Adopted Levels, Gammas

History

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

Q(β^-)=566.7 *24*; S(n)=−8963 *3*; S(p)=−7045 *3*; Q(α)=−3932 *24* 2017Wa10

^{105}Rh Levels

Cross Reference (XREF) Flags

A	^{105}Ru β^- decay	F	^{106}Pd(t,α)
B	^{105}Rh IT decay (42.8 s)	G	^{108}Pd(p,α)
C	^{103}Rh(t,p)	H	^{96}Zr(^{13}C,p3nγ)
D	^{104}Ru(p,p) IAS	I	^{100}Mo(^{11}B,α2nγ)
E	^{104}Ru(^{3}He,d)		

E(level)[†]	J$^\pi$	T$_{1/2}$	XREF	Comments
0.0[#]	7/2$^+$	35.341 h *19*	ABC EFGHI	%β^-=100 μ=4.452 *10* (1985Ed06,1981Ha19) J$^\pi$: 129.782γ E3 from 1/2$^-$; ^{106}Pd(t,α)=4; systematics. T$_{1/2}$: weighted average of 35.357 h *37* and 35.319 h *24* measured, at room temperature and 19 K in 2009Go29, 35.4 h *1* in 1965Pi01, and 35.47 h *8* in 1967Ko05; Other: 35.88 h *2* in 1962Br15. μ: from NMR on oriented ^{105}Rh in Fe and Ni (1985Ed06/1981Ha19); Others: 4.428 *18* (1974WeYR), 4.61 *16* (1976Ba39), 4.34 *12* (1977Wi10).
129.742[e] *4*	1/2$^-$	42.8 s *3*	ABC EFG I	%IT=100 J$^\pi$: L(t,p)=0, L(p,α)=1. T$_{1/2}$: Weighted average of 43.0 s *3* (1998Kr08) and 42.4 s *5* (1992KaZM).
149.124[‡] *6*	9/2$^+$	≤0.3 ns	A EFGHI	J$^\pi$: 149.115γ M1+E2 to 7/2$^+$; L(^{3}He,d)=4, L(t,α)=4. T$_{1/2}$: γ-γ(t) in ^{105}Ru β^- decay (1972Ja01).
392.526[f] *6*	3/2$^-$		A C EFG I	XREF: G(401). J$^\pi$: 262.828γ to 1/2$^-$; L(t,p)=2, L(^{3}He,d)=1, L(t,α)=1.
455.871[e] *8*	5/2$^-$		A C EFG I	J$^\pi$: 63.24γ to 3/2$^-$, 326.154γ to 1/2$^-$; L(t,α)=3, L(t,p)=2.
469.369 *5*	3/2$^+$	≤0.4 ns	A C EF I	J$^\pi$: 339.70γ to 1/2$^-$, 469.347γ E2 to 7/2$^+$. T$_{1/2}$: from γ-γ(t) in ^{105}Ru β^- decay (1972Ja01).
474 *5*	(7/2,9/2)$^+$		G	J$^\pi$: L(p,α)=4.
499.236 *5* 524 *5*	5/2$^+$		A EFGHI E G	J$^\pi$: 350.099γ to 9/2$^+$, 499.210γ M1+E2 to 7/2$^+$; L(t,α)=2, L(^{3}He,d)=2.
602.74[#] *6*	11/2$^+$		HI	J$^\pi$: 453.7γ M1+E2 to 9/2$^+$, 602.7γ E2 to 7/2$^+$; band member.
638.620 *6*	7/2$^+$		A I	J$^\pi$: 139.397γ to 5/2$^+$, 489.500γ M1+E2 to 9/2$^+$.
724.244 *6*	5/2$^+$	≤0.2 ns	A EFG	J$^\pi$: 254.900γ to 3/2$^+$, 575.106γ E2 to 9/2$^+$, 724.211γ to 7/2$^+$; L(^{3}He,d)=2.
734.23[d] *7*	11/2$^+$		HI	J$^\pi$: 585.1γ M1 to 9/2$^+$, 734.3γ E2 to 7/2$^+$.
762.063 *9*	3/2$^-$		A C EF	XREF: F(759). J$^\pi$: 369.527γ to 3/2$^-$, 632.322γ to 1/2$^-$; L(t,α)=1, L(t,p)=(2), L(^{3}He,d)=(2).
783 *5*	(3/2)$^-$		G	J$^\pi$: L(p,α)=1.
785.887 *6*	1/2$^+$	≤0.4 ns	A E I	J$^\pi$: 286.65γ to 5/2$^+$, 316.496γ M1+E2 to 3/2$^+$, 393.378γ E1 to 3/2$^-$; L(^{3}He,d) =0. T$_{1/2}$: from β-γ(t) in ^{105}Ru β^- decay.
794.93[‡] *7*	13/2$^+$		HI	J$^\pi$: 192.2γ M1+E2 to 11/2$^+$, 645.8γ E2 to 9/2$^+$; band member.
806.045 *6*	3/2$^+$	≤0.2 ns	A E I	J$^\pi$: 350.211γ E1 to 5/2$^-$, 413.538γ E1 to 3/2$^-$, 676.355γ E1 to 1//2$^-$; L(^{3}He,d)=2.

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Adopted Levels, Gammas (continued)

^{105}Rh Levels (continued)

E(level)[†]	J^π	XREF	Comments
			$T_{1/2}$: from β-γ(t) in ^{105}Ru β^- decay.
817 *5*	(5/2$^-$,7/2$^-$)	G	J$^\pi$: L(p,α) =(3).
830 *10*	9/2$^+$	C F	XREF: C(833). J$^\pi$: L(t,α)=4.
833.63 *20*	(11/2)	I	J$^\pi$: 684.5γ to 9/2$^+$; near yrast state assumed.
842.55 *3*		A	
866 *5*	5/2$^-$	C EFG	XREF: G(858). J$^\pi$: L(t,α)=3, L(t,p)=2, L(^{3}He,d)=3; However, L(p,α)=1.
869.30 *18*	(5/2)	I	J$^\pi$: 413.7γ to 5/2$^-$, 476.7γ D+Q to 3/2$^-$.
894.45[f] *8*	7/2$^-$	C E G I	J$^\pi$: 438.6γ M1+E2 to 5/2$^-$, 502.0γ E2 to 3/2$^-$; L(t,p)=4, L(p,α)=3.
924 *5*		G	
969.484 *5*	5/2$^+$	A E	J$^\pi$: 183.628γ to 1/2$^+$, 330.859γ M1 to 7/2$^+$.
978.27 *10*	9/2$^+$	I	J$^\pi$: 479.0γ (E2) to 5/2$^+$; near yrast state assumed.
978.82[e] *7*	9/2$^-$	C I	J$^\pi$: 84.4γ to 7/2$^-$, 522.8γ E2 to 5/2$^-$; L(t,p)=4; band member.
1018.92[c] *7*	7/2$^+$	EFGHI	XREF: F(1024)G(1016). J$^\pi$: 519.6γ M1+E2 to 5/2$^+$, 869.9γ M1 to 9/2$^+$, 1019.0γ M1+E2 to 7/2$^+$; L(^{3}He,d)=4;
1147.37 *20*	3/2$^-$,5/2$^-$	C F I	XREF: F(1143). J$^\pi$: 691.5γ D to 5/2$^-$; L(t,p)=2.
1190 *5*		G	
1206.91[d] *9*	13/2$^+$	HI	J$^\pi$: 472.5γ M1(+E2) to 11/2$^+$, 604.1γ M1+E2 to 11/2$^+$; band member.
1215 *5*	3/2$^-$,5/2$^-$	C	J$^\pi$: L(t,p)=2.
1296.9 *5*	1/2$^-$	C F I	XREF: F(1295). J$^\pi$: L(t,p) =0, L(t,α)=1.
1316.27 *20*	(1/2 to 7/2$^+$)	A	J$^\pi$: 846.9γ to 3/2$^+$.
1321.293 *7*	5/2$^+$	A EF	XREF: F(1327). J$^\pi$: 851.927γ 3/2$^+$, 1172.37γ to 9/2$^+$; 7/2$^+$ ruled out by log *ft*=6.965 *9* in ^{105}Ru β^- decay.
1345.135 *6*	3/2$^+$	A	J$^\pi$: 706.11γ to 7/2$^+$, 875.728γ M1+E2 to 3/2$^+$, 1215.463γ to 1/2$^-$.
1351 *5*	3/2$^-$,5/2$^-$	C	J$^\pi$: L(t,p)=2.
1355 *1*	(9/2)$^+$	E	J$^\pi$: L(^{3}He,d)=4; probable intruder band member.
1365.87[#] *9*	15/2$^+$	HI	J$^\pi$: 570.9γ M1+E2 to 13/2$^+$, 763.2γ E2 to 11/2$^+$; band member.
1377.024 *5*	3/2$^+$	A	J$^\pi$: 591.161γ to 1/2$^+$, 738.379γ to 7/2$^+$, 907.642γ (M1+E2) to 7/2$^+$.
1393 *5*		G	
1399.68[c] *12*	11/2$^+$	HI	J$^\pi$: 380.8γ E2 to 7/2$^+$, 421.1γ to 9/2$^+$; band member.
1405.95 *22*	(3/2$^-$ to 11/2$^-$)	I	J$^\pi$: 511.5γ to 7/2$^-$.
1441.43 *4*	(3/2$^+$,5/2,7/2$^+$)	A	J$^\pi$: 635.39γ to 3/2$^+$, 1441.42γ to 7/2$^+$;
1462 *10*	3/2$^-$	C F	J$^\pi$: L(t,α)=1, L(t,p)=2.
1475.02 *22*	(5/2$^+$ to 13/2$^+$)	I	J$^\pi$: 496.2γ to 9/2$^+$.
1486.839 *11*	(3/2$^+$)	A E	J$^\pi$: 700.98γ to 1/2$^+$, 987.40γ to 5/2$^+$, 1017.470γ (M1+E2) to 3/2$^+$; L(^{3}He,d)=2. However L(^{3}He,d)=(3) can not be excluded.
1519.0 *7*	(7/2 to 15/2)	I	J$^\pi$: 685.4γ to (11/2).
1521 *5*	(5/2$^-$,7/2$^-$)	G	J$^\pi$: L(p,α)=(3).
1529.65 *22*	(3/2$^-$ to 11/2$^-$)	I	J$^\pi$: 635.2γ to 7/2$^-$.
1565.26[f] *18*	(11/2$^-$)	I	J$^\pi$: 586.4γ (M1+E2) to 9/2$^-$, 670.9γ to 7/2$^-$; band member.
1577 *5*		G	
1605.47[‡] *11*	17/2$^+$	HI	J$^\pi$: 239.7γ M1+E2 to 15/2$^+$, 810.6γ E2 to 13/2$^+$; band member.
1608 *8*		F	
1647.03[e] *9*	13/2$^-$	I	J$^\pi$: 668.1γ E2 to 9/2$^-$; band member.
1649 *10*	3/2$^-$,5/2$^-$	C	J$^\pi$: L(t,p)=2.
1676.93[d] *9*	15/2$^+$	HI	J$^\pi$: 469.9γ M1(+E2) to 13/2$^+$, 942.8γ E2 to 11/2$^+$.
1690 *10*	(7/2$^-$,9/2$^-$)	C F	XREF: F(1684). J$^\pi$: L(t,p)=(4).
1698.196 *10*	(3/2$^+$,5/2)	A	J$^\pi$: 1228.73γ to 3/2$^+$, 1698.167γ to 7/2$^+$; log *ft*=6.276 *20* in ^{105}Ru β^- decay

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Adopted Levels, Gammas (continued)

^{105}Rh Levels (continued)

