Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	S. Kumar(a), J. Chen(b) and F. G. Kondev	NDS 137, 1 (2016)	31-May-2016

Q(β^-)=−215.5 *18*; S(n)=9184.5 *27*; S(p)=6484.5 *14*; Q(α)=−3294.2 *28* 2012Wa38
Additional information 1.

^{109}Ag Levels

Cross Reference (XREF) Flags

A	^{109}Pd β^- decay	E	^{107}Ag(t,p)	I	^{109}Ag(α,α')
B	^{109}Cd ε decay	F	^{108}Pd(^{3}He,d)	J	^{110}Cd(d,^{3}He)
C	^{96}Zr(^{18}O,p4nγ)	G	^{109}Ag(γ,γ)	K	^{112}Cd(p,α)
D	^{100}Mo(^{13}C,p3nγ)	H	^{109}Ag(p,p′)	L	Coulomb excitation

E(level)[†]	J$^\pi$[a]	T$_{1/2}$	XREF	Comments
0.0	1/2$^-$	stable	ABCDEFGHIJKL	μ=−0.1306906 *2* (1974Sa25) J$^\pi$: from atomic beam (1937Ja01,1950Cr26); π=+ from L(^{3}He,d)=L(d,^{3}He)=L(p,α)=1, L(t,p)=0 and μ. μ: by means of the NMR method. Other: −0.13056 2 (1954So05). configuration: $\pi(p_{1/2})^{-1}$.
88.0337 *10*	7/2$^+$	39.79 s *21*	ABCD G KL	%IT=100 μ=+4.400 *6* (1985Ed01); Q=(+)1.02 *12* (1986Be01) J$^\pi$: 88.0336γ E3 to 1/2$^-$; atomic beam (1965St18). T$_{1/2}$: weighted average of 40 s 2 (1940Al01), 40.4 s 2 (1945Wi11), 39.2 s 2 (1947Br05), 40 s 1 (1951Wo15), 39.80 s *10* (1967Mi11), 39.3 s *3* (1967Ab07) and 38.0 s 12 (2000Yo07). Other: 35 s *5* (1973Co10). μ: by means of the NMR method. Q: by means of the Level Mixing Resonance on Oriented Nuclei method. configuration: $\pi(g_{9/2})^{-1}$.
132.762[c] *8*	9/2$^+$	2.60 ns *12*	A CD F JKL	J$^\pi$: L(^{3}He,d)=(d,^{3}He)=L(p,α)=4; 44.77γ M1+E2 to 7/2$^+$; 602.5γ E2 from 5/2$^+$. T$_{1/2}$: from $\gamma\gamma$(t) in ^{109}Pd β^- decay (1972Ja01).
311.378 *6*	3/2$^-$	5.9 ps *4*	A EF HIJKL	B(E2)↑=0.228 *12* μ=+1.10 *9* J$^\pi$: L(^{3}He,d)=(d,^{3}He)=L(p,α)=1; 311.36γ M1+E2 to 1/2$^-$; 103.9γ M1+E2 from 5/2$^-$. B(E2)↑: weighted average of 0.222 *19* (1970Ro14), 0.210 *18* (1973Co10) and 0.249 *17* (1958Mc02) in Coulomb Excitation. T$_{1/2}$: weighted average of 5.9 ps 7, using Recoil Distance Method in Coulomb Excitation (1974Mi02) and 5.9 ps 5 from BE2=0.228 12 and δ(311.3γ)=0.192 *7* in Coulomb Excitation. Others: 6.9 ps *7* by RDM (1970MiZS) and 6.3 ps *18* (1970Ro14). Q: −0.54 *10*, −0.64 *10*, −0.81 *10* or −0.91 *10*, depending on the relative sign of the matrix elements (1972Th16). μ: from g=+0.73 *6*. g-factor (transition field method): +0.73 6, weighted average of 0.79 12 (1984Ba72), +0.77 10 (1984Wo08) and 0.66 10 (1986Ba14). Other: 0.58 24 (1970RoZS).
415.193 *8*	5/2$^-$	33.4 ps *13*	A EFGHI KL	B(E2)↑=0.317 *18* μ=+0.85 *8* J$^\pi$: L(t,p)=2, L(p,α)=3; 415.17γ E2 to 1/2$^-$. B(E2)↑: weighted average of 0.320 *26* (1970Ro14) and 0.315 24 (1973Co10). Other: 0.377 *26* (1958Mc02). T$_{1/2}$: weighted average of 32.6 ps *16* (1989Lo08) and 34.7 ps *21*

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Adopted Levels, Gammas (continued)

^{109}Ag Levels (continued)

E(level)[†]	Jπ[a]	$T_{1/2}$	XREF	Comments
				(1974Mi02), using the RDM method. Others: 35 ps *4* (1970MiZS,RDM), 40 ps *3* (1970Ro14), 40.2 ps *23* from B(E2)=0.317 *18* and δ(103.5γ)=−0.039 *17*. μ: from g=+0.34 *3*. g-factor (transition field method): +0.34 3, weighted average of 0.36 6 (1984Ba72), +0.36 5 (1984Wo08) and 0.29 6 (1986Ba14). Q: −0.16, −0.26, −0.33, or −0.43, depending on the relative sign of the matrix elements (1972Th16).
420[‡] *10*	(7/2⁺,9/2⁺)		J	Jπ: L(d,^{3}He)=(4).
697.38? *14*			A G	XREF: G(680).
701.877 *9*	3/2⁻	0.27 ps *7*	A E H JKL	B(E2)↑=0.00087 *19* (1970Ro14) Jπ: L(d,^{3}He)=L(p,α)=1;701.85γ M1+E2 to 1/2⁻. $T_{1/2}$: weighted average of 0.24 ps *7* (1974Er05) and 0.5 ps *2* (1970Ro14), using the DSAM method.
706[#] *5*	1/2⁺		F	Jπ: L(^{3}He,d)=0.
706.971 *10*	(3/2,5/2⁻)		A	Jπ: 707.05γ to 1/2⁻; probable feeding in ^{109}Pd β⁻ decay.
724.381 *6*	3/2⁺	3.2 ns *8*	A	Jπ: 413.02γ E1+M2 to 3/2⁻, 636.29γ E2 to 7/2⁺. γγ(θ) for 413.02γ in ^{109}Pd β⁻ decay (1977Bo04) is also consistent with J=3/2. $T_{1/2}$: from delayed coincidence in ^{109}Pd β⁻ decay (1982Br19).
735.320 *7*	5/2⁺		A F J	Jπ: L(^{3}He,d)=L(d,^{3}He)=2, 423.99γ E1+M2 to 3/2⁻, 647.27γ M1 to 7/2⁺.
773.42[c] *12*	11/2⁺		CD	Jπ: 640.6γ M1+E2 to 9/2⁺.
789?[@] *11*			K	
811.74? *19*			A	
862.633 *9*	5/2⁻	1.39 ps *19*	A E GH JKL	B(E2)↑=0.0173 *17* (1970Ro14) XREF: G(855)J(870)K(868). Jπ: L(t,p)=2; L(p,α)=3; 862.82γ E2 to 1/2⁻; 551.4γ(θ) and 862.82γ(θ) in Coulomb excitation (1970Ro14) are only consistent with J=5/2. $T_{1/2}$: weighted average of 1.42 ps 21 from BE2=0.0173 17 (1970Ro14) and 1.3 ps 4 from DSAM (1970Ro14). Other: 1.3 ps *+8−4* (1974Er05,DSAM).
869.426 *6*	5/2⁺		A F I	XREF: F(866). Jπ: L(^{3}He,d)=2; 736.64γ E2 to 9/2⁺, 558.1γ E1+M2 to 3/2⁻.
890[‡] *10*	(7/2⁺,9/2⁺)		J	Jπ: L(d,^{3}He)=(4).
910.902 *11*	7/2⁺		A F h	Jπ: L(^{3}He,d)=L(t,p)=4; 778.24γ M1 to 9/2⁺; possible feeding in ^{109}Pd β⁻ decay (Jπ=5/2⁺).
912.205 *25*	7/2⁻		A E h L	B(E2)↑<0.018 Jπ: L(t,p)=4; γ(θ) in Coulomb excitation (1989Lo08) is consistent with J=7/2, 601.1γ to 3/2⁻.
929[@] *8*	(9/2⁺)		K	Jπ: proposed by 1977SmZM in (p,α) based on DWBA analysis.
930.75[c] *10*	13/2⁺		CD	Jπ: 798.0γ E2 to 9/2⁺ and band structure in ^{96}Zr(^{18}O,p4nγ)and ^{100}Mo(^{13}C,p3nγ).
1070[@]			I K	
1090.7 *5*	9/2⁻	1.9 ps *3*	E H L	B(E2)↑<0.006 Jπ: L(p,p′)=4; γ(θ) in Coulomb excitation is consistent with J=9/2 (1989Lo08); 675.5γ E2 to 5/2⁻. $T_{1/2}$: from RDM in Coulomb excitation (1989Lo08).
1099.11 *4*	(5/2,7/2⁻)		A	Jπ: 966.19γ to 9/2⁺; 787.6γ to 3/2⁻; possible feeding in ^{109}Pd β⁻ decay (Jπ=5/2⁺).
1200[‡] *10*	(7/2⁺,9/2⁺)		FG JK	XREF: K(1230). Jπ: L(d,^{3}He)=(4).
1260[&] *2*	1/2⁻		EF HI	XREF: F(1255)I(1280).

