^{105}Pd(α,nγ) 2002Ga35

History

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

E(α)=13.75 MeV. Measured Eγ, Iγ, $\gamma\gamma$, $\gamma\gamma(\theta)$(DCO), lifetimes by Doppler-shift attenuation method using the OSIRIS cube spectrometer comprised of eight HPGe detectors of which six were Compton suppressed.

Corrections made to gamma-ray placements and mixing ratios based based on e-mail replies to XUNDL compilers (Nov. 30, 2002 and Dec. 8, 2002) from the first author (A. Gade) of 2002Ga35.

^{108}Cd Levels

3221.9 and 3489.4 levels reported in 2002Ga35 are non-existent; 780.6γ and 984.1γ from these levels, respectively are placed elsewhere in the level scheme (e-mail reply from A. Gade, Dec 8, 2002).

E(level)†	J$^\pi$	T$_{1/2}$‡	E(level)†	J$^\pi$	T$_{1/2}$‡	E(level)†	J$^\pi$	T$_{1/2}$‡
0	0^+		3059.55 *7*			3450.09 *5*	2^+,3^+	
632.99 *3*	2^+		3059.83 *6*	$(4,5)^+$		3459.84 *7*	5,6	
1508.44 *3*	4^+		3077.48 *5*	(4^+)		3460.58 *6*		
1601.81 *3*	2^+		3081.84 *5*	3^+		3474.98 *8*	8^-	
1720.63 *4*	0^+		3092.30 *5*	(3)		3482.44 *11*	2	
1913.36 *4*	0^+		3110.45 *8*	(8^+)		3485.21 *9*	9^-	
2145.83 *3*	3^+		3138.99 *6*			3512.26 *8*		
2162.79 *3*	2^+	0.34 ps *14*	3171.23 *6*	$2,3^+$		3525.36 *6*		
2202.17 *4*	3^-		3174.16 *8*			3527.15 *11*		
2239.33 *4*	4^+		3181.49 *7*			3535.84 *11*	$(3,4)^+$	
2365.84 *3*	2^+	0.28 ps *6*	3189.58 *8*	5,6,7		3539.95 *8*		0.29 ps *8*
2374.59 *4*	(0^+)		3194.85 *6*	2^+		3555.04 *11*	(3^+)	
2486.35 *4*	2^+		3203.63 *11*			3559.64 *11*		
2541.31 *4*	6^+		3221.65 *5*	$(3,4)^+$		3561.18 *5*	$(4,5,6)^+$	
2555.16 *4*	$3^{(-)}$		3223.79 *8*	8^-		3566.44 *11*		
2565.04 *4*	5^+		3227.93 *8*	(2^+)		3576.21 *7*		
2601.57 *4*	5^-		3248.22 *7*			3605.58 *11*		
2620.04 *4*	2^+	83 fs *20*	3249.06 *7*	7^-		3611.67 *7*		
2645.61 *4*	4^+		3259.64 *8*			3629.19 *8*		
2682.73 *4*	1	0.22 ps *5*	3264.93 *11*	$1,2^+,3$		3633.74 *11*		
2707.06 *5*	5^-		3289.75 *6*			3642.12 *7*		
2738.71 *4*	4^+	0.37 ps *9*	3294.90 *7*	3^+		3643.22 *8*		
2755.04 *6*	4^+,5^+	0.23 ps *7*	3298.54 *8*			3656.28 *7*		
2762.98 *4*	3^+		3316.41 *7*	(3^+)		3656.44 *9*	(8^+)	
2790.79 *6*			3321.90 *6*			3667.07 *10*	1	
2805.14 *5*	3		3326.63 *11*	$3,(2^+)$		3674.68 *6*		
2807.74 *5*	6^+		3343.99 *5*	1		3683.22 *11*	8^+	
2810.24 *6*	4^-		3353.35 *6*			3718.45 *6*		
2816.52 *5*	2^+		3367.49 *5*	$(5,6^+)$		3726.66 *11*		
2820.19 *6*	$2^{(-)}$		3384.93 *5*	$2^+,3$		3731.96 *11*		
2875.90 *5*	4^+		3388.99 *6*	$5^{(+)}$	0.21 ps *6*	3740.37 *8*		
2905.81 *5*	5^+		3389.43 *11*	(3)		3770.37 *8*	(7^+)	
2936.22 *11*	0^+,1^+,2^+		3400.51 *7*			3779.76 *8*		
2975.38 *5*	6^-		3407.28 *7*			3787.07 *11*		
2976.57 *5*	4^+		3407.89 *6*			3811.67 *11*		
2993.16 *5*	2^+		3413.05 *9*	(6^+)		3816.28 *5*	$(5^+,6^+)$	
2994.20 *5*	6^+		3427.97 *7*			3860.72 *8*		
3028.33 *5*			3433.01 *8*			3875.77 *8*		
3031.70 *5*	2^+		3435.17 *11*			3881.58 *8*		
3057.51 *6*	7^-		3436.96 *8*			3890.72 *8*		

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^{105}Pd(α,nγ) 2002Ga35 (continued)

^{108}Cd Levels (continued)

E(level)†	E(level)†	E(level)†
3904.06 *8*	3968.99 *8*	4082.87 *11*
3968.27 *11*	4016.97 *13*	4083.61 *11*
3968.65 *11*	4030.93 *6*	4096.17 *11*
		4282.32 *11*

† From least-squares fit to Eγ′s, assuming uncertainty of 0.1 keV for each γ ray.
‡ Effective half-life.

γ(^{108}Cd)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	δ†	Comments
632.99	2+	633.0	100	0	0+	E2		
1508.44	4+	875.4	100	632.99	2+	E2(+M3)	−0.02‡ *3*	δ: −0.011 *34* in ε decay.
1601.81	2+	968.8	97 *8*	632.99	2+	M1+E2	−1.59‡ *13*	δ: −1.68 *13* in ε decay.
		1601.8	100 *8*	0	0+	E2		
1720.63	0+	1087.7	100	632.99	2+	E2		
1913.36	0+	311.5	100 *8*	1601.81	2+	E2		
		1280.3	95 *8*	632.99	2+	E2		
2145.83	3+	544.0	12 *1*	1601.81	2+	M1+E2	−1.7‡ *+4−7*	δ: −1.7 *+8−22* in ε decay.
		637.3	6.2 *9*	1508.44	4+	M1+E2	−0.52‡ *7*	δ: −0.72 *+17−20* in ε decay.
		1512.7	100 *8*	632.99	2+	M1+E2	−0.87 *8*	δ: −0.82 *7* in (α,nγ); also −1.9 *2* in ε decay. δ=−0.78 *7* in table III is a misprint (e-mail reply from A. Gade Nov. 30, 2002).
2162.79	2+	442.0	0.3 *1*	1720.63	0+	E2	‡	δ: +0.26 *3* in ε decay.
		1529.8	100 *8*	632.99	2+	M1+E2	+0.27 *4*	
		2162.8	5.6 *7*	0	0+	E2		
2202.17	3−	600.3	4.1 *9*	1601.81	2+			
		1569.2	100 *8*	632.99	2+	E1(+M2)	+0.03 *3*	δ: +0.01 *3* in ε decay.
2239.33	4+	637.5	18 *1*	1601.81	2+	E2(+M3)	−0.01 *6*	
		730.8	100 *8*	1508.44	4+	M1+E2	−0.31‡ *10*	δ: −0.70 *16* or −0.25 *20* in ε decay.
		1606.3	86 *7*	632.99	2+	E2(+M3)	−0.07‡ *4*	δ: −0.003 *38* in ε decay.
2365.84	2+	1732.8	100 *9*	632.99	2+	M1(+E2)	−0.03‡ *5*	δ: −0.04 *3* in ε decay.
		2365.7	23 *3*	0	0+	E2		
2374.59	(0+)	772.7	8 *2*	1601.81	2+	E2		
		1741.5	100 *9*	632.99	2+	E2		
2486.35	2+	884.5	5 *2*	1601.81	2+	M1+E2	+0.31 *8*	
		1853.2	100 *9*	632.99	2+	M1+E2	−0.47‡ *14*	
		2486.3	4 *1*	0	0+	E2		
2541.31	6+	1032.9	100	1508.44	4+	E2(+M3)	−0.004‡ *32*	δ: −0.001 *42* in ε decay.
2555.16	3(−)	353.1	12 *3*	2202.17	3−			
		392.5	<0.6	2162.79	2+			
		409.1	3 *2*	2145.83	3+			
		953.3	33 *4*	1601.81	2+	E1(+M2)	−0.03 *9*	δ: +0.07 *8* in (α,nγ). In table IV δ=−0.03 *9* should be listed from ε decay (E-mail reply from A. Gade November 30, 2002).
		1922.1	100 *10*	632.99	2+	E1(+M2)	+0.04‡ *4*	δ: −0.07 *6* in ε decay.
2565.04	5+	325.7	46 *4*	2239.33	4+	M1+E2	−0.08‡ *4*	
		419.2	0.7 *1*	2145.83	3+			
		1056.6	100 *8*	1508.44	4+	M1+E2	−0.21‡ *3*	δ: −0.18 *3* in ε decay.

