^{150}Nd(^{34}S,5nγ) 1993Ba45,1994Ba27

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 110, 265 (2009)	15-Nov-2008

1993Ba45: E(^{34}S)=158 MeV; 12 Compton suppressed Ge detectors (OSIRIS array) with sum-energy and γ-multiplicity filter; measured Eγ, Iγ, $\gamma\gamma$ coin, ^{34}S-γ(t), DCO ratios (θ=30° (or 150°) and 90°, Q transition In gate).
1994Ba27: further analysis of the data of 1993Ba45 for the (ν $i_{13/2}$) band.

^{179}Os Levels

E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡
0.[i]	1/2−	1194.5[f] 8	19/2−	2818.5[h] 14	(31/2−)	4609.7[b] 13	(43/2−)
86.5[j] 5	3/2−	1315.9[h] 11	(19/2−)	2873.1[b] 9	(31/2−)	4721.8[a] 11	(43/2)
100.2[i] 5	5/2−	1318.3[d] 8	23/2+	2903.1[&] 9	(33/2)	4930.7[e] 12	(45/2−)
115.4[@g] 8	(5/2−)[@]	1418.0[e] 8	21/2−	2999.3[e] 10	33/2−	5099.3[h] 17	(47/2−)
145.4[f] 5	7/2−	1427.8[c] 7	25/2+	3047.2[d] 9	35/2+	5147.7[d] 12	(47/2+)
210.8[h] 9	(7/2−)	1448.7[j] 9	19/2−	3053.7[g] 14	(33/2−)	5178.1?[i]	(45/2−)
242.9[c] 5	9/2+	1503.5[i] 10	21/2−	3072.8[j] 13	31/2−	5270.2[f] 12	47/2−
273.1[e] 6	9/2−	1566.7[g] 11	(21/2−)	3152.6[i] 13	33/2−	5293.6[c] 13	(49/2+)
286.7[d] 9	11/2+	1654.8[f] 8	23/2−	3261.1[c] 9	37/2+	5307.1[b] 14	(47/2−)
296.5[j] 5	7/2−	1824.9[&] 8	(25/2)	3273.9[h] 14	(35/2−)	5493.2[a] 12	(47/2)
320.3[i] 6	9/2−	1833.5[h] 12	(23/2−)	3301.4[f] 10	35/2−	5604.7[e] 13	(49/2−)
336.5[g] 9	(9/2−)	1852.2[d] 8	27/2+	3380.0[b] 11	(35/2−)	5832.7[h] 18	(51/2−)
345.1[c] 7	13/2+	1899.8[e] 8	25/2−	3483.1?[&]	(37/2)	5943.8[d] 13	(51/2+)
424.5[f] 6	11/2−	1948.8[j] 10	23/2−	3514.7?[g]	(37/2−)	5979.3[f] 13	(51/2−)
487.2[h] 9	(11/2−)	1986.3[c] 7	29/2+	3617.4[e] 10	37/2−	6071.0[b] 15	(51/2−)
500.3[d] 8	15/2+	2011.7[i] 11	25/2−	3691.8?[j]	(35/2−)	6120.3[c] 14	(53/2+)
589.7[c] 7	17/2+	2106.5[g] 12	(25/2−)	3701.1[d] 9	39/2+	6307.8[a] 13	(51/2)
594.3[e] 7	13/2−	2144.8[b] 9	(23/2−)	3785.3[i] 14	37/2−	6321.7?[e]	(53/2−)
607.5[j] 6	11/2−	2160.0[f] 9	27/2−	3807.9[h] 15	(39/2−)	6618.9[h] 19	(55/2−)
641.6[i] 7	13/2−	2332.3[&] 8	(29/2)	3922.4[c] 10	41/2+	6738.3?[f]	(55/2−)
662.9[g] 10	(13/2−)	2376.9[h] 13	(27/2−)	3933.1[f] 10	39/2−	6784.9[d] 14	(55/2+)
781.5[f] 7	15/2−	2418.4[e] 9	29/2−	3964.8[b] 12	(39/2−)	6921.0[b]	(55/2−)
856.3[d] 8	19/2+	2431.9[d] 8	31/2+	4023.3[a] 10	(39/2)[#]	7039.3[c]	(57/2+)
860.4[h] 10	(15/2−)	2471.7[b] 9	(27/2−)	4261.1[e] 11	41/2−	7158.8[a] 14	(55/2)
955.5[c] 7	21/2+	2489.1[j] 11	27/2−	4399.9[d] 11	(43/2+)	7848.0?[b]	(59/2−)
981.2[e] 7	17/2−	2564.6[i] 13	29/2−	4420.7[h] 16	(43/2−)	8049.0?[a] 15	(59/2)
997.3[j] 7	15/2−	2605.5[c] 8	33/2+	4465.1[i] 15	(41/2−)	8956.5?[a] 15	(63/2)
1042.1[i] 9	17/2−	2630.2[g] 13	(29/2−)	4566.8[c] 11	45/2+		
1078.3[g] 10	(17/2−)	2709.5[f] 9	31/2−	4593.7[f] 11	43/2−		

† From least-squares fit to Eγ.
‡ Authors′ values, based on deduced band structure, transition multipolarity, branching, g_K and B(M1)/B(E2) ratios for intraband $\Delta J=1$ and $\Delta J=2$ transitions from the same level.
# 39/2 ± 1 based on observed deexcitation to J=37/2 only (1993Ba45).
@ From Adopted Levels; 1993Ba45 observe no transitions connecting 5/2[512] band members with other bands.
& Band(A): collective band, α=+1/2. J uncertain by 1 unit (1994Ba27).
a Band(B): collective band, α=−1/2. J uncertain by 1 unit (1994Ba27); adopted values are, indeed, one unit higher than shown here. Upper two levels (E=8049 and 8957) not adopted.
b Band(C): 3-quasiparticle band, α=−1/2. Possible Configuration=((π 5/2[512])⊗(ν $i^2_{13/2}$)) (1994BA27).

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^{150}Nd(^{34}S,5nγ) 1993Ba45,1994Ba27 (continued)

^{179}Os Levels (continued)

[c] Band(D): 9/2[624] band, α=+1/2. This favored sequence is crossed by 3-quasiparticle structure At higher rotational frequency than is the unfavored α=−1/2 sequence, suggesting presence of hexadecapole deformation; additionally, the signature dependence of intraband B(M1)/B(E2) values suggests triaxial shape ($\gamma \leq -10°$) (1994Ba27).
[d] Band(d): 9/2[624] band, α=−1/2. Please see comment on signature partner of this band.
[e] Band(E): 7/2[514] band, α=+1/2. Strongly-coupled band; No signature splitting. alignment gain of 12$\hbar$; band crossing At $\hbar\omega$=0.33 MeV.
[f] Band(e): 7/2[514] band, α=−1/2. See comment on signature partner.
[g] Band(F): 5/2[512] band, α=+1/2. Weakly populated band, As is also the case In isotones ^{177}W and ^{181}Pt. Orbital assignment supported by deduced B(M1)/B(E2) ratios and g_K factors (1993Ba45). band crossing At $\hbar\omega$=0.24 MeV.
[h] Band(f): 5/2[512] band, α=−1/2. See comment on signature partner of this band.
[i] Band(G): 1/2[521] band, α=+1/2. Decoupling parameter and energy staggering of the α=+1/2 and α=−1/2 sequences, along with intraband B(M1)/B(E2) ratios are typical of known 1/2[521] bands (1993Ba45).
[j] Band(g): 1/2[521] band, α=−1/2. See comment on signature partner sequence.

