Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	NDS 108,2173 (2007)	1-Oct-2006

Q(β^-)=4162.4 *4*; S(n)=4025.56 *10*; S(p)=10127 *15*; Q(α)=−1876 *4* 2012Wa38
Note: Current evaluation has used the following Q record 4166 74025.53 *1110170* 50 2003Au03.
Photo-fission fragment yield: 2005Ga50,2004Ga60,2003Ga21, 2002Ib01.
n-,p-induced fission yields: 2000Lh02.

^{137}Xe Levels

E(level)≥4103 keV decay by neutron emission and some also by γ rays.

Cross Reference (XREF) Flags

A	^{137}I β^- decay:neutron	D	^{248}Cm SF decay
B	^{137}I β^- decay:γ	E	^{136}Xe(n,γ) E=thermal
C	^{138}I β^-n decay	F	^{136}Xe(d,p)

E(level)[#]	J$^\pi$[‡c]	T$_{1/2}$[†]	XREF	Comments
0.0	7/2$^-$[@]	3.818 min *13*	ABCDEF	%β^-=100 μ=−0.9704 *10* (1990NeZY,1989Bo03) Q=−0.490 *17* (1990NeZY,1989Bo03) J$^\pi$: L=3 in (d,p), μ, configuration=2f7/2. T$_{1/2}$: from 1969Ca03. Others: 3.80 min *5* (1966Ar08), 3.86 min *8* (1968To20) 3.88 min *3* (1968Ho22), 3.83 min *2* (1972Eh02). Δ<r^2>(^{136}Xe,^{137}Xe)=0.105 *3* (1989Bo03).
601.05 *7*	3/2$^-$	<0.25 ns	BC EF	J$^\pi$: L=1 in (d,p), γ to 7/2$^-$ cannot be M3; configuration=3p3/2. T$_{1/2}$: from ^{137}I β^- decay (1980Fo09).
986.20 *10*	(1/2)$^-$		BC EF	XREF: F(950). J$^\pi$: L=1 in (d,p), no γ to 7/2$^-$, configuration=3p1/2.
1218.00 *10*	9/2$^-$[&]		B f	XREF: f(1120). J$^\pi$: configuration=1h9/2.
1220.07 *15*	11/2$^-$[@]		B D f	XREF: f(1120).
1302.73 *7*	5/2$^-$		B EF	XREF: F(1200). J$^\pi$: L(d,p)=3; γ to 1/2$^-$; configuration=2f5/2.
1461.28? *18*	(1/2,3/2)		E	J$^\pi$: probable γ from 1/2$^+$ neutron-capture state in (n,γ).
1512.16 *7*			B	
1534.32 *7*	(5/2)$^-$		B F	XREF: F(1410). J$^\pi$: L(d,p)=3; f5/2 from level ordering in N=83, ^{139}Ba (1968Mo21,1967Ve02).
1621.1 *2*	15/2$^-$[@]		D	J$^\pi$: γ to (9/2)$^-$, no γ to 7/2$^-$.
1668.13 *15*	(1/2,3/2)		B E	J$^\pi$: γ's to 1/2$^-$ and 3/2$^-$, γ from 1/2$^+$ neutron-capture state in (n,γ).
1715.55 *10*	3/2$^-$,5/2,7/2$^-$		B E	J$^\pi$: γ's to 3/2$^-$ and 7/2$^-$.
1752.56 *15*			B	
1766.17 *10*	3/2$^-$,5/2,7/2$^-$		B	J$^\pi$: γ's to 3/2$^-$ and 7/2$^-$.
1796.08 *15*			B	
1808.75 *10*			B	
1820.56 *10*			B	
1841.49 *25*	(3/2$^-$)		B E	J$^\pi$: γ from 1/2$^+$ n-capture state, γ to 7/2$^-$.
1849.69 *10*	3/2$^-$,5/2,7/2$^-$		B	J$^\pi$: γ's to 3/2$^-$ and 7/2$^-$.
1873.13 *10*			B	
1879.26 *20*			B	
1898.3 *3*			B	

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Adopted Levels, Gammas (continued)

^{137}Xe Levels (continued)

E(level)[#]	Jπ[‡c]	$T_{1/2}$[†]	XREF	Comments
1926.4 *3*			B	
1935.2 *3*	19/2⁻ [@]	10.1 ns *9*	D	$T_{1/2}$: From 2005Hw06,2004Hw02 from SF decay; others: 8.1 ns *4* (1974ClZX), 7.8 ns *8* (2005Fo17).
1936.05 *10*	(3/2⁻)		B E	Jπ: γ from 1/2⁺ n-capture state, γ to 7/2⁻.
1991.18 *15*			B	
1997.06 *7*			B	
2010.80 *17*			B	
2013.1 *3*			B	
2029.8 *7*			B	
2088.0 *3*			B	
2089.67 *25*			B	
2099.97 *10*			B	
2114.0 *4*			B	
2144.32 *25*			B	
2147.00 *20*			B	
2155.11 *20*			B	
2191.19 *15*			B	
2196.15 *15*	(1/2⁻,3/2)		B E	Jπ: γ to 5/2⁻ and possible primary γ from 1/2⁺.
2204.0 *6*	(19/2⁻)		D	Jπ: 270γ(θ) is interpreted as M1+E2, ΔJ=0 (1999Da13).
2229.97 *15*			B	
2237.76 *25*			B	
2244.09 *15*			B	
2281.59 *20*			B	
2345.65 *15*			B	
2356.28 *15*			B	
2368.32 *15*			B	
2380.30 *15*			B	
2422.70 *10*			B	
2444.0 *3*			B	
2452.4 *3*	1/2,3/2[a]		E	
2474.84 *20*			B	
2490.38 *10*	(3/2⁻)[b]		E	
2566.9 *6*			B	
2571.09 *15*			B	
2608.8 *5*			E	
2629.70 *10*			B	
2671.59 *20*			B	
2676.30 *20*			B	
2726.14 *20*			B	
2829.8 *3*			B	
2844.50 *15*			B	
2909.8 *4*			B	
2922.6 *3*			B	
2960.3 *3*			B	
2980.0 *6*	(23/2⁻)		D	Jπ: 1045.8γ(θ) is ΔJ=2 (1999Da13).
2983.5 *3*			B	
2993.9 *3*			B	
3022.9 *3*			B	
3062.1 *8*	(23/2⁻)		D	Jπ: 1128.3γ(θ) is likely to be ΔJ=2 (1999Da13).
3111.9 *10*			D	
3117.6 *3*			B	
3251.8 *11*			D	
3254.0 *4*			B	
3263.1 *3*			B	
3276.72 *20*			B	
3287.6 *3*			B	

