

Adopted Levels, Gammas

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Janos Timar and Zoltan Elekes, Balraj Singh		NDS 121, 143 (2014)	31-May-2014

$Q(\beta^-) = -9430$ SY; $S(n) = 10070$ SY; $S(p) = 3270$ SY; $Q(\alpha) = 1920$ SY **2012Wa38**
 Estimated (**2012Wa38**) uncertainties: 360 for $Q(\beta^-)$, 280 for $S(n)$ and $Q(\alpha)$, 200 for $S(p)$.
 $Q(\epsilon p) = 5930$ 200, $S(2n) = 22920$ 360, $S(2p) = 4910$ 200 (syst, **2012Wa38**).
1977Bo02: ^{129}Nd produced and identified, measured half-life, delayed protons.
1985Wi07: assignment: ^{92}Mo , $^{96}\text{Ru}(^{40}\text{Ca}, X)$, on-line mass spectrometer; measured delayed protons, x-rays, px-, py-coin.
1997Gi07: ^{129}Nd activity produced in bombardment of ^{92}Mo and ^{94}Mo targets by $E = 210, 255$ MeV ^{40}Ca beam at Grenoble, IGISOL technique to identify $A = 129$ isotopes. Measured $E\gamma$, $I\gamma$, $I\beta$, $\gamma\gamma(t)$ and $(x \text{ ray})(\gamma)(t)$, half-life of ^{129}Nd g.s.
 All γ -ray data (energies, intensities, multipolarities) and the level scheme are from $^{92}\text{Mo}(^{40}\text{Ca}, 2pn\gamma)$ reaction. In ^{129}Pm decay only one γ ray of 99 keV is reported.

^{129}Nd Levels

Cross Reference (XREF) Flags

- A ^{129}Pm ϵ decay (2.4 s)
- B $^{92}\text{Mo}(^{40}\text{Ca}, 2pn\gamma)$

E(level)	J^π	$T_{1/2}$	XREF	Comments
0	(5/2 ⁺)	6.7 s 4		$\% \epsilon + \% \beta^+ = 100$; $\% \epsilon p > 0$ $T_{1/2}$: weighted average of 7 s 1 (1997Gi07) and 6.7 s 4 (weighted average of 4 measurements in 2010Xu12); both from decay curves of γ rays. Others: 4.9 s 2 (1985Wi07), 5.9 s 6 (1977Bo02), both from decay curve of delayed protons. Additional information 1. J^π : from statistical model prediction (1985Wi07). 7/2 ⁻ proposed in theoretical calculations (1997Mo25); 5/2 ⁺ from systematics in 2012Au07 .
0+x [#]	(7/2 ⁻)	≈ 7 s	B	$\% \epsilon + \% \beta^+ = ?$ $T_{1/2}$: assumed by the evaluators to be comparable to that for g.s. See also discussion in 2010Xu12 .
0+y [@]	(1/2 ⁻)		AB	
0+z ^a	(1/2 ⁺)	2.6 s 4	B	$\% \epsilon + \% \beta^+ = ?$; $\% \epsilon p = ?$ J^π : possible configuration = 1/2[411]. $T_{1/2}$: from decay curves for 134.0 γ and 399.0 γ (2010Xu12); 134 γ and 399 γ seen in coincidence.
21.7+z ^b 3	(3/2 ⁺)		B	
53.8+y ^{&} 4	(3/2 ⁻)		B	
91.0+z ^c 4	(5/2 ⁺)		B	
99.0+y [@] 2	(5/2 ⁻)		AB	
130.4+x [‡] 2	(9/2 ⁻)		B	
178.8+z ^a 2	(5/2 ⁺)		B	
229.9+z ^b 3	(7/2 ⁺)		B	
232.6+y ^{&} 3	(7/2 ⁻)		B	
236.9+z ^d 4	(7/2 ⁺)		B	
292.6+x [#] 2	(11/2 ⁻)		B	
308.5+y [@] 3	(9/2 ⁻)		B	
415.7+z ^c 4	(9/2 ⁺)		B	
491.0+x [‡] 2	(13/2 ⁻)		B	
497.3+z ^a 3	(9/2 ⁺)		B	
530.1+y ^{&} 3	(11/2 ⁻)		B	

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Adopted Levels, Gammas (continued) ^{129}Nd Levels (continued)

E(level)	J^π^\dagger	XREF	E(level)	J^π^\dagger	XREF	E(level)	J^π^\dagger	XREF
581.7+z ^b 3	(11/2 ⁺)	B	3292.6+z ^c 4	(29/2 ⁺)	B	7658.3+x [#] 5	(51/2 ⁻)	B
629.3+z ^d 4	(11/2 ⁺)	B	3418.6+z ^a 7	(29/2 ⁺)	B	7916.4+z ^b 7	(51/2 ⁺)	B
630.8+y [@] 3	(13/2 ⁻)	B	3459.3+y ^{&} 5	(31/2 ⁻)	B	8010.9+y ^{&} 7	(51/2 ⁻)	B
710.7+x [#] 2	(15/2 ⁻)	B	3594.4+z ^b 5	(31/2 ⁺)	B	8178.2+z ^d 16	(51/2 ⁺)	B
868.4+z ^c 4	(13/2 ⁺)	B	3609.8+x [‡] 4	(33/2 ⁻)	B	8307.3+x [‡] 5	(53/2 ⁻)	B
936.3+z ^a 3	(13/2 ⁺)	B	3712.9+z ^d 5	(31/2 ⁺)	B	8471.7+z ^c 7	(53/2 ⁺)	B
942.8+y ^{&} 4	(15/2 ⁻)	B	3730.4+y [@] 6	(33/2 ⁻)	B	8636.1+y [@] 12	(53/2 ⁻)	B
969.7+x [‡] 2	(17/2 ⁻)	B	3960.5+z ^c 5	(33/2 ⁺)	B	8796.7+x [#] 6	(55/2 ⁻)	B
1054.2+z ^b 4	(15/2 ⁺)	B	3978.6+x [#] 4	(35/2 ⁻)	B	9024.0+z ^b 7	(55/2 ⁺)	B
1064.7+y [@] 4	(17/2 ⁻)	B	4214.4+y ^{&} 6	(35/2 ⁻)	B	9176.9+y ^{&} 7	(55/2 ⁻)	B
1136.9+z ^d 4	(15/2 ⁺)	B	4321.2+z ^b 5	(35/2 ⁺)	B	9337.2+z ^d 19	(55/2 ⁺)	B
1235.1+x [#] 3	(19/2 ⁻)	B	4374.5+x [‡] 4	(37/2 ⁻)	B	9535.6+x [‡] 6	(57/2 ⁻)	B
1419.4+z ^c 4	(17/2 ⁺)	B	4413.4+z ^d 5	(35/2 ⁺)	B	9643.5+z ^c 7	(57/2 ⁺)	B
1461.8+y ^{&} 4	(19/2 ⁻)	B	4575.7+y [@] 6	(37/2 ⁻)	B	9796.1+y [@] 16	(57/2 ⁻)	B
1471.8+z ^a 4	(17/2 ⁺)	B	4703.9+z ^c 5	(37/2 ⁺)	B	10019.4+x [#] 6	(59/2 ⁻)	B
1543.0+x [‡] 3	(21/2 ⁻)	B	4772.2+x [#] 4	(39/2 ⁻)	B	10222.2+z ^b 7	(59/2 ⁺)	B
1603.7+y [@] 4	(21/2 ⁻)	B	5032.4+y ^{&} 6	(39/2 ⁻)	B	10416.0+y ^{&} 8	(59/2 ⁻)	B
1620.6+z ^b 4	(19/2 ⁺)	B	5115.8+z ^b 6	(39/2 ⁺)	B	10857.6+x [‡] 6	(61/2 ⁻)	B
1730.3+z ^d 4	(19/2 ⁺)	B	5192.8+z ^d 6	(39/2 ⁺)	B	10902.5+z ^c 12	(61/2 ⁺)	B
1843.9+x [#] 3	(23/2 ⁻)	B	5210.8+x [‡] 4	(41/2 ⁻)	B	11009.1+y [@] 19	(61/2 ⁻)	B
2034.7+z ^c 4	(21/2 ⁺)	B	5487.5+y [@] 6	(41/2 ⁻)	B	11326.4+x [#] 6	(63/2 ⁻)	B
2067.6+y ^{&} 4	(23/2 ⁻)	B	5522.2+z ^c 6	(41/2 ⁺)	B	11511.1+z ^b 8	(63/2 ⁺)	B
2076.6+z ^a 4	(21/2 ⁺)	B	5644.3+x [#] 4	(43/2 ⁻)	B	11721.0+y ^{&} 13	(63/2 ⁻)	B
2187.3+x [‡] 3	(25/2 ⁻)	B	5935.3+y ^{&} 6	(43/2 ⁻)	B	12221.5+z ^c 16	(65/2 ⁺)	B
2236.8+y [@] 5	(25/2 ⁻)	B	5973.6+z ^b 6	(43/2 ⁺)	B	12263.5+x [‡] 6	(65/2 ⁻)	B
2248.4+z ^b 4	(23/2 ⁺)	B	6079.2+z ^d 6	(43/2 ⁺)	B	12265.1+y [@] 21	(65/2 ⁻)	B
2379.2+z ^d 4	(23/2 ⁺)	B	6142.9+x [‡] 4	(45/2 ⁻)	B	12720.4+x [#] 7	(67/2 ⁻)	B
2516.2+x [#] 3	(27/2 ⁻)	B	6415.4+z ^c 6	(45/2 ⁺)	B	12892.1+z ^b 13	(67/2 ⁺)	B
2666.0+z ^c 4	(25/2 ⁺)	B	6472.1+y [@] 7	(45/2 ⁻)	B	13090.1+y ^{&} 16	(67/2 ⁻)	B
2734.9+z ^a 4	(25/2 ⁺)	B	6606.4+x [#] 5	(47/2 ⁻)	B	13575.5+z ^c 19	(69/2 ⁺)	B
2739.3+y ^{&} 5	(27/2 ⁻)	B	6901.2+z ^b 7	(47/2 ⁺)	B	13746.5+x [‡] 12	(69/2 ⁻)	B
2881.7+x [‡] 4	(29/2 ⁻)	B	6927.2+y ^{&} 7	(47/2 ⁻)	B	14202.4+x [#] 12	(71/2 ⁻)	B
2909.7+z ^b 5	(27/2 ⁺)	B	7078.2+z ^d 12	(47/2 ⁺)	B	14365.1+z ^b 16	(71/2 ⁺)	B
2949.2+y [@] 5	(29/2 ⁻)	B	7176.0+x [‡] 5	(49/2 ⁻)	B	14528.1+y ^{&} 19	(71/2 ⁻)	B
3053.8+z ^d 4	(27/2 ⁺)	B	7395.6+z ^c 6	(49/2 ⁺)	B	15765.4+x [#] 16	(75/2 ⁻)	B
3232.5+x [#] 4	(31/2 ⁻)	B	7528.1+y [@] 7	(49/2 ⁻)	B			