E(level)[†]	J$^{\pi}$	XREF	Comments
			rules out 7/2$^+$.
1708.53 *5*	(3/2$^+$,5/2)	A	J$^{\pi}$: 1238.2γ to to 3/2$^+$, 1708.7γ to 7/2$^+$; log *ft*=7.38 *5* in ^{105}Ru β^- decay rules out 7/2$^+$.
1721.203 *10*	(5/2$^+$)	A E	XREF: E(1719). J$^{\pi}$: 1251.907γ to 3/2$^+$, 1571γ to 9/2$^+$; log *ft*=6.259 *22* in ^{105}Ru β^- decay rules out 7/2$^+$.
1745.24 *21*	(7/2$^+$ to 15/2$^+$)	I	J$^{\pi}$: 1142.5γ to 11/2$^+$.
1758 *10*	7/2$^-$,9/2$^-$	C F	XREF: F(1750). J$^{\pi}$: L(t,p)=4.
1765.4 *3*	(5/2$^+$,3/2$^+$)	A E	XREF: E(1762). J$^{\pi}$: 1765.4γ to 7/2$^+$; L(^{3}He,d)=2.
1780.8 *3*	(5/2$^-$ to 13/2$^-$)	I	J$^{\pi}$: 802.0γ to 9/2$^-$.
1809.78 *6*	(5/2,3/2$^+$)	A	J$^{\pi}$: 1340γ to 3/2$^+$, 1809γ to 3/2$^+$; log *ft*=6.56 *6* in ^{105}Ru β^- decay rules out 7/2$^+$.
1829.6 *3*	(5/2$^+$)	A C EF	XREF: C(1825)F(1832). J$^{\pi}$: 1829.6γ to 7/2$^+$; log *ft*=7.68 *23* in ^{105}Ru β^- decay rules out 7/2$^+$.
1849 *10*	3/2$^-$,5/2$^-$	C	J$^{\pi}$: L(t,p)=2.
1864 *5*	(3/2$^+$,5/2,7/2$^-$)	E	J$^{\pi}$: L(^{3}He,d) =2,3.
1887 *10*	3/2$^-$,5/2$^-$	C F	XREF: F(1889). J$^{\pi}$: L(t,p)=2.
1904 *10*	(3/2$^-$,5/2$^-$)	C	J$^{\pi}$: L(t,p)=(2).
1905.7 *4*	(9/2$^+$ to 17/2$^+$)	I	J$^{\pi}$: 698.8γ to 13/2$^+$.
1913 *5*	3/2$^+$,5/2$^+$	E	J$^{\pi}$: L(^{3}He,d)=2.
1936 *10*	7/2$^-$,9/2$^-$	C F	XREF: F(1942). J$^{\pi}$: L(t,p)=4.
1936.59[c] *16*	15/2$^+$	HI	J$^{\pi}$: 536.9γ E2 to 11/2$^+$; band member.
1957 *5*		E	
2005 *10*	3/2$^-$,5/2,7/2$^+$	C F	XREF: F(2001). J$^{\pi}$: L(t,p)=2,3.
2019.16[g] *9*	13/2$^-$	I	J$^{\pi}$: 371.2γ to 13/2$^-$, 1040.4γ to 9/2$^-$, 1224.3γ E1+M2 to 13/2$^+$, 1416.6γ E1 to 11/2$^+$; band member.
2033 *10*	7/2$^-$,9/2$^-$	C F	XREF: F(2041). J$^{\pi}$: L(t,p)=4.
2061 *10*	(7/2$^-$,9/2$^-$)	C	J$^{\pi}$: L(t,p)=(4).
2083 *10*	(7/2$^-$,9/2$^-$)	C F	XREF: F(2075). J$^{\pi}$: L(t,p)=(4).
2109 *10*	(3/2$^-$,5/2$^-$)	C F	XREF: F(2113). J$^{\pi}$: L(t,p)=(2).
2137 *10*	(7/2$^-$,9/2$^-$)	C	J$^{\pi}$: L(t,p)=(4).
2160 *10*	(3/2$^-$,5/2$^-$)	C	J$^{\pi}$: L(t,p)=(2).
2163.99[d] *16*	(17/2$^+$)	HI	J$^{\pi}$: 487.0γ (M1+E2) to 15/2$^+$, 957.1γ to 13/2$^+$; band member.
2170.15[g] *8*	15/2$^-$	I	J$^{\pi}$: 151.1γ M1+E2 to 13/2$^-$, 803.8γ E1(+M2) to 13/2$^+$, 1375.2γ E1 to 13/2$^+$; band member.
2244.13[#] *12*	19/2$^+$	HI	J$^{\pi}$: 638.7γ M1+E2 to 17/2$^+$, 878.2γ E2 to 15/2$^+$; band member.
2310.58[g] *10*	17/2$^-$	I	J$^{\pi}$: 140.4γ M1+E2 to 15/2$^-$, 663.6γ E2 to 13/2$^-$, 944.8γ E1 to 15/2$^+$; band member.
2329.96 *16*	(15/2)	I	J$^{\pi}$: 724.7γ to 17/2$^+$, 1534.8γ to 13/2$^+$.
2396.04[e] *12*	17/2$^-$	I	J$^{\pi}$: 749.1γ E2 to 13/2$^-$; band member.
2417.30[h] *17*	15/2$^-$	I	J$^{\pi}$: 1210.4γ to 13/2$^+$; band member.
2477.01[i] *10*	17/2$^-$	I	J$^{\pi}$: 306.8γ M1(+E2) to 15/2$^-$, 830.0γ E2 to 13/2$^-$; band member.
2495.90[g] *13*	19/2$^-$	I	J$^{\pi}$: 185.3γ M1+E2 to 17/2$^-$; band member.
2512.58[h] *12*	17/2$^-$	I	J$^{\pi}$: 835.6γ to 15/2$^+$; band member.
2521.14[‡] *15*	21/2$^+$	HI	J$^{\pi}$: 277.0γ M1(+E2) to 19/2$^+$, 915.4γ E2 to 17/2$^+$; band member.
2594.0[c] *3*	19/2$^+$	I	J$^{\pi}$: 657.4γ to E2 to 15/2$^+$; band member.

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Adopted Levels, Gammas (continued)

^{105}Rh Levels (continued)

E(level)[†]	Jπ	XREF	Comments
2615.31[d] *20*	(19/2$^+$)	HI	Jπ: 451.2γ to (17/2$^+$), 938.4γ to 15/2$^+$; band member.
2645.59[h] *11*	19/2$^-$	I	Jπ: 133.0γ M1 to 17/2$^-$, 168.6γ M1(+E2) to 17/2$^-$, 335.0γ M1 to 17/2$^-$, 475.5γ to 15/2$^-$; band member.
2668.98[i] *10*	19/2$^-$	I	Jπ: 191.9γ M1 to 17/2$^-$, 358.4γ M1(+E2) to 17/2$^-$; band member.
2718.60[g] *16*	21/2$^-$	I	Jπ: 222.7γ M1+E2 to 19/2$^-$; band member.
2825.02[h] *12*	21/2$^-$	I	Jπ: 156.0γ M1 to 19/2$^-$, 179.4γ M1(+E2) to 19/2$^-$, 329.4γ M1(+E2) to 19/2$^-$; band member.
2890.79 *23*	(19/2)	I	Jπ: 369.6γ D(+Q) to 21/2$^+$, 1285.6γ (D+Q) to 17/2$^+$.
2914.23[i] *12*	21/2$^-$	I	Jπ: 245.2γ M1(+E2) to 19/2$^-$; band member.
2981.55[&] *19*	23/2$^+$	HI	Jπ: 460.4γ M1(+E2) to 21/2$^+$, 737.5γ E2 to 19/2$^+$; band member.
2992.9[g] *4*	23/2$^-$	I	Jπ: 274.4γ M1+E2 to 21/2$^-$, 496.8γ to 19/2$^-$; band member.
3077.82[h] *16*	23/2$^-$	I	Jπ: 252.8γ M1(+E2) to 21/2$^-$; band member.
3197.55[@] *20*	25/2$^+$	HI	Jπ: 216.0γ M1(+E2) to 23/2$^+$, 676.4γ E2 to 21/2$^+$; band member.
3267.03[i] *16*	23/2$^-$	I	Jπ: 352.8γ M1(+E2) to 21/2$^-$; band member.
3308.3[g] *4*	25/2$^-$	I	Jπ: 315.4γ M1(+E2) to 23/2$^-$; band member.
3344.6[c] *11*	(23/2$^+$)	I	Jπ: 750.6γ (E2) to 19/2$^+$; band member.
3469.82[h] *19*	(25/2$^-$)	I	Jπ: 392.0γ (M1+E2) to 23/2$^-$; band member.
3478.0[&] *3*	27/2$^+$	HI	Jπ: 280.4γ M1(+E2) to 25/2$^+$, 496.5γ to 23/2$^+$; band member.
3536.86[‡] *24*	25/2$^+$	HI	Jπ: 1015.7γ E2 to 21/2$^+$; band member.
3667.6[i] *3*	(25/2$^-$)	I	Jπ: 400.6γ to 23/2$^-$; band member.
3769.1[g] *4*	27/2$^-$	I	Jπ: 460.8γ M1(+E2) to 25/2$^-$; band member.
3839.3[@] *3*	29/2$^+$	HI	Jπ: 361.3γ M1 to 27/2$^+$, 642.0γ to 25/2$^+$; band member.
4002.5[b] *4*	27/2$^+$	HI	Jπ: 465.6γ M1(+E2) to 25/2$^+$, 1021γ to 23/2$^+$; band member.
4092.4[i] *4*	(27/2$^-$)	I	Jπ: 424.8γ to (25/2$^-$); band member.
4169.8[c] *12*	(27/2$^+$)	I	Jπ: 825.2γ to (23/2$^+$); band member.
4183.4[g] *5*	(29/2$^-$)	I	Jπ: 414.3γ to 27/2$^-$; band member.
4215.4[&] *4*	31/2$^+$	HI	Jπ: 376.1γ M1 to 29/2$^+$, 736.9γ to 27/2$^+$; band member.
4298.7[a] *5*	29/2$^+$	H	Jπ: 821 M1+E2 to 27/2$^+$, 1101γ to 25/2$^+$; band member.
4417.5[‡] *12*	(29/2$^+$)	I	Jπ: 880.6γ (E2) to (25/2$^+$); band member.
4689.6[b] *5*	31/2$^+$	H	Jπ: 391γ to 29/2$^+$, 687γ to 27/2$^+$; band member.
4702.2[@] *4*	33/2$^+$	HI	Jπ: 486.8γ to 31/2$^+$, 863γ to 29/2$^+$; band member.
5080.8[a] *6*	33/2$^+$	H	Jπ: 391γ to 31/2$^+$, 782γ to 29/2$^+$; band member.
5184.4[&] *7*	35/2$^+$	H	Jπ: 482γ to 33/2$^+$, 969γ to 31/2$^+$; band member.
5525.3[b] *6*	35/2$^+$	H	Jπ: 444γ to 33/2$^+$, 836γ to 31/2$^+$; band member.
5764.1[@] *8*	37/2$^+$	H	Jπ: 580γ to 35/2$^+$, 1062γ to 33/2$^+$; band member.
6020.5[a] *8*	37/2$^+$	H	Jπ: 495γ to 35/2$^+$, 940γ to 33/2$^+$; band member.
6344.8[&] *10*	39/2$^+$	H	Jπ: 581γ to 37/2$^+$, 1160γ to 35/2$^+$; band member.
6566.5[b] *9*	39/2$^+$	H	Jπ: 546γ to 37/2$^+$, 1041 to 37/2$^+$; band member.
6640 *10*	3/2$^+$	D	Jπ: L(p,p)=2. Γ(p)=3 keV, Γ(total)=40 keV.
6775 *10*	1/2$^+$	D	Jπ: L(p,p)=2. Γ(p)=13 keV, Γ(total)=52 keV.
7038.0[@] *11*	41/2$^+$	H	Jπ: 693γ to 39/2$^+$, 1274γ to 37/2$^+$; band member.
7080 *10*	3/2$^+$,5/2$^+$	D	Jπ: L(p,p)=2. Γ(p)=9 keV, Γ(total)=55 keV.
7156.5[a] *11*	41/2$^+$	H	Jπ: 590γ to 39/2$^+$, 1136γ to 37/2$^+$; band member.
7260 *10*	(1/2$^+$)	D	
7712.7[&] *12*	43/2$^+$	H	Jπ: 675γ to 41/2$^+$, 1368γ to 39/2$^+$; band member.
8467.4[@] *13*	45/2$^+$	H	Jπ: 755γ to 43/2$^+$, 1429γ to 41/2$^+$; band member.

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Adopted Levels, Gammas (continued)

^{105}Rh Levels (continued)

E(level)[†]	J^π	XREF	Comments
8524.5[a] *15*	(45/2$^+$)	H	J^π: 1368γ to 41/2$^+$; band member.
9212.7[&] *15*	(47/2$^+$)	H	J^π: 1500γ to 43/2$^+$; band member.

[†] From a least squares fit to Eγ.
[‡] Band(A): $\pi g_{9/2}$, α=+1/2.
[#] Band(a): $\pi g_{9/2}$, α=−1/2.
[@] Band(B): $\pi g_{9/2}\nu(h_{11/2})^2$, α=+1/2. Chiral yrast.
[&] Band(b): $\pi g_{9/2}\nu(h_{11/2})^2$, α=−1/2. Chiral yrast.
[a] Band(C): $\pi g_{9/2}\nu(h_{11/2})^2$, α=+1/2. Chiral yrare.
[b] Band(c): $\pi g_{9/2}\nu(h_{11/2})^2$, α=−1/2. Chiral yrare.
[c] Band(D): π1/2[431], α=−1/2.
[d] Band(E): π7/2[413] + K^π=2$^+$ γ-vibration of the core.
[e] Band(F): π1/2[301], α=+1/2.
[f] Band(f): π1/2[301], α=−1/2.
[g] Band(G): 13/2$^-$, ΔJ=1 band.
[h] Band(H): 15/2$^-$, $\pi g_{9/2}\nu(h_{11/2}g_{7/2})$.
[i] Band(I): 17/2$^-$, $\pi g_{9/2}\nu(h_{11/2}g_{7/2})$.

