

Adopted Levels, Gammas

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Yu. Khazov, A. A. Rodionov and S. Sakharov, Balraj Singh		NDS 104,497 (2005)	10-Feb-2005

$Q(\beta^-)=-2122.7$ 20; $S(n)=8936.65$ 22; $S(p)=9125.2$ 7; $Q(\alpha)=-2710.1$ 9 [2012Wa38](#)

Note: Current evaluation has used the following Q record -2124.6 21 8936.5922 9125.1 6 -2713.3 20 [2003Au03](#).

Hyperfine structure, isotope-shift measurements: [2001Br28](#), [1999Da22](#) (also [2000Da33](#)), [1993Wa26](#), [1989PI03](#), [1989Bo03](#), [1988Ge05](#), [1987Al25](#), [1981Ge06](#), [1981Bo07](#), [1978Hu04](#), [1974Fi15](#).

Mass measurements: [1990Me08](#), [1986Au02](#), [1960Bh02](#).

$^{132}\text{Xe}(\mu^-, X)$: [2000Ma56](#), [1999Ma14](#).

[Additional information 1.](#)

^{132}Xe Levels

Cross Reference (XREF) Flags

A	^{132}I β^- decay (2.295 h)	E	^{130}Te ($^3\text{He}, n$)	I	$^{132}\text{Xe}(\gamma, \gamma)$
B	^{132}I β^- decay (1.387 h)	F	$^{130}\text{Te}(\alpha, 2n\gamma)$	J	Coulomb excitation
C	^{132}Xe IT decay (8.39 ms)	G	$^{131}\text{Xe}(n, \gamma)$ E=th	K	$^{133}\text{Cs}(d, ^3\text{He})$
D	^{132}Cs ε decay (6.480 d)	H	$^{131}\text{Xe}(n, \gamma)$ E=14.1 eV	L	$^{232}\text{Th}(^{37}\text{Cl}, X)$

E(level) [†]	J ^π	T _{1/2}	XREF	Comments
0.0	0 ⁺	stable	ABCDEFGHIJKL	
667.715 2	2 ⁺	4.63 ps 30	ABCD FGHIJKL	$\mu=+0.651$ 24 (2002Ja02) μ : weighted average of +0.628 24 (transient-field technique, 2002Ja02), +0.70 7 (IMPAC, 1993Sp01), +0.74 10 (IMPAC, 1977Ar19), +0.78 10 (IPAC, 1975Go18), +0.76 12 (1973De42). All values except that from 1973De42 are from Coul. ex. J ^π : E2 γ to 0 ⁺ . T _{1/2} : from Coul. ex as adopted by 2001Ra27 . Other: 6.7 ps 20 (γ, γ'). $\mu=+0.2$ 4 (2002Ja02) J ^π : M1+E2 γ to 2 ⁺ , γ to 0 ⁺ ; $\gamma\gamma(\theta)$. T _{1/2} , μ : from Coul. ex. $\mu=+2.4$ 4 (2002Ja02) J ^π : E2 γ to 2 ⁺ ; $\gamma\gamma(\theta)$. T _{1/2} , μ : from Coul. ex. J ^π : M1+E2 γ 's to 2 ⁺ ; E2 γ from 5 ⁺ . XREF: K(?). J ^π : L($^3\text{He}, n$)=0+2. J ^π : M1+E2 γ to 4 ⁺ ; $\gamma(\theta)$. J ^π : $\gamma\gamma(\theta)$; γ to 0 ⁺ . J ^π : (E1+M2) γ to 4 ⁺ ; $\gamma(\theta)$ in ($\alpha, 2n\gamma$). J ^π : E2 γ to 2 ⁺ ; $\gamma(\theta)$. J ^π : E2 γ to 4 ⁺ ; $\gamma(\theta)$. J ^π : M1+E2 γ to 4 ⁺ , M1+E2 γ from 5 ⁺ ; $\gamma(\theta)$. J ^π : γ to 0 ⁺ . J ^π : $\gamma(\theta)$; γ to 0 ⁺ . $\mu=-0.063$ 28 (1989Ra17 , 1986Vo14) Q=0.010 5 (1989Ra17 , 1987Le31) μ, Q : from TDPAD (1986Vo14 , 1987Le31). J ^π : E2 γ to (5 ⁻); probable configuration= $\nu(h_{11/2}^{-1})\nu(d_{3/2}^{-1})$. T _{1/2} : from $\gamma\gamma(t)$ (see ($\alpha, 2n\gamma$) dataset). J ^π : (E2) γ to 4 ⁺ ; $\gamma(\theta)$. J ^π : M1+E2 γ from 5 ⁺ ; $\gamma(\theta)$. XREF: K(?). J ^π : $\Delta J=1$ γ to (5 ⁻).
1297.912 13	2 ⁺	3.05 ps 28	A D FGH JK	
1440.323 10	4 ⁺	1.80 ps 14	ABCD FGH JKL	
1803.714 16	3 ⁺		A D GH K	
1850 80	0 ⁺ &2 ⁺		E K	
1963.01 7	4 ⁺		A FGH K	
1985.641 5	2 ⁺		A D GH K	
2040.31 9	(5 ⁻)		ABC FGH L	
2110.28 7	4 ⁺		A GH K	
2111.88 16	6 ⁺		A	
2167.09 15	5 ⁺		A FGH k	
2168.8 4	(1,2 ⁺)		GH k	
2187.40 12	2 ⁺		A GH K	
2214.01 14	(7 ⁻)	87 ns 3	BC F L	
2303.42 15	(6 ⁺)		A G K	
2350.64 9	5 ⁺		A H K	
2353.1 4	(4,6)		F K	

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{132}Xe Levels (continued)

