

Adopted Levels, Gammas

Type	History		Literature Cutoff Date
	Author	Citation	
Full Evaluation	Jean Blachot	ENSDF	1-Jul-2006

Q(β⁻)=-1980 4; S(n)=9894 19; S(p)=5476 6; Q(α)=-2617 7 2012Wa38

Note: Current evaluation has used the following Q record.

Q(β⁻)=-1980 4; S(n)=9895 25; S(p)=5478 17; Q(α)=-2613 18 2003Au03

¹⁰¹Rh Levels

Cross Reference (XREF) Flags

A	¹⁰¹ Rh IT decay (4.34 d)	E	¹⁰⁰ Ru(p,p),(p,n) IAR
B	¹⁰¹ Pd ε decay (8.47 h)	F	¹⁰³ Rh(p,t)
C	⁹⁴ Zr(¹² C,4npγ), ¹⁰² Ru(p,2nγ)	G	¹⁰¹ Ru(p,nγ)
D	⁹⁸ Mo(⁶ Li,3nγ)	H	⁷⁰ Zn(³⁶ S,p4nγ)

E(level)	J ^π †	T _{1/2}	XREF	Comments
0.0 ^e	1/2 ⁻	3.3 y 3	ABCD FGH	%ε=100 T _{1/2} : from 1965Ev06 monoisotopic source. Others: 3.0 y 4 (1965Hi07) mixed ¹⁰¹ Rh+ ¹⁰² Rh source, 5 y 1 (1955Fa12), 10 y 3 (1960Pe05). J ^π : L=0 (p,t) gives J=1/2 ⁻ for ¹⁰³ Rh target.
157.32 [‡] 3	9/2 ⁺	4.34 d 1	ABCD FGH	%IT=7.20 25; %ε=92.80 25 μ=+5.43 6 (1995Se20,2005St24) J ^π : from atomic beam (1975Ru06), π from M4 γ to 1/2 ⁻ . μ: others: +5.472 14 (1986Ni02), +5.49 9 (1973Ka28), +5.475 12 (1985Ed06). T _{1/2} : from 1966Ar05. Others: 4.39 d 8 (1968Li08), 4.43 d 6 (1965Ev04), 4.7 d 2 (1956Ka25). Others: 1948Li03, 1949Eg04, 1952Sc11, 1955Fa12.
181.78 [#] 3	7/2 ⁺	1.91 ns 6	BCD GH	T _{1/2} : from 1970Va33 (ce)(ce)(t). Other: 1.77 ns 5 (1974BeZJ) γγ(t). J ^π : M1 γ to 9/2 ⁺ , log ft=5.5 from 5/2 ⁺ .
305.42 ^f 12	(3/2 ⁻)		BCD FGH	J ^π : from L=2 (p,t), σ(355)/σ(305) suggests J(305)=3/2 and J(355)=5/2.
355.24 ^e 8	5/2 ⁻		BCD FGH	J ^π : from L=2 (p,t).
478.06 4	(5/2 ⁺)	68 ps 16	B D G	T _{1/2} : from 1970Va33 (ce)(ce)(t). Other: 66 ps 10 (1974BeZJ) γγ(t). J ^π : M1+E2 γ to 7/2 ⁺ . Excit function in (p,nγ) is consistent with J=5/2.
747.77 [#] 4	11/2 ⁺		D H	J ^π : M1 γ to 9/2 ⁺ , 590γ(θ) requires 11/2.
747.8 1	7/2 ⁺	≤0.2 ns	BCD G	T _{1/2} : from 1974BeZJ (K x ray)(590γ)(t). J ^π : M1 γ to 9/2 ⁺ . log ft=5.6 from 5/2 ⁺ , excit in (p,nγ) rule out J=5/2.
851.35 ^f 10	(7/2 ⁻)		BCD FGH	J ^π : L=4 (p,t).
893.40 [‡] 16	13/2 ⁺		CD GH	J ^π : Q γ to 9/2 ⁺ , Stretch D γ to 11/2 ⁺ , 145γ(θ) (2001Ti08).
899.35 ^e 22	9/2 ⁻		CD FGH	J ^π : from L=4 (p,t) and rel (p,t) strength.
905.69 5	(5/2,7/2) ⁺		B G	J ^π : M1 γ to (7/2) ⁺ , log ft=6.6 from 5/2 ⁺ .
977 2	(1/2 ⁻)		F	J ^π : Probably different from the 978 level. σ/σ(g.s.) is similar to that for the σ(1130,0 ⁺)/σ(g.s.,0 ⁺) in ¹⁰² Ru (p,t), suggesting that is the 1/2 ⁻ state expected from coupling with the excited 0 ⁺ in the core (1975De19).
978.16 15	(7/2,9/2) ⁺		B D G	J ^π : excit function in (p,nγ). Close-lying (p,t) and ¹⁰¹ Pd decay excitations may not correspond.
996.4 2	3/2 ⁻ ,5/2 ⁻		FG	J ^π : from L=2 (p,t), σ(1058)/σ(996) suggests J(996)=3/2 and J(1058)=5/2.
1035.63 8	(5/2) ⁺		B G	J ^π : M1,E2 γ to (7/2) ⁺ and excit function in (p,nγ).
1058.00 15	3/2 ⁻ ,5/2 ⁻		B FG	J ^π : L=2 (p,t), see 996 level; however, excit in (p,nγ) favors J(1058)=3/2.
1320.26 16	(3/2)		B G	J ^π : excit function in (p,nγ).
1359.37 5	7/2 ⁺		B G	J ^π : from M1 γ decay to 9/2 ⁺ state and log ft=5.9 from 5/2 ⁺ .
1383.4 3	3/2		G	J ^π : excit function in (p,nγ).

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Adopted Levels, Gammas (continued) ^{101}Rh Levels (continued)