[†] Assignments for excited states are from $^{92}\text{Mo}(^{40}\text{Ca},2p\text{n}\gamma)$, based on γ -ray multiplicities from angular correlation data, band assignments and comparisons with cranked-shell model calculations. All assignments have been taken from 2002Ze01, except parentheses have been added by the evaluators due to lack of strong supporting arguments, including those for the g.s. and isomers. For levels populated in high-spin studies, ascending order of spins with excitation energy is assumed based on yrast pattern of population.

[‡] Band(A): $\nu 7/2[523], \alpha = +1/2$.

[#] Band(a): $\nu 7/2[523], \alpha = -1/2$.

[@] Band(B): $\nu 1/2[541], \alpha = +1/2$.

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Adopted Levels, Gammas (continued) ^{129}Nd Levels (continued)& Band(b): $\nu 1/2[541], \alpha = -1/2$.^a Band(C): $\nu 1/2[411], \alpha = +1/2$.^b Band(c): $\nu 1/2[411], \alpha = -1/2$.^c Band(D): $\nu 5/2[402], \alpha = +1/2$.^d Band(d): $\nu 5/2[402], \alpha = -1/2$.

$E_i(\text{level})$	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult. [†]	α^\ddagger	$\gamma(^{129}\text{Nd})$	Comments
99.0+y	(5/2 ⁻)	99.0 2	100	0+y	(1/2 ⁻)	(E2)	2.27		$\alpha(\text{K})=1.241$ 19; $\alpha(\text{L})=0.801$ 14; $\alpha(\text{M})=0.182$ 3 $\alpha(\text{N})=0.0394$ 7; $\alpha(\text{O})=0.00508$ 9; $\alpha(\text{P})=5.42 \times 10^{-5}$ 9
130.4+x	(9/2 ⁻)	130.5 2		0+x	(7/2 ⁻)	(M1+E2)	0.680 19		$\alpha(\text{K})=0.564$ 9; $\alpha(\text{L})=0.091$ 13; $\alpha(\text{M})=0.020$ 3 $\alpha(\text{N})=0.0044$ 7; $\alpha(\text{O})=0.00064$ 8; $\alpha(\text{P})=3.57 \times 10^{-5}$ 11
178.8+z	(5/2 ⁺)	157.0 2	100 14	21.7+z	(3/2 ⁺)	(M1+E2)	0.400 8		$\alpha(\text{K})=0.335$ 6; $\alpha(\text{L})=0.052$ 5; $\alpha(\text{M})=0.0111$ 12 $\alpha(\text{N})=0.0025$ 3; $\alpha(\text{O})=0.00037$ 3; $\alpha(\text{P})=2.12 \times 10^{-5}$ 7
229.9+z	(7/2 ⁺)	178.8 2 138.8 2	43 7 25 8	0+z 91.0+z	(1/2 ⁺) (5/2 ⁺)	(M1+E2)	0.569 14		$\alpha(\text{K})=0.474$ 8; $\alpha(\text{L})=0.075$ 10; $\alpha(\text{M})=0.0162$ 23 $\alpha(\text{N})=0.0036$ 5; $\alpha(\text{O})=0.00053$ 6; $\alpha(\text{P})=3.00 \times 10^{-5}$ 9
		208.2 2	100 17	21.7+z	(3/2 ⁺)	(E2)	0.1713		$\alpha(\text{K})=0.1278$ 19; $\alpha(\text{L})=0.0340$ 5; $\alpha(\text{M})=0.00755$ 11 $\alpha(\text{N})=0.001649$ 24; $\alpha(\text{O})=0.000225$ 4; $\alpha(\text{P})=6.55 \times 10^{-6}$ 10
232.6+y	(7/2 ⁻)	133.6 2	100 64	99.0+y	(5/2 ⁻)	(M1+E2)	0.636 17		$\alpha(\text{K})=0.528$ 8; $\alpha(\text{L})=0.085$ 12; $\alpha(\text{M})=0.018$ 3 $\alpha(\text{N})=0.0041$ 6; $\alpha(\text{O})=0.00060$ 7; $\alpha(\text{P})=3.34 \times 10^{-5}$ 10
		178.8 2	86 14	53.8+y	(3/2 ⁻)	(E2)	0.286		$\alpha(\text{K})=0.206$ 3; $\alpha(\text{L})=0.0626$ 10; $\alpha(\text{M})=0.01399$ 21 $\alpha(\text{N})=0.00305$ 5; $\alpha(\text{O})=0.000411$ 6; $\alpha(\text{P})=1.023 \times 10^{-5}$ 15
236.9+z	(7/2 ⁺)	146.1 2	100	91.0+z	(5/2 ⁺)	(M1+E2)	0.492 11		$\alpha(\text{K})=0.410$ 7; $\alpha(\text{L})=0.064$ 8; $\alpha(\text{M})=0.0138$ 18 $\alpha(\text{N})=0.0031$ 4; $\alpha(\text{O})=0.00046$ 5; $\alpha(\text{P})=2.60 \times 10^{-5}$ 8
292.6+x	(11/2 ⁻)	162.5 2	100 6	130.4+x	(9/2 ⁻)	(M1+E2)	0.363 6		$\alpha(\text{K})=0.304$ 5; $\alpha(\text{L})=0.046$ 5; $\alpha(\text{M})=0.0100$ 10 $\alpha(\text{N})=0.00222$ 21; $\alpha(\text{O})=0.00033$ 3; $\alpha(\text{P})=1.93 \times 10^{-5}$ 6
		292.5 2	24.2 16	0+x	(7/2 ⁻)	(E2)	0.0567		$\alpha(\text{K})=0.0447$ 7; $\alpha(\text{L})=0.00939$ 14; $\alpha(\text{M})=0.00206$ 3 $\alpha(\text{N})=0.000452$ 7; $\alpha(\text{O})=6.35 \times 10^{-5}$ 9; $\alpha(\text{P})=2.45 \times 10^{-6}$ 4
308.5+y	(9/2 ⁻)	76.0 2 209.5 2	11 3 100 19	232.6+y 99.0+y	(7/2 ⁻) (5/2 ⁻)	(E2)	0.1677		$\alpha(\text{K})=0.1254$ 18; $\alpha(\text{L})=0.0332$ 5; $\alpha(\text{M})=0.00736$ 11 $\alpha(\text{N})=0.001609$ 24; $\alpha(\text{O})=0.000220$ 4; $\alpha(\text{P})=6.44 \times 10^{-6}$ 10

