Adopted Levels, Gammas

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

Q(β^-)=−4.08×10^3 *4*; S(n)=7.26×10^3 *3*; S(p)=5.00×10^3 *4*; Q(α)=3.73×10^3 *4* 2012Wa38
Note: Current evaluation has used the following Q record $ −4080 *40* 7270 *40* 5000 *40* 3720 *40* 2003Au03.

^{181}Os Levels

Cross Reference (XREF) Flags

- A ^{181}Ir ε decay
- B ^{185}Pt α decay
- C ^{182}W(α,5nγ),^{185}Re(p,5nγ)
- D (HI,xnγ)

E(level)†	Jπ‡	$T_{1/2}$	XREF	Comments
0.0[l]	1/2$^-$	105 min *3*	ABCD	%ε+%β^+=100 $T_{1/2}$: from 1966Ho16. Others: 1966Be47, 1968Be43, 1969Hu03. Jπ: Coriolis coupled bandhead. Shell model calculations predict the low-lying states of ν1/2[521], (g.s.) ν7/2[514] (49.22) and ν9/2[624] (156.93) configurations. The ground state is assigned as ν1/2[521], and it ε decays to 1/2$^-$,3/2$^-$ members of 1/2[541] band in ^{181}Re.
49.20[f] *14*	7/2$^-$	2.7 min *1*	A CD	%ε+%β^+≈100; %IT≤3 (1998Ro32) $T_{1/2}$: from 1967Go25. Other value: 2.8 min *1* (1966At06). Jπ: log *ft*≈4.7 to 9/2$^-$[514] of ^{181}Re and no population to higher band members. Band head of ν7/2[514] configuration. See comments in the J^π argument of the ground state.
93.90[k] *7*	3/2$^-$		A D	
102.76[l] *7*	5/2$^-$		A CD	Jπ: E2 to 1/2$^-$.
156.91[@] *15*	9/2$^+$	262 ns *6*	A CD	$T_{1/2}$: from $\gamma\gamma$(t) (HI,xnγ) (2003Cu03). Other: 316 ns *18* from (p,5nγ) (1974Ka19). Jπ: E1 to 7/2$^-$. See comments in the J^π argument of the ground state.
172.76[e] *14*	9/2$^-$		A CD	Jπ: M1 to 7/2$^-$.
200.27[#] *16*	11/2$^+$		A CD	Jπ: D to 9/2$^+$.
274.27[@] *17*	13/2$^+$		CD	Jπ: D to 11/2$^+$, E2 to 9/2$^+$.
320.93[k] *10*	7/2$^-$		A D	
321.02[f] *14*	11/2$^-$		A CD	Jπ: D to 9/2$^-$, E2 to 7/2$^-$.
334.26[l] *10*	9/2$^-$		A CD	Jπ: E2 to 5/2$^-$.
341.24 *20*	(7/2$^+$)		A	Jπ: γ to 9/2$^+$ and 7/2$^-$.
368.02 *15*	(5/2$^-$)		A	Jπ: γ to 9/2$^-$ and 3/2$^-$.
423.12[#] *17*	15/2$^+$		CD	Jπ: D to 13/2$^+$, E2 to 11/2$^+$.
423.88 *20*	(7/2$^-$)		A	Jπ: γ to 9/2$^-$ and 5/2$^-$.
491.34[e] *15*	13/2$^-$	22.4[z] ps *11*	CD	Jπ: D to 11/2$^-$, E2 to 9/2$^-$.
507.06 *15*	7/2$^-$		A	Jπ: γ to states of 9/2$^-$, 9/2$^+$ and 3/2$^-$.
509.30 *19*	(9/2$^+$)		A	Jπ: γ to (7/2$^+$) and 11/2$^+$.
525.1 *3*			A	
531.12[@] *18*	17/2$^+$		CD	Jπ: D to 15/2$^+$, E2 to 13/2$^+$.
574.3 *4*	(9/2$^-$)		A	
575.80 *22*			A	
640.35 *16*			A	
663.65[k] *16*	11/2$^-$		A D	
677.22[l] *11*	13/2$^-$	10.5[z] ps *7*	CD	Jπ: E2 to 9/2$^-$.

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Adopted Levels, Gammas (continued)

^{181}Os Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$	XREF	Comments
682.33[f] *15*	15/2⁻	9.4[z] ps *6*	CD	Jπ: D to 13/2⁻, E2 to 11/2⁻.
685.1 *3*			A	
749.30 *20*			A	
788.28[#] *18*	19/2⁺		CD	Jπ: D to 17/2⁺, E2 to 15/2⁺.
891.08[e] *15*	17/2⁻	4.9[z] ps *4*	CD	Jπ: E2 to 13/2⁻.
895.91[@] *18*	21/2⁺		CD	Jπ: E2 to 17/2⁺.
1094.45[k] *19*	15/2⁻		D	
1098.95[l] *13*	17/2⁻	3.5[z] ps *4*	CD	Jπ: E2 to 13/2⁻.
1116.59[f] *15*	19/2⁻	2.38[z] ps *17*	CD	Jπ: D to 17/2⁻, E2 to 15/2⁻.
1270.78[#] *22*	23/2⁺		CD	Jπ: E2 to 19/2⁺.
1355.40[e] *15*	21/2⁻	2.32[z] ps *16*	CD	Jπ: E2 to 17/2⁻.
1359.59[@] *22*	25/2⁺		CD	Jπ: E2 to 21/2⁺.
1554.01[l] *14*	21/2⁻	2.8[z] ps *5*	CD	Jπ: E2 to 17/2⁻.
1583.15[k] *22*	19/2⁻		D	
1606.76[f] *15*	23/2⁻		CD	Jπ: E2 to 19/2⁻.
1688.6? *3*			A	
1701.67? *22*			A	
1722.4? *3*			A	
1744.12 *18*	21/2⁺	7[x] ns *2*	CD	$T_{1/2}$: Other: 13 ns *2*. quoted by 1995Ku14 in (HI,xnγ) from a priv comm. with Ts. Venkova (1990). Configuration=ν7/2[514](ν9/2[624]ν5/2[512]). Jπ: ΔJ=0 to 21/2⁺, and D from 23/2⁻ member of the K^{π}=23/2⁻ t-band.
1848.26[#] *24*	27/2⁺		CD	Jπ: E2 to 23/2⁺.
1868.19[e] *15*	25/2⁻		CD	Jπ: E2 to 21/2⁻.
1875.02[c] *17*	23/2⁻		CD	Jπ: E1 to 21/2⁻.
1907.3[@] *3*	29/2⁺		CD	Jπ: E2 to 25/2⁺.
1920.2?[a] *11*			D	
1926.7[i] *4*	21/2⁻		D	Jπ: 810γ to the 19/2⁻ state of the ν7/2[514] band and 1035γ to the 17/2⁻ state of the ν7/2[514] band.
1989.35[l] *14*	25/2⁻		CD	Jπ: E2 to 21/2⁻.
2017.23[h] *20*	23/2⁻		D	Jπ: γ to the 19/2⁻ and 21/2⁻ states of ν7/2[514] band.
2079.11[b] *17*	25/2⁻		CD	Jπ: D to 23/2⁻.
2099.9[k] *3*	23/2⁻		D	
2138.29[f] *16*	27/2⁻		CD	Jπ: D to 25/2⁻, E2 to 23/2⁻.
2141.25[i] *20*	25/2⁻		D	Jπ: 123.6γ D to 23/2⁻.
2142.2?[&] *13*			D	
2176.81[n] *15*	25/2⁻		D	Jπ: 189γ (M1) to the 25/2⁻ state of the ν1/2[521] band and 622γ to the 21/2⁻ state of the ν1/2[521] band.
2293.39[c] *17*	27/2⁻		CD	Jπ: D to 25/2⁻.
2301.39[h] *18*	27/2⁻		D	Jπ: 159.8γ D to 25/2⁻, 283.9γ E2 to 23/2⁻.
2384.31[l] *15*	29/2⁻		CD	Jπ: 395.0 γ E2 to 25/2⁻.
2393.1?[a] *13*			D	
2415.90[e] *15*	29/2⁻		CD	Jπ: D to 27/2⁻, E2 to 25/2⁻.
2491.73[i] *20*	29/2⁻		D	Jπ: 190.0γ D to 27/2⁻.
2492.3[#] *5*	31/2⁺		CD	Jπ: E2 to 27/2⁺.
2507.6[@] *5*	33/2⁺		CD	Jπ: E2 to 29/2⁺.
2522.74[b] *15*	29/2⁻		CD	Jπ: E2 to 25/2⁻ state of ν7/2[514] band.
2609.6[k] *4*	27/2⁻		D	
2628.39[n] *17*	29/2⁻		D	

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Adopted Levels, Gammas (continued)

^{181}Os Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$	XREF	Comments
2632.40 *24*	(25/2⁻)		D	
2646.04 *23*	(23/2⁻)		D	
2647.2?[&] *14*			D	
2658.8 *3*	(31/2⁺)		D	
2699.76[f] *17*	31/2⁻		CD	Jπ: E2 to 27/2⁻.
2714.01[h] *20*	31/2⁻		D	Jπ: D to 29/2⁻, E2 to 27/2⁻.
2768.32[c] *17*	31/2⁻		D	Jπ: E2 to 27/2⁻ state of ν7/2[514] band.
2824.23[l] *16*	33/2⁻		CD	Jπ: E2 to 29/2⁻.
2903.1?[a] *15*			D	
2960.29[i] *21*	33/2⁻		D	Jπ: D to 31/2⁻.
2981.05[e] *16*	33/2⁻		CD	Jπ: E2 to 29/2⁻.
3039.71 *22*	(31/2⁺)		D	
3040.55[b] *17*	33/2⁻		D	Jπ: E2 to 29/2⁻ state of ν7/2[514] band.
3054.36 *17*	(29/2⁻)		D	
3092.29 *15*	(29/2⁻)		D	
3107.5[@] *5*	37/2⁺		CD	Jπ: E2 to 33/2⁺.
3107.9[k] *4*	31/2⁻		D	
3108.9 *4*	(29/2⁻)		D	
3163.5[#] *5*	35/2⁺		CD	Jπ: E2 to 31/2⁺.
3182.1?[&] *17*			D	
3192.0[n] *3*	33/2⁻		D	
3235.52[h] *20*	35/2⁻		D	Jπ: E2 to 31/2⁻.
3259.09 *20*	(31/2⁺)		D	
3266.65[f] *25*	35/2⁻		CD	Jπ: E2 to 31/2⁻.
3268.4 *3*	(25/2⁻)		D	
3335.19[c] *18*	35/2⁻		D	Jπ: E2 to 31/2⁻.
3350.74[l] *19*	37/2⁻		D	
3471.1?[a] *17*			D	
3526.21[i] *21*	37/2⁻		D	
3536.69 *20*	(31/2⁻)		D	
3555.75[e] *24*	37/2⁻		D	Jπ: E2 to 33/2⁻.
3579.27 *15*	33/2⁻	<5[x] ns	D	Configuration: 5 quasiparticle state ν(7/2[514],9/2[624],1/2[521])π(5/2[402],11/2[505]). Jπ: D (ΔJ=0) to 33/2⁻ state at 2824.3; Q to 29/2⁻ state at 2384.4.
3632.8[k] *5*	35/2⁻		D	
3655.11[b] *17*	37/2⁻		D	Jπ: Q to 33/2⁻ state of ν7/2[514] band.
3694.2[@] *5*	41/2⁺		CD	Jπ: E2 to 37/2⁺.
3738.67 *18*	35/2⁻	24 ns *4*	D	Configuration: 5 quasiparticle state ν(7/2[514],9/2[624],1/2[521])π(7/2[404],11/2[505]). $T_{1/2}$: from γγ(t) (HI,xnγ) (2003Cu03). Other: 34 ns *6* from 1991VeZV. Jπ: M1 to K=33/2⁻ state.
3780.1?[&] *20*			D	
3798.5[o] *3*	37/2⁻		D	
3816.6[#] *7*	39/2⁺		D	Jπ: E2 to 35/2⁺.
3842.74[h] *21*	39/2⁻		D	
3864.1[f] *3*	39/2⁻		D	
3877.0[n] *4*	37/2⁻		D	
3914.55[q] *21*	37/2⁺		D	Jπ: E1 to K=35/2⁻ state.
3969.24[l] *21*	41/2⁻	0.319[y] ps *21*	D	

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Adopted Levels, Gammas (continued)

^{181}Os Levels (continued)

E(level)†	Jπ‡	$T_{1/2}$	XREF	Comments
3974.5[c] 3	39/2−		D	
4139.91 24	(39/2+)		D	Jπ: D to K=37/2+ state.
4165.39[i] 23	41/2−		D	
4168.8?[k] 5	39/2−		D	
4173.90[j] 23	(41/2−)		D	
4184.8[e] 3	41/2−		D	Jπ: E2 to 37/2−.
4321.8[@] 6	45/2+	0.291[y] ps 28	D	Jπ: E2 to 41/2+.
4326.83[p] 23	(39/2+)		D	Jπ: D to 37/2+ 4.
4336.01[b] 20	41/2−		D	Jπ: E2 to 37/2−.
4447.6[o] 4	41/2−		D	
4459.9[#] 10	43/2+		D	
4511.9[h] 3	43/2−		D	
4521.83[s] 23	(41/2+)	<3 ns	D	$T_{1/2}$: from the minimum lifetime obtainable from the Eγ-time lifetime analysis with the large-volume GAMMASPHERE detectors in (HI,xnγ) (2003Cu03). Jπ: D to (39/2+).
4527.3[f] 3	43/2−		D	Jπ: E2 to 39/2−.
4612.8[n] 5	41/2−		D	
4631.93[q] 24	(41/2+)		D	Jπ: D to (39/2+).
4674.05[l] 23	45/2−	0.152[y] ps 14	D	
4685.4[c] 3	43/2−		D	
4794.1[j] 3	(45/2−)		D	
4843.7[i] 5	45/2−		D	
4844.31[r] 24	(43/2+)		D	Jπ: D to (41/2+).
4887.6[e] 3	45/2−		D	Jπ: E2 to 41/2−.
4947.2[v] 3	(43/2−)		D	Jπ: D to (41/2+) state of K=37/2+ band.
5030.0[@] 7	49/2+	0.215[y] ps 21	D	Jπ: E2 to 45/2+.
5061.11[b] 23	45/2−		D	Jπ: E2 to 41/2−.
5112.92[p] 23	(43/2+)		D	Jπ: D to (41/2+); Q to (39/2+).
5166.0[o] 4	45/2−		D	
5169.9[#] 11	47/2+		D	Jπ: E2 to 43/2+.
5178.68[s] 25	(45/2+)		D	Jπ: D to (43/2+); E2 to (41/2+).
5211.7[h] 4	47/2−		D	
5259.9[f] 4	47/2−		D	Jπ: E2 to 43/2−.
5274.0[w] 3	(45/2−)		D	Jπ: D to (43/2−).
5379.1[n] 6	45/2−		D	
5427.3[c] 3	47/2−		D	
5454.9[l] 3	49/2−	0.159[y] ps 14	D	Jπ: E2 to 45/2−.
5469.1[q] 3	(45/2+)		D	Jπ: D to (43/2+); Q to (41/2+).
5490.9[j] 4	(49/2−)		D	
5509.8[u] 3	(47/2+)		D	Jπ: D to (45/2+) and Q to (43/2+), members of K=41/2+ band.
5523.8[r] 3	(47/2+)		D	Jπ: D to (45/2+); E2 to (43/2+).
5541.7[i] 7	49/2−		D	
5614.1[v] 11	(47/2−)		D	Jπ: D to (45/2−).
5654.1[d] 3	49/2−		D	Jπ: Q to 45/2−.
5673.6[e] 4	49/2−		D	Jπ: E2 to 45/2−.
5808.81[b] 25	49/2−		D	Jπ: E2 to 45/2−.
5832.0[p] 3	(47/2+)		D	Jπ: D to (45/2+).
5832.3[@] 10	53/2+	0.173[y] ps 14	D	

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Adopted Levels, Gammas (continued)

