^{154}Sm(^{30}Si,5nγ) 1992Bu14

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

E(^{30}Si)=155 MeV; 20 Compton-suppressed Ge detectors (HERA array); measured Eγ, Iγ, $\gamma\gamma$ coin, directional correlation from oriented nuclei (DCO) ratios (θ=37° (or 153°) and 79° (or 103°)).

^{179}Os Levels

E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡
0.0[g]	1/2−	1194.3[c]	19/2−	2998.5[b]	33/2−	5307.1[@]	49/2−
86.3[h]	3/2−	1229.4[d]	(17/2)−	3046.1[a]	35/2+	5492.0[#]	49/2+
100.3[g]	5/2−	1315.9[f]	19/2−	3073.2[h]	31/2−	5604.4[b]	49/2−
115.2[e]	5/2−	1317.9[a]	23/2+	3151.8[g]	33/2−	5834.5[f]	51/2−
145.5[c]	7/2−	1417.8[b]	21/2−	3259.1[&]	37/2+	5945.2[a]	51/2+
195.9[d]	(5/2)−	1427.5[&]	25/2+	3274.5[f]	35/2−	5978.0[c]	51/2−
210.7[f]	7/2−	1448.4[h]	19/2−	3300.9[c]	35/2−	6071.8[@]	53/2−
243.0[&]	9/2+	1503.1[g]	21/2−	3379.8[@]	37/2−	6118.9[&]	53/2+
273.1[b]	9/2−	1566.6[e]	21/2−	3519.3[d]	(33/2)−	6306.7[#]	53/2+
286.7[a]	11/2+	1654.3[c]	23/2−	3616.4[b]	37/2−	6321.8[b]	53/2−
296.5[h]	7/2−	1738.9[d]	(21/2)−	3699.5[a]	39/2+	6621.5[f]	55/2−
320.2[g]	9/2−	1833.4[f]	23/2−	3784.3[g]	37/2−	6738.8[c]	55/2−
336.6[e]	9/2−	1851.5[a]	27/2+	3808.8[f]	39/2−	6786.9[a]	55/2+
345.1[&]	13/2+	1899.4[b]	25/2−	3920.3[&]	41/2+	6917.7[@]	57/2−
424.5[c]	11/2−	1948.8[h]	23/2−	3931.8[c]	39/2−	7038.9[&]	57/2+
436.5[d]	(9/2)−	1985.5[&]	29/2+	3964.9[@]	41/2−	7090.0[b]	(57/2)−
487.2[f]	11/2−	2011.2[g]	25/2−	4021.1[#]	41/2+	7157.4[#]	57/2+
500.1[a]	15/2+	2106.7[e]	25/2−	4212.3[d]	(37/2)−	7473.9[f]	59/2−
589.6[&]	17/2+	2159.9[c]	27/2−	4260.2[b]	41/2−	7553.3[c]	59/2−
594.3[b]	13/2−	2297.9[d]	(25/2)−	4399.1[a]	43/2+	7666.9[a]	59/2+
607.2[h]	11/2−	2376.9[f]	27/2−	4421.4[f]	43/2−	7843.7[@]	61/2−
641.4[g]	13/2−	2417.9[b]	29/2−	4464.7[g]	41/2−	8016.9[&]	61/2+
663.0[e]	13/2−	2431.4[a]	31/2+	4563.8[&]	45/2+	8019.4[#]	61/2+
781.3[c]	15/2−	2471.5[@]	29/2−	4592.3[c]	43/2−	8406.3[c]	63/2−
788.2[d]	(13/2)−	2489.1[h]	27/2−	4609.8[@]	45/2−	8555.9[a]	63/2+
856.1[a]	19/2+	2564.2[g]	29/2−	4720.5[#]	45/2+	8838.7[@]	65/2−
860.4[f]	15/2−	2604.1[&]	33/2+	4929.7[b]	45/2−	9021?[&]	(65/2)+
955.4[&]	21/2+	2629.7[e]	29/2−	5101.0[f]	47/2−	9533?[a]	(67/2)+
981.0[b]	17/2−	2709.2[c]	31/2−	5147.6[a]	47/2+	9867.1?[@]	(69/2)−
997.0[h]	15/2−	2818.7[f]	31/2−	5177.7[g]	45/2−	10043?[&]	(69/2)+
1041.8[g]	17/2−	2872.9[@]	33/2−	5268.8[c]	47/2−	11021.2?[@]	(73/2)−
1078.1[e]	17/2−	2894.3[d]	(29/2)−	5291.0[&]	49/2+		

† From least-squares fit to Eγ.

‡ Authors′ values based on DCO ratios and deduced rotational band structure.

Band(A): π=+ band, α=+1/2.

@ Band(B): 3-quasiparticle band, α=+1/2. Possible Configuration=((π 5/2[512])⊗(ν $i^2_{13/2}$)).

& Band(C): 9/2[624] band, α=+1/2. Band crossing At $\hbar\omega$=0.31 MeV with alignment gain 6.5$\hbar$. Second band crossing At $\hbar\omega\approx$0.5 MeV with alignment gain of >3$\hbar$ attributed to 1/2[541] (π $h_{9/2}$) quasiproton pair alignment (1992Bu14).

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^{154}Sm(^{30}Si,5nγ) 1992Bu14 (continued)

^{179}Os Levels (continued)

[a] Band(c): 9/2[624] band, α=−1/2. Band crossing At $\hbar\omega$=0.30 MeV with alignment gain of 5.5$\hbar$. Second band crossing At $\hbar\omega$=0.44 MeV with alignment gain of≈2.5$\hbar$ attributed to 1/2[541] (π $h_{9/2}$) quasiproton pair alignment (1992Bu14).

[b] Band(D): 7/2[514] band, α=+1/2. Signature misprinted as α=−1/2 in 1992Bu14. intraband transition B(M1)/B(E2) ratios suggest Coriolis mixing with 5/2[512] band. Band crossing At $\hbar\omega$=0.28 MeV with alignment gain≈11$\hbar$ due to alignment of $i_{13/2}$ neutron pair.

[c] Band(d): 7/2[514] band, α=−1/2. Signature misprinted as α=+1/2 in 1992Bu14. Band crossing At $\hbar\omega$=0.27 MeV with alignment gain≈11$\hbar$ due to alignment of $i_{13/2}$ neutron pair.

[d] Band(E): 5/2[523]? band. Probably mixed with 1/2[521] band. authors note that cranked shell-model calculations predict the 5/2[523] bandhead At considerably higher energy than observed for this band, but all other likely orbitals have already been assigned to other states In ^{179}Os (1992Bu14). band crossing At $\hbar\omega$=0.26 MeV, alignment gain≈4.5$\hbar$.

