Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	NDS 145, 25 (2017)	1-Jul-2017

Q(β^-)=−3399 *8*; S(n)=10477 *14*; S(p)=4645 *9*; Q(α)=−1985 *8* 2017Wa10

Other reactions:
^{209}Bi(γ,F), E=2.5 GeV (2009Na10).
^{136}Xe(p,X), E=2.5 GeV/nucleon (2007Na31).
^{103}Rh(γ,4n), E=65 MeV (2007Ng01).
^{103}Rh(^{12}C,X), E=70-400 MeV (2004Bu09); E=45-400 MeV (1997Ga09).
^{93}Nb(^{16}O,X), E=96 MeV (2006Mu20).
^{93}Nb(^{16}O,4p6n), E=6 MeV/nucleon (1999Sh39).
^{93}Nb(^{12}C,X), E=55.7-77.5 MeV (2005To15).
^{89}Y(^{12}C,2n), E=30-45 MeV (2005Mu31).
Ag(p,X), E=11-80 MeV (2005Ud01).
^{90}Zr(^{16}O,^{7}Li), E=90 MeV (2004Jh01).
Sn(P,xpyn), E=1-8.1 GeV (2002Al17).
^{96}Ru(α,p), E=7-11 MeV (2002Ra36, 2001Ra24).
^{98}Ru(p,γ), E=1.5-3 MeV (1998Bo17).
^{112,118,124}Sn(p,X), E=660 MeV (1996Al19).

^{99}Rh Levels

Cross Reference (XREF) Flags

A	^{99}Pd ε decay	D	^{99}Ru(p,nγ)
B	^{96}Mo(^{6}Li,3nγ)	E	(HI,xnγ)
C	^{98}Ru(p,p) IAR		

E(level)[#]	J$^\pi$[‡]	T$_{1/2}$[†]	XREF	Comments
0.0[d]	1/2$^-$	16.1 d *2*	ABCDE	%ε+%β^+=100 J$^\pi$: from syst. log *ft*=7.1 to 1/2$^+$. No γ from 9/2$^+$. T$_{1/2}$: from 1974An23. Other: 16.1 d (1959To25), 16 d *1* (1956Hi32), 15.0 d *2* (1955Fa12).
64.4[&] *5*	9/2$^+$	4.7 h *1*	AB DE	%ε+%β^+>99.84; %IT<0.16 μ=5.668 *12* (2014StZZ,1985Ed06) %IT: Deduced from B(M4)(W.u.)<30 (RUL). μ: From NMR on oriented nuclei. ^{99}Rh implanted in iron (1985Ed06); Other values: 5.62 *6* from NMR on oriented nuclei (2005St24,1995Se20); 5.666 *14* from NMR on oriented nuclei (1986Ni02). J$^\pi$: J measured by atomic beam magnetic resonance method (1975Ru06,1978Ru04,2013Ma15). log *ft*=5.2 to π=+. T$_{1/2}$: from 1956Ka25.
200.5[a] *5*	(7/2)$^+$		AB DE	J$^\pi$: M1 transition to 9/2$^+$ level. log *ft*=5.3 from (5/2)$^+$.
410.7 *6*			D	
427.5[d] *4*	5/2$^-$		AB DE	J$^\pi$: stretched E2 to 1/2$^-$.
464.1 *5*	(5/2,7/2)$^+$		AB D	J$^\pi$: E2 γ to 9/2$^+$. log *ft*=5.8 from (5/2)$^+$.
783.0[a] *9*	11/2$^+$		E	
842.4[&] *5*	13/2$^+$	2.6 ps *15*	B DE	J$^\pi$: stretched E2 to 9/2$^+$.
850.9 *5*	(7/2)$^+$		AB D	J$^\pi$: log *ft*=5.6 from (5/2)$^+$; M1,E2 γ to 9/2$^+$. 7/2 slightly favored by excitation functions in (p,nγ).
874.2 *5*	(5/2)$^+$		AB D	J$^\pi$: log *ft*=5.8 from (5/2)$^+$; γ to 9/2$^+$. 5/2 favored by excitation functions in (p,nγ).

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Adopted Levels, Gammas (continued)

^{99}Rh Levels (continued)

E(level)[#]	Jπ[‡]	$T_{1/2}$[†]	XREF	Comments
979.5[d] 6	9/2⁻		B DE	
1015.3 9	(5/2,7/2)		D	Jπ: from excit in (p,nγ).
1018.2 5	(7/2)		AB D	Jπ: log *ft*=6.4 from (5/2)⁺; γ to 9/2⁺. 7/2,9/2 from excit in (p,nγ).
1036.0 8	(1/2,3/2)		D	Jπ: from excit in (p,nγ).
1100.8 9	(1/2⁻,3/2)		D	Jπ: from excit in (p,nγ); γ to 5/2⁻.
1111.0 5	(5/2⁺,7/2)		A	Jπ: log *ft*=6.3 from (5/2)⁺; γ to 9/2⁺.
1167.6 5	(5/2)⁺		A D	Jπ: log *ft*=6.4 from (5/2)⁺; E2 γ from 5/2; favored by excit in (p,nγ).
1366.5 5	(5/2⁺)		A D	Jπ: log *ft*=6.3 from (5/2)⁺; γ to 9/2⁺. 5/2 favored by excit in (p,nγ).
1381.9 9	(3/2)		D	Jπ: from excit in (p,nγ).
1397.5? 11			D	
1408.1 11	(5/2)		D	Jπ: from excit in (p,nγ).
1430.6 9			D	
1477.3 12	(3/2)		D	Jπ: from excit in (p,nγ).
1527.6 4	(3/2)⁺		A D	Jπ: log *ft*=5.9 from (5/2)⁺; γ to (1/2⁻).
1535.9 5	(5/2,7/2)⁺		A D	Jπ: log *ft*=5.2 from (5/2)⁺; γ to 9/2⁺.
1616.0 11			D	
1618.5 11			D	
1622.2 11			D	
1626.6 12			D	
1655.4[@] 12	(17/2⁺)		E	
1660.6[d] 6	13/2⁻		B E	
1660.8[a] 12	15/2⁺		E	
1702.2[&] 6	17/2⁺	<3.3 ps	B E	Jπ: stretched E2 cascade to 13/2⁺.
1736.8? 13			D	
1761.0 5	(5/2,7/2)⁺		A	Jπ: log *ft*=5.9 from (5/2)⁺; γ to 9/2⁺.
1790.6? 12			D	
1794.5 11			D	
1798.8 12			D	
1814.7 7	(3/2⁺,5/2⁺,7/2⁺)		A D	Jπ: log *ft*=5.9 from (5/2)⁺.
1881.5 11			D	
1921.0 11			D	
1969.2 5	(5/2,7/2)⁺		A D	Jπ: log *ft*=5.6 from (5/2)⁺; γ to 9/2⁺.
2040.3 6			A	
2051.6 5	(3/2,5/2,7/2)⁺		A	Jπ: log *ft*=5.6 from (5/2)⁺.
2068.6 11			D	
2070.8 6			A	
2143.3 6	(3/2,5/2,7/2)⁺		A	Jπ: log *ft*=5.5 from (5/2)⁺.
2181.2 5	(3/2)⁺		A	Jπ: log *ft*=4.9 from (5/2)⁺; γ to (1/2⁻).
2195.4[a] 6	(19/2⁺)	6.3 ps 5	B E	Jπ: 493γ (M1) to 17/2⁺.
2198.9 5	(3/2,5/2,7/2)⁺		A	Jπ: log *ft*=5.2 from (5/2)⁺.
2268.0 6	(3/2,5/2,7/2)⁺		A	Jπ: log *ft*=5.5 from (5/2)⁺.
2300.5[d] 7	17/2⁻		B E	Jπ: stretched E2 cascade to 13/2⁻.
2343.2 7	(5/2,7/2)⁺		A	Jπ: log *ft*=5.5 from (5/2)⁺; γ to 9/2⁺.
2388.3 5	(5/2,7/2)⁺		A	Jπ: log *ft*=5.1 from (5/2)⁺; γ to 9/2⁺.
2505.2[@] 15	(21/2⁺)		E	
2508.6 12	(17/2⁻)		E	
2593.7[&] 6	21/2⁺		B E	Jπ: stretched E2 cascade to 17/2⁺.
2617.9 8	(5/2,7/2)⁺		A	Jπ: log *ft*=5.8 from (5/2)⁺; γ to 9/2⁺.
2620.3 8	(17/2⁻)		B E	Jπ: from excit and γ(θ) in (^{6}Li,3nγ).
2640.0 7	(5/2,7/2)⁺		A	Jπ: log *ft*=5.4 from (5/2)⁺; γ to 9/2⁺.
2709.6 7	(3/2,5/2,7/2)⁺		A	Jπ: log *ft*=5.0 from (5/2)⁺.
2727.0 12			B	
2736.8 6	(5/2,7/2)⁺		A	Jπ: log *ft*=4.9 from (5/2)⁺; γ to 9/2⁺.
2758.6 6	(5/2,7/2)⁺		A	Jπ: log *ft*=4.7 from (5/2)⁺; γ to 9/2⁺.

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Adopted Levels, Gammas (continued)

^{99}Rh Levels (continued)

E(level)[#]	Jπ[‡]	XREF	Comments
2836.0 *8*	(3/2,5/2,7/2)$^+$	A	Jπ: log *ft*=5.4 from (5/2)$^+$.
2860.2 *10*	(5/2,7/2)$^+$	A	Jπ: log *ft*=5.6 from (5/2)$^+$; γ to 9/2$^+$.
2890.7[b] *6*	21/2$^+$	E	
2957.3 *6*	(5/2,7/2)$^+$	A	Jπ: log *ft*=4.6 from (5/2)$^+$; γ to 9/2$^+$.
3015.3 *12*	(21/2$^+$)	B	Jπ: 820γ (M1) to (19/2$^+$).
3047.2 *8*	(5/2,7/2)$^+$	A	Jπ: log *ft*=4.9 from (5/2)$^+$; γ to 9/2$^+$.
3113.8[d] *8*	21/2$^-$	B E	
3150.4[a] *6*	23/2$^+$	B E	
3434.0[e] *9*	21/2$^-$	E	
3547.9 *8*	21/2$^-$	E	
3587.0[&] *7*	25/2$^+$	E	Jπ: stretched E2 cascade to 21/2$^+$.
3633.8 *13*		E	
3698.6[c] *8*	23/2$^+$	E	
3711.1[f] *7*	23/2$^-$	B E	
3878.7[b] *7*	25/2$^+$	E	
3989.3[e] *7*	25/2$^-$	B E	
4006.1[c] *9*	25/2$^+$	E	
4099.0[d] *9*	25/2$^-$	E	
4250.0[b] *8*	27/2$^+$	E	
4264.5[a] *7*	27/2$^+$	B E	
4326.8 *12*	(27/2)	B	Jπ: 337γ D to (25/2).
4328.9 *11*	(25/2$^-$)	E	
4580.1[f] *7*	27/2$^-$	E	
4628.5[&] *7*	29/2$^+$	E	Jπ: stretched E2 cascade to 25/2$^+$.
4678.5[c] *8*	27/2$^+$	E	
4690.7 *8*	29/2$^+$	E	
4825.8[b] *8*	29/2$^+$	E	
4917.4[e] *7*	29/2$^-$	E	
4961.8 *9*	27/2$^+$	E	
5113.9[c] *10*	29/2$^+$	E	
5146.4[d] *10*	29/2$^-$	E	
5320.4[a] *7*	(31/2$^+$)	B E	Jπ: 1055γ E2 to (25/2$^+$).
5367.4 *8*	29/2$^+$	E	
5448.0[f] *7*	31/2$^-$	E	
5518.3 *10*	29/2$^+$	E	
5694.4 *11*	(33/2$^+$)	E	
5701.7[&] *8*	33/2$^+$	E	Jπ: stretched E2 cascade to 29/2$^+$.
5785.7[e] *8*	33/2$^-$	E	
5826.8[c] *7*	31/2$^+$	E	
5973.1[b] *8*	31/2$^+$	E	
6300.4[d] *11*	33/2$^-$	E	
6666.2[f] *9*	35/2$^-$	E	
6829.6[&] *9*	37/2$^+$	E	Jπ: stretched E2 cascade to 33/2$^+$.
6879.4[c] *8*	35/2$^+$	E	
7127.4[e] *8*	37/2$^-$	E	
7282.5 *15*		E	
7303.0 *10*	37/2$^+$	E	
7462.4 *13*		E	
7676.5[d] *15*	37/2$^-$	E	
7872.1 *11*	(35/2$^+$)	E	

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Adopted Levels, Gammas (continued)

^{99}Rh Levels (continued)

E(level)[#]	Jπ[‡]	$T_{1/2}$[†]	XREF	Comments
7895.0[f] *10*	39/2⁻		E	
8019.1[e] *9*	41/2⁻		E	
8024.5 *15*			E	
8085.0 *10*	(37/2⁺)		E	
8319.7[&] *14*	41/2⁺		E	Jπ: stretched E2 cascade to 37/2⁺.
8331.6 *14*			E	
8448.6 *14*			E	
8868.9[f] *9*	43/2⁻		E	
9336.8 *11*	(39/2)		E	
9483.1 *12*	43/2⁻		E	
9587.7 *17*			E	
9767.1 *13*			E	
9839 *14*	(5/2⁺)	30 keV *6*	C	IAS: g.s.
9958.1[e] *10*	45/2⁻		E	
9973.6 *12*	(43/2⁻)		E	
10174 *9*	(17/2⁺)		C	IAS: 340.7 keV.
10174.7 *10*	45/2⁻		E	
10226.2[&] *17*	(45/2⁺)		E	Jπ: stretched (E2) to 41/2⁺.
10303 *14*	(1/2⁺)	30 keV *6*	C	IAS: 442.7 keV.
10380.6 *14*	(41/2)		E	
10432 *14*	(1/2⁺)	45 keV *9*	C	IAS: 618.0 keV.
10738.6 *15*			E	
10990.4 *14*	(43/2)		E	
11054.9[h] *11*	(45/2,47/2)⁻		E	
11610.7 *11*			E	
11622.7[g] *11*	47/2⁻		E	
12178.6 *18*			E	
12302.6 *18*			E	
12414.5 *17*	(47/2)		E	
12479.0[h] *12*	(49/2,51/2)⁻		E	
12542.6[g] *15*	(51/2⁻)		E	
12578.4 *17*			E	
13398.4[h] *16*	(53/2,55/2)⁻		E	
13729.6 *21*			E	
13922.9 *19*			E	
14905.4 *19*			E	
15014.4[h] *19*	(57/2,59/2)⁻		E	
15015.0[g] *18*	(55/2⁻)		E	
15175.9 *21*			E	
15342.4 *19*	(57/2,59/2)⁻		E	
16309.4 *21*	(61/2,63/2)⁻		E	
16626.4 *21*			E	
16744.4 *21*			E	
16876.4 *21*			E	
16960.4[h] *21*	(61/2,63/2)⁻		E	

[†] Half-lives in the ps range are from recoil-distance measurement in (HI,xnγ) (1985Bu11).

[‡] From 2014Ku20 in (HI,xnγ) are based on γ(θ), excit, γ multipolarity from DCO and IPDCO ratios, band assignments and band-head configurations.

[#] Deduced by evaluators from least-squares fit to adopted γ-ray energies for levels connected by γ rays, otherwise from the

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Adopted Levels, Gammas (continued)

^{99}Rh Levels (continued)

individual data sets.

@ Possible γ-vibrational state as discussed in 2014Ku20.

& Band(A): $\pi 5/2[422]$ band,$\alpha=+1/2$. Based on $g_{9/2}$ proton orbital. Crossings observed at $\hbar\omega\approx 0.40$ and 0.50 MeV. Several scenarios are discussed in 2014Ku20 for these crossings, including possible terminating 5-qp state at $33/2^+$.

a Band(a): $\pi 5/2[422]$ band,$\alpha=-1/2$. Based on $g_{9/2}$ proton orbital.

b Band(B): Band based on $21/2^+$. Configuration=$\pi g_{9/2}\otimes\nu g_{7/2}\otimes\nu d_{5/2}$.

c Band(C): Band based on $23/2^+$. Configuration=$\pi p_{1/2}\otimes\nu h_{11/2}\otimes\nu d_{5/2}$.

d Band(D): Band based on $1/2^-$. Configuration=$\pi p_{1/2}\otimes\nu g^2_{7/2}$.

e Band(E): Band based on $21/2^-$,$\alpha=+1/2$. Configuration=$\pi g_{9/2}\otimes\nu h_{11/2}\otimes\nu g_{7/2}$.

f Band(e): Band based on $23/2^-$,$\alpha=-1/2$. Configuration=$\pi g_{9/2}\otimes\nu h_{11/2}\otimes\nu g_{7/2}$.

g Band(F): Band based on $47/2^-$. Configuration=$\pi g_{9/2}\otimes\nu h_{11/2}\otimes\nu(g_{7/2}$ or $d_{5/2})$.

h Band(G): Band based on $(45/2,47/2)^-$. Configuration=$\pi g_{9/2}\otimes\nu h_{11/2}\otimes\nu(g_{7/2}$ or $d_{5/2})$.