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^{105}Pd(α,nγ) 2002Ga35 (continued)

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

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	$\delta^\dagger$	Comments
2601.57	5$^-$	399.4	1.6 *2*	2202.17	3$^-$	E2(+M3)	−0.1‡ *2*	
		1093.2	100 *10*	1508.44	4$^+$	E1(+M2)	−0.012‡ *19*	δ: −0.007 *29* in ε decay.
2620.04	2$^+$	1018.2	0.9 *3*	1601.81	2$^+$	M1+E2	−0.13 *10*	
		1987.0	100 *8*	632.99	2$^+$	M1+E2	+0.16 *3*	δ: +0.13 *7* in (α,nγ).
		2620.0	1.8 *4*	0	0$^+$	E2		
2645.61	4$^+$	406.2	3 *2*	2239.33	4$^+$			
		499.8	5 *2*	2145.83	3$^+$			
		1043.9	4 *2*	1601.81	2$^+$			
		1137.1	100 *8*	1508.44	4$^+$	M1+E2	−0.6‡ *2*	δ: −1.14 *+20−25* or +0.07 *10* in ε decay.
		2012.4	16 *2*	632.99	2$^+$			
2682.73	1	316.9	<0.5	2365.84	2$^+$			
		1080.8	2.9 *3*	1601.81	2$^+$			
		2049.6	100 *10*	632.99	2$^+$	D+Q	−0.056 *15*	δ: not listed in table IV of 2002Ga35.
		2682.8	2.7 *3*	0	0$^+$			
2707.06	5$^-$	105.5	2.0 *2*	2601.57	5$^-$			
		467.7	1.2 *2*	2239.33	4$^+$			
		504.9	1.5 *5*	2202.17	3$^-$			
		1198.5	100 *10*	1508.44	4$^+$	E1(+M2)	−0.006‡ *21*	δ: +0.05 *4* in ε decay.
2738.71	4$^+$	536.6	0.9 *2*	2202.17	3$^-$			
		575.9	0.9 *1*	2162.79	2$^+$			
		1230.3	100 *9*	1508.44	4$^+$	M1+E2	+0.16‡ *8*	δ: +0.22 *11* in ε decay.
		2105.6	14 *2*	632.99	2$^+$			
2755.04	4$^+$,5$^+$	1246.6	100	1508.44	4$^+$			
2762.98	3$^+$	397.1	<5	2365.84	2$^+$			
		523.6	<4	2239.33	4$^+$			
		560.7	<11	2202.17	3$^-$			
		617.1	<14	2145.83	3$^+$			
		1161.1	100 *10*	1601.81	2$^+$	M1+E2	+1.0‡ *+5−3*	δ: +0.55 *24* in ε decay.
		1254.5	70 *8*	1508.44	4$^+$	M1+E2	−0.55‡ *14*	δ: −0.58 *12* in ε decay.
		2129.9	33 *11*	632.99	2$^+$			
2790.79		551.4	9 *2*	2239.33	4$^+$			
		1189.0	44 *4*	1601.81	2$^+$			
		1282.3	100 *8*	1508.44	4$^+$			
2805.14	3	1296.6	100 *9*	1508.44	4$^+$	D+Q	−0.15‡ *4*	δ: −0.16 *4* in ε decay.
		2172.1	10 *2*	632.99	2$^+$			
2807.74	6$^+$	206.1	2.0 *5*	2601.57	5$^-$	E1(+M2)	−0.06 *6*	
		242.8	100 *8*	2565.04	5$^+$			
		266.4	8.5 *9*	2541.31	6$^+$			
		1299.3	40 *4*	1508.44	4$^+$	E2(+M3)	−0.003 *4*	δ: not listed in table IV of 2002Ga35.
2810.24	4$^-$	608.1	18 *2*	2202.17	3$^-$			
		664.4	40 *3*	2145.83	3$^+$	E1+M2	+0.04‡ *3*	
		1301.8	100 *8*	1508.44	4$^+$			
2816.52	2$^+$	450.7	19 *3*	2365.84	2$^+$			
		614.4	38 *4*	2202.17	3$^-$			
		653.7	16 *3*	2162.79	2$^+$			
		670.7	45 *4*	2145.83	3$^+$			
		2183.4	100 *9*	632.99	2$^+$	M1+E2	+0.22 *8*	
		2816.5	57 *5*	0	0$^+$			
2820.19	2$^{(-)}$	618.0	≤6	2202.17	3$^-$			
		1218.3	26 *4*	1601.81	2$^+$	(E1(+M2))	+0.2 *2*	
		2187.2	100 *10*	632.99	2$^+$	(E1+M2)	+0.25 *6*	
2875.90	4$^+$	510.2	≤12	2365.84	2$^+$			
		729.9	15 *4*	2145.83	3$^+$			

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^{105}Pd(α,nγ) 2002Ga35 (continued)

γ(^{108}Cd) (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	$\delta^\dagger$	Comments
2875.90	4^+	1367.4	79 *8*	1508.44	4^+	M1+E2	−0.5‡ *3*	δ: positive sign in table IV of 2002Ga35 is a misprint (E-mail reply from A. Gade, November 30, 2002).
		2242.9	100 *9*	632.99	2^+			
2905.81	5^+	364.5	4 *1*	2541.31	6^+			
		666.5	38 *3*	2239.33	4^+			
		760.0	55 *5*	2145.83	3^+	E2(+M3)	−0.012‡ *40*	δ: uncertainty=0.004 in table III of 2002Ga35 is a misprint (E-mail reply from A. Gade, November 30, 2002).
		1397.4	100 *8*	1508.44	4^+	M1+E2	−0.73 *14*	
2936.22	$0^+,1^+,2^+$	2303.2	100	632.99	2^+			
2975.38	6^-	268.4	38 *3*	2707.06	5^-			
		373.8	100 *8*	2601.57	5^-	M1+E2	+0.55 *5*	
		434.1	8.9 *9*	2541.31	6^+			
2976.57	4^+	331.0	<10	2645.61	4^+			
		737.3	14 *6*	2239.33	4^+			
		774.6	12 *5*	2202.17	3^-			
		1374.7	44 *7*	1601.81	2^+			
		1468.1	100 *11*	1508.44	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 reply from A. Gade, November 30, 2002).
2993.16	2^+	1391.4	<25	1601.81	2^+			
		2360.1	100 *12*	632.99	2^+	M1+E2	−0.91 *+20−25*	
		2993.1	32 *6*	0	0^+			
2994.20	6^+	429.1	<7	2565.04	5^+			
		452.9	7 *3*	2541.31	6^+			
		754.9	43 *5*	2239.33	4^+	E2(+M3)	+0.06 *6*	δ: +0.02 *15* in (α,nγ).
		1485.8	100 *9*	1508.44	4^+	E2(+M3)	−0.05 *5*	δ: no value given in table IV of 2002Ga35.
3028.33		662.5	4	2365.84	2^+			
		882.5	12	2145.83	3^+			
		1426.5	49 *15*	1601.81	2^+			
		2395.3	100 *17*	632.99	2^+			
3031.70	2^+	829.5	21	2202.17	3^-			
		868.9	5	2162.79	2^+			
		1118.3	9	1913.36	0^+			
		2398.6	100	632.99	2^+			
3057.51	7^-	350.5	63 *5*	2707.06	5^-			
		455.9	100 *8*	2601.57	5^-	E2(+M3)	−0.06 *9*	δ: −0.04 *4* in (α,nγ).
		516.2	53 *4*	2541.31	6^+			
3059.55		494.4	34 *14*	2565.04	5^+			
		1551.0	100 *17*	1508.44	4^+			
3059.83	$(4,5)^+$	252.0	13	2807.74	6^+			
		414.2	72	2645.61	4^+			
		518.7	100	2541.31	6^+			
		914.0	53	2145.83	3^+			
3077.48	(4^+)	314.5	9	2762.98	3^+			
		322.4	<3	2755.04	$4^+,5^+$			
		431.8	5	2645.61	4^+			
		838.2	18	2239.33	4^+			
		931.7	10	2145.83	3^+			
		1569.1	100	1508.44	4^+	M1+E2	−1.0 *+4−7*	δ: −0.5 *+3−4* in (α,nγ).
3081.84	3^+	918.9	15 *7*	2162.79	2^+			
		1480.1	33 *10*	1601.81	2^+			
		2448.8	100 *13*	632.99	2^+			