^{181}Os Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$	XREF	Comments
5879.6[s] *3*	(49/2+)		D	Jπ: D to (47/2+); E2 to (45/2+).
5922.1[o] *8*	49/2−		D	
5931.1[h] *6*	51/2−		D	
5963.8[#] *11*	51/2+		D	
5965.3[w] *4*	(49/2−)		D	Jπ: Q to (45/2−).
6020.1[g] *4*	51/2−		D	Jπ: Q to 47/2−.
6061.1[f] *4*	51/2−		D	Jπ: E2 to 47/2−.
6177.9[u] *4*	(51/2+)		D	Jπ: E2 to (47/2+).
6181.5[n] *7*	(49/2−)		D	
6191.3[c] *4*	51/2−		D	
6208.2[q] *3*	(49/2+)		D	Jπ: D to (47/2+).
6242.3[r] *3*	(51/2+)		D	Jπ: D to (49/2+); E2 to (47/2+).
6264.0[i] *9*	53/2−		D	
6279.0[j] *4*	(53/2−)		D	
6301.3[l] *3*	53/2−	0.180[y] ps *21*	D	
6403.5[d] *4*	53/2−		D	Jπ: E2 to 49/2−.
6475.5[p] *3*	(51/2+)		D	Jπ: D to (49/2+); Q to (47/2+).
6521.1[e] *6*	53/2−		D	
6574.8[b] *11*	53/2−		D	
6607.2[v] *3*	(51/2−)		D	Jπ: D to (49/2+) state of K=37/2+ band.
6614.6[s] *4*	(53/2+)		D	Jπ: D to (51/2+); E2 to (49/2+).
6678.7[h] *10*	55/2−		D	
6729.6[o] *9*	53/2−		D	
6730.2[@] *11*	57/2+	0.125[y] ps *+21−14*	D	
6806.6[g] *5*	55/2−		D	Jπ: E2 to 51/2−.
6840.5[#] *13*	55/2+		D	
6855.1[t] *4*	(55/2+)		D	Jπ: Q to (51/2+).
6874.1[u] *4*	(55/2+)		D	Jπ: E2 to (51/2+).
6905.1[f] *4*	55/2−		D	
6921.5[q] *4*	(53/2+)		D	Jπ: D to (51/2+).
6991.6[r] *5*	(55/2+)		D	Jπ: D to (53/2+); E2 to (51/2+).
6995.9[c] *4*	55/2−		D	
6999.5[i] *10*	(57/2−)		D	
7014.6[n] *7*	(53/2−)		D	
7138.0[j] *5*	(57/2−)		D	
7200.3[l] *3*	57/2−		D	
7213.9[m] *4*	(57/2−)		D	
7229.6[d] *4*	57/2−		D	
7243.7 *4*	(55/2+)		D	Jπ: D to (53/2+) state of K=37/2+ band.
7353.9[p] *4*	(55/2+)		D	Jπ: D to (53/2+).
7362.0[e] *7*	57/2−		D	
7363.0[b] *11*	57/2−		D	
7381.6[s] *5*	(57/2+)		D	Jπ: D to (55/2+); E2 to (53/2+).
7456.1[h] *10*	59/2−		D	
7486.9 *4*	(55/2+)		D	Jπ: Q to (51/2+) and (53/2+) states of K=37/2+ band.
7509.2[t] *5*	(59/2+)		D	Jπ: E2 to (55/2+).
7528.3 *4*	(57/2+)		D	Jπ: D to (55/2+).
7583.9[o] *10*	57/2−		D	
7629.1[u] *6*	(59/2+)		D	Jπ: E2 to (55/2+).

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Adopted Levels, Gammas (continued)

^{181}Os Levels (continued)

E(level)[†]	Jπ[‡]	XREF	Comments
7664.6[g] 5	59/2⁻	D	
7727.5[@] 12	61/2⁺	D	
7750.4[i] 11	(61/2⁻)	D	
7773.5[r] 11	(59/2⁺)	D	Jπ: E2 to (55/2⁺).
7794[#] 5	59/2⁺	D	
7803.1[f] 4	59/2⁻	D	
7842.9[c] 5	59/2⁻	D	
7864.1[n] 8	(57/2⁻)	D	
7927.1[q] 4	(57/2⁺)	D	Jπ: D to (55/2⁺).
8095.6[d] 11	61/2⁻	D	
8164.0[b] 15	(61/2⁻)	D	
8169.9[m] 5	(61/2⁻)	D	
8173.6[s] 6	(61/2⁺)	D	Jπ: E2 to (57/2⁺).
8173.8[l] 4	61/2⁻	D	
8231.8[t] 6	(63/2⁺)	D	Jπ: E2 to (59/2⁺).
8259.8[e] 11	61/2⁻	D	
8261.9[h] 11	(63/2⁻)	D	
8452.4[p] 4	(59/2⁺)	D	Jπ: D to (57/2⁺).
8457.4?[u] 8	(63/2⁺)	D	Jπ: Q to (59/2⁺).
8590.4[g] 6	63/2⁻	D	
8716.9[c] 11	63/2⁻	D	
8766.9[q] 5	(61/2⁺)	D	Jπ: D to (59/2⁺).
8782.7[f] 4	63/2⁻	D	
8818.1[@] 15	65/2⁺	D	
8826[#] 5	63/2⁺	D	
8971.3?[t] 6	(67/2⁺)	D	Jπ: Q to (63/2⁺).
8980.6[d] 15	(65/2⁻)	D	
9091.1[h] 11	(67/2⁻)	D	
9177.6[m] 6	(65/2⁻)	D	
9191[e] 3	65/2⁻	D	
9202.9[l] 4	65/2⁻	D	
9573.0[g] 6	67/2⁻	D	
9612.9[c] 15	67/2⁻	D	
9860.1[f] 6	67/2⁻	D	
9919[#] 5	67/2⁺	D	
9999.9[@] 18	(69/2⁺)	D	
10229.3[m] 6	(69/2⁻)	D	
10308.6[l] 7	69/2⁻	D	
10544.9[c] 18	71/2⁻	D	
10596.5[g] 7	71/2⁻	D	
11004.1[f] 10	(71/2⁻)	D	
11263.3[@] 20	(73/2⁺)	D	
11317.3[m] 11	(73/2⁻)	D	
11464.1[l] 8	73/2⁻	D	
11652.1[g] 7	75/2⁻	D	
12585.2[@] 22	(77/2⁺)	D	
12741.5[g] 8	(79/2⁻)	D	

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{181}Os Levels (continued)

† From least-squares fit to γ energies by evaluator. 0.3 keV uncertainty assumed when not reported.
‡ From band assignments and connecting dipole and stretched E2 transitions as proposed in (HI,xnγ) experiments. Additional arguments are given in comments.
# Band(A): ν9/2[624], α=−1/2 A=7.3 keV, B=19.0 eV, fit to levels J=11/2$^+$ to 23/2$^+$.
@ Band(a): ν9/2[624], α=+1/2 A=4.7 keV, B=29 eV, fit to levels J=9/2$^+$ to 21/2$^+$.
& Band(B): coupled band (?).
a Band(b): coupled band (?).
b Band(c): t-band, K$^\pi$=23/2$^-$, α=+1/2. Configuration=ν7/2[514](ν9/2[624]ν7/2[633]) A=7.5 keV, B=2.48 eV, fit to levels J=25/2$^-$ to 37/2$^-$.
c Band(C): t-band, K$^\pi$=23/2$^-$, α=−1/2. Configuration=ν7/2[514](ν9/2[624]ν7/2[633]) A=7.8 keV, B=1.42 eV, fit to levels J=23/2$^-$ to 35/2$^-$.
d Band(D): Band based on 49/2$^-$, α=+1/2. From crossing of ν7/2[514], α=−1/2 band by another sequence.
e Band(e): ν7/2[514], α=+1/2 A=13.9 keV, B=−12.9 eV, fit to levels J=9/2$^-$ to 21/2$^-$.
f Band(E): ν7/2[514], α=−1/2 A=13.9 keV, B=−13.5 eV, fit to levels J=7/2$^-$ to 19/2$^-$.
g Band(F): Band based on 51/2$^-$, α=−1/2. From crossing of ν7/2[514], α=−1/2 band by another sequence.
h Band(G): Band based on 23/2$^-$, α=−1/2. Configuration=ν9/2[624](ν7/2[633]ν1/2[521]) A=5.0 keV, B=8.9 eV, fit to levels J=23/2$^-$ to 35/2$^-$.
i Band(g): Band based on 21/2$^-$, α=+1/2. Configuration=ν9/2[624](ν7/2[633]ν1/2[521]) A=3.9 keV, B=12.3 eV, fit to levels J=21/2$^-$ to 33/2$^-$.
j Band(H): Band based on (41/2$^-$), α=+1/2. From crossing of 21/2$^-$, α=+1/2 band by 1/2[521] or 5/2[512] orbit.
k Band(i): ν1/2[521], α=−1/2 A=20.4 keV, B=−6.7 eV, a=0.191, fit to levels J=3/2$^-$ to 15/2$^-$.
l Band(I): ν1/2[521], α=+1/2 A=15.8 keV, B=−40 eV, a=0.89, fit to levels J=1/2$^-$ to 13/2$^-$.
m Band(J): Band based on 57/2$^-$. From crossing of ν1/2[521], α=+1/2 band by another sequence.
n Band(K): Band based on 25/2$^-$, α=+1/2. Possible configuration=ν9/2[624]π(5/2[602],11/2[505]) or ν9/2[624]π(9/2[514],11/2[505]). It should be noted that this band is of the same signature with the band based on 37/2$^-$, but they are not signature partners.
o Band(L): Band based on 37/2$^-$, α=+1/2. Possible configuration=ν9/2[624]π(5/2[602],11/2[505]) or ν9/2[624]π(9/2[514],11/2[505]). It should be noted that this band is of the same signature with the band based on 25/2$^-$, but they are not signature partners.
p Band(M): K$^\pi$=37/2$^+$, α=−1/2. Configuration: 5 quasiparticle state ν(7/2[514],9/2[624],1/2[521])π(9/2[514],11/2[505]).
q Band(m): K$^\pi$=37/2$^+$, α=+1/2. Configuration: 5 quasiparticle state ν(7/2[514],9/2[624],1/2[521])π(9/2[514],11/2[505]).
r Band(N): K$^\pi$=41/2$^+$, α=−1/2. Configuration: 5 quasiparticle state ν(7/2[514],9/2[624],7/2[633])π(7/2[404],11/2[505]).
s Band(n): K$^\pi$=41/2$^+$, α=+1/2. Configuration: 5 quasiparticle state ν(7/2[514],9/2[624],7/2[633])π(7/2[404],11/2[505]).
t Band(O): (55/2$^+$) band, α=−1/2.
u Band(o): (47/2$^+$) band, α=+1/2.
v Band(P): K$^\pi$=(43/2$^-$), α=−1/2. Configuration: 7 quasiparticle state ν(7/2[514],9/2[624],1/2[521])π(5/2[402],9/2[514],1/2[541],11/2[505]).
w Band(p): K$^\pi$=(43/2$^-$), α=+1/2. Configuration: 7 quasiparticle state ν(7/2[514],9/2[624],1/2[521])π(5/2[402],9/2[514],1/2[541],11/2[505]).
x From $\gamma\gamma$(t) in (HI,xnγ) (2003Cu03).
y From Doppler-shift attenuation method (DSAM) in (HI,xnγ) (2003Cu03).
z From recoil-distance method (2002Po06).

γ(^{181}Os)

E$_i$(level)	J$_i^\pi$	E$_\gamma$†	I$_\gamma$†	E$_f$	J$_f^\pi$	Mult.#	α&	Comments
49.20	7/2$^-$	(49.2)		0.0	1/2$^-$	[M3]		
93.90	3/2$^-$	93.86‡ *8*	100	0.0	1/2$^-$	(E2)@	5.75	
102.76	5/2$^-$	102.79‡ *7*	100	0.0	1/2$^-$	E2	3.97	
156.91	9/2$^+$	107.73‡ *7*	100	49.20	7/2$^-$	E1@	0.327	B(E1)(W.u.)=4.86×10^{-7} *12*

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

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

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[#]	α[&]	Comments
172.76	9/2$^-$	123.57[‡] *6*	100	49.20	7/2$^-$	M1[@]	3.16	
200.27	11/2$^+$	43.18[‡] *9*	100	156.91	9/2$^+$	D		
274.27	13/2$^+$	73.99 *14*	100 *3*	200.27	11/2$^+$	D		
		117.68 *24*	18 *8*	156.91	9/2$^+$	E2	2.32	
320.93	7/2$^-$	218.28[‡] *20*	10 *2*	102.76	5/2$^-$			
		227.02[‡] *8*	100 *9*	93.90	3/2$^-$	E2	0.221	
321.02	11/2$^-$	148.42[‡] *8*	28 *8*	172.76	9/2$^-$	D		
		271.79[‡] *8*	100 *4*	49.20	7/2$^-$	E2	0.125	
334.26	9/2$^-$	(13.7)		320.93	7/2$^-$			
		231.54[‡] *7*	100	102.76	5/2$^-$	E2	0.207	
341.24	(7/2$^+$)	184.49[@] *22*	100[@] *7*	156.91	9/2$^+$			
		291.7[@]		49.20	7/2$^-$			
368.02	(5/2$^-$)	195.3[@]		172.76	9/2$^-$			
		265.0[@]		102.76	5/2$^-$			
		273.9[@]		93.90	3/2$^-$			
		318.86[@] *13*	100[@] *4*	49.20	7/2$^-$			
423.12	15/2$^+$	148.82 *9*	79 *7*	274.27	13/2$^+$	D		
		222.53 *13*	100 *4*	200.27	11/2$^+$	E2	0.234	
423.88	(7/2$^-$)	251.1[@]		172.76	9/2$^-$			
		321.0[@]		102.76	5/2$^-$			
		374.8[@]		49.20	7/2$^-$			
491.34	13/2$^-$	170.42 *8*	7.8 *8*	321.02	11/2$^-$	D		
		318.50 *7*	100 *3*	172.76	9/2$^-$	E2	0.0772	B(E2)(W.u.)=109 *6*
507.06	7/2$^-$	138.8[@]		368.02	(5/2$^-$)			
		334.0[@]		172.76	9/2$^-$			
		350.38[@] *13*	100[@]	156.91	9/2$^+$			
		404.1[@]		102.76	5/2$^-$			
		413.2[@]		93.90	3/2$^-$			
		457.3[@]		49.20	7/2$^-$			
509.30	(9/2$^+$)	168.5[@]		341.24	(7/2$^+$)			
		308.98[@] *13*	100[@] *16*	200.27	11/2$^+$			
		352.2[@]	14[@] *3*	156.91	9/2$^+$			
525.1		431.2[@]		93.90	3/2$^-$			
531.12	17/2$^+$	107.94 *19*	41 *14*	423.12	15/2$^+$	D		
		257.08 *15*	100.0 *18*	274.27	13/2$^+$	E2	0.148	
574.3	(9/2$^-$)	150.4[@]		423.88	(7/2$^-$)			
575.80		481.7[@]		93.90	3/2$^-$			
		576.0[@]		0.0	1/2$^-$			
640.35		319.5[@] *3*		320.93	7/2$^-$			
		537.5[@]		102.76	5/2$^-$			
		546.4[@]		93.90	3/2$^-$			
		640.4[@]		0.0	1/2$^-$			
663.65	11/2$^-$	342.72[‡] *13*	100	320.93	7/2$^-$	E2	0.0626	
677.22	13/2$^-$	343.01 *7*	100	334.26	9/2$^-$	E2	0.0624	B(E2)(W.u.)=176 *11*
682.33	15/2$^-$	190.96 *8*	6.2 *4*	491.34	13/2$^-$	D		
		361.35 *8*	100 *3*	321.02	11/2$^-$	E2	0.0539	B(E2)(W.u.)=143 *9*

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Adopted Levels, Gammas (continued)

