Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Yu. Khazov, I. Mitropolsky, A. Rodionov	NDS 107, 2715 (2006)	17-Jul-2022

Q(β^-)=−8.00×10^3 *SY*; S(n)=9.24×10^3 *4*; S(p)=3.88×10^3 *7*; Q(α)=1.79×10^3 *4* 2021Wa16

In the comments for each rotational band the mean-squared deviation Δ of the energy values calculated with use of Variable Moment of Inertia model from the experimental ones is presented.

^{131}Nd Levels

Cross Reference (XREF) Flags

A ^{131}Pm ε decay (6.3 s)
B ^{94}Mo(^{40}Ca,2pnγ)

E(level)‡	Jπ†	$T_{1/2}$	XREF	Comments
0.0#	(5/2$^+$)	25.4 s *9*	AB	%ε+%β$^+$=100; %εp>0 Delayed proton emitter; E(p)=1.7 to 6.4 MeV (1986Wi15). Other: 1977Bo02. Jπ: from statistical model calculations of the final state feedings in ^{130}Ce (1986Wi15). $T_{1/2}$: weighted average of 26.6 s *17* (1999Ga41), 25.0 s *12* (1983ViZU, 1993Al03), 25 s *4* (1986Wi15), 24 s *3*(1977Bo02); Other: $T_{1/2}$=33 s *3*(1996Ge12).
113.9& *6*	(1/2$^+$)		B	
140.98a *23*	(3/2$^+$)		B	
146.04@ *20*	(7/2$^+$)		AB	
191.4d *8*	(1/2$^-$)		B	
210.8c *5*	(7/2$^-$)	≈50 ns	B	$T_{1/2}$: from 1990JaZU. Jπ: (E1) γ to (5/2$^+$) g.s.; Jπ assignments of this band were made on systematics of N=71 nuclei and in-band properties.
225.8e *7*	(3/2$^-$)		B	
300.0d *6*	(5/2$^-$)		B	
302.8b *5*	(9/2$^-$)		B	
321.0& *3*	(5/2$^+$)		B	
331.19# *17*	(9/2$^+$)		AB	
380.7 *4*	(7/2$^+$)		B	
387.74a *17*	(7/2$^+$)		B	
394.5e *6*	(7/2$^-$)		B	
453.4c *5*	(11/2$^-$)		B	
515.0d *6*	(9/2$^-$)		B	
551.41@ *20*	(11/2$^+$)		AB	
666.1& *3*	(9/2$^+$)		B	
676.9b *5*	(13/2$^-$)		B	
693.0e *6*	(11/2$^-$)		B	
760.60a *22*	(11/2$^+$)		B	
801.58# *21*	(13/2$^+$)		B	
842.7d *6*	(13/2$^-$)		B	
895.8c *5*	(15/2$^-$)		B	
1036.4?h *10*	(11/2$^-$)		B	
1079.47@ *21*	(15/2$^+$)		B	
1092.3& *3*	(13/2$^+$)		B	

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Adopted Levels, Gammas (continued)

^{131}Nd Levels (continued)

E(level)‡	Jπ†	XREF	Comments
1116.0[e] 6	(15/2⁻)	B	
1198.64[a] 24	(15/2⁺)	B	
1201.0[b] 5	(17/2⁻)	B	
1282.7[d] 6	(17/2⁻)	B	
1342.4[h] 6	(15/2⁻)	B	
1377.75[#] 23	(17/2⁺)	B	
1459.5[c] 5	(19/2⁻)	B	
1570.2[&] 3	(17/2⁺)	B	
1645.4[e] 6	(19/2⁻)	B	
1683.6[a] 3	(19/2⁺)	B	
1695.59[@] 24	(19/2⁺)	B	
1808.2[b] 5	(21/2⁻)	B	
1814.4[h] 6	(19/2⁻)	B	
1825.6[d] 6	(21/2⁻)	B	
2021.16[#] 25	(21/2⁺)	B	Jπ: stretched Q γ to (17/2⁺).
2085.5[f] 11	(17/2⁺)	B	Jπ: stretched Q γ from (21/2⁺) level, and γγ coin.
2097.7[c] 5	(23/2⁻)	B	
2106.1[&] 3	(21/2⁺)	B	
2239.0[a] 3	(23/2⁺)	B	
2255.0[e] 6	(23/2⁻)	B	Jπ: stretched Q γ to (19/2⁻) levels, and γγ coin.
2357.8[@] 3	(23/2⁺)	B	Jπ: stretched Q γ to (19/2⁺).
2410.5[h] 7	(23/2⁻)	B	Jπ: stretched (Q) γ to (19/2⁻) level, and γγ coin.
2433.5[f] 5	(21/2⁺)	B	Jπ: (E1) γ to (19/2⁻), (E2) γ to (17/2⁺)levels.
2447.0[b] 5	(25/2⁻)	B	Jπ: D+Q γ to (23/2⁻) and Q γ to (21/2⁻) levels, and γγ coin.
2458.6[d] 6	(25/2⁻)	B	Jπ: stretched Q γ′s from (29/2⁻) and to (21/2⁻) levels, and γγ coin.
2685.2[#] 3	(25/2⁺)	B	Jπ: stretched Q γ to (21/2⁺).
2716.9[&] 3	(25/2⁺)	B	
2770.7[c] 6	(27/2⁻)	B	Jπ: D+Q γ to (25/2⁻) and Q γ to (23/2⁻) levels, and γγ coin.
2870.8[a] 4	(27/2⁺)	B	
2901.6[f] 6	(25/2⁺)	B	Jπ: stretched (Q) γ to (21/2⁺) levels.
2912.4[e] 6	(27/2⁻)	B	
3025.8[@] 3	(27/2⁺)	B	
3105.4[h] 9	(27/2⁻)	B	
3126.5[b] 6	(29/2⁻)	B	
3155.4[d] 6	(29/2⁻)	B	
3332.9[#] 3	(29/2⁺)	B	
3376.0[&] 4	(29/2⁺)	B	
3470.1[f] 8	(29/2⁺)	B	
3474.5[c] 6	(31/2⁻)	B	
3578.0[a] 4	(31/2⁺)	B	
3589.8[e] 6	(31/2⁻)	B	
3661.4[@] 4	(31/2⁺)	B	Jπ: stretched Q γ to (27/2⁺).
3846.1[b] 6	(33/2⁻)	B	
3861.4[h] 13	(31/2⁻)	B	
3904.6[d] 6	(33/2⁻)	B	
3991.8[#] 4	(33/2⁺)	B	

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Adopted Levels, Gammas (continued)

^{131}Nd Levels (continued)