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Adopted Levels, Gammas (continued)

^{137}Xe Levels (continued)

E(level)#	Jπ‡c	XREF	Comments
3291.6 *7*	(27/2⁻)	D	Jπ: 311.6γ(θ) is ΔJ=2 (1999Da13).
3347.4 *10*		D	
3353.0 *4*		B	
3417.1 *5*		B	
3458.62 *15*		B	
3500.7 *5*		B	
3540.6 *5*		B	
3544 *4*		B	
3570.13 *15*		B	
3571.69 *25*		B	
3670.6 *4*		B	
3729.66 *20*		B	
3795.43 *20*		B	
3800.7 *3*		B	
3862.5 *3*		B	
3866.2 *3*		B	
3911.27 *20*		B	
3986.9 *3*		B	
3996.3 *3*		B	
4016.2 *8*		B	
4025.73 *25*		B E	
4028.92 *15*		B	
4038.96 *15*		B	
4064.6 *6*		B	
4083.87 *15*		B	
4103.3 *3*		AB	
4105.0 *6*		B	
4129.99 *15*		B	
4140.98 *15*		B	
4153 *4*		A	
4160.94 *15*		B	
4173.11 *15*		B	
4180.8 *16*		A	
4189.0 *7*		B	
4199.1 *7*		A	
4211.6 *2*		B	
4260.4 *4*		B	
4270.3 *4*		B	
4276.53 *15*		B	
4282.6 *14*		A	
4288.1 *8*		B	
4298.3 *5*		A	
4318.2 *5*		B	
4332.78 *15*		B	
4346.5 *12*		A	
4350.5 *6*		B	
4379.7 *2*		A	
4380.2 *5*		A	
4382.8 *10*	(29/2⁺)	D	Jπ: 1045.8γ(θ) is ΔJ=1, (E1) (1999Da13).
4399.8 *8*	(⁺)	A	
4402.78 *15*		B	
4420.7 *10*		A	
4424.7 *6*		B	
4443.1 *13*		A	
4477.8 *3*		B	
4489.4 *8*		A	
4501.9 *6*		B	

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Adopted Levels, Gammas (continued)

^{137}Xe Levels (continued)

E(level)[#]	J^{π}[‡c]	XREF	Comments
4505.2 *10*		A	
4527.2 *16*		A	
4543.3 *6*		B	
4543.6 *20*		A	
4559.9 *4*		B	
4584.6 *13*		A	
4609.3 *4*		A	
4631.1 *18*		A	
4680.6 *7*		B	
4685.8 *10*		B	
4687.6 *11*	(33/2$^+$)	D	J^{π}: 1396$\gamma(\theta)$, ΔJ=2 (1999Da13) not consistent with J^{π} assignment.
4712.7 *18*		A	
4750.3 *10*		A	
4758.0 *5*		B	
4772.6 *9*		A	
4784.7 *6*		B	
4797.9 *12*	($^+$)	A	
4802.5 *13*		B	
4869 *3*		A	
4880.5 *3*	($^+$)	A	
4881.0 *12*		A	
4899.0 *9*		B	
4905.6 *24*		A	
4956 *3*		A	
4978.5 *12*	($^+$)	A	
4998.8 *18*		A	
5025.1 *16*		A	
5080.2 *13*	($^+$)	A	
5125 *3*		A	
5132.2 *20*		B	
5148.8 *12*		B	
5158.2 *16*	($^+$)	A	
5170.2 *8*		B	
5179.7 *20*	($^+$)	A	
5208.9 *19*	($^+$)	A	
5230.3 *23*	($^+$)	A	
5355 *5*	($^+$)	A	
5379 *5*	($^+$)	A	
5408 *5*	($^+$)	A	

† All ^{137}Xe excited levels observed in ^{137}I β^- decay have $T_{1/2}\leq$0.4 ns (1980Fo09).

‡ Configurations are based on energy systematics of single-neutron states in N=83 (1990Ak01). Parity for higher energy levels is derived from allowed β decay from (7/2$^+$).

Correspondence between higher levels (E>1534) seen in (d,p) and other experiments is tentative. See (d,p) for these levels. See also ^{136}Xe(p,p),(p,p′) IAR in ^{137}Cs for probable analogs of some of these (d,p) levels.

@ Level cascade based on g.s. Levels connected by Stretch E2 γ rays.

& L(d,p)=5 for 1218 and/or 1220. Both levels decay only to the 7/2$^-$ g.s. Configuration=1h9/2 expected for one (or both) of these levels.

a γ from 1/2$^+$ n-capture state. γ only to 1/2$^-$.

b γ from 1/2$^+$ n-capture state. γ to 7/2$^-$.

c Configuration based on HFB calculations (1990Ak01).

Adopted Levels, Gammas (continued)

