Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	A. Hashizume	NDS 112,1647 (2011)	1-Oct-2009

Q(β^-)=−2081 *7*; S(n)=7247 *6*; S(p)=7699 *4*; Q(α)=−1574 *4* 2012Wa38
Note: Current evaluation has used the following Q record −2081 6 *7224* 6 7699 *3* −1574 4 2003Au03.
Nuclear structure calculations: 2009Al20 (level energies, spin and parities, IBFM), 2003Zu05 (level energies, spin and parities, B(E2), logft), 1997Yo06 (level energies, spin and parities, γ ray branching ratios); others: 1986Gr03, 1996Pa03, 1994Ca23, 1993Ge06, 1992Zh10, 1990Hs01, 1989Ch19, 1987Jo01, 1985Ar18, 1985Jo03, 1984Al19, 1982Cu03.

^{127}Xe Levels

Band(yr) positive-parity band-3.

Cross Reference (XREF) Flags

A	^{127}Cs β^+ decay	E	^{126}Te(α,3nγ)	I	^{127}I(p,n)
B	^{127}Xe IT decay (69.2 s)	F	^{127}I(p,nγ)	J	^{125}Te(^{3}He,n)
C	^{124}Te(α,nγ)	G	^{128}Te(^{3}He,4nγ)		
D	^{125}Te(α,2nγ)	H	(HI,xnγ)		

E(level)[†]	J$^\pi$	T$_{1/2}$[‡]	XREF	Comments
0.0	1/2$^+$[b]	36.346 d *3*	ABCDEFGHIJ	%ε=100 μ=−0.5039 *2* J$^\pi$: L=0 in (^{3}He,n). T$_{1/2}$: Weighted average of 36.3446 d *28* (2002Un02), 36.3 d *3* (1974Co05), 36.5 d *1* (1965Wi12), 36.4 *1* (1964Br26), 36.0 d *5* (1958Fo48), and 36.41 d *2* (1954Ba71). μ: LASER spectroscopy (saturation spectroscopy) (1989Ra17); value relative to μ for g.s. of ^{129}Xe and ^{131}Xe.
124.751[&] *20*	3/2$^+$[b]	0.28 ns *1*	ABCDEFGHI	J$^\pi$: M1+E2 γ to 1/2$^+$. T$_{1/2}$: from ^{127}Xe IT decay (1958Fo48).
297.10 *8*	9/2$^-$	69.2 s *9*	ABCDE GH	%IT=100 J$^\pi$: E3 γ to 3/2$^+$. T$_{1/2}$: from ^{127}Xe IT decay (1967Ge15). Others: 75 s *1* (1940Cr06), 71 s *2* (1968Sc14), 72 s (1969Ha03).
308.98[#] *13*	(11/2$^-$)[b]		CDEFGH	J$^\pi$: γ to 9/2$^-$, syst of 11/2$^-$ levels in neighboring nuclei.
321.550 *20*	3/2$^+$		A CDEFG	J$^\pi$: M1+E2 γ to 1/2$^+$.
342.23[@] *4*	7/2$^+$[b]	36.7 ns *9*	A CDEFGH	μ=+0.850 *32* J$^\pi$: E2 γ to 3/2$^+$, ΔJ=1 γ to 9/2$^-$. μ: differential perturbed angular distribution (1989Ra17); value does not include a Knight-shift correction. T$_{1/2}$: from $\gamma\gamma$(t) and γ(t); value from av of 34 ns *3* (1985Ur01), 37 ns *1* (1984Lo07), and 37 ns *3* (1981He04).
375.459 *24*	5/2$^+$[b]		A CDEFG	J$^\pi$: E2 γ to 1/2$^+$, $\gamma(\theta)$.
411.965 *23*	1/2$^+$		A F	J$^\pi$: M1+E2 γ to 3/2$^+$, $\gamma\gamma(\theta)$.
419.59 *6*	5/2$^-$,7/2$^-$,9/2$^-$		A C FG	J$^\pi$: E1 γ to 7/2$^+$.
509.97 *3*	(3/2)$^+$		A CD FG	J$^\pi$: M1+E2 γ to 3/2$^+$, γ from (7/2)$^+$, log *ft*=8.83 from 1/2$^+$ rules out 5/2$^+$.
530.31[&] *4*	7/2$^+$[b]		A CDE GH	J$^\pi$: E2 γ to 3/2$^+$.
587.064 *22*	3/2$^+$		A C FG	J$^\pi$: M1+E2 γ to 1/2$^+$.
645.90 *8*	(9/2)$^+$		CDEFGH	J$^\pi$: M1+E2 γ to 7/2$^+$, M1+E2 γ from (11/2)$^+$.
711.61 *3*	7/2$^+$	<2 ns	A CD FG	J$^\pi$: ΔJ=2 γ to 3/2$^+$, RUL rules out 7/2$^-$.

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Adopted Levels, Gammas (continued)

^{127}Xe Levels (continued)

E(level)[†]	Jπ	XREF	Comments
			$T_{1/2}$: from (α,2nγ).
720.09 *3*		A	
747.7 *3*		C	
792.37 *14*	(11/2$^-$,13/2$^-$)	CDEFG	Jπ: M1+E2 γ to (11/2$^-$), γ to 9/2$^-$.
804.75 *20*	5/2$^+$	CDE G	Jπ: M1+E2 γ to 5/2$^+$, ΔJ=1 γ to 3/2$^+$.
828.09[#] *15*	(15/2$^-$)[b]	DE GH	Jπ: E2 γ to (11/2$^-$).
846.0 *3*		C	
878.12 *6*		A	
897.63 *12*	(9/2$^+$)[b]	CDE G	Jπ: (E2) γ to 5/2$^+$.
904.80 *17*	1/2$^+$,3/2$^+$,5/2$^+$	CD FG	Jπ: M1+E2 γ to 3/2$^+$.
930.28 *15*	3/2$^+$	F	Jπ: ΔJ=1 γ to 1/2$^+$, E2 γ to 3/2$^+$.
931.070 *24*	3/2$^+$	A	Jπ: M1(+E2) γ to 1/2$^+$, γ to 7/2$^+$.
938.18[@] *11*	(11/2)$^+$[b]	CDE GH	Jπ: E2 γ to 7/2$^+$.
960.10 *12*	(9/2,13/2$^-$)	D	Jπ: ΔJ=0,1 γ to (11/2$^-$); ΔJ=0,2 γ to 9/2$^-$.
976.07 *3*	1/2,3/2,5/2$^+$	A C	Jπ: γ to 1/2$^+$.
980.13 *22*		C	
1021.0 *3*		CD G	
1071.5 *3*		C	
1080.79[&] *16*	11/2$^+$[b]	CDE GH	Jπ: E2 γ to 7/2$^+$.
1107.9 *3*		C	
1119.2 *3*		C	
1196.85 *4*	1/2$^+$,3/2$^+$	A C	Jπ: γ to 1/2$^+$, M1,E2 γ to 5/2$^+$, log *ft*=7.31 from 1/2$^+$ rules out 5/2$^+$.
1241.4 *3*		C	
1283.11 *22*	(11/2$^+$,13/2$^+$)	CD FGH	Jπ: E2 γ to (9/2)$^+$, γ from (15/2$^+$).
1306.334 *24*	3/2$^+$	A F	Jπ: M1,E2 γ to 1/2$^+$; γ to 7/2$^+$; log *ft*=7.02 from 1/2$^+$ rules out 5/2$^+$.
1369.27 *15*	(13/2$^-$,15/2$^-$)	DE G	Jπ: M1+E2 γ's to (11/2$^-$,13/2$^-$) and (15/2$^-$).
1402.60 *3*	(3/2)$^+$	A C	Jπ: γ to 1/2$^+$; γ to (7/2)$^+$; log *ft*=7.52 from 1/2$^+$ rules out 5/2$^+$.
1466.75 *19*	(13/2$^-$ to 17/2$^-$)	CDE G	Jπ: M1+E2 γ to (15/2$^-$).
1508.69[#] *17*	(19/2$^-$)[b]	DE GH	Jπ: E2 γ to (15/2$^-$).
1534.627 *22*	(3/2$^+$)	A C F	Jπ: log *ft*=6.67 *9* from 1/2$^+$.
1541.16 *18*	(13/2$^+$)[b]	CD G	
1558.25 *6*	1/2,3/2,5/2$^+$	A	Jπ: γ to 1/2$^+$.
1582.664 *24*	1/2$^+$,3/2$^+$	A	Jπ: γ to 1/2$^+$; M1,E2 γ to 5/2$^+$; log *ft*=6.85 from 1/2$^+$ rules out 5/2$^+$.
1584.01 *20*	1/2,3/2,5/2$^+$	F	Jπ: γ to 1/2$^+$.
1611.96 *8*		A	
1622.27[@] *14*	(15/2$^+$)[b]	CDE GH	Jπ: E2 γ to (11/2$^+$).
1650.7 *4*		D	
1666.4 *5*		D	
1704.45 *20*	(13/2$^-$,17/2$^-$)	D	Jπ: ΔJ=0,2 γ to (9/2$^-$,13/2$^-$); ΔJ$\leq$1 γ to (15/2$^-$); no parity change suggested by $\gamma(\theta)$ and linear polarization of γ in (α,2nγ).
1716.56 *5*	1/2,3/2	A	Jπ: γ to 1/2$^+$, log *ft*=7.24 from 1/2$^+$ rules out 5/2$^+$.
1741.34 *8*	1/2,3/2	A	Jπ: γ to 1/2$^+$, log *ft*=8.14 from 1/2$^+$ rules out 5/2$^+$.
1751.56[&] *20*	15/2$^+$[b]	CDE GH	Jπ: E2 γ to 11/2$^+$.
1774.91? *20*	1/2,3/2	A	Jπ: log *ft*=6.95 from 1/2$^+$.
1806.46 *4*	(1/2$^+$,3/2)	A	Jπ: γ to (5/2$^+$), log *ft*=6.82 from 1/2$^+$.
1831.01 *4*	(1/2$^+$)	A J	Jπ: L=(0) in (^{3}He,n), log *ft*=6.73 from 1/2$^+$.
1894.81 *9*	(1/2$^+$,3/2)	A DE G	Jπ: γ to (5/2$^+$), log *ft*=7.37 from 1/2$^+$.
1925.4 *7*			
1972.58 *10*	1/2,3/2	A F	Jπ: γ to 1/2$^+$, log *ft*=6.55 from 1/2$^+$ rules out 5/2$^+$.
1973.58 *21*	3/2	F	Jπ: ΔJ=1 γ to 1/2$^+$.
2016.4 *4*		D H	
2033.17 *7*	1/2,3/2	A	Jπ: log *ft*=5.8 *4* from 1/2$^+$.
2104.5 *3*	(15/2MPSYMBO<O19/2$^-$)	D	Jπ: (E2) γ to (19/2$^-$), γ to (13/2$^-$,15−/2$^-$).
2170.5 *4*		D H	