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Adopted Levels, Gammas (continued)

^{109}Ag Levels (continued)

E(level)[†]	J^{π}[a]	$T_{1/2}$	XREF	Comments
				J^{π}: L(t,p)=L(p,p′)=0 from $1/2^-$.
1310[‡] *10*	$1/2^-,3/2^-$		F J	J^{π}: L(d,^{3}He)=1.
1324.2 *7*	$3/2^-$	0.31 ps *9*	E H KL	XREF: K(1331). J^{π}: L(t,p)=2; 1012.9$\gamma(\theta)$ in Coulomb excitation is consistent with J=3/2 or, with smaller probability, J=5/2 (1970Ro14). 1970Ro14 suggest J=3/2 based on spin of analogous level in ^{107}Ag. $T_{1/2}$: from DSAM in Coulomb excitation (1970Ro14).
1430[#] *10*	$1/2^+$		F	J^{π}: L(^{3}He,d)=0.
1490[#]	$3/2^+,5/2^+$		Fg	E(level): unresolved multiplet; 1480 10 from (γ,γ'). J^{π}: L(^{3}He,d)=2.
1500[&] *5*	$3/2^-$		E gHIJk	XREF: H(1510)J(1510). J^{π}: L=(t,p)=2, L(d,^{3}He)=1.
1524[&] *5*	$(3/2,5/2)^-$		E k	J^{π}: L(t,p)=2.
1599[&] *5*			EF	
1613[&] *5*	$1/2^-$		E H	XREF: H(1610). J^{π}: L(t,p)=0.
1658[#] *10*	$1/2^+$		F	J^{π}: L(^{3}He,d)=0.
1675? *10*			G	E(level): proposed only from (γ,γ).
1702.9[c] *3*	$15/2^+$		CD	
1736[&] *5*	$(3/2,5/2)^-$		EF	XREF: F(1750). J^{π}: L(t,p)=2.
1792[&] *5*	$(7/2,9/2)^-$		E	J^{π}: L(t,p)=4.
1815[&] *5*	$(3/2,5/2)^-$		E	J^{π}: L(t,p)=2.
1839[&] *5*	$(5/2)^-$		E K	XREF: K(1844). E(level): from (t,p), J=$5/2^-,7/2^-$ based on DWBA analysis in (p,α) (1977SmZM). J^{π}: L(t,p)=2.
1841[#] *10*	$3/2^+,5/2^+$		F	J^{π}: L(^{3}He,d)=2.
1860[‡] *10*	$(7/2^+,9/2^+)$		J	J^{π}: L(d,^{3}He)=(4).
1891[&] *5*	$(7/2,9/2)^-$		E K	XREF: K(1887). J^{π}: L(t,p)=4.
1894.28[c] *14*	$17/2^+$	0.57[b] ps *5*	CD	
1950[&] *5*	$(7/2,9/2)^-$		E K	XREF: K(1940). E(level): Possible multiplet in (p,α) (1977SmZM). J^{π}: L(t,p)=4. J=$(9/2^+)$ based on DWBA analysis in (p,α) is inconsistent.
1970[#] *10*	$3/2^+,5/2^+$		F	J^{π}: L(^{3}He,d)=2.
1993[&] *5*	$(3/2,5/2)^-$		EF	XREF: F(?). J^{π}: L(t,p)=2.
2043[@] *11*	$(9/2^+)$		F K	XREF: F(?). J^{π}: based on DWBA analysis in (p,α) (1977SmZM).
2062[&] *10*	$(7/2,9/2)^-$		EF	XREF: F(?). J^{π}: L(t,p)=4.
2093[&] *10*	$(3/2,5/2)^-$		E	J^{π}: L(t,p)=2.
2124[&] *10*	$(5/2,7/2)^+$		EF H	XREF: H(2150). J^{π}: L(t,p)=3, L(^{3}He,d)=4(+2).
2185[&] *10*	$(9/2^+)$		E I K	XREF: I(2173)K(2171). E(level): Possible multiplet in (p,α) (1977SmZM). J^{π}: based on DWBA analysis in (p,α) (1977SmZM).
2199[&] *10*	$(7/2^-,9/2^-)$		E	J^{π}: L(t,p)=(4).

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Adopted Levels, Gammas (continued)

^{109}Ag Levels (continued)