Adopted Levels, Gammas (continued)

γ(^{99}Rh)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.[a]	δ[#c]	α[b]	Comments
200.5	(7/2)$^+$	136.00 *10*	100	64.4	9/2$^+$	M1(+E2)[&]	0.2 *2*	0.16 *3*	α(K)=0.136 *24*; α(L)=0.0174 *52*; α(M)=0.00325 *98* α(N)=5.3×10^{-4} *15*; α(O)=2.5×10^{-5} *4*
410.7		410.5 *10*	100	0.0	1/2$^-$	M1		0.00823	α(K)=0.00720 *11*; α(L)=0.000843 *13*; α(M)=0.0001566 *24* α(N)=2.60×10^{-5} *4*; α(O)=1.330×10^{-6} *21*
427.5	5/2$^-$	427.1 *5*	100.00	0.0	1/2$^-$	E2(+M3)[&]	0.07 *10*	0.0094 *18*	α(K)=0.0082 *15*; α(L)=0.00105 *22*; α(M)=0.00020 *5* α(N)=3.2×10^{-5} *7*; α(O)=1.4×10^{-6} *4*
464.1	(5/2,7/2)$^+$	263.60 *10*	100.0 *10*	200.5	(7/2)$^+$	M1+E2	−0.43 *20*	0.0280 *24*	α(K)=0.0243 *20*; α(L)=0.0030 *4*; α(M)=0.00056 *7* α(N)=9.2×10^{-5} *10*; α(O)=4.4×10^{-6} *3* Mult.,δ: from (^{6}Li,3nγ).
		399.80 *10*	23.4 *14*	64.4	9/2$^+$	E2(+M3)[&]		0.0121 *10*	α(K)=0.0104 *9*; α(L)=0.00137 *13*; α(M)=0.000255 *24* α(N)=4.2×10^{-5} *4*; α(O)=1.84×10^{-6} *18*
783.0	11/2$^+$	719.0 *10*	100	64.4	9/2$^+$	(M1)		0.00217	α(K)=0.00191 *3*; α(L)=0.000220 *4*; α(M)=4.07×10^{-5} *6* α(N)=6.78×10^{-6} *10*; α(O)=3.50×10^{-7} *5*
842.4	13/2$^+$	777.9 *3*	100.0	64.4	9/2$^+$	E2		1.71×10^{-3}	α(K)=0.001495 *21*; α(L)=0.0001781 *25*; α(M)=3.30×10^{-5} *5* α(N)=5.46×10^{-6} *8*; α(O)=2.67×10^{-7} *4* B(E2)(W.u.)=28 *17*
850.9	(7/2)$^+$	386.70 *10*	71. *4*	464.1	(5/2,7/2)$^+$	M1+E2[&]	1.0 *10*	0.0109 *15*	α(K)=0.0095 *12*; α(L)=0.00118 *21*; α(M)=0.00022 *4* α(N)=3.6×10^{-5} *6*; α(O)=1.69×10^{-6} *15*
		650.4 *5*	35.2 *19*	200.5	(7/2)$^+$	(M1,E2)[&]		0.00273	α(K)=0.00238 *4*; α(L)=0.000282 *6*; α(M)=5.24×10^{-5} *12* α(N)=8.66×10^{-6} *16*; α(O)=4.30×10^{-7} *13*
		786.60 *20*	100. *3*	64.4	9/2$^+$	M1,E2[&]		0.00172 *6*	α(K)=0.00150 *6*; α(L)=0.000176 *4*; α(M)=3.26×10^{-5} *7* α(N)=5.41×10^{-6} *13*; α(O)=2.72×10^{-7} *14*
874.2	(5/2)$^+$	410.30 *20*	18.9 *11*	464.1	(5/2,7/2)$^+$	M1[&]		0.00824	α(K)=0.00721 *11*; α(L)=0.000844 *12*; α(M)=0.0001568 *22* α(N)=2.60×10^{-5} *4*; α(O)=1.331×10^{-6} *19*
		673.38 *20*	100.0 *10*	200.5	(7/2)$^+$	M1,E2[&]		0.00250 *5*	α(K)=0.00219 *5*; α(L)=0.000258 *5*; α(M)=4.79×10^{-5} *9* α(N)=7.93×10^{-6} *12*; α(O)=3.95×10^{-7} *13*
979.5	9/2$^-$	809.80 *20* 552.0 *5*	29.5 *21* 100 *9*	64.4 427.5	9/2$^+$ 5/2$^-$	E2		0.00426	α(K)=0.00370 *6*; α(L)=0.000457 *7*;

From ENSDF

Adopted Levels, Gammas (continued)

γ(^{99}Rh) (continued)

E_i(level)	J_i^π	E_γ †	I_γ ‡	E_f	J_f^π	Mult.[a]	δ#[c]	α[b]	Comments
									α(M)=8.49×10^{-5} *13* α(N)=1.395×10^{-5} *20*; α(O)=6.52×10^{-7} *10*
979.5	9/2$^-$	915.1 *10*	8.7 *14*	64.4	9/2$^+$	(E1)		4.79×10^{-4}	α(K)=0.000421 *6*; α(L)=4.76×10^{-5} *7*; α(M)=8.81×10^{-6} *13* α(N)=1.462×10^{-6} *21*; α(O)=7.49×10^{-8} *11*
1015.3	(5/2,7/2)	588.0 *10*	100 *3*	427.5	5/2$^-$				
		604.3 *10*	18.4 *12*	410.7					
1018.2	(7/2)	817.56 *19*	100.0 *28*	200.5	(7/2)$^+$				
		953.9 *4*	9.2 *9*	64.4	9/2$^+$				
1036.0	(1/2,3/2)	625.4 *10*	20.2 *9*	410.7					
		1035.8 *10*	100. *4*	0.0	1/2$^-$				
1100.8	(1/2$^-$,3/2)	673.6 *10*	100. *3*	427.5	5/2$^-$				
		689.7 *10*	10.6 *5*	410.7					
1111.0	(5/2$^+$,7/2)	236.0 *10*	28. *5*	874.2	(5/2)$^+$				
		646.1 *7*	100. *7*	464.1	(5/2,7/2)$^+$				
		910.9 *3*	48. *11*	200.5	(7/2)$^+$				
		1046.5 *3*	74. *7*	64.4	9/2$^+$				
1167.6	(5/2)$^+$	293.3 *4*	100. *17*	874.2	(5/2)$^+$	[M1,E2]		0.025 *6*	α(K)=0.021 *5*; α(L)=0.00278 *81*; α(M)=5.2×10^{-4} *16* α(N)=8.5×10^{-5} *24*; α(O)=3.7×10^{-6} *7*
		702.7 *3*	18.3 *22*	464.1	(5/2,7/2)$^+$				
		740.0 *10*	12.8 *22*	427.5	5/2$^-$				
		967.10 *20*	72. *6*	200.5	(7/2)$^+$				
1366.5	(5/2$^+$)	1165.6 *4*	100. *15*	200.5	(7/2)$^+$				
		1302.2 *7*	31. *10*	64.4	9/2$^+$				
1381.9	(3/2)	954.1 *10*	32.4 *27*	427.5	5/2$^-$				
		971.5 *10*	100. *5*	410.7					
1397.5?		523.4[e] *10*	100	874.2	(5/2)$^+$				
1408.1	(5/2)	980.6 *10*	100	427.5	5/2$^-$				
1430.6		966.6 *10*	95. *5*	464.1	(5/2,7/2)$^+$				
		1229.9 *10*	100. *5*	200.5	(7/2)$^+$				
1477.3	(3/2)	1066.6 *10*	72. *6*	410.7					
		1477.1[e] *10*	100. *6*	0.0	1/2$^-$				
1527.6	(3/2)$^+$	653.1 *3*	100. *6*	874.2	(5/2)$^+$				
		1063.8 *10*	2.9 *11*	464.1	(5/2,7/2)$^+$				
		1099.6 *4*	40. *6*	427.5	5/2$^-$				
		1528.1 *6*	11.1 *20*	0.0	1/2$^-$				
1535.9	(5/2,7/2)$^+$	368.0 *3*	3.1 *5*	1167.6	(5/2)$^+$	E2(+M3)[&]	0.1 *1*	0.016 *4*	α(K)=0.014 *4*; α(L)=0.00181 *49*; α(M)=3.37×10^{-4} *93* α(N)=5.5×10^{-5} *16*; α(O)=2.38×10^{-6} *70*
		684.8 *4*	2.8 *5*	850.9	(7/2)$^+$				
		1071.7 *3*	19.1 *14*	464.1	(5/2,7/2)$^+$				
		1335.6 *4*	100. *5*	200.5	(7/2)$^+$				
		1471.2 *9*	4.8 *14*	64.4	9/2$^+$				

From ENSDF

$^{99}_{45}Rh_{54}$-7

Adopted Levels, Gammas (continued)

γ(^{99}Rh) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.[a]	α[b]	Comments
1616.0		1151.9 *10*	100	464.1	$(5/2,7/2)^+$			
1618.5		1191.0 *10*	100	427.5	$5/2^-$			
1622.2		1158.1 *10*	100	464.1	$(5/2,7/2)^+$			
1626.6		647.1 *10*	100	979.5	$9/2^-$			
1655.4	$(17/2^+)$	813.0 *10*	100	842.4	$13/2^+$	(E2)	1.54×10^{-3}	α(K)=0.001342 *20*; α(L)=0.0001592 *23*; α(M)=2.95×10^{-5} *5* α(N)=4.88×10^{-6} *7*; α(O)=2.40×10^{-7} *4*
1660.6	$13/2^-$	681.1 *5*	100 *12*	979.5	$9/2^-$	E2	0.00240	α(K)=0.00209 *3*; α(L)=0.000253 *4*; α(M)=4.69×10^{-5} *7* α(N)=7.73×10^{-6} *11*; α(O)=3.72×10^{-7} *6*
		818.0 *10*	30 *5*	842.4	$13/2^+$	(E1)	6.00×10^{-4}	α(K)=0.000527 *8*; α(L)=5.98×10^{-5} *9*; α(M)=1.106×10^{-5} *16* α(N)=1.83×10^{-6} *3*; α(O)=9.36×10^{-8} *14*
		878.1 *10*	16 *3*	783.0	$11/2^+$	(E1)	5.20×10^{-4}	α(K)=0.000457 *7*; α(L)=5.18×10^{-5} *8*; α(M)=9.57×10^{-6} *14* α(N)=1.588×10^{-6} *23*; α(O)=8.12×10^{-8} *12*
1660.8	$15/2^+$	818.4 *10*	100	842.4	$13/2^+$	(M1)	1.62×10^{-3}	α(K)=0.001421 *21*; α(L)=0.0001633 *24*; α(M)=3.03×10^{-5} *5* α(N)=5.03×10^{-6} *8*; α(O)=2.60×10^{-7} *4*
1702.2	$17/2^+$	859.8 *3*	100	842.4	$13/2^+$	E2	1.34×10^{-3}	B(E2)(W.u.)>13 α(K)=0.001173 *17*; α(L)=0.0001385 *20*; α(M)=2.57×10^{-5} *4* α(N)=4.25×10^{-6} *6*; α(O)=2.10×10^{-7} *3*
1736.8?		636.1[e] *10*	100	1100.8	$(1/2^-,3/2)$			
1761.0	$(5/2,7/2)^+$	886.5 *3*	61. *11*	874.2	$(5/2)^+$			
		1298.0 *8*	14. *7*	464.1	$(5/2,7/2)^+$			
		1559.6 *6*	29. *7*	200.5	$(7/2)^+$			
		1697.3 *6*	100. *13*	64.4	$9/2^+$			
1790.6?		1379.9[e] *10*	100	410.7				
1794.5		1594.0 *10*	100	200.5	$(7/2)^+$			
1798.8		1372.2[e] *10*		427.5	$5/2^-$			
		1388.1 *10*		410.7				
1814.7	$(3/2^+,5/2^+,7/2^+)$	1350.9 *10*	36. *9*	464.1	$(5/2,7/2)^+$			
		1614.1 *6*	100. *12*	200.5	$(7/2)^+$			
1881.5		1681.0 *10*	100	200.5	$(7/2)^+$			
1921.0		1493.5 *10*	100	427.5	$5/2^-$			
1969.2	$(5/2,7/2)^+$	1095.1 *6*	37. *11*	874.2	$(5/2)^+$			
		1504.8 *5*	98.0 *16*	464.1	$(5/2,7/2)^+$			
		1904.7 *5*	100. *17*	64.4	$9/2^+$			
2040.3		1022.1 *3*	100. *34*	1018.2	(7/2)			
		1840.0 *8*	68. *18*	200.5	$(7/2)^+$			
2051.6	$(3/2,5/2,7/2)^+$	524.10 *20*	74. *11*	1527.6	$(3/2)^+$			
		684.8 *4*	29. *5*	1366.5	$(5/2^+)$			
		1201.1 *8*	24. *10*	850.9	$(7/2)^+$			
		1587.6 *6*	27. *6*	464.1	$(5/2,7/2)^+$			

From ENSDF

$^{99}_{45}Rh_{54}$-8

Adopted Levels, Gammas (continued)

γ(^{99}Rh) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.[a]	α[b]	Comments
2051.6	(3/2,5/2,7/2)$^+$	1851.6 *8*	100. *15*	200.5	(7/2)$^+$			
2068.6		1604.4 *10*	100	464.1	(5/2,7/2)$^+$			
2070.8		1219.5 *7*	100	850.9	(7/2)$^+$			
2143.3	(3/2,5/2,7/2)$^+$	1124.4 *5*	36. *9*	1018.2	(7/2)			
		1680.5 *9*	100. *18*	464.1	(5/2,7/2)$^+$			
		1943.4 *7*	44. *11*	200.5	(7/2)$^+$			
2181.2	(3/2)$^+$	652.8 *5*	100. *10*	1527.6	(3/2)$^+$			
		1013.4 *3*	100. *10*	1167.6	(5/2)$^+$			
		1717.6 *5*	44. *4*	464.1	(5/2,7/2)$^+$			
		1754.1 *10*	9. *4*	427.5	5/2$^-$			
		1982.5 *10*	4.0 *15*	200.5	(7/2)$^+$			
		2182.0 *13*	21. *4*	0.0	1/2$^-$			
2195.4	(19/2$^+$)	493.2 *3*	100 *6*	1702.2	17/2$^+$	M1	0.00527	α(K)=0.00461 *7*; α(L)=0.000537 *8*; α(M)=9.97×10^{-5} *14* α(N)=1.657×10^{-5} *24*; α(O)=8.50×10^{-7} *12* B(M1)(W.u.)=0.028 *4*
		535 *1*	2.3 *3*	1660.8	15/2$^+$	(E2)	0.00465	α(K)=0.00404 *6*; α(L)=0.000501 *8*; α(M)=9.32×10^{-5} *14* α(N)=1.529×10^{-5} *23*; α(O)=7.11×10^{-7} *11* B(E2)(W.u.)=1.7 *3*
2198.9	(3/2,5/2,7/2)$^+$	662.4 *4*	46. *8*	1535.9	(5/2,7/2)$^+$			
		1325.0 *5*	100. *13*	874.2	(5/2)$^+$			
		1735.0 *8*	11. *5*	464.1	(5/2,7/2)$^+$			
		1999.1 *5*	92. *9*	200.5	(7/2)$^+$			
2268.0	(3/2,5/2,7/2)$^+$	1157.2 *4*	100. *16*	1111.0	(5/2$^+$,7/2)			
		1391.6 *10*	20. *9*	874.2	(5/2)$^+$			
		1804.2 *8*	26. *9*	464.1	(5/2,7/2)$^+$			
2300.5	17/2$^-$	598.4 *10*	17 *3*	1702.2	17/2$^+$	(E1)	1.18×10^{-3}	α(K)=0.001033 *15*; α(L)=0.0001180 *18*; α(M)=2.18×10^{-5} *4* α(N)=3.62×10^{-6} *6*; α(O)=1.82×10^{-7} *3*
		639.9 *5*	100 *12*	1660.6	13/2$^-$	E2	0.00283	α(K)=0.00247 *4*; α(L)=0.000300 *5*; α(M)=5.57×10^{-5} *8* α(N)=9.17×10^{-6} *13*; α(O)=4.38×10^{-7} *7*
2343.2	(5/2,7/2)$^+$	1879.6 *8*	40. *11*	464.1	(5/2,7/2)$^+$			
		2142.4 *7*	100. *14*	200.5	(7/2)$^+$			
		2278.2 *15*	46. *12*	64.4	9/2$^+$			
2388.3	(5/2,7/2)$^+$	627.0 *4*	52. *12*	1761.0	(5/2,7/2)$^+$			
		852.30 *20*	56. *11*	1535.9	(5/2,7/2)$^+$			
		1515.1 *8*	36. *12*	874.2	(5/2)$^+$			
		1924.8 *6*	87. *13*	464.1	(5/2,7/2)$^+$			
		2188.4 *15*	37. *11*	200.5	(7/2)$^+$			
		2324.6 *8*	100. *12*	64.4	9/2$^+$			
2505.2	(21/2$^+$)	849.8 *10*	100	1655.4	(17/2$^+$)	(E2)	1.38×10^{-3}	α(K)=0.001206 *18*; α(L)=0.0001425 *21*; α(M)=2.64×10^{-5} *4* α(N)=4.37×10^{-6} *7*; α(O)=2.16×10^{-7} *3*
2508.6	(17/2$^-$)	848.0 *10*	100	1660.6	13/2$^-$	(E2)	1.39×10^{-3}	α(K)=0.001212 *18*; α(L)=0.0001433 *21*; α(M)=2.66×10^{-5} *4* α(N)=4.39×10^{-6} *7*; α(O)=2.17×10^{-7} *3*