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Adopted Levels, Gammas (continued)

^{127}Xe Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$[‡]	XREF	Comments
2243.37 *23*	(17/2⁻,21/2⁻)		DE G	Jπ: (M1+E2) γ to (19/2⁻); ΔJ=0,2 γ to 17/2⁻.
2274.6 *4*	(9/2⁺,13/2⁺,15/2⁺)		D	
2306.6 *7*	(15/2⁻,17/2,19/2⁺)		H	Jπ: γ's to 15/2⁺ and 19/2⁻.
2307.1 *9*			H	
2312.1[#] *7*	(23/2⁻)[b]		DE GH	Jπ: E2 γ to (19/2⁻).
2395.07[@] *17*	(15/2⁺,19/2⁺)[b]		DE GH	Jπ: ΔJ=0,2 γ to (15/2⁺); no parity change suggested by γ(θ) and linear polarization of γ in (α,2nγ).
2497.7[&] *3*	15/2⁺,19/2⁺[b]		DE H	Jπ: ΔJ=0,2 γ to 15/2⁺; no parity change suggested by γ(θ) and linear polarization of γ in (α,2nγ).
2664.6 *7*			H	
2665.2 *4*	(17/2,19/2,21/2)		D	Jπ: ΔJ=0,1 γ to (19/2⁻).
2716.8 *7*			H	
2729.97 *25*		25 ns *3*	DE	$T_{1/2}$: From γ(t) in (α,2nγ) (1985Ur01). However, authors state that they cannot exclude the possibility of a level with half-life of 25 ns lying above that at 2730 keV.
2778.9 *10*			H	
2968.7 *6*			H	
2970 *50*	(1/2⁺)		J	Jπ: L=(0) in (^{3}He,n).
3037.0			D	
3052.4			D	
3201.8[#] *7*	(27/2⁻)[b]		D H	
3275.8 *6*			H	
3282.8 *7*			H	
3402.7[a] *8*			H	
3620.7[a] *13*			H	
4088.8[a] *15*			H	
4136.8[#] *12*	(31/2⁻)[b]		H	
4411.8[a] *15*			H	
4886.8[a] *17*			H	
5098.8[#] *16*	(35/2⁻)[b]		H	
5298.8[a] *17*			H	
6122.8[#] *19*	(39/2⁻)[b]		H	
6304.8[a] *20*			H	
7199.8[#] *21*	(43/2⁻)[b]		H	
7310.8[a] *22*			H	
7352.8[a] *22*			H	
7778.8[a] *22*			H	
8335.8[#] *24*	(47/2⁻)[b]		H	
8394.8 *24*			H	
8813.8[a] *25*			H	
9523[#] *3*	(51/2⁻)[b]		H	

[†] From a least-squares fit to the adopted E_γ's, except for the 2970 level.
[‡] The $T_{1/2}$'s of the levels reported by ^{125}Te(α,2nγ) are less than 25 ns, unless noted otherwise.
[#] Band(A): negative-parity yrast band.
[@] Band(B): positive-parity band-1.
[&] Band(C): positive-parity band-2.
[a] Band(D): band built on the 3403-keV level.
[b] From γ-cascade relation and from assignment to a band, in addition to the arguments given.

Adopted Levels, Gammas (continued)

$\gamma(^{127}Xe)$

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[g]	δ[g]	α[h]	Comments
124.751	$3/2^+$	124.70 *5*	100	0.0	$1/2^+$	M1+E2	+0.12 *2*	0.445	B(M1)(W.u.)=0.0276 *11*; B(E2)(W.u.)=17 *6* α(K)=0.381 *6*; α(L)=0.0516 *10*; α(M)=0.01051 *21*; α(N+..)=0.00244 *5* α(N)=0.00217 *5*; α(O)=0.000269 *5* Mult.,δ: from IT decay.
297.10	$9/2^-$	172.4 *1*	100	124.751	$3/2^+$	E3		1.627	B(E3)(W.u.)=0.00156 *4* α(K)=0.912 *13*; α(L)=0.564 *8*; α(M)=0.1238 *18*; α(N+..)=0.0269 *4* α(N)=0.0245 *4*; α(O)=0.00243 *4* Mult.: from ^{127}Xe IT decay. Additional information 1.
308.98	$(11/2^-)$	(11.8[‡] *4*)		297.10	$9/2^-$				
321.550	$3/2^+$	196.73 *5*	29.0 *4*	124.751	$3/2^+$	M1+E2	−0.005 *15*	0.1250	α(K)=0.1075 *15*; α(L)=0.01399 *20*; α(M)=0.00284 *4*; α(N+..)=0.000661 *10* α(N)=0.000588 *9*; α(O)=7.35×10^{-5} *11* I_γ: others: 19 *4* (α,nγ), 42 *17* (α,2nγ), 46 *14* (^{3}He,4nγ), 35 (α,3nγ). Mult.,δ: from ^{127}Cs β^+ decay.
		321.54 *5*	100.0 *10*	0.0	$1/2^+$	M1+E2	−0.90 *4*	0.0338	α(K)=0.0286 *4*; α(L)=0.00414 *7*; α(M)=0.000848 *13*; α(N+..)=0.000195 *3* α(N)=0.000174 *3*; α(O)=2.10×10^{-5} *3* δ: from (α,nγ). Others: −0.8 *+8−73* (α,2nγ), −0.6 *+5−7* (^{3}He,4nγ).
342.23	$7/2^+$	45.1[#] *2*	18[#] *6*	297.10	$9/2^-$	(E1)		1.88 *4*	B(E1)(W.u.)=9.E−6 *4* α(K)=1.58 *3*; α(L)=0.236 *5*; α(M)=0.0477 *9*; α(N+..)=0.01063 *20* α(N)=0.00956 *18*; α(O)=0.001075 *20* Mult.: D from (^{3}He,4nγ). $\Delta\pi$=yes from adopted J^π's.
		217.48 *5*	100 *10*	124.751	$3/2^+$	E2		0.1210	B(E2)(W.u.)=0.51 *9* α(K)=0.0967 *14*; α(L)=0.0194 *3*; α(M)=0.00404 *6*; α(N+..)=0.000904 *13* α(N)=0.000813 *12*; α(O)=9.03×10^{-5} *13* Mult.: from ^{127}Cs β^+ decay.
375.459	$5/2^+$	54.4[‡] *3*		321.550	$3/2^+$				
		250.71 *5*	8 *3*	124.751	$3/2^+$	M1+E2	−2.06 *25*	0.0733 *12*	α(K)=0.0601 *9*; α(L)=0.01054 *23*; α(M)=0.00218 *5*; α(N+..)=0.000493 *11* α(N)=0.000443 *10*; α(O)=5.06×10^{-5} *10* I_γ: other: 20 *6* (α,2nγ). Mult.: large δ and RUL suggest mult is not E1+M2. δ: from (α,nγ).
		375.35 *5*	100.0 *13*	0.0	$1/2^+$	E2		0.0207	α(K)=0.01732 *25*; α(L)=0.00273 *4*; α(M)=0.000561 *8*; α(N+..)=0.0001278 *18*

$^{127}_{54}Xe_{73}$-4

Adopted Levels, Gammas (continued)

γ(^{127}Xe) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[g]	δ[g]	α[h]	Comments
									α(N)=0.0001144 *16*; α(O)=1.341×10^{-5} *19* Mult.: from (α,2nγ).
411.965	1/2$^+$	90.7 *1*	0.32 *3*	321.550	3/2$^+$	M1+E2	0.00 *2*	1.084	α(K)=0.930 *14*; α(L)=0.1230 *18*; α(M)=0.0250 *4*; α(N+..)=0.00582 *9* α(N)=0.00517 *8*; α(O)=0.000645 *10* Mult.,δ: from ^{127}Cs β$^+$ decay.
		287.16 *5*	6.09 *7*	124.751	3/2$^+$	M1+E2	+0.55 *30*	0.0462 *8*	α(K)=0.0394 *6*; α(L)=0.0055 *4*; α(M)=0.00112 *8*; α(N+..)=0.000258 *16* α(N)=0.000230 *15*; α(O)=2.81×10^{-5} *13* Mult.,δ: from ^{127}Cs β$^+$ decay.
		411.95 *5*	100	0.0	1/2$^+$	(M1)		0.0181	α(K)=0.01559 *22*; α(L)=0.00198 *3*; α(M)=0.000401 *6*; α(N+..)=9.36×10^{-5} *14* α(N)=8.31×10^{-5} *12*; α(O)=1.043×10^{-5} *15* Mult.: from ^{127}Cs β$^+$ decay.
419.59	5/2$^-$,7/2$^-$,9/2$^-$	77.36 *5*	100	342.23	7/2$^+$	E1		0.432	α(K)=0.369 *6*; α(L)=0.0503 *8*; α(M)=0.01015 *15*; α(N+..)=0.00230 *4* α(N)=0.00206 *3*; α(O)=0.000240 *4* Mult.: from ^{127}Cs β$^+$ decay.
509.97	(3/2)$^+$	188.4[&] *1*	11[&] *3*	321.550	3/2$^+$				
		385.20[&] *5*	100[&] *2*	124.751	3/2$^+$	M1+E2		0.0203 *12*	α(K)=0.0173 *13*; α(L)=0.00243 *9*; α(M)=0.000496 *21*; α(N+..)=0.000114 *4* α(N)=0.000102 *4*; α(O)=1.236×10^{-5} *18* δ: −3.1 *+12−4* or −0.16 *16*. Other: >57 and −47<δ<57 (^{3}He,4nγ).
530.31	7/2$^+$	154.73[c] *9*	9 *3*	375.459	5/2$^+$	(M1+E2)	−0.07 *14*	0.242 *7*	α(K)=0.208 *5*; α(L)=0.0274 *19*; α(M)=0.0056 *4*; α(N+..)=0.00129 *9* α(N)=0.00115 *8*; α(O)=0.000143 *8* I_γ: from (^{3}He,4nγ).
		405.68 *5*	100 *1*	124.751	3/2$^+$	E2		0.01641	α(K)=0.01376 *20*; α(L)=0.00212 *3*; α(M)=0.000434 *6*; α(N+..)=9.91×10^{-5} *14* α(N)=8.86×10^{-5} *13*; α(O)=1.046×10^{-5} *15* I_γ: from (^{3}He,4nγ). Mult.: other: D+Q and δ=−0.002 *26* in (α,nγ).
587.064	3/2$^+$	175.11 *5*	2.30 *4*	411.965	1/2$^+$	M1+E2		0.21 *5*	α(K)=0.172 *25*; α(L)=0.032 *13*; α(M)=0.007 *3*; α(N+..)=0.0015 *6* α(N)=0.0014 *6*; α(O)=0.00015 *6* Mult.: from ^{127}Cs β$^+$ decay.
		211.57 *5*	1.61 *7*	375.459	5/2$^+$	M1		0.1027	α(K)=0.0884 *13*; α(L)=0.01148 *16*; α(M)=0.00233 *4*; α(N+..)=0.000543 *8*