E(level) [†]	J ^π	T _{1/2}	XREF	Comments
2394.92 8	4 ⁺		A GH K	J ^π : M1+E2 γ to 4 ⁺ ; γγ(θ).
2424.77 12	3 ⁺		A GH K	J ^π : M1+E2 γ to 2 ⁺ ; γ(θ).
2468.78 5	(3 ⁻)		GH	J ^π : strong (E1) primary γ from 1 ⁺ ,2 ⁺ ; γ to (5 ⁻).
2490 50	0 ⁺ &2 ⁺		E	J ^π : L(³ He,n)=0+2.
2512.2 4	(4 ⁺)		G	J ^π : (E1+M2) γ to (5 ⁻); γ to 2 ⁽⁺⁾ .
2555.61 8	(2 ⁺ ,3)		GH	J ^π : strong primary γ from 1 ⁺ ,2 ⁺ ; γ to 4 ⁺ .
2583.77 10	5 ⁺		A	J ^π : M1+E2 γ to 4 ⁺ ; γ(θ).
2588.69 9	(4 ⁺)		A GH K	J ^π : (E2) γ to 2 ⁺ ; γ(θ).
2613.45 9	5 ⁺		A	J ^π : M1+E2 γ to 4 ⁺ ; γ(θ).
2650.3 8	(7 ⁻)		B	J ^π : log ft=7.4 from (8 ⁻); γ to (5 ⁻).
2669.99 11	3 ⁺		A G K	J ^π : M1+E2 γ to 2 ⁺ ; γγ(θ).
2714.4 4	(1,2 ⁺)		GH K	J ^π : γ to 0 ⁺ .
2752.21 17	(10 ⁺)	8.39 ms 11	C F	%IT=100 μ=(-)1.95 5 (1989Ra17,1976Ha50)
				J ^π : E3 γ to (7 ⁻); shell-model configuration=vh _{11/2} ⁻² . T _{1/2} ,μ: from DPAD in (α,2nγ) (1976Ha50).
2754.43 11	(4 ⁺)		A GH K	J ^π : (E2) γ to 2 ⁺ ; γ(θ).
2828.0 9	(7,8,9 ⁻)		B	J ^π : log ft=6.6 from (8 ⁻); γ to (7 ⁻).
2838.85 7	5 ⁺		A K	J ^π : M1+E2 γ to 4 ⁺ ; E2 γ to 3 ⁺ ; γγ(θ).
2840.10 12	4 ⁽⁺⁾		A	J ^π : (E2) γ to 2 ⁺ ; γ(θ).
2872.7 7			G	J ^π : γ to (5 ⁻).
2890.69 11	(4 ⁺)		A K	J ^π : (E2) γ to 2 ⁺ ; γ(θ).
2916.85 13	(2 ⁺ ,3,4 ⁺)		A	J ^π : γ's to 2 ⁺ and 4 ⁺ .
2935.2 4			A	J ^π : γ to 2 ⁺ .
2958.76 19	(2 ⁺ ,3,4 ⁺)		A K	J ^π : γ's to 2 ⁺ and 4 ⁺ .
2960.3 12	(7,8,9 ⁻)		B	J ^π : log ft=6.9 from (8 ⁻); γ to (7 ⁻).
3049.6 22			G	
3058.14 11	(3 ⁺)		A	J ^π : (M1+E2) γ to 3 ⁺ ; γ(θ).
3076.43 17	(3 ⁺)		A	J ^π : (M1+E2) γ to 3 ⁺ ; γ(θ).
3084.4 4	(3,4 ⁺)		A	J ^π : log ft=8.0 from 4 ⁺ ; possible γ's to 2 ⁺ .
3112.08 20	(3,4 ⁺)		A	J ^π : log ft=7.1 from 4 ⁺ ; γ to 2 ⁺ .
3121.93 24	(4 ⁺)		A	J ^π : log ft=7.3 from 4 ⁺ ; γ's to 2 ⁺ and 6 ⁺ .
3155.66 25	3 ⁺ ,4 ⁺		A K	J ^π : log ft=6.8 from 4 ⁺ ; γ's to 2 ⁺ and 5 ⁺ .
3180.7 6	(3 ⁻)		GH	J ^π : strong primary γ from 1 ⁺ ,2 ⁺ ; γ to (5 ⁻).
3192.81 13	(3 ⁺)		A	J ^π : (M1+E2) γ to 2 ⁺ ; γ(θ).
3213.97 20	(3,4 ⁺)		A	J ^π : log ft=6.7 from 4 ⁺ ; γ to 2 ⁺ .
3226.71 20	(3,4,5)		A	J ^π : log ft=6.2 from 4 ⁺ ; γ to 4 ⁺ .
3237.2 3	(3 ⁺ ,4 ⁺)		A	J ^π : log ft=7.0 from 4 ⁺ ; γ's to 2 ⁺ and 5 ⁺ .
3243.4 3			GH	
3249 2			G	
3260.9 3	(3,4 ⁺)		A	J ^π : log ft=6.4 from 4 ⁺ ; γ to 2 ⁺ .
3320.4 4	(3,4 ⁺)		A	J ^π : log ft=7.3 from 4 ⁺ ; γ to 2 ⁺ .
3353.3 3	(4 ⁺ ,5)		A	J ^π : log ft=6.2 from 4 ⁺ ; γ to (6 ⁺).
3385.2 6	(3,4 ⁺)		A	J ^π : log ft=7.5 from 4 ⁺ ; γ to 2 ⁺ .
3699.5 7			GH	XREF: G(3695).
3733? 2			G	
3792.5 5			GH	XREF: G(3789).
3825? 2			G	
3855 2			G	
3875.3? 5			GH	XREF: G(3869).
3909? 2			G	
3954.2 6			GH	XREF: G(3952).
3990 2			G	
4018 2			G	
4027.0? 6			GH	XREF: G(4033).

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

 ^{132}Xe Levels (continued)

<u>E(level)[†]</u>	<u>J^π</u>	<u>XREF</u>	<u>Comments</u>
4094.5 4	(3 ⁻ ,4 ⁺)	GH	XREF: G(4092). J ^π : primary γ from 1 ⁺ ,2 ⁺ ; γ to (5 ⁻).
4110? 2		G	
4147? 2		G	
4168 2		G	
4188.4? 3		H	
4200 2		G	
4230 2		G	

[†] From least-squares fit to E γ 's.

Adopted Levels, Gammas (continued)

E _i (level)	J _i ^π	E _γ [†]	I _γ [†]	E _f	J _f ^π	Mult. [‡]	γ(¹³² Xe)		Comments	
							δ [‡]	α [@]		
667.715	2 ⁺	667.714 2	100	0.0	0 ⁺	E2		0.00421	α(K)=0.00356 11; α(L)=0.00048 2 B(E2)(W.u.)=23.1 15	
1297.912	2 ⁺	630.19 2	100	667.715	2 ⁺	M1+E2	+4.07 16	0.00497 1	α(K)=0.00420 1; α(L)=0.00057 B(M1)(W.u.)=0.00154 19; B(E2)(W.u.)=41 4 B(E2)(W.u.)=0.079 11	
1440.323	4 ⁺	1297.91 2 772.60 1	6.7 6 100	0.0 667.715	0 ⁺ 2 ⁺	[E2] E2		0.00294	α(K)=0.00250 8; α(L)=0.00033 1 B(E2)(W.u.)=28.6 23	
1803.714	3 ⁺	363.34 5	9.3 3	1440.323	4 ⁺	(M1+E2)	+1.10 20	0.0239	α(K)=0.0202 3; α(L)=0.00292 3; α(M)=0.00059 1; α(N+..)=0.00015	
1963.01	4 ⁺	505.79 3	100 4	1297.912	2 ⁺	M1+E2	+7.5 6	0.0088	α(K)=0.00740 1; α(L)=0.00107	
		1136.00 2	63 2	667.715	2 ⁺	M1+E2	+0.34 2	0.00159 1	α(K)=0.00137; α(L)=0.00017	
		522.65 9	100 3	1440.323	4 ⁺	M1+E2	-0.09 1	0.0101	α(K)=0.0087; α(L)=0.00109	
1985.641	2 ⁺	1295.1 2 687.74 17	11.7 5 0.37 8	667.715 1297.912	2 ⁺ 2 ⁺	(E2)		0.00095	α(K)=0.00081 3; α(L)=0.00010	
2040.31	(5 ⁻)	1317.918 6	100 13	667.715	2 ⁺	(M1+E2)	-0.16 5	0.00117 1	α(K)=0.00100; α(L)=0.00012	
		1985.625 6	10.0 17	0.0	0 ⁺					
2110.28	4 ⁺	600.1 1 147.4 2	100	1440.323 1963.01	4 ⁺ 4 ⁺	(E1+M2) M1	-0.18 7	0.279	δ: from (α,2nγ). Other: +0.03 25 in (n,γ) E=th. α(K)=0.240 8; α(L)=0.0314 10; α(M)=0.00633 19; α(N+..)=0.00160 5	
2111.88	6 ⁺	306.7& 4	<1.8	1803.714	3 ⁺					
		669.8 2	84 11	1440.323	4 ⁺	M1+E2		0.0049 7	α(K)=0.0042 7; α(L)=0.00054 6 δ: +0.86 16 or +0.05 9.	
		812.0 2	100 8	1297.912	2 ⁺	E2		0.00262	α(K)=0.00223 7; α(L)=0.00029 1	
2167.09	5 ⁺	1442.56 10 671.4 2	25.4 9 100	667.715 1440.323	2 ⁺ 4 ⁺	E2		0.00076	α(K)=0.00066 2	
2168.8	(1,2 ⁺)	727.0 3	100	1440.323	4 ⁺	M1+E2	+0.41 +7-8	0.00415 0.0040 6	α(K)=0.00351 11; α(L)=0.00048 2 α(K)=0.0034 6; α(L)=0.00044 5 δ: from (α,2nγ).	
2187.40	2 ⁺	1501.2 4 2169.5 8	100 [#] 18 17 [#] 9	667.715 0.0	2 ⁺ 0 ⁺				I _γ : double placement in ¹³² I β ⁻ (2.295 h); but (n,γ) results suggest main placement from 2187 level.	
2214.01	(7 ⁻)	889.56 15	61 16	1297.912	2 ⁺				0.00067 8	α(K)=0.00067 8 δ: +2.4 5 or -0.03 7.
		1519.6 2	100 10	667.715	2 ⁺	(M1+E2)				
2303.42	(6 ⁺)	2187.5 6 173.7 1	34 [#] 8 100	0.0 2040.31	0 ⁺ (5 ⁻)	E2		0.263	B(E2)(W.u.)=0.82 3 α(K)=0.203 6; α(L)=0.0471 15; α(M)=0.0098 3; α(N+..)=0.00238 8	
2303.42	(6 ⁺)	136.7& 4	<14	2167.09	5 ⁺	M1,E2		0.47 13	α(K)=0.37 8; α(L)=0.08 5; α(M)=0.017 10; α(N+..)=0.0042 22	
		863.0 2	100 9	1440.323	4 ⁺	(E2)		0.00227	α(K)=0.00194 6; α(L)=0.00025 1	

