^{110}In ε decay (4.92 h) 1977MeZY

History

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

Parent: ^{110}In: E=0.0; $J^\pi=7^+$; $T_{1/2}$=4.92 h *8*; Q(ε)=3878 *12*; %ε+%β^+ decay=100.0

Evaluator's note: Data are from 2000De11.

Others: 2009Be44, 1992Ku01, 1980Ba58, 1979Sy02, 1977Me15, 1970BuZZ, 1970Ko12, 1970Sa02, 1969SyZZ, 1968SyZZ, 1962Ka08, 1953Bl44, 1951Mc11.

^{110}Cd Levels

E(level)†	Jπ‡	Comments
0.0	0^+	
657.755 *10*	2^+	
1475.770 *12*	2^+	
1542.424 *12*	4^+	
1783.45 *3*	2^+	
2078.80 *3*	3^-	
2162.781 *12*	3^+	
2220.024 *23*	4^+	
2250.478 *24*	4^+	
2287.4? *10*	2^+	
2479.896 *16*	6^+	
2539.632 *17*	5^-	
2561.261 *19*	4^+	
2659.792 *17*	5^-	
2876.754 *25*	6^+	
2926.709 *16*	5^+	
3064.68 *3*	6^+	Jπ: Other: J=6 from γγ(θ) results of 1980Ba58.
3121.56 *3*	6^+	Jπ: Other: J=6 from γγ(θ) results of 1980Ba58.
3187.30 *3*	8^+	Jπ: Other: J=7 from γγ(θ) results of 1980Ba58.
3239.517 *25*	6^+	
3275.32 *4*	8^+	
3525.22 *5*	6^+	

† From least-squares fit to Eγ's.

‡ From Adopted Levels.

ε,β^+ radiations

E(decay)	E(level)	Iβ+ ‡	Iε‡	Log *ft*	I(ε+β+)†‡	Comments
(353 *12*)	3525.22		4.21 *14*	5.04 *4*	4.21 *14*	εK=0.8480 *7*; εL=0.1213 *5*; εM+=0.03076 *15*
(603 *12*)	3275.32		0.33 *3*	6.64 *5*	0.33 *3*	εK=0.8554 *2*; εL=0.11554 *16*; εM+=0.02907 *5*
(638 *12*)	3239.517		4.10 *13*	5.593 *23*	4.10 *13*	εK=0.8559 *2*; εL=0.11511 *14*; εM+=0.02895 *4*
(691 *12*)	3187.30		29.6 *12*	4.806 *25*	29.6 *12*	εK=0.8567 *2*; εL=0.11455 *12*; εM+=0.02878 *4*
(756 *12*)	3121.56		43.8 *11*	4.717 *20*	43.8 *11*	εK=0.8574 *2*; εL=0.1140 *1*; εM+=0.02861 *3*
(813 *12*)	3064.68		7.7 *3*	5.537 *23*	7.7 *3*	εK=0.8580 *1*; εL=0.11355 *9*; εM+=0.02849 *3*
(1001 *12*)	2876.754		2.33 *25*	6.24 *5*	2.33 *25*	εK=0.8593; εL=0.11250 *6*; εM+=0.02819 *2*
(1218 *12*)	2659.792		1.74 *15*	7.28^{1u} *5*	1.74 *15*	εK=0.8544 *2*; εL=0.1163 *1*; εM+=0.02931 *3*
(1338 *12*)	2539.632		0.6 *4*	7.9^{1u} *3*	0.6 *4*	εK=0.8552; εL=0.11544 *9*; εM+=0.02906 *3*
(1398 *12*)	2479.896	0.008 *9*	1.8 *19*	6.7 *5*	1.8 *19*	av Eβ=174.6 *53*; εK=0.8571 *5*; εL=0.1107 *1*; εM+=0.02769 *3*

† Calculated from the total intensity imbalance.

‡ Absolute intensity per 100 decays.

γ(^{110}Cd)

Iγ normalization: From Σ I(γ+ce) to g.s.=100 with the assumption that there is no direct β$^-$feeding to the ^{110}Cd g.s..

