

$^{142}\text{Nd}(\text{n},\gamma)$ E=th **1976Mi19,1993Bo29**

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	NDS 113, 715 (2012)		31-May-2011

Additional information 1.

1976Mi19: measured: γ rays, $\gamma\gamma$ coincidences.

1993Bo29: measured two-quantum cascades leading to 0, 742, 1306 levels.

Others: 1968Gr29, 1982Is05, 2005Ko30.

 ^{143}Nd Levels

E(level) [†]	J $\pi^{\ddagger}$
0.0	7/2 ⁻
742.18 5	3/2 ⁻
1306.05 6	1/2 ⁻
1555.84 8	3/2 ⁺
1556.53 6	5/2 ⁻
1558.9 4	
1608.56 7	1/2 ⁺
1775.11 10	1/2 ⁺
1799.80 7	3/2 ⁺
1852.83 6	3/2 ⁻
1900.5 4	
1910.69 11	5/2 ⁻
1917.6 9	
2004.87 8	1/2 ⁻
2126.10 8	3/2 ⁻
2147.9 3	
2255.88 8	(5/2 ⁻)
2323.43 10	3/2 ⁻ , 1/2 ⁻
2362.04 12	3/2 ⁻
2405.95 8	(1/2 ⁻ , 3/2 ⁻)
2420.30 13	3/2 ⁻
2451.81 10	1/2, 3/2
2476.09 22	(1/2 ⁻ , 3/2 ⁻)
2506.62 11	1/2 ⁻ , 3/2 ⁻
2516.3 3	
2530.19 7	3/2 ⁻
2588.91 12	1/2, 3/2
2623.34 17	3/2 ⁻ , 1/2 ⁻
2626.22 13	1/2, 3/2
2662.67 12	3/2 ⁻
2683.79 13	3/2 ⁻
2738.07 11	3/2 ⁻
2775.37 16	1/2, 3/2
2821.77 20	3/2, 1/2
2840.94 15	1/2 ⁽⁻⁾ , 3/2 ⁽⁻⁾
2876.25 14	1/2, 3/2
2922.85 10	1/2, 3/2
2939.30 25	1/2, 3/2
2954.32 15	3/2 ⁽⁺⁾
2957.61 16	3/2 ⁻
2969.98 23	1/2, 3/2
2988.16 25	1/2, 3/2
2998.74 22	3/2 ⁻
3013.74 18	3/2 ⁻
3023.20 14	

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$^{142}\text{Nd}(n,\gamma)$ E=th **1976Mi19,1993Bo29** (continued) ^{143}Nd Levels (continued)

E(level) [†]	J ^π [‡]	Comments
3034.10 15	1/2,3/2	
3048.10 13	1/2,3/2	
3064.20 17	1/2,3/2	
3080.49 16		
3091.24 20	1/2,3/2	
3166.0 6		
3185.75 9	1/2,3/2	
3220.87 16		
3271.27 18		
3293.92 18		
3298.29 18	1/2 ⁻ ,3/2 ⁻	
3426.01 16		
3470.84 18		
3485.62 19		
3896.90 19		
(6123.57 [#] 7)	1/2 ⁺	Additional information 2.

[†] From least-squares fit to γ -ray energies.[‡] From Adopted Levels.[#] S(n) from [2011AuZZ](#), [2003Au03](#). Level energy held fixed in least-squares adjustment. $\gamma(^{143}\text{Nd})$

E_γ [†]	I_γ ^{‡b}	$E_i(\text{level})$	J_i^π	E_f	J_f^π
152.02 14	0.04	2004.87	1/2 ⁻	1852.83	3/2 ⁻
183.18 13	0.03	2506.62	1/2 ⁻ ,3/2 ⁻	2323.43	3/2 ⁻ ,1/2 ⁻
191.27 8	0.39	1799.80	3/2 ⁺	1608.56	1/2 ⁺
206.81 12	0.04	2530.19	3/2 ⁻	2323.43	3/2 ⁻ ,1/2 ⁻
207.84 20	0.02	2738.07	3/2 ⁻	2530.19	3/2 ⁻
217.39 20	0.02	2623.34	3/2 ⁻ ,1/2 ⁻	2405.95	(1/2 ⁻ ,3/2 ⁻)
223.16 25	0.02	2998.74	3/2 ⁻	2775.37	1/2,3/2
243.94 8	0.27	1799.80	3/2 ⁺	1555.84	3/2 ⁺
250.95 14	0.06	2255.88	(5/2 ⁻)	2004.87	1/2 ⁻
273.21 8	0.23	2126.10	3/2 ⁻	1852.83	3/2 ⁻
^x 306.30 25	0.03				
^x 307.82 25	0.03				
332.12 20	0.05	2738.07	3/2 ⁻	2405.95	(1/2 ⁻ ,3/2 ⁻)
342.50 20	0.04	3080.49		2738.07	3/2 ⁻
345.35 20	0.06	2255.88	(5/2 ⁻)	1910.69	5/2 ⁻
368.57 20	0.05	2957.61	3/2 ⁻	2588.91	1/2,3/2
370.6 3	0.02	2626.22	1/2,3/2	2255.88	(5/2 ⁻)
392.60 25	0.03	2922.85	1/2,3/2	2530.19	3/2 ⁻
399.4 5	0.04	2988.16	1/2,3/2	2588.91	1/2,3/2
401.4 4	0.11	2405.95	(1/2 ⁻ ,3/2 ⁻)	2004.87	1/2 ⁻
403.50 20	0.21	2255.88	(5/2 ⁻)	1852.83	3/2 ⁻
406.6 4	0.03	2662.67	3/2 ⁻	2255.88	(5/2 ⁻)
409.9 7	0.05	2939.30	1/2,3/2	2530.19	3/2 ⁻
434.33 25	0.05	3023.20		2588.91	1/2,3/2
447.70 20	0.04	2954.32	3/2 ⁽⁺⁾	2506.62	1/2 ⁻ ,3/2 ⁻
462.80 20	0.04	2588.91	1/2,3/2	2126.10	3/2 ⁻
469.0 5	0.15	1775.11	1/2 ⁺	1306.05	1/2 ⁻
470.7 3	0.27	2323.43	3/2 ⁻ ,1/2 ⁻	1852.83	3/2 ⁻