[e] Band(F): 5/2[512] band, α=+1/2. Band crossing At $\hbar\omega$=0.22 MeV with alignment gain≈8.5$\hbar$ due to alignment of $i_{13/2}$ neutron pair. Assignment supported by intraband transition B(M1)/B(E2) values. Second band crossing At $\hbar\omega$=0.5 MeV with alignment gain of >2$\hbar$ attributed to 1/2[541] (π $h_{9/2}$) quasiproton pair alignment (1992Bu14).

[f] Band(f): 5/2[512] band, α=−1/2. Band crossing At $\hbar\omega$=0.23 MeV with alignment gain≈8.5$\hbar$ due to alignment of $i_{13/2}$ neutron pair. Assignment supported by intraband transition B(M1)/B(E2) values.

[g] Band(G): 1/2[521] band, α=+1/2. Band crossing At $\hbar\omega$=0.23 MeV with alignment gain >4.5$\hbar$ due to alignment of $i_{13/2}$ neutron pair.

[h] Band(g): 1/2[521] band, α=−1/2. Band crossing At $\hbar\omega$=0.26 MeV with alignment gain >8.5$\hbar$ due to alignment of $i_{13/2}$ neutron pair.

γ(^{179}Os)

E_γ [†]	I_γ [‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	Comments
45.2[@]	≤40	145.5	7/2$^-$	100.3	5/2$^-$		
58.4[@]	18.0 *21*	345.1	13/2$^+$	286.7	11/2$^+$		
86.3[@]	22.5 *16*	86.3	3/2$^-$	0.0	1/2$^-$		
89.4	8.2 *16*	589.6	17/2$^+$	500.1	15/2$^+$		
95.5	2.2 *6*	210.7	7/2$^-$	115.2	5/2$^-$	D	DCO ratio=1.6 *3*.
97.5[@]	132 *7*	243.0	9/2$^+$	145.5	7/2$^-$		
99.4	3.4 *5*	955.4	21/2$^+$	856.1	19/2$^+$		
100.3	26.5 *17*	100.3	5/2$^-$	0.0	1/2$^-$		
102.1	3.4 *4*	345.1	13/2$^+$	243.0	9/2$^+$		
109.6[&]	5.8[&] *5*	195.9	(5/2)$^-$	86.3	3/2$^-$		DCO ratio=1.11 *20*.
109.6[&]	3.6[&] *3*	1427.5	25/2$^+$	1317.9	23/2$^+$		
125.9	6.8 *10*	336.6	9/2$^-$	210.7	7/2$^-$		DCO ratio=1.16 *20*.
127.6	21 *4*	273.1	9/2$^-$	145.5	7/2$^-$	D	DCO ratio=1.42 *9*.
150.6	5.2 *13*	487.2	11/2$^-$	336.6	9/2$^-$	D	DCO ratio=1.46 *18*.
151.3	11.9 *16*	424.5	11/2$^-$	273.1	9/2$^-$	D	DCO ratio=1.59 *10*.
154.9	34 *5*	500.1	15/2$^+$	345.1	13/2$^+$	D+Q	DCO ratio=2.18 *12*.
169.7	9.8 *15*	594.3	13/2$^-$	424.5	11/2$^-$	D	DCO ratio=1.69 *16*.
175.8	4.1 *6*	663.0	13/2$^-$	487.2	11/2$^-$	D	DCO ratio=1.84 *22*.
187.1	10.7 *10*	781.3	15/2$^-$	594.3	13/2$^-$	D	DCO ratio=1.37 *13*.
196.2	1.23 *16*	296.5	7/2$^-$	100.3	5/2$^-$		DCO ratio=1.28 *15*.
197.4	3.1 *5*	860.4	15/2$^-$	663.0	13/2$^-$	D	DCO ratio=1.38 *17* (private communication to evaluator from J. Burde); misprinted as 1.38 *7* in table 1 of 1992Bu14.
199.8	10.2 *8*	981.0	17/2$^-$	781.3	15/2$^-$	D	DCO ratio=1.78 *9*.
208.8[a]		997.0	15/2$^-$	788.2	(13/2)$^-$		
209.9		1948.8	23/2$^-$	1738.9	(21/2)$^-$		
210.2	6.2 *6*	296.5	7/2$^-$	86.3	3/2$^-$	Q	DCO ratio=1.13 *3*.
213.3	7.4 *10*	1194.3	19/2$^-$	981.0	17/2$^-$	D	DCO ratio=1.58 *16*.
213.4	36 *5*	500.1	15/2$^+$	286.7	11/2$^+$	Q	DCO ratio=1.07 *6*.

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^{154}Sm(^{30}Si,5nγ) 1992Bu14 (continued)

γ(^{179}Os) (continued)

