^{103}Rh(α,2nγ) 1985Ke09,1979Ka05,1978Hi01

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	S. Lalkovski, J. Timar and Z. Elekes	NDS 161, 1 (2019)	1-Apr-2019

1985Ke09: Facility: Rossendorf's U-120 cyclotron; Beam: E(α)=27 MeV; Targets: one 17 mg/cm^2 thick metallic foil enriched to 94% in ^{103}Rh, one 34 mg/cm^2 Rh of cubic crystaline structure; Detectors: co-axial and planar Ge(Li) detectors, one Ge X-ray detector, one single-crystal and one two-crystals Compton polarimeters; Magnetic fields: 2.205 +/- 25 T; Measured: γ, γ-γ and γ-X coinc., γ-R.F.; Deduced: ^{105}Ag level scheme, γ-ray Mult., limits on δ, μ, $T_{1/2}$;

1979Ka05: Facility: Amsterdam's Free University AVF cyclotron; Beam: E(α)=17-32 MeV; Target: one rolled self-supporting 7 mg/cm^2 thick, and one 300 μg/cm^2 enriched in ^{103}Rh, and evaporated on 20 μg/cm^2 carbon backing; Detectors: one planar Ge(Li), one large-volume Ge(Li), one small-volume intrinsic Ge detector, and mini Orange; Measured: α(K)exp, γ-γ coinc., Eγ, Iγ, γ-$\gamma(\theta)$ and γ-ray linear polarization P_{exp}, γ-γ(t), Time Diferential Perturbed Angular Distribution (TDPAD), excitation function; Deduced: ^{105}Ag level scheme, J^π, t, g-factor; Also, from the same collaboration: 1977KaYJ, 1977KaZT.

1978Hi01: Facility: University of Cologne's Tandem accelerator; Beam: E(α)=19-25 MeV; Target: 6 mg/cm^2 ^{103}Rh; Detectors: two Ge(Li) and one Compton polarimeter; Measured: γ, , γ-γ coinc., γ-$\gamma(\theta)$ coinc., Eγ, Iγ, linear polarization, excitation function; Deduced: ^{105}Ag level scheme, γ-ray Mult., J^π.

Others: 1980Le05, 1979KeZW.

^{105}Ag Levels

E(level)[†]	J^π[‡]	$T_{1/2}$	Comments
0.0	$1/2^-$		
25.480 *20*	$7/2^+$		
53.09 *8*	$9/2^+$		
346.85 *15*	$3/2^-$		
433.29 *10*	$5/2^-$		
668.55 *8*	$11/2^+$		
917.16 *10*	$13/2^+$		E(level): Possible ns isomer just above that level. Suggestion based on 248.6, 615.5, 643.0, and 864.1 γ(t) in 1979Ka05.
987.2?[@] *7*	$(5/2)^+$		
1023.69[&] *14*	$7/2^-$		
1042.6?[&] *8*	$3/2^-$,$5/2^-$		
1166.39 *14*	$9/2^-$		
1327.9?[@] *10*	$(5/2^+)$		
1572.48 *14*	$(11/2^+)$		configuration: $\pi g_{9/2}^{-1}\nu d_{5/2}^2$.
1665.76[&] *13*	$13/2^+$		
1680.76 *12*	$15/2^+$		
1718.8?[@] *7*	$(9/2^+)$		
1733.56 *11*	$15/2^+$	5.6 ns *5*	$T_{1/2}$: unweighted average of 5.12 ns *4* in 1980Le05 from α-γ(t) and 6.0 ns *2* from 816γ-579γ(t) in 1979Ka05; 6.0 ns *2* from γ-R.F. in 1985Ke09. g: +0.508 *25* from TDPAD in 1985Ke09, +0.497 *19* from DPAD in 1980Le05, 0.58 *6* from DPAD in 1979Ka05. configuration: $\pi g_{9/2}^{-1}\nu d_{5/2}^2$.
1977.72 *13*	$17/2^+$		
2022.34[&] *12*	$17/2^+$		
2113.60[&] *25*			
2298.57 *15*	$17/2^-$		
2312.75 *13*	$19/2^+$		
2470.00 *15*	$15/2^-$		
2497.25[#] *15*	$15/2^-$		
2595.64[#] *14*	$17/2^-$		
2751.04[#] *17*	$19/2^-$		
2761.35 *16*	$(21/2^+)$		

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^{103}Rh(α,2nγ) 1985Ke09,1979Ka05,1978Hi01 (continued)

^{105}Ag Levels (continued)

E(level)[†]	J$^\pi$[‡]	Comments
2774.48 *16*	(17/2$^-$)	
2935.64[#] *20*	21/2$^-$	
2943.38 *19*	(19/2$^-$)	E(level): 3007.9 in 1979Ka05.
3101.2[&] *3*		
3124.92[&] *24*	21/2$^+$	
3175.94[#&] *22*	23/2$^-$	
3176.48 *22*	(21/2$^-$)	
3480.44? *24*		
3510.64[#] *24*	25/2$^-$	
3866.2[a] *4*	[25/2$^-$]	
3927.8[#] *3*	(27/2$^-$)	
4361.1[#] *3*	[29/2$^-$]	

[†] From a least-squares fit to Eγ.
[‡] From 1979Ka05.
[#] Band member.
[@] Level observed in 1978Hi01, but not confirmed in later references.
[&] Level observed in 1979Ka05, but not reported in 1985Ke09.
[a] Level observed only in 1985Ke09.

