

$^{103}\text{Rh}(\text{n},\gamma)$ E=thermal 1986ChYZ,1966Bi01,1966Ne06

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	NDS 108,2035 (2007)	30-Mar-2007

Measured: γ (1962Bu15,1963Ne18,1964Gr30,1965Su05,1966Ne06) bent-crystal spectrometer.

ce (1966Bi01) magnetic spectrometer, ce (1986ChYZ) on-line magnetic spectrometer.

Measured: E(ce), I(ce) for some intense dipole and octupole transitions (1996Su10) s.

See 1963Gr02 and 1964Me08 for low resolution ce- γ coincidences.

 ^{104}Rh Levels

E(level)	$J^\pi^\dagger$	$T_{1/2}^\ddagger$	E(level)	$J^\pi^\dagger$	$T_{1/2}^\ddagger$
0.0	1^+	42.3 s 3	524.702 4	$1^+, 2^+$	<1.2 ns
51.422 1	2^-	2.6 [#] ns 2	537.734 20	1^+	<0.45 ns
97.100 1	2^+	<0.6 [#] ns	555.475 7	$(3,4)^-$	<0.62 ns
128.970 2	5^+	4.34 min 3	577.223 18	$0^-, 1^-, 2^-$	
175.240 2	6^+		589.885 25	$1^-, 2^-$	
180.840 1	1^+		644.191 23	1^+	
186.041 1	1^-	0.89 ns 30	644.717 20	$(3,4)^-$	<1.2 ns
197.894 1	2^+		649.249 17	$2^-, 3^-$	
213.061 2	1^+	<1.2 ns	695.784 6	$1^+, 2^+$	<1.4 ns
224.419 1	$1^+, 2^+$		711.064 26	$1^+, 2^+$	<2.9 ns
266.768 2	$1^-, 2^-$	<0.26 ns	728.22 3	$1^-, 2^-, 3^-$	
269.274 2	$2^-, 3^-$		732.403 18	$2^-, 3^-$	<0.8 ns
329.799 2	$1^+, 2^+, 3^+$		749.97 4	-	<0.35 ns
344.596 2	6^-	34.6 ns 6	787.32 5	$1^+, 2^+$	
358.631 3	$1^+, 2^+$	<0.8 ns	790.5 3	$1^+, 2^+$	
363.181 2	$2^+, 3^+$	<0.31 ns	801.598 25	$1^-, 2^-$	
380.535 3	$4^-, 5^-$		802.473 13	$1^-, 2^-$	
384.985 20	$1^-, 2^-$	<0.35 ns	814.821 9	$1^+, 2^+$	
394.758 3	$1^+, 2^+, 3^+$	3.0 ns 13	818.01 5	$1^-, 2^-, 3^-$	
400.759 2	$1^+, 2^+$	<0.54 ns	826.724 17	$^+$	<2.9 ns
404.511 2	2^-	<1.2 ns	848.332 8	-	
420.766 3	$1^+, 2^+, 3^+$	<0.43 ns	860.322 8	-	
426.366 4	$2^-, 3^-$	<0.51 ns	865.38 4	$2^-, 3^-$	
459.637 7	$0^-, 1^-$	<0.93 ns	888.645 22	$^+$	<5.0 ns
465.892 3	$3^-, 4^-, 5^-$		908.196 27	-	
482.325 6	$1^+, 2^+$	<0.37 ns	915.65 6		<1.2 ns
498.049 3	2^+	<0.93 ns	924.31 3	$1^-, 2^-, 3^-$	
505.189 9	$2^-, 3^-, 4^-$		952.37 6		
514.519 3	2^-	<3.6 ns	1047.933 13	$1^-, 2^-$	
521.963 12	1^-	<0.6 ns	1081.93 3	$1^+, 2^+$	

[†] From Adopted Levels.

[‡] From 1986KoZT for levels >175.

[#] From $\gamma\gamma(t)$ (1961Du05).

$^{103}\text{Rh}(n,\gamma) \text{E=thermal}$ **1986ChYZ,1966Bi01,1966Ne06 (continued)** $\gamma(^{104}\text{Rh})$ $\alpha(\text{K})\text{exp}$: From **1986ChYZ**, unless otherwise noted.

E_γ [‡]	I_γ [†]	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. [‡]	Comments
31.8657 20	27.4×10^{-6} 14	128.970	5 ⁺	97.100	2 ⁺	M3	B(M3)(W.u.)=0.059 3 E_γ : from 1996Su10 .
32.2215 10	1.476 4	213.061	1 ⁺	180.840	1 ⁺	M1+E2	$\alpha(\text{L1})\text{exp}=1.1843$ 11; $\alpha(\text{L2})\text{exp}=0.0558$ 12; $\alpha(\text{M1})\text{exp}=0.2029$ 11; $\alpha(\text{M2})\text{exp}=0.0156$ 13
35.9395 10	0.777 3	380.535	4 ⁻ ,5 ⁻	344.596	6 ⁻	M1+E2	$\alpha(\text{N1})\text{exp}=0.0454$ 15 $\alpha(\text{L1})\text{exp}=0.9849$ 7; $\alpha(\text{L2})\text{exp}=0.0620$ 7; $\alpha(\text{M1})\text{exp}=0.1853$ 7; $\alpha(\text{M2})\text{exp}=0.0156$ 26
^x 39.4271 10	0.177 8					M1,E2	$\alpha(\text{N1})\text{exp}=0.0376$ 9 $\alpha(\text{L1})\text{exp}=0.6565$ 20; $\alpha(\text{L2})\text{exp}=0.0394$ 24; $\alpha(\text{M1})\text{exp}=0.1301$ 21
43.5797 10	0.438 4	224.419	1 ⁺ ,2 ⁺	180.840	1 ⁺	M1	$\alpha(\text{K})\text{exp}=2.8415$ 22; $\alpha(\text{L1})\text{exp}=0.5538$ 22; $\alpha(\text{L2})\text{exp}=0.0380$ 24; $\alpha(\text{M1})\text{exp}=0.1550$ 24 $\alpha(\text{M2})\text{exp}=0.0017$ 29
45.678 6	0.016 4	97.100	2 ⁺	51.422	2 ⁻	M1+E2	$\alpha(\text{K})\text{exp}=4.4770$ 7; $\alpha(\text{L1})\text{exp}=0.6790$ 7; $\alpha(\text{L2})\text{exp}=0.0413$ 9; $\alpha(\text{L3})\text{exp}=0.0106$ 29; $\alpha(\text{M1})\text{exp}=0.1407$ 7 $\alpha(\text{N1})\text{exp}=0.0261$
46.270 1	2.231 1	175.240	6 ⁺	128.970	5 ⁺		
51.42330 23	31.258 3	51.422	2 ⁻	0.0	1 ⁺	E1	$\alpha(\text{K})\text{exp}=1.5258$ 7; $\alpha(\text{L1})\text{exp}=0.1554$ 7; $\alpha(\text{L2})\text{exp}=0.0248$ 7; $\alpha(\text{L3})\text{exp}=0.0374$ 7; $\alpha(\text{M1})\text{exp}=0.0287$ 7 $\alpha(\text{M2})\text{exp}=0.0117$ 7; $\alpha(\text{N1})\text{exp}=0.0057$ 8; $\alpha(\text{N2})\text{exp}+\alpha(\text{N3})\text{exp}=0.0014$ 14 B(E1)(W.u.)=0.00087 7 E_γ : from 1996Su10 .
55.417 8	0.66 4	537.734	1 ⁺	482.325	1 ⁺ ,2 ⁺	M1	$\alpha(\text{K})\text{exp}=1.059$ 6 B(M1)(W.u.)>0.049
^x 56.120 8	0.040 5					E1	$\alpha(\text{K})\text{exp}=0.6570$ 11
^x 59.312 10	0.019 3					M1	$\alpha(\text{K})\text{exp}=1.3795$ 5
62.138 2	0.067 3	420.766	1 ⁺ ,2 ⁺ ,3 ⁺	358.631	1 ⁺ ,2 ⁺	M1	$\alpha(\text{K})\text{exp}=1.1066$ 7 B(M1)(W.u.)>0.0042
^x 63.039 10	0.017 5					M1	$\alpha(\text{K})\text{exp}=1.0611$ 10; $\alpha(\text{L1})\text{exp}=0.1070$ 20
^x 65.756 8	0.039 4					M1	$\alpha(\text{K})\text{exp}=1.3980$ 4
^x 68.743 20	0.08 2						
^x 68.816 20	0.016 4						
68.883 20	0.024 5	266.768	1 ⁻ ,2 ⁻	197.894	2 ⁺		
^x 70.461 10	0.02 4						
70.959 2	0.273 3	400.759	1 ⁺ ,2 ⁺	329.799	1 ⁺ ,2 ⁺ ,3 ⁺	M1+E2	$\alpha(\text{K})\text{exp}=1.2096$ 12; $\alpha(\text{L1})\text{exp}=0.0656$ 17; $\alpha(\text{M1})\text{exp}=0.0223$ 19
^x 77.165 10	0.008 2						
77.5447 4	7.264 1	128.970	5 ⁺	51.422	2 ⁻	E3	$\alpha(\text{K})\text{exp}=19.5$; $\alpha(\text{L})\text{exp}=21$ (1966Bi01) $\alpha(\text{K})\text{exp}=22.746$ 12; $\alpha(\text{L1})\text{exp}=2.781$ 14; $\alpha(\text{L2})\text{exp}=10.643$ 12; $\alpha(\text{L3})\text{exp}=13.328$ 12 $\alpha(\text{M2})\text{exp}=5.377$ 12 B(E3)(W.u.)=0.431 3 E_γ : from 1996Su10 .
80.727 2	0.893 1	266.768	1 ⁻ ,2 ⁻	186.041	1 ⁻	M1+E2	$\alpha(\text{K})\text{exp}=0.8$ 2 (1966Bi01) $\alpha(\text{K})\text{exp}=0.9380$ 3; $\alpha(\text{L1})\text{exp}=0.2025$ 10; $\alpha(\text{M1})\text{exp}=0.0230$ 10

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$^{103}\text{Rh}(n,\gamma)$ E=thermal **1986ChYZ,1966Bi01,1966Ne06 (continued)** $\gamma(^{104}\text{Rh})$ (continued)

