^{156}Gd(n,γ) E=24 keV 1993Ko01,1986GrZR

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 132, 1 (2016)	4-Dec-2015

Results given here are from measurements of primary γ's from averaged-resonance capture for 24-keV neutrons (1993Ko01,1986GrZR).

Experimental methods:

1970Bo29: (n,γ) reaction on natural Gd target with neutron spectrum shaped to average over many resonances. Only one γ assigned to levels in ^{157}Gd.

1975GrZB: (n,γ) reaction on enriched target with 24-keV n beam whose width of ≈ 2 keV averages over ≈ 42 resonances in the capture.

1977GrZL: (n,γ) reaction with 24-keV n.

1986GrZR: (n,γ) reaction on enriched targets with 24-keV n beam γ's measured with Ge detectors. Private communication to evaluator.

1993Ko01: (n,γ) reaction on enriched target with 24-keV beam. γ's measured with three-crystal pair spectrometer.

^{157}Gd Levels

E(level)†‡	J$^{\pi}$#@
0.0	(1/2,3/2)$^-$
63.66 *18*	5/2$^+$
474.34 *15*	(1/2,3/2)$^+$
524.6 *6*	5/2$^+$
655.7 *5*	
683.38 *14*	(1/2,3/2)$^+$
701.31 *14*	(1/2,3/2)$^-$
729.05 *12*	(1/2,3/2)$^-$
750.89 *23*	(1/2,3/2)$^+$
762.49 *13*	(1/2,3/2)$^-$
793.33 *14*	(1/2,3/2)$^-$
808.84 *10*	(1/2,3/2)$^-$
815.4 *4*	5/2$^+$
970.8 *5*	
996.6 *9*	
1040.95 *16*	(1/2,3/2)$^+$
1062.5 *6*	
1092.24 *17*	(1/2,3/2)$^+$
1136.7 *3*	
1142.0 *8*	5/2$^+$
1157.0 *9*	5/2$^+$
1184.5 *5*	
1245.6 *6*	
1249.6 *4*	(1/2,3/2)$^+$
1283.0 *4*	(1/2,3/2)$^+$
1298.25 *17*	(1/2,3/2)$^+$
1315.67 *10*	(1/2,3/2)$^-$
1330.67 *25*	(1/2$^+$,3/2$^+$)
1339.10 *24*	(1/2,3/2)$^+$
1348.87 *12*	(1/2,3/2)$^-$
1377.4? *22*	5/2
1386.51 *16*	(1/2,3/2)$^-$
1399.3 *5*	
1412.71 *17*	(1/2,3/2)$^-$
1437.2 *6*	
1446.5 *9*	5/2$^+$
1467.4 *13*	5/2

Continued on next page (footnotes at end of table)

^{156}Gd(n,γ) E=24 keV 1993Ko01,1986GrZR (continued)

^{157}Gd Levels (continued)

E(level)[†‡]	J$^{\pi}$[#@]	Comments
1477.90 *23*	$(5/2)^+$	J$^{\pi}$: Assigned $(5/2)^+$ by 1986GrZR and $(1/2,3/2)^-$ from multipolarity of primary γ (1993Ko01).
1489.71 *22*	$(1/2,3/2)^+$	
1521.60 *23*	(1/2,3/2)	
1525.6 *3*	$(1/2,3/2)^+$	
1552.0 *5*	$(1/2,3/2)^+$	
1556.3 *5*		
1562.7 *5*	$(1/2,3/2)^+$	
1564.7 *17*	$(1/2,3/2)^+$	
1568.5 *4*		
1574.1 *4*		
1583.7 *4*	$(1/2,3/2)^+$	
1589.69 *23*	(1/2,3/2)	J$^{\pi}$: Assigned π=+ by 1986GrZR and π=− from multipolarity of primary γ (1993Ko01).
1606.8 *6*		
1611.88 *18*	$(1/2,3/2)^-$	
1616.68 *20*	$(1/2,3/2)^-$	
1635.8 *4*	$(1/2,3/2)^+$	
1649.0 *6*		
1658.29 *19*	(1/2,3/2)	J$^{\pi}$: Assigned π=+ by 1986GrZR and π=− from multipolarity of primary γ 91993Ko01.
1666.60 *14*	$(1/2,3/2)^-$	
1678.9 *7*	$(1/2,3/2)^+$	
1692.2 *4*		
1701.7 *5*		
1717.66 *15*	(1/2,3/2)	
1720.70 *16*	(1/2,3/2)	
1736.4 *3*	$(1/2,3/2)^-$	
1740.3 *4*	$(1/2,3/2)^-$	
1750.14 *15*	$(1/2,3/2)^-$	
1760.09 *23*	$(1/2,3/2)^+$	
1788.2 *5*	$(1/2,3/2)^+$	
1798.6 *7*		E(level): Calculated by evaluator from γ energies; given as 1789.4 *7* by 1993Ko01.
1802.0 *3*		
1824.04 *19*	$(1/2,3/2)^-$	
1836.2 *3*	$(1/2,3/2)^-$	
1845.4 *4*	$(1/2,3/2)^-$	
1850.7 *4*	$(1/2,3/2)^+$	
1854.9 *5*	$(1/2,3/2)^+$	
1861.72 *18*	$(1/2,3/2)^-$	
1869.8? *12*		
1889.26 *18*	$(1/2,3/2)^-$	
1896.36 *25*	$(1/2,3/2)^+$	
1915.88 *14*	$(1/2,3/2)^-$	
1920.91 *25*	(1/2,3/2)	
1937.18 *20*	$(1/2,3/2)^-$	
1953.0 *5*	$(1/2,3/2)^+$	
1956.90 *15*	$(1/2,3/2)^-$	
1959.3 *9*		
1976.1 *4*	(1/2,3/2)	
1983.6 *4*	$(1/2,3/2)^-$	
1992.01 *23*	$(1/2,3/2)^-$	
1997.3 *5*	$(1/2,3/2)^+$	
2028.6? *6*		
2038.04 *25*	$(1/2,3/2)^-$	
2052.2 *3*		
2072.0 *3*	(1/2,3/2)	
2094.2 *3*	$(1/2,3/2)^+$	
2099.3 *3*		

