Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jun Chen	NDS 174,1 (2021)	15-Apr-2021

Q(β^-)=−4205 *15*; S(n)=7965 *15*; S(p)=6458 *11*; Q(α)=−491 *12* 2021Wa16
S(2n)=18910 *14*, S(2p)=11283 *28* (2021Wa16).
Mass measurements: −85160 *30* deduced by 1996Os04 from measured Q(ε)=4110 *30* of ^{123}Cs ε decay and known mass excess=−81053 *12* for ^{123}Cs; −85237 *12* (2004Di18, penning trap).
See the dataset of (^{48}Ca,5nγ):SD for data of super-deformed bands (2021Ba03).

^{123}Xe Levels

Band assignments are from 2020Ba12 in (^{48}Ca,5nγ):Nd and 1998Sc23 in (^{18}O,5nγ), unless otherwise noted. Assignments are also available from 2001Ga25 in (^{3}He,3nγ). See (^{48}Ca,5nγ):SD for super-deformed bands (2021Ba03).

Cross Reference (XREF) Flags

A	^{123}Cs ε decay	D	^{110}Pd(^{18}O,5nγ)
B	^{80}Se(^{48}Ca,5nγ):Nd	E	^{114}Cd(^{12}C,3nγ),(^{13}C,4nγ)
C	^{80}Se(^{48}Ca,5nγ):SD	F	^{123}Te(^{3}He,3nγ)

E(level)[†]	J$^\pi$[‡]	$T_{1/2}$	XREF	Comments
0.0[g]	1/2$^{(+)}$	2.050 h *14*	AB DEF	%ε+%β^+=100 μ=−0.150 *3* (1990NeZY,2014StZZ) J$^\pi$: spin from Collinear Fast Beam Laser Spectroscopy (1990NeZY); strong β^++ε feeding from 1/2$^{(+)}$ in ^{123}Cs; systematics of odd-mass xenon isotopes favors 1/2$^+$. $T_{1/2}$: weighted average of 2.040 h *9* (2021Ze01), 2.10 h *3* (1969Bu07), and 2.08 h *2* (1965An05). Others: 1.85 h *3* (1960Mo09), 1.85 h *10* (1962Pr09), 1.85 h *5* (1965Bu03), 1.83 h *15* (1967DaZY), and 2.23 h *2* (1974Jo16), are discrepant. μ: from Collinear Fast Beam Laser Spectroscopy (1990NeZY) and 2014StZZ compilation.
97.37[h] *3*	3/2$^{(+)}$	380 ps *30*	AB DEF	J$^\pi$: 97.4γ M1, ΔJ=1 to 1/2$^{(+)}$; strong β^++ε feeding from 1/2$^{(+)}$ in ^{123}Cs; spin=3/2 proposed by 1981Lu01 in (^{3}He,3nγ) and 1982Ze05 in (^{12}C,3nγ) based on $\gamma(\theta)$; systematics of odd-mass xenon isotopes also favors 3/2$^+$. $T_{1/2}$: from ce-γ-coin in ^{123}Cs ε decay (1987Fr10).
180.75 *4*	5/2$^{(+)}$	2.5 ns *2*	AB DEF	J$^\pi$: 180.6γ E2, ΔJ=2 to 1/2$^{(+)}$, 83.4γ M1, ΔJ=1 to 3/2$^{(+)}$. $T_{1/2}$: from ce-γ-coin in ^{123}Cs ε decay (1987Fr10).
185.30 *16*	7/2$^{(-)}$	5.7 μs *3*	B DEF	%IT=100 μ=−0.896 *7*; Q=1.4 *3* (1982Ze05) E(level): the position of this isomeric state is proposed by 1981Lu01 in (^{3}He,3nγ), based on their observation of the 66.8γ from the 252 level in coincidence with the 266.4γ and 515.7γ both feeding the 252 level. It is proposed as 180+x by 1982Ze05 in (^{12}C,3nγ), feeding the 180 level with an unobserved transition of E=x. J$^\pi$: spin=7/2 from analysis of the quadrupole modulation spectra by 1982Ze05 in (^{12}C,3nγ); negative parity proposed in 1981Lu01 based on possible 57γ(M1)−21γ(M1) cascade from 263,(11/2$^-$) level. $T_{1/2}$: weighted average of 5.2 μs *5* (1982Ze05) in (^{12}C,3nγ), 5.6 μs *3* (1981Lu01) and 6.3 μs *5* (1970Ke01) in (^{3}He,3nγ). μ,Q: from TDPAD in 1982Ze05. Value of μ does not include correction for dia-magnetic shielding or Knight shift; value of Q is relative to ^{125}Xe

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Adopted Levels, Gammas (continued)

^{123}Xe Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$	XREF	Comments
				(296,7/2$^+$ level) (1982Ze05). See also 2014StZZ compilation. Additional information 1.
206.38[a] *19*	(9/2$^-$)	11.8 ns *14*	B DEF	Q=1.1 *6* (1982Ze05,2016St14) Jπ: 21.1γ to 7/2$^{(-)}$, 57γ M1+E2, ΔJ=1 from (11/2$^-$); systematics of 9/2$^-$ levels in neighboring odd-mass xenon isotopes. $T_{1/2}$: from γ(t) in (^{12}C,3nγ) (1982Ze05). Q: from model-independent ratio of Q(9/2$^-$)/Q(7/2$^-$)=0.80 *40* from the analysis of the amplitude reduction and phase shift and Q(9/2$^-$)=1.4 *3* measured by TDPAD (1982Ze05). But 1.1 *7* is quoted in 1982Ze05.
252.01[o] *5*	(7/2$^+$)		AB DEF	Jπ: 71.3γ D+Q, ΔJ=1 to 5/2$^{(+)}$, 66.7γ to 7/2$^{(-)}$; band assignment.
263.39[e] *17*	(11/2$^-$)	1.5 ns *3*	B DEF	Jπ: proposed as the band head of the $h_{11/2}$ band by 1981Lu01 in (^{3}He,3nγ) based on systematics of observed $h_{11/2}$ bands of neighboring odd-mass xenon isotopes. $T_{1/2}$: from recoil-distance method (1982Ze05).
307.10[g] *7*	5/2$^{(+)}$		AB D F	Jπ: 307.1γ E2, ΔJ=2 to 1/2$^{(+)}$.
437.58[h] *14*	7/2$^{(+)}$		AB DEF	Jπ: 340.2γ E2, ΔJ=2 to 3/2$^{(+)}$, 130.5γ D+Q, ΔJ=1 to 5/2$^{(+)}$.
442.58 *9*	(1/2$^+$,3/2$^+$)		A F	Jπ: 261.8γ M1,E2 to 5/2$^{(+)}$, 442.6γ to 1/2$^{(+)}$; possible direct β^++ε feeding from 1/2$^{(+)}$ in ^{123}Cs.
467.04 *13*	(7/2$^+$)		EF	Jπ: 286.3γ M1+E2, ΔJ=1 to 5/2$^{(+)}$, 215.0γ D+Q, ΔJ=0 to (7/2$^+$), also 330.2γ D+Q from (9/2$^+$).
518.48[n] *14*	(9/2$^+$)		B DEF	Jπ: 266.4γ M1+E2, ΔJ=1 to (7/2$^+$), 255.2γ D(+Q) to (11/2$^-$).
567.7 *5*	(7/2$^-$,9/2$^-$,11/2$^-$)		F	Jπ: 382.4γ to 7/2$^{(-)}$, 304.5γ to (11/2$^-$).
585.75 *12*	(3/2$^+$)		A F	Jπ: 488.4γ to 3/2$^{(+)}$, 333.7γ to (7/2$^+$); possible direct β^++ε feeding from 1/2$^{(+)}$ in ^{123}Cs.
596.59 *9*	(1/2$^+$,3/2$^+$)		A	Jπ: 596.6γ M1,E2 to 1/2$^{(+)}$; direct β^++ε feeding from 1/2$^{(+)}$ in ^{123}Cs.
611.08 *8*	(1/2$^+$,3/2$^+$)		A	Jπ: 611.1γ M1,E2 to 1/2$^{(+)}$; direct β^++ε feeding from 1/2$^{(+)}$ in ^{123}Cs.
614.3 *6*	(3/2$^+$,5/2,7/2$^+$)		F	Jπ: 516.9γ to 3/2$^{(+)}$, possible 363.2γ to (7/2$^+$).
662.12[a] *20*	(13/2$^-$)		B DEF	Jπ: 398.7γ M1+E2, ΔJ=1 to (11/2$^-$); probable band assignment.
693.73 *17*	(1/2,3/2)		A	Jπ: 693.8γ to 1/2$^{(+)}$; possible β^++ε feeding from 1/2$^{(+)}$ in ^{123}Cs.
719.25[e] *20*	(15/2$^-$)	12.5 ps *21*	B DEF	Jπ: 455.8γ E2, ΔJ=2 to (11/2$^-$); probable band assignment. $T_{1/2}$: from recoil-distance method in (^{12}C,3nγ) (1982Ze05).
731.35 *13*	(9/2$^+$)		F	Jπ: 424.4γ Q(+O), ΔJ=2 to 5/2$^{(+)}$, 264.3γ D+Q, ΔJ=1 to (7/2$^+$), 550.6γ to 5/2$^{(+)}$.
741.47 *6*	(1/2$^+$,3/2$^+$)		A	Jπ: 434.3γ M1,E2 to 5/2$^{(+)}$, 741.5γ to 1/2$^{(+)}$; direct β^++ε feeding from 1/2$^{(+)}$ in ^{123}Cs.
750.7 *5*	(9/2$^-$,11/2$^-$)		F	Jπ: 565.3γ to 7/2$^{(-)}$, 509.6γ from (13/2$^-$).
759.7 *7*			F	
767.64[o] *15*	(11/2$^+$)		B DEF	Jπ: 515.6γ Q, ΔJ=2 to (7/2$^+$), 249.2γ D+Q to (9/2$^+$); probable band assignment.
776.7 *4*	(5/2,7/2,9/2$^+$)		F	Jπ: 596.0γ to 5/2$^{(+)}$, 591.4γ to 7/2$^{(-)}$, 339.1γ to 7/2$^{(+)}$.
798.04[g] *19*	(9/2$^+$)		F	Jπ: 491.1γ Q(+O), ΔJ=2 to 5/2$^{(+)}$, 278.9γ to (9/2$^+$); probable band assignment.
848.37 *11*	(1/2$^+$,3/2)		A F	E(level): there is no evidence for two separate levels of 847.9 and 848.5 proposed by 2001Ga25 in (^{3}He,3nγ). So only a single level is adopted based on ^{123}Cs ε decay. Jπ: 848.0γ to 1/2$^{(+)}$, 667.8γ to 5/2$^{(+)}$; possible β^++ε feeding from 1/2$^{(+)}$ in ^{123}Cs.
863.9 *6*	(5/2$^+$,7/2$^+$)		F	Jπ: 345.4γ to (9/2$^+$), 421.3γ to (1/2$^+$,3/2$^+$).
867.9 *6*	(11/2$^-$)		F	Jπ: 682.5γ to 7/2$^{(-)}$,673.2γ from (15/2$^-$).
877.32[b] *20*	(13/2$^-$)		B D F	Jπ: 614.0γ D+Q, ΔJ=1 to (11/2$^-$), 670.9γ Q, ΔJ=2 to (9/2$^-$);

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Adopted Levels, Gammas (continued)

^{123}Xe Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$	XREF	Comments
				probable band assignment.
917.45 *21*	(3/2$^+$)		A F	Jπ: possible β^++ε feeding from 1/2$^{(+)}$ in ^{123}Cs; 610.3γ to 5/2$^{(+)}$, possible 481.0γ to 7/2$^{(+)}$.
934.81[h] *23*	(11/2$^+$)		B D F	Jπ: 497.2γ Q, ΔJ=2 to 7/2$^{(+)}$; probable band assignment.
971.0 *5*	(11/2$^-$)		F	Jπ: 764.6γ D+Q to (9/2$^-$), 308.9γ D+Q to (13/2$^-$).
1032.36 *24*	(1/2$^+$,3/2)		A	Jπ: possible β^++ε feeding from 1/2$^{(+)}$ in ^{123}Cs; 725.1γ to 5/2$^{(+)}$.
1041.6 *5*	(11/2$^-$)		F	Jπ: 379.4γ D(+Q), ΔJ=1 to (13/2$^-$), 835.0γ to (9/2$^-$).
1046.4 *4*	(7/2$^+$)		F	Jπ: 460.6γ to (3/2$^+$), 249.0γ to (9/2$^+$), 839.8γ to (9/2$^-$).
1051.19 *22*	(9/2$^+$,11/2$^+$)		F	Jπ: 532.7γ D+Q to (9/2$^+$), 584.0γ to (7/2$^+$), 379.5γ from (13/2$^+$).
1054.5 *12*			F	
1082.13[n] *19*	(13/2$^+$)		B D F	Jπ: 314.5γ D+Q, ΔJ=1 to (11/2$^+$), 363.3γ D(+Q) to (15/2$^-$); probable band assignment.
1125.72 *19*	(1/2$^+$,3/2)		A	Jπ: possible β^++ε feeding from 1/2$^{(+)}$ in ^{123}Cs; 819.0γ to 5/2$^{(+)}$.
1145.2 *6*			F	
1260.4 *3*	(13/2$^-$)		F	Jπ: 289.3γ D+Q to (11/2$^-$), 541.1γ D+Q to (15/2$^-$).
1270.05[a] *21*	(15/2$^-$)		B DEF	Jπ: 608.0γ D+Q, ΔJ=1 to (13/2$^-$), 550.9γ D+Q to (15/2$^-$).
1273.28 *18*	(1/2,3/2)		A	Jπ: possible β^++ε feeding from 1/2$^{(+)}$ in ^{123}Cs.
1278.0 *8*			F	
1294.02[f] *22*	(17/2$^-$)		B DEF	Jπ: 631.9γ E2(+M3) to (13/2$^-$), 574.2γ D+Q to (15/2$^-$).
1325.5 *8*			F	
1336.16[e] *23*	(19/2$^-$)	≤3.5 ps	B DEF	Jπ: 617.0γ E2, ΔJ=2 to (15/2$^-$); probable band assignment. $T_{1/2}$: from recoil-distance method in (^{12}C,3nγ) (1982Ze05).
1339.0 *6*			F	
1384.3 *12*			F	
1397.65[o] *22*	(15/2$^+$)		B D F	Jπ: 630.0γ E2, ΔJ=2 to (11/2$^+$), 315.5γ to (13/2$^+$); probable band assignment.
1430.8[g] *6*	(13/2$^+$)		F	Jπ: 633.2γ Q(+O), ΔJ=2 to (9/2$^+$), 663.0γ to (11/2$^+$); probable band assignment.
1452.83 *14*	(1/2,3/2)		A	Jπ: possible β^++ε feeding from 1/2$^{(+)}$ in ^{123}Cs.
1519.9 *7*			F	
1521.96[b] *22*	(17/2$^-$)		B D F	Jπ: 802.7γ D+Q to (15/2$^-$); probable band assignment.
1541.1 *3*	(15/2$^-$)		F	Jπ: 879.0γ D+Q, ΔJ=1 to (13/2$^-$), 821.9γ to (15/2$^-$), 499.6γ to (11/2$^-$), possible 247.1γ to (17/2$^-$).
1554.2[h] *3*	(15/2$^+$)		B D F	Jπ: 619.4γ Q, ΔJ=2 to (11/2$^+$); probable band assignment.
1580.7 *3*	(11/2$^-$ to 15/2$^-$)		F	Jπ: 539.0γ to (11/2$^-$), 861.4γ to (15/2$^-$).
1618.6 *11*			F	
1696.4 *11*			F	
1733.1 *8*			F	
1757.9[n] *4*	(17/2$^+$)		B D F	Jπ: 1038.9γ D(+Q) to (15/2$^-$); probable band assignment.
1759.0 *10*			F	
1827.8 *5*	(17/2$^-$)		F	Jπ: 557.9γ D+Q, ΔJ=1 to (15/2$^-$), 491.6γ to (19/2$^-$), 567.4γ to (13/2$^-$).
1841.6 *6*			F	
1947.6 *11*	(15/2$^-$)		F	Jπ: 1285.5γ D(+Q), ΔJ=1 to (13/2$^-$).
1949.43 *23*			F	
1953.54[a] *22*	(19/2$^-$)		B D F	Jπ: 617.3γ to (19/2$^-$), 683.6γ Q to (15/2$^-$).
2063.1[f] *3*	(21/2$^-$)		B D F	Jπ: 769.1γ Q, ΔJ=2 to (17/2$^-$), 727.1γ D+Q to (19/2$^-$); probable band assignment.
2089.7[e] *3*	(23/2$^-$)		B DEF	Jπ: 753.3γ E2, ΔJ=2 to (19/2$^-$); probable band assignment.
2112.5[o] *3*	(19/2$^+$)		B D F	Jπ: 714.9γ Q, ΔJ=2 to (15/2$^+$), 818.7γ to (17/2$^-$); probable band assignment.
2144.6[g] *8*	(17/2$^+$)		F	Jπ: band assignment.
2197.1 *8*			F	
2210.0 *6*	(15/2$^-$ to 19/2$^-$)		F	Jπ: 668.9γ to (15/2$^-$), 873.8γ to (19/2$^-$).

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Adopted Levels, Gammas (continued)

^{123}Xe Levels (continued)

E(level)[†]	J$^{\pi}$[‡]	XREF	Comments
2226.0 *8*		F	
2227.6 *11*	(23/2$^-$)	B	E(level),J$^{\pi}$: from (^{48}Ca,5nγ) only.
2230.6[h] *5*	(19/2$^+$)	B D F	J$^{\pi}$: 676.7γ to (15/2$^+$); probable band assignment.
2248.9 *7*		F	
2284.6[b] *5*	(21/2$^-$)	B D F	J$^{\pi}$: 762.7γ Q to (17/2$^-$), 948.1γ D+Q to (19/2$^-$).
2416.3? *6*		F	
2422.3 *7*	(19/2$^+$)	B D F	J$^{\pi}$: 1128.7γ D to (17/2$^-$), 541.9γ from (23/2$^+$).
2497.5[n] *3*	(21/2$^+$)	B D F	J$^{\pi}$: 739.6γ Q to (17/2$^+$); probable band assignment.
2689.1 *4*	(21/2$^+$)	B D F	J$^{\pi}$: 267.1γ D+Q to (19/2$^+$), 1353.4γ to (19/2$^-$), 480.2γ from (25/2$^+$).
2769.7[a] *3*	(23/2$^-$)	B D F	J$^{\pi}$: 816.1γ Q to (19/2$^-$), 679.7γ D+Q to (23/2$^-$).
2822.3[p] *3*	(23/2$^+$)	B D F	J$^{\pi}$: 709.7γ Q to (19/2$^+$); probable band assignment.
2882.4[o] *3*	(23/2$^+$)	B D F	J$^{\pi}$: 652.1γ and 770.3γ Q to (19/2)$^+$; probable band assignment.
2951.7[f] *4*	(25/2$^-$)	B D F	J$^{\pi}$: 888.6γ Q to (21/2$^-$), 861.8γ D to (23/2$^-$).
2964.2[h] *3*	(23/2$^+$)	B D F	J$^{\pi}$: 541.9γ and 733.7γ Q to (19/2$^+$), 275.0γ D+Q to (21/2$^+$).
2965.6[e] *3*	(27/2$^-$)	B DEF	J$^{\pi}$: 875.9γ Q to (23/2$^-$); probable band assignment.
2991.5 *4*	(27/2$^-$)	B	J$^{\pi}$: 901.9γ Q to (23/2$^-$), 763.9γ to (19/2$^+$).
3152.7[b] *6*	(25/2$^-$)	B D F	J$^{\pi}$: 868.2γ Q to (21/2$^-$), 1062.7γ to (23/2$^-$).
3169.3 *3*	(25/2$^+$)	B D F	J$^{\pi}$: 480.3γ Q to (21/2$^+$), 1079.6γ D to (23/2$^-$).
3210.2[n] *4*	(25/2$^+$)	B D F	J$^{\pi}$: 712.4γ Q to (21/2$^+$); probable band assignment.
3349.6[j] *3*	(27/2$^+$)	B D F	J$^{\pi}$: 180.4γ D+Q to (25/2$^+$); probable band assignment.
3479.1[p] *4*	(27/2$^+$)	B D F	J$^{\pi}$: 656.8γ Q to (23/2$^+$); probable band assignment.
3559.7[o] *6*	(27/2$^+$)	B	Additional information 2.
3652.7 *11*		D	
3820.5[i] *4*	(29/2$^+$)	B D	
3854.0[a] *5*	(27/2$^-$)	B D	
3905.5[n] *7*	(29/2$^+$)	B D	Additional information 3.
3908.2[#] *3*	(27/2$^-$)	B D	Additional information 4.
3951.4[e] *4*	(31/2$^-$)	B D	Additional information 5.
3956.6[f] *7*	(29/2$^-$)	B D	
4019.4 *4*	(29/2$^+$)	B	Additional information 6.
4103.5[b] *7*	(29/2$^-$)	B D	Additional information 7.
4155.9[j] *4*	(31/2$^+$)	B D	Additional information 8.
4213.5[p] *4*	(31/2$^+$)	B D	Additional information 9.
4283.9[@] *5*	(29/2$^-$)	B	Additional information 10.
4325.6[o] *7*	(31/2$^+$)	B	Additional information 11.
4355.2 *7*	(31/2$^-$)	B D	
4609.2[#] *3*	(31/2$^-$)	B D	Additional information 12.
4627.8[i] *4*	(33/2$^+$)	B D	Additional information 13.
4724.9[n] *8*	(33/2$^+$)	B	Additional information 14.
4880.4 *5*	(33/2$^+$)	B	Additional information 15.
4934.1 *8*	(33/2$^-$)	B	Additional information 16.
5010.5[e] *4*	(35/2$^-$)	B D	Additional information 17.
5027.0[@] *5*	(33/2$^-$)	B	Additional information 18.
5036.5[j] *4*	(35/2$^+$)	B D	Additional information 19.
5043.8[f] *8*	(33/2$^-$)	B D	Additional information 20.
5064.8[c] *7*	(33/2$^-$)	B	Additional information 21.
5066.8[p] *4*	(35/2$^+$)	B D	Additional information 22.
5109.8 *9*	(33/2$^-$)	B	Additional information 23.
5207.8[o] *7*	(35/2$^+$)	B	Additional information 24.
5213.7 *7*	(35/2$^-$)	B D	Additional information 25.

