^{124}Ag β^- decay 2005Ka45,2004KaZR

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. Katakura, Z. D. Wu	NDS 109, 1655 (2008)	1-Apr-2008

Parent: ^{124}Ag: E=0.0; J$^\pi$=≥2; $T_{1/2}$=0.172 s *5*; Q(β^-)=10240 *SY*; %β^- decay=100.0
Parent: ^{124}Ag: E=0.0+x; J$^\pi$=≥7; Q(β^-)=10240 *SY*; %β^- decay=100.0
The decay scheme is that proposed by 2005Ka45. 2004KaZR gives additional level scheme, but some of the transitions are inconsistent with those of 2005Ka45. The evaluators assume that the decay scheme in 2004KaZR is superseded by that in 2005Ka45. The authors suggested that the decay scheme is from combined decay of two isomers in ^{124}Ag.
2005Ka45,2004KaZR: U(p,spallation) E(p)=1 GeV, on-line ms; measured γ, γ-γ coin; directly populated ^{124}Cd levels by ^{238}U(α,Fγ) were also mentioned;
1996Ka40: U(p,spallation) E(p)=1 GeV, on-line ms, semi; measured γ.
1984Hi03: ^{235}U(n,F), on-line ms, semi; measured γ, $\gamma\gamma$ coin.

^{124}Cd Levels

E(level)†	J$^\pi$‡	$T_{1/2}$	E(level)†	J$^\pi$‡	E(level)†	J$^\pi$‡
0.0	0$^+$	1.25 s *2*	1915.3 *5*	(2$^+$,3$^+$,4$^+$)	2560.1 *6*	(5$^-$,6$^+$)
612.8 *4*	(2$^+$)		1924.5 *5*		2674.2 *8*	(8$^+$)
1385.1 *5*	(4$^+$)		1978.2 *4*	(1,2$^+$)	2681.8 *6*	(3$^-$,4,5,6$^+$)
1427.6 *4*	(2$^+$)		2139.8 *6*	(6$^+$)	2937.6 *10*	(10$^+$)
1845.9 *6*	(5$^-$)		2384.5 *6*	(7$^-$)		

† From a least-squares fit to Eγ′s.
‡ From Adopted Levels.

γ(^{124}Cd)

E$_\gamma$†	I$_\gamma$‡	E$_i$(level)	J$^\pi_i$	E$_f$	J$^\pi_f$	Comments
175.1	15 *4*	2560.1	(5$^-$,6$^+$)	2384.5	(7$^-$)	I$_\gamma$: 18 *5* for high-spin dominant decay.
244.4	6.5 *19*	2384.5	(7$^-$)	2139.8	(6$^+$)	I$_\gamma$: 7.9 *26* for high-spin dominant decay.
263.4	0.44 *15*	2937.6	(10$^+$)	2674.2	(8$^+$)	
^{x}296.8	0.63 *21*					
^{x}416.0	1.6 *5*					I$_\gamma$: 16 *6* for high-spin dominant decay.
460.8	39 *11*	1845.9	(5$^-$)	1385.1	(4$^+$)	I$_\gamma$: 39 *11* for high-spin dominant decay.
487.7	1.6 *5*	1915.3	(2$^+$,3$^+$,4$^+$)	1427.6	(2$^+$)	
496.7	1.8 *4*	1924.5		1427.6	(2$^+$)	
529.9	0.45 *15*	1915.3	(2$^+$,3$^+$,4$^+$)	1385.1	(4$^+$)	
534.4	5.1 *15*	2674.2	(8$^+$)	2139.8	(6$^+$)	I$_\gamma$: 10 *4* for high-spin dominant decay.
538.3	18 *5*	2384.5	(7$^-$)	1845.9	(5$^-$)	I$_\gamma$: 24 *7* for high-spin dominant decay.
^{x}581.8	0.84 *25*					
^{x}589.1	1.2 *4*					
592.9	0.33 *12*	1978.2	(1,2$^+$)	1385.1	(4$^+$)	
^{x}600.1	0.42 *16*					
^{x}607.0	0.31 *13*					
612.8	100.0	612.8	(2$^+$)	0.0	0$^+$	E$_\gamma$: other: 613.2 *2* (1984Hi03).
^{x}618.8	3.0 *9*					
^{x}636.8	0.34 *13*					
^{x}657.4	0.40 *14*					
714.5	0.35 *14*	2560.1	(5$^-$,6$^+$)	1845.9	(5$^-$)	
^{x}750.0	2.2 *6*					
754.4	16 *4*	2139.8	(6$^+$)	1385.1	(4$^+$)	I$_\gamma$: 18 *6* for high-spin dominant decay.
771.9	59 *17*	1385.1	(4$^+$)	612.8	(2$^+$)	I$_\gamma$: 65 *19* for high-spin dominant decay.
^{x}789.4	0.11 *10*					

