## $^{143}$Nd(n,$\gamma$) E=th 1983Sn04

| Type | Author | History Citation | Literature Cutoff Date |
|---|---|---|---|
| Full Evaluation | A. A. Sonzogni | NDS 93, 599 (2001) | 1-Dec-2000 |

1983Sn04: E=thermal; measured $\gamma$, $\gamma\gamma$, $\gamma\gamma(\theta)$, semi detectors.
1976Ra21: E=thermal; measured $\gamma$(semi), $\gamma\gamma$(semi-semi), Ce(s).
Other measurements: 1968Gr32, 1970Or05, 1970Be09, 1971Gr55, 1974RaZJ.
$^{143}$Nd(polarized n,$\gamma$): 1971Dj03.
n-resonance capture: 1972We06, 1974RoYR, 1974RaZJ.
Av. res. capture: anomalous E1 strength to 1560 level (1982RaZG), calculated average radiative width (1982Bo20).
$^{143}$Nd(n,$\alpha$): 1983Ka34 (theory: n resonance), 1984An09 ($\Gamma\alpha$: n resonance).
$^{143}$Nd(n,2$\gamma$): 1985Po24, 1984Po23 (studied 2−$\gamma$ cascades).
1981Po14: statistical $\gamma$ spectra following n capture is mostly dipole, quadrupole admixture is <10%.
1984Pr03: determined radiative width for a primary E2 transition (4573$\gamma$).
$\gamma(\theta)$ from aligned nuclei, linear polarization for 814$\gamma$,864$\gamma$: 1968Re01.
The level scheme is as given by 1983Sn04 based upon the earlier level scheme of 1976Ra21. Placement for some of the $\gamma'$s has been changed by 1983Sn04.
E=reactor. Measured $T_{1/2}$ from Doppler broadening, grid technique (1994Ro13,1999Ro18).

### $^{144}$Nd Levels

| E(level)† | J$^{\pi}$†@ | $T_{1/2}$ | Comments |
|---|---|---|---|
| 0.0 | $0^+$ | | |
| 696.49‡ | $2^+$ | | |
| 1314.50‡ | $4^+$ | | |
| 1510.63‡ | $3^-$ | 0.56 ps *+8−6* | $T_{1/2}$: from 1994Ro13. |
| 1560.8‡ | $2^+$ | | |
| 1791.3 | $6^+$ | | |
| 2072.7‡ | $2^+$ | 69 fs *+21−14* | $T_{1/2}$: from 1994Ro13. |
| 2093.1‡ | $5^-$ | 0.76 ps *+20−14* | $T_{1/2}$: from 1999Ro18. Other: $T_{1/2}$=0.8 ps *+8−3* (1994Ro13). |
| 2109.4‡ | $4^+$ | | |
| 2179.0‡ | $3^+$ | | |
| 2185.1 | $1^-$ | 0.02 ps *+3−1* | $T_{1/2}$: from 1994Ro13. |
| 2204.6‡ | $4^-$ | 0.7 ps *+3−1* | $T_{1/2}$: from 1999Ro18. |
| 2218.0 | $6^+$ | | |
| 2295.4‡ | $4^+$ | | |
| 2321 | | | |
| 2368.5‡ | $2^+$ | | |
| 2399 | | | |
| 2420.0‡ | $5^+$ | | |
| 2452.6‡ | $4^+$ | | |
| 2508.3 | | | |
| 2528.3‡ | $2^+$ | | |
| 2564.1‡ | $(3^+)$ | | |
| 2581.47‡ | $(3^+)$ | | |
| 2592.17‡ | $2^+$ | | |
| 2601.12‡ | $4^+$ | | |
| 2605.61‡ | $3^-$ | 0.14 ps *+6−3* | $T_{1/2}$: from 1999Ro18. |
| 2613.87 | | | |
| 2655.2‡ | $(3^+)$ | | |
| 2681.4 | | | |

Continued on next page (footnotes at end of table)

