Adopted Levels, Gammas

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

Q(β^-)=7148 *21*; S(n)=5443 *14*; S(p)=10418 *8*; Q(α)=−6.27×10^3 *8* 2012Wa38
Note: Current evaluation has used the following Q record 7.06E3 105.47E3 1110400 syst-6500 syst 1993Au05.

^{118}Ag Levels

Cross Reference (XREF) Flags

A ^{118}Pd β^- decay
B ^{118}Ag IT decay (2.0 s)

E(level)†	J$^\pi$	T$_{1/2}$	XREF	Comments
0.0	1$^{(-)}$	3.76 s *15*	AB	%β^-=100 J$^\pi$: log *ft*=6.0-7.0 to 0$^+$ and 2$^+$; (E1) 379γ-(M1) 49.8γ- M1 45.8γ cascade relation from the 1$^+$ level allows π=−. T$_{1/2}$: from 1979HiZR. Others: ≈5 s (1967Fr16), 5.3 s *9* (1968We10), 5.6 s *2* (1969We11), 3.7 s *2* (1971Fo22), 4.00 s *4* (1974Gr29).
45.79 *9*	0$^{(-)}$ to 2$^{(-)}$	≈0.1 μs	A	J$^\pi$: (M1) γ from π=− level. T$_{1/2}$: from 1989Ko22.
95.61 *15*	(0$^-$,1$^-$,2$^-$)		A	J$^\pi$: (E1) γ from 1$^+$.
125.43 *15*	(0$^-$,1$^-$,2$^-$)		A	J$^\pi$: (E1) γ from 1$^+$.
127.63 *10*	4$^{(+)}$	2.0 s *2*	AB	%β^-=59; %IT=41 %IT: From ^{118}Ag IT decay (2.0 s). J$^\pi$: E3 γ to 1$^{(-)}$. T$_{1/2}$: from 1979HiZR. Others: 1.9 s *2* (1989Ko22), 2.8 s *3* (1971Fo22).
153.98 *20*			A	
250.90 *12*	0$^+$,1$^+$,2$^+$		A	J$^\pi$: M1 γ from 1$^+$.
279.37 *20*	(2$^+$,3$^+$)	≈0.1 μs	A	J$^\pi$: M1 γ from (0$^+$,1$^+$,2$^+$); γ to (4)$^+$. T$_{1/2}$: from 1989Ko22.
330.30? *25*			A	
370.8? *3*	(0$^+$,1$^+$,2$^+$)		A	J$^\pi$: (M1) γ from 1$^+$.
396.45 *18*	1$^+$		A	J$^\pi$: log *ft*=4.63 from 0$^+$.
475.08 *16*	1$^+$		A	J$^\pi$: log *ft*=4.28 from 0$^+$.
563.24 *23*	(0$^+$,1$^+$,2$^+$)		A	J$^\pi$: (M1) γ from 1$^+$.
641.82 *24*	1$^+$		A	J$^\pi$: log *ft*=4.77 from 0$^+$.
720.42 *24*	1$^+$		A	J$^\pi$: log *ft*=4.60 from 0$^+$.

† From ^{118}Pd β^- decay.

γ(^{118}Ag)

E$_i$(level)	J$^\pi_i$	E$_\gamma$†	I$_\gamma$	E$_f$	J$^\pi_f$	Mult.†	α‡	Comments
45.79	0$^{(-)}$ to 2$^{(-)}$	45.8 *1*	100	0.0	1$^{(-)}$	M1	4.02	α(K)=3.47; α(L)=0.436; α(M)=0.0827 B(M1)(W.u.)≈0.0005
95.61	(0$^-$,1$^-$,2$^-$)	49.8 *2*	100	45.79	0$^{(-)}$ to 2$^{(-)}$	(M1)	3.15	α(K)=2.72; α(L)=0.340; α(M)=0.0647
125.43	(0$^-$,1$^-$,2$^-$)	29.8 *2*	3.1 *6*	95.61	(0$^-$,1$^-$,2$^-$)	[M1]	14.2	α(K)=12.3; α(L)=1.55; α(M)=0.294
		125.4# *2*	100# *6*	0.0	1$^{(-)}$	[M1]	0.224	α(K)=0.195; α(L)=0.0240; α(M)=0.00456; α(N+..)=0.00092
127.63	4$^{(+)}$	127.6 *1*	100	0.0	1$^{(-)}$	E3	4.69	α(K)=2.80; α(L)=1.53; α(M)=0.307;