E(level)[†]	Jπ[a]	$T_{1/2}$	XREF	Comments
2206.46[d] *22*	15/2⁻		C	
2222[&] *10*	(7/2⁻,9/2⁻)		E	Jπ: L(t,p)=(4).
2230 *5*	(5/2,7/2)⁺		F H K	XREF: F(2220). E(level): from (p,p′). Jπ: L(p,p′)=3, L(^{3}He,d)=(2+4).
2256[&] *10*	(9/2,11/2)⁺		E	Jπ: L(t,p)=5.
2267[&] *10*	(5/2,7/2)⁺		E	Jπ: L(t,p)=3.
2314[&] *10*	(3/2⁻,5/2⁻)		E	Jπ: L(t,p)=(2).
2320[#] *5*	1/2⁺		F K	XREF: K(2350). Jπ: multiplet, but major component has L(^{3}He,d)=0.
2364[&] *10*	(9/2,11/2)⁺		EF	XREF: F(2400). Jπ: L(t,p)=5.
2419.96[d] *25*	17/2⁻		C	
2434[&] *10*	(7/2,9/2)⁻		E	Jπ: L(t,p)=4.
2466[&] *10*	(7/2,9/2)⁻		E	Jπ: L(t,p)=4.
2471[@] *6*	1/2⁺		F K	XREF: F(2470). Jπ: multiplet, but major component has L(^{3}He,d)=0.
2479.9[e] *4*	17/2⁻		C	
2537[&] *10*	(9/2,11/2)⁺		E K	XREF: K(2522). Jπ: L(t,p)=5.
2567.39[c] *18*	19/2⁺	0.39 ps *4* [b]	CD	
2568.4[e] *3*	19/2⁻		C	
2569[&] *10*	(9/2⁺,11/2⁺)		E	Jπ: L(t,p)=(5).
2614[&] *10*			E	
2659[&] *10*			E	
2660.5[d] *4*	19/2⁻		C	
2740.6[e] *3*	21/2⁻		C	
2840.79[c] *16*	21/2⁺	0.82[b] ps *8*	CD	
2940.2[d] *4*	(21/2⁻)		C	
2988.7[e] *3*	23/2⁻		C	
3090.19[c] *19*	23/2⁺	1.53[b] ps *16*	CD	
3203.5[d] *5*	(23/2⁻)		C	
3275[#] *10*	3/2⁺,5/2⁺		F	Jπ: L(^{3}He,d)=2.
3276.39[c] *22*	25/2⁺	1.87[b] ps *21*	CD	
3316.7[e] *4*	25/2⁻		C	
3575.19[c] *24*	27/2⁺	0.71[b] ps *8*	CD	
3968.7[c] *3*	29/2⁺	0.37[b] ps *4*	CD	
4375.8[c] *3*	31/2⁺	0.291[b] ps *35*	CD	
4886.4[c] *4*	33/2⁺	0.180[b] ps *21*	CD	
5414.5[c] *5*	(35/2⁺)	0.222[b] ps *28*	CD	
5998.3[c] *8*	(37/2⁺)		CD	

† From a least-squares fit to Eγ, unless otherwise noted.
‡ From ^{110}Cd(d,^{3}He).
# From ^{108}Pd(^{3}He,d).

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Adopted Levels, Gammas (continued)

^{109}Ag Levels (continued)

@ From ^{112}Cd(p,α).
& From ^{107}Ag(t,p).
[a] Values without comments are based on band consideration and/or γ multipolarities deduced from DCO ratios in ^{96}Zr(^{18}O,p4nγ) and ^{100}Mo(^{13}C,p3nγ).
[b] From DSAM in ^{100}Mo(^{13}C,p3nγ) (2008Da12).
[c] Band(A): Band 1: $\pi g_{9/2}$ band. Above J^π=21/2$^+$, it changes to $\pi g_{9/2}\otimes\nu(h_{11/2})^2$.
[d] Band(B): Band 2: build upon the J^π=15/2$^-$ level at 2206.5 keV.
[e] Band(C): Band 3: build upon the J^π=17/2$^-$ level at 2479.9 keV.

Adopted Levels, Gammas (continued)

$\gamma(^{109}Ag)$

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[&]	δ[&b]	α[a]	Comments
88.0337	7/2+	88.0336 *10*	100	0.0	1/2−	E3		26.3	α(K)=11.41 *16*; α(L)=12.06 *17*; α(M)=2.47 *4* α(N)=0.386 *6*; α(O)=0.001398 *20* B(E3)(W.u.)=0.0387 *6* E_γ: From ^{109}Cd ε decay (2000He14). Mult.: from ce data in ^{109}Pd β^- decay. α(K)exp=10.6 *5* (1970Ba37); α(K)exp=11.6, K:L:M:N=(0.98 *5*):1:(0.20 *1*):(0.050 *5*), L1:L2:L3=(0.185 *15*):1:(1.163 *27*) (1978Sh08) and ce data in ^{109}Cd ε decay. I_γ: Double photon decay: I($\gamma\gamma$)/I(γ)<6×10^{-7} (1988Il01).
132.762	9/2+	44.77 *13*	100	88.0337	7/2+	M1+E2	0.14 *6*	4.6 *5*	α(K)=3.85 *19*; α(L)=0.65 *20*; α(M)=0.126 *39* α(N)=0.0212 *60*; α(O)=0.000711 *22* Mult.: α(K)exp=3.6 *5*, α(L)exp=0.7 *3* (1978Sh08). δ: From 1984ShZL; Other: 0.35 15 (1996Po07).
311.378	3/2−	311.390 *10*	100	0.0	1/2−	M1+E2	−0.192 *7*	0.0200	α(K)=0.01743 *25*; α(L)=0.00212 *3*; α(M)=0.000402 *6* α(N)=6.96×10^{-5} *10*; α(O)=3.24×10^{-6} *5* Mult.: from $\gamma(\theta)$: A_2=−0.395 *16* (1970Ro14), −0.39 *2* (1955Mc51), −0.388 *7* (1958Mc02), A_2=−0.710 *7* (1970RoZS), −0.654 *36* (1989Lo08) in Coulomb Excitation and α(K)exp=0.019 *2* from ^{109}Pd β^- decay (1970Ba37). δ: weighted average of 0.193 *10* (1970RoZS), −0.196 *27* (1970Ro14), and 0.19 *1* (1958Mc02). Others: 0.19 (1955Mc51) in Coulomb Excitation and δ=0.35 5 from $\gamma\gamma(\theta)$ in ^{109}Pd β^- decay (1975El10).
415.193	5/2−	103.827 *23*	5.9 *3*	311.378	3/2−	M1+E2	−0.039 *17*	0.379	α(K)=0.329 *5*; α(L)=0.0410 *7*; α(M)=0.00780 *13* α(N)=0.001348 *22*; α(O)=6.18×10^{-5} *9* I_γ: Others: 5.1 4 in Coulomb Excitation (weighted average of 5.4 5 (1989Lo08), 4.9 5 1970Ro14 and 4.6 *11*, deduced from I(γ+ce) in 1973Co10). Mult.: α(K)exp=0.44 *5* in ^{109}Pd β^- decay (1970Ba37); A_2=−0.239 *17* in Coulomb Excitation (1970Ro14). δ: From $\gamma(\theta)$ in Coulomb excitation.
		282.431[c] *11*	≤0.05	132.762	9/2+	[M2]		0.1164	α(K)=0.0994 *14*; α(L)=0.01378 *20*; α(M)=0.00266 *4* α(N)=0.000458 *7*; α(O)=2.04×10^{-5} *3* E_γ: From level energy differences. I_γ: From Coulomb Excitation.
		327.159[c] *8*	0.40 *10*	88.0337	7/2+	[E1]		0.00582	α(K)=0.00509 *8*; α(L)=0.000600 *9*; α(M)=0.0001133 *16* α(N)=1.95×10^{-5} *3*; α(O)=8.81×10^{-7} *13* B(E1)(W.u.)=9.2×10^{-7} *24* E_γ: From level energy differences. I_γ: From Coulomb Excitation.
		415.222 *7*	100.0 *11*	0.0	1/2−	E2		0.01099	α(K)=0.00944 *14*; α(L)=0.001258 *18*; α(M)=0.000240 *4* α(N)=4.08×10^{-5} *6*; α(O)=1.637×10^{-6} *23*