## $^{143}$Nd(n,γ) E=th 1983Sn04 (continued)

### $^{144}$Nd Levels (continued)

| E(level)† | Jπ†@ | E(level)† | Jπ†@ | E(level)† | Jπ†@ | E(level)† | Jπ†@ |
|---|---|---|---|---|---|---|---|
| 2692.5‡ | 2+ | 2945.7 | | 3084.58 | | 3350 | |
| 2715.3‡ | (5,6) | 2951.9‡ *9* | 3(+) | 3101.5‡ *8* | 2+ | 3377 | |
| 2719.07 | 2+ | 2964.1‡ *12* | (2+) | 3126.34‡ | (4+) | 3380‡ | (2+,4+) |
| 2733.1‡ | 4+ | 2967.5 | 3− | 3133.8 | (1−) | 3409‡ | |
| 2775.1 | (6,4+) | 2980.7‡ *11* | 4+ | 3146.4‡ | | 3460‡ | (4+) |
| 2778.7‡ | 3− | 2986.6‡ | (4+) | 3161.5‡ *10* | (2+,5+)# | 3486 | 1 |
| 2803.5 | | 2999.6 | | 3201.52‡ | | 3495 | (5−) |
| 2808.2‡ | 6+ | 3019.1‡ *13* | (4+,3) | 3221.79‡ | (2+) | 3560 | |
| 2828.7 | (2+) | 3026.1‡ | (4+,5−) | 3251.49‡ | | 3578 | |
| 2834.3‡ | (4+) | 3030.97 | | 3254‡ | | 3660.8 | (3−) |
| 2839‡ | 2+ | 3042.4‡ | (3+) | 3272 | 1 | 3737 | (2+) |
| 2868.3‡ | (3,2+) | 3052.97‡ | (5−) | 3281‡ | | 3781.8 | 1 |
| 2887.2‡ | (5,4) | 3064.02‡ | (5,4) | 3285 | (3−) | (7817.10 *10*) | (3−) |
| 2901.0‡ | 2+ | 3070.27‡ | (3+) | 3341.2 | (3−,4+) | | |

† From adopted values.
‡ Level fed in primary transition in thermal or resonance neutron capture (1974RaZJ) or average resonance capture, E=2 keV (1986Ko37).
# From average resonance capture (1986Ko37).
@ From Adopted Levels, unless indicated otherwise.

## $^{143}$Nd(n,γ) E=th 1983Sn04 (continued)

### γ($^{144}$Nd)

| $E_\gamma$ † | $I_\gamma$ † | $E_i$(level) | $J_i^\pi$ | $E_f$ | $J_f^\pi$ | Mult. ‡ | δ † | α & | Comments |
|---|---|---|---|---|---|---|---|---|---|
| 196.1 *2* | 4.0# *6* | 1510.63 | 3⁻ | 1314.50 | 4⁺ | | | | |
| 202.0 *2* | 10.1 *6* | 2420.0 | 5⁺ | 2218.0 | 6⁺ | E2 | | 0.1908 | α(K)= 0.1414; α(L)= 0.0385; α(M)=0.00852; α(N+..)=0.00231<br>α(K)exp=0.116. |
| 302.0 *3* | 4.1 *6* | 2093.1 | 5⁻ | 1791.3 | 6⁺ | | | | |
| 310.3 *1* | 7.1 *10* | 2420.0 | 5⁺ | 2109.4 | 4⁺ | | | | |
| x415.0 *2* | 9.5 *1* | | | | | | | | |
| 426.8 *1* | 16.9 *1* | 2218.0 | 6⁺ | 1791.3 | 6⁺ | | | | δ: −0.72<δ<+0.06. |
| 454.4 *1* | 7.1 *1* | 2564.1 | (3⁺) | 2109.4 | 4⁺ | | | | |