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

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

E_i(level)	J^π_i	E_γ†	I_γ	E_f	J^π_f	Mult.†	α‡	Comments
								α(N+..)=0.0553 B(E3)(W.u.)=0.101 *11*
153.98		28.4@		125.43	$(0^-,1^-,2^-)$			
		108.0 *3*		45.79	$0^{(-)}$ to $2^{(-)}$			
250.90	$0^+,1^+,2^+$	96.8 *3*	≈2	153.98				
		125.4# *3*	100# *4*	125.43	$(0^-,1^-,2^-)$	[E1]	0.084	α(K)=0.0731; α(L)=0.0088; α(M)=0.00165; α(N+..)=0.00032
		205.2 *2*	7.8 *20*	45.79	$0^{(-)}$ to $2^{(-)}$			
		251.0@ *2*	≈8.2	0.0	$1^{(-)}$			
279.37	$(2^+,3^+)$	151.6 *2*	100	127.63	$4^{(+)}$			
330.30?		51.0 *2*	100	279.37	$(2^+,3^+)$			
370.8?	$(0^+,1^+,2^+)$	91.4 *2*	100	279.37	$(2^+,3^+)$	(M1)	0.545	α(K)=0.473; α(L)=0.0587; α(M)=0.0111; α(N+..)=0.00223
396.45	1^+	145.6 *2*	100 *6*	250.90	$0^+,1^+,2^+$	M1	0.148	α(K)=0.129; α(L)=0.0158; α(M)=0.00301; α(N+..)=0.00061
		271.0# *3*	37# *4*	125.43	$(0^-,1^-,2^-)$	(E1)	0.0096	α(K)=0.0084; α(L)=0.00099; α(M)=0.00019
		300.8 *2*	29 *6*	95.61	$(0^-,1^-,2^-)$			
475.08	1^+	224.2 *2*	100 *6*	250.90	$0^+,1^+,2^+$	M1	0.0466	α(K)=0.0406; α(L)=0.00492; α(M)=0.00093; α(N+..)=0.00019
		321.0 *3*	15 *3*	153.98				
		349.6 *2*	42 *5*	125.43	$(0^-,1^-,2^-)$			
		379.5 *2*	73 *12*	95.61	$(0^-,1^-,2^-)$	(E1)	0.00397	α(K)=0.00348; α(L)=0.00041
		429.5 *4*	≈3.4	45.79	$0^{(-)}$ to $2^{(-)}$			
563.24	$(0^+,1^+,2^+)$	233.0 *2*	25 *8*	330.30?				
		283.7 *2*	100 *10*	279.37	$(2^+,3^+)$	M1	0.0252	α(K)=0.0219; α(L)=0.00264; α(M)=0.00050; α(N+..)=0.00010
641.82	1^+	78.5# *2*	100# *1*	563.24	$(0^+,1^+,2^+)$	(M1)	0.84	α(K)=0.729; α(L)=0.091; α(M)=0.0172; α(N+..)=0.00346
		271.0# *3*	65# *7*	370.8?	$(0^+,1^+,2^+)$	(M1)	0.0284	α(K)=0.0247; α(L)=0.00298; α(M)=0.00056; α(N+..)=0.00011
720.42	1^+	78.5# *2*	16# *1*	641.82	1^+	(M1)	0.84	α(K)=0.729; α(L)=0.091; α(M)=0.0172; α(N+..)=0.00346 α(K)exp=0.8 *2*.
		157.1 *3*	67 *20*	563.24	$(0^+,1^+,2^+)$	[M1]	0.121	α(K)=0.105; α(L)=0.0128; α(M)=0.00244; α(N+..)=0.00049
		469.6 *4*	100 *10*	250.90	$0^+,1^+,2^+$			E_γ: 468.8 *5* (1989Ko22).
		595.7 *5*	51 *20*	125.43	$(0^-,1^-,2^-)$			

† From ^{118}Pd β^- decay.
‡ 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.
# Multiply placed with intensity suitably divided.
@ Placement of transition in the level scheme is uncertain.

