(HI,xnγ) 1996Pi11

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	T. D. Johnson, D. Symochko(a), M. Fadil(b), and J. K. Tuli	NDS 112, 1949 (2011)	1-Jun-2010

1996Pi11: ^{110}Pd(^{37}Cl,5nγ) E=160 MeV. Measured Eγ, Iγ, γγ, γ(anisotropy) using ESSA 30 array.
Includes ^{114}Cd(^{32}S,p3nγ) E=155 MeV (1993Bi13 and 1990Bi07).
The ordering of the following cascades is different in 1990Bi07: 1. 812-908-461-532-820 cascade (1996Pi11) is ordered as 460-532-811-907-820 in 1990Bi07. 2. 127-141-185-219-394-426 cascade (1996Pi11) is ordered as 127-141-185-394-219-426 in 1990Bi07. 3. A 285γ placed from a 3716 level by 1990Bi07 is now assigned (1996Pi11) higher up in the level scheme.

^{142}Eu Levels

E(level)†	Jπ	$T_{1/2}$	Comments
x	8⁻		Additional information 1.
282.60+x *10*	8⁺	6.2 ns *4*	g=0.51 *3* (1993Bi13) $T_{1/2}$: from 1993Bi13. Configuration=$\pi h_{11/2}\nu h^{-1}_{11/2}$ (1993Bi13).
292.70+x *18*	9⁺		
353.20+x *19*	9⁻		
376.29+x *20*	10⁺		
679.4+x *3*	(8,10)		
796.03+x *22*	11⁺		
1000.9+x *3*	11⁻		
1066.50+x *25*	11⁺		
1099.24+x *22*	12⁺		
1281.2+x *4*	(10)		
1397.4+x# *3*	11⁺		Jπ: 1990Bi07 proposed 12⁺ as the first band member.
1630.64+x *25*	12⁺		
1669.11+x *25*	13⁺		
2001.76+x *25*	13⁺		
2034.4+x *3*	12		
2046.1+x *3*	12⁻		
2085.3+x *3*	13⁻		
2130.95+x@ *24*	14⁺		
2209.3+x# *4*	13⁺		
2231.3+x *3*	14⁺		
2283.2+x *3*	12(⁻)		
2289.0+x@ *3*	15⁺	4.6 ps *3*	
2359.1+x *3*	12⁻		
2442.8+x *3*	13(⁻)		
2483.98+x[a] *24*	13⁻		
2543.7+x@ *3*	16⁺	1.8 ps *6*	
2610.75+x[a] *24*	14⁻	3.9 ps *7*	
2751.34+x[a] *25*	15⁻	3.1 ps *6*	
2935.9+x[a] *3*	16⁻	1.8 ps *3*	
3057.6+x@ *4*	17⁺		
3116.9+x# *4*	15⁺		
3154.5+x[a] *3*	17⁻	1.7 ps *2*	
3435.0+x@ *4*	18⁺		
3441.5+x *4*	17⁻		
3548.9+x[a] *4*	18⁻	1.3 ps *1*	
3574.8+x *4*	16⁺		
3577.6+x# *5*	17⁺	37 ps *3*	
3819.2+x *4*	17		

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(HI,xnγ) 1996Pi11 (continued)

^{142}Eu Levels (continued)

E(level)†	Jπ	$T_{1/2}$	Comments
3974.5+x *4*	19^-		
4109.7+x# *5*	19^+	5.8 ps *8*	
4114.5+x *6*	18		
4114.7+x *4*	19^-		
4186.5+x *5*	18		
4218.5+x@ *4*	19^+		
4380.3+x *5*	19^-		
4515.7+xa *5*	20^-		
4650.4+x *6*	19		
4651.4+x *4*	20^-		
4803.7+x@ *5*	20^+		
4909.2+x *5*	21		
4928.3+x *7*			
4930.0+x# *6*	21^+	<1.4 ps	
5078.0+xa *6*	21^-		
5165.6+x *7*	20		
5300.4+x *6*	21^-		
5467.1+x *6*	22		
5511.6+x *6*	22		
5533.5+x@ *5*	21^+		
5729.6+x *6*	22		
5819.4+x *6*	22		
6006.0+x# *6*	23^+		
6163.7+x *7*	23		
6525.4+x *7*	24		
6539.1+x *7*	24		
7073.8+x# *8*	(25^+)		
y&	J1		Additional information 2. E(level): y >3 MeV. Jπ: J1≥18.
602.8+y& *3*	J1+2		
1211.2+y& *5*	J1+4		
1956.8+y& *6*	J1+6	0.49‡ ps *3*	
2875.9+y& *8*	J1+8	0.21‡ ps *3*	
3996.6+y& *9*	J1+10	<0.21‡ ps	
5170.4+y& *11*	J1+12		
zb	J2		Additional information 3. E(level): Z>2.6 MeV. Jπ: J2≥12.
753.6+zb *3*	J2+2		
1374.3+zb *4*	J2+4		
2154.9+zb *5*	J2+6	0.26‡ ps *3*	
3093.2+zb *6*	J2+8	0.12‡ ps *2*	
4011.6+zb *8*	J2+10	0.08‡ ps *6*	
5015.8+zb *10*	J2+12	<0.21‡ ps	
6157.0+zb *12*	J2+14		

† From least-squares fit to Eγ. X=180 *300* (see Adopted Levels).

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(HI,xnγ) 1996Pi11 (continued)

^{142}Eu Levels (continued)

‡ From DSA line-shape analysis. Uncertainty given is statistical only.
# Band(A): ΔJ=2 band-1 based on 11^+.
@ Band(B): ΔJ=1 band-1 based on 14^+.
& Band(C): ΔJ=2 band-2.
a Band(D): ΔJ=1 band-2 based on 13^-.
b Band(E): ΔJ=2 band-3.

γ(^{142}Eu)

Ratio R=Iγ(37°)/Iγ(79°).