Adopted Levels, Gammas (continued)

$\gamma(^{132}\text{Xe})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult. [‡]	δ^\ddagger	$\alpha^@$	Comments
2350.64	5 ⁺	183.6 3	12.2 18	2167.09	5 ⁺	M1,E2		0.18 4	$\alpha(\text{K})=0.150$ 20; $\alpha(\text{L})=0.027$ 11; $\alpha(\text{M})=0.0057$ 22; $\alpha(\text{N}+..)=0.0014$ 6
		387.9& 3	<26	1963.01	4 ⁺	(M1+E2)		0.0200 12	$\alpha(\text{K})=0.0170$ 13; $\alpha(\text{L})=0.00240$ 7; $\alpha(\text{M})=0.00049$ 2; $\alpha(\text{N}+..)=0.00012$
		547.2 2	100 7	1803.714	3 ⁺	E2		0.00708	$\delta: -1.54$ 22 or -0.45 8.
2353.1	(4,6)	910.1 ^a 2	82 ^a 3	1440.323	4 ⁺	(M1+E2)	-1.27 22	0.00228 7	$\alpha(\text{K})=0.00596$ 18; $\alpha(\text{L})=0.00084$ 3
		312.9 3	100	2040.31	(5 ⁻)	D			$\alpha(\text{K})=0.00195$ 6; $\alpha(\text{L})=0.00025$ 1
2394.92	4 ⁺	284.9 2	4.0 4	2110.28	4 ⁺	M1+E2	-0.26 3	0.0472	$\alpha(\text{K})=0.0406$; $\alpha(\text{L})=0.00533$ 3; $\alpha(\text{M})=0.00107$ 1; $\alpha(\text{N}+..)=0.00027$
		355.2&b 4	<0.28	2040.31	(5 ⁻)				
		431.8 3	2.7 3	1963.01	4 ⁺	(M1+E2)	+0.06 4	0.0162	$\alpha(\text{K})=0.0139$; $\alpha(\text{L})=0.00177$; $\alpha(\text{M})=0.00036$
		591.1& 6	<0.4	1803.714	3 ⁺				
		954.55 9	100 3	1440.323	4 ⁺	M1+E2	-0.07 1	0.00243	$\alpha(\text{K})=0.00208$; $\alpha(\text{L})=0.00026$
		1096.9 4	0.25 5	1297.912	2 ⁺				
		1727.2 4	0.38 4	667.715	2 ⁺	(E2)			
2424.77	3 ⁺	621.2 3	100 13	1803.714	3 ⁺	M1(+E2)		0.0059 8	$\alpha(\text{K})=0.0050$ 8; $\alpha(\text{L})=0.00065$ 7
		984.2 2	38 3	1440.323	4 ⁺	(M1+E2)	-0.28 1	0.00222	$\alpha(\text{K})=0.00191$; $\alpha(\text{L})=0.00024$
		1126.5& 4	<3	1297.912	2 ⁺				
		1757.4 2	18.8 19	667.715	2 ⁺	(M1+E2)	+0.10 1		
2468.78	(3 ⁻)	428.86 22	8.4 10	2040.31	(5 ⁻)				
		483.04 5	100.0 22	1985.641	2 ⁺	(E1)		0.00318	$\alpha(\text{K})=0.00276$ 9; $\alpha(\text{L})=0.00034$ 1
		1028.79 15	73 3	1440.323	4 ⁺	(E1+M2)	-0.071 11	0.00065	$\alpha(\text{K})=0.00056$ 2
		1171.22 15	39.4 [#] 16	1297.912	2 ⁺				
		1801.1 3	49.1 16	667.715	2 ⁺				
2512.2	(4 ⁺)	325.4 5	45 30	2187.40	2 ⁺				
		471.2 5	100 30	2040.31	(5 ⁻)	(E1+M2)	-0.27 11	0.00339	$\alpha(\text{K})=0.00293$ 9; $\alpha(\text{L})=0.00036$ 1
2555.61	(2 ⁺ ,3)	570.13 9	80 6	1985.641	2 ⁺	D+Q			$\delta: +0.7$ +4-3 for J(2556)=2; -0.11 12 for J(2556)=3.
		1114.5 2	63 [#] 7	1440.323	4 ⁺				I_γ : other: 16 2 in (n, γ) E=14.1 eV. E_γ : level-energy difference=1115.3.
		1887.6 3	100 11	667.715	2 ⁺				
2583.77	5 ⁺	416.8 3	35 4	2167.09	5 ⁺	(M1+E2)	-1.70 23	0.0158	$\alpha(\text{K})=0.0134$ 2; $\alpha(\text{L})=0.00194$; $\alpha(\text{M})=0.00040$
		473.6 4	12 3	2110.28	4 ⁺				
		620.9 2	29 15	1963.01	4 ⁺				
		780.0 2	88 3	1803.714	3 ⁺	(E2)		0.00288	$\alpha(\text{K})=0.00244$ 8; $\alpha(\text{L})=0.00032$ 1
		1143.3 2	100 5	1440.323	4 ⁺	M1+E2	-0.20 2	0.00160	$\alpha(\text{K})=0.00137$; $\alpha(\text{L})=0.00017$
2588.69	(4 ⁺)	478.2 4	14 4	2110.28	4 ⁺				
		784.4 4	31 4	1803.714	3 ⁺	(M1+E2)	+1.2 5	0.0032 3	$\alpha(\text{K})=0.00277$ 23; $\alpha(\text{L})=0.00036$ 2
		1147.8 5	22 4	1440.323	4 ⁺				
		1290.8 2	91 4	1297.912	2 ⁺	(E2)		0.00096	$\alpha(\text{K})=0.00082$ 3; $\alpha(\text{L})=0.00010$

Adopted Levels, Gammas (continued)

