¹⁰⁵₄₈Cd₅₇-1

¹⁰⁵In ε decay (5.07 min) 1984Ve01,1989Bu29

TypeHistoryFull EvaluationS. Lalkovski, J. Timar and Z. ElekesCitationLiterature Cutoff DateNDS 161, 1 (2019)1-Apr-2019

Parent: ¹⁰⁵In: E=0.0; $J^{\pi}=9/2^+$; $T_{1/2}=5.07 \text{ min } 7$; $Q(\varepsilon)=4693 \ 10$; $\%\varepsilon+\%\beta^+$ decay=100.0

1984Ve01: Facility: CYCLONE cyclotron; Source: mass separated from ^{nat}Mo(¹⁴N,xn) and ⁹²Mo(¹⁶O,p3n) reactions at E(¹⁴N)=90 MeV and E(¹⁶O)=100 MeV; Detectors: two Ge(Li), one LEPS, plastic beta telescope and mini-orange spectrometer;

Measured: γ , γ - γ coinc., γ - β coinc., γ - $\gamma(t)$, β - $\gamma(t)$, $E\gamma$, $I\gamma$; Deduced ¹⁰⁵Cd level scheme, J^{π} and log *ft*.

1989Bu29: source from ¹⁰⁶Cd(p,2n). Measured: E γ , I γ , γ - γ . coinc.; Deduced: ¹⁰⁵Cd level scheme, I β , log *ft*, γ -ray hindrance factors. Others: 1983Wo04, 1981BuZL, 1980ViZU, 1980Wi20, 1975Ri06, 1973Ro30.

¹⁰⁵Cd Levels

E(level) [†]	$J^{\pi \ddagger}$	T _{1/2}	Comments
0.0	$5/2^+$		
131.18 7	7/2+	1.75 ns 11	$T_{1/2}$: from γ -131 γ (t) in 1973Ro30.
196.17 6	$(5/2^+)$		
260.38 6	$(7/2)^+$		
604.39 7	$(7/2)^+$		
766.49 9	$(5/2^+)$		
771.00 9	9/2+		
799.79 <i>13</i>	$11/2^+$		
832.52 9	9/2+		
1114.84 10	$(9/2^+)$		
1139.59 12	$(7/2^+)$		
1163.29 12	$(11/2)^{-}$		
1182.49 <i>13</i>	$(3/2^+ \text{ to } 9/2^+)$		
1327.97 15	$(5/2^+)$		
1386.69 9	$(7/2^+, 9/2^+)$		
1439.71 10	$(9/2^+)$		
1495.24 12	$(7/2^+, 9/2^+)$		
1579.23 12	$(9/2^+)$		
1608.78 11	$(5/2^+, 7/2, 9/2^+)$		
1625.52 16	$(7/2^+, 9/2^+)$		
1635.50 14	$(5/2^+)$		
1729.01 19	$(7/2^+, 9/2^+)$		
1822.78 13	$(7/2^+, 9/2^+, 11/2^+)$		
2060.01 23	$(1/2^+, 9/2^+, 11/2^+)$		
2142.77 13	$(1/2^+, 9/2^+)$		
2193./01/	$(1/2^+, 9/2^+)$ $(7/2^+, 0/2^+, 11/2^+)$		
2217.63 13	$(7/2^+, 9/2^+, 11/2^+)$		
2307.90 22	(1/2, 9/2, 11/2)		
2303.33 14	(7/2, 9/2)		
2371.90 10	$(7/2^+, 9/2^+)$		
2552 46 24	$(7/2^+, 9/2^+)$ $(7/2^+, 9/2^+, 11/2^+)$		
2677 27 11	$(7/2^+ 9/2^+)$		
2853.56 21	$(7/2^+, 9/2^+)$		
3165.42.18	$(7/2^+, 9/2^+)$		
3202.97 18	$(9/2^+)$		
3337.8 4	$(7/2^+, 9/2^+, 11/2^+)$		
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[†] From a least-squares fit to $E\gamma$.

[‡] From the Adopted Levels.

¹⁰⁵In ε decay (5.07 min) **1984Ve01,1989Bu29** (continued)

