Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	D. De Frenne and A. Negret	NDS 109, 943 (2008)	1-May-2007

$Q(\beta^-)=-6524$ *13*; S(n)=10869.5 *18*; S(p)=7350 *5*; $Q(\alpha)=-1626$ *3* 2012Wa38
Note: Current evaluation has used the following Q record.
$Q(\beta^-)=-6526$ *11*; S(n)=10874 *12*; S(p)=7353 *12*; $Q(\alpha)=-1632$ *7* 2003Au03

^{106}Cd Levels

Cross Reference (XREF) Flags

A	^{106}Ag β^- decay (23.96 min)	E	^{106}Cd(n,n′γ)	I	^{106}Cd(α,α),(α,α′)
B	^{106}In ε decay (6.2 min)	F	^{106}Cd(p,p′)	J	Coulomb excitation
C	^{106}In ε decay (5.2 min)	G	^{106}Cd(p,p′γ)	K	(HI,xnγ)
D	^{104}Pd(α,2nγ)	H	^{107}Ag(p,2nγ)		

E(level)[†]	J^π	$T_{1/2}$	XREF	Comments
0.0	0^+	stable	ABCDEFGHIJK	rms charge radius: 4.5340 fm 45 (2004An14).
632.64 *4*	2^+	7.27 ps *8*	BCDEFGHIJK	μ=+0.80 *20* (1989Ra17) Q=−0.28 *8* (1989Ra17) Q: Based on reorientation effect. Others: see Coul. ex. $T_{1/2}$: from B(E2)=0.384 *4* (1976Es02). J^π: E2 γ to 0^+.
1493.78[d] *5*	4^+	0.87 ps *11*	BCDEFGHIJK	$T_{1/2}$: from B[E2;2+(632 keV) to 4+(1493 keV)]=0.247 *31* Coul. ex. (1969Mi07). J^π: ΔJ(861γ,E2)=2. J=4 preferred above J=0 because member of a ΔJ=2 band.
1716.53 *8*	2^+	0.31 ps *5*	CDEFGHIJK	$T_{1/2}$: from B(E2)=0.036 *5* (1969Mi07), if Iγ(1716γ) branching=59% *5* Coul. ex. J^π: L=2 (p,p′).
1795.25 *11*	0^+		C E GHI	J^π: from excitation function and γ(θ) of 1162γ in (p,p′γ).
2104.53 *6*	4^+	≤2[#] ps	BCDEFGHI K	J^π: L=4 (p,p′); Coul. ex.
2144.06 *4*	0^+		C E GH	J^π: from E0 to g.s. in ^{106}In ε decay (5.2 min).
2252.2 *6*	(4^+)[@]		C E GH	
2254.0 *5*	$(2^+,3^+)$		C E GH	J^π: from (p,2n) excitation functions for deexciting 536.2γ and 1621.6γ.
2304.92 *12*	4^+[@]		B E GHI K	
2330.56 *6*	5^+	0.6[‡] ns *2*	B DE GH K	J^π: J=5 from ΔJ(226γ,D+Q)=−1 to 4^+ level at 2104 keV.
2338.55 *21*	(4^+)		K	J^π: ΔJ(844γ)=0 to 4^+ state; deexcites to 2^+ state.
2347.55 *11*	$(2)^+$[@]		C E GH	J^π: from log *ft*=5.79; M1 to 2^+ from(2^+).
2370.62 *4*	2^+		C EFGH	From E2 to 0^+ in ((p,p′γ). After discussions with authors of (n,n′γ) data (1988BeYC) from which J=1 was suggested, they cannot exclude J=2 for this level.
2378.50 *4*	3^-		CDE GHI	J^π: L(p,p′)=3 for 2366-keV level which is probably the same level; E1 to 2^+, ΔJ=1 from negative A_{22} γ(θ) coefficient. J=3 from (p,2n) excitation function.
2468.42 *4*	$(4)^+$[@]		B E	J^π: J=4 from (n,n′γ).
2485.72 *14*	$2^+,3^+,4^+$		B DE I	J^π: E2 to 2^+ allows $J^\pi=0^+,1^+,2^+,3^+,4^+$. γ to 4^+ eliminates $0^+,1^+$.
2491.66 *6*	6^+		B E K	J^π: ΔJ(997.87γ,E2)=−2 to 4^+.
2503.08[d] *7*	6^+		B DE K	J^π: ΔJ(1009.27γ,E2)=−2 to 4^+.
2521.9 *3*	$(4,5^+)$		K	J^π: from ΔJ=0 or −1 for 1028γ to 4^+ 1493-keV level and Δπ=no if J=5 in ^{97}Mo(^{12}C,3nγ).
2561.37? *6*	0^+[@]		C E I	
2566.26 *11*	2^+[@]		C E	

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Adopted Levels, Gammas (continued)

^{106}Cd Levels (continued)

E(level)[†]	J$^\pi$	T$_{1/2}$	XREF	Comments
2629.20 *7*	5$^-$	5[#] ps *+4−2*	BCDE I K	J$^\pi$: ΔJ(524.65γ,E1)=−1 to 4$^+$.
2630.08 *5*	2$^+$[@]		C E	
2717.86 *4*	2$^+$,3[@]		C E I	
2720.56 *4*	1,2$^+$,3[@]		E	
2824.58 *5*	1[@]		C E	
2889.57 *21*	2,3$^+$[@]		C E	
2918.2 *3*	1[@]		C E	
2920.14 *8*	5$^-$		K	J$^\pi$: ΔJ(1426)=−1 to 4$^+$.
2924.80 *9*	6$^+$		B K	J$^\pi$: ΔJ(433.14γ,E2)=0,−2 to 6$^+$. γ to 4$^+$ excludes 8$^+$.
2933.65 *6*	2$^+$,3$^+$[@]		E	
2936.15 *6*	2$^+$,3$^+$[@]		C E	
2973.33 *9*	2,3$^+$,4$^+$[@]		E	
3015.35? *6*	2$^+$,3$^+$[@]		E	
3018.80 *5*	3$^+$,(5)$^+$[@]		E	
3020.74 *7*	2,3$^+$[@]		E	
3044.13 *7*	8$^+$	0.39[#] ns *17*	B D K	T$_{1/2}$: weighted average of 0.4 ns *1* (1985An27) and 0.38 ns *14* (1983Gu14). J$^\pi$: π=+ from allowed β transition (log *ft*=5.1) from J$^\pi$(initial)=(7)$^+$. J=8 from ΔJ(541γ,E2)=−2 and ΔJ(552γ,E2)=−2 to 6$^+$ levels.
3059.84 *6*	3[@]		E	
3072.82 *11*	2,3$^+$,4[@]		E	
3084.38 *7*	7$^+$		B D K	J$^\pi$: π=+ from M1+E2 to 6$^+$. J=7 from ΔJ(581γ,M1+E2)=−1 to 6$^+$ 2503 keV level, ΔJ(753.8γ,E2)=−2 to 5$^+$ 2331 keV level.
3092.88 *11*	(2$^+$)[@]		E	
3094	(8)		K	J$^\pi$: from γ(θ) and band structure in ^{82}Se(^{30}Si,6nγ).
3118.80? *6*	2$^+$,3$^+$,4$^+$[@]		C E	
3119.72 *15*	1[@]		E	
3126.18 *15*	7$^+$		B K	J$^\pi$: π=+ from M1+E2 to 6$^+$. J=7 from ΔJ(624γ,D+Q)=−1 to 6$^+$ 2503 keV level.
3222.65 *20*	1[@]		C E	
3235.24? *15*	2,3$^+$[@]		E	
3245.43? *13*	(2$^+$)[@]		E	
3283.97 *16*	+		B	J$^\pi$: E2 to 6$^+$.
3320.15 *7*	6$^-$		D K	J$^\pi$: ΔJ(828.55γ,E1+M2)=0 to 6$^+$; ΔJ(400γ)=−1 to 5$^-$ 2492 level.
3322.69 *10*	1$^+$,2$^+$,3[@]		E	
3328.15 *11*	1,2$^+$[@]		C E	
3329.28 *8*	3$^+$[@]		E	
3354.2 *5*	7$^+$		K	
3367.16 *7*	8$^+$		B D K	J$^\pi$: ΔJ(875.44γ,E2)=−2 to 6$^+$; ΔJ(323γ,E2)=0 and ΔJ(283γ,M1+E2)=−1 to 7$^+$ 3085 keV level.
3394.2 *3*	2$^+$[@]		E	
3409.65 *7*	7$^-$		D K	J$^\pi$: ΔJ(780.45γ,Q)=−2 to 5$^-$.
3426.90 *20*	2,3$^+$,4$^+$[@]		C E	
3462.0 *6*	(6$^-$)		K	J$^\pi$: from γ(θ) and linear pol. in ^{97}Mo(^{12}C,3nγ).
3472.81 *13*			B	
3485.92? *25*	1,2$^+$[@]		E	
3494.7 *4*	1,2$^+$		C E	J$^\pi$: from γ to 0$^+$ g.s. and 2$^+$.
3507.79 *4*	8$^-$	1.5[#] ns *+1−5*	D K	J$^\pi$: ΔJ(187.71γ,E2)=−2 to 6$^-$.

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Adopted Levels, Gammas (continued)

^{106}Cd Levels (continued)

E(level)[†]	J^π	$T_{1/2}$	XREF	Comments
				$T_{1/2}$: other: 1.2 ns *4* (1985An27).
3543.6 *2*	7		K	J^π: ΔJ(1040.4γ,D+Q)=1 to 6^+.
3547.60 *14*	+		B	J^π: π=+ from E2 to 7^+.
3641.82 *12*	(8^+)		B K	J^π: ΔJ(1149γ,Q)=−2 to 6^+. Note inconsistency with 1138(M1) to 6^+.
3678.88 *7*	9^-	0.7[‡] ns *+1−3*	D K	J^π: ΔJ(171.10γ,M1+E2)=−1 to 8^-. $T_{1/2}$: from (^{13}C,3nγ). Other: 0.15 ns *+8−2* (1983Gu14). Systematics of B(E2)(W.u.) values in this region suggest that this value is not correct (1985An27).
3679.29? *17*	$2^+,3$[@]		E	
3698.3 *5*	(7^-)		K	J^π: from ΔJ=−2 for 1069γ to 2629-keV level and band structure in ^{97}Mo(^{12}C,3nγ).
3787.39[d] *15*			B K	
3902	(10)		K	J^π: from γ(θ) and band structure in ^{82}Si(^{30}Si,6nγ).
4106.33 *9*	10^-	≤4[#] ps	D K	J^π: ΔJ(427.64γ,D+Q)=−1 to 5^- 3678 keV level; ΔJ(598γ,E2)=−2 to 8^- 3508 keV level.
4113.86 *18*			K	
4120.95 *15*	9^+		K	J^π: ΔJ(1076.79γ,D+Q)=−1 to 8^+.
4179.5 *4*			K	
4183.04 *19*			D	
4193.8 *6*			K	J^π: 9^+ suggested by 1994Je05 without any argumentation.
4243.57 *15*			B	
4324.42 *8*	$11^{(-)}$		D K	J^π: ΔJ(645.55γ,Q)=−2 to $9^{(-)}$.
4436.02 *9*	$10^{(+)}$	[#]	D K	J^π: ΔJ(315.06,D+Q)=−1 to $9^{(+)}$. Member of ΔJ=2 g.s. band.
4574.3 *4*	$10^{(+)}$		K	J^π: ΔJ(1530.2γ,Q)=−2 to 8^+.
4659.71 *9*	$12^{(+)}$	62 ns *6*	D K	$T_{1/2}$: α,γ(t) pulsed beam (1977Da08): average of 65 ns *8*, 73 ns *16*, 55 ns *10*, 53 ns *16* for (335,646,1069,875γ)(t), respectively. J^π: ΔJ(223.61γ,E2)=−2 to $10^{(+)}$.
4794	(12)		K	J^π: from γ(θ) and band structure in ^{82}Si(^{30}Si,6nγ) and ^{97}Mo(^{12}C,3nγ).
4816.3[d] *6*	10^+		K	
4902.8 *4*			K	
4967.55 *18*	12^-		K	J^π: from γ(θ) and band structure in ^{82}Si(^{30}Si,6nγ) and ^{97}Mo(^{12}C,3nγ).
5130.76 *13*			B	
5214.06 *11*	$13^{(-)}$	≤9[#] ps	K	J^π: ΔJ(889.64γ,E2)=−2 to $11^{(-)}$.
5241.0 *3*	12^+		K	J^π: from γ(θ) and band structure in ^{82}Si(^{30}Si,6nγ) and ^{97}Mo(^{12}C,3nγ).
5252.43[&] *18*	(13^+)		K	J^π: ΔJ(592γ)=−1 from γ(θ) in ^{97}Mo(^{12}C,3nγ).
5418.7[d] *6*	12^+		K	
5557.8?[&] *14*			K	
5572.5?[&] *15*			K	
5623.7 *5*	12^+		K	E(level): Different interpretation of level by 1994Je05 who claim this is the 12^+ member of the ΔJ=2 band on the 4^+ level and not the 5418.7 keV level as proposed by 2003Si14, 2005Si23.
5770.4?[&] *13*			K	
5822	(14)		K	J^π: from γ(θ) and band structure in ^{82}Si(^{30}Si,6nγ).
5912.0[&] *6*			K	
5976.4 *5*	(14^-)		K	J^π: from γ(θ) and band structure in ^{82}Si(^{30}Si,6nγ) and ^{97}Mo(^{12}C,3nγ).
5986.7?[&] *21*			K	
6100.6?[&] *15*			K	

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Adopted Levels, Gammas (continued)

^{106}Cd Levels (continued)

E(level)[†]	J^π	$T_{1/2}$	XREF	Comments
6226.6[d] *6*	14^+		K	
6265.0 *3*	(15^-)		K	J^π: ΔJ(1050γ)=−2 to $13^{(-)}$ 5214 level from γ(θ) in ^{97}Mo(^{12}C,3nγ).
6516.0 *6*	14^+		K	
6858.3[&] *15*			K	
7118.9?[d] *7*	16^+	11 ns *+6−3*	K	$T_{1/2}$: From γ(t) in (HI,xnγ) (1994Je05). E(level),$T_{1/2}$: No evidence found in ^{94}Zr(^{16}O,4nγ) by 1995Re07 although this is the most complete study.
7120.9[a] *9*	16^-		K	
7480.2?[&] *16*			K	
7517.8[b] *8*	17^-		K	
8099.7[d] *7*	18^+	0.416 ps *35*	K	$T_{1/2}$: From line-shape analysis (2003Si14,2005Si23).
8099.7+x			K	E(level): this level May Be the same As 8099.7, thus x May Be zero.
8411.0[a] *18*	18^-		K	
8884.3[b] *12*	19^-		K	
9250.3[d] *8*	20^+	0.201 ps *28*	K	$T_{1/2}$: From line-shape analysis (2003Si14,2005Si23).
9318.6+x[c] *14*	(18^+)		K	E(level): from 1622.6γ to 18^+ level At 8099.7 or near this energy.
9722.3+x[c] *8*	(19^+)		K	
9877.0[a] *23*	20^-		K	
10160.9+x[c] *11*	(20^+)		K	
10350.1[b] *14*	21^-		K	
10560.9[d] *9*	22^+	0.180 ps *14*	K	$T_{1/2}$: From line-shape analysis (2003Si14,2005Si23).
10663.7+x[c] *11*	(21^+)		K	
11168.1+x[c] *12*	(22^+)		K	
11740.7+x[c] *15*	(23^+)		K	
11941.5[b] *21*	23^-		K	
12048.5[d] *12*	24^+	0.132 ps *14*	K	$T_{1/2}$: From line-shape analysis (2003Si14,2005Si23).
12312.0+x[c] *16*	(24^+)		K	
12951.8+x[c] *18*	(25^+)		K	
13614.9+x[c] *19*	(26^+)		K	
13724.1[d]	26^+	0.125 ps	K	$T_{1/2}$: Effective half-life (2005Si23). Effective half-life is obtained assuming 100% side-feeding into the top of the band via a cascade of 5 transitions with the same moment of inertia as the in-band transitions The highest γ ray for which a line shape was observed was then fitted and the extracted life time is called effective lifetime. This lifetime was used as input parameter to extract the lifetimes of the states lower in the cascade. E(level): Different interpretation of level by 1995Re07. Considered as a member of a $\nu h_{11/2}\otimes\nu g_{7/2}$ band.
14333.9+x[c] *20*	(27^+)		K	
15067.0+x[c] *21*	(28^+)		K	
15583.5 *25*	(28^+)		K	
15862.8+x[c] *23*	(29^+)		K	

† Obtained with least squares procedure using gammas of ^{106}Ag β^- Decay, ^{106}In ε Decay (6.2 min), ^{106}In ε Decay (5.2 min), ^{104}Pd(α,2nγ), ^{106}Cd(n,n′γ), ^{107}Ag(p,2nγ) and (HI,xnγ).

‡ From generalized centroid-shift method in ^{93}Nb(^{16}O,p2nγ) (1985An27).

\# From (^{13}C,3nγ) (1983Gu14) DSA method.

@ From γ(θ), linear pol and γ decay pattern in (n,n′γ) and adopted J^π values of lower lying levels.

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Adopted Levels, Gammas (continued)

^{106}Cd Levels (continued)

[&] Possible level above the isomer at 4659 kev, gammas from which feed the isomer.
[a] Band(A): $\nu h_{11/2}\otimes\nu d_{5/2}$.
[b] Band(B): $\nu h_{11/2}\otimes\nu g_{7/2}$.
[c] Band(C): 4-qp band, $\nu h^2_{11/2}\otimes\pi(g_{7/2},g_{9/2})$.
[d] Band(D): 4^+ band. Antimagnetic rotational band from lifetime measurements and deduced B(E2) values (2003Si14,2005Si23).

$\gamma(^{106}Cd)$

Unless noted otherwise, relative photon branchings for each level were calculated with a least squares procedure using data from ^{106}In ε decay (5.2 min), ^{106}In ε decay (6.2 min), ^{94}Zr(^{16}O,4nγ), ^{96}Mo(^{13}C,3nγ), ^{97}Mo(^{12}C,3nγ) and ^{104}Pd(α,2nγ) if all available. If not all available only available data sets used.

E_i(level)	J^π_i	E_γ[†]	I_γ	E_f	J^π_f	Mult.[b]	δ	Comments
632.64	2^+	632.66 *4*	100	0.0	0^+	E2[d]		B(E2)(W.u.)=25.8 *3*
1493.78	4^+	861.16 *4*	100	632.64	2^+	E2[d]		B(E2)(W.u.)=46 *6*
1716.53	2^+	1084.25 *23*	80 *20*	632.64	2^+	M1+E2	−1.44 *11*	B(M1)(W.u.)=0.0075 *19*; B(E2)(W.u.)=11 *3* δ: from (n,n′γ). Others: −0.85 *20* from $\gamma(\theta)$ in ^{106}Cd(α,$\alpha'\gamma\gamma$) (1973Gr16) and −0.60 +*20*−*15* 1084$\gamma(\theta)$ in ^{106}Cd(p,p′γ) (1969Mi07).
		1716.40 *9*	100 *15*	0.0	0^+	E2		B(E2)(W.u.)=2.4 *3*
1795.25	0^+	1162.60 *10*	100	632.64	2^+	E2		
2104.53	4^+	387.78 *18*	6.5 *17*	1716.53	2^+	E2[e]		B(E2)(W.u.)>42
		610.77 *5*	100.0 *18*	1493.78	4^+	M1+E2[d]	−0.314 *22*	B(M1)(W.u.)>0.026; B(E2)(W.u.)>5.2 δ: weighted average of δ=−0.31 *5* from ^{94}Zr(^{16}O,4nγ); −0.34 *4* from ^{96}Mo(^{13}C,3nγ); −0.4 *6* from ^{97}Mo(^{12}C,3nγ); −0.30 *3* from ^{106}Cd(n,n′γ). Mult.: other: E2 from conversion electron data in ^{106}In ε decay.
		1471.86 *5*	61.1 *15*	632.64	2^+	E2[e]		B(E2)(W.u.)>0.50
2144.06	0^+	427.35 *9*	42 *6*	1716.53	2^+	E2		
		1511.41 *4*	100 *14*	632.64	2^+	E2		
		2143.9 *3*		0.0	0^+	E0		Mult.: from conversion electron data.
2252.2	(4^+)	758.73 *7*	5.0 *8*	1493.78	4^+			
		1619.7 *3*	100 *53*	632.64	2^+			
2254.0	$(2^+,3^+)$	536.0 *7*	6.5 *10*	1716.53	2^+			E_γ: No final level within 0.78 keV.
		1621.3 *3*	100 *50*	632.64	2^+			
2304.92	4^+	811.14 *10*	100 *18*	1493.78	4^+	M1+E2	−0.17 *4*	Mult.: from $\gamma(\theta)$ and γ linear pol in (n,n′γ). δ: weighted average of δ=−0.5 *9* from $\gamma\gamma(\theta)$ in ^{97}Mo(^{12}C,3nγ) δ=0.00 *22* from $\gamma(\theta)$ in ^{96}Mo(^{13}C,3nγ) (1979Sa01) and from $\gamma(\theta)$ in (n,n′γ).
		1672.6 *3*	13.2 *21*	632.64	2^+			E_γ,I_γ: from ^{106}Cd(p,2nγ).
2330.56	5^+	226.04 *5*	100.0 *25*	2104.53	4^+	M1+E2[e]		δ=−0.58 *12* from $\gamma(\theta)$ in ^{96}Mo(^{13}C,3nγ); −0.27 *4* from $\gamma\gamma(\theta)$ in ^{97}Mo(^{12}C,3nγ) or −0.57 *12* from $\gamma(\theta)$ in (n,n′γ).
		836.79 *7*	45.7 *22*	1493.78	4^+	M1+E2[c]		δ=−0.24 *19* from $\gamma\gamma(\theta)$ in ^{97}Mo(^{12}C,3nγ); −0.03 *5* or −5.4 +21-12

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Adopted Levels, Gammas (continued)

$\gamma(^{106}Cd)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ	E_f	J^π_f	Mult.[b]	δ	Comments
								from $\gamma(\theta)$ in (n,n′γ); δ=−0.18 *5* from $\gamma(\theta)$ in ^{96}Mo(^{13}C,3nγ).
2338.55	(4$^+$)	844.78 *20*	100 *15*	1493.78	4$^+$	D+Q[c]	−0.05 *11*	E_γ,I_γ: taken from ^{97}Mo(^{12}C,3nγ).
		1704.5 *20*	75 *18*	632.64	2$^+$			E_γ,I_γ: taken from ^{97}Mo(^{12}C,3nγ).
2347.55	(2)$^+$	1714.90 *10*	100	632.64	2$^+$	M1		
2370.62	2$^+$	575.3[@] *3*	28[&] *4*	1795.25	0$^+$	E2		
		653.9[@] *3*	33[&] *5*	1716.53	2$^+$	M1+E2		
		1737.94[@] *3*	100[&] *15*	632.64	2$^+$	M1+E2		Mult.: δ=−0.18 *8* or −2.0 *5*.
		2370.6[@] *3*	9.0[&] *13*	0.0	0$^+$			
2378.50	3$^-$	1745.82 *3*	100	632.64	2$^+$	E1(+M2)	−0.005 *10*	
2468.42	(4)$^+$	974.54 *3*	100	1493.78	4$^+$	D+Q	+3.9 *3*	
2485.72	2$^+$,3$^+$,4$^+$	991.98 *18*	100 *30*	1493.78	4$^+$			
		1853.01 *20*	95 *9*	632.64	2$^+$	E2		Mult.: from (n,n′γ).
2491.66	6$^+$	161.05 *14*	1.03 *17*	2330.56	5$^+$			
		997.87 *4*	100 *5*	1493.78	4$^+$	E2[d]		
2503.08	6$^+$	1009.27 *6*	100	1493.78	4$^+$	E2[d]		B(E2)(W.u.)>0.036
2521.9	(4,5$^+$)	1028.15 *29*	100	1493.78	4$^+$	D+Q	+0.8 *4*	
2561.37?	0$^+$	1928.69 *5*	100	632.64	2$^+$	E2		
2566.26	2$^+$	1933.60 *10*	100	632.64	2$^+$	M1+E2	+2.5 *2*	
2629.20	5$^-$	298.5 *4*	3.2 *8*	2330.56	5$^+$	[E1]		B(E1)(W.u.)=6×10^{-5} *+4−3*.
		524.65 *5*	100.0 *16*	2104.53	4$^+$	E1(+M2)		Mult.: from conversion electron data in ^{106}In ε decay (5.2 min) and from change in sign of 525γ pol via $\gamma(\theta)$ versus γ-ray linear pol in ^{94}Zr(^{16}O,4nγ). Others: D+Q and δ=−0.046 *15* from $\gamma(\theta)$ in ^{96}Mo(^{13}C,3nγ); δ=+0.076 *18* from $\gamma\gamma(\theta)$ in ^{97}Mo(^{12}C,3nγ); δ=−0.05 *3* from $\gamma(\theta)$ in (n,n′γ) and δ=0.00 *5* from ^{94}Zr(^{16}O,4nγ). From RUL, one expects δ<0.012.
		1135.68 *11*	22.6 *14*	1493.78	4$^+$	E1(+M2)	−0.04 *5*	B(E1)(W.u.)=7.E−6 *6*; B(M2)(W.u.)<0.15 δ: from $\gamma(\theta)$ in (n,n′γ).
2630.08	2$^+$	1997.39[‡] *4*	100[#] *13*	632.64	2$^+$	M1+E2		Mult.: δ=−0.11 *4* or 3.2 *4*.
		2630.2[‡] *2*	13[#] *2*	0.0	0$^+$			
2717.86	2$^+$,3	2085.18 *3*	100	632.64	2$^+$			
2720.56	1,2$^+$,3	2087.88 *3*	100	632.64	2$^+$			
2824.58	1	2824.54 *5*	100	0.0	0$^+$			
2889.57	2,3$^+$	2256.90 *20*	100	632.64	2$^+$			
2918.2	1	2285.5 *6*	21.4 *24*	632.64	2$^+$			I_γ: from ^{106}In ε decay (5.2 min).
		2918.2 *3*	100 *5*	0.0	0$^+$			I_γ: from ^{106}In ε decay (5.2 min).
2920.14	5$^-$	1426.36 *6*	100	1493.78	4$^+$	D+Q[c]	0.06 *3*	δ: weighted average of δ=+0.02 *9* from $\gamma\gamma(\theta)$ in ^{97}Mo(^{12}C,3nγ) and δ=+0.063 *27* from $\gamma(\theta)$ in ^{96}Mo(^{13}C,3nγ) (1979Sa01).
2924.80	6$^+$	433.14 *7*	100 *13*	2491.66	6$^+$	E2		E_γ,I_γ: taken from ^{106}In ε decay (6.2 min). Mult.: from conversion electron data in ^{106}In ε decay (6.2 min). Others: D+Q and δ=−0.29 *17* from $\gamma(\theta)$ in ^{96}Mo(^{13}C,3nγ) and δ=+0.06 *27* from $\gamma\gamma(\theta)$ in ^{97}Mo(^{12}C,3nγ).

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Adopted Levels, Gammas (continued)

$\gamma(^{106}Cd)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.[b]	δ	Comments
2924.80	6^+	1431.0 *2*	52 *9*	1493.78	4^+			E_γ,I_γ: taken from ^{106}In ε decay (6.2 min).
2933.65	$2^+,3^+$	1217.05 *5*	100	1716.53	2^+			
2936.15	$2^+,3^+$	2303.46 *5*	100	632.64	2^+			
2973.33	$2,3^+,4^+$	2340.64 *8*	100	632.64	2^+			
3015.35?	$2^+,3^+$	1298.75 *5*	100	1716.53	2^+			
3018.80	$3^+,(5)^+$	1524.91 *4*	100	1493.78	4^+	M1+E2	−0.11 *4*	
3020.74	$2,3^+$	2388.05 *6*	100	632.64	2^+			
3044.13	8^+	541.00 *6*	63 *5*	2503.08	6^+	E2[e]		B(E2)(W.u.)=0.42 *16*
		552.53 *5*	100 *3*	2491.66	6^+	E2[e]		B(E2)(W.u.)=0.60 *23*
3059.84	3	1565.69 *15*	50 *8*	1493.78	4^+	D+Q		Mult.: δ=−11 *+75−5* or +0.02 *8*.
		2427.19 *6*	100 *13*	632.64	2^+	D+Q		Mult.: δ=−0.04 *5* or −3.4 *7*.
3072.82	$2,3^+,4$	2440.13 *10*	100	632.64	2^+			
3084.38	7^+	581.29 *9*	38 *4*	2503.08	6^+	M1+E2[c]		δ=−0.27 *17* from $\gamma\gamma(\theta)$ in $^{97}Mo(^{12}C,3n\gamma)$ or δ=−0.16 *5* from $\gamma(\theta)$ in $^{96}Mo(^{13}C,3n\gamma)$ (1979Sa01).
		592.73 *6*	100 *4*	2491.66	6^+	M1+E2[d]	−0.39 *15*	δ: other: +0.03 *8* from $\gamma\gamma(\theta)$ in $^{97}Mo(^{12}C,3n\gamma)$ or −0.03 *2* from $\gamma(\theta)$ in $^{96}Mo(^{13}C,3n\gamma)$.
		753.75 *7*	71 *5*	2330.56	5^+	E2[c]		
3092.88	(2^+)	1377.0[‡] *2*	100[#] *13*	1716.53	2^+			
		1598.83[‡] *17*	35[#] *5*	1493.78	4^+			
		2460.3[‡] *2*	75[#] *5*	632.64	2^+			
		3093.3[‡] *5*	44[#] *8*	0.0	0^+			
3094	(8)	602	100	2491.66	6^+			
3118.80?	$2^+,3^+,4^+$	1402.19[‡] *5*	100[#] *13*	1716.53	2^+			
		1624.99[‡] *14*	11[#] *2*	1493.78	4^+			
3119.72	1	2487.0 *2*	64 *9*	632.64	2^+			I_γ: from ^{106}In ε decay (5.2 min).
		3119.7 *2*	100 *9*	0.0	0^+			I_γ: from ^{106}In ε decay (5.2 min).
3126.18	7^+	623.72 *29*	100 *10*	2503.08	6^+	M1+E2[e]		E_γ,I_γ: from ^{106}In ε (6.2 min). δ=+0.13 *21* from $\gamma\gamma(\theta)$ in $^{97}Mo(^{12}C,3n\gamma)$ or δ=+0.039 *6* from $\gamma(\theta)$ in $^{96}Mo(^{13}C,3n\gamma)$ (1979Sa01).
		634.10 *20*	55 *6*	2491.66	6^+			E_γ,I_γ: from ^{106}In ε (6.2 min).
3222.65	1	3222.6 *2*	100	0.0	0^+			
3235.24?	$2,3^+$	1518.62[‡] *15*	100[#] *13*	1716.53	2^+			
		2602.6[‡] *4*	19[#] *4*	632.64	2^+			
3245.43?	(2^+)	1140.6[‡] *2*	63[#] *12*	2104.53	4^+			
		1528.9[‡] *2*	69[#] *13*	1716.53	2^+			
		3245.5[‡] *3*	100[#] *16*	0.0	0^+			
3283.97	+	780.70 *20*	100 *10*	2503.08	6^+	E2[e]		
		792.50 *20*	39 *4*	2491.66	6^+			
3320.15	6^-	400.2 *3*	6.1 *13*	2920.14	5^-	D+Q	+0.01 *16*	
		690.99 *5*	100.0 *23*	2629.20	5^-	M1+E2[c]	+0.73 *7*	Weighted average of δ=+0.57 *22* from linear γ pol in (^{16}O,xn); +1.22 *28* from $\gamma(\theta)$ in $^{97}Mo(^{12}C,3n\gamma)$ or δ=+0.71 *7* from $\gamma(\theta)$ in $^{96}Mo(^{13}C,3n\gamma)$ (1979Sa01).
		828.55 *7*	40.1 *21*	2491.66	6^+	E1+M2[c]		δ=+0.10 *19* from $\gamma\gamma(\theta)$ in $^{97}Mo(^{12}C,3n\gamma)$ or δ=+0.09 *18* from $\gamma(\theta)$ in $^{96}Mo(^{13}C,3n\gamma)$ (1979Sa01).
3322.69	$1^+,2^+,3$	2689.99 *9*	100	632.64	2^+			

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Adopted Levels, Gammas (continued)

$\gamma(^{106}Cd)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.[b]	δ	Comments
3328.15	1,2+	980.81[‡] 18	65[#] 11	2347.55	(2)+			
		2695.38[‡] 14	100[#] 14	632.64	2+			
		3327.8[‡] 4	50[#] 9	0.0	0+			
3329.28	3+	1835.39 7	100	1493.78	4+	M1+E2		Mult.: δ=+3.5 8 or +0.43 7.
3354.2	7+	862.3 4	100	2491.66	6+			
3367.16	8+	282.72 11	12.7 9	3084.38	7+	M1+E2[c]		δ=−0.28 16 from $\gamma\gamma(\theta)$ in ^{97}Mo(^{12}C,3nγ) or δ=−0.02 6 from $\gamma(\theta)$ in ^{96}Mo(^{13}C,3nγ) (1979Sa01).
		323.05 9	15.4 7	3044.13	8+	M1+E2[c]		δ=+0.23 10 from $\gamma\gamma(\theta)$ in ^{97}Mo(^{12}C,3nγ) or δ=+0.02 23 from $\gamma(\theta)$ in ^{96}Mo(^{13}C,3nγ) (1979Sa01).
		864.18 15	23 9	2503.08	6+	E2[f]	[f]	
		875.44 5	100 4	2491.66	6+	E2[d]		
3394.2	2+	3394.1 3	100	0.0	0+			
3409.65	7−	488.3 10	28 5	2920.14	5−	Q[i]		
		780.45 9	40 5	2629.20	5−	Q[i]		
		906.55 5	91 4	2503.08	6+	D(+Q)[c]		δ=+0.026 54 from $\gamma\gamma(\theta)$ in ^{97}Mo(^{12}C,3nγ) or δ=−0.014 32 from $\gamma(\theta)$ in ^{96}Mo(^{13}C,3nγ) (1979Sa01).
		918.04 5	100.0 26	2491.66	6+	D(+Q)[c]		δ=−0.02 10 from $\gamma\gamma(\theta)$ in ^{97}Mo(^{12}C,3nγ) or δ=−0.023 29 from $\gamma(\theta)$ in ^{96}Mo(^{13}C,3nγ) (1979Sa01).
3426.90	2,3+,4+	2794.2 2	100	632.64	2+			
3462.0	(6−)	832.8 7	100	2629.20	5−	D+Q[f]	+0.35[f] 15	
3472.81		980.80 20	21 3	2491.66	6+			
		1142.70 20	100 10	2330.56	5+			
		1978.90 20	23 3	1493.78	4+			
3485.92?	1,2+	1690.9[‡] 4	14[#] 3	1795.25	0+			
		2851.9[‡] 6	100[#] 21	632.64	2+			
		3486.7[‡] 7	2.8[#] 13	0.0	0+			
3494.7	1,2+	2862.1 5	70 4	632.64	2+			
		3494.5 5	100 4	0.0	0+			E_γ,I_γ: from ^{106}In ε decay (5.2 min).
3507.79	8−	140.46 18	2.4 8	3367.16	8+	[E1]		B(E1)(W.u.)=1.3×10^{-6} 6
		187.71 5	100.0 29	3320.15	6−	E2[c]		B(E2)(W.u.)=40 10 Mult.: M2 ruled out by RUL.
		423.38 5	45.1 28	3084.38	7+	D+Q[c]		δ=+0.043 37 from $\gamma\gamma(\theta)$ in ^{97}Mo(^{12}C,3nγ) or δ=−0.016 10 from $\gamma(\theta)$ in ^{96}Mo(^{13}C,3nγ) (1979Sa01).
		463.44 14	9.1 9	3044.13	8+	D(+Q)[c]		δ=−0.11 34 from $\gamma\gamma(\theta)$ in ^{97}Mo(^{12}C,3nγ) or δ=+0.25 36 from $\gamma(\theta)$ in ^{96}Mo(^{13}C,3nγ) (1979Sa01).
3543.6	7	1040.4 4	100 7	2503.08	6+	D+(Q)[c]	+0.03 8	δ: from $\gamma\gamma(\theta)$ in ^{97}Mo(^{12}C,3nγ) or $\gamma(\theta)$ in ^{96}Mo(^{13}C,3nγ).
		1051.0 4	61 8	2491.66	6+			
3547.60	+	421.30 20	25 3	3126.18	7+	E2[e]		
		1217.50 20	100 10	2330.56	5+			
		1442.70 20	60 6	2104.53	4+			

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Adopted Levels, Gammas (continued)

$\gamma(^{106}Cd)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.[b]	δ	Comments
3641.82	(8+)	1138.71 *15*	100 *4*	2503.08	6+	(M1)[e]		Mult.: mult=Q required from decay scheme.
		1149.56 *21*	45 *7*	2491.66	6+	Q[g]		
3678.88	9−	171.10 *5*	83 *6*	3507.79	8−	M1+E2[c]	0.15 *1*	B(M1)(W.u.)=0.0022 *8*; B(E2)(W.u.)=1.5 *6* Mult.: M2 ruled out by RUL. δ: from $\gamma(\theta)$ in ^{96}Mo(^{13}C,3nγ). Other: δ=+0.15 *2* from $\gamma\gamma(\theta)$ in ^{97}Mo(^{12}C,3nγ) (1979Sa01).
		269.28 *7*	100 *17*	3409.65	7−	E2[c]		B(E2)(W.u.)=8 *4* Mult.: M2 ruled out by RUL.
		311.76 *19*	11.6 *12*	3367.16	8+	(D+Q)[c]		δ=+0.15 *14* from $\gamma\gamma(\theta)$ in ^{97}Mo(^{12}C,3nγ) or δ=0.00 *6* from $\gamma(\theta)$ in ^{96}Mo(^{13}C,3nγ) (1979Sa01).
		634.69 *15*	71 *9*	3044.13	8+	D+Q[c]		δ=−0.02 *6* from $\gamma\gamma(\theta)$ in ^{97}Mo(^{12}C,3nγ) or δ=−0.038 *28* from $\gamma(\theta)$ in ^{96}Mo(^{13}C,3nγ) (1979Sa01).
3679.29?	2+,3	2184.9[‡] *3*	42[#] *8*	1493.78	4+			
		3046.8[‡] *2*	100[#] *13*	632.64	2+			
3698.3	(7−)	1069.1 *5*	100	2629.20	5−	Q		
3787.39		1284.58 *19*	100 *14*	2503.08	6+	D+Q[f]	+0.15[f] *8*	
		1295.45 *19*	88 *17*	2491.66	6+	D(+Q)	+0.3 *2*	δ: weighted average of δ=+0.26 *34* from ^{96}Mo(^{13}C,3nγ) and δ=+0.3 *3* from ^{97}Mo(^{12}C,3nγ).
3902	(10)	808	100	3094	(8)			
4106.33	10−	427.64 *21*	14.5 *13*	3678.88	9−	D(+Q)[h]	−0.15[h] *24*	
		598.54 *7*	100.0 *21*	3507.79	8−	E2[c]		B(E2)(W.u.)≥62 Mult.: Not M2 from RUL.
4113.86		570.11 *15*	63 *8*	3543.6	7	Q[g]		
		704.47 *20*	100 *6*	3409.65	7−			
4120.95	9+	1076.79 *15*	100	3044.13	8+	D+Q[c]	0.40 *11*	δ: weighted average of δ=+0.45 *15* from $\gamma\gamma(\theta)$ in ^{97}Mo(^{12}C,3nγ) and δ=+0.35 *15* from $\gamma(\theta)$ in ^{96}Mo(^{13}C,3nγ) (1979Sa01).
4179.5		1135.4 *4*	100	3044.13	8+	(D+Q)[c]	+0.03	
4183.04		675.5 *3*	100 *13*	3507.79	8−			
		1138.8 *3*	66 *16*	3044.13	8+			
4193.8		1149 *2*		3044.13	8+			
4243.57		601.40 *20*	100 *10*	3641.82	(8+)	M1[e]		
		1199.70 *20*	55 *6*	3044.13	8+			
4324.42	11(−)	218.38 *26*	3.7 *12*	4106.33	10−			
		645.55 *5*	100.0 *17*	3678.88	9−	Q[c]		
4436.02	10(+)	111.5	18 *4*	4324.42	11(−)			
		315.00 *29*	5.4 *8*	4120.95	9+	D+Q[c]		δ=−0.10 *4* from $\gamma\gamma(\theta)$ in ^{97}Mo(^{12}C,3nγ) or δ=+0.10 *4* from $\gamma(\theta)$ in ^{96}Mo(^{13}C,3nγ) (1979Sa01).
		757.8 *10*	6.8 *21*	3678.88	9−			
		1068.79 *7*	100.0 *11*	3367.16	8+	Q[i]		
		1392.3 *5*	12 *4*	3044.13	8+			
4574.3	10(+)	1530.2 *4*	100	3044.13	8+	Q[i]		
4659.71	12(+)	223.61 *5*	100.0 *24*	4436.02	10(+)	E2[c]		B(E2)(W.u.)=0.190 *24* Mult.: M2 excluded by RUL.
		335.36 *5*	95.0 *22*	4324.42	11(−)	D+Q[c]		δ=−0.05 *3* from $\gamma\gamma(\theta)$ in

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Adopted Levels, Gammas (continued)

$\gamma(^{106}Cd)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ	E_f	J^π_f	Mult.[b]	Comments
							$^{97}Mo(^{12}C,3n\gamma)$ or δ=−0.019 *11* from $\gamma(\theta)$ in $^{96}Mo(^{13}C,3n\gamma)$ (1979Sa01).
4659.71	$12^{(+)}$	476.8 *3*	53 *12*	4183.04			
4794	(12)	892		3902	(10)		
4816.3	10^+	241 *1*		4574.3	$10^{(+)}$		
		622.6 *3*		4193.8		M1	
		695.3 *8*	39 *17*	4120.95	9^+	M1	
		1028.4 *4*	100 *38*	3787.39		E2	
4902.8		788.9 *4*	100.0 *10*	4113.86		Q[c]	
		796.7 *10*	42 *11*	4106.33	10^-		
4967.55	12^-	861.22 *15*	100	4106.33	10^-	(Q)[c]	
5130.76		887.10 *20*	49 *5*	4243.57			
		1488.70 *20*	100 *10*	3641.82	(8^+)		
		1763.40 *20*	55 *6*	3367.16	8^+		
		2087.10 *20*	50 *5*	3044.13	8^+		
5214.06	$13^{(-)}$	889.64 *7*	100	4324.42	$11^{(-)}$	E2[c]	B(E2)(W.u.)≥3.8 Mult.: RUL rules out M2.
5241.0	12^+	804.98 *25*	100	4436.02	$10^{(+)}$	Q[i]	
5252.43	(13^+)	592.72[a] *15*	100[a]	4659.71	$12^{(+)}$	D+Q	Mult.: δ=+0.03 *8* or −0.035 *15* from $^{97}Mo(^{12}C,3n\gamma)$.
5418.7	12^+	602.4 *2*	100	4816.3	10^+		
5557.8?		304.9[aj] *8*	100[a] *15*	5252.43	(13^+)		
5572.5?		319.9[aj] *8*	100[a] *19*	5252.43	(13^+)		
5623.7	12^+	807.3 *2*	100	4816.3	10^+	E2	
5770.4?		517.9[aj] *4*	100[a]	5252.43	(13^+)		
5822	(14)	1028	100	4794	(12)		
5912.0		659.6[a] *5*	100[a]	5252.43	(13^+)		
5976.4	(14^-)	1008.8 *4*	100	4967.55	12^-	Q[i]	
5986.7?		414.2[aj] *15*	100[a]	5572.5?			
6100.6?		330.5[aj] *8*	100[a] *14*	5770.4?			
		542.4[aj] *8*	85[a] *14*	5557.8?			
6226.6	14^+	807.9 *2*	100	5418.7	12^+		
6265.0	(15^-)	1050.94 *24*	100	5214.06	$13^{(-)}$	Q[i]	E_γ: other: 1059 (1989Kl02) very probably typing error.
6516.0	14^+	892.3 *3*	100	5623.7	12^+	E2	
6858.3		757.7[aj] *4*	100[a]	6100.6?			
7118.9?	16^+	602.8 *2*		6516.0	14^+	E2	E_γ: Observed only by 1994Je05.
		892.3 *2*	100	6226.6	14^+		
7120.9	16^-	1145.3 *4*	100	5976.4	(14^-)	E2	
7480.2?		621.9[aj] *4*	100[a]	6858.3			
7517.8	17^-	1253.6 *4*	100	6265.0	(15^-)	E2	
8099.7	18^+	980.8 *2*	100	7118.9?	16^+	E2	
8411.0	18^-	1290.1 *15*	100	7120.9	16^-	E2	
8884.3	19^-	1366.5 *8*	100	7517.8	17^-	E2	
9250.3	20^+	1150.6 *4*	100	8099.7	18^+	E2	
9722.3+x	(19^+)	403.6 *15*	80 *40*	9318.6+x	(18^+)		
		1622.6 *8*	100 *40*	8099.7+x			
9877.0	20^-	1466.0 *15*	100	8411.0	18^-		DCO(2)=1.2 *3*
10160.9+x	(20^+)	438.5 *8*	100 *28*	9722.3+x	(19^+)		
		842.4 *15*	28 *14*	9318.6+x	(18^+)		
10350.1	21^-	1465.8 *8*	100	8884.3	19^-	(E2)	
10560.9	22^+	1310.6 *4*	100	9250.3	20^+		
10663.7+x	(21^+)	502.6 *8*	100 *40*	10160.9+x	(20^+)		
		941.5 *8*	100 *40*	9722.3+x	(19^+)		

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Adopted Levels, Gammas (continued)

$\gamma(^{106}Cd)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ	E_f	J^π_f	Mult.[b]
11168.1+x	(22$^+$)	504.4 *8*	100 *40*	10663.7+x	(21$^+$)	
		1007.0 *15*	80 *40*	10160.9+x	(20$^+$)	
11740.7+x	(23$^+$)	572.5 *15*	100 *50*	11168.1+x	(22$^+$)	
		1077.2 *15*	100 *50*	10663.7+x	(21$^+$)	
11941.5	23$^-$	1591.4 *15*	100	10350.1	21$^-$	
12048.5	24$^+$	1487.6 *8*	100	10560.9	22$^+$	(E2)
12312.0+x	(24$^+$)	571.0 *15*	100 *50*	11740.7+x	(23$^+$)	
		1143.8 *15*	100 *50*	11168.1+x	(22$^+$)	
12951.8+x	(25$^+$)	639.7 *15*	100 *50*	12312.0+x	(24$^+$)	
		1211.4 *15*	100 *50*	11740.7+x	(23$^+$)	
13614.9+x	(26$^+$)	663.3 *15*	100 *50*	12951.8+x	(25$^+$)	
		1302.6 *15*	100 *50*	12312.0+x	(24$^+$)	
13724.1	26$^+$	1677.6 *15*	100	12048.5	24$^+$	
14333.9+x	(27$^+$)	718.8 *15*	67 *33*	13614.9+x	(26$^+$)	
		1382.3 *15*	100 *33*	12951.8+x	(25$^+$)	
15067.0+x	(28$^+$)	733.0 *15*	100 *50*	14333.9+x	(27$^+$)	
		1452.1 *15*	100 *50*	13614.9+x	(26$^+$)	
15583.5	(28$^+$)	1857.4[j] *15*	100	13724.1	26$^+$	
15862.8+x	(29$^+$)	795.6 *15*	100 *50*	15067.0+x	(28$^+$)	
		1529.0 *15*	100 *50*	14333.9+x	(27$^+$)	

[†] Unless noted otherwise, gamma energies were calculated with a least squares procedures using data from ^{106}In ε decay (5.2 min), ^{106}In ε decay (6.2 min), ^{94}Zr(^{16}O,4nγ), ^{96}Mo(^{13}C,3nγ), ^{97}Mo(^{12}C,3nγ) and ^{104}Pd(α,2nγ).

[‡] From (n,n′γ).

[#] From (n,n′γ).

[@] From (p,p′γ).

[&] From (p,p′γ).

[a] γ feeding the isomer at 4659 kev.

[b] Unless noted otherwise, from $\gamma(\theta)$ and linear pol in (n,n′γ).

[c] From $\gamma(\theta)$ in ^{96}Mo(^{13}C,3nγ) and $\gamma\gamma(\theta)$ in ^{97}Mo(^{12}C,3nγ) (1979Sa01).

[d] From $\gamma(\theta)$ and linear γ pol in ^{94}Zr(^{16}O,4nγ) (1979Sa01).

[e] From conversion electron data in ^{106}In ε decay.

[f] From $\gamma(\theta)$ in ^{96}Mo(^{13}C,3nγ).

[g] From $\gamma(\theta)$ in ^{96}Mo(^{13}C,3nγ).

[h] From $\gamma\gamma(\theta)$ in ^{97}Mo(^{12}C,3nγ).

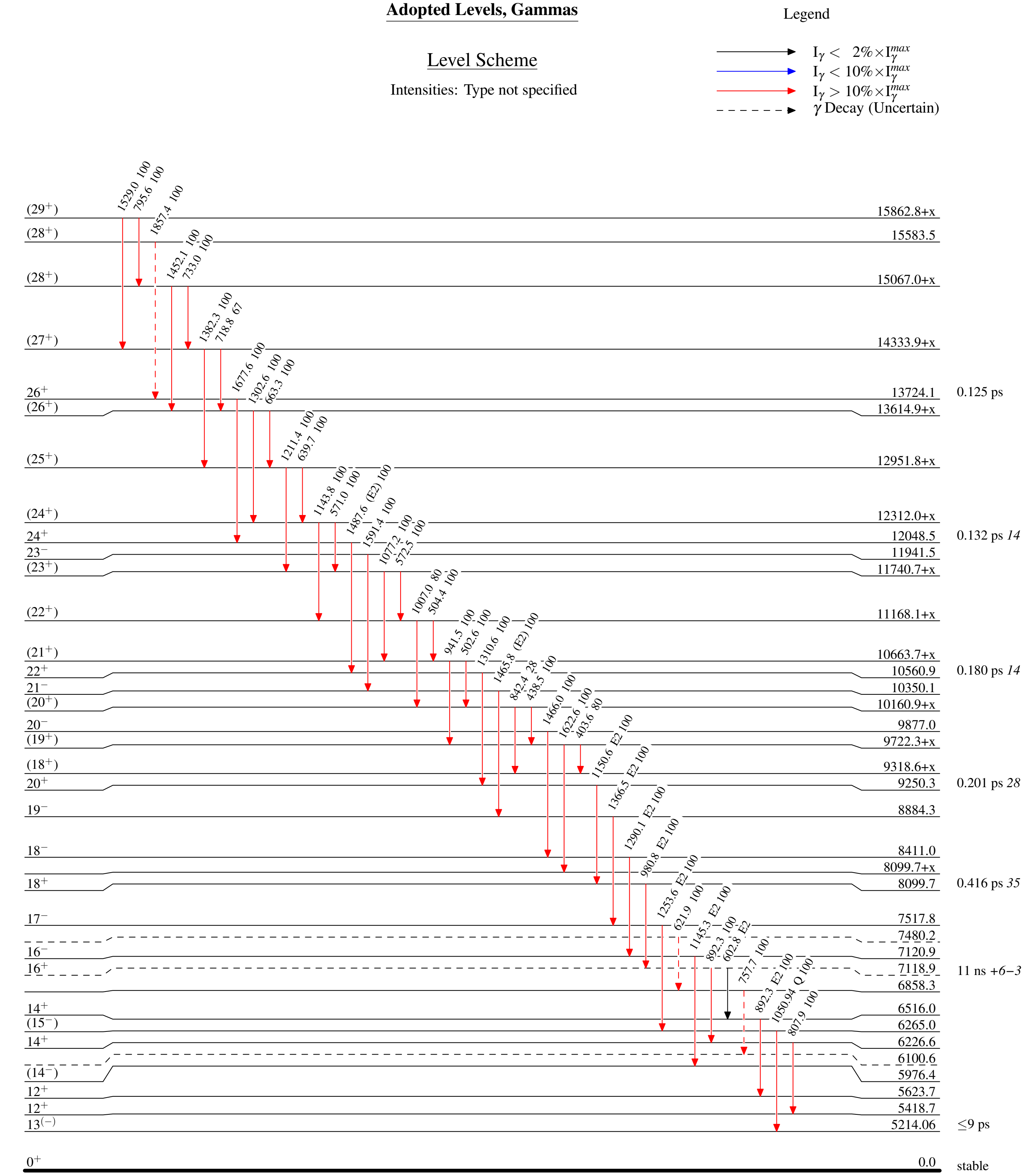
[i] From $\gamma\gamma(\theta)$ in ^{97}Mo(^{12}C,3nγ).

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

Adopted Levels, Gammas

Level Scheme

Intensities: Type not specified

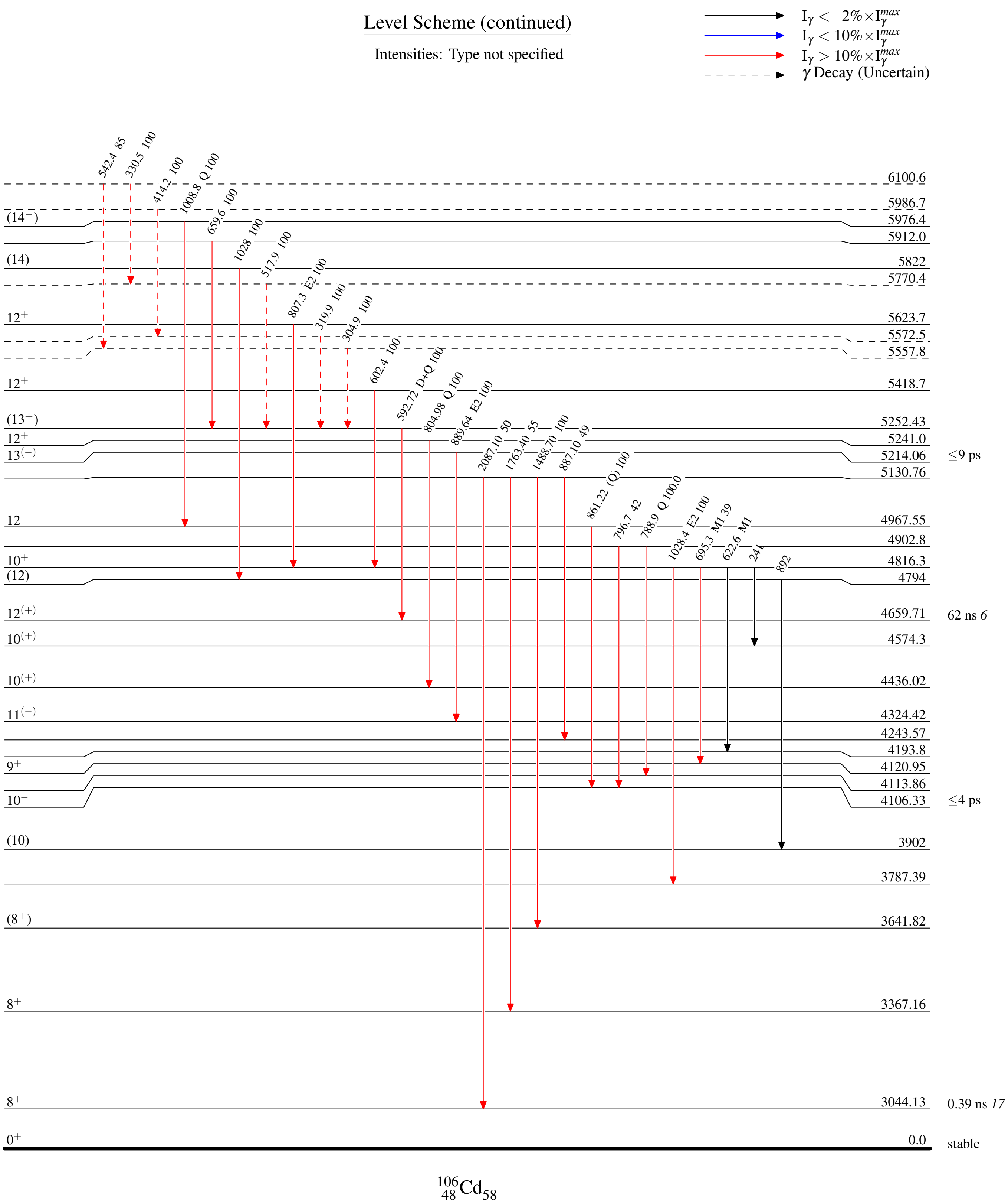


$^{106}_{48}Cd_{58}$

Adopted Levels, Gammas

Level Scheme (continued)

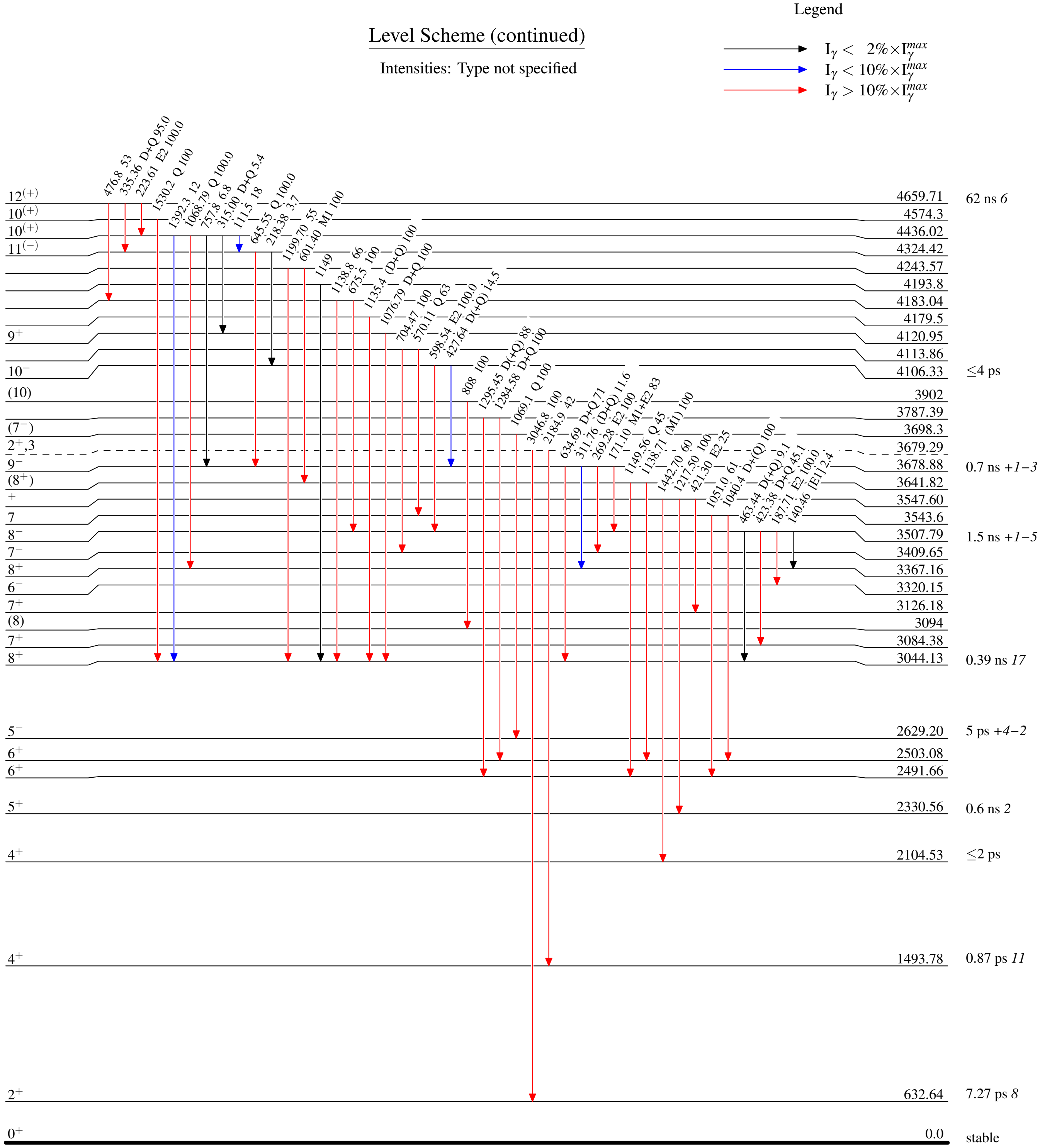
Intensities: Type not specified



Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified



$^{106}_{48}Cd_{58}$

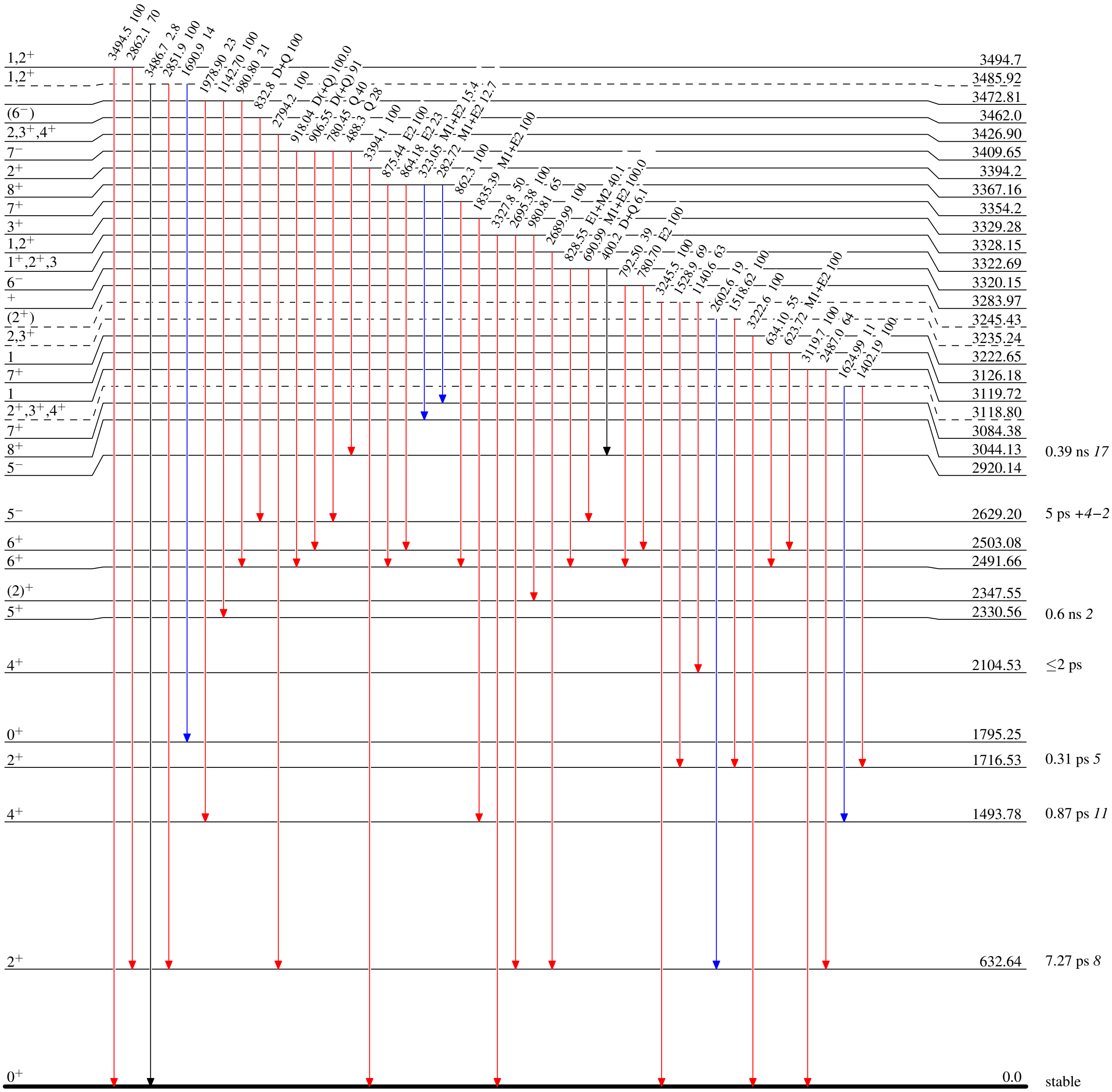
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Type not specified

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



$^{106}_{48}Cd_{58}$

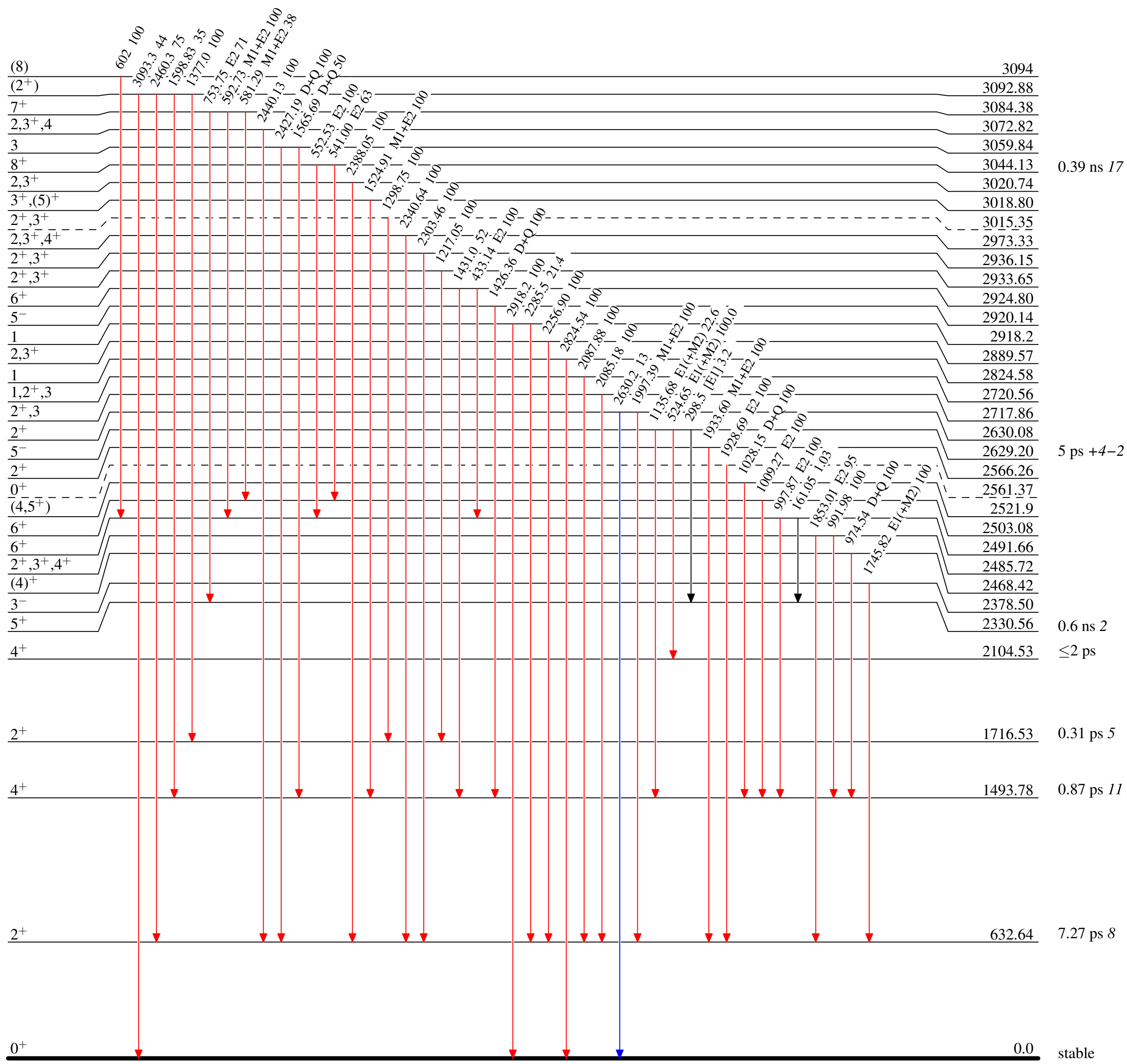
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

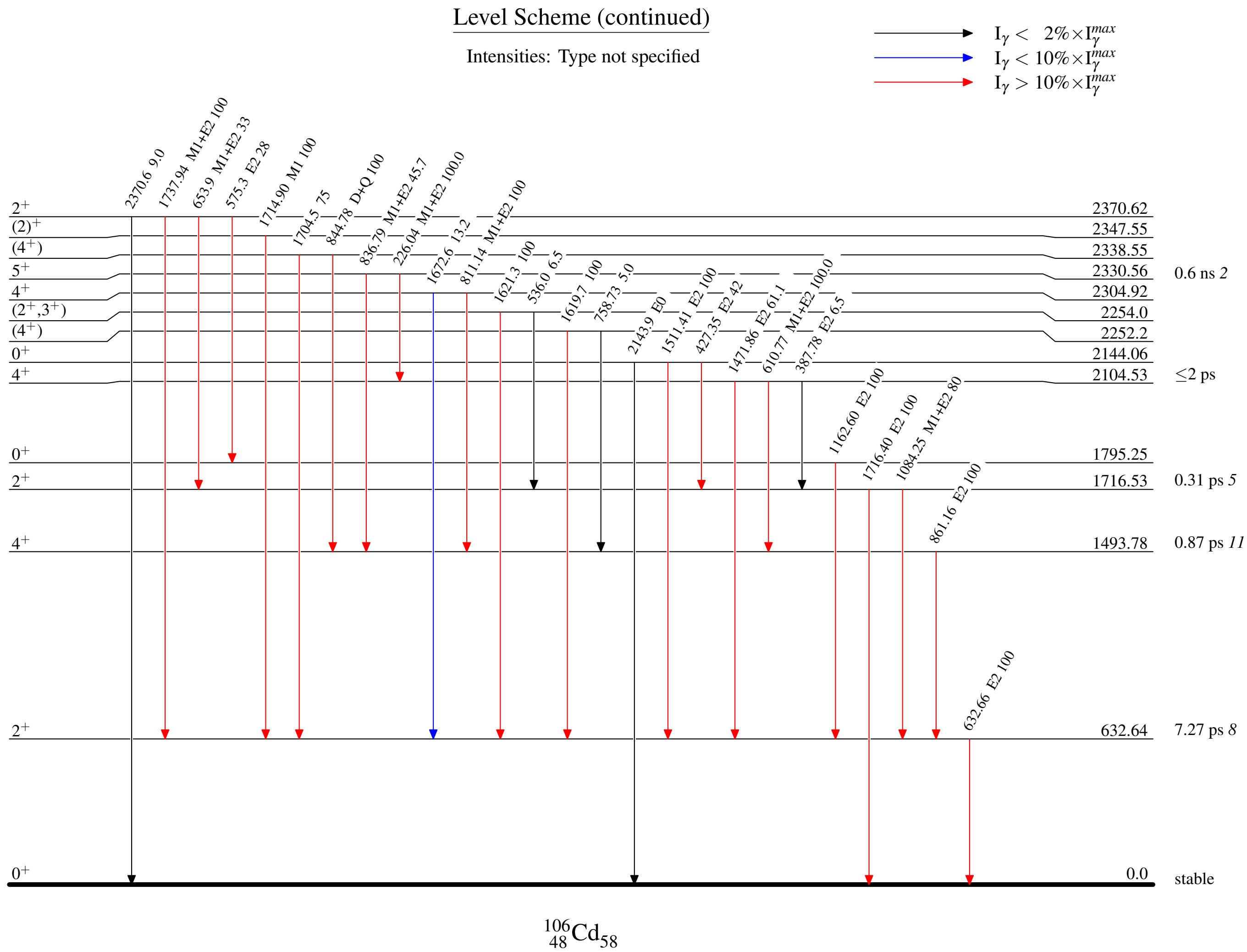
Legend

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

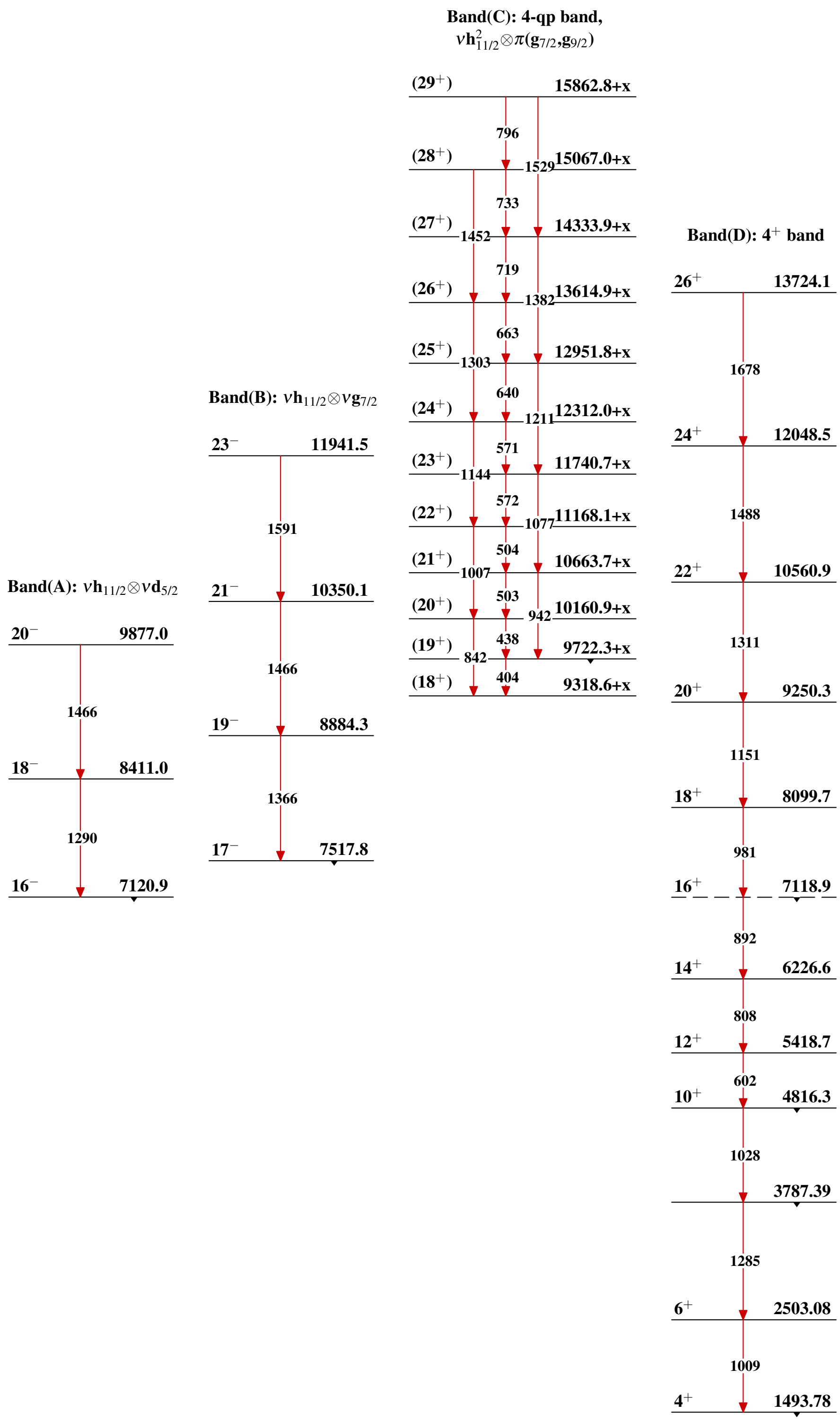


$^{106}_{48}Cd_{58}$

Adopted Levels, Gammas



Adopted Levels, Gammas



$^{106}_{48}Cd_{58}$

Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	ENSDF	1-Jul-2008

Q(β^-)=−5133 *9*; S(n)=10333.6 *20*; S(p)=8135 *3*; Q(α)=−2282.5 *18* 2012Wa38
Note: Current evaluation has used the following Q record −5137 9 *10339* 8 *8140* 7 −2287 7 2003Au03.
1991De27 have compared properties of the even Cd.

^{108}Cd Levels

Cross Reference (XREF) Flags

A	^{108}Ag β^- decay (2.382 min)	H	^{100}Mo(^{13}C,5nγ)	O	^{108}Cd(α,α')
B	^{108}In ε decay (39.6 min)	I	^{106}Pd(^{3}He,n)	P	Coulomb excitation
C	^{108}In ε decay (58.0 min)	J	^{107}Ag(p,p),(p,n) IAR	Q	^{108}Cd(γ,γ')
D	^{108}In ε decay (58.0 min+39.6 min)	K	^{107}Ag(^{3}He,d)	R	^{109}Ag(p,2nγ)
E	^{105}Pd(α,nγ)	L	^{108}Cd(n,n'γ)	S	^{112}Sn(d,^{6}Li)
F	^{64}Ni(^{48}Ca,4nγ)	M	^{108}Cd(p,p'),(pol p,p')	T	(HI,xnγ)
G	^{96}Zr(^{16}O,4nγ)	N	^{108}Cd(p,p'γ)		

E(level)[†]	J$^\pi$[‡]	T$_{1/2}$[@]	XREF	Comments
0.0[g]	0$^+$	stable	ABCDE GHI KLMNOPQRST	
632.988[g] *15*	2$^+$	6.86 ps *7*	ABCDE GH KLMNOPQRST	Q=−0.45 *8* (1989Ra17) μ=+0.68 *18* (1989Ra17) J$^\pi$: E2 γ to 0$^+$. T$_{1/2}$: from B(E2)=0.406 *4*. Other: 7.0 ps *6* in (HI,xnγ). μ: μ, Q are from Coulomb excitation.
1508.466[g] *23*	4$^+$	0.88 ps *11*	BCDE GH KLMNOP RST	J$^\pi$: E2 γ to 2$^+$. T$_{1/2}$: from B(E2) in Coul. ex., other: <3.5 ps in (HI,xnγ).
1601.833 *15*	2$^+$	0.46 ps *7*	BCDE KLMNOPQRS	J$^\pi$: E2 γ to 0$^+$. T$_{1/2}$: from B(E2) in Coul. ex.
1720.646 *24*	0$^+$		DEF I KL N QRS	J$^\pi$: L(^{3}He,d)=1 and $\gamma(\theta)$ in (n,n'γ).
1913.420 *24*	0$^+$		B DE I KL N QRS	XREF: K(1911). J$^\pi$: E0 γ to g.s.
2145.850 *21*	3$^+$[#]		DE L N R	J$^\pi$: M1 γ to 2$^+$.
2162.738 *23*	2$^+$		B DE KL N QR	J$^\pi$: E2 γ to 0$^+$.
2202.208 *24*	3$^-$		B DE KLMNO RS	β_3=0.207 XREF: S(2228). J$^\pi$: L(^{3}He,d)=2. L(p,p')=3 for E=2228 β_3: from (p,p').
2239.35[j] *7*	4$^+$[#]		CDE L N RST	J$^\pi$: M1+E2 γ's to 4$^+$. E2 γ to 2$^+$.
2365.781 *23*	2$^+$		B kL N R	J$^\pi$: E2 γ to 0$^+$.
2374.57 *4*	(0$^+$)[#]		DE I kL N QR	
2486.31 *3*	2$^+$[#]		DE KL N R	
2500			O	
2541.36[g] *4*	6$^+$		CDE GH L ST	J$^\pi$: E2 γ to 4$^+$ and E2 γ from 6$^+$.
2555.23 *4*	3$^{(-)}$[#]		DE KL	
2565.06[l] *5*	5$^+$	0.2[&] ps *1*	CDE L T	J$^\pi$: feeding from 3816 level which is directly fed in ε decay from 7$^+$ rules out 3$^+$.
2601.58 *3*	5$^-$		CDE KL ST	
2620.02 *7*	2$^+$	83 fs *20*	B DE L Q	J$^\pi$: M1+E2 γ to 2$^+$, γ(pol) in (n,n'γ) rules out 1$^+$.
2645.62 *4*	4$^+$[#]		L	
2678.01 *4*	1$^-$	27.5 fs *10*	D kL Q	XREF: k(2675). J$^\pi$: L(^{3}He,d)=0 for 2678 and/or 2682 level. T$_{1/2}$: From ^{108}Cd(γ,γ').

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{108}Cd Levels (continued)

E(level)[†]	J^{π}[‡]	$T_{1/2}$[@]	XREF	Comments
2682.65 *4*	1,2^{+}	0.22 ps *5*	B DE kL	XREF: k(2675). J^{π}: log *ft*=6.2 from 2^{+}. γ to 0^{+}.
2707.06 *4*	5^{-}		C KL sT	XREF: s(2738).
2738.72 *6*	4^{+}[#]	0.37 ps *9*	DE L s	XREF: s(2738).
2740 *14*	(0^{+},1^{+},2^{+})		DE K	J^{π}: L(^{3}He,d)=(1).
2755.07 *11*	4^{+},5^{+}	0.23 ps *7*		
2762.83 *5*	3^{+}[#]		DE L s	XREF: s(2738).
2790.79 *6*			G T	
2805.06 *4*	3[#]		DE L	
2807.81 *6*	6^{+}[#]		CDE L ST	J^{π}: M1 γ to 5^{+}.
2810.11 *4*	4^{-}[#]		DE L	
2816.51 *9*	2^{+}		DE L S	
2820.18 *11*	$2^{(-)}$[#]		DE KL	XREF: K(2816).
2875.89 *8*	4^{+}[#]		DE L	
2905.87 *8*	5^{+}		DE	
2912.32 *6*	2,3^{+}[#]		L s	XREF: s(2912).
2936.13 *11*	0^{+},1^{+},2^{+}[#]		DE KL s	XREF: K(2938)s(2912). J^{π}: L(^{3}He,d)=1.
2975.35[l] *5*	6^{-}	0.15[&] ns *10*	CDE T	
2976.48 *12*	4^{+}		DE	
2993.11 *7*	2^{+}		DE KL	J^{π}: γ to 0^{+} g.s, M1+E2 to 2^{+}.
2994.16[j] *10*	6^{+}		CDE T	J^{π}: M1,E2 γ to 4^{+}. log *ft*=5.7 from 7^{+}.
2998.09 *9*			D	
3005.65 *10*	1[#]	13.0 fs *6*	D L Q	$T_{1/2}$: From ^{108}Cd(γ,γ').
3028.30 *10*			D	
3031.55 *6*	2^{+}[#]		DE L	
3048.54 *12*	1^{+}	20.8 fs *14*	B D L Q	J^{π}: m1g to 0^{+}. $T_{1/2}$: From ^{108}Cd(γ,γ').
3057.56[b] *5*	7^{-}	31 ps *24*	CDE L T	
3059.53 *13*			DE	
3059.89 *11*	$(4,5)^{+}$		DE	
3076 *15*	0^{+},1^{+},2^{+}		K	J^{π}: L(^{3}He,d)=1.
3077.49 *9*	(4^{+})		DE	
3081.79 *8*	3^{+}[#]		DE L	
3092.29 *8*	(3)		DE	
3110.64[l] *10*	(8^{+})	0.3[&] ns *1*	CDE T	J^{π}: from $\gamma(\theta)$ and γ(pol) for the 569γ in (HI,xnγ), 1978Sa13 conclude ΔJ(3110-2541 levels)=2 (J^{π} 2541=6^{+}). Another solution allowed by $\gamma(\theta)$, namely ΔJ=0, is ruled out by the authors on the basis of γ(pol) (pol exp)=0.60 *20*, pol=0.60 *5* for ΔJ=2 and pol=0.007 to 0.32 for ΔJ=0).
3138 *16*	(0^{-},1^{-})		K	J^{π}: L(^{3}He,d)=(0).
3139.00 *10*			DEF	
3171.15 *15*	2,3^{+}[#]		DE KL	
3174.17 *15*				
3181.69 *10*			DE L	
3189.72 *14*	(6^{+},7^{+},8^{+})		CDE T	J^{π}: log *ft*=5.9 from 7^{+}.
3194.81 *12*	2^{+}[#]		DE L	
3203.6 *10*			DE	
3221.67 *9*	$(3,4)^{+}$		DE K	
3223.80[c] *6*	8^{-}	0.49 ns *14*	T	

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Adopted Levels, Gammas (continued)

^{108}Cd Levels (continued)

E(level)[†]	J$^{\pi}$[‡]	T$_{1/2}$[@]	XREF	Comments
3227.88 *15*	(2^{+})		DE	
3248.27 *9*			DE	
3248.71 *13*	7^{-}		T	
3259.7 *7*				
3264.92 *11*	1,2^{+},3[#]		L	
3267.68 *10*	[#]		L	
3284 *16*	3^{-},4^{-},5^{-}		K	J$^{\pi}$: L(^{3}He,d)=4.
3289.80 *11*				
3292.63 *10*	1[#]	16.6 fs *7*	L Q	T$_{1/2}$: From ^{108}Cd(γ,γ').
3294.89 *12*	2,3^{+}[#]		L	
3298.52 *15*			DE	
3303.55 *10*			T	
3316.44 *13*	(3^{+})[#]		DE L	
3321.93 *10*			DE	
3326.02 *20*	3,(2^{+})[#]		DE L	
3343.99 *8*	1		DE	
3353.35 *11*			DE	
3367.51 *9*	(6^{+})		CDE	J$^{\pi}$: γ's to 4^{+} and 6^{+}. log *ft*=6.4 from 7^{+}.
3384.91 *9*	2^{+},3		DE	
3389.43 *20*	(3)		K	E(level): doublet with L=(2+4).
3400.54 *12*			DE	
3407.23 *12*			DE	
3407.92 *11*			DE	
3413.14 *16*	(6^{+})		DE	
3428.00 *12*			DE	
3430 *17*			K	
3433.07 *16*			DE	
3435.2 *10*			DE	
3437.00 *15*			DE	
3450.05 *8*	2^{+},3^{+}		DE	
3454.12 *7*	1^{+}	22.9 fs *21*	B DE Q	T$_{1/2}$: From ^{108}Cd(γ,γ').
3459.83 *12*	5,6		DE	
3460.60 *10*			DE	
3470.01 *11*	2$^{(+)}$		DE	
3474.57[a] *11*	8^{-}		DE T	
3482.21 *11*	2		DE KL	
3485.20[b] *6*	9^{-}	47.1 ps *21*	DE T	
3512.27 *15*			DE	
3525.42 *10*			DE	
3530 *18*			K	J$^{\pi}$: L=2 for 3530+3560.
3535.83? *20*	(3,4)$^{+}$[#]		DE L	
3540.26? *13*		0.29 ps *8*	DE L	
3554.87? *15*	(3^{+})[#]		DE L	
3559.61? *18*	(0^{+},1^{+})[#]		L	
3560 *18*			K	J$^{\pi}$: L=2 for 3530+3560.
3566.43 *20*			DE	
3571.84 *7*	2^{+}		D	
3576.26 *12*			DE	
3605.62 *21*			DE	
3611.66 *12*			DE	
3630 *18*			K	J$^{\pi}$: L=2 for 3630+3670.
3633.73 *20*			DE	
3642.12 *11*			DE	

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Adopted Levels, Gammas (continued)

^{108}Cd Levels (continued)

E(level)[†]	J^{π}[‡]	$T_{1/2}$[@]	XREF	Comments
3643.22 *15*			DE	
3656.27 *12*			DE	
3656.48 *15*	(8$^+$)		DE	
3667.07 *20*	1	12.9 fs *6*	DE Q	$T_{1/2}$: From ^{108}Cd(γ,γ').
3670 *18*			K	
3674.74 *11*			DE	
3683.23[g] *8*	8$^+$		DE H T	
3683.36 *21*			DE	
3718.48 *11*			DE	
3724.54 *6*	2$^+$		D	
3726.7 *10*			DE	
3732.0 *10*			DE	
3737.50[d] *7*	9$^-$	6.2 ps *7*	T	
3740.41 *15*			DE	
3750 *19*			K	
3770.4 *7*	(7$^+$)		DE	
3779.8 *7*			DE	
3787.1 *10*			DE	
3788.9 *4*	2$^+$		DE	
≈3800	(0$^+$)		G	J^{π}: L(^{3}He,n)=0.
3811.7 *10*			DE	
3812.0 *3*	1$^+$,2$^+$		B DE	J^{π}: log *ft*=5.2 from 2$^+$. γ to 0$^+$.
3814.56 *7*	1$^+$	14.6 fs *14*	D Q	$T_{1/2}$: From ^{108}Cd(γ,γ').
3816.30 *7*	6$^+$		CDE	J^{π}: log *ft*=5.7 from 7$^+$. γ to 4$^+$.
3827.87 *5*	1$^+$	26 fs *+6−5*	B DE K Q	$T_{1/2}$: From ^{108}Cd(γ,γ'). J^{π}: M1 γ to 0$^+$.
3861.05[j] *20*	8$^+$		T	
3870 *19*			K	
3872.4[c] *3*	10$^-$	5.75 ps *21*	T	
3875.78 *15*			DE	
3881.63 *15*			DE	
3890.71 *15*			DE	
3904.06 *15*			DE	
3946.11 *9*	(2$^+$)		DE	
3968.30 *21*			DE	
3968.67 *21*			DE	
3969.03 *15*			DE	
3984.56 *12*			DE	
4008.8 *7*			DE	
4011.4 *7*			DE	
4011.89 *8*	2$^+$,(3)		D	
4016.6 *10*			DE	
4028.73 *6*	2$^+$		D	
4030.98 *11*			DE	
4043.83 *8*	4,5$^+$		C	
4082.90 *21*			DE	
4083.63 *21*			DE	
4096.20 *21*			DE	
4109.26 *15*			DE	
4152.65[g] *8*	10$^+$	35.4 ps *21*	GH T	
4160.67 *12*			D	
4179.27 *8*			C	
4188.20[b] *8*	11$^-$	3.60 ps *14*	T	
4196.4[a] *8*	10$^-$	5.5 ps *14*	T	
4203.60 *7*	(1$^+$)		D	

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Adopted Levels, Gammas (continued)

^{108}Cd Levels (continued)

E(level)[†]	J$^{\pi}$[‡]	$T_{1/2}$[@]	XREF	Comments
4209.81 *8*	2$^+$		D	
4224.17 *16*			DE	
4238.90 *7*	1$^+$		D	
4240.01 *9*			CD	
4251.39 *16*			CD	
4278.7 *6*			D	
4282.4 *10*			DE	
4293.92 *8*			D	
4315.76 *13*			D	
4323.48 *12*	(1$^+$,3$^+$)		D	
4334.35 *8*			D	
4345.36 *8*	1$^+$		D	
4351.97 *11*	1		D	
4394.75 *10*	1$^+$		D	
4400.64 *11*	(3$^+$,2$^+$)		D	
4414.01 *15*	(1$^+$,3$^+$)		D	
4468.56 *13*			D	
4471.04 *8*	1		D	
4481.33 *11*	(3$^+$,1$^+$)		D	
4512.66 *9*	6$^+$		CD	J$^{\pi}$: log *ft*=5.30 from 7$^+$. γ to 5$^-$.
4525.39 *12*			CD	
4529.14 *11*			D	
4568.7[d] *6*	11$^-$	1.66 ps *21*	T	
4584.66 *8*	1$^+$		D	
4618.5 *10*	(10)		T	
4640.39 *11*	1$^+$,(2)		D	
4649.47 *10*			D	
4656.38 *11*	(1$^+$,3$^+$)		D	
4663.36 *13*			D	
4663.94 *15*	(2$^+$)		D	
4698.32 *9*			D	
4708.74[g] *11*	12$^+$	10.1 ps *3*	GH T	J$^{\pi}$: E2 γ to 10$^+$.
4755.58 *11*			D	
4755.9[h] *8*	10$^+$		D T	
4774.89 *9*			D	
4811.52 *12*	1$^+$,2,3$^+$		D	
4811.80 *15*			D	
4826.0[c] *4*	12$^-$	1.11 ps *7*	T	J$^{\pi}$: E2 γ to 10$^-$.
4849.12 *15*			D	
4858.76 *11*			D	
4864.69 *11*			D	
4870.29 *15*			D	
4914.50 *15*			D	
5125.0[a] *8*	12$^-$	2.1 ps *3*	T	
5179.87[b] *17*	13$^-$	0.69 ps *7*	T	J$^{\pi}$: E2 γ to 11$^-$.
5502.55[g] *13*	14$^+$	1.52 ps *7*	GH T	J$^{\pi}$: E2 γ to 12$^+$. $T_{1/2}$: Other:0.91 ps *9* (2005Da16).
5574.2[d] *7*	13$^-$		T	
5589.2[e] *15*	11$^-$		G T	
5591.9[h] *6*	12$^+$		T	
5639.6[e] *5*	12$^-$		G T	
5760.6[e] *6*	13$^-$		G T	
5837.6[i] *9*	(12)		T	
5982.3[c] *9*	14$^-$		T	

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Adopted Levels, Gammas (continued)

^{108}Cd Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$[@]	XREF	Comments
6076.4[e] *7*	14⁻	<2 ps	G T	
6124.3[h] *6*	14⁺		R T	
6251.5[a] *8*	14⁻		T	
6404.1[b] *11*	15⁻		T	
6458.87[g] *24*	16⁺	0.40 ps *5*	GH T	Jπ: E2 γ to 14⁺. $T_{1/2}$: From 2005Da16.
6488.0[i] *9*	(14)		T	
6597.8[e] *8*	15⁻	0.48 ps *+3−4*	G T	$T_{1/2}$: from 2000Ke01 (DSA method), other: >2 ps (1994Th01).
6891.0[h] *8*	16⁺		T	
7212.6[c] *14*	(16⁻)		T	
7213.5[f] *9*	(15⁻)		G T	
7274.9[e] *9*	16⁻	0.19 ps *+4−6*	G T	$T_{1/2}$: from 2000Ke01 (DSA method).
7383.4[i] *13*	(16)		T	
7385.9[a] *8*	16⁻		T	
7528.6[f] *7*	16⁻		G T	
7564.2[g] *11*	18⁺	0.229 ps *28*	GH T	$T_{1/2}$: From 2005Da16.
7725.3[b] *15*	17⁻		T	
7740.4[e] *8*	17⁻	0.28 ps *4*	G T	$T_{1/2}$: from 2000Ke01 (DSA method).
7796.3 *5*	17⁻		G	
7861.4[f] *6*	17⁻		G T	
7913.3[h] *13*	(18⁺)		T	
8102.2[e] *9*	18⁻	0.52 ps *+3−4*	G T	$T_{1/2}$: from 2000Ke01 (DSA method).
8184.7 *12*	(17)		T	
8283.8[a] *13*	18⁻		T	
8316.6[f] *6*	18⁻		G	
8354.4 *7*	18⁻		G	
8534.9[i] *17*	(18)		G T	
8543.4 *16*	(18)		T	
8584.8[e] *9*	19⁻	0.201 ps *14*	G T	$T_{1/2}$: from 2000Ke01 (DSA method).
8639.8[f] *6*	19⁻		G	
8671.0[b] *18*	19⁻		T	
8824.5[g] *15*	(20⁺)	0.152 ps *28*	GH T	$T_{1/2}$: From 2005Da16.
8964.2 *19*	(19)		T	
8998.7[f] *7*	(20⁻)		G	
9174.8[e] *9*	(20⁻)	0.14 ps *+2−3*	G T	$T_{1/2}$: from 2000Ke01 (DSA method).
9325.9[a] *17*	(20⁻)		T	
9419.6[f] *7*	(21⁻)		G	
9757.3[b] *20*	(21⁻)		T	
9879.3[e] *9*	(21⁻)	0.208 ps *7*	G T	$T_{1/2}$: from 2000Ke01 (DSA method).
9894.3[i] *20*	(20)		T	
9896.7[f] *7*	(22⁻)		G	
10293.6[g] *18*	(22⁺)		G T	
10412.6[f] *8*	(23⁻)		G	
10532.6[a] *19*	(22⁻)		T	
10677.2[e] *9*	(22⁻)		G	
10975.9[f] *8*	(24⁻)		G	
11018.5[b] *23*	(23⁻)		T	

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{108}Cd Levels (continued)

E(level)[†]	Jπ[‡]	XREF	Comments
11906.6[a] 22	(24⁻)	T	
11914.8[g] 21	(24⁺)	G T	
12489.2[b] 25	(25⁻)	T	
14270		J	
14533		J	
14565		J	
14645		J	
14717		J	
14737		J	
14797		J	
14877		J	
14897		J	
14962		J	
15103		J	
x[k]	J≈(40)	F	Additional information 1. A weak 1638γ may deexcite this level.
1686.01+x[k] 20	J+2	F	
3421.6+x[k] 3	J+4	F	
5218.7+x[k] 4	J+6	F	
7083.4+x[k] 5	J+8	F	
9021.6+x[k] 6	J+10	F	
11037.5+x[k] 7	J+12	F	
13133.8+x[k] 8	J+14	F	
15310.4+x[k] 9	J+16	F	
17566.4+x[k] 9	J+18	F	
19902.7+x[k] 10	J+20	F	
y[l]		F	Additional information 2. Jπ: I<40.
1534.0+y[l] 10	J+2	F	
3130.0+y[l] 15	J+4	F	
4796.0+y[l] 18	J+6	F	
6540.1+y[l] 20	J+8	F	
8361.1+y[l] 23	J+10	F	
10262.1+y[l] 25	J+12	F	
12244+y[l] 3	J+14	F	
14306+y[l] 3	J+16	F	
16450+y[l] 3	J+18	F	
18676+y[l] 4	J+20	F	
20979+y[l] 4	J+22	F	

† From a least-squares fit to the adopted Eγ.
‡ For levels seen only in (HI,xnγ), J^π are from $\gamma(\theta)$, DCO, γ(pol).
\# $\gamma(\theta)$ and γ(lin pol) in (n,n′γ).
@ From Doppler shift recoil-distance method in (HI,xnγ), otherwise noted.
& From centroid shift measurement in (HI,xnγ).
a Band(A): ΔJ=2 band based on 8⁻.

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{108}Cd Levels (continued)

[b] Band(B): ΔJ=2 band based on 9^-.
[c] Band(C): ΔJ=2 band based on 6^-.
[d] Band(D): band 4.
[e] Band(E): Magnetic-dipole (shears) band, based on (11^-). Configuration=$\pi[g_{9/2}^{-3}g_{7/2}]\nu[h_{11/2}(g_{7/2}d_{5/2})^1]$ before the $\nu h_{11/2}^2$ crossing and $\pi[g_{9/2}^{-3}g_{7/2}]\nu[h_{11/2}^3(g_{7/2}d_{5/2})^1]$ after the crossing.
[f] Band(F): Magnetic-dipole (shears) band, based on (15^-). Tentative configuration=$\pi[g_{9/2}^{-3}g_{7/2}]\nu[h_{11/2}\ (g_{7/2}d_{5/2})^3]$.
[g] Band(G): g.s. (yrast) band.
[h] Band(H): ΔJ=2 band based on 10^+.
[i] Band(I): band 9.
[j] Band(J): band 10.
[k] Band(K): SD-1 band (2001Cl06). Percent population ≈1.4. Q(intrinsic)>9.5.
[l] Band(L): SD-2 band (2002Go03). Percent population ≈0.6. Q(intrinsic)≈8.5.

γ(^{108}Cd)

E_i(level)	J^π_i	E_γ	I_γ†	E_f	J^π_f	Mult.‡	δ	Comments
632.988	2^+	632.97 2	100	0.0	0^+	E2		B(E2)(W.u.)=26.6 3 E_γ: from β^- decay.
1508.466	4^+	875.47 2	100	632.988	2^+	E2		B(E2)(W.u.)=41 6
1601.833	2^+	968.81 2	100	632.988	2^+	M1+E2	−1.5 +6−15	B(E2)(W.u.)=17 5; B(M1)(W.u.)=0.008 5
		1601.84 2	92 3	0.0	0^+	E2		B(E2)(W.u.)=1.8 3
1720.646	0^+	1087.66 2	100	632.988	2^+	E2		
1913.420	0^+	311.58 3	96 7	1601.833	2^+	E2		I_γ: weighted av of Iγ(312γ)/Iγ(1280γ) excluding value of 1975Fl01.
		1280.45 3	100	632.988	2^+	E2		
		1913.3 2		0.0	0^+	E0		
2145.850	3^+	544.00 3	13.8 6	1601.833	2^+	M1+E2	−1.22 12	
		637.3 3	8.4 25	1508.466	4^+			
		1512.86 2	100 3	632.988	2^+	M1+E2	−1.84 3	
2162.738	2^+	1529.72 2	100	632.988	2^+	M1+E2	0.13 2	Mult.: the E1 assignment in ^{108}In ε decay seems to be a mistake.
		2162.7 2	6.7 6	0.0	0^+	E2		
2202.208	3^-	600.2 3	3.8 6	1601.833	2^+			
		1569.22 2	100	632.988	2^+	E1		
2239.35	4^+	637.5	18 1	1601.833	2^+	E2(+M3)	−0.01 6	
		730.8	100 8	1508.466	4^+	M1+E2	−0.31 10	δ: −0.70 16 or −0.25 20 in ε decay.
		1606.3	86 7	632.988	2^+	E2(+M3)	−0.07 4	δ: −0.003 38 in ε decay.
2365.781	2^+	1732.77 2	100	632.988	2^+	M1+E2	−0.151 14	
		2365.72 8	18.3 8	0.0	0^+	E2		
2374.57	(0^+)	772.69# 5	<18	1601.833	2^+			E_γ: from E(level) difference, placed by 1992Ku01 from this level, but the placement in (n,n′γ) is not consistent in energy.
		1741.56 4	100	632.988	2^+	(E2)		
2486.31	2^+	884.3 2	10.6 24	1601.833	2^+	E2+M1	+0.31 8	
		1853.30 3	100 3	632.988	2^+	E2+M1	−0.47 14	δ: −0.61 3 or −6.3 10.
		2486.3 2	1.6 4	0.0	0^+	E2		
2541.36	6^+	1032.92 3	100	1508.466	4^+	E2		
2555.23	$3^{(-)}$	353.1 2	12 3	2202.208	3^-			
		392.5 2	<0.6	2162.738	2^+			
		409.1 2	3 2	2145.850	3^+			
		953.3 2	33 4	1601.833	2^+	E1(+M2)	−0.03 9	
		1922.23 3	100	632.988	2^+			
2565.06	5^+	325.7 2	46 4	2239.35	4^+	M1+E2	−0.08 4	B(M1)(W.u.)=1.0 5; B(E2)(W.u.)=5.E+1 +6−5
		419.2 2	0.7 1	2145.850	3^+			
		1056.6 2	100 8	1508.466	4^+	M1+E2	−0.21 3	B(M1)(W.u.)=0.06 4; B(E2)(W.u.)=2.0 12 δ: −0.18 3 in ε decay.
2601.58	5^-	1093.10 2	100	1508.466	4^+	E1		
2620.02	2^+	1018.2 2	0.9 3	1601.833	2^+	M1+E2	−0.13 10	B(M1)(W.u.)=0.0022 9; B(E2)(W.u.)=0.03 +5−3
		1987.0 2	100 8	632.988	2^+	M1+E2	+0.16 3	B(M1)(W.u.)=0.032 9; B(E2)(W.u.)=0.18 8 δ: +0.13 7 in (α,nγ).

$\gamma(^{108}Cd)$ (continued)

E_i(level)	J^π_i	E_γ	I_γ†	E_f	J^π_f	Mult.‡	δ	Comments
2620.02	2^+	2620.0 *2*	1.8 *4*	0.0	0^+	E2		B(E2)(W.u.)=0.032 *11*
2645.62	4^+	1043.9 *3*	3.3 *9*	1601.833	2^+			
		1137.14 *3*	100 *3*	1508.466	4^+	D+Q	−0.48 *3*	
		2012.6 *2*	12.0 *11*	632.988	2^+	E2		
2678.01	1^-	2677.95 *4*	100	0.0	0^+	E1		B(E1)(W.u.)=0.000565 *21*
2682.65	$1,2^+$	316.9	<0.5	2365.781	2^+			
		1080.8	2.9 *3*	1601.833	2^+			
		2049.62 *4*	100 *10*	632.988	2^+			
		2682.8	2.7 *3*	0.0	0^+			
2707.06	5^-	1198.60 *3*	100	1508.466	4^+	E1+M2	−0.050 *16*	
2738.72	4^+	536.6 *2*	0.9 *2*	2202.208	3^-			
		575.9 *2*	0.9 *1*	2162.738	2^+			
		1230.3 *2*	100 *9*	1508.466	4^+	M1+E2	+0.16 *8*	B(M1)(W.u.)=0.027 *8*; B(E2)(W.u.)=0.4 *4* δ: +0.22 *11* in ε decay.
		2105.6 *2*	14 *2*	632.988	2^+			
2755.07	$4^+,5^+$	1246.6	100	1508.466	4^+			
2762.83	3^+	1160.91 *6*	100 *5*	1601.833	2^+	D+Q		δ: 3.7 *4* or 0.51 *3*.
		2129.79 *11*	35.5 *22*	632.988	2^+			
2805.06	3	1296.57 *4*	100 *3*	1508.466	4^+	D+Q		δ: −4.5 (+12−9) or −1.09 *5*.
		2172.08 *15*	15.5 *13*	632.988	2^+	D+Q		δ: −3.3(+12−8) or −0.09 *8*.
2807.81	6^+	206.1 *2*	1.23 *23*	2601.58	5^-			
		242.75 *4*	100 *5*	2565.06	5^+	M1		
		266.4 *2*	7.7 *6*	2541.36	6^+			
		1299.4 *2*	38 *4*	1508.466	4^+	E2		
2810.11	4^-	608.1 *2*	18 *2*	2202.208	3^-			
		664.4 *2*	40 *3*	2145.850	3^+	E1+M2	+0.04 *3*	
		1301.63 *3*	100	1508.466	4^+			
2816.51	2^+	450.7 *2*	19 *3*	2365.781	2^+			
		614.4 *2*	38 *4*	2202.208	3^-			
		653.7 *2*	16 *3*	2162.738	2^+			
		670.7 *2*	45 *4*	2145.850	3^+			
		2183.4 *2*	100 *9*	632.988	2^+	M1+E2	+0.22 *8*	
		2816.5 *2*	57 *5*	0.0	0^+			
2820.18	$2^{(-)}$	618.0 *2*	≤6	2202.208	3^-			
		1218.3 *2*	26 *4*	1601.833	2^+	(E1(+M2))	+0.2 *2*	
		2187.2 *2*	100 *10*	632.988	2^+	(E1+M2)	+0.25 *6*	
2875.89	4^+	510.2 *2*	≤12	2365.781	2^+			
		729.9 *2*	15 *4*	2145.850	3^+			
		1367.4 *2*	79 *8*	1508.466	4^+	M1+E2	−0.5 *3*	δ: positive sign in table IV of 2002Ga35 is a misprint.
		2242.9 *2*	100 *9*	632.988	2^+			
2905.87	5^+	364.5 *2*	4 *1*	2541.36	6^+			
		666.5 *2*	38 *3*	2239.35	4^+			

$\gamma(^{108}Cd)$ (continued)

E_i(level)	J^{π}_i	E_{γ}	I_{γ} †	E_f	J^{π}_f	Mult.‡	δ	Comments
2905.87	5+	760.0 *2*	55 *5*	2145.850	3+	E2(+M3)	−0.012 *40*	δ: uncertainty=0.004 in table III of 2002Ga35 is a misprint.
		1397.4 *2*	100 *8*	1508.466	4+	M1+E2	−0.73 *14*	
2912.32	2,3+	2279.31 *5*	100	632.988	2+			
2936.13	0+,1+,2+	773.40 *12*	100	2162.738	2+			
		2303.1 *2*	83 *9*	632.988	2+			
2975.35	6−	268.39 *20*	34 *2*	2707.06	5−	D+Q		δ: δ=0.40 *13* or 4.2 *18*. I_{γ}: from 1993Th05 in (HI,xnγ). 1978Sa13 report 44 *5*.
		373.77 *5*	100 *5*	2601.58	5−	M1+E2	+0.56 *6*	B(E2)(W.u.)=2.8 *20*; B(M1)(W.u.)=0.0015 *10*
		433.7 *4*	9.7 *14*	2541.36	6+			I_{γ}: from 1993Th05 in (HI,xnγ). 1978Sa13 report 39 *3*. 1980Wi20 report 74 in ε decay, a value inconsistent with non observation by 1984Ro13.
2976.48	4+	331.0	<10	2645.62	4+			
		737.3	14 *6*	2239.35	4+			
		774.6	12 *5*	2202.208	3−			
		1374.7	44 *7*	1601.833	2+			
		1468.1	100 *11*	1508.466	4+	M1(+E2)	−0.17 *31*	δ: −0.36 *21* from (α,n). δ=−0.5 *2* in table III is a misprint (E-mail from A. Gade, November 30, 2002).
2993.11	2+	1391.4	<25	1601.833	2+			
		2360.08 *7*	100 *4*	632.988	2+	M1+E2	−0.91 *+20−25*	
		2993.4 *5*	17.3 *25*	0.0	0+			
2994.16	6+	754.7 *2*	60 *14*	2239.35	4+			
		1485.8 *2*	100	1508.466	4+	(E2)		Mult.: M1,E2 from conversion data, ΔJ rules out M1.
2998.09		315.3 *2*	100 *8*	2682.65	1,2+			
		320.1 *2*	44 *4*	2678.01	1−			
		796.1 *2*	19 *3*	2202.208	3−			
		835.3 *2*	24 *3*	2162.738	2+			
3005.65	1	3005.58 *13*	100	0.0	0+			
3028.30		662.5 *2*	4	2365.781	2+			
		882.5 *2*	12	2145.850	3+			
		1426.5 *2*	49 *15*	1601.833	2+			
		2395.3 *2*	100 *17*	632.988	2+			
3031.55	2+	829.5 *2*	21	2202.208	3−			
		868.9 *2*	5	2162.738	2+			
		1118.3 *2*	9	1913.420	0+			
		1522.9 *2*	25 *3*	1508.466	4+			
		2398.42 *8*	100 *4*	632.988	2+			
3048.54	1+	1446.6 *2*	19 *3*	1601.833	2+	M1+E2	+0.17 *3*	B(M1)(W.u.)=0.036 *7*; B(E2)(W.u.)=0.41 *16*
		2415.6 *2*	62 *5*	632.988	2+	M1+E2	+0.320 *13*	B(M1)(W.u.)=0.023 *3*; B(E2)(W.u.)=0.34 *5*
		3048.5 *2*	100 *8*	0.0	0+	M1		B(M1)(W.u.)=0.0206 *25*
3057.56	7−	350.52 *5*	62.3 *17*	2707.06	5−	E2		B(E2)(W.u.)=32 *25*
		455.87 *8*	100.0 *24*	2601.58	5−	E2		B(E2)(W.u.)=14 *11*
		516.15 *7*	60 *10*	2541.36	6+	E1		B(E1)(W.u.)=1.9×10^{-5} *15*

$^{108}_{48}Cd_{60}$-11

$\gamma(^{108}Cd)$ (continued)

E_i(level)	J^{π}_i	E_γ	I_γ†	E_f	J^{π}_f	Mult.‡	δ	Comments
3059.53		494.4 *2*	34 *14*	2565.06	5^+			
		1551.0 *2*	100 *17*	1508.466	4^+			
3059.89	$(4,5)^+$	252.0 *2*	13	2807.81	6^+			
		414.2 *2*	72	2645.62	4^+			
		518.7 *2*	100	2541.36	6^+			
		914.0 *2*	53	2145.850	3^+			
3077.49	(4^+)	314.5 *2*	9	2762.83	3^+			
		322.4 *2*	<3	2755.07	$4^+,5^+$			
		431.8 *2*	5	2645.62	4^+			
		838.2 *2*	18	2239.35	4^+			
		931.7 *2*	10	2145.850	3^+			
		1569.1 *2*	100	1508.466	4^+	M1+E2	−1.0 *+4−7*	δ: −0.5 *+3−4* in (α,nγ).
3081.79	3^+	2448.76 *8*	100	632.988	2^+	D+Q		δ: 4.4 *9* or 0.51 *5*.
3092.29	(3)	606.0 *2*	10	2486.31	2^+			
		853.0 *2*	22	2239.35	4^+			
		929.6 *2*	4	2162.738	2^+			
		1490.4 *2*	100	1601.833	2^+	D+Q	−0.30 *11*	
		2459.2 *2*	26	632.988	2^+			
3110.64	(8^+)	116.4 *10*		2994.16	6^+			
		302.79 *25*	7.6 *12*	2807.81	6^+			
		569.31 *10*	100 *6*	2541.36	6^+	E2		B(E2)(W.u.)=1.0 *4*
3139.00		328.8 *2*	100	2810.11	4^-			
		583.9 *2*	<4	2555.23	$3^{(-)}$			
		936.8 *2*	40	2202.208	3^-			
		993.2 *2*	17	2145.850	3^+			
		1630.4 *2*	35	1508.466	4^+			
3171.15	$2,3^+$	805.5	5 *2*	2365.781	2^+			
		2538.2	100 *9*	632.988	2^+			
3174.17		1028.3 *2*	15	2145.850	3^+			
		1665.7 *2*	100	1508.466	4^+			
3181.69		2548.67 *9*	100	632.988	2^+			
3189.72	$(6^+,7^+,8^+)$	648.5 *2*	100	2541.36	6^+			
		950.2 *2*	<12	2239.35	4^+			
3194.81	2^+	2561.74 *12*	100 *7*	632.988	2^+			
		3195.3 *4*	44 *6*	0.0	0^+			
3203.6		2570.6	100	632.988	2^+			
3221.67	$(3,4)^+$	466.7 *2*	7	2755.07	$4^+,5^+$			
		483.1 *2*	7	2738.72	4^+			
		1075.9 *2*	14	2145.850	3^+			
		1713.4 *2*	100	1508.466	4^+			
		2588.8 *2*	29	632.988	2^+			
3223.80	8^-	166.25 *5*	100.0 *10*	3057.56	7^-	M1+E2	+0.185 *15*	B(E2)(W.u.)=7.3 *24*; B(M1)(W.u.)=0.0070 *20*

$^{108}_{48}Cd_{60}$-12

γ(^{108}Cd) (continued)

E_i(level)	J^π_i	E_γ	I_γ†	E_f	J^π_f	Mult.‡	δ	Comments
3223.80	8^-	248.49 *8*	35.6 *19*	2975.35	6^-			
3227.88	(2^+)	1065.0 *2*	30	2162.738	2^+			
		2595.0 *2*	100	632.988	2^+	M1+E2	+0.14 *10*	
3248.27		602.6 *2*	12	2645.62	4^+			
		1008.9 *2*	25	2239.35	4^+			
		1739.8 *1*	100	1508.466	4^+			
3248.71	7^-	191.5	30 *3*	3057.56	7^-			
		273.6	5 *1*	2975.35	6^-			
		707.9	100 *8*	2541.36	6^+	E1(+M2)	−0.01 *4*	
3259.7		1057.5	100	2202.208	3^-			
		1113.8	34	2145.850	3^+			
3264.92	$1,2^+,3$	2631.90 *11*	100	632.988	2^+			
3267.68		1547.0 *2*	40 *5*	1720.646	0^+			
		1665.84 *11*	100 *6*	1601.833	2^+			
3289.80		582.8 *2*	23	2707.06	5^-			
		734.6 *2*	100	2555.23	$3^{(-)}$			
		1087.6 *2*	81	2202.208	3^-			
		1781.2 *2*	93	1508.466	4^+			
3292.63	1	3292.5 *2*	100	0.0	0^+			
3294.89	$2,3^+$	1092.7 *2*	11	2202.208	3^-			
		1132.2 *2*	10	2162.738	2^+			
		2661.8 *2*	100	632.988	2^+	M1+E2	+4.3 *+9−6*	δ: or +0.002 *4*.
3298.52		323.1 *2*	100	2975.35	6^-			
		697.0 *2*	59	2601.58	5^-			
3316.44	(3^+)	1714.5 *2*	13 *6*	1601.833	2^+	M1+E2	+3.7 *+29−12*	
		2683.5 *2*	100 *14*	632.988	2^+	M1+E2	+8.7 *+41−21*	δ: or −0.10 *4*.
3321.93		327.9 *2*	3.5	2994.16	6^+			
		566.8 *2*	21	2755.07	$4^+,5^+$			
		780.6 *2*	76	2541.36	6^+			
		1082.5 *2*	24	2239.35	4^+			
		1813.4 *2*	100	1508.466	4^+			
3326.02	$3,(2^+)$	2693.0 *2*	100	632.988	2^+			
3343.99	1	350.9 *2*	1.3	2993.11	2^+			
		723.9 *2*	1.3	2620.02	2^+			
		978.1 *2*	4	2365.781	2^+			
		1181.2 *2*	6	2162.738	2^+			
		1430.7 *2*	4	1913.420	0^+			
		1623.4 *2*	12	1720.646	0^+			
		1742.2 *2*	100	1601.833	2^+	D+Q	+0.065 *26*	
		2710.9 *2*	<7	632.988	2^+			
3353.35		614.6 *2*	100	2738.72	4^+			
		1207.6 *2*	53	2145.850	3^+			

$^{108}_{48}Cd_{60}$-13

$\gamma(^{108}Cd)$ (continued)

E_i(level)	J_i^π	E_γ	I_γ†	E_f	J_f^π	Mult.‡	δ	Comments
3353.35		1751.5 *2*	38	1601.833	2^+			
		1844.8 *2*	44	1508.466	4^+			
3367.51	(6^+)	826.2 *2*	100 *10*	2541.36	6^+			
		1858.9 *2*	55 *6*	1508.466	4^+			
3384.91	2^+,3	579.8 *2*	7	2805.06	3			
		898.4 *2*	10	2486.31	2^+			
		1222.2 *2*	80	2162.738	2^+			
		1239.2 *2*	47	2145.850	3^+			
		1783.0 *2*	100	1601.833	2^+			
		2752.0 *2*	99.8	632.988	2^+			
3389.43	(3)	2756.4 *2*	100	632.988	2^+	D+Q	+0.04 *5*	
3400.54		845.4 *2*	95	2555.23	$3^{(-)}$			
		1198.4 *2*	100	2202.208	3^-			
		1891.9 *2*	57	1508.466	4^+			
3407.23		1041.4 *2*	32	2365.781	2^+			
		1244.5 *2*	43	2162.738	2^+			
		1805.4 *2*	100	1601.833	2^+			
3407.92		669.2 *2*	11	2738.72	4^+			
		762.2 *2*	15	2645.62	4^+			
		1262.1 *2*	<13	2145.850	3^+			
		1899.5 *2*	100	1508.466	4^+			
3413.14	(6^+)	223.4 *2*	4	3189.72	$(6^+,7^+,8^+)$			
		871.8 *2*	100	2541.36	6^+	M1+E2	+0.25 *12*	
3428.00		452.6 *2*	29	2975.35	6^-			
		826.4 *2*	9	2601.58	5^-			
		886.7 *2*	100	2541.36	6^+			
3433.07		677.9 *2*	32	2755.07	$4^+,5^+$			
		891.8 *2*	100	2541.36	6^+			
3435.2		1233.0	100	2202.208	3^-			
3437.00		698.4 *2*	19	2738.72	4^+			
		1928.4 *2*	100	1508.466	4^+			
3450.05	$2^+,3^+$	644.9 *2*	11	2805.06	3			
		963.8 *2*	27	2486.31	2^+			
		1084.3 *2*	38	2365.781	2^+			
		1247.8 *2*	5.5	2202.208	3^-			
		1287.3 *2*	11	2162.738	2^+			
		1848.2 *2*	100	1601.833	2^+			
		2817.1 *2*	80	632.988	2^+			
3454.12	1^+	282.9 *2*	0.2	3171.15	$2,3^+$			
		461.0 *2*	0.45	2993.11	2^+			
		771.4 *2*	12	2682.65	$1,2^+$			
		1079.5 *2*	7 *5*	2374.57	(0^+)	M1		B(M1)(W.u.)=0.031 *23*

$^{108}_{48}Cd_{60}$-14

$\gamma(^{108}Cd)$ (continued)

E_i(level)	J^π_i	E_γ	I_γ†	E_f	J^π_f	Mult.‡	δ	Comments
3454.12	1^+	1291.3 *2*	7	2162.738	2^+			
		1540.7 *2*	3.3	1913.420	0^+	M1		B(M1)(W.u.)=0.0050 *7*
		1733.6 *2*	4.4	1720.646	0^+	M1		B(M1)(W.u.)=0.0047 *7*
		1852.3 *2*	30 *9*	1601.833	2^+	M1(+E2)	−0.005 *20*	
		2821.1 *2*	8	632.988	2^+	E2(+M1)	≥+11.7	B(M1)(W.u.)<1.6×10^{-5}; B(E2)(W.u.)>0.18
		3454.1 *2*	100 *12*	0.0	0^+	M1		B(M1)(W.u.)=0.0135 *24*
3459.83	5,6	484.4 *2*	17	2975.35	6^-			
		752.8 *2*	20	2740	$(0^+,1^+,2^+)$			
		858.3 *2*	100	2601.58	5^-			
3460.60		652.8 *2*	46	2807.81	6^+			
		895.4 *2*	16	2565.06	5^+			
		919.2 *2*	28	2541.36	6^+			
		1221.3 *2*	39	2239.35	4^+			
		1952.2 *2*	100	1508.466	4^+			
3470.01	$2^{(+)}$	1104.3 *2*	13	2365.781	2^+			
		1307.3 *2*	64	2162.738	2^+			
		1324.1 *2*	38	2145.850	3^+			
		1868.1 *2*	100	1601.833	2^+	M1+E2	−0.4 *3*	
3474.57	8^-	225.87 *7*	37 *4*	3248.71	7^-	D+Q	−0.14 *11*	
		416.96 *10*	100 *5*	3057.56	7^-	D+Q	−0.31 *16*	
		498.5 *3*	25 *11*	2976.48	4^+			
3482.21	2	1880.24 *14*	65 *4*	1601.833	2^+			
		2849.36 *17*	100 *6*	632.988	2^+			
3485.20	9^-	261.49 *15*	100	3223.80	8^-	D+Q	0.06 *3*	
		427.64 *5*	77 *3*	3057.56	7^-	E2		B(E2)(W.u.)=12.0 *8*
3512.27		1366.3 *2*	54.5	2145.850	3^+			
		2003.9 *2*	100	1508.466	4^+			
3525.42		770.4 *2*	19	2755.07	$4^+,5^+$			
		786.6 *2*	16	2738.72	4^+			
		984.1 *2*	100	2541.36	6^+			
		1286.1 *2*	22	2239.35	4^+			
		2016.9 *2*	<16	1508.466	4^+			
3535.83?	$(3,4)^+$	2902.8 *2*	100	632.988	2^+			
3540.26?		1938.2 *3*	18 *4*	1601.833	2^+			
		2031.82 *14*	100 *6*	1508.466	4^+			
3554.87?	(3^+)	2921.84 *15*	100	632.988	2^+			
3559.61?	$(0^+,1^+)$	2926.58 *18*	100	632.988	2^+			
3566.43		2933.4 *2*	100	632.988	2^+			
3571.84	2^+	889.1 *2*	18	2682.65	$1,2^+$			
		951.9 *2*	10	2620.02	2^+			
		1085.4 *2*	23	2486.31	2^+			

$^{108}_{48}Cd_{60}$-15

γ(^{108}Cd) (continued)

E$_i$(level)	J$^\pi_i$	E$_\gamma$	I$_\gamma$†	E$_f$	J$^\pi_f$	Mult.‡	δ
3571.84	2$^+$	1369.6 *2*	4	2202.208	3$^-$		
		1409.0 *2*	12	2162.738	2$^+$		
		1426.0 *2*	13	2145.850	3$^+$		
		1658.4 *2*	11	1913.420	0$^+$		
		2939.0 *2*	100	632.988	2$^+$	M1+E2	+0.40 *7*
		3571.8 *2*	47	0.0	0$^+$	E2	
3576.26		930.6 *2*	36	2645.62	4$^+$		
		1021.0 *2*	100	2555.23	3$^{(-)}$		
		1374.1 *2*	18	2202.208	3$^-$		
3605.62		1403.4 *2*	100	2202.208	3$^-$		
3611.66		1409.5 *2*	<13	2202.208	3$^-$		
		1465.7 *2*	<19	2145.850	3$^+$		
		2103.2 *2*	100	1508.466	4$^+$		
3633.73		3000.7 *2*	100	632.988	2$^+$		
3642.12		666.7 *2*	56	2975.35	6$^-$		
		934.9 *2*	100	2740	(0$^+$,1$^+$,2$^+$)		
		1040.6 *2*	<52	2601.58	5$^-$		
		1100.9 *2*	40	2541.36	6$^+$		
3643.22		1403.9 *2*	87	2239.35	4$^+$		
		2134.7 *2*	100	1508.466	4$^+$		
3656.27		680.9 *2*	33	2975.35	6$^-$		
		949.2 *2*	100	2740	(0$^+$,1$^+$,2$^+$)		
		1054.7 *2*	17	2601.58	5$^-$		
3656.48	(8$^+$)	432.6 *2*	19	3223.80	8$^-$		
		1115.2 *2*	100	2541.36	6$^+$		
3667.07	1	3667.0 *2*	100	0.0	0$^+$		
3674.74		1119.5 *2*	40	2555.23	3$^{(-)}$		
		1472.4 *2*	41	2202.208	3$^-$		
		1528.9 *2*	100	2145.850	3$^+$		
		2073.0 *2*	64	1601.833	2$^+$		
3683.23	8$^+$	573.1 *10*	9.0 *6*	3110.64	(8$^+$)	E2	
		1141.85 *10*	100 *5*	2541.36	6$^+$	E2	
3683.36		1118.3 *2*	100	2565.06	5$^+$		
3718.48		979.8 *2*	16	2738.72	4$^+$		
		1072.8 *2*	<34	2645.62	4$^+$		
		1572.6 *2*	44	2145.850	3$^+$		
		2210.0 *2*	100	1508.466	4$^+$		
3724.54	2$^+$	692.7 *2*	1	3031.55	2$^+$		
		919.4 *2*	6	2805.06	3		
		1104.5 *2*	33	2620.02	2$^+$		
		1238.2 *2*	6.5	2486.31	2$^+$		
		1358.8 *2*	1.5	2365.781	2$^+$		

$^{108}_{48}$Cd$_{60}$-16

$\gamma(^{108}Cd)$ (continued)