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^{105}Pd(α,nγ) 2002Ga35 (continued)

γ(^{108}Cd) (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	δ[†]	Comments
3092.30	(3)	606.0	10	2486.35	2^+			
		853.0	22	2239.33	4^+			
		929.6	4	2162.79	2^+			
		1490.4	100	1601.81	2^+	D+Q	−0.30 *11*	
		2459.2	26	632.99	2^+			
3110.45	(8^+)	302.8	0.4	2807.74	6^+			
		569.0	100	2541.31	6^+	E2(+M3)	+0.04[‡] *4*	
3138.99		328.8	100	2810.24	4^-			
		583.9	<4	2555.16	$3^{(-)}$			
		936.8	40	2202.17	3^-			
		993.2	17	2145.83	3^+			
		1630.4	35	1508.44	4^+			
3171.23	$2,3^+$	805.5	5 *2*	2365.84	2^+			
		2538.2	100 *9*	632.99	2^+			
3174.16		435.4[#]	<5	2738.71	4^+			Placement from 3171.2 level as given in 2002Ga35 is incorrect (e-mail reply from A. Gade, Dec. 8, 2002).
		1028.3	15	2145.83	3^+			
		1665.7	100	1508.44	4^+			
3181.49		626.3	29	2555.16	$3^{(-)}$			
		1035.8	7	2145.83	3^+			
		2548.4	100	632.99	2^+			
3189.58	5,6,7	648.3	100 *10*	2541.31	6^+			
		950.2	<12	2239.33	4^+			
3194.85	2^+	1049.0	47	2145.83	3^+			
		1593.0	66	1601.81	2^+			
		2561.8	100	632.99	2^+			
		3194.8	44	0	0^+			
3203.63		2570.6	100	632.99	2^+			
3221.65	$(3,4)^+$	466.7	7	2755.04	$4^+,5^+$			
		483.1	7	2738.71	4^+			
		1075.9	14	2145.83	3^+			
		1713.4	100	1508.44	4^+			
		2588.8	29	632.99	2^+			
3223.79	8^-	166.3	100 *8*	3057.51	7^-			
		248.4	32 *3*	2975.38	6^-			
3227.93	(2^+)	1065.0	30	2162.79	2^+			
		2595.0	100	632.99	2^+	M1+E2	+0.14 *10*	
3248.22		602.6	12	2645.61	4^+			
		1008.9	25	2239.33	4^+			
		1739.8	100	1508.44	4^+			
3249.06	7^-	191.5	30 *3*	3057.51	7^-			
		273.6	5 *1*	2975.38	6^-			
		707.9	100 *8*	2541.31	6^+	E1(+M2)	−0.01[‡] *4*	
3259.64		1057.5	100	2202.17	3^-			
		1113.8	34	2145.83	3^+			
3264.93	$1,2^+,3$	2631.9	100	632.99	2^+			
3289.75		582.8	23	2707.06	5^-			
		734.6	100	2555.16	$3^{(-)}$			
		1087.6	81	2202.17	3^-			
		1781.2	93	1508.44	4^+			
3294.90	3^+	1092.7	11	2202.17	3^-			
		1132.2	10	2162.79	2^+			
		2661.8	100	632.99	2^+	M1+E2	+4.3 *+9−6*	δ: or +0.002 *4*.
3298.54		323.1	100	2975.38	6^-			

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^{105}Pd(α,nγ) 2002Ga35 (continued)

γ(^{108}Cd) (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	δ[†]	Comments
3298.54		697.0	59	2601.57	5^-			
3316.41	(3^+)	1714.5	13 *6*	1601.81	2^+	M1+E2	+3.7 *+29−12*	
		2683.5	100 *14*	632.99	2^+	M1+E2	+8.7 *+41−21*	δ: or −0.10 *4*.
3321.90		327.9	3.5	2994.20	6^+			
		566.8	21	2755.04	4^+,5^+			
		780.6	76	2541.31	6^+			Placement from 3221.9 level as given in 2002Ga35 is incorrect (e-mail reply from A. Gade, Dec. 8, 2002).
		1082.5	24	2239.33	4^+			
		1813.4	100	1508.44	4^+			
3326.63	3,(2^+)	2693.6	100	632.99	2^+			
3343.99	1	350.9	1.3	2993.16	2^+			
		723.9	1.3	2620.04	2^+			
		978.1	4	2365.84	2^+			
		1181.2	6	2162.79	2^+			
		1430.7	4	1913.36	0^+			
		1623.4	12	1720.63	0^+			
		1742.2	100	1601.81	2^+	D+Q	+0.065 *26*	
		2710.9	<7	632.99	2^+			
3353.35		614.6	100	2738.71	4^+			
		1207.6	53	2145.83	3^+			
		1751.5	38	1601.81	2^+			
		1844.8	44	1508.44	4^+			
3367.49	$(5,6^+)$	826.2	100 *8*	2541.31	6^+			
		1128.1	14 *2*	2239.33	4^+			
		1859.0	49 *5*	1508.44	4^+			
3384.93	2^+,3	579.8	7	2805.14	3			
		898.4	10	2486.35	2^+			
		1222.2	80	2162.79	2^+			
		1239.2	47	2145.83	3^+			
		1783.0	100	1601.81	2^+			
		2752.0	99.8	632.99	2^+			
3388.99	$5^{(+)}$	413.7	27	2975.38	6^-			
		578.7	47	2810.24	4^-			
		787.4	69	2601.57	5^-			
		824.1	52	2565.04	5^+			
		1149.6	24	2239.33	4^+			
		1880.4	100	1508.44	4^+	M1+E2	−0.14 *5*	δ: or −15.4.
3389.43	(3)	2756.4	100	632.99	2^+	D+Q	+0.04 *5*	
3400.51		845.4	95	2555.16	$3^{(-)}$			
		1198.4	100	2202.17	3^-			
		1891.9	57	1508.44	4^+			
3407.28		1041.4	32	2365.84	2^+			
		1244.5	43	2162.79	2^+			
		1805.4	100	1601.81	2^+			
3407.89		669.2	11	2738.71	4^+			
		762.2	15	2645.61	4^+			
		1262.1	<13	2145.83	3^+			
		1899.5	100	1508.44	4^+			
3413.05	(6^+)	223.4	4	3189.58	5,6,7			
		871.8	100	2541.31	6^+	M1+E2	+0.25[‡] *12*	
3427.97		452.6	29	2975.38	6^-			
		826.4	9	2601.57	5^-			
		886.7	100	2541.31	6^+			
3433.01		677.9	32	2755.04	4^+,5^+			