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	Comments
217.7	2.4 *4*	1078.1	17/2$^-$	860.4	15/2$^-$		DCO ratio=1.19 *21*.
219.0	1.6 *3*	1448.4	19/2$^-$	1229.4	(17/2)$^-$		
219.9	16.3 *10*	320.2	9/2$^-$	100.3	5/2$^-$	Q	DCO ratio=1.15 *10*.
221.4	3.0 *10*	336.6	9/2$^-$	115.2	5/2$^-$		
223.5	7.5 *6*	1417.8	21/2$^-$	1194.3	19/2$^-$	D	DCO ratio=1.86 *16*.
236.6	9.5 *6*	1654.3	23/2$^-$	1417.8	21/2$^-$	D	DCO ratio=1.459 *17* in 1992Bu14 is probably a misprint of 1.46 *17*.
238.5	1.6 *7*	663.0	13/2$^-$	424.5	11/2$^-$		
240.6	21.2 *6*	436.5	(9/2)$^-$	195.9	(5/2)$^-$	Q	DCO ratio=1.13 *13*.
243.3	2.5 *10*	2872.9	33/2$^-$	2629.7	29/2$^-$		
244.5	49 *8*	589.6	17/2$^+$	345.1	13/2$^+$	Q	DCO ratio=1.07 *9*.
245.2	5.8 *5*	1899.4	25/2$^-$	1654.3	23/2$^-$	D	DCO ratio=1.66 *19*.
258.0	2.1 *6*	2417.9	29/2$^-$	2159.9	27/2$^-$	D	DCO ratio=2.0 *3*.
260.5	4.0 *5*	2159.9	27/2$^-$	1899.4	25/2$^-$	D	DCO ratio=1.67 *17*.
266.5	19 *5*	856.1	19/2$^+$	589.6	17/2$^+$		
266.8	3.5 *6*	1833.4	23/2$^-$	1566.6	21/2$^-$	D	DCO ratio=1.7 *4*.
276.5	6.6 *16*	487.2	11/2$^-$	210.7	7/2$^-$	Q	DCO ratio=1.13 *15*.
279.0	42 *5*	424.5	11/2$^-$	145.5	7/2$^-$	Q	DCO ratio=1.17 *8*.
287.0	2.7 *3*	607.2	11/2$^-$	320.2	9/2$^-$		DCO ratio=1.07 *19*.
289.3	3.5 *8*	2998.5	33/2$^-$	2709.2	31/2$^-$		
291.3	3.0 *8*	2709.2	31/2$^-$	2417.9	29/2$^-$		
302.3	1.6 *3*	3300.9	35/2$^-$	2998.5	33/2$^-$		
310.7	12.4 *10*	607.2	11/2$^-$	296.5	7/2$^-$	Q	DCO ratio=0.93 *12*.
318.0	3.7 *10*	981.0	17/2$^-$	663.0	13/2$^-$		
321.2[&]	47[&] *5*	594.3	13/2$^-$	273.1	9/2$^-$	Q	DCO ratio=1.17 *8*.
321.2[&]	12.2[&] *8*	641.4	13/2$^-$	320.2	9/2$^-$	Q	DCO ratio=1.13 *10*.
326.4	11.8 *16*	663.0	13/2$^-$	336.6	9/2$^-$	Q	DCO ratio=1.01 *12*.
328.4	7.7 *16*	4260.2	41/2$^-$	3931.8	39/2$^-$		
332.7	1.3 *7*	1899.4	25/2$^-$	1566.6	21/2$^-$		
335.7	2.5 *8*	5604.4	49/2$^-$	5268.8	47/2$^-$		
337.4	1.7 *5*	4929.7	45/2$^-$	4592.3	43/2$^-$		
339.7	2.0 *7*	1417.8	21/2$^-$	1078.1	17/2$^-$		
351.7	23.7 *13*	788.2	(13/2)$^-$	436.5	(9/2)$^-$	Q	DCO ratio=1.15 *12*.
356.0	54.3 *24*	856.1	19/2$^+$	500.1	15/2$^+$	Q	DCO ratio=1.15 *11*.
356.8	54 *4*	781.3	15/2$^-$	424.5	11/2$^-$	Q	DCO ratio=1.09 *8*.
362.5		1317.9	23/2$^+$	955.4	21/2$^+$		
364.7	1.9 *7*	2471.5	29/2$^-$	2106.7	25/2$^-$		
365.8	100 *8*	955.4	21/2$^+$	589.6	17/2$^+$	Q	DCO ratio=1.08 *7*.
373.2	12.9 *13*	860.4	15/2$^-$	487.2	11/2$^-$	Q	DCO ratio=1.16 *17*.
386.7	51 *3*	981.0	17/2$^-$	594.3	13/2$^-$	Q	DCO ratio=1.07 *8*.
389.8	11.9 *11*	997.0	15/2$^-$	607.2	11/2$^-$	Q	DCO ratio=0.85 *14*.
400.4	11.9 *8*	1041.8	17/2$^-$	641.4	13/2$^-$	Q	DCO ratio=1.02 *9*.
401.4	12 *3*	2872.9	33/2$^-$	2471.5	29/2$^-$	Q	DCO ratio=1.03 *9*.
412.9	44 *4*	1194.3	19/2$^-$	781.3	15/2$^-$	Q	DCO ratio=1.02 *8*.
415.1	11.6 *11*	1078.1	17/2$^-$	663.0	13/2$^-$	Q	DCO ratio=1.15 *13*.
424.0	12.0 *11*	1851.5	27/2$^+$	1427.5	25/2$^+$	D	DCO ratio=1.8 *4*.
435.9[a]		860.4	15/2$^-$	424.5	11/2$^-$		
436.8	61 *4*	1417.8	21/2$^-$	981.0	17/2$^-$	Q	DCO ratio=1.08 *8*.
440.4		3699.5	39/2$^+$	3259.1	37/2$^+$	D	DCO ratio=1.9 *4*; Iγ=17.2 *24* for 440.4γ+442γ doublet.
441.2	16.4 *11*	1229.4	(17/2)$^-$	788.2	(13/2)$^-$	Q	DCO ratio=1.18 *13*.
441.8	12.9 *11*	2818.7	31/2$^-$	2376.9	27/2$^-$	Q	DCO ratio=1.14 *12*.
442		3046.1	35/2$^+$	2604.1	33/2$^+$	D	DCO ratio=1.55 *15*; Iγ=17.2 *24* for 440.4γ+442γ doublet.
445.8	12.3 *11*	2431.4	31/2$^+$	1985.5	29/2$^+$		DCO ratio=1.4 *3*.
451.4	10.1 *13*	1448.4	19/2$^-$	997.0	15/2$^-$	Q	DCO ratio=0.96 *13*.
455.0	20 *3*	2872.9	33/2$^-$	2417.9	29/2$^-$	Q	DCO ratio=1.03 *9*.

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^{154}Sm(^{30}Si,5nγ) 1992Bu14 (continued)