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

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[#]	α[&]	Comments
685.1		484.7[@]		200.27	$11/2^+$			
		528.2[@]		156.91	$9/2^+$			
749.30		576.5[@] *2*	100[@]	172.76	$9/2^-$			
		700.13[@] *19*	100[@]	49.20	$7/2^-$			
788.28	$19/2^+$	257.19 *9*	30 *6*	531.12	$17/2^+$	D		
		364.98 *9*	100 *5*	423.12	$15/2^+$	E2	0.0523	
891.08	$17/2^-$	208.8 *1*	4.8 *6*	682.33	$15/2^-$			
		399.75 *8*	100 *3*	491.34	$13/2^-$	E2	0.0408	B(E2)(W.u.)=170 *13*
895.91	$21/2^+$	107.64 *21*	20 *11*	788.28	$19/2^+$			
		364.84 *15*	100 *4*	531.12	$17/2^+$	E2	0.0525	
1094.45	$15/2^-$	430.8 *1*	100	663.65	$11/2^-$	E2	0.0335	
1098.95	$17/2^-$	421.77 *7*	100	677.22	$13/2^-$	E2	0.0354	B(E2)(W.u.)=192 *20*
1116.59	$19/2^-$	225.70 *17*	3.3 *4*	891.08	$17/2^-$	D		
		434.25 *7*	100 *3*	682.33	$15/2^-$	E2	0.0328	B(E2)(W.u.)=237 *16*
1270.78	$23/2^+$	374.79 *21*	27 *3*	895.91	$21/2^+$			
		482.31 *20*	100 *5*	788.28	$19/2^+$	E2	0.0250	
1355.40	$21/2^-$	238.35 *21*	2.6 *4*	1116.59	$19/2^-$			
		464.33 *7*	100 *3*	891.08	$17/2^-$	E2	0.0276	B(E2)(W.u.)=176 *11*
1359.59	$25/2^+$	88.8 *6*	3.0 *17*	1270.78	$23/2^+$			
		463.80 *15*	100 *3*	895.91	$21/2^+$	E2	0.0276	
1554.01	$21/2^-$	455.11 *7*	100	1098.95	$17/2^-$	E2	0.0290	B(E2)(W.u.)=165 *15*
1583.15	$19/2^-$	488.7 *1*	100	1094.45	$15/2^-$	E2	0.0242	
1606.76	$23/2^-$	252.32 *15*	3.2 *14*	1355.40	$21/2^-$			
		490.35 *7*	100 *3*	1116.59	$19/2^-$	E2	0.0240	
1688.6?		1181.8[@] *9*	16[@] *3*	507.06	$7/2^-$			
		1347.1[@] *3*	27[@] *9*	341.24	$(7/2^+)$			
		1639.7[@] *3*	100[@] *4*	49.20	$7/2^-$			
1701.67?		1528.6[@] *3*	100[@] *7*	172.76	$9/2^-$			
		1545.0[@] *3*	21[@]	156.91	$9/2^+$			
		1652.5[@] *3*	59[@]	49.20	$7/2^-$			
1722.4?		1380.8[@] *4*	98[@] *9*	341.24	$(7/2^+)$			
		1565.7[@] *3*	100[@] *9*	156.91	$9/2^+$			
1744.12	$21/2^+$	848.20 *7*	100 *4*	895.91	$21/2^+$			Mult.: $\Delta J=0$ transition.
		955.16 *24*	31 *8*	788.28	$19/2^+$			
		1213.1 *3*	14.1 *15*	531.12	$17/2^+$			
1848.26	$27/2^+$	488.9 *2*	14.8 *20*	1359.59	$25/2^+$			
		577.24 *19*	100 *4*	1270.78	$23/2^+$	E2	0.0162	
1868.19	$25/2^-$	262.3 *1*	8 *6*	1606.76	$23/2^-$			
		512.55 *7*	100 *3*	1355.40	$21/2^-$	E2	0.0216	
1875.02	$23/2^-$	130.83 *7*	100	1744.12	$21/2^+$	D		
1907.3	$29/2^+$	547.71 *15*	100	1359.59	$25/2^+$	E2	0.0184	
1920.2?		176[a]		1744.12	$21/2^+$			
1926.7	$21/2^-$	809.8 *5*	100 *90*	1116.59	$19/2^-$			
		1035.3 *5*	50 *30*	891.08	$17/2^-$			
1989.35	$25/2^-$	435.90 *7*	100	1554.01	$21/2^-$	E2	0.0326	
2017.23	$23/2^-$	91.0 *8*	8 *8*	1926.7	$21/2^-$			
		661.6 *3*	100 *17*	1355.40	$21/2^-$			
		898.7 *3*	63 *18*	1116.59	$19/2^-$			
2079.11	$25/2^-$	204.05 *7*	100	1875.02	$23/2^-$	D		
2099.9	$23/2^-$	516.7 *2*	100	1583.15	$19/2^-$	E2	0.0212	
2138.29	$27/2^-$	267.5 *3*	3.7 *10*	1868.19	$25/2^-$	D		
		531.47 *8*	100 *3*	1606.76	$23/2^-$	E2	0.0198	

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Adopted Levels, Gammas (continued)

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

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[#]	α[&]
2141.25	25/2$^-$	123.60 *16*	25 *10*	2017.23	23/2$^-$	D	
		213.0 *7*	3 *3*	1926.7	21/2$^-$	E2	0.272
		534.5 *4*	100 *3*	1606.76	23/2$^-$	D	
		786.4 *9*	8 *4*	1355.40	21/2$^-$		
2142.2?		222[a]		1920.2?			
2176.81	25/2$^-$	188.5 *1*	26.6 *15*	1989.35	25/2$^-$		
		621.8 *1*	100 *5*	1554.01	21/2$^-$		
2293.39	27/2$^-$	214.46 *9*	100 *3*	2079.11	25/2$^-$	D	
		418.24 *16*	43 *5*	1875.02	23/2$^-$	E2	0.0363
2301.39	27/2$^-$	159.8 *3*	100 *8*	2141.25	25/2$^-$	D	
		283.9 *2*	9 *8*	2017.23	23/2$^-$	E2	0.109
		312.1 *2*	30.5 *5*	1989.35	25/2$^-$		
		431.5 *5*	12 *7*	1868.19	25/2$^-$	Q	
		695.5 *7*	11 *4*	1606.76	23/2$^-$		
2384.31	29/2$^-$	394.98 *14*	100.0 *25*	1989.35	25/2$^-$	E2	0.0421
		516.50 *14*	19 *3*	1868.19	25/2$^-$	Q	
2393.1?		251[a]		2142.2?			
		473[a]		1920.2?			
2415.90	29/2$^-$	276.4 *3*	7.5 *12*	2138.29	27/2$^-$	D	
		547.79 *7*	100 *3*	1868.19	25/2$^-$	E2	0.0184
2491.73	29/2$^-$	190.02 *22*	23 *4*	2301.39	27/2$^-$	D	
		349.79 *21*	100 *9*	2141.25	25/2$^-$	E2	0.0591
2492.3	31/2$^+$	585.4 *8*	8.5 *19*	1907.3	29/2$^+$		
		644.0 *4*	100 *16*	1848.26	27/2$^+$	E2	0.0126
2507.6	33/2$^+$	600.2 *4*	100	1907.3	29/2$^+$	E2	0.0148
2522.74	29/2$^-$	229.22 *14*	100 *4*	2293.39	27/2$^-$		
		442.4 *2*	62 *7*	2079.11	25/2$^-$	E2	0.0312
		654.9 *1*	43 *5*	1868.19	25/2$^-$	Q	
2609.6	27/2$^-$	509.7 *2*	100	2099.9	23/2$^-$	E2	0.0219
2628.39	29/2$^-$	244		2384.31	29/2$^-$		
		451.7 *2*	46 *5*	2176.81	25/2$^-$	E2	0.0296
		639.0 *1*	100 *8*	1989.35	25/2$^-$		
2632.40	(25/2$^-$)	643.6 *9*	28 *10*	1989.35	25/2$^-$		
		1078.4 *2*	100 *17*	1554.01	21/2$^-$		
2646.04	(23/2$^-$)	657.5 *5*	28 *10*	1989.35	25/2$^-$		
		1091.9 *2*	100 *17*	1554.01	21/2$^-$		
2647.2?		254[a]		2393.1?			
		505[a]		2142.2?			
2658.8	(31/2$^+$)	273.9 *4*	100	2384.31	29/2$^-$		
2699.76	31/2$^-$	283.8 *2*	9 *1*	2415.90	29/2$^-$		
		560.59 *12*	100 *3*	2138.29	27/2$^-$	E2	0.0174
2714.01	31/2$^-$	222.28 *15*	77 *50*	2491.73	29/2$^-$	D	
		331		2384.31	29/2$^-$		
		412.45 *16*	100 *10*	2301.39	27/2$^-$	E2	0.0376
2768.32	31/2$^-$	246	50 *25*	2522.74	29/2$^-$		
		475.2 *1*	100 *6*	2293.39	27/2$^-$	E2	0.0260
		631.5 *2*	100 *60*	2138.29	27/2$^-$	Q	
2824.23	33/2$^-$	440.02 *7*	100	2384.31	29/2$^-$	E2	0.0317
2903.1?		256[a]		2647.2?			
		510[a]		2393.1?			
2960.29	33/2$^-$	246.37 *13*	76 *52*	2714.01	31/2$^-$	D	
		467.77 *19*	100 *10*	2491.73	29/2$^-$	E2	0.0270
2981.05	33/2$^-$	565.34 *9*	100 *4*	2415.90	29/2$^-$	E2	0.0171
		596.5 *3*	1.6 *2*	2384.31	29/2$^-$		
3039.71	(31/2$^+$)	623.7 *2*	100	2415.90	29/2$^-$		

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Adopted Levels, Gammas (continued)

γ(^{181}Os) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[#]	α[&]	Comments
3040.55	33/2⁻	272	65 *19*	2768.32	31/2⁻			
		518.0 *1*	83 *48*	2522.74	29/2⁻	E2	0.0211	
		624.39 *25*	100 *5*	2415.90	29/2⁻	Q		
3054.36	(29/2⁻)	423.0 *11*	50 *25*	2632.40	(25/2⁻)			
		1064.9 *3*	100 *38*	1989.35	25/2⁻			
3092.29	(29/2⁻)	708.1 *2*	71 *11*	2384.31	29/2⁻			
		1103.0 *1*	100 *13*	1989.35	25/2⁻			
3107.5	37/2⁺	599.83 *17*	100	2507.6	33/2⁺	E2	0.0149	
3107.9	31/2⁻	498.3 *2*	100	2609.6	27/2⁻	E2	0.0231	
3108.9	(29/2⁻)	1240.7 *3*	100	1868.19	25/2⁻			
3163.5	35/2⁺	654.8[a] *26*	5 *2*	2507.6	33/2⁺			
		671.15 *20*	100 *5*	2492.3	31/2⁺	E2	0.0115	
3182.1?		279[a]		2903.1?				
3192.0	33/2⁻	563.6 *2*	100	2628.39	29/2⁻	E2	0.0172	
		808		2384.31	29/2⁻			
3235.52	35/2⁻	275.5 *5*	100 *12*	2960.29	33/2⁻			
		412.5 *2*	1.0 *9*	2824.23	33/2⁻			
		521.4 *1*	43 *4*	2714.01	31/2⁻	E2	0.0207	
3259.09	(31/2⁺)	842.8 *2*	100	2415.90	29/2⁻			
3266.65	35/2⁻	566.89 *17*	100	2699.76	31/2⁻	E2	0.0169	
3268.4	(25/2⁻)	622.4 *2*	100	2646.04	(23/2⁻)			
3335.19	35/2⁻	296		3040.55	33/2⁻			
		567.5 *1*	100 *6*	2768.32	31/2⁻	E2	0.0169	
		634.8 *1*	33 *5*	2699.76	31/2⁻	Q		
3350.74	37/2⁻	526.5 *1*	100	2824.23	33/2⁻	E2	0.0202	
3471.1?		289[a]		3182.1?				
		568[a]		2903.1?				
3526.21	37/2⁻	290.8 *1*	55 *4*	3235.52	35/2⁻			
		565.7 *1*	100 *10*	2960.29	33/2⁻	E2	0.0170	
3536.69	(31/2⁻)	1243.3 *1*	100	2293.39	27/2⁻			
3555.75	37/2⁻	574.70 *18*	100	2981.05	33/2⁻	E2	0.0164	
3579.27	33/2⁻	(42)		3536.69	(31/2⁻)			E_γ: transition inferred from coincidence relations in (HI,xnγ) (2003Cu03).
		319.8 *2*	16 *3*	3259.09	(31/2⁺)			
		471		3107.5	37/2⁺			
		487.1 *1*	49 *4*	3092.29	(29/2⁻)			
		524.9 *1*	57 *5*	3054.36	(29/2⁻)			
		539.3 *3*	9 *2*	3039.71	(31/2⁺)			
		599.6 *2*	17 *3*	2981.05	33/2⁻			
		623.0 *12*	32 *4*	2960.29	33/2⁻			
		754.9 *1*	91 *5*	2824.23	33/2⁻	D		
		920.2 *3*	8 *2*	2658.8	(31/2⁺)			
		1056.3 *1*	53 *5*	2522.74	29/2⁻	Q		
		1195.0 *1*	100 *6*	2384.31	29/2⁻	Q		
3632.8	35/2⁻	524.9 *2*	100	3107.9	31/2⁻	E2	0.0204	
3655.11	37/2⁻	322		3335.19	35/2⁻			
		614.7 *1*	100 *6*	3040.55	33/2⁻	E2	0.0141	
		673.9 *1*	60 *4*	2981.05	33/2⁻	Q		
3694.2	41/2⁺	586.70 *17*	100	3107.5	37/2⁺	E2	0.0156	
3738.67	35/2⁻	159.4 *1*	100	3579.27	33/2⁻	M1	1.54	B(M1)(W.u.)=1.2×10^{-4} *4* Mult.: from intensity balance in (HI,xnγ) (2003Cu03).
3780.1?		309[a]		3471.1?				
3798.5	37/2⁻	606.5 *1*	100	3192.0	33/2⁻			
3816.6	39/2⁺	653.1 *5*	100	3163.5	35/2⁺	E2	0.0123	

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Adopted Levels, Gammas (continued)

γ(^{181}Os) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult.#	α&	Comments
3842.74	39/2$^-$	316.3 *1*	38 *3*	3526.21	37/2$^-$			
		607.3 *1*	100 *6*	3235.52	35/2$^-$	E2	0.0145	
3864.1	39/2$^-$	597.5 *1*	100	3266.65	35/2$^-$	E2	0.0150	
3877.0	37/2$^-$	685.0 *2*	100	3192.0	33/2$^-$	E2	0.0110	
3914.55	37/2$^+$	175.9 *1*	100	3738.67	35/2$^-$	E1	0.093	Mult.: from intensity balance in (HI,xnγ) (2003Cu03).
3969.24	41/2$^-$	618.5 *1*	100	3350.74	37/2$^-$	E2	0.0139	
3974.5	39/2$^-$	639.3 *2*	100	3335.19	35/2$^-$	E2	0.0129	
4139.91	(39/2$^+$)	225.3 *2*	100	3914.55	37/2$^+$	D		
4165.39	41/2$^-$	322.4 *1*	100 *5*	3842.74	39/2$^-$			
		640.7 *3*	98 *16*	3526.21	37/2$^-$	E2	0.0128	
4168.8?	39/2$^-$	536.0[a] *2*	100	3632.8	35/2$^-$			
4173.90	(41/2$^-$)	647.7 *1*	100	3526.21	37/2$^-$			
4184.8	41/2$^-$	629.1 *1*	100	3555.75	37/2$^-$	E2	0.0133	
4321.8	45/2$^+$	627.6 *3*	100	3694.2	41/2$^+$	E2	0.0134	B(E2)(W.u.)=324 *30*
4326.83	(39/2$^+$)	412.3 *1*	100	3914.55	37/2$^+$	D		
4336.01	41/2$^-$	680.9 *1*	100	3655.11	37/2$^-$	E2	0.0112	
4447.6	41/2$^-$	649.1 *2*	100	3798.5	37/2$^-$	E2	0.0124	
4459.9	43/2$^+$	643.3 *7*	100	3816.6	39/2$^+$	E2	0.0127	
4511.9	43/2$^-$	346.2 *2*	81 *14*	4165.39	41/2$^-$			
		669.4 *2*	100 *12*	3842.74	39/2$^-$	E2	0.0116	
4521.83	(41/2$^+$)	194.9 *1*	100 *13*	4326.83	(39/2$^+$)	D		
		381.9 *1*	96 *13*	4139.91	(39/2$^+$)	D		
4527.3	43/2$^-$	663.2 *1*	100	3864.1	39/2$^-$	E2	0.0119	
4612.8	41/2$^-$	735.8 *3*	100	3877.0	37/2$^-$	E2	0.0095	
4631.93	(41/2$^+$)	305.0 *1*	100	4326.83	(39/2$^+$)	D		
4674.05	45/2$^-$	704.8 *1*	100	3969.24	41/2$^-$	E2	0.0104	
4685.4	43/2$^-$	710.9 *1*	100	3974.5	39/2$^-$	E2	0.0102	
4794.1	(45/2$^-$)	620.2 *2*	100	4173.90	(41/2$^-$)	E2	0.0138	
4843.7	45/2$^-$	678.3 *4*	100	4165.39	41/2$^-$	E2	0.0113	
4844.31	(43/2$^+$)	322.4 *1*	100	4521.83	(41/2$^+$)	D		
4887.6	45/2$^-$	702.8 *1*	100	4184.8	41/2$^-$	E2	0.0104	
4947.2	(43/2$^-$)	315.3 *1*	100	4631.93	(41/2$^+$)	D		
5030.0	49/2$^+$	708.2 *4*	100	4321.8	45/2$^+$	E2	0.0103	B(E2)(W.u.)=240 *21*
5061.11	45/2$^-$	725.1 *1*	100	4336.01	41/2$^-$	E2	0.0098	
5112.92	(43/2$^+$)	165.6 *5*	2 *1*	4947.2	(43/2$^-$)			
		268.6 *1*	29 *3*	4844.31	(43/2$^+$)	D		
		480.9 *1*	94 *6*	4631.93	(41/2$^+$)	D		
		591.0 *1*	39 *3*	4521.83	(41/2$^+$)	D		
		786.3 *1*	100 *6*	4326.83	(39/2$^+$)	Q		
5166.0	45/2$^-$	718.4 *2*	100	4447.6	41/2$^-$	E2	0.0100	
5169.9	47/2$^+$	710.0 *3*	100	4459.9	43/2$^+$	E2	0.0102	
5178.68	(45/2$^+$)	334.3 *1*	100 *19*	4844.31	(43/2$^+$)	D		
		657.4 *3*	49 *15*	4521.83	(41/2$^+$)	E2	0.0121	
5211.7	47/2$^-$	699.8 *2*	100	4511.9	43/2$^-$	E2	0.0105	
5259.9	47/2$^-$	732.6 *2*	100	4527.3	43/2$^-$	E2	0.0095	
5274.0	(45/2$^-$)	326.8 *1*	100	4947.2	(43/2$^-$)	D		
5379.1	45/2$^-$	766.3 *3*	100	4612.8	41/2$^-$	E2	0.0087	
5427.3	47/2$^-$	741.9 *1*	100	4685.4	43/2$^-$	E2	0.0093	
5454.9	49/2$^-$	780.9 *1*	100	4674.05	45/2$^-$	E2	0.0083	B(E2)(W.u.)=200 *16*
5469.1	(45/2$^+$)	356.2 *1*	100 *5*	5112.92	(43/2$^+$)	D		
		836.3[a] *2*	9.8 *15*	4631.93	(41/2$^+$)	Q		
5490.9	(49/2$^-$)	696.8 *2*	100	4794.1	(45/2$^-$)	E2	0.0106	
5509.8	(47/2$^+$)	331.2 *1*	100	5178.68	(45/2$^+$)	D		
		665.5 *1*	100	4844.31	(43/2$^+$)	Q		