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$^{142}\text{Nd}(n,\gamma)$ E=th **1976Mi19,1993Bo29** (continued) $\gamma(^{143}\text{Nd})$ (continued)

E_γ †	I_γ ‡b	$E_i(\text{level})$	J_i^π	E_f	J_f^π
^x 488.3 4	0.03				
493.66 10	0.26	1799.80	3/2 ⁺	1306.05	1/2 ⁻
495.22 25	0.07	2405.95	(1/2 ⁻ , 3/2 ⁻)	1910.69	5/2 ⁻
500.20 20	0.04	2626.22	1/2, 3/2	2126.10	3/2 ⁻
517.90 25	0.11	3048.10	1/2, 3/2	2530.19	3/2 ⁻
^x 535.41 15	0.10				
546.78 22	1.16	1852.83	3/2 ⁻	1306.05	1/2 ⁻
551.69 20	0.12	2957.61	3/2 ⁻	2405.95	(1/2 ⁻ , 3/2 ⁻)
563.84 10	12.29	1306.05	1/2 ⁻	742.18	3/2 ⁻
^x 569.00 25	0.10				
^x 570.70 15	0.12				
606.13 11	0.33	2405.95	(1/2 ⁻ , 3/2 ⁻)	1799.80	3/2 ⁺
651.97 15	0.15	2451.81	1/2, 3/2	1799.80	3/2 ⁺
653.85 15	0.20	2506.62	1/2 ⁻ , 3/2 ⁻	1852.83	3/2 ⁻
655.2 3	0.14	3185.75	1/2, 3/2	2530.19	3/2 ⁻
^x 666.0 5	0.03				
677.20 20	0.15	2530.19	3/2 ⁻	1852.83	3/2 ⁻
678.15 25	0.07	2588.91	1/2, 3/2	1910.69	5/2 ⁻
^x 683.9 4	0.07				
^x 694.0 4	0.15				
698.81 25	0.08	2004.87	1/2 ⁻	1306.05	1/2 ⁻
700.3 4	0.05	2255.88	(5/2 ⁻)	1555.84	3/2 ⁺
714.70 ^c 25	0.07 ^c	2323.43	3/2 ⁻ , 1/2 ⁻	1608.56	1/2 ⁺
714.70 ^c 25	0.07 ^c	2840.94	1/2 ⁽⁻⁾ , 3/2 ⁽⁻⁾	2126.10	3/2 ⁻
742.09 10	50.5	742.18	3/2 ⁻	0.0	7/2 ⁻
^x 746.02 25	0.04				
756.3 5	0.04	3080.49		2323.43	3/2 ⁻ , 1/2 ⁻
^x 763.89 20	0.07				
765.62 15	0.11	3185.75	1/2, 3/2	2420.30	3/2 ⁻
797.2 3	0.05	2405.95	(1/2 ⁻ , 3/2 ⁻)	1608.56	1/2 ⁺
806.16 12	0.39	2362.04	3/2 ⁻	1555.84	3/2 ⁺
814.4 ^d 5	2.2 ^{d@}	1555.84	3/2 ⁺	742.18	3/2 ⁻
814.41 ^d 5	0.6 ^d	1556.53	5/2 ⁻	742.18	3/2 ⁻
823.6 3	0.24	2623.34	3/2 ⁻ , 1/2 ⁻	1799.80	3/2 ⁺
843.21 18	0.21	2451.81	1/2, 3/2	1608.56	1/2 ⁺
850.18 12	0.45	2405.95	(1/2 ⁻ , 3/2 ⁻)	1555.84	3/2 ⁺
866.27 10	3.35	1608.56	1/2 ⁺	742.18	3/2 ⁻
^x 877.9 3	0.06				
^x 879.9 3	0.04				
^x 903.71 25	0.04				
^x 917.2 3	0.05				
921.62 12	0.24	2530.19	3/2 ⁻	1608.56	1/2 ⁺
929.80 15	0.13	3185.75	1/2, 3/2	2255.88	(5/2 ⁻)
949.52 14	0.11	2255.88	(5/2 ⁻)	1306.05	1/2 ⁻
973.72 13	0.18	2530.19	3/2 ⁻	1556.53	5/2 ⁻
^x 995.2 4	0.05				
1017.47 22	0.53	2323.43	3/2 ⁻ , 1/2 ⁻	1306.05	1/2 ⁻
1023.35 25	0.07	2876.25	1/2, 3/2	1852.83	3/2 ⁻
1032.86 10	4.48	1775.11	1/2 ⁺	742.18	3/2 ⁻
^x 1042.20 25	0.08				
1055.94 25	0.75	2362.04	3/2 ⁻	1306.05	1/2 ⁻
1057.54 12	3.73	1799.80	3/2 ⁺	742.18	3/2 ⁻
1059.5 3	0.15	3185.75	1/2, 3/2	2126.10	3/2 ⁻
1070.05 13	0.19	2922.85	1/2, 3/2	1852.83	3/2 ⁻
^x 1083.95 22	0.10				

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$^{142}\text{Nd}(n,\gamma)$ E=th **1976Mi19,1993Bo29** (continued) $\gamma(^{143}\text{Nd})$ (continued)