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Adopted Levels, Gammas (continued)

^{123}Xe Levels (continued)

E(level)[†]	Jπ[‡]	XREF	Comments
5286.2 *9*	(33/2$^-$)	B	Additional information 26.
5329.1[b] *12*	(33/2$^-$)	B D	Additional information 27.
5338.1[#] *4*	(35/2$^-$)	B D	Additional information 28.
5418.3 *7*	(35/2$^-$)	B	Additional information 29.
5519.6[i] *4*	(37/2$^+$)	B D	Additional information 30.
5585.6[&] *9*	(35/2$^-$)	B	
5651.3[n] *13*	(37/2$^+$)	B	
5687.6 *7*	(35/2$^-$)	B	
5793.7[@] *5*	(37/2$^-$)	B	
5915.8[j] *4*	(39/2$^+$)	B D	
6034.4[p] *4*	(39/2$^+$)	B D	
6046.1[e] *5*	(39/2$^-$)	B D	
6049.1[f] *8*	(37/2$^-$)	B	
6070.5[c] *5*	(37/2$^-$)	B	
6134.1[#] *4*	(39/2$^-$)	B D	
6165.5[o] *7*	(39/2$^+$)	B	
6374.4[&] *6*	(39/2$^-$)	B	
6418.5 *5*	(39/2$^-$)	B	
6465.2 *5*	(39/2$^-$)	B D	
6477.4[i] *4*	(41/2$^+$)	B D	
6655.5[@] *5*	(41/2$^-$)	B	
6684.1[n] *17*	(41/2$^+$)	B	
6789.6[c] *5*	(41/2$^-$)	B	
7067.2[#] *6*	(43/2$^-$)	B D	
7084.7[j] *4*	(43/2$^+$)	B D	
7107.2[e] *6*	(43/2$^-$)	B D	
7115.2[p] *6*	(43/2$^+$)	B D	
7257.9[&] *5*	(43/2$^-$)	B	
7279.1[o] *8*	(43/2$^+$)	B	
7482.0[i] *5*	(45/2$^+$)	B D	
7617.8[@] *6*	(45/2$^-$)	B	
7781.0 *9*	(45/2$^-$)	B	
7807.8[n] *20*	(45/2$^+$)	B	
7840.5 *20*		B	
7970.2[c] *6*	(45/2$^-$)	B	
7991.2[j] *5*	(47/2$^+$)	B D	
8075.6[#] *7*	(47/2$^-$)	B D	
8189.6 *6*	(47/2$^+$)	B	
8218.5[e] *6*	(47/2$^-$)	B D	
8225.2[&] *6*	(47/2$^-$)	B	
8298.6[p] *8*	(47/2$^+$)	B D	
8364.0 *7*	(47/2$^-$)	B	
8448.9[o] *13*	(47/2$^+$)	B	
8454.0[i] *5*	(49/2$^+$)	B D	
8690.9[@] *7*	(49/2$^-$)	B	
8694.4 *6*	(49/2$^+$)	B	
8955.5[c] *7*	(49/2$^-$)	B	
8975.4 *14*	(49/2$^-$)	B	
9124.2[j] *5*	(51/2$^+$)	B	

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{123}Xe Levels (continued)

E(level)[†]	Jπ[‡]	XREF
9257.7[#] 7	(51/2⁻)	B D
9357.1[d] 7	(53/2⁻)	B
9377.2[&] 12	(51/2⁻)	B
9419.1[i] 6	(53/2⁺)	B D
9423.1[e] 8	(51/2⁻)	B D
9465.5[q] 9		B
9566.6[p] 13	(51/2⁺)	B
9591.0 13		B
9809.2[l] 6	(53/2⁺)	B
9904.5[k] 7		B
9906.8[@] 8	(53/2⁻)	B
10068.4[j] 6	(55/2⁺)	B
10135.5 7	(55/2⁻)	B
10489.8[#] 9	(55/2⁻)	B
10574.6[&] 16	(55/2⁻)	B
10597.4[i] 7	(57/2⁺)	B
10614.1 8	(57/2⁺)	B
10634.7[q] 14		B
10680.1[e] 13	(55/2⁻)	B
10708.4[p] 16	(55/2⁺)	B
10824.0 8	(57/2⁺)	B
10890.8[d] 9	(57/2⁻)	B
11046.4 9	(57/2⁻)	B
11090.0 8	(59/2⁻)	B
11098.0[l] 8	(57/2⁺)	B
11133.1[k] 8		B
11175.7[j] 8	(59/2⁺)	B
11176.0[@] 11	(57/2⁻)	B
11440.8[m] 12		B
11721.5[d] 9	(61/2⁻)	B
11808.8[i] 8	(61/2⁺)	B
11851.4[p] 19	(59/2⁺)	B
11898.8?[q] 17		B
11999.0[e] 14	(59/2⁻)	B
12040.2 9	(61/2⁺)	B
12146.8[l] 9	(61/2⁺)	B
12216.9? 12		B
12236.7 9	(63/2⁻)	B
12296.0[k] 9		B
12324.1 12		B
12492.2 10	(63/2⁻)	B
12858.8 12		B
12921.3[m] 16		B
13173.5[i] 10	(65/2⁺)	B
13433.1 10	(67/2⁻)	B
13438.7 14	(65/2⁻)	B
14485.1 11		B
14521.7 11		B
14554.5 17	(69/2⁻)	B

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{123}Xe Levels (continued)

E(level)[†]	Jπ[‡]	XREF	Comments
14760.3 *11*	(69/2$^-$)	B	
(2965.6+u)	(31/2$^-$)	D	Additional information 31. Decays to 2965, 27/2$^-$ and 3350, 27/2$^+$ levels through unknown transitions. Level energy should be about 5.5 MeV (2002Ra34).
3117.6+u[s] *4*	(33/2$^-$)	D	
3316.9+u[r] *6*	(35/2$^-$)	D	
3543.0+u[s] *7*	(37/2$^-$)	D	
3788.7+u[r] *7*	(39/2$^-$)	D	
4086.9+u[s] *7*	(41/2$^-$)	D	
4444.2+u[r] *7*	(43/2$^-$)	D	
4920.0+u[s] *8*	(45/2$^-$)	D	
5409.3+u[r] *9*	(47/2$^-$)	D	

[†] From a least-square fits to γ-ray energies. For the fitting purpose only, where $\Delta E\gamma$ is not given, a value of 0.5 keV for $E\gamma$ quoted to nearest tenth keV and 1 keV for $E\gamma$ quoted to nearest keV are assumed. See (^{48}Ca,5nγ):SD for additional levels from super-deformed bands.

[‡] Assignments for levels above 3479 are based on probable band assignments from (^{18}O,5nγ) and (^{48}Ca,5nγ) and $\gamma(\theta)$ in (^{48}Ca,5nγ).

[#] Band(A): Band based on 3909,(27/2$^-$) level, α=−1/2.

[@] Band(a): Band based on 4284,(29/2$^-$) level, α=+1/2.

[&] Band(B): Band based on 5585,(35/2$^-$) level.

[a] Band(C): Band based on 206,(9/2$^-$) level (1998Sc23). A different band is proposed by 2001Ga25 based on (9/2$^-$) level and overlaps with the band based on 877,(13/2$^-$) in 1998Sc23.

[b] Band(D): Band based on 877,(13/2$^-$) level.

[c] Band(E): Band based on 5065,(33/2$^-$) level.

[d] Band(F): Band based on 9357,(53/2$^-$) level.

[e] Band(G): Band based on 263,(11/2$^-$) level.

[f] Band(H): Band based on 1294,(17/2$^-$) level.

[g] Band(I): 1/2$^{(+)}$ g.s. band (2001Ga25).

[h] Band(J): Band based on 97,3/2$^{(+)}$ level.

[i] Band(k): Band based on 3821,(29/2$^+$) level, α=+1/2.

[j] Band(K): Band based on 3350,(27/2$^+$) level, α=−1/2.

[k] Band(L): Band based on 9905 level.

[l] Band(M): Band based on 9810 level.

[m] Band(N): Band based on 11441 level.

[n] Band(O): Band based on 519,(9/2$^+$) level.

[o] Band(P): Band based on 252,(7/2$^+$) level.

[p] Band(Q): Band based on 2823,(23/2$^+$) level.

[q] Band(R): Band based on 9465 level.

[r] Band(S): Band based on (35/2$^-$), α=−1/2 from 2002Ra34 in (^{18}O,5nγ).

[s] Band(s): Band based on (33/2$^-$), α=+1/2 from 2002Ra34 in (^{18}O,5nγ).

Adopted Levels, Gammas (continued)

$\gamma(^{123}Xe)$

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[@]	δ	α[†]	Comments
97.37	$3/2^{(+)}$	97.38[#] *3*	100	0.0	$1/2^{(+)}$	M1		0.885	B(M1)(W.u.)=0.0333 *26* α(K)=0.760 *11*; α(L)=0.1003 *14*; α(M)=0.0204 *3* α(N)=0.00422 *6*; α(O)=0.000526 *8* E_γ: other: 97.3 *1* from (^{3}He,3nγ). Mult.: from ce data in ^{123}Cs ε decay. Others: D+Q with δ=+0.11 *4* from $\gamma(\theta)$ in (^{12}C,3nγ) and D(+Q) from $\gamma(\theta)$ and $\gamma\gamma(\theta)$ in (^{3}He,3nγ), with ΔJ=1.
180.75	$5/2^{(+)}$	83.38[#] *2*	100[#] *6*	97.37	$3/2^{(+)}$	M1		1.380	B(M1)(W.u.)=0.00593 *48* α(K)=1.184 *17*; α(L)=0.1567 *22*; α(M)=0.0319 *5* α(N)=0.00659 *10*; α(O)=0.000821 *12* E_γ,I_γ: other: 83.2 *1* with Iγ=100 *10* from (^{3}He,3nγ). Mult.: from ce data in ^{123}Cs ε decay; supported by $\gamma(\theta)$ in (^{3}He,3nγ) and (^{12}C,3nγ).
		180.61 *14*	15.0 *15*	0.0	$1/2^{(+)}$	E2		0.228	B(E2)(W.u.)=1.90 *26* α(K)=0.178 *3*; α(L)=0.0400 *6*; α(M)=0.00841 *12* α(N)=0.001685 *25*; α(O)=0.000183 *3* E_γ: weighted average of 180.64 *14* from ^{123}Cs ε decay and 180.6 *1* from (^{3}He,3nγ). I_γ: weighted average of 14.7 *15* from ^{123}Cs ε decay and 16 *3* from (^{3}He,3nγ). Mult.: Q from $\gamma(\theta)$ in (^{12}C,3nγ); M1,E2 from ce data in ^{123}Cs ε decay.
185.30	$7/2^{(-)}$	4.6[b]		180.75	$5/2^{(+)}$	[E1]		34.3	B(E1)(W.u.)=1.40×10^{-5} *9* α(M)=29.0 *4* α(N)=5.01 *7*; α(O)=0.347 *5* E_γ: from level-energy difference; not observed. This transition is inferred by 1981Lu01 from the fact that decay curves of the 180.5γ and 83.3γ from 185 level and the 97.3γ from 97.3 level were observed to follow the isomeric decay.
206.38	$(9/2^-)$	21.1 *2*	100	185.30	$7/2^{(-)}$	[M1]		11.2 *4*	B(M1)(W.u.)=0.0163 *+34−26* α(L)=8.9 *3*; α(M)=1.81 *6* α(N)=0.374 *12*; α(O)=0.0465 *15* Mult.: 1981Lu01 in (^{3}He,3nγ) states the intensity balance require the same character for the 21γ as the 57γ, which is pure M1 proposed by 1981Lu01 based on $\gamma(\theta)$.
252.01	$(7/2^+)$	66.7 *2*	11 *3*	185.30	$7/2^{(-)}$				
		71.26[#] *3*	100 *10*	180.75	$5/2^{(+)}$	(M1+E2)	−0.02 *5*	2.17 *4*	α(K)=1.86 *3*; α(L)=0.248 *10*; α(M)=0.0504 *21* α(N)=0.0104 *4*; α(O)=0.00130 *4* E_γ: other: 71.3 *3* from (^{3}He,3nγ).

$^{123}_{54}Xe_{69}$-8

Adopted Levels, Gammas (continued)

γ(^{123}Xe) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[@]	δ	α[†]	Comments
									Mult.,δ: D+Q, ΔJ=1 from γ(θ) in (^{3}He,3nγ); M1+E2 required by level scheme.
263.39	(11/2$^-$)	57.0 *2*	100 *10*	206.38	(9/2$^-$)	M1+E2	+0.07 *+2−3*	4.19 *8*	B(M1)(W.u.)=0.0147 *+45−30*; B(E2)(W.u.)=16 *+18−12* α(K)=3.57 *7*; α(L)=0.502 *21*; α(M)=0.102 *5* α(N)=0.0211 *9*; α(O)=0.00259 *9* Mult.: D+Q from γ(θ) in (^{3}He,3nγ) and (^{12}C,3nγ); M2 ruled out by RUL. δ: weighted average of 0.06 *+2−3* from γ(θ) in (^{3}He,3nγ) (1981Lu01) and +0.09 *4* from γ(θ) in (^{12}C,3nγ) (1982Ze05).
		78.1 *2*	3.3 *10*	185.30	7/2$^{(-)}$	[E2]		4.37 *8*	B(E2)(W.u.)=22 *+18−11* α(K)=2.53 *4*; α(L)=1.46 *3*; α(M)=0.314 *6* α(N)=0.0618 *12*; α(O)=0.00611 *11*
307.10	5/2$^{(+)}$	209.6[#] *2*	4.6 *5*	97.37	3/2$^{(+)}$	E2,M1		0.121 *16*	α(K)=0.100 *10*; α(L)=0.017 *6*; α(M)=0.0035 *12* α(N)=0.00072 *23*; α(O)=8.3×10^{-5} *21* E_γ: others: 209.5 *10* from (^{48}Ca,5nγ), 209.9 from (^{3}He,3nγ). I_γ: weighted average of 4.5 *5* from ^{123}Cs ε decay and 5.0 *10* from (^{3}He,3nγ). Mult.: from ce data in ^{123}Cs ε decay.
		307.1[#] *1*	100[#] *8*	0.0	1/2$^{(+)}$	E2		0.0388	α(K)=0.0320 *5*; α(L)=0.00542 *8*; α(M)=0.001121 *16* α(N)=0.000228 *4*; α(O)=2.62×10^{-5} *4* E_γ,I_γ: others: 307.2 *2* with Iγ=100 *10* in (^{3}He,3nγ); 306.9 *10* from (^{48}Ca,5nγ). Mult.: from ce data and γ(θ) (ΔJ=2) in (^{3}He,3nγ) and ce data in ^{123}Cs ε decay.
437.58	7/2$^{(+)}$	130.5 *2*	14 *1*	307.10	5/2$^{(+)}$	D+Q	0.06 *4*		E_γ: from (^{3}He,3nγ). Other: 131.2 *10* from (^{48}Ca,5nγ). Mult.,δ: from (^{3}He,3nγ). Mult and δ from γ(θ) giving ΔJ=1.
		340.2 *2*	100 *10*	97.37	3/2$^{(+)}$	E2		0.0281	α(K)=0.0233 *4*; α(L)=0.00380 *6*; α(M)=0.000784 *11* α(N)=0.0001594 *23*; α(O)=1.85×10^{-5} *3* E_γ: weighted average of 340.1 *2* from ^{123}Cs ε decay and 340.2 *2* from (^{3}He,3nγ). Other: 340.2 *10* from (^{48}Ca,5nγ). Mult.: from ce data and γ(θ) (ΔJ=2) in (^{3}He,3nγ) and γ(θ) in (^{12}C,3nγ).
442.58	(1/2$^+$,3/2$^+$)	261.8 *1*	100 *10*	180.75	5/2$^{(+)}$	M1,E2		0.062 *4*	α(K)=0.0516 *17*; α(L)=0.0081 *16*; α(M)=0.0017 *4* α(N)=0.00034 *7*; α(O)=4.0×10^{-5} *6* E_γ: weighted average of 261.8 *1* from ^{123}Cs ε decay and 261.9 *2* from (^{3}He,3nγ). I_γ: from (^{3}He,3nγ). Other: 100 *16* from ^{123}Cs ε decay. Mult.: from ce data in ^{123}Cs ε decay.

$^{123}_{54}Xe_{69}$-9

Adopted Levels, Gammas (continued)

γ(^{123}Xe) (continued)

E_i(level)	J_i^π	E_γ ‡	I_γ ‡	E_f	J_f^π	Mult. @	δ	α †	Comments
442.58	(1/2$^+$,3/2$^+$)	345.3 *2*	15 *6*	97.37	3/2$^{(+)}$				E_γ: also from ^{123}Cs ε decay. I_γ: unweighted average of 9.7 *18* from ^{123}Cs ε decay and 21 *5* from (^{3}He,3nγ).
		442.6 *2*	29 *4*	0.0	1/2$^{(+)}$				E_γ: other: 442.8 from (^{3}He,3nγ). I_γ: weighted average of 26 *4* from ^{123}Cs ε decay and 32 *4* from (^{3}He,3nγ).
467.04	(7/2$^+$)	215.0 *2*	17 *2*	252.01	(7/2$^+$)	D(+Q)	0.5 *+16−8*		Mult.,δ: from (^{3}He,3nγ). Mult and δ from γ(θ), giving ΔJ=1.
		286.3 *2*	100 *10*	180.75	5/2$^{(+)}$	M1+E2	−1.9 *3*	0.0481	α(K)=0.0398 *6*; α(L)=0.00656 *16*; α(M)=0.00135 *4* α(N)=0.000275 *7*; α(O)=3.20×10^{-5} *7* Mult.: from ce data and γ(θ) (ΔJ=1) in (^{3}He,3nγ) and γ(θ) (ΔJ=1) in (^{12}C,3nγ). δ: from γ(θ) in (^{3}He,3nγ). Other: <0 from (^{12}C,3nγ).
518.48	(9/2$^+$)	255.1 *2*	25 *3*	263.39	(11/2$^-$)	D(+Q)	0.02 *6*		E_γ: from (^{3}He,3nγ). Other: 255.1 *10* from (^{48}Ca,5nγ). Mult.,δ: from (^{3}He,3nγ). Mult and δ from γγ(θ).
		266.4 *2*	100 *10*	252.01	(7/2$^+$)	M1+E2	−0.9 *3*	0.0583 *14*	α(K)=0.0489 *8*; α(L)=0.0075 *6*; α(M)=0.00153 *12* α(N)=0.000313 *23*; α(O)=3.72×10^{-5} *20* E_γ: from (^{3}He,3nγ). Other: 266.2 *10* from (^{48}Ca,5nγ). Mult.: from ce data, γ(θ) (ΔJ=1) and γγ(θ) in (^{3}He,3nγ) and γ(θ) (ΔJ=1) in (^{12}C,3nγ). δ: from γ(θ) and γγ(θ) in (^{3}He,3nγ). Others: <−0.18 from γ(θ) in (^{12}C,3nγ).
		312.2	23 *2*	206.38	(9/2$^-$)				
		333.3	29 *3*	185.30	7/2$^{(-)}$				
		337.8	25 *3*	180.75	5/2$^{(+)}$				
567.7	(7/2$^-$,9/2$^-$,11/2$^-$)	304.5	6 *1*	263.39	(11/2$^-$)				
		361.3	100 *10*	206.38	(9/2$^-$)				
		382.4	12 *1*	185.30	7/2$^{(-)}$				
585.75	(3/2$^+$)	278.6	22 *5*	307.10	5/2$^{(+)}$				
		333.7 *2*	72 *10*	252.01	(7/2$^+$)				E_γ: from ^{123}Cs ε decay. Other: 333.8 from (^{3}He,3nγ). I_γ: weighted average of 63 *13* from ^{123}Cs ε decay and 77 *10* from (^{3}He,3nγ).
		405.0 *2*	100 *12*	180.75	5/2$^{(+)}$				E_γ: from ^{123}Cs ε decay. Other: 405.1 from (^{3}He,3nγ). I_γ: from (^{3}He,3nγ). Other: 100 *19* from ^{123}Cs ε decay.
		488.4 *2*	79 *11*	97.37	3/2$^{(+)}$				E_γ: from ^{123}Cs ε decay. Other: 448.4 from (^{3}He,3nγ). I_γ: weighted average of 94 *19* from ^{123}Cs ε decay and 74 *11* from (^{3}He,3nγ).