E(level)‡	Jπ†	XREF	E(level)‡	Jπ†	XREF	E(level)‡	Jπ†	XREF
4057.5[&] 5	(33/2+)	B	6469.2[&] 8	(45/2+)	B	9762.8[d] 15	(57/2−)	B
4163.3[f] 9	(33/2+)	B	6490.5[d] 9	(45/2−)	B	9832.8?[#] 17	(57/2+)	B
4200.3[c] 6	(35/2−)	B	6558.7[#] 8	(45/2+)	B	10188.3[c] 12	(59/2−)	B
4284.6[e] 7	(35/2−)	B	6816.5[c] 9	(47/2−)	B	10288.2[e] 19	(59/2−)	B
4348.9[a] 4	(35/2+)	B	6914.8[e] 11	(47/2−)	B	10363.7[a] 20	(59/2+)	B
4349.2[g] 7	(35/2−)	B	7053.7[a] 9	(47/2+)	B	10434.0[@] 20	(59/2+)	B
4370.6[@] 4	(35/2+)	B	7072.0[@] 9	(47/2+)	B	10554.7[g] 23	(59/2−)	B
4603.4[b] 6	(37/2−)	B	7095.6[g] 14	(47/2−)	B	10688.8[&] 13	(61/2+)	B
4699.5[d] 7	(37/2−)	B	7420.3[&] 9	(49/2+)	B	10833.7[b] 15	(61/2−)	B
4744.9[#] 5	(37/2+)	B	7430.9[b] 9	(49/2−)	B	11000.8[d] 18	(61/2−)	B
4789.1[&] 5	(37/2+)	B	7498.4[d] 11	(49/2−)	B	11403.3[c] 16	(63/2−)	B
4945.7[f] 11	(37/2+)	B	7574.7[#] 9	(49/2+)	B	11617.8[a] 22	(63/2+)	B
4984.6[c] 6	(39/2−)	B	7867.0[c] 10	(51/2−)	B	11621.2?[e] 22	(63/2−)	B
5058.8[e] 8	(39/2−)	B	7964.2[e] 12	(51/2−)	B	11723.0[@] 22	(63/2+)	B
5168.8[a] 5	(39/2+)	B	8089.7[a] 13	(51/2+)	B	11927.8[&] 16	(65/2+)	B
5185.5[g] 8	(39/2−)	B	8103.0[@] 13	(51/2+)	B	12095.8[b] 18	(65/2−)	B
5203.6[@] 5	(39/2+)	B	8164.7[g] 17	(51/2−)	B	12256.8[d] 21	(65/2−)	B
5453.8[b] 7	(41/2−)	B	8438.3[&] 11	(53/2+)	B	12675.3[c] 19	(67/2−)	B
5559.1[d] 8	(41/2−)	B	8510.2[b] 10	(53/2−)	B	12950.8[a] 24	(67/2+)	B
5586.4[&] 6	(41/2+)	B	8587.8[d] 12	(53/2−)	B	13241.8[&] 19	(69/2+)	B
5612.5[#] 6	(41/2+)	B	8668.7[#] 14	(53/2+)	B	13432.8[b] 21	(69/2−)	B
5772.7?[f] 15	(41/2+)	B	9004.5[c] 11	(55/2−)	B	13515.7?[d] 24	(69/2−)	B
5856.5[c] 7	(43/2−)	B	9076.2[e] 16	(55/2−)	B	14011.3[c] 21	(71/2−)	B
5938.6[e] 9	(43/2−)	B	9190.7[a] 17	(55/2+)	B	14637.8[&] 22	(73/2+)	B
6077.6[a] 7	(43/2+)	B	9224.0[@] 17	(55/2+)	B	15418.2?[c] 24	(75/2−)	B
6103.6[g] 10	(43/2−)	B	9317.7[g] 20	(55/2−)	B	16106.9?[&] 24	(77/2+)	B
6107.1[@] 7	(43/2+)	B	9526.3[&] 12	(57/2+)	B			
6405.1[b] 7	(45/2−)	B	9641.7[b] 11	(57/2−)	B			

† From stretched Q(assumed E2) and D+Q(assumed M1+E2) γ cascades to bandhead, and regular sequence of transitions in a cascade, except as noted.

‡ From least-squares fit to Eγ's.

[#] Band(A): band based on configuration=ν5/2[402], α=+1/2; (Δ=115 keV). J=(37/2+)/(57/2+) values assigned from strong in-band stretched Q (assumed E2) transitions.

[@] Band(B): band based on configuration=ν5/2[402], α=−1/2; (Δ=181 keV). J=(39/2+)/(63/2+) values assigned from strong in-band stretched Q (assumed E2) transitions. Unified band A+B (K=5/2, Δ=158 keV).

[&] Band(C): band based on configuration=ν1/2[411], α=+1/2; (Δ=186 keV). J=(21/2+)/(77/2+) values assigned from strong in-band stretched Q (assumed E2) transitions.

[a] Band(D): band based on configuration=ν1/2[411], α=−1/2; (Δ=245 keV). J=(23/2+)/(67/2+) values assigned from strong in-band stretched Q (assumed E2) transitions. Unified band C+D (K=1/2, Δ=353 keV).

[b] Band(E): band based on configuration=ν7/2[523], α=+1/2; (Δ=140 keV). J=(45/2−)/(69/2−) values assigned from strong in-.

[c] Band(F): band based on configuration=ν7/2[523], α=−1/2; (Δ=105 keV). J=(43/2−)/(75/2−) values assigned from strong in-band stretched Q (assumed E2) transitions. Unified band e+F (K=7/2, Δ=106 keV).

[d] Band(G): band based on configuration=ν1/2[541], α=+1/2; (Δ>500 keV). J=(33/2−)/(65/2−) values assigned from strong in-band stretched Q (assumed E2) transitions.

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Adopted Levels, Gammas (continued)

^{131}Nd Levels (continued)

[e] Band(H): band based on configuration=$\nu 1/2[541]$, $\alpha=-1/2$; (Δ=114 keV). J=(23/2$^-$)/(63/2$^-$) values assigned from strong in-band stretched Q (assumed E2) transitions. Unified band G+H (K=1/2, Δ=95 keV).
[f] Band(I): band based on (17/2$^+$); (Δ=39 keV).
[g] Band(J): band based on (35/2$^-$); (Δ=4 keV). J=(39/2$^-$)/(59/2$^-$) values assigned from strong in-band stretched Q (assumed E2) transitions.
[h] Band(K): band based on (11/2$^-$), ΔJ=2; (Δ=25 keV).

$\gamma(^{131}Nd)$

E_i(level)	J_i^π	E_γ †	I_γ	E_f	J_f^π	Mult.	Comments
140.98	(3/2$^+$)	140.9 *5*		0.0	(5/2$^+$)	D+Q	
146.04	(7/2$^+$)	145.9 *4*		0.0	(5/2$^+$)	D+Q	
210.8	(7/2$^-$)	210.6 *5*	100	0.0	(5/2$^+$)	(E1)	B(E1)(W.u.)≈5.4×10^{-7} Mult.: RUL does not exclude mult.=M1 or =E2, but the transition states in the scheme between J^π=(7/2$^-$) and J^π=(5/2$^+$) states.
300.0	(5/2$^-$)	108.6 *5*		191.4	(1/2$^-$)	Q	
302.8	(9/2$^-$)	92.2 *5*		210.8	(7/2$^-$)	(D+Q)	
321.0	(5/2$^+$)	179.9 *3*	100	140.98	(3/2$^+$)	D+Q	
		207.1 *5*	67 *7*	113.9	(1/2$^+$)	Q	
331.19	(9/2$^+$)	185.00 *19*	100	146.04	(7/2$^+$)	D+Q	
		331.3 *2*	48 *3*	0.0	(5/2$^+$)	Q	
380.7	(7/2$^+$)	380.6		0.0	(5/2$^+$)		
387.74	(7/2$^+$)	67‡ *1*	<8	321.0	(5/2$^+$)	(D+Q)	
		246.8 *2*	100	140.98	(3/2$^+$)	Q	
		387.7 *2*	62 *3*	0.0	(5/2$^+$)	D+Q	
394.5	(7/2$^-$)	94.5 *3*	56 *4*	300.0	(5/2$^-$)	(D+Q)	
		168.7 *2*	100	225.8	(3/2$^-$)	Q	
453.4	(11/2$^-$)	150.5 *2*	100	302.8	(9/2$^-$)	D+Q	
		242.6 *2*	21 *2*	210.8	(7/2$^-$)	Q	
515.0	(9/2$^-$)	215.0 *2*	100	300.0	(5/2$^-$)	Q	
551.41	(11/2$^+$)	220.16 *19*	100	331.19	(9/2$^+$)	D+Q	
		405.5 *2*	88 *5*	146.04	(7/2$^+$)	Q	
666.1	(9/2$^+$)	278.2 *5*	34 *3*	387.74	(7/2$^+$)	D+Q	
		285.9 *5*	12 *2*	380.7	(7/2$^+$)	(D+Q)	
		345.1 *2*	100	321.0	(5/2$^+$)	Q	
676.9	(13/2$^-$)	223.3 *2*	100	453.4	(11/2$^-$)	D+Q	
		374.1 *2*	65 *4*	302.8	(9/2$^-$)	Q	
693.0	(11/2$^-$)	177.8 *5*	20.3 *14*	515.0	(9/2$^-$)	D+Q	
		298.5 *2*	100	394.5	(7/2$^-$)	Q	
760.60	(11/2$^+$)	372.9 *2*	100	387.74	(7/2$^+$)	Q	
		379.7 *3*	23 *1*	380.7	(7/2$^+$)	Q	
801.58	(13/2$^+$)	250.3 *2*	73 *4*	551.41	(11/2$^+$)	D+Q	
		470.4 *2*	100	331.19	(9/2$^+$)	Q	
842.7	(13/2$^-$)	327.8 *2*	100 *4*	515.0	(9/2$^-$)	Q	
895.8	(15/2$^-$)	218.9 *2*	56 *3*	676.9	(13/2$^-$)	D+Q	
		442.4 *2*	100	453.4	(11/2$^-$)	Q	
1079.47	(15/2$^+$)	277.9 *2*	59 *3*	801.58	(13/2$^+$)	D+Q	
		528.0 *2*	100	551.41	(11/2$^+$)	Q	
1092.3	(13/2$^+$)	331.6 *5*	33 *3*	760.60	(11/2$^+$)	D+Q	
		426.1 *2*	100	666.1	(9/2$^+$)	Q	
1116.0	(15/2$^-$)	273.4 *5*	9.4 *10*	842.7	(13/2$^-$)	(D+Q)	
		423.0 *2*	100	693.0	(11/2$^-$)	Q	
1198.64	(15/2$^+$)	438.0 *2*	100	760.60	(11/2$^+$)	Q	
1201.0	(17/2$^-$)	305.1 *2*	61 *4*	895.8	(15/2$^-$)	D+Q	