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

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	Comments
455.5		1315.9	19/2$^-$	860.4	15/2$^-$		Iγ=18.5 *24*, DCO ratio=1.12 *9* for 455.5γ+455.8γ doublet.
455.8		3274.5	35/2$^-$	2818.7	31/2$^-$		Iγ=18.5 *24*, DCO ratio=1.12 *9* for 455.5γ+455.8γ doublet.
460.1	46 *4*	1654.3	23/2$^-$	1194.3	19/2$^-$	Q	DCO ratio=0.99 *9*.
461.3	11.6 *8*	1503.1	21/2$^-$	1041.8	17/2$^-$	Q	DCO ratio=0.99 *10*.
461.9	46 *4*	1317.9	23/2$^+$	856.1	19/2$^+$	Q	DCO ratio=1.14 *12*.
472.1	99 *5*	1427.5	25/2$^+$	955.4	21/2$^+$	Q	DCO ratio=1.01 *7*.
481.6	50 *3*	1899.4	25/2$^-$	1417.8	21/2$^-$	Q	DCO ratio=1.05 *8*.
488.4	14.6 *24*	1566.6	21/2$^-$	1078.1	17/2$^-$	Q	DCO ratio=1.13 *16*.
500.4	9.0 *13*	1948.8	23/2$^-$	1448.4	19/2$^-$	Q	DCO ratio=0.93 *13*.
505.6	45 *4*	2159.9	27/2$^-$	1654.3	23/2$^-$	Q	DCO ratio=0.95 *8*.
506.9	21 *5*	3379.8	37/2$^-$	2872.9	33/2$^-$	Q	DCO ratio=1.04 *9*.
508.1	10.3 *8*	2011.2	25/2$^-$	1503.1	21/2$^-$	Q	DCO ratio=1.06 *10*.
509.5	15.2 *11*	1738.9	(21/2)$^-$	1229.4	(17/2)$^-$	Q	DCO ratio=1.0 *1*.
517.6	12.9 *11*	1833.4	23/2$^-$	1315.9	19/2$^-$	Q	DCO ratio=1.03 *12*.
518.4	36.0 *24*	2417.9	29/2$^-$	1899.4	25/2$^-$	Q	DCO ratio=0.99 *8*.
523.0	8.7 *10*	2629.7	29/2$^-$	2106.7	25/2$^-$	Q	DCO ratio=0.94 *10*.
533.6	49.4 *10*	1851.5	27/2$^+$	1317.9	23/2$^+$	Q	DCO ratio=1.01 *8*.
534.3	10.0 *10*	3808.8	39/2$^-$	3274.5	35/2$^-$	Q	DCO ratio=1.02 *12*.
540.2	9.8 *11*	2106.7	25/2$^-$	1566.6	21/2$^-$	Q	DCO ratio=0.92 *11*.
540.3	7.2 *12*	2489.1	27/2$^-$	1948.8	23/2$^-$	Q	DCO ratio=0.86 *17*.
543.5	13.2 *10*	2376.9	27/2$^-$	1833.4	23/2$^-$	Q	DCO ratio=1.06 *13*.
549.2	28 *3*	2709.2	31/2$^-$	2159.9	27/2$^-$	Q	DCO ratio=1.02 *9*.
553.0	6.5 *6*	2564.2	29/2$^-$	2011.2	25/2$^-$	Q	DCO ratio=0.99 *12*.
558.0	94 *5*	1985.5	29/2$^+$	1427.5	25/2$^+$	Q	DCO ratio=1.00 *8*.
559.0	10.3 *10*	2297.9	(25/2)$^-$	1738.9	(21/2)$^-$		
572.0	20 *3*	2471.5	29/2$^-$	1899.4	25/2$^-$	Q	DCO ratio=0.97 *10*.
579.8	42 *8*	2431.4	31/2$^+$	1851.5	27/2$^+$	Q	E$_\gamma$: 579.81 given in 1992Bu14 is presumed by evaluator to be a misprint. DCO ratio=1.01 *11*.
580.7	22.0 *24*	2998.5	33/2$^-$	2417.9	29/2$^-$	Q	DCO ratio=0.95 *11*.
584.1	5.5 *10*	3073.2	31/2$^-$	2489.1	27/2$^-$	Q	DCO ratio=0.88 *18*.
585.1	21 *3*	3964.9	41/2$^-$	3379.8	37/2$^-$	Q	DCO ratio=1.05 *10*.
587.6	5.7 *6*	3151.8	33/2$^-$	2564.2	29/2$^-$	Q	DCO ratio=0.95 *12*.
591.8	24.7 *24*	3300.9	35/2$^-$	2709.2	31/2$^-$	Q	DCO ratio=0.93 *9*.
596.4	9.0 *10*	2894.3	(29/2)$^-$	2297.9	(25/2)$^-$	Q	DCO ratio=1.14 *14*.
612.6	10.9 *13*	4421.4	43/2$^-$	3808.8	39/2$^-$	Q	DCO ratio=1.00 *13*.
614.8	59 *10*	3046.1	35/2$^+$	2431.4	31/2$^+$	Q	I$_\gamma$: from private communication to evaluator from J. Burde; misprinted as 59 *6* in table 1 of 1992Bu14. DCO ratio=0.96 *9*.
617.9	13.1 *16*	3616.4	37/2$^-$	2998.5	33/2$^-$	Q	DCO ratio=1.00 *10*.
618.6	69 *5*	2604.1	33/2$^+$	1985.5	29/2$^+$	Q	DCO ratio=0.97 *8*.
625	5.8 *7*	3519.3	(33/2)$^-$	2894.3	(29/2)$^-$	Q	DCO ratio=0.99 *13*.
630.9	20.5 *21*	3931.8	39/2$^-$	3300.9	35/2$^-$	Q	DCO ratio=1.02 *12*.
632.5	3.7 *5*	3784.3	37/2$^-$	3151.8	33/2$^-$		
643.5	14.7 *8*	4563.8	45/2$^+$	3920.3	41/2$^+$	Q	DCO ratio=0.86 *14*.
643.8	12 *3*	4260.2	41/2$^-$	3616.4	37/2$^-$	Q	DCO ratio=0.93 *9*.
644.9	16 *3*	4609.8	45/2$^-$	3964.9	41/2$^-$	Q	DCO ratio=0.95 *13*.
653.4	48 *11*	3699.5	39/2$^+$	3046.1	35/2$^+$		
655.0	60 *4*	3259.1	37/2$^+$	2604.1	33/2$^+$	Q	DCO ratio=0.97 *8*.
660.5	11.8 *16*	4592.3	43/2$^-$	3931.8	39/2$^-$	Q	DCO ratio=1.06 *15*.
661.2	27 *3*	3920.3	41/2$^+$	3259.1	37/2$^+$	Q	DCO ratio=0.96 *10*.
669.5	11.8 *16*	4929.7	45/2$^-$	4260.2	41/2$^-$	Q	DCO ratio=1.03 *12*.
674.6	9.2 *24*	5604.4	49/2$^-$	4929.7	45/2$^-$		
676.6	10.7 *11*	5268.8	47/2$^-$	4592.3	43/2$^-$	Q	DCO ratio=1.03 *11*.
679.6	7.8 *8*	5101.0	47/2$^-$	4421.4	43/2$^-$	Q	DCO ratio=1.01 *15*.
680.4	2.3 *3*	4464.7	41/2$^-$	3784.3	37/2$^-$	Q	DCO ratio=0.86 *16*.

Continued on next page (footnotes at end of table)

^{154}Sm(^{30}Si,5nγ) 1992Bu14 (continued)

γ(^{179}Os) (continued)