E_γ	I_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.	Comments
$^{x}81.62$ 1	0.009 5					M1	$\alpha(\text{K})\text{exp}=0.4806$ 16
$^{x}81.912$ 10	0.022 2					M1,E2	$\alpha(\text{K})\text{exp}=0.8550$ 4
83.740 2	0.731 2	180.840	1 ⁺	97.100	2 ⁺	M1	$\alpha(\text{K})\text{exp}=0.5$ 13; $\alpha(\text{L})\text{exp}=0.06$ 4 (1966Bi01) $\alpha(\text{K})\text{exp}=0.6159$ 3; $\alpha(\text{L1})\text{exp}=0.0720$ 3; $\alpha(\text{M1})\text{exp}=0.0122$ 16
$^{x}84.268$ 10	0.007 2						
85.357 2	3.454 5	465.892	3 ⁻ ,4 ⁻ ,5 ⁻	380.535	4 ⁻ ,5 ⁻	M1+E2	$\alpha(\text{K})\text{exp}=0.48$ 11 (1966Bi01) $\alpha(\text{K})\text{exp}=0.6560$ 9; $\alpha(\text{L1})\text{exp}=0.0727$ 9; $\alpha(\text{M1})\text{exp}=0.0156$ 9
85.928 2	0.769 2	266.768	1 ⁻ ,2 ⁻	180.840	1 ⁺	E1	$\alpha(\text{K})\text{exp}=0.2641$ 3 B(E1)(W.u.)>0.00019
$^{x}86.164$ 10	0.012 3						
$^{x}88.143$ 2	0.087 1					M1+E2	$\alpha(\text{K})\text{exp}=0.7342$ 2
88.34 5	0.02	269.274	2 ⁻ ,3 ⁻	180.840	1 ⁺		
$^{x}88.431$ 2	0.016 6					M1,E2	$\alpha(\text{K})\text{exp}=0.5713$ 16
88.940 2	0.074 1	186.041	1 ⁻	97.100	2 ⁺	E1	$\alpha(\text{K})\text{exp}=0.2382$ 2 B(E1)(W.u.)= 4.0×10^{-6} 14
$^{x}89.193$ 10	0.012 3						
$^{x}89.664$ 10	0.017 5					M1	$\alpha(\text{K})\text{exp}=0.4521$ 15
$^{x}94.245$ 4	0.075 1					M1	$\alpha(\text{K})\text{exp}=0.4411$ 2; $\alpha(\text{L1})\text{exp}=0.0603$ 12
$^{x}95.142$ 1	0.035 5					M1+E2	$\alpha(\text{K})\text{exp}=0.7420$ 11
$^{x}96.212$ 15	0.006 2						
$^{x}96.29$ 2	0.02						
$^{x}96.313$ 15	0.006 2						
97.0994 3	25.569 6	97.100	2 ⁺	0.0	1 ⁺	M1	$\alpha(\text{K})\text{exp}=0.33$; $\alpha(\text{L})\text{exp}=0.041$; $\alpha(\text{M})\text{exp}=0.003$ 1 (1966Bi01) $\alpha(\text{K})\text{exp}=0.3486$ 8; $\alpha(\text{L1})\text{exp}=0.0425$ 8; $\alpha(\text{L2})\text{exp}=0.0027$ 8; $\alpha(\text{L3})\text{exp}=0.0008$ 8; $\alpha(\text{M1})\text{exp}=0.0081$ 8 $\alpha(\text{M})\text{exp}=0.0004$ 9; $\alpha(\text{N1})\text{exp}=0.0018$ 8 B(M1)(W.u.)>0.040 E_γ : from 1996Su10 . $\alpha(\text{K})\text{exp}=25.0$ 9; $\alpha(\text{L})\text{exp}=1.5$ 13 (1966Bi01) E_γ : seen by 1966Bi01 .
$^{x}99.9$ 1	0.02					(M3)	
$^{x}100.171$ 4	0.012 3						
100.7945 10	6.313 14	197.894	2 ⁺	97.100	2 ⁺	M1	$\alpha(\text{K})\text{exp}=0.33$ 10; $\alpha(\text{L})\text{exp}=0.024$ 12 (1966Bi01) $\alpha(\text{K})\text{exp}=0.3398$ 20; $\alpha(\text{L1})\text{exp}=0.0374$ 20; $\alpha(\text{L2})\text{exp}=0.0024$ 20; $\alpha(\text{L3})\text{exp}=0.0007$ 22 $\alpha(\text{M1})\text{exp}=0.0071$ 20
$^{x}103.919$ 2	0.062 1					M1+E2	$\alpha(\text{K})\text{exp}=0.5403$ 3
$^{x}104.576$ 3	0.036 3					E2	$\alpha(\text{K})\text{exp}=0.8204$ 7
105.380 3	0.628 2	329.799	1 ⁺ ,2 ⁺ ,3 ⁺	224.419	1 ⁺ ,2 ⁺	M1	$\alpha(\text{K})\text{exp}=0.18$ 12 (1966Bi01) $\alpha(\text{K})\text{exp}=0.2731$ 3; $\alpha(\text{L1})\text{exp}=0.0302$ 5; $\alpha(\text{M1})\text{exp}=0.0052$ 18
$^{x}105.775$ 10	0.02 5						
$^{x}105.997$ 3	0.245 2					M1	$\alpha(\text{K})\text{exp}=0.12$ 4 (1966Bi01) $\alpha(\text{K})\text{exp}=0.2418$ 3; $\alpha(\text{L1})\text{exp}=0.0395$ 5; $\alpha(\text{M1})\text{exp}=0.0071$ 21
106.69 1	0.057 1	802.473	1 ⁻ ,2 ⁻	695.784	1 ⁺ ,2 ⁺	E1	$\alpha(\text{K})\text{exp}=0.1442$ 4; $\alpha(\text{K})\text{exp}=0.17$ 17 (1966Bi01)
$^{x}108.50$ 2	0.09 11					E1	$\alpha(\text{K})\text{exp}=0.0813$ 13
$^{x}109.030$ 3	0.067 1					E1	$\alpha(\text{K})\text{exp}=0.1102$ 6
$^{x}109.505$ 3	0.089 2					E1	$\alpha(\text{K})\text{exp}=0.1106$ 8
$^{x}110.002$ 4	0.135 2					E1	$\alpha(\text{K})\text{exp}=0.1208$ 3
$^{x}110.789$ 2	0.088 12					E1	$\alpha(\text{K})\text{exp}=0.0721$ 14
$^{x}112.810$ 17	0.06 1						
115.394 3	0.081 1	865.38	2 ⁻ ,3 ⁻	749.97	-	M1	$\alpha(\text{K})\text{exp}=0.1598$ 3; $\alpha(\text{K})\text{exp}=0.15$ 15 (1966Bi01)

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$^{103}\text{Rh}(n,\gamma)$ E=thermal **1986ChYZ,1966Bi01,1966Ne06** (continued) $\gamma(^{104}\text{Rh})$ (continued)

E_γ ‡	I_γ †	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. ‡	Comments
115.705 20	0.02 3	384.985	$1^-, 2^-$	269.274	$2^-, 3^-$	M1,E2	$\alpha(\text{K})\text{exp}=0.2979$ 11
115.960 1	0.03 4	213.061	1^+	97.100	2^+	E2	$\alpha(\text{K})\text{exp}=0.6893$ 10; $\alpha(\text{L1})\text{exp}=0.0616$ 34 B(E2)(W.u.)>6.3
^x 116.461 3	0.024 5					M1	$\alpha(\text{K})\text{exp}=0.1750$ 12
116.972 10	0.08 2	537.734	1^+	420.766	$1^+, 2^+, 3^+$		
118.224 4	0.587 17	384.985	$1^-, 2^-$	266.768	$1^-, 2^-$	M1	$\alpha(\text{K})\text{exp}=0.1763$ 20; $\alpha(\text{K})\text{exp}=0.11$ 6 (1966Bi01); $\alpha(\text{L1})\text{exp}=0.0195$ 20; $\alpha(\text{M1})\text{exp}=0.0029$ 34 B(M1)(W.u.)>0.0056
119.039 5	0.048 2	814.821	$1^+, 2^+$	695.784	$1^+, 2^+$	M1	$\alpha(\text{K})\text{exp}=0.2068$ 10; $\alpha(\text{K})\text{exp}=0.08$ 6 (1966Bi01)
119.5 3	0.012 3	644.717	(3,4) ⁻	524.702	$1^+, 2^+$		
119.53 8	0.02	644.191	1^+	524.702	$1^+, 2^+$		$\alpha(\text{K})\text{exp}=1.0$ 10 (1966Bi01)
^x 120.69 2	0.012 3						
121.26 3	0.012 3	465.892	$3^-, 4^-, 5^-$	344.596	6^-		
123.59 3	0.024 4	1047.933	$1^-, 2^-$	924.31	$1^-, 2^-, 3^-$	M1+E2	$\alpha(\text{K})\text{exp}=0.3122$ 12
^x 123.69 2	0.37 5					E1	$\alpha(\text{K})\text{exp}=0.0740$ 10; $\alpha(\text{K})\text{exp}=0.25$ 12 (1966Bi01)
^x 123.961 5	0.095 2					M1+E2	$\alpha(\text{K})\text{exp}=0.1647$ 2; $\alpha(\text{L1})\text{exp}=0.0186$ 23
^x 124.651 4	0.12 2					E1	$\alpha(\text{K})\text{exp}=0.0873$ 6
^x 125.552 4	0.018 4					M1	$\alpha(\text{K})\text{exp}=0.1200$ 9
127.318 2	5.982 15	224.419	$1^+, 2^+$	97.100	2^+	M1	$\alpha(\text{K})\text{exp}=0.14$ 4; $\alpha(\text{L1})\text{exp}=0.012$ 6 (1966Bi01) $\alpha(\text{K})\text{exp}=0.1436$ 17; $\alpha(\text{L1})\text{exp}=0.0162$ 17; $\alpha(\text{L2})\text{exp}=0.0008$ 20; $\alpha(\text{M1})\text{exp}=0.0032$ 17
^x 128.98 2	0.011 9					M1,E2	$\alpha(\text{K})\text{exp}=0.3671$ 17
129.418 3	0.209 3	180.840	1^+	51.422	2^-	E1	$\alpha(\text{K})\text{exp}=0.0472$ 12; $\alpha(\text{K})\text{exp}=0.10$ 5 (1966Bi01)
129.535 2	0.345 4	514.519	2^-	384.985	$1^-, 2^-$	M1	$\alpha(\text{K})\text{exp}=0.1282$ 5; $\alpha(\text{K})\text{exp}=0.10$ 5 (1966Bi01); $\alpha(\text{L1})\text{exp}=0.0167$ 9; $\alpha(\text{M1})\text{exp}=0.0041$ 13 B(M1)(W.u.)>0.00099
129.949 5	0.068 2	524.702	$1^+, 2^+$	394.758	$1^+, 2^+, 3^+$	M1	$\alpha(\text{K})\text{exp}=0.1252$ 6 B(M1)(W.u.)>0.00035
131.906 2	0.43 1	329.799	$1^+, 2^+, 3^+$	197.894	2^+	M1	$\alpha(\text{K})\text{exp}=0.1191$ 4; $\alpha(\text{K})\text{exp}=0.08$ 4 (1966Bi01); $\alpha(\text{L1})\text{exp}=0.0127$ 6
^x 132.307 4	0.4 1					M1	$\alpha(\text{K})\text{exp}=0.1577$ 4
134.619 2	7.425 3	186.041	1^-	51.422	2^-	M1	$\alpha(\text{K})\text{exp}=0.12$ 4; $\alpha(\text{L})\text{exp}=0.012$ 5 (1966Bi01) $\alpha(\text{K})\text{exp}=0.1092$ 3; $\alpha(\text{L1})\text{exp}=0.0126$ 3; $\alpha(\text{L2})\text{exp}=0.0006$ 6; $\alpha(\text{M1})\text{exp}=0.0028$ 4 B(M1)(W.u.)=0.008 3
134.867 3	0.271 2	498.049	2^+	363.181	$2^+, 3^+$	M1	$\alpha(\text{K})\text{exp}=0.1292$ 10 $\alpha(\text{K})\text{exp}=0.13$ 4 B(M1)(W.u.)>0.0013
135.237 2	0.728 8	404.511	2^-	269.274	$2^-, 3^-$	M1+E2	$\alpha(\text{K})\text{exp}=0.2290$ 10; $\alpha(\text{L1})\text{exp}=0.0244$ 10; $\alpha(\text{L2})\text{exp}=0.0014$ 31
137.733 2	0.532 4	404.511	2^-	266.768	$1^-, 2^-$	M1	B(M1)(W.u.)>0.0016
138.32 3	0.008 2	728.22	$1^-, 2^-, 3^-$	589.885	$1^-, 2^-$		
138.762 2	0.583 4	363.181	$2^+, 3^+$	224.419	$1^+, 2^+$	M1	$\alpha(\text{K})\text{exp}=0.1067$ 4; $\alpha(\text{L1})\text{exp}=0.0114$ 8; $\alpha(\text{M1})\text{exp}=0.0037$ 18 B(M1)(W.u.)>0.011
^x 139.40 3	0.58 14					E1	$\alpha(\text{K})\text{exp}=0.0371$ 26
^x 139.53 3	0.06 14					E1	$\alpha(\text{K})\text{exp}=0.0308$ 32
^x 140.53 3	0.027 8					E1	$\alpha(\text{K})\text{exp}=0.0525$ 18
^x 141.239 9	0.029 5					M1	$\alpha(\text{K})\text{exp}=0.1074$ 16
^x 145.16 3	0.008 2						
145.59 3	0.008 2	358.631	$1^+, 2^+$	213.061	1^+		
^x 146.43 3	0.008 2						
146.72 3	0.012 3	644.717	(3,4) ⁻	498.049	2^+		
^x 148.10 3	0.006 2						

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$^{103}\text{Rh}(n,\gamma)$ E=thermal **1986ChYZ,1966Bi01,1966Ne06 (continued)** $\gamma(^{104}\text{Rh})$ (continued)

