^{176}Yb(^{11}B,6nγ) 2000Pe18

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	S. -c. Wu	NDS 106, 367 (2005)	31-Aug-2005

2000Pe18,1997Pe15: ^{176}Yb(^{11}B,6nγ), E=77 MeV. Measured Eγ, Iγ, $\gamma\gamma$, $\gamma\gamma(\theta)$(DCO) and lifetimes using the CAESAR array of six Compton-suppressed Ge detectors, and two unsuppressed planar LEP detectors. The beam was bunched and chopped, having 1 ns wide pulses separated by 1.7 μs.

^{181}Re Levels

E(level)[†]	J$^{\pi}$[‡]	T$_{1/2}$[#]	Comments
0.0[&]	5/2$^+$		
117.78[a] *8*	7/2$^+$		
262.36[b] *12*	9/2$^-$	157 ns *2*	
266.10[&] *8*	9/2$^+$		
356.48[q] *13*	5/2$^-$	87.6 ns *12*	K^{π}=7/2$^-$ is misprint in the T$_{1/2}$ table.
390.2[q] *4*	9/2$^-$		
426.58[c] *14*	11/2$^-$		
443.46[a] *10*	11/2$^+$		
546.2[q] *4*	13/2$^-$		
618.23[b] *14*	13/2$^-$		
646.06[&] *10*	13/2$^+$		
822.3[q] *4*	17/2$^-$		
833.55[c] *14*	15/2$^-$		
872.51[a] *11*	15/2$^+$		
1071.82[b] *15*	17/2$^-$		
1116.17[&] *12*	17/2$^+$		
1208.3[q] *4*	21/2$^-$		
1327.22[c] *15*	19/2$^-$		
1376.24[a] *13*	19/2$^+$		
1475.4[p] *4*	15/2$^-$		
1600.98[b] *16*	21/2$^-$		
1641.59[&] *13*	21/2$^+$		
1656.10[f] *16*	21/2$^-$	250 ns *10*	
1689.2[q] *4*	25/2$^-$		
1693.13[v] *15*	17/2$^+$		
1743.7[p] *4*	19/2$^-$		
1808.89[v] *15*	19/2$^+$		
1857.85[r] *15*	21/2$^+$		
1880.35[t] *17*	25/2$^+$	12 μs *2*	
1882.79[@c] *16*	23/2$^-$		
1882.83[@g] *16*	23/2$^-$		
1913.36[a] *14*	23/2$^+$		
1986.67[s] *15*	23/2$^+$		
2103.9[p] *4*	23/2$^-$		
2135.67[u] *19*	27/2$^+$		
2136.09[f] *17*	25/2$^-$		
2156.24[r] *14*	25/2$^+$		
2177.06[&] *14*	25/2$^+$		
2177.26[b] *17*	25/2$^-$		
2224.88[d] *18*	25/2$^-$		

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^{176}Yb(^{11}B,6nγ) 2000Pe18 (continued)

^{181}Re Levels (continued)

E(level)[†]	J$^{\pi}$[‡]	T$_{1/2}$[#]	Comments
2245.9[q] 4	29/2$^-$		
2353.90[s] 16	27/2$^+$		
2411.47[g] 17	27/2$^-$		
2412.63[t] 19	29/2$^+$		
2426.79[e] 18	27/2$^-$		
2449.12[a] 15	27/2$^+$		
2468.22[c] 17	27/2$^-$		
2549.7[p] 4	27/2$^-$		
2573.94[r] 17	29/2$^+$		
2632.61[d] 18	29/2$^-$		
2709.44[&] 16	29/2$^+$		
2710.44[u] 19	31/2$^+$		
2712.77[f] 17	29/2$^-$		
2762.93[b] 18	29/2$^-$		
2815.20[s] 19	31/2$^+$		
2854.47[e] 19	31/2$^-$		
2856.8[q] 4	33/2$^-$		
2990.41[a] 16	31/2$^+$		
3027.81[t] 20	33/2$^+$		
3030.88[g] 17	31/2$^-$		
3046.80[c] 18	31/2$^-$		
3073.84[r] 20	33/2$^+$		
3076.0[p] 4	31/2$^-$		
3092.87[d] 19	33/2$^-$		
3271.47[&] 17	33/2$^+$		
3332.33[b] 18	33/2$^-$		
3347.80[s] 21	35/2$^+$		
3348.22 20	(33/2)		J$^{\pi}$: from level diagram of 2000Pe18 and further clarification from the first author (C. J. Pearson). J$^{\pi}$=35/2$^+$ is quoted in the γ-table of 2000Pe18.
3348.59[e] 20	35/2$^-$		
3370.30[u] 20	35/2$^+$		
3370.83[f] 18	33/2$^-$		
3486.18 19	(33/2$^-$)		
3508.1[q] 4	37/2$^-$		
3512.55 19	(33/2)		
3587.52[a] 18	35/2$^+$		
3618.08[c] 19	35/2$^-$		
3623.43[d] 20	37/2$^-$		
3642.25[r] 22	37/2$^+$		
3678.9[p] 4	35/2$^-$		
3711.15[g] 17	35/2$^-$		
3723.95[t] 21	37/2$^+$		
3869.18[n] 19	(35/2$^-$)	1.2 μs 2	
3903.30[&] 18	37/2$^+$		
3914.41[e] 21	39/2$^-$		
3924.29[b] 19	37/2$^-$		
3962.80[s] 24	39/2$^+$		
3967.25 18	(37/2$^-$)		
3989.78[h] 18	(37/2$^-$)	22.2 ns 5	
4201.8[q] 5	41/2$^-$		

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^{176}Yb(^{11}B,6nγ) 2000Pe18 (continued)

^{181}Re Levels (continued)

E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡
4225.8[o] 17	(37/2$^-$)	4653.7[s] 3	43/2$^+$	5272.99[k] 24	(43/2)	6238.13[h] 22	(49/2$^-$)
4228.44[d] 21	41/2$^-$	4677.83[h] 20	(41/2$^-$)	5384.97[&] 22	45/2$^+$	6255.7[s] 3	51/2$^+$
4230.07[j] 22	(37/2)	4801.05[l] 22	(41/2$^-$)	5421.3[s] 3	47/2$^+$	6402.1[l] 3	(49/2$^-$)
4237.51[c] 20	39/2$^-$	4909.65[d] 22	45/2$^-$	5425.87[h] 21	(45/2$^-$)	6456.7[d] 6	53/2$^-$
4261.17[a] 19	39/2$^+$	4916.32[j] 23	(41/2)	5578.05[l] 24	(45/2$^-$)	6640.8[q] 5	53/2$^-$
4288.14[r] 25	41/2$^+$	4928.90[c] 21	43/2$^-$	5639.6[j] 3	(45/2)	6655.8[r] 3	53/2$^+$
4327.55[i] 20	(39/2$^-$)	4948.1[q] 5	45/2$^-$	5665.68[d] 24	49/2$^-$	6665.46[i] 24	(51/2$^-$)
4354.3[p] 4	39/2$^-$	5009.6[r] 3	45/2$^+$	5759.1[q] 5	49/2$^-$	6740.6[p] 5	51/2$^-$
4552.26[e] 22	43/2$^-$	5009.73[a] 20	43/2$^+$	5803.3[r] 3	49/2$^+$	6861.8[e] 3	55/2$^-$
4571.12[k] 23	(39/2)	5043.72[i] 21	(43/2$^-$)	5823.97[i] 22	(47/2$^-$)	7590.7[q] 5	57/2$^-$
4583.17[b] 20	41/2$^-$	5097.1[p] 5	43/2$^-$	5898.2[p] 5	47/2$^-$		
4586.5[n] 17	(39/2$^-$)	5183.55[m] 24	(43/2$^-$)	5985.15[m] 25	(47/2$^-$)		
4611.97[a] 19	41/2$^+$	5259.75[e] 23	47/2$^-$	6032.23[e] 25	51/2$^-$		

† From least-squares fit to Eγ′s (by evaluator).

‡ From 2000Pe18, based on γγ-coin. and band structures. Assignments agree with those in the Adopted Levels.

From time spectra of γγ-coin.

@ Doublet of levels at 1882.8 proposed with nearly the same energy, same J^π and almost the same decay modes. The very close proximity of the two 23/2-, 1883-keV levels implies that mixing between the 9/2[514] and the K=21/2 bands is very small (2000Pe18).

& Band(A): 5/2[402] g.s. band, α=+1/2.

a Band(a): 5/2[402] g.s. band, α=−1/2.

b Band(B): 9/2$^-$[514] band, α=+1/2.

c Band(b): 9/2$^-$[514] band, α=−1/2.

d Band(C): K^π=25/2$^-$ band, α=+1/2. Probable configuration=π9/2[514]ν$i^2_{13/2}$.

e Band(c): K^π=25/2$^-$ band, α=−1/2. Probable configuration=π9/2[514]ν$i^2_{13/2}$.

f Band(D): K^π=21/2$^-$ band, α=+1/2. Probable configuration=π5/2[402]ν(9/2[624]7/2[514]).

g Band(d): K^π=21/2$^-$ band, α=−1/2. Probable configuration=π5/2[402]ν(9/2[624]7/2[514]).

h Band(E): K^π=(37/2$^-$) band, α=+1/2. Probable configuration=π9/2[514]ν(9/2[624]5/2[512]7/2[633]7/2[503]).

i Band(e): K^π=(37/2$^-$) band, α=−1/2. Probable configuration=π9/2[514]ν(9/2[624]5/2[512]7/2[633]7/2[503]).

j Band(F): (37/2) band, α=+1/2. Positive parity is given in the γ-table of 2000Pe18. Further clarification from the first author of 2000Pe18 (C. J. Pearson) suggests that the parity should not be adopted.

k Band(f): (37/2) band, α=−1/2. Positive parity is given in the γ-table of 2000Pe18. Further clarification from the first author of 2000Pe18 (C. J. Pearson) suggests that the parity should not be adopted.

l Band(G): (41/2$^-$) band, α=−1/2.

m Band(g): (41/2$^-$) band, α=+1/2.

n Band(H): (35/2$^-$) band, α=−1/2.

o Band(h): (35/2$^-$) band, α=+1/2.

p Band(I): 1/2[541], α=−1/2.

q Band(i): 1/2[541], α=+1/2.

r Band(J): K^π=21/2$^+$ band, α=+1/2. Probable configuration=π5/2[402]ν(9/2[624]7/2[633]).

s Band(j): K^π=21/2$^+$ band, α=−1/2. Probable configuration=π5/2[402]ν(9/2[624]7/2[633]).

t Band(K): K^π=25/2$^+$ band, α=+1/2. Probable configuration=π9/2[514]ν(9/2[624]7/2[514]).

u Band(k): K^π=25/2$^+$ band, α=−1/2. Probable configuration=π9/2[514]ν(9/2[624]7/2[514]).

v Band(L): K$^\pi$=17/2$^+$ band. Probable configuration=π1/2[541]ν(9/2[624]7/2[514]). Other possible transitions in this band are: 131.6, 150.4, 180.4, 188.0, 262.2 and 320.4.