E_i(level)	J^π_i	E_γ	I_γ†	E_f	J^π_f	Mult.‡	δ	Comments
3724.54	2^+	1522.3 2	2	2202.208	3^-			
		1561.7 2	8	2162.738	2^+			
		1578.7 2	3	2145.850	3^+			
		2003.8 2	3	1720.646	0^+			
		2123.0 2	4	1601.833	2^+			
		2216.0 2	36	1508.466	4^+			
		3091.7 2	100	632.988	2^+	M1+E2	−0.28 5	
		3724.5 2	39	0.0	0^+			
3726.7		2218.2	100	1508.466	4^+			
3732.0		2223.5	100	1508.466	4^+			
3737.50	9^-	514.0 2	100	3223.80	8^-			
		679.91 5	80 13	3057.56	7^-	E2		B(E2)(W.u.)=9.1 20
3740.41		1001.6 2	<24	2738.72	4^+			
		2232.0 2	100	1508.466	4^+			
3770.4	(7^+)	795.0	51	2975.35	6^-			
		1229.0	100	2541.36	6^+	M1+E2	−0.17 13	
3779.8		1072.6	<40	2740	$(0^+,1^+,2^+)$			
		2271.4	100	1508.466	4^+			
3787.1		2278.6	100	1508.466	4^+			
3788.9	2^+	1026.0	14	2762.83	3^+			
		1423.0	23	2365.781	2^+			
		1626.1	<10	2162.738	2^+			
		1643.1	15	2145.850	3^+			
		2187.1	100	1601.833	2^+	M1(+E2)	+0.06 8	
		3155.9	90	632.988	2^+	M1+E2	−0.33 11	
3811.7		2303.2	100	1508.466	4^+			
3812.0	$1^+,2^+$	2211.1 5	12.7 18	1601.833	2^+			
		3178.4 4	39 6	632.988	2^+			
		3811.8 5	100 7	0.0	0^+			
3814.56	1^+	521.9 2	0.2	3292.63	1			
		782.8 2	0.3	3031.55	2^+			
		816.5 2	0.2	2998.09				
		1131.8 2	0.5	2682.65	$1,2^+$			
		1194.6 2	0.7	2620.02	2^+			
		1651.7 2	1.6	2162.738	2^+			
		1901.1 2	4.4	1913.420	0^+	M1		B(M1)(W.u.)=0.0064 7
		2093.9 2	2.8	1720.646	0^+	M1		B(M1)(W.u.)=0.0031 3
		3181.8 2	40	632.988	2^+	M1+E2	+0.107 17	B(M1)(W.u.)=0.0123 12; B(E2)(W.u.)=0.012 4
		3814.6 2	100	0.0	0^+	M1		B(M1)(W.u.)=0.0180 18
3816.30	6^+	448.7 2	57 6	3367.51	(6^+)			
		839.8 2	12	2976.48	4^+			
		910.5 2	19	2905.87	5^+			

$^{108}_{48}Cd_{60}$-17

$\gamma(^{108}Cd)$ (continued)

E_i(level)	J^π_i	E_γ	I_γ†	E_f	J^π_f	Mult.‡	δ	Comments
3816.30	6+	940.4 2	17	2875.89	4+			
		1008.5 2	78 8	2807.81	6+			
		1077.6 2	16	2738.72	4+			
		1214.7 2	27	2601.58	5−			
		1251.4 2	60 6	2565.06	5+			
		1275.1 2	93 9	2541.36	6+			
		2307.5 2	100 10	1508.466	4+			
3827.87	1+	373.7 2	1	3454.12	1+			
		377.9 2	0.3	3450.05	2+,3+			
		535.2 2	1	3292.63	1			
		656.8 2	4	3171.15	2,3+			
		746.0 2	0.5	3081.79	3+			
		829.8 2	1	2998.09				
		1007.7 2	1	2820.18	2(−)			
		1145.2 2	2	2682.65	1,2+			
		1149.8 2	0.4	2678.01	1−			
		1207.8 2	1	2620.02	2+			
		1341.4 2	4	2486.31	2+			
		1453.2 2	1	2374.57	(0+)	M1		B(M1)(W.u.)=0.00123 +24−29
		1461.9 2	4	2365.781	2+			
		1665.1 2	4	2162.738	2+			
		1914.5 2	18	1913.420	0+	M1		B(M1)(W.u.)=0.0097 +19−23
		2107.3 2	1.5	1720.646	0+	M1		B(M1)(W.u.)=0.00061 +12−14
		2226.2 2	72	1601.833	2+	M1+E2	−0.060 17	B(M1)(W.u.)=0.02462 5; B(E2)(W.u.)=0.015 9
		3194.9 2	7	632.988	2+			
		3827.9 2	100	0.0	0+	M1		B(M1)(W.u.)=0.0068 +13−16
3861.05	8+	177.6 10	13.8 23	3683.23	8+	D		
		750.6 10	100 23	3110.64	(8+)	D		
		866.7 10	92 8	2994.16	6+	Q		
		1319.7 10	<69	2541.36	6+			
3872.4	10−	648.6 3	100	3223.80	8−			
3875.78		1730.0 2	<23	2145.850	3+			
		2367.2 2	100	1508.466	4+			
3881.63		1280.0 2	43	2601.58	5−			
		1340.3 2	100	2541.36	6+			
3890.71		915.4 2	62	2975.35	6−			
		1349.3 2	100	2541.36	6+			
3904.06		1258.4 2	7	2645.62	4+			
		2395.6 2	100	1508.466	4+			
3946.11	(2+)	1263.3 2	8.5	2682.65	1,2+			
		1580.2 2	19	2365.781	2+			
		1783.2 2	21	2162.738	2+			

$^{108}_{48}Cd_{60}$-18

$\gamma(^{108}Cd)$ (continued)

E_i(level)	J_i^π	E_γ	I_γ†	E_f	J_f^π	Mult.‡	δ
3946.11	(2^+)	2225.4 *2*	60	1720.646	0^+		
		2344.1 *2*	26	1601.833	2^+		
		3313.7 *2*	100	632.988	2^+	M1+E2	+0.23 *16*
3968.30		2459.8 *2*	100	1508.466	4^+		
3968.67		1822.8 *2*	100	2145.850	3^+		
3969.03		1262.0 *2*	24	2740	$(0^+,1^+,2^+)$		
		1367.4 *2*	100	2601.58	5^-		
3984.56		1179.6 *2*	50	2805.06	3		
		1821.7 *2*	89	2162.738	2^+		
		3351.5 *2*	100	632.988	2^+		
4008.8		1443.8	100	2565.06	5^+		
		1467.4	<8.4	2541.36	6^+		
4011.4		1865.5	<34	2145.850	3^+		
		2503.0	100	1508.466	4^+		
4011.89	2^+,(3)	983.7 *2*	2	3028.30			
		1006.2 *2*	6	3005.65	1		
		1206.7 *2*	6.6	2805.06	3		
		1329.1 *2*	10	2682.65	$1,2^+$		
		1646.0 *2*	19	2365.781	2^+		
		1809.6 *2*	33	2202.208	3^-		
		2410.2 *2*	15	1601.833	2^+		
		3379.0 *2*	100	632.988	2^+	D+Q	+0.10 *5*
4016.6		542.0	100	3474.57	8^-		
4028.73	2^+	936.5 *2*	3	3092.29	(3)		
		946.9 *2*	2	3081.79	3^+		
		1035.5 *2*	7	2993.11	2^+		
		1223.5 *2*	12	2805.06	3		
		1346.0 *2*	38	2682.65	$1,2^+$		
		1408.7 *2*	94	2620.02	2^+		
		1542.5 *2*	9	2486.31	2^+		
		1654.1 *2*	7	2374.57	(0^+)		
		1662.8 *2*	4	2365.781	2^+		
		1826.5 *2*	28	2202.208	3^-		
		1866.0 *2*	99	2162.738	2^+		
		1882.8 *2*	8	2145.850	3^+		
		2308.2 *2*	40	1720.646	0^+		
		2426.9 *2*	8	1601.833	2^+		
		2520.3 *2*	28	1508.466	4^+		
		3395.8 *2*	100	632.988	2^+	M1+E2	−0.55 *16*
4030.98		1323.9 *2*	37	2740	$(0^+,1^+,2^+)$		
		1429.3 *2*	15	2601.58	5^-		
		1466.0 *2*	34	2565.06	5^+		

$^{108}_{48}Cd_{60}$-19

$\gamma(^{108}Cd)$ (continued)

E_i(level)	J^π_i	E_γ	I_γ†	E_f	J^π_f	Mult.‡	Comments
4030.98		1489.6 *2*	100	2541.36	6^+		
4043.83	$4,5^+$	676.3 *2*	36.6	3367.51	(6^+)		
		1167.9 *2*	31	2875.89	4^+		
		1236.0 *2*	35	2807.81	6^+		
		1305.0 *2*	38.5	2738.72	4^+		
		1336.8 *2*	71.6	2707.06	5^-		
		1398.1 *2*	33.6	2645.62	4^+		
		1442.3 *2*	28.6	2601.58	5^-		
		1478.8 *2*	36	2565.06	5^+		
		1502.6 *2*	100	2541.36	6^+		
4082.90		2574.4 *2*	100	1508.466	4^+		
4083.63		1438.0 *2*	100	2645.62	4^+		
4096.20		2587.7 *2*	100	1508.466	4^+		
4109.26		1946.6 *2*	44	2162.738	2^+		
		2507.3 *2*	100	1601.833	2^+		
4152.65	10^+	280.3 *10*	9.3 *6*	3872.4	10^-	E1	B(E1)(W.u.)=1.11×10^{-5} *11*
		291.60 *20*	34 *3*	3861.05	8^+	E2	B(E2)(W.u.)=26 *3*
		414.97 *20*	100 *6*	3737.50	9^-	D	
		469.42 *5*	99 *4*	3683.23	8^+	E2	B(E2)(W.u.)=7.1 *6*
		667.49 *10*	78 *5*	3485.20	9^-	D	
		1043.2 *10*	1.2 *6*	3110.64	(8^+)	E2	B(E2)(W.u.)=0.0016 *8*
4160.67		1794.9 *2*	51	2365.781	2^+		
		1997.8 *2*	76	2162.738	2^+		
		3527.7 *2*	100	632.988	2^+		
4179.27		1119.6 *2*	32	3059.53			
		1184.9 *2*	44	2994.16	6^+		
		1202.8 *2*	18	2975.35	6^-		
		1371.5 *2*	28	2807.81	6^+		
		1472.2 *2*	36	2707.06	5^-		
		1533.7 *2*	40	2645.62	4^+		
		1614.2 *2*	96	2565.06	5^+		
		1637.9 *2*	100	2541.36	6^+		
		1940.0 *2*	60	2239.35	4^+		
		2670.9 *2*	99	1508.466	4^+		
4188.20	11^-	703.00 *5*	100	3485.20	9^-	E2	B(E2)(W.u.)=30.0 *12*
4196.4	10^-	721.7 *10*	100	3474.57	8^-	E2	B(E2)(W.u.)=17 *5*
4203.60	(1^+)	1525.6 *2*	4	2678.01	1^-		
		1717.3 *2*	16	2486.31	2^+		
		1829.0 *2*	3.6	2374.57	(0^+)		
		1837.8 *2*	9	2365.781	2^+		
		2040.6 *2*	6.6	2162.738	2^+		
		2290.2 *2*	16	1913.420	0^+		

$^{108}_{48}Cd_{60}$-20

γ(^{108}Cd) (continued)

E_i(level)	J^π_i	E_γ	I_γ†	E_f	J^π_f	Mult.‡	δ
4203.60	(1^+)	2482.9 *2*	14	1720.646	0^+		
		2601.8 *2*	100	1601.833	2^+	M1+E2	+0.11 *5*
		3570.7 *2*	43.6	632.988	2^+	M1+E2	−0.20 *7*
		4203.5 *2*	44	0.0	0^+	(M1)	
4209.81	2^+	917.2 *2*	5	3292.63	1		
		1446.7 *2*	13	2762.83	3^+		
		1723.4 *2*	26	2486.31	2^+		
		2063.9 *2*	4	2145.850	3^+		
		2608.0 *2*	100	1601.833	2^+	M1+E2	−0.21 *11*
		2701.4 *2*	<9	1508.466	4^+		
		3576.9 *2*	49	632.988	2^+	M1+E2	−3.0 *+8−15*
		4209.8 *2*	25	0.0	0^+		
4224.17		1230.0 *2*	63	2994.16	6^+		
		1682.8 *2*	100	2541.36	6^+		
4238.90	1^+	1752.5 *2*	18	2486.31	2^+		
		1864.2 *2*	23	2374.57	(0^+)		
		1873.0 *2*	27	2365.781	2^+		
		2076.0 *2*	22	2162.738	2^+		
		2325.6 *2*	14	1913.420	0^+		
		2518.3 *2*	36	1720.646	0^+		
		2637.2 *2*	46	1601.833	2^+	M1+E2	+0.39 *13*
		3605.9 *2*	49	632.988	2^+	M1+E2	−0.14 *8*
		4238.8 *2*	100	0.0	0^+	M1	
4240.01		1334.1 *2*	51	2905.87	5^+		
		1432.1 *2*	100	2807.81	6^+		
		1501.2 *2*	2.4	2738.72	4^+		
		1594.5 *2*	5	2645.62	4^+		
		1638.4 *2*	85	2601.58	5^-		
		1674.9 *2*	61	2565.06	5^+		
		1698.8 *2*	20	2541.36	6^+		
4251.39		1257.3 *2*	100 *10*	2994.16	6^+		
		1443.5 *2*	82 *8*	2807.81	6^+		
4278.7		2132.7	36	2145.850	3^+		
		2676.8	100	1601.833	2^+		
		3645.7	96	632.988	2^+		
4282.4		1741.0	100	2541.36	6^+		
4293.92		926.4 *2*	32	3367.51	(6^+)		
		1317.3 *2*	19	2976.48	4^+		
		1388.0 *2*	96	2905.87	5^+		
		1418.0 *2*	26	2875.89	4^+		
		1555.3 *2*	5	2738.72	4^+		
		1692.3 *2*	100	2601.58	5^-		

$\gamma(^{108}Cd)$ (continued)

E_i(level)	J^π_i	E_γ	I_γ†	E_f	J^π_f	Mult.‡	δ
4293.92		1728.9 *2*	74	2565.06	5^+		
		1752.6 *2*	<15	2541.36	6^+		
4315.76		948.2 *2*	60	3367.51	(6^+)		
		1750.8 *2*	50	2565.06	5^+		
		1774.3 *2*	100	2541.36	6^+		
4323.48	$(1^+,3^+)$	1957.7 *2*	7	2365.781	2^+		
		2160.6 *2*	23	2162.738	2^+		
		2721.7 *2*	30	1601.833	2^+		
		3690.4	100	632.988	2^+		
4334.35		1242.0 *2*	4	3092.29	(3)		
		1571.2 *2*	10	2762.83	3^+		
		1714.3 *2*	25	2620.02	2^+		
		1848.0# *2*	5	2486.31	2^+		
		1968.6 *2*	16	2365.781	2^+		
		2132.1 *2*	33	2202.208	3^-		
		2188.6 *2*	7	2145.850	3^+		
		3701.5 *2*	100	632.988	2^+		
4345.36	1^+	1667.2 *2*	5	2678.01	1^-		
		1859.1 *2*	14	2486.31	2^+		
		1979.4 *2*	26	2365.781	2^+		
		2182.6 *2*	25	2162.738	2^+		
		2624.7 *2*	7	1720.646	0^+		
		2743.6 *2*	36	1601.833	2^+	M1+E2	−0.40 *12*
		3712.4 *2*	100	632.988	2^+	M1+E2	−0.55 *5*
4351.97	1	2189.1 *2*	14	2162.738	2^+		
		2631.4 *2*	9	1720.646	0^+		
		2750.0 *2*	19	1601.833	2^+		
		3719.0 *2*	100	632.988	2^+	D+Q	−0.042 *35*
4394.75	1^+	2028.9 *2*	6	2365.781	2^+		
		2231.9 *2*	43	2162.738	2^+		
		2481.4 *2*	13	1913.420	0^+		
		2674.1 *2*	50	1720.646	0^+		
		3761.8	100	632.988	2^+	M1+E2	+0.31 *8*
4400.64	$(3^+,2^+)$	1661.8 *2*	17	2738.72	4^+		
		2237.8 *2*	50	2162.738	2^+		
		2892.3 *2*	33	1508.466	4^+		
		3767.6 *2*	100	632.988	2^+		
4414.01	$(1^+,3^+)$	2251.2 *2*	13	2162.738	2^+		
		3781.0 *2*	100	632.988	2^+		
4468.56		1660.8 *2*	74	2807.81	6^+		
		1903.4 *2*	100	2565.06	5^+		

$^{108}_{48}Cd_{60}$-22

$\gamma(^{108}Cd)$ (continued)

E_i(level)	J^π_i	E_γ	I_γ†	E_f	J^π_f	Mult.‡	δ	Comments
4468.56		1927.2 *2*	54	2541.36	6^+			
4471.04	1	1788.4 *2*	14	2682.65	$1,2^+$			
		1793.0 *2*	3	2678.01	1^-			
		2096.4 *2*	4	2374.57	(0^+)			
		2105.2 *2*	12	2365.781	2^+			
		2557.5 *2*	13	1913.420	0^+			
		2750.5 *2*	15	1720.646	0^+			
		2869.3 *2*	25	1601.833	2^+	D+Q	+0.09 *7*	
		3837.9 *2*	100	632.988	2^+	D(+Q)	+0.022 *25*	
4481.33	$(3^+,1^+)$	2115.5 *2*	26	2365.781	2^+			
		2318.5 *2*	9	2162.738	2^+			
		2879.5 *2*	55	1601.833	2^+			
		3848.3 *2*	100	632.988	2^+			
4512.66	6^+	1145.2 *2*	7	3367.51	(6^+)			
		1704.8 *2*	9.5	2807.81	6^+			
		1805.5 *2*	84	2707.06	5^-			
		1911.1 *2*	34	2601.58	5^-			
		1947.5 *2*	100	2565.06	5^+			
		1971.4 *2*	26	2541.36	6^+			
4525.39		1923.5 *2*	76 *8*	2601.58	5^-			
		1960.3 *2*	100	2565.06	5^+			
		1984.3 *2*	60 *10*	2541.36	6^+			
4529.14		1623.2 *2*	26	2905.87	5^+			
		1927.5 *2*	92	2601.58	5^-			
		1964.1 *2*	18	2565.06	5^+			
		1987.8 *2*	100	2541.36	6^+			
4568.7	11^-	696.5 *10*	25 *3*	3872.4	10^-	M1,E2		B(E2)(W.u.)=6.6 *12*; B(M1)(W.u.)=0.0038 *7*
		831.0 *10*	100 *7*	3737.50	9^-	E2		B(E2)(W.u.)=23 *4*
4584.66	1^+	1292.0 *2*	3	3292.63	1			
		1363.7 *2*	16	3221.67	$(3,4)^+$			
		1906.3 *2*	11	2678.01	1^-			
		2098.2 *2*	83	2486.31	2^+			
		2210.0 *2*	22	2374.57	(0^+)			
		2671.2 *2*	17	1913.420	0^+			
		2982.8 *2*	31	1601.833	2^+	M1(+E2)	+0.09 *9*	
		3951.4 *2*	100	632.988	2^+	M1+E2	−0.73 *7*	
4618.5	(10)	1507.8 *10*	100	3110.64	(8^+)			
4640.39	$1^+,(2)$	2154.0 *2*	14	2486.31	2^+			
		2477.6 *2*	44	2162.738	2^+			
		3038.5 *2*	35	1601.833	2^+	D+Q	−4 *+3−18*	δ: if J(4640.4 level)=1.
		4007.4 *2*	100	632.988	2^+	D+Q	−0.49 *6*	δ: if J(4640.4 level)=1.
4649.47		1886.4 *2*	30	2762.83	3^+			

$^{108}_{48}Cd_{60}$-23

$\gamma(^{108}$Cd) (continued)

E_i(level)	J^π_i	E_γ	I_γ[†]	E_f	J^π_f	Mult.[‡]	δ	Comments
4649.47		2283.6 *2*	100	2365.781	2^+			
		2447.4 *2*	37	2202.208	3^-			
		2503.7 *2*	36	2145.850	3^+			
		4016.4 *2*	70	632.988	2^+			
4656.38	$(1^+,3^+)$	1650.7 *2*	8.5	3005.65	1			
		1973.7 *2*	12	2682.65	$1,2^+$			
		2290.6 *2*	22	2365.781	2^+			
		2493.6 *2*	9	2162.738	2^+			
		2743.2[#] *2*	10	1913.420	0^+			
		4023.3	100	632.988	2^+			
4663.36		1346.9 *2*	11	3316.44	(3^+)			
		2461.2 *2*	100	2202.208	3^-			
		2517.4 *2*	23.5	2145.850	3^+			
4663.94	(2^+)	2298.1 *2*	16	2365.781	2^+			
		4030.9 *2*	100	632.988	2^+	M1+E2	−1.0 *+4−6*	
4698.32		2078.3 *2*	28	2620.02	2^+			
		2332.4 *2*	14	2365.781	2^+			
		2535.6 *2*	100	2162.738	2^+			
		2785.1 *2*	7	1913.420	0^+			
		2977.7 *2*	76	1720.646	0^+			
		4065.0 *2*	19	632.988	2^+			
4708.74	12^+	556.08 *7*	100	4152.65	10^+	E2		B(E2)(W.u.)=34.5 *11*
4755.58		1947.9 *2*	14	2807.81	6^+			
		2190.4 *2*	100	2565.06	5^+			
		2214.2 *2*	34	2541.36	6^+			
		3247.0 *2*	17	1508.466	4^+			
4755.9	10^+	1072.6 *10*	100	3683.23	8^+	Q		
4774.89		2400.5 *2*	100	2374.57	(0^+)			
		2409.0 *2*	68	2365.781	2^+			
		2611.9 *2*	37	2162.738	2^+			
		3173.1 *2*	40	1601.833	2^+			
		4141.8 *2*	13	632.988	2^+			
4811.52	$1^+,2,3^+$	2445.7 *2*	100	2365.781	2^+			
		2648.7 *2*	33	2162.738	2^+			
		4178.5 *2*	78	632.988	2^+			
4811.80		2004.0 *2*	100	2807.81	6^+			
		2246.7 *2*	93	2565.06	5^+			
4826.0	12^-	953.64 *25*	100	3872.4	10^-	E2		B(E2)(W.u.)=21.2 *14*
4849.12		2041.3 *2*	89	2807.81	6^+			
		2247.5 *2*	100	2601.58	5^-			
4858.76		1827.2 *2*	14	3031.55	2^+			

$^{108}_{48}Cd_{60}$-25

γ(^{108}Cd) (continued)

E_i(level)	J^π_i	E_γ	I_γ[†]	E_f	J^π_f	Mult.[‡]	Comments
4858.76		2492.9 *2*	11	2365.781	2^+		
		3256.9 *2*	65	1601.833	2^+		
		4225.7 *2*	100	632.988	2^+		
4864.69		2059.6 *2*	23	2805.06	3		
		2182.1 *2*	100	2682.65	$1,2^+$		
		2498.8 *2*	31	2365.781	2^+		
		4231.6 *2*	64	632.988	2^+		
4870.29		2504.5 *2*	17	2365.781	2^+		
		2707.5 *2*	100	2162.738	2^+		
4914.50		2312.9 *2*	33	2601.58	5^-		
		2349.4 *2*	100	2565.06	5^+		
5125.0	12^-	928.5 *10*	100	4196.4	10^-	E2	B(E2)(W.u.)=12.8 *19*
5179.87	13^-	991.66 *15*	100	4188.20	11^-	E2	B(E2)(W.u.)=28 *3*
5502.55	14^+	793.80 *7*	100	4708.74	12^+	E2	B(E2)(W.u.)=38.7 *18*
5574.2	13^-	748.1 *10*	18 *4*	4826.0	12^-	D,Q	
		1005.8 *10*	100 *7*	4568.7	11^-	Q	
5589.2	11^-	970.7 *10*	100	4618.5	(10)	D	
5591.9	12^+	836.0 *10*	100 *13*	4755.9	10^+	Q	
		883.0 *10*	75 *6*	4708.74	12^+	D	
		1439.7 *10*	44 *6*	4152.65	10^+	Q	
5639.6	12^-	459.4 *10*		5179.87	13^-	D,Q	
		514.4 *10*		5125.0	12^-		
		1070.7 *10*	100 *10*	4568.7	11^-	D,Q	
		1451.9 *10*	50 *7*	4188.20	11^-	D,Q	
		1767.6 *10*	21 *7*	3872.4	10^-	Q	
5760.6	13^-	121.2 *10*	100 *5*	5639.6	12^-	M1	
		186.4 *10*	33 *4*	5574.2	13^-	D	
		934.4 *10*	100 *11*	4826.0	12^-	D,Q	
		1191.9 *10*	33 *11*	4568.7	11^-	Q	
5837.6	(12)	1129.0 *10*	100	4708.74	12^+	D,Q	
5982.3	14^-	1156.3 *10*	100	4826.0	12^-	Q	
6076.4	14^-	316.0 *10*	100 *7*	5760.6	13^-	M1	B(M1)(W.u.)>0.30
		1250.6 *10*	13.5 *14*	4826.0	12^-	Q	
6124.3	14^+	532.7 *10*	100 *6*	5591.9	12^+	Q	
		621.6 *10*	38 *3*	5502.55	14^+	D,Q	
		1415.5 *10*	41 *3*	4708.74	12^+	Q	
6251.5	14^-	1126.6 *10*	100 *12*	5125.0	12^-	Q	
		1425.5 *10*	59 *6*	4826.0	12^-	Q	
6404.1	15^-	1224.2 *10*	100	5179.87	13^-	Q	
6458.87	16^+	956.3 *2*	100	5502.55	14^+	E2	B(E2)(W.u.)=58 *8* E_γ: a γ with E=963.26 *25* is given in 1978Sa13?
6488.0	(14)	650.6 *10*	100 *7*	5837.6	(12)	Q	

From ENSDF

$^{108}_{48}Cd_{60}$-25

Adopted Levels, Gammas (continued)

$\gamma(^{108}Cd)$ (continued)

E_i(level)	J^π_i	E_γ	I_γ†	E_f	J^π_f	Mult.‡	Comments
6488.0	(14)	985.3 *10*	37 *4*	5502.55	14^+	D	
6597.8	15^-	521.9 *10*	100	6076.4	14^-	M1	B(M1)(W.u.)=0.323 *+27−21*
6891.0	16^+	766.7 *10*	100 *7*	6124.3	14^+	Q	
		1388.5 *10*	15.8 *22*	5502.55	14^+	Q	
7212.6	(16^-)	1230.3 *10*	100	5982.3	14^-		
7213.5	(15^-)	615.4 *10*	100	6597.8	15^-	M1,E2	
7274.9	16^-	676.9 *10*	100	6597.8	15^-	M1	B(M1)(W.u.)=0.37 *+12−8*
7383.4	(16)	895.4 *10*	100	6488.0	(14)	Q	
7385.9	16^-	1134.5 *10*	100 *11*	6251.5	14^-	Q	
		1309.3 *10*	61 *11*	6076.4	14^-	Q	
		1403.6 *10*	<44	5982.3	14^-		
7528.6	16^-	314.0 *5*	100 *10*	7213.5	(15^-)	M1	
		931.0 *5*	93 *8*	6597.8	15^-	M1,E2	
7564.2	18^+	1105.3 *10*	100	6458.87	16^+	E2	B(E2)(W.u.)=49 *6*
7725.3	17^-	1321.2 *10*	100	6404.1	15^-	Q	
7740.4	17^-	212.0 *5*	61 *6*	7528.6	16^-	M1,E2	
		465.5 *3*	100 *6*	7274.9	16^-	M1	B(M1)(W.u.)=0.35 *6*
		526.9 *5*	61 *6*	7213.5	(15^-)	E2	B(E2)(W.u.)=4.5×10^2 *8*
7796.3	17^-	1337.1 *5*	100	6458.87	16^+	E1	
7861.4	17^-	333.0 *5*	100 *10*	7528.6	16^-	M1	
		1403.3 *10*	61 *6*	6458.87	16^+	E1	
7913.3	(18^+)	1022.2 *10*	100	6891.0	16^+		
8102.2	18^-	361.7 *2*	100	7740.4	17^-	M1	B(M1)(W.u.)=0.89 *+7−6*
8184.7	(17)	323.3 *10*	100	7861.4	17^-	D	
8283.8	18^-	897.9 *10*	100	7385.9	16^-	Q	
8316.6	18^-	455.4 *2*	100 *6*	7861.4	17^-	(M1)	
		520.0 *5*	41 *2*	7796.3	17^-	M1,E2	
8354.4	18^-	492.0 *5*	100 *6*	7861.4	17^-	M1,E2	
8534.9	(18)	1151.5 *10*	100	7383.4	(16)	Q	
8543.4	(18)	358.7 *10*	100	8184.7	(17)	D	
8584.8	19^-	482.3 *2*	100 *10*	8102.2	18^-	M1	B(M1)(W.u.)=0.89 *14*
		845.0 *5*	10 *1*	7740.4	17^-	E2	B(E2)(W.u.)=19 *3*
8639.8	19^-	284.4 *5*	40 *4*	8354.4	18^-	M1	
		323.4 *2*	100 *6*	8316.6	18^-	M1	
8671.0	19^-	945.7 *10*	100	7725.3	17^-	Q	
8824.5	(20^+)	1260.3 *10*	100	7564.2	18^+		
8964.2	(19)	420.8 *10*	100	8543.4	(18)		
8998.7	(20^-)	358.8 *2*	100 *8*	8639.8	19^-	M1	
		682.0 *5*	17 *4*	8316.6	18^-	E2	
9174.8	(20^-)	589.5 *5*	100 *9*	8584.8	19^-	M1	B(M1)(W.u.)=0.60 *+15−11*
		1073.9 *5*	29 *3*	8102.2	18^-	(E2)	B(E2)(W.u.)=21 *+6−21*
9325.9	(20^-)	1042.1 *10*	100	8283.8	18^-	Q	

$^{108}_{48}Cd_{60}$-26

γ(^{108}Cd) (continued)

E_i(level)	J^π_i	E_γ	I_γ†	E_f	J^π_f	Mult.‡	Comments
9419.6	(21⁻)	420.8 *2*	100 *8*	8998.7	(20⁻)	M1	
		780.4 *5*	23 *2*	8639.8	19⁻	(E2)	
9757.3	(21⁻)	1086.3 *10*	100	8671.0	19⁻	Q	
9879.3	(21⁻)	705.6 *5*	100 *7*	9174.8	(20⁻)	M1	B(M1)(W.u.)=0.222 *22*
		1293.6 *5*	36 *4*	8584.8	19⁻	(E2)	B(E2)(W.u.)=6.5 *9*
9894.3	(20)	1359.4 *10*	100	8534.9	(18)		
9896.7	(22⁻)	476.6 *5*	100 *5*	9419.6	(21⁻)	M1	
		897.8 *5*	30 *4*	8998.7	(20⁻)	(E2)	
10293.6	(22⁺)	1469.1 *10*	100	8824.5	(20⁺)		
10412.6	(23⁻)	515.6 *5*		9896.7	(22⁻)	(M1)	
		993.6 *5*	100	9419.6	(21⁻)	(E2)	
10532.6	(22⁻)	1206.7 *10*	100	9325.9	(20⁻)		
10677.2	(22⁻)	797.9 *2*	100 *8*	9879.3	(21⁻)	(M1)	
		1502.2 *5*	31 *5*	9174.8	(20⁻)	(E2)	
10975.9	(24⁻)	563.6 *5*	100 *10*	10412.6	(23⁻)	M1	
		1079.0 *5*	43 *4*	9896.7	(22⁻)	(E2)	
11018.5	(23⁻)	1261.2 *10*	100	9757.3	(21⁻)		
11906.6	(24⁻)	1374.0 *10*	100	10532.6	(22⁻)		
11914.8	(24⁺)	1621.2 *10*	100	10293.6	(22⁺)		
12489.2	(25⁻)	1470.7 *10*	100	11018.5	(23⁻)		
1686.01+x	J+2	1686.0 *2*	100	x	J≈(40)	Q	
3421.6+x	J+4	1735.6 *2*	100	1686.01+x	J+2	Q	
5218.7+x	J+6	1797.1 *2*	100	3421.6+x	J+4	Q	
7083.4+x	J+8	1864.6 *3*	100	5218.7+x	J+6	Q	
9021.6+x	J+10	1938.2 *3*	100	7083.4+x	J+8	Q	
11037.5+x	J+12	2015.9 *4*	100	9021.6+x	J+10	Q	
13133.8+x	J+14	2096.3 *3*	100	11037.5+x	J+12	Q	
15310.4+x	J+16	2176.6 *4*	100	13133.8+x	J+14	Q	
17566.4+x	J+18	2255.9 *3*	100	15310.4+x	J+16	Q	
19902.7+x	J+20	2336.3 *3*	100	17566.4+x	J+18	Q	
1534.0+y	J+2	1534	100	y			
3130.0+y	J+4	1596	100	1534.0+y	J+2		
4796.0+y	J+6	1666	100	3130.0+y	J+4		
6540.1+y	J+8	1744	100	4796.0+y	J+6		
8361.1+y	J+10	1821	100	6540.1+y	J+8		
10262.1+y	J+12	1901	100	8361.1+y	J+10		
12244+y	J+14	1982	100	10262.1+y	J+12		
14306+y	J+16	2062	100	12244+y	J+14		
16450+y	J+18	2144	100	14306+y	J+16		
18676+y	J+20	2226	100	16450+y	J+18		
20979+y	J+22	2303	100	18676+y	J+20		

$^{108}_{48}$Cd$_{60}$-27

Adopted Levels, Gammas (continued)

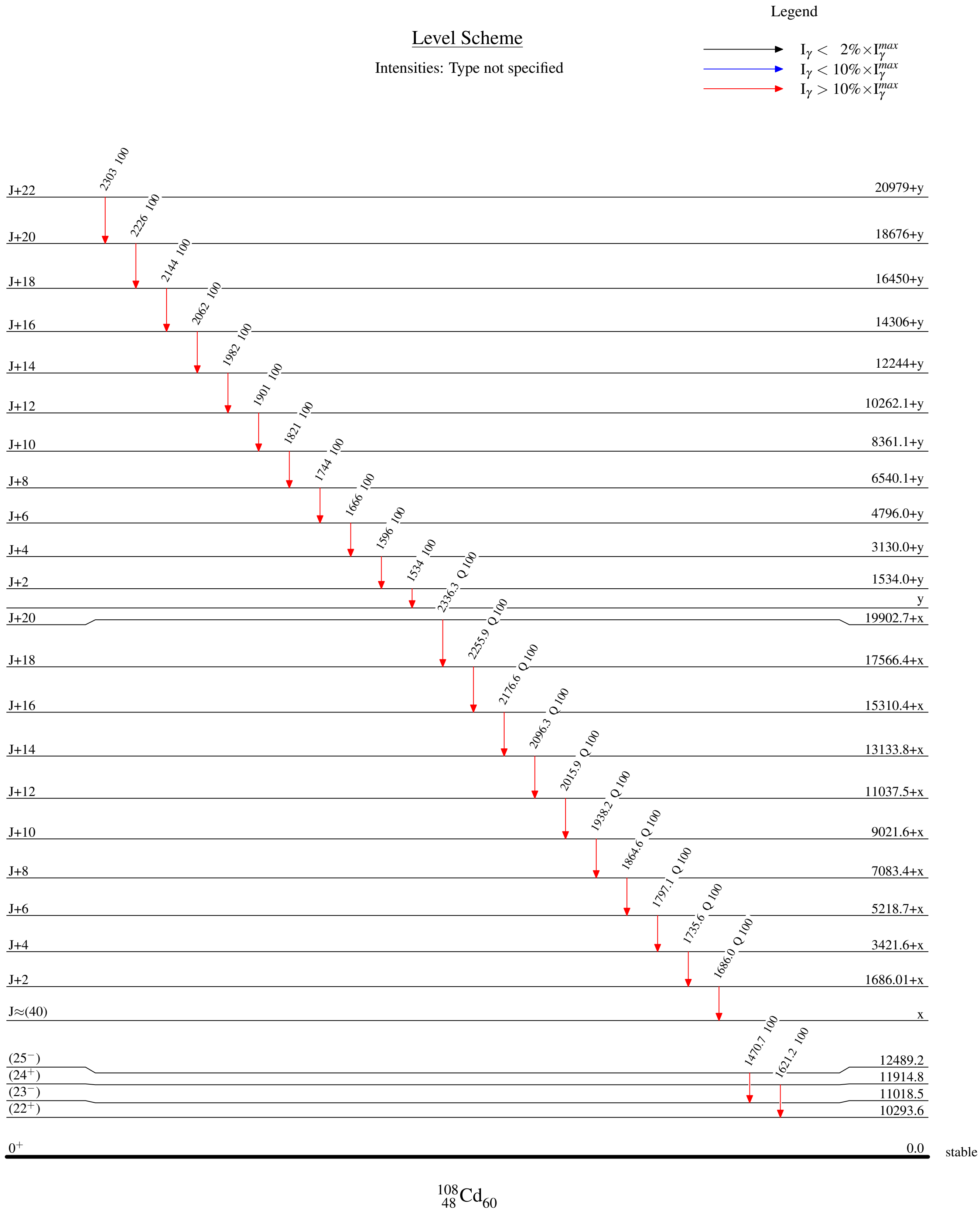
γ(^{108}Cd) (continued)

† Relative photon branching from each level.

‡ From $\gamma(\theta)$, DCO and γ(pol) in (HI,xnγ) and α(K)exp data in ^{108}In ε decay.

Placement of transition in the level scheme is uncertain.

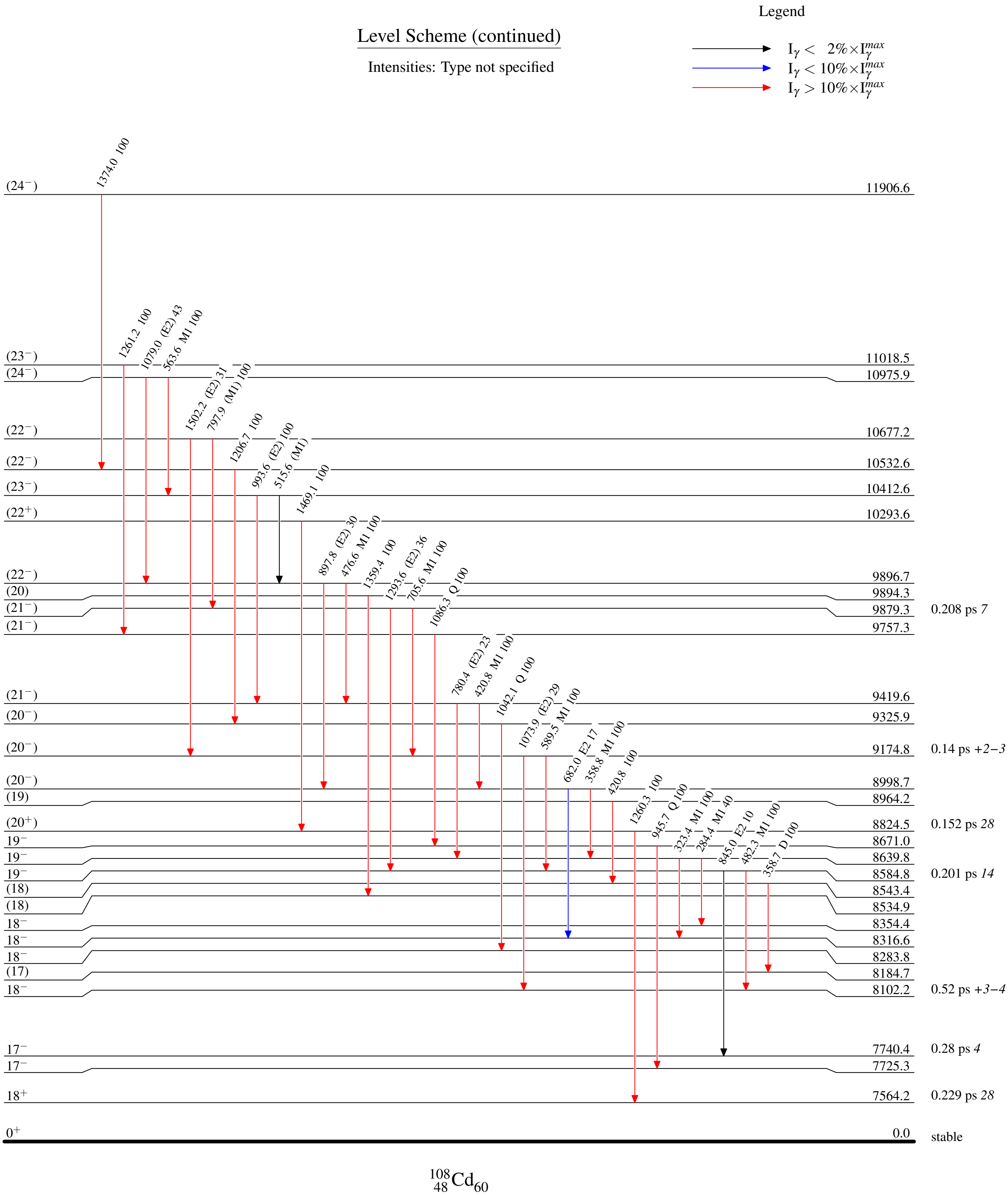
Adopted Levels, Gammas



Adopted Levels, Gammas

Level Scheme (continued)

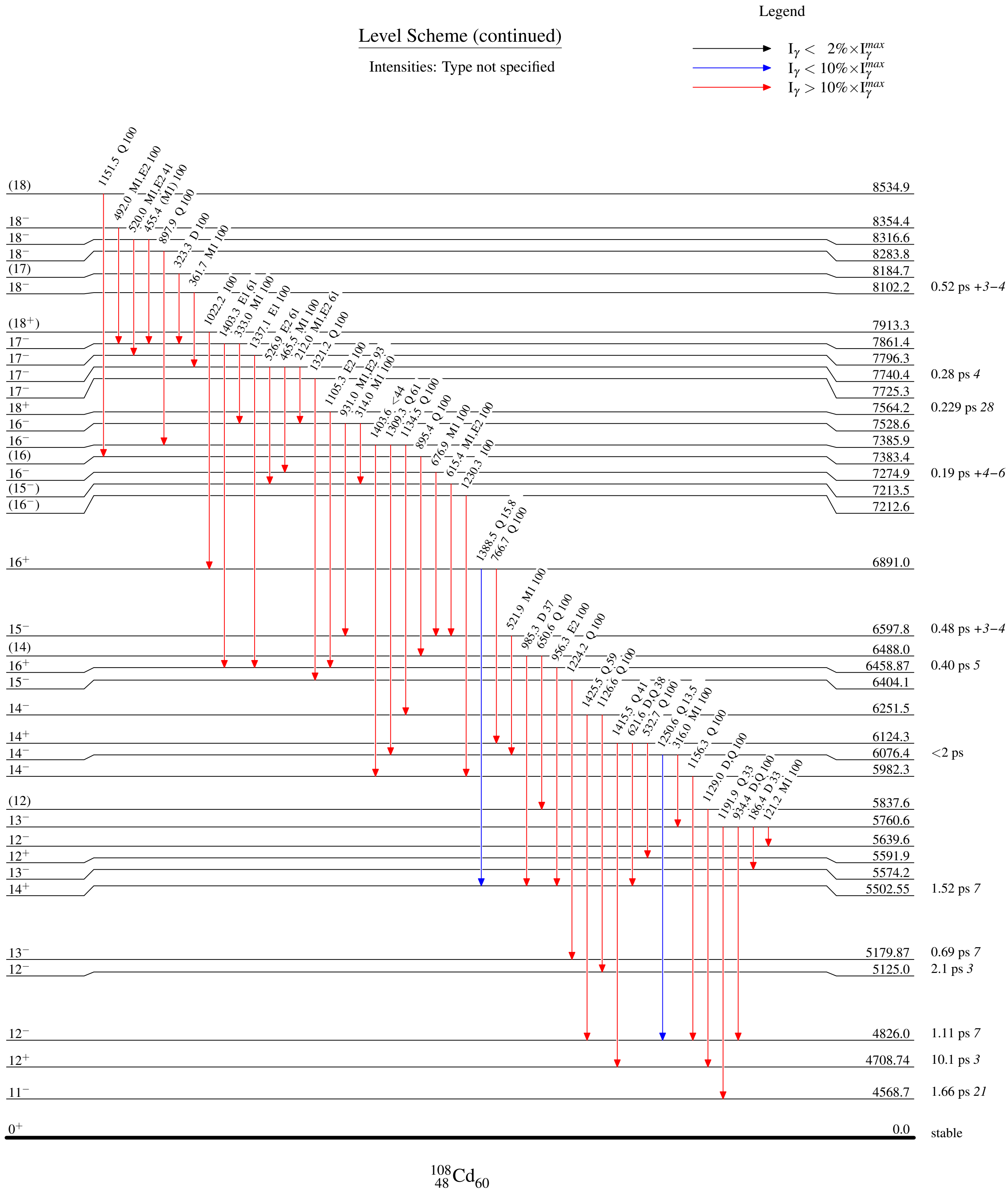
Intensities: Type not specified



Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified



Adopted Levels, Gammas

Level Scheme (continued)

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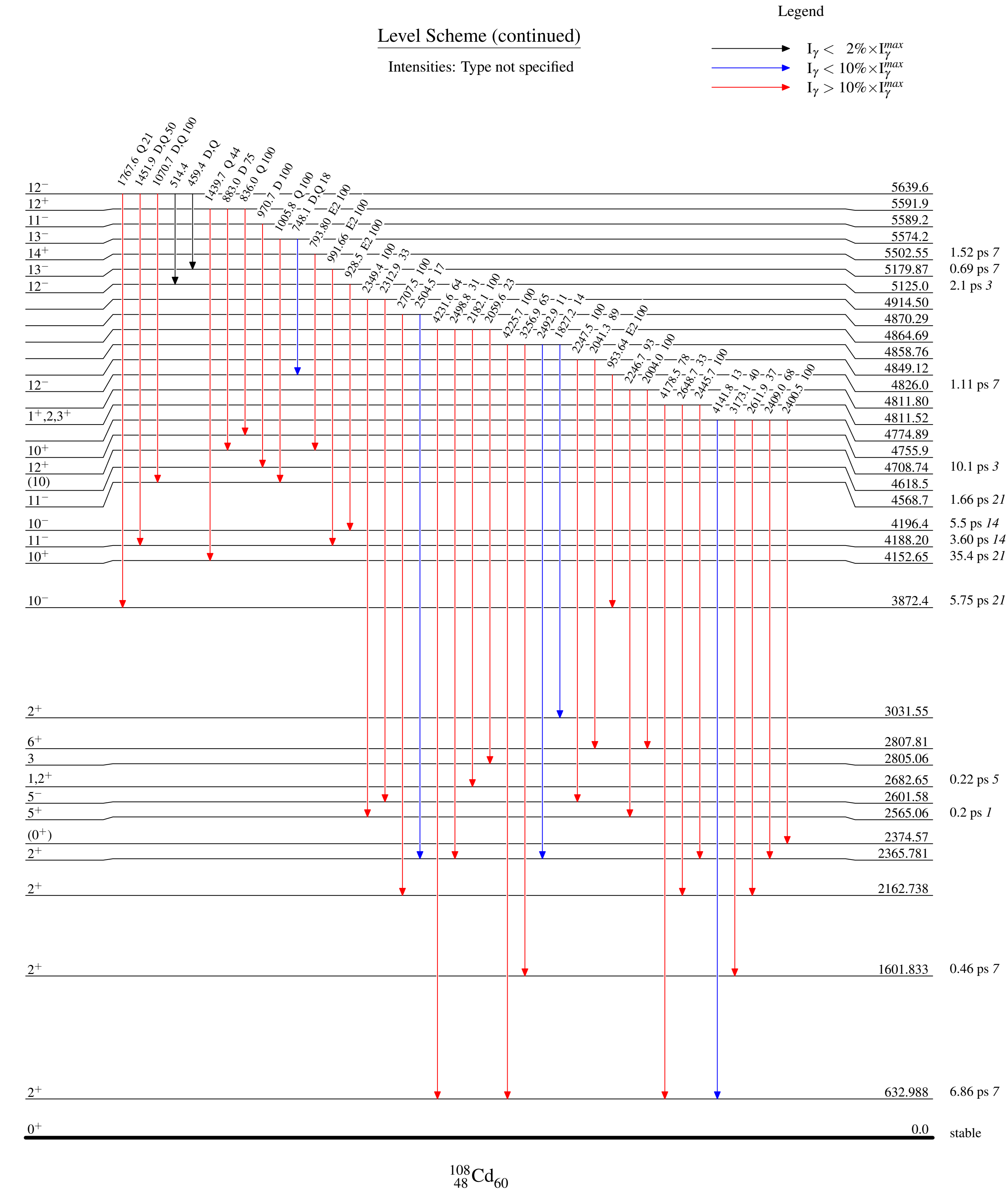

Adopted Levels, Gammas

Level Scheme (continued)

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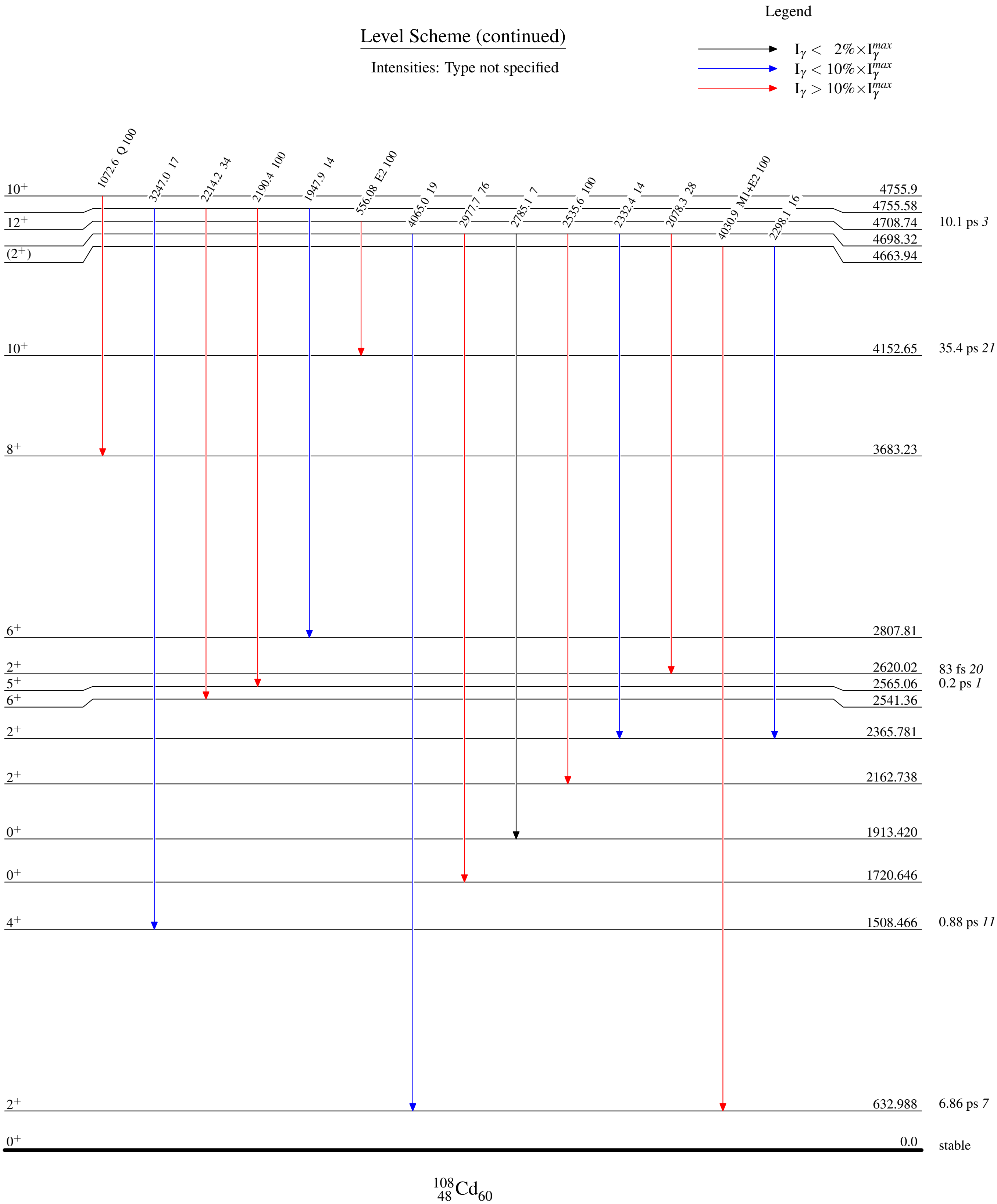
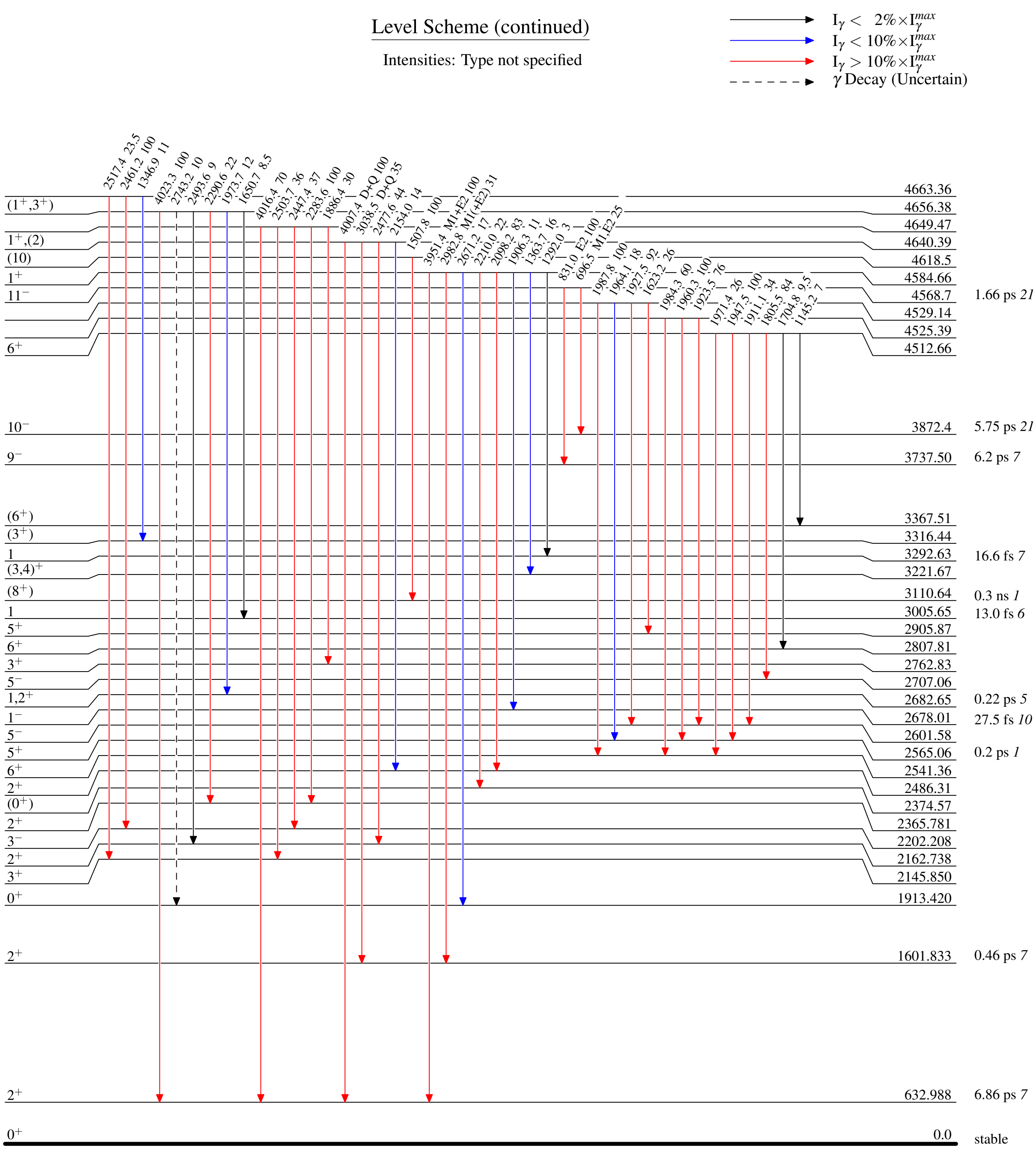


Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified



$^{108}_{48}Cd_{60}$

Adopted Levels, Gammas

Level Scheme (continued)

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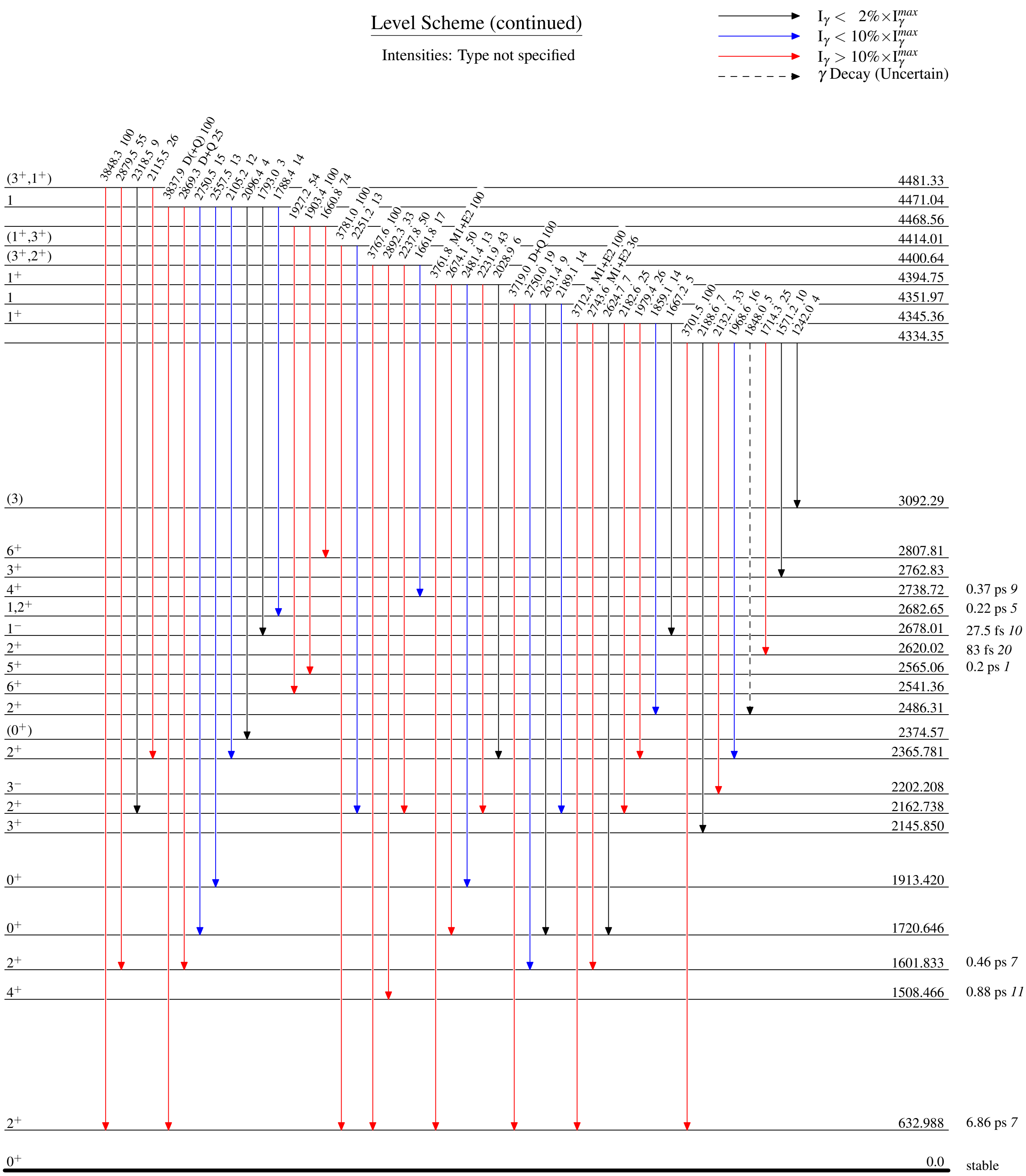
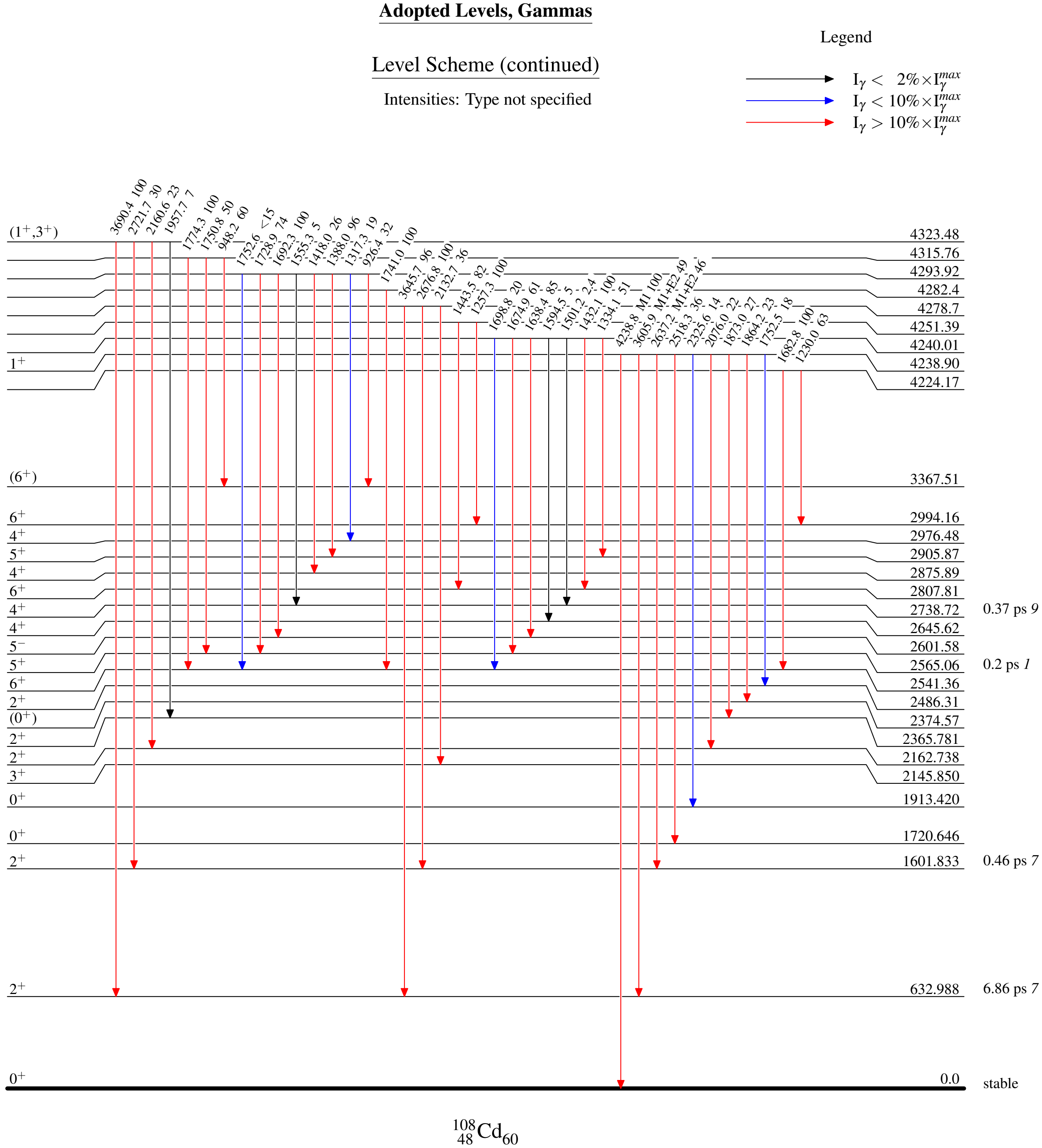


Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified



Adopted Levels, Gammas

Legend

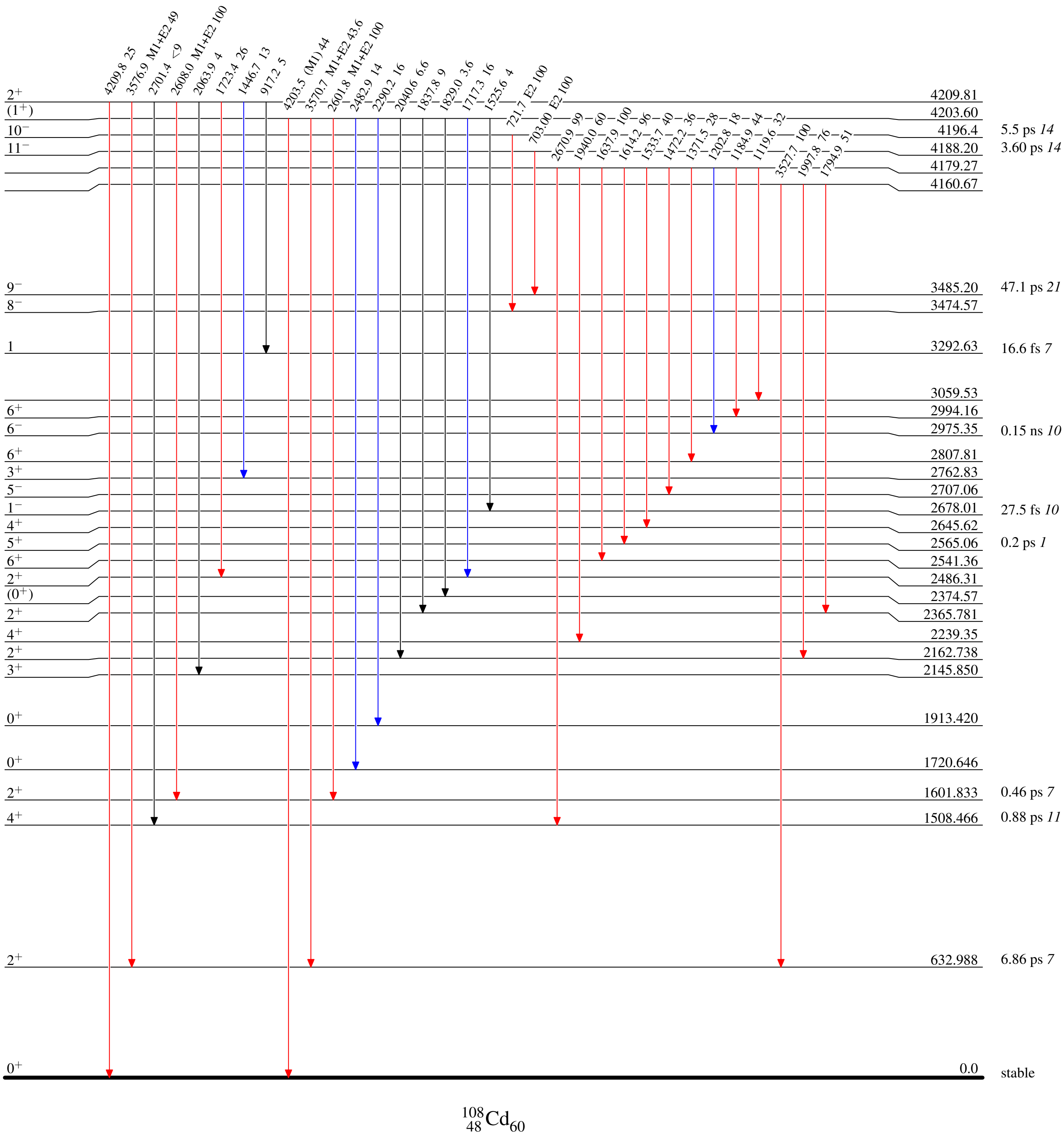
Level Scheme (continued)

Intensities: Type not specified

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

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

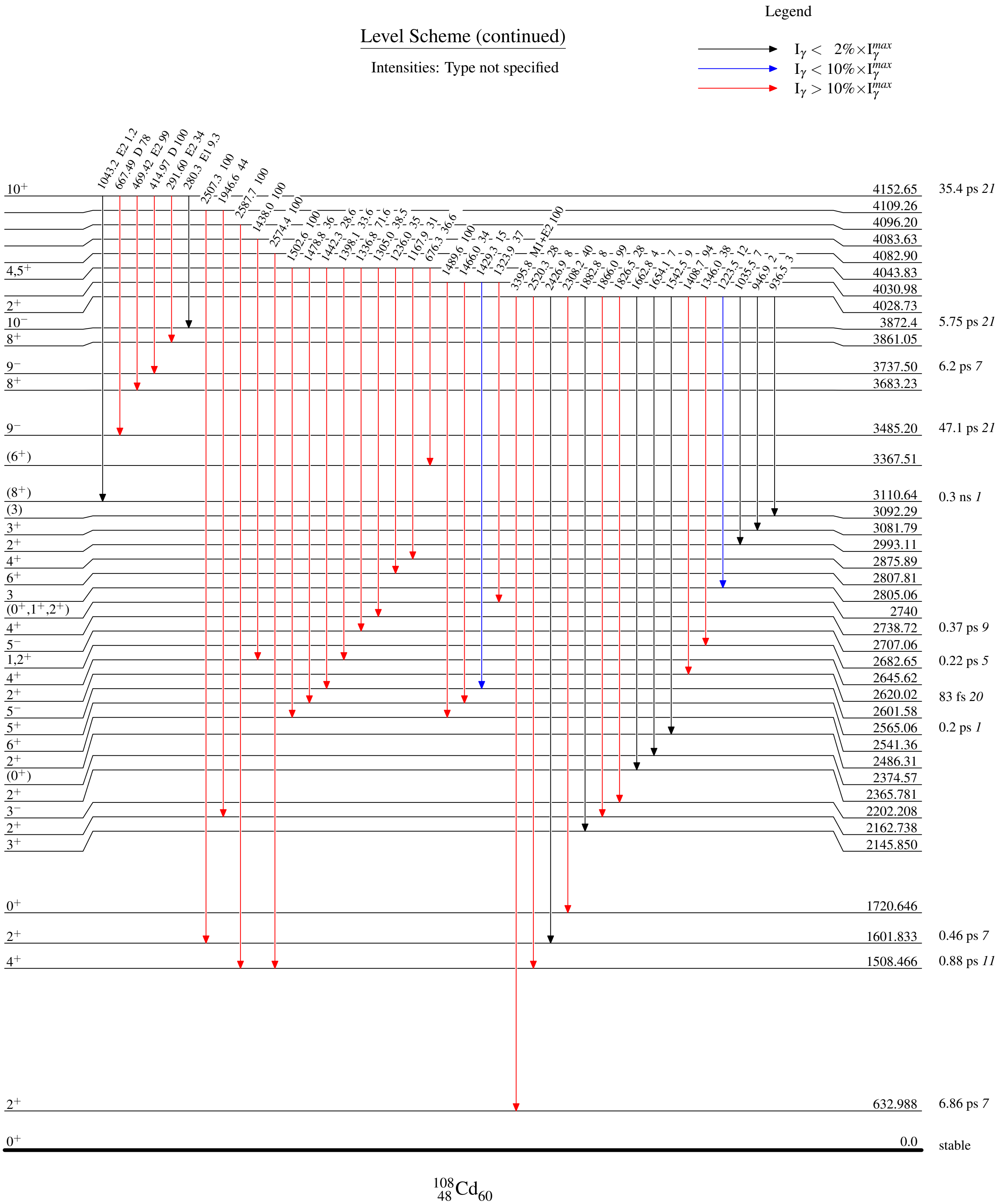
$I_\gamma > 10\% \times I_\gamma^{max}$



Adopted Levels, Gammas

Level Scheme (continued)

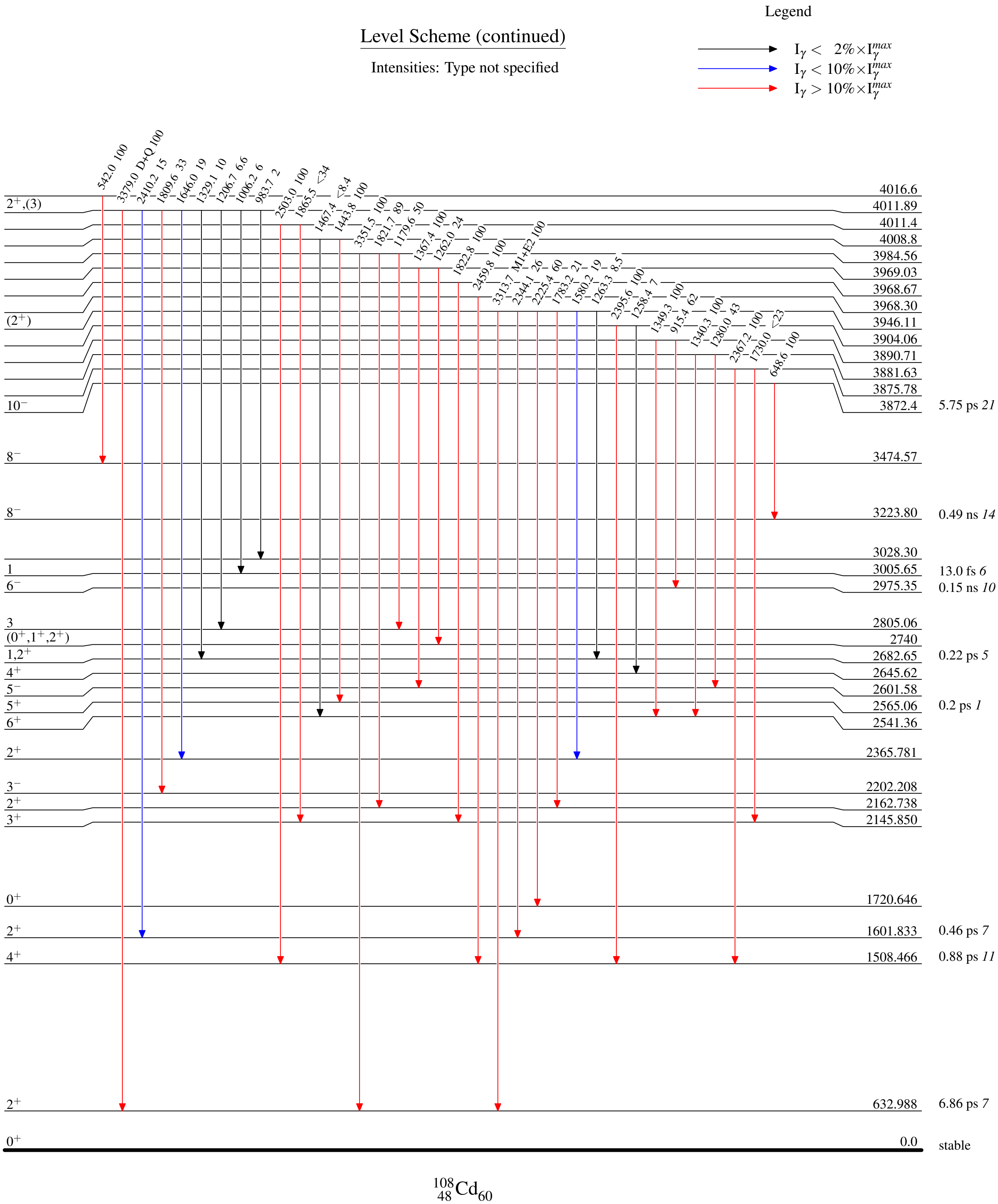
Intensities: Type not specified



Adopted Levels, Gammas

Level Scheme (continued)

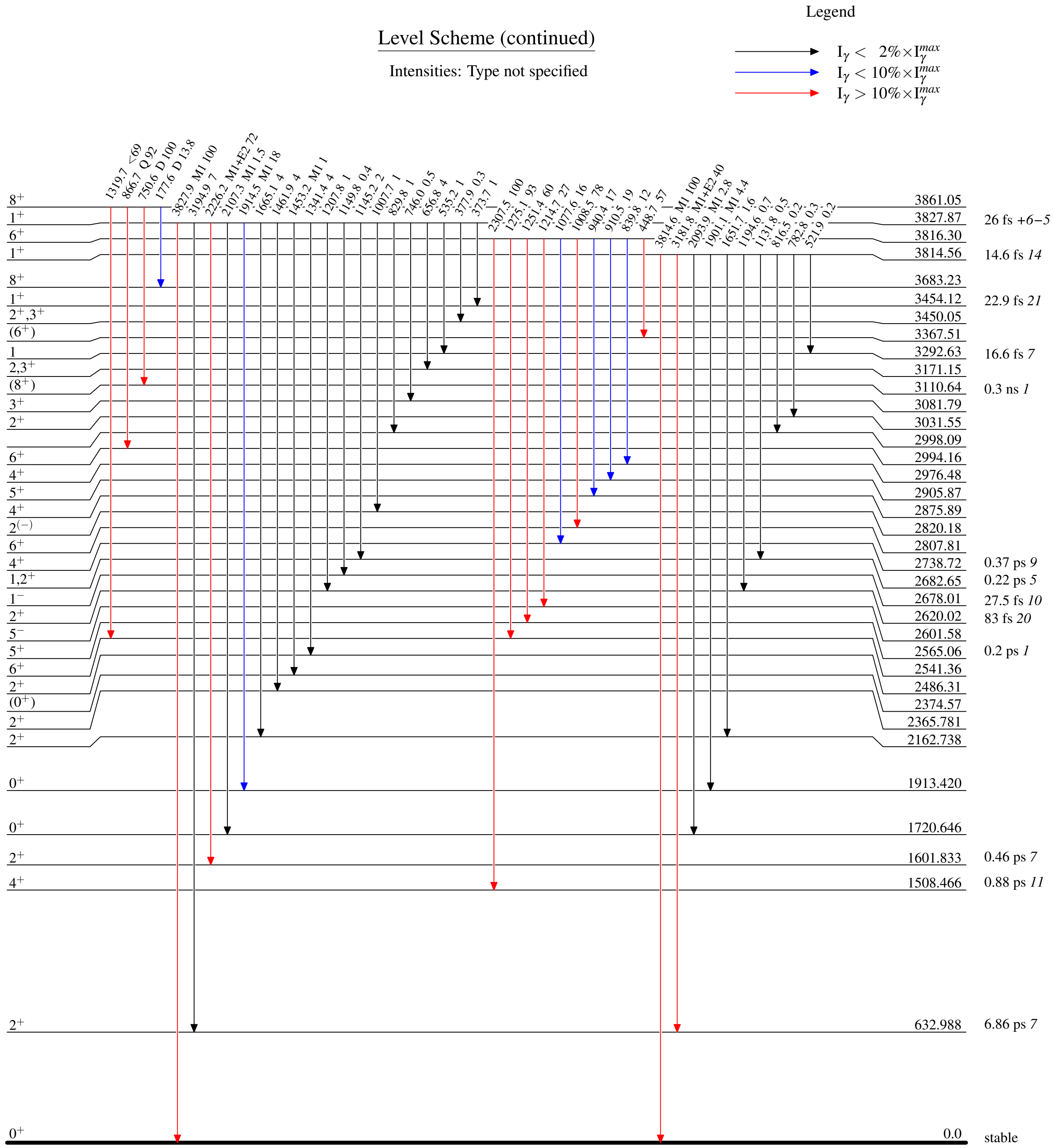
Intensities: Type not specified



Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified



$^{108}_{48}Cd_{60}$

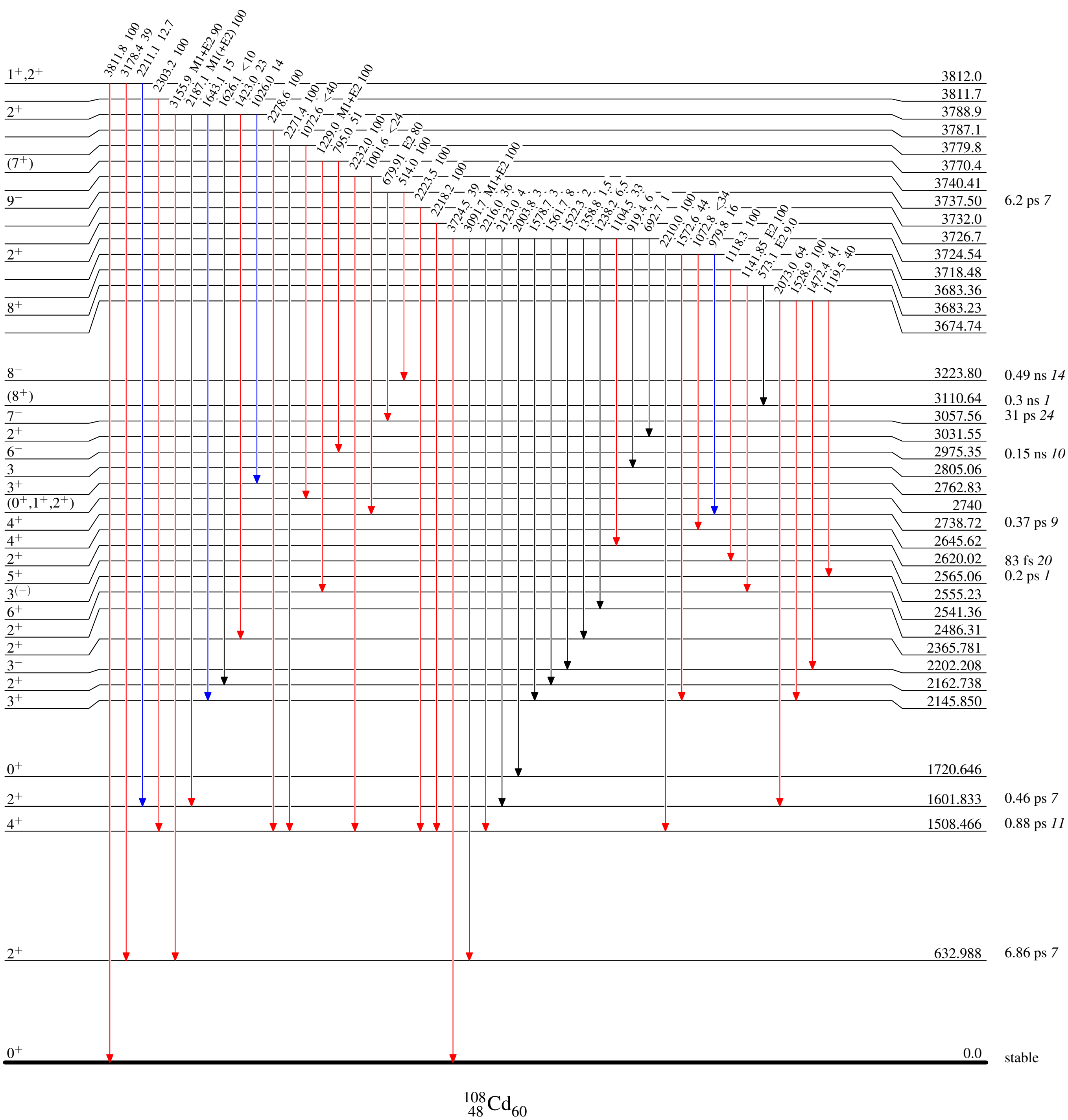
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Type not specified

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

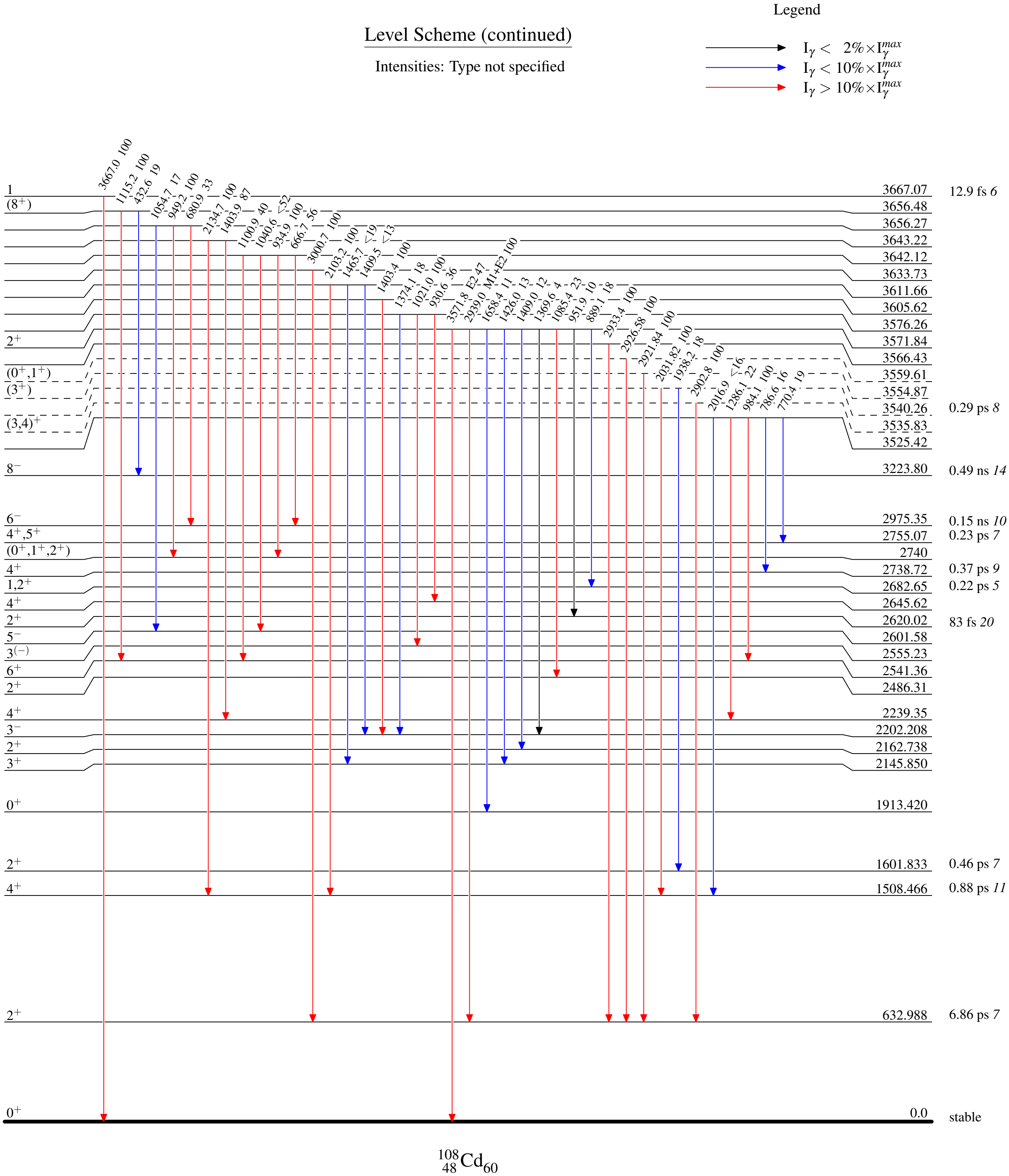


$^{108}_{48}Cd_{60}$

Adopted Levels, Gammas

Level Scheme (continued)

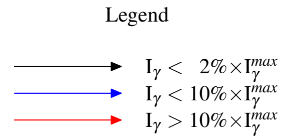
Intensities: Type not specified

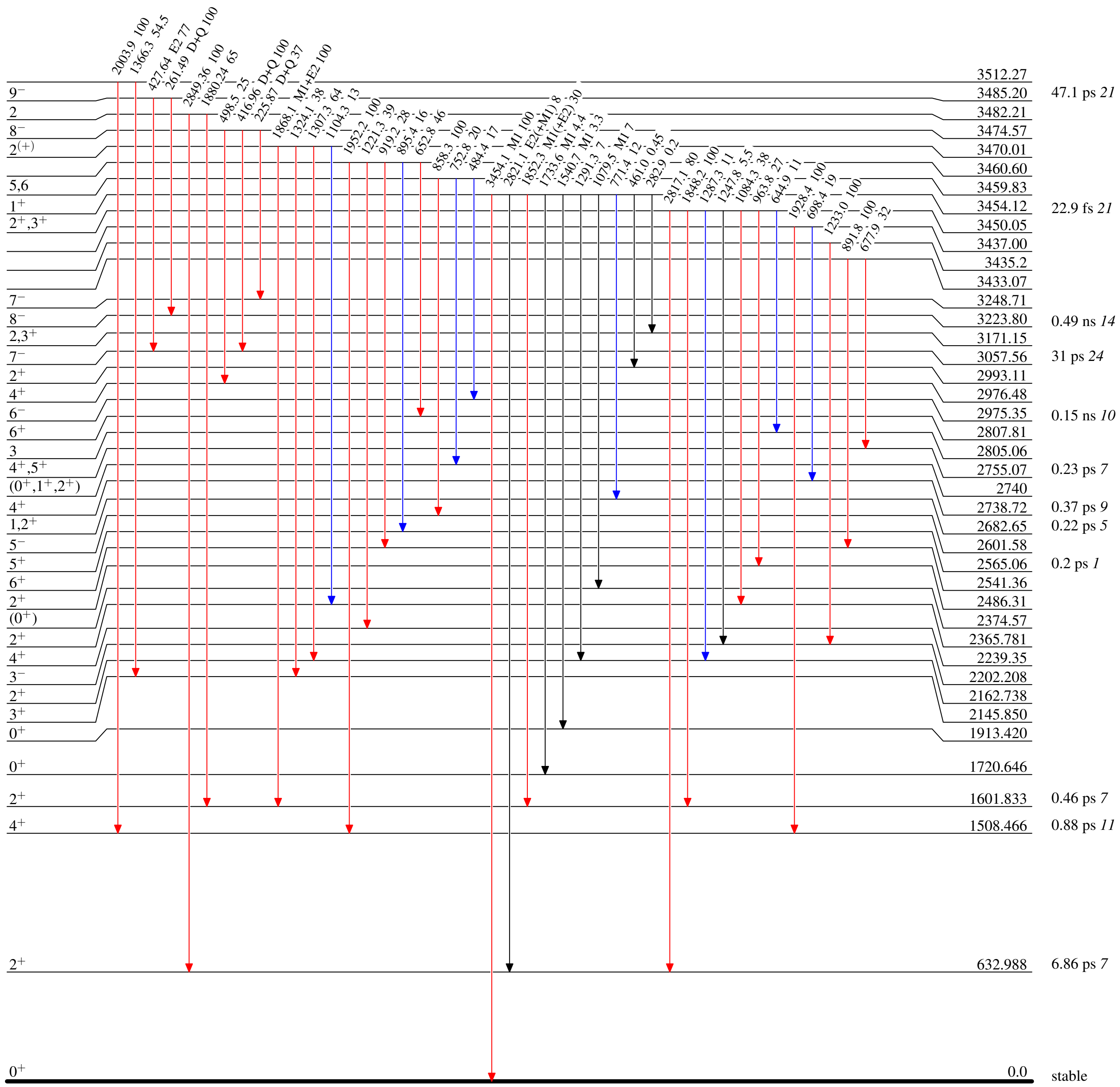


Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified



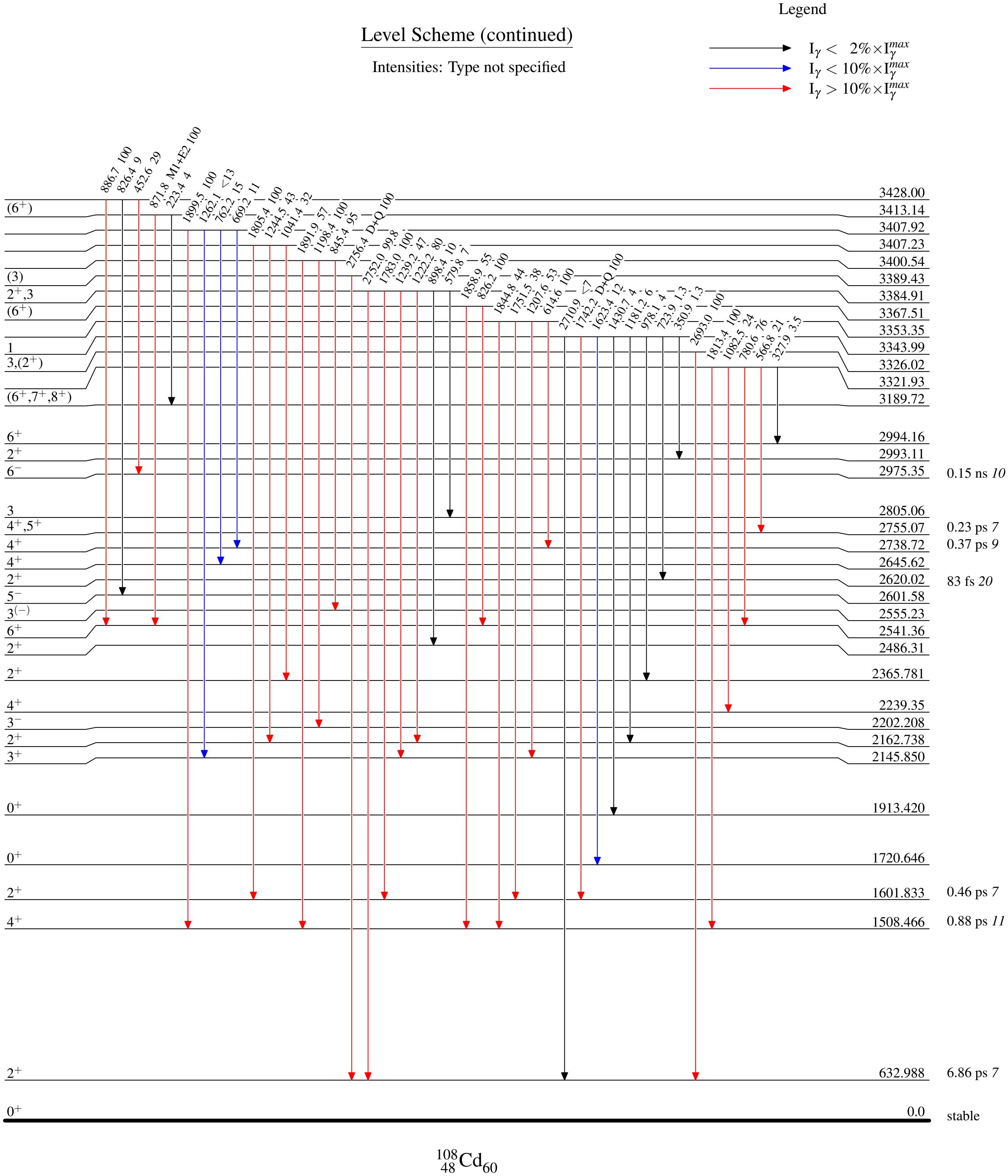


$^{108}_{48}$Cd$_{60}$

Adopted Levels, Gammas

Level Scheme (continued)

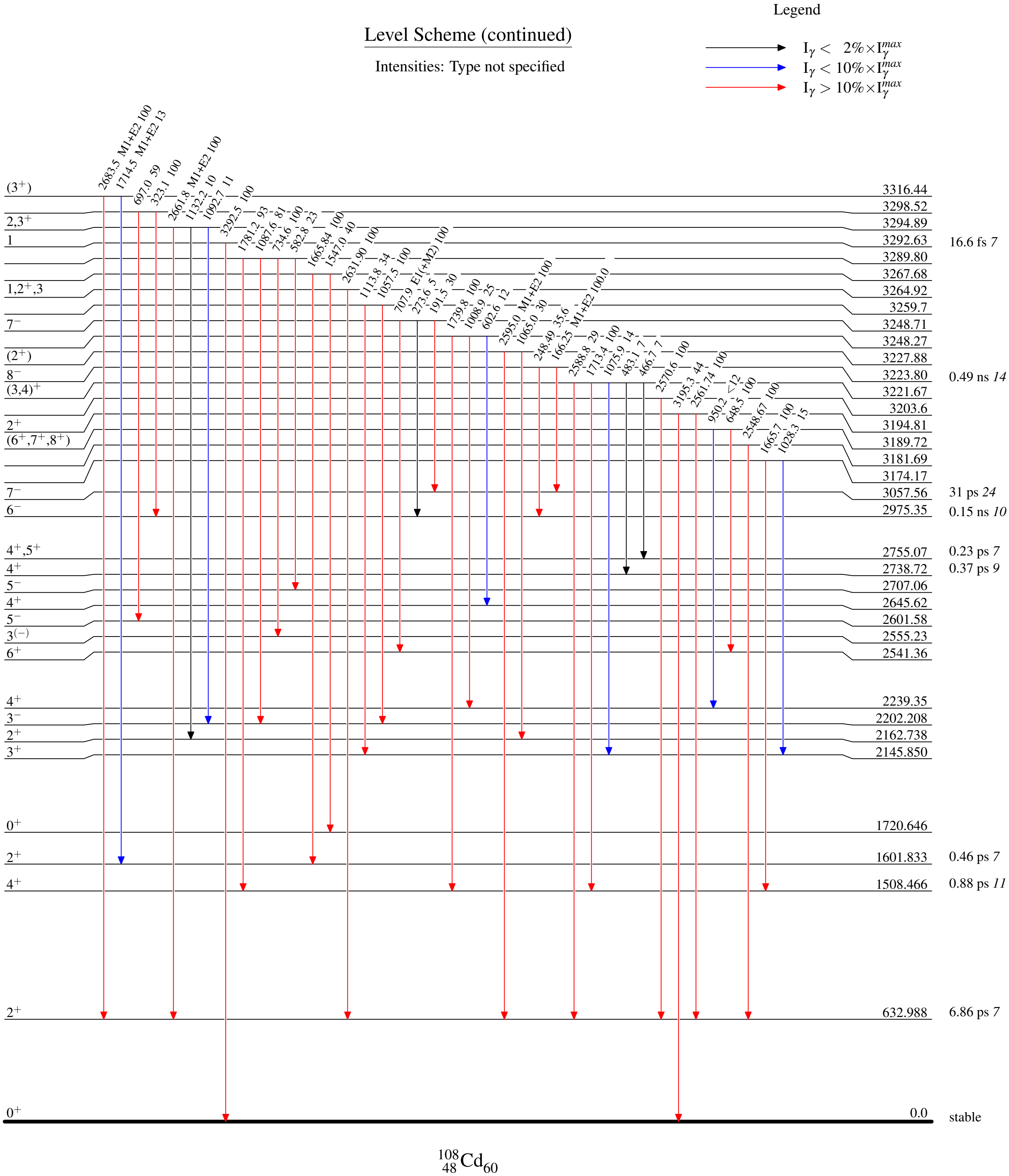
Intensities: Type not specified



Adopted Levels, Gammas

Level Scheme (continued)

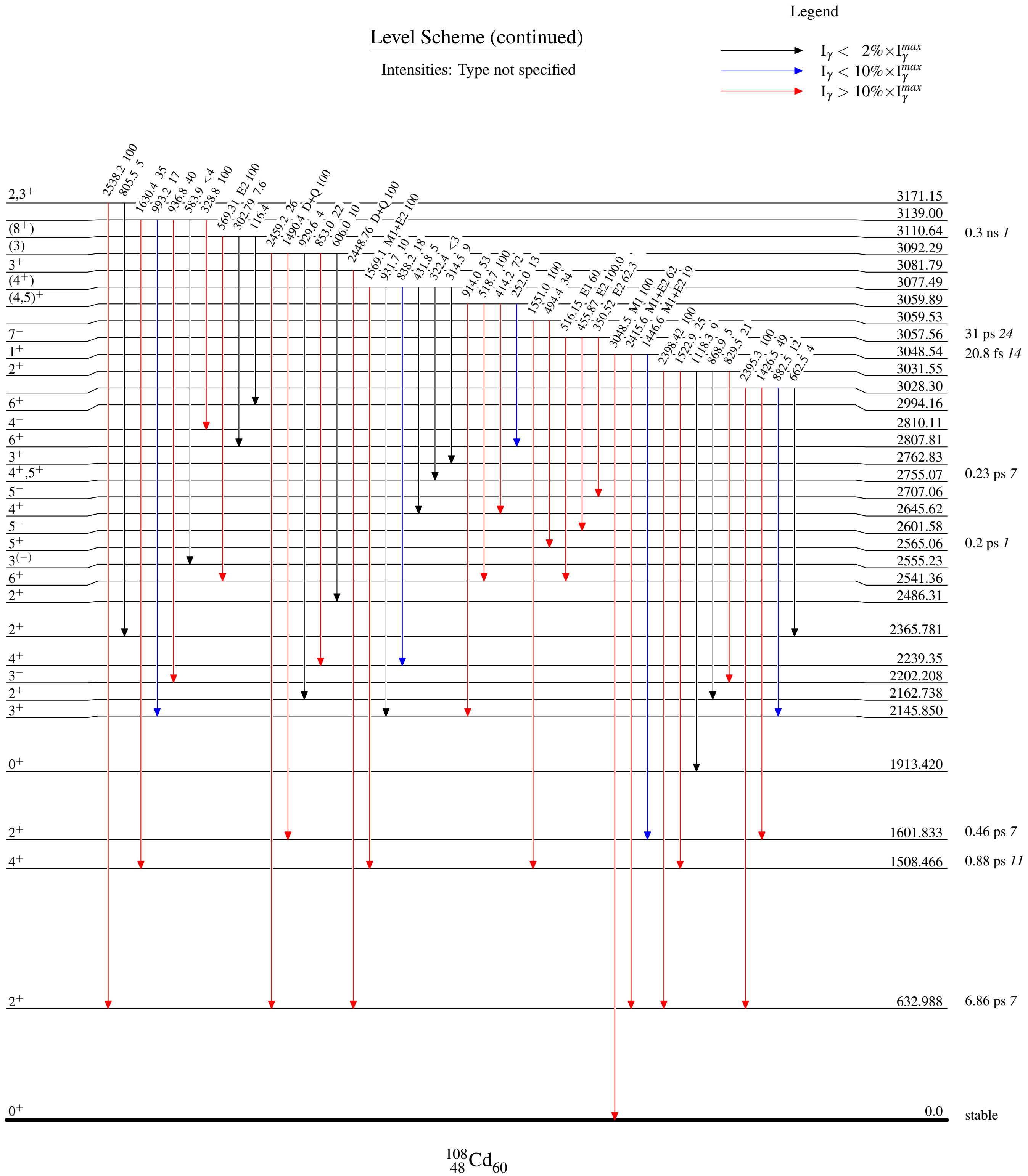
Intensities: Type not specified



Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified



Adopted Levels, Gammas

Level Scheme (continued)

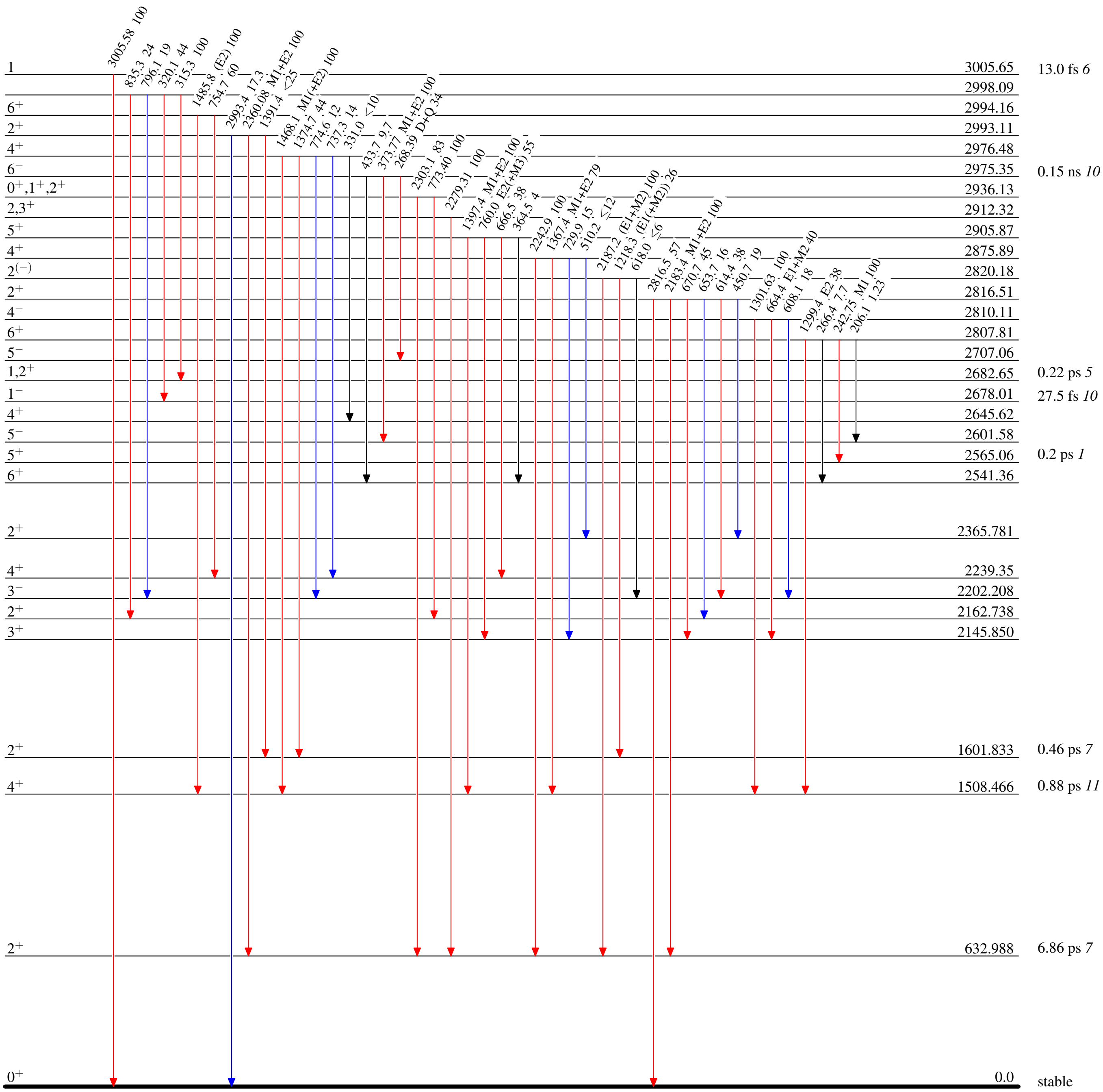
Intensities: Type not specified

Legend

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

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

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

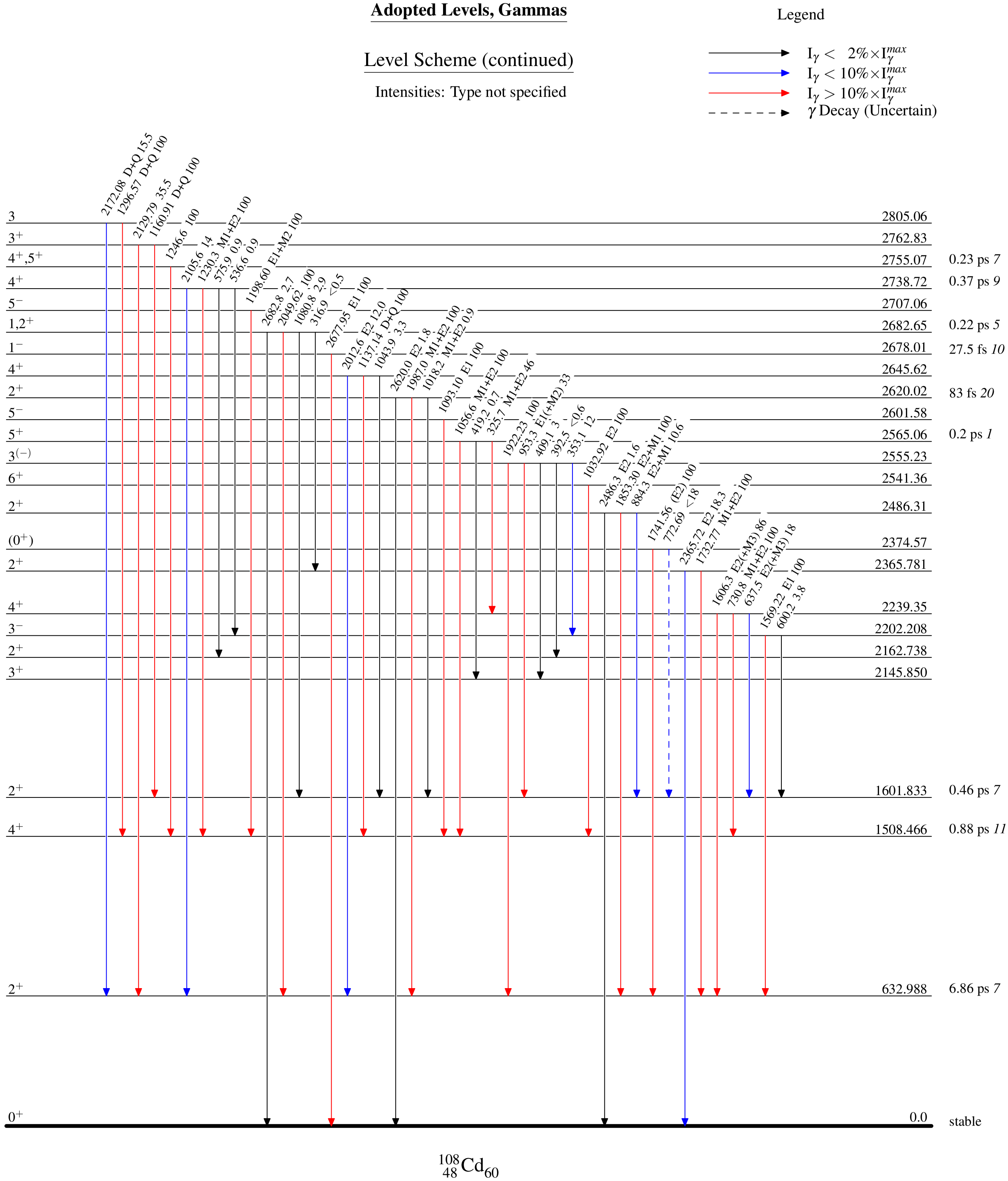


$^{108}_{48}Cd_{60}$

Adopted Levels, Gammas

Level Scheme (continued)

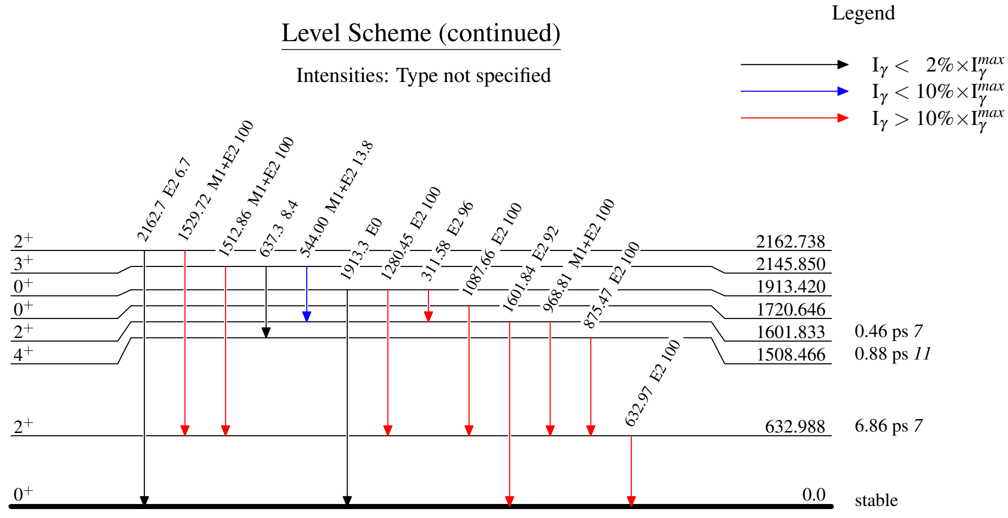
Intensities: Type not specified



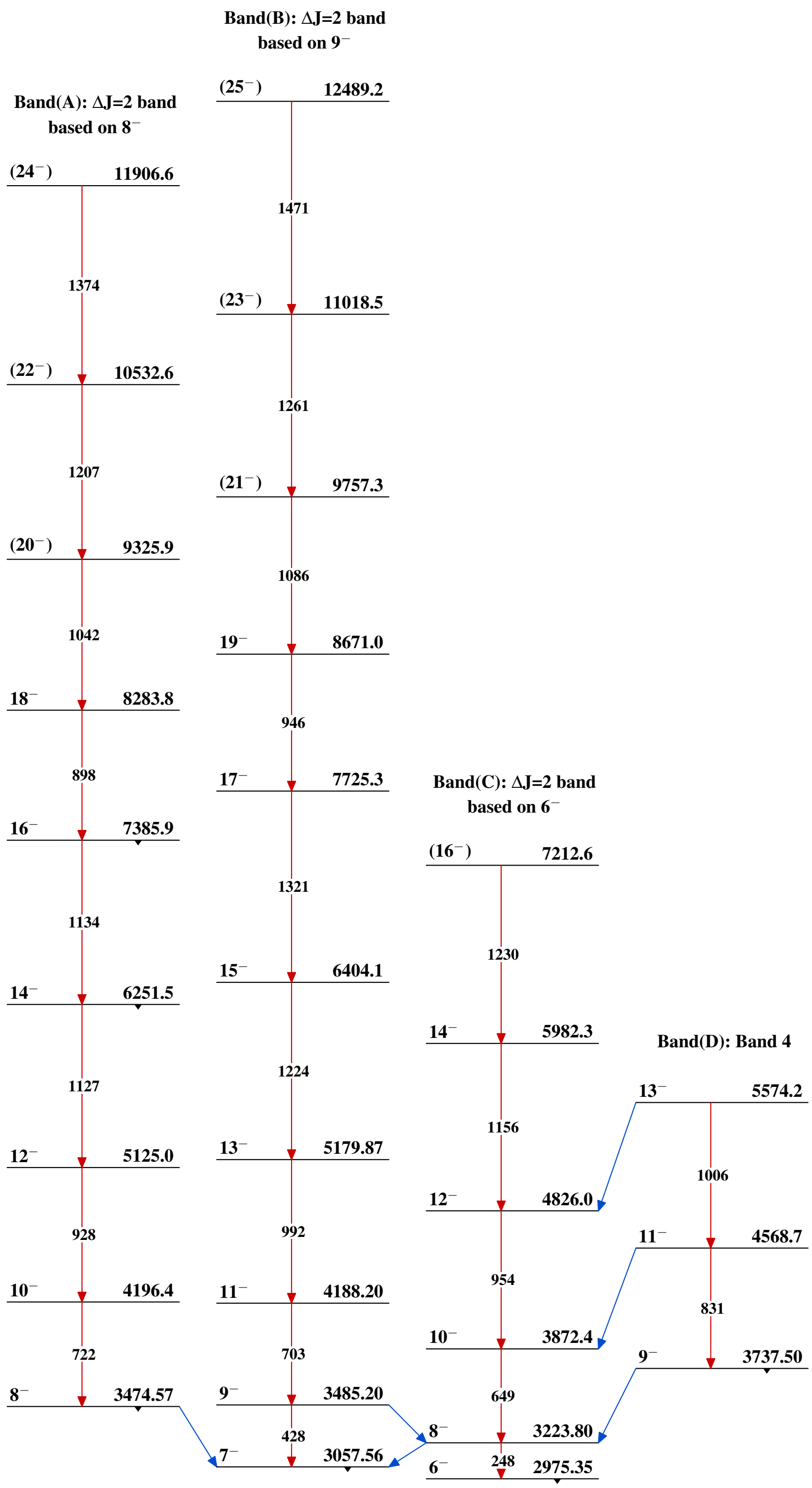
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

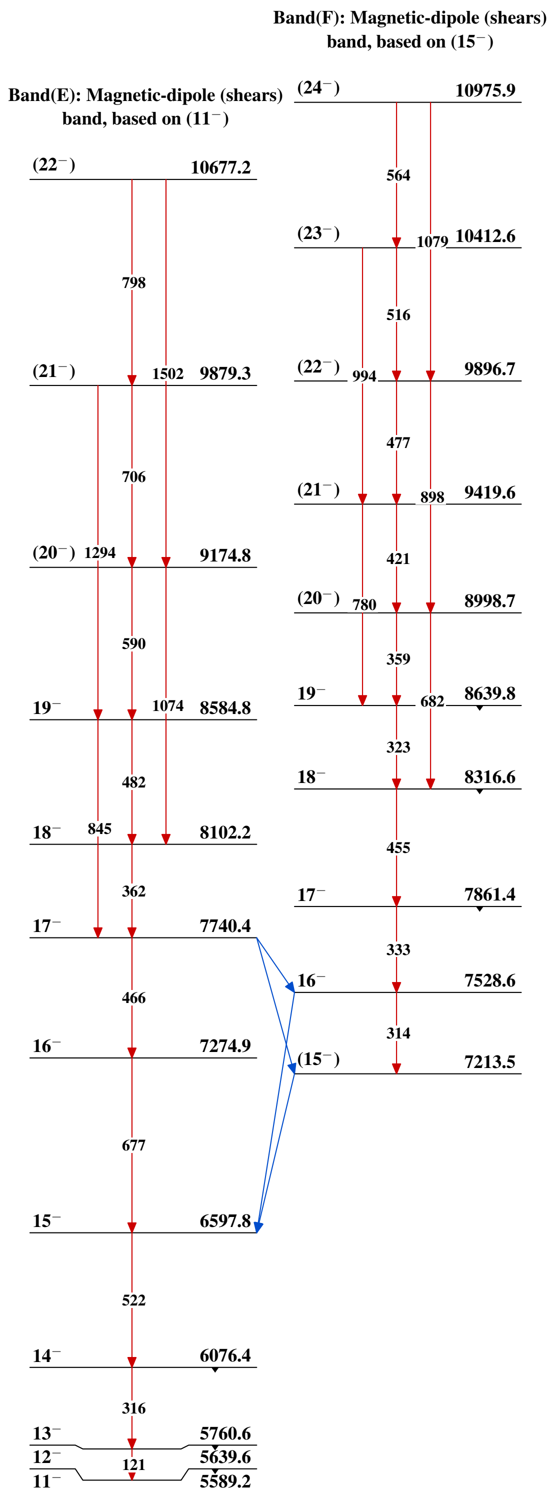


Adopted Levels, Gammas



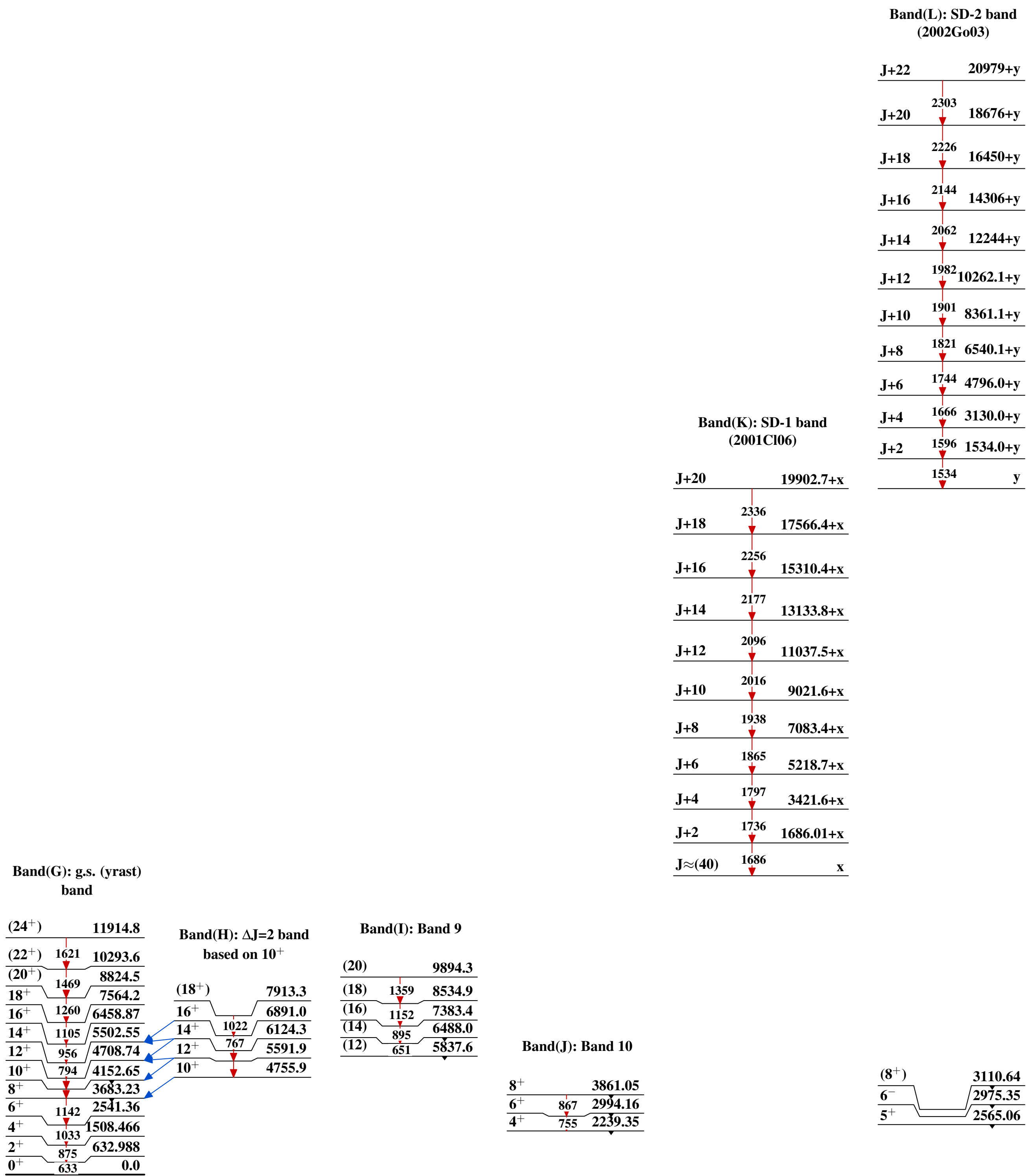
$^{108}_{48}Cd_{60}$

Adopted Levels, Gammas (continued)



$^{108}_{48}Cd_{60}$

Adopted Levels, Gammas (continued)



$^{108}_{48}Cd_{60}$

Adopted Levels, Gammas

History

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

Q(β^-)=−3878 *12*; S(n)=9915.7 *17*; S(p)=8917.8 *13*; Q(α)=−2866.3 *13* 2012Wa38
Note: Current evaluation has used the following Q record −3878 129917.3 *218919.8* *15*−2870 4 2011AuZZ.

^{110}Cd Levels

Cross Reference (XREF) Flags

A	^{110}Ag β^- decay (24.56 s)	H	^{110}Cd(e,e′)	O	^{109}Ag(p,p),(p,n) IAR
B	^{110}Ag β^- decay (249.83 d)	I	^{110}Cd(n,n′γ)	P	^{111}Cd(pol d,t),^{111}Cd(d,t)
C	^{110}In ε decay (69.1 min)	J	^{110}Cd(p,p′),(d,d′)	Q	^{110}Cd(γ,γ′)
D	^{110}In ε decay (4.92 h)	K	^{110}Cd(p,p′γ)	R	^{110}Cd(α,α′)
E	(HI,xnγ)	L	Coulomb excitation	S	^{114}Sn(d,^{6}Li)
F	^{108}Pd(α,2nγ),^{110}Pd(α,4nγ)	M	^{112}Cd(p,t)		
G	^{109}Ag(^{3}He,d)	N	^{108}Pd(^{3}He,n)		

E(level)[†]	J$^\pi$	T$_{1/2}$	XREF	Comments
0.0[d]	0$^+$	stable	ABCDEFGHIJKLMN PQRS	
657.7623[d] *11*	2$^+$	5.42 ps *16*	ABCDEFGHIJKLM PQR	μ=0.52 *4* Q=−0.40 *3* B(E2)↑=0.427 *3* J$^\pi$: L((pol d,t),(d,t))=L(α,α′)=L(p,t)=2; 657.7600γ E2 to 0$^+$. T$_{1/2}$: Weighted average of 6.4 ps *4* (recoil-distance technique in 1993Pi16), 6.0 ps *8* (recoil-distance technique in 2001Ha09) and 5.36 ps *9* (extracted from the adopted B(E2)↑=0.427 *3*). μ: Weighted average of 0.57 *11* (using dynamic field technique (1980Br01)), 0.50 *4* (reevaluated value based on the strength of the hyperfine field and the precession angle given at nuclear orientation measurement in ^{110}Ag β^- decay (249.83 d) (1978Wa07), using adopted T$_{1/2}$=5.42 *16*), 0.62 *14* (using recoil gas into vacuum technique in Coulomb excitation (1979LaZL)) and 0.50 *20* (reevaluated value from the reference within 1989Be22, using adopted T$_{1/2}$=5.42 *16*). Other: 0.81 *6* from transient filed technique in 2011Ch23. Q: Weighted average of −0.39 *4* (weighted average of −0.39 *6* (1977Ma41), −0.36 *8* (1976Es02) and −0.42 *10* (1971Be36) in Coulomb excitation) and −0.40 *4* (deduced from fits to the inelastic electron scattering cross sections within the framework of the anharmonic vibrational model in ^{110}Cd(e,e′) (1977Gi13)). Others: −0.55 *8* (or −0.31 *7* in 1971Ha08) and −0.24 *9* (relative to ^{114}Cd in 1970St17). B(E2)↑: Weighted average of 0.45 *4* (1991We15), 0.454 *43* (1977Gi13) from ^{110}Cd(e,e′), 0.427 *3* (weighted average of 0.415 *6* (1985Si01), 0.432 *6* (1972Be66 and 1971Be36) and 0.427 *4* (1976Es02), 0.44 *4* (1971Ha08), 0.467 *19* (1969Mi07), 0.50 *4* (1958St32), 0.41 *6* (1956Te26) and 0.436 *22* (relative to B(E2)↑(^{114}Cd) in 1970St17), in Coulomb excitation). Others: 0.459 (average of 0.474, 0.444, 0.460 and 0.456 in 1965Mc05) and 0.42 (1958Sh01).
1473.07[r] *3*	0$^+$		A C EFG I K N p R	XREF: G(1470)N(1440)p(1474). J$^\pi$: E0 to g.s.; 815.31γ E2 to 2$^+$; $\gamma\gamma(\theta)$ in ^{110}Ag β^- decay

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{110}Cd Levels (continued)

E(level)[†]	J^{π}	$T_{1/2}$	XREF	Comments
				(24.56 s) is only consistent with J=0, with J(657 keV level)=2 (1972Ka34). B(E0; 0^+ to 0^+ g.s. level)/B(E2; 0^+ to 657 keV, 2^+ level)=0.027 *4* (1990Gi01, ^{110}In ε decay (69.1 min)).
1475.7900 *14*	2^+	0.68 ps *10*	ABCDEF HIJKL p	B(E2)↑=0.021 *3* XREF: p(1474). J^{π}: 1475.7792γ E2 to 0^+; 818.0244γ M1+E2 to 2^+. B(E2)↑: Weighted average of 0.021 *3* (1969Mi07) and 0.023 *7* (1961St02) in Coulomb excitation. Other: 0.014 *3* (1991We15) in ^{110}Cd(e,e′). $T_{1/2}$: From adopted B(E2)↑=0.021 *3* and γ branching. Others: 1.02 ps *22* (from B(E2)↑=0.014 *3* (1991We15) in ^{110}Cd(e,e′)), 0.8 ps *+4−2* (1995KuZX) and 0.74 *19* (1999Lo15) (using Doppler shift attenuation method in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
1542.4441[d] *14*	4^+	0.80 ps *+17−16*	BCDEFGHIJKLM P R	XREF: G(1538)J(1543)L(1543)M(1543)R(1539). J^{π}: L(pol d,t)=4; 884.6781γ E2 to 2^+; band member. $T_{1/2}$: Weighted average of 0.7 ps *4* (2001Ha09) (from recoil-distance method, differential decay-curve analysis in (HI,xnγ)) and 0.82 ps +22−12 (1999Lo15) (from ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ)). Other: <2.1 ps (1993Pi16) from (HI,xnγ). μ: 5.4 *+14−13*. μ: From g−factor=1.36 +34 −33 deduced using the strength of the hyperfine field and the precession angle given at nuclear orientation measurement in ^{110}Ag β^- decay (249.83 d) (1978Wa07), and adopted $T_{1/2}$=0.80 *+17−16*. B(E4)↑: 0.5×10^{-3} *5* (1991We15) from ^{110}Cd(e,e′).
1731.31 *3*	0^+		A C FG IJK	XREF: G(1730)J(1735). J^{π}: E0 to g.s.; 1073.55γ E2 to 2^+; L(^{3}He,d)=1. B(E0; 0^+ to 0^+ g.s. level)/B(E2; 0^+ to 657 keV, 2^+ level)<0.049 (1990Gi01) from ^{110}In ε decay (69.1 min). B(E2; 0^+ to 657 keV, 2^+ level)×B(E2; 0^+ to 0^+ g.s. level)/B(E2; 0^+ to 657 keV, 2^+ level)×B(E2; 0^+ to 1475 keV, 2^+ level)<0.00029 (1990Gi01) from ^{110}In ε decay (69.1 min). B(E0; 0^+ to 1473 keV, 0^+ level)/B(E2; 0^+ to 657 keV, 2^+ level)<7.2 (1990Gi01) from ^{110}In ε decay (69.1 min). B(E0; 0^+ to 1473, 0^+ level)/B(E2; 0^+ to 1475 keV, 2^+ level)<0.042 (1990Gi01) from ^{110}In ε decay (69.1 min).
1783.496[r] *15*	2^+	0.8[&] ps *+3−2*	ABCDEF HIJK N QR	XREF: N(1770)Q(1790)R(1785). J^{π}: 1783.49γ E2 to 0^+; 1125.709γ M1+E2 to 2^+; band member; $\gamma\gamma(\theta)$ in ^{110}Ag β^- decay (24.56 s) is only consistent with J=2, with J(657 keV level)=2 (1972Ka34). B(E2)↑=0.005 *3* (1990We08) from ^{110}Cd(e,e′).
1809.48? *9*	4^+		H	E(level),J^{π}: From ^{110}Cd(e,e′). Eγ=1151.9 keV was assigned in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ) (1990Ke02) to depopulate the 1809.66-keV state (J^{π}=(2^+)). However, this level was not observed in 1992Ku01, where it was stated that this γ-ray belongs to ^{111}Cd.
2078.548[k] *11*	3^-	0.7 ps *+4−2*	ABCDEFG IJKL R	XREF: G(2076)R(2076). J^{π}: From L(α,α')=3; 1421.06γ E1 to 2^+. $T_{1/2}$: From Doppler shift attenuation method in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ) (1995KuZX and 1999Lo15).