E_γ[‡]	I_γ[‡d]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[@]	δ[&c]	α[†]	Comments
120.154[#] *25*	1.43[#] *3*	2659.792	5$^-$	2539.632	5$^-$	M1(+E2)	−0.1 *3*	0.28 *7*	α(K)=0.24 *5*; α(L)=0.031 *14*; α(M)=0.006 *3*; α(N+..)=0.0011 *5* α(N)=0.0011 *5*; α(O)=5.9×10^{-5} *8* Mult.,δ: From adopted gammas.
[x]121.17 *16*	0.4 *2*								α(K)exp=0.23 *12* (1970Ko12); K/L=5.8 *10* (1962Ka08)
229.420[#] *22*	0.0209[#] *4*	2479.896	6$^+$	2250.478	4$^+$	[E2]		0.0801	α(K)=0.0670 *10*; α(L)=0.01070 *15*; α(M)=0.00208 *3*; α(N+..)=0.000373 *6* α(N)=0.000358 *5*; α(O)=1.410×10^{-5} *20*
266.914[#] *12*	0.000304[#] *16*	2926.709	5$^+$	2659.792	5$^-$				
295.42[#] *18*	0.0177[#] *23*	2078.80	3$^-$	1783.45	2$^+$	(E1)		0.00805	α(K)=0.00702 *10*; α(L)=0.000836 *12*; α(M)=0.0001597 *23*; α(N+..)=2.98×10^{-5} *5* α(N)=2.83×10^{-5} *4*; α(O)=1.563×10^{-6} *22*
310.4 *6*	0.0006 *3*	1783.45	2$^+$	1475.770	2$^+$	[E2]		0.0290	α(K)=0.0246 *4*; α(L)=0.00357 *6*; α(M)=0.000692 *11*; α(N+..)=0.0001257 *20* α(N)=0.0001203 *19*; α(O)=5.38×10^{-6} *9* E_γ,I_γ: From adopted gammas.
341.3[#e] *1*	0.0417[#] *15*	2561.261	4$^+$	2220.024	4$^+$	[M1]		0.01715	α(K)=0.01493 *21*; α(L)=0.00181 *3*; α(M)=0.000347 *5*; α(N+..)=6.55×10^{-5} *10* α(N)=6.19×10^{-5} *9*; α(O)=3.61×10^{-6} *5*
365.448[#] *11*	0.00070[#] *4*	2926.709	5$^+$	2561.261	4$^+$				
387.075[#] *9*	0.00038[#] *2*	2926.709	5$^+$	2539.632	5$^-$				
396.894[#] *22*	0.26[#] *17*	2876.754	6$^+$	2479.896	6$^+$	M1+E2		0.0125 *8*	α(K)=0.0108 *6*; α(L)=0.00139 *17*; α(M)=0.00027 *4*; α(N+..)=5.0×10^{-5} *6* α(N)=4.7×10^{-5} *6*; α(O)=2.50×10^{-6} *5* Mult.: From adopted gammas.
409.6 *3*	0.447 *10*	2659.792	5$^-$	2250.478	4$^+$	E1(+M2)	−0.029 *23*	0.00349 *9*	α(K)=0.00305 *8*; α(L)=0.000361 *10*; α(M)=6.89×10^{-5} *18*; α(N+..)=1.29×10^{-5} *4* α(N)=1.22×10^{-5} *4*; α(O)=6.90×10^{-7} *18* Mult.,δ: From adopted gammas. E1 from α(K)exp=0.0027 *10* (1970Ko12) in ^{110}In ε Decay.
446.812[#] *3*	0.0281[#] *15*	2926.709	5$^+$	2479.896	6$^+$	M1+E2	−0.39 *2*	0.00883	α(K)=0.00768 *11*; α(L)=0.000936 *14*; α(M)=0.000180 *3*; α(N+..)=3.38×10^{-5} *5* α(N)=3.20×10^{-5} *5*; α(O)=1.83×10^{-6} *3* Mult.,δ: From adopted gammas.
460.85[#] *8*	0.428[#] *8*	2539.632	5$^-$	2078.80	3$^-$	E2		0.00845	α(K)=0.00726 *11*; α(L)=0.000965 *14*; α(M)=0.000186 *3*; α(N+..)=3.43×10^{-5} *5*

^{110}In ε decay (4.92 h) 1977MeZY (continued)

γ(^{110}Cd) (continued)