| 476.8 *1* | 56.9# *2* | 1791.3 | 6⁺ | 1314.50 | 4⁺ | E2 | | 0.01344 | α(K)=0.01109; α(L)=0.00184; α(M)=0.00040; α(N+..)=0.00011<br>α(K)exp=0.011. |
| 539.2 *3* | 4.5 *6* | 2834.3 | (4⁺) | 2295.4 | 4⁺ | | | | |
| 575.0 *1* | 5.3 *2* | 3026.1 | (4⁺,5⁻) | 2452.6 | 4⁺ | | | | |
| 582.3 *2* | 4.9# *4* | 2093.1 | 5⁻ | 1510.63 | 3⁻ | | | | |
| 608.0 *10* | 6.5 *2* | 2399 | | 1791.3 | 6⁺ | | | | |
| 618.10 *1* | 395.8 *8* | 1314.50 | 4⁺ | 696.49 | 2⁺ | E2 | | 0.00684 | α(K)=0.00569; α(L)=0.00087<br>α(K)exp=0.0056 (1976Ra21); K/L=6 *1*, K/(L+M)=5 *1* (1971Gr55). |
| 628.6 *1* | 2.7 *1* | 2420.0 | 5⁺ | 1791.3 | 6⁺ | | | | |
| 668.0 *1* | 4.5 *1* | 2179.0 | 3⁺ | 1510.63 | 3⁻ | M2 | | 0.0259 | α(K)=0.02171; α(L)=0.00316<br>α(K)exp=0.022 (1976Ra21). |
| 682.0 *1* | 3.1 *1* | 2775.1 | (6,4⁺) | 2093.1 | 5⁻ | | | | |
| x695.3 *1* | 13.4# *6* | | | | | | | | |
| 696.50 *1* | 1000.0# | 696.49 | 2⁺ | 0.0 | 0⁺ | E2 | | 0.00511 | α(K)=0.00427; α(L)=0.00063<br>α(K)exp=0.0044 (1976Ra21); K/L=7 *1*, K/(L+M)=5 *1* (1971Gr55). |
| 722.9 *2* | 3.0 *1* | 2901.0 | 2⁺ | 2179.0 | 3⁺ | | | | |
| 727.6 *2* | 2.6 *1* | 2945.7 | | 2218.0 | 6⁺ | | | | |
| 734.0 *3* | 2.7 *4* | 2295.4 | 4⁺ | 1560.8 | 2⁺ | | | | |
| 778.5 *1* | 23.3 *2* | 2093.1 | 5⁻ | 1314.50 | 4⁺ | E1+M2 | +0.08 *8* | 0.0016 *3* | α(K)=0.00139 *24*; α(L)=0.00018 *4*<br>Mult.: from adopted γ's. D(+Q) from (n,γ). |
| 784.6 *1* | 5.6 *1* | 2295.4 | 4⁺ | 1510.63 | 3⁻ | | | | |
| x794.8 *1* | 6.4 *1* | | | | | | | | |
| 812.9 *3* | 1.7# *2* | 3030.97 | | 2218.0 | 6⁺ | | | | |
| 814.1 *1* | 146.5 *4* | 1510.63 | 3⁻ | 696.49 | 2⁺ | E1+M2 | +0.12 *2* | 0.00159 *7* | α(K)=0.00136 *6*; α(L)=0.00018<br>α(K)exp=0.0020 (1976Ra21); K/L=8 *3* (1971Gr55). |
| 834.9 *5* | 9.8# *6* | 3052.97 | (5⁻) | 2218.0 | 6⁺ | | | | |
| x841.2 *1* | 2.1 *1* | | | | | | | | |
| 864.0 *10* | 31.6# *2* | 2179.0 | 3⁺ | 1314.50 | 4⁺ | M1+E2 | −0.84 *+17−92* | 0.0041 *7* | α(K)= 0.0035 *6*; α(L)=0.00047 *6* |
| 864.30 *1* | 125.8# *2* | 1560.8 | 2⁺ | 696.49 | 2⁺ | M1+E2 | −1.13 *+15−22* | 0.00388 *16* | α(K)=0.00329 *14*; α(L)=0.00045 |