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Adopted Levels, Gammas (continued) $\gamma(^{129}\text{Nd})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult. [†]	α^\ddagger	Comments
415.7+z	(9/2 ⁺)	179.1 2	100 9	236.9+z	(7/2 ⁺)	(M1+E2)	0.276	$\alpha(\text{K})=0.232$ 4; $\alpha(\text{L})=0.035$ 3; $\alpha(\text{M})=0.0074$ 6 $\alpha(\text{N})=0.00166$ 13; $\alpha(\text{O})=0.000247$ 15; $\alpha(\text{P})=1.47\times 10^{-5}$ 5
		324.5 2	88 6	91.0+z	(5/2 ⁺)	(E2)	0.0411	$\alpha(\text{K})=0.0328$ 5; $\alpha(\text{L})=0.00649$ 10; $\alpha(\text{M})=0.001417$ 20 $\alpha(\text{N})=0.000312$ 5; $\alpha(\text{O})=4.42\times 10^{-5}$ 7; $\alpha(\text{P})=1.82\times 10^{-6}$ 3
491.0+x	(13/2 ⁻)	198.6 2	100 5	292.6+x	(11/2 ⁻)	(M1+E2)	0.207	$\alpha(\text{K})=0.174$ 4; $\alpha(\text{L})=0.0256$ 15; $\alpha(\text{M})=0.0055$ 4 $\alpha(\text{N})=0.00122$ 8; $\alpha(\text{O})=0.000183$ 9; $\alpha(\text{P})=1.11\times 10^{-5}$ 4
		360.5 2	55 3	130.4+x	(9/2 ⁻)	(E2)	0.0298	$\alpha(\text{K})=0.0241$ 4; $\alpha(\text{L})=0.00452$ 7; $\alpha(\text{M})=0.000983$ 14 $\alpha(\text{N})=0.000217$ 3; $\alpha(\text{O})=3.09\times 10^{-5}$ 5; $\alpha(\text{P})=1.361\times 10^{-6}$ 20
497.3+z	(9/2 ⁺)	267.5 2	58 7	229.9+z	(7/2 ⁺)	(M1+E2)	0.0912 20	$\alpha(\text{K})=0.0773$ 20; $\alpha(\text{L})=0.01095$ 25; $\alpha(\text{M})=0.00233$ 6 $\alpha(\text{N})=0.000521$ 13; $\alpha(\text{O})=7.85\times 10^{-5}$ 14; $\alpha(\text{P})=4.92\times 10^{-6}$ 18
		318.4 2	100 7	178.8+z	(5/2 ⁺)	(E2)	0.0435	$\alpha(\text{K})=0.0347$ 5; $\alpha(\text{L})=0.00694$ 10; $\alpha(\text{M})=0.001516$ 22 $\alpha(\text{N})=0.000334$ 5; $\alpha(\text{O})=4.71\times 10^{-5}$ 7; $\alpha(\text{P})=1.92\times 10^{-6}$ 3
530.1+y	(11/2 ⁻)	221.5 2 297.5 2	50 6 100 11	308.5+y (9/2 ⁻) 232.6+y (7/2 ⁻)	(E2)	(E2)	0.0538	$\alpha(\text{K})=0.0425$ 6; $\alpha(\text{L})=0.00883$ 13; $\alpha(\text{M})=0.00193$ 3 $\alpha(\text{N})=0.000425$ 6; $\alpha(\text{O})=5.98\times 10^{-5}$ 9; $\alpha(\text{P})=2.33\times 10^{-6}$ 4
581.7+z	(11/2 ⁺)	344.8 2	7.6 8	236.9+z (7/2 ⁺)	(E2)	(E2)	0.0341	$\alpha(\text{K})=0.0274$ 4; $\alpha(\text{L})=0.00526$ 8; $\alpha(\text{M})=0.001146$ 17 $\alpha(\text{N})=0.000253$ 4; $\alpha(\text{O})=3.59\times 10^{-5}$ 5; $\alpha(\text{P})=1.539\times 10^{-6}$ 22
		351.6 2	100 5	229.9+z (7/2 ⁺)	(E2)	(E2)	0.0322	$\alpha(\text{K})=0.0259$ 4; $\alpha(\text{L})=0.00492$ 7; $\alpha(\text{M})=0.001071$ 16 $\alpha(\text{N})=0.000236$ 4; $\alpha(\text{O})=3.36\times 10^{-5}$ 5; $\alpha(\text{P})=1.458\times 10^{-6}$ 21
629.3+z	(11/2 ⁺)	213.7 2	100 7	415.7+z (9/2 ⁺)	(M1+E2)	(M1+E2)	0.169 3	$\alpha(\text{K})=0.142$ 3; $\alpha(\text{L})=0.0207$ 10; $\alpha(\text{M})=0.00442$ 23 $\alpha(\text{N})=0.00099$ 5; $\alpha(\text{O})=0.000148$ 6; $\alpha(\text{P})=9.0\times 10^{-6}$ 3
		392.3 2	72 3	236.9+z (7/2 ⁺)	(E2)	(E2)	0.0233	$\alpha(\text{K})=0.0189$ 3; $\alpha(\text{L})=0.00341$ 5; $\alpha(\text{M})=0.000740$ 11 $\alpha(\text{N})=0.0001634$ 23; $\alpha(\text{O})=2.35\times 10^{-5}$ 4; $\alpha(\text{P})=1.080\times 10^{-6}$ 16
630.8+y	(13/2 ⁻)	322.4 2	100	308.5+y (9/2 ⁻)	(E2)	(E2)	0.0419	$\alpha(\text{K})=0.0334$ 5; $\alpha(\text{L})=0.00664$ 10; $\alpha(\text{M})=0.001450$ 21 $\alpha(\text{N})=0.000319$ 5; $\alpha(\text{O})=4.52\times 10^{-5}$ 7; $\alpha(\text{P})=1.86\times 10^{-6}$ 3
710.7+x	(15/2 ⁻)	219.8 2	100 5	491.0+x (13/2 ⁻)	(M1+E2)	(M1+E2)	0.156 3	$\alpha(\text{K})=0.132$ 3; $\alpha(\text{L})=0.0191$ 8; $\alpha(\text{M})=0.00407$ 19 $\alpha(\text{N})=0.00091$ 4; $\alpha(\text{O})=0.000137$ 5; $\alpha(\text{P})=8.4\times 10^{-6}$ 3
		418.1 2	97 5	292.6+x (11/2 ⁻)	(E2)	(E2)	0.0193	$\alpha(\text{K})=0.01582$ 23; $\alpha(\text{L})=0.00277$ 4;