$\gamma(^{137}Xe)$

E_i(level)	J^π_i	E_γ	I_γ[†]	E_f	J^π_f	Mult.
601.05	3/2⁻	601.05[‡] *7*	100	0.0	7/2⁻	
986.20	(1/2)⁻	385.15 *7*	100	601.05	3/2⁻	
1218.00	9/2⁻	1218.00 *10*	100	0.0	7/2⁻	
1220.07	11/2⁻	1220.07 *15*	100	0.0	7/2⁻	E2
1302.73	5/2⁻	316.28 *20*	2	986.20	(1/2)⁻	
		701.79 *7*	10	601.05	3/2⁻	
		1302.64 *7*	100	0.0	7/2⁻	
1461.28?	(1/2,3/2)	860.27 *14*	100	601.05	3/2⁻	
1512.16		1512.16 *7*	100	0.0	7/2⁻	
1534.32	(5/2)⁻	1534.32 *7*	100	0.0	7/2⁻	
1621.1	15/2⁻	400.10 *10*	100	1220.07	11/2⁻	E2
1668.13	(1/2,3/2)	682.00 *7*	67	986.20	(1/2)⁻	
		1066.9 *3*	100	601.05	3/2⁻	
1715.55	3/2⁻,5/2,7/2⁻	412.97 *15*	24	1302.73	5/2⁻	
		1114.4 *3*	46	601.05	3/2⁻	
		1715.51 *10*	100	0.0	7/2⁻	
1752.56		532.49 *10*	100	1220.07	11/2⁻	
1766.17	3/2⁻,5/2,7/2⁻	463.9 *3*	20	1302.73	5/2⁻	
		1165.00 *15*	8	601.05	3/2⁻	
		1766.12 *10*	100	0.0	7/2⁻	
1796.08		283.78 *10*	13	1512.16		
		576.01 *7*	100	1220.07	11/2⁻	
		578.22 *7*	75	1218.00	9/2⁻	
1808.75		1808.75 *10*	100	0.0	7/2⁻	
1820.56		1820.56 *10*	100	0.0	7/2⁻	
1841.49	(3/2⁻)	538.93 *10*	100	1302.73	5/2⁻	
		1841.49 *13*	30	0.0	7/2⁻	
1849.69	3/2⁻,5/2,7/2⁻	547.20 *7*	47	1302.73	5/2⁻	
		1248.55 *7*	100	601.05	3/2⁻	
		1849.38 *15*	39	0.0	7/2⁻	
1873.13		570.51 *7*	16	1302.73	5/2⁻	
		655.29 *20*	9	1218.00	9/2⁻	
		1873.00 *10*	100	0.0	7/2⁻	
1879.26		659.21 *10*	100	1220.07	11/2⁻	
		1879.2 *5*	23	0.0	7/2⁻	
1898.3		1898.3 *3*	100	0.0	7/2⁻	
1926.4		1926.4 *3*	100	0.0	7/2⁻	
1935.2	19/2⁻	314.10[#] *10*	100	1621.1	15/2⁻	E2
1936.05	(3/2⁻)	268.35 *15*	60	1668.13	(1/2,3/2)	
		633.46 *7*	46	1302.73	5/2⁻	
		950.18 *13*	100	986.20	(1/2)⁻	
		1335.49 *14*	71	601.05	3/2⁻	
		1936.03 *15*	63	0.0	7/2⁻	
1991.18		773.16 *7*	100	1218.00	9/2⁻	
		1991.21 *15*	25	0.0	7/2⁻	
1997.06		694.61 *20*	17	1302.73	5/2⁻	
		1997.04 *7*	100	0.0	7/2⁻	
2010.80		1409.75 *15*	100	601.05	3/2⁻	
2013.1		2013.1 *3*	100	0.0	7/2⁻	
2029.8		727.31 *15*	4	1302.73	5/2⁻	
		811.84 *7*	13	1218.00	9/2⁻	
		2029.82 *7*	100	0.0	7/2⁻	
2088.0		867.75 *20*	86	1220.07	11/2⁻	
		869.92 *20*	100	1218.00	9/2⁻	
2089.67		1103.6 *3*	38	986.20	(1/2)⁻	

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Adopted Levels, Gammas (continued)

$\gamma(^{137}Xe)$ (continued)

E_i(level)	J^π_i	E_γ	I_γ[†]	E_f	J^π_f	Mult.
2089.67		1488.62 *20*	100	601.05	3/2⁻	
2099.97		565.73 *10*	25	1534.32	(5/2)⁻	
		882.13 *7*	70	1218.00	9/2⁻	
		2099.85 *10*	100	0.0	7/2⁻	
2114.0		2113.99 *40*	100	0.0	7/2⁻	
2144.32		1158.42 *15*	90	986.20	(1/2)⁻	
		1543.3 *3*	100	601.05	3/2⁻	
2147.00		927.1 *3*	100	1220.07	11/2⁻	
		2146.97 *20*	59	0.0	7/2⁻	
2155.11		852.4 *5*	24	1302.73	5/2⁻	
		937.19 *20*	86	1218.00	9/2⁻	
		1553.98 *15*	100	601.05	3/2⁻	
2191.19		888.43 *15*	63	1302.73	5/2⁻	
		973.49 *15*	75	1218.00	9/2⁻	
		2190.95 *15*	100	0.0	7/2⁻	
2196.15	(1/2⁻,3/2)	893.42 *7*	100	1302.73	5/2⁻	
2204.0	(19/2⁻)	101.1 *10*	<5.263	2099.97		
		269.7 *3*	100	1935.2	19/2⁻	D
2229.97		2229.97 *15*	100	0.0	7/2⁻	
2237.76		725.52 *15*	100	1512.16		
		2238.1 *4*	46	0.0	7/2⁻	
2244.09		252.83 *7*	21	1991.18		
		394.52 *7*	69	1849.69	3/2⁻,5/2,7/2⁻	
		435.28 *7*	51	1808.75		
		477.98 *7*	58	1766.17	3/2⁻,5/2,7/2⁻	
		709.71 *10*	42	1534.32	(5/2)⁻	
		941.41 *7*	100	1302.73	5/2⁻	
2281.59		1680.54 *15*	100	601.05	3/2⁻	
2345.65		834.4 *3*	24	1512.16		
		1127.59 *10*	100	1218.00	9/2⁻	
		2345.71 *15*	82	0.0	7/2⁻	
2356.28		1755.22 *15*	100	601.05	3/2⁻	
		2356.29 *15*	82	0.0	7/2⁻	
2368.32		1150.35 *10*	100	1218.00	9/2⁻	
		2368.24 *20*	40	0.0	7/2⁻	
2380.30		2380.30 *20*	100	0.0	7/2⁻	
2422.70		2422.70 *10*	100	0.0	7/2⁻	
2444.0		1224.01 *20*	100	1220.07	11/2⁻	
2452.4	1/2,3/2	1466.23 *20*	100	986.20	(1/2)⁻	
2474.84		1256.76 *15*	90	1218.00	9/2⁻	
		2474.91 *20*	100	0.0	7/2⁻	
2490.38	(3/2⁻)	1187.55 *19*	58	1302.73	5/2⁻	
		1504.30 *15*	100	986.20	(1/2)⁻	
		1889.21 *25*	25	601.05	3/2⁻	
		2490.48 *16*	84	0.0	7/2⁻	
2566.9		2566.93 *60*	100	0.0	7/2⁻	
2571.09		1351.02 *10*	100	1220.07	11/2⁻	
2608.8		893.23 *15*	≤100	1715.55	3/2⁻,5/2,7/2⁻	
		2007.8 *4*	10	601.05	3/2⁻	
2629.70		877.15 *20*	9	1752.56		
		2629.70 *10*	100	0.0	7/2⁻	
2671.59		2671.59 *20*	100	0.0	7/2⁻	
2676.30		1456.39 *10*	100	1220.07	11/2⁻	
		2674.9 *6*	29	0.0	7/2⁻	
2726.14		2726.14 *20*	100	0.0	7/2⁻	
2829.8		2829.8 *3*	100	0.0	7/2⁻	