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Adopted Levels, Gammas (continued)

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

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[#]	α[&]
5523.8	(47/2$^+$)	345.2 *2*	100 *22*	5178.68	(45/2$^+$)	D	
		679.8 *3*	87 *26*	4844.31	(43/2$^+$)	E2	0.0112
5541.7	49/2$^-$	698.0 *5*	100	4843.7	45/2$^-$	E2	0.0106
5614.1	(47/2$^-$)	340.0[a] *10*	100	5274.0	(45/2$^-$)	D	
5654.1	49/2$^-$	766.4 *1*	100	4887.6	45/2$^-$	Q	
5673.6	49/2$^-$	786.0 *3*	100	4887.6	45/2$^-$	E2	0.00822
5808.81	49/2$^-$	747.7 *1*	100	5061.11	45/2$^-$	E2	0.0091
5832.0	(47/2$^+$)	362.9 *1*	100	5469.1	(45/2$^+$)	D	
5832.3	53/2$^+$	802.3 *7*	100	5030.0	49/2$^+$	E2	0.00787
5879.6	(49/2$^+$)	355.8 *1*	100 *14*	5523.8	(47/2$^+$)	D	
		700.7 *2*	58 *8*	5178.68	(45/2$^+$)	E2	0.0105
5922.1	49/2$^-$	756.1 *6*	100	5166.0	45/2$^-$	E2	0.0089
5931.1	51/2$^-$	719.4 *4*	100	5211.7	47/2$^-$	E2	0.0099
5963.8	51/2$^+$	793.9 *4*	100	5169.9	47/2$^+$	E2	0.00805
5965.3	(49/2$^-$)	691.3 *3*	100	5274.0	(45/2$^-$)	Q	
6020.1	51/2$^-$	760.2 *1*	100	5259.9	47/2$^-$	Q	
6061.1	51/2$^-$	801.2 *1*	100	5259.9	47/2$^-$	E2	0.00789
6177.9	(51/2$^+$)	668.1 *2*	100	5509.8	(47/2$^+$)	E2	0.0117
6181.5	(49/2$^-$)	802.4[a] *4*	100	5379.1	45/2$^-$		
6191.3	51/2$^-$	764.0 *1*	100	5427.3	47/2$^-$	E2	0.0087
6208.2	(49/2$^+$)	376.2 *1*	100	5832.0	(47/2$^+$)	D	
6242.3	(51/2$^+$)	362.5 *2*	55 *12*	5879.6	(49/2$^+$)	D	
		718.7 *2*	100 *13*	5523.8	(47/2$^+$)	E2	0.0099
6264.0	53/2$^-$	722.3 *5*	100	5541.7	49/2$^-$	E2	0.0098
6279.0	(53/2$^-$)	788.1 *1*	100	5490.9	(49/2$^-$)	E2	0.00817
6301.3	53/2$^-$	846.3 *1*	100	5454.9	49/2$^-$	E2	0.00704
6403.5	53/2$^-$	749.5 *1*	100	5654.1	49/2$^-$	E2	0.0091
6475.5	(51/2$^+$)	267.3 *1*	100 *8*	6208.2	(49/2$^+$)	D	
		643.4 *9*	1 *3*	5832.0	(47/2$^+$)	Q	
6521.1	53/2$^-$	847.5 *4*	100	5673.6	49/2$^-$	E2	0.00702
6574.8	53/2$^-$	766		5808.81	49/2$^-$	E2	0.0087
6607.2	(51/2$^-$)	399.0 *1*	100	6208.2	(49/2$^+$)	D	
6614.6	(53/2$^+$)	372.5 *10*	7 *7*	6242.3	(51/2$^+$)	D	
		735.0 *2*	100 *27*	5879.6	(49/2$^+$)	E2	0.0095
6678.7	55/2$^-$	747.6 *8*	100	5931.1	51/2$^-$	E2	0.0091
6729.6	53/2$^-$	807.5 *5*	100	5922.1	49/2$^-$	E2	0.00777
6730.2	57/2$^+$	897.9 *3*	100	5832.3	53/2$^+$	E2	0.00623
6806.6	55/2$^-$	786.5 *2*	100	6020.1	51/2$^-$	E2	0.00821
6840.5	55/2$^+$	876.7 *6*	100	5963.8	51/2$^+$	E2	0.00655
6855.1	(55/2$^+$)	677.2 *2*	100	6177.9	(51/2$^+$)	Q	
6874.1	(55/2$^+$)	696.2 *2*	100	6177.9	(51/2$^+$)	E2	0.0107
6905.1	55/2$^-$	844.0 *1*	100	6061.1	51/2$^-$	E2	0.00708
6921.5	(53/2$^+$)	314.3[a] *22*	0.2 *2*	6607.2	(51/2$^-$)	D	
		446.0 *1*	100 *5*	6475.5	(51/2$^+$)	D	
6991.6	(55/2$^+$)	376.9 *10*	100	6614.6	(53/2$^+$)	D	
		749.3 *3*	100	6242.3	(51/2$^+$)	E2	0.0091
6995.9	55/2$^-$	804.6 *2*	100	6191.3	51/2$^-$	E2	0.00783
6999.5	(57/2$^-$)	735.5[a] *4*	100	6264.0	53/2$^-$		
7014.6	(53/2$^-$)	833.1[a] *2*	100	6181.5	(49/2$^-$)		
7138.0	(57/2$^-$)	859.0 *2*	100	6279.0	(53/2$^-$)	E2	0.00683
7200.3	57/2$^-$	899.0 *1*	100	6301.3	53/2$^-$	E2	0.00622
7213.9	(57/2$^-$)	912.6 *3*	100	6301.3	53/2$^-$		
7229.6	57/2$^-$	826.0 *1*	100	6403.5	53/2$^-$	E2	0.00741
7243.7	(55/2$^+$)	322.2 *1*	100	6921.5	(53/2$^+$)	D	
7353.9	(55/2$^+$)	432.4 *1*	100	6921.5	(53/2$^+$)	D	

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Adopted Levels, Gammas (continued)

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

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[#]	α[&]
7362.0	57/2$^-$	840.9 *4*	100	6521.1	53/2$^-$	E2	0.00714
7363.0	57/2$^-$	788.2 *3*	100	6574.8	53/2$^-$	E2	0.00817
7381.6	(57/2$^+$)	390.1 *10*	100 *10*	6991.6	(55/2$^+$)	D	
		767.0 *3*	16 *7*	6614.6	(53/2$^+$)	E2	0.0087
7456.1	59/2$^-$	777.4 *3*	100	6678.7	55/2$^-$	E2	0.0084
7486.9	(55/2$^+$)	565.2 *7*	100 *13*	6921.5	(53/2$^+$)	Q	
		1011.4 *2*	62 *10*	6475.5	(51/2$^+$)	Q	
7509.2	(59/2$^+$)	654.1 *2*	100	6855.1	(55/2$^+$)	E2	0.0122
7528.3	(57/2$^+$)	284.6 *1*	100	7243.7	(55/2$^+$)	D	
7583.9	57/2$^-$	854.3 *3*	100	6729.6	53/2$^-$	E2	0.00691
7629.1	(59/2$^+$)	755.0 *4*	100	6874.1	(55/2$^+$)	E2	0.0090
7664.6	59/2$^-$	858.0 *1*	100	6806.6	55/2$^-$	E2	0.00684
7727.5	61/2$^+$	997.3 *5*	100	6730.2	57/2$^+$	E2	0.00504
7750.4	(61/2$^-$)	750.9[a] *5*	100	6999.5	(57/2$^-$)		
7773.5	(59/2$^+$)	781.9 *10*	100	6991.6	(55/2$^+$)	E2	0.00831
7794	59/2$^+$	954 *4*	100	6840.5	55/2$^+$	E2	0.00551
7803.1	59/2$^-$	898.0 *1*	100	6905.1	55/2$^-$	E2	0.00623
7842.9	59/2$^-$	847.0 *2*	100	6995.9	55/2$^-$	E2	0.00703
7864.1	(57/2$^-$)	849.4[a] *2*	100	7014.6	(53/2$^-$)		
7927.1	(57/2$^+$)	440.2 *1*	100 *9*	7486.9	(55/2$^+$)	D	
		573.2 *1*	40 *4*	7353.9	(55/2$^+$)	D	
8095.6	61/2$^-$	866[a]		7229.6	57/2$^-$		
8164.0	(61/2$^-$)	801[a]		7363.0	57/2$^-$		
8169.9	(61/2$^-$)	956.0 *3*	100	7213.9	(57/2$^-$)	E2	0.00549
8173.6	(61/2$^+$)	792.0 *3*	100	7381.6	(57/2$^+$)	E2	0.00809
8173.8	61/2$^-$	973.5 *2*	100	7200.3	57/2$^-$	E2	0.00529
8231.8	(63/2$^+$)	722.6 *3*	100	7509.2	(59/2$^+$)	E2	0.0098
8259.8	61/2$^-$	897.7 *8*	100	7362.0	57/2$^-$	E2	0.0062 *4*
8261.9	(63/2$^-$)	805.8[a] *3*	100	7456.1	59/2$^-$		
8452.4	(59/2$^+$)	525.3 *1*	100	7927.1	(57/2$^+$)	D	
8457.4?	(63/2$^+$)	828.1[a] *5*	100	7629.1	(59/2$^+$)	Q	
8590.4	63/2$^-$	925.8 *3*	100	7664.6	59/2$^-$	E2	0.00585
8716.9	63/2$^-$	874		7842.9	59/2$^-$	E2	0.00659
8766.9	(61/2$^+$)	314.5 *3*	16 *5*	8452.4	(59/2$^+$)	D	
		839.9[a] *1*	100 *11*	7927.1	(57/2$^+$)	Q	
8782.7	63/2$^-$	979.6 *1*	100	7803.1	59/2$^-$	E2	0.00522
8818.1	65/2$^+$	1090.6 *9*	100	7727.5	61/2$^+$	E2	0.00422
8826	63/2$^+$	1031.7 *6*	100	7794	59/2$^+$	E2	0.00471
8971.3?	(67/2$^+$)	739.3[a] *3*	100	8231.8	(63/2$^+$)	Q	
8980.6	(65/2$^-$)	885[a]		8095.6	61/2$^-$		
9091.1	(67/2$^-$)	829.2[a] *1*	100	8261.9	(63/2$^-$)		
9177.6	(65/2$^-$)	1007.7 *2*	100	8169.9	(61/2$^-$)	E2	0.00493
9191	65/2$^-$	931.4 *23*	100	8259.8	61/2$^-$	E2	0.00578
9202.9	65/2$^-$	1029.1 *1*	100	8173.8	61/2$^-$	E2	0.00473
9573.0	67/2$^-$	982.6 *3*	100	8590.4	63/2$^-$	E2	0.00519
9612.9	67/2$^-$	896		8716.9	63/2$^-$	E2	0.00626
9860.1	67/2$^-$	1077.4 *4*	100	8782.7	63/2$^-$	E2	0.00432
9919	67/2$^+$	1092.7 *9*	100	8826	63/2$^+$	E2	0.00420
9999.9	(69/2$^+$)	1181.8 *9*	100	8818.1	65/2$^+$	E2	0.00361
10229.3	(69/2$^-$)	1051.7 *2*	100	9177.6	(65/2$^-$)	E2	0.00453
10308.6	69/2$^-$	1105.7 *5*	100	9202.9	65/2$^-$	E2	0.00410
10544.9	71/2$^-$	932		9612.9	67/2$^-$	E2	0.00578
10596.5	71/2$^-$	1023.5 *2*	100	9573.0	67/2$^-$	E2	0.00478
11004.1	(71/2$^-$)	1143.9[a] *8*	100	9860.1	67/2$^-$		

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Adopted Levels, Gammas (continued)

γ(^{181}Os) (continued)

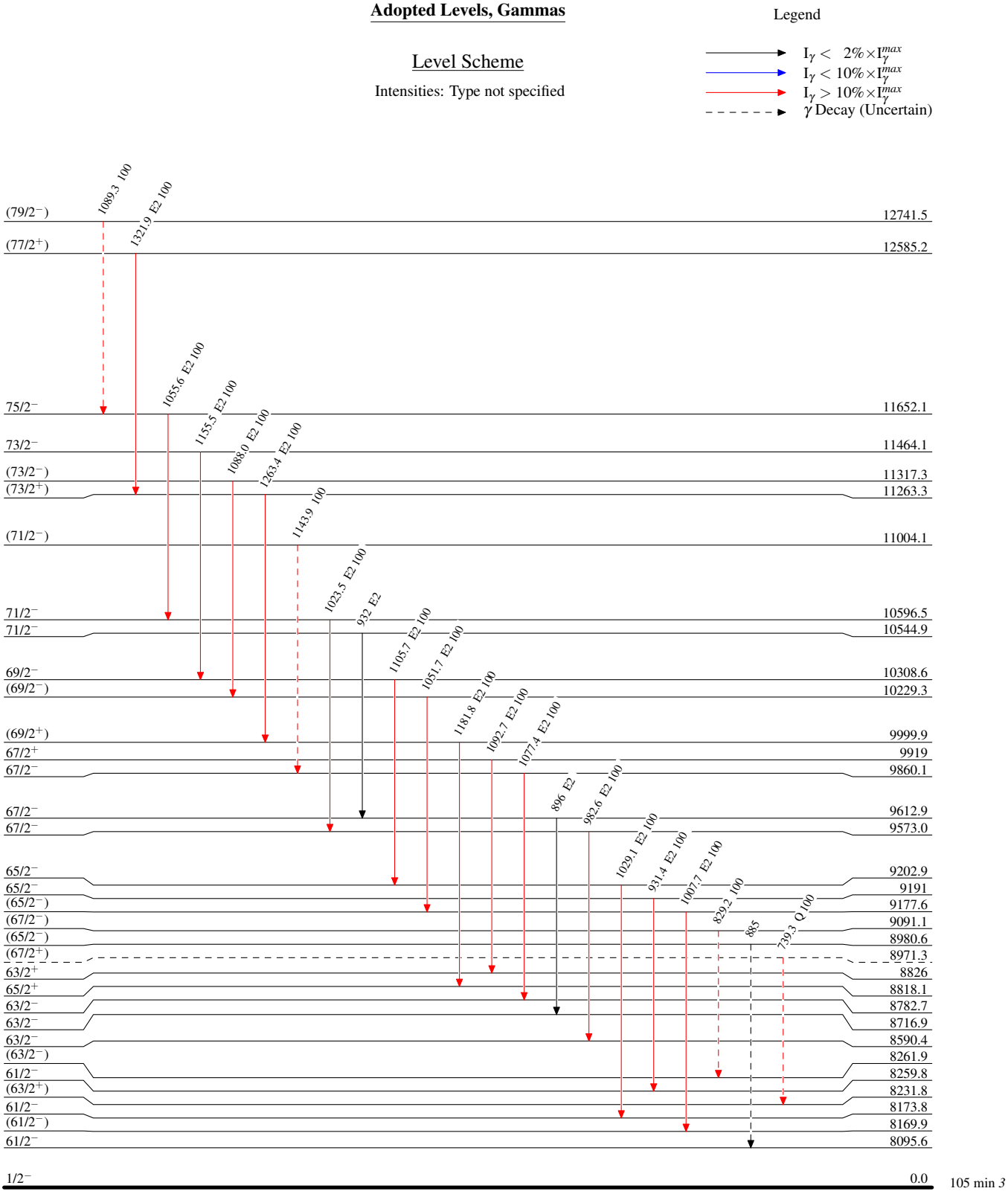
E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[#]	α[&]
11263.3	(73/2$^+$)	1263.4 *9*	100	9999.9	(69/2$^+$)	E2	0.00317
11317.3	(73/2$^-$)	1088.0 *9*	100	10229.3	(69/2$^-$)	E2	0.00424
11464.1	73/2$^-$	1155.5 *5*	100	10308.6	69/2$^-$	E2	0.00377
11652.1	75/2$^-$	1055.6 *2*	100	10596.5	71/2$^-$	E2	0.00450
12585.2	(77/2$^+$)	1321.9 *9*	100	11263.3	(73/2$^+$)	E2	0.00291
12741.5	(79/2$^-$)	1089.3[a] *4*	100	11652.1	75/2$^-$		

† From (HI,xnγ) and ^{182}W(α,5nγ), except as noted.
‡ Weighted average of values from ^{181}Ir ε decay, ^{182}W(α,5nγ) and (HI,xnγ).
# Unless otherwise noted, multipolarities are from DCO ratios of (HI,xnγ) (2003Cu03) and γ(θ) of ^{182}W(α,5nγ) (1976Ne03).
@ From ^{181}Ir ε decay.
& 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.
a Placement of transition in the level scheme is uncertain.