γ(^{179}Os)

E_γ [†]	I_γ [‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ	Comments
23.8		320.3	9/2$^-$	296.5	7/2$^-$			Transition inferred from $\gamma\gamma$ coin relations; Eγ from level energy difference. Iγ(220)/Iγ(24)=750 *150*.
34.1		641.6	13/2$^-$	607.5	11/2$^-$			Transition inferred from $\gamma\gamma$ coin relations; Eγ from level energy difference. Iγ(321)/Iγ(34)=400 *300*.
(43.8)		286.7	11/2$^+$	242.9	9/2$^+$			γ expected but not observed; Eγ from level energy difference.
(45.2 *1*)		145.4	7/2$^-$	100.2	5/2$^-$			γ expected but not observed; Eγ from Adopted Gammas.
(58.40 *15*)		345.1	13/2$^+$	286.7	11/2$^+$			γ expected but not observed; Eγ from Adopted Gammas.
86.5 *5*	2 *1*	86.5	3/2$^-$	0.	1/2$^-$			
89.4 *5*	12 *2*	589.7	17/2$^+$	500.3	15/2$^+$			Iγ(245)/Iγ(89)=9 *1*.
95.4 *5*	4 *1*	210.8	(7/2$^-$)	115.4	(5/2$^-$)			
(97.5 *1*)		242.9	9/2$^+$	145.4	7/2$^-$			γ expected but not observed; Eγ from Adopted Gammas.
99.1 *5*	3 *1*	955.5	21/2$^+$	856.3	19/2$^+$			Iγ(366)/Iγ(99)=29 *2*.
100.2 *5*	3 *1*	100.2	5/2$^-$	0.	1/2$^-$			
102.2 *5*	6 *1*	345.1	13/2$^+$	242.9	9/2$^+$			Iγ(102)/Iγ(58)=0.19 *4*.
109.5 *5*	2 *1*	1427.8	25/2$^+$	1318.3	23/2$^+$			Iγ(472)/Iγ(110)=45 *8*.
125.8[@] *5*	6 *1*	336.5	(9/2$^-$)	210.8	(7/2$^-$)			
127.6 *5*	20 *4*	273.1	9/2$^-$	145.4	7/2$^-$	D+Q	*c*	Mult.: DCO ratio=2.6 *5*.
150.6 *5*	3.5 *10*	487.2	(11/2$^-$)	336.5	(9/2$^-$)	D+Q		Mult.: DCO ratio=3.5 *15*. Iγ(277)/Iγ(151)=1.4 *2*.
151.3 *5*	8 *1*	424.5	11/2$^-$	273.1	9/2$^-$	D+Q	*c*	Mult.: DCO ratio=2.5 *8*. Iγ(279)/Iγ(151)=3.4 *2*.
155.0 *5*	23 *1*	500.3	15/2$^+$	345.1	13/2$^+$	D+Q	*d*	Mult.: DCO ratio=3.0 *5*. Iγ(214)/Iγ(155)=1.1 *1*.
169.7 *5*	5 *1*	594.3	13/2$^-$	424.5	11/2$^-$	D+Q	*c*	Mult.: DCO ratio=2.7 *8*. Iγ(321)/Iγ(170)=7.4 *5*.
175.6 *5*	3.5 *10*	662.9	(13/2$^-$)	487.2	(11/2$^-$)	D+Q	−0.32 *18*	Mult.,δ: from DCO ratio=2.3 *6*. Iγ(326)/Iγ(176)=3.2 *5*.
187.1 *5*	6 *1*	781.5	15/2$^-$	594.3	13/2$^-$	D+Q	*c*	Mult.: DCO ratio=2.6 *10*. Iγ(357)/Iγ(187)=7.2 *5*.
196.3 *5*	1.5 *5*	296.5	7/2$^-$	100.2	5/2$^-$			Iγ(210)/Iγ(196)=6.5 *15*.
197.5 *5*	2.5 *10*	860.4	(15/2$^-$)	662.9	(13/2$^-$)			Iγ(373)/Iγ(198)=4.1 *10*.

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^{150}Nd(^{34}S,5nγ) 1993Ba45,1994Ba27 (continued)

$\gamma(^{179}Os)$ (continued)

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	Comments
199.6 *5*	6 *1*	981.2	17/2$^-$	781.5	15/2$^-$	D+Q	Mult.: DCO ratio=3.3 *12*. Iγ(387)/Iγ(200)=9.4 *7*.
210.1 *5*	7 *1*	296.5	7/2$^-$	86.5	3/2$^-$		Mult.: DCO ratio=1.25 *20*.
213.2 *5*	5 *1*	1194.5	19/2$^-$	981.2	17/2$^-$	D+Q	Mult.: DCO ratio=2.4 *10*. Iγ(413)/Iγ(213)=7.2 *8*.
213.6 *5*	24 *1*	500.3	15/2$^+$	286.7	11/2$^+$	(Q)	Mult.: DCO ratio=0.8 *1*.
217.9 *5*	3 *1*	1078.3	(17/2$^-$)	860.4	(15/2$^-$)		Iγ(415)/Iγ(218)=6.5 *12*.
220.1 *5*	14 *1*	320.3	9/2$^-$	100.2	5/2$^-$	Q	Mult.: DCO ratio=0.95 *10*.
221.1 *5*	3 *1*	336.5	(9/2$^-$)	115.4	(5/2$^-$)		Iγ(221)/Iγ(126)=0.70 *20*.
223.5 *5*	5 *1*	1418.0	21/2$^-$	1194.5	19/2$^-$	(D+Q)	Mult.: DCO ratio=1.5 *5*. Iγ(437)/Iγ(224)=8.8 *6*.
236.9 *5*	3 *1*	1654.8	23/2$^-$	1418.0	21/2$^-$	(D+Q)	Mult.: DCO ratio=2.2 *10*. Iγ(460)/Iγ(237)=8.6 *11*.
237.6 *5*	2 *1*	1315.9	(19/2$^-$)	1078.3	(17/2$^-$)		Iγ(456)/Iγ(238)=8.5 *35*.
244.6 *1*	58 *2*	589.7	17/2$^+$	345.1	13/2$^+$	Q	Mult.: DCO ratio=1.0 *1*.
245.0 *5*	5 *1*	1899.8	25/2$^-$	1654.8	23/2$^-$	(D+Q)	Mult.: DCO ratio=1.5 *5*. Iγ(482)/Iγ(245)=7.4 *6*.
245.0 *5*	≤1	2144.8	(23/2$^-$)	1899.8	25/2$^-$		Mult.: DCO ratio=1.3 *3*; consistent with Q or D+Q.
250.8 *5*	2 *1*	1566.7	(21/2$^-$)	1315.9	(19/2$^-$)		Iγ(488)/Iγ(251)=10 *3*.
258.4[@] *5*	3 *1*	2418.4	29/2$^-$	2160.0	27/2$^-$	(D+Q)	Mult.: DCO ratio=2.2 *1*. Iγ(519)/Iγ(258)=9.4 *17*.
260.3[@] *5*	3 *1*	2160.0	27/2$^-$	1899.8	25/2$^-$	(D+Q)	Mult.: DCO ratio=1.7 *6*. Iγ(505)/Iγ(260)=8.5 *12*.
266.6 *5*	20 *1*	856.3	19/2$^+$	589.7	17/2$^+$	D+Q	Mult.: DCO ratio=3.6 *1*. Iγ(356)/Iγ(267)=2.9 *2*.
276.5 *5*	5.5 *10*	487.2	(11/2$^-$)	210.8	(7/2$^-$)	Q	Mult.: DCO ratio=0.9 *2*.
279.2 *5*	24 *2*	424.5	11/2$^-$	145.4	7/2$^-$	Q	DCO ratio=1.0 *1*.
287.1 *5*	1.0 *3*	607.5	11/2$^-$	320.3	9/2$^-$		Iγ(311)/Iγ(287)=8 *2*.
289.9[@] *5*	1.5 *5*	2999.3	33/2$^-$	2709.5	31/2$^-$	(D+Q)	Mult.: DCO ratio=1.8 *8*. I(581γ)/I(290γ)=12 *4*.
291.3[@] *5*	2 *1*	2709.5	31/2$^-$	2418.4	29/2$^-$	(D+Q)	Mult.: DCO ratio=2 *1*. Iγ(549)/Iγ(291)=9.1 *5*.
297.6 *5*	5 *1*	2903.1	(33/2)	2605.5	33/2$^+$		
302.1 *5*	1.5 *5*	3301.4	35/2$^-$	2999.3	33/2$^-$	(D+Q)	Mult.: DCO ratio=1.5 *5*. Iγ(592)/Iγ(302)=10 *3*.
311.0 *5*	8 *1*	607.5	11/2$^-$	296.5	7/2$^-$	Q	Mult.: DCO ratio=1.1 *2*.
311.7 *5*	2 *1*	2471.7	(27/2$^-$)	2160.0	27/2$^-$		Mult.: DCO ratio=1.0 *3*.
316.0[@] *5*	0.8 *4*	3617.4	37/2$^-$	3301.4	35/2$^-$		Iγ(618)/Iγ(316)=8 *4*.
316[@]	2 *1*	3933.1	39/2$^-$	3617.4	37/2$^-$	(D+Q)	Mult.: DCO ratio=1.4 *6*. Iγ(632)/Iγ(316)=12 *6*.
321.3 *5*	38 *3*	594.3	13/2$^-$	273.1	9/2$^-$	Q	Mult.: DCO ratio=0.95 *10*.
321.3 *5*	22 *2*	641.6	13/2$^-$	320.3	9/2$^-$	Q	Mult.: DCO ratio=1.1 *1*.
326.4 *5*	11 *2*	662.9	(13/2$^-$)	336.5	(9/2$^-$)	(Q)	Mult.: DCO ratio=0.8 *2*.
326.9 *5*	2 *1*	2471.7	(27/2$^-$)	2144.8	(23/2$^-$)		Mult.: DCO ratio=1.1 *4*.
328.2 *5*	1.0 *5*	4261.1	41/2$^-$	3933.1	39/2$^-$		Iγ(644)/Iγ(328)=5.2 *23*.
332.7 *5*	0.9 *4*	4593.7	43/2$^-$	4261.1	41/2$^-$		Iγ(661)/Iγ(333)=6.5 *25*.
346.0 *5*	5 *1*	2332.3	(29/2)	1986.3	29/2$^+$		
355.7[@] *5*	2 *1*	997.3	15/2$^-$	641.6	13/2$^-$		Iγ(390)/Iγ(356)=3 *2*.
356.0 *1*	63 *2*	856.3	19/2$^+$	500.3	15/2$^+$	Q	Mult.: DCO ratio=1.1 *1*.
357.0 *5*	43 *3*	781.5	15/2$^-$	424.5	11/2$^-$	Q	Mult.: DCO ratio=1.1 *1*.
362.8 *5*	9 *1*	1318.3	23/2$^+$	955.5	21/2$^+$	D+Q	Mult.: DCO ratio=4.5 *20*. Iγ(462)/Iγ(363)=4.9 *5*.
365.8 *1*	100 *2*	955.5	21/2$^+$	589.7	17/2$^+$	Q	Mult.: DCO ratio=1.0 *1*.
373.2 *5*	10 *1*	860.4	(15/2$^-$)	487.2	(11/2$^-$)	Q	Mult.: DCO ratio=0.9 *1*.