^{176}Yb(^{11}B,6nγ) 2000Pe18 (continued)

$\gamma(^{181}Re)$

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[b]	Comments
22.6 *1*		3989.78	(37/2$^-$)	3967.25	(37/2$^-$)			
33.8 *3*		390.2	9/2$^-$	356.48	5/2$^-$			E_γ: see ^{181}Os ε decay (105 min) for discussion of placement of this transition.
48.8 *1*		1857.85	21/2$^+$	1808.89	19/2$^+$			
115.6 *1*	2.0	1808.89	19/2$^+$	1693.13	17/2$^+$	D		Iγ(delayed)=0.2. DCO=2.0 *4*.
118.0 *1*	9.3	117.78	7/2$^+$	0.0	5/2$^+$	D		Iγ(delayed)=9.3. DCO=1.65 *10*.
120.6 *1*	0.2	3989.78	(37/2$^-$)	3869.18	(35/2$^-$)	M1	3.12	α(K)=2.58 *8*; α(L)=0.415 *13*; α(M)=0.095 *3*; α(N+..)=0.0291 *9* Mult.: From α=3 *1* from intensity balance. Iγ(delayed)=0.1.
129.2[&] *1*	2.7	1986.67	23/2$^+$	1857.85	21/2$^+$			E_γ: level-energy difference=128.8.
144.4 *1*	11.2	262.36	9/2$^-$	117.78	7/2$^+$			Iγ(delayed)=470.7. DCO=1.2 *2*.
148.5 *1*	18.2	266.10	9/2$^+$	117.78	7/2$^+$	D		DCO=1.75 *10*. A_2=−0.4 *2*.
156.0 *1*	84.9	546.2	13/2$^-$	390.2	9/2$^-$	E2[@]	0.770	α(K)=0.326 *10*; α(L)=0.334 *10*; α(M)=0.084 *3*; α(N+..)=0.0249 *8* A_2=−0.1 *1*.
164.0 *5*	0.1	1857.85	21/2$^+$	1693.13	17/2$^+$			
164.1 *1*	78.6	426.58	11/2$^-$	262.36	9/2$^-$	D		Iγ(delayed)=78.6. DCO=1.50 *5*. A_2=−0.4 *1*.
169.8 *1*	3.6	2156.24	25/2$^+$	1986.67	23/2$^+$			A_2=−0.8 *1*.
177.3 *1*	36.3	443.46	11/2$^+$	266.10	9/2$^+$	D		DCO=1.70 *10*. A_2=−0.4 *1*.
191.6 *1*	107.3	618.23	13/2$^-$	426.58	11/2$^-$	D		Iγ(delayed)=88.3. DCO=1.45 *5*. A_2=−0.2 *1*.
197.5 *1*	4.1	2353.90	27/2$^+$	2156.24	25/2$^+$			A_2=+0.1 *2*.
202.0 *1*	6.6	2426.79	27/2$^-$	2224.88	25/2$^-$			Iγ(delayed)=0.8. DCO=1.0 *3*.
202.7 *1*	44.0	646.06	13/2$^+$	443.46	11/2$^+$			A_2=−0.11 *6*.
205.8 *1*	20.3	2632.61	29/2$^-$	2426.79	27/2$^-$			Iγ(delayed)=1.9. DCO=1.0 *5*. A_2=+0.16 *7*.
215.3 *1*	126.7	833.55	15/2$^-$	618.23	13/2$^-$	D		Iγ(delayed)=108.2. DCO=1.50 *5*. A_2=−0.17 *5*.
220.3[d] *1*	1.4	2573.94	29/2$^+$	2353.90	27/2$^+$			A_2=−0.1 *2*.
221.8 *1*	31.5	2854.47	31/2$^-$	2632.61	29/2$^-$			DCO=1.0 *1*. A_2=0.0 *1*.
224.3 *1*	2.8	1880.35	25/2$^+$	1656.10	21/2$^-$	M2	2.59	α(K)=1.97 *6*; α(L)=0.466 *14*; α(M)=0.112 *4*; α(N+..)=0.0341 *11* Mult.: From α=2.5 *3* from intensity balance. Iγ(delayed)=2.8.
226.5 *1*	46.5	872.51	15/2$^+$	646.06	13/2$^+$	D		Iγ(delayed)=0.0. DCO=1.6 *1*. A_2=−0.24 *6*.
226.7 *1*	4.7	1882.83	23/2$^-$	1656.10	21/2$^-$			
238.3 *1*	111.2	1071.82	17/2$^-$	833.55	15/2$^-$	D		Iγ(delayed)=116.1. DCO=1.45 *5*. A_2=+0.2 *2*.
238.4 *1*	31.2	3092.87	33/2$^-$	2854.47	31/2$^-$	(D)		DCO=1.4 *2*.

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^{176}Yb(^{11}B,6nγ) 2000Pe18 (continued)

$\gamma(^{181}Re)$ (continued)

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[b]	Comments
238.7 *1*	17.9	356.48	5/2$^-$	117.78	7/2$^+$			Iγ(delayed)=118.4.
241.6[d] *1*	1.6	2815.20	31/2$^+$	2573.94	29/2$^+$			A_2=+0.5 *2*.
243.3 *1*	9.1	2156.24	25/2$^+$	1913.36	23/2$^+$	(D)		E_γ: level-energy difference=242.9. DCO=1.5 *1* for 243.3γ +243.7γ.
243.7 *1*	43.1	1116.17	17/2$^+$	872.51	15/2$^+$	(D)		DCO=1.5 *1* for 243.3γ + 243.7γ.
249.0 *5*	2.3	2426.79	27/2$^-$	2177.26	25/2$^-$			Iγ(delayed)=0.5.
253.3 *1*	43.8	2136.09	25/2$^-$	1882.83	23/2$^-$			Iγ(delayed)=5.6. DCO=1.0 *3*. A_2=+0.3 *1*.
255.4 *1*	79.7	2135.67	27/2$^+$	1880.35	25/2$^+$			Iγ(delayed)=79.7.
255.5 *1*	89.9	1327.22	19/2$^-$	1071.82	17/2$^-$			Iγ(delayed)=113.4. DCO=1.35 *15*.
255.7 *1*	25.1	3348.59	35/2$^-$	3092.87	33/2$^-$			DCO=1.3 *1*.
256.2 *1*	30.9	3967.25	(37/2$^-$)	3711.15	35/2$^-$			Iγ(delayed)=5.4.
258.9[d] *1*	2.5	3073.84	33/2$^+$	2815.20	31/2$^+$			
260.2[c] *1*	39.6[c]	1376.24	19/2$^+$	1116.17	17/2$^+$	(D)		DCO=1.6 *2* for doublet. A_2=−0.2 *1*.
260.2[c] *1*	11.8[c]	2709.44	29/2$^+$	2449.12	27/2$^+$	(D)		
263.6 *1*	25.6	2177.06	25/2$^+$	1913.36	23/2$^+$	(D)		DCO=1.6 *2*. A_2=0.0 *1*.
265.4 *1*	33.1	1641.59	21/2$^+$	1376.24	19/2$^+$	D		DCO=1.6 *2*. A_2=−0.2 *1*.
265.9 *1*	10.2	266.10	9/2$^+$	0.0	5/2$^+$	E2[@]	0.128	α(K)=0.0802 *24*; α(L)=0.0366 *11*; α(M)=0.0090 *3*; α(N+..)=0.00265 *8*
268.3 *1*	0.8	1743.7	19/2$^-$	1475.4	15/2$^-$			A_2=−0.2 *1*.
272.0[c] *1*	34.0[c]	1913.36	23/2$^+$	1641.59	21/2$^+$	(D)		DCO=1.5 *2* for doublet. A_2=−0.2 *1* for doublet.
272.0[c] *1*	9.2[c]	2449.12	27/2$^+$	2177.06	25/2$^+$	(D)		
273.9 *1*	78.2	1600.98	21/2$^-$	1327.22	19/2$^-$	D		Iγ(delayed)=13.0. DCO=1.6 *2*. A_2=−0.1 *2*.
274.8 *1*	20.6	3623.43	37/2$^-$	3348.59	35/2$^-$			DCO=1.0 *3*.
275.4 *1*	39.0	2411.47	27/2$^-$	2136.09	25/2$^-$	(D)		Iγ(delayed)=2.7. DCO=1.50 *15*.
276.1 *1*	156.0	822.3	17/2$^-$	546.2	13/2$^-$	E2[@]	0.114	α(K)=0.0726 *22*; α(L)=0.0317 *10*; α(M)=0.00779 *24*; α(N+..)=0.00229 *7* A_2=+0.2 *1*.
277.0 *1*	66.2	2412.63	29/2$^+$	2135.67	27/2$^+$			Iγ(delayed)=19.4. A_2=+0.25 *5*.
278.6 *1*	3.0	3989.78	(37/2$^-$)	3711.15	35/2$^-$	D		Iγ(delayed)=3.4. A_2=−0.2 *2*.
281.4[c] *1*	7.2[c]	2990.41	31/2$^+$	2709.44	29/2$^+$	(D)		DCO=1.6 *3* for doublet. A_2=−0.18 *4* for quadruplet (281.4γ + 281.9γ).
281.4[c] *1*	4.3[c]	3271.47	33/2$^+$	2990.41	31/2$^+$	(D)		
281.9[c] *1*	60.4[ca]	1882.79	23/2$^-$	1600.98	21/2$^-$	(D)		I_γ: or 62.0. Iγ(delayed)=5.0.
281.9[c] *1*	62.0[ca]	1882.83	23/2$^-$	1600.98	21/2$^-$	(D)		I_γ: or 60.4. Iγ(delayed)=5.0. DCO=1.5 *1* for doublet. A_2=−0.18 *4* for 281.4γ + 281.9γ multiplet.
284.3[&] *1*	13.2	3046.80	31/2$^-$	2762.93	29/2$^-$	D		E_γ: level-energy difference=283.9. Iγ(delayed)=0.9. DCO=1.4 *3*. A_2=+0.1 *1*.

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^{176}Yb(^{11}B,6nγ) 2000Pe18 (continued)

$\gamma(^{181}Re)$ (continued)

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	Comments
285.7[c] *1*	16.6[c]	3332.33	33/2$^-$	3046.80	31/2$^-$		DCO=1.4 *2* for doublet. A_2=−0.13 *3* for doublet.
285.7[c] *1*	10.2[c]	3618.08	35/2$^-$	3332.33	33/2$^-$		
291.0[c] *1*	32.6[c]	2468.22	27/2$^-$	2177.26	25/2$^-$		Iγ(delayed)=3.6. DCO=1.2 *1* for doublet. A_2=0.00 *3* for doublet.
291.0[c] *1*	20.0[c]	3914.41	39/2$^-$	3623.43	37/2$^-$		
294.7[c] *1*	35.1[c]	2177.26	25/2$^-$	1882.79	23/2$^-$	(D)	Iγ(delayed)=3.8. DCO=1.75 *15* for doublet. A_2=−0.11 *6* for doublet.
294.7[c] *1*	11.8[c]	2762.93	29/2$^-$	2468.22	27/2$^-$	(D)	Iγ(delayed)=0.1. DCO=1.75 *15* for doublet. A_2=−0.11 *6* for doublet.
297.8[&] *1*	0.9	2156.24	25/2$^+$	1857.85	21/2$^+$	E2[@]	α(K)=0.0596 *18*; α(L)=0.0238 *8*; α(M)=0.00583 *18*; α(N+..)=0.00171 *6* E_γ: level-energy difference=298.4. A_2=+0.01 *6* for 297.8γ +297.9γ.
297.9 *1*	39.4	2710.44	31/2$^+$	2412.63	29/2$^+$		Iγ(delayed)=4.2. A_2=+0.01 *6* for 297.8γ + 297.9γ.
301.3 *1*	9.5	2712.77	29/2$^-$	2411.47	27/2$^-$		Iγ(delayed)=1.7. DCO=1.0 *4*. A_2=+0.16 *6*.
306.5 *1*	8.2	3924.29	37/2$^-$	3618.08	35/2$^-$	D	DCO=1.4 *4*. A_2=−0.27 *6*.
313.5 *1*	10.1	4237.51	39/2$^-$	3924.29	37/2$^-$	D	DCO=1.5 *2*.
314.1 *1*	10.8	4228.44	41/2$^-$	3914.41	39/2$^-$		DCO=1.3 *2*.
316.0[c] *1*	4.0[c]	3587.52	35/2$^+$	3271.47	33/2$^+$	(D)	DCO=1.8 *4* for doublet.
316.0[c] *1*	2.6[c]	3903.30	37/2$^+$	3587.52	35/2$^+$	(D)	
317.6 *1*	26.5	3027.81	33/2$^+$	2710.44	31/2$^+$		
318.4[&] *1*	12.1	3030.88	31/2$^-$	2712.77	29/2$^-$		E_γ: level-energy difference=318.1. Iγ(delayed)=1.0. DCO=1.0 *5*.
320.5 *1*	8.9	3348.22	(33/2)	3027.81	33/2$^+$	(D)	Iγ(delayed)=0.3. A_2=−0.32 *3*.
323.9 *1*	7.9	4552.26	43/2$^-$	4228.44	41/2$^-$		DCO=1.0 *2*. A_2=0.0 *1*.
325.9 *1*	21.0	443.46	11/2$^+$	117.78	7/2$^+$	E2	α(K)=0.0472 *15*; α(L)=0.0171 *6*; α(M)=0.00417 *13*; α(N+..)=0.00123 *4* DCO=0.7 *1*. A_2=+0.1 *1*.
328.9 *1*	8.4	1656.10	21/2$^-$	1327.22	19/2$^-$		Iγ(delayed)=182.2. A_2=0.0 *2*.
337.9 *1*	21.6	4327.55	(39/2$^-$)	3989.78	(37/2$^-$)		A_2=+0.1 *1*.
340.6[c] *1*	5.4[c]	3370.83	33/2$^-$	3030.88	31/2$^-$	D	E_γ: level-energy difference=340.0. Iγ(delayed)=2.1.
340.6[c&] *1*	7.4[c]	3711.15	35/2$^-$	3370.83	33/2$^-$	D	E_γ: level-energy difference=340.3. Iγ(delayed)=1.1.
341.1 *1*	7.6	4571.12	(39/2)	4230.07	(37/2)		
342.5 *1*	14.1	3370.30	35/2$^+$	3027.81	33/2$^+$		A_2=+0.10 *4*. DCO=1.0 *3* for doublet. A_2=+0.26 *6* for doublet.
344.6 *1*	9.8	2224.88	25/2$^-$	1880.35	25/2$^+$		Iγ(delayed)=9.8. DCO=1.0 *1*. A_2=+0.2 *1* for 344.6γ + 345.3γ.
345.3 *1*	6.0	4916.32	(41/2)	4571.12	(39/2)		A_2=+0.2 *1* for 344.6γ + 345.3γ.