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Adopted Levels, Gammas (continued) $\gamma(^{129}\text{Nd})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult. [†]	α^\ddagger	Comments
868.4+z	(13/2 ⁺)	239.3 2	69 6	629.3+z	(11/2 ⁺)	(M1+E2)	0.1234 23	$\alpha(\text{M})=0.000601$ 9 $\alpha(\text{N})=0.0001328$ 19; $\alpha(\text{O})=1.91\times 10^{-5}$ 3; $\alpha(\text{P})=9.11\times 10^{-7}$ 13 $\alpha(\text{K})=0.1044$ 25; $\alpha(\text{L})=0.0150$ 5; $\alpha(\text{M})=0.00319$ 12 $\alpha(\text{N})=0.000713$ 25; $\alpha(\text{O})=0.000107$ 3; $\alpha(\text{P})=6.64\times 10^{-6}$ 23
		452.7 2	100 6	415.7+z	(9/2 ⁺)	(E2)	0.01546	$\alpha(\text{K})=0.01271$ 18; $\alpha(\text{L})=0.00216$ 3; $\alpha(\text{M})=0.000466$ 7 $\alpha(\text{N})=0.0001032$ 15; $\alpha(\text{O})=1.496\times 10^{-5}$ 21; $\alpha(\text{P})=7.38\times 10^{-7}$ 11
936.3+z	(13/2 ⁺)	354.3 2 439.1 2	36 4 100 8	581.7+z 497.3+z	(11/2 ⁺) (9/2 ⁺)	(E2)	0.01684	$\alpha(\text{K})=0.01382$ 20; $\alpha(\text{L})=0.00237$ 4; $\alpha(\text{M})=0.000513$ 8 $\alpha(\text{N})=0.0001135$ 16; $\alpha(\text{O})=1.643\times 10^{-5}$ 24; $\alpha(\text{P})=8.00\times 10^{-7}$ 12
942.8+y	(15/2 ⁻)	312.0 5 412.6 2	<20 100 10	630.8+y 530.1+y	(13/2 ⁻) (11/2 ⁻)	(E2)	0.0201	$\alpha(\text{K})=0.01642$ 23; $\alpha(\text{L})=0.00289$ 4; $\alpha(\text{M})=0.000627$ 9 $\alpha(\text{N})=0.0001386$ 20; $\alpha(\text{O})=2.00\times 10^{-5}$ 3; $\alpha(\text{P})=9.43\times 10^{-7}$ 14
969.7+x	(17/2 ⁻)	259.0 2	74 4	710.7+x	(15/2 ⁻)	(M1+E2)	0.0995 21	$\alpha(\text{K})=0.0843$ 22; $\alpha(\text{L})=0.0120$ 3; $\alpha(\text{M})=0.00255$ 8 $\alpha(\text{N})=0.000570$ 15; $\alpha(\text{O})=8.59\times 10^{-5}$ 17; $\alpha(\text{P})=5.36\times 10^{-6}$ 19
		478.6 2	100 5	491.0+x	(13/2 ⁻)	(E2)	0.01326	$\alpha(\text{K})=0.01095$ 16; $\alpha(\text{L})=0.00182$ 3; $\alpha(\text{M})=0.000392$ 6 $\alpha(\text{N})=8.69\times 10^{-5}$ 13; $\alpha(\text{O})=1.264\times 10^{-5}$ 18; $\alpha(\text{P})=6.39\times 10^{-7}$ 9
1054.2+z	(15/2 ⁺)	472.7 2	100	581.7+z	(11/2 ⁺)	(E2)	0.01372	$\alpha(\text{K})=0.01131$ 16; $\alpha(\text{L})=0.00189$ 3; $\alpha(\text{M})=0.000407$ 6 $\alpha(\text{N})=9.02\times 10^{-5}$ 13; $\alpha(\text{O})=1.312\times 10^{-5}$ 19; $\alpha(\text{P})=6.60\times 10^{-7}$ 10
1064.7+y	(17/2 ⁻)	434.0 2	100	630.8+y	(13/2 ⁻)	(E2)	0.01740	$\alpha(\text{K})=0.01427$ 20; $\alpha(\text{L})=0.00246$ 4; $\alpha(\text{M})=0.000533$ 8 $\alpha(\text{N})=0.0001178$ 17; $\alpha(\text{O})=1.703\times 10^{-5}$ 24; $\alpha(\text{P})=8.25\times 10^{-7}$ 12
1136.9+z	(15/2 ⁺)	268.5 2	47 3	868.4+z	(13/2 ⁺)	(M1+E2)	0.0903 20	$\alpha(\text{K})=0.0765$ 20; $\alpha(\text{L})=0.01084$ 24; $\alpha(\text{M})=0.00230$ 6 $\alpha(\text{N})=0.000515$ 12; $\alpha(\text{O})=7.77\times 10^{-5}$ 14; $\alpha(\text{P})=4.87\times 10^{-6}$ 18
		507.4 2	100 7	629.3+z	(11/2 ⁺)	(E2)	0.01132	$\alpha(\text{K})=0.00938$ 14; $\alpha(\text{L})=0.001526$ 22; $\alpha(\text{M})=0.000328$ 5 $\alpha(\text{N})=7.28\times 10^{-5}$ 11; $\alpha(\text{O})=1.063\times 10^{-5}$ 15; $\alpha(\text{P})=5.50\times 10^{-7}$ 8
1235.1+x	(19/2 ⁻)	265.6 2	47 2	969.7+x	(17/2 ⁻)	(M1+E2)	0.0930 20	$\alpha(\text{K})=0.0788$ 21; $\alpha(\text{L})=0.0112$ 3; $\alpha(\text{M})=0.00238$ 6 $\alpha(\text{N})=0.000531$ 13; $\alpha(\text{O})=8.01\times 10^{-5}$ 15; $\alpha(\text{P})=5.01\times 10^{-6}$ 18
		524.3 2	100	710.7+x	(15/2 ⁻)	(E2)	0.01037	$\alpha(\text{K})=0.00861$ 12; $\alpha(\text{L})=0.001385$ 20; $\alpha(\text{M})=0.000298$ 5 $\alpha(\text{N})=6.61\times 10^{-5}$ 10; $\alpha(\text{O})=9.66\times 10^{-6}$ 14; $\alpha(\text{P})=5.07\times 10^{-7}$ 8
1419.4+z	(17/2 ⁺)	282.1 2	47 3	1136.9+z	(15/2 ⁺)	(M1+E2)	0.0790 18	$\alpha(\text{K})=0.0670$ 18; $\alpha(\text{L})=0.00945$ 18;

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued) $\gamma(^{129}\text{Nd})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult. [†]	α^\ddagger	Comments
1419.4+z	(17/2 ⁺)	482.6 5	<11	936.3+z	(13/2 ⁺)	(E2)	0.01296	$\alpha(\text{M})=0.00201$ 5 $\alpha(\text{N})=0.000449$ 9; $\alpha(\text{O})=6.78\times 10^{-5}$ 11; $\alpha(\text{P})=4.26\times 10^{-6}$ 16 $\alpha(\text{K})=0.01071$ 16; $\alpha(\text{L})=0.00177$ 3; $\alpha(\text{M})=0.000382$ 6 $\alpha(\text{N})=8.47\times 10^{-5}$ 13; $\alpha(\text{O})=1.233\times 10^{-5}$ 18; $\alpha(\text{P})=6.25\times 10^{-7}$ 9
		551.3 2	100 8	868.4+z	(13/2 ⁺)	(E2)	0.00909	$\alpha(\text{K})=0.00757$ 11; $\alpha(\text{L})=0.001197$ 17; $\alpha(\text{M})=0.000257$ 4 $\alpha(\text{N})=5.70\times 10^{-5}$ 8; $\alpha(\text{O})=8.37\times 10^{-6}$ 12; $\alpha(\text{P})=4.47\times 10^{-7}$ 7
1461.8+y	(19/2 ⁻)	397.2 2 518.8 2	20 4 100 8	1064.7+y 942.8+y	(17/2 ⁻) (15/2 ⁻)	(E2)	0.01066	$\alpha(\text{K})=0.00885$ 13; $\alpha(\text{L})=0.001429$ 20; $\alpha(\text{M})=0.000307$ 5 $\alpha(\text{N})=6.81\times 10^{-5}$ 10; $\alpha(\text{O})=9.96\times 10^{-6}$ 14; $\alpha(\text{P})=5.20\times 10^{-7}$ 8
1471.8+z	(17/2 ⁺)	535.4 2	100	936.3+z	(13/2 ⁺)	(E2)	0.00981	$\alpha(\text{K})=0.00816$ 12; $\alpha(\text{L})=0.001303$ 19; $\alpha(\text{M})=0.000280$ 4 $\alpha(\text{N})=6.21\times 10^{-5}$ 9; $\alpha(\text{O})=9.10\times 10^{-6}$ 13; $\alpha(\text{P})=4.81\times 10^{-7}$ 7
1543.0+x	(21/2 ⁻)	308.1 2	55 3	1235.1+x	(19/2 ⁻)	(M1+E2)	0.0624 16	$\alpha(\text{K})=0.0530$ 16; $\alpha(\text{L})=0.00741$ 11; $\alpha(\text{M})=0.00157$ 3 $\alpha(\text{N})=0.000352$ 6; $\alpha(\text{O})=5.32\times 10^{-5}$ 8; $\alpha(\text{P})=3.37\times 10^{-6}$ 13
		573.2 2	100 5	969.7+x	(17/2 ⁻)	(E2)	0.00822	$\alpha(\text{K})=0.00686$ 10; $\alpha(\text{L})=0.001072$ 15; $\alpha(\text{M})=0.000230$ 4 $\alpha(\text{N})=5.10\times 10^{-5}$ 8; $\alpha(\text{O})=7.50\times 10^{-6}$ 11; $\alpha(\text{P})=4.06\times 10^{-7}$ 6
1603.7+y	(21/2 ⁻)	539.1 2	100	1064.7+y	(17/2 ⁻)	(E2)	0.00964	$\alpha(\text{K})=0.00801$ 12; $\alpha(\text{L})=0.001277$ 18; $\alpha(\text{M})=0.000274$ 4 $\alpha(\text{N})=6.09\times 10^{-5}$ 9; $\alpha(\text{O})=8.92\times 10^{-6}$ 13; $\alpha(\text{P})=4.73\times 10^{-7}$ 7
1620.6+z	(19/2 ⁺)	566.6 2	100	1054.2+z	(15/2 ⁺)	(E2)	0.00847	$\alpha(\text{K})=0.00706$ 10; $\alpha(\text{L})=0.001107$ 16; $\alpha(\text{M})=0.000238$ 4 $\alpha(\text{N})=5.27\times 10^{-5}$ 8; $\alpha(\text{O})=7.75\times 10^{-6}$ 11; $\alpha(\text{P})=4.18\times 10^{-7}$ 6
1730.3+z	(19/2 ⁺)	311.0 2 593.4 2	27 3 100 7	1419.4+z 1136.9+z	(17/2 ⁺) (15/2 ⁺)	(E2)	0.00752	$\alpha(\text{K})=0.00629$ 9; $\alpha(\text{L})=0.000972$ 14; $\alpha(\text{M})=0.000208$ 3 $\alpha(\text{N})=4.63\times 10^{-5}$ 7; $\alpha(\text{O})=6.82\times 10^{-6}$ 10; $\alpha(\text{P})=3.73\times 10^{-7}$ 6
1843.9+x	(23/2 ⁻)	300.9 2	35.2 22	1543.0+x	(21/2 ⁻)	(M1+E2)	0.0665 17	$\alpha(\text{K})=0.0564$ 16; $\alpha(\text{L})=0.00791$ 13; $\alpha(\text{M})=0.00168$ 3 $\alpha(\text{N})=0.000376$ 6; $\alpha(\text{O})=5.68\times 10^{-5}$ 8; $\alpha(\text{P})=3.59\times 10^{-6}$ 13
2034.7+z	(21/2 ⁺)	608.8 2 304.7 2	100 6 29.2 24	1235.1+x 1730.3+z	(19/2 ⁻) (19/2 ⁺)	Q (M1+E2)	0.0643 16	$\alpha(\text{K})=0.0546$ 16; $\alpha(\text{L})=0.00764$ 12; $\alpha(\text{M})=0.00162$ 3 $\alpha(\text{N})=0.000363$ 6; $\alpha(\text{O})=5.49\times 10^{-5}$ 8; $\alpha(\text{P})=3.47\times 10^{-6}$ 13
2067.6+y	(23/2 ⁻)	615.1 2 464.0 5	100 9 <18	1419.4+z 1603.7+y	(17/2 ⁺) (21/2 ⁻)	Q		
2076.6+z	(21/2 ⁺)	605.8 2 604.7 2	100 9 100	1461.8+y 1471.8+z	(19/2 ⁻) (17/2 ⁺)	Q		