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Adopted Levels, Gammas (continued)

$\gamma(^{131}Nd)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.
1201.0	(17/2⁻)	524.1 *2*	100	676.9	(13/2⁻)	Q
1282.7	(17/2⁻)	440.0 *2*	100	842.7	(13/2⁻)	Q
1342.4	(15/2⁻)	306[‡] *1*	<30	1036.4?	(11/2⁻)	(Q)
		446.7 *5*	78 *8*	895.8	(15/2⁻)	(D+Q)
		665.5 *3*	100	676.9	(13/2⁻)	(D+Q)
1377.75	(17/2⁺)	298.2 *2*	46 *4*	1079.47	(15/2⁺)	D+Q
		576.3 *2*	100	801.58	(13/2⁺)	Q
1459.5	(19/2⁻)	258.4 *2*	29 *2*	1201.0	(17/2⁻)	D+Q
		563.9 *2*	100	895.8	(15/2⁻)	Q
1570.2	(17/2⁺)	372.0 *5*	15 *2*	1198.64	(15/2⁺)	(D+Q)
		477.9 *2*	100	1092.3	(13/2⁺)	Q
1645.4	(19/2⁻)	362.6 *5*	8 *1*	1282.7	(17/2⁻)	(D+Q)
		529.4 *2*	100	1116.0	(15/2⁻)	Q
1683.6	(19/2⁺)	484.9 *2*	100	1198.64	(15/2⁺)	Q
		604.5 *3*	20 *2*	1079.47	(15/2⁺)	Q
1695.59	(19/2⁺)	318.0 *3*	36 *4*	1377.75	(17/2⁺)	D+Q
		496.9 *5*	8.5 *9*	1198.64	(15/2⁺)	(Q)
		616.0 *2*	100	1079.47	(15/2⁺)	Q
1808.2	(21/2⁻)	349.1 *2*	37 *3*	1459.5	(19/2⁻)	D+Q
		607.1 *2*	100	1201.0	(17/2⁻)	Q
1814.4	(19/2⁻)	472.0 *3*	100	1342.4	(15/2⁻)	(Q)
		613.5 *5*	44 *5*	1201.0	(17/2⁻)	(D+Q)
1825.6	(21/2⁻)	542.9 *2*	100	1282.7	(17/2⁻)	Q
2021.16	(21/2⁺)	325.5 *3*	25 *2*	1695.59	(19/2⁺)	(D+Q)
		643.4 *2*	100	1377.75	(17/2⁺)	Q
2097.7	(23/2⁻)	289.7 *2*	28.5 *11*	1808.2	(21/2⁻)	D+Q
		637.9 *2*	100	1459.5	(19/2⁻)	Q
2106.1	(21/2⁺)	536.0 *2*	100	1570.2	(17/2⁺)	Q
2239.0	(23/2⁺)	555.4 *2*	100	1683.6	(19/2⁺)	Q
2255.0	(23/2⁻)	609.6 *2*	100	1645.4	(19/2⁻)	Q
2357.8	(23/2⁺)	336.9 *3*	28 *2*	2021.16	(21/2⁺)	D+Q
		662.2 *2*	100	1695.59	(19/2⁺)	Q
2410.5	(23/2⁻)	596.1 *3*	100	1814.4	(19/2⁻)	(Q)
2433.5	(21/2⁺)	348 *1*	<71	2085.5	(17/2⁺)	(Q)
		788 *1*	<71	1645.4	(19/2⁻)	(E1)
		863.3 *5*	100	1570.2	(17/2⁺)	(E2)
2447.0	(25/2⁻)	348.6 *3*	32 *4*	2097.7	(23/2⁻)	D+Q
		621.4 *3*	32 *2*	1825.6	(21/2⁻)	Q
		638.9 *2*	100	1808.2	(21/2⁻)	Q
2458.6	(25/2⁻)	632.9 *2*	100	1825.6	(21/2⁻)	Q
		650.3 *5*	26 *3*	1808.2	(21/2⁻)	Q
2685.2	(25/2⁺)	327.0 *5*	25 *3*	2357.8	(23/2⁺)	(D+Q)
		579.0 *5*	17 *2*	2106.1	(21/2⁺)	(Q)
		664.0 *2*	100	2021.16	(21/2⁺)	Q
2716.9	(25/2⁺)	610.8 *2*	100	2106.1	(21/2⁺)	Q
		695.5 *3*	38 *4*	2021.16	(21/2⁺)	(Q)
2770.7	(27/2⁻)	311.7 *5*	7.9 *10*	2458.6	(25/2⁻)	(D+Q)
		323.6 *3*	19.4 *15*	2447.0	(25/2⁻)	D+Q
		673.1 *2*	100	2097.7	(23/2⁻)	Q
2870.8	(27/2⁺)	631.8 *2*	100	2239.0	(23/2⁺)	Q
2901.6	(25/2⁺)	468.1 *5*	100	2433.5	(21/2⁺)	(Q)
		646 *1*	<71	2255.0	(23/2⁻)	(E1)
		796 *1*	<71	2106.1	(21/2⁺)	(Q)
2912.4	(27/2⁻)	657.4 *2*	100	2255.0	(23/2⁻)	Q
3025.8	(27/2⁺)	340.6 *5*	25 *3*	2685.2	(25/2⁺)	(D+Q)