E_γ [†]	I_γ ^{‡b}	$E_i(\text{level})$	J_i^π	E_f	J_f^π
1099.74 23	0.11	2405.95	(1/2 ⁻ , 3/2 ⁻)	1306.05	1/2 ⁻
1106.84 15	0.26	2662.67	3/2 ⁻	1555.84	3/2 ⁺
1110.63 10	2.00	1852.83	3/2 ⁻	742.18	3/2 ⁻
1114.2 3	0.38	2420.30	3/2 ⁻	1306.05	1/2 ⁻
1145.82 15	0.20	2451.81	1/2, 3/2	1306.05	1/2 ⁻
^x 1151.01 20	0.10				
1180.81 13	0.26	3185.75	1/2, 3/2	2004.87	1/2 ⁻
^x 1187.2 4	0.11				
^x 1191.6 4	0.11				
^x 1215.2 5	0.05				
^x 1221.41 20	0.23				
1224.10 11	1.53	2530.19	3/2 ⁻	1306.05	1/2 ⁻
1238.2 3	0.06	3013.74	3/2 ⁻	1775.11	1/2 ⁺
^x 1239.91 25	0.08				
^x 1253.7 3	0.13				
1262.58 10	1.96	2004.87	1/2 ⁻	742.18	3/2 ⁻
^x 1283.75 18	0.22				
^x 1308.86 21	0.11				
1314.00 25	0.08	2922.85	1/2, 3/2	1608.56	1/2 ⁺
1317.3 4	0.09	2623.34	3/2 ⁻ , 1/2 ⁻	1306.05	1/2 ⁻
^x 1351.9 4	0.06				
1356.8 3	0.11	2662.67	3/2 ⁻	1306.05	1/2 ⁻
^x 1363.8 5	0.07				
^x 1378.80 22	0.42				
1383.80 20	1.28	2126.10	3/2 ⁻	742.18	3/2 ⁻
1390.5 4	0.15	2998.74	3/2 ⁻	1608.56	1/2 ⁺
^x 1407.18 23	0.32				
^x 1424.3 3	0.09				
^x 1435.0 5	0.09				
1440.1 5	0.09	3048.10	1/2, 3/2	1608.56	1/2 ⁺
1445.06 23	0.72	3298.29	1/2 ⁻ , 3/2 ⁻	1852.83	3/2 ⁻
1457.9 4	0.12	3013.74	3/2 ⁻	1555.84	3/2 ⁺
^x 1460.9 4	0.08				
^x 1465.0 5	0.10				
1481.9 5	0.20	3091.24	1/2, 3/2	1608.56	1/2 ⁺
1492.05 24	0.18	3048.10	1/2, 3/2	1555.84	3/2 ⁺
1508.4 3	0.08	3064.20	1/2, 3/2	1555.84	3/2 ⁺
1513.53 20	1.12	2255.88	(5/2 ⁻)	742.18	3/2 ⁻
^x 1521.7 4	0.13				
^x 1531.1 3	0.23				
1535.0 3	0.22	2840.94	1/2 ⁽⁻⁾ , 3/2 ⁽⁻⁾	1306.05	1/2 ⁻
^x 1539.9 3	0.13				
^x 1546.9 4	0.10				
1555.58 21	4.32	1556.53	5/2 ⁻	0.0	7/2 ⁻
1558.81 [#] 40	0.22	1558.9		0.0	7/2 ⁻
^x 1576.2 3	0.13				
^x 1580.2 3	0.14				
^x 1585.3 3	0.12				
^x 1596.1 8	0.06				
^x 1599.5 4	0.14				
^x 1605.04 23	0.22				
^x 1610.5 6	0.06				
1616.8 3	0.35	2922.85	1/2, 3/2	1306.05	1/2 ⁻
1620.3 5	0.14	2362.04	3/2 ⁻	742.18	3/2 ⁻
^x 1624.0 4	0.22				
1630.4 4	0.05	3185.75	1/2, 3/2	1555.84	3/2 ⁺

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$^{142}\text{Nd}(n,\gamma) \text{E=th}$ **1976Mi19,1993Bo29** (continued) $\gamma(^{143}\text{Nd})$ (continued)

$E_\gamma^\dagger$	$I_\gamma^{\ddagger b}$	$E_i(\text{level})$	J_i^π	E_f	J_f^π
$^{x1639.98}_{25}$	0.16				
1648.3 3	0.18	2954.32	$3/2^{(+)}$	1306.05	$1/2^-$
$^{x1653.3}_{4}$	0.06				
1663.87 25	0.23	2405.95	$(1/2^-, 3/2^-)$	742.18	$3/2^-$
$^{x1675.9}_{4}$	0.18				
1678.44 22	0.19	2420.30	$3/2^-$	742.18	$3/2^-$
1681.8 4	0.05	2988.16	$1/2, 3/2$	1306.05	$1/2^-$
$^{x1688.2}_{5}$	0.11				
$^{x1691.57}_{22}$	0.41				
$^{x1702.8}_{5}$	0.07				
1709.0 3	0.17	2451.81	$1/2, 3/2$	742.18	$3/2^-$
1717.24 25	0.26	3023.20		1306.05	$1/2^-$
$^{x1723.7}_{4}$	0.06				
1727.80 25	0.14	3034.10	$1/2, 3/2$	1306.05	$1/2^-$
1733.88 22	0.24	2476.09	$(1/2^-, 3/2^-)$	742.18	$3/2^-$
$^{x1740.00}_{25}$	0.12				
$^{x1744.0}_{3}$	0.10				
$^{x1754.91}_{18}$	0.28				
1764.6 3	0.12	2506.62	$1/2^-, 3/2^-$	742.18	$3/2^-$
1774.5 ^{c#} 3	0.06 ^c	2516.3		742.18	$3/2^-$
1774.54 31	0.06	1775.11	$1/2^+$	0.0	$7/2^-$
1785.4 4	0.10	3091.24	$1/2, 3/2$	1306.05	$1/2^-$
1787.98 21	0.31	2530.19	$3/2^-$	742.18	$3/2^-$
$^{x1795.9}_{4}$	0.13				
$^{x1807.2}_{4}$	0.13				
$^{x1831.0}_{6}$	0.06				
$^{x1840.8}_{4}$	0.14				
1846.67 22	0.38	2588.91	$1/2, 3/2$	742.18	$3/2^-$
1852.39 19	1.44	1852.83	$3/2^-$	0.0	$7/2^-$
$^{x1855.6}_{3}$	0.29				
$^{x1867.99}_{22}$	0.23				
$^{x1871.8}_{4}$	0.12				
1879.8 4	0.17	3185.75	$1/2, 3/2$	1306.05	$1/2^-$
1883.81 19	0.39	2626.22	$1/2, 3/2$	742.18	$3/2^-$
1900.32 ^{#a} 43	0.15	1900.5		0.0	$7/2^-$
1910.75 17	2.04	1910.69	$5/2^-$	0.0	$7/2^-$
1920.6 [#] 30	0.74	1917.6		0.0	$7/2^-$
1920.6 3	0.74	2662.67	$3/2^-$	742.18	$3/2^-$
$^{x1928.4}_{6}$	0.05				
$^{x1932.9}_{3}$	0.31				
$^{x1936.9}_{4}$	0.18				
1941.28 19	0.68	2683.79	$3/2^-$	742.18	$3/2^-$
$^{x1944.86}_{22}$	0.47				
$^{x1950.5}_{3}$	0.12				
$^{x1963.5}_{5}$	0.18				
$^{x1969.0}_{5}$	0.25				
1987.8 3	0.38	3293.92		1306.05	$1/2^-$
1996.04 20	0.86	2738.07	$3/2^-$	742.18	$3/2^-$
$^{x2000.8}_{5}$	0.15				
$^{x2021.90}_{21}$	0.23				
$^{x2027.96}_{17}$	0.98				
2033.05 18	0.63	2775.37	$1/2, 3/2$	742.18	$3/2^-$
$^{x2040.07}_{22}$	0.33				
$^{x2042.7}_{3}$	0.17				
$^{x2047.4}_{3}$	0.15				
$^{x2060.4}_{3}$	0.19				