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^{176}Yb(^{11}B,6nγ) 2000Pe18 (continued)

$\gamma(^{181}Re)$ (continued)

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[b]	Comments
345.8[c] *1*	3.6[c]	4583.17	41/2$^-$	4237.51	39/2$^-$			
345.8[c] *1*	3.0[c]	4928.90	43/2$^-$	4583.17	41/2$^-$			
350.2 *1*	4.1	5259.75	47/2$^-$	4909.65	45/2$^-$			DCO=1.0 *2*.
350.5 *1*	2.9	4677.83	(41/2$^-$)	4327.55	(39/2$^-$)			
351.6[&] *1*	0.8	4611.97	41/2$^+$	4261.17	39/2$^+$			E_γ: level-energy difference=350.8.
353.6 *1*	5.0	3723.95	37/2$^+$	3370.30	35/2$^+$			
355.8 *1*	19.8	618.23	13/2$^-$	262.36	9/2$^-$	E2	0.0542	α(K)=0.0378 *12*; α(L)=0.0125 *4*; α(M)=0.00303 *9*; α(N+..)=0.00089 *3* Iγ(delayed)=23.0. DCO=0.50 *5*.
356.6 *1*	9.8	3869.18	(35/2$^-$)	3512.55	(33/2)			Iγ(delayed)=24.9.
356.8 *1*	5.2	5272.99	(43/2)	4916.32	(41/2)			
357 *2*	3.5	4225.8	(37/2$^-$)	3869.18	(35/2$^-$)			
357.5 *1*	5.8	4909.65	45/2$^-$	4552.26	43/2$^-$			
358.6[&] *1*	2.7	4261.17	39/2$^+$	3903.30	37/2$^+$			E_γ: level-energy difference=357.9.
360.1 *1*	8.7	2103.9	23/2$^-$	1743.7	19/2$^-$			
360.9 *1*	4.9	4230.07	(37/2)	3869.18	(35/2$^-$)			
361 *2*	4.6	4586.5	(39/2$^-$)	4225.8	(37/2$^-$)			
366.0 *5*	0.3	6032.23	51/2$^-$	5665.68	49/2$^-$			A_2=−0.03 *9* for 366.0γ + 366.2γ + 366.7γ.
366.2[&] *1*	1.0	5043.72	(43/2$^-$)	4677.83	(41/2$^-$)	D		E_γ: level-energy difference=365.9. A_2=−0.03 *9* for 366.0γ + 366.2γ + 366.7γ.
366.7 *1*	2.2	5639.6	(45/2)	5272.99	(43/2)	D		A_2=−0.03 *9* for 366.0γ + 366.2γ + 366.7γ.
367.4 *1*	11.2	2353.90	27/2$^+$	1986.67	23/2$^+$	E2	0.0496	α(K)=0.0349 *11*; α(L)=0.0111 *4*; α(M)=0.00271 *9*; α(N+..)=0.00080 *2* DCO=0.5 *2*. A_2=+0.3 *2*.
380.0 *1*	33.0	646.06	13/2$^+$	266.10	9/2$^+$	E2	0.0452	α(K)=0.0321 *10*; α(L)=0.0099 *3*; α(M)=0.00240 *8*; α(N+..)=0.00071 *2* DCO=0.60 *5*.
382.1 *1*	0.2	5425.87	(45/2$^-$)	5043.72	(43/2$^-$)			
382.6 *1*	4.9	5183.55	(43/2$^-$)	4801.05	(41/2$^-$)			
386.0 *1*	167.6	1208.3	21/2$^-$	822.3	17/2$^-$	E2[@]	0.0432	α(K)=0.0309 *10*; α(L)=0.0094 *3*; α(M)=0.00228 *7*; α(N+..)=0.00067 *2* A_2=0.0 *2*.
394.6 *1*	0.1	5578.05	(45/2$^-$)	5183.55	(43/2$^-$)			
397.9 *1*	0.7	5009.73	43/2$^+$	4611.97	41/2$^+$			A_2=+0.11 *5*.
398.0 *1*	0.2	5823.97	(47/2$^-$)	5425.87	(45/2$^-$)			
406.0 *5*	1.1	5665.68	49/2$^-$	5259.75	47/2$^-$			
406.9 *1*	52.9	833.55	15/2$^-$	426.58	11/2$^-$	E2	0.0375	α(K)=0.0271 *9*; α(L)=0.00788 *24*; α(M)=0.00190 *6*; α(N+..)=0.00056 *2* Iγ(delayed)=42.5. DCO=0.6 *5*. A_2=+0.15 *2*.
407.1 *1*	0.8	5985.15	(47/2$^-$)	5578.05	(45/2$^-$)			
407.7 *1*	10.0	2632.61	29/2$^-$	2224.88	25/2$^-$	E2[@]	0.0373	α(K)=0.0270 *8*; α(L)=0.00783 *24*; α(M)=0.00189 *6*; α(N+..)=0.00056 *2* Iγ(delayed)=0.6. DCO=1.0 *3*.
414.3 *1*	0.1	6238.13	(49/2$^-$)	5823.97	(47/2$^-$)			A_2=+0.26 *1*.
417.7 *1*	20.2	2573.94	29/2$^+$	2156.24	25/2$^+$	E2	0.0349	α(K)=0.0254 *8*; α(L)=0.00722 *22*; α(M)=0.00174 *6*; α(N+..)=0.00051 *2* DCO=0.5 *2*. A_2=+0.2 *1*.
427.0 *5*	0.1	6665.46	(51/2$^-$)	6238.13	(49/2$^-$)			
427.7 *1*	8.5	2854.47	31/2$^-$	2426.79	27/2$^-$	E2[@]	0.0328	α(K)=0.0240 *8*; α(L)=0.00668 *20*;

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^{176}Yb(^{11}B,6nγ) 2000Pe18 (continued)

$\gamma(^{181}Re)$ (continued)

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[b]	Comments
								α(M)=0.00161 *5*; α(N+..)=0.00048 *2* DCO=1.0 *2*. A_2=−0.3 *2*.
429.1 *1*	51.0	872.51	15/2$^+$	443.46	11/2$^+$	E2	0.0325	α(K)=0.0238 *8*; α(L)=0.00661 *20*; α(M)=0.00159 *5*; α(N+..)=0.00047 *2* DCO=0.65 *5*. A_2=+0.15 *1*.
445.7 *1*	14.7	2549.7	27/2$^-$	2103.9	23/2$^-$	E2	0.0294	α(K)=0.0218 *7*; α(L)=0.00585 *18*; α(M)=0.00140 *5*; α(N+..)=0.00042 *1* DCO=0.7 *2*. A_2=+0.26 *6*.
453.5 *1*	55.5	1071.82	17/2$^-$	618.23	13/2$^-$	E2	0.0282	α(K)=0.0209 *7*; α(L)=0.00553 *17*; α(M)=0.00133 *4*; α(N+..)=0.00039 *1* Iγ(delayed)=66.2. DCO=0.70 *5*. A_2=+0.2 *1*.
460.3 *1*	15.1	3092.87	33/2$^-$	2632.61	29/2$^-$	E2[@]	0.0271	α(K)=0.0202 *6*; α(L)=0.00528 *16*; α(M)=0.00126 *4*; α(N+..)=0.00038 *1* DCO=0.9 *1*. A_2=0.0 *2*.
461.3 *1*	18.5	2815.20	31/2$^+$	2353.90	27/2$^+$	E2	0.0269	α(K)=0.0201 *6*; α(L)=0.00524 *16*; α(M)=0.00126 *4*; α(N+..)=0.00037 *1* DCO=0.7 *3*. A_2=+0.4 *1*.
470.2 *1*	62.0	1116.17	17/2$^+$	646.06	13/2$^+$	E2	0.0257	α(K)=0.0192 *6*; α(L)=0.00494 *15*; α(M)=0.00118 *4*; α(N+..)=0.00035 *1* DCO=0.55 *5*. A_2=+0.17 *6*.
473.5 *1*	9.9	4801.05	(41/2$^-$)	4327.55	(39/2$^-$)			A_2=0.0 *9*.
479.9 *1*	23.9	2136.09	25/2$^-$	1656.10	21/2$^-$	E2	0.0244	α(K)=0.0183 *6*; α(L)=0.00463 *14*; α(M)=0.00111 *4*; α(N+..)=0.00033 *1* Iγ(delayed)=5.3. DCO=0.80 *15*. A_2=+0.4 *3*.
481.0 *1*	1.4	3967.25	(37/2$^-$)	3486.18	(33/2$^-$)			Iγ(delayed)=1.7.
481.1 *1*	149.2	1689.2	25/2$^-$	1208.3	21/2$^-$	E2[@]	0.0242	α(K)=0.0182 *6*; α(L)=0.00460 *14*; α(M)=0.00110 *4*; α(N+..)=0.00033 *1* A_2=+0.26 *6*.
493.7 *1*	63.1	1327.22	19/2$^-$	833.55	15/2$^-$	E2	0.0227	α(K)=0.0171 *6*; α(L)=0.00425 *13*; α(M)=0.00101 *3*; α(N+..)=0.00030 *1* Iγ(delayed)=77.8. DCO=0.70 *5*. A_2=+0.21 *1* for 493.7γ + 494.1γ.
494.1 *1*	23.4	3348.59	35/2$^-$	2854.47	31/2$^-$	E2[@]	0.0226	α(K)=0.0171 *6*; α(L)=0.00424 *13*; α(M)=0.00101 *3*; α(N+..)=0.00030 *1* A_2=+0.21 *1* for 493.7γ + 494.1γ.
499.9 *1*	17.4	3073.84	33/2$^+$	2573.94	29/2$^+$	E2	0.0220	α(K)=0.0167 *5*; α(L)=0.00409 *13*; α(M)=0.00097 *3*; α(N+..)=0.00029 *1* DCO=0.6 *1*. A_2=+0.2 *1*.
503.8 *1*	61.9	1376.24	19/2$^+$	872.51	15/2$^+$	E2	0.0217	α(K)=0.0164 *5*; α(L)=0.00399 *12* DCO=0.65 *5*. A_2=+0.2 *1*.
514.4 *1*	18.9	2156.24	25/2$^+$	1641.59	21/2$^+$	(E2)	0.0206	α(K)=0.0156 *5*; α(L)=0.00375 *12* DCO=0.66 *7*. A_2=+0.2 *1*.