E_γ	I_γ‡	E_i(level)	J_i^π	E_f	J_f^π	Mult.#	α†	Comments
83.6 *1*	159	376.29+x	10^+	292.70+x	9^+	M1@	3.09	α(K)=2.61 *4*; α(L)=0.375 *6*; α(M)=0.0810 *12*; α(N+..)=0.0218 *4* α(N)=0.0185 *3*; α(O)=0.00294 *5*; α(P)=0.000289 *5* R=0.88 *10*.
116.2 *3*	4	1397.4+x	11^+	1281.2+x	(10)			R=0.61 *20*.
125.0 *3*	6	2483.98+x	13^-	2359.1+x	12^-			R=0.85 *20*.
126.8 *1*	87	2610.75+x	14^-	2483.98+x	13^-	M1@	0.938	B(M1)(W.u.)=1.5 *3* α(K)=0.794 *12*; α(L)=0.1132 *16*; α(M)=0.0245 *4*; α(N+..)=0.00658 *10* α(N)=0.00560 *8*; α(O)=0.000889 *13*; α(P)=8.78×10^{-5} *13* R=0.90 *10*.
129.2 *2*	30	2130.95+x	14^+	2001.76+x	13^+	M1@	0.890	α(K)=0.753 *11*; α(L)=0.1073 *16*; α(M)=0.0232 *4*; α(N+..)=0.00624 *10* α(N)=0.00531 *8*; α(O)=0.000842 *13*; α(P)=8.32×10^{-5} *13* R=0.84 *12*.
140.6 *1*	148	2751.34+x	15^-	2610.75+x	14^-	M1@	0.701	B(M1)(W.u.)=2.2 *5* α(K)=0.593 *9*; α(L)=0.0845 *12*; α(M)=0.0182 *3*; α(N+..)=0.00491 *7* α(N)=0.00418 *6*; α(O)=0.000663 *10*; α(P)=6.56×10^{-5} *10* R=0.89 *8*.
158.0 *1*	171	2289.0+x	15^+	2130.95+x	14^+	M1@	0.505	B(M1)(W.u.)=1.21 *8* α(K)=0.428 *6*; α(L)=0.0608 *9*; α(M)=0.01313 *19*; α(N+..)=0.00353 *5* α(N)=0.00301 *5*; α(O)=0.000477 *7*; α(P)=4.72×10^{-5} *7* R=0.84 *8*.
167.9 *2*	26	2610.75+x	14^-	2442.8+x	$13^{(-)}$	(M1+E2)	0.408 *20*	α(K)=0.31 *5*; α(L)=0.076 *25*; α(M)=0.017 *6*; α(N+..)=0.0044 *15* α(N)=0.0038 *13*; α(O)=0.00056 *16*; α(P)=3.1×10^{-5} *10* R=0.82 *10*.
184.6 *1*	203	2935.9+x	16^-	2751.34+x	15^-	M1@	0.328	B(M1)(W.u.)=1.7 *3* α(K)=0.278 *4*; α(L)=0.0394 *6*; α(M)=0.00850 *12*; α(N+..)=0.00229 *4* α(N)=0.00195 *3*; α(O)=0.000309 *5*;

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(HI,xnγ) 1996Pi11 (continued)

γ(^{142}Eu) (continued)

E_γ	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[†]	Comments
								α(P)=3.06×10^{-5} *5* R=0.81 *8*.
200.8 *2*	16	2483.98+x	13$^-$	2283.2+x	12$^{(-)}$			R=0.78 *10*.
218.6 *1*	206	3154.5+x	17$^-$	2935.9+x	16$^-$	M1[@]	0.206	B(M1)(W.u.)=1.24 *15* α(K)=0.1748 *25*; α(L)=0.0247 *4*; α(M)=0.00532 *8*; α(N+..)=0.001432 *21* α(N)=0.001219 *18*; α(O)=0.000194 *3*; α(P)=1.92×10^{-5} *3* R=0.76 *7*.
244.4 *2*	29	3819.2+x	17	3574.8+x	16$^+$			R=0.75 *8*.
254.7 *1*	178	2543.7+x	16$^+$	2289.0+x	15$^+$	M1(+E2)	0.117 *20*	α(K)=0.094 *22*; α(L)=0.0176 *14*; α(M)=0.0039 *4*; α(N+..)=0.00103 *9* α(N)=0.00088 *9*; α(O)=0.000134 *7*; α(P)=1.0×10^{-5} *3* R=0.72 *6*.
257.8 *2*	31	4909.2+x	21	4651.4+x	20$^-$			R=0.72 *7*.
271.1 *2*	13	4651.4+x	20$^-$	4380.3+x	19$^-$			R=0.63 *8*.
282.6 *1*	944	282.60+x	8$^+$	x	8$^-$	E1[&]	0.01782	B(E1)(W.u.)=1.78×10^{-6} *12* α(K)=0.01516 *22*; α(L)=0.00209 *3*; α(M)=0.000448 *7*; α(N+..)=0.0001190 *17* α(N)=0.0001017 *15*; α(O)=1.581×10^{-5} *23*; α(P)=1.432×10^{-6} *20* R=1.47 *11*.
285.9 *3*	15	5819.4+x	22	5533.5+x	21$^+$			R=0.81 *8*.
292.7 *2*	56	292.70+x	9$^+$	x	8$^-$	E1[&]	0.01630	α(K)=0.01387 *20*; α(L)=0.00190 *3*; α(M)=0.000409 *6*; α(N+..)=0.0001087 *16* α(N)=9.29×10^{-5} *14*; α(O)=1.446×10^{-5} *21*; α(P)=1.314×10^{-6} *19* R=0.78 *6*.
303.2 *1*	313	1099.24+x	12$^+$	796.03+x	11$^+$			R=0.69 *4*.
344.3 *3*	12	6163.7+x	23	5819.4+x	22			R=0.45 *4*.
353.2 *2*	56	353.20+x	9$^-$	x	8$^-$			R=0.39 *4*.
361.7 *3*	9	6525.4+x	24	6163.7+x	23			R=0.61 *6*.
367.3 *2*	32	4186.5+x	18	3819.2+x	17			R=0.66 *5*.
371.0 *3*	17	2001.76+x	13$^+$	1630.64+x	12$^+$			R=0.74 *6*.
377.4 *2*	55	3435.0+x	18$^+$	3057.6+x	17$^+$			R=0.65 *5*.
386.7 *3*	11	679.4+x	(8,10)	292.70+x	9$^+$			R=0.64 *6*.
394.4 *2*	186	3548.9+x	18$^-$	3154.5+x	17$^-$	M1(+E2)	0.034 *9*	α(K)=0.029 *8*; α(L)=0.0045 *6*; α(M)=0.00099 *10*; α(N+..)=0.00026 *3* α(N)=0.000226 *24*; α(O)=3.5×10^{-5} *5*; α(P)=3.0×10^{-6} *10* R=0.67 *4*.
396.7 *2*	15	2442.8+x	13$^{(-)}$	2046.1+x	12$^-$			R=0.80 *6*.
396.8 *4*	4	679.4+x	(8,10)	282.60+x	8$^+$			R=1.5 *3*.
398.5 *4*	4	2483.98+x	13$^-$	2085.3+x	13$^-$			R=1.5 *3*.
408.5 *4*	8	2442.8+x	13$^{(-)}$	2034.4+x	12			R=0.68 *6*.
419.7 *2*	586	796.03+x	11$^+$	376.29+x	10$^+$			R=0.66 *4*.
425.6 *2*	76	3974.5+x	19$^-$	3548.9+x	18$^-$			R=0.64 *4*.
438.0 *2*	25	2483.98+x	13$^-$	2046.1+x	12$^-$			R=0.65 *5*.
449.6 *3*	20	2483.98+x	13$^-$	2034.4+x	12			R=0.85 *8*.
460.7 *2*	155	3577.6+x	17$^+$	3116.9+x	15$^+$	E2	0.01667	B(E2)(W.u.)=16.7 *14* α(K)=0.01353 *19*; α(L)=0.00246 *4*; α(M)=0.000542 *8*; α(N+..)=0.0001427 *20*

