^{135}I β^- decay (6.58 h) 1982Wa21,1991Go09,1972Ac02

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh, Alexander A. Rodionov And Yuri L. Khazov	NDS 109,517 (2008)	22-Jan-2008

Parent: ^{135}I: E=0.0; $J^\pi=7/2^+$; $T_{1/2}$=6.58 h *3*; Q(β^-)=2627 *6*; %β^- decay=100

^{135}I-Q(β^-): from 2003Au03 who adopted value from $\beta\gamma$ coin work of 1999Fo01.

1982Wa21: measured Eγ, Iγ, $\gamma\gamma$, $T_{1/2}$, deduced level scheme and proposed detailed shell-model configurations.

1991Go09: measured $\gamma\gamma(\theta)$.

1972Ac02: measured ce.

Others:

γ: 1979Bo26, 1971Ma37, 1971Sa09, 1970Ma19, 1968Al16.

β, $\beta\gamma$: 1999Fo01 (deduced Q(β^-) value), 1976Lu04, 1970Ma19 (also 1970Ma58), 1955Wa35.

$\gamma\gamma(\theta)$: 1972Be90, 1971Ma37.

$T_{1/2}$ and production of ^{135}I: 1971Ha13, 1955Wa35, 1953Pa25, 1950Ka06, 1950Gl09, 1950Su32, 1945Wu05, 1940Do07, 1940Wu05.

^{135}Xe isomer decay: 1976Fe04, 1975Fu12, 1974Da01.

Others: 1973GeZZ, 1972JoZL.

Total decay energy of 2548 keV *22* calculated (by RADLIST code) from level scheme is somewhat lower than the expected value of 2627 keV *6*.

^{135}Xe Levels

E(level)	J^π[†]	$T_{1/2}$	Comments
0.0	$3/2^+$		
288.455 *15*	$1/2^+$		
526.551 *13*	$11/2^-$	15.29 min *5*	$T_{1/2}$: from 1975Fu12.
1131.512 *11*	$7/2^+$[‡]		
1260.416 *13*	$5/2^+$		
1448.36 *3*	$(3/2^+)$		
1457.566 *15*	$5/2^+$		
1543.70 *17*	$(1/2^+)$		
1565.288 *16*	$9/2^+$		
1678.065 *12*	$(7/2)^+$[‡]		
1781.39 *3*	$(11/2)^+$[‡]		
1791.213 *19*	$5/2^+$		
1894.45 *5*	(7/2,9/2)		
1927.294 *23*	$(5/2^+,7/2^+)$		
1968.323 *17*	$(9/2)^+$[‡]		
2045.892 *24*	$5/2^+$		
2048.55 *7*			
2092.943 *22*	$(7/2^-,9/2)$		
2112.4 *5*			
2151.52 *10*			
2233.041 *19*	$(9/2^+)$[‡]		
2255.478 *17*	$(7/2^+)$[‡]		
2357.24 *3*	$(9/2^+)$		
2371.99 *4*	$7/2^{(+)},9/2^{(+)}$		
2408.66 *3*	$(5/2,7/2^+)$		
2447.30 *8*			
2466.11 *9*	$(7/2^+)$		
2475.08 *5*	$(7/2^-,9/2)$		
2477.87? *20*			

[†] From Adopted Levels, unless otherwise stated.

[‡] Assignment supported by $\gamma\gamma(\theta)$ data of 1991Go09.

^{135}I β^- decay (6.58 h) 1982Wa21,1991Go09,1972Ac02 (continued)

β^- radiations

Intensity balance gives an unrealistic feeding of 0.28% *8* to 288.5, 1/2$^+$ level. It is possible that some of the transitions populating this levels have not been detected. Limits of feeding to other levels are: <0.1 to 1448; <0.015 to 1543; <0.03 to 1781 and 2048 levels.

E(decay)	E(level)	Iβ^-[†]	Log *ft*	Comments
(149[‡] *6*)	2477.87?	0.013 *3*	7.03 *12*	av Eβ=40.0 *18*
(152 *6*)	2475.08	0.142 *14*	6.01 *7*	av Eβ=40.8 *18*
(161 *6*)	2466.11	0.127 *14*	6.14 *7*	av Eβ=43.4 *18*
(180 *6*)	2447.30	0.14 *3*	6.25 *11*	av Eβ=48.8 *18*
(218 *6*)	2408.66	1.03 *6*	5.65 *5*	av Eβ=60.3 *19*
(255 *6*)	2371.99	0.92 *4*	5.91 *4*	av Eβ=71.6 *19*
(270 *6*)	2357.24	1.39 *7*	5.81 *4*	av Eβ=76.2 *19*
(372 *6*)	2255.478	4.78 *16*	5.73 *3*	av Eβ=109.0 *20*
(394 *6*)	2233.041	7.4 *3*	5.62 *3*	av Eβ=116.5 *21*
(476 *6*)	2151.52	0.023 *3*	8.40 *6*	av Eβ=144.5 *21*
(515 *6*)	2112.4	0.07 *3*	8.04 *19*	av Eβ=158.3 *22*
(534 *6*)	2092.943	1.59 *7*	6.74 *3*	av Eβ=165.3 *22*
(581 *6*)	2045.892	1.11 *5*	7.02 *3*	av Eβ=182.3 *22*
(659 *6*)	1968.323	8.0 *3*	6.35 *2*	av Eβ=211.0 *23*
(700 *6*)	1927.294	0.05 *4*	8.6 *4*	av Eβ=226.5 *23*
(733 *6*)	1894.45	0.61 *3*	7.63 *3*	av Eβ=239.1 *23*
(836 *6*)	1791.213	8.8 *3*	6.67 *2*	av Eβ=279.2 *24*
(949 *6*)	1678.065	21.8 *8*	6.48 *2*	av Eβ=324.3 *25* E(decay): measured value: 870 *70* (1976Lu04). Other: 1970Ma19.
(1062 *6*)	1565.288	8.0 *3*	7.09 *2*	av Eβ=370.4 *25*
(1169 *6*)	1457.566	7.5 *3*	7.28 *2*	av Eβ=415.1 *26*
(1367 *6*)	1260.416	23.6 *8*	7.04 *2*	av Eβ=498.8 *26* E(decay): measured value: 1320 *50* (1976Lu04). Other: 1970Ma19.
(1496 *6*)	1131.512	1.3 *2*	8.45 *7*	av Eβ=554.5 *27*
(2100 *6*)	526.551	1.9 *2*	9.97[1u] *5*	av Eβ=820.7 *27*