ε, β^+ radiations

E(decay)	E(level)	$\mathrm{I}\beta^+$ †	$\mathrm{I}\varepsilon^{\dagger}$	Log <i>ft</i>	$I(\varepsilon + \beta^+)^{\dagger}$	Comments
(1355 10)	3337.8	0.0029 6	1.06 16	5.09 7	1.06 16	av $E\beta$ =156.0 44; ε K=0.8585 3; ε L=0.11103 7;
(1490 10)	3202.97	0.0097 18	0.92 15	5.23 7	0.93 15	av $E\beta = 214.4$ 44; $\varepsilon K = 0.8522$ 8; $\varepsilon L = 0.10988$ 12;
(1528 10)	3165.42	0.0188 21	1.32 11	5.10 4	1.34 11	av $E\beta$ =230.7 44; ϵ K=0.8492 9; ϵ L=0.10941 14;
(1839 10)	2853.56	0.078 12	0.95 14	5.40 7	1.03 15	$\varepsilon M += 0.02735 4$ av E β =366.1 44; εK =0.796 3; εL =0.1021 4;
(2016 10)	2677.27	0.60 4	3.70 22	4.89 <i>3</i>	4.30 25	εM +=0.02550 9 av E β =443.4 44; εK =0.742 4; εL =0.0949 5;
(2141 10)	2552.46	0.12 2	0.48 8	5.83 8	0.60 10	εM +=0.02371 12 av E β =498.5 45; εK =0.695 4; εL =0.0888 6;
(2273 10)	2420.12	0.24 4	0.70 12	5.72 8	0.94 16	ε M+=0.02216 14 av E β =557.2 45; ε K=0.639 5; ε L=0.0815 6;
(2321 10)	2371.90	0.68 11	1.7 3	5.35 8	2.4 4	εM +=0.02036 <i>14</i> av E β =578.6 <i>45</i> ; εK =0.618 <i>5</i> ; εL =0.0788 <i>6</i> ;
(2327 10)	2365.53	0.37 11	0.9 3	5.62 14	1.3 4	εM +=0.01967 15 av E β =581.5 45; εK =0.615 5; εL =0.0785 6;
(2385 10)	2307.96	0.35 8	0.77 17	5.73 10	1.12 25	εM +=0.01958 <i>15</i> av E β =607.2 <i>45</i> ; εK =0.590 <i>5</i> ; εL =0.0752 <i>6</i> ;
(2415 10)	2277.85	0.40 10	0.80 20	5.72 11	1.2 3	ε M+=0.01876 15 av E β =620.6 45; ε K=0.576 5; ε L=0.0734 6;
(2499 10)	2193.70	0.19 7	0.31 12	6.16 <i>17</i>	0.50 19	ε M+=0.01833 15 av E β =658.4 45; ε K=0.539 5; ε L=0.0686 6;
(2550 10)	2142.77	0.80 16	1.2 2	5.59 9	2.0 4	ε M+=0.01713 15 av E β =681.2 45; ε K=0.517 5; ε L=0.0658 6;
(2633 10)	2060.01	0.38 6	0.49 8	6.01 7	0.87 14	εM +=0.01641 <i>14</i> av E β =718.5 <i>4</i> 6; εK =0.481 <i>5</i> ; εL =0.0612 <i>6</i> ;
(2870 10)	1822.78	0.48 9	0.40 8	6.17 9	0.88 17	εM +=0.01528 <i>14</i> av E β =826.0 <i>46</i> ; εK =0.388 <i>4</i> ; εL =0.0493 <i>5</i> ;
(2964 10)	1729.01	<1.0	< 0.70	>6.0	<1.7	εM +=0.01229 <i>12</i> av E β =868.8 <i>4</i> 6; εK =0.355 <i>4</i> ; εL =0.0451 <i>5</i> ;
(3058 10)	1635.50			>6.04	0	εM +=0.01125 <i>11</i> av E β =988 6; εK =0.277 4; εL =0.0352 5;
(3067 10)	1625.52	1.3 2	0.75 11	5.96 7	2.0 3	εM +=0.00878 <i>11</i> av E β =916.1 <i>4</i> 6; εK =0.322 <i>3</i> ; εL =0.0409 <i>4</i> ;
(3084 10)	1608.78	1.3 3	0.77 18	5.95 11	2.1 5	ε M+=0.01019 <i>10</i> av E β =923.7 <i>4</i> 6; ε K=0.317 <i>3</i> ; ε L=0.0402 <i>4</i> ;
(3114 10)	1579.23	0.36 15	0.20 8	6.54 18	0.56 23	ε M+=0.01003 <i>10</i> av E β =937.3 <i>46</i> ; ε K=0.308 <i>3</i> ; ε L=0.0391 <i>4</i> ;
(3198 10)	1495.24	0.99 9	0.48 4	6.18 <i>4</i>	1.47 <i>13</i>	ε M+=0.00975 <i>10</i> av E β =975.8 <i>4</i> 6; ε K=0.284 <i>3</i> ; ε L=0.0361 <i>4</i> ;
(3253 10)	1439.71	1.5 7	0.7 <i>3</i>	6.04 20	2.2 10	ε M+=0.00899 9 av E β =1001.3 46; ε K=0.270 3; ε L=0.0342 4;
(3306 10)	1386.69	5.0 6	2.1 2	5.57 5	7.1 8	ε M+=0.00853 9 av E β =1025.7 46: ε K=0.2565 25: ε L=0.0325 4:
(3365-10)	1327.97	< 0.11	< 0.042	>7.3	< 0.15	ε M+=0.00811 8 av E β =1052.8 47: ε K=0.2427 23: ε L=0.0308 3:
(3511 10)	1182.49	0.35 15	0.11.5	6.90 19	0.46 20	εM +=0.00767 8 av E β =1120.1 47: εK =0.2119 20: εL =0.0268 3:
(3530-10)	1163.29	0.25.8	0.08.3	7.05.15	0.33 11	εM +=0.00669 7 av E β =1129.0 47: εK =0.2082 20: εL =0.02637 25:
(3553 10)	1139.59	2.0.2	0.61 7	6.17 5	2.6.3	εM +=0.00657 7 av E β =1140.0 47: εK =0.2037 19: εL =0.02579 24:
(3578 10)	1114 84	153	0 44 9	6 32 10	194	$\varepsilon M + = 0.00643 \ 6$ av $F_{B} = 11514 \ 47^{\circ} \varepsilon K = 0.1991 \ 19^{\circ} \varepsilon I = 0.02521 \ 24^{\circ}$
(3370 10)	1117.07	1.5 5	0.17 2	0.52 10	1.7 7	$\varepsilon M += 0.00629 \ 6$

Continued on next page (footnotes at end of table)

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	ϵ, β^+ radiations (continued)												
E(decay)	E(level)	$I\beta^+$ [†]	$\mathrm{I}\varepsilon^{\dagger}$	Log ft	$I(\varepsilon + \beta^+)^{\dagger}$	Comments							
(3860 10)	832.52	5.2 9	1.1 2	5.98 8	6.3 11	av Eβ=1282.8 47; εK=0.1546 14; εL=0.01956 18; εM+=0.00488 5							
(3893 10)	799.79	5.5 4	1.1 <i>1</i>	5.98 4	6.6 5	av Eβ=1298.1 47; εK=0.1503 14; εL=0.01901 17; εM+=0.00474 5							
(3922 10)	771.00	6.7 15	1.4 3	5.91 10	8.1 18	av Eβ=1311.6 47; εK=0.1466 13; εL=0.01854 17; εM+=0.00462 4							
(3927 10)	766.49	< 0.5	<0.1	>7.0	<0.6	av Eβ=1313.7 47; εK=0.1460 13; εL=0.01847 16; εM+=0.00460 4							
(4089 10)	604.39	2.7 6	0.47 10	6.41 10	3.2 7	av Eβ=1389.6 47; εK=0.1272 11; εL=0.01609 14; εM+=0.00401 4							
(4433 10)	260.38	8.8 21	1.1 3	6.11 11	9.9 24	av Eβ=1551.4 48; εK=0.0964 8; εL=0.01218 10; εM+=0.003036 24							
471×10 ¹ <i>13</i>	196.17	< 0.4	< 0.05	>7.4	<0.5	av Eβ=1581.7 48; εK=0.0918 7; εL=0.01159 9; εM+=0.002889 23							
471×10 ¹ 13	131.18	23.3 8	2.62 10	5.759 17	25.9 9	av Eβ=1612.3 48; εK=0.0873 7; εL=0.01103 9; εM+=0.002749 21							
471×10 ¹ <i>13</i>	0.0	< 0.15	< 0.015	>8.0	<0.16	av E β =1674.4 48; ε K=0.0792 6; ε L=0.01000 8; ε M+=0.002492 19							

¹⁰⁵In ε decay (5.07 min) **1984Ve01,1989Bu29** (continued)

 † Absolute intensity per 100 decays.

$\gamma(^{105}\text{Cd})$

Iy normalization: calculated from $\Sigma I(\gamma+ce)=100\%$ to g.s., assuming no $(\varepsilon+\beta^+)$ -feeding to the ¹⁰⁵Cd g.s.

