(HI,xnγ) 1994Ju04,1990Ju01,1974Lu01

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	G. Gürdal and F. G. Kondev	NDS 113, 1315 (2012)	1-Aug-2011

1994Ju04, 1990Ju01: Reaction: $^{96}Zr(^{18}O,4n\gamma)$, $E(^{18}0)$=73 and 65 MeV. Target: A stacked target consisting of two 0.9 mg/cm^2, enriched to 85% in ^{96}Zr and a 0.74 mg/cm^2 thick target with a 6 mg/cm^2 thick gold backing. The beams were provided by the Tandem Accelerator Laboratory of the Niels Bohr Institute. γ-rays were detected using Nordball array consisting of 17-20 Compton-suppressed Ge detectors (at 37°, 79°, 101° and 143°) and a BaF_2-multiplicity filter. Measured: Eγ, $\gamma\gamma$, $\gamma(\theta)$. Deduced: ^{110}Cd levels, J^{π}, $T_{1/2}$, B(M1)/B(E2).

1974Lu01: Reaction: $^{96}Zr(^{18}O,4n\gamma)$, $E(^{18}O)$=60 MeV. For linear-polarization measurements a Ge(Li) two-crystal Compton polarimeter was used. Measured: $\gamma(\theta)$, linear pol.

1994Ju04: Reaction: $^{100}Mo(^{13}C,3n\gamma)$, $E(^{13}C)$=44 MeV. Target: 0.59 mg/cm^2, enriched to 97.4% in ^{100}Mo with a 6.8 mg/cm^2 thick gold backing. The beams were provided by the Tandem Accelerator Laboratory of the Niels Bohr Institute. γ-rays were detected using Nordball array consisting of 17-20 Compton-suppressed Ge detectors (at 37°, 79°, 101° and 143°) and a BaF_2-multiplicity filter. Measured: Eγ, $\gamma\gamma$, $\gamma\gamma$(t), $\gamma(\theta)$. Deduced: ^{110}Cd levels, J^{π}, $T_{1/2}$, B(M1)/B(E2).

Others: 2011Ro01, 2001Ha09, 2000Wa31, 1999Cl03, 1993Pi16, and 1990MuZZ.

^{110}Cd Levels

E(level)[†]	J^{π}[‡]	$T_{1/2}$[#]	Comments
0.0[@]	0^+		
657.80[@] *10*	2^+	5.42 ps *16*	$T_{1/2}$: From Adopted Levels. 6.4 ps *4* (1993Pi16) and 6.0 ps *8* (2001Ha09).
1474.8[m] *12*	0^+		
1475.8 *5*	2^+		
1542.31[@] *14*	4^+	<2.1 ps	$T_{1/2}$: Other: 0.7 ps *4* (2001Ha09).
1783.7[m] *10*	2^+		
2078.8[f] *8*	3^-		
2162.8 *7*	3^+		
2220.1 *6*	4^+		
2250.70[m] *25*	4^+		
2480.04[@] *17*	6^+	<2.1 ps	$T_{1/2}$: Other: 0.6 ps *4* (2001Ha09).
2540.04[f] *21*	5^-		
2660.1[e] *3*	5^-		
2842.4 *6*	5^-		
2877.17[m] *23*	6^+		
2879.25[a] *21*	7^-	0.69 ns *4*	$T_{1/2}$: Other: 0.62 ns *14* (1994Ju04) and<0.866 ns (2001Ha09).
2896.2[e] *3*	6^-		
3029.33[f] *25*	7^-		
3055.73[e] *25*	8^-	2.4 ns *4*	$T_{1/2}$: From 1994Ju04.
3063.7 *6*	6^+		
3074.4 *8*	6^-		
3187.4[p] *3*	8^+	55 ps *6*	
3275.56[@] *19*	8^+	1.1 ps *4*	$T_{1/2}$: From 2001Ha09. <2.8 (1993Pi16).
3334.5 *8*	7^-		
3345.90[a] *24*	9^-	49 ps *3*	
3391.2 *11*	(7^-)		
3427.4[b] *3*	8^-	6.0 ps *6*	
3440.08 *24*	8^+	<2.8 ps	
3611.10[@] *22*	10^+	0.464 ns *17*	μ=−0.9 *3* $T_{1/2}$: From 2001Ha09. Other: 0.7 ns *2* (1994Ju04) and 0.55 ns *3* (1993Pi16). μ: Using ion-implantation perturbed-angular-correlation (IMAP) technique in 1995Re15 (g-factor =−0.09 *3* deduced using $T_{1/2}$=0.56 ns *3*).

Continued on next page (footnotes at end of table)

(HI,xnγ) 1994Ju04,1990Ju01,1974Lu01 (continued)

^{110}Cd Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$[#]	Comments
3641.0[h] *6*	8⁻		
3683.6[f] *3*	9⁻		
3782.2[i] *4*	9⁻		
3823.7[e] *3*	10⁻	3.5 ps *3*	
4077.6[&] *3*	10⁺	0.69 ps *21*	$T_{1/2}$: Other:<3.5 (2001Ha09).
4172.03[@] *23*	12⁺	8.1 ps *4*	$T_{1/2}$: Other: 7.9 ps *4* (2001Ha09).
4172.9[a] *3*	11⁻	2.08 ps *14*	
4182.4[b] *3*	10⁻	1.04 ps *14*	
4335.2[h] *4*	10⁻		
4438.4[p] *11*	9⁺		
4560.4[f] *4*	11⁻		
4620.2[p] *4*	10⁺		
4737.2[i] *4*	11⁻		
4889.1[&] *4*	12⁺	1.39 ps *14*	
4930.6[e] *3*	12⁻		
5026.3[@] *3*	14⁺	1.39 ps *14*	$T_{1/2}$: Other:<2.8 (2001Ha09).
5092.9[b] *4*	12⁻	3.3 ps *4*	
5114.0[j] *4*	12⁺		
5213.5[h] *4*	12⁻		
5215.5[p] *7*	(11⁺)		
5249.2[a] *3*	13⁻	<1.4 ps	
5497.5 *4*	13⁻		
5500.0[n] *4*	13⁺		
5676.1[k] *4*	14⁺		
5758.9[d] *3*	13⁻		
5789.9[l] *4*	14⁺		
5857.0[&] *5*	14⁺		
5892.9[p] *9*	(12⁺,13⁺)		
5915.3[j] *5*	14⁺		
5967.4[b] *3*	14⁻		
5984.5[d] *4*	14⁻		
6079.8[p] *10*			
6100.9[@] *4*	16⁺	0.250 ps *21*	$T_{1/2}$: From 2011Ro01. Other:<1 ps (1993Pi16).
6101.8[e] *4*	14⁻		
6178.5[n] *4*	15⁺		
6181.6[a] *3*	15⁻		
6216.9[g] *4*	(14)		
6354.6[d] *5*	15⁻		
6544.2 *11*	(15⁻)		
6568.8 *5*	14		
6576.2[k] *5*	16⁺		
6584.5[q] *5*	14		
6646.0[l] *6*	(16⁺)		
6671.3[f] *6*	(15⁻)		
6672.9[b] *4*	16⁻		
6798.7[&] *7*	16⁺		
6837.0[j] *7*	16⁺		
6879.6[q] *5*	15		

Continued on next page (footnotes at end of table)

(HI,xnγ) 1994Ju04,1990Ju01,1974Lu01 (continued)

^{110}Cd Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$[#]	Comments
6963.2[d] 6	16⁻		
6993.1[a] 4	17⁻		
7048.0[e] 5	16⁻		
7184.3[n] 5	17⁺		
7281.0[q] 5	16		
7285.8[g] 5	(16)		
7325.4[@] 4	18⁺	0.159 ps 21	$T_{1/2}$: From 2011Ro01.
7342.3[c] 6			
7443.5[f] 5	(17⁻)		
7523.5[b] 5	18⁻		
7575.6[d] 7	17⁻		
7594.6[c] 8			
7653.6[k] 6	18⁺		
7759.0[q] 6	17		
7778.3[c] 7			
7797.7 6	17		
7801.0[l] 12	(18⁺)		
7945.9[a] 5	19⁻		
7970.7[e] 7	18⁻		
8016.5[o] 6	17		
8278.0[o] 5	18		
8292.3 6	18		
8373.2[c] 8			
8405.5[f] 11	(19⁻)		
8481.3[n] 11	(19⁺)		
8530.7[g] 8	(18)		
8595.6[o] 6	19		
8630.0[b] 6	20⁻		
8648.3[@] 5	20⁺	0.118 ps 21	$T_{1/2}$: From 2011Ro01.
8862.1[k] 6	20⁺		
8967.9[o] 6	20	0.127 ps +12−15	$T_{1/2}$: From 1999Cl03.
9106.8[a] 6	21⁻		
9430.4[o] 7	21	0.070 ps +10−12	$T_{1/2}$: From 1999Cl03.
9574.5[f] 15	(21⁻)		
9962.4[@] 6	22⁺	0.15 ps 5	$T_{1/2}$: From 2011Ro01.
9972.0[b] 12	22⁻		
9991.4[o] 12	22	0.065 ps +10−12	$T_{1/2}$: From 1999Cl03.
10229.2[k] 12	(22⁺)		
10495.9[a] 12	23⁻		
10665.2[o] 13	23	0.064 ps +12−16	$T_{1/2}$: From 1999Cl03.
11320.4[@] 6	24⁺	0.19 ps 5	$T_{1/2}$: From 2011Ro01.
11451.2[o] 16	24		
11455.0[b] 16	(24⁻)		
12081.9[a] 16	(25⁻)		
12763[@] 3	26⁺	0.24 ps	$T_{1/2}$: Effective half-life from 2011Ro01.
13033.0[b] 19	(26⁻)		
14206[@] 4	28⁺		