Adopted Levels, Gammas (continued)

γ(^{105}Rh)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.	δ[@]	α[&]	Comments
129.742	1/2⁻	129.782 *4*	100	0.0	7/2⁺	E3		3.94	α(K)=2.55 *4*; α(L)=1.140 *16*; α(M)=0.223 *4*; α(N)=0.0336 *5*; α(O)=0.000358 *5* B(E3)(W.u.)=0.01415 *19* E_γ: from curved crystal spectrometer in ^{105}Ru β^- decay (1979Bo26).
149.124	9/2⁺	149.115 *10*	100	0.0	7/2⁺	M1+E2	+0.34 *1*	0.1352 *23*	α(K)=0.1163 *19*; α(L)=0.0155 *3*; α(M)=0.00290 *6*; α(N)=0.000474 *9*; α(O)=2.09×10^{-5} *4* Mult.,δ: from ^{105}Rb β^- decay.
392.526	3/2⁻	262.828 *10*	100	129.742	1/2⁻	M1+E2	−0.16 *1*	0.0257	α(K)=0.0225 *4*; α(L)=0.00269 *4*; α(M)=0.000500 *8*; α(N)=8.29×10^{-5} *12*; α(O)=4.15×10^{-6} *6* Mult.,δ: from ^{105}Rb β^- decay.
455.871	5/2⁻	63.24 *4*	4.9 *4*	392.526	3/2⁻	M1+E2			Mult.: R_{DCO}=0.8 *3* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		326.154 *10*	100.0 *8*	129.742	1/2⁻	E2		0.0214	α(K)=0.0184 *3*; α(L)=0.00247 *4*; α(M)=0.000461 *7*; α(N)=7.47×10^{-5} *11*; α(O)=3.12×10^{-6} *5*
469.369	3/2⁺	339.70 *4*	0.102 *5*	129.742	1/2⁻				I_γ: in ^{105}Ru β^-decay value is much smaller than the 9.6 value in ^{100}Mo(^{11}B,α2nγ). Latter value probably contaminated by other γ-rays.
		469.347 *10*	100.0 *8*	0.0	7/2⁺	E2		0.00682	α(K)=0.00591 *9*; α(L)=0.000746 *11*; α(M)=0.0001388 *20*; α(N)=2.27×10^{-5} *4* α(O)=1.032×10^{-6} *15*
499.236	5/2⁺	350.099 *20*	15 *4*	149.124	9/2⁺				
		499.210 *10*	100.0 *10*	0.0	7/2⁺	M1+E2			Mult.: R_{DCO}=1.0 *3* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
602.74	11/2⁺	453.7[‡] *1*	100[‡]	149.124	9/2⁺	M1+E2		0.00644	α(K)=0.00564 *8*; α(L)=0.000659 *10*; α(M)=0.0001223 *18*; α(N)=2.03×10^{-5} *3* α(O)=1.041×10^{-6} *15* Mult.: R_{DCO}=0.69 *13* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		602.7[‡] *1*	13.7[‡] *13*	0.0	7/2⁺	E2		0.00334	α(K)=0.00290 *4*; α(L)=0.000355 *5*; α(M)=6.60×10^{-5} *10*; α(N)=1.085×10^{-5} *16*; α(O)=5.14×10^{-7} *8* Mult.: R_{DCO}=0.90 *19* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
638.620	7/2⁺	139.397 *14*	6.1 *3*	499.236	5/2⁺				
		489.500 *10*	100.0 *8*	149.124	9/2⁺	M1+E2	+0.25 *2*	0.00540	α(K)=0.00473 *7*; α(L)=0.000554 *8*; α(M)=0.0001028 *15*; α(N)=1.706×10^{-5} *24* α(O)=8.69×10^{-7} *13* Mult.: R_{DCO}=0.6 *3* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		638.589 *10*	41.3 *4*	0.0	7/2⁺				
724.244	5/2⁺	225.013 *15*	0.257 *5*	499.236	5/2⁺	M1		0.057 *19*	α(K)=0.048 *16*; α(L)=0.007 *3*; α(M)=0.0013 *6*; α(N)=0.00020 *8*; α(O)=8.3×10^{-6} *22*
		254.900 *12*	0.160 *4*	469.369	3/2⁺	M1,E2		0.038 *11*	α(K)=0.033 *9*; α(L)=0.0044 *16*; α(M)=0.0008 *3*; α(N)=0.00013 *5*; α(O)=5.7×10^{-6} *13*
		575.106 *10*	2.060 *20*	149.124	9/2⁺	E2		0.00379	α(K)=0.00330 *5*; α(L)=0.000406 *6*; α(M)=7.54×10^{-5} *11*; α(N)=1.238×10^{-5} *18*; α(O)=5.82×10^{-7} *9*

$^{105}_{45}Rh_{60}$-6

Adopted Levels, Gammas (continued)

γ(^{105}Rh) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.	δ[@]	α[&]	Comments
724.244	5/2$^+$	724.211 *10*	100.0 *10*	0.0	7/2$^+$	M1+E2	−0.12 *5*	0.00214	α(K)=0.00187 *3*; α(L)=0.000216 *3*; α(M)=4.01×10^{-5} *6*; α(N)=6.66×10^{-6} *10*; α(O)=3.44×10^{-7} *5* E_γ: from curved crystal spectrometer (1979Bo26).
734.23	11/2$^+$	585.1[‡] *1*	100[‡]	149.124	9/2$^+$	M1			Mult.: R_{DCO}=0.48 *20* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		734.3[‡] *1*	46[‡] *4*	0.0	7/2$^+$	E2			Mult.: R_{DCO}=0.7 *3* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
762.063	3/2$^-$	369.527 *15*	34.5 *8*	392.526	3/2$^-$				
		632.322 *10*	100	129.742	1/2$^-$				
785.887	1/2$^+$	286.65 *4*	0.23 *2*	499.236	5/2$^+$				
		316.496 *10*	100	469.369	3/2$^+$	M1+E2	−0.20 *1*	0.01603	α(K)=0.01400 *20*; α(L)=0.001667 *24*; α(M)=0.000310 *5*; α(N)=5.14×10^{-5} *8*; α(O)=2.58×10^{-6} *4*
		393.378 *10*	37.5 *4*	392.526	3/2$^-$	E1		0.00323	α(K)=0.00283 *4*; α(L)=0.000326 *5*; α(M)=6.04×10^{-5} *9*; α(N)=9.98×10^{-6} *14*; α(O)=4.94×10^{-7} *7* Mult.: experimental data also allows M1 but decay scheme requires E1.
		656.198 *10*	19.22 *17*	129.742	1/2$^-$				
794.93	13/2$^+$	192.2[‡] *1*	28.6[‡] *14*	602.74	11/2$^+$	M1+E2		0.0574	α(K)=0.0500 *7*; α(L)=0.00601 *9*; α(M)=0.001117 *16*; α(N)=0.000185 *3*; α(O)=9.33×10^{-6} *14* Mult.: R_{DCO}=0.78 *11* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		645.8[‡] *1*	100[‡]	149.124	9/2$^+$	E2		0.00277	α(K)=0.00241 *4*; α(L)=0.000292 *4*; α(M)=5.43×10^{-5} *8*; α(N)=8.94×10^{-6} *13*; α(O)=4.27×10^{-7} *6* Mult.: R_{DCO}=0.98 *10* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
806.045	3/2$^+$	81.67 *4*	0.251 *12*	724.244	5/2$^+$				E_γ: If the energy is correct no final level within 0.35 keV.
		306.79 *3*	0.57 *3*	499.236	5/2$^+$				
		350.211 *20*	6.8 *6*	455.871	5/2$^-$	E1		0.00436	α(K)=0.00382 *6*; α(L)=0.000441 *7*; α(M)=8.16×10^{-5} *12*; α(N)=1.347×10^{-5} *19*; α(O)=6.63×10^{-7} *10*
		413.538 *10*	15.65 *15*	392.526	3/2$^-$	E1		0.00285	α(K)=0.00250 *4*; α(L)=0.000287 *4*; α(M)=5.32×10^{-5} *8*; α(N)=8.79×10^{-6} *13*; α(O)=4.36×10^{-7} *7*
		676.355 *10*	100	129.742	1/2$^-$	E1		8.96×10^{-4}	α(K)=0.000787 *11*; α(L)=8.97×10^{-5} *13*; α(M)=1.658×10^{-5} *24*; α(N)=2.75×10^{-6} *4* α(O)=1.394×10^{-7} *20*
		805.973 *14*	0.305 *3*	0.0	7/2$^+$				
833.63	(11/2)	684.5[‡] *2*	100[‡]	149.124	9/2$^+$				
842.55		343.314 *25*	100	499.236	5/2$^+$				
869.30	(5/2)	413.7[‡] *4*	100[‡]	455.871	5/2$^-$				
		476.7[‡] *2*	85[‡] *15*	392.526	3/2$^-$	D+Q			Mult.: R_{DCO}=0.65 *17* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
894.45	7/2$^-$	438.6[‡] *1*	100[‡]	455.871	5/2$^-$	M1+E2			
		502.0[‡] *2*	19[‡] *3*	392.526	3/2$^-$	E2			
969.484	5/2$^+$	163.473 *10*	8.00 *16*	806.045	3/2$^+$	(M1)		0.0885	α(K)=0.0772 *11*; α(L)=0.00931 *13*; α(M)=0.001732 *25*; α(N)=0.000287 *4*; α(O)=1.442×10^{-5} *21*
		183.628 *10*	5.49 *11*	785.887	1/2$^+$				

$^{105}_{45}Rh_{60}$-7

Adopted Levels, Gammas (continued)

γ(^{105}Rh) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.	δ[@]	α[&]	Comments
969.484	5/2$^+$	245.21 *3*	1.28 *7*	724.244	5/2$^+$				
		330.859 *10*	35.20 *22*	638.620	7/2$^+$	M1		0.01406	α(K)=0.01229 *18*; α(L)=0.001450 *21*; α(M)=0.000269 *4*; α(N)=4.47×10^{-5} *7*; α(O)=2.28×10^{-6} *4*
		470.235 *20*	39 *3*	499.236	5/2$^+$				
		500.11 *3*	9.2 *8*	469.369	3/2$^+$	M1+E2	+0.7 *3*	0.00528 *13*	α(K)=0.00461 *11*; α(L)=0.000551 *20*; α(M)=0.000102 *4*; α(N)=1.69×10^{-5} *6*; α(O)=8.34×10^{-7} *14*
		513.623 *10*	10.85 *11*	455.871	5/2$^-$				
		577.019 *13*	5.07 *9*	392.526	3/2$^-$				
		820.23 *5*	0.58 *4*	149.124	9/2$^+$				
		969.414 *10*	100	0.0	7/2$^+$	M1,E2		0.00106 *6*	α(K)=0.00093 *5*; α(L)=0.000108 *5*; α(M)=2.00×10^{-5} *8*; α(N)=3.31×10^{-6} *14*; α(O)=1.69×10^{-7} *10*
978.27	9/2$^+$	479.0[‡] *1*	100[‡]	499.236	5/2$^+$	(E2)			Mult.: R_{DCO}=1.3 *5* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
978.82	9/2$^-$	84.4[‡] *1*	0.56[‡] *19*	894.45	7/2$^-$				
		522.8[‡] *1*	100[‡]	455.871	5/2$^-$	E2		0.00497	α(K)=0.00431 *6*; α(L)=0.000537 *8*; α(M)=9.98×10^{-5} *14*; α(N)=1.637×10^{-5} *23*; α(O)=7.58×10^{-7} *11* Mult.: R_{DCO}=0.97 *7* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
1018.92	7/2$^+$	380.3[‡] *6*	9.6[‡] *17*	638.620	7/2$^+$				
		519.6[‡] *1*	100[‡]	499.236	5/2$^+$	M1+E2			Mult.: R_{DCO}=0.71 *16* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		869.9[‡] *1*	63[‡] *9*	149.124	9/2$^+$	M1			Mult.: R_{DCO}=0.31 *20* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		1019.0[‡] *4*	34[‡] *9*	0.0	7/2$^+$	M1+E2			Mult.: R_{DCO}=1.7 *9* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
1147.37	3/2$^-$,5/2$^-$	691.5[‡] *2*	100[‡]	455.871	5/2$^-$	D			Mult.: R_{DCO}=0.9 *3* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
1206.91	13/2$^+$	472.5[‡] *2*	100[‡]	734.23	11/2$^+$	M1(+E2)			Mult.: R_{DCO}=0.59 *22* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		604.1[‡] *1*	78[‡] *5*	602.74	11/2$^+$	M1+E2			Mult.: R_{DCO}=0.87 *21* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
1296.9	1/2$^-$	149.5[‡] *4*	100[‡]	1147.37	3/2$^-$,5/2$^-$				
1316.27	(1/2 to 7/2$^+$)	846.9 *2*	100	469.369	3/2$^+$				E_γ,I_γ: from 1975Ar03, γ not reported in 2010Kr05.
1321.293	5/2$^+$	597.06 *3*	17.5 *7*	724.244	5/2$^+$				
		822.042 *10*	100	499.236	5/2$^+$				

Adopted Levels, Gammas (continued)