E_γ †	I_γ ‡	E_i(level)	J_i^π	E_f	J_f^π	Mult.#	Comments
693.0	4.2 *8*	4212.3	(37/2)$^-$	3519.3	(33/2)$^-$	(Q)	DCO ratio=0.6 *4*.
697.3	10.8 *24*	5307.1	49/2$^-$	4609.8	45/2$^-$	Q	DCO ratio=1.06 *13*.
699.4	12.1 *16*	4720.5	45/2$^+$	4021.1	41/2$^+$		
699.6	28 *10*	4399.1	43/2$^+$	3699.5	39/2$^+$	Q	DCO ratio=1.10 *10*.
709.2	7.4 *10*	5978.0	51/2$^-$	5268.8	47/2$^-$	Q	DCO ratio=1.04 *16*.
713.0	1.28 *24*	5177.7	45/2$^-$	4464.7	41/2$^-$	Q	DCO ratio=0.97 *17*.
717.4	5.3 *11*	6321.8	53/2$^-$	5604.4	49/2$^-$	Q	DCO ratio=1.04 *17*.
727.2	11.5 *5*	5291.0	49/2$^+$	4563.8	45/2$^+$	Q	DCO ratio=1.10 *12*.
733.5	6.0 *6*	5834.5	51/2$^-$	5101.0	47/2$^-$	Q	DCO ratio=0.99 *17*.
748.5	21 *5*	5147.6	47/2$^+$	4399.1	43/2$^+$	Q	I_γ: from private communication to evaluator from J. Burde; misprinted as 21 *8* in table 1 of 1992Bu14. DCO ratio=1.09 *12*.
760.8	6.1 *8*	6738.8	55/2$^-$	5978.0	51/2$^-$	Q	DCO ratio=0.97 *13*.
762.0	12.6 *11*	4021.1	41/2$^+$	3259.1	37/2$^+$	Q	DCO ratio=1.07 *12*.
764.7	10.9 *24*	6071.8	53/2$^-$	5307.1	49/2$^-$	Q	DCO ratio=1.05 *12*.
768.2	3.2 *8*	7090.0	(57/2)$^-$	6321.8	53/2$^-$		
771.5	11.6 *16*	5492.0	49/2$^+$	4720.5	45/2$^+$	Q	DCO ratio=0.91 *13*.
787.0	5.1 *6*	6621.5	55/2$^-$	5834.5	51/2$^-$	Q	DCO ratio=0.94 *18*.
797.6	20 *6*	5945.2	51/2$^+$	5147.6	47/2$^+$	Q	DCO ratio=0.91 *10*.
800.2	6.8 *11*	4720.5	45/2$^+$	3920.3	41/2$^+$	Q	DCO ratio=0.91 *22*.
814.5	2.5 *10*	7553.3	59/2$^-$	6738.8	55/2$^-$	Q	DCO ratio=1.15 *24*.
814.7	7.6 *8*	6306.7	53/2$^+$	5492.0	49/2$^+$	Q	DCO ratio=1.04 *14*.
827.9	9.0 *5*	6118.9	53/2$^+$	5291.0	49/2$^+$	Q	DCO ratio=0.88 *13*.
841.7	27 *10*	6786.9	55/2$^+$	5945.2	51/2$^+$	Q	DCO ratio=1.29 *17*.
845.9	8.9 *16*	6917.7	57/2$^-$	6071.8	53/2$^-$	Q	DCO ratio=1.19 *16*.
850.7	7.5 *5*	7157.4	57/2$^+$	6306.7	53/2$^+$	Q	DCO ratio=1.22 *19*.
852.4	5.4 *8*	7473.9	59/2$^-$	6621.5	55/2$^-$	Q	DCO ratio=1.08 *20*.
853.0	2.9 *11*	8406.3	63/2$^-$	7553.3	59/2$^-$	Q	DCO ratio=1.09 *18*.
862.0	5.1 *6*	8019.4	61/2$^+$	7157.4	57/2$^+$	Q	DCO ratio=0.84 *21*. γ absent in (^{34}S,5nγ).
880.0	15 *3*	7666.9	59/2$^+$	6786.9	55/2$^+$	Q	DCO ratio=1.01 *22*.
889.0	14 *5*	8555.9	63/2$^+$	7666.9	59/2$^+$	Q	DCO ratio=1.1 *3*. Tentatively placed elsewhere in (^{34}S,5nγ).
920.0	6.9 *14*	7038.9	57/2$^+$	6118.9	53/2$^+$	Q	DCO ratio=1.03 *17*.
926.0	4.0 *8*	7843.7	61/2$^-$	6917.7	57/2$^-$	Q	DCO ratio=1.11 *24*.
977[a]	3.2 *16*	9533?	(67/2)$^+$	8555.9	63/2$^+$		
978.0	4.4 *11*	8016.9	61/2$^+$	7038.9	57/2$^+$	Q	DCO ratio=0.89 *22*.
995.0	2.6 *8*	8838.7	65/2$^-$	7843.7	61/2$^-$		
1004[a]	4.2 *16*	9021?	(65/2)$^+$	8016.9	61/2$^+$		
1022[a]	3.0 *14*	10043?	(69/2)$^+$	9021?	(65/2)$^+$		
1028.4[a]	1.5 *5*	9867.1?	(69/2)$^-$	8838.7	65/2$^-$		
1154.1[a]	0.9 *3*	11021.2?	(73/2)$^-$	9867.1?	(69/2)$^-$		

† ΔE_γ not stated by authors; however, Eγ typically deviates by≤0.2 keV from data in (^{16}O,4nγ) and ^{179}Ir ε decay.

‡ Relative photon intensity.

From DCO ratios (1992Bu14) with stretched Q transitions in gate. Expected values of DCO ratios are: 1 for stretched Q or D(ΔJ=0); 1.2-2.0 for stretched D or Q(ΔJ=0) (depending on deorientation);≈0.85 to 5 for D+Q transitions, depending on δ and deorientation.

@ From Adopted Gammas.

& Multiply placed with intensity suitably divided.

a Placement of transition in the level scheme is uncertain.