Adopted Levels, Gammas (continued)

γ(^{123}Xe) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[@]	δ	α[†]	Comments
596.59	(1/2$^+$,3/2$^+$)	499.2[#] *2*	11.3[#] *15*	97.37	3/2$^{(+)}$	E2,M1		0.0101 *11*	α(K)=0.0086 *11*; α(L)=0.00116 *6*; α(M)=0.000237 *11* α(N)=4.88×10^{-5} *25*; α(O)=6.0×10^{-6} *5* Mult.: from ce data in ^{123}Cs ε decay.
		596.6[#] *1*	100[#] *9*	0.0	1/2$^{(+)}$	M1,E2		0.0064 *9*	α(K)=0.0055 *8*; α(L)=0.00072 *7*; α(M)=0.000147 *13* α(N)=3.0×10^{-5} *3*; α(O)=3.7×10^{-6} *4* Mult.: from ce data in ^{123}Cs ε decay.
611.08	(1/2$^+$,3/2$^+$)	304.0[#] *1*	22[#] *5*	307.10	5/2$^{(+)}$	M1,E2		0.0397 *7*	α(K)=0.0335 *7*; α(L)=0.0050 *7*; α(M)=0.00102 *14* α(N)=0.00021 *3*; α(O)=2.50×10^{-5} *22* Mult.: from ce data in ^{123}Cs ε decay.
		430.5[#] *2*	6.5[#] *13*	180.75	5/2$^{(+)}$				
		513.6[#] *4*	≈45[#]	97.37	3/2$^{(+)}$				
		611.1[#] *2*	100[#] *12*	0.0	1/2$^{(+)}$				
614.3	(3/2$^+$,5/2,7/2$^+$)	307.1[b]	<32	307.10	5/2$^{(+)}$				
		362.2[b]	32 *5*	252.01	(7/2$^+$)				
		433.5	64 *8*	180.75	5/2$^{(+)}$				
		516.9	100 *12*	97.37	3/2$^{(+)}$				
662.12	(13/2$^-$)	398.7 *2*	100 *10*	263.39	(11/2$^-$)	M1+E2	−0.55 *5*	0.0191	α(K)=0.01636 *25*; α(L)=0.00217 *3*; α(M)=0.000442 *7* α(N)=9.12×10^{-5} *13*; α(O)=1.127×10^{-5} *16* E_γ: from (^{3}He,3nγ). Other: 399.0 *10* from (^{48}Ca,5nγ). Mult.,δ: from γ(θ), γγ(θ) and ce data in (^{3}He,3nγ), with ΔJ=1 and δ from γ(θ). Other: δ<−0.4, ΔJ=1 from γ(θ) in (^{12}C,3nγ).
		455.8[a] *2*	50[a] *5*	206.38	(9/2$^-$)				E_γ: from (^{3}He,3nγ). Other: 455.7 *10* from (^{48}Ca,5nγ).
693.73	(1/2,3/2)	693.8[#] *2*	100	0.0	1/2$^{(+)}$				
719.25	(15/2$^-$)	455.8[a] *2*	100[a]	263.39	(11/2$^-$)	E2		0.01167	B(E2)(W.u.)=63 *+13−9* α(K)=0.00984 *14*; α(L)=0.001462 *21*; α(M)=0.000300 *5* α(N)=6.13×10^{-5} *9*; α(O)=7.29×10^{-6} *11* E_γ: from (^{3}He,3nγ). Other: 455.6 *10* from (^{48}Ca,5nγ). Mult.: from γ(θ) in (^{12}C,3nγ) and (^{3}He,3nγ); M2 ruled out by RUL.
731.35	(9/2$^+$)	213.0	48 *5*	518.48	(9/2$^+$)				
		264.3 *2*	53 *6*	467.04	(7/2$^+$)	D+Q	−0.3 *+2−5*		Mult.,δ: from γ(θ) and γγ(θ) in (^{3}He,3nγ), with δ from γ(θ).
		294.0	16 *3*	437.58	7/2$^{(+)}$				
		424.4	40 *5*	307.10	5/2$^{(+)}$	Q(+O)	−0.05 *+6−3*		Mult.,δ: from γγ(θ) in (^{3}He,3nγ).
		468.2[b]	12 *3*	263.39	(11/2$^-$)				

Adopted Levels, Gammas (continued)

γ(^{123}Xe) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[@]	δ	α[†]	Comments
731.35	(9/2$^+$)	479.3 *2*	69 *8*	252.01	(7/2$^+$)				
		550.6 *2*	100 *11*	180.75	5/2$^{(+)}$				
741.47	(1/2$^+$,3/2$^+$)	130.3[#] *2*	2.7[#] *4*	611.08	(1/2$^+$,3/2$^+$)	[M1,E2]		0.55 *17*	α(K)=0.43 *10*; α(L)=0.10 *6*; α(M)=0.021 *12* α(N)=0.0042 *24*; α(O)=0.00045 *23*
		434.3[#] *1*	31[#] *4*	307.10	5/2$^{(+)}$	M1,E2		0.0146 *13*	α(K)=0.0125 *12*; α(L)=0.00172 *3*; α(M)=0.000350 *5* α(N)=7.20×10^{-5} *13*; α(O)=8.8×10^{-6} *4* Mult.: from ce data in ^{123}Cs ε decay.
		644.1[#] *1*	83[#] *17*	97.37	3/2$^{(+)}$				
		741.5[#] *1*	100[#] *13*	0.0	1/2$^{(+)}$				
750.7	(9/2$^-$,11/2$^-$)	183.0	8 *2*	567.7	(7/2$^-$,9/2$^-$,11/2$^-$)				
		487.4	100 *11*	263.39	(11/2$^-$)				
		544.3	43 *6*	206.38	(9/2$^-$)				
		565.3	25 *5*	185.30	7/2$^{(-)}$				
759.7		192.0	100 *12*	567.7	(7/2$^-$,9/2$^-$,11/2$^-$)				
		553.4	51 *7*	206.38	(9/2$^-$)				
		574.3	92 *12*	185.30	7/2$^{(-)}$				
767.64	(11/2$^+$)	249.2 *2*	15 *2*	518.48	(9/2$^+$)	D+Q	−0.62 *3*		E_γ: from (^{3}He,3nγ). Other: 249.0 *10* from (^{48}Ca,5nγ). Mult.,δ: from γ(θ) and γγ(θ) in (^{3}He,3nγ), with δ from γγ(θ).
		515.6 *2*	100 *10*	252.01	(7/2$^+$)	Q			Mult.: from γ(θ) in (^{3}He,3nγ) and (^{12}C,3nγ).
776.7	(5/2,7/2,9/2$^+$)	309.7	29 *3*	467.04	(7/2$^+$)				
		339.1	100 *11*	437.58	7/2$^{(+)}$				
		469.7	31 *4*	307.10	5/2$^{(+)}$				
		524.7	32 *5*	252.01	(7/2$^+$)				
		591.4	57 *6*	185.30	7/2$^{(-)}$				
		596.0	76 *8*	180.75	5/2$^{(+)}$				
798.04	(9/2$^+$)	278.9	7 *1*	518.48	(9/2$^+$)				
		331.2	46 *5*	467.04	(7/2$^+$)	D+Q	−0.28 *2*		Mult.,δ: from γγ(θ) in (^{3}He,3nγ).
		359.9	<4	437.58	7/2$^{(+)}$				
		491.1 *2*	100 *10*	307.10	5/2$^{(+)}$	Q(+O)	−0.05 *+6−3*		Mult.,δ: from γγ(θ) in (^{3}He,3nγ).
		545.5	41 *4*	252.01	(7/2$^+$)				
848.37	(1/2$^+$,3/2)	154.8[#] *3*	5.2[#] *17*	693.73	(1/2,3/2)	[M1+E2]		0.31 *8*	α(K)=0.25 *5*; α(L)=0.051 *24*; α(M)=0.011 *6* α(N)=0.0021 *10*; α(O)=0.00024 *10*
		237.6[#] *3*	22[#] *16*	611.08	(1/2$^+$,3/2$^+$)				
		251.8[#] *2*	6.6[#] *7*	596.59	(1/2$^+$,3/2$^+$)				

Adopted Levels, Gammas (continued)

γ(^{123}Xe) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[@]	δ	α[†]	Comments
848.37	(1/2$^+$,3/2)	541.0[#] *5*	50[#] *19*	307.10	5/2$^{(+)}$				E_γ: other: 541.5 from (^{3}He,3nγ).
		667.8[#] *2*	100[#] *23*	180.75	5/2$^{(+)}$				E_γ: other: 667.8 from (^{3}He,3nγ).
		750.8[#] *2*	67[#] *5*	97.37	3/2$^{(+)}$				
		848.0[#] *5*	14[#] *4*	0.0	1/2$^{(+)}$				
863.9	(5/2$^+$,7/2$^+$)	249.7	40 *8*	614.3	(3/2$^+$,5/2,7/2$^+$)				
		278.2[b]	27 *6*	585.75	(3/2$^+$)				
		345.4	47 *10*	518.48	(9/2$^+$)				
		396.9	26 *8*	467.04	(7/2$^+$)				
		421.3	100 *15*	442.58	(1/2$^+$,3/2$^+$)				
		678.8[b]	149 *20*	185.30	7/2$^{(-)}$				
867.9	(11/2$^-$)	661.5	33 *4*	206.38	(9/2$^-$)				
		682.5	100 *11*	185.30	7/2$^{(-)}$	[E2]		0.00395	α(K)=0.00338 *5*; α(L)=0.000458 *7*; α(M)=9.32×10^{-5} *13* α(N)=1.92×10^{-5} *3*; α(O)=2.34×10^{-6} *4*
877.32	(13/2$^-$)	614.0 *2*	100 *10*	263.39	(11/2$^-$)	D+Q	14 *+5−3*		E_γ: from (^{3}He,3nγ). Other: 613.7 *10* from (^{48}Ca,5nγ). Mult.,δ: from γ(θ) and γγ(θ) in (^{3}He,3nγ), with δ and ΔJ=1 from γ(θ).
		670.9 *2*	64 *7*	206.38	(9/2$^-$)	Q			Mult.: from γ(θ) in (^{3}He,3nγ).
917.45	(3/2$^+$)	481.0		437.58	7/2$^{(+)}$				E_γ: from (^{3}He,3nγ) only.
		610.3[#] *2*	100	307.10	5/2$^{(+)}$				E_γ: other: 611.4 from (^{3}He,3nγ).
934.81	(11/2$^+$)	137.5	1 *1*	798.04	(9/2$^+$)				
		416.5	2 *1*	518.48	(9/2$^+$)				
		497.2 *2*	100 *10*	437.58	7/2$^{(+)}$	Q			E_γ: from (^{3}He,3nγ). Other: 497.0 *10* from (^{48}Ca,5nγ). Mult.: from γ(θ) in (^{3}He,3nγ).
971.0	(11/2$^-$)	308.9	26 *3*	662.12	(13/2$^-$)	D+Q			Mult.: from γγ(θ) in (^{3}He,3nγ). δ: −0.3 *1* or −4 *+1−2* from γγ(θ) in (^{3}He,3nγ).
		403.4	13 *2*	567.7	(7/2$^-$,9/2$^-$,11/2$^-$)				
		707.6	43 *5*	263.39	(11/2$^-$)				
		764.6	100 *10*	206.38	(9/2$^-$)	D+Q	−1.05 *+34−51*		Mult.,δ: from γγ(θ) in (^{3}He,3nγ).
1032.36	(1/2$^+$,3/2)	422.0[#] *5*	70[#] *30*	611.08	(1/2$^+$,3/2$^+$)				
		725.1[#] *3*	90[#] *20*	307.10	5/2$^{(+)}$				
		934.7[#] *5*	100[#] *30*	97.37	3/2$^{(+)}$				
1041.6	(11/2$^-$)	290.9	9 *2*	750.7	(9/2$^-$,11/2$^-$)				
		379.4	25 *3*	662.12	(13/2$^-$)	D(+Q)	−0.05 *+6−3*		Mult.,δ: from γγ(θ) in (^{3}He,3nγ) giving ΔJ=1.
		778.3	35 *5*	263.39	(11/2$^-$)				

Adopted Levels, Gammas (continued)

γ(^{123}Xe) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[@]	δ	α[†]	Comments
1041.6	(11/2$^-$)	835.0	100 *11*	206.38	(9/2$^-$)				
1046.4	(7/2$^+$)	249.0	34 *5*	798.04	(9/2$^+$)				
		432.1	52 *7*	614.3	(3/2$^+$,5/2,7/2$^+$)				
		460.6	64 *8*	585.75	(3/2$^+$)				
		527.8	45 *7*	518.48	(9/2$^+$)				
		579.2	82 *10*	467.04	(7/2$^+$)				
		839.8	100 *13*	206.38	(9/2$^-$)				
		860.9	84 *11*	185.30	7/2$^{(-)}$				
1051.19	(9/2$^+$,11/2$^+$)	253.7	12 *2*	798.04	(9/2$^+$)				
		283.6	8 *1*	767.64	(11/2$^+$)				
		319.7	25 *3*	731.35	(9/2$^+$)				
		532.7 *2*	97 *10*	518.48	(9/2$^+$)	D+Q			δ: −5.04 *+57−73* or −0.26 *2* from γγ(θ) in (^{3}He,3nγ).
		584.0	100 *11*	467.04	(7/2$^+$)				
		844.8	37 *6*	206.38	(9/2$^-$)				
1054.5		294.8	100	759.7					
1082.13	(13/2$^+$)	314.5 *2*	18 *2*	767.64	(11/2$^+$)	D+Q	−0.9 *+5−9*		E_γ: from (^{3}He,3nγ). Other: 314.2 *10* from (^{48}Ca,5nγ). δ: from γ(θ) and γγ(θ) in (^{3}He,3nγ), with ΔJ=1 and δ from γ(θ).
		363.3	6 *1*	719.25	(15/2$^-$)	D(+Q)	+0.05 *+10−6*		E_γ: other: 363.1 *10* from (^{48}Ca,5nγ). Mult.,δ: from γγ(θ) in (^{3}He,3nγ).
		563.6 *2*	100 *10*	518.48	(9/2$^+$)	[E2]		0.00648	α(K)=0.00550 *8*; α(L)=0.000776 *11*; α(M)=0.0001584 *23* α(N)=3.25×10^{-5} *5*; α(O)=3.93×10^{-6} *6* E_γ: other: 563.5 *10* from (^{48}Ca,5nγ).
		818.9	35 *4*	263.39	(11/2$^-$)	D(+Q)	+0.05 *6*		E_γ: other: 818.6 *10* from (^{48}Ca,5nγ). Mult.,δ: from γγ(θ) in (^{3}He,3nγ).
1125.72	(1/2$^+$,3/2)	278.0[#] *5*	30[#] *11*	848.37	(1/2$^+$,3/2)				
		819.0[#] *5*	32[#] *16*	307.10	5/2$^{(+)}$				
		945.0[#] *3*	51[#] *14*	180.75	5/2$^{(+)}$				
		1125.3[#] *3*	100[#] *8*	0.0	1/2$^{(+)}$				
1145.2		626.8	77 *10*	518.48	(9/2$^+$)				
		893.3	100 *12*	252.01	(7/2$^+$)				
1260.4	(13/2$^-$)	218.8	14 *2*	1041.6	(11/2$^-$)				
		289.3	23 *3*	971.0	(11/2$^-$)	D+Q			δ: −0.14 *3* or −8 *+2−4* from γγ(θ) in (^{3}He,3nγ).
		509.6	42 *6*	750.7	(9/2$^-$,11/2$^-$)				
		541.1	100 *11*	719.25	(15/2$^-$)	D+Q			δ: −0.08 *+3−6* or +11 *+5−3* from γγ(θ) in (^{3}He,3nγ).

Adopted Levels, Gammas (continued)

γ(^{123}Xe) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[@]	δ	α[†]	Comments
1260.4	(13/2$^-$)	598.0	38 *6*	662.12	(13/2$^-$)				
		997.0	21 *4*	263.39	(11/2$^-$)				
1270.05	(15/2$^-$)	392.7 *2*	24 *3*	877.32	(13/2$^-$)	(D+Q)			E_γ: other: 392.6 *10* from (^{48}Ca,5nγ). Mult.: from γ(θ) in (^{3}He,3nγ).
		550.9 *2*	27 *4*	719.25	(15/2$^-$)	D+Q	−3.4 *+9−18*		E_γ: other: 550.8 *10* from (^{48}Ca,5nγ). Mult.,δ: from γγ(θ) in (^{3}He,3nγ).
		608.0 *2*	100 *10*	662.12	(13/2$^-$)	D+Q	−2.04 *11*		E_γ: other: 607.7 *10* from (^{48}Ca,5nγ). Mult.,δ: from γ(θ) and γγ(θ) in (^{3}He,3nγ), with ΔJ=1 from γ(θ) and δ from γγ(θ).
1273.28	(1/2,3/2)	1176.2 *4*	64 *28*	97.37	3/2$^{(+)}$				
		1273.2 *2*	100 *14*	0.0	1/2$^{(+)}$				
1278.0		501.3		776.7	(5/2,7/2,9/2$^+$)				
		546.7		731.35	(9/2$^+$)				
1294.02	(17/2$^-$)	574.7 *2*	73 *7*	719.25	(15/2$^-$)	D+Q	−0.41 *18*		E_γ: other: 574.4 *10* from (^{48}Ca,5nγ). Mult.,δ: from γ(θ) and γγ(θ) in (^{3}He,3nγ).
		631.9 *2*	100 *10*	662.12	(13/2$^-$)	E2(+M3)	−0.05 *+6−3*	0.00490 *18*	α(K)=0.00418 *15*; α(L)=0.000577 *23*; α(M)=0.000118 *5* α(N)=2.42×10^{-5} *10*; α(O)=2.94×10^{-6} *12* E_γ: other: 631.6 *10* from (^{48}Ca,5nγ). Mult.,δ: from γ(θ) and ce data in (^{3}He,3nγ); Q from γ(θ) in (^{48}Ca,5nγ).
1325.5		448.3		877.32	(13/2$^-$)				
		663.2		662.12	(13/2$^-$)				
1336.16	(19/2$^-$)	616.8 *2*	100	719.25	(15/2$^-$)	E2		0.00510	α(K)=0.00435 *7*; α(L)=0.000602 *9*; α(M)=0.0001226 *18* α(N)=2.52×10^{-5} *4*; α(O)=3.06×10^{-6} *5* E_γ: weighted average of 616.6 *2* from (^{48}Ca,5nγ) and 617.0 *2* from (^{3}He,3nγ). Mult.: Q from γ(θ) in (^{12}C,3nγ) and (^{3}He,3nγ); M2 ruled out by RUL. Other: δ(O/Q)=−0.05 *6* from γγ(θ) in (^{3}He,3nγ).
1339.0		287.9		1051.19	(9/2$^+$,11/2$^+$)				
		571.3		767.64	(11/2$^+$)				
		607.5		731.35	(9/2$^+$)				
		820.5		518.48	(9/2$^+$)				
1384.3		520.4	100	863.9	(5/2$^+$,7/2$^+$)				
1397.65	(15/2$^+$)	315.5	6 *1*	1082.13	(13/2$^+$)				E_γ: other: 315.3 *10* from (^{48}Ca,5nγ).
		630.0 *2*	100 *10*	767.64	(11/2$^+$)	E2		0.00484	α(K)=0.00413 *6*; α(L)=0.000568 *8*; α(M)=0.0001158 *17* α(N)=2.38×10^{-5} *4*; α(O)=2.89×10^{-6} *4*

Adopted Levels, Gammas (continued)

γ(^{123}Xe) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[@]	δ	Comments
								E_γ: other: 629.9 *10* from (^{48}Ca,5nγ). Mult.: from ce data and γ(θ) in (^{3}He,3nγ).
1397.65	(15/2$^+$)	735.6	22 *2*	662.12	(13/2$^-$)			E_γ: other: 735.7 *10* from (^{48}Ca,5nγ).
1430.8	(13/2$^+$)	379.5	25 *4*	1051.19	(9/2$^+$,11/2$^+$)			
		633.2	100 *12*	798.04	(9/2$^+$)	Q(+O)	−0.02 *+6−10*	Mult.,δ: from γγ(θ) in (^{3}He,3nγ).
		663.0	40 *5*	767.64	(11/2$^+$)			
1452.83	(1/2,3/2)	711.2[#] *2*	90[#] *30*	741.47	(1/2$^+$,3/2$^+$)			
		841.8[#] *2*	48[#] *9*	611.08	(1/2$^+$,3/2$^+$)			
		1355.9[#] *5*	100[#] *24*	97.37	3/2$^{(+)}$			
		1453.0 *5*	33 *15*	0.0	1/2$^{(+)}$			
1519.9		374.7		1145.2				
		752.2		767.64	(11/2$^+$)			
		1001.4		518.48	(9/2$^+$)			
1521.96	(17/2$^-$)	251.9	6 *1*	1270.05	(15/2$^-$)			
		644.7 *2*	100 *11*	877.32	(13/2$^-$)			E_γ: other: 644.6 *10* from (^{48}Ca,5nγ).
		802.7 *2*	49 *15*	719.25	(15/2$^-$)	D+Q	<−16	E_γ: other: 802.8 *10* from (^{48}Ca,5nγ). Mult.,δ: from γγ(θ) in (^{3}He,3nγ).
1541.1	(15/2$^-$)	247.1[b]	17 *10*	1294.02	(17/2$^-$)			
		499.6	8 *5*	1041.6	(11/2$^-$)			
		570.1	80 *11*	971.0	(11/2$^-$)			
		664.0	45 *7*	877.32	(13/2$^-$)			
		673.2	19 *8*	867.9	(11/2$^-$)			
		821.9	37 *7*	719.25	(15/2$^-$)			
		879.0 *2*	100 *12*	662.12	(13/2$^-$)	D+Q	−2.2 *+6−7*	Mult.,δ: from γ(θ) in (^{3}He,3nγ), ΔJ=1.
1554.2	(15/2$^+$)	619.4 *2*	100	934.81	(11/2$^+$)	Q		E_γ: other: 619.0 *10* from (^{48}Ca,5nγ). Mult.: from γ(θ) in (^{3}He,3nγ), ΔJ=2.
1580.7	(11/2$^-$ to 15/2$^-$)	320.3	<30	1260.4	(13/2$^-$)			
		539.0	33 *9*	1041.6	(11/2$^-$)			
		861.4	46 *11*	719.25	(15/2$^-$)			
		918.2	100 *15*	662.12	(13/2$^-$)			
1618.6		572.2	100	1046.4	(7/2$^+$)			
1696.4		1034.3	100	662.12	(13/2$^-$)			
1733.1		650.9		1082.13	(13/2$^+$)			
		682.0		1051.19	(9/2$^+$,11/2$^+$)			
1757.9	(17/2$^+$)	675.7	100 *11*	1082.13	(13/2$^+$)			E_γ: other: 675.8 *10* from (^{48}Ca,5nγ).
		1038.9	37 *4*	719.25	(15/2$^-$)	D(+Q)	0.05 *6*	E_γ: other: 1038.3 *10* from (^{48}Ca,5nγ). Mult.,δ: from γγ(θ) in (^{3}He,3nγ). Other: D from γ(θ) in (^{48}Ca,5nγ).
1759.0		1321.4	100	437.58	7/2$^{(+)}$			