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

γ(^{131}Nd) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.
3025.8	(27/2$^+$)	668.1 *2*	100	2357.8	(23/2$^+$)	(Q)
3105.4	(27/2$^-$)	694.9 *5*	100	2410.5	(23/2$^-$)	(Q)
3126.5	(29/2$^-$)	355.6 *3*	23 *2*	2770.7	(27/2$^-$)	D+Q
		667.8 *5*	7.9 *15*	2458.6	(25/2$^-$)	(Q)
		679.6 *2*	100	2447.0	(25/2$^-$)	Q
3155.4	(29/2$^-$)	696.9 *2*	100	2458.6	(25/2$^-$)	Q
		708.2 *5*	13 *2*	2447.0	(25/2$^-$)	(Q)
3332.9	(29/2$^+$)	307.4 *5*	23 *3*	3025.8	(27/2$^+$)	(D+Q)
		647.5 *2*	100	2685.2	(25/2$^+$)	Q
3376.0	(29/2$^+$)	659.1 *2*	100	2716.9	(25/2$^+$)	Q
3470.1	(29/2$^+$)	568.5 *5*	100	2901.6	(25/2$^+$)	(Q)
		753[‡] *1*	<44	2716.9	(25/2$^+$)	(Q)
3474.5	(31/2$^-$)	347.9 *3*	22 *2*	3126.5	(29/2$^-$)	D+Q
		703.9 *2*	100	2770.7	(27/2$^-$)	Q
3578.0	(31/2$^+$)	707.3 *2*	100	2870.8	(27/2$^+$)	Q
3589.8	(31/2$^-$)	677.4 *2*	100	2912.4	(27/2$^-$)	Q
3661.4	(31/2$^+$)	328.5 *5*	31 *4*	3332.9	(29/2$^+$)	(D+Q)
		635.9 *3*	100	3025.8	(27/2$^+$)	(Q)
3846.1	(33/2$^-$)	371.3 *5*	20 *2*	3474.5	(31/2$^-$)	D+Q
		719.5 *2*	100	3126.5	(29/2$^-$)	Q
3861.4	(31/2$^-$)	756 *1*	100	3105.4	(27/2$^-$)	(Q)
3904.6	(33/2$^-$)	749.2 *2*	100	3155.4	(29/2$^-$)	Q
3991.8	(33/2$^+$)	330.8 *5*	30 *4*	3661.4	(31/2$^+$)	(D+Q)
		658.7 *3*	100	3332.9	(29/2$^+$)	(Q)
4057.5	(33/2$^+$)	681.4 *3*	100	3376.0	(29/2$^+$)	(Q)
4163.3	(33/2$^+$)	693.2 *5*	100	3470.1	(29/2$^+$)	(Q)
		787[‡] *1*	<44	3376.0	(29/2$^+$)	(Q)
4200.3	(35/2$^-$)	353.7 *5*	21 *3*	3846.1	(33/2$^-$)	(D+Q)
		725.9 *2*	100	3474.5	(31/2$^-$)	Q
4284.6	(35/2$^-$)	694.8 *3*	100	3589.8	(31/2$^-$)	(Q)
4348.9	(35/2$^+$)	687.8 *5*	18 *2*	3661.4	(31/2$^+$)	(Q)
		770.9 *2*	100	3578.0	(31/2$^+$)	Q
4349.2	(35/2$^-$)	759.6 *5*	71 *7*	3589.8	(31/2$^-$)	(Q)
		874.6 *5*	100	3474.5	(31/2$^-$)	(Q)
4370.6	(35/2$^+$)	378.3 *5*	33 *5*	3991.8	(33/2$^+$)	(D+Q)
		709.0 *5*	89 *9*	3661.4	(31/2$^+$)	(Q)
		792.7 *5*	100	3578.0	(31/2$^+$)	Q
4603.4	(37/2$^-$)	403.2 *5*	31 *4*	4200.3	(35/2$^-$)	(D+Q)
		757.2 *2*	100	3846.1	(33/2$^-$)	Q
4699.5	(37/2$^-$)	794.9 *3*	100	3904.6	(33/2$^-$)	Q
4744.9	(37/2$^+$)	753.1 *3*	100	3991.8	(33/2$^+$)	Q
4789.1	(37/2$^+$)	731.6 *3*	100	4057.5	(33/2$^+$)	(Q)
4945.7	(37/2$^+$)	782.4 *5*	100	4163.3	(33/2$^+$)	(Q)
4984.6	(39/2$^-$)	380.5 *5*	23 *3*	4603.4	(37/2$^-$)	(D+Q)
		784.3 *2*	100	4200.3	(35/2$^-$)	Q
5058.8	(39/2$^-$)	774.2 *3*	100	4284.6	(35/2$^-$)	(Q)
5168.8	(39/2$^+$)	819.9 *2*	100	4348.9	(35/2$^+$)	(Q)
5185.5	(39/2$^-$)	836.3 *5*	100	4349.2	(35/2$^-$)	(Q)
5203.6	(39/2$^+$)	832.9 *3*	100	4370.6	(35/2$^+$)	(Q)
		855.1 *5*	54 *5*	4348.9	(35/2$^+$)	(Q)
5453.8	(41/2$^-$)	468.6 *5*	25 *4*	4984.6	(39/2$^-$)	(D+Q)
		850.7 *3*	100	4603.4	(37/2$^-$)	Q
5559.1	(41/2$^-$)	859.6 *3*	100	4699.5	(37/2$^-$)	(Q)
5586.4	(41/2$^+$)	797.0 *5*	100	4789.1	(37/2$^+$)	(Q)
		841.7 *5*	56 *9*	4744.9	(37/2$^+$)	(Q)

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

γ(^{131}Nd) (continued)

E_i(level)	J_i^π	E_γ †	I_γ	E_f	J_f^π	Mult.
5612.5	(41/2$^+$)	823.3 *5*	45 *5*	4789.1	(37/2$^+$)	(Q)
		867.6 *5*	100	4744.9	(37/2$^+$)	(Q)
5772.7?	(41/2$^+$)	827‡ *1*	100	4945.7	(37/2$^+$)	(Q)
5856.5	(43/2$^-$)	871.9 *3*	100	4984.6	(39/2$^-$)	(Q)
5938.6	(43/2$^-$)	879.8 *5*	100	5058.8	(39/2$^-$)	(Q)
6077.6	(43/2$^+$)	908.8 *5*	100	5168.8	(39/2$^+$)	(Q)
6103.6	(43/2$^-$)	918.1 *5*	100	5185.5	(39/2$^-$)	(Q)
6107.1	(43/2$^+$)	903.5 *5*	100	5203.6	(39/2$^+$)	(Q)
6405.1	(45/2$^-$)	951.3 *3*	100	5453.8	(41/2$^-$)	(Q)
6469.2	(45/2$^+$)	882.8 *5*	100	5586.4	(41/2$^+$)	(Q)
6490.5	(45/2$^-$)	931.4 *5*	100	5559.1	(41/2$^-$)	(Q)
6558.7	(45/2$^+$)	946.2 *5*	100	5612.5	(41/2$^+$)	(Q)
6816.5	(47/2$^-$)	960.0 *5*	100	5856.5	(43/2$^-$)	(Q)
6914.8	(47/2$^-$)	976.2 *5*	100	5938.6	(43/2$^-$)	(Q)
7053.7	(47/2$^+$)	976.1 *5*	100	6077.6	(43/2$^+$)	(Q)
7072.0	(47/2$^+$)	964.9 *5*	100	6107.1	(43/2$^+$)	(Q)
7095.6	(47/2$^-$)	992 *1*	100	6103.6	(43/2$^-$)	(Q)
7420.3	(49/2$^+$)	951.1 *5*	100	6469.2	(45/2$^+$)	(Q)
7430.9	(49/2$^-$)	1025.8 *5*	100	6405.1	(45/2$^-$)	(Q)
7498.4	(49/2$^-$)	1007.8 *5*	100	6490.5	(45/2$^-$)	(Q)
7574.7	(49/2$^+$)	1016.0 *5*	100	6558.7	(45/2$^+$)	(Q)
7867.0	(51/2$^-$)	1050.5 *5*	100	6816.5	(47/2$^-$)	(Q)
7964.2	(51/2$^-$)	1049.4 *5*	100	6914.8	(47/2$^-$)	(Q)
8089.7	(51/2$^+$)	1036 *1*	100	7053.7	(47/2$^+$)	(Q)
8103.0	(51/2$^+$)	1031 *1*	100	7072.0	(47/2$^+$)	(Q)
8164.7	(51/2$^-$)	1069 *1*	100	7095.6	(47/2$^-$)	(Q)
8438.3	(53/2$^+$)	1018.0 *5*	100	7420.3	(49/2$^+$)	(Q)
8510.2	(53/2$^-$)	1079.3 *5*	100	7430.9	(49/2$^-$)	(Q)
8587.8	(53/2$^-$)	1089.4 *5*	100	7498.4	(49/2$^-$)	(Q)
8668.7	(53/2$^+$)	1094 *1*	100	7574.7	(49/2$^+$)	(Q)
9004.5	(55/2$^-$)	1137.5 *5*	100	7867.0	(51/2$^-$)	(Q)
9076.2	(55/2$^-$)	1112 *1*	100	7964.2	(51/2$^-$)	(Q)
9190.7	(55/2$^+$)	1101 *1*	100	8089.7	(51/2$^+$)	(Q)
9224.0	(55/2$^+$)	1121 *1*	100	8103.0	(51/2$^+$)	(Q)
9317.7	(55/2$^-$)	1153 *1*	100	8164.7	(51/2$^-$)	(Q)
9526.3	(57/2$^+$)	1088.0 *5*	100	8438.3	(53/2$^+$)	(Q)
9641.7	(57/2$^-$)	1131.5 *5*	100	8510.2	(53/2$^-$)	(Q)
9762.8	(57/2$^-$)	1175 *1*	100	8587.8	(53/2$^-$)	(Q)
9832.8?	(57/2$^+$)	1164‡ *1*	100	8668.7	(53/2$^+$)	(Q)
10188.3	(59/2$^-$)	1183.8 *5*	100	9004.5	(55/2$^-$)	(Q)
10288.2	(59/2$^-$)	1212 *1*	100	9076.2	(55/2$^-$)	(Q)
10363.7	(59/2$^+$)	1173 *1*	100	9190.7	(55/2$^+$)	(Q)
10434.0	(59/2$^+$)	1210 *1*	100	9224.0	(55/2$^+$)	(Q)
10554.7	(59/2$^-$)	1237 *1*	100	9317.7	(55/2$^-$)	(Q)
10688.8	(61/2$^+$)	1162.5 *5*	100	9526.3	(57/2$^+$)	(Q)
10833.7	(61/2$^-$)	1192 *1*	100	9641.7	(57/2$^-$)	(Q)
11000.8	(61/2$^-$)	1238 *1*	100	9762.8	(57/2$^-$)	(Q)
11403.3	(63/2$^-$)	1215 *1*	100	10188.3	(59/2$^-$)	(Q)
11617.8	(63/2$^+$)	1254	100	10363.7	(59/2$^+$)	(Q)
11621.2?	(63/2$^-$)	1333‡ *1*	100	10288.2	(59/2$^-$)	(Q)
11723.0	(63/2$^+$)	1289 *1*	100	10434.0	(59/2$^+$)	(Q)
11927.8	(65/2$^+$)	1239 *1*	100	10688.8	(61/2$^+$)	(Q)
12095.8	(65/2$^-$)	1262 *1*	100	10833.7	(61/2$^-$)	(Q)
12256.8	(65/2$^-$)	1256 *1*	100	11000.8	(61/2$^-$)	(Q)
12675.3	(67/2$^-$)	1272 *1*	100	11403.3	(63/2$^-$)	(Q)

