^{168}Er(^{18}O,4nγ) 1982Li04

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	ENSDF	11-Jul-2022

Includes ^{175}Lu(^{11}B,4nγ).
1982Li04: ^{168}Er(^{18}O,4nγ),E=81 MeV. Measured Eγ, Iγ, $\gamma\gamma$-coin, ce, $\gamma(\theta)$.
Others:
1967Bu02 (also 1966Bu08,1967Bu18): ^{175}Lu(^{11}B,4nγ),E=52, 56, 63 MeV. Measured γ, ce, $\gamma(\theta)$, six transitions reported in the g.s. band (to 10^+) and 553γ from 8^- isomer. Delayed intensities are given by 1966Bu08.

^{182}Os Levels

E(level)	J$^\pi$‡	T$_{1/2}$	E(level)	J$^\pi$‡	E(level)	J$^\pi$‡
0.0[@]	0^+		2371.5[g] 4	8^-	3615.8[h] 6	13^-
126.73[@] 24	2^+		2374.7[&] 4	10^+	3617.6[&] 5	16^+
400.1[@] 3	4^+		2380.5[c] 4	9^-	3639.4[d] 7	15^-
793.7[@] 3	6^+		2419.3[e] 4	10^-	3840.6[a] 6	17^+
890.78[f] 24	2^+		2449.7[j] 5	11^-	3850.0[b] 5	16^+
1038.7[f] 3	3^+		2526.1[a] 4	11^+	3857.2[@] 6	18^+
1190.1[f] 3	4^+		2583.4[h] 4	9^-	3874.5?[g] 6	(14^-)
1277.7[@] 4	8^+		2591.1[d] 4	11^-	3904.5[i] 6	16^-
1399.6[f] 4	5^+		2671.2[&] 4	12^+	3905.3[c] 8	15^-
1471.5[d] 3	3^-		2700.8[i] 6	12^-	4071.7[e] 7	16^-
1653.9[d] 3	5^-		2803.5[b] 5	12^+	4185.6[h] 6	15^-
1734.8[c] 4	5^-		2818.9[g] 5	10^-	4238.0[j] 7	17^-
1756.2[e] 4	6^-		2823.9[c] 5	11^-	4275.2[&] 5	18^+
1801.2[g] 3	4^-		2840.7[@] 5	14^+	4293.4[d] 8	17^-
1812.0[@] 4	10^+		2869.4[a] 4	13^+	4466.9[c] 8	17^-
1831.5[†i] 5	8^-	0.78[#] ms 7	2908.6[e] 5	12^-	4467.8[b] 8	18^+
1878.4[d] 4	7^-		2973.1[j] 6	13^-	4476.2[a] 6	19^+
1895.3[h] 3	5^-		3071.7[d] 5	13^-	4480.5[@] 7	20^+
2014.3[j] 5	9^-		3072.0[h] 5	11^-	4599.3[i] 7	18^-
2016.2[c] 4	7^-		3073.0[&] 5	14^+	4640.0[e] 8	18^-
2025.0[g] 4	6^-		3265.5[i] 6	14^-	4766.9[h] 7	(17^-)
2035.2[e] 4	8^-		3291.2[b] 5	14^+	4941.9[j] 7	19^-
2112.3[&] 4	8^+		3304.0[a] 5	15^+	5024.3[&] 6	20^+
2181.6[h] 4	7^-		3320.1[@] 5	16^+	5141.3[b] 9	20^+
2193.2[d] 4	9^-		3330.7[g] 5	12^-	5192.5[@] 7	22^+
2220.5[i] 5	10^-		3337.6[c] 6	13^-	5987.5[@] 8	(24^+)
2245.3[a] 4	9^+		3490.2[e] 5	14^-		
2346.2[@] 4	12^+		3574.1[j] 6	15^-		

† %IT=100.
‡ As proposed by 1982Li04 based on $\gamma(\theta)$ and ce data and associated band structures. The assignments in Adopted Levels are consistent but many are placed in parentheses there.
# From $\gamma\gamma$(t) (1966Bu08).
@ Band(A): g.s. band.
& Band(B): Band based on 8^+, α=0.
a Band(b): Band based on 9^+, α=1.

Continued on next page (footnotes at end of table)

^{168}Er(^{18}O,4nγ) 1982Li04 (continued)

^{182}Os Levels (continued)

[b] Band(C): Band based on 12^+.
[c] Band(D): Band based on 5^-.
[d] Band(E): Octupole band, α=1.
[e] Band(e): Octupole band, α=0.
[f] Band(F): γ band.
[g] Band(G): Band based on 4^-, α=0.
[h] Band(g): Band based on 5^-, α=1.
[i] Band(H): $K^\pi=8^-$ isomer, α=0.
[j] Band(h): $K^\pi=8^-$ isomer, α=1.

^{168}Er(^{18}O,4nγ) 1982Li04 (continued)