[†] Absolute intensity per 100 decays.
[‡] Existence of this branch is questionable.

^{135}I β^- decay (6.58 h) 1982Wa21,1991Go09,1972Ac02 (continued)

$\gamma(^{135}Xe)$

Iγ normalization: from I(γ+ce)(γ's to g.s.)=100. Uncertainty of 3% is assigned by the evaluators. β feeding to g.s. is expected as <0.01% from log *ft*>12.8. Total feeding to 526 isomer is 15.7% *3* (average of 14.7% *7* (1974Da01), 15.0% *8* (1975Fu12), 15.5% *5* (1976Fe04), 16.5% *5* (1982Wa21)).
A_2 and A_4 coefficients are from 1991Go09, unless otherwise stated.
α(K)exp: from 1972Ac02.

E_γ[†]	I_γ[‡][g]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[h]	Comments
112.78[c]	≈0.044[f]	1678.065	(7/2)$^+$	1565.288	9/2$^+$			
113.15[c]	≈0.024[f]	1791.213	5/2$^+$	1678.065	(7/2)$^+$			Iγ(112.78γ+113.15γ)=0.68 *7* for Eγ=112.84 *7*.
162.65 *11*	0.034 *9*	2255.478	(7/2$^+$)	2092.943	(7/2$^-$,9/2)			
165.74 *6*	0.109 *9*	2092.943	(7/2$^-$,9/2)	1927.294	(5/2$^+$,7/2$^+$)			
184.49 *8*	0.082 *8*	2233.041	(9/2$^+$)	2048.55				
197.19 *7*	0.114 *9*	1457.566	5/2$^+$	1260.416	5/2$^+$	[M1,E2]	0.146 *23*	α(K)=0.120 *14*; α(L)=0.021 *8*; α(M)=0.0044 *16*; α(N+..)=0.0010 *4* α(N)=0.0009 *3*; α(O)=0.00010 *3*
220.502 *15*	6.1 *1*	1678.065	(7/2)$^+$	1457.566	5/2$^+$	M1,E2	0.104 *12*	α(K)=0.086 *7*; α(L)=0.014 *4*; α(M)=0.0030 *9*; α(N+..)=0.00067 *19* α(N)=0.00060 *17*; α(O)=7.0×10^{-5} *16* E$_\gamma$: 220.51 *3* (bent-crystal spectrometer (1979Bo26)). Mult.: from α(K)exp=0.07 *3*. (221γ)(1458γ)(θ): A_2=+0.29 *2*, A_4=+0.07 *3*. Additional information 2.
229.72 *3*	0.840 *8*	1678.065	(7/2)$^+$	1448.36	(3/2$^+$)	[E2]	0.1006	α(K)=0.0809 *12*; α(L)=0.01570 *22*; α(M)=0.00327 *5*; α(N+..)=0.000734 *11* α(N)=0.000660 *10*; α(O)=7.37×10^{-5} *11*
247.5 *3*	0.10 *3*	1791.213	5/2$^+$	1543.70	(1/2$^+$)			
254.74 *13*	0.08 *3*	2045.892	5/2$^+$	1791.213	5/2$^+$			
264.26 *9*	0.64 *1*	2357.24	(9/2$^+$)	2092.943	(7/2$^-$,9/2)			
288.451 *16*	10.8 *2*	288.455	1/2$^+$	0.0	3/2$^+$	[M1,E2]	0.0463 *14*	α(K)=0.0389 *6*; α(L)=0.0059 *9*; α(M)=0.00121 *20*; α(N+..)=0.00028 *4* α(N)=0.00025 *4*; α(O)=2.9×10^{-5} *4*
290.27 *4*	1.06 *6*	1968.323	(9/2)$^+$	1678.065	(7/2)$^+$	[M1,E2]	0.0455 *13*	α(K)=0.0382 *6*; α(L)=0.0058 *9*; α(M)=0.00118 *19*; α(N+..)=0.00027 *4* α(N)=0.00024 *4*; α(O)=2.9×10^{-5} *3*
304.91 *13*	0.11 *1*	1565.288	9/2$^+$	1260.416	5/2$^+$			
305.83 *9*	0.331 *9*	2233.041	(9/2$^+$)	1927.294	(5/2$^+$,7/2$^+$)			
326.0[&] *2*	0.008 *6*	1457.566	5/2$^+$	1131.512	7/2$^+$			
333.6 *2*	0.13 *1*	1791.213	5/2$^+$	1457.566	5/2$^+$			
342.52 *12*	0.003 *2*	1791.213	5/2$^+$	1448.36	(3/2$^+$)			

