Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 93,33 (2001)	11-May-2001

Q(β^-)=−2981 *9*; S(n)=9255.720 *10*; S(p)=8662 *4*; Q(α)=−2240.1 *15* 2012Wa38
Note: Current evaluation has used the following Q record −2979 8 *9255.8 9* 8667 3 −2236.4 *21* 1995Au04.
^{130}Te(π^+,π^-): 1996Fo02, 1992Sm06, 1988Fa05.
Hyperfine structure, isotope shifts, charge radii: 1999Da22, 1993Wa26, 1989Bo03, 1989Pl03, 1988Ge05, 1987Al25, 1982Bi11, 1981Ge06, 1981Bo07, 1974Fi15.
Mass measurement: 1990Dy04.
^{129}Xe(n,α) resonances: 1969Po02.

^{130}Xe Levels

Cross Reference (XREF) Flags

A	^{130}I β^- decay (12.36 h)	F	^{128}Te(α,2nγ)	K	^{130}Xe(γ,γ')
B	^{130}I β^- decay (8.84 min)	G	^{129}Xe(n,γ) E=th	L	Coulomb excitation
C	^{130}Cs ε decay (29.21 min)	H	^{129}Xe(n,γ) E=9.47 eV	M	^{232}Th(^{37}Cl,Fγ)
D	^{130}Cs ε decay (3.46 min)	I	^{130}Te(^{3}He,3nγ)		
E	^{128}Te(^{3}He,n)	J	^{130}Te(α,4nγ)		

E(level)†	J$^\pi$	$T_{1/2}$‡	XREF	Comments
0.0[a]	0$^+$	stable	ABCDEFGHIJKLM	
536.068[a] *6*	2$^+$	8.6 ps *15*	ABCD FGHIJKLM	μ=+0.76 *14* (1989Ra17,1977Ar19) J$^\pi$: E2 γ to 0$^+$. $T_{1/2}$: weighted average of 8.6 ps *15* (Coul. ex.), 8.3 ps *21* (^{131}I β^- decay (12.36 h)), 8.8 ps *15* (res fluorescence). μ: $\gamma\gamma(\theta$,H), IMPAC in Coul. ex. (1977Ar19). Other: +0.62 *8* (1975Go18).
1122.112 *9*	2$^+$	<3 ns	ABCD FGHIJ	J$^\pi$: M1+E2 γ to 2$^+$, γ to 0$^+$; $\gamma\gamma(\theta)$.
1204.614[a] *10*	4$^+$	<2 ns	AB FGHIJ M	J$^\pi$: ΔJ=2, E2 γ to 2$^+$.
1590.4 *7*			G	
1632.580 *11*	3$^+$	<2 ns	AB D FGHI	J$^\pi$: M1+E2 γ to 2$^+$, γ from 5$^+$.
1793.52 *24*	0$^+$		C GH	J$^\pi$: E0 transition to 0$^+$.
1808.166 *11*	(4$^+$)		AB FGHI	J$^\pi$: log *ft*=8.2 from 5$^+$; γ to 2$^+$, γ from 5$^+$.
1944.140[a] *12*	6$^+$	<2 ns	A F IJ M	J$^\pi$: ΔJ=2, E2 γ to 4$^+$.
2017.06 *16*	0$^+$		C e GH	J$^\pi$: E0 transition to 0$^+$.
2059.60 *5*	(5)$^-$	0.20 ns *10*	A FG IJ M	J$^\pi$: E1 γ to 6$^+$; $\gamma(\theta)$ in (α,4nγ). $T_{1/2}$: γ(t) in (α,2nγ).
2081.96 *4*	(4$^+$)		A	J$^\pi$: log *ft*=8.7 from 5$^+$; γ to 2$^+$, γ from 5$^+$.
2103.41 *16*	(4)$^-$	0.50 ns *10*	D F I	J$^\pi$: E1 γ to (3)$^+$; $\gamma(\theta)$ in (^{3}He,3nγ). $T_{1/2}$: γ(t) in (α,2nγ).
2150.191 *25*	(2$^+$)		BC e GH	J$^\pi$: γ's to 4$^+$ and 0$^+$.
2171.632 *12*	(4$^+$,5$^+$)		A GH	J$^\pi$: γ's to 3$^+$ and 6$^+$.
2223.50 *20*			C H	
2242.91 *20*			C gH	
2296.09 *5*	1,2		B H	J$^\pi$: γ to 0$^+$.
2307.79 *18*	1,2		B H	J$^\pi$: γ to 0$^+$.
2310.02 *18*	(5)$^-$	<3 ns	D F I	J$^\pi$: M1+E2 γ to (4)$^-$, M1+E2 γ from (6)$^-$.
2345.95 *19*	(6)$^-$	<3 ns	F IJ	J$^\pi$: ΔJ=1, M1+E2 γ to (5$^-$); excitation function.
2362.073 *12*	5$^+$	9.4 ps *14*	A F I	J$^\pi$: M1+E2 γ's to 4$^+$, 6$^+$. $T_{1/2}$: from βce(t) (1974Bu13).
2375.21[@] *10*	(7)$^-$	0.30 ns *10*	F IJ M	J$^\pi$: E2 γ to (5)$^-$; excitation function, $\gamma(\theta)$ in (^{3}He,3nγ). $T_{1/2}$: γ(t) in (α,2nγ).

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Adopted Levels, Gammas (continued)