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$^{142}\text{Nd}(\text{n},\gamma) \text{E=th}$ **1976Mi19,1993Bo29** (continued) $\gamma(^{143}\text{Nd})$ (continued)

E_γ [†]	I_γ ^{‡b}	$E_i(\text{level})$	J_i^π	E_f	J_f^π
^x 2063.7 3	0.07				
2079.50 20	0.18	2821.77	3/2,1/2	742.18	3/2 ⁻
^x 2084.0 3	0.09				
^x 2094.02 20	0.31				
^x 2095.6 4	0.14				
2098.76 20	0.27	2840.94	1/2 ⁽⁻⁾ ,3/2 ⁽⁻⁾	742.18	3/2 ⁻
^x 2100.86 20	0.30				
^x 2108.3 3	0.10				
^x 2112.5 3	0.08				
2126.3 3	0.22	2126.10	3/2 ⁻	0.0	7/2 ⁻
2133.74 22	0.55	2876.25	1/2,3/2	742.18	3/2 ⁻
2147.87 [#] 30	0.07	2147.9		0.0	7/2 ⁻
^x 2154.44 22	0.18				
^x 2156.84 22	0.16				
2165.0	0.42 20	3470.84		1306.05	1/2 ⁻
^x 2172.6 4	0.14				
2180.50 24	0.53	2922.85	1/2,3/2	742.18	3/2 ⁻
2182.4	0.27	3485.62		1306.05	1/2 ⁻
^x 2185.96 22	0.34				
2197.2 3	0.33	2939.30	1/2,3/2	742.18	3/2 ⁻
2212.13 23	0.57	2954.32	3/2 ⁽⁺⁾	742.18	3/2 ⁻
2227.78 22	1.00	2969.98	1/2,3/2	742.18	3/2 ⁻
2227.78 ^{c#} 22	1.00 ^c	(6123.57)	1/2 ⁺	3896.90	
2245.9 4	0.32	2988.16	1/2,3/2	742.18	3/2 ⁻
2256.17 24	0.18	2255.88	(5/2 ⁻)	0.0	7/2 ⁻
2271.7 3	0.16	3013.74	3/2 ⁻	742.18	3/2 ⁻
^x 2277.74 20	0.19				
2280.90 19	0.70	3023.20		742.18	3/2 ⁻
^x 2286.6 5	0.07				
2292.05 20	0.26	3034.10	1/2,3/2	742.18	3/2 ⁻
^x 2295.2 4	0.09				
2305.79 18	0.38	3048.10	1/2,3/2	742.18	3/2 ⁻
2322.00 22	0.88	3064.20	1/2,3/2	742.18	3/2 ⁻
^x 2326.1 4	0.18				
2338.32 22	0.17	3080.49		742.18	3/2 ⁻
2348.9 3	0.10	3091.24	1/2,3/2	742.18	3/2 ⁻
^x 2353.8 3	0.19				
^x 2363.01 19	0.27				
^x 2368.3 3	0.09				
^x 2382.29 16	0.28				
^x 2390.4 5	0.10				
^x 2401.6 3	0.15				
^x 2403.9 5	0.08				
^x 2413.18 22	0.85				
^x 2416.2 3	0.95				
2420.7 5	0.35	2420.30	3/2 ⁻	0.0	7/2 ⁻
2426.0	0.30 12	3166.0		742.18	3/2 ⁻
^x 2432.2 4	0.33				
^x 2437.9 4	0.29				
2443.40 25	0.42	3185.75	1/2,3/2	742.18	3/2 ⁻
^x 2459.75 22	0.25				
^x 2463.1 5	0.14				
^x 2467.67 18	0.55				
2478.72 18	0.73	3220.87		742.18	3/2 ⁻
^x 2483.1 4	0.15				
^x 2489.72 25	0.45				

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$^{142}\text{Nd}(n,\gamma) \text{E=th}$ **1976Mi19,1993Bo29** (continued) $\gamma(^{143}\text{Nd})$ (continued)