γ(^{105}Ag)

E$_\gamma$[†]	I$_\gamma$[†]	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.[‡]	δ[‡]	Comments
(25.48 *2*)		25.480	7/2$^+$	0.0	1/2$^-$			E$_\gamma$: from the adopted gammas.
27.7 *1*	12.8 *14*	53.09	9/2$^+$	25.480	7/2$^+$			
86.4 *2*	1.3 *1*	433.29	5/2$^-$	346.85	3/2$^-$	M1+E2	−0.05 *5*	δ: from γ linear pol measurement in 1979KeZW; Other: 0.0≥δ≥−1.0 (1985Ke09).
98.4 *1*	10.4 *3*	2595.64	17/2$^-$	2497.25	15/2$^-$	M1+E2	0.00 *+3−5*	Mult.: A$_2$=−0.23 *1*; A$_4$=−0.02 *2* (1979Ka05). Mult.: A$_2$=−0.21 *3*, A$_4$=0.09 *5* (1985Ke09); Mult.: P$_{a.d.}$=−0.39 *6* (1985Ke09); δ: Other: 0.0≤δ≤0.04 (1985Ke09).
125.6 *1*	7.3 *2*	2595.64	17/2$^-$	2470.00	15/2$^-$	M1+E2	+0.08 *+3−1*	Mult.: A$_2$=−0.09 *9*; A$_4$=0.00 *6* (1979Ka05). Mult.: A$_2$=−0.13 *3*, A$_4$=0.03 *5* (1985Ke09); Mult.: P$_{a.d.}$=−0.37 *5* (1985Ke09); δ: Other: 0.02≤δ≤0.09 (1985Ke09).
155.4 *1*	28.0 *7*	2751.04	19/2$^-$	2595.64	17/2$^-$	M1+E2	+0.04 *+1−3*	Mult.: A$_2$=−0.17 *1*; A$_4$=0.00 *1* (1979Ka05). Mult.: A$_2$=−0.17 *2*, A$_4$=0.05 *2* (1985Ke09); Mult.: P$_{exp}$=−0.68 *35*, P$_{a.d.}$=−0.41 *4* (1985Ke09); δ: Other: 0.02≤δ≤0.08 (1985Ke09).
161.1 *1*	1.0 *1*	1733.56	15/2$^+$	1572.48	(11/2$^+$)	(E2)		Mult.: A$_2$=0.60 *22*, A$_4$=−0.37 *27* (1985Ke09);

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^{103}Rh(α,2nγ) 1985Ke09,1979Ka05,1978Hi01 (continued)