$^{127}_{54}Xe_{73}$-5

Adopted Levels, Gammas (continued)

γ(^{127}Xe) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[g]	δ[g]	α[h]	Comments
									α(N)=0.000482 *7*; α(O)=6.03×10^{-5} *9* Mult.: from ^{127}Cs β$^+$ decay.
587.064	3/2$^+$	265.51 *5*	2.56 *4*	321.550	3/2$^+$	M1+E2	+1.1 *3*	0.0594 *13*	α(K)=0.0496 *8*; α(L)=0.0078 *5*; α(M)=0.00161 *11*; α(N+..)=0.000367 *22* α(N)=0.000329 *20*; α(O)=3.87×10^{-5} *18* Mult.,δ: from ^{127}Cs β$^+$ decay.
		462.31 *5*	100.0 *10*	124.751	3/2$^+$	M1+E2	+0.6 *4*	0.0129 *6*	α(K)=0.0111 *6*; α(L)=0.00146 *3*; α(M)=0.000296 *6*; α(N+..)=6.87×10^{-5} *14* α(N)=6.11×10^{-5} *12*; α(O)=7.58×10^{-6} *22* Mult.,δ: from ^{127}Cs β$^+$ decay.
		587.01 *5*	82.9 *13*	0.0	1/2$^+$	M1+E2	<0.9	0.0071 *4*	α(K)=0.0062 *4*; α(L)=0.00079 *3*; α(M)=0.000160 *6*; α(N+..)=3.71×10^{-5} *15* α(N)=3.30×10^{-5} *13*; α(O)=4.12×10^{-6} *19* Mult.: from ^{127}Cs β$^+$ decay.
645.90	(9/2)$^+$	303.58[b] *9*	100 *7*	342.23	7/2$^+$	M1+E2	−3.1 *+7−13*	0.0402	α(K)=0.0333 *5*; α(L)=0.00553 *11*; α(M)=0.001142 *22*; α(N+..)=0.000259 *5* α(N)=0.000232 *5*; α(O)=2.69×10^{-5} *5*
		348.84[e] *9*	48 *7*	297.10	9/2$^-$	E1(+M2)		0.06 *6*	α(K)=0.05 *5*; α(L)=0.007 *7*; α(M)=0.0015 *14*; α(N+..)=0.0003 *3* α(N)=0.0003 *3*; α(O)=4.E−5 *4* I$_\gamma$: others: 33 (α,3nγ), 65 *25* (^{3}He,4nγ).
711.61	7/2$^+$	201.6 *1*	17 *5*	509.97	(3/2)$^+$				
		336.1 *1*	20.2 *24*	375.459	5/2$^+$				
		369.41 *5*	16.7 *24*	342.23	7/2$^+$				
		390.05 *5*	100.0 *24*	321.550	3/2$^+$	E2		0.0185	B(E2)(W.u.)>0.42 α(K)=0.01545 *22*; α(L)=0.00240 *4*; α(M)=0.000494 *7*; α(N+..)=0.0001126 *16* α(N)=0.0001007 *15*; α(O)=1.185×10^{-5} *17* Mult.: from (α,nγ) and RUL.
		586.7 *1*	44 *5*	124.751	3/2$^+$				E$_\gamma$: not reported in (α,2nγ). I$_\gamma$: <1 (α,nγ).
720.09		308.07 *5*	24 *4*	411.965	1/2$^+$				
		595.3 *1*	100 *13*	124.751	3/2$^+$				
		720.2 *1*	38 *13*	0.0	1/2$^+$				
747.7		426.1[&] *3*	100[&]	321.550	3/2$^+$				
792.37	(11/2$^-$,13/2$^-$)	483.4[‡] *1*	100 *7*	308.98	(11/2$^-$)	M1+E2		0.0110 *12*	α(K)=0.0094 *11*; α(L)=0.00127 *6*; α(M)=0.000259 *10*; α(N+..)=6.0×10^{-5} *3* α(N)=5.33×10^{-5} *23*; α(O)=6.5×10^{-6} *5* I$_\gamma$: from (^{3}He,4nγ). δ: −1.7 *+4−6* or −0.45 *12* if mult(483.3γ)=E2.

Adopted Levels, Gammas (continued)

γ(^{127}Xe) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[g]	δ[g]	α[h]	Comments
792.37	(11/2$^-$,13/2$^-$)	495.27[e] *17*	13 *6*	297.10	9/2$^-$				
804.75	5/2$^+$	274.6 *5*	[f]	530.31	7/2$^+$				E_γ: from (α,nγ).
		429.22[d] *24*	100 *15*	375.459	5/2$^+$	M1+E2	−0.28 *8*	0.01612 *25*	α(K)=0.01389 *22*; α(L)=0.00178 *3*; α(M)=0.000361 *5*; α(N+..)=8.42×10^{-5} *12* α(N)=7.48×10^{-5} *11*; α(O)=9.35×10^{-6} *14* δ: from (α,3nγ). Other:−2.7+6−10 or −0.14 *7* for a transition from 7/2$^+$ to 5/2$^+$ (α,2nγ).
		483.3[‡] *4*	105[‡] *57*	321.550	3/2$^+$	M1+E2		0.0110 *12*	α(K)=0.0094 *11*; α(L)=0.00127 *6*; α(M)=0.000259 *10*; α(N+..)=6.0×10^{-5} *3* α(N)=5.33×10^{-5} *23*; α(O)=6.5×10^{-6} *5* δ: −0.32 *5* (α,3nγ), −0.38 *4* (^{3}He,4n), 0.45 +*11*−*8* (α,nγ). These values are probably for a composite peak of 483.4γ and 483.3γ.
828.09	(15/2$^-$)	519.10[e] *9*	100	308.98	(11/2$^-$)	E2		0.00809 *12*	α(K)=0.00686 *10*; α(L)=0.000986 *14*; α(M)=0.000202 *3*; α(N+..)=4.62×10^{-5} *7* α(N)=4.13×10^{-5} *6*; α(O)=4.96×10^{-6} *7*
846.0		426.4[&] *3*	100[&]	419.59	5/2$^-$,7/2$^-$,9/2$^-$				
878.12		556.57 *5*	100	321.550	3/2$^+$				
897.63	(9/2$^+$)	367[#] *1*	6.3[#] *21*	530.31	7/2$^+$				
		522.15[c] *13*	100 *30*	375.459	5/2$^+$	(E2)		0.00796 *12*	α(K)=0.00675 *10*; α(L)=0.000969 *14*; α(M)=0.000198 *3*; α(N+..)=4.55×10^{-5} *7* α(N)=4.06×10^{-5} *6*; α(O)=4.88×10^{-6} *7* I_γ: from (^{3}He,4nγ). Mult.: from (^{3}He,4nγ). Other: M1,E2 in (α,2nγ).
904.80	1/2$^+$,3/2$^+$,5/2$^+$	394.83[b] *16*	100	509.97	(3/2)$^+$	M1+E2	0.3 +*5*−*2*	0.0199 *8*	α(K)=0.0172 *8*; α(L)=0.00222 *5*; α(M)=0.000450 *11*; α(N+..)=0.0001046 *19* α(N)=9.30×10^{-5} *19*; α(O)=1.161×10^{-5} *18*
930.28	3/2$^+$	608.5[@] *2*	72[@] *29*	321.550	3/2$^+$	E2		0.00529 *8*	α(K)=0.00451 *7*; α(L)=0.000625 *9*; α(M)=0.0001274 *18*; α(N+..)=2.93×10^{-5} *5* α(N)=2.62×10^{-5} *4*; α(O)=3.18×10^{-6} *5* Mult.: from (p,nγ).
		930.5[@] *2*	100[@] *29*	0.0	1/2$^+$	D			Mult.: from (p,nγ).
931.070	3/2$^+$	343.98 *5*	12.6 *5*	587.064	3/2$^+$				
		421.00 *5*	2.9 *5*	509.97	(3/2)$^+$				
		519.13 *5*	10.4 *3*	411.965	1/2$^+$				
		555.7 *1*	35 *6*	375.459	5/2$^+$				
		588.8 *1*	[f]	342.23	7/2$^+$				

$^{127}_{54}Xe_{73}$-7

Adopted Levels, Gammas (continued)

γ(^{127}Xe) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[g]	δ[g]	α[h]	Comments
931.070	3/2$^+$	609.6 *1*	8.3 *14*	321.550	3/2$^+$				
		806.34 *5*	100.0 *11*	124.751	3/2$^+$	M1+E2	+0.14 *3*	0.00351 *5*	α(K)=0.00303 *5*; α(L)=0.000378 *6*; α(M)=7.63×10^{-5} *11*; α(N+..)=1.78×10^{-5} *3* α(N)=1.581×10^{-5} *23*; α(O)=1.99×10^{-6} *3* Mult.,δ: from ^{127}Cs β$^+$ decay.
		931.10 *5*	91.3 *14*	0.0	1/2$^+$	M1(+E2)	<0.5	0.00246 *8*	α(K)=0.00213 *7*; α(L)=0.000264 *7*; α(M)=5.34×10^{-5} *14*; α(N+..)=1.25×10^{-5} *4* α(N)=1.11×10^{-5} *3*; α(O)=1.39×10^{-6} *4* Mult.,δ: from ^{127}Cs β$^+$ decay.
938.18	(11/2)$^+$	292.21[c] *13*	5 *2*	645.90	(9/2)$^+$	M1+E2	−2.1		Δδ: +13−∞.
		596.06[c] *14*	100 *10*	342.23	7/2$^+$	(E2)		0.00558 *8*	α(K)=0.00475 *7*; α(L)=0.000662 *10*; α(M)=0.0001350 *19*; α(N+..)=3.11×10^{-5} *5* α(N)=2.77×10^{-5} *4*; α(O)=3.36×10^{-6} *5*
960.10	(9/2,13/2$^-$)	651.1[‡] *1*	56[‡] *5*	308.98	(11/2$^-$)	D+Q			Mult.: ΔJ=0,1. δ: 0.03 *7* or 30 +∞−20.
		663.0[‡] *1*	100[‡] *7*	297.10	9/2$^-$				E_γ: not reported in (α,3nγ). Mult.: ΔJ=0,2. δ: 0.1 *4* for a transition from 9/2$^-$ to 9/2$^-$.
976.07	1/2,3/2,5/2$^+$	654.51 *5*	100 *5*	321.550	3/2$^+$				
		976.3 *1*	14 *5*	0.0	1/2$^+$				I_γ: other: 213 *22*(α,nγ).
980.13		658.7[&] *3*	64[&] *10*	321.550	3/2$^+$				
		980.0[&] *3*	100[&] *8*	0.0	1/2$^+$				
1021.0		490.7[c] *3*	100[‡] *33*	530.31	7/2$^+$				
		510.9[‡i] *3*	<92	509.97	(3/2)$^+$				
1071.5		541.2[&] *3*	100[&]	530.31	7/2$^+$				
1080.79	11/2$^+$	183.1[#] *2*	13[#] *5*	897.63	(9/2$^+$)				
		550.52[c] *20*	100 *30*	530.31	7/2$^+$	E2		0.00690 *10*	α(K)=0.00586 *9*; α(L)=0.000830 *12*; α(M)=0.0001695 *24*; α(N+..)=3.90×10^{-5} *6* α(N)=3.48×10^{-5} *5*; α(O)=4.19×10^{-6} *6* I_γ: from (^{3}He,4nγ).
		757.6[i] *5*		321.550	3/2$^+$				E_γ: from (α,nγ).
1107.9		732.4[&] *3*	100[&]	375.459	5/2$^+$				
1119.2		699.6[&] *3*	100[&]	419.59	5/2$^-$,7/2$^-$,9/2$^-$				
1196.85	1/2$^+$,3/2$^+$	609.9 *1*	11 *3*	587.064	3/2$^+$				
		875.26 *5*	18.5 *6*	321.550	3/2$^+$				
		1072.0 *1*	11 *3*	124.751	3/2$^+$				
		1196.87 *5*	100.0 *11*	0.0	1/2$^+$	M1,E2		0.00127 *16*	α(K)=0.00110 *14*; α(L)=0.000136 *16*;