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Adopted Levels, Gammas (continued)

γ(^{137}Xe) (continued)

E_i(level)	J_i^π	E_γ	I_γ[†]	E_f	J_f^π	Mult.
2844.50		2243.45 *10*	100	601.05	3/2⁻	
2909.8		2909.8 *4*	100	0.0	7/2⁻	
2922.6		2922.6 *3*	100	0.0	7/2⁻	
2960.3		2960.3 *3*	100	0.0	7/2⁻	
2980.0	(23/2⁻)	1045.8 *3*	100.0	1935.2	19/2⁻	(E2)
2983.5		2983.5 *3*	100	0.0	7/2⁻	
2993.9		1773.84 *20*	100	1220.07	11/2⁻	
3022.9		1720.05 *15*	63	1302.73	5/2⁻	
		1804.95 *10*	100	1218.00	9/2⁻	
		3023.3 *4*	12	0.0	7/2⁻	
3062.1	(23/2⁻)	857.9 *10*	100	2204.0	(19/2⁻)	
		1128.3 *10*	40	1935.2	19/2⁻	Q
3111.9		907.4 *10*	100	2204.0	(19/2⁻)	
3117.6		3117.6 *3*	100	0.0	7/2⁻	
3251.8		139.5 *10*	≈100	3111.9		
		190.2 *10*	≈100	3062.1	(23/2⁻)	
3254.0		2036.0 *3*	100	1218.00	9/2⁻	
3263.1		1497.19 *20*	100	1766.17	3/2⁻,5/2,7/2⁻	
3276.72		1974.15 *10*	60	1302.73	5/2⁻	
		2058.45 *10*	100	1218.00	9/2⁻	
		3277.8 *7*	28	0.0	7/2⁻	
3287.6		2069.62 *20*	100	1218.00	9/2⁻	
3291.6	(27/2⁻)	229.4 *10*	≈8.3	3062.1	(23/2⁻)	
		311.6 *3*	100	2980.0	(23/2⁻)	E2
3347.4		367.7 *10*	100	2980.0	(23/2⁻)	D
3353.0		3353.0 *4*	100	0.0	7/2⁻	
3417.1		3417.1 *5*	100	0.0	7/2⁻	
3458.62		613.8 *3*	13	2844.50		
		3458.62 *15*	100	0.0	7/2⁻	
3500.7		2899.5 *4*	100	601.05	3/2⁻	
		3501.2 *14*	17	0.0	7/2⁻	
3540.6		2320.5 *4*	100	1220.07	11/2⁻	
3544		2943.1 *3*	100	601.05	3/2⁻	
3570.13		3570.13 *15*	100	0.0	7/2⁻	
3571.69		2351.62 *15*	100	1220.07	11/2⁻	
3670.6		3670.6 *4*	100	0.0	7/2⁻	
3729.66		1100.4 *3*	12	2629.70		
		3729.43 *20*	100	0.0	7/2⁻	
3795.43		1859.1 *3*	12	1936.05	(3/2⁻)	
		1922.1 *4*	11	1873.13		
		3194.36 *15*	88	601.05	3/2⁻	
		3795.57 *20*	100	0.0	7/2⁻	
3800.7		3800.7 *3*	100	0.0	7/2⁻	
3862.5		1832.28 *20*	40	2029.8		
		3261.8 *7*	24	601.05	3/2⁻	
		3862.8 *3*	100	0.0	7/2⁻	
3866.2		1236.67 *20*	30	2629.70		
		3866.1 *3*	100	0.0	7/2⁻	
3911.27		950.85 *20*	18	2960.3		
		3911.27 *20*	100	0.0	7/2⁻	
3986.9		1357.37 *15*	58	2629.70		
		2220.47 *20*	74	1766.17	3/2⁻,5/2,7/2⁻	
		2452.51 *10*	83	1534.32	(5/2)⁻	
		2767.04 *20*	100	1220.07	11/2⁻	
		3987.0 *3*	81	0.0	7/2⁻	
3996.3		1366.77 *20*	27	2629.70		

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Adopted Levels, Gammas (continued)

$\gamma(^{137}Xe)$ (continued)

E_i(level)	J^π_i	E_γ	I_γ†	E_f	J^π_f	Mult.
3996.3		1995.0 *10*	20	1997.06		
		2004.5 *4*	14	1991.18		
		2123.18 *15*	57	1873.13		
		2693.5 *3*	25	1302.73	5/2⁻	
		3996.2 *3*	100	0.0	7/2⁻	
4016.2		4016.2 *8*	100	0.0	7/2⁻	
4025.73		1396.03 *10*	79	2629.70		
		1788.18 *15*	63	2237.76		
		2491.29 *15*	89	1534.32	(5/2)⁻	
		2807.76 *15*	100	1218.00	9/2⁻	
4028.92		2092.80 *15*	100	1936.05	(3/2⁻)	
		2155.64 *15*	67	1873.13		
		4028.92 *15*		0.0	7/2⁻	
4038.96		4038.96 *15*	100	0.0	7/2⁻	
4064.6		4064.6 *6*	100	0.0	7/2⁻	
4083.87		4083.87 *15*	100	0.0	7/2⁻	
4103.3		4103.3 *3*	100	0.0	7/2⁻	
4105.0		4105.0 *6*	100	0.0	7/2⁻	
4129.99		4129.99 *15*	100	0.0	7/2⁻	
4140.98		4140.98 *15*	100	0.0	7/2⁻	
4160.94		2943.1 *3*	18	1218.00	9/2⁻	
		4160.94 *15*	100	0.0	7/2⁻	
4173.11		4173.11 *15*	100	0.0	7/2⁻	
4189.0		4189.0 *7*	100	0.0	7/2⁻	
4199.1		4199.1 *7*	100	0.0	7/2⁻	
4211.6		4211.6 *2*	100	0.0	7/2⁻	
4260.4		4260.4 *4*	100	0.0	7/2⁻	
4270.3		4270.3 *4*	100	0.0	7/2⁻	
4276.53		2741.5 *4*	19	1534.32	(5/2)⁻	
		4276.53 *15*	100	0.0	7/2⁻	
4288.1		4288.1 *8*	100	0.0	7/2⁻	
4298.3		4298.3 *5*	100	0.0	7/2⁻	
4318.2		4318.2 *5*	100	0.0	7/2⁻	
4332.78		4332.78 *15*	100	0.0	7/2⁻	
4350.5		4350.5 *6*	100	0.0	7/2⁻	
4379.7		4379.7 *2*	100	0.0	7/2⁻	
4380.2		4380.2 *5*	100	0.0	7/2⁻	
4382.8	(29/2⁺)	1035.6 *10*	33.33	3347.4		
		1090.8 *10*	100	3291.6	(27/2⁻)	D
4402.78		4402.78 *15*	100	0.0	7/2⁻	
4420.7		4420.7 *10*	100	0.0	7/2⁻	
4424.7		4424.7 *6*	100	0.0	7/2⁻	
4477.8		4477.8 *3*	100	0.0	7/2⁻	
4489.4		4489.4 *8*	100	0.0	7/2⁻	
4501.9		4501.9 *6*	100	0.0	7/2⁻	
4543.3		4543.3 *6*	100	0.0	7/2⁻	
4559.9		4559.9 *4*	100	0.0	7/2⁻	
4609.3		4609.3 *4*	100	0.0	7/2⁻	
4680.6		4680.6 *7*	100	0.0	7/2⁻	
4685.8		4685.8 *10*	100	0.0	7/2⁻	
4687.6	(33/2⁺)	304.8 *10*	100	4382.8	(29/2⁺)	
		1396.0 *10*	33.3	3291.6	(27/2⁻)	Q
4750.3		4750.3 *10*	100	0.0	7/2⁻	
4758.0		4758.0 *5*	100	0.0	7/2⁻	
4784.7		4784.7 *6*	100	0.0	7/2⁻	
4802.5		4802.5 *13*	100	0.0	7/2⁻	