$^{109}_{47}Ag_{62}$-6

$\gamma(^{109}Ag)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[&]	δ[&b]	α[a]	Comments
									B(E2)(W.u.)=40.5 *17* Mult.: α(K)exp=0.010 *1* from ^{109}Pd β^- decay (1970Ba37); A_2=+0.124 *23* (1970Ro14), A_2=+0.248 *4*, A_4=−0.039 *9* (1955Mc51) in Coulomb excitation.
697.38?		564.3[c] *3*	100 *16*	132.762	9/2$^+$				
		609.37[c] *17*	≤6.8	88.0337	7/2$^+$				
701.877	3/2$^-$	286.644 *24*	5.2 *4*	415.193	5/2$^-$	[M1]		0.0244	α(K)=0.0213 *3*; α(L)=0.00257 *4*; α(M)=0.000488 *7* α(N)=8.45×10^{-5} *12*; α(O)=3.97×10^{-6} *6* B(M1)(W.u.)=0.14 *4*
		390.515 *18*	26.4 *11*	311.378	3/2$^-$	M1+E2	+0.21 *4*	0.01126 *17*	α(K)=0.00981 *14*; α(L)=0.001180 *18*; α(M)=0.000224 *4* α(N)=3.88×10^{-5} *6*; α(O)=1.82×10^{-6} *3* Mult.: α(K)exp=0.095 *2* (1970Ba37); $\gamma\gamma(\theta)$ in ^{109}Pd β^- decay. δ: weighted average of δ=0.19 *6* (1977Bo04) and +0.23 *5* (1988Br31) using $\gamma\gamma(\theta)$ in ^{109}Pd β^- decay.
		701.876 *10*	100.0 *8*	0.0	1/2$^-$	M1+E2	0.029 *7*	0.00273	α(K)=0.00239 *4*; α(L)=0.000280 *4*; α(M)=5.32×10^{-5} *8* α(N)=9.23×10^{-6} *13*; α(O)=4.41×10^{-7} *7* Mult.: α(K)exp=0.0023 *5* from ^{109}Pd β^- decay (1970Ba37); A_2=−0.32 *6* ($\gamma(\theta)$) in Coulomb excitation (1970Ro14). δ: from $\gamma(\theta)$ in Coulomb excitation (1970Ro14).
706.971	(3/2,5/2$^-$)	395.590 *28*	4.5 *4*	311.378	3/2$^-$				
		706.964 *10*	100.0 *10*	0.0	1/2$^-$				α(K)exp=0.0020 *6* (1970Ba37).
724.381	3/2$^+$	309.182 *10*	38.4 *5*	415.193	5/2$^-$	E1(+M2)	+0.03 *6*	0.0068 *6*	α(K)=0.0060 *5*; α(L)=0.00071 *7*; α(M)=0.000133 *14* α(N)=2.29×10^{-5} *23*; α(O)=1.03×10^{-6} *11* Mult.: α(K)exp=0.006 *1* from ^{109}Pd β^- decay (1970Ba37). δ: $\gamma\gamma(\theta)$ in ^{109}Pd β^- decay (1988Br31).
		413.010 *10*	64.9 *7*	311.378	3/2$^-$	E1+M2	0.18 *5*	0.0042 *6*	α(K)=0.0037 *6*; α(L)=0.00044 *7*; α(M)=8.4×10^{-5} *14* α(N)=1.45×10^{-5} *23*; α(O)=6.6×10^{-7} *11* Mult.: α(K)exp=0.0030 *3* (1970Ba37) and $\gamma\gamma(\theta)$ (1977Bo04) in ^{109}Pd β^- decay. δ: $\gamma\gamma(\theta)$ in ^{109}Pd β^- decay (1977Bo04).
		636.342 *10*	100.0 *9*	88.0337	7/2$^+$	E2		0.00323	α(K)=0.00281 *4*; α(L)=0.000350 *5*; α(M)=6.65×10^{-5} *10* α(N)=1.142×10^{-5} *16*; α(O)=4.98×10^{-7} *7* B(E2)(W.u.)=0.027 *7* Mult.: α(K)exp=0.0026 *5* from ^{109}Pd β^- decay (1970Ba37).
		724.372 *14*	0.56 *7*	0.0	1/2$^-$				
735.320	5/2$^+$	423.942 *12*	3.83 *6*	311.378	3/2$^-$	E1(+M2)	+0.08 *8*	0.0032 *6*	α(K)=0.0028 *5*; α(L)=0.00033 *7*; α(M)=6.2×10^{-5} *12* α(N)=1.07×10^{-5} *21*; α(O)=4.9×10^{-7} *10* Mult.: α(K)exp=0.0030 *5* (1970Ba37) and $\gamma\gamma(\theta)$ in ^{109}Pd β^- decay.

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Adopted Levels, Gammas (continued)

γ(^{109}Ag) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[&]	δ[&b]	α[a]	Comments
									δ: from γγ(θ) in 1988Br31; Other: δ=−0.27 *3* in (1977Bo04)
735.320	5/2$^+$	602.568 *10*	33.6 *3*	132.762	9/2$^+$	E2		0.00374	α(K)=0.00324 *5*; α(L)=0.000407 *6*; α(M)=7.75×10^{-5} *11* α(N)=1.329×10^{-5} *19*; α(O)=5.75×10^{-7} *8* Mult.: α(K)exp=0.0030 *5* from ^{109}Pd β^- decay (1970Ba37).
		647.272 *10*	100	88.0337	7/2$^+$	M1		0.00330	α(K)=0.00288 *4*; α(L)=0.000339 *5*; α(M)=6.43×10^{-5} *9* α(N)=1.117×10^{-5} *16*; α(O)=5.33×10^{-7} *8* Mult.: α(K)exp=0.0027 *4* from ^{109}Pd β^- decay (1970Ba37).
773.42	11/2$^+$	640.6[‡] *2*	100	132.762	9/2$^+$	M1+E2	>+0.3[‡]	0.00327 *11*	α(K)=0.00285 *10*; α(L)=0.000345 *6*; α(M)=6.56×10^{-5} *10* α(N)=1.132×10^{-5} *20*; α(O)=5.2×10^{-7} *3* Mult.,δ: from anisotropy α=0.30 *9* in ^{96}Zr(^{18}O,p4nγ).
811.74?		114.26[c] *19*	100 *32*	697.38?					
		500.6[c] *3*	72 *16*	311.378	3/2$^-$				
862.633	5/2$^-$	447.426 *14*	100.0 *16*	415.193	5/2$^-$	M1+E2	−0.16 *4*	0.00801	α(K)=0.00699 *10*; α(L)=0.000834 *12*; α(M)=0.0001582 *23* α(N)=2.74×10^{-5} *4*; α(O)=1.295×10^{-6} *19* Mult.,δ: α(K)exp=0.0070 *8* from ^{109}Pd β^- decay (1970Ba37); A_2=+0.124 *23* (1970Ro14), A_2=+0.32 *10*, A_4=−0.11 *15* (1989Lo08). δ: From γ(θ) in Coulomb excitation (1970Ro14); Other: −0.12 *14* in Coulomb excitation (1988Br31).
		551.258 *14*	75.4 *11*	311.378	3/2$^-$	M1+E2	−0.28 *3*	0.00482	α(K)=0.00421 *6*; α(L)=0.000500 *7*; α(M)=9.49×10^{-5} *14* α(N)=1.645×10^{-5} *23*; α(O)=7.76×10^{-7} *11* Mult.: A_2=−0.441 *29* in Coulomb excitation (1970Ro14); ; γγ(θ) in ^{109}Pd β^- decay (1988Br31). δ: weighted average of −0.28 *4* from γ(θ) in Coulomb excitation (1970Ro14), −0.28 *4* (1977Bo04) and −0.26 *7* (1988Br31) from γγ(θ) in ^{109}Pd β^- decay.
		862.637 *14*	18.24 *21*	0.0	1/2$^-$	E2		1.51×10^{-3}	α(K)=0.001313 *19*; α(L)=0.0001584 *23*; α(M)=3.00×10^{-5} *5* α(N)=5.18×10^{-6} *8*; α(O)=2.36×10^{-7} *4* B(E2)(W.u.)=2.6 *4* Mult.: A_2=+0.28 *13* in Coulomb excitation (1970Ro14).