^{135}I β^- decay (6.58 h) 1982Wa21,1991Go09,1972Ac02 (continued)

$\gamma(^{135}Xe)$ (continued)

E_γ [†]	I_γ [‡g]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[@]	α[h]	Comments
361.85[&] *13*	0.65 *8*	1927.294	(5/2$^+$,7/2$^+$)	1565.288	9/2$^+$				
403.03 *4*	0.81 *1*	1968.323	(9/2)$^+$	1565.288	9/2$^+$				
414.83 *3*	1.05 *5*	2092.943	(7/2$^-$,9/2)	1678.065	(7/2)$^+$				
417.633 *22*	12.3 *1*	1678.065	(7/2)$^+$	1260.416	5/2$^+$	M1+E2	−1.86 *20*	0.01559 *24*	α(K)=0.01319 *21*; α(L)=0.00192 *3*; α(M)=0.000394 *6*; α(N+..)=9.03×10^{-5} *13* α(N)=8.06×10^{-5} *12*; α(O)=9.67×10^{-6} *14* Mult.: from α(K)exp=0.015 *9*. (418γ)(1260γ)(θ): A_2=−0.50 *2*, A_4=+0.02 *3*. Additional information 3.
429.93 *3*	1.06 *7*	2357.24	(9/2$^+$)	1927.294	(5/2$^+$,7/2$^+$)				
433.741 *19*	1.93 *5*	1565.288	9/2$^+$	1131.512	7/2$^+$	(M1+E2)	−0.52 *10*	0.0154 *3*	α(K)=0.01319 *24*; α(L)=0.001732 *25*; α(M)=0.000352 *5*; α(N+..)=8.16×10^{-5} *12* α(N)=7.26×10^{-5} *11*; α(O)=9.01×10^{-6} *14* (434γ)(1132γ)(θ): A_2=−0.38 *5*, A_4=+0.04 *6*.
451.63 *3*	1.10 *5*	2233.041	(9/2$^+$)	1781.39	(11/2)$^+$				
526.561 *17*		526.551	11/2$^-$	0.0	3/2$^+$	M4		0.237	α(K)=0.191 *3*; α(L)=0.0364 *5*; α(M)=0.00770 *11*; α(N+..)=0.001777 *25* α(N)=0.001587 *23*; α(O)=0.000190 *3* Mult.: from ^{135}Xe IT decay. I_γ: transient equilibrium value=46.6 *3* (1982Wa21) for isomeric transition. E_γ: 526.58 *7* (bent-crystal spectrometer (1979Bo26)). Additional information 1.
530.8 *4*	0.11 *5*	1791.213	5/2$^+$	1260.416	5/2$^+$	(M1+E2)	−0.55 *20*	0.0091 *3*	α(K)=0.0079 *3*; α(L)=0.001018 *22*; α(M)=0.000206 *5*; α(N+..)=4.80×10^{-5} *11* α(N)=4.27×10^{-5} *9*; α(O)=5.31×10^{-6} *14* (531γ)(1260γ)(θ): A_2=+0.43 *7*, A_4=+0.03 *10*.
546.557 *16*	24.9 *3*	1678.065	(7/2)$^+$	1131.512	7/2$^+$	(M1+E2)	−0.14 *5*	0.00891	α(K)=0.00770 *12*; α(L)=0.000971 *14*; α(M)=0.000196 *3*; α(N+..)=4.58×10^{-5} *7* α(N)=4.07×10^{-5} *6*; α(O)=5.11×10^{-6} *8* (547γ)(1132γ)(θ): A_2=+0.24 *1*, A_4=−0.002 *20*. Additional information 4.
575.97 *8*	0.45 *8*	2357.24	(9/2$^+$)	1781.39	(11/2)$^+$				
588.28 *6*	0.18 *5*	2045.892	5/2$^+$	1457.566	5/2$^+$				
616.9[a] *2*	0.13 *6*	2408.66	(5/2,7/2$^+$)	1791.213	5/2$^+$				
649.85 *4*	1.59 *9*	1781.39	(11/2)$^+$	1131.512	7/2$^+$				(650γ)(1132γ)(θ): A_2=+0.16 *7*, A_4=+0.02 *11*.
656.09 *10*	0.26 *5*	2447.30		1791.213	5/2$^+$				
679.22 *15*	0.19 *5*	2357.24	(9/2$^+$)	1678.065	(7/2)$^+$				
684.6 *2*	0.08 *3*	2466.11	(7/2$^+$)	1781.39	(11/2)$^+$				