From ENSDF

$^{99}_{45}Rh_{54}$-9

Adopted Levels, Gammas (continued)

γ(^{99}Rh) (continued)

E_i(level)	J_i^π	E_γ [†]	I_γ [‡]	E_f	J_f^π	Mult.[a]	α[b]	Comments
2593.7	21/2$^+$	398.4 *3*	56 *4*	2195.4	(19/2$^+$)	M1	0.00885	α(K)=0.00775 *11*; α(L)=0.000909 *13*; α(M)=0.0001687 *24* α(N)=2.80×10^{-5} *4*; α(O)=1.432×10^{-6} *21*
		891.6 *3*	100 *7*	1702.2	17/2$^+$	E2	1.23×10^{-3}	α(K)=0.001076 *15*; α(L)=0.0001267 *18*; α(M)=2.35×10^{-5} *4* α(N)=3.89×10^{-6} *6*; α(O)=1.93×10^{-7} *3*
2617.9	(5/2,7/2)$^+$	2154.5 *8*	100. *26*	464.1	(5/2,7/2)$^+$			
		2417.6 *15*	15. *7*	200.5	(7/2)$^+$			
		2550.8 *15*	17. *9*	64.4	9/2$^+$			
2620.3	(17/2$^-$)	319.6 *10*	26 *5*	2300.5	17/2$^-$			
		918.0 *10*	100 *17*	1702.2	17/2$^+$	(E1)	4.76×10^{-4}	α(K)=0.000418 *6*; α(L)=4.74×10^{-5} *7*; α(M)=8.75×10^{-6} *13* α(N)=1.453×10^{-6} *21*; α(O)=7.44×10^{-8} *11*
		960.0 *10*	43 *8*	1660.6	13/2$^-$	E2	1.04×10^{-3}	α(K)=0.000907 *13*; α(L)=0.0001062 *15*; α(M)=1.97×10^{-5} *3* α(N)=3.26×10^{-6} *5*; α(O)=1.625×10^{-7} *23*
2640.0	(5/2,7/2)$^+$	1274.2 *8*	66. *21*	1366.5	(5/2$^+$)			
		1789.6 *10*	100. *21*	850.9	(7/2)$^+$			
		2439.1 *12*	41. *10*	200.5	(7/2)$^+$			
		2574.5 *9*	14. *3*	64.4	9/2$^+$			
2709.6	(3/2,5/2,7/2)$^+$	1540.8 *10*	18. *5*	1167.6	(5/2)$^+$			
		2246.2 *7*	100. *11*	464.1	(5/2,7/2)$^+$			
		2508.7 *12*	14. *4*	200.5	(7/2)$^+$			
2727.0		133.3 *10*	100	2593.7	21/2$^+$			
2736.8	(5/2,7/2)$^+$	767.2 *5*	37. *7*	1969.2	(5/2,7/2)$^+$			
		1863.6 *8*	31. *7*	874.2	(5/2)$^+$			
		2273.3 *15*	60. *19*	464.1	(5/2,7/2)$^+$			
		2536.3 *9*	100. *19*	200.5	(7/2)$^+$			
		2671.2 *15*	1.7 *13*	64.4	9/2$^+$			
2758.6	(5/2,7/2)$^+$	718.7 *20*	59. *6*	2040.3				
		1231.0 *4*	100. *10*	1527.6	(3/2)$^+$			
		1391.6 *10*	18. *8*	1366.5	(5/2$^+$)			
		2557.8 *12*	26. *8*	200.5	(7/2)$^+$			
		2694.9 *10*	19. *4*	64.4	9/2$^+$			
2836.0	(3/2,5/2,7/2)$^+$	1962.0 *10*	85. *31*	874.2	(5/2)$^+$			
		2373.1 *11*	85. *23*	464.1	(5/2,7/2)$^+$			
		2633.6 *12*	100. *23*	200.5	(7/2)$^+$			
2860.2	(5/2,7/2)$^+$	2394.0 *15*	50. *17*	464.1	(5/2,7/2)$^+$			
		2661.4 *15*	47. *8*	200.5	(7/2)$^+$			
		2796.0 *15*	100. *25*	64.4	9/2$^+$			
2890.7	21/2$^+$	296.8 *10*	17.2 *20*	2593.7	21/2$^+$			
		695.2 *3*	100 *7*	2195.4	(19/2$^+$)	M1	0.00235	α(K)=0.00206 *3*; α(L)=0.000238 *4*; α(M)=4.41×10^{-5} *7* α(N)=7.33×10^{-6} *11*; α(O)=3.78×10^{-7} *6*
		1188.4 *5*	25 *3*	1702.2	17/2$^+$	(E2)	6.52×10^{-4}	α(K)=0.000567 *8*; α(L)=6.54×10^{-5} *10*; α(M)=1.212×10^{-5} *17* α(N)=2.01×10^{-6} *3*; α(O)=1.018×10^{-7} *15*; α(IPF)=5.98×10^{-6} *11*

From ENSDF

Adopted Levels, Gammas (continued)

γ(^{99}Rh) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.[a]	α[b]	Comments
2957.3	(5/2,7/2)$^+$	758.5 *4*	48. *9*	2198.9	(3/2,5/2,7/2)$^+$			
		886.5 *3*	100. *17*	2070.8				
		1422.2 *10*	48. *22*	1535.9	(5/2,7/2)$^+$			
		1429.4 *10*	59. *22*	1527.6	(3/2)$^+$			
		1789.6 *10*	63. *13*	1167.6	(5/2)$^+$			
		2492.7 *20*	6.5 *22*	464.1	(5/2,7/2)$^+$			
		2893.0 *20*	1.5 *7*	64.4	9/2$^+$			
3015.3	(21/2$^+$)	819.8	100	2195.4	(19/2$^+$)	(M1)[@]	1.61×10^{-3}	α(K)=0.001416 *20*; α(L)=0.0001627 *23*; α(M)=3.01×10^{-5} *5* α(N)=5.02×10^{-6} *7*; α(O)=2.59×10^{-7} *4*
3047.2	(5/2,7/2)$^+$	1879.6 *8*	100. *26*	1167.6	(5/2)$^+$			
		2847.3 *15*	91. *26*	200.5	(7/2)$^+$			
		2982.0 *20*	6.1 *26*	64.4	9/2$^+$			
3113.8	21/2$^-$	813.3 *10*	100	2300.5	17/2$^-$	E2	1.53×10^{-3}	α(K)=0.001341 *20*; α(L)=0.0001591 *23*; α(M)=2.95×10^{-5} *5* α(N)=4.87×10^{-6} *7*; α(O)=2.39×10^{-7} *4*
3150.4	23/2$^+$	259.6 *10*	4.7 *8*	2890.7	21/2$^+$	(M1)	0.0261 *5*	α(K)=0.0228 *4*; α(L)=0.00271 *5*; α(M)=0.000504 *9* α(N)=8.36×10^{-5} *15*; α(O)=4.23×10^{-6} *8*
		556.6 *5*	35 *3*	2593.7	21/2$^+$	M1	0.00395	α(K)=0.00346 *5*; α(L)=0.000402 *6*; α(M)=7.45×10^{-5} *11* α(N)=1.238×10^{-5} *18*; α(O)=6.36×10^{-7} *9*
		954.8 *3*	100 *7*	2195.4	(19/2$^+$)	E2	1.05×10^{-3}	α(K)=0.000918 *13*; α(L)=0.0001075 *15*; α(M)=1.99×10^{-5} *3* α(N)=3.30×10^{-6} *5*; α(O)=1.645×10^{-7} *23*
3434.0	21/2$^-$	320.3 *10*	100	3113.8	21/2$^-$			
3547.9	21/2$^-$	434.4 *10*	100 *18*	3113.8	21/2$^-$			
		927.7 *10*	61 *13*	2620.3	(17/2$^-$)	(E2)	1.12×10^{-3}	α(K)=0.000981 *14*; α(L)=0.0001152 *17*; α(M)=2.13×10^{-5} *3* α(N)=3.53×10^{-6} *5*; α(O)=1.757×10^{-7} *25*
3587.0	25/2$^+$	436.0 *5*	53 *5*	3150.4	23/2$^+$	M1	0.00710	α(K)=0.00621 *9*; α(L)=0.000727 *11*; α(M)=0.0001349 *20* α(N)=2.24×10^{-5} *4*; α(O)=1.147×10^{-6} *17*
		993.4 *3*	100 *6*	2593.7	21/2$^+$	E2	9.58×10^{-4}	α(K)=0.000839 *12*; α(L)=9.80×10^{-5} *14*; α(M)=1.82×10^{-5} *3* α(N)=3.01×10^{-6} *5*; α(O)=1.504×10^{-7} *21*
3633.8		520.0 *10*	100	3113.8	21/2$^-$			
3698.6	23/2$^+$	548.4 *10*	61 *9*	3150.4	23/2$^+$			
		1104.3 *10*	100 *13*	2593.7	21/2$^+$	(M1)	8.37×10^{-4}	α(K)=0.000734 *11*; α(L)=8.38×10^{-5} *12*; α(M)=1.552×10^{-5} *22* α(N)=2.58×10^{-6} *4*; α(O)=1.342×10^{-7} *19*; α(IPF)=5.21×10^{-7} *20*
		1503.4 *10*	27 *5*	2195.4	(19/2$^+$)	(E2)	4.83×10^{-4}	α(K)=0.000350 *5*; α(L)=4.00×10^{-5} *6*; α(M)=7.40×10^{-6} *11* α(N)=1.229×10^{-6} *18*; α(O)=6.30×10^{-8} *9*; α(IPF)=8.38×10^{-5} *13*
3711.1	23/2$^-$	163.1 *10*	0.89 *18*	3547.9	21/2$^-$	(M1)	0.0891 *20*	α(K)=0.0777 *17*; α(L)=0.00936 *21*; α(M)=0.00174 *4* α(N)=0.000289 *7*; α(O)=1.45×10^{-5} *4*
		277.1 *10*	0.33 *6*	3434.0	21/2$^-$	(M1)	0.0221 *4*	α(K)=0.0193 *4*; α(L)=0.00229 *4*; α(M)=0.000425 *8* α(N)=7.05×10^{-5} *12*; α(O)=3.58×10^{-6} *6*

From ENSDF

Adopted Levels, Gammas (continued)

γ(^{99}Rh) (continued)

E_i(level)	J_i^π	E_γ [†]	I_γ [‡]	E_f	J_f^π	Mult.[a]	α[b]	Comments
3711.1	23/2$^-$	561.3 *10*	1.48 *24*	3150.4	23/2$^+$	(E1)	1.36×10^{-3}	α(K)=0.001195 *18*; α(L)=0.0001368 *20*; α(M)=2.53×10^{-5} *4* α(N)=4.19×10^{-6} *7*; α(O)=2.11×10^{-7} *3*
		597.4 *10*	0.68 *12*	3113.8	21/2$^-$	(M1)	0.00334	α(K)=0.00293 *5*; α(L)=0.000339 *5*; α(M)=6.29×10^{-5} *10* α(N)=1.046×10^{-5} *16*; α(O)=5.38×10^{-7} *8*
		820.4 *5*	29.3 *18*	2890.7	21/2$^+$	E1	5.96×10^{-4}	α(K)=0.000524 *8*; α(L)=5.94×10^{-5} *9*; α(M)=1.099×10^{-5} *16* α(N)=1.82×10^{-6} *3*; α(O)=9.31×10^{-8} *13*
		1117.5 *3*	100 *6*	2593.7	21/2$^+$	E1	3.35×10^{-4}	α(K)=0.000288 *4*; α(L)=3.25×10^{-5} *5*; α(M)=6.00×10^{-6} *9* α(N)=9.97×10^{-7} *14*; α(O)=5.13×10^{-8} *8*; α(IPF)=7.42×10^{-6} *12*
3878.7	25/2$^+$	728.2 *5*	100 *9*	3150.4	23/2$^+$	M1	0.00211	α(K)=0.00185 *3*; α(L)=0.000213 *3*; α(M)=3.96×10^{-5} *6* α(N)=6.58×10^{-6} *10*; α(O)=3.40×10^{-7} *5*
		987.8 *10*	43 *5*	2890.7	21/2$^+$	(E2)	9.70×10^{-4}	α(K)=0.000850 *12*; α(L)=9.93×10^{-5} *14*; α(M)=1.84×10^{-5} *3* α(N)=3.05×10^{-6} *5*; α(O)=1.523×10^{-7} *22*
3989.3	25/2$^-$	278.5 *3*	100 *6*	3711.1	23/2$^-$	M1	0.0218	α(K)=0.0190 *3*; α(L)=0.00226 *4*; α(M)=0.000419 *6* α(N)=6.96×10^{-5} *10*; α(O)=3.53×10^{-6} *5*
		555.4 *10*	0.51 *9*	3434.0	21/2$^-$	(E2)	0.00418	α(K)=0.00364 *6*; α(L)=0.000449 *7*; α(M)=8.34×10^{-5} *13* α(N)=1.370×10^{-5} *21*; α(O)=6.41×10^{-7} *10*
4006.1	25/2$^+$	307.6 *10*	100 *12*	3698.6	23/2$^+$	(M1)	0.0169 *3*	α(K)=0.01477 *24*; α(L)=0.00175 *3*; α(M)=0.000325 *6* α(N)=5.39×10^{-5} *9*; α(O)=2.74×10^{-6} *5*
		419 *1*	95 *12*	3587.0	25/2$^+$			
4099.0	25/2$^-$	551.4 *10*	39 *7*	3547.9	21/2$^-$	(E2)	0.00427	α(K)=0.00371 *6*; α(L)=0.000458 *7*; α(M)=8.52×10^{-5} *13* α(N)=1.399×10^{-5} *21*; α(O)=6.54×10^{-7} *10*
		985.2 *10*	100 *18*	3113.8	21/2$^-$	E2	9.76×10^{-4}	α(K)=0.000855 *13*; α(L)=9.99×10^{-5} *15*; α(M)=1.85×10^{-5} *3* α(N)=3.07×10^{-6} *5*; α(O)=1.532×10^{-7} *22*
4250.0	27/2$^+$	371.0 *10*	2.9 *6*	3878.7	25/2$^+$	(M1)	0.01056 *17*	α(K)=0.00924 *15*; α(L)=0.001086 *17*; α(M)=0.000202 *4* α(N)=3.35×10^{-5} *6*; α(O)=1.71×10^{-6} *3*
		662.7 *10*	19 *4*	3587.0	25/2$^+$	(M1)	0.00262	α(K)=0.00230 *4*; α(L)=0.000266 *4*; α(M)=4.93×10^{-5} *8* α(N)=8.19×10^{-6} *12*; α(O)=4.22×10^{-7} *6*
		1099.4 *10*	100 *12*	3150.4	23/2$^+$	E2	7.65×10^{-4}	α(K)=0.000670 *10*; α(L)=7.77×10^{-5} *11*; α(M)=1.440×10^{-5} *21* α(N)=2.39×10^{-6} *4*; α(O)=1.203×10^{-7} *17*
4264.5	27/2$^+$	385.9 *10*	17.1 *18*	3878.7	25/2$^+$	M1	0.00958 *15*	α(K)=0.00838 *13*; α(L)=0.000984 *16*; α(M)=0.000183 *3* α(N)=3.03×10^{-5} *5*; α(O)=1.549×10^{-6} *24*
		677.6 *10*	13.1 *18*	3587.0	25/2$^+$	(M1)	0.00249	α(K)=0.00218 *4*; α(L)=0.000252 *4*; α(M)=4.68×10^{-5} *7* α(N)=7.78×10^{-6} *12*; α(O)=4.01×10^{-7} *6*
		1114.1 *3*	100 *6*	3150.4	23/2$^+$	E2	7.44×10^{-4}	α(K)=0.000651 *10*; α(L)=7.55×10^{-5} *11*; α(M)=1.398×10^{-5} *20* α(N)=2.32×10^{-6} *4*; α(O)=1.169×10^{-7} *17*; α(IPF)=8.92×10^{-7} *16*
4326.8	(27/2)	337.5	100	3989.3	25/2$^-$	D		
4328.9	(25/2$^-$)	230.0 *10*	52 *11*	4099.0	25/2$^-$			
		1215.0 *10*	100 *20*	3113.8	21/2$^-$	(E2)	6.26×10^{-4}	α(K)=0.000541 *8*; α(L)=6.24×10^{-5} *9*; α(M)=1.155×10^{-5} *17* α(N)=1.92×10^{-6} *3*; α(O)=9.72×10^{-8} *14*; α(IPF)=9.51×10^{-6} *20*
4580.1	27/2$^-$	329.6 *10*	0.66 *15*	4250.0	27/2$^+$	(E1)	0.00511 *9*	α(K)=0.00448 *8*; α(L)=0.000518 *9*; α(M)=9.57×10^{-5} *16* α(N)=1.58×10^{-5} *3*; α(O)=7.75×10^{-7} *13*