Adopted Levels, Gammas (continued)

γ(^{123}Xe) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[@]	δ	α[†]	Comments
1827.8	(17/2⁻)	491.6		1336.16	(19/2⁻)				
		533.7		1294.02	(17/2⁻)				
		557.9		1270.05	(15/2⁻)	D+Q			δ: −0.52 *11*, −1.56 *21* from γγ(θ) in (^{3}He,3nγ), giving ΔJ=1.
		567.4		1260.4	(13/2⁻)				
		950.6		877.32	(13/2⁻)				
		1108.4		719.25	(15/2⁻)				
1841.6		443.9		1397.65	(15/2⁺)				
		696.4		1145.2					
		759.3		1082.13	(13/2⁺)				
		1179.5		662.12	(13/2⁻)				
1947.6	(15/2⁻)	1285.5	100	662.12	(13/2⁻)	D(+Q)	−0.02 *3*		Mult.,δ: from γγ(θ) in (^{3}He,3nγ), giving ΔJ=1.
1949.43		368.7 *2*		1580.7	(11/2⁻ to 15/2⁻)				
		427.5 *2*		1521.96	(17/2⁻)				
		679.4 *2*		1270.05	(15/2⁻)				
		689.0 *2*		1260.4	(13/2⁻)				
1953.54	(19/2⁻)	431.6 *2*	14 *3*	1521.96	(17/2⁻)				Eγ: other: 430.9 *10* from (^{48}Ca,5nγ).
		617.3 *2*	<57	1336.16	(19/2⁻)				Eγ: other: 617.5 *10* from (^{48}Ca,5nγ).
		659.4 *2*	30 *4*	1294.02	(17/2⁻)				
		683.6 *2*	100 *11*	1270.05	(15/2⁻)	Q			Eγ: other: 683.5 *10* from (^{48}Ca,5nγ).
2063.1	(21/2⁻)	727.1	69 *10*	1336.16	(19/2⁻)	D+Q	−0.38 *+7−11*		Eγ: other: 726.9 *10* from (^{48}Ca,5nγ). Mult.: from γγ(θ) in (^{3}He,3nγ).
		769.1 *2*	100 *13*	1294.02	(17/2⁻)	Q			Eγ: other: 768.5 *10* from (^{48}Ca,5nγ). Mult.: from γγ(θ) in (^{3}He,3nγ) and (^{48}Ca,5nγ).
2089.7	(23/2⁻)	753.6 *3*	100	1336.16	(19/2⁻)	E2		0.00310	α(K)=0.00266 *4*; α(L)=0.000354 *5*; α(M)=7.20×10^{-5} *10* α(N)=1.483×10^{-5} *21*; α(O)=1.82×10^{-6} *3* Eγ: weighted average of 753.8 *2* from (^{48}Ca,5nγ) and 753.3 *2* from (^{3}He,3nγ). Mult.: from ce data and γ(θ) in (^{3}He,3nγ).
2112.5	(19/2⁺)	714.9 *2*	100	1397.65	(15/2⁺)	Q			Eγ: other: 714.7 *10* from (^{48}Ca,5nγ). Mult.: from γ(θ) in (^{3}He,3nγ) and (^{48}Ca,5nγ).
		818.7		1294.02	(17/2⁻)				
2144.6	(17/2⁺)	714.0		1430.8	(13/2⁺)				
		746.8		1397.65	(15/2⁺)				
2197.1		927.2		1270.05	(15/2⁻)				
		1477.6		719.25	(15/2⁻)				
2210.0	(15/2⁻ to 19/2⁻)	668.9		1541.1	(15/2⁻)				
		873.8		1336.16	(19/2⁻)				

Adopted Levels, Gammas (continued)

γ(^{123}Xe) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[@]	Comments
2210.0	(15/2$^-$ to 19/2$^-$)	915.9		1294.02	(17/2$^-$)		
		1490.7		719.25	(15/2$^-$)		
2226.0		684.9		1541.1	(15/2$^-$)		
		932.0		1294.02	(17/2$^-$)		
2230.6	(19/2$^+$)	676.7	100 *11*	1554.2	(15/2$^+$)		E_γ: other: 676.5 *10* from (^{48}Ca,5nγ).
		936.8	24 *4*	1294.02	(17/2$^-$)		E_γ: other: 936.1 *10* from (^{48}Ca,5nγ).
2248.9		668.1		1580.7	(11/2$^-$ to 15/2$^-$)		
		954.9		1294.02	(17/2$^-$)		
		1529.6		719.25	(15/2$^-$)		
2284.6	(21/2$^-$)	762.7	100 *11*	1521.96	(17/2$^-$)	Q	E_γ: other: 762.7 *10* from (^{48}Ca,5nγ).
		948.1	32 *8*	1336.16	(19/2$^-$)	D+Q	E_γ: other: 948.9 *10* from (^{48}Ca,5nγ).
2416.3?		1080.2[b]	100	1336.16	(19/2$^-$)		
2422.3	(19/2$^+$)	1128.7	100	1294.02	(17/2$^-$)	D	E_γ: other: 1128.1 *10* from (^{48}Ca,5nγ).
2497.5	(21/2$^+$)	739.6 *2*	100 *10*	1757.9	(17/2$^+$)	Q	E_γ: from (^{48}Ca,5nγ). Other: 739.7 from (^{3}He,3nγ). I_γ: from (^{3}He,3nγ). Other: 100 *13* from (^{48}Ca,5nγ).
		1160.9 *5*	51 *5*	1336.16	(19/2$^-$)		E_γ: from (^{48}Ca,5nγ). Other: 1161.5 from (^{3}He,3nγ). I_γ: weighted average of 57 *8* from (^{48}Ca,5nγ) and 48 *5* from (^{3}He,3nγ).
2689.1	(21/2$^+$)	267.1	19 *3*	2422.3	(19/2$^+$)	D+Q	E_γ: other: 266.3 from (^{48}Ca,5nγ).
		1353.4	100 *11*	1336.16	(19/2$^-$)		E_γ: other: 1352.4 *10* from (^{48}Ca,5nγ).
2769.7	(23/2$^-$)	484.3 *10*		2284.6	(21/2$^-$)		E_γ: from (^{48}Ca,5nγ) only.
		679.7 *10*		2089.7	(23/2$^-$)	D+Q	E_γ: from (^{48}Ca,5nγ) only.
		816.1 *2*	100	1953.54	(19/2$^-$)	Q	E_γ: from (^{48}Ca,5nγ). Other: 816.9 from (^{3}He,3nγ).
2822.3	(23/2$^+$)	591.8	21 *2*	2230.6	(19/2$^+$)		E_γ: other: 591.5 *10* from (^{48}Ca,5nγ).
		709.7 *2*	100 *10*	2112.5	(19/2$^+$)	Q	E_γ: from (^{48}Ca,5nγ). Other: 709.8 from (^{3}He,3nγ).
		732.7 *10*		2089.7	(23/2$^-$)		E_γ: from (^{48}Ca,5nγ) only.
2882.4	(23/2$^+$)	652.1	50 *6*	2230.6	(19/2$^+$)	Q	E_γ: other: 651.7 *10* from (^{48}Ca,5nγ).
		770.3 *5*	100 *11*	2112.5	(19/2$^+$)	Q	E_γ: from (^{48}Ca,5nγ). Other: 770.2 from (^{3}He,3nγ).
		819.6	77 *9*	2063.1	(21/2$^-$)		E_γ: other: 820.0 *10* from (^{48}Ca,5nγ).
2951.7	(25/2$^-$)	861.8	39 *5*	2089.7	(23/2$^-$)	D	E_γ: other: 861.1 *10* from (^{48}Ca,5nγ).
		888.6 *2*	100 *11*	2063.1	(21/2$^-$)	Q	E_γ: from (^{48}Ca,5nγ). Other: 888.5 from (^{3}He,3nγ).
2964.2	(23/2$^+$)	275.0	29 *3*	2689.1	(21/2$^+$)	D+Q	E_γ: other: 275.3 *10* from (^{48}Ca,5nγ).
		541.9	75 *8*	2422.3	(19/2$^+$)	Q	E_γ: other: 541.8 *10* from (^{48}Ca,5nγ).
		733.7	100 *11*	2230.6	(19/2$^+$)	Q	E_γ: other: 733.6 *10* from (^{48}Ca,5nγ).
		875.3 *10*		2089.7	(23/2$^-$)		E_γ: from from (^{48}Ca,5nγ) only.
2965.6	(27/2$^-$)	875.9 *2*	100	2089.7	(23/2$^-$)	Q	E_γ: from (^{48}Ca,5nγ). Other: 876.1 from (^{3}He,3nγ).
2991.5	(27/2$^-$)	763.9 *10*		2227.6	(23/2$^-$)		E_γ: from (^{48}Ca,5nγ) only.
		901.9 *10*		2089.7	(23/2$^-$)	Q	E_γ: from (^{48}Ca,5nγ) only.
3152.7	(25/2$^-$)	868.2 *2*	100 *3*	2284.6	(21/2$^-$)	Q	E_γ: from (^{48}Ca,5nγ). Other: 868.3 from (^{3}He,3nγ). I_γ: from (^{3}He,3nγ). Other: 100 *11* from (^{48}Ca,5nγ).

$^{123}_{54}Xe_{69}$-18

Adopted Levels, Gammas (continued)

γ(^{123}Xe) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[@]	Comments
3152.7	(25/2$^-$)	1062.7	21 *5*	2089.7	(23/2$^-$)		
3169.3	(25/2$^+$)	205.1 *2*	31 *11*	2964.2	(23/2$^+$)		E_γ: from (^{48}Ca,5nγ). Other: 205.1 from (^{3}He,3nγ). I_γ: unweighted average of 41 *6* from (^{48}Ca,5nγ) and 20.0 *20* from (^{3}He,3nγ).
		287.0 *2*	21 *8*	2882.4	(23/2$^+$)	D+Q	E_γ: from (^{48}Ca,5nγ). Other: 286.8 from (^{3}He,3nγ). I_γ: unweighted average of 28 *4* from (^{48}Ca,5nγ) and 13.0 *10* from (^{3}He,3nγ).
		347.0 *5*	5.2 *22*	2822.3	(23/2$^+$)		E_γ: from (^{48}Ca,5nγ). Other: 347.1 from (^{3}He,3nγ). I_γ: unweighted average of 7.3 *12* from (^{48}Ca,5nγ) and 3.0 *10* from (^{3}He,3nγ).
		480.3 *2*	21 *4*	2689.1	(21/2$^+$)	Q	E_γ: from (^{48}Ca,5nγ). Other: 480.2 from (^{3}He,3nγ). I_γ: unweighted average of 26 *4* from (^{48}Ca,5nγ) and 16.0 *20* from (^{3}He,3nγ).
		671.8 *2*	68 *8*	2497.5	(21/2$^+$)		E_γ: from (^{48}Ca,5nγ). Other: 671.6 from (^{3}He,3nγ). I_γ: weighted average of 61 *7* from (^{48}Ca,5nγ) and 76 *8* from (^{3}He,3nγ).
		1079.6 *2*	100 *10*	2089.7	(23/2$^-$)	D	E_γ: from (^{48}Ca,5nγ). Other: 1079.9 from (^{3}He,3nγ). I_γ: from (^{3}He,3nγ). Other: 100 *12* from (^{48}Ca,5nγ).
3210.2	(25/2$^+$)	712.4 *5*	100 *12*	2497.5	(21/2$^+$)	Q	E_γ: from (^{48}Ca,5nγ). Other: 713.0 from (^{3}He,3nγ). I_γ: from (^{3}He,3nγ). Other: 100 *13* from (^{48}Ca,5nγ).
		1120.8 *5*	45 *5*	2089.7	(23/2$^-$)		E_γ: from (^{48}Ca,5nγ). Other: 1121.1 from (^{3}He,3nγ). I_γ: weighted average of 43 *5* from (^{48}Ca,5nγ) and 50 *7* from (^{3}He,3nγ).
3349.6	(27/2$^+$)	139.4 *5*	16.9 *24*	3210.2	(25/2$^+$)	D+Q	E_γ: from (^{48}Ca,5nγ). Other: 139.0 from (^{3}He,3nγ). I_γ: weighted average of 20.0 *26* from (^{48}Ca,5nγ) and 15.0 *20* from (^{3}He,3nγ).
		180.4 *2*	100 *10*	3169.3	(25/2$^+$)	D+Q	E_γ: from (^{48}Ca,5nγ). Other: 180.5 from (^{3}He,3nγ). I_γ: from (^{3}He,3nγ). Other: 100 *11* from (^{48}Ca,5nγ).
		385.1 *5*	14.5 *11*	2964.2	(23/2$^+$)		E_γ: from (^{48}Ca,5nγ). Other: 385.5 from (^{3}He,3nγ). I_γ: weighted average of 16.8 *21* from (^{48}Ca,5nγ) and 14.0 *10* from (^{3}He,3nγ).
		466.8 *5*	8.8 *13*	2882.4	(23/2$^+$)		E_γ: from (^{48}Ca,5nγ). Other: 467.0 from (^{3}He,3nγ). I_γ: weighted average of 7.4 *11* from (^{48}Ca,5nγ) and 10.0 *10* from (^{3}He,3nγ).
3479.1	(27/2$^+$)	656.8 *2*	100	2822.3	(23/2$^+$)	Q	E_γ: from (^{48}Ca,5nγ). Other: 657.0 from (^{3}He,3nγ).
3559.7	(27/2$^+$)	608.8[b] *10*		2951.7	(25/2$^-$)		E_γ: from (^{48}Ca,5nγ) only.
		677.3 *5*	100 *15*	2882.4	(23/2$^+$)	Q	E_γ: from (^{48}Ca,5nγ) only.
3652.7		1563		2089.7	(23/2$^-$)		
3820.5	(29/2$^+$)	470.9 *2*	100	3349.6	(27/2$^+$)		
3854.0	(27/2$^-$)	862.1 *10*		2991.5	(27/2$^-$)		E_γ: from (^{48}Ca,5nγ) only.
		887.8 *10*		2965.6	(27/2$^-$)		E_γ: from (^{48}Ca,5nγ) only.
		1084.5 *5*	100	2769.7	(23/2$^-$)		
		1764.1 *10*		2089.7	(23/2$^-$)		
3905.5	(29/2$^+$)	555.7 *10*	29 *7*	3349.6	(27/2$^+$)		E_γ,I_γ: from (^{48}Ca,5nγ) only.
		695.6 *10*	100 *14*	3210.2	(25/2$^+$)	Q	
		939.9 *10*	57 *14*	2965.6	(27/2$^-$)		
3908.2	(27/2$^-$)	738.9 *2*	70 *10*	3169.3	(25/2$^+$)	D	E_γ,I_γ: from (^{48}Ca,5nγ) only.

Adopted Levels, Gammas (continued)

γ(^{123}Xe) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[@]	Comments
3908.2	(27/2$^-$)	916.7 *2*	47 *6*	2991.5	(27/2$^-$)		E_γ,I_γ: from (^{48}Ca,5nγ) only.
		942.6 *2*	100 *13*	2965.6	(27/2$^-$)	D+Q	
		1138.3 *2*	49 *6*	2769.7	(23/2$^-$)	Q	
		1818.9 *5*	24 *5*	2089.7	(23/2$^-$)		E_γ,I_γ: from (^{48}Ca,5nγ) only.
3951.4	(31/2$^-$)	985.8 *2*	100	2965.6	(27/2$^-$)	Q	
3956.6	(29/2$^-$)	1005.4 *10*		2951.7	(25/2$^-$)		
4019.4	(29/2$^+$)	669.8 *10*		3349.6	(27/2$^+$)	D+Q	
		850.5 *5*	100 *20*	3169.3	(25/2$^+$)	Q	
4103.5	(29/2$^-$)	950.9 *5*	100	3152.7	(25/2$^-$)	Q	
4155.9	(31/2$^+$)	136.5 *5*	4.3 *7*	4019.4	(29/2$^+$)	D+Q	
		335.2 *5*	6.8 *9*	3820.5	(29/2$^+$)	D+Q	
		806.3 *2*	100 *11*	3349.6	(27/2$^+$)		
4213.5	(31/2$^+$)	734.3 *2*	100	3479.1	(27/2$^+$)	Q	
4283.9	(29/2$^-$)	375.6 *10*		3908.2	(27/2$^-$)	D+Q	
		934.2 *10*		3349.6	(27/2$^+$)	D	
4325.6	(31/2$^+$)	765.9 *5*	100	3559.7	(27/2$^+$)	Q	
4355.2	(31/2$^-$)	403.7 *10*		3951.4	(31/2$^-$)		
		1389.9 *10*		2965.6	(27/2$^-$)		
4609.2	(31/2$^-$)	325.4 *10*		4283.9	(29/2$^-$)		
		700.9 *2*	100 *12*	3908.2	(27/2$^-$)	Q	
		755.1 *10*		3854.0	(27/2$^-$)		
		788.7 *5*	14.3 *22*	3820.5	(29/2$^+$)	D	
4627.8	(33/2$^+$)	471.4 *10*		4155.9	(31/2$^+$)		
		807.4 *10*		3820.5	(29/2$^+$)		
4724.9	(33/2$^+$)	819.4 *5*	100	3905.5	(29/2$^+$)	Q	
4880.4	(33/2$^+$)	724.8 *10*	11.1 *19*	4155.9	(31/2$^+$)		
		861.3 *5*	100 *17*	4019.4	(29/2$^+$)	Q	
4934.1	(33/2$^-$)	830.6 *5*	100	4103.5	(29/2$^-$)		
5010.5	(35/2$^-$)	1059.1 *2*	100	3951.4	(31/2$^-$)	Q	
5027.0	(33/2$^-$)	417.8 *5*	49 *6*	4609.2	(31/2$^-$)	D+Q	
		743.0 *5*	100 *13*	4283.9	(29/2$^-$)	Q	
		871.1 *10*		4155.9	(31/2$^+$)		
5036.5	(35/2$^+$)	156.6 *5*	100 *15*	4880.4	(33/2$^+$)	D+Q	
		408.6 *5*	85 *10*	4627.8	(33/2$^+$)	D+Q	
		880.8 *10*		4155.9	(31/2$^+$)		
5043.8	(33/2$^-$)	1087.3 *5*	100	3956.6	(29/2$^-$)		
5064.8	(33/2$^-$)	961.3 *10*		4103.5	(29/2$^-$)		
5066.8	(35/2$^+$)	853.3 *2*	100	4213.5	(31/2$^+$)	Q	
5109.8	(33/2$^-$)	1153.2 *10*		3956.6	(29/2$^-$)		
5207.8	(35/2$^+$)	882.2 *5*	100	4325.6	(31/2$^+$)	Q	
5213.7	(35/2$^-$)	858.6 *10*		4355.2	(31/2$^-$)		

$^{123}_{54}Xe_{69}$-20

Adopted Levels, Gammas (continued)