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Adopted Levels, Gammas (continued)

^{110}Cd Levels (continued)

E(level)[†]	J^π	$T_{1/2}$	XREF	Comments
				Other: 0.46 ps +15−9 in ^{110}Cd(n,n′γ) (2001Co01) (using Doppler shift attenuation method). B(E3)↑=0.11 1 (weighted average of 0.10 2 (from 1965Mc05, under assumption that only direct E3 excitation is involved) and 0.115 13 (1985Fe05) in Coulomb excitation). Other: 0.63 (1963Ha20) in ^{110}Cd(α,α′).
2078.80 5	0^+		A C F I K P	XREF: P(2081). Jπ: E0′s to 0^+; 295.30γ E2 to 2^+; γγ(θ) in ^{110}Ag β^- decay (24.56 s) is only consistent with J=0, with J(657 keV level)=2 (1972Ka34).
2162.8015 15	3^+	0.8[&] ps +6−2	BCDEF IJK P	XREF: J(2164)P(2163). Jπ: 1505.0280γ M1+E2 to 2^+; 620.3553γ M1+E2 to 4^+.
2184[#] 2	(1^-)[#]		J	
2198[‡] 2	$2^+,3^+$[‡]		P	
2220.0683 14	4^+	0.7[&] ps +3−2	B DEF HIJK P R	XREF: R(2221). Jπ: 677.6217γ M1+E2 to 4^+; 744.2755γ E2 to 2^+. B(E4)↑=6.2×10^{-3} 16 (1991We15) from ^{110}Cd(e,e′).
2250.554[r] 11	4^+	0.6[&] ps +5−2	B DEF HIJK	Jπ: 467.01γ E2 to 2^+; 708.133γ M1+E2 to 4^+; band member.
2287.63 11	2^+	0.29[&] ps +7−5	ABCD FG IJK P	XREF: G(2279)J(2288)P(2288). Jπ: 1629.65γ E2(+M1) to 2^+; assignment in ^{111}Cd(pol d,t),^{111}Cd(d,t) and ^{110}Cd(p,p′),^{110}Pd(d,d′); L(^{3}He,d)=(1).
2331.92 4	$(0)^+$		A C FG IJK P	XREF: G(2346)J(2330)P(2333). Jπ: 1674.15γ to 2^+ and the absence of γ′s to 0^+; L(d,t)=0.
2355.792 19	2^+	0.35[&] ps +12−7	BC FG IJK P	XREF: G(2346)J(2357)P(2357). Jπ: L(^{3}He,d)=(1); 624.47γ E2 to 0^+.
2365[‡] 2	2^+[‡]		P	
2377[#] 2	4^+[#]		J	
2381 2			P	E(level): From ^{110}Cd(p,p′),(d,d′).
2385[#] 2	(2^+)[#]		J	
2405[#] 2	$(0^+,2^-)$[#]		J	
2432[#] 2	2^+[#]		J P	Jπ: From L((pol d,t),(d,t))=2.
2433.248 25	3^+		BC F I	Jπ: 957.47γ M1+E2 to 2^+; 890.7γ to 4^+.
2451[#] 2	[#]		J	E(level): From ^{110}Cd(p,p′),(d,d′).
2477.41 5	2^+		C G I P R	XREF: R(2475). Jπ: 746.19γ E2 to 0^+.
2479.9339[d] 25	6^+	0.6 ps 4	B DEF I M	Jπ: L(p,t)=(6); 937.485γ E2 to 4^+; band member. $T_{1/2}$: Using recoil-distance method, differential decay-curve analysis in (HI,xnγ) (2001Ha09). Others: 0.40 ps +15−9 (in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ) (1999Lo15) using Doppler shift attenuation method), 0.2 ps +8−1 (in ^{110}Cd(n,n′γ) (2001Co01) using Doppler shift attenuation method), <2.1 ps (in (HI,xnγ) (1993Pi16) using recoil-distance method).
2481.606 20	$(2)^+$	0.46[&] ps +23−12	F IJ N	XREF: N(2490). Jπ: 402.84γ (E1) to 3^-; 1823.84γ M1+E2 to 2^+.

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Adopted Levels, Gammas (continued)

^{110}Cd Levels (continued)

E(level)[†]	J^π	$T_{1/2}$	XREF	Comments
2539.691[k] *6*	5^-	0.60 ps *+24−14*	B DEFG IJ R	XREF: R(2544). $T_{1/2}$: Weighted average of 0.6 ps *+4−2* (in ^{110}Cd(n,n′γ) (2001Co01), using Doppler shift attenuation method) and 0.6 ps *+3−2* (in ^{108}Pd(α,2nγ), ^{110}Pd(α,4nγ) (1995KuZX and 1999Lo15), using Doppler shift attenuation method). J^π: 460.85γ E2 to 3^-; 997.256γ E1 to 4^+; L(^{3}He,d)=4.
2561.284 *9*	4^+	0.9[&] ps *+8−3*	B D F HIJ P	XREF: P(2563). J^π: 1085.447γ E2 to 2^+; 1018.94γ M1+E2 to 4^+.
2566.47 *6*	$(2^-,3)$		G I	XREF: G(2570). J^π: 782.8γ and 1908.7γ to 2^+; branching ratios would favor dipole transitions; the absence of γ′s to 0^+ would argue against J^π=1 and 2^+.
2633.20 *9*	2^+	0.139[&] ps *+21−14*	C IJ P	J^π: 1090.83γ to 4^+; 1975.2γ E2+M1 to 2^+; assignment in ^{111}Cd(pol d,t),^{111}Cd(d,t) and ^{110}Cd(p,p′),(d,d′).
2649.95 *6*	1^-	0.03[&] ps *1*	G IJ Q	XREF: G(2652). J^π: 2649.92γ E1 to 0^+. $T_{1/2}$: Other: 0.0203 ps *5* from ^{110}Cd(γ,γ′), deduced using ground state transition width Γ_0 and adopted branching ratios. Note that authors of 2005Ko32 only quote depopulating 2649.92γ, but not the 1176.8γ one resulting in $T_{1/2}$=0.0298 ps *8*.
2659.866[j] *7*	5^-		B DEF IJ	J^π: 1117.437γ E1 to 4^+; 120.154γ M1(+E2) to 5^-.
2662.13 *10*	0^+		AB I P	J^π: 2004.40γ E2 to 2^+; direct population in ^{110}Ag β^- decay (24.56 s) (J^π=1^+); $\gamma\gamma(\theta)$ in ^{110}Ag β^- decay (24.56 s) is only consistent with J=0, with J(657 keV level)=2 (1972Ka34). Note that L((pol d,t),(d,t))=2+4 would suggest J^π=3^+.
2705.669 *10*	$(4)^+$		B F IJ	J^π: 1163.19γ M1+E2 to 4^+; from ^{111}Cd(pol d,t),^{111}Cd(d,t).
2707.397 *8*	$(4)^+$		B F I P	J^π: 1.60γ M1 to 3^+; 1164.98γ M1(+E2) to 4^+.
2757[#] *3*	2^-[#]		G J	XREF: G(2754).
2758.25 *8*	$(1,2,3)^+$	0.23 ps *+9−6*	I P	J^π: 1282.45γ M1+E2 to 2^+; 1^+,2^+ from ^{111}Cd(pol d,t),^{111}Cd(d,t).
2787.49 *4*	2^+	0.028 ps *7*	C IJ P	J^π: L((pol d,t),^{111}Cd(d,t))=2; 2129.52γ M1+E2 to 2^+, 1314.25γ and 2788.37γ to 0^+.
2793.441 *7*	$(4)^+$		B F I	J^π: 573.0γ M1+E2 to 4^+; 630.62γ M1(+E2) 3^+.
2813 *3*			P	E(level): From ^{111}Cd(pol d,t),^{111}Cd(d,t).
2834[‡] *3*	$3^+,4^+$[‡]		P	
2842.682 *10*	$(5)^-$		B EF IJ	XREF: J(2840). J^π: 182.83γ M1+E2 to 5^-; 1300.233γ E1(+M2) to 4^+; 409.36γ to 3^-.
2869.144 *23*	$1^+,2^+$		C IJ P	J^π: 2211.33γ M1+E2 to 2^+; 2869.28γ to 0^+; direct population in ^{110}In ε decay (69.1 min) (J^π=2^+).
2876.812[r] *10*	6^+		B DEF IJ	J^π: 626.256γ E2 to 4^+; band member.
2879.185[f] *9*	7^-	0.61 ns *8*	EF I	J^π: 339.498γ E2 to 5^-; 399.254γ E1(+M2) to 6^+. $T_{1/2}$: Weighted average of 0.69 ns *42* (from recoil-distance measurement in (HI,xnγ) (1993Pi16)), 0.62 ns *14* (deduced using $\gamma\gamma$(t) in

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Adopted Levels, Gammas (continued)

^{110}Cd Levels (continued)

E(level)[†]	J$^{\pi}$	T$_{1/2}$	XREF	Comments
				(HI,xnγ) (1994Ju04)), 0.60 ns *10* (from generalized centroid-shift method in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ)(1998Ko35)). Other: <0.87 ns in (HI,xnγ) (2001Ha09).
2895.948[j] *13*	6$^-$		EF I	J$^{\pi}$: 356.255γ M1 to 5$^-$; 415.9γ E1 to 6$^+$; band member.
2917.60 *7*	2$^+$,3,4$^+$		IJ P	XREF: J(2915). J$^{\pi}$: 356.38γ to 4$^+$; 1441.9γ to 2$^+$.
2926.7474 *16*	5$^+$		B D F I	J$^{\pi}$: 763.9424γ E2 to 3$^+$; 446.812γ M1+E2 to 4$^+$; 387.075γ to 6$^+$.
2938[‡] *3*	2$^+$[‡]		P	
2975.24 *4*	1$^+$,2$^+$		C G I P	XREF: G(2973)P(2972). J$^{\pi}$: 2317.41γ M1+E2 to 2$^+$; 2975.29γ to 0$^+$.
2984.46 *14*	2$^+$,3$^+$	0.11[&] ps *+20−5*	IJ R	XREF: J(2982)R(2984). J$^{\pi}$: 2326.9γ M1+E2 to 2$^+$; 905.7γ to 3$^-$; 1441.9γ to 4$^+$.
2984.48 *6*	(5$^-$)		F J P R	XREF: J(2982)P(2983). J$^{\pi}$: L((pol d,t),(d,t))=5; 1442.03γ D to 4$^+$.
2991[#] *3*	(5$^-$)[#]		J P	XREF: P(2993).
2993.63 *17*	(0$^+$)		I P	J$^{\pi}$: 1517.83γ to 2$^+$ in ^{110}Cd(n,n$'\gamma$).
2994.07 *8*	(3$^+$,4$^+$)		I	J$^{\pi}$: 1451.62γ to 4$^+$ in ^{110}Cd(n,n$'\gamma$).
3008.4? *7*	1,2$^+$		I	J$^{\pi}$: 2350.7γ to 2$^+$; 3008.3γ to 0$^+$.
3021[#] *3*	(1$^-$)[#]		J	
3029.077[k] *12*	7$^-$	0.30 ns *10*	EF	J$^{\pi}$: 369.20γ E2 to 5$^-$; 149.88γ M1(+E2) to 7$^-$; band member. T$_{1/2}$: From centroid-shift method in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ) (1998Ko35).
3042.86 *8*	1$^+$	31 fs *4*	I PQ	XREF: P(3040)Q(3044). J$^{\pi}$: 3042.98γ M1 to 0$^+$. T$_{1/2}$: Deduced from the ground state transition width Γ_0 in ^{110}Cd(γ,γ') (2005Ko32) and the adopted branching ratios.
3052[‡] *3*	2$^+$[‡]		P	
3055.703[j] *12*	8$^-$	2.26 ns *10*	EF	J$^{\pi}$: 159.746γ E2 to 6$^-$; 176.517γ M1+E2 to 7$^-$; band member. T$_{1/2}$: Weighted average of 2.25 ns *10* (from centroid-shift method in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ) (1998Ko35)) and 2.4 ns *4* (from $\gamma\gamma$(t) in (HI,xnγ) (1994Ju04)).
3064.712 *13*	6$^+$		DEF IJ	XREF: J(3061). J$^{\pi}$: 844.667γ E2 to 4$^+$; 584.21γ M1+E2 to 6$^+$.
3073[‡] *3*	(1$^+$,2$^+$)[‡]		P	E(level): Probably unresolved doublet in ^{111}Cd(pol d,t),^{111}Cd(d,t).
3074.971[r] *17*	6$^-$		EF	J$^{\pi}$: 535.269γ M1+E2 to (5$^-$); band member.
3078.381 *23*	1$^{(+)}$	187 fs *40*	C I Q	J$^{\pi}$: 3078.42γ (M1) to 0$^+$; 2420.51γ to 2$^+$; direct population in ^{110}In ε decay (69.1 min) (J$^{\pi}$=2$^+$). T$_{1/2}$: Deduced from the ground state transition width Γ_0 in ^{110}Cd(γ,γ') (2005Ko32) and the adopted branching ratios.
3101.88 *3*	2$^+$		C G IJ P	XREF: P(3098). J$^{\pi}$: 3102.00γ to 0$^+$; 1023.05γ to 3$^-$; assignment in ^{111}Cd(pol d,t),^{111}Cd(d,t).
3106[‡] *3*	3$^+$,4$^+$[‡]		P	

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Adopted Levels, Gammas (continued)

^{110}Cd Levels (continued)

E(level)[†]	J^π	$T_{1/2}$	XREF	Comments
3118[#] *3*	2+[#]		J	
3121.62 *3*	6+		D F I	J^π: 581.93γ E1 to 5−; 560.32γ E2 to 4+.
3128.41 *7*	1+,2+		C P	XREF: P(3125). J^π: 3128γ to 0+; 1344.88γ to 2+; direct population in ^{110}In ε decay (69.1 min); assignment in ^{111}Cd(pol d,t),^{111}Cd(d,t).
3135.18 *7*	2+,3+		I	J^π: 1592.7γ to 4+; 2477.39γ M1+E2 to 2+.
3142 *2*	2+,3+,4+		J P	E(level): Weighted average of 3141 *3* (from ^{111}Cd(pol d,t),^{111}Cd(d,t)) and 3143 *3* (from ^{110}Cd(p,p′),(d,d′)). J^π: From ^{111}Cd(pol d,t),^{111}Cd(d,t).
3148[‡] *3*	0+[‡]		P	
3171.19 *20*	2+,3+,4+		G I P	J^π: From ^{111}Cd(pol d,t),^{111}Cd(d,t); 2513.4γ to 2+.
3183[#] *3*	(4+)[#]		J P	XREF: P(3179).
3184.53 *3*	5−,6−		F	J^π: 644.82γ M1+E2 to 5−.
3187.337[u] *21*	8+	55[b] ps *6*	DEF	J^π: 707.40γ E2 to 6+.
3193.40 *4*	(3)+		C I P	XREF: P(3190). J^π: 1+,2+,3+ in ^{111}Cd(pol d,t),^{111}Cd(d,t); 1030.0γ to 3+ and 1410.08γ to 2+. The absence of γ′s to 0+ would argue against J^π=1+ and 2+.
3199[#] *3*	(2−)[#]		J	
3203 *3*			P	E(level): Probably J^π=0+ component of unresolved doublet in ^{111}Cd(pol d,t),^{111}Cd(d,t).
3208.69 *7*	2+,3+		C P	XREF: P(3203). E(level): Probably a component of unresolved doublet in ^{111}Cd(pol d,t),^{111}Cd(d,t). J^π: 1666.23γ to 4+; direct population in ^{110}In ε Decay (69.1 min) (J^π=2+); assignment in ^{111}Cd(pol d,t),^{111}Cd(d,t).
3239.56 *5*	6+		D F	J^π: 360.7γ E1 to 7−; 397.18γ E1 to (5)−; 1018.99γ to 4+.
3251[#] *3*	3−[#]		G J	XREF: G(3247).
3256.49 *14*	1+,2+,3+		I P	XREF: P(3253). J^π: 2598.69γ to 2+; assignment in ^{111}Cd(pol d,t),^{111}Cd(d,t).
3262[‡] *3*	1+,2+,3+[‡]		P	
3275.449[d] *17*	8+	0.70 ps *19*	DEF M	J^π: L(p,t)=(8); 795.5γ E2 to 6+; band member. $T_{1/2}$: Weighted average of 0.62 ps *21* in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ) (using Doppler shift attenuation method (1995KuZX)) and 1.0 ps *4* in (HI,xnγ) (using recoil-distance method, differential decay-curve analysis (2001Ha09)). Others: <2.8 ps in (HI,xnγ) (1993Pi16), (using recoil-distance method), >0.83 ps in (1999Lo15) (using Doppler shift attenuation method).
3277.86 *14*	(1+)	37.4 fs *1*	IJ PQ	XREF: P(3279)Q(3281). J^π: 3281γ (M1) to 0+; 2620.00γ to 2+. $T_{1/2}$: From ^{110}Cd(γ,γ′) (2005Ko32), by assuming that only 3281γ depopulate this level.
3298.13 *20*	1−	134 fs *12*	IJ Q	XREF: J(3302). J^π: 3298.1γ D to 0+; 2640.1γ to 2+; assignment in ^{110}Cd(p,p′), ^{110}Cd(d,d′). $T_{1/2}$: From ^{110}Cd(γ,γ′) (2005Ko32), by assuming that

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Adopted Levels, Gammas (continued)

^{110}Cd Levels (continued)

E(level)†	J^{π}	$T_{1/2}$	XREF	Comments
				only 3298γ depopulate this level.
3314.334 *24*	2^+		C IJ P	XREF: J(3309)P(3309). J^{π}: 1235.67γ to 3^-; 1583.18γ to 0^+; 1151.70γ to 3^+; direct population in ^{110}In ε Decay (69.1 min) ($J^{\pi}=2^+$).
3329 *17*	$(1^-,2^-,3^-)$		G	E(level): unresolved doublet in ^{109}Ag(^{3}He,d). J^{π}: L(^{3}He,d)=(2).
3334.85[r] *3*	7^-		EF	J^{π}: 456.0γ M1+E2 to 7^-; 279.142γ M1(+E2) to 8^-; band member.
3340[#] *3*	$(5^-,6^+)$[#]		J	
3340.83 *14*			I	
3345.810[f] *15*	9^-	49[b] ps *3*	EF M	J^{π}: 290.09γ M1+E2 to 8^-; 466.624γ E2 to 7^-; band member.
3353[‡] *3*	$2^+,3^+$[‡]		P	
3359.06 *20*	1^-	11.7 fs *2*	I Q	J^{π}: 3359.0γ E1 to 0^+. $T_{1/2}$: Deduced from Γ_0 in ^{110}Cd(γ,γ′) (2005Ko32).
3366.8 *4*	$1^+,2^+,3^+,4^+$		I P	XREF: P(3362). J^{π}: 2709.0γ to 2^+; assignment in ^{111}Cd(pol d,t),^{111}Cd(d,t).
3373[#] *3*	4^+[#]		J P	
3391.177 *16*	$(7)^-$		EF	J^{π}: 912.2γ (E1) to 6^+; 495.227γ M1+E2 to 6^-.
3403.29 *6*	(1^-)		C G I P	XREF: G(3410)P(3397). J^{π}: L(^{3}He,d)=2, 3403.48γ to 0^+; 2745.45γ to 2^+. However, assignment in ^{111}Cd(pol d,t),^{111}Cd(d,t) suggests $J^{\pi}=1^+,2^+,3^+$.
3413[#] *3*	4^+[#]		J P	XREF: P(3412).
3427[‡] *3*	0^+[‡]		P	
3427.27[g] *11*	8^-	6.0[b] ps *6*	EF I	J^{π}: 371.6γ M1+E2 to 8^-; 548.2γ M1+E2 to 7^-; 531γ to 6^-; band member.
3439.719 *10*	8^+	0.45 ps *+28−17*	EF	J^{π}: 959.785γ E2 to 6^+; 164.26γ M1(+E2) to 8^+. $T_{1/2}$: From Doppler shift attenuation method in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ) (1995KuZX). Others: <2.8 ps in (HI,xnγ) (from recoil distance method (1993Pi16)) and >1.11 ps from Doppler shift attenuation method in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ)(1999Lo15).
3449.6 *3*	(1,2)		IJ P	XREF: J(3447)P(3442). J^{π}: 1^- in ^{110}Cd(p,p′),(d,d′), but $J^{\pi}=1^+,2^+$ in ^{111}Cd(pol d,t),^{111}Cd(d,t); 1973.8γ to 2^+.
3460[‡] *4*	$1^+,2^+$[‡]		G J P	
3466.39 *4*	1,2,3		C I	J^{π}: 2808.59γ to 2^+; direct population in ^{110}In ε Decay (69.1 min) ($J^{\pi}=2^+$).
3475.416 *24*	1^+	72 fs *4*	C IJ PQ	XREF: J(3476)P(3471). J^{π}: 3475.34γ (M1) to 0^+; direct population in ^{110}In ε Decay (69.1 min) ($J^{\pi}=2^+$). Note that $J^{\pi}=1^-$ in ^{110}Cd(p,p′),(d,d′). $T_{1/2}$: Deduced from Γ_0 in ^{110}Cd(γ,γ′) (2005Ko32), by assuming that only 3475γ depopulate this level.
3489[#] *3*	(0^+)[#]		J	
3492.64 *6*	$(5^-,6^-)$		F P	XREF: P(3487).

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Adopted Levels, Gammas (continued)

^{110}Cd Levels (continued)

E(level)[†]	J^π	$T_{1/2}$	XREF	Comments
				J^π: 952.9γ to 5^-; 1012.70γ to 6^+; assignment in ^{111}Cd(pol d,t),^{111}Cd(d,t).
3493.1 *4*			I	
3499[‡] *4*	$1^+,2^+$[‡]		J P	
3510[‡] *4*	$1^+,2^+$[‡]		P	
3517 *18*	$0^-,1^-$		G	E(level): From ^{109}Ag(^{3}He,d). J^π: L(^{3}He,d)=0.
3525.34 *5*	6^+		D F	J^π: 460.85γ E2(+M1) to 6^+; 1982.77γ to 4^+; direct population in ^{110}In ε decay (4.92 h) ($J^\pi=7^+$).
3536[‡] *4*	$1^+,2^+,3^+$[‡]		J P	J^π: Other:(0^+) from ^{110}Cd(p,p′),^{110}Cd(d,d′).
3581 *4*			P	E(level): From ^{111}Cd(pol d,t),^{111}Cd(d,t).
3598.0 *7*	1^+	71 fs *6*	I PQ	J^π: 3596.9γ M1 to 0^+. $T_{1/2}$: Deduced using ground state transition width Γ_0 in ^{110}Cd(γ,γ′) (2005Ko32).
3604[#] *4*	3^-[#]		J	
3611.041[d] *15*	10^+	0.487 ns *24*	EF	μ=−1.0 *4* $T_{1/2}$: Weighted average of 0.45 ns *10* (from generalized centroid shift method in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ) (1998Ko35)), 0.56 ns *3* (from recoil distance method in (HI,xnγ) (1993Pi16)), 0.49 ns *14* (from γγ(t) in (HI,xnγ)(1994Ju04)) and 0.464 ns *17* (using recoil-distance method, differential decay-curve analysis in (HI,xnγ) (2001Ha09)). J^π: 335.596γ E2 to 8^+; 265.218γ E1(+M2) to 9^-. μ: From g-factor=−0.09 *3* in 1995Re15, deduced using the perturbed angular-correlation technique and $T_{1/2}$=0.56 ns *3*, and the adopted $T_{1/2}$=0.487 ns *24*.
3614 *18*	$0^-,1^-$		G P	E(level): From ^{109}Ag(^{3}He,d). J^π: L(^{3}He,d)=0. Note that $J^\pi=1^+,2^+,3^+$ in ^{111}Cd(pol d,t),11Cd(d,t).
3634.57 *12*	2^+		C J P	XREF: J(3632)P(3630). J^π: Assignment in ^{110}Cd(p,p′),(d,d′); 1555.76γ to 3^-; 1851.15γ to 2^+.
3641.10[m] *4*	8^-		EF	J^π: 566.02γ (E2) to 6^-; 761.93 M1+E2 to 7^-.
3657[‡] *4*	$1^+,2^+,3^+$[‡]		G J P	
3668[‡] *4*	$1^+,2^+,3^+$[‡]		P	
3683.15[k] *5*	9^-		EF	J^π: 654.00γ E2 to 7^-; 627.59γ M1+E2 to 8^-; band member.
3686[‡] *4*	$1^+,2^+,3^+$[‡]		P	
3689[#] *4*	3^-[#]		J	
3696			P	E(level): From ^{111}Cd(pol d,t),^{111}Cd(d,t).
3713			P	E(level): From ^{111}Cd(pol d,t),^{111}Cd(d,t).
3726.58 *18*	$1,2^+$		C N	XREF: N(3730). J^π: 3726.51γ to 0^+; direct population in ^{110}In ε Decay (69.1 min) ($J^\pi=2^+$); L(^{3}He,n)=0+2.
3736[#] *4*	2^+[#]		G J P	J^π: Other: $1^+,2^+,3^+$ in ^{111}Cd(pol d,t),^{111}Cd(d,t).
3760[‡] *4*	$1^+,2^+,3^+$[‡]		P	
3772.77 *4*	1^+	12.8 fs *1*	C IJ PQ	XREF: J(3776)P(3773). J^π: 3772γ M1 to 0^+. Note, that $1^+,2^+,3^+$ in ^{111}Cd(pol d,t),^{111}Cd(d,t) and ($2^+,3^-$) ^{110}Cd(p,p′),(d,d′). $T_{1/2}$: Deduced using ground state transition width Γ_0

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Adopted Levels, Gammas (continued)

^{110}Cd Levels (continued)

E(level)[†]	J^π	$T_{1/2}$	XREF	Comments
				given in ^{110}Cd(γ,γ') (2005Ko32) and the adopted branching ratios.
3782.13[n] *4*	9^-		EF	J^π: 902.90γ E2 to 7^-; 726.43γ M1+E2 to 8^-.
3791.62 *5*	8^+		F	J^π: 914.50γ E2 to 6^+; 351.93γ M1(+E2) to 8^+; band member.
3808[‡] *4*	$2^+,3^+$[‡]		P	
3812 *19*	$1^-,2^-,3^-$		G	E(level): From ^{109}Ag(^{3}He,d). J^π: L(^{3}He,d)=2.
3823.247[j] *21*	10^-	3.5[b] ps *3*	EF J	XREF: J(3824). J^π: 767.532γ E2 to 8^-; 477.45γ M1 to 9^-; band member. $T_{1/2}$: Other: >2.1 ps from Doppler shift attenuation method in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ) ((1995KuZX) and (1999Lo15)).
3830[‡] *4*	$1^+,2^+,3^+$[‡]		J P	XREF: J(3824).
3854.1 *10*	(1^+)	46 fs *6*	J PQ	XREF: J(3847)P(3850). E(level): From ^{111}Cd(pol d,t),^{111}Cd(d,t). J^π: 3854γ (M1) to 0^+; $1^+,2^+,3^+$ assignment in ^{111}Cd(pol d,t),^{111}Cd(d,t).
3861.9 *7*	(1^+)	13.3 fs *5*	PQ	XREF: P(3866). J^π: 3862γ (M1) to 0^+; $1^+,2^+,3^+$ assignment in ^{111}Cd(pol d,t),^{111}Cd(d,t). $T_{1/2}$: Deduced using ground state transition width Γ_0 given in ^{110}Cd(γ,γ') (2005Ko32) and adopted branching ratios.
3866[‡] *4*	$1^+,2^+,3^+$[‡]		P	
3888[‡] *4*	$2^+,3^+$[‡]		J P	XREF: J(3891).
3897 *19*	$0^-,1^-$		G	E(level): From ^{109}Ag(^{3}He,d). J^π: L(^{3}He,d)=0.
3924[‡] *4*	$1^+,2^+,3^+$[‡]		J P	XREF: J(3920).
3957 *4*	(2,3,4,5)		G J	XREF: G(3950). E(level): From ^{110}Cd(p,p'),^{110}Cd(d,d'). J^π: L(^{3}He,d)=(3,4).
3968[‡] *4*	$1^+,2^+,3^+$[‡]		P	
3988[‡] *4*	$1^+,2^+,3^+$[‡]		P	
3992.79[r] *15*	(9^-)		F	J^π: From 1113.60γ (E2) to 7^-; band member.
4005[‡] *4*	$1^+,2^+$[‡]		J P	XREF: J(3997).
4024[‡] *4*	0^+[‡]		P	
4042[‡] *4*	$1^+,2^+,3^+$[‡]		J P	XREF: J(4034).
4067 *5*			J	E(level): From ^{110}Cd(p,p'),^{110}Cd(d,d').
4077.176[e] *23*	10^+	0.72 ps *+21−13*	EF	J^π: 801.724 E2 to 8^+. $T_{1/2}$: Weighted average of 0.69 ps *21* (from recoil-distance method in (HI,xnγ) (1993Pi16)) and 0.8 ps *+4−2* (from Doppler shift attenuation method in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ) (1999Lo15)). Others: >1.4 ps (from Doppler shift attenuation method in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ) (1995KuZX)), <3.5 ps (from recoil-distance Doppler shift technique, using the differential decay curve method in (HI,xnγ) (2001Ha09)).
4078[‡] *4*	$1^+,2^+,3^+$[‡]		P	

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Adopted Levels, Gammas (continued)

^{110}Cd Levels (continued)

E(level)[†]	J^π	$T_{1/2}$	XREF	Comments
4104[‡] 4	$1^+,2^+,3^+$[‡]		J P	XREF: J(4098).
4128[‡] 4	0^+[‡]		P	
4154[‡] 4	$1^+,2^+,3^+$[‡]		J P	XREF: J(4143).
4171[‡] 4	$1^+,2^+,3^+$[‡]		J P	XREF: J(4170).
4172.076[d] 18	12^+	8.1 ps 3	EF	J^π: 561.034γ E2 to 10^+; band member. $T_{1/2}$: Weighted average of 8.3 ps 4 (from recoil-distance method in (HI,xnγ) (1993Pi16)) and 7.9 ps 4 (from recoil-distance Doppler shift technique, using the differential decay curve method in (HI,xnγ) (2001Ha09)).
4172.706[f] 24	11^-	2.08[b] ps 14	EF	J^π: 826.893γ E2 to 9^-; band member. $T_{1/2}$: Other: 1.7 ps +14−7 from Doppler shift attenuation method in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ) (1995KuZX and 1999Lo15).
4181 4			P	E(level): From ^{111}Cd(pol d,t),^{111}Cd(d,t).
4181.96[g] 9	10^-	1.04[b] ps 14	EF	J^π: 836.13γ M1+E2 to 9^-; 754.69γ E2 to 8^-; band member.
4200[#] 5	2^+[#]		J	
4290	$0^+,1^+$		N	E(level): From ^{108}Pd(^{3}He,n). J^π: L(^{3}He,n)=0.
4334.26[m] 7	10^-		EF	J^π: 988.44γ M1 to 9^-; band member.
4421.62 20	(10^+)		F	J^π: From 1075.8γ D to 9^-.
4438.37 7	9^+		EF	J^π: 1251.03γ M1+E2 to 8^+.
4559.12[k] 5	11^-	1.7 ps +14−7	EF	J^π: 736.7γ M1 to 10^-; 877.0γ E2 to 9^-; band member. $T_{1/2}$: From Doppler shift attenuation method in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ) (1995KuZX and 1999Lo15).
4620.2[u] 4	10^+		EF	J^π: 1433.0γ to 8^+; band member.
4660	$0^+,1^+$		N	E(level): From ^{108}Pd(^{3}He,n). J^π: L(^{3}He,n)=0.
4736.81[n] 19	11^-		EF	J^π: 954.64γ E2 to 9^-; band member.
4888.27[e] 3	12^+	1.39[b] ps 14	EF	J^π: 811.093γ E2 to 10^+; band member. Other: $J^\pi=12^+$ in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ), interpreted as a member of the g.s. band.
4930.26[j] 19	12^-		E	J^π: 1107.0γ E2 to 10^-; 757.7γ M1 to 11^-; band member.
5026.32[d] 7	14^+	1.39[b] ps 14	EF	J^π: 854.25γ E2 to 12^+; band member. $T_{1/2}$: Other: <2.8 ps (from recoil-distance method, differential decay-curve analysis in (HI,xnγ) (2001Ha09)).
5092.56[g] 22	12^-	3.3[b] ps 4	E	J^π: 910.6γ E2 to 10^-; band member.
5113.6[o] 3	12^+		E	J^π: 1036.7γ E2 to 10^+.
5212.7[m] 3	12^-		E	J^π: 878.2γ E2 to 10^-; band member.
5215.5[u] 7	(11^+)		E	J^π: 595.3γ to 10^+; band member.
5248.93[f] 20	13^-	<1.4[b] ps	E	J^π: 1076.1γ E2 to 11^-; band member.
5497.29 25	13^-		E	J^π: 937γ to 11^-; 1325.6γ to 12^+.
5500.00[s] 24	13^+		E	J^π: 1327.9γ M1 to 12^+.
5675.5[p] 3	14^+		E	J^π: 787.1γ E2 to 12^+.
5758.52[i] 18	13^-		E	J^π: 828.0γ M1 to 12^-; 1198.9γ E2 to 11^-; 1586.8γ E1 to 12^+.
5789.95[q] 25	14^+		E	J^π: 1617.9γ E2 to 12^+.

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Adopted Levels, Gammas (continued)

^{110}Cd Levels (continued)

E(level)[†]	J^π	$T_{1/2}$	XREF	Comments
5856.3[e] *3*	14+		E	J^π: 967.7γ E2 to 12+; band member.
5892.9[u] *8*	(12+,13+)		E	J^π: 677.4γ to 11+; band member.
5914.5[o] *3*	14+		E	J^π: 1026.2γ E2 to 12+; band member.
5966.98[g] *21*	14−		E	J^π: 874.4γ E2 to 12−; band member.
5984.2[i] *4*	14−		E	J^π: 225.6γ M1 to 13−; band member.
6079.8[u] *10*			E	
6100.87[d] *19*	16+	0.250[a] ps *21*	E	J^π: 1074.6γ E2 to 14+; band member.
6101.4[j] *3*	14−		E	J^π: 1171.3γ E2 to 12−; band member.
6178.5[s] *3*	15+		E	J^π: 678.5γ E2 to 13+; 1152.1γ M1 to 14+; band member.
6181.45[f] *19*	15−		E	J^π: 1155.2γ E1 to 14+; 932.3γ E2 to 13−; band member.
6216.9[l] *3*	(14)		E	J^π: 1190.6γ D to 14+.
6354.3[i] *5*	15−		E	J^π: 370.0γ M1 to 14−; band member.
6489.9 *6*	(1)		Q	J^π: 6490γ D to 0+.
6543.9 *11*	(15−)		E	J^π: 1295γ to 13−.
6568.8 *4*	14		E	J^π: From a probable ΔJ=0 *1542*.4γ d to 14+.
6575.6[p] *4*	16+		E	J^π: 900.1γ E2 to 14+; band member.
6584.5[v] *4*	14		E	J^π: From a very probable ΔJ=0 *1558*.1γ D to 14+.
6646.1[q] *6*	(16+)		E	J^π: 856.1γ E2 to 14+.
6671.1[k] *5*	(15−)		E	J^π: 1422γ to 13−, 1645γ to 14+; band structure.
6672.6[g] *3*	16−		E	J^π: 705.7γ E2 to 14−; band member.
6798.0[e] *6*	16+		E	J^π: 941.7γ E2 to 14+; band member.
6836.2[o] *6*	16+		E	J^π: 921.7γ E2 to 14+; band member.
6879.6[v] *4*	15		E	J^π: 295.0γ D to 14; band member.
6962.8[i] *6*	16−		E	J^π: 608.5γ M1 to 15−; band member.
6993.1[f] *3*	17−		E	J^π: 811.6γ E2 to 15−; 892.2γ E1 to 16+; band member.
7047.6[j] *4*	16−		E	J^π: 946.3γ E2 to 14−; band member.
7184.3[s] *5*	17+		E	J^π: 1005.8γ E2 to 15+; band member.
7281.0[v] *5*	16		E	J^π: 401.4γ D to 15; band member.
7285.8[l] *5*	(16)		E	J^π: 1068.9γ (Q) to (14); band member.
7325.3[d] *3*	18+	0.159[a] ps *21*	E	J^π: 1224.5γ E2 to 16+; band member.
7341.6[h] *9*			E	
7443.3[k] *4*	(17−)		E	J^π: 1261γ to 15−; 770.7γ to 16−; band member.
7523.2[g] *5*	18−		E	J^π: 850.6γ E2 to 16−; band member.
7575.2[i] *6*	17−		E	J^π: 612.4γ M1 to 16−; band member.
7594.2[h] *8*			E	
7653.1[p] *5*	18+		E	J^π: 1077.4γ E2 to 16+; band member.
7759.0[v] *6*	17		E	J^π: 477.9γ D to 16; band member.
7777.9[h] *6*			E	
7797.7 *6*	(17)		E	J^π: 516.8γ D to 16.
7801.1[q] *12*	(18+)		E	J^π: 1155γ (E2) to (16+); band member.
7945.9[f] *4*	19−		E	J^π: 952.8γ E2 to 17−; band member.
7970.3[j] *7*	18−		E	J^π: 922.7γ E2 to 16−; band member.
8016.5[t] *6*	17		E	J^π: From band structure in (HI,xnγ).
8278.0[t] *4*	18		E	J^π: 952.8γ D to 18+; band member.
8292.3 *5*	(18)		E	J^π: 967.0γ to 18+.
8372.8[h] *8*			E	
8405.3[k] *11*	(19−)		E	J^π: 962γ E2 to (17−); band member.
8481.3[s] *11*	(19+)		E	J^π: 1297γ (E2) to 17+; band member.
8530.7[l] *7*	(18)		E	J^π: 1244.9γ to (16); band member.

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Adopted Levels, Gammas (continued)

^{110}Cd Levels (continued)

E(level)[†]	J^π	$T_{1/2}$	XREF	Comments
8595.6[t] *5*	19		E	J^π: 317.6γ D to 18; band member.
8629.7[g] *6*	20^-		E	J^π: 1106.5γ E2 to 18^-; band member.
8648.3[d] *4*	20^+	0.118[a] ps *21*	E	J^π: 1323.0γ E2 to 18^+; band member.
8861.6[p] *5*	20^+		E	J^π: 1208.5γ E2 to 18^+; band member.
8967.9[t] *6*	20	0.127[c] ps *+12−15*	E	J^π: 372.3γ D to 19; band member.
9106.8[f] *5*	21^-		E	J^π: 1160.9γ E2 to 19^-; band member.
9430.4[t] *7*	21	0.070[c] ps *+10−12*	E	J^π: 462.5γ D to 20; band member.
9574.3[k] *15*	(21^-)		E	J^π: From band structure in (HI,xnγ).
9962.3[d] *5*	22^+	0.15 ps *5*	E	J^π: 1314.1γ E2 to 20^+; band member. $T_{1/2}$: From Doppler shift attenuation method using the line-shape analysis in (HI,xnγ) (2011Ro01). The quoted uncertainty does not include additional systematics error in the stopping powers that may be as large as 20%. Note that $T_{1/2}$=0.11 ps *4* was deduced by including 1100γ. However, authors of 2011Ro01 stated that 1100-keV γ was not confirmed in their $\gamma\gamma$-coincidence gated spectra (see XUNDL compilation dated on January 5th, 2011) and they reported $T_{1/2}$=0.15 ps *5*.
9971.7[g] *12*	22^-		E	J^π: 1342γ E2 to 20^-; band member.
9991.4[t] *12*	22	0.065[c] ps *+10−12*	E	J^π: 561γ D to 21; band member.
10228.7[p] *12*	(22^+)		E	J^π: From band structure in (HI,xnγ).
10495.8[f] *12*	23^-		E	J^π: 1389γ E2 to 21^-; band member.
10665.2[t] *13*	23	0.064[c] ps *+12−16*	E	J^π: 673.8γ D to 22; band member.
11320.3[d] *6*	24^+	0.19[a] ps *5*	E	J^π: 1358.0γ E2 to 22^+; band member.
11451.2[t] *16*	24		E	J^π: 786γ D to 23; band member.
11454.8[g] *15*	(24^-)		E	J^π: From band structure in (HI,xnγ).
12081.8[f] *15*	(25^-)		E	J^π: From band structure in (HI,xnγ).
12763.3[d] *12*	26^+	0.24 ps	E	J^π: 1443γ E2 to 24^+; band member. $T_{1/2}$: Effective $T_{1/2}$ from Doppler shift attenuation method using the line-shape analysis in (HI,xnγ) (2011Ro01). 1443γ which depopulate 12763 keV $J^\pi=26^+$ and 14206 keV $J^\pi=28^+$ levels was used to deduce the effective $T_{1/2}$.
13032.8[g] *18*	(26^-)		E	J^π: From band structure in (HI,xnγ).
14206.4[d] *16*	28^+		E	J^π: 1443γ E2 to 26^+; band member.
15356[@]		31 keV	O	E(p)(c.m)=6437 keV.
15586[@]		36 keV	O	E(p)(c.m)=6667 keV. Possible IAS of ^{110}Ag(236.9) level.
15644[@]		≈15 keV	O	E(p)(c.m)=(6725) keV.
15679[@]		17 keV	O	E(p)c.m)=6760 keV. Possible IAS of ^{110}Ag(338.9) level.
15737[@]		23 keV	O	E(p)(c.m)=6818 keV.Possible IAS of ^{110}Ag(381.2) level.
15780[@]		25 keV	O	E(p)(c.m)=6861 keV. Possible IAS of ^{110}Ag(424.7) level.
15877[@]		45 keV	O	E(p)(c.m)=6958 keV. Possible IAS of ^{110}Ag(525.7 or 527.5) level.
15943[@]		15 keV	O	E(p)(c.m)=7024 keV. Possible IAS of ^{110}Ag(594) level.
16004[@]		10 keV	O	E(p)(c.m)=7085 keV. Possible IAS of ^{110}Ag(653.9) level.

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Adopted Levels, Gammas (continued)

^{110}Cd Levels (continued)

† From least-squares fit to Eγ′s, unless otherwise stated.
‡ From ^{111}Cd(pol d,t),^{111}Cd(d,t).
# From ^{110}Cd(p,p′),(d,d′).
@ From ^{109}Ag(p,p),(p,n) IAR.
& From Doppler shift attenuation method in ^{110}Cd(n,n′γ) (2001Co01).
[a] From Doppler shift attenuation method using the line-shape analysis in (HI,xnγ) (2011Ro01). The quoted uncertainties do not include additional systematics error in the stopping powers that may be as large as 20%.
[b] From recoil-distance method in (HI,xnγ) (1993Pi16).
[c] From Doppler shift attenuation method in (HI,xnγ) (1999Cl03).
[d] Band(A): g.s. rotational band.
[e] Band(B): band based on 10^+, 4077.176-keV.
[f] Band(C): band based on 7^-, 2879.185-keV.
[g] Band(D): band based on 8-, 3427.27-keV.
[h] Band(E): band based on 7341.6-keV.
[i] Band(F): band based on 13-, 5758.52-keV.
[j] Band(G): band based on 5^-, 2659.866-keV.
[k] Band(H): band based on 3^-, 2078.548-keV.
[l] Band(I): band based on (14), 6216.9-keV.
[m] Band(J): band based on 8-, 3641.10-keV.
[n] Band(K): band based on 9-, 3782.13-keV.
[o] Band(L): band based on 12^+, 5113.6-keV.
[p] Band(M): band based on 14^+, 5675.5-keV.
[q] Band(N): band based on 14^+, 5789.95-keV.
[r] Band(O): band based on 0^+, 1473.07-keV.
[s] Band(P): band based on 13^+, 5500.0-keV.
[t] Band(Q): band based on 17, 8016.5-keV.
[u] Band(R): band based on 8^+, 3187.337-keV.
[v] Band(S): band based on 14, 6584.5-keV.

$\gamma(^{110}Cd)$

E_i(level)	J^π_i	E_γ[‡]	I_γ[‡]	E_f	J^π_f	Mult.[b]	δ[c]	α[†]	Comments
657.7623	2^+	657.7600[#] *11*	100[#]	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* B(E2)(W.u.)=27.0 *8* Mult.: α(K)exp=0.00264 *10* (1964Ne05), K/L=8.1 *7*, (M+N)/L=0.23 *6* in ^{110}Ag β^- decay (249.83 d) (1993Ka37). Other: A_2=+0.23 *2*, A_4=−0.15 *3* (1992Ku01) from ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
1473.07	0^+	815.31[&] *4*	100[&]	657.7623	2^+	E2		0.00183	α(K)=0.001592 *23*; α(L)=0.000195 *3*; α(M)=3.74×10^{-5} *6*; α(N+..)=7.01×10^{-6} *10* α(N)=6.64×10^{-6} *10*; α(O)=3.69×10^{-7} *6* Mult.: α(K)exp=0.0016 *2*, sum of 815.31 keV and 818.05 keV transitions in ^{110}In ε decay (69.1 min) (1992Ku01). Other: A_2=0.277 *30*, A_4=0.990 *50*, 657.76γ gated (0-2-0 spin sequence) in ^{110}Ag β^- decay (24.56 s) (1972Ka34).
		1473.1 *11*		0.0	0^+	E0			E_γ,Mult.: From ^{110}In ε decay (69.1 min) (1990Gi01). The uncertainty of the electron energy was estimated by the evaluators based on the energy resolution (2.6 keV at 1450 keV electron energy) given by the authors. Mult. from ce. Iγ(1473γ)/Ice(K)(1473γ)<3.4×10^{-4} (1990Gi01).
1475.7900	2^+	818.0244[#] *18*	100.0[#] *5*	657.7623	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* B(M1)(W.u.)=0.0134 *22*; B(E2)(W.u.)=30 *5* Mult.: From α(K)exp=0.00172 *19* (1967Mo12). Other:0.00191 *15* (1980Ba58) from ^{110}In ε decay (4.92 h); A_2=−0.23 *1*, A_4=−0.10 *1* (1992Ku01). δ: Weighted average of −1.20 *15* (1970Kr03), −1.36 *10* (1973Jo08), −1.2 *5* (1978Wa07), −1.25 *+22−10* (1979Ve03), and −1.44 *10* (1980Ru03) (from ^{110}Ag β^- decay (249.83 d)), −1.5 *+9−4* (1969Mi07) (from Coulomb excitation), −1.4 *+10−4* (1992De41), −1.4 *+4−10* (1990Ar20), 1.5 *+3−4* (2001Co01) (from ^{110}Cd(n,n′γ)), and −1.5 *4* (1990Ke02) (from ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ)).
		1475.7792[#] *23*	55.0[#] *6*	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* B(E2)(W.u.)=1.35 *20*

From ENSDF

$^{110}_{48}Cd_{62}$-14

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

E_i(level)	J^π_i	E_γ ‡	I_γ ‡	E_f	J^π_f	Mult. b	δ c	α †	Comments
									Mult.: From α(K)exp=0.00043 *6* (1967Mo12) in ^{110}Ag β^- decay (249.83 d) and 0.00036 *7* (1980Ba58) from ^{110}In ε decay (4.92 h)). Other: A_2=0.18 *3*, A_4=−0.11 *4* (1992Ku01) from ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
1542.4441	4+	884.6781# *13*	100#	657.7623	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* B(E2)(W.u.)=42 *9* Mult.: From α(K)exp=0.00126 *6* (1964Ne05) and K/L=7.6 (1963Su07) in ^{110}Ag β^- decay (249.83 d). K/(L+M)=7.7 *13* (1962Ka08) from ^{110}In ε decay (4.9 h). Other: A_2=0.289, A_4=−0.069 *10* in (HI,xnγ) (1974Lu01).
1731.31	0+	255.4& *3*	11.3& *19*	1475.7900	2+	E2		0.0556	α(K)=0.0467 *7*; α(L)=0.00719 *11*; α(M)=0.001397 *21*; α(N+..)=0.000251 *4* α(N)=0.000241 *4*; α(O)=9.98×10^{-6} *15* Mult.: From α(K)exp=0.023 *7* in ^{110}In ε decay (69.1 min) (1992Ku01) and from decay pattern.
		258.3 *1*		1473.07	0+	E0			E_γ: From ^{110}In ε decay (69.1 min) (1992Ku01). The uncertainty of the electron energy was estimated from another close transition given by the authors. Iγ(258γ)/Ice(K)(258γ)<6.5×10^{-3} from ^{110}In ε decay (69.1 min) (1990Gi01). Mult.: From ^{110}In ε decay (69.1 min) (1990Gi01).
		1073.55& *4*	100& *5*	657.7623	2+	E2		9.75×10^{-4}	α(K)=0.000850 *12*; α(L)=0.0001017 *15*; α(M)=1.95×10^{-5} *3*; α(N+..)=3.66×10^{-6} *6* α(N)=3.47×10^{-6} *5*; α(O)=1.98×10^{-7} *3* Mult.: α(K)exp=0.00085 *8* (1992Ku01) in ^{110}In ε decay (69.1 min).
		1731.4 *11*		0.0	0+	E0			E_γ: From ^{110}In ε decay (69.1 min) (1992Ku01). The uncertainty of the electron energy was estimated by the evaluators based on the energy resolution (2.6 keV at 1450 keV electron energy) given by the authors. Iγ(1731γ)/Ice(K)(1731γ)<2.1×10^{-4} (1990Gi01). Mult.: From ^{110}In ε decay (69.1 min) (1990Gi01).
1783.496	2+	310.4@ *6*	0.29@ *14*	1473.07	0+				
		1125.709# *20*	100# *5*	657.7623	2+	M1+E2	+0.28 *4*	1.01×10^{-3}	α(K)=0.000886 *13*; α(L)=0.0001038 *15*; α(M)=1.98×10^{-5} *3*; α(N+..)=4.78×10^{-6} *7*

$^{110}_{48}Cd_{62}$-15

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

E_i(level)	J^{π}_i	E_{γ}[‡]	I_{γ}[‡]	E_f	J^{π}_f	Mult.[b]	δ[c]	α[†]	Comments
									α(N)=3.55×10^{-6} *5*; α(O)=2.11×10^{-7} *3*; α(IPF)=1.020×10^{-6} *15* B(M1)(W.u.)=0.013 *+4−6*; B(E2)(W.u.)=0.7 *+3−4* Mult.: From α(K)exp=0.0009 *2* (1979Sy02) in ^{110}In ε decay (4.9 h), from A_2=+0.36 *2*, A_4=+0.02 *4* (1992De41) in ^{110}Cd(n,n′γ) and from A_2=0.21 *10*, A_4=−0.07 *14*, 657.50γ gated (2-2-0 spin sequence) in ^{110}Ag β^- decay (24.56 s) (1972Ka34). Other: α(K)exp=0.00043 *5* (1992Ku01) in ^{110}In ε decay (69.1 min). δ: Weighted average of +0.13 *+3−2* (2001Co01), +0.33 *+7−4* (1992De41), +0.33 *8* (1990Ar20) (from ^{110}Cd(n,n′γ)), −0.06 *+7−12* (1972Ka34) (from ^{110}Ag β^- decay (24.56 s)) and 0.3 *2* (1976De23). Other: 1.7 *3* (1976De23).
1783.496	2$^+$	1783.49[#] *3*	33.2[#] *16*	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* B(E2)(W.u.)=0.31 *+8−12* Mult.: From A_2=+0.29 *3*, A_4=−0.07 *4* (1992De41) in ^{110}Cd(n,n′γ) and from α(K)exp=0.00018 *3* (1992Ku01) in ^{110}In ε decay (69.1 min).
2078.548	3$^-$	295.42[a] *18*	3.77[a] *22*	1783.496	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* B(E1)(W.u.)=0.00052 *+15−30* Mult.: From A_2=0.04 *5* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
		603.03[a] *4*	15.4[a] *9*	1475.7900	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* B(E1)(W.u.)=(0.00024 *+8−14*); B(M2)(W.u.)=(6.E+1 *+19−6*) Mult.: From A_2=−0.3 *2*, A_4=−0.3 *3* (1992Ku01) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ). δ: From 1990Ke02.
		1421.06[a] *4*	100.0[a] *22*	657.7623	2$^+$	E1(+M2)	+0.01 *8*	4.32×10^{-4} *10*	α(K)=0.000226 *9*; α(L)=2.59×10^{-5} *10*;

Adopted Levels, Gammas (continued)

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

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[b]	δ[c]	α[†]	Comments
									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* B(E1)(W.u.)=(0.00012 *+4−7*) Mult.: α(K)exp=0.00019 *2* (1992Ku01) in ^{110}In ε decay (69.1 min) and from A_2=−0.28 *3*, A_4=−0.04 *5* (1992Ku01) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ). δ: From 1990Ke02.
2078.80	0^+	295.30 *8*	100	1783.496	2^+	E2		0.0342	α(K)=0.0290 *4*; α(L)=0.00426 *6*; α(M)=0.000826 *12*; α(N+..)=0.0001496 *21* α(N)=0.0001433 *21*; α(O)=6.29×10^{-6} *9* E_γ,I_γ: From ^{110}Ag β^- decay (24.56 s). Mult.: From α(K)exp=0.028 *5* in ^{110}In ε decay (69.1 min) (1992Ku01) and A_2=0.259 *17*, A_4=0.753 *26*, 1783.6γ gated (0-2-0 spin sequence) in ^{110}Ag β^- decay (24.56 s) (1972Ka34).
		605.4 *3*		1473.07	0^+	E0			E_γ,Mult.: From ^{110}In ε Decay (69 min).
		2078.4 *3*		0.0	0^+	E0			E_γ,Mult.: From ^{110}In ε Decay (69 min).
2162.8015	3^+	620.3553[#] *17*	20.5[#] *6*	1542.4441	4^+	M1+E2	−0.50 *5*	0.00391	B(M1)(W.u.)=0.011 *+3−9*; B(E2)(W.u.)=5.9 *+18−46* 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* Mult.: From α(K)exp=0.0031 *6* (1967Mo12). δ: Weighted average of −0.50 *8* (1980Ru03), −0.8 *5* (1970Kr03), −0.85 *25* (1979Ve03) (from ^{110}Ag β^- decay (249.83 d)) and −0.46 *+7−6* (2001Co01) (from ^{110}Cd(n,n′γ)). Others: −1.2 *5* or −0.7 *3* (1978Wa07) (from ^{110}Ag β^- decay (249.83 d)).
		687.0091[#] *18*	49.00[#] *22*	1475.7900	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* B(M1)(W.u.)=0.0064 *+16−48*; B(E2)(W.u.)=32 *+8−24* Mult.: From α(K)exp=0.0022 *5* and from A_2=−0.70 *5*, A_4=−0.01 *2* (1992Ku01, in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ)). δ: Weighted average of −1.80 *5* (1973Jo08), −1.65 *9* (1978Wa07), and −1.27 *38* (1980Ru03), −1.1 *+8−4* (1970Kr03) and −1.5 *+6−22* (1979Ve03) (from ^{110}Ag β^- decay (249.83 d)), −1.66 *+9−8* (2001Co01), −1.48 *10* (1992De41), −1.48 *15* (1990Ar20), and −1.3 *4* (1992Ku01)

$^{110}_{48}Cd_{62}$-17

Adopted Levels, Gammas (continued)

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

E_i(level)	J^π_i	E_γ[‡]	I_γ[‡]	E_f	J^π_f	Mult.[b]	δ[c]	α[†]	Comments
									(from ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ)). Others: 0.4 *+1−2* (1976De23) (from ^{110}Cd(n,n′γ)), −0.40 *4* (1992De41) (from ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ)).
2162.8015	3+	1505.0280[#] *20*	100.0[#] *12*	657.7623	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* B(M1)(W.u.)=0.0018 *+5−14*; B(E2)(W.u.)=1.1 *+3−8* Mult.: From α(K)exp=0.00046 *4* (1967Mo12). δ: Weighted average of −1.05 *16* (1988Kr03), −1.24 *7* (1988Kr03), −1.24 *20* (1980Ru03), −1.09 *9* (1978Wa07), and −1.26 *6* (1973Jo08) (from ^{110}Ag β^- decay (249.83 d)), −1.37 *8* (1992De41), −1.37 *15* (1990Ar20), −1.52 *+11−14* (2001Co01) from ^{110}Cd(n,n′γ)), −1.48 *23* (1990Ke02) (from ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ)). Others: −0.55 *10* (1970Kr03), −0.48 *3* (1973Jo08), −0.40 *+9−17* (1979Ve03) (from ^{110}Ag β^- decay (249.83 d)), −0.30 *7* (1980Ba58) (from ^{110}In ε decay (4.92 h)), −0.1 *1* or 3 *+2−1* (1976De23) (from ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ)).
2220.0683	4+	677.6217[#] *12*	100.0[#] *5*	1542.4441	4+	M1+E2	−0.34 *2*	0.00320	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* B(M1)(W.u.)=0.058 *+17−25*; B(E2)(W.u.)=12 *+4−6* Mult.: From α(K)exp=0.0025 *4* (1967Mo12). δ: Unweighted average of −0.25 *20* (1970Kr03), −0.44 *5* (1973Jo08), −0.36 *3* (1978Wa07), −0.25 *15* (1979Ve03), −0.28 *5* (1980Ru03) from ^{110}Ag β^- decay (249.83 d), −0.40 *7* (1990Ke02) from ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ), −0.34 *3* (1992De41), −0.34 *4* (1990Ar20), −0.41 *2* (2001Co01) from ^{110}Cd(n,n′γ)).
		744.2755[#] *18*	44.6[#] *3*	1475.7900	2+	E2		0.00229	α(K)=0.00199 *3*; α(L)=0.000246 *4*; α(M)=4.72×10^{-5} *7*; α(N+..)=8.83×10^{-6} *13* α(N)=8.37×10^{-6} *12*; α(O)=4.60×10^{-7} *7* B(E2)(W.u.)=32 *+10−14* Mult.: From α(K)exp=0.0021 *4* in ^{110}Ag β^- decay (249.83 d) (1967Mo12); A$_2$=0.28 *1*, A$_4$=−0.27 *1* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
		1562.2940[#] *18*	11.4[#] *3*	657.7623	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*

$^{110}_{48}Cd_{62}$-18

Adopted Levels, Gammas (continued)

γ(^{110}Cd) (continued)

E$_i$(level)	J$^\pi_i$	E$_\gamma$‡	I$_\gamma$‡	E$_f$	J$^\pi_f$	Mult.[b]	δ[c]	α†	Comments
									α(N)=1.570×10^{-6} *22*; α(O)=9.21×10^{-8} *13*; α(IPF)=0.0001050 *15* B(E2)(W.u.)=0.20 *+6−9* Mult.: From A$_2$=0.22 *6*, A$_4$=−0.19 *8* (1992Ku01) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ) and from α(K)exp=0.00046 *7* (1967Mo12). Other: E2(+M3) with δ=−0.10 *+2−3* from γγ(θ) in ^{110}Ag β$^-$ Decay (249.83 d) (1979Ve03). δ= Infinite (1970Kr03).
2250.554	4$^+$	467.01# *4*	11.0# *8*	1783.496	2$^+$	E2		0.00812	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* B(E2)(W.u.)=1.2×10^2 *+5−11* Mult.: From A$_2$=+0.22 *6*, A$_4$=−0.10 *8* (1992De41) in ^{110}Cd(n,n′γ) and from α(K)exp=0.013 *4* (1979Sy02) in ^{110}In ε Decay (4.9 h) (1979Sy02).
		708.133# *20*	100# *21*	1542.4441	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* B(M1)(W.u.)=0.08 *+4−8*; B(E2)(W.u.)=2.6 *+16−26* Mult.: From A$_2$=+0.22 *6*, A$_4$=−0.10 *8* (1992De41) from ^{110}Cd(n,n′γ). δ: Weighted average of −0.15 *9* (1992De41), −0.15 *9* (1990Ar20), 0.13 *+4−3* (2001Co01) (from ^{110}Cd(n,n′γ)). Other: −0.7 *3* (1990Ke02) from ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
		774.71# *7*	2.5# *13*	1475.7900	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* B(E2)(W.u.)=2.2 *+14−22* Mult.: From γ(θ) in ^{110}Cd(n,n′γ) but A$_2$ and A$_4$ coefficients were not given by the authors of 1992De41.
		1592.77# *6*	9.1# *3*	657.7623	2$^+$	E2		5.51×10^{-4}	α(K)=0.000379 *6*; α(L)=4.43×10^{-5} *7*; α(M)=8.47×10^{-6} *12*; α(N+..)=0.0001188 *17* α(N)=1.511×10^{-6} *22*; α(O)=8.87×10^{-8} *13*; α(IPF)=0.0001172 *17* B(E2)(W.u.)=0.22 *+9−19* Mult.: From γ(θ) in ^{110}Cd(n,n′γ) but A$_2$ and A$_4$ coefficients were not given by the authors of 1992De41.
2287.63	2$^+$	1629.90# *14*	100#	657.7623	2$^+$	M1+E2	+0.06 *3*	5.86×10^{-4}	α(K)=0.000407 *6*; α(L)=4.73×10^{-5} *7*; α(M)=9.03×10^{-6} *13*;

$^{110}_{48}$Cd$_{62}$-19

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

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[b]	δ[c]	α[†]	Comments
									α(N+..)=0.0001228 *18* α(N)=1.615×10^{-6} *23*; α(O)=9.66×10^{-8} *14*; α(IPF)=0.0001211 *17* B(M1)(W.u.)=0.017 *+3−5*; B(E2)(W.u.)=0.019 *+20−19* Mult.: From A_2=+0.24 *3*, A_4=+0.01 *4* (1992De41) in ^{110}Cd(n,n′γ). δ: From 1992De41 and 1990Ar20 using $\gamma(\theta)$ in ^{110}Cd(n,n′γ). Other: −0.01 *2* (2001Co01) from ^{110}Cd(n,n′γ).
2331.92	$(0)^+$	548.4[@] *2*	24[@] *6*	1783.496	2^+				
		1674.15[@] *4*	100[@] *6*	657.7623	2^+				
2355.792	2^+	624.47 *9*		1731.31	0^+	E2		0.00360	α(K)=0.00311 *5*; α(L)=0.000394 *6*; α(M)=7.58×10^{-5} *11*; α(N+..)=1.411×10^{-5} *20* α(N)=1.339×10^{-5} *19*; α(O)=7.16×10^{-7} *10* E_γ: From ^{110}Cd(n,n′γ) (2001Co01). Mult.: From $\gamma(\theta)$ in ^{110}Cd(n,n′γ) but A_2 and A_4 coefficients were not given by the authors of 2001Co01.
		1698.02[@] *2*	100[@]	657.7623	2^+	M1+E2	+1.75 *15*	5.53×10^{-4}	α(K)=0.000345 *5*; α(L)=4.02×10^{-5} *6*; α(M)=7.67×10^{-6} *12*; α(N+..)=0.0001597 *23* α(N)=1.370×10^{-6} *20*; α(O)=8.10×10^{-8} *12*; α(IPF)=0.0001582 *23* B(M1)(W.u.)=0.0032 *+8−12*; B(E2)(W.u.)=2.8 *+6−10* Mult.: From A_2=+0.27 *3*, A_4=−0.01 *3* (1992De41) in ^{110}Cd(n,n′γ). δ: From 1992De41. Others: +0.11 *4* (1992De41), 0.1 *+2−1* or 1.7 *+6−5* (1976De23), 1.8 *2* or +0.10 *5* (1990Ar20) in ^{110}Cd(n,n′γ).
2433.248	3^+	651.3[@d] *5*	29[@] *4*	1783.496	2^+				
		890.7[@] *5*	9[@] *3*	1542.4441	4^+				
		957.38[#] *6*	100[#] *7*	1475.7900	2^+	M1+E2	−0.9 *7*	0.00137 *9*	α(K)=0.00120 *8*; α(L)=0.000142 *8*; α(M)=2.72×10^{-5} *15*; α(N+..)=5.1×10^{-6} *3* α(N)=4.9×10^{-6} *3*; α(O)=2.83×10^{-7} *21* Mult.: From A_2=−0.58 *3*, A_4=+0.07 *3* (1992De41) in ^{110}Cd(n,n′γ). δ: Others: −0.45 *5* or −1.38 *14* (1992De41), −0.43 *8* or −1.38 *20* (1990Ar20) in ^{110}Cd(n,n′γ).
		1775.42[#] *4*	70[#] *3*	657.7623	2^+	M1+E2	−0.35 *10*	5.69×10^{-4}	α(K)=0.000338 *6*; α(L)=3.92×10^{-5} *6*; α(M)=7.49×10^{-6} *12*; α(N+..)=0.000184 *3*

$^{110}_{48}Cd_{62}$-20

γ(^{110}Cd) (continued)

E_i(level)	J^π_i	E_γ[‡]	I_γ[‡]	E_f	J^π_f	Mult.[b]	α[†]	Comments
								α(N)=1.339×10^{-6} *21*; α(O)=8.00×10^{-8} *13*; α(IPF)=0.000183 *3* Mult.: From A$_2$=−0.56 *8*, A$_4$=0.00 *3* (1992De41) in ^{110}Cd(n,n′γ). δ: −0.35 *10* or −1.6 *3* (1992De41), −0.35 *10* or −1.6 *4* (1990Ar20) in ^{110}Cd(n,n′γ).
2477.41	2$^+$	746.19[@] *17*	[@]	1731.31	0$^+$	E2	0.00227	α(K)=0.00197 *3*; α(L)=0.000245 *4*; α(M)=4.69×10^{-5} *7*; α(N+..)=8.77×10^{-6} *13* α(N)=8.32×10^{-6} *12*; α(O)=4.57×10^{-7} *7* Mult.: From $\gamma(\theta)$ in ^{110}Cd(n,n′γ) but A$_2$ and A$_4$ coefficients were not given by the authors of 2001Co01.
		1001.71[&] *6*	98[&] *10*	1475.7900	2$^+$			
		1819.82[@] *24*	[@]	657.7623	2$^+$			
		2477.16[&] *8*	100[&] *4*	0.0	0$^+$	E2	7.24×10^{-4}	α(K)=0.0001686 *24*; α(L)=1.94×10^{-5} *3*; α(M)=3.70×10^{-6} *6*; α(N+..)=0.000532 *8* α(N)=6.61×10^{-7} *10*; α(O)=3.94×10^{-8} *6*; α(IPF)=0.000532 *8* Mult.: From ^{110}Cd(n,n′γ).
2479.9339	6$^+$	229.420[#d] *22*	0.03[#]	2250.554	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* B(E2)(W.u.)=14 *10*
		937.485[#] *3*	100[#]	1542.4441	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* B(E2)(W.u.)=4.E+1 *3* Mult.: From α(K)exp=0.0012 *8* (1964Ne05) in ^{110}Ag β^- Decay (249.83 d) and 0.00114 *8* (1980Ba58) in ^{110}In ε Decay (4.92 h)). K/(L+M)=6.6 *14* from ^{110}In ε decay (4.92 h) (1962Ka08) and A$_2$=+0.34 *2*, A$_4$=−0.08 *3* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
2481.606	(2)$^+$	402.84[@] *17*	[@]	2078.548	3$^-$	(E1)	0.00361	α(K)=0.00315 *5*; α(L)=0.000373 *6*; α(M)=7.12×10^{-5} *10*; α(N+..)=1.335×10^{-5} *19* α(N)=1.263×10^{-5} *18*; α(O)=7.12×10^{-7} *10* E_γ: From ^{110}Cd(n,n′γ). Mult.: From $\gamma(\theta)$ in ^{110}Cd(n,n′γ) but A$_2$ and A$_4$ coefficients were not given by the authors (2001Co01).
		698.0[@] *2*	27[@] *3*	1783.496	2$^+$			

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

E_i(level)	J^π_i	E_γ[‡]	I_γ[‡]	E_f	J^π_f	Mult.[b]	δ[c]	α[†]	Comments
2481.606	(2)$^+$	1005.58[@] *10*	51[@] *3*	1475.7900	2$^+$	M1(+E2)	−0.41 *10*	1.29×10^{-3} *2*	α(K)=0.001124 *19*; α(L)=0.0001323 *22*; α(M)=2.53×10^{-5} *4*; α(N+..)=4.79×10^{-6} *8* α(N)=4.52×10^{-6} *8*; α(O)=2.67×10^{-7} *5* B(M1)(W.u.)=(0.012 *+4−6*); B(E2)(W.u.)=(1.6 *+8−11*) Mult.: From A_2=+0.07 *3* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ). δ: From 1992De41 in ^{110}Cd(n,n′γ).
		1823.84[@] *2*	100[@] *6*	657.7623	2$^+$	M1+E2		5.73×10^{-4}	α(K)=0.000324 *5*; α(L)=3.75×10^{-5} *6*; α(M)=7.16×10^{-6} *10*; α(N+..)=0.000204 *3* α(N)=1.280×10^{-6} *18*; α(O)=7.66×10^{-8} *11*; α(IPF)=0.000203 *3* Mult.: From A_2=−0.15 *3*, A_4=0.02 *4* in ^{110}Cd(n,n′γ) (1992De41). δ: −0.70 *9* or −4.9 *+24−11* (1992De41), −0.70 *10* or −5.2 *20* (1990Ar20) in ^{110}Cd(n,n′γ).
2539.691	5$^-$	460.85[a] *8*	4.00[a] *11*	2078.548	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* α(N)=3.27×10^{-5} *5*; α(O)=1.641×10^{-6} *23* B(E2)(W.u.)=56 *+13−23* Mult.: From A_2=+0.31 *6*, A_4=−0.14 *9* in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
		997.256[a] *8*	100.0[a] *8*	1542.4441	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* B(E1)(W.u.)=(0.00048 *+12−19*); B(M2)(W.u.)=(2 *+7−2*) Mult.: α(K)exp=0.00041 *5* (1980Ba58) in ^{110}In ε decay (4.92 h). δ: From 1990Ke02 in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
2561.284	4$^+$	341.3[#d] *1*	3.0[#] *7*	2220.0683	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* B(M1)(W.u.)=0.013 *+6−12*
		1018.94[#] *4*	19.6[#] *9*	1542.4441	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* B(M1)(W.u.)=0.0023 *+12−22*; B(E2)(W.u.)=0.7 *7* Mult.: From A_2=+0.01 *6* (1990Ke02)

$^{110}_{48}Cd_{62}$-22

Adopted Levels, Gammas (continued)

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

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[b]	α[†]	Comments
								$^{108}Pd(\alpha,2n\gamma)$,$^{110}Pd(\alpha,4n\gamma)$. δ: Other: −0.49 +*16*−*19* in $^{110}Cd(n,n'\gamma)$ (2001Co01).
2561.284	4^+	1085.447[#] *14*	100[#] *5*	1475.7900	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* B(E2)(W.u.)=9 +*4*−*9* Mult.: From A_2=+0.36 *4*, A_4=−0.10 *5* (1992De41) in $^{110}Cd(n,n'\gamma)$ and α(K)exp=0.0008 *2* in ^{110}In ε decay (4.9 h) (1980Ba58).
		1903.53[#] *3*	22.2[#] *9*	657.7623	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* B(E2)(W.u.)=0.12 +*5*−*11* Mult.: From $\gamma(\theta)$ in $^{110}Cd(n,n'\gamma)$ but A_2 and A_4 coefficients were not given by the authors of 2001Co01.
2566.47	(2^-,3)	782.8[@] *2*	29[@] *4*	1783.496	2^+			
		1908.70[@] *6*	100[@] *6*	657.7623	2^+			
2633.20	2^+	1090.83[@] *10*	42[@] *4*	1542.4441	4^+	[E2]	9.42×10^{-4}	α(K)=0.000821 *12*; α(L)=9.81×10^{-5} *14*; α(M)=1.88×10^{-5} *3*; α(N+..)=3.54×10^{-6} *5* α(N)=3.34×10^{-6} *5*; α(O)=1.92×10^{-7} *3* B(E2)(W.u.)=25 +*4*−*5*
		1157.24 *17*		1475.7900	2^+	[M1]	9.66×10^{-4}	α(K)=0.000843 *12*; α(L)=9.85×10^{-5} *14*; α(M)=1.88×10^{-5} *3*; α(N+..)=6.00×10^{-6} *9* α(N)=3.37×10^{-6} *5*; α(O)=2.01×10^{-7} *3*; α(IPF)=2.43×10^{-6} *4* E_γ: From $^{110}Cd(n,n'\gamma)$.
		1975.2[@] *3*	100[@] *9*	657.7623	2^+	E2+M1	5.87×10^{-4}	α(K)=0.000276 *4*; α(L)=3.18×10^{-5} *5*; α(M)=6.08×10^{-6} *9*; α(N+..)=0.000274 *4* α(N)=1.088×10^{-6} *16*; α(O)=6.52×10^{-8} *10*; α(IPF)=0.000272 *4* Mult.: E2 from A_2=+0.43 *4*, A_4=0.00 *4* (1992De41) in $^{110}Cd(n,n'\gamma)$.
2649.95	1^-	1176.8[@] *2*	32[@] *4*	1473.07	0^+	[E1]	3.84×10^{-4}	α(K)=0.000315 *5*; α(L)=3.62×10^{-5} *5*; α(M)=6.91×10^{-6} *10*; α(N+..)=2.61×10^{-5} *4* α(N)=1.232×10^{-6} *18*; α(O)=7.26×10^{-8} *11*; α(IPF)=2.48×10^{-5} *4* B(E1)(W.u.)=0.0015 *6*
		2649.92[@] *6*	100[@] *9*	0.0	0^+	E1	1.12×10^{-3}	α(K)=8.53×10^{-5} *12*; α(L)=9.68×10^{-6} *14*; α(M)=1.84×10^{-6} *3*; α(N+..)=0.001026 *15* α(N)=3.30×10^{-7} *5*; α(O)=1.97×10^{-8} *3*; α(IPF)=0.001026 *15* B(E1)(W.u.)=0.00040 *15*

γ(^{110}Cd) (continued)

E$_i$(level)	J$^\pi_i$	E$_\gamma$[‡]	I$_\gamma$[‡]	E$_f$	J$^\pi_f$	Mult.[b]	δ[c]	α[†]	Comments
									Mult.: From A$_2$=−0.09 *4*, A$_4$=0.00 *5* (1992De41) in ^{110}Cd(n,n′γ) and from ^{110}Cd(γ,γ') (2005Ko32), deduced using $\gamma(\theta)$ and π from linear polarization measurements.
2659.866	5$^-$	120.154[a] *25*	33.3[a] *18*	2539.691	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* I$_\gamma$: Other: 58 *10* in ^{110}Cd(n,n′γ). Mult.: From A$_2$=0.26 *13* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
		409.36[a] *8*	10.4[a] *4*	2250.554	4$^+$	E1(+M2)	−0.029 *23*	0.00350 *9*	α(K)=0.00305 *8*; α(L)=0.000361 *10*; α(M)=6.90×10^{-5} *18*; α(N+..)=1.29×10^{-5} *4* α(N)=1.23×10^{-5} *4*; α(O)=6.91×10^{-7} *18* Mult.: From α(K)exp=0.0027 *10* (1970Ko12) in ^{110}In ε decay (4.9 h) and A$_2$=−0.25 *2* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ) (1990Ke02).
		1117.437[a] *10*	100.0[a] *11*	1542.4441	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+..)=8.05×10^{-6} *12* α(N)=1.356×10^{-6} *19*; α(O)=7.98×10^{-8} *12*; α(IPF)=6.61×10^{-6} *10* Mult.: From α(K)exp=0.00033 *7* (1990Ke02) in ^{110}In ε decay (4.9 h) (1980Ba58) and A$_2$=−0.18 *2* in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
2662.13	0$^+$	1186.30 *12*	75 *16*	1475.7900	2$^+$				E$_\gamma$,I$_\gamma$: From ^{110}Ag β^- decay (24.56 s).
		2004.40 *15*	100 *10*	657.7623	2$^+$	E2		5.85×10^{-4}	α(K)=0.000246 *4*; α(L)=2.85×10^{-5} *4*; α(M)=5.44×10^{-6} *8*; α(N+..)=0.000305 *5* α(N)=9.72×10^{-7} *14*; α(O)=5.76×10^{-8} *8*; α(IPF)=0.000304 *5* E$_\gamma$,I$_\gamma$: From ^{110}Ag β^- decay (24.56 s). Mult.: From A$_2$=0.177 *28*, A$_4$=0.986 *47*, 657.50γ gated (0-2-0 spin sequence) (1972Ka34) in ^{110}Ag β^- decay (24.56 s).
2705.669	(4)$^+$	1163.19[#] *5*	100[#]	1542.4441	4$^+$	M1+E2	−0.03 *+6−9*	9.56×10^{-4}	α(K)=0.000834 *12*; α(L)=9.74×10^{-5} *14*; α(M)=1.86×10^{-5} *3*; α(N+..)=6.34×10^{-6} *9* α(N)=3.33×10^{-6} *5*; α(O)=1.98×10^{-7} *3*; α(IPF)=2.81×10^{-6} *4* Mult.: From A$_2$=+0.32 *5*, A$_4$=−0.03 *6* (1992De41) in ^{110}Cd(n,n′γ). δ: From $\gamma(\theta)$ in ^{110}Cd(n,n′γ) (1992De41).
2707.397	(4)$^+$	1.60 *10*		2705.669	(4)$^+$	M1			E$_\gamma$: From measured Ice in ^{110}Ag β^- decay

Adopted Levels, Gammas (continued)

γ(^{110}Cd) (continued)

E$_i$(level)	J$^\pi_i$	E$_\gamma$‡	I$_\gamma$‡	E$_f$	J$^\pi_f$	Mult.[b]	δ[c]	α†	Comments
									(249.83 d). Mult.: From M1/M2/M3=10 *2*/1.0/0.35 *10* in ^{110}Ag β^- decay (249.83 d) (1993Ka37).
2707.397	(4)$^+$	544.56[#] *4*	41[#] *7*	2162.8015	3$^+$	M1+E2	+0.21 *11*	0.00541	α(K)=0.00472 *7*; α(L)=0.000565 *8*; α(M)=0.0001083 *16*; α(N+..)=2.05×10^{-5} *3* α(N)=1.93×10^{-5} *3*; α(O)=1.131×10^{-6} *17* I$_\gamma$: Other: 62 *3* in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ), 56 *5* in ^{110}Cd(n,n′γ). Mult.: From A$_2$=+0.02 *5* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ). δ: Other:−0.03 *5* or −5.5 *+24−10* (1992De41) from ^{110}Cd(n,n′γ).
		1164.98[#] *7*	100[#] *7*	1542.4441	4$^+$	M1(+E2)	<+0.3	9.48×10^{-4} *15*	α(K)=0.000826 *13*; α(L)=9.66×10^{-5} *15*; α(M)=1.85×10^{-5} *3*; α(N+..)=6.46×10^{-6} *9* α(N)=3.30×10^{-6} *5*; α(O)=1.96×10^{-7} *3*; α(IPF)=2.96×10^{-6} *5* Mult.: From A$_2$=+0.17 *5* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ). Other: A$_2$=+0.39 *11*, A$_4$=+0.02 *14* (1992De41) from ^{110}Cd(n,n′γ). δ: Other:−0.07 *+10−7* (1992De41) from ^{110}Cd(n,n′γ).
2758.25	(1,2,3)$^+$	402.4[@d] *2*	45[@] *7*	2355.792	2$^+$	[M1]		0.01135	α(K)=0.00988 *14*; α(L)=0.001191 *17*; α(M)=0.000228 *4*; α(N+..)=4.31×10^{-5} *6* α(N)=4.08×10^{-5} *6*; α(O)=2.38×10^{-6} *4* B(M1)(W.u.)=0.37 *+12−16*
		1282.45[@] *8*	100[@] *7*	1475.7900	2$^+$	M1+E2	+0.32 *5*	7.80×10^{-4} *12*	α(K)=0.000667 *10*; α(L)=7.78×10^{-5} *12*; α(M)=1.488×10^{-5} *22*; α(N+..)=2.07×10^{-5} *3* α(N)=2.66×10^{-6} *4*; α(O)=1.583×10^{-7} *24*; α(IPF)=1.79×10^{-5} *3* B(M1)(W.u.)=0.023 *+7−10*; B(E2)(W.u.)=1.2 *+5−6* Mult.: From A$_2$=+0.39 *11*, A$_4$=+0.02 *14* (1992De41) in ^{110}Cd(n,n′γ). δ: From γ(θ) in ^{110}Cd(n,n′γ) (1992De41).
		2100.6[@] *5*	33[@] *10*	657.7623	2$^+$	[M1]		6.10×10^{-4}	α(K)=0.000244 *4*; α(L)=2.81×10^{-5} *4*; α(M)=5.37×10^{-6} *8*; α(N+..)=0.000333 *5* α(N)=9.61×10^{-7} *14*; α(O)=5.76×10^{-8} *8*; α(IPF)=0.000332 *5* B(M1)(W.u.)=0.0019 *+8−10*
2787.49	2$^+$	305.8[@] *2*	16[@] *5*	2481.606	(2)$^+$	[M1]		0.0227	α(K)=0.0197 *3*; α(L)=0.00240 *4*; α(M)=0.000460 *7*;

Adopted Levels, Gammas (continued)

γ(^{110}Cd) (continued)

E$_i$(level)	J$^\pi_i$	E$_\gamma$[‡]	I$_\gamma$[‡]	E$_f$	J$^\pi_f$	Mult.[b]	δ[c]	α[†]	Comments
									α(N+..)=8.69×10^{-5} *13* α(N)=8.21×10^{-5} *12*; α(O)=4.77×10^{-6} *7* B(M1)(W.u.)=3.3 *14*
2787.49	2$^+$	1314.25[&] *10*	1.91[&] *14*	1473.07	0$^+$	[E2]		6.63×10^{-4}	α(K)=0.000555 *8*; α(L)=6.56×10^{-5} *10*; α(M)=1.254×10^{-5} *18*; α(N+..)=2.92×10^{-5} *4* α(N)=2.23×10^{-6} *4*; α(O)=1.298×10^{-7} *19*; α(IPF)=2.68×10^{-5} *4* B(E2)(W.u.)=2.3 *7*
		2129.52[@] *5*	100[@] *7*	657.7623	2$^+$	M1+E2		6.17×10^{-4}	α(K)=0.000237 *4*; α(L)=2.74×10^{-5} *4*; α(M)=5.23×10^{-6} *8*; α(N+..)=0.000347 *5* α(N)=9.35×10^{-7} *13*; α(O)=5.61×10^{-8} *8*; α(IPF)=0.000346 *5* Mult.: From A$_2$=−0.31 *5*, A$_4$=−0.02 *5* (1992De41) in ^{110}Cd(n,n′γ). δ: +0.18 *+10−7* or +1.5 *3* (1992De41) in ^{110}Cd(n,n′γ).
		2788.37[@] *10*	16[@] *5*	0.0	0$^+$	[E2]		8.31×10^{-4}	α(K)=0.0001374 *20*; α(L)=1.575×10^{-5} *22*; α(M)=3.00×10^{-6} *5*; α(N+..)=0.000675 *10* α(N)=5.37×10^{-7} *8*; α(O)=3.21×10^{-8} *5*; α(IPF)=0.000675 *10* B(E2)(W.u.)=0.46 *19* I$_\gamma$: 3.27 *14* in ^{110}In ε decay (69.1 min).
2793.441	(4)$^+$	360.23[#] *8*	23[#] *14*	2433.248	3$^+$				I$_\gamma$: Other: 8.1 *12* from ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
		573.0[#] *4*	51[#] *3*	2220.0683	4$^+$	M1+E2	−0.3 *3*	0.00478 *9*	α(K)=0.00416 *8*; α(L)=0.000499 *7*; α(M)=9.57×10^{-5} *14*; α(N+..)=1.81×10^{-5} *3* α(N)=1.707×10^{-5} *24*; α(O)=9.96×10^{-7} *24* I$_\gamma$: Other: 17.4 *14* in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ), <63 in ^{110}Cd(n,n′γ). Mult.: From A$_2$=+0.10 *14* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
		630.62[#] *5*	100[#] *15*	2162.8015	3$^+$	M1(+E2)	+0.02 *7*	0.00382	α(K)=0.00334 *5*; α(L)=0.000396 *6*; α(M)=7.59×10^{-5} *11*; α(N+..)=1.436×10^{-5} *21* α(N)=1.356×10^{-5} *19*; α(O)=8.00×10^{-7} *12* Mult.: From A$_2$=−0.11 *4* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
		714.94[#] *1*	28[#] *7*	2078.548	3$^-$				
		1251.06[#] *4*	80[#] *9*	1542.4441	4$^+$				
2842.682	(5)$^-$	182.83[a] *6*	3.5[a] *4*	2659.866	5$^-$	M1+E2		0.0876	α(K)=0.0760 *11*; α(L)=0.00939 *14*; α(M)=0.00181 *3*; α(N+..)=0.000340 *5*

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Adopted Levels, Gammas (continued)

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

E_i(level)	J^π_i	E_γ[‡]	I_γ[‡]	E_f	J^π_f	Mult.[b]	δ[c]	α[†]	Comments
									α(N)=0.000322 5; α(O)=1.85×10^{-5} 3 Mult.: From A_2=+0.79 11 in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
2842.682	(5)$^-$	409.36[a] 8	20.3[a] 7	2433.248	3$^+$				
		1300.233[a] 10	100.0[a] 21	1542.4441	4$^+$	E1(+M2)	+0.0 1	3.93×10^{-4} 14	α(K)=0.000264 13; α(L)=3.03×10^{-5} 15; α(M)=5.8×10^{-6} 3; α(N+..)=9.35×10^{-5} 16 α(N)=1.03×10^{-6} 6; α(O)=6.1×10^{-8} 3; α(IPF)=9.24×10^{-5} 16 Mult.: From A_2=−0.21 2 (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ) and from $\gamma(\theta)$ in ^{110}Cd(n,n′γ) (2001Co01).
2869.144	1$^+$,2$^+$	1085.57[&] 4	2.2[&] 7	1783.496	2$^+$	E2+M1		1.11×10^{-3}	α(K)=0.000969 14; α(L)=0.0001135 16; α(M)=2.17×10^{-5} 3; α(N+..)=4.11×10^{-6} 6 α(N)=3.88×10^{-6} 6; α(O)=2.31×10^{-7} 4 Mult.: From $\gamma(\theta)$ in ^{110}Cd(n,n′γ), but A_2 and A_4 coefficients were not given by the authors (2001Co01).
		1393.63[&] 7	3.03[&] 22	1475.7900	2$^+$				
		2211.33[&] 3	100[&] 2	657.7623	2$^+$	M1+E2		6.38×10^{-4}	α(K)=0.000220 3; α(L)=2.54×10^{-5} 4; α(M)=4.85×10^{-6} 7; α(N+..)=0.000387 6 α(N)=8.67×10^{-7} 13; α(O)=5.20×10^{-8} 8; α(IPF)=0.000386 6 Mult.: From $\gamma(\theta)$ in ^{110}Cd(n,n′γ) but A_2 and A_4 coefficients were not given by the authors (1992De41). δ: +1.8 7 or +0.10 +22−13 (1992De41).
		2869.28[&] 10	1.85[&] 11	0.0	0$^+$				I_γ: Other: 14 6 from ^{110}Cd(n,n′γ).
2876.812	6$^+$	396.894[#] 22	17.2[#] 18	2479.9339	6$^+$	M1+E2		0.01174	α(K)=0.01023 15; α(L)=0.001233 18; α(M)=0.000236 4; α(N+..)=4.47×10^{-5} 7 α(N)=4.22×10^{-5} 6; α(O)=2.47×10^{-6} 4 Mult.: From A_2=+0.29 6 in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
		626.256[#] 10	100[#] 8	2250.554	4$^+$	E2		0.00357	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.: From α(K)exp=3.0×10^{-3} 4 (1980Ba58) in ^{110}In ε decay (4.92 h) and from A_2=+0.35 2, A_4=−0.04 3 (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).

γ(^{110}Cd) (continued)

E_i(level)	J^π_i	E_γ[‡]	I_γ[‡]	E_f	J^π_f	Mult.[b]	δ[c]	α[†]	Comments
2876.812	6^+	1334.348[#] *16*	66.1[#] *22*	1542.4441	4^+	E2		6.48×10^{-4}	α(K)=0.000539 *8*; α(L)=6.35×10^{-5} *9*; α(M)=1.214×10^{-5} *17*; α(N+..)=3.37×10^{-5} *5* α(N)=2.16×10^{-6} *3*; α(O)=1.259×10^{-7} *18*; α(IPF)=3.14×10^{-5} *5* Mult.: From A_2=+0.33 *4* in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ) and DCO=1.02 *14* in (HI,xnγ).
2879.185	7^-	219.31[a] *2*	1.94[a] *6*	2659.866	5^-	E2		0.0935	α(K)=0.0780 *11*; α(L)=0.01268 *18*; α(M)=0.00247 *4*; α(N+..)=0.000441 *7* α(N)=0.000424 *6*; α(O)=1.632×10^{-5} *23* B(E2)(W.u.)=0.84 *12* Mult.: From A_2=+0.37 *3*, A_4=−0.09 *4* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ) and from DCO=1.38 *13* (1994Ju04) in (HI,xnγ).
		339.498[a] *15*	32.2[a] *3*	2539.691	5^-	E2		0.0217	α(K)=0.0185 *3*; α(L)=0.00262 *4*; α(M)=0.000507 *7*; α(N+..)=9.24×10^{-5} *13* α(N)=8.84×10^{-5} *13*; α(O)=4.07×10^{-6} *6* B(E2)(W.u.)=1.56 *21* Mult.: From A_2=+0.34 *2*, A_4=−0.08 *2* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
		399.254[a] *15*	100.0[a] *6*	2479.9339	6^+	E1(+M2)	−0.01 *3*	0.00369 *8*	α(K)=0.00323 *7*; α(L)=0.000382 *9*; α(M)=7.29×10^{-5} *17*; α(N+..)=1.37×10^{-5} *4* α(N)=1.29×10^{-5} *3*; α(O)=7.29×10^{-7} *17* B(E1)(W.u.)=(5.6×10^{-6} *8*); B(M2)(W.u.)=(0.016 *+97−16*) Mult.: From A_2=−0.25 *1* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ). δ: Other:<0.06 in (HI,xnγ).
2895.948	6^-	236.04[a] *4*	23.1[a] *7*	2659.866	5^-	M1+E2	−0.09 *4*	0.0446	α(K)=0.0388 *6*; α(L)=0.00477 *8*; α(M)=0.000916 *16*; α(N+..)=0.000173 *3* α(N)=0.000163 *3*; α(O)=9.40×10^{-6} *14* Mult.: From A_2=−0.36 *1* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
		356.255[a] *15*	100.0[a] *7*	2539.691	5^-	M1		0.01539	α(K)=0.01340 *19*; α(L)=0.001620 *23*; α(M)=0.000311 *5*; α(N+..)=5.87×10^{-5} *9* α(N)=5.55×10^{-5} *8*; α(O)=3.24×10^{-6} *5* Mult.: From DCO=0.66 *5* in (HI,xnγ); A_2=−0.35 *1* with δ=−0.09 *4* in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
		415.9[a] *1*	8.59[a] *22*	2479.9339	6^+	E1		0.00333	α(K)=0.00291 *4*; α(L)=0.000344 *5*; α(M)=6.57×10^{-5}

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

E_i(level)	J^π_i	E_γ[‡]	I_γ[‡]	E_f	J^π_f	Mult.[b]	δ[c]	α[†]	Comments
									10; α(N+..)=1.232×10^{-5} *18* α(N)=1.166×10^{-5} *17*; α(O)=6.59×10^{-7} *10* Mult.: From A_2=0.26 *4* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
2917.60	2$^+$,3,4$^+$	356.38[@] *8*	50[@] *7*	2561.284	4$^+$				
		1441.9[@]	100[@]	1475.7900	2$^+$				
		2259.5[@] *2*	43[@] *7*	657.7623	2$^+$				
2926.7474	5$^+$	133.333[#] *7*	0.30[#] *1*	2793.441	(4)$^+$				
		219.348[#] *8*	0.29[#] *2*	2707.397	(4)$^+$				
		221.078[#] *10*	0.27[#]	2705.669	(4)$^+$				
		266.914[#] *12*	0.16[#] *2*	2659.866	5$^-$				
		365.448[#] *11*	0.37[#] *2*	2561.284	4$^+$				
		387.075[#] *9*	0.2[#]	2539.691	5$^-$				
		446.812[#] *3*	14.77[#] *19*	2479.9339	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* I_γ: Other:3.2 *3* in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ). Mult.: From α(K)exp=0.0070 *11* (1967Mo12). δ: Weighted average of −0.40 *6* (1978Wa07), −0.39 *+2−1* (1979Ve03), −0.35 *5* (1980Ru03) and −0.45 *20* (1970Kr03) from ^{110}Ag β^- decay (249.83 d).
		493.38[#] *5*	0.04[#]	2433.248	3$^+$				
		706.6760[#] *15*	66.6[#] *3*	2220.0683	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 α(K)exp=0.00262 *23* (1967Mo12). K/L=4.7 (1963Su07). δ: Weighted average of −1.42 *7* (1978Wa07), −1.0 *3* (1970Kr03), −0.58 *2* (1973Jo08), −1.8 *+7−9* (1979Ve03) and −1.1 *3* (1980Ru03) from ^{110}Ag β^- decay (249.83 d).
		763.9424[#] *17*	90.2[#] *3*	2162.8015	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 A_2=+0.31 *1*, A_4=−0.13 *1* (1990Ke02) in

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

E_i(level)	J^π_i	E_γ[‡]	I_γ[‡]	E_f	J^π_f	Mult.[b]	δ[c]	α[†]	Comments
									^{108}Pd(α,2nγ),^{110}Pd(α,4nγ). Other:E2(+M3) with δ=−0.10 +2−3 (1979Ve03) in ^{110}Ag β^- decay (249.83 d). Other δ=Infinite (1970Kr03).
2926.7474	5$^+$	1384.2931[#] 20	100.0[#] 19	1542.4441	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)=4.01×10^{-5} 6 Mult.: From α(K)exp=0.00055 4 (1967Mo12). δ: Weighted average of −0.37 3 (1970Kr03), −0.46 1 (1973Jo08), −0.39 2 (1978Wa07), −0.42 +7−6 (1979Ve03), and −0.44 2 (1980Ru03) in ^{110}Ag β^- decay (249.83 d).
2975.24	1$^+$,2$^+$	2317.41[&] 4	100.0[&] 17	657.7623	2$^+$	M1+E2	−0.16 12	6.67×10^{-4}	α(K)=0.000201 3; α(L)=2.31×10^{-5} 4; α(M)=4.41×10^{-6} 7; α(N+..)=0.000439 7 α(N)=7.90×10^{-7} 12; α(O)=4.74×10^{-8} 7; α(IPF)=0.000438 7 Mult.: From ^{110}In ε decay (69.1 min). δ: From 1992De41.
		2975.29[&] 6	8.5[&] 3	0.0	0$^+$				I_γ: 15 5 in ^{110}In ε decay (69.1 min).
2984.46	2$^+$,3$^+$	905.7[@] 2	27[@] 7	2078.548	3$^-$	[E1]		5.88×10^{-4}	α(K)=0.000515 8; α(L)=5.97×10^{-5} 9; α(M)=1.138×10^{-5} 16; α(N+..)=2.15×10^{-6} 3 α(N)=2.03×10^{-6} 3; α(O)=1.187×10^{-7} 17 B(E1)(W.u.)=0.0006 +3−6
		1441.9[@] 6	100[@]	1542.4441	4$^+$	[M1,E2]		6.56×10^{-4}	α(K)=0.000526 8; α(L)=6.12×10^{-5} 9; α(M)=1.170×10^{-5} 17; α(N+..)=5.73×10^{-5} 9 α(N)=2.09×10^{-6} 3; α(O)=1.249×10^{-7} 18; α(IPF)=5.51×10^{-5} 8
		2326.9[@] 2	40[@] 7	657.7623	2$^+$	M1+E2		6.70×10^{-4}	α(K)=0.000199 3; α(L)=2.30×10^{-5} 4; α(M)=4.38×10^{-6} 7; α(N+..)=0.000443 7 α(N)=7.84×10^{-7} 11; α(O)=4.71×10^{-8} 7; α(IPF)=0.000442 7 Mult.: From A_2=−0.50 18, A_4=+0.02 18 (1992De41) in ^{110}Cd(n,n′γ). δ: −1.9 +12−7 or −0.3 +3−2 (1992De41) in ^{110}Cd(n,n′γ).
2984.48	(5$^-$)	1442.03[a] 6	100[a]	1542.4441	4$^+$	D			Mult.: From A_2=−0.17 4 (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ). δ: −0.01 9 (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
2993.63	(0$^+$)	1517.83[@] 17	100[@]	1475.7900	2$^+$				

Adopted Levels, Gammas (continued)

γ(^{110}Cd) (continued)

E_i(level)	J^π_i	E_γ[‡]	I_γ[‡]	E_f	J^π_f	Mult.[b]	δ[c]	α[†]	Comments
2994.07	(3$^+$,4$^+$)	1451.62[@] *8*	100[@]	1542.4441	4$^+$				
3008.4?	1,2$^+$	2350.7[@] *10*	100[@] *40*	657.7623	2$^+$				
		3008.3[@] *10*	80[@] *40*	0.0	0$^+$				
3029.077	7$^-$	149.88[@] *30*	15.7[@] *10*	2879.185	7$^-$	M1(+E2)	−0.08 *22*	0.152 *16*	α(K)=0.131 *12*; α(L)=0.016 *3*; α(M)=0.0032 *6*; α(N+..)=0.00059 *11* α(N)=0.00056 *10*; α(O)=3.20×10^{-5} *20* B(M1)(W.u.)=(0.0016 *6*); B(E2)(W.u.)=(0.4 *+21−4*) Mult.: From A_2=0.33 *5* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
		369.20[@] *10*	14.4[@] *16*	2659.866	5$^-$	E2		0.01662	α(K)=0.01420 *20*; α(L)=0.00197 *3*; α(M)=0.000381 *6*; α(N+..)=6.98×10^{-5} *10* α(N)=6.66×10^{-5} *10*; α(O)=3.15×10^{-6} *5* B(E2)(W.u.)=0.61 *22* Mult.: From A_2=+0.60 *9*, A_4=−0.35 *10* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
		489.382[@] *15*	75.0[@] *7*	2539.691	5$^-$	E2		0.00708	α(K)=0.00610 *9*; α(L)=0.000802 *12*; α(M)=0.0001545 *22*; α(N+..)=2.86×10^{-5} *4* α(N)=2.72×10^{-5} *4*; α(O)=1.384×10^{-6} *20* B(E2)(W.u.)=0.8 *3* Mult.: From A_2=+0.34 *2*, A_4=−0.08 *3* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
		549.141[@] *17*	100.0[@] *20*	2479.9339	6$^+$	E1(+M2)	−0.04 *6*	0.00174 *13*	α(K)=0.00152 *11*; α(L)=0.000178 *14*; α(M)=3.4×10^{-5} *3*; α(N+..)=6.4×10^{-6} *6* α(N)=6.1×10^{-6} *5*; α(O)=3.5×10^{-7} *3* B(E1)(W.u.)=(2.8×10^{-6} *10*); B(M2)(W.u.)=(0.07 *+21−7*) Mult.: From A_2=−0.27 *3* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ). δ: From ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ) (1990Ke02).
3042.86	1$^+$	1566.92 *10*		1475.7900	2$^+$				E_γ: From ^{110}Cd(n,n′γ).
		2385.22 *11*	18.3 *24*	657.7623	2$^+$				E_γ,I_γ: Eγ from ^{110}Cd(n,n′γ), Iγ from ^{110}Cd(γ,γ′).
		3042.98 *28*	100	0.0	0$^+$	M1		9.12×10^{-4}	α(K)=0.0001198 *17*; α(L)=1.374×10^{-5} *20*; α(M)=2.62×10^{-6} *4*; α(N+..)=0.000775 *11* α(N)=4.69×10^{-7} *7*; α(O)=2.82×10^{-8} *4*; α(IPF)=0.000775 *11* B(M1)(W.u.)=0.021 *3*

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

E_i(level)	J^π_i	E_γ[‡]	I_γ[‡]	E_f	J^π_f	Mult.[b]	δ[c]	α[†]	Comments
									E_γ,I_γ: Eγ from ^{110}Cd(n,n′γ), Iγ from ^{110}Cd(γ,γ′). Mult.: From γ(θ) and linear polarization in ^{110}Cd(γ,γ′) (2005Ko32).
3055.703	8⁻	159.746[a] *15*	42.2[a] *7*	2895.948	6⁻	E2		0.283	α(K)=0.230 *4*; α(L)=0.0435 *6*; α(M)=0.00853 *12*; α(N+..)=0.001493 *21* α(N)=0.001447 *21*; α(O)=4.59×10^{-5} *7* B(E2)(W.u.)=19.2 *11* Mult.: From A_2=+0.34 *2*, A_4=−0.08 *3* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
		176.517[a] *12*	100.0[a] *11*	2879.185	7⁻	M1+E2	−1.03 *54*	0.15 *4*	α(K)=0.12 *3*; α(L)=0.020 *6*; α(M)=0.0039 *12*; α(N+..)=0.00070 *21* α(N)=0.00067 *20*; α(O)=2.7×10^{-5} *5* B(M1)(W.u.)=0.0005 *3*; B(E2)(W.u.)=14 *8* Mult.: From A_2=−0.96 *1*, A_4=+0.17 *2* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
3064.712	6⁺	270.4[@] *2*	70[@] *20*	2793.441	(4)⁺				
		584.21[&] *8*	100[&] *3*	2479.9339	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* Mult.: K/(L+M)=9 *3* in ^{110}In ε decay (4.9 h)(1962Ka08). Other: A_2=+0.29 *2*, A_4=+0.19 *4* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ). δ: From γγ(θ) in ^{110}In ε decay (4.92 h) (1980Ba58).
		844.667[&] *13*	50.0[&] *15*	2220.0683	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=0.00146 *8* in ^{110}In ε decay (4.92 h) (1980Ba58).
		1521.66[&] *20*	2.6[&] *5*	1542.4441	4⁺				
3074.971	6⁻	232.30[a] *4*	40.7[a] *12*	2842.682	(5)⁻	M1(+E2)	−0.044 *50*	0.0463	α(K)=0.0403 *6*; α(L)=0.00494 *8*; α(M)=0.000950 *15*; α(N+..)=0.000179 *3* α(N)=0.000169 *3*; α(O)=9.78×10^{-6} *14* Mult.: From A_2=−0.28 *2* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
		535.269[a] *18*	100.0[a] *23*	2539.691	5⁻	M1+E2	+1.4 *7*	0.00554 *10*	α(K)=0.00480 *10*; α(L)=0.000605 *12*;

$^{110}_{48}$Cd$_{62}$-32

Adopted Levels, Gammas (continued)

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

E_i(level)	J^π_i	E_γ[‡]	I_γ[‡]	E_f	J^π_f	Mult.[b]	δ[c]	α[†]	Comments
									α(M)=0.0001162 *24*; α(N+..)=2.17×10^{-5} *4* α(N)=2.06×10^{-5} *4*; α(O)=1.11×10^{-6} *4* Mult.: From A_2=+0.63 *2*, A_4=+0.14 *4* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
3074.971	6$^-$	595.49[a] *14*	30.2[a] *12*	2479.9339	6$^+$				
3078.381	1$^{(+)}$	790.81[&] *18*	3.4[&] *6*	2287.63	2$^+$	[M1]		0.00226	α(K)=0.00197 *3*; α(L)=0.000233 *4*; α(M)=4.46×10^{-5} *7*; α(N+..)=8.44×10^{-6} *12* α(N)=7.97×10^{-6} *12*; α(O)=4.72×10^{-7} *7* B(M1)(W.u.)=0.0046 *13* I_γ: Other: 55 *18* in ^{110}Cd(n,n′γ).
		1602.57[&] *4*	23.0[&] *8*	1475.7900	2$^+$	[M1]		5.93×10^{-4}	α(K)=0.000422 *6*; α(L)=4.90×10^{-5} *7*; α(M)=9.36×10^{-6} *14*; α(N+..)=0.0001123 *16* α(N)=1.674×10^{-6} *24*; α(O)=1.001×10^{-7} *14*; α(IPF)=0.0001105 *16* B(M1)(W.u.)=0.0037 *9*
		2420.51[&] *4*	100[&] *2*	657.7623	2$^+$	[M1]		6.98×10^{-4}	α(K)=0.000185 *3*; α(L)=2.13×10^{-5} *3*; α(M)=4.06×10^{-6} *6*; α(N+..)=0.000488 *7* α(N)=7.26×10^{-7} *11*; α(O)=4.36×10^{-8} *7*; α(IPF)=0.000487 *7* B(M1)(W.u.)=0.0047 *11*
		3078.42[&] *4*	49.5[&] *15*	0.0	0$^+$	(M1)		9.24×10^{-4}	α(K)=0.0001173 *17*; α(L)=1.345×10^{-5} *19*; α(M)=2.57×10^{-6} *4*; α(N+..)=0.000791 *11* α(N)=4.59×10^{-7} *7*; α(O)=2.76×10^{-8} *4*; α(IPF)=0.000790 *11* B(M1)(W.u.)=0.00114 *25* I_γ: Other:73 *18* in ^{110}Cd(n,n′γ). Mult.: D from $\gamma(\theta)$ in ^{110}Cd(γ,γ') (2005Ko32).
3101.88	2$^+$	184.4[@] *2*	77[@] *15*	2917.60	2$^+$,3,4$^+$				E_γ: Only observed in ^{110}Cd(n,n′γ).
		1023.05[&] *5*	21[&] *4*	2078.80	0$^+$				
		1626.17[&] *6*	18.4[&] *13*	1475.7900	2$^+$				
		2444.05[&] *4*	100[&] *2*	657.7623	2$^+$				
		3102.00[&] *18*	1.7[&] *3*	0.0	0$^+$				
3121.62	6$^+$	461.80[&] *13*	18[&]	2659.866	5$^-$				
		560.32[&] *11*	7.2[&] *4*	2561.284	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* (1980Ba58) from ^{110}In ε decay (4.9 h).
		581.93[&] *9*	33.0[&] *11*	2539.691	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* Mult.: From A_2=−0.19 *7* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ). δ: From 1990Ke02 in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).

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Adopted Levels, Gammas (continued)

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

E_i(level)	J^π_i	E_γ[‡]	I_γ[‡]	E_f	J^π_f	Mult.[b]	δ[c]	α[†]	Comments
		641.68[&] *5*	100.0[&] *23*	2479.9339	6^+	M1(+E2)		0.00367	α(K)=0.00320 *5*; α(L)=0.000380 *6*; α(M)=7.28×10^{-5} *11*;

$^{110}_{48}Cd_{62}$-34

Adopted Levels, Gammas (continued)

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

E_i(level)	J^{π}_i	E_{γ}[‡]	I_{γ}[‡]	E_f	J^{π}_f	Mult.[b]	δ[c]	α[†]	Comments
									α(N+..)=1.378×10^{-5} 20 α(N)=1.301×10^{-5} 19; α(O)=7.68×10^{-7} 11 Mult.: α(K)exp=2.96×10^{-3} 21 (1980Ba58) from ^{110}In ε decay (4.9 h). Other: From A_2=+0.39 5, A_4=+0.11 8 (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
3121.62	6^+	871.08[&] 5	1.21[&] 15	2250.554	4^+				
		901.53[&] 5	7.6[&] 4	2220.0683	4^+				
		1579.07[&] 12	0.98[&] 23	1542.4441	4^+				
3128.41	$1^+,2^+$	1344.88[&] 15	63[&] 13	1783.496	2^+				
		1652.70[&] 9	93[&] 10	1475.7900	2^+				
		3128.25[&] 10	100[&] 7	0.0	0^+				
3135.18	$2^+,3^+$	1592.7[@] 3	30[@] 7	1542.4441	4^+				
		2477.39[@] 7	100[@] 7	657.7623	2^+	M1+E2		7.16×10^{-4}	α(K)=0.0001766 25; α(L)=2.03×10^{-5} 3; α(M)=3.88×10^{-6} 6; α(N+..)=0.000515 8 α(N)=6.94×10^{-7} 10; α(O)=4.17×10^{-8} 6; α(IPF)=0.000514 8 Mult.: From A_2=+0.31 7, A_4=−0.02 7 (2001Co01) in ^{110}Cd(n,n′γ).
3171.19	$2^+,3^+,4^+$	2513.4[@] 2	100[@]	657.7623	2^+				
3184.53	$5^-,6^-$	342.02[a] 9	42.5[a] 13	2842.682	$(5)^-$	M1+E2	+0.23 5	0.0173 3	α(K)=0.01501 23; α(L)=0.00184 3; α(M)=0.000353 6; α(N+..)=6.64×10^{-5} 11 α(N)=6.28×10^{-5} 11; α(O)=3.61×10^{-6} 6 Mult.: From A_2=+0.08 3 (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
		644.82[a] 3	100[a] 4	2539.691	5^-	M1+E2	+0.26 7	0.00361 6	α(K)=0.00315 5; α(L)=0.000375 6; α(M)=7.18×10^{-5} 11; α(N+..)=1.358×10^{-5} 20 α(N)=1.282×10^{-5} 18; α(O)=7.53×10^{-7} 11 Mult.: From A_2=+0.11 6 (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
3187.337	8^+	707.40[&] 2	100[&]	2479.9339	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 B(E2)(W.u.)=1.85 21 Mult.: α(K)exp=2.61×10^{-3} 16 (1980Ba58), 2.9×10^{-3} 6 (1970Ko12). K/(L+M)=6.0 5 (1962Ka08). DCO=1.47 6 (1994Ju04).
3193.40	$(3)^+$	1030.0[@] 5	50[@] 17	2162.8015	3^+				E_{γ}: Only observed in ^{110}Cd(n,n′γ).
		1410.08[&] 8	15.1[&] 18	1783.496	2^+				
		1717.70[&] 10	13.7[&] 14	1475.7900	2^+				

$^{110}_{48}Cd_{62}$-35

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

E_i(level)	J^π_i	E_γ[‡]	I_γ[‡]	E_f	J^π_f	Mult.[b]	δ[c]	α[†]	Comments
3193.40	$(3)^+$	2535.55[&] *4*	100.0[&] *23*	657.7623	2^+				
3208.69	$2^+,3^+$	1666.23[&] *7*	100[&]	1542.4441	4^+				
3239.56	6^+	360.7[a] *4*	8.8[a] *13*	2879.185	7^-	E1		0.00478	α(K)=0.00417 *6*; α(L)=0.000494 *7*; α(M)=9.44×10^{-5} *14*; α(N+..)=1.77×10^{-5} *3* α(N)=1.674×10^{-5} *24*; α(O)=9.38×10^{-7} *14* Mult.: From A_2=−0.02 *9* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
		397.18[ad] *15*	52[a] *3*	2842.682	$(5)^-$	E1		0.00374	α(K)=0.00327 *5*; α(L)=0.000386 *6*; α(M)=7.38×10^{-5} *11*; α(N+..)=1.383×10^{-5} *20* α(N)=1.309×10^{-5} *19*; α(O)=7.37×10^{-7} *11* Mult.: From A_2=+0.29 *6* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
		760.0[a] *6*	100[a] *3*	2479.9339	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+..)=9.18×10^{-6} *14* α(N)=8.67×10^{-6} *13*; α(O)=5.11×10^{-7} *9* Mult.: From A_2=+0.36 (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ). M1 from α(K)exp=2.2×10^{-3} *1* (1980Ba58) in ^{110}In ε decay (4.9 h).
		1018.99[a] *6*	39.1[a] *16*	2220.0683	4^+			0.001094 *16*	α(K)=0.000953 *14*; α(L)=0.0001145 *16*; α(M)=2.19×10^{-5} *3*; α(N+..)=4.12×10^{-6} α(N)=3.90×10^{-6} *6*; α(O)=2.22×10^{-7} *4*
		1697.77[&] *7*	8.1[&] *3*	1542.4441	4^+				
3256.49	$1^+,2^+,3^+$	2598.69[@] *14*	100[@]	657.7623	2^+				
3275.449	8^+	398.5 *5*	1.05 *14*	2876.812	6^+	[E2]		0.01310	α(K)=0.01122 *17*; α(L)=0.001534 *23*; α(M)=0.000296 *5*; α(N+..)=5.43×10^{-5} *8* α(N)=5.18×10^{-5} *8*; α(O)=2.51×10^{-6} *4* B(E2)(W.u.)=27 *8*
		795.5 *1*	100.0 *9*	2479.9339	6^+	E2		0.00194	α(K)=0.001688 *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* B(E2)(W.u.)=80 *22* Mult.: From A_2=0.327 *14*, A_4=−0.077 *21* and linear polarization measurements (1974Lu01).
3277.86	(1^+)	2620.00 *14*		657.7623	2^+	[M1]		7.63×10^{-4}	α(K)=0.0001587 *23*; α(L)=1.82×10^{-5} *3*; α(M)=3.48×10^{-6} *5*; α(N+..)=0.000582 *9* α(N)=6.23×10^{-7} *9*; α(O)=3.74×10^{-8} *6*; α(IPF)=0.000582 *9*

$^{110}_{48}Cd_{62}$-36

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

E_i(level)	J^π_i	E_γ[‡]	I_γ[‡]	E_f	J^π_f	Mult.[b]	δ[c]	α[†]	Comments
3277.86	(1^+)	3281		0.0	0^+	(M1)		9.96×10^{-4}	α(K)=0.0001044 *15*; α(L)=1.195×10^{-5} *17*; α(M)=2.28×10^{-6} *4*; α(N+..)=0.000878 *13* α(N)=4.08×10^{-7} *6*; α(O)=2.45×10^{-8} *4*; α(IPF)=0.000877 *13* E_γ,Mult.: From $^{110}Cd(\gamma,\gamma')$ (2005Ko32); POL=+0.03 *6*.
3298.13	1^-	2640.1[@] *7*	67[@] *22*	657.7623	2^+	[E1]		1.12×10^{-3}	α(K)=8.58×10^{-5} *12*; α(L)=9.73×10^{-6} *14*; α(M)=1.85×10^{-6} *3*; α(N+..)=0.001020 *15* α(N)=3.31×10^{-7} *5*; α(O)=1.98×10^{-8} *3*; α(IPF)=0.001020 *15* B(E1)(W.u.)=4.8×10^{-5} *19*
		3298.1[@] *2*	100[@] *22*	0.0	0^+	(E1)		1.43×10^{-3}	α(K)=6.27×10^{-5} *9*; α(L)=7.09×10^{-6} *10*; α(M)=1.351×10^{-6} *19*; α(N+..)=0.001364 *19* α(N)=2.41×10^{-7} *4*; α(O)=1.448×10^{-8} *21*; α(IPF)=0.001363 *19* B(E1)(W.u.)=3.7×10^{-5} *11* Mult.: D from the intensity ratios W(90°)/W(127°) in $^{110}Cd(\gamma,\gamma')$.
3314.334	2^+	958.56[&] *5*	17.0[&] *12*	2355.792	2^+				
		1151.70[&] *6*	12.3[&] *10*	2162.8015	3^+				
		1235.67[&] *4*	73.2[&] *20*	2078.548	3^-				
		1583.18[&] *20*	3.2[&] *12*	1731.31	0^+				
		1838.2[@] *4*	50[@] *25*	1475.7900	2^+				E_γ: Only observed in $^{110}Cd(n,n'\gamma)$.
		2656.55[&] *4*	100[&] *2*	657.7623	2^+				
		3315.2[@][d] *7*	35.0[@] *7*	0.0	0^+				E_γ: Only observed in $^{110}Cd(n,n'\gamma)$.
3334.85	7^-	279.142[a] *25*	82.0[a] *16*	3055.703	8^-	M1(+E2)	+0.045 *40*	0.0287	α(K)=0.0250 *4*; α(L)=0.00304 *5*; α(M)=0.000585 *9*; α(N+..)=0.0001103 *16* α(N)=0.0001042 *15*; α(O)=6.04×10^{-6} *9* Mult.: From A_2=−0.205 *15* (1990Ke02) in $^{108}Pd(\alpha,2n\gamma)$,$^{110}Pd(\alpha,4n\gamma)$.
		456.0[a] *2*	100[a] *7*	2879.185	7^-	M1+E2	−0.28 *19*	0.00836 *13*	α(K)=0.00728 *11*; α(L)=0.000881 *19*; α(M)=0.000169 *4*; α(N+..)=3.19×10^{-5} *7* α(N)=3.01×10^{-5} *6*; α(O)=1.74×10^{-6} *3* Mult.: From A_2=+0.25 *13* (1990Ke02) in $^{108}Pd(\alpha,2n\gamma)$,$^{110}Pd(\alpha,4n\gamma)$.
3340.83		2683.03[@] *14*	100[@]	657.7623	2^+				
3345.810	9^-	290.09[a] *3*	10.38[a] *23*	3055.703	8^-	M1+E2	+0.54 *19*	0.0283 *14*	α(K)=0.0244 *11*; α(L)=0.00315 *23*;

$^{110}_{48}Cd_{62}$-37

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

E_i(level)	J^π_i	E_γ[‡]	I_γ[‡]	E_f	J^π_f	Mult.[b]	δ[c]	α[†]	Comments
									α(M)=0.00061 *5*; α(N+..)=0.000113 *8* α(N)=0.000107 *8*; α(O)=5.74×10^{-6} *17* B(M1)(W.u.)=0.00133 *23*; B(E2)(W.u.)=3.8 *21* Mult.: From A_2=+0.43 *3*, A_4=+0.19 *3* in (1990Ke02) ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
3345.810	9$^-$	466.624[a] *20*	100.0[a] *12*	2879.185	7$^-$	E2		0.00814	α(K)=0.00700 *10*; α(L)=0.000928 *13*; α(M)=0.000179 *3*; α(N+..)=3.30×10^{-5} *5* α(N)=3.14×10^{-5} *5*; α(O)=1.583×10^{-6} *23* B(E2)(W.u.)=15.0 *10* Mult.: From A_2=+0.36 *2*, A_4=−0.10 *2* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ) (1990Ke02).
3359.06	1$^-$	3359.0[@] *2*	100[@]	0.0	0$^+$	E1		1.46×10^{-3}	α(K)=6.11×10^{-5} *9*; α(L)=6.91×10^{-6} *10*; α(M)=1.317×10^{-6} *19*; α(N+..)=0.001394 *20* α(N)=2.35×10^{-7} *4*; α(O)=1.412×10^{-8} *20*; α(IPF)=0.001394 *20* B(E1)(W.u.)=0.000664 *12* Mult.: From $\gamma(\theta)$ and POL in ^{110}Cd(γ,γ') (2005Ko32).
3366.8	1$^+$,2$^+$,3$^+$,4$^+$	2709.0[@] *4*	100[@]	657.7623	2$^+$				
3391.177	(7)$^-$	316.25[ad] *25*	12.2[a] *13*	3074.971	6$^-$	M1+E2		0.0208	α(K)=0.0181 *3*; α(L)=0.00220 *4*; α(M)=0.000422 *6*; α(N+..)=7.97×10^{-5} *12* α(N)=7.53×10^{-5} *11*; α(O)=4.38×10^{-6} *7* Mult.: From A_2=+0.30 *11* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ). No δ given by 1990Ke02.
		495.227[a] *10*	100.0[a] *22*	2895.948	6$^-$	M1+E2	+0.16 *2*	0.00682	α(K)=0.00594 *9*; α(L)=0.000713 *10*; α(M)=0.0001366 *20*; α(N+..)=2.58×10^{-5} *4* α(N)=2.44×10^{-5} *4*; α(O)=1.427×10^{-6} *20* Mult.: From A_2=+0.01 *3* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
		512.3 *7*		2879.185	7$^-$				
		912.2[a] *4*	54[a] *7*	2479.9339	6$^+$	(E1)		5.80×10^{-4}	α(K)=0.000508 *8*; α(L)=5.88×10^{-5} *9*; α(M)=1.122×10^{-5} *16*; α(N+..)=2.12×10^{-6} *3* α(N)=2.00×10^{-6} *3*; α(O)=1.170×10^{-7} *17* Mult.: From A_2=−0.19 *19* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
3403.29	(1$^-$)	2745.45[&] *6*	100[&] *3*	657.7623	2$^+$				
		3403.48[&] *15*	24.4[&] *22*	0.0	0$^+$				

$^{110}_{48}Cd_{62}$-38

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

E_i(level)	J^π_i	E_γ[‡]	I_γ[‡]	E_f	J^π_f	Mult.[b]	δ[c]	α[†]	Comments
3427.27	8^-	371.6 *5*	11 *4*	3055.703	8^-	M1+E2	−0.25 *15*	0.0140 *3*	α(K)=0.01216 *23*; α(L)=0.00148 *5*; α(M)=0.000285 *9*; α(N+..)=5.37×10^{-5} *15* α(N)=5.07×10^{-5} *15*; α(O)=2.92×10^{-6} *5* B(M1)(W.u.)=0.006 *3*; B(E2)(W.u.)=2.4 *+29−24* I_γ: 16.7 *9* in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ). Mult.: From A_2=+0.28 *5* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
		531 *1*	3.7 *19*	2895.948	6^-	[E2]		0.00561	α(K)=0.00484 *8*; α(L)=0.000628 *10*; α(M)=0.0001208 *19*; α(N+..)=2.24×10^{-5} *4* α(N)=2.13×10^{-5} *4*; α(O)=1.103×10^{-6} *17* B(E2)(W.u.)=2.3 *13*
		548.2 *3*	100 *11*	2879.185	7^-	M1+E2	−0.14 *4*	0.00533	α(K)=0.00465 *7*; α(L)=0.000555 *8*; α(M)=0.0001064 *15*; α(N+..)=2.01×10^{-5} *3* α(N)=1.90×10^{-5} *3*; α(O)=1.115×10^{-6} *16* B(M1)(W.u.)=0.019 *4*; B(E2)(W.u.)=1.0 *6* Mult.: Other: DCO=0.50 *5* in (HI,xnγ).
3439.719	8^+	164.26[a] *2*	11.5[a] *4*	3275.449	8^+	M1(+E2)	+0.22 *27*	0.123 *21*	α(K)=0.106 *16*; α(L)=0.014 *4*; α(M)=0.0027 *8*; α(N+..)=0.00050 *13* α(N)=0.00047 *13*; α(O)=2.6×10^{-5} *3* B(M1)(W.u.)=0.8 *+4−6* Mult.: From A_2=0.42 *4* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ) Other:DCO=1.39 *9* in (HI,xnγ).
		562.907[a] *25*	30.7[a] *7*	2876.812	6^+	E2		0.00477	α(K)=0.00412 *6*; α(L)=0.000529 *8*; α(M)=0.0001018 *15*; α(N+..)=1.89×10^{-5} *3* α(N)=1.80×10^{-5} *3*; α(O)=9.42×10^{-7} *14* B(E2)(W.u.)=1.5×10^2 *+6−10* Mult.: From A_2=+0.46 *3*, A_4=−0.08 *5* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
		959.785[a] *10*	100.0[a] *14*	2479.9339	6^+	E2		1.25×10^{-3}	α(K)=0.001089 *16*; α(L)=0.0001316 *19*; α(M)=2.52×10^{-5} *4*; α(N+..)=4.73×10^{-6} *7* α(N)=4.48×10^{-6} *7*; α(O)=2.54×10^{-7} *4* B(E2)(W.u.)=34 *+13−22* Mult.: From A_2=+0.36 *3*, A_4=−0.12 *5* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
3449.6	(1,2)	1973.8[@] *3*	100[@]	1475.7900	2^+				
3466.39	1,2,3	2808.59[&] *4*	100[&]	657.7623	2^+				
3475.416	1^+	1744.10[&] *7*	8.5[&] *5*	1731.31	0^+	[M1]		5.73×10^{-4}	α(K)=0.000355 *5*; α(L)=4.11×10^{-5} *6*; α(M)=7.85×10^{-6} *11*; α(N+..)=0.0001690 *24*

$^{110}_{48}Cd_{62}$-39

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

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[b]	δ[c]	α[†]	Comments
									$\alpha(K)=0.000355$ *5*; $\alpha(L)=4.11\times10^{-5}$ *6*; $\alpha(M)=7.85\times10^{-6}$ *11*; $\alpha(N+..)=0.0001690$ *24* $\alpha(N)=1.403\times10^{-6}$ *20*; $\alpha(O)=8.40\times10^{-8}$ *12*; $\alpha(IPF)=0.0001675$ *24* B(M1)(W.u.)=0.0035 *3*
3475.416	1^+	2002.37[&] *5*	22.4[&] *5*	1473.07	0^+	[M1]		5.91×10^{-4}	$\alpha(K)=0.000268$ *4*; $\alpha(L)=3.10\times10^{-5}$ *5*; $\alpha(M)=5.92\times10^{-6}$ *9*; $\alpha(N+..)=0.000286$ *4* $\alpha(N)=1.058\times10^{-6}$ *15*; $\alpha(O)=6.34\times10^{-8}$ *9*; $\alpha(IPF)=0.000285$ *4* B(M1)(W.u.)=0.0061 *4*
		2817.61[&] *7*	9.8[&] *5*	657.7623	2^+	[M1]		8.32×10^{-4}	$\alpha(K)=0.0001383$ *20*; $\alpha(L)=1.587\times10^{-5}$ *23*; $\alpha(M)=3.03\times10^{-6}$ *5*; $\alpha(N+..)=0.000675$ *10* $\alpha(N)=5.42\times10^{-7}$ *8*; $\alpha(O)=3.26\times10^{-8}$ *5*; $\alpha(IPF)=0.000674$ *10* B(M1)(W.u.)=0.00095 *8*
		3475.34[&] *3*	100[&] *3*	0.0	0^+	(M1)		1.06×10^{-3}	$\alpha(K)=9.41\times10^{-5}$ *14*; $\alpha(L)=1.076\times10^{-5}$ *15*; $\alpha(M)=2.05\times10^{-6}$ *3*; $\alpha(N+..)=0.000958$ *14* $\alpha(N)=3.67\times10^{-7}$ *6*; $\alpha(O)=2.21\times10^{-8}$ *3*; $\alpha(IPF)=0.000958$ *14* B(M1)(W.u.)=0.0052 *4* Mult.: D from intensity ratios W(90°)/W(127°) in ^{110}Cd(γ,γ') (2005Ko32).
3492.64	$(5^-,6^-)$	566.02[ad] *12*	43.9[a] *18*	2926.7474	5^+				
		952.9[a] *4*	100[a] *5*	2539.691	5^-				
		1012.70[a] *6*	42[a] *5*	2479.9339	6^+				
3493.1		2835.3[@] *4*	100[@]	657.7623	2^+				
3525.34	6^+	460.85[a] *8*	100[a] *3*	3064.712	6^+	E2(+M1)		0.00812	$\alpha(K)=0.00708$ *10*; $\alpha(L)=0.000849$ *12*; $\alpha(M)=0.0001628$ *23*; $\alpha(N+..)=3.08\times10^{-5}$ *5* $\alpha(N)=2.91\times10^{-5}$ *4*; $\alpha(O)=1.704\times10^{-6}$ *24* Mult.: From $A_2=+0.31$ *6*, $A_4=-0.14$ *9* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
		648.58[&] *8*	17[&] *4*	2876.812	6^+	M1+E2	+0.20 +*10*−*12*	0.00357 *6*	$\alpha(K)=0.00311$ *5*; $\alpha(L)=0.000370$ *6*; $\alpha(M)=7.09\times10^{-5}$ *10*; $\alpha(N+..)=1.341\times10^{-5}$ *19* $\alpha(N)=1.266\times10^{-5}$ *18*; $\alpha(O)=7.45\times10^{-7}$ *12* Mult.: From $\alpha(K)$exp=4.2×10^{-3} *12* (1979Sy02) in ^{110}In ε decay (4.9 h).