E_γ [†]	I_γ ^{‡b}	$E_i(\text{level})$	J_i^π	E_f	J_f^π
$^{x2493.6}$ 4	0.35				
$^{x2504.8}$ 4	0.14				
$^{x2527.3}$ 6	0.09				
2529.82 ^c 25	0.18 ^c	2530.19	3/2 ⁻	0.0	7/2 ⁻
2529.82 ^{c#} 25	0.18 ^c	3271.27		742.18	3/2 ⁻
$^{x2546.8}$ 6	0.08				
2556.20 60	0.14	3298.29	1/2 ⁻ , 3/2 ⁻	742.18	3/2 ⁻
$^{x2571.2}$ 5	0.12				
$^{x2607.8}$ 5	0.06				
$^{x2614.81}$ 25	0.16				
$^{x2631.4}$ 3	0.11				
$^{x2633.4}$ 4	0.10				
2637.8 7	0.54	(6123.57)	1/2 ⁺	3485.62	
$^{x2645.10}$ 20	0.30				
2652.70 22	0.23	(6123.57)	1/2 ⁺	3470.84	
2662.3 3	0.09	2662.67	3/2 ⁻	0.0	7/2 ⁻
$^{x2672.75}$ 25	0.27				
$^{x2676.0}$ 3	0.13				
2683.82 ^{c#} 17	0.68 ^c	2683.79	3/2 ⁻	0.0	7/2 ⁻
2683.82 ^{c#} 17	0.68 ^c	3426.01		742.18	3/2 ⁻
$^{x2691.1}$ 3	0.20				
2697.6 3	0.41	(6123.57)	1/2 ⁺	3426.01	
$^{x2708.60}$ 17	0.83				
$^{x2716.8}$ 6	0.08				
2728.6 3	0.17	3470.84		742.18	3/2 ⁻
2738.3 4	0.22	2738.07	3/2 ⁻	0.0	7/2 ⁻
2743.30 19	0.33	3485.62		742.18	3/2 ⁻
$^{x2789.25}$ 25	0.15				
$^{x2802.3}$ 6	0.05				
$^{x2810.2}$ 5	0.18				
$^{x2822.7}$ 4	0.12				
2824.6 3	0.13	(6123.57)	1/2 ⁺	3298.29	1/2 ⁻ , 3/2 ⁻
2829.60 22	0.50	(6123.57)	1/2 ⁺	3293.92	
$^{x2834.76}$ 25	0.28				
$^{x2838.0}$ 6	0.11				
2853.02 25	0.22	(6123.57)	1/2 ⁺	3271.27	
$^{x2866.80}$ 25	0.30				
2876.8 3	0.15	2876.25	1/2, 3/2	0.0	7/2 ⁻
$^{x2879.6}$ 3	0.39				
$^{x2897.3}$ 7	0.05				
2902.8 3	0.72	(6123.57)	1/2 ⁺	3220.87	
2925.2 6	0.18	2922.85	1/2, 3/2	0.0	7/2 ⁻
2937.3 4	2.04	(6123.57)	1/2 ⁺	3185.75	1/2, 3/2
$^{x2942.8}$ 5	0.29				
2958.3 6	0.23	2957.61	3/2 ⁻	0.0	7/2 ⁻
2958.3 6	0.23	(6123.57)	1/2 ⁺	3166.0	
$^{x2966.4}$ 6	0.12				
$^{x2975.4}$ 4	0.14				
2998.9 6	0.10	2998.74	3/2 ⁻	0.0	7/2 ⁻
3013.2 7	0.16	3013.74	3/2 ⁻	0.0	7/2 ⁻
3023.3 6	0.10	3023.20		0.0	7/2 ⁻
3031.8 4	0.35	(6123.57)	1/2 ⁺	3091.24	1/2, 3/2
$^{x3044.1}$ 7	0.08				
3059.4 4	0.20	(6123.57)	1/2 ⁺	3064.20	1/2, 3/2
3074.7 4	0.21	(6123.57)	1/2 ⁺	3048.10	1/2, 3/2

Continued on next page (footnotes at end of table)

$^{142}\text{Nd}(n,\gamma) \text{E=th}$ **1976Mi19,1993Bo29** (continued) $\gamma(^{143}\text{Nd})$ (continued)

E_γ †	I_γ ‡b	$E_i(\text{level})$	J_i^π	E_f	J_f^π
3080.8 9	0.07	3080.49		0.0	$7/2^-$
3089.4 4	0.33	(6123.57)	$1/2^+$	3034.10	$1/2, 3/2$
3108.8 5	0.14	(6123.57)	$1/2^+$	3013.74	$3/2^-$
3124.2 9	0.06	(6123.57)	$1/2^+$	2998.74	$3/2^-$
3134.0 9	0.07	(6123.57)	$1/2^+$	2988.16	$1/2, 3/2$
3154.0 6	0.30	3896.90		742.18	$3/2^-$
3165.6 9	0.12	(6123.57)	$1/2^+$	2957.61	$3/2^-$
3170.0 9	0.10	(6123.57)	$1/2^+$	2954.32	$3/2^{(+)}$
3184.9 5	0.21	(6123.57)	$1/2^+$	2939.30	$1/2, 3/2$
3200.8 4	1.04	(6123.57)	$1/2^+$	2922.85	$1/2, 3/2$
^x 3212.3 9	0.08				
^x 3239.7 7	0.07				
3247.1 4	0.42	(6123.57)	$1/2^+$	2876.25	$1/2, 3/2$
3282.2 9	0.10	(6123.57)	$1/2^+$	2840.94	$1/2^{(-)}, 3/2^{(-)}$
3301.1 6	0.14	(6123.57)	$1/2^+$	2821.77	$3/2, 1/2$
3348.1 4	0.31	(6123.57)	$1/2^+$	2775.37	$1/2, 3/2$
^x 3363.7 9	0.08				
^x 3375.5 7	0.07				
3386.2 5	0.10	(6123.57)	$1/2^+$	2738.07	$3/2^-$
3438.0 5	0.39	(6123.57)	$1/2^+$	2683.79	$3/2^-$
^x 3441.4 5	0.36				
3460.7 4	0.96	(6123.57)	$1/2^+$	2662.67	$3/2^-$
3496.8 6	0.13	(6123.57)	$1/2^+$	2626.22	$1/2, 3/2$
3501.1 9	0.06	(6123.57)	$1/2^+$	2623.34	$3/2^-, 1/2^-$
^x 3513.0 6	0.07				
3534.5 7	0.07	(6123.57)	$1/2^+$	2588.91	$1/2, 3/2$
3593.3 4	1.24	(6123.57)	$1/2^+$	2530.19	$3/2^-$
^x 3601.6 6	0.09				
3611.7	0.20 8	(6123.57)	$1/2^+$	2516.3	
3617.5 4	0.18	(6123.57)	$1/2^+$	2506.62	$1/2^-, 3/2^-$
3647.1	0.32 10	(6123.57)	$1/2^+$	2476.09	$(1/2^-, 3/2^-)$
3670.1 5	0.09	(6123.57)	$1/2^+$	2451.81	$1/2, 3/2$
3717.5 4	0.29	(6123.57)	$1/2^+$	2405.95	$(1/2^-, 3/2^-)$
^x 3747.9 13	0.02				
^x 3756.7 10	0.04				
3761.2 5	0.13	(6123.57)	$1/2^+$	2362.04	$3/2^-$
^x 3821.6 5	0.12				
3900.9 4	0.24	3896.90		0.0	$7/2^-$
^x 3916.4 6	0.08				
3975.8	0.26 10	(6123.57)	$1/2^+$	2147.9	
3996.2 4	0.34	(6123.57)	$1/2^+$	2126.10	$3/2^-$
4117.7 4	0.30	(6123.57)	$1/2^+$	2004.87	$1/2^-$
4206.2 9	0.06	(6123.57)	$1/2^+$	1917.6	
4222.4	0.11 5	(6123.57)	$1/2^+$	1900.5	
^x 4233.1 9	0.05				
4269.4 4	0.99	(6123.57)	$1/2^+$	1852.83	$3/2^-$
^x 4313.6 11	0.07				
4322.5 4	1.32	(6123.57)	$1/2^+$	1799.80	$3/2^+$
4347.2 4	3.21	(6123.57)	$1/2^+$	1775.11	$1/2^+$
4513.7 4	0.67	(6123.57)	$1/2^+$	1608.56	$1/2^+$
4563.8	0.17 8	(6123.57)	$1/2^+$	1558.9	
4817.63 & 11	2.41	(6123.57)	$1/2^+$	1306.05	$1/2^-$
5381.49 & 11	7.84	(6123.57)	$1/2^+$	742.18	$3/2^-$

