(HI,xnγ) 2001We13,1997ScZU,1984Ga21

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. Katakura, Z. D. Wu	NDS 109, 1655 (2008)	1-Apr-2008

2001We13: ^{123}Te(^{3}He,2nγ), E=16, 18 and 20 MeV, 2 mg/cm^2 ^{123}Te(89.4% enriched) on a 0.8 mg/cm^2 gold foil; measured E_γ, I_γ, γγ-coin, excitation functions, and γγ(θ)(DCO) using OSIRIS-6 spectrometer comprised of 6 Compton-suppressed HPGe detectors, deduced δ.

1999Sc20,1997ScZU: ^{110}Pd(^{18}O,4nγ), E=86 MeV, 1 mg/cm^2 ^{110}Pd(97.7% enriched) on a 3 mg/cm^2 tantalum foil; measured E_γ, I_γ, γγ-coin, and mixing ratios using NORDBALL spectrometer comprised of 20 Compton-suppressed HPGe detectors and a 4π calorimeter equipped with 60 BaF_2 detectors.

1984Ga21,1983Ha38,1982GaZH: ^{122}Te(α,2nγ), ^{114}Cd(^{13}C,3nγ), ^{108}Pd(^{19}F,p2nγ); measured γ, γγ coin, γ(θ), excitation functions, ce, $T_{1/2}$.

2004Sa47: ^{110}Pd(^{18}O,4nγ), E=80 MeV, euroball, 1.1 mg/CM**2 thick self- supporting Pd foil; measured Eγ, Iγ, γγ, lifetimes. Lifetimes were measured by differential decay curve method (ddcm).

1998Sa25: ^{123}Te(α,3nγ), E=40 MeV; measured γ, angular distribution.

1998Go03: ^{110}Pd(^{18}O,4nγ), E=66 MeV, 1.2 mg/cm^2 self supporting ^{110}Pd foil; measured lifetimes using the recoil-distance Doppler-shift technique by 2 HPGe detectors.

1997Lo12: ^{110}Pd(^{18}O,4nγ), E=75 MeV, 10 mg/cm^2 target; GASP spectrometer; measured γ, γγ, DCO ratios.

1987Ha03: ^{110}Pd(^{18}O,4n), E=65-82 MeV; measured γ, γγ coin, γ(θ).

1983Ku04: ^{124}Te(α,4nγ), E=49-55 MeV; measured γ, γγ coin, γ(θ).

1982Ha44: ^{124}Te(^{3}He,3nγ); enriched target; Ge(Li) γ, γγ-coin γ(θ); excitation functions; Si(Li) with magnetic guide ce.

1982SoZT,1982SoZZ: (α,4nγ) E not given; enriched target; measured γ, γγ coin, γ(θ).

1975Ku05: ^{127}I(p,4n), E=17-28.5 MeV; semi, γγ coin, γ(θ), excitation functions.

The Level scheme is based on that of 1999Sc20 and 1997ScZU with 2 additional bands structure from 2001We13.

^{124}Xe Levels

E(level)	J^π †	$T_{1/2}$ i	Comments
0.0 b	0^+		
353.95 b 8	2^+	46.8 ps 12	$T_{1/2}$: other: 33 ps 2(1982GaZH); 57 ps 3 from lifetime 82 ps 4 (1998Go03).
846.50 f 10	2^+	12.3 ps 21	$T_{1/2}$: other: 6.9 ps 14 (1982GaZH).
878.76 b 10	4^+	5.68 ps 16	$T_{1/2}$: other: 3.5 ps 4(1982GaZH); 2.1 ps 2 from lifetime 3.0 ps 2 (1998Go03).
1247.61 e 11	3^+	6.2 ps 7	$T_{1/2}$: other: 6.2 ps 14 (1982GaZH).
1269.01 g 20	0^+		
1437.89 f 12	4^+	2.1 ps 7	$T_{1/2}$: from recoil distance Doppler shift (1982GaZH).
1548.31 b 12	6^+	1.29 ps 11	$T_{1/2}$: other: 1.0 ps 4(1982GaZH); 0.7 ps 1 from lifetime 1.0 ps 1 (1998Go03).
1628.48 g 15	2^+		
1836.85 e 12	5^+	3.99 ps 17	$T_{1/2}$: other: 3.1 ps 4 (1982GaZH).
1873.32 @ 16	(4^+)		
1897.93 24	$3^{(-)}$		
1994.24 23			
2014.61 g 19	$4^{(+)}$		
2143.65 f 15	6^+	4.2 ps	$T_{1/2}$: from recoil distance Doppler shift (1982GaZH). $\Delta T_{1/2}$ not given.
2164.9 3			
2205.1 4	(2^+)		
2222.70 18	(4,5)		
2226.20 ‡ 17	$5^{(-)}$		
2279.2 4			
2281.5 4			
2290.7 4			
2330.90 b 14	8^+	0.79 ps 24	$T_{1/2}$: other: 1.0 ps 4(1982GaZH); 0.5 ps 2 from lifetime 0.7 ps 2 (1998Go03).
2360.54 @ 17	$5^{(+)}$		

Continued on next page (footnotes at end of table)

(HI,xnγ) 2001We13,1997ScZU,1984Ga21 (continued)

^{124}Xe Levels (continued)

E(level)	J^{π} †	$T_{1/2}$ [i]	Comments
2367.1 *4*			
2380.8 *4*	5		
2508.8 *4*	(5,6)		
2531.73[@] *21*	$6^{(+)}$		
2536.4 *4*			
2574.59[e] *16*	7^{+}	3.5 ps	$T_{1/2}$: from recoil distance Doppler shift (1982GaZH). $\Delta T_{1/2}$ not given.
2578.58[d] *16*	$6^{(-)}$		
2600.5 *4*			
2625.4 *4*			
2625.46[‡] *16*	7^{-}	68 ps *7*	$T_{1/2}$: other: 103 ps *10* (1982GaZH).
2644.82 *18*			
2647.54 *18*	6		
2675.69[c] *16*	$7^{(-)}$	1.0 ps *6*	$T_{1/2}$: from recoil distance Doppler shift (1982GaZH).
2682.50 *24*			
2700.45 *25*			
2728.9 *4*			
2768.60 *20*	7^{+}		
2778.8 *4*			
2809.54[#] *18*	8^{-}	0.75 ns *4*	$T_{1/2}$: from recoil distance Doppler shift (1982GaZH).
2867.2 *4*			
2869.2 *4*			
2900.0 *4*	6		
2912.06[f] *23*	8^{+}		
2958.9 *4*			
2984.0 *4*			
3013.1 *4*	(8)		
3026.13[@] *18*	(7^{+})		
3032.0 *4*			
3070.9 *4*			
3095.44[d] *17*	$8^{(-)}$		
3110.0 *4*			
3111.75[‡] *18*	9^{-}	21 ps *4*	$T_{1/2}$: from recoil distance Doppler shift (1982GaZH).
3131.8 *3*			
3147.66[c] *17*	$9^{(-)}$	3.6 ps *5*	$T_{1/2}$: other: 3.5 ps *7* (1982GaZH).
3171.27[b] *17*	10^{+}	1.74 ps *22*	$T_{1/2}$: other: 1.5 ps *3*(1982GaZH); <0.4 ps from lifetime <0.6 ps(1998Go03).
3241.3 *3*			
3273.7 *4*	$9^{(-)}$		
3343.86[e] *24*	(9^{+})		
3462.23[#] *20*	$10^{(-)}$		
3476.5 *4*			
3502.31[&] *19*	(10^{+})		
3557.0 *3*			
3669.7[f] *3*	(10^{+})		
3676.62 *23*			
3717.21[d] *19*	$10^{(-)}$		
3787.09[‡] *22*	$11^{(-)}$		
3822.46[c] *19*	$11^{(-)}$	2.20 ps *6*	$T_{1/2}$: other: 0.8 ps *6* (1982GaZH).
3882.91[a] *19*	$12^{(+)}$	1.50 ps *25*	$T_{1/2}$: other: 2.8 ps (1982GaZH). $\Delta T_{1/2}$ not given.
3955.9 *4*	(11^{-})		
4002.9[e] *3*	(11^{+})		
4216.02[#] *23*	$12^{(-)}$		

Continued on next page (footnotes at end of table)

(HI,xnγ) 2001We13,1997ScZU,1984Ga21 (continued)

^{124}Xe Levels (continued)

E(level)	Jπ†	$T_{1/2}$ i	Comments
4299.00& *20*	(12+)	>1.7 ps	
4421.24d *23*	12(−)		
4573.90‡ *24*	13(−)		
4598.24c *25*	13(−)	1.12 ps *6*	$T_{1/2}$: other: 1.7 ps *10* (1982GaZH).
4612.6a *3*	14(+)		
4743.1e *5*	(13+)		
4759.7? *5*	(13−)		
4875.8 *3*			
5049.76h *25*	(12+)		
5067.8# *3*	14(−)		
5114.2& *3*	(14+)		
5182.0d *3*	14(−)		
5290.3h *3*	13(+)		
5433.4c *3*	15(−)	1.40 ps *8*	$T_{1/2}$: other: 2.9 ps *8* (1982GaZH).
5462.4‡ *4*	(15−)		
5465.6a *4*	16(+)		
5518.8 *3*	14		
5551.8h *3*	14(+)	0.71 ps *6*	
5592.6e *5*	(15+)		
5827.4h *3*	15(+)	1.30 ps *8*	
5938.0& *4*	(16+)		
5974.1d *3*	16(−)		
6011.6# *4*	(16−)		
6134.5c *4*	17(−)	2.95 ps *15*	
6153.9h *3*	16(+)	1.25 ps *6*	
6255.3 *5*	(16+)		
6438.3‡ *5*	(17−)		
6438.5a *4*	18(+)		
6543.9e *6*	(17+)		
6553.7h *4*	17(+)	0.39 ps *6*	
6741.0d *4*	18(−)		
6829.0& *4*	(18+)		
6984.6h *4*	18(+)		
7019.8# *5*	(18−)		
7031.1c *4*	19(−)		
7053.0 *6*			
7433.1h *4*	19(+)		
7452.5? *11*			
7481.2‡ *6*	(19−)		
7523.8a *5*	20(+)		
7556.0e *7*	(19+)		
7626.5d *5*	20(−)		
7637.4 *5*			
7811.2& *5*	(20+)		
7914.5 *6*			
7929.2h *4*	20(+)		
7939.4c *5*	21(−)		
8192.8 *5*			

Continued on next page (footnotes at end of table)

(HI,xnγ) 2001We13,1997ScZU,1984Ga21 (continued)

^{124}Xe Levels (continued)

E(level)	Jπ†	E(level)	Jπ†	E(level)	Jπ†	E(level)	Jπ†
8365.6[h] 5	21(+)	8901.0[&] 6	(22+)	9483.5[h] 5	23(+)	10342.6[c] 6	25(−)
8484.2 5		8911.4[h] 5	22(+)	9676.0[d] 5	24(−)	10897.1[d] 6	26(−)
8523.0[d] 5	22(−)	8990.6 6		9927.1[h] 5	24(+)	11241.0[a] 12	(26+)
8570.2[‡] 12	(21−)	9048.5 5		9996.9[a] 7	24(+)	11555.1[c] 6	27(−)
8721.7[a] 6	22(+)	9105.9[c] 5	23(−)	10143.4 7		12772.7[c] 7	(29−)

† From Adopted Levels, unless otherwise indicated.
‡ Band(A): Band based on 5−, α=1.
# Band(a): Band based on 5−, α=0 Configuration=νh11/2νg7/2 (prolate).
@ Band(B): $K^{\pi}=4^{+}$.
& Band(C): $\pi h^{2}_{11/2}$ structure.
a Band(D): 12^{+} band,$\nu h^{2}_{11/2}$ structure.
b Band(E): g.s. band.
c Band(F): Band based on 6−, α=1 Configuration=πh11/2π(d5/2/g7/2) (prolate).
d Band(f): Band based on 6−, α=0.
e Band(G): Quasi γ-band, α=1.
f Band(g): Quasi γ-band, α=0.
g Band(H): $K^{\pi}=0^{+}$ band.
h Band(I): (12) dipole band.
i From lifetime by recoil distance measurement (2004Sa47), unless otherwise indicated.