E_{γ} ‡	I_{γ} [‡] &	E _i (level)	${f J}^\pi_i$	\mathbf{E}_{f}	J_f^π	Mult. [#]	α^{\dagger}	Comments
64.31 8	1.03 25	260.38	(7/2)+	196.17	(5/2+)	[M1+E2]	43	$\alpha(K)=3.0 \ 16; \ \alpha(L)=1.2 \ 10; \ \alpha(M)=0.23 \ 20; \ \alpha(N+)=0.04 \ 4 \ \alpha(N)=0.04 \ 4; \ \alpha(O)=0.00057 \ 22 \ \alpha; \ from intensity \ balance.$
87.38 19	0.85 12	2365.53	$(7/2^+, 9/2^+)$	2277.85	$(7/2^+, 9/2^+, 11/2^+)$			
119.1 12	2.0 8	1729.01	$(7/2^+, 9/2^+)$	1608.78	$(5/2^+, 7/2, 9/2^+)$			
128.90 25	2.54 18	260.38	$(7/2)^+$	131.18	7/2+	[M1+E2]	0.42 19	$\alpha(\text{K})=0.34 \ 14; \ \alpha(\text{L})=0.06 \ 4; \ \alpha(\text{M})=0.013 \ 8; \ \alpha(\text{N}+)=0.0022 \ 14 \ \alpha(\text{N})=0.0021 \ 13; \ \alpha(\text{O})=7.0 \times 10^{-5} \ 22$
131.47 12	100	131.18	7/2+	0.0	5/2+	M1	0.215	$\begin{array}{l} \alpha({\rm K})=0.18\ 3\ (1976{\rm NeZU}) \\ \alpha({\rm K})=0.18\ 3\ ;\ \alpha({\rm L})=0.0233\ 4;\ \alpha({\rm M})=0.00448\ 7; \\ \alpha({\rm N}+)=0.000843\ 12 \\ \alpha({\rm N})=0.000798\ 12;\ \alpha({\rm O})=4.56\times10^{-5}\ 7 \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $
140.09 12	0.43 17	1635.50	$(5/2^+)$	1495.24	$(7/2^+, 9/2^+)$			
^x 154.15 22	0.68 23							
^x 156.3 5	0.68 11							
163.0 4	0.12 4	766.49	$(5/2^+)$	604.39	$(7/2)^+$	[M1+E2]	0.19 8	$\alpha(K)=0.16\ 6;\ \alpha(L)=0.026\ 14;\ \alpha(M)=0.005\ 3;$ $\alpha(N+)=0.0009\ 5$
166.9 <i>3</i>	0.96 13	771.00	9/2+	604.39	(7/2)+	[M1]	0.1120	$\alpha(N)=0.00095; \alpha(O)=3.4\times10^{-9}9$ $\alpha(K)=0.0972 I5; \alpha(L)=0.01204 I8; \alpha(M)=0.00232 4;$ $\alpha(N+)=0.000436 7$ $\alpha(N)=0.000412 7$ (O) 2.27 10 ⁻⁵ 4
102 1 0	0.0.4	1570.22	$(0/2^{+})$	1296 60	(7/2+0/2+)			$\alpha(N)=0.000413$ /; $\alpha(O)=2.3/\times10^{-5}$ 4
192.1 9 196.25 7	0.9 <i>4</i> 14.3 6	196.17	$(5/2^+)$	0.0	(1/2, 3/2) $5/2^+$	M1	0.0724	α (K)exp=0.063 <i>15</i> (1976NeZU) α (K)=0.0629 <i>9</i> ; α (L)=0.00775 <i>11</i> ; α (M)=0.001490 <i>21</i> ; α (N+)=0.000281 <i>4</i>
								α (N)=0.000266 4; α (O)=1.530×10 ⁻⁵ 22
204.3 6	0.54 25	1386.69	$(7/2^+, 9/2^+)$	1182.49	$(3/2^+ \text{ to } 9/2^+)$			
213.0 3	0.20 5	1327.97	$(5/2^+)$	1114.84	$(9/2^+)$	[E2]	0.1035	$\alpha(K)=0.0861 \ 13; \ \alpha(L)=0.01416 \ 22; \ \alpha(M)=0.00276 \ 5; \ \alpha(N+)=0.000492 \ 8$
227 81 20	204	832 52	0/2+	604 30	$(7/2)^+$	(M1)	0.0487	$\alpha(N)=0.000474 \ 8; \ \alpha(O)=1.79\times10^{-5} \ 3$ $\alpha(K)=0.0423 \ 6; \ \alpha(L)=0.00520 \ 8; \ \alpha(M)=0.000008 \ 15;$
227.01 20	2.0 4	032.32	7/2	004.39	(1/2)	(1411)	0.040/	$\alpha(N_{-}-0.04250, \alpha(N_{-}-0.005200, \alpha(N_{-}-0.00099815; \alpha(N_{-}-0.0001883) - \alpha(N_{-}-0.0001782, \alpha(N_{-}-1.020) \times 10^{-5} J_{5}$
220.2.0	172	1625 52	$(7/2^{+} 0/2^{+})$	1286 60	$(7/2^+ 0/2^+)$			$\alpha(1)=0.0001783; \alpha(0)=1.029\times10^{-1}13$
230.30	0.41.6	1822.52	(1/2, 3/2) (7/2+0/2+11/2+)	1500.09	(1/2, 3/2) $(0/2^+)$			
243.03	0.410	1622.70	(1/2, 3/2, 11/2) $(5/2^+)$	1386.60	$(7/2^+)$ $(7/2^+)/(2^+)$			