^{130}Xe Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$[‡]	XREF	Comments
2386.20 *19*			BC GH	
2427.18 *4*	(4^+)		A	Jπ: γ to 2^+; log *ft*=7.9 from 5^+.
2442.04 *15*	$(6)^-$	<2 ns	F I	Jπ: ΔJ=2, E2 γ to $(4)^-$; γ from $(8)^-$.
2494.10 *4*			BC	
2502.207 *25*	1,2		BC GH	Jπ: γ to 0^+.
2533.4 *3*			C	
2544.43 *8*			B GH	
2608.426 *19*			A	
2622.32 *9*			A	
2628.36 *10*			BC H	
2629.389 *23*			A	
2633.2 *4*			gH	
2637.50 *5*			B gH	
2644.87 *5*			B	
2659.35 *19*	(7^-)	<2 ns	F I	Jπ: ΔJ=1, (M1+E2) γ to (6^-); excitation function.
2692.55 *12*	$(4^+,5^+)$		A	Jπ: γ's to 3^+, 6^+.
2696.95[a] *12*	8^+	<3 ns	F IJ M	Jπ: ΔJ=2, E2 γ to 6^+.
2704.92 *8*			A	
2752.43 *3*			A	
2762.6 *3*	1,2		B GH	Jπ: γ to 0^+.
2811.92 *10*	(4^+)		A	Jπ: log *ft*=6.3 from 5^+; γ to 2^+.
2841.58[&] *16*	(8^-)	<4 ns	F IJ M	Jπ: ΔJ=1, M1+E2 γ to (7^-); excitation function, γ(θ) in (^{3}He,3nγ).
2886.0 *4*	1,2		GH	Jπ: γ to 0^+.
2931.42 *15*	$(8)^+$		F IJ	Jπ: see 3277.49 level.
2954.3 *6*			GH	
2972.41[a] *15*	10^+	5.13 ns *11*	F IJ M	μ=−2.05 *14* (1989Ra17,1983Go02) μ: γ(θ,H,t), DPAD in (α,2nγ) (1983Go02). Other: −1.58 *21* γ(θ,H) IPAD in (α,4nγ) (1984Ku14). configuration=$\nu h^2_{11/2}$. Jπ: ΔJ=2, γ to 8^+. $T_{1/2}$: weighted average of 4.6 ns *4* (1996Ko16), 5.17 ns *11* (1984Ku14), 5.9 ns *8* (1983Ku04), 4.8 ns *5* (1981Go04).
2978.5 *4*	1,2		GH	Jπ: γ to 0^+.
3058.45 *24*			F IJ	
3070.6 *5*			GH	
3071.49[@] *16*	(9^-)		F IJ M	
3151.3 *4*			GH	
3189.1 *6*			GH	
3.23×10^3 *20*	2^+		E	Jπ: L(^{3}He,n)=2. E(level): this group most likely corresponds to any or several of the low-spin levels in the vicinity of 3200 keV.
3242.9? *6*			H	
3277.56 *19*	(9^+)		F IJ	Jπ: ΔJ=1 γ to 10^+ and ΔJ=1−(L≤2) γ cascade to 6^+ establish $J^\pi(3277.49)=(9^+)$ and $J^\pi(2931.35)=(8^+)$.
3299.0 *4*			GH	
3326.1 *4*			H	
3341.6 *3*			J	
3406.0 *6*			H	
3461.23[#] *19*	(10^+)	<3 ns	F IJ	Jπ: ΔJ=(2) γ to 8^+.
3535.2 *5*			GH	
3542.17[&] *18*	(10^-)		F IJ	Jπ: ΔJ=2 γ to (8^-).
3622.9 *6*			H	
3688.1? *7*			H	
3693.27[a] *18*	12^+	<2 ns	F IJ M	Jπ: ΔJ=2, E2 γ to 10^+.

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Adopted Levels, Gammas (continued)

^{130}Xe Levels (continued)

E(level)[†]	Jπ	XREF	Comments
3780.5? *6*		H	
3814.31 *25*		J	
3893.35[@] *19*	(11⁻)	F IJ M	
3894.2? *9*		GH	
3957.1 *3*		J	
3959.6? *10*		H	
3977.3 *6*	1,2	H	Jπ: γ to 0⁺.
3988.4 *6*		GH	
4184.7 *3*		J	
4217.2[#] *3*	(12⁺)	J	Jπ: ΔJ=(2) γ to 10⁺.
4347.06[&] *21*	(12⁻)	J	Jπ: ΔJ=2 γ to (10⁻).
4370.8 *3*		J	
4540.13[@] *20*	(13⁻)	J	Jπ: ΔJ=(2) γ to (11⁻).
4551.0 *4*		J	
4590.5[a] *3*	(14⁺)	J	
4628.4 *3*		J	
4635.2 *3*		J	
4827.8 *3*		J	
4933.2 *4*		J	
4942.66[&] *23*	(14⁻)	J	Jπ: ΔJ=(2) γ to (12⁻).
4971.6[@] *3*	(15⁻)	J	Jπ: ΔJ=(2) γ to (13⁻).
5070.0[#] *4*	(14⁺)	J	
5121.1 *4*		J	
5296.7 *3*		J	
5437.5 *11*		J	
5560.9 *4*		J	
5587.7[a] *4*	(16⁺)	J	
5604.8[&] *3*	(16⁻)	J	Jπ: ΔJ=(2) γ to (14⁻).
5891.7 *4*		J	
5953.1[@] *4*	(17⁻)	J	Jπ: γ to (15⁻).
5960.0 *11*		J	
6290.5 *4*		J	
6605.9 *4*		J	
6643.3 *4*		J	
6971.3 *4*		J	

[†] From least-squares adjustment to Eγ's.
[‡] From (^{3}He,3nγ) when given as a limit.
[#] Band(A): band based on 10⁺.
[@] Band(B): band based on (7⁻), α=1.
[&] Band(b): band based on (7⁻), α=0.
[a] Band(C): yrast (g.s.) band.

Adopted Levels, Gammas (continued)

γ(^{130}Xe)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[‡]	Comments
536.068	2^+	536.066 *6*	100	0.0	0^+	E2		B(E2)(W.u.)=38 *5* Mult.: from 13.36-h ^{130}I decay.
1122.112	2^+	586.049 *8*	100 *3*	536.068	2^+	M1+E2	+3.75 *12*	B(M1)(W.u.)>2.0×10^{-6}; B(E2)(W.u.)>0.056
		1122.15 *4*	15.4 *5*	0.0	0^+			
1204.614	4^+	668.536 *9*	100	536.068	2^+	E2		B(E2)(W.u.)>0.054 Mult.: from 12.36-h ^{130}I decay.
1590.4		469.2 *10*	100 *30*	1122.112	2^+			
		1053.6 *9*	80 *80*	536.068	2^+			
1632.580	3^+	427.94 *4*	9.8 *12*	1204.614	4^+			
		510.472 *9*	100 *4*	1122.112	2^+			
		1096.48 *4*	65 *3*	536.068	2^+	M1+E2	+1.3 *+38−8*	
1793.52	0^+	671.9 *5*	16 *8*	1122.112	2^+			
		1257.5 *3*	100 *20*	536.068	2^+			
		1794		0.0	0^+	E0		Mult.: from 29.21-min ^{130}Cs decay.
1808.166	(4^+)	603.548 *14*	58 *3*	1204.614	4^+			
		686.060 *14*	100 *4*	1122.112	2^+			
		1272.12 *3*	70 *3*	536.068	2^+			
1944.140	6^+	739.512 *10*	100	1204.614	4^+	E2		B(E2)(W.u.)>0.033 Mult.: from 12.36-h ^{130}I decay.
2017.06	0^+	894.5 *2*	100 *10*	1122.112	2^+			
		1481.8 *3*	6.1 *12*	536.068	2^+			
		2016		0.0	0^+	E0		Mult.: from 29.21-min ^{130}Cs decay.
2059.60	$(5)^-$	854.99 *10*	100	1204.614	4^+	E1		B(E1)(W.u.)=2.1×10^{-6} *11*
2081.96	(4^+)	877.35 *4*	100 *5*	1204.614	4^+			
		1545.78 *23*	12 *2*	536.068	2^+			
2103.41	$(4)^-$	470.8 *2*	100	1632.580	3^+	E1		B(E1)(W.u.)=5.1×10^{-6} *11*
2150.191	(2^+)	946.0 *5*	0.18 *7*	1204.614	4^+			
		1028.11 *4*	8.7 *4*	1122.112	2^+			
		1614.10 *4*	100 *4*	536.068	2^+			
		2150.15 *5*	4.7 *2*	0.0	0^+			
2171.632	$(4^+,5^+)$	227.55 *16*	0.9 *4*	1944.140	6^+			
		363.467 *15*	6.4 *14*	1808.166	(4^+)			
		539.053 *8*	100	1632.580	3^+			
		967.02 *3*	63 *2*	1204.614	4^+			
2223.50		1687.4 *2*	100	536.068	2^+			
2242.91		1707.0 *2*	100	536.068	2^+			
2296.09	1,2	1174.22 *25*	4.3 *11*	1122.112	2^+			
		1759.97 *5*	100 *11*	536.068	2^+			
		2296.21 *12*	12.8 *11*	0.0	0^+			
2307.79	1,2	2307.76 *18*	100	0.0	0^+			