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Adopted Levels, Gammas (continued) $\gamma(^{129}\text{Nd})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult. [†]	α^\ddagger	Comments
2187.3+x	(25/2 ⁻)	343.4 2	39 3	1843.9+x	(23/2 ⁻)	(M1+E2)	0.0468 13	$\alpha(\text{K})=0.0398$ 13; $\alpha(\text{L})=0.00552$ 8; $\alpha(\text{M})=0.001171$ 17 $\alpha(\text{N})=0.000262$ 4; $\alpha(\text{O})=3.97\times 10^{-5}$ 7; $\alpha(\text{P})=2.53\times 10^{-6}$ 10
		644.2 2	100 5	1543.0+x	(21/2 ⁻)	Q		
2236.8+y	(25/2 ⁻)	633.1 2	100	1603.7+y	(21/2 ⁻)	Q		
2248.4+z	(23/2 ⁺)	628.0 2	100	1620.6+z	(19/2 ⁺)	Q		
2379.2+z	(23/2 ⁺)	344.8 2	28 3	2034.7+z	(21/2 ⁺)			
		648.7 2	100 6	1730.3+z	(19/2 ⁺)	Q		
2516.2+x	(27/2 ⁻)	329.0 2	28.6 12	2187.3+x	(25/2 ⁻)			
		672.3 2	100 6	1843.9+x	(23/2 ⁻)	Q		
2666.0+z	(25/2 ⁺)	286.9 2	14.5 19	2379.2+z	(23/2 ⁺)	(M1+E2)	0.0755 18	$\alpha(\text{K})=0.0641$ 18; $\alpha(\text{L})=0.00902$ 16; $\alpha(\text{M})=0.00192$ 4 $\alpha(\text{N})=0.000428$ 8; $\alpha(\text{O})=6.47\times 10^{-5}$ 10; $\alpha(\text{P})=4.08\times 10^{-6}$ 15
		417.8 2	13.2 24	2248.4+z	(23/2 ⁺)	(M1+E2)	0.0281 9	$\alpha(\text{K})=0.0239$ 8; $\alpha(\text{L})=0.00327$ 7; $\alpha(\text{M})=0.000693$ 13 $\alpha(\text{N})=0.000155$ 3; $\alpha(\text{O})=2.35\times 10^{-5}$ 6; $\alpha(\text{P})=1.52\times 10^{-6}$ 6
		589.2 2	23.7 26	2076.6+z	(21/2 ⁺)	(E2)	0.00766	$\alpha(\text{K})=0.00640$ 9; $\alpha(\text{L})=0.000992$ 14; $\alpha(\text{M})=0.000213$ 3 $\alpha(\text{N})=4.72\times 10^{-5}$ 7; $\alpha(\text{O})=6.95\times 10^{-6}$ 10; $\alpha(\text{P})=3.80\times 10^{-7}$ 6
		631.1 2	100 8	2034.7+z	(21/2 ⁺)	Q		
2734.9+z	(25/2 ⁺)	658.3 2	100	2076.6+z	(21/2 ⁺)			
2739.3+y	(27/2 ⁻)	671.7 2	100	2067.6+y	(23/2 ⁻)			
2881.7+x	(29/2 ⁻)	365.6 2	32.4 14	2516.2+x	(27/2 ⁻)			
		694.4 2	100 6	2187.3+x	(25/2 ⁻)	Q		
2909.7+z	(27/2 ⁺)	661.3 2	100	2248.4+z	(23/2 ⁺)	Q		
2949.2+y	(29/2 ⁻)	712.3 2	100	2236.8+y	(25/2 ⁻)	Q		
3053.8+z	(27/2 ⁺)	674.6 2	100	2379.2+z	(23/2 ⁺)			
3232.5+x	(31/2 ⁻)	351.0 2	33 3	2881.7+x	(29/2 ⁻)			
		716.2 2	100 6	2516.2+x	(27/2 ⁻)	Q		
3292.6+z	(29/2 ⁺)	626.6 2	100	2666.0+z	(25/2 ⁺)	Q		
3418.6+z	(29/2 ⁺)	683.7 5	100	2734.9+z	(25/2 ⁺)			
3459.3+y	(31/2 ⁻)	720.0 2	100	2739.3+y	(27/2 ⁻)			
3594.4+z	(31/2 ⁺)	684.7 2	100	2909.7+z	(27/2 ⁺)	Q		
3609.8+x	(33/2 ⁻)	377.1 2	37.3 17	3232.5+x	(31/2 ⁻)			
		728.1 2	100 7	2881.7+x	(29/2 ⁻)	Q		
3712.9+z	(31/2 ⁺)	659.1 2	100	3053.8+z	(27/2 ⁺)			
3730.4+y	(33/2 ⁻)	781.2 2	100	2949.2+y	(29/2 ⁻)	Q		
3960.5+z	(33/2 ⁺)	667.9 2	100	3292.6+z	(29/2 ⁺)	Q		
3978.6+x	(35/2 ⁻)	368.6 2	41.2 20	3609.8+x	(33/2 ⁻)			
		746.3 2	100 6	3232.5+x	(31/2 ⁻)	Q		
4214.4+y	(35/2 ⁻)	755.1 2	100	3459.3+y	(31/2 ⁻)			
4321.2+z	(35/2 ⁺)	726.8 2	100	3594.4+z	(31/2 ⁺)	Q		
4374.5+x	(37/2 ⁻)	396.0 2	36.0 16	3978.6+x	(35/2 ⁻)			
		764.6 2	100 5	3609.8+x	(33/2 ⁻)	Q		
4413.4+z	(35/2 ⁺)	700.5 2	100	3712.9+z	(31/2 ⁺)			
4575.7+y	(37/2 ⁻)	845.3 2	100	3730.4+y	(33/2 ⁻)	Q		
4703.9+z	(37/2 ⁺)	743.4 2	100	3960.5+z	(33/2 ⁺)	Q		
4772.2+x	(39/2 ⁻)	398.0 2	34 3	4374.5+x	(37/2 ⁻)			
		793.5 2	100 5	3978.6+x	(35/2 ⁻)	Q		
5032.4+y	(39/2 ⁻)	818.0 2	100	4214.4+y	(35/2 ⁻)			
5115.8+z	(39/2 ⁺)	794.6 2	100	4321.2+z	(35/2 ⁺)	Q		