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(HI,xnγ) 1996Pi11 (continued)

γ(^{142}Eu) (continued)

E_γ	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[†]	Comments
								α(N)=0.0001228 *18*; α(O)=1.86×10^{-5} *3*; α(P)=1.337×10^{-6} *19*
								R=1.39 *10*.
461.8 *2*	43	2130.95+x	14$^+$	1669.11+x	13$^+$			R=0.78 *6*.
463.9 *3*	16	4650.4+x	19	4186.5+x	18			R=0.65 *6*.
479.8 *4*	10	2610.75+x	14$^-$	2130.95+x	14$^+$	E1	0.00495 *7*	B(E1)(W.u.)=3.6×10^{-5} *7*
								α=0.00495 *7*; α(K)=0.00423 *6*; α(L)=0.000567 *8*; α(M)=0.0001215 *18*; α(N+..)=3.24×10^{-5} *5*
								α(N)=2.77×10^{-5} *4*; α(O)=4.35×10^{-6} *7*; α(P)=4.14×10^{-7} *6*
								R=1.47 *15*.
505.6 *3*	25	3441.5+x	17$^-$	2935.9+x	16$^-$			R=0.59 *5*.
513.9 *2*	85	3057.6+x	17$^+$	2543.7+x	16$^+$			R=0.57 *4*.
515.2 *4*	10	5165.6+x	20	4650.4+x	19			R=0.50 *7*.
525.5 *4*	11	2610.75+x	14$^-$	2085.3+x	13$^-$	M1(+E2)	0.016 *5*	α(K)=0.014 *4*; α(L)=0.0020 *4*; α(M)=0.00044 *8*; α(N+..)=0.000118 *22*
								α(N)=0.000100 *19*; α(O)=1.6×10^{-5} *4*; α(P)=1.4×10^{-6} *5*
								R=0.72 *10*.
532.1 *2*	151	4109.7+x	19$^+$	3577.6+x	17$^+$	E2	0.01137	B(E2)(W.u.)=52 *8*
								α(K)=0.00933 *13*; α(L)=0.001593 *23*; α(M)=0.000350 *5*; α(N+..)=9.25×10^{-5} *13*
								α(N)=7.94×10^{-5} *12*; α(O)=1.212×10^{-5} *17*; α(P)=9.35×10^{-7} *14*
								R=1.31 *10*.
536.6 *3*	30	4651.4+x	20$^-$	4114.7+x	19$^-$			R=0.61 *5*.
541.2 *3*	46	4515.7+x	20$^-$	3974.5+x	19$^-$			R=0.56 *5*.
557.9 *4*	17	5467.1+x	22	4909.2+x	21			R=0.54 *6*.
562.3 *3*	21	5078.0+x	21$^-$	4515.7+x	20$^-$			R=0.63 *6*.
565.7 *3*	40	4114.7+x	19$^-$	3548.9+x	18$^-$			R=0.63 *5*.
569.8 *2*	109	1669.11+x	13$^+$	1099.24+x	12$^+$			R=0.62 *4*.
585.2 *5*	8	4803.7+x	20$^+$	4218.5+x	19$^+$			R=0.53 *15*.
601.5 *4*	120	1397.4+x	11$^+$	796.03+x	11$^+$			R=1.47 *12*.
601.8 *4*	17	1281.2+x	(10)	679.4+x	(8,10)			R=1.61 *25*.
602.4 *4*	13	5511.6+x	22	4909.2+x	21			R=0.66 *8*.
602.8 *3*	85	602.8+y	J1+2	y	J1			R=1.45 *15*.
608.4 *3*	85	1211.2+y	J1+4	602.8+y	J1+2			R=1.33 *10*.
620.3 *3*	23	2751.34+x	15$^-$	2130.95+x	14$^+$	E1	0.00281 *4*	B(E1)(W.u.)=4.5×10^{-5} *9*
								α=0.00281 *4*; α(K)=0.00241 *4*; α(L)=0.000318 *5*; α(M)=6.81×10^{-5} *10*; α(N+..)=1.82×10^{-5} *3*
								α(N)=1.555×10^{-5} *22*; α(O)=2.45×10^{-6} *4*; α(P)=2.38×10^{-7} *4*
								R=0.84 *8*.
620.7 *2*	101	1374.3+z	J2+4	753.6+z	J2+2			R=1.47 *12*.
646.9 *3*	29	2935.9+x	16$^-$	2289.0+x	15$^+$	E1	0.00257 *4*	B(E1)(W.u.)=6.4×10^{-5} *11*
								α=0.00257 *4*; α(K)=0.00220 *3*; α(L)=0.000291 *4*; α(M)=6.22×10^{-5} *9*; α(N+..)=1.666×10^{-5} *24*
								α(N)=1.420×10^{-5} *20*; α(O)=2.24×10^{-6} *4*; α(P)=2.18×10^{-7} *3*
								R=0.73 *8*.
647.7 *3*	56	1000.9+x	11$^-$	353.20+x	9$^-$			R=1.43 *15*.
673.0 *4*	9	4114.5+x	18	3441.5+x	17$^-$			R=0.70 *9*.
690.2 *2*	52	1066.50+x	11$^+$	376.29+x	10$^+$			R=0.76 *5*.