Adopted Levels, Gammas

Level Scheme

Intensities: Type not specified

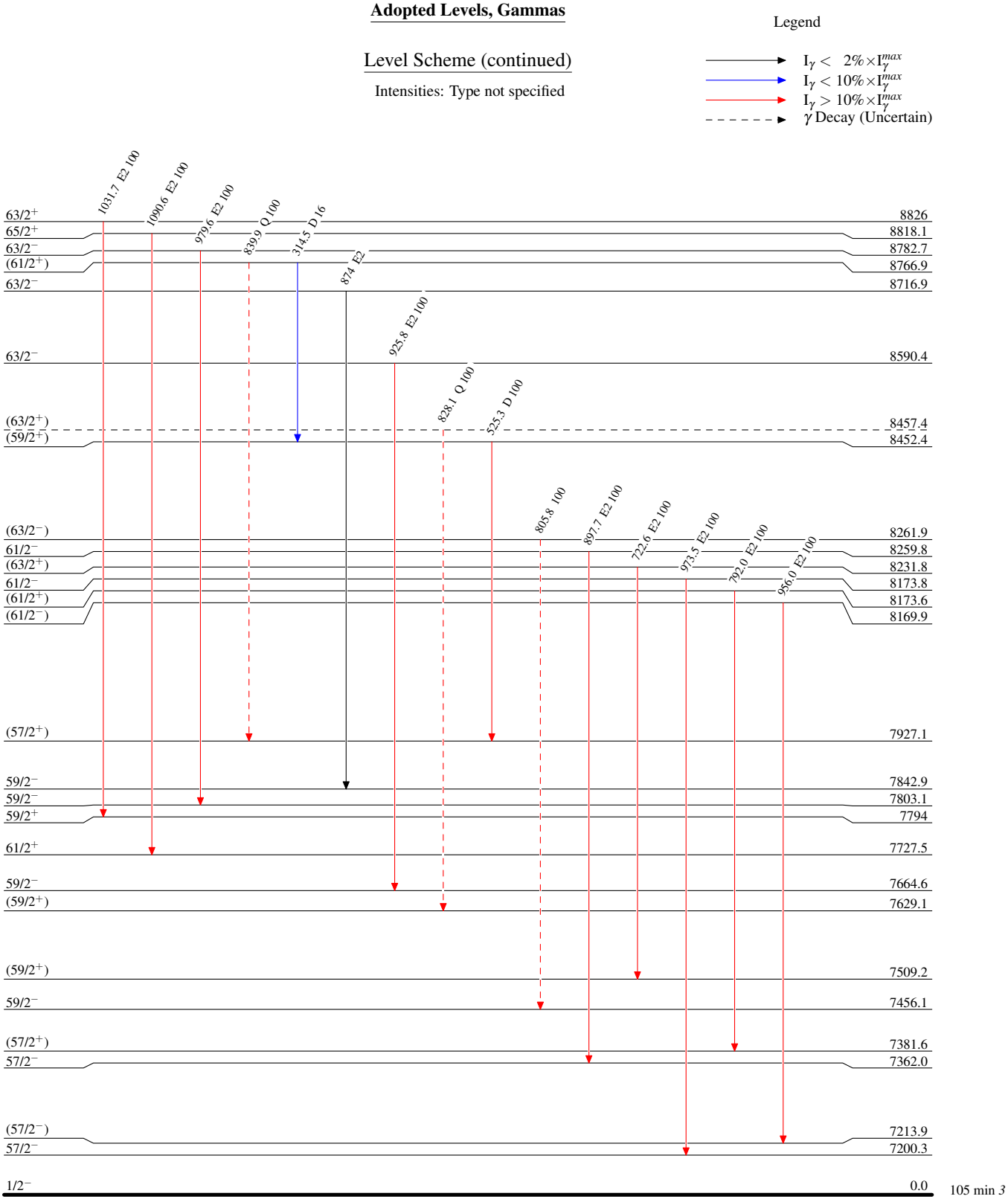


$^{181}_{76}Os_{105}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

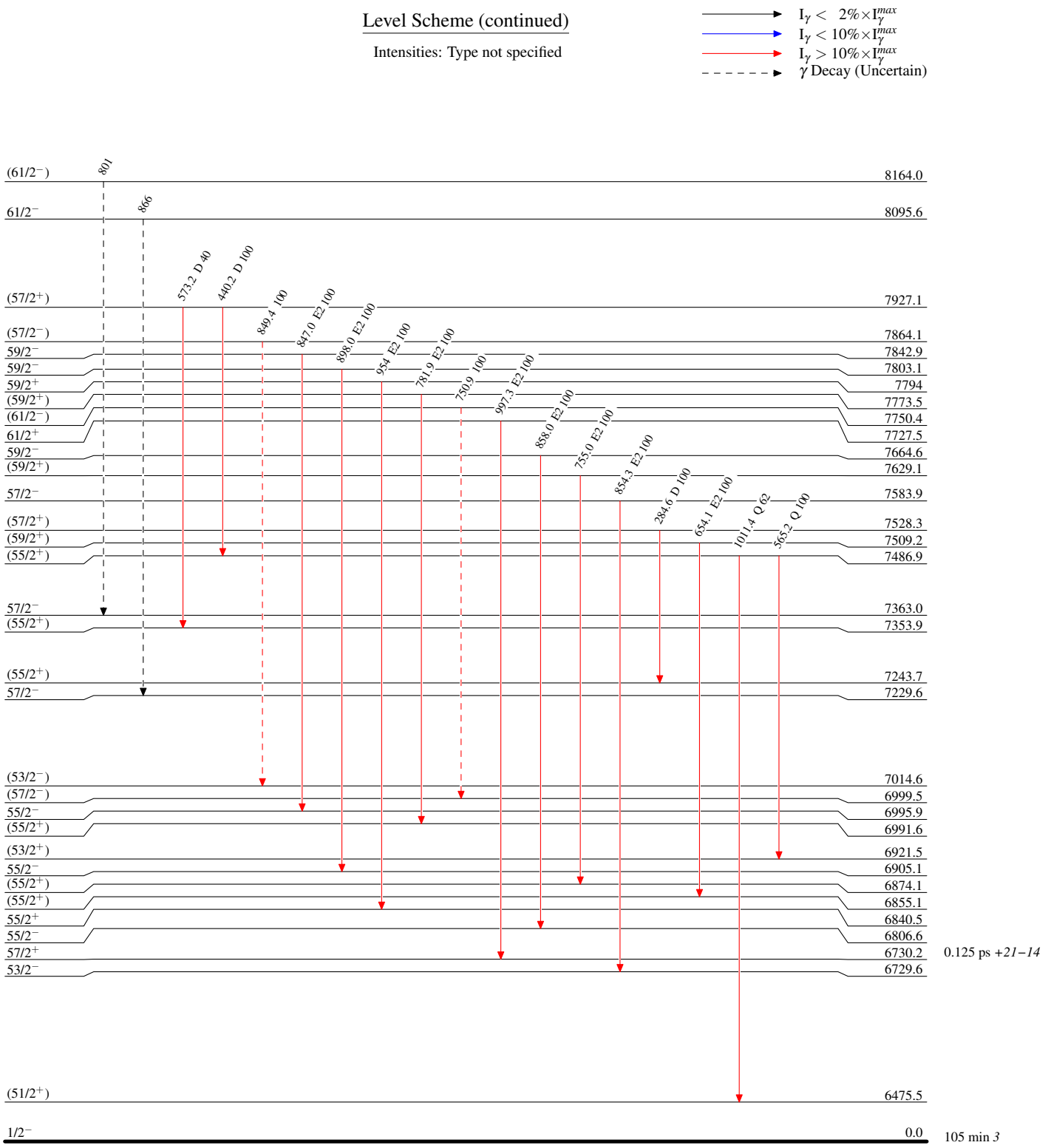


$^{181}_{76}Os_{105}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

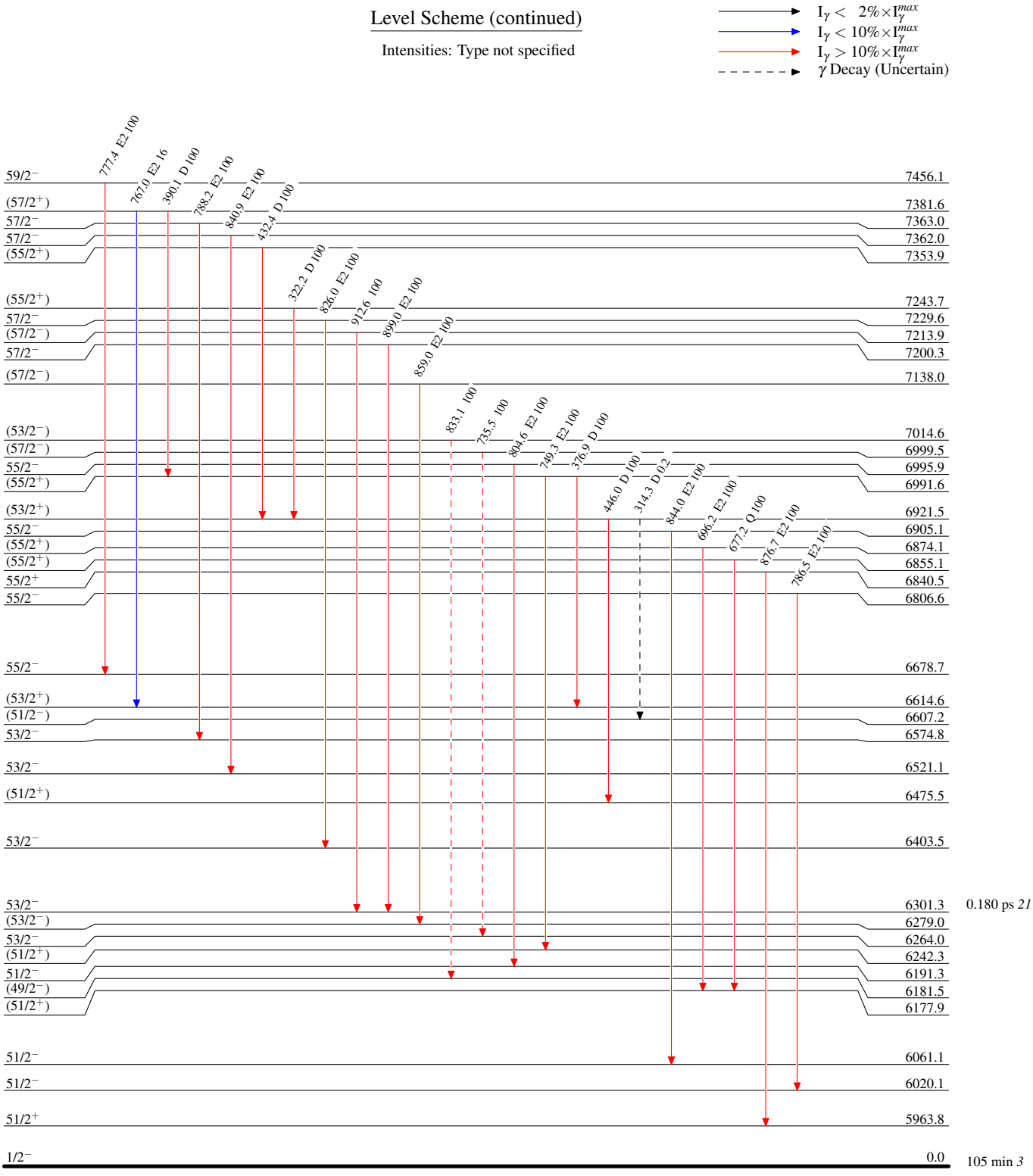


$^{181}_{76}Os_{105}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

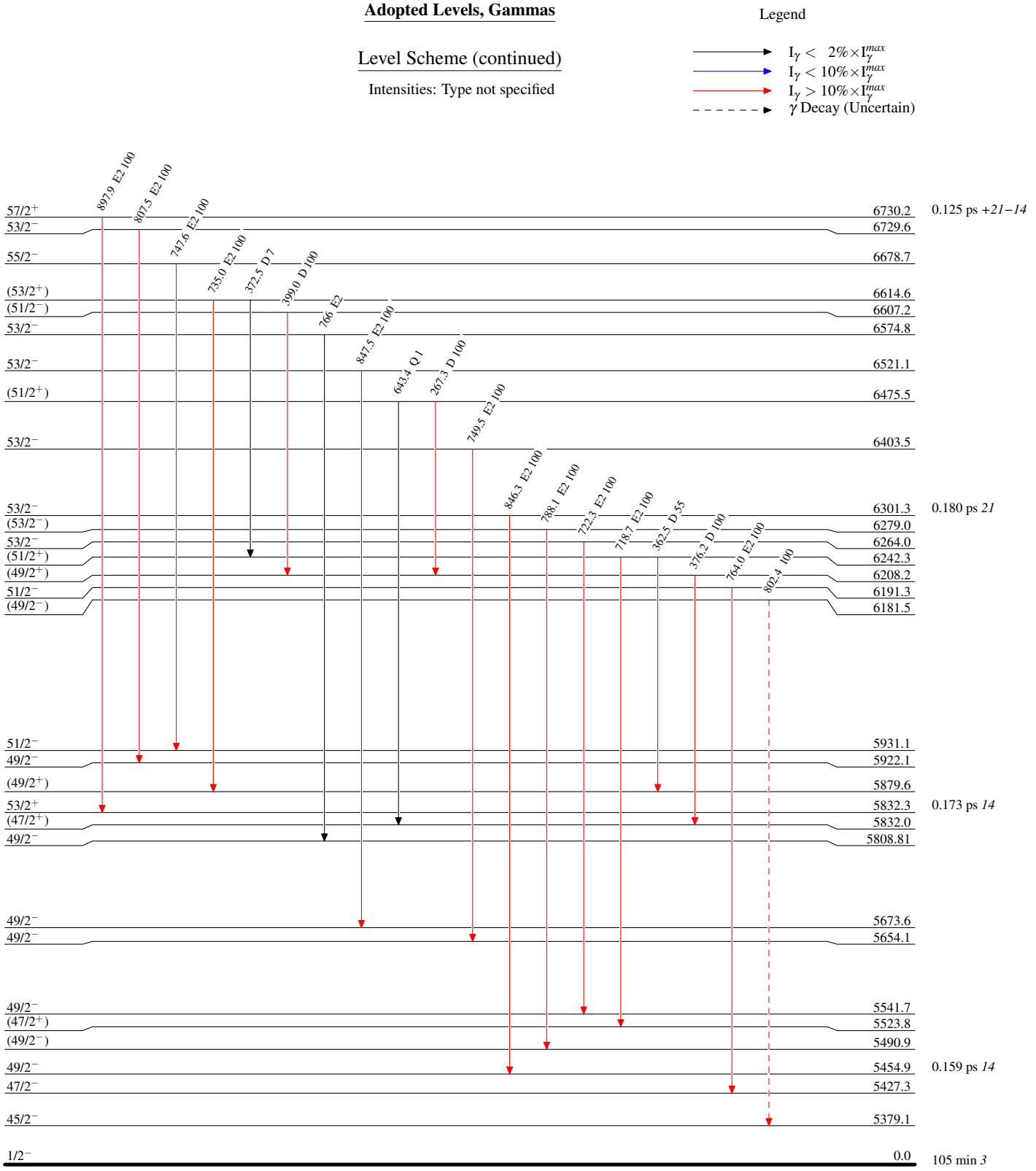