From ENSDF

$^{99}_{45}Rh_{54}$-12

Adopted Levels, Gammas (continued)

γ(^{99}Rh) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.[a]	α[b]	Comments
4580.1	27/2$^-$	590.7 *3*	100 *6*	3989.3	25/2$^-$	M1	0.00343	α(K)=0.00301 *5*; α(L)=0.000349 *5*; α(M)=6.46×10^{-5} *9* α(N)=1.075×10^{-5} *16*; α(O)=5.53×10^{-7} *8*
		700.9 *10*	6.8 *9*	3878.7	25/2$^+$	(E1)	8.30×10^{-4}	α(K)=0.000729 *11*; α(L)=8.30×10^{-5} *12*; α(M)=1.534×10^{-5} *22* α(N)=2.54×10^{-6} *4*; α(O)=1.291×10^{-7} *19*
		867.8 *10*	6.6 *8*	3711.1	23/2$^-$	E2	1.31×10^{-3}	α(K)=0.001147 *17*; α(L)=0.0001354 *20*; α(M)=2.51×10^{-5} *4* α(N)=4.15×10^{-6} *6*; α(O)=2.05×10^{-7} *3*
		992.0 *10*	3.5 *5*	3587.0	25/2$^+$	(E1)	4.10×10^{-4}	α(K)=0.000360 *5*; α(L)=4.07×10^{-5} *6*; α(M)=7.52×10^{-6} *11* α(N)=1.249×10^{-6} *18*; α(O)=6.41×10^{-8} *9*
4628.5	29/2$^+$	364.4 *5*	32 *3*	4264.5	27/2$^+$	M1	0.01104	α(K)=0.00966 *14*; α(L)=0.001136 *17*; α(M)=0.000211 *3* α(N)=3.50×10^{-5} *5*; α(O)=1.79×10^{-6} *3*
		378.7 *10*	3.5 *6*	4250.0	27/2$^+$	(M1)	0.01003 *16*	α(K)=0.00878 *14*; α(L)=0.001031 *16*; α(M)=0.000191 *3* α(N)=3.18×10^{-5} *5*; α(O)=1.62×10^{-6} *3*
		1041.4 *5*	100 *6*	3587.0	25/2$^+$	E2	8.62×10^{-4}	α(K)=0.000755 *11*; α(L)=8.79×10^{-5} *13*; α(M)=1.628×10^{-5} *23* α(N)=2.70×10^{-6} *4*; α(O)=1.354×10^{-7} *19*
4678.5	27/2$^+$	428.0 *10*	58 *10*	4250.0	27/2$^+$			
		672.4 *10*	100 *16*	4006.1	25/2$^+$	M1	0.00254	α(K)=0.00222 *4*; α(L)=0.000257 *4*; α(M)=4.76×10^{-5} *7* α(N)=7.92×10^{-6} *12*; α(O)=4.08×10^{-7} *6*
		980.0 *10*	62 *11*	3698.6	23/2$^+$	(E2)	9.88×10^{-4}	α(K)=0.000865 *13*; α(L)=0.0001011 *15*; α(M)=1.87×10^{-5} *3* α(N)=3.10×10^{-6} *5*; α(O)=1.551×10^{-7} *22*
		1091.0 *10*	88 *14*	3587.0	25/2$^+$	(M1)	8.59×10^{-4}	α(K)=0.000754 *11*; α(L)=8.60×10^{-5} *13*; α(M)=1.593×10^{-5} *23* α(N)=2.65×10^{-6} *4*; α(O)=1.377×10^{-7} *20*
4690.7	29/2$^+$	425.8 *10*	94 *12*	4264.5	27/2$^+$	M1	0.00752	α(K)=0.00658 *10*; α(L)=0.000770 *12*; α(M)=0.0001430 *22* α(N)=2.38×10^{-5} *4*; α(O)=1.215×10^{-6} *19*
		811.7 *10*	71 *10*	3878.7	25/2$^+$	(E2)	1.54×10^{-3}	α(K)=0.001347 *20*; α(L)=0.0001598 *23*; α(M)=2.97×10^{-5} *5* α(N)=4.90×10^{-6} *7*; α(O)=2.41×10^{-7} *4*
		1104.0 *10*	100 *12*	3587.0	25/2$^+$	(E2)	7.58×10^{-4}	α(K)=0.000664 *10*; α(L)=7.70×10^{-5} *11*; α(M)=1.427×10^{-5} *21* α(N)=2.36×10^{-6} *4*; α(O)=1.192×10^{-7} *17*; α(IPF)=6.38×10^{-7} *24*
4825.8	29/2$^+$	576.0 *10*	71 *12*	4250.0	27/2$^+$	(M1)	0.00364	α(K)=0.00319 *5*; α(L)=0.000370 *6*; α(M)=6.86×10^{-5} *10* α(N)=1.141×10^{-5} *17*; α(O)=5.87×10^{-7} *9*
		947.4 *10*	50 *9*	3878.7	25/2$^+$	(E2)	1.07×10^{-3}	α(K)=0.000935 *14*; α(L)=0.0001095 *16*; α(M)=2.03×10^{-5} *3* α(N)=3.36×10^{-6} *5*; α(O)=1.675×10^{-7} *24*
		1238.9 *10*	100 *19*	3587.0	25/2$^+$	E2	6.05×10^{-4}	α(K)=0.000519 *8*; α(L)=5.98×10^{-5} *9*; α(M)=1.108×10^{-5} *16* α(N)=1.84×10^{-6} *3*; α(O)=9.33×10^{-8} *14*; α(IPF)=1.33×10^{-5} *3*
4917.4	29/2$^-$	337.0 *3*	100 *8*	4580.1	27/2$^-$	M1	0.01342	α(K)=0.01174 *17*; α(L)=0.001384 *20*; α(M)=0.000257 *4* α(N)=4.27×10^{-5} *6*; α(O)=2.17×10^{-6} *3*
		928.4 *3*	63 *4*	3989.3	25/2$^-$	E2	1.12×10^{-3}	α(K)=0.000979 *14*; α(L)=0.0001150 *17*; α(M)=2.13×10^{-5} *3* α(N)=3.53×10^{-6} *5*; α(O)=1.754×10^{-7} *25*
4961.8	27/2$^+$	1811.3 *10*	100	3150.4	23/2$^+$	(E2)	4.93×10^{-4}	α(K)=0.000245 *4*; α(L)=2.77×10^{-5} *4*; α(M)=5.13×10^{-6} *8* α(N)=8.53×10^{-7} *12*; α(O)=4.41×10^{-8} *7*; α(IPF)=0.000214 *3*
5113.9	29/2$^+$	435.2 *10*	100	4678.5	27/2$^+$	(M1)	0.00713	α(K)=0.00624 *10*; α(L)=0.000730 *11*; α(M)=0.0001355 *21* α(N)=2.25×10^{-5} *4*; α(O)=1.152×10^{-6} *18*

From ENSDF

$^{99}_{45}Rh_{54}$-13

Adopted Levels, Gammas (continued)

γ(^{99}Rh) (continued)

E_i(level)	J_i^π	E_γ [†]	I_γ [‡]	E_f	J_f^π	Mult.[a]	α[b]	Comments
5146.4	29/2$^-$	1047.5 *10*	100	4099.0	25/2$^-$	E2	8.51×10^{-4}	α(K)=0.000745 *11*; α(L)=8.67×10^{-5} *13*; α(M)=1.607×10^{-5} *23* α(N)=2.66×10^{-6} *4*; α(O)=1.337×10^{-7} *19*
5320.4	(31/2$^+$)	495 *1*	7.1 *12*	4825.8	29/2$^+$	(M1)	0.00522	α(K)=0.00457 *7*; α(L)=0.000533 *8*; α(M)=9.88×10^{-5} *15* α(N)=1.643×10^{-5} *25*; α(O)=8.43×10^{-7} *13*
		629.8 *10*	16.3 *24*	4690.7	29/2$^+$	(M1)	0.00295	α(K)=0.00259 *4*; α(L)=0.000299 *5*; α(M)=5.55×10^{-5} *8* α(N)=9.23×10^{-6} *14*; α(O)=4.76×10^{-7} *7*
		692.0 *10*	15.8 *21*	4628.5	29/2$^+$	M1	0.00237	α(K)=0.00208 *3*; α(L)=0.000240 *4*; α(M)=4.45×10^{-5} *7* α(N)=7.41×10^{-6} *11*; α(O)=3.82×10^{-7} *6*
		1055.6 *5*	100 *9*	4264.5	27/2$^+$	E2	8.36×10^{-4}	α(K)=0.000732 *11*; α(L)=8.52×10^{-5} *12*; α(M)=1.579×10^{-5} *23* α(N)=2.62×10^{-6} *4*; α(O)=1.314×10^{-7} *19*
5367.4	29/2$^+$	738.9 *5*	100 *12*	4628.5	29/2$^+$			
		1489.0 *10*	60 *7*	3878.7	25/2$^+$	(E2)	4.85×10^{-4}	α(K)=0.000357 *5*; α(L)=4.08×10^{-5} *6*; α(M)=7.55×10^{-6} *11* α(N)=1.254×10^{-6} *18*; α(O)=6.42×10^{-8} *9*; α(IPF)=7.86×10^{-5} *12*
5448.0	31/2$^-$	530.5 *3*	100 *7*	4917.4	29/2$^-$	M1	0.00442	α(K)=0.00388 *6*; α(L)=0.000451 *7*; α(M)=8.36×10^{-5} *12* α(N)=1.390×10^{-5} *20*; α(O)=7.14×10^{-7} *10*
		756.9 *10*	5.6 *7*	4690.7	29/2$^+$	(E1)	7.05×10^{-4}	α(K)=0.000619 *9*; α(L)=7.03×10^{-5} *10*; α(M)=1.300×10^{-5} *19* α(N)=2.16×10^{-6} *3*; α(O)=1.098×10^{-7} *16*
		820.0 *10*	5.7 *8*	4628.5	29/2$^+$	(E1)	5.97×10^{-4}	α(K)=0.000525 *8*; α(L)=5.95×10^{-5} *9*; α(M)=1.100×10^{-5} *16* α(N)=1.83×10^{-6} *3*; α(O)=9.31×10^{-8} *14*
		867.7 *5*	38 *3*	4580.1	27/2$^-$	E2	1.31×10^{-3}	α(K)=0.001147 *17*; α(L)=0.0001354 *19*; α(M)=2.51×10^{-5} *4* α(N)=4.15×10^{-6} *6*; α(O)=2.05×10^{-7} *3*
5518.3	29/2$^+$	1931.3 *10*	100	3587.0	25/2$^+$	(E2)	5.18×10^{-4}	α(K)=0.000217 *3*; α(L)=2.46×10^{-5} *4*; α(M)=4.54×10^{-6} *7* α(N)=7.56×10^{-7} *11*; α(O)=3.91×10^{-8} *6*; α(IPF)=0.000271 *4*
5694.4	(33/2$^+$)	1065.9 *10*	100	4628.5	29/2$^+$	E2	8.18×10^{-4}	α(K)=0.000717 *11*; α(L)=8.33×10^{-5} *12*; α(M)=1.544×10^{-5} *22* α(N)=2.56×10^{-6} *4*; α(O)=1.287×10^{-7} *19*
5701.7	33/2$^+$	381.0 *5*	70 *7*	5320.4	(31/2$^+$)	M1	0.00989	α(K)=0.00865 *13*; α(L)=0.001016 *15*; α(M)=0.000189 *3* α(N)=3.13×10^{-5} *5*; α(O)=1.599×10^{-6} *23*
		1073.5 *5*	100 *9*	4628.5	29/2$^+$	E2	8.06×10^{-4}	α(K)=0.000706 *10*; α(L)=8.20×10^{-5} *12*; α(M)=1.520×10^{-5} *22* α(N)=2.52×10^{-6} *4*; α(O)=1.267×10^{-7} *18*
5785.7	33/2$^-$	337.7 *3*	100 *8*	5448.0	31/2$^-$	M1	0.01335	α(K)=0.01168 *17*; α(L)=0.001377 *20*; α(M)=0.000256 *4* α(N)=4.25×10^{-5} *6*; α(O)=2.16×10^{-6} *3*
		868.6 *5*	20.0 *10*	4917.4	29/2$^-$	E2	1.31×10^{-3}	α(K)=0.001145 *17*; α(L)=0.0001351 *19*; α(M)=2.50×10^{-5} *4* α(N)=4.14×10^{-6} *6*; α(O)=2.05×10^{-7} *3*
5826.8	31/2$^+$	124.9 *10*	6.1 *12*	5701.7	33/2$^+$	(M1)	0.185 *5*	α(K)=0.161 *5*; α(L)=0.0195 *6*; α(M)=0.00364 *10* α(N)=0.000602 *16*; α(O)=3.01×10^{-5} *8*
		308.5 *10*	19 *3*	5518.3	29/2$^+$	(M1)	0.0168 *3*	α(K)=0.01466 *24*; α(L)=0.00173 *3*; α(M)=0.000322 *6* α(N)=5.35×10^{-5} *9*; α(O)=2.72×10^{-6} *5*
		459.5 *5*	100 *9*	5367.4	29/2$^+$	M1	0.00625	α(K)=0.00547 *8*; α(L)=0.000639 *10*; α(M)=0.0001185 *17* α(N)=1.97×10^{-5} *3*; α(O)=1.009×10^{-6} *15*
		680.4 *10*	4.2 *9*	5146.4	29/2$^-$	(E1)	8.85×10^{-4}	α(K)=0.000777 *12*; α(L)=8.85×10^{-5} *13*; α(M)=1.636×10^{-5} *24* α(N)=2.71×10^{-6} *4*; α(O)=1.376×10^{-7} *20*
		712.8 *10*	24 *4*	5113.9	29/2$^+$	(M1)	0.00222	α(K)=0.00194 *3*; α(L)=0.000224 *4*; α(M)=4.16×10^{-5} *6*

From ENSDF

$^{99}_{45}Rh_{54}$-14

Adopted Levels, Gammas (continued)

$\gamma(^{99}Rh)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.[a]	α[b]	Comments
								α(N)=6.91×10^{-6} *10*; α(O)=3.57×10^{-7} *6*

From ENSDF

$^{99}_{45}Rh_{54}$-15

Adopted Levels, Gammas (continued)