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^{176}Yb(^{11}B,6nγ) 2000Pe18 (continued)

$\gamma(^{181}Re)$ (continued)

E_γ [†]	I_γ [‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [#]	α [b]	Comments
525.4 *1*	65.4	1641.59	21/2$^+$	1116.17	17/2$^+$	E2	0.0196	α(K)=0.0149 *5*; α(L)=0.00352 *11* DCO=0.60 *5*. A_2=+0.3 *1*.
526.3 *1*	13.8	3076.0	31/2$^-$	2549.7	27/2$^-$	E2[@]	0.0195	α(K)=0.0148 *5*; α(L)=0.00350 *11*
528.6 *1*	34.3	2411.47	27/2$^-$	1882.83	23/2$^-$	E2	0.0193	α(K)=0.0147 *5*; α(L)=0.00346 *11* Iγ(delayed)=3.5. DCO=0.7 *2*. A_2=+0.3 *1* for 528.6γ + 529.1γ.
529.1 *1*	64.9	1600.98	21/2$^-$	1071.82	17/2$^-$	E2	0.0192	α(K)=0.0146 *5*; α(L)=0.00345 *11* Iγ(delayed)=8.3. DCO=0.70 *5*. A_2=+0.3 *1* for 528.6γ + 529.1γ.
530.6 *1*	23.6	3623.43	37/2$^-$	3092.87	33/2$^-$	E2	0.0191	α(K)=0.0145 *5*; α(L)=0.00342 *11* DCO=0.9 *1*. A_2=+0.4 *1*.
532.2 *1*	22.5	2412.63	29/2$^+$	1880.35	25/2$^+$	E2[@]	0.0190	α(K)=0.0144 *5*; α(L)=0.00339 *11* Iγ(delayed)=5.7. A_2=+0.3 *1* for 532 triplet.
532.4 *1*	23.6	2709.44	29/2$^+$	2177.06	25/2$^+$	E2	0.0189	α(K)=0.0144 *5*; α(L)=0.00338 *11* DCO=0.55 *15* for 532.4γ + 532.6γ. A_2=+0.3 *1* for 532 triplet.
532.6 *1*	9.5	3347.80	35/2$^+$	2815.20	31/2$^+$	E2	0.0189	α(K)=0.0144 *5*; α(L)=0.00338 *11* DCO=0.55 *15* for 532.6γ + 532.4γ. A_2=+0.3 *1* for 532 triplet.
535.5 *1*	41.7	2177.06	25/2$^+$	1641.59	21/2$^+$	E2[@]	0.0187	α(K)=0.0142 *5*; α(L)=0.00333 *10* A_2=+0.26 *6* for 535.5γ +535.8γ.
535.8 *1*	26.6	2449.12	27/2$^+$	1913.36	23/2$^+$	E2[@]	0.0186	α(K)=0.0142 *5*; α(L)=0.00332 *10* A_2=+0.26 *6* for 535.5γ + 535.8γ.
537.3 *1*	48.0	1913.36	23/2$^+$	1376.24	19/2$^+$	E2	0.0185	α(K)=0.0141 *5*; α(L)=0.00329 *10* A_2=+0.3 *1*.
541.4 *1*	11.2	2990.41	31/2$^+$	2449.12	27/2$^+$	E2	0.0182	α(K)=0.0139 *5*; α(L)=0.00322 *10* DCO=0.6 *2*. A_2=+0.4 *1*.
543.9 *1*	20.3	2426.79	27/2$^-$	1882.79	23/2$^-$	(E2)	0.0180	α(K)=0.0138 *5*; α(L)=0.00318 *10* Iγ(delayed)=2.5. DCO=0.65 *5*. A_2=+0.2 *1*.
555.6[c] *1*	59.0[ca]	1882.79	23/2$^-$	1327.22	19/2$^-$	E2	0.0171	α(K)=0.0131 *4*; α(L)=0.00299 *9* I_γ: or 61.0. Iγ(delayed)=5.1. DCO=0.70 *2*. A_2=+0.2 *2* for doublet.
555.6[c] *1*	61.0[ca]	1882.83	23/2$^-$	1327.22	19/2$^-$	E2	0.0171	α(K)=0.0131 *4*; α(L)=0.00299 *9* I_γ: or 59.0. Iγ(delayed)=5.1.
556.6 *1*	126.5	2245.9	29/2$^-$	1689.2	25/2$^-$	E2[@]	0.0170	α(K)=0.0131 *4*; α(L)=0.00297 *9* A_2=+0.3 *7*.
561.5 *1*	14.1	3271.47	33/2$^+$	2709.44	29/2$^+$	E2	0.0167	α(K)=0.0128 *4*; α(L)=0.00290 *9* E_γ: level-energy difference=562.0. DCO=0.5 *1*. A_2=+0.14 *6*.
565.8 *1*	23.1	3914.41	39/2$^-$	3348.59	35/2$^-$	E2[@]	0.0164	α(K)=0.0126 *4*; α(L)=0.00283 *9* DCO=0.9 *1*. A_2=+0.2 *1*.
568.4 *1*	23.5	3642.25	37/2$^+$	3073.84	33/2$^+$	E2	0.0162	α(K)=0.0125 *4*; α(L)=0.00280 *9*

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^{176}Yb(^{11}B,6nγ) 2000Pe18 (continued)

$\gamma(^{181}Re)$ (continued)

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[b]	Comments
								DCO=0.6 *1*.
								A_2=+0.1 *2* for 568.4γ + 569.1γ.
569.1 *1*	14.8	3332.33	33/2$^-$	2762.93	29/2$^-$	E2	0.0161	α(K)=0.0124 *4*; α(L)=0.00279 *9*
								DCO=0.6 *2*.
								A_2=+0.1 *2* for 568.4γ + 569.1γ.
571.4 *1*	8.6	3618.08	35/2$^-$	3046.80	31/2$^-$	E2	0.0160	α(K)=0.0123 *4*; α(L)=0.00275 *9*
								DCO=0.6 *2*.
								A_2=+0.2 *1*.
574.8 *1*	34.3	2710.44	31/2$^+$	2135.67	27/2$^+$	E2[@]	0.0158	α(K)=0.0122 *4*; α(L)=0.00271 *9*
								Iγ(delayed)=3.3.
								A_2=+0.1 *1*.
576.2 *1*	25.4	2177.26	25/2$^-$	1600.98	21/2$^-$	E2	0.0157	α(K)=0.0121 *4*; α(L)=0.00269 *8*
								Iγ(delayed)=3.5.
								DCO=0.6 *2*.
								A_2=+0.22 *4* for 576.2γ + 576.6γ.
576.6 *1*	21.3	2712.77	29/2$^-$	2136.09	25/2$^-$	E2	0.0157	α(K)=0.0121 *4*; α(L)=0.00268 *8*
								Iγ(delayed)=0.1.
								DCO=0.70 *5*.
								A_2=+0.22 *4* for 576.2γ + 576.6γ.
578.6 *1*	14.2	3046.80	31/2$^-$	2468.22	27/2$^-$	E2	0.0155	α(K)=0.0120 *4*; α(L)=0.00266 *8*
								Iγ(delayed)=1.0.
								DCO=0.7 *2*.
								A_2=+0.2 *1*.
584.2 *1*	9.8	1656.10	21/2$^-$	1071.82	17/2$^-$	(E2)	0.0152	α(K)=0.0117 *4*; α(L)=0.00259 *8*
								Iγ(delayed)=103.8.
								A_2=+0.2 *2*.
585.4 *1*	24.1	2468.22	27/2$^-$	1882.79	23/2$^-$	E2	0.0151	α(K)=0.0117 *4*; α(L)=0.00257 *8*
								Iγ(delayed)=3.1.
								A_2=+0.3 *1* for 585.4γ + 585.8γ.
585.8 *1*	18.9	2762.93	29/2$^-$	2177.26	25/2$^-$	E2	0.0151	α(K)=0.0117 *4*; α(L)=0.00257 *8*
								Iγ(delayed)=0.1.
								DCO=0.65 *5*.
								A_2=+0.3 *1* for 585.4γ + 585.8γ.
591.9 *1*	6.5	3924.29	37/2$^-$	3332.33	33/2$^-$	E2	0.0147	α(K)=0.0114 *4*; α(L)=0.00249 *8*
								DCO=0.65 *15*.
597.3 *1*	14.9	3587.52	35/2$^+$	2990.41	31/2$^+$	E2	0.0144	α(K)=0.0112 *4*; α(L)=0.00243 *8*
								DCO=0.7 *2*.
602.9 *1*	16.5	3678.9	35/2$^-$	3076.0	31/2$^-$	E2[@]	0.0141	α(K)=0.0110 *4*; α(L)=0.00237 *8*
605.0 *1*	25.3	4228.44	41/2$^-$	3623.43	37/2$^-$	E2[@]	0.0140	α(K)=0.0109 *4*; α(L)=0.00234 *7*
								DCO=1.0 *2*.
610.9 *1*	103.0	2856.8	33/2$^-$	2245.9	29/2$^-$	E2[@]	0.0137	α(K)=0.0107 *4*; α(L)=0.00228 *7*
615.0 *1*	12.1	3962.80	39/2$^+$	3347.80	35/2$^+$	E2	0.0135	α(K)=0.0105 *4*; α(L)=0.00224 *7*
								DCO=0.6 *2*.
615.1 *1*	41.9	3027.81	33/2$^+$	2412.63	29/2$^+$	E2[@]	0.0135	α(K)=0.0105 *4*; α(L)=0.00224 *7*
619.2 *1*	12.5	4237.51	39/2$^-$	3618.08	35/2$^-$	E2	0.0133	α(K)=0.0103 *4*; α(L)=0.00220 *7*
								DCO=0.6 *1*.
619.4 *1*	29.8	3030.88	31/2$^-$	2411.47	27/2$^-$	E2	0.0133	α(K)=0.0103 *4*; α(L)=0.00220 *7*
								Iγ(delayed)=5.2.
								DCO=0.7 *1*.
621.3 *1*	31.8	1693.13	17/2$^+$	1071.82	17/2$^-$			Iγ(delayed)=2.1.
631.7 *1*	9.1	3903.30	37/2$^+$	3271.47	33/2$^+$	E2	0.0127	α(K)=0.0099 *3*; α(L)=0.00208 *7*
								DCO=0.70 *15*.
637.7 *1*	12.7	3348.22	(33/2)	2710.44	31/2$^+$			Iγ(delayed)=0.2.
								A_2=+0.2 *1* for 637.7γ + 637.8γ.
637.8 *1*	21.3	4552.26	43/2$^-$	3914.41	39/2$^-$	E2[@]	0.0124	α(K)=0.0097 *3*; α(L)=0.00203 *6*

Continued on next page (footnotes at end of table)

^{176}Yb(^{11}B,6nγ) 2000Pe18 (continued)

$\gamma(^{181}Re)$ (continued)

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[b]	Comments
								DCO=0.9 *1*. A_2=+0.2 *1* for 637.7γ + 637.8γ.
645.9 *1*	12.1	4288.14	41/2$^+$	3642.25	37/2$^+$	E2[@]	0.0121	α(K)=0.0094 *3*; α(L)=0.00196 *6* A_2=+0.2 *1*.
651.3 *1*	70.5	3508.1	37/2$^-$	2856.8	33/2$^-$	E2[@]	0.0118	α(K)=0.0093 *3*; α(L)=0.00192 *6* A_2=+0.3 *1*.
657.7[&] *1*	14.5	3370.83	33/2$^-$	2712.77	29/2$^-$	E2[@]	0.0116	α(K)=0.0091 *3*; α(L)=0.00187 *6* E_γ: level-energy difference=658.1. Iγ(delayed)=0.3.
658.8 *1*	5.9	4583.17	41/2$^-$	3924.29	37/2$^-$	E2	0.0115	α(K)=0.0091 *3*; α(L)=0.00186 *6* DCO=0.7 *2*. A_2=+0.3 *2*.
659.8 *1*	18.7	3370.30	35/2$^+$	2710.44	31/2$^+$	E2[@]	0.0115	α(K)=0.0090 *3*; α(L)=0.00185 *6*
664.5 *1*	3.3	3711.15	35/2$^-$	3046.80	31/2$^-$			Iγ(delayed)=1.9. A_2=+0.2 *1*.
673.6 *1*	6.2	4261.17	39/2$^+$	3587.52	35/2$^+$	E2[@]	0.0110	α(K)=0.0086 *3*; α(L)=0.00175 *6*
675.4 *1*	8.1	4354.3	39/2$^-$	3678.9	35/2$^-$	E2	0.0109	α(K)=0.0086 *3*; α(L)=0.00174 *6* A_2=+0.7 *4*.
679.9 *1*	30.2	3711.15	35/2$^-$	3030.88	31/2$^-$	E2	0.0107	α(K)=0.0085 *3*; α(L)=0.00171 *6* Iγ(delayed)=7.1. DCO=0.85 *10*. A_2=+0.3 *2*.
681.2 *1*	12.8	4909.65	45/2$^-$	4228.44	41/2$^-$	E2	0.0107	α(K)=0.0084 *3*; α(L)=0.00170 *5* DCO=1.0 *2*. A_2=+0.6 *4*.
686.2 *1*	2.7	4916.32	(41/2)	4230.07	(37/2)			
687.9 *1*	0.5	4677.83	(41/2$^-$)	3989.78	(37/2$^-$)	E2	0.0105	α(K)=0.00827 *25*; α(L)=0.00166 *5* A_2=+0.9 *5*.
690.9 *1*	5.3	4653.7	43/2$^+$	3962.80	39/2$^+$	E2	0.0104	α(K)=0.00819 *25*; α(L)=0.00164 *5* A_2=+0.4 *2* for 690.9γ + 691.3γ.
691.3 *1*	5.2	4928.90	43/2$^-$	4237.51	39/2$^-$	E2	0.0104	α(K)=0.00818 *25*; α(L)=0.00163 *5* DCO=0.65 *15*. A_2=+0.4 *2* for 690.9γ + 691.3γ.
693.7 *1*	41.1	4201.8	41/2$^-$	3508.1	37/2$^-$	E2	0.0103	α(K)=0.00812 *25*; α(L)=0.00162 *5* A_2=+0.36 *3*.
696.2 *1*	18.6	3723.95	37/2$^+$	3027.81	33/2$^+$	E2	0.0102	α(K)=0.00806 *25*; α(L)=0.00160 *5* A_2=+0.5 *3*.
701.8 *1*	1.9	5272.99	(43/2)	4571.12	(39/2)			
707.4 *1*	11.7	5259.75	47/2$^-$	4552.26	43/2$^-$	E2[@]	0.0098	α(K)=0.00780 *24*; α(L)=0.00154 *5* DCO=0.9 *1*.
708.0[&] *1*	10.8	4611.97	41/2$^+$	3903.30	37/2$^+$	E2	0.0098	α(K)=0.00778 *24*; α(L)=0.00154 *5* E_γ: level-energy difference=708.7. DCO=0.65 *15*.
716.1 *1*	1.6	5043.72	(43/2$^-$)	4327.55	(39/2$^-$)	E2[@]	0.0096	α=0.0096; α(K)=0.00760 *23*; α(L)=0.00149 *5*
717 *2*	3.0	4586.5	(39/2$^-$)	3869.18	(35/2$^-$)			A_2=+0.4 *2*.
721.5 *1*	5.8	5009.6	45/2$^+$	4288.14	41/2$^+$	E2[@]	0.0094	α=0.0094; α(K)=0.00748 *23*; α(L)=0.00146 *5* A_2=+0.2 *1* for 721.5γ + 722.0γ.
722	0.3	5639.6	(45/2)	4916.32	(41/2)			A_2=+0.2 *1* for 721.5γ + 722.0γ.
742.8 *1*	5.6	5097.1	43/2$^-$	4354.3	39/2$^-$	E2[@]	0.0088	α=0.0088; α(K)=0.00704 *22*; α(L)=0.00136 *4*
746.3 *1*	21.0	4948.1	45/2$^-$	4201.8	41/2$^-$	E2	0.0088	α=0.0088; α(K)=0.00697 *21*; α(L)=0.00134 *4* A_2=+0.4 *1*.
747.8 *1*	1.4	5425.87	(45/2$^-$)	4677.83	(41/2$^-$)	E2[@]	0.0087	α=0.0087; α(K)=0.00695 *21*; α(L)=0.00133 *4* A_2=+0.2 *2* for 747.8γ + 748.4γ.