Continued on next page (footnotes at end of table)

(HI,xnγ) 1994Ju04,1990Ju01,1974Lu01 (continued)

^{110}Cd Levels (continued)

† From a least-squares fit to Eγ.
‡ From deduced γ-ray transition multipolarities, apparent band structures and decay patterns.
# From 1993Pi16, unless otherwise stated.
@ Band(A): g.s. rotational band.
& Band(B): ΔJ=2 rotational band on $J^\pi=10^+$ 4078-keV level.
a Band(C): ΔJ=2 rotational band on J^π=7- 2879-keV level.
b Band(D): ΔJ=2 rotational band on J^π=8- 3427-keV level.
c Band(E): rotational band on the 7342-keV level.
d Band(F): ΔJ=2 rotational band on J^π=13- 5759-keV level.
e Band(G): ΔJ=2 rotational band on J^π=5- 2659-keV level.
f Band(H): ΔJ=2 rotational band on J^π=3- 2079-keV level.
g Band(I): ΔJ=2 rotational band on J^π=(14) 6217-keV level.
h Band(J): ΔJ=2 rotational band on J^π=8- 3641-keV level.
i Band(K): ΔJ=2 rotational band on J^π=9- 3782-keV level.
j Band(L): ΔJ=2 rotational band on $J^\pi=12^+$ 5114-keV level.
k Band(M): ΔJ=2 rotational band on $J^\pi=14^+$ 5676-keV level.
l Band(N): ΔJ=2 rotational band on $J^\pi=14^+$ 5790-keV level.
m Band(O): ΔJ=2 rotational band on $J^\pi=0^+$ 1474-keV level.
n Band(P): ΔJ=2 rotational band on $J^\pi=13^+$ 5500-keV level.
o Band(Q): ΔJ=1 rotational band on J^π=17 *8017*-keV level.
p Band(R): rotational band on $J^\pi=8^+$ 3187-keV level.
q Band(S): ΔJ=1 rotational band on J^π=14 *6584*-keV level.

γ(^{110}Cd)

E_γ†	I_γ†	E_i(level)	J^π_i	E_f	J^π_f	Mult.‡	Comments
120.2 *5*	0.3 *1*	2660.1	5^-	2540.04	5^-		
150.0 *5*	0.2 *1*	3029.33	7^-	2879.25	7^-	M1	DCO=1.4 *2*
159.5 *3*	2.4 *1*	3055.73	8^-	2896.2	6^-	E2	DCO=1.32 *8*
164.0 *5*	0.9 *1*	3440.08	8^+	3275.56	8^+	M1	DCO=1.39 *9*
171.1 *3*	6.80 *5*	3611.10	10^+	3440.08	8^+	E2	DCO=1.40 *3*
176.5 *3*	5.4 *1*	3055.73	8^-	2879.25	7^-	M1	DCO=0.35 *5*
186.9 *5*	0.20 *5*	6079.8		5892.9	$(12^+,13^+)$		
219.0 *5*	0.4 *1*	2879.25	7^-	2660.1	5^-	E2	DCO=1.38 *13*
225.6 *3*	5.8 *2*	5984.5	14^-	5758.9	13^-	M1	DCO=0.84 *3*
232.0 *5*		3074.4	6^-	2842.4	5^-		
236.0 *5*	0.6 *1*	2896.2	6^-	2660.1	5^-		
261.2 *5*	0.2 *1*	8278.0	18	8016.5	17	D	DCO=0.91 *6*
265.2 *3*	2.40 *10*	3611.10	10^+	3345.90	9^-	E1	DCO=0.81 *8*
278 *1*		3334.5	7^-	3055.73	8^-		
289.9 *5*	0.2 *1*	5789.9	14^+	5500.0	13^+		
290.1 *3*	1.80 *5*	3345.90	9^-	3055.73	8^-		DCO=1.33 *8*
295.0 *3*	1.0 *1*	6879.6	15	6584.5	14	D	DCO=0.78 *3*
303.3 *5*	0.15 *5*	8595.6	19	8292.3	18		DCO=0.8 *2*
310.7 *5*	0.6 *1*	6879.6	15	6568.8	14		DCO=0.90 *5*
317.6 *3*	2.7 *2*	8595.6	19	8278.0	18	D	DCO=0.87 *5*
335.5 *2*	45.9 *5*	3611.10	10^+	3275.56	8^+	E2#	DCO=1.40 *3* Mult.: The authors of 1974Lu01 stated that polarization measurement was not much influenced by presence of weak unresolved 339γ, because of its similar angular distribution and its expected E2 character. Mult.: A_2=0.333 *11*, A_4=−0.093 *16*.

Continued on next page (footnotes at end of table)

(HI,xnγ) 1994Ju04,1990Ju01,1974Lu01 (continued)

$\gamma(^{110}Cd)$ (continued)

E_γ†	I_γ†	E_i(level)	J^π_i	E_f	J^π_f	Mult.‡	δ	Comments
339.2 *3*	7.7 *1*	2879.25	7⁻	2540.04	5⁻	Q		DCO=1.13 *6* Mult.: A_2=0.30 *3*, A_4=−0.08 *4*. Because of the more intense 335γ, the polarity of the 339γ could not be determined in the linear polarization measurements in 1974Lu01.
356.2 *3*	2.4 *1*	2896.2	6⁻	2540.04	5⁻	M1		DCO=0.66 *5*
369 *1*	0.4 *2*	3029.33	7⁻	2660.1	5⁻			
370.0 *3*	4.8 *1*	6354.6	15⁻	5984.5	14⁻	M1		DCO=0.77 *3*
371.6 *5*	0.3 *1*	3427.4	8⁻	3055.73	8⁻			
372.3 *3*	2.4 *2*	8967.9	20	8595.6	19	D		DCO=0.84 *6*
388.6 *5*	0.20 *5*	6178.5	15⁺	5789.9	14⁺	D		DCO=<0.7.
396.7 *5*	0.28 *4*	2877.17	6⁺	2480.04	6⁺			
398.5 *5*	0.58 *8*	3275.56	8⁺	2877.17	6⁺			
399.2 *2*	22.7 *4*	2879.25	7⁻	2480.04	6⁺	E1(+M2)#	<0.06	DCO=0.80 *4* Mult.: A_2=−0.210 *15*. δ: Absolute value of δ from 1974Lu01.
401.4 *3*	1.6 *2*	7281.0	16	6879.6	15	D		DCO=0.87 *5*
409 *1*	0.2 *1*	2660.1	5⁻	2250.70	4⁺			
416 *1*	0.20 *5*	2896.2	6⁻	2480.04	6⁺			
423.5 *3*	1.04 *10*	3611.10	10⁺	3187.4	8⁺	E2		DCO=1.7 *4*
437 *1*	0.2 *1*	7778.3		7342.3				DCO=0.82 *14*
456 *1*		3334.5	7⁻	2879.25	7⁻			
461 *5*	0.2 *1*	2540.04	5⁻	2078.8	3⁻			
462.5 *3*	2.6 *2*	9430.4	21	8967.9	20	D		DCO=0.98 *6*
466.6 *2*	17.8 *3*	3345.90	9⁻	2879.25	7⁻	E2#		DCO=1.37 *5* Mult.: A_2=0.308 *23*, A_4=−0.050 *34*.
467 *1*	0.10 *3*	2250.70	4⁺	1783.7	2⁺			
477.7 *3*	0.80 *5*	3823.7	10⁻	3345.90	9⁻	M1		DCO=0.60 *6*
477.9 *5*	0.9 *1*	7759.0	17	7281.0	16	D		DCO=0.73 *3*
480.5 *5*	0.5 *1*	8278.0	18	7797.7	17	D		DCO=0.77 *6*
489.4 *3*	1.1 *2*	3029.33	7⁻	2540.04	5⁻	E2		DCO=1.25 *9*
491.2 *5*	0.9 *1*	6672.9	16⁻	6181.6	15⁻			
495 *1*		3391.2	(7⁻)	2896.2	6⁻			
499.1 *5*	0.6 *2*	4182.4	10⁻	3683.6	9⁻	D		DCO=<0.6.
509.8 *5*	0.5 *1*	5758.9	13⁻	5249.2	13⁻	M1		DCO=1.32 *12*
516.8 *5*	0.6 *1*	7797.7	17	7281.0	16	D		DCO=0.64 *6*
519.0 *5*	0.3 *1*	8278.0	18	7759.0	17	D		DCO=0.80 *5*
531 *1*	0.10 *5*	3427.4	8⁻	2896.2	6⁻			
545 *1*	0.26 *4*	5758.9	13⁻	5213.5	12⁻	M1		DCO=0.63 *8*
548.2 *3*	2.7 *3*	3427.4	8⁻	2879.25	7⁻	M1		DCO=0.50 *5*
549.4 *3*	1.0 *3*	3029.33	7⁻	2480.04	6⁺	E1		DCO=0.73 *10*
560.9 *1*	53.0 *1*	4172.03	12⁺	3611.10	10⁺	E2#		DCO=1.41 *3* Mult.: A_2=0.311 *13*, A_4=−0.083 *19*.
562.5 *5*	2.0 *5*	9991.4	22	9430.4	21	D		DCO=1.0 *2* E_γ: From 1999Cl03.
563.0 *3*	1.8 *2*	3440.08	8⁺	2877.17	6⁺			
583.7 *5*		3063.7	6⁺	2480.04	6⁺			
594.9 *5*	0.5 *1*	8373.2		7778.3				DCO=0.77 *8*
595.3 *5*	<0.5	5215.5	(11⁺)	4620.2	10⁺			DCO=1.16 *12*
603 *1*		2078.8	3⁻	1475.8	2⁺			
608.5 *3*	3.2 *4*	6963.2	16⁻	6354.6	15⁻	M1		DCO=0.84 *6*
612.4 *3*	1.3 *4*	7575.6	17⁻	6963.2	16⁻	M1		DCO=0.87 *12*
626.3 *3*	1.3 *2*	2877.17	6⁺	2250.70	4⁺	E2		DCO=1.37 *12*
627.9 *3*	1.0 *3*	3683.6	9⁻	3055.73	8⁻	M1		DCO=0.90 *10*
631.4 *5*	0.6 *2*	7594.6		6963.2	16⁻			