γ(^{99}Rh) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.[a]	α[b]	Comments
5826.8	31/2$^+$	865.4 *10*	14.2 *25*	4961.8	27/2$^+$	(E2)	1.32×10^{-3}	α(K)=0.001155 *17*; α(L)=0.0001363 *20*; α(M)=2.53×10^{-5} *4* α(N)=4.18×10^{-6} *6*; α(O)=2.07×10^{-7} *3*
		1000.4 *10*	36 *5*	4825.8	29/2$^+$	(M1)	1.04×10^{-3}	α(K)=0.000910 *13*; α(L)=0.0001041 *15*; α(M)=1.93×10^{-5} *3* α(N)=3.21×10^{-6} *5*; α(O)=1.665×10^{-7} *24*
		1148.0 *5*	86 *10*	4678.5	27/2$^+$	(E2)	6.98×10^{-4}	α(K)=0.000610 *9*; α(L)=7.06×10^{-5} *10*; α(M)=1.308×10^{-5} *19* α(N)=2.17×10^{-6} *3*; α(O)=1.096×10^{-7} *16*; α(IPF)=2.39×10^{-6} *5*
		1198.4 *5*	58 *7*	4628.5	29/2$^+$	(M1)	7.08×10^{-4}	α(K)=0.000616 *9*; α(L)=7.02×10^{-5} *10*; α(M)=1.300×10^{-5} *19* α(N)=2.16×10^{-6} *3*; α(O)=1.125×10^{-7} *16*; α(IPF)=5.94×10^{-6} *10*
5973.1	31/2$^+$	605.4 *10*	100 *13*	5367.4	29/2$^+$	(M1)	0.00324	α(K)=0.00284 *5*; α(L)=0.000329 *5*; α(M)=6.10×10^{-5} *9* α(N)=1.014×10^{-5} *15*; α(O)=5.22×10^{-7} *8*
		653.0 *10*	11.0 *21*	5320.4	(31/2$^+$)			
		1010.9 *10*	60 *9*	4961.8	27/2$^+$	(E2)	9.21×10^{-4}	α(K)=0.000806 *12*; α(L)=9.41×10^{-5} *14*; α(M)=1.744×10^{-5} *25* α(N)=2.89×10^{-6} *4*; α(O)=1.447×10^{-7} *21*
		1148.0 *10*	17 *4*	4825.8	29/2$^+$	(M1)	7.71×10^{-4}	α(K)=0.000676 *10*; α(L)=7.70×10^{-5} *11*; α(M)=1.426×10^{-5} *21* α(N)=2.37×10^{-6} *4*; α(O)=1.234×10^{-7} *18*; α(IPF)=1.95×10^{-6} *6*
		1282.3 *10*	5.5 *14*	4690.7	29/2$^+$	(M1)	6.26×10^{-4}	α(K)=0.000534 *8*; α(L)=6.07×10^{-5} *9*; α(M)=1.124×10^{-5} *16* α(N)=1.87×10^{-6} *3*; α(O)=9.74×10^{-8} *14*; α(IPF)=1.79×10^{-5} *3*
6300.4	33/2$^-$	1154.1 *10*	100	5146.4	29/2$^-$	(E2)	6.91×10^{-4}	α(K)=0.000603 *9*; α(L)=6.98×10^{-5} *10*; α(M)=1.293×10^{-5} *19* α(N)=2.14×10^{-6} *3*; α(O)=1.083×10^{-7} *16*; α(IPF)=2.79×10^{-6} *8*
6666.2	35/2$^-$	880.6 *5*	100 *10*	5785.7	33/2$^-$	M1	1.37×10^{-3}	α(K)=0.001206 *17*; α(L)=0.0001384 *20*; α(M)=2.56×10^{-5} *4* α(N)=4.27×10^{-6} *6*; α(O)=2.21×10^{-7} *4*
		1218.0 *10*	13.0 *23*	5448.0	31/2$^-$	(E2)	6.23×10^{-4}	α(K)=0.000538 *8*; α(L)=6.20×10^{-5} *9*; α(M)=1.149×10^{-5} *17* α(N)=1.91×10^{-6} *3*; α(O)=9.67×10^{-8} *14*; α(IPF)=9.96×10^{-6} *21*
6829.6	37/2$^+$	1127.9 *5*	100	5701.7	33/2$^+$	E2	7.24×10^{-4}	α(K)=0.000634 *9*; α(L)=7.34×10^{-5} *11*; α(M)=1.360×10^{-5} *19* α(N)=2.25×10^{-6} *4*; α(O)=1.138×10^{-7} *16*; α(IPF)=1.37×10^{-6} *3*
6879.4	35/2$^+$	579 *1*	0.68 *14*	6300.4	33/2$^-$	(E1)	1.27×10^{-3}	α(K)=0.001113 *17*; α(L)=0.0001273 *19*; α(M)=2.35×10^{-5} *4* α(N)=3.90×10^{-6} *6*; α(O)=1.97×10^{-7} *3*
		906.5 *10*	17.0 *21*	5973.1	31/2$^+$	(E2)	1.18×10^{-3}	α(K)=0.001035 *15*; α(L)=0.0001217 *18*; α(M)=2.26×10^{-5} *4* α(N)=3.73×10^{-6} *6*; α(O)=1.85×10^{-7} *3*
		1052.5 *5*	100 *8*	5826.8	31/2$^+$	E2	8.42×10^{-4}	α(K)=0.000737 *11*; α(L)=8.58×10^{-5} *12*; α(M)=1.589×10^{-5} *23* α(N)=2.63×10^{-6} *4*; α(O)=1.323×10^{-7} *19*
7127.4	37/2$^-$	461.3 *10*	4.6 *7*	6666.2	35/2$^-$	M1	0.00619	α(K)=0.00542 *9*; α(L)=0.000633 *10*; α(M)=0.0001174 *18* α(N)=1.95×10^{-5} *3*; α(O)=9.99×10^{-7} *15*
		1341.6 *3*	100 *6*	5785.7	33/2$^-$	E2	5.36×10^{-4}	α(K)=0.000440 *7*; α(L)=5.05×10^{-5} *7*; α(M)=9.35×10^{-6} *14* α(N)=1.552×10^{-6} *22*; α(O)=7.92×10^{-8} *11*; α(IPF)=3.45×10^{-5} *5*
7282.5		1588.0[d] *10*	100[d]	5694.4	(33/2$^+$)			
7303.0	37/2$^+$	473.4 *10*	44 *10*	6829.6	37/2$^+$			
		1601.3 *10*	100 *20*	5701.7	33/2$^+$	(E2)	4.75×10^{-4}	α(K)=0.000310 *5*; α(L)=3.53×10^{-5} *5*; α(M)=6.52×10^{-6} *10* α(N)=1.084×10^{-6} *16*; α(O)=5.57×10^{-8} *8*; α(IPF)=0.0001222 *18*

From ENSDF

$^{99}_{45}Rh_{54}$-16

Adopted Levels, Gammas (continued)

γ(^{99}Rh) (continued)

E_i(level)	J_i^π	E_γ [†]	I_γ [‡]	E_f	J_f^π	Mult.[a]	α[b]	Comments
7303.0	37/2$^+$	1608.5 *10*	93 *20*	5694.4	(33/2$^+$)	(E2)	4.75×10^{-4}	α(K)=0.000307 *5*; α(L)=3.50×10^{-5} *5*; α(M)=6.47×10^{-6} *9* α(N)=1.075×10^{-6} *16*; α(O)=5.52×10^{-8} *8*; α(IPF)=0.0001252 *18*
7462.4		583 *1*	80 *20*	6879.4	35/2$^+$			
		1162[e]	<100	6300.4	33/2$^-$			
7676.5	37/2$^-$	1376.0 *10*	100	6300.4	33/2$^-$	(E2)	5.20×10^{-4}	α(K)=0.000418 *6*; α(L)=4.79×10^{-5} *7*; α(M)=8.87×10^{-6} *13* α(N)=1.473×10^{-6} *21*; α(O)=7.52×10^{-8} *11*; α(IPF)=4.33×10^{-5} *7*
7872.1	(35/2$^+$)	992.7 *10*	100	6879.4	35/2$^+$			
7895.0	39/2$^-$	767.6 *10*	100 *13*	7127.4	37/2$^-$	(M1)	0.00187	α(K)=0.001643 *24*; α(L)=0.000189 *3*; α(M)=3.50×10^{-5} *5* α(N)=5.83×10^{-6} *9*; α(O)=3.01×10^{-7} *5*
		1228.9 *10*	64 *12*	6666.2	35/2$^-$	(E2)	6.14×10^{-4}	α(K)=0.000528 *8*; α(L)=6.09×10^{-5} *9*; α(M)=1.127×10^{-5} *16* α(N)=1.87×10^{-6} *3*; α(O)=9.49×10^{-8} *14*; α(IPF)=1.166×10^{-5} *23*
8019.1	41/2$^-$	124		7895.0	39/2$^-$			
		891.7 *3*	100 *8*	7127.4	37/2$^-$	E2	1.23×10^{-3}	α(K)=0.001076 *15*; α(L)=0.0001267 *18*; α(M)=2.35×10^{-5} *4* α(N)=3.88×10^{-6} *6*; α(O)=1.93×10^{-7} *3*
8024.5		1724 *1*	100	6300.4	33/2$^-$			
8085.0	(37/2$^+$)	212.9 *10*	6.7 *13*	7872.1	(35/2$^+$)	(M1)	0.0438 *9*	α(K)=0.0382 *8*; α(L)=0.00457 *9*; α(M)=0.000850 *16* α(N)=0.000141 *3*; α(O)=7.11×10^{-6} *14*
		1205.6 *5*	100 *9*	6879.4	35/2$^+$	D		
8319.7	41/2$^+$	1490.1 *10*	100	6829.6	37/2$^+$	E2	4.85×10^{-4}	α(K)=0.000357 *5*; α(L)=4.07×10^{-5} *6*; α(M)=7.54×10^{-6} *11* α(N)=1.252×10^{-6} *18*; α(O)=6.41×10^{-8} *9*; α(IPF)=7.90×10^{-5} *12*
8331.6		1502.0 *10*	100	6829.6	37/2$^+$			
8448.6		1619.0 *10*	100	6829.6	37/2$^+$			
8868.9	43/2$^-$	849.8 *5*	100 *7*	8019.1	41/2$^-$	M1	1.49×10^{-3}	α(K)=0.001306 *19*; α(L)=0.0001499 *21*; α(M)=2.78×10^{-5} *4* α(N)=4.62×10^{-6} *7*; α(O)=2.39×10^{-7} *4*
		973.9 *10*	5.9 *10*	7895.0	39/2$^-$	(E2)	1.00×10^{-3}	α(K)=0.000877 *13*; α(L)=0.0001026 *15*; α(M)=1.90×10^{-5} *3* α(N)=3.15×10^{-6} *5*; α(O)=1.573×10^{-7} *23*
9336.8	(39/2)	1251.8 *5*	100	8085.0	(37/2$^+$)	D		
9483.1	43/2$^-$	1464.0 *10*	100	8019.1	41/2$^-$			
9587.7		1256.0 *10*	100	8331.6				
9767.1		1748 *1*	100	8019.1	41/2$^-$			
9958.1	45/2$^-$	475.0 *10*	47 *8*	9483.1	43/2$^-$	(M1)	0.00577	α(K)=0.00505 *8*; α(L)=0.000589 *9*; α(M)=0.0001093 *17* α(N)=1.82×10^{-5} *3*; α(O)=9.31×10^{-7} *14*
		1089.2 *10*	100 *14*	8868.9	43/2$^-$	(M1)	8.62×10^{-4}	α(K)=0.000757 *11*; α(L)=8.63×10^{-5} *13*; α(M)=1.599×10^{-5} *23* α(N)=2.66×10^{-6} *4*; α(O)=1.382×10^{-7} *20*
		1939.0 *10*	61 *11*	8019.1	41/2$^-$	(E2)	5.20×10^{-4}	α(K)=0.000216 *3*; α(L)=2.44×10^{-5} *4*; α(M)=4.51×10^{-6} *7* α(N)=7.50×10^{-7} *11*; α(O)=3.88×10^{-8} *6*; α(IPF)=0.000274 *4*
9973.6	(43/2$^-$)	1954.6 *10*	100	8019.1	41/2$^-$	(M1)	5.15×10^{-4}	α(K)=0.000226 *4*; α(L)=2.55×10^{-5} *4*; α(M)=4.72×10^{-6} *7* α(N)=7.86×10^{-7} *11*; α(O)=4.11×10^{-8} *6*; α(IPF)=0.000258 *4*
10174.7	45/2$^-$	216.6 *5*	56 *6*	9958.1	45/2$^-$			
		1305.8 *5*	100 *9*	8868.9	43/2$^-$	M1	6.07×10^{-4}	α(K)=0.000514 *8*; α(L)=5.84×10^{-5} *9*; α(M)=1.081×10^{-5} *16* α(N)=1.80×10^{-6} *3*; α(O)=9.37×10^{-8} *14*; α(IPF)=2.21×10^{-5} *4*

From ENSDF

$^{99}_{45}Rh_{54}$-17

Adopted Levels, Gammas (continued)

γ(^{99}Rh) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.[a]	α[b]	Comments
10226.2	(45/2$^+$)	1906.4 *10*	100	8319.7	41/2$^+$	(E2)	5.12×10^{-4}	α(K)=0.000223 *4*; α(L)=2.52×10^{-5} *4*; α(M)=4.66×10^{-6} *7* α(N)=7.74×10^{-7} *11*; α(O)=4.00×10^{-8} *6*; α(IPF)=0.000259 *4*
10380.6	(41/2)	1043.8 *10*	100	9336.8	(39/2)	(M1)	9.45×10^{-4}	α(K)=0.000830 *12*; α(L)=9.48×10^{-5} *14*; α(M)=1.755×10^{-5} *25* α(N)=2.92×10^{-6} *5*; α(O)=1.517×10^{-7} *22*
10738.6		1401.8 *10*	100	9336.8	(39/2)			
10990.4	(43/2)	609.8 *10*	100 *17*	10380.6	(41/2)	(M1)	0.00318	α(K)=0.00279 *4*; α(L)=0.000323 *5*; α(M)=5.99×10^{-5} *9* α(N)=9.97×10^{-6} *15*; α(O)=5.13×10^{-7} *8*
		1653.6 *10*	95 *15*	9336.8	(39/2)	E2	4.76×10^{-4}	α(K)=0.000291 *4*; α(L)=3.31×10^{-5} *5*; α(M)=6.12×10^{-6} *9* α(N)=1.018×10^{-6} *15*; α(O)=5.24×10^{-8} *8*; α(IPF)=0.0001443 *21*
11054.9	(45/2,47/2)$^-$	880 *1*	32 *6*	10174.7	45/2$^-$			
		1081.4 *10*	100 *16*	9973.6	(43/2$^-$)			
		2186.0 *10*	51 *11*	8868.9	43/2$^-$			
11610.7		1436.0 *5*	100	10174.7	45/2$^-$			
11622.7	47/2$^-$	1448.0 *5*	100	10174.7	45/2$^-$	M1	5.27×10^{-4}	α(K)=0.000414 *6*; α(L)=4.70×10^{-5} *7*; α(M)=8.70×10^{-6} *13* α(N)=1.448×10^{-6} *21*; α(O)=7.55×10^{-8} *11*; α(IPF)=5.58×10^{-5} *8*
12178.6		1440.0 *10*	100	10738.6				
12302.6		1564.0 *10*	100	10738.6				
12414.5	(47/2)	1424.1 *10*	100	10990.4	(43/2)	(E2)	5.02×10^{-4}	α(K)=0.000390 *6*; α(L)=4.46×10^{-5} *7*; α(M)=8.26×10^{-6} *12* α(N)=1.372×10^{-6} *20*; α(O)=7.02×10^{-8} *10*; α(IPF)=5.71×10^{-5} *9*
12479.0	(49/2,51/2)$^-$	1424.1 *5*	100	11054.9	(45/2,47/2)$^-$	E2	5.02×10^{-4}	α(K)=0.000390 *6*; α(L)=4.46×10^{-5} *7*; α(M)=8.26×10^{-6} *12* α(N)=1.372×10^{-6} *20*; α(O)=7.02×10^{-8} *10*; α(IPF)=5.71×10^{-5} *9*
12542.6	(51/2$^-$)	919.8 *10*	100	11622.7	47/2$^-$	(E2)	1.14×10^{-3}	α(K)=0.001001 *15*; α(L)=0.0001175 *17*; α(M)=2.18×10^{-5} *4* α(N)=3.61×10^{-6} *6*; α(O)=1.79×10^{-7} *3*
12578.4		1588.0[d] *10*	100[d]	10990.4	(43/2)			
13398.4	(53/2,55/2)$^-$	919.4 *10*	100	12479.0	(49/2,51/2)$^-$	E2	1.14×10^{-3}	α(K)=0.001002 *15*; α(L)=0.0001177 *17*; α(M)=2.18×10^{-5} *4* α(N)=3.61×10^{-6} *6*; α(O)=1.79×10^{-7} *3*
13729.6		1427 *1*	100	12302.6				
13922.9		524.5 *10*	100	13398.4	(53/2,55/2)$^-$			
14905.4		1507.0 *10*	100	13398.4	(53/2,55/2)$^-$			
15014.4	(57/2,59/2)$^-$	1616.0 *10*	100	13398.4	(53/2,55/2)$^-$	E2	4.75×10^{-4}	α(K)=0.000304 *5*; α(L)=3.46×10^{-5} *5*; α(M)=6.41×10^{-6} *9* α(N)=1.065×10^{-6} *15*; α(O)=5.47×10^{-8} *8*; α(IPF)=0.0001284 *19*
15015.0	(55/2$^-$)	2472.4 *10*	100	12542.6	(51/2$^-$)	(E2)	6.90×10^{-4}	α(K)=0.0001394 *20*; α(L)=1.567×10^{-5} *22*; α(M)=2.90×10^{-6} *4* α(N)=4.82×10^{-7} *7*; α(O)=2.51×10^{-8} *4*; α(IPF)=0.000532 *8*
15175.9		1253.0 *10*	100	13922.9				
15342.4	(57/2,59/2)$^-$	1944 *1*	100	13398.4	(53/2,55/2)$^-$	(E2)	5.21×10^{-4}	α(K)=0.000215 *3*; α(L)=2.43×10^{-5} *4*; α(M)=4.49×10^{-6} *7* α(N)=7.47×10^{-7} *11*; α(O)=3.86×10^{-8} *6*; α(IPF)=0.000277 *4*