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

E_i(level)	J^π_i	E_γ[‡]	I_γ[‡]	E_f	J^π_f	Mult.[b]	δ[c]	α[†]	Comments
									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* Mult.: From α(K)exp=4.2×10^{-3} *12* (1979Sy02) in ^{110}In ε decay (4.9 h). δ: From $\gamma\gamma(\theta)$ in ^{110}In ε decay (4.9 h) (1980Ba58).
3525.34	6$^+$	1045.24[&] *9*	35.7[&] *17*	2479.9339	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 α(K)exp=1.0×10^{-3} *2* (1980Ba58). δ: From $\gamma\gamma(\theta)$ in ^{110}In ε decay (4.9 h) (1980Ba58).
		1305.11[&] *9*	15.2[&] *13*	2220.0683	4$^+$				
		1982.77[&] *18*	17.0[&] *4*	1542.4441	4$^+$				
3598.0	1$^+$	3597.9[@] *7*	100[@]	0.0	0$^+$	M1		1.11×10^{-3}	B(M1)(W.u.)=0.0067 *6* α(K)=8.85×10^{-5} *13*; α(L)=1.011×10^{-5} *15*; α(M)=1.93×10^{-6} *3*; α(N+..)=0.001008 *15* α(N)=3.45×10^{-7} *5*; α(O)=2.08×10^{-8} *3*; α(IPF)=0.001007 *15* Mult.: From $\gamma(\theta)$ and linear polarization measurements in ^{110}Cd(γ,γ') (2005Ko32).
3611.041	10$^+$	171.33 *2*	14.81 *11*	3439.719	8$^+$	E2		0.221	α(K)=0.181 *3*; α(L)=0.0329 *5*; α(M)=0.00645 *9*; α(N+..)=0.001134 *16* α(N)=0.001097 *16*; α(O)=3.65×10^{-5} *6* B(E2)(W.u.)=29.1 *15* E_γ: From ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ). I_γ: From (HI,xnγ). Mult.: From A_2=+0.22 *2*, A_4=−0.08 *3* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
		265.218 *20*	5.23 *22*	3345.810	9$^-$	E1(+M2)	−0.014 *16*	0.01078 *19*	α(K)=0.00940 *16*; α(L)=0.001123 *21*; α(M)=0.000214 *4*; α(N+..)=4.00×10^{-5} *8* α(N)=3.79×10^{-5} *7*; α(O)=2.08×10^{-6} *4* B(E1)(W.u.)=(1.33×10^{-6} *9*); B(M2)(W.u.)=(0.017 *+39−17*) E_γ: From ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ). I_γ: From (HI,xnγ). Mult.: From A_2=−0.27 *2* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).

γ(^{110}Cd) (continued)

E_i(level)	J^π_i	E_γ[‡]	I_γ[‡]	E_f	J^π_f	Mult.[b]	δ[c]	α[†]	Comments
3611.041	10$^+$	335.596 *15*	100.0 *10*	3275.449	8$^+$	E2		0.0225	α(K)=0.0192 *3*; α(L)=0.00273 *4*; α(M)=0.000528 *8*; α(N+..)=9.61×10^{-5} *14* α(N)=9.19×10^{-5} *13*; α(O)=4.22×10^{-6} *6* B(E2)(W.u.)=6.8 *4* E_γ: From ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ). I_γ: From (HI,xnγ). Mult.: From A_2=+0.35 *2*, A_4=−0.10 *3* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ) and A_2=0.333 *11*, A_4=−0.093 *16* in (HI,xnγ).
		423.5 *3*	2.27 *22*	3187.337	8$^+$	E2		0.01088	α(K)=0.00933 *14*; α(L)=0.001260 *18*; α(M)=0.000243 *4*; α(N+..)=4.47×10^{-5} *7* α(N)=4.26×10^{-5} *6*; α(O)=2.10×10^{-6} *3* B(E2)(W.u.)=0.048 *6* Mult.: DCO=1.7 *4* in (HI,xnγ).
3634.57	2$^+$	1555.76[&] *21*	28[&] *9*	2078.548	3$^-$				
		1851.15[&] *13*	100[&] *9*	1783.496	2$^+$				
3641.10	8$^-$	566.02[ad] *12*	43.1[a] *17*	3074.971	6$^-$	(E2)		0.00469	α(K)=0.00405 *6*; α(L)=0.000521 *8*; α(M)=0.0001002 *14*; α(N+..)=1.86×10^{-5} *3* α(N)=1.767×10^{-5} *25*; α(O)=9.28×10^{-7} *13* I_γ: Iγ for unresolved doublet in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
		611.80[a] *15*	24[a] *7*	3029.077	7$^-$	M1+E2		0.00411	α(K)=0.00358 *5*; α(L)=0.000426 *6*; α(M)=8.16×10^{-5} *12*; α(N+..)=1.544×10^{-5} *22* α(N)=1.458×10^{-5} *21*; α(O)=8.59×10^{-7} *12* Mult.: From ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ) (1990Ke02) but no δ given.
		761.93[a] *4*	100[a] *4*	2879.185	7$^-$	M1+E2	+0.057 *24*	0.00246	α(K)=0.00215 *3*; α(L)=0.000254 *4*; α(M)=4.86×10^{-5} *7*; α(N+..)=9.20×10^{-6} *13* α(N)=8.68×10^{-6} *13*; α(O)=5.14×10^{-7} *8* Mult.: From A_2=−0.14 *3* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
3683.15	9$^-$	255.74[ad] *15*	4.77[a] *25*	3427.27	8$^-$	M1+E2	−0.12 *11*	0.0363 *9*	α(K)=0.0315 *7*; α(L)=0.00387 *14*; α(M)=0.00074 *3*; α(N+..)=0.000140 *5* α(N)=0.000133 *5*; α(O)=7.62×10^{-6} *14* Mult.: From A_2=−0.42 *1* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
		337.40 *7*	15.6 *5*	3345.810	9$^-$	M1+E2		0.01765	α(K)=0.01537 *22*; α(L)=0.00186 *3*; α(M)=0.000357 *5*; α(N+..)=6.75×10^{-5} *10* α(N)=6.37×10^{-5} *9*; α(O)=3.71×10^{-6} *6*

$^{110}_{48}$Cd$_{62}$-42

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

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[b]	δ[c]	α[†]	Comments
									Mult.: From A_2=+0.67 *9* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ). No reliable δ could be obtained by 1990Ke02.
3683.15	9⁻	627.59[a] *12*	65.8[a] *20*	3055.703	8⁻	M1+E2	−0.21 *7*	0.00385	α(K)=0.00336 *5*; α(L)=0.000400 *6*; α(M)=7.67×10^{-5} *11*; α(N+..)=1.450×10^{-5} *21* α(N)=1.370×10^{-5} *20*; α(O)=8.05×10^{-7} *12* Mult.: From DCO=0.90 *10* in (HI,xnγ) and A_2=−0.57 *4* (1990Ke02), in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
		654.00 *10*	100.0 *15*	3029.077	7⁻	E2		0.00318	α(K)=0.00276 *4*; α(L)=0.000347 *5*; α(M)=6.67×10^{-5} *10*; α(N+..)=1.243×10^{-5} *18* α(N)=1.180×10^{-5} *17*; α(O)=6.35×10^{-7} *9* Mult.: From A_2=+0.37 *3*, A_4=−0.06 *6* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
3726.58	1,2⁺	3726.51[&] *18*	100[&]	0.0	0⁺				
3772.77	1⁺	3114	30 *3*	657.7623	2⁺	[M1]		9.37×10^{-4}	α(K)=0.0001149 *16*; α(L)=1.316×10^{-5} *19*; α(M)=2.51×10^{-6} *4*; α(N+..)=0.000806 *12* α(N)=4.49×10^{-7} *7*; α(O)=2.70×10^{-8} *4*; α(IPF)=0.000806 *12* B(M1)(W.u.)=0.0131 *14* E_γ,I_γ: From ^{110}Cd(γ,γ').
		3772.70[@] *4*	100[@]	0.0	0⁺	M1		1.17×10^{-3}	α(K)=8.13×10^{-5} *12*; α(L)=9.29×10^{-6} *13*; α(M)=1.772×10^{-6} *25*; α(N+..)=0.001076 *15* α(N)=3.17×10^{-7} *5*; α(O)=1.91×10^{-8} *3*; α(IPF)=0.001076 *15* B(M1)(W.u.)=0.0246 *6* Mult.: Deduced from $\gamma(\theta)$ and linear polarization measurements in ^{110}Cd(γ,γ') (2005Ko32).
3782.13	9⁻	726.43[a] *4*	100.0[a] *22*	3055.703	8⁻	M1+E2	+0.15 *2*	0.00274	α(K)=0.00239 *4*; α(L)=0.000283 *4*; α(M)=5.42×10^{-5} *8*; α(N+..)=1.026×10^{-5} *15* α(N)=9.69×10^{-6} *14*; α(O)=5.72×10^{-7} *8* Mult.: From A_2=−0.00 *2* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
		902.90[a] *15*	68.9[a] *15*	2879.185	7⁻	E2		1.44×10^{-3}	α(K)=0.001252 *18*; α(L)=0.0001521 *22*; α(M)=2.91×10^{-5} *4*; α(N+..)=5.47×10^{-6} *8* α(N)=5.18×10^{-6} *8*; α(O)=2.91×10^{-7} *4* I_γ: Other: 100 *12* in (HI,xnγ). Mult.: From A_2=+0.36 *2*, A_4=−0.18 *3* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).

$^{110}_{48}Cd_{62}$-43

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

E_i(level)	J^{π}_i	E_γ[‡]	I_γ[‡]	E_f	J^{π}_f	Mult.[b]	δ[c]	α[†]	Comments
3791.62	8+	351.93[a] 7	25.0[a] 16	3439.719	8+	M1(+E2)	−0.15 24	0.0159 5	α(K)=0.0139 4; α(L)=0.00169 8; α(M)=0.000324 15; α(N+..)=6.10×10^{-5} 25 α(N)=5.77×10^{-5} 25; α(O)=3.34×10^{-6} 6 Mult.: From A_2=+0.30 5 (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
		914.50[a] 15	100[a] 5	2876.812	6+	E2		1.40×10^{-3}	α(K)=0.001216 17; α(L)=0.0001475 21; α(M)=2.83×10^{-5} 4; α(N+..)=5.30×10^{-6} 8 α(N)=5.02×10^{-6} 7; α(O)=2.83×10^{-7} 4 Mult.: From A_2=+0.42 11 (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
		1311.70[a] 6	78[a] 3	2479.9339	6+	E2		6.65×10^{-4}	α(K)=0.000558 8; α(L)=6.58×10^{-5} 10; α(M)=1.259×10^{-5} 18; α(N+..)=2.87×10^{-5} 4 α(N)=2.24×10^{-6} 4; α(O)=1.303×10^{-7} 19; α(IPF)=2.63×10^{-5} 4 Mult.: From A_2=+0.30 4 in (1990Ke02) ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
3823.247	10−	477.45[a] 4	20.0[a] 6	3345.810	9−	M1+E2	−0.24 8	0.00746	α(K)=0.00650 9; α(L)=0.000783 12; α(M)=0.0001501 22; α(N+..)=2.83×10^{-5} 4 α(N)=2.68×10^{-5} 4; α(O)=1.558×10^{-6} 22 B(M1)(W.u.)=0.0091 9; B(E2)(W.u.)=1.9 12 I_γ: Other: 14.8 9 in (HI,xnγ). Mult.: From DCO=0.60 6 in (HI,xnγ) and A_2=−0.61 4, A_4=+0.13 6 in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ) (1990Ke02).
		767.532[a] 20	100.0[a] 12	3055.703	8−	E2		0.00212	α(K)=0.00184 3; α(L)=0.000227 4; α(M)=4.36×10^{-5} 7; α(N+..)=8.16×10^{-6} 12 α(N)=7.74×10^{-6} 11; α(O)=4.27×10^{-7} 6 B(E2)(W.u.)=16.1 14 Mult.: From A_2=−0.36 3, A_4=−0.13 4 (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
3854.1	(1+)	3854	100	0.0	0+	(M1)		1.19×10^{-3}	α(K)=7.83×10^{-5} 11; α(L)=8.95×10^{-6} 13; α(M)=1.706×10^{-6} 24; α(N+..)=0.001105 16 α(N)=3.05×10^{-7} 5; α(O)=1.84×10^{-8} 3; α(IPF)=0.001105 16 B(M1)(W.u.)=0.0084 11 E_γ,I_γ: From ^{110}Cd(γ,γ′). Mult.: POL=+0.09 7 for the 3854+3862 keV doublet.
3861.9	(1+)	3204	12 4	657.7623	2+	[M1]		9.69×10^{-4}	α(K)=0.0001090 16; α(L)=1.249×10^{-5} 18; α(M)=2.38×10^{-6} 4; α(N+..)=0.000845 12

$^{110}_{48}Cd_{62}$-44

γ(^{110}Cd) (continued)

E_i(level)	J^π_i	E_γ[‡]	I_γ[‡]	E_f	J^π_f	Mult.[b]	α[†]	Comments
								α(K)=0.0001090 *16*; α(L)=1.249×10^{-5} *18*; α(M)=2.38×10^{-6} *4*; α(N+..)=0.000845 *12* α(N)=4.26×10^{-7} *6*; α(O)=2.56×10^{-8} *4*; α(IPF)=0.000845 *12* B(M1)(W.u.)=0.0054 *19* E_γ,I_γ: From ^{110}Cd(γ,γ′).
3861.9	(1$^+$)	3862	100	0.0	0$^+$	(M1)	1.20×10^{-3}	α(K)=7.81×10^{-5} *11*; α(L)=8.91×10^{-6} *13*; α(M)=1.700×10^{-6} *24*; α(N+..)=0.001108 *16* α(N)=3.04×10^{-7} *5*; α(O)=1.83×10^{-8} *3*; α(IPF)=0.001107 *16* B(M1)(W.u.)=0.0256 *14* E_γ,I_γ: From ^{110}Cd(γ,γ′). Mult.: Deduced from γ(θ) and linear polarization measurements in ^{110}Cd(γ,γ′) (2005Ko32).
3992.79	(9$^-$)	1113.60[a] *15*	100[a]	2879.185	7$^-$	(E2)	9.01×10^{-4}	α(K)=0.000785 *11*; α(L)=9.37×10^{-5} *14*; α(M)=1.79×10^{-5} *3*; α(N+..)=4.19×10^{-6} *6* α(N)=3.19×10^{-6} *5*; α(O)=1.83×10^{-7} *3*; α(IPF)=8.12×10^{-7} *12* Mult.: From A_2=+0.53 *10* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
4077.176	10$^+$	637.2 *5*	6.8 *9*	3439.719	8$^+$	E2	0.00341	α(K)=0.00295 *5*; α(L)=0.000373 *6*; α(M)=7.17×10^{-5} *11*; α(N+..)=1.335×10^{-5} *19* α(N)=1.267×10^{-5} *18*; α(O)=6.79×10^{-7} *10* B(E2)(W.u.)=15 *+4−5* Mult.: From DCO=1.5 *2*.
		801.724[a] *15*	100[a] *1*	3275.449	8$^+$	E2	0.00191	α(K)=0.001657 *24*; α(L)=0.000204 *3*; α(M)=3.91×10^{-5} *6*; α(N+..)=7.31×10^{-6} *11* α(N)=6.93×10^{-6} *10*; α(O)=3.84×10^{-7} *6* B(E2)(W.u.)=71 *+13−21* Mult.: From DCO=1.40 *6*.
4172.076	12$^+$	561.034[a] *10*	100[a]	3611.041	10$^+$	E2	0.00481	α(K)=0.00415 *6*; α(L)=0.000534 *8*; α(M)=0.0001028 *15*; α(N+..)=1.91×10^{-5} *3* α(N)=1.81×10^{-5} *3*; α(O)=9.50×10^{-7} *14* B(E2)(W.u.)=40.0 *15* Mult.: A_2=+0.36 *2*, A_4=−0.09 *3* (1990Ke02) from ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
4172.706	11$^-$	826.893[a] *18*	100[a]	3345.810	9$^-$	E2	1.77×10^{-3}	α(K)=0.001539 *22*; α(L)=0.000188 *3*; α(M)=3.61×10^{-5} *5*; α(N+..)=6.77×10^{-6} *10* α(N)=6.41×10^{-6} *9*; α(O)=3.57×10^{-7} *5* B(E2)(W.u.)=22.4 *16* Mult.: From A_2=+0.37 *1*, A_4=−0.13 *2* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
4181.96	10$^-$	499.1 *5*	20 *7*	3683.15	9$^-$	D		Mult.: From DCO < 0.6.

$^{110}_{48}$Cd$_{62}$-45

Adopted Levels, Gammas (continued)

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

E_i(level)	J^π_i	E_γ[‡]	I_γ[‡]	E_f	J^π_f	Mult.[b]	δ[c]	α[†]	Comments
4181.96	10^-	754.69[a] *6*	100[a] *3*	3427.27	8^-	E2		0.00221	α(K)=0.00192 *3*; α(L)=0.000237 *4*; α(M)=4.56×10^{-5} *7*; α(N+..)=8.52×10^{-6} *12* α(N)=8.08×10^{-6} *12*; α(O)=4.45×10^{-7} *7* B(E2)(W.u.)=43 *7* Mult.: From A_2=+0.39 *1*, A_4=−0.13 *2* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
		836.13[a] *10*	46.3[a] *18*	3345.810	9^-	M1+E2	−0.27 *8*	0.00197	α(K)=0.00172 *3*; α(L)=0.000203 *3*; α(M)=3.89×10^{-5} *6*; α(N+..)=7.36×10^{-6} *11* α(N)=6.95×10^{-6} *11*; α(O)=4.10×10^{-7} *7* B(M1)(W.u.)=0.0094 *15*; B(E2)(W.u.)=0.8 *5* I_γ: Other: 33 *7* from (HI,xnγ). Mult.: From DCO=0.46 *4* in (HI,xnγ) and A_2=−0.66 *4* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
4334.26	10^-	694[d] *1*		3641.10	8^-				
		988.44[a] *6*	100[a]	3345.810	9^-	M1+E2	0.57 *12*	1.32×10^{-3} *2*	α(K)=0.001150 *21*; α(L)=0.0001358 *24*; α(M)=2.60×10^{-5} *5*; α(N+..)=4.91×10^{-6} *9* α(N)=4.64×10^{-6} *8*; α(O)=2.73×10^{-7} *6* Mult.: From DCO=1.6 *2*. Other: M1+E2 from ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ) (1990Ke02). δ=0.57 *12* reported by 1990Ke02.
4421.62	(10^+)	1075.8[a] *2*	100[a]	3345.810	9^-	D			Mult.: From A_2=+0.35 *6* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
4438.37	9^+	1251.03[a] *6*	100[a]	3187.337	8^+	M1+E2		8.27×10^{-4}	α(K)=0.000712 *10*; α(L)=8.31×10^{-5} *12*; α(M)=1.589×10^{-5} *23*; α(N+..)=1.571×10^{-5} *22* α(N)=2.84×10^{-6} *4*; α(O)=1.693×10^{-7} *24*; α(IPF)=1.270×10^{-5} *18* Mult.: From A_2=+0.06 *3* (1990Ke02) ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ) but no δ given.
4559.12	11^-	735.83 *5*	38 *10*	3823.247	10^-	M1+E2	−0.07 *5*	0.00266	α(K)=0.00233 *4*; α(L)=0.000275 *4*; α(M)=5.27×10^{-5} *8*; α(N+..)=9.97×10^{-6} *14* α(N)=9.42×10^{-6} *14*; α(O)=5.57×10^{-7} *8* B(M1)(W.u.)=0.009 *+5−8*; B(E2)(W.u.)=0.07 *+10−7* E_γ: from ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ). I_γ: From (HI,xnγ). Other: 17.4 *14* in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ). Mult.: From DCO=0.73 *14* in (HI,xnγ) and A_2=−0.37 *5* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
		876.00[a] *5*	100[a] *5*	3683.15	9^-	E2		1.54×10^{-3}	α(K)=0.001343 *19*; α(L)=0.0001636 *23*; α(M)=3.14×10^{-5}

$^{110}_{48}Cd_{62}$-46

Adopted Levels, Gammas (continued)

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

E_i(level)	J^π_i	E_γ[‡]	I_γ[‡]	E_f	J^π_f	Mult.[b]	α[†]	Comments
								5; α(N+..)=5.88×10^{-6} *9* α(N)=5.57×10^{-6} *8*; α(O)=3.12×10^{-7} *5* B(E2)(W.u.)=15 *+7−13* Mult.: From A_2=+0.32 *3*, A_4=−0.10 *4* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
4620.2	10^+	1344.5 *5*	40 *20*	3275.449	8^+			
		1433.0 *5*	100 *20*	3187.337	8^+			Mult.: Note that mult.=M1+E2 was suggested in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ) (1990Ke02), while the decay scheme requires mult.=E2.
4736.81	11^-	954.64[a] *20*	100[a]	3782.13	9^-	E2	1.27×10^{-3}	α(K)=0.001103 *16*; α(L)=0.0001332 *19*; α(M)=2.55×10^{-5} *4*; α(N+..)=4.79×10^{-6} *7* α(N)=4.54×10^{-6} *7*; α(O)=2.57×10^{-7} *4* Mult.: From DCO=1.7 *4* in (HI,xnγ) and A_2=+0.35 *5*, A_4=−0.11 *7* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
4888.27	12^+	811.093[a] *20*	100[a]	4077.176	10^+	E2	0.00185	α(K)=0.001611 *23*; α(L)=0.000198 *3*; α(M)=3.79×10^{-5} *6*; α(N+..)=7.10×10^{-6} *10* α(N)=6.73×10^{-6} *10*; α(O)=3.74×10^{-7} *6* B(E2)(W.u.)=37 *4* Mult.: From DCO=1.46 *6* in (HI,xnγ) and A_2=+0.35 *2*, A_4=−0.10 *3* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
4930.26	12^-	757.7 *5*	6 *1*	4172.706	11^-	M1	0.00249	α(K)=0.00218 *3*; α(L)=0.000257 *4*; α(M)=4.92×10^{-5} *7*; α(N+..)=9.32×10^{-6} *14* α(N)=8.80×10^{-6} *13*; α(O)=5.21×10^{-7} *8* Mult.: From DCO=0.42 *13*.
		1107.0 *3*	100 *10*	3823.247	10^-	E2	9.13×10^{-4}	α(K)=0.000796 *12*; α(L)=9.50×10^{-5} *14*; α(M)=1.82×10^{-5} *3*; α(N+..)=4.07×10^{-6} *6* α(N)=3.24×10^{-6} *5*; α(O)=1.86×10^{-7} *3*; α(IPF)=6.50×10^{-7} *12* Mult.: From DCO=1.44 *9*.
5026.32	14^+	854.25[a] *7*	100[a]	4172.076	12^+	E2	1.64×10^{-3}	α(K)=0.001425 *20*; α(L)=0.0001739 *25*; α(M)=3.33×10^{-5} *5*; α(N+..)=6.25×10^{-6} *9* α(N)=5.92×10^{-6} *9*; α(O)=3.31×10^{-7} *5* B(E2)(W.u.)=29 *3* Mult.: From DCO=1.41 *3* in (HI,xnγ) and A_2=+0.32 *2*, A_4=−0.14 *3* (1990Ke02) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
5092.56	12^-	910.6 *3*	100	4181.96	10^-	E2	1.41×10^{-3}	α(K)=0.001228 *18*; α(L)=0.0001490 *21*; α(M)=2.86×10^{-5} *4*; α(N+..)=5.36×10^{-6} *8* α(N)=5.07×10^{-6} *8*; α(O)=2.86×10^{-7} *4* B(E2)(W.u.)=8.7 *11* Mult.: From DCO=1.48 *10*.

$^{110}_{48}Cd_{62}$-47

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

E_i(level)	J_i^π	E_γ‡	I_γ‡	E_f	J_f^π	Mult.b	α†	Comments
5113.6	12^+	941 *1*	<13	4172.076	12^+			
		1036.7 *3*	100 *7*	4077.176	10^+	E2	1.05×10^{-3}	α(K)=0.000917 *13*; α(L)=0.0001101 *16*; α(M)=2.11×10^{-5} *3*; α(N+..)=3.96×10^{-6} *6* α(N)=3.75×10^{-6} *6*; α(O)=2.14×10^{-7} *3* Mult.: From DCO=1.29 *11*.
5212.7	12^-	878.2 *3*	100	4334.26	10^-	E2	1.53×10^{-3}	α(K)=0.001335 *19*; α(L)=0.0001626 *23*; α(M)=3.12×10^{-5} *5*; α(N+..)=5.85×10^{-6} *9* α(N)=5.53×10^{-6} *8*; α(O)=3.10×10^{-7} *5* Mult.: From DCO=1.46 *12*.
5215.5	(11^+)	595.3 *5*	100	4620.2	10^+			
5248.93	13^-	1076.1 *3*	100	4172.706	11^-	E2	9.70×10^{-4}	α(K)=0.000846 *12*; α(L)=0.0001012 *15*; α(M)=1.94×10^{-5} *3*; α(N+..)=3.64×10^{-6} *6* α(N)=3.45×10^{-6} *5*; α(O)=1.97×10^{-7} *3* B(E2)(W.u.)>8.9 Mult.: From DCO=1.40 *8*.
5497.29	13^-	937 *1*	100 *10*	4559.12	11^-			
		1324.6 *5*	40 *10*	4172.706	11^-			
		1325.6 *5*	80 *20*	4172.076	12^+			
5500.00	13^+	1327.9 *3*	100	4172.076	12^+	M1	7.42×10^{-4}	α(K)=0.000627 *9*; α(L)=7.30×10^{-5} *11*; α(M)=1.396×10^{-5} *20*; α(N+..)=2.88×10^{-5} *4* α(N)=2.50×10^{-6} *4*; α(O)=1.489×10^{-7} *21*; α(IPF)=2.62×10^{-5} *4* Mult.: From DCO=1.05 *14*.
5675.5	14^+	787.1 *3*	100 *4*	4888.27	12^+	E2	0.00199	α(K)=0.001732 *25*; α(L)=0.000213 *3*; α(M)=4.09×10^{-5} *6*; α(N+..)=7.66×10^{-6} *11* α(N)=7.26×10^{-6} *11*; α(O)=4.02×10^{-7} *6* Mult.: From DCO=1.50 *6*.
		1504 *1*	48 *6*	4172.076	12^+	E2	5.68×10^{-4}	α(K)=0.000424 *6*; α(L)=4.97×10^{-5} *7*; α(M)=9.50×10^{-6} *14*; α(N+..)=8.49×10^{-5} *13* α(N)=1.694×10^{-6} *24*; α(O)=9.92×10^{-8} *14*; α(IPF)=8.31×10^{-5} *13* Mult.: From DCO=1.7 *3*.
5758.52	13^-	509.8 *5*	31 *6*	5248.93	13^-	M1	0.00635	α(K)=0.00554 *8*; α(L)=0.000662 *10*; α(M)=0.0001270 *18*; α(N+..)=2.40×10^{-5} *4* α(N)=2.27×10^{-5} *4*; α(O)=1.332×10^{-6} *19* Mult.: From DCO=1.32 *12*.
		545 *1*	16 *3*	5212.7	12^-	M1	0.00541	α(K)=0.00472 *7*; α(L)=0.000563 *9*; α(M)=0.0001079 *16*; α(N+..)=2.04×10^{-5} *3* α(N)=1.93×10^{-5} *3*; α(O)=1.133×10^{-6} *17* Mult.: From DCO=0.63 *8*.
		666.0 *5*	19 *6*	5092.56	12^-	M1	0.00336	α(K)=0.00294 *5*; α(L)=0.000348 *5*; α(M)=6.67×10^{-5} *10*;

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

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

E_i(level)	J^π_i	E_γ [‡]	I_γ [‡]	E_f	J^π_f	Mult. [b]	α [†]	Comments
								α(N+..)=1.262×10^{-5} *18* α(N)=1.191×10^{-5} *17*; α(O)=7.03×10^{-7} *10* Mult.: From DCO=0.83 *11*.
5758.52	13^-	828.0 *3*	75 *25*	4930.26	12^-	M1	0.00203	α(K)=0.001776 *25*; α(L)=0.000209 *3*; α(M)=4.01×10^{-5} *6*; α(N+..)=7.59×10^{-6} *11* α(N)=7.16×10^{-6} *10*; α(O)=4.24×10^{-7} *6* Mult.: From DCO=1.0 *2*.
		1021.5 *5*	16 *3*	4736.81	11^-	E2	1.09×10^{-3}	α(K)=0.000948 *14*; α(L)=0.0001139 *16*; α(M)=2.18×10^{-5} *3*; α(N+..)=4.10×10^{-6} *6* α(N)=3.88×10^{-6} *6*; α(O)=2.21×10^{-7} *4* Mult.: From DCO=1.9 *4*.
		1198.9 *5*	19 *6*	4559.12	11^-	E2	7.76×10^{-4}	α(K)=0.000672 *10*; α(L)=7.97×10^{-5} *12*; α(M)=1.526×10^{-5} *22*; α(N+..)=9.86×10^{-6} *15* α(N)=2.72×10^{-6} *4*; α(O)=1.568×10^{-7} *22*; α(IPF)=6.98×10^{-6} *12* Mult.: From DCO=1.6 *2*.
		1586 *1*	31 *6*	4172.706	11^-	E2	5.52×10^{-4}	α(K)=0.000383 *6*; α(L)=4.47×10^{-5} *7*; α(M)=8.54×10^{-6} *12*; α(N+..)=0.0001161 *17* α(N)=1.524×10^{-6} *22*; α(O)=8.95×10^{-8} *13*; α(IPF)=0.0001144 *17* Mult.: From DCO=1.3 *2*.
		1586.8 *3*	100 *6*	4172.076	12^+	E1	5.14×10^{-4}	α(K)=0.000188 *3*; α(L)=2.15×10^{-5} *3*; α(M)=4.10×10^{-6} *6*; α(N+..)=0.000300 *5* α(N)=7.32×10^{-7} *11*; α(O)=4.34×10^{-8} *6*; α(IPF)=0.000299 *5* Mult.: From DCO=0.71 *9*.
5789.95	14^+	289.9 *5*	13 *7*	5500.00	13^+			
		1617.9 *3*	100 *7*	4172.076	12^+	E2	5.48×10^{-4}	α(K)=0.000368 *6*; α(L)=4.30×10^{-5} *6*; α(M)=8.21×10^{-6} *12*; α(N+..)=0.0001290 *18* α(N)=1.465×10^{-6} *21*; α(O)=8.61×10^{-8} *12*; α(IPF)=0.0001274 *18* Mult.: From DCO=1.1 *2*.
5856.3	14^+	743.5 *5*	24 *6*	5113.6	12^+			
		967.7 *3*	100 *12*	4888.27	12^+	E2	1.23×10^{-3}	α(K)=0.001069 *15*; α(L)=0.0001291 *18*; α(M)=2.47×10^{-5} *4*; α(N+..)=4.64×10^{-6} *7* α(N)=4.39×10^{-6} *7*; α(O)=2.49×10^{-7} *4* Mult.: From DCO=1.41 *10*.
5892.9	$(12^+,13^+)$	677.4 *5*	<100	5215.5	(11^+)			
5914.5	14^+	1026.2 *3*	100	4888.27	12^+	E2	1.08×10^{-3}	α(K)=0.000938 *14*; α(L)=0.0001127 *16*; α(M)=2.16×10^{-5} *3*; α(N+..)=4.06×10^{-6} *6* α(N)=3.84×10^{-6} *6*; α(O)=2.19×10^{-7} *3* Mult.: From DCO=1.51 *13*.
5966.98	14^-	718.1 *5*	15 *3*	5248.93	13^-			

$^{110}_{48}Cd_{62}$-49

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

E_i(level)	J^π_i	E_γ[‡]	I_γ[‡]	E_f	J^π_f	Mult.[b]	α[†]	Comments
5966.98	14^-	753.8 *5*	21 *5*	5212.7	12^-	E2	0.00222	α(K)=0.00193 *3*; α(L)=0.000238 *4*; α(M)=4.57×10^{-5} *7*; α(N+..)=8.55×10^{-6} *12* α(N)=8.10×10^{-6} *12*; α(O)=4.46×10^{-7} *7* Mult.: From DCO=1.64 *8*.
		874.4 *3*	100 *16*	5092.56	12^-	E2	1.55×10^{-3}	α(K)=0.001349 *19*; α(L)=0.0001643 *23*; α(M)=3.15×10^{-5} *5*; α(N+..)=5.91×10^{-6} *9* α(N)=5.59×10^{-6} *8*; α(O)=3.14×10^{-7} *5* Mult.: From DCO=1.5 *2*.
		1036.8 *3*	37 *3*	4930.26	12^-	E2	1.05×10^{-3}	α(K)=0.000917 *13*; α(L)=0.0001101 *16*; α(M)=2.11×10^{-5} *3*; α(N+..)=3.96×10^{-6} *6* α(N)=3.75×10^{-6} *6*; α(O)=2.14×10^{-7} *3* Mult.: From DCO=1.38 *13*.
5984.2	14^-	225.6 *3*	100	5758.52	13^-	M1	0.0500	α(K)=0.0434 *7*; α(L)=0.00533 *8*; α(M)=0.001025 *15*; α(N+..)=0.000193 *3* α(N)=0.000183 *3*; α(O)=1.056×10^{-5} *16* Mult.: From DCO=0.84 *3*.
		1055 *1*		4930.26	12^-			
6079.8		186.9 *5*	100	5892.9	$(12^+,13^+)$			
6100.87	16^+	1074.6 *2*	100	5026.32	14^+	E2	9.73×10^{-4}	α(K)=0.000848 *12*; α(L)=0.0001015 *15*; α(M)=1.94×10^{-5} *3*; α(N+..)=3.66×10^{-6} *6* α(N)=3.46×10^{-6} *5*; α(O)=1.98×10^{-7} *3* B(E2)(W.u.)=50 *5* Mult.: From DCO=1.47 *5*.
6101.4	14^-	1009 *1*	20 *4*	5092.56	12^-			
		1171.3 *3*	100 *23*	4930.26	12^-	E2	8.12×10^{-4}	α(K)=0.000705 *10*; α(L)=8.39×10^{-5} *12*; α(M)=1.605×10^{-5} *23*; α(N+..)=7.03×10^{-6} *11* α(N)=2.86×10^{-6} *4*; α(O)=1.647×10^{-7} *23*; α(IPF)=4.01×10^{-6} *7* B(E2)(W.u.)>6.8 Mult.: From DCO=1.3 *2*.
6178.5	15^+	388.6 *5*	18 *5*	5789.95	14^+	(M1)	0.01238	α(K)=0.01078 *16*; α(L)=0.001300 *19*; α(M)=0.000249 *4*; α(N+..)=4.71×10^{-5} *7* α(N)=4.45×10^{-5} *7*; α(O)=2.60×10^{-6} *4* Mult.: From DCO<0.7.
		678.5 *3*	100 *27*	5500.00	13^+	E2	0.00289	α(K)=0.00251 *4*; α(L)=0.000314 *5*; α(M)=6.04×10^{-5} *9*; α(N+..)=1.126×10^{-5} *16* α(N)=1.068×10^{-5} *15*; α(O)=5.79×10^{-7} *9* Mult.: From DCO=1.23 *10*.
		1152.1 *5*	46 *18*	5026.32	14^+	M1	9.75×10^{-4}	α(K)=0.000851 *12*; α(L)=9.95×10^{-5} *14*; α(M)=1.90×10^{-5} *3*; α(N+..)=5.74×10^{-6} *9* α(N)=3.40×10^{-6} *5*; α(O)=2.03×10^{-7} *3*; α(IPF)=2.13×10^{-6} *4* Mult.: From DCO=1.2 *2*.

Adopted Levels, Gammas (continued)

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

E_i(level)	J^π_i	E_γ[‡]	I_γ[‡]	E_f	J^π_f	Mult.[b]	α[†]	Comments
6181.45	15^-	684.2 *3*	36 *4*	5497.29	13^-	E2	0.00283	α(K)=0.00246 *4*; α(L)=0.000307 *5*; α(M)=5.90×10^{-5} *9*; α(N+..)=1.101×10^{-5} *16* α(N)=1.044×10^{-5} *15*; α(O)=5.67×10^{-7} *8* Mult.: From DCO=1.3 *2*.
		932.3 *3*	91 *5*	5248.93	13^-	E2	1.34×10^{-3}	α(K)=0.001163 *17*; α(L)=0.0001409 *20*; α(M)=2.70×10^{-5} *4*; α(N+..)=5.07×10^{-6} *8* α(N)=4.80×10^{-6} *7*; α(O)=2.71×10^{-7} *4* Mult.: From DCO=1.40 *6*.
		1155.2 *3*	100 *7*	5026.32	14^+	E1	3.88×10^{-4}	α(K)=0.000325 *5*; α(L)=3.75×10^{-5} *6*; α(M)=7.15×10^{-6} *10*; α(N+..)=1.77×10^{-5} *3* α(N)=1.275×10^{-6} *18*; α(O)=7.51×10^{-8} *11*; α(IPF)=1.64×10^{-5} *3* Mult.: From DCO=0.81 *6*.
6216.9	(14)	1190.6 *3*	100	5026.32	14^+	D		Mult.: From DCO=1.39 *14*.
6354.3	15^-	370.0 *3*	100	5984.2	14^-	M1	0.01399	α(K)=0.01218 *18*; α(L)=0.001472 *21*; α(M)=0.000282 *4*; α(N+..)=5.33×10^{-5} *8* α(N)=5.04×10^{-5} *8*; α(O)=2.94×10^{-6} *5* Mult.: From DCO=0.77 *3*.
6489.9	(1)	4707		1783.496	2^+			E_γ: From $^{110}Cd(\gamma,\gamma')$.
		5831		657.7623	2^+			E_γ: From $^{110}Cd(\gamma,\gamma')$.
		6490		0.0	0^+	D		E_γ,Mult.: From $^{110}Cd(\gamma,\gamma')$. $I\gamma(150°)/I\gamma(90°)$=1.66 *8*, 1.75 expected for 0(1)1(1)0 transition (1969Mi13).
6543.9	(15^-)	1295 *1*	100	5248.93	13^-			
6568.8	14	1542.4 *5*	100	5026.32	14^+	D		Mult.: From DCO=1.4 *2*, very probably a $\Delta J=0$ transition.
6575.6	16^+	900.1 *3*	100.0 *23*	5675.5	14^+	E2	1.45×10^{-3}	α(K)=0.001261 *18*; α(L)=0.0001532 *22*; α(M)=2.94×10^{-5} *5*; α(N+..)=5.51×10^{-6} *8* α(N)=5.22×10^{-6} *8*; α(O)=2.93×10^{-7} *5* Mult.: From DCO=1.33 *7*.
		1549 *1*	25 *5*	5026.32	14^+	E2	5.58×10^{-4}	α(K)=0.000401 *6*; α(L)=4.69×10^{-5} *7*; α(M)=8.95×10^{-6} *13*; α(N+..)=0.0001016 *15* α(N)=1.597×10^{-6} *23*; α(O)=9.36×10^{-8} *14*; α(IPF)=9.99×10^{-5} *15* Mult.: From DCO=1.3 *2*.
6584.5	14	1558.1 *5*	100	5026.32	14^+	D		Mult.: From DCO=1.5 *2*, very probably a $\Delta J=0$ transition.
6646.1	(16^+)	856.1 *5*	100	5789.95	14^+	(E2)	1.63×10^{-3}	α(K)=0.001417 *20*; α(L)=0.0001730 *25*; α(M)=3.32×10^{-5} *5*; α(N+..)=6.22×10^{-6} *9* α(N)=5.89×10^{-6} *9*; α(O)=3.29×10^{-7} *5* Mult.: From DCO=1.69 *14*.
6671.1	(15^-)	1422 *1*	67 *33*	5248.93	13^-			
		1645 *1*	100 *33*	5026.32	14^+			
6672.6	16^-	491.2 *5*	12.1 *14*	6181.45	15^-			

$^{110}_{48}Cd_{62}$-51

γ(^{110}Cd) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[b]	α[†]	Comments
6672.6	16⁻	705.7 *3*	100 *7*	5966.98	14⁻	E2	0.00262	α(K)=0.00227 *4*; α(L)=0.000283 *4*; α(M)=5.43×10^{-5} *8*; α(N+..)=1.015×10^{-5} *15* α(N)=9.62×10^{-6} *14*; α(O)=5.24×10^{-7} *8* Mult.: From DCO=1.40 *7*.
6798.0	16⁺	941.7 *5*	100	5856.3	14⁺	E2	1.31×10^{-3}	α(K)=0.001137 *16*; α(L)=0.0001376 *20*; α(M)=2.64×10^{-5} *4*; α(N+..)=4.95×10^{-6} *7* α(N)=4.68×10^{-6} *7*; α(O)=2.65×10^{-7} *4* Mult.: From DCO=1.3 *2*.
6836.2	16⁺	921.7 *5*	100	5914.5	14⁺	E2	1.37×10^{-3}	α(K)=0.001194 *17*; α(L)=0.0001448 *21*; α(M)=2.77×10^{-5} *4*; α(N+..)=5.21×10^{-6} *8* α(N)=4.93×10^{-6} *7*; α(O)=2.78×10^{-7} *4* Mult.: From DCO=1.3 *2*.
6879.6	15	295.0 *3*	100 *10*	6584.5	14	D		Mult.: From DCO=0.78 *3*.
		310.7 *5*	60 *10*	6568.8	14			
6962.8	16⁻	608.5 *3*	100	6354.3	15⁻	M1	0.00416	α(K)=0.00363 *5*; α(L)=0.000432 *6*; α(M)=8.27×10^{-5} *12*; α(N+..)=1.564×10^{-5} *22* α(N)=1.477×10^{-5} *21*; α(O)=8.71×10^{-7} *13* Mult.: From DCO=0.84 *6*.
6993.1	17⁻	811.6 *3*	100 *4*	6181.45	15⁻	E2	0.00185	α(K)=0.001609 *23*; α(L)=0.000197 *3*; α(M)=3.79×10^{-5} *6*; α(N+..)=7.09×10^{-6} *10* α(N)=6.72×10^{-6} *10*; α(O)=3.73×10^{-7} *6* Mult.: From DCO=1.46 *12*.
		892.2 *3*	20.2 *20*	6100.87	16⁺	E1	6.06×10^{-4}	α(K)=0.000531 *8*; α(L)=6.15×10^{-5} *9*; α(M)=1.173×10^{-5} *17*; α(N+..)=2.21×10^{-6} *4* α(N)=2.09×10^{-6} *3*; α(O)=1.222×10^{-7} *18* Mult.: From DCO=0.77 *6*.
7047.6	16⁻	946.3 *3*	100 *20*	6101.4	14⁻	E2	1.29×10^{-3}	α(K)=0.001125 *16*; α(L)=0.0001360 *19*; α(M)=2.61×10^{-5} *4*; α(N+..)=4.89×10^{-6} *7* α(N)=4.63×10^{-6} *7*; α(O)=2.62×10^{-7} *4* Mult.: From DCO=1.7 *3*.
		1080.2 *5*	70 *16*	5966.98	14⁻			
7184.3	17⁺	1005.8 *3*	100	6178.5	15⁺	E2	1.13×10^{-3}	α(K)=0.000981 *14*; α(L)=0.0001180 *17*; α(M)=2.26×10^{-5} *4*; α(N+..)=4.25×10^{-6} *6* α(N)=4.02×10^{-6} *6*; α(O)=2.29×10^{-7} *4* Mult.: From DCO=1.36 *10*.
7281.0	16	401.4 *3*	100	6879.6	15	D		Mult.: From DCO=0.87 *5*.
7285.8	(16)	1068.9 *3*	100	6216.9	(14)	(Q)		Mult.: From DCO=1.48 *13*.
7325.3	18⁺	1224.5 *2*	100	6100.87	16⁺	E2	7.47×10^{-4}	α(K)=0.000643 *9*; α(L)=7.62×10^{-5} *11*; α(M)=1.458×10^{-5} *21*; α(N+..)=1.325×10^{-5} *19*

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

E_i(level)	J_i^π	E_γ‡	I_γ‡	E_f	J_f^π	Mult.b	α†	Comments
								α(K)=0.000643 9; α(L)=7.62×10^{-5} 11; α(M)=1.458×10^{-5} 21; α(N+..)=1.325×10^{-5} 19 α(N)=2.60×10^{-6} 4; α(O)=1.501×10^{-7} 21; α(IPF)=1.051×10^{-5} 15 B(E2)(W.u.)=41 6 Mult.: From DCO=1.46 4.
7341.6		1358 1	100	5984.2	14$^-$			
7443.3	(17$^-$)	770.7 3	100 17	6672.6	16$^-$			
		772.2 5		6671.1	(15$^-$)			
		1261 1	17 8	6181.45	15$^-$			
7523.2	18$^-$	850.6 3	100	6672.6	16$^-$	E2	1.65×10^{-3}	α(K)=0.001439 21; α(L)=0.0001758 25; α(M)=3.37×10^{-5} 5; α(N+..)=6.32×10^{-6} 9 α(N)=5.98×10^{-6} 9; α(O)=3.34×10^{-7} 5 Mult.: From DCO=1.43 5.
7575.2	17$^-$	612.4 3	100	6962.8	16$^-$	M1	0.00410	α(K)=0.00357 5; α(L)=0.000425 6; α(M)=8.14×10^{-5} 12; α(N+..)=1.540×10^{-5} 22 α(N)=1.455×10^{-5} 21; α(O)=8.57×10^{-7} 12 Mult.: From DCO=0.87 12.
7594.2		631.4 5	100	6962.8	16$^-$			
7653.1	18$^+$	1077.4 3	100	6575.6	16$^+$	E2	9.67×10^{-4}	α(K)=0.000843 12; α(L)=0.0001009 15; α(M)=1.93×10^{-5} 3; α(N+..)=3.63×10^{-6} 5 α(N)=3.44×10^{-6} 5; α(O)=1.97×10^{-7} 3 Mult.: From DCO=1.5 2.
7759.0	17	477.9 5	100	7281.0	16	D		Mult.: From DCO=0.73 3.
7777.9		437 1	67 33	7341.6				
		815 1	100 33	6962.8	16$^-$			
		1423.5 5	57 13	6354.3	15$^-$			
7797.7	(17)	516.8 5	100	7281.0	16	D		Mult.: From DCO=0.64 6.
7801.1	(18$^+$)	1155 1	100	6646.1	(16$^+$)	(E2)	8.35×10^{-4}	α(K)=0.000727 11; α(L)=8.65×10^{-5} 13; α(M)=1.655×10^{-5} 24; α(N+..)=5.83×10^{-6} 11 α(N)=2.95×10^{-6} 5; α(O)=1.696×10^{-7} 24; α(IPF)=2.71×10^{-6} 8 Mult.: From (HI,xnγ).
7945.9	19$^-$	952.8 3	100	6993.1	17$^-$	E2	1.27×10^{-3}	α(K)=0.001107 16; α(L)=0.0001338 19; α(M)=2.56×10^{-5} 4; α(N+..)=4.82×10^{-6} 7 α(N)=4.56×10^{-6} 7; α(O)=2.58×10^{-7} 4 Mult.: From DCO=1.41 9.
7970.3	18$^-$	922.7 5	100	7047.6	16$^-$	E2	1.37×10^{-3}	α(K)=0.001191 17; α(L)=0.0001444 21; α(M)=2.77×10^{-5} 4; α(N+..)=5.19×10^{-6} 8 α(N)=4.92×10^{-6} 7; α(O)=2.77×10^{-7} 4 Mult.: From DCO=1.37 13.
8016.5	17	735.2 5	100	7281.0	16			

$^{110}_{48}Cd_{62}$-53

γ(^{110}Cd) (continued)

E_i(level)	J^π_i	E_γ ‡	I_γ ‡	E_f	J^π_f	Mult. b	α †	Comments
8278.0	18	261.2 *5*	29 *14*	8016.5	17	D		Mult.: From DCO=0.91 *6*.
		480.5 *5*	71 *14*	7797.7	(17)	D		Mult.: From DCO=0.77 *6*.
		519.0 *5*	43 *14*	7759.0	17	D		Mult.: From DCO=0.80 *5*.
		952.8 *5*	100 *14*	7325.3	18$^+$	D		Mult.: From DCO=1.46 *10*, very probably a ΔJ=0 transition.
8292.3	(18)	967.0 *5*	100	7325.3	18$^+$			
8372.8		594.9 *5*	100	7777.9				
8405.3	(19$^-$)	962 *1*	100	7443.3	(17$^-$)	E2	1.24×10^{-3}	α(K)=0.001084 *16*; α(L)=0.0001308 *19*; α(M)=2.51×10^{-5} *4*; α(N+..)=4.71×10^{-6} *7* α(N)=4.46×10^{-6} *7*; α(O)=2.52×10^{-7} *4* Mult.: From DCO=1.4 *2*.
8481.3	(19$^+$)	1297 *1*	100	7184.3	17$^+$	(E2)	6.77×10^{-4}	α(K)=0.000571 *8*; α(L)=6.74×10^{-5} *10*; α(M)=1.289×10^{-5} *19*; α(N+..)=2.56×10^{-5} *5* α(N)=2.30×10^{-6} *4*; α(O)=1.333×10^{-7} *19*; α(IPF)=2.32×10^{-5} *4* Mult.: From (HI,xnγ).
8530.7	(18)	1244.9 *5*	100	7285.8	(16)			
8595.6	19	303.3 *5*	5.6 *19*	8292.3	(18)			
		317.6 *3*	100 *7*	8278.0	18	D		Mult.: From DCO=0.87 *5*.
8629.7	20$^-$	1106.5 *3*	100	7523.2	18$^-$	E2	9.14×10^{-4}	α(K)=0.000796 *12*; α(L)=9.51×10^{-5} *14*; α(M)=1.82×10^{-5} *3*; α(N+..)=4.06×10^{-6} *6* α(N)=3.24×10^{-6} *5*; α(O)=1.86×10^{-7} *3*; α(IPF)=6.38×10^{-7} *12* Mult.: From DCO=1.50 *14*.
8648.3	20$^+$	1323.0 *3*	100	7325.3	18$^+$	E2	6.56×10^{-4}	α(K)=0.000548 *8*; α(L)=6.47×10^{-5} *9*; α(M)=1.236×10^{-5} *18*; α(N+..)=3.11×10^{-5} *5* α(N)=2.20×10^{-6} *3*; α(O)=1.281×10^{-7} *18*; α(IPF)=2.88×10^{-5} *4* B(E2)(W.u.)=38 *7* Mult.: From DCO=1.44 *6*.
8861.6	20$^+$	1208.5 *3*	100	7653.1	18$^+$	E2	7.65×10^{-4}	α(K)=0.000660 *10*; α(L)=7.84×10^{-5} *11*; α(M)=1.500×10^{-5} *21*; α(N+..)=1.105×10^{-5} *16* α(N)=2.67×10^{-6} *4*; α(O)=1.542×10^{-7} *22*; α(IPF)=8.23×10^{-6} *13* Mult.: From DCO=1.7 *2*.
8967.9	20	372.3 *3*	100	8595.6	19	(M1)	0.01377	α(K)=0.01200 *17*; α(L)=0.001449 *21*; α(M)=0.000278 *4*; α(N+..)=5.25×10^{-5} *8* α(N)=4.96×10^{-5} *7*; α(O)=2.90×10^{-6} *4* B(M1)(W.u.)=3.3 *4* Mult.: From DCO=0.84 *6*.
9106.8	21$^-$	1160.9 *3*	100	7945.9	19$^-$	E2	8.27×10^{-4}	α(K)=0.000719 *10*; α(L)=8.55×10^{-5} *12*; α(M)=1.637×10^{-5} *23*; α(N+..)=6.22×10^{-6} *9* α(N)=2.91×10^{-6} *4*; α(O)=1.678×10^{-7} *24*; α(IPF)=3.14×10^{-6} *5* Mult.: From DCO=1.50 *14*.
9430.4	21	462.5 *3*	100	8967.9	20	(M1)	0.00805	α(K)=0.00702 *10*; α(L)=0.000842 *12*; α(M)=0.0001614 *23*;

$^{110}_{48}$Cd$_{62}$-54

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

E_i(level)	J^π_i	E_γ[‡]	I_γ[‡]	E_f	J^π_f	Mult.[b]	α[†]	Comments
								α(N+..)=3.05×10^{-5} *5* α(N)=2.88×10^{-5} *4*; α(O)=1.689×10^{-6} *24* B(M1)(W.u.)=3.2 *+6−5* Mult.: From DCO=0.98 *6*.
9574.3	(21$^-$)	1169 *1*	100	8405.3	(19$^-$)			
9962.3	22$^+$	1100 *1*	37 *11*	8861.6	20$^+$	[E2]	9.25×10^{-4}	α(K)=0.000806 *12*; α(L)=9.63×10^{-5} *14*; α(M)=1.84×10^{-5} *3*; α(N+..)=4.0×10^{-6} *5* α(N)=3.28×10^{-6} *5*; α(O)=1.88×10^{-7} *3* B(E2)(W.u.)=20 *10*
		1314.1 *3*	100 *4*	8648.3	20$^+$	E2	6.63×10^{-4}	α(K)=0.000556 *8*; α(L)=6.56×10^{-5} *10*; α(M)=1.254×10^{-5} *18*; α(N+..)=2.92×10^{-5} *5* α(N)=2.24×10^{-6} *4*; α(O)=1.298×10^{-7} *19*; α(IPF)=2.68×10^{-5} *4* B(E2)(W.u.)=22 *8* Mult.: From DCO=1.50 *9*.
9971.7	22$^-$	1342 *1*	100	8629.7	20$^-$	E2	6.43×10^{-4}	α(K)=0.000532 *8*; α(L)=6.28×10^{-5} *9*; α(M)=1.200×10^{-5} *17*; α(N+..)=3.56×10^{-5} *6* α(N)=2.14×10^{-6} *3*; α(O)=1.244×10^{-7} *18*; α(IPF)=3.33×10^{-5} *6* Mult.: From DCO=1.8 *3*.
9991.4	22	561 *1*	100	9430.4	21	(M1)	0.00505	α(K)=0.00440 *7*; α(L)=0.000525 *8*; α(M)=0.0001006 *15*; α(N+..)=1.90×10^{-5} *3* α(N)=1.80×10^{-5} *3*; α(O)=1.057×10^{-6} *16* B(M1)(W.u.)=1.9 *+4−3* Mult.: From DCO=1.0 *2*.
10228.7	(22$^+$)	1367 *1*	100	8861.6	20$^+$			
10495.8	23$^-$	1389 *1*	100	9106.8	21$^-$	E2	6.14×10^{-4}	α(K)=0.000497 *7*; α(L)=5.84×10^{-5} *9*; α(M)=1.117×10^{-5} *16*; α(N+..)=4.80×10^{-5} *8* α(N)=1.99×10^{-6} *3*; α(O)=1.161×10^{-7} *17*; α(IPF)=4.59×10^{-5} *7* Mult.: From DCO=1.5 *3*.
10665.2	23	673.8 *3*	100	9991.4	22	D		Mult.: From DCO=0.83 *7*.
11320.3	24$^+$	1358.0 *3*	100	9962.3	22$^+$	E2	6.32×10^{-4}	α(K)=0.000520 *8*; α(L)=6.12×10^{-5} *9*; α(M)=1.171×10^{-5} *17*; α(N+..)=3.96×10^{-5} *6* α(N)=2.09×10^{-6} *3*; α(O)=1.215×10^{-7} *17*; α(IPF)=3.74×10^{-5} *6* B(E2)(W.u.)=21 *6* Mult.: From DCO=1.33 *10*.
11451.2	24	786 *1*	100	10665.2	23	D		Mult.: From DCO=1.12 *13*.
11454.8	(24$^-$)	1483 *1*	100	9971.7	22$^-$	(E2)	5.75×10^{-4}	α(K)=0.000436 *7*; α(L)=5.11×10^{-5} *8*; α(M)=9.77×10^{-6} *14*; α(N+..)=7.75×10^{-5} *12* α(N)=1.743×10^{-6} *25*; α(O)=1.020×10^{-7} *15*; α(IPF)=7.57×10^{-5} *12* Mult.: From (HI,xnγ).
12081.8	(25$^-$)	1586 *1*	100	10495.8	23$^-$	(E2)	5.52×10^{-4}	α(K)=0.000383 *6*; α(L)=4.47×10^{-5} *7*; α(M)=8.54×10^{-6} *12*;

$^{110}_{48}Cd_{62}$-55

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

E_i(level)	J^π_i	E_γ ‡	I_γ ‡	E_f	J^π_f	Mult. b	α †	Comments
								α(N+..)=0.0001161 *17* α(N)=1.524×10^{-6} *22*; α(O)=8.95×10^{-8} *13*; α(IPF)=0.0001144 *17* Mult.: From (HI,xnγ).
12763.3	26^+	1443 *1*	100	11320.3	24^+	E2	5.89×10^{-4}	α(K)=0.000460 *7*; α(L)=5.40×10^{-5} *8*; α(M)=1.033×10^{-5} *15*; α(N+..)=6.43×10^{-5} *10* α(N)=1.84×10^{-6} *3*; α(O)=1.076×10^{-7} *16*; α(IPF)=6.23×10^{-5} *10* B(E2)(W.u.)=12.0 Mult.: From DCO=1.53 *12*.
13032.8	(26^-)	1578 *1*	100	11454.8	(24^-)			
14206.4	28^+	1443	100	12763.3	26^+	E2	5.89×10^{-4}	α(K)=0.000460 *7*; α(L)=5.40×10^{-5} *8*; α(M)=1.033×10^{-5} *15*; α(N+..)=6.43×10^{-5} *9* α(N)=1.84×10^{-6} *3*; α(O)=1.076×10^{-7} *15*; α(IPF)=6.23×10^{-5} *9* Mult.: From DCO=1.53 *12*.

† Additional information 1.
‡ From (HI,xn) reaction, unless otherwise stated.
\# From ^{110}Ag β^- decay (249.83 d).
@ From ^{110}Cd(n,n′γ).
& From ^{110}In ε decay (69.1 min).
a From ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ).
b From α(K)exp in ^{110}Ag β^- decay (249.83 d) (1967Mo12) and/or DCO measurements in (HI,xnγ) (1994Ju04), unless otherwise stated. DCO ratios are deduced using ($R(E_\gamma)=I_\gamma(143°$ or $37°)/I_\gamma(79°$ or $101°)$). For ΔI=0 dipole and ΔI=2 quadrupole transitions $R(E_\gamma)\approx1.50$, for stretch dipole transitions $R(E_\gamma)\approx0.75$.
c From γ(θ) in ^{108}Pd(α,2nγ),^{110}Pd(α,4nγ) (1990Ke02), unless otherwise stated.
d Placement of transition in the level scheme is uncertain.

$^{110}_{48}Cd_{62}$-56

Adopted Levels, Gammas

Level Scheme

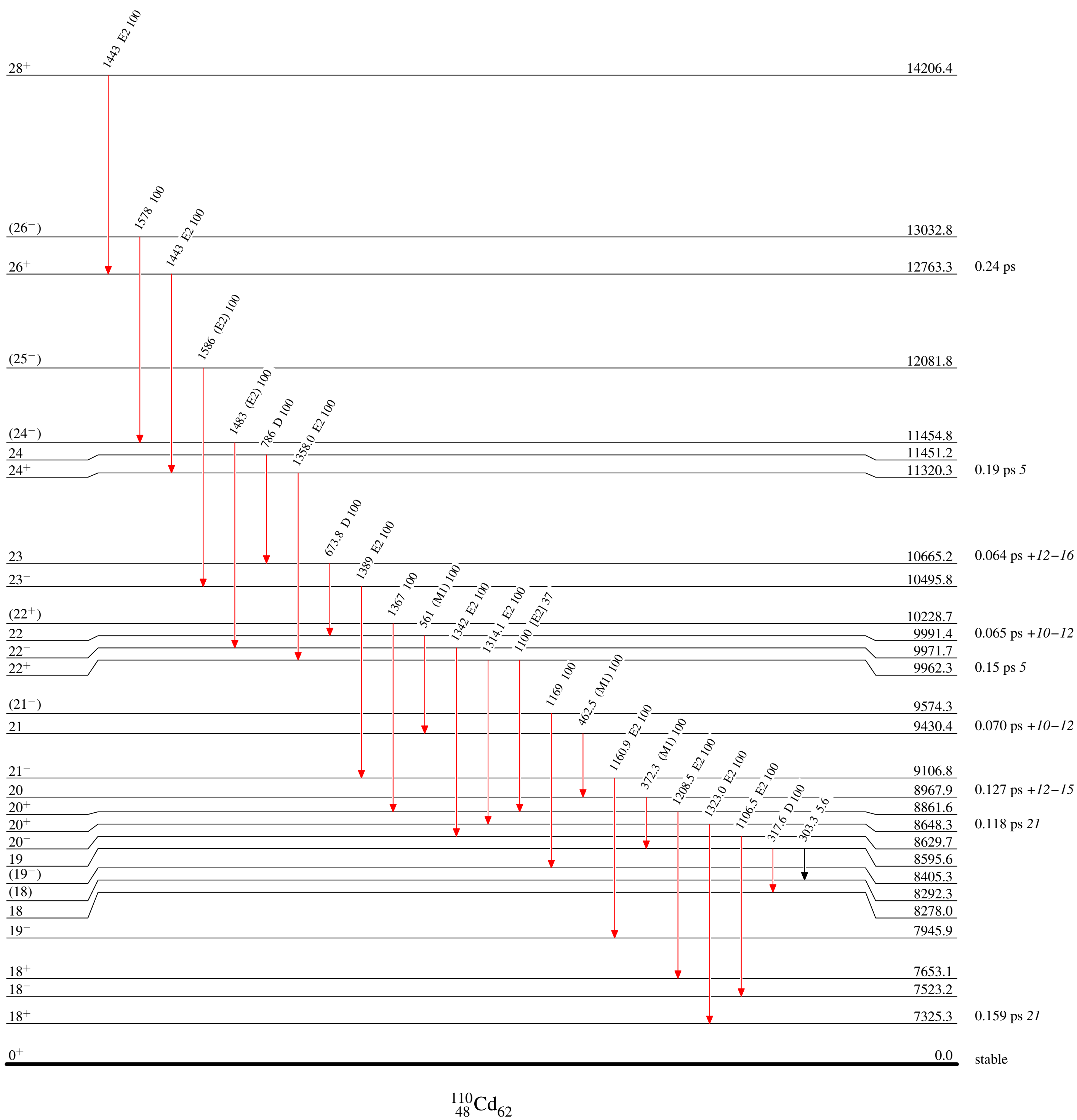
Intensities: Type not specified

Legend

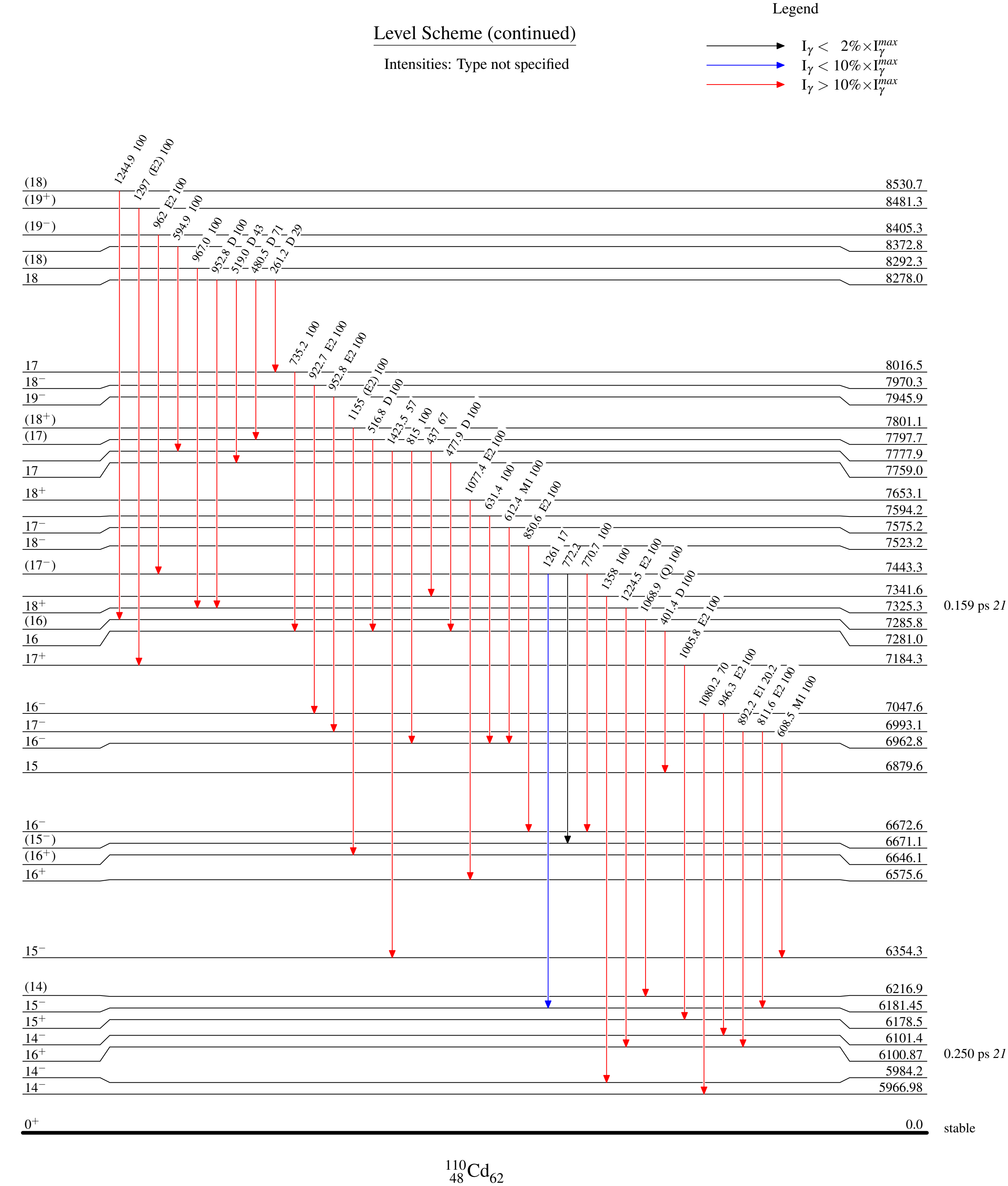
$I_\gamma < 2\% \times I_\gamma^{max}$

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

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



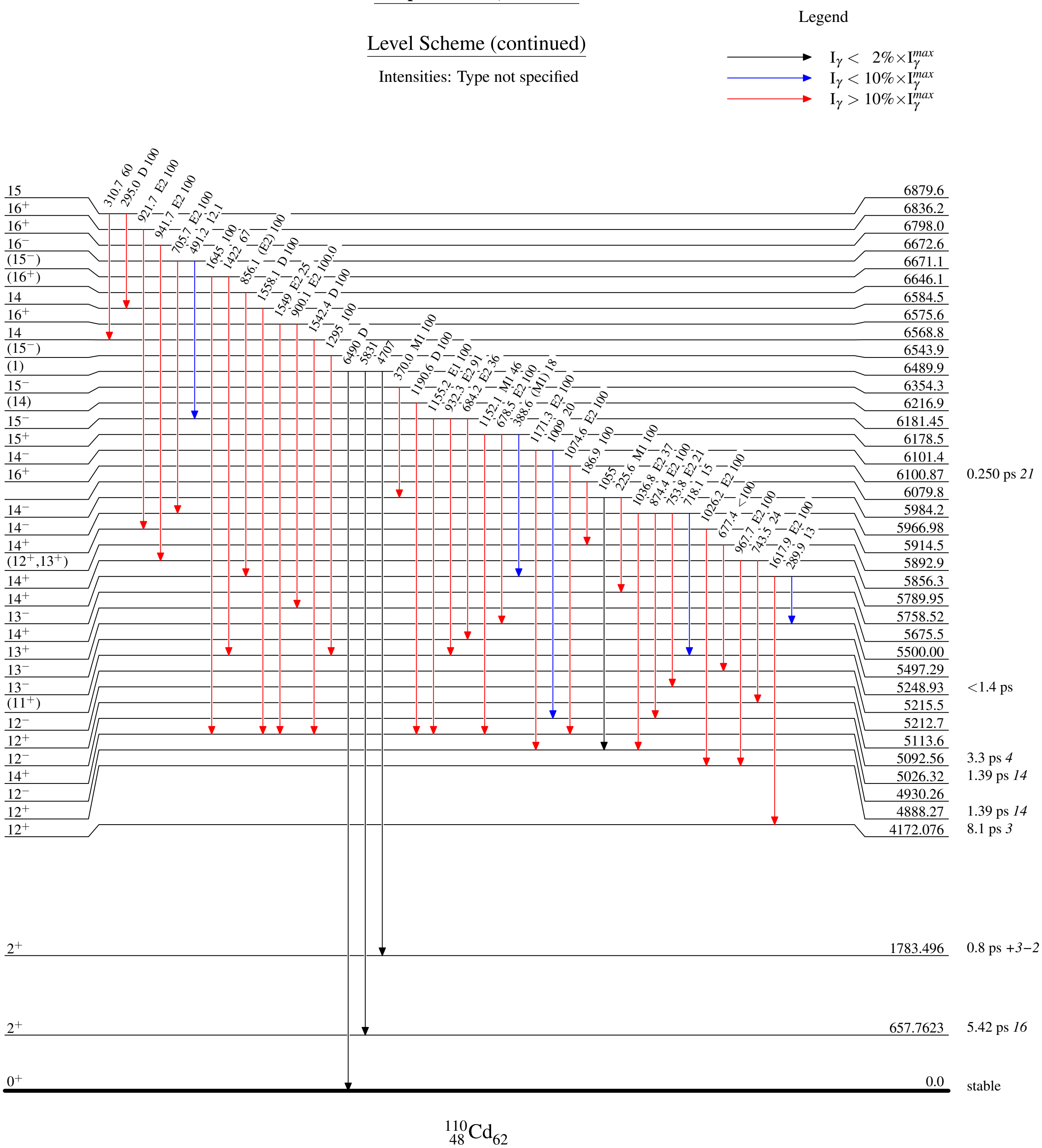
Adopted Levels, Gammas



Adopted Levels, Gammas

Level Scheme (continued)

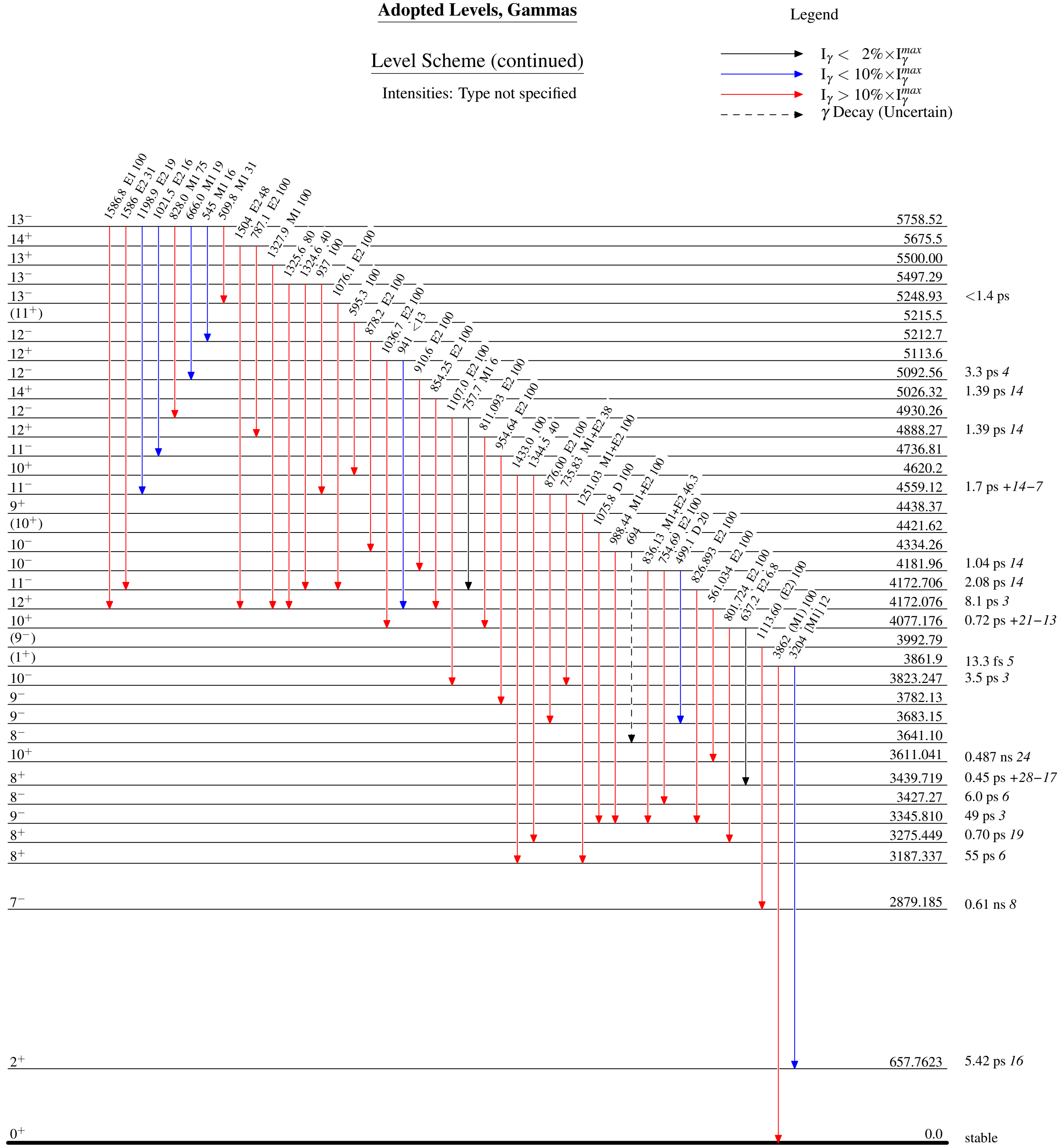
Intensities: Type not specified



Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

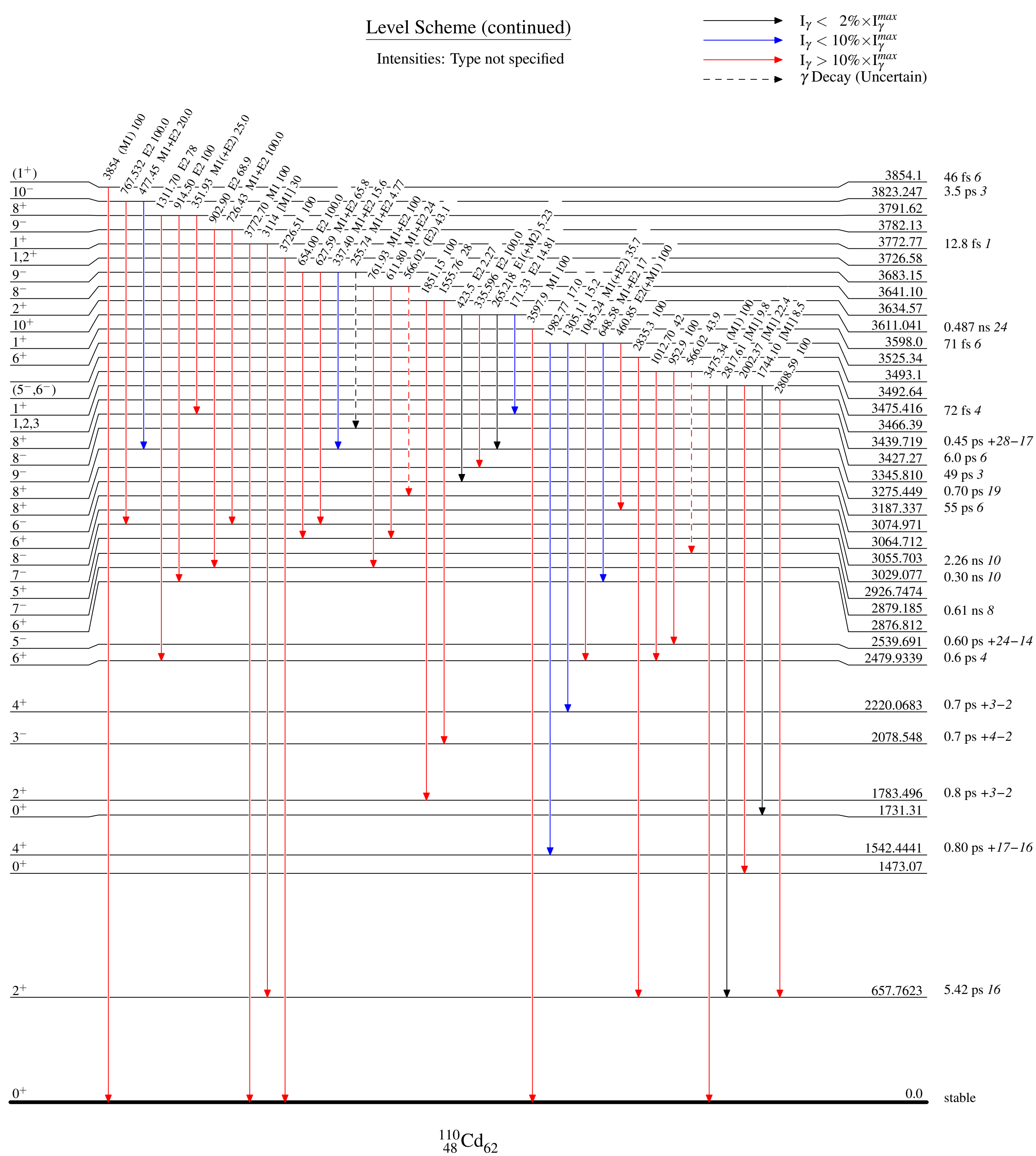


$^{110}_{48}Cd_{62}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified



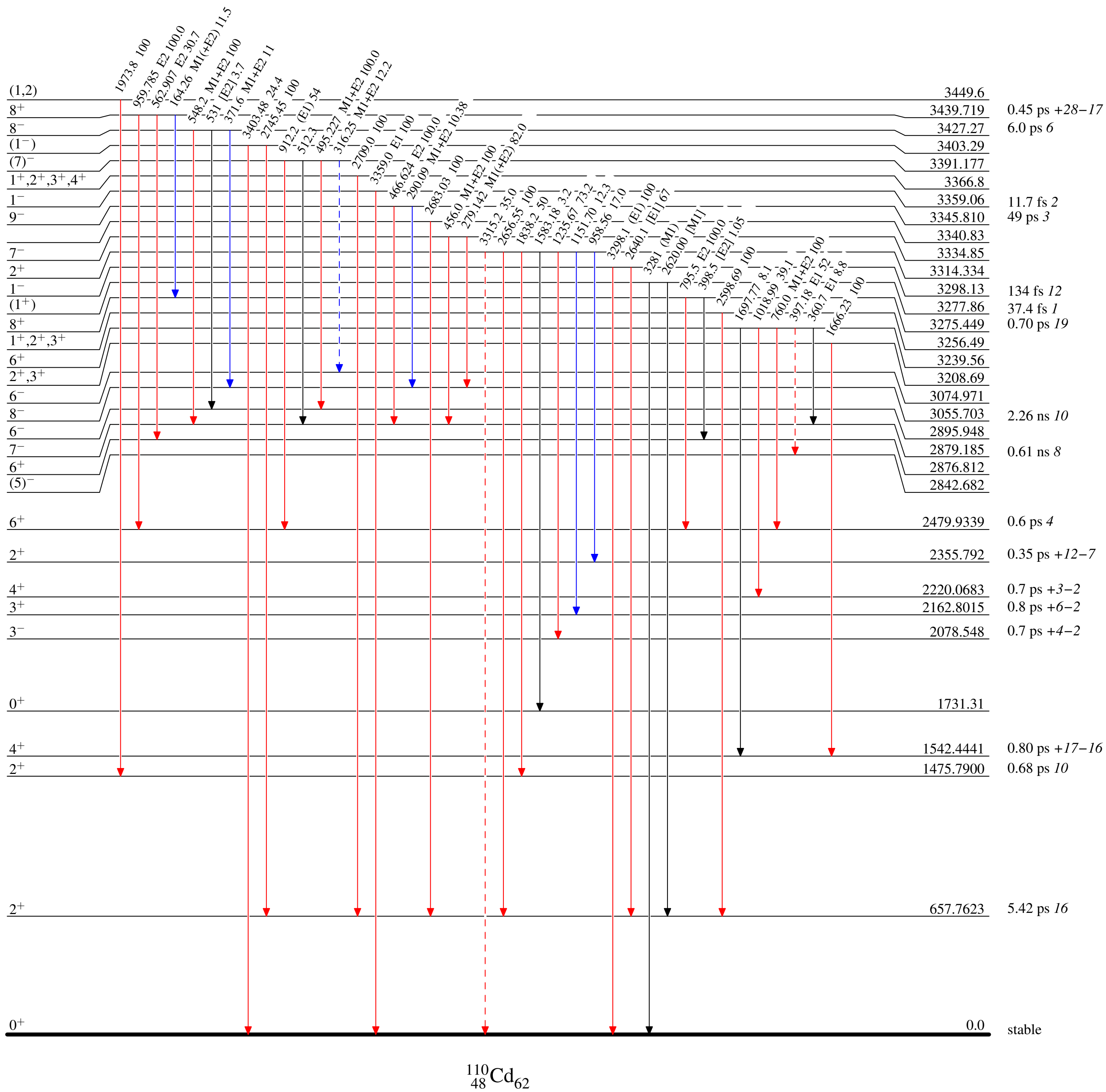
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

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)



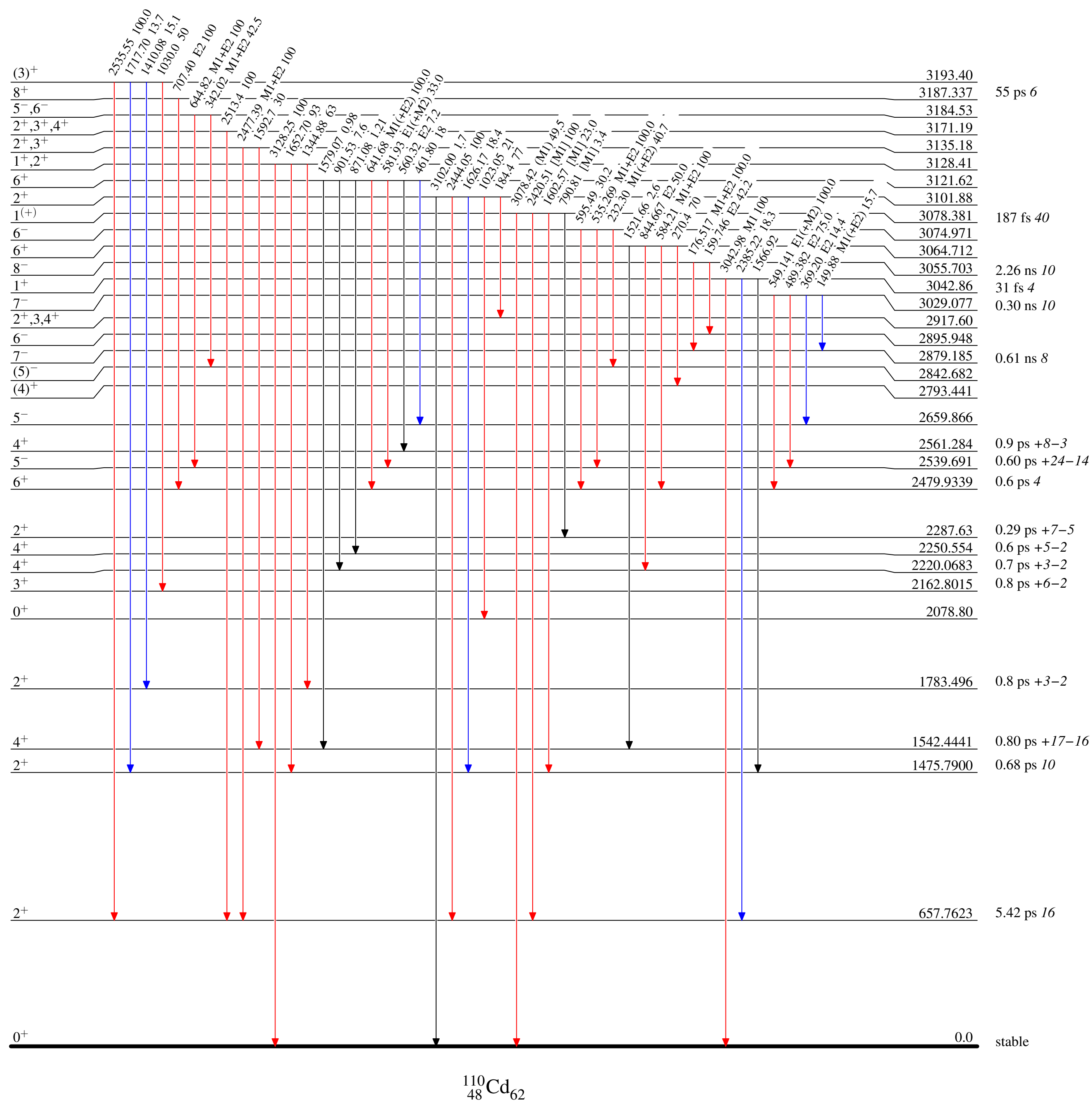
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Type not specified

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



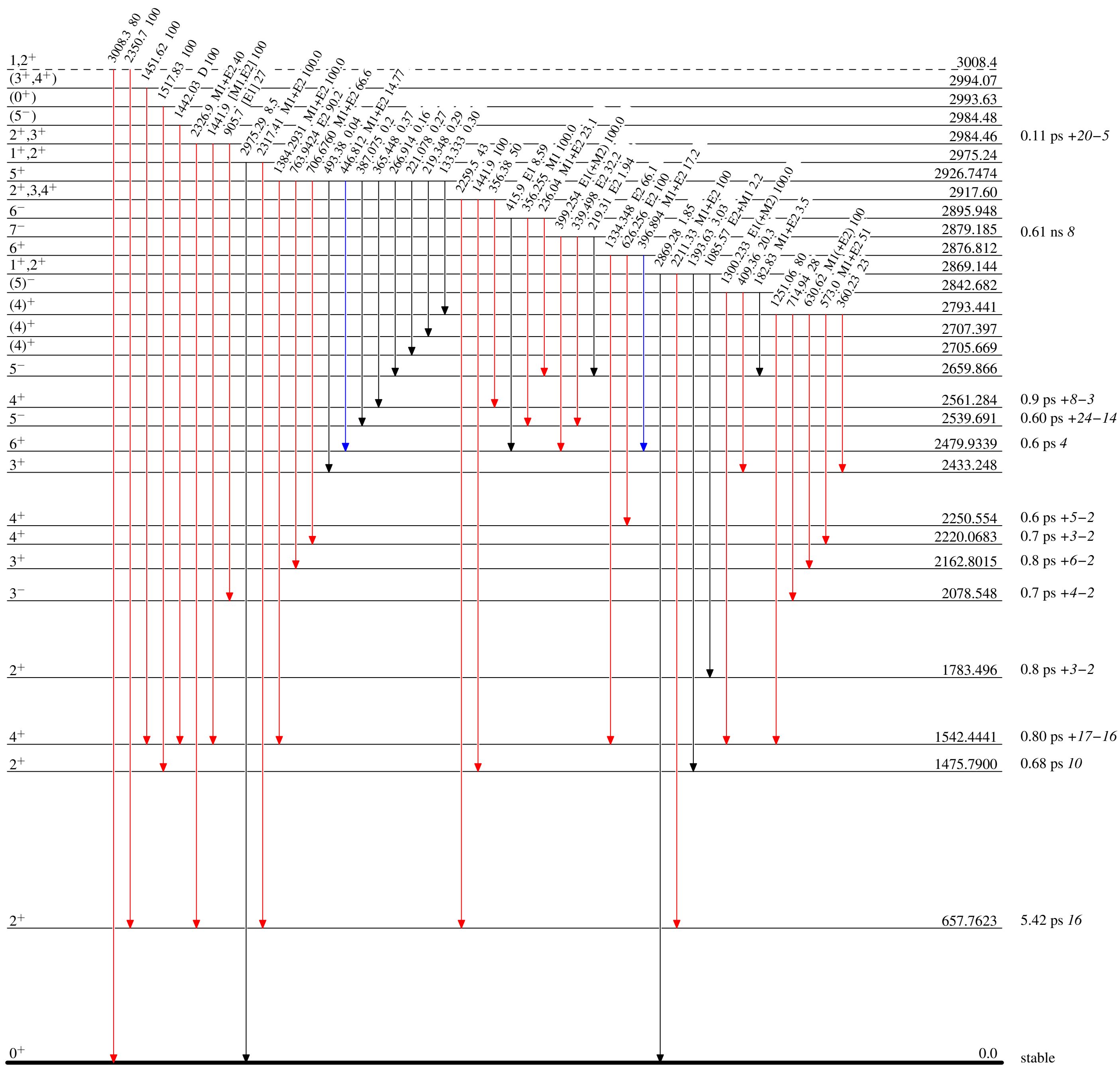
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

Legend

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

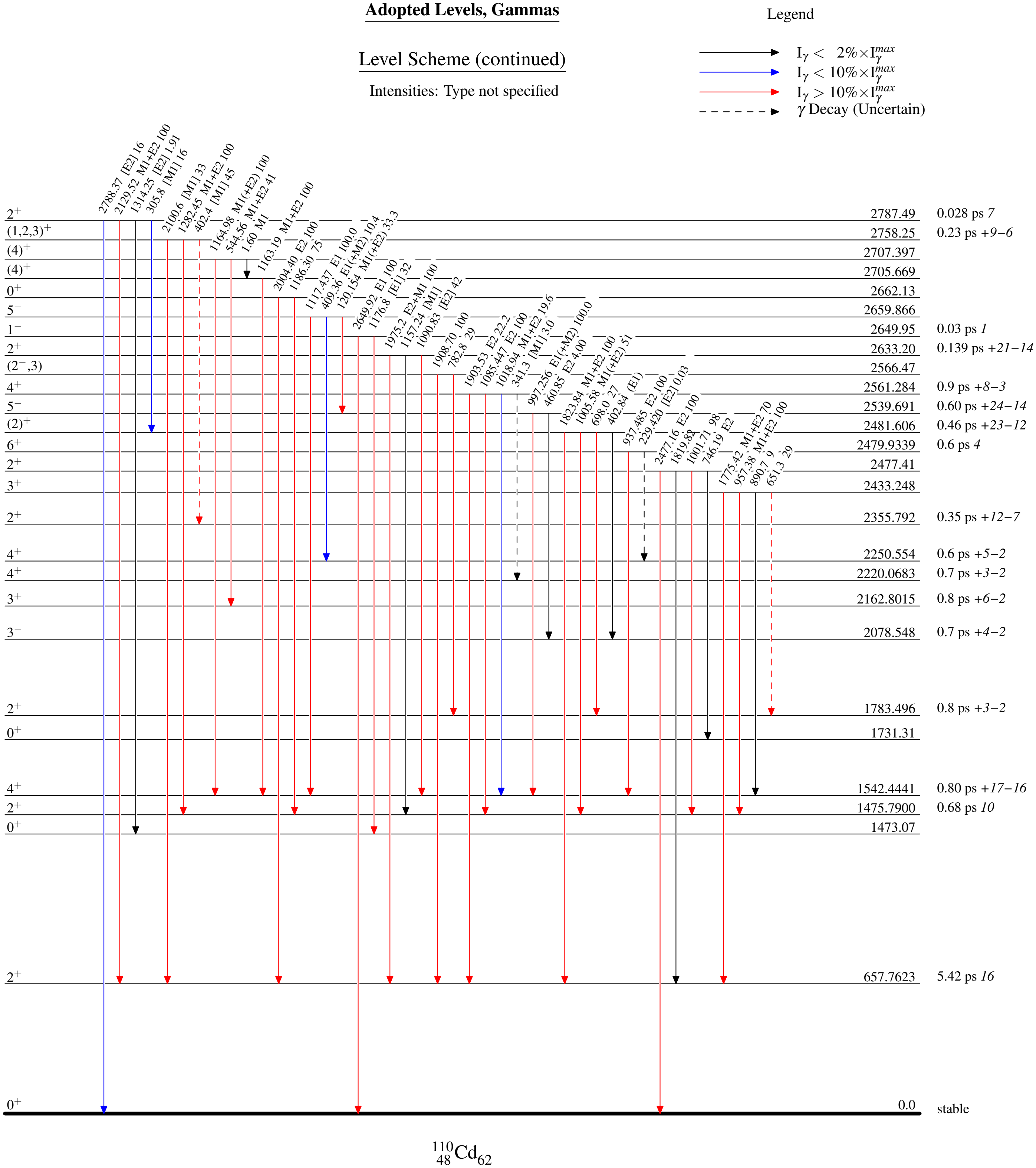


$^{110}_{48}Cd_{62}$

Adopted Levels, Gammas

Level Scheme (continued)

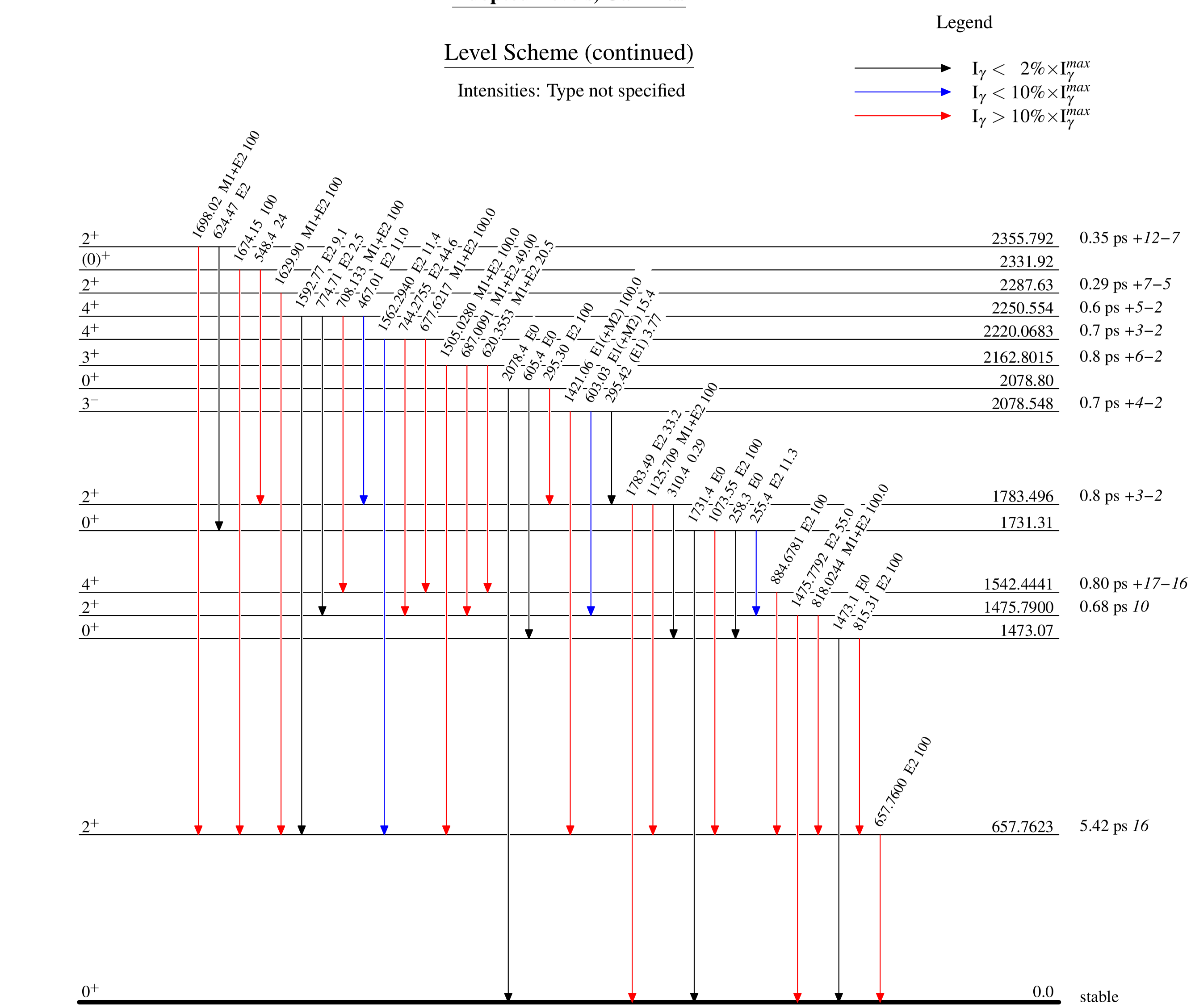
Intensities: Type not specified



Adopted Levels, Gammas

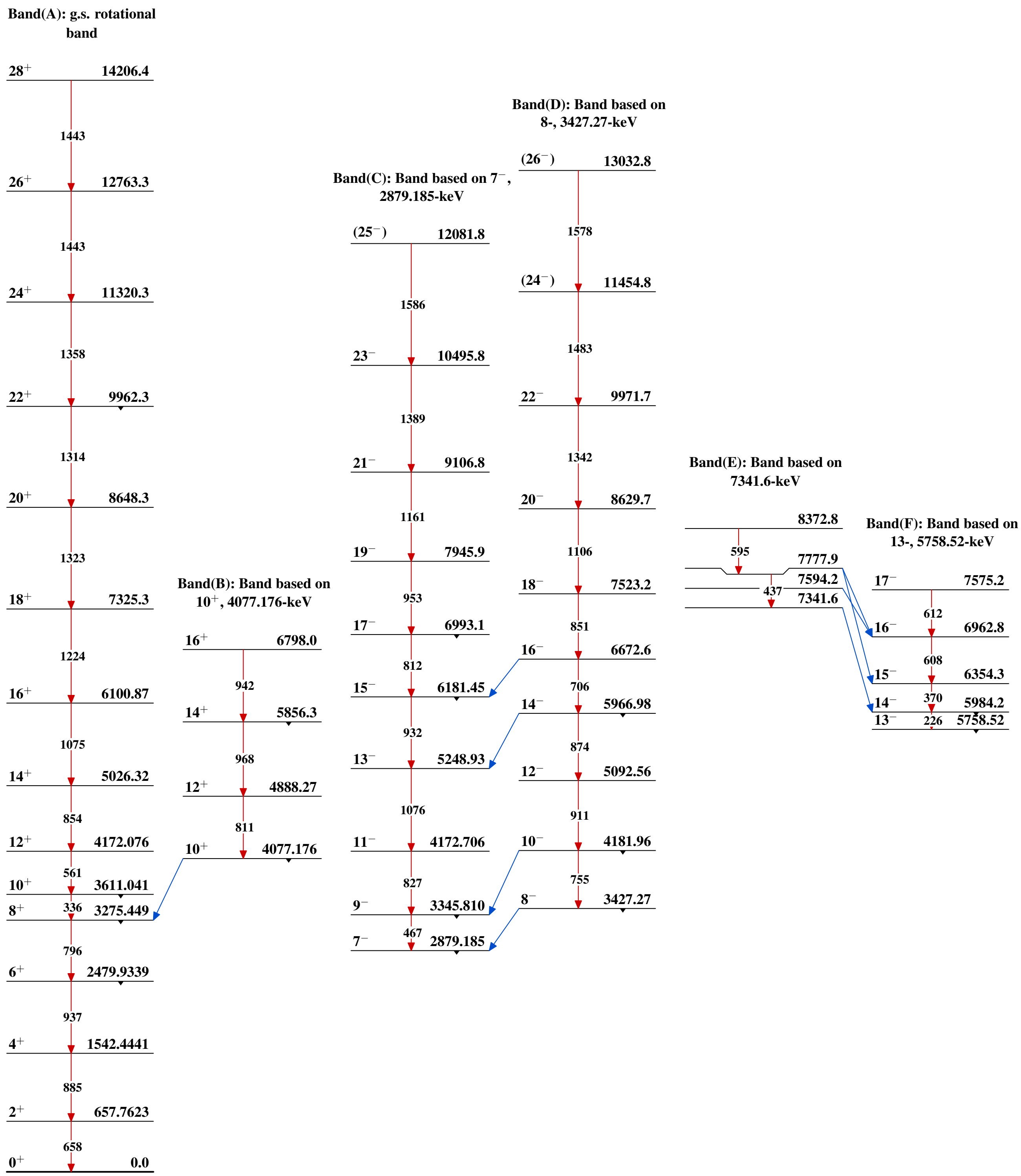
Level Scheme (continued)

Intensities: Type not specified



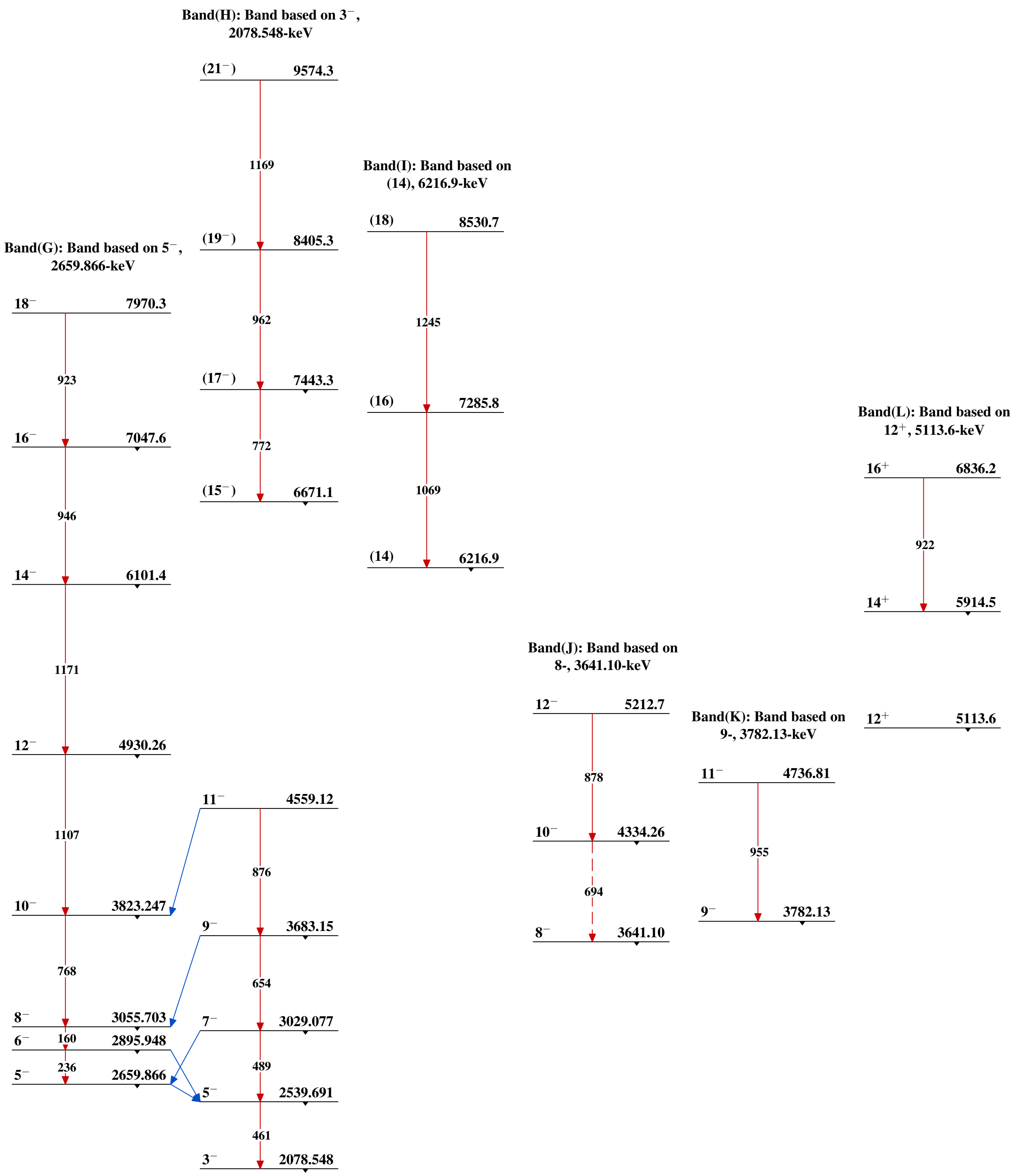
$^{110}_{48}Cd_{62}$

Adopted Levels, Gammas



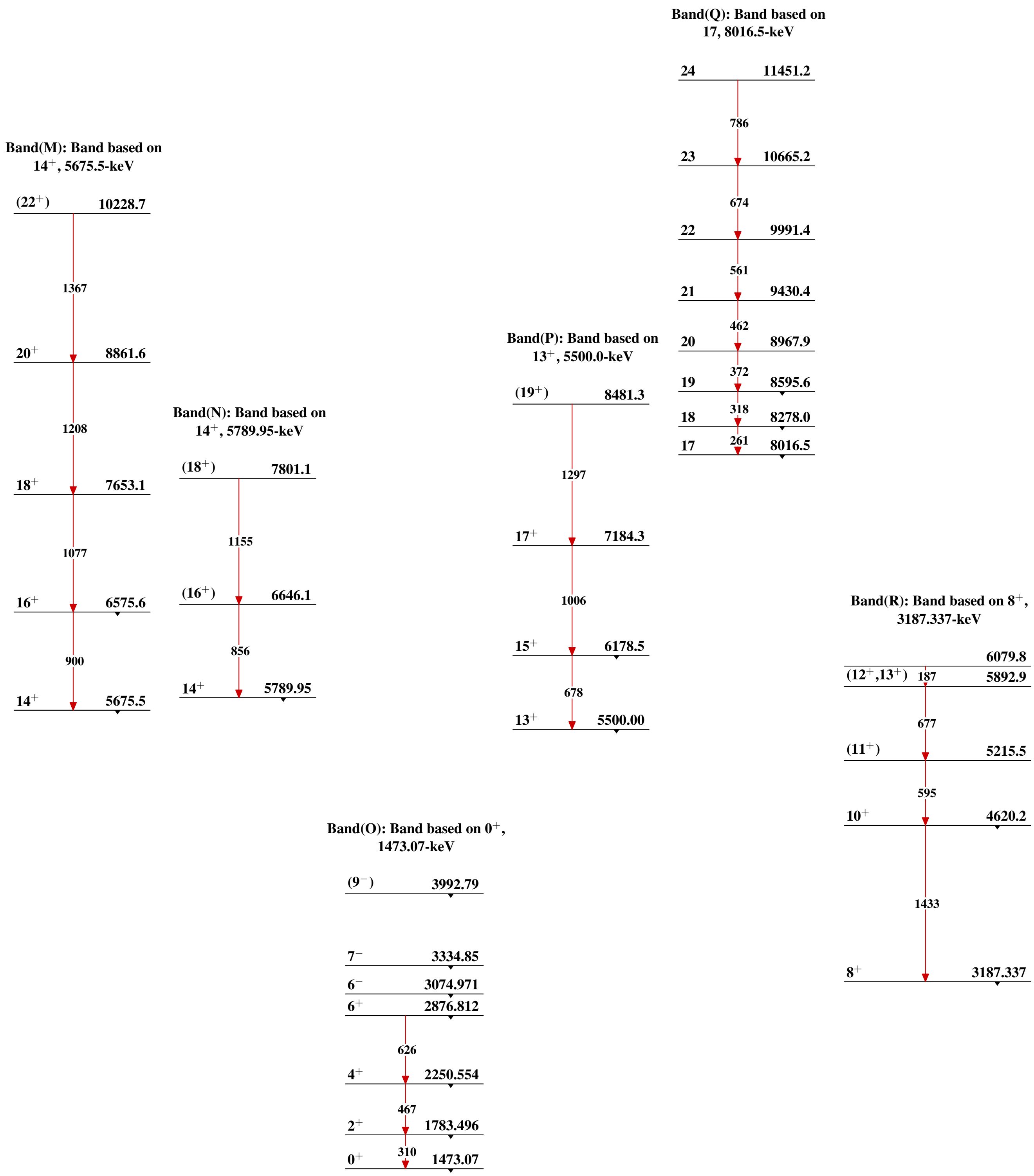
$^{110}_{48}Cd_{62}$

Adopted Levels, Gammas (continued)



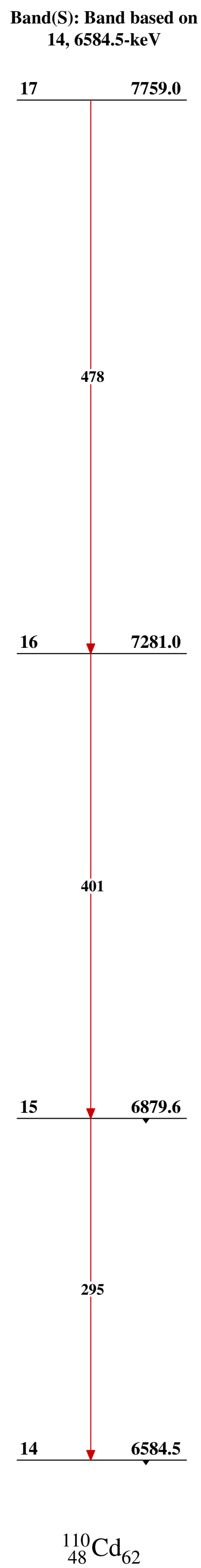
$^{110}_{48}Cd_{62}$

Adopted Levels, Gammas (continued)



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

Adopted Levels, Gammas (continued)



Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	S. Lalkovski, F. G. Kondev	NDS 124, 157 (2015)	1-Aug-2014

Q(β^-)=−2585 *4*; S(n)=9394.0 *5*; S(p)=9648.5 *14*; Q(α)=−3476.4 *12* 2012Wa38

^{112}Cd Levels

Cross Reference (XREF) Flags

A	^{112}Ag β^- decay (3.130 h)	I	^{112}Cd(γ,pol γ')	Q	^{110}Cd(t,p)
B	^{112}In ε decay (14.88 min)	J	^{112}Cd(γ,γ')	R	^{113}Cd(pol d,t)
C	Coulomb excitation	K	^{111}Cd(d,pγ)	S	^{112}Cd(α,α')
D	^{110}Pd(α,2nγ)	L	^{112}Cd(pol d,d′)	T	^{111}Cd(d,p)
E	^{112}Cd(n,n′γ)	M	^{112}Cd(d,d′)	U	^{112}Cd(pol p,p′)
F	^{112}Cd(p,p′γ)	N	^{112}Cd(π^-,X)	V	^{112}Cd(p,p′)
G	^{111}Cd(n,γ) E=th:primary	O	^{112}Cd(e,e′)	W	^{114}Cd(p,t)
H	^{111}Cd(n,γ) E=th:secondary	P	^{110}Pd(^{3}He,n)		

E(level)[†]	J$^\pi$	T$_{1/2}$[‡]	XREF	Comments
0.0[#]	0$^+$	stable	ABCDEFGHIJKLMNOPQRSTUVW	XREF: R(618)S(616)T(619).
617.518[#] *3*	2$^+$	6.46 ps *4*	ABCDEFGHIJKLMNO QRSTUVW	J$^\pi$: L(p,p′)=2; 617.52γ E2 to 0$^+$. T$_{1/2}$: from B(E2)↑(617.52γ)=0.486 *3*; weighted average of 0.486 *5* (1985Si01), 0.524 *50* from ^{112}Cd(e,e′) in (1977Gi13), 0.484 *4* (1976Es02), 0.478 *33* (1970St17), 0.524 *21* (1969Mi07), 0.514 *60* (1965Mc05) and 0.546 *39* (1962Ec03). Q: −0.38 *3*; weighted average of −0.37 *4* (1977Gi13), −0.39 *8* (1976Es02), −0.42 *8* (1976Es01), −0.38 *11* (1977Ma41). Others: −0.40 +*13*−*20* (1971Ha47), −0.15 *7* (1970St17). μ: +0.71 *3*; weighted average of +0.71 *5* (conventional kinematics in 2011Ch33), +0.73 *4* (inverse kinematics in 2011Ch33), 0.60 *12* (1970St17), 0.72 *22* via IMPAC (1974Hu01), 0.74 *22* (1978BrZX) and 0.64 *16* (1980Br01) from $\gamma\gamma$(θ,H,t). β_2=0.173 *11* (1968Ma34), 0.20 *1* (1968St18) and 0.19 (1967BaZV).
1224.341[@] *7*	0$^+$	4.2 ps *11*	ABCDEFGH JKLM PQ TUV	XREF: J(1223.2)P(1250)Q(1223)T(1228). J$^\pi$: L(p,p′)=0; 606.84γ E2 to 2$^+$; 1223.9ce E0 to 0$^+$. T$_{1/2}$: from B(E2)(W.u.)=51 *13* in 1980Ju05.
1312.390[&] *8*	2$^+$	1.9 ps *3*	ABCDEFGH JKLM QRS UVW	XREF: R(1314)S(1310)W(1313). J$^\pi$: 694.87γ E2+M1 to 2$^+$; 1312.41γ E2 to 0$^+$; L(p,p′)=2; T$_{1/2}$: from B(E2)(↓)=0.0021 *3* in Coulomb excitation (1969Mi07). Other: 1.5 ps +*22*−*5* from DSAM in ^{112}Cd(n,n′γ) (2007Ga22).
1415.480[#] *25*	4$^+$	0.87 ps *10*	A CDEF H KLM QRS UV	XREF: M(1416)Q(1414)R(1417)S(1414)V(1416). J$^\pi$: 798.04γ E2 to 2$^+$; L(p,p′)=4; band assignment. T$_{1/2}$: from B(E2)↑=0.36 *4*, weighted average of 0.34 *5* (1978Jo07), 0.356 *42* (1965Mc05), and 0.41 *8* (1962Ec03); Others: 0.7 ps +*7*−*2* from DSAM in ^{112}Cd(n,n′γ) (2007Ga22). B(E4)↑=0.09 *1* W.u. (1992Pi08).
1433.27 *3*	0$^+$	1.9 ns *1*	AB DEFGH JKL Q T V	XREF: B(1431.5)J(1429)Q(1431)T(1436). J$^\pi$: 815.79γ E2 to 2$^+$; 1433.27 E0 to 0$^+$; L(d,p)=0. T$_{1/2}$: from RF-ce(t) in ^{111}Cd(d,pγ) (1979Lu10,1980Ju05).

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{112}Cd Levels (continued)

E(level)[†]	J^π	$T_{1/2}$[‡]	XREF	Comments
				Others: 2.9 ps *9* using B(E2)(W.u.)(120.68γ)=66 *20* and 1.4 ps *3* using B(E2)(W.u.)(815.79γ)=0.017 *4*. Ice(K)(1433.27):Ice(K)(815.79):Ice(K)(208.93): Ice(K)(120.68)= 0.79 *8*: 0.10 *3*: 2.5 *4*: 11 *2* (1980Ju05) and Ice(K)(1433.27):Ice(K)(815.79)=19.0 *17*, Ice(K)(1433.27):Ice(K)(120.68)= 0.051 *7*, Ice(K)(208.93):Ice(K)(815.79)=45 *5* and Ice(K)(208.93):Ice(K)(120.68)=0.13 *2* in 1997Dr03.
1468.822[@] *14*	2^+	2.7 ps *5*	ABCDEFGH JKLM QRST VW	XREF: M(1469)Q(1467)R(1470)S(1470)T(1474)V(1469). J^π: 1468.836γ E2 to 0^+; L(p,p′)=2; band member. $T_{1/2}$: from B(E2)↑=0.0055 *10* in Coulomb excitation (1969Mi07); Other: 1.4 ps *+30−6* ^{112}Cd(n,n′γ) (2007Ga22).
1870.68[@] *4*	4^+		A DEF	J^π: 1253.31γ E2 to 2^+; 455.14γ M1+E2 to 4^+; band member.
1870.96 *5*	0^+		AB DEFGH J LM QR T V	XREF: J(1869.7)Q(1873)R(1872)T(1876). J^π: 1253.49γ E2 to 2^+; L(pol d,t)=0.
2005.200[a] *21*	3^-	0.26 ps *5*	A CDEF H J LM QRSTUV	XREF: J(2000)Q(2006)S(2003)T(2009). J^π: 1387.68γ E1 to 2^+; L(p,p′)=3. B(E3)=0.0207 (1985De57) in ^{112}Cd(p,p′) and 0.114 *9* (1985Fe05), 0.158 27 (1978Jo07), 0.106 *22* (1965Mc05) and 0.37 *18* (1963Ha20) in Coulomb excitation. β_3=0.164 *11* (1968Ma34), 0.15 *2* (1968St18), 0.049 *5* (1985De57) and 0.147 (1984Pi01) from ^{112}Cd(p,p′), 0.146 (1965Mc05) in Coulomb excitation, 0.15 (1967BaZV) from ^{112}Cd(α,α′).
2064.53[&] *3*	3^+	0.47 ps *13*	A DEFGH L R	XREF: L(2064)R(2065). J^π: 1447.00γ M1+E2 to 2^+, 648.91γ M1+E2 to 4^+; band member.
2081.64[&] *4*	4^+	0.35 ps *10*	DEF H J L QR T V	XREF: J(2082)Q(2085)R(2082). J^π: 1464.04γ E2 to 2^+, 666.15γ M1+E2 to 4^+; L(p,p′)=4; band member. B(E4)↑=8.2 *10* W.u. (1992Pi08).
2121.62 *4*	2^+	0.51 ps *14*	B DE GH J LM QR T V	XREF: B(2124.7)J(2120.2)L(2122)Q(2123)T(2123). J^π: 2121.49γ E2 to 0^+; L(p,p′)=2;
2156.18 *5*	2^+	0.2 ps *2*	AB DE GH J LM QR T V	XREF: J(2155.2)Q(2162)R(2155)T(2159). J^π: 2156.20γ E2 to 0^+; L(p,p′)=2;
2167.76[#] *5*	6^+		DE L	XREF: L(2167). J^π: 752.14γ E2 to 4^+; band member.
2231.12 *5*	2^+	0.15 ps *14*	A DE GH J LM QR T V	XREF: J(2229.2)R(2230)T(2235). J^π: 1006.81γ E2 to 0^+; L(p,p′)=2;
2300.68 *7*	0^+	>623 fs	B E GH J LM QR T V	XREF: J(2295)M(2299)Q(2306)R(2299, 2305)T(2302)V(2299). J^π: 1683.22γ E2 to 2^+; L(p,p′)=0;
2373.19[a] *5*	5^-	0.4 ps *+6−2*	DE LM QR TUV	J^π: 957.72γ E1 to 4^+ and 367.9γ E2 to 3^-; L(p,p′)=5; band member. β_5=0.048 or 0.044 if two-step contributions through 2^+ and 3^- states are included (1984Pi01).
2402.98 *5*	3^+	0.24 ps *+10−6*	DE GH R	XREF: R(2402). J^π: 987.89γ M1+E2 to 4^+, 1785.48γ to 2^+; 6991.18γ from (1^+) in ^{111}Cd(n,γ) E=th:primary (1997Dr03).
2416.00[c] *5*	3^-	0.15 ps *3*	A DE H LM R V	XREF: R(2414). J^π: 946.92γ E1 to 2^+; L(p,p′)=3.

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Adopted Levels, Gammas (continued)

^{112}Cd Levels (continued)

E(level)[†]	J^π	$T_{1/2}$[‡]	XREF	Comments
				B(E3)=0.0019 (1985De57). β_3=0.0148 *17* (1985De57), and 0.035 or 0.038 if two-step contributions via the 2^+ and 3^- states are included (1984Pi01).
2418.0 *10*	(1,2$^+$)	1.29 ps *3*	I ST	XREF: S(2420)T(2424). J^π: 2418γ to 0^+; L(d,p)=(0,1). $T_{1/2}$: from ^{112}Cd(γ,pol γ') and by assuming J=1.
2454.51 *8*	4^+	0.35 ps *+9−6*	DE LM QR V	XREF: Q(2457)R(2453). J^π: 1142.21γ E2 to 2^+, 1038.93γ M1+E2 to 4^+; L(p,p′)=4. B(E4)↑: 8.4 *8* W.u. (1992Pi08).
2493.15 *6*	4^+	0.4 ps *+4−1*	DE H LM QR V	XREF: M(2492)R(2491)V(2492). J^π: 1875.70γ E2 to 2^+, 1077.60γ M1+E2 to 4^+; L(p,p′)=4. B(E4)↑: 8.2 *9* W.u. (1992Pi08).
2506.36 *7*	(2)$^+$	0.21 ps *3*	A DE H J L QR T	XREF: L(2507)Q(2505)R(2505)T(2507). J^π: 1888.79γ M1+E2 to 2^+; L(pol d,t)=2.
2506.70 *6*	1^-	36.6 fs *19*	A E GHIJ M UV	XREF: U(2507). J^π: 2506.70γ E1 to 0^+, 1037.8γ E1 to 2^+ and L(p,p′)=(1); $T_{1/2}$: from ^{112}Cd(γ,pol γ'). Other: 44 fs *8* in ^{112}Cd(n,n′γ) (2007Ga22).
2532.20 *12*	2^+		D GH L R	XREF: L(2533). J^π: 1116.83γ to 4^+, 1099.0γ to 0^+; 6862.10γ from (1^+) in ^{111}Cd(n,γ) E=th:primary (1997Dr03).
2561.27 *16*	(1,2$^+$)		GH	J^π: 2561.13γ to 0^+, 1248.92γ to 2^+.
2570.21[b] *6*	5^-	>693 fs	DE R	XREF: R(2569). J^π: 1154.75γ E1 to 4^+ and 565.10γ E2 to 3^-; band member. configuration: possible $\nu(s_{1/2},h_{11/2})$. The assignment is tentative.
2571.47[@] *6*	6^+	>693 fs	DE LM Q T V	XREF: L(2570)M(2569)Q(2570)T(2570)V(2569). J^π: 1156.21γ E2 to 4^+ and 403.55γ M1+E2 to 6^+; L(p,p′)=6; band member.
2591.05[c] *5*	4^-	>693 fs	DE H LM R V	XREF: H(2590)L(2589)M(2590)R(2589)V(2590). J^π: 526.52γ E1 to 3^+, 585.78γ M1+E2 to 3^-; band member.
2632 *5*	(5)$^-$		M V	J^π: from L(p,p′)=5.
2634.99 *5*	3^+		DE H L R T	XREF: T(2637). J^π: 629.80γ E1 to 3^-, 1322.59γ M1+E2 to 2^+, 1219.4γ M1+E2 to 4^+.
2650.15 *8*	0^+	0.23 ps *+12−6*	E L P R	XREF: L(2649)P(2640)R(2649). J^π: 2032.62γ E2 to 2^+, no γ rays were observed to the 0^+ levels; L(pol d,t)=0.
2657 *1*	1^-		LM T V	XREF: L(2653). J^π: L(p,p′)=1.
2665.64[&] *6*	5^+	>208 fs	DE L	XREF: L(2667). J^π: 601.01γ E2 to 3^+ and 583.92γ M1+E2 to 4^+; band member.
2668.92 *6*	(2)$^-$	0.21 ps *3*	A DE GH M Q V	XREF: M(2667)Q(2671)V(2667). J^π: 1356.522γ E1 to 2^+, 663.59γ M1+E2 to 3^-; L(t,p)=(2,6); direct population in ^{111}Cd(n,γ) E=th:primary (J^π=$(1)^+$) makes J^π=3^- unlikely.
2674.00 *10*	2^+	35 fs *3*	A DE GH L R T	XREF: D(2673)G(2673.0)L(2673)R(2673)T(2678). J^π: 2056.48γ M1+E2 to 2^+ and L(pol d,t)=2.