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^{150}Nd(^{34}S,5nγ) 1993Ba45,1994Ba27 (continued)

$\gamma(^{179}Os)$ (continued)

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	Comments
386.8 *1*	52 *3*	981.2	17/2$^-$	594.3	13/2$^-$	Q	Mult.: DCO ratio=1.0 *1*.
389.7 *5*	8 *1*	997.3	15/2$^-$	607.5	11/2$^-$	Q	Mult.: DCO ratio=1.0 *2*.
397.1 *5*	4 *1*	1824.9	(25/2)	1427.8	25/2$^+$		
400.5 *5*	24 *2*	1042.1	17/2$^-$	641.6	13/2$^-$	Q	Mult.: DCO ratio=1.0 *1*.
401.4 *5*	6 *1*	2873.1	(31/2$^-$)	2471.7	(27/2$^-$)	Q	Mult.: DCO ratio=0.95 *20*.
413.1 *5*	35 *2*	1194.5	19/2$^-$	781.5	15/2$^-$	Q	Mult.: DCO ratio=1.1 *1*.
415.4 *5*	20 *2*	1078.3	(17/2$^-$)	662.9	(13/2$^-$)	Q	Mult.: DCO ratio=0.9 *2*.
423.5 *5*	3 *1*	3053.7	(33/2$^-$)	2630.2	(29/2$^-$)		Mult.: DCO ratio=1.3 *5*.
424.3 *5*	6 *1*	1852.2	27/2$^+$	1427.8	25/2$^+$	D+Q	Mult.: DCO ratio=2.8 *10*. Iγ(534)/Iγ(424)=6 *1*.
436.9 *5*	47 *3*	1418.0	21/2$^-$	981.2	17/2$^-$	Q	Mult.: DCO ratio=1.1 *1*.
440.0[@] *5*	2 *1*	3701.1	39/2$^+$	3261.1	37/2$^+$	(D+Q)	Mult.: DCO ratio=1.2 *5*. Iγ(654)/Iγ(440)=5 *2*.
441.6 *5*	6.0 *15*	2818.5	(31/2$^-$)	2376.9	(27/2$^-$)		Mult.: DCO ratio=1.0 *3*.
441.8[@] *5*	4 *1*	3047.2	35/2$^+$	2605.5	33/2$^+$	(D+Q)	Mult.: DCO ratio=2.6 *25*. Iγ(615)/Iγ(442)=5.5 *1*.
445.6 *5*	5 *1*	2431.9	31/2$^+$	1986.3	29/2$^+$	D+Q	Mult.: DCO ratio=3.8 *22*. Iγ(580)/Iγ(446)=5 *1*.
451.4 *5*	7 *1*	1448.7	19/2$^-$	997.3	15/2$^-$	Q	Mult.: DCO ratio=1.0 *2*.
454.8 *5*	7 *1*	2873.1	(31/2$^-$)	2418.4	29/2$^-$		Mult.,δ: DCO ratio=0.8 *2*. Consistent with +0.4≤δ(D,Q)≤+2.9 if ΔJ=1 or −0.3≤δ(D,Q)≤+0.5 if ΔJ=0 (1993Ba45); also consistent with ΔJ=2 implied by Adopted Levels.
455.4 *5*		3273.9	(35/2$^-$)	2818.5	(31/2$^-$)		
455.6 *5*	17 *11*	1315.9	(19/2$^-$)	860.4	(15/2$^-$)	Q	Mult.: DCO ratio=1.15 *20*.
460.2 *5*	23 *2*	1654.8	23/2$^-$	1194.5	19/2$^-$	Q	Mult.: DCO ratio=1.05 *20*.
461[&e]		3514.7?	(37/2$^-$)	3053.7	(33/2$^-$)		
461.4 *5*	22 *2*	1503.5	21/2$^-$	1042.1	17/2$^-$	Q	Mult.: DCO ratio=1.2 *1*.
461.9 *5*	44 *2*	1318.3	23/2$^+$	856.3	19/2$^+$	Q	Mult.: DCO ratio=1.0 *1*.
472.3 *1*	85 *2*	1427.8	25/2$^+$	955.5	21/2$^+$	Q	Mult.: DCO ratio=1.05 *10*.
481.8 *5*	43 *3*	1899.8	25/2$^-$	1418.0	21/2$^-$	Q	Mult.: DCO ratio=1.1 *1*.
488.3 *5*	16 *2*	1566.7	(21/2$^-$)	1078.3	(17/2$^-$)	Q	Mult.: DCO ratio=1.0 *2*.
500.1 *5*	6 *1*	1948.8	23/2$^-$	1448.7	19/2$^-$	Q	Mult.: DCO ratio=1.2 *2*.
505.3 *5*	22 *2*	2160.0	27/2$^-$	1654.8	23/2$^-$	Q	Mult.: DCO ratio=1.05 *15*.
506.9 *5*	12 *2*	3380.0	(35/2$^-$)	2873.1	(31/2$^-$)	Q	Mult.: DCO ratio=1.0 *2*.
507.4 *5*	3 *1*	2332.3	(29/2)	1824.9	(25/2)		
508.2 *5*	19 *1*	2011.7	25/2$^-$	1503.5	21/2$^-$	Q	Mult.: DCO ratio=0.9 *2*.
517.6 *5*	14 *2*	1833.5	(23/2$^-$)	1315.9	(19/2$^-$)	(Q)	Mult.: DCO ratio=0.8 *2*.
518.6 *5*	31 *2*	2418.4	29/2$^-$	1899.8	25/2$^-$	Q	Mult.: DCO ratio=1.1 *2*.
523.7 *5*	8 *1*	2630.2	(29/2$^-$)	2106.5	(25/2$^-$)		Mult.: DCO ratio=0.8 *4*.
533.9 *5*	43 *2*	1852.2	27/2$^+$	1318.3	23/2$^+$	Q	Mult.: DCO ratio=1.05 *10*.
534.0 *5*	4.5 *20*	3807.9	(39/2$^-$)	3273.9	(35/2$^-$)	Q	Mult.: DCO ratio=0.9 *2*.
539.8 *5*	9.5 *20*	2106.5	(25/2$^-$)	1566.7	(21/2$^-$)	Q	Mult.: DCO ratio=1.1 *2*.
540.3 *5*	5 *1*	2489.1	27/2$^-$	1948.8	23/2$^-$		Mult.: DCO ratio=1.1 *3*.
543.4 *5*	9.5 *20*	2376.9	(27/2$^-$)	1833.5	(23/2$^-$)	Q	Mult.: DCO ratio=1.0 *2*.
549.4 *5*	15 *1*	2709.5	31/2$^-$	2160.0	27/2$^-$	Q	Mult.: DCO ratio=1.0 *1*.
552.9 *5*	12 *1*	2564.6	29/2$^-$	2011.7	25/2$^-$		Mult.: DCO ratio=1.3 *3*.
558.5 *1*	56 *2*	1986.3	29/2$^+$	1427.8	25/2$^+$	Q	Mult.: DCO ratio=0.95 *10*.
570.8 *5*	3 *1*	2903.1	(33/2)	2332.3	(29/2)		
571.8 *5*	7 *1*	2471.7	(27/2$^-$)	1899.8	25/2$^-$		Mult.,δ: DCO ratio=0.8 *2*. Consistent with +0.4≤δ(D,Q)≤+2.9 if ΔJ=1 or −0.3≤δ(D,Q)≤+0.5 if ΔJ=0 (1993Ba45). Also consistent with ΔJ=2 implied by Adopted Levels.
579.7 *5*	34 *2*	2431.9	31/2$^+$	1852.2	27/2$^+$	Q	Mult.: DCO ratio=0.8 *1*.
580[@e]		3483.1?	(37/2)	2903.1	(33/2)		