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

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	δ[‡]	Comments
168.9[@] *1*	5.2 *5*	2943.38	(19/2$^-$)	2774.48	(17/2$^-$)	M1(+E2)	0.15 *15*	Mult.: A_2=−0.25 *2*, A_4=−0.02 *3* (1979Ka05); Mult.: A_2=−0.23 *2*, A_4=−0.01 *2* (1985Ke09); Mult.: P_{exp}=−0.37 *33*, $P_{a.d.}$=−0.36 *3* (1985Ke09); δ: others: 0.0≤δ≤0.03 (1985Ke09).
184.6 *1*	20.7 *5*	2935.64	21/2$^-$	2751.04	19/2$^-$	M1+E2	+0.03 *+4−2*	Mult.: A_2=−0.16 *1*, A_4=0.00 *1* (1979Ka05); Mult.: A_2=−0.14 *2*, A_4=−0.07 *2* (1985Ke09); Mult.: P_{exp}=−39 *11* (1979Ka05); Mult.: $P_{c.p.}$=−0.38 *27*, $P_{a.d.}$=−0.47 *3* (1985Ke09); δ: others: 0.05≤δ≤0.08 (1985Ke09).
233.1[@] *1*	9.2 *3*	3176.48	(21/2$^-$)	2943.38	(19/2$^-$)	M1+E2	+0.01 *+3−2*	Mult.: A_2=−0.20 *2*, A_4=0.00 *3* (1979Ka05); Mult.: A_2=−0.21 *2*, A_4=−0.07 *3* (1985Ke09); Mult.: P_{exp}=−30 *8* (1979Ka05); Mult.: $P_{c.p.}$=−0.46 *35*, $P_{a.d.}$=−0.45 *3* (1985Ke09); δ: α(K)exp=0.027 *9* (1979Ka05); Other: 0.01≤δ≤0.04 (1985Ke09).
240.3 *1*	13.9 *4*	3175.94	23/2$^-$	2935.64	21/2$^-$	M1+E2	+0.02 *+3−1*	Mult.: A_2=−0.17 *1*, A_4=−0.03 *2* (1979Ka05); Mult.: A_2=−0.14 *2*, A_4=−0.04 *3* (1985Ke09); Mult.: P_{exp}=−25 *5* (1979Ka05); Mult.: $P_{c.p.}$=−0.35 *26*, $P_{a.d.}$=−0.45 *3* (1985Ke09); δ: α(K)exp=0.039 *12* (1979Ka05); Other: 0.04≤δ≤0.07 (1985Ke09).
248.6 *1*	35.3 *9*	917.16	13/2$^+$	668.55	11/2$^+$	M1+E2	+0.08 *+1−2*	Mult.: A_2=−0.11 *1*, A_4=−0.03 *2* (1979Ka05); Mult.: A_2=−0.10 *1*, A_4=−0.02 *2* (1985Ke09); Mult.: P_{exp}=−30 *4* (1979Ka05). Mult.: $P_{c.p.}$=−0.41 *13*, $P_{a.d.}$=−0.38 *2* (1985Ke09); δ: α(K)exp=0.030 *9* (1979Ka05); Other: 0.07≤δ ≤ 0.09 (1985Ke09).
288.8[#b]	1.9[#]	2022.34	17/2$^+$	1733.56	15/2$^+$			
290.4 *1*	4.9 *2*	2312.75	19/2$^+$	2022.34	17/2$^+$	M1+E2	−2.05 *+36−28*	Mult.: A_2=−0.77 *3*, A_4=0.44 *4* (1979Ka05); Mult.: A_2=−0.78 *3*, A_4=0.18 *5* (1985Ke09); Mult.: P_{exp}=27 *6* (1979Ka05); Mult.: $P_{c.p.}$=0.87 *63*, $P_{a.d.}$=0.20 *4* (1985Ke09); δ: α(K)exp=0.026 *8* (1979Ka05); Other: −2.3≤δ≤−1.8 (1985Ke09).
297.0[a] *1*	8.4[a] *3*	1977.72	17/2$^+$	1680.76	15/2$^+$			Mult.: A_2=0.15 *3*, A_4=0.01 *5* (1985Ke09); δ: α(K)exp=0.024 *7* (1979Ka05).
297.0[a]	8.4[a] *3*	2595.64	17/2$^-$	2298.57	17/2$^-$			

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^{103}Rh(α,2nγ) 1985Ke09,1979Ka05,1978Hi01 (continued)