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				105 In ε de	ecay (5.07 min)	1984Ve01,	1989Bu29 (co	ntinued)		
γ ⁽¹⁰⁵ Cd) (continued)										
E _γ ‡	I_{γ} ^{‡&}	E _i (level)	${ m J}^{\pi}_i$	\mathbf{E}_{f}	\mathbf{J}_f^π	Mult. [#]	δ#	α^{\dagger}	Comments	
260.27 10	37.9 17	260.38	(7/2)+	0.0	5/2+	M1+E2	+0.07 9	0.0345 6	$\begin{array}{l} \alpha(\text{K}) \exp = 0.032 \ 6 \ (1976\text{NeZU}) \\ \alpha(\text{K}) = 0.0300 \ 5; \ \alpha(\text{L}) = 0.00367 \ 8; \\ \alpha(\text{M}) = 0.000704 \ 16; \ \alpha(\text{N}+) = 0.000133 \ 3 \\ \alpha(\text{N}) = 0.000126 \ 3; \ \alpha(\text{O}) = 7.26 \times 10^{-6} \ 11 \\ \delta; \ \text{from} \ 1980\text{Kr}^{22} \end{array}$	
277.75 20	0.7 3	2420.12	(7/2 ⁺ ,9/2 ⁺)	2142.77	(7/2 ⁺ ,9/2 ⁺)	[M1,E2]		0.035 7	$\alpha(K)=0.030 5; \alpha(L)=0.0042 12; \alpha(M)=0.00081 22; \alpha(N+)=0.00015 4 \alpha(N)=0.00014 4; \alpha(O)=6.9\times10^{-6} 8$	
280.85 14	1.4 3	1608.78	$(5/2^+, 7/2, 9/2^+)$	1327.97	$(5/2^+)$					
290.0 9 325.53 <i>13</i> 330.00 <i>23</i>	2.0 <i>15</i> 0.95 <i>17</i>	1729.01 1439.71 2060.01	$(1/2^+, 9/2^+)$ $(9/2^+)$ $(7/2^+, 9/2^+, 11/2^+)$	1439.71 1114.84 1720.01	$(9/2^+)$ $(9/2^+)$ $(7/2^+, 0/2^+)$				E_{γ} : No final level within 0.50 keV.	
344.4 7	1.6 6	1114.84	$(9/2^+)$ $(9/2^+)$	771.00	9/2 ⁺	[M1+E2]		0.0187 20	$\alpha(K)=0.0161 \ 16; \ \alpha(L)=0.0021 \ 4;$ $\alpha(M)=0.00041 \ 8; \ \alpha(N+)=7.6\times10^{-5} \ 12$	
392.21 <i>13</i>	0.90 7	1163.29	(11/2)-	771.00	9/2+	E1(+M2)	0.033 12	0.00390 7	$\begin{aligned} \alpha(N) &= 7.2 \times 10^{-5} \ I2; \ \alpha(O) &= 3.71 \times 10^{-6} \ 20 \\ \alpha &= 0.00390 \ 7; \ \alpha(K) &= 0.00341 \ 6; \\ \alpha(L) &= 0.000404 \ 8; \ \alpha(M) &= 7.72 \times 10^{-5} \ I4; \\ \alpha(N+) &= 1.45 \times 10^{-5} \ 3 \end{aligned}$	
416.44 25	0.58 8	1579.23	(9/2+)	1163.29	(11/2) ⁻	[E1]		0.00332 5	$\begin{aligned} &\alpha(\mathrm{N}) = 1.370 \times 10^{-5} \ 25; \ \alpha(\mathrm{O}) = 7.71 \times 10^{-7} \ 14 \\ &\alpha = 0.00332 \ 5; \ \alpha(\mathrm{K}) = 0.00290 \ 4; \\ &\alpha(\mathrm{L}) = 0.000343 \ 5; \ \alpha(\mathrm{M}) = 6.55 \times 10^{-5} \ 10; \\ &\alpha(\mathrm{N}+) = 1.228 \times 10^{-5} \ 18 \\ &\alpha(\mathrm{N}) = 1.162 \times 10^{-5} \ 17; \ \alpha(\mathrm{O}) = 6.57 \times 10^{-7} \ 10 \end{aligned}$	
451.7 <i>4</i> 473.09 <i>14</i>	0.23 7 1.95 <i>1</i> 7	2060.01 604.39	$(7/2^+, 9/2^+, 11/2^+)$ $(7/2)^+$	1608.78 131.18	(5/2 ⁺ ,7/2,9/2 ⁺) 7/2 ⁺	[M1+E2]		0.00772 15	α =0.00772 <i>15</i> ; α (K)=0.00668 <i>11</i> ; α (L)=0.00084 <i>5</i> ; α (M)=0.000162 <i>10</i> ; α (N+)=3.02×10 ⁻⁵ <i>15</i>	
496.0 6	0.37 23	1327.97	(5/2+)	832.52	9/2+	[E2]		0.00681 10	$\begin{array}{l} \alpha(\mathrm{N}) = 2.87 \times 10^{-5} \ 15; \ \alpha(\mathrm{O}) = 1.56 \times 10^{-6} \ 5\\ \alpha = 0.00681 \ 10; \ \alpha(\mathrm{K}) = 0.00587 \ 9;\\ \alpha(\mathrm{L}) = 0.000770 \ 12; \ \alpha(\mathrm{M}) = 0.0001483 \ 22;\\ \alpha(\mathrm{N} +) = 2.74 \times 10^{-5} \ 4 \end{array}$	
510.67 <i>17</i>	8 4	771.00	9/2+	260.38	(7/2)+	M1		0.00633 9	$\alpha(N)=2.61\times10^{-5} 4; \ \alpha(O)=1.333\times10^{-6} 20 \\ \alpha=0.00633 9; \ \alpha(K)=0.00552 8; \\ \alpha(L)=0.000660 \ 10; \ \alpha(M)=0.0001264 \ 18; \\ \alpha(N+)=2.39\times10^{-5} 4$	
535.42 14	0.70 <i>16</i>	1139.59	(7/2+)	604.39	(7/2)+	[M1+E2]		0.00556 12	$\begin{aligned} &\alpha(N) = 2.26 \times 10^{-5} \ 4; \ \alpha(O) = 1.326 \times 10^{-6} \ 19 \\ I_{\gamma}: \ from \ I_{\gamma}/I_{\gamma}(639.74) = 0.67 \ 34 \ from \\ &1978Ge05 \ in \ (\alpha, 3n\gamma). \\ &\alpha = 0.00556 \ 12; \ \alpha(K) = 0.00483 \ 12; \\ &\alpha(L) = 0.000600 \ 15; \ \alpha(M) = 0.000115 \ 3; \\ &\alpha(N+) = 2.16 \times 10^{-5} \ 4 \\ &\alpha(N) = 2.04 \times 10^{-5} \ 5; \ \alpha(O) = 1.13 \times 10^{-6} \ 6 \end{aligned}$	

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 $^{105}_{48}\mathrm{Cd}_{57}$ -5