Continued on next page (footnotes at end of table)

^{105}Pd(α,nγ) 2002Ga35 (continued)

γ(^{108}Cd) (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Comments
3433.01		891.8	100	2541.31	6^+	
3435.17		1233.0	100	2202.17	3^-	
3436.96		698.4	19	2738.71	4^+	
		1928.4	100	1508.44	4^+	
3450.09	$2^+,3^+$	644.9	11	2805.14	3	
		963.8	27	2486.35	2^+	
		1084.3	38	2365.84	2^+	
		1247.8	5.5	2202.17	3^-	
		1287.3	11	2162.79	2^+	
		1848.2	100	1601.81	2^+	
		2817.1	80	632.99	2^+	
3459.84	5,6	484.4	17	2975.38	6^-	
		752.8	20	2707.06	5^-	
		858.3	100	2601.57	5^-	
3460.58		652.8	46	2807.74	6^+	
		895.4	16	2565.04	5^+	
		919.2	28	2541.31	6^+	
		1221.3	39	2239.33	4^+	
		1952.2	100	1508.44	4^+	
3474.98	8^-	225.9	29	3249.06	7^-	
		417.5	100	3057.51	7^-	
		499.5	35	2975.38	6^-	
3482.44	2	2849.4	100	632.99	2^+	
3485.21	9^-	261.5	100	3223.79	8^-	
		427.6	86	3057.51	7^-	
3512.26		1366.3	54.5	2145.83	3^+	
		2003.9	100	1508.44	4^+	
3525.36		770.4	19	2755.04	$4^+,5^+$	
		786.6	16	2738.71	4^+	
		984.1	100	2541.31	6^+	Placement from 3489.4 level as given in 2002Ga35 is incorrect (e-mail reply from A. Gade, Dec. 8, 2002).
		1286.1	22	2239.33	4^+	
		2016.9	<16	1508.44	4^+	
3527.15		1381.3	100	2145.83	3^+	
3535.84	$(3,4)^+$	2902.8	100	632.99	2^+	
3539.95		1938.2	19	1601.81	2^+	
		2031.4	100	1508.44	4^+	
3555.04	(3^+)	2922.0	100	632.99	2^+	
3559.64		2926.6	100	632.99	2^+	
3561.18	$(4,5,6)^+$	770.3	<31	2790.79		
		822.4	0.25	2738.71	4^+	
		915.7	12	2645.61	4^+	
		996.1	51 *8*	2565.04	5^+	
		1019.8	14	2541.31	6^+	
		1321.9	100 *12*	2239.33	4^+	
3566.44		2933.4	100	632.99	2^+	
3576.21		930.6	36	2645.61	4^+	
		1021.0	100	2555.16	$3^{(-)}$	
		1374.1	18	2202.17	3^-	
3605.58		1403.4	100	2202.17	3^-	
3611.67		1409.5	<13	2202.17	3^-	
		1465.7	<19	2145.83	3^+	
		2103.2	100	1508.44	4^+	
3629.19		1027.6	100	2601.57	5^-	
		1087.9	46	2541.31	6^+	
3633.74		3000.7	100	632.99	2^+	

Continued on next page (footnotes at end of table)

^{105}Pd(α,nγ) 2002Ga35 (continued)

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

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	δ[†]
3642.12		666.7	56	2975.38	6^-		
		934.9	100	2707.06	5^-		
		1040.6	<52	2601.57	5^-		
		1100.9	40	2541.31	6^+		
3643.22		1403.9	87	2239.33	4^+		
		2134.7	100	1508.44	4^+		
3656.28		680.9	33	2975.38	6^-		
		949.2	100	2707.06	5^-		
		1054.7	17	2601.57	5^-		
3656.44	(8^+)	432.6	19	3223.79	8^-		
		1115.2	100	2541.31	6^+		
3667.07	1	3667.0	100	0	0^+		
3674.68		1119.5	40	2555.16	$3^{(-)}$		
		1472.4	41	2202.17	3^-		
		1528.9	100	2145.83	3^+		
		2073.0	64	1601.81	2^+		
3683.22	8^+	1141.9	100	2541.31	6^+	E2(+M3)	−0.011[‡] *8*
3718.45		979.8	16	2738.71	4^+		
		1072.8	<34	2645.61	4^+		
		1572.6	44	2145.83	3^+		
		2210.0	100	1508.44	4^+		
3726.66		2218.2	100	1508.44	4^+		
3731.96		2223.5	100	1508.44	4^+		
3740.37		1001.6	<24	2738.71	4^+		
		2232.0	100	1508.44	4^+		
3770.37	(7^+)	795.0	51	2975.38	6^-		
		1229.0	100	2541.31	6^+	M1+E2	−0.17[‡] *13*
3779.76		1072.6	<40	2707.06	5^-		
		2271.4	100	1508.44	4^+		
3787.07		2278.6	100	1508.44	4^+		
3811.67		2303.2	100	1508.44	4^+		
3816.28	$(5^+,6^+)$	448.7	29	3367.49	$(5,6^+)$		
		839.8	12	2976.57	4^+		
		910.5	19	2905.81	5^+		
		940.4	17	2875.90	4^+		
		1008.5	100	2807.74	6^+		
		1077.6	16	2738.71	4^+		
		1214.7	27	2601.57	5^-		
		1251.2	60	2565.04	5^+		
		1275.0	73	2541.31	6^+		
3860.72		866.5	100	2994.20	6^+		
		1319.4	91	2541.31	6^+		
3875.77		1730.0	<23	2145.83	3^+		
		2367.2	100	1508.44	4^+		
3881.58		1280.0	43	2601.57	5^-		
		1340.3	100	2541.31	6^+		
3890.72		915.4	62	2975.38	6^-		
		1349.3	100	2541.31	6^+		
3904.06		1258.4	7	2645.61	4^+		
		2395.6	100	1508.44	4^+		
3968.27		2459.8	100	1508.44	4^+		
3968.65		1822.8	100	2145.83	3^+		
3968.99		1262.0	24	2707.06	5^-		
		1367.4	100	2601.57	5^-		
4016.97		542.0	100	3474.98	8^-		

Continued on next page (footnotes at end of table)

^{105}Pd(α,nγ) 2002Ga35 (continued)