$\gamma(^{132}\text{Xe})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult. [‡]	δ^\ddagger	$\alpha^@$	Comments
2588.69	(4 ⁺)	1921.08 12	100 5	667.715	2 ⁺	(E2)			
2613.45	5 ⁺	262.9 1	50 4	2350.64	5 ⁺	M1+E2	-0.16 5	0.0583	$\alpha(\text{K})=0.0502$ 1; $\alpha(\text{L})=0.00653$ 6; $\alpha(\text{M})=0.00131$ 1; $\alpha(\text{N}+..)=0.00033$
		310.4& 4	<3.5	2303.42	(6 ⁺)				
		446.2 3	23.5 20	2167.09	5 ⁺	M1,E2			
		572.5&b 4	<2.3	2040.31	(5 ⁻)				
		650.5 2	100 8	1963.01	4 ⁺	M1+E2	-0.36 3	0.00580 3	$\alpha(\text{K})=0.00497$ 2; $\alpha(\text{L})=0.00063$
		809.5 2	100 12	1803.714	3 ⁺	E2		0.00263	$\alpha(\text{K})=0.00224$ 7; $\alpha(\text{L})=0.00030$ 1
		1172.9 2	42 3	1440.323	4 ⁺	M1+E2	-0.57 2	0.00143 1	$\alpha(\text{K})=0.00123$; $\alpha(\text{L})=0.00015$
2650.3	(7 ⁻)	610.0 8	100	2040.31	(5 ⁻)				
2669.99	3 ⁺	559.7 4	3.6 8	2110.28	4 ⁺				
		684.4 ^b 2	1.0 2	1985.641	2 ⁺				
		706.4 7	≈0.8	1963.01	4 ⁺				
		866.0& 6	<1.4	1803.714	3 ⁺				
		1372.07 13	100 4	1297.912	2 ⁺	M1+E2	-0.13 1	0.00107	$\alpha(\text{K})=0.00092$; $\alpha(\text{L})=0.00011$
		2002.2 5	46 4	667.715	2 ⁺	(M1+E2)	-0.73 11		
2714.4	(1,2 ⁺)	910.8 ^a 7	≈29 ^a	1803.714	3 ⁺				
		2714.3 5	100 30	0.0	0 ⁺				
2752.21	(10 ⁺)	538.2 1	100	2214.01	(7 ⁻)	E3		0.0197	$\alpha(\text{K})=0.0158$ 5; $\alpha(\text{L})=0.00294$ 9 B(E3)(W.u.)=0.01049 14 Additional information 2.
2754.43	(4 ⁺)	791.2 4	38 8	1963.01	4 ⁺				
		1314.0 5	23 4	1440.323	4 ⁺				
		1456.5 2	19 3	1297.912	2 ⁺				
		2086.82 15	100 8	667.715	2 ⁺	(E2)			
2828.0	(7,8,9 ⁻)	614.0 8	100	2214.01	(7 ⁻)				
2838.85	5 ⁺	250.8& 6	<0.25	2588.69	(4 ⁺)				
		255.1 ^a 2	3.4 ^a 3	2583.77	5 ⁺	M1,E2		0.067 5	$\alpha(\text{K})=0.0561$ 19; $\alpha(\text{L})=0.0088$ 19; $\alpha(\text{M})=0.0018$ 4; $\alpha(\text{N}+..)=0.00045$ 10
		488.0& 4	<6	2350.64	5 ⁺				
		535.4 3	7.3 7	2303.42	(6 ⁺)	(M1+E2)	+0.09 2	0.0096	$\alpha(\text{K})=0.00819$ 1; $\alpha(\text{L})=0.00103$
		727.2 3	45 9	2111.88	6 ⁺	M1+E2		0.0040 6	$\alpha(\text{K})=0.0034$ 6; $\alpha(\text{L})=0.00044$ 5
		728.4 2	23 6	2110.28	4 ⁺	(M1+E2)	-4.1 4	0.0040 6	$\alpha(\text{K})=0.0034$ 6; $\alpha(\text{L})=0.00044$ 5
		1035.0 2	7.3 7	1803.714	3 ⁺	(E2)		0.00152	$\alpha(\text{K})=0.00130$ 4; $\alpha(\text{L})=0.00017$ 1
		1398.57 10	100 3	1440.323	4 ⁺	M1+E2	+0.07 1	0.00103	$\alpha(\text{K})=0.00088$; $\alpha(\text{L})=0.00011$
2840.10	4 ⁽⁺⁾	250.8& 6	<1.7	2588.69	(4 ⁺)				
		445.0 ^b 6	<9.5	2394.92	4 ⁺				
		876.6 2	100 4	1963.01	4 ⁺	(M1+E2)	-1.2 5	0.00251 20	$\alpha(\text{K})=0.00214$ 18; $\alpha(\text{L})=0.00027$ 2
		1542.3 6	1.52 19	1297.912	2 ⁺				

Adopted Levels, Gammas (continued)

$\gamma(^{132}\text{Xe})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult. [‡]	δ^\ddagger	$\alpha^@$	Comments
2840.10	4 ⁽⁺⁾	2172.68 15	20.0 19	667.715	2 ⁺	(E2)			
2872.7		832.4 7	100	2040.31	5 ⁽⁻⁾				
2890.69	4 ⁽⁺⁾	136.7& 4	<19	2754.43	4 ⁽⁺⁾	M1,E2		0.47 13	$\alpha(\text{K})=0.37$ 8; $\alpha(\text{L})=0.08$ 5; $\alpha(\text{M})=0.017$ 10; $\alpha(\text{N}+..)=0.0042$ 22
		306.7& 4	<24	2583.77	5 ⁺				
		539.7&b 4	<26	2350.64	5 ⁺				
		904.4 5	3.1 10	1985.641	2 ⁺				
		927.4 3	100 10	1963.01	4 ⁺	(M1+E2)	-0.27 6	0.00255 2	$\alpha(\text{K})=0.00219$ 2; $\alpha(\text{L})=0.00027$
		1086.2 4	19 5	1803.714	3 ⁺				
		1450.0 5	1.9 5	1440.323	4 ⁺				
		1592.9 3	11.4 10	1297.912	2 ⁺				
		2223.17 15	29 5	667.715	2 ⁺	(E2)			
2916.85	2 ^{(+),3,4⁺}	1112.4 4	50 12	1803.714	3 ⁺				
		1476.7 2	100 7	1440.323	4 ⁺				
		1618.9 3	5 4	1297.912	2 ⁺				
		2249.1 3	25.8 16	667.715	2 ⁺				
2935.2		1636.5& 6	100	1297.912	2 ⁺				
2958.76	2 ^{(+),3,4⁺}	771.7 ^b	70 70	2187.40	2 ⁺				
		847.9 5	57 17	2110.28	4 ⁺				
		995.8 5	100 40	1963.01	4 ⁺				
		1661.4 5	53 10	1297.912	2 ⁺				
		2290.6 6	12 3	667.715	2 ⁺				
2960.3	7,8,9 ⁽⁻⁾	310.0 8	100	2650.3	7 ⁽⁻⁾				
3058.14	3 ⁽⁺⁾	387.9& 3	<160	2669.99	3 ⁺				
		947.2 6	24 8	2110.28	4 ⁺				
		1254.1 4	32 4	1803.714	3 ⁺	(M1+E2)	+1.71 9	0.00109 1	$\alpha(\text{K})=0.00093$ 1; $\alpha(\text{L})=0.00012$
		1617.9 2	5.2 26	1440.323	4 ⁺				
		1760.4 6	32 11	1297.912	2 ⁺				
		2390.48 15	100 11	667.715	2 ⁺				
3076.43	3 ⁽⁺⁾	488.0& 4	<250	2588.69	4 ⁽⁺⁾	(M1(+E2))	+0.7 7	0.0108 12	$\alpha(\text{K})=0.0092$ 11; $\alpha(\text{L})=0.00124$ 6; $\alpha(\text{M})=0.00025$ 1
		888.7 ^b 5	<20	2187.40	2 ⁺				
		965.8 5	21 5	2110.28	4 ⁺				
		1272.8 4	100 12	1803.714	3 ⁺	(M1+E2)	+1.89 13	0.00105 1	$\alpha(\text{K})=0.00090$ 1; $\alpha(\text{L})=0.00011$
		1636.5& 6	<7	1440.323	4 ⁺				
		1778.5 4	47 5	1297.912	2 ⁺				
		2408.6 4	5.6 5	667.715	2 ⁺				
3084.4	3,4 ⁽⁺⁾	1644.0 6	100 30	1440.323	4 ⁺				
		1786.5& 6	<85	1297.912	2 ⁺				
		2417.1 ^b 4	11 5	667.715	2 ⁺				