$\gamma(^{182}Os)$

E_γ [†]	I_γ [‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[&]	δ[&]	α[b]	Comments
94.0 *3*	0.4 *2*	1895.3	5^-	1801.2	4^-	(D+Q)	≥+0.1		A_2=+0.35 *47* M1+E2 in 1982Li04.
102.2 *3*	1.1 *3*	1756.2	6^-	1653.9	5^-	D+Q	−0.4 *3*		A_2=−0.55 *15*; A_4=−0.12 *20* M1+E2 in 1982Li04.
122.2 *3*	1.8 *3*	1878.4	7^-	1756.2	6^-	D+Q	−0.5 *3*		A_2=−0.59 *10*; A_4=+0.01 *13* M1+E2 in 1982Li04.
126.9 *3*	37 *3*	126.73	2^+	0.0	0^+	E2		1.70 *3*	A_2=+0.21 *1*; A_4=−0.05 *1* α(K)exp=1.21 (1966Bu08) α(K)=0.516 *8*; α(L)=0.897 *16*; α(M)=0.229 *4* I(γ+ce)=100 (1967Bu02).
129.6 *3*	1.3 *2*	2025.0	6^-	1895.3	5^-	(D+Q)	+0.14 *5*		A_2=−0.02 *7*; A_4=+0.06 *10* M1+E2 in 1982Li04.
133.0 *2*	0.6 *2*	2245.3	9^+	2112.3	8^+	M1(+E2)	−0.06 *19*	2.48 *7*	A_2=−0.25 *22* α(exp)=3.4 *9* α(K)=2.05 *10*; α(L)=0.335 *23*; α(M)=0.077 *6* M1+E2 in 1982Li04. α(exp): from intensity balance.
151.5[@] *3*	0.9[#] *3*	2526.1	11^+	2374.7	10^+	(D+Q)			A_2=+0.09 *6*; A_4=−0.15 *8* M1+E2 in 1982Li04.
156.8[d@] *5*	1.8[d#] *4*	2035.2	8^-	1878.4	7^-	(D+Q)			A_2=−0.36 *4*, A_4=−0.01 *5* for doublet. M1+E2 in 1982Li04.
156.8[d@] *5*	1.6[d#] *4*	2181.6	7^-	2025.0	6^-				M1+E2 in 1982Li04.
158.0 *3*	1.1 *2*	2193.2	9^-	2035.2	8^-	D+Q	−0.16 *13*		A_2=−0.40 *10*; A_4=+0.02 *13* M1+E2 in 1982Li04.
182.4 *3*	1.5[#] *6*	1653.9	5^-	1471.5	3^-				E2 in 1982Li04.
182.7[@] *3*	10 *3*	2014.3	9^-	1831.5	8^-	D+Q			A_2=−0.57 *2*, A_4=−0.08 *3* for 182.4+182.7. M1+E2 in 1982Li04. I_γ: this γ ray superimposed by an impurity line.
189.9 *3*	1.2 *4*	2371.5	8^-	2181.6	7^-	D+Q	+0.14 *5*		A_2=−0.02 *7*; A_4=−0.10 *9* M1+E2 in 1982Li04.
198.1[@] *3*	0.9[#] *3*	2869.4	13^+	2671.2	12^+				A_2=−0.03 *5* M1+E2 in 1982Li04.
206.2 *3*	4.3 *6*	2220.5	10^-	2014.3	9^-	D+Q	−0.9 *1*		A_2=−0.98 *3*; A_4=+0.13 *5* M1+E2 in 1982Li04.
211.8 *3*	1.5 *2*	2583.4	9^-	2371.5	8^-	D+Q	+0.11 *6*		A_2=−0.06 *9*; A_4=−0.05 *12* M1+E2 in 1982Li04.
223.0[@] *3*	0.3[#] *2*	3840.6	17^+	3617.6	16^+				A_2=+0.61 *32* M1+E2 in 1982Li04.
223.9 *3*	0.4[#] *3*	2025.0	6^-	1801.2	4^-				E2 in 1982Li04.
224.3 *3*	0.8[#] *3*	1878.4	7^-	1653.9	5^-	(Q)			A_2=+0.54 *21* for 223.0+223.9+224.3. E2 in 1982Li04.

$^{182}_{76}Os_{106}$-3

^{168}Er(^{18}O,4nγ) 1982Li04 (continued)

$\gamma(^{182}Os)$ (continued)

E_γ [†]	I_γ [‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[&]	δ[&]	Comments
226.0 *3*	0.6 *2*	2419.3	10^-	2193.2	9^-	D+Q	−0.5 *4*	A_2=−0.64 *36* M1+E2 in 1982Li04.
229.1 *3*	3.7 *6*	2449.7	11^-	2220.5	10^-	D+Q	−0.4 *1*	A_2=−0.72 *3*; A_4=+0.07 *5* M1+E2 in 1982Li04.
230.5[@] *3*	0.4[#] *2*	3304.0	15^+	3073.0	14^+			M1+E2 in 1982Li04.
232.4[@] *3*	0.6[#] *3*	3073.0	14^+	2840.7	14^+	(D+Q)[a]	−0.4 *1*	A_2=+0.22 *6*; A_4=−0.03 *7* M1+E2 in 1982Li04.
235.4 *3*	1.2 *2*	2818.9	10^-	2583.4	9^-	D+Q	+0.08 *6*	A_2=−0.10 *9*; A_4=+0.02 *11* M1+E2 in 1982Li04.
251.1 *3*	2.5 *5*	2700.8	12^-	2449.7	11^-	D+Q	−0.4 *2*	A_2=−0.66 *5*; A_4=+0.07 *7* M1+E2 in 1982Li04.
253.0 *3*	1.3 *3*	3072.0	11^-	2818.9	10^-	D+Q	+0.07 *4*	A_2=−0.13 *7*; A_4=+0.04 *9* M1+E2 in 1982Li04.
254.4[@] *3*	0.4[#] *2*	1653.9	5^-	1399.6	5^+			A_2=+0.01 *26* E1 in 1982Li04.
258.8 *3*	1.3 *3*	3330.7	12^-	3072.0	11^-	(D+Q)	+0.26 *6*	A_2=+0.15 *6*; A_4=+0.05 *7* M1+E2 in 1982Li04.
272.4[@] *3*	4.3 *20*	2973.1	13^-	2700.8	12^-	D+Q		A_2=−0.12 *8* I_γ: this γ ray superimposed by an impurity line. M1+E2 in 1982Li04.
273.4 *3*	89 *6*	400.1	4^+	126.73	2^+	Q		A_2=+0.25 *1*; A_4=−0.05 *1* I(γ+ce)=92 (1967Bu02). E2 in 1982Li04.
279.1 *3*	2.1 *4*	2035.2	8^-	1756.2	6^-	(Q)		A_2=+0.26 *2*; A_4=−0.04 *4* E2 in 1982Li04.
280.6[@] *3*	1.6[#] *5*	2526.1	11^+	2245.3	9^+	(Q)		A_2=+0.29 *10*; A_4=−0.10 *14* E2 in 1982Li04.
281.4 *5*	1.2 *4*	2016.2	7^-	1734.8	5^-	(Q)		A_2=+0.35 *15*; A_4=−0.39 *25* E2 in 1982Li04.
286.2 *3*	2.3 *6*	2181.6	7^-	1895.3	5^-	Q		A_2=+0.15 *4*; A_4=−0.08 *5* E2 in 1982Li04.
292.3 *3*	1.8 *4*	3265.5	14^-	2973.1	13^-	D(+Q)	−0.07 *8*	A_2=−0.31 *7*; A_4=+0.06 *9* M1+E2 in 1982Li04.
308.6 *3*	1.5 *5*	3574.1	15^-	3265.5	14^-	D(+Q)	−0.05 *9*	A_2=−0.25 *6*; A_4=+0.03 *8* M1+E2 in 1982Li04.
314.8 *3*	3.9 *6*	2193.2	9^-	1878.4	7^-	(Q)		A_2=+0.34 *3*; A_4=−0.08 *5* E2 in 1982Li04.
324.8 *3*	0.6 *3*	2671.2	12^+	2346.2	12^+	(D(+Q))[a]	−0.14 *22*	A_2=+0.26 *6*; A_4=−0.03 *9* M1+E2 in 1982Li04.
330.5 *3*	0.8 *3*	3904.5	16^-	3574.1	15^-	(D+Q)	−0.3 *2*	A_2=−0.68 *15*; A_4=+0.07 *20* I_γ: this γ ray superimposed by an impurity line. M1+E2 in 1982Li04.