E_γ	I_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.	Comments
$^{148.87}_{-3}$	$^{0.018}_{-4}$					M1	$\alpha(\text{K})\text{exp}=0.1086$ 14
$^{149.08}_{-3}$	$^{0.012}_{-3}$						
$^{150.973}_{-5}$	$^{0.052}_{-14}$	728.22	$1^-,2^-,3^-$	577.223	$0^-,1^-,2^-$	M1	$\alpha(\text{K})\text{exp}=0.0863$ 19
$^{152.31}_{-3}$	$^{0.016}_{-4}$	801.598	$1^-,2^-$	649.249	$2^-,3^-$		$\alpha(\text{K})\text{exp}=0.4$ 4 (1966Bi01)
$^{152.56}_{-3}$	$^{0.03}_{-}$	537.734	1^+	384.985	$1^-,2^-$		
$^{152.87}_{-4}$	$^{0.008}_{-2}$						
$^{153.85}_{-3}$	$^{0.008}_{-2}$						
$^{154.20}_{-3}$	$^{0.008}_{-2}$						
$^{155.66}_{-3}$	$^{0.017}_{-4}$					E1	$\alpha(\text{K})\text{exp}=0.0418$ 34
$^{157.095}_{-4}$	$^{1.071}_{-3}$	426.366	$2^-,3^-$	269.274	$2^-,3^-$	M1	$\alpha(\text{K})\text{exp}=0.0726$ 3; $\alpha(\text{K})\text{exp}=0.06$ 3 (1966Bi01); $\alpha(\text{L1})\text{exp}=0.0089$ 7
							$B(\text{M1})(\text{W.u.})>0.0042$
$^{158.049}_{-5}$	$^{0.065}_{-2}$	695.784	$1^+,2^+$	537.734	1^+	M1	$\alpha(\text{K})\text{exp}=0.0783$ 11
							$B(\text{M1})(\text{W.u.})>0.00029$
$^{159.595}_{-6}$	$^{0.413}_{-11}$	426.366	$2^-,3^-$	266.768	$1^-,2^-$	M1	$\alpha(\text{K})\text{exp}=0.0651$ 12; $\alpha(\text{K})\text{exp}=0.05$ 3 (1966Bi01); $\alpha(\text{L1})\text{exp}=0.0095$ 14
							$B(\text{M1})(\text{W.u.})>0.0016$
$^{160.14}_{-2}$	$^{0.05}_{-12}$					E1	$\alpha(\text{K})\text{exp}=0.0330$ 30
$^{160.85}_{-4}$	$^{0.032}_{-8}$						
$^{161.638}_{-5}$	$^{1.003}_{-3}$	213.061	1^+	51.422	2^-	E1	$\alpha(\text{K})\text{exp}=0.0308$ 4; $\alpha(\text{K})\text{exp}=0.018$ 10 (1966Bi01); $\alpha(\text{L1})\text{exp}=0.035$ 9
							$B(\text{E1})(\text{W.u.})>1.6\times 10^{-5}$
$^{163.30}_{-10}$	1					E1	$\alpha(\text{K})\text{exp}=0.045$ 17 (1966Bi01)
$^{165.285}_{-5}$	$^{0.865}_{-22}$	363.181	$2^+,3^+$	197.894	2^+	M1	$\alpha(\text{K})\text{exp}=0.0720$ 24; $\alpha(\text{L1})\text{exp}=0.0095$ 24
							$B(\text{M1})(\text{W.u.})>0.0094$
$^{165.98}_{-5}$	$^{0.09}_{-}$	524.702	$1^+,2^+$				
$^{166.071}_{-5}$	$^{0.074}_{-2}$	524.702	$1^+,2^+$	358.631	$1^+,2^+$	M1	$\alpha(\text{K})\text{exp}=0.0626$ 5
							$B(\text{M1})(\text{W.u.})>0.00018$
$^{167.71}_{-4}$	$^{0.012}_{-3}$						
$^{168.258}_{-6}$	$^{0.397}_{-7}$	498.049	2^+	329.799	$1^+,2^+,3^+$	M1	$\alpha(\text{K})\text{exp}=0.0679$ 8; $\alpha(\text{K})\text{exp}=0.025$ 15 (1966Bi01); $\alpha(\text{L1})\text{exp}=0.0057$ 14
							$B(\text{M1})(\text{W.u.})>0.0010$
$^{169.356}_{-3}$	$^{2.58}_{-2}$	344.596	6^-	175.240	6^+	E1	$\alpha(\text{K})\text{exp}=0.011$ 6 (1966Bi01); $\alpha(\text{K})\text{exp}=0.0279$ 2; $\alpha(\text{L1})\text{exp}=0.0030$ 4
							$\alpha(\text{L2})\text{exp}=0.00022$ 25; $\alpha(\text{L3})\text{exp}=0.00017$ 15;
							$\alpha(\text{M1})\text{exp}=0.0008$ 15
$^{169.665}_{-4}$	$^{0.267}_{-6}$	266.768	$1^-,2^-$	97.100	2^+	E1	$B(\text{E1})(\text{W.u.})=1.159\times 10^{-6}$ 23
							$\alpha(\text{K})\text{exp}=0.0229$ 10
$^{169.89}_{-2}$	$^{0.046}_{-1}$					E2	$B(\text{E1})(\text{W.u.})>8.7\times 10^{-6}$
$^{170.340}_{-4}$	$^{0.462}_{-10}$	394.758	$1^+,2^+,3^+$	224.419	$1^+,2^+$	M1+E2	$\alpha(\text{K})\text{exp}=0.1512$ 9
							$\alpha(\text{K})\text{exp}=0.029$ 15 (1966Bi01); $\alpha(\text{K})\text{exp}=0.0890$ 12; $\alpha(\text{L1})\text{exp}=0.0107$ 13
$^{172.175}_{-5}$	$^{0.246}_{-4}$	269.274	$2^-,3^-$	97.100	2^+	E1	$\alpha(\text{K})\text{exp}=0.0260$ 9
$^{173.19}_{-4}$	$^{0.041}_{-1}$					E1	$\alpha(\text{K})\text{exp}=0.0200$ 21
$^{173.91}_{-4}$	$^{0.03}_{-1}$	695.784	$1^+,2^+$	521.963	1^-		
$^{174.398}_{-5}$	$^{0.234}_{-5}$					M1	$\alpha(\text{K})\text{exp}=0.04$ 4 (1966Bi01)
							$\alpha(\text{K})\text{exp}=0.0550$ 9; $\alpha(\text{L1})\text{exp}=0.0065$ 19
$^{174.944}_{-8}$	$^{0.074}_{-1}$	555.475	$(3,4)^-$	380.535	$4^-,5^-$	M1	$\alpha(\text{K})\text{exp}=0.0526$ 7
							$B(\text{M1})(\text{W.u.})>0.0014$
$^{175.78}_{-4}$	$^{0.016}_{-4}$	908.196	$-$	732.403	$2^-,3^-$		
$^{176.331}_{-9}$	$^{0.074}_{-1}$	400.759	$1^+,2^+$	224.419	$1^+,2^+$	M1	$\alpha(\text{K})\text{exp}=0.0554$ 6
							$B(\text{M1})(\text{W.u.})>0.00020$
$^{177.794}_{-4}$	$^{1.799}_{-12}$	358.631	$1^+,2^+$	180.840	1^+	M1	$\alpha(\text{K})\text{exp}=0.0633$ 13; $\alpha(\text{K})\text{exp}=0.035$ 12 (1966Bi01); $\alpha(\text{L1})\text{exp}=0.0076$ 13
							$B(\text{M1})(\text{W.u.})>0.0036$
$^{178.825}_{-4}$	$^{2.755}_{-12}$	644.717	$(3,4)^-$	465.892	$3^-,4^-,5^-$	M1	$\alpha(\text{K})\text{exp}=0.0632$ 13; $\alpha(\text{K})\text{exp}=0.024$ 9

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$^{103}\text{Rh}(n,\gamma)$ E=thermal **1986ChYZ,1966Bi01,1966Ne06 (continued)** $\gamma(^{104}\text{Rh})$ (continued)

E_γ ‡	I_γ †	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. ‡	Comments
							(1966Bi01); $\alpha(\text{L1})\text{exp}=0.0075$ 13; $\alpha(\text{M1})\text{exp}=0.0012$ 16 $\text{B}(\text{M1})(\text{W.u.})>0.0032$
$^{x180.049}$ 6 180.8408 9	0.12 3 222.888 6	180.840	1 ⁺	0.0	1 ⁺	M1	$\alpha(\text{K})\text{exp}=0.049$ 8; $\alpha(\text{L})\text{exp}=0.005$ 2 (1966Bi01) $\alpha(\text{K})\text{exp}=0.0518$ 6; $\alpha(\text{L1})\text{exp}=0.0063$ 6; $\alpha(\text{L2})\text{exp}=0.0004$ 16; $\alpha(\text{M1})\text{exp}=0.0012$ 6 E_γ : from 1996Su10. $\alpha(\text{K})\text{exp}=0.0240$ 30
$^{x182.606}$ 6 185.04 5 186.041 4	0.072 2 0.026 6 1.571 7	644.717 186.041	(3,4) ⁻ 1 ⁻	459.637 0.0	0 ⁻ ,1 ⁻ 1 ⁺	E1 E1	$\alpha(\text{K})\text{exp}=0.0178$ 7; $\alpha(\text{K})\text{exp}=0.014$ 7 (1966Bi01); $\alpha(\text{L1})\text{exp}=0.0026$ 16 $\text{B}(\text{E1})(\text{W.u.})=9.E-6$ 4 $\alpha(\text{K})\text{exp}=0.0531$ 18
$^{x187.21}$ 5 $^{x188.37}$ 5 $^{x189.47}$ 5 $^{x190.441}$ 6 191.87 6 193.29 6 $^{x196.356}$ 5 196.865 5	0.032 1 0.01 3 0.012 3 0.021 4 0.016 4 0.008 2 0.408 1 0.418 1					M1 M1 M1 M1	$\alpha(\text{K})\text{exp}=0.0539$ 26
		924.31 1081.93	1 ⁻ ,2 ⁻ ,3 ⁻ 1 ⁺ ,2 ⁺	732.403 888.645	2 ⁻ ,3 ⁻ +	E1 M1	$\alpha(\text{K})\text{exp}=0.0178$ 4; $\alpha(\text{L})\text{exp}=0.0024$ 12 $\alpha(\text{K})\text{exp}=0.0432$ 4; $\alpha(\text{L})\text{exp}=0.0037$ 12 $\text{B}(\text{M1})(\text{W.u.})=0.00038$ 17
197.63 7 197.893 6 $^{x198.11}$ 7 198.928 10	0.04 1 0.21 3 0.042 2 0.45 1	695.784 197.894 384.985	1 ⁺ ,2 ⁺ 2 ⁺ 1 ⁻ ,2 ⁻	498.049 0.0 186.041	2 ⁺ 1 ⁺ 1 ⁻	M1 M1 E2	$\alpha(\text{K})\text{exp}=0.0503$ 4 $\alpha(\text{K})\text{exp}=0.0408$ 14 $\alpha(\text{K})\text{exp}=0.1120$ 7 $\text{B}(\text{E2})(\text{W.u.})>20$ $\alpha(\text{K})\text{exp}=0.0569$ 13
199.604 10 200.48 4 $^{x200.917}$ 7 201.98 4	0.069 10 0.09 2 0.431 2 0.081 2	1047.933 790.5 426.366	1 ⁻ ,2 ⁻ 1 ⁺ ,2 ⁺ 2 ⁻ ,3 ⁻	848.332 589.885 224.419	- 1 ⁻ ,2 ⁻ 1 ⁺ ,2 ⁺	M1+E2 M1 E1	$\alpha(\text{K})\text{exp}=0.0520$ 6 $\alpha(\text{K})\text{exp}=0.0131$ 27 $\text{B}(\text{E1})(\text{W.u.})>2.1\times 10^{-6}$ $\alpha(\text{K})\text{exp}=0.03$ 2; $\alpha(\text{L})\text{exp}=0.004$ 4 (1966Bi01) $\alpha(\text{K})\text{exp}=0.0406$ 3; $\alpha(\text{L1})\text{exp}=0.0047$ 5; $\alpha(\text{M1})\text{exp}=0.0008$ 19 $\text{B}(\text{M1})(\text{W.u.})>0.0025$ $\alpha(\text{K})\text{exp}=0.14$ 10 (1966Bi01)
202.870 5	1.402 3	400.759	1 ⁺ ,2 ⁺	197.894	2 ⁺	M1	
203.62 6 203.96 10 $^{x204.131}$ 11 $^{x205.88}$ 5 207.55 10 $^{x207.735}$ 11 $^{x208.89}$ 7 $^{x209.56}$ 7 211.64 6 213.062 7	0.04 1 0.07 0.125 2 0.043 2 0.07 0.048 8 0.04 1 0.03 1 0.032 2 1.201 4	848.332 384.985	- 1 ⁻ ,2 ⁻	644.717 180.840	(3,4) ⁻ 1 ⁺	M1 E2 M1	$\alpha(\text{K})\text{exp}=0.0434$ 7 $\alpha(\text{K})\text{exp}=0.0849$ 14 $\alpha(\text{K})\text{exp}=0.0384$ 15
		420.766	1 ⁺ ,2 ⁺ ,3 ⁺	213.061	1 ⁺	M1	
$^{x207.735}$ 11 $^{x208.89}$ 7 $^{x209.56}$ 7 211.64 6 213.062 7	0.048 8 0.04 1 0.03 1 0.032 2 1.201 4	801.598 213.061	1 ⁻ ,2 ⁻ 1 ⁺	589.885 0.0	1 ⁻ ,2 ⁻ 1 ⁺	M1,E2 M1	$\alpha(\text{K})\text{exp}=0.0636$ 23 $\alpha(\text{K})\text{exp}=0.0392$ 4; $\alpha(\text{K})\text{exp}=0.030$ 15 (1966Bi01); $\alpha(\text{L1})\text{exp}=0.0050$ 6 $\text{B}(\text{M1})(\text{W.u.})>0.00061$ $\alpha(\text{K})\text{exp}=0.0787$ 10 $\alpha(\text{K})\text{exp}=0.0433$ 2; $\alpha(\text{L1})\text{exp}=0.0051$ 2
$^{x214.54}$ 5 215.349 6 215.606 6 215.626 10 217.850 6	0.065 1 3.145 2 1.428 2 1.422 2 6392 12	266.768 860.322 344.596 269.274	1 ⁻ ,2 ⁻ - 6 ⁻ 2 ⁻ ,3 ⁻	51.422 644.717 128.970 51.422	2 ⁻ (3,4) ⁻ 5 ⁺ 2 ⁻	E2 M1+E2 M1 E1 M1	$\text{B}(\text{E1})(\text{W.u.})=3.09\times 10^{-7}$ 6 $\alpha(\text{K})\text{exp}=0.03$ 3; $\alpha(\text{L})\text{exp}=0.004$ 2 (1966Bi01) $\alpha(\text{K})\text{exp}=0.0382$ 13; $\alpha(\text{L1})\text{exp}=0.0045$ 13; $\alpha(\text{L2})\text{exp}=0.0008$ 14; $\alpha(\text{M1})\text{exp}=0.0008$ 14 $\alpha(\text{K})\text{exp}=0.0664$ 8
218.478 4	0.341 7	404.511	2 ⁻	186.041	1 ⁻	M1+E2	