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Adopted Levels, Gammas (continued)

^{112}Cd Levels (continued)

E(level)[†]	J^π	$T_{1/2}$[‡]	XREF	Comments
				configuration: possible $\nu(s_{1/2},d_{3/2})$. The assignment is tentative.
2694.0 *10*	(1)	0.72[e] ps *14*	I	J^π: 2694γ to 0^+; observation in ^{112}Cd(γ,pol γ').
2711.19 *8*	4^+	0.26 ps *+15−7*	DE LM R V	XREF: R(2710). J^π: 705.95γ E1 to 3^-,1295.74γ M1+E2 to 4^+; L(p,p′)=4. B(E4)↑: 3.6 *4* W.u. (1992Pi08).
2723.96 *7*	2^+	159 fs *24*	A DE H J LM QR T V	XREF: L(2722)M(2724)Q(2718)R(2724)T(2725)V(2724). J^π: 718.89γ E1 to 3^-, 1501γ to 0^+; L(p,p′)=2;
2765.72 *5*	2^+	34 fs *3*	A E GH LM QR T V	XREF: L(2763)Q(2763)T(2770). J^π: 2765.7γ E2 to 0^+,1296.9γ M1+E2 to 2^+; L(p,p′)=2;
2773.08 *8*	$(0)^+$	>693 fs	E L	XREF: L(2775). J^π: 1460.83γ E2 to 2^+.
2791.79 *11*	$(4)^-$	>97 fs	E LM V	XREF: L(2793). J^π: 786.59γ M1(+E2) to 3^-; L(p,p′)=5.
2793.80[a] *6*	7^-		DE	J^π: 420.68γ E2 to 5^-, 625.97γ E1 to 6^+; band member.
2816.71 *7*	4^+	>416 fs	E LM R V	XREF: M(2815)R(2799)V(2815). J^π: 811.3γ E1 to 3^-, 1401.3γ M1+E2 to 4^+; L(p,p′)=4. B(E4)↑: 2.6 *3* W.u. (1992Pi08).
2817.74[c] *9*	6^-		DE L RST	XREF: L(2819)R(2818)S(2820)T(2822). J^π: 444.54γ M1+E2 to 5^-; band member.
2829.19 *6*	1^-	27 fs *3*	A E GHI	J^π: 2829.20γ E1 to 0^+. $T_{1/2}$: Other: 21.0 fs *16* in ^{112}Cd(γ,pol γ').
2834.27 *7*	0^+	>347 fs	E GH J L QR	XREF: J(2832.2)L(2832)Q(2829). J^π: 2216.74γ E2 to 2^+; L(pol d,t)=0.
2840.22 *11*	$(4)^+$	>485 fs	DE LM T V	XREF: L(2835)M(2836)T(2840)V(2836). B(E4)↑: 1.8 *4* W.u. (1992Pi08). J^π: 1424.73γ M1+E2 to 4^+; L(p,p′)=4.
2852.90 *5*	2^+	0.44 ps *+21−10*	E H J L R	XREF: J(2850.1)L(2850). J^π: 2852.87γ E2 to 0^+; L(pol d,t)=0.
2866.75 *6*	3^-	0.6 ps *+8−2*	A DE H LM Q V	XREF: L(2867)M(2866)Q(2865)V(2866). J^π: 1451.30γ E1 to 4^+; L(p,p′)=3; B(E3)=0.00123 and β_3=0.0122 *11* (1985De57).
2867.48 *6*	$(3)^+$	0.09 ps *+8−3*	A E L R T	XREF: A(2866.0)L(2877)R(2868)T(2875). J^π: 2249.91γ M1+E2 to 2^+; assignment in ^{113}Cd(pol d,t) (1990Bl10).
2881.02[#] *8*	8^+		D	J^π: 713.23γ E2 to 6^+; band member.
2882.82 *8*	0^+	>693 fs	E L R	J^π: 1570.51γ E2 to 2^+; L(pol d,t)=0.
2893.51 *6*	4^+	>416 fs	E LM R V	XREF: L(2892)M(2895)R(2894)V(2895). J^π: 2276.07γ E2 to 2^+, 811.9γ M1+E2 to 4^+; L(p,p′)=4. B(E4)↑: 4.7 *5* W.u. (1992Pi08).
2899.02 *5*	$(3^-,5^-)$	0.13 ps *3*	DE L	XREF: L(2897). J^π: 1483.53γ (E1) to 4^+.
2921.53[&] *9*	6^+		DE L T	XREF: L(2916)T(2901). J^π: 1505.5γ E2 to 4^+; band member;
2924 *29*	0^+		R	J^π: L(pol d, t)=0.
2924.83 *5*	4^-	>139 fs	E L	XREF: L(2926). J^π: 551.63γ M1+E2 to 5^- and 919.58γ M1+E2 to 3^-;
2928 *5*	$(5)^-$		LM V	XREF: L(2922). J^π: L(p,p′)=5.

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Adopted Levels, Gammas (continued)

^{112}Cd Levels (continued)

E(level)[†]	J^π	$T_{1/2}$[‡]	XREF	Comments
2931.46 *6*	1^+	17 fs *4*	E GHI R	XREF: G(2930.2)I(2931)R(2931). J^π: 2931.42γ M1 to 0^+, 2314.12γ M1+E2 to 2^+. $T_{1/2}$: Other: 12.3 fs *7* in ^{112}Cd(γ,pol γ').
2931.97[b] *8*	6^-		DE L	XREF: L(2932). J^π: 558.7γ M1+E2 to 5^-; band member;
2935.50[b] *6*	7^-		D	J^π: 767.65γ E1 to 6^+, 365.38γ E2 to 5^-; band member.
2944.94 *7*	2^+	0.4 ps *+3−1*	E GH LM T V	XREF: L(2942)M(2942)T(2936)V(2942). J^π: 2944.78γ E2 to 0^+; L(p,p′)=2.
2947.76 *10*	$(2,3)^+$	83 fs *24*	E L R	XREF: L(2946,2949)R(2946). J^π: 2330.22γ M1+E2 to 2^+.
2961.92 *6*	4^-		E R	J^π: 588.83γ M1+E2 to 5^-; 956.7γ M1+E2 to 3^-.
2962.0 *7*	2^+		A LM T V	XREF: L(2967)M(2969)T(2965)V(2969). J^π: 2961.7γ to 0^+, 957.1γ to 3^-; L(p,p′)=2.
2970.02 *10*	$(4,5)^+$		DE	J^π: 1554.49γ M1+E2 to 4^+, 398.57γ to 6^+.
2972.45 *7*	5^+	0.6 ps *+11−2*	DE	J^π: 1556.8γ M1+E2 to 4^+, 804.89γ M1+E2 to 6^+.
2980.85 *9*	2^+	0.14 ps *3*	E L QR T	XREF: L(2976,2980)Q(2974)T(2988). J^π: 2363.274γ M1+E2 to 2^+; L(pol d,t)=2.
3002.06 *6*	3^+	0.19 ps *+12−6*	E R	J^π: 2384.54γ M1+E2 to 2^+ and 1586.57γ M1+E2 to 4^+.
3011.08 *11*	$(4,5,6)^-$		E L	XREF: L(3022). J^π: 637.89γ M1+E2 to 5^-.
3027.97 *10*	6^+		DE R	XREF: R(3026). J^π: 946.39γ E2 to 4^+ and 859.83γ M1+E2 to 6^+.
3046 *5*	1^-		M V	J^π: L(p,p′)=1.
3049.08 *8*	(4^+)	0.08 ps *+12−3*	E L	XREF: L(3046,3050). J^π: 1633.39γ to 4^+; $J^\pi=4^+,1^-$ in ^{112}Cd(pol d,d′).
3051.19 *11*	$(5)^+$		E L	XREF: L(3058). J^π: 1635.70γ M1+E2 to 4^+.
3066.23 *10*	$(2,3)^-$	>207 fs	E G L	XREF: G(3065.4)L(3065). J^π: 2448.76γ E1 to 2^+; ^{112}Cd(pol d,d′) (1994He22) and ^{112}Cd(n,n′γ) (2001Ga44) support 3^- assignment.
3068.62 *6*	4^+	>555 fs	A E QR t v	XREF: Q(3071)R(3069)t(3071)v(3072). J^π: 1756.30γ E2 to 2^+, 1653.09γ M1+E2 to 4^+. B(E4)↑: 4.6 *8* W.u. (1992Pi08) (unresolved doublet).
3071.46 *8*	$(4)^+$	>249 fs	E M t v	XREF: M(3072)t(3071)v(3072). J^π: 1006.9γ to 3^+, 1066.28γ to 3^-; L(p,p′)=4. B(E4)↑: 4.6 *8* W.u. (1992Pi08) (unresolved doublet).
3071.74 *5*	$(1,2^+)$		E	J^π: 3071.2γ to 0^+, 949.65γ to 2^+.
3075.19 *11*	$(4,5)^+$	0.3 ps *+5−1*	DE L	XREF: D(3075.65)L(3074,3080). J^π: 1659.70γ M1+E2 to 4^+.
3081.65 *19*	2^+		E L R	XREF: L(3091)R(3085). J^π: 3081.60γ E2 to 0^+.
3093.02[b] *8*	8^-		D	J^π: 299.19γ M1+E2 to 7^-; band member.
3102[d] *5*	4^+		LM V	XREF: L(3100). J^π: L(p,p′)=4. B(E4)↑: 0.68 *13* W.u. (1992Pi08).
3102.15[d] *10*	$(2)^+$	21 fs *6*	E R	XREF: R(3101). J^π: 3102.10γ to 0^+; L(pol d,t)=2.
3102.59 *8*	(4,5)		E L	XREF: L(3104). J^π: 729.41γ to 5^-, 1687.08γ to 4^+.
3105.50 *5*	$(2)^+$	0.3 ps *+5−1*	E QR	XREF: Q(3108)R(3109). J^π: L(t,p)=2; 2488.14γ to 2^+,1690.1γ to 4^+.

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Adopted Levels, Gammas (continued)

^{112}Cd Levels (continued)

E(level)[†]	J^π	$T_{1/2}$[‡]	XREF	Comments
3109.98 *7*	(2)$^+$	0.13 ps *+6−3*	E G J T	XREF: G(3111.3)J(3110)T(3113). J^π: 3110.01γ to 0$^+$; L(d,p)=2.
3130.83 *7*	5$^-$		A E LM R V	XREF: L(3124,3131)M(3131)R(3128)V(3131). J^π: 1125.78γ E2 to 3$^-$; 1715.08γ E1 to 4$^+$; Other: L(p,p′)=3.
3133.42 *9*	1$^-$	27 fs *5*	A E GHI Q	J^π: 3133.21γ E1 to 0$^+$; Other: L(t,p)=(2). $T_{1/2}$: Other: 10.7 fs *5* in112CD(γ,pol γ') (2005Ko32).
3135.84 *6*	(2,3$^+$)	0.3 ps *+3−1*	E GH	J^π: 2518.43γ to 2$^+$, 1071.26γ to 3$^+$; 6258.35γ from (1$^+$) in ^{111}Cd(n,γ) E=th:primary.
3145.28 *8*	3$^+$,4$^+$,5$^+$	0.13 ps *+5−3*	E R	XREF: R(3146). J^π: 1729.82γ M1+E2 to 4$^+$.
3163.51 *9*	2$^+$	0.26 ps *+12−7*	E GH	J^π: 3163.4γ E2 to 0$^+$, 656.74γ E1 to 1$^-$.
3165.46 *11*	4$^-$,5$^-$,6$^-$		E L	XREF: L(3168). J^π: 792.27γ M1+E2 to 5$^-$; Other: (4$^+$) in ^{112}Cd(pol d,d′) (1994He22).
3169.46 *6*	2$^+$	146 fs *14*	A E GH	J^π: 1945.14γ E2 to 0$^+$, 1164.2γ E1 to 3$^-$.
3175 *4*	(3)$^-$		Q	J^π: L(t,p)=3.
3176.47 *8*	8$^+$		D	J^π: 604.98γ E2 to 6$^+$, 295.19γ M1+E2 to 8$^+$.
3176.83 *13*	(4)$^+$		E	J^π: 2559.28γ E2 to 2$^+$.
3178.79 *7*	2$^+$	104 fs *24*	E LM R T V	XREF: L(3177)M(3176)R(3177)T(3184)V(3176). J^π: 3178.76γ E2 to 0$^+$; L(p,p′)=2;
3189.82 *9*	4$^+$,5,6$^+$	>354 fs	E	J^π: 1022.09γ to 6$^+$, 1774.30γ to 4$^+$.
3190.06 *9*	0$^+$,1,2,3$^+$	22.2 fs *14*	E GH J L	XREF: G(3189.93)L(3188). J^π: 2572.51γ to 2$^+$; 6203.94γ from (1$^+$) in ^{111}Cd(n,γ) E=th:primary (1997Dr03).
3194.46 *6*	(2)$^+$	0.10 ps *4*	E J R	XREF: J(3193). J^π: 1189.41γ to 3$^-$, 2576.72γ to 2$^+$; L(pol d,t)=2.
3201.32 *10*	5$^-$	0.5 ps *+5−2*	E	J^π: 1196.21γ E2 to 3$^-$; 1785.8γ E1 to 4$^+$.
3203.25 *10*	(2,3)$^+$	0.12 ps *+9−4*	E R	XREF: R(3204). J^π: 2585.70γ (M1+E2) to 2$^+$.
3205.74 *12*	2$^+$,3,4	>111 fs	E	J^π: 1736.90γ to 2$^+$; 1790.2γ to 4$^+$.
3206.48 *8*	(4)$^+$	76 fs *24*	E LM V	XREF: M(3204)V(3204). J^π: 1084.93γ to 2$^+$; L(p,p′)=4. B(E4)↑: 1.27 *24* W.u. (1992Pi08).
3206.71 *3*	2$^+$,3,4	0.4 ps *+3−1*	E	J^π: 1792.1γ to 4$^+$; 1894.30γ to 2$^+$.
3230.29 *9*	8$^+$		D	J^π: 658.83γ E2 to 6$^+$; 349.26γ M1+E2 to 8$^+$.
3231.59 *6*	1$^+$	35 fs *4*	A E GHI R	XREF: I(3231)R(3230). J^π: 3231.35γ M1 to the 0$^+$, 2614.02γ M1+E2 to 2$^+$. $T_{1/2}$: Other: 26.7 fs *16* in ^{112}Cd(γ,pol γ').
3239.04[&] *7*	7$^+$		D	J^π: 573.31γ E2 to 5$^+$, 1071.24γ M1+E2 to 6$^+$; band member.
3242.64 *6*	2$^+$	0.2 ps *+3−1*	E GH L QR T	XREF: L(3246)T(3240). J^π: 3242.49γ E2 to the g.s.; L(pol d,t)=2.
3246.86 *8*	(1,2)$^+$	0.16 ps *3*	E J	J^π: 2629.34γ to 2$^+$; 4385γ E1 from 1$^-$ in ^{112}Cd(γ,γ') (1971Mo31).
3247.17 *11*	(6$^+$)		E M V	XREF: M(3244)V(3244). J^π: 1831.67γ to 4$^+$; L(p,p′)=(6).
3248.25[c] *8*	7$^-$		D	J^π: 155.21γ M1+E2 to 8$^-$; 316.19γ M1+E2 to 6$^-$; band member.
3251.86 *13*	(0)$^+$	<0.8 ps	E R	XREF: R(3252). J^π: 2634.31γ E2 to 2$^+$.
3252.55 *12*	(6,7,8)$^-$		D	J^π: 458.75γ M1(+E2) to 7$^-$.
3254.21 *7*	(0$^+$,1,2)	0.2 ps *+8−1*	E GH	J^π: 1942.01γ to 2$^+$; 6140.26γ from (1$^+$) in

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Adopted Levels, Gammas (continued)

^{112}Cd Levels (continued)

E(level)[†]	J^{π}	$T_{1/2}$[‡]	XREF	Comments
				^{111}Cd(n,γ) E=th:primary.
3254.30 *8*	(3,4)$^+$	57 fs *17*	E	J^{π}: 1249.01γ E1 to 3$^-$ and 1838.89γ M1+E2 to 4$^+$.
3258.01 *11*	(3,4$^+$)		E	J^{π}: 1252.8γ to 3$^-$; assignment in ^{113}Cd(pol d,t).
3266.54 *11*	4$^+$	0.19 ps *5*	E LM R V	XREF: L(3265)M(3265)R(3259)V(3265). J^{π}: 1851.04γ to 4$^+$; L(p,p′)=4. B(E4)↑: 2.5 *5* W.u. (1992Pi08).
3269.50 *8*	2$^+$,3,4,5$^-$	0.17 ps *+21−7*	E	J^{π}: 1264.25γ to 3$^-$, 1854.04γ to 4$^+$.
3290.40 *12*	(2$^+$)		E	J^{π}: 1419.43γ to 0$^+$.
3291.13 *7*	2$^+$,3,4,5$^-$	0.2 ps *+5−1*	E LM Q V	XREF: L(3293)M(3292)Q(3302)V(3292). J^{π}: 1875.7γ to 4$^+$, 1285.95γ to 3$^-$.
3291.17 *9*	7$^-$		D	J^{π}: 917.73γ E2 to 5$^-$, 1123.96γ E1 to 6$^+$.
3297.01 *8*	(2,3)$^+$	0.38 ps *+24−11*	E R	XREF: R(3296). J^{π}: 2679.46γ to 2$^+$, 1881.5γ to 4$^+$; L(pol d,t)=2.
3300.99 *16*	(1)	0.10 ps *+12−4*	E I	J^{π}: 3300.94γ to 0$^+$; population in ^{112}Cd(γ,pol γ'). $T_{1/2}$: Other: 40.6 fs *22* in ^{112}Cd(γ,pol γ').
3303.24 *11*	(2,3)$^+$	173 fs *24*	A E GH T	XREF: T(3304). J^{π}: 2685.78γ to 2$^+$; 886.99γ to 3$^-$; L(d,p)=2.
3312.24 *6*	(1$^-$,2)	76 fs *17*	E J L R	XREF: J(3309)L(3309). J^{π}: 2694.56γ to 2$^+$; 1306.97γ to 3$^-$; 4323γ from 1$^-$ in ^{112}Cd(γ,γ').
3318.09[a] *8*	9$^-$		D	J^{π}: 524.28γ E2 to 7$^-$; band member.
3319.83 *6*	1$^-$,2,3,4$^+$	0.17 ps *3*	E	J^{π}: 2702.24γ to 2$^+$ and 1314.6γ to 3$^-$.
3322.40 *10*	10$^+$		D	J^{π}: 441.45γ E2 to 8$^+$; band member.
3325.96 *11*	(3)$^-$		E V	B(E3)↑=0.00045 (1985De57) β_3=0.0073 *20* (1985De57) XREF: V(3326). J^{π}: 734.91γ to 4$^-$; L(p,p′)=3.
3329.17 *11*	(5$^-$)		E LM V	XREF: M(3327)V(3327). J^{π}: 1913.67γ to 4$^+$; L(p,p′)=(5).
3332.11 *8*	2$^+$,3,4,5$^-$	0.12 ps *3*	E QR	XREF: Q(3335)R(3330). J^{π}: 1326.83γ to 3$^-$, 1916.72γ to 4$^+$.
3332.46 *10*	1,2,3,4$^+$	97 fs *24*	E	J^{π}: 2714.91γ to 2$^+$.
3336.03 *10*	(2)$^+$	0.10 ps *3*	E R	XREF: R(3340). J^{π}: 2718.48γ to 2$^+$; L(pol d,t)=2.
3341.86 *10*	(3)$^+$	37 fs *4*	E T V	XREF: T(3344)V(3344). J^{π}: 2724.31γ E2+M1 to 2$^+$. Note, that L(p,p′)=3.
3353.36 *10*	0$^+$	0.13 ps *4*	E L R	XREF: L(3350)R(3352). J^{π}: 2735.81γ to 2$^+$; L(pol d,t)=0.
3363.55 *7*	2$^+$	0.24 ps *+10−6*	E G LM QR V	XREF: L(3366)M(3359)Q(3365)R(3361)V(3359). J^{π}: 3363.67γ E2 to 0$^+$; L(p,p′)=2.
3363.99 *13*	2$^+$,3,4,5,6$^+$	0.2 ps *+7−1*	E	J^{π}: 909.48γ to 4$^+$.
3369.62 *7*	2$^+$,3,4$^+$	35 fs *3*	A E L	XREF: L(3372). J^{π}: 2752.08γ to 2$^+$, 1952.9γ to 4$^+$.
3375.45 *12*	(6,7,8)		D	J^{π}: 439.95γ D to 7$^-$.
3375.50 *9*	(1)	52 fs *8*	E I	J^{π}: 3375.40γ to 0$^+$, 2758.02 to 2$^+$; population in ^{112}Cd(γ,pol γ'). $T_{1/2}$: Other: 87 fs *13* in ^{112}Cd(γ,pol γ').
3376.46 *11*	7$^-$		D	J^{π}: 283.40γ M1+E2 to 8$^-$; 444.53γ M1+E2 to 6$^-$.
3378.52 *8*	(2)$^+$	0.4 ps *+3−1*	E G L R	XREF: L(3380)R(3381). J^{π}: 1909.63γ to 2$^+$; L(pol d,t)=2.
3383.71 *9*	0$^+$ to 4$^+$	97 fs *17*	E	J^{π}: 2766.05γ to 2$^+$.
3392.78 *12*	1,2$^+$	>693 fs	E	J^{π}: 3392.72γ to 0$^+$.

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Adopted Levels, Gammas (continued)

^{112}Cd Levels (continued)

E(level)[†]	J^π	$T_{1/2}$[‡]	XREF	Comments
3393.39 *4*	0^+ to 4^+	>970 fs	E	J^π: 2775.83γ to 2^+.
3393.45 *10*	$(1,2^+)$		A E GH Q	XREF: Q(3393). J^π: 3392.72γ to 0^+, 2775.78 to 2^+.
3393.60 *7*	1^- to 5^-	0.2 ps *+3−1*	E	J^π: 3392.72γ to 3^-.
3398.88[@] *8*	8^+		D	J^π: 827.54γ E2 to 6^+; 517.99γ M1+E2 to 8^+; band member.
3400.35 *10*	0^+ to 4^+		E	J^π: 2087.94γ to 2^+.
3402.93 *10*	$1^+,2^+,3^+$	>527 fs	E R	XREF: R(3402). J^π: 2785.37γ M1+E2 to 2^+.
3422.55 *9*	$(4)^+$		E LM QR V	XREF: L(3417,3422)M(3417)Q(3415)V(3417). J^π: 1953.71γ to 2^+; L(p,p′)=4. B(E4)↑: 3.1 *4* W.u. (1992Pi08).
3425.60 *5*	0^+ to 4^+	0.09 ps *3*	E	J^π: 2113.19γ to 2^+.
3426.32 *14*	0^+ to 4^+	33 fs *+17−10*	E	J^π: 2113.19γ to 2^+.
3428.87 *7*	2^+	0.08 ps *+5−3*	E GH	J^π: 2811.2γ M1+E2 to 2^+, 3428.71γ E2 to 0^+.
3429.6 *3*			E	
3429.98 *16*	(5,6,7)		D	J^π: 1262.21γ d(+Q) to 6^+.
3433.73 *11*	$(2^+$ to $6^+)$	0.11 ps *+6−3*	E R	XREF: R(3433). J^π: 2018.23γ to 4^+.
3451.97 *8*	(0^+)		E	J^π: 945.26γ to 1^-.
3452 *5*	$6^{(+)}$		M V	J^π: L(p,p′)=6.
3452.47 *7*	2^+	0.2 ps *+4−1*	E GH	XREF: G(3451.9). J^π: 3452.1γ to 0^+, 2037.4γ to 4^+.
3453.8 *3*	0^+ to 4^+		E	J^π: 1985.0γ to 2^+.
3455.48 *9*	0^+,1,2	0.3 ps *+3−1*	E GH L	XREF: L(3457). J^π: 2837.85γ to 2^+; 5938.41γ from (1^+) in ^{111}Cd(n,γ) E=th:primary 1997Dr03.
3470.3 *12*	0^+ to 4^+		A	J^π: 2852.7γ to 2^+.
3471.32 *22*	2^+ to 6^+		E	J^π: 2055.8γ to 4^+.
3478.58 *7*	$0^+,1,2^+$	0.2 ps *+7−1*	E GH	J^π: 2166.06γ to 2^+; 5914.9γ from (1^+) in ^{111}Cd(n,γ) E=th:primary 1997Dr03.
3478.7 *9*	0^+ to 4^+		A	J^π: 1322.0 to 2^+.
3487 *5*	(6^+)		V	J^π: from L(p,p′)=(6).
3487.55 *10*	$(4)^+$	83 fs *17*	E V	XREF: V(3489). J^π: 2869.99γ E2 to 2^+; 4^+ in ^{112}Cd(p,p′);
3489.85 *6*	$2^+,3,4^+$	68 fs *13*	E L	XREF: L(3492). J^π: 1368.12γ to 2^+; 2074.36γ to 4^+.
3493.92 *13*	(6,7)		D	J^π: 1326.15γ D(+Q) to 6^+.
3500.45 *8*	0^+ to 3^+	0.15 ps *3*	E GH	J^π: 2882.85γ to 2^+; 5893.51γ from (1^+) in ^{111}Cd(n,γ) E=th:primary (1997Dr03).
3511.6 *3*	3^- to 7^-	>485 fs	E	J^π: 1138.4γ to 5^-.
3512.97 *10*	$(1,2,3)^+$	0.10 ps *3*	E G	J^π: 2895.23γ M1+E2 to 2^+.
3522.51 *10*	0^+ to 4^+	33 fs *3*	E	J^π: 2904.95γ to 2^+.
3528.92[c] *9*	7^-		D	J^π: 593.45γ M1+E2 to 7^-; band member.
3530.90 *5*			E	
3531.32 *7*	4^+	76 fs *24*	E LM V	XREF: L(3543). J^π: 2913.77γ M1+E2 to 2^+; L(p,p′)=4. B(E4)↑: 0.00 *1* W.u. (1992Pi08).
3540.24 *9*	$1,2^+$	15.3 fs *21*	E GH	J^π: 3539.8γ to 0^+, 2922.72γ to 2^+.
3542.84[&] *10*	8^+		D	J^π: 1375.02γ E2 to 6^+; band member.
3556.88 *10*	$(1,2^+)$	48 fs *4*	E G I	J^π: 3556.78γ to 0^+. $T_{1/2}$: Other: 0.52 ps *13* in ^{112}Cd(γ,pol γ′) (2005Ko32).
3557.33 *10*	$(3)^-$	0.07 ps *3*	E H LM V	XREF: L(3560)M(3557)V(3557). J^π: 2939.77γ to 2^+; L(p,p′)=3.

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Adopted Levels, Gammas (continued)

^{112}Cd Levels (continued)

E(level)[†]	J^π	$T_{1/2}$[‡]	XREF	Comments
3568.05 *6*	2^+	62 fs *10*	E GHI	J^π: 3568.00γ E2 to 0^+; $T_{1/2}$: Other: 60 fs *15* in ^{112}Cd(γ,pol γ′).
3571.05[b] *10*	9^-		D	J^π: 777.36γ E2 to 7^-; 252.88γ M1+E2 to 9^-; band member.
3572.28 *20*	(1,2^+)		GH	J^π: 3572.37γ to 0^+.
3574.49 *9*	0^+ to 4^+	≤2.5 ps	E	J^π: 2956.96γ to 2^+.
3577.2 *3*	0^+ to 4^+		E	J^π: 2264.8γ to 2^+.
3577.55 *11*	2^+		GH	J^π: 3577.53γ to 0^+, 2352.94γ to 4^+.
3579.44 *7*	0^+ to 4^+	0.13 ps *3*	E	J^π: 2961.69γ to 2^+.
3583.80 *24*	5,6,7		D	J^π: 1416.03γ D(+Q) to 6^+.
3586 *5*	3^-		M V	J^π: L(p,p′)=L(d,d′)=3;
3594.64 *9*	1,2^+	76 fs *14*	E I L	XREF: L(3590). J^π: 3594.49γ to 0^+, 2977.24γ to 2^+. $T_{1/2}$: Also: 0.153 ps *25* in ^{112}Cd(γ,pol γ′) (2005Ko32).
3598.81 *10*	1^+,2^+,3^+	31 fs *8*	E	J^π: 2981.25γ M1+E2 to 2^+.
3608.91 *10*	0^+,1,2,3^+	0.12 ps *3*	E G	J^π: 2991.30γ to 2^+; 5784.3γ from (1^+) in ^{111}Cd(n,γ) E=th:primary (1997Dr03).
3613.26 *10*	1^+,2^+,3^+	0.10 ps *+6−3*	E	J^π: 2995.85γ M1+E2 to 2^+.
3618.48 *14*	3^-	0.06 ps *+6−2*	E LM V	XREF: L(3616)M(3614)V(3614). J^π: 2202.7γ to 4^+, 3000.83γ to 2^+; L(p,p′)=3.
3622.18 *11*	0^+ to 4^+	0.033 ps *10*	E	J^π: 3004.62γ to 2^+;
3627.6 *3*	2^+ to 6^+		E L	XREF: L(3625). J^π: 2212.1γ to 4^+; (6^+) in ^{112}Cd(pol d,d′) (1994He22).
3646.54 *10*	0^+,1,2,3^+	0.24 ps *+8−5*	E G	J^π: 3028.88γ to 2^+; 5746.95γ from (1^+) in ^{111}Cd(n,γ) E=th:primary (1997Dr03).
3652.18 *9*	1,2^+	0.12 ps *4*	E G	J^π: 3652.07γ to 0^+, 3034.60γ to 2^+.
3658.74 *11*	8^-		D	J^π: 410.55γ M1+E2 to 7^-; 340.50γ M1+E2 to 9^-.
3665.78 *10*	3^-	132 fs *24*	E LM V	XREF: M(3664)V(3664). J^π: 3048.22γ to 2^+; L(p,p′)=3;
3676.73 *8*	0^+ to 4^+	0.09 ps *3*	E	J^π: 3059.00γ to 2^+.
3682.83 *12*	1,2^+	32 fs *8*	E I	J^π: 3682.76γ to 0^+. $T_{1/2}$: Other: 88 fs *14* in ^{112}Cd(γ,pol γ′).
3684.02[#] *12*	10^+		D	J^π: 802.98γ E2 to 8^+.
3685.55 *15*	6^-,7^-,8^-		D	J^π: 309.09γ M1+E2 to (7^-).
3687.93 *10*	(1,2^+)	0.13 ps *5*	E	J^π: 3687.86γ to 0^+.
3690.68 *13*	$(4)^+$	0.10 ps *+11−4*	E LM V	XREF: L(3691)M(3691)V(3691). J^π: 3073.12γ to 2^+; L(p,p′)=4. B(E4)↑: 2.2 *4* W.u. (1992Pi08).
3696.15 *11*	0^+,1,2,3^+		GH	J^π: 2383.81γ to 2^+; 5423.9γ from (1^+) in ^{111}Cd(n,γ) E=th:primary (1997Dr03).
3697.74 *12*	1^-,2,3,4^+	0.3 ps *+10−1*	E L	XREF: L(3700). J^π: 3080.13γ to 2^+; 1692.8γ to 3^-; (5^-) in ^{112}Cd(pol d,d′) (1994He22).
3703.81 *10*	1,2^+	22 fs *4*	E I	J^π: 3703.74γ to 0^+. $T_{1/2}$: Other: 65 fs *6* in ^{112}Cd(γ,pol γ′) (2005Ko32).
3707.45 *9*	1^-,2,3^+	36 fs *8*	E GH	J^π: 3090.04γ to 2^+; 840.71γ to 3^-; 5686.66γ from (1^+) in ^{111}Cd(n,γ) E=th:primary (1997Dr03).
3719.75 *20*	(2^+,3^+)		E G L	J^π: 2305.1γ to 4^+; 5674.88γ from (1^+) in ^{111}Cd(n,γ) E=th:primary.
3723.25 *17*	0^+,1,2,3^+	16 fs *+12−8*	E G	J^π: 3105.13γ to 2^+; 5670.24γ from (1^+) in ^{111}Cd(n,γ) E=th:primary (1997Dr03).
3731.95 *10*	0^+ to 4^+	0.125 ps *+9−4*	E	J^π: 3114.39γ to 2^+.

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Adopted Levels, Gammas (continued)

^{112}Cd Levels (continued)

E(level)[†]	J^π	$T_{1/2}$[‡]	XREF	Comments
3736.5 *3*	8^+		D	J^π: 1165.0γ E2 to 6^+.
3739.55 *10*	$(1,2,3)^+$	66 fs *20*	E L	XREF: L(3740). J^π: 3121.99γ M1+E2 to 2^+.
3743.76 *10*	$(1,2,3)^+$	54 fs *8*	E G	J^π: 3126.22γ M1+E2 to 2^+; 5650.8γ from (1^+) in ^{111}Cd(n,γ) E=th:primary (1997Dr03).
3746.8 *3*	$(4)^+$		E M V	XREF: M(3748)V(3748). J^π: 2331.3γ to 4^+; L(p,p′)=4. B(E4)↑: 1.0 *3* W.u. (1992Pi08).
3754.09 *11*	2^+ to 6^+	>416 fs	E	J^π: 2338.58γ to 4^+.
3755.46 *13*	(2^+)	28 fs *9*	E L	J^π: 3755.39γ to 0^+.
3763.95 *10*	$(4)^+$	104 fs *14*	E M V	XREF: M(3764)V(3764). J^π: 3146.38γ to 2^+; L(p,p′)=4 (1992Pi08). B(E4)↑: 0.68 *16* W.u. (1992Pi08).
3770.47 *10*	0^+ to 4^+	26 fs *6*	E	J^π: 3152.90γ to 2^+;
3783.197 *11*	$(1,2,3)^+$	0.2 ps *+4−1*	E	J^π: 3165.631γ M1+E2 to 2^+.
3785.69[c] *13*	9^-		D	J^π: 692.67γ to 8^-; band member.
3787.3 *3*	2^+		E G	XREF: G(3795). J^π: 3787.2γ E2 to 0^+.
3801.2 *3*	$(4)^+$		E M V	XREF: M(3800)V(3800). J^π: 2385.7γ to 4^+; L(p,p′)=4. B(E4)↑: 1.3 *3* W.u. (1992Pi08).
3804.87 *14*	0^+ to 4^+	0.2 ps *+5−1*	E	J^π: 3187.30γ to 2^+.
3809.39[b] *9*	10^-		D	J^π: 716.376γ E2 to 8^-; 491.30γ M1+E2 to 9^-; band member.
3810.04 *10*	$1,2^+$	9.7 fs *21*	E I	J^π: 3809.97γ to 0^+. $T_{1/2}$: Other: 17 fs *3* from ^{112}Cd(γ,pol γ′).
3810.88 *10*	(3^-)	0.07 ps *+3−2*	E M V	XREF: M(3815)V(3815). J^π: 3193.317γ to 2^+; L(p,p′)=3 (1992Pi08).
3832.66 *11*	(4^+)	22 fs *7*	E M V	XREF: M(3835)V(3835). J^π: 3215.09γ to 2^+; L(p,p′)=4 (1992Pi08). B(E4)↑: 1.0 *3* W.u. (1992Pi08).
3838.85 *23*	$(1,2^+)$		GH	J^π: 3838.84γ to 0^+.
3844.25 *10*	0^+ to 4^+	263 fs	E	J^π: 3226.68γ to 2^+.
3846.48 *10*	$(1,2^+)$	40 fs *9*	E GHI	J^π: 3846.41γ to 0^+. $T_{1/2}$: Other: 0.20 ps *3* in ^{112}Cd(γ,pol γ′).
3854.4 *3*	2^+		E	J^π: 3854.3γ E2 to 0^+.
3864.51 *11*	$(4)^+$		E M V	XREF: M(3863)V(3863). J^π: 2449.0γ to 4^+; L(p,p′)=4 (1992Pi08). B(E4)↑: 1.37 *23* W.u. (1992Pi08).
3869.00 *10*	$(1,2^+)$	13 fs *3*	E I	J^π: 3868.93γ to 2^+. $T_{1/2}$: Other: 20 fs *5* in ^{112}Cd(γ,pol γ′).
3878.62 *13*	0^+ to 4^+	53 fs *24*	E	J^π: 3261.05γ to 2^+.
3892.48 *14*	$0^+,1,2,3^+$		GH M V	J^π: 2579.77γ to 2^+; 5501.62γ from (1^+) in ^{111}Cd(n,γ) E=th:primary (1997Dr03).
3913.69[&] *9*	9^+		D	J^π: 674.713γ E2 to 7^+; 514.75γ M1+E2 to 8^+; band member.
3929.21 *21*	$(0)^+$	≤0.9 ps	E P	XREF: P(3920). J^π: 3311.64γ to 2^+; L(^{3}He,n)=0.
3930.78 *17*	12^+		D	J^π: 608.5γ E2 to 10^+; band member.
3932.18 *12*	0^+ to 4^+	0.09 ps *+6−3*	E	J^π: 3314.61γ to 2^+.
3933.07 *13*	$(1,2^+)$	12 fs *4*	E I	J^π: 3933.00γ to 0^+. $T_{1/2}$: Other: 76 fs *10* in ^{112}Cd(γ,pol γ′).
3939.27 *14*	$(4)^+$	0.05 fs *+3−2*	E M V	XREF: M(3945)V(3945). J^π: 3321.70γ to 2^+; L(p,p′)=4 (1992Pi08). B(E4)↑: 0.43 *14* W.u. (1992Pi08).

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Adopted Levels, Gammas (continued)

^{112}Cd Levels (continued)

E(level)[†]	J^π	$T_{1/2}$[‡]	XREF	Comments
3951.57 *13*	1,2$^+$	43 fs *6*	E GH	XREF: E(3952.25)G(3951.43)H(3951.50). J^π: 3951.4γ to 0$^+$, 3333.9γ to 2$^+$.
3963.8 *4*	(1,2$^+$)	0.03 ps *+4−2*	E	J^π: 3963.7γ to 0$^+$.
3966.44 *14*	(9,10,11)$^+$		D	J^π: 644.04γ M1+E2 to 10$^+$.
3970.08 *19*	(1,2$^+$)	0.05 ps *+7−2*	E GH	XREF: E(3969.28). J^π: 3970.0γ to 0$^+$.
3990.40 *11*	10$^+$		D	J^π: 591.57γ E2 to 8$^+$; 306.23γ M1+E2 to 10$^+$.
3997.75 *14*	1,2$^+$	2.4[e] fs *6*	GHI	XREF: G(3996.1). J^π: 3997.6γ to 0$^+$, 2685.83γ to 2$^+$.
4003.9 *3*	(3$^-$)		GH M V	XREF: M(4010)V(4010). J^π: 3386.50γ to 2$^+$; L(p,p′)=3 (1992Pi08).
4033.88 *20*	(3$^-$)	0.06 ps *+5−2*	E M V	XREF: M(4034)V(4034). J^π: 3416.31γ to 2$^+$; L(p,p′)=3 (1992Pi08).
4060 *5*	(4$^+$)		M V	J^π: L(p,p′)=4. B(E4)↑: 0.84 *16* W.u. (1992Pi08).
4090 *5*	(3$^-$)		M V	J^π: L(p,p′)=3.
4118 *5*	(4$^+$)		M V	J^π: L(p,p′)=4. B(E4)↑: 0.01 *3* W.u. (1992Pi08).
4125.91 *13*	10$^+$		D	J^π: 949.44γ E2 to 8$^+$; assumed yrast state.
4172 *5*	(3$^-$)		M V	J^π: L(p,p′)=3 (1992Pi08).
4174.50 *13*	10$^+$		D	J^π: 856.41γ E1 to 9$^-$; assumed yrast state.
4221 *5*	(7$^-$)		M V	J^π: L(p,p′)=7 (1992Pi08).
4248 *5*	(3$^-$)		M V	J^π: L(p,p′)=3 (1992Pi08).
4279 *5*	(3$^-$)		M V	J^π: L(p,p′)=3 (1992Pi08).
4283.47[&] *14*	10$^+$		D	J^π: 740.63γ E2 to 8$^+$; band member.
4284.76 *15*	(9)$^-$		D	J^π: 908.29γ E2 to (7)$^-$; assumed yrast state.
4285.20[a] *13*	11$^-$		D	J^π: 967.10γ E2 to 9$^-$; band member.
4320 *5*	(4$^+$)		M V	J^π: L(p,p′)=4 (1992Pi08). B(E4)↑: 0.71 *22* W.u. (1992Pi08).
4338 *5*	(7$^-$)		M V	J^π: L(p,p′)=7 (1992Pi08).
4364 *5*	(4$^+$)		M V	J^π: L(p,p′)=4 (1992Pi08). B(E4)↑: 0.62 *17* W.u. (1992Pi08).
4383.05 *14*	11$^+$		D	J^π: 1060.63γ M1+E2 to 10$^+$; 452.27γ M1(+E2) to 12$^+$.
4385 *5*	(3$^-$)		M V	J^π: L(p,p′)=3 (1992Pi08).
4385.16[c] *13*	10$^-$		D	J^π: 1067.06γ M1+E2 to 9$^-$; band member.
4419 *5*	(4$^+$)		M V	J^π: L(p,p′)=(4) (1992Pi08). B(E4)↑: 0.83 *17* W.u. (1992Pi08).
4467.74[b] *14*	11$^-$		D	J^π: 896.683γ E2 to 9$^-$; band member.
4468 *5*	3		M V	J^π: From ^{112}Cd(d,d′) and ^{112}Cd(p,p′).
4499 *5*	(3$^-$)		M V	J^π: From ^{112}Cd(d,d′) and ^{112}Cd(p,p′).
4546 *5*	(2$^+$)		V	J^π: From ^{112}Cd(p,p′).
4587.15[#] *16*	12$^+$		D	J^π: 903.121γ E2 to 10$^+$; band member.
4687.17[&] *13*	11$^+$		D	J^π: 773.48γ E2 9$^+$; band member.
4720	0$^+$,2$^+$		P	J^π: L(^{3}He,n)=0,2.
4871.47 *20*	14$^+$		D	J^π: 940.680γ E2 to 12$^+$; band member.
5106.22 *20*	(13)$^-$		D	J^π: 1175.431γ E1 to 12$^+$; assumed yrast state.
7633.0 *5*	1$^-$	5.3 fs *9*	J	J^π: 7632γ E1 to 0$^+$. $T_{1/2}$: from Γ_γ=0.086 eV *15* (1970Mo26). Other: 0.6 eV *+2−1* (1966Mi13).
(9394.20 *3*)	(1)$^+$		G	J^π: s-wave capture on J^π=1/2$^+$ in ^{111}Cd suggests 0$^+$,1$^+$; 9393.63γ to the g.s. and other decay branches to 0$^+$ states support 1$^+$ assignments.

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Adopted Levels, Gammas (continued)

^{112}Cd Levels (continued)

† From a least-squares fit to Eγ.
‡ From DSAM in ^{112}Cd(n,n′γ) (2007Ga22), unless otherwise stated.
# Member of the gsb.
@ Member of the band based on the 0^+ state at 1224 keV.
& Member of the band based on the 2^+ state at 1312 keV.
[a] Member of the band based on the 3^- state at 2005 keV.
[b] Member of the band based on the 5^- state at 2570 keV.
[c] Member of the band based on the 3^- state at 2415 keV.
[d] Unresolved multiplet in (p,p′) and (pol d, t).
[e] From ^{112}Cd(γ,pol γ′).

Adopted Levels, Gammas (continued)

$\gamma(^{112}Cd)$

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.†	δ†f	α[e]	$I_{(\gamma+ce)}$	Comments
617.518	2^+	617.517[d] *3*	100	0.0	0^+	E2		0.00371		α(K)=0.00321 *5*; α(L)=0.000407 *6*; α(M)=7.82×10^{-5} *11* α(N)=1.381×10^{-5} *20*; α(O)=7.37×10^{-7} *11* B(E2)(W.u.)=30.31 *19* Mult.: α(K)exp=0.00317 *16*, α(L)exp=0.00039 *4*, and α(M)exp=0.000138 *15* in ^{111}Cd(n,γ) E=th:secondary (1997Dr03); α(K)exp=0.0038 *7* in ^{112}In ε decay (14.88 min) (1962Ru05); A_2=+0.44 *2*, A_4=−0.05 *2* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).
1224.341	0^+	606.821 *6*	100	617.518	2^+	E2		0.00388		α(K)=0.00336 *5*; α(L)=0.000427 *6*; α(M)=8.21×10^{-5} *12* α(N)=1.450×10^{-5} *21*; α(O)=7.71×10^{-7} *11* B(E2)(W.u.)=51 *14* Mult.: α(K)exp=0.0034 *3* in ^{111}Cd(n,γ) E=th:secondary (1997Dr03); A_2=−0.02 *7*; A_4=−0.08 *10* in ^{110}Pd(α,2nγ) (1992Ku01).
		1224.341 *7*		0.0	0^+	E0			0.090 *7*	E_γ: transition energy from level energy differences. Mult.: from ce measurements 1979Gi05, 1980Ju05 and 1997Dr03; Ice(K)(1224.341γ)/Ice(K)(606.821γ)= 0.300 *22*, weighted average of 0.30 *4* (1979Gi05), 0.33 *5* (1980Ju05) and 0.29 *3* (1997Dr03). $I_{(\gamma+ce)}$: from Ice(K)(1224.341γ)/Ice(K)(606.821γ)= 0.300 *22* α(K)(606.84γ)=0.00336 *5* and Ω_K/Ω_T=0.8961 (2008Ki07).
1312.390	2^+	694.872[d] *7*	100[#] *3*	617.518	2^+	E2+M1	−4.0 *7*	0.00274		α(K)=0.00238 *4*; α(L)=0.000296 *5*; α(M)=5.68×10^{-5} *8* α(N)=1.007×10^{-5} *15*; α(O)=5.50×10^{-7} *8* B(M1)(W.u.)=0.0015 *6*; B(E2)(W.u.)=39 *7* Mult.: α(K)exp=0.00242 *18* in ^{111}Cd(n,γ) E=th:secondary (1997Dr03); A_2=−0.224 *7*; A_4=0.008 *10* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09). δ: From $\gamma\gamma(\theta)$ in ^{112}Ag β^- decay (1972Wa03); Others ($\gamma(\theta)$): −1.6 +*5*−*8* (1997Dr03), −2.6 +*4*−*3* in (2001Ga44), −0.77 *6* in ^{111}Cd(d,pγ) and −0.87 *10* or −3.5 *9* (1969Mi07).
		1312.36 *4*	37.7[#] *4*	0.0	0^+	E2		6.64×10^{-4}		α(K)=0.000557 *8*; α(L)=6.58×10^{-5} *10*; α(M)=1.258×10^{-5} *18* α(N)=2.24×10^{-6} *4*; α(O)=1.302×10^{-7} *19*; α(IPF)=2.64×10^{-5} *4* B(E2)(W.u.)=0.65 *11* Mult.: α(K)exp=0.00052 *6* in ^{111}Cd(n,γ) E=th:secondary (1997Dr03); A_2=+0.46 *2*, A_4=−0.04 *3* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).
1415.480	4^+	798.04 *10*	100	617.518	2^+	E2		0.00193		α(K)=0.001676 *24*; α(L)=0.000206 *3*; α(M)=3.95×10^{-5}

$^{112}_{48}Cd_{64}$-13

$\gamma(^{112}Cd)$ (continued)

E_i(level)	J_i^π	E_γ [†]	I_γ [†]	E_f	J_f^π	Mult. [†]	δ [†f]	α [e]	$I_{(\gamma+ce)}$	Comments
										6 α(N)=7.01×10^{-6} *10*; α(O)=3.89×10^{-7} *6* B(E2)(W.u.)=63 *8* Mult.: α(K)exp=0.00155 *15* in ^{111}Cd(n,γ) E=th:secondary (1997Dr03); A_2=+0.58 *4*, A_4=−0.15 *5* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).
1433.27	0$^+$	120.68[#] *10*	58[@] *7*	1312.390	2$^+$	E2		0.766		α(K)=0.597 *9*; α(L)=0.1367 *20*; α(M)=0.0270 *4* α(N)=0.00453 *7*; α(O)=0.0001141 *17* B(E2)(W.u.)=99 *16* I_γ: Others: 61 *10* in ^{112}Cd(p,p′γ), but 27 *4* in ^{110}Pd(α,2nγ).
		208.93 *3*		1224.341	0$^+$	E0			6.4 *10*	E_γ: transition energy from level energy differences. Mult.: from α measurements in 1980Ju05 and 1997Dr03. $I_{(\gamma+ce)}$: from Ice(K)(208.93γ):Ice(K)(815.79γ)=45 *5* (1997Dr03), α(K)(815.79γ)=0.001589 *23*, Iγ(815.79γ)=100 *11* and Ω_K/Ω_T=0.8941 (2008Ki07); Other: Ice(K)(208.93γ):Ice(K)(815.79γ)=25 *9* (1980Ju05), is probably affected by the uncertainties in the ce spectrum around the 183-keV line.
		815.79[d] *3*	100[@] *10*	617.518	2$^+$	E2		0.00183		α(K)=0.001589 *23*; α(L)=0.000195 *3*; α(M)=3.74×10^{-5} *6* α(N)=6.63×10^{-6} *10*; α(O)=3.69×10^{-7} *6* B(E2)(W.u.)=0.0121 *17* E_γ: B(E2)(↓)=0.017 *4* (1980Ju05).
		1433.27 *3*		0.0	0$^+$	E0			2.7 *4*	E_γ: transition energy from level energy differences. Mult.: from α measurements in 1980Ju05 and 1997Dr03. $I_{(\gamma+ce)}$: from Ice(K)(1433.27γ):Ice(K)(815.79γ)=19.0 *17* (1997Dr03), α(K)(815.57γ)=0.001589 *23*, Iγ(815.57γ)=100 *11* and Ω_K/Ω_T=0.8962 (2008Ki07) Other: Ice(K)(1433.27γ):Ice(K)(815.79γ)=7.9 *25* (1980Ju05), but the value is probably affected by the weak population of this level.
1468.822	2$^+$	244.86[#] *23*	1.0 *3*	1224.341	0$^+$	(E2)		0.0641		α(K)=0.0538 *8*; α(L)=0.00840 *13*; α(M)=0.001633 *24* α(N)=0.000282 *4*; α(O)=1.143×10^{-5} *17* B(E2)(W.u.)=1.2×10^2 *5* Mult.: from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).
		851.285[d] *15*	100.0 *10*	617.518	2$^+$	M1+E2+E0	+0.050 *18*	0.00195	4	B(M1)(W.u.)=2.1×10^{-6} *16*

$\gamma(^{112}$Cd) (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.†	δ†f	αe	Comments
									ce(K)/(γ+ce)=0.001664 *24*; ce(L)/(γ+ce)=0.000196 *3*; ce(M)/(γ+ce)=3.75×10^{-5} *6* ce(N)/(γ+ce)=6.71×10^{-6} *10*; ce(O)/(γ+ce)=3.97×10^{-7} *6* α(K)=0.001667 *24*; α(L)=0.000196 *3*; α(M)=3.76×10^{-5} *6* α(N)=6.72×10^{-6} *10*; α(O)=3.98×10^{-7} *6* Mult.: from α(K)exp=0.00235 *18* in ^{111}Cd(n,γ) E=th (1997Dr03) and α(K)exp=0.00234 *12* in ^{112}In ε decay (14.88 min) (1991Gi05); A_2=0.50 *2* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03); Others: A_2=0.07 *7* and A_4=0.03 *16* in ^{112}Ag β^- decay (3.130 h) (1972Wa03). δ: Weighted average of 0.053 *30* in 1997De03 and 0.048 *22* in 1991Gi05. Others: +0.14 *5* from $\gamma(\theta)$ in ^{112}Cd(n,n$'\gamma$) (2001Ga44), +0.23 *13* or +1.4 *5* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03), +0.10 *7* (1973Gr16); 0.05 or +2.0 *+7−5* (1969Mi07) in Coulomb excitation; +0.22 *5* in ^{112}Ag β^- decay (3.130 h) (1972Wa03). α: 0.00195 *4*, using q^2=9.7 *35*, weighted average of 9.4 *54* (1997Dr03) and 9.9 *46*(1991Gi05), and α from 2008Ki07.
1468.822	2$^+$	1468.84 *10*	58.3 *8*	0.0	0$^+$	E2		5.79×10^{-4}	α(K)=0.000444 *7*; α(L)=5.21×10^{-5} *8*; α(M)=9.96×10^{-6} *14* α(N)=1.777×10^{-6} *25*; α(O)=1.039×10^{-7} *15*; α(IPF)=7.09×10^{-5} *10* B(E2)(W.u.)=0.88 *17* Mult.: α(K)exp=0.00050 *7* in ^{111}Cd(n,γ) E=th (1997Dr03). Mult.: a_0=15.6 *2*; A_2=0.210 *13*; A_4=−0.036 *19* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
1870.68	4$^+$	401.88 *13*	58 *3*	1468.822	2$^+$	E2		0.01277	α(K)=0.01093 *16*; α(L)=0.001492 *21*; α(M)=0.000288 *4* α(N)=5.04×10^{-5} *7*; α(O)=2.44×10^{-6} *4* Mult.: A_2=+0.60 *2*, A_4=−0.10 *2* in ^{110}Pd(α,2nγ) (1997Dr03).
		455.26 *13*	32.0 *17*	1415.480	4$^+$	M1+E2	+2.7 *+4−3*	0.00871	α(K)=0.00750 *11*; α(L)=0.000987 *15*; α(M)=0.000190 *3* α(N)=3.35×10^{-5} *5*; α(O)=1.706×10^{-6} *24* Mult.: A_2=0.06 *23*, A_4=−0.41 *24* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03). δ: Other: 2.43 *15* or −0.45 *14* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).
		558.39 *11*	100.0 *25*	1312.390	2$^+$	E2		0.00487	α(K)=0.00421 *6*; α(L)=0.000542 *8*; α(M)=0.0001042 *15* α(N)=1.84×10^{-5} *3*; α(O)=9.62×10^{-7} *14* Mult.: A_2=+0.64 *3*, A_4=−0.12 *4* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).
		1253.16 *12*	89 *3*	617.518	2$^+$	E2		7.17×10^{-4}	α(K)=0.000612 *9*; α(L)=7.25×10^{-5} *11*; α(M)=1.387×10^{-5} *20* α(N)=2.47×10^{-6} *4*; α(O)=1.431×10^{-7} *20*; α(IPF)=1.510×10^{-5} *22* Mult.: A_2=+0.52 *4*, A_4=−0.15 *6* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).

$^{112}_{48}$Cd$_{64}$-15

Adopted Levels, Gammas (continued)

$\gamma(^{112}Cd)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[†]	δ[†f]	α[e]	Comments
1870.96	0^+	402.50 *16*	11.2 *12*	1468.822	2^+	E2		0.01271	α(K)=0.01088 *16*; α(L)=0.001485 *21*; α(M)=0.000287 *4* α(N)=5.02×10^{-5} *7*; α(O)=2.43×10^{-6} *4* Mult.: A_2=+0.60 *2*, A_4=−0.10 *2* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).
		558.7	3.5[@] *9*	1312.390	2^+	E2		0.00487	α(K)=0.00420 *6*; α(L)=0.000541 *8*; α(M)=0.0001041 *15* α(N)=1.83×10^{-5} *3*; α(O)=9.61×10^{-7} *14*
		1253.56 *12*	100.0 *12*	617.518	2^+	E2		7.16×10^{-4}	α(K)=0.000612 *9*; α(L)=7.25×10^{-5} *11*; α(M)=1.386×10^{-5} *20* α(N)=2.47×10^{-6} *4*; α(O)=1.430×10^{-7} *20*; α(IPF)=1.517×10^{-5} *22* Mult.: A_2=0.218 *42* and A_4=0.990 *51* in ^{112}In ε decay (14.88 min) (1972Ka34).
2005.200	3^-	536.31 *10*	1.11 *12*	1468.822	2^+	E1		0.00181	B(E1)(W.u.)=6.5×10^{-5} *15* α(K)=0.001581 *23*; α(L)=0.000186 *3*; α(M)=3.54×10^{-5} *5* α(N)=6.30×10^{-6} *9*; α(O)=3.61×10^{-7} *5* Mult.: A_2=−0.17 *15* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).
		692.82[d] *3*	22.2 *6*	1312.390	2^+	E1		1.02×10^{-3}	α(K)=0.000893 *13*; α(L)=0.0001041 *15*; α(M)=1.99×10^{-5} *3* α(N)=3.54×10^{-6} *5*; α(O)=2.05×10^{-7} *3* B(E1)(W.u.)=0.00061 *12* Mult.: A_2/A_0=−0.046 *17* in ^{110}Pd(α,2nγ) (1993De09).
		1387.68 *10*	100.0 *6*	617.518	2^+	E1		4.19×10^{-4}	B(E1)(W.u.)=0.00034 *7* α(K)=0.000235 *4*; α(L)=2.70×10^{-5} *4*; α(M)=5.15×10^{-6} *8* α(N)=9.19×10^{-7} *13*; α(O)=5.44×10^{-8} *8*; α(IPF)=0.0001504 *21* Mult.: A_2=−0.07 *6* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03); Also, A_2=−0.11 *3* and A_4=−0.02 *5* in ^{112}Ag β^- decay (3.130 h) (1972Wa03). Possible M2 admixture; δ=−0.06 *2* from ^{112}Ag β^- decay (3.130 h).
2064.53	3^+	648.91 *10*	28.3 *7*	1415.480	4^+	M1+E2	−1.20 *+20−15*	0.00338 *6*	α(K)=0.00294 *5*; α(L)=0.000361 *6*; α(M)=6.93×10^{-5} *10* α(N)=1.230×10^{-5} *19*; α(O)=6.89×10^{-7} *14* B(M1)(W.u.)=0.009 *4*; B(E2)(W.u.)=25 *8* Mult.: A_2=+0.45 *7* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03). δ: Also: −1.6 *3* or −0.50 *15* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).
		752.14[d] *3*	100.0 *13*	1312.390	2^+	M1+E2	−2.75 *+23−17*	0.00227	α(K)=0.00197 *3*; α(L)=0.000242 *4*; α(M)=4.65×10^{-5} *7*

$^{112}_{48}Cd_{64}$-16

$\gamma(^{112}Cd)$ (continued)

E_i(level)	J_i^π	E_γ†	I_γ†	E_f	J_f^π	Mult.†	δ†f	αe	Comments
									$\alpha(N)=8.24\times10^{-6}$ *12*; $\alpha(O)=4.58\times10^{-7}$ *7* B(M1)(W.u.)=0.0059 *19*; B(E2)(W.u.)=64 *18* Mult.: A_2=0.303 *6*; A_4=−0.092 *8* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09). δ: Also: −1.5 *5* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).
2064.53	3+	1447.00 *10*	87.7 *13*	617.518	2+	M1+E2	−1.70 *+10−12*	6.04×10^{-4}	$\alpha(K)=0.000474$ *7*; $\alpha(L)=5.55\times10^{-5}$ *8*; $\alpha(M)=1.062\times10^{-5}$ *16* $\alpha(N)=1.89\times10^{-6}$ *3*; $\alpha(O)=1.114\times10^{-7}$ *17*; $\alpha(IPF)=6.18\times10^{-5}$ *9* B(M1)(W.u.)=0.0016 *5*; B(E2)(W.u.)=1.8 *5* Mult.: A_2=−0.47 *6*, A_4=+0.10 *10* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03). δ: Also: −1.24 *15* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).
2081.64	4+	211.0# *3*	4.9# *7*	1870.68	4+	[M1]		0.0597	$\alpha(K)=0.0519$ *8*; $\alpha(L)=0.00638$ *10*; $\alpha(M)=0.001226$ *18* $\alpha(N)=0.000218$ *4*; $\alpha(O)=1.261\times10^{-5}$ *19* B(M1)(W.u.)=0.14 *5*
		612.88 *25*	23 *4*	1468.822	2+	E2		0.00378	$\alpha(K)=0.00327$ *5*; $\alpha(L)=0.000415$ *6*; $\alpha(M)=7.99\times10^{-5}$ *12* $\alpha(N)=1.411\times10^{-5}$ *20*; $\alpha(O)=7.52\times10^{-7}$ *11* B(E2)(W.u.)=59 *20* Mult.: A_2=+0.51 *18*, A_4=−0.12 *10* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).
		666.17d *6*	100.0 *22*	1415.480	4+	M1+E2	−0.41 *3*	0.00331	$\alpha(K)=0.00289$ *4*; $\alpha(L)=0.000345$ *5*; $\alpha(M)=6.62\times10^{-5}$ *10* $\alpha(N)=1.181\times10^{-5}$ *17*; $\alpha(O)=6.89\times10^{-7}$ *10* B(M1)(W.u.)=0.080 *24*; B(E2)(W.u.)=24 *8* Mult.: A_2=+0.36 *2* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03). δ: Also: −0.47 *5* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).
		769.36 *10*	70.4 *18*	1312.390	2+	E2		0.00211	$\alpha(K)=0.00183$ *3*; $\alpha(L)=0.000226$ *4*; $\alpha(M)=4.34\times10^{-5}$ *6* $\alpha(N)=7.69\times10^{-6}$ *11*; $\alpha(O)=4.24\times10^{-7}$ *6* B(E2)(W.u.)=58 *17* Mult.: A_2=+0.34 *16* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).
		1464.04 *10*	27.7 *9*	617.518	2+	E2		5.81×10^{-4}	B(E2)(W.u.)=0.9 *3* $\alpha(K)=0.000447$ *7*; $\alpha(L)=5.25\times10^{-5}$ *8*; $\alpha(M)=1.003\times10^{-5}$ *14* $\alpha(N)=1.79\times10^{-6}$ *3*; $\alpha(O)=1.046\times10^{-7}$ *15*; $\alpha(IPF)=6.92\times10^{-5}$ *10* Mult.: A_2=0.11 *6*; A_4=0.05 *8* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
2121.62	2+	688.23 *10*	14.9 *9*	1433.27	0+	E2		0.00279	B(E2)(W.u.)=25 *7* $\alpha(K)=0.00242$ *4*; $\alpha(L)=0.000302$ *5*; $\alpha(M)=5.81\times10^{-5}$ *9* $\alpha(N)=1.028\times10^{-5}$ *15*; $\alpha(O)=5.58\times10^{-7}$ *8* Mult.: A_2=+0.52 *19* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).

$^{112}_{48}Cd_{64}$-17

Adopted Levels, Gammas (continued)

γ(^{112}Cd) (continued)

E$_i$(level)	J$^\pi_i$	E$_\gamma$†	I$_\gamma$†	E$_f$	J$^\pi_f$	Mult.†	δ†f	α^e	Comments
2121.62	2$^+$	808.82 *19*	3.73 *12*	1312.390	2$^+$	M1+E2		0.00215	α(K)=0.00187 *3*; α(L)=0.000221 *3*; α(M)=4.23×10^{-5} *6* α(N)=7.56×10^{-6} *11*; α(O)=4.48×10^{-7} *7*
		897.07 *10*	11.9 *3*	1224.341	0$^+$	E2		1.46×10^{-3}	B(E2)(W.u.)=5.3 *15* α(K)=0.001271 *18*; α(L)=0.0001545 *22*; α(M)=2.96×10^{-5} *5* α(N)=5.26×10^{-6} *8*; α(O)=2.96×10^{-7} *5*
		1504.04 *10*	100.0 *9*	617.518	2$^+$	M1+E2	+1.36 *7*	5.88×10^{-4}	B(M1)(W.u.)=0.0033 *10*; B(E2)(W.u.)=2.2 *6* α(K)=0.000444 *7*; α(L)=5.19×10^{-5} *8*; α(M)=9.92×10^{-6} *15* α(N)=1.77×10^{-6} *3*; α(O)=1.045×10^{-7} *15*; α(IPF)=8.01×10^{-5} *12* E$_\gamma$: seen as 1507.3 keV *3* in ^{112}In ε decay (14.97 min). Mult.: α(K)exp=0.00030 *10* in ^{111}Cd(n,γ) E=th (1997Dr03); A$_2$=0.16 *4* from γγ(θ) in (1993De09). δ: Also: +0.15 *5* or +1.6 *3* from γγ(θ) in ^{110}Pd(α,2nγ) (1997Dr03).
		2121.49 *13*	2.80 *13*	0.0	0$^+$	E2		6.14×10^{-4}	B(E2)(W.u.)=0.017 *5* α(K)=0.000222 *4*; α(L)=2.57×10^{-5} *4*; α(M)=4.90×10^{-6} *7* α(N)=8.75×10^{-7} *13*; α(O)=5.19×10^{-8} *8*; α(IPF)=0.000360 *5*
2156.18	2$^+$	687.41 *10*	5.6 *8*	1468.822	2$^+$	M1+E2	−2.3 *19*	0.00285 *24*	α(K)=0.00247 *22*; α(L)=0.000307 *15*; α(M)=5.9×10^{-5} *3* α(N)=1.04×10^{-5} *6*; α(O)=5.7×10^{-7} *7* B(M1)(W.u.)=0.003 *+5−3*; B(E2)(W.u.)=23 *+25−23*
		842.8@ *15*	2.5@ *7*	1312.390	2$^+$	[M1]		0.00195	α(K)=0.001706 *25*; α(L)=0.000201 *3*; α(M)=3.85×10^{-5} *6* α(N)=6.88×10^{-6} *10*; α(O)=4.08×10^{-7} *6* B(M1)(W.u.)=0.004 *4*
		1538.68^d *10*	100	617.518	2$^+$	M1+E2	+0.085 *+25−22*	6.11×10^{-4}	α(K)=0.000459 *7*; α(L)=5.33×10^{-5} *8*; α(M)=1.019×10^{-5} *15* α(N)=1.82×10^{-6} *3*; α(O)=1.089×10^{-7} *16*; α(IPF)=8.67×10^{-5} *13* B(M1)(W.u.)=0.03 *3*; B(E2)(W.u.)=0.06 *+8−6* Mult.: A$_2$=−0.02 *7* from γγ(θ) in ^{110}Pd(α,2nγ) (1993De09). δ: Also: −0.33 *15* from γγ(θ) in ^{110}Pd(α,2nγ) (1997Dr03).
		2156.20 *10*	8.8 *3*	0.0	0$^+$	E2		6.23×10^{-4}	α(K)=0.000216 *3*; α(L)=2.49×10^{-5} *4*;

$^{112}_{48}$Cd$_{64}$-18

$\gamma(^{112}Cd)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.†	δ†f	αe	Comments
									α(M)=4.75×10^{-6} *7* α(N)=8.49×10^{-7} *12*; α(O)=5.04×10^{-8} *7*; α(IPF)=0.000377 *6* B(E2)(W.u.)=0.14 *+15−14*
2167.76	6$^+$	297.29# *12*	0.58# *9*	1870.68	4$^+$	E2		0.0334	α(K)=0.0283 *4*; α(L)=0.00416 *6*; α(M)=0.000806 *12* α(N)=0.0001400 *20*; α(O)=6.15×10^{-6} *9* Mult.: A_2=0.37 *7*; A_4=0.02 *10* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
		752.14# *10*	100# *3*	1415.480	4$^+$	E2		0.00223	α(K)=0.00194 *3*; α(L)=0.000240 *4*; α(M)=4.60×10^{-5} *7* α(N)=8.15×10^{-6} *12*; α(O)=4.48×10^{-7} *7* Mult.: A_2=+0.41 *5*, A_4=−0.11 *7* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).
2231.12	2$^+$	226.0@ *3*	0.61@ *15*	2005.200	3$^-$	[E1]		0.01665	α(K)=0.01452 *21*; α(L)=0.00174 *3*; α(M)=0.000332 *5* α(N)=5.87×10^{-5} *9*; α(O)=3.18×10^{-6} *5* B(E1)(W.u.)=0.0009 *9*
		762.41 *10*	2.07 *11*	1468.822	2$^+$	M1+E2	−1.4 *+8−34*	0.00226 *13*	α(K)=0.00196 *12*; α(L)=0.000239 *10*; α(M)=4.58×10^{-5} *18* α(N)=8.1×10^{-6} *4*; α(O)=4.6×10^{-7} *4* B(M1)(W.u.)=0.0021 *+26−21*; B(E2)(W.u.)=6 *6*
		918.72 *10*	2.72 *11*	1312.390	2$^+$	M1+E2	+0.21 *+20−13*	0.00160 *4*	α(K)=0.00140 *3*; α(L)=0.000164 *3*; α(M)=3.14×10^{-5} *6* α(N)=5.62×10^{-6} *11*; α(O)=3.33×10^{-7} *8* B(M1)(W.u.)=0.005 *5*; B(E2)(W.u.)=0.19 *+39−19*
		1006.81 *10*	4.03 *11*	1224.341	0$^+$	E2		1.12×10^{-3}	B(E2)(W.u.)=4 *4* α(K)=0.000979 *14*; α(L)=0.0001177 *17*; α(M)=2.25×10^{-5} *4* α(N)=4.01×10^{-6} *6*; α(O)=2.28×10^{-7} *4* Mult.: A_2=0.14 *14* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).
		1613.66 *10*	100.0 *2*	617.518	2$^+$	M1+E2	−0.020 *+20−27*	5.90×10^{-4}	B(M1)(W.u.)=0.03 *3*; B(E2)(W.u.)=0.004 *+9−4* α(K)=0.000416 *6*; α(L)=4.83×10^{-5} *7*; α(M)=9.23×10^{-6} *13* α(N)=1.650×10^{-6} *24*; α(O)=9.86×10^{-8} *14*; α(IPF)=0.0001147 *16* Mult.: A_2=−0.05 *3* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09). δ: Also: −0.6 *+2−4* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).

From ENSDF

$^{112}_{48}Cd_{64}$-19

$\gamma(^{112}$Cd) (continued)

E_i(level)	J_i^π	E_γ†	I_γ†	E_f	J_f^π	Mult.†	δ†f	αe	Comments
2300.68	0^+	831.79 *10*	48.4 *12*	1468.822	2^+	E2		1.75×10^{-3}	B(E2)(W.u.)<23 α(K)=0.001517 *22*; α(L)=0.000186 *3*; α(M)=3.56×10^{-5} *5* α(N)=6.32×10^{-6} *9*; α(O)=3.52×10^{-7} *5*
		1683.22 *10*	100.0 *12*	617.518	2^+	E2		5.45×10^{-4}	B(E2)(W.u.)<1.4 α(K)=0.000341 *5*; α(L)=3.98×10^{-5} *6*; α(M)=7.60×10^{-6} *11* α(N)=1.356×10^{-6} *19*; α(O)=7.98×10^{-8} *12*; α(IPF)=0.0001551 *22*
2373.19	5^-	291.5 *1*	1.08 *11*	2081.64	4^+	E1		0.00834	α(K)=0.00728 *11*; α(L)=0.000867 *13*; α(M)=0.0001656 *24* α(N)=2.93×10^{-5} *5*; α(O)=1.619×10^{-6} *23* B(E1)(W.u.)=0.00031 *+16−31* Mult.: A_2=−0.16 *13* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).
		367.9 *1*	0.98 *20*	2005.200	3^-	E2		0.01681	B(E2)(W.u.)=6.E+1 *+4−6* α(K)=0.01435 *21*; α(L)=0.00200 *3*; α(M)=0.000386 *6* α(N)=6.74×10^{-5} *10*; α(O)=3.19×10^{-6} *5* Mult.: A_2=0.38 *4*; A_4=−0.09 *5* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
		957.72 *10*	100	1415.480	4^+	E1		5.28×10^{-4}	B(E1)(W.u.)=0.0008 *+4−8* α(K)=0.000462 *7*; α(L)=5.34×10^{-5} *8*; α(M)=1.020×10^{-5} *15* α(N)=1.82×10^{-6} *3*; α(O)=1.065×10^{-7} *15* Mult.: A_2=−0.233 *7* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
2402.98	3^+	531.89 *10*	10.4 *12*	1870.68	4^+	M1+E2	−0.6 *+4−25*	0.00569 *13*	B(M1)(W.u.)=0.016 *+7−9*; B(E2)(W.u.)=16 *+17−16* α(K)=0.00495 *14*; α(L)=0.000605 *20*; α(M)=0.000116 *4* α(N)=2.06×10^{-5} *6*; α(O)=1.17×10^{-6} *7*
		934.19 *10*	61.2 *12*	1468.822	2^+	M1+E2	−4.0 *6*	1.34×10^{-3} *2*	B(M1)(W.u.)=0.0014 *+6−7*; B(E2)(W.u.)=20 *+5−9* α(K)=0.001170 *17*; α(L)=0.0001413 *21*; α(M)=2.71×10^{-5} *4* α(N)=4.81×10^{-6} *7*; α(O)=2.73×10^{-7} *4* Mult.: A_2=0.09 *5* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09). δ: Also: 0.33 *10* from $\gamma\gamma(\theta)$ in 1997Dr03.
		987.89 *10*	100	1415.480	4^+	M1(+E2)	−0.025 *+27−36*	1.37×10^{-3}	α(K)=0.001194 *17*; α(L)=0.0001401 *20*; α(M)=2.68×10^{-5} *4* α(N)=4.79×10^{-6} *7*; α(O)=2.85×10^{-7} *4* B(M1)(W.u.)=(0.032 *+8−14*); B(E2)(W.u.)=(0.02 *+4−2*) δ: Also: −6.2 *+10−17* from 2001Ga44.

From ENSDF

$^{112}_{48}$Cd$_{64}$-20

$\gamma(^{112}Cd)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ[†f]	α[e]	Comments
2402.98	3^+	1090.56 *10*	57.7 *12*	1312.390	2^+	M1+E2	+0.099 *+27−36*	1.10×10^{-3}	B(M1)(W.u.)=0.014 *+4−6*; B(E2)(W.u.)=0.09 *+6−7* α(K)=0.000958 *14*; α(L)=0.0001122 *16*; α(M)=2.15×10^{-5} *3* α(N)=3.84×10^{-6} *6*; α(O)=2.28×10^{-7} *4*
		1785.48 *10*	66.6 *15*	617.518	2^+	M1+E2	−0.107 *+36−43*	5.71×10^{-4}	α(K)=0.000338 *5*; α(L)=3.91×10^{-5} *6*; α(M)=7.47×10^{-6} *11* α(N)=1.336×10^{-6} *19*; α(O)=7.99×10^{-8} *12*; α(IPF)=0.000186 *3* B(M1)(W.u.)=0.0036 *+9−15*; B(E2)(W.u.)=0.010 *8* Mult.: A_2=−0.26 *4* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09). δ: −0.25 *20* from $\gamma(\theta)$ in 1997Dr03.
2416.00	3^-	411.39 *23*	12.9 *14*	2005.200	3^-	M1+E2	−0.35 *+18−23*	0.01087 *23*	B(M1)(W.u.)=0.14 *4*; B(E2)(W.u.)=8.E+1 *8* α(K)=0.00945 *18*; α(L)=0.00115 *4*; α(M)=0.000222 *8* α(N)=3.95×10^{-5} *13*; α(O)=2.26×10^{-6} *4* I_γ: From ^{112}Ag β^- decay (3.130 h). Mult.: A_2=0.46 *9*; A_4=0.19 *13* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09). δ: Also: +4.2 +∞−20 from $\gamma\gamma(\theta)$ in ^{112}Cd(n,n′γ) (2001Ga44); 0.50 *25* or 2.7 *10* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
		946.92 *10*	9.5 *12*	1468.822	2^+	E1		5.39×10^{-4}	α(K)=0.000472 *7*; α(L)=5.46×10^{-5} *8*; α(M)=1.043×10^{-5} *15* α(N)=1.86×10^{-6} *3*; α(O)=1.089×10^{-7} *16* B(E1)(W.u.)=0.00012 *3*
		983.8[@] *3*	5.7[@] *3*	1433.27	0^+				
		1103.58 *10*	47.0 *14*	1312.390	2^+	E1		4.08×10^{-4}	α(K)=0.000354 *5*; α(L)=4.08×10^{-5} *6*; α(M)=7.78×10^{-6} *11* α(N)=1.387×10^{-6} *20*; α(O)=8.16×10^{-8} *12*; α(IPF)=4.47×10^{-6} *7* B(E1)(W.u.)=0.00039 *8* Mult.: A_2=+0.31 *14* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).
		1798.50 *10*	100.0 *17*	617.518	2^+	E1		6.36×10^{-4}	α(K)=0.0001535 *22*; α(L)=1.751×10^{-5} *25*; α(M)=3.34×10^{-6} *5* α(N)=5.96×10^{-7} *9*; α(O)=3.55×10^{-8} *5*; α(IPF)=0.000461 *7* B(E1)(W.u.)=0.00019 *4* Mult.: A_2=−0.20 *3* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
2418.0	$(1,2^+)$	2418[a] *1*	100	0.0	0^+				

$^{112}_{48}Cd_{64}$-21

$\gamma(^{112}Cd)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.†	δ†f	αe	$I_{(\gamma+ce)}$	Comments
2454.51	4^+	1038.93 *10*	100.0 *3*	1415.480	4^+	M1+E2	−0.27 *18*	1.21×10^{-3} *3*		B(M1)(W.u.)=0.048 *+10−14*; B(E2)(W.u.)=3 *+4−3* α(K)=0.001057 *22*; α(L)=0.0001241 *24*; α(M)=2.37×10^{-5} *5* α(N)=4.24×10^{-6} *8*; α(O)=2.52×10^{-7} *6* Mult.: A_2=+0.40 *9* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).
		1142.21 *10*	8.7 *3*	1312.390	2^+	E2		8.55×10^{-4}		B(E2)(W.u.)=2.1 *+4−6* α(K)=0.000744 *11*; α(L)=8.86×10^{-5} *13*; α(M)=1.696×10^{-5} *24* α(N)=3.02×10^{-6} *5*; α(O)=1.736×10^{-7} *25*; α(IPF)=1.93×10^{-6} *3*
2493.15	4^+	1024.29 *10*	13.7 *5*	1468.822	2^+	E2		1.08×10^{-3}		α(K)=0.000942 *14*; α(L)=0.0001132 *16*; α(M)=2.17×10^{-5} *3* α(N)=3.85×10^{-6} *6*; α(O)=2.20×10^{-7} *3* B(E2)(W.u.)=4.5 *+12−45*
		1077.60 *10*	100.0 *6*	1415.480	4^+	M1+E2	+0.13 *+6−5*	1.12×10^{-3}		α(K)=0.000983 *14*; α(L)=0.0001151 *17*; α(M)=2.20×10^{-5} *4* α(N)=3.94×10^{-6} *6*; α(O)=2.34×10^{-7} *4* B(M1)(W.u.)=0.036 *+9−36*; B(E2)(W.u.)=0.4 *4* Mult.: A_2=+0.47 *23* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03). δ: Also: −0.03 *25* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).
		1875.70 *10*	5.6 *5*	617.518	2^+	E2		5.60×10^{-4}		α(K)=0.000278 *4*; α(L)=3.23×10^{-5} *5*; α(M)=6.17×10^{-6} *9* α(N)=1.101×10^{-6} *16*; α(O)=6.51×10^{-8} *10*; α(IPF)=0.000242 *4* B(E2)(W.u.)=0.089 *+24−89*
2506.36	$(2)^+$	1194.00 *10*	17.9 *5*	1312.390	2^+	M1+E2	+0.20 *+16−12*	9.01×10^{-4} *16*		α(K)=0.000783 *14*; α(L)=9.16×10^{-5} *16*; α(M)=1.75×10^{-5} *3* α(N)=3.13×10^{-6} *6*; α(O)=1.86×10^{-7} *4*; α(IPF)=5.48×10^{-6} *11* B(M1)(W.u.)=0.0090 *15*; B(E2)(W.u.)=0.20 *+32−20* Mult.: A_2=−0.18 *17* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).
		1888.79 *10*	100.0 *5*	617.518	2^+	M1+E2	−0.18 *6*	5.76×10^{-4}		α(K)=0.000301 *5*; α(L)=3.48×10^{-5} *5*; α(M)=6.64×10^{-6} *10* α(N)=1.188×10^{-6} *17*; α(O)=7.11×10^{-8} *10*; α(IPF)=0.000233 *4* B(M1)(W.u.)=0.0128 *19*; B(E2)(W.u.)=0.09 *7* δ: Also: +4.2 *+15−8* from $\gamma(\theta)$ in 2001Ga44.

$\gamma(^{112}Cd)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.†	δ†f	αe	Comments
2506.70	1^-	1037.9@ 3	6.8@ 7	1468.822	2^+	E1		4.53×10^{-4}	α(K)=0.000396 6; α(L)=4.58×10^{-5} 7; α(M)=8.73×10^{-6} 13 α(N)=1.557×10^{-6} 22; α(O)=9.15×10^{-8} 13 B(E1)(W.u.)=0.00041 5
		1073.32@ 17	4.8@ 5	1433.27	0^+	E1		4.25×10^{-4}	α(K)=0.000372 6; α(L)=4.29×10^{-5} 6; α(M)=8.19×10^{-6} 12 α(N)=1.462×10^{-6} 21; α(O)=8.59×10^{-8} 12 B(E1)(W.u.)=0.00026 3
		1282.29 10	5.5 5	1224.341	0^+	E1		3.90×10^{-4}	α(K)=0.000270 4; α(L)=3.10×10^{-5} 5; α(M)=5.92×10^{-6} 9 α(N)=1.056×10^{-6} 15; α(O)=6.24×10^{-8} 9; α(IPF)=8.18×10^{-5} 12 B(E1)(W.u.)=0.000177 19
		2506.70 10	100.0 6	0.0	0^+	E1		1.04×10^{-3}	α(K)=9.25×10^{-5} 13; α(L)=1.050×10^{-5} 15; α(M)=2.00×10^{-6} 3 α(N)=3.58×10^{-7} 5; α(O)=2.14×10^{-8} 3; α(IPF)=0.000940 14 B(E1)(W.u.)=0.000431 23 Mult.: ε=−0.10 8 from polarization measurements in ^{112}Cd(γ,pol γ') (2005Ko32).
2532.20	2^+	1063.56b 22	76b 12	1468.822	2^+				
		1099.0b 3	45b 12	1433.27	0^+				
		1116.83b 20	100b 15	1415.480	4^+				
2561.27	$(1,2^+)$	1248.92b 24	61b 11	1312.390	2^+				
		2561.13b 22	100b 11	0.0	0^+				
2570.21	5^-	197.03 10	95 9	2373.19	5^-	M1		0.0717	B(M1)(W.u.)<1.3 α(K)=0.0622 9; α(L)=0.00767 11; α(M)=0.001474 21 α(N)=0.000263 4; α(O)=1.514×10^{-5} 22 I_γ: 100 in ^{110}Pd(α,2nγ) (1997Dr03). Mult.: A_2=+0.61 13 from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09); possible E2 admixture with δ=0.00 15 in ^{110}Pd(α,2nγ) (1997Dr03).
		565.10 20	31 3	2005.200	3^-	E2		0.00472	B(E2)(W.u.)<45 α(K)=0.00407 6; α(L)=0.000523 8; α(M)=0.0001007 15 α(N)=1.776×10^{-5} 25; α(O)=9.32×10^{-7} 13 Mult.: A_2=0.26 7 from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
		699.59 10	71 4	1870.68	4^+	E1		1.00×10^{-3}	B(E1)(W.u.)<0.00029 α(K)=0.000874 13; α(L)=0.0001020 15; α(M)=1.95×10^{-5} 3 α(N)=3.47×10^{-6} 5; α(O)=2.01×10^{-7} 3 Mult.: A_2=−0.21 5 from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09); possible M2 admixture with δ=0.02 5 in ^{110}Pd(α,2nγ) (1993De09).
		1154.75 10	100	1415.480	4^+	E1		3.88×10^{-4}	B(E1)(W.u.)<9.0×10^{-5} α(K)=0.000326 5; α(L)=3.75×10^{-5} 6; α(M)=7.15×10^{-6} 10 α(N)=1.276×10^{-6} 18; α(O)=7.52×10^{-8} 11; α(IPF)=1.621×10^{-5}

$^{112}_{48}Cd_{64}$-23

Adopted Levels, Gammas (continued)

$\gamma(^{112}Cd)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.†	δ†f	αe	Comments
									23 Mult.: A_2=−0.35 *10* from $\gamma\gamma(\theta)$ in $^{110}Pd(\alpha,2n\gamma)$ (1993De09); Possible M2 admixture with δ=−0.13 *13* in $^{110}Pd(\alpha,2n\gamma)$ (1993De09).
2571.47	6^+	403.55# *10*	5.9# *7*	2167.76	6^+	M1+E2‡	−0.57‡ *6*	0.01159	B(M1)(W.u.)<0.012; B(E2)(W.u.)<20 α(K)=0.01005 *15*; α(L)=0.001253 *21*; α(M)=0.000241 *4* α(N)=4.28×10^{-5} *7*; α(O)=2.38×10^{-6} *4* Mult.,δ: A_2=0.048 *22*; A_4=−0.3 *3* from $\gamma\gamma(\theta)$ in $^{110}Pd(\alpha,2n\gamma)$ (1993De09). δ: Others: +1.8 *8* from $\gamma\gamma(\theta)$ in $^{110}Pd(\alpha,2n\gamma)$ (1997Dr03).
		700.89# *10*	100# *3*	1870.68	4^+	E2		0.00266	B(E2)(W.u.)<77 α(K)=0.00231 *4*; α(L)=0.000288 *4*; α(M)=5.53×10^{-5} *8* α(N)=9.80×10^{-6} *14*; α(O)=5.33×10^{-7} *8* Mult.: A_2=+0.13 *54* from $\gamma\gamma(\theta)$ in $^{110}Pd(\alpha,2n\gamma)$ (1997Dr03).
		1156.21# *10*	89# *5*	1415.480	4^+	E2		8.34×10^{-4}	B(E2)(W.u.)<5.6 α(K)=0.000725 *11*; α(L)=8.63×10^{-5} *12*; α(M)=1.651×10^{-5} *24* α(N)=2.94×10^{-6} *5*; α(O)=1.692×10^{-7} *24*; α(IPF)=2.80×10^{-6} *4* Mult.: A_2=+0.68 *22* from $\gamma\gamma(\theta)$ in $^{110}Pd(\alpha,2n\gamma)$ (1997Dr03).
2591.05	4^-	526.52 *10*	48.0 *11*	2064.53	3^+	E1		0.00189	B(E1)(W.u.)<0.00076 α(K)=0.001650 *24*; α(L)=0.000194 *3*; α(M)=3.70×10^{-5} *6* α(N)=6.58×10^{-6} *10*; α(O)=3.76×10^{-7} *6* Mult.: A_2=−0.13 *3* from $\gamma\gamma(\theta)$ in $^{110}Pd(\alpha,2n\gamma)$ (1993De09); possible M2 admixture with δ=0.03 *5* (1993De09).
		585.78 *10*	23.0 *7*	2005.200	3^-	M1+E2	+0.47 *+8−7*	0.00450	B(M1)(W.u.)<0.017; B(E2)(W.u.)<11 α(K)=0.00392 *6*; α(L)=0.000473 *7*; α(M)=9.06×10^{-5} *13* α(N)=1.616×10^{-5} *23*; α(O)=9.34×10^{-7} *15* Mult.: A_2=0.09 *6* from $\gamma\gamma(\theta)$ in $^{110}Pd(\alpha,2n\gamma)$ (1993De09). δ: Other: +0.27 *15* from $\gamma\gamma(\theta)$ in $^{110}Pd(\alpha,2n\gamma)$ (1993De09).
		720.44 *10*	11.7 *7*	1870.68	4^+	E1		9.39×10^{-4}	B(E1)(W.u.)<7.2×10^{-5} α(K)=0.000822 *12*; α(L)=9.57×10^{-5} *14*; α(M)=1.83×10^{-5} *3* α(N)=3.25×10^{-6} *5*; α(O)=1.89×10^{-7} *3*
		1175.50 *10*	100.0 *11*	1415.480	4^+	E1		3.84×10^{-4}	B(E1)(W.u.)<0.00014 α(K)=0.000315 *5*; α(L)=3.63×10^{-5} *5*; α(M)=6.92×10^{-6} *10*

γ(^{112}Cd) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[†]	δ[†f]	α[e]	Comments
									α(N)=1.235×10^{-6} *18*; α(O)=7.28×10^{-8} *11*; α(IPF)=2.42×10^{-5} *4* Mult.: A_2=0.334 *18*; A_4=0.111 *25* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
2634.99	3$^+$	570.5 *1*	10.15 *16*	2064.53	3$^+$	M1+E2		0.00485	α(K)=0.00423 *6*; α(L)=0.000504 *7*; α(M)=9.66×10^{-5} *14* α(N)=1.725×10^{-5} *25*; α(O)=1.015×10^{-6} *15*
		629.80 *10*	38.1 *8*	2005.200	3$^-$	E1		1.26×10^{-3}	α(K)=0.001099 *16*; α(L)=0.0001285 *18*; α(M)=2.45×10^{-5} *4* α(N)=4.37×10^{-6} *7*; α(O)=2.52×10^{-7} *4*
		1219.4 *1*		1415.480	4$^+$	M1+E2		8.69×10^{-4}	α(K)=0.000753 *11*; α(L)=8.79×10^{-5} *13*; α(M)=1.680×10^{-5} *24* α(N)=3.00×10^{-6} *5*; α(O)=1.79×10^{-7} *3*; α(IPF)=8.36×10^{-6} *12*
		1322.59 *10*	100.0 *5*	1312.390	2$^+$	M1+E2	−1.37 *+16−15*	6.88×10^{-4} *11*	α(K)=0.000577 *10*; α(L)=6.78×10^{-5} *11*; α(M)=1.297×10^{-5} *21* α(N)=2.31×10^{-6} *4*; α(O)=1.358×10^{-7} *23*; α(IPF)=2.74×10^{-5} *5*
		2017.5 *1*	8.67 *16*	617.518	2$^+$	M1+E2		5.94×10^{-4}	α(K)=0.000264 *4*; α(L)=3.05×10^{-5} *5*; α(M)=5.83×10^{-6} *9* α(N)=1.042×10^{-6} *15*; α(O)=6.25×10^{-8} *9*; α(IPF)=0.000292 *4*
2650.15	0$^+$	1337.75 *11*	14.2 *17*	1312.390	2$^+$	E2		6.46×10^{-4}	B(E2)(W.u.)=2.2 *+7−12* α(K)=0.000536 *8*; α(L)=6.32×10^{-5} *9*; α(M)=1.208×10^{-5} *17* α(N)=2.15×10^{-6} *3*; α(O)=1.252×10^{-7} *18*; α(IPF)=3.23×10^{-5} *5*
		2032.62 *10*	100	617.518	2$^+$	E2		5.92×10^{-4}	B(E2)(W.u.)=1.9 *+5−11* α(K)=0.000240 *4*; α(L)=2.78×10^{-5} *4*; α(M)=5.30×10^{-6} *8* α(N)=9.47×10^{-7} *14*; α(O)=5.61×10^{-8} *8*; α(IPF)=0.000317 *5*
2665.64	5$^+$	583.92 *10*	100	2081.64	4$^+$	M1+E2	+0.30 *4*	0.00456	B(M1)(W.u.)<0.19; B(E2)(W.u.)<48 α(K)=0.00398 *6*; α(L)=0.000477 *7*; α(M)=9.13×10^{-5} *13* α(N)=1.630×10^{-5} *23*; α(O)=9.52×10^{-7} *14*
		601.01 *10*	60 *4*	2064.53	3$^+$	E2		0.00399	B(E2)(W.u.)<2.4×10^2 α(K)=0.00345 *5*; α(L)=0.000439 *7*; α(M)=8.44×10^{-5} *12* α(N)=1.490×10^{-5} *21*; α(O)=7.91×10^{-7} *11* Mult.: A_2=0.32 *6*; A_4=−0.11 *9* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
		795.08 *13*	40 *3*	1870.68	4$^+$	M1(+E2)	+0.14 *+18−17*	0.00223	α(K)=0.00194 *4*; α(L)=0.000230 *4*; α(M)=4.39×10^{-5} *7* α(N)=7.85×10^{-6} *13*; α(O)=4.64×10^{-7} *9* B(M1)(W.u.)<0.033?; B(E2)(W.u.)<2.7?
		1250.17 *10*	65.6 *24*	1415.480	4$^+$	M1+E2	−0.12 *+6−5*	8.26×10^{-4}	B(M1)(W.u.)<0.013; B(E2)(W.u.)<0.19

$^{112}_{48}$Cd$_{64}$-25

$\gamma(^{112}Cd)$ (continued)

E_i(level)	J^{π}_i	E_{γ}[†]	I_{γ}[†]	E_f	J^{π}_f	Mult.[†]	δ[†f]	α[e]	Comments
									α(K)=0.000712 *10*; α(L)=8.31×10^{-5} *12*; α(M)=1.588×10^{-5} *23* α(N)=2.84×10^{-6} *4*; α(O)=1.692×10^{-7} *24*; α(IPF)=1.260×10^{-5} *18* Mult.: A_2=−0.58 *5*; A_4=0.19 *6* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09). δ: Other: −2.0 *5* or −0.30 *12* in 1997Dr03.
2668.92	(2)$^-$	663.59 *15*	6.47 *25*	2005.200	3$^-$	M1+E2	+1.3 *+23−8*	0.00319 *15*	B(M1)(W.u.)=0.007 *+16−7*; B(E2)(W.u.)=21 *+29−21* α(K)=0.00277 *14*; α(L)=0.000340 *9*; α(M)=6.53×10^{-5} *17* α(N)=1.16×10^{-5} *4*; α(O)=6.5×10^{-7} *5*
		1356.52 *10*	100	1312.390	2$^+$	E1		4.08×10^{-4}	B(E1)(W.u.)=0.00045 *7* α(K)=0.000245 *4*; α(L)=2.81×10^{-5} *4*; α(M)=5.36×10^{-6} *8* α(N)=9.56×10^{-7} *14*; α(O)=5.66×10^{-8} *8*; α(IPF)=0.0001287 *18* Mult.: A_2=0.05 *4* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
		2051.50 *10*	17.9 *8*	617.518	2$^+$	E1		7.86×10^{-4}	B(E1)(W.u.)=2.3×10^{-5} *4* α(K)=0.0001249 *18*; α(L)=1.422×10^{-5} *20*; α(M)=2.71×10^{-6} *4* α(N)=4.84×10^{-7} *7*; α(O)=2.89×10^{-8} *4*; α(IPF)=0.000644 *9*
2674.00	2$^+$	2056.48 *10*	100	617.518	2$^+$	M1(+E2)	+0.05 *+7−8*	6.01×10^{-4}	α(K)=0.000254 *4*; α(L)=2.93×10^{-5} *5*; α(M)=5.61×10^{-6} *8* α(N)=1.003×10^{-6} *14*; α(O)=6.01×10^{-8} *9*; α(IPF)=0.000311 *5* B(M1)(W.u.)=(0.072 *7*); B(E2)(W.u.)=(0.03 *+10−3*)
2694.0	(1)	2694[a] *1*	100	0.0	0$^+$	M1		7.88×10^{-4}	α(K)=0.0001505 *21*; α(L)=1.729×10^{-5} *25*; α(M)=3.30×10^{-6} *5* α(N)=5.90×10^{-7} *9*; α(O)=3.55×10^{-8} *5*; α(IPF)=0.000617 *9* B(M1)(W.u.)=0.0016 *3*
2711.19	4$^+$	705.95 *10*	6.3 *9*	2005.200	3$^-$	E1		9.80×10^{-4}	B(E1)(W.u.)=0.00019 *+6−12* α(K)=0.000858 *12*; α(L)=0.0001000 *14*; α(M)=1.91×10^{-5} *3* α(N)=3.40×10^{-6} *5*; α(O)=1.97×10^{-7} *3*
		1295.74 *10*	100	1415.480	4$^+$	M1+E2	−0.08 *6*	7.74×10^{-4}	B(M1)(W.u.)=0.036 *+10−21*; B(E2)(W.u.)=0.11 *+17−11* α(K)=0.000660 *10*; α(L)=7.69×10^{-5} *11*; α(M)=1.471×10^{-5} *21* α(N)=2.63×10^{-6} *4*; α(O)=1.568×10^{-7} *23*; α(IPF)=2.00×10^{-5} *3*

$^{112}_{48}Cd_{64}$-26

Adopted Levels, Gammas (continued)

$\gamma(^{112}Cd)$ (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult. †	δ †f	α e	$I_{(\gamma+ce)}$	Comments
										Mult.: A_2=0.09 *3* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09). δ: Other: −0.33 *9* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).
2723.96	2^+	718.89 *10*	7.0@ *7*	2005.200	3^-	E1		9.43×10^{-4}		α(K)=0.000825 *12*; α(L)=9.62×10^{-5} *14*; α(M)=1.84×10^{-5} *3* α(N)=3.27×10^{-6} *5*; α(O)=1.90×10^{-7} *3* B(E1)(W.u.)=0.00031 *6* I_γ: 11.5 *6* in ^{112}Cd(n,n′γ).
		1411.8@ *8*	1.4@ *4*	1312.390	2^+	[M1+E2]		6.75×10^{-4}		α(K)=0.000550 *8*; α(L)=6.40×10^{-5} *9*; α(M)=1.224×10^{-5} *18* α(N)=2.19×10^{-6} *3*; α(O)=1.306×10^{-7} *19*; α(IPF)=4.66×10^{-5} *7*
		2106.31 *10*	100.0 *6*	617.518	2^+	M1(+E2)	+0.05 *+6−5*	6.12×10^{-4}		α(K)=0.000242 *4*; α(L)=2.80×10^{-5} *4*; α(M)=5.34×10^{-6} *8* α(N)=9.56×10^{-7} *14*; α(O)=5.73×10^{-8} *8*; α(IPF)=0.000335 *5* B(M1)(W.u.)=(0.0131 *20*); B(E2)(W.u.)=(0.006 *+15−6*) δ: Other: 2.0 *+3−2* from $\gamma(\theta)$ in 2001Ga44.
		2723.6@ *3*	4.1@ *4*	0.0	0^+	[E2]		8.09×10^{-4}		α(K)=0.0001430 *20*; α(L)=1.641×10^{-5} *23*; α(M)=3.13×10^{-6} *5* α(N)=5.59×10^{-7} *8*; α(O)=3.34×10^{-8} *5*; α(IPF)=0.000645 *9* B(E2)(W.u.)=0.027 *5*
2765.72	2^+	894.5 *1*	7.2 *10*	1870.96	0^+	E2		1.47×10^{-3}		B(E2)(W.u.)=47 *8* α(K)=0.001280 *18*; α(L)=0.0001555 *22*; α(M)=2.98×10^{-5} *5* α(N)=5.29×10^{-6} *8*; α(O)=2.98×10^{-7} *5*
		1296.9 *1*	16 *4*	1468.822	2^+	M1+E2		7.74×10^{-4}		α(K)=0.000659 *10*; α(L)=7.68×10^{-5} *11*; α(M)=1.469×10^{-5} *21* α(N)=2.63×10^{-6} *4*; α(O)=1.567×10^{-7} *22*; α(IPF)=2.02×10^{-5} *3* I_γ: from ^{110}Cd(n,γ) E=th.
		1453.4 *1*	8.9 *5*	1312.390	2^+	M1+E2		6.50×10^{-4}		α(K)=0.000518 *8*; α(L)=6.02×10^{-5} *9*; α(M)=1.150×10^{-5} *17* α(N)=2.06×10^{-6} *3*; α(O)=1.228×10^{-7} *18*; α(IPF)=5.85×10^{-5} *9*
		2148.21 *10*	100 *4*	617.518	2^+	M1(+E2)	+0.06 *+7−6*	6.22×10^{-4}		α(K)=0.000233 *4*; α(L)=2.69×10^{-5} *4*; α(M)=5.14×10^{-6} *8* α(N)=9.19×10^{-7} *13*; α(O)=5.51×10^{-8} *8*; α(IPF)=0.000355 *5* B(M1)(W.u.)=(0.047 *5*); B(E2)(W.u.)=(0.03 *+7−3*) δ: Other: +1.9 *+3−2* from $\gamma(\theta)$ in 2001Ga44.

$^{112}_{48}Cd_{64}$-27

Adopted Levels, Gammas (continued)

$\gamma(^{112}Cd)$ (continued)

E_i(level)	J^{π}_i	E_{γ}†	I_{γ}†	E_f	J^{π}_f	Mult.†	δ†f	αe	$I_{(\gamma+ce)}$	Comments
		2765.7 *3*	5.85 *24*	0.0	0^+	E2		8.23×10^{-4}		α(K)=0.0001393 *20*; α(L)=1.597×10^{-5} *23*;

$^{112}_{48}Cd_{64}$-28

Adopted Levels, Gammas (continued)

$\gamma(^{112}Cd)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.†	δ†f	αe	$I_{(\gamma+ce)}$	Comments
										α(M)=3.05×10^{-6} *5* α(N)=5.45×10^{-7} *8*; α(O)=3.25×10^{-8} *5*; α(IPF)=0.000665 *10* B(E2)(W.u.)=0.136 *15*
2773.08	(0)$^+$	541.80 *10*	19.2 *10*	2231.12	2$^+$	E2		0.00530		B(E2)(W.u.)<88 α(K)=0.00457 *7*; α(L)=0.000592 *9*; α(M)=0.0001138 *16* α(N)=2.01×10^{-5} *3*; α(O)=1.044×10^{-6} *15*
		1460.83 *10*	100.0 *10*	1312.390	2$^+$	E2		5.82×10^{-4}		B(E2)(W.u.)<3.2 α(K)=0.000449 *7*; α(L)=5.27×10^{-5} *8*; α(M)=1.008×10^{-5} *15* α(N)=1.80×10^{-6} *3*; α(O)=1.050×10^{-7} *15*; α(IPF)=6.82×10^{-5} *10*
2791.79	(4)$^-$	786.59 *10*	100	2005.200	3$^-$	M1+E2	+0.038 *+49−14*	0.00229		α(K)=0.00200 *3*; α(L)=0.000236 *4*; α(M)=4.51×10^{-5} *7* α(N)=8.06×10^{-6} *12*; α(O)=4.77×10^{-7} *7* B(M1)(W.u.)<0.47; B(E2)(W.u.)<3.1
2793.80	7$^-$	222.17# *10*	3.2# *4*	2571.47	6$^+$	(E1)		0.01746		α(K)=0.01522 *22*; α(L)=0.00182 *3*; α(M)=0.000348 *5* α(N)=6.15×10^{-5} *9*; α(O)=3.33×10^{-6} *5* Mult.: A$_2$=−0.32 *22* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).
		420.68 *19*	63 *4*	2373.19	5$^-$	E2		0.01110		α(K)=0.00952 *14*; α(L)=0.001287 *19*; α(M)=0.000248 *4* α(N)=4.35×10^{-5} *7*; α(O)=2.14×10^{-6} *3* Mult.: A$_2$=0.323 *7*; A$_4$=−0.112 *10* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
		625.97 *10*	100 *4*	2167.76	6$^+$	E1		1.27×10^{-3}		α(K)=0.001114 *16*; α(L)=0.0001302 *19*; α(M)=2.49×10^{-5} *4* α(N)=4.43×10^{-6} *7*; α(O)=2.55×10^{-7} *4* Mult.: A$_2$=−0.250 *6* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
2816.71	4$^+$	735.20 *10*		2081.64	4$^+$	M1+E2	+4.0 *+39−13*	0.00238		α(K)=0.00207 *4*; α(L)=0.000255 *4*; α(M)=4.90×10^{-5} *8* α(N)=8.69×10^{-6} *14*; α(O)=4.79×10^{-7} *9* δ: Also: −0.65 *+16−20* from $\gamma(\theta)$ in 2001Ga44.
		811.3 *1*		2005.200	3$^-$	E1		7.33×10^{-4}		α(K)=0.000642 *9*; α(L)=7.46×10^{-5} *11*; α(M)=1.423×10^{-5} *20* α(N)=2.54×10^{-6} *4*; α(O)=1.477×10^{-7} *21*
		1401.3 *1*		1415.480	4$^+$	M1+E2		6.82×10^{-4}		α(K)=0.000559 *8*; α(L)=6.51×10^{-5} *10*; α(M)=1.243×10^{-5} *18*

$^{112}_{48}Cd_{64}$-29

$\gamma(^{112}$Cd) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ[†f]	α[e]	Comments
									α(N)=2.22×10^{-6} *4*; α(O)=1.327×10^{-7} *19*; α(IPF)=4.37×10^{-5} *7*
2817.74	6$^-$	247.54[#] *10*	10.6[#] *9*	2570.21	5$^-$	M1(+E2)	+0.03 *3*	0.0392	α(K)=0.0341 *5*; α(L)=0.00417 *6*; α(M)=0.000801 *12* α(N)=0.0001429 *21*; α(O)=8.27×10^{-6} *12* Mult.: A$_2$=−0.18 *4* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
		444.54 *10*	100.0 *28*	2373.19	5$^-$	M1+E2	−0.29 *+5−7*	0.00891	α(K)=0.00776 *11*; α(L)=0.000940 *15*; α(M)=0.000180 *3* α(N)=3.22×10^{-5} *5*; α(O)=1.86×10^{-6} *3* Mult.: A$_2$=−0.73 *2*; A$_4$=0.05 *2* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09). δ: Other: −0.45 *18* from $\gamma(\theta)$ in 1997Dr03.
2829.19	1$^-$	957.80 *19*	8.0[@] *10*	1870.96	0$^+$	E1		5.28×10^{-4}	α(K)=0.000462 *7*; α(L)=5.34×10^{-5} *8*; α(M)=1.019×10^{-5} *15* α(N)=1.82×10^{-6} *3*; α(O)=1.065×10^{-7} *15* B(E1)(W.u.)=0.00051 *9*
		1604.6 *4*	5.0[@] *14*	1224.341	0$^+$	[E1]		5.24×10^{-4}	α(K)=0.000185 *3*; α(L)=2.11×10^{-5} *3*; α(M)=4.02×10^{-6} *6* α(N)=7.19×10^{-7} *10*; α(O)=4.27×10^{-8} *6*; α(IPF)=0.000313 *5* B(E1)(W.u.)=6.8×10^{-5} *21*
		2211.65 *10*	100.0 *21*	617.518	2$^+$	E1		8.80×10^{-4}	α(K)=0.0001114 *16*; α(L)=1.267×10^{-5} *18*; α(M)=2.41×10^{-6} *4* α(N)=4.31×10^{-7} *6*; α(O)=2.58×10^{-8} *4*; α(IPF)=0.000753 *11* B(E1)(W.u.)=0.00052 *6*
		2829.20 *10*	78.6 *21*	0.0	0$^+$	E1		1.22×10^{-3}	α(K)=7.77×10^{-5} *11*; α(L)=8.80×10^{-6} *13*; α(M)=1.677×10^{-6} *24* α(N)=3.00×10^{-7} *5*; α(O)=1.79×10^{-8} *3*; α(IPF)=0.001129 *16* B(E1)(W.u.)=0.000195 *23*
2834.27	0$^+$	712.68 *10*	19 *4*	2121.62	2$^+$	E2		0.00255	α(K)=0.00221 *4*; α(L)=0.000276 *4*; α(M)=5.29×10^{-5} *8* α(N)=9.37×10^{-6} *14*; α(O)=5.12×10^{-7} *8* B(E2)(W.u.)<36
		1521.82 *12*	26.2 *19*	1312.390	2$^+$	E2		5.64×10^{-4}	α(K)=0.000415 *6*; α(L)=4.85×10^{-5} *7*; α(M)=9.28×10^{-6} *13* α(N)=1.655×10^{-6} *24*; α(O)=9.69×10^{-8} *14*; α(IPF)=8.96×10^{-5} *13* B(E2)(W.u.)<1.1
		2216.74 *10*	100	617.518	2$^+$	E2		6.40×10^{-4}	α(K)=0.000205 *3*; α(L)=2.37×10^{-5} *4*; α(M)=4.52×10^{-6} *7* α(N)=8.07×10^{-7} *12*; α(O)=4.80×10^{-8} *7*; α(IPF)=0.000406 *6* B(E2)(W.u.)<0.65

$^{112}_{48}$Cd$_{64}$-30

$\gamma(^{112}Cd)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.†	δ†f	αe	Comments
2840.22	(4)+	1424.73 *10*	100	1415.480	4+	M1+E2	−1.28 *+18−24*	6.23×10⁻⁴ *11*	α(K)=0.000498 *9*; α(L)=5.82×10⁻⁵ *10*; α(M)=1.113×10⁻⁵ *19* α(N)=1.99×10⁻⁶ *4*; α(O)=1.171×10⁻⁷ *22*; α(IPF)=5.41×10⁻⁵ *9* B(M1)(W.u.)<0.0070; B(E2)(W.u.)<4.3 Mult.: A_2=−0.33 *2* from γγ(θ) in ^{110}Pd(α,2nγ) (1993De09). δ: Other: −0.11 *8* γγ(θ) in ^{110}Pd(α,2nγ) in 1997Dr03.
2852.90	2+	850& *2*		2005.200	3−				
		1419.6 *1*	12.2 *4*	1433.27	0+	E2		5.99×10⁻⁴	B(E2)(W.u.)=0.42 *+10−21* α(K)=0.000475 *7*; α(L)=5.59×10⁻⁵ *8*; α(M)=1.068×10⁻⁵ *15* α(N)=1.90×10⁻⁶ *3*; α(O)=1.111×10⁻⁷ *16*; α(IPF)=5.49×10⁻⁵ *8*
		1540.4 *1*	52.8 *22*	1312.390	2+	M1+E2		6.11×10⁻⁴	α(K)=0.000458 *7*; α(L)=5.32×10⁻⁵ *8*; α(M)=1.017×10⁻⁵ *15* α(N)=1.82×10⁻⁶ *3*; α(O)=1.087×10⁻⁷ *16*; α(IPF)=8.72×10⁻⁵ *13*
		2235.46 *10*	34.8 *8*	617.518	2+	M1+E2	−0.39 *+20−25*	6.44×10⁻⁴	B(M1)(W.u.)=0.00068 *+18−34*; B(E2)(W.u.)=0.017 *+16−17* α(K)=0.000214 *4*; α(L)=2.47×10⁻⁵ *5*; α(M)=4.71×10⁻⁶ *8* α(N)=8.42×10⁻⁷ *15*; α(O)=5.04×10⁻⁸ *10*; α(IPF)=0.000400 *7*
		2852.87 *10*	100 *3*	0.0	0+	E2		8.54×10⁻⁴	B(E2)(W.u.)=0.106 *+25−51* α(K)=0.0001321 *19*; α(L)=1.514×10⁻⁵ *22*; α(M)=2.89×10⁻⁶ *4* α(N)=5.16×10⁻⁷ *8*; α(O)=3.09×10⁻⁸ *5*; α(IPF)=0.000704 *10*
2866.75	3−	450.75 *10*	16.5 *7*	2416.00	3−	M1+E2	+0.73 *+69−71*	0.00873 *20*	α(K)=0.00757 *15*; α(L)=0.00094 *5*; α(M)=0.000182 *10* α(N)=3.22×10⁻⁵ *16*; α(O)=1.78×10⁻⁶ *3* B(M1)(W.u.)=0.020 *+15−20*; B(E2)(W.u.)=4.E+1 *+6−4*
		784.91 *10*	18.3 *15*	2081.64	4+	E1		7.85×10⁻⁴	α(K)=0.000687 *10*; α(L)=7.99×10⁻⁵ *12*; α(M)=1.524×10⁻⁵ *22* α(N)=2.72×10⁻⁶ *4*; α(O)=1.580×10⁻⁷ *23* B(E1)(W.u.)=9.E−5 *+3−9*
		802.3@ *4*	14@ *4*	2064.53	3+	[E1]		7.50×10⁻⁴	α(K)=0.000657 *10*; α(L)=7.63×10⁻⁵ *11*; α(M)=1.456×10⁻⁵ *21* α(N)=2.59×10⁻⁶ *4*; α(O)=1.511×10⁻⁷ *22* B(E1)(W.u.)=6.E−5 *+3−6*
		861.68 *10*	100.0 *11*	2005.200	3−	M1(+E2)	+0.069 *+89−69*	0.00186	α(K)=0.001621 *24*; α(L)=0.000191 *3*; α(M)=3.66×10⁻⁵

$\gamma(^{112}Cd)$ (continued)

E_i(level)	J_i^π	E_γ†	I_γ†	E_f	J_f^π	Mult.†	δ†f	αe	Comments
									6
									α(N)=6.53×10^{-6} *10*; α(O)=3.87×10^{-7} *6*
									B(M1)(W.u.)=(0.027 *+9−27*); B(E2)(W.u.)=(0.1 *+4−1*)
2866.75	3$^-$	1451.30 *10*	64.7 *13*	1415.480	4$^+$	E1		4.45×10^{-4}	α(K)=0.000218 *3*; α(L)=2.50×10^{-5} *4*; α(M)=4.77×10^{-6} *7*
									α(N)=8.51×10^{-7} *12*; α(O)=5.04×10^{-8} *7*; α(IPF)=0.000197 *3*
									B(E1)(W.u.)=4.8×10^{-5} *+16−48*
2867.48	(3)$^+$	1398.64 *10*		1468.822	2$^+$	M1+E2		6.84×10^{-4}	α(K)=0.000561 *8*; α(L)=6.53×10^{-5} *10*; α(M)=1.249×10^{-5} *18*
									α(N)=2.23×10^{-6} *4*; α(O)=1.333×10^{-7} *19*; α(IPF)=4.30×10^{-5} *6*
		1555.1 *1*		1312.390	2$^+$	M1+E2		6.06×10^{-4}	α(K)=0.000449 *7*; α(L)=5.22×10^{-5} *8*; α(M)=9.97×10^{-6} *14*
									α(N)=1.783×10^{-6} *25*; α(O)=1.066×10^{-7} *15*; α(IPF)=9.26×10^{-5} *13*
		2249.91 *10*	100	617.518	2$^+$	M1+E2		6.48×10^{-4}	α(K)=0.000213 *3*; α(L)=2.45×10^{-5} *4*; α(M)=4.69×10^{-6} *7*
									α(N)=8.38×10^{-7} *12*; α(O)=5.03×10^{-8} *7*; α(IPF)=0.000405 *6*
2881.02	8$^+$	713.23# *10*	100#	2167.76	6$^+$	E2		0.00255	α(K)=0.00221 *3*; α(L)=0.000275 *4*; α(M)=5.28×10^{-5} *8*
									α(N)=9.36×10^{-6} *14*; α(O)=5.11×10^{-7} *8*
									Mult.: A_2=0.341 *9*; A_4=−0.121 *13* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
2882.82	0$^+$	726.79 *14*	36 *5*	2156.18	2$^+$	E2		0.00243	α(K)=0.00211 *3*; α(L)=0.000262 *4*; α(M)=5.03×10^{-5} *7*
									α(N)=8.91×10^{-6} *13*; α(O)=4.88×10^{-7} *7*
									B(E2)(W.u.)<27
		1413.86 *10*	100 *5*	1468.822	2$^+$	E2		6.02×10^{-4}	α(K)=0.000479 *7*; α(L)=5.63×10^{-5} *8*; α(M)=1.077×10^{-5} *15*
									α(N)=1.92×10^{-6} *3*; α(O)=1.120×10^{-7} *16*; α(IPF)=5.32×10^{-5} *8*
									B(E2)(W.u.)<2.7
		1570.51 *14*	28.5 *25*	1312.390	2$^+$	E2		5.54×10^{-4}	α(K)=0.000390 *6*; α(L)=4.56×10^{-5} *7*; α(M)=8.71×10^{-6} *13*
									α(N)=1.554×10^{-6} *22*; α(O)=9.12×10^{-8} *13*; α(IPF)=0.0001083 *16*
									B(E2)(W.u.)<0.46
2893.51	4$^+$	771.76 *10*	37 *4*	2121.62	2$^+$	E2		0.00209	α(K)=0.00182 *3*; α(L)=0.000224 *4*; α(M)=4.30×10^{-5} *6*
									α(N)=7.63×10^{-6} *11*; α(O)=4.21×10^{-7} *6*
									B(E2)(W.u.)<42
		811.9 *1*		2081.64	4$^+$	M1+E2		0.00213	α(K)=0.00186 *3*; α(L)=0.000219 *3*; α(M)=4.19×10^{-5} *6*
									α(N)=7.50×10^{-6} *11*; α(O)=4.44×10^{-7} *7*
		2276.07 *10*	100 *4*	617.518	2$^+$	E2		6.58×10^{-4}	B(E2)(W.u.)<0.51
									α(K)=0.000196 *3*; α(L)=2.26×10^{-5} *4*; α(M)=4.31×10^{-6} *6*
									α(N)=7.70×10^{-7} *11*; α(O)=4.58×10^{-8} *7*; α(IPF)=0.000435 *6*
2899.02	(3$^-$,5$^-$)	1483.53 *4*	100	1415.480	4$^+$	(E1)		4.60×10^{-4}	α(K)=0.000210 *3*; α(L)=2.41×10^{-5} *4*; α(M)=4.59×10^{-6} *7*
									α(N)=8.20×10^{-7} *12*; α(O)=4.86×10^{-8} *7*; α(IPF)=0.000221 *3*
									B(E1)(W.u.)=0.00069 *16*
									Mult.: A_2=−0.29 *3*; A_4=0.07 *4* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
									Mult.: stretched transition; δ=+0.014 *+33−30* from $\gamma(\theta)$ in 2001Ga44.
2921.53	6$^+$	840.00 *10*	100# *8*	2081.64	4$^+$	E2		1.70×10^{-3}	α(K)=0.001482 *21*; α(L)=0.000181 *3*; α(M)=3.48×10^{-5} *5*

$^{112}_{48}Cd_{64}$-32

γ(^{112}Cd) (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.†	δ†f	αe	Comments
									α(N)=6.17×10^{-6} *9*; α(O)=3.44×10^{-7} *5* Mult.: A$_2$=0.28 *3*; A$_4$=−0.12 *4* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
2921.53	6$^+$	1505.5# *3*	40# *5*	1415.480	4$^+$	E2		5.68×10^{-4}	α(K)=0.000423 *6*; α(L)=4.96×10^{-5} *7*; α(M)=9.48×10^{-6} *14* α(N)=1.691×10^{-6} *24*; α(O)=9.90×10^{-8} *14*; α(IPF)=8.37×10^{-5} *12* Mult.: A$_2$=0.13 *12* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
2924.83	4$^-$	333.72 *10*	60 *3*	2591.05	4$^-$	M1+E2	−0.21 *+18−17*	0.0184 *5*	α(K)=0.0160 *4*; α(L)=0.00195 *8*; α(M)=0.000375 *16* α(N)=6.7×10^{-5} *3*; α(O)=3.84×10^{-6} *7* B(M1)(W.u.)<0.80; B(E2)(W.u.)<6.3×10^2 δ: Other: +1.4 *+7−5* from $\gamma\gamma(\theta)$ in 2001Ga44.
		551.63 *10*	28 *3*	2373.19	5$^-$	M1+E2		0.00525	α(K)=0.00458 *7*; α(L)=0.000547 *8*; α(M)=0.0001048 *15* α(N)=1.87×10^{-5} *3*; α(O)=1.101×10^{-6} *16*
		919.58 *10*	100 *3*	2005.200	3$^-$	M1+E2	−0.22 *10*	1.59×10^{-3} *3*	α(K)=0.001392 *22*; α(L)=0.0001639 *25*; α(M)=3.14×10^{-5} *5* α(N)=5.60×10^{-6} *9*; α(O)=3.32×10^{-7} *6* B(M1)(W.u.)<0.062; B(E2)(W.u.)<5.1
		1054.24 *10*	62 *3*	1870.68	4$^+$	E1		4.40×10^{-4}	α(K)=0.000385 *6*; α(L)=4.44×10^{-5} *7*; α(M)=8.48×10^{-6} *12* α(N)=1.512×10^{-6} *22*; α(O)=8.88×10^{-8} *13* B(E1)(W.u.)<0.00034
		1509.36 *10*	75.9 *23*	1415.480	4$^+$	E1		4.73×10^{-4}	α(K)=0.000204 *3*; α(L)=2.34×10^{-5} *4*; α(M)=4.46×10^{-6} *7* α(N)=7.96×10^{-7} *12*; α(O)=4.72×10^{-8} *7*; α(IPF)=0.000240 *4* B(E1)(W.u.)<0.00014
2931.46	1$^+$	1618.84 *11*	47.5 *20*	1312.390	2$^+$	M1+E2		5.89×10^{-4}	α(K)=0.000413 *6*; α(L)=4.80×10^{-5} *7*; α(M)=9.16×10^{-6} *13* α(N)=1.639×10^{-6} *23*; α(O)=9.80×10^{-8} *14*; α(IPF)=0.0001167 *17*
		2314.12 *10*	53 *3*	617.518	2$^+$	M1+E2		6.66×10^{-4}	α(K)=0.000202 *3*; α(L)=2.32×10^{-5} *4*; α(M)=4.43×10^{-6} *7* α(N)=7.93×10^{-7} *12*; α(O)=4.76×10^{-8} *7*; α(IPF)=0.000436 *7*
		2931.42 *10*	100 *3*	0.0	0$^+$	M1		8.72×10^{-4}	α(K)=0.0001284 *18*; α(L)=1.473×10^{-5} *21*; α(M)=2.81×10^{-6} *4* α(N)=5.03×10^{-7} *7*; α(O)=3.02×10^{-8} *5*; α(IPF)=0.000726 *11* B(M1)(W.u.)=0.026 *7* Mult.: ε=+0.08 *10* from polarization measurements in ^{112}Cd(γ,pol γ') (2005Ko32).
2931.97	6$^-$	361.80# *20*		2570.21	5$^-$	M1+E2		0.01480	α(K)=0.01289 *19*; α(L)=0.001558 *22*; α(M)=0.000299 *5* α(N)=5.33×10^{-5} *8*; α(O)=3.11×10^{-6} *5* Mult.: A$_2$=−0.20 *17* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).