Continued on next page (footnotes at end of table)

^{150}Nd(^{34}S,5nγ) 1993Ba45,1994Ba27 (continued)

γ(^{179}Os) (continued)

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	Comments
580.9 *5*	14 *1*	2999.3	33/2$^-$	2418.4	29/2$^-$		Mult.: DCO ratio=0.90 *25*.
583.7 *5*	3 *1*	3072.8	31/2$^-$	2489.1	27/2$^-$		Mult.: DCO ratio=1.3 *5*.
584.8 *5*	10 *1*	3964.8	(39/2$^-$)	3380.0	(35/2$^-$)	Q	Mult.: DCO ratio=1.05 *20*.
588.0 *5*	8 *1*	3152.6	33/2$^-$	2564.6	29/2$^-$		Mult.: DCO ratio=1.1 *3*.
591.9 *5*	11 *1*	3301.4	35/2$^-$	2709.5	31/2$^-$	Q	Mult.: DCO ratio=1.1 *2*.
612.4 *5*	3 *1*	4420.7	(43/2$^-$)	3807.9	(39/2$^-$)	Q	Mult.: DCO ratio=1.0 *2*.
615.2 *5*	21 *2*	3047.2	35/2$^+$	2431.9	31/2$^+$	Q	Mult.: DCO ratio=0.9 *1*.
618.1 *5*	7 *1*	3617.4	37/2$^-$	2999.3	33/2$^-$		Mult.: DCO ratio=1.1 *4*.
619[@e]		3691.8?	(35/2$^-$)	3072.8	31/2$^-$		
619.2 *5*	38 *2*	2605.5	33/2$^+$	1986.3	29/2$^+$	Q	Mult.: DCO ratio=0.9 *2*.
631.5 *5*	8 *1*	3933.1	39/2$^-$	3301.4	35/2$^-$		Mult.: DCO ratio=1.0 *3*.
632.7 *5*	5 *1*	3785.3	37/2$^-$	3152.6	33/2$^-$		Mult.: DCO ratio=1.4 *7*.
643.6[@] *5*	5 *1*	4261.1	41/2$^-$	3617.4	37/2$^-$		
644.4 *5*	5 *1*	4566.8	45/2$^+$	3922.4	41/2$^+$		Mult.: DCO ratio=1.2 *3*.
644.9[@] *5*	6 *1*	4609.7	(43/2$^-$)	3964.8	(39/2$^-$)		Mult.: DCO ratio=0.9 *4*.
654.0[@] *5*	13 *1*	3701.1	39/2$^+$	3047.2	35/2$^+$		Mult.: DCO ratio=1.3 *4*.
655.6[@] *5*	19 *1*	3261.1	37/2$^+$	2605.5	33/2$^+$		Mult.: DCO ratio=1.1 *3*.
660.5[@] *5*	6 *1*	4593.7	43/2$^-$	3933.1	39/2$^-$		Mult.: DCO ratio=1.2 *4*.
661.3 *5*	8 *1*	3922.4	41/2$^+$	3261.1	37/2$^+$	Q	Mult.: DCO ratio=1.0 *2*.
669.6 *5*	3 *1*	4930.7	(45/2$^-$)	4261.1	41/2$^-$		
674.0[@] *5*	<1	5604.7	(49/2$^-$)	4930.7	(45/2$^-$)		
676.5[@] *5*	3.5 *10*	5270.2	47/2$^-$	4593.7	43/2$^-$		Mult.: DCO ratio=0.8 *4*.
679.0 *5*	<1	5099.3	(47/2$^-$)	4420.7	(43/2$^-$)		Mult.: DCO ratio=1.1 *3*.
679.8 *5*	2 *1*	4465.1	(41/2$^-$)	3785.3	37/2$^-$		
697.4 *5*	3.5 *10*	5307.1	(47/2$^-$)	4609.7	(43/2$^-$)		Mult.: DCO ratio=1.2 *4*.
698.6[@] *5*	4 *2*	4721.8	(43/2)	4023.3	(39/2)		
698.8[@] *5*	7 *1*	4399.9	(43/2$^+$)	3701.1	39/2$^+$		
709.1 *5*	2.5 *10*	5979.3	(51/2$^-$)	5270.2	47/2$^-$		
713[&e]	≤1	5178.1?	(45/2$^-$)	4465.1	(41/2$^-$)		
717[&e]	<1	6321.7?	(53/2$^-$)	5604.7	(49/2$^-$)		
726.8 *5*	3.5 *10*	5293.6	(49/2$^+$)	4566.8	45/2$^+$		
733.4 *5*	<1	5832.7	(51/2$^-$)	5099.3	(47/2$^-$)		
747.8 *5*	4 *1*	5147.7	(47/2$^+$)	4399.9	(43/2$^+$)		
759[&e]	<1	6738.3?	(55/2$^-$)	5979.3	(51/2$^-$)		
762.2 *5*	5 *2*	4023.3	(39/2)	3261.1	37/2$^+$		
763.9 *5*	2.5 *10*	6071.0	(51/2$^-$)	5307.1	(47/2$^-$)		
771.3 *5*	2 *1*	5493.2	(47/2)	4721.8	(43/2)		
786.1 *5*	<1	6618.9	(55/2$^-$)	5832.7	(51/2$^-$)		
796.1 *5*	2 *1*	5943.8	(51/2$^+$)	5147.7	(47/2$^+$)		
799.4 *5*	2.5 *10*	4721.8	(43/2)	3922.4	41/2$^+$		
814.6 *5*	2 *1*	6307.8	(51/2)	5493.2	(47/2)		
826.7 *5*	2 *1*	6120.3	(53/2$^+$)	5293.6	(49/2$^+$)		
841.1 *5*	<1	6784.9	(55/2$^+$)	5943.8	(51/2$^+$)		
850	<1	6921.0	(55/2$^-$)	6071.0	(51/2$^-$)		
851.0[@] *5*	≈1	7158.8	(55/2)	6307.8	(51/2)		
890.2[ae] *5*	<1	8049.0?	(59/2)	7158.8	(55/2)		γ placed higher In cascade In Adopted Levels, Gammas.
907.5[&be] *5*	<1	8956.5?	(63/2)	8049.0?	(59/2)		
919	<1	7039.3	(57/2$^+$)	6120.3	(53/2$^+$)		
927[&e]	<1	7848.0?	(59/2$^-$)	6921.0	(55/2$^-$)		