γ(^{123}Xe) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[@]
5213.7	(35/2$^-$)	1262.5 *10*		3951.4	(31/2$^-$)	
5286.2	(33/2$^-$)	1329.5 *10*		3956.6	(29/2$^-$)	
5329.1	(33/2$^-$)	1225.5 *10*		4103.5	(29/2$^-$)	
5338.1	(35/2$^-$)	710.7 *5*	13.5 *24*	4627.8	(33/2$^+$)	
		728.9 *2*	100 *12*	4609.2	(31/2$^-$)	Q
5418.3	(35/2$^-$)	1466.6 *10*		3951.4	(31/2$^-$)	
5519.6	(37/2$^+$)	483.2 *2*	100 *12*	5036.5	(35/2$^+$)	D+Q
		891.8 *2*	92 *11*	4627.8	(33/2$^+$)	Q
5585.6	(35/2$^-$)	558.4 *10*		5027.0	(33/2$^-$)	D+Q
5651.3	(37/2$^+$)	926.4 *10*	100	4724.9	(33/2$^+$)	Q
5687.6	(35/2$^-$)	401.3 *10*		5286.2	(33/2$^-$)	
		753.8 *10*		4934.1	(33/2$^-$)	
5793.7	(37/2$^-$)	455.9 *10*		5338.1	(35/2$^-$)	D+Q
		757.0 *5*	94 *12*	5036.5	(35/2$^+$)	
		766.5 *5*	100 *12*	5027.0	(33/2$^-$)	Q
5915.8	(39/2$^+$)	396.3 *2*	26.8 *33*	5519.6	(37/2$^+$)	
		848.7 *10*	1.23 *14*	5066.8	(35/2$^+$)	
		879.2 *2*	100 *12*	5036.5	(35/2$^+$)	
6034.4	(39/2$^+$)	967.6 *2*	100	5066.8	(35/2$^+$)	Q
6046.1	(39/2$^-$)	1035.6 *2*	100	5010.5	(35/2$^-$)	Q
6049.1	(37/2$^-$)	1005.3 *2*	100	5043.8	(33/2$^-$)	
6070.5	(37/2$^-$)	382.9 *10*	17.1 *29*	5687.6	(35/2$^-$)	D+Q
		960.6 *10*		5109.8	(33/2$^-$)	Q
		1005.7 *5*	100 *12*	5064.8	(33/2$^-$)	
		1027.3 *10*		5043.8	(33/2$^-$)	
6134.1	(39/2$^-$)	796.0 *2*	100	5338.1	(35/2$^-$)	Q
6165.5	(39/2$^+$)	957.7 *5*	100	5207.8	(35/2$^+$)	Q
6374.4	(39/2$^-$)	580.8 *5*	100 *15*	5793.7	(37/2$^-$)	D+Q
		788.6 *10*		5585.6	(35/2$^-$)	Q
6418.5	(39/2$^-$)	1000.1 *5*	100 *13*	5418.3	(35/2$^-$)	Q
		1408.2 *5*	69 *13*	5010.5	(35/2$^-$)	
6465.2	(39/2$^-$)	394.8 *5*	35 *7*	6070.5	(37/2$^-$)	D+Q
		777.7 *10*		5687.6	(35/2$^-$)	Q
		1251.9 *10*		5213.7	(35/2$^-$)	
		1454.7 *5*	100 *23*	5010.5	(35/2$^-$)	Q
6477.4	(41/2$^+$)	561.5 *2*	100 *13*	5915.8	(39/2$^+$)	D+Q
		958.1 *5*	29 *4*	5519.6	(37/2$^+$)	Q
6655.5	(41/2$^-$)	521.7 *5*	100 *14*	6134.1	(39/2$^-$)	D+Q
		861.5 *5*	77 *9*	5793.7	(37/2$^-$)	Q
6684.1	(41/2$^+$)	1032.8 *10*	100	5651.3	(37/2$^+$)	Q
6789.6	(41/2$^-$)	324.6 *5*	100 *12*	6465.2	(39/2$^-$)	D+Q
		371.1 *5*	44 *5*	6418.5	(39/2$^-$)	D+Q
6789.6	(41/2$^-$)	655.1 *5*	35 *5*	6134.1	(39/2$^-$)	
		719.2 *5*	79 *12*	6070.5	(37/2$^-$)	Q
7067.2	(43/2$^-$)	933.1 *5*	100	6134.1	(39/2$^-$)	Q
7084.7	(43/2$^+$)	607.4 *2*	100 *12*	6477.4	(41/2$^+$)	D+Q
		919.2 *10*	2.4 *5*	6165.5	(39/2$^+$)	
		1050.2 *5*	17.4 *19*	6034.4	(39/2$^+$)	Q
		1168.8 *5*	41 *5*	5915.8	(39/2$^+$)	Q
7107.2	(43/2$^-$)	1060.9 *10*		6046.1	(39/2$^-$)	Q
7115.2	(43/2$^+$)	1080.7 *5*	100	6034.4	(39/2$^+$)	Q
7257.9	(43/2$^-$)	602.3 *5*	100 *12*	6655.5	(41/2$^-$)	D+Q
		883.7 *10*		6374.4	(39/2$^-$)	
7279.1	(43/2$^+$)	1113.7 *5*	100	6165.5	(39/2$^+$)	Q
7482.0	(45/2$^+$)	366.8 *10*		7115.2	(43/2$^+$)	D+Q
		396.9 *10*		7084.7	(43/2$^+$)	
		1004.7 *2*	100 *12*	6477.4	(41/2$^+$)	Q
7617.8	(45/2$^-$)	550.5 *5*	100 *14*	7067.2	(43/2$^-$)	D+Q
		962.5 *10*		6655.5	(41/2$^-$)	Q
7781.0	(45/2$^-$)	523.1 *10*		7257.9	(43/2$^-$)	D+Q
7807.8	(45/2$^+$)	1123.7 *10*		6684.1	(41/2$^+$)	Q
7840.5		1156.4 *10*		6684.1	(41/2$^+$)	
7970.2	(45/2$^-$)	712.1 *5*	24.1 *35*	7257.9	(43/2$^-$)	D+Q
		1180.6 *5*	100 *12*	6789.6	(41/2$^-$)	Q
7991.2	(47/2$^+$)	712.2 *10*		7279.1	(43/2$^+$)	
		875.8 *10*		7115.2	(43/2$^+$)	
		906.4 *2*	100 *12*	7084.7	(43/2$^+$)	Q
8075.6	(47/2$^-$)	457.6 *10*		7617.8	(45/2$^-$)	
		1008.4 *5*	100 *13*	7067.2	(43/2$^-$)	Q
8189.6	(47/2$^+$)	707.6 *10*		7482.0	(45/2$^+$)	D+Q
		1105.4 *10*		7084.7	(43/2$^+$)	Q
8218.5	(47/2$^-$)	960.8 *5*	55 *8*	7257.9	(43/2$^-$)	
		1111.4 *5*	100 *11*	7107.2	(43/2$^-$)	Q
8225.2	(47/2$^-$)	607.5 *5*	100 *12*	7617.8	(45/2$^-$)	D+Q
		966.7 *10*		7257.9	(43/2$^-$)	
		1118.1 *5*	84 *12*	7107.2	(43/2$^-$)	
8298.6	(47/2$^+$)	1183.4 *5*	100	7115.2	(43/2$^+$)	
8364.0	(47/2$^-$)	1256.6 *5*	100	7107.2	(43/2$^-$)	
8448.9	(47/2$^+$)	1169.8 *10*	100	7279.1	(43/2$^+$)	
8454.0	(49/2$^+$)	462.7 *2*	99 *11*	7991.2	(47/2$^+$)	D+Q
		971.9 *2*	100 *12*	7482.0	(45/2$^+$)	Q
8690.9	(49/2$^-$)	614.6 *10*		8075.6	(47/2$^-$)	
		1073.2 *5*	100 *17*	7617.8	(45/2$^-$)	
8694.4	(49/2$^+$)	240.2 *10*	41 *6*	8454.0	(49/2$^+$)	D+Q

$^{123}_{54}Xe_{69}$-21

Adopted Levels, Gammas (continued)

γ(^{123}Xe) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[@]
8694.4	(49/2$^+$)	504.1 *10*	47 *6*	8189.6	(47/2$^+$)	D+Q
		703.4 *10*	53 *6*	7991.2	(47/2$^+$)	
		1212.7 *5*	100 *12*	7482.0	(45/2$^+$)	
8955.5	(49/2$^-$)	591.4 *5*	60 *7*	8364.0	(47/2$^-$)	D+Q
		737.3 *5*	100 *13*	8218.5	(47/2$^-$)	D+Q
		985.0 *10*		7970.2	(45/2$^-$)	
		1174.5 *10*		7781.0	(45/2$^-$)	
8975.4	(49/2$^-$)	1194.4 *10*		7781.0	(45/2$^-$)	
9124.2	(51/2$^+$)	430.1 *5*	14.0 *18*	8694.4	(49/2$^+$)	D+Q
		670.1 *2*	100 *12*	8454.0	(49/2$^+$)	D+Q
		934.9 *5*	25 *4*	8189.6	(47/2$^+$)	Q
		1133.3 *5*	15.8 *18*	7991.2	(47/2$^+$)	Q
9257.7	(51/2$^-$)	566.8 *5*	62 *8*	8690.9	(49/2$^-$)	D+Q
		1182.2 *5*	100 *15*	8075.6	(47/2$^-$)	
9357.1	(53/2$^-$)	401.6 *2*	100	8955.5	(49/2$^-$)	Q
9377.2	(51/2$^-$)	1152.0 *10*		8225.2	(47/2$^-$)	
9419.1	(53/2$^+$)	294.6 *5*	15.4 *31*	9124.2	(51/2$^+$)	D+Q
		965.4 *5*	100 *12*	8454.0	(49/2$^+$)	Q
9423.1	(51/2$^-$)	1204.6 *5*	100	8218.5	(47/2$^-$)	Q
9465.5		1166.9 *5*	100	8298.6	(47/2$^+$)	
9566.6	(51/2$^+$)	1268.0 *10*	100	8298.6	(47/2$^+$)	
9591.0		1292.4 *10*		8298.6	(47/2$^+$)	
9809.2	(53/2$^+$)	684.6 *10*	55 *9*	9124.2	(51/2$^+$)	
		1355.3 *5*	100 *18*	8454.0	(49/2$^+$)	
9904.5		780.2 *5*	100	9124.2	(51/2$^+$)	
9906.8	(53/2$^-$)	649.3 *5*	77 *15*	9257.7	(51/2$^-$)	
		1215.7 *5*	100 *15*	8690.9	(49/2$^-$)	
10068.4	(55/2$^+$)	944.3 *5*	100	9124.2	(51/2$^+$)	Q
10135.5	(55/2$^-$)	778.3 *2*	100	9357.1	(53/2$^-$)	D+Q
10489.8	(55/2$^-$)	582.7 *10*	64 *7*	9906.8	(53/2$^-$)	
		1232.0 *5*	100 *22*	9257.7	(51/2$^-$)	
10574.6	(55/2$^-$)	1197.4 *10*		9377.2	(51/2$^-$)	
10597.4	(57/2$^+$)	1178.2 *5*	100	9419.1	(53/2$^+$)	
10614.1	(57/2$^+$)	1195.0 *5*	100	9419.1	(53/2$^+$)	Q
10634.7		1169.2 *10*		9465.5		
10680.1	(55/2$^-$)	1257.0 *10*		9423.1	(51/2$^-$)	Q
10708.4	(55/2$^+$)	1141.8 *10*	100	9566.6	(51/2$^+$)	
10824.0	(57/2$^+$)	1404.9 *5*	100	9419.1	(53/2$^+$)	Q
10890.8	(57/2$^-$)	755.3 *10*		10135.5	(55/2$^-$)	
		1534.0 *10*	100 *22*	9357.1	(53/2$^-$)	
11046.4	(57/2$^-$)	910.9 *5*	100	10135.5	(55/2$^-$)	D+Q
11090.0	(59/2$^-$)	199.4 *5*	43 *5*	10890.8	(57/2$^-$)	D+Q

$^{123}_{54}Xe_{69}$-22

Adopted Levels, Gammas (continued)

γ(^{123}Xe) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[@]	Comments
11090.0	(59/2⁻)	954.6 *5*	100 *13*	10135.5	(55/2⁻)	Q	
11098.0	(57/2⁺)	1029.6 *5*	100 *19*	10068.4	(55/2⁺)	D+Q	
		1288.5 *10*	29 *5*	9809.2	(53/2⁺)		
11133.1		1064.7 *5*	100 *20*	10068.4	(55/2⁺)		
		1228.3 *10*		9904.5			
11175.7	(59/2⁺)	1107.3 *5*	100	10068.4	(55/2⁺)		
11176.0	(57/2⁻)	685.6 *10*	50 *17*	10489.8	(55/2⁻)		
		1269.9 *10*	100 *17*	9906.8	(53/2⁻)		
11440.8		1372.4 *10*		10068.4	(55/2⁺)		
11721.5	(61/2⁻)	631.5 *5*	50 *7*	11090.0	(59/2⁻)	D+Q	
		674.7 *10*	26.7 *33*	11046.4	(57/2⁻)		
		830.6 *5*	100 *10*	10890.8	(57/2⁻)	Q	
11808.8	(61/2⁺)	633.1 *5*	100 *13*	11175.7	(59/2⁺)	D+Q	
		1211.3 *10*		10597.4	(57/2⁺)		
11851.4	(59/2⁺)	1143.0 *10*		10708.4	(55/2⁺)		
11898.8?		1264.0[b] *10*		10634.7			
11999.0	(59/2⁻)	1318.9 *5*	100	10680.1	(55/2⁻)		
12040.2	(61/2⁺)	1216.2 *5*	100	10824.0	(57/2⁺)	Q	
12146.8	(61/2⁺)	1048.8 *5*	100	11098.0	(57/2⁺)	Q	
12216.9?		1126.9[b] *10*	100	11090.0	(59/2⁻)		
12236.7	(63/2⁻)	515.1 *5*	100 *20*	11721.5	(61/2⁻)	D+Q	
		1146.5 *10*	53 *7*	11090.0	(59/2⁻)	Q	
12296.0		1162.9 *5*	100	11133.1			
12324.1		1234.2 *10*		11090.0	(59/2⁻)		
12492.2	(63/2⁻)	1402.3 *5*	100	11090.0	(59/2⁻)	Q	
12858.8		534.8 *10*		12324.1			
		1137.1 *10*		11721.5	(61/2⁻)		
12921.3		1480.5 *10*	100	11440.8			
13173.5	(65/2⁺)	1364.7 *5*	100	11808.8	(61/2⁺)		
13433.1	(67/2⁻)	941.0 *5*	100 *14*	12492.2	(63/2⁻)	Q	
		1196.0 *10*	43 *7*	12236.7	(63/2⁻)		
13438.7	(65/2⁻)	1202.0 *10*		12236.7	(63/2⁻)	D+Q	
		1222.1[b] *10*		12216.9?			
14485.1		1311.6 *5*	100	13173.5	(65/2⁺)		
14521.7		1348.2 *5*	100	13173.5	(65/2⁺)		
14554.5	(69/2⁻)	1115.8 *10*	100	13438.7	(65/2⁻)		
14760.3	(69/2⁻)	1327.2 *5*	100	13433.1	(67/2⁻)	D+Q	
3117.6+u	(33/2⁻)	152.0 *4*	100	2965.6+u?	(31/2⁻)	D[&]	Decays to 2965, 23/2⁺ level also through unknown transitions.
3316.9+u	(35/2⁻)	199.3 *4*	100	3117.6+u	(33/2⁻)	(D)[&]	
3543.0+u	(37/2⁻)	226.1 *4*	100	3316.9+u	(35/2⁻)	(D)[&]	

$^{123}_{54}Xe_{69}$-23

Adopted Levels, Gammas (continued)

γ(^{123}Xe) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[@]
3788.7+u	(39/2$^-$)	245.5 *4*	100 *7*	3543.0+u	(37/2$^-$)	(D)[&]
		471.8 *4*	5 *2*	3316.9+u	(35/2$^-$)	(Q)[&]
4086.9+u	(41/2$^-$)	298.2 *4*	100 *8*	3788.7+u	(39/2$^-$)	D[&]
		544.1 *4*	18 *5*	3543.0+u	(37/2$^-$)	(Q)[&]
4444.2+u	(43/2$^-$)	357.4 *4*	100 *7*	4086.9+u	(41/2$^-$)	D[&]
4444.2+u	(43/2$^-$)	655.2 *4*	21 *4*	3788.7+u	(39/2$^-$)	(Q)[&]
4920.0+u	(45/2$^-$)	475.7 *4*	70 *8*	4444.2+u	(43/2$^-$)	(D)[&]
		833.2 *4*	100 *16*	4086.9+u	(41/2$^-$)	(Q)[&]
5409.3+u	(47/2$^-$)	489.3 *4*	100	4920.0+u	(45/2$^-$)	(D)[&]

† Additional information 32.
‡ From (^{3}He,3nγ) up to 3479 level and from (^{48}Ca,5nγ) above that, unless otherwise noted.
# From ^{123}Cs ε decay.
@ From γ(θ) in (^{48}Ca,5nγ), unless otherwise noted.
& From γγ(DCO) in (^{18}O,5nγ) (2002Ra34).
[a] Multiply placed with intensity suitably divided.
[b] Placement of transition in the level scheme is uncertain.

$^{123}_{54}Xe_{69}$-24

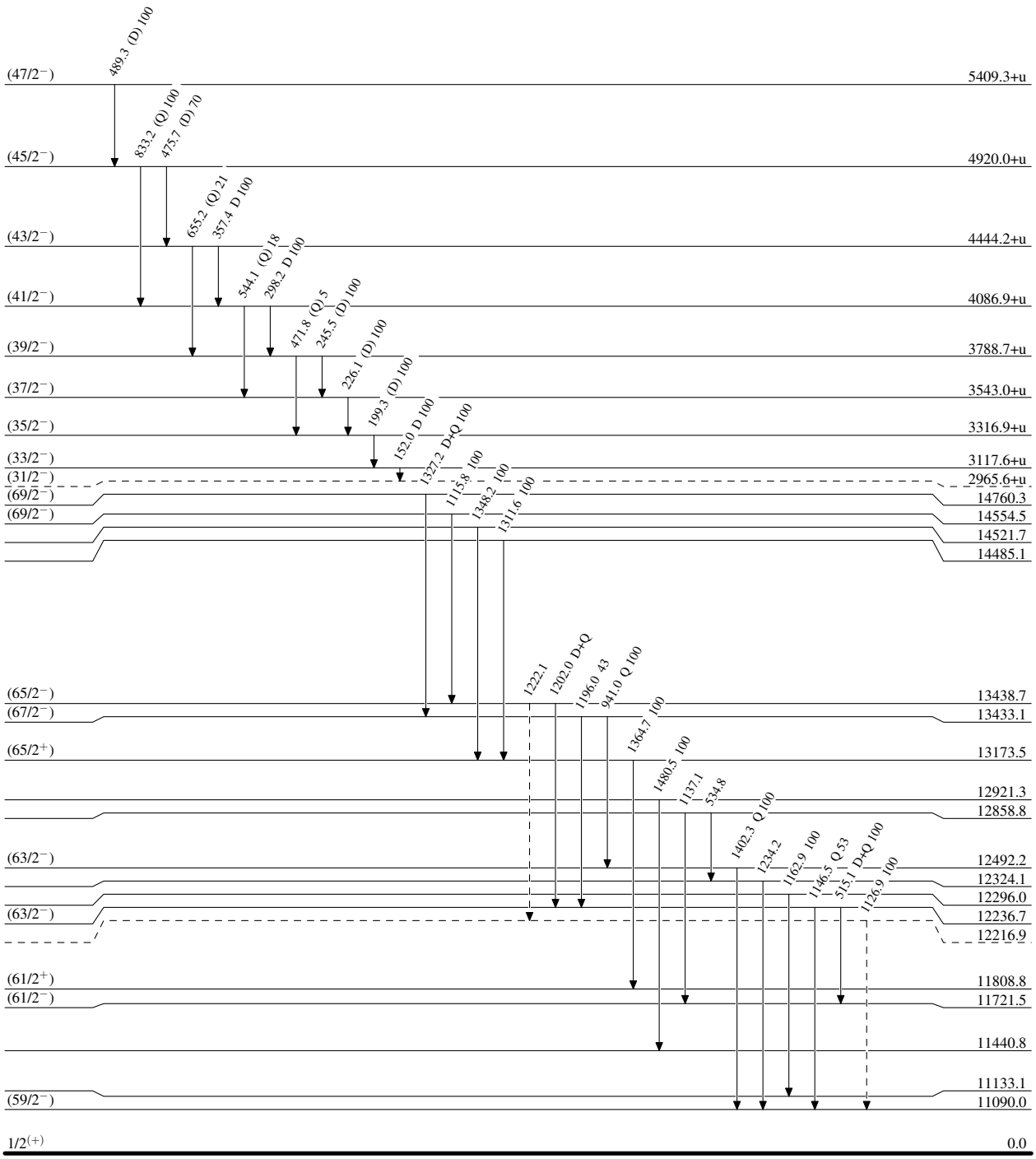
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{123}_{54}Xe_{69}$