Continued on next page (footnotes at end of table)

^{176}Yb(^{11}B,6nγ) 2000Pe18 (continued)

$\gamma(^{181}Re)$ (continued)

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[b]	Comments
748.4 *1*	6.3	5009.73	$43/2^+$	4261.17	$39/2^+$	E2[@]	0.0087	α=0.0087; α(K)=0.00693 *21*; α(L)=0.00133 *4* A_2=+0.2 *2* for 747.8γ + 748.4γ.
[x]751.9 *1*	2.4							A_2=+0.26 *5*. E_γ: listed as transition from 5553 keV, $47/2^+$ level in the γ-table of 2000Pe18. There is no lower energy level near 4801 keV of correct J^π. The transition is considered unassigned by evaluator after discussion with the first author.
756.0 *1*	5.2	5665.68	$49/2^-$	4909.65	$45/2^-$	E2[@]	0.0085	α=0.0085; α(K)=0.00679 *21*; α(L)=0.00130 *4* DCO=1.0 *2*.
767.6 *1*	2.8	5421.3	$47/2^+$	4653.7	$43/2^+$	E2	0.00824	α=0.00824; α(K)=0.00658 *20*; α(L)=0.00125 *4* A_2=+0.6 *2*.
772.5 *1*	5.2	6032.23	$51/2^-$	5259.75	$47/2^-$	E2	0.00813	α=0.00813; α(K)=0.00650 *20*; α(L)=0.00123 *4* DCO=1.1 *3*. A_2=+0.3 *1* for 772.5γ + 773.0γ.
773.0 *1*	4.7	5384.97	$45/2^+$	4611.97	$41/2^+$	E2	0.00812	α=0.00812; α(K)=0.00649 *20*; α(L)=0.00123 *4* A_2=+0.3 *1* for 772.5γ + 773.0γ.
776.9 *1*	2.3	5578.05	$(45/2^-)$	4801.05	$(41/2^-)$	E2[@]	0.00803	α=0.00803; α(K)=0.00642 *20*; α(L)=0.00121 *4*
780.5 *1*	0.8	5823.97	$(47/2^-)$	5043.72	$(43/2^-)$	E2[@]	0.00796	α=0.00796; α(K)=0.00636 *19*; α(L)=0.00120 *4*
791	0.5	6456.7	$53/2^-$	5665.68	$49/2^-$	E2	0.00773	α=0.00773; α(K)=0.00619 *19*; α(L)=0.00116 *4* A_2=+0.4 *4*.
793.7 *1*	4.3	5803.3	$49/2^+$	5009.6	$45/2^+$	E2	0.00768	α=0.00768; α(K)=0.00615 *19*; α(L)=0.00115 *4* A_2=+0.5 *3*.
801.1 *1*	1.4	5898.2	$47/2^-$	5097.1	$43/2^-$	E2	0.00753	α=0.00753; α(K)=0.00603 *18*; α(L)=0.00112 *4* A_2=+0.2 *1* for 801.1γ + 801.6γ.
801.6 *1*	0.2	5985.15	$(47/2^-)$	5183.55	$(43/2^-)$			A_2=+0.2 *1* for 801.1γ + 801.6γ.
802.2 *1*	9.8	3512.55	(33/2)	2710.44	$31/2^+$			Mult.: (E2) from A_2=+0.4 *2*. Iγ(delayed)=4.1.
811.0 *1*	8.5	5759.1	$49/2^-$	4948.1	$45/2^-$	E2	0.00734	α=0.00734; α(K)=0.00588 *18*; α(L)=0.00109 *4* A_2=+0.4 *1* for 811.0γ + 812.1γ.
812.1 *1*	0.1	6238.13	$(49/2^-)$	5425.87	$(45/2^-)$	E2	0.00731	α=0.00731; α(K)=0.00587 *18*; α(L)=0.00109 *4* A_2=+0.4 *1* for 812.1γ + 811.0γ.
824.0 *1*	0.2	6402.1	$(49/2^-)$	5578.05	$(45/2^-)$	E2[@]	0.00709	α=0.00709; α(K)=0.00570 *17*; α(L)=0.00105 *4*
829.6 *1*	3.8	6861.8	$55/2^-$	6032.23	$51/2^-$	E2	0.00699	α=0.00699; α(K)=0.00562 *17*; α(L)=0.00103 *3* DCO=0.8 *2*. A_2=+0.1 *1*.
834.4 *1*	2.0	6255.7	$51/2^+$	5421.3	$47/2^+$	E2[@]	0.00691	α=0.00691; α(K)=0.00556 *17*; α(L)=0.00102 *3* A_2=−0.2 *3*.
841.5 *1*	1.6	6665.46	$(51/2^-)$	5823.97	$(47/2^-)$	E2[@]	0.00679	α=0.00679; α(K)=0.00546 *17*; α(L)=0.00100 *3* A_2=−0.1 *2* for 841.5γ + 842.4γ.
842.4 *1*	1.7	6740.6	$51/2^-$	5898.2	$47/2^-$	E2[@]	0.00677	α=0.00677; α(K)=0.00545 *17*; α(L)=0.00099 *3* A_2=−0.1 *2* for 841.5γ + 842.4γ.
852.4 *1*	1.5	6655.8	$53/2^+$	5803.3	$49/2^+$	E2[@]	0.00661	α=0.00661; α(K)=0.00532 *16*; α(L)=0.00097 *3* A_2=−0.1 *2* for 852.4γ + 853.5γ.
853.5 *1*	6.9	3486.18	$(33/2^-)$	2632.61	$29/2^-$			Iγ(delayed)=2.6. A_2=−0.1 *2* for 853.5γ + 852.4γ.
859.4 *1*	89.4	1693.13	$17/2^+$	833.55	$15/2^-$			Iγ(delayed)=3.3. DCO=0.70 *15*. A_2=−0.31 *4* for 859.4γ + 860.5γ.
860.5 *1*	3.2	2549.7	$27/2^-$	1689.2	$25/2^-$			A_2=−0.31 *4* for 859.4γ + 860.5γ.
881.7 *1*	2.2	6640.8	$53/2^-$	5759.1	$49/2^-$	E2[@]	0.00616	α=0.00616; α(K)=0.00498 *15*; α(L)=0.00089 *3*
895.6 *1*	7.7	2103.9	$23/2^-$	1208.3	$21/2^-$			DCO=1.4 *2*.
921.2 *1*	6.1	1743.7	$19/2^-$	822.3	$17/2^-$			DCO=1.40 *25*.
929.2 *1*	2.0	1475.4	$15/2^-$	546.2	$13/2^-$			

Continued on next page (footnotes at end of table)

^{176}Yb(^{11}B,6nγ) 2000Pe18 (continued)

$\gamma(^{181}Re)$ (continued)

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[b]	Comments
949.9 *1*	0.5	7590.7	$57/2^-$	6640.8	$53/2^-$	E2[@]	0.00529	α=0.00529; α(K)=0.00430 *13*; α(L)=0.00075 *2*
1099.8 *1*	10.0	3512.55	(33/2)	2412.63	$29/2^+$			Iγ(delayed)=24.4.

[†] $\Delta(E\gamma)$=0.1 keV for most of the gamma rays, except 2 keV for 357, 361 and 717 in the $(35/2^-)$ isomer band and 0.5 keV for about seven gamma rays quoted to nearest keV in the γ-table of 2000Pe18. (Uncertainties assigned on the basis of a general comment in the γ-table of 2000Pe18 and further clarification from the first author (C. J. Pearson)).

[‡] Prompt (<15 ns) intensities. Uncertainties vary from 20% to over 100%. Delayed (25-1700 ns) intensities are listed under comments.

[#] Assigned by evaluator based on DCO ratios and angular distribution coefficients from 2000Pe18. DCO ≈ 1.7 for stretched dipole transitions and ≈ 0.6 for stretched quadrupole transitions.

[@] Stretched quadrupole transition connecting ΔJ=2 states in the rotational band.

[&] Fitted energy deviates by more than 2 σ's.

[a] Since there are two Eγ's of the same energies deexciting the levels of almost the same energies, either of the two intensities from the γ-table can belong here.

[b] 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.

[c] Multiply placed with intensity suitably divided.

[d] Placement of transition in the level scheme is uncertain.

[x] γ ray not placed in level scheme.