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				105 In ε de	cay (5.07 mir	n) 1984V e	01,1989Bı	129 (continued	<u>)</u>	
$\gamma(^{105}\text{Cd})$ (continued)										
E_{γ}^{\ddagger}	Ι _γ ‡&	E _i (level)	J_i^π	E_{f}	J_f^π	Mult. [#]	$\delta^{\#}$	α^{\dagger}	Comments	
554.5 5	1.0 5	1386.69	$(7/2^+, 9/2^+)$	832.52	9/2+					
570.40 16	4.0 7	766.49	$(5/2^+)$	196.17	$(5/2^+)$	(E2)		0.00460 7	$\alpha = 0.00460 \ 7; \ \alpha(K) = 0.00397 \ 6; \ \alpha(L) = 0.000509 \ 8; \alpha(M) = 9.80 \times 10^{-5} \ 14; \ \alpha(N+) = 1.82 \times 10^{-5} \ 3 \alpha(N) = 1.729 \times 10^{-5} \ 25; \ \alpha(O) = 9.09 \times 10^{-7} \ 13$	
604.12 <i>16</i>	22.3 12	604.39	(7/2)+	0.0	5/2+	M1+E2	-0.9 5	0.00410 11	$\begin{array}{l} \alpha(\mathrm{K}) = 1.123, \mathrm{R}(\mathrm{G}) = 2.5, \mathrm{R}(\mathrm$	
607.8 4	1.6 15	1439.71	$(9/2^+)$	832.52	9/2+					
620.03 18	0.53 8	1386.69	$(7/2^+, 9/2^+)$	766.49	$(5/2^+)$ $7/2^+$	[M1 + E2]		0.00350.17	$\alpha = 0.00350$ 17: $\alpha(K) = 0.00313$ 16: $\alpha(L) = 0.000382$	
055.44 17	1.10 21	700.49	(3/2)	131.18	112	[1011+1:2]		0.00559 17	a = 0.00339 T/, a(R) = 0.00313 T0, a(L) = 0.000382 $9; a(M) = 7.34 \times 10^{-5} I6; a(N+) = 1.38 \times 10^{-5} 4$ $a(N) = 1.30 \times 10^{-5} 4; a(O) = 7.3 \times 10^{-7} 6$ E : from level energy differences	
636.1 4	0.5 4	832.52	9/2+	196.17	(5/2+)	[E2]		0.00343 5	α =0.00343 5; α (K)=0.00297 5; α (L)=0.000375 6; α (M)=7.20×10 ⁻⁵ 11; α (N+)=1.341×10 ⁻⁵ 19 α (N)=1.273×10 ⁻⁵ 18; α (O)=6.82×10 ⁻⁷ 10 E ₂ : from level energy differences.	
637.5 <i>6</i> 639.74 <i>13</i>	0.9 8 13.1 <i>11</i>	2365.53 771.00	(7/2 ⁺ ,9/2 ⁺) 9/2 ⁺	1729.01 131.18	(7/2 ⁺ ,9/2 ⁺) 7/2 ⁺	M1+E2	-4.3 6	0.00339 5	E _γ : from level energy differences. α =0.00339 5; α (K)=0.00294 5; α (L)=0.000370 6; α (M)=7.10×10 ⁻⁵ 10; α (N+)=1.324×10 ⁻⁵ 19 α (N)=1.256×10 ⁻⁵ 18; α (O)=6.78×10 ⁻⁷ 10	
642.40 25	3.9 8	2371.90	$(7/2^+, 9/2^+)$	1729.01	$(7/2^+, 9/2^+)$					
662.49 <i>12</i> 668.30 <i>14</i>	1.33 10 19.0 9	1495.24 799.79	(//2 ⁺ ,9/2 ⁺) 11/2 ⁺	832.52 131.18	9/2* 7/2 ⁺	E2		0.00317 17	α =0.00317 <i>17</i> ; α (K)=0.00276 <i>16</i> ; α (L)=0.000336 <i>11</i> ; α (M)=6.45×10 ⁻⁵ <i>19</i> ; α (N+)=1.21×10 ⁻⁵ <i>5</i> α (N)=1.15×10 ⁻⁵ <i>4</i> ; α (O)=6.5×10 ⁻⁷ <i>5</i>	
673.4 4	4.2 9	1439.71	$(9/2^+)$	766.49	(5/2 ⁺)					
701.26 14	2.75 17	832.52	9/2+	131.18	7/2+	M1+E2	2.0 4	0.00272 5	$\alpha = 0.00272 \ 5; \ \alpha(K) = 0.00237 \ 4; \ \alpha(L) = 0.000292 \ 5; \alpha(M) = 5.60 \times 10^{-5} \ 9; \ \alpha(N+) = 1.049 \times 10^{-5} \ 17 \alpha(N) = 9.94 \times 10^{-6} \ 16; \ \alpha(O) = 5.51 \times 10^{-7} \ 11$	
707.6 5 725.3 9	0.6 <i>3</i> 0.7 <i>3</i>	1822.78 1327.97	$(7/2^+, 9/2^+, 11/2^+)$ $(5/2^+)$	1114.84 604.39	$(9/2^+)$ $(7/2)^+$	[M1+E2]		0.00260 17	<i>α</i> =0.00260 <i>17</i> ; <i>α</i> (K)=0.00226 <i>15</i> ; <i>α</i> (L)=0.000274	
			/						<i>12</i> ; α (M)=5.25×10 ⁻⁵ 22; α (N+)=9.9×10 ⁻⁶ 5 α (N)=9.3×10 ⁻⁶ 5: α (Q)=5.3×10 ⁻⁷ 5	
730.04 <i>24</i> 754.5 <i>4</i>	0.78 <i>12</i> 1.2 5	2365.53 2142.77	$(7/2^+, 9/2^+)$ $(7/2^+, 9/2^+)$	1635.50 1386.69	$(5/2^+)$ $(7/2^+, 9/2^+)$				<i>a</i> (1)-7.5×10 5, <i>a</i> (0)-5.5×10 5	
766.85 18	2.7 8	766.49	(5/2 ⁺)	0.0	5/2+	[M1+E2]		0.00227 16	α =0.00227 <i>16</i> ; α (K)=0.00198 <i>14</i> ; α (L)=0.000239 <i>12</i> ; α (M)=4.58×10 ⁻⁵ <i>22</i> ; α (N+)=8.6×10 ⁻⁶ <i>5</i> α (N)=8.2×10 ⁻⁶ 5; α (Q)=4.7×10 ⁻⁷ 4	
			0.10+		1				$u(1) = 0.2 \times 10$ J, $u(0) = 4.7 \times 10$ 4	