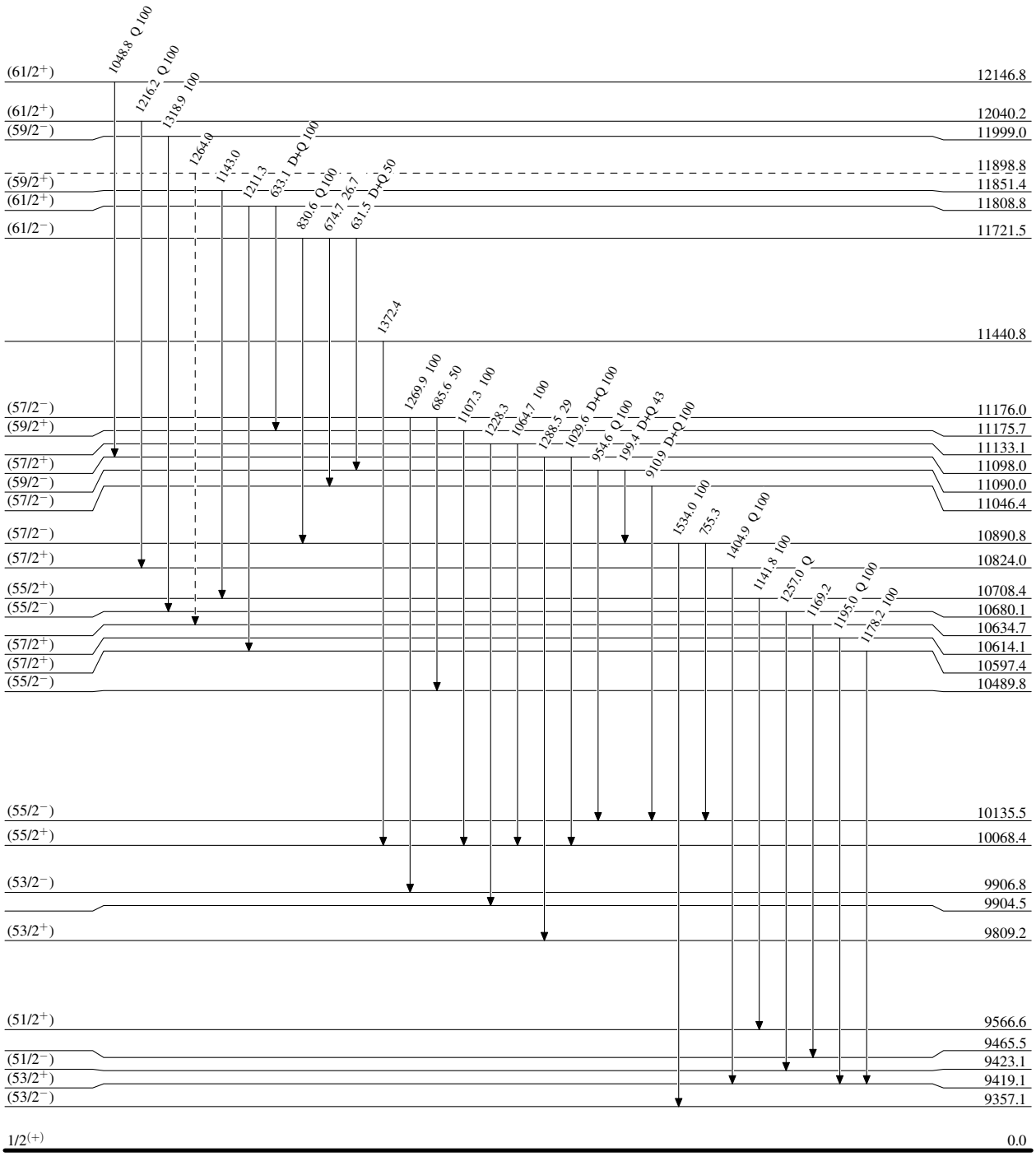
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



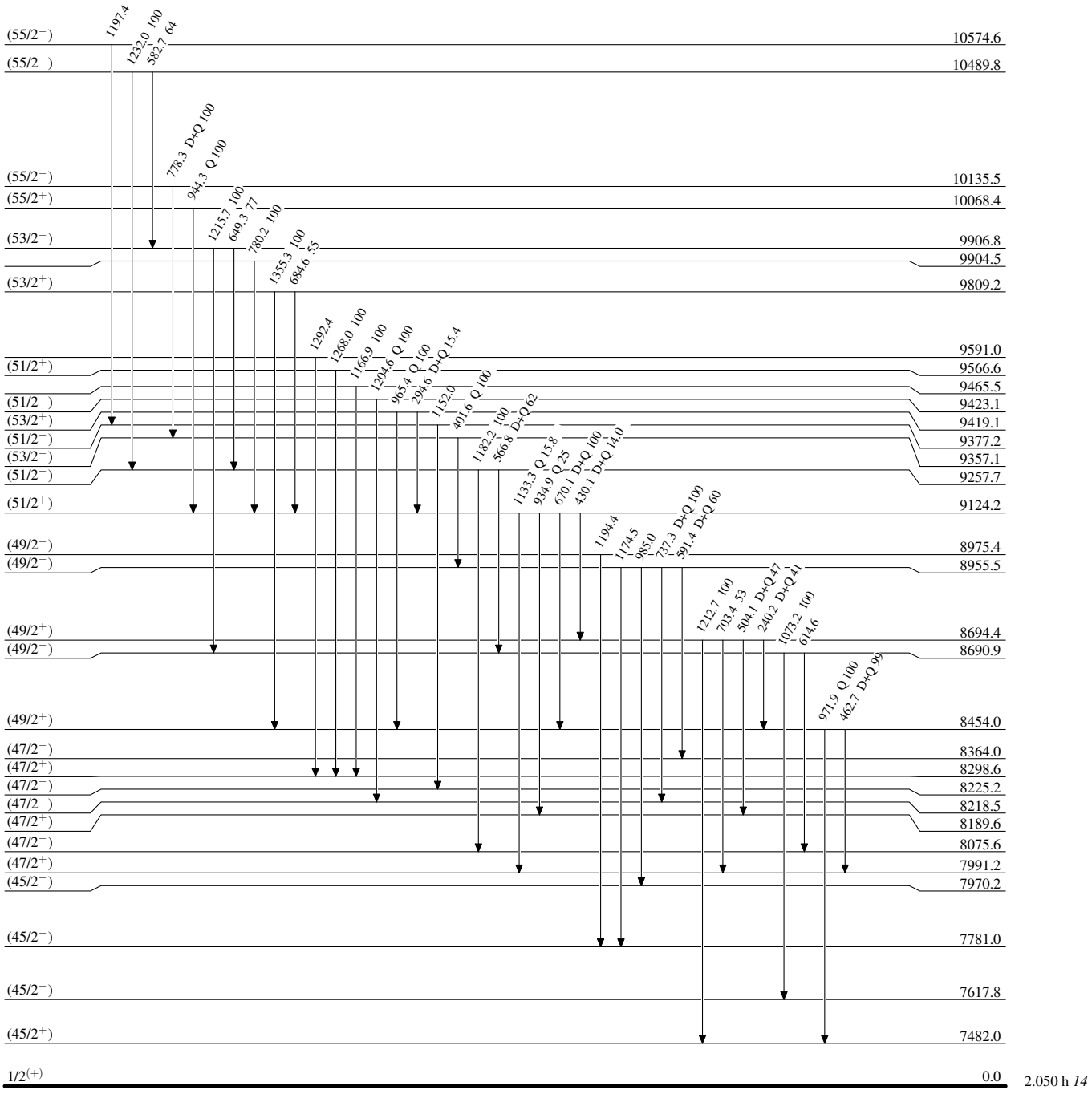
2.050 h *14*

$^{123}_{54}Xe_{69}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

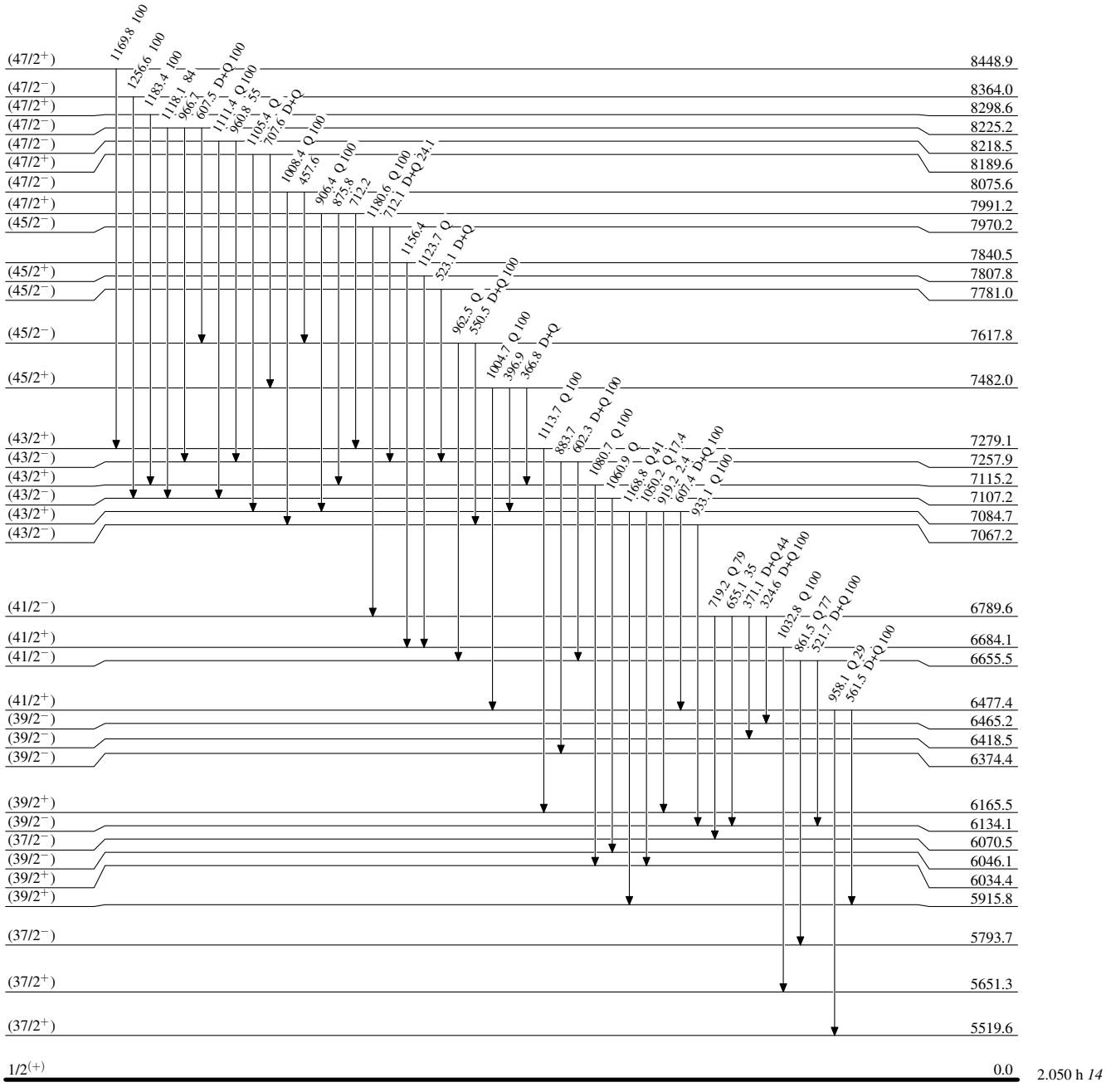


$^{123}_{54}Xe_{69}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

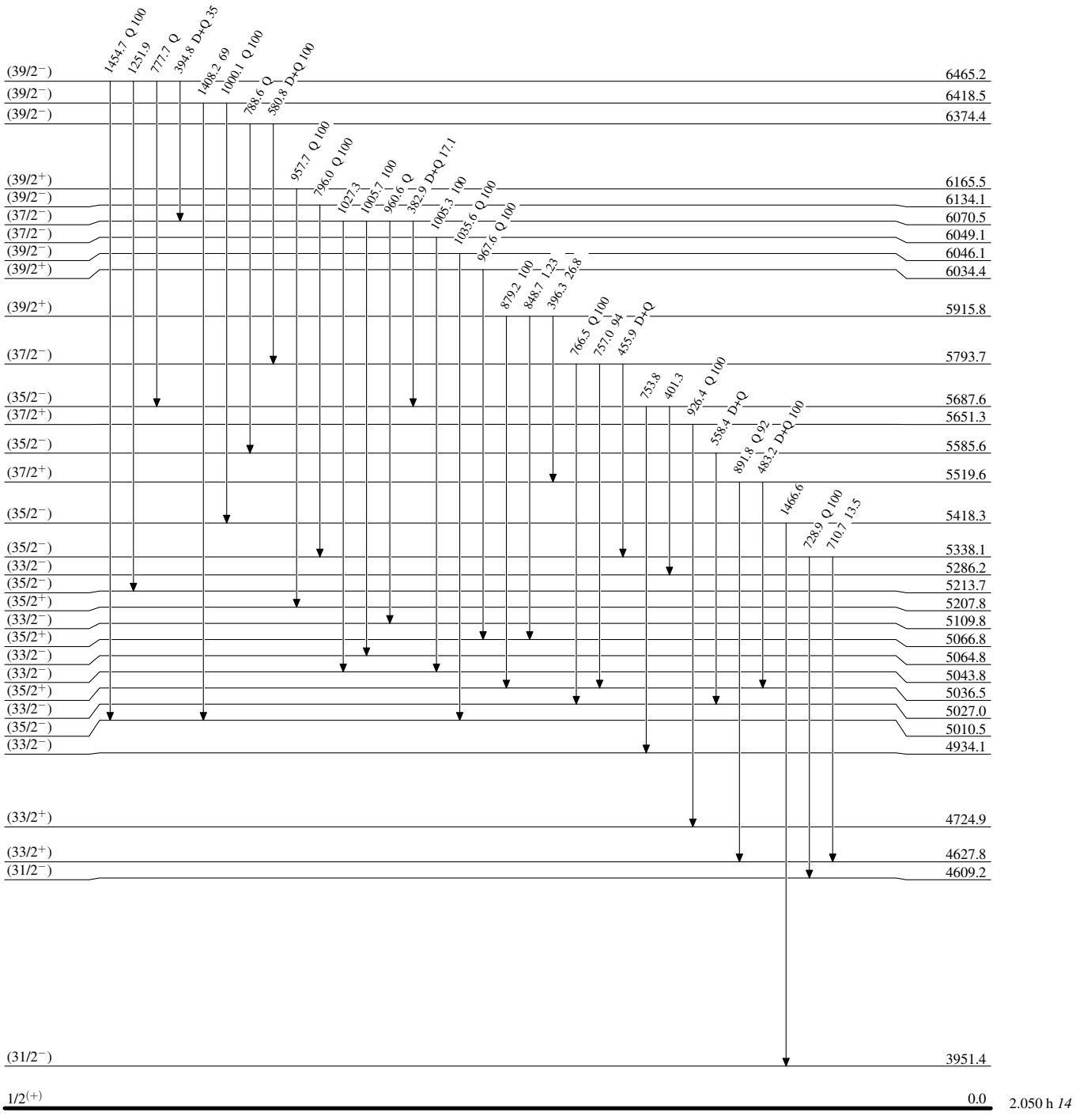


$^{123}_{54}Xe_{69}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

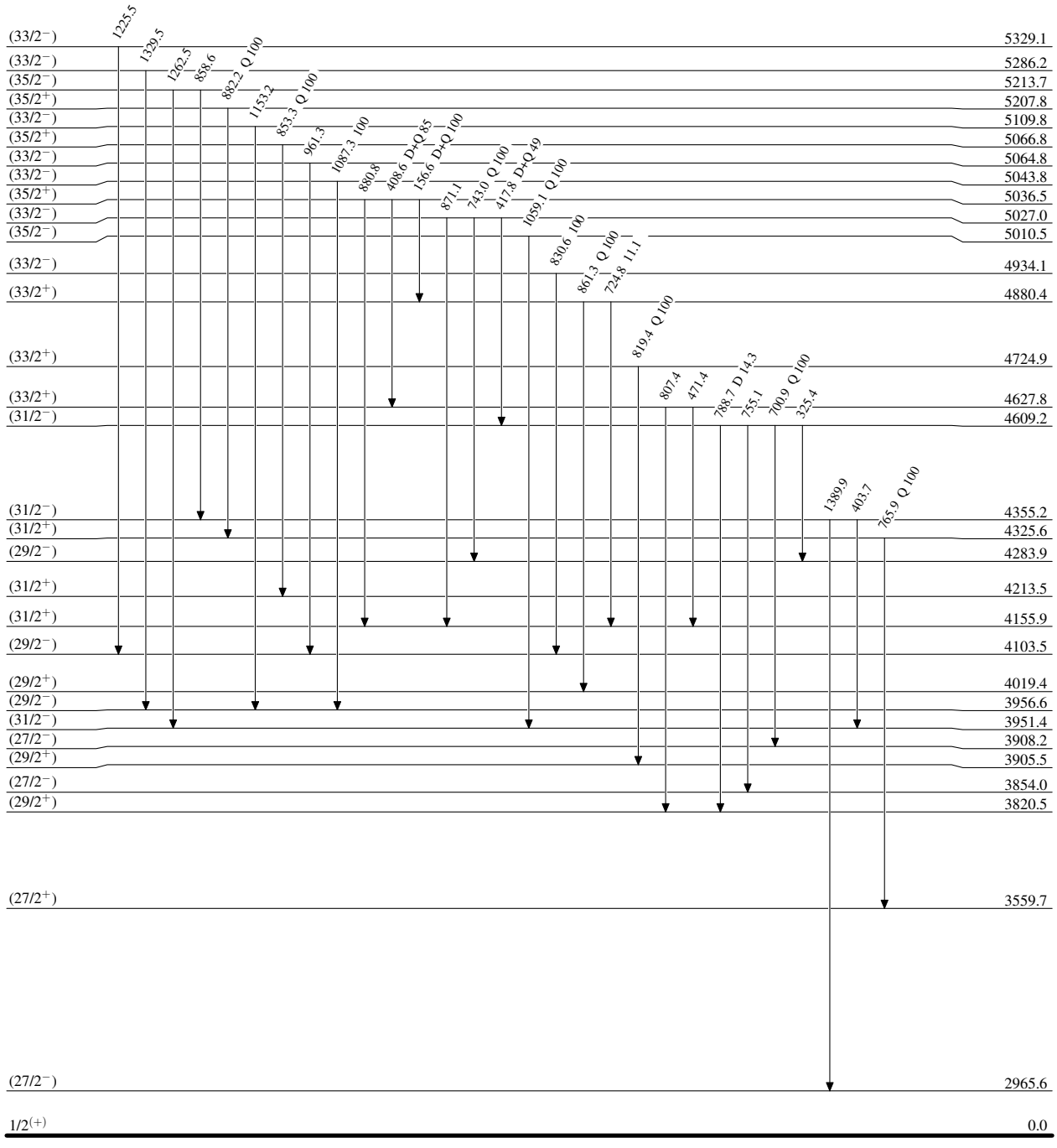


$^{123}_{54}Xe_{69}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{123}_{54}Xe_{69}$

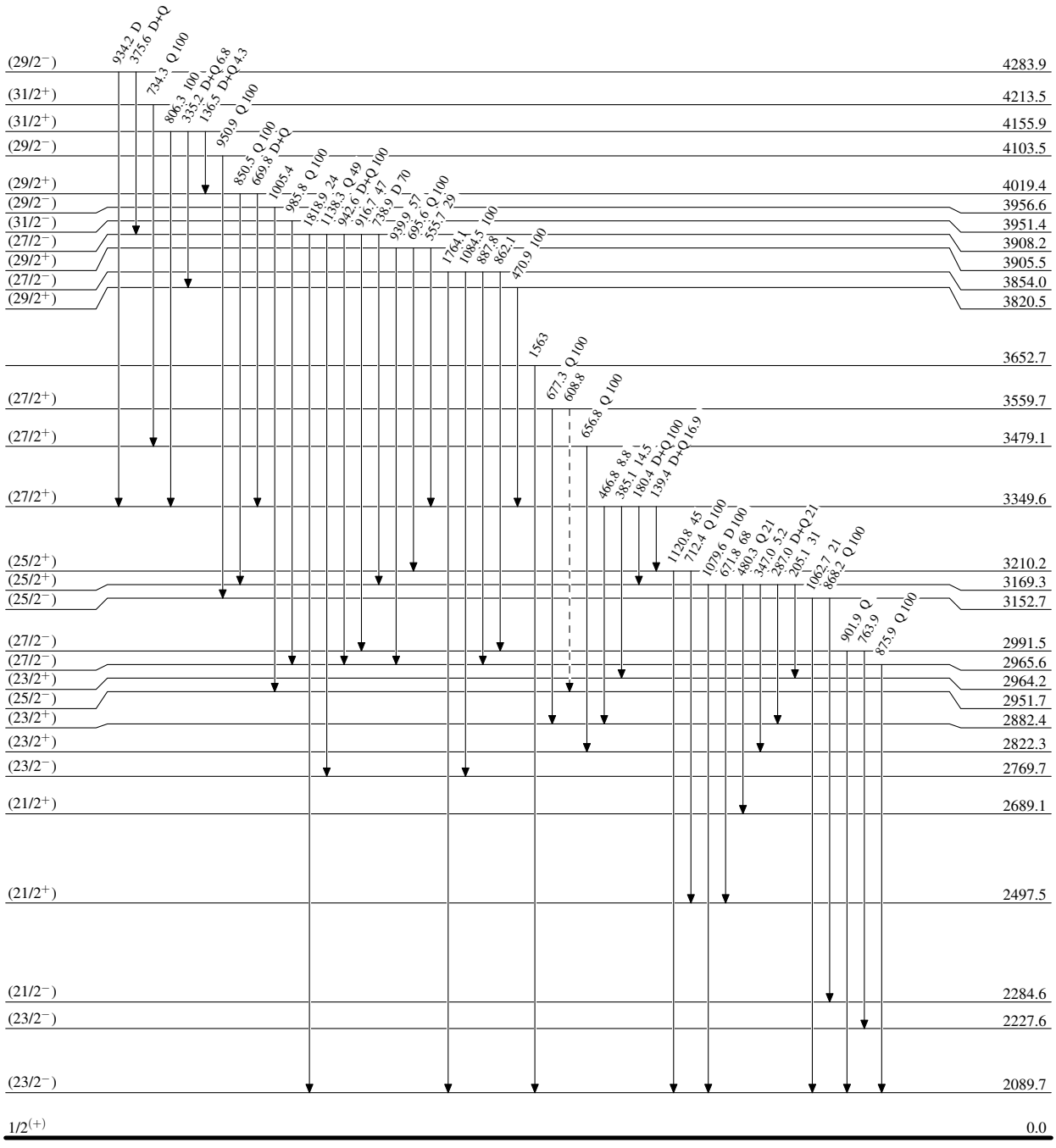
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{123}_{54}Xe_{69}$