$^{144}_{60}Nd_{84}$-3

## $^{143}$Nd(n,γ) E=th 1983Sn04 (continued)

### γ($^{144}$Nd) (continued)

| $E_\gamma$[†] | $I_\gamma$[†] | $E_i$(level) | $J_i^\pi$ | $E_f$ | $J_f^\pi$ | Mult.[‡] | δ[†] | α[&] | Comments |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | α(K)exp=0.0052 (1976Ra21); K/L=8 *3*, K/(L+M)=6 *2* (1971Gr55) 1976Ra21 assumed Iγ(864.0γ) to be 10% of total doublet intensity. |
| 890.0 *2* | 2.3 *1* | 2204.6 | $4^-$ | 1314.50 | $4^+$ | | | | |
| 906.2 *3* | 1.3[#] *2* | 3084.58 | | 2179.0 | $3^+$ | | | | |
| 916.6 *3* | 1.7 *1* | 3026.1 | $(4^+,5^-)$ | 2109.4 | $4^+$ | | | | |
| 924.2 *3* | 1.8 *1* | 2715.3 | (5,6) | 1791.3 | $6^+$ | | | | |
| [x]943.7 *3* | 1.0 *1* | | | | | | | | |
| 947.5 *2* | 2.4 *1* | 2508.3 | | 1560.8 | $2^+$ | | | | |
| 967.3 *2* | 2.3 *1* | 2528.3 | $2^+$ | 1560.8 | $2^+$ | | | | |
| 980.6 *1* | 35.5 *2* | 2295.4 | $4^+$ | 1314.50 | $4^+$ | | | | δ: −0.54<δ<−0.27 if J(2295)=4. |
| 1003.0 *2* | 4.2 *5* | 2564.1 | $(3^+)$ | 1560.8 | $2^+$ | | | | |
| 1007.2 *3* | 2.7 *2* | 2321 | | 1314.50 | $4^+$ | | | | |
| 1016.8 *1* | 4.5 *2* | 2808.2 | $6^+$ | 1791.3 | $6^+$ | | | | |
| 1023.2 *2* | 2.7 *2* | 3201.52 | | 2179.0 | $3^+$ | | | | |
| 1040.7 *6* | 2.9[#] *6* | 3133.8 | $(1^-)$ | 2093.1 | $5^-$ | | | | |
| 1051.9 *6* | 2.3 *2* | 2564.1 | $(3^+)$ | 1510.63 | $3^-$ | | | | |
| 1094.9 *4* | 6.1 *2* | 2605.61 | $3^-$ | 1510.63 | $3^-$ | | | | |
| 1136.0 *10* | 1.0[#] *2* | 3737 | $(2^+)$ | 2601.12 | $4^+$ | | | | |
| 1136.8 *2* | 19.7[#] *2* | 2452.6 | $4^+$ | 1314.50 | $4^+$ | D+Q | −1.3 *+3−4* | 0.00204 *11* | α(K)=0.00173 *10*; α(L)=0.00023 |
| 1170.8[a] *2* | 2.7[a#] *6* | 2681.4 | | 1510.63 | $3^-$ | | | | |
| 1170.8[a] *2* | 2.1[a#] *6* | 2733.1 | $4^+$ | 1560.8 | $2^+$ | | | | |
| 1267.9[a] *2* | 3.5[a#] *2* | 2775.1 | $(6,4^+)$ | 1510.63 | $3^-$ | | | | |
| 1267.9[a] *2* | 1.9[a#] *2* | 2828.7 | $(2^+)$ | 1560.8 | $2^+$ | | | | |
| 1284.0 *2* | 1.7[#] *2* | 3377 | | 2093.1 | $5^-$ | | | | |
| 1286.6 *2* | 9.5 *1* | 2601.12 | $4^+$ | 1314.50 | $4^+$ | | | | |
| 1299.5 *2* | 6.2 *1* | 3409 | | 2109.4 | $4^+$ | | | | |
| 1323.6 *3* | 3.1 *1* | 2834.3 | $(4^+)$ | 1510.63 | $3^-$ | | | | |
| 1340.0 *10* | 3.1[#] *2* | 2901.0 | $2^+$ | 1560.8 | $2^+$ | | | | |
| 1340.1 *3* | 8.0[#] *2* | 2655.2 | $(3^+)$ | 1314.50 | $4^+$ | D+Q | | | δ: 18.0>δ>−3.1. |
| 1357.0 *1* | 9.9 *1* | 2868.3 | $(3,2^+)$ | 1510.63 | $3^-$ | | | | |
| 1367.7 *2* | 2.4 *1* | 3460 | $(4^+)$ | 2093.1 | $5^-$ | | | | |
| 1376.2 *1* | 22.1 *2* | 2072.7 | $2^+$ | 696.49 | $2^+$ | D+Q | +0.31 *+11−9* | 0.00161 *3* | α(K)=0.00138 *3*; α(L)=0.00018 |
| 1378.0 *4* | 5.1[#] *2* | 2692.5 | $2^+$ | 1314.50 | $4^+$ | | | | |
| 1389.6 *1* | 5.5 *2* | 2901.0 | $2^+$ | 1510.63 | $3^-$ | | | | |
| 1400.7 *2* | 3.4 *1* | 2715.3 | (5,6) | 1314.50 | $4^+$ | | | | |
| 1413.0 *1* | 56.0 *2* | 2109.4 | $4^+$ | 696.49 | $2^+$ | D+Q | +0.29 *6* | | |
| 1417.9 *1* | 10.4 *2* | 2733.1 | $4^+$ | 1314.50 | $4^+$ | | | | |
| 1481.9[a] *1* | 17.9[a#] *2* | 2179.0 | $3^+$ | 696.49 | $2^+$ | D+Q | +0.4 *+22−2* | 0.0013 *3* | α(K)=0.00115 *24*; α(L)=0.00015 *3* |
| 1481.9[a] *1* | 4.9[a#] *2* | 3660.8 | $(3^-)$ | 2179.0 | $3^+$ | | | | |