(HI,xnγ) 2001We13,1997ScZU,1984Ga21 (continued)

$\gamma(^{124}Xe)$

α(K)exp is from 1982Ha44 normalized to theoretical E2 value for 354γ, unless otherwise indicated.

$\gamma(\theta)$ data (1982GaZH,1982Ha44,1998Sa25. Others: 1983Ku04,1975Ku05)

1982GaZH			1982Ha44			1998Sa25					
Eγ	A_2	A_4	Eγ	A_2	A_4	Eγ	A_2	A_4			
184.0	-0.594 *10*	+0.234 *7*	184.3	-0.40 *4*	-0.07 *6*						
302.1	-0.80 *4*	+0.119 *14*	302.3	-0.90 *10*	+0.33 *15*	302	-0.67 *10*	+0.15 *9*			
350.4	-0.67 *3*	+0.06 *4*									
353.9	+0.237 *4*	-0.049 *2*	354.2	+0.14 *1*	-0.10 *2*	354	+0.19 *4*	-0.04 *4*			
368.8	-0.55 *6*	+0.038 *10*									
398.7	-0.687 *14*	+0.077 *4*	399.1	+0.19 *2*	-0.01 *2*	399	-0.39 *6*	-			
			401.2	+0.10 *2*	-0.01 *2*	401	+0.12 *11*	+0.14 *12*			
471.8	+0.184 *25*	-0.005 *5*							472	+0.20 *13*	-0.17 *15*
486.1	+0.277 *21*	-0.033 *8*							486	+0.51 *7*	+0.19 *8*
			492.6	-0.032 *5*	-0.03 *1*	493	+0.02 *6*	+0.12 *7*			
524.7	+0.275 *4*	-0.017 *1*	524.9	+0.21 *1*	-0.09 *2*						
			559.1	-0.05 *2*	-0.07 *3*						
						564	+0.22 *10*	+0.13 *11*			
589.0	+0.272 *14*	-0.037 *6*	589.4	+0.31 *7*	-0.05 *9*	589	+0.30 *9*	-0.07 *11*			
591.3	+0.241 *11*	+0.016 *17*	591.4	+0.09 *6*	-0.11 *8*	591	+0.15 *10*	+0.04 *11*			
			595.8	+0.06 *2*	+0.03 *3*						
			625.2	-0.13 *3*	+0.01 *4*	625	-0.25 *7*	-			
652.5	+0.312 *19*	+0.004 *5*							652	+0.39 *13*	-0.05 *15*
659.0	+0.110 *8*	-0.014 *3*									
669.5	+0.284 *5*	-0.023 *2*	669.6	+0.26 *3*	-0.10 *4*						
674.6	+0.216 *14*	-0.04 *5*									
675.3	+0.330 *19*	-0.037 *8*							675	+0.28 *3*	-
705.5	+0.246 *14*	+0.003 *6*	706.1	+0.40 *9*	-0.06 *13*						
711.6	+0.293 *10*	-0.007 *8*									
729.5	+0.308 *18*	-0.008 *7*									
737.6	+0.282 *15*	-0.028 *19*	737.7	+0.27 *1*	-0.10 *2*	738	+0.20 *6*	-			
						754	+0.39 *9*	-0.09 *10*			
757.5	+0.37 *4*	-0.005 *20*									
768.4	+0.251 *22*	-0.018 *7*	768.6	+0.30 *4*	-0.04 *5*	769	+0.22 *11*	+0.01 *11*			
775.6	+0.300 *15*	-0.044 *7*							776	+0.14 *10*	-
782.5	+0.292 *5*	-0.029 *2*	782.7	+0.29 *2*	-0.08 *3*						
816.5	-0.23 *3*	+0.028 *6*	816.9	-0.27 *5*	-0.13 *7*	816	-0.26 *9*	+0.03 *9*			
835.0	+0.300 *21*	+0.051 *10*									
840.1	+0.279 *8*	-0.015 *3*	840.5	+0.15 *4*	-0.08 *6*						
846.4	+0.124 *9*	-0.012 *2*							846	+0.26 *6*	+0.12 *6*
852.8	+0.274 *14*	+0.03 *4*									
893.5	+0.350 *14*	+0.102 *9*	893.9	+0.27 *1*	+0.02 *2*	894	+0.24 *11*	+0.08 *12*			
896.6	+0.10 *5*	-0.018 *23*									
			943.0	+0.24 *6*	-0.06 *9*						
			958.2	+0.48 *1*	+0.03 *2*						
1076.9	-0.222 *11*	+0.034 *3*	1077.4	-0.20 *1*	+0.01 *2*	1077	-0.20 *6*	+0.07 *6*			

$^{124}_{54}Xe_{70}$-5

1127.2 -0.118 *16* 0.000 *3* 1127.6 -0.23 *1* -0.04 *2* 1127 -0.15 *9* -0.10 *9*

E_i(level)	J_i^π	E_γ[†]	I_γ[#]	E_f	J_f^π	Mult.[&]	δ[&]	α[c]	Comments
353.95	2^+	353.90 *9*	100	0.0	0^+	E2		0.0249	α(K)=0.0207 *7*; α(L)=0.00334 *10*; α(M)=0.00068 *2*; α(N+..)=0.00017 *1*
846.50	2^+	492.48 *12*	100 *10*	353.95	2^+	M1+E2	+8 *+8−2*	0.0094	α=0.0094; α(K)=0.00795 *3*; α(L)=0.00116; α(M)=0.00024 δ: from 2001We13. others:+100 *+∞−90* or −0.42 *8* (1982Ha44); +6.3 *+5.3−2.0* (1975Ku05); −0.38 *+25−55* (1998Sa25). α(K)exp=0.0068 *4*.
		846.60 *15*	36 *4*	0.0	0^+	E2[b]			from adopted gammas.
878.76	4^+	524.78 *9*	100	353.95	2^+	E2		0.00793	α=0.00793; α(K)=0.00666 *20*; α(L)=0.00095 *3* α(K)exp=0.0071 *2*.
1247.61	3^+	368.85 *15*	13 *2*	878.76	4^+	D(+Q)[b]			δ: +0.21 *3* or +3.85 *+57−45*(2001We13). δ listed as +0.21 *19* in table 4 of 2001We13 is a misprint. See also 123TE(3HE,2NG):XUNDL-2.
		401.05 *15*	61 *6*	846.50	2^+	M1+E2	+0.32 *5*	0.0192 *1*	α(K)=0.0166 *1*; α(L)=0.00215; α(M)=0.00043; α(N+..)=0.00011 δ: others:+16 *+16−8* or +7.8 *+79−26* (2001We13), 0.14 *+43−3* (1998Sa25). α(K)exp=0.016 *2*.
		893.70 *15*	100 *10*	353.95	2^+	M1+E2	+0.73 *6*	0.00257 *3*	α=0.00257 *3*; α(K)=0.00221 *2*; α(L)=0.00028 δ: other: +3.4 *+5−4*(2001We13); +0.31 *+55−12* (1998Sa25). α(K)exp=0.0018 *3*.
1269.01	0^+	422.4 *3*	10 *4*	846.50	2^+				
		915.1 *3*	100 *12*	353.95	2^+				
1437.89	4^+	559.10 *17*	44 *4*	878.76	4^+	M1+E2	+2.3 *+8−4*	0.00699 *13*	α=0.00699 *13*; α(K)=0.00591 *12*; α(L)=0.00081 *1* δ: from 2001We13. Others: δ=+5 *+5−1* or −0.7 *2*, from $\gamma(\theta)$ and α(K)exp. α(K)exp=0.0077 *5*;
		591.43 *15*	100 *10*	846.50	2^+	E2		0.00575	α=0.00575; α(K)=0.00485 *15*; α(L)=0.00068 *2* α(K)exp=0.0055 *4*.
		1083.90 *21*	2 *1*	353.95	2^+				
1548.31	6^+	669.56 *9*	100	878.76	4^+	E2		0.00418	α=0.00418; α(K)=0.00354 *11*; α(L)=0.00048 *2* α(K)exp=0.0037 *3*.
1628.48	2^+	359.4 *3*	20 *11*	1269.01	0^+				
		749.6 *3*	39 *7*	878.76	4^+				
		782.0 *3*	26 *8*	846.50	2^+				
		1274.6 *3*	46 *8*	353.95	2^+				
		1628.6 *3*	100 *16*	0.0	0^+				
1836.85	5^+	288.5 *3*	2 *1*	1548.31	6^+				
		399.00 *15*	14 *2*	1437.89	4^+	M1+E2	+5.2 *+26−13*	0.0173 *1*	α(K)=0.0145 *1*; α(L)=0.00224; α(M)=0.00046; α(N+..)=0.00011 δ: from 2001We13. other: δ=+0.35 *5*(from $\gamma(\theta)$ and α(K)exp); δ=−0.08 *+8−24*(1998Sa25). α(K)exp=0.017 *4*.
		589.23 *15*	100 *10*	1247.61	3^+	E2		0.00581	α=0.00581; α(K)=0.00490 *15*; α(L)=0.00068 *2* α(K)exp=0.0060 *4*.
		958.25 *23*	30 *3*	878.76	4^+	M1+E2	+1.0 *+5−3*	0.00210 *12*	α=0.00210 *12*; α(K)=0.00180 *11*; α(L)=0.00023 *1*