Continued on next page (footnotes at end of table)

(HI,xnγ) 1994Ju04,1990Ju01,1974Lu01 (continued)

$\gamma(^{110}Cd)$ (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	Comments
637.2 5	0.8 1	4077.6	10^+	3440.08	8^+	E2	DCO=1.5 2
654.4 3	1.9 3	3683.6	9^-	3029.33	7^-	E2	DCO=1.46 14
657.8 2		657.80	2^+	0.0	0^+	E2[#]	DCO=1.25 3 Mult.: A_2=0.285 5, A_4=−0.066 8.
666.0 5	0.3 1	5758.9	13^-	5092.9	12^-	M1	DCO=0.83 11
673.8 3	1.1 2	10665.2	23	9991.4	22	D	DCO=0.83 7
677 1		2220.1	4^+	1542.31	4^+		
677.4 5	<0.5	5892.9	$(12^+,13^+)$	5215.5	(11^+)		DCO=1.6 2
678.5 3	1.1 3	6178.5	15^+	5500.0	13^+	E2	DCO=1.23 10
684.2 3	2.1 2	6181.6	15^-	5497.5	13^-	E2	DCO=1.3 2
687.0 5	0.20 5	2162.8	3^+	1475.8	2^+		
694[a] 1		4335.2	10^-	3641.0	8^-		
705.7 3	7.4 5	6672.9	16^-	5967.4	14^-	E2	DCO=1.40 7
707.2 3	1.8 2	3187.4	8^+	2480.04	6^+	E2	DCO=1.47 6
708.3 3	1.4 3	2250.70	4^+	1542.31	4^+	M1	DCO=1.5 2
718.1 5	0.57 10	5967.4	14^-	5249.2	13^-		
726.5 5	0.8 3	3782.2	9^-	3055.73	8^-	M1	DCO=1.08 12
735.2 5	0.2 1	8016.5	17	7281.0	16		
736.7 5	0.8 2	4560.4	11^-	3823.7	10^-	M1	DCO=0.73 14
743.5 5	0.4 1	5857.0	14^+	5114.0	12^+		
744.5 5		2220.1	4^+	1475.8	2^+		
753.8 5	0.8 2	5967.4	14^-	5213.5	12^-	E2	DCO=1.64 8
754.9 3	3.0 2	4182.4	10^-	3427.4	8^-	E2	DCO=1.37 10
757.7 5	0.27 4	4930.6	12^-	4172.9	11^-	M1	DCO=0.42 13
761.7 5	0.3 1	3641.0	8^-	2879.25	7^-	M1	DCO=1.0 2
768.0 3	5.4 1	3823.7	10^-	3055.73	8^-	E2	DCO=1.46 9
770.7 3	1.2 2	7443.5	(17^-)	6672.9	16^-		DCO=1.3 2
772.2 5		7443.5	(17^-)	6671.3	(15^-)		
786 1	0.6 2	11451.2	24	10665.2	23	D	DCO=1.12 13
787.1 3	5.2 2	5676.1	14^+	4889.1	12^+	E2	DCO=1.50 6
795.5 1	55.4 5	3275.56	8^+	2480.04	6^+	E2[#]	DCO=1.40 3 Mult.: A_2=0.327 14, A_4=−0.077 21.
802.1 2	11.7 2	4077.6	10^+	3275.56	8^+	E2	DCO=1.40 6
811.4 3	9.2 4	4889.1	12^+	4077.6	10^+	E2	DCO=1.46 6
811.6 3	9.9 4	6993.1	17^-	6181.6	15^-	E2	DCO=1.46 12
815 1	0.3 1	7778.3		6963.2	16^-		
818.2 5		1475.8	2^+	657.80	2^+		
827.0 2	12.1 2	4172.9	11^-	3345.90	9^-	E2	DCO=1.46 7
828.0 3	1.2 4	5758.9	13^-	4930.6	12^-	M1	DCO=1.0 2
836.5 3	1.0 2	4182.4	10^-	3345.90	9^-	M1	DCO=0.46 4
850.6 3	7.5 6	7523.5	18^-	6672.9	16^-	E2	DCO=1.43 5
854.2 2	42.4 4	5026.3	14^+	4172.03	12^+	E2	DCO=1.41 3
856.1 5	0.6 2	6646.0	(16^+)	5789.9	14^+	(Q)	DCO=1.69 14
874.4 3	3.8 6	5967.4	14^-	5092.9	12^-	E2	DCO=1.5 2
877.0 3	2.1 1	4560.4	11^-	3683.6	9^-	E2	DCO=1.51 10
878.2 3	1.3 3	5213.5	12^-	4335.2	10^-	E2	DCO=1.46 12
884.5 1	100	1542.31	4^+	657.80	2^+	E2[#]	DCO=1.40 3 Mult.: A_2=0.289 7, A_4=−0.069 10.
892.2 3	2.0 2	6993.1	17^-	6100.9	16^+	E1	DCO=0.77 6
900.1 3	4.4 1	6576.2	16^+	5676.1	14^+	E2	DCO=1.33 7
902.8 5	0.8 1	3782.2	9^-	2879.25	7^-		DCO=1.38 14
910.6 3	4.4 6	5092.9	12^-	4182.4	10^-	E2	DCO=1.48 10
921.7 5	0.7 2	6837.0	16^+	5915.3	14^+	E2	DCO=1.3 2
922.7 5	0.8 2	7970.7	18^-	7048.0	16^-	E2	DCO=1.37 13
932.3 3	5.3 3	6181.6	15^-	5249.2	13^-	E2	DCO=1.40 6

Continued on next page (footnotes at end of table)

(HI,xnγ) 1994Ju04,1990Ju01,1974Lu01 (continued)

γ(^{110}Cd) (continued)