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

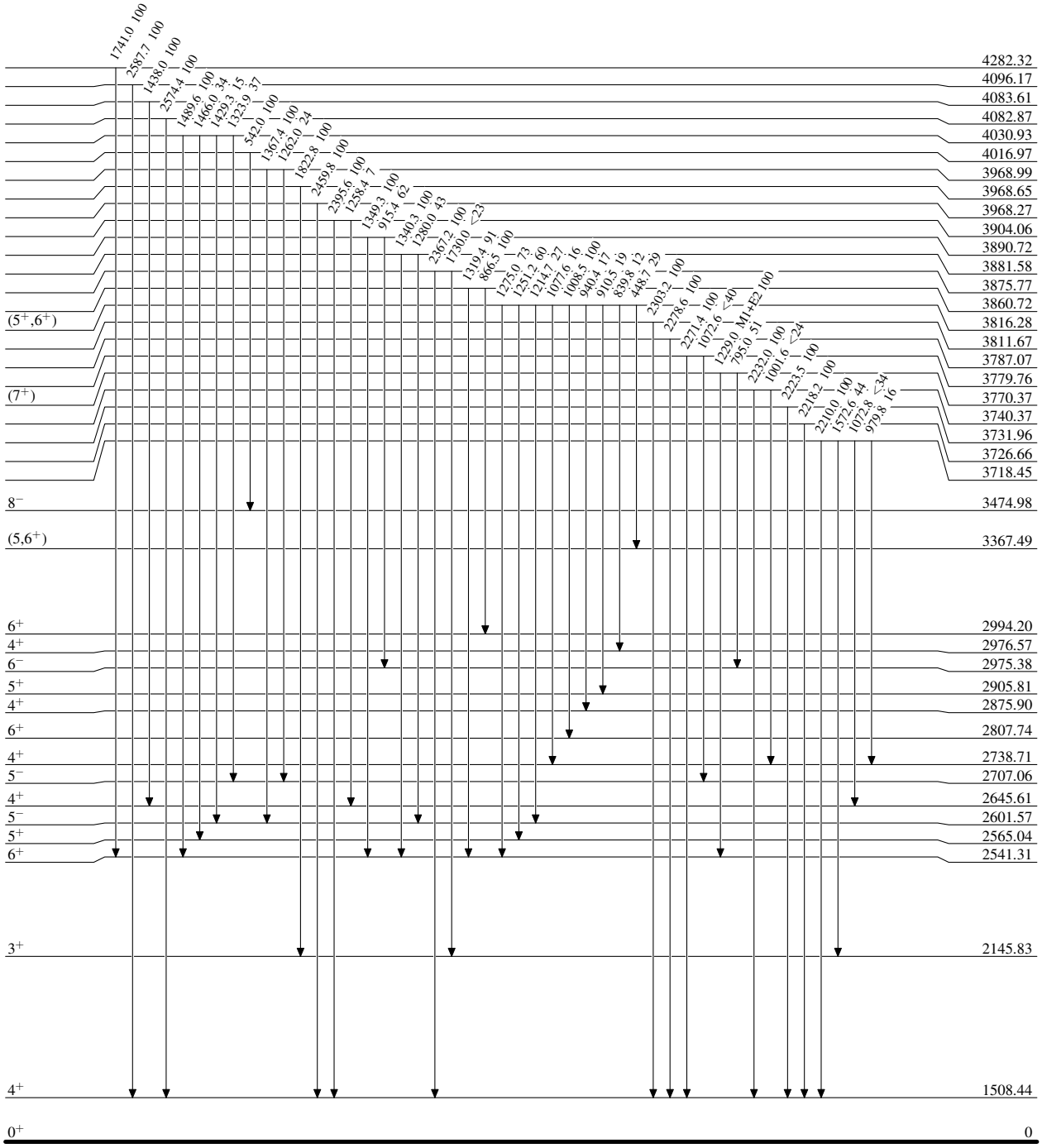
E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π
4030.93		1323.9	37	2707.06	5^-	4082.87		2574.4	100	1508.44	4^+
		1429.3	15	2601.57	5^-	4083.61		1438.0	100	2645.61	4^+
		1466.0	34	2565.04	5^+	4096.17		2587.7	100	1508.44	4^+
		1489.6	100	2541.31	6^+	4282.32		1741.0	100	2541.31	6^+

† From $\gamma\gamma(\theta)$ in ^{108}In ε decay, unless otherwise stated.
‡ From $\gamma\gamma(\theta)$(DCO) in (α,nγ).
# Placement of transition in the level scheme is uncertain.

^{105}Pd(α,nγ) 2002Ga35

Level Scheme

Intensities: Relative photon branching from each level

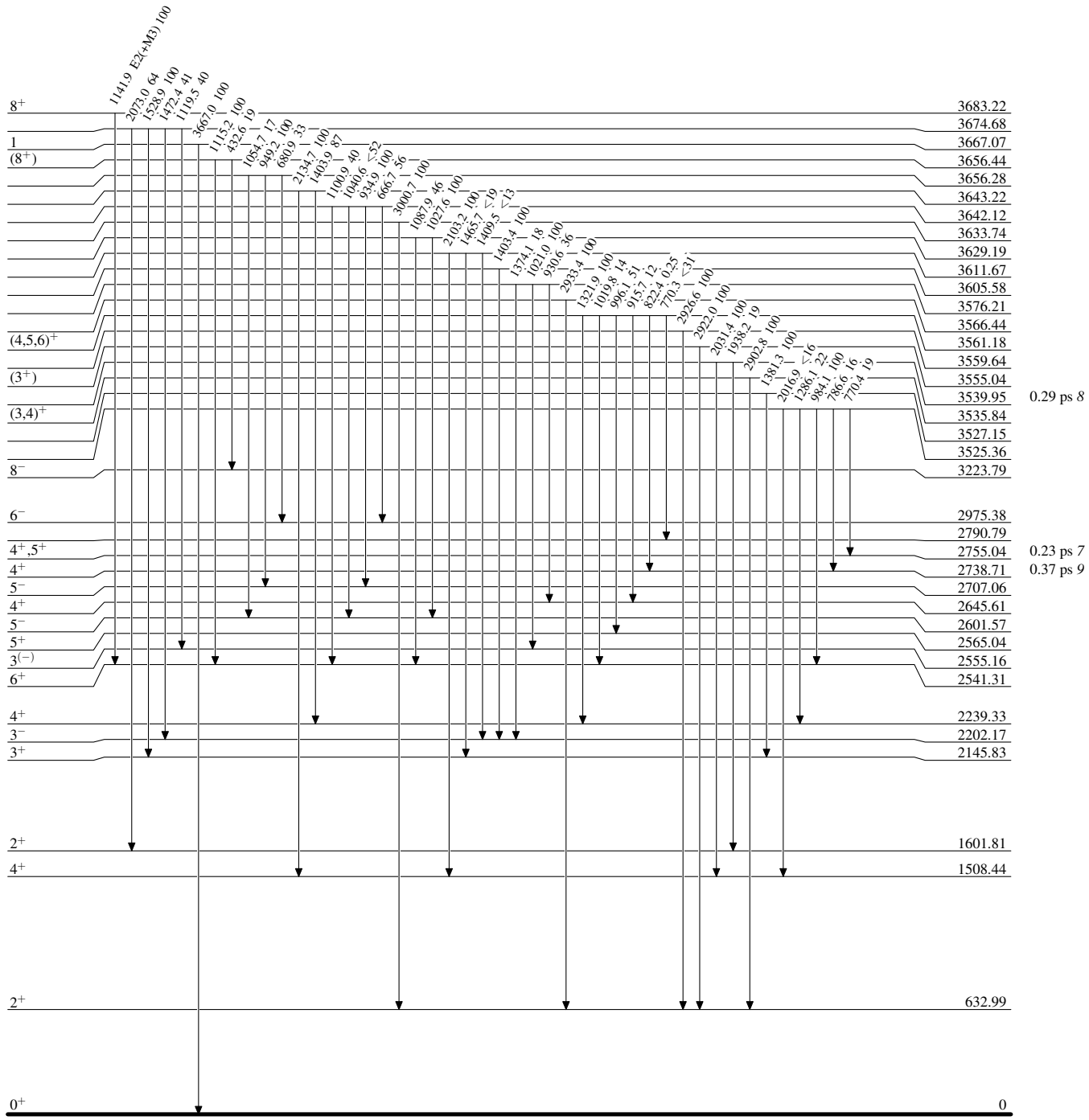


$^{108}_{48}Cd_{60}$

^{105}Pd(α,nγ) 2002Ga35

Level Scheme (continued)