$^{124}_{54}Xe_{70}$-6

(HI,xnγ) 2001We13,1997ScZU,1984Ga21 (continued)

γ(^{124}Xe) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[#]	E_f	J_f^π	Mult.[&]	δ[&]	α[c]	Comments
									δ: other: +1.67 +27−22 or +0.62 +14−9 (2001We13). α(K)exp=0.0017 3.
1873.32	(4+)	435.5 3	32 9	1437.89	4+				
		625.8 3	86 11	1247.61	3+	D+Q			Mult.,δ: 0.24 +7−7 or 3.4 +10−9 (2001We13).
		994.4 3	52 9	878.76	4+	D+Q	−0.18 +19−21		Mult.,δ: from 2001We13.
		1026.9 3	100 12	846.50	2+				
1897.93	3(−)	1544.0 3	100	353.95	2+	D+Q	+0.05 +3−3		Mult.,δ: from 2001We13.
1994.24		1147.7 3		846.50	2+				
		1640.3 3		353.95	2+				
2014.61	4(+)	386.2 3	8 3	1628.48	2+				
		1135.8 3	27 6	878.76	4+				
		1660.6 3	100 13	353.95	2+	Q			
2143.65	6+	595.5 3	23 3	1548.31	6+	M1+E2	−0.54 +12−18	0.00700 14	α=0.00700 14; α(K)=0.0060 2; α(L)=0.00076 1 α(K)exp=0.0037 7.
		705.73 15	100 10	1437.89	4+	E2		0.00366	α=0.00366; α(K)=0.00311 10; α(L)=0.00042 1
		1264.8 3	10 2	878.76	4+				
2164.9		1810.9 3	100	353.95	2+				
2205.1	(2+)	1358.6 3	100	846.50	2+				
2222.70	(4,5)	324.8 3	<13	1897.93	3(−)				
		975.1 3	22 6	1247.61	3+				
		1343.9 3	100 14	878.76	4+				
2226.20	5(−)	1347.35 21	100	878.76	4+	D(+Q)	+0.02 +10−6		Mult.,δ: from 2001We13.
2279.2		1400.4 3	100	878.76	4+				
2281.5		1033.9 3	100	1247.61	3+				
2290.7		1444.2 3	100	846.50	2+				
2330.90	8+	782.58 9	100	1548.31	6+	E2		0.00285	α=0.00285; α(K)=0.00243 8; α(L)=0.00032 1 α(K)exp=0.0027 5.
2360.54	5(+)	487.3 3	27 8	1873.32	(4+)				
		523.8 3		1836.85	5+				
		922.5 3	26 7	1437.89	4+				
		1112.8 3	100 17	1247.61	3+	Q			
2367.1		1488.3 3	100	878.76	4+				
2380.8	5	942.9 3	100	1437.89	4+	D+Q			E_γ: from 2001We13 and assumed an uncertainty of 0.3 keV. Mult.,δ: from 2001We13; δ=+0.08 +3−6 or 11 +21−3. α(K)exp=0.0014 3 for γ942.8+γ942.9.
2508.8	(5,6)	1630.0 3	100	878.76	4+				
2531.73	6(+)	388.2[d] 3		2143.65	6+				
		658.4 3		1873.32	(4+)				
		695.0 3		1836.85	5+				
		983.3 3		1548.31	6+	M1+E2	−0.76 +18−22		Mult.,δ: from 2001We13 and large mixing ratio.
2536.4		1288.8 3	100	1247.61	3+				
2574.59	7+	431.0 3	<5	2143.65	6+				E_γ: from 2001We13 and assumed an uncertainty of 0.3 keV.

$^{124}_{54}Xe_{70}$-7

(HI,xnγ) **2001We13,1997ScZU,1984Ga21 (continued)**

$\gamma(^{124}Xe)$ (continued)

E_i(level)	J_i^π	E_γ †	I_γ #	E_f	J_f^π	Mult.&	δ&	αc	Comments
2574.59	7^+	737.70 *15*	100 *11*	1836.85	5^+	E2		0.00329	α=0.00329; α(K)=0.00279 *9*; α(L)=0.00037 *1* α(K)exp=0.0033 *5*.
2578.58	$6^{(-)}$	741.77 *17*	100 *11*	1836.85	5^+	D(+Q)b			
		1030.30 *17*	26 *5*	1548.31	6^+	D+Qb			
2600.5		1721.7 *3*	100	878.76	4^+				
2625.4		788.5 *3*	100	1836.85	5^+				
2625.46	7^-	399.25 *21*	<4	2226.20	$5^{(-)}$				
		1077.15 *12*	100 *10*	1548.31	6^+	E1		0.00060	α=0.00060; α(K)=0.00052 *2* α(K)exp=0.0005 *2* (1982Ha44); 0.00068 *14* (1984Ga21).
2644.82		422.2 *3*		2222.70	(4,5)				
		1207.0 *3*		1437.89	4^+				
		1397.3 *3*		1247.61	3^+				
		1765.8 *3*		878.76	4^+				
2647.54	6	421.4 *3*	16 *6*	2226.20	$5^{(-)}$				
		424.8 *3*	36 *8*	2222.70	(4,5)				
		810.6 *3*	73 *13*	1836.85	5^+	D+Q			Mult.: from 2001We13; δ=−11 *+10−7* or<−10.5.
		1099.1 *3*	100 *15*	1548.31	6^+	D+Q	−0.21 *+19−21*		Mult.,δ: from 2001We13.
2675.69	$7^{(-)}$	449.3 *3*	7 *3*	2226.20	$5^{(-)}$				
		1127.38 *15*	100 *11*	1548.31	6^+	(E1)		0.00055	α=0.00055; α(K)=0.00048 *2* Mult.: D+Q from $\gamma(\theta)$ In 2001We13; δ=−0.08 *+3−6*. α(K)exp=0.0005 *2*.
2682.50		809.2 *3*		1873.32	(4^+)				
		1803.7 *3*		878.76	4^+				
2700.45		685.8 *3*		2014.61	$4^{(+)}$				
		1821.7 *3*		878.76	4^+				
2728.9		1850.1 *3*	100	878.76	4^+				
2768.60	7^+	624.90 *17*		2143.65	6^+	M1(+E2)	+0.05 *5*	0.00657 *1*	α=0.00657 *1*; α(K)=0.00564 *1*; α(L)=0.00070 δ: other: ∞ or −0.05 *6* (2001We13). α(K)exp=0.0033 *10*.
		931.9 *3*		1836.85	5^+				
2778.8		1230.5 *3*	100	1548.31	6^+				
2809.54	8^-	184.15 *15*	100 *10*	2625.46	7^-	M1+E2	−2.52 *12*	0.206 *1*	α(K)=0.162 *1*; α(L)=0.0345 *3*; α(M)=0.00717 *6*; α(N+..)=0.00174 *1* δ: from 2001We13; other: −0.14 *8* (from $\gamma(\theta)$ and α(K)exp), −1.8(1997ScZU). α(K)exp=0.105 *20*.
		478.55 *21*	2 *1*	2330.90	8^+				
2867.2		1318.9 *3*	100	1548.31	6^+				
2869.2		1032.3 *3*		1836.85	5^+				
2900.0	6	1063.1 *3*	100	1836.85	5^+	D(+Q)	−0.02 *+6−10*		Mult.,δ: from 2001We13.
2912.06	8^+	768.40 *17*	100	2143.65	6^+	E2		0.00298	α=0.00298; α(K)=0.00253 *8*; α(L)=0.00034 *1* α(K)exp=0.0036 *6*.
2958.9		1410.6 *3*	100	1548.31	6^+				

$^{124}_{54}Xe_{70}$-8

(HI,xnγ) 2001We13,1997ScZU,1984Ga21 (continued)

$\gamma(^{124}Xe)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[#]	E_f	J_f^π	Mult.[&]	δ[&]	α[c]	Comments
2984.0		1435.7 *3*	100	1548.31	6^+				
3013.1	(8)	682.2 *3*	100	2330.90	8^+				
3026.13	(7^+)	451.7 *3*		2574.59	7^+				
		665.5 *3*		2360.54	$5^{(+)}$				
		882.5 *3*		2143.65	6^+				
		1189.4 *3*		1836.85	5^+				
		1477.6 *3*		1548.31	6^+				
3032.0		1483.7 *3*	100	1548.31	6^+				
3070.9		1522.6 *3*	100	1548.31	6^+				
3095.44	$8^{(-)}$	419.70 *17*	100 *13*	2675.69	$7^{(-)}$	M1+E2[b]	−1.0 *+5−8*		δ: from 2001We13 and large mixing ratio.
		516.93 *18*	73 *10*	2578.58	$6^{(-)}$	Q[b]			
		764.6 *3*	66 *15*	2330.90	8^+				
3110.0		462.5 *3*	100	2647.54	6				
3111.75	9^-	302.18 *15*	100 *10*	2809.54	8^-	M1+E2	−0.81 *11*	0.0406 *1*	α(K)=0.0344 *1*; α(L)=0.00498 *9*; α(M)=0.00101 *2*; α(N+..)=0.00025 *1* δ: from 2001We13. Others: −2.1(1997ScZU), −1.1 *+7−11* (from $\gamma(\theta)$ and α(K)exp), −0.32 *+20−54* (1998Sa25). α(K)exp=0.030 *5*.
		486.20 *17*	70 *7*	2625.46	7^-	E2		0.0097	α(K)=0.00820 *25*; α(L)=0.00120 *4*; α(M)=0.00024 *1* Mult.: $\gamma(\theta)$ and RUL.
3131.8		484.1 *3*		2647.54	6				
		557.4 *3*		2574.59	7^+				
3147.66	$9^{(-)}$	471.97 *17*	30 *3*	2675.69	$7^{(-)}$	E2[b]			Mult.: from $\gamma(\theta)$ and RUL. M=D+Q from $\gamma(\theta)$ In 1998Sa25; δ=−0.15 *+30−65*.
		816.73 *15*	3100 *10*	2330.90	8^+	(E1)		0.00102	α=0.00102; α(K)=0.00088 *3*; α(L)=0.00011 Mult.: from α(K)exp in 1984Ga21, but α(K)exp in 1982Ha44 indicated M1+E2. α(K)exp=0.00074 *30* (1984Ga21). other: 0.0019 *4*. (1982Ha44).
3171.27	10^+	840.35 *11*	100	2330.90	8^+	E2		0.00242	α=0.00242; α(K)=0.00206 *7*; α(L)=0.00027 *1* α(K)exp=0.0022 *4*.
3241.3		593.7 *3*		2647.54	6				
		666.8[d] *3*		2574.59	7^+				
		910.4 *3*		2330.90	8^+				
3273.7	$9^{(-)}$	942.8 *3*	100	2330.90	8^+				E_γ: from 2001We13 and assumed an uncertainty of 0.3 keV. α(K)exp=0.0014 *3* for γ942.8+γ942.9.
3343.86	(9^+)	769.27 *17*	100	2574.59	7^+	(Q)[b]			
3462.23	$10^{(-)}$	350.47 *17*	30 *3*	3111.75	9^-	D			Mult.: from $\gamma(\theta)$.
		652.63 *17*	100 *10*	2809.54	8^-	Q[b]			
3476.5		1145.6 *3*	100	2330.90	8^+				
3502.31	(10^+)	331.20 *17*	29 *4*	3171.27	10^+	(D+Q)[b]			
		1171.53 *17*	100 *11*	2330.90	8^+	(Q)[b]			