γ(^{105}Rh) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.	δ[@]	α[&]	Comments
1321.293	5/2$^+$	851.927 *10*	73.0 *7*	469.369	3/2$^+$				
		1172.37 *6*	4.07 *20*	149.124	9/2$^+$				
		1321.282 *10*	95.3 *9*	0.0	7/2$^+$				
1345.135	3/2$^+$	539.094 *12*	7.35 *9*	806.045	3/2$^+$				
		559.245 *12*	4.44 *7*	785.887	1/2$^+$				
		620.898 *13*	2.81 *9*	724.244	5/2$^+$				
		706.11 *14*	0.11 *5*	638.620	7/2$^+$				
		845.878 *10*	25.6 *4*	499.236	5/2$^+$				
		875.728 *10*	100	469.369	3/2$^+$	M1+E2	+1.3 *+4−3*	1.32×10^{-3} *2*	α(K)=0.001159 *21*; α(L)=0.0001353 *22*; α(M)=2.51×10^{-5} *4*; α(N)=4.16×10^{-6} *7*; α(O)=2.09×10^{-7} *5*
		952.568 *22*	0.733 *18*	392.526	3/2$^-$				
		1215.463 *12*	2.61 *4*	129.742	1/2$^-$				
1365.87	15/2$^+$	570.9[‡] *1*	100[‡] *6*	794.93	13/2$^+$	M1+E2		0.00372	α(K)=0.00326 *5*; α(L)=0.000378 *6*; α(M)=7.01×10^{-5} *10*; α(N)=1.165×10^{-5} *17*; α(O)=5.99×10^{-7} *9* Mult.: DCOQ=0.7 *2*. Mult.: R_{DCO}=0.80 *16* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		763.2[‡] *1*	35.8[‡] *23*	602.74	11/2$^+$	E2			Mult.: R_{DCO}=0.88 *22* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
1377.024	3/2$^+$	407.570 *10*	29.1 *4*	969.484	5/2$^+$				
		591.161 *12*	14.9 *3*	785.887	1/2$^+$				
		652.761 *10*	70.0 *7*	724.244	5/2$^+$				
		738.379 *10*	16.35 *17*	638.620	7/2$^+$				
		877.801 *15*	77.1 *8*	499.236	5/2$^+$				
		907.642 *10*	100	469.369	3/2$^+$	(M1+E2)		0.00123 *6*	α(K)=0.00108 *5*; α(L)=0.000125 *5*; α(M)=2.32×10^{-5} *8*; α(N)=3.85×10^{-6} *15*; α(O)=1.96×10^{-7} *12* Mult.: D+Q from γγ(θ). Δπ=no from level scheme. δ: +0.21 *3* or +22 *+8−31* (1979Sa23).
		984.39 *3*	2.00 *9*	392.526	3/2$^-$				
		1377.017 *10*	9.74 *17*	0.0	7/2$^+$				
1399.68	11/2$^+$	380.8[‡] *1*	100[‡]	1018.92	7/2$^+$	E2			Mult.: R_{DCO}=1.1 *3* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		421.1[‡] *3*	12.4[‡] *21*	978.27	9/2$^+$				
1405.95	(3/2$^-$ to 11/2$^-$)	511.5[‡] *2*	100[‡]	894.45	7/2$^-$				
1441.43	(3/2$^+$,5/2,7/2$^+$)	635.39[‡] *9*	100[‡]	806.045	3/2$^+$				
		1441.42[‡] *4*	85[‡] *5*	0.0	7/2$^+$				
1475.02	(5/2$^+$ to 13/2$^+$)	496.2[‡] *2*	100[‡]	978.82	9/2$^-$				

$^{105}_{45}Rh_{60}$-9

Adopted Levels, Gammas (continued)

γ(^{105}Rh) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.	α[&]	Comments
1486.839	(3/2$^+$)	700.98 *4*	6.3 *3*	785.887	1/2$^+$			
		987.40 *4*	2.28 *14*	499.236	5/2$^+$			
		1017.470 *10*	100	469.369	3/2$^+$	(M1+E2)	0.00095 *5*	α(K)=0.00084 *5*; α(L)=9.6×10^{-5} *4*; α(M)=1.79×10^{-5} *8*; α(N)=2.97×10^{-6} *13*; α(O)=1.51×10^{-7} *10* δ: +1.3 +∞ −*1.4* (1979Sa23).
		1094.43 *12*	0.81 *6*	392.526	3/2$^-$			
		1357.55 *10*	0.67 *9*	129.742	1/2$^-$			
1519.0	(7/2 to 15/2)	685.4[‡] *6*	100[‡]	833.63	(11/2)			
1529.65	(3/2$^-$ to 11/2$^-$)	635.2[‡] *2*	100[‡]	894.45	7/2$^-$			
1565.26	(11/2$^-$)	586.4[‡] *2*	100[‡] *14*	978.82	9/2$^-$	(M1+E2)		Mult.: R_{DCO}=0.9 *3* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		670.9[‡] *3*	45[‡] *10*	894.45	7/2$^-$			
1605.47	17/2$^+$	239.7[‡] *1*	16.3[‡] *9*	1365.87	15/2$^+$	M1+E2		Mult.: R_{DCO}=0.62 *15* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		810.6[‡] *5*	100[‡]	794.93	13/2$^+$	E2	1.55×10^{-3}	α(K)=0.001351 *19*; α(L)=0.0001604 *23*; α(M)=2.98×10^{-5} *5*; α(N)=4.92×10^{-6} *7*; α(O)=2.41×10^{-7} *4* Mult.: R_{DCO}=1.00 *11* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
1647.03	13/2$^-$	668.1[‡] *1*	100[‡]	978.82	9/2$^-$	E2	0.00253	α(K)=0.00220 *3*; α(L)=0.000266 *4*; α(M)=4.94×10^{-5} *7*; α(N)=8.15×10^{-6} *12*; α(O)=3.91×10^{-7} *6*
1676.93	15/2$^+$	469.9[‡] *1*	100[‡]	1206.91	13/2$^+$	M1(+E2)		Mult.: R_{DCO}=0.52 *17* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		942.8[‡] *1*	100[‡]	734.23	11/2$^+$	E2		Mult.: R_{DCO}=0.9 *4* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
1698.196	(3/2$^+$,5/2)	1059.632 *21*	32.7 *6*	638.620	7/2$^+$			
		1228.73 *7*	6.2 *4*	469.369	3/2$^+$			
		1698.167 *11*	100	0.0	7/2$^+$			
1708.53	(3/2$^+$,5/2)	1209.30 *5*	100	499.236	5/2$^+$			
		1238.2 *3*	27 *9*	469.369	3/2$^+$			
		1708.7 *2*	<18.2	0.0	7/2$^+$			
1721.203	(5/2$^+$)	1082.52 *6*	19.7 *13*	638.620	7/2$^+$			
		1221.98 *3*	64.8 *16*	499.236	5/2$^+$			
		1251.907 *19*	74.3 *16*	469.369	3/2$^+$			
		1571	<1.58	149.124	9/2$^+$			
		1721.149 *13*	100	0.0	7/2$^+$			
1745.24	(7/2$^+$ to 15/2$^+$)	1142.5[‡] *2*	100[‡]	602.74	11/2$^+$	D,Q		Mult.: R_{DCO}=0.8 *4* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
1765.4	(5/2$^+$,3/2$^+$)	1765.4 *3*	100	0.0	7/2$^+$			
1780.8	(5/2$^-$ to 13/2$^-$)	802.0[‡] *3*	100[‡]	978.82	9/2$^-$			

$^{105}_{45}Rh_{60}$-10

Adopted Levels, Gammas (continued)

γ(^{105}Rh) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.	α[&]	Comments
1809.78	(5/2,3/2$^+$)	1085.53 *6*	100	724.244	5/2$^+$			
		1340		469.369	3/2$^+$			
		1809	<8.5	0.0	7/2$^+$			
1829.6	(5/2$^+$)	1829.6 *3*	100	0.0	7/2$^+$			
1905.7	(9/2$^+$ to 17/2$^+$)	698.8[‡] *3*	100[‡]	1206.91	13/2$^+$			
1936.59	15/2$^+$	536.9[‡] *1*	100[‡]	1399.68	11/2$^+$	E2		Mult.: R_{DCO}=1.18 *20* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
2019.16	13/2$^-$	371.2[‡] *6*	9[‡] *5*	1647.03	13/2$^-$			
		1040.4[‡] *3*	27[‡] *4*	978.82	9/2$^-$			
		1224.3[‡] *1*	100[‡]	794.93	13/2$^+$	E1+M2		Mult.: R_{DCO}=1.1 *5* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		1416.6[‡] *2*	48[‡] *6*	602.74	11/2$^+$	E1		Mult.: R_{DCO}=0.35 *15* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
2163.99	(17/2$^+$)	487.0[‡] *2*	61[‡] *9*	1676.93	15/2$^+$	(M1+E2)		Mult.: R_{DCO}=0.6 *3* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		957.1[‡] *2*	100[‡]	1206.91	13/2$^+$			
2170.15	15/2$^-$	151.1[‡] *1*	80[‡] *5*	2019.16	13/2$^-$	M1+E2		Mult.: R_{DCO}=0.76 *22* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		522.9[‡] *1*	76[‡] *5*	1647.03	13/2$^-$		0.00497	
		803.8[‡] *4*	13[‡] *3*	1365.87	15/2$^+$	E1(+M2)		Mult.: R_{DCO}=0.8 *5* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		1375.2[‡] *1*	100[‡] *7*	794.93	13/2$^+$	E1		Mult.: R_{DCO}=0.37 *15* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
2244.13	19/2$^+$	638.7[‡] *1*	100[‡]	1605.47	17/2$^+$	M1+E2		Mult.: R_{DCO}=0.83 *17* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		878.2[‡] *1*	57[‡] *4*	1365.87	15/2$^+$	E2		Mult.: R_{DCO}=0.88 *25* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
2310.58	17/2$^-$	140.4[‡] *1*	64[‡] *3*	2170.15	15/2$^-$	M1+E2	0.1339	α(K)=0.1167 *17*; α(L)=0.01412 *20*; α(M)=0.00263 *4*; α(N)=0.000436 *7*; α(O)=2.18×10^{-5} *3* Mult.: R_{DCO}=0.71 *14* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		663.6[‡] *3*	100[‡]	1647.03	13/2$^-$	E2	0.00257	α(K)=0.00224 *4*; α(L)=0.000271 *4*; α(M)=5.04×10^{-5} *7*; α(N)=8.30×10^{-6} *12*; α(O)=3.98×10^{-7} *6* Mult.: R_{DCO}=0.99 *12* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		944.8[‡] *3*	23.4[‡] *19*	1365.87	15/2$^+$	E1		Mult.: R_{DCO}=0.52 *21* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
2329.96	(15/2)	724.7[‡] *2*	100[‡]	1605.47	17/2$^+$			
		1534.8[‡] *2*	100[‡]	794.93	13/2$^+$			
2396.04	17/2$^-$	749.1[‡] *1*	100[‡]	1647.03	13/2$^-$	E2	0.00188	α(K)=0.001642 *23*; α(L)=0.000196 *3*; α(M)=3.64×10^{-5} *6*; α(N)=6.01×10^{-6} *9*; α(O)=2.93×10^{-7} *5* Mult.: R_{DCO}=1.01 *19* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
2417.30	15/2$^-$	1210.4[‡] *2*	100[‡]	1206.91	13/2$^+$			
2477.01	17/2$^-$	306.8[‡] *1*	79[‡] *6*	2170.15	15/2$^-$	M1(+E2)		Mult.: R_{DCO}=0.6 *3* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		830.0[‡] *1*	100[‡]	1647.03	13/2$^-$	E2		Mult.: R_{DCO}=0.85 *25* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
2495.90	19/2$^-$	100.2[‡] *2*	2.6[‡] *4*	2396.04	17/2$^-$			
		185.3[‡] *1*	100[‡]	2310.58	17/2$^-$	M1+E2	0.0632	α(K)=0.0552 *8*; α(L)=0.00663 *10*; α(M)=0.001233 *18*; α(N)=0.000204 *3*; α(O)=1.029×10^{-5} *15* Mult.: R_{DCO}=0.68 *9* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).