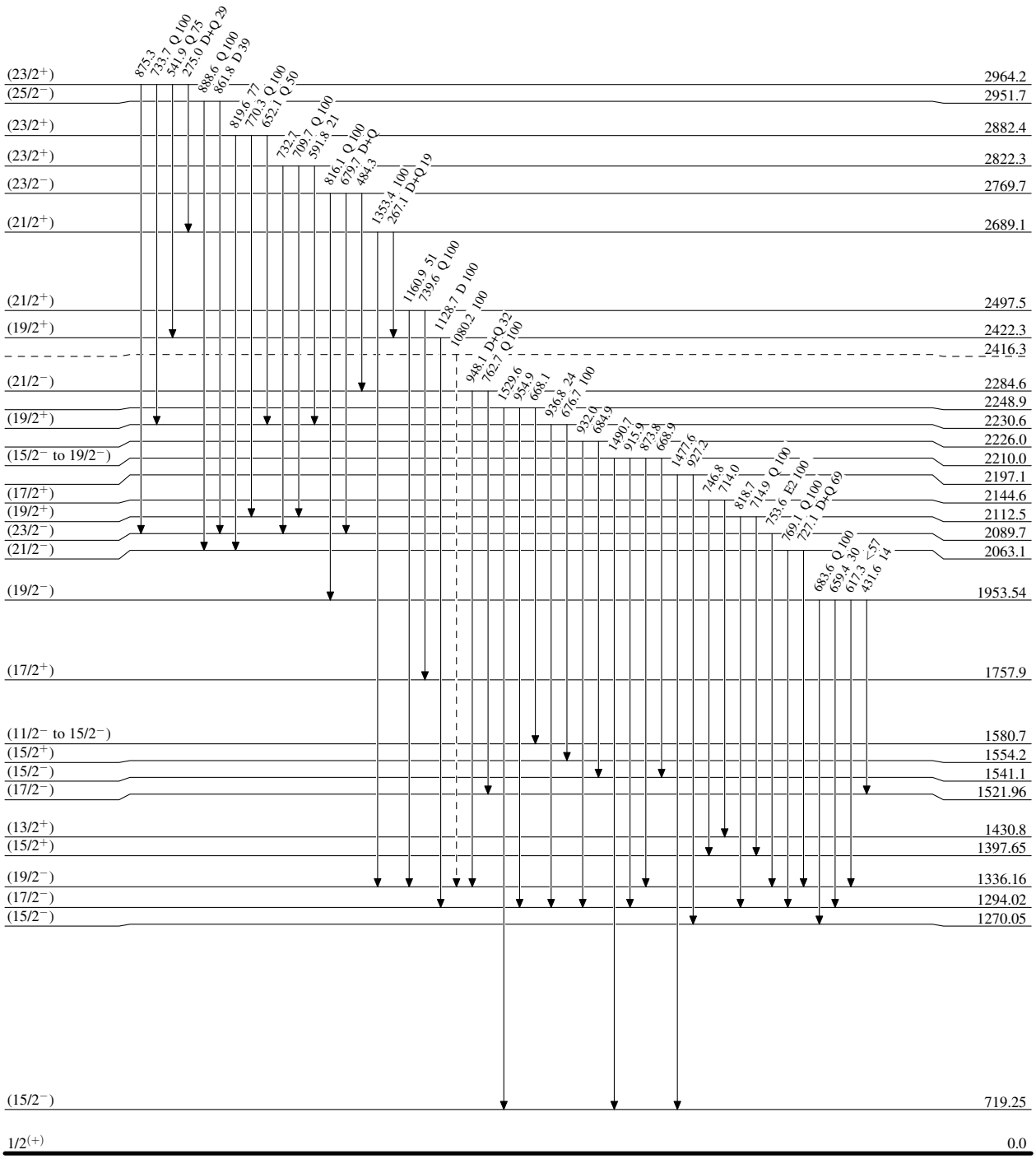
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{123}_{54}Xe_{69}$

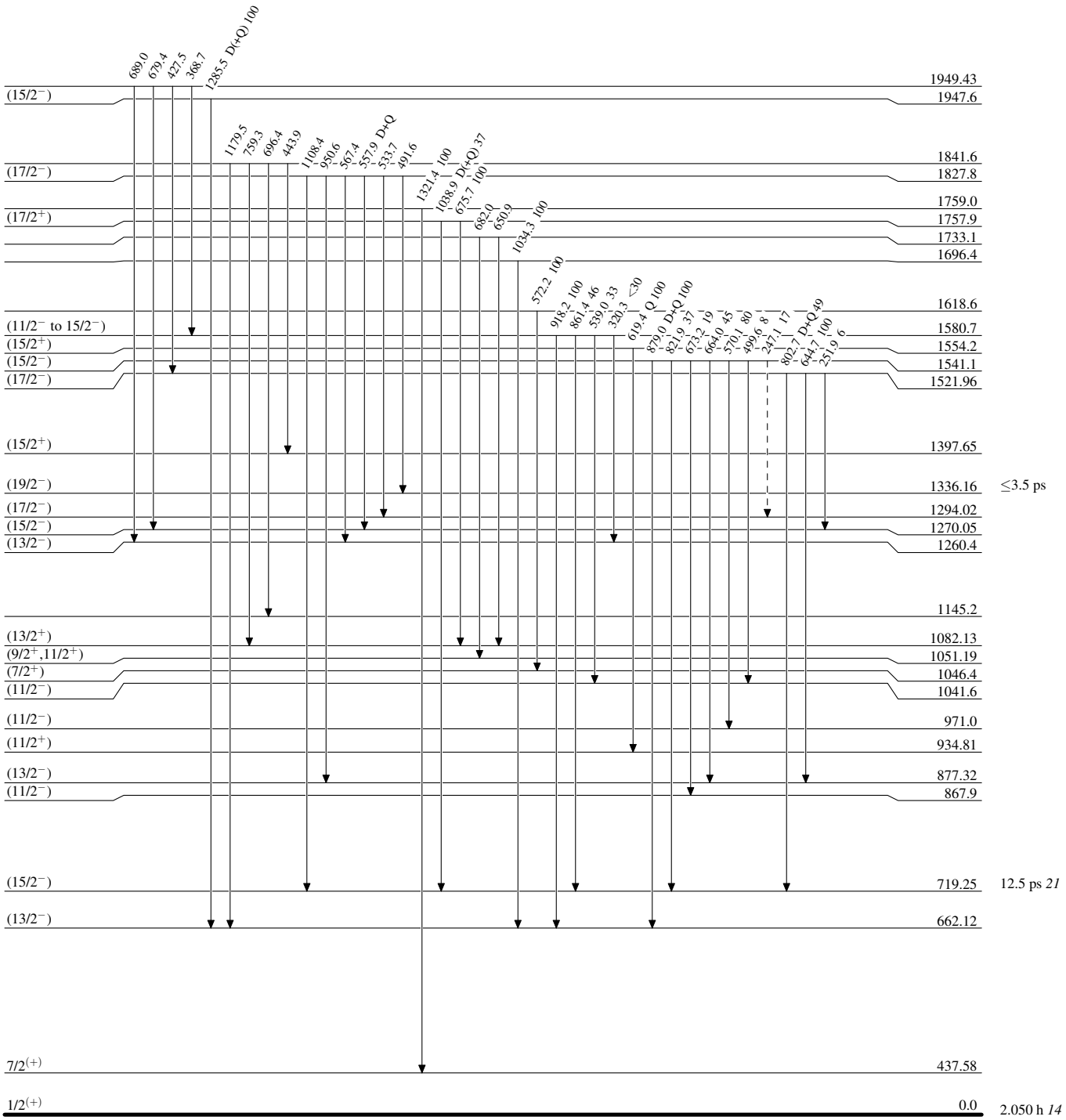
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)

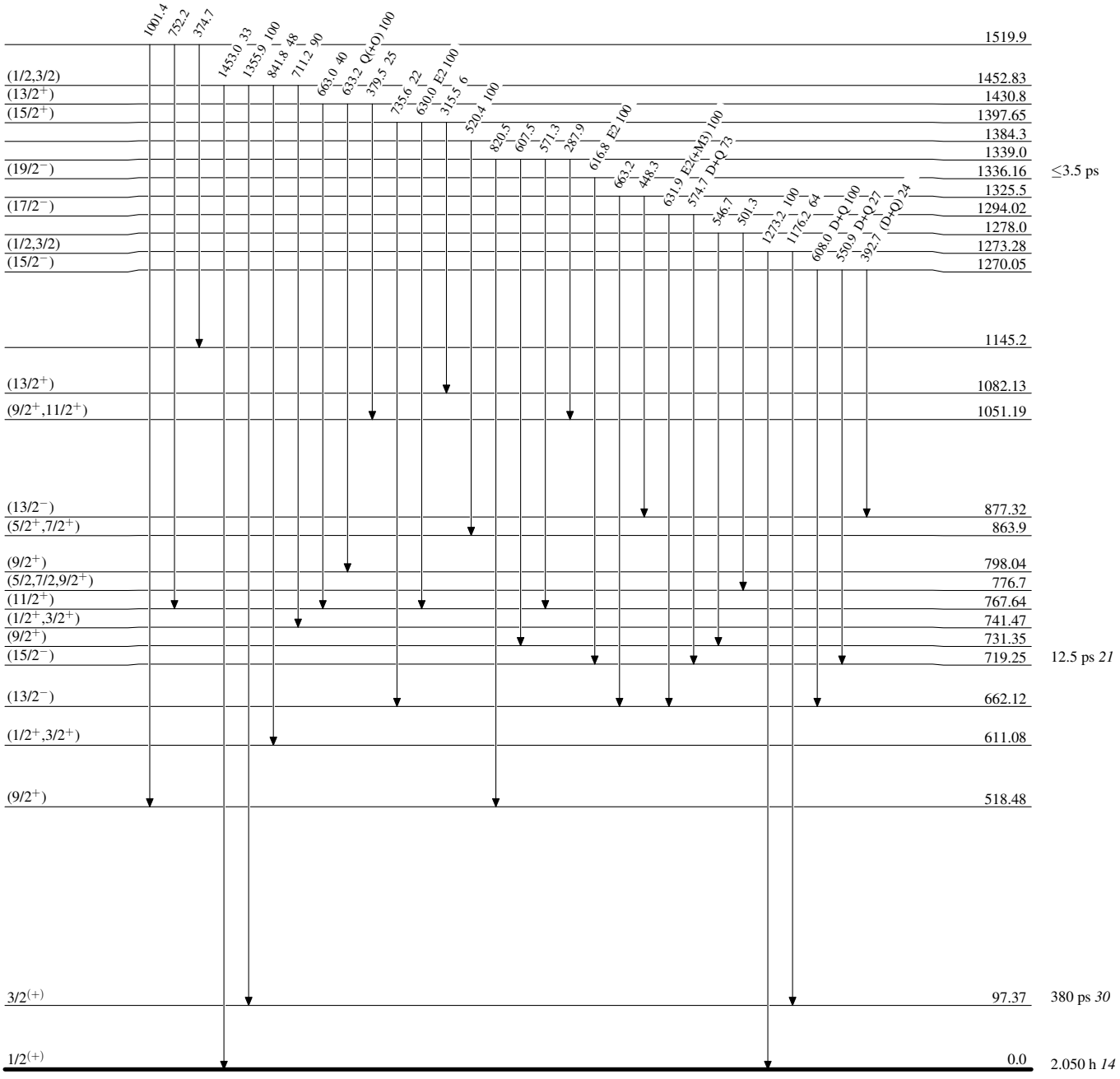


$^{123}_{54}Xe_{69}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

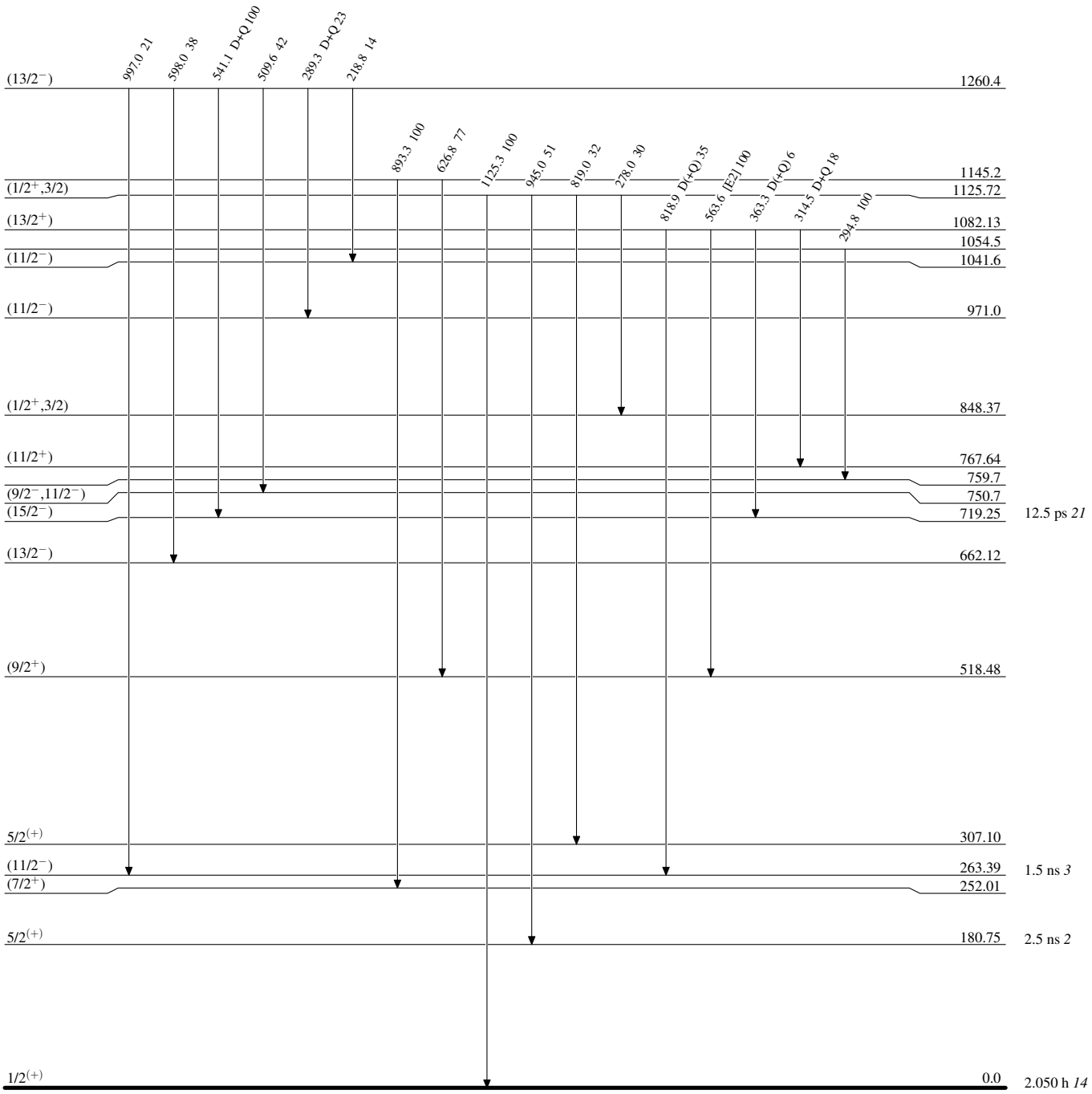


$^{123}_{54}Xe_{69}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{123}_{54}Xe_{69}$

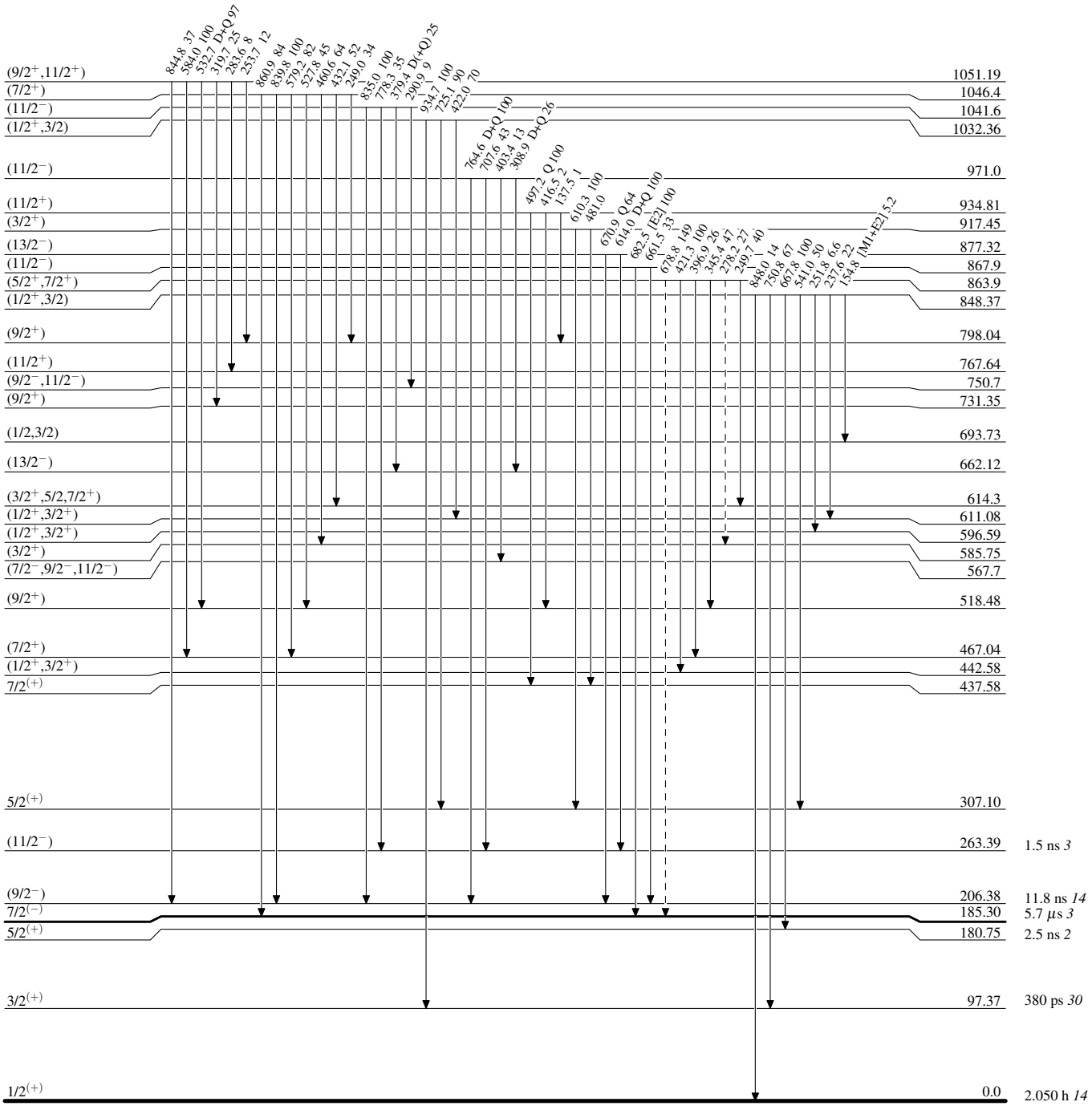
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)

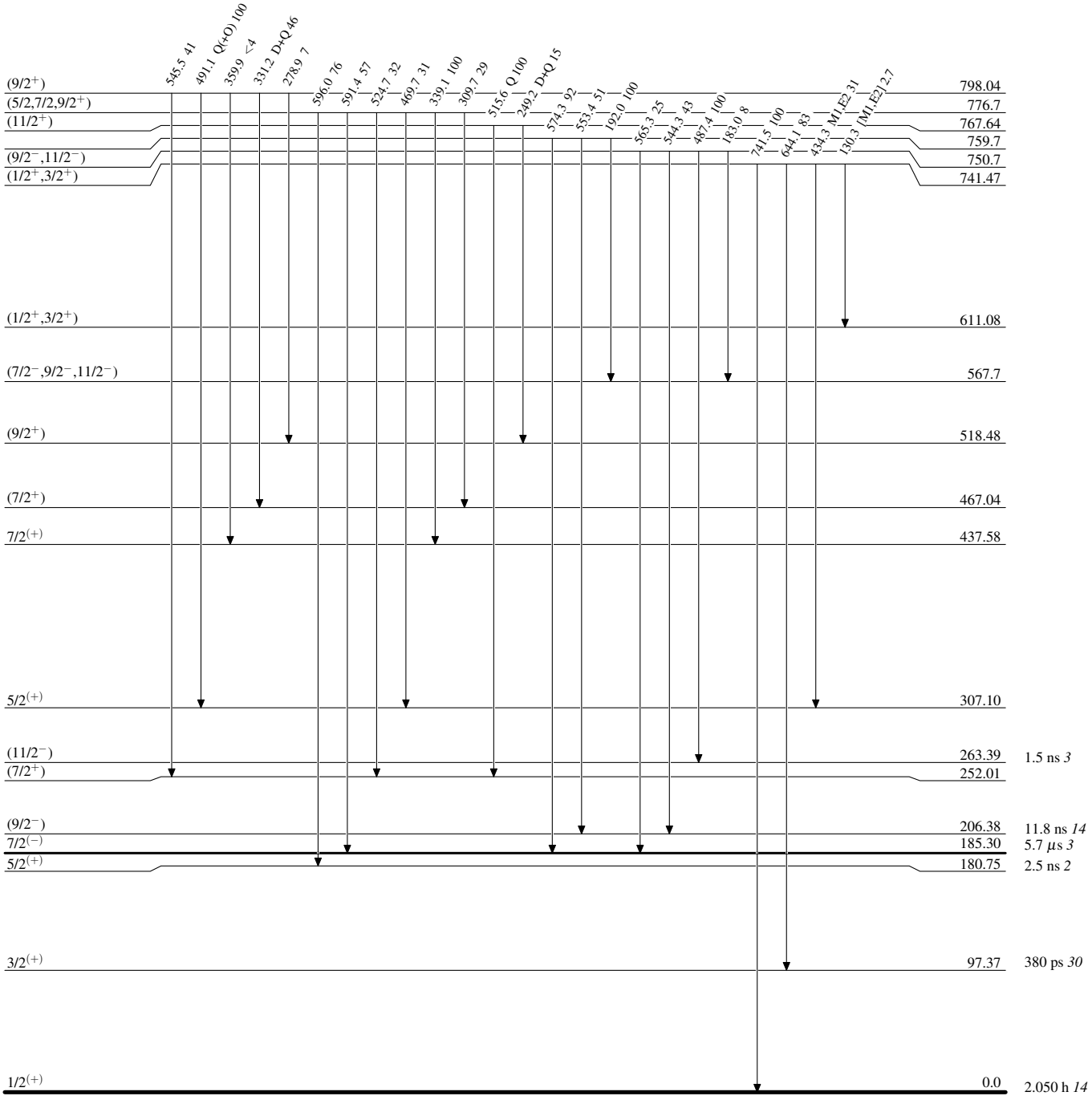


$^{123}_{54}Xe_{69}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{123}_{54}Xe_{69}$