^{176}Yb(^{11}B,6nγ) 2000Pe18

Level Scheme

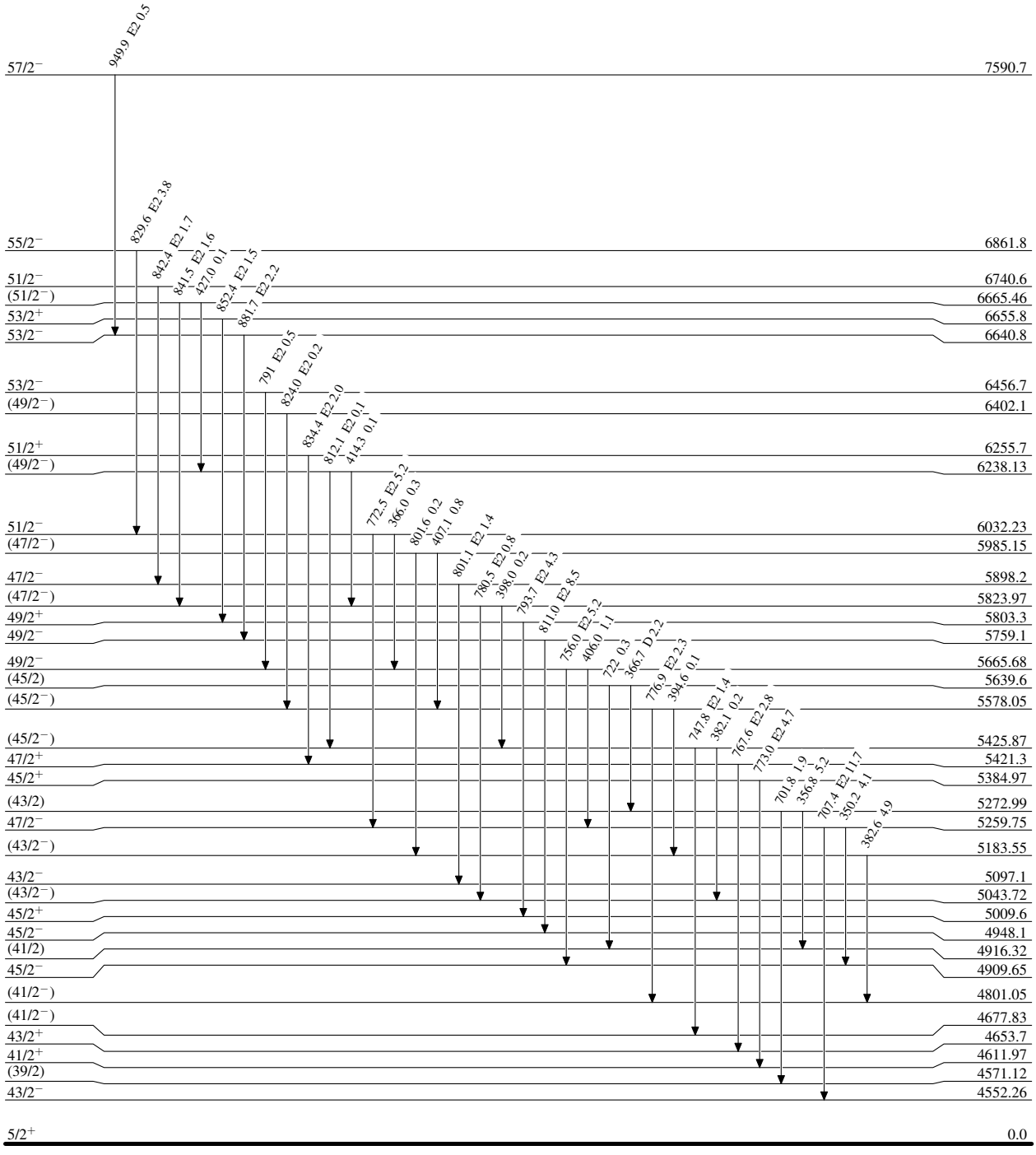
Intensities: Relative I_γ

Legend

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

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

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



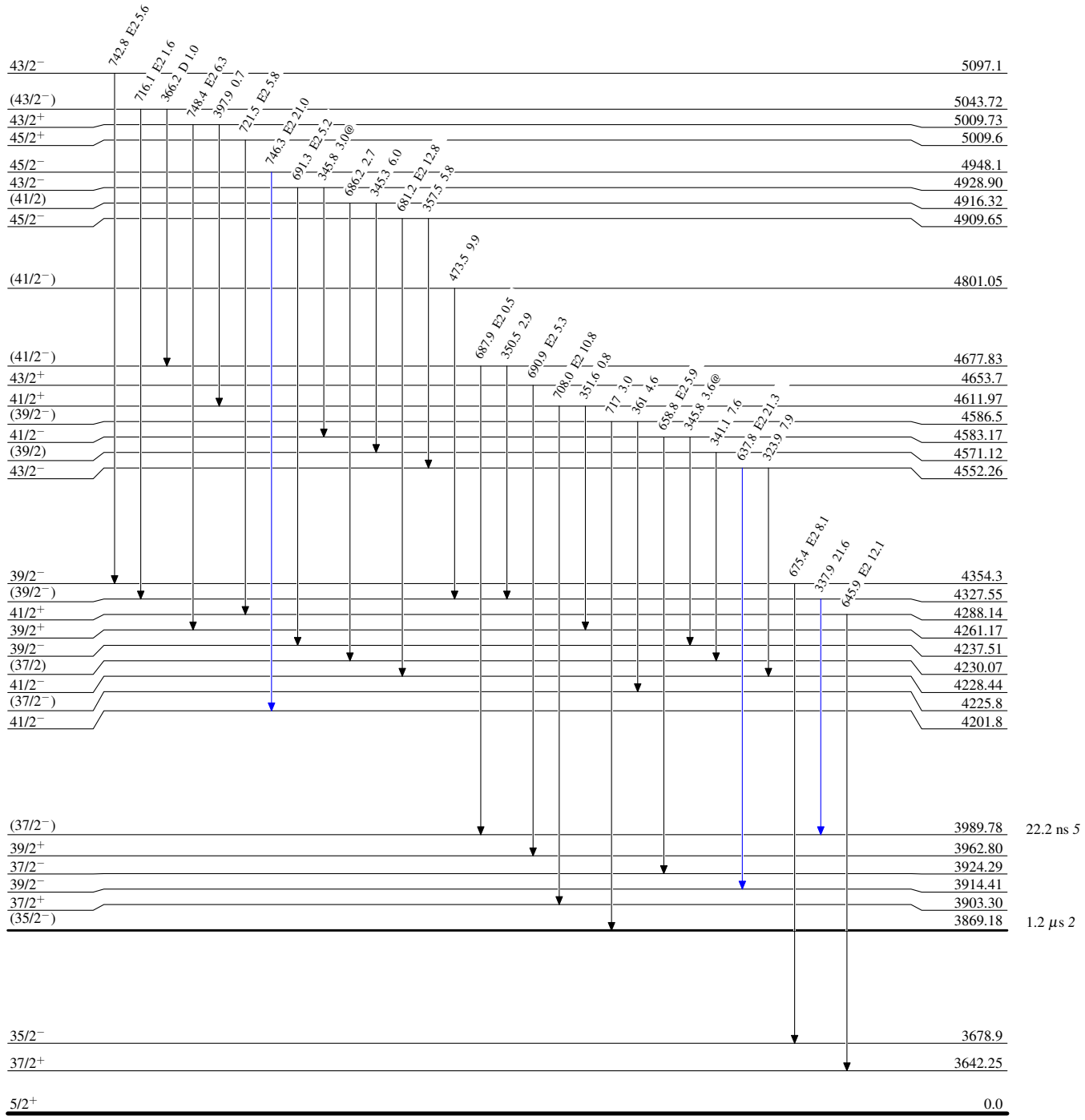
$^{181}_{75}Re_{106}$

^{176}Yb(^{11}B,6nγ) 2000Pe18

Level Scheme (continued)

Intensities: Relative I_γ
@ Multiply placed: intensity suitably divided

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



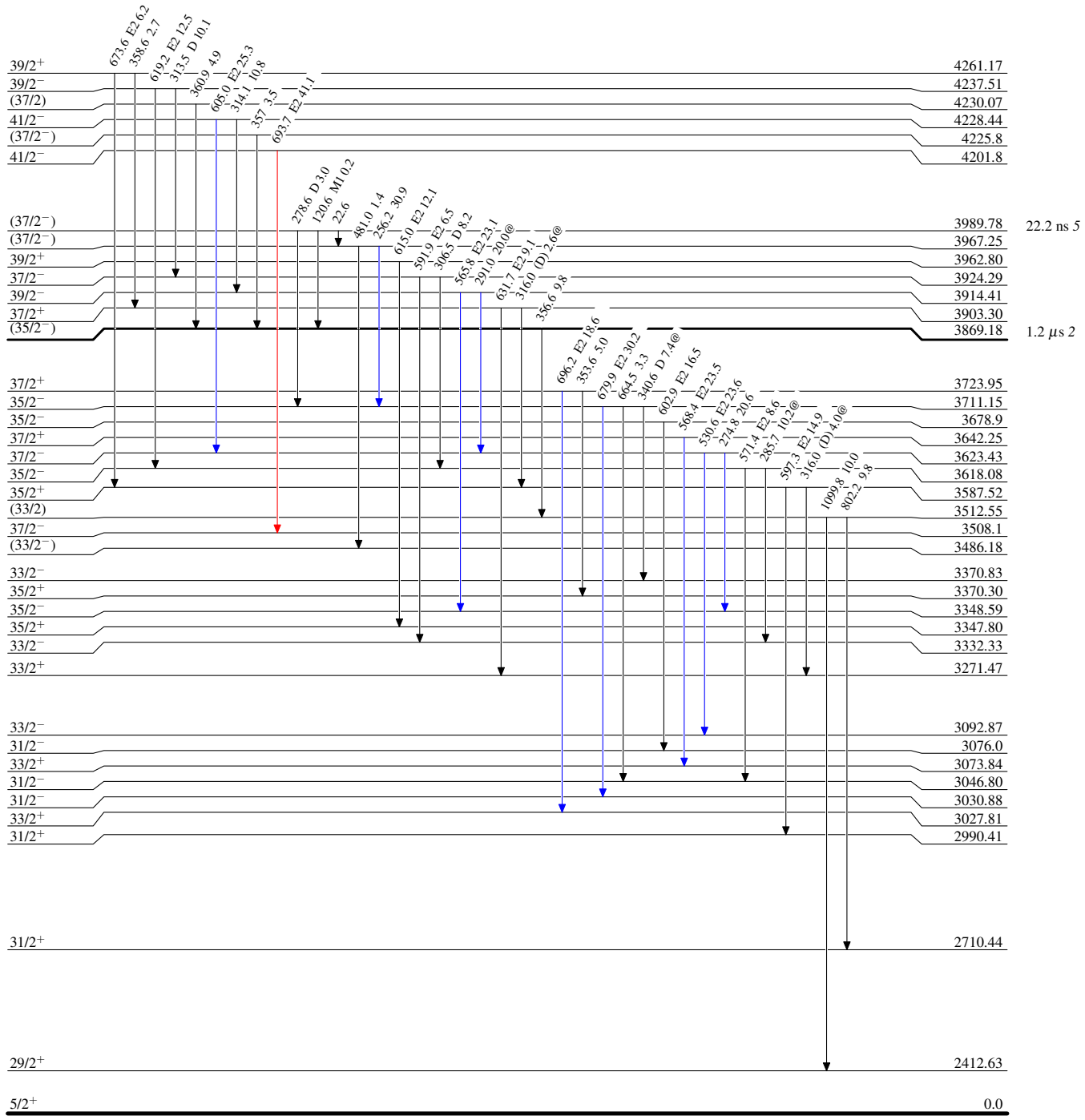
$^{181}_{75}Re_{106}$

^{176}Yb(^{11}B,6nγ) 2000Pe18

Level Scheme (continued)

Intensities: Relative I_γ
@ Multiply placed: intensity suitably divided

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



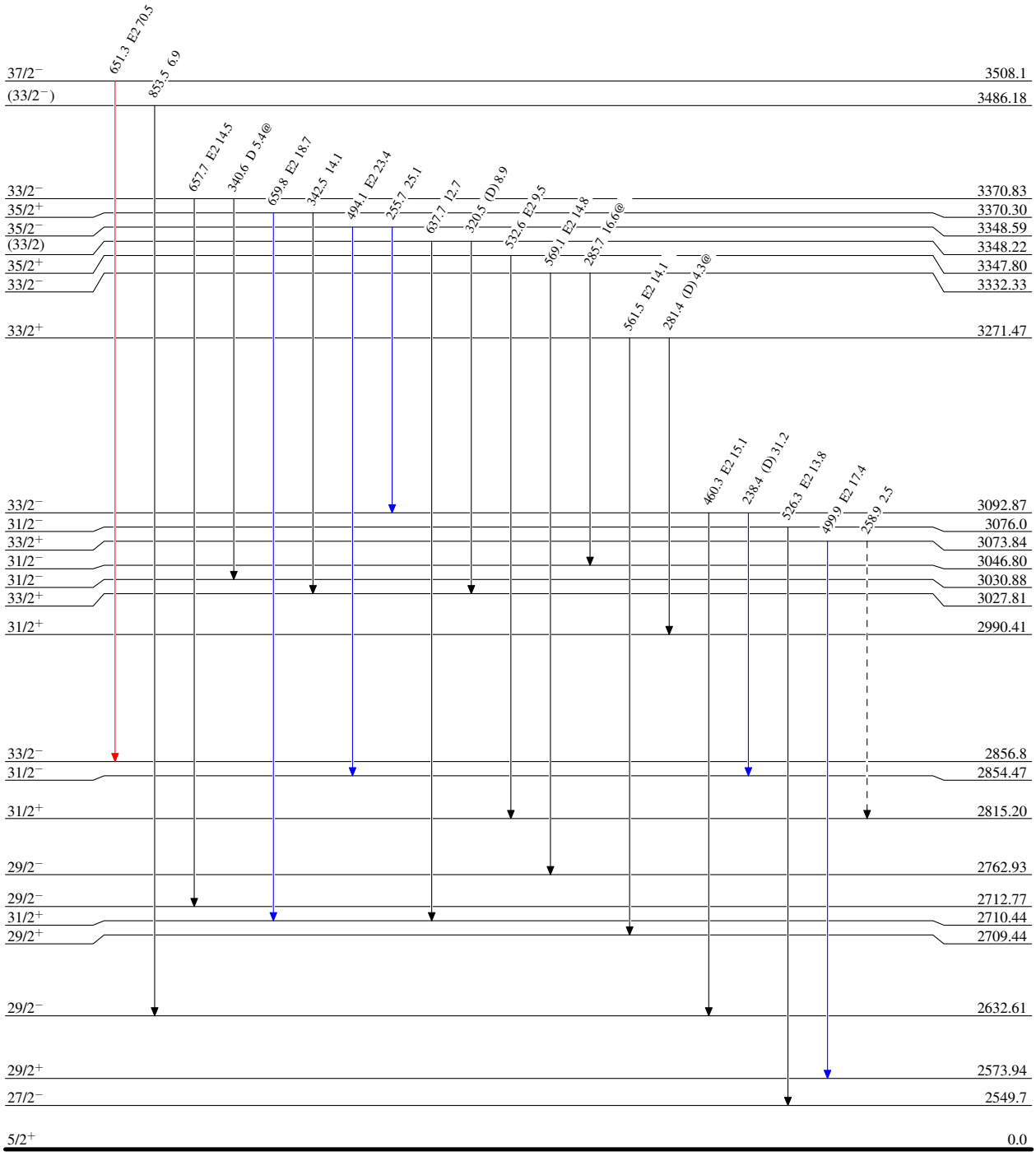
$^{181}_{75}Re_{106}$

^{176}Yb(^{11}B,6nγ) 2000Pe18

Level Scheme (continued)