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^{124}Ag β^- decay 2005Ka45,2004KaZR (continued)

γ(^{124}Cd) (continued)

E_γ †	I_γ ‡	E_i(level)	J^π_i	E_f	J^π_f	Comments
814.4	12 *3*	1427.6	(2+)	612.8	(2+)	I_γ: 9 *4* for high-spin dominant decay.
835.9	7.2 *20*	2681.8	(3−,4,5,6+)	1845.9	(5−)	I_γ: 6 *3* for high-spin dominant decay.
x855.3	1.6 *5*					
x877.1	0.9 *3*					
x925.3	0.78 *25*					
x948.6	0.52 *19*					
x1000.0	0.9 *3*					
x1009.1	0.28 *11*					
1175.2	0.26 *11*	2560.1	(5−,6+)	1385.1	(4+)	
x1193.4	0.45 *15*					
x1233.3	0.45 *16*					
x1238.2	0.17 *8*					
1296.7	0.9 *3*	2681.8	(3−,4,5,6+)	1385.1	(4+)	
1302.8	1.7 *5*	1915.3	(2+,3+,4+)	612.8	(2+)	
x1306.4	0.32 *12*					
1311.9	3.0 *9*	1924.5		612.8	(2+)	
x1317.8	0.20 *9*					
x1329.8	0.32 *12*					
1365.8	0.9 *3*	1978.2	(1,2+)	612.8	(2+)	
x1384.9	0.73 *23*					
x1399.4	1.0 *3*					
1427.9	2.3 *7*	1427.6	(2+)	0.0	0+	
x1475.0	0.18 *8*					
x1526.2	0.13 *7*					
x1568.0	0.17 *11*					
x1583.1	0.39 *13*					
x1587.7	0.25 *10*					
x1697.3	1.0 *3*					
x1729.1	1.7 *5*					
x1768.5	0.49 *16*					
x1816.8	0.15 *7*					
x1875.6	1.2 *4*					
x1905.7	0.54 *17*					
x1912.5	3.5 *10*					
x1963.3	1.8 *5*					
1977.9	0.54 *17*	1978.2	(1,2+)	0.0	0+	
x2036.8	0.37 *13*					
x2159.7	0.23 *9*					
x2175.6	0.20 *8*					
x2188.1	0.39 *14*					
x2227.1	0.49 *16*					
x2305.2	0.31 *11*					
x2334.4	0.44 *14*					
x2340.2	0.18 *8*					
x2393.6	0.31 *11*					
x2419.3	0.69 *21*					
x2433.8	0.27 *10*					
x2453.1	2.4 *7*					
x2467.9	0.29 *10*					
x2500.5	0.39 *13*					
x2514.6	0.66 *20*					
x2518.3	0.35 *12*					
x2526.0	0.49 *16*					
x2557.3	0.20 *8*					
x2562.3	0.31 *11*					
x2624.1	0.38 *13*					
x2827.8	0.20 *8*					

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^{124}Ag β^- decay 2005Ka45,2004KaZR (continued)

$\gamma(^{124}Cd)$ (continued)

E_γ †	I_γ ‡	E_i(level)	E_γ †	I_γ ‡	E_i(level)	E_γ †	I_γ ‡	E_i(level)
^{x}2889.7	0.33 *11*		^{x}3343.8	0.10 *7*		^{x}4121.3	0.35 *11*	
^{x}2931.1	0.24 *9*		^{x}3558.0	0.12 *5*		^{x}4186.9	0.04 *3*	
^{x}3018.5	0.36 *12*		^{x}3609.7	0.11 *5*		^{x}4234.8	0.05 *3*	
^{x}3098.8	0.13 *6*		^{x}3661.3	0.50 *15*		^{x}4278.1	0.07 *3*	
^{x}3121.0	0.08 *5*		^{x}3800.7	0.07 *4*		^{x}4345.6	0.24 *8*	
^{x}3141.6	0.08 *4*		^{x}3912.1	0.26 *9*		^{x}4609.9	0.61 *18*	
^{x}3234.2	0.18 *7*		^{x}3938.8	0.26 *9*				
^{x}3330.0	0.09 *5*		^{x}4098.9	0.16 *6*				

† From 2005Ka45, unless otherwise noted. Uncertainty of 0.5 keV is assumed by the evaluators.
‡ From 2005Ka45 and 2004KaZR. For low-spin states dominant decay.
^{x} γ ray not placed in level scheme.

^{124}Ag β^- decay 2005Ka45,2004KaZR