217.5 4	8 3	3705.4	(6^+)			
		767.3 4	100.0	3155.3	6^+	E1	0.000425 6	α(K)=0.000377 6; α(L)=4.04×10^{-5} 6; α(M)=6.77×10^{-6} 10; α(N)=8.50×10^{-7} 12 α(O)=5.54×10^{-8} 8; α(N+..)=9.06×10^{-7} 13
		951.0# 4	18 3	2972.07	(5^-)			
		1066.1 4	12 3	2856.89	$(5)^-$			
3948.63	(2,3,4)	1244.9 2	23.5 23	2703.94	(2,3,4)			
		1345.0	15.2	2603.94	(4^-)			
		1534.3 2	50 4	2414.11	(3^-)			
		2022.3 4	100 11	1926.28	(3^-)			
3953.3?	(2,3,4)	3116.3# 10	100	836.9	2^+			
3968.9	(2,3,4)	3131.9 10	100	836.9	2^+			
3982.5	(2,3,4)	3145.5 10	100	836.9	2^+			
4024.2?	(2,3,4)	3187.2# 10	100	836.9	2^+			
4034.5	(7^-)	878.8 4	100 13	3155.3	6^+	D+Q		
		1177.5 4	41 6	2856.89	$(5)^-$			
4066.4?	(2,3,4)	3229.4# 10	100	836.9	2^+			
4087.1?	(2,3,4)	3250.1# 10	100	836.9	2^+			
4117.4?	(2,3,4)	1703.3# 4	100	2414.11	(3^-)			
4142.5?	(2,3,4)	3305.5# 10	100	836.9	2^+			
4168.2	(2,3,4)	1755.8 8	100 25	2414.11	(3^-)			
		2241.5 4	60 8	1926.28	(3^-)			
4198.49	(2,3,4)	1594.5 2	22.7 20	2603.94	(4^-)			
		2272.2 5	100 20	1926.28	(3^-)			
		3362.2 10	15.3 20	836.9	2^+			
4211.0?	(2,3,4)	3374.0# 10	100	836.9	2^+			
4268.4?	(2,3,4)	3431.4# 10	100	836.9	2^+			
4281.65?	(2,3,4)	1632.0# 2	100 9	2649.78	$4^{(+)}$			
		2354.4# 5	62 6	1926.28	(3^-)			
4308.4?	(2,3,4)	3471.4# 10	100	836.9	2^+			
4361.0	(2,3,4)	1757.0 4	100	2603.94	(4^-)			

From ENSDF

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Adopted Levels, Gammas (continued)

γ(^{94}Sr) (continued)