$^{135}_{54}Xe_{81}$-4

^{135}I β^- decay (6.58 h) 1982Wa21,1991Go09,1972Ac02 (continued)

$\gamma(^{135}Xe)$ (continued)

E_γ [†]	I_γ [‡g]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ [@]	α [h]	Comments
690.13 *5*	0.45 *5*	2255.478	(7/2$^+$)	1565.288	9/2$^+$				
707.92 *4*	2.3 *1*	1968.323	(9/2)$^+$	1260.416	5/2$^+$				(708γ)(1260γ)(θ): A_2=+0.11 *4*, A_4=0.00 *7*.
785.48 *5*	0.53 *6*	2045.892	5/2$^+$	1260.416	5/2$^+$	(M1+E2)	−0.56 *10*	0.00352 *8*	α(K)=0.00304 *7*; α(L)=0.000383 *8*; α(M)=7.75×10^{-5} *16*; α(N+..)=1.81×10^{-5} *4* α(N)=1.60×10^{-5} *4*; α(O)=2.01×10^{-6} *5* (785γ)(1260γ)(θ): A_2=+0.43 *9*, A_4=+0.01 *12*.
795.5 *4*	0.08 *8*	1927.294	(5/2$^+$,7/2$^+$)	1131.512	7/2$^+$				
797.71 *8*	0.60 *9*	2255.478	(7/2$^+$)	1457.566	5/2$^+$				
807.2 *3*	0.16 *6*	2255.478	(7/2$^+$)	1448.36	(3/2$^+$)				
836.804 *16*	23.3 *3*	1968.323	(9/2)$^+$	1131.512	7/2$^+$	(M1+E2)	+3.58 *10*	0.00248	α(K)=0.00213 *3*; α(L)=0.000278 *4*; α(M)=5.64×10^{-5} *8*; α(N+..)=1.307×10^{-5} *19* α(N)=1.163×10^{-5} *17*; α(O)=1.436×10^{-6} *21* (837γ)(1132γ)(θ): A_2=+0.05 *2*, A_4=−0.08 *3*. Additional information 5.
960.29[d]	0.12[f] *9*	2408.66	(5/2,7/2$^+$)	1448.36	(3/2$^+$)				
961.43[d]	0.51[f] *9*	2092.943	(7/2$^-$,9/2)	1131.512	7/2$^+$				
971.96[e]	3.1[f] *1*	1260.416	5/2$^+$	288.455	1/2$^+$				
972.62[e]	4.2[f] *1*	2233.041	(9/2$^+$)	1260.416	5/2$^+$				δ(M3/E2)=−0.01 *5* from (973)(1260)(θ): A_2=+0.10 *4*, A_4=+0.02 *7*. Additional information 6.
995.09 *10*	0.54 *9*	2255.478	(7/2$^+$)	1260.416	5/2$^+$	(M1+E2)	−1.14 *30*	0.00187 *9*	α(K)=0.00161 *8*; α(L)=0.000203 *9*; α(M)=4.10×10^{-5} *17*; α(N+..)=9.6×10^{-6} *4* α(N)=8.5×10^{-6} *4*; α(O)=1.06×10^{-6} *5* (995γ)(1260γ)(θ): A_2=−0.55 *10*, A_4=0.00 *14*.
1038.760 *21*	27.7 *3*	1565.288	9/2$^+$	526.551	11/2$^-$	E1		6.37×10^{-4}	α(K)=0.000553 *8*; α(L)=6.68×10^{-5} *10*; α(M)=1.344×10^{-5} *19*; α(N+..)=3.13×10^{-6} *5* α(N)=2.78×10^{-6} *4*; α(O)=3.49×10^{-7} *5* Mult.: from α(K)exp≤0.0007.
1096.86 *10*	0.31 *5*	2357.24	(9/2$^+$)	1260.416	5/2$^+$				
1101.58 *3*	5.60 *9*	2233.041	(9/2$^+$)	1131.512	7/2$^+$	(M1+E2)	+1.82 *20*	0.00141 *3*	α(K)=0.001218 *23*; α(L)=0.000153 *3*; α(M)=3.10×10^{-5} *6*; α(N+..)=7.64×10^{-6} *14* α(N)=6.40×10^{-6} *12*; α(O)=7.99×10^{-7} *15*; α(IPF)=4.36×10^{-7} *7* (1102γ)(1132γ)(θ): A_2=+0.17 *4*, A_4=−0.05 *7*.
1124.00 *3*	12.6 *1*	2255.478	(7/2$^+$)	1131.512	7/2$^+$	(M1+E2)	−1.08 *20*	0.00144 *5*	α(K)=0.00124 *4*; α(L)=0.000155 *5*; α(M)=3.13×10^{-5} *9*; α(N+..)=8.23×10^{-6} *21* α(N)=6.48×10^{-6} *19*; α(O)=8.12×10^{-7} *24*; α(IPF)=9.35×10^{-7} *16*

$^{135}_{54}Xe_{81}$-5

^{135}I β^- decay (6.58 h) 1982Wa21,1991Go09,1972Ac02 (continued)

$\gamma(^{135}Xe)$ (continued)