Adopted Levels, Gammas (continued)

$\gamma(^{127}Xe)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[g]	δ[g]	α[h]	Comments
									α(M)=2.7×10^{-5} *4*; α(N+..)=1.23×10^{-5} *6* α(N)=5.7×10^{-6} *7*; α(O)=7.1×10^{-7} *9*; α(IPF)=5.93×10^{-6} *24* Mult.: from ^{127}Cs β^+ decay.
1241.4		821.8[&] *3*	100[&]	419.59	5/2$^-$,7/2$^-$,9/2$^-$				
1283.11	(11/2$^+$,13/2$^+$)	345.0[‡i] *5*	22[‡] *11*	938.18	(11/2)$^+$				
		637.15[b] *22*	100 *32*	645.90	(9/2)$^+$	D,E2			
1306.334	3/2$^+$	330.27 *5*	3.5 *4*	976.07	1/2,3/2,5/2$^+$				
		594.8 *1*	3 *4*	711.61	7/2$^+$				
		719.2 *1*	16 *4*	587.064	3/2$^+$				
		776.07 *5*	3.8 *4*	530.31	7/2$^+$				
		796.5 *1*	1.9 *4*	509.97	(3/2)$^+$				
		894.31 *5*	9.5 *4*	411.965	1/2$^+$				
		930.8 *1*	9.5 *23*	375.459	5/2$^+$				
		984.78 *5*	37.7 *7*	321.550	3/2$^+$				E$_\gamma$: not reported in (p,nγ).
		1181.57 *5*	53.8 *7*	124.751	3/2$^+$	M1		0.001470 *21*	α(K)=0.001271 *18*; α(L)=0.0001562 *22*; α(M)=3.15×10^{-5} *5*; α(N+..)=1.156×10^{-5} α(N)=6.54×10^{-6} *10*; α(O)=8.24×10^{-7} *12*; α(IPF)=4.20×10^{-6} *6* I$_\gamma$: other: 27 *7* (p,nγ). Mult.: M1,E2 from ^{127}Cs β^+ decay; D from (p,nγ).
		1306.31 *5*	100.0 *16*	0.0	1/2$^+$	M1,E2		0.00107 *13*	α(K)=0.00091 *11*; α(L)=0.000112 *13*; α(M)=2.27×10^{-5} *25*; α(N+..)=2.79×10^{-5} *4* α(N)=4.7×10^{-6} *6*; α(O)=5.9×10^{-7} *7*; α(IPF)=2.26×10^{-5} *8* Mult.: from ^{127}Cs β^+ decay.
1369.27	(13/2$^-$,15/2$^-$)	541.2[‡] *1*	48[‡] *6*	828.09	(15/2$^-$)	M1(+E2)	+0.3 *5*	0.0090 *7*	α(K)=0.0078 *6*; α(L)=0.00099 *4*; α(M)=0.000200 *8*; α(N+..)=4.66×10^{-5} *20* α(N)=4.14×10^{-5} *18*; α(O)=5.2×10^{-6} *3*
		576.90[e] *9*	100 *6*	792.37	(11/2$^-$,13/2$^-$)	M1+E2	−0.8 *+2−4*	0.0072 *4*	E$_\gamma$: not reported in (^{3}He,2nγ). α(K)=0.0062 *4*; α(L)=0.00080 *3*; α(M)=0.000163 *6*; α(N+..)=3.78×10^{-5} *14* α(N)=3.36×10^{-5} *12*; α(O)=4.17×10^{-6} *18*
1402.60	(3/2)$^+$	691.1 *1*	4.7 *12*	711.61	7/2$^+$				
		990.64 *5*	69.8 *12*	411.965	1/2$^+$				
		1081.05 *5*	37.2 *12*	321.550	3/2$^+$				
		1402.56 *5*	100.0 *23*	0.0	1/2$^+$				

$^{127}_{54}Xe_{73}$-9

Adopted Levels, Gammas (continued)

γ(^{127}Xe) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[g]	δ[g]	α[h]	Comments
1466.75	(13/2⁻ to 17/2⁻)	638.72[e] *16*	100 *22*	828.09	(15/2⁻)	M1+E2	−0.24 *4*	0.00605 *9*	α(K)=0.00523 *8*; α(L)=0.000658 *10*; α(M)=0.0001330 *19*; α(N+..)=3.10×10^{-5} *5* α(N)=2.75×10^{-5} *4*; α(O)=3.46×10^{-6} *5* δ: weighted av of 0.21 *11*(α,2nγ), −0.26 *4*(α,3nγ) and −0.16 *9* (^{3}He,4nγ). Other: −3.5 +*9*−*17* (α,2nγ).
		674.5[c] *3*	48 *3*	792.37	(11/2⁻,13/2⁻)	E2		0.00407 *6*	α(K)=0.00348 *5*; α(L)=0.000473 *7*; α(M)=9.62×10^{-5} *14*; α(N+..)=2.22×10^{-5} *4* α(N)=1.98×10^{-5} *3*; α(O)=2.41×10^{-6} *4* I_γ: others: 16 *5* (^{3}He,4nγ), 22 (α,3nγ).
1508.69	(19/2⁻)	680.58[e] *9*	100	828.09	(15/2⁻)	E2		0.00398 *6*	α(K)=0.00340 *5*; α(L)=0.000462 *7*; α(M)=9.39×10^{-5} *14*; α(N+..)=2.17×10^{-5} *3* α(N)=1.93×10^{-5} *3*; α(O)=2.36×10^{-6} *4* Mult.: other: M1 in (p,nγ).
1534.627	(3/2⁺)	603.57 *5*	11.4 *5*	931.070	3/2⁺				
		814.58 *5*	18.4 *14*	720.09					
		822.98 *5*	100.0 *18*	711.61	7/2⁺	(E2)		0.00251 *4*	α(K)=0.00216 *3*; α(L)=0.000284 *4*; α(M)=5.76×10^{-5} *8*; α(N+..)=1.334×10^{-5} *19* α(N)=1.188×10^{-5} *17*; α(O)=1.463×10^{-6} *21* E_γ: not reported in (p,nγ).
		947.6 *1*	3.5 *5*	587.064	3/2⁺				
		1004.4 *1*	0.13 *5*	530.31	7/2⁺				
		1024.64 *5*	11.8 *5*	509.97	(3/2)⁺				
		1159.18 *5*	31.1 *5*	375.459	5/2⁺				
		1192.38 *5*	8.3 *5*	342.23	7/2⁺				
		1213.08 *5*	32.5 *9*	321.550	3/2⁺				
		1409.81 *5*	78.9 *14*	124.751	3/2⁺				I_γ: other: 56 *8* (α,nγ).
		1534.62 *5*	58.8 *9*	0.0	1/2⁺	(M1,E2)		0.00084 *8*	α(K)=0.00065 *7*; α(L)=8.0×10^{-5} *8*; α(M)=1.61×10^{-5} *16*; α(N+..)=9.41×10^{-5} *17* α(N)=3.3×10^{-6} *4*; α(O)=4.2×10^{-7} *5*; α(IPF)=9.03×10^{-5} *19*
1541.16	(13/2⁺)	643.53[c] *13*	100	897.63	(9/2⁺)	E2		0.00458 *7*	α(K)=0.00391 *6*; α(L)=0.000536 *8*; α(M)=0.0001092 *16*; α(N+..)=2.52×10^{-5} *4* α(N)=2.24×10^{-5} *4*; α(O)=2.73×10^{-6} *4*
1558.25	1/2,3/2,5/2⁺	1146.2 *1*	24 *6*	411.965	1/2⁺				
		1236.5 *1*	100 *6*	321.550	3/2⁺				
		1433.7 *1*	18 *6*	124.751	3/2⁺				
		1558.3 *1*	53 *6*	0.0	1/2⁺				
1582.664	1/2⁺,3/2⁺	606.66 *5*	11.6 *7*	976.07	1/2,3/2,5/2⁺				
		862.56 *5*	8.2 *7*	720.09					

$^{127}_{54}Xe_{73}$-10

Adopted Levels, Gammas (continued)