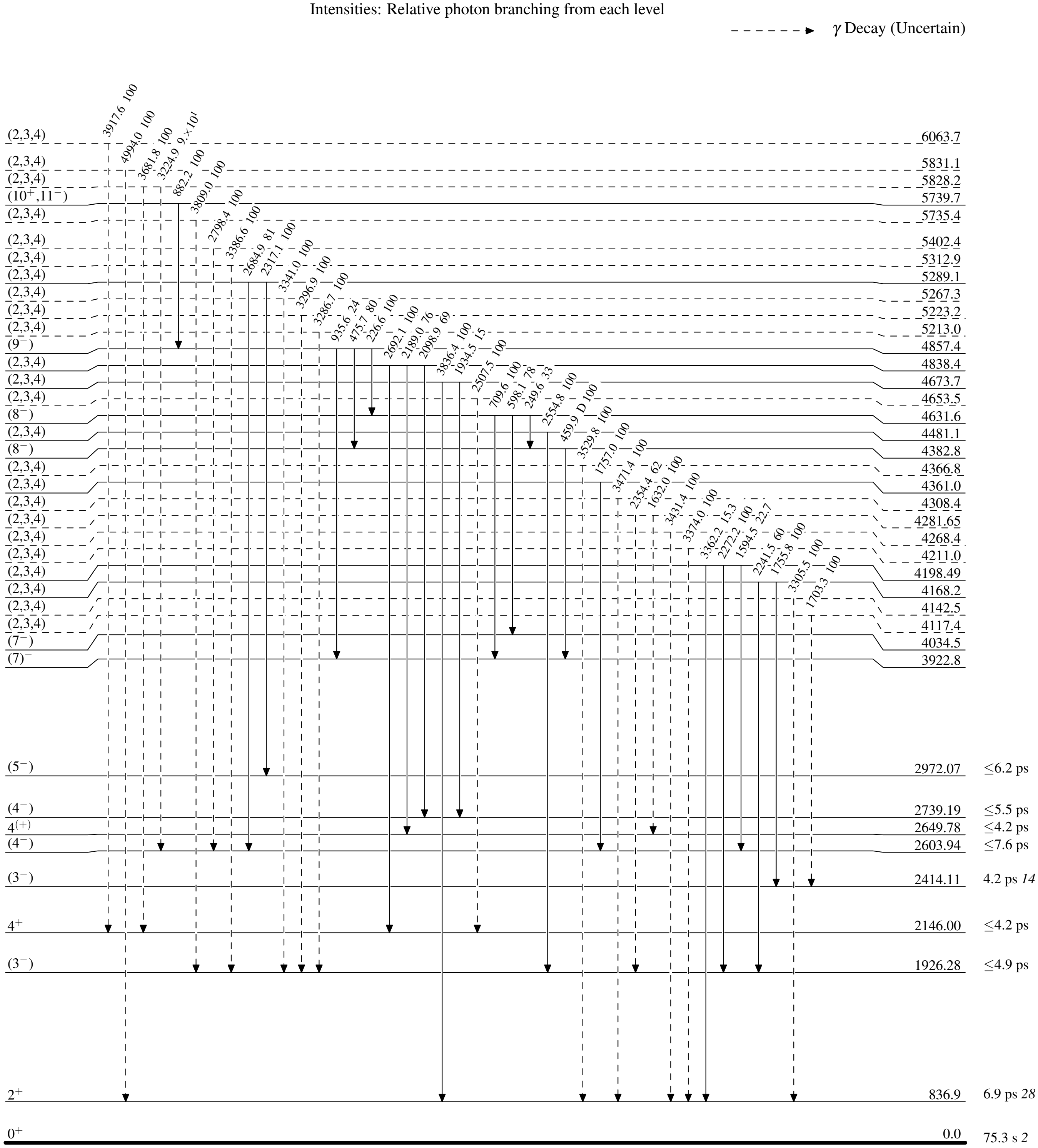
E_i(level)	J^π_i	E_γ[‡]	I_γ	E_f	J^π_f	Mult.[†]
4366.8?	(2,3,4)	3529.8[#] *10*	100	836.9	2^+	
4382.8	(8^-)	459.9 *4*	100	3922.8	$(7)^-$	D
4481.1	(2,3,4)	2554.8 *6*	100	1926.28	(3^-)	
4631.6	(8^-)	249.6 *2*	33 *7*	4382.8	(8^-)	
		598.1 *4*	78 *11*	4034.5	(7^-)	
		709.6 *4*	100 *16*	3922.8	$(7)^-$	
4653.5?	(2,3,4)	2507.5[#] *5*	100	2146.00	4^+	
4673.7	(2,3,4)	1934.5 *4*	15 *4*	2739.19	(4^-)	
		3836.4 *10*	100 *10*	836.9	2^+	
4838.4	(2,3,4)	2098.9 *4*	69 *7*	2739.19	(4^-)	
		2189.0 *4*	76 *7*	2649.78	$4^{(+)}$	
		2692.1 *6*	100 *11*	2146.00	4^+	
4857.4	(9^-)	226.6 *2*	100 *10*	4631.6	(8^-)	
		475.7 *4*	80 *10*	4382.8	(8^-)	
4857.4	(9^-)	935.6 *4*	24 *4*	3922.8	$(7)^-$	
5213.0?	(2,3,4)	3286.7[#] *10*	100	1926.28	(3^-)	
5223.2?	(2,3,4)	3296.9[#] *10*	100	1926.28	(3^-)	
5267.3?	(2,3,4)	3341.0[#] *10*	100	1926.28	(3^-)	
5289.1	(2,3,4)	2317.1 *5*	100 *11*	2972.07	(5^-)	
		2684.9 *6*	81 *7*	2603.94	(4^-)	
5312.9?	(2,3,4)	3386.6[#] *10*	100	1926.28	(3^-)	
5402.4?	(2,3,4)	2798.4[#] *7*	100	2603.94	(4^-)	
5735.4?	(2,3,4)	3809.0[#] *10*	100	1926.28	(3^-)	
5739.7	$(10^+,11^-)$	882.2 *4*	100	4857.4	(9^-)	
5828.2?	(2,3,4)	3224.9[#] *15*	$9.\times10^1$ *4*	2603.94	(4^-)	
		3681.8[#] *10*	100	2146.00	4^+	
5831.1?	(2,3,4)	4994.0[#] *5*	100	836.9	2^+	
6063.7?	(2,3,4)	3917.6[#] *10*	100	2146.00	4^+	

† From angular correlations studied in ^{94}Rb β^- decay, and ^{248}Cm SF Decay unless stated otherwise.
‡ The gamma energies and the BRs are calculated as weighted average from ^{94}Rb β^- decay and ^{248}Cm SF Decay, where available.
# Placement of transition in the level scheme is uncertain.