E(level)	J^π	XREF	Comments
1464 8	(11/2 ⁺ ,13/2 ⁺)	F	J^π : L=(6) (p,t).
1470.81 5	5/2 ⁺ ,7/2 ⁺	B G	J^π : from γ decays to 3/2 ⁻ ,5/2 ⁺ ,7/2 ⁺ ,9/2 ⁺ states, M1 γ to $\pi=+$.
1531 8	1/2 ⁻	F	J^π : from L=0 (p,t).
1541 8	3/2 ⁻ ,5/2 ⁻	F	J^π : L=2 (p,t).
1576.9 ^f 4	11/2 ⁻	CD F H	
1604.0 3	(7/2 ⁻ ,9/2 ⁻)	BC FG	J^π : (E1) to (5/2 ⁺ ,7/2 ⁺) and γ to 9/2 ⁺ .
1604.5 ^e 4	(13/2 ⁻)	CD H	J^π : Q γ to 9/2 ⁻ , Q is probably E2.
1607.4 3		D	
1609.0 [#] 2	(15/2 ⁺)	D H	J^π : γ 's to 11/2 ⁺ and 13/2 ⁺ and $\gamma(\theta)$.
1640 8		F	
1696.33 7	3/2 ⁺ ,5/2 ⁺ ,7/2 ⁺	B FG	J^π : from log $ft=5.8$ from 5/2 ⁺ .
1730 8		F	
1777.9 3	3/2 ⁻ ,5/2 ⁻	FG	J^π : L=2 (p,t).
1778.8 [‡] 3	(17/2 ⁺)	CD H	J^π : Q γ to 13/2 ⁺ .
1789.49 18	5/2 ⁺ ,7/2 ⁺	B G	J^π : from γ decays to 5/2 ⁺ and 9/2 ⁺ states, log $ft=5.8$ from 5/2 ⁺ .
1820.59 10	5/2 ⁺ ,7/2 ⁺	B F	E(level): 1813 keV in (p,t) may correspond. J^π : from γ decays to 5/2 ⁺ and 9/2 ⁺ states, log $ft=5.8$ from 5/2 ⁺ .
1843.0 8	(13/2 ⁻)	H	
1845.33 19		B	
1911.40 15	3/2 ⁻ ,5/2 ⁻	B FG	J^π : L=2 (p,t).
1935 8	3/2 ⁻ ,5/2 ⁻	F	J^π : L=2 (p,t).
1960 8	3/2 ⁻ ,5/2 ⁻	F	J^π : L=2 (p,t).
1997 8	1/2 ⁻	F	J^π : from L=0 (p,t).
2009 8	3/2 ⁻ ,5/2 ⁻	F	J^π : L=2 (p,t).
2038 8		F	
2075 8		F	
2087 8	(7/2 ⁻ ,9/2 ⁻)	F	J^π : L=(4) (p,t).
2113 8	7/2 ⁻ ,9/2 ⁻	F	J^π : L=4 (p,t).
2146 8		F	
2166 8		F	
2188 8	3/2 ⁻ ,5/2 ⁻	F	J^π : L=2 (p,t).
2225 8	3/2 ⁻ ,5/2 ⁻	F	J^π : L=2 (p,t).
2242 8	7/2 ⁻ ,9/2 ⁻	F	J^π : L=4 (p,t).
2292 8	7/2 ⁻ ,9/2 ⁻	F	J^π : L=4 (p,t).
2328 8	7/2 ⁻ ,9/2 ⁻	F	J^π : L=4 (p,t).
2352 8		F	
2361 8		F	
2386.7 ^e 5	(17/2 ⁻)	CD H	J^π : Q γ to 13/2 ⁻ .
2455 8		F	
2492 8	3/2 ⁻ ,5/2 ⁻	F	J^π : L=2 (p,t).
2521 8	(7/2 ⁻ ,9/2 ⁻)	F	J^π : L=(4) (p,t).
2577 8		F	
2586.3 [#] 4	19/2 ⁺	D H	
2653.8 4		D	
2671.8 ^a 5	(17/2 ⁻)	D H	J^π : Q γ to 13/2 ⁻ .
2781.0 [‡] 4	(21/2 ⁺)	CD H	J^π : Q γ to 17/2 ⁺ .
2785.1 5	17/2 ⁻	D	
2931.2 ^b 5	19/2 ⁻	D H	
3119.5 ^a 3	21/2 ⁻	H	
3247.7 ^e 6	21/2 ⁻	D	
3425.1 ^b 4	23/2 ⁻	H	
3530.5 ^d 3	23/2 ⁻	H	
3744.2 ^a 4	25/2 ⁻	H	

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Adopted Levels, Gammas (continued) ^{101}Rh Levels (continued)

E(level)	J^π	XREF	Comments
3763.3 <i>ll</i>	(23/2 ⁻)	H	
3874.2 \ddagger	(25/2 ⁺)	D H	J^π : Q γ to 21/2 ⁺ .
3890.0 $\#$	(23/2 ⁺)	H	
3930.8 <i>c</i>	25/2 ⁻	H	
3994.2 8	(25/2 ⁻)	H	
4071.7 15	(25/2 ⁻)	H	
4236.6 <i>b</i>	27/2 ⁻	H	
4303.5 <i>d</i>	27/2 ⁻	H	
4384.4 @ 9	(25/2 ⁺)	H	
4571.0 8		H	
4609.6 <i>a</i>	29/2 ⁻	H	
4773.4 & 6	(27/2 ⁺)	H	
4801.2 <i>c</i>	29/2 ⁻	H	
4825.0 $\#$	(27/2 ⁺)	H	
4979.9 \ddagger	29/2 ⁺	H	
5196.7 @ 6	(29/2 ⁺)	H	
5230.4 <i>d</i>	31/2 ⁻	H	
5234.5 <i>b</i>	(31/2 ⁻)	H	
5627.1 & 7	(31/2 ⁺)	H	
5728.1 <i>c</i>	33/2 ⁻	H	
5846.3 <i>a</i>	33/2 ⁻	H	
5881.5 $\#$	(31/2 ⁺)	H	
6082.8 \ddagger	33/2 ⁺	H	
6116.9 @ 7	(33/2 ⁺)	H	
6309.6 <i>d</i>	35/2 ⁻	H	
6633.1 & 7	(35/2 ⁺)	H	
6706.4 7	(35/2 ⁺)	H	
6882.5 <i>c</i>	37/2 ⁻	H	
6994.2 <i>a</i>	37/2 ⁻	H	
7210.4 @ 7	(37/2 ⁺)	H	
7213.3 \ddagger	37/2 ⁺	H	
7536.0 <i>d</i>	39/2 ⁻	H	
7840.3 & 7	(39/2 ⁺)	H	
8161.0 <i>c</i>	41/2 ⁻	H	
8287.6 <i>a</i>	41/2 ⁻	H	
8392.4 @ 7	(41/2 ⁺)	H	
8926.0 <i>d</i>	43/2 ⁻	H	
9066.9 & 8	(43/2 ⁺)	H	
9464.5 <i>c</i>	45/2 ⁻	H	
9507.6 <i>a</i>	45/2 ⁻	H	
9647.6 @ 7	(45/2 ⁺)	H	
10219.9 <i>d</i>	47/2 ⁻	H	
10414.1 & 8	(47/2 ⁺)	H	
10689.9 <i>c</i>	49/2 ⁻	H	
11029.7 @ 8	(49/2 ⁺)	H	
11300 20		E	E(level): Analog of ^{101}Ru g.s., $J^\pi=5/2^+$.
11597 20		E	E(level): Possible analog of ^{101}Ru E(levels)=311+307.

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Adopted Levels, Gammas (continued) ^{101}Rh Levels (continued)

E(level)	J^π [†]	XREF	Comments
11607 20		E	E(level): Analog of ^{101}Ru 325-keV L=0 (d,p) excitation (1977Ho02).
11839 20		E	E(level): Possible analog of ^{101}Ru 535-keV L=2 (d,p) excitation:
11933 20		E	
12127.6 ^c 9	53/2 ⁻	H	
12382.1 [@] 10	(53/2 ⁺)	H	
13756.3 [@] 11	(57/2 ⁺)	H	
13833.6 ^c 14	57/2 ⁻	H	
15407.2 [@] 15	(61/2 ⁺)	H	
17234.3 [@] 18	(65/2 ⁺)	H	

[†] The target in (p,t) has $J^\pi=1/2^-$.

[‡] Band(A): band based on 9/2⁺, $\alpha=+1/2$.

Band(a): band based on 9/2⁺, $\alpha=-1/2$.

[@] Band(B): band based on (25/2⁺), $\alpha=+1/2$.

[&] Band(b): band based on (25/2⁺), $\alpha=-1/2$.

^a Band(C): band based on 17/2⁻, $\alpha=+1/2$.

^b Band(c): band based on 17/2⁻, $\alpha=-1/2$.

^c Band(D): band based on 23/2⁻, $\alpha=-1/2$.

^d Band(d): band based on 23/2⁻, $\alpha=+1/2$.

^e Band(E): gs band, $\alpha=+1/2$.

^f Band(e): gs band, $\alpha=-1/2$.