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Adopted Levels, Gammas (continued)

$\gamma(^{131}Nd)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.
12950.8	$(67/2^+)$	1333 *1*	100	11617.8	$(63/2^+)$	(Q)
13241.8	$(69/2^+)$	1314 *1*	100	11927.8	$(65/2^+)$	(Q)
13432.8	$(69/2^-)$	1337 *1*	100	12095.8	$(65/2^-)$	(Q)
13515.7?	$(69/2^-)$	1259[‡] *1*	100	12256.8	$(65/2^-)$	(Q)
14011.3	$(71/2^-)$	1336 *1*	100	12675.3	$(67/2^-)$	(Q)
14637.8	$(73/2^+)$	1396 *1*	100	13241.8	$(69/2^+)$	(Q)
15418.2?	$(75/2^-)$	1407[‡] *1*	100	14011.3	$(71/2^-)$	(Q)
16106.9?	$(77/2^+)$	1469[‡] *1*	100	14637.8	$(73/2^+)$	(Q)

[†] Weighted average from all available data.
[‡] Placement of transition in the level scheme is uncertain.

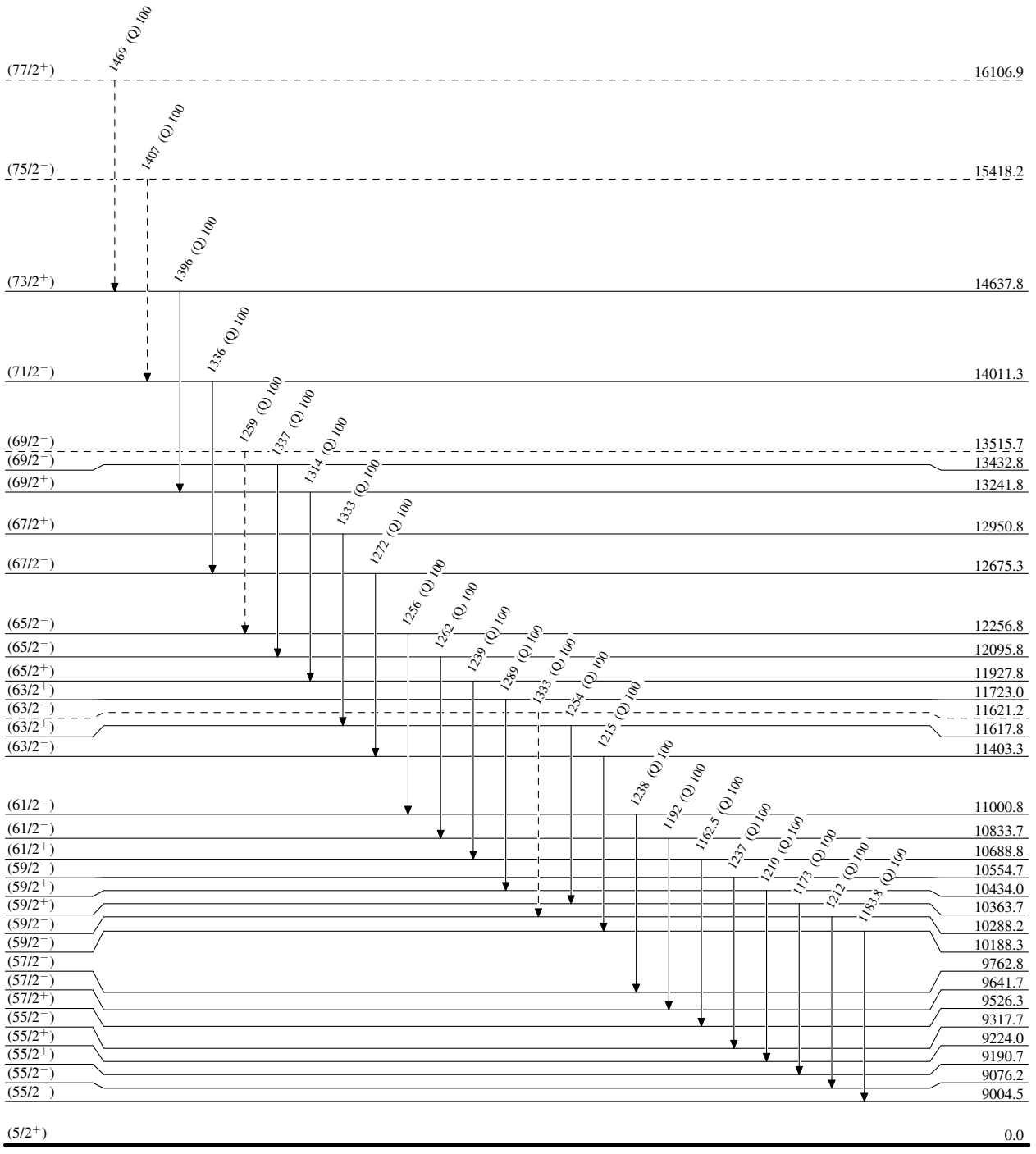
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{131}_{60}Nd_{71}$