$^{109}_{47}Ag_{62}$-8

γ(^{109}Ag) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[&]	δ[&b]	α[a]	Comments
869.426	5/2+	134.107 *18*	12.7 *3*	735.320	5/2+	M1+E2	0.44 +*13*−*15*	0.24 *3*	α(K)=0.201 *21*; α(L)=0.030 *6*; α(M)=0.0058 *11* α(N)=0.00097 *17*; α(O)=3.5×10^{-5} *3* Mult.,δ: α(K)exp=0.20 *2* from ^{109}Pd β$^-$ decay (1970Ba37).
		145.039 *14*	8.22 *15*	724.381	3/2+	M1+E2	0.13 *2*	0.1531 *25*	α(K)=0.1326 *21*; α(L)=0.0167 *4*; α(M)=0.00318 *7* α(N)=0.000549 *11*; α(O)=2.48×10^{-5} *4* Mult.,δ: α(K)exp=0.15 *2* (1970Ba37) and δ=0.13 *2* from γγ(θ) (1975El10) in ^{109}Pd β$^-$ decay.
		162.37 *4*	0.88 *9*	706.971	(3/2,5/2−)				
		454.269 *14*	3.67 *13*	415.193	5/2−	E1(+M2)	−0.14 +*36*−*17*	0.0030 *17*	α(K)=0.0026 *15*; α(L)=3.1×10^{-4} *19*; α(M)=5.9×10^{-5} *36* α(N)=1.02×10^{-5} *62*; α(O)=4.7×10^{-7} *29* Mult.,δ: from γγ(θ) in ^{109}Pd β$^-$ decay (1988Br31).
		558.040 *10*	22.32 *21*	311.378	3/2−	E1+M2	−0.20 *4*	0.00205 *21*	α(K)=0.00179 *18*; α(L)=0.000214 *23*; α(M)=4.0×10^{-5} *5* α(N)=7.0×10^{-6} *8*; α(O)=3.2×10^{-7} *4* Mult.,δ: α(K)exp=0.0012 *3* (1970Ba37) and δ=−0.26 *5* from γγ(θ) (1977Bo04) in ^{109}Pd β$^-$ decay.
		736.652 *10*	14.53 *15*	132.762	9/2+	E2		0.00222	α(K)=0.00193 *3*; α(L)=0.000236 *4*; α(M)=4.48×10^{-5} *7* α(N)=7.72×10^{-6} *11*; α(O)=3.44×10^{-7} *5* Mult.: α(K)exp=0.0012 *3* from ^{109}Pd β$^-$ decay (1970Ba37).
		781.394 *10*	100.0 *11*	88.0337	7/2+	M1+E2		0.00213	α(K)=0.00187 *3*; α(L)=0.000219 *3*; α(M)=4.14×10^{-5} *6* α(N)=7.19×10^{-6} *10*; α(O)=3.44×10^{-7} *5* Mult.: α(K)exp=0.0017 *5* from ^{109}Pd β$^-$ decay (1970Ba37).
		869.415 *25*	0.13 *6*	0.0	1/2−	[M2]		0.00427	α(K)=0.00372 *6*; α(L)=0.000453 *7*; α(M)=8.62×10^{-5} *12* α(N)=1.495×10^{-5} *21*; α(O)=7.06×10^{-7} *10*
910.902	7/2+	778.140 *14*	100.0 *12*	132.762	9/2+	M1		0.00215	α(K)=0.00188 *3*; α(L)=0.000221 *3*; α(M)=4.18×10^{-5} *6* α(N)=7.26×10^{-6} *11*; α(O)=3.47×10^{-7} *5* Mult.,δ: α(K)exp=0.0018 *5* from ^{109}Pd β$^-$ decay (1970Ba37).
		822.862 *14*	17.69 *19*	88.0337	7/2+	[M1]		0.00190	α(K)=0.001660 *24*; α(L)=0.000194 *3*; α(M)=3.67×10^{-5} *6* α(N)=6.38×10^{-6} *9*; α(O)=3.06×10^{-7} *5*
912.205	7/2−	497.010 *23*	100 *4*	415.193	5/2−	(M1+E2)		0.00619	α(K)=0.00540 *8*; α(L)=0.000641 *9*; α(M)=0.0001215 *17*

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$\gamma(^{109}Ag)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[&]	δ[&b]	α[a]	Comments
									α(N)=2.11×10^{-5} *3*; α(O)=1.001×10^{-6} *14* Mult.: A_2=−0.51 *6* (1989Lo08). I_γ: from Coulomb excitation.
912.205	7/2$^-$	601.1 *7*	25 *4*	311.378	3/2$^-$	(E2)		0.00377	α(K)=0.00327 *5*; α(L)=0.000410 *6*; α(M)=7.80×10^{-5} *12* α(N)=1.338×10^{-5} *20*; α(O)=5.79×10^{-7} *9* E_γ,I_γ: from Coulomb excitation. Mult.: A_2=+0.8 *3*, A_4=+0.6 *3* (1989Lo08).
930.75	13/2$^+$	157.3[‡] *1*	8[‡] *1*	773.42	11/2$^+$				
		798.0[‡] *1*	100[‡] *1*	132.762	9/2$^+$	E2		0.00182	α(K)=0.001582 *23*; α(L)=0.000192 *3*; α(M)=3.65×10^{-5} *6* α(N)=6.29×10^{-6} *9*; α(O)=2.83×10^{-7} *4* Mult.: based on measured anisotropy in ^{96}Zr(^{18}O,p4nγ) (1996Po07).
1090.7	9/2$^-$	675.5 *5*	100	415.193	5/2$^-$	E2		0.00276	α(K)=0.00240 *4*; α(L)=0.000297 *5*; α(M)=5.64×10^{-5} *8* α(N)=9.70×10^{-6} *14*; α(O)=4.28×10^{-7} *6* B(E2)(W.u.)=68 *11* E_γ: from Coulomb excitation. Mult.: A_2=+0.48 *5*, A_4=−0.26 *7* from Coulomb excitation (1989Lo08).
1099.11	(5/2,7/2$^-$)	402.05[c] *9*	31 *11*	697.38?					
		787.6[c] *3*	100 *63*	311.378	3/2$^-$				
		966.29 *4*	18.1 *9*	132.762	9/2$^+$				
		1011.16 *5*	11.5 *6*	88.0337	7/2$^+$				
1324.2	3/2$^-$	909[#c] *1*	8[#] *4*	415.193	5/2$^-$	[M1]		1.52×10^{-3}	α(K)=0.001326 *19*; α(L)=0.0001546 *22*; α(M)=2.93×10^{-5} *5* α(N)=5.09×10^{-6} *8*; α(O)=2.44×10^{-7} *4* B(M1)(W.u.)=0.006 *4*
		1012.9[#] *10*	100[#] *4*	311.378	3/2$^-$	M1+E2	−0.09[#] *3*	1.19×10^{-3}	α(K)=0.001042 *15*; α(L)=0.0001211 *18*; α(M)=2.29×10^{-5} *4* α(N)=3.98×10^{-6} *6*; α(O)=1.91×10^{-7} *3* Mult.,δ: A_2=+0.20 *5* $\gamma(\theta)$ in Coulomb excitation (1970Ro14) consistent with J to J transition.
		1324.2[#] *10*	16[#] *4*	0.0	1/2$^-$	[M1]		6.92×10^{-4}	α(K)=0.000584 *9*; α(L)=6.75×10^{-5} *10*; α(M)=1.276×10^{-5} *18* α(N)=2.22×10^{-6} *4*; α(O)=1.070×10^{-7} *15*; α(IPF)=2.55×10^{-5} *5* B(M1)(W.u.)=0.0039 *16*
1702.9	15/2$^+$	772.3[‡] *3*	100[‡] *16*	930.75	13/2$^+$	M1+E2	+1.0[‡] *+10−5*	0.00208 *8*	α(K)=0.00182 *7*; α(L)=0.000217 *6*;