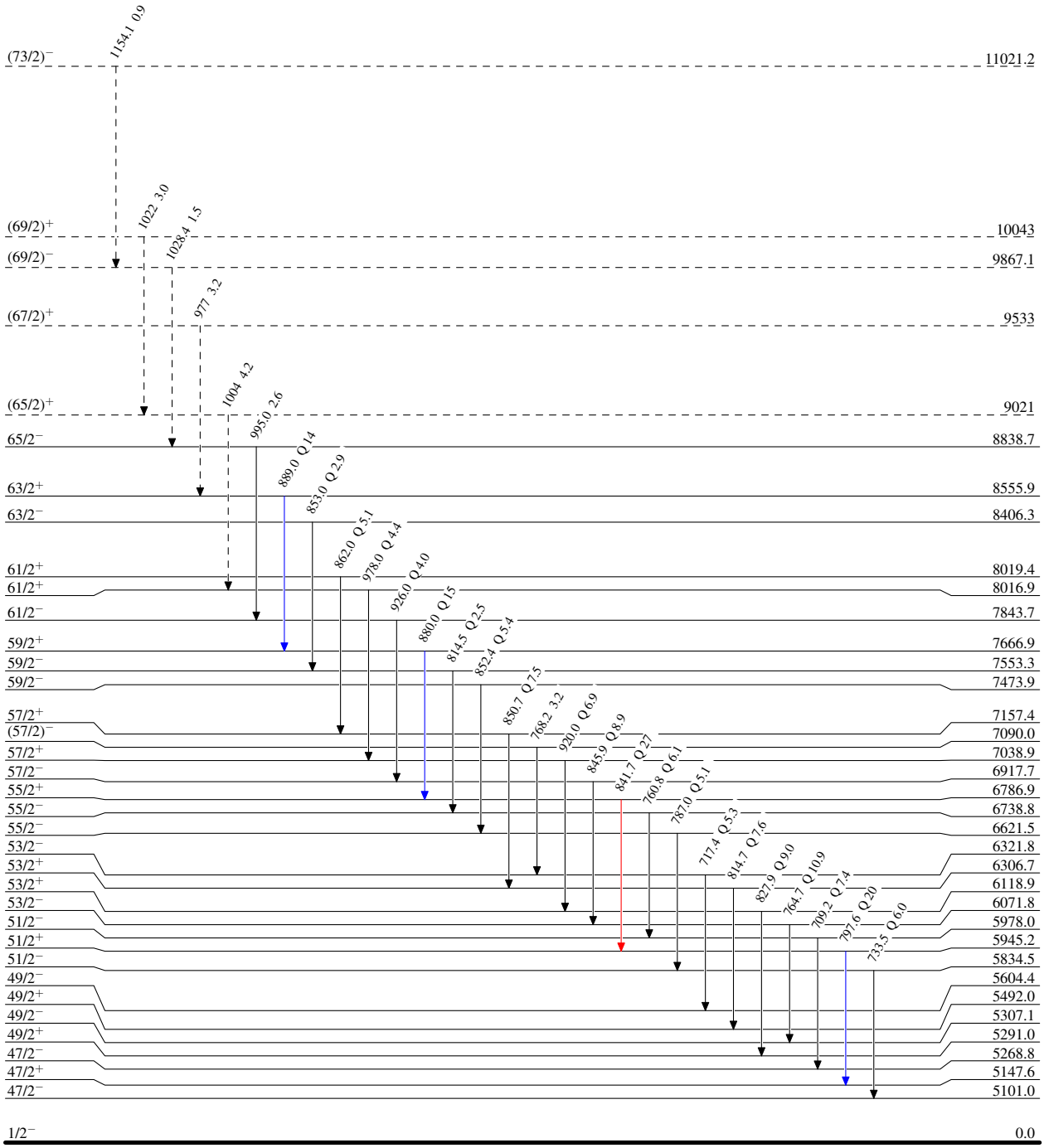
^{154}Sm(^{30}Si,5nγ) 1992Bu14

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)



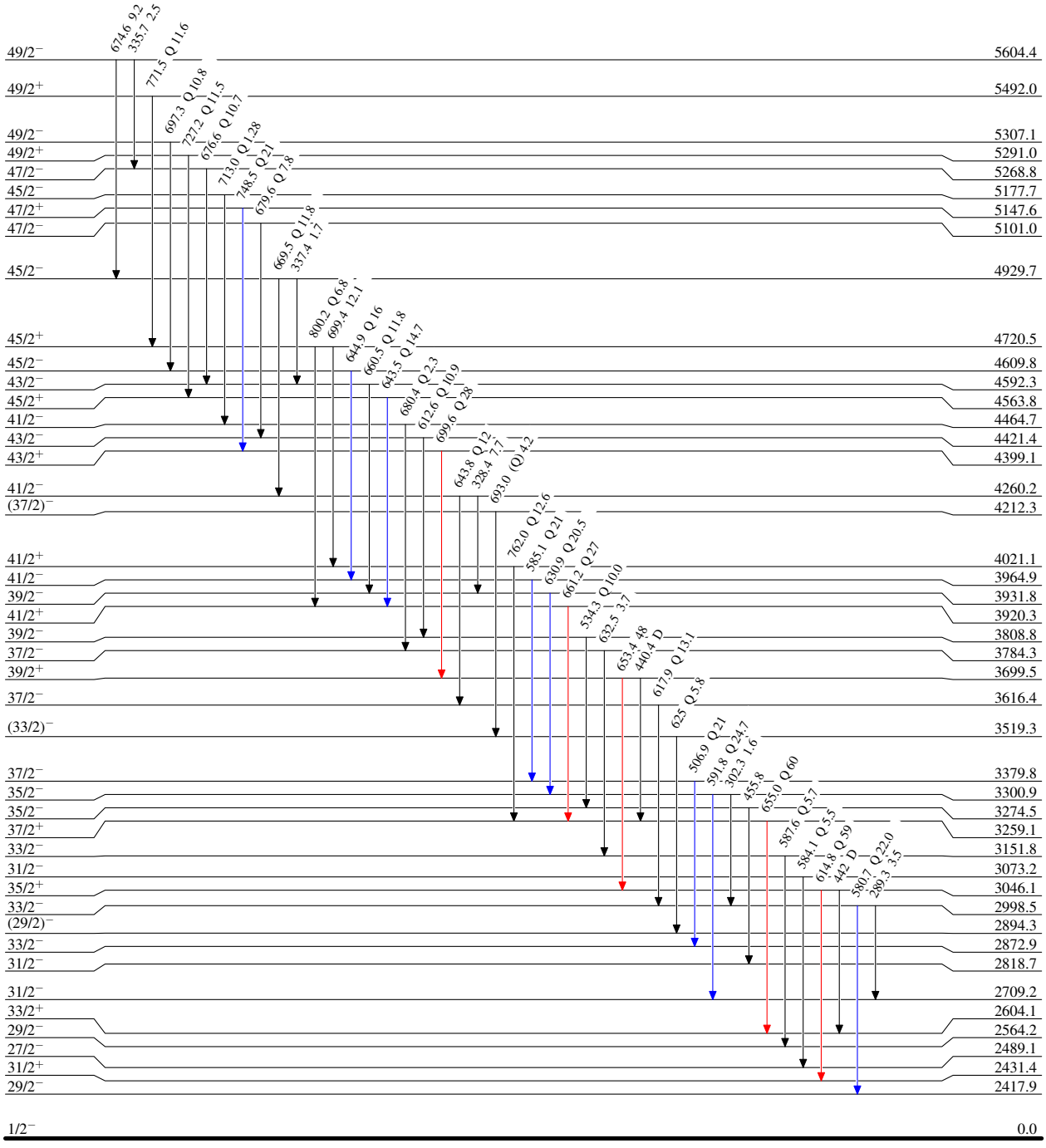
$^{179}_{76}Os_{103}$

^{154}Sm(^{30}Si,5nγ) 1992Bu14

Level Scheme (continued)