$^{182}_{76}Os_{106}$-4

^{168}Er(^{18}O,4nγ) 1982Li04 (continued)

$\gamma(^{182}Os)$ (continued)

E_γ [†]	I_γ [‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [&]	δ [&]	α [b]	Comments
343.3 [@] *3*	2.3 [#] *8*	2869.4	13^+	2526.1	11^+	Q			A_2=+0.33 *2*; A_4=−0.06 *3* E2 in 1982Li04.
346.5 [@] *3*	1.4 [#] *5*	2371.5	8^-	2025.0	6^-	Q			A_2=+0.28 *12*; A_4=−0.22 *18* E2 in 1982Li04.
364.5 [@] *3*	2.6 [#] *8*	2380.5	9^-	2016.2	7^-	Q			A_2=+0.38 *3*; A_4=−0.10 *5* E2 in 1982Li04.
384.2 *3*	2.5 *4*	2419.3	10^-	2035.2	8^-	(Q)			A_2=+0.28 *4*; A_4=−0.05 *6* E2 in 1982Li04.
389.0 *3*	5.9 *9*	2220.5	10^-	1831.5	8^-	(Q)			A_2=+0.29 *2*; A_4=−0.04 *3* E2 in 1982Li04.
393.8 *3*	80 *6*	793.7	6^+	400.1	4^+	E2		0.0422	A_2=+0.25 *1*; A_4=−0.06 *1* α(K)exp=0.032 (1966Bu08) α(K)=0.0300 *5*; α(L)=0.00932 *14*; α(M)=0.00227 *4* I(γ+ce)=70 (1967Bu02).
398.1 *3*	4.8 *7*	2591.1	11^-	2193.2	9^-	Q			A_2=+0.33 *2*; A_4=−0.10 *3* E2 in 1982Li04.
401.0 [e] *3*	1.4 [#] *7*	1801.2	4^-	1399.6	5^+				A_2=+0.33 *5*, A_4=−0.09 *7* for 401.0+401.8. E1 in 1982Li04.
401.8 [d] *5*	2.1 [d#] *6*	2583.4	9^-	2181.6	7^-				E2 in 1982Li04.
401.8 [d] *5*	2.1 [d#] *6*	3073.0	14^+	2671.2	12^+				E2 in 1982Li04.
432.9 *4*	1.0 *3*	1471.5	3^-	1038.7	3^+	(D) [a]			A_2=+0.31 *12*; A_4=+0.12 *16* E1 in 1982Li04.
434.4 [@] *3*	3.2 [#] *10*	3304.0	15^+	2869.4	13^+	(Q)			A_2=+0.32 *3*; A_4=−0.06 *5* E2 in 1982Li04.
435.4 *3*	5.8 *9*	2449.7	11^-	2014.3	9^-	Q			A_2=+0.34 *2*; A_4=−0.06 *3* E2 in 1982Li04.
443.4 *3*	3.3 *5*	2823.9	11^-	2380.5	9^-	(Q)			A_2=+0.37 *4*; A_4=−0.05 *5* E2 in 1982Li04.
447.4 *3*	1.9 *3*	2818.9	10^-	2371.5	8^-	(Q)			A_2=+0.35 *6*; A_4=−0.07 *8* E2 in 1982Li04.
450.2 *3*	0.8 *3*	3291.2	14^+	2840.7	14^+	(D+Q) [a]	−0.6 *2*		A_2=+0.14 *9* M1+E2 in 1982Li04.
457.6 *3*	0.7 *2*	2803.5	12^+	2346.2	12^+	(D+Q)	−0.5 *4*		A_2=+0.16 *15* M1+E2 in 1982Li04.
463.8 *3*	0.9 [#] *3*	1653.9	5^-	1190.1	4^+	D			A_2=−0.13 *6* E1 in 1982Li04.
479.4 *3*	11.6 *12*	3320.1	16^+	2840.7	14^+	Q			A_2=+0.33 *1*; A_4=−0.09 *2* E2 in 1982Li04.
480.4 *3*	4.6 [#] *14*	2700.8	12^-	2220.5	10^-	(Q)			A_2=+0.33 *3*, A_4=−0.08 *5* for 480.4+480.7. E2 in 1982Li04.
480.7 *3*	3.7 [#] *11*	3071.7	13^-	2591.1	11^-				E2 in 1982Li04.

$^{182}_{76}Os_{106}$-5

^{168}Er(^{18}O,4nγ) 1982Li04 (continued)

$\gamma(^{182}Os)$ (continued)