Continued on next page (footnotes at end of table)

^{156}Gd(n,γ) E=24 keV 1993Ko01,1986GrZR (continued)

^{157}Gd Levels (continued)

E(level)[†‡]	Jπ[#@]	Comments
2118.1 *4*	(1/2,3/2)$^-$	
2123.3 *7*		
2129.6 *3*		
2135.9 *4*		
2146.7 *3*	(1/2,3/2)$^-$	
2164.81 *16*	(1/2,3/2)$^-$	
2173.6 *3*	(1/2,3/2)$^-$	
2180.0 *8*		
2181.2 *3*		
2188.56 *20*	(1/2,3/2)$^-$	
2198.80 *21*	(1/2,3/2)$^-$	
2207.75 *21*	(1/2,3/2)$^-$	
2218.1 *3*	(1/2,3/2)$^-$	
2230.3 *3*	(1/2,3/2)$^-$	
2242.2 *6*		
2250.5 *5*		
2259.48 *25*	(1/2,3/2)$^-$	
2276.2 *8*		
2290.66 *25*	(1/2,3/2)$^-$	
2303.4		
2307.6 *7*		
2317.1 *3*	(1/2,3/2)$^-$	
2328.1 *4*		
2333.61 *25*	(1/2,3/2)$^-$	
2342.8 *4*		
2352.6 *4*		
2367.3 *3*	(1/2,3/2)$^-$	
2373.39 *19*	(1/2,3/2)$^-$	
2380.8 *4*	(1/2,3/2)$^-$	
2387.1 *5*		
2393.4 *7*		
2401.3 *4*		
2413.3 *5*	(1/2,3/2)$^+$	
2441.6 *4*	(1/2,3/2)$^-$	
2465.7 *7*		
2469.3 *6*	(1/2,3/2)$^-$	
2491.9 *3*	(1/2,3/2)$^+$	
2518.1 *8*		
2523.9 *5*		
2540.4 *8*		
2555.8 *4*		
2562.5 *4*		
2571.3 *4*		
2585.2 *3*	(1/2,3/2)$^-$	
2590.1 *5*	(1/2,3/2)$^-$	
2595.2 *6*		
2607.8 *3*	(1/2,3/2)$^-$	
2614.7 *4*	(1/2,3/2)$^-$	
2626.0 *5*		
2633.5 *4*	(1/2,3/2)$^-$	
2650.6 *6*		
2659.2 *5*	(1/2,3/2)$^+$	
2663.2 *11*		
2666.3 *5*	(1/2,3/2)$^+$	
6382.93 *13*	1/2$^+$,1/2$^-$,3/2$^-$	E(level): Capture state for 24-keV n. Jπ: About equal contributions of s- and p-wave capture expected, so all three J^π values contribute.

Continued on next page (footnotes at end of table)

^{156}Gd(n,γ) E=24 keV 1993Ko01,1986GrZR (continued)

^{157}Gd Levels (continued)

† The energy of the capture state was computed from the energy of the ground-state γ ray. With this value fixed, the energies of the remaining levels were computed from the other primary γ energies.
‡ Above 2100 keV, all levels are from 1993Ko01; below this energy they are from 1986GrZR and 1993Ko01.
# Assigned by 1986GrZR from γ intensities from averaged n resonance capture and by evaluator from γ multipolarities of 1993Ko01. Below 1 MeV, more restricted assignments are generally available in the Adopted Levels.
@ For band assignments, see ^{157}Gd Adopted Levels.