$^{112}_{48}$Cd$_{64}$-33

$\gamma(^{112}$Cd) (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.†	δ†f	αe	Comments
2931.97	6^-	558.7 *1*	100	2373.19	5^-	M1+E2		0.00510	α(K)=0.00445 *7*; α(L)=0.000530 *8*; α(M)=0.0001016 *15* α(N)=1.81×10^{-5} *3*; α(O)=1.068×10^{-6} *15* Mult.: A_2=+0.64 *3*, A_4=−0.12 *4* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).
2935.50	7^-	141.69# *11*	5.6# *14*	2793.80	7^-	M1+E2‡	−0.52‡ *9*	0.230 *16*	α(K)=0.193 *12*; α(L)=0.030 *3*; α(M)=0.0058 *6* α(N)=0.00101 *10*; α(O)=4.37×10^{-5} *19*
		365.38# *10*	3.9# *16*	2570.21	5^-	E2		0.01718	α(K)=0.01467 *21*; α(L)=0.00204 *3*; α(M)=0.000395 *6* α(N)=6.90×10^{-5} *10*; α(O)=3.25×10^{-6} *5* Mult.: A_2=0.63 *10*; A_4=−0.15 *12* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
		562.39# *10*	100# *3*	2373.19	5^-	(E2)		0.00478	α(K)=0.00413 *6*; α(L)=0.000531 *8*; α(M)=0.0001021 *15* α(N)=1.80×10^{-5} *3*; α(O)=9.44×10^{-7} *14* Mult.: A_2=+0.24 *8* (1997Dr03).
		767.65# *10*	61# *3*	2167.76	6^+	E1		8.22×10^{-4}	α(K)=0.000719 *10*; α(L)=8.37×10^{-5} *12*; α(M)=1.597×10^{-5} *23* α(N)=2.84×10^{-6} *4*; α(O)=1.653×10^{-7} *24* Mult.: A_2=−0.249 *14* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
2944.94	2^+	2327.44 *10*	100 *4*	617.518	2^+	M1+E2	+1.4 *+11−14*	6.73×10^{-4}	α(K)=0.000192 *8*; α(L)=2.21×10^{-5} *9*; α(M)=4.22×10^{-6} *18* α(N)=7.5×10^{-7} *4*; α(O)=4.50×10^{-8} *22*; α(IPF)=0.000454 *13* B(M1)(W.u.)=0.0009 *+10−9*; B(E2)(W.u.)=0.25 *+15−23*
		2944.78 *10*	73 *4*	0.0	0^+	E2		8.87×10^{-4}	α(K)=0.0001252 *18*; α(L)=1.433×10^{-5} *20*; α(M)=2.73×10^{-6} *4* α(N)=4.89×10^{-7} *7*; α(O)=2.92×10^{-8} *4*; α(IPF)=0.000744 *11* B(E2)(W.u.)=0.084 *+22−64*
2947.76	$(2,3)^+$	2330.22 *10*	100	617.518	2^+	M1+E2	−3.6 *+10−16*	6.75×10^{-4}	α(K)=0.000189 *3*; α(L)=2.17×10^{-5} *4*; α(M)=4.15×10^{-6} *6* α(N)=7.41×10^{-7} *11*; α(O)=4.41×10^{-8} *7*; α(IPF)=0.000460 *7* B(M1)(W.u.)=0.0015 *9*; B(E2)(W.u.)=2.9 *9*
2961.92	4^-	370.86 *10*	37.1 *22*	2591.05	4^-	M1(+E2)	+0.06 *+15−10*	0.01392 *22*	α(K)=0.01212 *19*; α(L)=0.00146 *3*; α(M)=0.000281 *6* α(N)=5.01×10^{-5} *10*; α(O)=2.92×10^{-6} *5*
		588.83 *10*	60.2 *24*	2373.19	5^-	M1+E2		0.00450	α(K)=0.00392 *6*; α(L)=0.000467 *7*;

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$^{112}_{48}$Cd$_{64}$-34

$\gamma(^{112}Cd)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[†]	δ[†f]	α[e]	Comments
									α(M)=8.95×10^{-5} *13* α(N)=1.598×10^{-5} *23*; α(O)=9.41×10^{-7} *14*
2961.92	4^-	956.7 *1*		2005.200	3^-	M1+E2		1.47×10^{-3}	α(K)=0.001282 *18*; α(L)=0.0001506 *21*; α(M)=2.88×10^{-5} *4* α(N)=5.15×10^{-6} *8*; α(O)=3.06×10^{-7} *5*
		1546.35 *10*	100 *3*	1415.480	4^+	E1		4.92×10^{-4}	α(K)=0.000196 *3*; α(L)=2.24×10^{-5} *4*; α(M)=4.28×10^{-6} *6* α(N)=7.64×10^{-7} *11*; α(O)=4.53×10^{-8} *7*; α(IPF)=0.000268 *4*
2962.0	2^+	957.1[@] *10*	50[@] *25*	2005.200	3^-				
		2961.7[@] *10*	100[@] *25*	0.0	0^+				
2970.02	$(4,5)^+$	398.57[#] *10*	75[#] *5*	2571.47	6^+				
		1554.49[#] *16*	100[#] *11*	1415.480	4^+	M1+E2[‡]	+0.42[‡] *12*	5.99×10^{-4} *10*	α(K)=0.000442 *8*; α(L)=5.14×10^{-5} *9*; α(M)=9.81×10^{-6} *16* α(N)=1.75×10^{-6} *3*; α(O)=1.046×10^{-7} *18*; α(IPF)=9.38×10^{-5} *15* Mult.: A_2=0.27 *3* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
2972.45	5^+	804.89 *10*	32.3 *17*	2167.76	6^+	M1+E2	−2.5 *+7−12*	0.00193 *4*	α(K)=0.00168 *4*; α(L)=0.000205 *4*; α(M)=3.92×10^{-5} *7* α(N)=6.97×10^{-6} *13*; α(O)=3.91×10^{-7} *9* B(M1)(W.u.)=0.0020 *+12−20*; B(E2)(W.u.)=15 *+6−15*
		890.77 *10*	25 *3*	2081.64	4^+	M1+E2	+0.17 *+7−6*	1.72×10^{-3} *3*	α(K)=0.001499 *22*; α(L)=0.000177 *3*; α(M)=3.38×10^{-5} *5* α(N)=6.04×10^{-6} *9*; α(O)=3.58×10^{-7} *6* B(M1)(W.u.)=0.008 *+3−8*; B(E2)(W.u.)=0.23 *+21−23* Mult.: A_2=−0.55 *8* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09). δ: Other: −0.33 *15* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).
		1556.8 *1*	100 *3*	1415.480	4^+	M1+E2[‡]	+0.42[‡] *12*	5.98×10^{-4} *10*	α(K)=0.000441 *8*; α(L)=5.12×10^{-5} *9*; α(M)=9.78×10^{-6} *16* α(N)=1.75×10^{-6} *3*; α(O)=1.043×10^{-7} *18*; α(IPF)=9.47×10^{-5} *16* B(M1)(W.u.)=0.0053 *+19−53*; B(E2)(W.u.)=0.31 *+18−31* Mult.: A_2=0.02 *6* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
2980.85	2^+	1512.13 *17*	15 *3*	1468.822	2^+	M1+E2		6.22×10^{-4}	α(K)=0.000476 *7*; α(L)=5.53×10^{-5} *8*; α(M)=1.058×10^{-5} *15*

From ENSDF

$^{112}_{48}Cd_{64}$-35

Adopted Levels, Gammas (continued)

$\gamma(^{112}Cd)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.†	δ†f	αe	Comments
									α(N)=1.89×10^{-6} *3*; α(O)=1.130×10^{-7} *16*; α(IPF)=7.73×10^{-5} *11*
2980.85	2$^+$	1668.4	9.6 *23*	1312.390	2$^+$	M1+E2		5.80×10^{-4}	α(K)=0.000388 *6*; α(L)=4.50×10^{-5} *7*; α(M)=8.60×10^{-6} *12* α(N)=1.539×10^{-6} *22*; α(O)=9.20×10^{-8} *13*; α(IPF)=0.0001361 *19*
		2363.27 *10*	100 *4*	617.518	2$^+$	M1(+E2)	−0.01 *6*	6.81×10^{-4}	α(K)=0.000193 *3*; α(L)=2.23×10^{-5} *4*; α(M)=4.25×10^{-6} *6* α(N)=7.61×10^{-7} *11*; α(O)=4.57×10^{-8} *7*; α(IPF)=0.000460 *7* B(M1)(W.u.)=(0.0096 *22*); B(E2)(W.u.)=(0.00014 *+165−14*) δ: Other: +2.3 *+5−4* from $\gamma(\theta)$ in 2001Ga44.
3002.06	3$^+$	996.75 *14*	37 *6*	2005.200	3$^-$	E1		4.89×10^{-4}	α(K)=0.000428 *6*; α(L)=4.95×10^{-5} *7*; α(M)=9.44×10^{-6} *14* α(N)=1.683×10^{-6} *24*; α(O)=9.87×10^{-8} *14* B(E1)(W.u.)=0.00026 *+10−18*
		1586.57 *10*	79 *3*	1415.480	4$^+$	M1+E2	+0.12 *6*	5.96×10^{-4}	B(M1)(W.u.)=0.010 *+4−7*; B(E2)(W.u.)=0.05 *5* α(K)=0.000430 *6*; α(L)=4.99×10^{-5} *7*; α(M)=9.54×10^{-6} *14* α(N)=1.707×10^{-6} *25*; α(O)=1.020×10^{-7} *15*; α(IPF)=0.0001045 *15*
		1689.7 *1*		1312.390	2$^+$	M1+E2		5.77×10^{-4}	α(K)=0.000378 *6*; α(L)=4.39×10^{-5} *7*; α(M)=8.38×10^{-6} *12* α(N)=1.499×10^{-6} *21*; α(O)=8.97×10^{-8} *13*; α(IPF)=0.0001447 *21*
		2384.54 *11*	100 *4*	617.518	2$^+$	M1+E2	+8.3 *+44−20*	6.93×10^{-4}	B(M1)(W.u.)=6.E−5 *+7−6*; B(E2)(W.u.)=0.55 *+18−35* α(K)=0.000180 *3*; α(L)=2.08×10^{-5} *3*; α(M)=3.96×10^{-6} *6* α(N)=7.08×10^{-7} *10*; α(O)=4.22×10^{-8} *6*; α(IPF)=0.000487 *7* δ: Other: +0.33 *+5−6* from $\gamma(\theta)$ in 2001Ga44.
3011.08	(4,5,6)$^-$	637.89 *10*	100	2373.19	5$^-$	M1+E2	+3.5 *+27−14*	0.00342 *6*	α(K)=0.00297 *6*; α(L)=0.000373 *6*; α(M)=7.16×10^{-5} *11* α(N)=1.267×10^{-5} *19*; α(O)=6.85×10^{-7} *15* δ: Other: +0.36 *+25−17* from $\gamma(\theta)$ in 2001Ga44.
3027.97	6$^+$	859.83# *25*	45# *9*	2167.76	6$^+$	M1+E2‡	−0.39‡ *9*	0.00183	α(K)=0.00160 *3*; α(L)=0.000189 *3*; α(M)=3.62×10^{-5} *6* α(N)=6.47×10^{-6} *10*; α(O)=3.81×10^{-7} *7* Mult.: A_2=0.15 *5*; A_4=0.10 *8* from $\gamma\gamma(\theta)$ in

From ENSDF

$\gamma(^{112}Cd)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.†	δ†f	αe	Comments
									^{110}Pd(α,2nγ) (1993De09). δ: Also: +1.3 *2* from $\gamma(\theta)$ in 1997Dr03.
3027.97	6^+	946.39# *10*	100# *7*	2081.64	4^+	E2		1.29×10^{-3}	α(K)=0.001124 *16*; α(L)=0.0001360 *19*; α(M)=2.61×10^{-5} *4* α(N)=4.63×10^{-6} *7*; α(O)=2.62×10^{-7} *4* Mult.: A_2=0.16 *2*; A_4=−0.08 *3* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
3049.08	(4^+)	967.63 *10*	28.4 *22*	2081.64	4^+	[M1]		1.43×10^{-3}	α(K)=0.001250 *18*; α(L)=0.0001468 *21*; α(M)=2.81×10^{-5} *4* α(N)=5.02×10^{-6} *7*; α(O)=2.98×10^{-7} *5* B(M1)(W.u.)=0.07 *+3−7*
		1633.39 *10*	100.0 *22*	1415.480	4^+	[M1]		5.86×10^{-4}	α(K)=0.000406 *6*; α(L)=4.71×10^{-5} *7*; α(M)=8.99×10^{-6} *13* α(N)=1.608×10^{-6} *23*; α(O)=9.62×10^{-8} *14*; α(IPF)=0.0001224 *18* B(M1)(W.u.)=0.049 *+19−49*
3051.19	$(5)^+$	1635.70 *10*	100	1415.480	4^+	M1+E2	+0.35 *+14−9*	5.81×10^{-4}	α(K)=0.000400 *7*; α(L)=4.64×10^{-5} *8*; α(M)=8.87×10^{-6} *15* α(N)=1.59×10^{-6} *3*; α(O)=9.46×10^{-8} *17*; α(IPF)=0.0001245 *20*
3066.23	$(2,3)^-$	1753.8	56.3 *23*	1312.390	2^+	E1		6.09×10^{-4}	B(E1)(W.u.)<9.4×10^{-5} α(K)=0.0001598 *23*; α(L)=1.82×10^{-5} *3*; α(M)=3.48×10^{-6} *5* α(N)=6.21×10^{-7} *9*; α(O)=3.69×10^{-8} *6*; α(IPF)=0.000427 *6*
		2448.76 *10*	100.0 *23*	617.518	2^+	E1		1.01×10^{-3}	B(E1)(W.u.)<6.1×10^{-5} α(K)=9.57×10^{-5} *14*; α(L)=1.087×10^{-5} *16*; α(M)=2.07×10^{-6} *3* α(N)=3.70×10^{-7} *6*; α(O)=2.21×10^{-8} *3*; α(IPF)=0.000904 *13*
3068.62	4^+	1063.49 *10*	100.0 *19*	2005.200	3^-	E1		4.32×10^{-4}	B(E1)(W.u.)<0.00016 α(K)=0.000379 *6*; α(L)=4.37×10^{-5} *7*; α(M)=8.34×10^{-6} *12* α(N)=1.487×10^{-6} *21*; α(O)=8.74×10^{-8} *13*
		1599.70 *10*	93.4 *22*	1468.822	2^+	E2		5.50×10^{-4}	B(E2)(W.u.)<1.0 α(K)=0.000376 *6*; α(L)=4.40×10^{-5} *7*; α(M)=8.40×10^{-6} *12* α(N)=1.499×10^{-6} *21*; α(O)=8.80×10^{-8} *13*; α(IPF)=0.0001200 *17*
		1653.09 *10*	44.8 *17*	1415.480	4^+	M1+E2	−0.54 *21*	5.74×10^{-4} *10*	B(M1)(W.u.)<0.0013; B(E2)(W.u.)<0.15 α(K)=0.000386 *8*; α(L)=4.48×10^{-5} *9*; α(M)=8.57×10^{-6} *17* α(N)=1.53×10^{-6} *3*; α(O)=9.13×10^{-8} *20*; α(IPF)=0.0001328 *25*
		1756.30 *14*	36.5 *22*	1312.390	2^+	E2		5.47×10^{-4}	B(E2)(W.u.)<0.25 α(K)=0.000315 *5*; α(L)=3.66×10^{-5} *6*; α(M)=7.00×10^{-6} *10* α(N)=1.249×10^{-6} *18*; α(O)=7.36×10^{-8} *11*; α(IPF)=0.000188 *3*

$^{112}_{48}Cd_{64}$-37

Adopted Levels, Gammas (continued)

γ(^{112}Cd) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[†]	δ[†f]	α[e]	Comments
3071.46	(4)$^+$	1006.9 *1*	100 *4*	2064.53	3$^+$				
		1066.28 *10*	39 *4*	2005.200	3$^-$				
3071.74	(1,2$^+$)	840.613 *10*		2231.12	2$^+$				
		949.65 *11*		2121.62	2$^+$				
		1638.4 *10*		1433.27	0$^+$				
		3071.2 *10*		0.0	0$^+$				
3075.19	(4,5)$^+$	1659.70 *10*	100	1415.480	4$^+$	M1+E2	+0.13 *5*	5.81×10^{-4}	B(M1)(W.u.)=0.016 *+6−16*; B(E2)(W.u.)=0.08 *+7−8* α(K)=0.000392 *6*; α(L)=4.54×10^{-5} *7*; α(M)=8.68×10^{-6} *13* α(N)=1.553×10^{-6} *22*; α(O)=9.29×10^{-8} *14*; α(IPF)=0.0001329 *19* Mult.: A_2=−0.20 *6* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
3081.65	2$^+$	3081.60 *19*	100	0.0	0$^+$	E2		9.35×10^{-4}	α(K)=0.0001160 *17*; α(L)=1.326×10^{-5} *19*; α(M)=2.53×10^{-6} *4* α(N)=4.52×10^{-7} *7*; α(O)=2.71×10^{-8} *4*; α(IPF)=0.000803 *12*
3093.02	8$^-$	157.50[#] *10*	16.0[#] *9*	2935.50	7$^-$	M1+E2[‡]	−0.59[‡] *18*	0.174 *20*	α(K)=0.147 *15*; α(L)=0.022 *4*; α(M)=0.0043 *8* α(N)=0.00075 *12*; α(O)=3.30×10^{-5} *24* Mult.: A_2=−1.01 *2*; A_4=0.13 *3* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
		299.19[#] *10*	100[#] *11*	2793.80	7$^-$	M1+E2[‡]	+0.55[‡] *6*	0.0260 *5*	α(K)=0.0225 *5*; α(L)=0.00289 *8*; α(M)=0.000557 *14* α(N)=9.85×10^{-5} *24*; α(O)=5.28×10^{-6} *9*
3102.15	(2)$^+$	3102.10 *10*	100	0.0	0$^+$	[E2]		9.42×10^{-4}	α(K)=0.0001147 *16*; α(L)=1.312×10^{-5} *19*; α(M)=2.50×10^{-6} *4* α(N)=4.47×10^{-7} *7*; α(O)=2.68×10^{-8} *4*; α(IPF)=0.000812 *12* B(E2)(W.u.)=2.9 *9*
3102.59	(4,5)	729.41 *10*	26.7 *25*	2373.19	5$^-$				
		1687.08 *10*	100.0 *25*	1415.480	4$^+$				
3105.50	(2)$^+$	1636.7 *1*		1468.822	2$^+$	[M1]		5.85×10^{-4}	α(K)=0.000404 *6*; α(L)=4.69×10^{-5} *7*; α(M)=8.96×10^{-6} *13* α(N)=1.602×10^{-6} *23*; α(O)=9.58×10^{-8} *14*; α(IPF)=0.0001237 *18*
		1690.1 *1*		1415.480	4$^+$	[E2]		5.45×10^{-4}	α(K)=0.000339 *5*; α(L)=3.95×10^{-5} *6*; α(M)=7.54×10^{-6} *11* α(N)=1.345×10^{-6} *19*; α(O)=7.92×10^{-8} *11*; α(IPF)=0.0001581 *23*
		1792.77 *10*	50 *3*	1312.390	2$^+$	[M1]		5.72×10^{-4}	α(K)=0.000335 *5*; α(L)=3.88×10^{-5} *6*; α(M)=7.41×10^{-6} *11* α(N)=1.326×10^{-6} *19*; α(O)=7.94×10^{-8} *12*;

$\gamma(^{112}Cd)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.†	δ†f	αe	Comments
									α(IPF)=0.000189 *3* B(M1)(W.u.)=0.0042 *+15−42*
3105.50	(2)$^+$	2488.14 *10*	100 *3*	617.518	2$^+$	[M1]		7.19×10^{-4}	α(K)=0.0001751 *25*; α(L)=2.01×10^{-5} *3*; α(M)=3.85×10^{-6} *6* α(N)=6.88×10^{-7} *10*; α(O)=4.13×10^{-8} *6*; α(IPF)=0.000519 *8* B(M1)(W.u.)=0.0032 *+11−32*
3109.98	(2)$^+$	1641.14 *10*	84.0 *20*	1468.822	2$^+$	[M1]		5.84×10^{-4}	α(K)=0.000402 *6*; α(L)=4.66×10^{-5} *7*; α(M)=8.91×10^{-6} *13* α(N)=1.593×10^{-6} *23*; α(O)=9.52×10^{-8} *14*; α(IPF)=0.0001254 *18* B(M1)(W.u.)=0.015 *+4−7*
		2492.24 *10*	100.0 *22*	617.518	2$^+$	[M1]		7.20×10^{-4}	α(K)=0.0001746 *25*; α(L)=2.01×10^{-5} *3*; α(M)=3.83×10^{-6} *6* α(N)=6.86×10^{-7} *10*; α(O)=4.12×10^{-8} *6*; α(IPF)=0.000521 *8* B(M1)(W.u.)=0.0049 *+12−23*
		3110.01 *16*	37.7 *18*	0.0	0$^+$	[E2]		9.45×10^{-4}	α(K)=0.0001142 *16*; α(L)=1.306×10^{-5} *19*; α(M)=2.49×10^{-6} *4* α(N)=4.45×10^{-7} *7*; α(O)=2.67×10^{-8} *4*; α(IPF)=0.000815 *12* B(E2)(W.u.)=0.079 *+19−37*
3130.83	5$^-$	714.84 *10*	30.0 *21*	2416.00	3$^-$	E2		0.00253	α(K)=0.00220 *3*; α(L)=0.000274 *4*; α(M)=5.25×10^{-5} *8* α(N)=9.30×10^{-6} *13*; α(O)=5.08×10^{-7} *8*
		1125.78 *10*	100	2005.200	3$^-$	E2		8.81×10^{-4}	α(K)=0.000767 *11*; α(L)=9.15×10^{-5} *13*; α(M)=1.751×10^{-5} *25* α(N)=3.12×10^{-6} *5*; α(O)=1.79×10^{-7} *3*; α(IPF)=1.198×10^{-6} *18*
		1715.08 *12*	23.0 *12*	1415.480	4$^+$	E1		5.86×10^{-4}	α(K)=0.0001656 *24*; α(L)=1.89×10^{-5} *3*; α(M)=3.61×10^{-6} *5* α(N)=6.44×10^{-7} *9*; α(O)=3.83×10^{-8} *6*; α(IPF)=0.000397 *6*
3133.42	1$^-$	1909.53b *17*	38.7b *16*	1224.341	0$^+$	[E1]		7.02×10^{-4}	α(K)=0.0001396 *20*; α(L)=1.592×10^{-5} *23*; α(M)=3.03×10^{-6} *5* α(N)=5.42×10^{-7} *8*; α(O)=3.23×10^{-8} *5*; α(IPF)=0.000543 *8* B(E1)(W.u.)=0.00043 *9*
		3133.21b *10*	100b *5*	0.0	0$^+$	E1		1.35×10^{-3}	B(E1)(W.u.)=0.00025 *5* α(K)=6.73×10^{-5} *10*; α(L)=7.62×10^{-6} *11*; α(M)=1.451×10^{-6} *21* α(N)=2.59×10^{-7} *4*; α(O)=1.554×10^{-8} *22*; α(IPF)=0.001278 *18* Mult.: ε=−0.13 *6* from polarization measurements in ^{112}Cd(γ,pol γ') 2005Ko32.
3135.84	(2,3$^+$)	1071.26 *10*	28 *3*	2064.53	3$^+$				I_γ: 96 *6* in ^{111}Cd(n,γ) E=th:secondary (1997Dr03).
		1667.01b *25*	27b *5*	1468.822	2$^+$				
		1823.39 *10*	100 *5*	1312.390	2$^+$				
		2518.43 *10*	68 *6*	617.518	2$^+$				
3145.28	3$^+$,4$^+$,5$^+$	1063.6 *1*		2081.64	4$^+$	M1+E2		1.16×10^{-3}	α(K)=0.001014 *15*; α(L)=0.0001188 *17*; α(M)=2.27×10^{-5} *4* α(N)=4.06×10^{-6} *6*; α(O)=2.42×10^{-7} *4*

$^{112}_{48}Cd_{64}$-39

Adopted Levels, Gammas (continued)

$\gamma(^{112}Cd)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[†]	δ[†f]	α[e]	Comments
3145.28	$3^+,4^+,5^+$	1729.82 *10*	100	1415.480	4^+	M1+E2	−0.43 *+11−12*	5.69×10^{-4} *9*	B(M1)(W.u.)=0.028 *+7−11*; B(E2)(W.u.)=1.4 *+7−8* α(K)=0.000355 *6*; α(L)=4.11×10^{-5} *7*; α(M)=7.86×10^{-6} *13* α(N)=1.405×10^{-6} *23*; α(O)=8.39×10^{-8} *14*; α(IPF)=0.000164 *3* δ: Also: +3.0 *+15−7* from $\gamma(\theta)$ in 2001Ga44.
3163.51	2^+	656.74[b] *10*	100[b]	2506.70	1^-	E1		1.15×10^{-3}	B(E1)(W.u.)=0.0025 *+7−12* α(K)=0.001002 *14*; α(L)=0.0001171 *17*; α(M)=2.23×10^{-5} *4* α(N)=3.98×10^{-6} *6*; α(O)=2.30×10^{-7} *4*
		3163.4[b] *3*	58[b] *9*	0.0	0^+	E2		9.64×10^{-4}	B(E2)(W.u.)=0.079 *+25−39* α(K)=0.0001110 *16*; α(L)=1.269×10^{-5} *18*; α(M)=2.42×10^{-6} *4* α(N)=4.33×10^{-7} *6*; α(O)=2.59×10^{-8} *4*; α(IPF)=0.000838 *12* I_γ: 100 in ^{112}Cd(n,n′γ) (2001Ga44).
3165.46	$4^-,5^-,6^-$	792.27 *10*	100	2373.19	5^-	M1+E2		0.00225	α(K)=0.00196 *3*; α(L)=0.000232 *4*; α(M)=4.44×10^{-5} *7* α(N)=7.93×10^{-6} *12*; α(O)=4.70×10^{-7} *7*
3169.46	2^+	1164.2 *1*		2005.200	3^-	E1		3.86×10^{-4}	α(K)=0.000321 *5*; α(L)=3.69×10^{-5} *6*; α(M)=7.04×10^{-6} *10* α(N)=1.257×10^{-6} *18*; α(O)=7.41×10^{-8} *11*; α(IPF)=1.96×10^{-5} *3*
		1945.14 *17*	74 *3*	1224.341	0^+	E2		5.72×10^{-4}	α(K)=0.000260 *4*; α(L)=3.02×10^{-5} *5*; α(M)=5.76×10^{-6} *8* α(N)=1.028×10^{-6} *15*; α(O)=6.09×10^{-8} *9*; α(IPF)=0.000275 *4* B(E2)(W.u.)=1.80 *20*
		2552.01 *10*	100 *3*	617.518	2^+	M1+E2	−0.68 *+13−20*	7.43×10^{-4}	B(M1)(W.u.)=0.0035 *6*; B(E2)(W.u.)=0.20 *6* α(K)=0.0001647 *25*; α(L)=1.89×10^{-5} *3*; α(M)=3.61×10^{-6} *6* α(N)=6.46×10^{-7} *10*; α(O)=3.87×10^{-8} *6*; α(IPF)=0.000555 *8* δ: Other: −4.8 *+19−58* from $\gamma(\theta)$ in ^{112}Cd(n,n′γ) (2001Ga44).
		3170.0[@] *15*	4[@]	0.0	0^+	[E2]		9.66×10^{-4}	α(K)=0.0001106 *16*; α(L)=1.264×10^{-5} *18*; α(M)=2.41×10^{-6} *4* α(N)=4.31×10^{-7} *6*; α(O)=2.58×10^{-8} *4*; α(IPF)=0.000840 *12* B(E2)(W.u.)=0.0085 *9*

$\gamma(^{112}Cd)$ (continued)

E_i(level)	J_i^π	E_γ†	I_γ†	E_f	J_f^π	Mult.†	δ†f	αe	Comments
3176.47	8^+	295.19# *14*	8.2# *20*	2881.02	8^+	M1+E2‡	−0.14‡ *10*	0.0250 *5*	α(K)=0.0217 *4*; α(L)=0.00266 *7*; α(M)=0.000511 *14* α(N)=9.10×10^{-5} *23*; α(O)=5.25×10^{-6} *9* Mult.: A_2=0.36 *3*; A_4=−0.02 *2* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
		382.37# *13*	10.6# *23*	2793.80	7^-				Mult.: A_2=+0.07 *2* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
		604.98# *10*	100# *5*	2571.47	6^+	E2		0.00392	α(K)=0.00339 *5*; α(L)=0.000431 *6*; α(M)=8.28×10^{-5} *12* α(N)=1.463×10^{-5} *21*; α(O)=7.78×10^{-7} *11* Mult.: A_2=0.334 *12*; A_4=−0.12 *2* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
3176.83	$(4)^+$	2559.28 *13*	100	617.518	2^+	E2		7.52×10^{-4}	α(K)=0.0001593 *23*; α(L)=1.83×10^{-5} *3*; α(M)=3.49×10^{-6} *5* α(N)=6.24×10^{-7} *9*; α(O)=3.72×10^{-8} *6*; α(IPF)=0.000570 *8*
3178.79	2^+	2561.23 *10*	100.0 *15*	617.518	2^+	M1+E2		7.43×10^{-4}	α(K)=0.0001657 *24*; α(L)=1.90×10^{-5} *3*; α(M)=3.64×10^{-6} *5* α(N)=6.51×10^{-7} *10*; α(O)=3.91×10^{-8} *6*; α(IPF)=0.000554 *8*
		3178.76 *10*	35.7 *15*	0.0	0^+	E2		9.70×10^{-4}	B(E2)(W.u.)=0.14 *4* α(K)=0.0001101 *16*; α(L)=1.259×10^{-5} *18*; α(M)=2.40×10^{-6} *4* α(N)=4.29×10^{-7} *6*; α(O)=2.57×10^{-8} *4*; α(IPF)=0.000844 *12*
3189.82	4^+,5,6^+	1022.09 *13*	83 *4*	2167.76	6^+				
		1774.30 *10*	100 *4*	1415.480	4^+				
3190.06	0^+,1,2,3^+	2572.51 *10*	100	617.518	2^+				
3194.46	$(2)^+$	1189.41 *10*	59.0 *18*	2005.200	3^-	[E1]		3.83×10^{-4}	α(K)=0.000309 *5*; α(L)=3.55×10^{-5} *5*; α(M)=6.77×10^{-6} *10* α(N)=1.209×10^{-6} *17*; α(O)=7.13×10^{-8} *10*; α(IPF)=3.06×10^{-5} *5* B(E1)(W.u.)=0.0006 *3*
		1882.1 *1*		1312.390	2^+	[M1]		5.76×10^{-4}	α(K)=0.000304 *5*; α(L)=3.51×10^{-5} *5*; α(M)=6.71×10^{-6} *10* α(N)=1.200×10^{-6} *17*; α(O)=7.19×10^{-8} *10*; α(IPF)=0.000229 *4*
		2576.72 *10*	100.0 *18*	617.518	2^+	[M1]		7.48×10^{-4}	α(K)=0.0001638 *23*; α(L)=1.88×10^{-5} *3*; α(M)=3.59×10^{-6} *5* α(N)=6.43×10^{-7} *9*; α(O)=3.86×10^{-8} *6*; α(IPF)=0.000561 *8* B(M1)(W.u.)=0.008 *4*

$^{112}_{48}Cd_{64}$-41

Adopted Levels, Gammas (continued)

γ(^{112}Cd) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ[†f]	α[e]	Comments
3201.32	5^-	1196.21 *19*	100	2005.200	3^-	E2		7.80×10^{-4}	B(E2)(W.u.)=14 *+6−14* α(K)=0.000675 *10*; α(L)=8.01×10^{-5} *12*; α(M)=1.533×10^{-5} *22* α(N)=2.73×10^{-6} *4*; α(O)=1.576×10^{-7} *22*; α(IPF)=6.65×10^{-6} *10*
		1785.8 *1*		1415.480	4^+	E1		6.28×10^{-4}	α(K)=0.0001552 *22*; α(L)=1.771×10^{-5} *25*; α(M)=3.38×10^{-6} *5* α(N)=6.03×10^{-7} *9*; α(O)=3.59×10^{-8} *5*; α(IPF)=0.000451 *7*
3203.25	$(2,3)^+$	2585.70 *10*	100	617.518	2^+	(M1+E2)	−0.10 *+5−6*	7.51×10^{-4}	α(K)=0.0001626 *23*; α(L)=1.87×10^{-5} *3*; α(M)=3.57×10^{-6} *5* α(N)=6.38×10^{-7} *9*; α(O)=3.83×10^{-8} *6*; α(IPF)=0.000566 *8* B(M1)(W.u.)=(0.011 *+4−8*); B(E2)(W.u.)=(0.013 *+14−13*)
3205.74	2^+,3,4	1736.90 *12*	100	1468.822	2^+				
		1790.2		1415.480	4^+				
3206.48	$(4)^+$	1084.93 *10*	76 *4*	2121.62	2^+	[E2]		9.53×10^{-4}	α(K)=0.000831 *12*; α(L)=9.93×10^{-5} *14*; α(M)=1.90×10^{-5} *3* α(N)=3.38×10^{-6} *5*; α(O)=1.94×10^{-7} *3* B(E2)(W.u.)=67 *22*
		2588.85 *10*	100	617.518	2^+	[E2]		7.62×10^{-4}	α(K)=0.0001561 *22*; α(L)=1.79×10^{-5} *3*; α(M)=3.42×10^{-6} *5* α(N)=6.12×10^{-7} *9*; α(O)=3.65×10^{-8} *6*; α(IPF)=0.000584 *9* B(E2)(W.u.)=1.1 *4*
3206.71	2^+,3,4	1792.1		1415.480	4^+				
		1894.30 *3*	100	1312.390	2^+				
3230.29	8^+	349.26[#] *10*	27[#] *4*	2881.02	8^+	M1+E2[‡]	+0.42[‡] *20*	0.0167 *6*	α(K)=0.0145 *5*; α(L)=0.00181 *9*; α(M)=0.000347 *18* α(N)=6.2×10^{-5} *3*; α(O)=3.45×10^{-6} *7* Mult.: A_2=0.42 *3*; A_4=−0.03 *4* from γγ(θ) in ^{110}Pd(α,2nγ) (1993De09). δ: Also: −0.09 *12* from γγ(θ) in ^{110}Pd(α,2nγ) in 1997Dr03.
		436.92[#g] *6*	[#]	2793.80	7^-	E1		0.00295	α(K)=0.00258 *4*; α(L)=0.000304 *5*; α(M)=5.81×10^{-5} *9* α(N)=1.032×10^{-5} *15*; α(O)=5.84×10^{-7} *9* Mult.: A_0=3.3 *1*; A_2/A_0=0.02 *10* (1993De09).
		658.83[#] *10*	100[#] *14*	2571.47	6^+	E2		0.00312	α(K)=0.00271 *4*; α(L)=0.000340 *5*; α(M)=6.54×10^{-5} *10* α(N)=1.156×10^{-5} *17*; α(O)=6.24×10^{-7} *9* Mult.: A_2=+0.43 *6* (1997Dr03).
3231.59	1^+	1919.4 *1*		1312.390	2^+	M1+E2		5.80×10^{-4}	α(K)=0.000292 *4*; α(L)=3.37×10^{-5} *5*;

$\gamma(^{112}Cd)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[†]	δ[†f]	α[e]	Comments
									$\alpha(M)=6.45\times10^{-6}$ *9* $\alpha(N)=1.153\times10^{-6}$ *17*; $\alpha(O)=6.91\times10^{-8}$ *10*; $\alpha(IPF)=0.000247$ *4* I_γ: 100 in ^{112}Ag β^- decay (3.130 h) (1970Ma45).
3231.59	1^+	2614.02 *14*	38.9 *22*	617.518	2^+	M1+E2		7.61×10^{-4}	$\alpha(K)=0.0001594$ *23*; $\alpha(L)=1.83\times10^{-5}$ *3*; $\alpha(M)=3.50\times10^{-6}$ *5* $\alpha(N)=6.25\times10^{-7}$ *9*; $\alpha(O)=3.76\times10^{-8}$ *6*; $\alpha(IPF)=0.000579$ *9*
		3231.35 *10*	100.0 *22*	0.0	0^+	M1		9.79×10^{-4}	B(M1)(W.u.)=0.0134 *16* $\alpha(K)=0.0001073$ *15*; $\alpha(L)=1.229\times10^{-5}$ *18*; $\alpha(M)=2.35\times10^{-6}$ *4* $\alpha(N)=4.20\times10^{-7}$ *6*; $\alpha(O)=2.52\times10^{-8}$ *4*; $\alpha(IPF)=0.000856$ *12* Mult.: ε=+0.27 *12* from polarization measurements in $^{112}Cd(\gamma,pol\ \gamma')$ (2005Ko32).
3239.04	7^+	573.31[#] *10*	100[#] *4*	2665.64	5^+	E2		0.00453	$\alpha(K)=0.00392$ *6*; $\alpha(L)=0.000502$ *7*; $\alpha(M)=9.66\times10^{-5}$ *14* $\alpha(N)=1.704\times10^{-5}$ *24*; $\alpha(O)=8.97\times10^{-7}$ *13* Mult.: A_2=0.34 *2* from $\gamma\gamma(\theta)$ in $^{110}Pd(\alpha,2n\gamma)$ (1993De09).
		668.18[#] *18*	35[#] *4*	2571.47	6^+	M1+E2[‡]	+2.6[‡] *10*	0.00305 *7*	$\alpha(K)=0.00265$ *6*; $\alpha(L)=0.000330$ *6*; $\alpha(M)=6.33\times10^{-5}$ *11* $\alpha(N)=1.122\times10^{-5}$ *19*; $\alpha(O)=6.14\times10^{-7}$ *17* Mult.: A_2=+0.68 *4* from $\gamma\gamma(\theta)$ in $^{110}Pd(\alpha,2n\gamma)$ (1993De09). δ: Also: +0.54 *+30−15* from $\gamma\gamma(\theta)$ in $^{110}Pd(\alpha,2n\gamma)$ (1993De09).
		1071.24[#] *10*	54[#] *6*	2167.76	6^+	E2(+M1)[‡]	−7.2[‡] *25*	9.83×10^{-4} *15*	$\alpha(K)=0.000857$ *13*; $\alpha(L)=0.0001025$ *15*; $\alpha(M)=1.96\times10^{-5}$ *3* $\alpha(N)=3.49\times10^{-6}$ *5*; $\alpha(O)=2.00\times10^{-7}$ *3* Mult.: A_2=−0.26 *2*; A_4=0.28 *3* from $\gamma\gamma(\theta)$ in $^{110}Pd(\alpha,2n\gamma)$ (1993De09).
3242.64	2^+	1161.08 *12*	100 *8*	2081.64	4^+	E2		8.27×10^{-4}	B(E2)(W.u.)=16 *+9−16* $\alpha(K)=0.000719$ *10*; $\alpha(L)=8.55\times10^{-5}$ *12*; $\alpha(M)=1.636\times10^{-5}$ *23* $\alpha(N)=2.91\times10^{-6}$ *4*; $\alpha(O)=1.677\times10^{-7}$ *24*; $\alpha(IPF)=3.16\times10^{-6}$ *5*
		2625.07 *10*	92 *6*	617.518	2^+	M1+E2	+1.9 *+15−9*	7.72×10^{-4} *12*	B(M1)(W.u.)=0.0005 *+7−5*; B(E2)(W.u.)=0.20 *+13−20* $\alpha(K)=0.000154$ *3*; $\alpha(L)=1.76\times10^{-5}$ *4*; $\alpha(M)=3.37\times10^{-6}$ *6* $\alpha(N)=6.02\times10^{-7}$ *11*; $\alpha(O)=3.60\times10^{-8}$ *7*;

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Adopted Levels, Gammas (continued)

$\gamma(^{112}Cd)$ (continued)

E_i(level)	J^{π}_i	E_γ†	I_γ†	E_f	J^{π}_f	Mult.†	δ†f	αe	Comments
									α(IPF)=0.000597 *10* δ: Also: +0.10 *+35−22* (2001Ga44).
3242.64	2^+	3242.49 *10*	64 *5*	0.0	0^+	E2		9.92×10^{-4}	B(E2)(W.u.)=0.06 *+4−6* α(K)=0.0001065 *15*; α(L)=1.217×10^{-5} *17*; α(M)=2.32×10^{-6} *4* α(N)=4.15×10^{-7} *6*; α(O)=2.49×10^{-8} *4*; α(IPF)=0.000871 *13*
3246.86	$(1,2)^+$	1778.0 *1*		1468.822	2^+				
		2629.34 *10*	100	617.518	2^+				
3247.17	(6^+)	1831.67 *10*	100	1415.480	4^+				
3248.25	7^-	155.21# *10*	1.02# *23*	3093.02	8^-	M1+E2‡	+0.18‡ *12*	0.142 *10*	α(K)=0.123 *8*; α(L)=0.0158 *18*; α(M)=0.0030 *4* α(N)=0.00054 *6*; α(O)=2.96×10^{-5} *12* Mult.: a_0=0.96 *6*; A_2=−0.40 *10*; A_4=0.15 *16* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09). δ: Other: +7 *4* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
		312.94# *10*	9.9# *5*	2935.50	7^-	M1(+E2)‡	−0.1‡ *1*	0.0214 *4*	α(K)=0.0187 *3*; α(L)=0.00227 *5*; α(M)=0.000436 *10* α(N)=7.78×10^{-5} *16*; α(O)=4.51×10^{-6} *7* Mult.: A_2=0.34 *1*; A_4=−0.01 *1* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
		316.19# *10*	100#	2931.97	6^-	M1+E2‡	+0.28‡ *4*	0.0213 *4*	α(K)=0.0185 *3*; α(L)=0.00228 *4*; α(M)=0.000439 *8* α(N)=7.81×10^{-5} *14*; α(O)=4.43×10^{-6} *7* Mult.: A_2=0.19 *2*; A_4=−0.02 *2* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
3251.86	$(0)^+$	2634.31 *13*	100	617.518	2^+	E2		7.77×10^{-4}	α(K)=0.0001515 *22*; α(L)=1.739×10^{-5} *25*; α(M)=3.32×10^{-6} *5* α(N)=5.93×10^{-7} *9*; α(O)=3.54×10^{-8} *5*; α(IPF)=0.000605 *9* B(E2)(W.u.)>0.17
3252.55	$(6,7,8)^-$	458.75# *10*	100#	2793.80	7^-	M1(+E2)‡	−0.02‡ *5*	0.00821	α(K)=0.00716 *10*; α(L)=0.000859 *12*; α(M)=0.0001647 *23* α(N)=2.94×10^{-5} *5*; α(O)=1.723×10^{-6} *25* Mult.: A_2=+0.39 *22* (1997Dr03).
3254.21	$(0^+,1,2)$	1785.2		1468.822	2^+				
		1942.01 *10*	100 *3*	1312.390	2^+				
		2636.62 *11*	70 *3*	617.518	2^+				I_γ: 100 in ^{111}Cd(n,γ) E=th:secondary (1997Dr03).
3254.30	$(3,4)^+$	1249.01 *10*	100 *3*	2005.200	3^-	E1		3.86×10^{-4}	B(E1)(W.u.)=0.0017 *5* α(K)=0.000283 *4*; α(L)=3.25×10^{-5} *5*;

γ(^{112}Cd) (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.†	δ†f	αe	Comments
									α(M)=6.20×10^{-6} *9* α(N)=1.107×10^{-6} *16*; α(O)=6.53×10^{-8} *10*; α(IPF)=6.28×10^{-5} *9*
3254.30	(3,4)$^+$	1838.89 *10*	57 *3*	1415.480	4$^+$	M1+E2	+3.1 *+30−11*	5.57×10^{-4}	B(M1)(W.u.)=0.0021 *+38−21*; B(E2)(W.u.)=4.8 *18* α(K)=0.000292 *6*; α(L)=3.38×10^{-5} *6*; α(M)=6.46×10^{-6} *12* α(N)=1.154×10^{-6} *21*; α(O)=6.83×10^{-8} *13*; α(IPF)=0.000224 *4* δ: Also: −0.45 *+30−25* from γ(θ) in 2001Ga44.
3258.01	(3,4$^+$)	1252.8 *1*	100	2005.200	3$^-$				
3266.54	4$^+$	1851.04 *10*	100	1415.480	4$^+$	[M1]		5.74×10^{-4}	α(K)=0.000314 *5*; α(L)=3.63×10^{-5} *5*; α(M)=6.94×10^{-6} *10* α(N)=1.242×10^{-6} *18*; α(O)=7.43×10^{-8} *11*; α(IPF)=0.000215 *3* B(M1)(W.u.)=0.018 *5*
3269.50	2$^+$,3,4,5$^-$	1264.25 *10*	100.0 *25*	2005.200	3$^-$				
		1854.04 *10*	44.3 *25*	1415.480	4$^+$				
3290.40	(2$^+$)	1419.43 *10*	100	1870.96	0$^+$				
3291.13	2$^+$,3,4,5$^-$	1209.4 *1*		2081.64	4$^+$				
		1285.95 *10*	100	2005.200	3$^-$				
		1875.7 *1*		1415.480	4$^+$				
3291.17	7$^-$	917.73# *10*	100# *8*	2373.19	5$^-$	E2		1.39×10^{-3}	α(K)=0.001206 *17*; α(L)=0.0001463 *21*; α(M)=2.80×10^{-5} *4* α(N)=4.98×10^{-6} *7*; α(O)=2.81×10^{-7} *4* Mult.: A_2=+0.07 *2* (1997Dr03).
		1123.96# *15*	95# *10*	2167.76	6$^+$	E1		3.98×10^{-4}	α(K)=0.000342 *5*; α(L)=3.94×10^{-5} *6*; α(M)=7.52×10^{-6} *11* α(N)=1.341×10^{-6} *19*; α(O)=7.89×10^{-8} *11*; α(IPF)=7.87×10^{-6} *12* Mult.: A_2=−0.23 *2* from γγ(θ) in ^{110}Pd(α,2nγ) (1993De09);
3297.01	(2,3)$^+$	1881.5 *1*	100.0 *20*	1415.480	4$^+$				
		2679.46 *10*	31.2 *20*	617.518	2$^+$				
3300.99	(1)	3300.94 *16*	100.0 *4*	0.0	0$^+$				
3303.24	(2,3)$^+$	629.2@ *4*	6.8@ *17*	2674.00	2$^+$				
		886.99b *23*	17b *3*	2416.00	3$^-$				
		2685.83b *17*	100b *5*	617.518	2$^+$				
3312.24	(1$^-$,2)	1306.97 *10*	46.9 *13*	2005.200	3$^-$				
		2000.01 *10*	43.8 *19*	1312.390	2$^+$				
		2694.56 *10*	100.0 *21*	617.518	2$^+$				
3318.09	9$^-$	382.37# *13*	14# *3*	2935.50	7$^-$	E2		0.01489	α(K)=0.01274 *18*; α(L)=0.001757 *25*;

γ(^{112}Cd) (continued)

E_i(level)	J_i^π	E_γ†	I_γ†	E_f	J_f^π	Mult.†	δ†f	αe	Comments
									α(M)=0.000339 *5* α(N)=5.93×10^{-5} *9*; α(O)=2.84×10^{-6} *4*
3318.09	9$^-$	524.28# *10*	100#	2793.80	7$^-$	E2		0.00581	α(K)=0.00501 *7*; α(L)=0.000652 *10*; α(M)=0.0001255 *18* α(N)=2.21×10^{-5} *3*; α(O)=1.143×10^{-6} *16* Mult.: a_2=0.340 *10*; a_4=−0.132 *14* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
3319.83	1$^-$,2,3,4$^+$	1314.6 *1*		2005.200	3$^-$				
		1851.04 *10*	100 *3*	1468.822	2$^+$				
		2702.24 *10*	62 *3*	617.518	2$^+$				
3322.40	10$^+$	145.87# *10*	11.8# *10*	3176.47	8$^+$	E2		0.390	α(K)=0.313 *5*; α(L)=0.0627 *9*; α(M)=0.01232 *18* α(N)=0.00208 *3*; α(O)=6.18×10^{-5} *9*
		441.45# *10*	100# *5*	2881.02	8$^+$	E2		0.00960	α(K)=0.00824 *12*; α(L)=0.001104 *16*; α(M)=0.000213 *3* α(N)=3.74×10^{-5} *6*; α(O)=1.86×10^{-6} *3* Mult.: A_2=+0.72 *23* (1997Dr03).
3325.96	(3)$^-$	734.91 *10*	100	2591.05	4$^-$				
3329.17	(5$^-$)	1913.67 *10*	100	1415.480	4$^+$				
3332.11	2$^+$,3,4,5$^-$	1326.83 *10*	100 *8*	2005.200	3$^-$				
		1916.72 *12*	54 *8*	1415.480	4$^+$				
3332.46	1,2,3,4$^+$	2714.91 *10*	100	617.518	2$^+$				
3336.03	(2)$^+$	2718.48 *10*	100	617.518	2$^+$	[M1+E2]		7.97×10^{-4}	α(K)=0.0001479 *21*; α(L)=1.699×10^{-5} *24*; α(M)=3.24×10^{-6} *5* α(N)=5.80×10^{-7} *9*; α(O)=3.49×10^{-8} *5*; α(IPF)=0.000628 *9*
3341.86	(3)$^+$	2724.31 *10*	100	617.518	2$^+$	E2+M1	+7.4 *+17−16*	8.09×10^{-4}	B(M1)(W.u.)=0.00053 *25*; B(E2)(W.u.)=3.1 *4* α(K)=0.0001430 *20*; α(L)=1.641×10^{-5} *23*; α(M)=3.13×10^{-6} *5* α(N)=5.60×10^{-7} *8*; α(O)=3.34×10^{-8} *5*; α(IPF)=0.000646 *9*
3353.36	0$^+$	2735.81 *10*	100	617.518	2$^+$	[E2]		8.13×10^{-4}	α(K)=0.0001419 *20*; α(L)=1.628×10^{-5} *23*; α(M)=3.11×10^{-6} *5* α(N)=5.55×10^{-7} *8*; α(O)=3.32×10^{-8} *5*; α(IPF)=0.000651 *10* B(E2)(W.u.)=0.9 *3*
3363.55	2$^+$	2745.86 *10*	100 *3*	617.518	2$^+$	M1+E2	−0.49 *+15−17*	8.08×10^{-4}	α(K)=0.0001444 *21*; α(L)=1.657×10^{-5} *24*; α(M)=3.16×10^{-6} *5* α(N)=5.66×10^{-7} *9*; α(O)=3.40×10^{-8} *5*; α(IPF)=0.000644 *10* B(M1)(W.u.)=0.0023 *+7−10*; B(E2)(W.u.)=0.06 *4*
		3363.67 *10*	58 *3*	0.0	0$^+$	E2		1.03×10^{-3}	α(K)=0.0001002 *14*; α(L)=1.144×10^{-5} *16*; α(M)=2.18×10^{-6} *3*

Adopted Levels, Gammas (continued)

$\gamma(^{112}$Cd) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[†]	δ[†f]	α[e]	Comments
									α(N)=3.90×10^{-7} *6*; α(O)=2.34×10^{-8} *4*; α(IPF)=0.000920 *13* B(E2)(W.u.)=0.063 *+16−27*
3363.99	2$^+$,3,4,5,6$^+$	909.48 *10*	100	2454.51	4$^+$				
3369.62	2$^+$,3,4$^+$	1900.77 *10*	26.9 *14*	1468.822	2$^+$				
		1952.9[@] *10*	50[@]	1415.480	4$^+$				
		2752.08 *10*	100.0 *14*	617.518	2$^+$				
3375.45	(6,7,8)	439.95[#] *10*	100[#]	2935.50	7$^-$	D[‡]	[‡]		Mult.: A$_2$=−0.281 *12* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
3375.50	(1)	2758.02 *14*	95 *3*	617.518	2$^+$				
		3375.40 *10*	100 *3*	0.0	0$^+$				
3376.46	7$^-$	283.40[#] *12*	4.7[#] *10*	3093.02	8$^-$	M1+E2[‡]	−2.2[‡] *7*	0.0372 *17*	α(K)=0.0316 *14*; α(L)=0.0046 *3*; α(M)=0.00089 *6* α(N)=0.000155 *10*; α(O)=6.93×10^{-6} *21* Mult.: A$_2$=0.32 *6*; A$_4$=0.17 *8* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09). δ: Also: −0.42 *+15−40* from $\gamma(\theta)$ in 1997Dr03.
		444.53[#] *10*	100[#] *3*	2931.97	6$^-$	M1+E2[‡]	−0.37[‡] *13*	0.00894 *14*	α(K)=0.00777 *12*; α(L)=0.000947 *18*; α(M)=0.000182 *4* α(N)=3.24×10^{-5} *6*; α(O)=1.86×10^{-6} *3* Mult.: A$_2$=−0.73 *2*; A$_4$=0.05 *2* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
3378.52	(2)$^+$	1909.63 *10*	100.0 *21*	1468.822	2$^+$	[M1]		5.79×10^{-4}	α(K)=0.000295 *5*; α(L)=3.41×10^{-5} *5*; α(M)=6.51×10^{-6} *10* α(N)=1.165×10^{-6} *17*; α(O)=6.98×10^{-8} *10*; α(IPF)=0.000242 *4* B(M1)(W.u.)=0.0059 *+15−45*
		2761.18 *14*	33.9 *21*	617.518	2$^+$	[M1]		8.12×10^{-4}	α(K)=0.0001437 *21*; α(L)=1.650×10^{-5} *23*; α(M)=3.15×10^{-6} *5* α(N)=5.63×10^{-7} *8*; α(O)=3.38×10^{-8} *5*; α(IPF)=0.000648 *9* B(M1)(W.u.)=0.00066 *+18−50*
3383.71	0$^+$ to 4$^+$	1227.70 *13*	30 *3*	2156.18	2$^+$				
		2766.05 *10*	100	617.518	2$^+$				
3392.78	1,2$^+$	3392.72 *12*	100	0.0	0$^+$				
3393.39	0$^+$ to 4$^+$	2775.83 *4*	100	617.518	2$^+$				
3393.45	(1,2$^+$)	2775.78[b] *18*	100[b]	617.518	2$^+$				
		3393.35[b] *20*	31[b] *4*	0.0	0$^+$				
3393.60	1$^-$ to 5$^-$	977.59 *5*	100	2416.00	3$^-$				
3398.88	8$^+$	222.17[#] *10*	28[#] *4*	3176.47	8$^+$	(M1)		0.0521	α(K)=0.0452 *7*; α(L)=0.00556 *8*;

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Adopted Levels, Gammas (continued)

$\gamma(^{112}Cd)$ (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult. †	δ † f	α e	Comments
									α(M)=0.001067 *15* α(N)=0.000190 *3*; α(O)=1.099×10^{-5} *16* Mult.: A_2=−0.32 *22* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).
3398.88	8^+	517.99# *12*	51# *9*	2881.02	8^+	M1+E2‡	−0.16‡ *14*	0.00611	α(K)=0.00533 *8*; α(L)=0.000638 *10*; α(M)=0.0001223 *18* α(N)=2.18×10^{-5} *4*; α(O)=1.279×10^{-6} *19* Mult.: A_2=+0.23 5from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03). δ: Other: +0.62 *12* in ^{110}Pd(α,2nγ) (1997dr3).
		827.54# *10*	100# *9*	2571.47	6^+	E2		1.77×10^{-3}	α(K)=0.001536 *22*; α(L)=0.000188 *3*; α(M)=3.61×10^{-5} *5* α(N)=6.40×10^{-6} *9*; α(O)=3.57×10^{-7} *5* Mult.: A_2=0.316 *9*; A_4=−0.111 *12* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
3400.35	0^+ to 4^+	2087.94 *10*	100	1312.390	2^+				
3402.93	$1^+,2^+,3^+$	2785.37 *10*	100	617.518	2^+	M1+E2	−1.8 *+3−4*	8.28×10^{-4}	B(M1)(W.u.)<0.00057; B(E2)(W.u.)<0.16 α(K)=0.0001385 *20*; α(L)=1.588×10^{-5} *23*; α(M)=3.03×10^{-6} *5* α(N)=5.42×10^{-7} *8*; α(O)=3.24×10^{-8} *5*; α(IPF)=0.000670 *10* δ: Also: −0.34 *+10−13* from G(θ) in 2001Ga44.
3422.55	$(4)^+$	1953.71 *16*	100.0 *24*	1468.822	2^+				
		2805.0 *1*	35.7 *24*	617.518	2^+				
3425.60	0^+ to 4^+	2113.19 *5*	100	1312.390	2^+				
3426.32	0^+ to 4^+	2808.76 *14*	100	617.518	2^+				
3428.87	2^+	2811.2 *1*	100.0 *16*	617.518	2^+	M1+E2		8.30×10^{-4}	α(K)=0.0001389 *20*; α(L)=1.594×10^{-5} *23*; α(M)=3.04×10^{-6} *5* α(N)=5.44×10^{-7} *8*; α(O)=3.27×10^{-8} *5*; α(IPF)=0.000671 *10*
		3428.71 *14*	14.2 *16*	0.0	0^+	E2		1.06×10^{-3}	α(K)=9.71×10^{-5} *14*; α(L)=1.108×10^{-5} *16*; α(M)=2.11×10^{-6} *3* α(N)=3.78×10^{-7} *6*; α(O)=2.27×10^{-8} *4*; α(IPF)=0.000946 *14* B(E2)(W.u.)=0.058 *+23−37*
3429.6		2014.1 *3*	100	1415.480	4^+				
3429.98	(5,6,7)	1262.21# *15*	100#	2167.76	6^+	D(+Q)‡	−0.04‡ *5*		Mult.: A_2=−0.30 *6* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
3433.73	(2^+ to 6^+)	2018.23 *10*	100	1415.480	4^+				
3451.97	(0^+)	945.26 *5*	100	2506.70	1^-	E1		5.41×10^{-4}	α(K)=0.000474 *7*; α(L)=5.48×10^{-5} *8*; α(M)=1.046×10^{-5} *15* α(N)=1.87×10^{-6} *3*; α(O)=1.092×10^{-7} *16*

γ(^{112}Cd) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[†]	δ[†f]	α[e]	$I_{(\gamma+ce)}$	Comments
3452.47	2^+	2037.4 *3*	59 *8*	1415.480	4^+	[E2]		5.93×10^{-4}		α(K)=0.000239 *4*; α(L)=2.77×10^{-5} *4*; α(M)=5.28×10^{-6} *8* α(N)=9.43×10^{-7} *14*; α(O)=5.59×10^{-8} *8*; α(IPF)=0.000320 *5* B(E2)(W.u.)=0.9 *+5−9*
		2835.33 *10*	100 *8*	617.518	2^+	[M1]		8.38×10^{-4}		α(K)=0.0001367 *20*; α(L)=1.569×10^{-5} *22*; α(M)=2.99×10^{-6} *5* α(N)=5.36×10^{-7} *8*; α(O)=3.22×10^{-8} *5*; α(IPF)=0.000682 *10* B(M1)(W.u.)=0.0030 *+16−30*
		3452.1 *4*		0.0	0^+	[E2]		1.06×10^{-3}		α(K)=9.60×10^{-5} *14*; α(L)=1.096×10^{-5} *16*; α(M)=2.09×10^{-6} *3* α(N)=3.74×10^{-7} *6*; α(O)=2.24×10^{-8} *4*; α(IPF)=0.000955 *14* E_γ: from ce in ^{111}Cd(n,γ) E=th:secondary (1997Dr03).
3453.8	0^+ to 4^+	1985.0 *3*	100	1468.822	2^+					
3455.48	0^+,1,2	2837.85 *10*	100	617.518	2^+					
3470.3	0^+ to 4^+	2852.7[@] *12*	100[@]	617.518	2^+					
3471.32	2^+ to 6^+	1389.7 *3*	100	2081.64	4^+					
		2055.8 *3*	100	1415.480	4^+					
3478.58	0^+,1,2^+	2166.06 *10*	100	1312.390	2^+					
		2861.0 *1*	37 *5*	617.518	2^+					
		3479.2[b] *3*	100[b]	0.0	0^+					
3478.7	0^+ to 4^+	1322.0[@] *10*	100[@] *17*	2156.18	2^+					
		2863.0[@] *20*	33[@] *17*	617.518	2^+					
3487.55	$(4)^+$	2869.99 *10*	100	617.518	2^+	E2		8.60×10^{-4}		B(E2)(W.u.)=1.09 *23* α(K)=0.0001308 *19*; α(L)=1.498×10^{-5} *21*; α(M)=2.86×10^{-6} *4* α(N)=5.11×10^{-7} *8*; α(O)=3.05×10^{-8} *5*; α(IPF)=0.000711 *10*
3489.85	2^+,3,4^+	1368.12 *10*	39 *4*	2121.62	2^+					
		2074.36 *10*	100 *4*	1415.480	4^+					
		2872.4 *1*	55.8 *10*	617.518	2^+					
3493.92	(6,7)	1326.15[#] *12*	100[#]	2167.76	6^+	D(+Q)[‡]	+0.02[‡] *3*			Mult.: A_2=−0.21 *3* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
3500.45	0^+ to 3^+	2882.85 *10*	100	617.518	2^+					
3511.6	3^- to 7^-	1138.4 *3*	100	2373.19	5^-					
3512.97	$(1,2,3)^+$	2895.23 *10*	100	617.518	2^+	M1+E2	−0.18 *6*	8.60×10^{-4}		B(M1)(W.u.)=0.009 *3*; B(E2)(W.u.)=0.027 *20* α(K)=0.0001314 *19*; α(L)=1.507×10^{-5} *22*; α(M)=2.88×10^{-6} *4*

$^{112}_{48}$Cd$_{64}$-49

Adopted Levels, Gammas (continued)

$\gamma(^{112}Cd)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.†	δ†f	αe	Comments
									α(N)=5.15×10^{-7} *8*; α(O)=3.09×10^{-8} *5*; α(IPF)=0.000710 *10*
3522.51	0^+ to 4^+	2904.95 *10*	100	617.518	2^+				
3528.92	7^-	593.45# *10*	82# *11*	2935.50	7^-	M1+E2‡	+1.0‡ *5*	0.00427 *11*	α(K)=0.00371 *10*; α(L)=0.000457 *7*; α(M)=8.76×10^{-5} *13* α(N)=1.556×10^{-5} *23*; α(O)=8.7×10^{-7} *4* Mult.: A_2=+0.51 *13* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).
		735.08# *10*	100#	2793.80	7^-	M1+E2‡	−0.11‡ *6*	0.00267	α(K)=0.00233 *4*; α(L)=0.000276 *4*; α(M)=5.28×10^{-5} *8* α(N)=9.43×10^{-6} *14*; α(O)=5.57×10^{-7} *8* Mult.: A_2=+0.12 *7* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).
3530.90		1525.69 *4*	100	2005.200	3^-				
3531.32	4^+	2218.9 *1*		1312.390	2^+				
		2913.77 *10*	100	617.518	2^+	M1+E2	−0.18 *+10−9*	8.66×10^{-4}	α(K)=0.0001298 *19*; α(L)=1.489×10^{-5} *21*; α(M)=2.84×10^{-6} *4* α(N)=5.08×10^{-7} *8*; α(O)=3.06×10^{-8} *5*; α(IPF)=0.000718 *10* B(M1)(W.u.)=0.011 *4*; B(E2)(W.u.)=0.03 *+4−3*
3540.24	1,2^+	2922.72 *10*	100 *7*	617.518	2^+				
		3539.8b *4*	24b *6*	0.0	0^+				
3542.84	8^+	621.41# *15*	78# *8*	2921.53	6^+	E2		0.00364	α(K)=0.00315 *5*; α(L)=0.000400 *6*; α(M)=7.68×10^{-5} *11* α(N)=1.358×10^{-5} *19*; α(O)=7.25×10^{-7} *11* Mult.: A_2=0.26 *10*; A_4=−0.26 *13* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
		1375.02# *10*	100# *6*	2167.76	6^+	E2		6.22×10^{-4}	α(K)=0.000507 *7*; α(L)=5.97×10^{-5} *9*; α(M)=1.141×10^{-5} *16* α(N)=2.03×10^{-6} *3*; α(O)=1.185×10^{-7} *17*; α(IPF)=4.19×10^{-5} *6* Mult.: A_2=0.31 *3*; A_4=−0.07 *4* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
3556.88	(1,2^+)	3556.78 *12*	100	0.0	0^+				
3557.33	$(3)^-$	2939.77 *10*	100	617.518	2^+	[E1]		1.27×10^{-3}	α(K)=7.36×10^{-5} *11*; α(L)=8.34×10^{-6} *12*; α(M)=1.588×10^{-6} *23* α(N)=2.84×10^{-7} *4*; α(O)=1.700×10^{-8} *24*; α(IPF)=0.001184 *17* B(E1)(W.u.)=0.00016 *7*
3568.05	2^+	2099.17 *10*	100 *5*	1468.822	2^+	M1+E2	≤+0.29	6.10×10^{-4}	α(K)=0.000243 *4*; α(L)=2.81×10^{-5} *4*;

From ENSDF

$^{112}_{48}Cd_{64}$-50

$\gamma(^{112}$Cd) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ[†f]	α[e]	Comments
									α(M)=5.36×10^{-6} *8* α(N)=9.60×10^{-7} *14*; α(O)=5.75×10^{-8} *9*; α(IPF)=0.000332 *5* B(M1)(W.u.)>0.011; B(E2)(W.u.)<0.24 δ: Other: +2.3 *+29−9* from $\gamma(\theta)$ in ^{112}Cd(n,n′γ) (2001Ga44).
3568.05	2$^+$	2950.52 *12*	94 *4*	617.518	2$^+$	M1+E2	+1.6 *+12−8*	8.86×10^{-4}	α(K)=0.0001254 *19*; α(L)=1.436×10^{-5} *22*; α(M)=2.74×10^{-6} *5* α(N)=4.90×10^{-7} *8*; α(O)=2.93×10^{-8} *5*; α(IPF)=0.000743 *12* B(M1)(W.u.)=0.0014 *+15−14*; B(E2)(W.u.)=0.32 *15* δ: Other: +0.15 *+40−20* from $\gamma(\theta)$ in ^{112}Cd(n,n′γ) 2001Ga44.
		3568.00 *10*	75 *5*	0.0	0$^+$	E2		1.10×10^{-3}	B(E2)(W.u.)=0.137 *25* α(K)=9.10×10^{-5} *13*; α(L)=1.038×10^{-5} *15*; α(M)=1.98×10^{-6} *3* α(N)=3.54×10^{-7} *5*; α(O)=2.12×10^{-8} *3*; α(IPF)=0.001000 *14*
3571.05	9$^-$	252.88[#] *10*	100[#] *6*	3318.09	9$^-$	M1+E2[‡]	+0.82[‡] *13*	0.0453 *18*	α(K)=0.0387 *14*; α(L)=0.0054 *3*; α(M)=0.00104 *6* α(N)=0.000181 *10*; α(O)=8.82×10^{-6} *24* Mult.: A_2=0.28 *4*; A_4=−0.11 *5* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09). δ: Other: −0.33 *14* in ^{110}Pd(α,2nγ) (1997Dr03).
		478.22[#g] *4*	[#]	3093.02	8$^-$	M1+E2	−0.10 *6*	0.00742	α(K)=0.00647 *9*; α(L)=0.000776 *11*; α(M)=0.0001487 *21* α(N)=2.66×10^{-5} *4*; α(O)=1.555×10^{-6} *22* E_γ: transition seen only in 1993De09. Mult.: A_0=3.74 *15*; A_2/A_0=−0.43 *8* (1993De09).
		635.7[#] *3*	51[#] *17*	2935.50	7$^-$	E2		0.00343	α(K)=0.00297 *5*; α(L)=0.000375 *6*; α(M)=7.21×10^{-5} *11* α(N)=1.275×10^{-5} *18*; α(O)=6.84×10^{-7} *10* Mult.: A_2=0.34 *3*; A_4=−0.12 *5* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
		777.36[#] *15*	76[#] *13*	2793.80	7$^-$	E2		0.00206	α(K)=0.00179 *3*; α(L)=0.000220 *3*; α(M)=4.22×10^{-5} *6* α(N)=7.49×10^{-6} *11*; α(O)=4.14×10^{-7} *6* Mult.: A_2=0.352 *10*; A_4=−0.120 *14* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
3572.28	(1,2$^+$)	3572.37[b] *23*	100[b]	0.0	0$^+$				
3574.49	0$^+$ to 4$^+$	2262.06 *10*	57 *4*	1312.390	2$^+$				

From ENSDF

$^{112}_{48}$Cd$_{64}$-51

$\gamma(^{112}Cd)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ[†f]	α[e]	Comments
3574.49	0^+ to 4^+	2956.96 *18*	100 *4*	617.518	2^+				
3577.2	0^+ to 4^+	2264.8 *3*	100	1312.390	2^+				
3577.55	2^+	2352.94[b] *19*	21.9[b] *19*	1224.341	0^+				
		2960.13[b] *16*	100[b] *4*	617.518	2^+				
		3577.53[b] *18*	18.1[b] *19*	0.0	0^+				
3579.44	0^+ to 4^+	2267.21 *10*	40 *3*	1312.390	2^+				
		2961.69 *10*	100	617.518	2^+				
3583.80	5,6,7	1416.03[#] *23*	100[#]	2167.76	6^+	D(+Q)[‡]	−0.06[‡] *4*		Mult.: A_2=−0.13 *26* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).
3594.64	$1,2^+$	2977.24 *14*	43 *4*	617.518	2^+				
		3594.49 *10*	100	0.0	0^+				
3598.81	$1^+,2^+,3^+$	2981.25 *10*	100	617.518	2^+	M1+E2	−0.16 *+8−10*	8.90×10^{-4}	α(K)=0.0001244 *18*; α(L)=1.427×10^{-5} *20*; α(M)=2.72×10^{-6} *4* α(N)=4.87×10^{-7} *7*; α(O)=2.93×10^{-8} *5*; α(IPF)=0.000748 *11* B(M1)(W.u.)=0.026 *7*; B(E2)(W.u.)=0.06 *6* δ: Other: −2.8 *+6−11* from G(θ) in 2001Ga44.
3608.91	$0^+,1,2,3^+$	2991.30 *10*	100	617.518	2^+				
3613.26	$1^+,2^+,3^+$	2143.97 *19*	96 *6*	1468.822	2^+				
		2995.85 *11*	100	617.518	2^+	M1+E2	+2.0 *+21−15*	9.03×10^{-4} *14*	α(K)=0.0001220 *20*; α(L)=1.396×10^{-5} *24*; α(M)=2.66×10^{-6} *5* α(N)=4.76×10^{-7} *9*; α(O)=2.85×10^{-8} *6*; α(IPF)=0.000764 *13* B(M1)(W.u.)=0.0008 *+15−8*; B(E2)(W.u.)=0.30 *+16−22*
3618.48	3^-	1613.8 *3*		2005.200	3^-				
		2202.7 *3*		1415.480	4^+				
		3000.83 *18*	100	617.518	2^+	[E1]		1.29×10^{-3}	α(K)=7.15×10^{-5} *10*; α(L)=8.10×10^{-6} *12*; α(M)=1.542×10^{-6} *22* α(N)=2.76×10^{-7} *4*; α(O)=1.651×10^{-8} *24*; α(IPF)=0.001213 *17* B(E1)(W.u.)=0.00018 *+6−18*
3622.18	0^+ to 4^+	3004.62 *11*	100	617.518	2^+				
3627.6	2^+ to 6^+	2212.1 *3*	100	1415.480	4^+				
3646.54	$0^+,1,2,3^+$	3028.88 *10*	100	617.518	2^+				
3652.18	$1,2^+$	3034.60 *10*	100 *4*	617.518	2^+				
		3652.07 *23*	19 *4*	0.0	0^+				
3658.74	8^-	340.50[#] *15*	100[#]	3318.09	9^-	M1+E2[‡]	−0.18[‡] *4*	0.0174 *3*	α(K)=0.01512 *22*; α(L)=0.00184 *3*; α(M)=0.000354 *6* α(N)=6.31×10^{-5} *10*; α(O)=3.64×10^{-6} *6* Mult.: A_2=0.09 *4* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).

$\gamma(^{112}$Cd) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[†]	δ[†f]	α[e]	Comments
3658.74	8^-	410.55[#] *10*		3248.25	7^-	M1+E2[‡]	0.50[‡] *25*	0.01103 *25*	α(K)=0.00957 *19*; α(L)=0.00118 *5*; α(M)=0.000227 *9* α(N)=4.04×10^{-5} *15*; α(O)=2.27×10^{-6} *4* Mult.: A_2=0.46 *9*; A_4=0.19 *13* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09). δ: from ^{110}Pd(α,2nγ) (1993De09); Other: 2.7 *10* in ^{110}Pd(α,2nγ) (1993De09).
3665.78	3^-	3048.22 *10*	100	617.518	2^+	[E1]		1.32×10^{-3}	α(K)=6.99×10^{-5} *10*; α(L)=7.92×10^{-6} *11*; α(M)=1.508×10^{-6} *22* α(N)=2.70×10^{-7} *4*; α(O)=1.615×10^{-8} *23*; α(IPF)=0.001236 *18* B(E1)(W.u.)=7.8×10^{-5} *15*
3676.73	0^+ to 4^+	2208.09 *11*	100 *4*	1468.822	2^+				
		3059.00 *10*	75 *4*	617.518	2^+				
3682.83	$1,2^+$	3682.76 *12*	100	0.0	0^+				
3684.02	10^+	802.98[#] *10*	100[#]	2881.02	8^+	E2		0.00190	α(K)=0.001651 *24*; α(L)=0.000203 *3*; α(M)=3.89×10^{-5} *6* α(N)=6.90×10^{-6} *10*; α(O)=3.83×10^{-7} *6* Mult.: A_2=+0.53 *16*, A_4=−0.48 *20* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).
3685.55	$6^-,7^-,8^-$	309.09[#] *10*	100[#]	3376.46	7^-	M1+E2[‡]	−0.29[‡] *9*	0.0226 *5*	α(K)=0.0196 *4*; α(L)=0.00243 *8*; α(M)=0.000468 *14* α(N)=8.32×10^{-5} *24*; α(O)=4.71×10^{-6} *8* Mult.: A_2=0.24 *2*; A_4=−0.04 *3* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
3687.93	$(1,2^+)$	3687.86 *10*	100	0.0	0^+				
3690.68	$(4)^+$	3073.12 *13*	100	617.518	2^+	[E2]		9.32×10^{-4}	α(K)=0.0001165 *17*; α(L)=1.333×10^{-5} *19*; α(M)=2.54×10^{-6} *4* α(N)=4.55×10^{-7} *7*; α(O)=2.72×10^{-8} *4*; α(IPF)=0.000799 *12* B(E2)(W.u.)=0.6 *+3−6*
3696.15	$0^+,1,2,3^+$	2383.81[b] *17*	100[b]	1312.390	2^+				
3697.74	$1^-,2,3,4^+$	1692.8 *3*		2005.200	3^-				
		3080.13 *12*	100	617.518	2^+				
3703.81	$1,2^+$	3703.74 *10*	100	0.0	0^+				
3707.45	$1^-,2,3^+$	840.71[b] *18*	40[b] *4*	2866.75	3^-				
		2395.00[b] *18*	57[b] *4*	1312.390	2^+				
		3090.04[b] *18*	100[b] *6*	617.518	2^+				
3719.75	$(2^+,3^+)$	2305.1 *3*	100	1415.480	4^+				
3723.25	$0^+,1,2,3^+$	3105.13 *24*	100	617.518	2^+				
3731.95	0^+ to 4^+	3114.39 *10*	100	617.518	2^+				

$^{112}_{48}Cd_{64}$-54

γ(^{112}Cd) (continued)

E_i(level)	J^π_i	E_γ †	I_γ †	E_f	J^π_f	Mult. †	δ † f	α e	$I_{(\gamma+ce)}$	Comments
3736.5	8^+	1165.0# *3*	100#	2571.47	6^+	E2		8.21×10^{-4}		α(K)=0.000713 *10*; α(L)=8.49×10^{-5} *12*; α(M)=1.624×10^{-5} *23* α(N)=2.89×10^{-6} *4*; α(O)=1.666×10^{-7} *24*; α(IPF)=3.47×10^{-6} *6* Mult.: A_2=0.36 *7*; A_4=−0.04 *9* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
3739.55	$(1,2,3)^+$	3121.99 *10*	100	617.518	2^+	M1+E2	−0.32 +*14*−*20*	9.41×10^{-4}		B(M1)(W.u.)=0.010 *4*; B(E2)(W.u.)=0.08 *8* α(K)=0.0001142 *16*; α(L)=1.309×10^{-5} *19*; α(M)=2.50×10^{-6} *4* α(N)=4.47×10^{-7} *7*; α(O)=2.69×10^{-8} *4*; α(IPF)=0.000810 *12*
3743.76	$(1,2,3)^+$	3126.22 *10*	100	617.518	2^+	M1+E2	−12 +*4*−*20*	9.51×10^{-4}		α(K)=0.0001132 *16*; α(L)=1.295×10^{-5} *19*; α(M)=2.47×10^{-6} *4* α(N)=4.42×10^{-7} *7*; α(O)=2.64×10^{-8} *4*; α(IPF)=0.000822 *12* B(M1)(W.u.)=9.E−5 *7*; B(E2)(W.u.)=1.09 *16*
3746.8	$(4)^+$	2331.3 *3*	100	1415.480	4^+					
3754.09	2^+ to 6^+	2338.58 *10*	100	1415.480	4^+					
3755.46	(2^+)	3755.39 *13*	100	0.0	0^+	[E2]		1.17×10^{-3}		α(K)=8.37×10^{-5} *12*; α(L)=9.54×10^{-6} *14*; α(M)=1.82×10^{-6} *3* α(N)=3.25×10^{-7} *5*; α(O)=1.95×10^{-8} *3*; α(IPF)=0.001073 *15* B(E2)(W.u.)=0.8 *3*
3763.95	$(4)^+$	3146.38 *10*	100	617.518	2^+	[E2]		9.58×10^{-4}		α(K)=0.0001120 *16*; α(L)=1.280×10^{-5} *18*; α(M)=2.44×10^{-6} *4* α(N)=4.37×10^{-7} *7*; α(O)=2.61×10^{-8} *4*; α(IPF)=0.000830 *12* B(E2)(W.u.)=0.55 *8*
3770.47	0^+ to 4^+	3152.90 *10*	100	617.518	2^+					
3783.197	$(1,2,3)^+$	3165.631 *10*	100	617.518	2^+	M1+E2	−2.7 +*10*−*14*	9.64×10^{-4}		B(M1)(W.u.)=0.0004 *4*; B(E2)(W.u.)=0.24 +*13*−*24* α(K)=0.0001109 *16*; α(L)=1.268×10^{-5} *18*; α(M)=2.42×10^{-6} *4* α(N)=4.33×10^{-7} *6*; α(O)=2.59×10^{-8} *4*; α(IPF)=0.000837 *12* δ: Other: −0.23 +*14*−*20* from $\gamma(\theta)$ in 2001Ga44.
3785.69	9^-	692.67# *10*	100#	3093.02	8^-					
3787.3	2^+	3787.2 *3*	100	0.0	0^+	E2		1.18×10^{-3}		α(K)=8.26×10^{-5} *12*; α(L)=9.41×10^{-6} *14*; α(M)=1.79×10^{-6} *3* α(N)=3.21×10^{-7} *5*; α(O)=1.93×10^{-8} *3*; α(IPF)=0.001085 *16*
3801.2	$(4)^+$	2385.7 *3*	100	1415.480	4^+					
3804.87	0^+ to 4^+	3187.30 *14*	100	617.518	2^+					

From ENSDF

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$\gamma(^{112}Cd)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.†	δ†f	αe	Comments
3809.39	10−	238.32# *10*		3571.05	9−	M1+E2		0.0433	α(K)=0.0376 *6*; α(L)=0.00461 *7*; α(M)=0.000885 *13* α(N)=0.0001579 *23*; α(O)=9.13×10−6 *13*
		491.30# *10*		3318.09	9−	M1+E2	−0.78 *35*	0.00697	α(K)=0.00605 *9*; α(L)=0.000751 *19*; α(M)=0.000144 *4* α(N)=2.56×10−5 *6*; α(O)=1.42×10−6 *3* Mult.,δ: A_2=−1.23 *5*; A_4=0.06 *5* from γγ(θ) in ^{110}Pd(α,2nγ) (1993De09).
		716.38# *10*		3093.02	8−	E2		0.00252	α(K)=0.00219 *3*; α(L)=0.000272 *4*; α(M)=5.22×10−5 *8* α(N)=9.25×10−6 *13*; α(O)=5.05×10−7 *7* Mult.: A_2=0.445 *24*; A_4=−0.139 *33* from γγ(θ) in ^{110}Pd(α,2nγ) (1993De09).
3810.04	1,2+	3809.97 *10*		0.0	0+				
3810.88	(3−)	3193.31 *10*	100	617.518	2+	[E1]		1.38×10−3	α(K)=6.55×10−5 *10*; α(L)=7.42×10−6 *11*; α(M)=1.413×10−6 *20* α(N)=2.53×10−7 *4*; α(O)=1.514×10−8 *22*; α(IPF)=0.001309 *19* B(E1)(W.u.)=0.00013 *+4−6*
3832.66	(4+)	3215.09 *11*	100	617.518	2+	[E2]		9.83×10−4	α(K)=0.0001080 *16*; α(L)=1.235×10−5 *18*; α(M)=2.35×10−6 *4* α(N)=4.21×10−7 *6*; α(O)=2.52×10−8 *4*; α(IPF)=0.000859 *12* B(E2)(W.u.)=2.3 *8*
3838.85	(1,2+)	3838.84b *24*	100b	0.0	0+				
3844.25	0+ to 4+	3226.68 *10*	100	617.518	2+				
3846.48	(1,2+)	3846.41 *10*	100	0.0	0+				
3854.4	2+	3854.3 *3*	100	0.0	0+	E2		1.20×10−3	α(K)=8.03×10−5 *12*; α(L)=9.14×10−6 *13*; α(M)=1.743×10−6 *25* α(N)=3.12×10−7 *5*; α(O)=1.87×10−8 *3*; α(IPF)=0.001110 *16*
3864.51	(4)+	2449.0 *1*	100	1415.480	4+				
3869.00	(1,2+)	3868.93 *10*	100 *11*	0.0	0+				
3878.62	0+ to 4+	3261.05 *13*	100	617.518	2+				
3892.48	0+,1,2,3+	2579.77b *23*	100b	1312.390	2+				
3913.69	9+	514.75# *10*		3398.88	8+	M1+E2	0.31 *7*	0.00620	α(K)=0.00540 *8*; α(L)=0.000651 *10*; α(M)=0.0001247 *18* α(N)=2.22×10−5 *4*; α(O)=1.292×10−6 *19* Mult.,δ: A_2=0.26 *6* from γγ(θ) in ^{110}Pd(α,2nγ) (1993De09).
		674.71# *10*		3239.04	7+	E2		0.00294	α(K)=0.00254 *4*; α(L)=0.000319 *5*; α(M)=6.13×10−5 *9* α(N)=1.084×10−5 *16*; α(O)=5.87×10−7 *9* Mult.: A_2=0.322 *14*; A_4=−0.15 *2* from γγ(θ) in ^{110}Pd(α,2nγ) (1993De09).
		1032.66# *10*		2881.02	8+	M1(+E2)	0.09 *7*	1.24×10−3	α(K)=0.001081 *16*; α(L)=0.0001267 *18*; α(M)=2.42×10−5 *4*

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Adopted Levels, Gammas (continued)

$\gamma(^{112}Cd)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[†]	δ[†f]	α[e]	Comments
									α(N)=4.33×10^{-6} *7*; α(O)=2.58×10^{-7} *4* Mult.,δ: A_2=−0.09 *4*; A_4=0.17 *5* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
3929.21	(0)$^+$	3311.64 *21*	100	617.518	2$^+$	[E2]		1.02×10^{-3}	α(K)=0.0001028 *15*; α(L)=1.175×10^{-5} *17*; α(M)=2.24×10^{-6} *4* α(N)=4.01×10^{-7} *6*; α(O)=2.40×10^{-8} *4*; α(IPF)=0.000899 *13* B(E2)(W.u.)>0.049
3930.78	12$^+$	608.5[#] *4*	100[#]	3322.40	10$^+$	E2		0.00385	α(K)=0.00333 *5*; α(L)=0.000424 *6*; α(M)=8.15×10^{-5} *12* α(N)=1.439×10^{-5} *21*; α(O)=7.66×10^{-7} *11* Mult.: A_2=0.340 *16*; A_4=−0.139 *22* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
3932.18	0$^+$ to 4$^+$	3314.61 *12*	100	617.518	2$^+$				
3933.07	(1,2$^+$)	3933.00 *13*	100	0.0	0$^+$				
3939.27	(4)$^+$	3321.70 *14*	100	617.518	2$^+$				
3951.57	1,2$^+$	3333.9[b] *10*	100[b] *5*	617.518	2$^+$				E_γ: a rounded off value and $\Delta E\gamma$=1.0 keV set by the evaluators.
		3951.4[b] *10*	12.5[b] *18*	0.0	0$^+$				E_γ: a rounded off value and $\Delta E\gamma$=1.0 keV set by the evaluators.
3963.8	(1,2$^+$)	3963.7 *4*	100	0.0	0$^+$				
3966.44	(9,10,11)$^+$	644.04[#] *10*		3322.40	10$^+$	M1+E2	−0.16 *2*	0.00363	α(K)=0.00317 *5*; α(L)=0.000377 *6*; α(M)=7.21×10^{-5} *11* α(N)=1.288×10^{-5} *18*; α(O)=7.59×10^{-7} *11* Mult.,δ: A_2=0.07 *3* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
3970.08	(1,2$^+$)	3352.4[b] *4*	44[b] *11*	617.518	2$^+$				E_γ: 3351.72 *20* in ^{112}Cd(n,n′γ).
		3970.0[b] *3*	100[b] *9*	0.0	0$^+$				
3990.40	10$^+$	306.23[#] *25*	21 *5*	3684.02	10$^+$	M1+E2[‡]	−0.50[‡] *10*	0.0241 *6*	α(K)=0.0209 *5*; α(L)=0.00266 *10*; α(M)=0.000512 *19* α(N)=9.1×10^{-5} *4*; α(O)=4.93×10^{-6} *9* Mult.: A_2=0.17 *2* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
		591.57[#] *10*	[#]	3398.88	8$^+$	E2		0.00416	α(K)=0.00360 *5*; α(L)=0.000459 *7*; α(M)=8.83×10^{-5} *13* α(N)=1.558×10^{-5} *22*; α(O)=8.25×10^{-7} *12* Mult.: A_2=0.397 *24*; A_4=−0.22 *4* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
		813.86[#] *15*	100[#] *12*	3176.47	8$^+$	(E2)		0.00184	α(K)=0.001598 *23*; α(L)=0.000196 *3*; α(M)=3.76×10^{-5} *6* α(N)=6.67×10^{-6} *10*; α(O)=3.71×10^{-7} *6* Mult.: A_2=+0.25 *22* from $\gamma\gamma(\theta)$ in

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$\gamma(^{112}Cd)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.†	δ†f	αe	Comments
									$^{110}Pd(\alpha,2n\gamma)$ (1997Dr03).

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Adopted Levels, Gammas (continued)

$\gamma(^{112}Cd)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[†]	δ[†f]	α[e]	Comments
3997.75	1,2$^+$	2685.83[b] *17*	100[b] *5*	1312.390	2$^+$				
		3997.6[b] *3*	27[b] *3*	0.0	0$^+$				
4003.9	(3$^-$)	3386.50[b] *31*	100[b]	617.518	2$^+$				
4033.88	(3$^-$)	3416.31 *20*	100	617.518	2$^+$	[E1]		1.49×10^{-3}	α(K)=5.97×10^{-5} *9*; α(L)=6.75×10^{-6} *10*; α(M)=1.287×10^{-6} *18* α(N)=2.30×10^{-7} *4*; α(O)=1.379×10^{-8} *20*; α(IPF)=0.001420 *20* B(E1)(W.u.)=0.00012 *+4−11*
4125.91	10$^+$	949.44[#] *10*	100[#]	3176.47	8$^+$	E2		1.28×10^{-3}	α(K)=0.001116 *16*; α(L)=0.0001349 *19*; α(M)=2.59×10^{-5} *4* α(N)=4.60×10^{-6} *7*; α(O)=2.60×10^{-7} *4* Mult.: A_2=0.33 *5*; A_4=−0.17 *7* from γγ(θ) in ^{110}Pd(α,2nγ) (1993De09).
4174.50	10$^+$	856.41[#] *10*	100[#]	3318.09	9$^-$	E1		6.57×10^{-4}	α(K)=0.000576 *8*; α(L)=6.68×10^{-5} *10*; α(M)=1.274×10^{-5} *18* α(N)=2.27×10^{-6} *4*; α(O)=1.325×10^{-7} *19* Mult.: A_2=−0.39 *5* from γγ(θ) in ^{110}Pd(α,2nγ) (1993De09). δ: possible M2 admixture of δ=−0.08 *5* ^{110}Pd(α,2nγ) (1993De09).
4283.47	10$^+$	740.63[#] *10*	100[#]	3542.84	8$^+$	E2		0.00232	α(K)=0.00201 *3*; α(L)=0.000249 *4*; α(M)=4.79×10^{-5} *7* α(N)=8.48×10^{-6} *12*; α(O)=4.65×10^{-7} *7* Mult.: A_2=0.43 *4*; A_4=−0.08 *6* from γγ(θ) in ^{110}Pd(α,2nγ) (1993De09).
4284.76	(9)$^-$	908.29[#] *10*	100[#]	3376.46	7$^-$	E2		1.42×10^{-3}	α(K)=0.001235 *18*; α(L)=0.0001499 *21*; α(M)=2.87×10^{-5} *4* α(N)=5.10×10^{-6} *8*; α(O)=2.87×10^{-7} *4* Mult.: A_2=0.27 *7*; A_4=−0.13 *10* from γγ(θ) in ^{110}Pd(α,2nγ) (1993De09).
4285.20	11$^-$	967.10[#] *10*	100[#]	3318.09	9$^-$	E2		1.23×10^{-3}	α(K)=0.001071 *15*; α(L)=0.0001292 *18*; α(M)=2.48×10^{-5} *4* α(N)=4.40×10^{-6} *7*; α(O)=2.49×10^{-7} *4* Mult.: A_2=0.285 *39*; A_4=−0.13 *6* from γγ(θ) in ^{110}Pd(α,2nγ) (1993De09).
4383.05	11$^+$	452.27[#] *10*		3930.78	12$^+$	M1(+E2)	0.05 *3*	0.00850	α(K)=0.00741 *11*; α(L)=0.000890 *13*; α(M)=0.0001706 *24* α(N)=3.05×10^{-5} *5*; α(O)=1.784×10^{-6} *25* Mult.: a_0/A_2=−0.28 *10* from γγ(θ) in ^{110}Pd(α,2nγ) (1993De09).
		1060.63[#] *10*		3322.40	10$^+$	M1+E2	0.75 *30*	0.00111 *4*	α(K)=0.00097 *4*; α(L)=0.000114 *4*; α(M)=2.18×10^{-5} *7* α(N)=3.90×10^{-6} *12*; α(O)=2.29×10^{-7} *9* Mult.,δ: A_2=0.67 *5*; A_4=0.16 *6* from γγ(θ) in ^{110}Pd(α,2nγ) (1993De09).
4385.16	10$^-$	1067.06[#] *10*	100[#]	3318.09	9$^-$	M1+E2	0.38 *10*	1.13×10^{-3} *2*	α(K)=0.000988 *17*; α(L)=0.0001161 *19*; α(M)=2.22×10^{-5} *4*

Adopted Levels, Gammas (continued)

$\gamma(^{112}Cd)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[†]	δ[†f]	α[e]	Comments
									α(N)=3.97×10^{-6} *7*; α(O)=2.35×10^{-7} *4* Mult.,δ: A_2=0.35 *10*; A_4=0.17 *12* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09). δ: Other: 3.6 *+20−10* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
4467.74	11$^-$	896.68[#] *10*	100[#]	3571.05	9$^-$	E2		1.46×10^{-3}	α(K)=0.001272 *18*; α(L)=0.0001546 *22*; α(M)=2.96×10^{-5} *5* α(N)=5.26×10^{-6} *8*; α(O)=2.96×10^{-7} *5* Mult.: A_2=0.364 *23*; A_4=−0.06 *3* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
4587.15	12$^+$	903.12[#] *10*	100[#]	3684.02	10$^+$	E2		1.44×10^{-3}	α(K)=0.001251 *18*; α(L)=0.0001520 *22*; α(M)=2.91×10^{-5} *4* α(N)=5.17×10^{-6} *8*; α(O)=2.91×10^{-7} *4* Mult.: A_2=0.367 *19*; A_4=−0.124 *28* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
4687.17	11$^+$	773.48[#] *10*	100[#]	3913.69	9$^+$	E2		0.00208	α(K)=0.00181 *3*; α(L)=0.000223 *4*; α(M)=4.28×10^{-5} *6* α(N)=7.59×10^{-6} *11*; α(O)=4.19×10^{-7} *6* Mult.: A_2=0.31 *6*; A_4=−0.09 *8* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
4871.47	14$^+$	940.68[#] *10*	100[#]	3930.78	12$^+$	E2		1.31×10^{-3}	α(K)=0.001140 *16*; α(L)=0.0001379 *20*; α(M)=2.64×10^{-5} *4* α(N)=4.70×10^{-6} *7*; α(O)=2.65×10^{-7} *4* Mult.: A_2=0.35 *3*; A_4=−0.14 *4* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
5106.22	(13)$^-$	1175.43[#] *10*	100[#]	3930.78	12$^+$	E1		3.84×10^{-4}	α(K)=0.000315 *5*; α(L)=3.63×10^{-5} *5*; α(M)=6.92×10^{-6} *10* α(N)=1.235×10^{-6} *18*; α(O)=7.28×10^{-8} *11*; α(IPF)=2.42×10^{-5} *4* Mult.: A_2=0.334 *18*; A_4=0.111 *25* from $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1993De09).
7633.0	1$^-$	4323[&] *6*	0.36 *18*	3312.24	(1$^-$,2)				
		4385[&] *6*	0.91 *18*	3246.86	(1,2)$^+$	E1		0.00186	α(K)=4.28×10^{-5} *6*; α(L)=4.83×10^{-6} *7*; α(M)=9.20×10^{-7} *13* α(N)=1.645×10^{-7} *24*; α(O)=9.88×10^{-9} *14*; α(IPF)=0.00181 *3* B(E1)(W.u.)=3.3×10^{-6} *9* Mult.: A_2=0.4 *1* (1971Mo31).
		4439[&] *6*	0.36 *18*	3190.06	0$^+$,1,2,3$^+$	E1(+M2)	≤0.6	0.00177 *11*	α(K)=5.0×10^{-5} *8*; α(L)=5.7×10^{-6} *10*;

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$\gamma(^{112}Cd)$ (continued)

E_i(level)	E_γ†	I_γ†	E_f	J^π_f	Mult.†	δ†f	αe	Comments
								α(M)=1.08×10^{-6} *18* α(N)=1.9×10^{-7} *4*; α(O)=1.16×10^{-8} *19*; α(IPF)=0.00172 *12* B(E1)(W.u.)>4.4×10^{-7}?; B(M2)(W.u.)<0.12? Mult.: A_2=0.16 *17* (1971Mo31).
7633.0	4522&	0.91 *18*	3109.98	(2)$^+$	E1(+M2)	>−0.28	0.0015 *4*	α(K)=7.E−5 *3*; α(L)=8.E−6 *3*; α(M)=1.6×10^{-6} *6* α(N)=2.8×10^{-7} *11*; α(O)=1.7×10^{-8} *7*; α(IPF)=0.0014 *4* B(E1)(W.u.)<3.5×10^{-6}?; B(M2)(W.u.)>0.036? Mult.: A_2=0.04 *18* (1971Mo31).
	4782& *3*	3.5 *4*	2852.90	2$^+$	E1(+M2)	≤+0.21	0.00197 *4*	α(K)=3.93×10^{-5} *12*; α(L)=4.44×10^{-6} *14*; α(M)=8.4×10^{-7} *3* α(N)=1.51×10^{-7} *5*; α(O)=9.1×10^{-9} *3*; α(IPF)=0.00193 *4* B(E1)(W.u.)>7.4×10^{-6}?; B(M2)(W.u.)<0.10? Mult.: A_2=0.11 *8* (1971Mo31).
	4800& *3*	3.09 *18*	2834.27	0$^+$	E1		0.00199	α(K)=3.81×10^{-5} *6*; α(L)=4.29×10^{-6} *6*; α(M)=8.18×10^{-7} *12* α(N)=1.462×10^{-7} *21*; α(O)=8.79×10^{-9} *13*; α(IPF)=0.00195 *3* B(E1)(W.u.)=8.6×10^{-6} *16* Mult.: A_2=0.5 *1* (1971Mo31).
	4909& *2*	0.36 *18*	2723.96	2$^+$	[E1]		0.00203	α(K)=3.70×10^{-5} *6*; α(L)=4.17×10^{-6} *6*; α(M)=7.94×10^{-7} *12* α(N)=1.421×10^{-7} *20*; α(O)=8.54×10^{-9} *12*; α(IPF)=0.00198 *3* B(E1)(W.u.)=9.E−7 *5*
	5126& *2*	0.73 *18*	2506.36	(2)$^+$	[E1]		0.00209	α(K)=3.50×10^{-5} *5*; α(L)=3.95×10^{-6} *6*; α(M)=7.52×10^{-7} *11* α(N)=1.344×10^{-7} *19*; α(O)=8.08×10^{-9} *12*; α(IPF)=0.00205 *3* B(E1)(W.u.)=1.7×10^{-6} *5*
	5337& *4*	0.91 *18*	2300.68	0$^+$	[E1]		0.00215	α(K)=3.33×10^{-5} *5*; α(L)=3.75×10^{-6} *6*; α(M)=7.14×10^{-7} *10* α(N)=1.277×10^{-7} *18*; α(O)=7.68×10^{-9} *11*; α(IPF)=0.00211 *3* B(E1)(W.u.)=1.8×10^{-6} *5*
	5403& *2*	0.36 *18*	2231.12	2$^+$	[E1]		0.00217	α(K)=3.28×10^{-5} *5*; α(L)=3.69×10^{-6} *6*; α(M)=7.03×10^{-7} *10* α(N)=1.257×10^{-7} *18*; α(O)=7.56×10^{-9} *11*; α(IPF)=0.00213 *3* B(E1)(W.u.)=7.E−7 *4*
	5477& *2*	0.73 *18*	2156.18	2$^+$	[E1]		0.00219	α(K)=3.22×10^{-5} *5*; α(L)=3.63×10^{-6} *5*; α(M)=6.91×10^{-7} *10* α(N)=1.236×10^{-7} *18*; α(O)=7.43×10^{-9} *11*; α(IPF)=0.00215 *3* B(E1)(W.u.)=1.4×10^{-6} *5*
	5512& *2*	1.27 *18*	2121.62	2$^+$	[E1]		0.00220	α(K)=3.20×10^{-5} *5*; α(L)=3.60×10^{-6} *5*; α(M)=6.86×10^{-7} *10* α(N)=1.226×10^{-7} *18*; α(O)=7.37×10^{-9} *11*; α(IPF)=0.00216 *3* B(E1)(W.u.)=2.3×10^{-6} *6*
	5551& *4*	0.91 *18*	2081.64	4$^+$	[E3]		1.40×10^{-3}	α(K)=6.29×10^{-5} *9*; α(L)=7.18×10^{-6} *10*; α(M)=1.370×10^{-6} *20* α(N)=2.45×10^{-7} *4*; α(O)=1.475×10^{-8} *21*; α(IPF)=0.001327 *19* B(E3)(W.u.)=10 *3*
	5763& *2*	21.1 *16*	1870.96	0$^+$	E1		0.00226	α(K)=3.02×10^{-5} *5*; α(L)=3.41×10^{-6} *5*; α(M)=6.48×10^{-7} *9* α(N)=1.159×10^{-7} *17*; α(O)=6.98×10^{-9} *10*; α(IPF)=0.00223 *4* B(E1)(W.u.)=3.4×10^{-5} *7* Mult.: A_2=0.51 *2* (1971Mo31).

$^{112}_{48}Cd_{64}$-60

$\gamma(^{112}Cd)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ[†f]	Comments
7633.0	1^-	6164[&] 2	3.5 4	1468.822	2^+	E1(+M2)	≤0.15	α(IPF)=0.00233 4 B(E1)(W.u.)>3.5×10^{-6}?; B(M2)(W.u.)<0.015? Mult.: A_2=0.08 7 (1971Mo31).
		6203[&] 3	4.0 4	1433.27	0^+	E1		α(IPF)=0.00235 4 B(E1)(W.u.)=5.1×10^{-6} 11 Mult.: A_2=0.57 7 (1971Mo31).
		6409[&] 2	14.6 11	1224.341	0^+	E1		α(IPF)=0.00240 4 B(E1)(W.u.)=1.7×10^{-5} 4 Mult.: A_2=0.52 4 (1971Mo31).
		7015 2	21.3 16	617.518	2^+	E1+M2	0.06 2	α(IPF)=0.00254 4 B(E1)(W.u.)=1.9×10^{-5} 4; B(M2)(W.u.)=0.006 5 Mult.: A_2=0.09 2 (1971Mo31).
		7632[&] 1	100 7	0.0	0^+	E1		α(IPF)=0.00267 4 B(E1)(W.u.)=6.9×10^{-5} 13 Mult.: from $\gamma(\theta)$ and γ(pol) (1970Mo26). Mult.: A_2=0.51 1 (1971Mo31).
(9394.20)	$(1)^+$	5390.5[c] 5	2.9[c] 6	4003.9	(3^-)			
		5397.8[c] 3	5.5[c] 9	3997.75	$1,2^+$			
		5423.9[c] 3	4.4[c] 6	3970.08	$(1,2^+)$			
		5442.48[c] 13	62.3[c] 16	3951.57	$1,2^+$			
		5498.9[c] 6	4.3[c] 12					
		5501.62[c] 17	24.5[c] 19	3892.48	$0^+,1,2,3^+$			
		5547.5[c] 4	5.3[c] 8	3846.48	$(1,2^+)$			
		5555.6[c] 6	2.6[c] 6	3838.85	$(1,2^+)$			
		5650.8[c] 5	3.4[c] 8	3743.76	$(1,2,3)^+$			
		5670.24[c] 24	6.2[c] 7	3723.25	$0^+,1,2,3^+$			
		5674.88[c] 25	5.9[c] 7	3719.75	$(2^+,3^+)$			
		5686.66[c] 14	62.6[c] 19	3707.45	$1^-,2,3^+$			
		5697.93[c] 13	58.7[c] 19	3696.15	$0^+,1,2,3^+$			
		5741.76[c] 18	14.3[c] 8	3652.18	$1,2^+$			
		5746.95[c] 24	7.5[c] 7	3646.54	$0^+,1,2,3^+$			
		5784.3[c] 4	4.5[c] 8	3608.91	$0^+,1,2,3^+$			
		5822.2[c] 4	4.7[c] 7	3572.28	$(1,2^+)$			
		5825.99[c] 20	11.3[c] 9	3568.05	2^+			
		5837.08[c] 18	11.0[c] 7	3556.88	$(1,2^+)$			
		5853.86[c] 21	13.6[c] 13	3540.24	$1,2^+$			
		5879.4[c] 3	4.4[c] 6	3512.97	$(1,2,3)^+$			
		5893.51[c] 13	30.5[c] 10	3500.45	0^+ to 3^+			
		5914.9[c] 3	5.7[c] 7	3478.58	$0^+,1,2^+$			
		5938.41[c] 14	35.6[c] 13	3455.48	$0^+,1,2$			

$^{112}_{48}Cd_{64}$-61

Adopted Levels, Gammas (continued)

$\gamma(^{112}Cd)$ (continued)

E_i(level)	J^{π}_i	E_γ[†]	I_γ[†]	E_f	J^{π}_f
(9394.20)	(1)$^+$	5942.00[c] *10*	8.7[c] *11*	3452.47	2$^+$
		5965.00[c] *10*	3.9[c] *5*	3428.87	2$^+$
		6000.49[c] *13*	28.8[c] *10*	3393.45	(1,2$^+$)
		6015.63[c] *15*	25.7[c] *10*	3378.52	(2)$^+$
		6030.58[c] *16*	12.1[c] *7*	3363.55	2$^+$
		6090.77[c] *16*	22.3[c] *13*	3303.24	(2,3)$^+$
		6140.26[c] *16*	14.5[c] *8*	3254.21	(0$^+$,1,2)
		6150.4[c] *4*	2.9[c] *5*	3242.64	2$^+$
		6162.45[c] *16*	13.0[c] *7*	3231.59	1$^+$
		6203.94[c] *15*	18.8[c] *9*	3190.06	0$^+$,1,2,3$^+$
		6224.68[c] *15*	20.1[c] *9*	3169.46	2$^+$
		6230.36[c] *14*	27.7[c] *11*	3163.51	2$^+$
		6258.35[c] *19*	41[c] *5*	3135.84	(2,3$^+$)
		6260.63[c] *25*	29[c] *5*	3133.42	1$^-$
		6282.6[c] *3*	8.7[c] *8*	3109.98	(2)$^+$
		6328.5[c] *3*	6.4[c] *8*	3066.23	(2,3)$^-$
		6448.4[c] *3*	2.7[c] *4*	2944.94	2$^+$
		6463.7[c] *6*	1.4[c] *3*	2931.46	1$^+$
		6559.8[c] *6*	2.7[c] *6*	2834.27	0$^+$
		6564.67[c] *13*	85[c] *3*	2829.19	1$^-$
(9394.20)	(1)$^+$	6627.97[c] *15*	3.0[c] *7*	2765.72	2$^+$
		6720.8[c] *6*	3.0[c] *7*	2674.00	2$^+$
		6725.22[c] *15*	38.1[c] *19*	2668.92	(2)$^-$
		6832.3[c] *5*	3.4[c] *5*	2561.27	(1,2$^+$)
		6862.10[c] *21*	9.5[c] *7*	2532.20	2$^+$
		6887.26[c] *13*	100[c] *4*	2506.70	1$^-$
		6991.18[c] *23*	6.1[c] *6*	2402.98	3$^+$
		7093.29[c] *17*	10.3[c] *7*	2300.68	0$^+$
		7162.1[c] *5*	2.3[c] *5*	2231.12	2$^+$
		7237.56[c] *23*	6.1[c] *6*	2156.18	2$^+$
		7272.28[c] *17*	12.7[c] *8*	2121.62	2$^+$
		7328.6[c] *7*	1.5[c] *5*	2064.53	3$^+$
		7522.80[c] *25*	5.9[c] *6*	1870.96	0$^+$
		7924.8[c] *4*	1.9[c] *3*	1468.822	2$^+$
		7961.03[c] *11*	0.45[c] *19*	1433.27	0$^+$
		8081.34[c] *14*	16.8[c] *12*	1312.390	2$^+$
		8169.41[c] *23*	8.8[c] *8*	1224.341	0$^+$
		8776.11[c] *14*	25.8[c] *3*	617.518	2$^+$
		9393.63[c] *18*	4.1[c] *5*	0.0	0$^+$

[†] From ^{112}Cd(n,n′γ), unless otherwise stated. Eγ′s were rounded off by the evaluators and ΔEγ=0.10 was set by the evaluators in cases where the authors quoted ΔEγ<0.10 keV.

[‡] From $\gamma\gamma(\theta)$ in ^{110}Pd(α,2nγ) (1997Dr03).

[#] From ^{110}Pd(α,2nγ). ΔEγ=0.10 was set by the evaluators in cases where the authors quoted ΔEγ<0.10 keV.

[@] From ^{112}Ag β^- decay (3.130 h).

[&] From ^{112}Cd(γ,γ′); Mult and δ based on $\gamma(\theta)$ in 1971Mo31, where applicable.

[a] From ^{112}Cd(γ, pol γ′).

[b] From ^{111}Cd(n,γ) E=th:secondary. ΔEγ=0.10 was set by the evaluators in cases where the authors quoted ΔEγ<0.10 keV, unless value measured with a curved crustal spectrometer.

[c] From ^{111}Cd(n,γ) E=th:primary.

[d] From curved crustal spectrometer measurements in ^{111}Cd(n,γ) E=th:secondary (1997Dr03).

[e] Additional information 1.

[f] If no value given it was assumed δ=0.00 for E2/M1, δ=1.00 for E3/M2 and δ=0.10 for the other multipolarities.

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

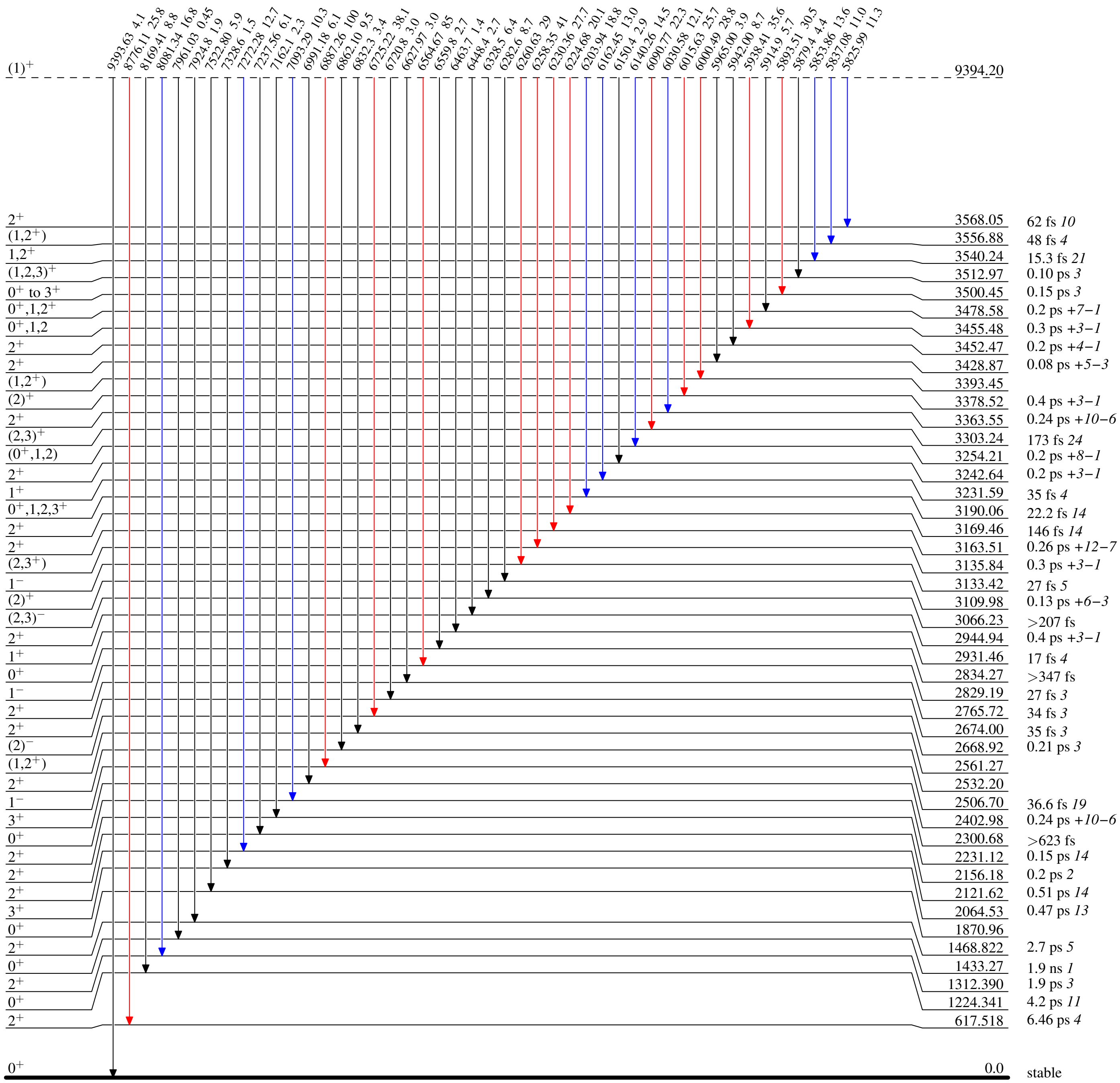
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Type not specified

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



$^{112}_{48}Cd_{64}$

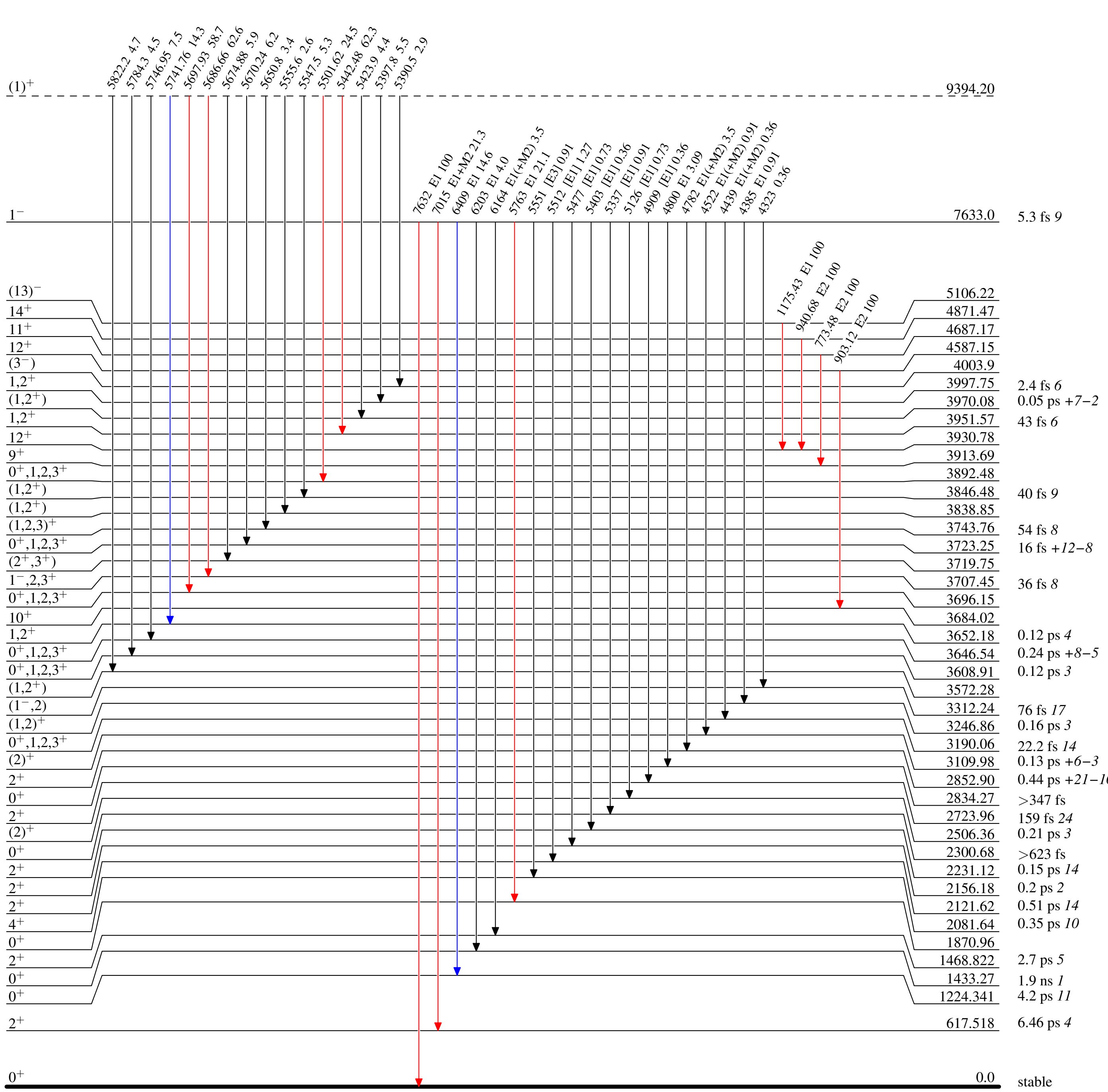
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

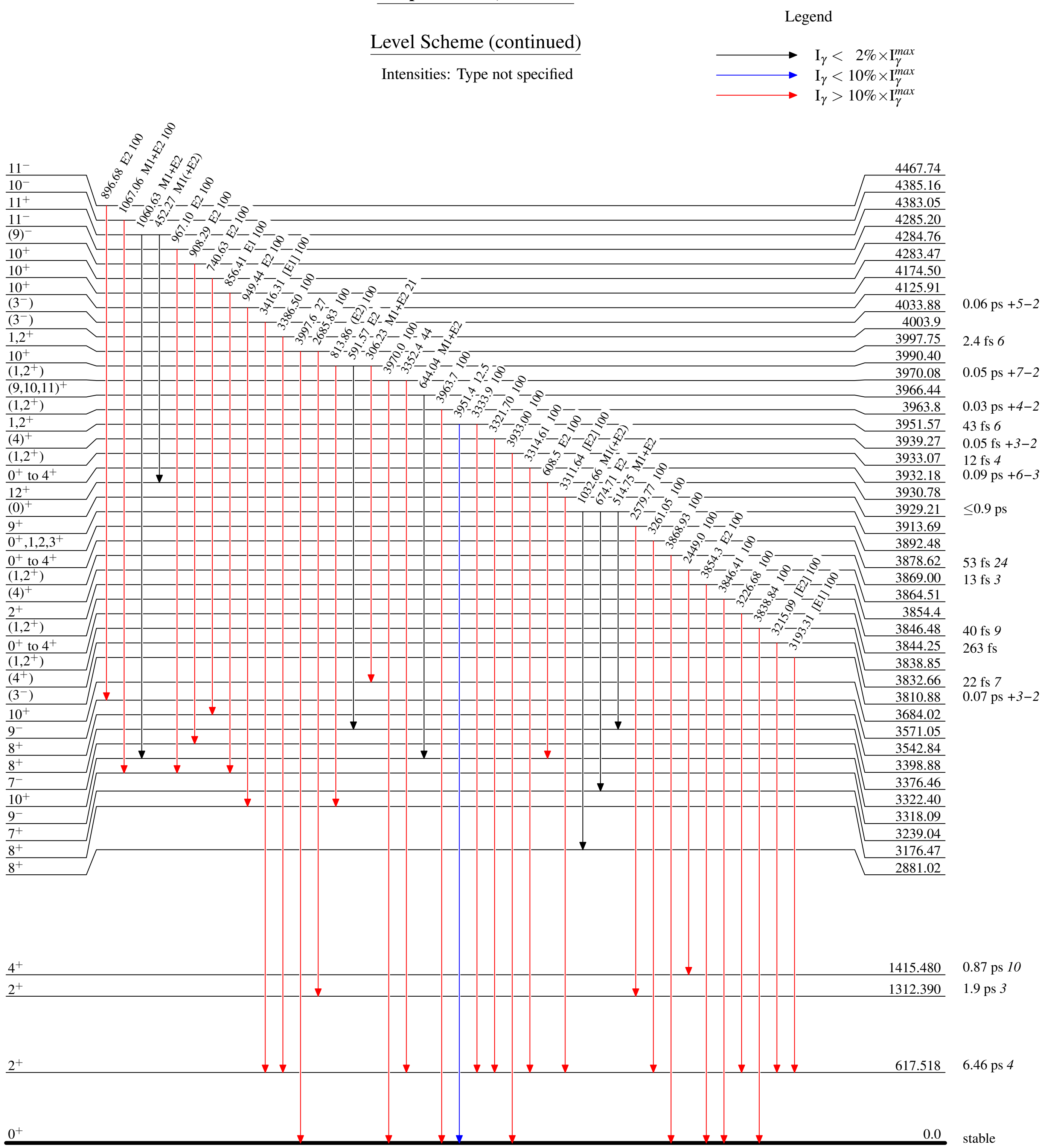
Legend

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



$^{112}_{48}$Cd$_{64}$

Adopted Levels, Gammas

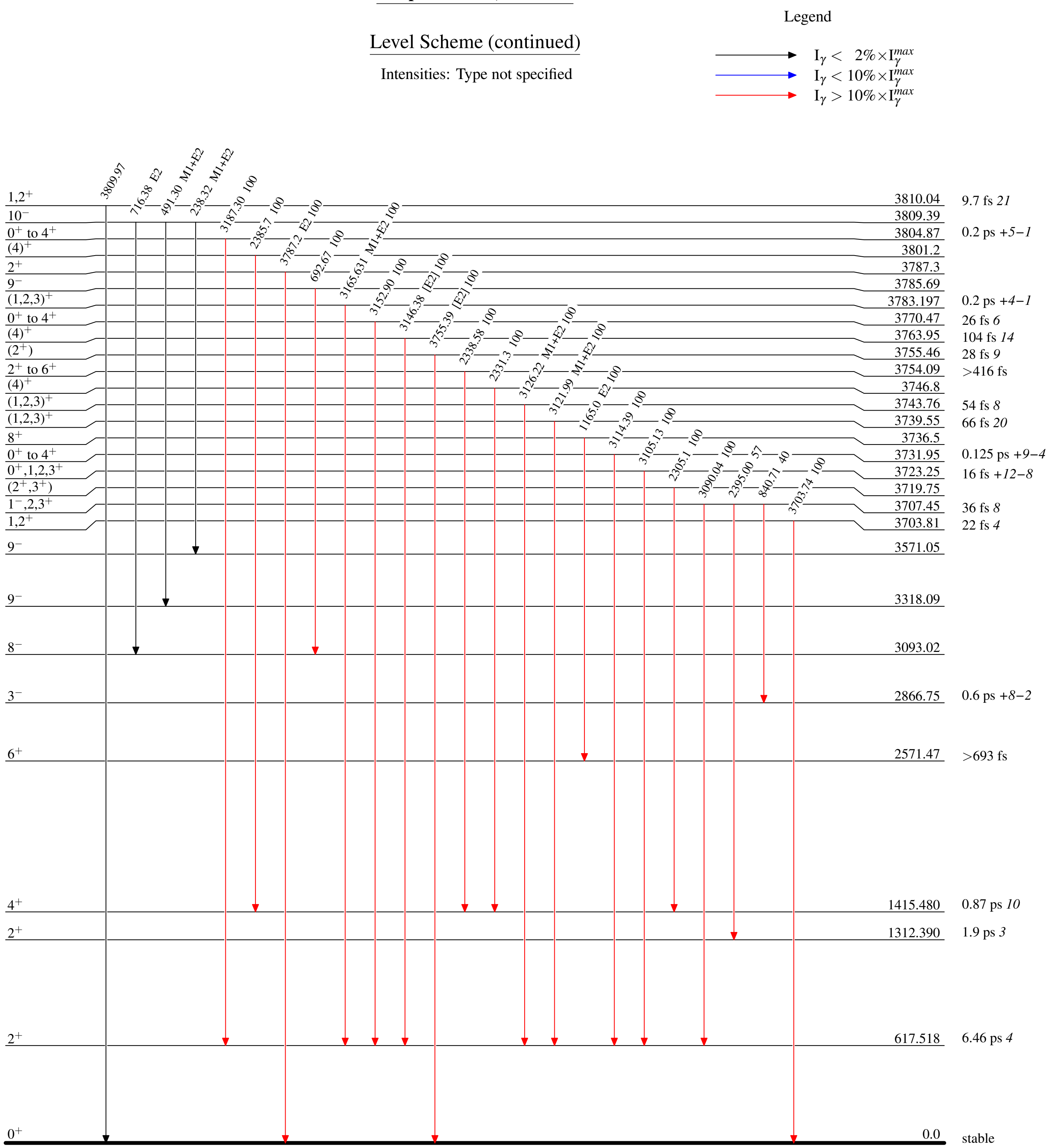


$^{112}_{48}Cd_{64}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified



$^{112}_{48}Cd_{64}$

Adopted Levels, Gammas

Level Scheme (continued)

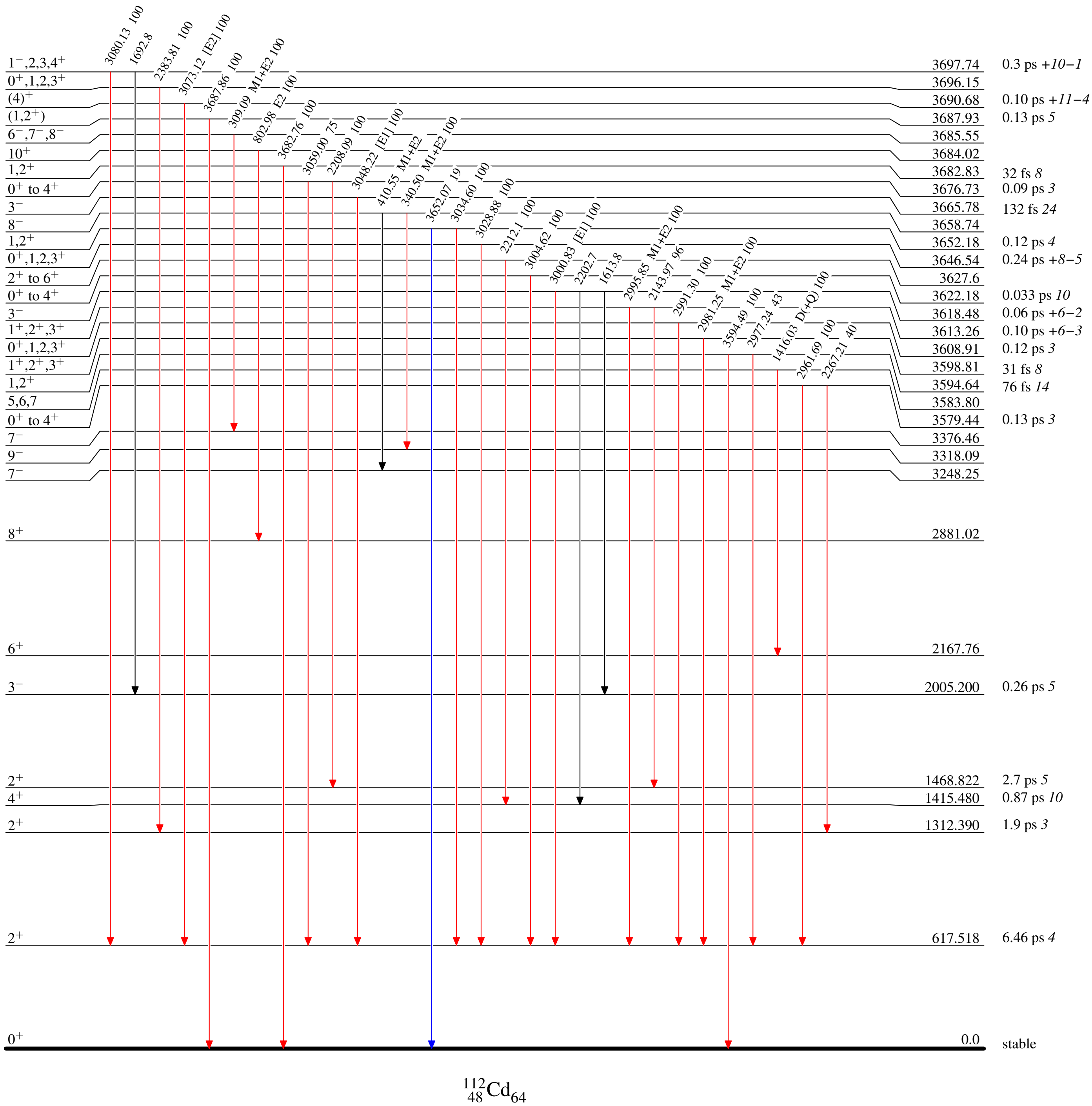
Intensities: Type not specified

Legend

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

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

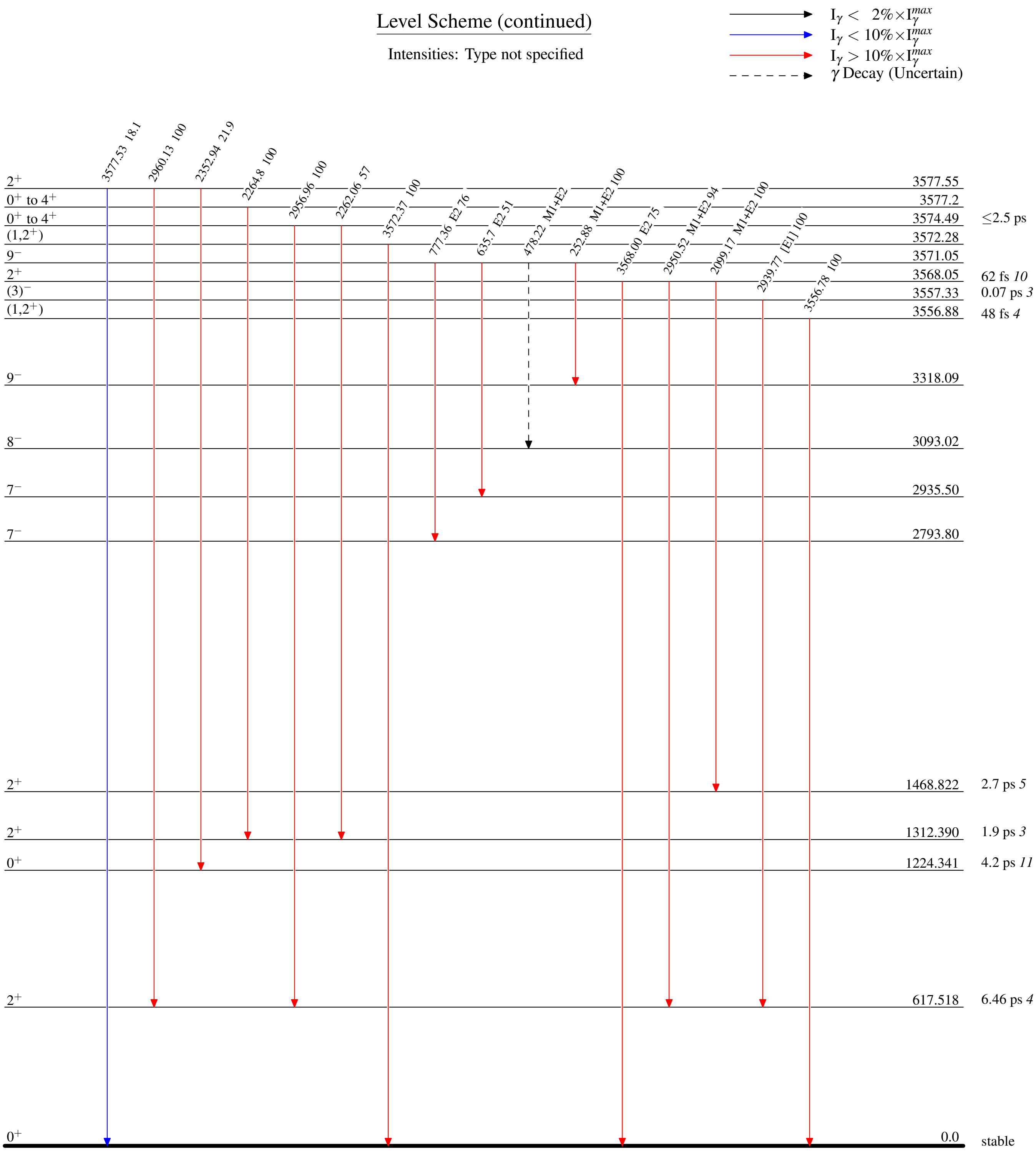
$I_\gamma > 10\% \times I_\gamma^{max}$



Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

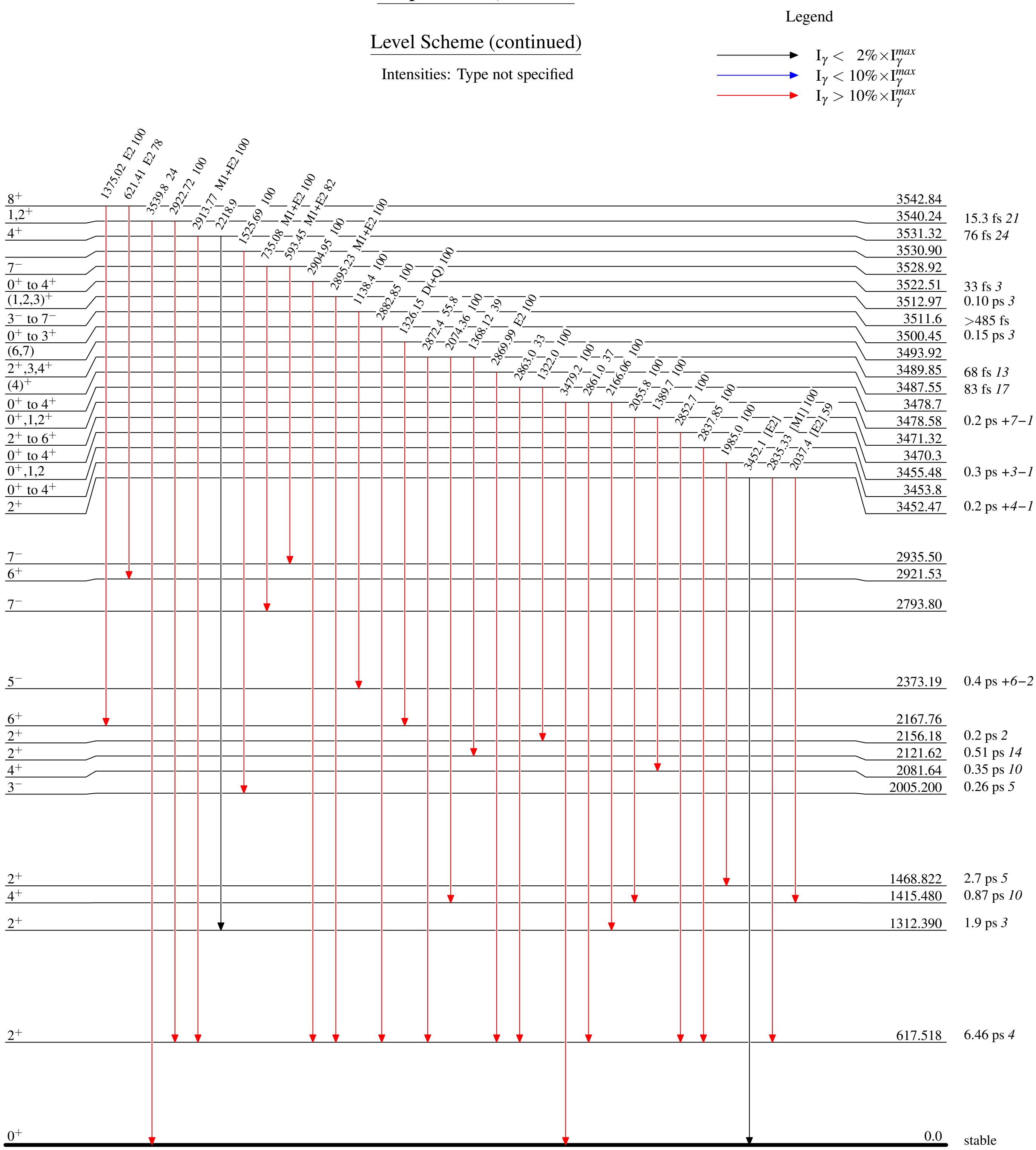


$^{112}_{48}Cd_{64}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified



Adopted Levels, Gammas

Level Scheme (continued)