$^{130}_{54}Xe_{76}$-4

Adopted Levels, Gammas (continued)

γ(^{130}Xe) (continued)

E_i(level)	J_i^π	E_γ [†]	I_γ [†]	E_f	J_f^π	Mult.[‡]	δ[‡]	α[#]	Comments
2310.02	(5)$^-$	206.6 *2*	100 *12*	2103.41	(4)$^-$	M1+E2	−0.25 *5*	0.1124 *9*	α(K)= 0.0961 *5*; α(L)= 0.0130 *3*; α(M)=0.00263 *6*; α(N+..)=0.00066 B(M1)(W.u.)>0.00051; B(E2)(W.u.)>0.31
		250.5 *3*	35 *8*	2059.60	(5)$^-$	M1,E2		0.071 *5*	B(M1)(W.u.)>5.5×10^{-5}; B(E2)(W.u.)>0.57
2345.95	(6)$^-$	286.4 *2*	100	2059.60	(5)$^-$	M1+E2	−0.34 *2*	0.0467	α(K)=0.04001; α(L)=0.00533; α(M)=0.00108; α(N+..)=0.00027 B(M1)(W.u.)>0.00026; B(E2)(W.u.)>0.22
2362.073	5$^+$	190.46 *12*	<0.0014	2171.632	(4$^+$,5$^+$)				
		280.09 *11*	0.070 *20*	2081.96	(4$^+$)				
		302.49 *6*	0.038 *14*	2059.60	(5)$^-$				
		417.932 *4*	100 *3*	1944.140	6$^+$	M1+E2	−0.42 *3*	0.0172	α(K)=0.01475 *5*; α(L)=0.00193; α(M)=0.00039 B(M1)(W.u.)=0.020 *3*; B(E2)(W.u.)=13 *3* Mult.,δ: from 12.36-h ^{130}I decay.
		553.916 *10*	1.94 *8*	1808.166	(4$^+$)				
		729.54 *22*	0.032 *23*	1632.580	3$^+$	[E2]			B(E2)(W.u.)=0.0017 *13*
		1157.43 *3*	33.0 *12*	1204.614	4$^+$	M1+E2			Mult.: from 12.36-h ^{130}I decay. B(E2)(W.u.)=0.013 *3*, B(M1)(W.u.)=3.4×10^{-4} *2* if δ=0.28; B(E2)(W.u.)=0.16 *5*, B(M1)(W.u.)=4.5×10^{-5} *9* if δ=2.7. δ: +0.28 *3* or +2.7 *4*.
2375.21	(7)$^-$	315.52 *11*	100 *6*	2059.60	(5)$^-$	E2		0.0357	α(K)= 0.0295; α(L)=0.00495; α(M)=0.00102; α(N+..)=0.00025 B(E2)(W.u.)=13 *5*
		431.3 *2*	14 *2*	1944.140	6$^+$	(E1)			B(E1)(W.u.)=1.3×10^{-6} *5*
2386.20		161.5[a] *11*	35 *8*	2223.50					
		1181.3 *9*	7.4 *60*	1204.614	4$^+$				
		1263.8 *3*	100 *20*	1122.112	2$^+$				
		1850.5 *3*	83 *16*	536.068	2$^+$				
2427.18	(4$^+$)	1222.56 *3*	100 *5*	1204.614	4$^+$				
		1304.69 *30*	2.71 *11*	1122.112	2$^+$				
2442.04	(6)$^-$	132.1 *3*	9 *5*	2310.02	(5)$^-$	[M1+E2]		0.53 *15*	B(M1)(W.u.)>0.00012; B(E2)(W.u.)>4.7
		338.6 *3*	38 *8*	2103.41	(4)$^-$	E2		0.0286	α(K)=0.02370; α(L)=0.00388; α(M)=0.00079; α(N+..)= 0.0002 B(E2)(W.u.)>0.40
		382.5 *2*	100 *8*	2059.60	(5)$^-$	(M1+E2)	−0.50 +*16*−*12*	0.0215 *3*	α(K)=0.01842 *25*; α(L)=0.00245; α(M)=0.00049; α(N+..)=0.00012 B(M1)(W.u.)>8.8×10^{-5}; B(E2)(W.u.)>0.055
2494.10		1958.02 *4*	100	536.068	2$^+$				
2502.207	1,2	352.27 *20*	2.1 *6*	2150.191	(2$^+$)				
		1380.15 *4*	69 *3*	1122.112	2$^+$				
		1966.04 *4*	100 *3*	536.068	2$^+$				

$^{130}_{54}Xe_{76}$-5

Adopted Levels, Gammas (continued)