$^{124}_{54}Xe_{70}$-9

(HI,xnγ) 2001We13,1997ScZU,1984Ga21 (continued)

$\gamma(^{124}Xe)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[#]	E_f	J_f^π	Mult.[&]	α[c]	Comments
3557.0		982.45 *21*	100	2574.59	7^+			
3669.7	(10^+)	757.67 *17*	100	2912.06	8^+	(Q)[b]		
3676.62		564.70 *21*		3111.75	9^-			
		867.25 *21*		2809.54	8^-			
3717.21	$10^{(-)}$	569.53 *17*	100 *10*	3147.66	$9^{(-)}$	D(+Q)[b]		
		621.80 *17*	53 *6*	3095.44	$8^{(-)}$	Q[b]		
3787.09	$11^{(-)}$	675.33 *17*	100	3111.75	9^-	Q[b]		
3822.46	$11^{(-)}$	651.20 *17*	9 *1*	3171.27	10^+	D[b]		
		674.77 *17*	100 *10*	3147.66	$9^{(-)}$	(E2)	0.00410	α=0.00410; α(K)=0.00347 *11*; α(L)=0.00047 *2* Mult.: from $\gamma(\theta)$ and RUL.
3882.91	$12^{(+)}$	380.8 *3*	2 *1*	3502.31	(10^+)	(E2)[b]		Mult.: from $\gamma(\theta)$ and RUL.
		711.53 *12*	100 *10*	3171.27	10^+	(E2)	0.00359	α=0.00359; α(K)=0.00305 *10*; α(L)=0.00041 *1* Mult.: from $\gamma(\theta)$ and RUL.
3955.9	(11^-)	682.20 *21*	100	3273.7	$9^{(-)}$			
4002.9	(11^+)	659.00 *17*	100	3343.86	(9^+)	(Q)[b]		
4216.02	$12^{(-)}$	428.6 *3*	22 *3*	3787.09	$11^{(-)}$	D(+Q)[b]		
		753.73 *17*	100 *11*	3462.23	$10^{(-)}$	Q[b]		
4299.00	(12^+)	416.00 *21*	23[@]	3882.91	$12^{(+)}$	(D+Q)[b]		
		797.4 *3*	57[@]	3502.31	(10^+)	(Q)[b]		
		1127.70 *21*	100[@]	3171.27	10^+	(Q)[b]		
4421.24	$12^{(-)}$	598.80 *21*	63[@]	3822.46	$11^{(-)}$	D(+Q)[b]		
		704.05 *25*	100[@]	3717.21	$10^{(-)}$	Q[b]		
4573.90	$13^{(-)}$	357.6 *3*	9.7[@]	4216.02	$12^{(-)}$	D(+Q)[b]		
		786.95 *21*	100[@]	3787.09	$11^{(-)}$	Q[b]		
4598.24	$13^{(-)}$	177.2 *3*	1[@]	4421.24	$12^{(-)}$	D(+Q)[b]		
		775.75 *21*	100[@]	3822.46	$11^{(-)}$	(E2)	0.00291	α=0.00291; α(K)=0.00248 *8*; α(L)=0.00033 *1* Mult.: from $\gamma(\theta)$ and RUL.
4612.6	$14^{(+)}$	729.55 *21*	100[@]	3882.91	$12^{(+)}$	Q[b]		
4743.1	(13^+)	740.2 *3*	100[@]	4002.9	(11^+)	(Q)[b]		
4759.7?	(13^-)	803.8 *3*		3955.9	(11^-)			
4875.8		1088.9 *3*	100[@]	3787.09	$11^{(-)}$			
5049.76	(12^+)	751.0 *3*	100[@]	4299.00	(12^+)	(D+Q)[b]		
		1262.5 *3*	20[@]	3787.09	$11^{(-)}$	(D(+Q))[b]		
5067.8	$14^{(-)}$	494.0 *3*	6.7[@]	4573.90	$13^{(-)}$	D(+Q)[b]		
		851.65 *21*	100[@]	4216.02	$12^{(-)}$	Q[b]		
5114.2	(14^+)	501.4 *3*	28[@]	4612.6	$14^{(+)}$	(D+Q)[b]		
		815.5 *3*	100[@]	4299.00	(12^+)	(Q)[b]		

$^{124}_{54}Xe_{70}$-10

(HI,xnγ) 2001We13,1997ScZU,1984Ga21 (continued)

γ(^{124}Xe) (continued)

E_i(level)	J_i^π	E_γ †	I_γ #	E_f	J_f^π	Mult.&	δ&	α c	Comments
5182.0	$14^{(-)}$	584.0 *4*	16@	4598.24	$13^{(-)}$	D(+Q)b			
		760.70 *21*	100@	4421.24	$12^{(-)}$	Qb			
5290.3	$13^{(+)}$	240.7 *3*	100@	5049.76	(12^+)	M1+E2a	−0.14a *3*	0.0737 *1*	α(K)=0.0633 *1*; α(L)=0.0083 *1*; α(M)=0.00167 *1*; α(N+..)=0.00042
		1074.3 *3*	91@	4216.02	$12^{(-)}$	(D(+Q))b			
5433.4	$15^{(-)}$	251.4 *3*	3.0@	5182.0	$14^{(-)}$	D(+Q)b			
		835.15 *21*	100@	4598.24	$13^{(-)}$	(E2)		0.00245	α=0.00245; α(K)=0.00209 *7*; α(L)=0.00027 *1* Mult.: from γ(θ) and RUL.
5462.4	(15^-)	888.5 *3*	100@	4573.90	$13^{(-)}$	(Q)b			E_γ: from 1997ScZU and assumed an uncertainty of 0.3 keV.
5465.6	$16^{(+)}$	852.95 *21*	100@	4612.6	$14^{(+)}$	Qb			
5518.8	14	643.1 *3*	33@	4875.8					
		944.6 *3*	100@	4573.90	$13^{(-)}$	D(+Q)b			
		1219.7 *3*	100@	4299.00	(12^+)				
5551.8	$14^{(+)}$	261.6 *3*	100@	5290.3	$13^{(+)}$	M1+E2a	−0.14a *3*	0.0591 *1*	α(K)=0.0508; α(L)=0.00660 *3*; α(M)=0.00133 *1*; α(N+..)=0.00034
		502.0 *3*	39@	5049.76	(12^+)	Qb			
		978.0 *3*	39@	4573.90	$13^{(-)}$	(D(+Q))b			
5592.6	(15^+)	849.50 *21*	100@	4743.1	(13^+)	(Q)b			
5827.4	$15^{(+)}$	275.9 *3*	100@	5551.8	$14^{(+)}$	M1+E2a	−0.14a *3*	0.0513	α(K)=0.0441; α(L)=0.00572 *2*; α(M)=0.00115 *1*; α(N+..)=0.00029
		308.5 *3*	37@	5518.8	14	M1+E2a	−0.17a *3*	0.0382	α(K)=0.0329; α(L)=0.00426 *1*; α(M)=0.00086; α(N+..)=0.00022
		537.0 *3*	0.4@	5290.3	$13^{(+)}$	Qb			
		759.5 *3*	7.8@	5067.8	$14^{(-)}$	(D(+Q))b			
5938.0	(16^+)	472.2 *3*	41@	5465.6	$16^{(+)}$	(D+Q)b			
		823.8 *3*	100@	5114.2	(14^+)	(Q)b			
5974.1	$16^{(-)}$	540.75 *21*	38@	5433.4	$15^{(-)}$	D(+Q)b			
		792.10 *21*	100@	5182.0	$14^{(-)}$	Qb			
6011.6	(16^-)	943.8 *3*	100@	5067.8	$14^{(-)}$	(Q)b			
6134.5	$17^{(-)}$	160.3 *3*	4.7@	5974.1	$16^{(-)}$	D(+Q)b			
		700.6 *21*	100@	5433.4	$15^{(-)}$	Qb			
6153.9	$16^{(+)}$	326.5 *3*	100@	5827.4	$15^{(+)}$	M1+E2a	−0.14a *3*	0.0330	α(K)=0.0284; α(L)=0.00366 *1*; α(M)=0.00073; α(N+..)=0.00019
		602.0 *3*	4.7@	5551.8	$14^{(+)}$	Qb			
6255.3	(16^+)	789.7 *3*	100@	5465.6	$16^{(+)}$				
6438.3	(17^-)	975.9 *3*	100@	5462.4	(15^-)	(Q)b			
6438.5	$18^{(+)}$	973.00 *21*	100@	5465.6	$16^{(+)}$	Qb			
6543.9	(17^+)	951.3 *3*	100@	5592.6	(15^+)	(Q)b			
6553.7	$17^{(+)}$	399.8 *3*	100@	6153.9	$16^{(+)}$	M1+E2a	−0.14a *3*	0.0196	α(K)=0.0169; α(L)=0.00216; α(M)=0.00043; α(N+..)=0.00011
		726.4 *3*	13@	5827.4	$15^{(+)}$	Qb			

$^{124}_{54}Xe_{70}$-11

(HI,xnγ) 2001We13,1997ScZU,1984Ga21 (continued)

