(HI,xnγ) 2003Cu03

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

2003Cu03: ^{150}Nd(^{36}S,5nγ), E=160 MeV; enriched targets; Measured Eγ, Iγ, γγ, γγ(θ)(DCO), lifetimes with the GAMMASPHERE array which comprised of 101 escape-suppressed HPGe-detectors.

2002Po06: ^{160}Gd(^{26}Mg,5n), E=124 MeV Measured lifetimes by the differential decay curve method (DDCM) using the SPEEDY Ge-detector array consisting of seven Clover detectors and one ≈70% coaxial detector.

Others:

1995Ku14: ^{150}Nd(^{36}S,5nγ), E(^{36}S)=160 MeV. Measured Eγ, Iγ, γγ, γγ(θ)(DCO) using the ESSA30 spectrometer comprised of 28 Compton-suppressed Ge detectors including the 6 detectors of the OSIRIS spectrometer. ^{167}Er(^{18}O,4nγ), E(^{18}O)=81.5 MeV. Used an array of 5 Compton-suppressed Ge detectors each with a NaI Compton-suppression shield.

1982Fa01: ^{170}Er(^{16}O,5nγ), E=96 MeV.

1982Li04: ^{168}Er(^{18}O,5nγ), E=81 MeV.

^{181}Os Levels

E(level)†	Jπ‡	$T_{1/2}$#	Comments
0.0[n]	1/2−		
48.7[h] *3*	7/2−		
93.90[m] *10*	3/2−		
102.89[n] *10*	5/2−		
156.6[a] *4*	9/2+	262 ns *6*	
172.2[g] *3*	9/2−		
199.7[&] *4*	11/2+		
274.1[a] *4*	13/2+		
320.5[h] *3*	11/2−		
320.90[m] *14*	7/2−		
334.57[n] *14*	9/2−		
422.9[&] *4*	15/2+		
490.9[g] *3*	13/2−	22.4[@] ps *11*	
531.2[a] *4*	17/2+		
663.70[m] *17*	11/2−		
677.65[n] *18*	13/2−	10.5[@] ps *7*	
682.0[h] *3*	15/2−	9.4[@] ps *6*	
788.4[&] *5*	19/2+		
890.8[g] *3*	17/2−	4.9[@] ps *4*	
896.0[a] *4*	21/2+		
1094.50[m] *20*	15/2−		
1099.44[n] *20*	17/2−	3.5[@] ps *4*	
1116.3[h] *3*	19/2−	2.38[@] ps *17*	
1271.0[&] *5*	23/2+		
1355.2[g] *3*	21/2−	2.32[@] ps *16*	
1359.7[a] *4*	25/2+		
1554.55[n] *23*	21/2−	2.8[@] ps *5*	
1583.20[m] *22*	19/2−		
1606.5[h] *3*	23/2−		
1744.2 *3*	21/2+	7 ns *2*	$T_{1/2}$: Other: 13 ns *2* quoted by 1995Ku14 from a priv comm from Ts. Venkova (1990). Configuration=*ν*7/2[514](*ν*9/2[624]*ν*5/2[512]).
1848.6[&] *4*	27/2+		
1868.1[g] *3*	25/2−		

Continued on next page (footnotes at end of table)

(HI,xnγ) 2003Cu03 (continued)

^{181}Os Levels (continued)

E(level)†	Jπ‡	Comments
1875.0[e] 3	23/2−	
1907.7[a] 4	29/2+	
1920.2?[c] 11		
1926.3[k] 4	21/2−	
1989.02[n] 24	25/2−	
2016.6[j] 3	23/2−	
2079.0[d] 3	25/2−	
2099.9[m] 3	23/2−	
2138.1[h] 3	27/2−	
2140.7[k] 3	25/2−	
2142.2?[b] 13		
2176.88[p] 24	25/2−	
2293.2[e] 3	27/2−	
2300.9[j] 3	27/2−	
2384.19[n] 25	29/2−	
2393.2?[c] 13		
2415.8[g] 3	29/2−	
2491.6[k] 3	29/2−	
2493.4[&] 7	31/2+	
2508.9[a] 6	33/2+	
2522.6[d] 3	29/2−	
2609.6[m] 4	27/2−	
2628.1[p] 3	29/2−	
2632.9 3	(25/2−)	
2646.5 3	(23/2−)	
2647.2?[b] 15		
2658.7 4	(31/2+)	Jπ: interpreted as 31/2− in the table of multi-quasiparticle calculations.
2699.5[h] 3	31/2−	
2713.8[j] 3	31/2−	
2768.2[e] 3	31/2−	
2824.1[n] 3	33/2−	
2903.2?[c] 15		
2960.2[k] 3	33/2−	
2980.9[g] 3	33/2−	
3038.5 4	(31/2+)	
3040.4[d] 3	33/2−	
3054.2 3	(29/2−)	
3092.08 25	(29/2−)	
3107.9[m] 5	31/2−	
3108.6[a] 6	37/2+	
3108.8 4	(29/2−)	
3164.8[&] 8	35/2+	
3182.2?[b] 17		
3191.8[p] 4	33/2−	
3235.4[j] 3	35/2−	
3259.0 3	(31/2+)	
3266.2[h] 3	35/2−	
3268.9 4	(25/2−)	
3334.9[e] 3	35/2−	

Continued on next page (footnotes at end of table)

(HI,xnγ) 2003Cu03 (continued)

^{181}Os Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$[#]	Comments
3350.6[n] *3*	37/2⁻		
3471.2?[c] *17*			
3526.1[k] *3*	37/2⁻		
3536.6 *3*	(31/2⁻)		
3555.6[g] *3*	37/2⁻		
3579.1 *3*	33/2⁻	<5 ns	Configuration: 5 quasiparticle state =ν(7/2[514],9/2[624],1/2[521]) π(5/2[402], 11/2[505]).
3632.8[m] *5*	35/2⁻		
3654.9[d] *3*	37/2⁻		
3695.5[a] *7*	41/2⁺		
3738.5 *3*	35/2⁻	24 ns *4*	Configuration: 5 quasiparticle state n(7/2[514],9/2[624],1/2[521]) π(7/2[404], 11/2[505]). $T_{1/2}$: Other: 34 ns *6* from γγ time spectra (1991VeZV).
3780.2?[b] *20*			
3798.2[q] *4*	37/2⁻		
3818.0[&] *10*	39/2⁺		
3842.6[j] *3*	39/2⁻		
3863.7[h] *3*	39/2⁻		
3876.7[p] *4*	37/2⁻		
3914.4[s] *3*	37/2⁺		
3969.1[n] *3*	41/2⁻	0.319 ps *21*	
3974.2[e] *4*	39/2⁻		
4139.8 *4*	(39/2⁺)		
4165.2[k] *3*	41/2⁻		
4168.8?[m] *5*	39/2⁻		
4173.8[l] *3*	(41/2⁻)		
4184.7[g] *3*	41/2⁻		
4323.1[a] *8*	45/2⁺	0.291 ps *28*	
4326.7[r] *3*	(39/2⁺)		
4335.9[d] *3*	41/2⁻		
4447.4[q] *4*	41/2⁻		
4461.3[&] *12*	43/2⁺		
4511.7[j] *4*	43/2⁻		
4521.7[u] *3*	(41/2⁺)	<3 ns	$T_{1/2}$: from the minimum lifetime obtainable from the Eγ-time lifetime analysis with the large-volume GAMMASPHERE detectors (2003Cu03).
4526.9[h] *4*	43/2⁻		
4612.6[p] *5*	41/2⁻		
4631.8[s] *4*	(41/2⁺)		
4673.9[n] *3*	45/2⁻	0.152 ps *14*	
4685.1[e] *4*	43/2⁻		
4794.0[l] *4*	(45/2⁻)		
4843.5[k] *5*	45/2⁻		
4844.2[t] *4*	(43/2⁺)		
4887.5[g] *4*	45/2⁻		
4947.1[x] *4*	(43/2⁻)		
5031.3[a] *9*	49/2⁺	0.215 ps *21*	
5060.9[d] *3*	45/2⁻		
5112.8[r] *3*	(43/2⁺)		
5165.7[q] *5*	45/2⁻		
5171.3[&] *12*	47/2⁺		
5178.6[u] *4*	(45/2⁺)		

Continued on next page (footnotes at end of table)

(HI,xnγ) 2003Cu03 (continued)

^{181}Os Levels (continued)

E(level)†	Jπ‡	$T_{1/2}$#	Comments
5211.6[j] 4	47/2−		
5259.5[h] 4	47/2−		
5273.9[y] 4	(45/2−)		
5378.9[p] 6	45/2−		
5427.1[e] 4	47/2−		
5454.8[n] 4	49/2−	0.159 ps *14*	
5469.0[s] 4	(45/2+)		
5490.8[l] 5	(49/2−)		
5509.7[w] 4	(47/2+)		Jπ: (45/2) in the level scheme of high K isomer feeding and decay.
5523.7[t] 4	(47/2+)		
5541.5[k] 8	49/2−		
5613.9[x] 11	(47/2−)		
5653.9[f] 4	49/2−		
5673.5[g] 5	49/2−		
5808.6[d] 4	49/2−		
5831.9[r] 4	(47/2+)		
5833.6[a] 11	53/2+	0.173 ps *14*	
5879.5[u] 4	(49/2+)		
5921.8[q] 8	49/2−		
5930.9[j] 6	51/2−		
5965.1[&] 13	51/2+		
5965.2[y] 5	(49/2−)		
6019.7[i] 4	51/2−		
6060.7[h] 4	51/2−		
6177.8[w] 4	(51/2+)		
6181.3[p] 7	(49/2−)		
6191.0[e] 4	51/2−		
6208.1[s] 4	(49/2+)		
6242.2[t] 4	(51/2+)		
6263.9[k] 9	53/2−		
6278.9[l] 5	(53/2−)		
6301.1[n] 4	53/2−	0.180 ps *21*	
6403.4[f] 4	53/2−		
6475.4[r] 4	(51/2+)		
6521.0[g] 6	53/2−		
6574.6[d] 11	53/2−		
6607.1[x] 4	(51/2−)		
6614.5[u] 4	(53/2+)		
6678.5[j] 10	55/2−		
6729.4[q] 9	53/2−		
6731.5[a] 12	57/2+	0.125 ps *+21−14*	
6806.2[i] 5	55/2−		
6841.9[&] 8	55/2+		
6855.0[v] 5	(55/2+)		
6874.0[w] 5	(55/2+)		
6904.7[h] 4	55/2−		
6921.4[s] 4	(53/2+)		
6991.5[t] 5	(55/2+)		
6995.7[e] 5	55/2−		

Continued on next page (footnotes at end of table)

(HI,xnγ) 2003Cu03 (continued)

^{181}Os Levels (continued)

E(level)[†]	Jπ[‡]	Comments
6999.4[k] 10	(57/2⁻)	
7014.4[p] 8	(53/2⁻)	
7137.9[l] 5	(57/2⁻)	
7200.1[n] 4	57/2⁻	
7213.7[o] 5	(57/2⁻)	
7229.4[f] 4	57/2⁻	
7243.6 4	(55/2⁺)	E(level): mis-listed as a member K=41/2 band in table of prompt high K γ-transitions.
7353.8[r] 4	(55/2⁺)	
7361.9[g] 8	57/2⁻	
7362.8[d] 11	57/2⁻	
7381.5[u] 5	(57/2⁺)	
7455.9[j] 11	59/2⁻	
7486.8 4	(55/2⁺)	
7509.1[v] 5	(59/2⁺)	
7528.2 4	(57/2⁺)	
7583.7[q] 10	57/2⁻	
7629.0[w] 6	(59/2⁺)	
7664.2[i] 5	59/2⁻	
7728.8[a] 13	61/2⁺	
7750.3[k] 11	(61/2⁻)	
7773.4[t] 11	(59/2⁺)	
7796[&] 4	59/2⁺	
7802.7[h] 5	59/2⁻	
7842.7[e] 5	59/2⁻	
7863.8[p] 8	(57/2⁻)	
7927.0[s] 4	(57/2⁺)	
8095.4[f] 11	61/2⁻	
8163.8[d] 15	(61/2⁻)	
8169.7[o] 6	(61/2⁻)	
8173.5[u] 6	(61/2⁺)	
8173.6[n] 4	61/2⁻	
8231.7[v] 6	(63/2⁺)	
8259.6[g] 11	61/2⁻	
8261.7[j] 11	(63/2⁻)	
8452.3[r] 4	(59/2⁺)	
8457.1?[w] 8	(63/2⁺)	
8590.0[i] 6	63/2⁻	
8716.7[e] 11	63/2⁻	
8766.8[s] 5	(61/2⁺)	
8782.3[h] 5	63/2⁻	
8819.4[a] 16	65/2⁺	
8828[&] 5	63/2⁺	
8971.0?[v] 7	(67/2⁺)	
8980.4[f] 15	(65/2⁻)	
9090.9[j] 11	(67/2⁻)	
9177.4[o] 6	(65/2⁻)	
9191[g] 3	65/2⁻	
9202.7[n] 5	65/2⁻	
9572.6[i] 7	67/2⁻	

Continued on next page (footnotes at end of table)

(HI,xnγ) 2003Cu03 (continued)

^{181}Os Levels (continued)

E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡
9612.7[e] 15	67/2⁻	10229.1[o] 7	(69/2⁻)	11003.6[h] 10	(71/2⁻)	11651.7[i] 7	75/2⁻
9859.7[h] 6	67/2⁻	10308.4[n] 7	69/2⁻	11264.6[a] 20	(73/2⁺)	12586.5[a] 22	(77/2⁺)
9920[&] 5	67/2⁺	10544.7[e] 18	71/2⁻	11317.1[o] 11	(73/2⁻)	12741.0[i] 8	(79/2⁻)
10001.2[a] 18	(69/2⁺)	10596.1[i] 7	71/2⁻	11463.9[n] 9	73/2⁻		

† From least-squares fit to Eγ's. About 20 γ rays are fitted poorly. The uncertainty for some of the γ rays may be underestimated.
‡ From γγ-coin. and rotational band structures.
# Unless otherwise stated, $T_{1/2}$ are from γγ(t) for half-lives in the nanosecond region and from Doppler-shift attenuation method (DSAM) in the ps region (2003Cu03). No evidence was found for higher-lying isomers with $T_{1/2}$>5 ns above the $K^{\pi}=35/2^{-}$ isomer.
@ From recoil-distance method (2002Po06).
& Band(A): ν9/2[624], α=−1/2.
a Band(a): ν9/2[624], α=+1/2.
b Band(B): coupled band (?).
c Band(b): coupled band (?).
d Band(c): t-band, $K^{\pi}=23/2^{-}$, α=+1/2. Configuration=ν7/2[514](ν9/2[624]ν7/2[633]).
e Band(C): t-band, $K^{\pi}=23/2^{-}$, α=−1/2. Configuration=ν7/2[514](ν9/2[624]ν7/2[633]).
f Band(D): Band based on $49/2^{-}$, α=+1/2. From crossing of ν7/2[514], α=−1/2 band by another sequence.
g Band(e): ν7/2[514], α=+1/2.
h Band(E): ν7/2[514], α=−1/2.
i Band(F): Band based on $51/2^{-}$, α=−1/2. From crossing of ν7/2[514], α=−1/2 band by another sequence.
j Band(G): Band based on $23/2^{-}$, α=−1/2. Configuration=ν9/2[624](ν7/2[633]ν1/2[521]).
k Band(g): Band based on $21/2^{-}$, α=+1/2. Configuration=ν9/2[624](ν7/2[633]ν1/2[521]).
l 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.
m Band(i): ν1/2[521], α=−1/2.
n Band(I): ν1/2[521], α=+1/2.
o Band(J): Band based on $57/2^{-}$. From crossing of ν1/2[521], α=+1/2 band by another sequence.
p 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.
q 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.
r 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]).
s 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]).
t 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]).
u 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]).
v Band(O): $(55/2^{+})$ band, α=−1/2.
w Band(o): $(47/2^{+})$ band, α=+1/2.
x 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]).
y 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]).

(HI,xnγ) 2003Cu03 (continued)

$\gamma(^{181}Os)$

DCO=[Iγ(17°,32°,163°,148°) gated by (79°,81°,90°, 100°)]/[Iγ(79°,81°,90°,100°) gated by (17°,32°,163°, 148°)] (2003Cu03).