$^{181}_{76}Os_{105}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

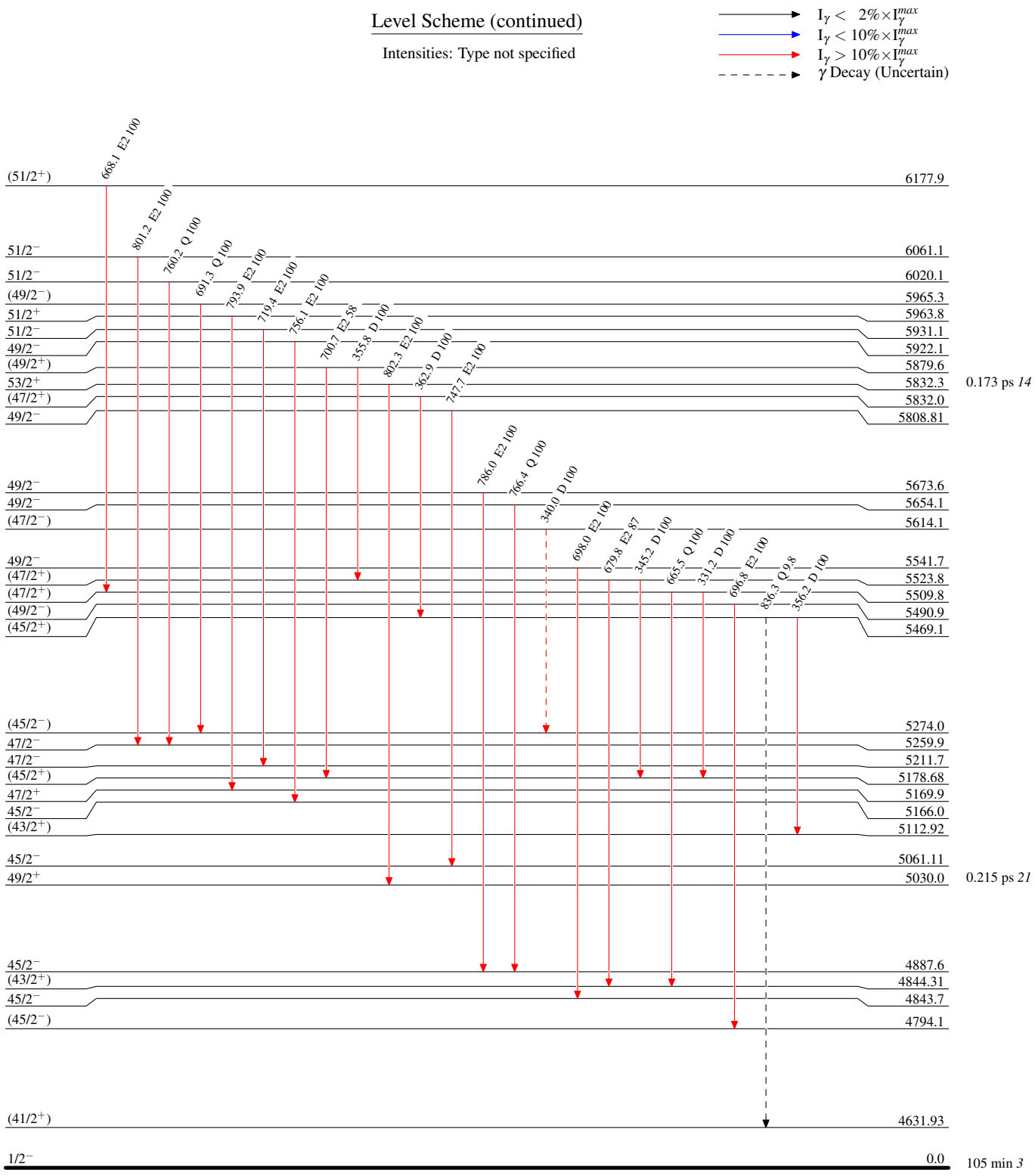


$^{181}_{76}Os_{105}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

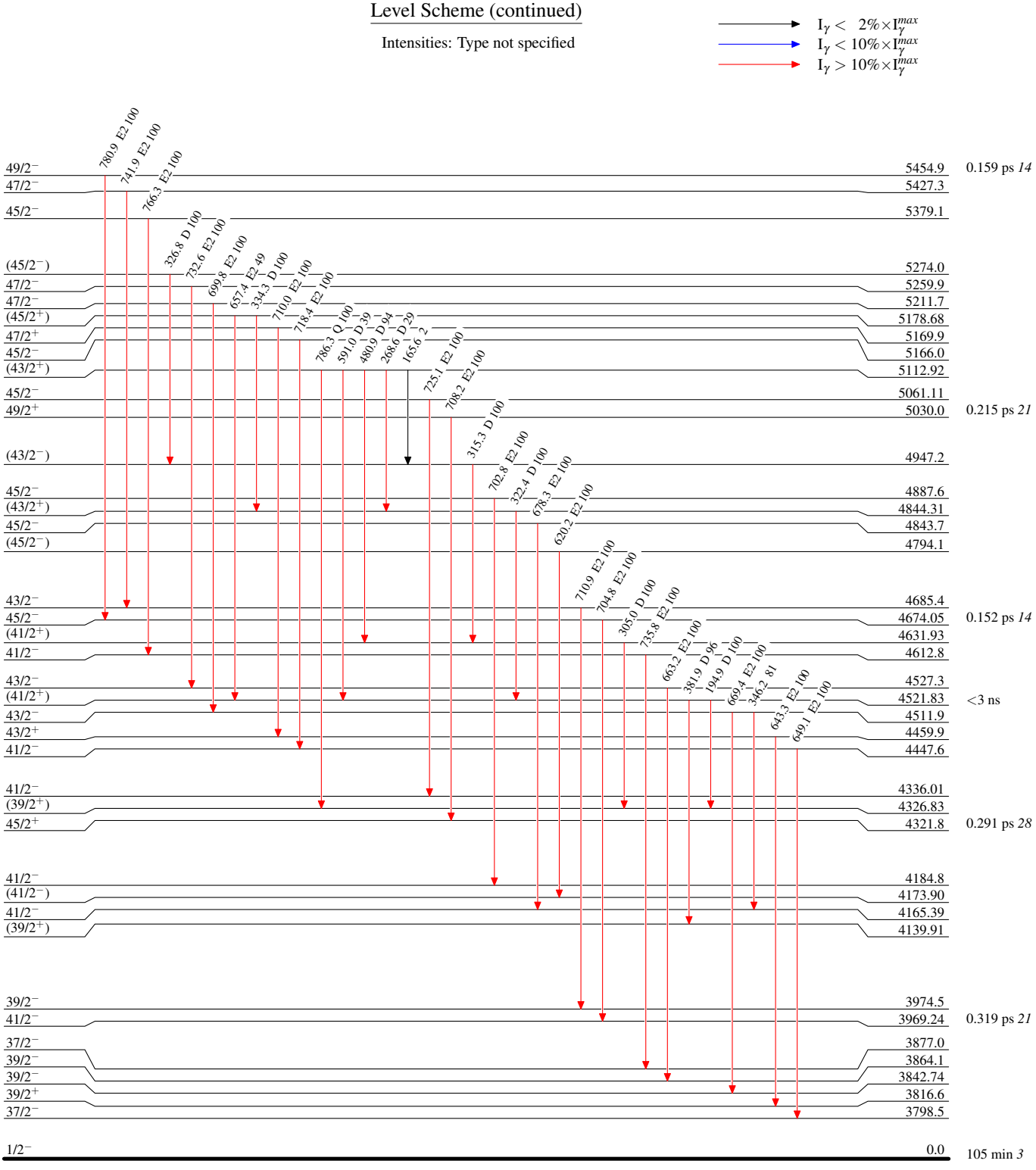


$^{181}_{76}Os_{105}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

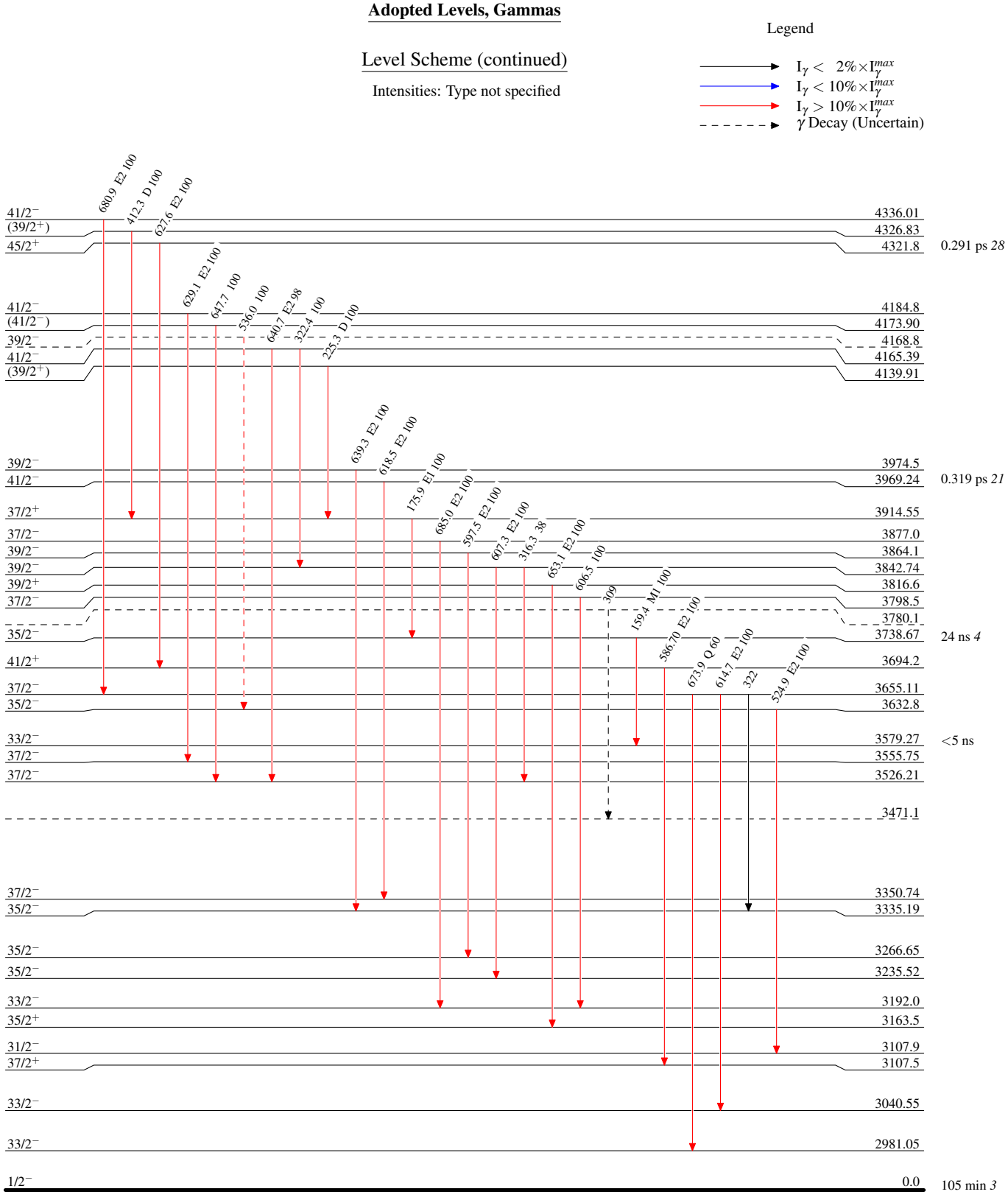


$^{181}_{76}Os_{105}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