Continued on next page (footnotes at end of table)

 $^{142}\text{Nd}(\text{n},\gamma) \text{ E=th } \textbf{1976Mi19,1993Bo29 (continued)}$

 $\gamma(^{143}\text{Nd}) \text{ (continued)}$

[†] From [1976Mi19](#), unless given otherwise.

[‡] Photons per 100 neutron capture from [1976Mi19](#); uncertainty 8% for strongest transition, 50% for the weakest.

[#] Placement by [1993Bo29](#).

[@] From $I\gamma(814.4)=2.76$ from 2 levels: 1555.6 and 1555.85 and branching for 1555.85 level from $(\alpha,\text{n}\gamma)$.

[&] From [1982Is05](#).

^a From [1993Bo29](#). $E\gamma=1906.32$ in [1976Mi19](#).

^b Intensity per 100 neutron captures.

^c Multiply placed with undivided intensity.

^d Multiply placed with intensity suitably divided.

^x γ ray not placed in level scheme.

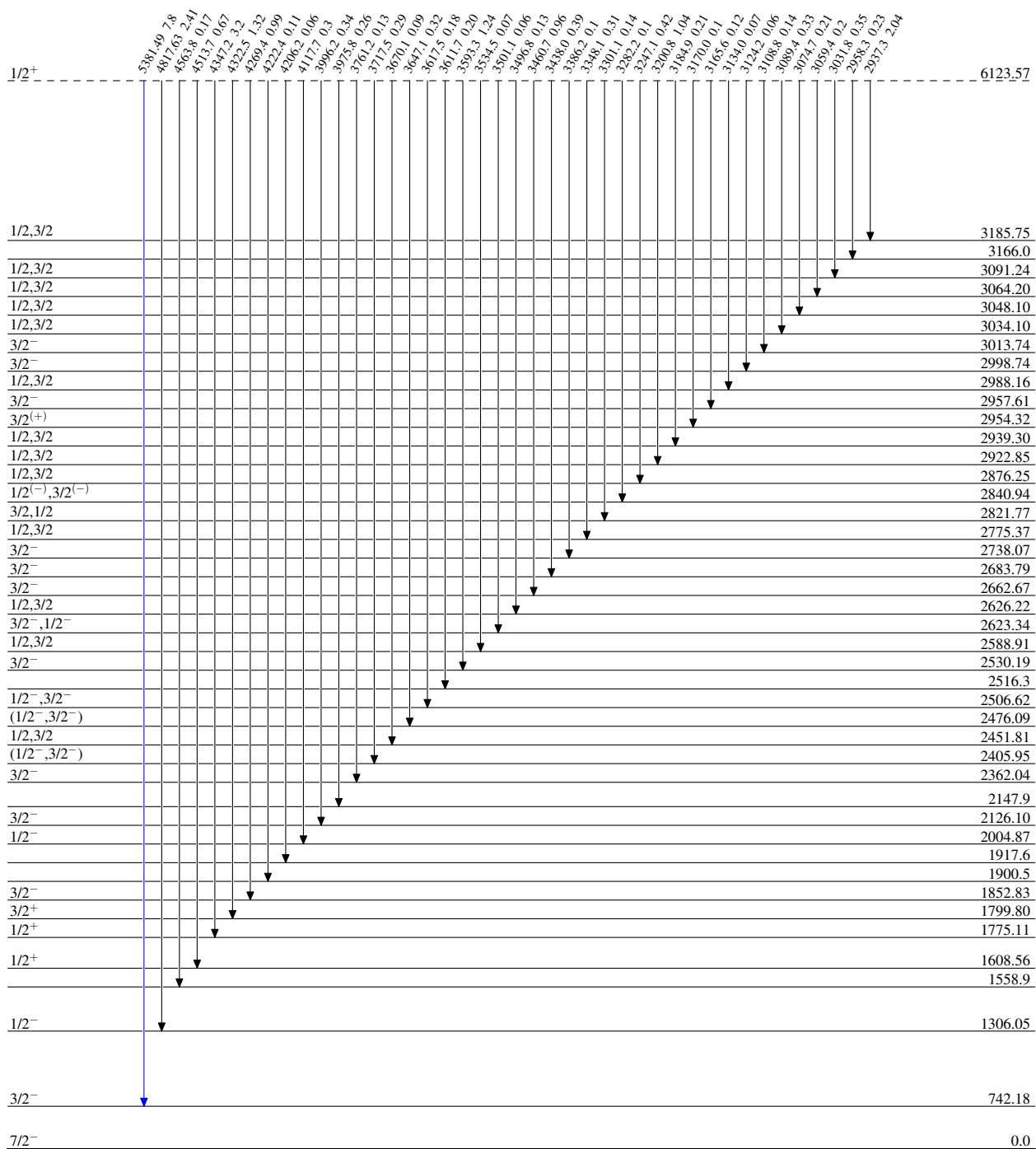
$^{142}\text{Nd}(n,\gamma) \text{E=th}$ 1976Mi19,1993Bo29