Intensities: Relative I_γ

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



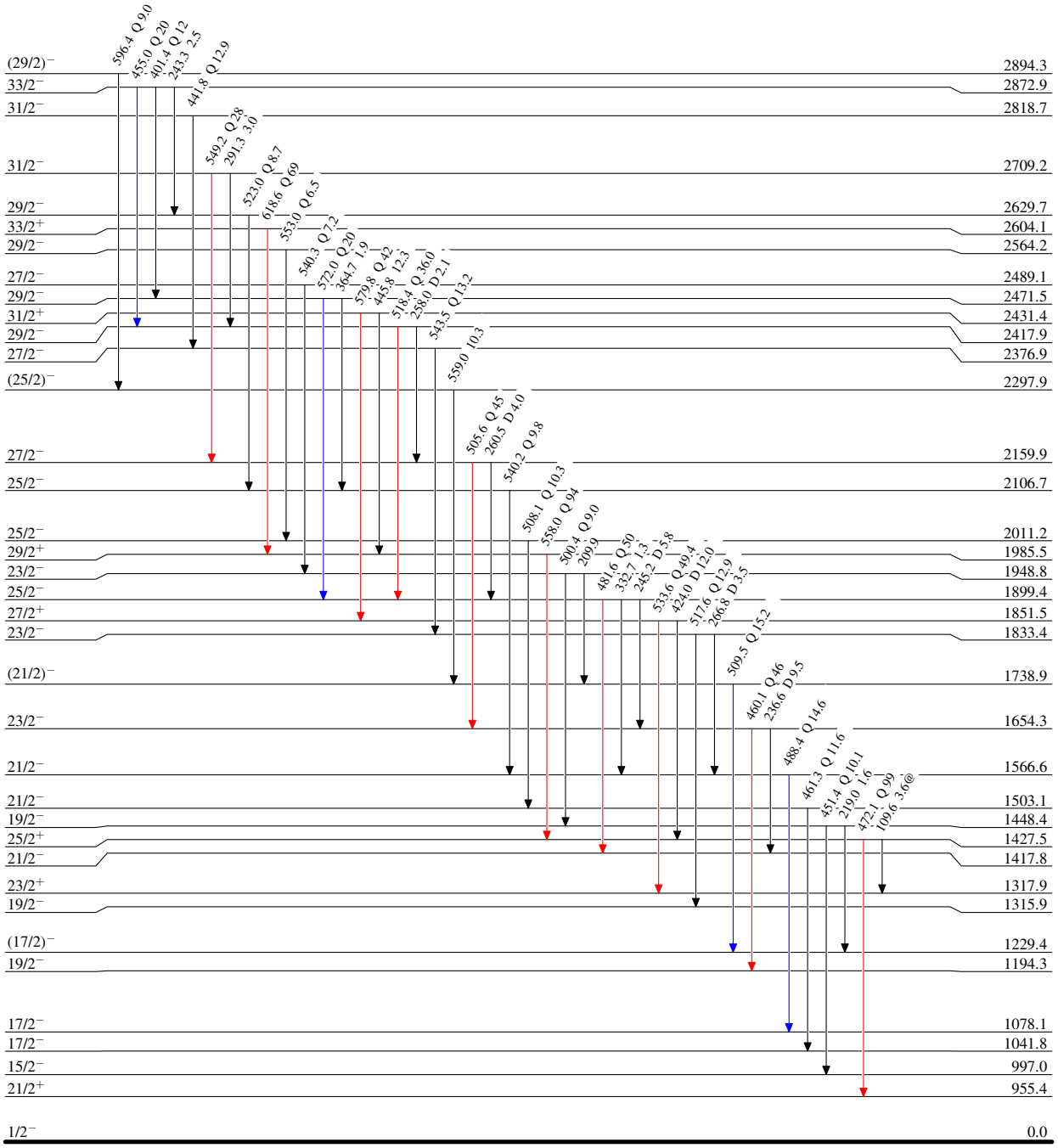
$^{179}_{76}Os_{103}$

^{154}Sm(^{30}Si,5nγ) 1992Bu14

Level Scheme (continued)

Intensities: Relative I_γ
@ Multiply placed: intensity suitably divided

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



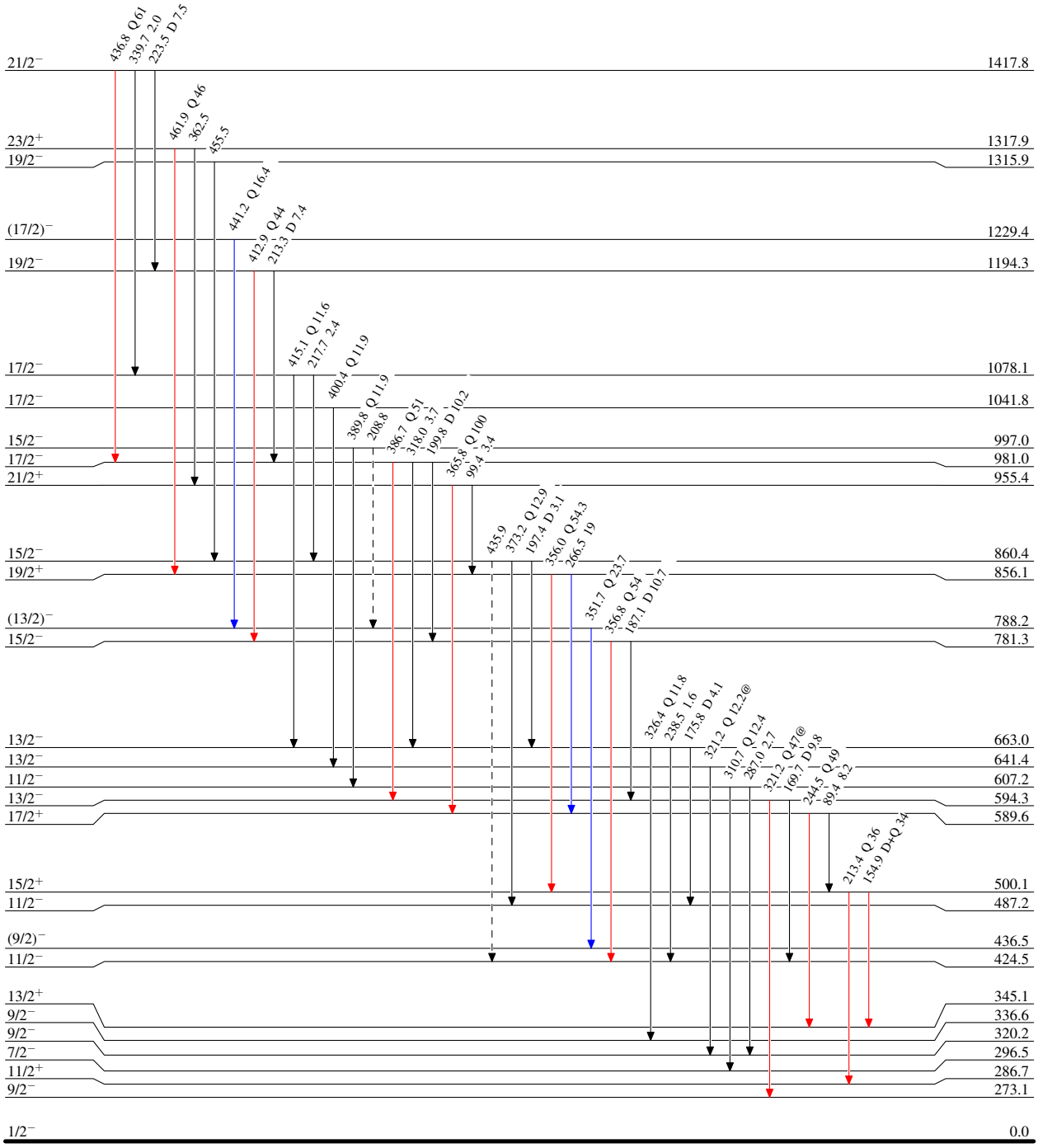
$^{179}_{76}Os_{103}$

^{154}Sm(^{30}Si,5nγ) 1992Bu14

Level Scheme (continued)