γ(^{130}Xe) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[‡]	α[#]	Comments
2502.207	1,2	2502.20 *5*	25.3 *12*	0.0	0^+				
2533.4		1997.3 *3*	100	536.068	2^+				
2544.43		2008.35 *8*	100 *10*	536.068	2^+				
		2544.0 *6*	11 *4*	0.0	0^+				
2608.426		246.306 *22*	13.5 *14*	2362.073	5^+				
		800.23 *4*	29.3 *14*	1808.166	(4^+)				
		1403.90 *3*	100 *5*	1204.614	4^+				
2622.32		814.15 *11*	100 *20*	1808.166	(4^+)				
		1417.69 *13*	48 *8*	1204.614	4^+				
2628.36		2092.29 *10*	100	536.068	2^+				
2629.389		457.758 *21*	100 *6*	2171.632	$(4^+,5^+)$				
		821.15 *8*	18 *2*	1808.166	(4^+)				
		996.80 *16*	12 *2*	1632.580	3^+				
		1424.73 *15*	8.8 *8*	1204.614	4^+				
2633.2		246.0 *6*	100 *25*	2386.20					
		825.7[&] *8*	14[&] *8*	1808.166	(4^+)				
2637.50		2101.42 *5*	100	536.068	2^+				
2644.87		837.03 *25*	7.5 *3*	1808.166	(4^+)				
		1440.18 *8*	100 *6*	1204.614	4^+				
		2108.80 *5*	96 *6*	536.068	2^+				
2659.35	(7^-)	313.5 *3*	50	2345.95	$(6)^-$	(M1+E2)	−0.21 *3*	0.0367	α(K)=0.03153; α(L)=0.00410; α(M)=0.00082; α(N+..)=0.00021 B(M1)(W.u.)>0.00011; B(E2)(W.u.)>0.024
		599.7 *2*	100 *20*	2059.60	$(5)^-$				
2692.55	$(4^+,5^+)$	1060.07 *17*	100 *30*	1632.580	3^+				
		1487.85 *15*	71 *12*	1204.614	4^+				
2696.95	8^+	752.77 *14*	100	1944.140	6^+	E2			B(E2)(W.u.)>0.020
2704.92		623.04 *30*	43 *28*	2081.96	(4^+)				
		897.04 *16*	53 *13*	1808.166	(4^+)				
		1500.20 *9*	100 *5*	1204.614	4^+				
2752.43		808.29 *3*	100 *4*	1944.140	6^+				
		944.21 *8*	27 *6*	1808.166	(4^+)				
		1547.75 *23*	7.6 *17*	1204.614	4^+				
2762.6	1,2	2762.6 *3*	100	0.0	0^+				
2811.92	(4^+)	867.75 *22*	96 *13*	1944.140	6^+				
		1607.29 *12*	100 *7*	1204.614	4^+				
		1689.86 *25*	12 *2*	1122.112	2^+				
2841.58	(8^-)	399.7 *3*	10	2442.04	$(6)^-$				
		466.4 *2*	100 *10*	2375.21	$(7)^-$	M1+E2			B(M1)(W.u.)>2.5×10^{-5}; B(E2)(W.u.)>0.074 δ: −0.45 *7* or −1.35 *14*.
2886.0	1,2	252.1 *8*	41 *10*	2633.2					

Adopted Levels, Gammas (continued)

γ(^{130}Xe) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α[#]	Comments
2886.0	1,2	500.1 *5*	20 *7*	2386.20				
		1764.3[&] *10*	<290[&]	1122.112	2^+			
		2885.2 *8*	100 *30*	0.0	0^+			
2931.42	$(8)^+$	234.5 *2*	<390	2696.95	8^+	M1,E2	0.087 *8*	
		987.3 *2*	100 *40*	1944.140	6^+			
2954.3		191.8 *7*	100 *15*	2762.6	1,2			
		936.2 *11*	7.5 *25*	2017.06	0^+			
2972.41	10^+	275.42 *12*	100	2696.95	8^+	E2	0.0554	α(K)= 0.0453; α(L)=0.00803; α(M)=0.00165; α(N+..)=0.00041 B(E2)(W.u.)=1.69 *4*
2978.5	1,2	736.8[&] *11*	10[&] *7*	2242.91				
		806.8 *8*	16 *7*	2171.632	$(4^+,5^+)$			
		959.3 *10*	32 *12*	2017.06	0^+			
		2978.7 *6*	100 *18*	0.0	0^+			
3058.45		361.5 *2*	100	2696.95	8^+			
3070.6		762.7 *7*	72 *15*	2307.79	1,2			
		1053.6[&] *13*	≤27[&]	2017.06	0^+			
		1262.7 *8*	≈33	1808.166	(4^+)			
		1948.2 *13*	100 *30*	1122.112	2^+			
3071.49	(9^-)	230.1 *2*	59	2841.58	(8^-)			
		696.2 *2*	100	2375.21	$(7)^-$	Q		
3151.3		765.7 *7*	8 *5*	2386.20				
		854.3 *8*	≤85	2296.09	1,2			
		909.9 *9*	46 *9*	2242.91				
		2028.8 *9*	100 *30*	1122.112	2^+			
		2612.7 *11*	54 *23*	536.068	2^+			
3189.1		2066.5 *7*	21 *11*	1122.112	2^+			
		2653.8 *9*	100 *40*	536.068	2^+			
3242.9?		698.1[&] *8*	≤7[&]	2544.43				
		1450.8[&] *11*	≤12[&]	1793.52	0^+			
		1609.6 *11*	≤100	1632.580	3^+			
3277.56	(9^+)	305.1 *2*	100 *20*	2972.41	10^+	D+Q		
		346.2 *2*	100 *20*	2931.42	$(8)^+$	D+Q		
3299.0		1126.1 *12*	13 *9*	2171.632	$(4^+,5^+)$			
		2176.8 *11*	100 *30*	1122.112	2^+			
		2763.0 *4*	≤75	536.068	2^+			
3326.1		136.5[a] *11*	<300	3189.1				
		698.1[&] *8*	≤42[&]	2628.36				
		1154.8 *6*	100 *21*	2171.632	$(4^+,5^+)$			
		1175.8 *6*	34 *13*	2150.191	(2^+)			
3341.6		500.0 *2*	100	2841.58	(8^-)			

$^{130}_{54}Xe_{76}$-7

Adopted Levels, Gammas (continued)

γ(^{130}Xe) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	Comments
3406.0		1020.8 *9*	100 *24*	2386.20			
		1388.8 *10*	42 *18*	2017.06	0^+		
		2283.0 *9*	37 *18*	1122.112	2^+		
		2870.1 *20*	71 *30*	536.068	2^+		
3461.23	(10^+)	488.8 *2*	33 *17*	2972.41	10^+		
		764.3 *2*	100 *30*	2696.95	8^+	(E2)	B(E2)(W.u.)>0.014
3535.2		209.6 *8*	63 *16*	3326.1			
		1311.4 *7*	100 *30*	2223.50			
		1726.6 *11*	≤63	1808.166	(4^+)		
3542.17	(10^-)	470.8 *2*	63 *17*	3071.49	(9^-)		
		700.5 *2*	100 *17*	2841.58	(8^-)	Q	
3622.9		736.8[&] *11*	42[&] *30*	2886.0	1,2		
		986.7 *10*	53 *21*	2637.50			
		1450.8[&] *11*	≤170[&]	2171.632	$(4^+,5^+)$		
		1813.9 *10*	100 *50*	1808.166	(4^+)		
3688.1?		1053.6[&] *13*	≤27[&]	2633.2			
		1060.1 *7*	100 *24*	2628.36			
3693.27	12^+	720.84 *13*	100	2972.41	10^+	E2	B(E2)(W.u.)>0.037
3780.5?		825.7[&] *8*	42[&] *23*	2954.3			
		893.7 *11*	≤340	2886.0	1,2		
		1987.6 *7*	100 *50*	1793.52	0^+		
3814.31		841.9 *2*	100	2972.41	10^+	D+Q	
3893.35	(11^-)	351.1 *2*	9 *5*	3542.17	(10^-)		
		821.9 *2*	100 *20*	3071.49	(9^-)	Q	
3894.2?		914.9[&] *13*	7[&] *4*	2978.5	1,2		
		2101.3 *11*	100	1793.52	0^+		
3957.1		679.5 *2*	100	3277.56	(9^+)		
3959.6?		981.1 *9*	100	2978.5	1,2		
3977.3	1,2	825.7[&] *8*	7[&] *4*	3151.3			
		2345.1 *7*	100 *25*	1632.580	3^+		
		3975.2 *24*	19 *6*	0.0	0^+		
3988.4		836.8 *8*	40 *13*	3151.3			
		914.9[&] *13*	28[&] *15*	3070.6			
		1355.3 *10*	55 *25*	2633.2			
		1746.9 *10*	100 *50*	2242.91			
		1764.3[&a] *10*	≤50[&]	2223.50			
4184.7		642.5 *2*	100	3542.17	(10^-)		
4217.2	(12^+)	756.0 *2*	100	3461.23	(10^+)		
4347.06	(12^-)	453.6 *2*	50 *10*	3893.35	(11^-)		
		805.0 *2*	100 *25*	3542.17	(10^-)	Q	