Continued on next page (footnotes at end of table)

^{150}Nd(^{34}S,5nγ) 1993Ba45,1994Ba27 (continued)

$\gamma(^{179}Os)$ (continued)

† ΔE=0.1 keV for strong transitions, 0.5 keV for weak transitions (1993Ba45). Evaluator has assigned ΔE=0.1 keV to the six strongest transitions (Iγ≥52), and 0.5 keV in all other cases. Also, Eγ values quoted in 1993Ba45 to the nearest keV are given here to the nearest keV without uncertainty.

‡ Derived from γγ coin data and normalized to the 365.8γ using the coincidence spectrum obtained by total projection. See comments for branching determined from γγ coin spectra gated by transitions above low spin levels or by transitions below high spin levels.

Based on measured DCO ratios (θ=38°, 90°)from 1993Ba45; the first transition was stretched Q In all cases.

@ Contaminated transition (1994Ba27).

& Observed in summed γγ coin spectra only (1994Ba27).

a Similar Eγ in (^{30}Si,5nγ) was placed elsewhere in that reaction.

b Absent in (^{30}Si,5nγ); omitted from Adopted Levels, Gammas.

c From analysis of DCO ratios measured for transitions connecting the signature partners of the 7/2[514] band, 1993Ba45 conclude $-7\leq\delta(D,Q)\leq-0.2$.

d From analysis of DCO ratios measured for transitions connecting the signature partners of the 9/2[624] band, 1993Ba45 conclude $-2.8\leq\delta(D,Q)\leq-0.3$.

e Placement of transition in the level scheme is uncertain.

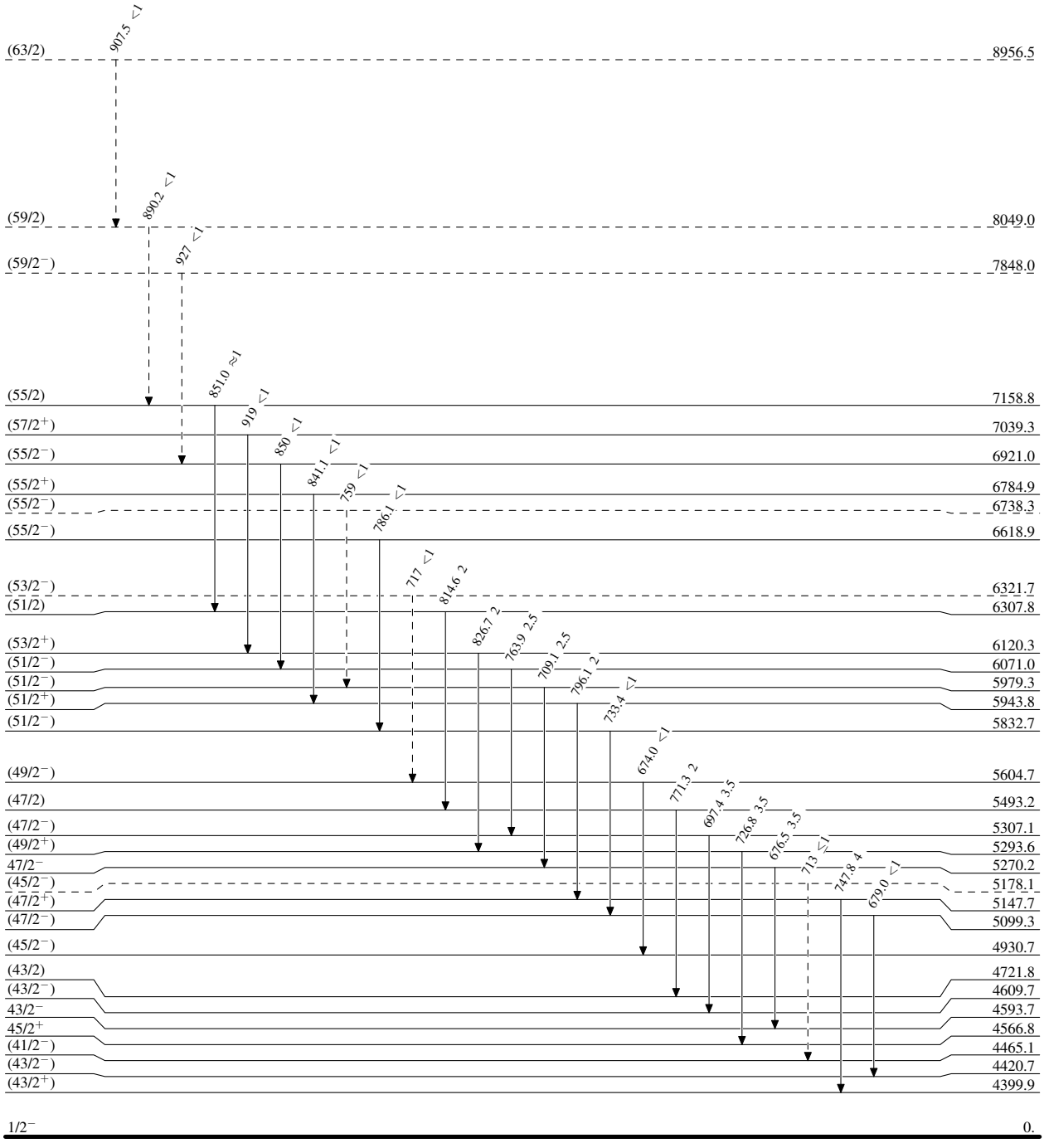
^{150}Nd(^{34}S,5nγ) 1993Ba45,1994Ba27

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)