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

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	δ[‡]	Comments
304.5[a] *1*	7.0[a] *8*	2774.48	(17/2$^-$)	2470.00	15/2$^-$	M1+E2	+0.03 *+7−9*	Mult.: A_2=−0.18 *11*, A_4=−0.04 *16* (1979Ka05); Mult.: A_2=−0.16 *3*, A_4=−0.09 *5* (1985Ke09);
304.5[a] *1*	7.0[a] *8*	3480.44?		3175.94	23/2$^-$			Mult.: A_2=−0.18 *11*, A_4=−0.04 *16* (1979Ka05).
334.7 *1*	8.7 *3*	3510.64	25/2$^-$	3175.94	23/2$^-$	M1+E2	0.00 *3*	Mult.: A_2=−0.19 *3*, A_4=0.10 *4* (1979Ka05); Mult.: A_2=−0.16 *5*, A_4=−0.03 *7* (1985Ke09); Mult.: P_{exp}=−40 *5* (1979Ka05); Mult.: $P_{c.p.}$=−0.40 *28*, $P_{a.d.}$=−0.39 *8* (1985Ke09); δ: α(K)exp=0.012 *4* (1979Ka05); Other: 0.02≤δ≤0.08 (1985Ke09).
341.4 *2*	6.1 *3*	2022.34	17/2$^+$	1680.76	15/2$^+$	M1+E2	+0.11 *+6−5*	Mult.: A_2=0.01 *5*, A_4=0.05 *7* (1979Ka05); Mult.: A_2=−0.14 *20*, A_4=0.14 *36* (1985Ke09); Mult.: P_{exp}=−19 *6* (1979Ka05). δ: α(K)exp=0.015 *5* (1979Ka05); Other: −7 *5* (1979KeZW).
346.8 *2*	9.7 *3*	346.85	3/2$^-$	0.0	1/2$^-$	M1+E2	+0.10 *+5−7*	Mult.: A_2=−0.12 *4*, A_4=0.03 *5* (1979Ka05); Mult.: A_2=−0.08 *9*, A_4=0.18 *14* (1985Ke09); Mult.: P_{exp}=−31 *4* (1979Ka05); Mult.: $P_{c.p.}$=−0.92 *52*, $P_{a.d.}$=−0.12 *15* (1985Ke09). δ: α(K)exp=0.014 *4* (1979Ka05); Other: 0.0≤δ≤0.30 (1985Ke09).
350.2 *2*	4.2 *2*	3101.2		2751.04	19/2$^-$			
385.8[&] *3*		3866.2	[25/2$^-$]	3480.44?				
417.2 *1*	3.6 *3*	3927.8	(27/2$^-$)	3510.64	25/2$^-$	M1+E2	+0.19 *+5−6*	Mult.: A_2=0.01 *14*, A_4=0.05 *16* (1979Ka05); Mult.: A_2=−0.05 *6*, A_4=−0.16 *11* (1985Ke09); Mult.: P_{exp}=−65 *12* (1979Ka05); Mult.: $P_{c.p.}$=−0.73 *35*, $P_{a.d.}$=−0.65 *12* (1985Ke09); δ: α(K)exp=0.011 *4* (1979Ka05); Other: 0.08≤δ≤0.15 (1985Ke09).
433.3[a] *1*	28.0[a] *8*	433.29	5/2$^-$	0.0	1/2$^-$	E2		Mult.: A_2=0.20 *2*, A_4=−0.11 *3* (1979Ka05); Mult.: A_2=0.19 *2*, A_4=−0.02 *3* (1985Ke09); Mult.: P_{exp}=32 *3* (1979Ka05). Mult.: $P_{c.p.}$=0.92 *11*, $P_{a.d.}$=0.30 *4* (1985Ke09). δ: α(K)exp=0.0079 *24* (1979Ka05).
433.3[a] *1*	28.0[a] *8*	4361.1	[29/2$^-$]	3927.8	(27/2$^-$)			
448.6 *1*	6.9 *4*	2761.35	(21/2$^+$)	2312.75	19/2$^+$	M1+E2	+0.33 *+6−3*	Mult.: A_2=0.23 *6*, A_4=−0.09 *8* (1979Ka05); Mult.: A_2=0.37 *6*, A_4=0.01 *9* (1985Ke09); Mult.: P_{exp}=−80 *9* (1979Ka05); Mult.: $P_{c.p.}$=−0.84 *35*, $P_{a.d.}$=−0.81 *15* (1985Ke09);

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^{103}Rh(α,2nγ) 1985Ke09,1979Ka05,1978Hi01 (continued)

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

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	δ[‡]	Comments
								Mult.: P_{exp}=−80 *9* (1979Ka05); Mult.: $P_{c.p.}$=−0.84 *35*, $P_{a.d.}$=−0.81 *15* (1985Ke09); δ: α(K)exp=0.0059 *19* (1979Ka05); Other: 0.30≤δ≤0.44 (1985Ke09).
565.0 *1*	16.9 *7*	2298.57	17/2$^-$	1733.56	15/2$^+$	E1		Mult.: A_2=−0.24 *4*, A_4=−0.10 *6* (1979Ka05); Mult.: A_2=−0.24 *2*, A_4=0.05 *4* (1985Ke09); Mult.: P_{exp}=30 *4* (1979Ka05); Mult.: $P_{c.p.}$=0.32 *15*, $P_{a.d.}$=−0.29 *4* (1985Ke09); δ: α(K)exp=0.0012 *5* (1979Ka05).
579.2 *1*	14.0 *6*	2312.75	19/2$^+$	1733.56	15/2$^+$	E2		Mult.: A_2=0.37 *4*, A_4=−0.07 *6* (1979Ka05); Mult.: A_2=0.30 *3*, A_4=−0.10 *5* (1985Ke09); Mult.: P_{exp}=83 *7* (1979Ka05); Mult.: $P_{c.p.}$=0.56 *14*, $P_{a.d.}$=0.48 *8* (1985Ke09); δ: α(K)exp=0.0031 *10* (1979Ka05).
590.4 *1*	2.8 *3*	1023.69	7/2$^-$	433.29	5/2$^-$	M1+E2	+0.02 +*9*−*44*	Mult.: A_2=−0.62 *31*, A_4=−0.46 *34* (1979Ka05); Mult.: A_2=−0.43 *22*, A_4=0.09 *36* (1985Ke09);
609.4[#b]	5.6[#]	1042.6?	3/2$^-$,5/2$^-$	433.29	5/2$^-$			Mult.: A_2/A_0=−0.259 *6*, A_4/A_0=0.63 *75* (1978Hi01).
615.5 *1*	100	668.55	11/2$^+$	53.09	9/2$^+$	M1+E2	+0.43 +*2*−*4*	Mult.: A_2=0.31 *1*, A_4=0.04 *1* (1979Ka05); Mult.: A_2=0.25 *2*, A_4=0.03 *2* (1985Ke09); Mult.: P_{exp}=−56 *4* (1979Ka05); Mult.: $P_{c.p.}$=−0.50 *9*, $P_{a.d.}$=−0.50 *9* (1985Ke09); δ: α(K)exp=0.0039 *12* (1979Ka05); 0.34≤δ ≤ 0.40 (1985Ke09).
643.0 *1*	5.1 *2*	668.55	11/2$^+$	25.480	7/2$^+$	E2		Mult.: A_2=0.34 *5*, A_4=0.12 *7* (1979Ka05); Mult.: A_2=0.11 *11*, A_4=−0.03 *18* (1985Ke09); Mult.: P_{exp}=57 *13* (1979Ka05);
676.7[#b]	5.5[#]	1023.69	7/2$^-$	346.85	3/2$^-$			
695.7[#b]	1.5[#]	1042.6?	3/2$^-$,5/2$^-$	346.85	3/2$^-$			
733.1 *1*	14.9 *3*	1166.39	9/2$^-$	433.29	5/2$^-$	E2		Mult.: A_2=0.27 *5*, A_4=−0.13 *7* (1979Ka05); Mult.: A_2=0.26 *3*, A_4=−0.09 *5* (1985Ke09); Mult.: P_{exp}=50 *17* (1979Ka05). Mult.: $P_{c.p.}$=0.35 *17*, $P_{a.d.}$=0.40 *7* (1985Ke09); δ: α(K)exp=0.0018 *6* (1979Ka05).
748.0 *3*	1.9 *3*	1665.76	13/2$^+$	917.16	13/2$^+$			
763.6 *1*	25.3 *9*	1680.76	15/2$^+$	917.16	13/2$^+$	M1+E2	+0.29 *3*	Mult.: A_2=0.19 *3*, A_4=0.04 *4* (1979Ka05); Mult.: A_2=0.21 *2*, A_4=−0.01 *3*