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(HI,xnγ) 1996Pi11 (continued)

γ(^{142}Eu) (continued)

E_γ	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[†]	Comments
723.0 *2*	293	1099.24+x	12^+	376.29+x	10^+			R=1.41 *8*.
729.8 *3*	25	5533.5+x	21^+	4803.7+x	20^+			R=0.65 *6*.
745.6 *3*	61	1956.8+y	J1+6	1211.2+y	J1+4	E2	0.00499 *7*	B(E2)(W.u.)=114 *7* α=0.00499 *7*; α(K)=0.00417 *6*; α(L)=0.000637 *9*; α(M)=0.0001386 *20*; α(N+..)=3.69×10^{-5} *6* α(N)=3.16×10^{-5} *5*; α(O)=4.90×10^{-6} *7*; α(P)=4.26×10^{-7} *6* R=1.42 *12*.
753.6 *3*	28	753.6+z	J2+2	z	J2			R=1.51 *12*.
768.6 *4*	18	3057.6+x	17^+	2289.0+x	15^+			R=1.36 *15*.
780.6 *3*	54	2154.9+z	J2+6	1374.3+z	J2+4	E2	0.00449 *7*	B(E2)(W.u.)=171 *20* α=0.00449 *7*; α(K)=0.00377 *6*; α(L)=0.000568 *8*; α(M)=0.0001234 *18*; α(N+..)=3.29×10^{-5} *5* α(N)=2.81×10^{-5} *4*; α(O)=4.37×10^{-6} *7*; α(P)=3.85×10^{-7} *6* R=1.41 *12*.
783.5 *3*	31	4218.5+x	19^+	3435.0+x	18^+			R=0.56 *5*.
799.6 *3*	22	5729.6+x	22	4930.0+x	21^+			R=0.76 *8*.
809.5 *3*	15	6539.1+x	24	5729.6+x	22			R=1.54 *15*.
811.9 *2*	151	2209.3+x	13^+	1397.4+x	11^+			R=1.40 *8*.
813.8 *4*	5	4928.3+x		4114.5+x	18			R=1.0 *4*.
820.0 *4*	7	3974.5+x	19^-	3154.5+x	17^-			R=1.1 *4*.
820.3 *2*	90	4930.0+x	21^+	4109.7+x	19^+	E2	0.00402 *6*	B(E2)(W.u.)>25 α=0.00402 *6*; α(K)=0.00338 *5*; α(L)=0.000503 *7*; α(M)=0.0001091 *16*; α(N+..)=2.91×10^{-5} *4* α(N)=2.49×10^{-5} *4*; α(O)=3.88×10^{-6} *6*; α(P)=3.46×10^{-7} *5* R=1.39 *9*.
831.4 *4*	13	4380.3+x	19^-	3548.9+x	18^-			R=0.51 *5*.
834.5 *2*	70	1630.64+x	12^+	796.03+x	11^+			R=0.56 *4*.
853.3 *3*	37	2483.98+x	13^-	1630.64+x	12^+			R=0.84 *7*.
873.1 *4*	20	1669.11+x	13^+	796.03+x	11^+			R=1.46 *12*.
891.4 *3*	40	3435.0+x	18^+	2543.7+x	16^+			R=1.24 *15*.
902.6 *4*	18	2001.76+x	13^+	1099.24+x	12^+			R=0.79 *8*.
907.6 *2*	131	3116.9+x	15^+	2209.3+x	13^+			R=1.41 *8*.
918.4 *5*	20	4011.6+z	J2+10	3093.2+z	J2+8	E2	0.00314 *5*	B(E2)(W.u.)=2.5×10^2 *19* α=0.00314 *5*; α(K)=0.00265 *4*; α(L)=0.000384 *6*; α(M)=8.32×10^{-5} *12*; α(N+..)=2.22×10^{-5} *4* α(N)=1.90×10^{-5} *3*; α(O)=2.97×10^{-6} *5*; α(P)=2.72×10^{-7} *4* R=1.38 *20*.
919.1 *5*	48	2875.9+y	J1+8	1956.8+y	J1+6	E2	0.00313 *5*	B(E2)(W.u.)=93 *14* α=0.00313 *5*; α(K)=0.00264 *4*; α(L)=0.000384 *6*; α(M)=8.30×10^{-5} *12*; α(N+..)=2.22×10^{-5} *4* α(N)=1.89×10^{-5} *3*; α(O)=2.96×10^{-6} *5*; α(P)=2.71×10^{-7} *4* R=1.34 *20*.
935.2 *3*	21	2001.76+x	13^+	1066.50+x	11^+			R=1.38 *12*.
938.3 *3*	38	3093.2+z	J2+8	2154.9+z	J2+6	E2	0.00300 *5*	B(E2)(W.u.)=147 *25* α=0.00300 *5*; α(K)=0.00253 *4*; α(L)=0.000366 *6*; α(M)=7.91×10^{-5} *11*; α(N+..)=2.11×10^{-5} *3* α(N)=1.80×10^{-5} *3*; α(O)=2.83×10^{-6} *4*; α(P)=2.60×10^{-7} *4* R=1.35 *15*.