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Adopted Levels, Gammas (continued) $\gamma(^{129}\text{Nd})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult. [†]
5192.8+z	(39/2 ⁺)	779.4	2 100	4413.4+z	(35/2 ⁺)	
5210.8+x	(41/2 ⁻)	438.3	2 27 3	4772.2+x	(39/2 ⁻)	
		836.2	2 100 6	4374.5+x	(37/2 ⁻)	Q
5487.5+y	(41/2 ⁻)	911.8	2 100	4575.7+y	(37/2 ⁻)	Q
5522.2+z	(41/2 ⁺)	818.3	2 100	4703.9+z	(37/2 ⁺)	Q
5644.3+x	(43/2 ⁻)	433.0	2 28 3	5210.8+x	(41/2 ⁻)	
		872.5	2 100 8	4772.2+x	(39/2 ⁻)	Q
5935.3+y	(43/2 ⁻)	902.9	2 100	5032.4+y	(39/2 ⁻)	
5973.6+z	(43/2 ⁺)	857.8	2 100	5115.8+z	(39/2 ⁺)	Q
6079.2+z	(43/2 ⁺)	886.4	2 100	5192.8+z	(39/2 ⁺)	
6142.9+x	(45/2 ⁻)	498.5	2 27 5	5644.3+x	(43/2 ⁻)	
		932.1	2 100 9	5210.8+x	(41/2 ⁻)	
6415.4+z	(45/2 ⁺)	893.2	2 100	5522.2+z	(41/2 ⁺)	
6472.1+y	(45/2 ⁻)	984.6	2 100	5487.5+y	(41/2 ⁻)	Q
6606.4+x	(47/2 ⁻)	962.1	2 100	5644.3+x	(43/2 ⁻)	Q
6901.2+z	(47/2 ⁺)	927.6	2 100	5973.6+z	(43/2 ⁺)	
6927.2+y	(47/2 ⁻)	991.9	2 100	5935.3+y	(43/2 ⁻)	
7078.2+z	(47/2 ⁺)	999	1 100	6079.2+z	(43/2 ⁺)	
7176.0+x	(49/2 ⁻)	1033.1	2 100	6142.9+x	(45/2 ⁻)	
7395.6+z	(49/2 ⁺)	980.2	2 100	6415.4+z	(45/2 ⁺)	
7528.1+y	(49/2 ⁻)	1056.0	2 100	6472.1+y	(45/2 ⁻)	Q
7658.3+x	(51/2 ⁻)	1051.9	2 100	6606.4+x	(47/2 ⁻)	
7916.4+z	(51/2 ⁺)	1015.2	2 100	6901.2+z	(47/2 ⁺)	
8010.9+y	(51/2 ⁻)	1083.7	2 100	6927.2+y	(47/2 ⁻)	
8178.2+z	(51/2 ⁺)	1100	1 100	7078.2+z	(47/2 ⁺)	
8307.3+x	(53/2 ⁻)	1131.3	2 100	7176.0+x	(49/2 ⁻)	
8471.7+z	(53/2 ⁺)	1076.1	2 100	7395.6+z	(49/2 ⁺)	
8636.1+y	(53/2 ⁻)	1108	1 100	7528.1+y	(49/2 ⁻)	
8796.7+x	(55/2 ⁻)	1138.4	2 100	7658.3+x	(51/2 ⁻)	
9024.0+z	(55/2 ⁺)	1107.6	2 100	7916.4+z	(51/2 ⁺)	
9176.9+y	(55/2 ⁻)	1166.0	2 100	8010.9+y	(51/2 ⁻)	
9337.2+z	(55/2 ⁺)	1159	1 100	8178.2+z	(51/2 ⁺)	
9535.6+x	(57/2 ⁻)	1228.3	2 100	8307.3+x	(53/2 ⁻)	
9643.5+z	(57/2 ⁺)	1171.8	2 100	8471.7+z	(53/2 ⁺)	
9796.1+y	(57/2 ⁻)	1160	1 100	8636.1+y	(53/2 ⁻)	
10019.4+x	(59/2 ⁻)	1222.7	2 100	8796.7+x	(55/2 ⁻)	
10222.2+z	(59/2 ⁺)	1198.2	2 100	9024.0+z	(55/2 ⁺)	
10416.0+y	(59/2 ⁻)	1239.1	2 100	9176.9+y	(55/2 ⁻)	
10857.6+x	(61/2 ⁻)	1322.0	2 100	9535.6+x	(57/2 ⁻)	
10902.5+z	(61/2 ⁺)	1259	1 100	9643.5+z	(57/2 ⁺)	
11009.1+y	(61/2 ⁻)	1213	1 100	9796.1+y	(57/2 ⁻)	
11326.4+x	(63/2 ⁻)	1307.0	2 100	10019.4+x	(59/2 ⁻)	
11511.1+z	(63/2 ⁺)	1288.9	2 100	10222.2+z	(59/2 ⁺)	
11721.0+y	(63/2 ⁻)	1305	1 100	10416.0+y	(59/2 ⁻)	
12221.5+z	(65/2 ⁺)	1319	1 100	10902.5+z	(61/2 ⁺)	
12263.5+x	(65/2 ⁻)	1405.9	2 100	10857.6+x	(61/2 ⁻)	
12265.1+y	(65/2 ⁻)	1256	1 100	11009.1+y	(61/2 ⁻)	
12720.4+x	(67/2 ⁻)	1394.0	2 100	11326.4+x	(63/2 ⁻)	
12892.1+z	(67/2 ⁺)	1381	1 100	11511.1+z	(63/2 ⁺)	
13090.1+y	(67/2 ⁻)	1369	1 100	11721.0+y	(63/2 ⁻)	
13575.5+z	(69/2 ⁺)	1354 [#]	1 100	12221.5+z	(65/2 ⁺)	
13746.5+x	(69/2 ⁻)	1483	1 100	12263.5+x	(65/2 ⁻)	
14202.4+x	(71/2 ⁻)	1482	1 100	12720.4+x	(67/2 ⁻)	
14365.1+z	(71/2 ⁺)	1473	1 100	12892.1+z	(67/2 ⁺)	

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Adopted Levels, Gammas (continued) $\gamma(^{129}\text{Nd})$ (continued)

<u>$E_i(\text{level})$</u>	<u>J_i^π</u>	<u>E_γ</u>	<u>I_γ</u>	<u>E_f</u>	<u>J_f^π</u>
14528.1+y	(71/2 ⁻)	1438 l	100	13090.1+y	(67/2 ⁻)
15765.4+x	(75/2 ⁻)	1563 l	100	14202.4+x	(71/2 ⁻)

† From $\gamma\gamma(\theta)$ (DCO) data in $^{92}\text{Mo}(^{40}\text{Ca}, 2\text{pn}\gamma)$. The mult=Q indicates $\Delta J=2$, quadrupole (most likely E2) and D+Q indicates $\Delta J=1$, dipole+quadrupole (most likely M1+E2). Mult=(E2) or (M1+E2) assigned based on RUL for E2 and M2 with the assumption of ≈ 10 ns resolving time in $\gamma\gamma$ coincidence experiments.

‡ $\delta(\text{E2/M1})=0.30$ assumed for M1+E2 transitions.