6

L

			105	⁾⁵ In ε decay (5.07 min)		1984Ve01,1989Bu29 (continued)				
					γ (¹⁰⁵ C	d) (continued	<u>1)</u>			
E_{γ}^{\ddagger}	I_{γ} ‡&	E _i (level)	J_i^π	\mathbf{E}_{f}	\mathbf{J}_f^{π}	Mult. [#]	α^{\dagger}	Comments		
					<u>`</u>			$\alpha(M)=4.32\times10^{-5}$ 6; $\alpha(N+)=8.08\times10^{-6}$ 12		
								$\alpha(N) = 7.65 \times 10^{-6} \ 11; \ \alpha(O) = 4.22 \times 10^{-7} \ 6$		
782.0 4	1.9 3	1386.69	$(7/2^+, 9/2^+)$	604.39	$(7/2)^+$					
792.844 24	0.9^{4} 3	1625.52	$(7/2^+, 9/2^+)$	832.52	$9/2^+$					
792.84 ^{cr} 24	0.94 3	23/1.90	$(1/2^+, 9/2^+)$	1579.23	(9/2+)					
792.84 ^{<i>ab</i>} 24	$0.9^{\prime\prime}$ 3	3165.42	$(7/2^+, 9/2^+)$	2371.90	$(7/2^+, 9/2^+)$					
/99./3 14	1.48 11	3165.42	$(1/2^+, 9/2^+)$	2305.53	$(1/2^{+},9/2^{+})$	[M1 + E2]	0.00201.15	a=0.00201 15: $a(K)=0.00175$ 12: $a(L)=0.000211$ 12:		
808.10 12	2.11 15	1379.23	(9/2)	//1.00	9/2	[IVI1+E2]	0.00201 13	$a = 0.00201 \ 15; \ a(\mathbf{K}) = 0.00175 \ 15; \ a(\mathbf{L}) = 0.000211 \ 12; \\a(\mathbf{M}) = 4.03 \times 10^{-5} \ 22; \ a(\mathbf{N}+) = 7.6 \times 10^{-6} \ 5 \\a(\mathbf{N}) = 7.2 \times 10^{-6} \ 4; \ a(\mathbf{O}) = 4.1 \times 10^{-7} \ 4$		
823 6 3	0469	2552.46	$(7/2^+ 9/2^+ 11/2^+)$	1729.01	$(7/2^+ 9/2^+)$			$u(1) = 1.2 \times 10^{-4}, u(0) = 4.1 \times 10^{-4}$		
832.58 18	17.7 12	832.52	9/2 ⁺	0.0	5/2 ⁺	E2	0.001741 25	α =0.001741 25; α (K)=0.001514 22; α (L)=0.000185		
								3; $\alpha(M)=3.55\times10^{-5}$ 5; $\alpha(N+)=6.66\times10^{-6}$ 10		
								$\alpha(N) = 6.31 \times 10^{-6} 9; \alpha(O) = 3.52 \times 10^{-7} 5$		
834.6 5	0.69 20	1439.71	$(9/2^+)$	604.39	$(7/2)^+$					
838.1 5	1.5 6	1608.78	$(5/2^+, 7/2, 9/2^+)$	771.00	9/2+					
841.6 4	0.48 14	1608.78	$(5/2^+, 7/2, 9/2^+)$	766.49	$(5/2^+)$					
854.68 14	3.23 22	1114.84	(9/2+)	260.38	$(7/2)^+$	(M1+E2)	0.00176 13	$\alpha = 0.00176 \ 13; \ \alpha(\text{K}) = 0.00154 \ 12; \ \alpha(\text{L}) = 0.000184 \ 11; \\ \alpha(\text{M}) = 3.53 \times 10^{-5} \ 21; \ \alpha(\text{N}+) = 6.6 \times 10^{-6} \ 5 \\ \alpha(\text{N}) = 6.3 \times 10^{-6} \ 4; \ \alpha(\text{O}) = 3.6 \times 10^{-7} \ 4$		
^x 866.87 14	1.1 3									
^x 875.6 3	2.34 21									
879.8 <i>5</i>	0.38 13	1139.59	(7/2+)	260.38	(7/2)+	[M1+E2]	0.00165 13	α =0.00165 <i>13</i> ; α (K)=0.00144 <i>11</i> ; α (L)=0.000172 <i>11</i> ; α (M)=3.30×10 ⁻⁵ <i>20</i> ; α (N+)=6.2×10 ⁻⁶ <i>4</i> α (N)=5.9×10 ⁻⁶ <i>4</i> ; α (O)=3.4×10 ⁻⁷ <i>3</i>		
890.7 <i>3</i>	2.31 20	1495.24	$(7/2^+, 9/2^+)$	604.39	$(7/2)^+$					
896.4	2.7 16	1729.01	(7/2+,9/2+)	832.52	9/2+	(E2)	0.001463 21	α =0.001463 21; α (K)=0.001273 18; α (L)=0.0001547 22; α (M)=2.97×10 ⁻⁵ 5; α (N+)=5.56×10 ⁻⁶ α (N)=5.27×10 ⁻⁶ 8; α (O)=2.96×10 ⁻⁷ 5		
^x 911.4 4	1.4 3									
943.5 4	1.78 <i>16</i>	1139.59	(7/2+)	196.17	(5/2+)	[M1+E2]	0.00141 11	$\alpha = 0.00141 \ 11; \ \alpha(K) = 0.00123 \ 10; \ \alpha(L) = 0.000146 \ 10; \alpha(M) = 2.80 \times 10^{-5} \ 18; \ \alpha(N+) = 5.3 \times 10^{-6} \ 4 \alpha(N) = 5.0 \times 10^{-6} \ 4; \ \alpha(O) = 2.9 \times 10^{-7} \ 3$		
960.9 6	0.6 5	1729.01	$(7/2^+, 9/2^+)$	766.49	$(5/2^+)$					
966.3 4	0.92 18	3337.8	$(7/2^+, 9/2^+, 11/2^+)$	2371.90	$(7/2^+, 9/2^+)$					
^x 977.03 17	1.07 13									
983.85 17	0.77 17	1114.84	(9/2+)	131.18	7/2+	[M1+E2]	0.00128 10	$\alpha = 0.00128 \ 10; \ \alpha(\text{K}) = 0.00112 \ 9; \ \alpha(\text{L}) = 0.000133 \ 9; \alpha(\text{M}) = 2.54 \times 10^{-5} \ 17; \ \alpha(\text{N}+) = 4.8 \times 10^{-6} \ 4 \alpha(\text{N}) = 4.5 \times 10^{-6} \ 4; \ \alpha(\text{O}) = 2.64 \times 10^{-7} \ 24$		
^x 994.8 4	0.31 9									
1004.41 17	0.86 9	1608.78	$(5/2^+, 7/2, 9/2^+)$	604.39	$(7/2)^+$					
1033.04 21	0.88 17	1163.29	$(11/2)^{-}$	131.18	7/2+	[M2]	0.00297 5	α =0.00297 5; α (K)=0.00259 4; α (L)=0.000314 5;		