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$^{103}\text{Rh}(n,\gamma)$ E=thermal **1986ChYZ,1966Bi01,1966Ne06 (continued)** $\gamma(^{104}\text{Rh})$ (continued)

E_γ ‡	I_γ †	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. ‡	Comments
219.915 13	0.49 4	400.759	1 ⁺ ,2 ⁺	180.840	1 ⁺	M1	$\alpha(\text{K})\text{exp}=0.0200$ 4; $\alpha(\text{K})\text{exp}=0.03$ 3 (1966Bi01) B(M1)(W.u.)>0.00068
^x 220.798 13	0.064 2					M1,E2	$\alpha(\text{K})\text{exp}=0.0478$ 11
222.845 10	0.197 3	420.766	1 ⁺ ,2 ⁺ ,3 ⁺	197.894	2 ⁺	M1	$\alpha(\text{K})\text{exp}=0.0364$ 5; $\alpha(\text{K})\text{exp}=0.025$ 25 (1966Bi01) B(M1)(W.u.)>0.00027
^x 223.55 10	0.05						
^x 223.612 10	0.082 8					M1	$\alpha(\text{K})\text{exp}=0.0289$ 18
224.405 13	0.063 2	224.419	1 ⁺ ,2 ⁺	0.0	1 ⁺	M1+E2	$\alpha(\text{K})\text{exp}=0.0448$ 9
227.11 7	0.025 6	732.403	2 ⁻ ,3 ⁻	505.189	2 ⁻ ,3 ⁻ ,4 ⁻	M1+E2	$\alpha(\text{K})\text{exp}=0.0494$ 27
228.61 7	0.03 1	924.31	1 ⁻ ,2 ⁻ ,3 ⁻	695.784	1 ⁺ ,2 ⁺		
228.70 10	0.07	426.366	2 ⁻ ,3 ⁻	197.894	2 ⁺		
^x 229.08 7	0.03 1						
231.24 7	0.02 1	498.049	2 ⁺	266.768	1 ⁻ ,2 ⁻		
^x 231.985 8	0.135 2					M1+E2	$\alpha(\text{K})\text{exp}=0.0382$ 4
232.74 5	0.04 1	329.799	1 ⁺ ,2 ⁺ ,3 ⁺	97.100	2 ⁺		
^x 233.74 5	0.082 2					M1	$\alpha(\text{K})\text{exp}=0.0254$ 18
^x 234.206 9	0.29 1					M1	$\alpha(\text{K})\text{exp}=0.0348$ 4; $\alpha(\text{K})\text{exp}=0.024$ 24 (1966Bi01)
235.917 9	0.289 3	505.189	2 ⁻ ,3 ⁻ ,4 ⁻	269.274	2 ⁻ ,3 ⁻	M1	$\alpha(\text{K})\text{exp}=0.0303$ 3; $\alpha(\text{K})\text{exp}=0.040$ 25 (1966Bi01)
^x 236.520 9	0.073 2					M1+E2	$\alpha(\text{K})\text{exp}=0.0543$ 10
^x 237.123 9	0.312 3					M1+E2	$\alpha(\text{K})\text{exp}=0.0353$ 4; $\alpha(\text{L}1)\text{exp}=0.0041$ 14
238.41 8	0.03 1	505.189	2 ⁻ ,3 ⁻ ,4 ⁻	266.768	1 ⁻ ,2 ⁻		
240.83 8	0.04 1	818.01	1 ⁻ ,2 ⁻ ,3 ⁻	577.223	0 ⁻ ,1 ⁻ ,2 ⁻		
^x 243.08 8	0.05 1						
245.249 9	0.164 2	514.519	2 ⁻	269.274	2 ⁻ ,3 ⁻	M1	$\alpha(\text{K})\text{exp}=0.0238$ 6 B(M1)(W.u.)>6.9×10 ⁻⁵
245.53 2	0.04 1	426.366	2 ⁻ ,3 ⁻	180.840	1 ⁺		
246.565 11	0.121 1	459.637	0 ⁻ ,1 ⁻	213.061	1 ⁺	E1	$\alpha(\text{K})\text{exp}=0.0109$ 28 B(E1)(W.u.)>3.5×10 ⁻⁶
247.742 12	0.283 13	514.519	2 ⁻	266.768	1 ⁻ ,2 ⁻	M1	$\alpha(\text{K})\text{exp}=0.0301$ 14; $\alpha(\text{L}1)\text{exp}=0.0023$ 30 B(M1)(W.u.)>0.00012
^x 249.178 10	0.226 10					M1	$\alpha(\text{K})\text{exp}=0.0268$ 12
^x 250.17 10	0.02 4						
^x 251.537 13	0.035 11						
252.680 18	0.045 10	521.963	1 ⁻	269.274	2 ⁻ ,3 ⁻		
255.197 18	0.098 9	521.963	1 ⁻	266.768	1 ⁻ ,2 ⁻	M1	$\alpha(\text{K})\text{exp}=0.0225$ 17 B(M1)(W.u.)>0.000100
^x 257.44 5	0.03 5						
^x 257.788 20	0.046 9						
^x 261.156 13	0.327 2					M1	$\alpha(\text{K})\text{exp}=0.0226$ 5
261.536 8	0.616 3	358.631	1 ⁺ ,2 ⁺	97.100	2 ⁺	M1	$\alpha(\text{K})\text{exp}=0.0245$ 4; $\alpha(\text{K})\text{exp}=0.017$ 10 (1966Bi01); $\alpha(\text{L}1)\text{exp}=0.0028$ 30 B(M1)(W.u.)>0.00039
^x 265.832 8	0.245 8					M1	$\alpha(\text{K})\text{exp}=0.003$ 3 (1966Bi01); $\alpha(\text{K})\text{exp}=0.0194$ 13
266.769 7	2.312 9	266.768	1 ⁻ ,2 ⁻	0.0	1 ⁺	E1	$\alpha(\text{K})\text{exp}=0.0087$ 9; $\alpha(\text{K})\text{exp}=0.003$ 3 (1966Bi01); $\alpha(\text{L}1)\text{exp}=0.0009$ 18 B(E1)(W.u.)>1.9×10 ⁻⁵
269.271 10	1.368 3	482.325	1 ⁺ ,2 ⁺	213.061	1 ⁺	M1	$\alpha(\text{K})\text{exp}=0.016$ 10 (1966Bi01); $\alpha(\text{K})\text{exp}=0.0210$ 3 B(M1)(W.u.)>0.00096
270.52 6	0.092 2	860.322	-	589.885	1 ⁻ ,2 ⁻	M1	$\alpha(\text{K})\text{exp}=0.0194$ 227
^x 271.82 6	0.115 2					E2	
273.601 8	0.369 4	459.637	0 ⁻ ,1 ⁻	186.041	1 ⁻	M1	$\alpha(\text{K})\text{exp}=0.018$ 12 (1966Bi01) B(M1)(W.u.)>0.00057
273.629 8	0.469 5	498.049	2 ⁺	224.419	1 ⁺ ,2 ⁺	M1	B(M1)(W.u.)>0.00028
^x 274.585 12	0.083 2					E2	$\alpha(\text{K})\text{exp}=0.0318$ 8
275.68 12	0.06 2	790.5	1 ⁺ ,2 ⁺	514.519	2 ⁻		
^x 279.01 6	0.08 2						

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$^{103}\text{Rh}(n,\gamma) \text{ E=thermal}$ [1986ChYZ,1966Bi01,1966Ne06](#) (continued) $\gamma(^{104}\text{Rh})$ (continued)

E_γ ‡	I_γ †	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. ‡	Comments
280.88 22	0.043 13	505.189	$2^-, 3^-, 4^-$	224.419	$1^+, 2^+$		
^x 281.115 17	0.085 2					E2	$\alpha(\text{K})\text{exp}=0.0309$ 15
284.432 10	0.124 2	482.325	$1^+, 2^+$	197.894	2^+	E2	$\alpha(\text{K})\text{exp}=0.0309$ 7 $B(\text{E}2)(\text{W.u.})>0.81$
284.98 12	0.05 1	498.049	2^+	213.061	1^+		
286.196 10	0.216 2	555.475	$(3,4)^-$	269.274	$2^-, 3^-$	M1+E2	$\alpha(\text{K})\text{exp}=0.0272$ 6
287.14 7	0.102 2	801.598	$1^-, 2^-$	514.519	2^-	M1	$\alpha(\text{K})\text{exp}=0.0147$ 20
287.84 7	0.06 2	384.985	$1^-, 2^-$	97.100	2^+		
288.993 20	0.205 5	826.724	$+$	537.734	1^+	E2	$\alpha(\text{K})\text{exp}=0.0265$ 6 $B(\text{E}2)(\text{W.u.})>0.30$
290.05 4	0.10 3	514.519	2^-	224.419	$1^+, 2^+$		
293.09 7	0.05 1	344.596	6^-	51.422	2^-		
^x 294.38 7	0.05 1						
^x 295.78 7	0.05 1						
296.59 7	0.07 2	801.598	$1^-, 2^-$	505.189	$2^-, 3^-, 4^-$		
^x 299.32 15	0.041 1						
^x 300.70 15	0.04 1						
302.22 15	0.02 4	826.724	$+$	524.702	$1^+, 2^+$		
303.651 12	0.528 20	400.759	$1^+, 2^+$	97.100	2^+	M1	$\alpha(\text{K})\text{exp}=0.0151$ 21 $B(\text{M}1)(\text{W.u.})>0.00028$
^x 304.507 12	0.256 22					M1+E2	$\alpha(\text{K})\text{exp}=0.0181$ 23; $\alpha(\text{L}1)\text{exp}=0.0727$ 9; $\alpha(\text{M}1)\text{exp}=0.0156$ 9
306.04 2	0.722 2	732.403	$2^-, 3^-$	426.366	$2^-, 3^-$	M1,E2	$\alpha(\text{K})\text{exp}=0.0172$ 4
307.41 8	0.12 11	404.511	2^-	97.100	2^+		
^x 308.65 8	0.05 1						
311.414 17	0.108 10	888.645	$+$	577.223	$0^-, 1^-, 2^-$	M1+E2	$\alpha(\text{K})\text{exp}=0.0146$ 3; $\alpha(\text{L}1)\text{exp}=0.0014$ 14
317.205 16	0.599 2	498.049	2^+	180.840	1^+	M1+E2	$\alpha(\text{K})\text{exp}=0.0144$ 23
^x 319.65 3	0.122 2					M1	$\alpha(\text{K})\text{exp}=0.0120$ 47
^x 322.43 8	0.101 5					M1	$\alpha(\text{K})\text{exp}=0.0129$ 5; $\alpha(\text{K})\text{exp}=0.006$ 4 (1966Bi01); $\alpha(\text{L}1)\text{exp}=0.013$ 13
323.646 14	1.379 13	420.766	$1^+, 2^+, 3^+$	97.100	2^+	M1	$B(\text{M}1)(\text{W.u.})>0.00062$ $\alpha(\text{K})\text{exp}=0.0150$ 5
324.684 14	0.711 5	537.734	1^+	213.061	1^+	M1+E2	
^x 326.27 14	0.264 2					E2	
326.90 8	0.091 2	524.702	$1^+, 2^+$	197.894	2^+	E2	$\alpha(\text{K})\text{exp}=0.0171$ 25 $B(\text{E}2)(\text{W.u.})>0.24$
328.53 8	0.093 2	514.519	2^-	186.041	1^-	E2	$\alpha(\text{K})\text{exp}=0.0303$ 9 $B(\text{E}2)(\text{W.u.})>0.13$
329.37 8	0.061 2	426.366	$2^-, 3^-$	97.100	2^+		
331.04 15	0.05 1	555.475	$(3,4)^-$	224.419	$1^+, 2^+$		
^x 331.55 15	0.05 1						
333.548 14	2.793 5	384.985	$1^-, 2^-$	51.422	2^-	M1,E2	$\alpha(\text{K})\text{exp}=0.0140$ 5; $\alpha(\text{K})\text{exp}=0.006$ 3 (1966Bi01); $\alpha(\text{L}1)\text{exp}=0.0014$ 8; $\alpha(\text{M}1)\text{exp}=0.0003$ 34
^x 335.30 9	0.122 3					M1	$\alpha(\text{K})\text{exp}=0.0122$ 22
^x 336.15 12	0.14 2						
336.50 14	0.05 1	802.473	$1^-, 2^-$	465.892	$3^-, 4^-, 5^-$		
338.99 23	0.075 18	524.702	$1^+, 2^+$	186.041	1^-		
340.72 10	0.054 18	865.38	$2^-, 3^-$	524.702	$1^+, 2^+$		
341.96 9	0.054 18	801.598	$1^-, 2^-$	459.637	$0^-, 1^-$		
^x 342.21 5	0.054 18						
343.83 3	0.141 18	524.702	$1^+, 2^+$	180.840	1^+	E2	$\alpha(\text{K})\text{exp}=0.0163$ 22 $B(\text{E}2)(\text{W.u.})>0.29$
347.92 17	0.015 5	728.22	$1^-, 2^-, 3^-$	380.535	$4^-, 5^-$		
349.22 10	0.154 14	749.97	$-$	400.759	$1^+, 2^+$		
350.82 10	0.07 2	888.645	$+$	537.734	1^+		
353.0 2	0.5	482.325	$1^+, 2^+$	128.970	5^+		