Legend

Level Scheme

Intensities: I_γ per 100 neutron captures

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



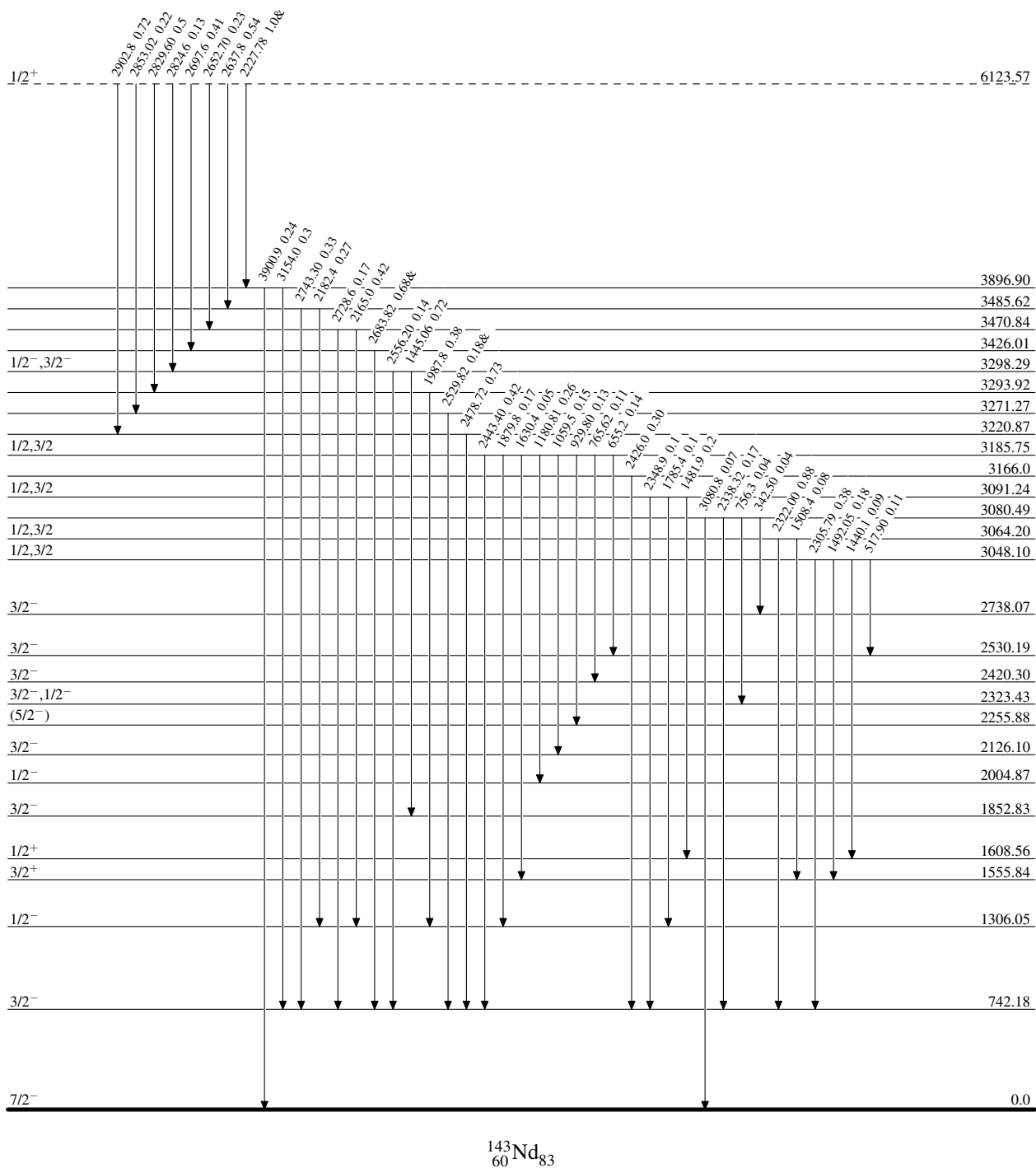
$^{142}\text{Nd}(n,\gamma) E=\text{th}$ 1976Mi19,1993Bo29

Level Scheme (continued)

Intensities: I_γ per 100 neutron captures
& Multiply placed: undivided intensity given

Legend

—→ $I_\gamma < 2\% \times I_\gamma^{\text{max}}$
 —→ $I_\gamma < 10\% \times I_\gamma^{\text{max}}$
 —→ $I_\gamma > 10\% \times I_\gamma^{\text{max}}$

 $^{143}_{60}\text{Nd}_{83}$

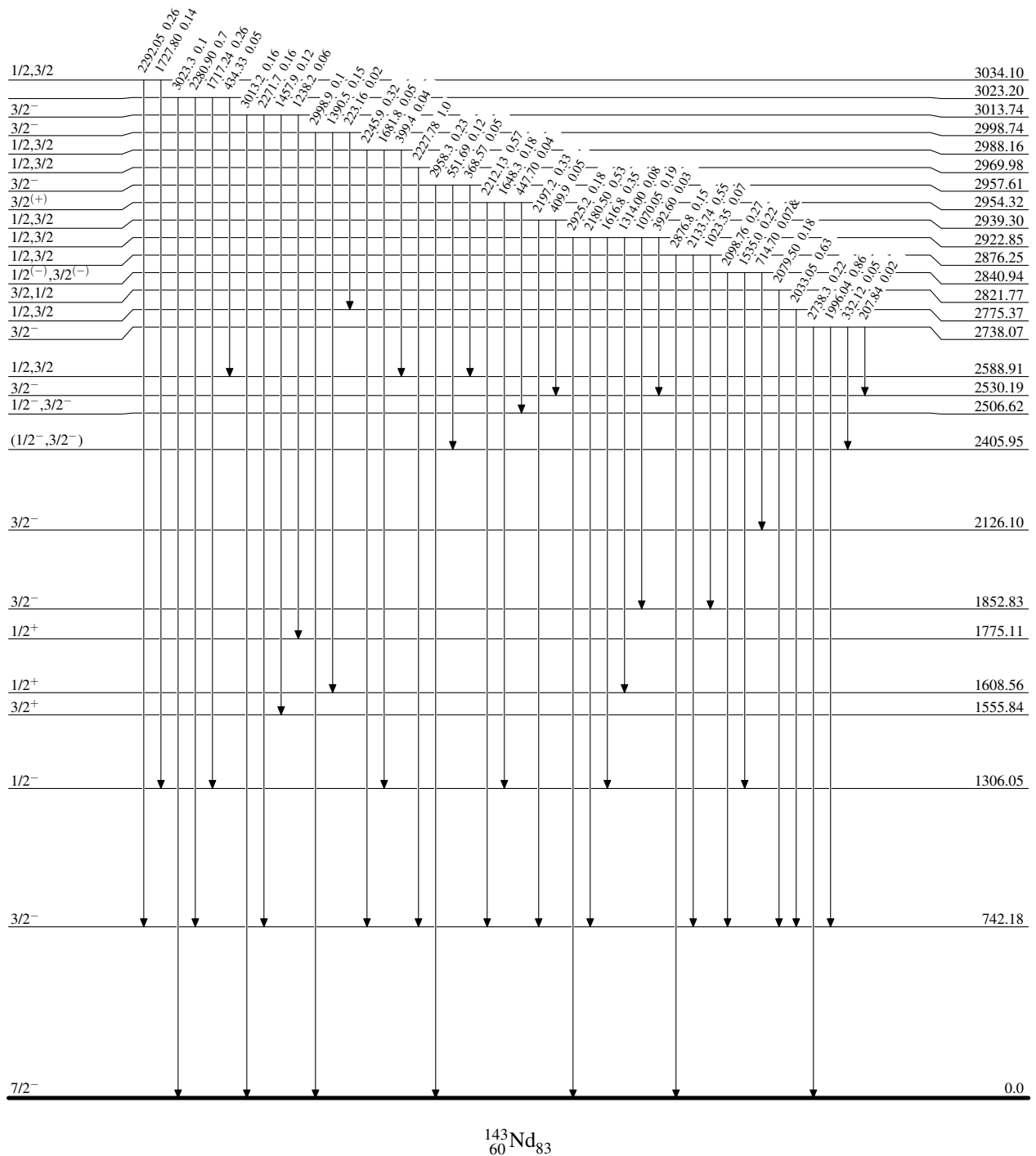
$^{142}\text{Nd}(n,\gamma) \text{E=th}$ 1976Mi19,1993Bo29