$\gamma(^{157}Gd)$

E_γ †	I_γ †&	E_i(level)	J_i^π	E_f	J_f^π	Mult.‡
3715.5 *7*	24 *6*	6382.93	$1/2^+,1/2^-,3/2^-$	2666.3	$(1/2,3/2)^+$	M1
3719.7 *11*	14 *6*	6382.93	$1/2^+,1/2^-,3/2^-$	2663.2		
3724.6 *7*	17 *5*	6382.93	$1/2^+,1/2^-,3/2^-$	2659.2	$(1/2,3/2)^+$	M1
3732.3 *6*	14 *4*	6382.93	$1/2^+,1/2^-,3/2^-$	2650.6		
3749.3 *4*	20 *4*	6382.93	$1/2^+,1/2^-,3/2^-$	2633.5	$(1/2,3/2)^-$	E1
3767.6 *6*	10.6 *28*	6382.93	$1/2^+,1/2^-,3/2^-$	2614.7	$(1/2,3/2)^-$	E1
3775.0 *4*	19 *3*	6382.93	$1/2^+,1/2^-,3/2^-$	2607.8	$(1/2,3/2)^-$	E1
3792.4 *4*	10 *3*	6382.93	$1/2^+,1/2^-,3/2^-$	2590.1	$(1/2,3/2)^-$	E1
3798.4 *6*	19 *5*	6382.93	$1/2^+,1/2^-,3/2^-$	2585.2	$(1/2,3/2)^-$	E1
3890.8 *4*	26 *5*	6382.93	$1/2^+,1/2^-,3/2^-$	2491.9	$(1/2,3/2)^+$	M1
3912.4 *11*	14 *4*	6382.93	$1/2^+,1/2^-,3/2^-$	2469.3	$(1/2,3/2)^-$	E1
3917.2 *7*	11 *3*	6382.93	$1/2^+,1/2^-,3/2^-$	2465.7		
3942.0 *9*	20 *5*	6382.93	$1/2^+,1/2^-,3/2^-$	2441.6	$(1/2,3/2)^-$	E1
3969.8 *6*	18 *4*	6382.93	$1/2^+,1/2^-,3/2^-$	2413.3	$(1/2,3/2)^+$	M1
3981.6 *4*	25 *4*	6382.93	$1/2^+,1/2^-,3/2^-$	2401.3		
4003.9 *9*	13 *4*	6382.93	$1/2^+,1/2^-,3/2^-$	2380.8	$(1/2,3/2)^-$	E1
4010.0 *7*	12 *3*	6382.93	$1/2^+,1/2^-,3/2^-$	2373.39	$(1/2,3/2)^-$	E1
4016.0 *8*	13 *4*	6382.93	$1/2^+,1/2^-,3/2^-$	2367.3	$(1/2,3/2)^-$	E1
4049.8 *7*	15 *4*	6382.93	$1/2^+,1/2^-,3/2^-$	2333.61	$(1/2,3/2)^-$	E1
4054.8 *4*	17.9 *28*	6382.93	$1/2^+,1/2^-,3/2^-$	2328.1		
4066.8 *5*	13.5 *29*	6382.93	$1/2^+,1/2^-,3/2^-$	2317.1	$(1/2,3/2)^-$	E1
4092.2 *3*	24 *3*	6382.93	$1/2^+,1/2^-,3/2^-$	2290.66	$(1/2,3/2)^-$	E1
4123.2 *4*	24 *4*	6382.93	$1/2^+,1/2^-,3/2^-$	2259.48	$(1/2,3/2)^-$	E1
4132.4 *5*	17 *4*	6382.93	$1/2^+,1/2^-,3/2^-$	2250.5		
4152.9 *10*	14 *6*	6382.93	$1/2^+,1/2^-,3/2^-$	2230.3	$(1/2,3/2)^-$	E1
4165.4 *7*	20 *6*	6382.93	$1/2^+,1/2^-,3/2^-$	2218.1	$(1/2,3/2)^-$	E1
4173.4 *4*	40 *6*	6382.93	$1/2^+,1/2^-,3/2^-$	2207.75	$(1/2,3/2)^-$	E1
4184.3 *4*	32 *5*	6382.93	$1/2^+,1/2^-,3/2^-$	2198.80	$(1/2,3/2)^-$	E1
4194.6 *4*	30 *5*	6382.93	$1/2^+,1/2^-,3/2^-$	2188.56	$(1/2,3/2)^-$	E1
4202.9 *8*	21 *6*	6382.93	$1/2^+,1/2^-,3/2^-$	2180.0		
4208.2 *9*	13 *4*	6382.93	$1/2^+,1/2^-,3/2^-$	2173.6	$(1/2,3/2)^-$	E1
4218.2 *3*	30 *5*	6382.93	$1/2^+,1/2^-,3/2^-$	2164.81	$(1/2,3/2)^-$	E1
4236.1 *4*	15.8 *29*	6382.93	$1/2^+,1/2^-,3/2^-$	2146.7	$(1/2,3/2)^-$	E1
4259.6 *7*	16 *4*	6382.93	$1/2^+,1/2^-,3/2^-$	2123.3		
4264.6 *6*	17 *4*	6382.93	$1/2^+,1/2^-,3/2^-$	2118.1	$(1/2,3/2)^-$	E1
4285.8# *10*		6382.93	$1/2^+,1/2^-,3/2^-$	2099.3		
4287.3 *5*	30 *6*	6382.93	$1/2^+,1/2^-,3/2^-$	2094.2	$(1/2,3/2)^+$	M1
4311.5 *6*	22 *6*	6382.93	$1/2^+,1/2^-,3/2^-$	2072.0	(1/2,3/2)	E1,M1
4330.1# *12*		6382.93	$1/2^+,1/2^-,3/2^-$	2052.2		
4344.7 *4*	15 *3*	6382.93	$1/2^+,1/2^-,3/2^-$	2038.04	$(1/2,3/2)^-$	E1
4354.3 *6*	5.4 *19*	6382.93	$1/2^+,1/2^-,3/2^-$	2028.6?		
4385.9 *8*	13 *4*	6382.93	$1/2^+,1/2^-,3/2^-$	1997.3	$(1/2,3/2)^+$	M1
4391.0 *3*	27 *4*	6382.93	$1/2^+,1/2^-,3/2^-$	1992.01	$(1/2,3/2)^-$	E1
4399.2 *5*	13 *3*	6382.93	$1/2^+,1/2^-,3/2^-$	1983.6	$(1/2,3/2)^-$	E1