Adopted Levels, Gammas (continued)

$\gamma(^{132}\text{Xe})$ (continued)								
$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult. [‡]	δ^\ddagger	Comments
3112.08	(3,4 ⁺)	687.8 5	100 50	2424.77	3 ⁺			
		1002.5 & 6	<65	2110.28	4 ⁺			
		1126.5 & 4	<125	1985.641	2 ⁺			
		1671.3 4	55 10	1440.323	4 ⁺			
		1814.0 5	40 10	1297.912	2 ⁺			
		2444.0 6	14.3 20	667.715	2 ⁺			
3121.93	(4 ⁺)	539.7 & b 4	<235	2583.77	5 ⁺			
		1009.0 4	100 15	2111.88	6 ⁺			
		1081.8 & 4	<74	2040.31	(5 ⁻)			
3155.66	3 ⁺ ,4 ⁺	2454.8 4	4.5 11	667.715	2 ⁺			
		316.7 4	100 16	2838.85	5 ⁺			
		572.5 & b 4	<46	2583.77	5 ⁺			
3180.7	(3 ⁻)	1715.4 4	43 3	1440.323	4 ⁺			
		2487.8 6	0.62 16	667.715	2 ⁺			
		1140.89 17	100 80	2040.31	(5 ⁻)			
3192.81	(3 ⁺)	1739.8 8	25 13	1440.323	4 ⁺			
		234.3 6	75 25	2958.76	(2 ⁺ ,3,4 ⁺)			
		302.0 ^b 7	≈12	2890.69	(4 ⁺)			
		355.2 & b 4	<125	2838.85	5 ⁺			
		1005.4 6	40 13	2187.40	2 ⁺			
		1081.8 & 4	<88	2110.28	4 ⁺			
3213.97	(3,4 ⁺)	1752.3 7	63 20	1440.323	4 ⁺			
		2525.14 15	100 10	667.715	2 ⁺	(M1+E2)	+0.46 5	
		255.1 ^a 3	<45 ^a	2958.76	(2 ⁺ ,3,4 ⁺)			
		278.4 & 4	<90	2935.2				
		600.0 6	<300	2613.45	5 ⁺			
		1410.6 3	100 16	1803.714	3 ⁺			
3226.71	(3,4,5)	2546.5 6	3.6 11	667.715	2 ⁺			
		310.1 & 4	<330	2916.85	(2 ⁺ ,3,4 ⁺)			
		387.9 & 3	<1100	2838.85	5 ⁺			
		831.3 5	96 40	2394.92	4 ⁺			
		1263.6 5	100 22	1963.01	4 ⁺			
3237.2	(3 ⁺ ,4 ⁺)	1786.5 & 6	<41	1440.323	4 ⁺			
		278.4 & 4	<160	2958.76	(2 ⁺ ,3,4 ⁺)			
		886.1 5	100 30	2350.64	5 ⁺			
3243.4		2569.8 4	20 4	667.715	2 ⁺			
		1280.4 3	100 17	1963.01	4 ⁺			

I_γ : double placement (from 2040 and 3214 levels) in $^{132}\text{I} \beta^-$ decay with undivided intensity.

Adopted Levels, Gammas (continued)

γ(¹³²Xe) (continued)

<u>E_i(level)</u>	<u>J_i^π</u>	<u>E_γ[†]</u>	<u>I_γ[†]</u>	<u>E_f</u>	<u>J_f^π</u>	<u>E_i(level)</u>	<u>J_i^π</u>	<u>E_γ[†]</u>	<u>I_γ[†]</u>	<u>E_f</u>	<u>J_f^π</u>
3243.4		2577.0 ^{&} 10	<50	667.715	2 ⁺	3792.5		1398.8 7	68 40	2394.92	4 ⁺
3260.9	(3,4 ⁺)	343.7 4	100 23	2916.85	(2 ⁺ ,3,4 ⁺)	3875.3?		1120.9 5	100 9	2754.43	(4 ⁺)
		591.1 ^{&} 6	<80	2669.99	3 ⁺			2577 ^{&} 1	<50	1297.912	2 ⁺
		866.0 ^{&} 6	<40	2394.92	4 ⁺	3954.2		1786.0 8	100 30	2168.8	(1,2 ⁺)
		2593.8 8	1.3 4	667.715	2 ⁺			2149.9 ^{&} 8	<90	1803.714	3 ⁺
3320.4	(3,4 ⁺)	1879.2 5	100 22	1440.323	4 ⁺	4027.0?		1858.3 7	100 18	2168.8	(1,2 ⁺)
		2653.8 6	7.1 22	667.715	2 ⁺			1986.4 9	<36	2040.31	(5 ⁻)
3353.3	(4 ⁺ ,5)	1002.5 ^{&} 6	<55	2350.64	5 ⁺	4094.5	(3 ⁻ ,4 ⁺)	1539.0 5	63 17	2555.61	(2 ⁺ ,3)
		1049.6 4	100 30	2303.42	(6 ⁺)			1669.7 11	38 14	2424.77	3 ⁺
		1242.6 7	≤20	2110.28	4 ⁺			1926.0 12	83 50	2168.8	(1,2 ⁺)
		1390.7 ^b 7	32 22	1963.01	4 ⁺			2055.2 7	100 40	2040.31	(5 ⁻)
		1913.7 5	64 22	1440.323	4 ⁺			2795.4 7	66 40	1297.912	2 ⁺
3385.2	(3,4 ⁺)	2717.5 6	100	667.715	2 ⁺	4188.4?		1719.7 4	100 25	2468.78	(3 ⁻)
3699.5		1895.8 7	100 20	1803.714	3 ⁺			2149.9 ^{&} 8	<25	2040.31	(5 ⁻)
		3699.2 25		0.0	0 ⁺			2384.2 4	17 9	1803.714	3 ⁺
3792.5		1236.2 5	100 30	2555.61	(2 ⁺ ,3)						

[†] Weighted averages of all available data; in some cases values are preferred from one data set if the level is very weakly populated in other studies. Most values originate from ¹³²I β⁻ decay (2.295 h). Intensities are relative photon branches.

[‡] From ¹³²I β⁻ decay (2.295 h), except as noted.

[#] From (n,γ) E=th; the value available from other dataset(s) originates from weakly populated level.

[@] 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.