Eγ†	Iγ†	Ei(level)	J^{π}_{i}	Ef	J^{π}_{f}	Mult.‡	δ	Comments
937 *1*	1.0 *1*	5497.5	13⁻	4560.4	11⁻			
937.7 *1*	86.0 *10*	2480.04	6⁺	1542.31	4⁺	E2#		DCO=1.40 *3* Mult.: A_2=0.322 *9*, A_4=−0.075 *13*.
941 *1*	<0.2	5114.0	12⁺	4172.03	12⁺			
941.7 *5*	0.8 *2*	6798.7	16⁺	5857.0	14⁺	E2		DCO=1.3 *2*
946.3 *3*	0.50 *10*	7048.0	16⁻	6101.8	14⁻	E2		DCO=1.7 *3*
952.8 *3*	5.5 *6*	7945.9	19⁻	6993.1	17⁻	E2		DCO=1.41 *9*
952.8 *5*	0.7 *1*	8278.0	18	7325.4	18⁺	D@		DCO=1.46 *10*
955.0 *3*	1.2 *3*	4737.2	11⁻	3782.2	9⁻	E2		DCO=1.7 *4*
960.1 *3*	7.10 *10*	3440.08	8⁺	2480.04	6⁺	E2		DCO=1.27 *8*
962 *1*	1.0 *3*	8405.5	(19⁻)	7443.5	(17⁻)	(Q)		DCO=1.4 *2*
967.0 *5*	0.2 *1*	8292.3	18	7325.4	18⁺			
967.7 *3*	1.7 *2*	5857.0	14⁺	4889.1	12⁺	E2		DCO=1.41 *10*
989.2 *3*	1.5 *4*	4335.2	10⁻	3345.90	9⁻	M1		DCO=1.6 *2*
997.8 *3*	11.5 *1*	2540.04	5⁻	1542.31	4⁺	E1(+M2)#	<0.06	DCO=0.71 *4* Mult.: A_2=−0.264 *25*. δ: Absolute value of δ from 1974Lu01.
1005.8 *3*	1.1 *3*	7184.3	17⁺	6178.5	15⁺	E2		DCO=1.36 *10*
1009 *1*	0.26 *5*	6101.8	14⁻	5092.9	12⁻			
1021.5 *5*	0.25 *5*	5758.9	13⁻	4737.2	11⁻	E2		DCO=1.9 *4*
1026.2 *3*	1.5 *1*	5915.3	14⁺	4889.1	12⁺	E2		DCO=1.51 *13*
1036.7 *3*	1.5 *1*	5114.0	12⁺	4077.6	10⁺	E2		DCO=1.29 *11*
1036.8 *3*	1.4 *1*	5967.4	14⁻	4930.6	12⁻	E2		DCO=1.38 *13*
1055 *1*		5984.5	14⁻	4930.6	12⁻			
1068.9 *3*	1.9 *4*	7285.8	(16)	6216.9	(14)	(Q)		DCO=1.48 *13*
1074.6 *2*	20.0 *2*	6100.9	16⁺	5026.3	14⁺	E2		DCO=1.47 *5*
1076.1 *3*	8.6 *4*	5249.2	13⁻	4172.9	11⁻	E2		DCO=1.40 *8*
1077.4 *3*	4.6 *3*	7653.6	18⁺	6576.2	16⁺	E2		DCO=1.5 *2*
1080.2 *5*	0.35 *8*	7048.0	16⁻	5967.4	14⁻			
1100 *1*	1.0 *3*	9962.4	22⁺	8862.1	20⁺			
1106.5 *3*	2.8 *3*	8630.0	20⁻	7523.5	18⁻	E2		DCO=1.40 *93*
1107.0 *3*	4.2 *4*	4930.6	12⁻	3823.7	10⁻	E2		DCO=1.44 *9*
1117.4 *5*	0.9 *1*	2660.1	5⁻	1542.31	4⁺	E1		DCO=0.8 *2*
1126 *5*	0.2 *1*	1783.7	2⁺	657.80	2⁺			
1152.1 *5*	0.5 *2*	6178.5	15⁺	5026.3	14⁺	M1		DCO=1.2 *2*
1155 *1*	<0.5	7801.0	(18⁺)	6646.0	(16⁺)	(E2)		
1155.2 *3*	5.8 *4*	6181.6	15⁻	5026.3	14⁺	E1		DCO=0.81 *6*
1160.9 *3*	4.4 *2*	9106.8	21⁻	7945.9	19⁻	E2		DCO=1.50 *14*
1169 *1*	<0.5	9574.5	(21⁻)	8405.5	(19⁻)			
1171.3 *3*	1.3 *3*	6101.8	14⁻	4930.6	12⁻	E2		DCO=1.3 *2*
1190.6 *3*	3.9 *3*	6216.9	(14)	5026.3	14⁺	D&		DCO=1.39 *14*
1198.9 *5*	0.3 *1*	5758.9	13⁻	4560.4	11⁻	E2		DCO=1.6 *2*
1208.5 *3*	2.9 *3*	8862.1	20⁺	7653.6	18⁺	E2		DCO=1.7 *2*
1224.5 *2*	11.2 *2*	7325.4	18⁺	6100.9	16⁺	E2		DCO=1.46 *4*
1244.9 *5*	0.5 *2*	8530.7	(18)	7285.8	(16)			
1251 *1*	<0.3	4438.4	9⁺	3187.4	8⁺			
1261 *1*	0.2 *1*	7443.5	(17⁻)	6181.6	15⁻			
1295 *1*	0.7 *2*	6544.2	(15⁻)	5249.2	13⁻			DCO=1.25 *14*
1297 *1*	<0.5	8481.3	(19⁺)	7184.3	17⁺	(E2)		
1300.1 *5*		2842.4	5⁻	1542.31	4⁺			
1314.1 *3*	2.7 *1*	9962.4	22⁺	8648.3	20⁺	E2		DCO=1.50 *9*
1323.0 *3*	5.1 *2*	8648.3	20⁺	7325.4	18⁺	E2		DCO=1.44 *6*
1324.6 *5*	0.4 *1*	5497.5	13⁻	4172.9	11⁻			
1325.6 *5*	0.8 *2*	5497.5	13⁻	4172.03	12⁺			
1327.9 *3*	2.0 *5*	5500.0	13⁺	4172.03	12⁺	D		DCO=1.05 *14*

Continued on next page (footnotes at end of table)

(HI,xnγ) 1994Ju04,1990Ju01,1974Lu01 (continued)

γ(^{110}Cd) (continued)

E_γ [†]	I_γ [†]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [‡]	Comments
1335.3 *3*	1.0 *1*	2877.17	6$^+$	1542.31	4$^+$	E2	DCO=1.02 *14*
1342 *1*	2.0 *2*	9972.0	22$^-$	8630.0	20$^-$	E2	DCO=1.8 *3*
1344.5 *5*	0.2 *1*	4620.2	10$^+$	3275.56	8$^+$		
1358 *1*	0.3 *1*	7342.3		5984.5	14$^-$		
1358.0 *3*	2.5 *1*	11320.4	24$^+$	9962.4	22$^+$	E2	DCO=1.33 *10*
1367 *1*	1.0 *1*	10229.2	(22$^+$)	8862.1	20$^+$		
1389 *1*	3.0 *5*	10495.9	23$^-$	9106.8	21$^-$	E2	DCO=1.5 *3*
1421 *1*	<0.3	2078.8	3$^-$	657.80	2$^+$		
1422 *1*	0.2 *1*	6671.3	(15$^-$)	5249.2	13$^-$		
1423.5 *5*	0.17 *4*	7778.3		6354.6	15$^-$		
1433.0 *5*	0.5 *1*	4620.2	10$^+$	3187.4	8$^+$		
1443 *1*	1.7 *2*	12763	26$^+$	11320.4	24$^+$	E2	DCO=1.53 *12*
1443 *1*		14206	28$^+$	12763	26$^+$	E2	
1483 *1*	0.7 *2*	11455.0	(24$^-$)	9972.0	22$^-$	(E2)	
1504 *1*	2.5 *3*	5676.1	14$^+$	4172.03	12$^+$	E2	DCO=1.7 *3*
1542.4 *5*	0.8 *2*	6568.8	14	5026.3	14$^+$	D [@]	DCO=1.4 *2*
1549 *1*	1.1 *2*	6576.2	16$^+$	5026.3	14$^+$	E2	DCO=1.3 *2*
1558.1 *5*	0.8 *2*	6584.5	14	5026.3	14$^+$	D [@]	DCO=1.5 *2*
1578 *1*	<0.5	13033.0	(26$^-$)	11455.0	(24$^-$)		
1586 *1*	0.5 *1*	5758.9	13$^-$	4172.9	11$^-$		DCO=1.3 *2*
1586 *1*	0.7 *2*	12081.9	(25$^-$)	10495.9	23$^-$	(E2)	
1586.8 *3*	1.6 *1*	5758.9	13$^-$	4172.03	12$^+$	E1	DCO=0.71 *9*
1592.6 *5*	0.15 *5*	2250.70	4$^+$	657.80	2$^+$		
1617.9 *3*	1.5 *1*	5789.9	14$^+$	4172.03	12$^+$	E2	DCO=1.1 *2*
1645 *1*	0.3 *1*	6671.3	(15$^-$)	5026.3	14$^+$		

[†] From ^{96}Zr(^{18}O,4nγ) in 1994Ju04.

[‡] From DCO measurements and band structure (1994Ju04). DCO ratios are from 1994Ju04 (R(E_γ)=I_γ(143° or 37°)/I_γ(79° or 101°)). For ΔI=0 dipole and ΔI=2 quadrupole transitions R(E_γ)≈1.50, for stretched dipole transitions R(E_γ)≈0.75. A_2 and A_4 coefficients are from 1974Lu01, unless otherwise stated.