Continued on next page (footnotes at end of table)

^{156}Gd(n,γ) E=24 keV 1993Ko01,1986GrZR (continued)

γ(^{157}Gd) (continued)

E_γ [†]	I_γ [†&]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [‡]
4407.0 *4*	19 *4*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1976.1	(1/2,3/2)	M1,E1
4423.6 *9*	15 *5*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1959.3		
4425.95 *13*	13.4 *29*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1956.90	(1/2,3/2)$^-$	E1
4429.3 *6*	25 *6*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1953.0	(1/2,3/2)$^+$	M1
4445.91 *23*	6.5 *17*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1937.18	(1/2,3/2)$^-$	E1
4461.4 *3*	4.0 *17*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1920.91	(1/2,3/2)	E1,M1
4466.49 *15*	23.1 *17*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1915.88	(1/2,3/2)$^-$	E1
4487.2 *4*	21.0 *29*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1896.36	(1/2,3/2)$^+$	M1
4494.0 *3*	25 *3*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1889.26	(1/2,3/2)$^-$	E1
4513.1 *12*		6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1869.8?		
4521.3 *3*	35 *10*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1861.72	(1/2,3/2)$^-$	E1
4528.0 *6*	24 *8*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1854.9	(1/2,3/2)$^+$	M1
4532.1 *4*	21 *8*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1850.7	(1/2,3/2)$^+$	M1
4537.9 *5*	21 *6*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1845.4	(1/2,3/2)$^-$	E1
4547.3 *4*	12.1 *17*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1836.2	(1/2,3/2)$^-$	E1
4558.8 *3*	26 *5*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1824.04	(1/2,3/2)$^-$	E1
4584.3 *7*	13 *4*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1798.6		
4594.4 *7*	13 *4*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1788.2	(1/2,3/2)$^+$	M1
4622.72 *24*	20 *4*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1760.09	(1/2,3/2)$^+$	M1
4633.2 *5*	19 *4*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1750.14	(1/2,3/2)$^-$	E1
4642.5 *6*	29 *5*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1740.3	(1/2,3/2)$^-$	E1,M1
4647.0 *8*	18 *4*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1736.4	(1/2,3/2)$^-$	E1
4662.28 *15*	16.2 *10*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1720.70	(1/2,3/2)	M1,E1
4664.6 *3*	36 *4*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1717.66	(1/2,3/2)	E1
4680.9 *5*	12 *4*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1701.7		
4690.7 *4*	14.8 *27*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1692.2		
4702.6[#] *9*		6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1678.9	(1/2,3/2)$^+$	
4716.45 *19*	47 *4*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1666.60	(1/2,3/2)$^-$	E1
4725.4 *5*	18 *3*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1658.29	(1/2,3/2)	E1
4733.8 *6*	12 *3*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1649.0		
4747.2 *4*	21 *3*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1635.8	(1/2,3/2)$^+$	
4765.4 *5*	18 *3*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1616.68	(1/2,3/2)$^-$	E1
4770.3 *3*	34 *3*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1611.88	(1/2,3/2)$^-$	E1
4776.0 *6*	13.3 *28*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1606.8		
4792.8 *8*	5.2 *15*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1589.69	(1/2,3/2)	E1
4797.5[#] *12*		6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1583.7	(1/2,3/2)$^+$	
4808.7 *4*	34 *17*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1574.1		
4814.5 *4*	41 *13*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1568.5		
4820.2 *5*	26 *10*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1562.7	(1/2,3/2)$^+$	M1
4826.6 *5*	45 *8*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1556.3		
4830.6 *6*	42 *7*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1552.0	(1/2,3/2)$^+$	M1
4856.9 *4*	24 *4*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1525.6	(1/2,3/2)$^+$	M1
4860.8 *3*	34 *4*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1521.60	(1/2,3/2)	E1,M1
4893.24 *21*	28 *3*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1489.71	(1/2,3/2)$^+$	M1
4904.8 *3*	18.9 *25*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1477.90	(5/2)$^+$	E1
4915.5[#] *13*		6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1467.4	5/2	
4936.4[#] *9*		6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1446.5	5/2$^+$	
4945.6 *6*	12 *3*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1437.2		
4970.16 *23*	29.3 *28*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1412.71	(1/2,3/2)$^-$	E1
4983.5 *5*	11.7 *24*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1399.3		
4997.4 *4*	15.7 *24*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1386.51	(1/2,3/2)$^-$	E1
5005.4[#] *22*		6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1377.4?	5/2	
5033.89 *17*	28 *3*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1348.87	(1/2,3/2)$^-$	E1
5044.1 *4*	36 *3*	6382.93	1/2$^+$,1/2$^-$,3/2$^-$	1339.10	(1/2,3/2)$^+$	M1