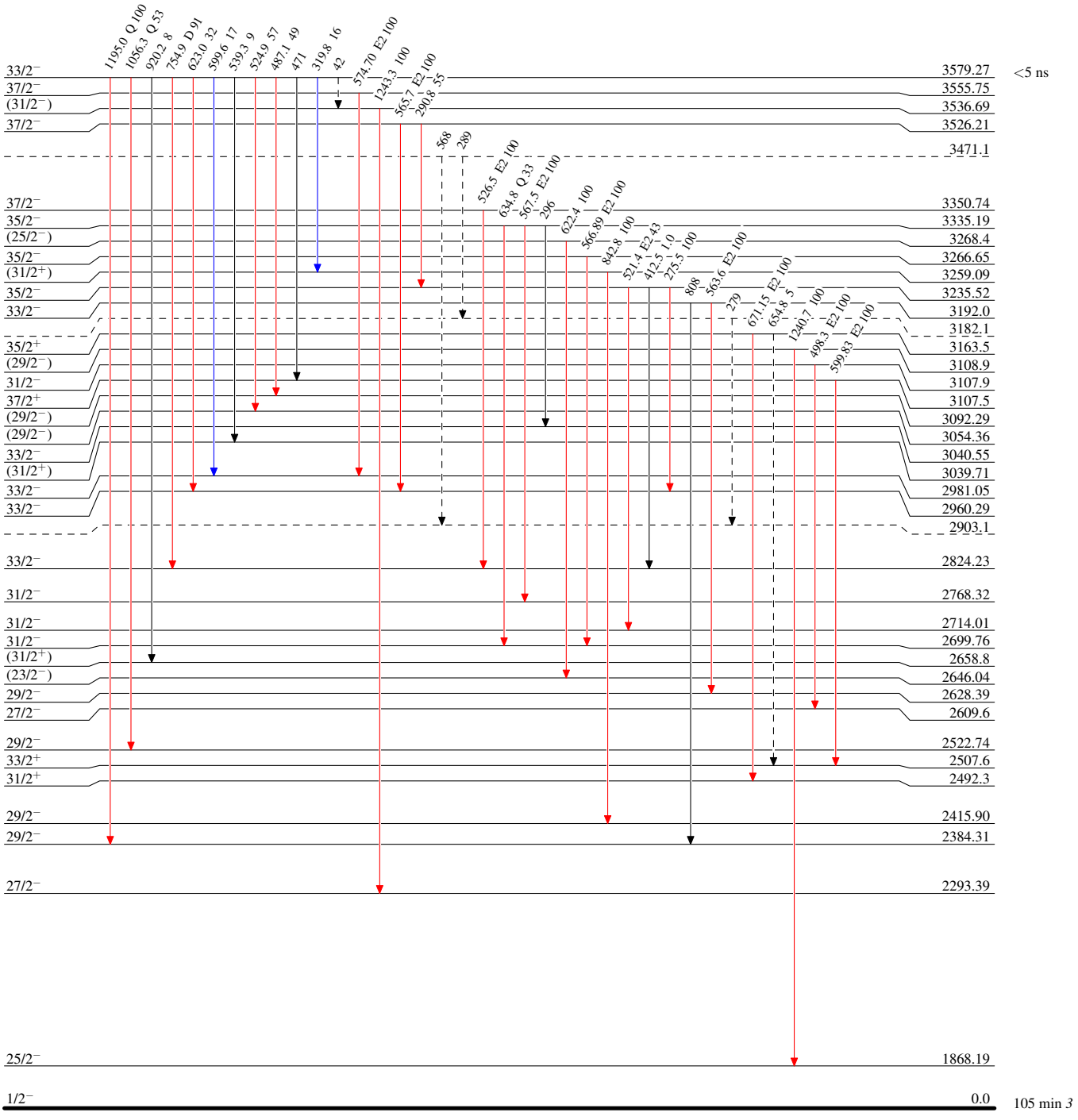


$^{181}_{76}Os_{105}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

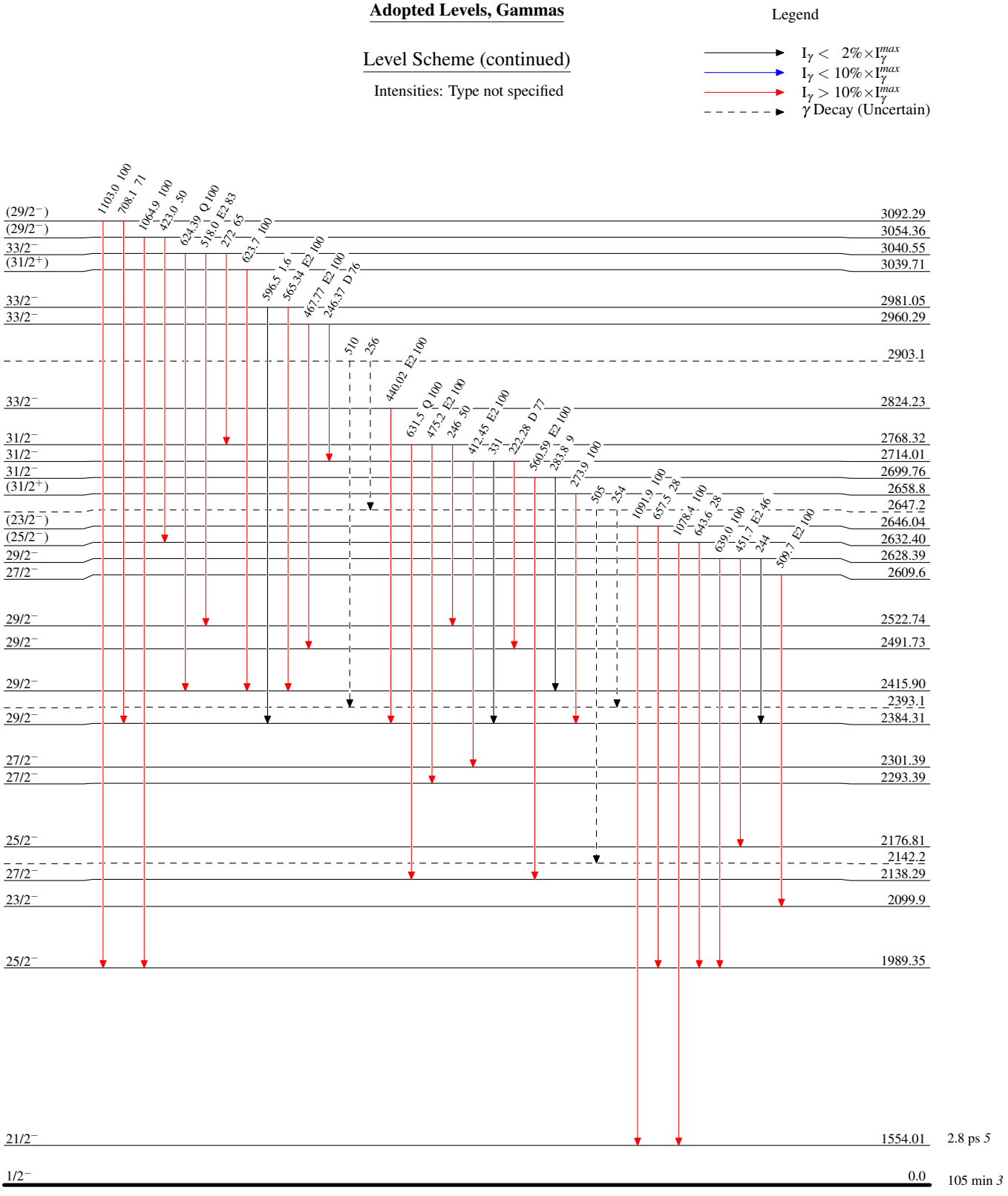


$^{181}_{76}Os_{105}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

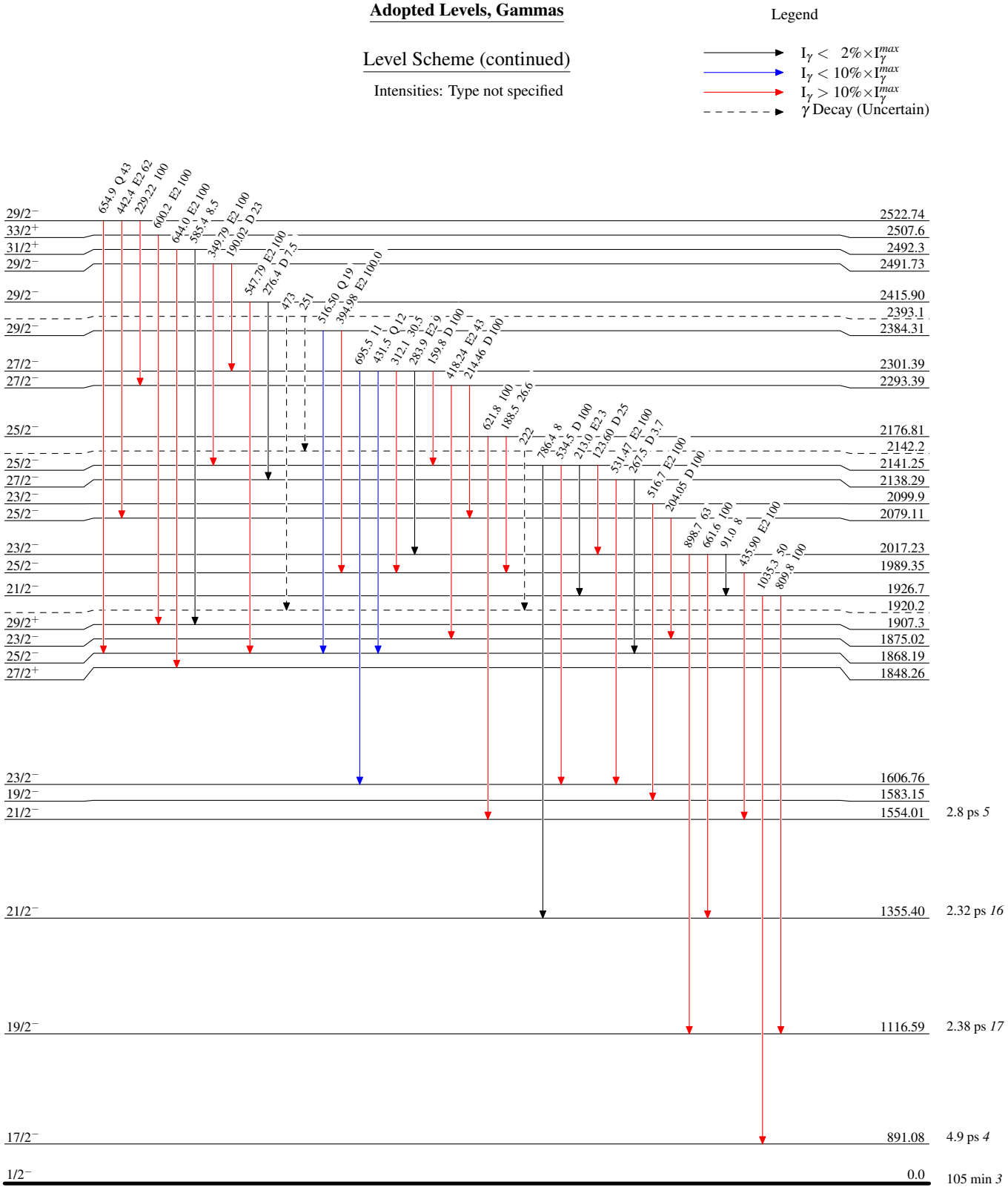


$^{181}_{76}Os_{105}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

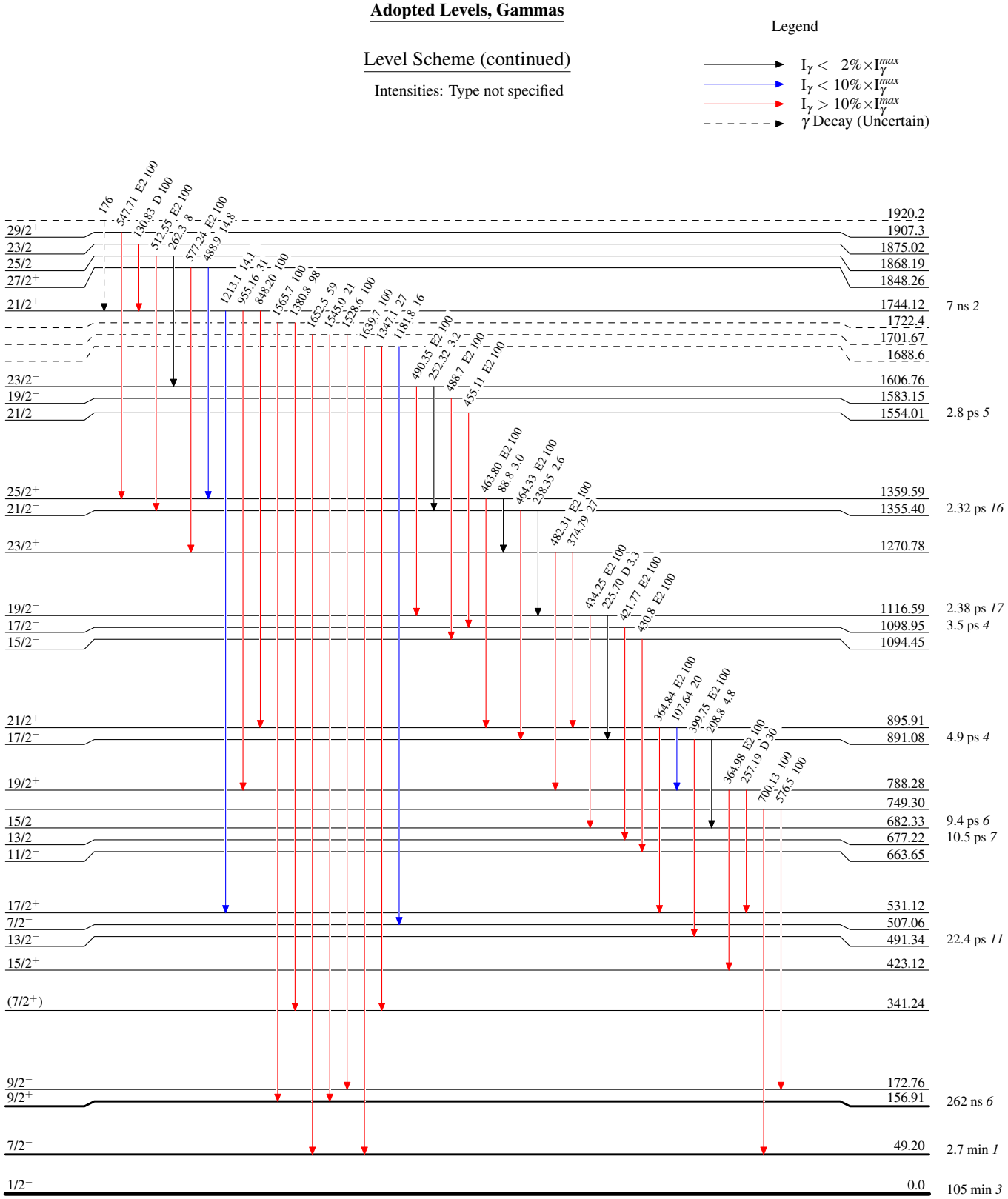


$^{181}_{76}Os_{105}$

Adopted Levels, Gammas

Level Scheme (continued)