E_γ [†]	I_γ [‡] [g]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [#]	δ [@]	α [h]	Comments
									(1124γ)(1132γ)(θ): A_2=+0.21 *3*, A_4=+0.09 *4*. Additional information 7.
1131.511 *18*	78.7 *5*	1131.512	$7/2^+$	0.0	$3/2^+$	E2		1.25×10^{-3}	α(K)=0.001074 *15*; α(L)=0.0001359 *19*; α(M)=2.75×10^{-5} *4*; α(N+..)=7.61×10^{-6} *11* α(N)=5.67×10^{-6} *8*; α(O)=7.06×10^{-7} *10*; α(IPF)=1.232×10^{-6} *18* Mult.: from α(K)exp=0.00118 *24*.
1151.51 [bj]	<0.01	1678.065	$(7/2)^+$	526.551	$11/2^-$				E_γ: from level-energy difference.
1159.9 *2*	0.36 *8*	1448.36	$(3/2^+)$	288.455	$1/2^+$				
1169.04 *4*	3.05 *8*	1457.566	$5/2^+$	288.455	$1/2^+$				
[x] 1180.46 *9*	0.22 *3*								
1225.6 *3*	0.15 *6*	2357.24	$(9/2^+)$	1131.512	$7/2^+$				
1240.47 *3*	3.15 *9*	2371.99	$7/2^{(+)}$,$9/2^{(+)}$	1131.512	$7/2^+$				δ(Q/D)=−0.06 *10* for 9/2; +0.89 *10* for 7/2 (1991Go09). (1240γ)(1132γ)(θ): A_2=−0.11 *6*, A_4=+0.03 *10* (1991Go09). (1240γ)(1132γ)(θ): A_2=+0.16 *7*, A_4=+0.06 *5* (1972Be90). Note sign of A_2 is different in two studies.
1254.8 [ij] *10*	0.02 [i] *1*	1543.70	$(1/2^+)$	288.455	$1/2^+$				
1254.8 [ij] *10*	0.02 [i] *1*	1781.39	$(11/2)^+$	526.551	$11/2^-$				
1260.409 *17*	100.0 *6*	1260.416	$5/2^+$	0.0	$3/2^+$	M1+E2	+0.56 *5*	1.22×10^{-3} *2*	α(K)=0.001043 *17*; α(L)=0.0001285 *20*; α(M)=2.59×10^{-5} *4*; α(N+..)=2.04×10^{-5} *3* α(N)=5.37×10^{-6} *9*; α(O)=6.76×10^{-7} *11*; α(IPF)=1.435×10^{-5} *21* Mult.: from α(K)exp=0.00090 *14*.
[x] 1277.83 *12*	0.20 *1*								
[x] 1308.70 *15*	0.12 *3*								
1315.77 *11*	0.23 *6*	2447.30		1131.512	$7/2^+$				
1334.8 *2*	0.11 *3*	2466.11	$(7/2^+)$	1131.512	$7/2^+$				
1343.66 *9*	0.27 *4*	2475.08	$(7/2^-,9/2)$	1131.512	$7/2^+$				
1367.89 *4*	2.12 *8*	1894.45	(7/2,9/2)	526.551	$11/2^-$				
[x] 1416.3 *4*	0.11 *3*								
1441.8 *5*	0.06 *4*	1968.323	$(9/2)^+$	526.551	$11/2^-$				
1448.35 *10*	1.10 *9*	1448.36	$(3/2^+)$	0.0	$3/2^+$				
1457.56 *3*	30.2 *2*	1457.566	$5/2^+$	0.0	$3/2^+$	M1,E2		0.00090 *9*	α(K)=0.00072 *8*; α(L)=8.9×10^{-5} *9*; α(M)=1.79×10^{-5} *19*; α(N+..)=6.79×10^{-5} *13* α(N)=3.7×10^{-6} *4*; α(O)=4.7×10^{-7} *5*; α(IPF)=6.37×10^{-5} *16* Mult.: from α(K)exp=0.00070 *24*.

^{135}I β^- decay (6.58 h) 1982Wa21,1991Go09,1972Ac02 (continued)

$\gamma(^{135}Xe)$ (continued)