γ(^{127}Xe) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[g]	α[h]	Comments
1582.664	1/2$^+$,3/2$^+$	995.54 *5*	40.1 *7*	587.064	3/2$^+$			
		1073.0 *1*	17 *7*	509.97	(3/2)$^+$			
		1170.73[i] *5*	62.6 *14*	411.965	1/2$^+$			
		1207.1 *1*	4.1 *7*	375.459	5/2$^+$			
		1261.09 *5*	100.0 *14*	321.550	3/2$^+$	M1,E2	0.00115 *14*	α(K)=0.00098 *12*; α(L)=0.000121 *14*; α(M)=2.4×10^{-5} *3*; α(N+..)=2.04×10^{-5} *4* α(N)=5.1×10^{-6} *6*; α(O)=6.4×10^{-7} *8*; α(IPF)=1.47×10^{-5} *6* Mult.: from ^{127}Cs β$^+$ decay.
		1457.86 *5*	12.2 *7*	124.751	3/2$^+$			
		1582.66 *5*	46.9 *7*	0.0	1/2$^+$	M1,E2	0.00081 *7*	α(K)=0.00061 *6*; α(L)=7.5×10^{-5} *7*; α(M)=1.50×10^{-5} *15*; α(N+..)=0.0001121 *19* α(N)=3.1×10^{-6} *3*; α(O)=3.9×10^{-7} *4*; α(IPF)=0.0001086 *20* Mult.: from ^{127}Cs β$^+$ decay.
1584.01	1/2,3/2,5/2$^+$	1584.0[@] *2*	100[@]	0.0	1/2$^+$			
1611.96		1290.3 *1*	100 *5*	321.550	3/2$^+$			
		1487.3 *1*	33 *5*	124.751	3/2$^+$			
1622.27	(15/2$^+$)	339[a]	[f]	1283.11	(11/2$^+$,13/2$^+$)			
		684.11[c] *9*	100	938.18	(11/2)$^+$	E2	0.00393 *6*	α(K)=0.00336 *5*; α(L)=0.000455 *7*; α(M)=9.26×10^{-5} *13*; α(N+..)=2.14×10^{-5} *3* α(N)=1.90×10^{-5} *3*; α(O)=2.33×10^{-6} *4* Mult.: other: D+Q suggested in (α,3nγ).
1650.7		570.4[‡i] *5*	44[‡] *19*	1080.79	11/2$^+$			
		629.7[‡] *1*	100[‡] *13*	1021.0				
1666.4		874.0[‡] *4*	100[‡]	792.37	(11/2$^-$,13/2$^-$)			
1704.45	(13/2$^-$,17/2$^-$)	335.5[‡] *3*	12[‡] *6*	1369.27	(13/2$^-$,15/2$^-$)			
		744.3[‡] *2*	100[‡] *9*	960.10	(9/2,13/2$^-$)	M1,E2	0.0037 *6*	α(K)=0.0032 *5*; α(L)=0.00041 *5*; α(M)=8.3×10^{-5} *10*; α(N+..)=1.94×10^{-5} *23* α(N)=1.73×10^{-5} *20*; α(O)=2.1×10^{-6} *3* Mult.: from ΔJ=0,2 and Δπ=no. δ: 0.3 *4* for a transition from 13/2$^-$ to 13/2$^-$.
		876.0[‡] *4*	30[‡] *6*	828.09	(15/2$^-$)			
1716.56	1/2,3/2	785.4 *1*	18 *3*	931.070	3/2$^+$			
		1129.7 *1*	18 *3*	587.064	3/2$^+$			
		1341.2 *1*	35 *3*	375.459	5/2$^+$			
		1394.7 *1*	68 *8*	321.550	3/2$^+$			
		1592.3[i] *1*	50 *3*	124.751	3/2$^+$			
		1716.6 *1*	100 *3*	0.0	1/2$^+$			
1741.34	1/2,3/2	1365.8 *1*	100 *13*	375.459	5/2$^+$			

$^{127}_{54}Xe_{73}$-11

Adopted Levels, Gammas (continued)

γ(^{127}Xe) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult.[g]	α[h]	Comments
1741.34	1/2,3/2	1741.4 *1*	25 *4*	0.0	1/2$^+$			
1751.56	15/2$^+$	670.75[c] *14*	100	1080.79	11/2$^+$	E2	0.00412 *6*	α(K)=0.00352 *5*; α(L)=0.000480 *7*; α(M)=9.76×10^{-5} *14*; α(N+..)=2.25×10^{-5} *4* α(N)=2.01×10^{-5} *3*; α(O)=2.45×10^{-6} *4*
1774.91?	1/2,3/2	1188.3[i] *1*	56 *4*	587.064	3/2$^+$			
		1649.6[i] *1*	63 *4*	124.751	3/2$^+$			
		1774.9 *2*	100 *4*	0.0	1/2$^+$			
1806.46	(1/2$^+$,3/2)	830.3 *1*	19 *2*	976.07	1/2,3/2,5/2$^+$			
		1086.3 *1*	21 *2*	720.09				
		1219.3 *1*	43 *2*	587.064	3/2$^+$			
		1296.4 *1*	17 *2*	509.97	(3/2)$^+$			
		1431.1 *1*	14 *2*	375.459	5/2$^+$			
		1484.98 *5*	100 *2*	321.550	3/2$^+$			
		1681.68 *5*	83 *2*	124.751	3/2$^+$			
		1806.5 *2*	11 *1*	0.0	1/2$^+$			
1831.01	(1/2$^+$)	1110.86 *5*	28.2 *12*	720.09				
		1419.12 *5*	100 *4*	411.965	1/2$^+$			
		1455.2[i] *1*	9 *5*	375.459	5/2$^+$			
		1509.3 *1*	17.6 *12*	321.550	3/2$^+$			
		1831.0 *2*	5.9 *5*	0.0	1/2$^+$			
1894.81	(1/2$^+$,3/2)	1519.2 *1*	100 *8*	375.459	5/2$^+$			
		1770.4 *2*	17 *3*	124.751	3/2$^+$			
		1895.0 *2*	8 *3*	0.0	1/2$^+$			
1925.4		458.3‡[i] *8*	<80‡	1466.75	(13/2$^-$ to 17/2$^-$)			
		556.1[e] *6*	100 *30*	1369.27	(13/2$^-$,15/2$^-$)			
1972.58	1/2,3/2	1385.3 *1*	14 *5*	587.064	3/2$^+$			
		1973.4 *2*	100 *5*	0.0	1/2$^+$			
1973.58	3/2	1561.6[@] *2*	100[@]	411.965	1/2$^+$	D		Mult.: from (p,nγ).
2016.4		395[a]	*f*	1622.27	(15/2$^+$)			
		733.2‡ *3*	100‡	1283.11	(11/2$^+$,13/2$^+$)			Mult.: from ΔJ=0,2 and Δπ=no.
2033.17	1/2,3/2	1321.4 *1*	100 *25*	711.61	7/2$^+$			
		1446.1 *1*	100 *25*	587.064	3/2$^+$			
		1909.0 *2*	50 *8*	124.751	3/2$^+$			
2104.5	(15/2MPSYMBO<O19/2$^-$)	595.7‡ *3*	100‡ *32*	1508.69	(19/2$^-$)	(E2)	0.00559 *8*	α(K)=0.00476 *7*; α(L)=0.000664 *10*; α(M)=0.0001353 *19*; α(N+..)=3.11×10^{-5} *5* α(N)=2.78×10^{-5} *4*; α(O)=3.37×10^{-6} *5*
		638.0‡ *4*	72‡ *20*	1466.75	(13/2$^-$ to 17/2$^-$)			
		735.0‡ *5*	36‡ *12*	1369.27	(13/2$^-$,15/2$^-$)			
2170.5		1342.4‡ *4*	100‡	828.09	(15/2$^-$)			

Adopted Levels, Gammas (continued)

γ(^{127}Xe) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[g]	α[h]	Comments
2243.37	(17/2$^-$,21/2$^-$)	734.55[e] *25*	100 *8*	1508.69	(19/2$^-$)	(M1+E2)	0.0038 *6*	α(K)=0.0033 *5*; α(L)=0.00043 *5*; α(M)=8.6×10^{-5} *10*; α(N+..)=2.00×10^{-5} *23* α(N)=1.78×10^{-5} *21*; α(O)=2.2×10^{-6} *3*
		776.7[‡] *2*	51[‡] *8*	1466.75	(13/2$^-$ to 17/2$^-$)			Mult.: ΔJ=0,2 and Δπ=no. δ: +0.2 *4* for a transition from 17/2$^-$ to 17/2$^-$.
2274.6	(9/2$^+$,13/2$^+$,15/2$^+$)	733.4[‡] *3*	100	1541.16	(13/2$^+$)	Q		Mult.: from ΔJ=0,2 and Δπ=no.
2306.6	(15/2$^-$,17/2,19/2$^+$)	555[a]	*f*	1751.56	15/2$^+$			
		798[a]	*f*	1508.69	(19/2$^-$)			
2307.1		685[a]	*f*	1622.27	(15/2$^+$)			
2312.1	(23/2$^-$)	803.4[e] *6*	100	1508.69	(19/2$^-$)	E2	0.00266 *4*	α(K)=0.00228 *4*; α(L)=0.000302 *5*; α(M)=6.12×10^{-5} *9*; α(N+..)=1.416×10^{-5} *20* α(N)=1.261×10^{-5} *18*; α(O)=1.551×10^{-6} *22*
2395.07	(15/2$^+$,19/2$^+$)	772.80[e] *9*	100	1622.27	(15/2$^+$)			Mult.: ΔJ=0,2 and Δπ=no. δ: +0.35 *65* for a transition from 15/2$^+$ to 15/2$^+$.
2497.7	15/2$^+$,19/2$^+$	746.1[‡] *2*	100[‡]	1751.56	15/2$^+$			Mult.: ΔJ=0,2 and Δπ=no. δ: +0.25 *75* for a transition from 15/2$^+$ to 15/2$^+$.
2664.6		358[a]	*f*	2306.6	(15/2$^-$,17/2,19/2$^+$)			
		494[a]	*f*	2170.5				
2665.2	(17/2,19/2,21/2)	1156.5[‡] *3*	100[‡]	1508.69	(19/2$^-$)	D		Mult.: from ΔJ=0,1. δ: −0.05 *7* for a transition from 21/2 to 19/2.
2716.8		965[a]	*f*	1751.56	15/2$^+$			
		1095[a]	*f*	1622.27	(15/2$^+$)			
2729.97		486.6[‡] *1*	100[‡]	2243.37	(17/2$^-$,21/2$^-$)			
2778.9		472[a]	*f*	2307.1				
2968.7		252[a]	*f*	2716.8				
		952[a]	*f*	2016.4				
3037.0		724.4[‡i] *5*	100[‡]	2312.1	(23/2$^-$)			
3052.4		809.0[‡i] *3*	100[‡]	2243.37	(17/2$^-$,21/2$^-$)			
3201.8	(27/2$^-$)	889.7[‡] *2*	100[‡]	2312.1	(23/2$^-$)			
3275.8		307[a]	*f*	2968.7				
		611[a]	*f*	2664.6				
		778[a]	*f*	2497.7	15/2$^+$,19/2$^+$			
		881[a]	*f*	2395.07	(15/2$^+$,19/2$^+$)			
3282.8		314[a]	*f*	2968.7				

$^{127}_{54}Xe_{73}$-13

Adopted Levels, Gammas (continued)

γ(^{127}Xe) (continued)

E_i(level)	J_i^π	E_γ †	E_f	J_f^π	E_i(level)	J_i^π	E_γ †	E_f	J_f^π	
3282.8		504[a]	2778.9		5298.8		887[a]	4411.8		
		785[a]	2497.7	15/2$^+$,19/2$^+$	6122.8	(39/2$^-$)	1024[a]	5098.8	(35/2$^-$)	
3402.7		120[a]	3282.8		6304.8		1006[a]	5298.8		
		127[a]	3275.8		7199.8	(43/2$^-$)	1077[a]	6122.8	(39/2$^-$)	
		434[a]	2968.7		7310.8		1006[a]	6304.8		
3620.7		218[a]	3402.7		7352.8		1048[a]	6304.8		
4088.8		468[a]	3620.7		7778.8		426[a]	7352.8		
4136.8	(31/2$^-$)	935[a]	3201.8	(27/2$^-$)			468	7310.8		
4411.8		323[a]	4088.8		8335.8	(47/2$^-$)	1136[a]	7199.8	(43/2$^-$)	
		791[a]	3620.7		8394.8		1195[a]	7199.8	(43/2$^-$)	
4886.8		475[a]	4411.8		8813.8		1035	7778.8		
5098.8	(35/2$^-$)	962[a]	4136.8	(31/2$^-$)	9523	(51/2$^-$)	1187[a]	8335.8	(47/2$^-$)	
5298.8		412[a]	4886.8							

† From ^{127}Cs β^+ decay, unless otherwise noted.
‡ From (α,2nγ).
# From (^{3}He,4nγ).
@ From (p,nγ).
& From (α,nγ).
[a] From (HI,xnγ). No uncertainty is given by authors.
[b] Weighted av from (α,nγ), (α,2nγ), (^{3}He,4nγ) and (p,nγ); Iγ from (α,2nγ).
[c] Weighted av from (α,nγ), (α,2nγ) and (^{3}He,4nγ).
[d] Weighted av from (α,nγ) and (α,2nγ); Iγ from (α,2nγ).
[e] Weighted av from (α,2nγ) and (^{3}He,4nγ); Iγ from (α,2nγ).
[f] No intensity is given by authors.
[g] From (α,2nγ), unless otherwise noted.
[h] 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.
[i] Placement of transition in the level scheme is uncertain.