E_γ[†]	Iγ(prompt)[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[e]	Iγ(delayed)[@]	Comments
(13.7)		334.57	9/2$^-$	320.90	7/2$^-$				E_γ: transition inferred from coincidence relations (2003Cu03, 1995Ku14).
(42)		3579.1	33/2$^-$	3536.6	(31/2$^-$)				E_γ: transition inferred from coincidence relations (2003Cu03).
43.1 *1*	67.7 *15*	199.7	11/2$^+$	156.6	9/2$^+$	D		9.4 *9*	Mult.: DCO=0.68 8 from prompt transitions.
73.9 *6*	44.2 *12*	274.1	13/2$^+$	199.7	11/2$^+$	D		21 *10*	Mult.: DCO=0.60 4 from prompt transitions.
88.8 *6*	22 *3*	1359.7	25/2$^+$	1271.0	23/2$^+$				
91.0 *8*	1.0 *9*	2016.6	23/2$^-$	1926.3	21/2$^-$				
93.9 *1*	20 *3*	93.90	3/2$^-$	0.0	1/2$^-$				
102.9 *1*	57.3 *4*	102.89	5/2$^-$	0.0	1/2$^-$	E2[c]	3.94 *9*	0.4 *9*	α(K)=0.780 *24*; α(L)=2.38 *8*; α(M)=0.605 *19*; α(N+..)=0.182 *6*
107.5 *4*	183 *6*	896.0	21/2$^+$	788.4	19/2$^+$			1.0 *5*	
107.8 *3*		156.6	9/2$^+$	48.7	7/2$^-$	D		9.4 *9*	
108.2 *4*	41 *6*	531.2	17/2$^+$	422.9	15/2$^+$	D		4.9 *20*	
118.2 *6*	11.5 *5*	274.1	13/2$^+$	156.6	9/2$^+$	E2[c]	2.28	2.0 *5*	α(K)=0.607 *19*; α(L)=1.25 *4*; α(M)=0.319 *10*; α(N+..)=0.096 *3*
123.6 *2*	34 *6*	2140.7	25/2$^-$	2016.6	23/2$^-$	D		0.2 *1*	
123.7 *1*	291 *9*	172.2	9/2$^-$	48.7	7/2$^-$	D		9.4 *9*	
130.8 *1*	234 *9*	1875.0	23/2$^-$	1744.2	21/2$^+$	D		16.2 *17*	
148.5 *1*	212 *9*	320.5	11/2$^-$	172.2	9/2$^-$	D		8 *6*	
149.0 *3*	101 *9*	422.9	15/2$^+$	274.1	13/2$^+$	D		9.0 *16*	
159.4[&] *1*		3738.5	35/2$^-$	3579.1	33/2$^-$	M1[b]	1.54	37.4 *16*	α(K)=1.27 *4*; α(L)=0.205 *7*; α(M)=0.0471 *15*; α(N+..)=0.0146 *5* DCO=0.67 10 from delayed transitions.
160.2 *1*	64 *8*	2300.9	27/2$^-$	2140.7	25/2$^-$	D		9.4 *11*	E_γ: 159.1 *2* from delayed transitions.
165.6[a] *5*	1.0 *5*	5112.8	(43/2$^+$)	4947.1	(43/2$^-$)				Mult.: M1 listed by 2003Cu03 is inconsistent with ΔJ^π. (43/2$^+$) to (43/2$^+$) as listed in table of prompt high K γ-transitions is a misprint; it should be (43/2$^+$) to (43/2$^-$).
170.5 *1*	85 *5*	490.9	13/2$^-$	320.5	11/2$^-$	D		3.7 *6*	
175.9 *1*	9.1 *9*	3914.4	37/2$^+$	3738.5	35/2$^-$	E1[b]	0.093		α(K)=0.0762 *23*; α(L)=0.0126 *4*; α(M)=0.00288 *9*; α(N+..)=0.00086 *3*
176[df]		1920.2?		1744.2	21/2$^+$				
188.5 *1*	14.8 *9*	2176.88	25/2$^-$	1989.02	25/2$^-$				E_γ: poor fit; level-energy difference=187.9. Mult.: possibly M1(ΔI=0).
190.0 *4*	11 *4*	2491.6	29/2$^-$	2300.9	27/2$^-$	D		1.0 *5*	Mult.: DCO=0.49 14 from delayed transitions.
191.0 *1*	44 *4*	682.0	15/2$^-$	490.9	13/2$^-$	D		4.7 *7*	
194.9[a] *1*	11.9 *15*	4521.7	(41/2$^+$)	4326.7	(39/2$^+$)	D			E_γ: 195.4 *1*, RI=21.6 *10* from table of prompt low K γ-transitions.
204.0 *1*	35.5 *20*	2079.0	25/2$^-$	1875.0	23/2$^-$			10.4 *8*	

γ(^{181}Os) (continued)

E_γ[†]	Iγ(prompt)[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[e]	Iγ(delayed)[@]	Comments
208.8 *1*	36 *3*	890.8	17/2⁻	682.0	15/2⁻				E_γ: 209 from the level scheme of high K isomer feeding and decay.
213.0 *7*	2.4 *12*	2140.7	25/2⁻	1926.3	21/2⁻	E2[c]	0.272		α(K)=0.145 *5*; α(L)=0.096 *3*; α(M)=0.0240 *8*; α(N+..)=0.00714 *22*
214.6 *1*	28.2 *10*	2293.2	27/2⁻	2079.0	25/2⁻			7.6 *7*	
217.9 *5*	11 *4*	320.90	7/2⁻	102.89	5/2⁻				
222[d f]		2142.2?		1920.2?					
222.2 *1*	30.6 *20*	2713.8	31/2⁻	2491.6	29/2⁻	D		0.7 *4*	
223.0 *3*	115 *5*	422.9	15/2⁺	199.7	11/2⁺	E2[c]	0.234	13.5 *22*	α(K)=0.129 *4*; α(L)=0.0793 *24*; α(M)=0.0198 *6*; α(N+..)=0.00591 *18*
225.3[a] *2*	6.6 *17*	4139.8	(39/2⁺)	3914.4	37/2⁺	D			
225.6 *3*	21 *3*	1116.3	19/2⁻	890.8	17/2⁻	D		3.3 *6*	
[x]226.0 *3*	18.4 *10*								E_γ: γ placed in K=41/2 band, above the K^π=35/2⁻ isomer, but not shown in the level scheme of high K isomer feeding and decay.
227.0 *1*	128 *13*	320.90	7/2⁻	93.90	3/2⁻	E2[c]	0.221		α(K)=0.123 *4*; α(L)=0.0738 *23*; α(M)=0.0184 *6*; α(N+..)=0.00549 *17*
229.1 *4*	40.6 *20*	2522.6	29/2⁻	2293.2	27/2⁻			9.6 *7*	
231.7 *1*	447.7 *15*	334.57	9/2⁻	102.89	5/2⁻	E2[c]	0.207	81 *14*	α(K)=0.117 *4*; α(L)=0.0679 *21*; α(M)=0.0169 *5*; α(N+..)=0.00505 *16* E_γ: 231.3 *1*, DCO=1.05 11 from delayed transitions.
238.5 *3*	18 *3*	1355.2	21/2⁻	1116.3	19/2⁻				
244[d]		2628.1	29/2⁻	2384.19	29/2⁻				
246[d]		2768.2	31/2⁻	2522.6	29/2⁻				
246.4 *1*	27.0 *20*	2960.2	33/2⁻	2713.8	31/2⁻	D		1.0 *6*	
251[d f]		2393.2?		2142.2?					
252.4 *2*	34 *4*	1606.5	23/2⁻	1355.2	21/2⁻			1.1 *5*	ce(K)/(γ+ce)=0.0299 *9*; ce(L)/(γ+ce)=0.00476 *15*; ce(M)/(γ+ce)=0.00109 *4*; ce(N)/(γ+ce)=0.00032 *1* Mult.: E1 listed by 2003Cu03 in the table of delayed transitions is inconsistent with ΔJ^π. E_γ: poor fit; level-energy difference=251.2.
254[d f]		2647.2?		2393.2?					
256[d f]		2903.2?		2647.2?					
257.1 *3*	54.8 *10*	531.2	17/2⁺	274.1	13/2⁺	E2[c]	0.148	10.0 *8*	α(K)=0.089 *3*; α(L)=0.0449 *14*; α(M)=0.0111 *4*; α(N+..)=0.00332 *10*
257.1 *7*	65 *5*	788.4	19/2⁺	531.2	17/2⁺	D		12.1 *14*	
262.3 *1*	76 *4*	1868.1	25/2⁻	1606.5	23/2⁻				E_γ: poor fit; level-energy difference=261.7.
267.3[a] *1*	39 *3*	6475.4	(51/2⁺)	6208.1	(49/2⁺)	D			
267.5 *3*	21 *4*	2138.1	27/2⁻	1868.1	25/2⁻	D			E_γ: poor fit; level-energy difference=269.8.
268.6[a] *1*	14.1 *13*	5112.8	(43/2⁺)	4844.2	(43/2⁺)	D			
271.8 *1*	6.7×10^2 *6*	320.5	11/2⁻	48.7	7/2⁻	E2[c]	0.125	50 *4*	α(K)=0.0768 *23*; α(L)=0.0361 *11*; α(M)=0.0089 *3*; α(N+..)=0.00267 *8*

(HI,xnγ) 2003Cu03 (continued)

γ(^{181}Os) (continued)

E_γ [†]	Iγ(prompt) [‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [#]	α [e]	Iγ(delayed) [@]	Comments
272 [d]		3040.4	33/2⁻	2768.2	31/2⁻				
273.9 [&] 4		2658.7	(31/2⁺)	2384.19	29/2⁻			1.9 5	
275.5 5	97 12	3235.4	35/2⁻	2960.2	33/2⁻				29/2⁻ to 27/2⁻ in the 7/2[514] band listed in the table of prompt low K γ-transitions is a misprint; should be 35/2⁻ to 33/2⁻ in band based on 23/2⁻.
276.4 3	31 5	2415.8	29/2⁻	2138.1	27/2⁻	D			E_γ: poor fit; level-energy difference=277.7.
279 [d f]		3182.2?		2903.2?					
283.8 2	32 4	2699.5	31/2⁻	2415.8	29/2⁻				
284.0 3	11 4	2300.9	27/2⁻	2016.6	23/2⁻	E2 [c]	0.109	0.1 3	α(K)=0.0685 21; α(L)=0.0305 10; α(M)=0.00754 23; α(N+..)=0.00225 7
284.6 [a] 1	5.4 5	7528.2	(57/2⁺)	7243.6	(55/2⁺)	D			
289 [d f]		3471.2?		3182.2?					
290.8 1	27.9 20	3526.1	37/2⁻	3235.4	35/2⁻				
296 [d]		3334.9	35/2⁻	3040.4	33/2⁻				
305.0 [a] 1	50 4	4631.8	(41/2⁺)	4326.7	(39/2⁺)	D			
309 [d f]		3780.2?		3471.2?					
312.1 2	19.6 3	2300.9	27/2⁻	1989.02	25/2⁻				
314.3 [a f] 22	0.1 1	6921.4	(53/2⁺)	6607.1	(51/2⁻)	D			
314.5 [a] 3	2.1 6	8766.8	(61/2⁺)	8452.3	(59/2⁺)	D			
315.3 [a] 1	18.8 14	4947.1	(43/2⁻)	4631.8	(41/2⁺)	D			
316.3 1	26.3 20	3842.6	39/2⁻	3526.1	37/2⁻				
318.6 1	1.00×10^3 4	490.9	13/2⁻	172.2	9/2⁻	E2 [c]	0.0772	70 10	α(K)=0.0510 16; α(L)=0.0199 6; α(M)=0.00488 15; α(N+..)=0.00146 5
319.8 [&] 2		3579.1	33/2⁻	3259.0	(31/2⁺)			2.3 4	
[x]321.2									E_γ: Observed in 1995Ku14, assigned as deexciting the 29/2⁻ state of the ν1/2[521] band, but not observed in 2003Cu03.
322 [d]		3654.9	37/2⁻	3334.9	35/2⁻				
322.2 [a] 1	6.8 10	7243.6	(55/2⁺)	6921.4	(53/2⁺)	D			
322.4 1	21.5 10	4165.2	41/2⁻	3842.6	39/2⁻				
322.4 [a] 1	24.8 25	4844.2	(43/2⁺)	4521.7	(41/2⁺)	D			
326.8 [a] 1	1.7 7	5273.9	(45/2⁻)	4947.1	(43/2⁻)	D			
331 [d]		2713.8	31/2⁻	2384.19	29/2⁻				
331.2 [a] 1	0.1 1	5509.7	(47/2⁺)	5178.6	(45/2⁺)	D			
334.3 [a] 1	4.7 9	5178.6	(45/2⁺)	4844.2	(43/2⁺)	D			
340.0 [a f] 10	0.1 1	5613.9	(47/2⁻)	5273.9	(45/2⁻)	D			
342.8 1	66 4	663.70	11/2⁻	320.90	7/2⁻	E2 [c]	0.0626		α(K)=0.0425 13; α(L)=0.0152 5; α(M)=0.00373 12; α(N+..)=0.00112 4
343.1 1	415 13	677.65	13/2⁻	334.57	9/2⁻	E2 [c]	0.0624	88 4	α(K)=0.0424 13; α(L)=0.0152 5; α(M)=0.00372 12;

$^{181}_{76}Os_{105}$-9

(HI,xnγ) 2003Cu03 (continued)

γ(^{181}Os) (continued)

E_γ †	Iγ(prompt) ‡	E_i(level)	J_i^π	E_f	J_f^π	Mult. #	α e	Iγ(delayed) @	Comments
									α(N+..)=0.00111 *4* Mult.: DCO=0.95 1 from delayed transitions.
345.2 a *2*	2.3 *5*	5523.7	(47/2$^+$)	5178.6	(45/2$^+$)	D			
346.2 *2*	20 *4*	4511.7	43/2$^-$	4165.2	41/2$^-$				43/2$^-$ to 39/2$^-$ in the table of prompt low K γ-transitions is a misprint; should be 43/2$^-$ to 41/2$^-$.
349.8 *3*	35 *8*	2491.6	29/2$^-$	2140.7	25/2$^-$	E2 c	0.0591	6.1 *7*	α(K)=0.0404 *13*; α(L)=0.0142 *5*; α(M)=0.00347 *11*; α(N+..)=0.00104 *4* E_γ: poor fit. Level-energy difference=350.8.
355.8 a *1*	10.1 *14*	5879.5	(49/2$^+$)	5523.7	(47/2$^+$)	D			
356.2 a *1*	100 *5*	5469.0	(45/2$^+$)	5112.8	(43/2$^+$)	D			
361.5 *1*	708 *29*	682.0	15/2$^-$	320.5	11/2$^-$	E2 c	0.0539	76 *5*	α(K)=0.0372 *12*; α(L)=0.0126 *4*; α(M)=0.00308 *10*; α(N+..)=0.00092 *3*
362.5 a *2*	4.1 *9*	6242.2	(51/2$^+$)	5879.5	(49/2$^+$)	D			
362.9 a *1*	97 *5*	5831.9	(47/2$^+$)	5469.0	(45/2$^+$)	D			
364.8 *2*	340 *13*	896.0	21/2$^+$	531.2	17/2$^+$	E2 c	0.0525	7 *4*	α(K)=0.0364 *11*; α(L)=0.0122 *4*; α(M)=0.00299 *9*; α(N+..)=0.00089 *3*
365.3 *6*	149 *15*	788.4	19/2$^+$	422.9	15/2$^+$	E2 c	0.0523	60 *4*	α(K)=0.0363 *11*; α(L)=0.0122 *4*; α(M)=0.00297 *9*; α(N+..)=0.00089 *3*
372.5 a *10*	0.1 *1*	6614.5	(53/2$^+$)	6242.2	(51/2$^+$)	D			
374.6 *8*	46 *4*	1271.0	23/2$^+$	896.0	21/2$^+$				
376.2 a *1*	94 *5*	6208.1	(49/2$^+$)	5831.9	(47/2$^+$)	D			
376.9 a *10*	0.1 *1*	6991.5	(55/2$^+$)	6614.5	(53/2$^+$)	D			
381.9 a *1*	11.4 *16*	4521.7	(41/2$^+$)	4139.8	(39/2$^+$)	D			
390.1 a *10*	9.1 *9*	7381.5	(57/2$^+$)	6991.5	(55/2$^+$)	D			
395.2 *1*	197 *7*	2384.19	29/2$^-$	1989.02	25/2$^-$	E2 c	0.0421	47.9 *19*	α(K)=0.0299 *9*; α(L)=0.0093 *3*; α(M)=0.00226 *7*; α(N+..)=0.00068 *2* Mult.: DCO=0.90 12 from delayed transitions.
399.0 a *1*	22.3 *17*	6607.1	(51/2$^-$)	6208.1	(49/2$^+$)	D			
399.9 *1*	663 *23*	890.8	17/2$^-$	490.9	13/2$^-$	E2 c	0.0408	76 *4*	α(K)=0.0291 *9*; α(L)=0.0089 *3*; α(M)=0.00217 *7*; α(N+..)=0.00065 *2*
412.3 a *1*	90 *8*	4326.7	(39/2$^+$)	3914.4	37/2$^+$	D			
412.4 *2*	72 *9*	2713.8	31/2$^-$	2300.9	27/2$^-$	E2 c	0.0376	0.4 *3*	α(K)=0.0270 *8*; α(L)=0.00807 *25*; α(M)=0.00195 *6*; α(N+..)=0.00059 *2*
412.5 *2*	1.0 *9*	3235.4	35/2$^-$	2824.1	33/2$^-$				35/2$^-$ to 29/2$^-$ in table of prompt low K γ-transitions is a misprint; should be 35/2$^-$ to 33/2$^-$. E_γ: poor fit; level-energy difference=411.4.
418.0 *2*	13.1 *20*	2293.2	27/2$^-$	1875.0	23/2$^-$	E2 c	0.0363	2.9 *5*	α(K)=0.0261 *8*; α(L)=0.00771 *24*; α(M)=0.00187 *6*; α(N+..)=0.00056 *2*
421.8 *1*	418 *10*	1099.44	17/2$^-$	677.65	13/2$^-$	E2 c	0.0354	100 *4*	α(K)=0.0255 *8*; α(L)=0.00749 *23*; α(M)=0.00181 *6*; α(N+..)=0.00054 *2*
423.0 & *11*		3054.2	(29/2$^-$)	2632.9	(25/2$^-$)			0.4 *2*	
x426.2									E_γ: Observed in 1995Ku14, assigned as deexciting the

$^{181}_{76}Os_{105}$-10

(HI,xnγ) 2003Cu03 (continued)