E_γ [†]	I_γ [‡ g]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [#]	α [h]	Comments
1502.79 *4*	3.75 *9*	1791.213	5/2$^+$	288.455	1/2$^+$			
1521.99 *13*	0.13 *6*	2048.55		526.551	11/2$^-$			
1543.7 *2*	0.09 *3*	1543.70	(1/2$^+$)	0.0	3/2$^+$			
1566.41 *3*	4.5 *1*	2092.943	(7/2$^-$,9/2)	526.551	11/2$^-$			
[x]1613.75 *14*	0.09 *2*							
1678.027 *21*	33.3 *7*	1678.065	(7/2)$^+$	0.0	3/2$^+$	(E2)	7.16×10^{-4}	α(K)=0.000492 *7*; α(L)=6.03×10^{-5} *9*; α(M)=1.216×10^{-5} *17*; α(N+..)=0.0001517 *22* α(N)=2.52×10^{-6} *4*; α(O)=3.16×10^{-7} *5*; α(IPF)=0.0001488 *21* Mult.: from α(K)exp=0.00056 *14*.
1706.459 *21*	14.3 *4*	2233.041	(9/2$^+$)	526.551	11/2$^-$			
[x]1742.0 *4*	0.06 *2*							Proposed (1982Wa21) placement: 2268-526.
1791.196 *21*	26.9 *1*	1791.213	5/2$^+$	0.0	3/2$^+$			
1830.69 *4*	2.02 *6*	2357.24	(9/2$^+$)	526.551	11/2$^-$			
1845.3 *4*	0.020 *9*	2371.99	7/2$^{(+)}$,9/2$^{(+)}$	526.551	11/2$^-$			
1927.30 *3*	1.03 *4*	1927.294	(5/2$^+$,7/2$^+$)	0.0	3/2$^+$			
1948.49 *5*	0.22 *2*	2475.08	(7/2$^-$,9/2)	526.551	11/2$^-$			
2045.88 *3*	3.04 *9*	2045.892	5/2$^+$	0.0	3/2$^+$			
2112.4 *5*	0.24 *1*	2112.4		0.0	3/2$^+$			
2151.5 *1*	0.078 *9*	2151.52		0.0	3/2$^+$			
[x]2179.7 *5*	0.014 *6*							
2189.4[bj] *2*	0.045 *9*	2477.87?		288.455	1/2$^+$			
2255.457 *22*	2.14 *7*	2255.478	(7/2$^+$)	0.0	3/2$^+$			
2408.65 *3*	3.33 *9*	2408.66	(5/2,7/2$^+$)	0.0	3/2$^+$			
[x]2452.8[b] *8*	0.03 *2*							
2466.07 *10*	0.25 *1*	2466.11	(7/2$^+$)	0.0	3/2$^+$			
2477.1[bj] *4*	0.005 *1*	2477.87?		0.0	3/2$^+$			

[†] From 1982Wa21. A calibration uncertainty of 15 eV, as stated by 1982Wa21, is added in quadrature to authors′ fitting uncertainty.
[‡] From 1982Wa21. Fitting uncertainty only is given.
[#] From α(K)exp when given outside parentheses. From large δ(Q/D) (E2/M1 expected) in $\gamma\gamma(\theta)$ data when given in parentheses.
[@] From $\gamma\gamma(\theta)$ (1991Go09).
[&] Contaminated by ^{131}I or ^{133}I.
[a] Contaminated by ^{132}I.
[b] Uncertain γ.
[c] From level-energy difference. Eγ=112.84 *7* for doublet Iγ(112.78+113.15)=0.68 *7*.
[d] From level-energy difference. Eγ=960.097 *82* for doublet Iγ(960.29+961.43)=0.63 *9*.
[e] From level-energy difference. Doublet.

$^{135}_{54}Xe_{81}$-7

^{135}I β^- decay (6.58 h) 1982Wa21,1991Go09,1972Ac02 (continued)

$\gamma(^{135}Xe)$ (continued)

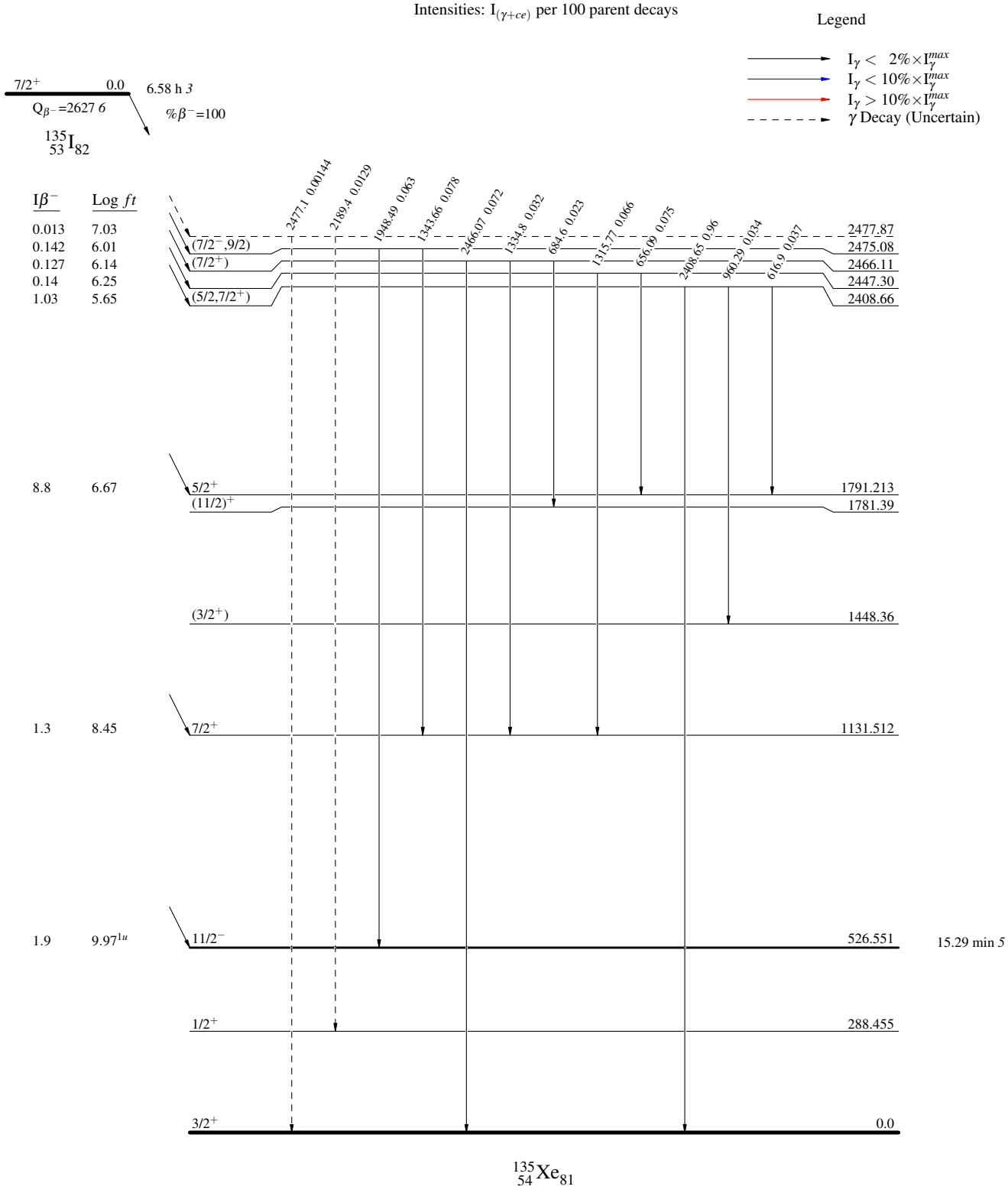
[f] Intensity division based on $\gamma\gamma$ data.
[g] For absolute intensity per 100 decays, multiply by 0.287 *9*.
[h] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.
[i] Multiply placed with undivided intensity.
[j] Placement of transition in the level scheme is uncertain.
[x] γ ray not placed in level scheme.