$^{127}_{54}Xe_{73}$-14

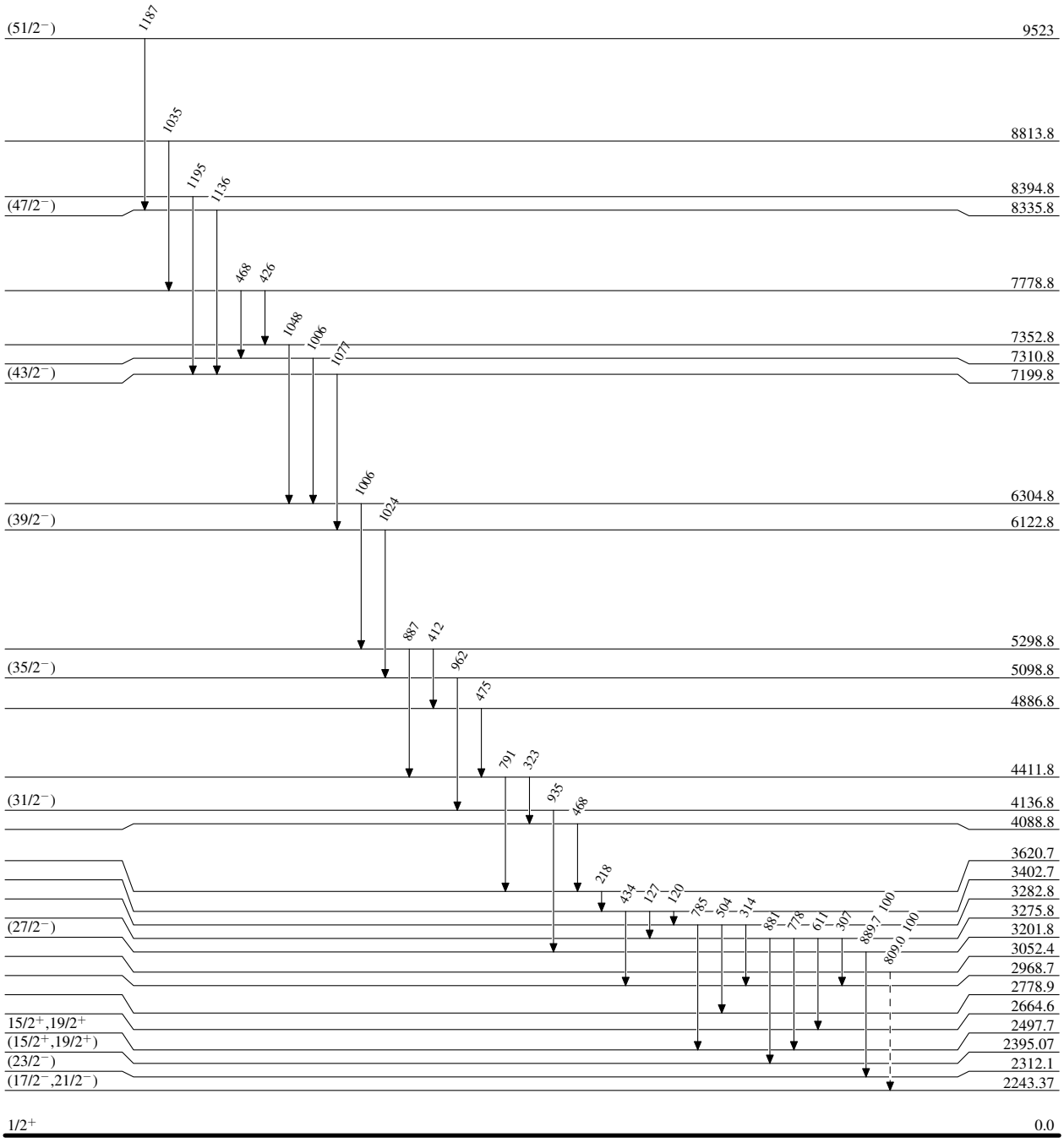
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level

– – – – – – ► γ Decay (Uncertain)



$^{127}_{54}Xe_{73}$

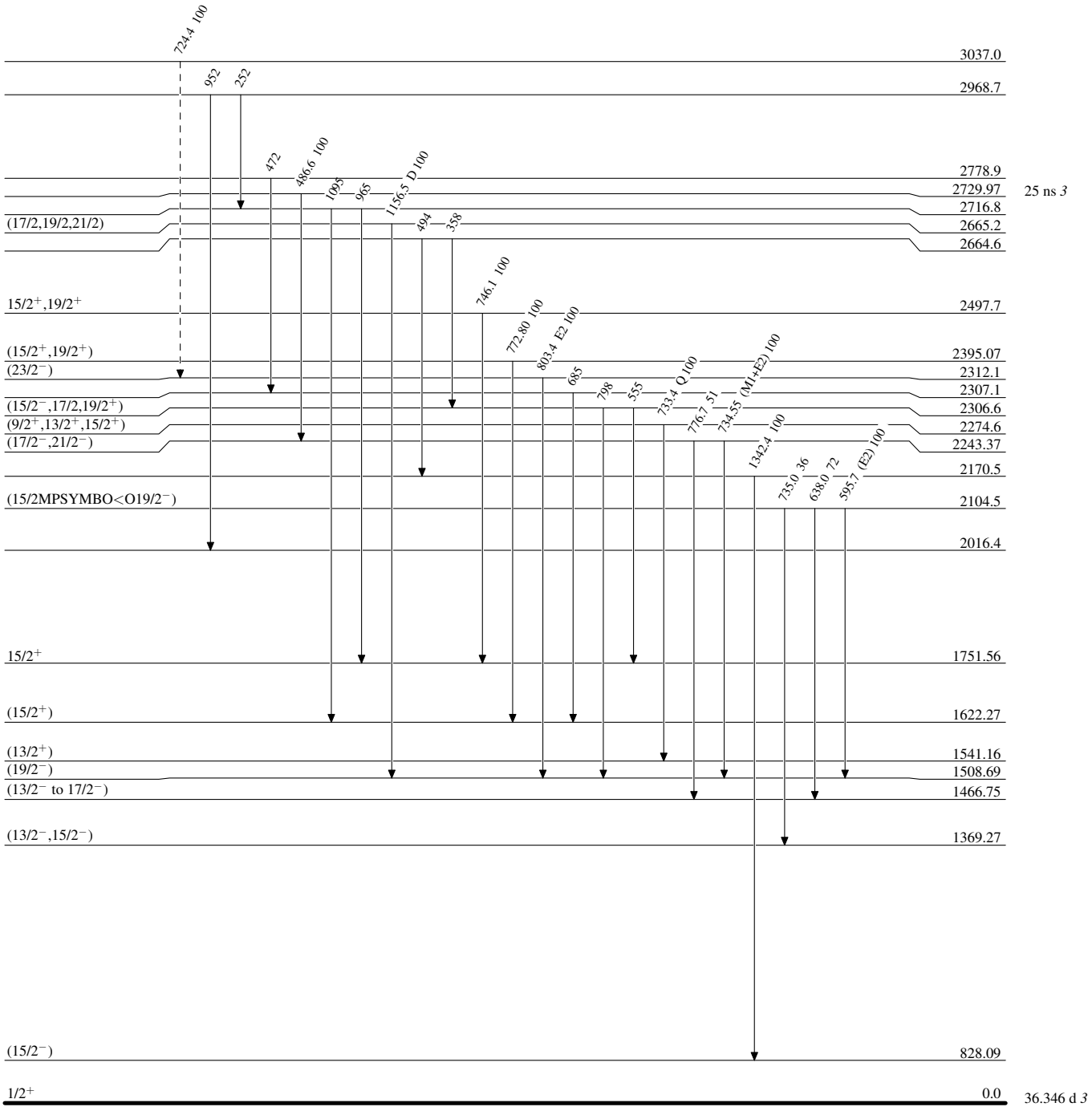
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{127}_{54}Xe_{73}$