$^{179}_{76}Os_{103}$

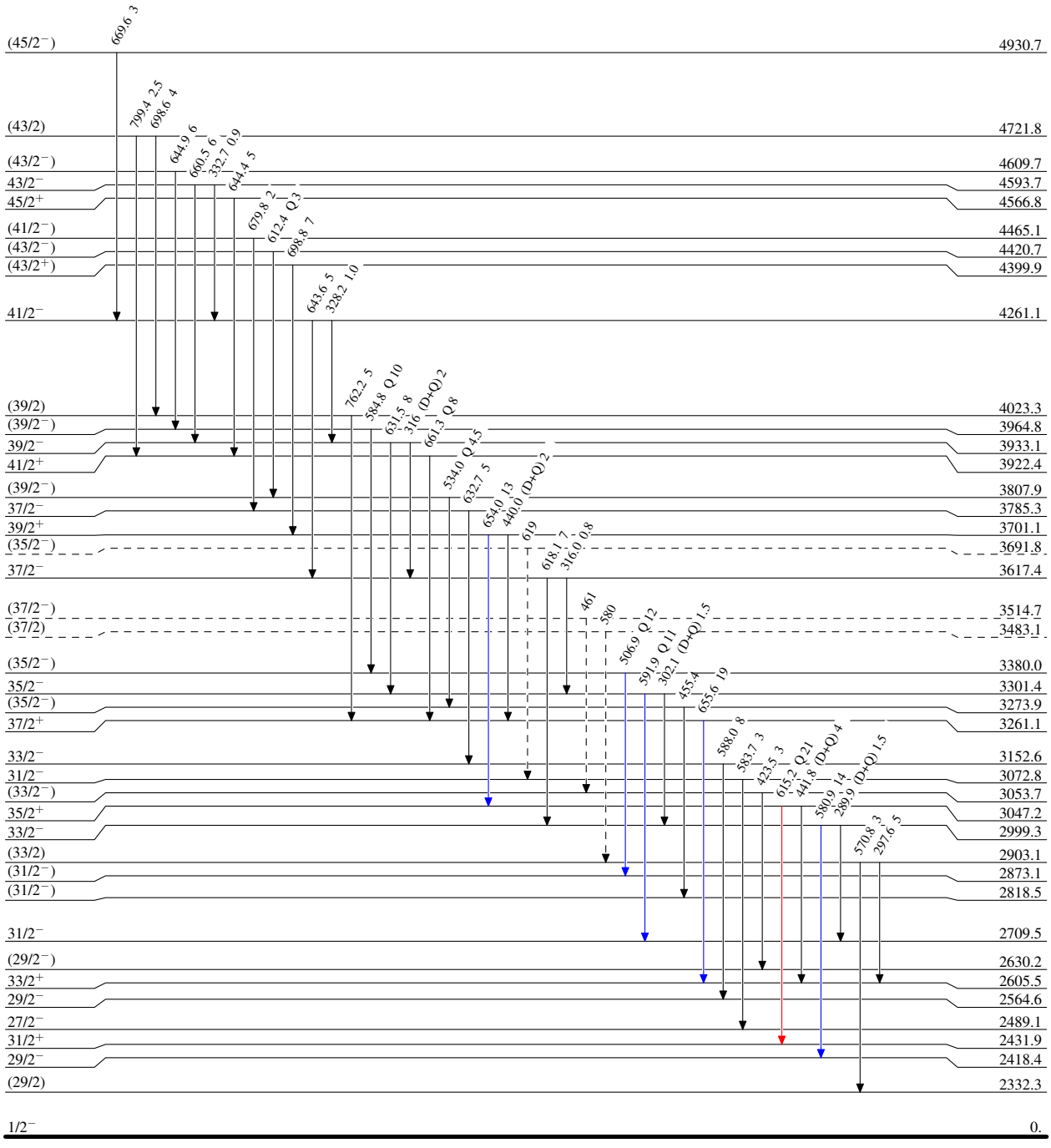
^{150}Nd(^{34}S,5nγ) **1993Ba45,1994Ba27**

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)



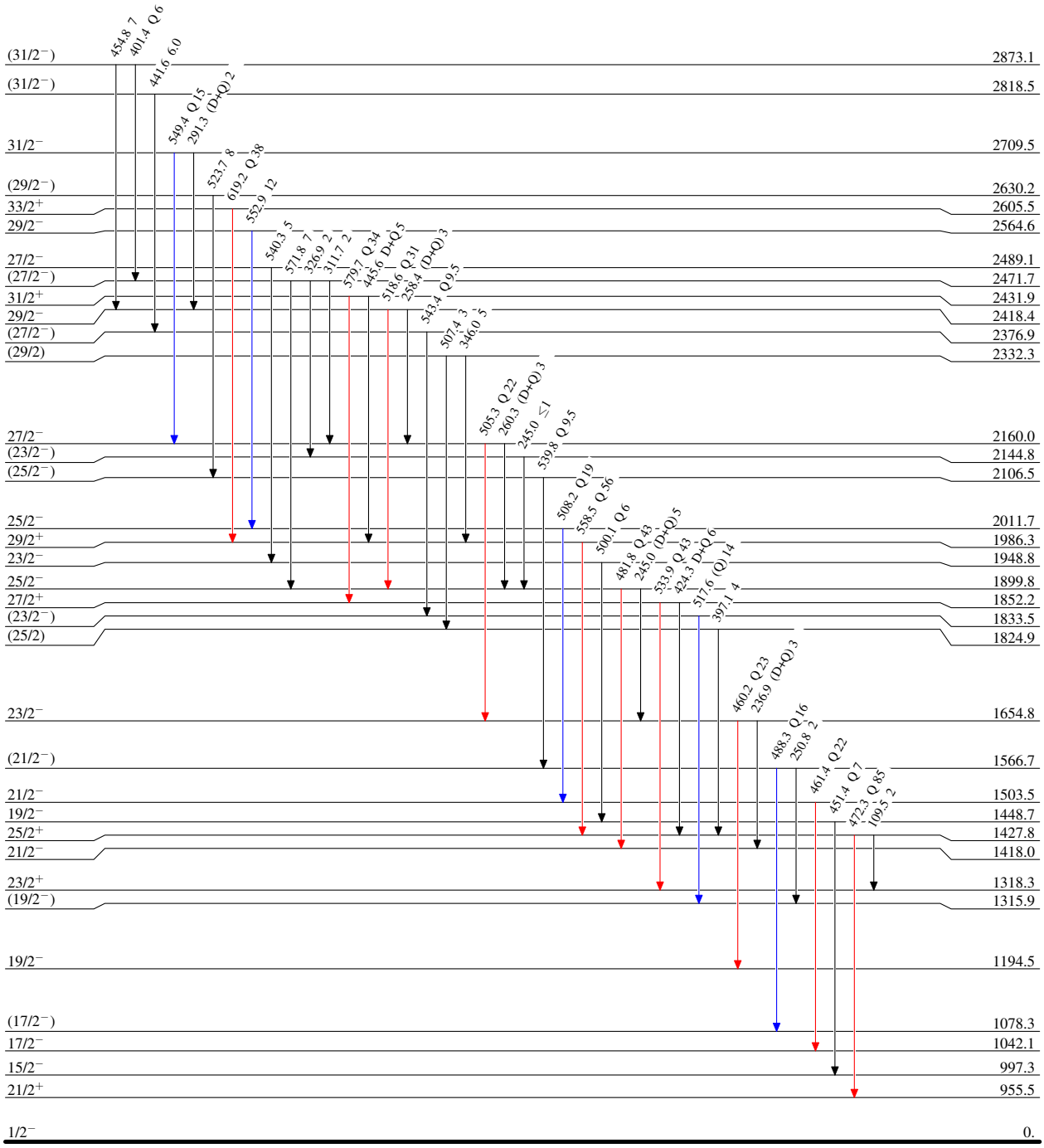
$^{179}_{76}Os_{103}$

^{150}Nd(^{34}S,5nγ) 1993Ba45,1994Ba27

Level Scheme (continued)