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Adopted Levels, Gammas (continued)

$\gamma(^{137}Xe)$ (continued)

E_i(level)	J^π_i	E_γ	I_γ†	E_f	J^π_f
4880.5	$(^+)$	4880.5 *3*	100	0.0	$7/2^-$
4899.0		4899.0 *9*	100	0.0	$7/2^-$
5132.2		5132.2 *20*	100	0.0	$7/2^-$
5148.8		5148.8 *12*	100	0.0	$7/2^-$
5170.2		5170.2 *8*		0.0	$7/2^-$

† ΔIγ is generally 10%−20%, may be smaller for well resolved lines; for very weak lines ΔIγ is about 40% (1980Fo09).

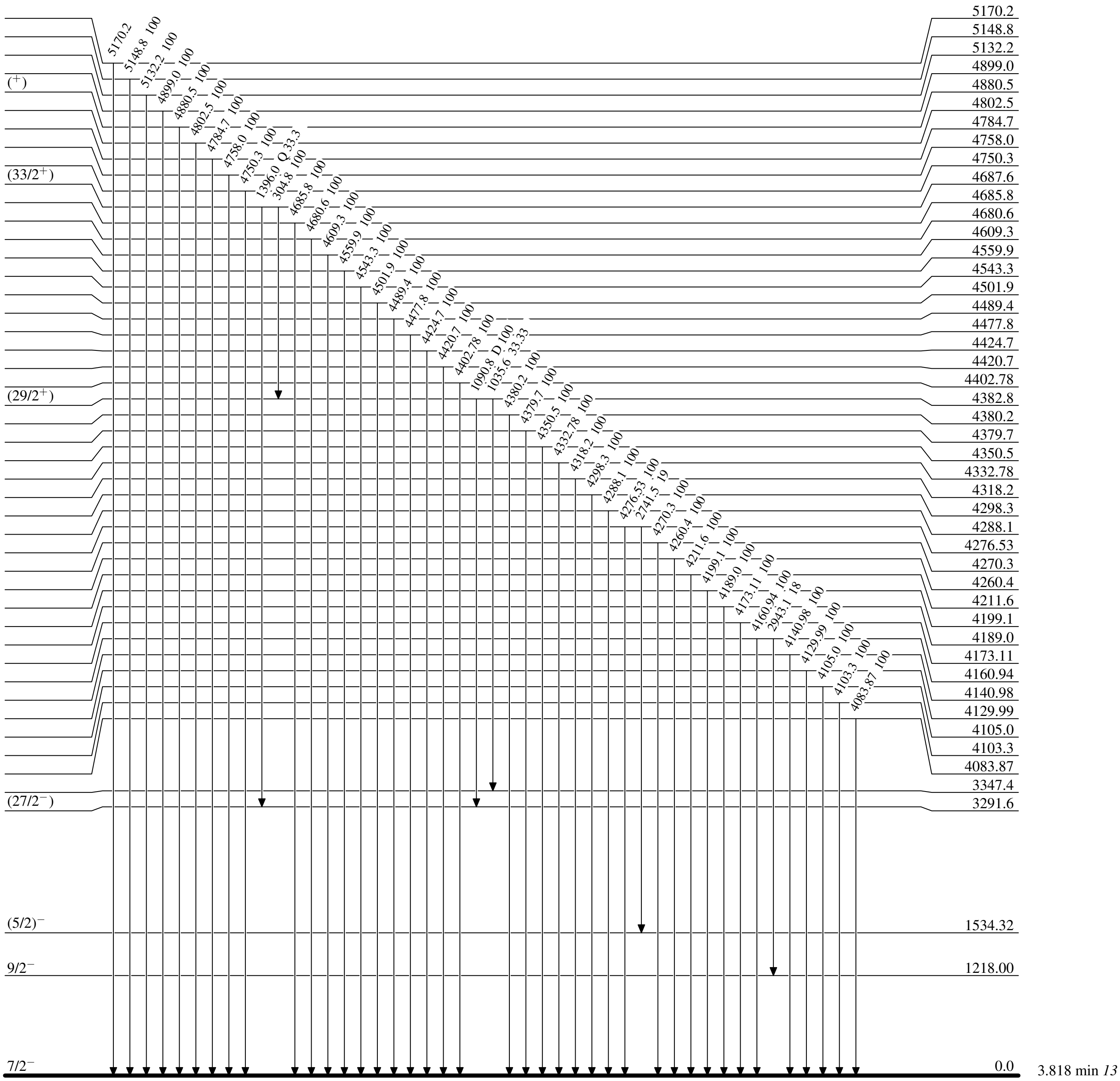
‡ B(E2)(W.u.)>0.69. Mult is not M3 from RUL.