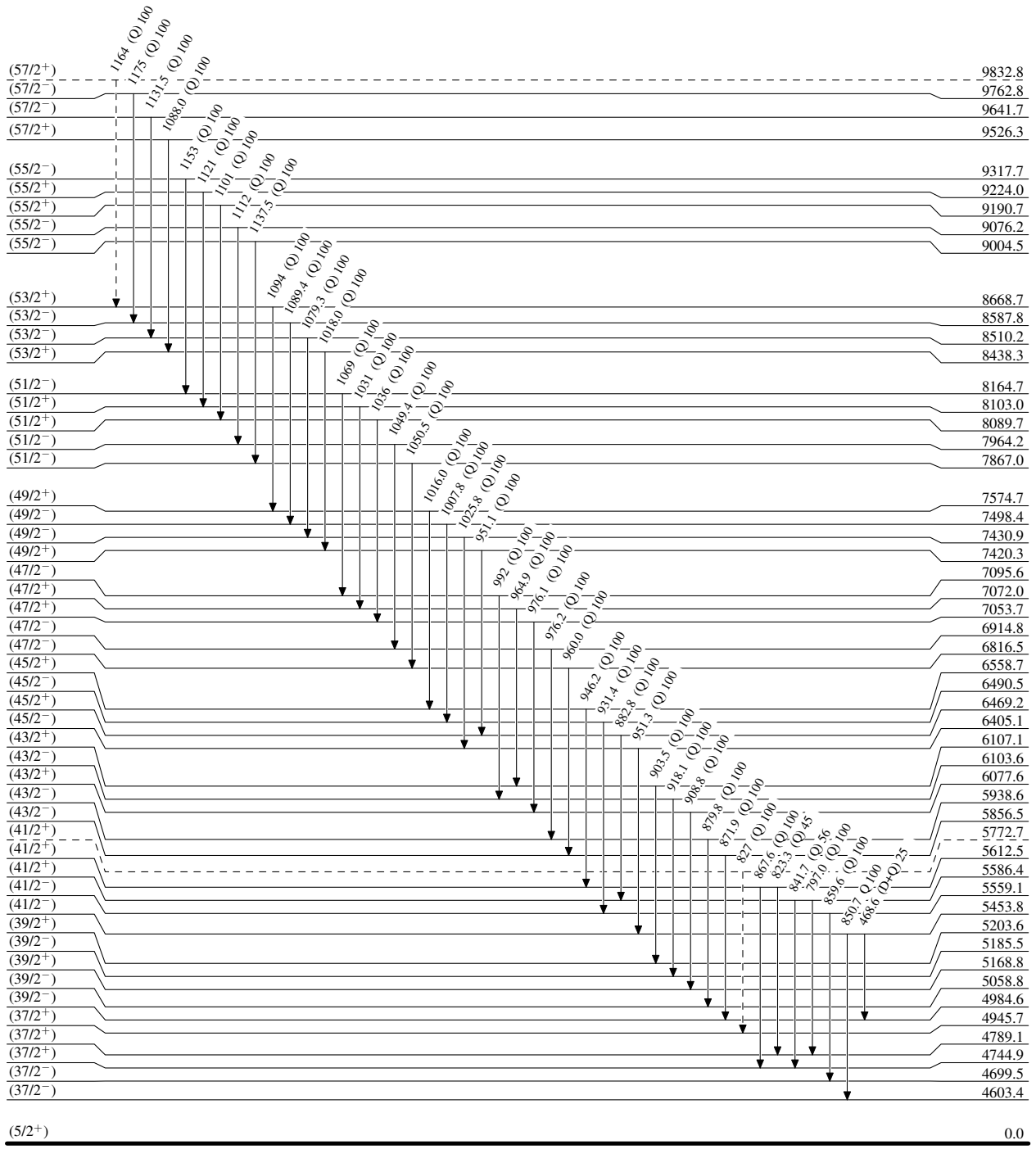
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{131}_{60}Nd_{71}$

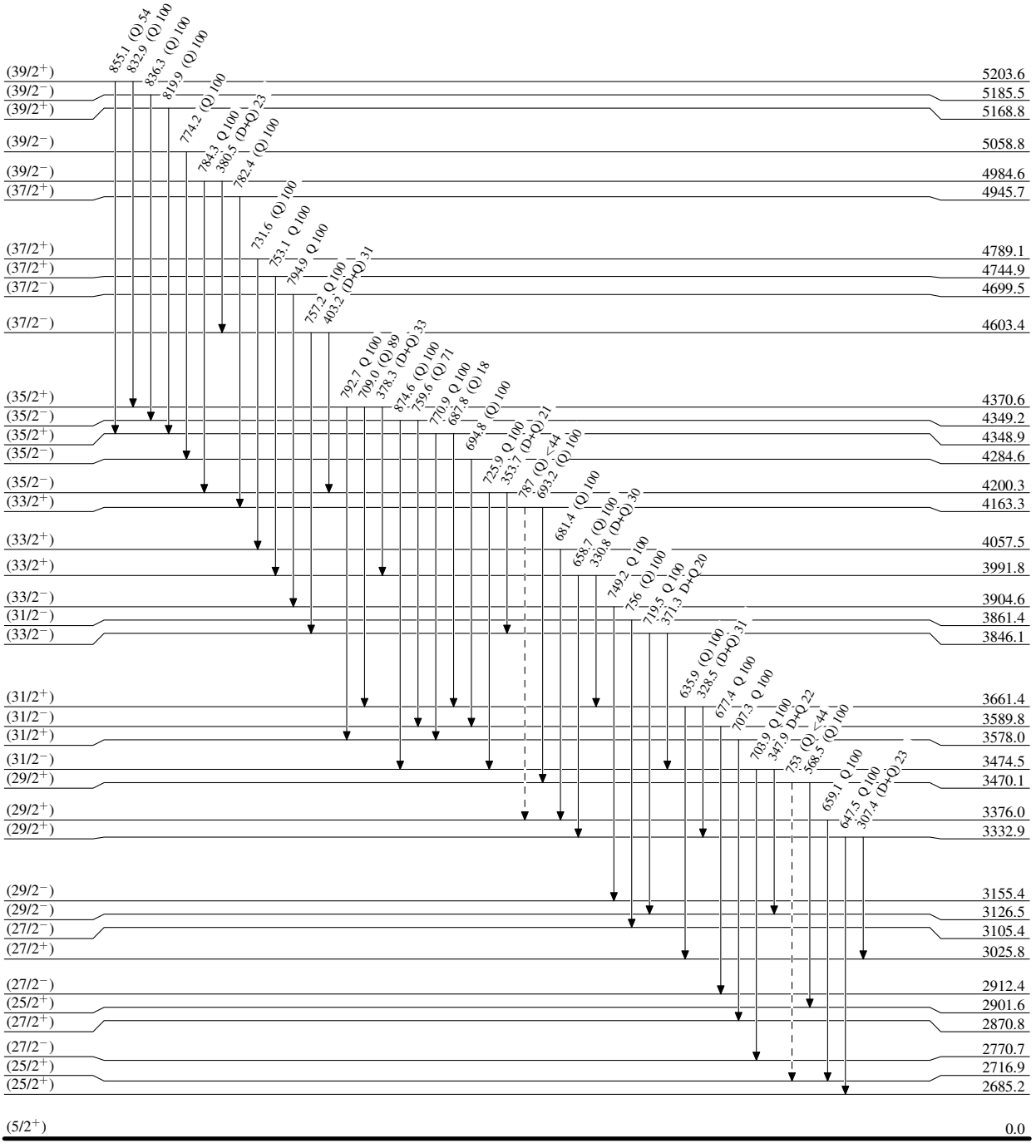
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)