$\gamma(^{124}Xe)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[#]	E_f	J_f^π	Mult.[&]	δ[&]	α[c]	Comments
6741.0	$18^{(-)}$	606.40 *21*	100[@]	6134.5	$17^{(-)}$	D(+Q)[b]	−0.14		δ: from 1997ScZU.
		766.9 *3*	20[@]	5974.1	$16^{(-)}$	Q[b]			
6829.0	(18^+)	390.6 *3*	7.3[@]	6438.5	$18^{(+)}$	(D+Q)[b]			
		890.9 *3*	100[@]	5938.0	(16^+)	(Q)[b]			
6984.6	$18^{(+)}$	430.8 *3*	100[@]	6553.7	$17^{(+)}$	M1+E2[a]	−0.17[a] *4*	0.0162	α(K)=0.0140; α(L)=0.00178; α(M)=0.00036
		830.7 *3*	31[@]	6153.9	$16^{(+)}$	Q[b]			
7019.8	(18^-)	1008.2 *3*	100[@]	6011.6	(16^-)	(Q)[b]			
7031.1	$19^{(-)}$	290.1 *3*	22[@]	6741.0	$18^{(-)}$	D(+Q)[b]	−0.14		δ: from 1997ScZU.
		896.70 *21*	100[@]	6134.5	$17^{(-)}$	Q[b]			
7053.0		797.7 *3*	100[@]	6255.3	(16^+)				
7433.1	$19^{(+)}$	448.5 *3*	100[@]	6984.6	$18^{(+)}$	M1+E2[a]	−0.21[a] *3*	0.0146	α(K)=0.0126; α(L)=0.00161; α(M)=0.00032
		879.5 *3*	43[@]	6553.7	$17^{(+)}$	Q[b]			
7452.5?		1014 *1*		6438.5	$18^{(+)}$				E_γ: from 1987Ha03 assuming 1-keV uncertainty.
7481.2	(19^-)	1042.9 *3*	100[@]	6438.3	(17^-)	(Q)[b]			
7523.8	$20^{(+)}$	1085.3 *3*	100[@]	6438.5	$18^{(+)}$	Q[b]			
7556.0	(19^+)	1012.1 *3*	100[@]	6543.9	(17^+)	(Q)[b]			
7626.5	$20^{(-)}$	595.4 *3*	100[@]	7031.1	$19^{(-)}$	D(+Q)[b]	−0.17		δ: from 1997ScZU.
		885.5 *3*	89[@]	6741.0	$18^{(-)}$	Q[b]			
7637.4		606.3 *3*		7031.1	$19^{(-)}$				E_γ: average from 1987Ha03 and 1984Ga21 assuming uncertainties of 1 keV and 0.3 keV, respectively. 1984Ga21 assigned 606.2γ to the transition from 6739 level to 6133 level, but evaluators assume the two γ's are the same.
7811.2	(20^+)	982.2 *3*	100[@]	6829.0	(18^+)	(Q)[b]			
7914.5		861.5 *3*	100[@]	7053.0					
7929.2	$20^{(+)}$	496.3 *3*	100[@]	7433.1	$19^{(+)}$	M1+E2	−0.17 *3*	0.0114	α(K)=0.0098; α(L)=0.00124; α(M)=0.00025
		944.4 *3*	71[@]	6984.6	$18^{(+)}$	Q[b]			
7939.4	$21^{(-)}$	313.1 *3*	18[@]	7626.5	$20^{(-)}$	D(+Q)[b]			
		908.3 *3*	100[@]	7031.1	$19^{(-)}$	Q[b]			E_γ: other:910 (1987Ha03).
8192.8		759.7 *3*	100[@]	7433.1	$19^{(+)}$				
8365.6	$21^{(+)}$	436.1 *3*	89[@]	7929.2	$20^{(+)}$	M1+E2[a]	−0.28[a] *7*	0.0156 *1*	α(K)=0.0134 *1*; α(L)=0.00172; α(M)=0.00035 δ: other: 0.31(1997ScZU). 1997ScZU and 1999Sc20 were from the same experiment, but the values are different.
		932.5 *3*	100[@]	7433.1	$19^{(+)}$	Q[b]			
8484.2		554.9 *3*	100[@]	7929.2	$20^{(+)}$				
8523.0	$22^{(-)}$	583.7 *3*	96[@]	7939.4	$21^{(-)}$	D(+Q)[b]			
		896.3 *3*	100[@]	7626.5	$20^{(-)}$	Q[b]			

$^{124}_{54}Xe_{70}$-12

(HI,xnγ) 2001We13,1997ScZU,1984Ga21 (continued)

$\gamma(^{124}Xe)$ (continued)

E_i(level)	J_i^π	E_γ †	I_γ #	E_f	J_f^π	Mult. &
8570.2	(21^-)	1089‡		7481.2	(19^-)	
8721.7	$22^{(+)}$	1197.9 *3*	100@	7523.8	$20^{(+)}$	Q[b]
8901.0	(22^+)	1089.8 *3*	100@	7811.2	(20^+)	(Q)[b]
8911.4	$22^{(+)}$	546.0 *3*	100@	8365.6	$21^{(+)}$	D(+Q)[b]
		982.4 *3*	20@	7929.2	$20^{(+)}$	Q[b]
8990.6		797.8 *3*	100@	8192.8		
9048.5		564.2 *3*	62@	8484.2		
		1119.4 *3*	100@	7929.2	$20^{(+)}$	
9105.9	$23^{(-)}$	582.9 *3*	100@	8523.0	$22^{(-)}$	D(+Q)[b]
		1166.6 *3*	76@	7939.4	$21^{(-)}$	Q[b]
9483.5	$23^{(+)}$	572.4 *3*	100@	8911.4	$22^{(+)}$	D(+Q)[b]
		1117.5 *3*	83@	8365.6	$21^{(+)}$	Q[b]
9676.0	$24^{(-)}$	570.2 *3*	52@	9105.9	$23^{(-)}$	D(+Q)[b]
9676.0	$24^{(-)}$	1153.0 *3*	100@	8523.0	$22^{(-)}$	Q[b]
9927.1	$24^{(+)}$	443.3 *3*	56@	9483.5	$23^{(+)}$	D(+Q)[b]
		1016.0 *3*	100@	8911.4	$22^{(+)}$	Q[b]
9996.9	$24^{(+)}$	1275.2 *3*	100@	8721.7	$22^{(+)}$	Q[b]
10143.4		1152.8 *3*	100@	8990.6		
10342.6	$25^{(-)}$	666.6 *3*	100@	9676.0	$24^{(-)}$	D(+Q)[b]
		1236.5 *3*	97@	9105.9	$23^{(-)}$	Q[b]
10897.1	$26^{(-)}$	554.5 *3*	21@	10342.6	$25^{(-)}$	D(+Q)[b]
		1221.1 *3*	100@	9676.0	$24^{(-)}$	Q[b]
11241.0	(26^+)	1244‡		9996.9	$24^{(+)}$	
11555.1	$27^{(-)}$	658.0 *3*	95@	10897.1	$26^{(-)}$	D(+Q)[b]
		1212.5 *3*	100@	10342.6	$25^{(-)}$	Q[b]
12772.7	(29^-)	1217.6 *3*	100@	11555.1	$27^{(-)}$	(Q)[b]

† From the average of the data of 2001We13, 1997ScZU, 1984Ga21, 1983Ku04 and 1982Ha44, unless otherwise indicated. The authors have assumed an uncertainty of 0.3 keV to the data of 2001We13, 1997ScZU and 1984Ga21.

‡ Eγ from 1999Sc20.

Relative branching ratio from 2001We13, unless otherwise noted.

@ Relative branching ratios calculated from the intensities in 1997ScZU.

& From $\gamma(\theta)$ and α(K)exp, unless otherwise indicated.

[a] Mult. and δ from 1999Sc20, δ determined by γ angular correlation information.

[b] Mult. assigned by evaluators based on the ΔJ and δ values from 1997ScZU. D for ΔJ=1, δ=0; Q for ΔJ=2; D+Q for ΔJ=1,$\delta\neq$0 or ΔJ=0;D(+Q) for ΔJ=1,δ not given. And the ΔJ and δ were determined by measuring γ angular correlation informations, but the γ angular informations were not given.

[c] 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.

[d] Placement of transition in the level scheme is uncertain.

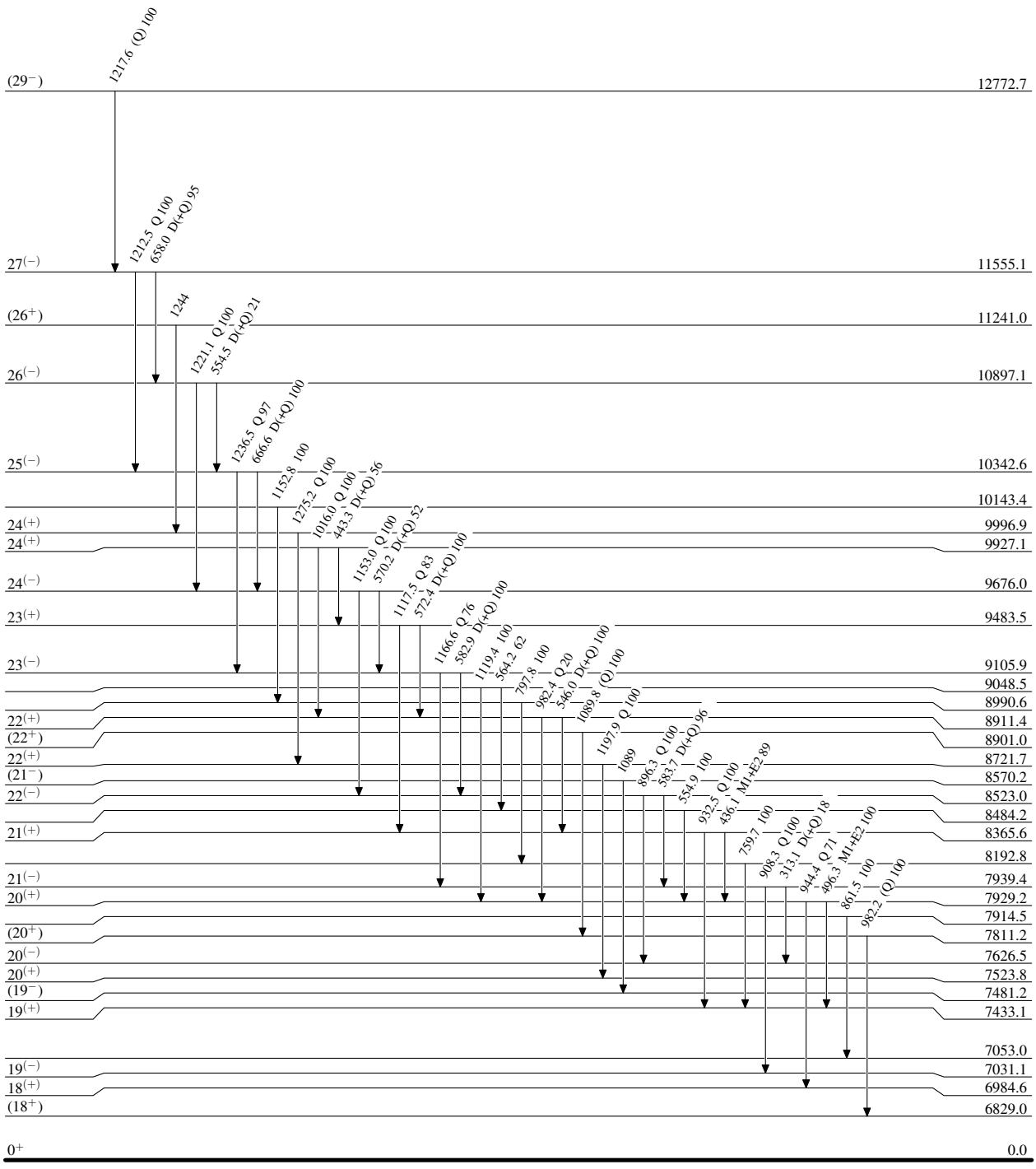
[x] γ ray not placed in level scheme.