Intensities: Relative I_γ

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



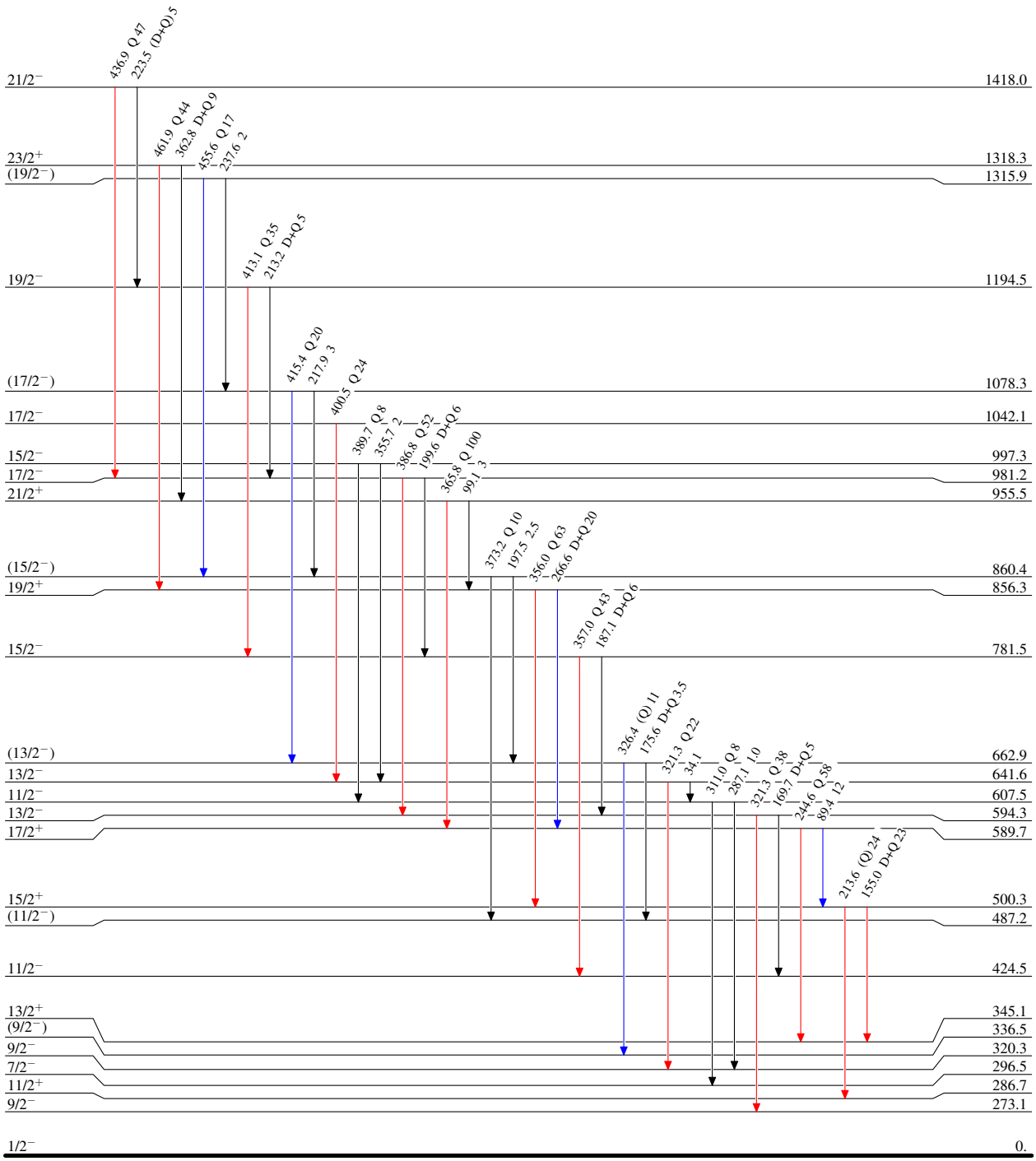
$^{179}_{76}Os_{103}$

^{150}Nd(^{34}S,5nγ) 1993Ba45,1994Ba27

Level Scheme (continued)

Intensities: Relative I_γ

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



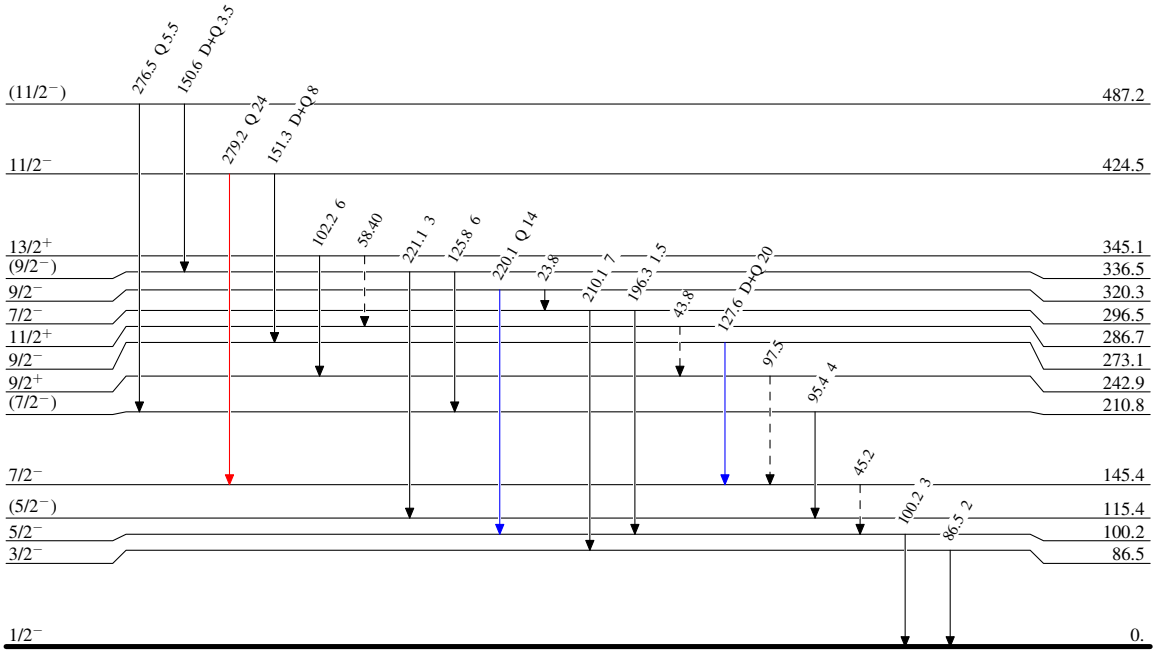
$^{179}_{76}Os_{103}$

^{150}Nd(^{34}S,5nγ) 1993Ba45,1994Ba27

Level Scheme (continued)