$^{135}_{54}Xe_{81}$-8

^{135}I β^- decay (6.58 h) 1982Wa21,1991Go09,1972Ac02

Decay Scheme

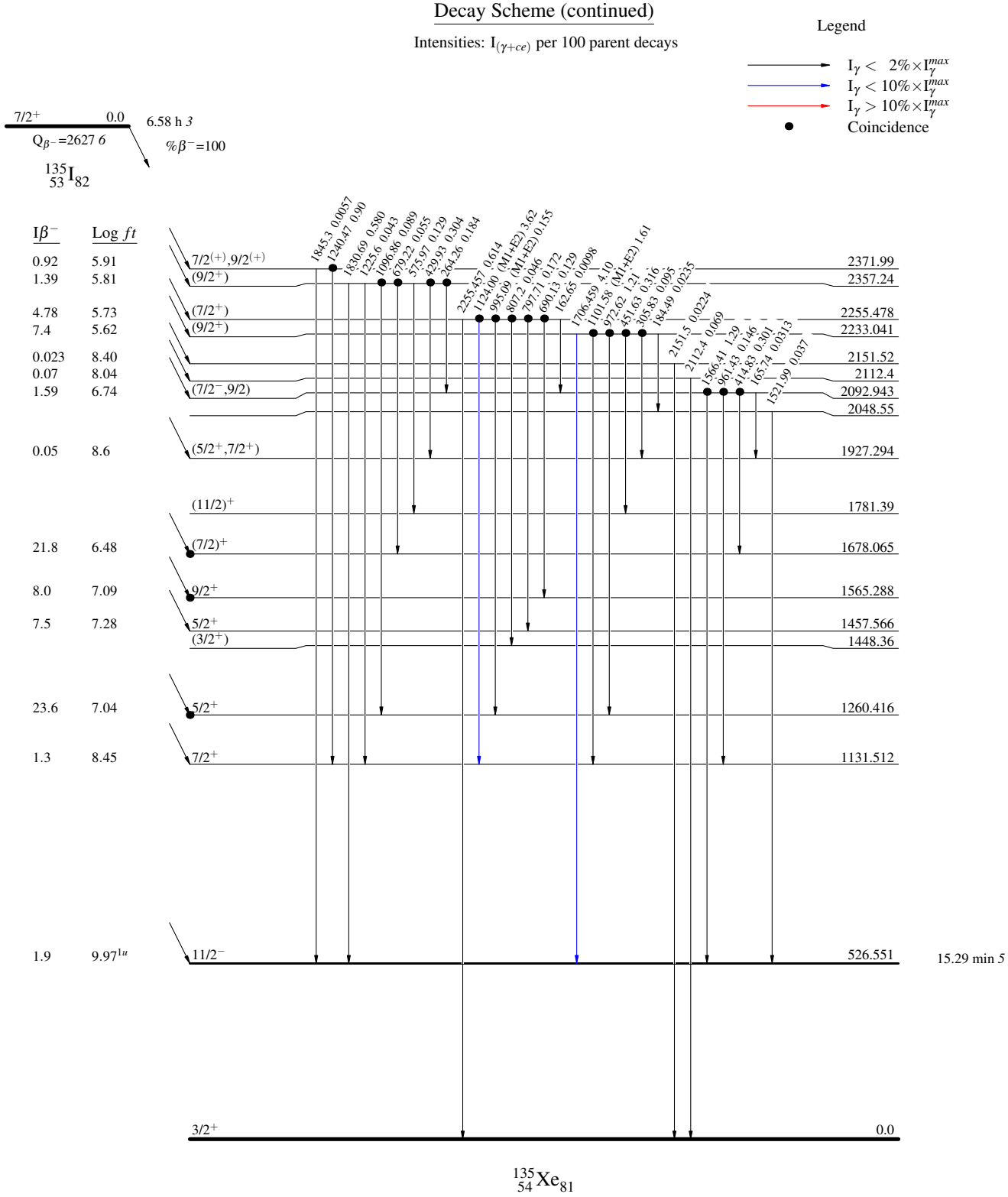
Intensities: $I_{(\gamma+ce)}$ per 100 parent decays