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Adopted Levels, Gammas (continued)

$\gamma(^{109}Ag)$ (continued)

E_i(level)	J^{π}_i	E_γ†	I_γ†	E_f	J^{π}_f	Mult.$^{\&}$	$\delta^{\&b}$	α^{a}	Comments
									α(M)=4.11×10^{-5} *11* α(N)=7.11×10^{-6} *20*; α(O)=3.30×10^{-7} *15* Mult.,δ: from anisotropy α=0.50 *21* in ^{96}Zr(^{18}O,p4nγ).
1702.9	15/2$^+$	930.6‡ *8*	24‡ *9*	773.42	11/2$^+$	[E2]		1.26×10^{-3}	α(K)=0.001101 *16*; α(L)=0.0001319 *19*; α(M)=2.50×10^{-5} *4* α(N)=4.32×10^{-6} *7*; α(O)=1.98×10^{-7} *3*
1894.28	17/2$^+$	191.3$^{@}$		1702.9	15/2$^+$				
		963.5‡ *1*	100	930.75	13/2$^+$	E2		1.17×10^{-3}	α(K)=0.001017 *15*; α(L)=0.0001215 *17*; α(M)=2.30×10^{-5} *4* α(N)=3.98×10^{-6} *6*; α(O)=1.83×10^{-7} *3* B(E2)(W.u.)=39 *4* Mult.: based on measured anisotropy in ^{96}Zr(^{18}O,p4nγ).
2206.46	15/2$^-$	1275.7‡ *2*	100	930.75	13/2$^+$	E1(+M2)	+0.02‡ *8*	3.73×10^{-4} *13*	α(K)=0.000257 *12*; α(L)=2.93×10^{-5} *14*; α(M)=5.5×10^{-6} *3* α(N)=9.6×10^{-7} *5*; α(O)=4.59×10^{-8} *22*; α(IPF)=7.96×10^{-5} *14* Mult.,δ: from anisotropy α=−0.21 *12* in ^{96}Zr(^{18}O,p4nγ).
2419.96	17/2$^-$	213.5‡ *1*	100	2206.46	15/2$^-$	M1+E2	−0.09‡ *8*	0.0530 *12*	α(K)=0.0461 *10*; α(L)=0.00564 *17*; α(M)=0.00107 *4* α(N)=0.000186 *6*; α(O)=8.62×10^{-6} *16* Mult.,δ: from anisotropy α=−0.36 *12* in ^{96}Zr(^{18}O,p4nγ).
2479.9	17/2$^-$	273.4‡ *3*	100	2206.46	15/2$^-$				
2567.39	19/2$^+$	673.4‡ *2*	92‡ *23*	1894.28	17/2$^+$	M1+E2	+0.31‡ *20*	0.00299	α(K)=0.00261 *5*; α(L)=0.000308 *5*; α(M)=5.84×10^{-5} *9* α(N)=1.014×10^{-5} *15*; α(O)=4.81×10^{-7} *10* Mult.,δ: from anisotropy α=0.20 *19* in ^{96}Zr(^{18}O,p4nγ).
		864.9‡ *4*	100‡ *31*	1702.9	15/2$^+$	E2		1.50×10^{-3}	α(K)=0.001305 *19*; α(L)=0.0001574 *23*; α(M)=2.99×10^{-5} *5* α(N)=5.15×10^{-6} *8*; α(O)=2.34×10^{-7} *4* B(E2)(W.u.)=50 *20* Mult.: from measured anisotropy α=0.61 *29* in ^{96}Zr(^{18}O,p4nγ).
2568.4	19/2$^-$	88.5‡		2479.9	17/2$^-$				
		148.4‡ *1*	100	2419.96	17/2$^-$	M1(+E2)	+0.05‡ *11*	0.141 *6*	α(K)=0.122 *4*; α(L)=0.0151 *10*; α(M)=0.00287 *18* α(N)=0.00050 *3*; α(O)=2.29×10^{-5} *6* Mult.,δ: from anisotropy α=−0.16 *19* in ^{96}Zr(^{18}O,p4nγ).
2660.5	19/2$^-$	240.5‡ *2*	100	2419.96	17/2$^-$	M1(+E2)	−0.05‡ *9*	0.0385 *7*	α(K)=0.0335 *6*; α(L)=0.00408 *10*; α(M)=0.000775 *18* α(N)=0.000134 *3*; α(O)=6.27×10^{-6} *10* Mult.,δ: from anisotropy α=−0.31 *16* in ^{96}Zr(^{18}O,p4nγ).
2740.6	21/2$^-$	172.2‡ *1*	100	2568.4	19/2$^-$	M1(+E2)	+0.01‡ *8*	0.0935 *16*	α(K)=0.0813 *14*; α(L)=0.00997 *22*; α(M)=0.00190 *5*

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$\gamma(^{109}Ag)$ (continued)