Intensities: Relative I_γ
@ Multiply placed: intensity suitably divided

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



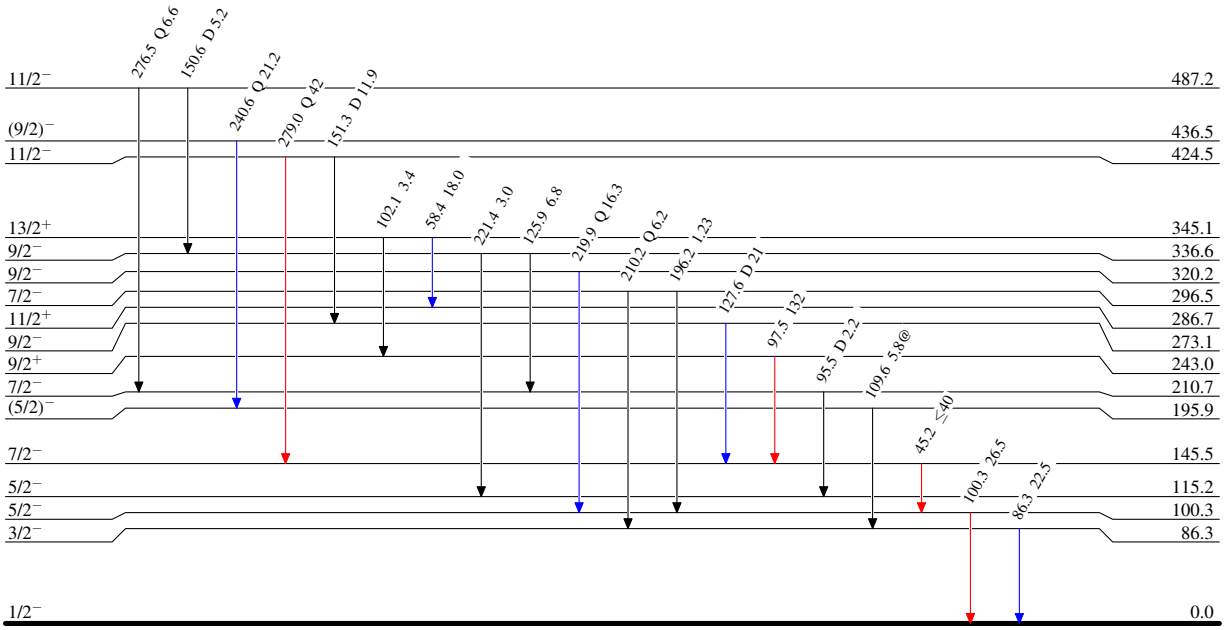
$^{179}_{76}Os_{103}$

^{154}Sm(^{30}Si,5nγ) 1992Bu14

Level Scheme (continued)

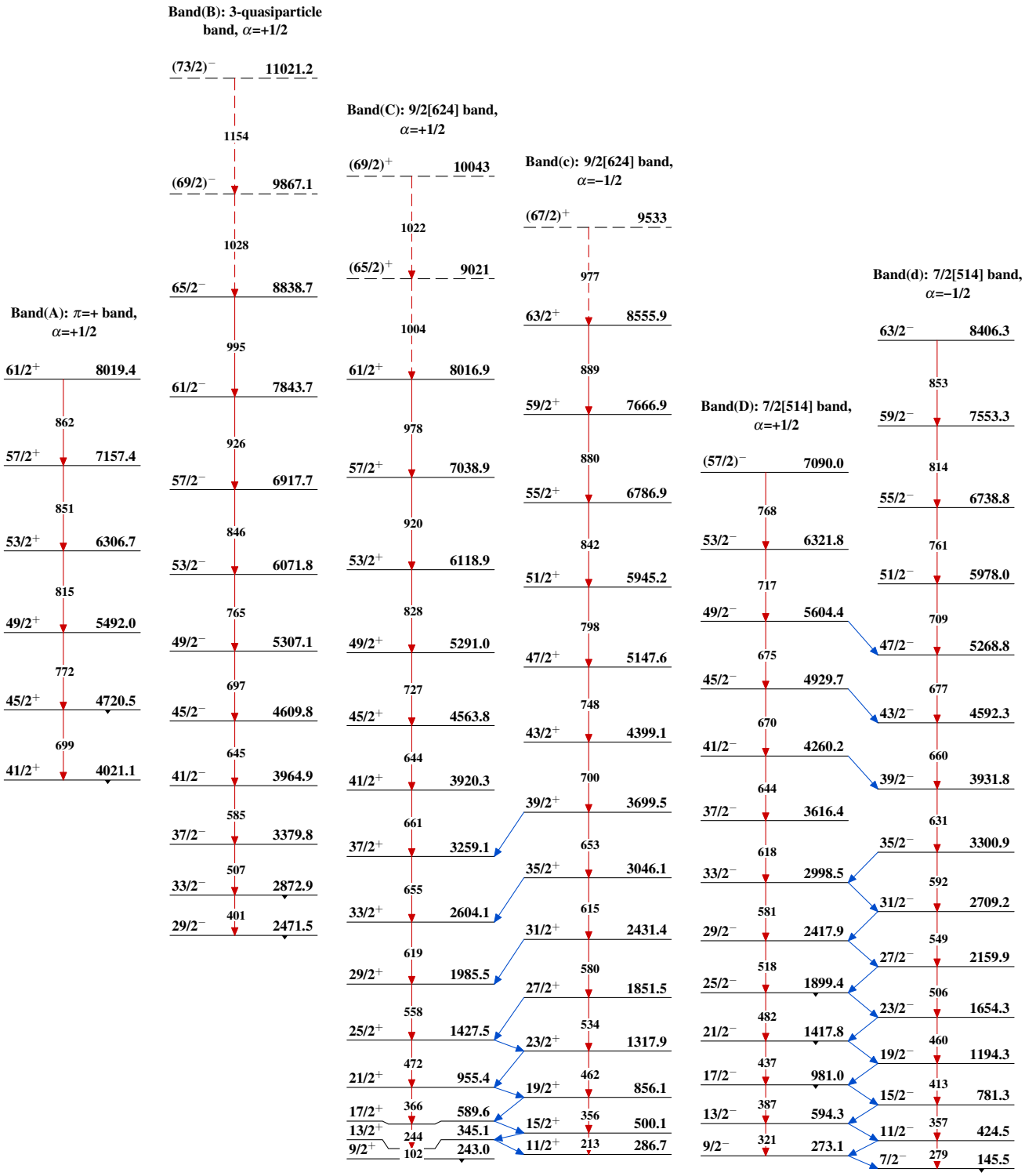
Intensities: Relative I_γ
@ Multiply placed: intensity suitably divided

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



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

$^{154}Sm(^{30}Si,5n\gamma)$ 1992Bu14



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

$^{154}Sm(^{30}Si,5n\gamma)$ 1992Bu14 (continued)