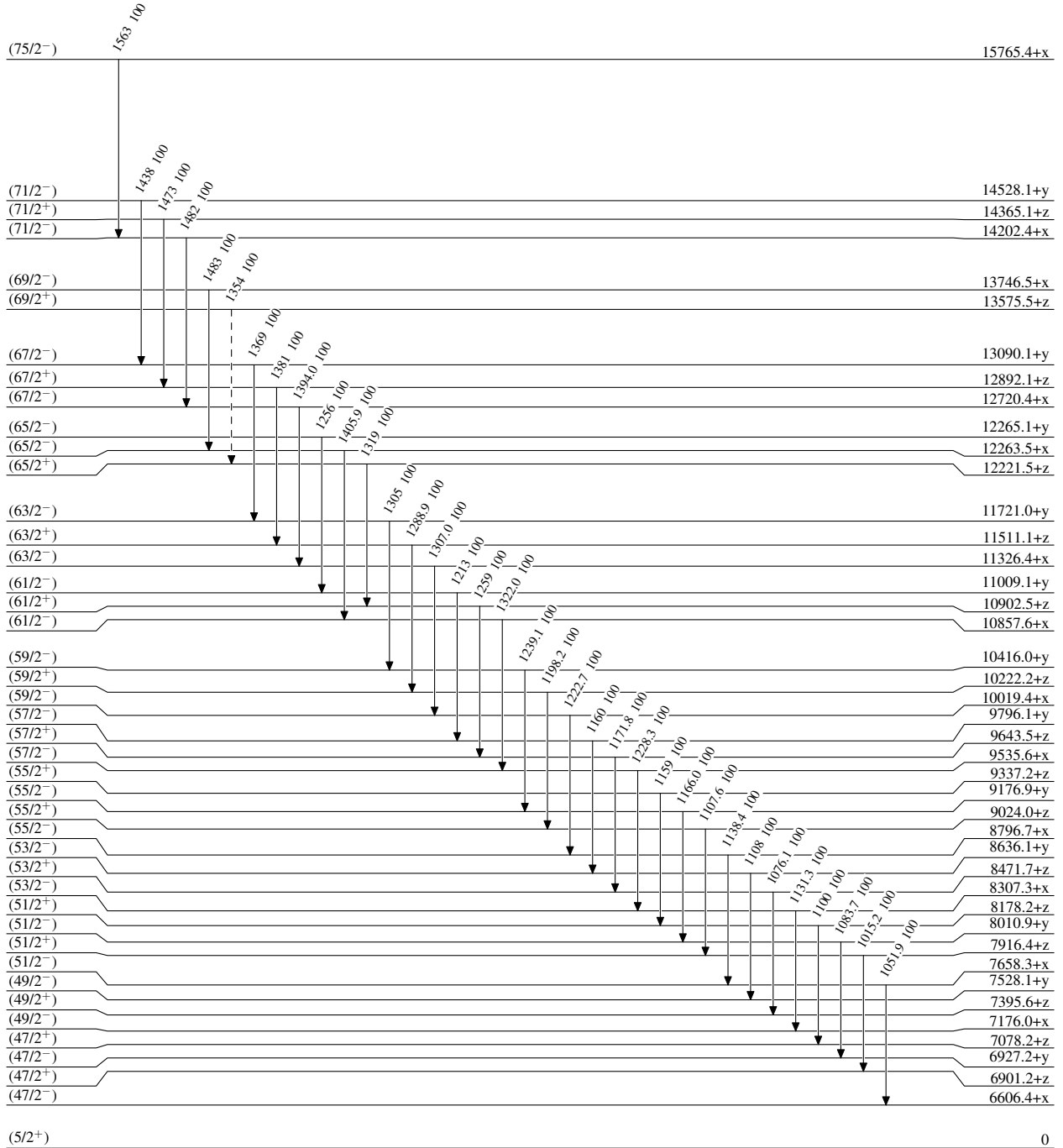
Placement of transition in the level scheme is uncertain.

Adopted Levels, Gammas

Legend

Level Scheme

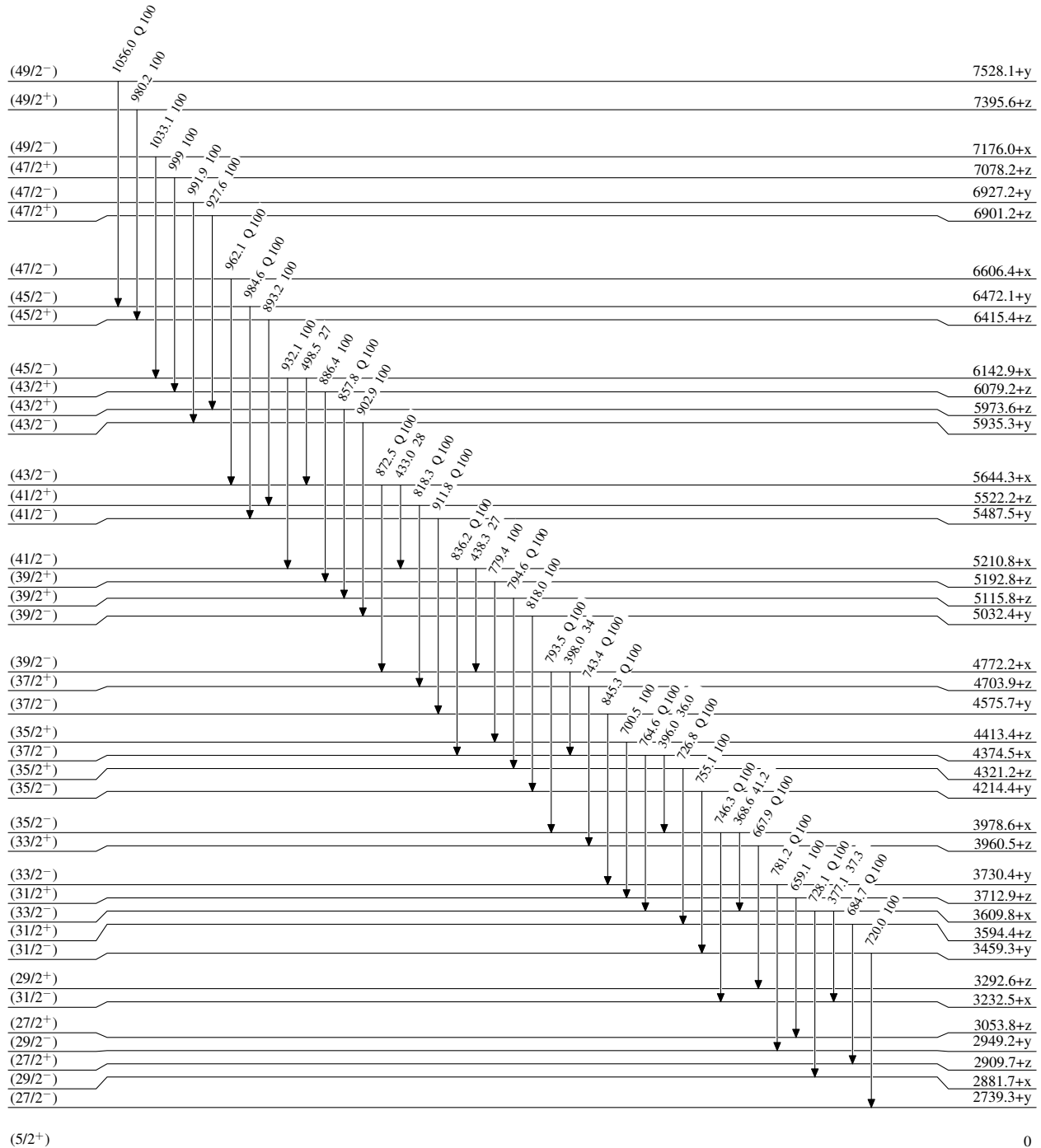
Intensities: Relative photon branching from each level

-----▶ γ Decay (Uncertain)

6.7 s 4

Adopted Levels, GammasLevel Scheme (continued)