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

E_γ [†]	Iγ(prompt) [‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [#]	α [e]	Iγ(delayed) [@]	Comments
									23/2$^-$ state of the ν7/2[514] band, but not observed in 2003Cu03.
430.8 *1*	25 *3*	1094.50	15/2$^-$	663.70	11/2$^-$	E2 [c]	0.0335		α(K)=0.0243 *8*; α(L)=0.00699 *21*; α(M)=0.00169 *5*; α(N+..)=0.00051 *2*
431.1 *3*	12.5 *20*	2300.9	27/2$^-$	1868.1	25/2$^-$	Q		0.5 *3*	E_γ: poor fit; level-energy difference=432.8.
432.4 [a] *1*	13.9 *12*	7353.8	(55/2$^+$)	6921.4	(53/2$^+$)	D			
434.3 *1*	636 *24*	1116.3	19/2$^-$	682.0	15/2$^-$	E2 [c]	0.0328	81 *4*	α(K)=0.0238 *8*; α(L)=0.00681 *21*; α(M)=0.00164 *5*; α(N+..)=0.00049 *2*
435.0 *1*	343 *11*	1989.02	25/2$^-$	1554.55	21/2$^-$	E2 [c]	0.0326	74 *3*	α(K)=0.0237 *8*; α(L)=0.00677 *21*; α(M)=0.00164 *5*; α(N+..)=0.00049 *2* Mult.: DCO=1.03 11 from delayed transitions.
440.1 *1*	286 *9*	2824.1	33/2$^-$	2384.19	29/2$^-$	E2 [c]	0.0317	20.3 *10*	E_γ: poor fit; level-energy difference=434.5. α(K)=0.0231 *7*; α(L)=0.00652 *20*; α(M)=0.00157 *5*; α(N+..)=0.00047 *2* Mult.: DCO=0.90 17 from delayed transitions.
440.2 [a] *1*	26.5 *23*	7927.0	(57/2$^+$)	7486.8	(55/2$^+$)	D			
442.4 *2*	25 *3*	2522.6	29/2$^-$	2079.0	25/2$^-$	E2 [c]	0.0312		α(K)=0.0228 *7*; α(L)=0.00641 *20*; α(M)=0.00155 *5*; α(N+..)=0.00047 *1* E_γ: poor fit; level-energy difference=443.3.
446.0 [a] *1*	46.6 *24*	6921.4	(53/2$^+$)	6475.4	(51/2$^+$)	D			
451.7 *2*	15.3 *20*	2628.1	29/2$^-$	2176.88	25/2$^-$	E2 [c]	0.0296		α(K)=0.0217 *7*; α(L)=0.00600 *18*; α(M)=0.00145 *5*; α(N+..)=0.00043 *1*
455.1 *1*	381 *12*	1554.55	21/2$^-$	1099.44	17/2$^-$	E2 [c]	0.0290	94 *4*	α(K)=0.0213 *7*; α(L)=0.00586 *18*; α(M)=0.00141 *5*; α(N+..)=0.00042 *1* Mult.: DCO=1.01 10 from delayed transitions.
463.8 *2*	470 *17*	1359.7	25/2$^+$	896.0	21/2$^+$	E2 [c]	0.0276		α(K)=0.0204 *7*; α(L)=0.00552 *17*; α(M)=0.00133 *4*; α(N+..)=0.00040 *1*
464.4 *1*	641 *24*	1355.2	21/2$^-$	890.8	17/2$^-$	E2 [c]	0.0276	69 *3*	α(K)=0.0203 *7*; α(L)=0.00550 *17*; α(M)=0.00132 *4*; α(N+..)=0.00040 *1*
[x]467.2 *3*								6.2 *7*	From table of delayed transitions, placement shown as 31/2$^-$ to 27/2$^-$ in the 7/2[514] band; but no such transition in the low K level scheme or the level scheme of high K isomer feeding and decay.
467.9 *3*	15 *3*	2960.2	33/2$^-$	2491.6	29/2$^-$	E2 [c]	0.0270	2.8 *5*	α(K)=0.0200 *6*; α(L)=0.00537 *17*; α(M)=0.00129 *4*; α(N+..)=0.00039 *1*
471		3579.1	33/2$^-$	3108.6	37/2$^+$				E_γ: From the level scheme of high K isomer feeding and decay; not listed in authors' the table of delayed transitions.
473 [df]		2393.2?		1920.2?					
475.2 *1*	31.6 *20*	2768.2	31/2$^-$	2293.2	27/2$^-$	E2 [c]	0.0260		α(K)=0.0193 *6*; α(L)=0.00511 *16*; α(M)=0.00123 *4*; α(N+..)=0.00037 *1*
480.9 [a] *1*	45 *3*	5112.8	(43/2$^+$)	4631.8	(41/2$^+$)	D			
482.4 *6*	146 *7*	1271.0	23/2$^+$	788.4	19/2$^+$	E2 [c]	0.0250		α(K)=0.0186 *6*; α(L)=0.00488 *15*; α(M)=0.00117 *4*;

$^{181}_{76}Os_{105}$-11

(HI,xnγ) 2003Cu03 (continued)

γ(^{181}Os) (continued)

E_γ [†]	Iγ(prompt) [‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [#]	α [e]	Iγ(delayed) [@]	Comments
									α(N+..)=0.00035 *1* Mult.: M1 from table 1 disagrees with the $23/2^+$ to $19/2^+$ assignment.
487.1 [&] *1*		3579.1	$33/2^-$	3092.08	$(29/2^-)$			7.2 *6*	
488.7 *1*	58 *4*	1583.20	$19/2^-$	1094.50	$15/2^-$	E2 [c]	0.0242		α(K)=0.0181 *6*; α(L)=0.00469 *14*; α(M)=0.00112 *4*; α(N+..)=0.00034 *1*
488.9 *2*	19 *3*	1848.6	$27/2^+$	1359.7	$25/2^+$				
490.4 *1*	566 *21*	1606.5	$23/2^-$	1116.3	$19/2^-$	E2 [c]	0.0240	66 *3*	α(K)=0.0179 *6*; α(L)=0.00464 *14*; α(M)=0.00111 *4*; α(N+..)=0.00034 *1*
498.3 *2*	15.1 *20*	3107.9	$31/2^-$	2609.6	$27/2^-$	E2 [c]	0.0231		α(K)=0.0173 *6*; α(L)=0.00442 *14*; α(M)=0.00106 *4*; α(N+..)=0.00032 *1*
505 [df]		2647.2?		2142.2?					
509.7 *2*	15 *3*	2609.6	$27/2^-$	2099.9	$23/2^-$	E2 [c]	0.0219		α(K)=0.0164 *5*; α(L)=0.00412 *13*
510 [df]		2903.2?		2393.2?					
512.6 *1*	526 *19*	1868.1	$25/2^-$	1355.2	$21/2^-$	E2 [c]	0.0216	49.0 *22*	α(K)=0.0162 *5*; α(L)=0.00405 *13* E_γ: level-energy difference=512.9.
516.3 *1*	49 *3*	2384.19	$29/2^-$	1868.1	$25/2^-$	Q		6.8 *6*	
516.7 *2*	22 *3*	2099.9	$23/2^-$	1583.20	$19/2^-$	E2 [c]	0.0212		α(K)=0.0159 *5*; α(L)=0.00396 *12*
518.0 *1*	35 *3*	3040.4	$33/2^-$	2522.6	$29/2^-$	E2 [c]	0.0211		α(K)=0.0158 *5*; α(L)=0.00393 *12*
521.4 *1*	42 *4*	3235.4	$35/2^-$	2713.8	$31/2^-$	E2 [c]	0.0207		α(K)=0.0156 *5*; α(L)=0.00385 *12*
524.9 [&] *1*		3579.1	$33/2^-$	3054.2	$(29/2^-)$			8.5 *7*	
524.9 *2*	14.1 *20*	3632.8	$35/2^-$	3107.9	$31/2^-$	E2 [c]	0.0204		α(K)=0.0154 *5*; α(L)=0.00378 *12*
525.3 [a] *1*	9.0 *10*	8452.3	$(59/2^+)$	7927.0	$(57/2^+)$	D			
526.5 *1*	198 *7*	3350.6	$37/2^-$	2824.1	$33/2^-$	E2 [c]	0.0202		α(K)=0.0153 *5*; α(L)=0.00374 *12*
531.4 *1*	461 *19*	2138.1	$27/2^-$	1606.5	$23/2^-$	E2 [c]	0.0198	42.2 *22*	α(K)=0.0149 *5*; α(L)=0.00364 *11*
535.0 *5*	79.1 *25*	2140.7	$25/2^-$	1606.5	$23/2^-$	D		2.6 *13*	
536.0 [f] *2*	2.9 *20*	4168.8?	$39/2^-$	3632.8	$35/2^-$				
539.3 [&] *3*		3579.1	$33/2^-$	3040.4	$33/2^-$			1.4 *3*	
547.9 *2*	4.1×10^2 *7*	1907.7	$29/2^+$	1359.7	$25/2^+$	E2 [c]	0.0184		α(K)=0.0140 *5*; α(L)=0.00333 *10*
547.9 *1*	413 *15*	2415.8	$29/2^-$	1868.1	$25/2^-$	E2 [c]	0.0184	20.3 *12*	α(K)=0.0140 *5*; α(L)=0.00333 *10* E_γ: poor fit; level-energy difference=547.5.
560.7 *1*	347 *14*	2699.5	$31/2^-$	2138.1	$27/2^-$	E2 [c]	0.0174	11.4 *9*	α(K)=0.0133 *4*; α(L)=0.00311 *10* E_γ: poor fit; level-energy difference=561.3.
563.6 *2*	23 *3*	3191.8	$33/2^-$	2628.1	$29/2^-$	E2 [c]	0.0172		α(K)=0.0131 *4*; α(L)=0.00306 *10*
565.2 [a] *7*	9.1 *12*	7486.8	$(55/2^+)$	6921.4	$(53/2^+)$	Q			
565.3 *1*	285 *14*	2980.9	$33/2^-$	2415.8	$29/2^-$	E2 [c]	0.0171	1.8 *4*	α(K)=0.0130 *4*; α(L)=0.00304 *10*
565.7 *1*	51 *5*	3526.1	$37/2^-$	2960.2	$33/2^-$	E2 [c]	0.0170		α(K)=0.0130 *4*; α(L)=0.00303 *9*
566.7 *1*	81 *7*	3266.2	$35/2^-$	2699.5	$31/2^-$	E2 [c]	0.0170	2.6 *5*	α(K)=0.0130 *4*; α(L)=0.00302 *9*
567.5 *1*	210 *14*	3334.9	$35/2^-$	2768.2	$31/2^-$	E2 [c]	0.0169		α(K)=0.0129 *4*; α(L)=0.00300 *9* E_γ: poor fit; level-energy difference=566.9.
568 [df]		3471.2?		2903.2?					

$^{181}_{76}Os_{105}$-12

(HI,xnγ) 2003Cu03 (continued)

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

E_γ[†]	Iγ(prompt)[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[e]	Iγ(delayed)[@]	Comments
573.2[a] *1*	10.6 *10*	7927.0	(57/2$^+$)	7353.8	(55/2$^+$)	D			
574.7 *1*	160 *9*	3555.6	37/2$^-$	2980.9	33/2$^-$	E2[c]	0.0164	0.2 *2*	α(K)=0.0126 *4*; α(L)=0.00290 *9*
577.4 *4*	133 *7*	1848.6	27/2$^+$	1271.0	23/2$^+$	E2[c]	0.0162		α(K)=0.0124 *4*; α(L)=0.00286 *9*
585.4 *8*	11 *4*	2493.4	31/2$^+$	1907.7	29/2$^+$				
586.9 *3*	289 *12*	3695.5	41/2$^+$	3108.6	37/2$^+$	E2[c]	0.0156		α(K)=0.0120 *4*; α(L)=0.00273 *9*
591.0[a] *1*	18.6 *16*	5112.8	(43/2$^+$)	4521.7	(41/2$^+$)	D			
596.5 *3*	4.5 *6*	2980.9	33/2$^-$	2384.19	29/2$^-$				
597.5 *1*	189 *12*	3863.7	39/2$^-$	3266.2	35/2$^-$	E2[c]	0.0150		α(K)=0.0116 *4*; α(L)=0.00259 *8*
599.6[&] *2*		3579.1	33/2$^-$	2980.9	33/2$^-$			2.5 *4*	
599.7 *3*	485 *21*	3108.6	37/2$^+$	2508.9	33/2$^+$	E2[c]	0.0149		α(K)=0.0115 *4*; α(L)=0.00257 *8*
601.3 *4*	286 *14*	2508.9	33/2$^+$	1907.7	29/2$^+$	E2[c]	0.0148		α(K)=0.0114 *4*; α(L)=0.00255 *8*
606.5 *1*	50 *3*	3798.2	37/2$^-$	3191.8	33/2$^-$				
607.3 *1*	69 *5*	3842.6	39/2$^-$	3235.4	35/2$^-$	E2[c]	0.0145		α(K)=0.0112 *4*; α(L)=0.00248 *8* DCO=1.24 12 from prompt transitions.
614.7 *1*	104 *7*	3654.9	37/2$^-$	3040.4	33/2$^-$	E2[c]	0.0141		α(K)=0.0109 *4*; α(L)=0.00240 *8*
618.5 *1*	147 *5*	3969.1	41/2$^-$	3350.6	37/2$^-$	E2[c]	0.0139		α(K)=0.0107 *4*; α(L)=0.00236 *7*
620.2 *2*	25 *3*	4794.0	(45/2$^-$)	4173.8	(41/2$^-$)	E2[c]	0.0138		α(K)=0.0107 *4*; α(L)=0.00234 *7*
621.8 *1*	55 *3*	2176.88	25/2$^-$	1554.55	21/2$^-$				E_γ: poor fit; level-energy difference=622.3. Mult.: possibly E2(ΔI=2).
622.4[&] *2*		3268.9	(25/2$^-$)	2646.5	(23/2$^-$)			4.0 *5*	
623.0[&] *12*		3579.1	33/2$^-$	2960.2	33/2$^-$			4.7 *6*	DCO=0.6 3 from delayed transitions. Mult.: ΔJ=1 transition; E1 listed by 2003Cu03 in the table of delayed transitions is inconsistent with ΔJ^π. E_γ: 620 in the level scheme of high K isomer feeding and decay.
623.7[&] *2*		3038.5	(31/2$^+$)	2415.8	29/2$^-$			4.0 *5*	
624.6 *1*	100 *6*	3040.4	33/2$^-$	2415.8	29/2$^-$	Q		4.0 *5*	
627.6 *3*	190 *8*	4323.1	45/2$^+$	3695.5	41/2$^+$	E2[c]	0.0134		α(K)=0.0104 *4*; α(L)=0.00226 *7*
629.1 *1*	119 *8*	4184.7	41/2$^-$	3555.6	37/2$^-$	E2[c]	0.0133		α(K)=0.0104 *4*; α(L)=0.00225 *7*
631.5 *2*	50 *5*	2768.2	31/2$^-$	2138.1	27/2$^-$	Q			E_γ: poor fit; level-energy difference=629.9.
634.8 *1*	65 *5*	3334.9	35/2$^-$	2699.5	31/2$^-$	Q			E_γ: poor fit; level-energy difference=635.4.
639.0 *1*	34 *3*	2628.1	29/2$^-$	1989.02	25/2$^-$				
639.3 *2*	69 *6*	3974.2	39/2$^-$	3334.9	35/2$^-$	E2[c]	0.0129		α(K)=0.0100 *3*; α(L)=0.00215 *7*
640.7 *3*	21 *4*	4165.2	41/2$^-$	3526.1	37/2$^-$	E2[c]	0.0128		α(K)=0.0100 *3*; α(L)=0.00214 *7* E_γ: poor fit; level-energy difference=639.2.
643.3 *7*	7.1×10^1 *4*	4461.3	43/2$^+$	3818.0	39/2$^+$	E2[c]	0.0127		α(K)=0.0099 *3*; α(L)=0.00212 *7*
643.4[a] *9*	0.4 *12*	6475.4	(51/2$^+$)	5831.9	(47/2$^+$)	Q			
643.6[&] *9*		2632.9	(25/2$^-$)	1989.02	25/2$^-$			0.8 *3*	
645.1 *6*	1.0×10^2 *3*	2493.4	31/2$^+$	1848.6	27/2$^+$	E2[c]	0.0126		α(K)=0.0098 *3*; α(L)=0.00210 *7*
647.7 *1*	39 *3*	4173.8	(41/2$^-$)	3526.1	37/2$^-$				
649.1 *2*	13.8 *20*	4447.4	41/2$^-$	3798.2	37/2$^-$	E2[c]	0.0124		α(K)=0.0097 *3*; α(L)=0.00206 *7*
653.1 *5*	82 *7*	3818.0	39/2$^+$	3164.8	35/2$^+$	E2[c]	0.0123		α(K)=0.0096 *3*; α(L)=0.00203 *6*

$^{181}_{76}Os_{105}$-13

(HI,xnγ) 2003Cu03 (continued)