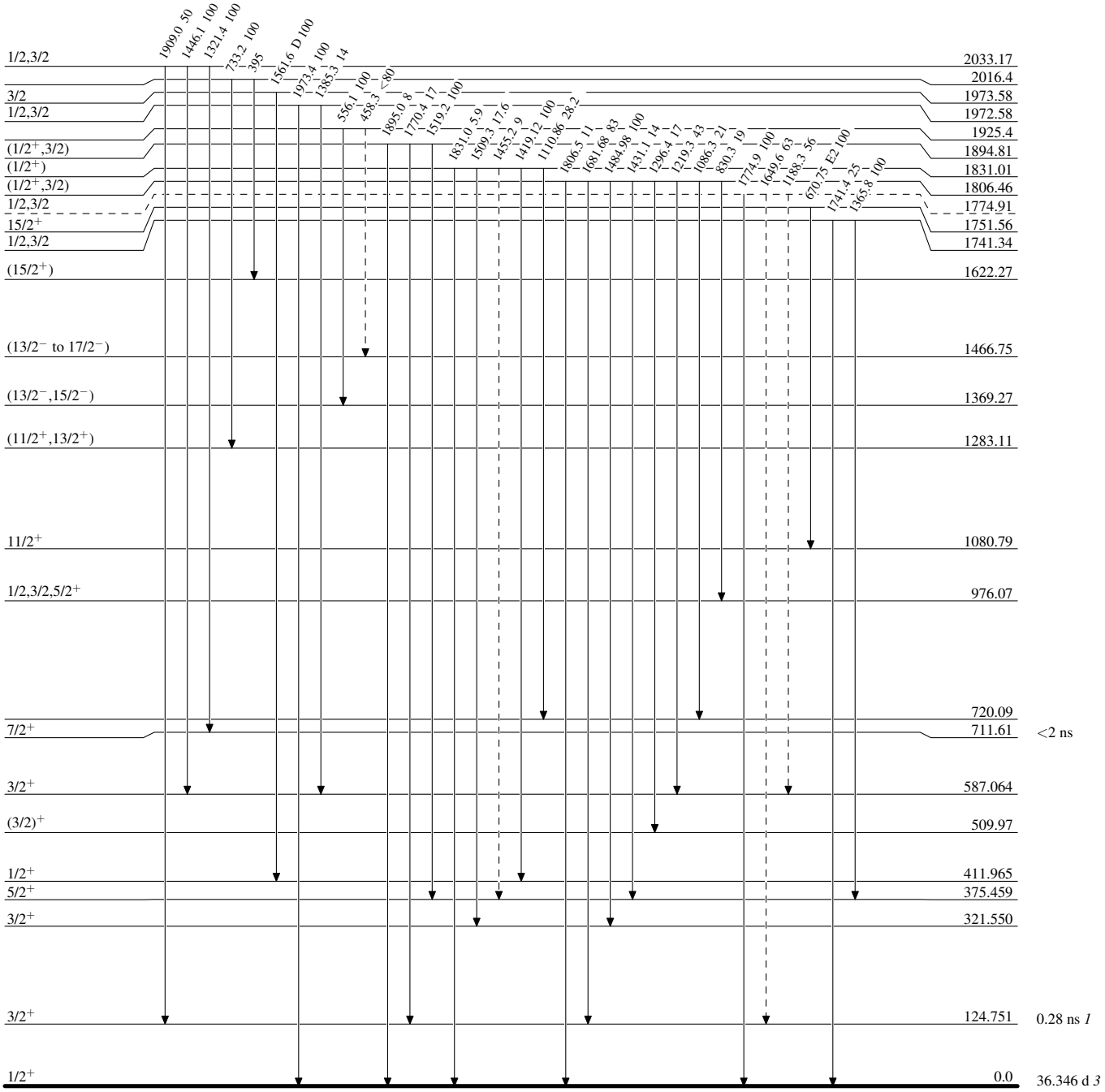
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{127}_{54}Xe_{73}$

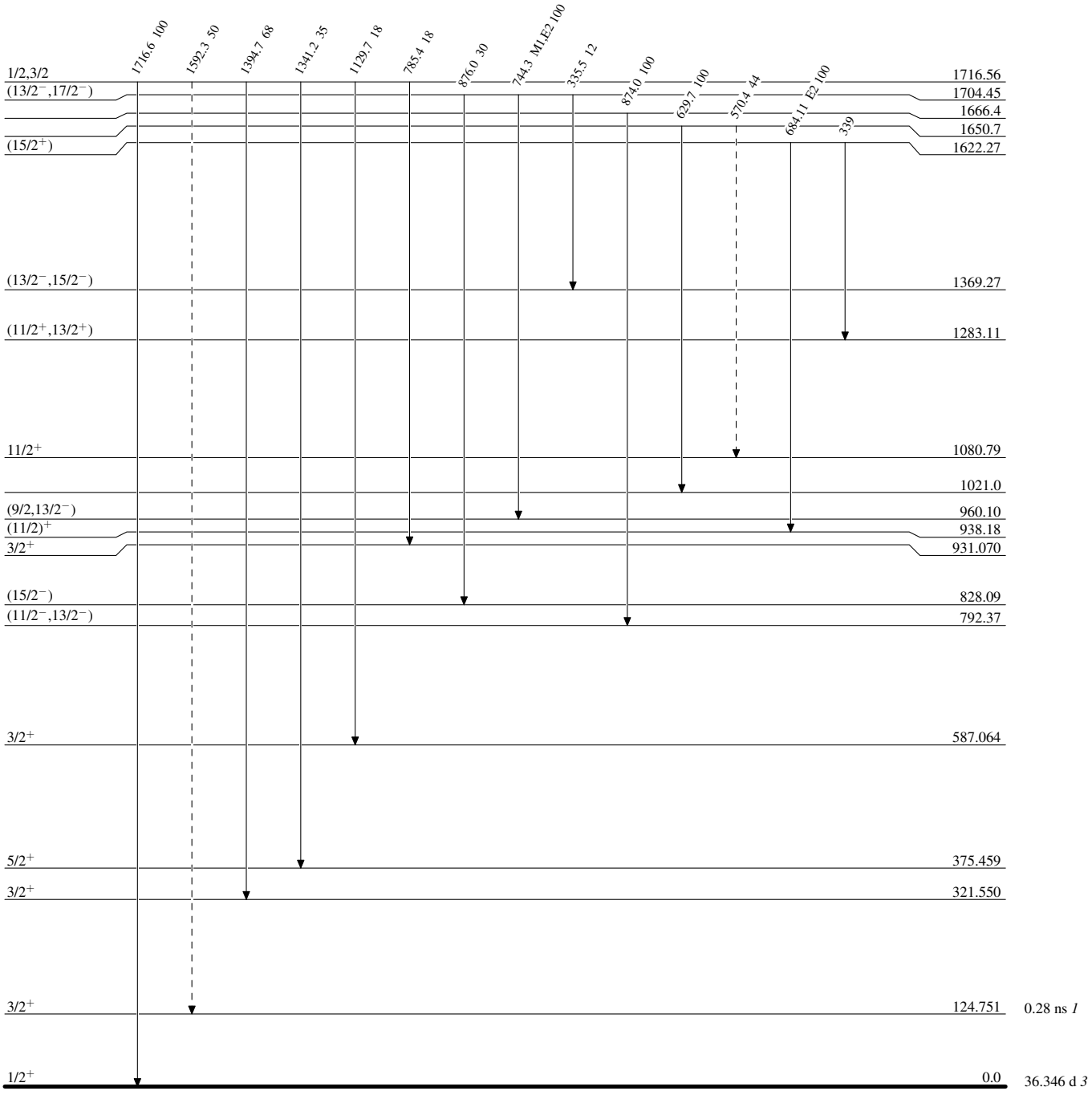
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{127}_{54}Xe_{73}$

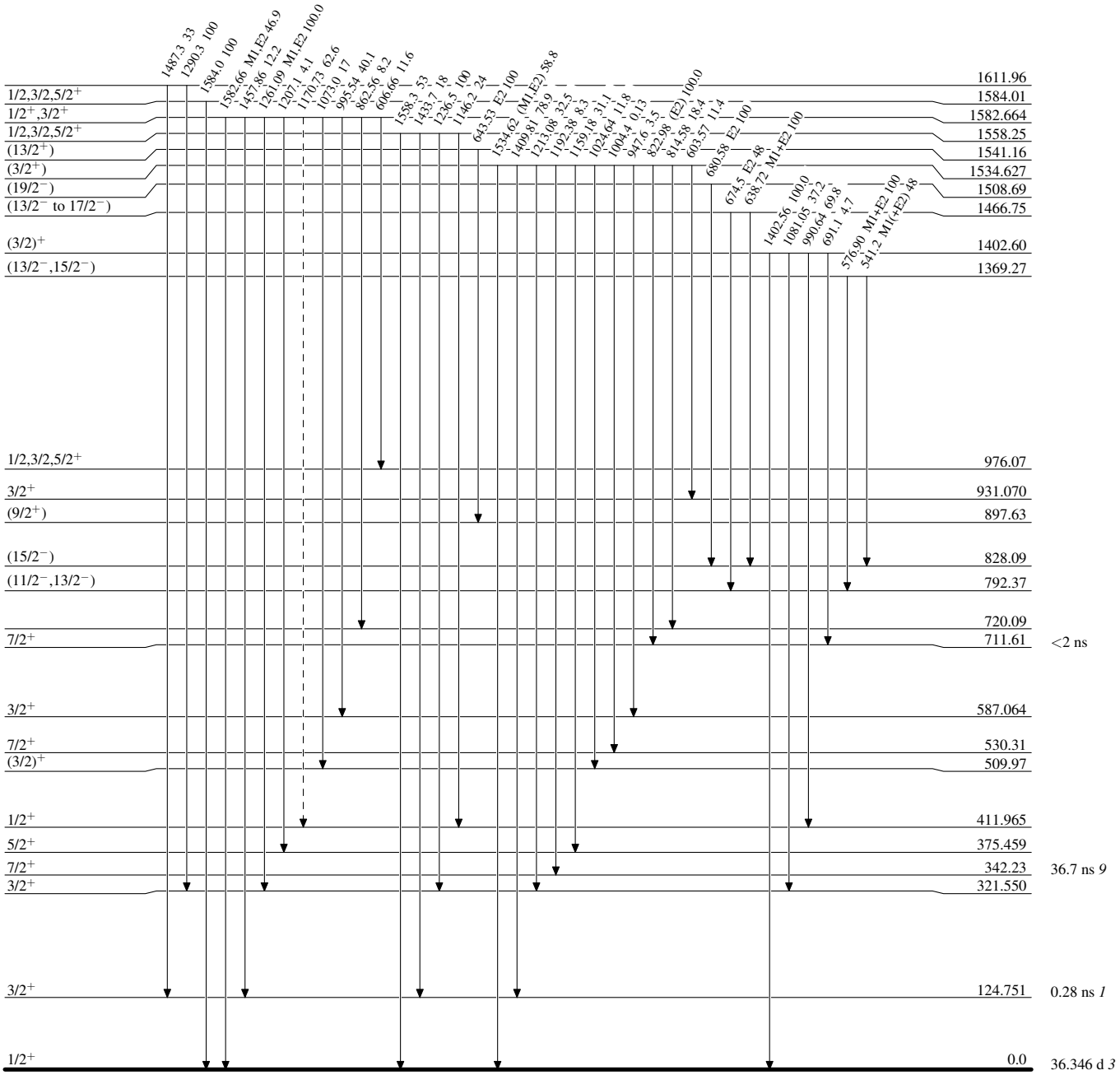
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

– – – – – – ► γ Decay (Uncertain)