Adopted Levels, Gammas (continued)

$\gamma(^{101}\text{Rh})$									
$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult. [‡]	$\delta^\#$	$\alpha^@$	Comments
157.32	9/2 ⁺	157.41 4	100	0.0	1/2 ⁻	M4		29.2	$\alpha=29.2$ B(M4)(W.u.)=67.2 24
181.78	7/2 ⁺	24.46 1	100	157.32	9/2 ⁺	M1+E2	0.020 +5-6	20.8 1	E_γ : from IT Decay. $\alpha=20.8$ 1 B(M1)(W.u.)=0.788 25; B(E2)(W.u.)=4.8×10 ² 25
305.42	(3/2 ⁻)	305.28 16	100	0.0	1/2 ⁻				
355.24	5/2 ⁻	355.28 9	100	0.0	1/2 ⁻	E2			
478.06	(5/2 ⁺)	296.29 3	100 3	181.78	7/2 ⁺	M1+E2	0.29 3	0.0195 2	$\alpha=0.0195$ 2 B(M1)(W.u.)=0.011 3; B(E2)(W.u.)=10 3
		320.74 4	3.3 4	157.32	9/2 ⁺	E2		0.023	$\alpha=0.023$ B(E2)(W.u.)=2.8 8
747.77	11/2 ⁺	590.4 3	100	157.32	9/2 ⁺	M1			
747.8	7/2 ⁺	269.67 7	53.3 10	478.06	(5/2 ⁺)	M1		0.024	$\alpha=0.024$ B(M1)(W.u.)>0.0016 I_γ : see 590 γ .
		565.98 5	28.5 7	181.78	7/2 ⁺	M1,E2			I_γ : see 590 γ .
		590.44 6	100 2	157.32	9/2 ⁺	M1+E2	0.68 +12-14		B(M1)(W.u.)>0.00018; B(E2)(W.u.)>0.19 I_γ : from ε decay, in (p,n γ) part of the 590 γ is due to the excit of the 11/2 ⁺ level.
851.35	(7/2 ⁻)	496.09 12	100	355.24	5/2 ⁻	M1,E2			I_γ : From (¹² C,4pn γ).
		545.1& 5	50&	305.42	(3/2 ⁻)				
893.40	13/2 ⁺	145.9& 3	≤18.3&	747.77	11/2 ⁺	D			
		736.0 2	100	157.32	9/2 ⁺	Q			
899.35	9/2 ⁻	544.1 2	100	355.24	5/2 ⁻	E2			
905.69	(5/2,7/2) ⁺	158.0 5	1.2 5	747.8	7/2 ⁺				
		427.65 8	5.0 3	478.06	(5/2 ⁺)	M1,E2			I_γ : from (p,n γ).
		723.75 10	100 6	181.78	7/2 ⁺	M1(+E2)			I_γ : from (p,n γ).
		748.37 5	25.6 10	157.32	9/2 ⁺	M1,E2			I_γ : from (p,n γ).
		905.8 3	0.4 2	0.0	1/2 ⁻				
978.16	(7/2,9/2) ⁺	230.8 2	31.1 11	747.8	7/2 ⁺				
		796.62 15	100 3	181.78	7/2 ⁺	M1,E2			
		821.1 2	37.7 11	157.32	9/2 ⁺				
996.4	3/2 ⁻ ,5/2 ⁻	641.1		355.24	5/2 ⁻				
		691.0		305.42	(3/2 ⁻)				
1035.63	(5/2 ⁺)	129.7 10	17 8	905.69	(5/2,7/2) ⁺				
		557.2 2		478.06	(5/2) ⁺				I_γ : Weak.
		853.6 2	100 9	181.78	7/2 ⁺	M1,E2			
1058.00	3/2 ⁻ ,5/2 ⁻	702.6 2	100 3	355.24	5/2 ⁻				
		752.6 2	71 3	305.42	(3/2 ⁻)				
1320.26	(3/2)	965.3 2	83 41	355.24	5/2 ⁻				
		1014.56 19	100 33	305.42	(3/2 ⁻)				
1359.37	7/2 ⁺	381.2 4	2.5 5	978.16	(7/2,9/2) ⁺	M1,E2			

Adopted Levels, Gammas (continued) $\gamma(^{101}\text{Rh})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult. [‡]	$\delta^\#$	$\alpha^@$	Comments
1359.37	7/2 ⁺	453.69 5 611.44 10 881.29 8 1177.63 8 1202.04 6	39.9 15 6.2 6 7.1 6 23.3 13 100 4	905.69 747.8 478.06 181.78 157.32	(5/2,7/2) ⁺ 7/2 ⁺ (5/2) ⁺ 7/2 ⁺ 9/2 ⁺	M1(+E2) M1,E2 M1,E2 M1(+E2) M1(+E2)			
1383.4	3/2	1028.1 3	100	355.24	5/2 ⁻				
1470.81	5/2 ⁺ ,7/2 ⁺	111.40 8 435.08 8 492.0 4 619.45 12 722.9 2 992.82 6 1165.7 6 1289.04 5 1313.0 25	0.50 17 2.8 3 0.42 17 1.76 25 12 3 41.3 12 0.42 25 100 3 3.2 9	1359.37 1035.63 978.16 851.35 747.8 478.06 305.42 181.78 157.32	7/2 ⁺ (5/2) ⁺ (7/2,9/2) ⁺ (7/2 ⁻) 7/2 ⁺ (5/2) ⁺ (3/2 ⁻) 7/2 ⁺ 9/2 ⁺	(M1) E2 M1,E2 M1,E2 M1 (E2)		0.26 $\alpha=0.26$	
1576.9	11/2 ⁻	677.6 3 726	100	899.35 851.35	9/2 ⁻ (7/2 ⁻)				E_γ : Reported only in (¹² C,p4n γ), No branching given.
1604.0	(7/2 ⁻ ,9/2 ⁻)	132.8 7 857.0 5 1126.0	100 36 36 17	1470.81 747.8 478.06	5/2 ⁺ ,7/2 ⁺ 7/2 ⁺ (5/2) ⁺	(E1)			E_γ : Only reported in (p,n γ), but the others only in ϵ decay.
1604.5	(13/2 ⁻)	1446.0 5 705.2 3	18 9 100	157.32 899.35	9/2 ⁺ 9/2 ⁻	Q			
1607.4		859.6 3	100	747.8	7/2 ⁺				
1609.0	(15/2 ⁺)	715.8 3 861.1 3	71 3 <100	893.40 747.77	13/2 ⁺ 11/2 ⁺	E2+M1	-0.59 +17-14		I_γ : Intensity for unresolved triplet.
1696.33	3/2 ⁺ ,5/2 ⁺ ,7/2 ⁺	790.4 2 949.0 4 1218.28 7 1391.2 6 1514.5 2	4.4 7 1.5 7 100 4 1.1 4 5.2 11	905.69 747.8 478.06 305.42 181.78	(5/2,7/2) ⁺ 7/2 ⁺ (5/2) ⁺ (3/2 ⁻) 7/2 ⁺	M1,E2 M1(+E2) 			
1777.9	3/2 ⁻ ,5/2 ⁻	1422.6 3	100	355.24	5/2 ⁻				
1778.8	(17/2 ⁺)	169.9 3 885.3 3	6.1 10 100 20	1609.0 893.40	(15/2 ⁺) 13/2 ⁺	D Q			
1789.49	5/2 ⁺ ,7/2 ⁺	185.0 10 1041.73 15 1311.5 3 1607.7 3 1632.5 3	100 40 5.8 8 16 3 2.8 4 2.0 4	1604.0 747.8 478.06 181.78 157.32	(7/2 ⁻ ,9/2 ⁻) 7/2 ⁺ (5/2) ⁺ 7/2 ⁺ 9/2 ⁺	M1,E2 M1,E2 			
1820.59	5/2 ⁺ ,7/2 ⁺	914.86 12 1072.9 2 1342.5 2	75 8 29 8 25 4	905.69 747.8 478.06	(5/2,7/2) ⁺ 7/2 ⁺ (5/2) ⁺	M1,E2 			

Adopted Levels, Gammas (continued)