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

E_γ[†]	Iγ(prompt)[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[e]	Iγ(delayed)[@]	Comments
654.1[a] *2*	2.1 *4*	7509.1	(59/2$^+$)	6855.0	(55/2$^+$)	E2[c]	0.0122		α(K)=0.0095 *3*; α(L)=0.00202 *6*
654.8[f] *26*	2.7 *20*	3164.8	35/2$^+$	2508.9	33/2$^+$				
654.9 *1*		2522.6	29/2$^-$	1868.1	25/2$^-$	Q		4.0 *5*	Eγ: From delayed γ-ray measurements, Eγ=655 from low K level scheme; not listed in authors' table of prompt low K γ-transitions. Mult.: DCO=0.68 21 from delayed transitions.
657.4[a] *3*	2.3 *7*	5178.6	(45/2$^+$)	4521.7	(41/2$^+$)	E2[c]	0.0121		α(K)=0.0094 *3*; α(L)=0.00200 *6*
657.5[&] *5*		2646.5	(23/2$^-$)	1989.02	25/2$^-$			0.8 *3*	
661.3 *2*	12 *3*	2016.6	23/2$^-$	1355.2	21/2$^-$			1.4 *6*	DCO=0.96 13 from prompt transitions. Mult.: ΔJ=0 transition listed in the table of prompt γ-transitions, inconsistent with ΔJ^π, possibly M1.
663.2 *1*	90 *8*	4526.9	43/2$^-$	3863.7	39/2$^-$	E2[c]	0.0119		α(K)=0.0093 *3*; α(L)=0.00195 *6*
665.5[a] *1*	0.1 *10*	5509.7	(47/2$^+$)	4844.2	(43/2$^+$)	Q			
668.1[a] *2*	6.0 *8*	6177.8	(51/2$^+$)	5509.7	(47/2$^+$)	E2[c]	0.0117		α(K)=0.0091 *3*; α(L)=0.00191 *6*
669.4 *2*	24 *3*	4511.7	43/2$^-$	3842.6	39/2$^-$	E2[c]	0.0116		α(K)=0.0091 *3*; α(L)=0.00190 *6*
671.4 *5*	104 *6*	3164.8	35/2$^+$	2493.4	31/2$^+$	E2[c]	0.0115		α(K)=0.0090 *3*; α(L)=0.00189 *6*
673.9 *1*	65 *5*	3654.9	37/2$^-$	2980.9	33/2$^-$	Q			
677.2[a] *2*	3.9 *6*	6855.0	(55/2$^+$)	6177.8	(51/2$^+$)	Q			
678.3 *4*	11 *3*	4843.5	45/2$^-$	4165.2	41/2$^-$	E2[c]	0.0113		α(K)=0.0088 *3*; α(L)=0.00184 *6*
679.8[a] *3*	2.0 *6*	5523.7	(47/2$^+$)	4844.2	(43/2$^+$)	E2[c]	0.0112		α(K)=0.0088 *3*; α(L)=0.00182 *6* α(K)=0.0088 *3*; α(L)=0.00182 *6*
680.9 *1*	68 *5*	4335.9	41/2$^-$	3654.9	37/2$^-$	E2[c]	0.0112		α(K)=0.0088 *3*; α(L)=0.00182 *6*
685.0 *2*	14.3 *20*	3876.7	37/2$^-$	3191.8	33/2$^-$	E2[c]	0.0110		α(K)=0.0087 *3*; α(L)=0.00179 *6*
691.3[a] *3*	2.3 *6*	5965.2	(49/2$^-$)	5273.9	(45/2$^-$)	Q			
695.5 *7*	7 *3*	2300.9	27/2$^-$	1606.5	23/2$^-$				
696.2[a] *2*	2.6 *6*	6874.0	(55/2$^+$)	6177.8	(51/2$^+$)	E2[c]	0.0107		α(K)=0.0084 *3*; α(L)=0.00171 *6*
696.8 *2*	10.9 *10*	5490.8	(49/2$^-$)	4794.0	(45/2$^-$)	E2[c]	0.0106		α(K)=0.0084 *3*; α(L)=0.00171 *6*
698.0 *5*	9 *3*	5541.5	49/2$^-$	4843.5	45/2$^-$	E2[c]	0.0106		α(K)=0.0083 *3*; α(L)=0.00170 *6*
699.8 *2*	23 *4*	5211.6	47/2$^-$	4511.7	43/2$^-$	E2[c]	0.0105		α(K)=0.00829 *25*; α(L)=0.00169 *5*
700.7[a] *2*	5.9 *8*	5879.5	(49/2$^+$)	5178.6	(45/2$^+$)	E2[c]	0.0105		α(K)=0.00827 *25*; α(L)=0.00168 *5*
702.8 *1*	90 *7*	4887.5	45/2$^-$	4184.7	41/2$^-$	E2[c]	0.0104		α(K)=0.00822 *25*; α(L)=0.00167 *5*
704.8 *1*	99 *4*	4673.9	45/2$^-$	3969.1	41/2$^-$	E2[c]	0.0104		α(K)=0.00817 *25*; α(L)=0.00166 *5*
708.1[&] *2*		3092.08	(29/2$^-$)	2384.19	29/2$^-$			2.7 *4*	
708.2 *4*	145 *8*	5031.3	49/2$^+$	4323.1	45/2$^+$	E2[c]	0.0103		α(K)=0.00809 *25*; α(L)=0.00164 *5*
710.0 *3*	18 *3*	5171.3	47/2$^+$	4461.3	43/2$^+$	E2[c]	0.0102		α(K)=0.00805 *25*; α(L)=0.00163 *5*
710.9 *1*	32 *3*	4685.1	43/2$^-$	3974.2	39/2$^-$	E2[c]	0.0102		α(K)=0.00803 *24*; α(L)=0.00162 *5*
718.4 *2*	16.4 *20*	5165.7	45/2$^-$	4447.4	41/2$^-$	E2[c]	0.0100		α(K)=0.00786 *24*; α(L)=0.00158 *5*
718.7[a] *2*	7.5 *10*	6242.2	(51/2$^+$)	5523.7	(47/2$^+$)	E2[c]	0.0099		α(K)=0.00785 *24*; α(L)=0.00158 *5*
719.4 *4*	13 *3*	5930.9	51/2$^-$	5211.6	47/2$^-$	E2[c]	0.0099		α(K)=0.00784 *24*; α(L)=0.00157 *5*
722.3 *5*	5 *3*	6263.9	53/2$^-$	5541.5	49/2$^-$	E2[c]	0.0098		α(K)=0.00777 *24*; α(L)=0.00156 *5*
722.6[a] *3*	1.3 *3*	8231.7	(63/2$^+$)	7509.1	(59/2$^+$)	E2[c]	0.0098		α(K)=0.00777 *24*; α(L)=0.00156 *5*
725.1 *1*	52 *5*	5060.9	45/2$^-$	4335.9	41/2$^-$	E2[c]	0.0098		α(K)=0.00771 *24*; α(L)=0.00154 *5*

$^{181}_{76}Os_{105}$-14

(HI,xnγ) 2003Cu03 (continued)

γ(^{181}Os) (continued)

E_γ[†]	Iγ(prompt)[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[e]	Iγ(delayed)[@]	Comments
732.6 *2*	75 *8*	5259.5	47/2$^-$	4526.9	43/2$^-$	E2[c]	0.0095		α=0.0095; α(K)=0.00755 *23*; α(L)=0.00150 *5*
735.0[a] *2*	1.5 *4*	6614.5	(53/2$^+$)	5879.5	(49/2$^+$)	E2[c]	0.0095		α=0.0095; α(K)=0.00750 *23*; α(L)=0.00149 *5*
735.5[f] *4*	8.8 *20*	6999.4	(57/2$^-$)	6263.9	53/2$^-$				
735.8 *3*	9.3 *20*	4612.6	41/2$^-$	3876.7	37/2$^-$	E2[c]	0.0095		α=0.0095; α(K)=0.00748 *23*; α(L)=0.00148 *5*
739.3[af] *3*	1.3 *3*	8971.0?	(67/2$^+$)	8231.7	(63/2$^+$)	Q			
741.9 *1*	35.7 *20*	5427.1	47/2$^-$	4685.1	43/2$^-$	E2[c]	0.0093		α=0.0093; α(K)=0.00736 *22*; α(L)=0.00145 *5*
747.6 *8*	6 *3*	6678.5	55/2$^-$	5930.9	51/2$^-$	E2[c]	0.0091		α=0.0091; α(K)=0.00725 *22*; α(L)=0.00143 *5*
747.7 *1*	50 *4*	5808.6	49/2$^-$	5060.9	45/2$^-$	E2[c]	0.0091		α=0.0091; α(K)=0.00724 *22*; α(L)=0.00142 *5*
749.3[a] *3*	0.1 *6*	6991.5	(55/2$^+$)	6242.2	(51/2$^+$)	E2[c]	0.0091		α=0.0091; α(K)=0.00721 *22*; α(L)=0.00142 *5*
749.5 *1*	27.1 *20*	6403.4	53/2$^-$	5653.9	49/2$^-$	E2[c]	0.0091		α=0.0091; α(K)=0.00721 *22*; α(L)=0.00142 *5*
750.9[f] *5*	6.4 *20*	7750.3	(61/2$^-$)	6999.4	(57/2$^-$)				
754.9[&] *1*		3579.1	33/2$^-$	2824.1	33/2$^-$	D		13.4 *7*	Mult.: DCO=0.92 17 from delayed transitions. Mult.: ΔJ=0 transition. Initial J^π=33/2$^+$ in table of delayed transitions seems a misprint; it should be 33/2$^-$.
755.0[a] *4*	1.2 *4*	7629.0	(59/2$^+$)	6874.0	(55/2$^+$)	E2[c]	0.0090		α=0.0090; α(K)=0.00710 *22*; α(L)=0.00139 *5*
756.1 *6*	4.1 *20*	5921.8	49/2$^-$	5165.7	45/2$^-$	E2[c]	0.0089		α=0.0089; α(K)=0.00708 *22*; α(L)=0.00139 *5*
760.2 *1*	23.4 *20*	6019.7	51/2$^-$	5259.5	47/2$^-$	Q			
764.0 *1*	29.3 *20*	6191.0	51/2$^-$	5427.1	47/2$^-$	E2[c]	0.0087		α=0.0087; α(K)=0.00693 *21*; α(L)=0.00135 *4*
766[d]		6574.6	53/2$^-$	5808.6	49/2$^-$	E2[c]	0.0087		α=0.0087; α(K)=0.00690 *21*; α(L)=0.00134 *4*
766.3 *3*	10.7 *20*	5378.9	45/2$^-$	4612.6	41/2$^-$	E2[c]	0.0087		α=0.0087; α(K)=0.00689 *21*; α(L)=0.00134 *4*
766.4 *1*	49.2 *20*	5653.9	49/2$^-$	4887.5	45/2$^-$	Q			
767.0[a] *3*	1.5 *6*	7381.5	(57/2$^+$)	6614.5	(53/2$^+$)	E2[c]	0.0087		α=0.0087; α(K)=0.00688 *21*; α(L)=0.00134 *4*
777.4 *3*	4.0 *10*	7455.9	59/2$^-$	6678.5	55/2$^-$	E2[c]	0.0084		α=0.0084; α(K)=0.00670 *20*; α(L)=0.00129 *4*
780.9 *1*	66 *3*	5454.8	49/2$^-$	4673.9	45/2$^-$	E2[c]	0.0083		α=0.0083; α(K)=0.00663 *20*; α(L)=0.00128 *4*
781.9[a] *10*	0.1 *1*	7773.4	(59/2$^+$)	6991.5	(55/2$^+$)	E2[c]	0.00831		α=0.00831; α(K)=0.00662 *20*; α(L)=0.00127 *4*
786.0 *3*	29 *7*	5673.5	49/2$^-$	4887.5	45/2$^-$	E2[c]	0.00822		α=0.00822; α(K)=0.00655 *20*; α(L)=0.00126 *4* Mult.: DCO=0.68 4 from prompt transitions, probably for 786.0γ + 786.5γ.
786.3[a] *1*	48 *3*	5112.8	(43/2$^+$)	4326.7	(39/2$^+$)	Q			
786.4 *9*	6 *3*	2140.7	25/2$^-$	1355.2	21/2$^-$				Mult.: possibly E2.
786.5 *2*	17.9 *20*	6806.2	55/2$^-$	6019.7	51/2$^-$	E2[c]	0.00821		α=0.00821; α(K)=0.00654 *20*; α(L)=0.00125 *4* Mult.: DCO=0.68 4 from prompt transitions, probably for 786.0γ + 786.5γ.
788.1 *1*	16.9 *10*	6278.9	(53/2$^-$)	5490.8	(49/2$^-$)	E2[c]	0.00817		α=0.00817; α(K)=0.00651 *20*; α(L)=0.00125 *4*
788.2 *3*	14 *4*	7362.8	57/2$^-$	6574.6	53/2$^-$	E2[c]	0.00817		α=0.00817; α(K)=0.00651 *20*; α(L)=0.00125 *4*
792.0[a] *3*	1.7 *6*	8173.5	(61/2$^+$)	7381.5	(57/2$^+$)	E2[c]	0.00809		α=0.00809; α(K)=0.00645 *20*; α(L)=0.00123 *4*
793.9 *4*	28 *6*	5965.1	51/2$^+$	5171.3	47/2$^+$	E2[c]	0.00805		α=0.00805; α(K)=0.00642 *20*; α(L)=0.00123 *4*
801[f]		8163.8	(61/2$^-$)	7362.8	57/2$^-$				
801.2 *1*	39 *3*	6060.7	51/2$^-$	5259.5	47/2$^-$	E2[c]	0.00789		α=0.00789; α(K)=0.00630 *19*; α(L)=0.00120 *4*
802.3 *7*	86 *8*	5833.6	53/2$^+$	5031.3	49/2$^+$	E2[c]	0.00787		α=0.00787; α(K)=0.00628 *19*; α(L)=0.00119 *4*

$^{181}_{76}Os_{105}$-15

(HI,xnγ) 2003Cu03 (continued)

γ(^{181}Os) (continued)

E_γ[†]	Iγ(prompt)[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[e]	Iγ(delayed)[@]	Comments
802.4[f] *4*	1.4 *10*	6181.3	(49/2$^-$)	5378.9	45/2$^-$				
804.6 *2*	18.1 *20*	6995.7	55/2$^-$	6191.0	51/2$^-$	E2[c]	0.00783		α=0.00783; α(K)=0.00625 *19*; α(L)=0.00119 *4*
805.8[f] *3*	1.7 *10*	8261.7	(63/2$^-$)	7455.9	59/2$^-$				
807.5 *5*	6.4 *20*	6729.4	53/2$^-$	5921.8	49/2$^-$	E2[c]	0.00777		α=0.00777; α(K)=0.00620 *19*; α(L)=0.00118 *4*
808[d]		3191.8	33/2$^-$	2384.19	29/2$^-$				
809.8 *5*	1.0 *9*	1926.3	21/2$^-$	1116.3	19/2$^-$				Mult.: possibly M1 or E2.
826.0 *1*	24.8 *20*	7229.4	57/2$^-$	6403.4	53/2$^-$	E2[c]	0.00741		α=0.00741; α(K)=0.00593 *18*; α(L)=0.00111 *4*
828.1[af] *5*	1.0 *4*	8457.1?	(63/2$^+$)	7629.0	(59/2$^+$)	Q			
829.2[f] *1*	27.4 *20*	9090.9	(67/2$^-$)	8261.7	(63/2$^-$)				
833.1[f] *2*	14.4 *20*	7014.4	(53/2$^-$)	6181.3	(49/2$^-$)				
836.3[af] *2*	9.8 *15*	5469.0	(45/2$^+$)	4631.8	(41/2$^+$)	Q			
839.9[af] *1*	13.3 *15*	8766.8	(61/2$^+$)	7927.0	(57/2$^+$)	Q			
840.9 *4*	28 *6*	7361.9	57/2$^-$	6521.0	53/2$^-$	E2[c]	0.00714		α=0.00714; α(K)=0.00572 *18*; α(L)=0.00106 *4*
842.8[&] *2*		3259.0	(31/2$^+$)	2415.8	29/2$^-$			2.1 *4*	
844.0 *1*	44 *3*	6904.7	55/2$^-$	6060.7	51/2$^-$	E2[c]	0.00708		α=0.00708; α(K)=0.00568 *17*; α(L)=0.00106 *4*
846.3 *1*	65 *3*	6301.1	53/2$^-$	5454.8	49/2$^-$	E2[c]	0.00704		α=0.00704; α(K)=0.00565 *17*; α(L)=0.00105 *4*
847.0 *2*	25.8 *20*	7842.7	59/2$^-$	6995.7	55/2$^-$	E2[c]	0.00703		α=0.00703; α(K)=0.00564 *17*; α(L)=0.00105 *4* Assignment to 7/2[514] band in table of prompt low K γ-transitions seems a misprint; should be in K=23/2$^-$ band as in authors′ low K level scheme.
847.5 *4*	29 *7*	6521.0	53/2$^-$	5673.5	49/2$^-$	E2[c]	0.00702		α=0.00702; α(K)=0.00563 *17*; α(L)=0.00104 *4* Assignment to the ν1/2[521] band in the table of prompt low K γ-transitions seems a misprint; should be in ν7/2[514] band as in authors′ low K level scheme.
848.2 *1*	61 *3*	1744.2	21/2$^+$	896.0	21/2$^+$			17.2 *11*	Mult.: ΔJ=0 transition, E2 from table prompt low K γ-transitions, but M1 from the text of 2003Cu03.
849.4[f] *2*	18.5 *20*	7863.8	(57/2$^-$)	7014.4	(53/2$^-$)				
854.3 *3*	11.6 *20*	7583.7	57/2$^-$	6729.4	53/2$^-$	E2[c]	0.00691		α=0.00691; α(K)=0.00554 *17*; α(L)=0.00103 *3*
858.0 *1*	21.7 *20*	7664.2	59/2$^-$	6806.2	55/2$^-$	E2[c]	0.00684		α=0.00684; α(K)=0.00550 *17*; α(L)=0.00101 *3*
859.0 *2*	10.9 *10*	7137.9	(57/2$^-$)	6278.9	(53/2$^-$)	E2[c]	0.00683		α=0.00683; α(K)=0.00548 *17*; α(L)=0.00101 *3*
866[df]		8095.4	61/2$^-$	7229.4	57/2$^-$				
874[d]		8716.7	63/2$^-$	7842.7	59/2$^-$	E2[c]	0.00659		α=0.00659; α(K)=0.00530 *16*; α(L)=0.00097 *3*
876.7 *6*	21 *7*	6841.9	55/2$^+$	5965.1	51/2$^+$	E2[c]	0.00655		α=0.00655; α(K)=0.00526 *16*; α(L)=0.00096 *3*
885[df]		8980.4	(65/2$^-$)	8095.4	61/2$^-$				
896[d]		9612.7	67/2$^-$	8716.7	63/2$^-$	E2[c]	0.00626		α=0.00626; α(K)=0.00504 *16*; α(L)=0.00091 *3*
897.7 *8*	11 *5*	8259.6	61/2$^-$	7361.9	57/2$^-$	E2[c]	0.00624		α=0.00624; α(K)=0.00502 *15*; α(L)=0.00091 *3*
897.9 *3*	45 *8*	6731.5	57/2$^+$	5833.6	53/2$^+$	E2[c]	0.00623		α=0.00623; α(K)=0.00502 *15*; α(L)=0.00091 *3* E_γ: 899.0 in the table of lifetime measurements.
898.0 *1*	22.0 *20*	7802.7	59/2$^-$	6904.7	55/2$^-$	E2[c]	0.00623		α=0.00623; α(K)=0.00502 *15*; α(L)=0.00091 *3*

$^{181}_{76}Os_{105}$-16

(HI,xnγ) 2003Cu03 (continued)

γ(^{181}Os) (continued)