[#] From γ(θ) and linear pol measurements (1974Lu01).

[@] From DCO ratio very probably ΔJ=0 transition (1994Ju04).

[&] DCO indicates ΔJ=0 or 2, but from intensity considerations the former is preferred (1994Ju04).

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

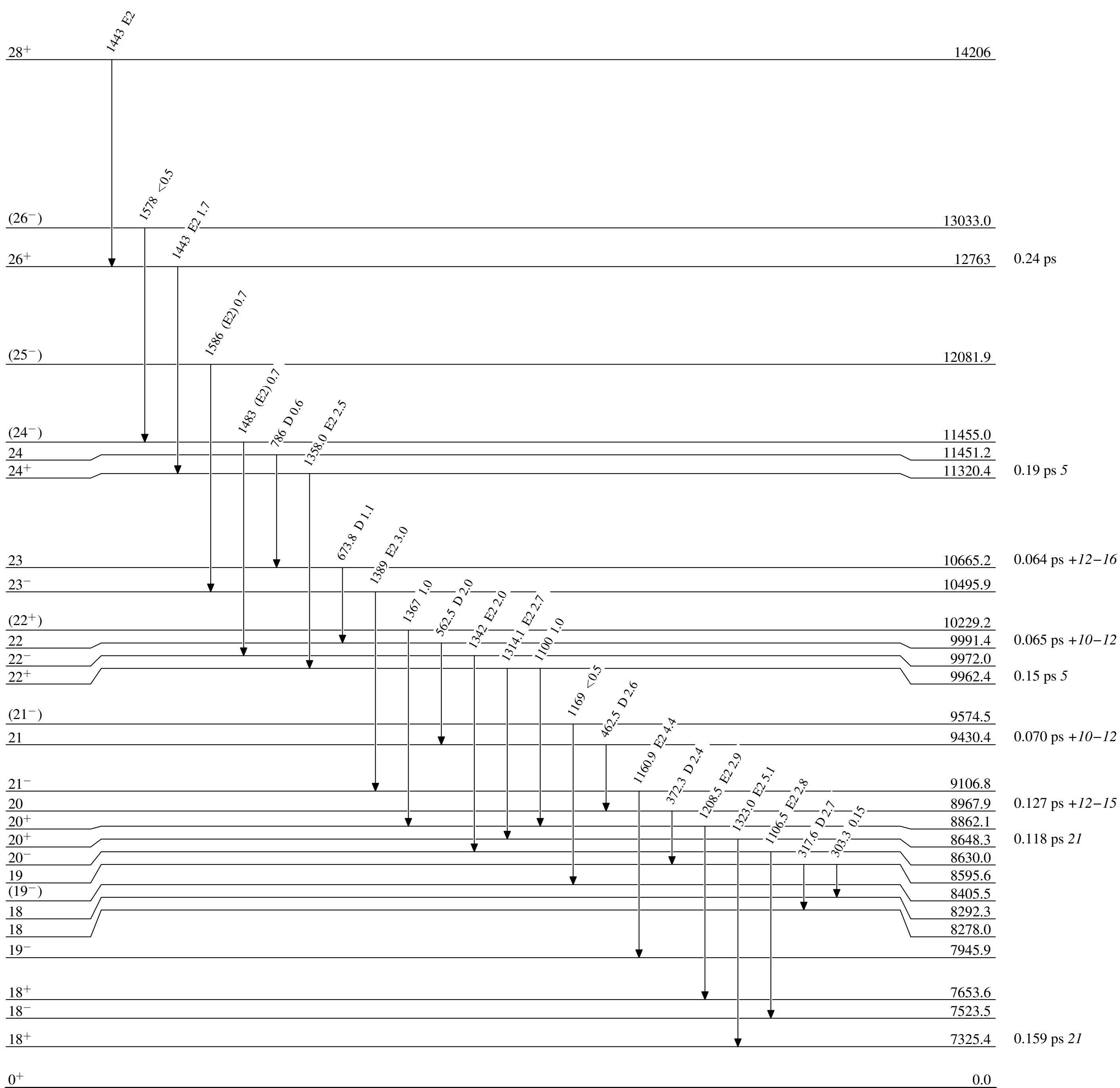
(HI,xnγ) 1994Ju04,1990Ju01,1974Lu01

Legend

Level Scheme

Intensities: Type not specified

$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$

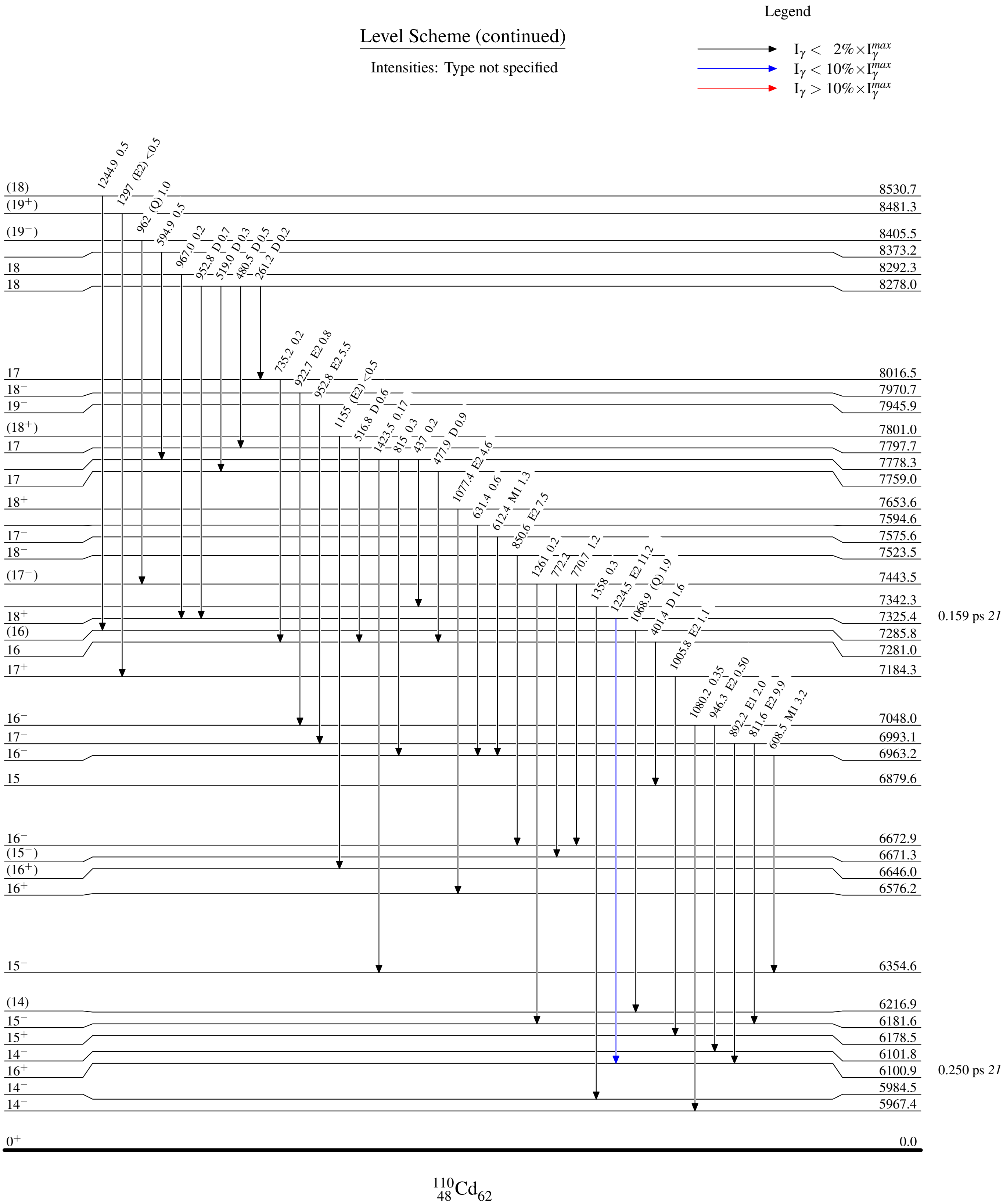


$^{110}_{48}Cd_{62}$

(HI,xnγ) 1994Ju04,1990Ju01,1974Lu01

Level Scheme (continued)