$^{124}_{54}Xe_{70}$-13

(HI,xnγ) 2001We13,1997ScZU,1984Ga21

Level Scheme

Intensities: Relative photon branching from each level

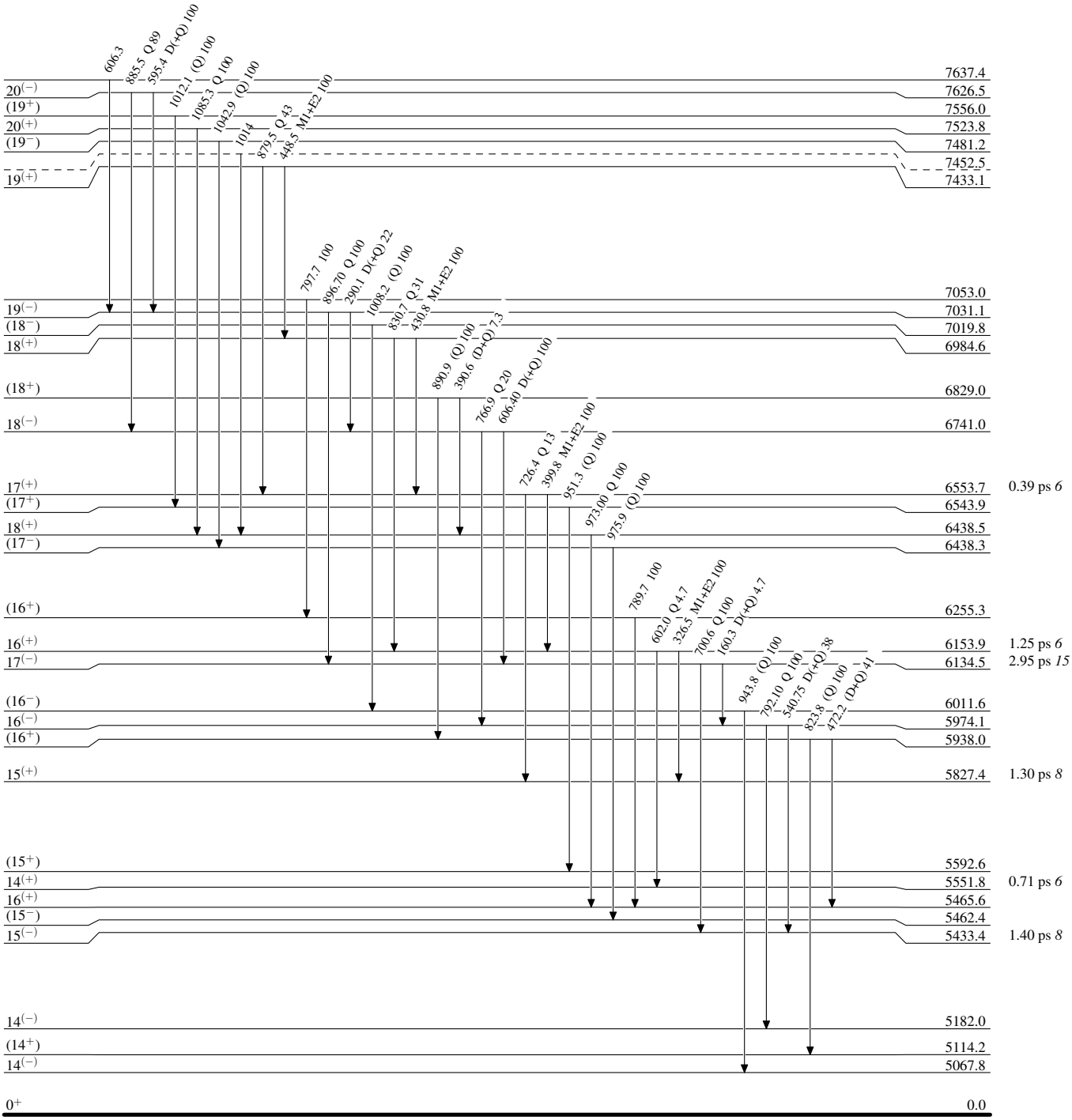


$^{124}_{54}Xe_{70}$

(HI,xnγ) 2001We13,1997ScZU,1984Ga21

Level Scheme (continued)