$\gamma(^{101}\text{Rh})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult. [‡]
1820.59	5/2 ⁺ , 7/2 ⁺	1638.6 3	100 10	181.78	7/2 ⁺	M1,E2
		1663.6 4	2.1 12	157.32	9/2 ⁺	
1843.0	(13/2 ⁻)	239.0 10	1	1604.5	(13/2 ⁻)	
1845.33		374.6 2	100 67	1470.81	5/2 ⁺ , 7/2 ⁺	
		787.0 4	83 40	1058.00	3/2 ⁻ , 5/2 ⁻	
1911.40	3/2 ⁻ , 5/2 ⁻	1163.6 2	33 20	747.8	7/2 ⁺	
		1433.4 3	100 33	478.06	(5/2 ⁺)	
		1729.6 3	30 10	181.78	7/2 ⁺	
2386.7	(17/2 ⁻)	782.2 3	100	1604.5	(13/2 ⁻)	Q
2586.3	19/2 ⁺	807.5 3	100	1778.8	(17/2 ⁺)	
2653.8		875.0 3	100	1778.8	(17/2 ⁺)	
2671.8	(17/2 ⁻)	285.2 3	29.8 24	2386.7	(17/2 ⁻)	
		1067.2 3	100 4	1604.5	(13/2 ⁻)	Q
2781.0	(21/2 ⁺)	1002.2 3	100	1778.8	(17/2 ⁺)	Q
2785.1	17/2 ⁻	398.3 3	100	2386.7	(17/2 ⁻)	
2931.2	19/2 ⁻	145.9 & 3	22.5 & 10	2785.1	17/2 ⁻	
		259.4 3	5.9 6	2671.8	(17/2 ⁻)	
		544.6 3	100 4	2386.7	(17/2 ⁻)	
3119.5	21/2 ⁻	188.5 2	100 20	2931.2	19/2 ⁻	M1+E2
		447.4 10	1.3 3	2671.8	(17/2 ⁻)	
		733.8 5	16 3	2386.7	(17/2 ⁻)	E2
3247.7	21/2 ⁻	861.0 3	100	2386.7	(17/2 ⁻)	
3425.1	23/2 ⁻	175.5 10	2.9 6	3247.7	21/2 ⁻	D
		305.5 2	100 20	3119.5	21/2 ⁻	M1+E2
		494.3 10	1.4 3	2931.2	19/2 ⁻	
		644.5 5	10 2	2781.0	(21/2 ⁺)	D
3530.5	23/2 ⁻	281.1 10	12 2	3247.7	21/2 ⁻	D
		410.9 2	68 14	3119.5	21/2 ⁻	M1+E2
		749.7 2	100 20	2781.0	(21/2 ⁺)	E1
3744.2	25/2 ⁻	213.6 2	33 7	3530.5	23/2 ⁻	M1+E2
		318.9 2	100 20	3425.1	23/2 ⁻	M1+E2
		624.0 ^a 10	2.9 ^a 6	3119.5	21/2 ⁻	
3763.3	(23/2 ⁻)	513.7 10	100	3247.7	21/2 ⁻	D
3874.2	(25/2 ⁺)	1093.2 3	100	2781.0	(21/2 ⁺)	Q
3890.0	(23/2 ⁺)	1109.2 5	100	2781.0	(21/2 ⁺)	D
3930.8	25/2 ⁻	400.5 5	80 16	3530.5	23/2 ⁻	D
		506.0 5	100 20	3425.1	23/2 ⁻	M1+E2
		811.6 5	47 9	3119.5	21/2 ⁻	Q
3994.2	(25/2 ⁻)	744.9 10	100	3247.7	21/2 ⁻	
4071.7	(25/2 ⁻)	308.4 10	100	3763.3	(23/2 ⁻)	
4236.6	27/2 ⁻	305.5 5	8.3 17	3930.8	25/2 ⁻	
		492.1 2	100 20	3744.2	25/2 ⁻	M1+E2
		811.4 5	47 9	3425.1	23/2 ⁻	Q

Adopted Levels, Gammas (continued)

 $\gamma(^{101}\text{Rh})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult. [‡]	$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult. [‡]		
4303.5	27/2 ⁻	372.8 2	100 20	3930.8	25/2 ⁻	D	6633.1	(35/2 ⁺)	550.8 10	22 4	6082.8	33/2 ⁺			
		559.5 5	43 9	3744.2	25/2 ⁻	D			751.7 5	100 20	5881.5	(31/2 ⁺)	Q		
		774.1 5	48 10	3530.5	23/2 ⁻	Q			1005.5 10	33 7	5627.1	(31/2 ⁺)			
4571.0		576.8 10	100 20	3994.2	(25/2 ⁻)		6706.4	(35/2 ⁺)	588.8 5	100 20	6116.9	(33/2 ⁺)			
		1145.6 10	100 20	3425.1	23/2 ⁻				1079.8 5	100 20	5627.1	(31/2 ⁺)			
4609.6	29/2 ⁻	306.1 2	61 12	4303.5	27/2 ⁻	D	6882.5	37/2 ⁻	573.4 5	76 15	6309.6	35/2 ⁻	M1+E2		
		373.0 2	100 20	4236.6	27/2 ⁻	M1+E2			1154.5 2	100 20	5728.1	33/2 ⁻	Q		
		865.4 2	64 13	3744.2	25/2 ⁻	E2			6994.2	37/2 ⁻	1147.9 2	100	5846.3	33/2 ⁻	Q
4773.4	(27/2 ⁺)	202.2 10	50 10	4571.0			7210.4	(37/2 ⁺)	503.8 5	43 9	6706.4	(35/2 ⁺)			
		389.2 10	100 20	4384.4	(25/2 ⁺)				577.3 5	50 10	6633.1	(35/2 ⁺)			
		779.3 10	75 15	3994.2	(25/2 ⁻)				1093.6 5	100 20	6116.9	(33/2 ⁺)	Q		
		1028.5 10	75 15	3744.2	25/2 ⁻				7213.3	37/2 ⁺	1129.9 10	100	6082.8	33/2 ⁺	Q
4801.2	29/2 ⁻	190.4 10	5 1	4609.6	29/2 ⁻		7536.0	39/2 ⁻	1226.2 2	100	6309.6	35/2 ⁻	E2		
		497.6 5	65 13	4303.5	27/2 ⁻	D			7840.3	(39/2 ⁺)	630.6 5	60 12	7210.4	(37/2 ⁺)	
		564.3 2	100 20	4236.6	27/2 ⁻	D			8161.0	41/2 ⁻	1207.5 5	100 20	6633.1	(35/2 ⁺)	
		870.9 5	40 8	3930.8	25/2 ⁻				624.0 ^a 5	100 ^a 20	7536.0	39/2 ⁻	D		
		935.1 5	100	3890.0	(23/2 ⁺)	Q			1279.5 5	100 20	6882.5	37/2 ⁻	Q		
4825.0	(27/2 ⁺)	935.1 5	100	3890.0	(23/2 ⁺)	Q	8287.6	41/2 ⁻	1293.4 5	100	6994.2	37/2 ⁻	Q		
4979.9	29/2 ⁺	1105.0 5	100	3874.2	(25/2 ⁺)	Q	8392.4	(41/2 ⁺)	552.4 5	47 10	7840.3	(39/2 ⁺)			
5196.7	(29/2 ⁺)	423.3 10	100 20	4773.4	(27/2 ⁺)	D	8392.4	(41/2 ⁺)	1178.6 10	10.5 21	7213.3	37/2 ⁺			
		812.1 10	25 5	4384.4	(25/2 ⁺)				1181.9 2	100 20	7210.4	(37/2 ⁺)	Q		
		1322.1 10	12.5 25	3874.2	(25/2 ⁺)				1390.0 5	100	7536.0	39/2 ⁻	Q		
5230.4	31/2 ⁻	429.0 2	100 20	4801.2	29/2 ⁻	M1+E2	8926.0	43/2 ⁻	674.2 5	71 14	8392.4	(41/2 ⁺)			
		619.9 10	12.0 24	4609.6	29/2 ⁻				1227.2 5	100 20	7840.3	(39/2 ⁺)			
		927.2 2	68 14	4303.5	27/2 ⁻	Q			9464.5	45/2 ⁻	1303.4 5	100	8161.0	41/2 ⁻	Q
		994.1 5	32 6	4236.6	27/2 ⁻	Q			9507.6	45/2 ⁻	1220.0 10	100	8287.6	41/2 ⁻	Q
5234.5	(31/2 ⁻)	624.9 5	100	4609.6	29/2 ⁻		9647.6	(45/2 ⁺)	580.8 5	50 10	9066.9	(43/2 ⁺)			
		853.6 10	38 8	4773.4	(27/2 ⁺)				1255.1 2	100 20	8392.4	(41/2 ⁺)	Q		
5627.1	(31/2 ⁺)	430.3 5	100 20	5196.7	(29/2 ⁺)		10219.9	47/2 ⁻	1294.0 5	100	8926.0	43/2 ⁻	Q		
		497.8 2	100 20	5230.4	31/2 ⁻	M1+E2			10414.1	(47/2 ⁺)	766.2 5	87 17	9647.6	(45/2 ⁺)	
		926.9 5	60 12	4801.2	29/2 ⁻	E2			1347.5 5	100 20	9066.9	(43/2 ⁺)			
5728.1	33/2 ⁻	1118.2 5	50 10	4609.6	29/2 ⁻	Q	10689.9	49/2 ⁻	470.0 5	71 14	10219.9	47/2 ⁻			
		1044.7 5	20 4	4801.2	29/2 ⁻				1225.4 5	100 20	9464.5	45/2 ⁻	Q		
		1236.7 2	100 20	4609.6	29/2 ⁻	Q			11029.7	(49/2 ⁺)	615.4 5	100	10414.1	(47/2 ⁺)	
5881.5	(31/2 ⁺)	1056.6 5	100	4825.0	(27/2 ⁺)	Q	12127.6	53/2 ⁻	1382.2 5	100	9647.6	(45/2 ⁺)			
6082.8	33/2 ⁺	1103.0 5	100	4979.9	29/2 ⁺	Q			13756.3	(57/2 ⁺)	1374.2 5	100	12382.1	(53/2 ⁺)	
6116.9	(33/2 ⁺)	489.2 5	100 20	5627.1	(31/2 ⁺)	D			1437.7 5	100	10689.9	49/2 ⁻	Q		
6309.6	35/2 ⁻	920.3 10	38 8	5196.7	(29/2 ⁺)		13833.6	57/2 ⁻	1706.0 10	100	12127.6	53/2 ⁻	Q		
		463.1 5	25 5	5846.3	33/2 ⁻				15407.2	(61/2 ⁺)	1650.9 10	100	13756.3	(57/2 ⁺)	
		581.0 5	50 10	5728.1	33/2 ⁻	M1+E2			17234.3	(65/2 ⁺)	1827.1 10	100	15407.2	(61/2 ⁺)	
6633.1	(35/2 ⁺)	1079.2 2	100 20	5230.4	31/2 ⁻	E2	17234.3	(65/2 ⁺)	1827.1 10	100	15407.2	(61/2 ⁺)			
		516.2 5	67 13	6116.9	(33/2 ⁺)										