From ENSDF

$^{99}_{45}Rh_{54}$-18

Adopted Levels, Gammas (continued)

$\gamma(^{99}Rh)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.[a]	α[b]	Comments
16309.4	(61/2,63/2)$^-$	967.0 *10*	100	15342.4	(57/2,59/2)$^-$	(E2)	1.02×10^{-3}	α(K)=0.000892 *13*; α(L)=0.0001044 *15*; α(M)=1.93×10^{-5} *3* α(N)=3.20×10^{-6} *5*; α(O)=1.598×10^{-7} *23*
16626.4		1721 *1*	100	14905.4				
16744.4		1730 *1*	100	15014.4	(57/2,59/2)$^-$			
16876.4		1971.0 *10*	100	14905.4				
16960.4	(61/2,63/2)$^-$	1946.0 *10*	100	15014.4	(57/2,59/2)$^-$	(E2)	5.21×10^{-4}	α(K)=0.000214 *3*; α(L)=2.42×10^{-5} *4*; α(M)=4.48×10^{-6} *7* α(N)=7.45×10^{-7} *11*; α(O)=3.85×10^{-8} *6*; α(IPF)=0.000278 *4*

[†] Weighted averages of all available data. ΔE=1 keV was assumed for γ rays reported without uncertainty.
[‡] Weighted averages of all available data.
[#] From ^{99}Pd ε decay.
[@] From $\gamma(\theta)$ in (^{16}O,α2nγ) and level scheme.
[&] From α(K)exp in β^+ decay.
[a] As given by 2014Ku20, unless stated otherwise, on basis of DCO and IPDCO measurements. Most of the assignments, however, in 2014Ku20 seem from ΔJ^π assignments, not necessarily from experimental data in support of these multipolarity assignments.
[b] Additional information 1.
[c] If No value given it was assumed δ=1.00 for E2/M1, δ=1.00 for E3/M2 and δ=0.10 for the other multipolarities.
[d] Multiply placed with intensity suitably divided.
[e] Placement of transition in the level scheme is uncertain.

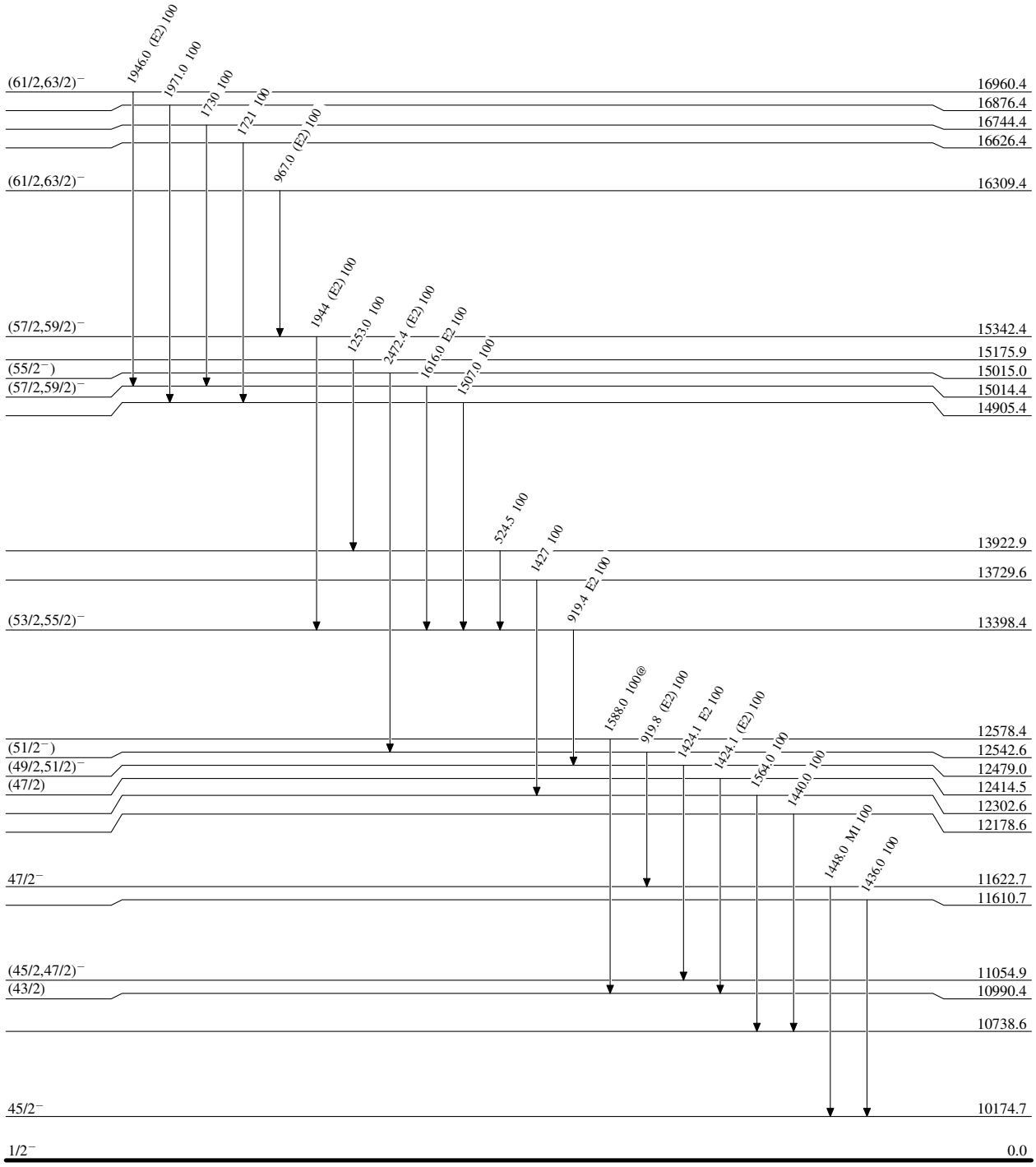
From ENSDF

$^{99}_{45}Rh_{54}$-19

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided



$^{99}_{45}Rh_{54}$

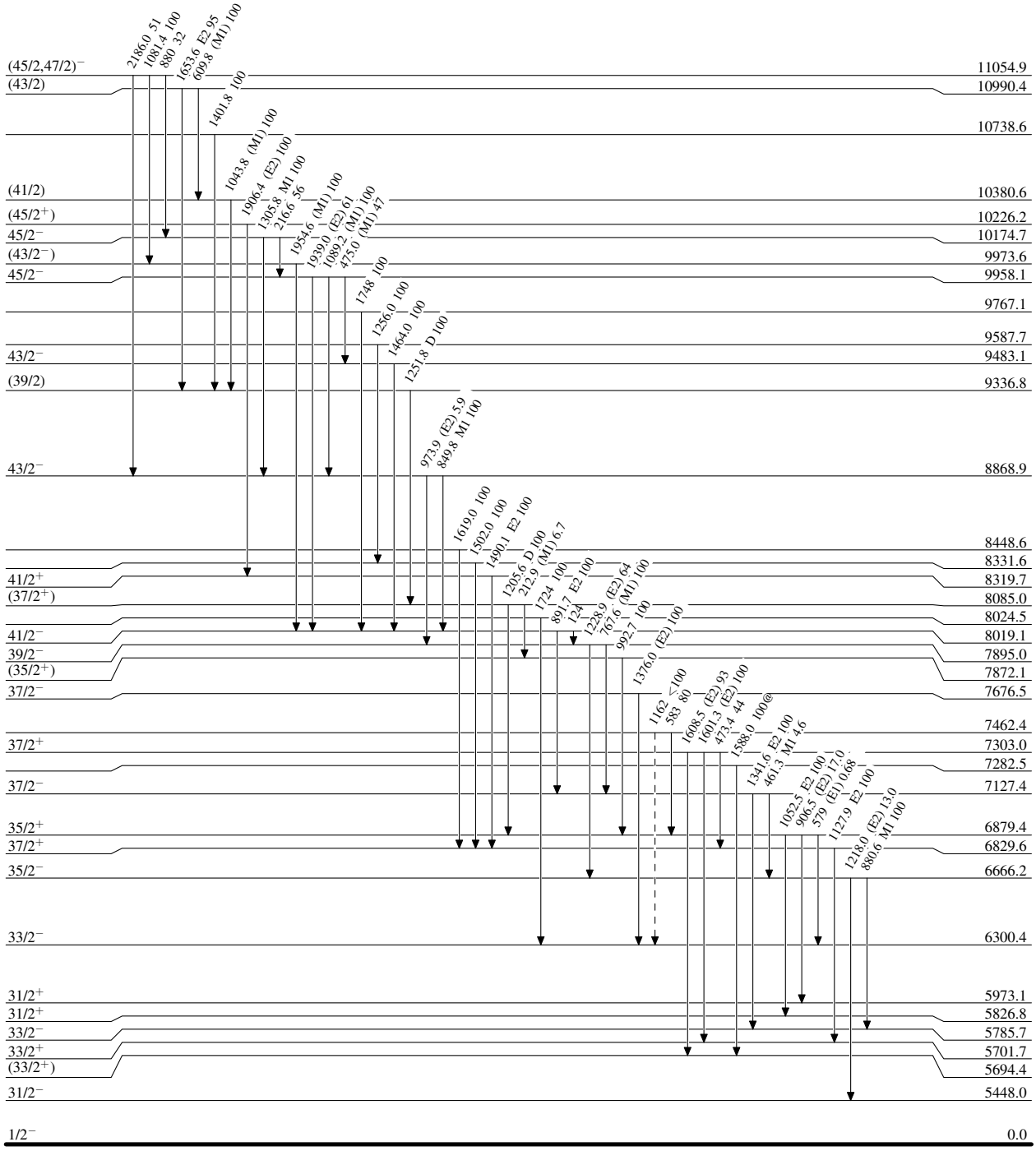
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided

- - - - - - ► γ Decay (Uncertain)