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$^{103}\text{Rh}(n,\gamma) \text{E=thermal}$ **1986ChYZ,1966Bi01,1966Ne06 (continued)** $\gamma(^{104}\text{Rh})$ (continued)

E_γ ‡	I_γ †	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. ‡	Comments
353.122 14	0.581 16	404.511	2 ⁻	51.422	2 ⁻	M1,E2	$\alpha(\text{K})\text{exp}=0.0121$ 16
356.887 14	0.46 17	537.734	1 ⁺	180.840	1 ⁺	M1+E2	$\alpha(\text{K})\text{exp}=0.0121$ 18
^x 358.76 4	0.495 39					E1	$\alpha(\text{K})\text{exp}=0.0037$ 39; $\alpha(\text{L1})\text{exp}=0.0727$ 9; $\alpha(\text{M1})\text{exp}=0.0156$ 9
^x 359.01 5	0.07 2						
362.4 4	0.031 15	860.322	-	498.049	2 ⁺		
^x 368.62 9	0.113 12					M1	$\alpha(\text{K})\text{exp}=0.0077$ 49
370.87 3	0.232 2	1081.93	1 ⁺ ,2 ⁺	711.064	1 ⁺ ,2 ⁺	M1+E2	$\alpha(\text{K})\text{exp}=0.0096$ 15
^x 371.570 22	0.12 2						
374.90 5	<1.0	644.191	1 ⁺	269.274	2 ⁻ ,3 ⁻		
374.905 17	1.087 20	426.366	2 ⁻ ,3 ⁻	51.422	2 ⁻	M1+E2	$\alpha(\text{K})\text{exp}=0.0115$ 20; $\alpha(\text{L1})\text{exp}=0.0012$ 26
379.954 20	0.232 16	649.249	2 ⁻ ,3 ⁻	269.274	2 ⁻ ,3 ⁻	M1+E2	$\alpha(\text{K})\text{exp}=0.0094$ 19
382.394 25	0.278 16	848.332	-	465.892	3 ⁻ ,4 ⁻ ,5 ⁻	M1+E2	$\alpha(\text{K})\text{exp}=0.0089$ 18
385.3 2	0.6	482.325	1 ⁺ ,2 ⁺	97.100	2 ⁺		
^x 389.06 10	0.086 15						
391.164 25	0.308 14	577.223	0 ⁻ ,1 ⁻ ,2 ⁻	186.041	1 ⁻	M1	$\alpha(\text{K})\text{exp}=0.0070$ 19
394.64 9	0.178 15	394.758	1 ⁺ ,2 ⁺ ,3 ⁺	0.0	1 ⁺		
395.41 12	0.05 1	790.5	1 ⁺ ,2 ⁺	394.758	1 ⁺ ,2 ⁺ ,3 ⁺		
396.62 12	0.08 2	577.223	0 ⁻ ,1 ⁻ ,2 ⁻	180.840	1 ⁺		
396.94 10	0.13 2	952.37		555.475	(3,4) ⁻		
397.21 8	0.10 3	818.01	1 ⁻ ,2 ⁻ ,3 ⁻	420.766	1 ⁺ ,2 ⁺ ,3 ⁺		
400.95 13	0.09 15	498.049	2 ⁺	97.100	2 ⁺		
403.86 6	0.292 15	589.885	1 ⁻ ,2 ⁻	186.041	1 ⁻	M1	$\alpha(\text{K})\text{exp}=0.0054$ 29
406.32 12	0.101 2	888.645	+	482.325	1 ⁺ ,2 ⁺	E2	$\alpha(\text{K})\text{exp}=0.0100$ 38 B(E2)(W.u.)>0.023
408.38 10	0.262 2	459.637	0 ⁻ ,1 ⁻	51.422	2 ⁻	E2	$\alpha(\text{K})\text{exp}=0.0084$ 11 B(E2)(W.u.)>0.64 Mult.: M1 excluded $\Delta J=2$.
409.76 12	0.131 3	924.31	1 ⁻ ,2 ⁻ ,3 ⁻	514.519	2 ⁻	M1	$\alpha(\text{K})\text{exp}=0.0071$ 17
414.70 13	0.125 19	952.37		537.734	1 ⁺		
^x 418.38 14	0.08 2						
419.47 21	0.14 4	644.191	1 ⁺	224.419	1 ⁺ ,2 ⁺		
420.785 25	1.652 5	420.766	1 ⁺ ,2 ⁺ ,3 ⁺	0.0	1 ⁺	M1+E2	$\alpha(\text{K})\text{exp}=0.0073$ 5; $\alpha(\text{K})\text{exp}=0.004$ 3 (1966Bi01)
423.75 24	0.08 2	787.32	1 ⁺ ,2 ⁺	363.181	2 ⁺ ,3 ⁺		
427.528 25	0.894 23	524.702	1 ⁺ ,2 ⁺	97.100	2 ⁺	M1	$\alpha(\text{K})\text{exp}=0.0057$ 23; $\alpha(\text{L1})\text{exp}=0.0727$ 9; $\alpha(\text{M1})\text{exp}=0.0156$ 9 B(M1)(W.u.)>0.00013
430.15 24	0.151 24	952.37		521.963	1 ⁻		
431.23 5	0.34 4	644.191	1 ⁺	213.061	1 ⁺		$\alpha(\text{K})\text{exp}=0.0051$ 28; $\alpha(\text{L1})\text{exp}=0.0727$ 9; $\alpha(\text{M1})\text{exp}=0.0156$ 9
431.63 12	0.342 4	790.5	1 ⁺ ,2 ⁺	358.631	1 ⁺ ,2 ⁺	M1	
433.92 7	0.093 2	860.322	-	426.366	2 ⁻ ,3 ⁻		
440.636 22	1.947 4	537.734	1 ⁺	97.100	2 ⁺	E2	$\alpha(\text{K})\text{exp}=0.0077$ 4; $\alpha(\text{K})\text{exp}=0.005$ 3 (1966Bi01); $\alpha(\text{L1})\text{exp}=0.0008$ 15 B(E2)(W.u.)>1.3
442.35 5	0.16 4	908.196	-	465.892	3 ⁻ ,4 ⁻ ,5 ⁻		
446.6 4	0.056 16	498.049	2 ⁺	51.422	2 ⁻		
^x 448.27 10	0.08 2						
^x 449.46 8	0.09 2						
454.19 16	0.112 17	952.37		498.049	2 ⁺		
459.54 3	0.436 20	860.322	-	400.759	1 ⁺ ,2 ⁺		
463.55 4	0.399 20	826.724	+	363.181	2 ⁺ ,3 ⁺	M1,E2	$\alpha(\text{K})\text{exp}=0.0071$ 37
463.7 4	0.4	644.191	1 ⁺	180.840	1 ⁺		
467.81 8	0.07 2	848.332	-	380.535	4 ⁻ ,5 ⁻		
470.6 3	2.024 5	521.963	1 ⁻	51.422	2 ⁻	E2	B(E2)(W.u.)>1.3

Continued on next page (footnotes at end of table)

$^{103}\text{Rh}(n,\gamma)$ E=thermal **1986ChYZ,1966Bi01,1966Ne06 (continued)** $\gamma(^{104}\text{Rh})$ (continued)