If E2, B(E2)(W.u.)=0.54; if E1, B(E1)(W.u.)=1.0×10^{-6}; if M1, B(M1)(W.u.)=8.8×10^{-3}.

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level

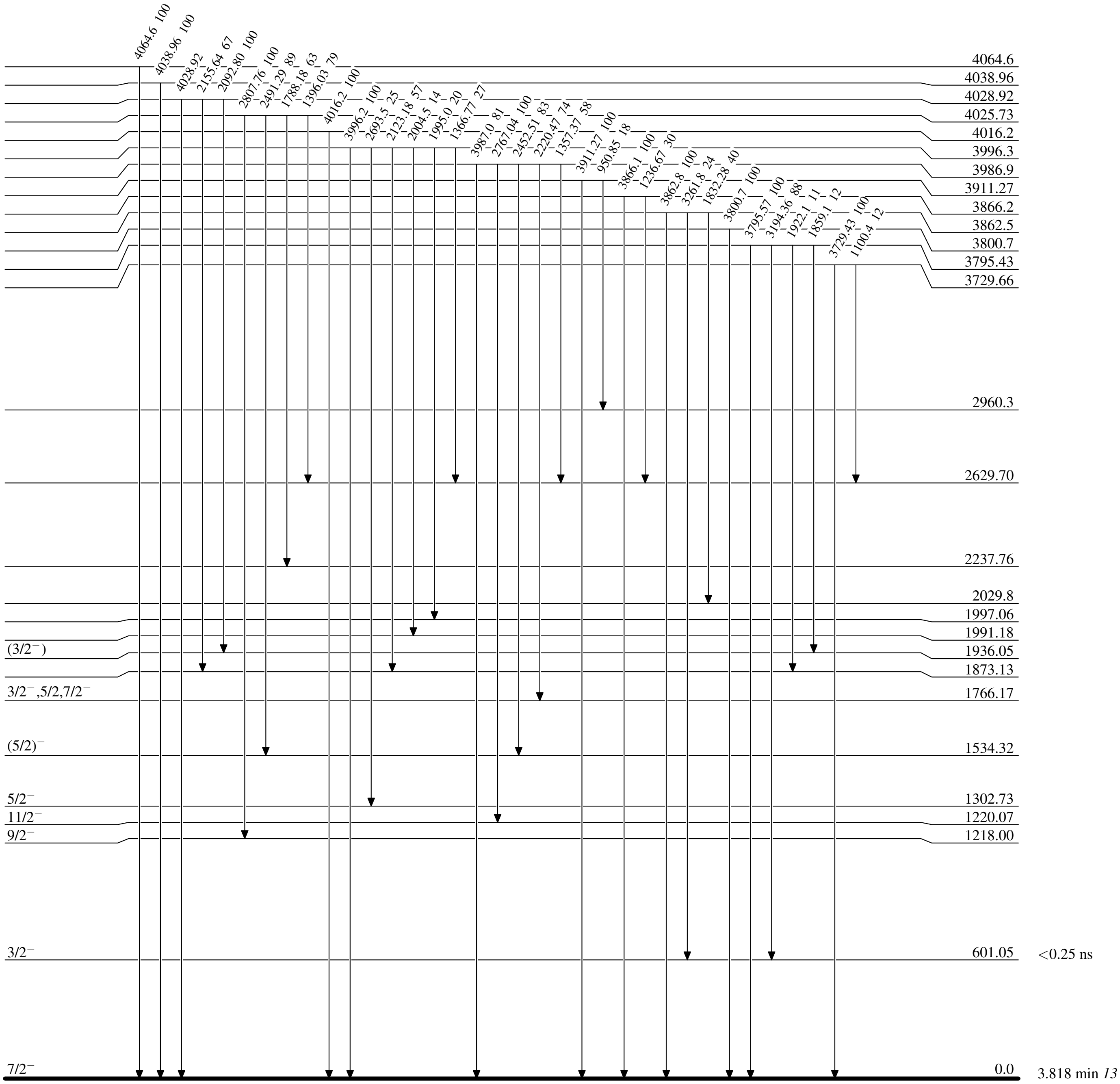


$^{137}_{54}Xe_{83}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