Level Scheme (continued)

Intensities: I_γ per 100 neutron captures
& Multiply placed: undivided intensity given

Legend

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

 $^{143}_{60}\text{Nd}_{83}$

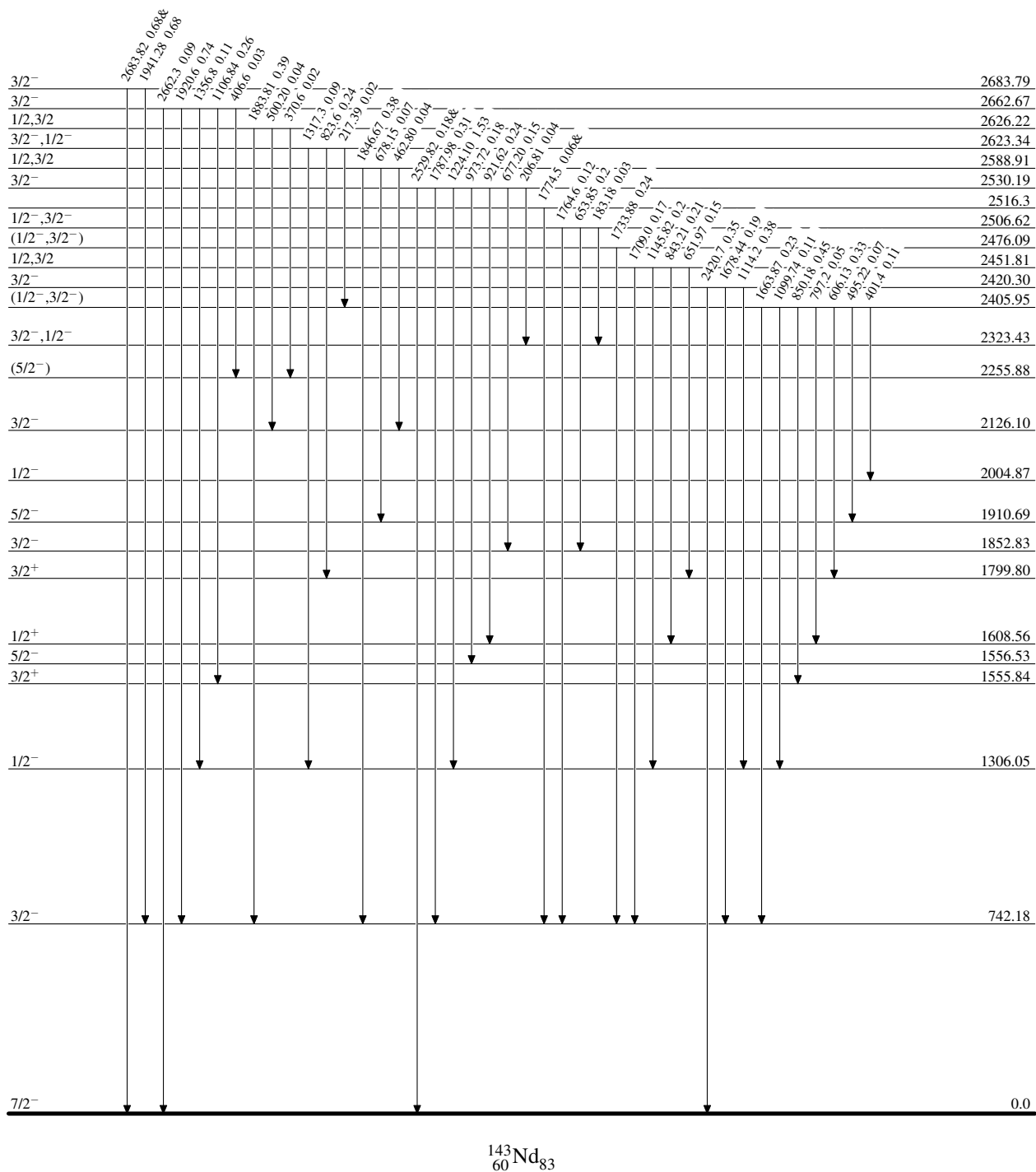
$^{142}\text{Nd}(n,\gamma) E=\text{th}$ 1976Mi19,1993Bo29

Level Scheme (continued)

Intensities: I_γ per 100 neutron captures
& Multiply placed: undivided intensity given

Legend

—→ $I_\gamma < 2\% \times I_\gamma^{\text{max}}$
 —→ $I_\gamma < 10\% \times I_\gamma^{\text{max}}$
 —→ $I_\gamma > 10\% \times I_\gamma^{\text{max}}$



$^{142}\text{Nd}(n,\gamma) \text{E=th}$ 1976Mi19,1993Bo29

Level Scheme (continued)

Intensities: I_γ per 100 neutron captures
 & Multiply placed: undivided intensity given
 @ Multiply placed: intensity suitably divided

Legend

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