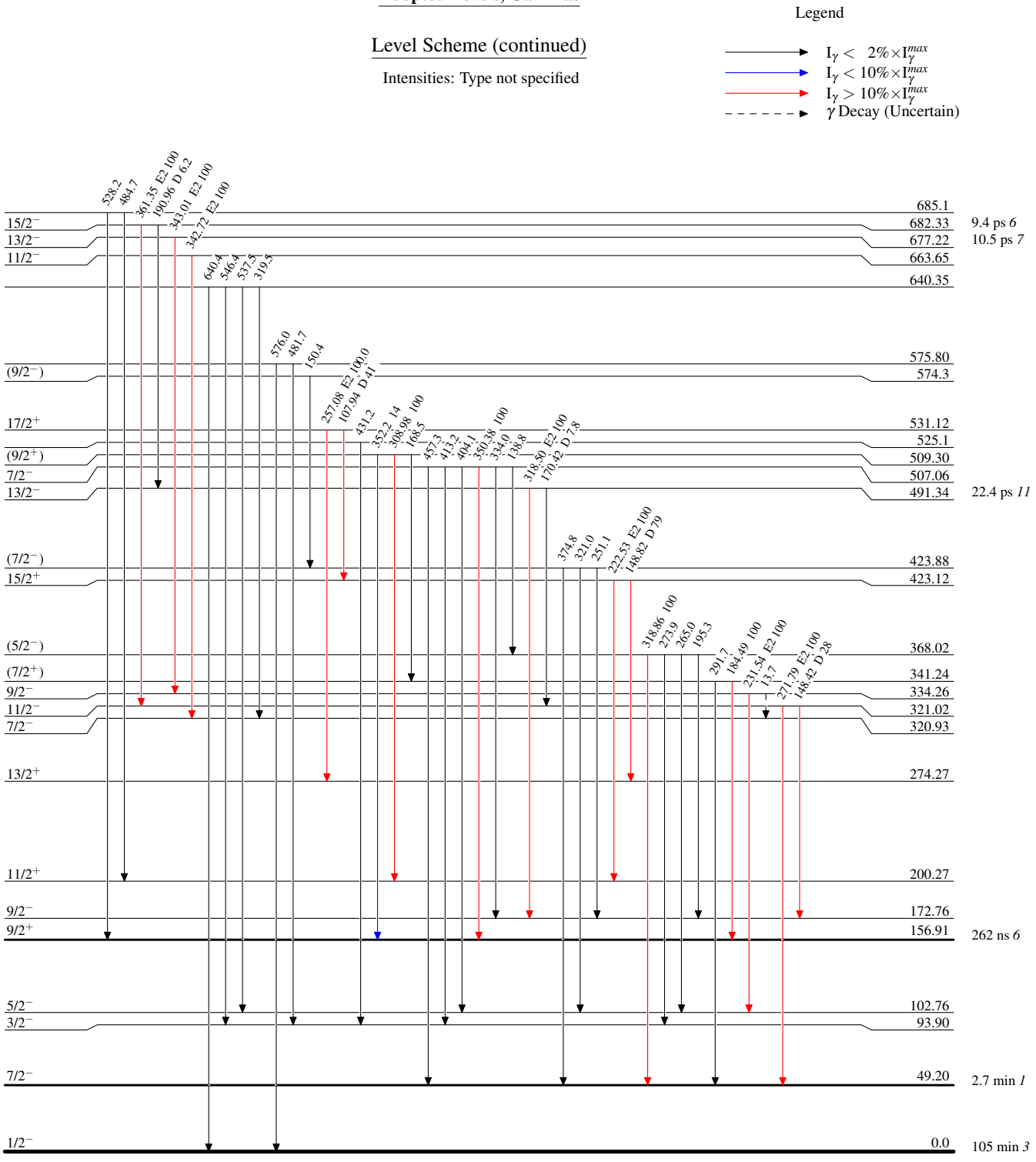
Intensities: Type not specified



Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

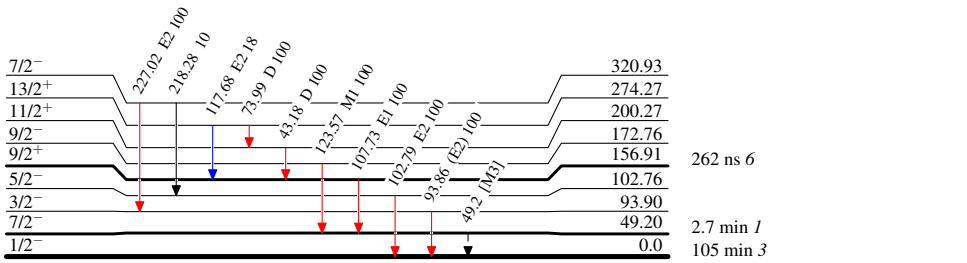


$^{181}_{76}Os_{105}$

Adopted Levels, Gammas

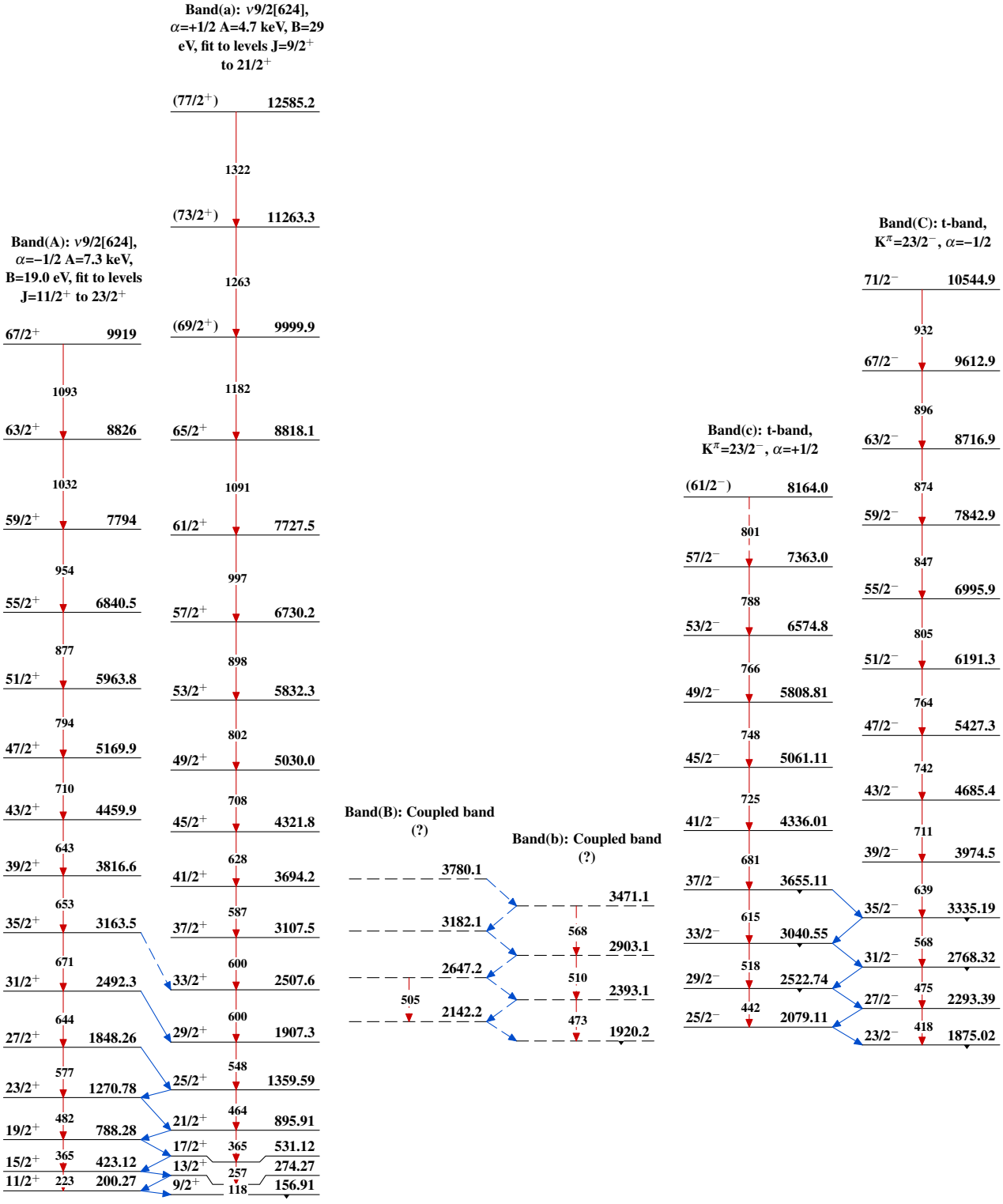
Level Scheme (continued)

Intensities: Type not specified

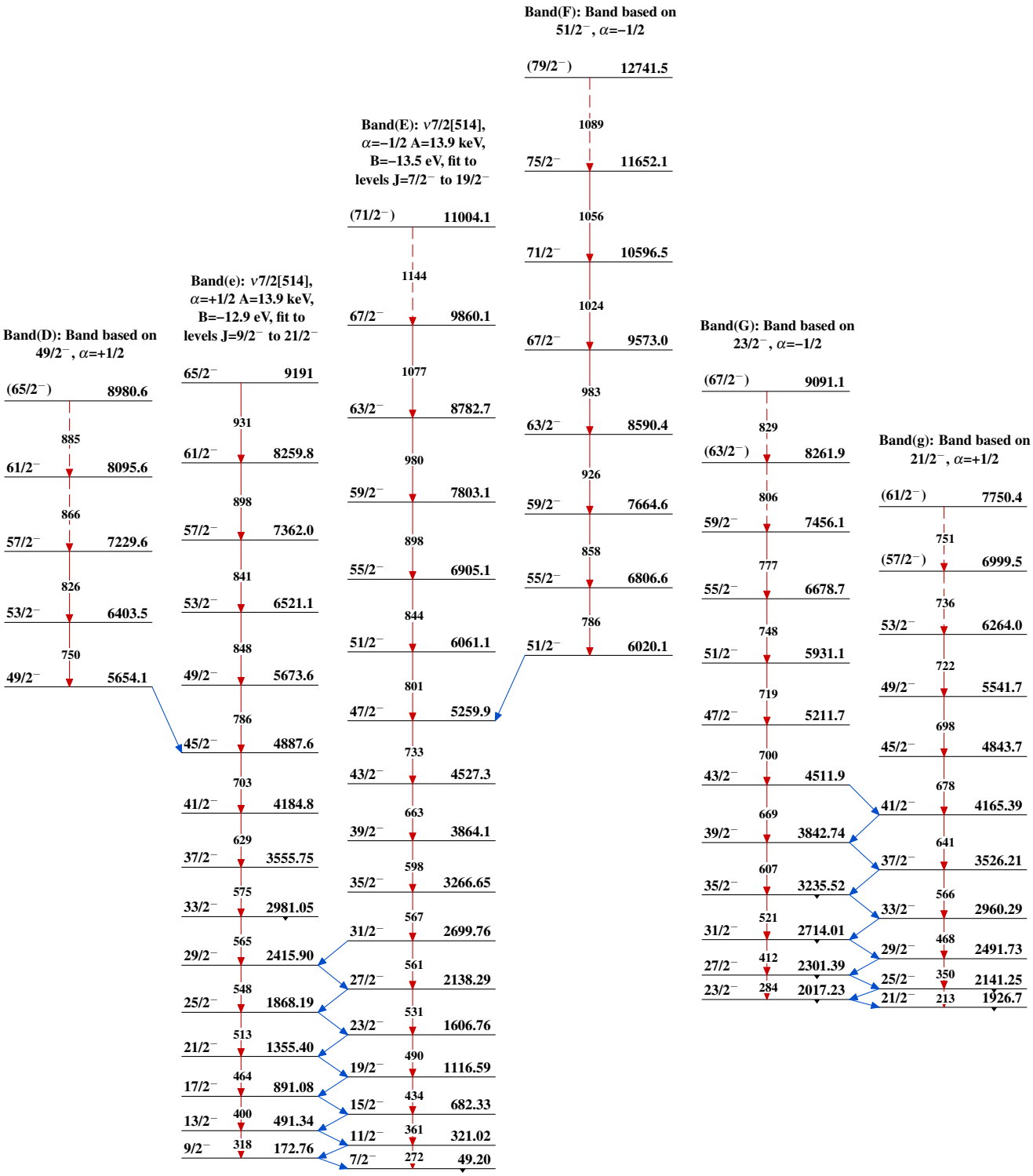


$^{181}_{76}Os_{105}$

Adopted Levels, Gammas

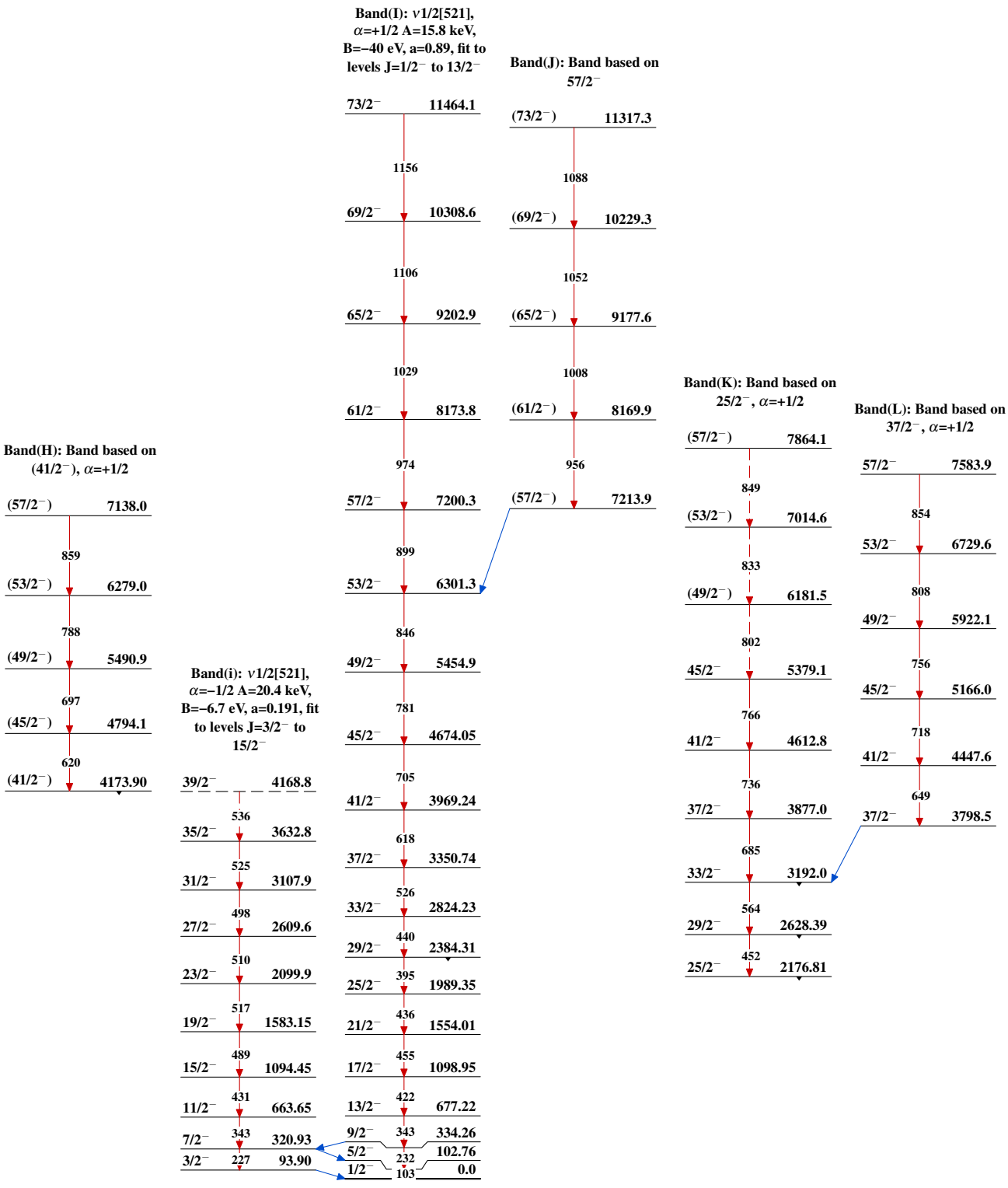


Adopted Levels, Gammas (continued)

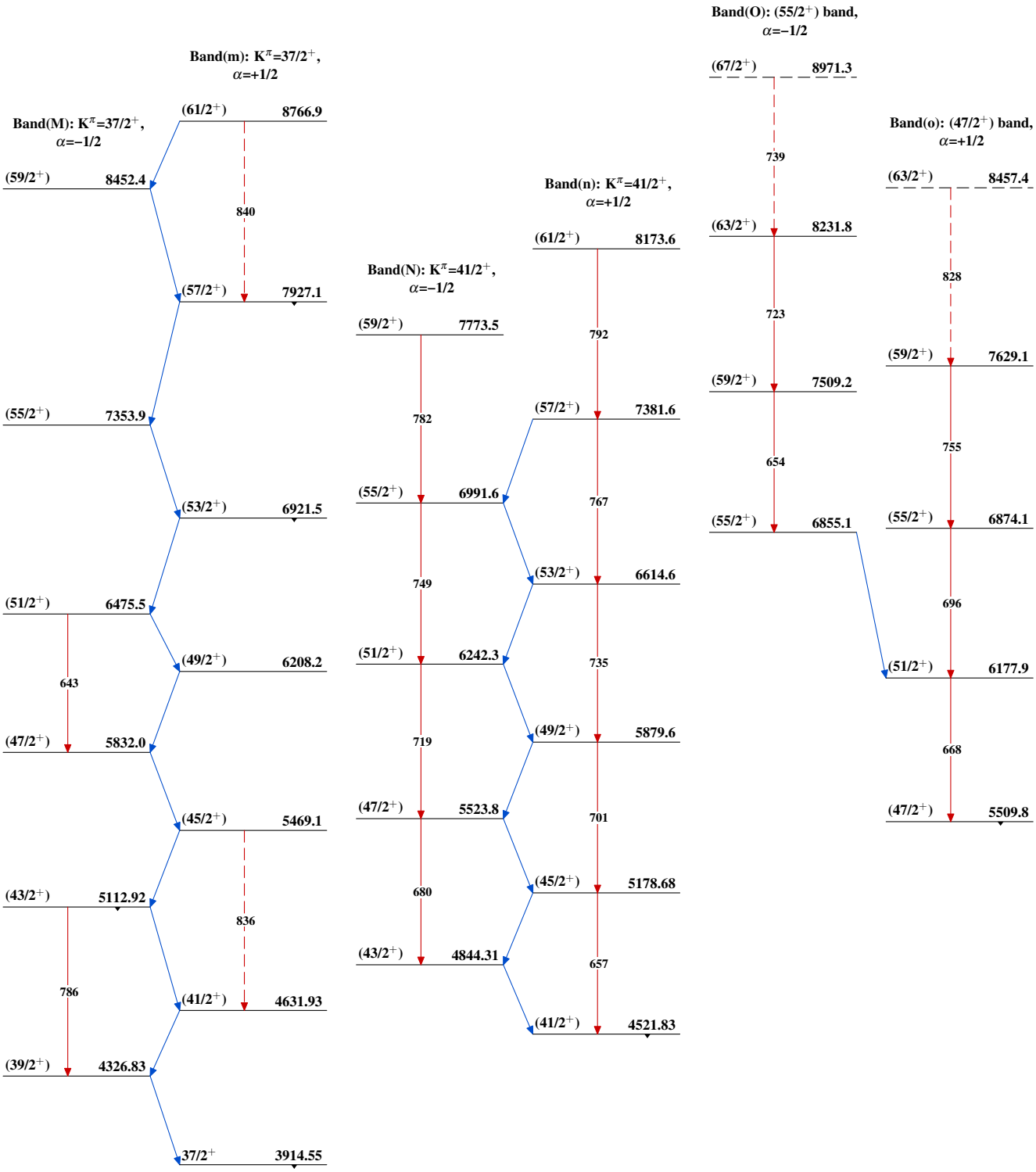


$^{181}_{76}Os_{105}$

Adopted Levels, Gammas (continued)

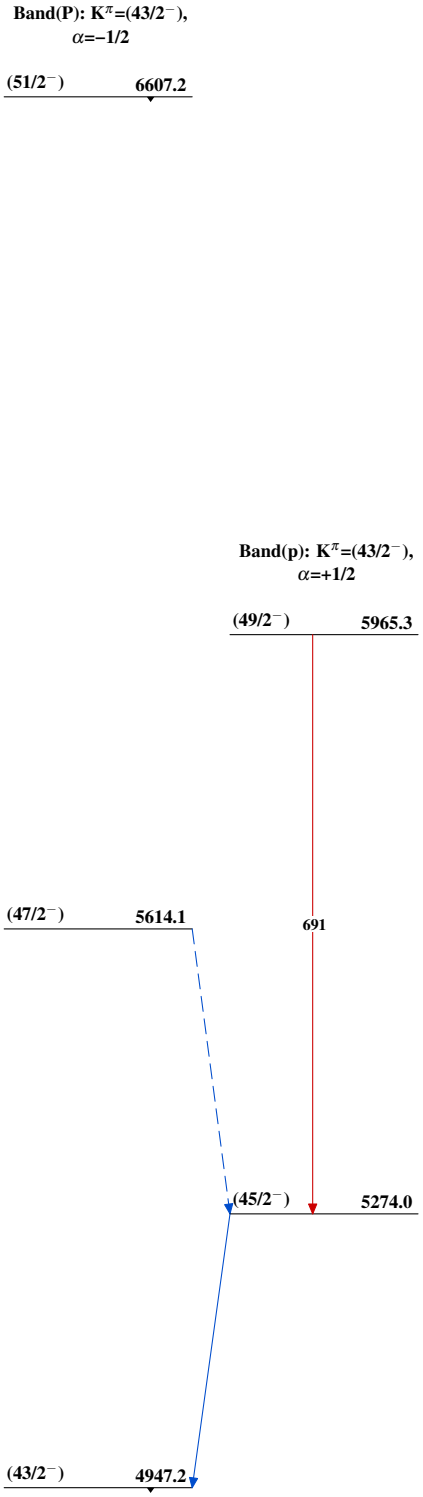


Adopted Levels, Gammas (continued)



$^{181}_{76}Os_{105}$

Adopted Levels, Gammas (continued)



$^{181}_{76}Os_{105}$