Continued on next page (footnotes at end of table)

(HI,xnγ) 1996Pi11 (continued)

γ(^{142}Eu) (continued)

E_γ	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[†]	Comments
941.6 *3*	26	2610.75+x	14^-	1669.11+x	13^+	E1	0.001213 *17*	B(E1)(W.u.)=1.24×10^{-5} *23* α=0.001213 *17*; α(K)=0.001041 *15*; α(L)=0.0001352 *19*; α(M)=2.89×10^{-5} *4*; α(N+..)=7.75×10^{-6} α(N)=6.60×10^{-6} *10*; α(O)=1.045×10^{-6} *15*; α(P)=1.041×10^{-7} *15* R=0.74 *6*.
960.2 *4*	7	4114.7+x	19^-	3154.5+x	17^-			R=1.25 *20*.
966.7 *5*	5	4515.7+x	20^-	3548.9+x	18^-			R=1.4 *3*.
1004.2 *6*	11	5015.8+z	J2+12	4011.6+z	J2+10	E2	0.00259 *4*	B(E2)(W.u.)>60 α=0.00259 *4*; α(K)=0.00219 *3*; α(L)=0.000313 *5*; α(M)=6.77×10^{-5} *10*; α(N+..)=1.81×10^{-5} *3* α(N)=1.544×10^{-5} *22*; α(O)=2.42×10^{-6} *4*; α(P)=2.26×10^{-7} *4* R=1.37 *25*.
1021.0 *4*	16	1397.4+x	11^+	376.29+x	10^+			R=0.35 *4*.
1031.7 *2*	269	2130.95+x	14^+	1099.24+x	12^+			R=1.41 *8*.
1067.8 *4*	8	7073.8+x	(25^+)	6006.0+x	23^+			R=1.16 *20*.
1076.0 *3*	22	6006.0+x	23^+	4930.0+x	21^+			R=1.26 *15*.
1084.2 *3*	43	2085.3+x	13^-	1000.9+x	11^-			R=1.37 *15*.
1102.5 *4*	5	4651.4+x	20^-	3548.9+x	18^-			R=1.1 *3*.
1104.5 *4*	12	1397.4+x	11^+	292.70+x	9^+			R=1.48 *15*.
1120.7 *5*	23	3996.6+y	J1+10	2875.9+y	J1+8	E2	0.00207 *3*	B(E2)(W.u.)>35 α=0.00207 *3*; α(K)=0.001754 *25*; α(L)=0.000246 *4*; α(M)=5.30×10^{-5} *8*; α(N+..)=1.484×10^{-5} *21* α(N)=1.209×10^{-5} *17*; α(O)=1.90×10^{-6} *3*; α(P)=1.81×10^{-7} *3*; α(IPF)=6.64×10^{-7} *15* R=1.62 *25*.
1132.0 *2*	79	2231.3+x	14^+	1099.24+x	12^+			R=1.39 *8*.
1141.2 *7*	9	6157.0+z	J2+14	5015.8+z	J2+12			R=1.4 *3*.
1160.8 *4*	7	4218.5+x	19^+	3057.6+x	17^+			R=1.3 *3*.
1173.8 *6*	11	5170.4+y	J1+12	3996.6+y	J1+10			R=1.3 *3*.
1205.9 *3*	32	2001.76+x	13^+	796.03+x	11^+			R=1.30 *12*.
1216.8 *4*	8	2283.2+x	$12^{(-)}$	1066.50+x	11^+			R=0.78 *9*.
1238.3 *3*	29	2034.4+x	12	796.03+x	11^+			R=0.88 *9*.
1250.0 *3*	38	2046.1+x	12^-	796.03+x	11^+			R=0.80 *9*.
1254.5 *4*	10	1630.64+x	12^+	376.29+x	10^+			R=1.32 *15*.
1315.0 *5*	6	5533.5+x	21^+	4218.5+x	19^+			R=1.6 *3*.
1325.9 *4*	6	5300.4+x	21^-	3974.5+x	19^-			R=1.41 *20*.
1343.5 *3*	19	3574.8+x	16^+	2231.3+x	14^+			R=1.41 *15*.
1343.7 *3*	23	2442.8+x	$13^{(-)}$	1099.24+x	12^+			R=0.75 *8*.
1358.3 *3*	5	2359.1+x	12^-	1000.9+x	11^-			R=0.38 *10*.
1368.7 *3*	32	4803.7+x	20^+	3435.0+x	18^+			R=1.46 *12*.
1384.8 *3*	61	2483.98+x	13^-	1099.24+x	12^+			R=0.79 *7*.
1444.0 *4*	5	3574.8+x	16^+	2130.95+x	14^+			R=1.48 *20*.
1487.3 *4*	9	2283.2+x	$12^{(-)}$	796.03+x	11^+			R=0.86 *10*.

[†] Additional information 4.
[‡] Relative intensity. Uncertainty is 5%, larger for weak and complex peaks.
[#] From R and level scheme placement, unless given otherwise.

Continued on next page (footnotes at end of table)

(HI,xnγ) 1996Pi11 (continued)

$\gamma(^{142}Eu)$ (continued)

@ From intensity balance.
& From ce and linear polarization (1990Bi07).