$^{105}_{45}Rh_{60}$-11

Adopted Levels, Gammas (continued)

γ(^{105}Rh) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.	α[&]	Comments
2512.58	17/2$^-$	95.3[‡] *2*	51[‡] *6*	2417.30	15/2$^-$			
		835.6[‡] *2*	100[‡]	1676.93	15/2$^+$			
2521.14	21/2$^+$	277.0[‡] *1*	16.6[‡] *12*	2244.13	19/2$^+$	M1(+E2)		Mult.: R_{DCO}=0.49 *20* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		915.4[‡] *6*	100[‡]	1605.47	17/2$^+$	E2	1.16×10^{-3}	α(K)=0.001012 *15*; α(L)=0.0001189 *17*; α(M)=2.20×10^{-5} *4*; α(N)=3.65×10^{-6} *6*; α(O)=1.81×10^{-7} *3* Mult.: R_{DCO}=0.97 *12* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
2594.0	19/2$^+$	657.4[‡] *2*	100[‡]	1936.59	15/2$^+$	E2		Mult.: R_{DCO}=0.9 *3* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
2615.31	(19/2$^+$)	451.2[‡] *4*	43[‡] *10*	2163.99	(17/2$^+$)			
		938.4[‡] *2*	100[‡]	1676.93	15/2$^+$			
2645.59	19/2$^-$	133.0[‡] *2*	39[‡] *4*	2512.58	17/2$^-$	M1		Mult.: R_{DCO}=0.34 *20* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		168.6[‡] *1*	69[‡] *5*	2477.01	17/2$^-$	M1(+E2)		Mult.: R_{DCO}=0.63 *25* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		335.0[‡] *1*	100[‡]	2310.58	17/2$^-$	M1		Mult.: R_{DCO}=0.46 *13* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		475.5[‡] *17*	29[‡] *6*	2170.15	15/2$^-$			
2668.98	19/2$^-$	156.4[‡] *1*	18[‡] *5*	2512.58	17/2$^-$			
		191.9[‡] *1*	82[‡] *6*	2477.01	17/2$^-$	M1		Mult.: R_{DCO}=0.49 *16* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		273.0[‡] *2*	29[‡] *4*	2396.04	17/2$^-$			
		358.4[‡] *1*	100[‡]	2310.58	17/2$^-$	M1(+E2)		Mult.: R_{DCO}=0.46 *25* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		498.3[‡] *4*	24[‡] *6*	2170.15	15/2$^-$			
2718.60	21/2$^-$	222.7[‡] *1*	100[‡]	2495.90	19/2$^-$	M1+E2	0.0389	α(K)=0.0339 *5*; α(L)=0.00405 *6*; α(M)=0.000754 *11*; α(N)=0.0001251 *18*; α(O)=6.32×10^{-6} *9* Mult.: R_{DCO}=0.65 *11* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
2825.02	21/2$^-$	156.0[‡] *1*	34[‡] *3*	2668.98	19/2$^-$	M1		Mult.: R_{DCO}=0.34 *20* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		179.4[‡] *1*	100[‡]	2645.59	19/2$^-$	M1(+E2)		Mult.: R_{DCO}=0.6 *3* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		329.4[‡] *2*	24[‡] *3*	2495.90	19/2$^-$	M1(+E2)		Mult.: R_{DCO}=0.7 *4* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
2890.79	(19/2)	369.6[‡] *2*	100[‡]	2521.14	21/2$^+$	D(+Q)		Mult.: R_{DCO}=0.7 *3* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		1285.6[‡] *5*	75[‡] *25*	1605.47	17/2$^+$	(D+Q)		Mult.: R_{DCO}=1.1 *4* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
2914.23	21/2$^-$	245.2[‡] *1*	100[‡]	2668.98	19/2$^-$			Mult.: R_{DCO}=0.69 *23* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		268.7[‡] *1*	84[‡] *7*	2645.59	19/2$^-$			
2981.55	23/2$^+$	460.4[‡] *2*	100[‡]	2521.14	21/2$^+$	M1(+E2)		Mult.: R_{DCO}=0.58 *12* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		737.5[‡] *3*	22.0[‡] *20*	2244.13	19/2$^+$	E2		Mult.: R_{DCO}=0.9 *3* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
2992.9	23/2$^-$	274.4[‡] *1*	100[‡]	2718.60	21/2$^-$	M1+E2	0.0226	α(K)=0.0198 *3*; α(L)=0.00235 *4*; α(M)=0.000436 *7*; α(N)=7.24×10^{-5} *11*; α(O)=3.67×10^{-6} *6* Mult.: R_{DCO}=0.68 *13* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		496.8[‡] *13*	4.7[‡] *24*	2495.90	19/2$^-$			
3077.82	23/2$^-$	252.8[‡] *1*	100[‡]	2825.02	21/2$^-$	M1(+E2)		Mult.: R_{DCO}=0.6 *3* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
3197.55	25/2$^+$	216.0[‡] *1*	100[‡]	2981.55	23/2$^+$	M1(+E2)		Mult.: R_{DCO}=0.52 *8* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).

$^{105}_{45}Rh_{60}$-12

Adopted Levels, Gammas (continued)

γ(^{105}Rh) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.	δ[@]	α[&]	Comments
3197.55	25/2$^+$	676.4[‡] *2*	23.0[‡] *24*	2521.14	21/2$^+$	E2			Mult.: R_{DCO}=1.0 *4* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
3267.03	23/2$^-$	352.8[‡] *1*	100[‡]	2914.23	21/2$^-$	M1(+E2)			Mult.: R_{DCO}=0.56 *15* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
3308.3	25/2$^-$	315.4[‡] *1*	100[‡]	2992.9	23/2$^-$	M1(+E2)			Mult.: R_{DCO}=0.61 *14* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
3344.6	(23/2$^+$)	750.6[‡]	100[‡]	2594.0	19/2$^+$	(E2)			Mult.: R_{DCO}=0.8 *3* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
3469.82	(25/2$^-$)	392.0[‡] *1*	100[‡]	3077.82	23/2$^-$	(M1+E2)			Mult.: R_{DCO}=0.8 *5* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
3478.0	27/2$^+$	280.4[‡] *3*	100[‡]	3197.55	25/2$^+$	M1(+E2)			Mult.: R_{DCO}=0.60 *12* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		496.5[‡] *8*	6.2[‡] *14*	2981.55	23/2$^+$				
3536.86	25/2$^+$	1015.7[‡] *2*	100[‡]	2521.14	21/2$^+$	E2		9.11×10^{-4}	α(K)=0.000798 *12*; α(L)=9.31×10^{-5} *13*; α(M)=1.725×10^{-5} *25*; α(N)=2.86×10^{-6} *4* α(O)=1.431×10^{-7} *20* Mult.: R_{DCO}=1.1 *4* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
3667.6	(25/2$^-$)	400.6[‡] *2*	100[‡]	3267.03	23/2$^-$				
3769.1	27/2$^-$	460.8[‡] *1*	100[‡]	3308.3	25/2$^-$	M1(+E2)			Mult.: R_{DCO}=0.52 *16* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
3839.3	29/2$^+$	361.3[‡] *1*	100[‡]	3478.0	27/2$^+$	M1			Mult.: R_{DCO}=0.47 *12* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		642.0[‡] *5*	12.7[‡] *25*	3197.55	25/2$^+$				
4002.5	27/2$^+$	465.6[‡] *3*	100[‡]	3536.86	25/2$^+$	M1(+E2)	24 *8*	0.00698	α(K)=0.00605 *9*; α(L)=0.000764 *11*; α(M)=0.0001423 *21*; α(N)=2.33×10^{-5} *4* α(O)=1.056×10^{-6} *15* Mult.: R_{DCO}=0.49 *22* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		805[#]		3197.55	25/2$^+$				
		1021[#]		2981.55	23/2$^+$				
4092.4	(27/2$^-$)	424.8[‡] *2*	100[‡]	3667.6	(25/2$^-$)				
4169.8	(27/2$^+$)	825.2[‡] *6*	100[‡]	3344.6	(23/2$^+$)				
4183.4	(29/2$^-$)	414.3[‡] *2*	100[‡]	3769.1	27/2$^-$				
4215.4	31/2$^+$	376.1[‡] *1*	100[‡]	3839.3	29/2$^+$	M1			Mult.: R_{DCO}=0.48 *15* in ^{100}Mo(^{11}B,α2nγ) (2004Al03).
		736.9[‡] *6*	34[‡] *11*	3478.0	27/2$^+$				
4298.7	29/2$^+$	296[#]		4002.5	27/2$^+$				
		762[#]		3536.86	25/2$^+$				
		821[#]		3478.0	27/2$^+$	M1+E2	0.37 *8*	1.60×10^{-3}	α(K)=0.001399 *21*; α(L)=0.0001613 *23*;

$^{105}_{45}Rh_{60}$-13

Adopted Levels, Gammas (continued)

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

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.	Comments
							α(M)=2.99×10^{-5} *5*; α(N)=4.97×10^{-6} *7*; α(O)=2.56×10^{-7} *4*
4298.7	29/2$^+$	1101[#]		3197.55	25/2$^+$		
4417.5	(29/2$^+$)	880.6[‡] *11*	100[‡]	3536.86	25/2$^+$	(E2)	
4689.6	31/2$^+$	391[#]		4298.7	29/2$^+$		
		687[#]		4002.5	27/2$^+$		
		850[#]		3839.3	29/2$^+$		
		1212[#]		3478.0	27/2$^+$		
4702.2	33/2$^+$	486.8[‡] *2*	[‡]	4215.4	31/2$^+$		
		863[#]		3839.3	29/2$^+$		
5080.8	33/2$^+$	391[#]		4689.6	31/2$^+$		
		782[#]		4298.7	29/2$^+$		
		866[#]		4215.4	31/2$^+$		
		1241[#]		3839.3	29/2$^+$		
5184.4	35/2$^+$	482[#]		4702.2	33/2$^+$		
		969[#]		4215.4	31/2$^+$		
5525.3	35/2$^+$	444[#]		5080.8	33/2$^+$		
		823[#]		4702.2	33/2$^+$		
		836[#]		4689.6	31/2$^+$		
		1310[#]		4215.4	31/2$^+$		
5764.1	37/2$^+$	580[#]		5184.4	35/2$^+$		
		1062[#]		4702.2	33/2$^+$		
6020.5	37/2$^+$	495[#]		5525.3	35/2$^+$		
		940[#]		5080.8	33/2$^+$		
6344.8	39/2$^+$	581[#]		5764.1	37/2$^+$		
		1160[#]		5184.4	35/2$^+$		
6566.5	39/2$^+$	546[#]		6020.5	37/2$^+$		
		1041[#]		5525.3	35/2$^+$		
7038.0	41/2$^+$	693[#]		6344.8	39/2$^+$		
		1274[#]		5764.1	37/2$^+$		
7156.5	41/2$^+$	590[#]		6566.5	39/2$^+$		
		1136[#]		6020.5	37/2$^+$		
7712.7	43/2$^+$	675[#]		7038.0	41/2$^+$		
		1368[#]		6344.8	39/2$^+$		
8467.4	45/2$^+$	755[#]		7712.7	43/2$^+$		
		1429[#]		7038.0	41/2$^+$		

$^{105}_{45}Rh_{60}$-14

Adopted Levels, Gammas (continued)

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

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π
8524.5	$(45/2^+)$	1368[#]	100	7156.5	$41/2^+$
9212.7	$(47/2^+)$	1500[#]	100	7712.7	$43/2^+$

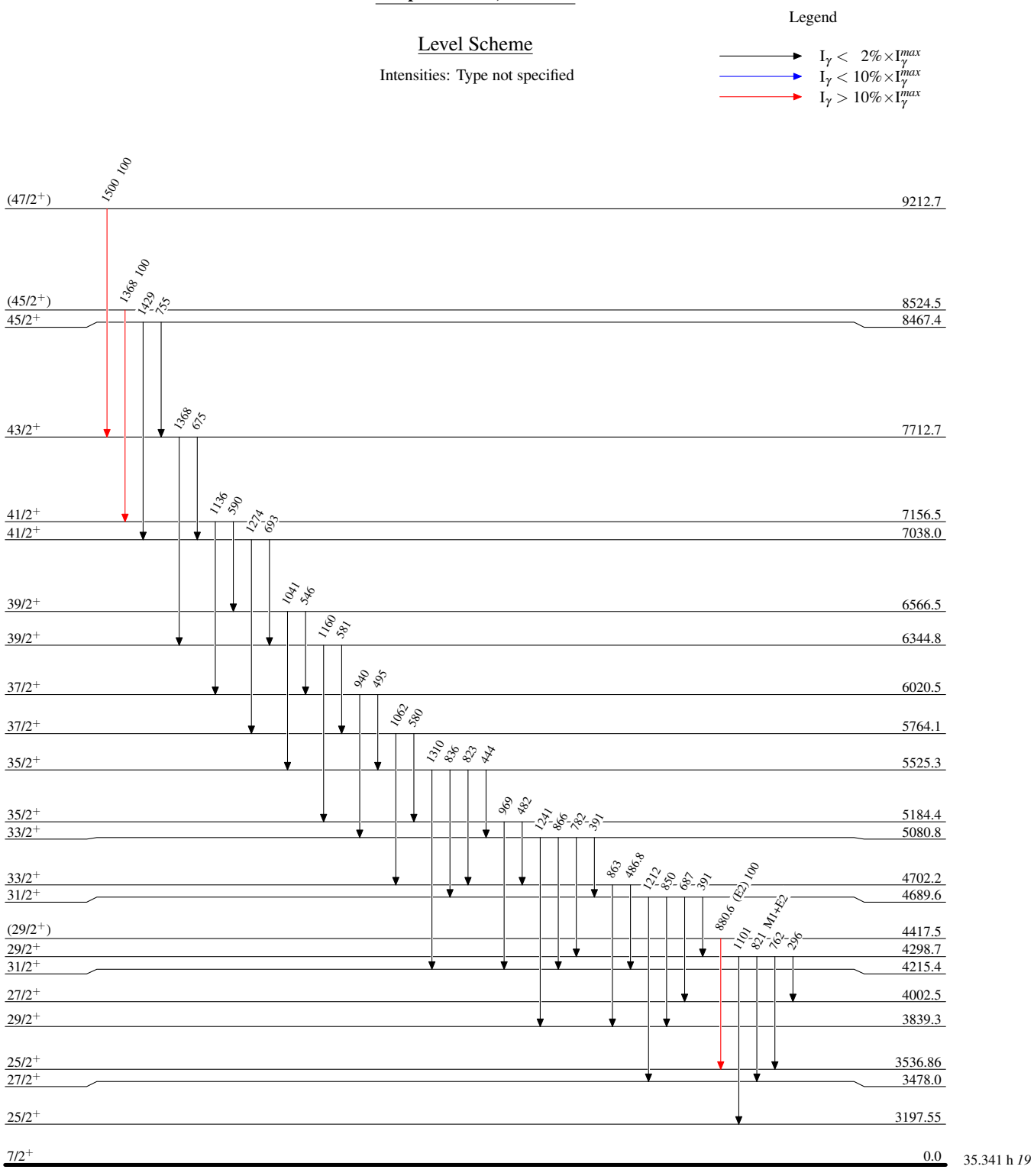
[†] From ^{105}Ru β^- decay, unless otherwise noted.
[‡] From ^{100}Mo(^{11}B,α2nγ).
[#] From ^{96}Zr(^{13}C,p3nγ).
[@] From DCO ratios in ^{100}Mo(^{11}B,α2nγ). Stretched quadrupole transitions assumed E2, stretched dipole transitions M1.
[&] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