Continued on next page (footnotes at end of table)

^{156}Gd(n,γ) E=24 keV 1993Ko01,1986GrZR (continued)

γ(^{157}Gd) (continued)

E_γ [†]	I_γ [†&]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]
5052.3 *4*	19.6 *28*	6382.93	$1/2^+,1/2^-,3/2^-$	1330.67	$(1/2^+,3/2^+)$	M1,E1
5067.11 *16*	55 *4*	6382.93	$1/2^+,1/2^-,3/2^-$	1315.67	$(1/2,3/2)^-$	E1
5084.75 *17*	28 *4*	6382.93	$1/2^+,1/2^-,3/2^-$	1298.25	$(1/2,3/2)^+$	M1
5100.0 *5*	18 *3*	6382.93	$1/2^+,1/2^-,3/2^-$	1283.0	$(1/2,3/2)^+$	M1
5133.3 *5*	23 *5*	6382.93	$1/2^+,1/2^-,3/2^-$	1249.6	$(1/2,3/2)^+$	M1
5137.2 *6*	16 *5*	6382.93	$1/2^+,1/2^-,3/2^-$	1245.6		
5198.3 *5*	15 *4*	6382.93	$1/2^+,1/2^-,3/2^-$	1184.5		
5225.8[#] *9*		6382.93	$1/2^+,1/2^-,3/2^-$	1157.0	$5/2^+$	
5240.8[#] *8*		6382.93	$1/2^+,1/2^-,3/2^-$	1142.0	$5/2^+$	
5246.1 *3*	16.7 *25*	6382.93	$1/2^+,1/2^-,3/2^-$	1136.7		
5290.24 *21*	39 *3*	6382.93	$1/2^+,1/2^-,3/2^-$	1092.24	$(1/2,3/2)^+$	M1
5320.4 *7*	13 *3*	6382.93	$1/2^+,1/2^-,3/2^-$	1062.5		
5341.98 *25*	27.9 *23*	6382.93	$1/2^+,1/2^-,3/2^-$	1040.95	$(1/2,3/2)^+$	E1,M1
5386.2 *9*	14 *4*	6382.93	$1/2^+,1/2^-,3/2^-$	996.6		
5412.0 *5*	16 *3*	6382.93	$1/2^+,1/2^-,3/2^-$	970.8		
5567.4 *4*	37 *4*	6382.93	$1/2^+,1/2^-,3/2^-$	815.4	$5/2^+$	E2
5574.31 *17*	75 *6*	6382.93	$1/2^+,1/2^-,3/2^-$	808.84	$(1/2,3/2)^-$	E1
5589.58 *23*	44 *4*	6382.93	$1/2^+,1/2^-,3/2^-$	793.33	$(1/2,3/2)^-$	E1
5620.7 *6*	54 *12*	6382.93	$1/2^+,1/2^-,3/2^-$	762.49	$(1/2,3/2)^-$	E1
5631.81 *26*	42 *5*	6382.93	$1/2^+,1/2^-,3/2^-$	750.89	$(1/2,3/2)^+$	M1
5653.98 *28*	53 *3*	6382.93	$1/2^+,1/2^-,3/2^-$	729.05	$(1/2,3/2)^-$	E1
5681.77 *21*	7.9 *6*	6382.93	$1/2^+,1/2^-,3/2^-$	701.31	$(1/2,3/2)^-$	E1
5699.33[@] *16*	114[@] *6*	6382.93	$1/2^+,1/2^-,3/2^-$	683.38	$(1/2,3/2)^+$	M1
5727.1 *5*	17 *5*	6382.93	$1/2^+,1/2^-,3/2^-$	655.7		
5858.2 *6*	38 *11*	6382.93	$1/2^+,1/2^-,3/2^-$	524.6	$5/2^+$	E2
5909.4 *4*	46 *5*	6382.93	$1/2^+,1/2^-,3/2^-$	474.34	$(1/2,3/2)^+$	M1
6319.13 *16*	78 *4*	6382.93	$1/2^+,1/2^-,3/2^-$	63.66	$5/2^+$	E2
6382.79 *13*	100 *5*	6382.93	$1/2^+,1/2^-,3/2^-$	0.0	$(1/2,3/2)^-$	E1