E_γ[‡]	I_γ[‡d]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[@]	δ[&c]	α[†]	Comments
									α(N)=3.27×10^{-5} *5*; α(O)=1.641×10^{-6} *23* Mult.: From adopted gammas.
461.1[a]	2.3	3525.22	6$^+$	3064.68	6$^+$	E2		0.00843	α(K)=0.00725 *11*; α(L)=0.000963 *14*; α(M)=0.000186 *3*; α(N+..)=3.43×10^{-5} *5* α(N)=3.26×10^{-5} *5*; α(O)=1.638×10^{-6} *23*
461.80[a] *13*	4.8	3121.56	6$^+$	2659.792	5$^-$	[E1]		0.00258	Mult.: From adopted gammas. α(K)=0.00225 *4*; α(L)=0.000265 *4*; α(M)=5.07×10^{-5} *8*; α(N+..)=9.52×10^{-6} *14* α(N)=9.01×10^{-6} *13*; α(O)=5.12×10^{-7} *8*
467.01 *4*	0.184 *22*	2250.478	4$^+$	1783.45	2$^+$	E2		0.00812	α(K)exp=13×10^{-3} *4* (1979Sy02) α(K)=0.00698 *10*; α(L)=0.000926 *13*; α(M)=0.0001785 *25*; α(N+..)=3.29×10^{-5} *5* α(N)=3.14×10^{-5} *5*; α(O)=1.580×10^{-6} *23* I_γ: From adopted gammas.
560.32 *11*	1.9 *1*	3121.56	6$^+$	2561.261	4$^+$	E2		0.00483	α(K)=0.00417 *6*; α(L)=0.000536 *8*; α(M)=0.0001032 *15*; α(N+..)=1.92×10^{-5} *3* α(N)=1.82×10^{-5} *3*; α(O)=9.54×10^{-7} *14* Mult.: α(K)exp=3.8×10^{-3} *5*. Other: 3.3×10^{-3} *16* (1970Ko12).
581.93 *9*	8.7 *3*	3121.56	6$^+$	2539.632	5$^-$	E1(+M2)	−0.01 *10*	0.00150 *15*	α(K)=0.00131 *13*; α(L)=0.000154 *17*; α(M)=2.9×10^{-5} *4*; α(N+..)=5.5×10^{-6} *6* α(N)=5.2×10^{-6} *6*; α(O)=3.0×10^{-7} *4*
584.21 *8*	6.6 *2*	3064.68	6$^+$	2479.896	6$^+$	M1+E2	+0.0 *3*	0.00458	α(K)=0.00400 *6*; α(L)=0.000476 *7*; α(M)=9.12×10^{-5} *13*; α(N+..)=1.725×10^{-5} *25* α(N)=1.629×10^{-5} *23*; α(O)=9.59×10^{-7} *16* E_γ: No final level within 5 sigmas. Uncertainty on energy probably underestimated. Least-squares fit gives 584.76 *3*. K/(L+M)=9 *3* (1962Ka08).
603.03[#] *4*	0.072[#] *9*	2078.80	3$^-$	1475.770	2$^+$	E1(+M2)	−0.14 *22*	0.0016 *11*	α(K)=0.0014 *10*; α(L)=0.00017 *12*; α(M)=3.2×10^{-5} *24*; α(N+..)=6.E−6 *5* α(N)=6.E−6 *5*; α(O)=3.2×10^{-7} *24*
620.3553[#] *17*	0.053[#] *8*	2162.781	3$^+$	1542.424	4$^+$	M1+E2	−0.50 *5*	0.00391	α(K)=0.00341 *5*; α(L)=0.000410 *6*; α(M)=7.86×10^{-5} *11*; α(N+..)=1.482×10^{-5} *21* α(N)=1.401×10^{-5} *20*; α(O)=8.11×10^{-7} *12*
626.24 *7*	1.5 *1*	2876.754	6$^+$	2250.478	4$^+$	E2		0.00357	Mult.,δ: From adopted gammas. α(K)=0.00309 *5*; α(L)=0.000391 *6*; α(M)=7.52×10^{-5} *11*; α(N+..)=1.400×10^{-5} *20* α(N)=1.329×10^{-5} *19*; α(O)=7.11×10^{-7} *10* Mult.: α(K)exp=3.0×10^{-3} *4*. Other: 3.5×10^{-3} *18* (1970Ko12).
641.68 *5*	26.4 *6*	3121.56	6$^+$	2479.896	6$^+$	M1(+E2)		0.00351 *17*	α(K)=0.00305 *16*; α(L)=0.000373 *9*; α(M)=7.16×10^{-5} *17*; α(N+..)=1.34×10^{-5} *4* α(N)=1.27×10^{-5} *4*; α(O)=7.2×10^{-7} *6*

$^{110}_{48}Cd_{62}$-3

^{110}In ε decay (4.92 h) 1977MeZY (continued)

γ(^{110}Cd) (continued)

E_γ[‡]	I_γ[‡d]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[@]	δ[&c]	α[†]	Comments
									Mult.: α(K)exp=2.96×10^{-3} *21*. Other: 3.5×10^{-3} *8* (1970Ko12). δ −0.05 *+16−10* or +0.74 *+17−25* (1977Be19).
648.58 *8*	0.4 *1*	3525.22	6$^+$	2876.754	6$^+$	M1+E2	+0.20 *+10−12*	0.00357 *6*	α(K)=0.00311 *5*; α(L)=0.000370 *6*; α(M)=7.09×10^{-5} *10*; α(N+..)=1.341×10^{-5} *19* α(N)=1.266×10^{-5} *18*; α(O)=7.45×10^{-7} *12* α(K)exp: =4.2×10^{-3} *12* (1979Sy02). Other: 1.2×10^{-3} *4* (1980Ba58).
657.750 *10*	100 *2*	657.755	2$^+$	0.0	0$^+$	E2		0.00314	α(K)=0.00272 *4*; α(L)=0.000342 *5*; α(M)=6.57×10^{-5} *10*; α(N+..)=1.224×10^{-5} *18* α(N)=1.161×10^{-5} *17*; α(O)=6.26×10^{-7} *9* Mult.: K/(L+M)=6.0 *5* (1962Ka08).
677.6[a] *5*	4.6 *5*	2220.024	4$^+$	1542.424	4$^+$	M1+E2	−0.34 *2*	0.00320	α(K)exp=2.2×10^{-3} *4* (1979Sy02) α(K)=0.00279 *4*; α(L)=0.000332 *5*; α(M)=6.37×10^{-5} *9*; α(N+..)=1.203×10^{-5} *17* α(N)=1.136×10^{-5} *16*; α(O)=6.65×10^{-7} *10*
687.0091[#] *18*	0.127[#] *20*	2162.781	3$^+$	1475.770	2$^+$	M1+E2	−1.69 *+2−4*	0.00289	α(K)=0.00251 *4*; α(L)=0.000309 *5*; α(M)=5.93×10^{-5} *9*; α(N+..)=1.111×10^{-5} *16* α(N)=1.052×10^{-5} *15*; α(O)=5.85×10^{-7} *9* Mult.,δ: From adopted gammas.
706.67[b]	0.13	2926.709	5$^+$	2220.024	4$^+$	M1+E2	−1.15 *+5−6*	0.00275	α(K)=0.00239 *4*; α(L)=0.000291 *5*; α(M)=5.58×10^{-5} *8*; α(N+..)=1.048×10^{-5} *15* α(N)=9.92×10^{-6} *14*; α(O)=5.61×10^{-7} *9* Mult.: From 1980Ba58. δ: From adopted gammas. −0.5 *2* in ^{110}In ε Decay (4.9 h).
707.40[b] *2*	30.0 *10*	3187.30	8$^+$	2479.896	6$^+$	E2		0.00260	α(K)=0.00226 *4*; α(L)=0.000281 *4*; α(M)=5.40×10^{-5} *8*; α(N+..)=1.008×10^{-5} *15* α(N)=9.56×10^{-6} *14*; α(O)=5.21×10^{-7} *8* Mult.: From α(K)exp=2.61×10^{-3} *16*. E2+M1 with δ=+0.52 *+12−10* reported in 1980Ba58 See also 1977Be19. If J^π=8$^+$ M1 component is impossible. Other: α(K)exp=2.9×10^{-3} *6* (1970Ko12). K/(L+M)=6.0 *5* (1962Ka08).
708.12[b]	1.67 *17*	2250.478	4$^+$	1542.424	4$^+$	M1+E2	−0.14 *3*	0.00291	α(K)=0.00254 *4*; α(L)=0.000301 *5*; α(M)=5.76×10^{-5} *8*; α(N+..)=1.090×10^{-5} *16* α(N)=1.029×10^{-5} *15*; α(O)=6.07×10^{-7} *9* Mult.,δ: From adopted gammas.
744.26 *3*	2.0 *1*	2220.024	4$^+$	1475.770	2$^+$	E2		0.00229	α(K)=0.00199 *3*; α(L)=0.000246 *4*; α(M)=4.73×10^{-5} *7*; α(N+..)=8.83×10^{-6} *13* α(N)=8.37×10^{-6} *12*; α(O)=4.60×10^{-7} *7* Mult.: From the decay pattern. α(K)exp=0.0021 *2*. Other:

$^{110}_{48}Cd_{62}$-4

^{110}In ε decay (4.92 h) 1977MeZY (continued)

γ(^{110}Cd) (continued)

E_γ[‡]	I_γ[‡d]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[@]	δ[&c]	α[†]	Comments
									0.0022 *9* (1970Ko12). Mult=M1+E2 by 1980Ba58 and 1970Ko12.
759.87 *6*	3.2 *1*	3239.517	6^+	2479.896	6^+	M1+E2	+0.29 *10*	0.00245	α(K)=0.00214 *4*; α(L)=0.000254 *4*; α(M)=4.86×10^{-5} *8*; α(N+..)=9.19×10^{-6} *14* α(N)=8.68×10^{-6} *13*; α(O)=5.11×10^{-7} *9* E_γ: No final level within 4 sigmas. Uncertainty on energy probably underestimated. Least-squares fit gives 759.60 *3*. Mult.,δ: From adopted gammas. α(K)exp=2.2×10^{-3} *1* in ^{110}In ε Decay (4.92 h).
763.93	0.17	2926.709	5^+	2162.781	3^+	E2		0.00215	α(K)=0.00186 *3*; α(L)=0.000230 *4*; α(M)=4.42×10^{-5} *7*; α(N+..)=8.26×10^{-6} *12* α(N)=7.83×10^{-6} *11*; α(O)=4.32×10^{-7} *6* Mult.: From adopted gammas.
774.71 *7*	0.042 *21*	2250.478	4^+	1475.770	2^+	E2		0.00207	α(K)=0.00180 *3*; α(L)=0.000222 *4*; α(M)=4.26×10^{-5} *6*; α(N+..)=7.97×10^{-6} *12* α(N)=7.55×10^{-6} *11*; α(O)=4.17×10^{-7} *6* I_γ,Mult.: From adopted gammas.
[x]795.42 *3*	0.33 *3*								
795.42 *3*	0.33 *3*	3275.32	8^+	2479.896	6^+	E2		0.00194	α(K)=0.001689 *24*; α(L)=0.000208 *3*; α(M)=3.98×10^{-5} *6*; α(N+..)=7.46×10^{-6} *11* α(N)=7.07×10^{-6} *10*; α(O)=3.92×10^{-7} *6* Mult.: From adopted gammas. α(K)exp=2.6×10^{-3} *8* in ^{110}In ε Decay (4.9 h).
818.016[a] *12*	2.3 *1*	1475.770	2^+	657.755	2^+	M1+E2	−1.36 *6*	0.00191	α(K)=0.001666 *24*; α(L)=0.000201 *3*; α(M)=3.86×10^{-5} *6*; α(N+..)=7.25×10^{-6} *11* α(N)=6.86×10^{-6} *10*; α(O)=3.91×10^{-7} *6* Mult.: α(K)exp=1.91×10^{-3} *15*. Other: 1.9×10^{-3} *8* (1970Ko12). δ: From adopted gammas.
844.667 *13*	3.3 *1*	3064.68	6^+	2220.024	4^+	E2		1.68×10^{-3}	α(K)=0.001463 *21*; α(L)=0.000179 *3*; α(M)=3.43×10^{-5} *5*; α(N+..)=6.43×10^{-6} *9* α(N)=6.09×10^{-6} *9*; α(O)=3.40×10^{-7} *5* Mult.: α(K)exp=1.46×10^{-3} *8*. Other: 1.50×10^{-3} *7*.
871.08 *5*	0.32 *4*	3121.56	6^+	2250.478	4^+	[E2]		1.56×10^{-3}	α(K)=0.001361 *19*; α(L)=0.0001658 *24*; α(M)=3.18×10^{-5} *5*; α(N+..)=5.96×10^{-6} *9* α(N)=5.65×10^{-6} *8*; α(O)=3.16×10^{-7} *5*
884.667[a] *13*	94.5 *19*	1542.424	4^+	657.755	2^+	E2		1.51×10^{-3}	α(K)=0.001313 *19*; α(L)=0.0001597 *23*; α(M)=3.06×10^{-5} *5*; α(N+..)=5.74×10^{-6} *8* α(N)=5.44×10^{-6} *8*; α(O)=3.05×10^{-7} *5* Mult.: α(K)exp=1.34×10^{-3} *8*. Other: 1.31 *2* (1970Ko12). K/(L+M)=7.7 *13* (1962Ka08).
901.53 *5*	2.0 *1*	3121.56	6^+	2220.024	4^+	[E2]		1.44×10^{-3}	α(K)=0.001257 *18*; α(L)=0.0001526 *22*; α(M)=2.93×10^{-5} *4*;