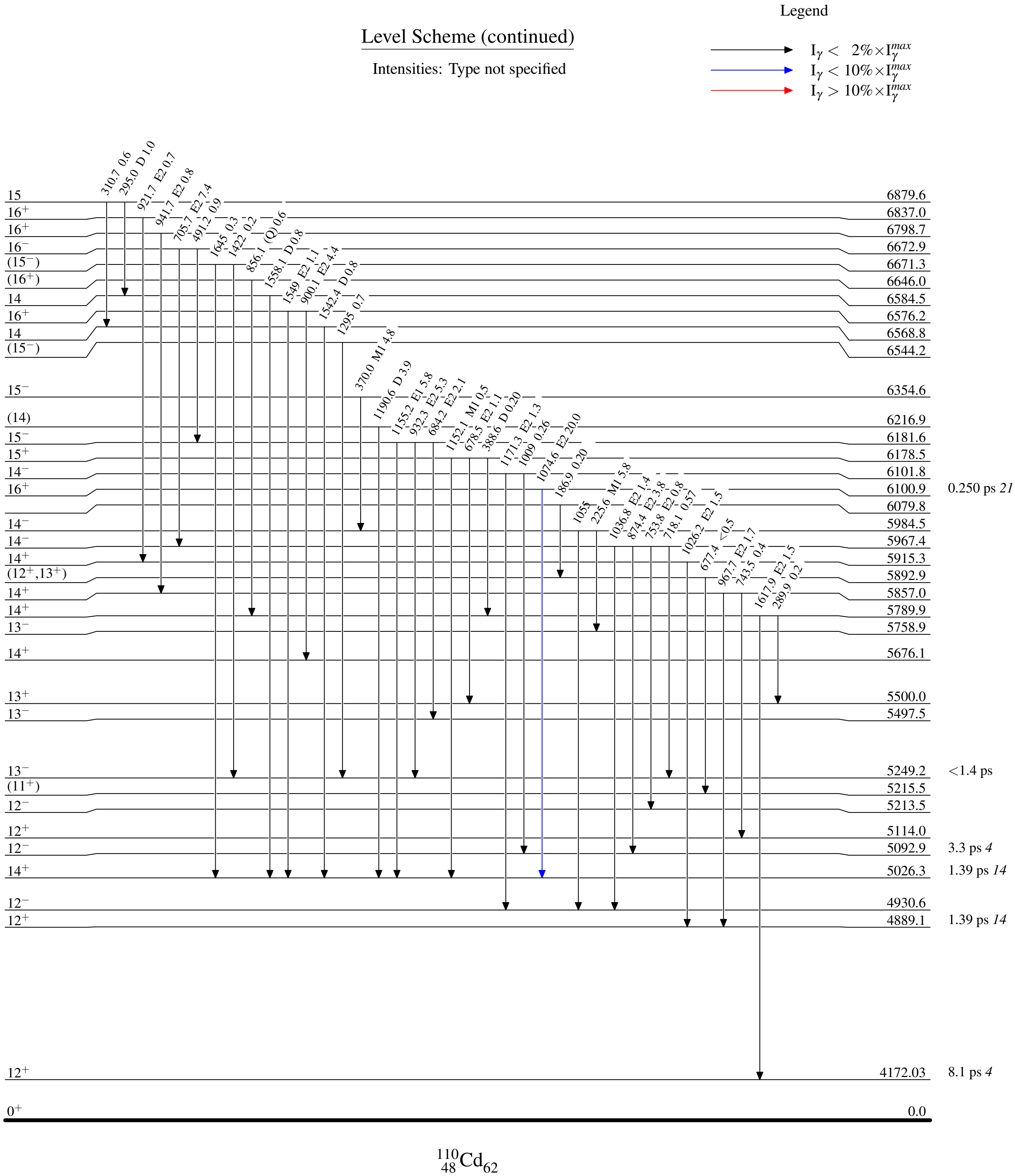
Intensities: Type not specified



(HI,xnγ) 1994Ju04,1990Ju01,1974Lu01

Level Scheme (continued)

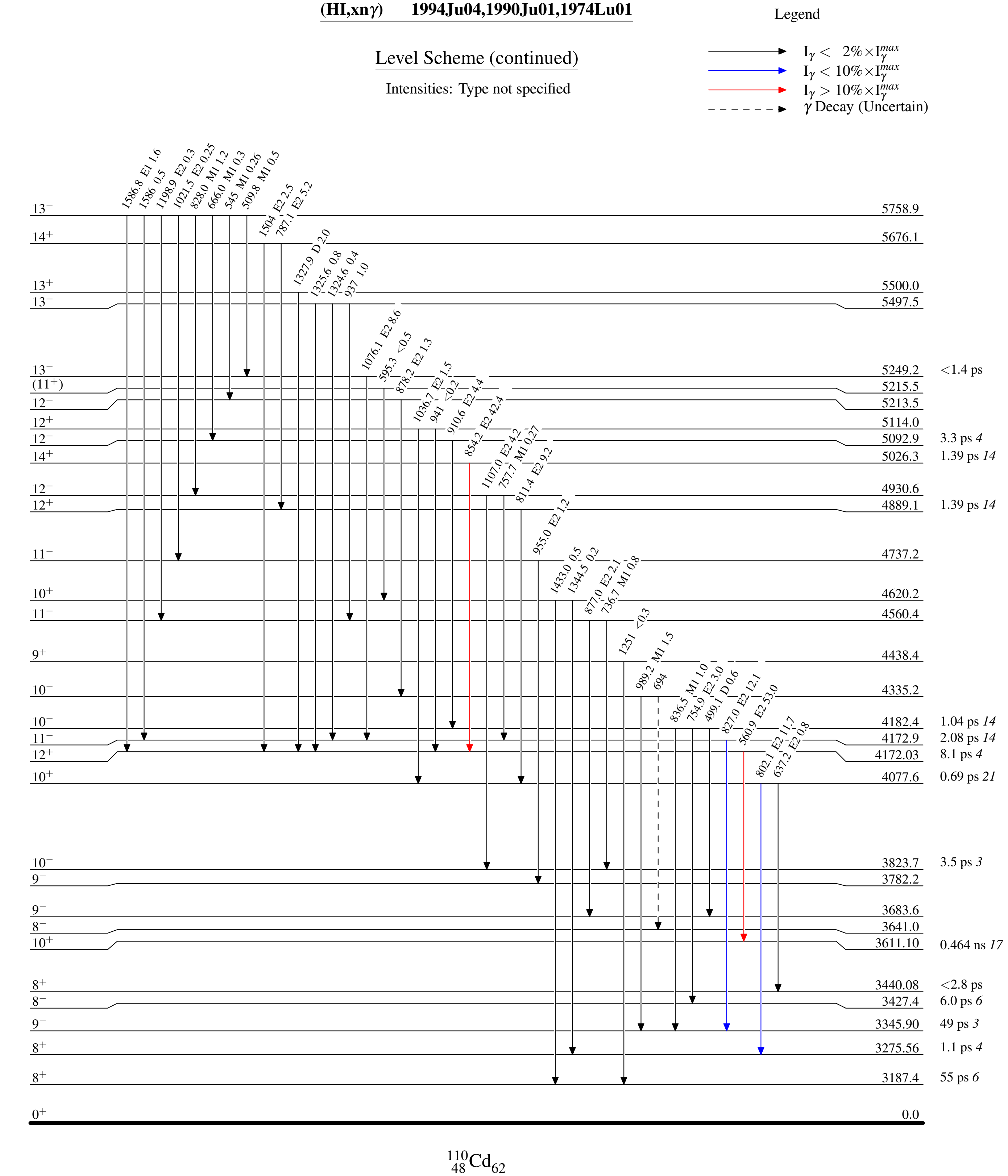
Intensities: Type not specified



(HI,xnγ) 1994Ju04,1990Ju01,1974Lu01

Level Scheme (continued)