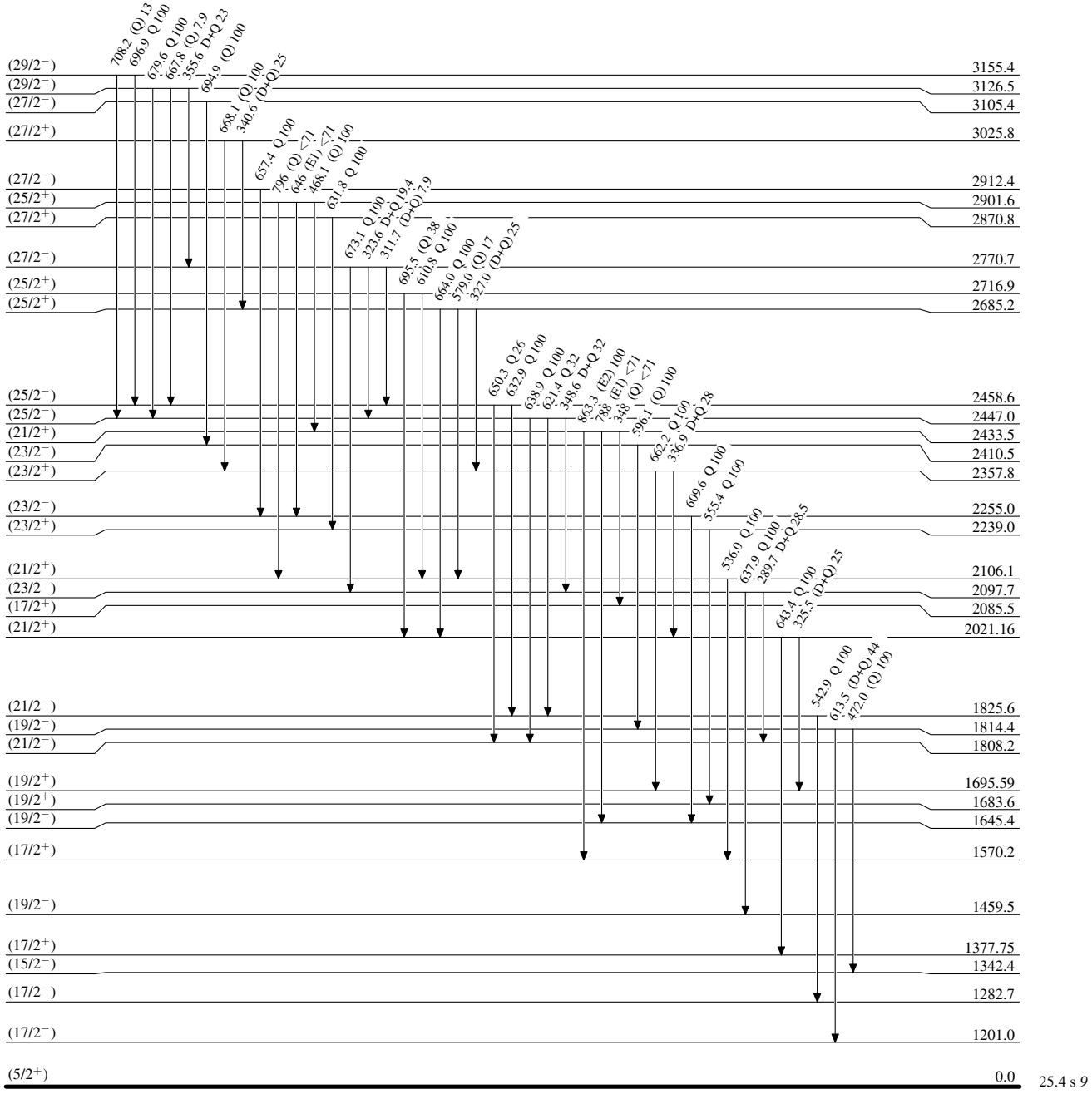


$^{131}_{60}Nd_{71}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{131}_{60}Nd_{71}$

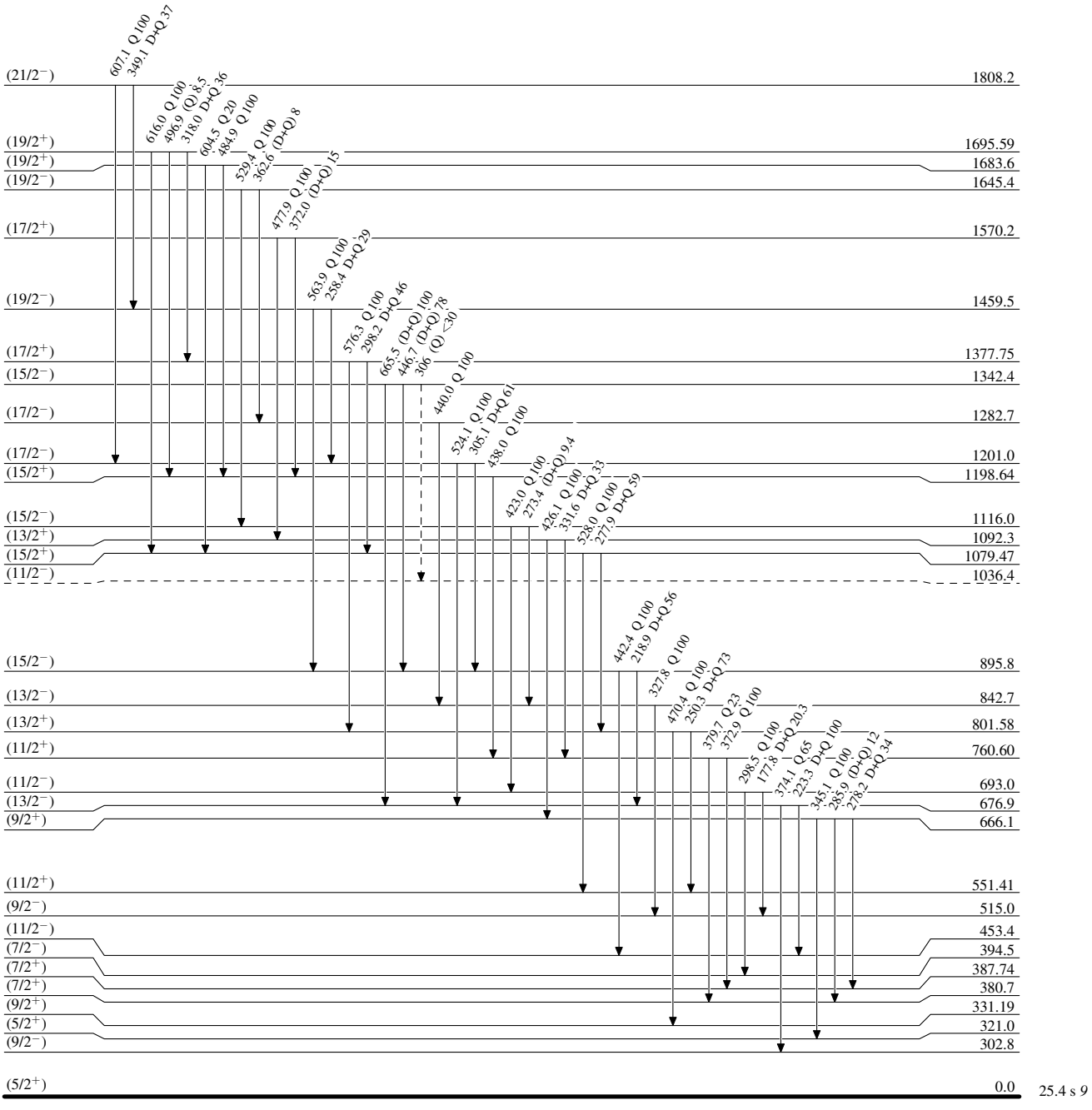
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{131}_{60}Nd_{71}$

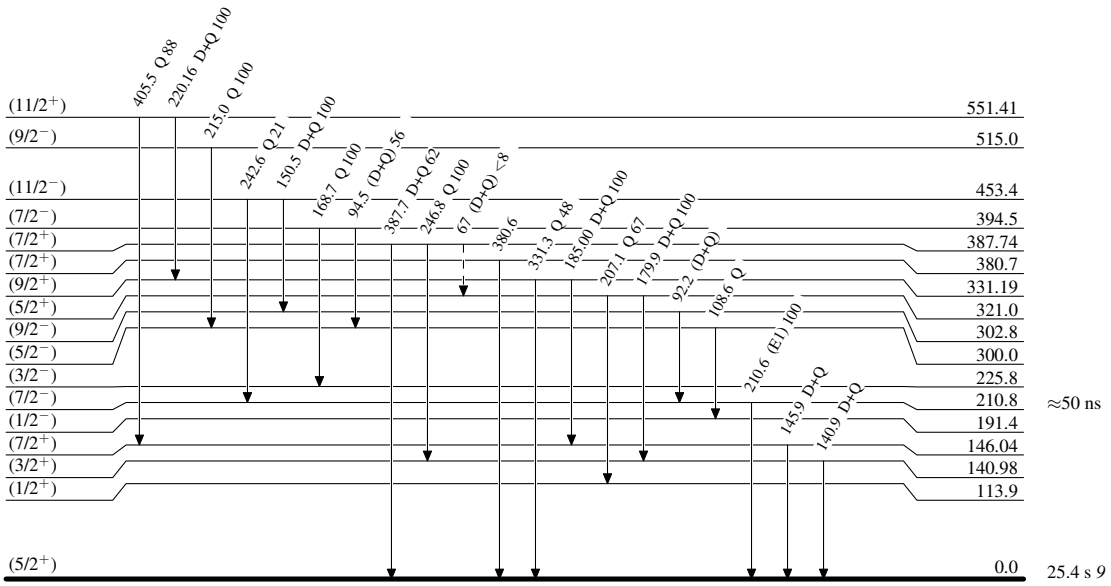
Adopted Levels, Gammas

Legend

Level Scheme (continued)