$^{110}_{48}Cd_{62}$-5

^{110}In ε decay (4.92 h) 1977MeZY (continued)

γ(^{110}Cd) (continued)

E_γ[‡]	I_γ[‡d]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[@]	δ[&c]	α[†]	Comments
									α(N+..)=5.49×10^{-6} *8* α(N)=5.20×10^{-6} *8*; α(O)=2.92×10^{-7} *4*
937.478 *13*	69.6 *14*	2479.896	6$^+$	1542.424	4$^+$	E2		1.32×10^{-3}	α(K)=0.001149 *16*; α(L)=0.0001390 *20*; α(M)=2.66×10^{-5} *4*; α(N+..)=5.00×10^{-6} *7* α(N)=4.73×10^{-6} *7*; α(O)=2.67×10^{-7} *4* Mult.: α(K)exp=1.14×10^{-3} *8*. Other: 1.1×10^{-3} *3* (1970Ko12). K/(L+M)=6.6 *14* (1962Ka08).
997.16 *4*	10.7 *2*	2539.632	5$^-$	1542.424	4$^+$	E1(+M2)	−0.03 *5*	4.91×10^{-4} *17*	α(K)=0.000430 *15*; α(L)=4.97×10^{-5} *18*; α(M)=9.5×10^{-6} *4*; α(N+..)=1.79×10^{-6} *7* α(N)=1.69×10^{-6} *6*; α(O)=9.9×10^{-8} *4* Mult.: From adopted gammas. Mult=E1(+M2) and δ=−0.03 *+4−8* from Iγ(θ,H,T) results of 1977Be19 in ^{110}In ε Decay (4.9 h). α(K)exp=4.1×10^{-4} *5* in ^{110}In ε Decay (4.9 h). Other: α(K)exp= 4.7×10^{-4} *19* (1970Ko12).
1018.87[a]	0.30	2561.261	4$^+$	1542.424	4$^+$	M1+E2	−0.6 *4*	0.00123 *5*	α(K)=0.00107 *4*; α(L)=0.000126 *5*; α(M)=2.42×10^{-5} *8*; α(N+..)=4.57×10^{-6} *16* α(N)=4.32×10^{-6} *15*; α(O)=2.54×10^{-7} *11* Mult.,δ: From adopted gammas.
1019.48[a] *1*	0.7	3239.517	6$^+$	2220.024	4$^+$	[E2]		1.09×10^{-3}	α(K)=0.000952 *14*; α(L)=0.0001144 *16*; α(M)=2.19×10^{-5} *3*; α(N+..)=4.12×10^{-6} *6* α(N)=3.90×10^{-6} *6*; α(O)=2.22×10^{-7} *4*
1045.24 *9*	0.82 *4*	3525.22	6$^+$	2479.896	6$^+$	M1(+E2)	+0.3 *3*	0.00119 *4*	α(K)=0.00104 *4*; α(L)=0.000122 *4*; α(M)=2.34×10^{-5} *7*; α(N+..)=4.43×10^{-6} *13* α(N)=4.18×10^{-6} *12*; α(O)=2.48×10^{-7} *9* Mult.: From adopted gammas. E2(+M1) from α(K)exp=1.0×10^{-3} *2* in ^{110}In ε Decay (4.9 h). Other: 8×10^{-4} *3* (1970Ko12). δ: From adopted gammas.
1085.52 *4*	1.39 *5*	2561.261	4$^+$	1475.770	2$^+$	E2		9.52×10^{-4}	α(K)=0.000830 *12*; α(L)=9.92×10^{-5} *14*; α(M)=1.90×10^{-5} *3*; α(N+..)=3.57×10^{-6} *5* α(N)=3.38×10^{-6} *5*; α(O)=1.94×10^{-7} *3* Mult.: α(K)exp=0.8×10^{-3} *2*. Other: 0.7 *2*. From α(K)exp M1 contribution cannot be excluded.
1117.36 *2*	4.3 *1*	2659.792	5$^-$	1542.424	4$^+$	E1		4.01×10^{-4}	α(K)=0.000346 *5*; α(L)=3.98×10^{-5} *6*; α(M)=7.60×10^{-6} *11*; α(N+..)=8.04×10^{-6} *12* α(N)=1.356×10^{-6} *19*; α(O)=7.98×10^{-8} *12*; α(IPF)=6.60×10^{-6} *10* Mult.: α(K)exp=3.3×10^{-4} *7*. Other: 2.8×10^{-4} *9* (1970Ko12).
1125.67 *3*	0.2 *1*	1783.45	2$^+$	657.755	2$^+$	M1+E2	+0.28 *4*	1.01×10^{-3}	α(K)exp=0.9×10^{-3} *2* (1979Sy02) α(K)=0.000886 *13*; α(L)=0.0001038 *15*; α(M)=1.98×10^{-5} *3*; α(N+..)=4.78×10^{-6} *7*