Adopted Levels, Gammas (continued)

$\gamma(^{101}\text{Rh})$ (continued)

† Weighted average of all available data, unless otherwise noted.

‡ From ^{101}Pd ε decay.

From ^{101}Pd ε decay and $^{98}\text{Mo}(^6\text{Li},3\text{n})$.

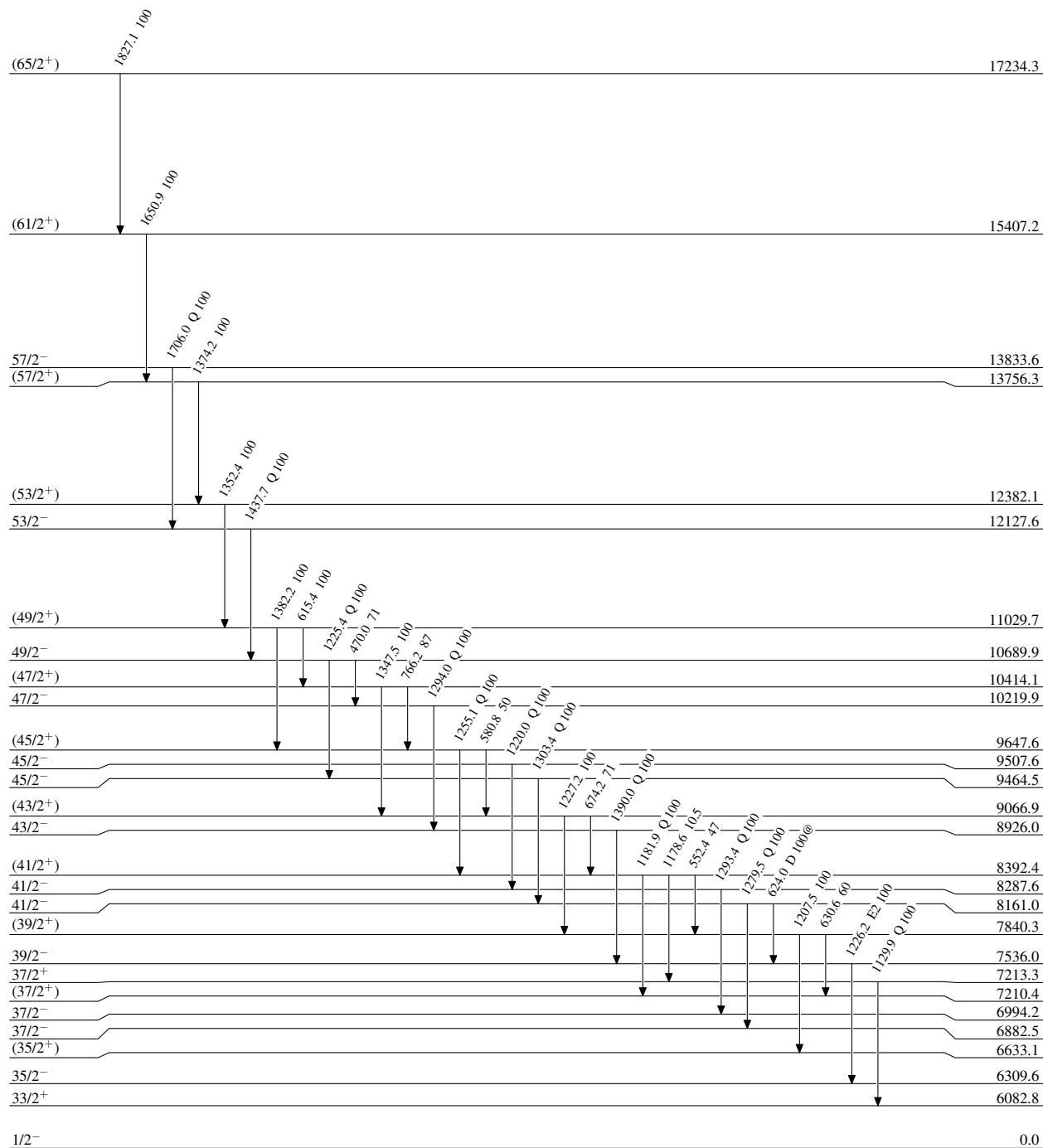
@ Total theoretical internal conversion coefficients, calculated using the BrIcc code ([2008Ki07](#)) with Frozen orbital approximation based on γ -ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

& Multiply placed with undivided intensity.

^a Multiply placed with intensity suitably divided.