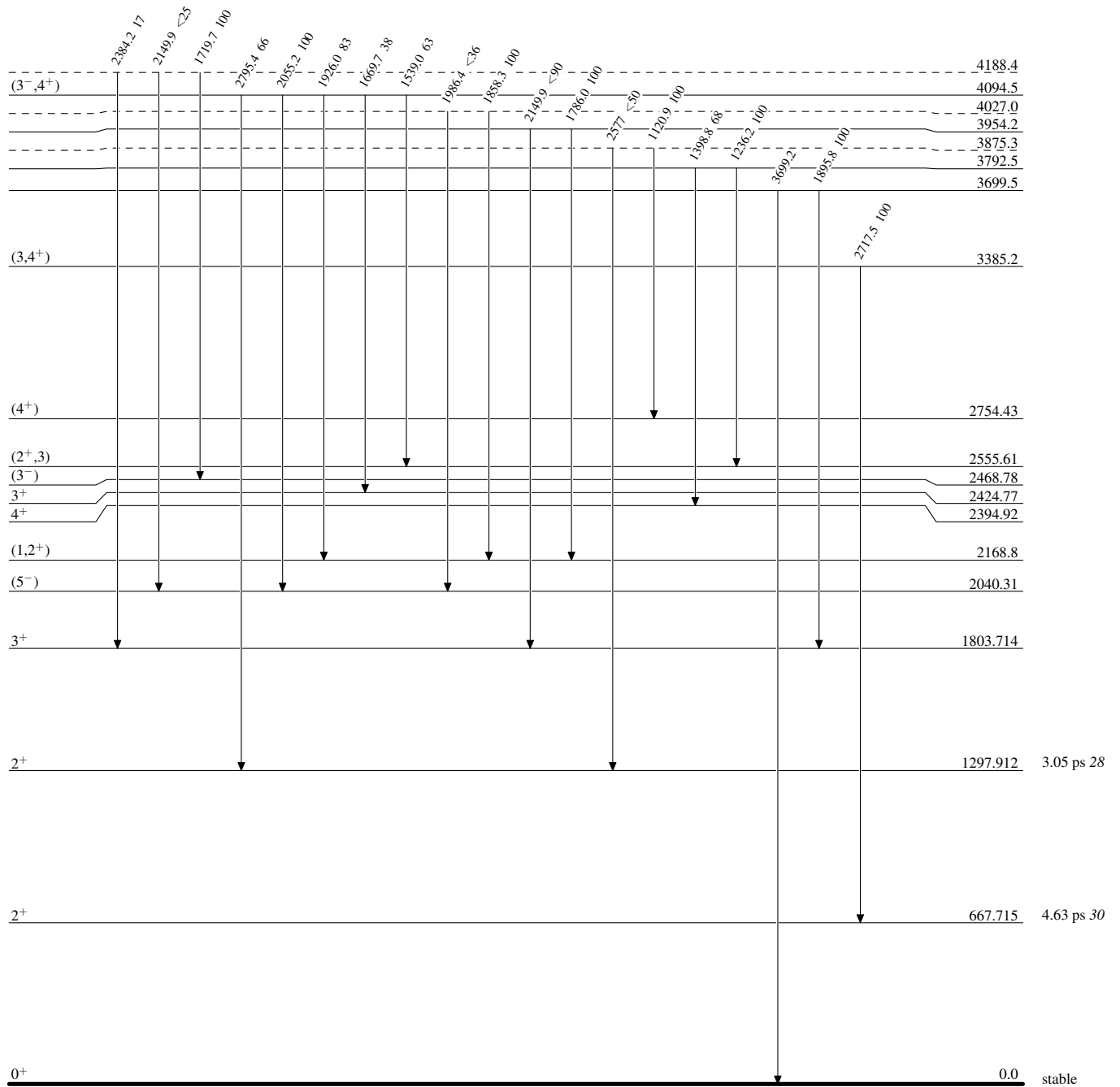
[&] Multiply placed.

^a Multiply placed with intensity suitably divided.

^b Placement of transition in the level scheme is uncertain.

Adopted Levels, Gammas**Level Scheme**

Intensities: Relative photon branching from each level

 $^{132}_{54}\text{Xe}_{78}$

Adopted Levels, Gammas

Legend

Level Scheme (continued)

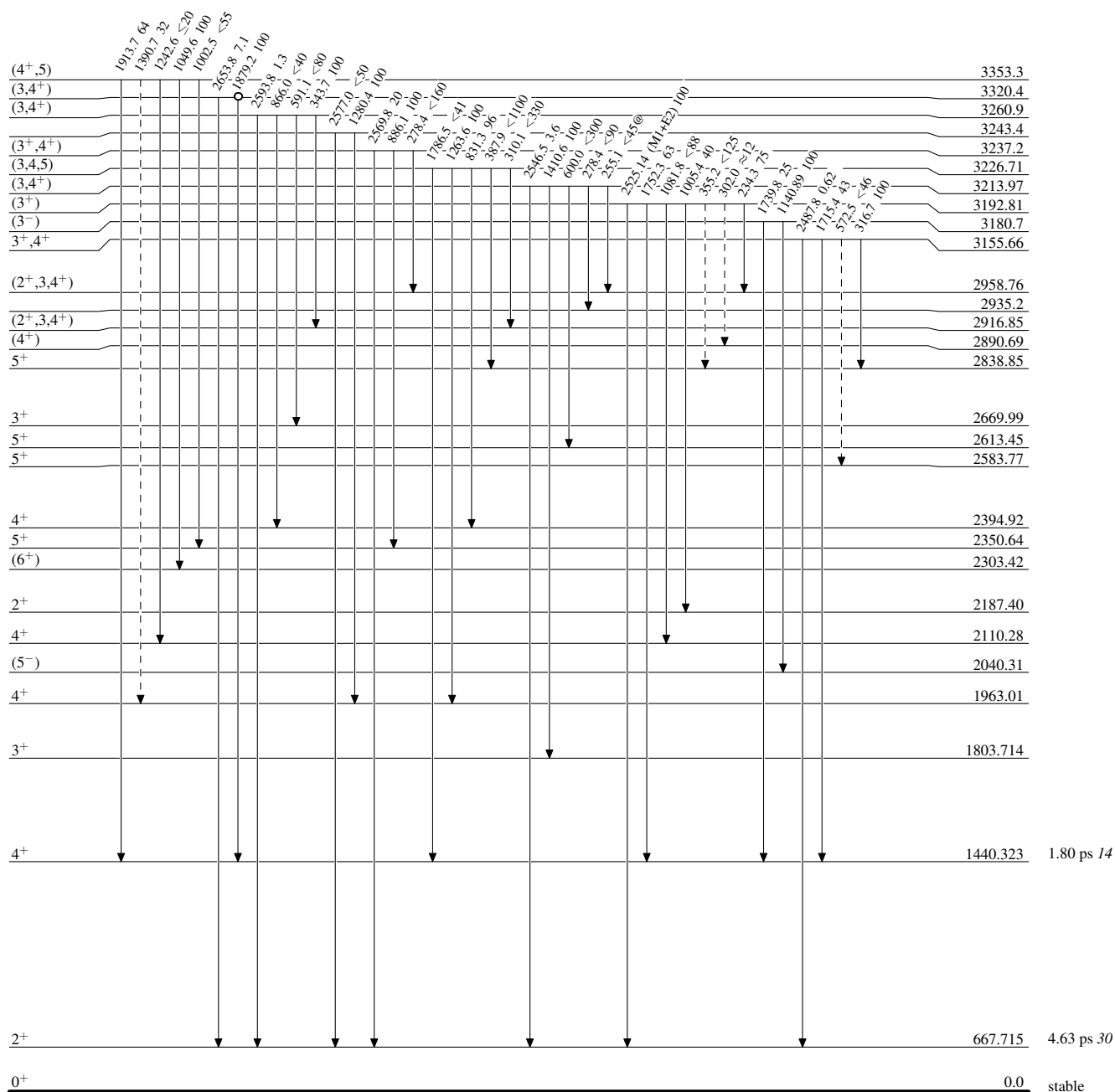
Intensities: Relative photon branching from each level

@ Multiply placed: intensity suitably divided

-----► γ Decay (Uncertain)

● Coincidence

○ Coincidence (Uncertain)