$^{130}_{54}Xe_{76}$-8

Adopted Levels, Gammas (continued)

γ(^{130}Xe) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]
4370.8		677.5 *2*	100	3693.27	12^+	
4540.13	(13^-)	646.8 *2*	100 *23*	3893.35	(11^-)	(Q)
		846.8 *2*	≈47	3693.27	12^+	
4551.0		736.7 *2*	100	3814.31		(Q)
4590.5	(14^+)	897.2 *2*	100	3693.27	12^+	
4628.4		735.0 *2*	100	3893.35	(11^-)	
4635.2		941.9 *2*	100	3693.27	12^+	
4827.8		287	<89	4540.13	(13^-)	
		934.5 *2*	100 *20*	3893.35	(11^-)	
4933.2		382.2 *2*	100	4551.0		
4942.66	(14^-)	402.5 *2*	18 *9*	4540.13	(13^-)	
		595.6 *2*	100 *20*	4347.06	(12^-)	(Q)
4971.6	(15^-)	431.5 *2*	100	4540.13	(13^-)	(Q)
5070.0	(14^+)	852.8 *2*	100	4217.2	(12^+)	
5121.1		485.9 *2*	100	4635.2		
5296.7		949.6 *2*	100	4347.06	(12^-)	
5437.5		847 *1*	100	4590.5	(14^+)	
5560.9		925.7 *2*	100	4635.2		
5587.7	(16^+)	997.2 *2*	100	4590.5	(14^+)	
5604.8	(16^-)	633.2 *2*	100 *50*	4971.6	(15^-)	
		662.1 *2*	100 *50*	4942.66	(14^-)	(Q)
5891.7		330.8 *2*	100	5560.9		
5953.1	(17^-)	981.5 *2*	100	4971.6	(15^-)	
5960.0		522.5 *2*	100	5437.5		
6290.5		702.8 *2*	100	5587.7	(16^+)	
6605.9		1018.2[@] *2*	100	5587.7	(16^+)	
6643.3		1038.5 *2*	100	5604.8	(16^-)	
6971.3		1018.2[@] *2*	100	5953.1	(17^-)	

[†] Weighted averages taken when common levels are seen in different reactions.
[‡] From (^{3}He,3nγ), (α,4nγ) and (α,2nγ); unless otherwise stated.
[#] 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.
[@] Multiply placed.
[&] Multiply placed with undivided intensity.
[a] Placement of transition in the level scheme is uncertain.

$^{130}_{54}Xe_{76}$-9

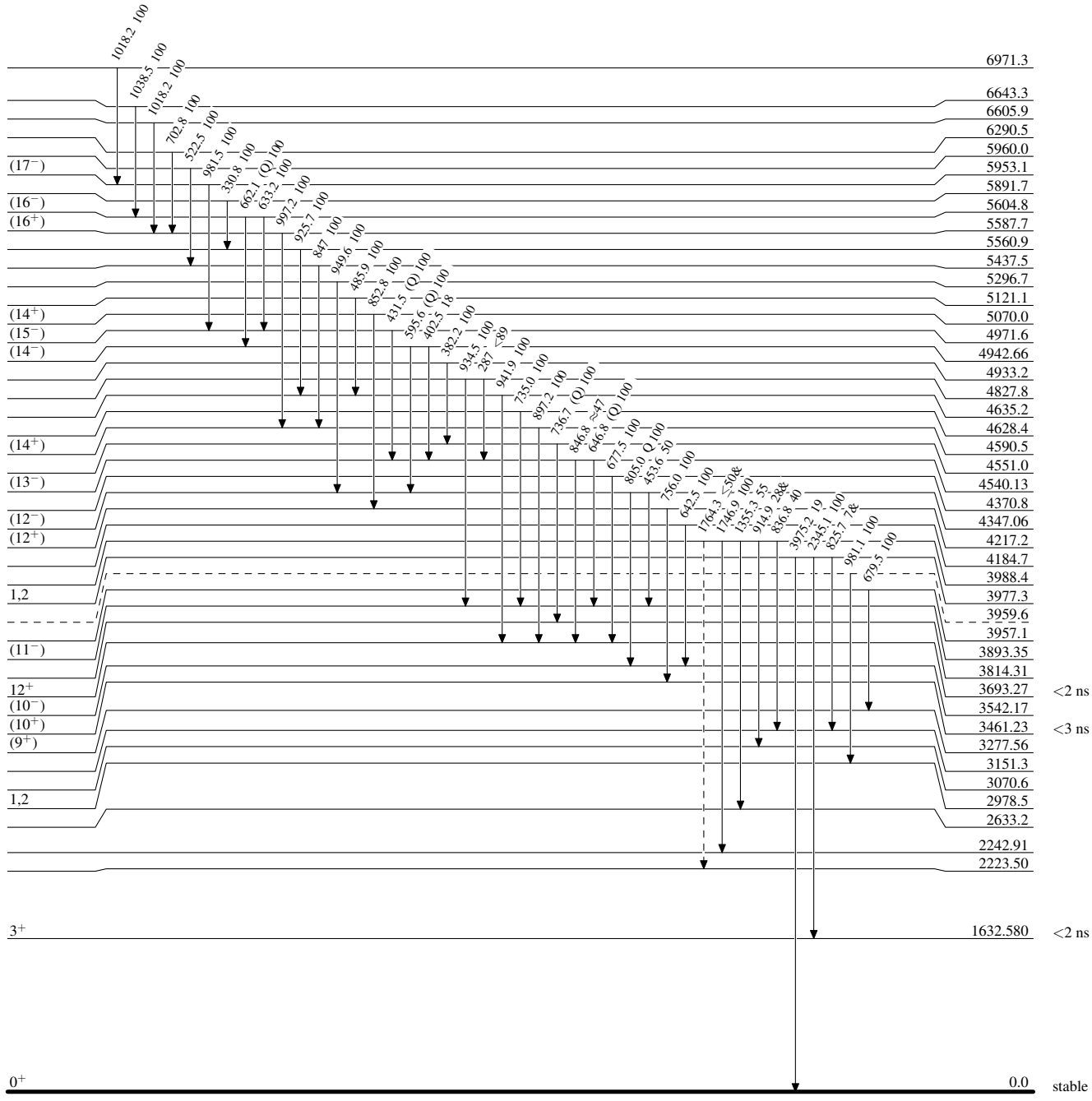
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