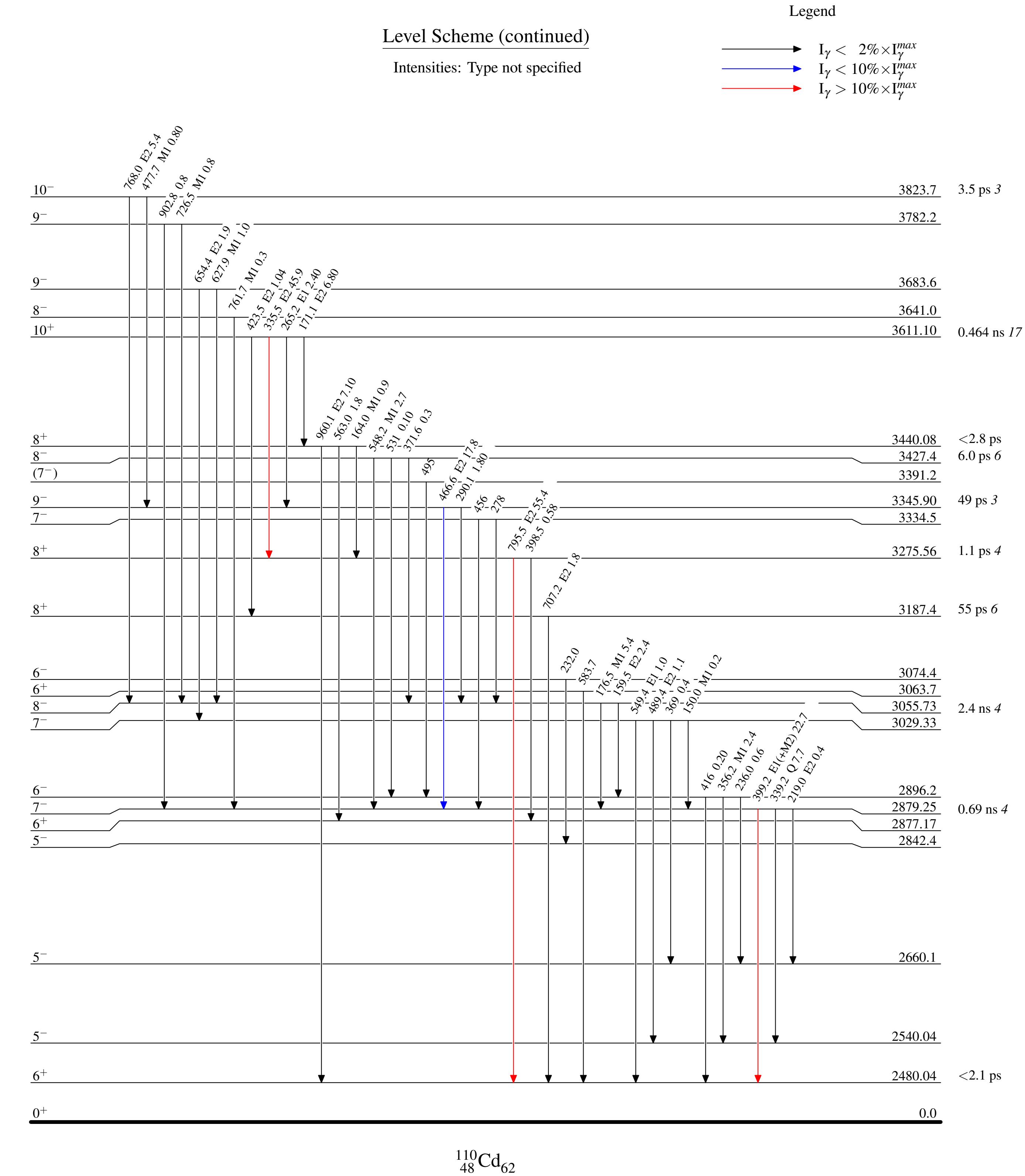
Intensities: Type not specified



(HI,xnγ) 1994Ju04,1990Ju01,1974Lu01

Level Scheme (continued)

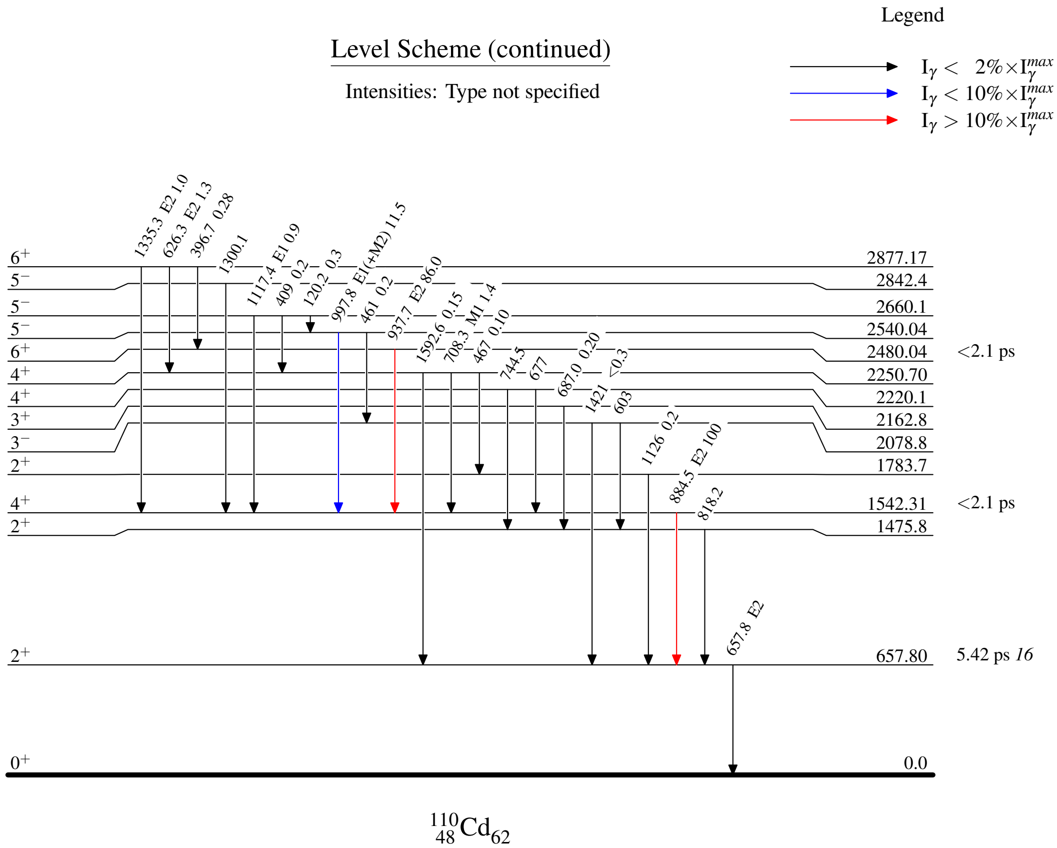
Intensities: Type not specified



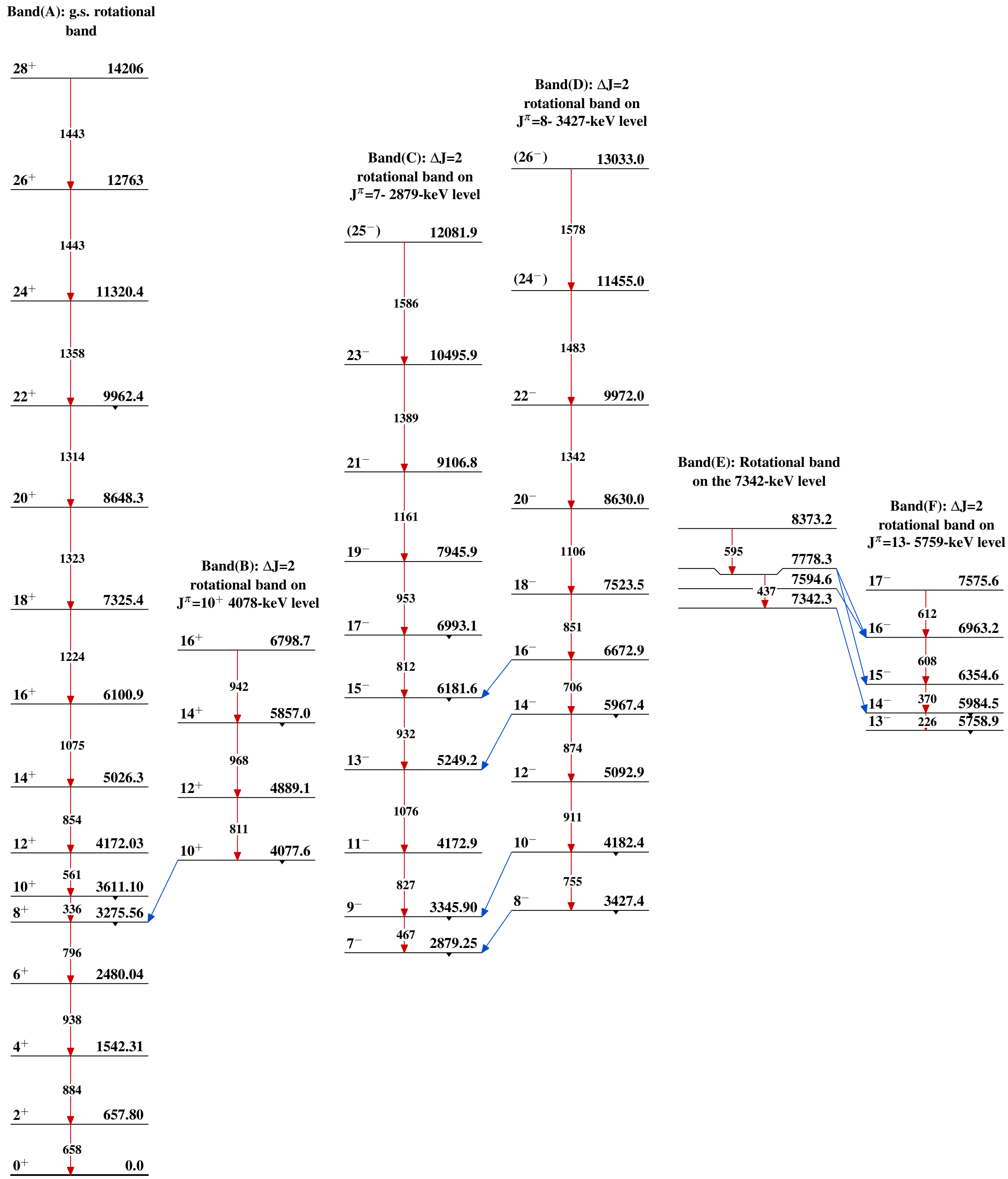
(HI,xnγ) 1994Ju04,1990Ju01,1974Lu01

Level Scheme (continued)