Adopted Levels, GammasLevel Scheme

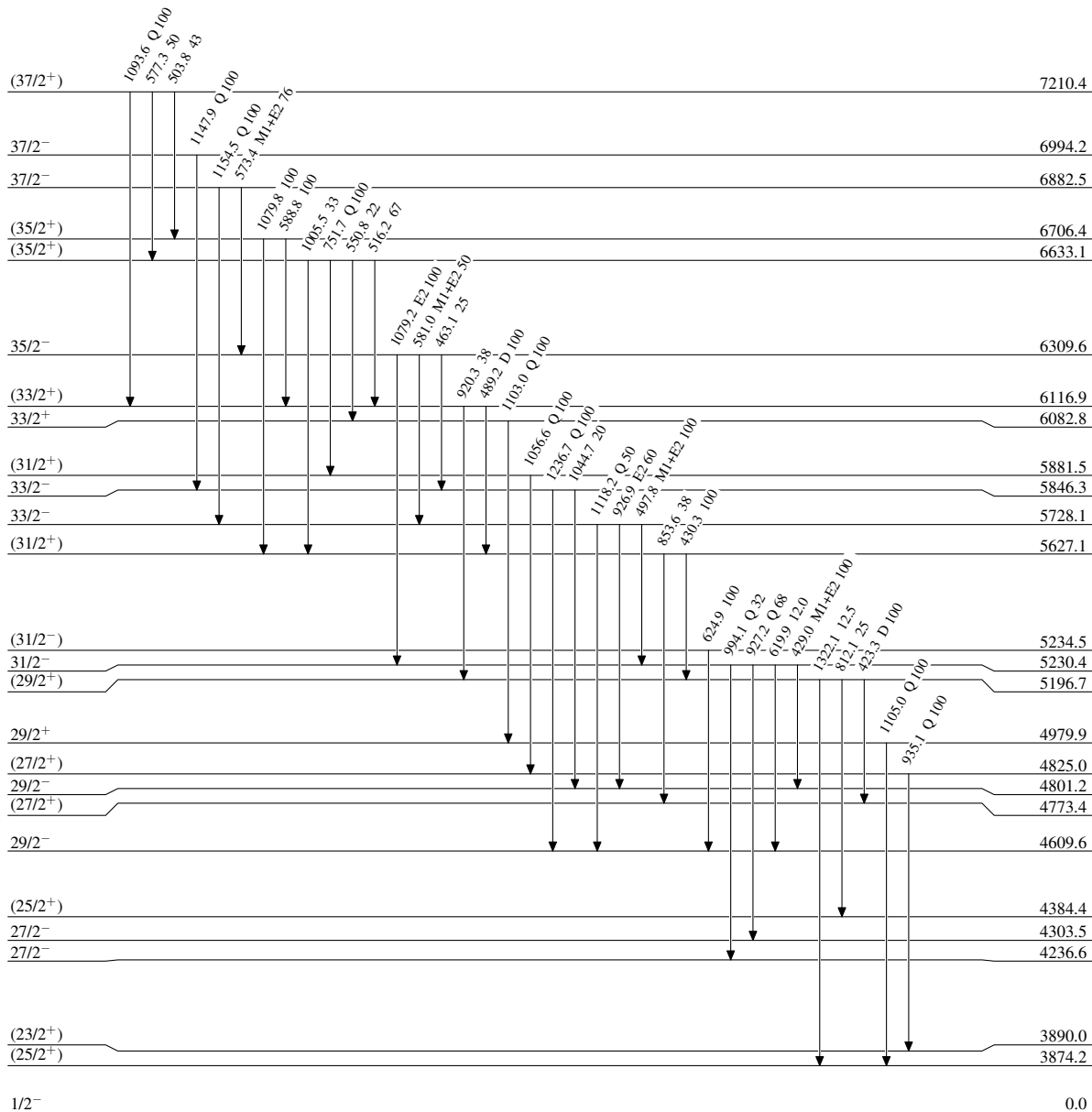
Intensities: Relative photon branching from each level
 @ Multiply placed: intensity suitably divided



Adopted Levels, Gammas

Level Scheme (continued)

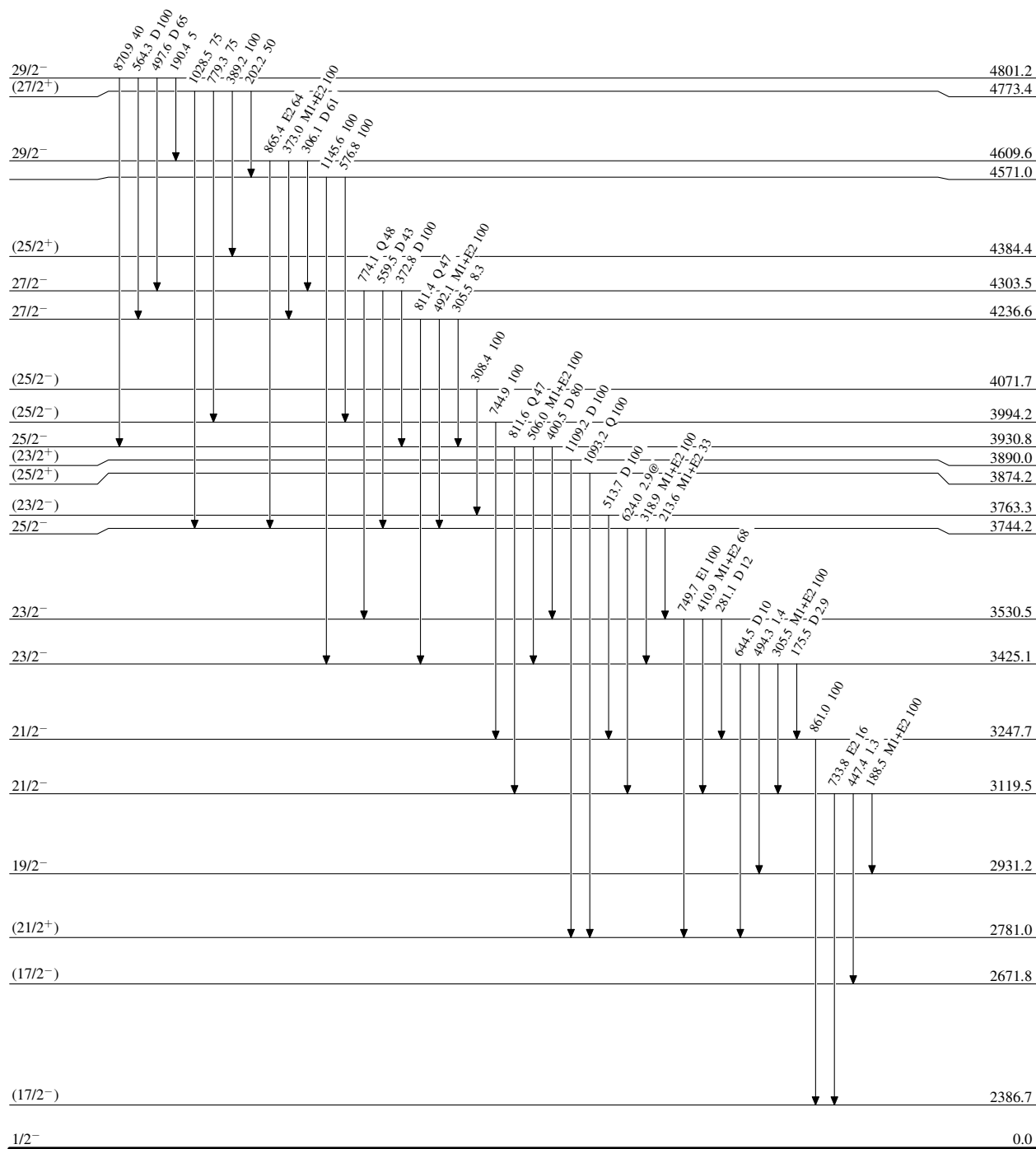
Intensities: Relative photon branching from each level
 @ Multiplied placed: intensity suitably divided



Adopted Levels, Gammas

Level Scheme (continued)