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level



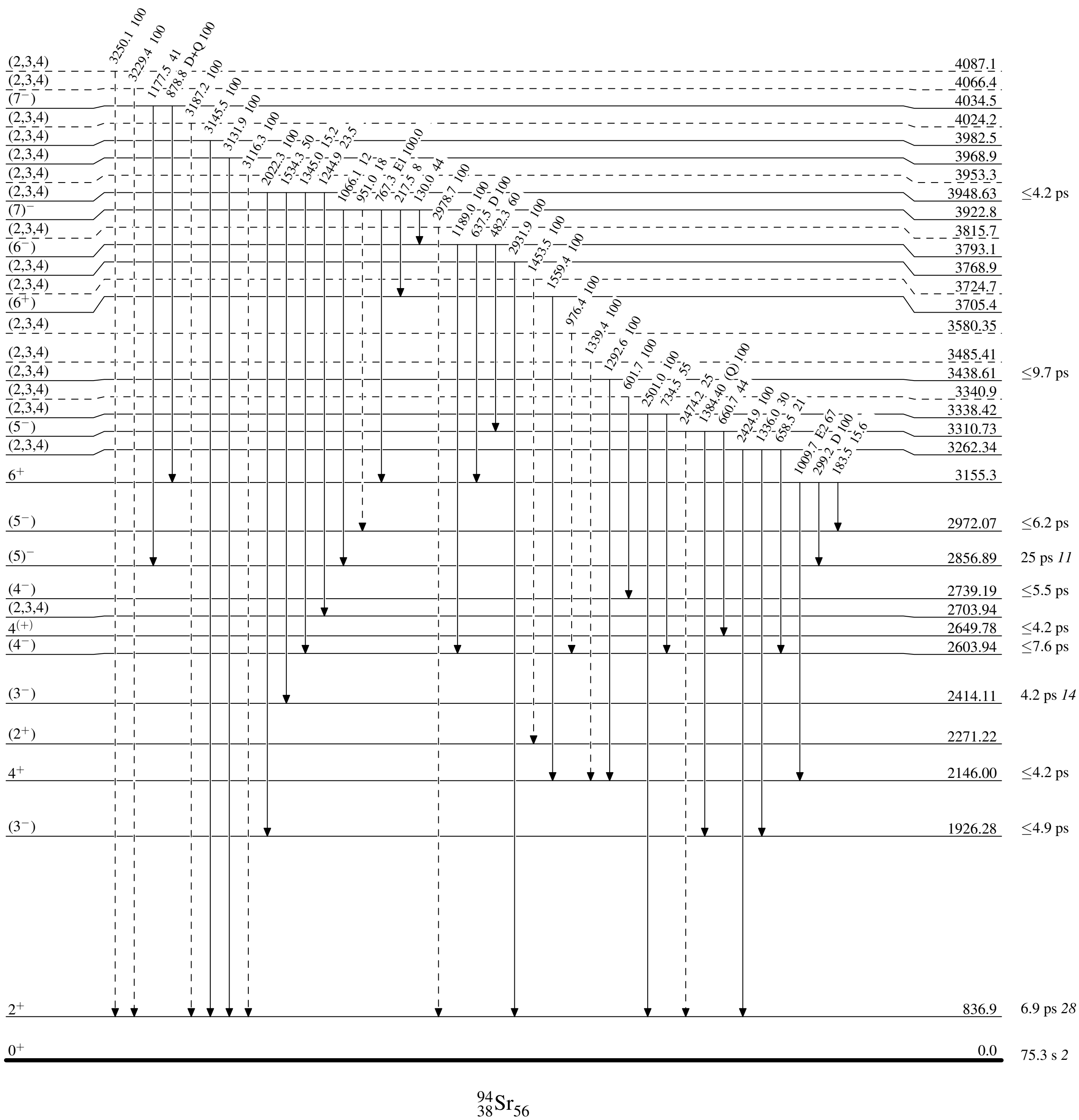
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