E_i(level)	J_i^π	E_γ†	I_γ†	E_f	J_f^π	Mult.&	δ&b	αa	Comments
									α(N)=0.000328 *7*; α(O)=1.527×10^{-5} *24* Mult.,δ: from anisotropy α=−0.23 *14* in ^{96}Zr(^{18}O,p4nγ).
2840.79	21/2$^+$	273.5‡ *1*	43‡ *6*	2567.39	19/2$^+$	M1(+E2)	+0.03‡ *8*	0.0276 *5*	α(K)=0.0240 *4*; α(L)=0.00290 *5*; α(M)=0.000551 *10* α(N)=9.56×10^{-5} *16*; α(O)=4.48×10^{-6} *7* Mult.,δ: from anisotropy α=−0.18 *13* in ^{96}Zr(^{18}O,p4nγ).
		946.4‡ *1*	100‡ *3*	1894.28	17/2$^+$	E2		1.21×10^{-3}	α(K)=0.001059 *15*; α(L)=0.0001268 *18*; α(M)=2.40×10^{-5} *4* α(N)=4.15×10^{-6} *6*; α(O)=1.90×10^{-7} *3* B(E2)(W.u.)=20.4 *23* Mult.: from measured anisotropy α= 0.34 *11* in ^{96}Zr(^{18}O,p4nγ).
2940.2	(21/2$^-$)	279.7‡ *2*	100	2660.5	19/2$^-$	M1+E2	+0.13‡ *9*	0.0262 *6*	α(K)=0.0228 *5*; α(L)=0.00277 *8*; α(M)=0.000527 *15* α(N)=9.12×10^{-5} *24*; α(O)=4.25×10^{-6} *8* Mult.,δ: from anisotropy α=−0.02 *15* in ^{96}Zr(^{18}O,p4nγ).
2988.7	23/2$^-$	248.1‡ *1*	100	2740.6	21/2$^-$	M1(+E2)	+0.02‡ *8*	0.0355 *6*	α(K)=0.0309 *5*; α(L)=0.00375 *7*; α(M)=0.000712 *13* α(N)=0.0001234 *21*; α(O)=5.78×10^{-6} *9* Mult.,δ: from anisotropy α=−0.20 *12* in ^{96}Zr(^{18}O,p4nγ).
3090.19	23/2$^+$	249.4‡ *1*	100	2840.79	21/2$^+$	M1+E2	+0.05‡ *4*	0.0350	α(K)=0.0305 *5*; α(L)=0.00370 *6*; α(M)=0.000704 *11* α(N)=0.0001219 *19*; α(O)=5.70×10^{-6} *9* Mult.,δ: from anisotropy α=−0.16 *7* in ^{96}Zr(^{18}O,p4nγ).
		522.7@		2567.39	19/2$^+$				
3203.5	(23/2$^-$)	263.3‡ *2*	100	2940.2	(21/2$^-$)	M1+E2	−0.14‡ *9*	0.0307 *7*	α(K)=0.0267 *6*; α(L)=0.00326 *10*; α(M)=0.000619 *20* α(N)=0.000107 *4*; α(O)=4.98×10^{-6} *9* Mult.,δ: from anisotropy α=−0.46 *16* in ^{96}Zr(^{18}O,p4nγ).
3276.39	25/2$^+$	186.2‡ *1*	100	3090.19	23/2$^+$	M1(+E2)	−0.05‡ *5*	0.0760 *13*	α(K)=0.0661 *11*; α(L)=0.00810 *16*; α(M)=0.00154 *3* α(N)=0.000267 *5*; α(O)=1.239×10^{-5} *19* Mult.,δ: from anisotropy α=−0.31 *10* in ^{96}Zr(^{18}O,p4nγ).
		435.6@		2840.79	21/2$^+$				
3316.7	25/2$^-$	328.0‡ *1*	100	2988.7	23/2$^-$	M1+E2	+0.06‡ *4*	0.01733	α(K)=0.01510 *22*; α(L)=0.00182 *3*; α(M)=0.000345 *5* α(N)=5.98×10^{-5} *9*; α(O)=2.81×10^{-6} *4* Mult.,δ: from anisotropy α=−01.3 *13* in ^{96}Zr(^{18}O,p4nγ).
3575.19	27/2$^+$	298.8‡ *1*	100	3276.39	25/2$^+$	M1+E2	−0.07‡ *5*	0.0220 *4*	α(K)=0.0192 *3*; α(L)=0.00231 *4*; α(M)=0.000439 *7* α(N)=7.61×10^{-5} *12*; α(O)=3.57×10^{-6} *5* Mult.,δ: from anisotropy α=−0.35 *9* in ^{96}Zr(^{18}O,p4nγ).
		485.0@		3090.19	23/2$^+$				
3968.7	29/2$^+$	393.5‡ *1*	100	3575.19	27/2$^+$	M1+E2	+0.06‡ *4*	0.01097	α(K)=0.00957 *14*; α(L)=0.001144 *17*; α(M)=0.000217 *3* α(N)=3.76×10^{-5} *6*; α(O)=1.779×10^{-6} *25* Mult.,δ: from anisotropy α=−0.13 *10* in ^{96}Zr(^{18}O,p4nγ).
		692.3@		3276.39	25/2$^+$				

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$\gamma(^{109}$Ag) (continued)

E_i(level)	J^π_i	E_γ †	I_γ †	E_f	J^π_f	Mult.&	δ&b	αa	Comments
4375.8	31/2+	407.1‡ *1*	100	3968.7	29/2+	M1(+E2)	0.00‡ *6*	0.01008	α(K)=0.00879 *13*; α(L)=0.001049 *15*; α(M)=0.000199 *3* α(N)=3.45×10^{-5} *5*; α(O)=1.634×10^{-6} *23* Mult.,δ: from anisotropy α=−0.22 *11* in ^{96}Zr(^{18}O,p4nγ).
		800.6@		3575.19	27/2+				
4886.4	33/2+	510.6‡ *2*	100	4375.8	31/2+	M1+E2	−0.14‡ *8*	0.00580	α(K)=0.00506 *8*; α(L)=0.000601 *9*; α(M)=0.0001140 *17* α(N)=1.98×10^{-5} *3*; α(O)=9.37×10^{-7} *14* Mult.,δ: from anisotropy α=−0.46 *15* in ^{96}Zr(^{18}O,p4nγ).
		917.7@		3968.7	29/2+				
5414.5	(35/2+)	528.1‡ *3*	100	4886.4	33/2+	M1+E2	+0.20‡ *14*	0.00535	α(K)=0.00467 *7*; α(L)=0.000554 *9*; α(M)=0.0001052 *16* α(N)=1.82×10^{-5} *3*; α(O)=8.63×10^{-7} *13* Mult.,δ: from anisotropy α=0.10 *19* in ^{96}Zr(^{18}O,p4nγ).
		1038.7@		4375.8	31/2+				
5998.3	(37/2+)	583.8#		5414.5	(35/2+)				
		1111.9#		4886.4	33/2+				

† From ^{109}Pd β^- decay, unless otherwise noted.
‡ From ^{96}Zr(^{18}O,p4nγ).
# From Coulomb excitation.
@ From ^{100}Mo(^{13}C,p3nγ).
& From ce data and $\gamma\gamma(\theta)$ in ^{109}Pd β^- decay, anisotropy in ^{96}Zr(^{18}O,p4nγ), and $\gamma(\theta)$ in Coulomb excitation, unless otherwise noted.
a Additional information 2.
b If No value given it was assumed δ=0.00 for E2/M1, δ=1.00 for E3/M2 and δ=0.10 for the other multipolarities.
c Placement of transition in the level scheme is uncertain.