E_γ ‡	I_γ †	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. ‡	Comments
473.67 15	0.19 5	524.702	$1^+, 2^+$	51.422	2^-	E1	$\alpha(\text{K})\text{exp}=0.0012$ 47 B(E1)(W.u.) $>2.8\times 10^{-7}$
^x 475.67 14	0.172 4					E2	$\alpha(\text{K})\text{exp}=0.0075$ 19
^x 478.05 4	0.22 3						
480.64 8	0.46 6	749.97	-	269.274	$2^-, 3^-$		
482.3 3	1.748 6	482.325	$1^+, 2^+$	0.0	1^+	M1	B(M1)(W.u.) >0.00021
^x 486.30 18	0.131 3					E2	$\alpha(\text{K})\text{exp}=0.0053$ 24; $\alpha(\text{L1})\text{exp}=0.0727$ 9; $\alpha(\text{M1})\text{exp}=0.0156$ 9
^x 489.57 15	0.11 3						
^x 495.2 2	0.087 20						
498.00 4	0.672 23	711.064	$1^+, 2^+$	213.061	1^+	M1,E2	$\alpha(\text{K})\text{exp}=0.0059$ 26
504.17 24	0.10 2	848.332	-	344.596	6^-		
^x 517.7 3	0.077 25						
525.4 4	0.059 21	888.645	+	363.181	$2^+, 3^+$		
527.65 5	0.07 2	908.196	-	380.535	$4^-, 5^-$		
530.23 5	0.684 3	711.064	$1^+, 2^+$	180.840	1^+	M1,E2	$\alpha(\text{K})\text{exp}=0.0056$ 7
533.43 7	0.101 3	1047.933	$1^-, 2^-$	514.519	2^-		$\alpha(\text{K})\text{exp}=0.0113$ 13
^x 538.24 3	2.057 3					M1,E2	$\alpha(\text{K})\text{exp}=0.0046$ 3
542.26 10	0.352 3	728.22	$1^-, 2^-, 3^-$	186.041	1^-	M1,E2	$\alpha(\text{K})\text{exp}=0.0038$ 11
545.0 3	0.15 3	908.196	-	363.181	$2^+, 3^+$		
547.19 12	0.34 3	644.191	1^+	97.100	2^+		
548.5 9	0.5	644.191	1^+				
551.13 13	0.25 3	818.01	$1^-, 2^-, 3^-$	266.768	$1^-, 2^-$		
^x 556.01 3	2.932 7					M1,E2	$\alpha(\text{K})\text{exp}=0.0041$ 7
562.82 11	0.211 22	787.32	$1^+, 2^+$	224.419	$1^+, 2^+$		
567.5 4	0.076 24	952.37	-	384.985	$1^-, 2^-$		
569.5 4	0.096 24	749.97	-	180.840	1^+		
574.24 8	0.394 23	787.32	$1^+, 2^+$	213.061	1^+	M1,E2	$\alpha(\text{K})\text{exp}=0.0070$ 24
576.7 5	0.10 5	1081.93	$1^+, 2^+$	505.189	$2^-, 3^-, 4^-$		
578.24 18	0.25 5	908.196	-	329.799	$1^+, 2^+, 3^+$		
^x 582.2 3	0.11 3						
^x 584.38 17	0.19 3						
589.58 15	0.158 23	787.32	$1^+, 2^+$	197.894	2^+		
594.5 5	0.03 1	924.31	$1^-, 2^-, 3^-$	329.799	$1^+, 2^+, 3^+$		
596.15 13	0.34 4	865.38	$2^-, 3^-$	269.274	$2^-, 3^-$		
597.92 6	0.844 4	649.249	$2^-, 3^-$	51.422	2^-	M1,E2	$\alpha(\text{K})\text{exp}=0.0042$ 9
604.7 5	0.08 25	818.01	$1^-, 2^-, 3^-$	213.061	1^+		
606.3 4	0.081 25	787.32	$1^+, 2^+$	180.840	1^+		
609.0 7	0.5	952.37	-	344.596	6^-		
609.53 7	0.552 3	790.5	$1^+, 2^+$	180.840	1^+	M1,E2	$\alpha(\text{K})\text{exp}=0.0032$ 17
613.56 7	0.567 25	826.724	+	213.061	1^+		
616.9 5	0.071 22	802.473	$1^-, 2^-$	186.041	1^-		
^x 619.63 7	0.53 3						
627.6 8	0.07 2	814.821	$1^+, 2^+$	186.041	1^-		
633.91 15	0.209 22	814.821	$1^+, 2^+$	180.840	1^+		
637.29 16	0.201 22	818.01	$1^-, 2^-, 3^-$	180.840	1^+		
643.4 4	<1.6	644.191	1^+				
644.06 5	1.945 6	644.191	1^+	0.0	1^+	M1,E2	$\alpha(\text{K})\text{exp}=0.0028$ 8
645.86 7	1.023 5	826.724	+	180.840	1^+	M1,E2	$\alpha(\text{K})\text{exp}=0.0033$ 10; $\alpha(\text{L1})\text{exp}=0.0727$ 9; $\alpha(\text{M1})\text{exp}=0.0156$ 9
^x 648.45 15	0.29 3						
^x 650.90 8	0.592 3					M1,E2	$\alpha(\text{K})\text{exp}=0.0024$ 15
^x 657.06 10	0.336 23						
661.13 14	0.28 3	1081.93	$1^+, 2^+$	420.766	$1^+, 2^+, 3^+$		
^x 663.55 13	0.35 3						
^x 666.3 4	0.093 25						

Continued on next page (footnotes at end of table)

$^{103}\text{Rh}(n,\gamma)$ E=thermal **1986ChYZ,1966Bi01,1966Ne06** (continued) $\gamma(^{104}\text{Rh})$ (continued)

E_γ [‡]	I_γ [†]	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. [‡]	Comments
681.32 16	0.219 24	1081.93	1 ⁺ ,2 ⁺	400.759	1 ⁺ ,2 ⁺		
689.26 17	0.214 24	1047.933	1 ⁻ ,2 ⁻	358.631	1 ⁺ ,2 ⁺		
693.8 4	0.17 5	790.5	1 ⁺ ,2 ⁺	97.100	2 ⁺		
695.69 10	0.762 5	695.784	1 ⁺ ,2 ⁺	0.0	1 ⁺	M1,E2	$\alpha(K)\text{exp}=0.0027$ 14
702.63 8	0.76 3	915.65		213.061	1 ⁺		
707.95 9	0.67 3	888.645	+	180.840	1 ⁺		
711.24 12	0.39 3	924.31	1 ⁻ ,2 ⁻ ,3 ⁻	213.061	1 ⁺		
^x 715.9 5	0.08 4						
718.6 3	0.21 4	1081.93	1 ⁺ ,2 ⁺	363.181	2 ⁺ ,3 ⁺		
720.8 3	0.23 4	818.01	1 ⁻ ,2 ⁻ ,3 ⁻	97.100	2 ⁺		
723.4 3	0.17 4	1081.93	1 ⁺ ,2 ⁺	358.631	1 ⁺ ,2 ⁺		
729.8 4	0.09 3	826.724	+	97.100	2 ⁺		
734.73 11	0.44 3	915.65		180.840	1 ⁺		
739.66 23	0.16 3	952.37		213.061	1 ⁺		
^x 744.00 22	0.18 3						
^x 753.71 10	0.57 4						
^x 759.9 4	0.13 3						
763.04 16	0.31 3	814.821	1 ⁺ ,2 ⁺	51.422	2 ⁻		
766.9 5	0.09 3	818.01	1 ⁻ ,2 ⁻ ,3 ⁻	51.422	2 ⁻		
^x 774.19 25	0.17 3						
^x 780.38 19	0.25 3						
^x 785.38 24	0.31 5						
787.49 13	0.91 6	787.32	1 ⁺ ,2 ⁺	0.0	1 ⁺		
790.56 2	0.86 17	790.5	1 ⁺ ,2 ⁺	0.0	1 ⁺		
791.9 3	0.52 17	888.645	+	97.100	2 ⁺		
^x 803.8 3	0.17 4						
^x 809.69 15	0.39 4						
818.09 18	0.42 5	818.01	1 ⁻ ,2 ⁻ ,3 ⁻	0.0	1 ⁺		
^x 820.54 18	0.43 5						
^x 825.3 4	0.16 4						
^x 832.36 15	0.59 5						
835.0 5	0.14 5	1047.933	1 ⁻ ,2 ⁻	213.061	1 ⁺		
^x 843.69 13	0.76 4						
^x 847.07 23	0.26 4						
855.16 15	0.48 4	952.37		97.100	2 ⁺		
^x 863.61 15	0.50 4						
868.2 4	0.15 4	1081.93	1 ⁺ ,2 ⁺	213.061	1 ⁺		
872.7 3	0.27 4	924.31	1 ⁻ ,2 ⁻ ,3 ⁻	51.422	2 ⁻		
^x 874.9 11	0.08 5						
884.0 4	0.18 4	1081.93	1 ⁺ ,2 ⁺	197.894	2 ⁺		
^x 889.4 2	0.40 4						
^x 899.8 3	0.26 5						
907.9 4	0.16 5	908.196	-	0.0	1 ⁺		
^x 914.63 2	0.46 5						
924.0 5	0.16 6	924.31	1 ⁻ ,2 ⁻ ,3 ⁻	0.0	1 ⁺		
^x 951.39 18	1.26 7						
^x 962.5 5	0.23 5						
^x 974.1 5	0.27 5						
^x 983.9 3	0.66 8						

[†] Photons per 100 n captures (**1986ChYZ**), unless otherwise noted.[‡] From **1986ChYZ**, unless otherwise noted.^x γ ray not placed in level scheme.

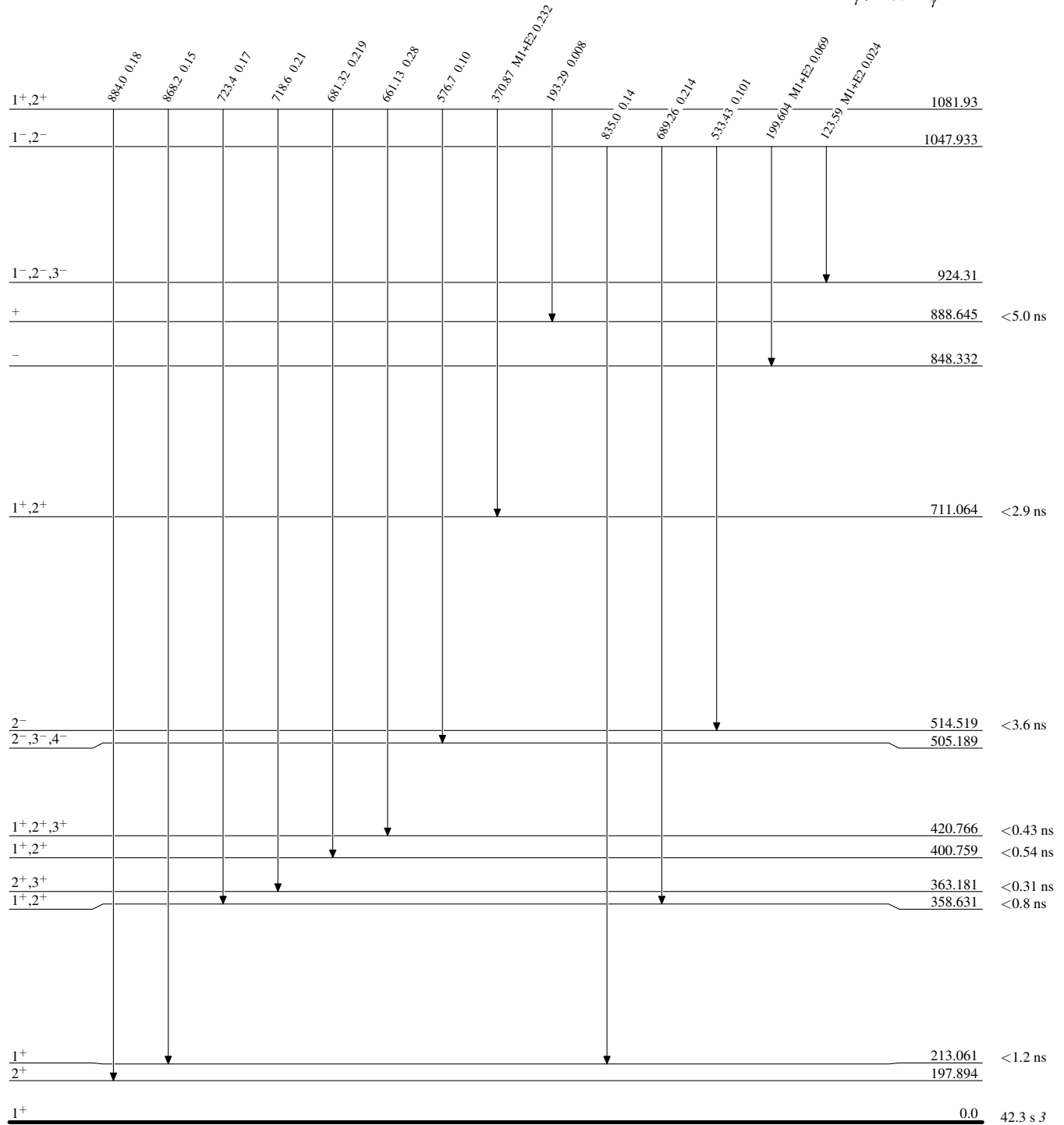
$^{103}\text{Rh}(n,\gamma) E=\text{thermal}$ 1986ChYZ,1966Bi01,1966Ne06

Level Scheme

Intensities: Relative I_γ

Legend

- $\longrightarrow$ $I_\gamma < 2\% \times I_\gamma^{\text{max}}$
 $\longrightarrow$ $I_\gamma < 10\% \times I_\gamma^{\text{max}}$
 $\longrightarrow$ $I_\gamma > 10\% \times I_\gamma^{\text{max}}$