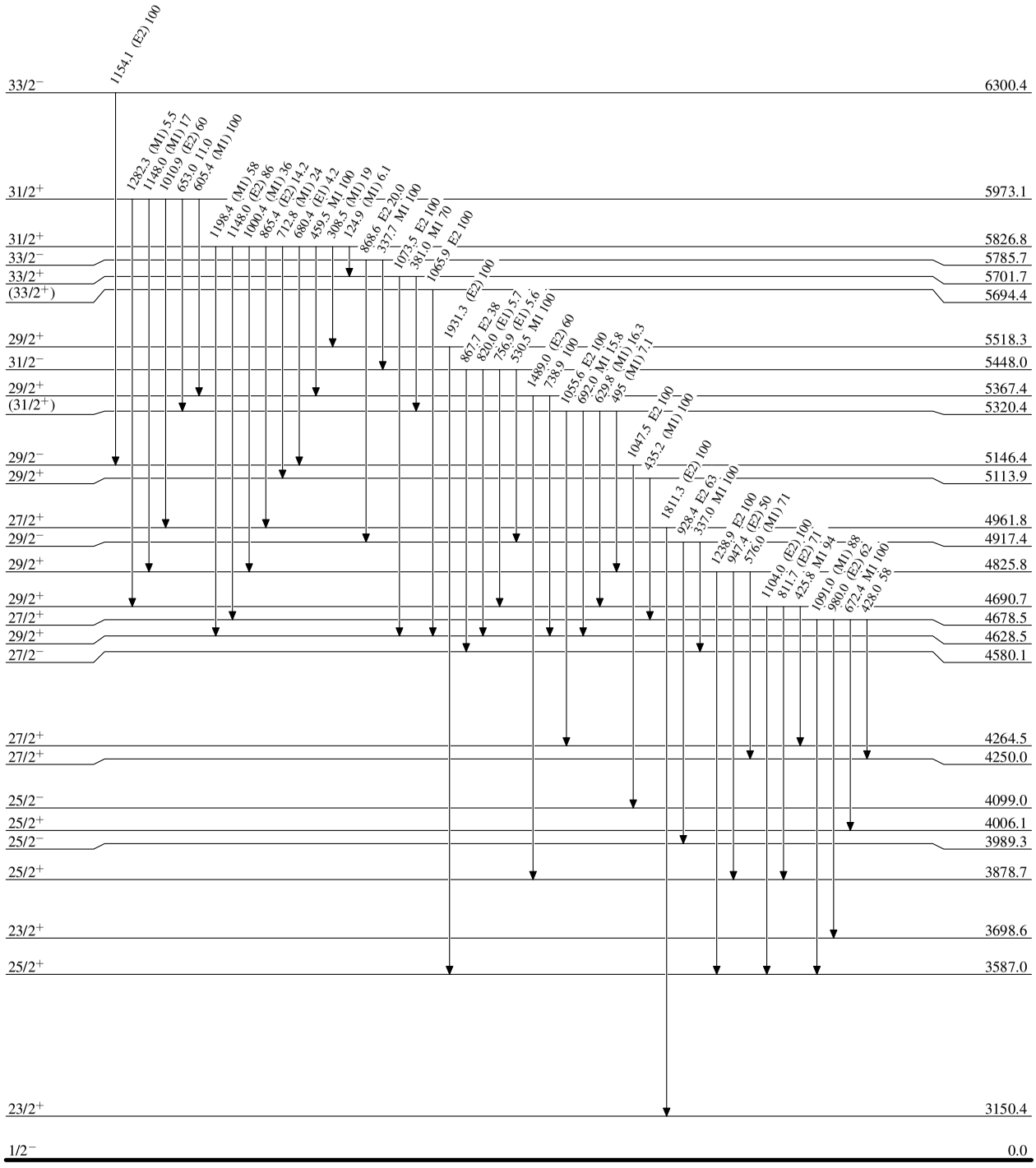


$^{99}_{45}Rh_{54}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided

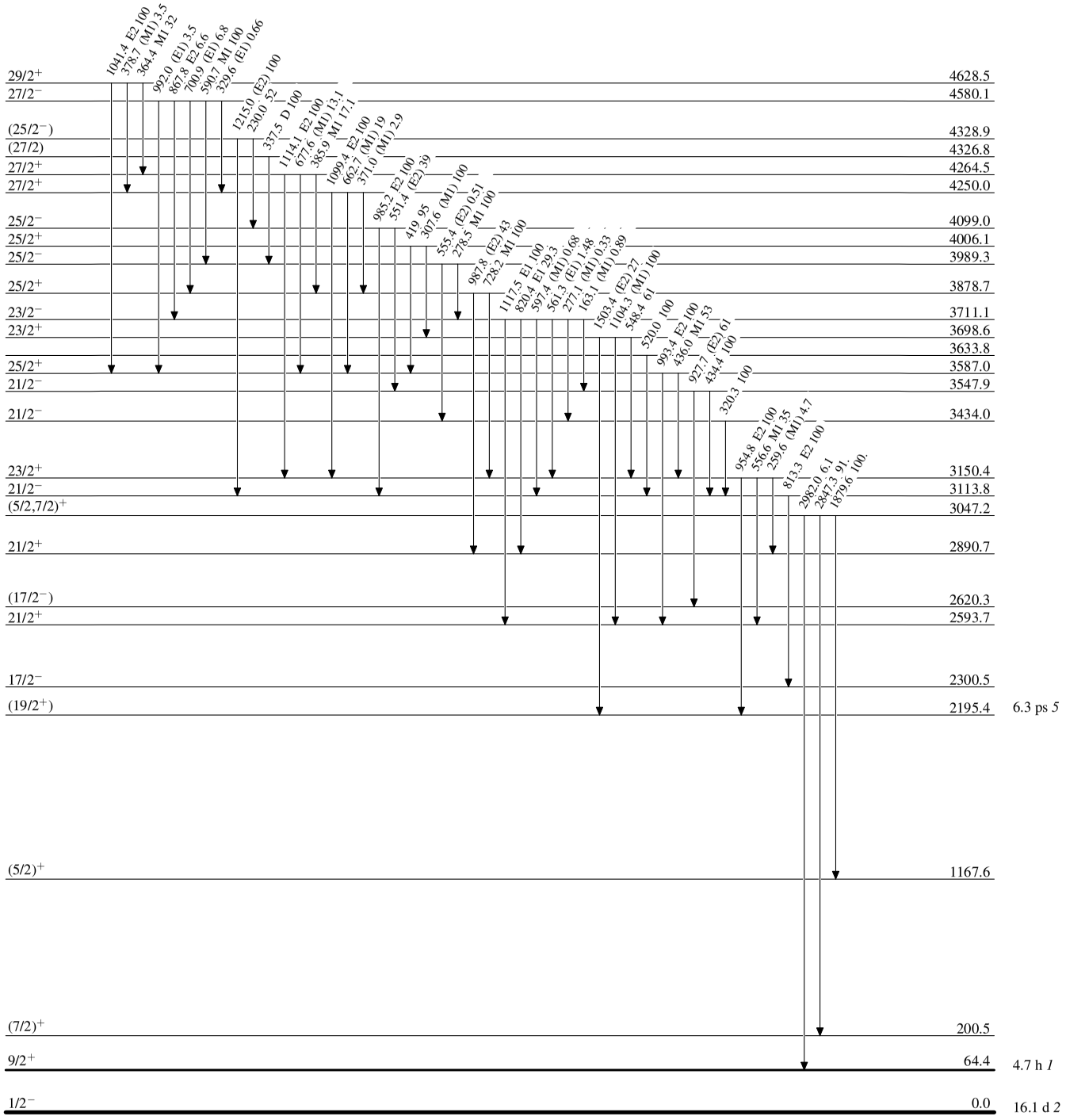


$^{99}_{45}Rh_{54}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided

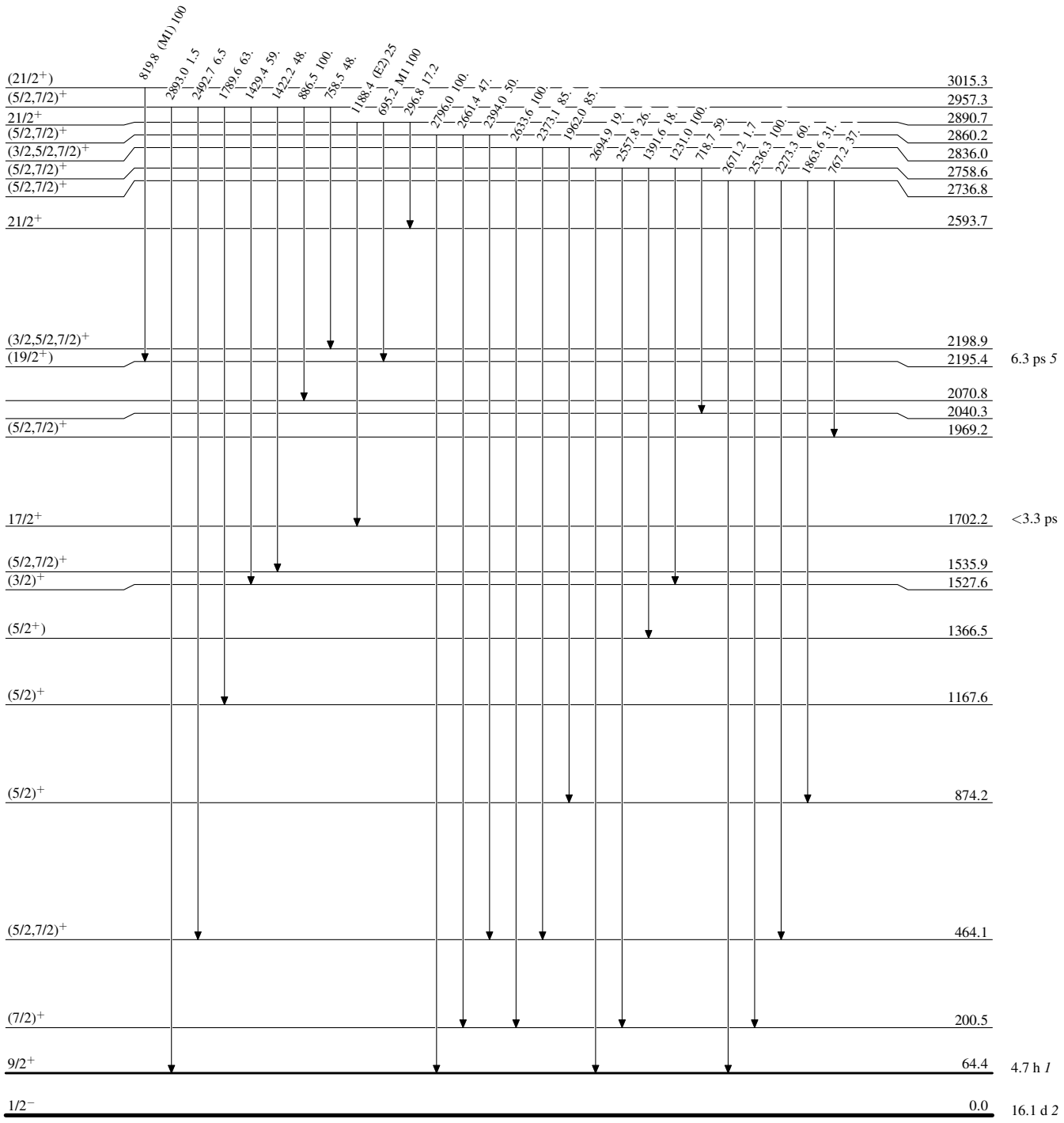


$^{99}_{45}Rh_{54}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided

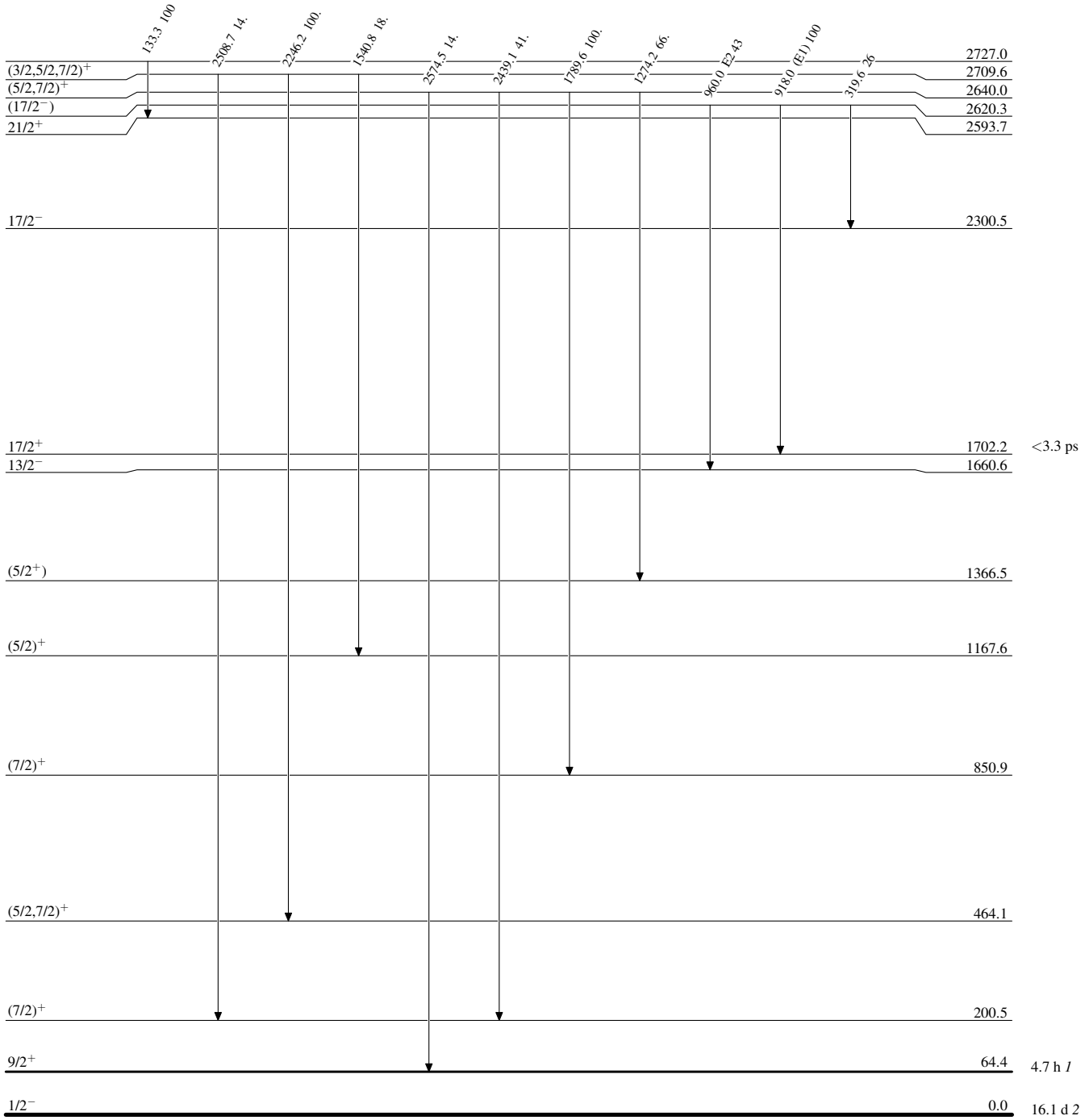


$^{99}_{45}Rh_{54}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided

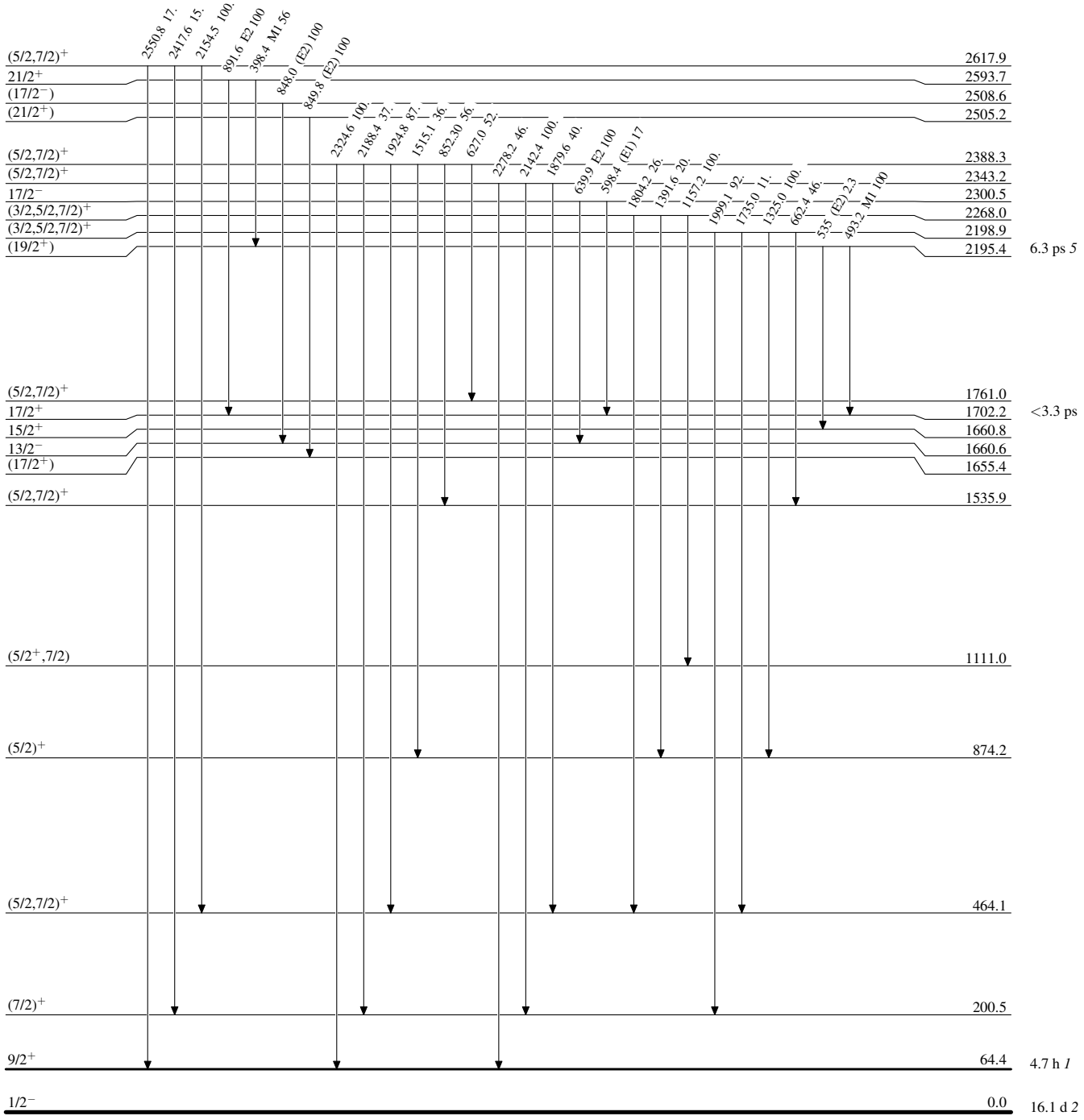


$^{99}_{45}Rh_{54}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided

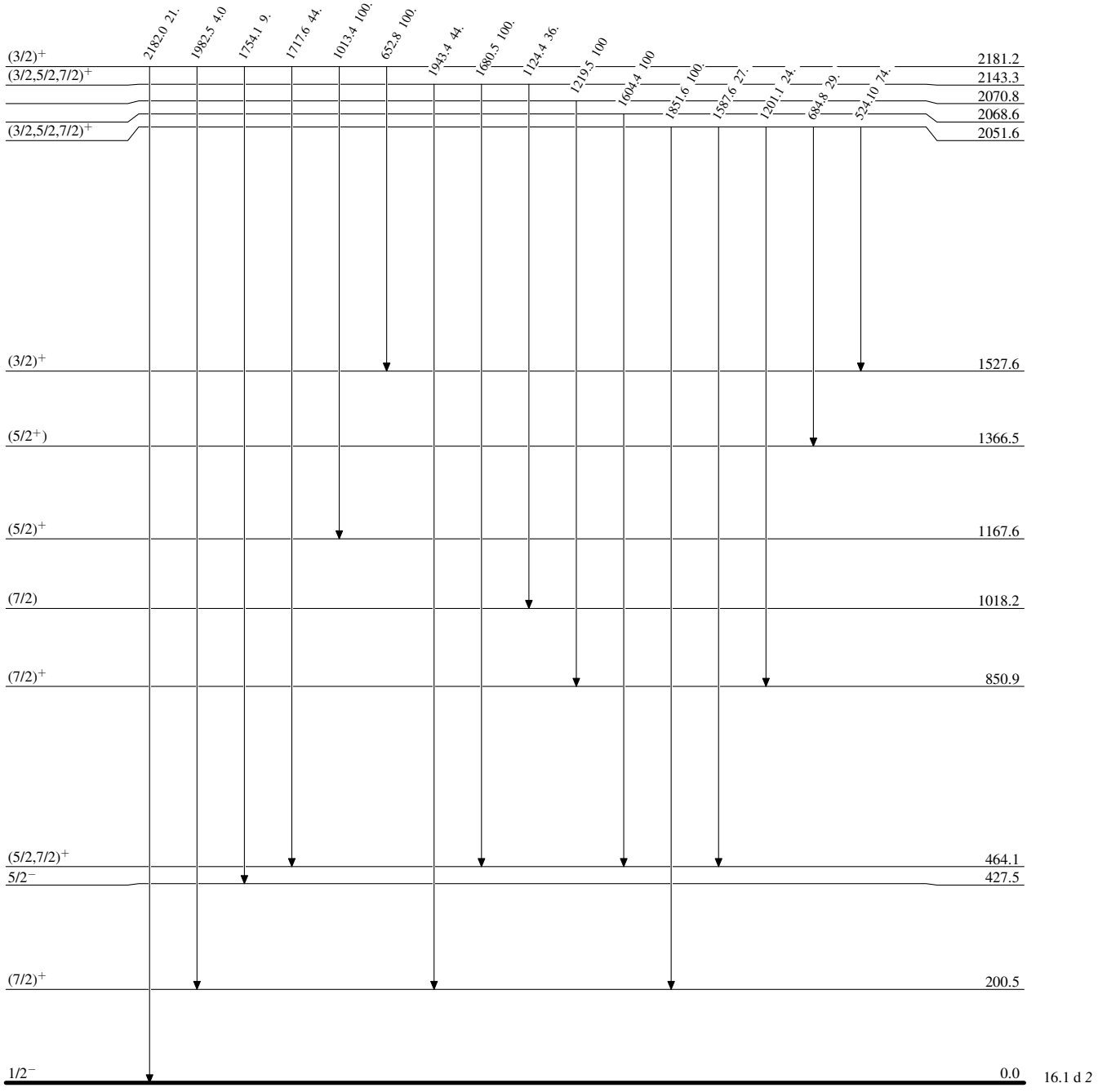