$^{105}_{45}Rh_{60}$-15

Adopted Levels, Gammas

Level Scheme

Intensities: Type not specified

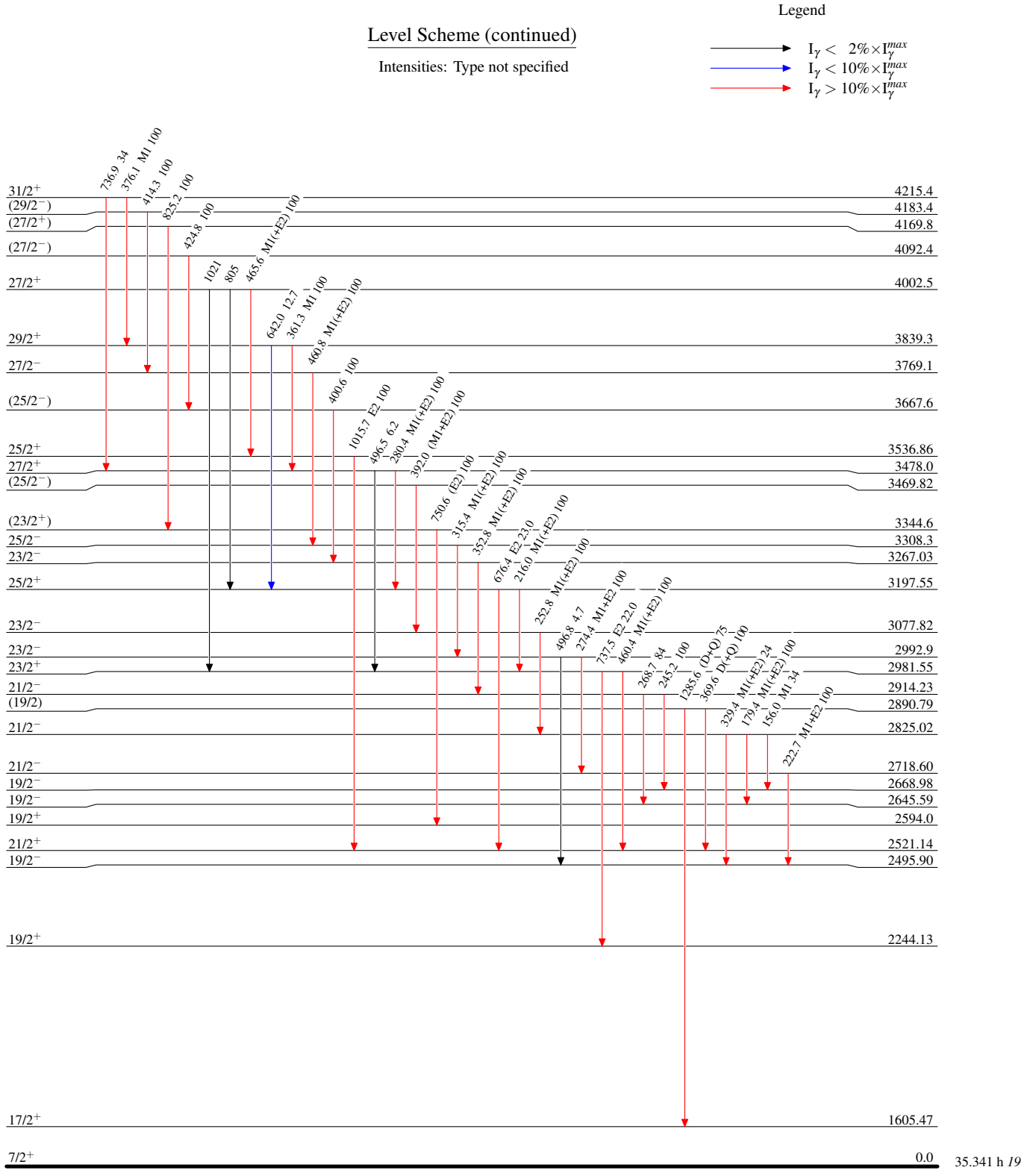


$^{105}_{45}Rh_{60}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

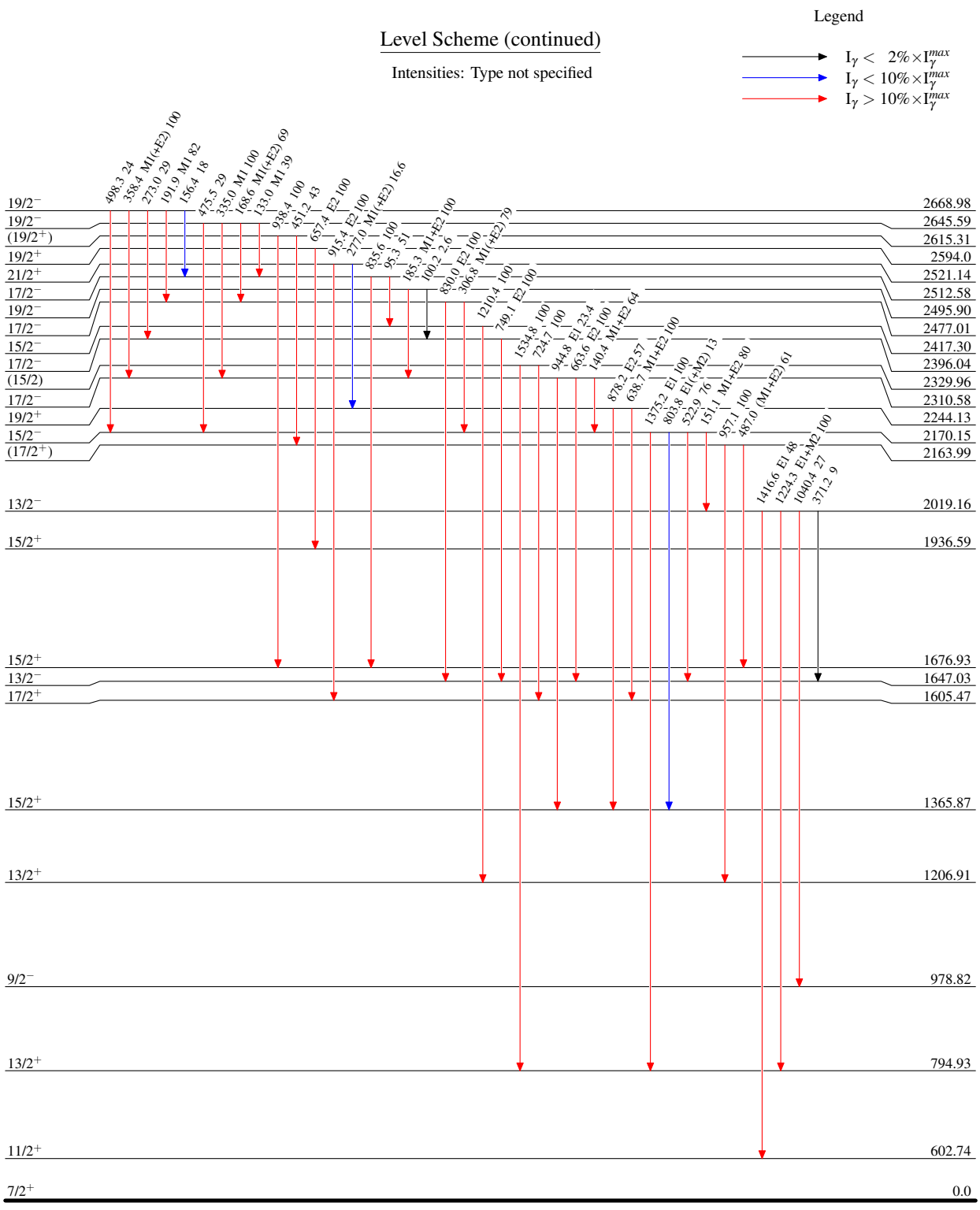


$^{105}_{45}Rh_{60}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

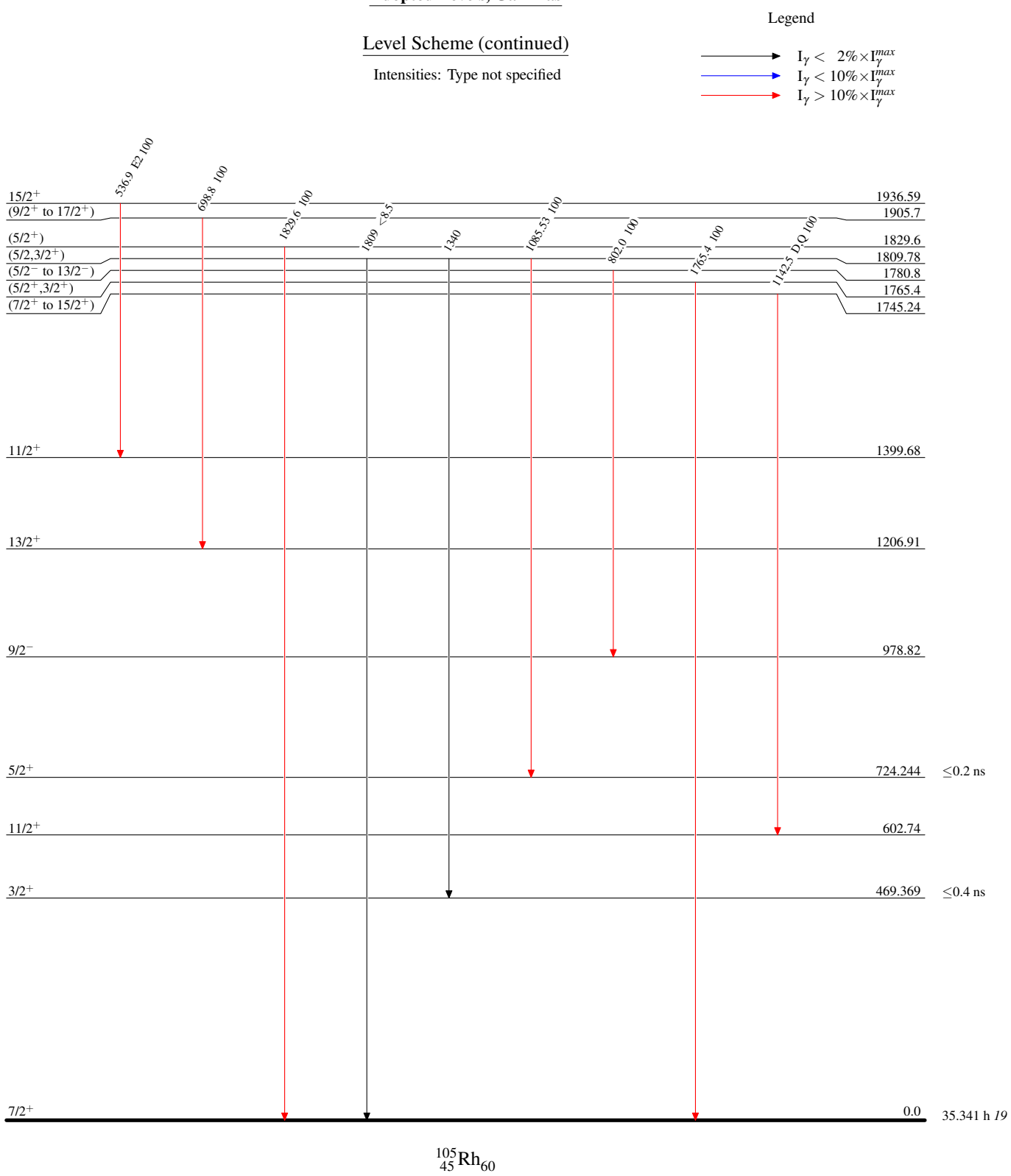


$^{105}_{45}Rh_{60}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