E_γ[†]	Iγ(prompt)[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[e]	Iγ(delayed)[@]	Comments
898.7 *3*	7.4 *21*	2016.6	23/2$^-$	1116.3	19/2$^-$				E_γ: poor fit; level-energy difference=900.3. Mult.: possibly E2.
899.0 *1*	22.0 *20*	7200.1	57/2$^-$	6301.1	53/2$^-$	E2[c]	0.00622		α=0.00622; α(K)=0.00501 *15*; α(L)=0.00091 *3* E_γ: 902 in low K level scheme.
912.6 *3*	5.3 *10*	7213.7	(57/2$^-$)	6301.1	53/2$^-$				
920.2[&] *3*		3579.1	33/2$^-$	2658.7	(31/2$^+$)			1.2 *3*	Initial J^π=33/2$^+$ in table of delayed transitions seems a misprint; it should be 33/2$^-$.
925.8 *3*	7.3 *10*	8590.0	63/2$^-$	7664.2	59/2$^-$	E2[c]	0.00585		α=0.00585; α(K)=0.00473 *15*; α(L)=0.00085 *3*
931.4 *23*	3 *4*	9191	65/2$^-$	8259.6	61/2$^-$	E2[c]	0.00578		α=0.00578; α(K)=0.00467 *14*; α(L)=0.00084 *3*
932[d]		10544.7	71/2$^-$	9612.7	67/2$^-$	E2[c]	0.00578		α=0.00578; α(K)=0.00467 *14*; α(L)=0.00083 *3*
954 *4*	8.7 *24*	7796	59/2$^+$	6841.9	55/2$^+$	E2[c]	0.00551		α=0.00551; α(K)=0.00446 *14*; α(L)=0.00079 *2*
956.0 *3*	2.9 *9*	8169.7	(61/2$^-$)	7213.7	(57/2$^-$)	E2[c]	0.00549		α=0.00549; α(K)=0.00444 *14*; α(L)=0.00079 *2*
956.5 *19*	26.7 *23*	1744.2	21/2$^+$	788.4	19/2$^+$			2.7 *4*	
973.5 *2*	10.7 *10*	8173.6	61/2$^-$	7200.1	57/2$^-$	E2[c]	0.00529		α=0.00529; α(K)=0.00428 *13*; α(L)=0.00075 *2*
979.6 *1*	14.7 *10*	8782.3	63/2$^-$	7802.7	59/2$^-$	E2[c]	0.00522		α=0.00522; α(K)=0.00423 *13*; α(L)=0.00074 *2*
982.6 *3*	8.8 *10*	9572.6	67/2$^-$	8590.0	63/2$^-$	E2[c]	0.00519		α=0.00519; α(K)=0.00421 *13*; α(L)=0.00074 *2*
997.3 *5*	25 *9*	7728.8	61/2$^+$	6731.5	57/2$^+$	E2[c]	0.00504		α=0.00504; α(K)=0.00409 *13*; α(L)=0.00071 *2*
1007.7 *2*	7.7 *9*	9177.4	(65/2$^-$)	8169.7	(61/2$^-$)	E2[c]	0.00493		α=0.00493; α(K)=0.00401 *12*; α(L)=0.00070 *2*
1011.4[a] *2*	5.6 *9*	7486.8	(55/2$^+$)	6475.4	(51/2$^+$)	Q			
1023.5 *2*	7.9 *9*	10596.1	71/2$^-$	9572.6	67/2$^-$	E2[c]	0.00478		α=0.00478; α(K)=0.00389 *12*; α(L)=0.00067 *2*
1029.1 *1*	12.1 *9*	9202.7	65/2$^-$	8173.6	61/2$^-$	E2[c]	0.00473		α=0.00473; α(K)=0.00385 *12*; α(L)=0.00067 *2*
1031.7 *6*	9 *3*	8828	63/2$^+$	7796	59/2$^+$	E2[c]	0.00471		α=0.00471; α(K)=0.00383 *12*; α(L)=0.00066 *2*
1035.3 *5*	0.5 *3*	1926.3	21/2$^-$	890.8	17/2$^-$				E_γ: 1053.3 listed in table of prompt low K γ-transitions seems a misprint; should probably be 1035.3 (or 1037 given in authors' low K level scheme). Mult.: possibly E2.
1051.7 *2*	7.8 *9*	10229.1	(69/2$^-$)	9177.4	(65/2$^-$)	E2[c]	0.00453		α=0.00453; α(K)=0.00369 *11*; α(L)=0.00063 *2*
1055.6 *2*	7.8 *9*	11651.7	75/2$^-$	10596.1	71/2$^-$	E2[c]	0.00450		α=0.00450; α(K)=0.00366 *11*; α(L)=0.00063 *2*
1056.3[&] *1*		3579.1	33/2$^-$	2522.6	29/2$^-$	Q		7.9 *7*	Mult.: DCO=0.9 3 from delayed transitions.
1064.9[&] *3*		3054.2	(29/2$^-$)	1989.02	25/2$^-$			0.8 *3*	
1077.4 *4*	3.6 *6*	9859.7	67/2$^-$	8782.3	63/2$^-$	E2[c]	0.00432		α=0.00432; α(K)=0.00352 *11*; α(L)=0.00060 *2*
1078.4[&] *2*		2632.9	(25/2$^-$)	1554.55	21/2$^-$			2.9 *5*	
1088.0 *9*	0.9 *6*	11317.1	(73/2$^-$)	10229.1	(69/2$^-$)	E2[c]	0.00424		α=0.00424; α(K)=0.00346 *11*; α(L)=0.00059 *2*
1089.3[f] *4*	2.6 *6*	12741.0	(79/2$^-$)	11651.7	75/2$^-$				
1090.6 *9*	4.9 *20*	8819.4	65/2$^+$	7728.8	61/2$^+$	E2[c]	0.00422		α=0.00422; α(K)=0.00344 *11*; α(L)=0.00058 *2*
1091.9[&] *2*		2646.5	(23/2$^-$)	1554.55	21/2$^-$			2.9 *5*	
1092.7 *9*	4 *3*	9920	67/2$^+$	8828	63/2$^+$	E2[c]	0.00420		α=0.00420; α(K)=0.00343 *11*; α(L)=0.00058 *2*
1103.0[&] *1*		3092.08	(29/2$^-$)	1989.02	25/2$^-$			3.8 *5*	
1105.7 *5*	1.8 *6*	10308.4	69/2$^-$	9202.7	65/2$^-$	E2[c]	0.00410		α=0.00410; α(K)=0.00335 *10*; α(L)=0.00057 *2*
1143.9[f] *8*	2.9 *3*	11003.6	(71/2$^-$)	9859.7	67/2$^-$				
1155.5 *5*	1.0 *9*	11463.9	73/2$^-$	10308.4	69/2$^-$	E2[c]	0.00377		α=0.00377; α(K)=0.00308 *10*; α(L)=0.00052 *2*

$^{181}_{76}Os_{105}$-17

(HI,xnγ) 2003Cu03 (continued)

γ(^{181}Os) (continued)

E_γ[†]	Iγ(prompt)[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[e]	Iγ(delayed)[@]	Comments
1181.8 *9*	5 *3*	10001.2	(69/2$^+$)	8819.4	65/2$^+$	E2[c]	0.00361		α=0.00361; α(K)=0.00295 *9*; α(L)=0.00049 *2*
1195.0[&] *1*		3579.1	33/2$^-$	2384.19	29/2$^-$	Q		14.8 *9*	Mult.: DCO=0.91 11 from delayed transitions.
1212.9 *3*	8.7 *6*	1744.2	21/2$^+$	531.2	17/2$^+$			2.0 *5*	
1240.7[&] *3*		3108.8	(29/2$^-$)	1868.1	25/2$^-$			1.7 *3*	
1243.3[&] *1*		3536.6	(31/2$^-$)	2293.2	27/2$^-$			4.8 *4*	
1263.4 *9*	15 *3*	11264.6	(73/2$^+$)	10001.2	(69/2$^+$)	E2[c]	0.00317		α=0.00317; α(K)=0.00260 *8*; α(L)=0.00043 *1*
1321.9 *9*	2 *6*	12586.5	(77/2$^+$)	11264.6	(73/2$^+$)	E2[c]	0.00291		α=0.00291; α(K)=0.00239 *8*; α(L)=0.00039 *1*

[†] From prompt low K γ-transitions (2003Cu03), except as noted. Eγ values from delayed transitions are listed in comments if differ significantly.
[‡] From prompt low K γ-transitions relative to Iγ(318.6)=1000 (2003Cu03).
[#] From DCO values of 2003Cu03, unless otherwise as noted.
[@] From delayed γ-intensity relative to Iγ(421.1)=100 (2003Cu03).
[&] From delayed γ-ray measurements of 2003Cu03.
[a] Transitions above the K=35/2$^-$, $T_{1/2}$=24 ns state, from table of prompt high K γ-transitions (2003Cu03).
[b] From intensity balance (2003Cu03).
[c] Stretched quadrupole transition connecting ΔJ=2 states in the rotational band.
[d] From level scheme of 2003Cu03; not listed as prompt low K γ-transitions.
[e] 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.
[f] Placement of transition in the level scheme is uncertain.
[x] γ ray not placed in level scheme.

$^{181}_{76}Os_{105}$-18

(HI,xnγ) 2003Cu03

Level Scheme

Intensities: Relative I_γ

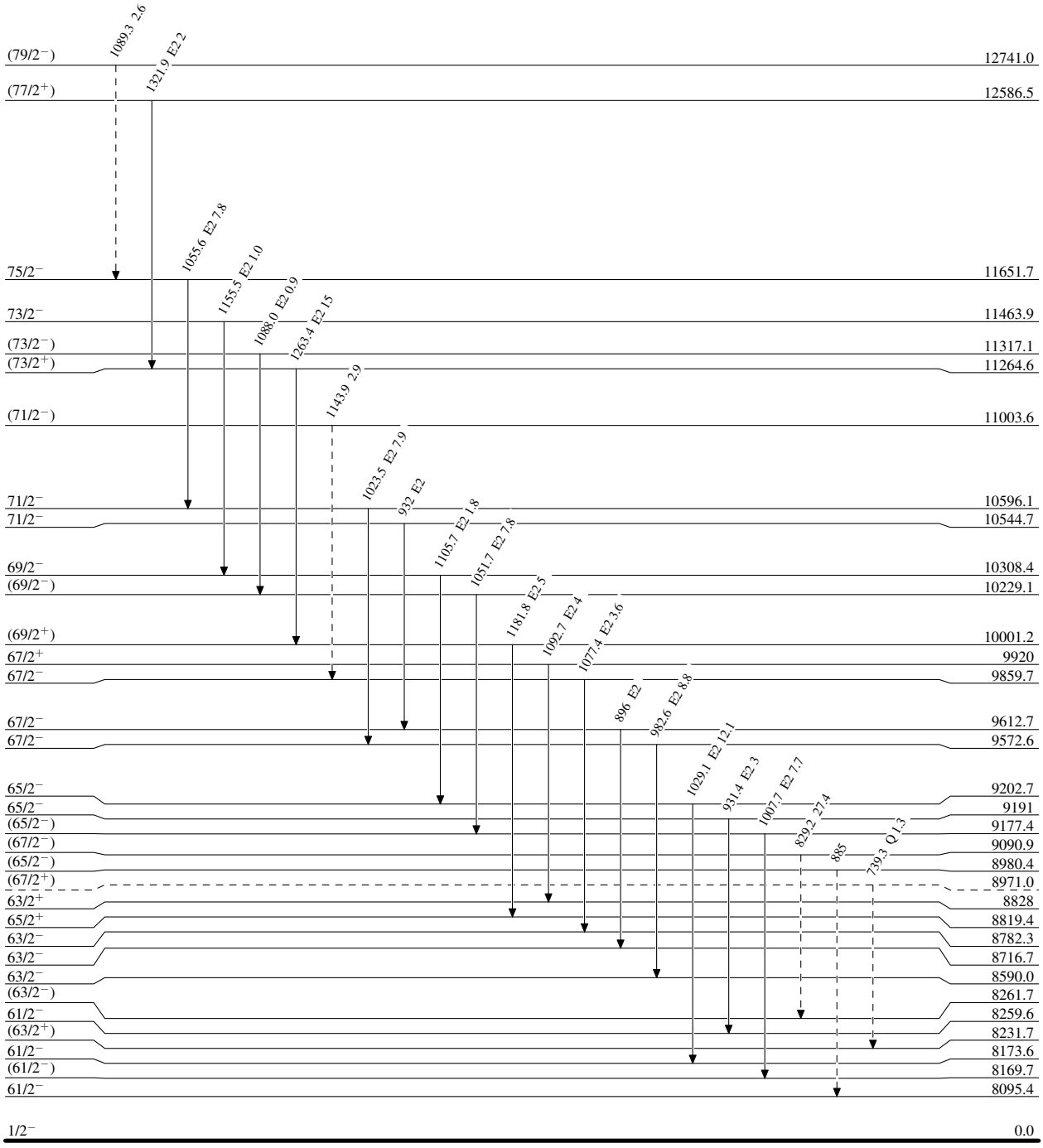
Legend

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

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

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

γ Decay (Uncertain)



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

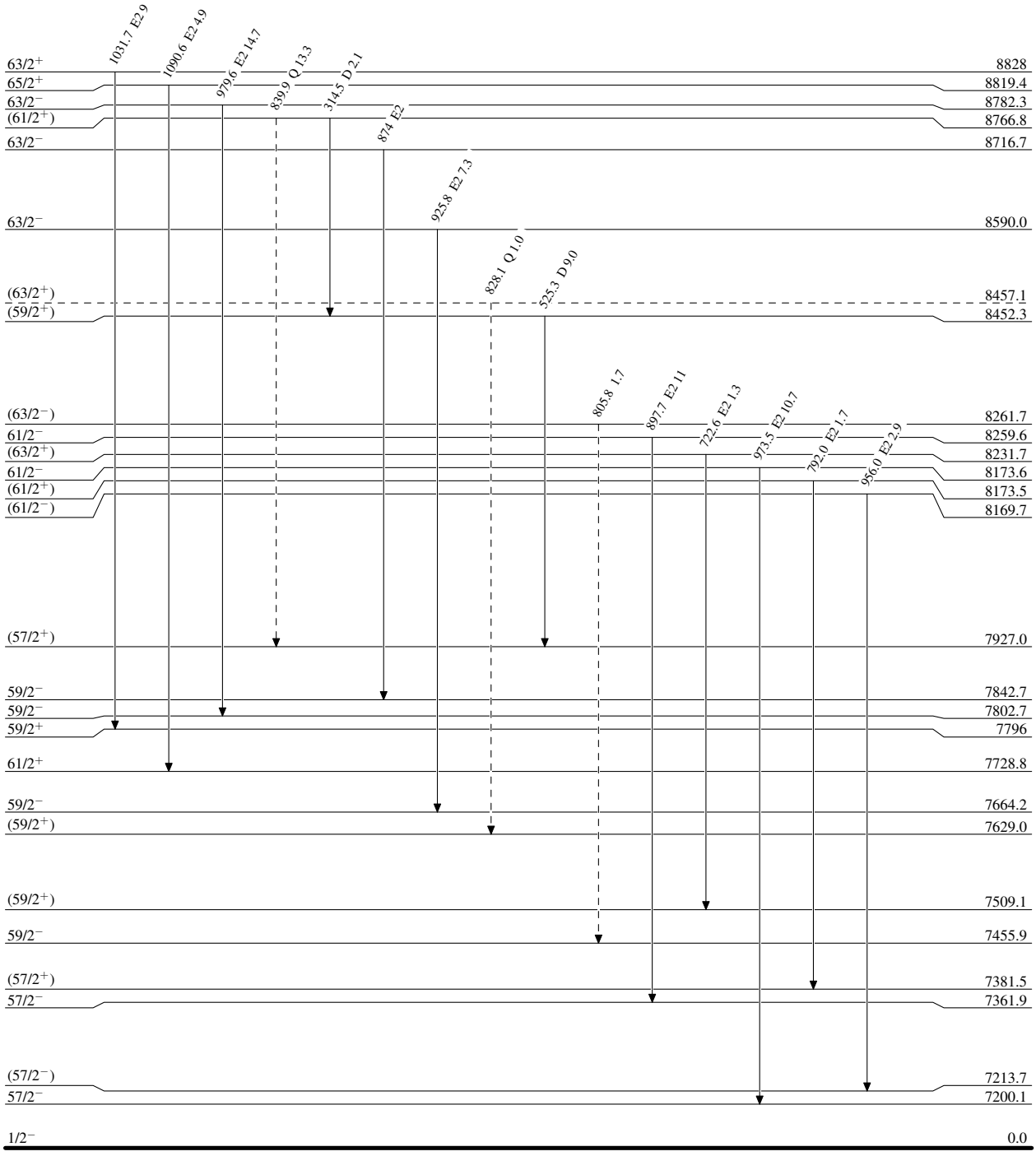
(HI,xnγ) 2003Cu03

Level Scheme (continued)

Intensities: Relative I_γ

Legend

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



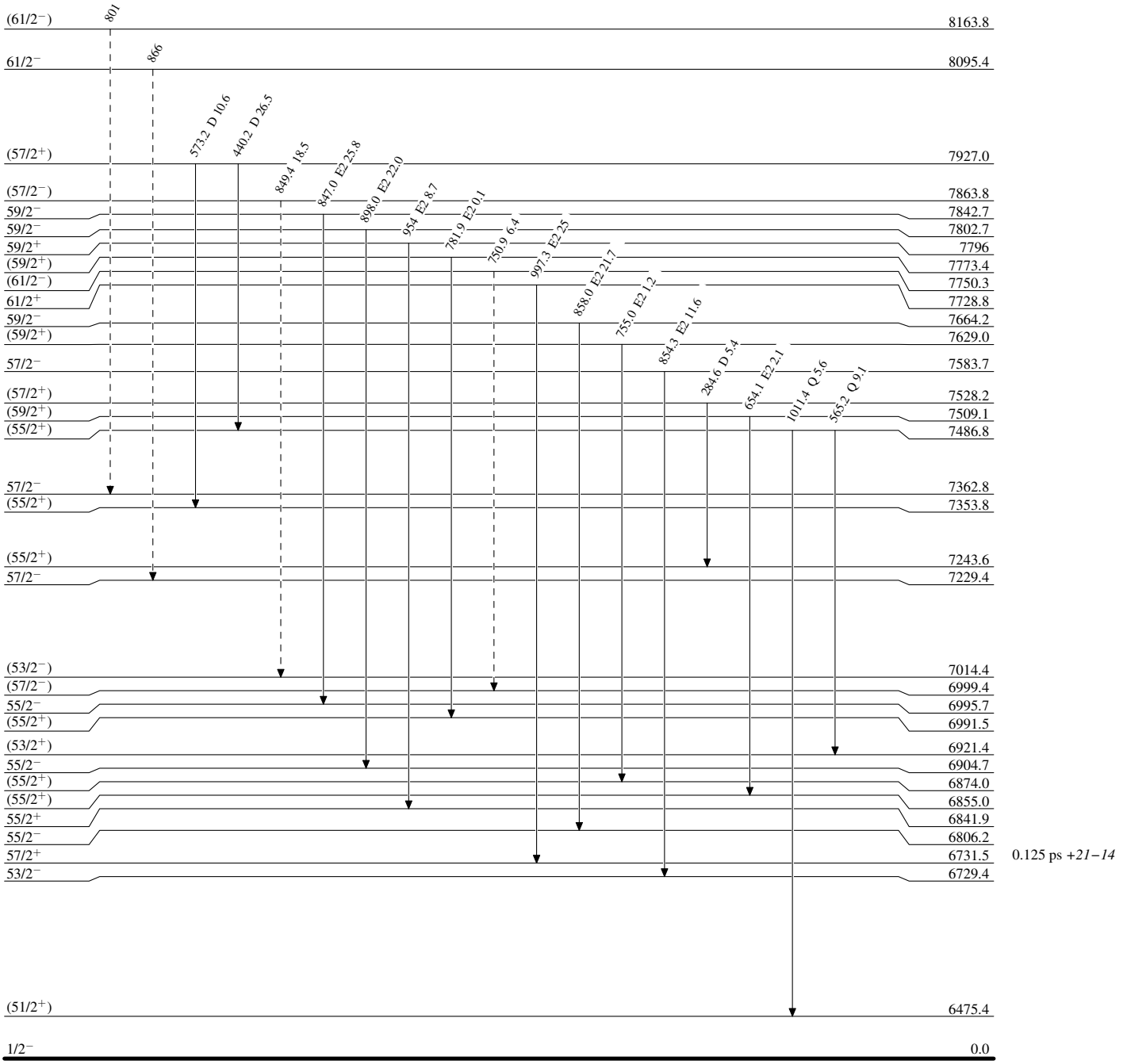
$^{181}_{76}Os_{105}$

(HI,xnγ) 2003Cu03

Level Scheme (continued)