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

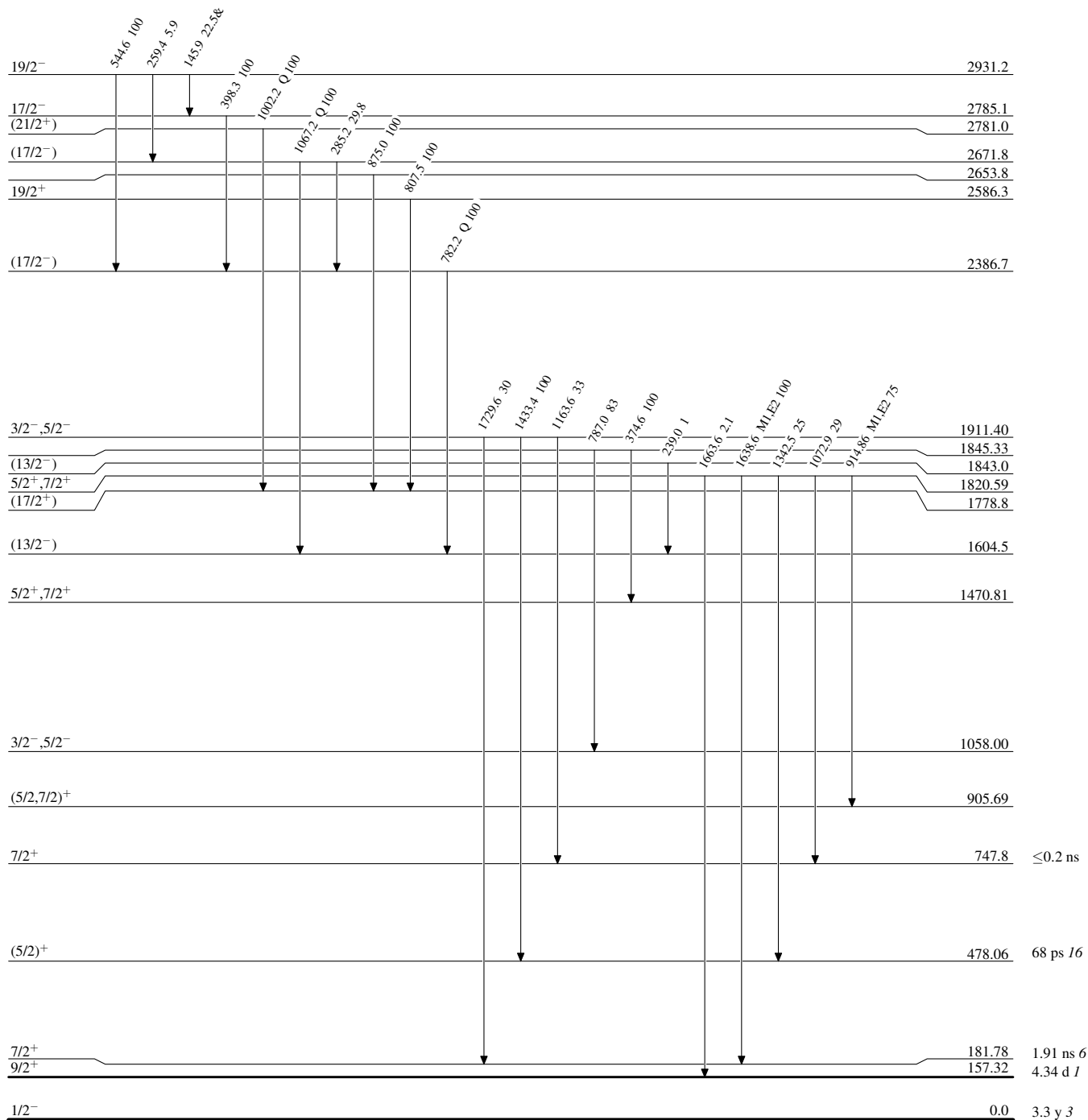


3.3 y 3

Adopted Levels, Gammas

Level Scheme (continued)

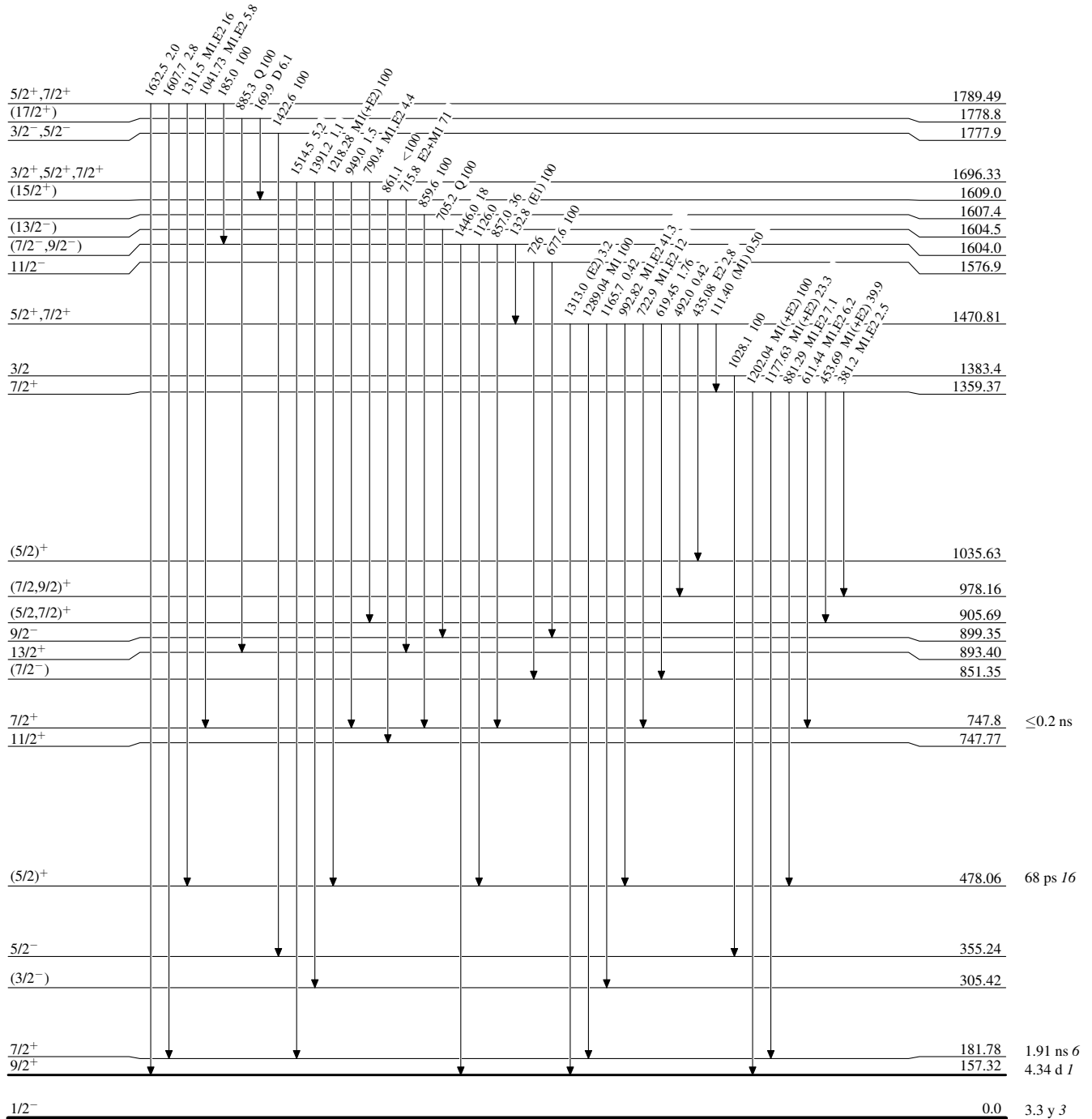
Intensities: Relative photon branching from each level
 & Multiply placed: undivided intensity given
 @ Multiply placed: intensity suitably divided



Adopted Levels, Gammas

Level Scheme (continued)