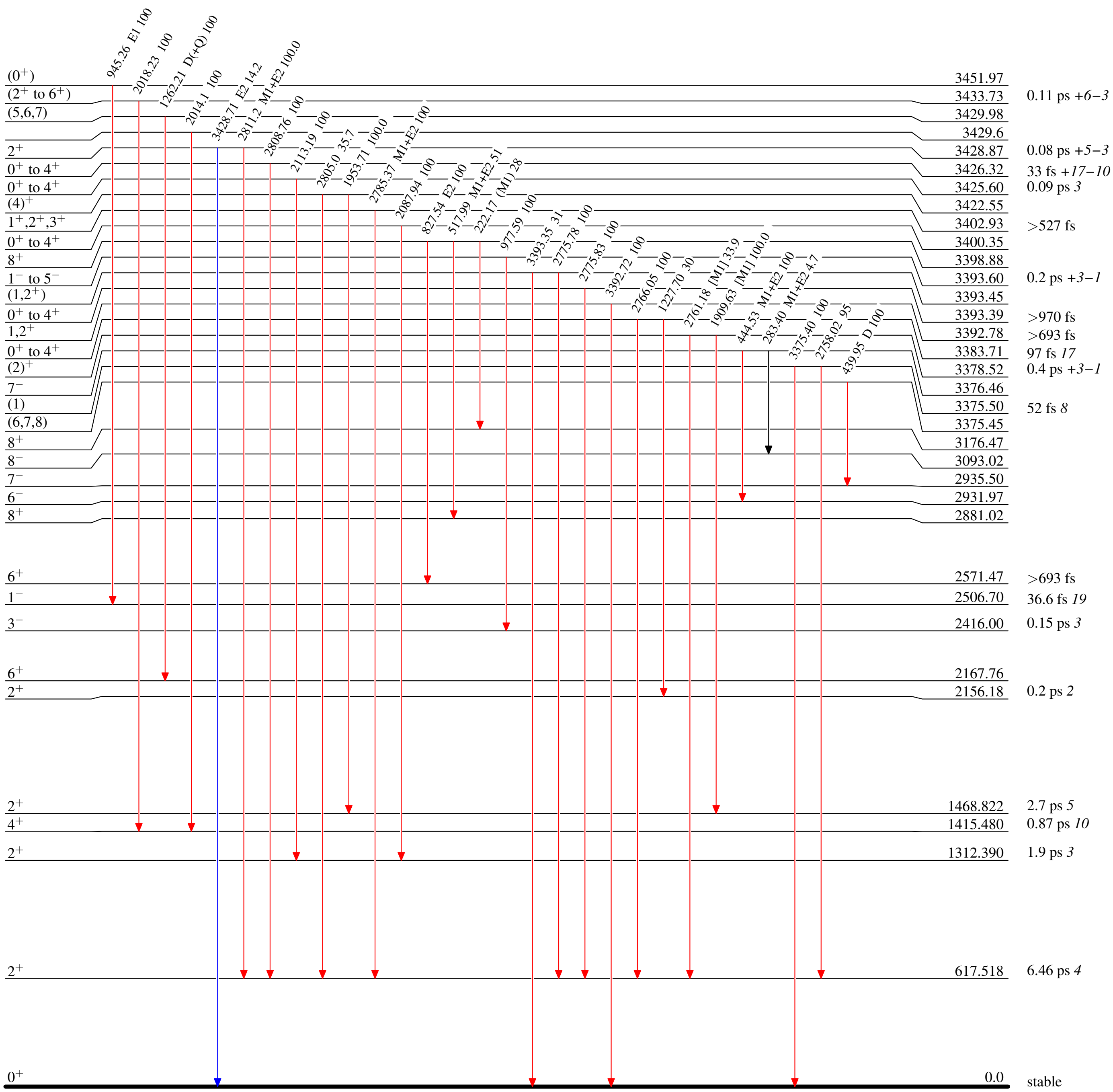
Intensities: Type not specified

Legend

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

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

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

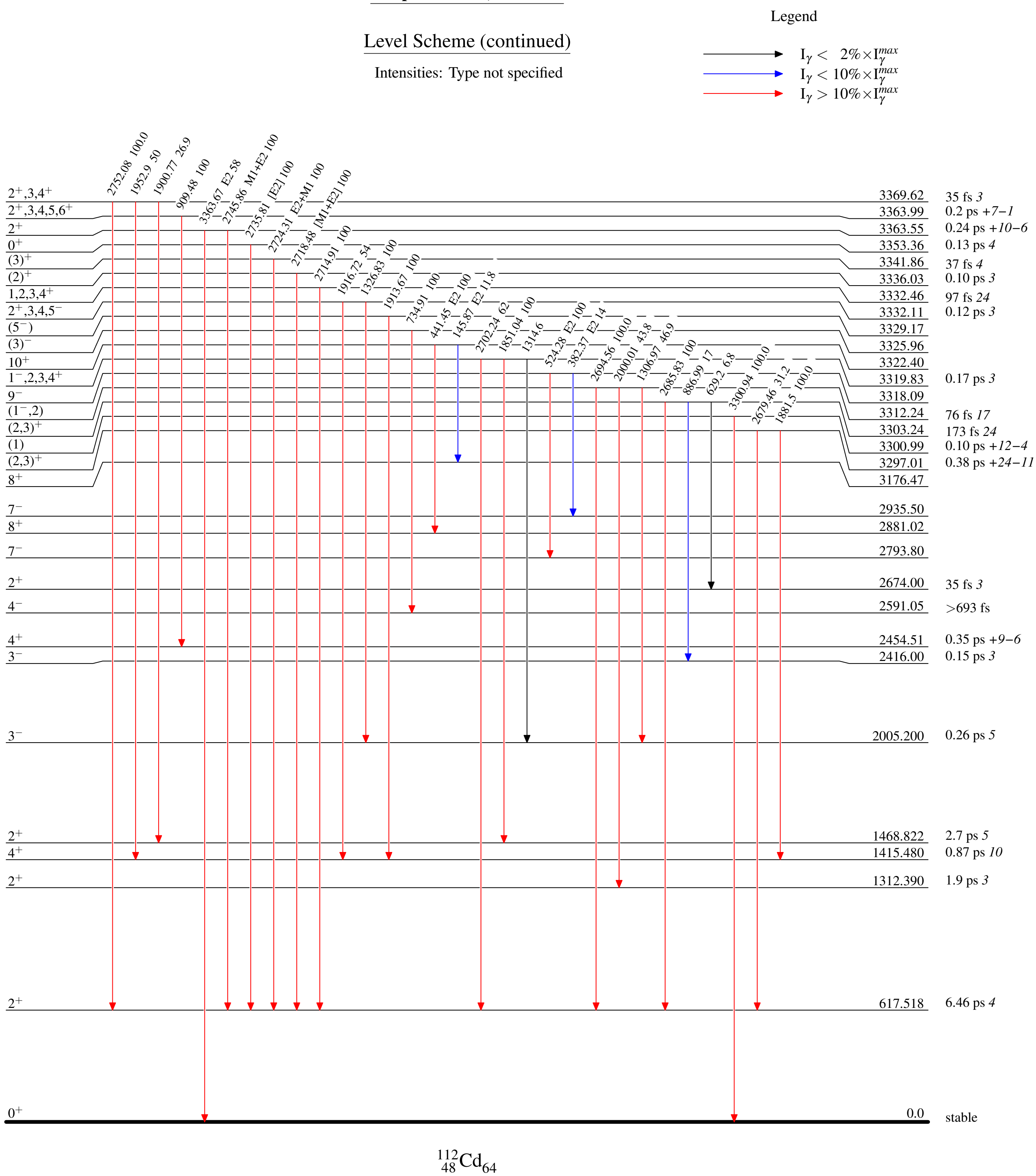


$^{112}_{48}Cd_{64}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified



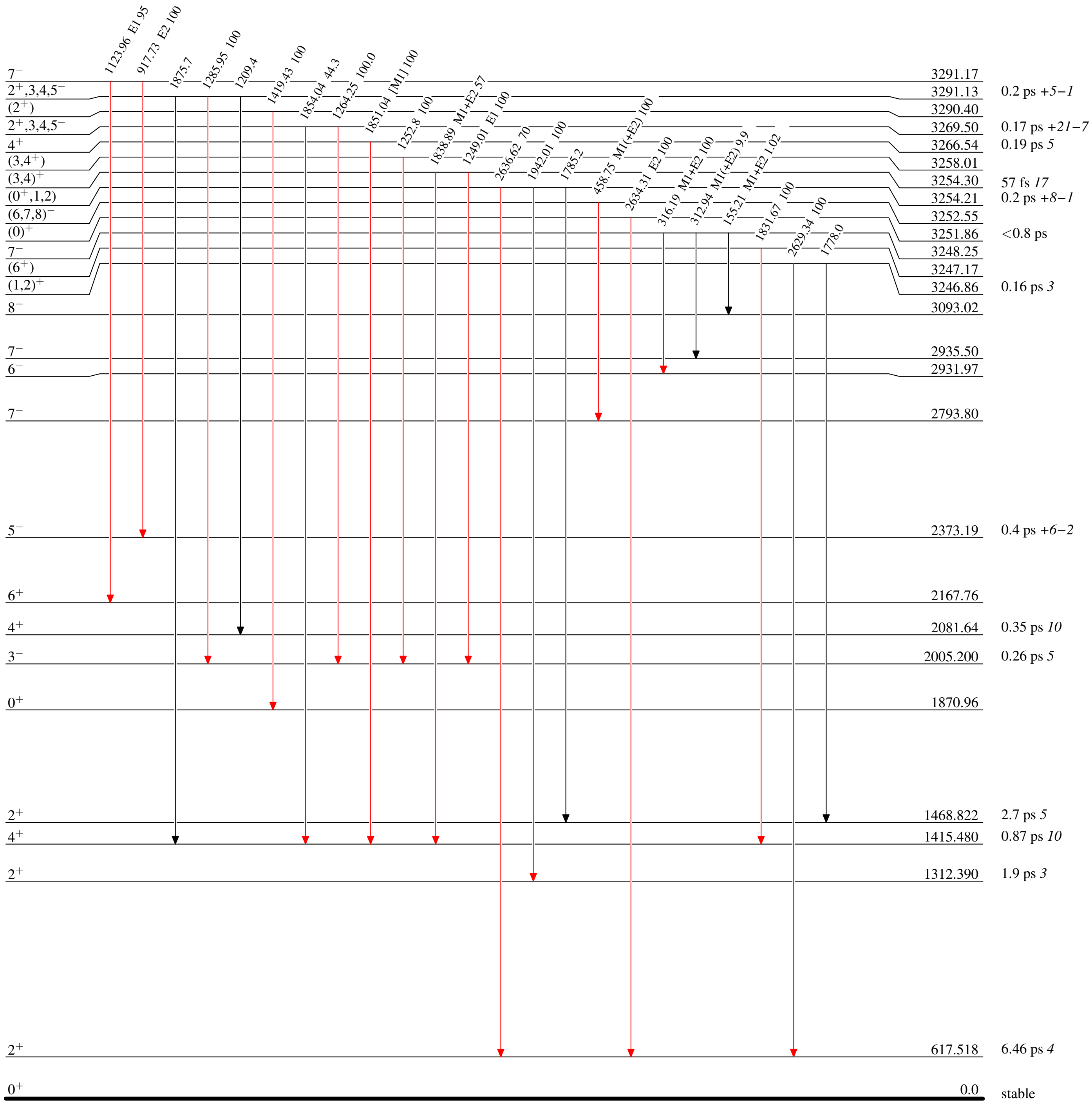
Adopted Levels, Gammas

Legend

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

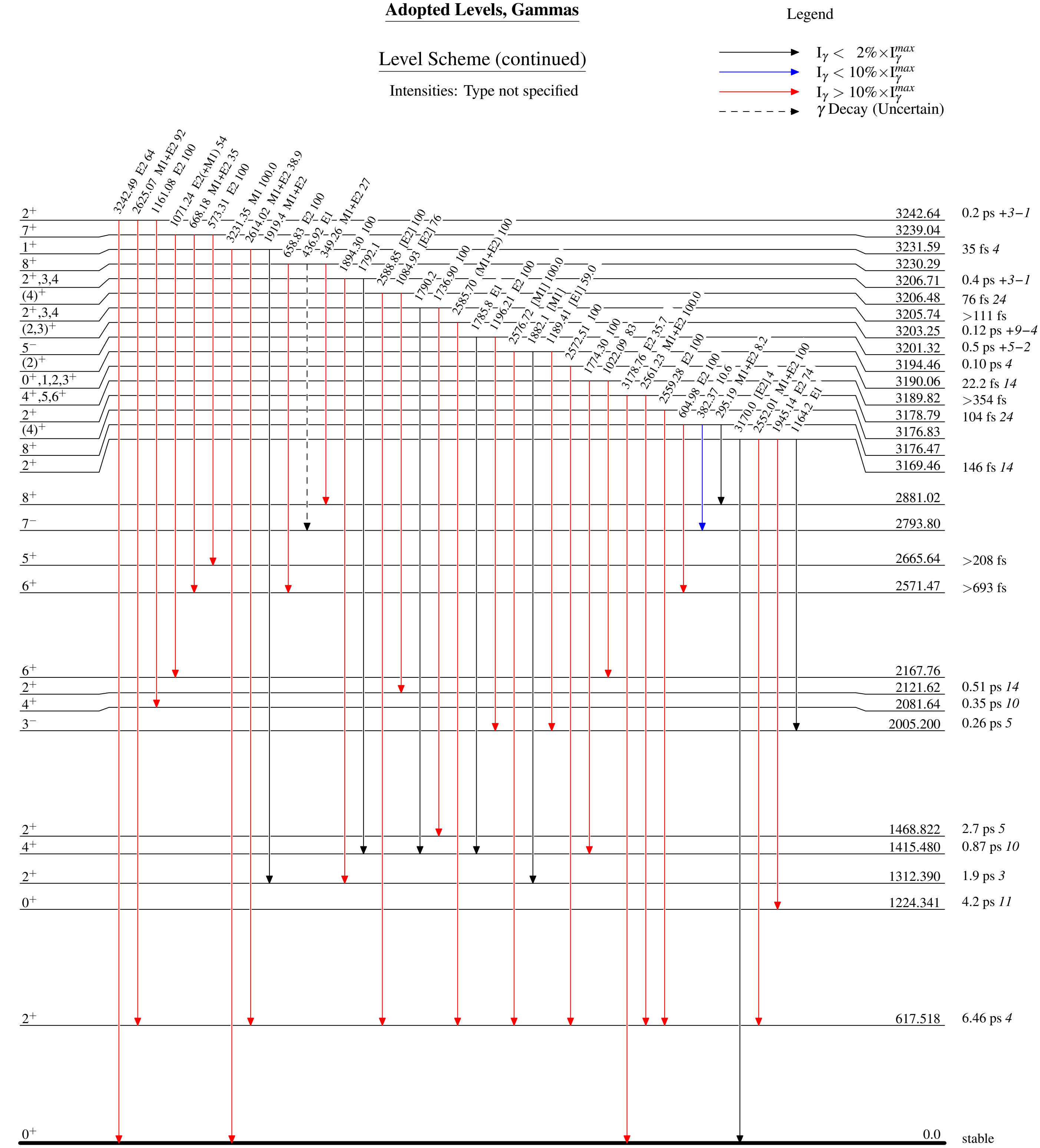
Level Scheme (continued)

Intensities: Type not specified



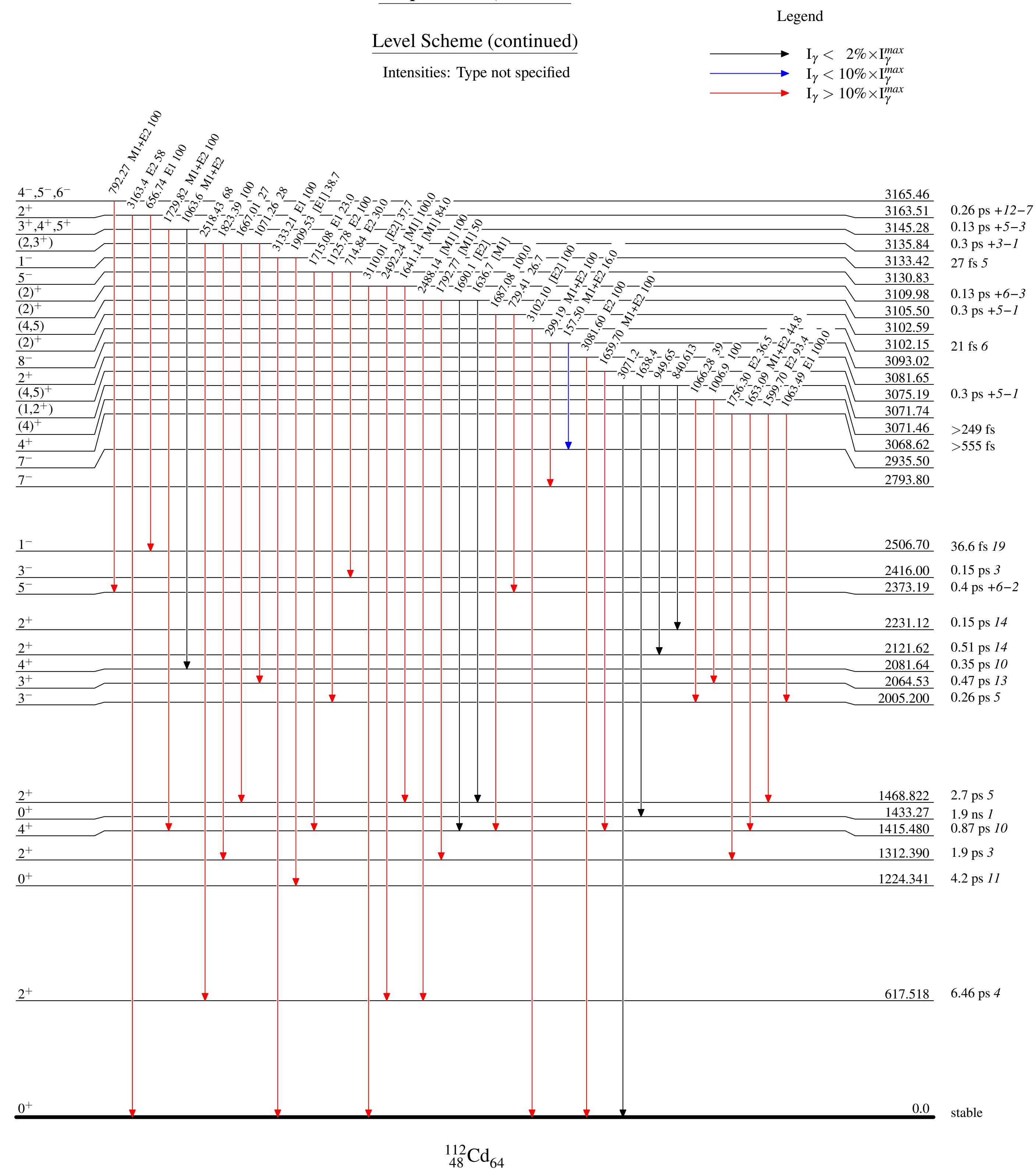
$^{112}_{48}Cd_{64}$

Adopted Levels, Gammas



$^{112}_{48}Cd_{64}$

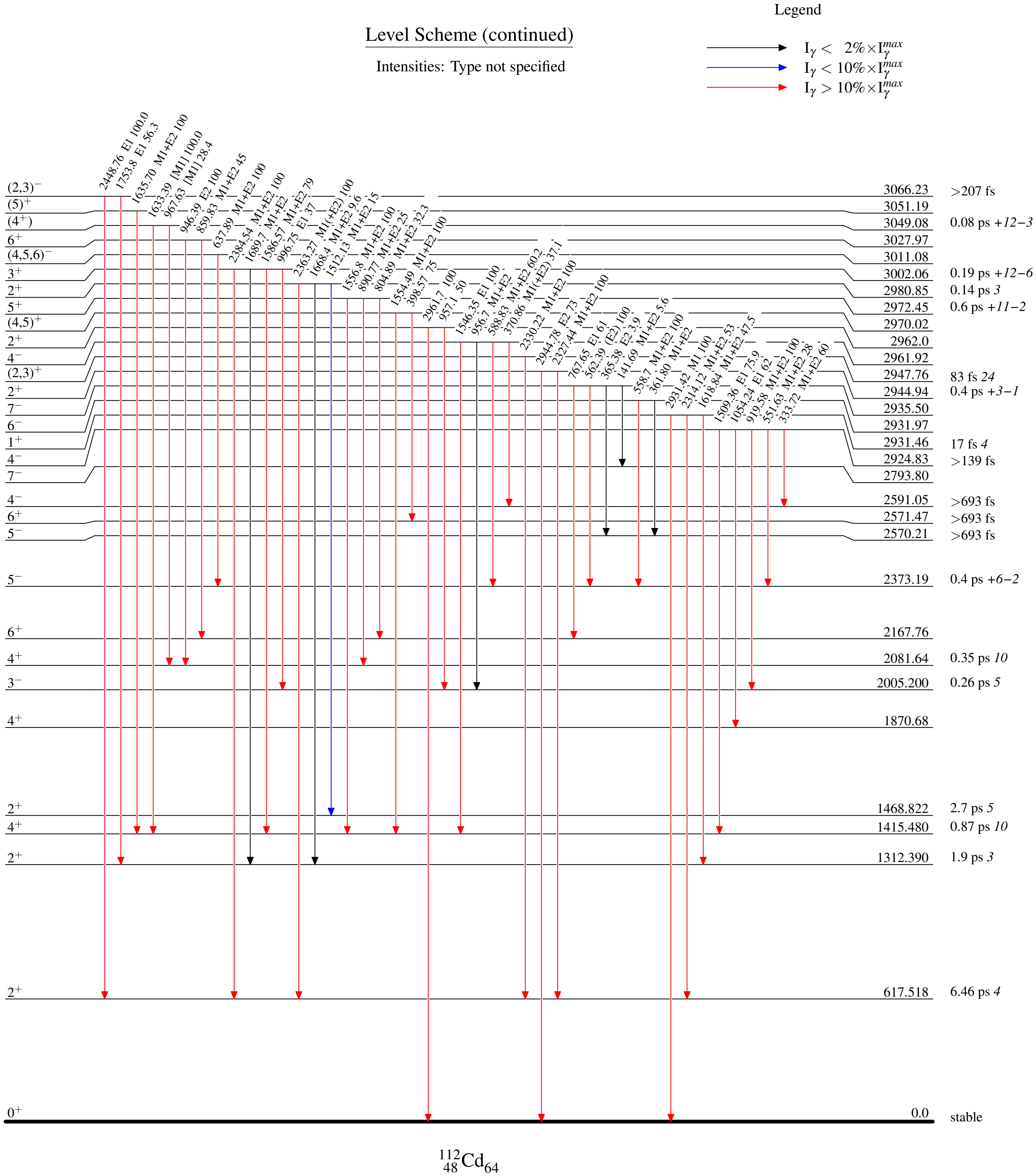
Adopted Levels, Gammas



Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified



Adopted Levels, Gammas

Level Scheme (continued)

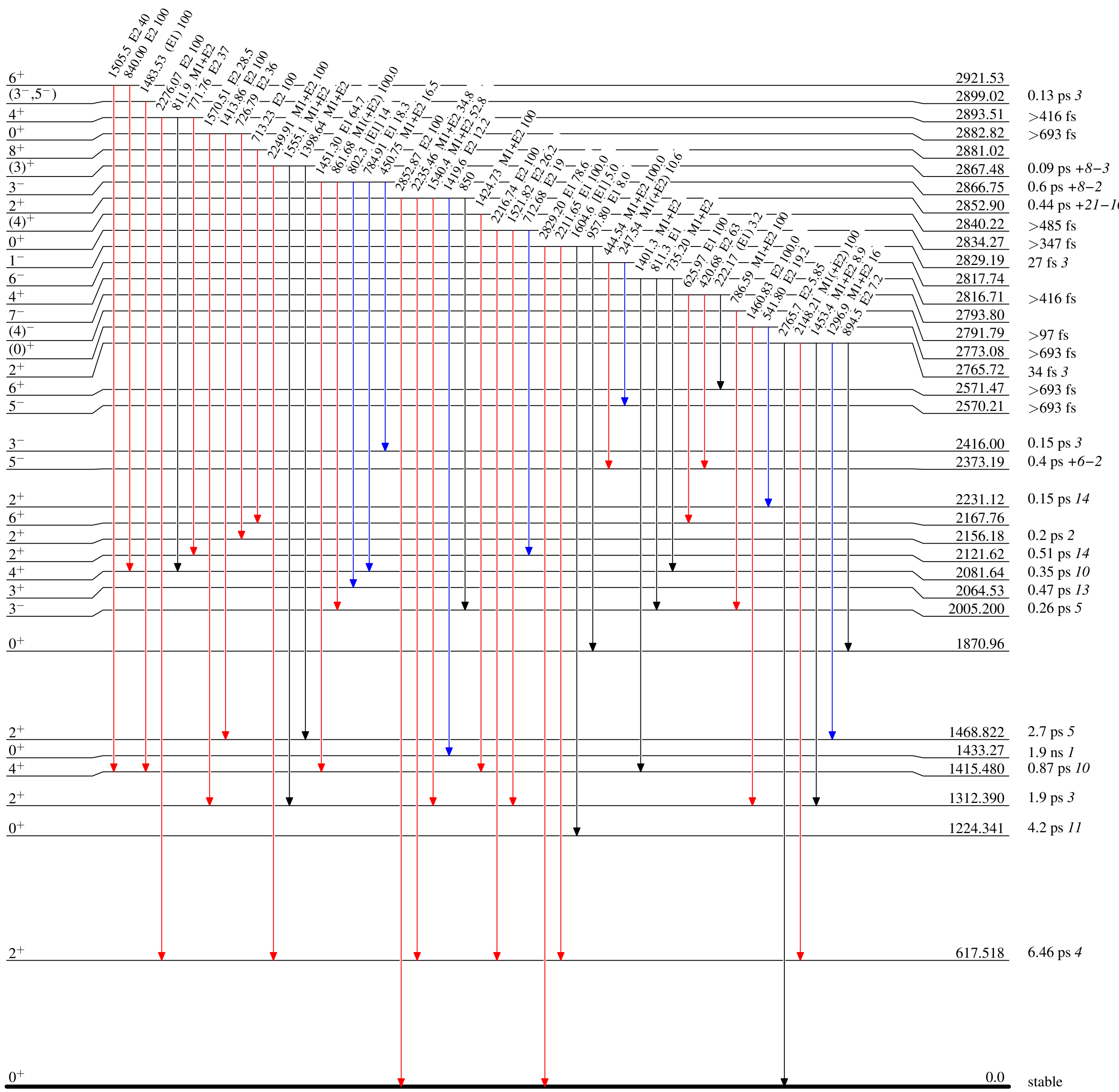
Intensities: Type not specified

Legend

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

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

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

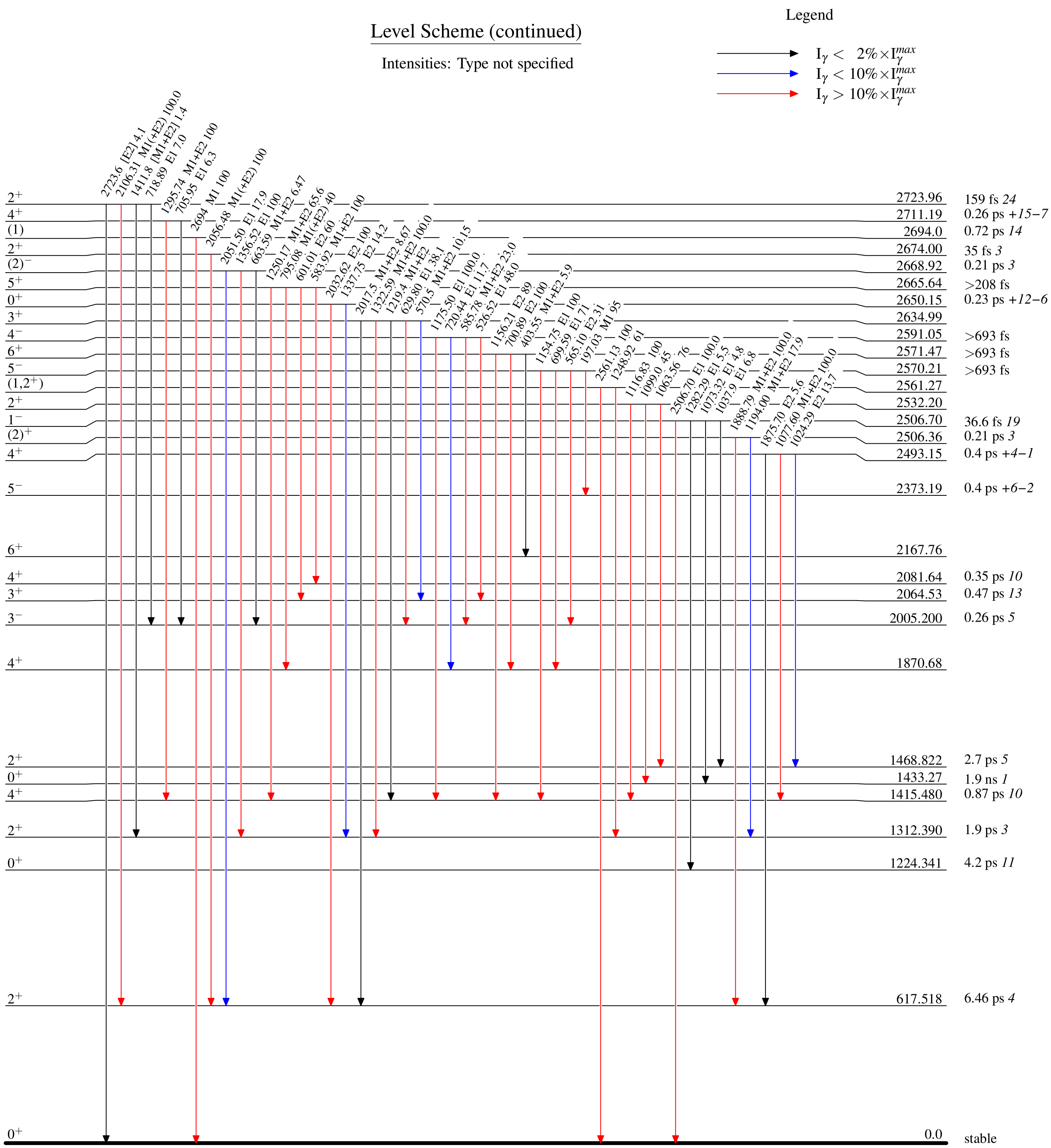


$^{112}_{48}Cd_{64}$

Adopted Levels, Gammas

Level Scheme (continued)

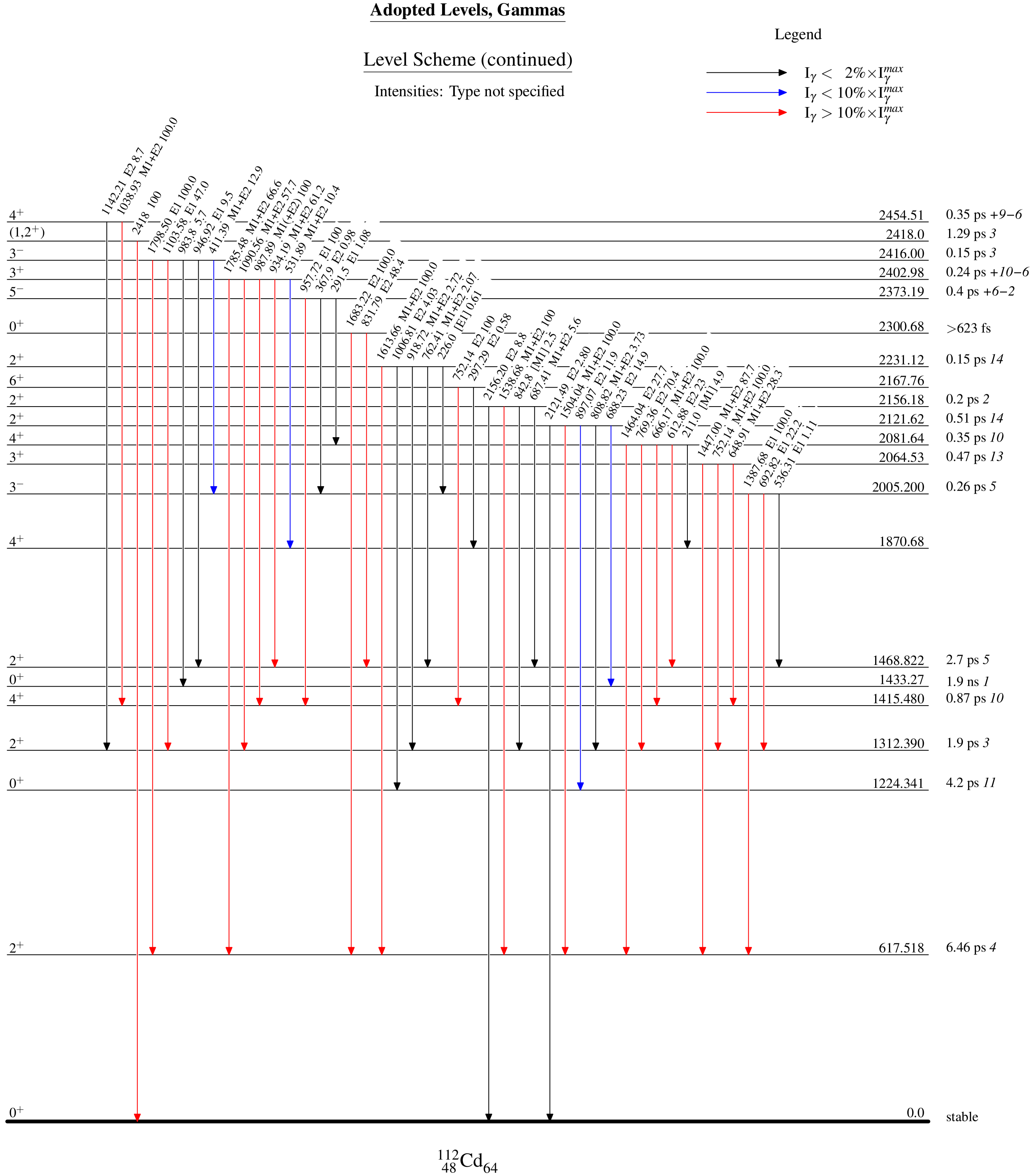
Intensities: Type not specified



Adopted Levels, Gammas

Level Scheme (continued)

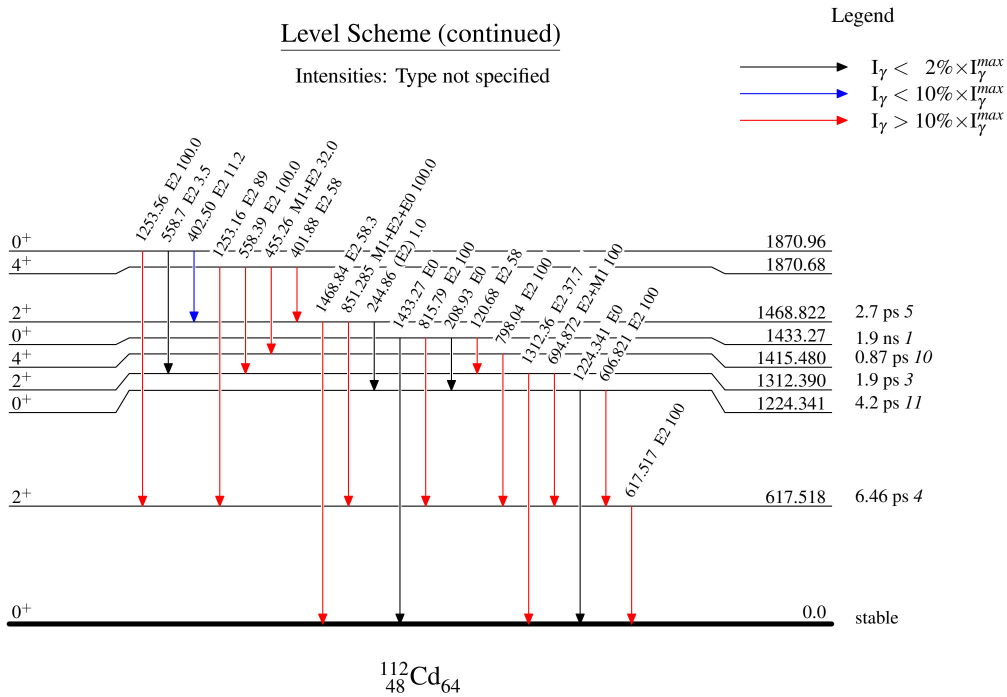
Intensities: Type not specified



Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified



Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	NDS 113,515 (2012)	1-Jan-2012

$Q(\beta^-)=-1446.4$ *9*; S(n)=9042.91 *14*; S(p)=10277 *17*; $Q(\alpha)=-4108.2$ *8* 2012Wa38
Note: Current evaluation has used the following Q record −1447.2 9 *9042.98 1410277* 17-4095 7 2011AuZZ.
1991De27 have compared the even-even isotopes $^{106-116}$Cd.

^{114}Cd Levels

Cross Reference (XREF) Flags

A	^{114}Ag β^- decay	G	^{118}Sn(d,^{6}Li)	M	Coulomb excitation
B	^{114}In ε decay (71.9 s)	H	^{112}Cd(t,p)	N	^{115}In(d,^{3}He)
C	^{114}In ε decay (49.51 d)	I	(HI,xnγ)	O	^{114}Cd(γ,γ')
D	^{113}Cd(n,γ) E=thermal	J	^{114}Cd(n,n$'\gamma$)	P	^{114}Cd(e,e$'$)
E	^{113}Cd(n,γ) E=2,24 keV	K	^{114}Cd(p,p$'$)	Q	^{114}Cd(α,α')
F	^{113}Cd(d,p)	L	^{114}Cd(d,d$'$)	R	^{114}Cd(γ,pol γ')

E(level)	J$^{\pi}$†	T$_{1/2}$‡	XREF	Comments
0#	0+	stable	ABCDEFGHIJKLMNOPQ	E(level): g−factor=+0.321 *21* (2011Ch23). T$_{1/2}$: an upper limit is given for the double β decay: >92.×10^{15} y (1995Tr07), >6.0*10^{17} y (2003Da24), >1.3*10^{18} y (2008Be22).
558.456# *2*	2+	10.2 ps *6*	ABCDEFGHIJKLMNOPQ	Q=−0.35 *5* (2005St24) μ=+0.642 *40* (2011Ch23) μ: other: +0.58 *14* (1980Br01,2005St24). J$^{\pi}$: L(p,p$'$)=2.
1134.532 *6*	0+	9.9 ps *6*	AB DEFGH JKLM Q	XREF: L(1150). J$^{\pi}$: L(p,p$'$)=0.
1209.708 *6*	2+	3.1 ps *3*	A DEFGH JKLM PQ	J$^{\pi}$: L(p,p$'$)=2.
1283.739# *8*	4+	1.39 ps *8*	A CD FGHIJKLMNO Q	J$^{\pi}$: L(d,p)=4, E2 γ to 2+. T$_{1/2}$: from $\gamma\gamma(\theta)$ in ^{114}In β^- decay (1970Mu11); other: 5.2 ps *+8−18* from (γ,γ') (1962Ak01).
1305.609 *6*	0+	4.7 ns *3*	AB DEFGH JK M	J$^{\pi}$: L(d,p)=0. T$_{1/2}$: from ^{16}O, γ(t) (1980Ju05).
1364.344 *6*	2+	5.2 ps *4*	A DEFGH JKLMN Q	J$^{\pi}$: L(d,p)=2, E2 γ to 0+.
1732.246 *8*	4+	4.8 ps *3*	D H J M	J$^{\pi}$: E2 γ to 2+. Not fed by primary gammas in arc (1967Eg01). L(t,p)=(2) is discrepant.
1784 *5*	(2+)		H	J$^{\pi}$: L(t,p)=(2).
1841.947 *8*	2+	0.65 ps *12*	A DEFG J M	T$_{1/2}$: T$_{1/2}$= >0.83 ps (2007Ba73). J$^{\pi}$: E2 γ to 0+ g.s.
1859.698 *10*	0+	1.8 ps *4*	A DEFGH J LM	T$_{1/2}$: T$_{1/2}$= >0.73 ps (2007Ba73). J$^{\pi}$: from L(d,p)=0.
1864.262 *8*	3+	>0.87 ps	DE J	T$_{1/2}$: From 2007Ba73. J$^{\pi}$: M1 γ's to 2+ and 4+.
1932.077 *8*	(4)+	>0.31 ps	D J	T$_{1/2}$: From 2007Ba73. J$^{\pi}$: M1 γ to 4+ and E2 γ to 2+, possible E0 component in transition to 4+.
1958.094 *8*	3−	0.60 ps *+15−10*	DEFGH JK MN PQ	T$_{1/2}$: From 2007Ba73. J$^{\pi}$: E1 γ to 2+, L(d,^{3}He)=1.
1990.3# *2*	6+	0.82 ps *10*	IJ LM	XREF: L(1980). J$^{\pi}$: E2 γ to 4+, no γ to J<4.
2048.026 *8*	2+	0.38 ps *11*	A DEF H J M	T$_{1/2}$: T$_{1/2}$=0.57 ps *+25−14* (2007Ba73), 0.00024 eV *11*

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{114}Cd Levels (continued)

E(level)	J^{π} †	$T_{1/2}$ ‡	S	XREF	Comments
					(2005Ko32).
2152.266 *8*	$3^+,4^+$	>0.35 ps		D J	J^{π}: E1 γ to 3^-, M1,E2 γ to 0^+. $T_{1/2}$: From 2007Ba73. J^{π}: M1 γ's to 4^+, 3^+, M1+E2 γ to 4^+.
2204.561 *8*	3^+	>0.55 ps		DE J	$T_{1/2}$: From 2007Ba73. J^{π}: E1 γ to 3^-. M1 γ to 2^+, arc.
2218.860 *16*	2^+	89 fs *+8−7*		A DEF H JK	$T_{1/2}$: From 2007Ba73. J^{π}: from L(t,p)=2, M1,E2 to 4^+ rules out 1^+.
2298.93@ *2*	5^-	>1.04 ps		D IJKl N Q	$T_{1/2}$: From 2007Ba73. J^{π}: L(^{3}He,d)=1 from $9/2^+$, E1 γ to 4^+.
2317.1 *7*	2^+			J l	J^{π}: M1+E2 γ to 2^+ and $\gamma(\theta)$ in (n,n′γ).
2384.760 *8*	3^-	0.55 ps *+16−10*		D F n	$T_{1/2}$: From 2007Ba73. J^{π}: E1 γ to 2^+ and M1 γ to 3^+.
2387.3 *10*	3^-			J n q	J^{π}: J=3 from $\gamma(\theta)$ in (n,n′γ). L(d,^{3}He)=1 for E=2390 *15* yields π=−. 1976De42 in (n,n′γ) suggest π=+, but δ discrepant with 1987Ar24.
2391.50 *4*	4^+	187 fs *+24−21*		D H JK n q	$T_{1/2}$: From 2007Ba73. J^{π}: L(e,e′)=4. $\gamma(\theta)$ data in (e,e′) analyzed as L=2+4 doublet, possibly distorted by 2387 J=(3) level.
2396	1^-	0.0007 eV *2*	1.4 *4*	R	B(E1)↑=0.14×10^{-5} *4* $T_{1/2}$: from 2005Ko32.
2400.2 *20*	$(6)^+$	1.0 ps *3*		J LM	XREF: L(2410). E(level): a level at 2412.5 is also seen in (n,n′γ) with suggested J=(6). J^{π}: E2 γ to 4^+.
2412.5 *5*	(6)			J	J^{π}: from $\gamma(\theta)$ in (n,n′γ).
2437.64 *8*	0^+	>0.90 ps		DE J	$T_{1/2}$: From 2007Ba73. J^{π}: E0 γ to g.s.
2456.005 *14*	1^-	39 fs *4*		A DE J N R	B(E1)↑=2.1×10^{-5} *4* $T_{1/2}$: From 2007Ba73, $T_{1/2}$=0.0110 eV *18* (2005Ko32). J^{π}: E1 γ to 0^+ g.s.
2460.757 *12*	4^-	>0.68 ps		D J N	$T_{1/2}$: From 2007Ba73. J^{π}: E1 γ's to 3^+ and 4^+, $\gamma(\theta)$ in (n,n′γ).
2465.2 *7*				J	
2503.24 *9*	(4)	152 fs *+35−28*		J	
2505 *6*	$0^+,1^+$			F	J^{π}: from L(d,p)=0.
2525.420 *10*	2^+	>0.35 ps		DEF Jk	$T_{1/2}$: From 2007Ba73. J^{π}: from L(d,p)=2, E1 γ to 3^-.
2535.81 *2*	(5^-)	0.18 ps *+28−8*		H Jkl N	$T_{1/2}$: From 2007Ba73. J^{π}: from angular distribution in (d,^{3}He).
2553.87 *8*	0^+	0.32 ps *+12−7*		A DEF J l	$T_{1/2}$: From 2007Ba73. J^{π}: from L(d,p)=0, E0 γ to 0^+.
2580.357 *12*	2^-	0.42 ps *+9−6*		DE J	$T_{1/2}$: From 2007Ba73. J^{π}: E1 γ to 2^+. M1 γ to 3^-, arc.
2636.52 *6*	0^+	0.25 ps *+6−4*		A DEF J	$T_{1/2}$: From 2007Ba73. J^{π}: from L(d,p)=0, arc.
2646	1	0.0006 eV *2*	1.0 *3*	R	B(M1)↑=0.008 *2*; B(E1)↑=0.09×10^{-5} *3* $T_{1/2}$: From 2005Ko32.
2650.120 *12*	2^+	0.41 ps *+13−8*		DE h J l	B(M1)↑=0.010 *3*; B(E1)↑=0.12×10^{-5} *4* $T_{1/2}$: From 2007Ba73, $T_{1/2}$=0.0008 eV *2* (2005Ko32). J^{π}: E2 γ to 0^+ g.s.
2660.90 *3*	2^+	22.2 fs *14*		A DEF h JKl	$T_{1/2}$: From 2007Ba73.

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Adopted Levels, Gammas (continued)

^{114}Cd Levels (continued)

E(level)	$J^{\pi\dagger}$	$T_{1/2}$‡	XREF	Comments
				J^π: from L(d,p)=2.
2669.3# *20*	(8^+)	1.4 ps *4*	IJ M	E2 γ to 6^+.
2701.066 *20*	3^+	0.31 ps *+11−7*	DE J	$T_{1/2}$: From 2007Ba73. J^π: primary γ in (n,γ), res, E1 γ to 3^-.
2735.2@ *4*	(7^-)		I	
2747.21 *10*	(5)		J	
2749.265 *20*	2^+	0.69 ps *+10−7*	DEF h J	$T_{1/2}$: From 2007Ba73. J^π: L(d,p)=2, E2 γ to 4^+.
2756.92 *7*	$3^-,(4^-)$	0.51 ps *+73−19*	DE h Jkl	$T_{1/2}$: From 2007Ba73. J^π: E1 γ to 4^+.
2767.85 *10*	1^-	29.8 fs *28*	D F Jkl N	$T_{1/2}$: From 2007Ba73, $T_{1/2}$=0.0072 eV *8* (2005Ko32). J^π: E1 γ to 0^+ g.s.
2788.501 *24*	$(1,2)^+$	0.25 ps *+5−4*	DE J l	$T_{1/2}$: From 2007Ba73. J^π: M1, E2 γ to g.s.
2799.99 *5*	$(1^+,2^+)$	19.4 fs *21*	A DE J l	$T_{1/2}$: From 2007Ba73, $T_{1/2}$=0.0113 eV *13* (2005Ko32). J^π: M1, E2 γ to 0^+ g.s.
2806.59 *3*	3^+	125 fs *+18−15*	DEF J	$T_{1/2}$: From 2007Ba73. J^π: M1 γ to 2^+, E1 γ to 2^-.
2812.050 *20*	2^+	0.36 ps *+23−10*	DE J	$T_{1/2}$: From 2007Ba73. J^π: E1 γ to 3^-, M1 γ to 3^+, γ to 0^+ g.s.
2820.22 *3*	4^+		D H	XREF: H(2830). J^π: E2 γ to 2^+, L(t,p)=(4).
2827.88 *10*	$(4)^+$	0.38 ps *+44−14*	J	$T_{1/2}$: From 2007Ba73. J^π: E2 γ to to 2^+.
2828.2 *2*	$0^+,1^+$		EF	J^π: from L(d,p)=0.
2847 *6*	$2^-,3^-,4^-$		F	J^π: L(d,p)=3.
2869 *4*	(4^+)		H	J^π: L(t,p)=4,(2).
2871.63 *7*	2,3	125 fs *+17−14*	J	$T_{1/2}$: From 2007Ba73.
2874.26 *6*	2,4	>0.62 ps	J	$T_{1/2}$: From 2007Ba73.
2880.56 *10*	4,3	111 fs *+21−17*	J	$T_{1/2}$: From 2007Ba73.
2902.6 *8*	$3^+,(0^+)$		E	J^π: arc.
2910.2 *3*	$0^+,1^+$		EF	J^π: from L(d,p)=0.
2918.45 *10*	3	69 fs *+17−14*	J	$T_{1/2}$: From 2007Ba73.
2932.97 *10*	4^+	125 fs *+21−17*	H J	J^π: L(t,p)=4. $T_{1/2}$: From 2007Ba73.
2935.76 *6*	2^+	>0.35 ps	J	$T_{1/2}$: From 2007Ba73.
2936.12 *5*	(3^-)		DE	J^π: E1 γ to 4^+. Arc gives $0^+,3^+$.
2941.27 *7*	$2,3^+$	0.24 ps *+12−6*	EF J	$T_{1/2}$: From 2007Ba73.
2953.00 *10*	3^+	62 fs *7*	A D J l	$T_{1/2}$: From 2007Ba73. J^π: E2 γ to 4^+, M1 γ to 2^+.
2957.26 *5*	$1^-,2^-,3^-$	166 fs *+28−21*	DEF J l	$T_{1/2}$: From 2007Ba73. J^π: E1 γ to 2^+. Tentative γ to 0^+ would rule out $2^-,3^-$. Doubly placed E1 to 3^+ would rule out 1^-. Doubly placed γ to 4^- would rule out 1^-.
2999.56 *2*	1^-	25.0 fs *28*	DE J l	B(M1)↑=0.107 *10*; B(E1)↑=1.18×10^{-5} *11* $T_{1/2}$: From 2007Ba73, $T_{1/2}$=0.0111 eV *11* (2005Ko32). J^π: E1 γ to 0^+ g.s.
3001.63 *12*	4^+		J	
3002.22 *3*	2^+	145 fs *+49−28*	DEF J l	$T_{1/2}$: From 2007Ba73. J^π: E2 γ to 0^+ g.s.
3025.04 *11*	2,3	0.33 ps *+19−9*	F J	$T_{1/2}$: From 2007Ba73.
3051.54 *11*	(2)		J	
3052.90 *4*	0^+		A DEF H l N	J^π: L(d,p)=0, L(t,p)=0.
3061.48 *8*	2^+	121 fs *+24−17*	J	$T_{1/2}$: From 2007Ba73.
3077.44 *3*	2^+	139 fs *+66−35*	DE G J l	XREF: E(3080).

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Adopted Levels, Gammas (continued)

^{114}Cd Levels (continued)

E(level)	J^{π}†	$T_{1/2}$‡	XREF	Comments
				$T_{1/2}$: From 2007Ba73. J^{π}: M1 γ to 2^+, γ to 0^+ g.s., L(d,p)=2.
3087	1,2	0.00086 eV *26*	R	
3108.640 *24*	1^-	22 fs *6*	DE J	$T_{1/2}$: From 2007Ba73, $T_{1/2}$=0.0095 eV *19* (2005Ko32). J^{π}: E1 γ to 0^+ g.s.
3110	1	0.0051 eV *14*	R	E(level): from 1994Ge07, energy of 3110 in 2005Ko32 is 3109+3110 unresolved doublet.
3111.74 *10*	(2)		J	
3115.56 *7*	3,2	146 fs *+21−17*	J	$T_{1/2}$: From 2007Ba73.
3119 *6*			F	J^{π}: L(d,p)=(2,3).
3130 *6*			F	J^{π}: L(d,p)=(2,3).
3140.34 *9*	3,2	229 fs *+42−35*	J	$T_{1/2}$: From 2007Ba73.
3142 *5*			H	J^{π}: L(t,p)=(6+0).
3143.3# *20*	(10^+)		I	
3157.16 *4*	$1^-,(2^-,3^-)$		DE H J	XREF: H(3142). J^{π}: E1 γ to 2^+.
3167.1 *3*	$0^+,1^+,2^+$		A E J	J^{π}: log *ft*=5.8 from 1^+ parent.
3168.72 *13*	2	90 fs *+35−21*	J	$T_{1/2}$: From 2007Ba73.
3176.14 *7*	2,3	0.22 ps *+10−6*	J	$T_{1/2}$: From 2007Ba73.
3192.19 *14*	2,3	0.17 ps *+12−6*	J	$T_{1/2}$: From 2007Ba73.
3193 *6*	$2^-,3^-,4^-$		F N	J^{π}: L(d,p)=3.
3206.0 *3*	2^+	173 fs *+49−35*	DE J	$T_{1/2}$: From 2007Ba73. J^{π}: E1 γ to 3^-, E2 γ to 0^+.
3213.2 *3*	$(1,2)^-$	42 fs *+5−4*	A E J	$T_{1/2}$: From 2007Ba73. J^{π}: γ to 0^+ g.s., arc.
3214	$1^{(+)}$	0.0025 eV *3*	R	B(M1)↑=0.019 *2*; B(E1)↑=0.21×10^{-5} *3*
3218.56 *4*	$1^-,(2^-)$	33.3 fs *35*	DE J	J^{π}: E1 γ to 2^+. Fed by primary γ in (n,γ).
3220	$1^{(+)}$	0.0126 eV *8*	R	B(M1)↑=0.098 *6*; B(E1)↑=1.08×10^{-5} *7*
3221 *6*	$1^+,2^+,3^+$		F	J^{π}: L(d,p)=2.
3222.76 *15*	0	0.14 ps *+9−4*	J	$T_{1/2}$: From 2007Ba73.
3232.41 *12*	1,2,3	121 fs *+24−17*	J	$T_{1/2}$: From 2007Ba73.
3249.18 *11*	1	62 fs *+42−21*	J	$T_{1/2}$: From 2007Ba73.
3250 *15*	(8^+)		N	J^{π}: from angular distributions in (d,^{3}He).
3254 *5*			H	J^{π}: L(t,p)=(5+0).
3258.093 *11*	$1^-,2^-$	132 fs *+62−35*	DEF H J	XREF: H(3253). $T_{1/2}$: From 2007Ba73. J^{π}: E1 γ to 2^+, M1 γ to 1^-.
3267.27 *10*	$1^+,2^+$		A	J^{π}: L(d,p)=2.
3282.6@ *4*	(9^-)		I	
3285.09 *12*	$2,3^+$	121 fs *+28−21*	F J N	J^{π}: L(d,p)=2. $T_{1/2}$: From 2007Ba73.
3296.57 *11*			J	
3298.52 *13*	2,3	42 fs *+10−7*	J	$T_{1/2}$: From 2007Ba73.
3315.7 *3*	(0,1,2)		A	J^{π}: γ to 2^+.
3322.29 *8*	1	0.18 ps *+17−7*	J	$T_{1/2}$: From 2007Ba73.
3334.34 *9*	2,3,4	114 fs *+38−28*	J	$T_{1/2}$: From 2007Ba73.
3343 *9*			H	J^{π}: L(t,p)=(4).
3350.8 *3*	$0^+,1^+$		A F J	J^{π}: L(d,p)=0.
3365 *1*			F J	
3381.95 *13*	1,2,3		F J	
3409.62 *16*	1,2		F J N	J^{π}: L(d,p)=2. L(d,^{3}He)=1+4.
3445.1 *3*			A EF	
3462.1 *3*	$(1^+,2^+,3^+)$		EF H J	J^{π}: L(d,p)=2, av res (n,γ) gives π=−?, L(t,p)=1,(2)

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Adopted Levels, Gammas (continued)

^{114}Cd Levels (continued)

E(level)	J^{π}†	$T_{1/2}$‡	S	XREF	Comments
					suggests π=−, maybe it is another level.
3478.54 *19*				J	
3480 *6*	−			F N	J^{π}: L(d,^{3}He)=1.
3488.79 *22*				J	
3501.15 *8*	$0^+,1^+,2^+$			A F	J^{π}: log *ft*=5.5 from 1^+ parent.
3503.80 *13*				J	
3504.0& *5*	(10^+)			I	
3521 *6*	−			F N	J^{π}: L(d,^{3}He)=1.
3543.74 *23*				J	
3552.14 *25*				J	
3557 *6*				F	
3566 *6*	$(4^+,1^-)$			H	J^{π}: L(t,p)=(4,1).
3582 *6*				F	
3604 *7*	(0)			H	J^{π}: L(t,p)=(0).
3610.7 *3*				J	
3613 *6*				F N	J^{π}: L(d,^{3}He)=1+4 for E=3610 *15*.
3670 *6*				F	
3682	1,2	0.0027 eV *7*		R	
3690 *15*				N	J^{π}: L(d,^{3}He)=1+4 for E=3610 *15*.
3707	1,2	0.0026 eV *9*		R	
3711.3# *20*	(12^+)			I	
3712 *6*	$1^+,2^+,3^+$			F	J^{π}: L(d,p)=2.
3747 *6*				F	
3748	1	0.0119 eV *9*		R	B(M1)↑=0.058 *4*; B(E1)↑=0.65×10^{-5} *5* Γ=0.022 eV *8* (1994Ge07), with R(exp)=0.82 *21* (1994Ge07).
3789 *6*	$1^+,2^+,3^+$			F N	J^{π}: L(d,p)=2. L(d,^{3}He)=1 for E=3780 *15* gives π=−.
3791	1	0.0014 eV *5*		R	B(M1)↑=0.007 *2*; B(E1)↑=0.07×10^{-5} *2*
3796	1	0.0031 eV *9*		R	B(M1)↑=0.015 *4*; B(E1)↑=0.16×10^{-5} *5*
3823 *6*				F	
3827	1	0.0045 eV *14*		R	B(M1)↑=0.021 *6*; B(E1)↑=0.23×10^{-5} *7*
3853 *6*				F	
3857	1	0.0032 eV *6*	2.5 *5*	R	B(M1)↑=0.014 *3*; B(E1)↑=0.16×10^{-5} *3*
3876 *6*				F N	J^{π}: L(d,^{3}He)=1 for 3880 *15*.
3902 *6*				F	
3916	1	0.0078 eV *16*		R	B(M1)↑=0.034 *7*; B(E1)↑=0.37×10^{-5} *8*
3936	1,2	0.0039 eV *14*		R	
3940 *6*				F	
3949	1	0.0062 eV *15*	4.6 *11*	R	B(M1)↑=0.026 *6*; B(E1)↑=0.29×10^{-5} *7*
3962 *6*				F	
3994		0.0126 eV *26*		R	B(M1)↑=0.051 *11*; B(E1)↑=0.57×10^{-5} *12*
3996 *6*				F	
4017 *6*				F	
4027.3@ *5*	(11^-)			I	
4056	1	0.0141 eV *35*		R	
4075	1,2	0.0115 eV *32*		F R	
4099 *6*				F	
4142 *6*				F	
4177 *6*				F	
4211 *6*				F	
4256.4& *5*	(12^+)			I	

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Adopted Levels, Gammas (continued)

^{114}Cd Levels (continued)

E(level)	J^{π} †	XREF
4604.2# *6*	(14$^+$)	I
4605.2@ *5*	(13$^-$)	I

† Most of the spins are coming from average resonance neutron capture (arc) and conversion electron measurements.
‡ From B(E2) in Coulomb excitation (1976Es02,1988Fa07), unless otherwise noted.
# Band(A): g.s. band.
@ Band(B): Rotational band based on 5$^-$.
& Band(C): Side band based on (10$^+$).

$\gamma(^{114}Cd)$

E_i(level)	J^π_i	E_γ[†]	I_γ[@]	E_f	J^π_f	Mult.[‡]	δ[‡]	α[&]	$I_{(\gamma+ce)}$	Comments
558.456	2^+	558.456 *2*	100	0	0^+	E2				B(E2)(W.u.)=31.1 *19*
1134.532	0^+	576.079 *4*	100	558.456	2^+	E2				B(E2)(W.u.)=27.4 *17*
		1134.60 *5*		0	0^+	E0			0.135 *8*	
1209.708	2^+	75.177 *5*	1.9×10^{-4} *3*	1134.532	0^+	E2		4.2		B(E2)(W.u.)=3.4 *7*
		651.256 *5*	100 *5*	558.456	2^+	M1+E2	−1.2 *3*			B(E2)(W.u.)=22 *6*; B(M1)(W.u.)=0.008 *3* Mult.: from α(K)exp (1984Mh01).
		1209.713 *7*	29 *2*	0	0^+	E2				B(E2)(W.u.)=0.48 *6* I_γ: $I\gamma$=44 *2* in β^- decay. Mult.: M1+E2 from α(K)exp, but M1 is ruled out since ΔJ=2. δ>1.52.
1283.739	4^+	725.298 *9*	100	558.456	2^+	E2				B(E2)(W.u.)=62 *4*
1305.609	0^+	95.902 *3*	100 *8*	1209.708	2^+	E2		1.76		B(E2)(W.u.)=127 *16*
		171.077 *5*		1134.532	0^+	E0			1.4 *7*	
		747.151 *6*	58 *5*	558.456	2^+	E2				B(E2)(W.u.)=0.0026 *4*
		1305.59 *4*		0	0^+	E0			20.8 *11*	
1364.344	2^+	80.605 *3*	0.0090 *10*	1283.739	4^+	E2				B(E2)(W.u.)=45 *7*
		154.639 *3*	0.178 *16*	1209.708	2^+	(M1+E2)	1.95			B(E2)(W.u.)=(27 *4*); B(M1)(W.u.)=(0.00022 *3*)
		229.812 *6*	2.45 *23*	1134.532	0^+	E2				B(E2)(W.u.)=65 *9*
		805.887 *5*	100 *7*	558.456	2^+	M1+E2	+0.050 *25*			B(E2)(W.u.)<0.045; B(M1)(W.u.)>0.0037 δ: from Bull. Rus. Acad. Sci. Ser. Phys. 51, 45 (1987).
		1364.339 *6*	91 *6*	0	0^+	E2				B(E2)(W.u.)=0.33 *4*
1732.246	4^+	367.893 *9*	64 *4*	1364.344	2^+	E2				B(E2)(W.u.)=119 *12* Mult.: M1+E2 from α(K)exp with δ=1, but M1 is ruled out (ΔJ=2).
		448.518 *4*	33.4 *15*	1283.739	4^+	M1+E2	−1.6[#] *+10−4*			B(E2)(W.u.)=17 *6*; B(M1)(W.u.)=0.0017 *15*
		522.542 *11*	100 *10*	1209.708	2^+	E2				B(E2)(W.u.)=32 *4*
		1173.782 *19*	90 *5*	558.456	2^+	E2				B(E2)(W.u.)=0.50 *5*
1841.947	2^+	477.604 *6*	20.1 *10*	1364.344	2^+	M1+E2	2.3[#] *+37−13*			B(E2)(W.u.)=7.E+1 *4*; B(M1)(W.u.)=0.004 *+11−4*
		536.350 *12*	14.1 *13*	1305.609	0^+	E2				B(E2)(W.u.)=34 *8* Mult.: α(K)exp suggests M1,E2; placement on decay scheme requires ΔJ=2.
		632.247 *6*	5.2 *2*	1209.708	2^+	E2				B(E2)(W.u.)=5.6 *11*
		707.419 *5*	69 *3*	1134.532	0^+	E2				B(E2)(W.u.)=42 *9*
		1283.495 *14*	100 *7*	558.456	2^+	M1+E2	+2.4 *+4−2*			B(E2)(W.u.)=0.84 *17*; B(M1)(W.u.)=0.0048 *10* δ: from Bull. Rus. Acad. Sci. Ser. Phys. 51, 45 (1987).
		1841.98 *8*	37 *3*	0	0^+	E2				B(E2)(W.u.)=0.19 *4* Mult.: α(K)exp suggests M1,E2; placement on decay scheme requires ΔJ=2.
1859.698	0^+	495.354 *4*	6 *1*	1364.344	2^+	E2				B(E2)(W.u.)=18 *6*

$^{114}_{48}Cd_{66}$-7

$\gamma(^{114}$Cd) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[@]	E_f	J^π_f	Mult.[‡]	δ[‡]	Comments
1859.698	0^+	1301.234 18	100 8	558.456	2^+	E2		B(E2)(W.u.)=2.4 6
		1859.70 5		0	0^+			Mult.: could be E0.
1864.262	3^+	132.015 9	0.041	1732.246	4^+	M1+E2	<0.65	
		499.92 3	0.4 1	1364.344	2^+	M1		
		580.516 5	22.8 12	1283.739	4^+	M1		
		654.551 5	100 5	1209.708	2^+	M1+E2	−4.2[#] +8−6	
		1305.783 21	86 5	558.456	2^+	M1+E2	−0.10 +6−2	
1932.077	$(4)^+$	199.833 4	2.4 10	1732.246	4^+	M1		
		567.74 3	34.5 15	1364.344	2^+	E2		
		648.316 17	66 6	1283.739	4^+	M1,E2(+E0)		
		722.368 6	100 5	1209.708	2^+	E2		
1958.094	3^-	225.852 5	0.07 2	1732.246	4^+	E1		
		593.755 16	1.0 3	1364.344	2^+	E1		
		674.30 5	0.3 22	1283.739	4^+			
		748.385 7	35 2	1209.708	2^+	E1		
		1399.638 11	100 10	558.456	2^+	E1		
1990.3	6^+	706.6 2	100	1283.739	4^+	(E2)		B(E2)(W.u.)=119 15
2048.026	2^+	89.929 2	0.168 17	1958.094	3^-	E1		B(E1)(W.u.)=0.0014 5
		183.782 8	0.088 21	1864.262	3^+	(M1)		B(M1)(W.u.)=0.007 3 Mult.: α(K)exp allows E1 or M1; level scheme requires $\Delta\pi$=no.
		206.090 4	0.113 11	1841.947	2^+	M1		B(M1)(W.u.)=0.0061 19
		742.419 7	10.4 6	1305.609	0^+	(E2)		B(E2)(W.u.)=17 5 Mult.: α(K)exp allows M1,E2; level scheme requires ΔJ=2.
		838.309 6	4.5 4	1209.708	2^+	M1(+E2)	<0.75	B(E2)(W.u.)<1.9; B(M1)(W.u.)>0.0016
		1489.560 10	100 5	558.456	2^+	M1,E2		δ: 0.00 10 or 2.3 +10−5 (1976De42).
		2047.7 3	7.6 13	0	0^+	(E2)		B(E2)(W.u.)=0.08 3 Mult.: α(K)exp allows M1,E2; level scheme requires ΔJ=2.
2152.266	$3^+,4^+$	220.189 4	4.5 4	1932.077	$(4)^+$	M1,E2		
		287.981 9	24.3 12	1864.262	3^+	M1		
		310.316 6	20.2 11	1841.947	2^+	E2		
		420.023 4	37 3	1732.246	4^+	M1+E2		δ: δ=−0.55 13 or +3.2 +21−8.
		786.8[b] 4	<13	1364.344	2^+			I_γ: reported by 1976De42 in (n,n′γ) with Iγ=56 28, not reported in (n,γ); evaluator estimates Iγ<13 in (n,γ).
		868.513 17	63 4	1283.739	4^+	M1,E2		I_γ: from (n,γ), Iγ=151 51 in (n,n′γ).
		942.55 3	100 9	1209.708	2^+	M1+E2		δ: 0.00 10 or 2.3 +10−5 (1976De42).
		1593.3[b] 6	<43	558.456	2^+			I_γ: reported by 1976De42 in (n,n′γ) with Iγ=124 11, not reported in (n,γ); evaluator estimates Iγ<43 in (n,γ).
2204.561	3^+	156.531 3	0.3 3	2048.026	2^+	M1(+E2)	<0.42	
		246.472 4	1 1	1958.094	3^-	E1		
		340.294 7	3.8 2	1864.262	3^+	M1,E2+E0		
		362.608 5	4.4 2	1841.947	2^+	M1(+E2)	<0.82	

$^{114}_{48}$Cd$_{66}$-8

Adopted Levels, Gammas (continued)

$\gamma(^{114}\mathrm{Cd})$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[@]	E_f	J^π_f	Mult.[‡]	δ[‡]	Comments
2204.561	3^+	472.310 8	4.5 2	1732.246	4^+	M1		
		840.217 12	43 5	1364.344	2^+	M1		
		920.791 13	73 6	1283.739	4^+	M1		
		994.852 9	71 4	1209.708	2^+	M1+E2	0.8[#] +7−3	
		1646.12 4	100 5	558.456	2^+	M1+E2	−0.10[#] +3−5	
2218.860	2^+	170.857 15	0.016 3	2048.026	2^+			
		359.20 5	0.06 2	1859.698	0^+			
		486.647 19	0.20 5	1732.246	4^+	(E2)		
		854.62 4	1.2 2	1364.344	2^+	M1,E2		
		1660.368 16	100 6	558.456	2^+	M1+E2		δ: +0.17 6 or +1.5 +8−10 (1987Ar24).
2298.93	5^-	366.91 4	3 1	1932.077	$(4)^+$			
		1015.178 17	100	1283.739	4^+	E1		
2317.1	2^+	1107.4 6	100 8	1209.708	2^+	M1+E2	<+0.5[#]	
		1183.7 9	31 7	1134.532	0^+			
		2316.1 9	20 6	0	0^+			
2384.760	3^-	165.895 6	0.250 22	2218.860	2^+	E1		
		180.198 6	0.180 8	2204.561	3^+	E1		
		336.743 11	0.31 7	2048.026	2^+			
		426.666 6	7.9 6	1958.094	3^-	M1		
		1175.076 20	25.1 13	1209.708	2^+	E1		
		1826.30 4	100 6	558.456	2^+	E1		
2387.3	3^-	1828.8 8	100 4	558.456	2^+	E1(+M2)	+0.01[#] 3	Mult.: δ is from 1987Ar24. δ=−0.10 +2−3 (1976De42). Mult=E1 from polarization (1987Ar24).
2391.50	4^+	459.393 25	2.5 3	1932.077	$(4)^+$	M1		
		659.20 5	4.5 9	1732.246	4^+			
		1107.761 21	100 8	1283.739	4^+	M1		
2396	1^-	2396		0	0^+	E1		
2400.2	$(6)^+$	668 1	100	1732.246	4^+	E2		B(E2)(W.u.)=1.3×10^2 4
2412.5	(6)	113.6 2		2298.93	5^-			
2437.64	0^+	1228.00 10	8.6 11	1209.708	2^+	E2		
		1879.10 5	100 6	558.456	2^+	E2		
		2437.7 1	14	0	0^+	E0		
2456.005	1^-	1091.64 9	15 4	1364.344	2^+	E1		
		2456.0 1	100 40	0	0^+	E1		
2460.757	4^-	256.195[a] 4	12.5[a] 6	2204.561	3^+	E1		
		502.667 10	18.0 13	1958.094	3^-	M1,E2		
		596.485 5	61 6	1864.262	3^+	E1		
		728.56 6	9.7 17	1732.246	4^+			
		1177.04 3	100 7	1283.739	4^+	E1		
		1902.19 14	97 17	558.456	2^+			

γ(^{114}Cd) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[@]	E_f	J^π_f	Mult.[‡]	δ[‡]	Comments
2465.2		1100.9 1	100	1364.344	2^+			
2503.24	(4)	1219.62 8		1283.739	4^+			
2525.420	2^+	140.659 3	0.5 1	2384.760	3^-	E1		
		306.560 7	7.6 4	2218.860	2^+	E2+M1	>0.82	
		320.835 13	0.7 1	2204.561	3^+	M1		
		567.328 7	30 6	1958.094	3^-	E1		
		661.21 3	5.4 6	1864.262	3^+	M1		
		665.735 15	10.0 6	1859.698	0^+	E2		
		1161.06 3	56 5	1364.344	2^+	M1		
		1219.78 3	73 5	1305.609	0^+	E2		
		1315.677 22	100 10	1209.708	2^+	M1		
		1966.80 20	87 16	558.456	2^+			
		2525.1 1	58 10	0	0^+			
2535.81	(5^-)	236.897 9	100	2298.93	5^-	M1		
2553.87	0^+	694.45 12		1859.698	0^+	E0		
		1995.06 17	100 10	558.456	2^+	E2		
		2554.0 1		0	0^+	E0		
2580.357	2^-	361.501 16	0.3 1	2218.860	2^+			
		375.3 10	1.5 4	2204.561	3^+			
		532.320 10	5.1 7	2048.026	2^+	E1(+M2)	+0.07 +27−18	
		622.259 6	5.7 2	1958.094	3^-	M1+E2	+1.2 +13−6	
		738.35[a] 3	1.4[a] 1	1841.947	2^+			
		1370.617 22	100 6	1209.708	2^+	E1(+M2)	+0.01 3	
		2021.9 1	41 8	558.456	2^+	E1(+M2)	+0.12 +7−6	
2636.52	0^+	1426.6 3	8.5 3	1209.708	2^+	E2		
		2078.1 1	100 6	558.456	2^+	E2		
2646	1	2646		0	0^+			
2650.120	2^+	124.698 3	0.15 5	2525.420	2^+	M1		
		194.116 6	0.18 11	2456.005	1^-	E1		
		212.488 16	0.10 5	2437.64	0^+			
		431.263 7	2.5 1	2218.860	2^+	M1		
		602.117 16	2.7 2	2048.026	2^+			
		692.10 3	4.0 4	1958.094	3^-	E1		
		1285.83 8	28 4	1364.344	2^+	M1+E2	+0.03 6	
		1344.59 9	12.1 5	1305.609	0^+	E2		
		2650.1 1	100 6	0	0^+	E2		
2660.90	2^+	276.139 19	0.3 1	2384.760	3^-			
		2102.4 1	100 5	558.456	2^+	M1+E2		δ: =+1.9 1 for J(2660.7)=2 or +0.41 +2−3 for J(2660.7)=3.
2669.3	(8^+)	270		2400.2	$(6)^+$			E_γ: seen only in Coul. ex. Branching relative to 679γ not given.
		678.2 3	100	1990.3	6^+	E2		B(E2)(W.u.)=85 25
2701.066	3^+	240.301 7	4.0 2	2460.757	4^-	E1		
		309.567 15	1.2 2	2391.50	4^+			

$^{114}_{48}$Cd$_{66}$-10

Adopted Levels, Gammas (continued)

$\gamma(^{114}Cd)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[@]	E_f	J^π_f	Mult.[‡]	δ[‡]	Comments
2701.066	3^+	316.327 *12*	1.0 *2*	2384.760	3^-			
		496.552[a] *21*	7.7[a] *16*	2204.561	3^+			
		742.945 *17*	59 *3*	1958.094	3^-	E1		
		859.21 *5*	13.3 *16*	1841.947	2^+			
		1491.39 *23*	83 *11*	1209.708	2^+			
		2143.2 *2*	100 *17*	558.456	2^+			
2735.2	(7^-)	436.3		2298.93	5^-			
		744.6		1990.3	6^+			
2747.21	(5)	1463.59 *9*		1283.739	4^+			
2749.265	2^+	597.016 *10*	5 *1*	2152.266	$3^+,4^+$	E2		
		2190.8 *1*	100 *7*	558.456	2^+	M1		
		2749.2 *2*	8 *1*	0	0^+			
2756.92	$3^-,(4^-)$	300.868 *17*	1.4 *2*	2456.005	1^-			
		798.92 *5*	14 *3*	1958.094	3^-	M1,E2		
		1024.73 *5*	39 *4*	1732.246	4^+			
		1473.40 *10*	49 *10*	1283.739	4^+	E1		
		2198.0 *4*	100 *21*	558.456	2^+			
2767.85	1^-	908.30 *10*	2.1 *5*	1859.698	0^+			
		2209.2 *1*	52 *5*	558.456	2^+	E1		
		2767.5 *2*	100 *6*	0	0^+	E1		
2788.501	$(1,2)^+$	138.376 *12*	0.060 *12*	2650.120	2^+			
		263.081 *12*	0.40 *4*	2525.420	2^+	M1		
		2230.2 *1*	100 *7*	558.456	2^+	M1+E2		δ: =−0.28 *4* or +7.6 *+30−19*.
		2788.4 *2*	30 *3*	0	0^+	M1,E2		
2799.99	$(1^+,2^+)$	1590.20 *10*	19 *1*	1209.708	2^+	M1+E2	<+0.24	
		2242.0 *2*	20 *3*	558.456	2^+	M1+E2	+1 *+62−1*	
		2800.1 *1*	100 *6*	0	0^+	M1,E2		
2806.59	3^+	226.213 *9*	1.2 *6*	2580.357	2^-	E1		
		281.12 *3*	0.50 *8*	2525.420	2^+			
		1522.90 *9*	92 *10*	1283.739	4^+	M1,E2		
		2248.1 *3*	100 *20*	558.456	2^+	M1,E2		
2812.050	2^+	110.985 *5*	0.35 *4*	2701.066	3^+	M1+E2	0.42	
		175.531 *13*	0.09 *6*	2636.52	0^+			
		231.684 *8*	0.30 *16*	2580.357	2^-			
		607.452 *14*	2.2 *3*	2204.561	3^+	M1,E2		
		853.983 *14*	14.6 *13*	1958.094	3^-	E1		
		1447.63 *6*	16.5 *13*	1364.344	2^+	M1,E2		
		2253.4 *1*	100 *7*	558.456	2^+	M1,E2		
		2811.9 *2*	36 *9*	0	0^+			
2820.22	4^+	601.354 *20*	23 *4*	2218.860	2^+	E2		
		772.17 *3*	40 *4*	2048.026	2^+	E2		
		862.171 *24*	100 *7*	1958.094	3^-			

$\gamma(^{114}Cd)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[@]	E_f	J^π_f	Mult.[‡]	δ[‡]	Comments
2827.88	(4)$^+$	1618.25 *9*	100.0 *18*	1209.708	2$^+$	E2		
2871.63	2,3	913.57 *9*	13 *1*	1958.094	3$^-$			
		2313.24 *9*	100 *5*	558.456	2$^+$			
2874.26	2,4	826.11 *8*	100 *2*	2048.026	2$^+$			
		916.27 *9*	19 *1*	1958.094	3$^-$			
		1664.77 *9*	33 *1*	1209.708	2$^+$			
		2316.2 *2*		558.456	2$^+$			
2880.56	4,3	1596.94 *9*	100	1283.739	4$^+$			
2918.45	3	1634.83 *9*	100	1283.739	4$^+$	M1,E2		
2932.97	4$^+$	1649.35 *9*	100	1283.739	4$^+$	E2		
2935.76	2$^+$	1629.36 *10*	56 *1*	1305.609	0$^+$	E2		E_γ: poor fit, level-energy difference=1630.15.
		1652.53 *9*	100 *2*	1283.739	4$^+$	E2		E_γ: poor fit, level-energy difference=1652.14.
		1725.78 *20*	85 *3*	1209.708	2$^+$	M1+E2	−1.5 *+1−14*	
		2377.67 *9*	93 *6*	558.456	2$^+$	M1+E2		E_γ: level-energy difference=2377.35. δ: =+0.20 *+11−7* or +1.5 *3*.
2936.12	(3$^-$)	286.021 *22*	0.5 *1*	2650.120	2$^+$			
		475.327 *21*	4.5 *5*	2460.757	4$^-$			
		1652.59 *11*	100 *23*	1283.739	4$^+$	E1		
		2377.8 *2*	77 *15*	558.456	2$^+$			
2941.27	2,3$^+$	1731.59 *9*	100 *2*	1209.708	2$^+$	M1+E2	−0.9 *+2−38*	
		2382.90 *9*	96 *6*	558.456	2$^+$	M1+E2	+0.18 *3*	
2953.00	3$^+$	800.99 *4*	4.4 *5*	2152.266	3$^+$,4$^+$	E2		
		905.08 *7*	3.1 *7*	2048.026	2$^+$			
		2394.9 *1*	100 *8*	558.456	2$^+$	M1,E2		
2957.26	1$^-$,2$^-$,3$^-$	256.195[a] *4*	2.86[a] *16*	2701.066	3$^+$	E1		
		496.552[a] *21*	1.8[a] *4*	2460.757	4$^-$			
		738.35[a] *3*	2.1[a] *3*	2218.860	2$^+$			
		1097.35[b] *11*	4.7 *10*	1859.698	0$^+$			
		2398.6 *1*	100 *7*	558.456	2$^+$	E1		
2999.56	1$^-$	780.54 *8*	2.0 *2*	2218.860	2$^+$			
		2440.7 *3*	14 *3*	558.456	2$^+$			
		2999.7 *1*	100 *6*	0	0$^+$	E1		
3001.63	4$^+$	477.57 *6*		2525.420	2$^+$	E2		
		2443.22 *11*		558.456	2$^+$	E2		
3002.22	2$^+$	341.321 *17*	2.2 *2*	2660.90	2$^+$			
		476.80 *3*	4.8 *11*	2525.420	2$^+$	M1,E2		
		3001.8 *4*	100 *23*	0	0$^+$	E2		
3025.04	2,3	2466.63 *10*		558.456	2$^+$			
3051.54	(2)	1841.9 *1*	100	1209.708	2$^+$			
3052.90	0$^+$	232.689 *8*	0.1 *1*	2820.22	4$^+$			
		833.98 *3*	5.5 *4*	2218.860	2$^+$	(E2)		

$^{114}_{48}Cd_{66}$-12

γ(^{114}Cd) (continued)

E_i(level)	J^π_i	E_γ†	I_γ@	E_f	J^π_f	Mult.‡	δ‡	Comments
3052.90	0^+	1004.91 *5*	7.8 *10*	2048.026	2^+			
		3053.1 *2*	100 *10*	0	0^+			
3061.48	2^+	1197.26 *12*	100 *15*	1864.262	3^+			
		2503.12 *9*	95 *10*	558.456	2^+	M1+E2	−1.5 *+5−7*	
		3062 *1*		0	0^+			
3077.44	2^+	270.804 *16*	0.8 *1*	2806.59	3^+			
		277.469 *12*	0.7 *1*	2799.99	$(1^+,2^+)$			
		376.347 *19*	1.4 *2*	2701.066	3^+			
		523.588 *20*	5.3 *10*	2553.87	0^+			
		1029.471 *20*	40 *4*	2048.026	2^+	M1,E2		
		2518.9 *2*	48 *10*	558.456	2^+	M1+E2		
		3077.6 *2*	100 *10*	0	0^+	E2		
3087	1,2	3087		0	0^+			
3108.640	1^-	151.378 *3*	0.1 *1*	2957.26	$1^-,2^-,3^-$	M1+E2	<0.33	
		2550.1 *1*	100 *6*	558.456	2^+	E1		
		3108.2 *2*	37 *6*	0	0^+	E1		
3111.74	(2)	727.37 *11*	50 *6*	2387.3	3^-	E2		E_γ: level-energy difference=727.03.
		1746.88 *14*	15 *2*	1364.344	2^+	E1		E_γ: level-energy difference=1747.42.
3115.56	3,2	1067.07 *10*	86 *3*	2048.026	2^+			E_γ: poor fit, level-energy difference=1067.61, also pure E2 not possible.
		1274.15 *11*	100 *3*	1841.947	2^+			E_γ: level-energy difference=1273.80.
		1832.19 *20*	37 *2*	1283.739	4^+			
		2557.36 *11*	91 *5*	558.456	2^+			
3140.34	3,2	1276.65 *11*	46 *2*	1864.262	3^+			E_γ: level-energy difference=1276.23.
		2581.50 *11*	100.0 *8*	558.456	2^+			
3143.3	(10^+)	474		2669.3	(8^+)			
3157.16	$1^-,(2^-,3^-)$	345.073 *21*	0.4 *2*	2812.050	2^+			
		400.253 *15*	2.5 *2*	2756.92	$3^-,(4^-)$			
		2022.7 *2*	85 *17*	1134.532	0^+	E1		
		2598.6 *1*	100 *6*	558.456	2^+	E1		
3167.1	$0^+,1^+,2^+$	1802.6 *3*	53	1364.344	2^+			
		1957.5 *3*	59	1209.708	2^+			
		2608.3 *8*	100	558.456	2^+			
3168.72	2	1959.08 *12*	100	1209.708	2^+			
3176.14	2,3	1128.04 *10*	49 *3*	2048.026	2^+			
		1311.70 *12*	68 *4*	1864.262	3^+			
		2618.17 *11*	100 *5*	558.456	2^+			E_γ: poor fit, level-energy difference=2618.72.
3192.19	2,3	1982.55 *13*	100	1209.708	2^+			
3206.0	2^+	203.774 *6*	0.5 *1*	3002.22	2^+	M1		
		987.20 *3*	66 *3*	2218.860	2^+	M1		
		1247.85 *6*	37 *7*	1958.094	3^-	E1		
		1900.3 *3*	100 *16*	1305.609	0^+	E2		

$^{114}_{48}$Cd$_{66}$-13

$\gamma(^{114}Cd)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[@]	E_f	J^π_f	Mult.[‡]	δ[‡]	Comments
3213.2	$(1,2)^-$	3213.2 *3*	100	0	0^+			
3214	$1^{(+)}$	3214		0	0^+	(M1)		
3218.56	$1^-,(2^-)$	109.915 *3*	0.08 *8*	3108.640	1^-	M1+E2	<0.35	
		418.554 *14*	0.2 *1*	2799.99	$(1^+,2^+)$	E1		
		999.743 *19*	3.6 *4*	2218.860	2^+	E1		
		1260.56 *5*	4.3 *5*	1958.094	3^-	E2		
		1853.7 *4*	4.7 *10*	1364.344	2^+	E1		
		2660.02 *3*	100 *5*	558.456	2^+	E1		
		3217.5 *6*	4.7 *14*	0	0^+			
3220	$1^{(+)}$	3220		0	0^+	(M1)		
3222.76	0	2013.12 *14*	100	1209.708	2^+			
3232.41	1,2,3	2673.99 *11*		558.456	2^+			
3249.18	1	811.15 *13*	100 *20*	2437.64	0^+			E_γ: level-energy difference=811.60.
		2040.06 *14*	72 *8*	1209.708	2^+			E_γ: level-energy difference=2039.54.
3258.093	$1^-,2^-$	304.855 *8*	0.8 *1*	2953.00	3^+			
		802.076 *17*	10.9 *16*	2456.005	1^-	M1,E2		
		873.31 *4*	6.7 *7*	2384.760	3^-			
		1416.10 *11*	26 *3*	1841.947	2^+	E1		
		2699.5 *2*	100 *10*	558.456	2^+	E1		
3282.6	(9^-)	547.4	100	2735.2	(7^-)			
3285.09	$2,3^+$	2001.46 *11*	100	1283.739	4^+			
3296.57		1092.43 *12*	71 *4*	2204.561	3^+			
		2737.68 *18*	100 *28*	558.456	2^+			
3298.52	2,3	2740.10 *12*		558.456	2^+			
3315.7	(0,1,2)	2757.2 *3*	100	558.456	2^+			
3322.29	1	865.35 *11*		2456.005	1^-			E_γ: poor fit, level-energy difference=865.89.
		2764.51 *12*	100 *12*	558.456	2^+			E_γ: poor fit, level-energy difference=2763.87.
		3322.24 *13*	69 *14*	0	0^+			
3334.34	2,3,4	753.76 *13*		2580.357	2^-			
		2124.92 *14*	67 *3*	1209.708	2^+			
		2775.97 *13*	100 *12*	558.456	2^+			
3365		2808.37 *15*		558.456	2^+			
3381.95	1,2,3	2172.19 *15*	100 *23*	1209.708	2^+			
		2823.81 *23*	68 *14*	558.456	2^+			
3409.62	1,2	1545.50 *15*	100	1864.262	3^+			
		3410 *1*		0	0^+			
3445.1		1397.0 *3*	100	2048.026	2^+			
3462.1	$(1^+,2^+,3^+)$	3462.18 *19*	100	0	0^+			
3478.54		2114.21 *18*	100	1364.344	2^+			
3488.79		3488.73 *22*	100	0	0^+			
3501.15	$0^+,1^+,2^+$	2136.9 *2*	100 *8*	1364.344	2^+			

From ENSDF

$^{114}_{48}Cd_{66}$-14

Adopted Levels, Gammas (continued)

$\gamma(^{114}Cd)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[@]	E_f	J^π_f
3501.15	$0^+,1^+,2^+$	2942.5 *3*	97 *8*	558.456	2^+
3503.80		1545.50 *15*		1958.094	3^-
		2198.63 *20*		1305.609	0^+
3504.0	(10^+)	835.2	100	2669.3	(8^+)
3543.74		2985.31 *22*	100	558.456	2^+
3552.14		2993.71 *24*	100	558.456	2^+
3610.7		3610.6 *3*	100	0	0^+
3682	1,2	3682		0	0^+
3707	1,2	3707		0	0^+
3711.3	(12^+)	568.2	100	3143.3	(10^+)
3748	1	3190	38 *5*	558.456	2^+
		3748	100	0	0^+
3791	1	3791		0	0^+
3796	1	3796		0	0^+
3827	1	3269	168 *68*	558.456	2^+
		3827	100	0	0^+
3857	1	3857		0	0^+
3916	1	3916		0	0^+
3936	1,2	3936		0	0^+
3949	1	3949		0	0^+
3994		3994		0	0^+
4027.3	(11^-)	744.7	100	3282.6	(9^-)
4056	1	4056		0	0^+
4075	1,2	4075		0	0^+
4256.4	(12^+)	752.4	100	3504.0	(10^+)
4604.2	(14^+)	892.5	100	3711.3	(12^+)
4605.2	(13^-)	577.9	100	4027.3	(11^-)

[†] From (n,γ). See also (n,n′γ) for additional γ′s.

[‡] From (n,γ), unless otherwise noted.

[#] From 1976De42.

[@] Relative photon branching from each level. Data are averages from (n,γ) and (n,n′γ). Gammas from the 2151 level (not seen in (n,γ)) are not included here.

[&] 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.

[a] Multiply placed with undivided intensity.

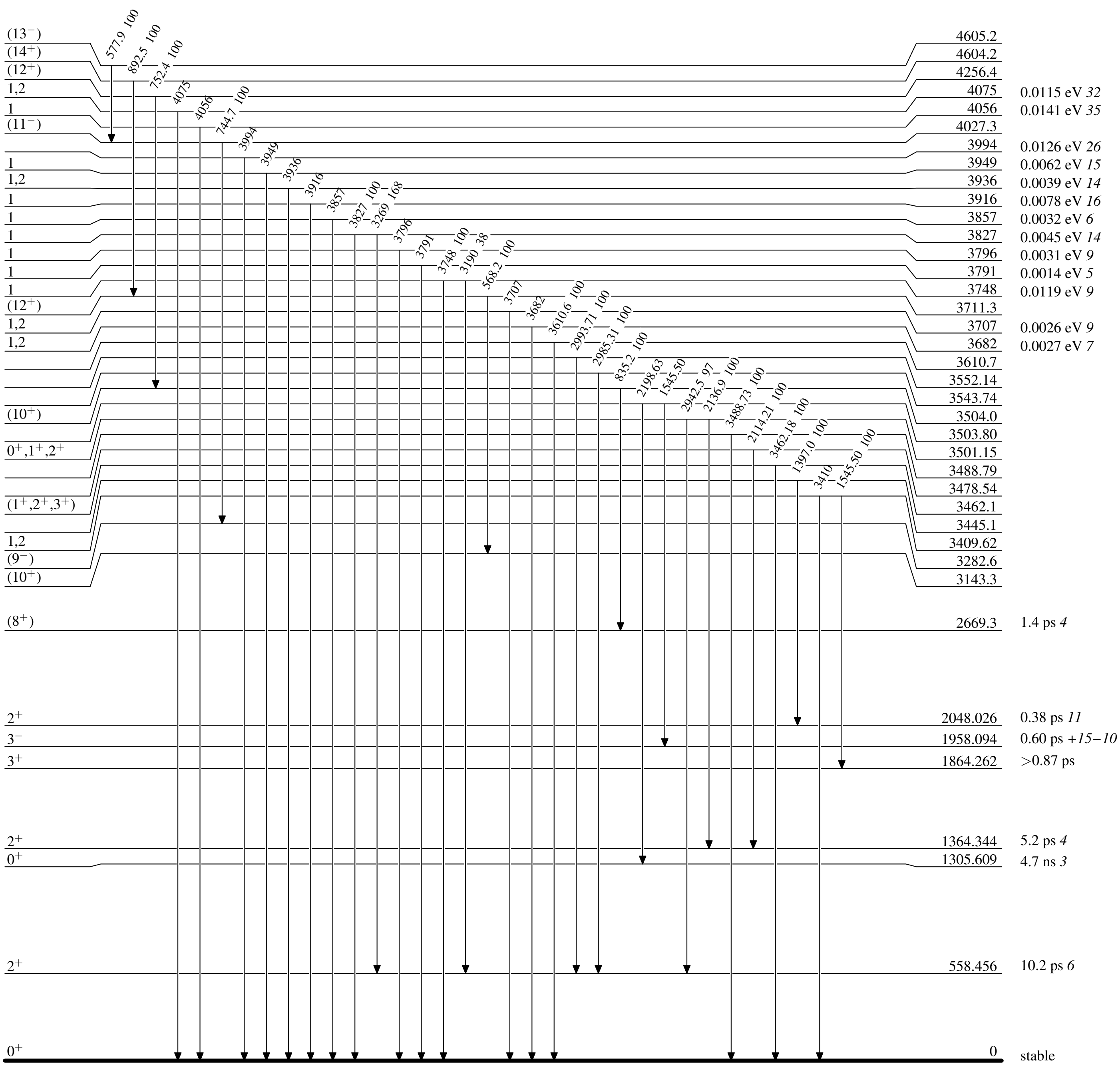
[b] Placement of transition in the level scheme is uncertain.

$^{114}_{48}Cd_{66}$-15

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level

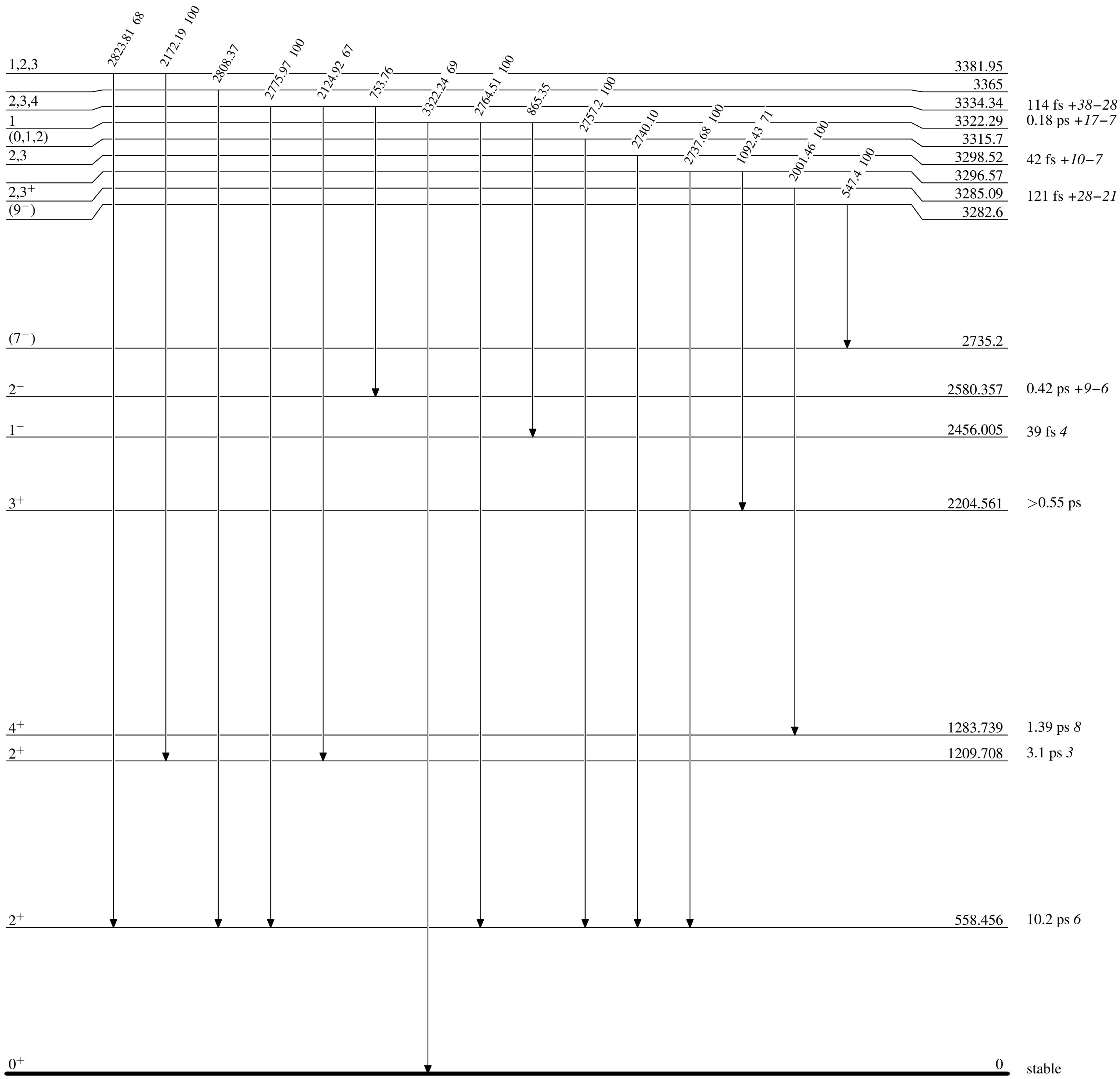


$^{114}_{48}Cd_{66}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

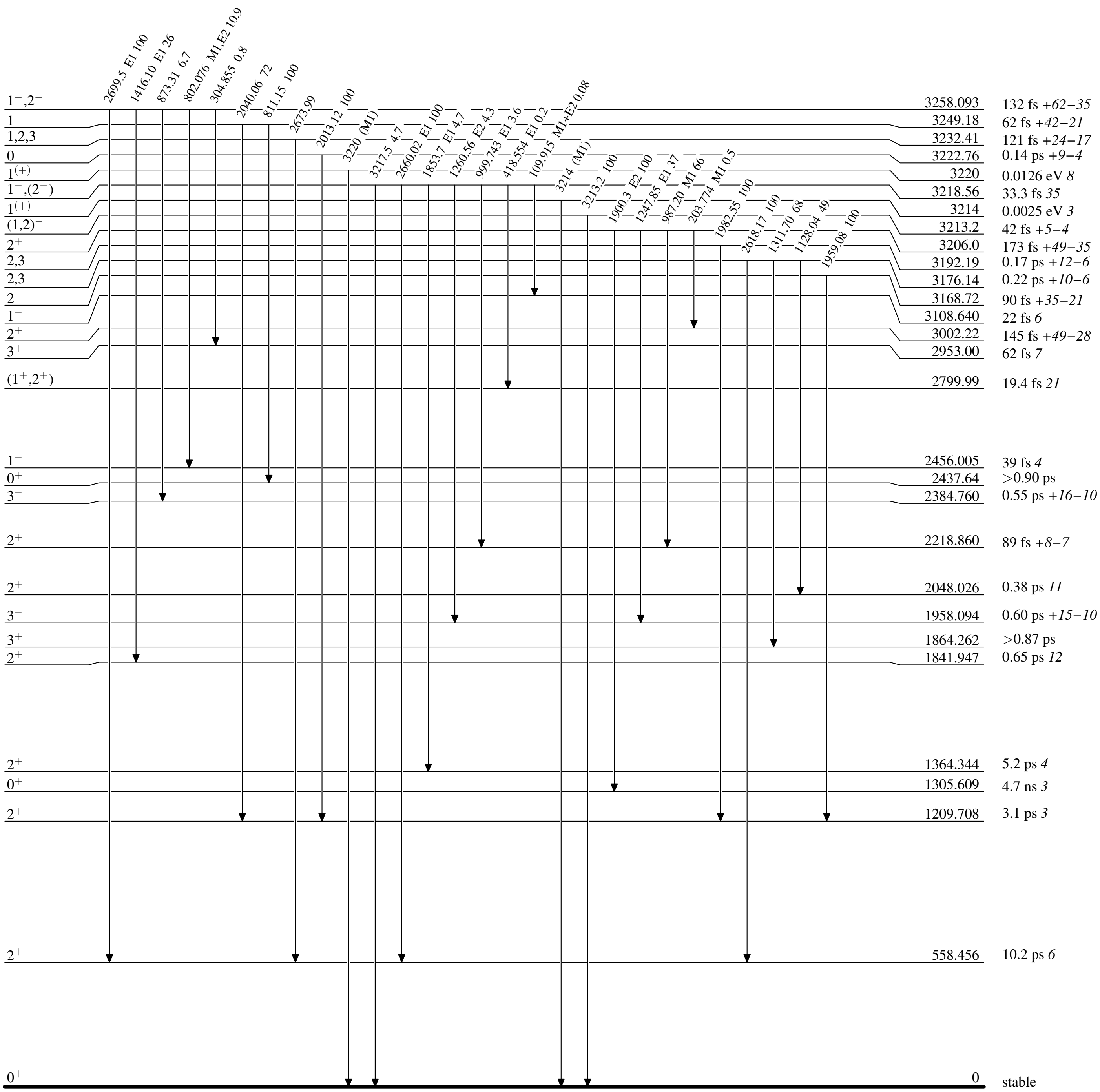


$^{114}_{48}Cd_{66}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

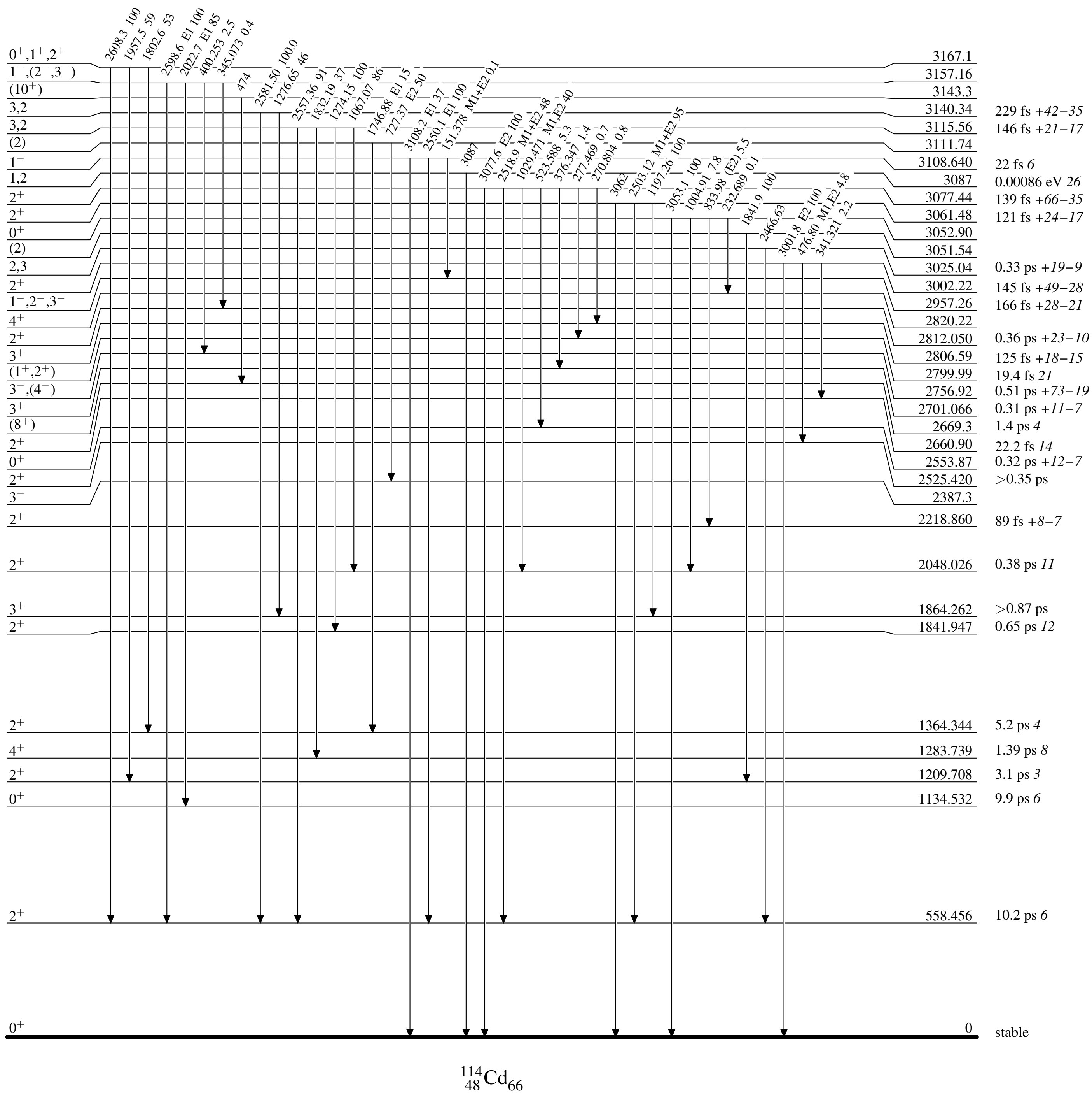


$^{114}_{48}Cd_{66}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



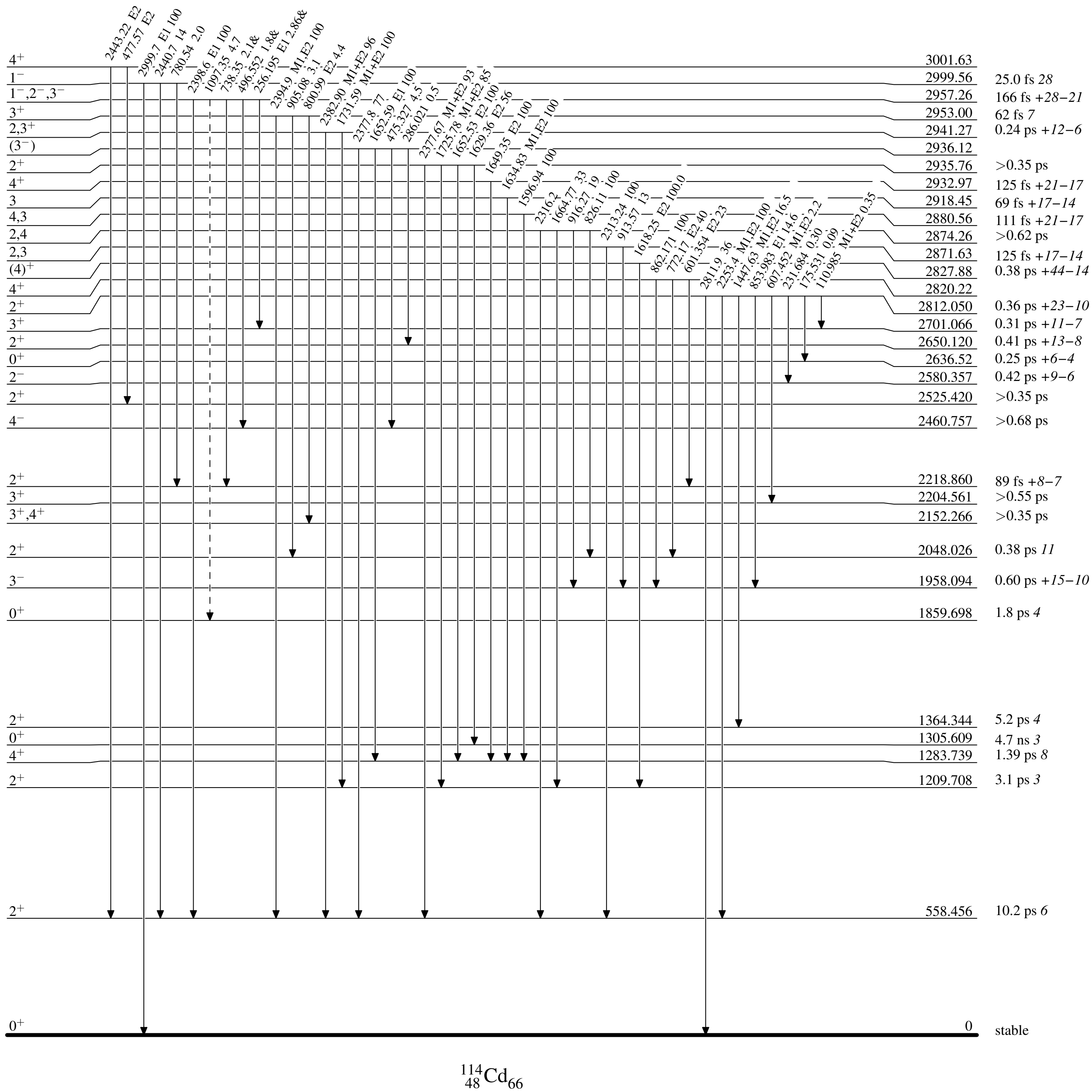
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

γ Decay (Uncertain)

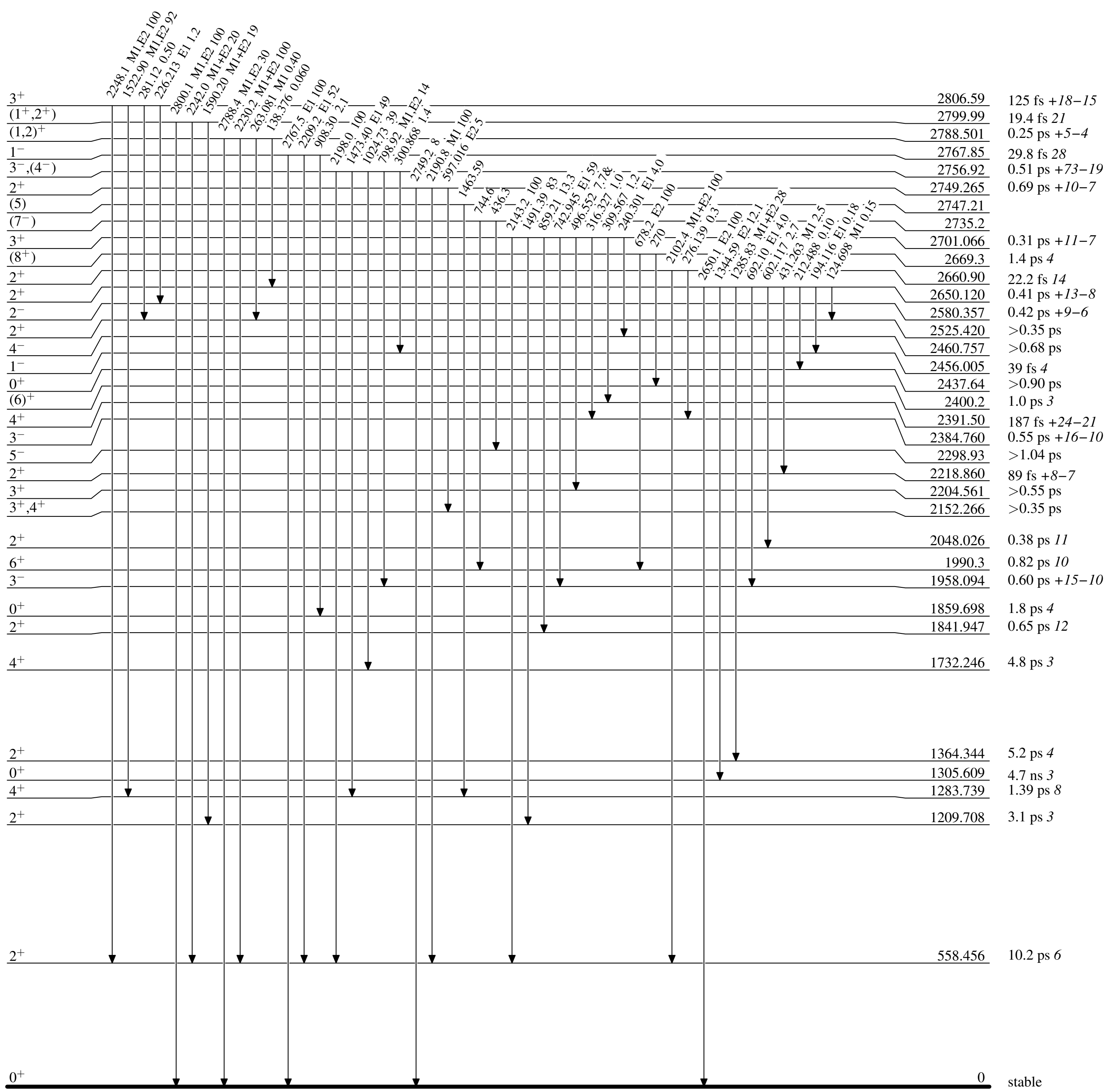


$^{114}_{48}Cd_{66}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

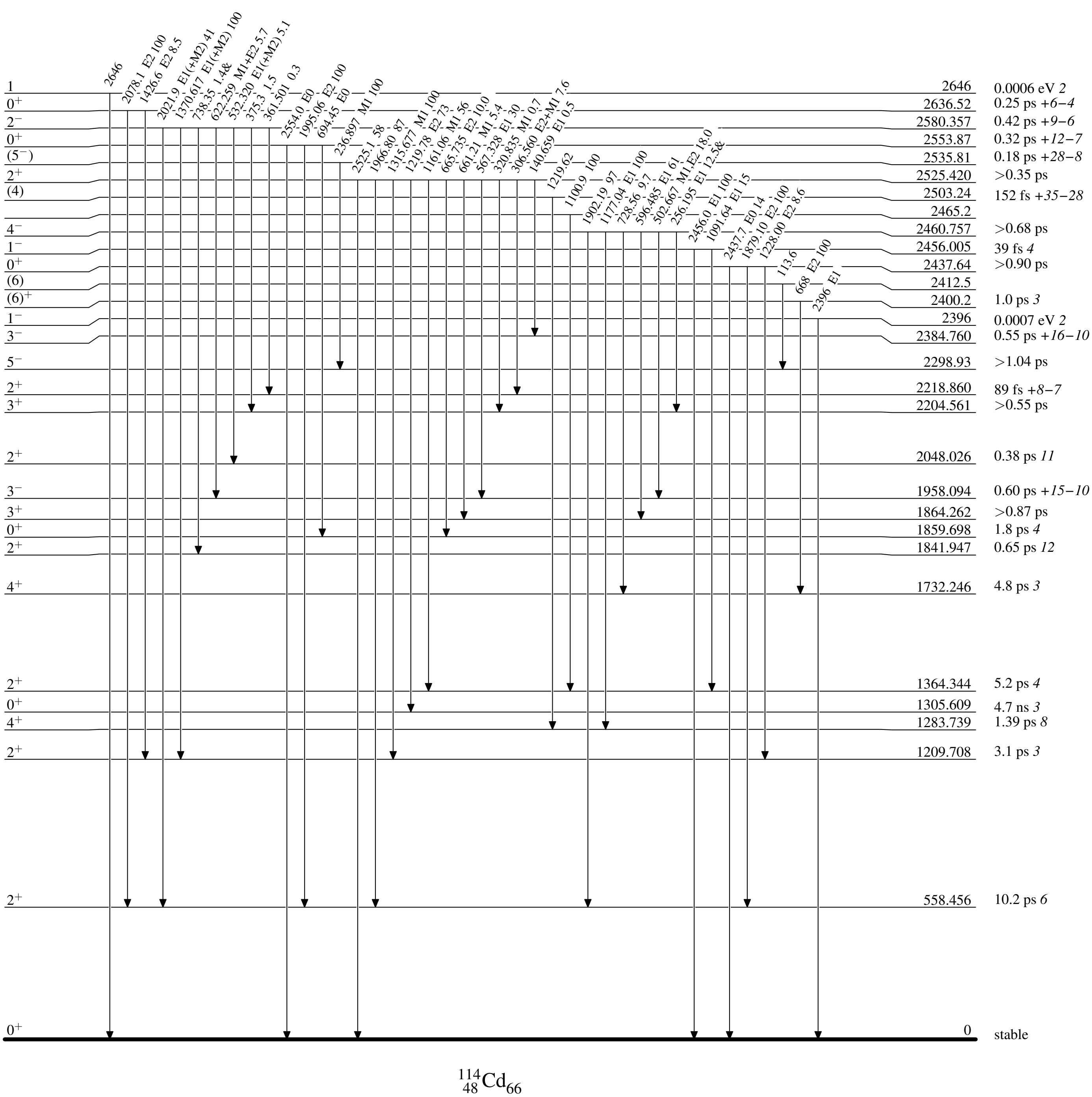


$^{114}_{48}Cd_{66}$

Adopted Levels, Gammas

Level Scheme (continued)

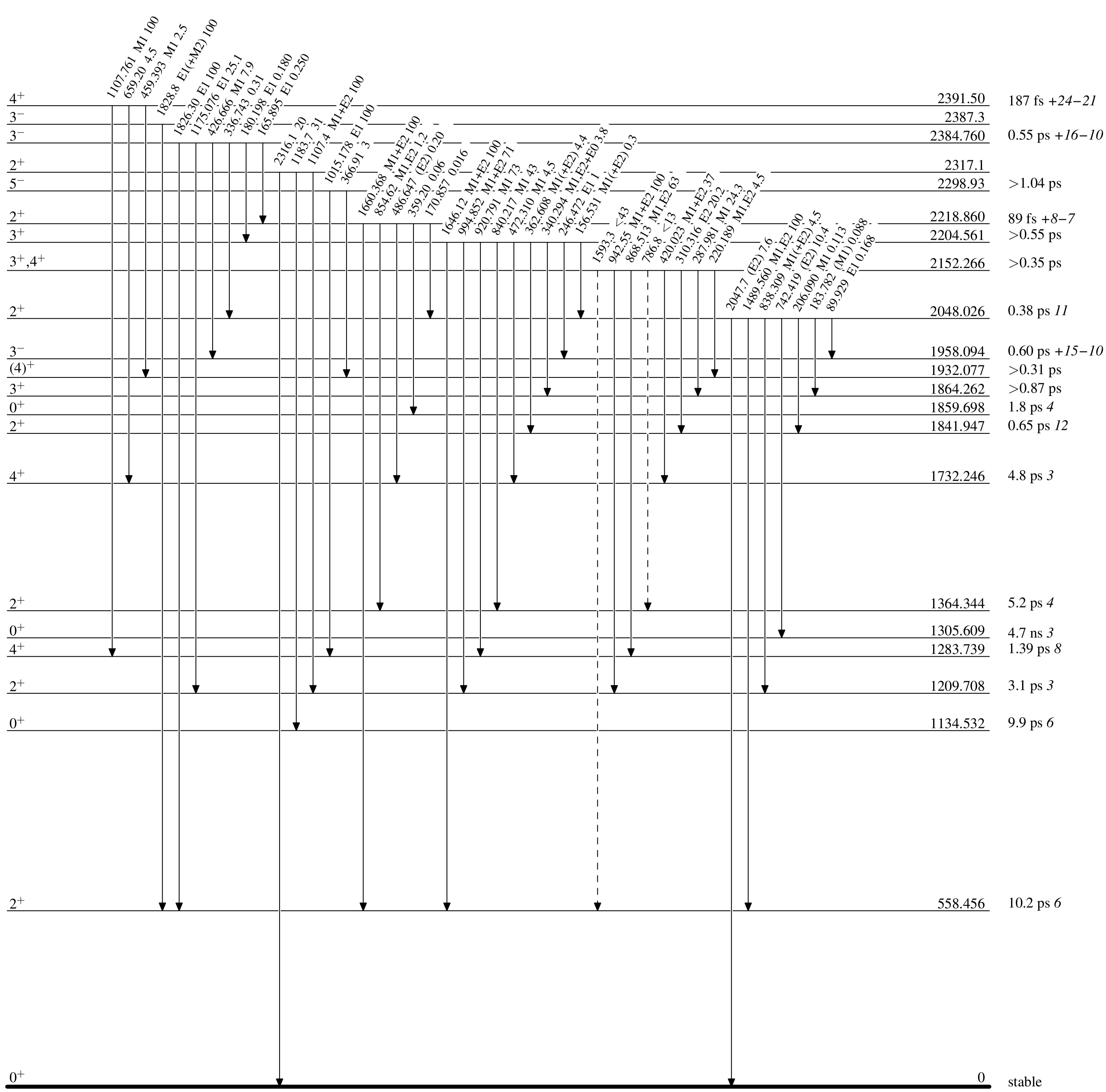
Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given



Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

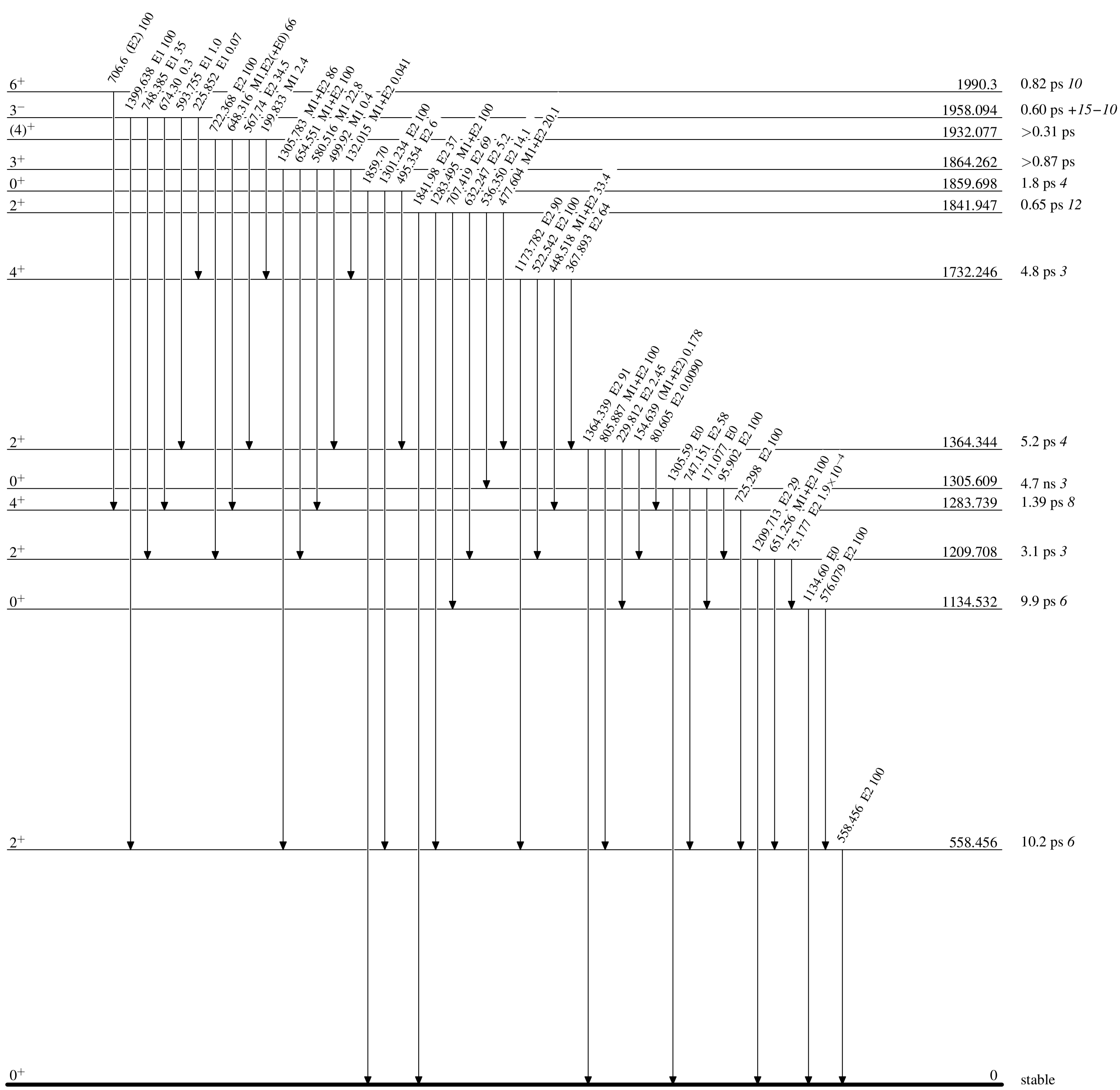


$^{114}_{48}Cd_{66}$

Adopted Levels, Gammas

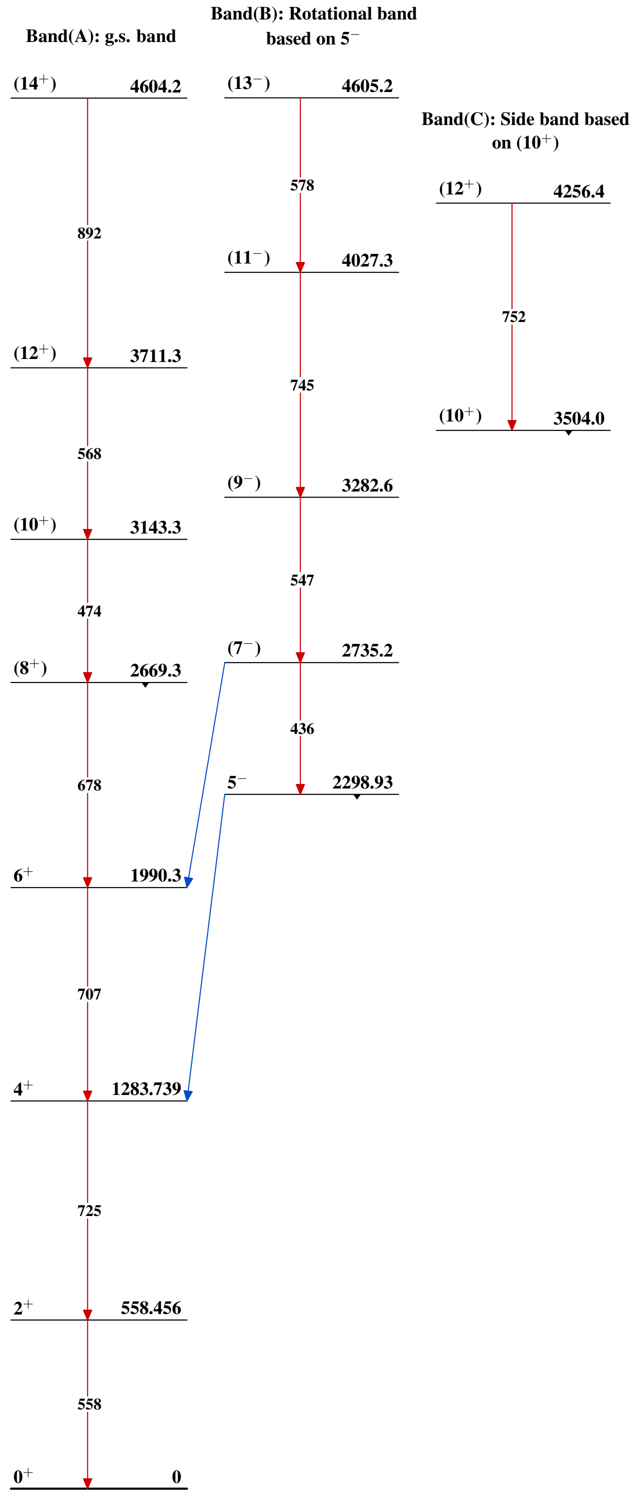
Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given



$^{114}_{48}Cd_{66}$

Adopted Levels, Gammas



$^{114}_{48}Cd_{66}$

Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	NDS 111, 717 (2010)	1-Dec-2009

Q(β^-)=−462.8 *3*; S(n)=8699.5 *7*; S(p)=11019 *19*; Q(α)=−4816 *7* 2012Wa38
Note: Current evaluation has used the following Q record.
Q(β^-)=−468 *4*; S(n)=8700.2 *20*; S(p)=11028 *20*; Q(α)=−4794 *23* 2003Au03,2009AuZZ

^{116}Cd Levels

Cross Reference (XREF) Flags

A	Coulomb excitation	G	^{116}Cd(n,n′γ)	M	(HI,xnγ)
B	^{116}Ag β^- decay (9.3 s)	H	^{116}Cd(p,p′)	N	^{116}Cd(^{94}Kr,xnγ)
C	^{116}Ag β^- decay (237 s)	I	^{116}Cd(p,p′γ)	O	^{116}Cd(γ,pol γ′)
D	^{116}Ag β^- decay (20 s)	J	^{120}Sn(d,^{6}Li)	P	^{116}In ε decay (14.10 s)
E	^{116}Cd(d,d′)	K	^{114}Cd(t,p)	Q	^{116}Cd(α,α′)
F	^{116}Cd(e,e′)	L	^{176}Yb(^{28}Si,Fγ)		

E(level)[†]	Jπ[‡]	$T_{1/2}$	XREF	Comments
0.0[@]	0+	3.3×10^{19} y *4*		%2β$^-$=? $T_{1/2}$: From 2002Ba52 the lower limits of the $T_{1/2}$ 1/2 for 2β- decay is 4×10^{19} y *1*(2005Ra13). Other values: 1.7×10^{20} y (1990Ba52), 2.6×10^{20}y (1994Ku25), 2.7×10^{20} y (1995Da09). Others: 1991Zd01, 1993Kl01, 2000Ar16, 1998Da23, 2003Da09, 2003Da24, 2005Ba01, 2005Ba33, 2005Da03,2006Wi12, 2006Sh31, 2006Ba35.
513.490[@] *15*	2+	14.1 ps *5*	ABCDEFGHIJKLMNO Q	Q=−0.42 *4* (1989Ra17,2005St24) μ=+0.60 *14* (1980Br01,1989Ra17,2005St24) XREF: E(520). Jπ: L(p,p′)=2. $T_{1/2}$: from Coul. ex., B(E2)(0-2)=0.560 *20* (1987Ra01). Q: average of 1976Es02 and 1977Gi13.
1212.997 *13*	2+	1.9 ps *3*	ABCD GHIJK Q	Jπ: γ(θ) in Coul. ex., π=+ from L=2+4 (p,p′) and (t,p). $T_{1/2}$: from Coul. ex., B(E2)=0.019 *3* (1969Mi07).
1219.448[@] *18*	4+	1.7 ps *4*	ABCDE GHIJKLMN	Jπ: L(t,p)=2+4 for E=1214. $T_{1/2}$: from Coul. ex., B(E2)(2-4)=0.35 *7* (1965Mc05).
1282.560[#] *20*	0+	65 ps *4*	C GHIJ N	Jπ: γ(θ) in (n,n′γ), J=2 in (p,p′) could be different level. $T_{1/2}$: from 1989Ma33, measured βγγ with BaF_2 and plastic detector.
1380.310[&] *20*	0+	1.15 ps *23*	A CD GHIJK N Q	$T_{1/2}$: from B(E2)(2-0)=0.020 *4* (1965Mc05). Jπ: from L(t,p)=0.
1642.499[&] *17*	2+	0.50 ps +*14*−*9*	BCDE GHIJ N Q	Jπ: M1+E2 to 2+, E2 γ to 0+. $T_{1/2}$: From DSA in (n,n′γ) (2003Ka45).
1869.477 *19*	4+	0.24 ps +*17*−*7*	B D G	$T_{1/2}$: From DSA in (n,n′γ) (2003Ka45).
1915.816 *22*	3+	0.49 ps +*17*−*10*	BCD G I	$T_{1/2}$: From DSA in (n,n′γ) (2003Ka45). Jπ: γ(θ) in (n,n′γ),
1921.557 *23*	3−		ABCD GHIJK Q	Jπ: L(t,p)=0+3 for E=1924 *6* and γ(θ) in (n,n′γ).
1928.44 *5*	0+		C E G I K	Jπ: L(t,p)=0+3, γ(θ) in (n,n′γ).
1951.33[#] *4*	2+	0.56 ps +*22*−*12*	C G I K N	$T_{1/2}$: From DSA in (n,n′γ) (2003Ka45). Jπ: L(p)=2 (t,p).
2026.66[@] *3*	6+	0.44 ps +*31*−*13*	B G IJ LMN	$T_{1/2}$: From DSA in (n,n′γ) (2003Ka45). Jπ: E2 γ to 4+, no γ to 0+.
2037.04 *5*	2+		G	Jπ: γ(θ) in (n,n′γ), linear polarization.