$^{110}_{48}Cd_{62}$-6

^{110}In ε decay (4.92 h) 1977MeZY (continued)

γ(^{110}Cd) (continued)

E_γ ‡	I_γ ‡ d	E_i(level)	J_i^π	E_f	J_f^π	Mult. @	δ &c	α †	Comments
									α(N)=3.55×10^{-6} *5*; α(O)=2.11×10^{-7} *3*; α(IPF)=1.019×10^{-6} *15* δ: From adopted gammas.
x1163.28 *7*	0.3 *1*								
1305.11 *9*	0.35 *3*	3525.22	6$^+$	2220.024	4$^+$	[E2]		6.70×10^{-4}	α(K)=0.000563 *8*; α(L)=6.65×10^{-5} *10*; α(M)=1.272×10^{-5} *18*; α(N+..)=2.73×10^{-5} *4* α(N)=2.27×10^{-6} *4*; α(O)=1.316×10^{-7} *19*; α(IPF)=2.49×10^{-5} *4*
1334.14 *6*	1.0 *1*	2876.754	6$^+$	1542.424	4$^+$	E2		6.48×10^{-4}	α(K)exp=0.5×10^{-3} *2* (1970Ko12) α(K)=0.000539 *8*; α(L)=6.35×10^{-5} *9*; α(M)=1.215×10^{-5} *17*; α(N+..)=3.37×10^{-5} *5* α(N)=2.17×10^{-6} *3*; α(O)=1.259×10^{-7} *18*; α(IPF)=3.14×10^{-5} *5* Mult.: From adopted gammas. From α(K)exp=0.5×10^{-3} *2* (1970Ko12) M1,E2 is favored in ^{110}In ε Decay (4.9 h). If α(K)exp=0.33×10^{-3} *9* (1980Ba58) is accepted, then multipolarity is E1.
1384.39 *17*	0.19 *1*	2926.709	5$^+$	1542.424	4$^+$	M1+E2	−0.44 *1*	6.82×10^{-4}	α(K)=0.000562 *8*; α(L)=6.55×10^{-5} *10*; α(M)=1.252×10^{-5} *18*; α(N+..)=4.25×10^{-5} *6* α(N)=2.24×10^{-6} *4*; α(O)=1.331×10^{-7} *19*; α(IPF)=4.02×10^{-5} *6* δ: From adopted gammas. −0.42 *4* in ^{110}In ε Decay (4.9 h).
1421.04 *4*	0.47 *6*	2078.80	3$^-$	657.755	2$^+$	E1(+M2)	+0.01 *8*	4.32×10^{-4} *10*	α(K)=0.000226 *9*; α(L)=2.59×10^{-5} *10*; α(M)=4.94×10^{-6} *19*; α(N+..)=0.000175 *3* α(N)=8.8×10^{-7} *4*; α(O)=5.23×10^{-8} *20*; α(IPF)=0.000174 *3* Mult.: From decay pattern. α(K)exp=0.51×10^{-3} *13* and Mult=M1,E2 by 1979Sy02.
1475.76 *3*	1.27 *7*	1475.770	2$^+$	0.0	0$^+$	E2		5.77×10^{-4}	α(K)=0.000440 *7*; α(L)=5.16×10^{-5} *8*; α(M)=9.87×10^{-6} *14*; α(N+..)=7.51×10^{-5} *11* α(N)=1.760×10^{-6} *25*; α(O)=1.029×10^{-7} *15*; α(IPF)=7.32×10^{-5} *11* Mult.: α(K)exp=3.6×10^{-4} *7*. Other: 3.8×10^{-4} *2* (1970Ko12).
1505.00 *2*	0.26 *4*	2162.781	3$^+$	657.755	2$^+$	M1+E2	−1.27 *3*	5.90×10^{-4}	α(K)=0.000446 *7*; α(L)=5.20×10^{-5} *8*; α(M)=9.94×10^{-6} *14*; α(N+..)=8.21×10^{-5} *12* α(N)=1.776×10^{-6} *25*; α(O)=1.048×10^{-7} *15*; α(IPF)=8.02×10^{-5} *12* δ: From adopted gammas. −0.30 *7* (1980Ba58) in ^{110}In ε Decay (4.9 h).
1521.66 *20*	0.17 *3*	3064.68	6$^+$	1542.424	4$^+$	[E2]		5.64×10^{-4}	α(K)=0.000415 *6*; α(L)=4.86×10^{-5} *7*; α(M)=9.28×10^{-6} *13*; α(N+..)=9.13×10^{-5} *13* α(N)=1.655×10^{-6} *24*; α(O)=9.69×10^{-8} *14*; α(IPF)=8.96×10^{-5} *13* E_γ: ΔE_γ was increased by the evaluators to fit the level scheme.
1562.26 *4*	0.51 *3*	2220.024	4$^+$	657.755	2$^+$	E2		5.56×10^{-4}	α(K)=0.000394 *6*; α(L)=4.61×10^{-5} *7*; α(M)=8.80×10^{-6} *13*; α(N+..)=0.0001067 *15* α(N)=1.571×10^{-6} *22*; α(O)=9.21×10^{-8} *13*; α(IPF)=0.0001050 *15* Mult.: From decay pattern. α(K)exp=4.5×10^{-4} *1* and mult=M1,E2 by 1979Sy02.
1579.07 *12*	0.26 *6*	3121.56	6$^+$	1542.424	4$^+$	[E2]		5.53×10^{-4}	α(K)=0.000386 *6*; α(L)=4.51×10^{-5} *7*; α(M)=8.62×10^{-6} *12*;