## $^{143}$Nd(n,γ) E=th 1983Sn04 (continued)

### γ($^{144}$Nd) (continued)

| $E_\gamma$[†] | $I_\gamma$[†] | $E_i$(level) | $J_i^\pi$ | $E_f$ | $J_f^\pi$ | Mult.[‡] | δ[†] |
|---|---|---|---|---|---|---|---|
| 1489.0[a] *1* | 1.9[a#] *2* | 2803.5 | | 1314.50 | $4^+$ | | |
| 1489.0[a] *1* | 3.9[a#] *2* | 2999.6 | | 1510.63 | $3^-$ | | |
| 1494.1 *2* | 2.5 *1* | 2808.2 | $6^+$ | 1314.50 | $4^+$ | | |
| 1515.4 *3* | 13.4 *2* | 3026.1 | $(4^+,5^-)$ | 1510.63 | $3^-$ | D+Q | +0.20 *14* |
| 1560.7 *2* | 11.9 *1* | 1560.8 | $2^+$ | 0.0 | $0^+$ | | |
| 1572.7 *3* | 6.2 *1* | 2887.2 | (5,4) | 1314.50 | $4^+$ | | |
| 1586.2 *3* | 1.2 *1* | 2901.0 | $2^+$ | 1314.50 | $4^+$ | | |
| 1598.6 *3* | 5.6 *1* | 2295.4 | $4^+$ | 696.49 | $2^+$ | | |
| 1636.0 *3* | 3.0 *2* | 3146.4 | | 1510.63 | $3^-$ | | |
| 1653.2 *5* | 1.6[#] *2* | 2967.5 | $3^-$ | 1314.50 | $4^+$ | | |
| 1661.0 *2* | 5.3[#] *2* | 3221.79 | $(2^+)$ | 1560.8 | $2^+$ | | |
| 1671.7[a] *1* | 28.4[a#] *2* | 2368.5 | $2^+$ | 696.49 | $2^+$ | D+Q | +0.17 *8* |
| 1671.7[a] *1* | 5.3[a#] *2* | 2986.6 | $(4^+)$ | 1314.50 | $4^+$ | | |
| 1690.7 *2* | 2.1 *1* | 3251.49 | | 1560.8 | $2^+$ | | |
| 1711.7 *2* | 3.8 *1* | 3026.1 | $(4^+,5^-)$ | 1314.50 | $4^+$ | | |
| 1743.4 *3* | 3.1 *1* | 3254 | | 1510.63 | $3^-$ | | |
| 1749.5 *5* | 1.9 *1* | 3064.02 | (5,4) | 1314.50 | $4^+$ | | |
| 1754.9 *2* | 7.3 *2* | 2452.6 | $4^+$ | 696.49 | $2^+$ | | |
| 1775.8 *4* | 5.9[#] *4* | 3285 | $(3^-)$ | 1510.63 | $3^-$ | | |
| 1811.8 *3* | 2.4 *1* | 3126.34 | $(4^+)$ | 1314.50 | $4^+$ | | |
| 1820.6 *2* | 4.5 *1* | 3380 | $(2^+,4^+)$ | 1560.8 | $2^+$ | | |
| 1831.8 *2* | 5.4 *1* | 3146.4 | | 1314.50 | $4^+$ | | |
| 1867.7 *4* | 5.1 *2* | 3377 | | 1510.63 | $3^-$ | | |
| 1885.0 *4* | 2.6 *1* | 2581.47 | $(3^+)$ | 696.49 | $2^+$ | | |
| 1895.7 *3* | 11.4 *2* | 2592.17 | $2^+$ | 696.49 | $2^+$ | | |
| 1909.2 *3* | 8.8 *1* | 2605.61 | $3^-$ | 696.49 | $2^+$ | | |
| 1917.4 *7* | 1.0 *2* | 2613.87 | | 696.49 | $2^+$ | | |
| 1939.3 *3* | 2.5 *1* | 3254 | | 1314.50 | $4^+$ | | |
| 1950.6 *2* | 5.3 *1* | 3460 | $(4^+)$ | 1510.63 | $3^-$ | | |
| 1958.6 *3* | 2.7 *1* | 3272 | 1 | 1314.50 | $4^+$ | | |
| 1967.0 *2* | 5.9 *1* | 3281 | | 1314.50 | $4^+$ | | |
| 1983.7 *4* | 1.8 *2* | 3495 | $(5^-)$ | 1510.63 | $3^-$ | | |
| 2022.6 *3* | 1.8 *2* | 2719.07 | $2^+$ | 696.49 | $2^+$ | | |
| 2027.0 *5* | 1.0[#] *2* | 3341.2 | $(3^-,4^+)$ | 1314.50 | $4^+$ | | |
| 2036.5 *3* | 2.1 *1* | 2733.1 | $4^+$ | 696.49 | $2^+$ | | |
| 2049.7 *3* | 2.8 *1* | 3560 | | 1510.63 | $3^-$ | | |
| 2072.8 *2* | 9.5 *1* | 2072.7 | $2^+$ | 0.0 | $0^+$ | | |
| 2082.4 *2* | 3.9 *1* | 2778.7 | $3^-$ | 696.49 | $2^+$ | | |
| 2094.9 *2* | 3.4 *1* | 3409 | | 1314.50 | $4^+$ | | |
| 2132.3 *3* | 5.2 *1* | 2828.7 | $(2^+)$ | 696.49 | $2^+$ | | |
| 2142.9 *5* | 3.6 *1* | 2839 | $2^+$ | 696.49 | $2^+$ | | |