Intensities: Relative photon branching from each level

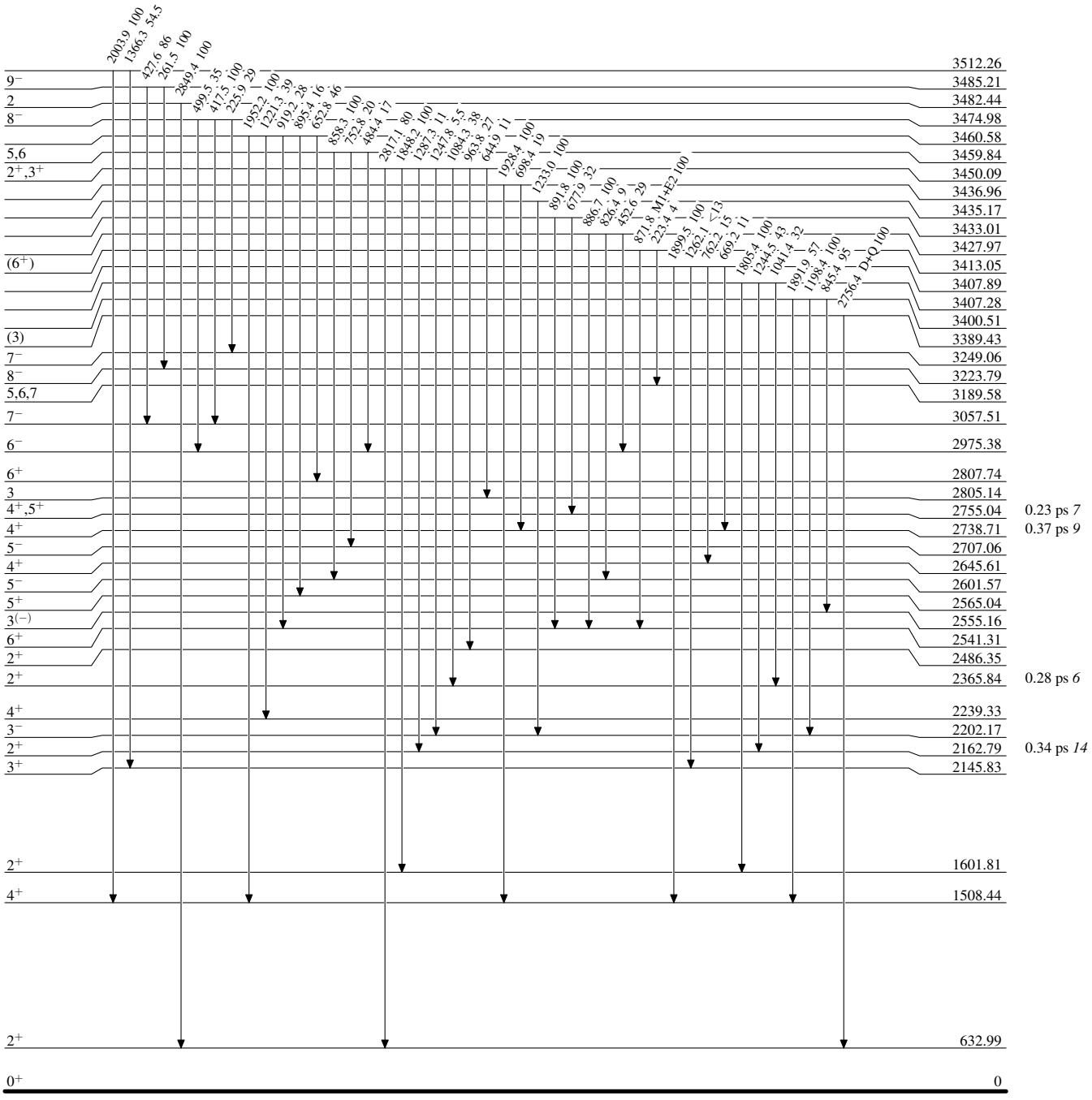


$^{108}_{48}Cd_{60}$

^{105}Pd(α,nγ) 2002Ga35

Level Scheme (continued)

Intensities: Relative photon branching from each level

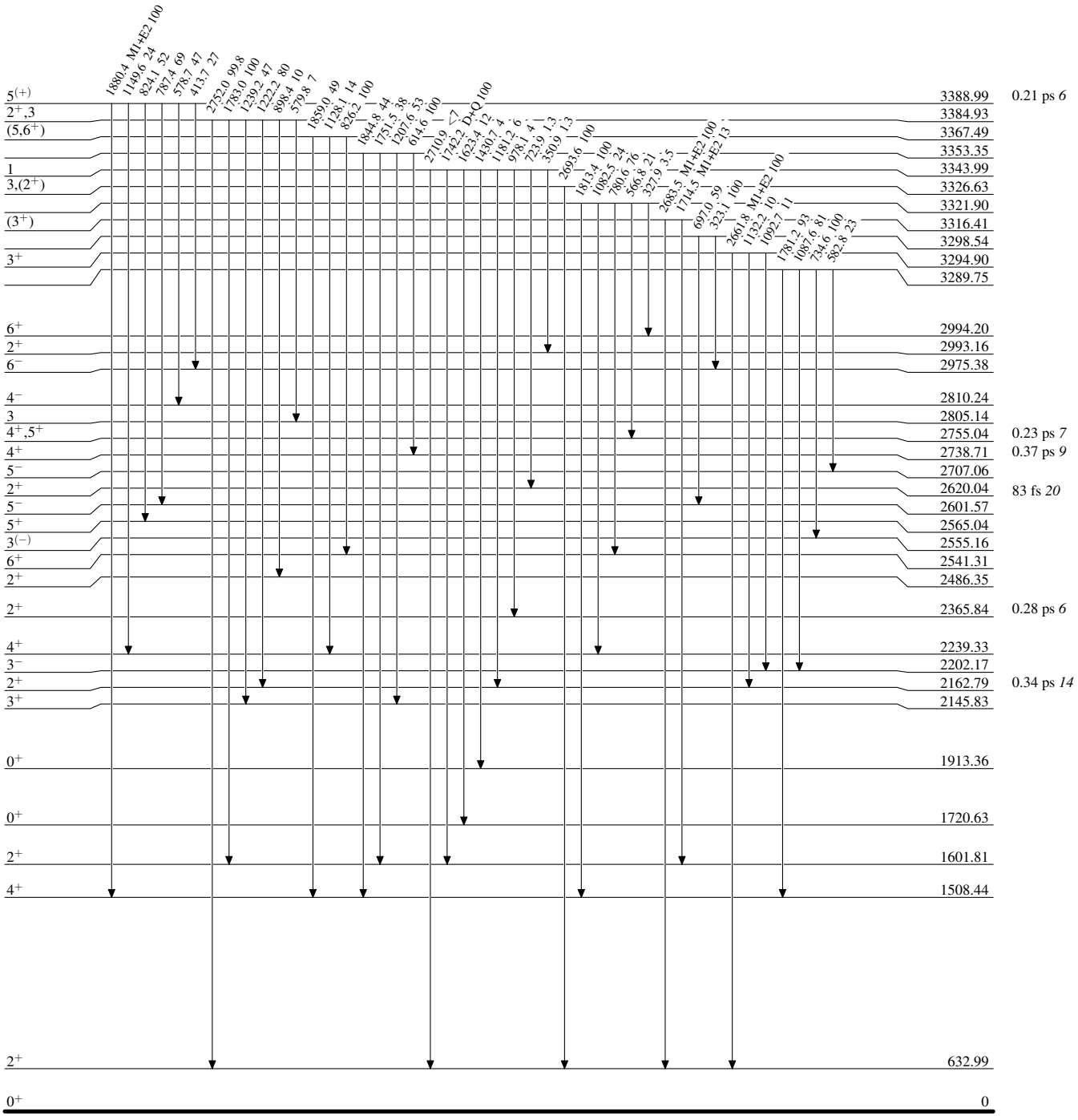


$^{108}_{48}Cd_{60}$

^{105}Pd(α,nγ) 2002Ga35

Level Scheme (continued)