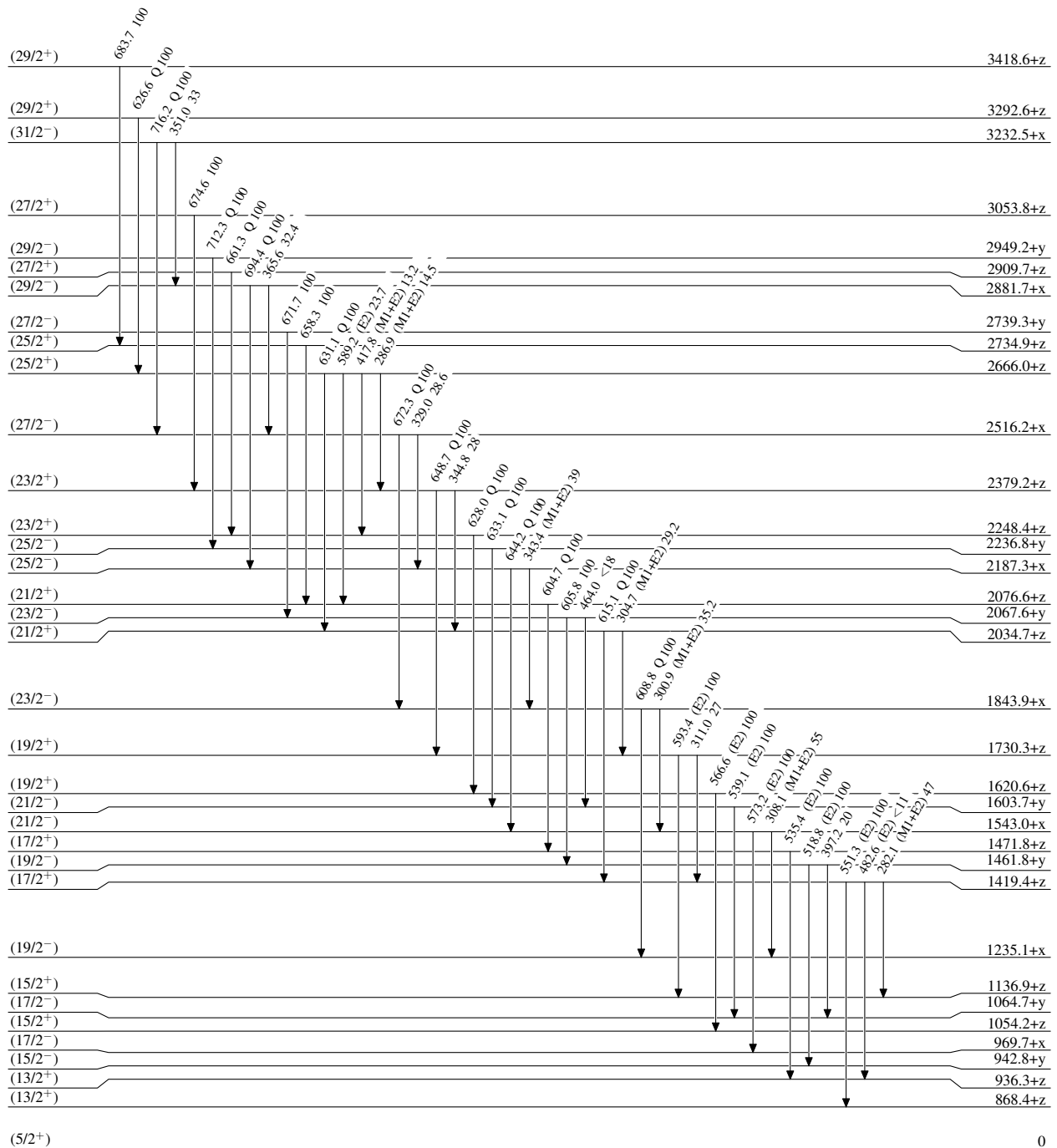
Intensities: Relative photon branching from each level



0 6.7 s 4

Adopted Levels, Gammas**Level Scheme (continued)**

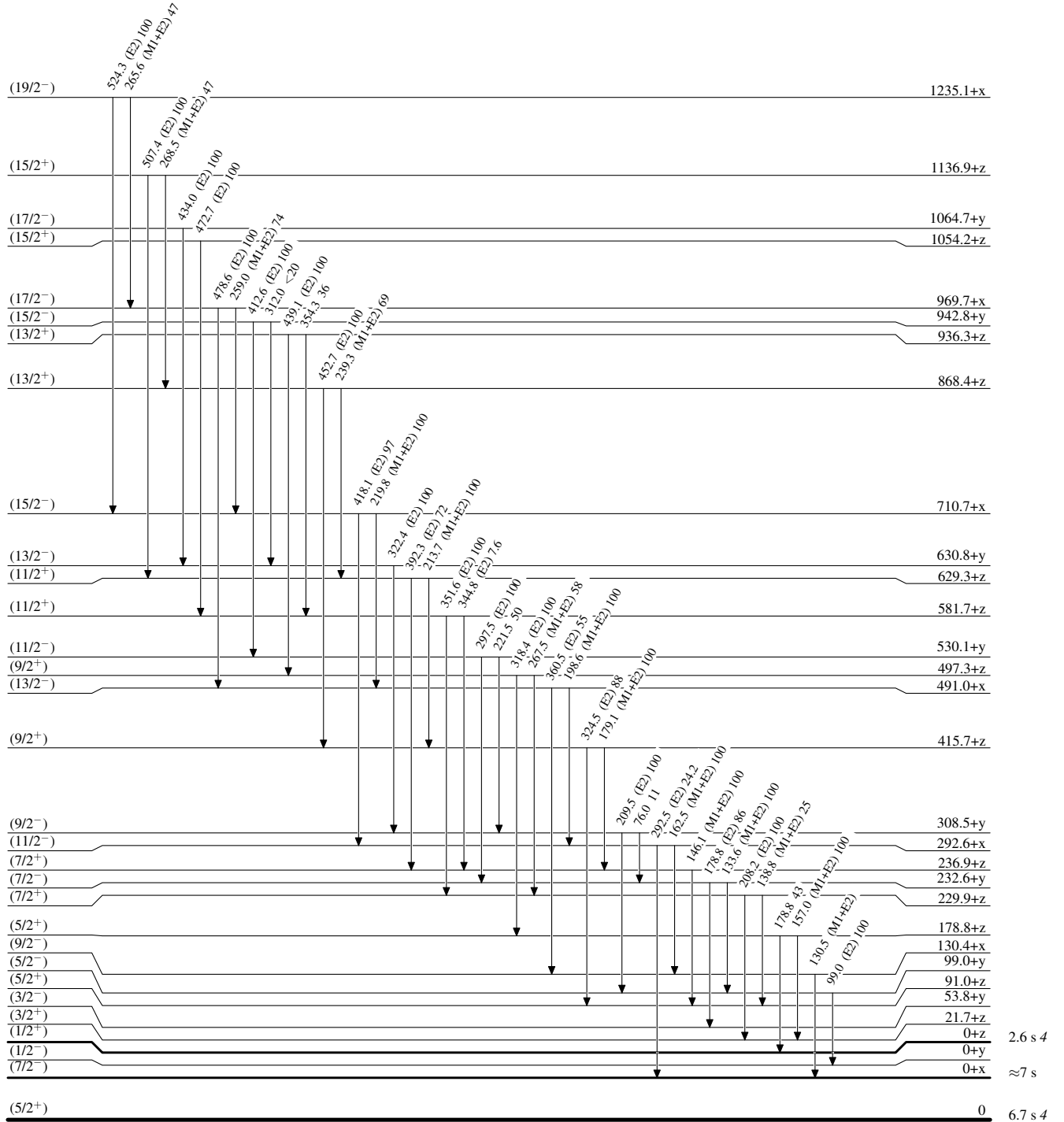
Intensities: Relative photon branching from each level

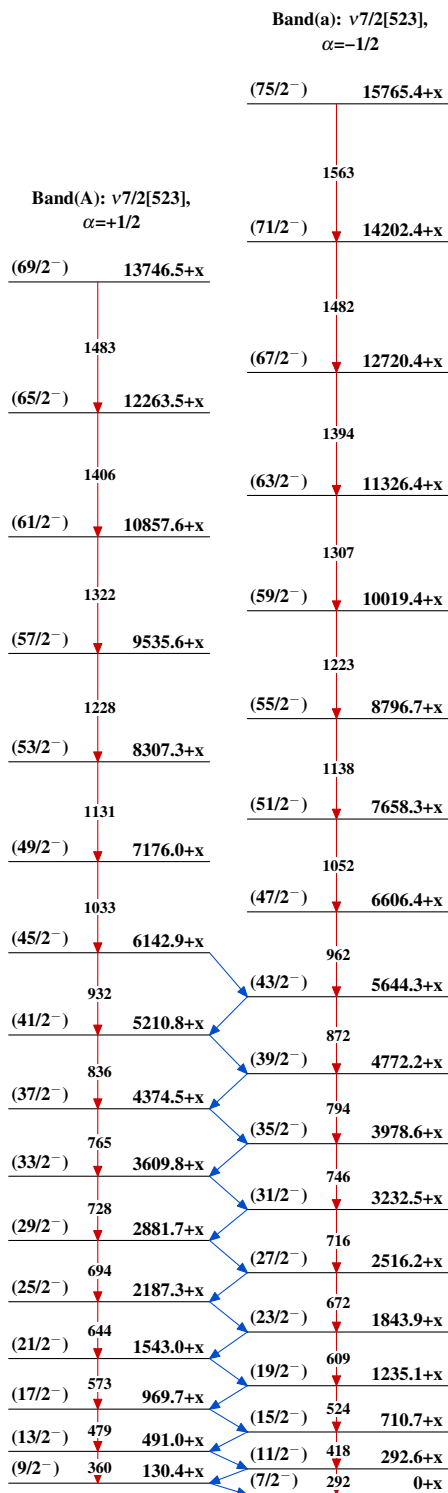


Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



Adopted Levels, Gammas $^{129}_{60}\text{Nd}_{69}$

Adopted Levels, Gammas (continued)