- - - - - - ► γ Decay (Uncertain)



$^{130}_{54}Xe_{76}$

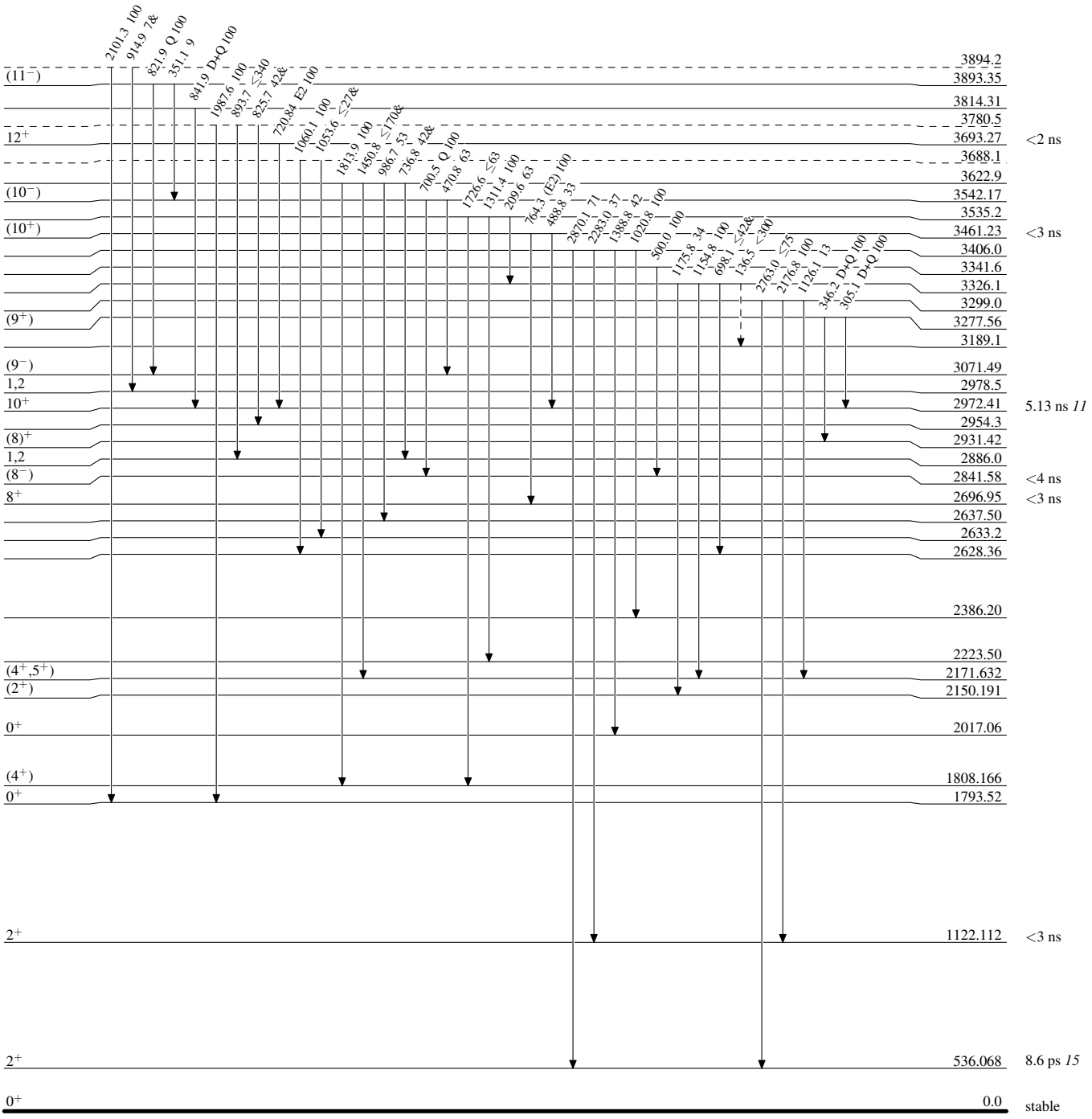
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

γ Decay (Uncertain)