(HI,xnγ) 1996Pi11

Level Scheme

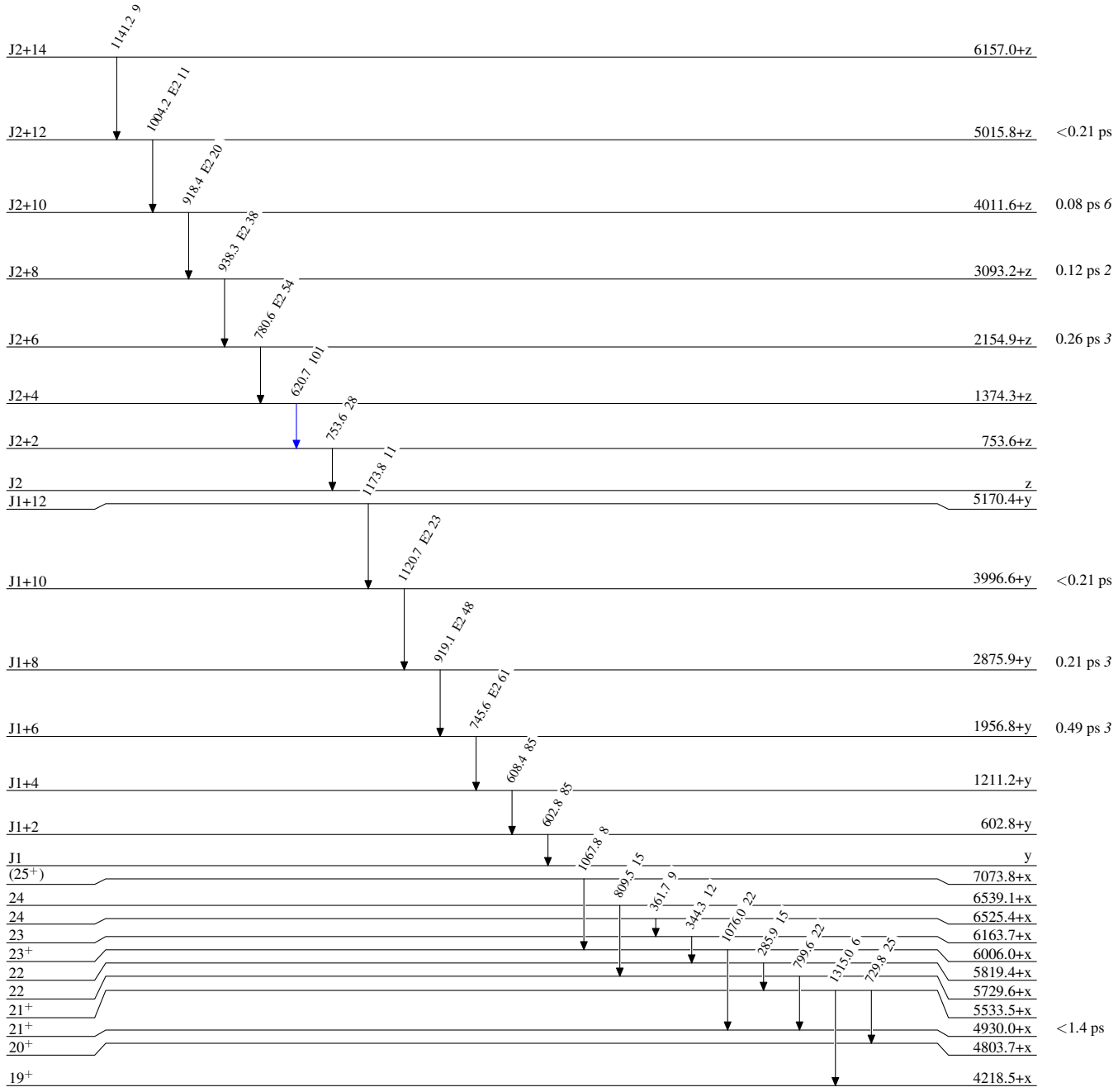
Intensities: Relative I_γ

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



$^{142}_{63}Eu_{79}$

(HI,xnγ) 1996Pi11

Level Scheme (continued)