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^{103}Rh(α,2nγ) 1985Ke09,1979Ka05,1978Hi01 (continued)

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

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	Mult.‡	δ‡	Comments
								(1985Ke09); Mult.: P_{exp}=−49 *6* (1979Ka05); Mult.: $P_{c.p.}$=−0.46 *16*, $P_{a.d.}$=−0.57 *5* (1985Ke09); δ: α(K)exp=0.0020 *6* (1979Ka05); Other: 0.27≤δ≤0.33 (1985Ke09).
816.5 *1*	13.9 *7*	1733.56	15/2$^+$	917.16	13/2$^+$	M1+E2	−1.04 *+31−39*	Mult.: A_2=−0.92 *6*, A_4=0.10 *6* (1979Ka05); Mult.: A_2=−0.76 *5*, A_4=0.13 *7* (1985Ke09); Mult.: P_{exp}=18 *5* (1979Ka05). Mult.: $P_{c.p.}$=0.16 *9*, $P_{a.d.}$=0.09 *6* (1985Ke09); δ: α(K)exp=0.0016 *5* (1979Ka05); Other: −0.35≥δ≥−1.10 (1985Ke09).
864.1 *1*	122 *3*	917.16	13/2$^+$	53.09	9/2$^+$	E2		Mult.: A_2=0.29 *2*, A_4=−0.13 *2* (1979Ka05); Mult.: A_2=0.31 *2*, A_4=−0.09 *3* (1985Ke09); Mult.: P_{exp}=60 *5* (1979Ka05); Mult.: $P_{c.p.}$=0.43 *13*, $P_{a.d.}$=0.50 *5* (1985Ke09); δ: α(K)exp=0.0012 *4* (1979Ka05).
914.9 *1*	5.6 *2*	2595.64	17/2$^-$	1680.76	15/2$^+$	E1		Mult.: A_2=−0.22 *30*, A_4=−0.02 *34* (1979Ka05); Mult.: A_2=−0.17 *7*, A_4=0.18 *11* (1985Ke09); Mult.: P_{exp}=66 *12* (1979Ka05); Mult.: $P_{c.p.}$=0.64 *27*, $P_{a.d.}$=−0.12 *11* (1985Ke09);
934.1#b	1.3#	987.2?	(5/2)$^+$	53.09	9/2$^+$			
947.2 *2*	3.8 *2*	2113.60		1166.39	9/2$^-$			
961.8#b	1.1#	987.2?	(5/2)$^+$	25.480	7/2$^+$			
997.3 *1*	5.3 *2*	1665.76	13/2$^+$	668.55	11/2$^+$	M1+E2	+1.26 *+25−59*	Mult.: A_2=0.69 *5*, A_4=0.23 *7* (1979Ka05); Mult.: P_{exp}=−92 *24* (1979Ka05).
1012.2 *3*	11.8 *4*	1680.76	15/2$^+$	668.55	11/2$^+$	E2		Mult.: A_2=0.28 *8*, A_4=−0.25 *11* (1979Ka05); Mult.: A_2=0.27 *7*, A_4=−0.20 *10* (1985Ke09); Mult.: P_{exp}=59 *8* (1979Ka05); Mult.: $P_{c.p.}$=0.44 *30*, $P_{a.d.}$=0.35 *16* (1985Ke09); δ: α(K)exp=0.00065 *22* (1979Ka05).
1060.5 *1*	27.5 *10*	1977.72	17/2$^+$	917.16	13/2$^+$	E2		Mult.: A_2=0.37 *4*, A_4=0.00 *4* (1979Ka05); Mult.: A_2=0.33 *3*, A_4=−0.09 *4* (1985Ke09); Mult.: P_{exp}=45 *7* (1979Ka05); Mult.: $P_{c.p.}$=0.56 *18*, $P_{a.d.}$=0.55 *8* (1985Ke09); δ: α(K)exp=0.00057 *18* (1979Ka05).
1064.9 *1*	29.9 *10*	1733.56	15/2$^+$	668.55	11/2$^+$	E2		Mult.: A_2=0.36 *4*, A_4=−0.05 *4* (1979Ka05); Mult.: A_2=0.32 *3*, A_4=−0.09 *4* (1985Ke09);