 $^{132}_{54}\text{Xe}_{78}$

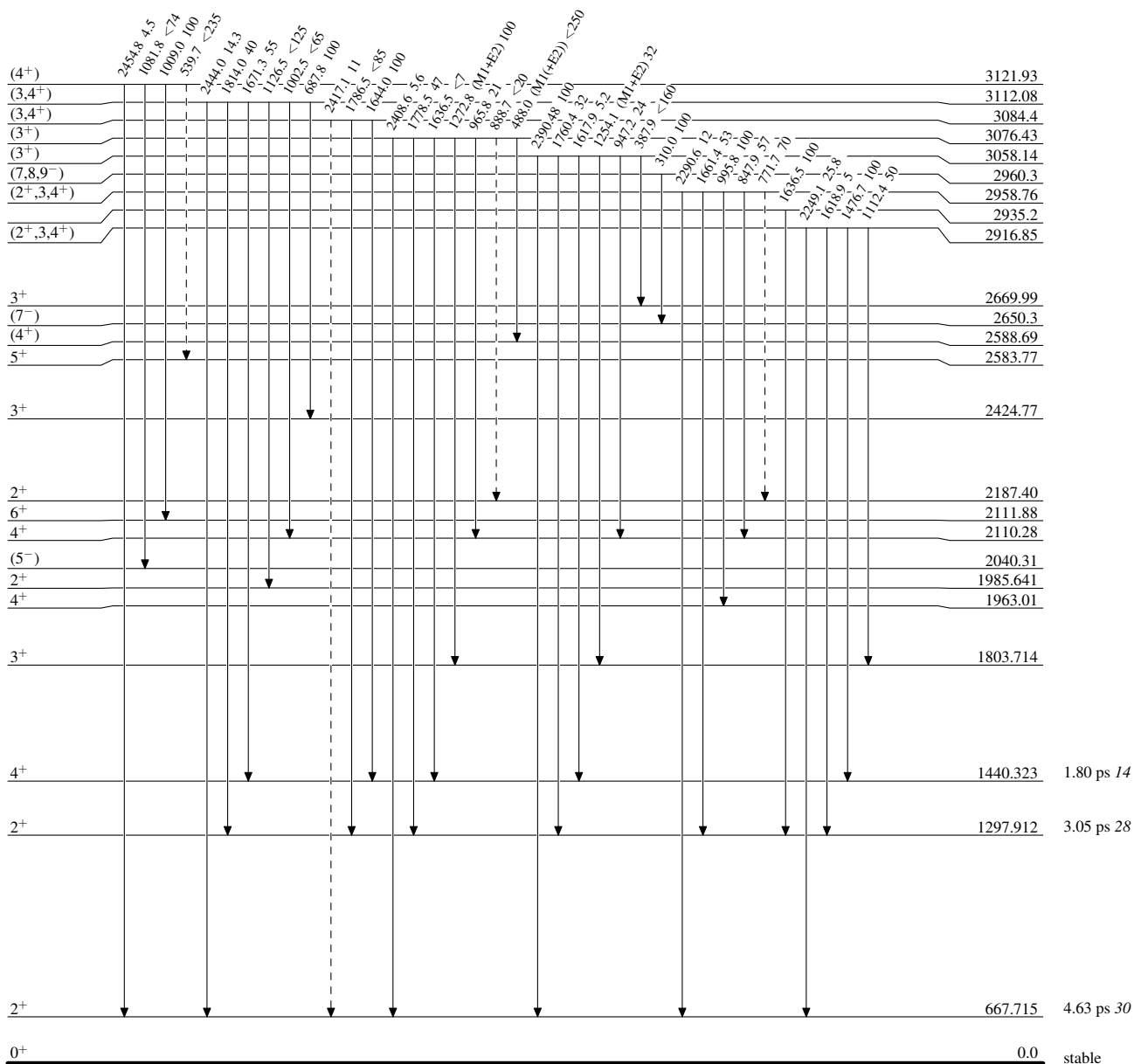
Adopted Levels, Gammas

Legend

Level Scheme (continued)

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

-----▶ γ Decay (Uncertain)



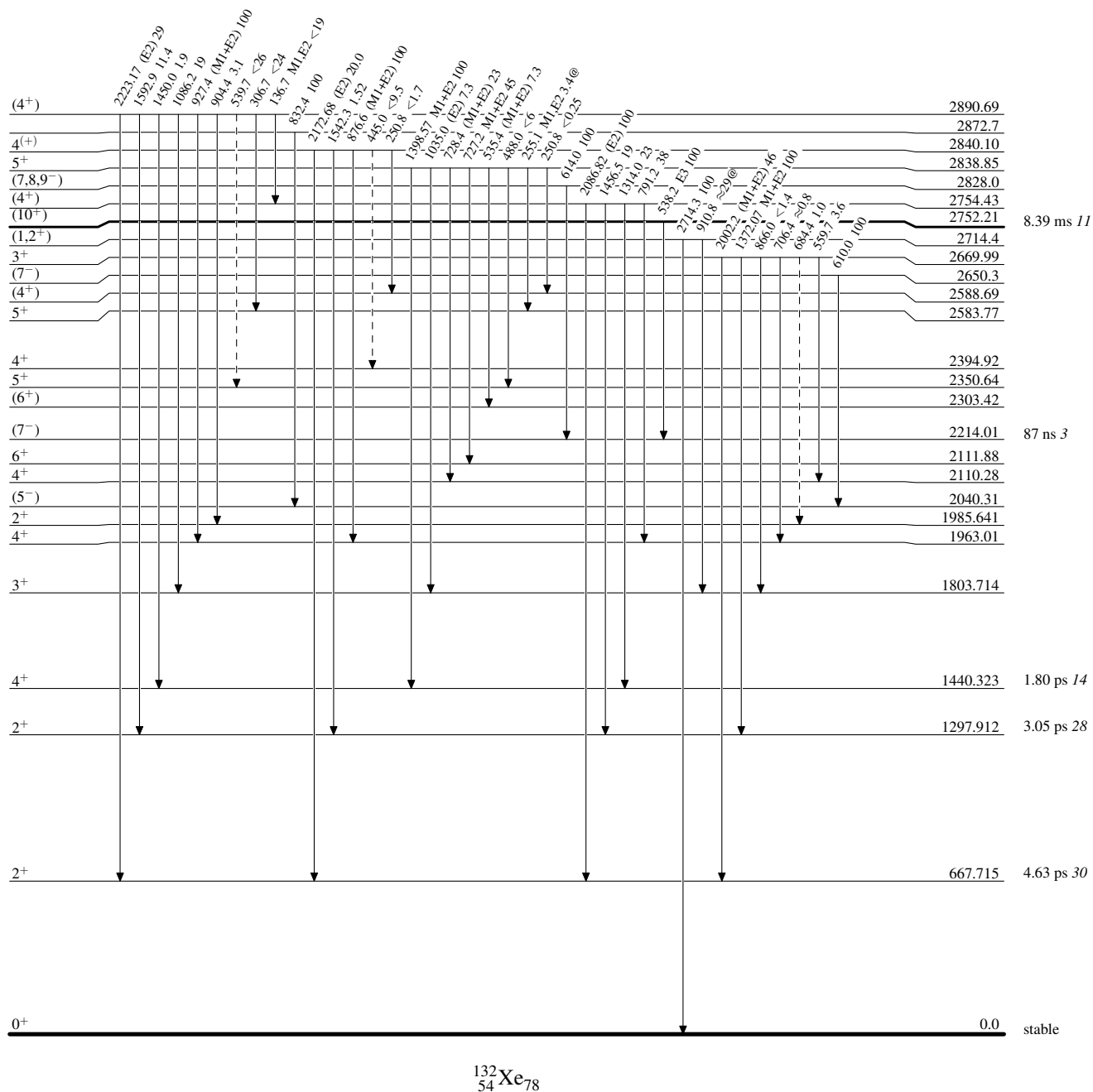
Adopted Levels, Gammas

Legend

Level Scheme (continued)

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

-----> γ Decay (Uncertain)