[†] From 1993Ko01 unless noted otherwise.
[‡] From 1993Ko01 and assigned from comparison of the γ intensities with the theoretical values from a Monte Carlo model and from the ratio of the γ intensities in the 2- and 24-keV measurements.
[#] From 1986GrZR.
[@] Doublet (1993Ko01).
[&] Intensity per 100 neutron captures.

^{156}Gd(n,γ) E=24 keV 1993Ko01,1986GrZR

Level Scheme

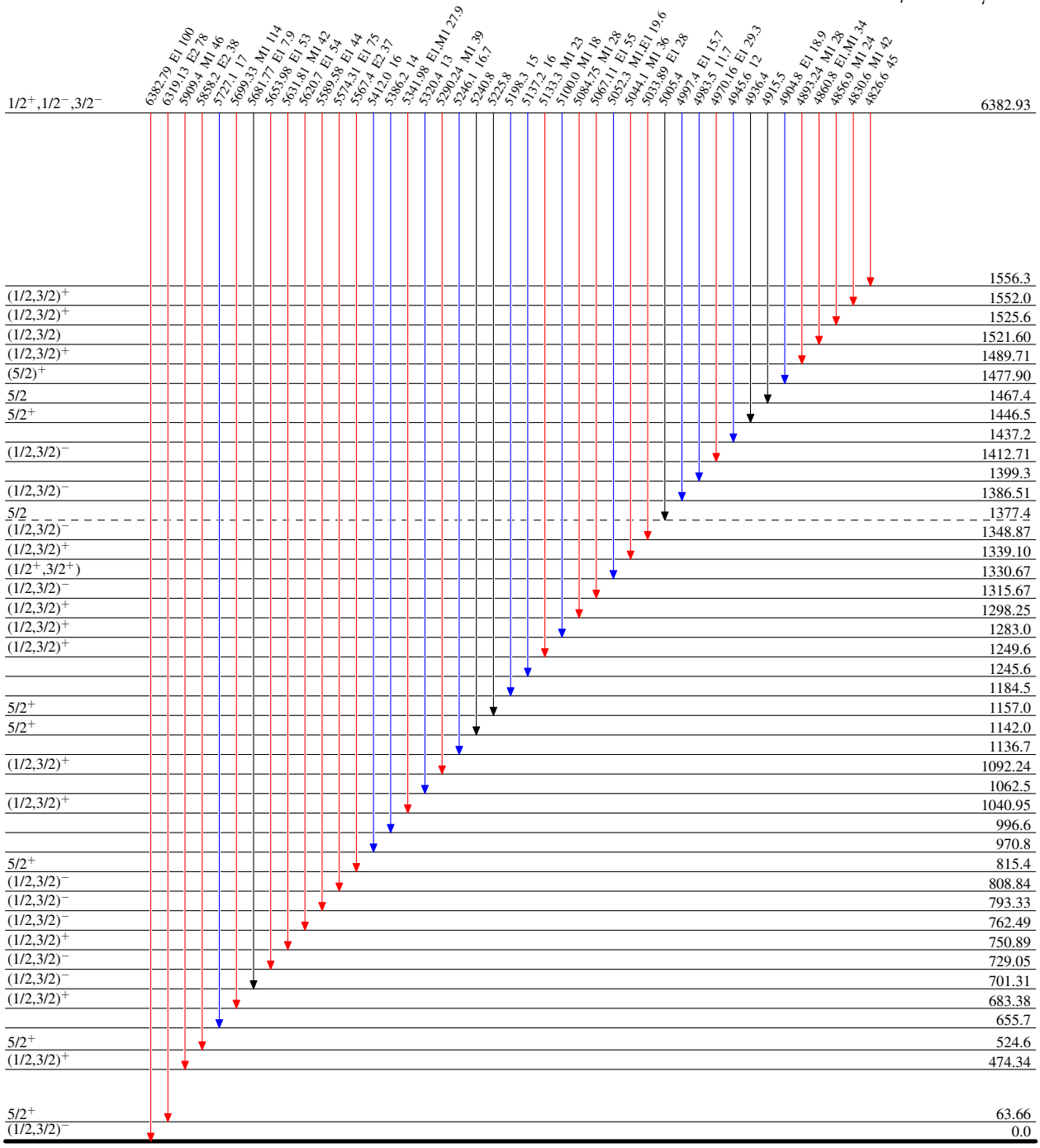
Intensities: Relative I_γ

Legend

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

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

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



$^{157}_{64}Gd_{93}$

^{156}Gd(n,γ) E=24 keV 1993Ko01,1986GrZR

Level Scheme (continued)

