

Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	NDS 111,1471 (2010)	1-May-2009

Q(β^-)=2016 17; S(n)=8514 17; S(p)=7994 18; Q(α)=-4452 18 [2012Wa38](#)
 Note: Current evaluation has used the following Q record 2017 168520 177970 28-4444 20 [2003Au03,2009AuZZ](#).
[1988KaZE](#) suggest that the 222, 369, 476 levels could be intruder states and have tried to derive parameter sets for this collective rotational-like band with K=1/2.

¹¹³Ag Levels

Cross Reference (XREF) Flags

- A ¹¹³Pd β^- decay
- B ¹¹³Ag IT decay

E(level) [‡]	J π	T _{1/2}	XREF	Comments
0	1/2 ⁻	5.37 h 5	A	$\% \beta^- = 100$ $\mu = 0.159 2$ (1989Ra17) J π : atomic beam (1976Fu06), negative parity from μ . T _{1/2} : from 1970Tr02. Other: 5.25 h 4 (1968RoZZ). %IT= 64 7; $\% \beta^- = 36 7$ %IT: from 1990Fo07.
43.5 1	7/2 ⁺	68.7 s 16	AB	J π : allowed β^- decay to 5/2 ⁺ level. E3 γ to 1/2 ⁻ . T _{1/2} : weighted av of 67.8 s 21 (1974Gr29) and 70.0 s 25 (1975BrYM). Others: 72 s 9 (1958A190), 66 s 12 (1970Ma47).
139.30 15	9/2 ⁺		A	J π : M1 γ to 7/2 ⁺ and syst.
222.08 [#] 13	3/2 ⁺	23 ns 2	A	J π : E1 γ to 1/2 ⁻ , band assignment favors 3/2 ⁺ .
270.82 14	(3/2 ⁻) [†]		A	J π : γ to 1/2 ⁻ , not fed from (5/2) ⁺ parent, no γ to 7/2 ⁺ , syst.
273.59 16	(1/2)	≈30 ns	A	J π : γ 's to 1/2 ⁻ and 1/2 ⁺ , 3/2 ⁺ , not fed from 5/2 ⁺ parent.
280.0 [#] 2	1/2 ⁺		A	J π : member of the intruder band.
366.84 20	(5/2 ⁻) [†]		A	J π : γ 's to 1/2 ⁻ and 3/2 ⁻ , syst favors 5/2 ⁻ .
369.80 [#] 17	7/2 ⁺	<0.8 ns	A	J π : E2 γ to 3/2 ⁺ . γ to 9/2 ⁺ .
476.70 [#] 14	5/2 ⁺	<0.5 ns	A	J π : member of the intruder band.
526.16 16			A	
607.06 23			A	
611.31 25	(3/2 ⁻) [†]		A	J π : from syst.
673.35 23			A	
781.79 20	(5/2 ⁻) [†]		A	J π : γ 's to 3/2 ⁻ and sys.
783.16 14	(3/2,5/2,7/2)		A	J π : log ft ≈ 6.1 from (5/2 ⁺).

[†] [1988KaZE](#) have derived low-lying negative parity states in odd-mass Ag: A=^{107,109,111,113,115}Ag.

[‡] From least-squares fit to γ energies.

[#] Band(A): Intruder-rotational band (1990Ro16) with A=17.23, E0=228.9 keV, a=-1.92.