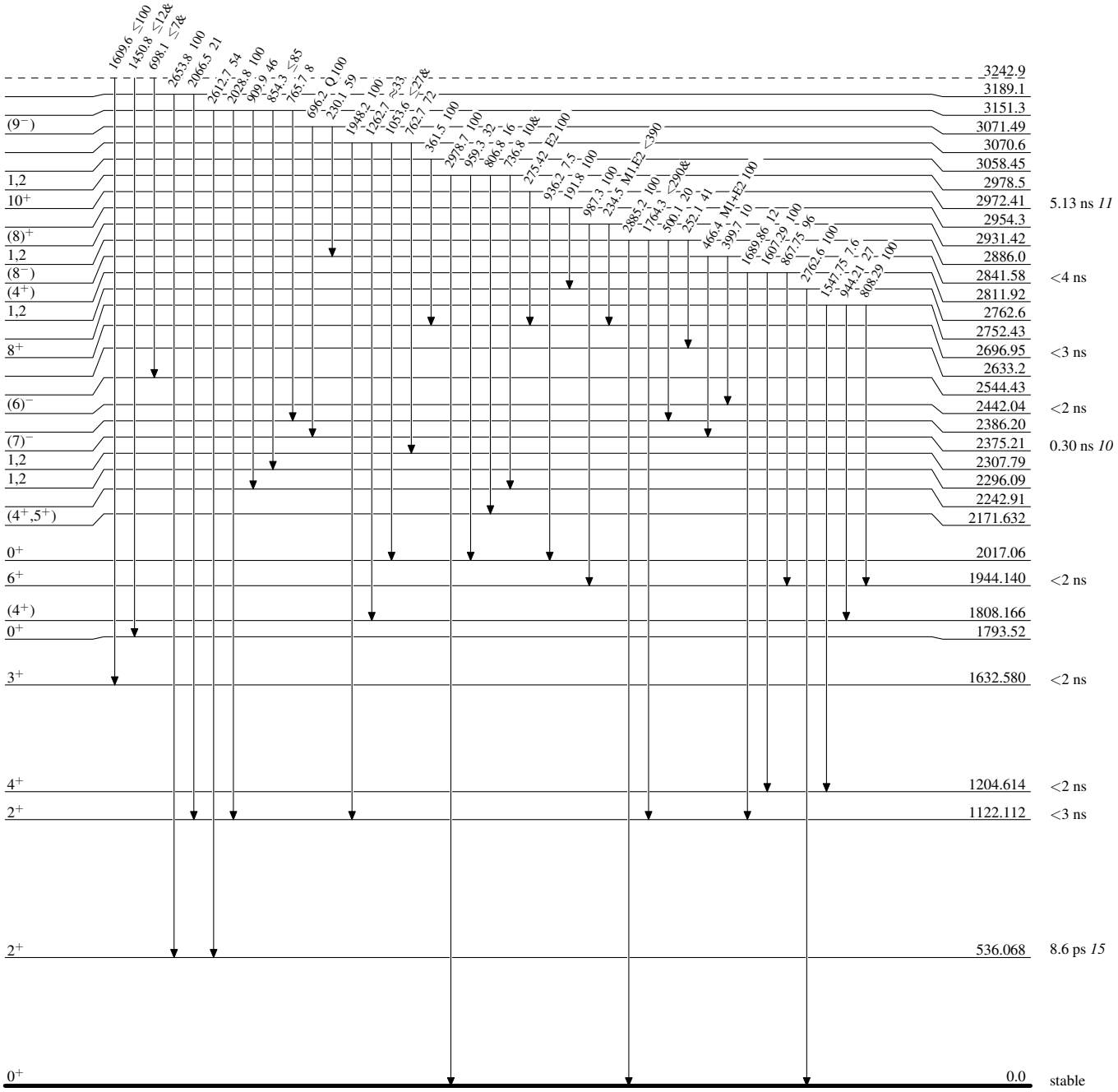


$^{130}_{54}Xe_{76}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given



$^{130}_{54}Xe_{76}$

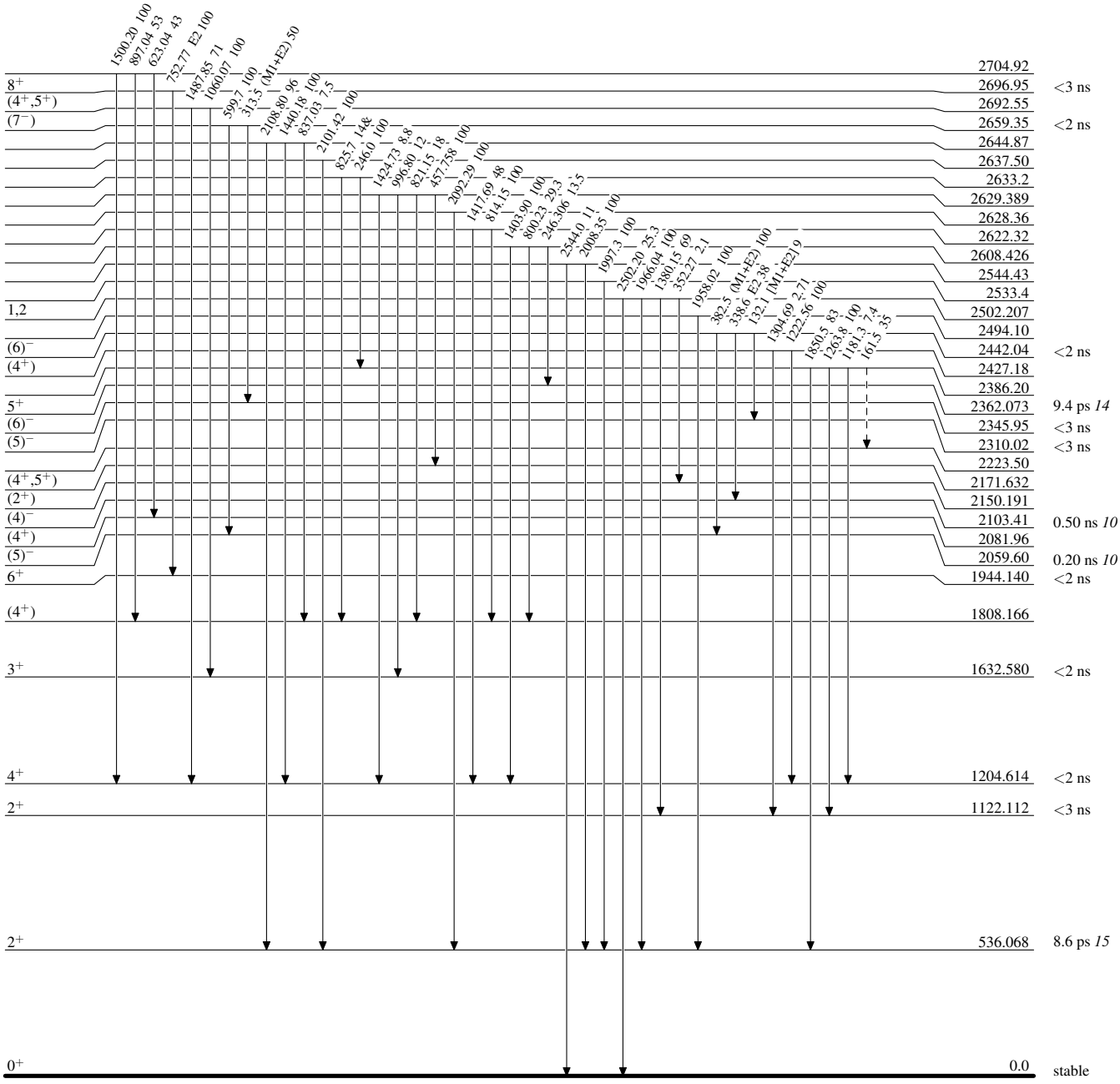
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

– – – – – – ► γ Decay (Uncertain)