$^{144}_{60}Nd_{84}$-5

## $^{143}$Nd(n,$\gamma$) E=th 1983Sn04 (continued)

### $\gamma(^{144}Nd)$ (continued)

| $E_\gamma$ † | $I_\gamma$ † | $E_i$(level) | $J_i^\pi$ | $E_f$ | $J_f^\pi$ | $E_\gamma$ † | $I_\gamma$ † | $E_i$(level) | $J_i^\pi$ | $E_f$ | $J_f^\pi$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2171.3 *3* | 4.1 *1* | 3486 | 1 | 1314.50 | $4^+$ | 2429.9 *3* | 9.7 *2* | 3126.34 | $(4^+)$ | 696.49 | $2^+$ |
| 2185.6 *2* | 8.2 *1* | 2185.1 | $1^-$ | 0.0 | $0^+$ | 2505.0 *2* | 6.1 *2* | 3201.52 | | 696.49 | $2^+$ |
| 2204.0 *4* | 3.8 *1* | 2901.0 | $2^+$ | 696.49 | $2^+$ | 2527.0 *5* | 7.7 *1* | 2528.3 | $2^+$ | 0.0 | $0^+$ |
| 2262.1 *3* | 3.0 *1* | 3578 | | 1314.50 | $4^+$ | 2558.3 *2* | 6.1 *2* | 3254 | | 696.49 | $2^+$ |
| 2271.3 *3* | 8.2 *2* | 3781.8 | 1 | 1510.63 | $3^-$ | 2655.0 *2* | 8.1 *2* | 3350 | | 696.49 | $2^+$ |
| [x]2312.8 *6* | 1.9 *1* | | | | | 2712.8 *4* | 4.8 *1* | 3409 | | 696.49 | $2^+$ |
| [x]2323.0 *2* | 5.7 *2* | | | | | 2804.0 *5* | 2.9 *1* | 2803.5 | | 0.0 | $0^+$ |
| 2345.9 *2* | 7.7 *2* | 3042.4 | $(3^+)$ | 696.49 | $2^+$ | 5612.45[@] | | (7817.10) | $(3^-)$ | 2204.6 | $4^-$ |
| 2368.4 *5* | 6.9 *1* | 2368.5 | $2^+$ | 0.0 | $0^+$ | 6256.22[@] | | (7817.10) | $(3^-)$ | 1560.8 | $2^+$ |
| 2373.8 *2* | 8.7 *2* | 3070.27 | $(3^+)$ | 696.49 | $2^+$ | 6306.53[@] | | (7817.10) | $(3^-)$ | 1510.63 | $3^-$ |
| [x]2404.7 *3* | 3.4 *1* | | | | | 6502.68[@] | | (7817.10) | $(3^-)$ | 1314.50 | $4^+$ |

† From 1983Sn04. There are many $\gamma$'s reported by 1976Ra21 which are not seen by 1983Sn04 and vice versa.

‡ From $\gamma\gamma(\theta)$ or ce data (as given in comments). The transitions with >10% quadrupole admixture are assumed to be between states of the same parity (1983Sn04).

# From coincidence spectra.

@ From (n,$\gamma$) E=th (1982Is05).

& Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on $\gamma$-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

[a] Multiply placed with intensity suitably divided.

[x] $\gamma$ ray not placed in level scheme.