Adopted Levels, Gammas (continued)

$\gamma(^{113}\text{Ag})$								
$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult. [‡]	$\alpha^\#$	Comments
43.5	7/2 ⁺	43.6 2	100	0	1/2 ⁻	E3	1047	B(E3)(W.u.)=0.048 6
139.30	9/2 ⁺	95.74 20	100	43.5	7/2 ⁺	M1	0.478	
222.08	3/2 ⁺	222.06 20	100	0	1/2 ⁻	E1	0.01660	B(E1)(W.u.)=1.13×10 ⁻⁶ 10
270.82	(3/2 ⁻)	270.81 20	100	0	1/2 ⁻			
273.59	(1/2)	51.5 2	25	222.08	3/2 ⁺			
		273.6 2	100	0	1/2 ⁻			
280.0	1/2 ⁺	57.9 3	1.2 6	222.08	3/2 ⁺			
		280.0 2	100 4	0	1/2 ⁻			
366.84	(5/2 ⁻)	96.0 3	76	270.82	(3/2 ⁻)			
		366.8 3	100	0	1/2 ⁻			
369.80	7/2 ⁺	147.73 20	100	222.08	3/2 ⁺	E2	0.362	B(E2)(W.u.)>1.1×10 ²
		230.49 20	77	139.30	9/2 ⁺			
		326.28 20	60	43.5	7/2 ⁺			
476.70	5/2 ⁺	205.87 20	19	270.82	(3/2 ⁻)			
		254.61 20	100	222.08	3/2 ⁺			
		337.32 20	9	139.30	9/2 ⁺			
		433.4 2	26	43.5	7/2 ⁺			
526.16		49.6 2	2.3	476.70	5/2 ⁺			
		386.9 2	16	139.30	9/2 ⁺			
		482.4 3	100	43.5	7/2 ⁺			
607.06		336.3 3	48	270.82	(3/2 ⁻)			
		607.0 3	100	0	1/2 ⁻			
611.31	(3/2 ⁻)	472.1 3	7	139.30	9/2 ⁺			
		567.7 3	100	43.5	7/2 ⁺			
673.35		534.2 3	100	139.30	9/2 ⁺			
		673.2 3	39	0	1/2 ⁻			
781.79	(5/2 ⁻)	414.9 3	67	366.84	(5/2 ⁻)			
		510.9 3	100	270.82	(3/2 ⁻)			
		781.9 3	33	0	1/2 ⁻			
783.16	(3/2,5/2,7/2)	257.1 3	4.5	526.16				
		643.7 3	100	139.30	9/2 ⁺			
		739.63 3	80	43.5	7/2 ⁺			