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^{103}Rh(α,2nγ) 1985Ke09,1979Ka05,1978Hi01 (continued)

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

E_γ [†]	I_γ [†]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [‡]	Comments
							Mult.: P_{exp}=46 *7* (1979Ka05); Mult.: $P_{c.p.}$=0.37 *17*, $P_{a.d.}$=0.53 *8* (1985Ke09); δ: α(K)exp=0.00059 *19* (1979Ka05).
1093.6 *2*	4.0 *2*	2774.48	(17/2$^-$)	1680.76	15/2$^+$		Mult.: A_2=−0.18 *7*, A_4=−0.09 *11* (1985Ke09); Mult.: P_{exp}=29 *14* (1979Ka05); Mult.: $P_{c.p.}$=0.2 *5*, $P_{a.d.}$=−0.44 *12* (1985Ke09);
1105.2 *1*	18.6 *4*	2022.34	17/2$^+$	917.16	13/2$^+$	E2	Mult.: A_2=0.30 *2*, A_4=−0.10 *2* (1979Ka05); Mult.: A_2=0.34 *3*, A_4=−0.08 *4* (1985Ke09); Mult.: P_{exp}=46 *8* (1979Ka05); Mult.: $P_{c.p.}$=0.58 *17*, $P_{a.d.}$=0.57 *7* (1985Ke09); δ: α(K)exp=0.00058 *18* (1979Ka05).
1147.2 *2*	5.1 *2*	3124.92	21/2$^+$	1977.72	17/2$^+$	E2	Mult.: A_2=0.44 *16*, A_4=−0.03 *21* (1979Ka05); Mult.: P_{exp}=70 *18* (1979Ka05). δ: α(K)exp=0.00038 *14* (1979Ka05).
1302.4[#b]	0.64[#]	1327.9?	(5/2$^+$)	25.480	7/2$^+$		
1520.2 *5*	1.9 *3*	1572.48	(11/2$^+$)	53.09	9/2$^+$		
1546.6 *5*	3.3 *3*	1572.48	(11/2$^+$)	25.480	7/2$^+$	(E2)	Mult.: A_2=0.37 *14*, A_4=−0.16 *21* (1985Ke09);
1552.8 *2*	11.3 *3*	2470.00	15/2$^-$	917.16	13/2$^+$	E1	Mult.: A_2=−0.31 *3*, A_4=−0.07 *4* (1979Ka05); Mult.: A_2=−0.23 *4*, A_4=0.04 *6* (1985Ke09); Mult.: P_{exp}=10 *9* (1979Ka05); Mult.: $P_{c.p.}$=0.3 *4*, $P_{a.d.}$=−0.30 *7* (1985Ke09); δ: α(K)exp=0.00015 *7* (1979Ka05).
1580.1 *2*	14.6 *4*	2497.25	15/2$^-$	917.16	13/2$^+$	E1	Mult.: A_2=−0.24 *2*, A_4=0.03 *3* (1979Ka05); Mult.: A_2=−0.29 *3*, A_4=−0.05 *5* (1985Ke09); Mult.: P_{exp}=10 *6* (1979Ka05); Mult.: $P_{c.p.}$=0.2 *2*, $P_{a.d.}$=−0.41 *6* (1985Ke09); δ: α(K)exp=0.00014 *6* (1979Ka05).
1612.0 *5*	2.0 *3*	1665.76	13/2$^+$	53.09	9/2$^+$		
1665.7[#b]	1.6[#]	1718.8?	(9/2$^+$)	53.09	9/2$^+$		
1693.4[#b]	1.6[#]	1718.8?	(9/2$^+$)	25.480	7/2$^+$		