Intensities: Relative photon branching from each level



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

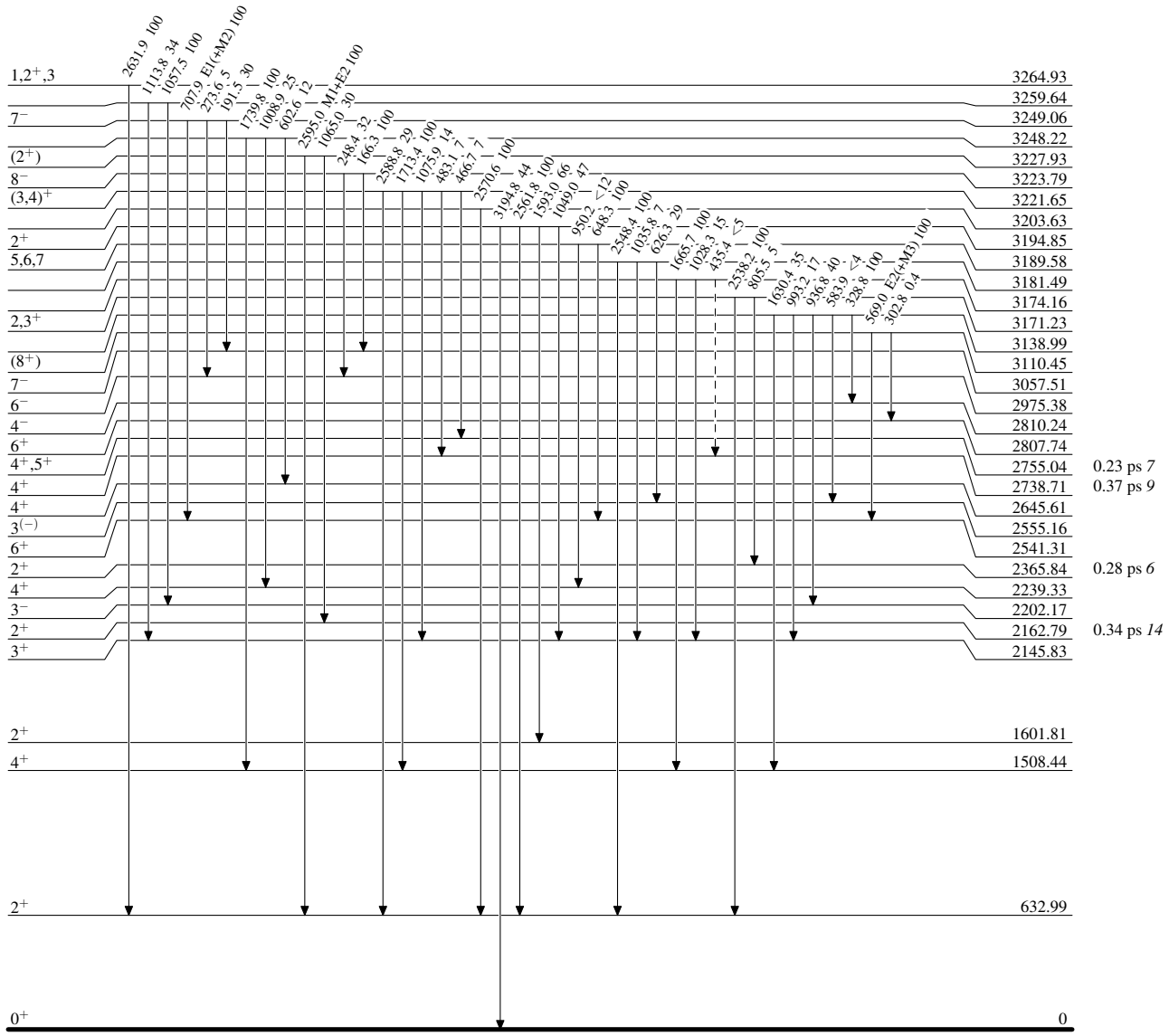
^{105}Pd(α,nγ) 2002Ga35

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)

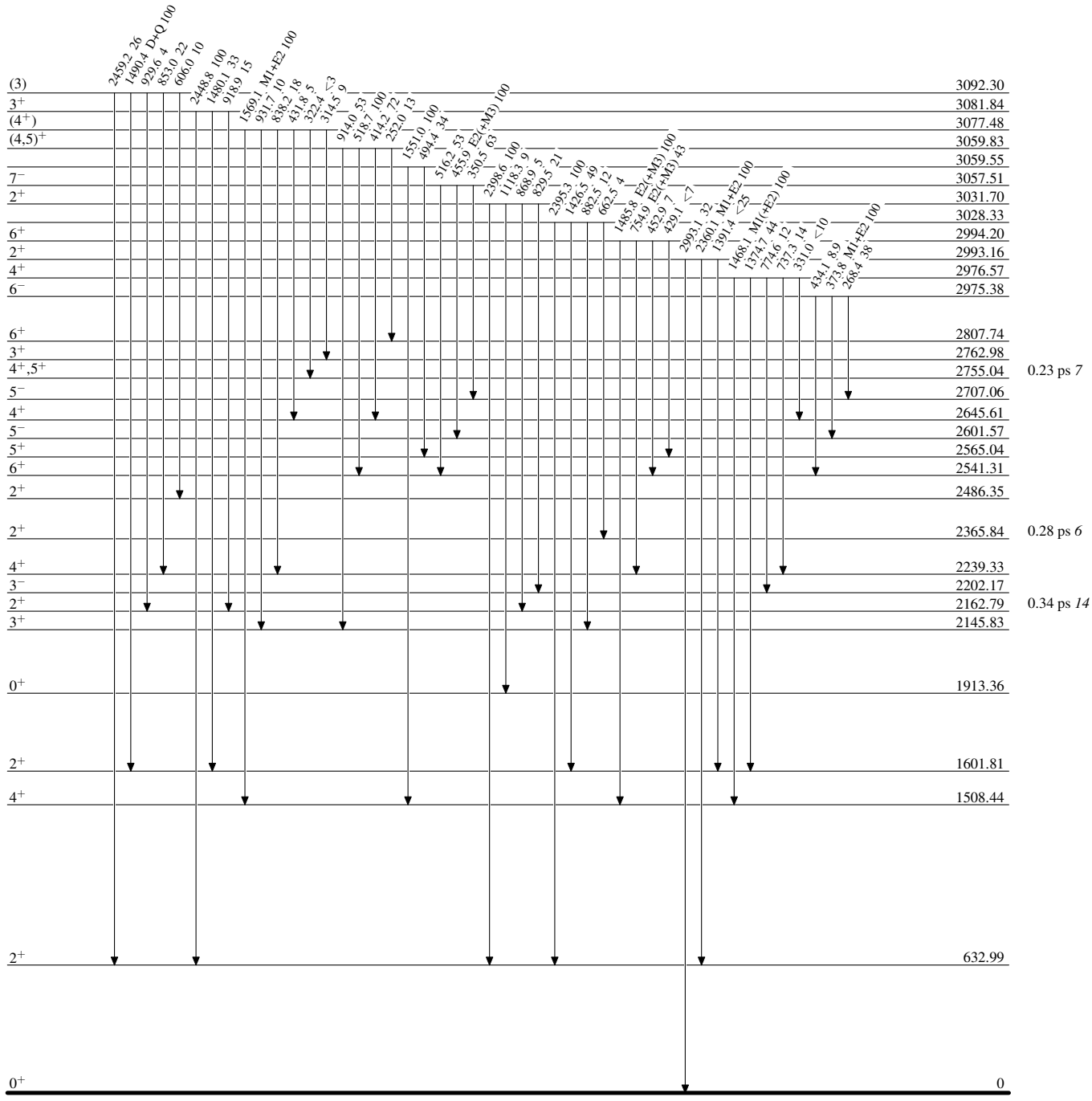


$^{108}_{48}Cd_{60}$

^{105}Pd(α,nγ) 2002Ga35

Level Scheme (continued)