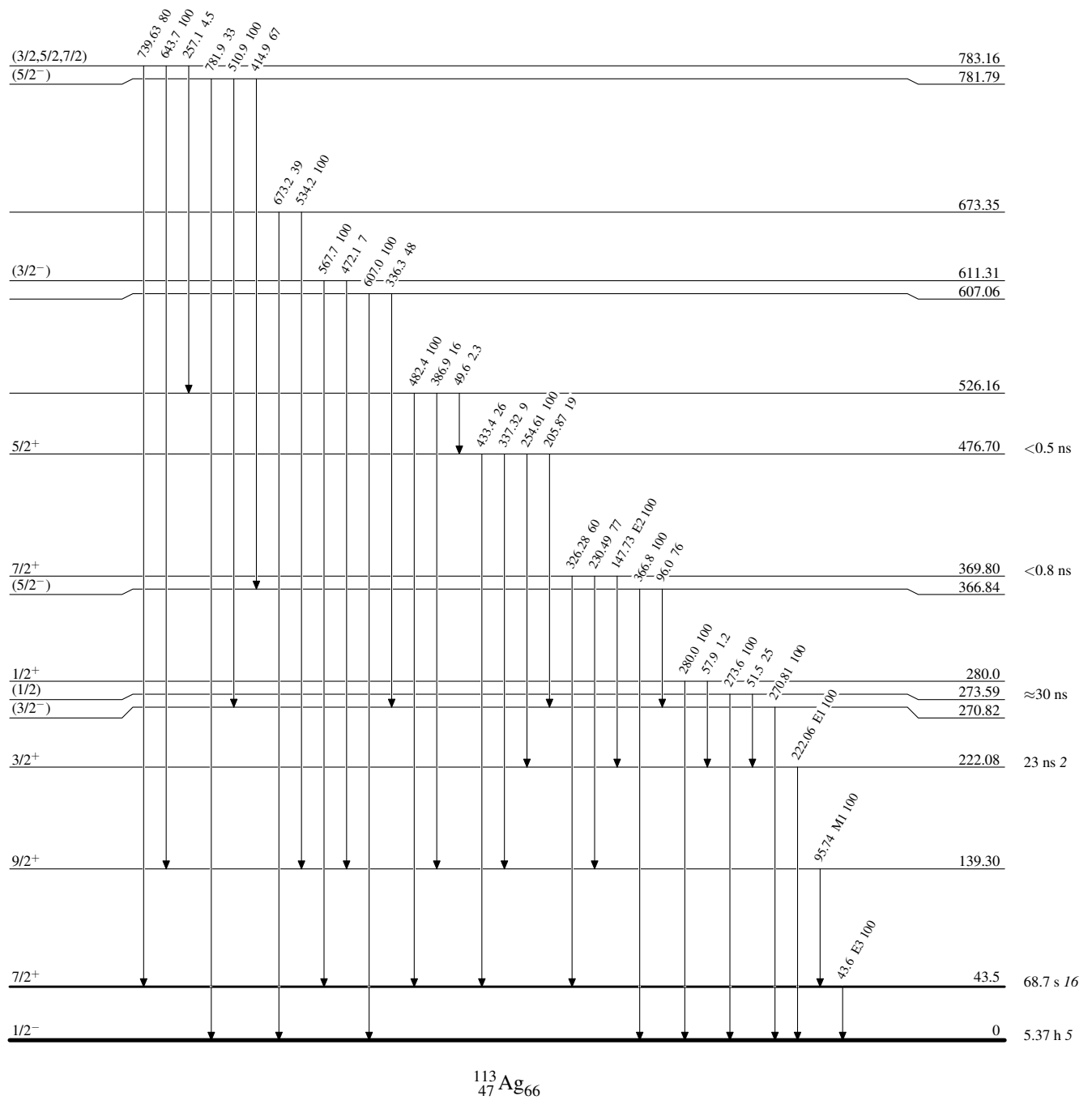
[†] From $^{113}\text{Pd} \beta^-$ decay.

[‡] From $\alpha(\text{K})\text{exp}$ in $^{113}\text{Pd} \beta^-$ decay and ^{113}Ag IT 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.

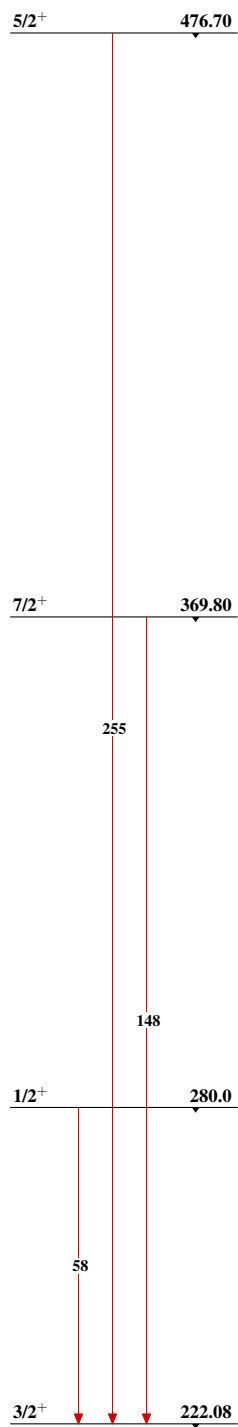
Adopted Levels, GammasLevel Scheme

Intensities: Relative photon branching from each level



Adopted Levels, Gammas

Band(A): Intruder-rotational band
(1990Ro16) with $A=17.23$, $E_0=228.9$
keV, $a=-1.92$

 $^{113}_{47}\text{Ag}_{66}$