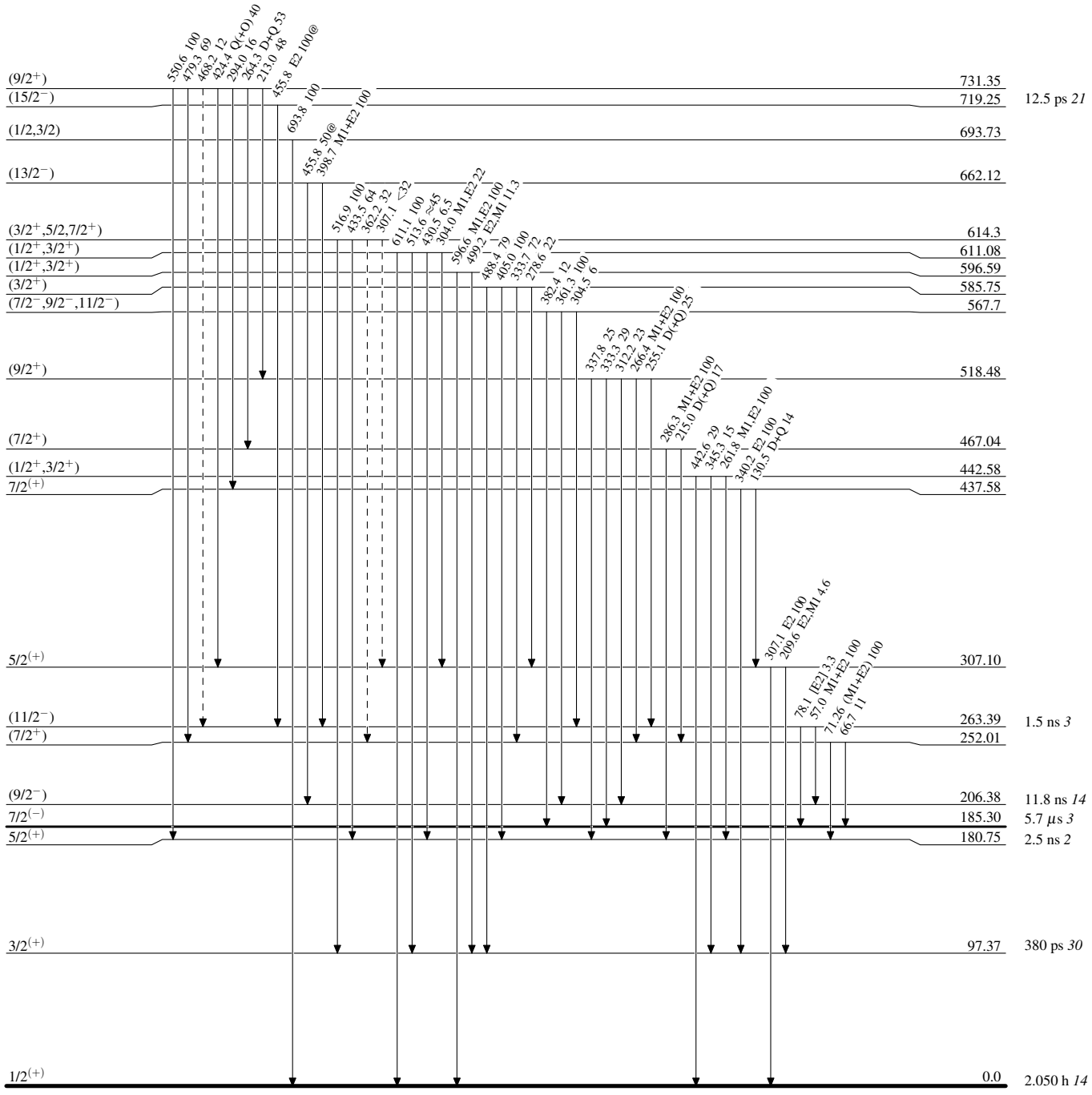
Adopted Levels, Gammas

Legend

Level Scheme (continued)

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

γ Decay (Uncertain)



$^{123}_{54}Xe_{69}$

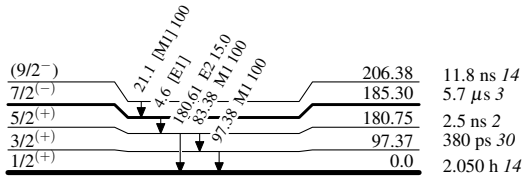
Adopted Levels, Gammas

Level Scheme (continued)

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

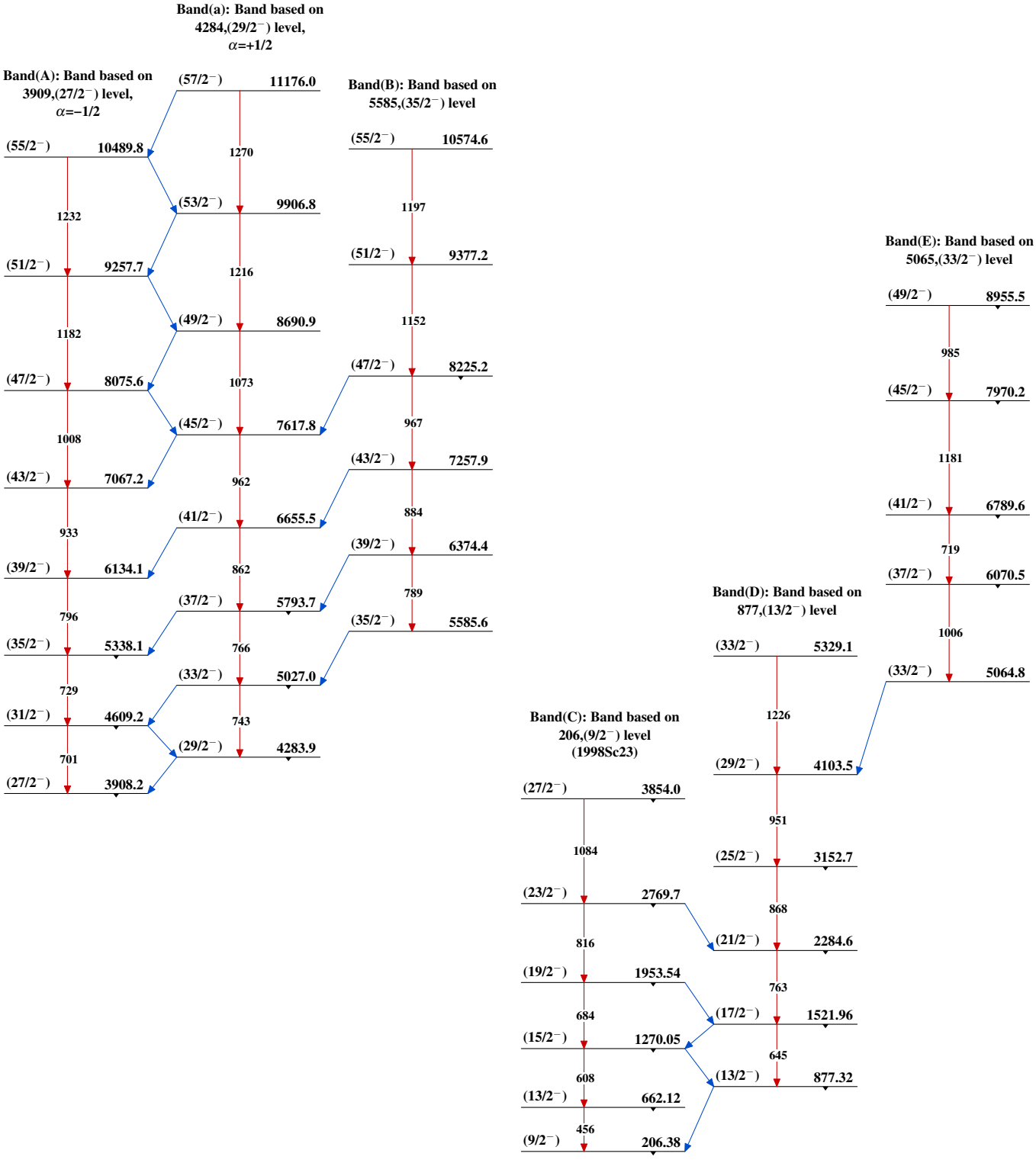
Legend

- - - - - - ► γ Decay (Uncertain)

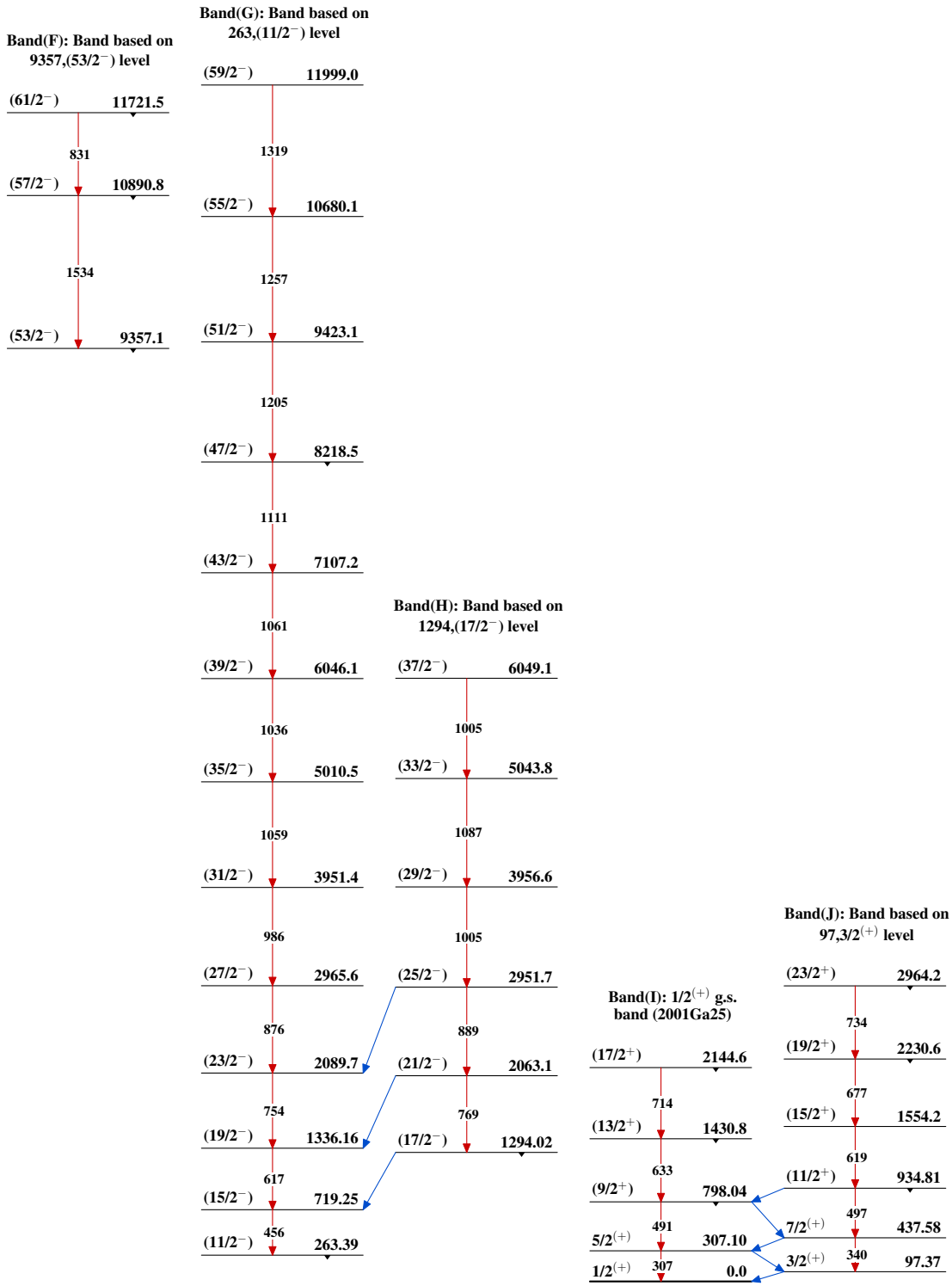


$^{123}_{54}Xe_{69}$

Adopted Levels, Gammas

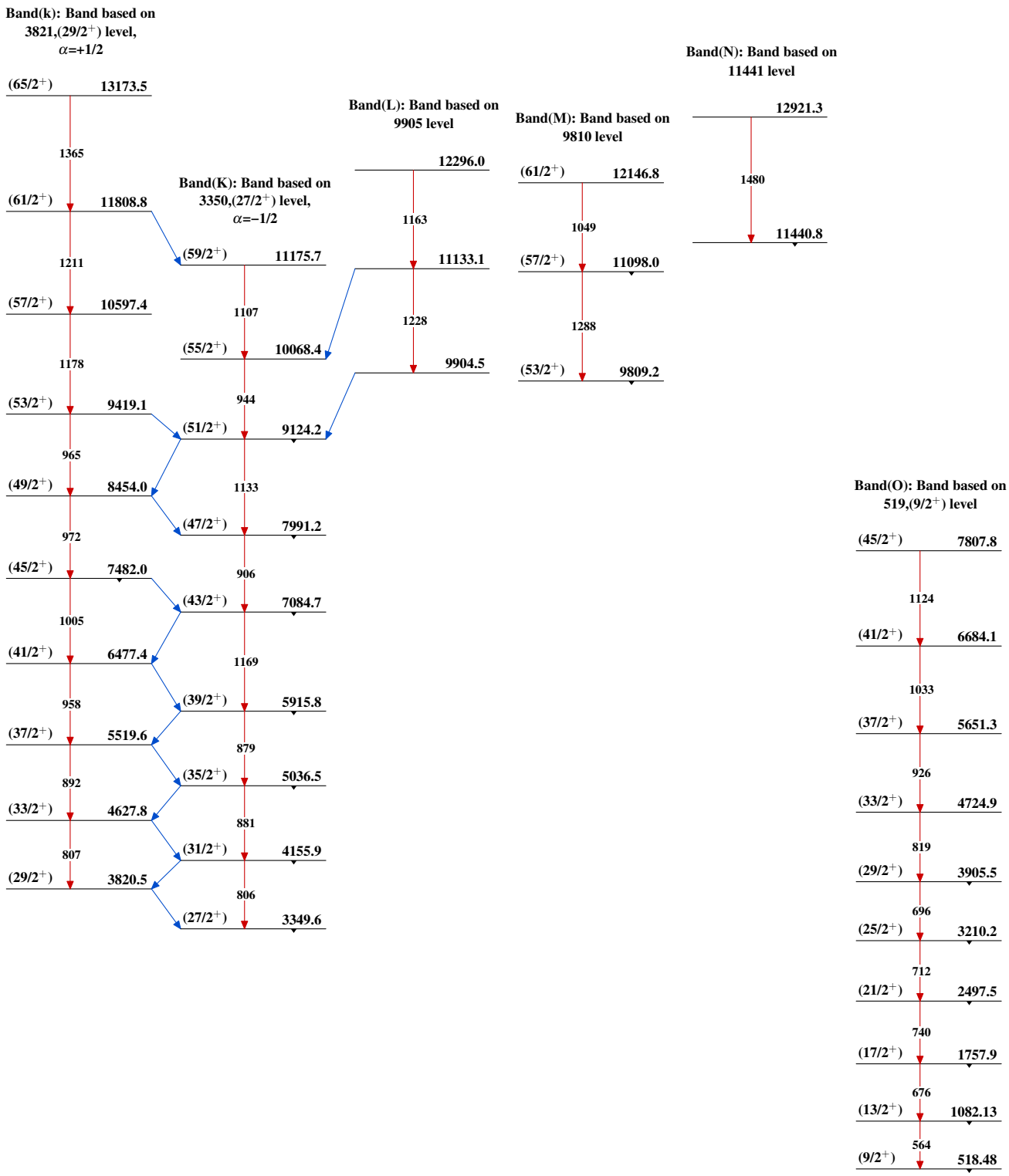


Adopted Levels, Gammas (continued)

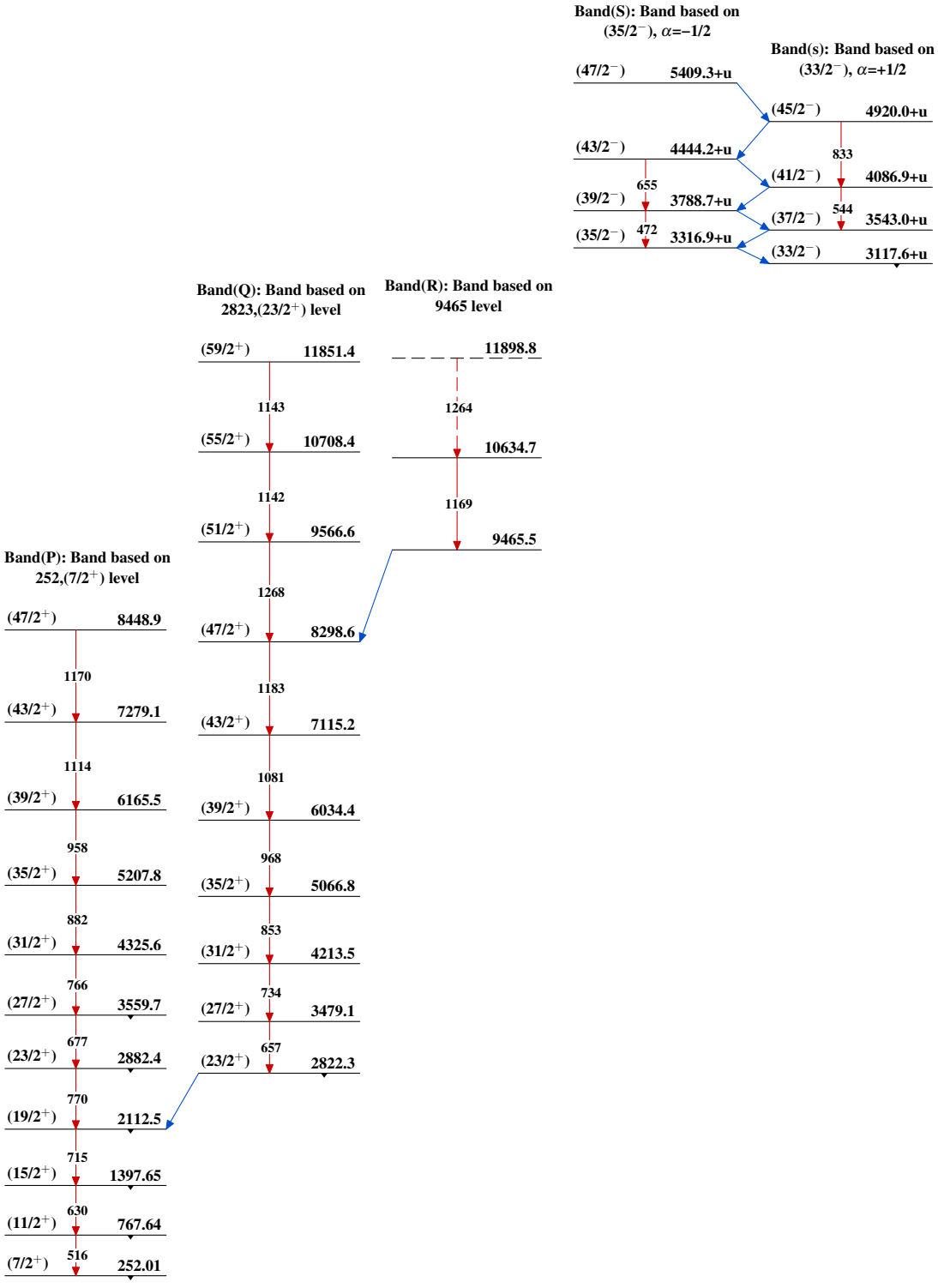


$^{123}_{54}Xe_{69}$

Adopted Levels, Gammas (continued)



Adopted Levels, Gammas (continued)



$^{123}_{54}Xe_{69}$