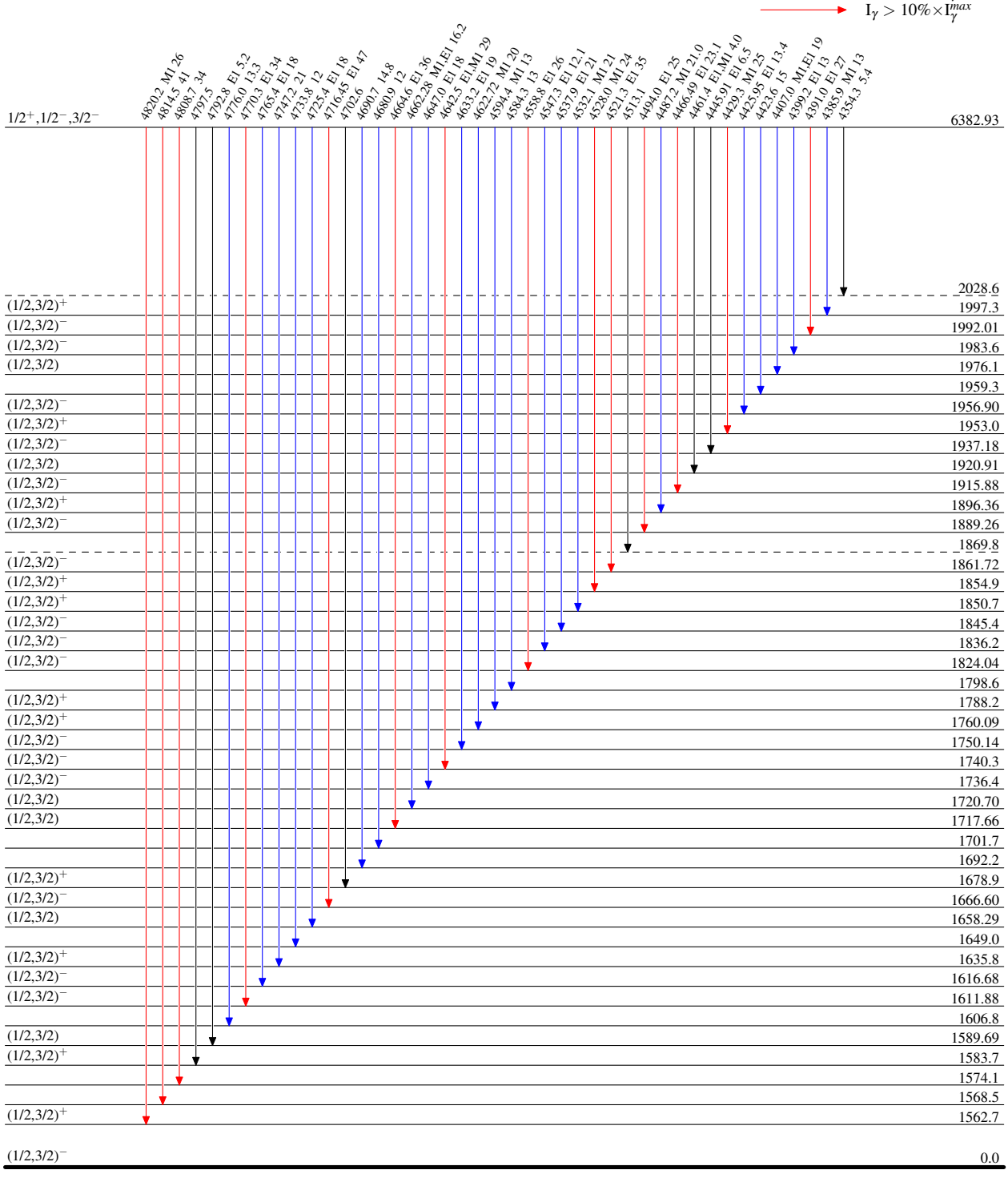
Intensities: Relative I_γ

Legend

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

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