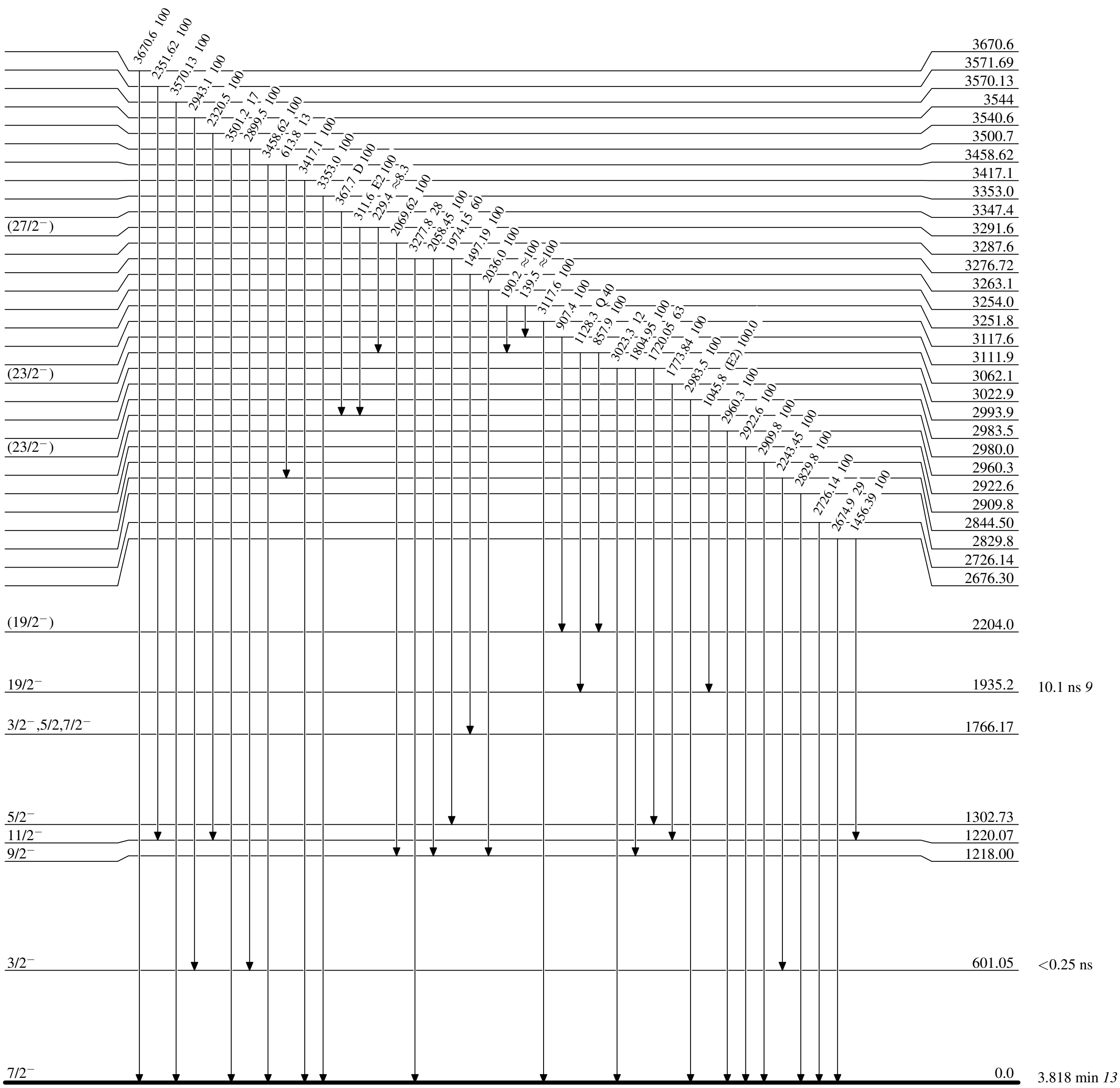


$^{137}_{54}Xe_{83}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

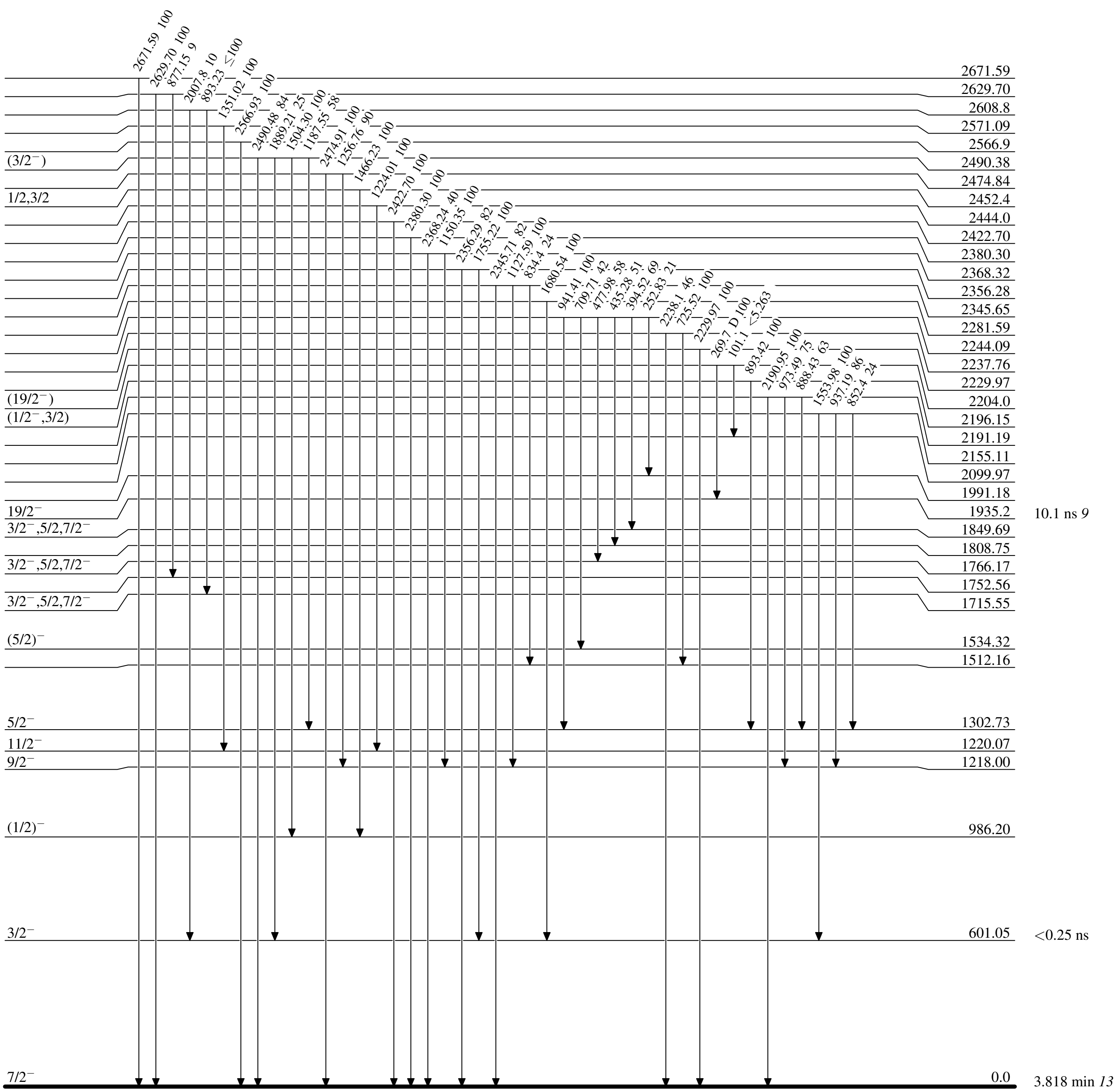


$^{137}_{54}Xe_{83}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

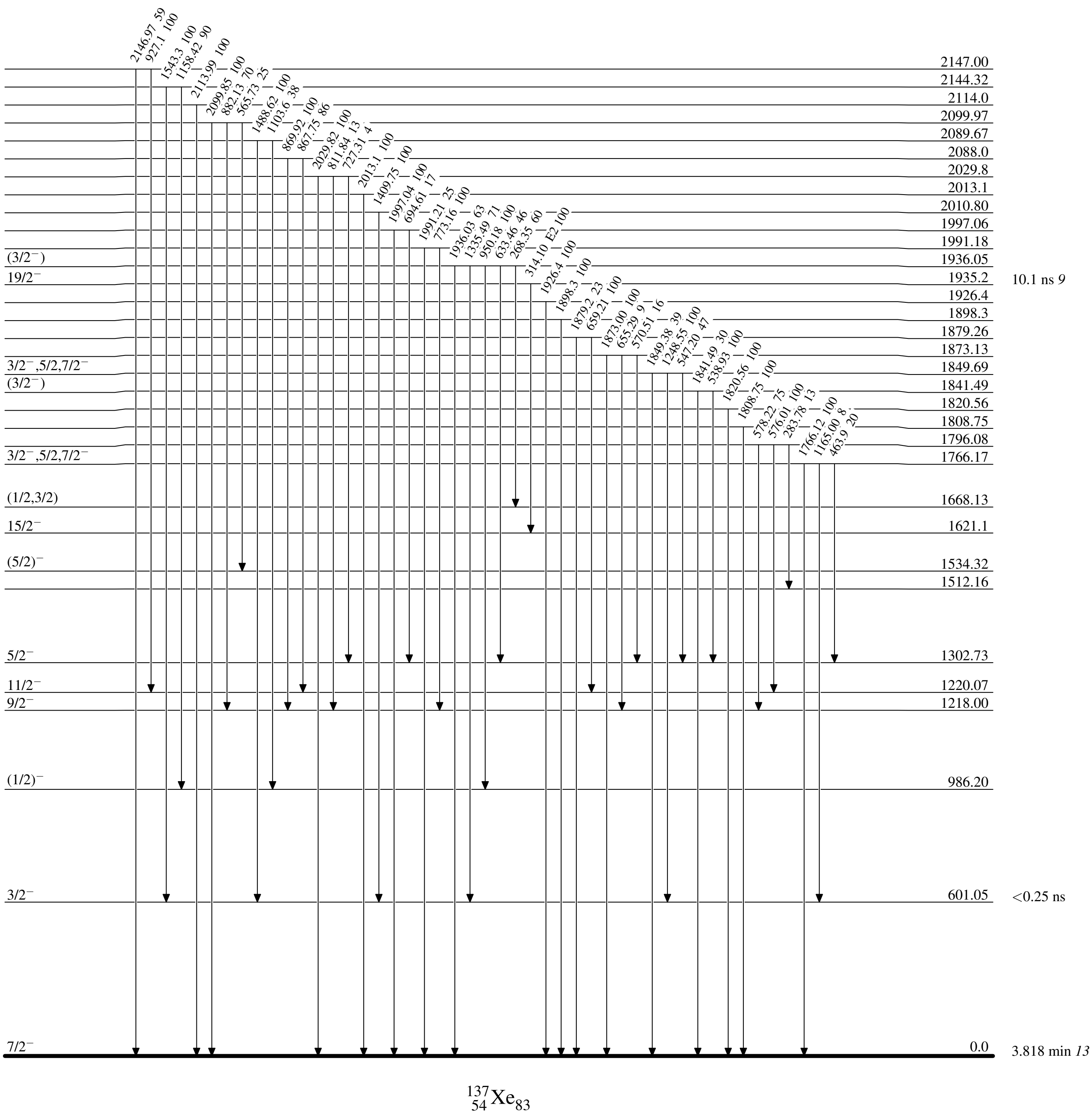