E_γ [†]	I_γ [‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[&]	δ[&]	α[b]	Comments
484.0 *2*	65 *5*	1277.7	8^+	793.7	6^+	E2		0.0247	A_2=+0.25 *1*; A_4=−0.06 *1* α(K)exp=0.018 (1966Bu08) α(K)=0.0184 *3*; α(L)=0.00478 *7*; α(M)=0.001150 *17* I(γ+ce)=63 (1967Bu02).
487.8 *3*	1.8 *6*	3291.2	14^+	2803.5	12^+	(Q)			A_2=+0.26 *5*; A_4=−0.07 *7* E2 in 1982Li04.
488.8[d] *5*	3.2[d#] *9*	2908.6	12^-	2419.3	10^-	(Q)			A_2=+0.30 *2*, A_4=−0.10 *3* for doublet. E2 in 1982Li04.
488.8[d] *3*	2.7[d#] *9*	3072.0	11^-	2583.4	9^-	(Q)			E2 in 1982Li04.
494.5 *3*	18.0 *13*	2840.7	14^+	2346.2	12^+	Q			A_2=+0.35 *1*; A_4=−0.11 *2* E2 in 1982Li04.
511.7 *3*		3330.7	12^-	2818.9	10^-				E2 in 1982Li04.
513.7[@] *3*	2.4[#] *8*	3337.6	13^-	2823.9	11^-	(Q)			A_2=+0.57 *19* E2 in 1982Li04.
523.3 *3*	4.3 *6*	2973.1	13^-	2449.7	11^-	Q			A_2=+0.38 *3*; A_4=−0.09 *6* E2 in 1982Li04.
530.0 *3*	0.4 *2*	3850.0	16^+	3320.1	16^+	(D+Q)	−0.6 *4*		A_2=+0.16 *17* M1+E2 in 1982Li04.
534.2[d] *5*	38[d#] *8*	1812.0	10^+	1277.7	8^+	(Q)			A_2=+0.34 *1*, A_4=−0.09 *2* for doublet. I(γ+ce)=44 (1967Bu02) for doublet. E2 in 1982Li04.
534.2[d] *5*	30[d#] *6*	2346.2	12^+	1812.0	10^+	(Q)			E2 in 1982Li04. I(γ+ce)=44 (1967Bu02) for doublet.
536.5 *10*		3840.6	17^+	3304.0	15^+				E2 in 1982Li04.
537.1 *3*	7.7 *9*	3857.2	18^+	3320.1	16^+	Q			A_2=+0.41 *4*; A_4=−0.11 *6* E2 in 1982Li04.
543.8[d] *3*	1.9[d#] *5*	3615.8	13^-	3072.0	11^-	(Q)			A_2=+0.31 *4*, A_4=−0.03 *5* for doublet. E2 in 1982Li04.
543.8[de] *3*	0.3[d#] *3*	3874.5?	(14^-)	3330.7	12^-				E2 in 1982Li04.
544.6[c] *5*	2.6[c] *5*	1734.8	5^-	1190.1	4^+	(D)			A_2=+0.17 *6*, A_4=−0.05 *9* for doublet. (E1) in 1982Li04.
544.6[c] *5*	2.6[c] *5*	3617.6	16^+	3073.0	14^+				E2 in 1982Li04.
553.8 *3*	15.9 *16*	1831.5	8^-	1277.7	8^+	E1		0.00617	A_2=0.00 *1*; A_4=0.00 *1* α(K)exp=0.0051 (1966Bu08) α(K)=0.00517 *8*; α(L)=0.000776 *11*; α(M)=0.0001762 *25*
558.6 *3*	3.6 *5*	3850.0	16^+	3291.2	14^+	(Q)			A_2=+0.53 *16* E2 in 1982Li04.
561.6 *3*	1.1 *3*	4466.9	17^-	3905.3	15^-	(Q)			A_2=+0.26 *15* E2 in 1982Li04.
562.8 *3*	1.7 *5*	2374.7	10^+	1812.0	10^+	(D(+Q))[a]	+0.2 *3*		A_2=+0.58 *20* M1+E2 in 1982Li04.

$^{182}_{76}Os_{106}$-6

^{168}Er(^{18}O,4nγ) 1982Li04 (continued)

$\gamma(^{182}Os)$ (continued)

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[&]	α[b]	Comments
564.7 *3*	4.1 *7*	3265.5	14^-	2700.8	12^-	(Q)		A_2=+0.34 *2*; A_4=−0.02 *3* E2 in 1982Li04.
567.7[d] *5*	2.0[d#] *7*	3639.4	15^-	3071.7	13^-	(Q)		A_2=+0.35 *2*, A_4=−0.08 *3* for doublet. E2 in 1982Li04.
567.7[d] *5*	1.4[d#] *5*	3905.3	15^-	3337.6	13^-			E2 in 1982Li04.
568.3 *3*	2.1[#] *7*	4640.0	18^-	4071.7	16^-			E2 in 1982Li04.
569.8 *3*	1.4[#] *7*	4185.6	15^-	3615.8	13^-	(Q)		A_2=+0.62 *25* E2 in 1982Li04.
580.5[@] *3*	1.6[#] *6*	1471.5	3^-	890.78	2^+			E1 in 1982Li04.
581.3 *3*	1.0[#] *5*	4766.9	(17^-)	4185.6	15^-			E2 in 1982Li04.
581.5[c] *5*	4.3[c#] *11*	3490.2	14^-	2908.6	12^-	(Q)		A_2=+0.33 *4*, A_4=−0.11 *6* for 581.3+581.5+581.5. E2 in 1982Li04.
581.5[c] *5*	4.3[c#] *11*	4071.7	16^-	3490.2	14^-			E2 in 1982Li04.
601.2 *3*	3.0 *6*	3574.1	15^-	2973.1	13^-	(Q)		A_2=+0.33 *5*; A_4=−0.03 *7* E2 in 1982Li04.
611.4 *3*	0.8 *3*	1801.2	4^-	1190.1	4^+	(D)[a]		A_2=+0.34 *16*; A_4=+0.01 *20* E1 in 1982Li04.
617.8 *3*	3.3 *5*	4467.8	18^+	3850.0	16^+	(Q)		A_2=+0.51 *13*; A_4=+0.02 *20* E2 in 1982Li04.
623.3 *3*	3.4 *5*	4480.5	20^+	3857.2	18^+	Q		A_2=+0.33 *3*; A_4=−0.11 *5* E2 in 1982Li04.
635.6 *3*	1.4 *3*	4476.2	19^+	3840.6	17^+	(Q)		A_2=+0.34 *11*; A_4=−0.04 *15* E2 in 1982Li04.
638.9[@] *3*	3.6 *9*	3904.5	16^-	3265.5	14^-	(Q)		A_2=+0.20 *5*; A_4=−0.08 *8* I_γ: line is superimposed. E2 in 1982Li04.
654.0 *3*	1.3 *3*	4293.4	17^-	3639.4	15^-	(Q)		A_2=+0.33 *13*; A_4=−0.09 *20* E2 in 1982Li04.
657.6 *3*	1.5 *3*	4275.2	18^+	3617.6	16^+	(Q)		A_2=+0.61 *25* E2 in 1982Li04.
663.9 *3*	2.4 *5*	4238.0	17^-	3574.1	15^-	(Q)		A_2=+0.22 *6*; A_4=−0.01 *9* E2 in 1982Li04.
674.4 *3*	1.7 *6*	5141.3	20^+	4467.8	18^+	(Q)		A_2=+0.30 *19*; A_4=−0.15 *23* E2 in 1982Li04.
694.8 *3*	1.2 *4*	4599.3	18^-	3904.5	16^-	(Q)		A_2=+0.24 *13*; A_4=−0.03 *19* E2 in 1982Li04.
703.9 *3*	0.4 *2*	4941.9	19^-	4238.0	17^-			A_2=+0.3 *3* E2 in 1982Li04.
705.2 *3*	1.4 *4*	1895.3	5^-	1190.1	4^+	E1	0.00378	A_2=−0.06 *8*; A_4=+0.08 *11* α(K)exp<0.0046 α(K)=0.00317 *5*; α(L)=0.000468 *7*; α(M)=0.0001061 *15*
712.0 *3*	1.6 *4*	5192.5	22^+	4480.5	20^+	E2	0.01006	A_2=+0.28 *7*; A_4=−0.14 *10*