Intensities: Relative photon branching from each level

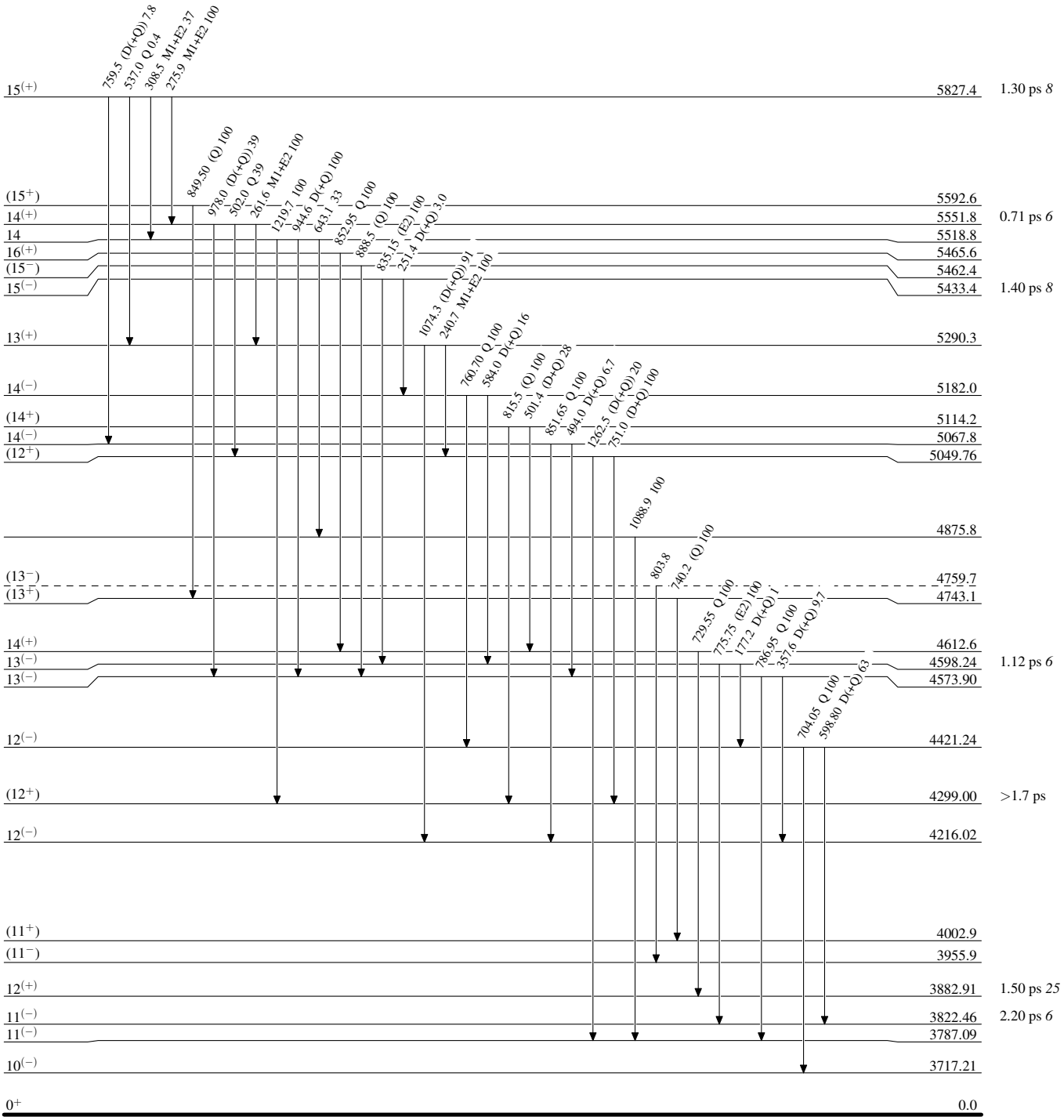


$^{124}_{54}Xe_{70}$

(HI,xnγ) 2001We13,1997ScZU,1984Ga21

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{124}_{54}Xe_{70}$

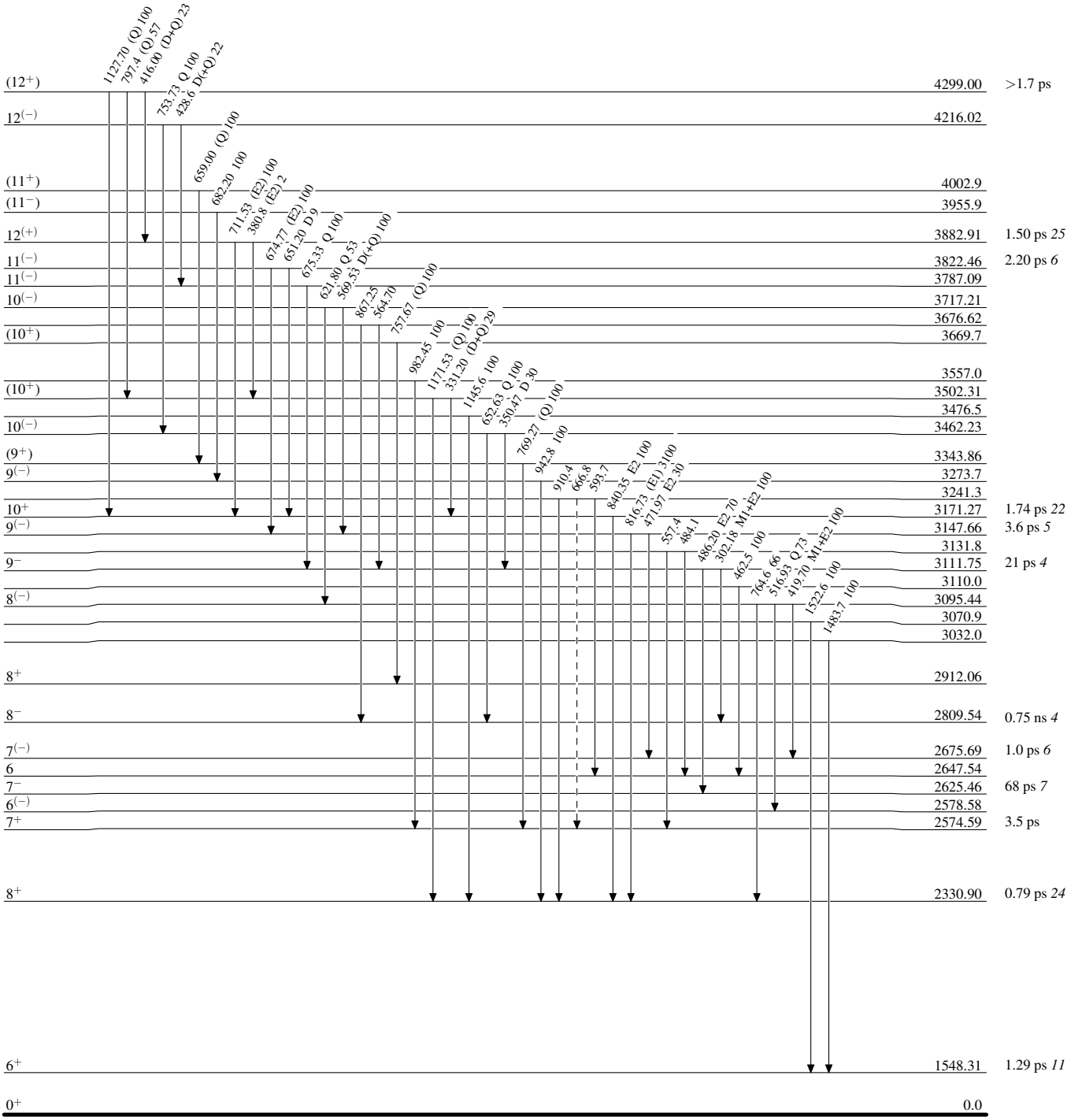
(HI,xnγ) 2001We13,1997ScZU,1984Ga21

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

– – – – – – ► γ Decay (Uncertain)

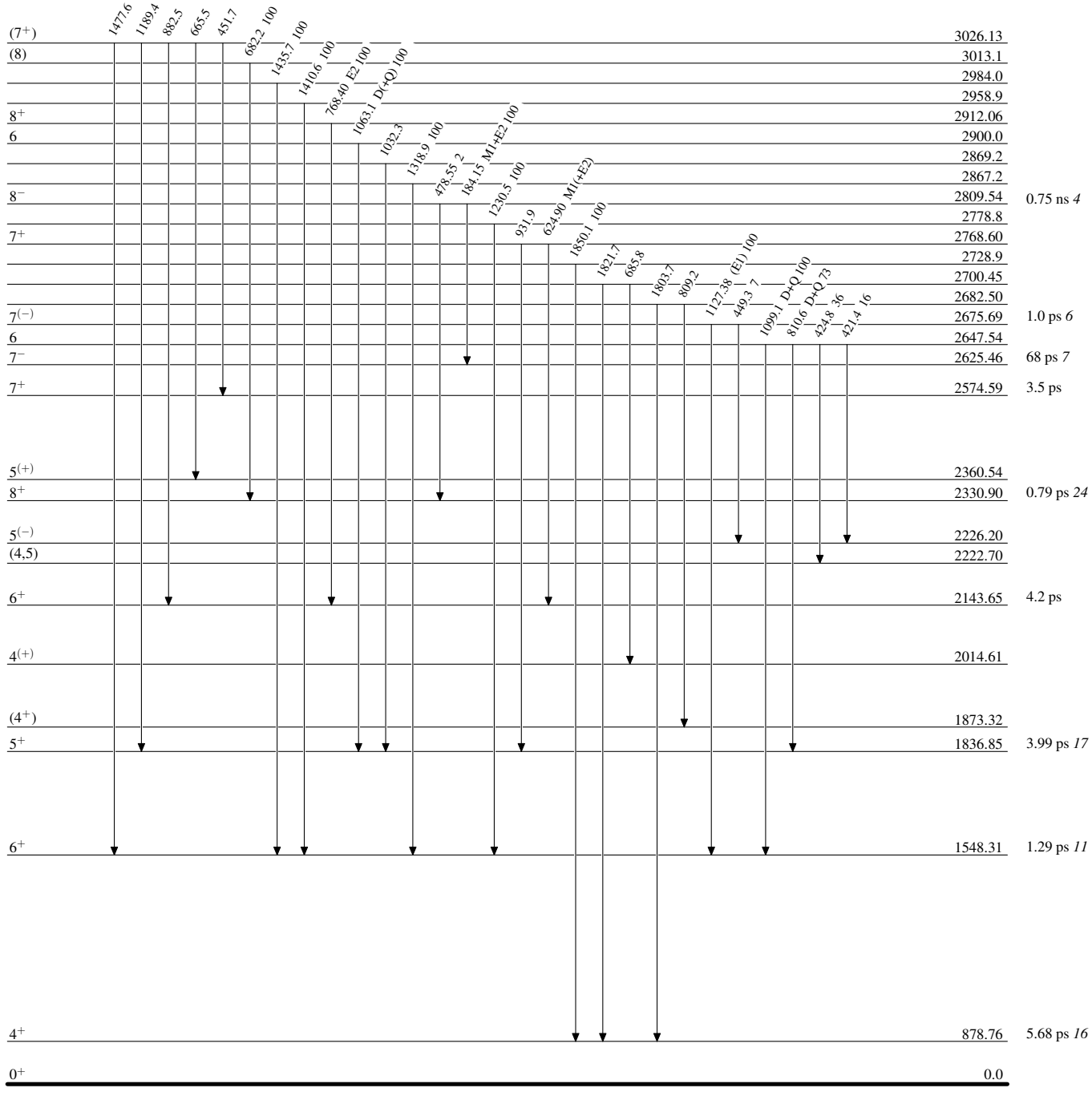


$^{124}_{54}Xe_{70}$

(HI,xnγ) 2001We13,1997ScZU,1984Ga21

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{124}_{54}Xe_{70}$

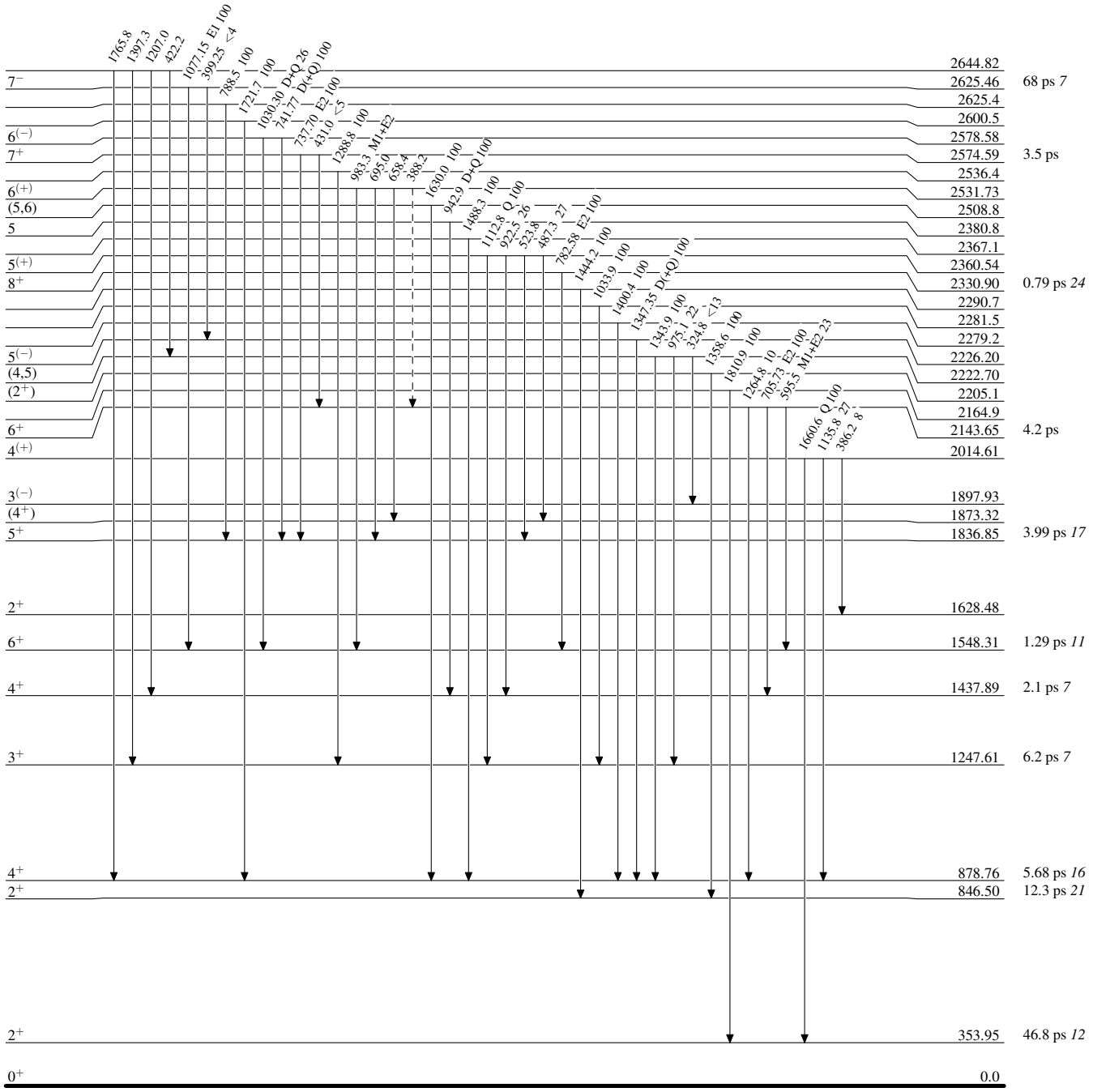
(HI,xnγ) 2001We13,1997ScZU,1984Ga21

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)