$^{127}_{54}Xe_{73}$

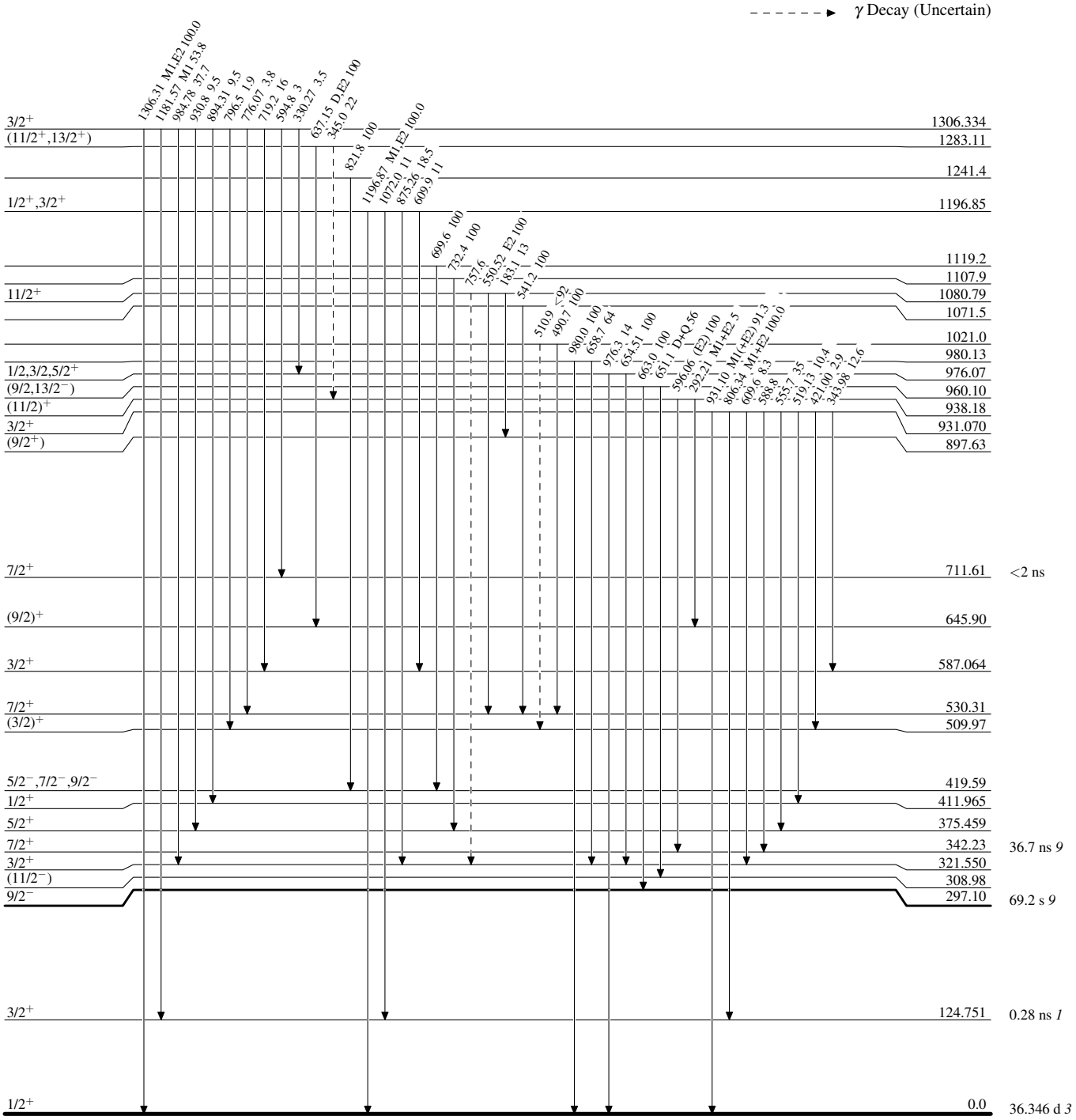
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{127}_{54}Xe_{73}$

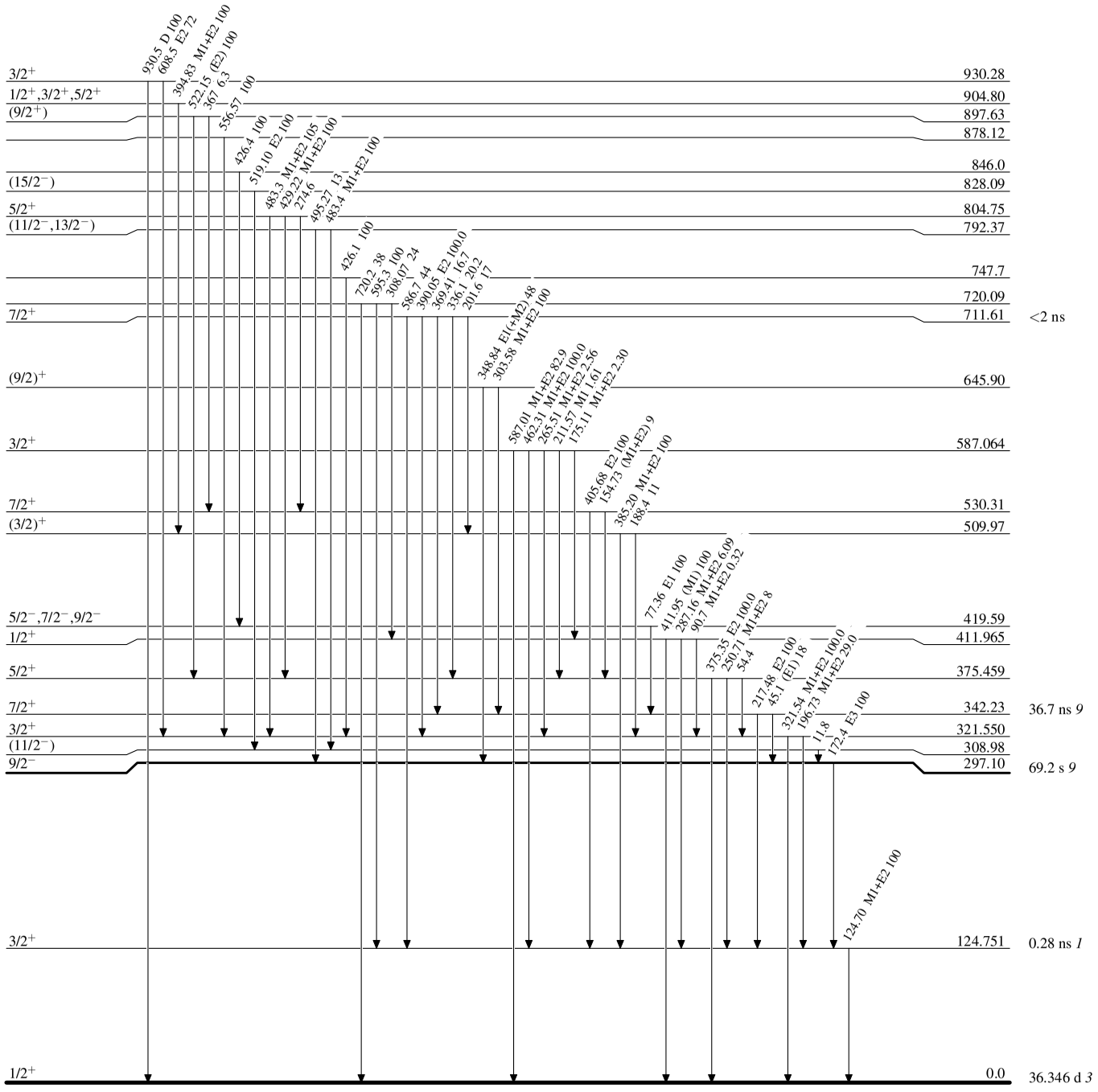
Adopted Levels, Gammas

Legend

Level Scheme (continued)

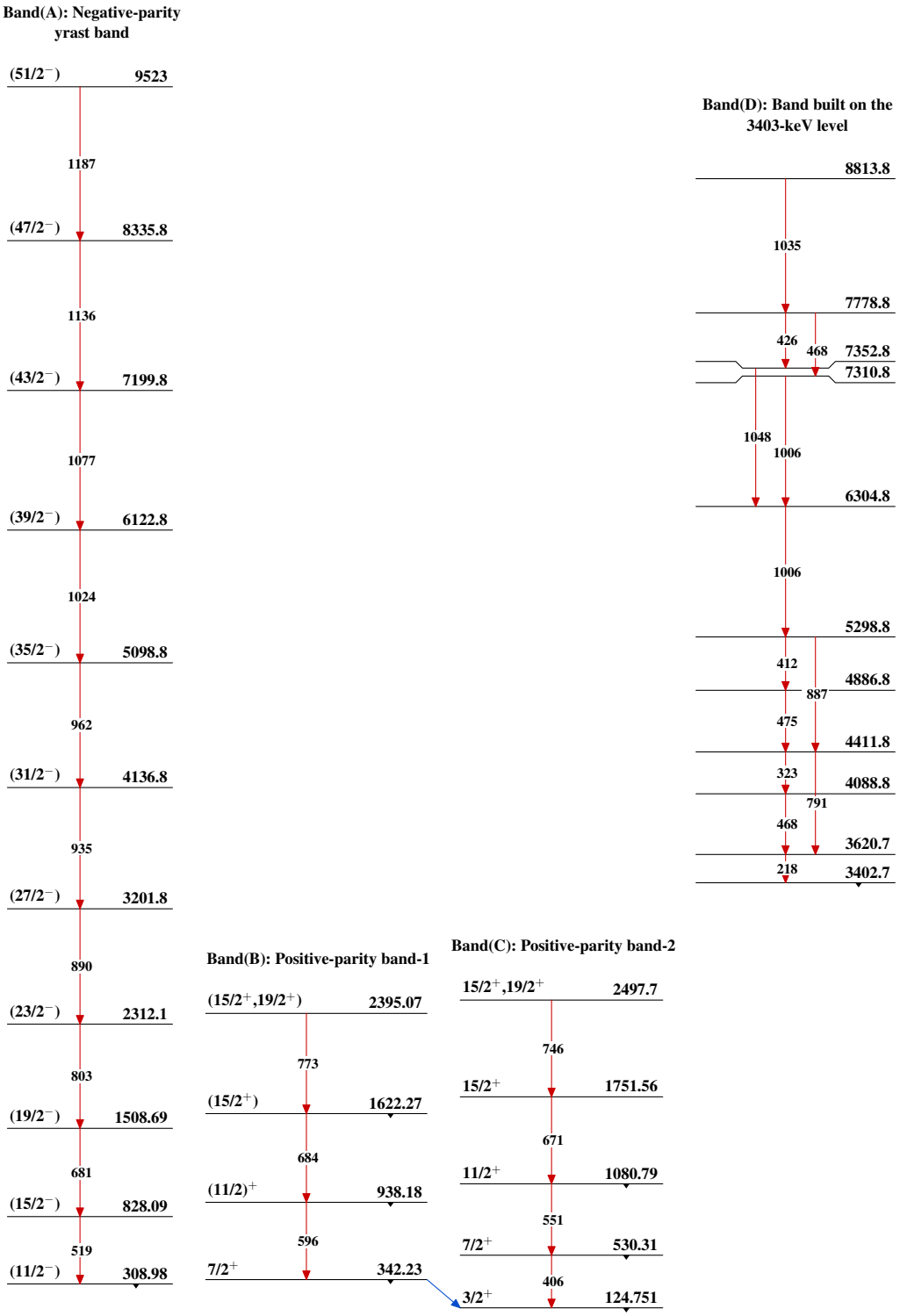
Intensities: Relative photon branching from each level

– – – – – – ► γ Decay (Uncertain)



$^{127}_{54}Xe_{73}$

Adopted Levels, Gammas



$^{127}_{54}Xe_{73}$