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Adopted Levels, Gammas (continued)

^{116}Cd Levels (continued)

E(level)[†]	J^{π}[‡]	$T_{1/2}$	XREF	Comments
2041.91[&] *4*	4^+		B GH	J^{π}: from M1+E2 γ to 4^+, E2 γ to 2^+.
2118.43 *3*	$(2)^+$		C GHIJ	J^{π}: M1+E2 γ to 2^+, 1,3 ruled out by $\gamma(\theta)$ in (n,n$'\gamma$).
2189.0? *5*			B	E(level): not confirmed in (n,n$'\gamma$) (1991Ar17).
2195.4? *4*			C	E(level): not confirmed in (n,n$'\gamma$) (1991Ar17).
2248.837[a] *23*	5^-		B e GHIJKL	J^{π}: L(t,p)=5.
2291.9 *3*	5^-		B e h JK	J^{π}: L(t,p)=2+5. E(level): not confirmed by 1991Ar17.
2292.47 *10*	2^+		C e Gh JK	J^{π}: L(t,p)=2+5,γ to 2^+, J≤5.
2293.2 *6*			C	
2293.7 *3*	$(2,3^+)$		C e GhIJ	J^{π}: M1+E2 γ to 2^+.
2296.29 *4*	+		G	
2302.95 *20*			B D	
2339.77 *5*	4^-		B De GH	J^{π}: $\gamma(\theta)$ and linear polarization in (n,n$'\gamma$).
2376.45 *4*	4^+		e GHIJK	J^{π}: L(t,p)=4.
2377.073 *16*	3^+		D G i	J^{π}: $\gamma(\theta)$ in (n,n$'\gamma$), 3^- ruled out from δ.
2391.50 *3*	$(2^+,3)$		D GHiJ	J^{π}: $\gamma(\theta)$ in (n,n$'\gamma$), linear polarization ,(3^-) in Ag decay (20s).
2435.03 *14*	2^+		C GHI K	XREF: K(2431). J^{π}: L(t,p)=2.
2478.15 *7*	1^-	0.0097 eV *6*	C E GH O	J^{π}: $\gamma(\theta)$ in (n,n$'\gamma$), linear polarization, excitation in (d,d$'$) suggests natural parity.
2488.0 *10*	1^+	0.0021 eV *3*	O	
2493.66 *20*			B D	
2503.83 *5*	(5^-)		B GH	XREF: H(2509).
2517.49 *5*			C G	
2559 *10*	2^+		H K	J^{π}: L(t,p)=2.
2564.7[&] *10*	6^+		B MN	J^{π}: stretched E2 γ to 4^+.
2572.16 *15*			C	
2604.85 *5*	$2^+,3,4^+$		GHI	XREF: I(2559). J^{π}: γ's to 2^+ and 4^+.
2627.7? *3*			C	E(level): not confirmed in (n,n$'\gamma$) (1991Ar17).
2648 *8*			E HI	XREF: E(2640).
2653.90 *6*			C G	
2659.0 *10*	1^+	0.0045 eV *4*	O	
2672.83 *7*			G	
2690.90 *8*	(5^-)		B	
2693.17[a] *15*	(7^-)		B L	
2698.8 *5*	(5^-)		B	
2720.09 *7*	1^-		C GH K	XREF: H(2715)K(2714). J^{π}: L(t,p)=1.
2727.25 *19*			G	
2760.1? *3*	$(1,2^+)$		C	E(level): not confirmed in (n,n$'\gamma$) (1991Ar17). J^{π}: γ to 0^+.
2762.0 *10*	1	0.0020 eV *5*	O	B(E1)↑=0.27×10^{-5} *6*
2764.6 *3*			G	
2779.7 *14*	(10^+)		M	J^{π}: from systematics.
2782.6 *5*	2^+		C H K	J^{π}: L(t,p)=2.
2786.14 *15*			D G	
2802.96 *6*			C GH	
2810.5 *3*	$1,2^+$		G	J^{π}: γ to 0^+.
2817.6 *6*			C	
2822.35 *15*			D G	
2824.9[@] *8*	8^+		L N	
2828.3 *10*	(6^-)		B L	
2828.6 *3*	1^-	0.0020 eV *5*	C G O	J^{π}: γ to 0^+.

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Adopted Levels, Gammas (continued)

^{116}Cd Levels (continued)

E(level)[†]	J^{π}[‡]	$T_{1/2}$	XREF	Comments
2837 *11*	(6$^+$)		K	J^{π}: L=(t,p)=(6).
2845.3 *7*	1$^+$	0.0104 eV *10*	CD O	
2862.45 *18*			C	
2865.62 *15*	(5$^-$)		B	
2873.2 *3*	8$^+$		L N	
2877.52 *12*	(6$^-$)		B	
2909.79 *17*			GH K	
2915.34 *21*			B D	
2958.22 *22*	(6$^-$)		B G	J^{π}: log *ft*=4.8 from (5$^+$) parent.
2973 *12*	(3$^-$)		H K	J^{π}: L(t,p)=(3).
2978.19 *21*			C	
3001.44 *9*			C	
3013.38 *10*	(5$^-$,6$^-$)		B	
3014.74 *24*			C	
3040.0[@] *8*	10$^+$		L N	
3050 *14*	4$^+$		H K	J^{π}: L(t,p)=4.
3068.0 *10*	1$^+$	0.0207 eV *10*	C O	
3087.83 *7*	(7$^-$)		B	
3102.7 *3*			C	
3118.21 *15*	1$^-$		C H K	J^{π}: L(t,p)=1.
3124.6 *3*			D	
3130.14 *22*			B	
3137.62 *20*			C	
3156.0 *10*	1$^-$	0.0052 eV *5*	O	B(E1)↑=0.48×10^{-5} *5*
3162.46 *20*			B	
3175.68 *22*			C	
3212.66 *20*			B	
3213.44 *19*	(6$^+$)		BC	
3217.00 *23*	2$^+$		C K	J^{π}: L(t,p)=2.
3218.44 *20*			C	
3227.99 *14*			D	
3250.65 *20*			C	
3275.65 *17*			C	
3282.0 *10*	1	0.0009 eV *6*	O	B(E1)↑=0.08×10^{-5} *5*
3287.23 *20*			C	
3294.35 *14*			D	
3299.3 *4*			C	
3303.1 *3*			D	
3304.12 *17*			D	
3307.2 *3*			C	
3321 *14*	3$^-$		K	J^{π}: L(t,p)=3.
3339.95 *20*			C	
3348.02 *12*	(1,2$^+$)		C	J^{π}: γ to 0$^+$.
3354.88 *19*			D	
3359.94 *13*			B	
3372.0 *3*			B	
3373.0 *5*			B	
3378.14 *15*			C	
3378.6 *3*			C	
3382.5[a] *10*	(9$^-$)		L	
3387.7 *3*			B	
3398.6 *4*	(1,2$^+$)		C	J^{π}: γ to 0$^+$.
3401.1 *10*	1	0.0017 eV *4*	O	B(E1)↑=0.13×10^{-5} *3*
3423.1 *10*	1$^+$	0.0028 eV *5*	O	
3433.3 *5*			C	
3471.33 *20*			C	

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Adopted Levels, Gammas (continued)

^{116}Cd Levels (continued)

E(level)[†]	J^{π}[‡]	$T_{1/2}$	XREF	Comments
3472.13 *12*			C	
3483 *14*	4^+		K	J^{π}: L(t,p)=4.
3486.06 *21*			B	
3511.86 *20*			C	
3527.30 *18*			C	
3531.56 *20*			C	
3542.7 *3*			C	
3549.54 *21*			B	
3560.31 *20*			C	
3578.5[@] *13*	12^+		L	
3595.5 *3*			C	
3601.1 *10*	1	0.0064 eV *6*	C O	B(E1)↑=0.39×10^{-5} *4*
3632.7 *5*			B	
3641.1 *10*	1	0.0013 eV *4*	O	B(E1)↑=0.08×10^{-5} *2*
3655.3 *7*	1	0.0068 eV *8*	O	B(E1)↑=0.25×10^{-5} *6*
3664.75 *20*			B	
3674.56 *15*			C	
3681.86 *20*			C	
3708.38 *17*			C	
3732.1 *10*	1	0.0067 eV *7*	O	B(E1)↑=0.37×10^{-5} *4*
3745.53 *17*			C	
3747.24 *20*			C	
3758.63 *20*			C	
3763.1 *10*	1	0.0024 eV *7*	O	B(E1)↑=0.13×10^{-5} *4*
3782.3 *7*	1	0.0142 eV *10*	O	B(E1)↑=0.53×10^{-5} *7*
3794.27 *20*			C	
3794.3 *3*			C	
3805.97 *20*			C	
3839.17 *20*			C	
3841.5 *3*			C	
3849.1 *10*	1	0.0086 eV *8*	C O	B(E1)↑=0.43×10^{-5} *4*
3876.1 *10*	1	0.0056 eV *7*	C O	B(E1)↑=0.27×10^{-5} *3*
3895.3 *7*	1	0.0273 eV *16*	O	B(E1)↑=0.90×10^{-5} *10*
3916.1 *4*	$(1,2^+)$		C	J^{π}: γ to 0^+.
3924.2 *3*			C	
3943.07 *20*			C	
3976.1 *10*	1	0.0044 eV *7*	O	B(E1)↑=0.20×10^{-5} *3*
3984.6 *3*			C	
3997.1 *10*	1	0.0022 eV *7*	O	B(E1)↑=0.10×10^{-5} *3*
4009.7 *3*			C	
4022.97 *20*			C	
4027.1 *10*	1	0.0067 eV *9*	O	B(E1)↑=0.29×10^{-5} *4*
4057.88 *20*			C	
4059.4[a] *14*	(11^-)		L	
4080.2 *3*			C	
4083.60 *17*			C	
4135.85 *20*			C	
4177.2 *3*			C	
4231.48 *20*			C	
4247.0 *3*			C	
4290.19 *20*			C	
4378.46 *20*			C	
4380.5[@] *16*	(14^+)		L	
4428.29 *20*			C	
4432.06 *20*			C	

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{116}Cd Levels (continued)

E(level)†	XREF	E(level)†	XREF	E(level)†	XREF
4449.5 *3*	C	4632.0 *3*	C	4773.0 *3*	C
4475.94 *17*	C	4642.66 *14*	C	4787.17 *20*	C
4539.20 *20*	C	4647.4 *3*	C	4828.88 *20*	C
4561.89 *20*	C	4652.85 *20*	C	4916.6 *3*	C
4575.1 *7*	C	4689.22 *19*	C	4924.6 *3*	C
4590.80 *20*	C	4697.55 *20*	C	4953.6 *3*	C
4614.81 *14*	C	4755.16 *20*	C	4968.88 *20*	C

† Energies of levels are based on least squares fit to the adopted gammas.
‡ Unless given otherwise, J^π are based on $\gamma\gamma(\theta)$, band assignment in (^{28}Si,Fγ) and (^{94}Kr,xnγ).
# Band(A): band based on the first 0^+.
@ Band(B): g.s. band.
& Band(C): intruder band based on the second 0^+.
a Band(D): band based on 5^-.

$\gamma(^{116}Cd)$

E_i(level)	J^π_i	E_γ	I_γ†	E_f	J^π_f	Mult.‡	δ	α#	Comments
513.490	2^+	513.50 5	100	0.0	0^+	[E2]			B(E2)(W.u.)=33.5 12
1212.997	2^+	699.512 14	100 3	513.490	2^+	E2+M1	−1.5 +9−4		B(E2)(W.u.)=25 10; B(M1)(W.u.)=0.007 6 Mult.: from $\gamma(\theta)$ with $\Delta\pi$=no required by level scheme, RUL rules out E1+M2.
		1212.980 14	49.1 12	0.0	0^+	[E2]			B(E2)(W.u.)=1.11 18
1219.448	4^+	705.950 14	100	513.490	2^+	[E2]			B(E2)(W.u.)=56 14
1282.560	0^+	68.9 8	22 4	1212.997	2^+	[E2]		5.6 3	B(E2)(W.u.)=3.0×10^4 8
		769.065 14	100 20	513.490	2^+	[E2]			B(E2)(W.u.)=0.79 22
1380.310	0^+	866.816 14	100	513.490	2^+	[E2]			B(E2)(W.u.)=30 6
1642.499	2^+	429.6 4	1.0 3	1212.997	2^+				E_γ: a 422γ seen in β^- decay and (p,p′γ) has not been adopted.
		1129.000 14	100 20	513.490	2^+	M1+E2	+1.10 20		B(E2)(W.u.)=6.2 +22−26; B(M1)(W.u.)=0.009 4
		1642.53 3	61 12	0.0	0^+	E2			B(E2)(W.u.)=1.1 4
1869.477	4^+	650.02 2	1.0×10^2 4	1219.448	4^+	M1+E2	−1.16 +19−32		B(E2)(W.u.)=1.5×10^2 +8−13; B(M1)(W.u.)=0.06 +4−6
		656.48 2	$9.\times10^1$ 4	1212.997	2^+				
		1356.00 4	45 19	513.490	2^+				
1915.816	3^+	273.41 5	19.2 14	1642.499	2^+				
		696.36 15	50 10	1219.448	4^+				
		702.77 5	98 9	1212.997	2^+				
		1402.309 19	100 3	513.490	2^+	D+Q	−2.3 4		
1921.557	3^-	708.7 2	30 4	1212.997	2^+				
		1408.059 18	100 3	513.490	2^+	(E1+M2)	≤0.39		Mult.: from $\gamma(\theta)$ with $\Delta\pi$=yes required by level scheme.
1928.44	0^+	1414.94 5	100	513.490	2^+				
1951.33	2^+	668.73 7	23.0 20	1282.560	0^+				
		731.77 25	2.8 5	1219.448	4^+				
		738.4 3	1.4 6	1212.997	2^+				
		1437.87 24	100 3	513.490	2^+	M1+E2	−0.54 15		B(E2)(W.u.)=0.9 5; B(M1)(W.u.)=0.0081 +20−30
		1951.35 6	17.1 6	0.0	0^+				
2026.66	6^+	807.21 3	100	1219.448	4^+	E2			B(E2)(W.u.)=1.1×10^2 +4−8
2037.04	2^+	656.73 5	100	1380.310	0^+				
2041.91	4^+	399.40 6	30.8 15	1642.499	2^+	E2		0.01301	
		822.47 8	30.7 17	1219.448	4^+	M1+E2	−0.37 17		
		1528.40 5	100 3	513.490	2^+	E2			
2118.43	$(2)^+$	835.7 3	55 8	1282.560	0^+				
		905.5 3	5.9 8	1212.997	2^+				
		1604.95 3	100 5	513.490	2^+	M1+E2	−0.05 5		
2189.0?		974.4 15	100	1212.997	2^+				
2195.4?		1681.0 6	100	513.490	2^+				
2248.837	5^-	1029.380 14	100	1219.448	4^+	E1			
		1736.0 14		513.490	2^+				
2291.9	5^-	102.7 5	34	2189.0?					
		264.3 8	100	2026.66	6^+				

$^{116}_{48}Cd_{68}$-6

γ(^{116}Cd) (continued)

E_i(level)	J^π_i	E_γ	I_γ†	E_f	J^π_f	Mult.‡	δ	Comments
2292.47	2+	173.8 *3*	8 *4*	2118.43	(2)+			
		650.0 *1*	100 *8*	1642.499	2+			
2293.2		1080.2 *6*	100	1212.997	2+			
2293.7	(2,3+)	1780.2 *3*	100	513.490	2+	M1+E2	+4.7 *20*	
2296.29	+	178.0 *3*	4.0 *24*	2118.43	(2)+			
		1083.29 *4*	100 *5*	1212.997	2+	M1+E2		Mult.: δ=−0.20 *10* or +3 *2*.
2302.95		1083.5 *2*	100	1219.448	4+			
2339.77	4−	418.2 *3*	10.0 *20*	1921.557	3−			
		423.9 *2*	50 *5*	1915.816	3+			
		1120.32 *5*	100 *8*	1219.448	4+			
2376.45	4+	334.5 *5*	5.0 *20*	2041.91	4+			
		1157.00 *4*	100 *4*	1219.448	4+	D+Q	−0.07 *7*	
2377.073	3+	258.83 *8*	7.8 *11*	2118.43	(2)+			
		1164.07 *1*	100.0 *7*	1212.997	2+			
		1863.49 *5*	18.5 *18*	513.490	2+			δ: δ=−0.18 *10* or −2.5 *9* (1991Ar17).
2391.50	(2+,3)	748.6 *3*	8.6 *18*	1642.499	2+			
		1178.40 *15*	15.7 *14*	1212.997	2+			
		1878.00 *3*	100 *3*	513.490	2+			
2435.03	2+	1152.46 *15*	100 *7*	1282.560	0+	E2		
		2435.0 *3*	63 *4*	0.0	0+			
2478.15	1−	2478.12 *7*	100	0.0	0+	E1		B(E1)(W.u.)=0.000397 *25*
2488.0	1+	2488	100	0.0	0+	M1		B(M1)(W.u.)=0.0066 *10*
2493.66		1274.2 *2*	100	1219.448	4+			
2503.83	(5−)	254.98 *5*	100 *5*	2248.837	5−			
		861.33 *10*	37 *3*	1642.499	2+			
		1991.0 *5*	8.2 *19*	513.490	2+			
2517.49		1235.1 *3*	10.1 *15*	1282.560	0+			
		1304.46 *5*	100 *7*	1212.997	2+			
		2004.3 *4*	33 *13*	513.490	2+			
2564.7	6+	538 *1*	100	2026.66	6+			
2572.16		2059.0 *2*	100	513.490	2+			
2604.85	2+,3,4+	1385.0 *2*	72 *4*	1219.448	4+			
		2091.36 *5*	100 *5*	513.490	2+			
		2604.8 *3*	14 *7*	0.0	0+			
2627.7?		711.9 *4*	100	1915.816	3+			
		1414.6 *6*	75 *9*	1212.997	2+			
2653.90		2140.39 *6*	100	513.490	2+			
2659.0	1+	2659	100	0.0	0+	M1		B(M1)(W.u.)=0.0116 *11* pol=+0.11 *7*.
2672.83		423.86 *9*	100 *5*	2248.837	5−			
		752.4 *6*	13 *3*	1921.557	3−			
		757.2 *3*	14 *3*	1915.816	3+			
		1453.57 *13*	54 *3*	1219.448	4+			

$^{116}_{48}Cd_{68}$-7

$\gamma(^{116}Cd)$ (continued)

E_i(level)	J_i^π	E_γ	I_γ†	E_f	J_f^π	Mult.‡	Comments
2690.90	(5⁻)	351.2 *2*	6.9 *8*	2339.77	4⁻	M1	α(K)exp=1.5×10⁻² *3*
		442.0 *1*	18 *4*	2248.837	5⁻		
		664.6 *3*	100 *23*	2026.66	6⁺		
2693.17	(7⁻)	444.2		2248.837	5⁻		
		666.4		2026.66	6⁺		
2698.8	(5⁻)	450.0 *5*	100	2248.837	5⁻	M1,E2	α(K)exp=7×10⁻³ *2*
2720.09	1⁻	678.1 *3*	5.7 *15*	2041.91	4⁺		
		1500.9 *3*	13.5 *17*	1219.448	4⁺		
		2206.56 *7*	100 *3*	513.490	2⁺		
2727.25		1507.9 *3*	30 *16*	1219.448	4⁺		
		2213.67 *25*	100 *9*	513.490	2⁺		
2760.1?	(1,2⁺)	2246.3 *6*	100	513.490	2⁺		
		2759.8 *7*	35 *4*	0.0	0⁺		
2762.0	1	2762	100	0.0	0⁺		
2764.6		1122.3 *5*	23 *11*	1642.499	2⁺		
		1384.1 *5*	32 *10*	1380.310	0⁺		
		2250.8 *10*	100 *9*	513.490	2⁺		
2779.7	(10⁺)	215 *1*	100	2564.7	6⁺		
2782.6	2⁺	1569.6 *6*	100	1212.997	2⁺		
2786.14		2272.63 *15*	100	513.490	2⁺		
2802.96		881.7 *5*	16 *5*	1921.557	3⁻		
		2289.49 *6*	100 *5*	513.490	2⁺		
2810.5	1,2⁺	2810.5 *3*	100	0.0	0⁺		
2817.6		1604.6 *6*	100	1212.997	2⁺		
2822.35		901.0 *2*	30	1921.557	3⁻		
		1602.5 *4*	100 *17*	1219.448	4⁺		
		1609.3 *5*	50	1212.997	2⁺		
		2308.6 *3*	98 *10*	513.490	2⁺		
2824.9	8⁺	798	100	2026.66	6⁺		
2828.3	(6⁻)	579.5	100	2248.837	5⁻		
2828.6	1⁻	2315.1 *6*	39 *5*	513.490	2⁺		
		2828.5 *3*	100 *20*	0.0	0⁺	E1	
2845.3	1⁺	2332	100 *20*	513.490	2⁺		
		2845	51 *10*	0.0	0⁺	M1	
2862.45		1649.4 *3*	58 *12*	1212.997	2⁺		
		2348.9 *3*	100 *20*	513.490	2⁺		
2865.62	(5⁻)	1646.1 *2*	100	1219.448	4⁺		
2873.2	8⁺	846.6 *3*	100	2026.66	6⁺		
2877.52	(6⁻)	186.6 *4*	18 *3*	2690.90	(5⁻)	M1	α(K)exp=8×10⁻² *2*
		373.6 *4*	13.4 *15*	2503.83	(5⁻)		
		537.6 *6*	43 *4*	2339.77	4⁻		
		628.6 *2*	100 *9*	2248.837	5⁻		α(K)exp=3×10⁻³ *1*
2909.79		2396.27 *17*	100	513.490	2⁺		

$^{116}_{48}Cd_{68}$-8

Adopted Levels, Gammas (continued)

$\gamma(^{116}Cd)$ (continued)

E_i(level)	J^π_i	E_γ	I_γ †	E_f	J^π_f	Mult. ‡	Comments
2915.34		1696.0 *3*	100	1219.448	4^+		
		1702.2 *3*	100	1212.997	2^+		
2958.22	(6^-)	666.26 *17*	39.0 *20*	2291.9	5^-		
		708.8 *8*	100 *5*	2248.837	5^-		
		931.5 *4*	18 *5*	2026.66	6^+		
2978.19		1056.6 *3*	1.0×10^2 *3*	1921.557	3^-		
		2464.7 *3*	$7.\times10^1$ *3*	513.490	2^+		
3001.44		2487.9 *3*	98 *18*	513.490	2^+		
		3001.4 *1*	100 *20*	0.0	0^+		
3013.38	$(5^-,6^-)$	135.6 *2*	8 *3*	2877.52	(6^-)	M1	α(K)exp=1.2×10^{-1} *3*
		147.7 *2*	2.0 *5*	2865.62	(5^-)	M1,E2	α(K)exp=2.3×10^{-1} *9*
		320.2 *2*	83 *8*	2693.17	(7^-)	M1,E2	α(K)exp=1.9×10^{-2} *3*
		673.5 *2*	100 *17*	2339.77	4^-		
		764.7 *2*	45 *5*	2248.837	5^-		
		987.0 *2*	23 *3*	2026.66	6^+		
3014.74		1801.8 *3*	61 *7*	1212.997	2^+		
		2501.1 *4*	100 *10*	513.490	2^+		
3040.0	10^+	167	40	2873.2	8^+		
		215	100	2824.9	8^+		
3068.0	1^+	3068	100	0.0	0^+	M1	B(M1)(W.u.)=0.0346 *17*
3087.83	(7^-)	129.3 *3*	18.6 *23*	2958.22	(6^-)	M1	α(K)exp=1.5×10^{-1} *7*
		210.6 *3*	16 *3*	2877.52	(6^-)	M1	α(K)exp=5×10^{-2} *1*
		394.6 *2*	65 *6*	2693.17	(7^-)	M1,E2	α(K)exp=1.1×10^{-2} *2*
		583.9 *2*	100 *9*	2503.83	(5^-)	E2	α(K)exp=3.8×10^{-3} *8*
		839.1 *1*	37 *3*	2248.837	5^-		
		1061.1 *1*	15.1 *12*	2026.66	6^+		
3102.7		1180.9 *5*	50 *20*	1921.557	3^-		
		2589.2 *3*	1.0×10^2 *4*	513.490	2^+		
3118.21	1^-	640.06 *13*	100	2478.15	1^-		
3124.6		1911.6 *3*	100	1212.997	2^+		
3130.14		881.1 *3*	100	2248.837	5^-		
3137.62		2624.1 *2*	100	513.490	2^+		
3156.0	1^-	3156	100	0.0	0^+	E1	B(E1)(W.u.)=0.000103 *10*
3162.46		1135.8 *2*	100	2026.66	6^+		
3175.68		1533.1 *6*	0.64 *13*	1642.499	2^+		
		1956.2 *3*	59 *11*	1219.448	4^+		
		2662.2 *4*	100 *20*	513.490	2^+		
3212.66		1186.0 *2*	100	2026.66	6^+		
3213.44	(6^+)	522.5 *5*	100 *11*	2690.90	(5^-)	E1	α(K)exp=2.1×10^{-3} *7*
		964.6 *2*	81 *16*	2248.837	5^-		
3217.00	2^+	1575.1 *6*	4.0 *10*	1642.499	2^+		
		1836.6 *6*	5.0 *10*	1380.310	0^+		
		2703.4 *3*	100 *20*	513.490	2^+		

$^{116}_{48}Cd_{68}$-9

$\gamma(^{116}Cd)$ (continued)

E_i(level)	J_i^π	E_γ	I_γ†	E_f	J_f^π	Comments
3217.00	2^+	3216.6 *7*	6.0 *10*	0.0	0^+	
3218.44		1267.1 *2*	100	1951.33	2^+	
3227.99		2008.4 *2*	100	1219.448	4^+	
		2015.1 *2*	40	1212.997	2^+	
3250.65		3250.6 *2*	100	0.0	0^+	
3275.65		555.2 *3*	30 *10*	2720.09	1^-	
		2062.8 *2*	1.0×10^2 *3*	1212.997	2^+	
3282.0	1	3282	100	0.0	0^+	
3287.23		2773.7 *2*	100	513.490	2^+	
3294.35		1378.4 *3*	15.0	1915.816	3^+	
		2075.0 *4*	26	1219.448	4^+	
		2081.5 *4*	100	1212.997	2^+	
		2780.8 *2*	50	513.490	2^+	
3299.3		781.8 *4*	100	2517.49		
3303.1		1381.5 *3*	100	1921.557	3^-	
3304.12		2084.7 *2*	100	1219.448	4^+	
		2091.0 *3*	55	1212.997	2^+	
3307.2		829.0 *3*	100	2478.15	1^-	
3339.95		3339.9 *2*	100	0.0	0^+	
3348.02	$(1,2^+)$	545.6 *2*	7.0 *10*	2802.96		
		776.2 *2*	6.0 *20*	2572.16		
		830.4 *3*	9.0 *10*	2517.49		
		869.0 *4*	36 *4*	2478.15	1^-	
		1151.7 *6*	9.0 *10*	2195.4?		
		1704.9 *6*	17.0 *20*	1642.499	2^+	
		2062.4 *7*	0.32 *10*	1282.560	0^+	
		2134.0 *6*	70 *14*	1212.997	2^+	
		2834.1 *7*	100 *20*	513.490	2^+	
		3347.4 *7*	8.0 *20*	0.0	0^+	
3354.88		2135.4 *2*	23.0	1219.448	4^+	
		2841.4 *5*	100	513.490	2^+	
3359.94		229.6 *3*	6.7 *22*	3130.14		α(K)exp=4×10^{-2} *1*
		667.1 *5*	44 *16*	2693.17	(7^-)	
		669.0 *5*	67 *22*	2690.90	(5^-)	
		1111.1 *2*	100 *13*	2248.837	5^-	
		1333.3 *2*	24.4 *22*	2026.66	6^+	
3372.0		1345.3 *3*	100	2026.66	6^+	
3373.0		1124.2 *5*	100	2248.837	5^-	
3378.14		1462.2 *3*	1.0×10^2 *7*	1915.816	3^+	
		2165.1 *2*	27 *10*	1212.997	2^+	
		2864.9 *4*	63 *13*	513.490	2^+	
3378.6		861.1 *3*	100	2517.49		
3382.5	(9^-)	689.3	100	2693.17	(7^-)	

$^{116}_{48}Cd_{68}$-10

Adopted Levels, Gammas (continued)

$\gamma(^{116}Cd)$ (continued)

E_i(level)	J^π_i	E_γ	I_γ†	E_f	J^π_f	Mult.‡	Comments
3387.7		559.1 2	100	2828.6	1^-		
3398.6	$(1,2^+)$	881.4 5	100 20	2517.49			
		3398.0 7	87 9	0.0	0^+		
3401.1	1	3401	100	0.0	0^+		
3423.1	1^+	3423	100	0.0	0^+	M1	B(M1)(W.u.)=0.0034 6
3433.3		2150.6 6	37 8	1282.560	0^+		
		2919.9 7	100 20	513.490	2^+		
3471.33		2091.0 2	100	1380.310	0^+		
3472.13		609.6 3	42 8	2862.45			
		994.05 12	100 20	2478.15	1^-		
		1550.3 6	24 5	1921.557	3^-		
		2090.8 6	64 13	1380.310	0^+		
		2958.2 6	41 8	513.490	2^+		
3486.06		1237.1 3	63 13	2248.837	5^-		
		1459.5 3	100 13	2026.66	6^+		
3511.86		3511.8 2	100	0.0	0^+		
3527.30		1009.6 2	80 20	2517.49			
		3014.6 4	1.0×10^2 5	513.490	2^+		
3531.56		3531.5 2	100	0.0	0^+		
3542.7		782.6 2	100 12	2760.1?	$(1,2^+)$		
		3029.4 4	8 4	513.490	2^+		
3549.54		1045.7 2	100	2503.83	(5^-)		
3560.31		1168.8 2	100	2391.50	$(2^+,3)$		
3578.5	12^+	538.4	100	3040.0	10^+		
3595.5		3082.0 3	100	513.490	2^+		
3601.1	1	3601	100	0.0	0^+		
3632.7		1606.0 5	100	2026.66	6^+		
3641.1	1	3641	100	0.0	0^+		
3655.3	1	3142	$5.\times10^1$ 3	513.490	2^+		
		3655	100	0.0	0^+		
3664.75		1415.9 2	100	2248.837	5^-		
3674.56		954.6 2	64 7	2720.09	1^-		
		1758.6 2	100 7	1915.816	3^+		
3681.86		3681.8 2	100	0.0	0^+		
3708.38		3194.9 2	100 21	513.490	2^+		
		3708.2 3	36 7	0.0	0^+		
3732.1	1	3732	100	0.0	0^+		
3745.53		1354.0 2	100 8	2391.50	$(2^+,3)$		
		1824.0 3	31 15	1921.557	3^-		
3747.24		3233.7 2	100	513.490	2^+		
3758.63		2545.6 2	100	1212.997	2^+		
3763.1	1	3763	100	0.0	0^+		
3782.3	1	3269	43 13	513.490	2^+		

$^{116}_{48}Cd_{68}$-11

$\gamma(^{116}Cd)$ (continued)

E_i(level)	J^π_i	E_γ	I_γ†	E_f	J^π_f	E_i(level)	J^π_i	E_γ	I_γ†	E_f	J^π_f
3782.3	1	3782	100	0.0	0^+	4290.19		4290.1 *2*	100	0.0	0^+
3794.27		1872.7 *2*	100	1921.557	3^-	4378.46		3864.9 *2*	100	513.490	2^+
3794.3		1276.8 *3*	100	2517.49		4380.5	(14^+)	802	100	3578.5	12^+
3805.97		3805.9 *2*	100	0.0	0^+	4428.29		4428.2 *2*	100	0.0	0^+
3839.17		1917.6 *2*	100	1921.557	3^-	4432.06		3918.5 *2*	100	513.490	2^+
3841.5		3328.0 *3*	100	513.490	2^+	4449.5		3935.9 *3*	100	513.490	2^+
3849.1	1	3849	100	0.0	0^+	4475.94		3962.4 *2*	1.0×10^2 *3*	513.490	2^+
3876.1	1	3876	100	0.0	0^+			4475.8 *3*	57 *14*	0.0	0^+
3895.3	1	3382	48 *12*	513.490	2^+	4539.20		4539.1 *2*	100	0.0	0^+
		3895	100	0.0	0^+	4561.89		2640.3 *2*	100	1921.557	3^-
3916.1	$(1,2^+)$	1133.6 *6*	32 *6*	2782.6	2^+	4575.1		1729.8 *2*	100	2845.3	1^+
		2703.1 *5*	100 *20*	1212.997	2^+	4590.80		4590.7 *2*	100	0.0	0^+
		3916.0 *7*	22 *4*	0.0	0^+	4614.81		3401.8 *2*	1.0×10^2 *3*	1212.997	2^+
3924.2		1406.7 *3*	100	2517.49				4101.2 *2*	48 *12*	513.490	2^+
3943.07		3943.0 *2*	100	0.0	0^+	4632.0		4118.4 *3*	100	513.490	2^+
3976.1	1	3976	100	0.0	0^+	4642.66		3429.7 *2*	1.0×10^2 *3*	1212.997	2^+
3984.6		3471.1 *3*	100	513.490	2^+			4129.0 *2*	43 *14*	513.490	2^+
3997.1	1	3997	100	0.0	0^+	4647.4		4133.8 *3*	100	513.490	2^+
4009.7		4009.6 *3*	100	0.0	0^+	4652.85		3439.8 *2*	100	1212.997	2^+
4022.97		4022.9 *2*	100	0.0	0^+	4689.22		3476.2 *2*	1.0×10^2 *3*	1212.997	2^+
4027.1	1	4027	100	0.0	0^+			4688.9 *5*	5.3 *21*	0.0	0^+
4057.88		4057.8 *2*	100	0.0	0^+	4697.55		3484.5 *2*	100	1212.997	2^+
4059.4	(11^-)	676.9	100	3382.5	(9^-)	4755.16		3542.1 *2*	100	1212.997	2^+
4080.2		2867.2 *3*	100	1212.997	2^+	4773.0		4259.4 *3*	100	513.490	2^+
4083.60		2801.1 *2*	100 *17*	1282.560	0^+	4787.17		4273.6 *2*	100	513.490	2^+
		4083.3 *3*	50 *17*	0.0	0^+	4828.88		4315.3 *2*	100	513.490	2^+
4135.85		3622.3 *2*	100	513.490	2^+	4916.6		4403.0 *3*	100	513.490	2^+
4177.2		3663.6 *3*	100	513.490	2^+	4924.6		4411.0 *3*	100	513.490	2^+
4231.48		4231.4 *2*	100	0.0	0^+	4953.6		4440.0 *3*	100	513.490	2^+
4247.0		3733.4 *3*	100	513.490	2^+	4968.88		4455.3 *2*	100	513.490	2^+

† Average of all available data.

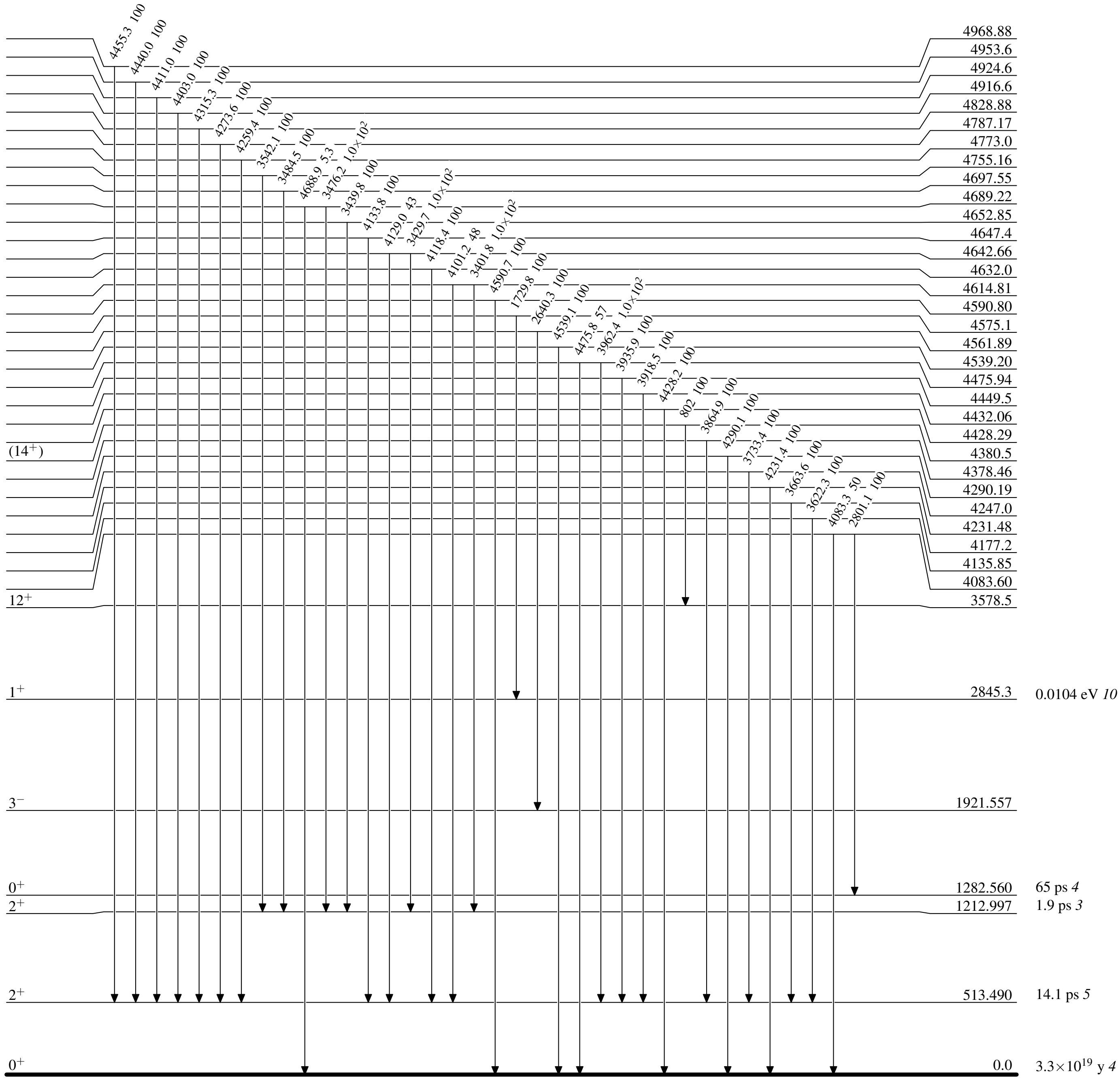
‡ From (n,n′γ) or (γ,polγ').

\# 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.

Adopted Levels, Gammas

Level Scheme

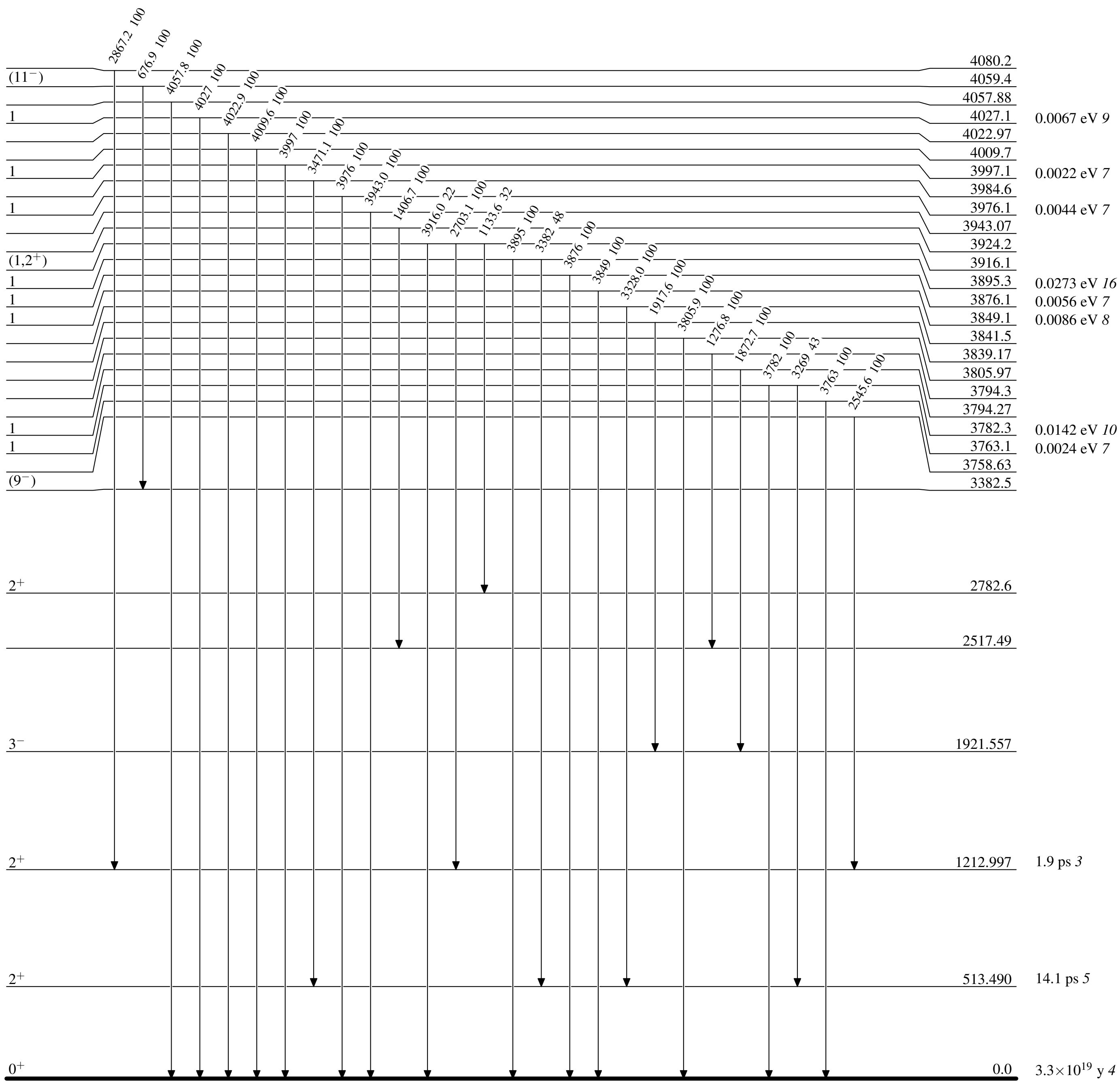
Intensities: Relative photon branching from each level



Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

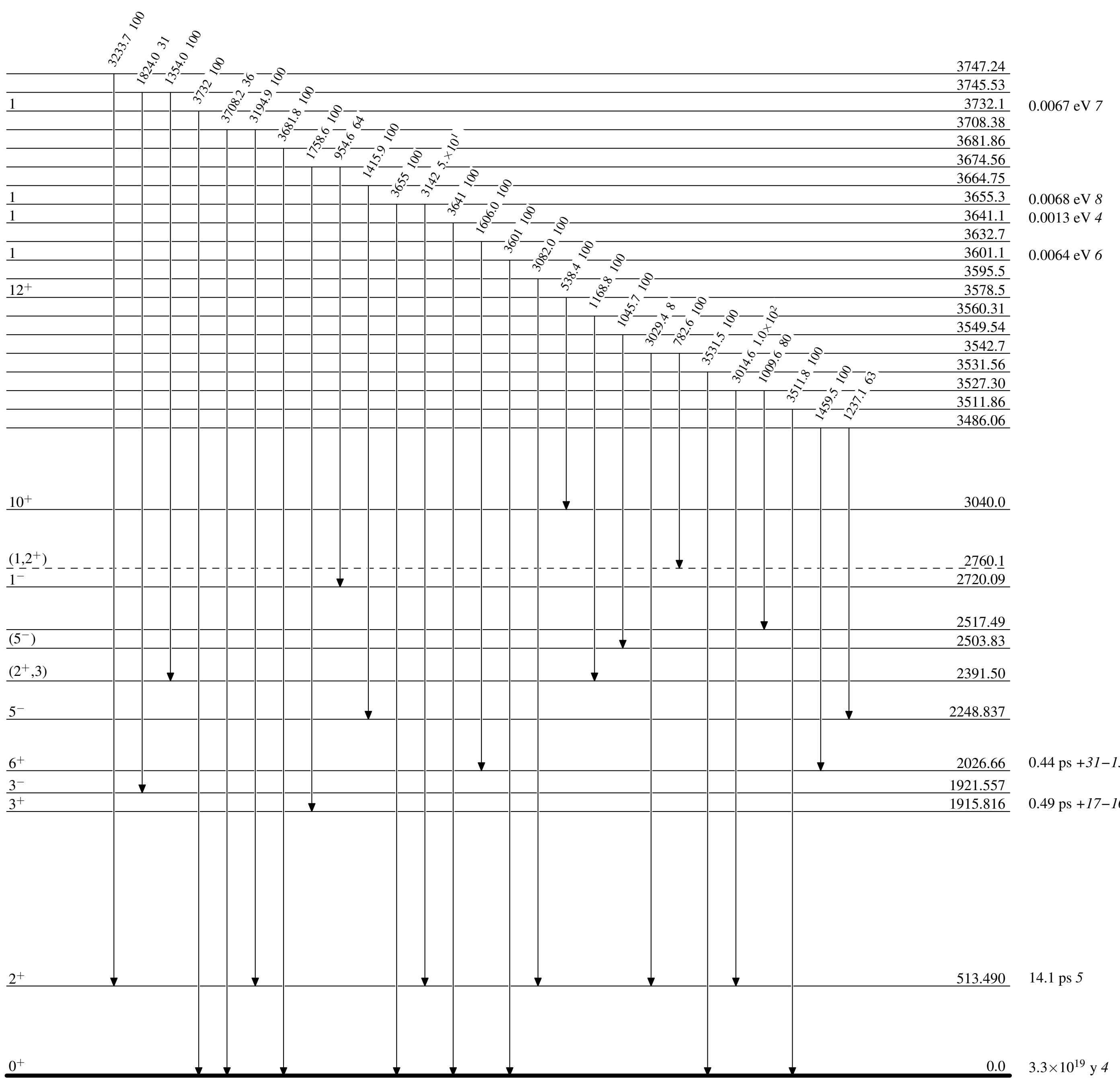


$^{116}_{48}Cd_{68}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

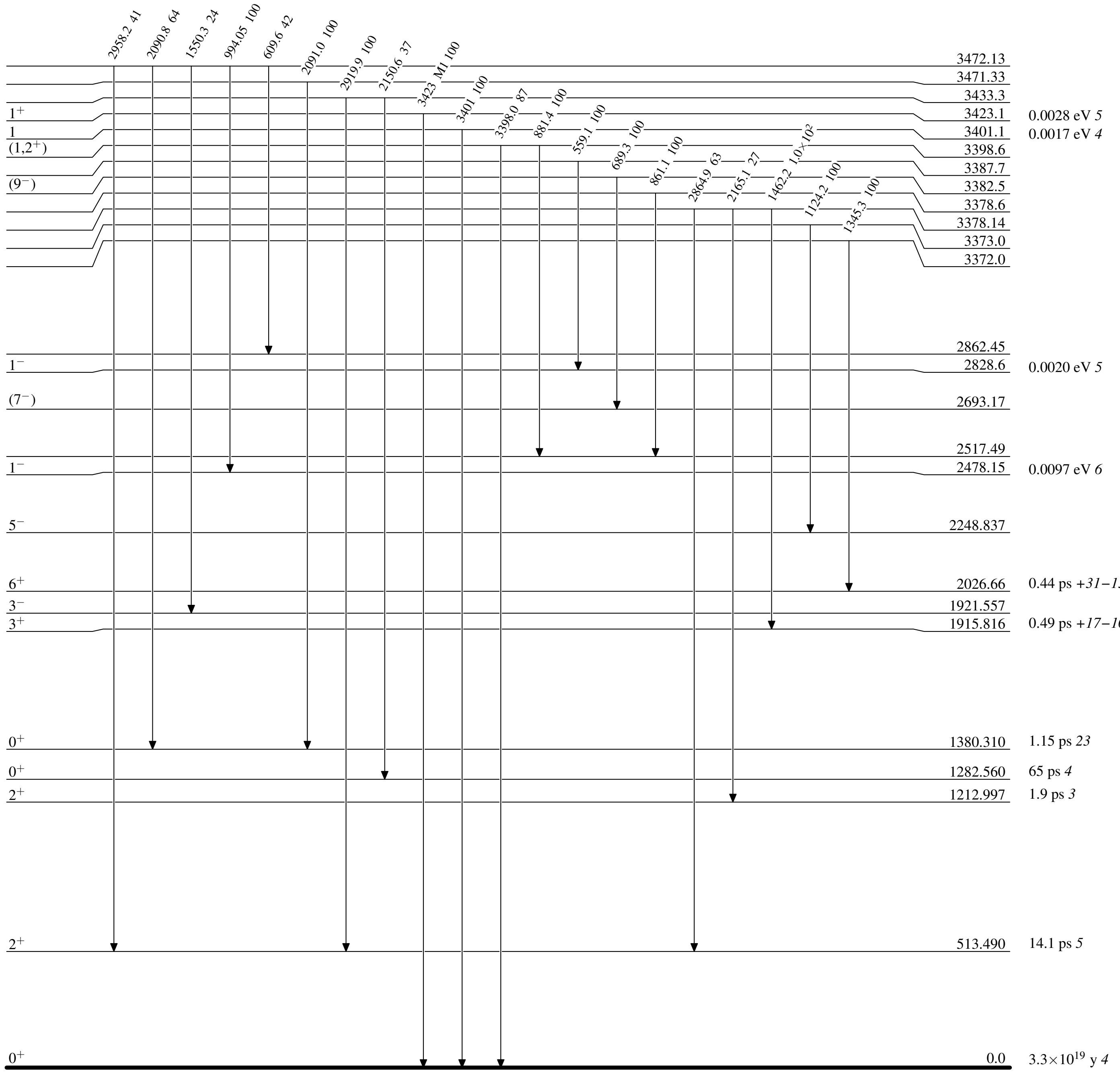


$^{116}_{48}Cd_{68}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

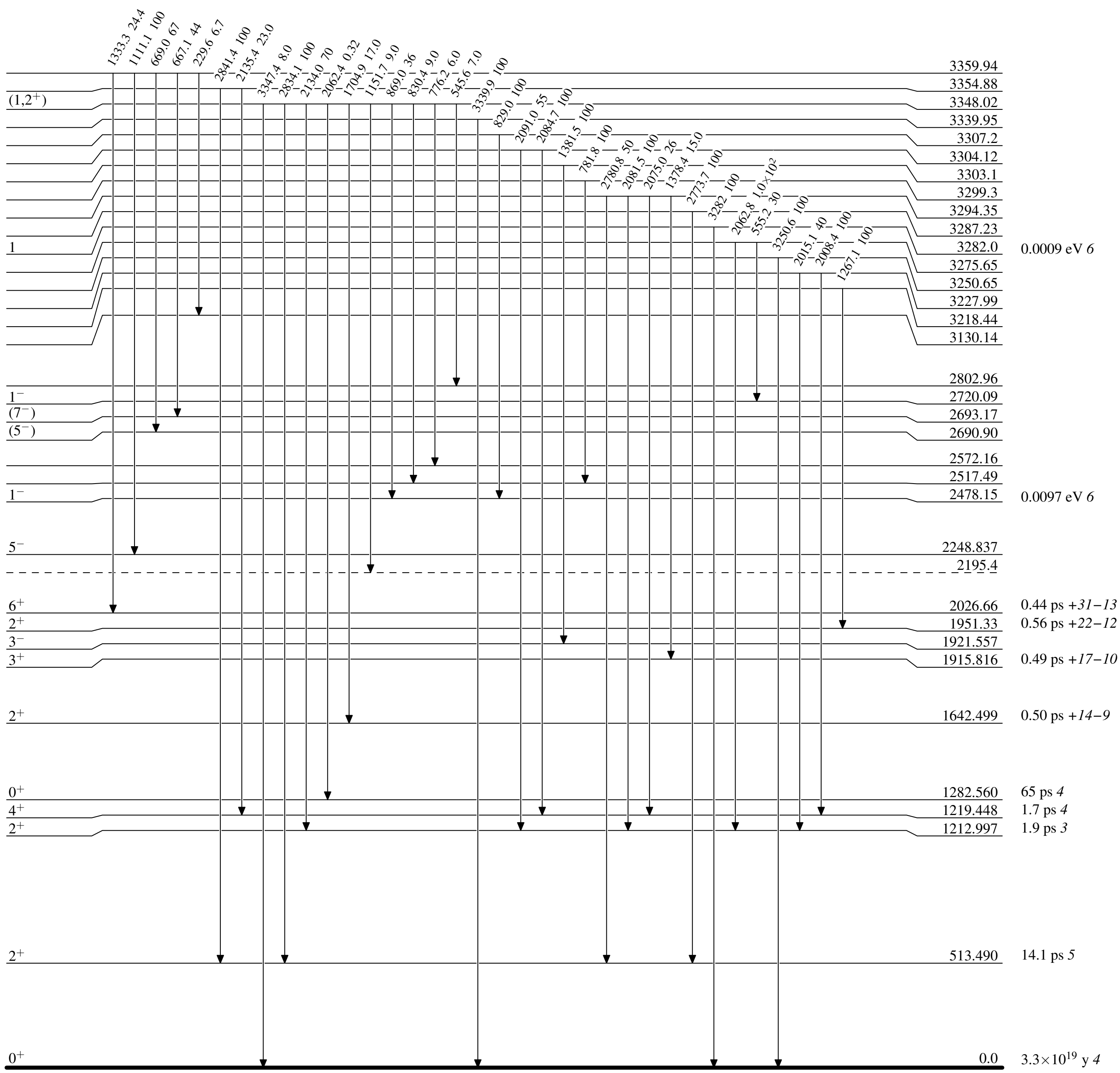


$^{116}_{48}Cd_{68}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

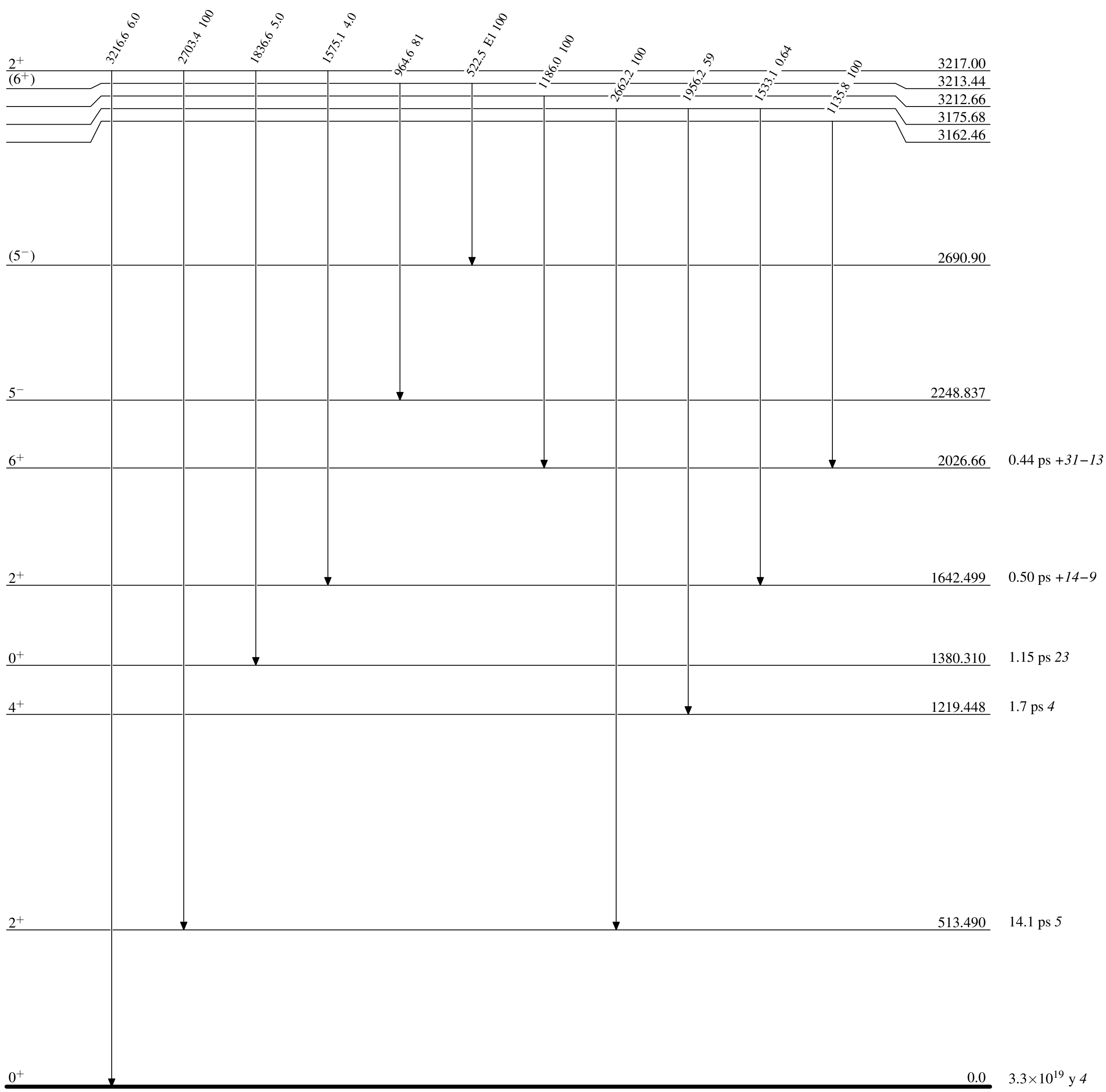


$^{116}_{48}Cd_{68}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

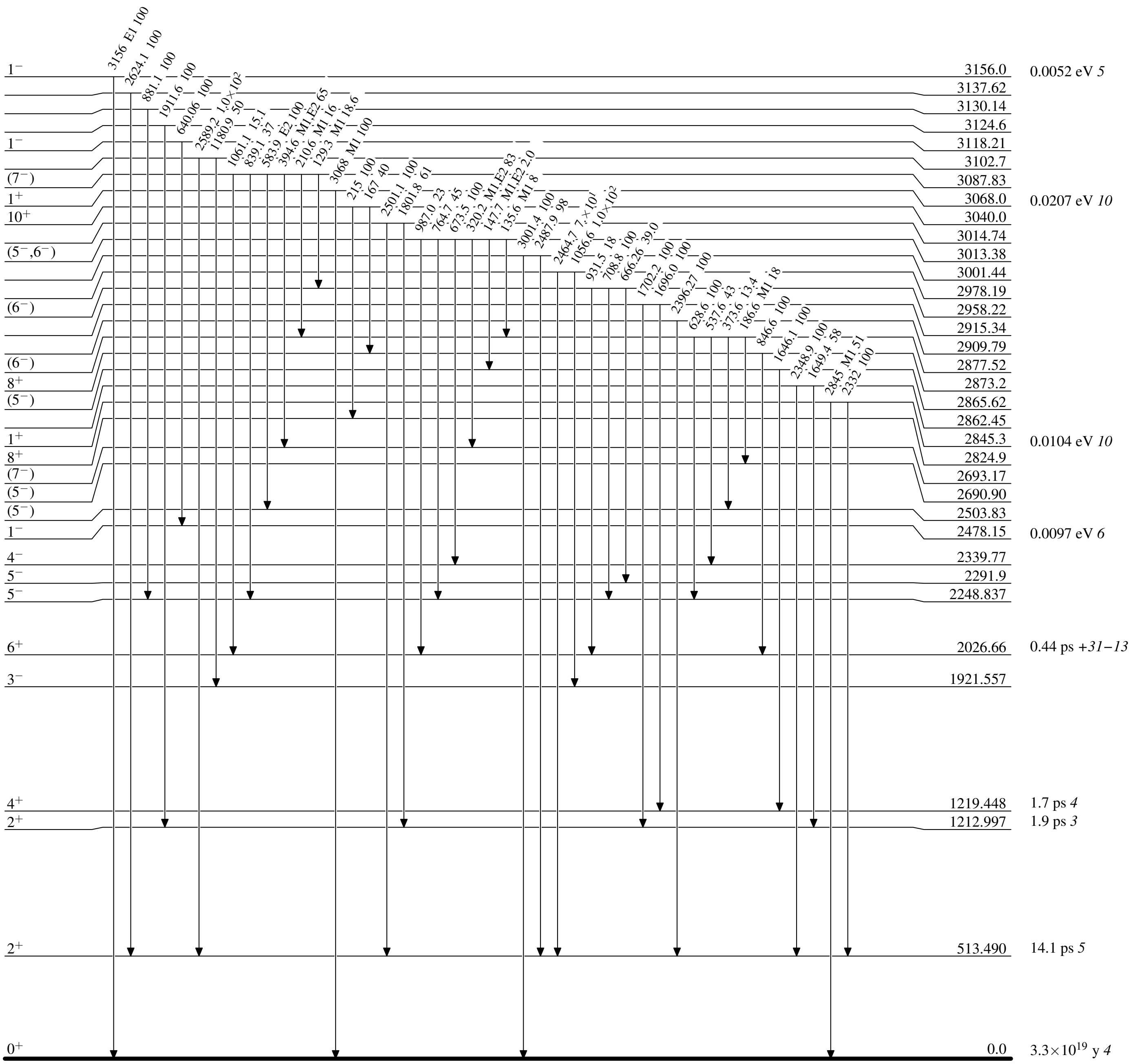


$^{116}_{48}Cd_{68}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

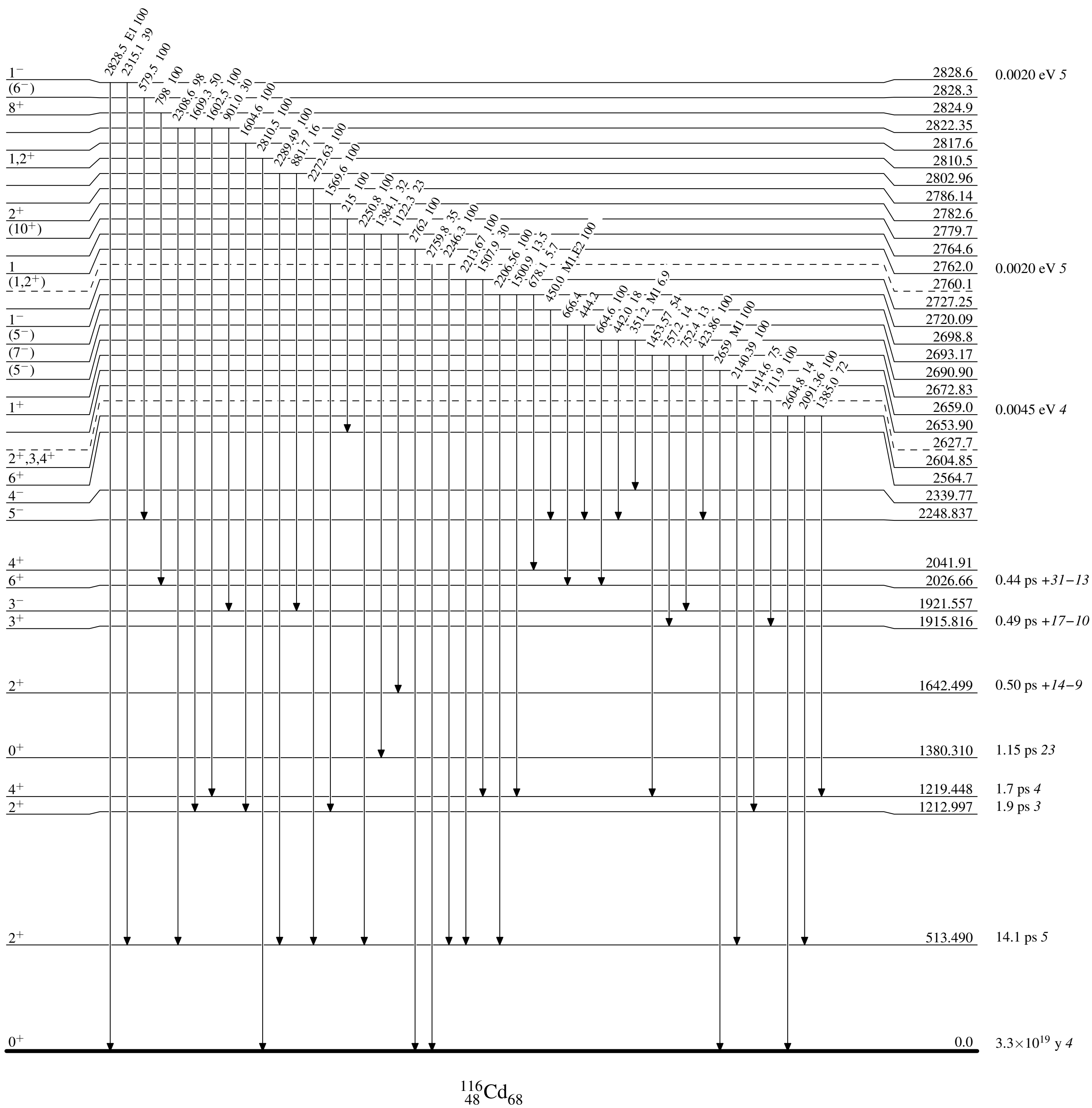


$^{116}_{48}Cd_{68}$

Adopted Levels, Gammas

Level Scheme (continued)

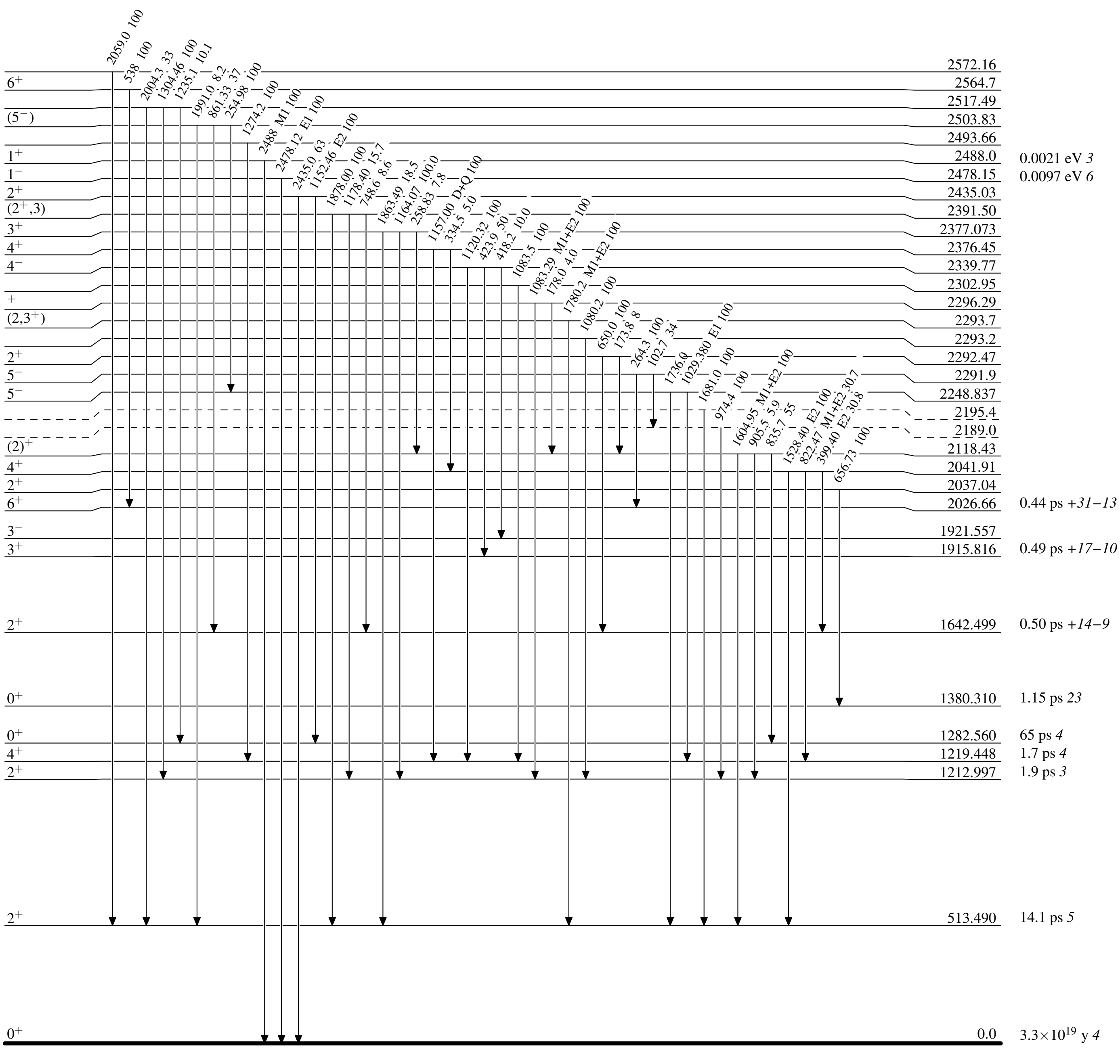
Intensities: Relative photon branching from each level



Adopted Levels, Gammas

Level Scheme (continued)

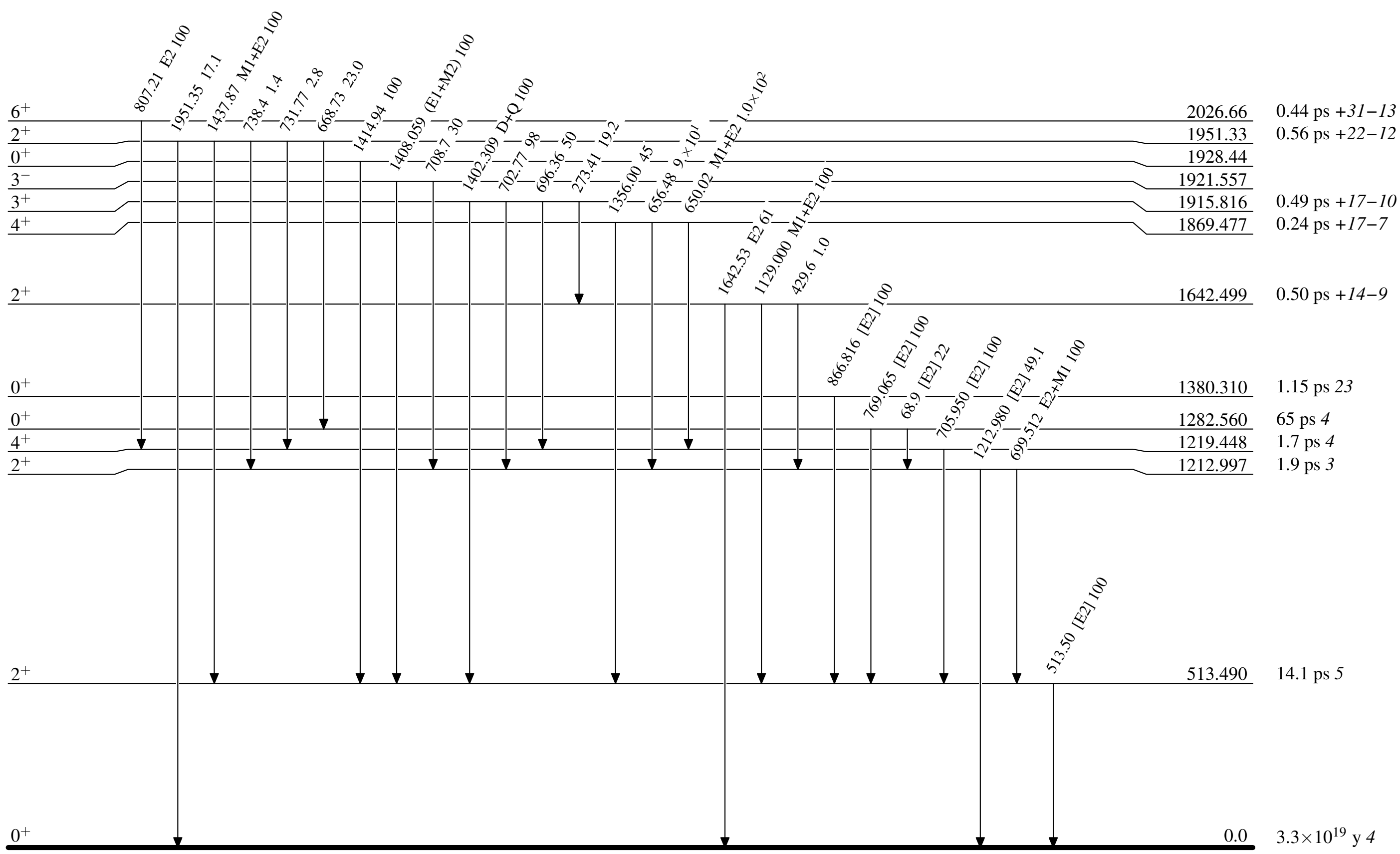
Intensities: Relative photon branching from each level



Adopted Levels, Gammas

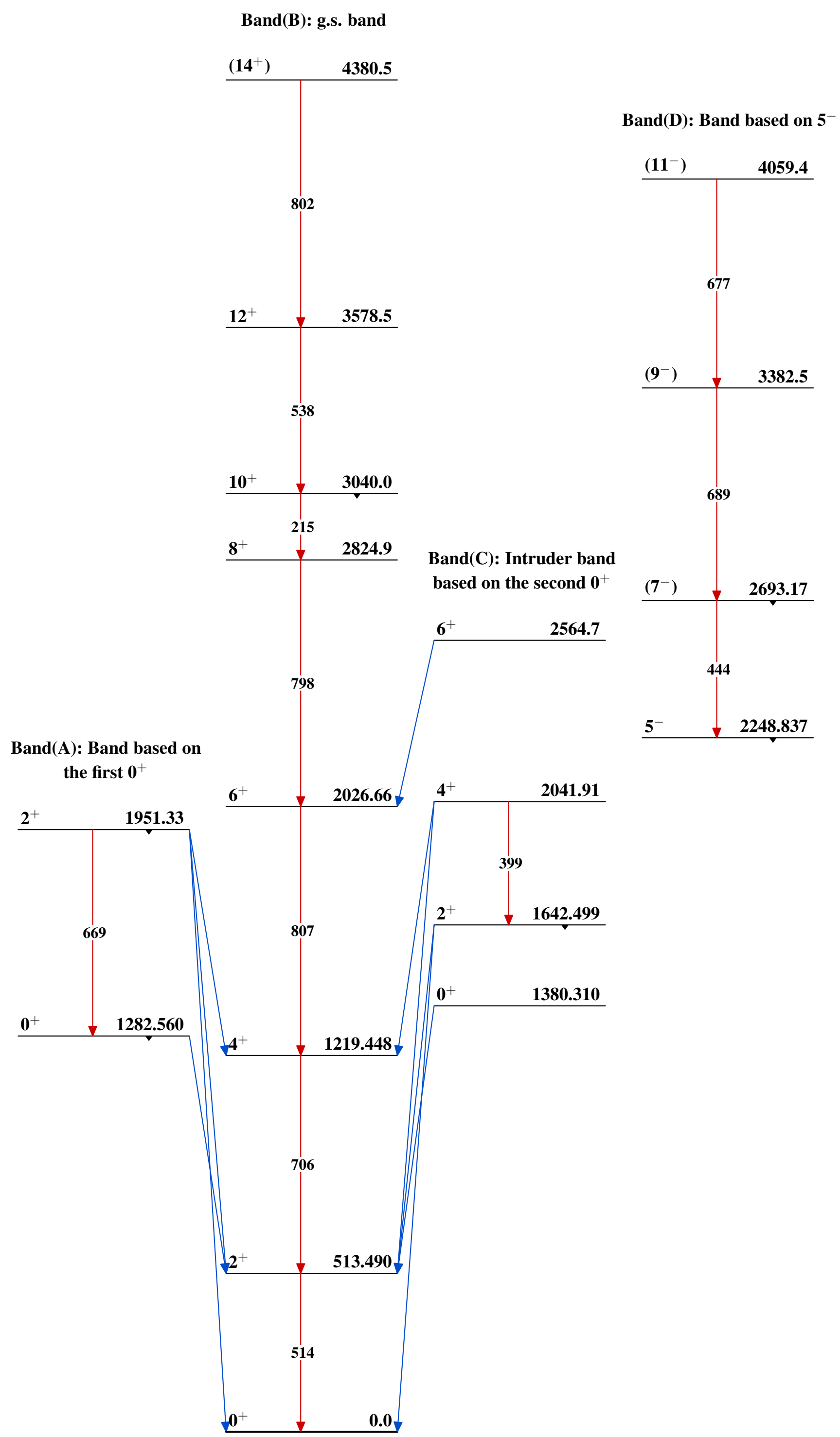
Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{116}_{48}Cd_{68}$

Adopted Levels, Gammas



$^{116}_{48}Cd_{68}$

Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	K. Kitao	NDS 75,99 (1995)	1-Feb-1993

Q(β^-)=527 *22*; S(n)=8355 *20*; S(p)=11809 *25*; Q(α)=−5635 *22* 2012Wa38
Note: Current evaluation has used the following Q record 520 228355 2011750 50-5640 30 1993Au05.

^{118}Cd Levels

Cross Reference (XREF) Flags

- A ^{118}Ag β^- decay (3.76 s)
- B ^{118}Ag β^- decay (2.0 s)
- C ^{238}U(^{7}Li,F)
- D ^{122}Sn(d,^{6}Li)

E(level)[‡]	J$^\pi$	T$_{1/2}$	XREF	Comments
0.0[†]	0+[#]	50.3 min *2*	ABCD	%β^-=100 T$_{1/2}$: from 1968Sc24. Others: 50 min *2* (1958Gl58), 49.0 min *15* (1961Gl02).
487.77[†] *8*	2+[#]	17.9 ps *15*	ABCD	T$_{1/2}$: from $\beta\gamma\gamma$(t) (1989Ma33).
1164.94[†&] *9*	4+[#]	<1.9 ps	ABCD	T$_{1/2}$: from $\beta\gamma\gamma$(t) (1989Ma33).
1269	(7−)		D	J$^\pi$: L=(7) in (d,^{6}Li).
1269.55[&] *8*	2+[@]		ABC	
1285.61[&] *12*	0+[@]	9.7 ps *14*	A D	T$_{1/2}$: from $\beta\gamma\gamma$(t) (1989Ma33).
1460 *30*	(0+)		D	J$^\pi$: L=(0) in (d,^{6}Li).
1615.07 *10*	0+[@]	<7.1 ps	A D	XREF: D(1600). T$_{1/2}$: from $\beta\gamma\gamma$(t) (1989Ma33).
1915.77[a] *10*	2+[@]		AB	
1929.14[a] *9*	(3,4+)		ABC	J$^\pi$: 659γ to 2$^+$, 764γ to 4$^+$, no γ to 0$^+$.
1935	3−		D	J$^\pi$: L=3 in (d,^{6}Li).
1935.94[†a] *13*	(6+)[#]		BC	J$^\pi$: 4$^+$,5$^+$,6$^+$ from $\gamma\gamma(\theta)$ in ^{118}Ag β^- decay; systematics of the yrast states in Cd isotopes suggests 6$^+$.
2073.69[a] *13*	0+[@]		A	
2091.61[a] *9*	3+[@]		AB	
2110 *30*			D	
2182.14 *25*			B	
2223.33 *10*	3,4,5		ABCD	J$^\pi$: strong γ to 4$^+$.
2322.31 *10*	3,4+		AB	J$^\pi$: strong γ to 4$^+$, 406γ to 2$^+$.
2395 *30*			D	
2471.84 *11*			AB	
2575 *30*			D	
2590.9[†] *10*	(8+)[#]		C	
2621.00 *11*			B	
2640.55 *25*			BC	
2756.00 *20*			B	
2788.72 *19*	(1)		A	J$^\pi$: strong γ to 0$^+$.
3017.9[†] *15*	(10+)[#]		C	
3031.85 *18*			B	
3181.73 *23*	2,3,4		AB	J$^\pi$: γ's to 2$^+$ and 4$^+$.
3224.32 *17*	(1)		A	J$^\pi$: strong γ to 0$^+$.
3265.77 *19*	2,3,4		AB	J$^\pi$: γ's to 2$^+$ and 4$^+$.
3329.0 *4*			B	
3381.8 *3*			AB	

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Adopted Levels, Gammas (continued)

^{118}Cd Levels (continued)

E(level)‡	J^π	XREF
3579.0† *18*	(12^+)#	C
4367.0† *20*	(14^+)#	C

† Band(A): yrast band.
‡ From a least-squares fit to adopted E(γ's), for γ-connecting levels. Others are from (d,^{6}Li).
# γ cascades to 0^+ g.s., and syst in yrast band in ^{114}Cd-^{122}Cd.
@ From $\gamma\gamma(\theta)$ in ^{118}Ag β^- decay (1984Ap04, 1987Ap01).
& Member of two phonon triplet.
a Member of three phonon quintuplet (1987Ap01).

$\gamma(^{118}$Cd)

E_i(level)	J^π_i	E_γ†	I_γ#	E_f	J^π_f	Mult.	δ	Comments
487.77	2^+	487.77 *10*	100	0.0	0^+			B(E2)(W.u.)=33 *3*
1164.94	4^+	677.13 *10*	100	487.77	2^+			B(E2)(W.u.)>61
1269.55	2^+	781.73 *10*	100 *10*	487.77	2^+			
		1269.54 *10*	69 *7*	0.0	0^+			
1285.61	0^+	797.83 *10*	100	487.77	2^+			B(E2)(W.u.)=5.3 *8*
1615.07	0^+	345.51 *10*	<5.1@	1269.55	2^+			B(E2)(W.u.)>13
		1127.32 *10*	100@ *10*	487.77	2^+			B(E2)(W.u.)>1.2
1915.77	2^+	646.20 *10*	39 *4*	1269.55	2^+			
		1428.02 *10*	100 *10*	487.77	2^+	E2+M1	+1.9	Mult.,δ: from 1987Ap01.
1929.14	$(3,4^+)$	659.63 *10*	100 *10*	1269.55	2^+			
		764.23 *10*	59 *6*	1164.94	4^+			
		1441.34 *10*	48 *5*	487.77	2^+			
1935.94	(6^+)	771.00 *10*	100 *10*	1164.94	4^+			
2073.69	0^+	1585.91 *10*	100@	487.77	2^+			
2091.61	3^+	822.02 *10*		1269.55	2^+			
		926.53 *10*		1164.94	4^+			
		1603.96 *10*		487.77	2^+	E2+M1	+1.15	Mult.,δ: from 1987Ap01.
2182.14		246.2 *3*	100	1935.94	(6^+)			
2223.33	3,4,5	294.20 *10*	10.8 *11*	1929.14	$(3,4^+)$			
		1058.39 *10*	100 *10*	1164.94	4^+			
		1735.52 *10*		487.77	2^+			
2322.31	$3,4^+$	230.66 *10*		2091.61	3^+			
		406.54 *10*	15.6 *16*	1915.77	2^+			
		1157.40 *10*	100 *10*	1164.94	4^+			
2471.84		248.50 *10*		2223.33	3,4,5			
		542.70 *10*		1929.14	$(3,4^+)$			
2590.9	(8^+)	655‡		1935.94	(6^+)			
2621.00		397.67 *10*	100 *10*	2223.33	3,4,5			
		691.87 *10*		1929.14	$(3,4^+)$			
2640.55		704.6 *3*	100	1935.94	(6^+)			
2756.00		433.6 *3*	29 *3*	2322.31	$3,4^+$			
		532.7 *3*	100 *10*	2223.33	3,4,5			
2788.72	(1)	2300.9 *3*	5.4 *6*	487.77	2^+			
		2788.7 *3*	100 *10*	0.0	0^+			
3017.9	(10^+)	427‡		2590.9	(8^+)			
3031.85		275.8 *3*	41 *4*	2756.00				
		391.3 *3*	41 *4*	2640.55				
		410.9 *3*	34 *4*	2621.00				

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Adopted Levels, Gammas (continued)

$\gamma(^{118}Cd)$ (continued)

E_i(level)	J^π_i	E_γ †	I_γ #	E_f	J^π_f
3031.85		808.5 *3*	100 *10*	2223.33	3,4,5
		849.7 *3*	45 *5*	2182.14	
3181.73	2,3,4	2016.9 *3*	54 *6*	1164.94	4^+
		2693.8 *3*	100 *10*	487.77	2^+
3224.32	(1)	435.6 *3*	4.6 *5*	2788.72	(1)
		1938.6 *3*	35 *4*	1285.61	0^+
		2736.7 *3*	18.8 *19*	487.77	2^+
		3224.2 *3*	100 *10*	0.0	0^+
3265.77	2,3,4	1336.8 *3*	12.8 *13*	1929.14	$(3,4^+)$
		2100.8 *3*	99 *10*	1164.94	4^+
		2777.8 *3*	100 *10*	487.77	2^+
3329.0		2164.0 *3*	100	1164.94	4^+
3381.8		2894.0 *3*	100	487.77	2^+
3579.0	(12^+)	561‡		3017.9	(10^+)
4367.0	(14^+)	788‡		3579.0	(12^+)

† From ^{118}Ag β^- decay (3.76-s, 2.0-s), unless otherwise noted.

‡ From $^{238}U(^7Li,F)$.

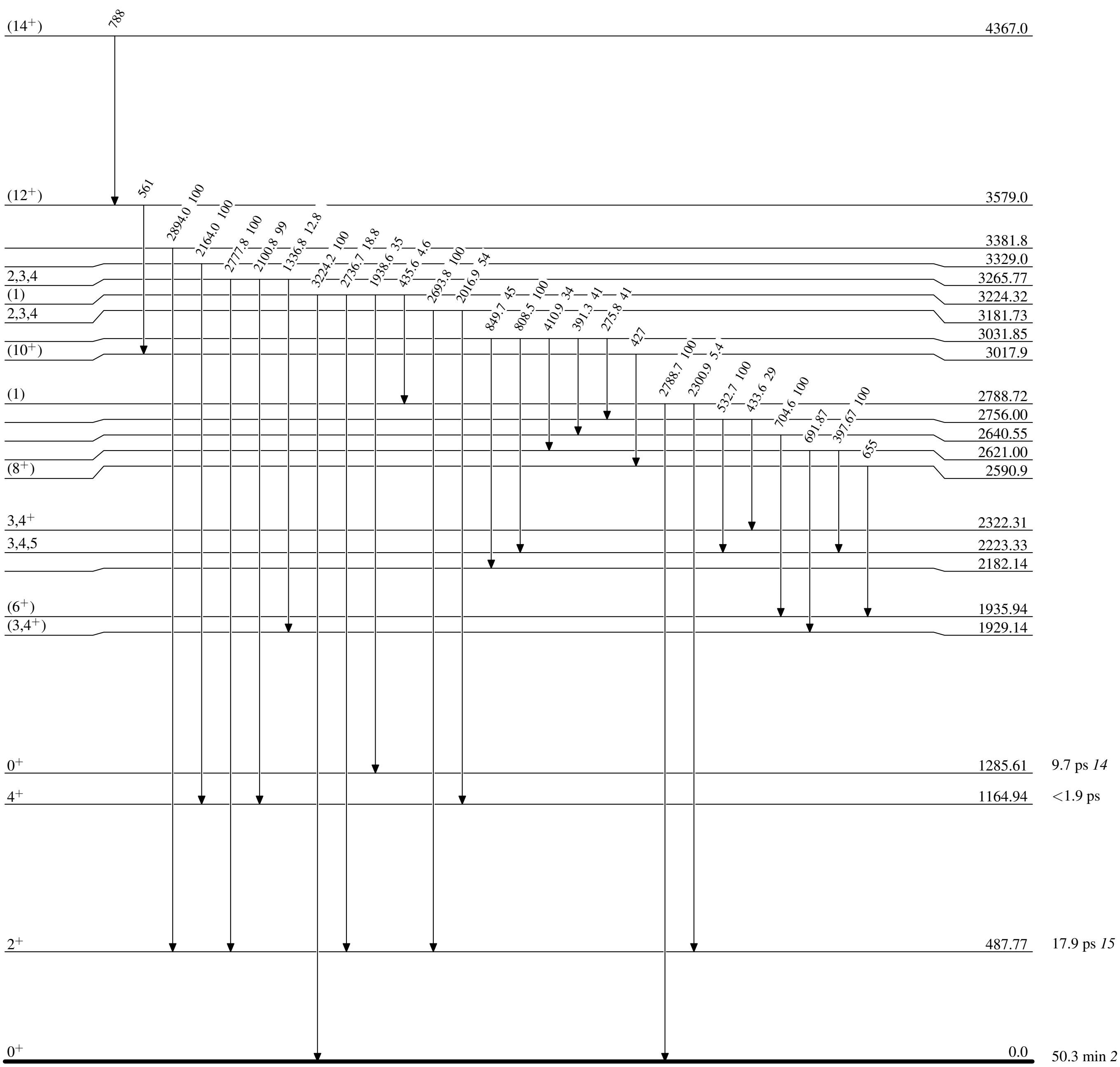
From the combined β^- decay of 3.76-s and 2.0-s given by 1979HiZR, unless otherwise noted. Uncertainty of 10% assumed by evaluator.

@ From 1984Ap04. Uncertainty of 10% assumed by evaluator.

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level

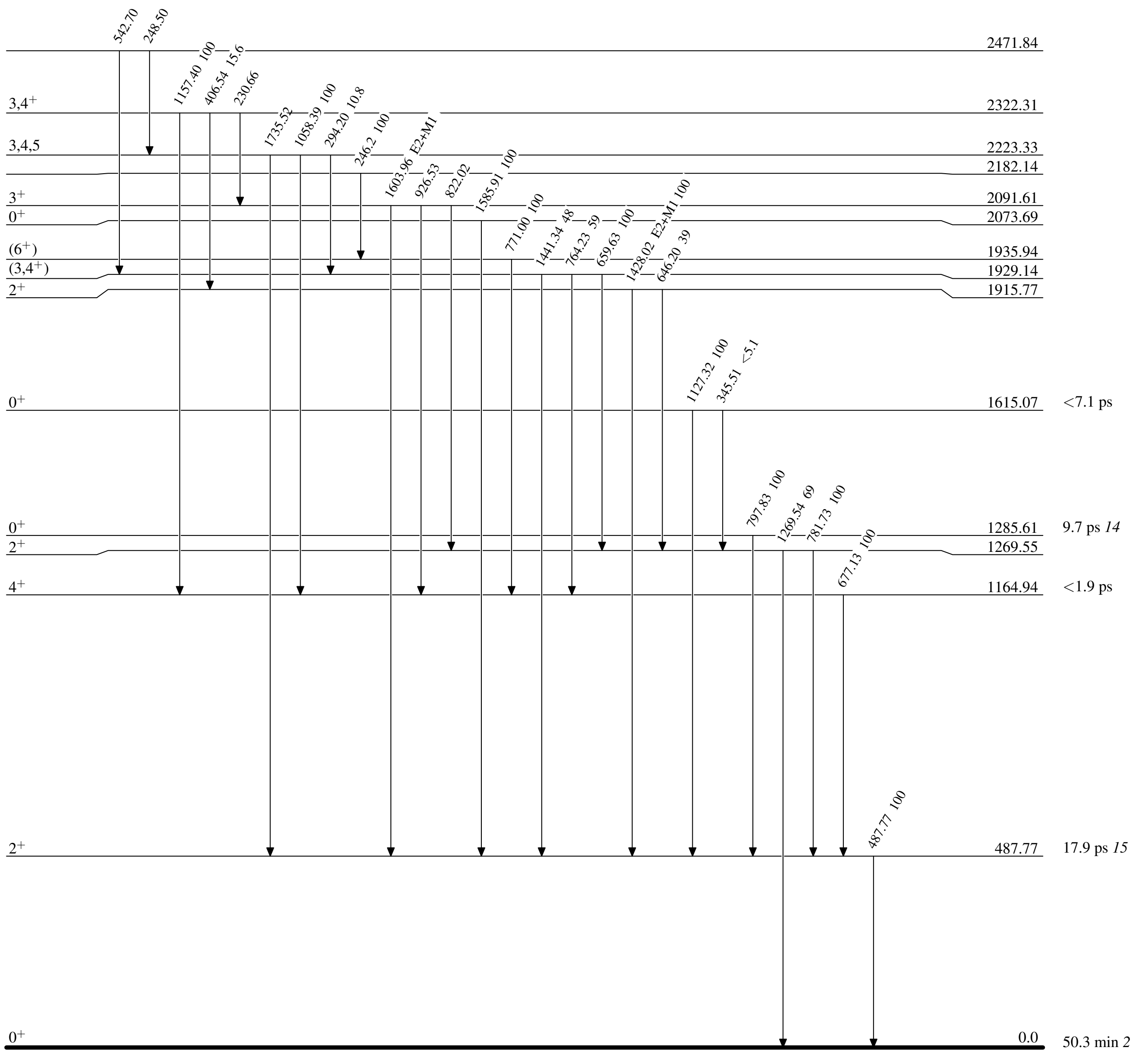


$^{118}_{48}Cd_{70}$

Adopted Levels, Gammas

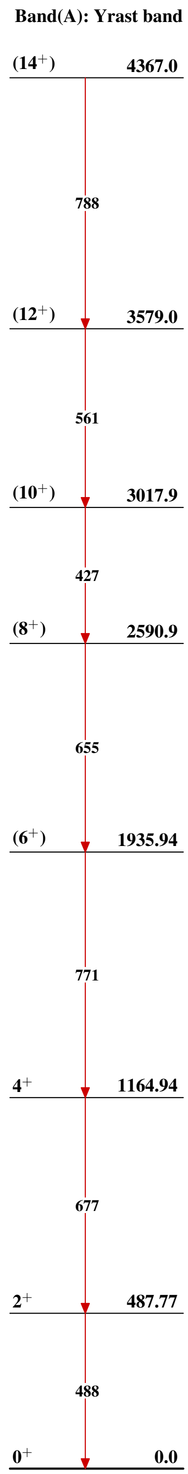
Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{118}_{48}Cd_{70}$

Adopted Levels, Gammas



$^{118}_{48}Cd_{70}$

Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	K. Kitao, Y. Tendow and A. Hashizume	NDS 96,241 (2002)	1-Dec-2001

Q(β^-)=1.77×10^3 *4*; S(n)=8.05×10^3 *4*; S(p)=12601 *16*; Q(α)=−6550 *8* 2012Wa38
Note: Current evaluation has used the following Q record 1760 448138 8312705 92-6437 59 1995Au04.

^{120}Cd Levels

Cross Reference (XREF) Flags

A	^{120}Ag β^- decay (0.32 s)	D	^{124}Sn(^{3}He,^{7}Be)
B	^{120}Ag β^- decay (1.23 s)	E	^{173}Yb(^{24}Mg,F),^{208}Pb(^{18}O,F),
C	^{124}Sn(d,^{6}Li)		

E(level)[‡]	J$^\pi$[@]	T$_{1/2}$[#]	XREF	Comments
0.0[†]	0$^+$	50.80 s *21*	A CDE	%β^-=100 T$_{1/2}$: from 1973Sc19. Other: 50.9 s *5* (1974Gr29).
505.94[†] *17*	2$^+$	18.0 ps *21*	ABCDE	
975? *25*			C	
1203.7[†b] *3*	(4$^+$)[a]	3.5 ps *28*	ABC E	
1323	(7$^-$)[a]		CdE	XREF: d(1300). E(level): from (d,^{6}Li).
1323.07[b] *17*	(2$^+$)		B d	XREF: d(1300).
1388.9[b] *11*	(0$^+$)[&]	<13 ps	B	
1744.9 *11*	(0$^+$)[&]	<13 ps	B	
1899.9 *19*	(3$^-$)[a]		BC	XREF: C(1920).
2033.7[†] *4*	(6$^+$)		A C E	
2093.9 *13*			B	
2129.6 *4*			A E	
2449.8 *11*			B	
2524.7 *8*			E	
2886.2[†] *10*	(8$^+$)		E	
2921.4 *10*			E	
3129.8[†] *11*	(10$^+$)		E	
3329.0 *11*			B	
3423.9 *16*			B	
3500.9 *8*			B	
3536.0 *8*			B	
3549.9 *8*			B	
3559.0 *11*			B	
3746.1[†] *15*	(12$^+$)		E	
3880.1 *10*			B	
4579.9[†] *18*	(14$^+$)		E	
5522.7[†] *21*	(16$^+$)		E	

[†] Band(A): yrast band.
[‡] From a least-squares fit to the adopted E(γ's) by the evaluators, unless otherwise noted. Uncertainty of 1 keV is assumed for E(γ), if not given by authors.
[#] From $\beta\gamma\gamma$(t) in ^{120}Ag β^- decay, except that of g.s.

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{120}Cd Levels (continued)

@ γ-cascades to g.s. and from an expected band structure, unless otherwise noted.
& Suggested by 1984ApZZ, based on $\gamma\gamma(\theta)$, and systematics of phonon state.
[a] From systematics on (d,^{6}Li) in even Cd isotopes.
[b] Member of two phonon triplet.

γ(^{120}Cd)

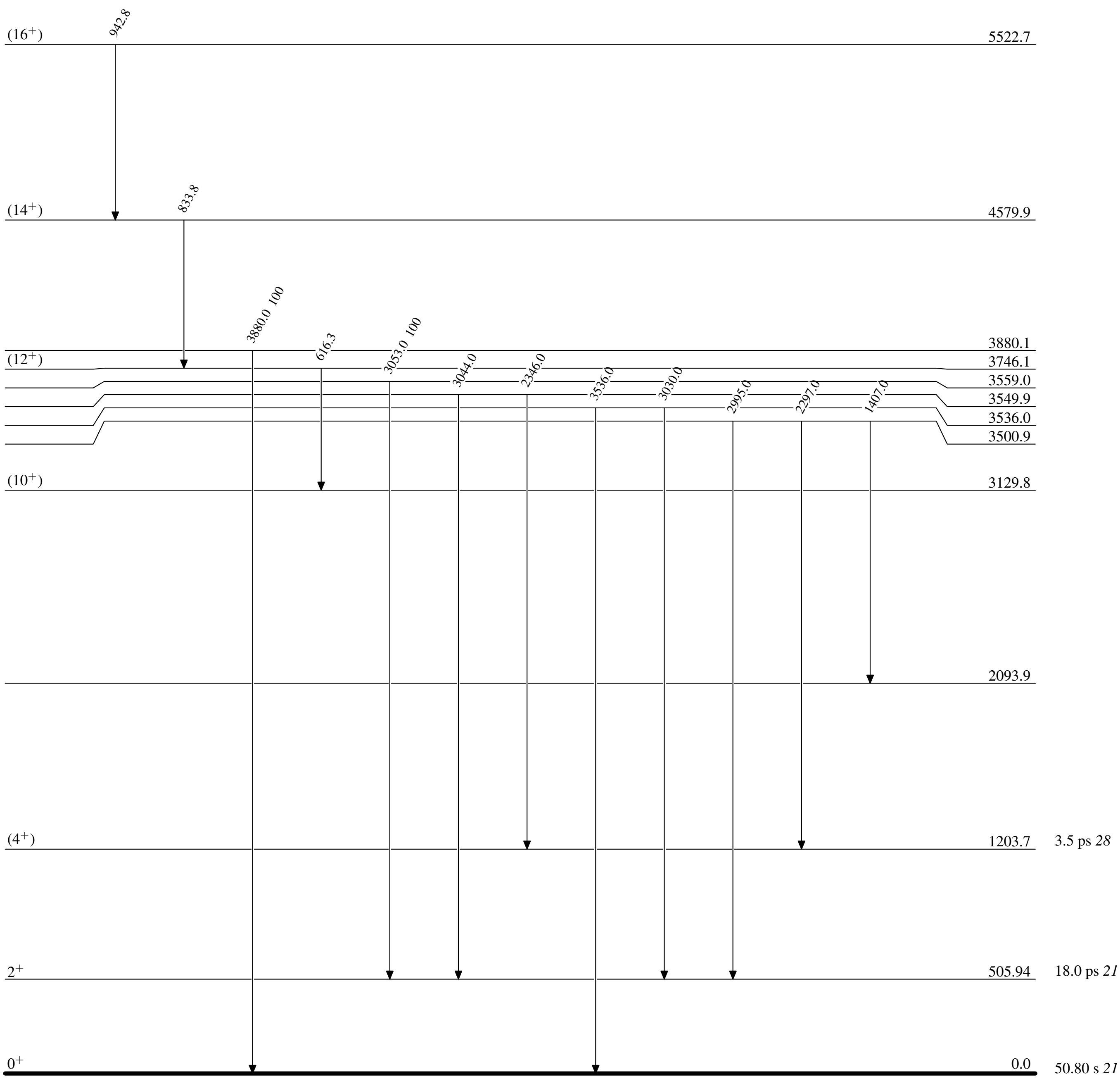
E_i(level)	J^π_i	E_γ †	I_γ	E_f	J^π_f
505.94	2^+	505.9 *2*	100	0.0	0^+
1203.7	(4^+)	697.8 *2*	100	505.94	2^+
1323.07	(2^+)	817.1 *2*		505.94	2^+
		1323.1 *2*		0.0	0^+
1388.9	(0^+)	883.0	100	505.94	2^+
1744.9	(0^+)	1239.0	100	505.94	2^+
2033.7	(6^+)	830.0 *2*	100	1203.7	(4^+)
2129.6		925.8 *2*	100	1203.7	(4^+)
2449.8		1246.0	100	1203.7	(4^+)
2524.7		395‡	71	2129.6	
		491‡	100 *21*	2033.7	(6^+)
2886.2	(8^+)	852.5‡	100	2033.7	(6^+)
2921.4		887.7‡		2033.7	(6^+)
3129.8	(10^+)	208.3‡		2921.4	
		243.5‡		2886.2	(8^+)
3329.0		2823.0	100	505.94	2^+
3423.9		1330.0		2093.9	
		1524.0		1899.9	(3^-)
3500.9		1407.0		2093.9	
		2297.0		1203.7	(4^+)
		2995.0		505.94	2^+
3536.0		3030.0		505.94	2^+
		3536.0		0.0	0^+
3549.9		2346.0		1203.7	(4^+)
		3044.0		505.94	2^+
3559.0		3053.0	100	505.94	2^+
3746.1	(12^+)	616.3‡		3129.8	(10^+)
3880.1		3880.0	100	0.0	0^+
4579.9	(14^+)	833.8‡		3746.1	(12^+)
5522.7	(16^+)	942.8‡		4579.9	(14^+)

† From ^{120}Ag β^- decay (1.23 s), unless otherwise noted.
‡ From ^{173}Yb(^{24}Mg,F),^{208}Pb(^{18}O,F),^{232}Th(^{18}O,F).

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level

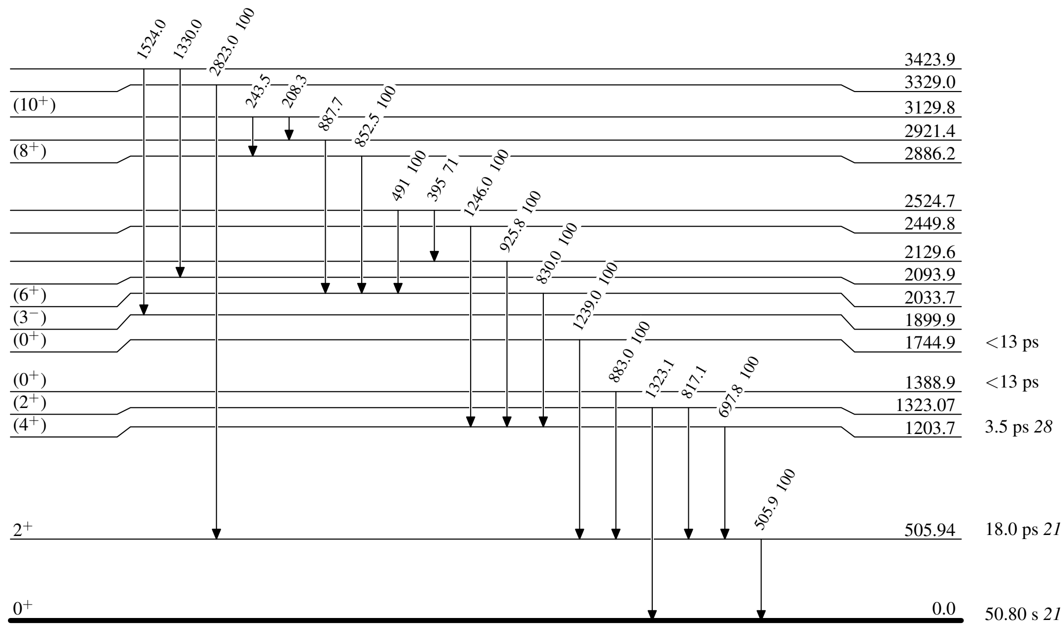


$^{120}_{48}Cd_{72}$

Adopted Levels, Gammas

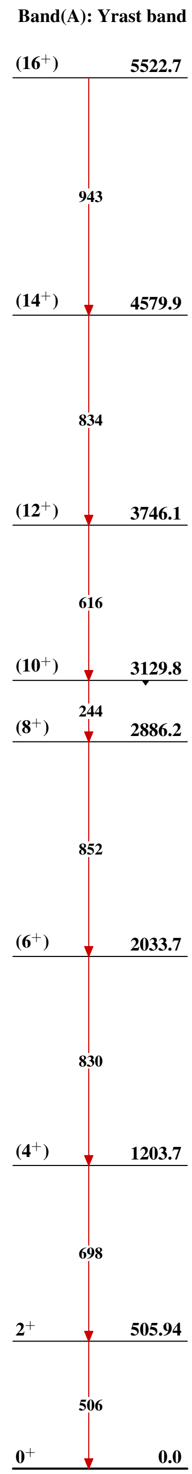
Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{120}_{48}Cd_{72}$

Adopted Levels, Gammas



$^{120}_{48}Cd_{72}$

Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	T. Tamura	NDS 108,455 (2007)	30-Sep-2006

Q(β^-)=2.96×10^3 *5*; S(n)=7610 *3*; S(p)=13499 *13*; Q(α)=−7648 *4* 2012Wa38
Note: Current evaluation has used the following Q record 2850 707740 9013.36e$^+$315-7.69e$^+$321 2003Au03.

^{122}Cd Levels

Cross Reference (XREF) Flags

A	^{122}Ag β^- decay (0.529 s)	D	Coulomb excitation
B	^{122}Ag β^- decay: mixed source	E	^{123}Ag β^-n decay
C	^{238}U(^{7}Li,Xγ)	F	^{124}Sn(^{18}O,^{20}Ne)

E(level)†	J$^\pi$	T$_{1/2}$	XREF	Comments
0.0	0$^+$	5.24 s *3*	ABCDEF	%β^-=100 T$_{1/2}$: from β^--multiscaler counting, ΔT$_{1/2}$: statistical uncertainty only (1981Ru07). Others: 3.13 s *12* (1974Gr29), 5.78 s *9* (1973Sc19).
569.45 *8*	2$^+$	10 ps *5*	ABCD F	B(E2)↑=0.37 *12* BE2↑ from Coulomb excitation (2005BeZS); other: BE2↑=0.58 *27* deduced from τ=15 ps *7* (1995Za01). J$^\pi$: (1135γ)(569γ)(θ) and (1422γ)(569γ)(θ) clearly indicate 0-2-0 spin sequences, RUL assigns mult.(569γ)=E2. T$_{1/2}$: from centroid-shift analysis of $\beta\gamma$(t) coincidence (1995Za01); other: 14 ps *5* from B(E2) in Coulomb excitation (2005BeZS).
915			F	
1329.15 *12*	(4$^+$)		ABC F	J$^\pi$: γ to 2$^+$; no γ to 0$^+$; log *ft*≈5.9 from (3$^+$).
1367.8 *3*	(2)$^+$		AB F	J$^\pi$: γ's to 0$^+$ and 2$^+$; log *ft*≈5.7 from (3$^+$).
1704.7 *4*	0$^{(+)}$		B F	J$^\pi$: from (1135γ)(569γ)(θ).
1909.1 *4*	(3$^-$)		B F	J$^\pi$: systematics of 3$^-$ in even Cd isotopes, ^{106}Cd-^{120}Cd.
1979.34 *16*	(3,4$^+$)		ABC F	J$^\pi$: γ to (4$^+$); log *ft*≈5.5 from (3$^+$).
1991.9 *4*	0$^{(+)}$		B	J$^\pi$: from (1422γ)(569γ)(θ).
2178.02 *25*	(6$^+$)		BC F	J$^\pi$: γ to (4$^+$); no γ's to 0$^+$ and 2$^+$; systematics of yrast states in ^{114}Cd-^{120}Cd (1989DuZW).
2197.11 *23*			B	
2315.7 *4*			B	
2444.8 *4*			B	
2502.6 *3*			B	
2536.1 *4*			B	
2577.0 *4*			B	
2644.5 *3*			B	
2668.5 *4*			B	
2800.4 *4*			B	
2823.4 *4*	(8$^+$)		BC F	J$^\pi$: systematics of yrast states in ^{114}Cd-^{120}Cd (1989DuZW).
3062.0 *4*	(8$^+$)		B F	J$^\pi$: γ to (6$^+$).
3170.2 *4*			B	

† From a least-squares fit to the Eγ's (evaluator).

Adopted Levels, Gammas (continued)

$\gamma(^{122}Cd)$

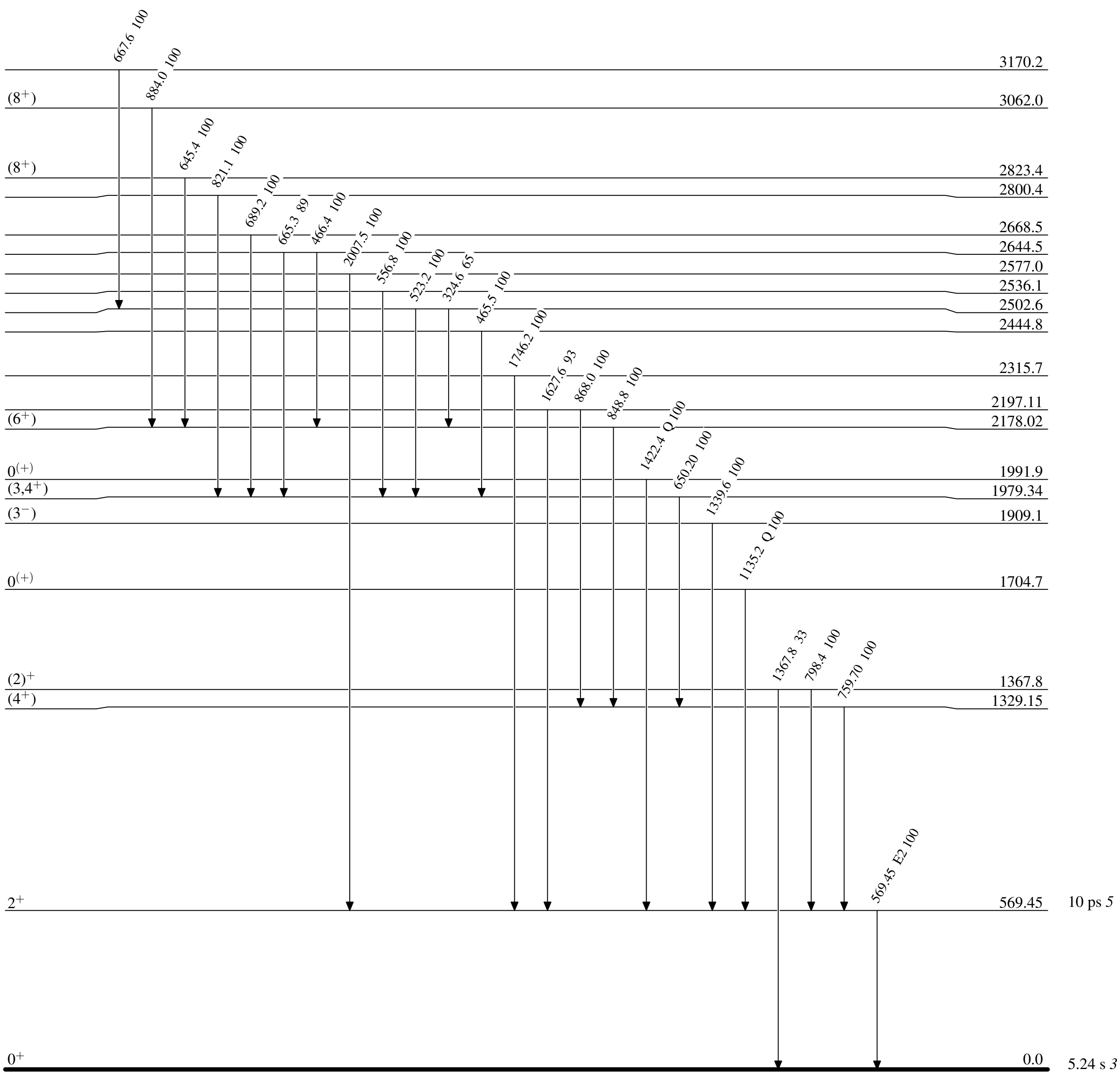
E_i(level)	J^π_i	E_γ †	I_γ †	E_f	J^π_f	Mult.	Comments
569.45	2^+	569.45 *8*	100	0.0	0^+	E2	B(E2)(W.u.)=26 *14* Mult.: $\gamma\gamma(\theta)$ and RUL; Coulomb excitation.
1329.15	(4^+)	759.70 *8*	100	569.45	2^+		
1367.8	$(2)^+$	798.4 *3*	100 *38*	569.45	2^+		
		1367.8 *5*	33 *15*	0.0	0^+		
1704.7	$0^{(+)}$	1135.2 *3*	100	569.45	2^+	Q	
1909.1	(3^-)	1339.6 *3*	100	569.45	2^+		
1979.34	$(3,4^+)$	650.20 *12*	100	1329.15	(4^+)		
1991.9	$0^{(+)}$	1422.4 *3*	100	569.45	2^+	Q	
2178.02	(6^+)	848.8 *3*	100	1329.15	(4^+)		
2197.11		868.0 *3*	100 *3*	1329.15	(4^+)		
		1627.6 *3*	93 *3*	569.45	2^+		
2315.7		1746.2 *3*	100	569.45	2^+		
2444.8		465.5 *3*	100	1979.34	$(3,4^+)$		
2502.6		324.6 *3*	65 *2*	2178.02	(6^+)		
		523.2 *3*	100 *3*	1979.34	$(3,4^+)$		
2536.1		556.8 *3*	100	1979.34	$(3,4^+)$		
2577.0		2007.5 *3*	100	569.45	2^+		
2644.5		466.4 *3*	100 *3*	2178.02	(6^+)		
		665.3 *3*	89 *3*	1979.34	$(3,4^+)$		
2668.5		689.2 *3*	100	1979.34	$(3,4^+)$		
2800.4		821.1 *3*	100	1979.34	$(3,4^+)$		
2823.4	(8^+)	645.4 *3*	100	2178.02	(6^+)		
3062.0	(8^+)	884.0 *3*	100	2178.02	(6^+)		
3170.2		667.6 *3*	100	2502.6			

† From ^{122}Ag β^- decay (0.529 s), ^{122}Ag β^- decay: mixed source.

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level



$^{122}_{48}Cd_{74}$