$^{182}_{76}Os_{106}$-7

^{168}Er(^{18}O,4nγ) 1982Li04 (continued)

$\gamma(^{182}Os)$ (continued)

E_γ [†]	I_γ [‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[&]	δ[&]	α[b]	Comments
									α(K)exp=0.011 *4* α(K)=0.00797 *12*; α(L)=0.001601 *23*; α(M)=0.000377 *6*
726.9 *3*	3.5 *5*	3073.0	14^+	2346.2	12^+	E2		0.00961	A_2=+0.28 *3*; A_4=−0.06 *4* α(K)exp=0.0066 *19* α(K)=0.00764 *11*; α(L)=0.001518 *22*; α(M)=0.000357 *5*
738.6 *3*	0.7 *2*	2016.2	7^-	1277.7	8^+	E1		0.00345	A_2=−0.25 *12* α(K)exp<0.0082 α(K)=0.00290 *4*; α(L)=0.000426 *6*; α(M)=9.66×10^{-5} *14*
749.1 *3*	0.9 *2*	5024.3	20^+	4275.2	18^+	(Q)			A_2=+0.23 *13*; A_4=+0.02 *19* E2 in 1982Li04.
762.6 *3*	0.6 *3*	1801.2	4^-	1038.7	3^+	D			A_2=−0.14 *12* E1 in 1982Li04.
764.0 *3*	1.2 *4*	890.78	2^+	126.73	2^+	M1+E2	>4	0.015 *7*	α(K)=0.013 *6*; α(L)=0.0021 *8*; α(M)=0.00048 *17* α(N)=0.00012 *5*; α(O)=2.0×10^{-5} *8*; α(P)=1.4×10^{-6} *7* δ: ≥+14 or ≤−4 from A_2=−0.17 *13*.
776.8 *3*	1.9 *3*	3617.6	16^+	2840.7	14^+	Q			A_2=+0.25 *5*; A_4=−0.15 *7* E2 in 1982Li04.
790.1 *3*	2.8 *6*	1190.1	4^+	400.1	4^+	E2(+M1)	>+3	0.0087 *7*	A_2=−0.06 *5*; A_4=−0.07 *6* α(K)exp=0.0067 *17* α(K)=0.0070 *6*; α(L)=0.00130 *8*; α(M)=0.000303 *17*
795.0[@] *3*	0.6[#] *3*	5987.5	(24^+)	5192.5	22^+				A_2=−0.21 *7*; A_4=−0.04 *9* E2 in 1982Li04. $\gamma(\theta)$ data for mixed 795γ and an impurity line. Mult.: ΔJ=2, E2 assigned by 1982Li04; but in $\gamma(\theta)$ sign of A_2 should be positive for such transitions. The negative sign of A_2 may be due to contribution from an impurity line.
834.6 *3*	1.8[#] *6*	2112.3	8^+	1277.7	8^+	M1		0.01773	α(K)exp=0.018 *10* α(K)=0.01477 *21*; α(L)=0.00228 *4*; α(M)=0.000522 *8* M1(+E2) or M1+E2 in 1982Li04.
859.2 *3*	3.0[#] *8*	2671.2	12^+	1812.0	10^+	(E2)		0.00675	α(K)=0.00545 *8*; α(L)=0.001003 *14*; α(M)=0.000234 *4* A_2=+0.11 *3*, A_4=−0.07 *4* for 859.2+860.1. α(K)exp=0.0043 *10* for 859.2+860.1. E2 in 1982Li04.
860.1 *3*	3.0[#] *8*	1653.9	5^-	793.7	6^+	(E1)		0.00258	α(K)=0.00217 *3*; α(L)=0.000316 *5*; α(M)=7.14×10^{-5} *10* A_2=+0.11 *3*, A_4=−0.07 *4* for 859.2+860.1. α(K)exp=0.0043 *10* for 859.2+860.1. E1 in 1982Li04.
890.6 *3*	1.1 *2*	890.78	2^+	0.0	0^+	E2		0.00627	A_2=+0.41 *12*; A_4=+0.02 *16* α(K)exp=0.0047 *8* α(K)=0.00508 *8*; α(L)=0.000921 *13*; α(M)=0.000214 *3*
912.2 *3*	3.0 *5*	1038.7	3^+	126.73	2^+	E2+M1	>8		A_2=+0.08 *5*; A_4=+0.05 *7* α(K)exp=0.0036 *12* δ: ≥+8 or ≤−17 from $\gamma(\theta)$; α(K)exp also suggests dominant E2.

$^{182}_{76}Os_{106}$-8

^{168}Er(^{18}O,4nγ) 1982Li04 (continued)

$\gamma(^{182}Os)$ (continued)