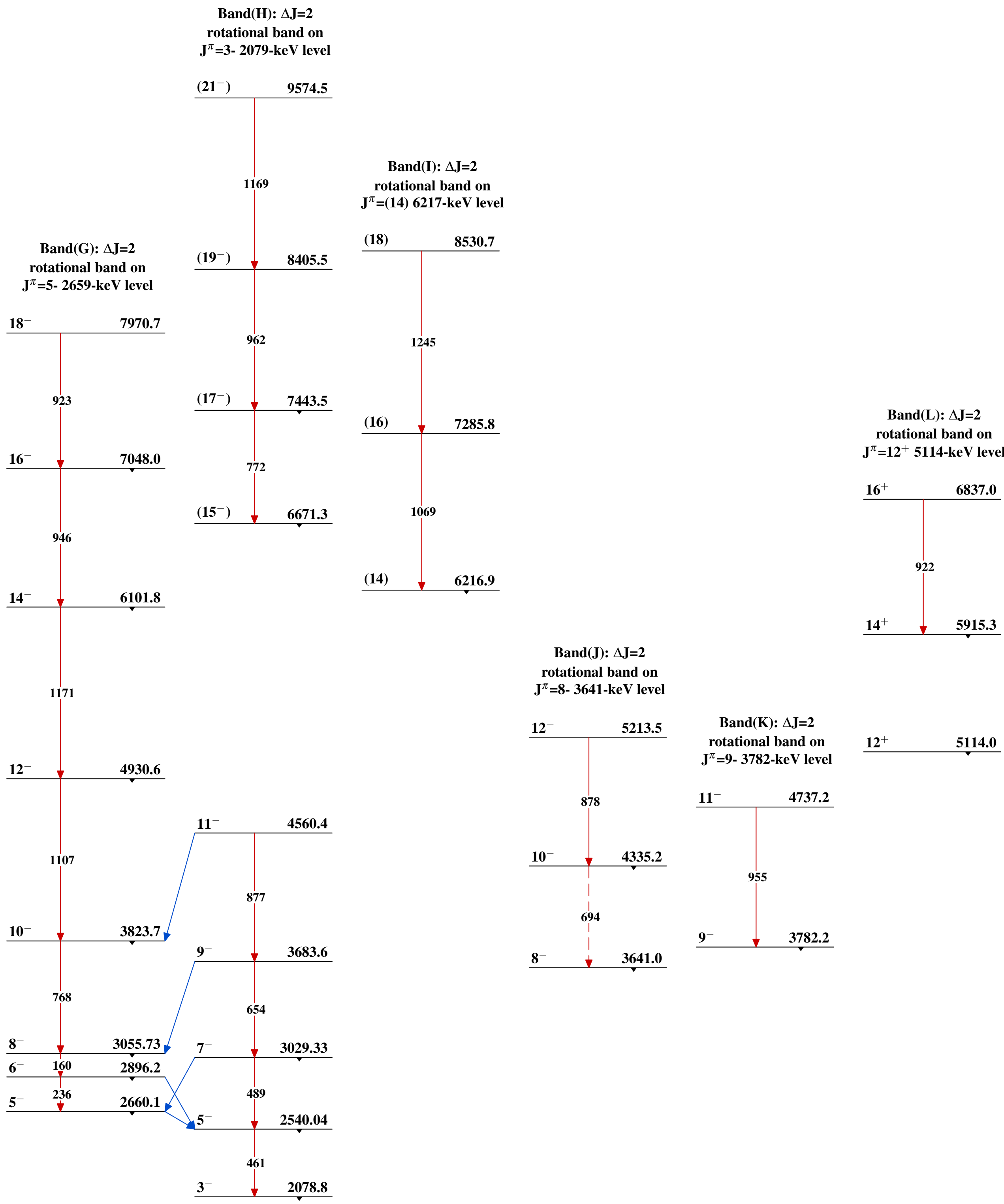
Intensities: Type not specified



(HI,xnγ) 1994Ju04,1990Ju01,1974Lu01

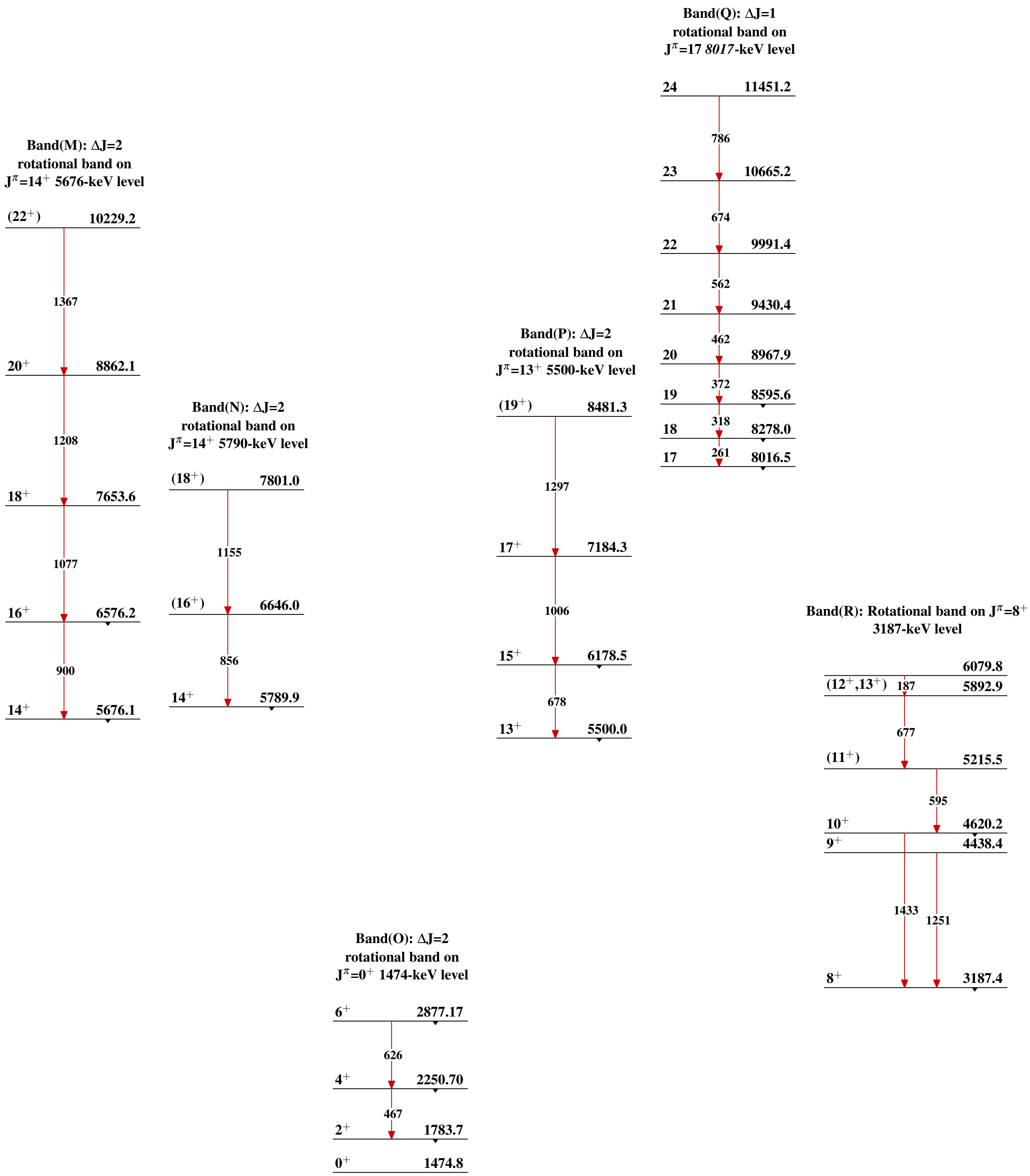


$(HI,xn\gamma)$ 1994Ju04,1990Ju01,1974Lu01 (continued)



$^{110}_{48}Cd_{62}$

(HI,xnγ) 1994Ju04,1990Ju01,1974Lu01 (continued)



$^{110}_{48}Cd_{62}$

(HI,xnγ) 1994Ju04,1990Ju01,1974Lu01 (continued)