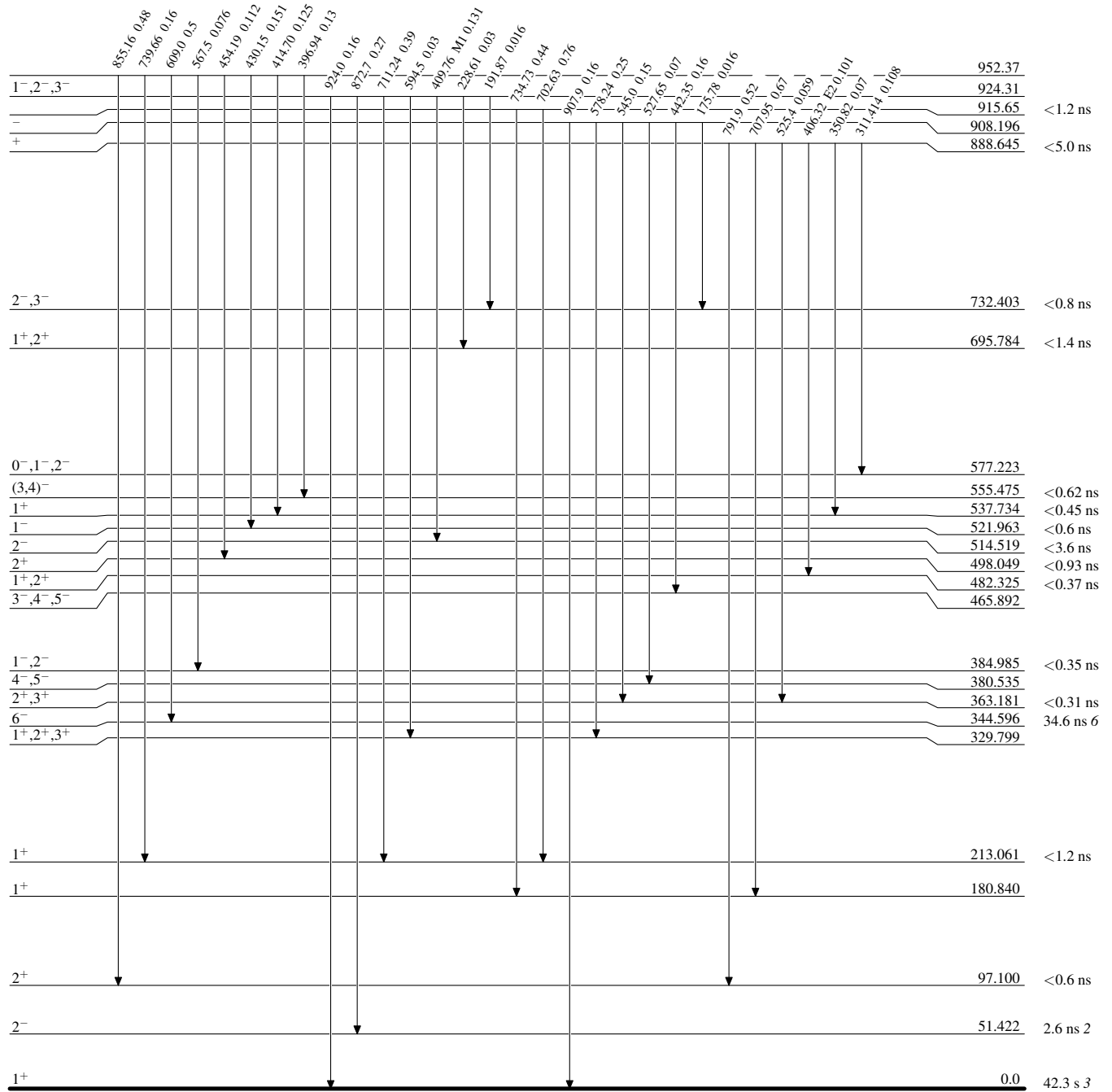
$^{103}\text{Rh}(n,\gamma) \text{E=thermal}$ 1986ChYZ,1966Bi01,1966Ne06

Level Scheme (continued)

Intensities: Relative I_γ

Legend

- $\longrightarrow$ $I_\gamma < 2\% \times I_\gamma^{\max}$
 $\longrightarrow$ $I_\gamma < 10\% \times I_\gamma^{\max}$
 $\longrightarrow$ $I_\gamma > 10\% \times I_\gamma^{\max}$

 $^{104}_{45}\text{Rh}_{59}$

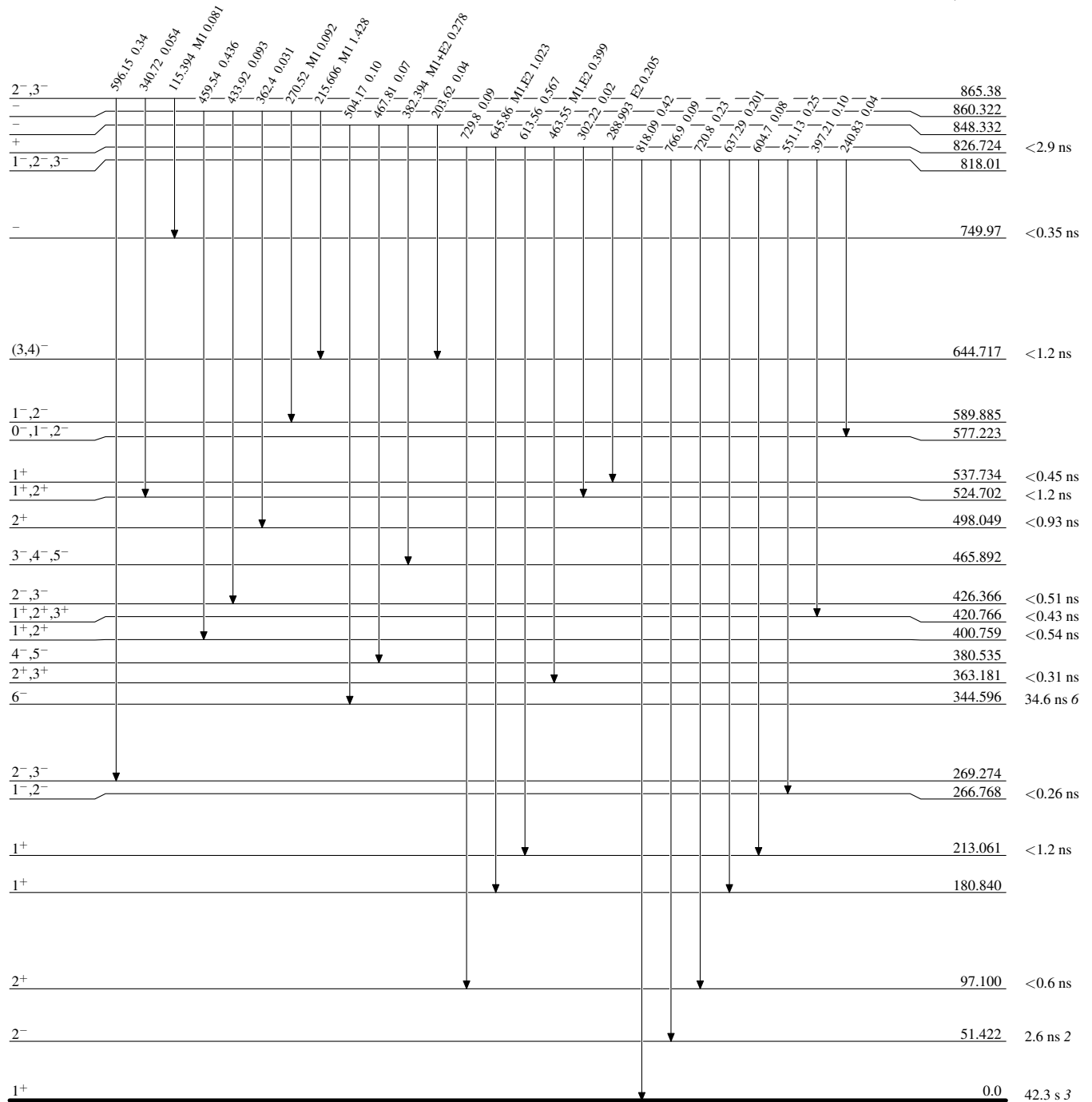
$^{103}\text{Rh}(n,\gamma) \text{ E=thermal}$ 1986ChYZ,1966Bi01,1966Ne06

Level Scheme (continued)

Intensities: Relative I_γ

Legend

- $\longrightarrow$ $I_\gamma < 2\% \times I_\gamma^{\max}$
 $\longrightarrow$ $I_\gamma < 10\% \times I_\gamma^{\max}$
 $\longrightarrow$ $I_\gamma > 10\% \times I_\gamma^{\max}$

 $^{104}_{45}\text{Rh}_{59}$

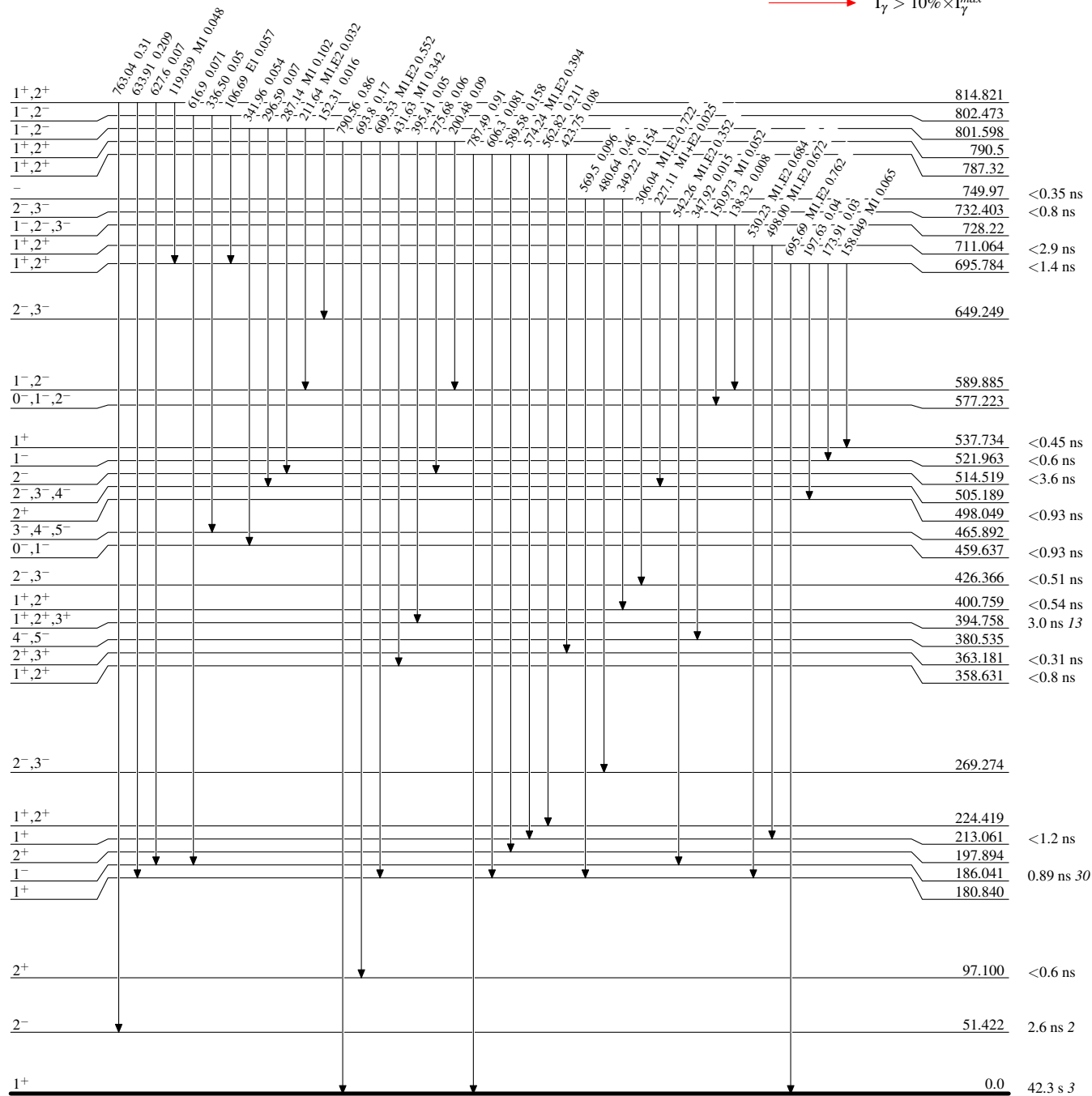
$^{103}\text{Rh}(n,\gamma) \text{E=thermal}$ 1986ChYZ,1966Bi01,1966Ne06

Level Scheme (continued)

Legend

Intensities: Relative I_γ

- $\longrightarrow$ $I_\gamma < 2\% \times I_\gamma^{\text{max}}$
 $\longrightarrow$ $I_\gamma < 10\% \times I_\gamma^{\text{max}}$
 $\longrightarrow$ $I_\gamma > 10\% \times I_\gamma^{\text{max}}$