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From ENSDF

 $^{105}_{48}\mathrm{Cd}_{57}$ -7

	105 In ε decay (5.07 min) 1984Ve01,1989Bu29 (continued)											
					γ ⁽¹⁰⁵ Cd) (continued)						
E_{γ}^{\ddagger}	I_{γ} [‡] &	E _i (level)	J_i^π	\mathbf{E}_{f}	\mathbf{J}_f^{π}	Mult. [#]	α^{\dagger}	Comments				
1040.7 3	1.20 17	2677.27	$(7/2^+, 9/2^+)$	1635.50	(5/2 ⁺)			α (M)=6.04×10 ⁻⁵ 9; α (N+)=1.142×10 ⁻⁵ 16 α (N)=1.079×10 ⁻⁵ 16; α (O)=6.33×10 ⁻⁷ 9 E _{γ} : No final level within 0.75 keV.				
1051.41 20 1057.07 14 1068.2 3 1095.36 11 1098.33 23	1.18 <i>12</i> 1.18 <i>12</i> 1.03 <i>20</i> 1.3 <i>3</i> 0.92 <i>10</i>	1182.49 1822.78 2677.27 2277.85 2677.27	$(3/2^+ \text{ to } 9/2^+)$ $(7/2^+, 9/2^+, 11/2^+)$ $(7/2^+, 9/2^+)$ $(7/2^+, 9/2^+, 11/2^+)$ $(7/2^+, 9/2^+)$	131.18 766.49 1608.78 1182.49 1579.23	$\begin{array}{l} 7/2^{+} \\ (5/2^{+}) \\ (5/2^{+}, 7/2, 9/2^{+}) \\ (3/2^{+} \text{ to } 9/2^{+}) \\ (9/2^{+}) \end{array}$			E_{γ} : No final level within 0.55 keV.				
1115.2 3	1.92 17	1114.84	(9/2+)	0.0	5/2+	[E2]	0.000899 <i>13</i>	$ \begin{array}{l} \alpha = 0.000899 \ 13; \ \alpha(\mathrm{K}) = 0.000783 \ 11; \\ \alpha(\mathrm{L}) = 9.34 \times 10^{-5} \ 13; \ \alpha(\mathrm{M}) = 1.79 \times 10^{-5} \ 3; \\ \alpha(\mathrm{N}+) = 4.22 \times 10^{-6} \ 6 \\ \alpha(\mathrm{N}) = 3.18 \times 10^{-6} \ 5; \ \alpha(\mathrm{O}) = 1.83 \times 10^{-7} \ 3; \\ \alpha(\mathrm{IPF}) = 8.56 \times 10^{-7} \ 15 \end{array} $				
1123.7 11	0.43	1729.01	$(7/2^+, 9/2^+)$ $(7/2^+, 9/2^+)$	604.39	$(7/2)^+$ $(7/2)^+$							
1120.14 1139.06 <i>19</i>	3.5 6	1139.59	$(7/2^+, 9/2^-)$ $(7/2^+)$	0.0	(1/2) 5/2 ⁺	[M1+E2]	0.00093 8	α =0.00093 8; α (K)=0.00081 7; α (L)=9.6×10 ⁻⁵ 7; α (M)=1.83×10 ⁻⁵ 13; α (N+)=5.09×10 ⁻⁶ 13 α (N)=3.26×10 ⁻⁶ 23; α (O)=1.91×10 ⁻⁷ 17; α (IPF)=1.63×10 ⁻⁶ 14				
1161.0 <i>4</i> 1176.9 <i>4</i> 1182.3 <i>3</i> 1190 34 <i>1</i> 5	1.3 5 0.51 <i>12</i> 1.78 <i>23</i> 3 6 <i>4</i>	2277.85 1439.71 1182.49 1386.69	$(7/2^+, 9/2^+, 11/2^+)$ $(9/2^+)$ $(3/2^+ \text{ to } 9/2^+)$ $(7/2^+ 9/2^+)$	1114.84 260.38 0.0 196.17	$(9/2^+)$ $(7/2)^+$ $5/2^+$ $(5/2^+)$			E_{γ} : No final level within 1.6 keV. E_{γ} : No final level within 1.7 keV.				
1216.30 <i>23</i> 1237.91 <i>11</i>	0.68 <i>10</i> 2.3 <i>3</i>	1822.78 2677.27	$(7/2^+, 9/2^+)$ $(7/2^+, 9/2^+, 11/2^+)$ $(7/2^+, 9/2^+)$	604.39 1439.71	$(7/2)^+$ $(9/2^+)$			E_{γ} : No final level within 1.0 keV.				
1244.12 2 1255.64 16 1299.6 3 1308.72 22 1348.49 20 1379.1 4 1386.98 24 1477.0 4 1494.45 21 1507.7 4 1538.55 15 1589.9 3 1608.8 3 1608.8 3 1625.8 6 1674.6 3 * 1698.4 4	$\begin{array}{c} 0.4 \ 2 \\ 4.2 \ 7 \\ 0.34 \ 9 \\ 1.79 \ 14 \\ 2.4 \ 3 \\ 0.74 \ 19 \\ 8.4 \ 9 \\ 0.86 \ 12 \\ 1.5 \ 4 \\ 0.7 \ 3 \\ 1.7 \ 3 \\ 0.4 \ 2 \\ 0.75 \ 11 \\ 0.79 \ 24 \\ 0.56 \ 16 \\ 0.9 \ 4 \end{array}$	2853.56 1386.69 1495.24 1439.71 1608.78 3202.97 1386.69 1608.78 1625.52 2307.96 2142.77 2193.70 1608.78 1625.52 2277.85	$\begin{array}{c} (1/2^+, 9/2^+) \\ (7/2^+, 9/2^+) \\ (7/2^+, 9/2^+) \\ (9/2^+) \\ (5/2^+, 7/2, 9/2^+) \\ (7/2^+, 9/2^+) \\ (7/2^+, 9/2^+) \\ (7/2^+, 9/2^+) \\ (7/2^+, 9/2^+) \\ (7/2^+, 9/2^+) \\ (7/2^+, 9/2^+) \\ (5/2^+, 7/2, 9/2^+) \\ (7/2^+, 9/2^+) \\ (7/2^+, 9/2^+) \\ (7/2^+, 9/2^+) \\ (7/2^+, 9/2^+) \\ (7/2^+, 9/2^+) \\ (7/2^+, 9/2^+) \\ (7/2^+, 9/2^+, 11/2^+) \end{array}$	1608.78 131.18 196.17 131.18 260.38 1822.78 0.0 131.18 131.18 799.79 604.39 604.39 0.0 0.0 604.39	$(5/2^{+}, 7/2, 9/2^{+})$ $7/2^{+}$ $(5/2^{+})$ $7/2^{+}$ $(7/2)^{+}$ $(7/2^{+}, 9/2^{+}, 11/2^{+})$ $5/2^{+}$ $7/2^{+}$ $11/2^{+}$ $(7/2)^{+}$ $(7/2)^{+}$ $5/2^{+}$ $5/2^{+}$ $5/2^{+}$ $(7/2)^{+}$							