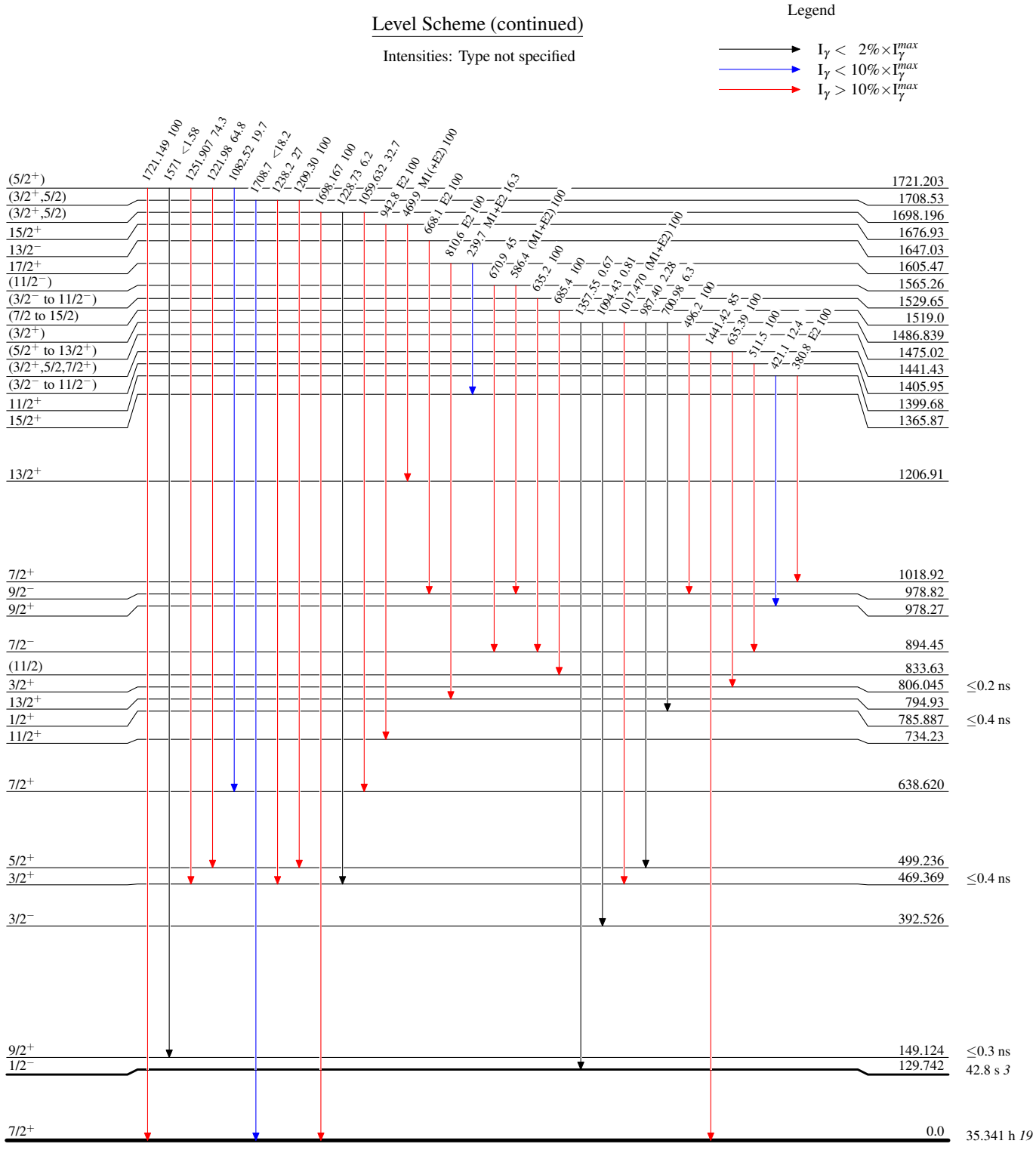


$^{105}_{45}Rh_{60}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

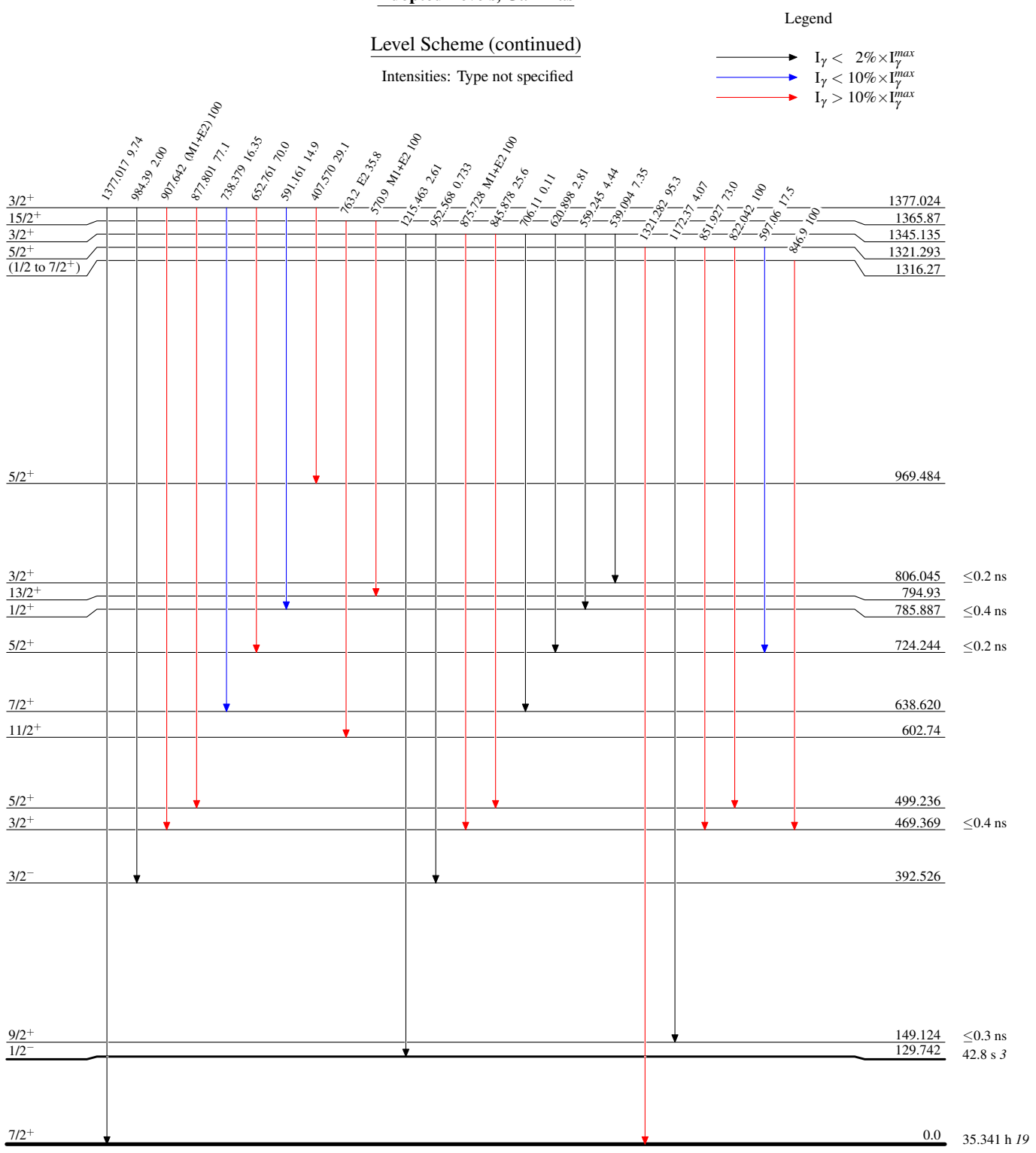


$^{105}_{45}Rh_{60}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

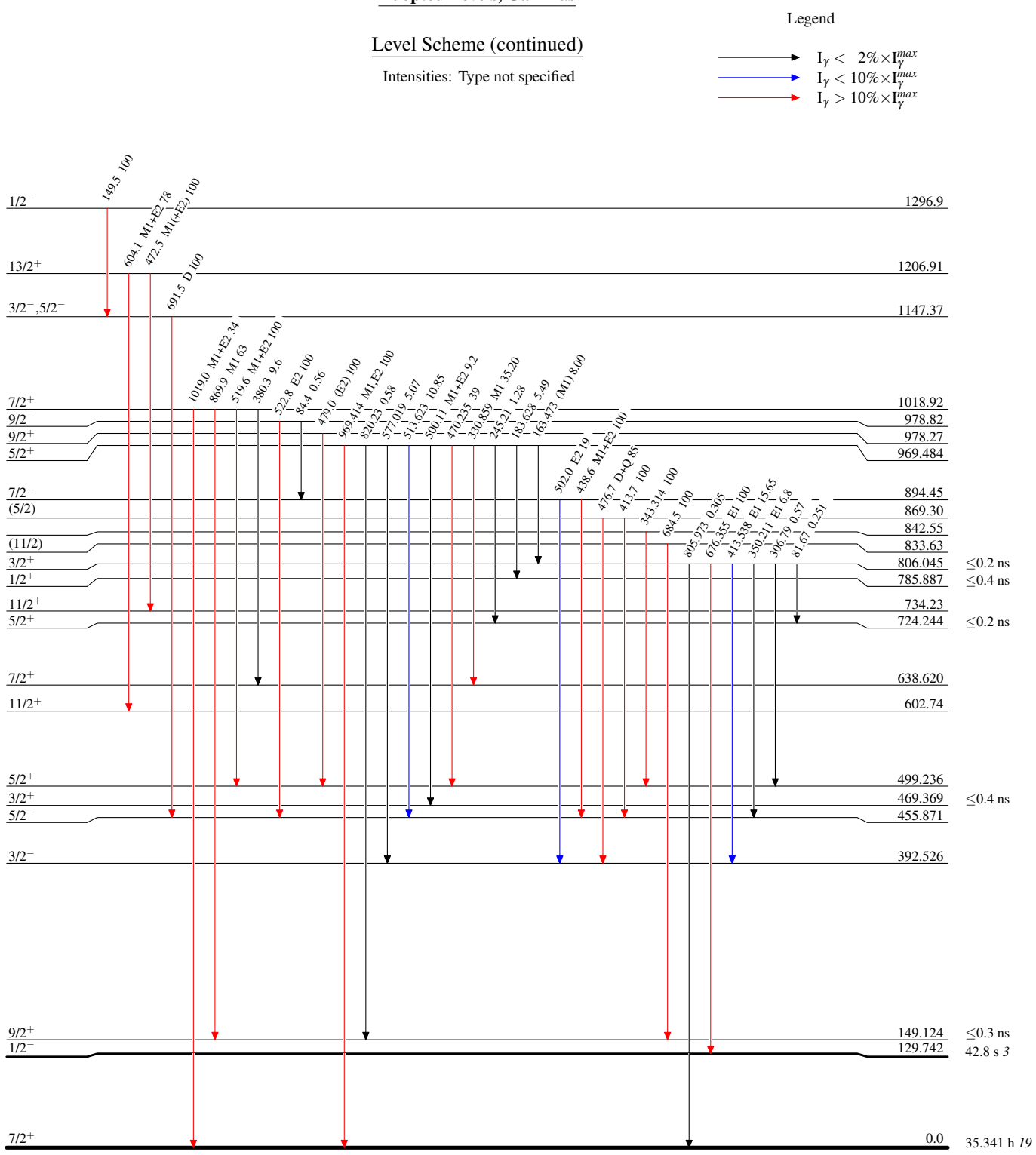


$^{105}_{45}Rh_{60}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

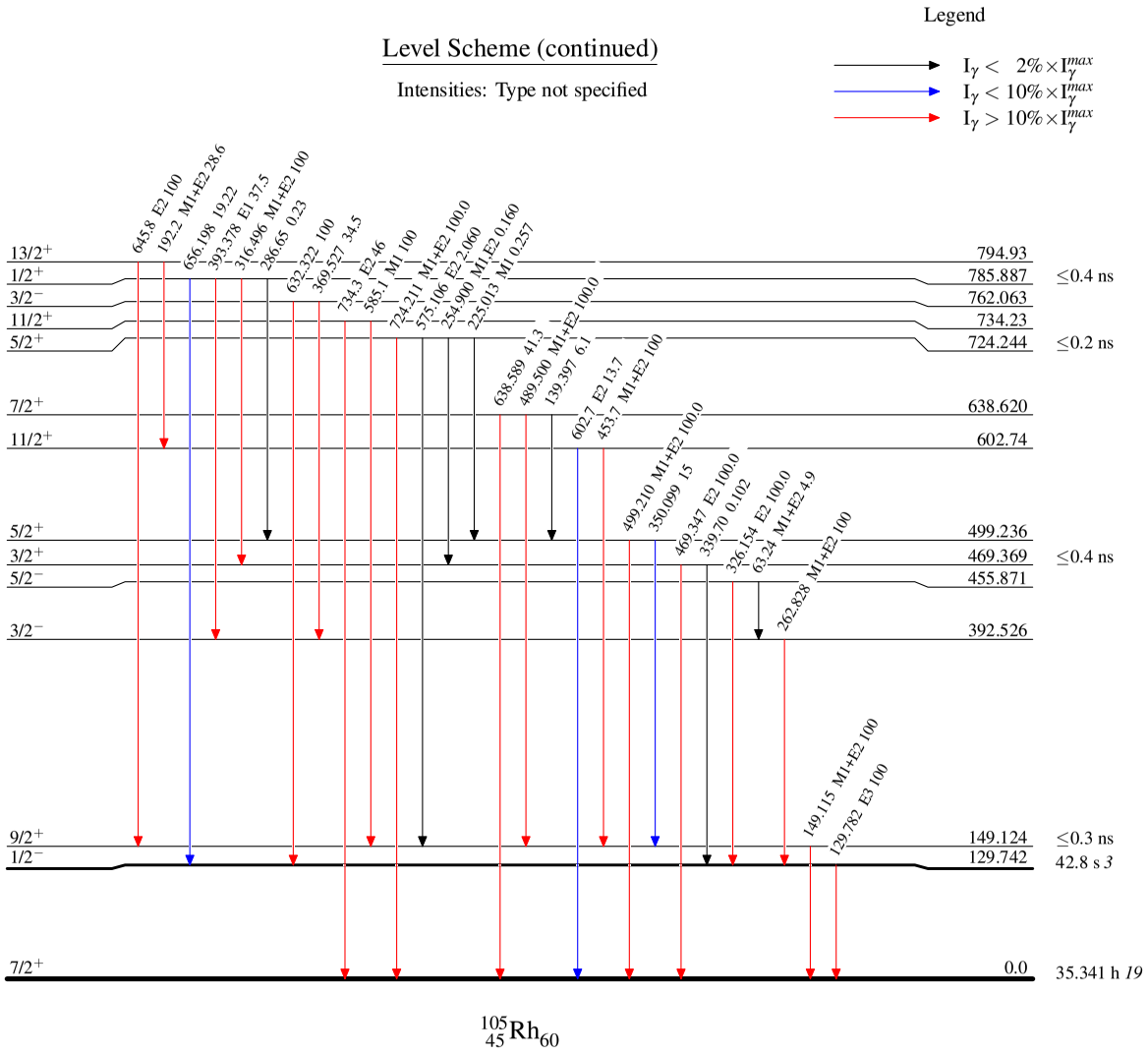