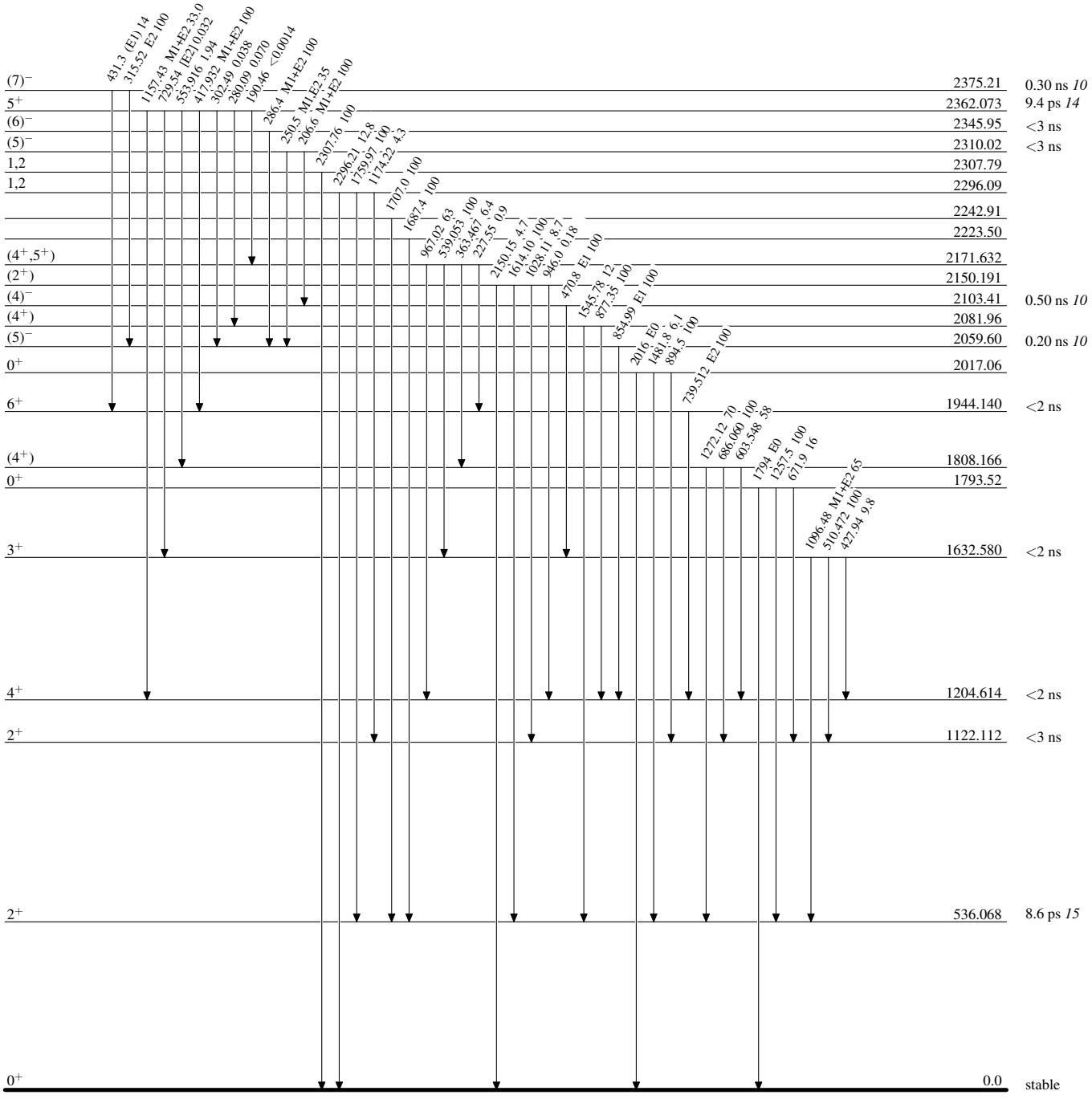


$^{130}_{54}Xe_{76}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

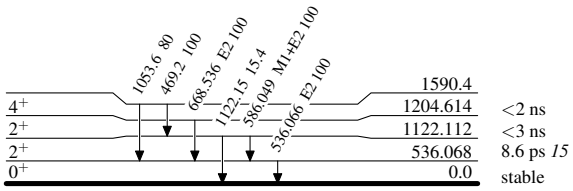


$^{130}_{54}Xe_{76}$

Adopted Levels, Gammas

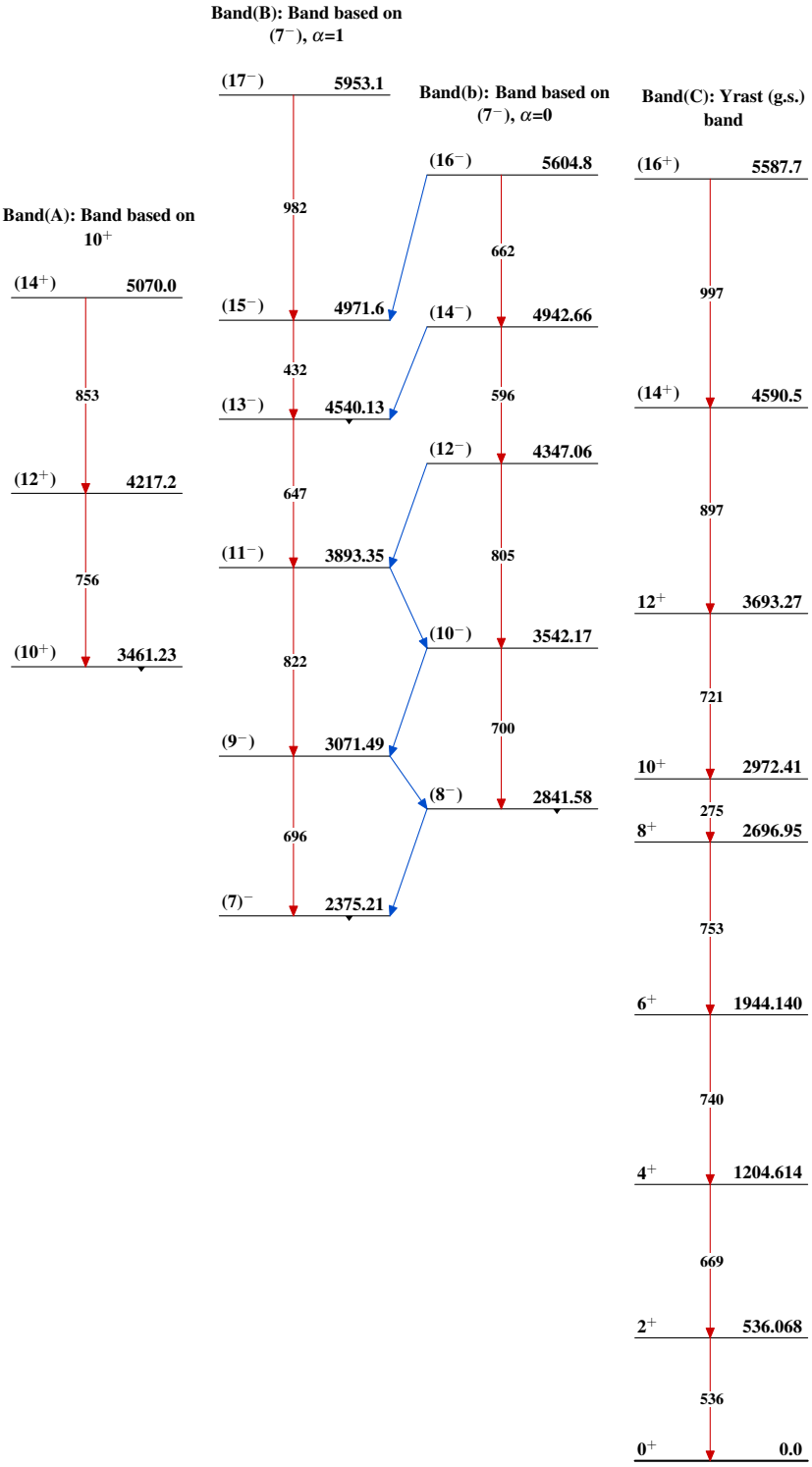
Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given



$^{130}_{54}Xe_{76}$

Adopted Levels, Gammas



$^{130}_{54}Xe_{76}$