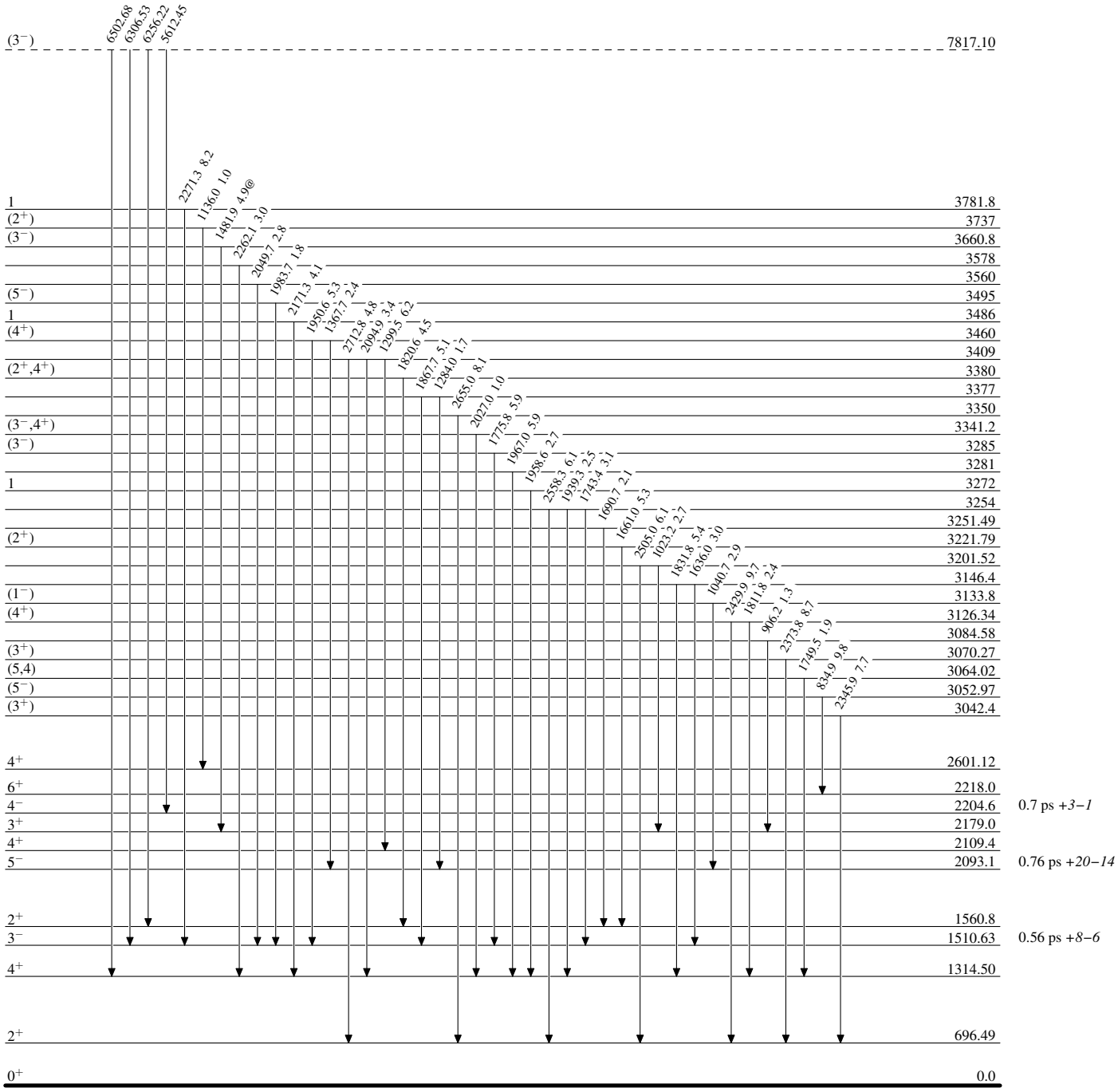
$^{144}_{60}Nd_{84}$-6

## $^{143}$Nd(n,γ) E=th 1983Sn04

### Level Scheme

Intensities: Type not specified
@ Multiply placed: intensity suitably divided

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



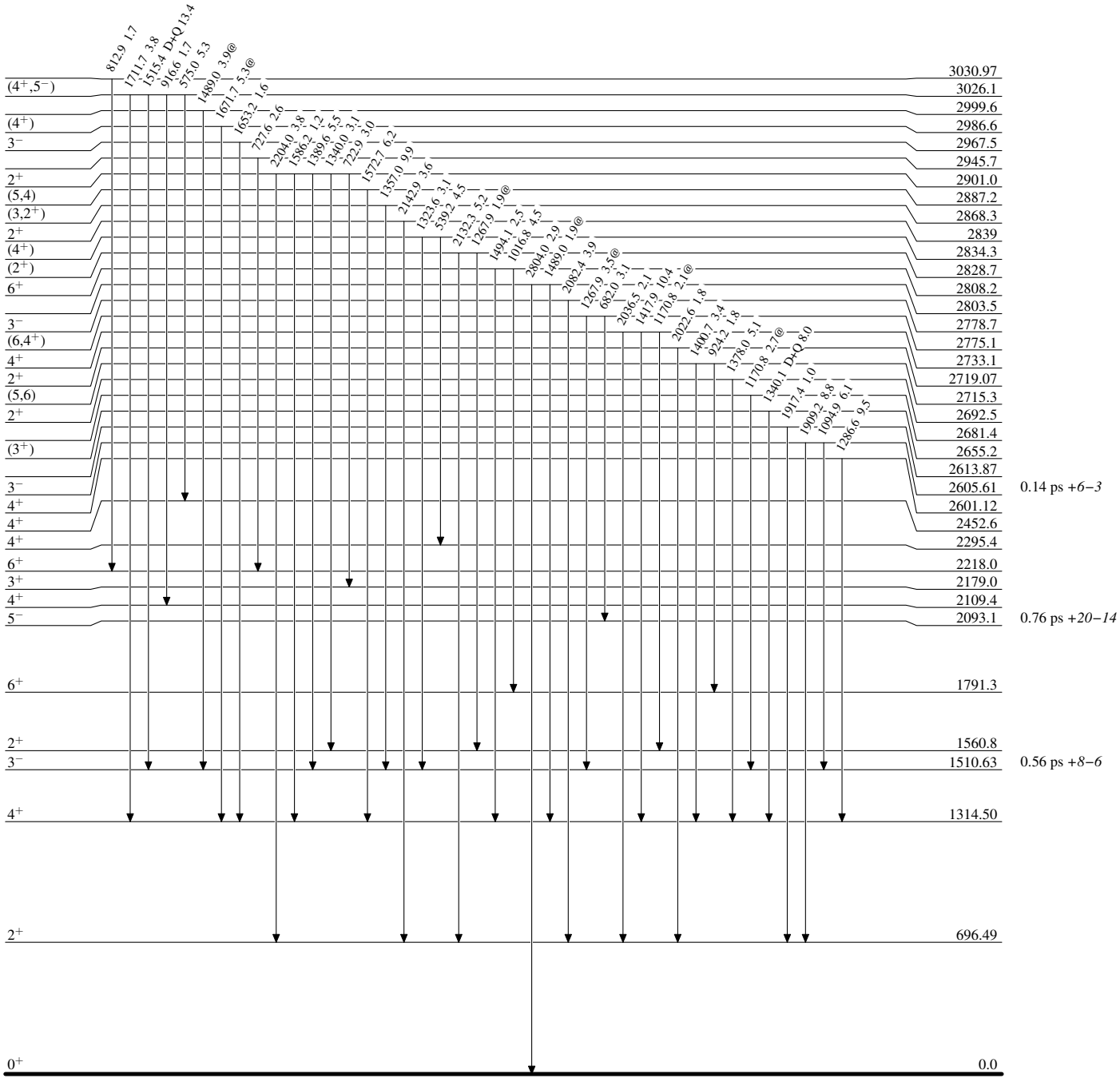

$^{144}_{60}Nd_{84}$

## $^{143}$Nd(n,γ) E=th 1983Sn04

### Level Scheme (continued)

Intensities: Type not specified