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[&]	α[b]	Comments
945.0 *3*	0.9 *2*	3291.2	14^+	2346.2	12^+	E2	0.00556	A_2=+0.28 *11*; A_4=−0.02 *15* α(K)exp=0.0049 *26* α(K)=0.00452 *7*; α(L)=0.000802 *12*; α(M)=0.000186 *3*
955.2 *3*	0.4 *2*	4275.2	18^+	3320.1	16^+			A_2=+0.16 *23* E2 in 1982Li04.
991.5 *3*	1.0 *2*	2803.5	12^+	1812.0	10^+	(Q)		A_2=+0.34 *16* E2 in 1982Li04.
999.4 *3*	3.6 *6*	1399.6	5^+	400.1	4^+	E2(+M1)	0.008 *4*	A_2=0.00 *4*; A_4=+0.07 *6* α(K)exp=0.0042 *16* α(K)=0.007 *3*; α(L)=0.0011 *4*; α(M)=0.00025 *9* δ(Q/D)≥17.
1009.4 *3*	0.7 *2*	3850.0	16^+	2840.7	14^+	(Q)		A_2=+0.81 *45* E2 in 1982Li04.
1063.3 *3*	1.7 *4*	1190.1	4^+	126.73	2^+	(Q)		A_2=+0.59 *9*; A_4=+0.02 *13* E2 in 1982Li04.
1097.0 *3*	1.7 *4*	2374.7	10^+	1277.7	8^+	E2	0.00414	A_2=+0.37 *7*; A_4=−0.17 *10* α(K)exp=0.0038 *22* α(K)=0.00339 *5*; α(L)=0.000573 *8*; α(M)=0.0001323 *19*
1101.6 *3*	0.7 *2*	1895.3	5^-	793.7	6^+	(E1)	1.63×10^{-3}	α(K)exp<0.0020 α(K)=0.001378 *20*; α(L)=0.000198 *3*; α(M)=4.47×10^{-5} *7* A_2=−0.13 *8*; A_4=−0.11 *10* for 1101.6+1102.7.
1102.7 *3*	0.5 *2*	2380.5	9^-	1277.7	8^+			E1 in 1982Li04.
1222.4[@] *3*	1.8[#] *5*	2016.2	7^-	793.7	6^+	E1	1.38×10^{-3}	A_2=−0.02 *12* α(K)exp=0.0020 *6* α(K)=0.001146 *16*; α(L)=0.0001638 *23*; α(M)=3.70×10^{-5} *6*
1253.9 *3*	4.1 *7*	1653.9	5^-	400.1	4^+	E1	1.34×10^{-3}	A_2=−0.15 *4*; A_4=−0.07 *6* α(K)exp=0.0004 *4* α(K)=0.001096 *16*; α(L)=0.0001565 *22*; α(M)=3.53×10^{-5} *5*
1318.4 *3*	0.3 *2*	2112.3	8^+	793.7	6^+	(Q)		A_2=+0.5 *4* E2 in 1982Li04.
1334.8 *3*	0.5 *2*	1734.8	5^-	400.1	4^+			A_2=−0.15 *39* E1 in 1982Li04.
1495.1 *3*	1.6 *5*	1895.3	5^-	400.1	4^+			E1 in 1982Li04.

[†] Uncertainty of 0.3 keV is assigned for most transitions, 0.5 keV for unresolved lines as proposed by 1982Li04.
[‡] Transition intensities are also deduced by 1982Li04 based on multipolarities assigned by these authors as E2 for ΔJ=2, M1+E2 or E1 for ΔJ=1, and in a few ΔJ=0 cases and E1 in some cases.
[#] From $\gamma\gamma$ coin.
[@] Line is superimposed in $\gamma(\theta)$ data.
[&] From $\gamma\gamma(\theta)$ and Ice(K) measurements of 1982Li04. When only $\gamma(\theta)$ data are available, the evaluator assigns mult=Q to ΔJ=2 transitions and mult=D or D+Q

$^{182}_{76}Os_{106}$-9

^{168}Er(^{18}O,4nγ) 1982Li04 (continued)

$\gamma(^{182}Os)$ (continued)

to ΔJ=1 or 0 transitions. From associated band structures ΔJ=2, Q transitions are expected as E2 and ΔJ=1, 0 transitions as E1 for pure dipole and M1+E2 for admixtures.

[a] $\gamma(\theta)$ consistent with ΔJ=0, dipole transition.

[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 undivided intensity.

[d] Multiply placed with intensity suitably divided.

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

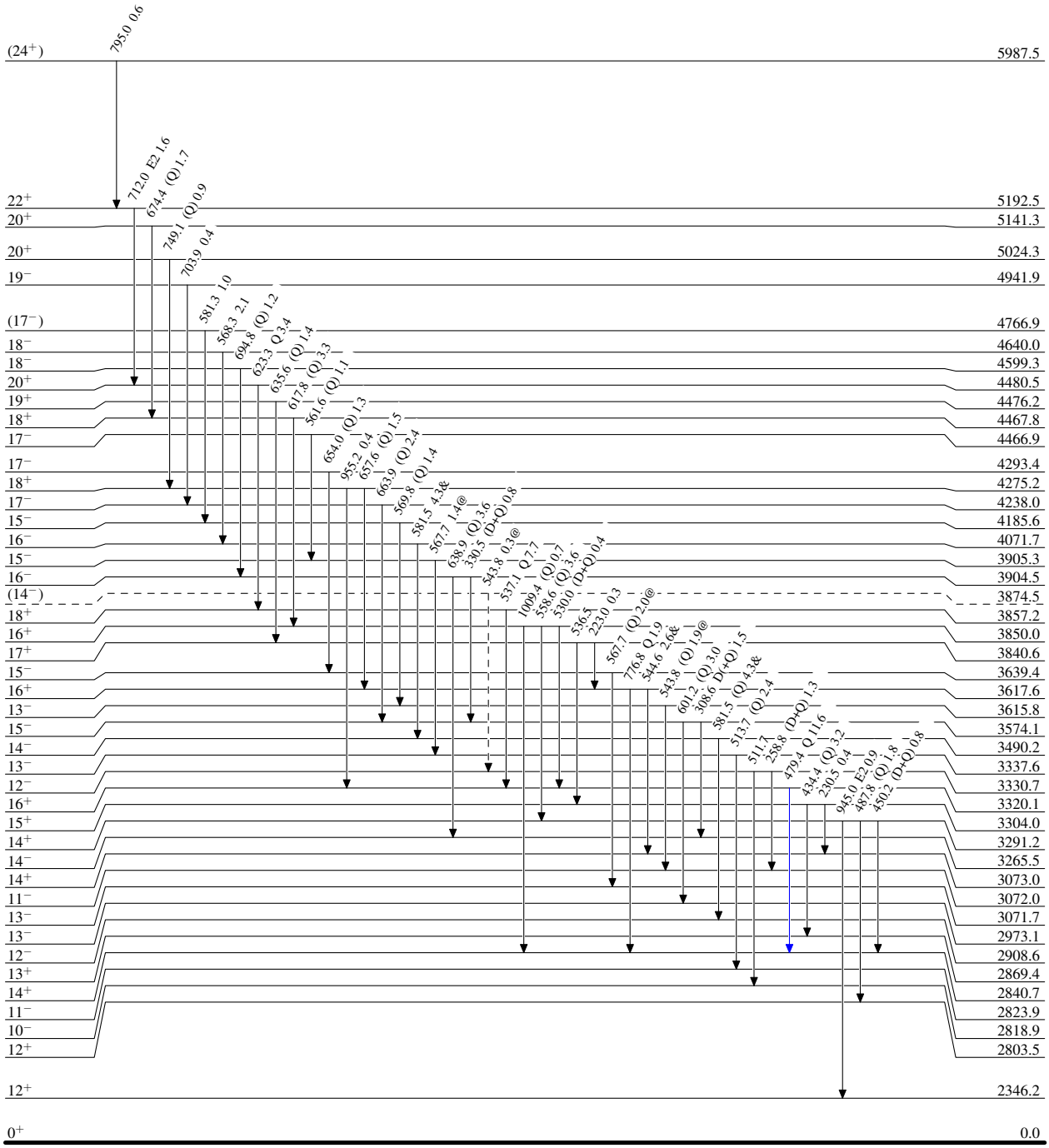
$^{182}_{76}Os_{106}$-10

^{168}Er(^{18}O,4nγ) 1982Li04

Level Scheme

Intensities: Relative I_γ
& Multiply placed: undivided intensity given
@ 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)