$^{99}_{45}Rh_{54}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided



$^{99}_{45}Rh_{54}$

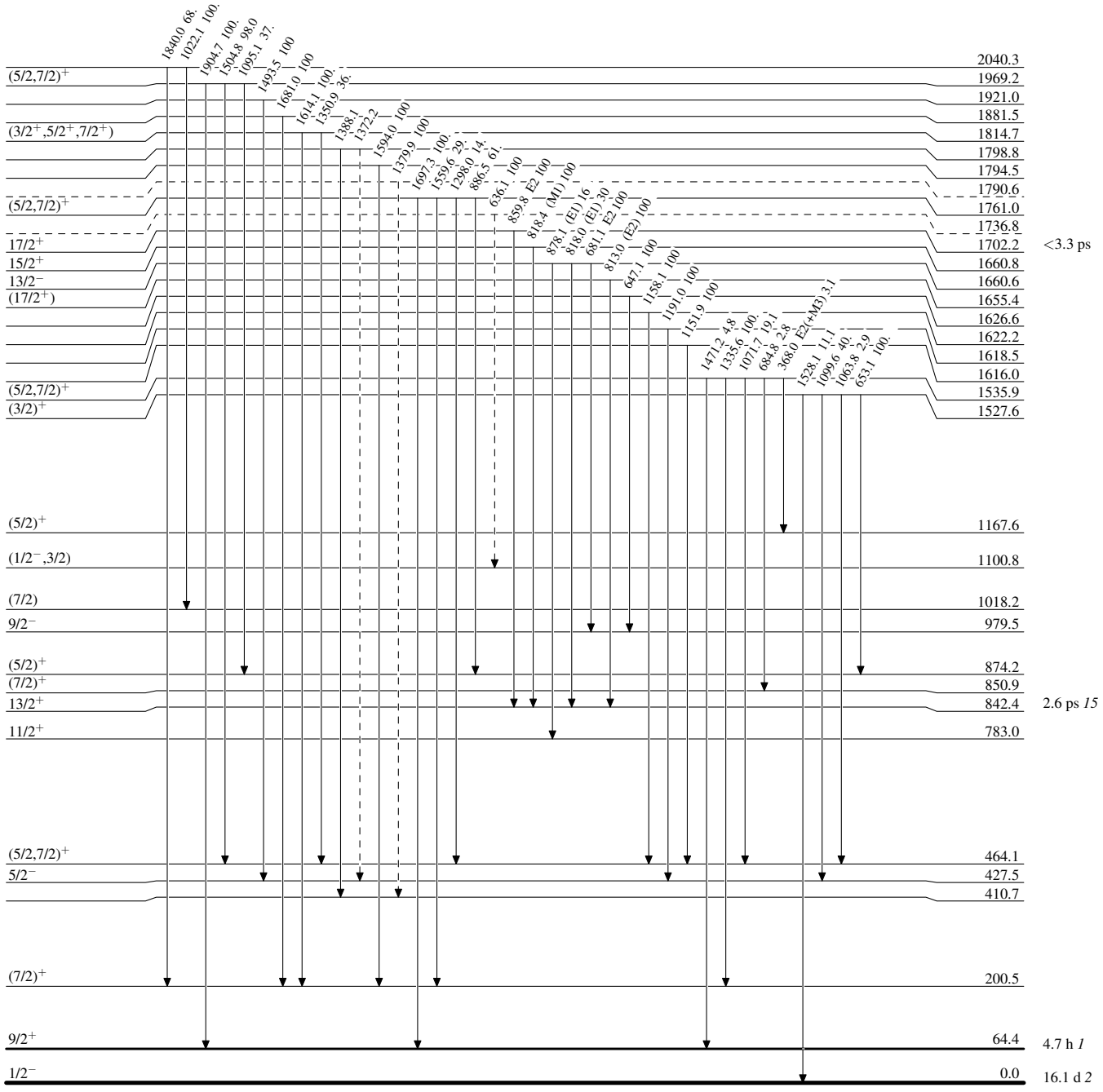
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided

γ Decay (Uncertain)



$^{99}_{45}Rh_{54}$

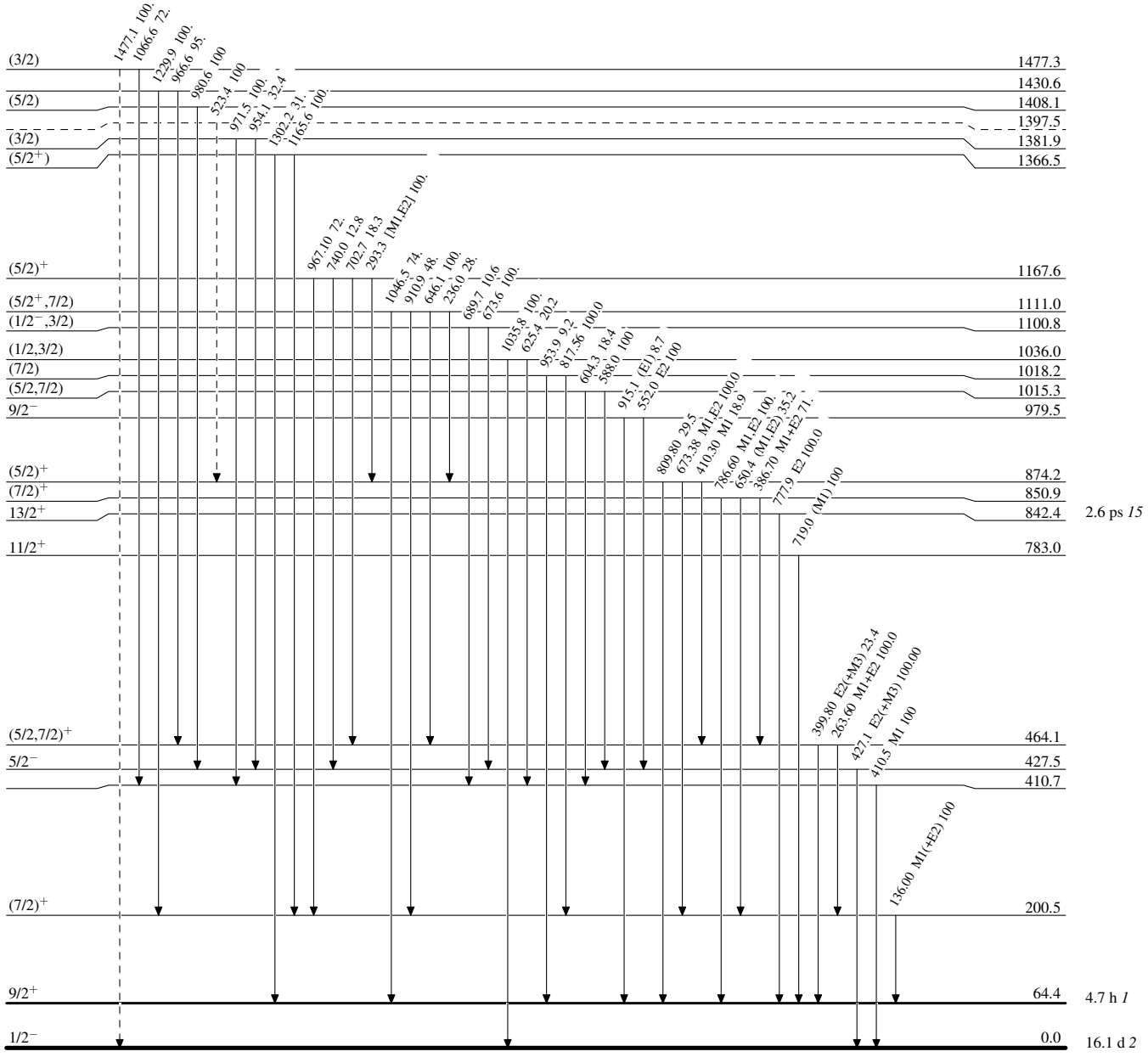
Adopted Levels, Gammas

Legend

Level Scheme (continued)

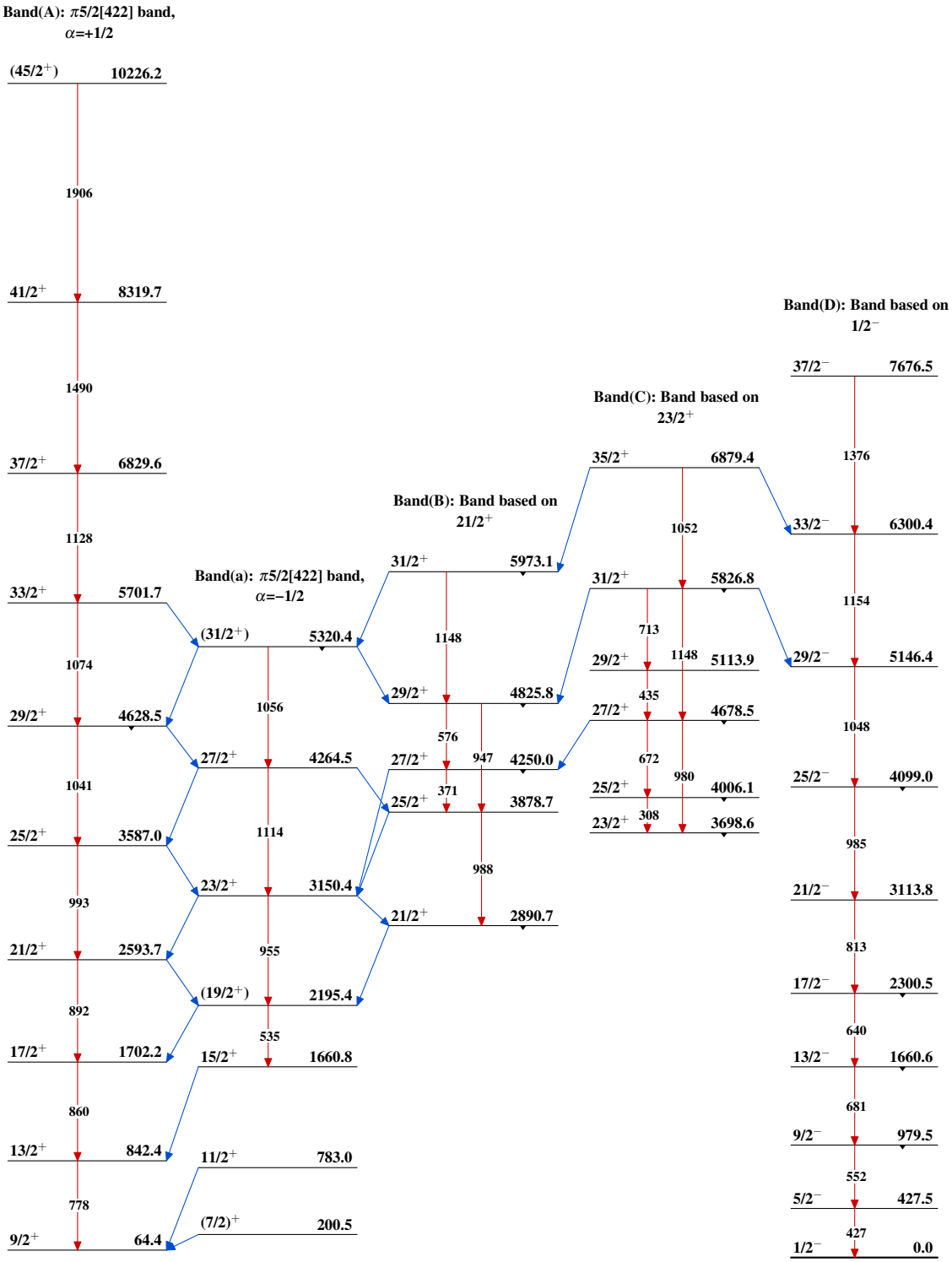
Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided

γ Decay (Uncertain)



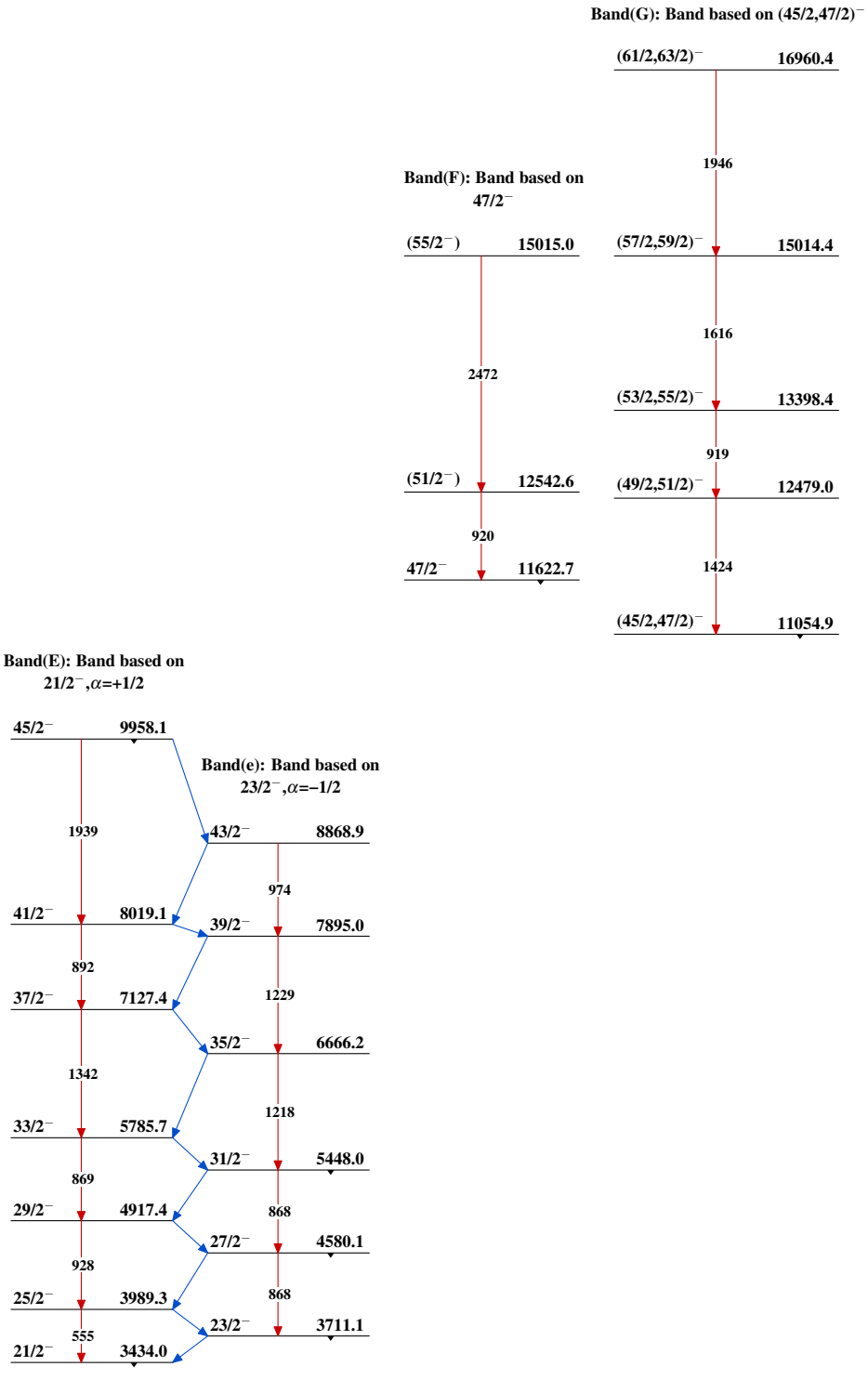
$^{99}_{45}Rh_{54}$

Adopted Levels, Gammas



$^{99}_{45}Rh_{54}$

Adopted Levels, Gammas (continued)



$^{99}_{45}Rh_{54}$