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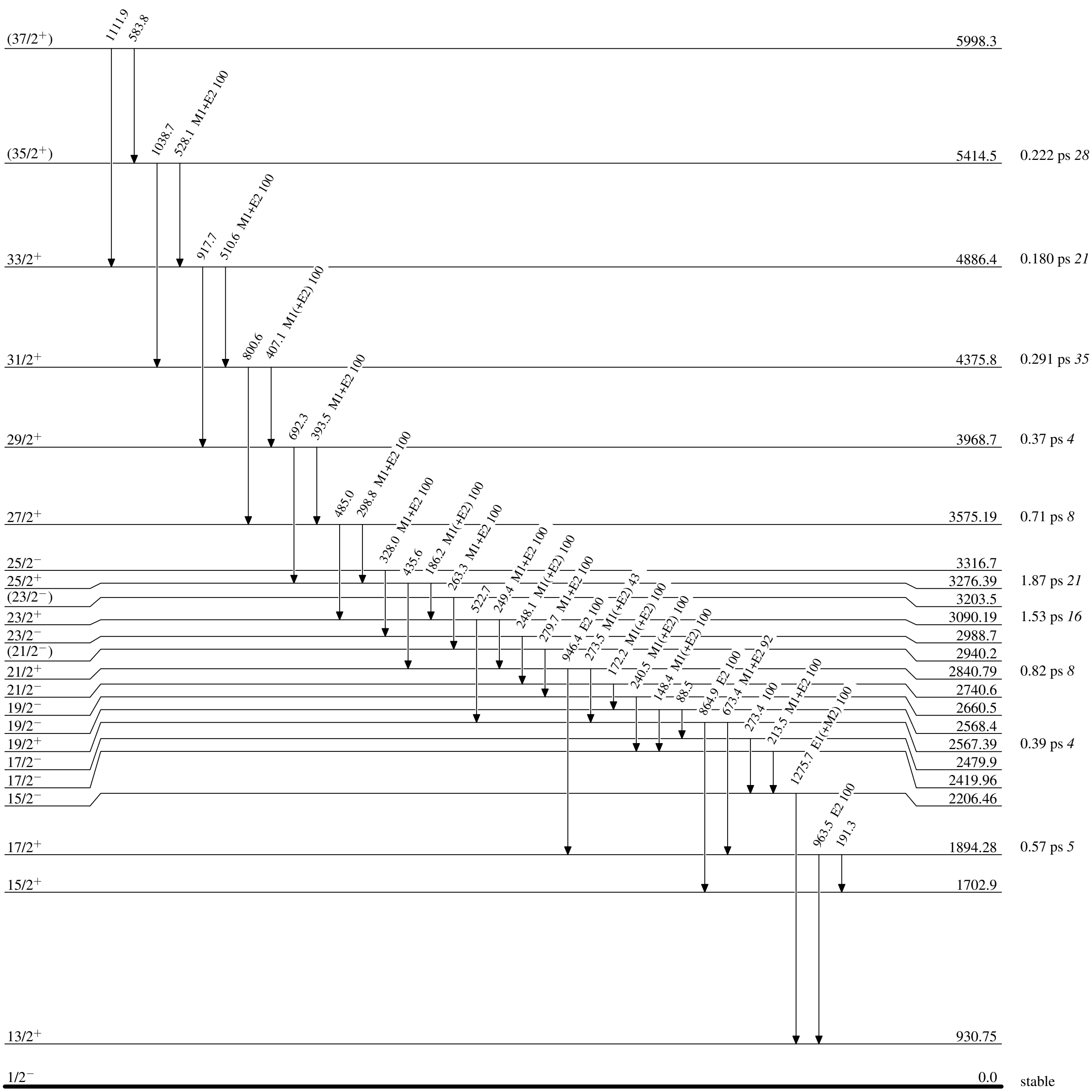
Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level



$^{109}_{47}Ag_{62}$

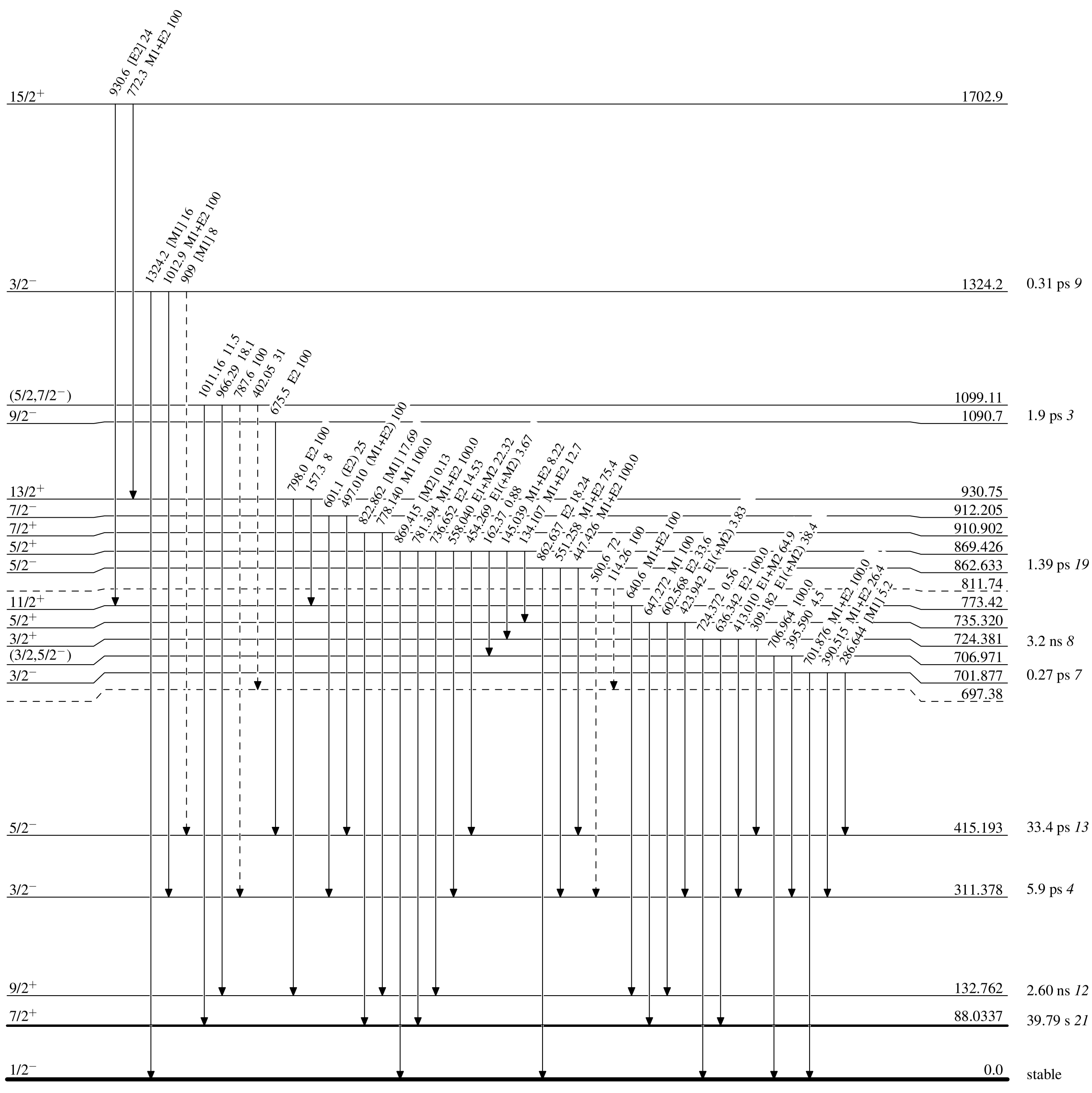
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{109}_{47}Ag_{62}$

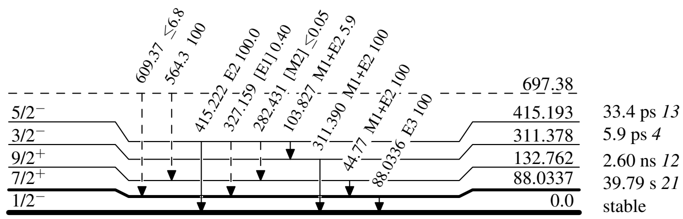
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{109}_{47}Ag_{62}$

Adopted Levels, Gammas