Intensities: Relative photon branching from each level

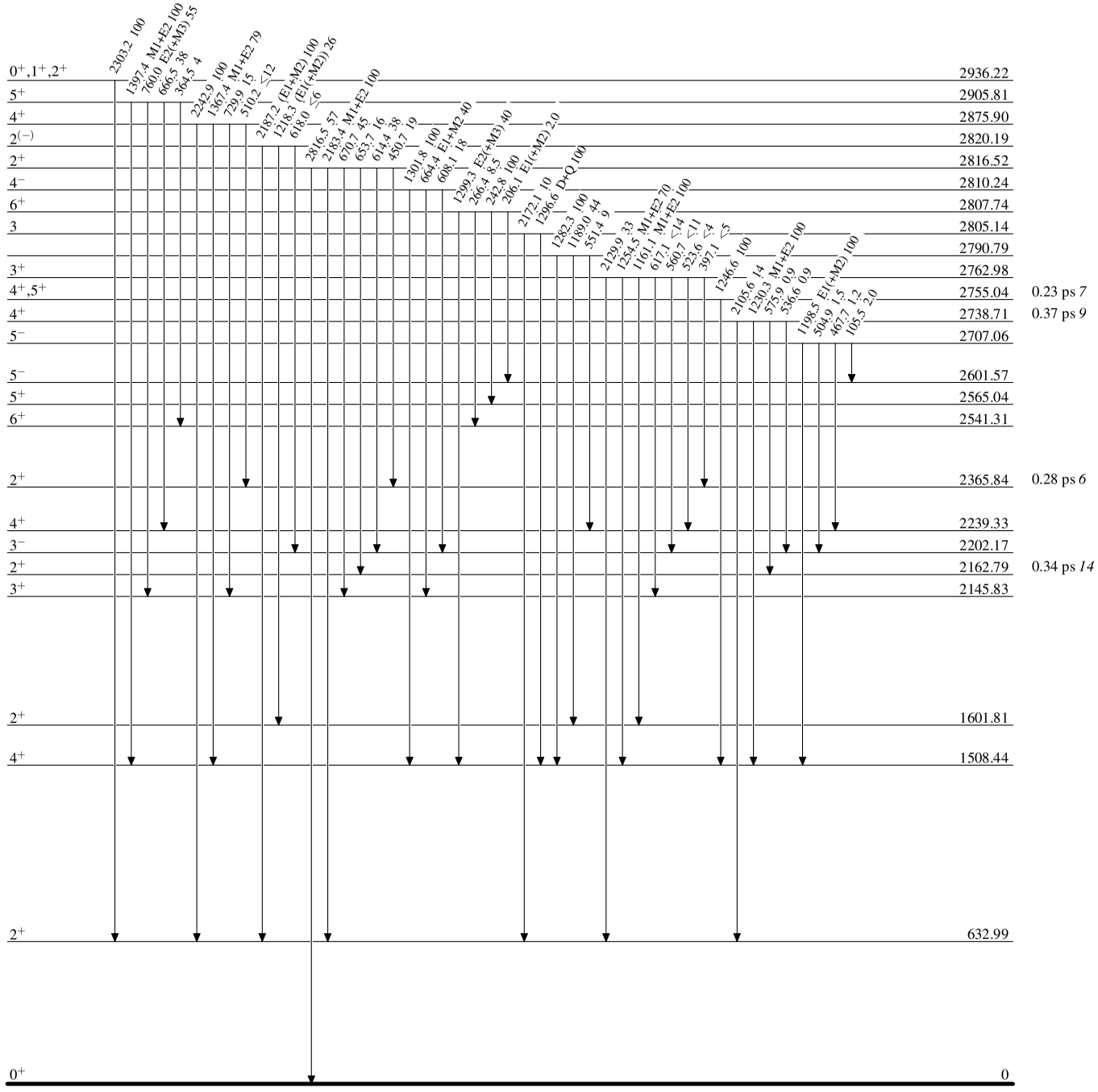


$^{108}_{48}Cd_{60}$

^{105}Pd(α,nγ) 2002Ga35

Level Scheme (continued)

Intensities: Relative photon branching from each level

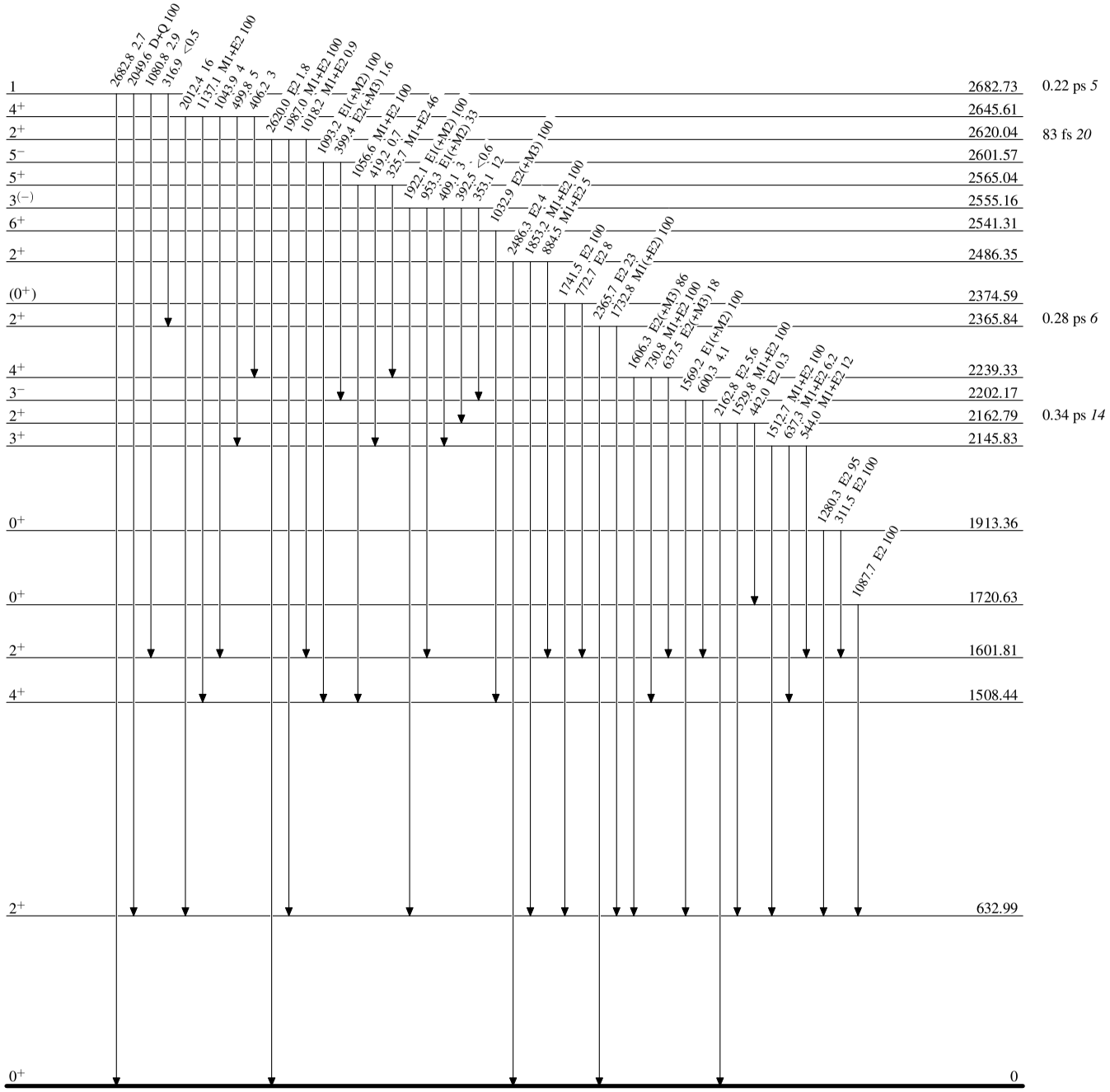


$^{108}_{48}Cd_{60}$

^{105}Pd(α,nγ) 2002Ga35

Level Scheme (continued)

Intensities: Relative photon branching from each level

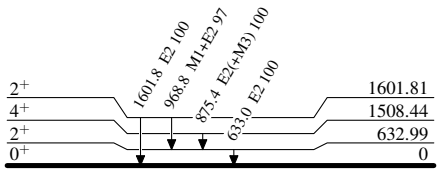


$^{108}_{48}Cd_{60}$

^{105}Pd(α,nγ) 2002Ga35

Level Scheme (continued)

Intensities: Relative photon branching from each level



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