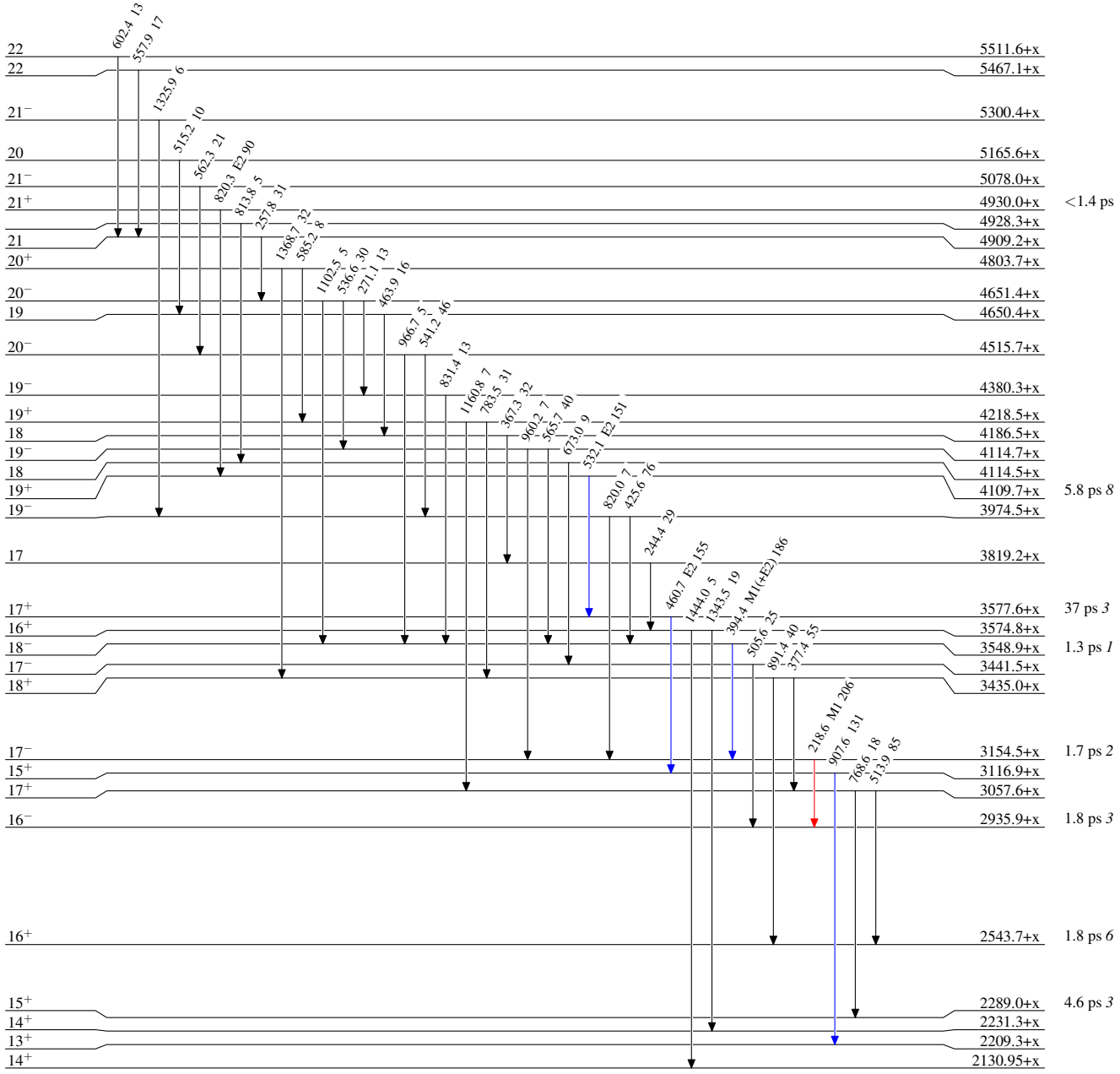
Intensities: Relative I_γ

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$

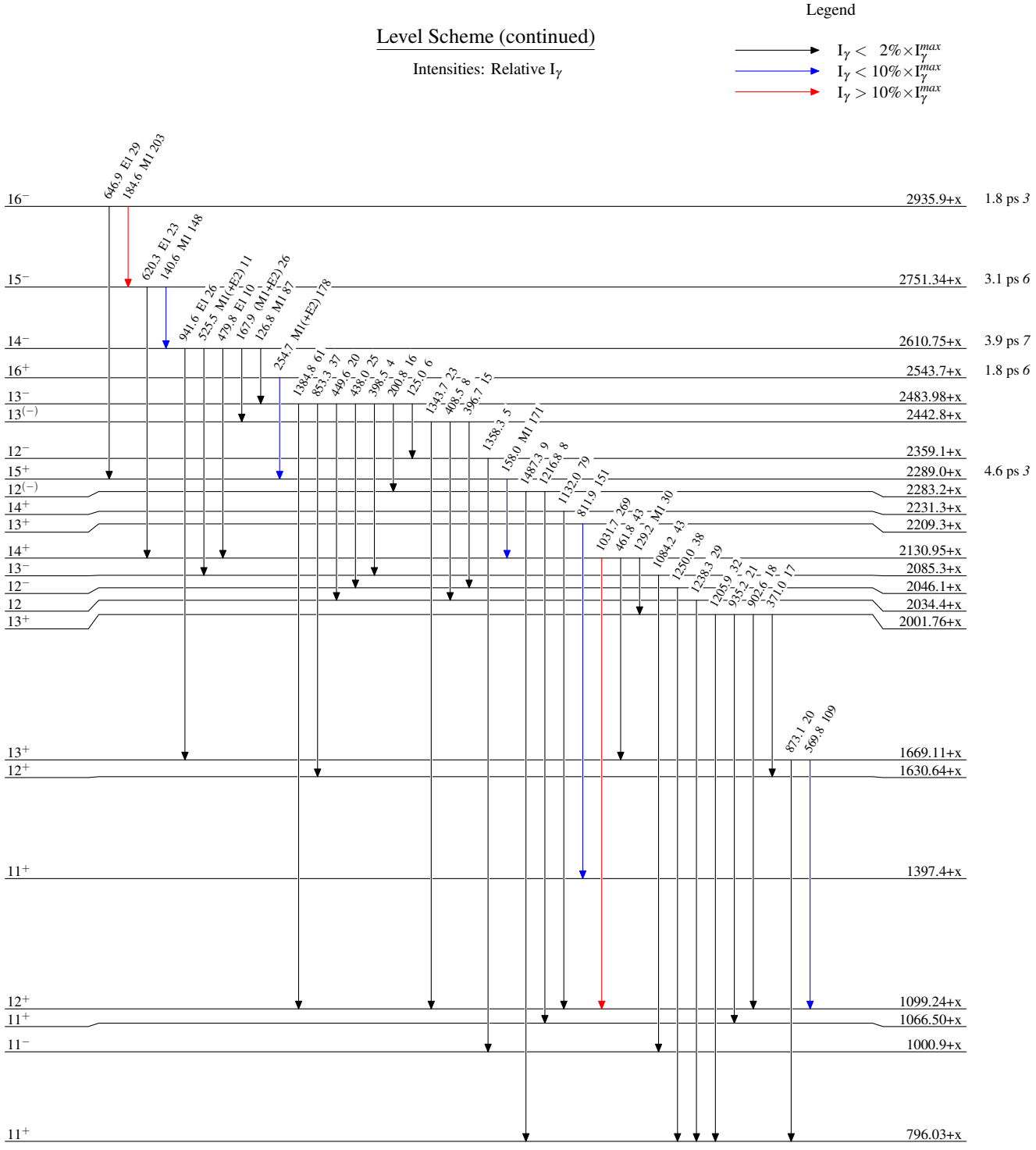


$^{142}_{63}Eu_{79}$

(HI,xnγ) 1996Pi11

Level Scheme (continued)