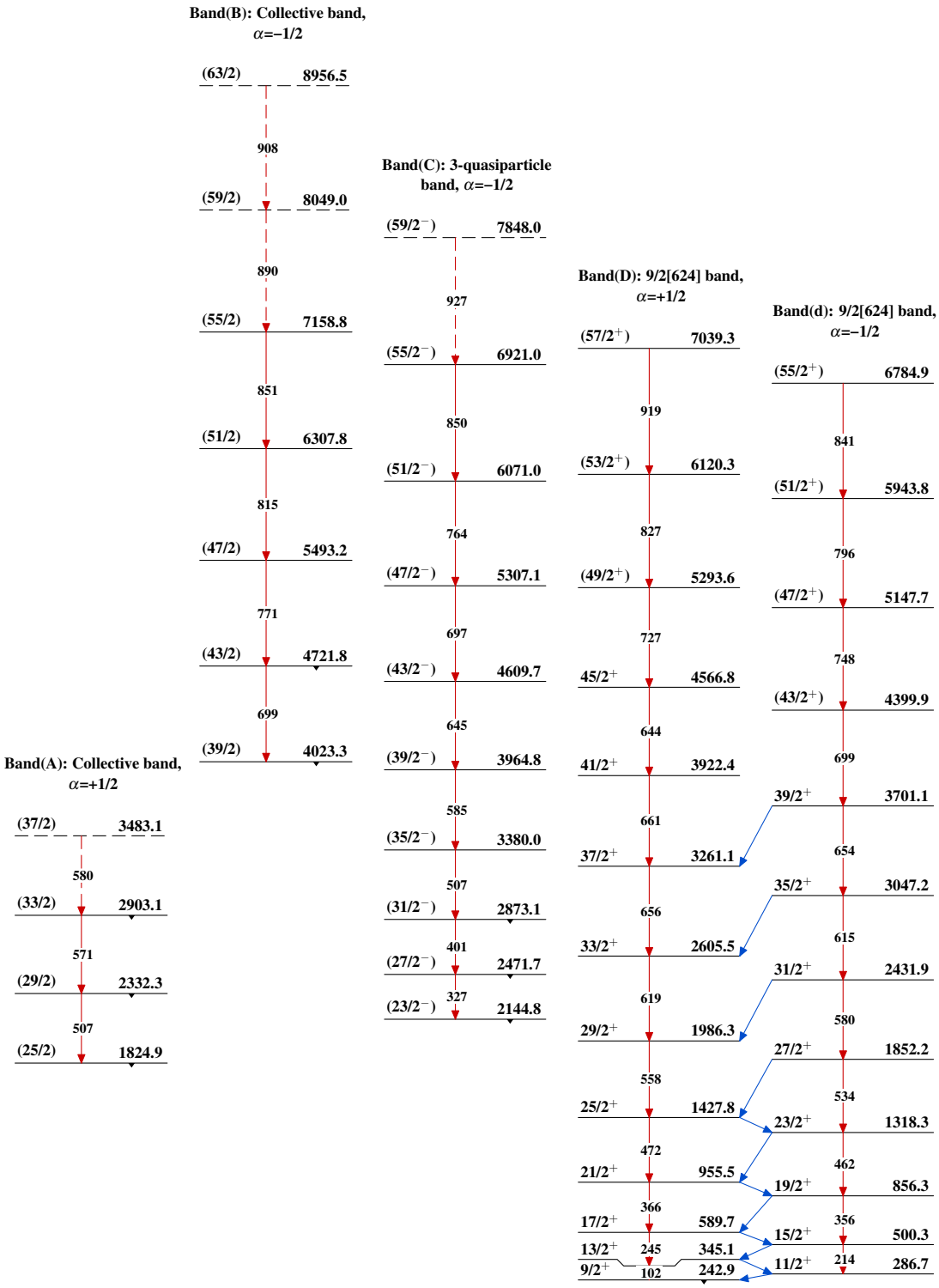
Intensities: Relative I_γ

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)



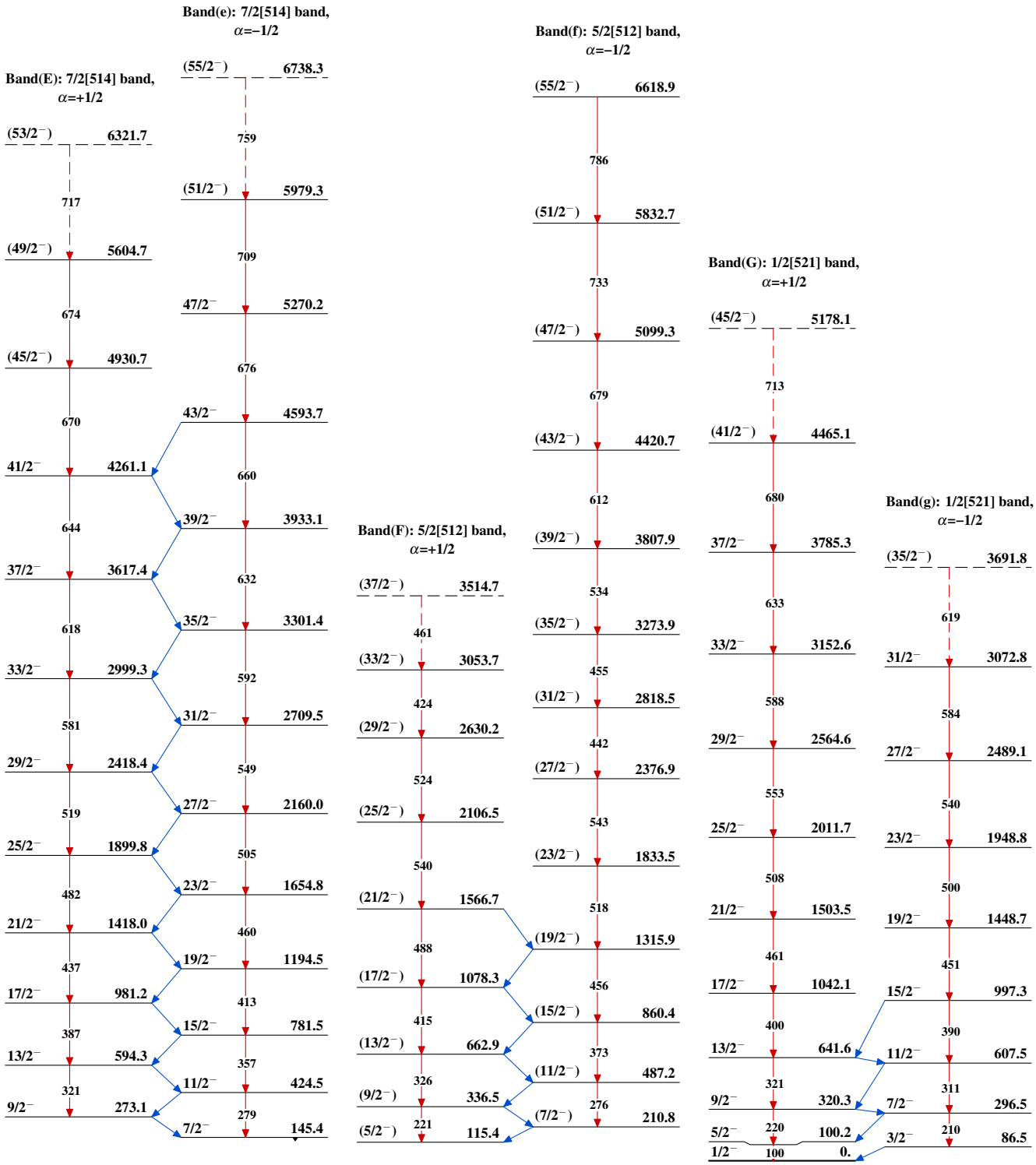
$^{179}_{76}Os_{103}$

$^{150}Nd(^{34}S,5n\gamma)$ 1993Ba45,1994Ba27



$^{179}_{76}Os_{103}$

^{150}Nd(^{34}S,5nγ) 1993Ba45,1994Ba27 (continued)



$^{179}_{76}Os_{103}$