$^{105}_{45}Rh_{60}$

Adopted Levels, Gammas

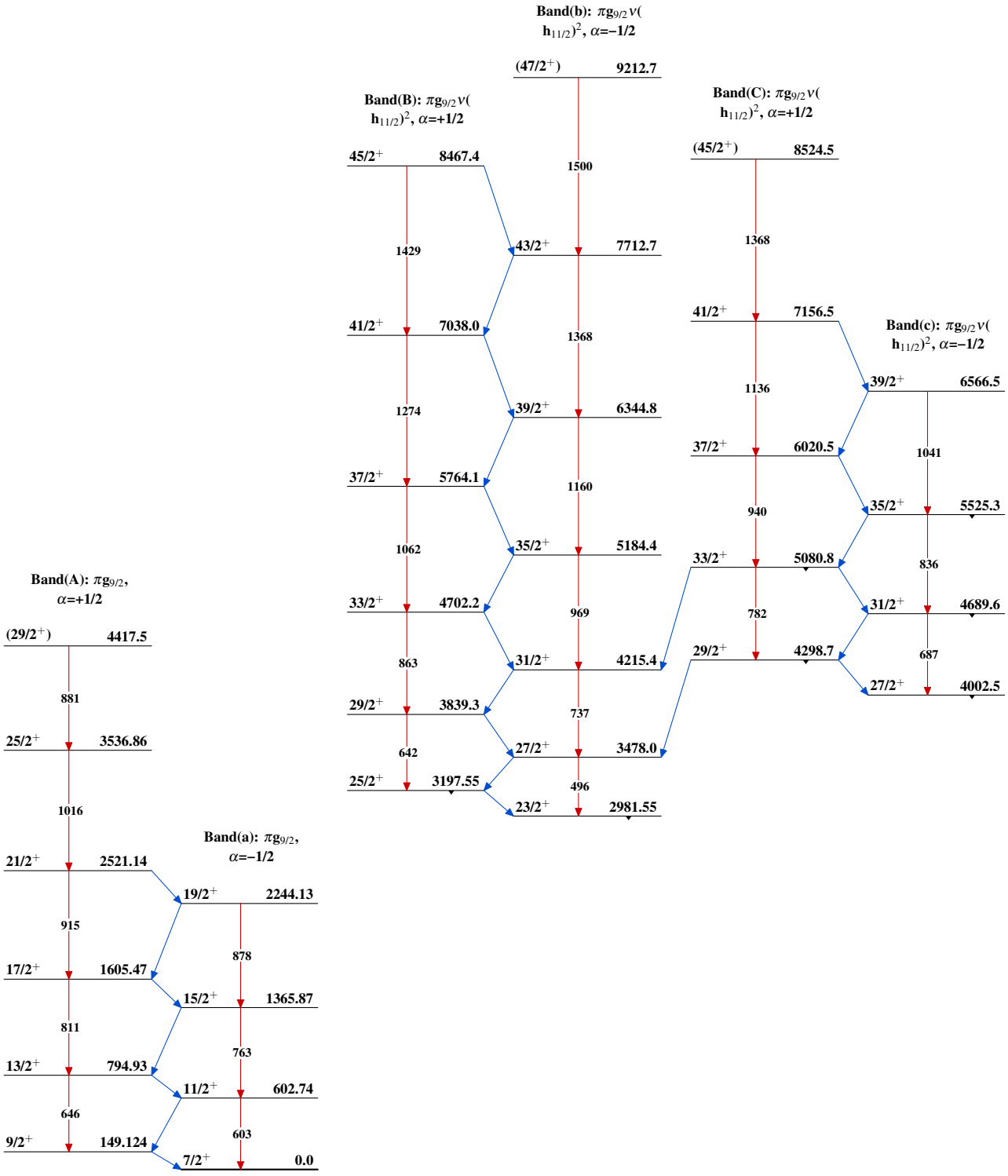
Level Scheme (continued)

Intensities: Type not specified



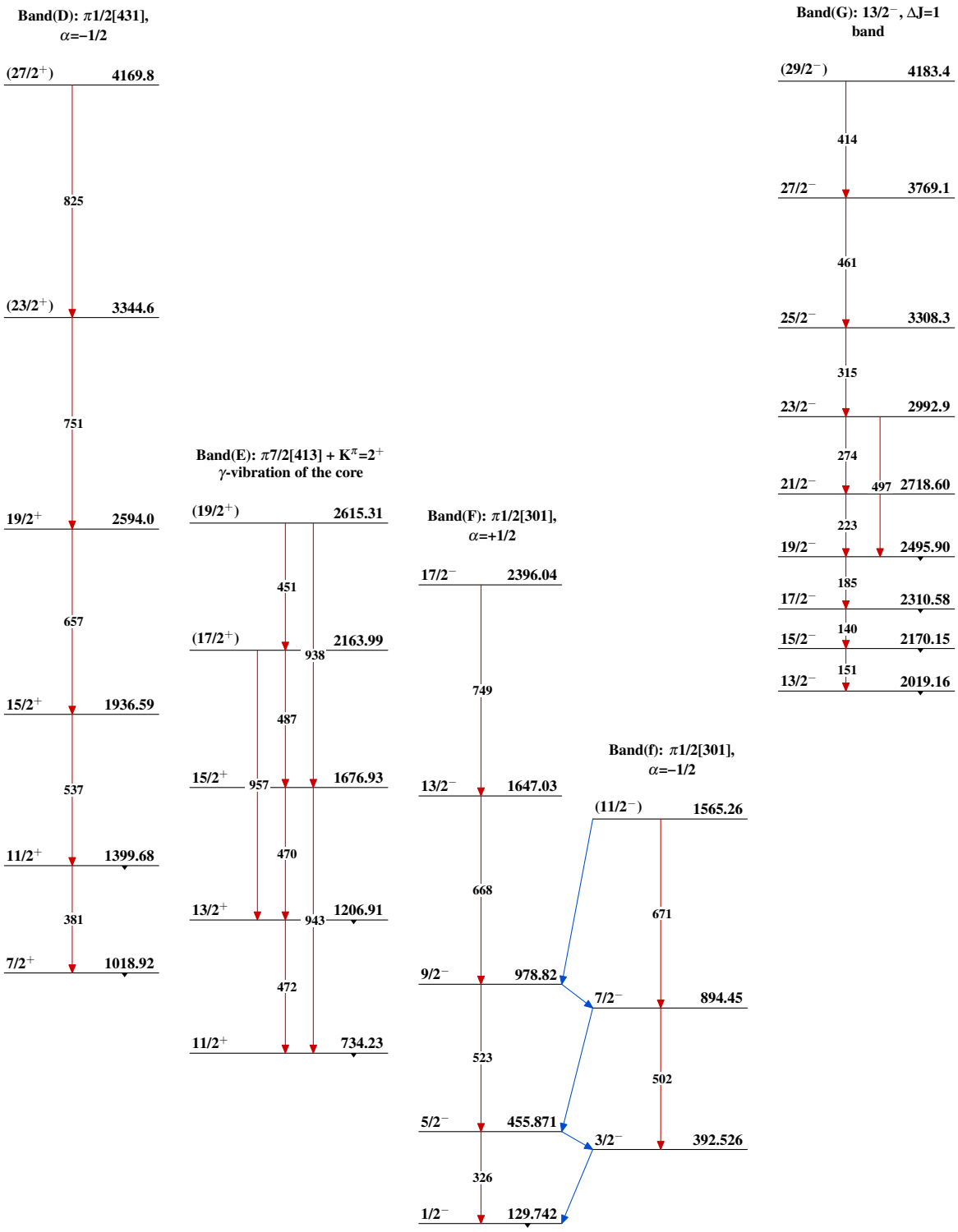
$^{105}_{45}Rh_{60}$

Adopted Levels, Gammas



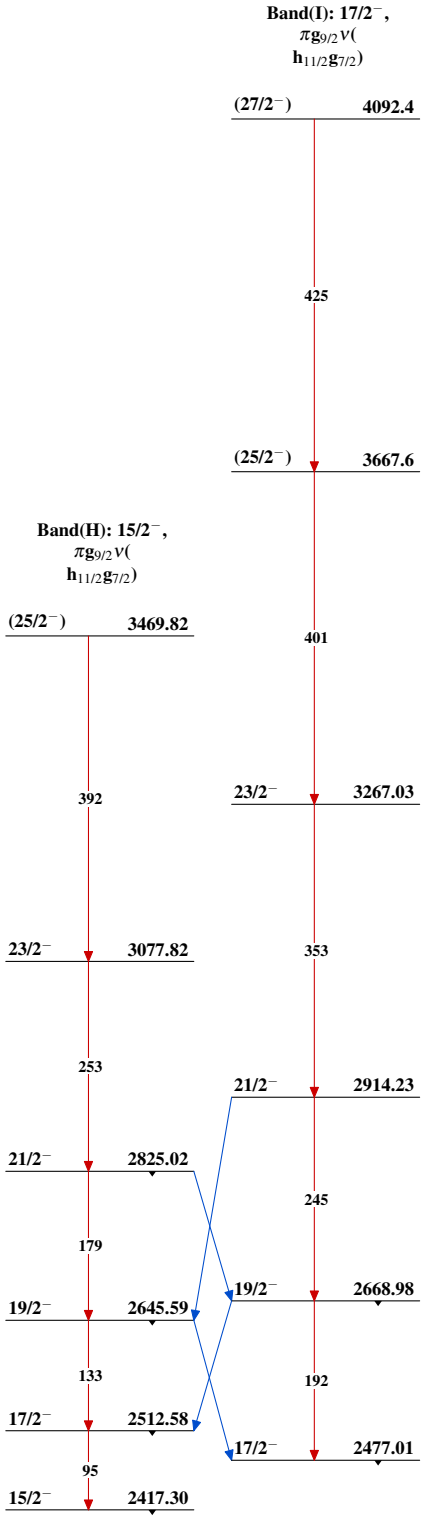
$^{105}_{45}Rh_{60}$

Adopted Levels, Gammas (continued)



$^{105}_{45}Rh_{60}$

Adopted Levels, Gammas (continued)



$^{105}_{45}Rh_{60}$