^{135}I β^- decay (6.58 h) 1982Wa21,1991Go09,1972Ac02

Decay Scheme (continued)

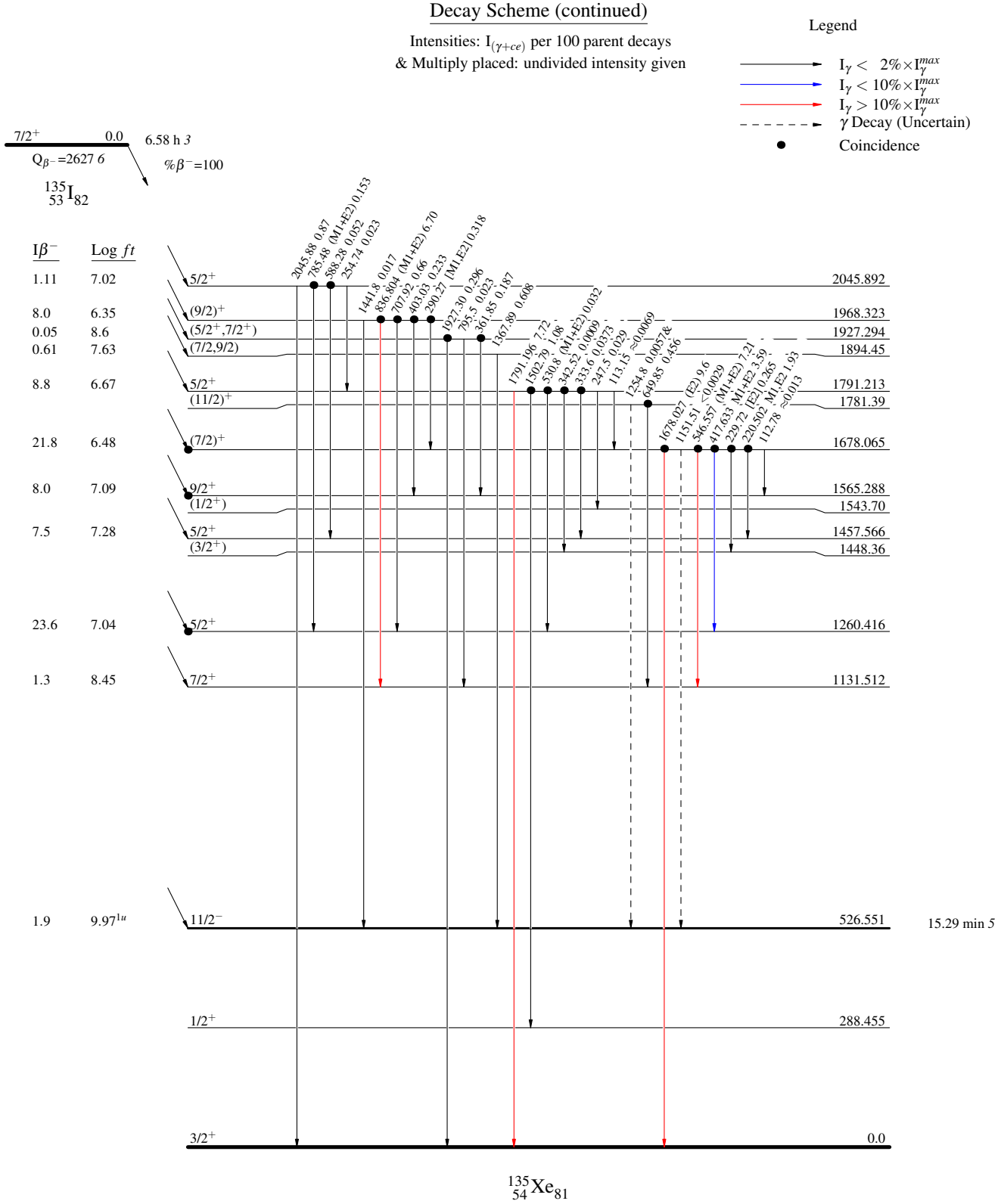
Intensities: $I_{(\gamma+ce)}$ per 100 parent decays



^{135}I β^- decay (6.58 h) 1982Wa21,1991Go09,1972Ac02

Decay Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays
& Multiply placed: undivided intensity given



^{135}I β^- decay (6.58 h) 1982Wa21,1991Go09,1972Ac02

Decay Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays
& Multiply placed: undivided intensity given