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

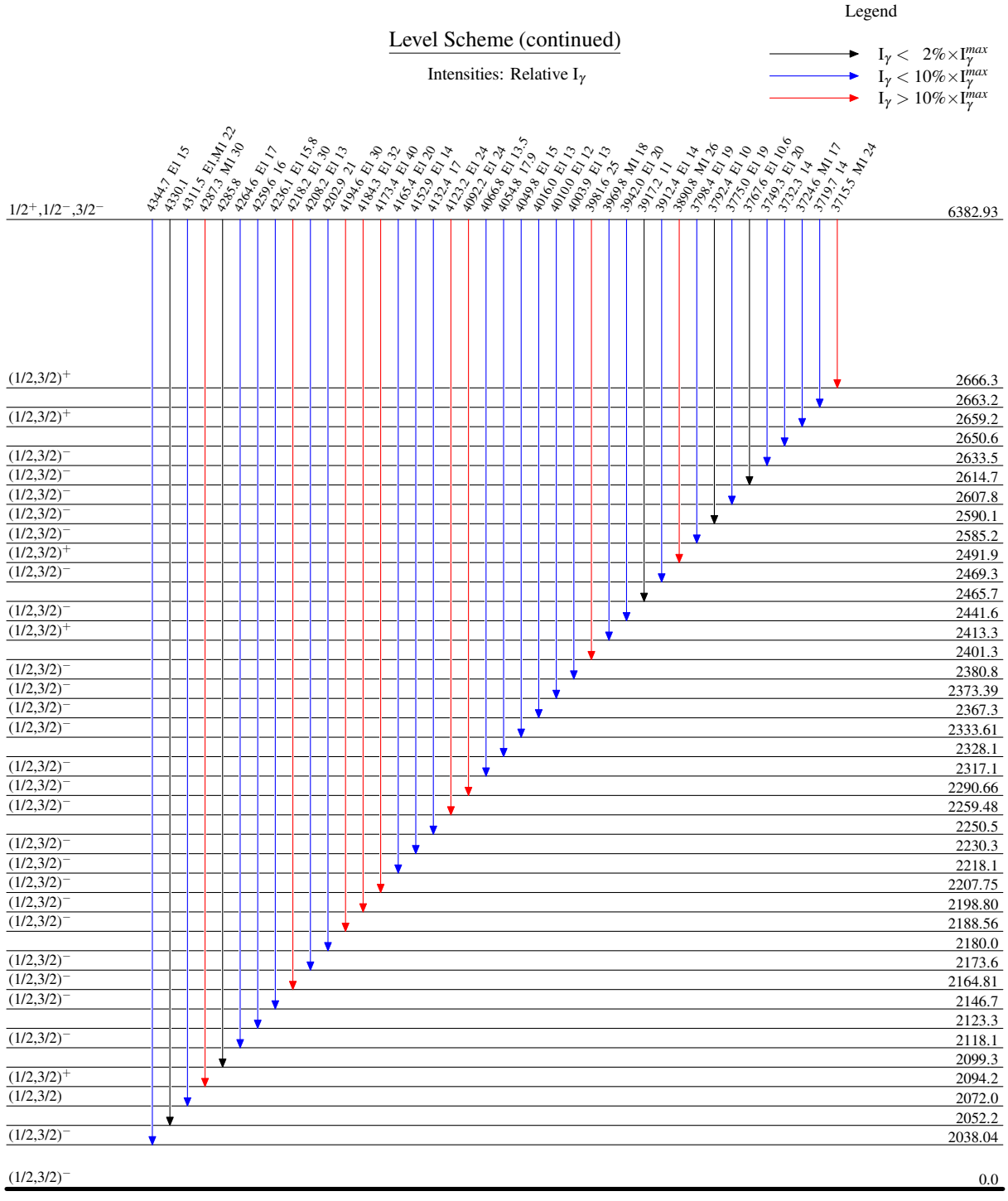


$^{157}_{64}Gd_{93}$

^{156}Gd(n,γ) E=24 keV 1993Ko01,1986GrZR

Level Scheme (continued)

Intensities: Relative I_γ



$^{157}_{64}Gd_{93}$