$^{110}_{48}Cd_{62}$-7

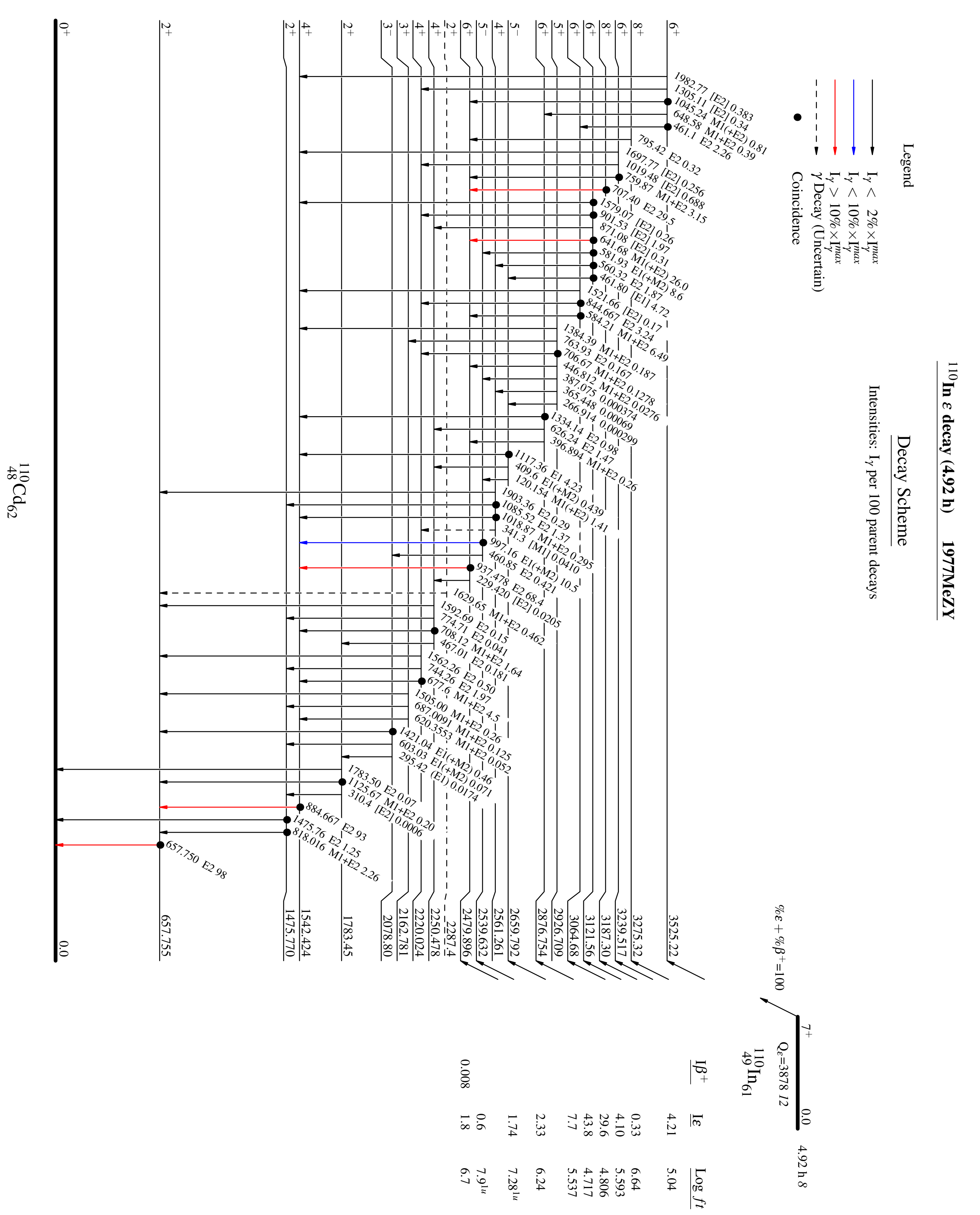
^{110}In ε decay (4.92 h) 1977MeZY (continued)

γ(^{110}Cd) (continued)