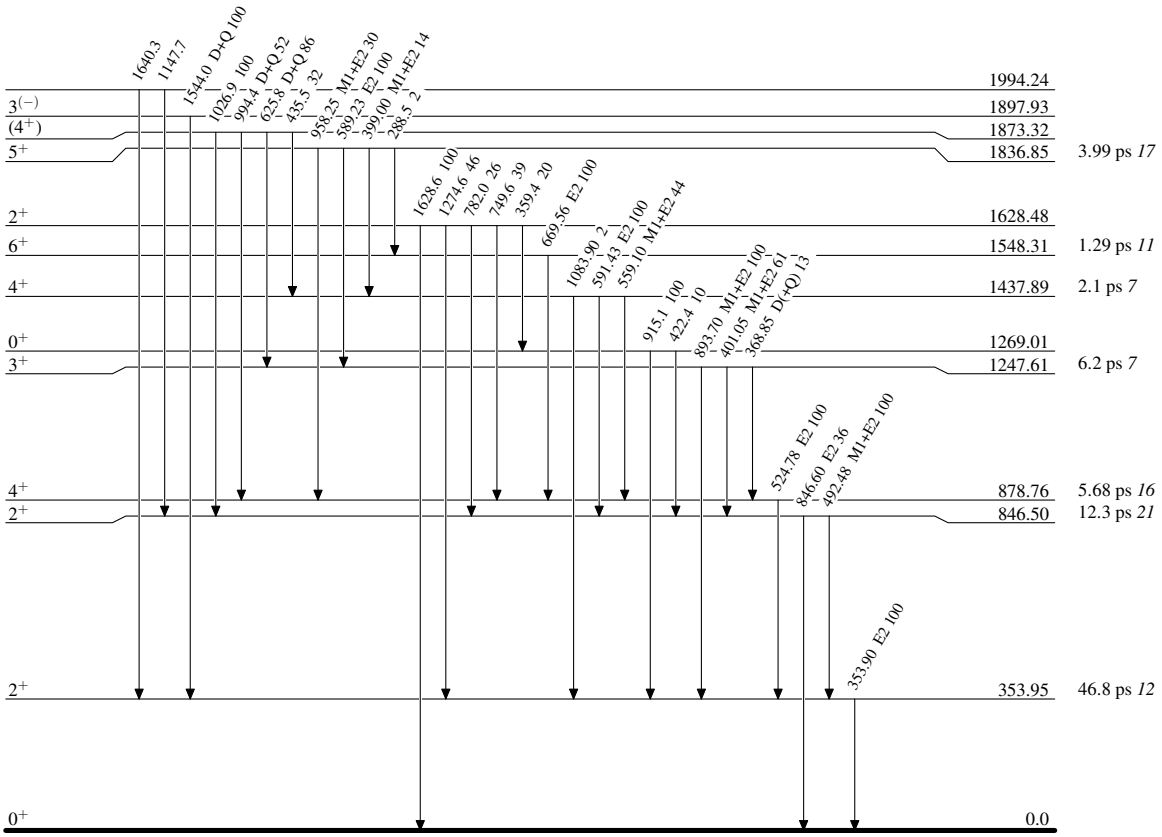


$^{124}_{54}Xe_{70}$

(HI,xnγ) 2001We13,1997ScZU,1984Ga21

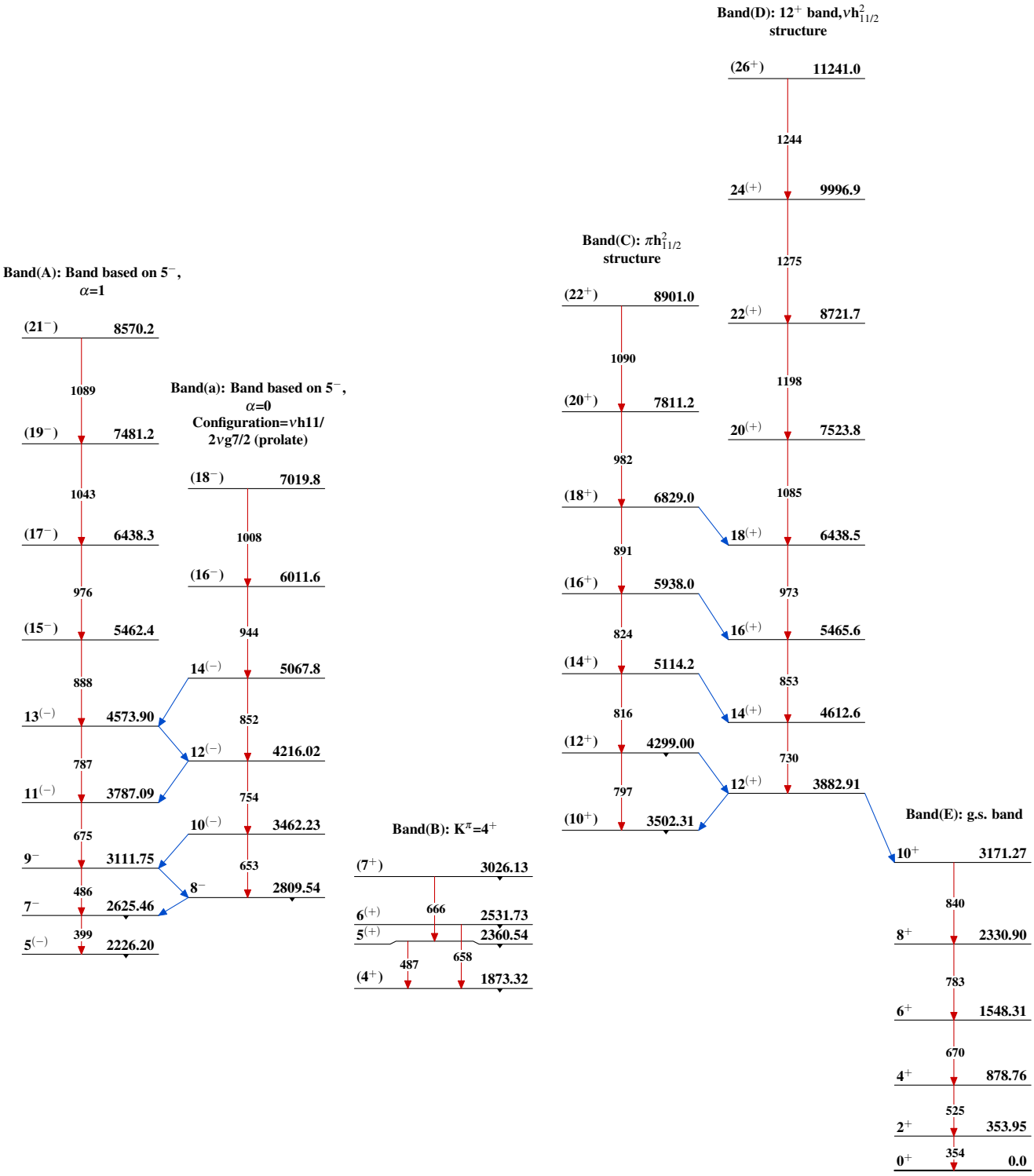
Level Scheme (continued)

Intensities: Relative photon branching from each level



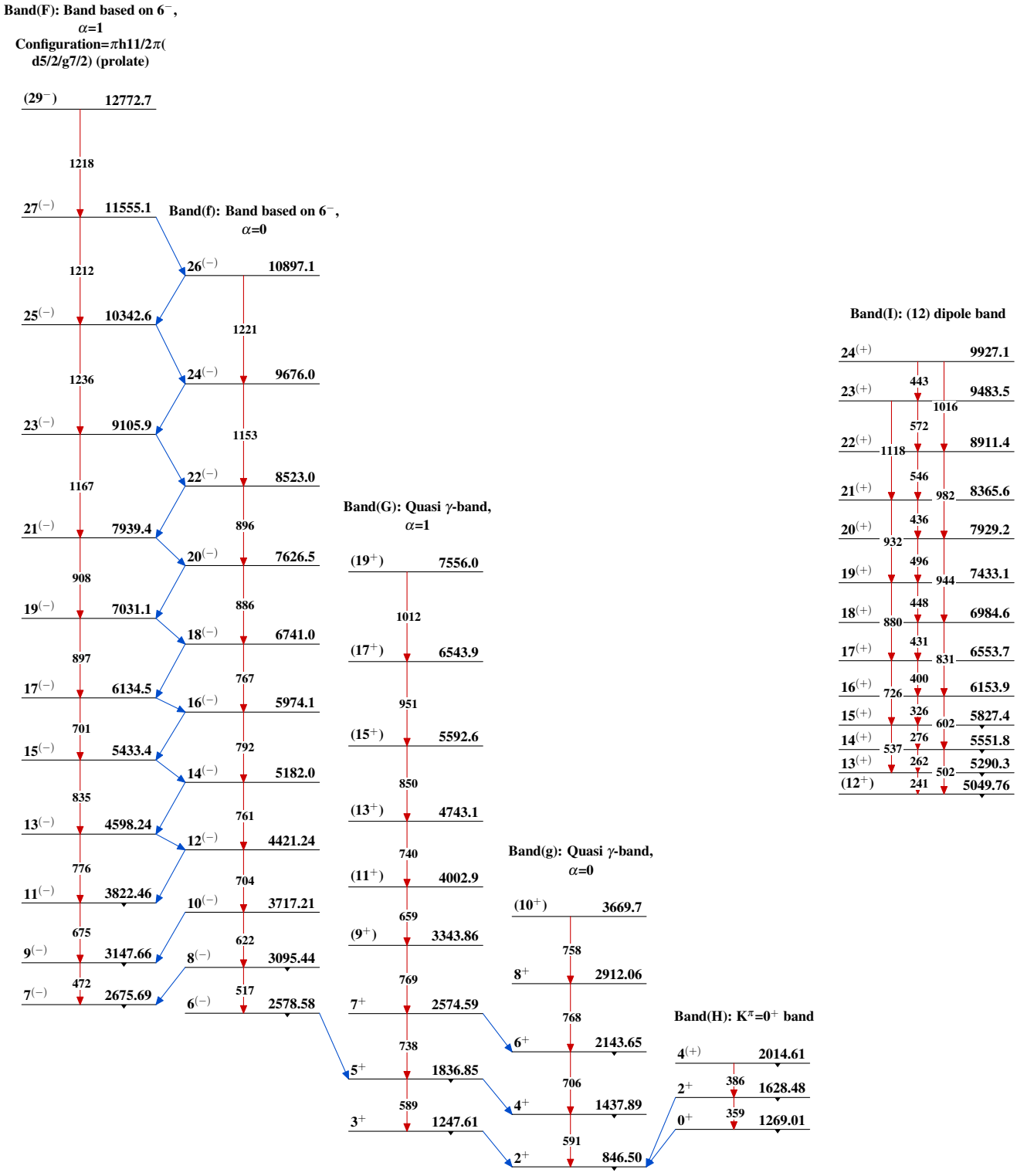
$^{124}_{54}Xe_{70}$

(HI,xnγ) 2001We13,1997ScZU,1984Ga21



$^{124}_{54}Xe_{70}$

(HI,xnγ) 2001We13,1997ScZU,1984Ga21 (continued)



$^{124}_{54}Xe_{70}$