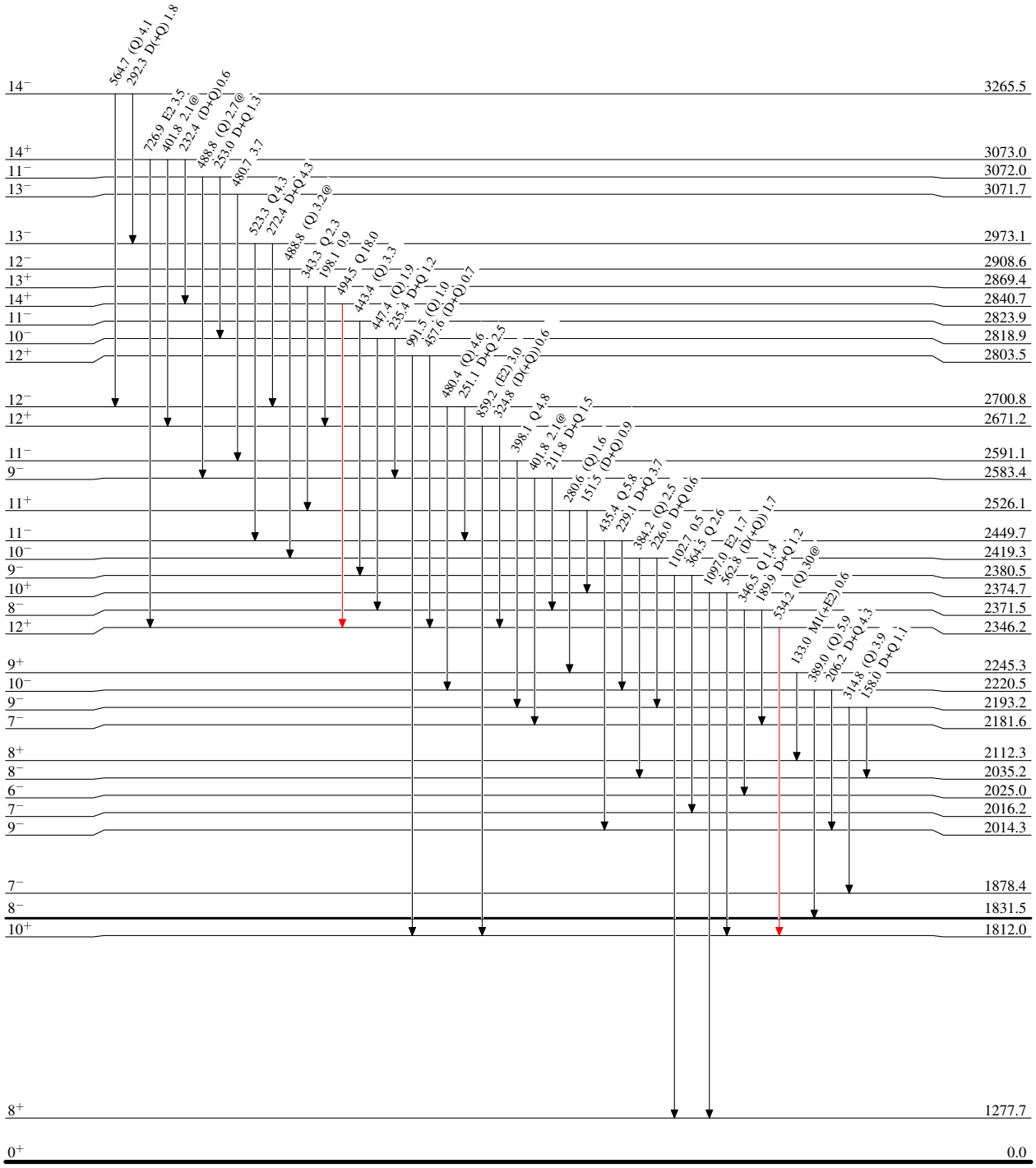
$^{182}_{76}Os_{106}$

^{168}Er(^{18}O,4nγ) 1982Li04

Level Scheme (continued)