[†] From 1979Ka05, unless otherwise noted.
[‡] From 1979Ka05 and 1985Ke09, based on γ-$\gamma(\theta)$ and polarization measurments; In 1985Ke09, $P_{c.p.}$ is from Compon polarimeter and $P_{a.d.}$ from angular distribution measurements, respectively. $P_{c.p.}$ and $P_{a.d.}$ are of opposite signs for parity-changing transitions.
[#] From 1978Hi01. Not observed in 1979Ka05 nor validated in 1985Ke09.
[@] Transition sequence swapped in 1985Ke09, based on intensity arguments.
[&] From 1985Ke09.
[a] Multiply placed with undivided intensity.
[b] Placement of transition in the level scheme is uncertain.

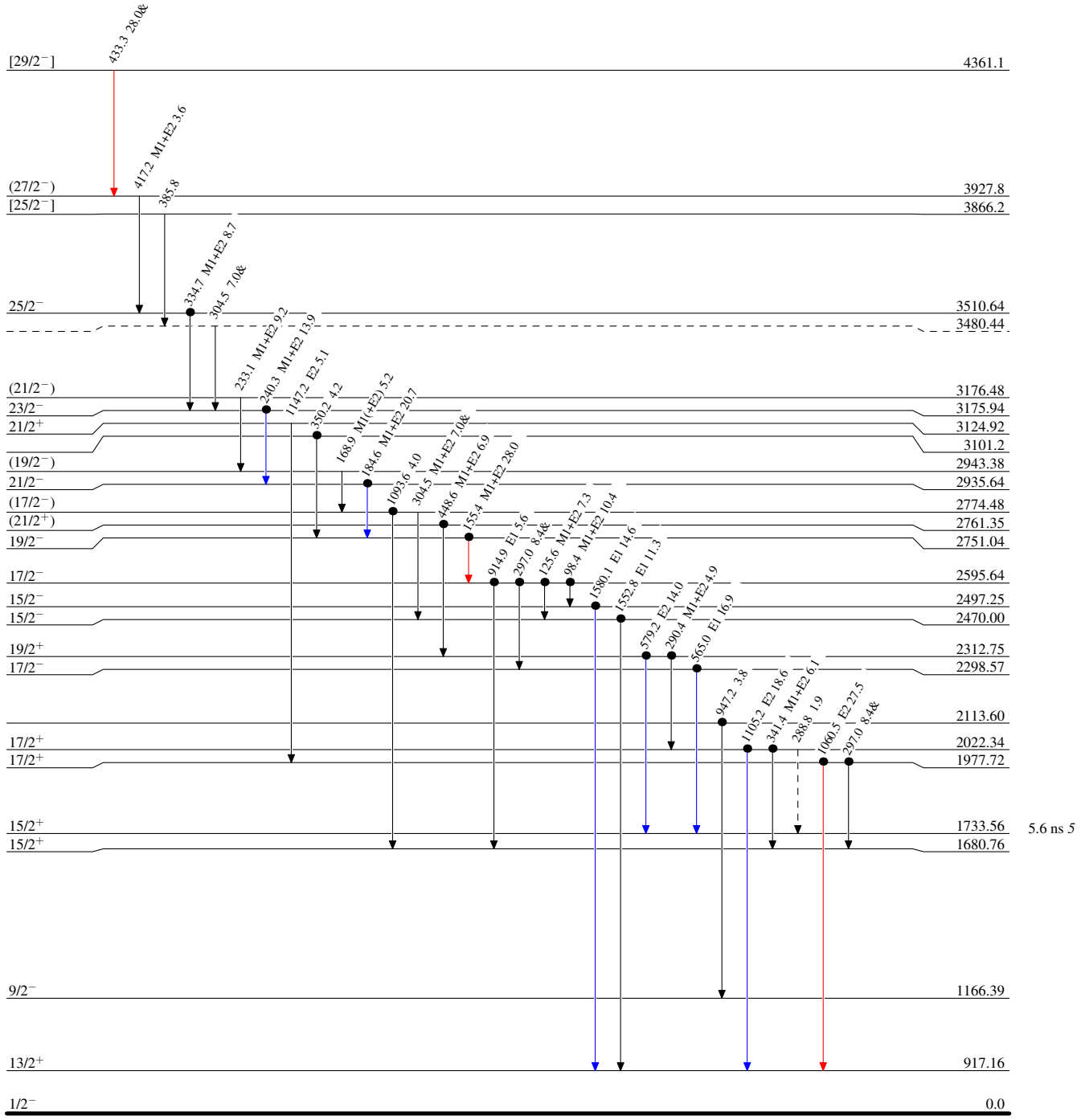
^{103}Rh(α,2nγ) 1985Ke09,1979Ka05,1978Hi01