Intensities: Relative I_γ



$^{142}_{63}Eu_{79}$

(HI,xnγ) 1996Pi11

Level Scheme (continued)

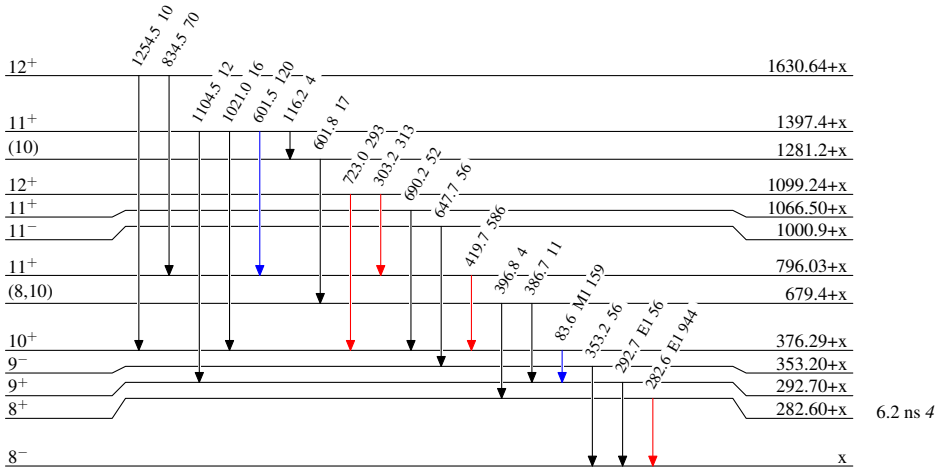
Intensities: Relative I_γ

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

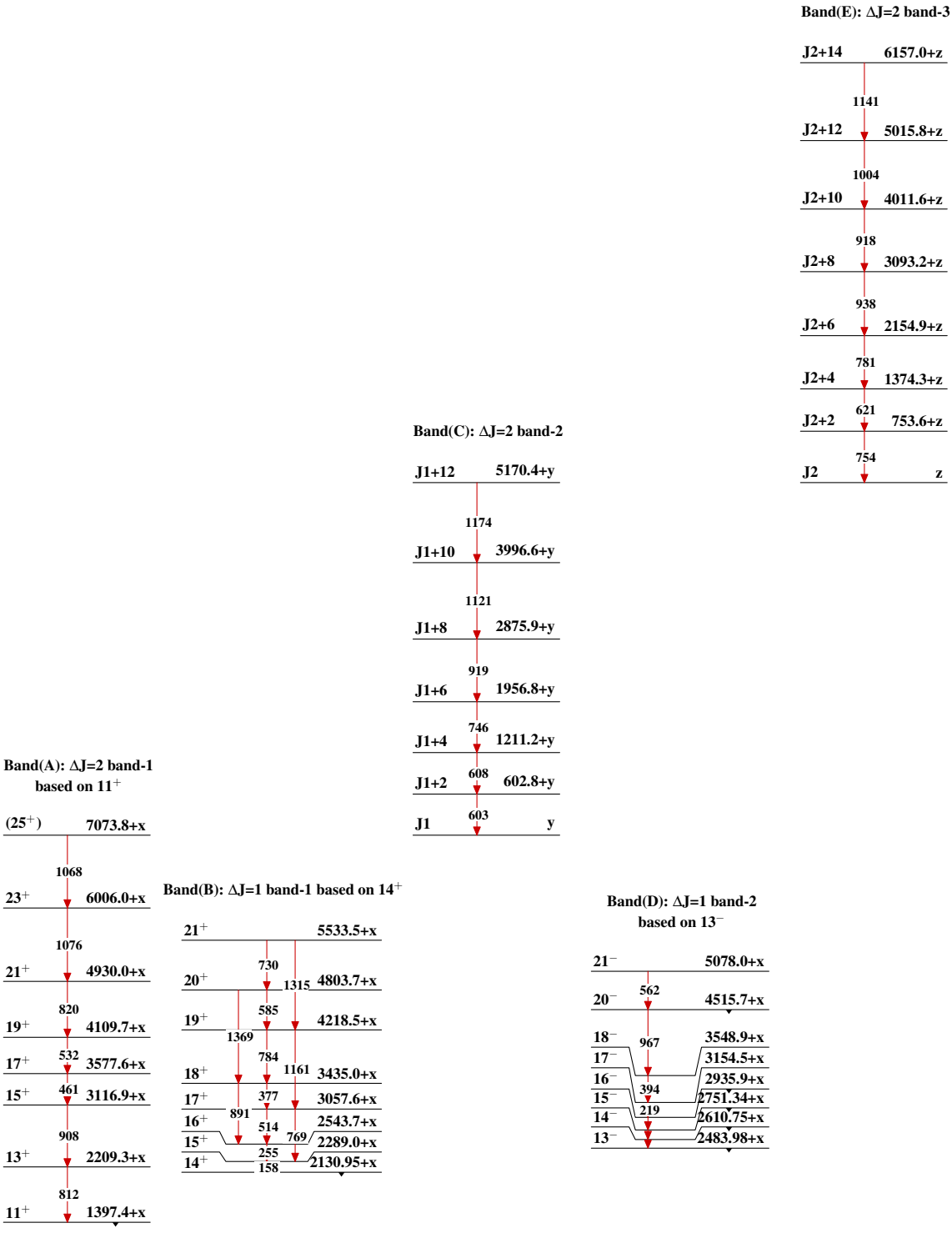
$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



$^{142}_{63}Eu_{79}$

(HI,xnγ) 1996Pi11



$^{142}_{63}Eu_{79}$