E_γ ‡	I_γ ‡ d	E_i(level)	J_i^π	E_f	J_f^π	Mult. @	δ &c	α †	Comments
									α(N+..)=0.0001133 *16* α(N)=1.538×10^{-6} *22*; α(O)=9.02×10^{-8} *13*; α(IPF)=0.0001117 *16*
1592.69 *12*	0.15 *7*	2250.478	4$^+$	657.755	2$^+$	E2		5.51×10^{-4}	α(K)=0.000380 *6*; α(L)=4.43×10^{-5} *7*; α(M)=8.47×10^{-6} *12*; α(N+..)=0.0001187 *17* α(N)=1.512×10^{-6} *22*; α(O)=8.87×10^{-8} *13*; α(IPF)=0.0001171 *17* I_γ,Mult.: From adopted gammas.
1629.65 e	0.47	2287.4?	2$^+$	657.755	2$^+$	M1+E2	+0.06 *3*	5.87×10^{-4}	α(K)=0.000408 *6*; α(L)=4.73×10^{-5} *7*; α(M)=9.03×10^{-6} *13*; α(N+..)=0.0001227 *18* α(N)=1.616×10^{-6} *23*; α(O)=9.66×10^{-8} *14*; α(IPF)=0.0001210 *17* Mult.,δ: From adopted gammas.
1697.77 *25*	0.26 *1*	3239.517	6$^+$	1542.424	4$^+$	[E2]		5.45×10^{-4}	α(K)=0.000336 *5*; α(L)=3.91×10^{-5} *6*; α(M)=7.47×10^{-6} *11*; α(N+..)=0.0001628 *23* α(N)=1.334×10^{-6} *19*; α(O)=7.85×10^{-8} *11*; α(IPF)=0.0001614 *23* E_γ: ΔEγ was increased by the evaluators to fit the level scheme.
1783.50 *5*	0.07 *3*	1783.45	2$^+$	0.0	0$^+$	E2		5.49×10^{-4}	α(K)=0.000306 *5*; α(L)=3.56×10^{-5} *5*; α(M)=6.79×10^{-6} *10*; α(N+..)=0.000201 *3* α(N)=1.212×10^{-6} *17*; α(O)=7.15×10^{-8} *10*; α(IPF)=0.000200 *3* I_γ,Mult.: From adopted gammas. Iγ=0.15 *8* in ^{110}In ε decay (4.92 h).
x 1802.39 *7*	0.63 *9*								
1903.36 *12*	0.30 *4*	2561.261	4$^+$	657.755	2$^+$	E2		5.65×10^{-4}	α(K)=0.000271 *4*; α(L)=3.14×10^{-5} *5*; α(M)=6.00×10^{-6} *9*; α(N+..)=0.000256 *4* α(N)=1.071×10^{-6} *15*; α(O)=6.33×10^{-8} *9*; α(IPF)=0.000255 *4* Mult.: From adopted gammas.
1982.77 *18*	0.39 *1*	3525.22	6$^+$	1542.424	4$^+$	[E2]		5.80×10^{-4}	α(K)=0.000251 *4*; α(L)=2.91×10^{-5} *4*; α(M)=5.55×10^{-6} *8*; α(N+..)=0.000294 *5* α(N)=9.92×10^{-7} *14*; α(O)=5.87×10^{-8} *9*; α(IPF)=0.000293 *5*

† Additional information 1.
‡ From 2000De11 (based on 1977MeZY), unless otherwise stated.
# From adopted gammas.
@ Deduced from α(K)exp and δ in 1980Ba58, unless otherwise stated. α(K)exp were normalized to α(K)(657.750γ)=0.00272.
& From adopted gammas.
a Doublet.
b Triplet.
c If No value given it was assumed δ=1.00 for E2/M1, δ=1.00 for E3/M2 and δ=0.10 for the other multipolarities.
d For absolute intensity per 100 decays, multiply by 0.983 *19*.
e Placement of transition in the level scheme is uncertain.
x γ ray not placed in level scheme.

$^{110}_{48}Cd_{62}$-8


^{110}In ε decay (4.92 h) 1977MeZY
Decay Scheme
Intensities: I_γ per 100 parent decays
Legend
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
γ Decay (Uncertain)
Coincidence
%ε + %β⁺=100
7⁺ 0.0 4.92 h 8
Q_ε=3878 12
$^{110}_{49}$In$_{61}$
Iβ⁺ Iε Log ft
6⁺ 3525.22 4.21 5.04
8⁺ 3275.32 0.33 6.64
6⁺ 3239.517 4.10 5.593
8⁺ 3187.30 29.6 4.806
6⁺ 3121.56 43.8 4.717
6⁺ 3064.68 7.7 5.537
5⁺ 2926.709
6⁺ 2876.754 2.33 6.24
5⁻ 2659.792 1.74 7.28¹ᵘ
4⁺ 2561.261
5⁻ 2539.632 0.6 7.9¹ᵘ
6⁺ 2479.896 0.008 1.8 6.7
2⁺ 2287.4
4⁺ 2250.478
4⁺ 2220.024
3⁺ 2162.781
3⁻ 2078.80
2⁺ 1783.45
4⁺ 1542.424
2⁺ 1475.770
2⁺ 657.755
0⁺ 0.0
657.750 E2 98
$^{110}_{48}$Cd$_{62}$