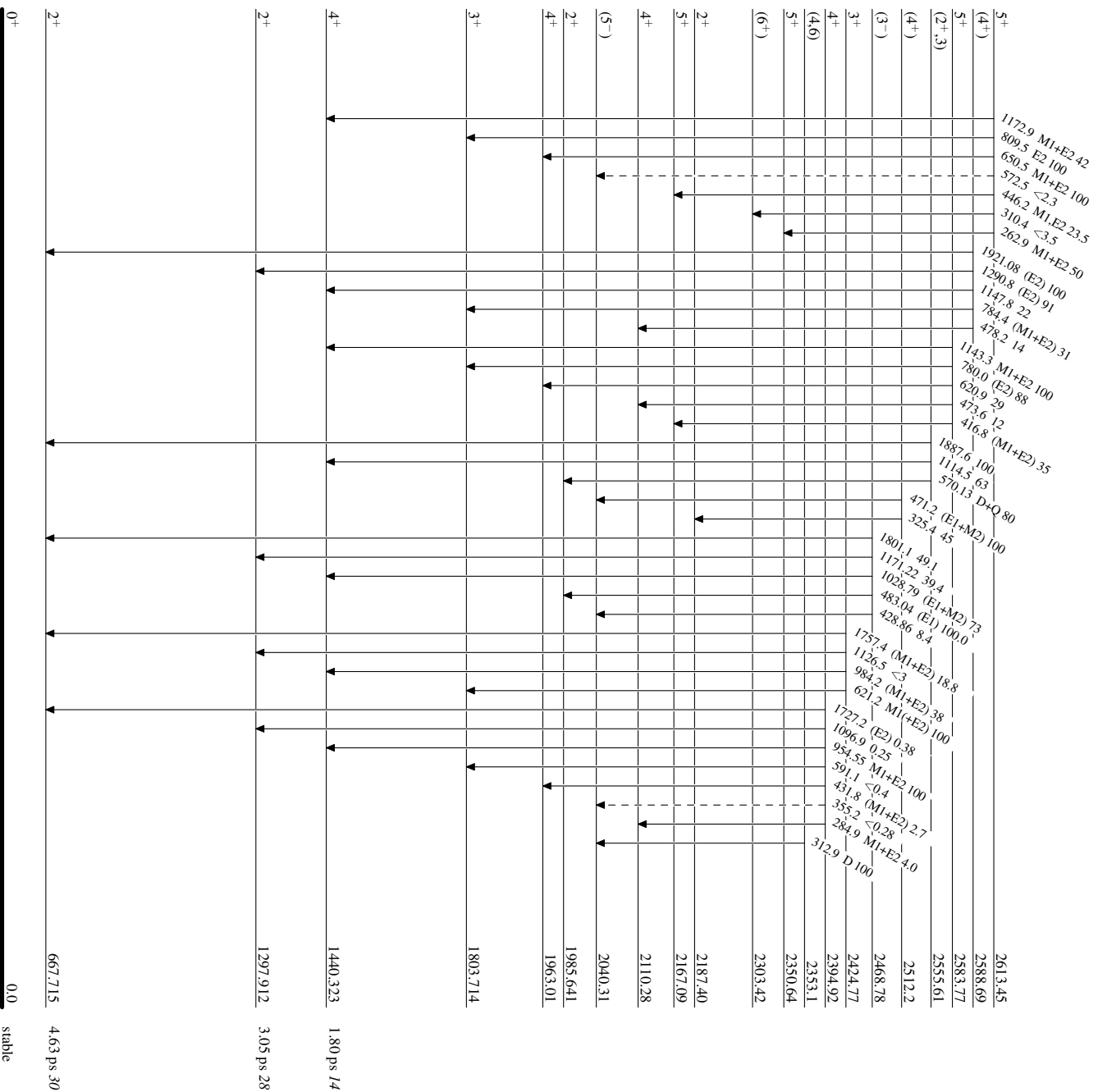
Adopted Levels, Gammas

Level Scheme (continued)

Legend

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

-----> γ Decay (Uncertain)

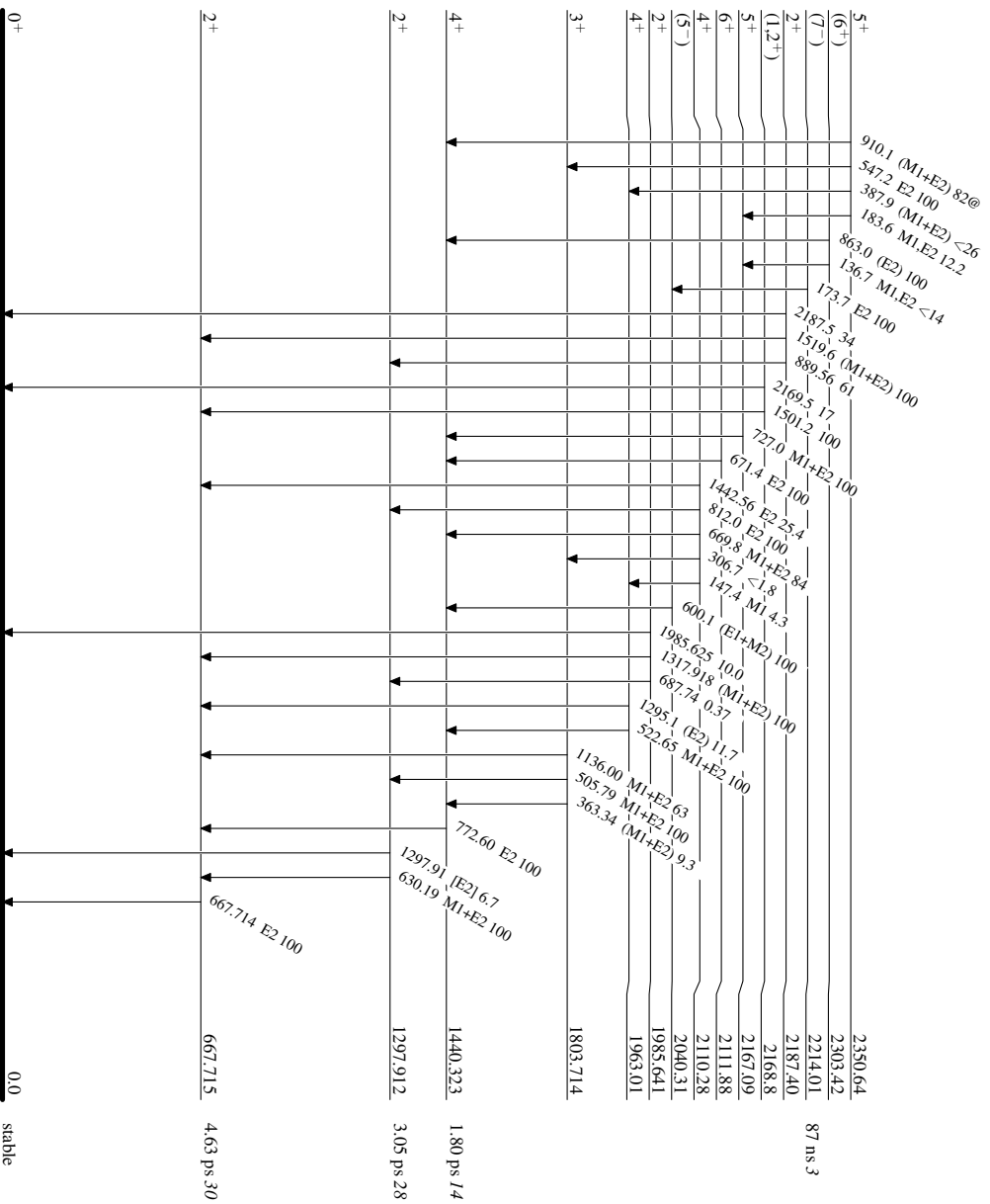


¹³²Xe₇₈
⁵⁴Xe₇₈

Adopted Levels, Gammas

Level Scheme (continued)

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



¹³²Xe₇₈