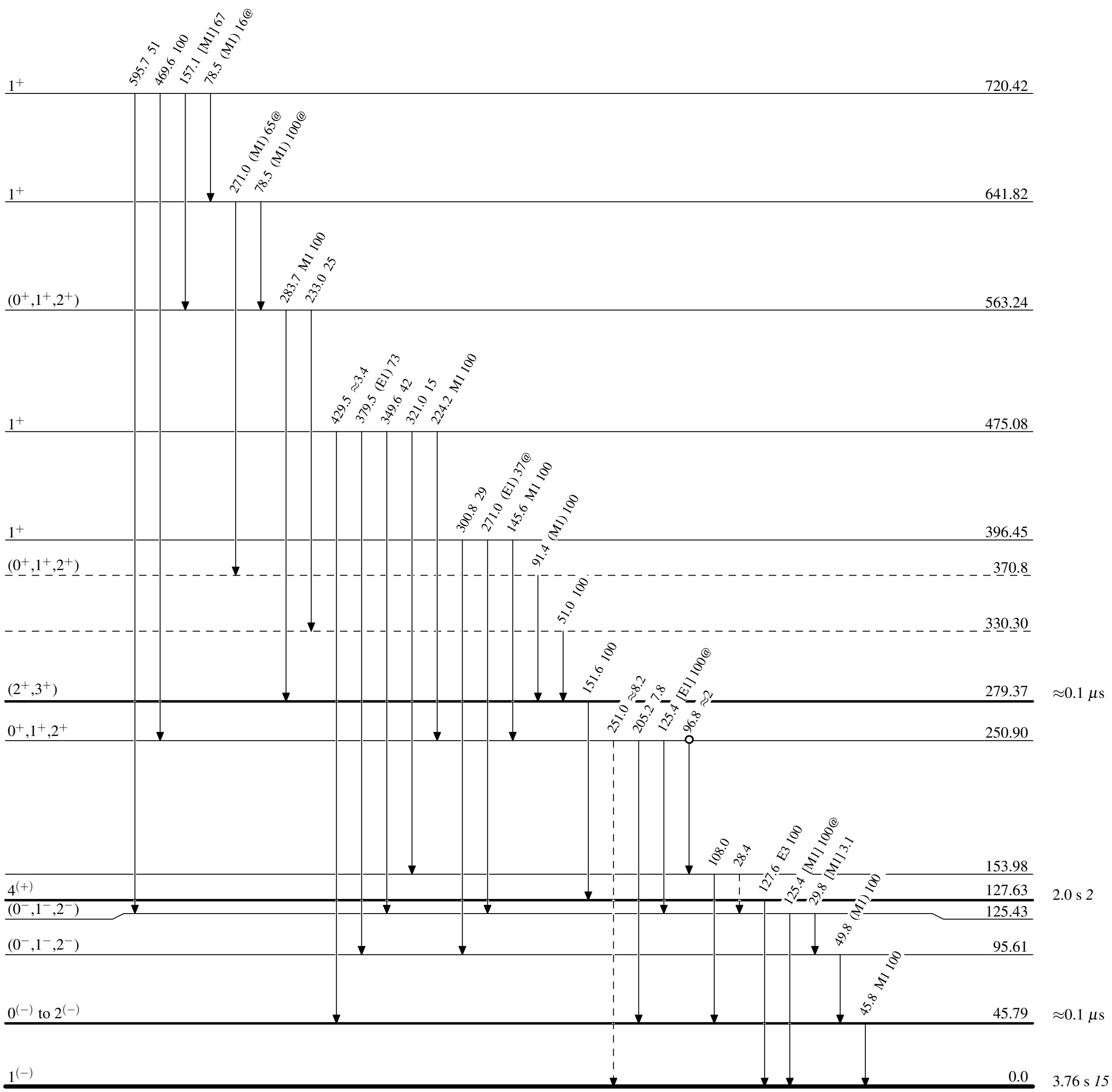
Legend

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided

γ Decay (Uncertain)
Coincidence
Coincidence (Uncertain)



$^{118}_{47}Ag_{71}$