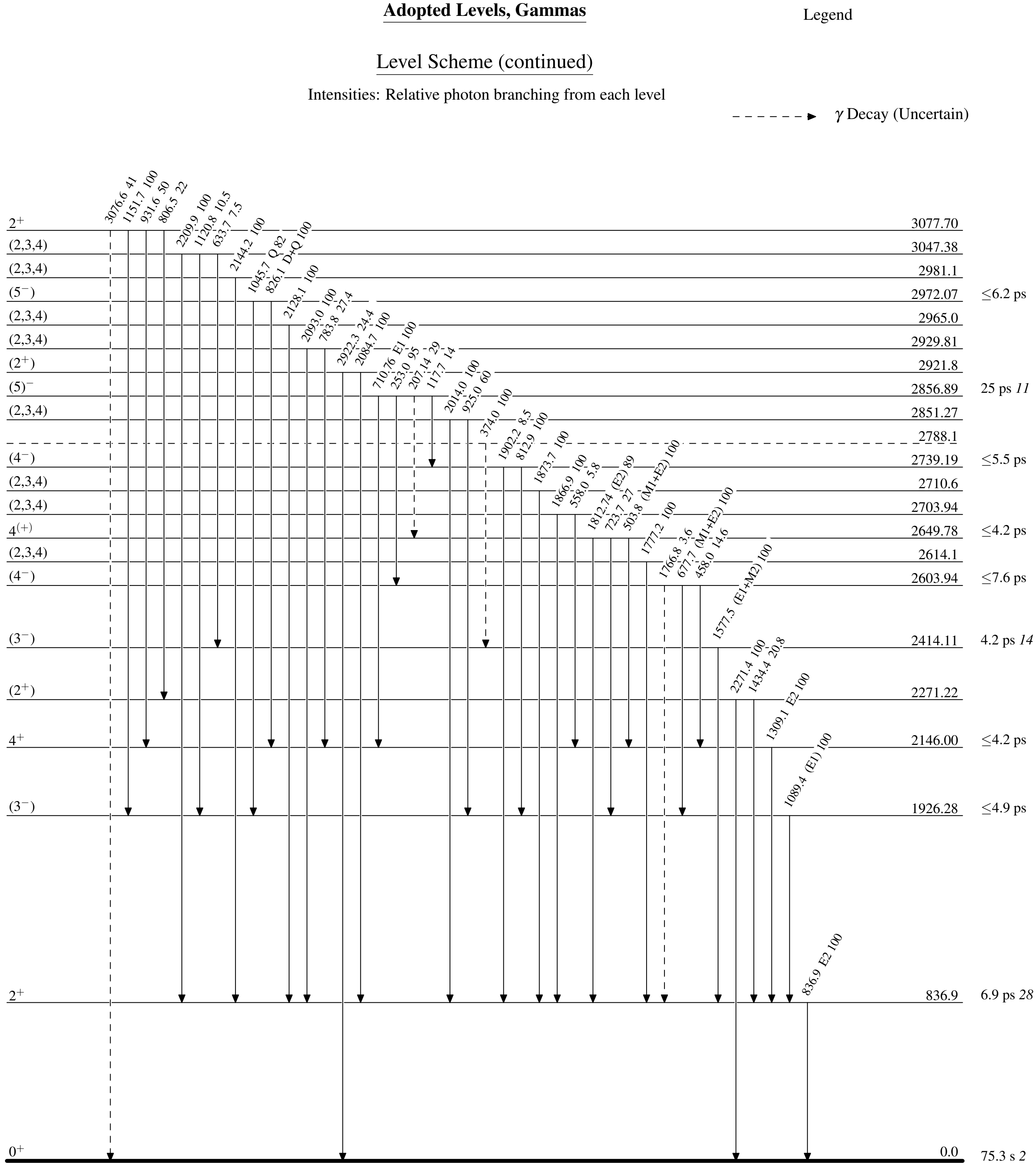
γ Decay (Uncertain)



Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



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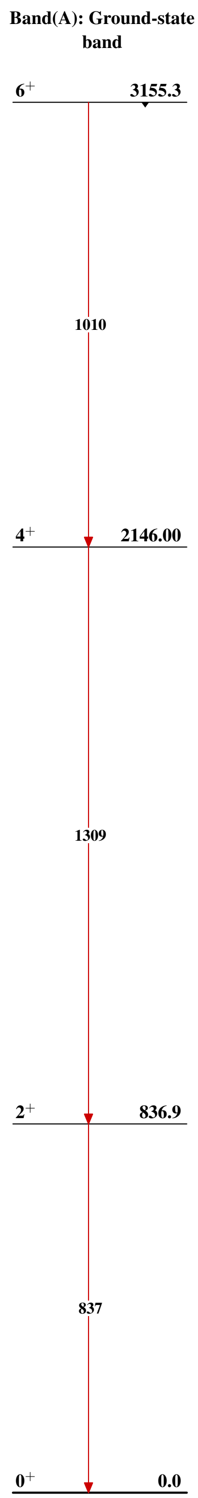
Adopted Levels, Gammas



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