Intensities: Relative I_γ
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

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



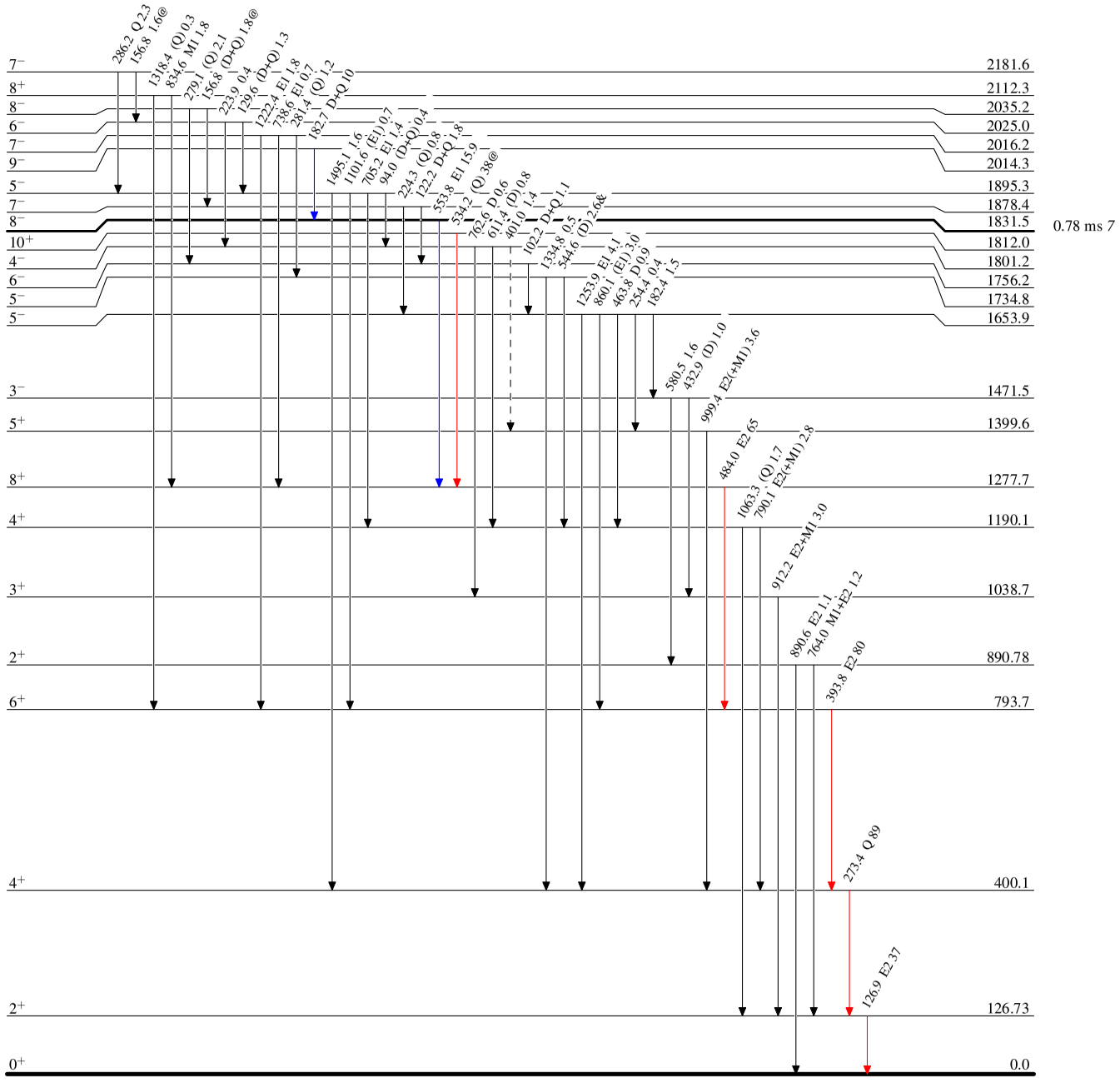
$^{182}_{76}Os_{106}$

^{168}Er(^{18}O,4nγ) 1982Li04

Level Scheme (continued)

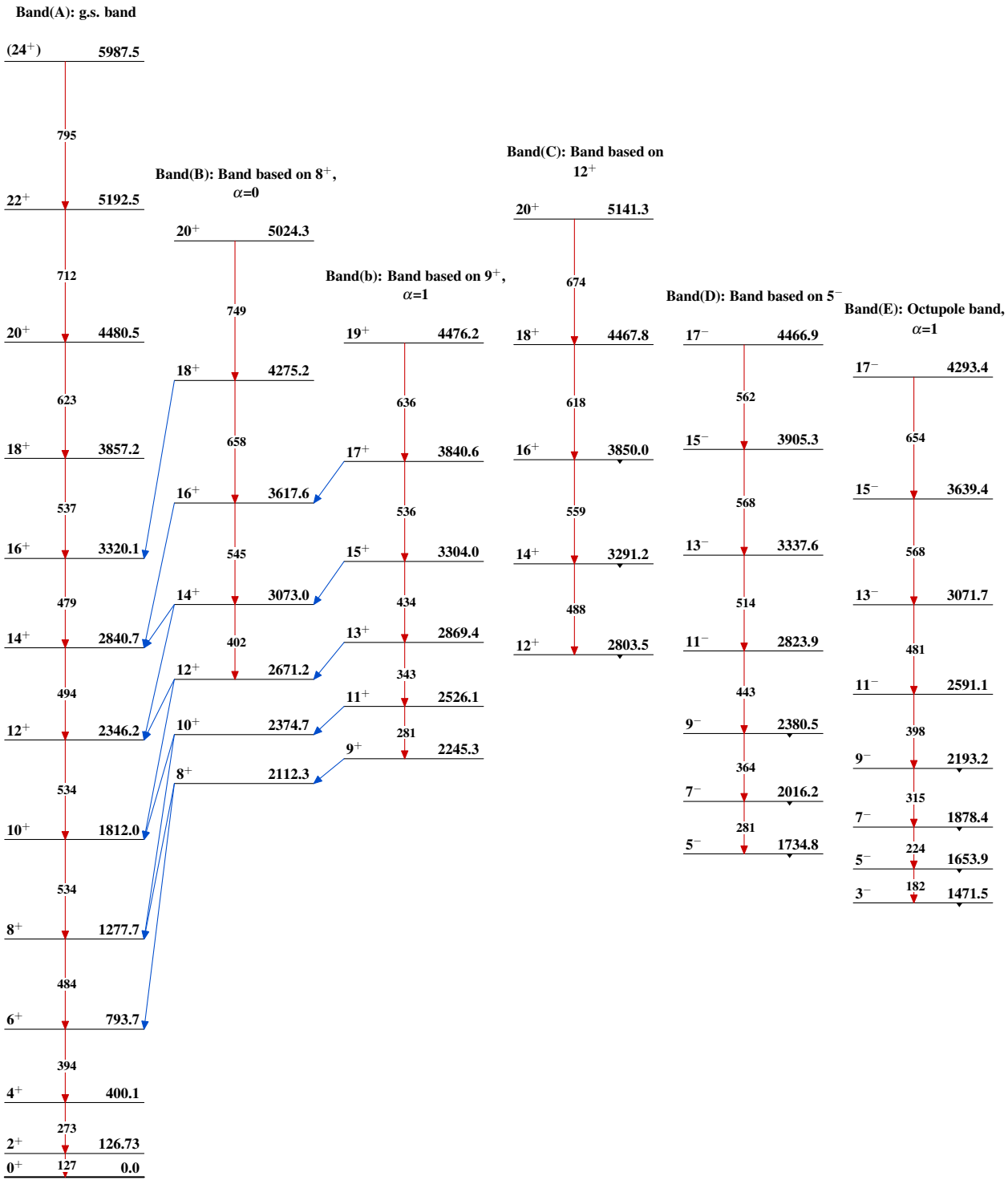
Intensities: Relative I_γ
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

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)



$^{182}_{76}Os_{106}$

$^{168}Er(^{18}O,4n\gamma)$ 1982Li04



$^{182}_{76}Os_{106}$

^{168}Er(^{18}O,4nγ) 1982Li04 (continued)