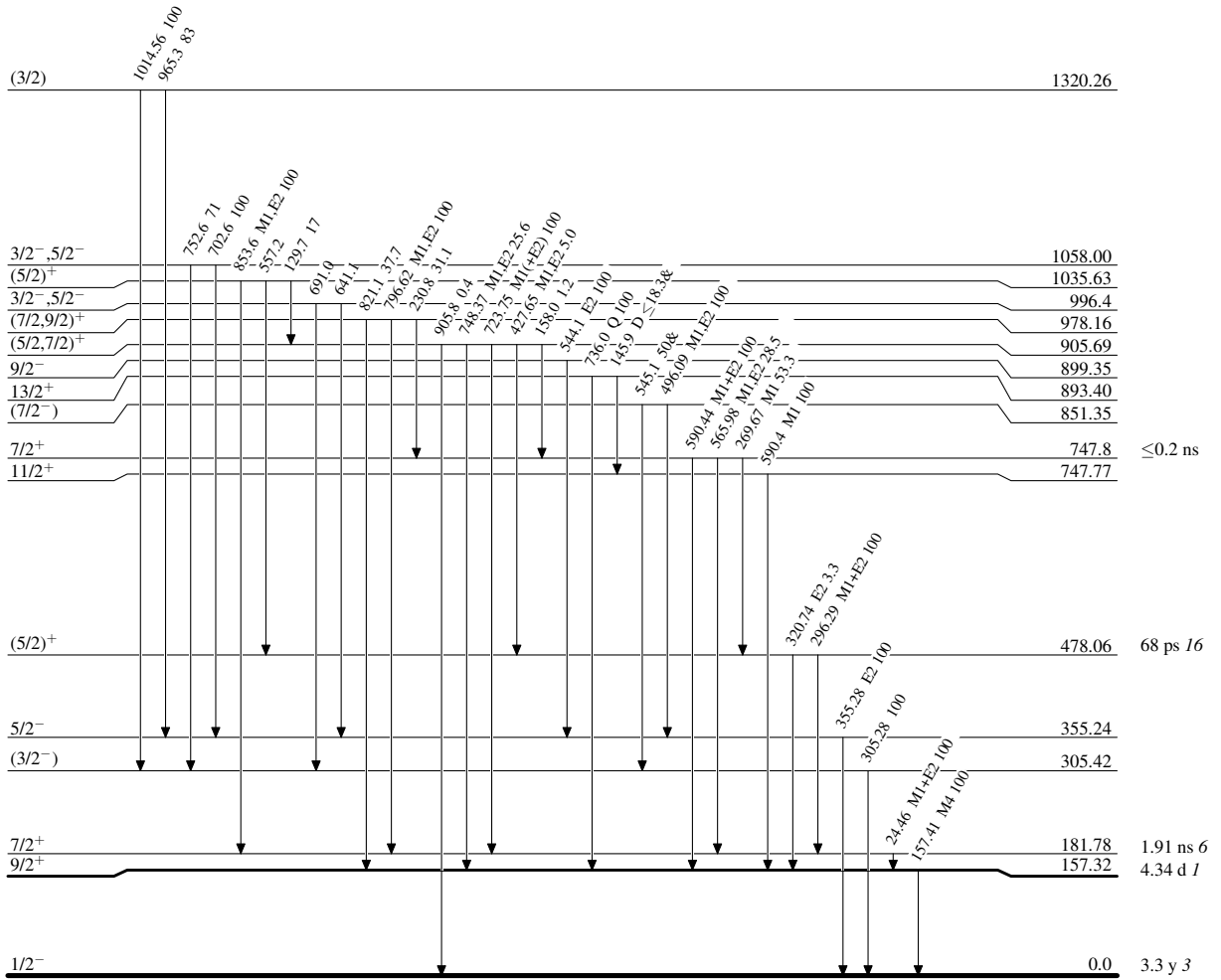
Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided



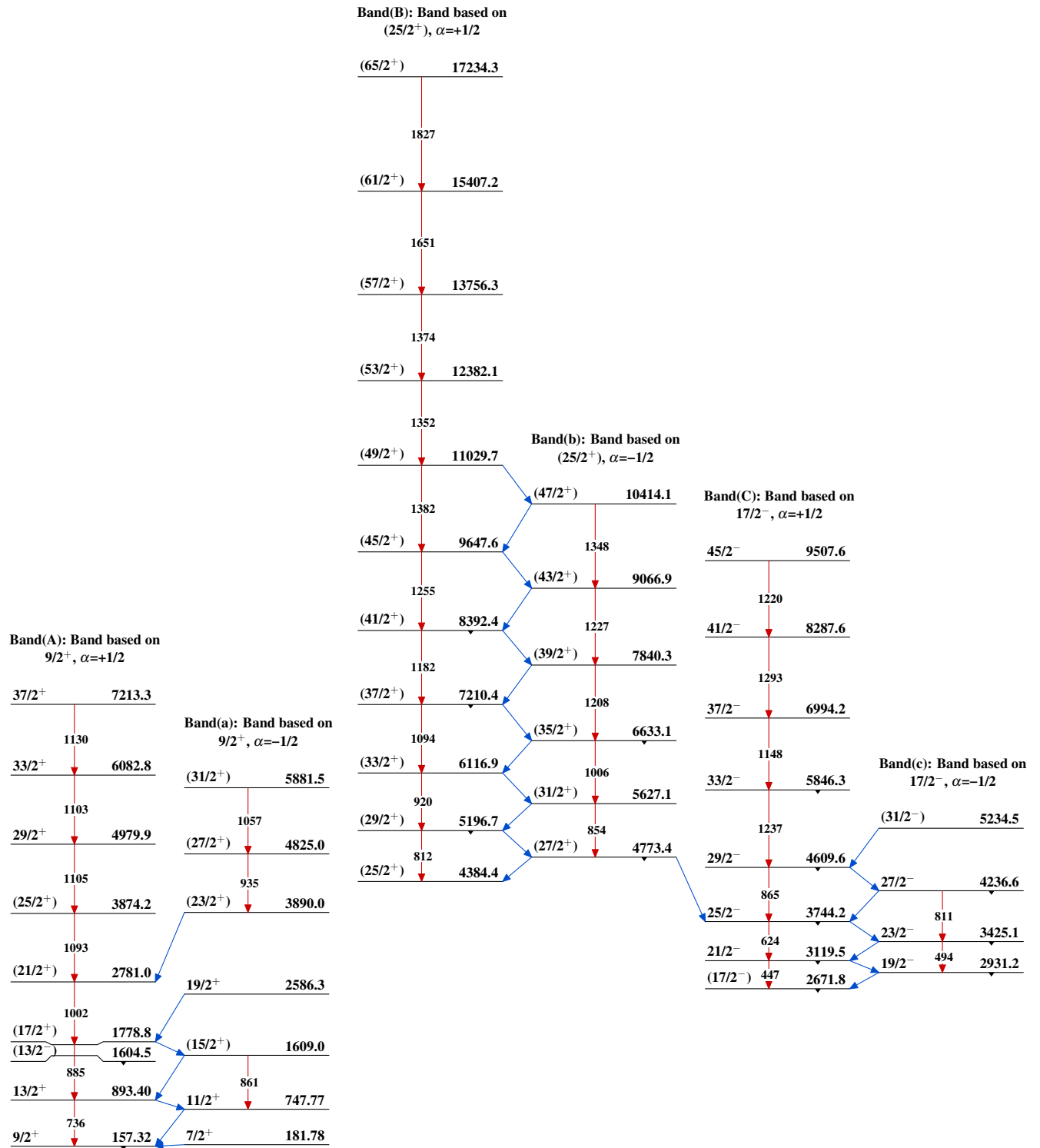
Adopted Levels, Gammas

Level Scheme (continued)

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



$^{101}_{45}\text{Rh}_{56}$

Adopted Levels, Gammas

Adopted Levels, Gammas (continued)

Band(D): Band based on
 $23/2^-$, $\alpha=-1/2$

$57/2^-$ 13833.6

1706

$53/2^-$ 12127.6

1438

$49/2^-$ 10689.9

1225

$45/2^-$ 9464.5

1303

$41/2^-$ 8161.0

1280

$37/2^-$ 6882.5

1154

$33/2^-$ 5728.1

927

$29/2^-$ 4801.2

871

$25/2^-$ 3930.8

Band(d): Band based on
 $23/2^-$, $\alpha=+1/2$

$47/2^-$ 10219.9

1294

$43/2^-$ 8926.0

1390

$39/2^-$ 7536.0

1226

$35/2^-$ 6309.6

1079

$31/2^-$ 5230.4

927

$27/2^-$ 4303.5

774

$23/2^-$ 3530.5

Band(E): Gs band,
 $\alpha=+1/2$

$21/2^-$ 3247.7

861

$(17/2^-)$ 2386.7

782

$(13/2^-)$ 1604.5

705

$9/2^-$ 899.35

544

$5/2^-$ 355.24

355

$1/2^-$ 0.0

Band(e): Gs band,
 $\alpha=-1/2$

$11/2^-$ 1576.9

726

$(7/2^-)$ 851.35

545

$(3/2^-)$ 305.42