Intensities: Relative I_γ
@ Multiply placed: intensity suitably divided

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



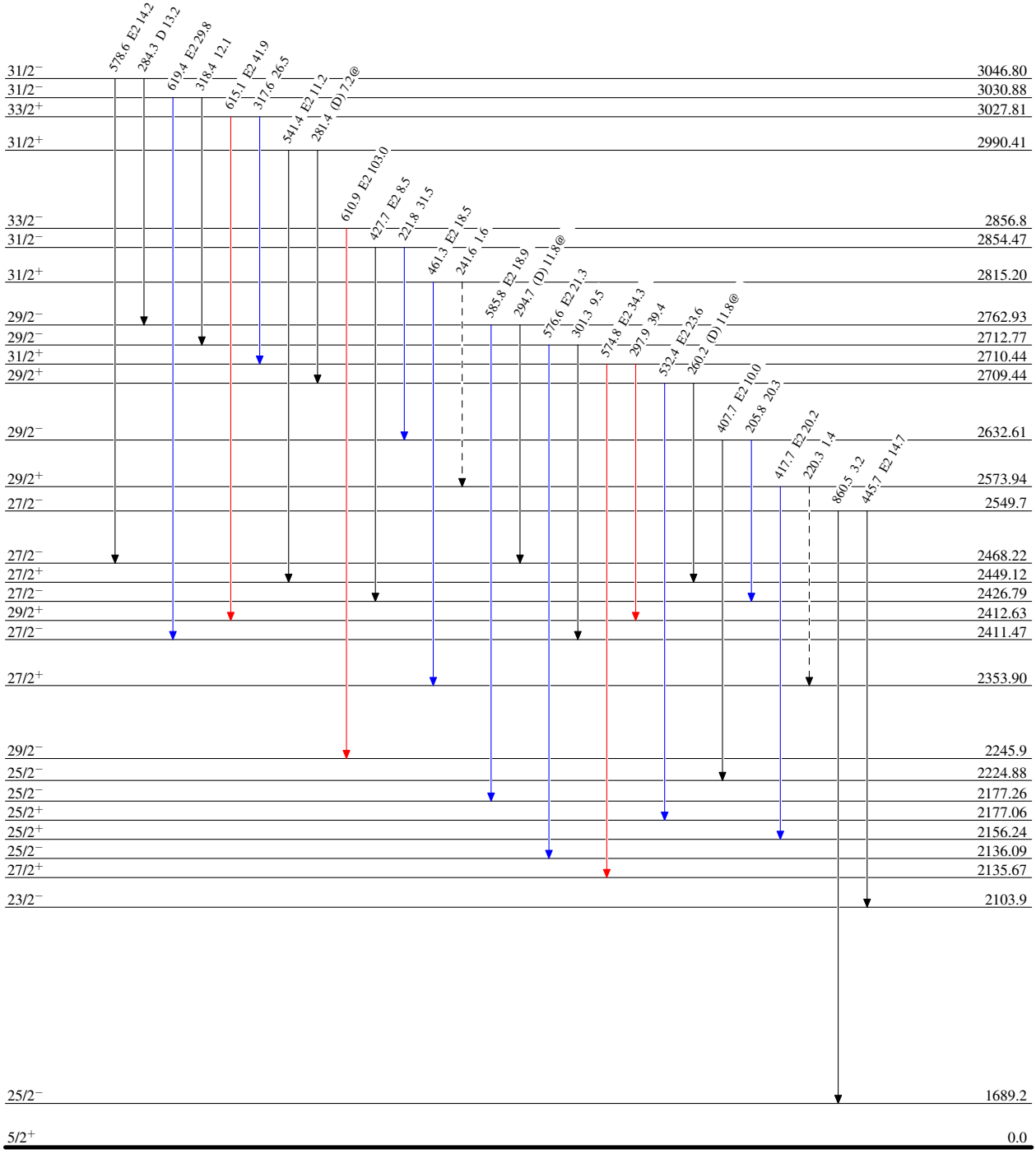
$^{181}_{75}Re_{106}$

^{176}Yb(^{11}B,6nγ) 2000Pe18

Level Scheme (continued)

Intensities: Relative I_γ
@ Multiply placed: intensity suitably divided

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



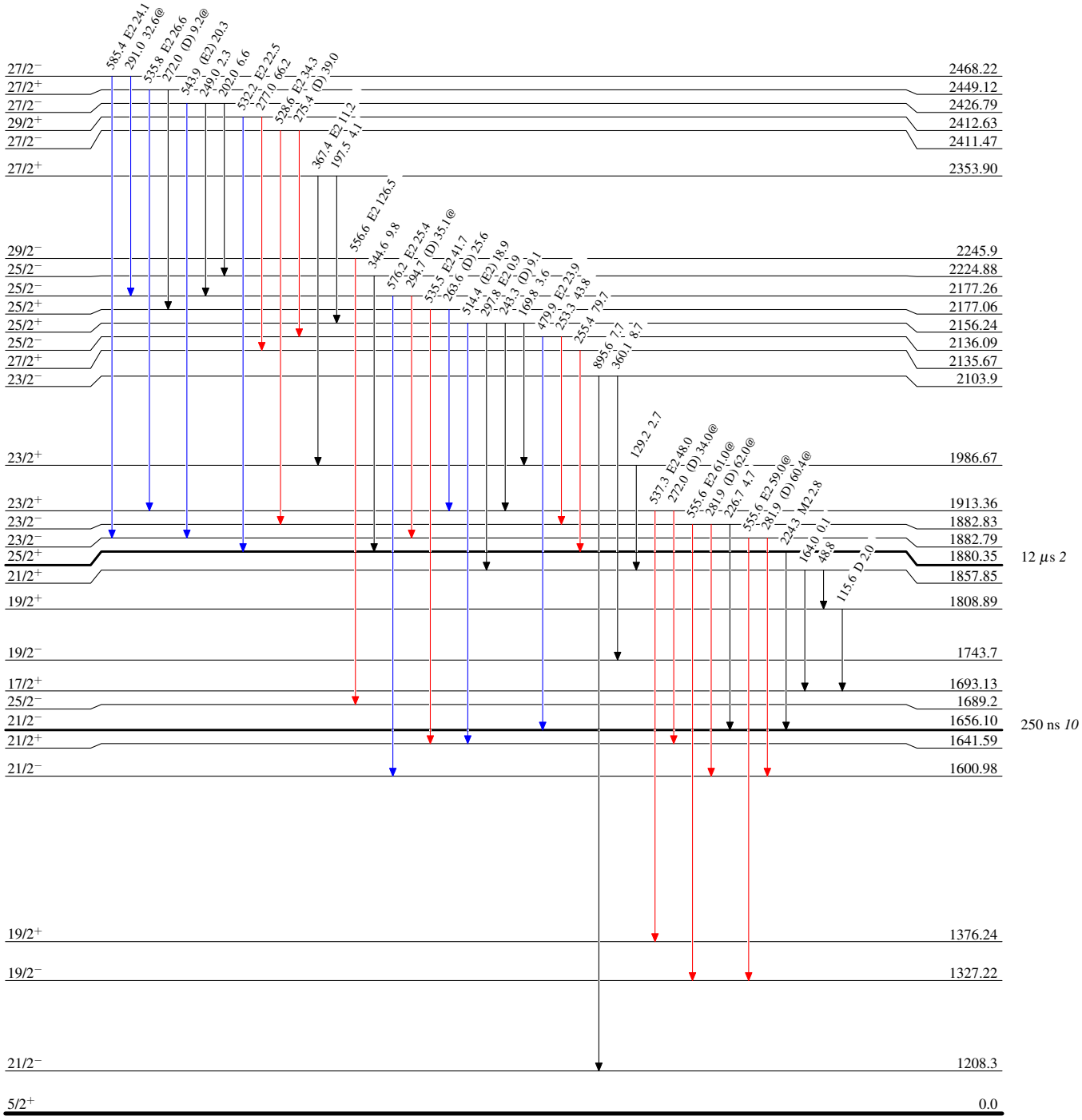
$^{181}_{75}Re_{106}$

^{176}Yb(^{11}B,6nγ) 2000Pe18

Level Scheme (continued)

Intensities: Relative I_γ
@ Multiply placed: intensity suitably divided

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



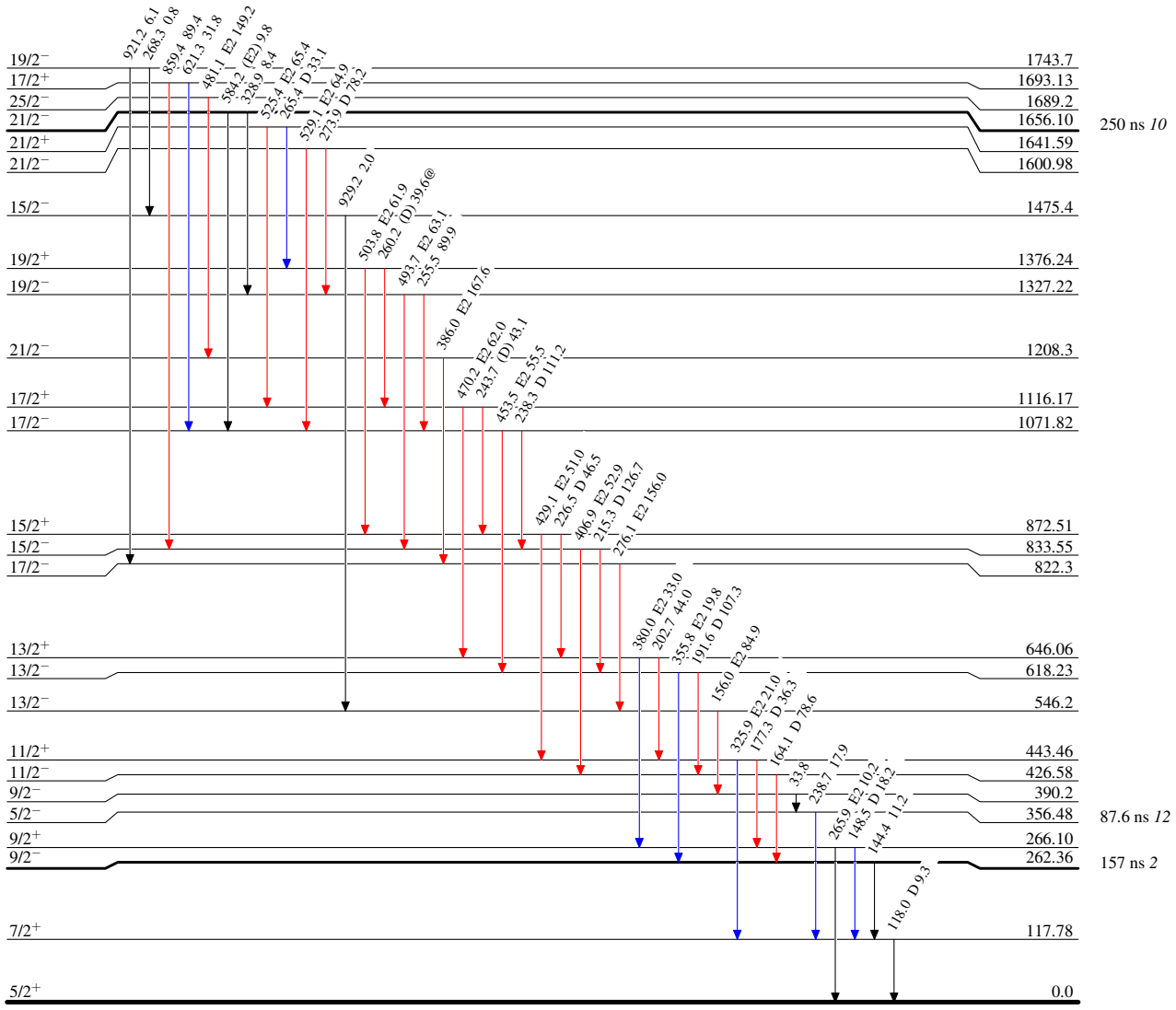
$^{181}_{75}Re_{106}$

^{176}Yb(^{11}B,6nγ) 2000Pe18

Level Scheme (continued)