Intensities: Relative I_γ

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



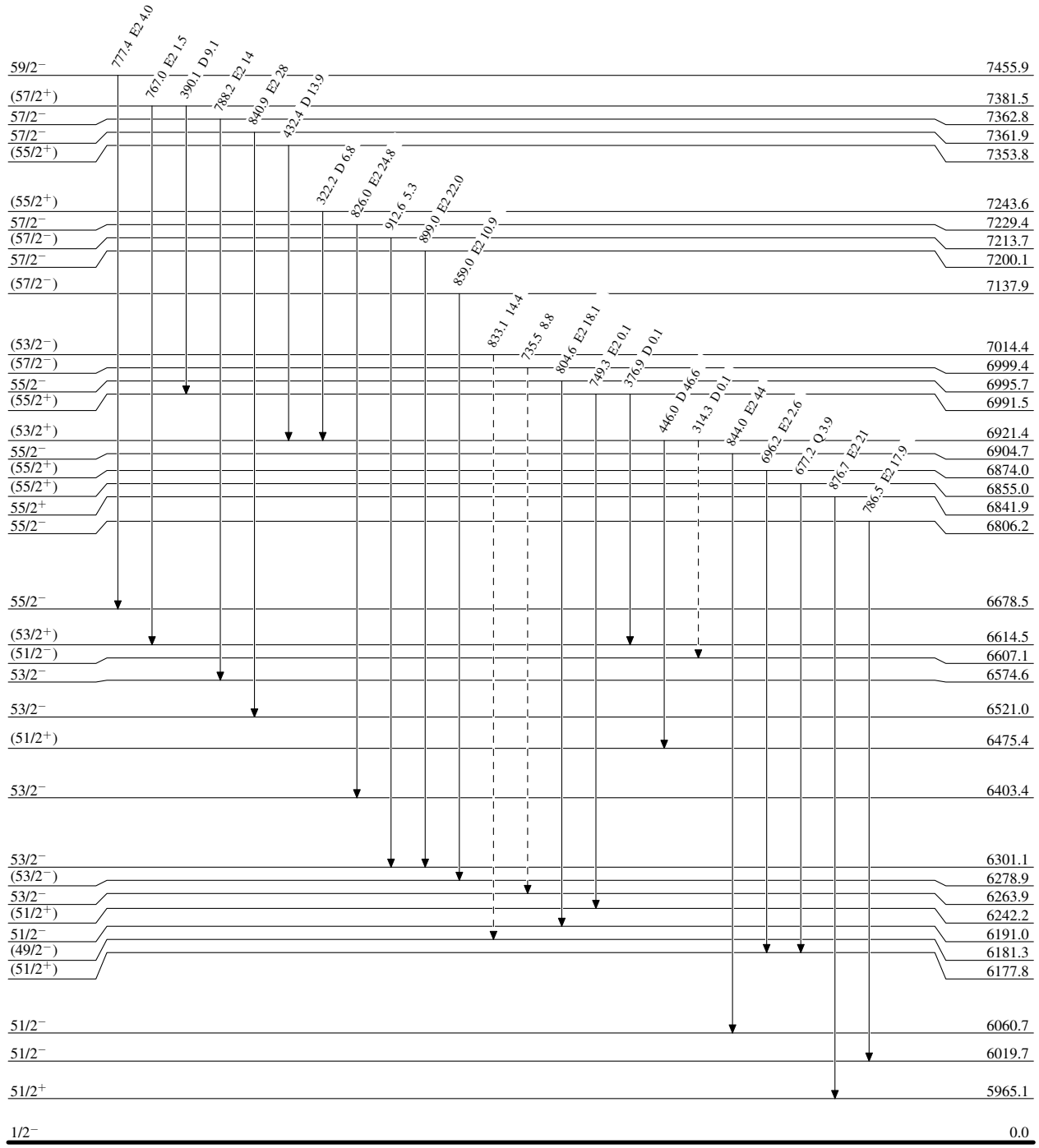
$^{181}_{76}Os_{105}$

(HI,xnγ) 2003Cu03

Level Scheme (continued)

Intensities: Relative I_γ

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



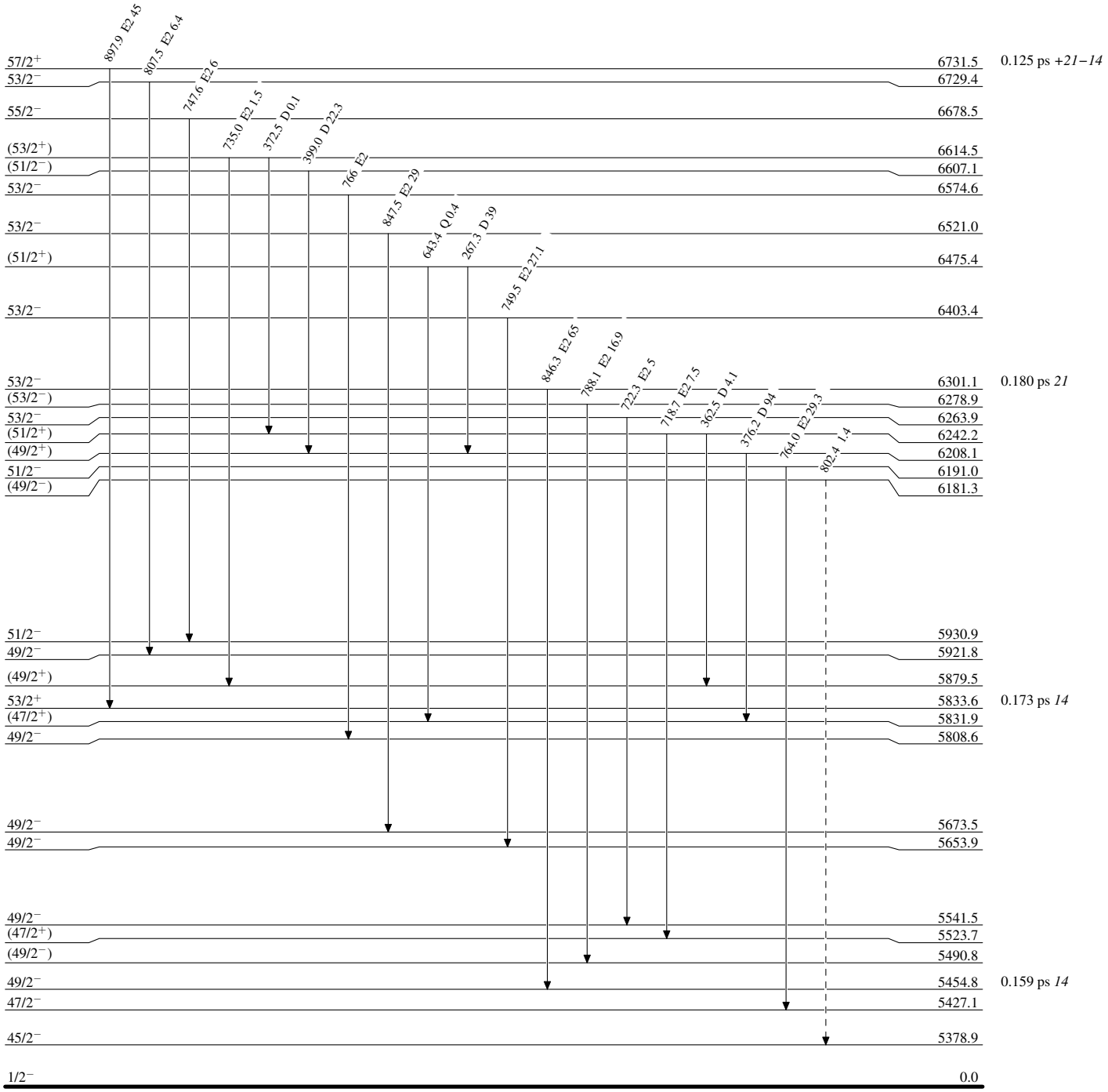
$^{181}_{76}Os_{105}$

(HI,xnγ) 2003Cu03

Level Scheme (continued)

Intensities: Relative I_γ

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



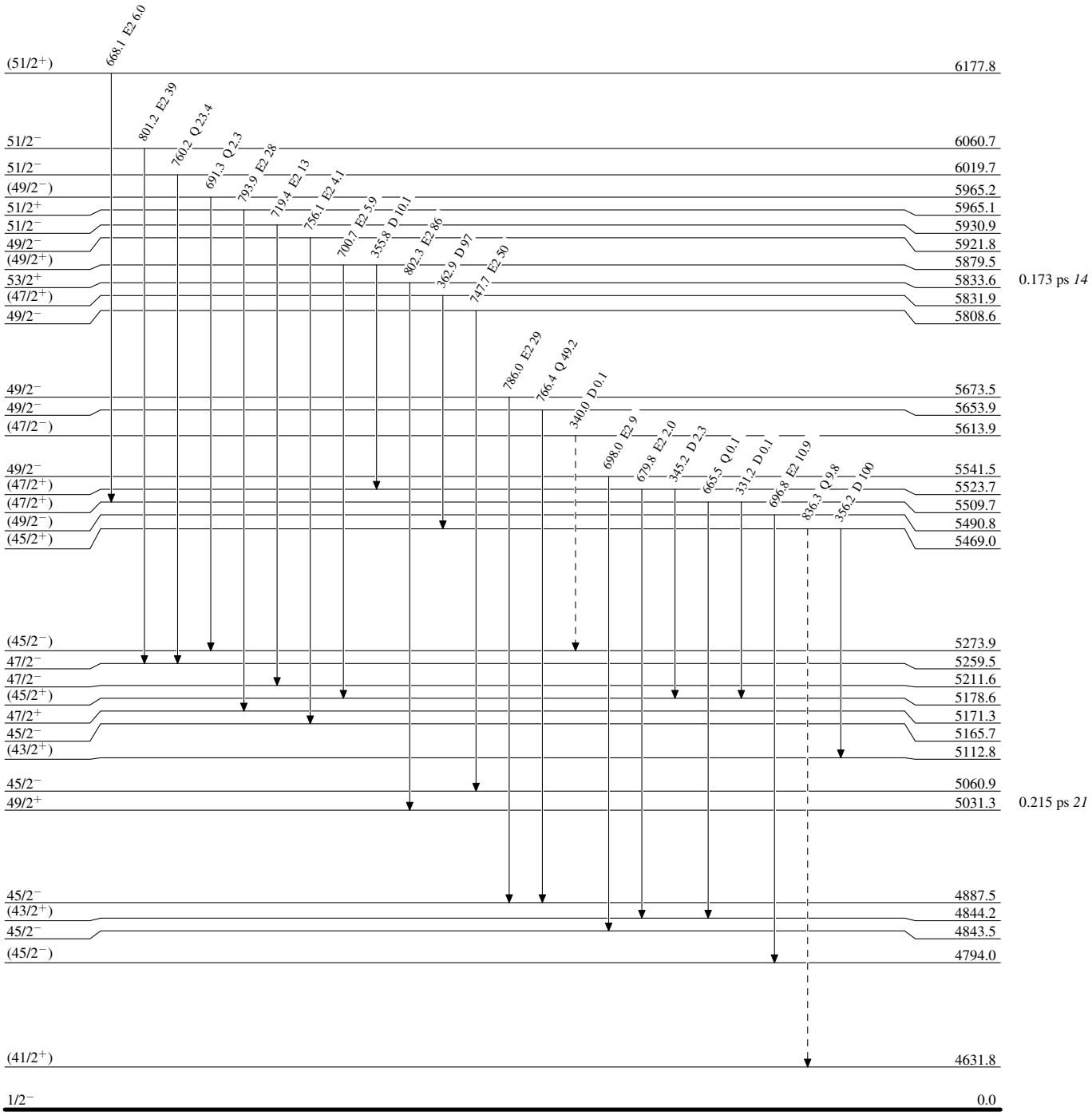
$^{181}_{76}Os_{105}$

(HI,xnγ) 2003Cu03

Level Scheme (continued)

Intensities: Relative I_γ

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



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

(HI,xnγ) 2003Cu03

Level Scheme (continued)

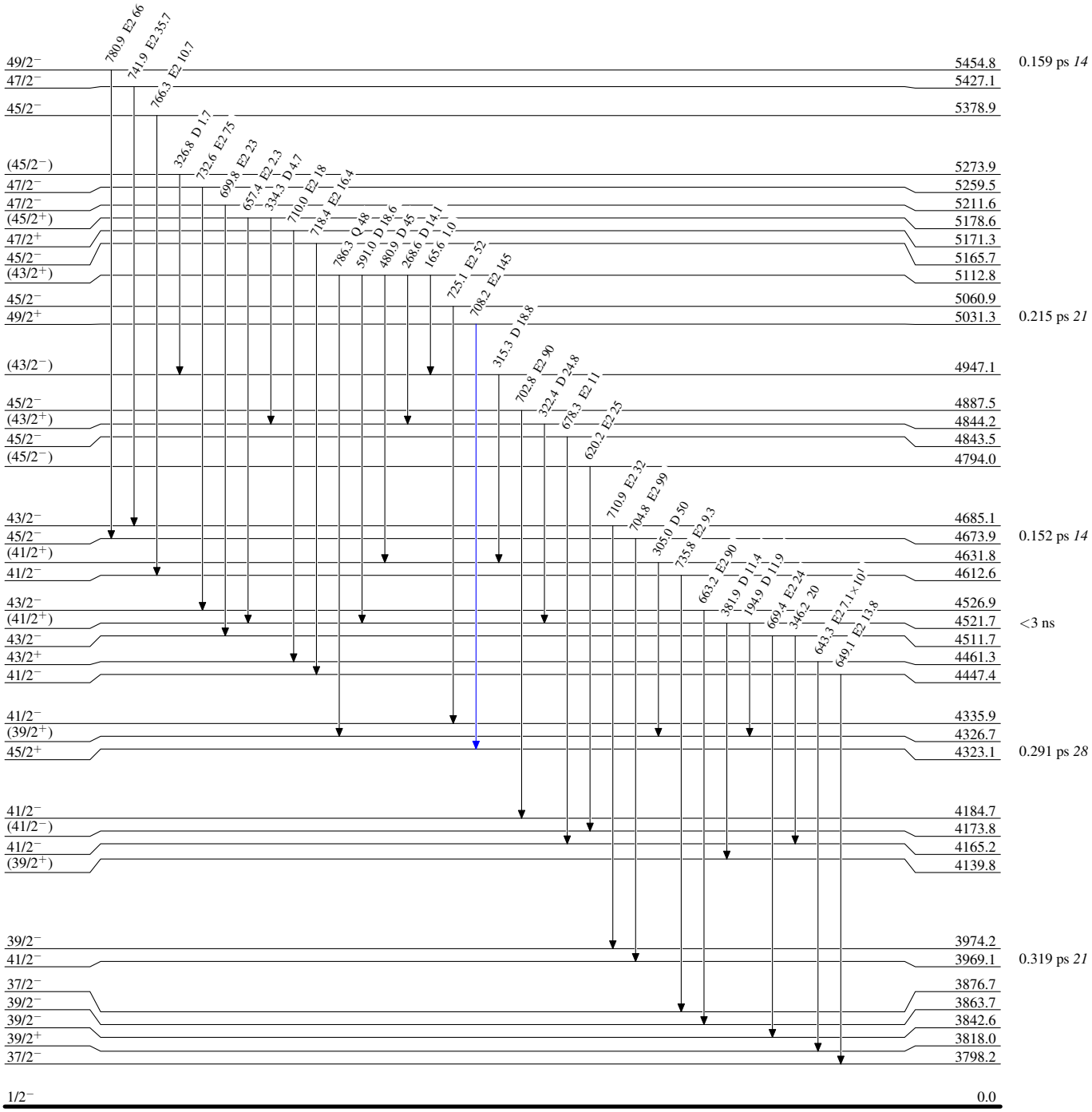
Intensities: Relative I_γ

Legend

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

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

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

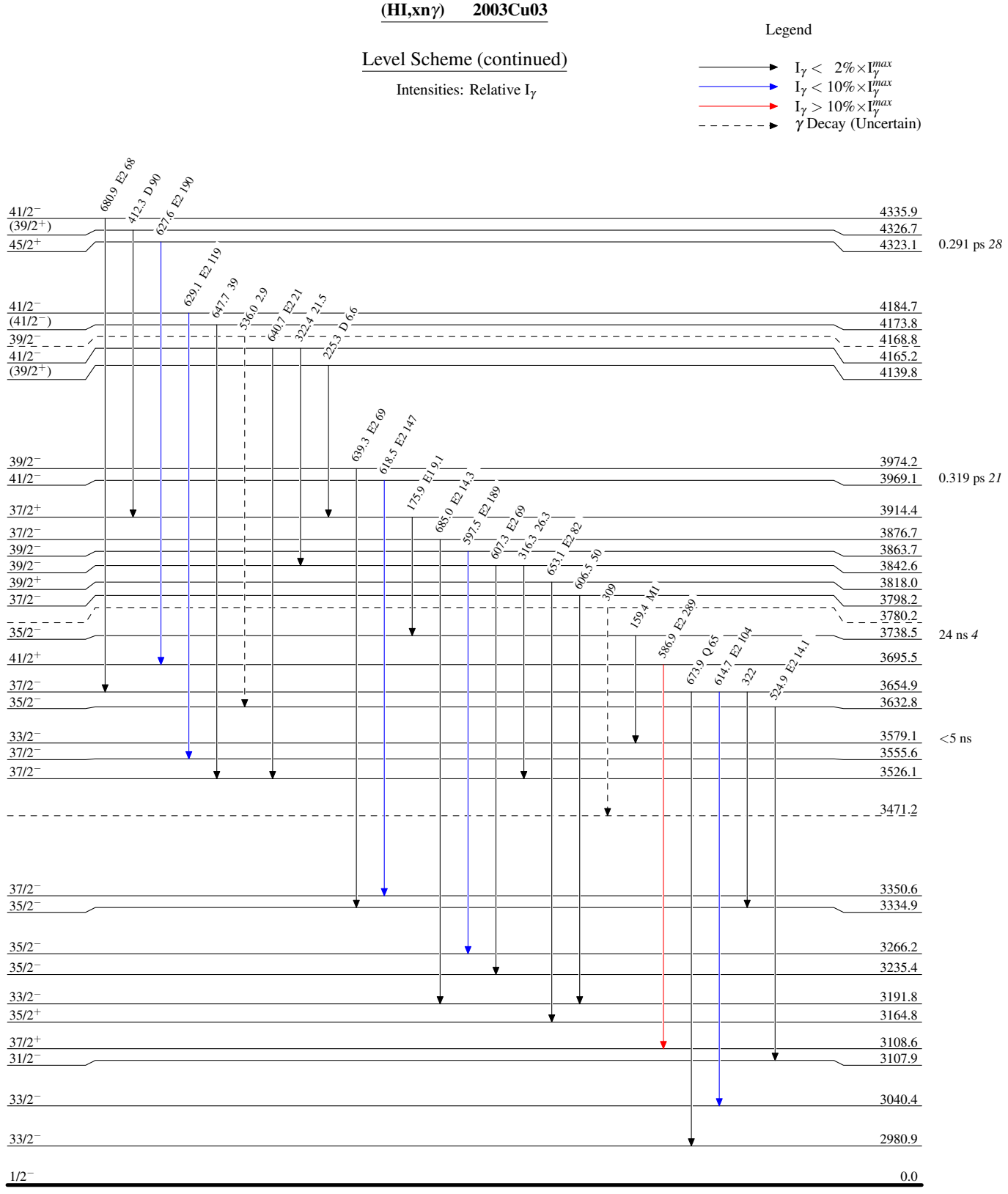


$^{181}_{76}Os_{105}$

(HI,xnγ) 2003Cu03

Level Scheme (continued)