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
γ Decay (Uncertain)
Coincidence

Level Scheme

Intensities: Type not specified
& Multiply placed: undivided intensity given



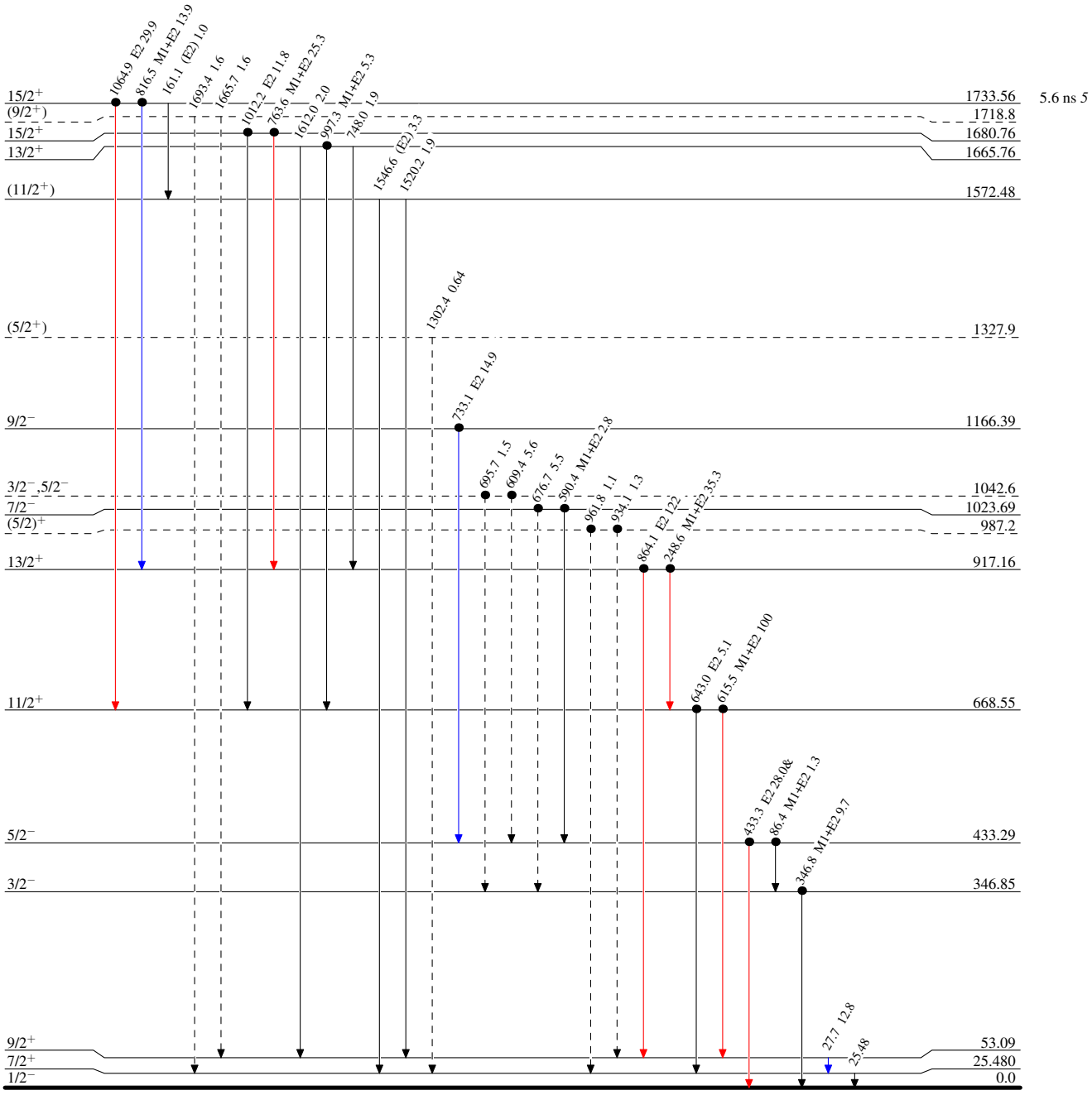
$^{105}_{47}Ag_{58}$

^{103}Rh(α,2nγ) 1985Ke09,1979Ka05,1978Hi01

Level Scheme (continued)

Intensities: Type not specified
& Multiply placed: undivided intensity given

Legend
- $I_\gamma < 2\% \times I_\gamma^{max}$
- $I_\gamma < 10\% \times I_\gamma^{max}$
- $I_\gamma > 10\% \times I_\gamma^{max}$
- γ Decay (Uncertain)
- Coincidence



$^{105}_{47}Ag_{58}$