@ Multiply placed: intensity suitably divided

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




$^{144}_{60}Nd_{84}$

## $^{143}$Nd(n,γ) E=th 1983Sn04

### Level Scheme (continued)

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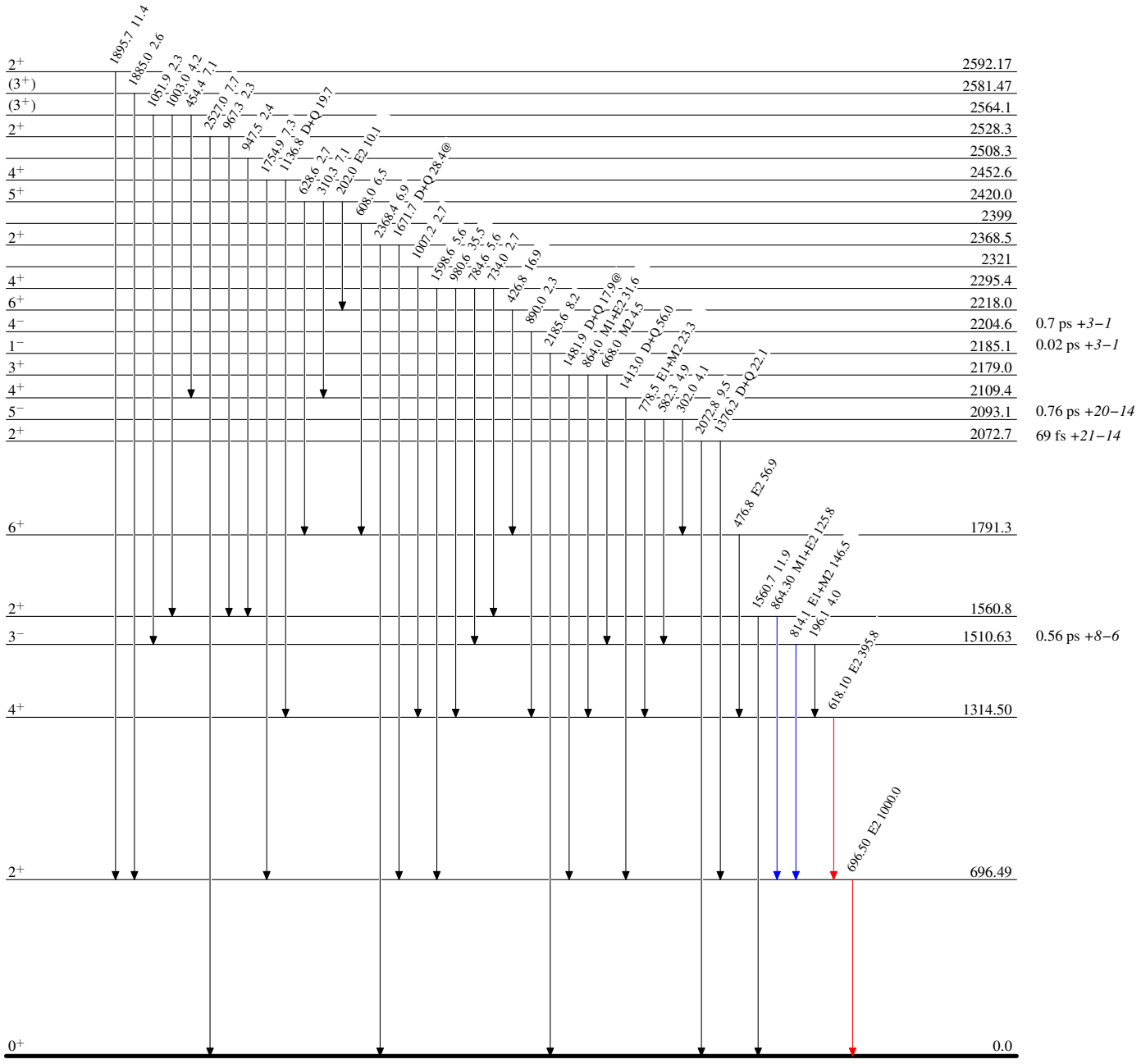
$I_\gamma > 10\% \times I_\gamma^{max}$




$^{144}_{60}Nd_{84}$