Intensities: Relative I_γ



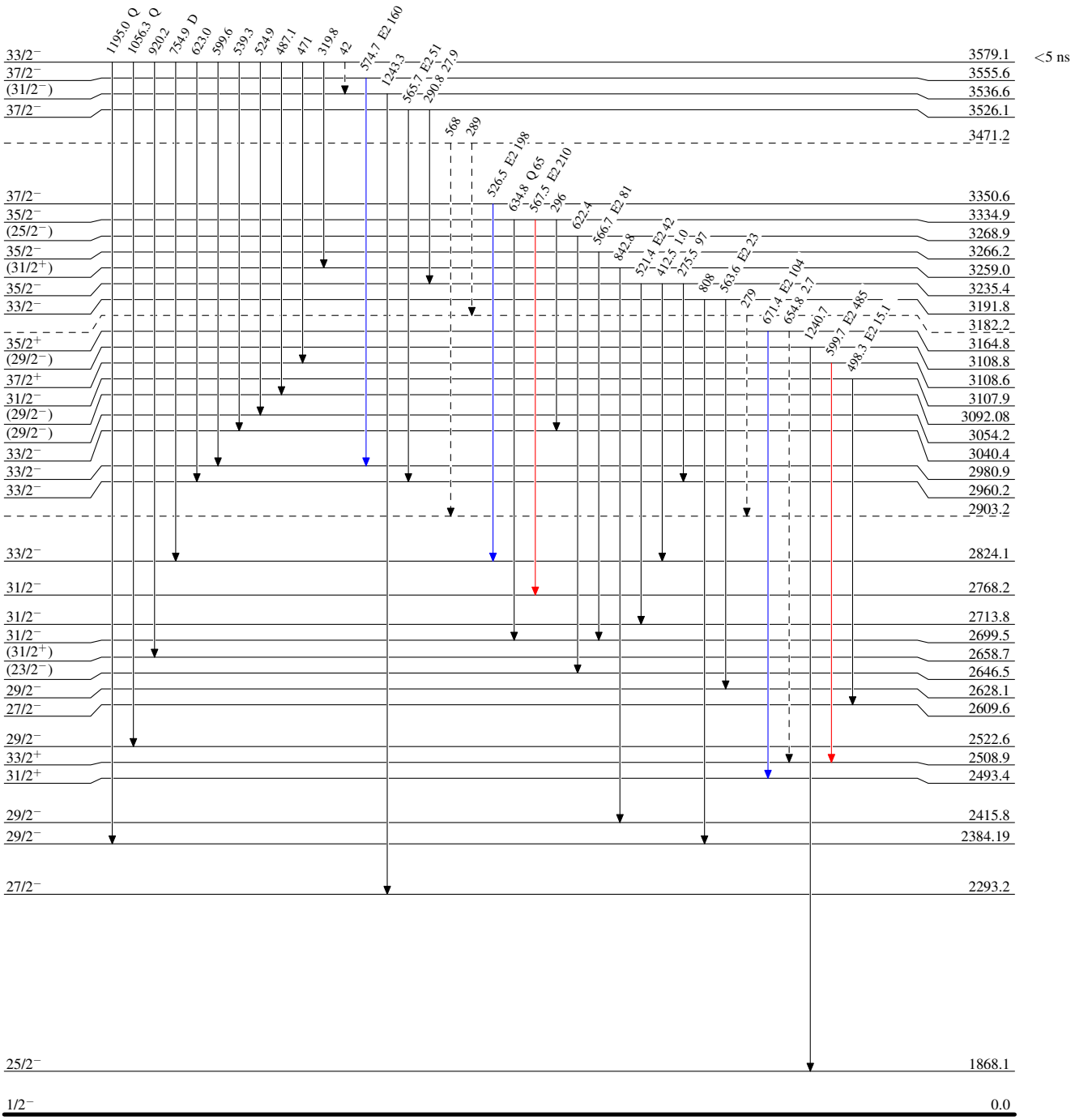
$^{181}_{76}Os_{105}$

(HI,xnγ) 2003Cu03

Level Scheme (continued)

Intensities: Relative I_γ

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



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

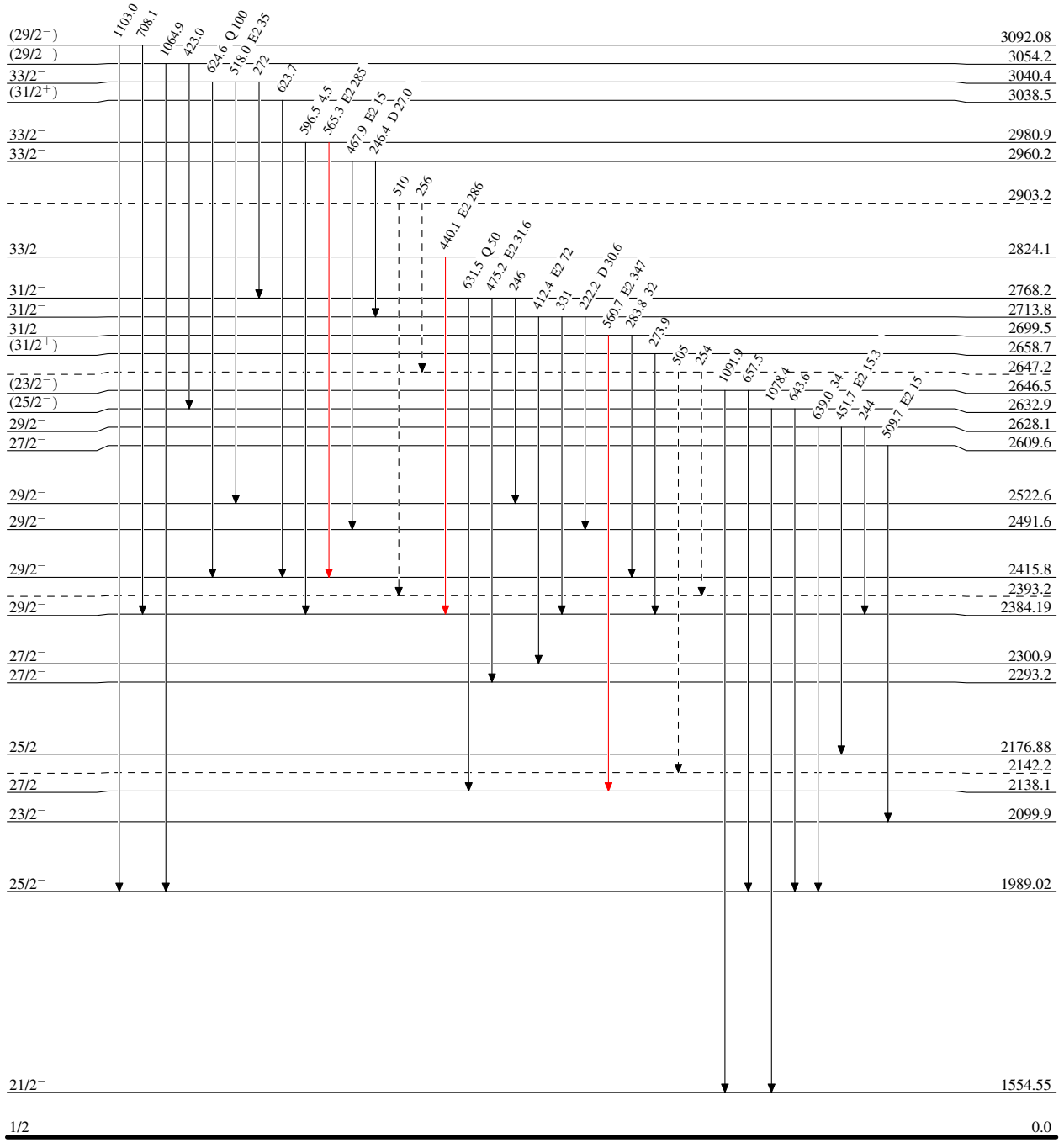
(HI,xnγ) 2003Cu03

Level Scheme (continued)

Intensities: Relative I_γ

Legend

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



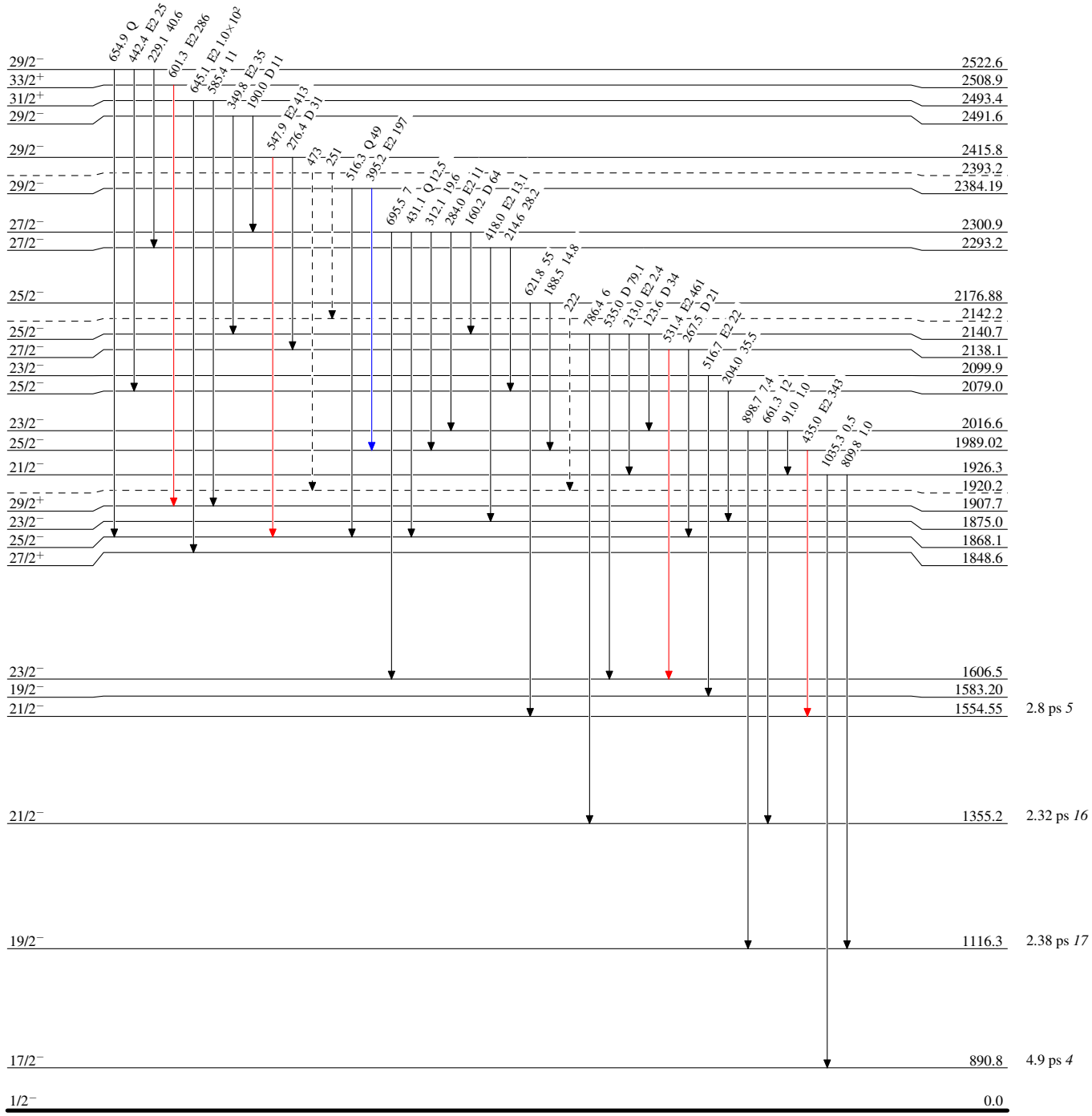
$^{181}_{76}Os_{105}$

(HI,xnγ) 2003Cu03

Level Scheme (continued)

Intensities: Relative I_γ

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



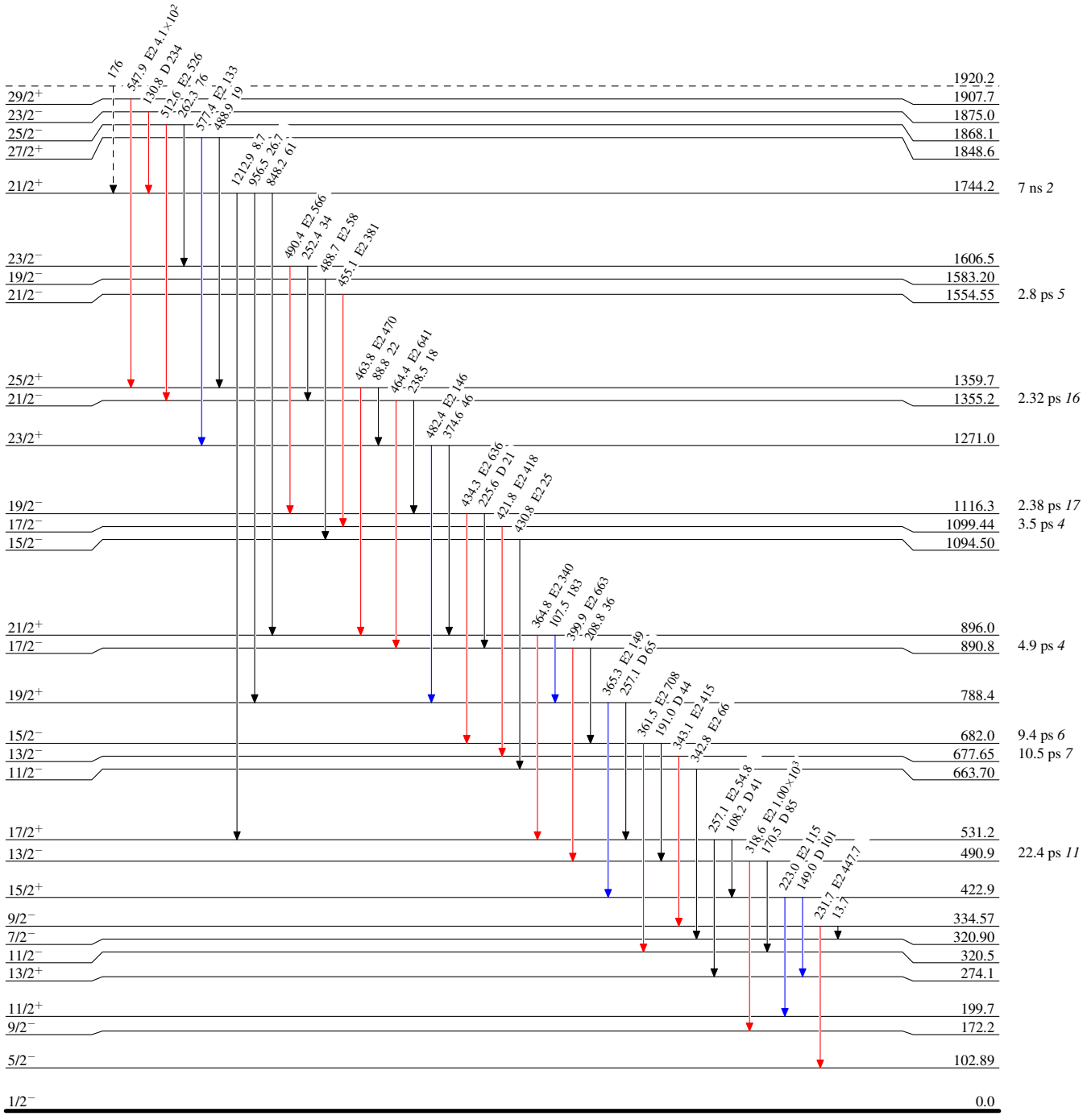
$^{181}_{76}Os_{105}$

(HI,xnγ) 2003Cu03

Level Scheme (continued)