 $^{104}_{45}\text{Rh}_{59}$

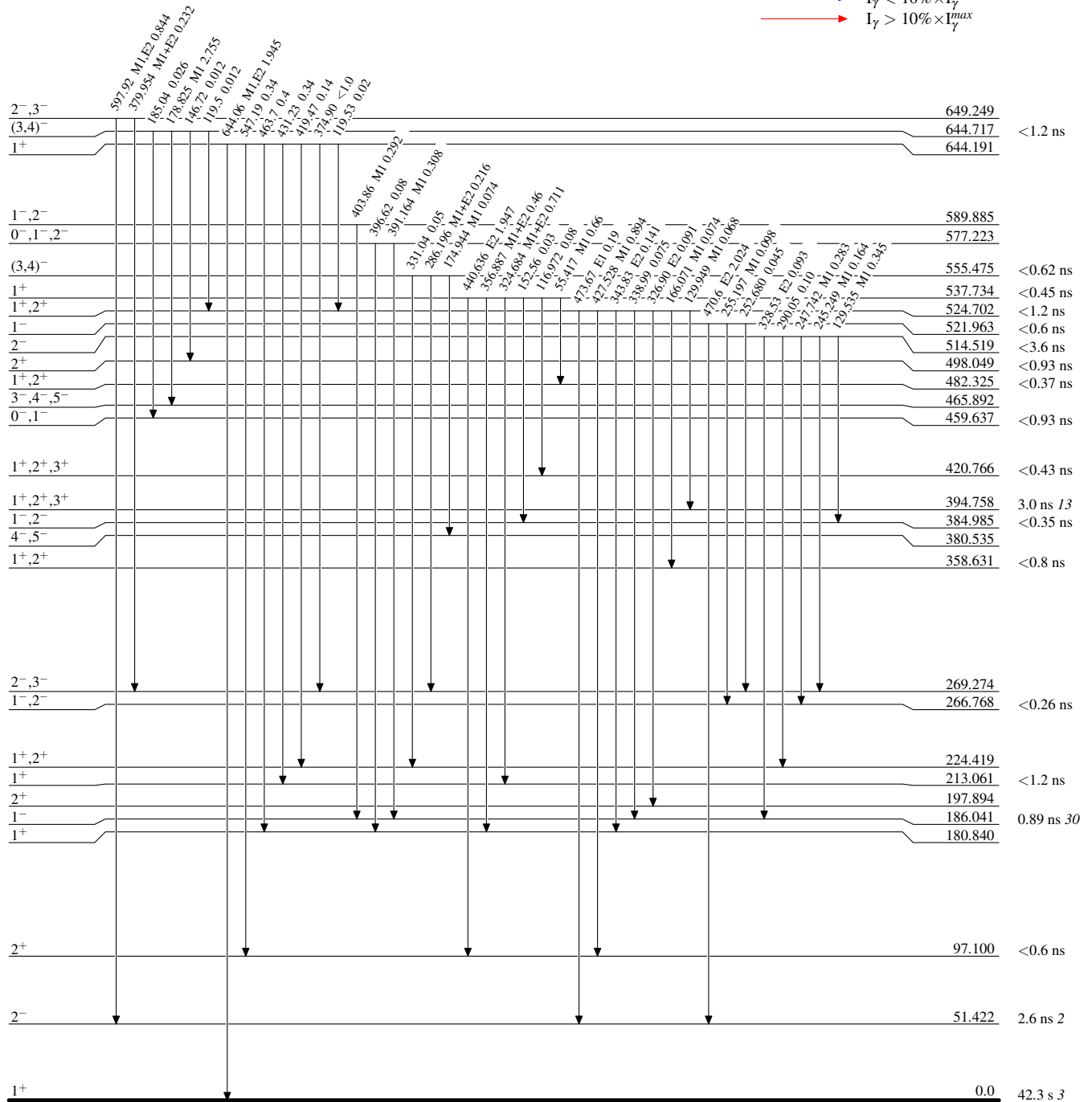
$^{103}\text{Rh}(n,\gamma) \text{E=thermal}$ 1986ChYZ,1966Bi01,1966Ne06

Level Scheme (continued)

Intensities: Relative I_γ

Legend

$\longrightarrow$ $I_\gamma < 2\% \times I_\gamma^{\text{max}}$
 $\longrightarrow$ $I_\gamma < 10\% \times I_\gamma^{\text{max}}$
 $\longrightarrow$ $I_\gamma > 10\% \times I_\gamma^{\text{max}}$



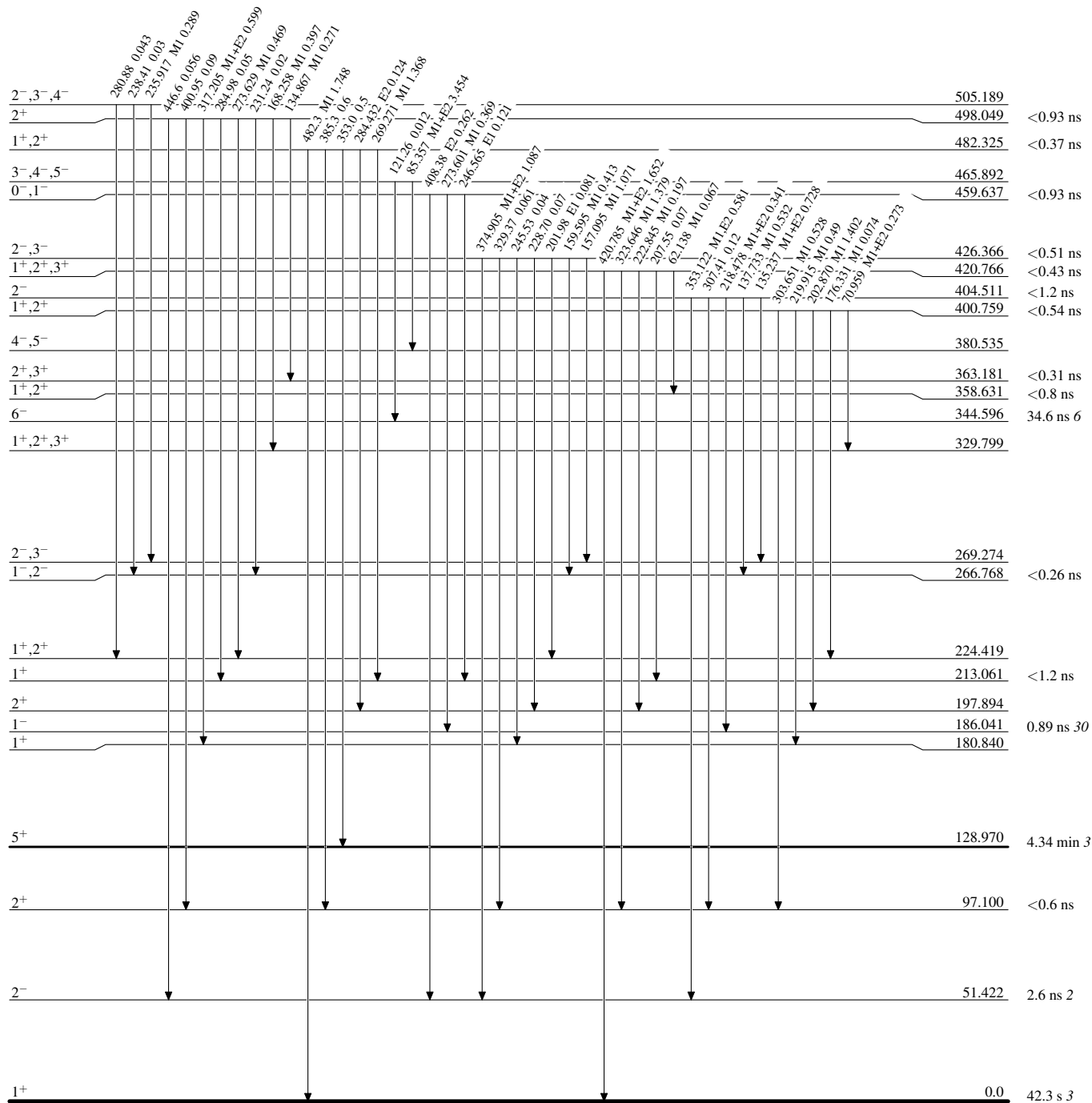
$^{103}\text{Rh}(n,\gamma)$ E=thermal 1986ChYZ,1966Bi01,1966Ne06

Level Scheme (continued)

Intensities: Relative I_γ

Legend

- $\longrightarrow$ $I_\gamma < 2\% \times I_\gamma^{\max}$
 $\longrightarrow$ $I_\gamma < 10\% \times I_\gamma^{\max}$
 $\longrightarrow$ $I_\gamma > 10\% \times I_\gamma^{\max}$

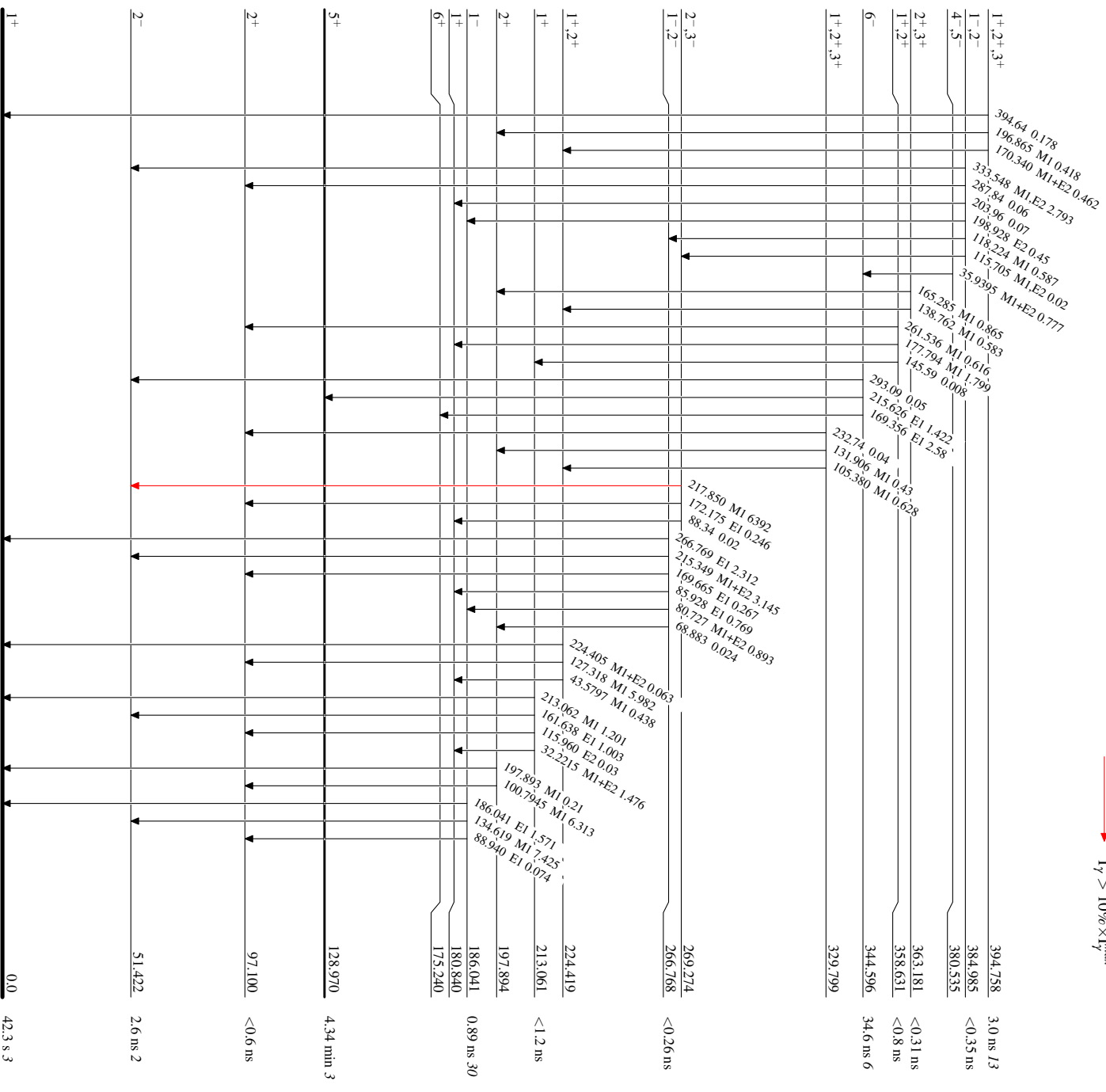


¹⁰³Rh(n,γ) E=thermal 1986ChYZ,1966Bf01,1966Ne06

Level Scheme (continued)

Intensities: Relative I_γ

Legend
 $I_{\gamma} < 2\% \times I_{\gamma}^{max}$
 $I_{\gamma} < 10\% \times I_{\gamma}^{max}$
 $I_{\gamma} > 10\% \times I_{\gamma}^{max}$



$^{103}\text{Rh}(n,\gamma)$ E=thermal 1986ChYZ,1966Bi01,1966Ne06