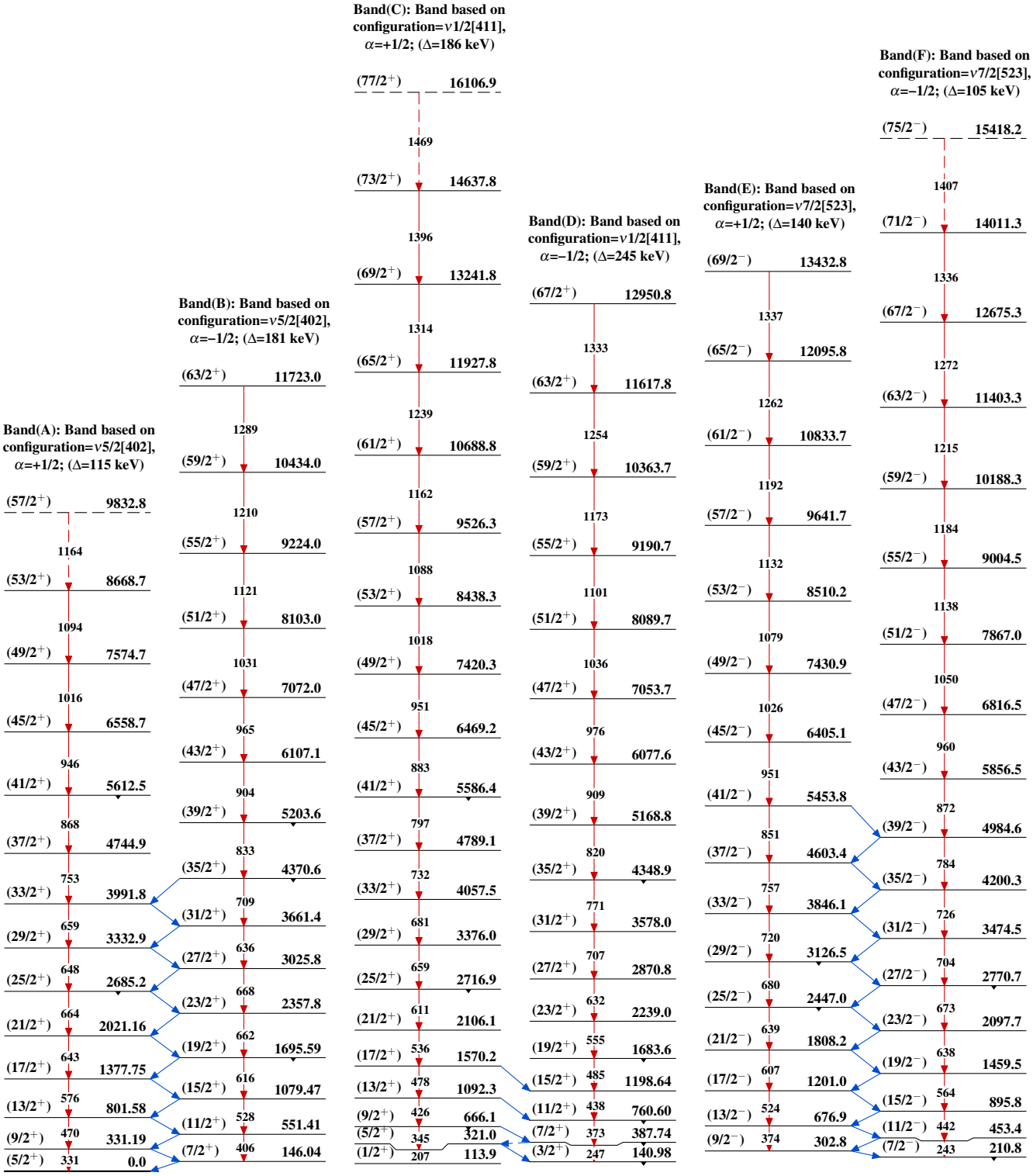
Intensities: Relative photon branching from each level

γ Decay (Uncertain)



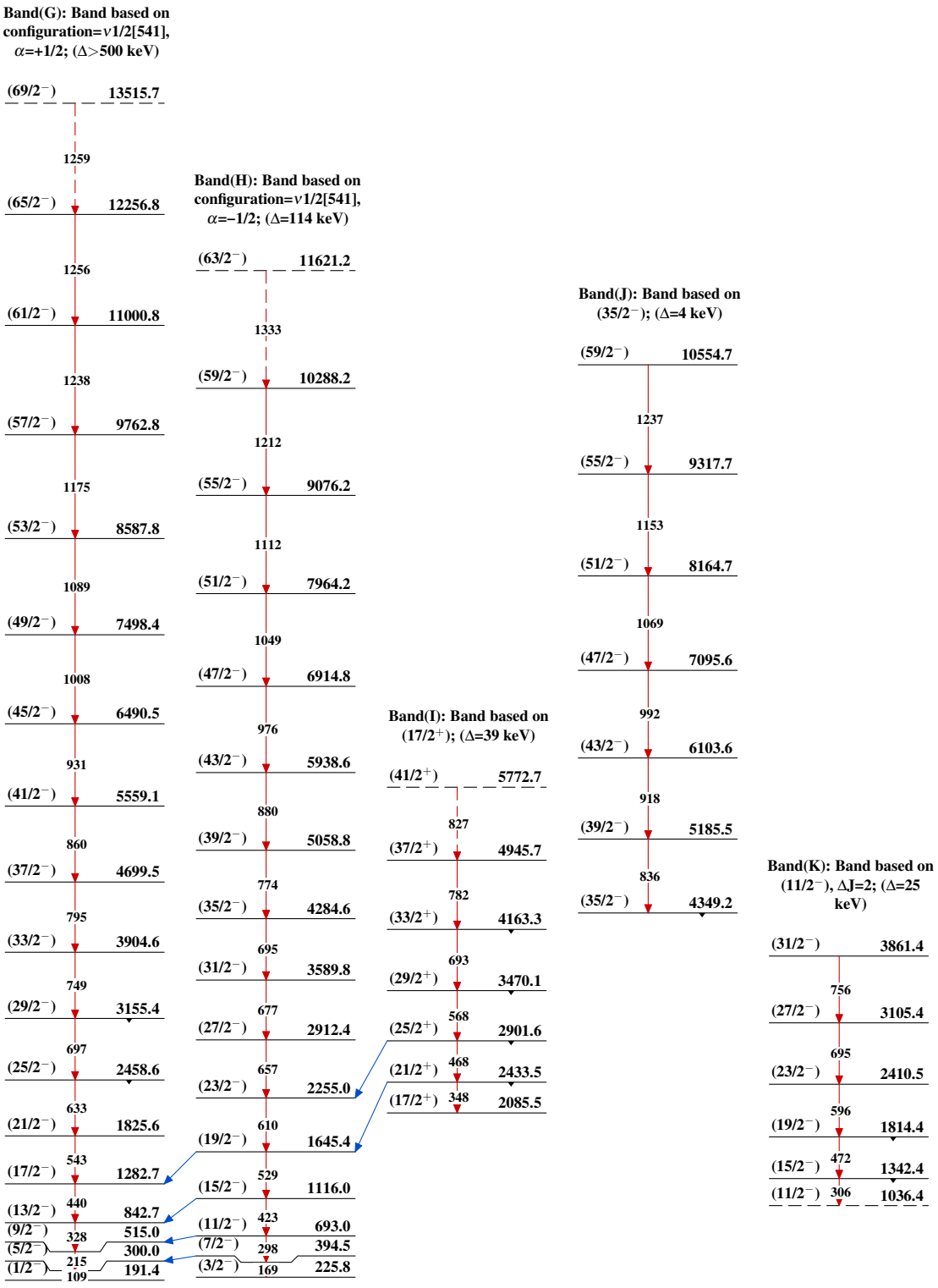
$^{131}_{60}Nd_{71}$

Adopted Levels, Gammas



$^{131}_{60}Nd_{71}$

Adopted Levels, Gammas (continued)



$^{131}_{60}Nd_{71}$