$^{137}_{54}Xe_{83}$

Adopted Levels, Gammas

Level Scheme (continued)

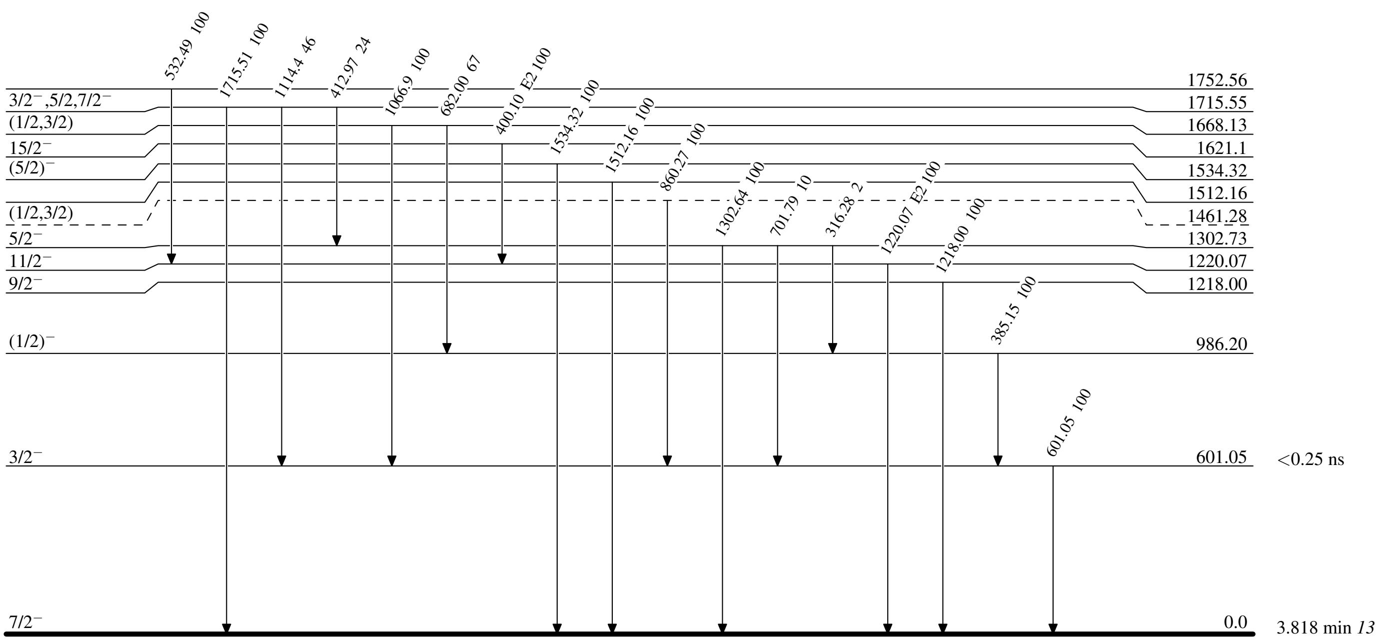
Intensities: Relative photon branching from each level



Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{137}_{54}Xe_{83}$