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From ENSDF

 $^{105}_{48}\mathrm{Cd}_{57}\text{-}8$

L

			105	In ε decay	(5.07 min)	1984Ve01,1	989Bu29 (conti	nued)				
γ ⁽¹⁰⁵ Cd) (continued)												
${\rm E_{\gamma}}^{\ddagger}$	Ι _γ ‡&	E _i (level)	\mathbf{J}^{π}_i	E_f	\mathbf{J}_{f}^{π}	Mult. [#]	α^{\dagger}	Comments				
1761.3 <i>4</i> ^x 1770.3 <i>5</i>	0.93 <i>11</i> 0.92 <i>16</i>	2365.53	(7/2 ⁺ ,9/2 ⁺)	604.39	$(7/2)^+$							
1779.4 <i>3</i>	1.77 24	3165.42	$(7/2^+, 9/2^+)$	1386.69	$(7/2^+, 9/2^+)$							
1799.3 7	0.52 21	2060.01	$(7/2^+, 9/2^+, 11/2^+)$	260.38	$(7/2)^+$							
1876.99 <i>19</i>	2.3 3	2677.27	$(7/2^+, 9/2^+)$	799.79	$11/2^{+}$							
1883.0 <i>3</i>	1.9 5	2142.77	$(7/2^+, 9/2^+)$	260.38	$(7/2)^+$							
1906.3 8	0.98 19	2677.27	$(7/2^+, 9/2^+)$	771.00	9/2+							
1910.4 4	1.07 17	2677.27	$(7/2^+, 9/2^+)$	766.49	$(5/2^+)$							
1928.5 8	0.24 10	2060.01	$(7/2^+, 9/2^+, 11/2^+)$	131.18	7/2+							
1947.9 3	0.60 9	2552.46	$(1/2^+, 9/2^+, 11/2^+)$	604.39	$(1/2)^{+}$							
×1990.20 21	0.70 11											
2012 4 4	0.90 20	2142 77	(7/2+0/2+)	121 19	7/2+							
2012.4 4	0.80 23	2142.77	(1/2, 9/2) (7/2+9/2+11/2+)	260.38	$(7/2)^+$			E : No final level within 1.3 keV				
2010.0 4	0.39 14	3202.97	(1/2, 3/2, 11/2) $(9/2^+)$	1163.29	$(11/2)^{-}$	[F1]	0 000780 11	$\alpha = 0.000780 \ 11: \ \alpha(K) = 0.0001260 \ 18:$				
2010.10 20	0.07 11	5262.77	(7)~)	1105.27	(11/2)	[21]	0.000700 11	$\begin{array}{l} \alpha (\text{L})=1.435\times 10^{-5} \ 20; \ \alpha(\text{M})=2.73\times 10^{-6} \ 4; \\ \alpha(\text{N}+)=0.000636 \\ \alpha(\text{N})=4.89\times 10^{-7} \ 7; \ \alpha(\text{O})=2.91\times 10^{-8} \ 4; \\ \end{array}$				
2047 72 24	205	2207.06	$(7/2^{+} 0/2^{+} 11/2^{+})$	260.20	$(7/2)^{+}$			$\alpha(\text{IPF})=0.0006369$				
2047.72.24	2.0 3	2507.90	(1/2, 9/2, 11/2)	200.58	(7/2)							
2063.4 0 8	2.2.4	2193.70	$(1/2^+, 9/2^+)$	131.18	$1/2^{+}$							
2072.4 3	$0.00\ 13$	2077.27	$(1/2^+, 9/2^+)$	004.39	$(1/2)^{+}$							
2103.4 4	$0.74\ 21$ 1 20 13	2303.33	(1/2, 9/2) (7/2+9/2+)	200.58	(1/2) $(5/2^+)$							
2170.55	1.20 15	2371.90	(7/2, 9/2)	190.17	(3/2)							
2193.4 - 2	0.84	2193.70	$(1/2^+, 9/2^+)$	0.0	$5/2^{+}$							
2223.2 4	1.10 15	2420.12	$(7/2^+, 9/2^+)$	190.17	$(3/2^{+})$							
x2240.8 4	0.80 25	2371.90	(1/2 ,9/2)	131.10	1/2							
2364.3.5	0.40 16	2365.53	$(7/2^+, 9/2^+)$	0.0	$5/2^{+}$							
$2371 0^{ab} 5$	1.16^{a} 13	2371.00	$(7/2^+, 9/2^+)$	0.0	5/2 ⁺							
2371.0 5	1.10 13	2371.90	(1/2, 3/2)	0.0	3/2		0.000/07.10	$0.000(96, 10, (K), 0.000107, (-(L), 0.15, 10^{-5}, 7)$				
2371.048 5	1.16" 13	3202.97	(9/2*)	832.52	9/2*	[M1+E2]	0.000686 10	$\begin{aligned} \alpha &= 0.000686 \ I0; \ \alpha(\text{K}) = 0.0001876; \ \alpha(\text{L}) = 2.15 \times 10^{-77}; \\ \alpha(\text{M}) = 4.11 \times 10^{-6} \ I3; \ \alpha(\text{N}+) = 0.000473 \ I1 \\ \alpha(\text{N}) = 7.35 \times 10^{-7} \ 23; \ \alpha(\text{O}) = 4.40 \times 10^{-8} \ I6; \\ \alpha(\text{IPF}) = 0.000472 \ I1 \end{aligned}$				
2419.2 4	0.44 17	2420.12	$(7/2^+, 9/2^+)$	0.0	$5/2^{+}$							
2421.3 20	0.39 18	2552.46	$(7/2^+, 9/2^+, 11/2^+)$	131.18	7/2+							
^x 2523.9 5	0.70 20											
^x 2551.0 7	0.67 14											
2596.7 5	0.28 14	3202.97	(9/2 ⁺)	604.39	(7/2)+	[M1+E2]	0.000760 12	$\begin{aligned} &\alpha = 0.000760 \ 12; \ \alpha(\text{K}) = 0.000158 \ 4; \ \alpha(\text{L}) = 1.82 \times 10^{-5} \ 5; \\ &\alpha(\text{M}) = 3.47 \times 10^{-6} \ 9; \ \alpha(\text{N}+) = 0.000580 \ 12 \\ &\alpha(\text{N}) = 6.21 \times 10^{-7} \ 16; \ \alpha(\text{O}) = 3.72 \times 10^{-8} \ 11; \\ &\alpha(\text{IPF}) = 0.000579 \ 12 \\ &\text{E}_{\gamma}: \text{ No final level within } 1.7 \text{ keV.} \end{aligned}$				

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¹⁰⁵In ε decay (5.07 min) **1984Ve01,1989Bu29** (continued)

$\gamma(^{105}Cd)$ (continued)

${\rm E}_{\gamma}^{\ddagger}$	Ι _γ ‡&	E_i (level)	\mathbf{J}_i^{π}	\mathbf{E}_{f}	\mathbf{J}_{f}^{π}	Mult. [#]	α^{\dagger}	Comments			
^x 2721.7 6	0.9 3										
2722.3 [@] 2	1.8 3	2853.56	$(7/2^+, 9/2^+)$	131.18	$7/2^{+}$						
2854.1 [@] 8	0.7 2	2853.56	$(7/2^+, 9/2^+)$	0.0	$5/2^{+}$						
2942.1 7	0.12 6	3202.97	(9/2+)	260.38	(7/2)+	[M1+E2]	0.000881 14	$\alpha = 0.000881 \ 14; \ \alpha(K) = 0.0001265 \ 21; \ \alpha(L) = 1.449 \times 10^{-5} \ 25; \ \alpha(M) = 2.77 \times 10^{-6} \ 5; \ \alpha(N+) = 0.000737 \ \alpha(N) = 4.95 \times 10^{-7} \ 0; \ \alpha(Q) = 2.07 \times 10^{-8} \ 6; \ \alpha(DE) = 0.000737 \ 12$			
3072.8 4	0.72 23	3202.97	(9/2+)	131.18	7/2+	[M1+E2]	0.000927 14	$\begin{array}{l} \alpha(N)=4.93\times10^{-9}, \ \alpha(O)=2.97\times10^{-0}, \ \alpha(IFF)=0.00073772\\ \alpha=0.000927 \ 14; \ \alpha(K)=0.0001171 \ 18; \ \alpha(L)=1.341\times10^{-5} \ 21;\\ \alpha(M)=2.56\times10^{-6} \ 4; \ \alpha(N+)=0.000794\\ \alpha(N)=4.58\times10^{-7} \ 7; \ \alpha(O)=2.75\times10^{-8} \ 5; \ \alpha(IFF)=0.000794 \ 13 \end{array}$			
3076.5 <i>6</i> x3115.4 <i>10</i>	0.35 <i>14</i> 0.59 9	3337.8	(7/2 ⁺ ,9/2 ⁺ ,11/2 ⁺)	260.38	$(7/2)^+$						
3206.3 9	1.3 3	3337.8	$(7/2^+, 9/2^+, 11/2^+)$	131.18	7/2+						
 [†] Additional information 1. [‡] From 1984Ve01. [#] From the adopted gammas. [@] Gammas reported by 1980Wi20 are not confirmed by 1984Ve01. ^{&} For absolute intensity per 100 decays, multiply by 0.413 5. ^a Multiply placed with undivided intensity. 											

^b Placement of transition in the level scheme is uncertain. ^x γ ray not placed in level scheme.

From ENSDF

¹⁰⁵In ε decay (5.07 min) 1984Ve01,1989Bu29



 $^{105}_{48}\text{Cd}_{57}$

¹⁰⁵In ε decay (5.07 min) 1984Ve01,1989Bu29



 $^{105}_{48}\mathrm{Cd}_{57}$

¹⁰⁵In ε decay (5.07 min) 1984Ve01,1989Bu29





 $^{105}_{48}\mathrm{Cd}_{57}$