Intensities: Relative I_γ

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

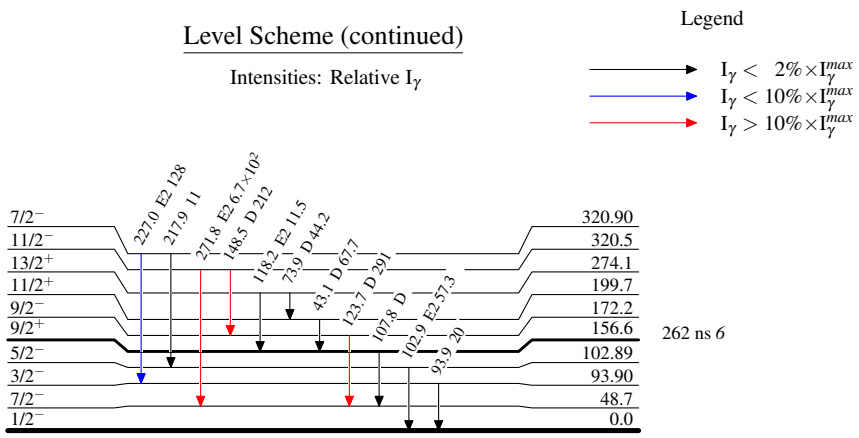


$^{181}_{76}Os_{105}$

(HI,xnγ) 2003Cu03

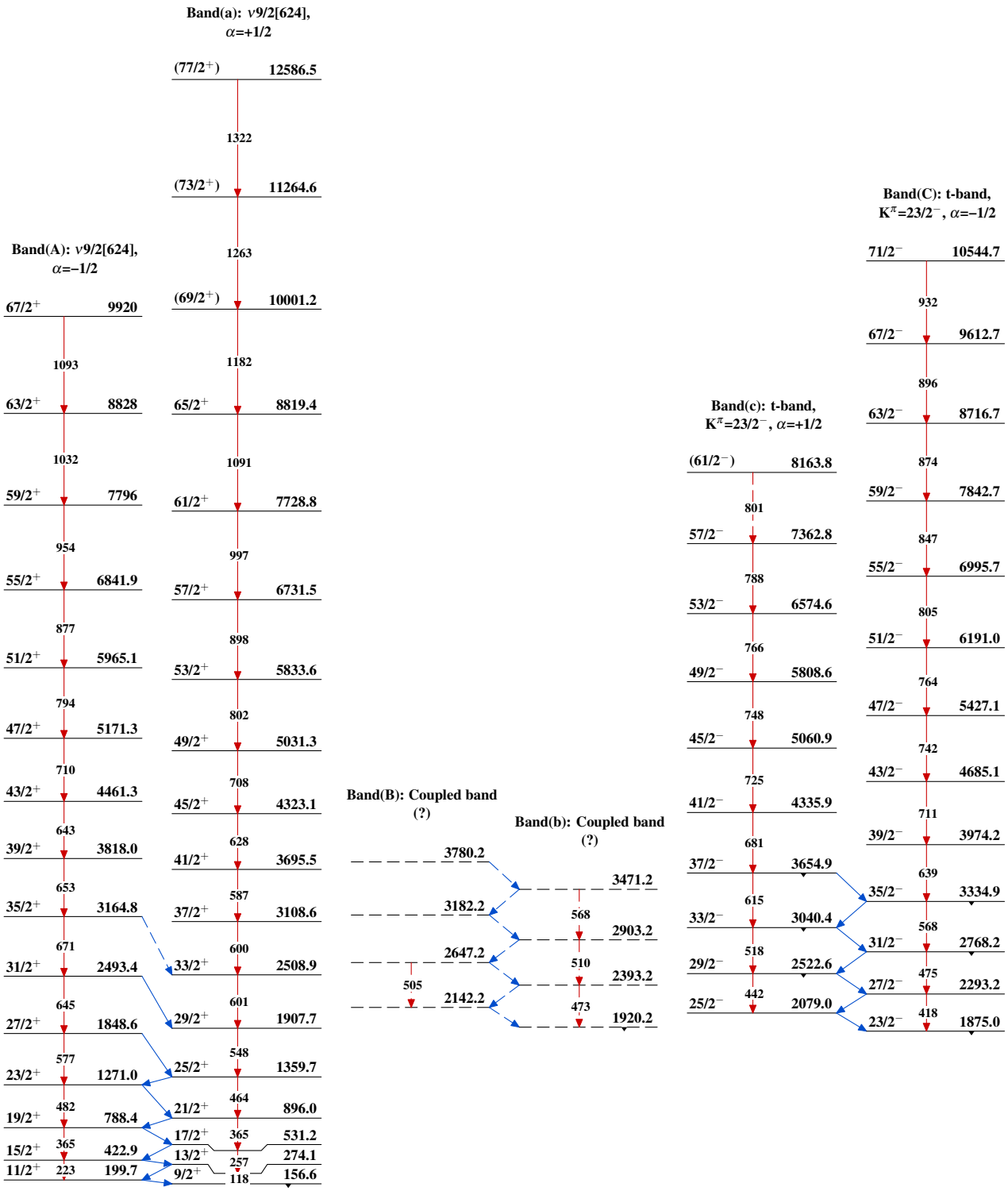
Level Scheme (continued)

Intensities: Relative I_γ



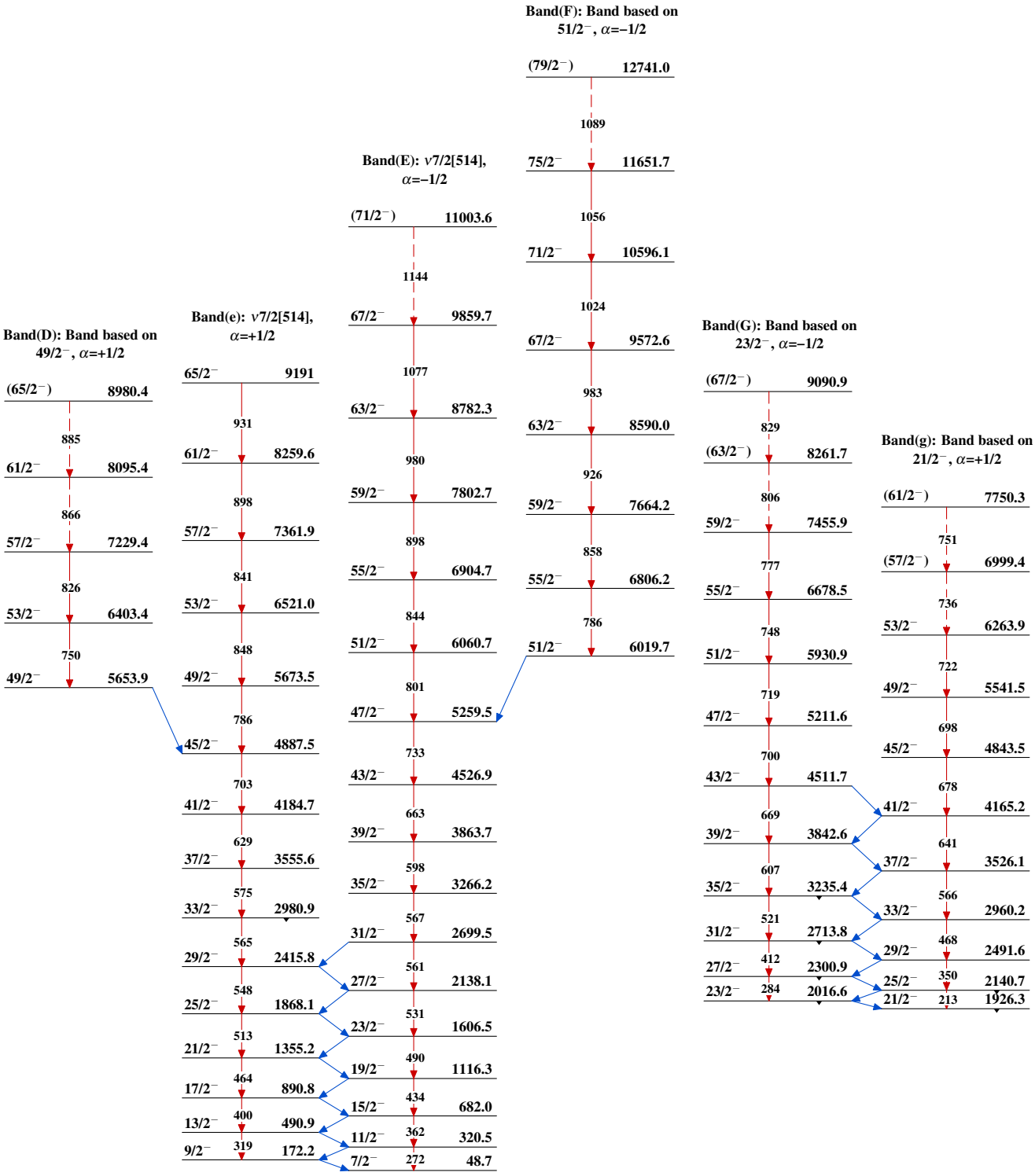
$^{181}_{76}Os_{105}$

(HI,xnγ) 2003Cu03



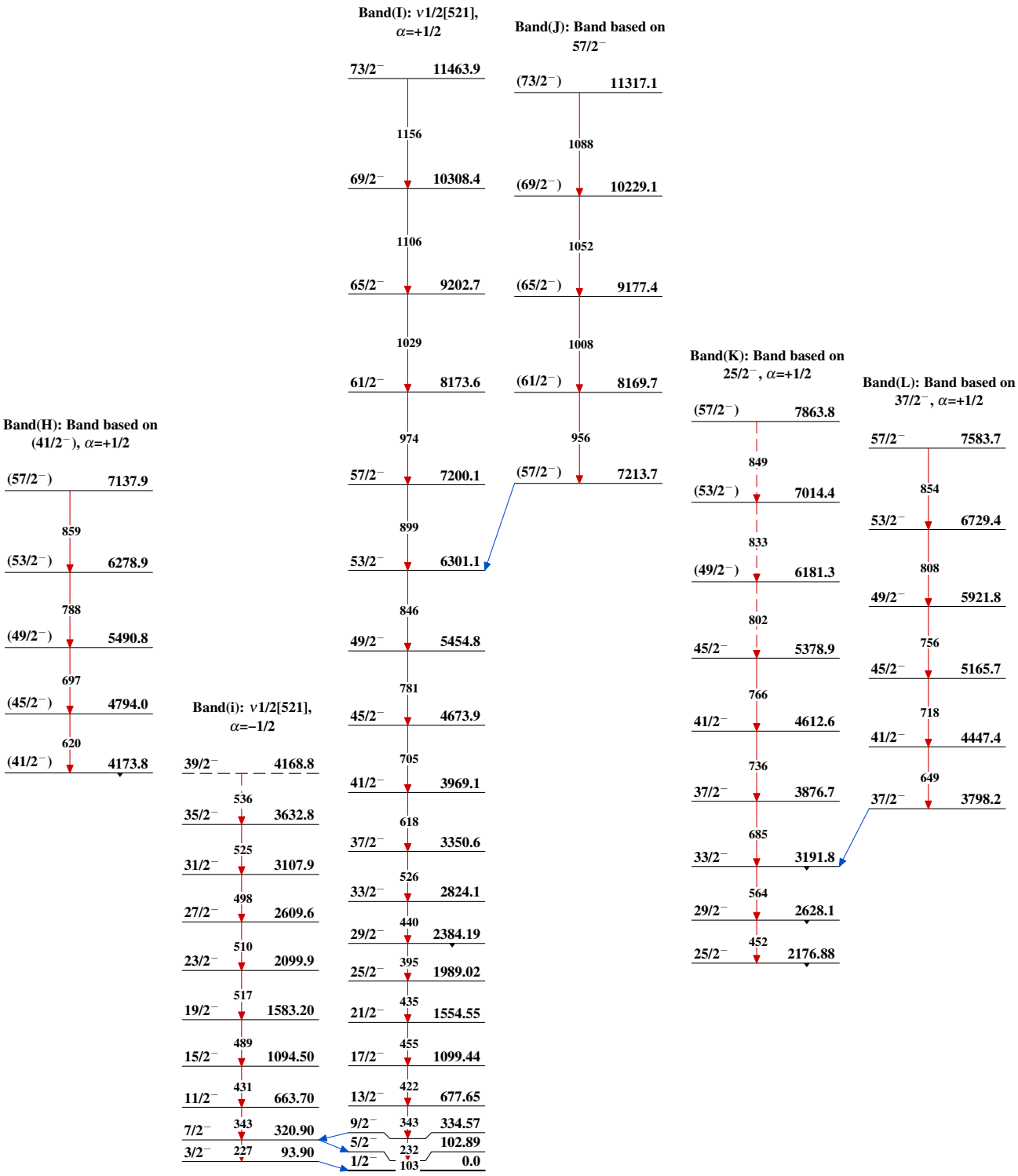
$^{181}_{76}Os_{105}$

(HI,xnγ) 2003Cu03 (continued)



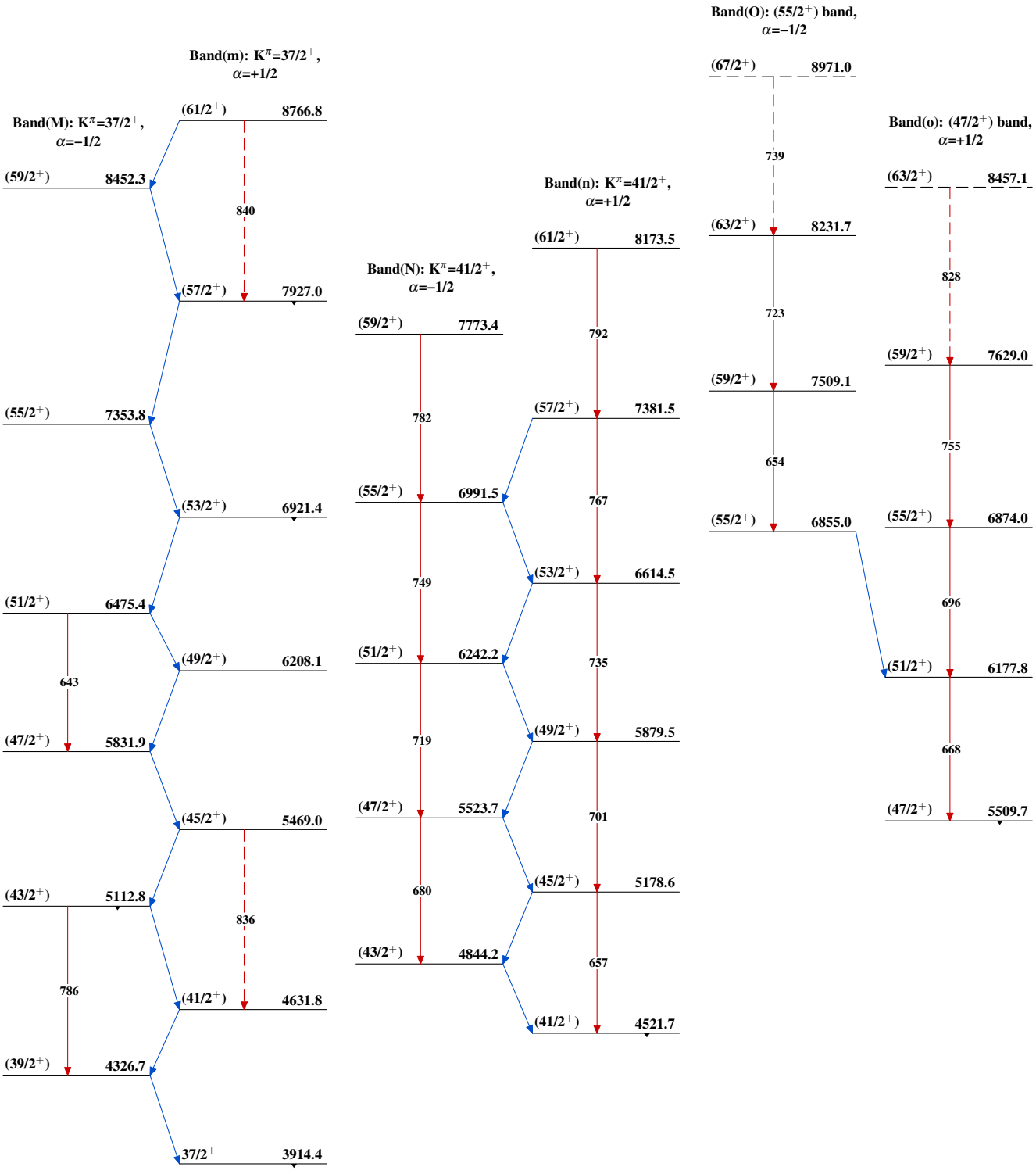
$^{181}_{76}Os_{105}$

(HI,xnγ) 2003Cu03 (continued)

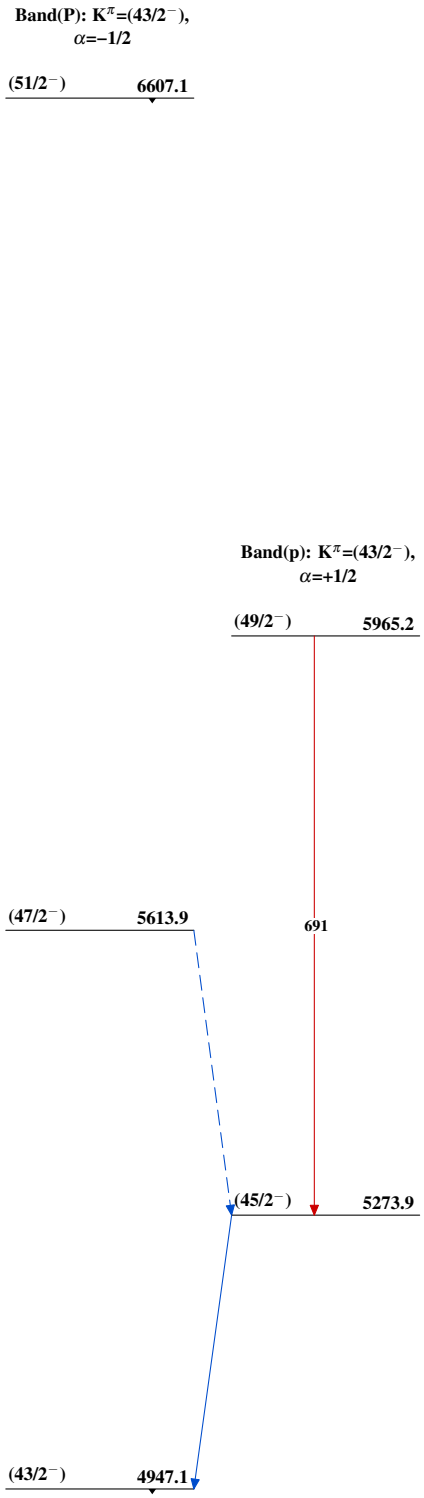


$^{181}_{76}Os_{105}$

(HI,xnγ) 2003Cu03 (continued)



(HI,xnγ) 2003Cu03 (continued)



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