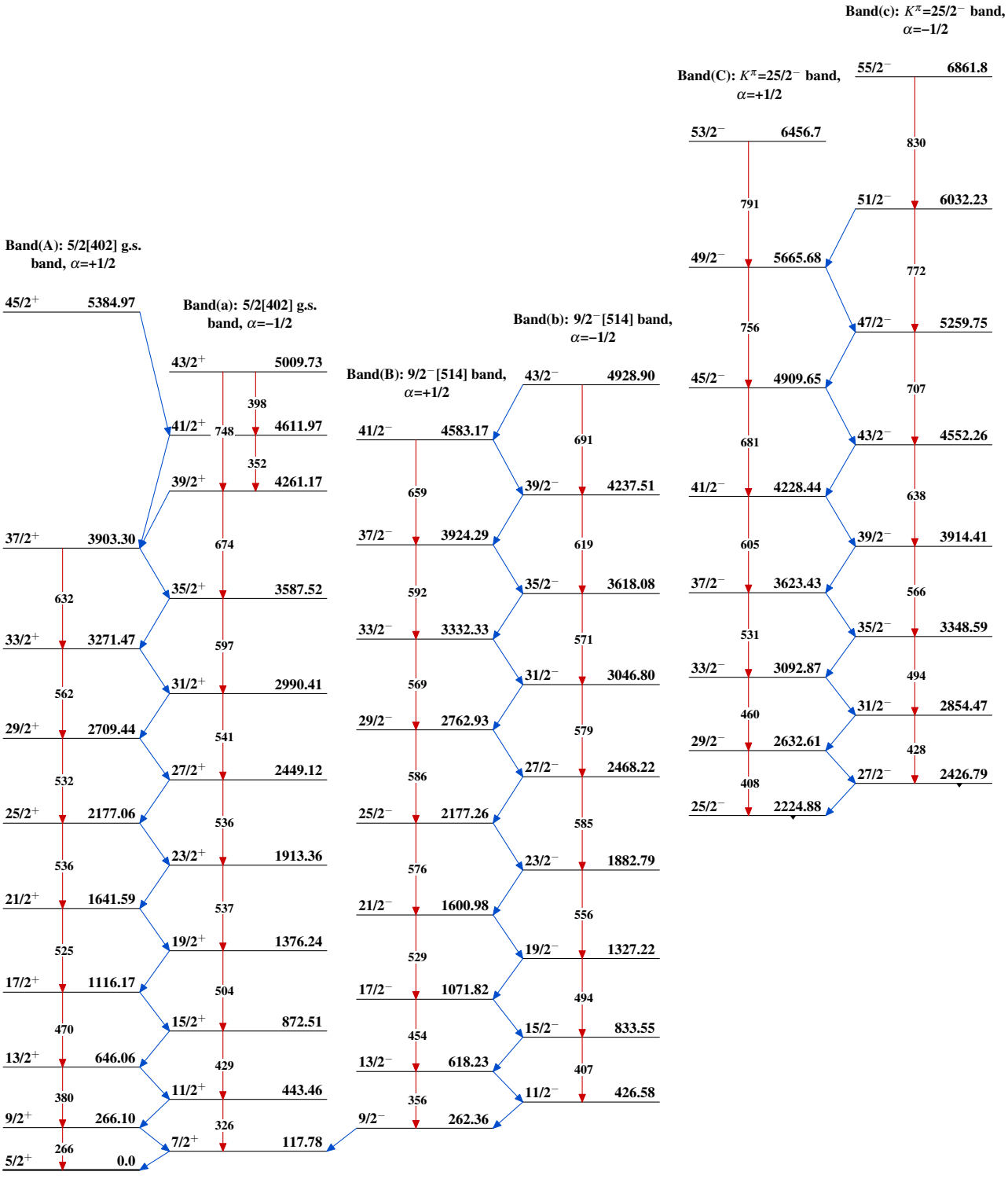
Intensities: Relative I_γ
@ Multiply placed: intensity suitably divided

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



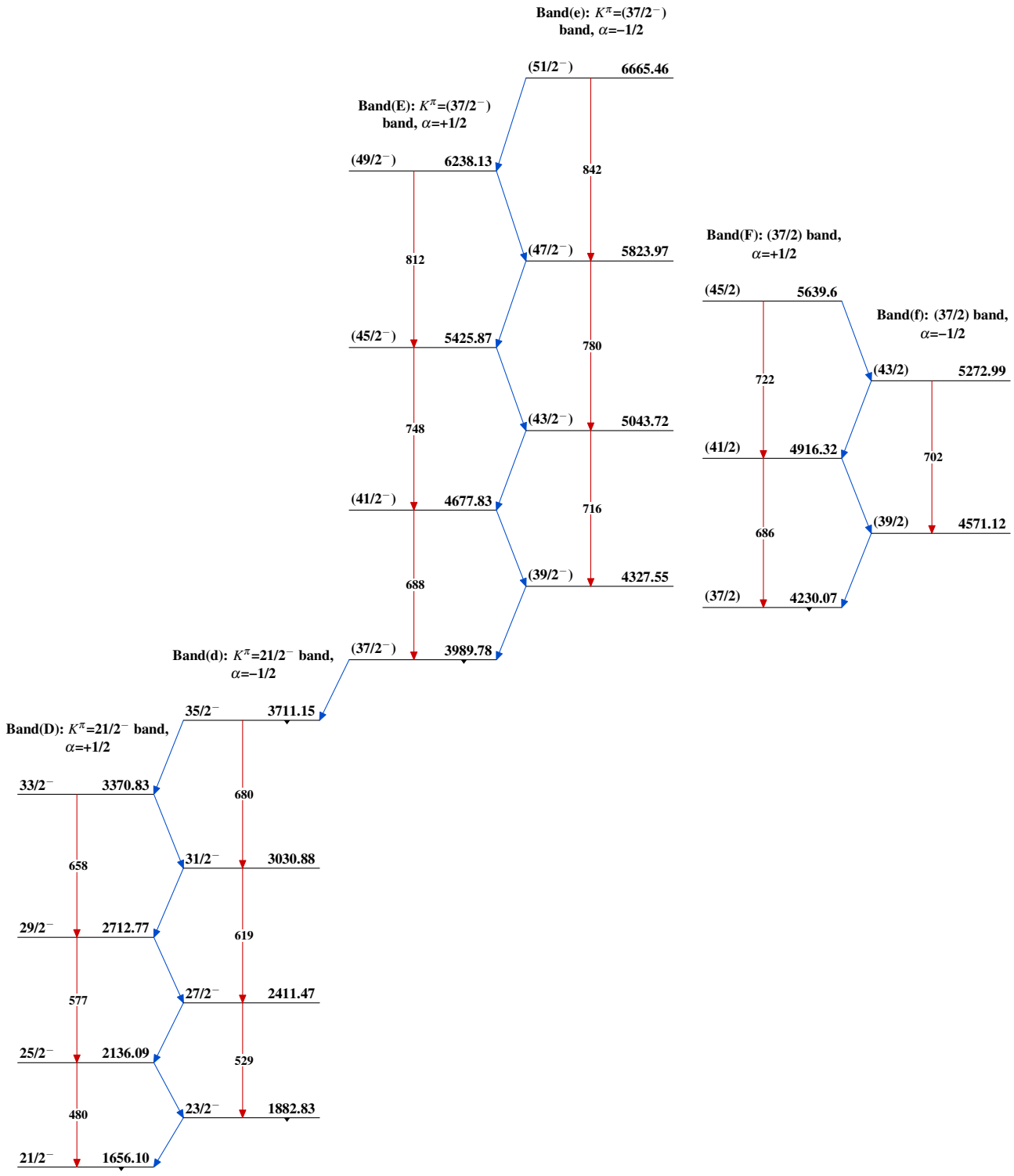
$^{181}_{75}Re_{106}$

^{176}Yb(^{11}B,6nγ) 2000Pe18



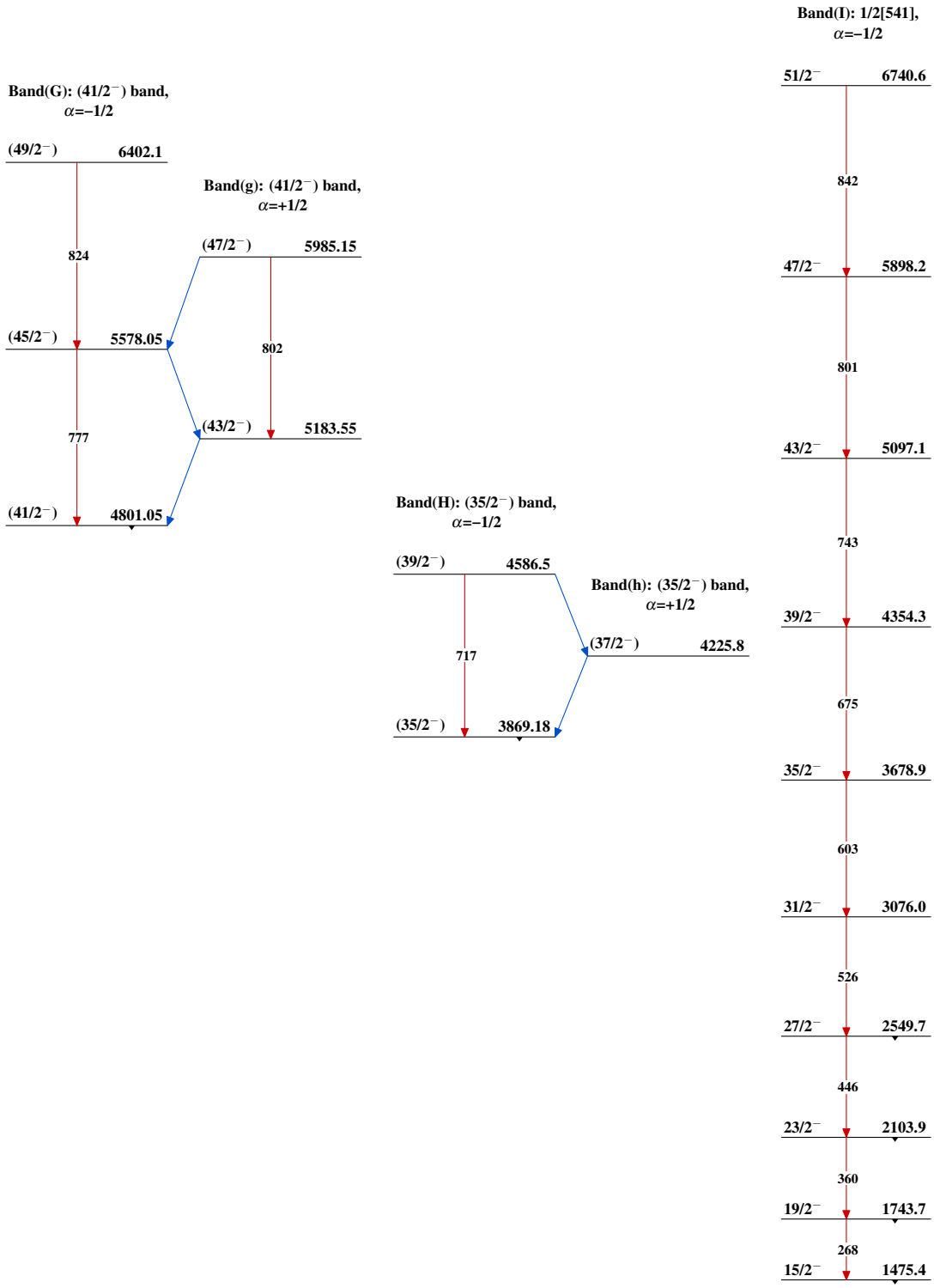
$^{181}_{75}Re_{106}$

^{176}Yb(^{11}B,6nγ) 2000Pe18 (continued)



$^{181}_{75}Re_{106}$

^{176}Yb(^{11}B,6nγ) 2000Pe18 (continued)



$^{181}_{75}Re_{106}$

^{176}Yb(^{11}B,6nγ) 2000Pe18 (continued)