$^{137}_{60}$Nd

Δ: –79510 *70* **S_n:** 8430 *60* **S_p:** 5430 *60*
Q_{EC}: 3690 *50* **Q_α:** (450)

Nuclear Bands

A Band Structure
B Band Structure
C SD band (87Wa18,92Mu09,96Pe18)

Levels and γ-ray branchings:

0, 1/2$^+$, 38.5 *15* m, %EC+%β$^+$=100

108.6 *2*, 3/2$^+$ γ_{0}***108.6*** *2* (†$_\gamma$100) M1

268.7 *3*, (3/2)$^+$ γ_{109}***160.5*** *4* (†$_\gamma$19.4 *4*) M1,E2 γ_{0}***268.7*** *3* (†$_\gamma$100.0 *8*) M1,E2

286.0 *2*, 5/2$^+$ γ_{109}***177.5*** *2* (†$_\gamma$100.0 *3*) M1(+E2) γ_{0}***286.0*** *2* (†$_\gamma$39.9 *2*) E2

A **519.6** *5*, 11/2$^-$, 1.60 *15* s, %IT=100 γ_{286}***233.6*** *3* (†$_\gamma$100) E3

614.9 *6*, 7/2$^+$ γ_{286}***328.5*** *5* (†$_\gamma$47 *1*) M1,E2 γ_{109}***506.0*** *10* (†$_\gamma$100 *25*)

797.8 *6* γ_{286}***512.0*** *10* (?) γ_{269}***529.2*** *4* (†$_\gamma$100)

834.5 *6*, (7/2$^+$) γ_{286}***548.8*** *3* (†$_\gamma$100 *2*) γ_{269}***565.6*** *3* (†$_\gamma$<66)

851.5 *6*, (7/2$^+$) γ_{286}***565.6*** *3* (†$_\gamma$<395) γ_{109}***743.3*** *4* (†$_\gamma$100 *6*)

976.8 *6*, 9/2$^-$ γ_{520}***457.3*** *5* (†$_\gamma$100 *2*) γ_{286}***690.8*** *3* (†$_\gamma$69 *2*) M2

A **1100.0** *10*, 13/2$^-$ γ_{520}***581*** *1* (†$_\gamma$100) M1+E2

A **1188.6** *6*, (15/2$^-$) γ_{520}***669.0*** *3* (†$_\gamma$100) Q

1374.5 *7*, (7/2,5/2$^-$) γ_{977}***397.7*** *3* (†$_\gamma$100 *3*) γ_{615}***759.5*** *5* (†$_\gamma$91 *3*)

1510.6 *8*, (11/2)$^-$ γ_{1100}***410.6*** *5* (†$_\gamma$100 *2*) M1,E2 γ_{977}***533.8*** *4* (†$_\gamma$<75) γ_{852}***658.6*** *3* (†$_\gamma$7.5 *5*)

A **1682.0** *14*, (15/2$^-$) γ_{1189}***493.5*** (?) (†$_\gamma$10 *1*) γ_{1100}***582*** *1* (†$_\gamma$100 *8*) M1+E2

1707.1 *8*, (9/2,11/2) γ_{615}***1092.2*** *5* (†$_\gamma$100)

1788.5 (?) γ_{1375}***414.0*** *5* (†$_\gamma$100) M1,E2

A **1894.4** *14*, (17/2$^-$) γ_{1189}***705.6*** *3* (†$_\gamma$100 *3*) M1+E2 γ_{1100}***794*** *1* (†$_\gamma$26 *4*) Q

1899.5 *8*, 9/2$^-$,11/2$^+$ γ_{1707}***192.9*** *4* (†$_\gamma$8.3 *5*) γ_{1511}***389.2*** *3* (†$_\gamma$43.5 *5*) M1,E2 γ_{1375}***525.1*** *4* (†$_\gamma$20.7 *52*) γ_{1100}***798.6*** *5* (†$_\gamma$7.3 *5*) γ_{977}***923.0*** *5* (†$_\gamma$35.2 *10*) γ_{852}***1047.6*** *5* (†$_\gamma$10.4 *5*) γ_{835}***1064.7*** *5* (†$_\gamma$14.5 *5*) γ_{615}***1284.7*** *5* (†$_\gamma$100 *2*)

1976.5 *15*, (19/2$^-$) γ_{1682}***295.0*** *3* (†$_\gamma$86 *4*) Q γ_{1189}***788*** *1* (†$_\gamma$100 *15*) Q

1987.7 *9*, (9/2,11/2) γ_{1789}***199.0*** *5* γ_{798}***1189.9*** *5* (†$_\gamma$100 *3*)

2072, (19/2$^-$) γ_{1189}***883***

B **2222.5** *16*, (19/2$^+$) γ_{1894}***328.1*** *3* (†$_\gamma$100) D

2370.2 *10*, $^-$ γ_{1900}***470.7*** *3* (†$_\gamma$100 *1*) M1,E2 γ_{1375}***994.7*** *5* (†$_\gamma$11.5 *10*)

2433.3 *10* γ_{1900}***533.8*** *4* (†$_\gamma$100)

B **2629.1** *17*, (23/2$^+$) γ_{2223}***406.7*** *3* (†$_\gamma$100) Q

2722.5 *10* γ_{2370}***352.3*** *3* (†$_\gamma$100 *3*) M1,E2 γ_{1988}***735.0*** *5* (†$_\gamma$27 *1*) γ_{1900}***821.7*** *5* (†$_\gamma$60 *3*)

2803.9 *10* γ_{2433}***370.6*** *3* (†$_\gamma$100 *1*) M1,E2 γ_{2370}***434.0*** *3* (†$_\gamma$22.9 *12*) γ_{1511}***1293.5*** *5* (†$_\gamma$36 *1*)

2818.8 *17*, (21/2$^-$) γ_{1894}***924.5*** (†$_\gamma$100)

3081, (23/2$^-$) γ_{2072}***1009***

B **3555**, (27/2$^+$) γ_{2629}***924.5*** *1* (†$_\gamma$100) Q

B **4043**, (25/2$^+$) γ_{2629}***1412*** *1* (†$_\gamma$100)

C **4885**, (29/2$^+$) γ_{4043}***842.6*** *5* (†$_\gamma$0.03 *2*) γ_{3555}***1330.4*** *5* (†$_\gamma$0.06 *2*)

B **4925**, (29/2$^+$) γ_{3555}***1370.0*** *5* (†$_\gamma$100)

B **4939**, (29/2$^+$) γ_{3555}***1383.9*** *5* (†$_\gamma$100)

C **5520**, (33/2$^+$) γ_{4939}***581.2*** *4* (†$_\gamma$0.05 *3*) γ_{4925}***595.1*** *4* (†$_\gamma$0.05 *2*) γ_{4885}***634.7*** *3* (†$_\gamma$0.54 *2*) Q *$I^{(1)}$=50.3, $I^{(2)}$=91.3, ħω=0.328*

C **6199**, (37/2$^+$) γ_{5520}***678.5*** *3* (†$_\gamma$1.09 *4*) Q *$I^{(1)}$=52.1, $I^{(2)}$=63.4, ħω=0.355*

C **6941**, (41/2$^+$) γ_{6199}***741.6*** *3* (†$_\gamma$1.00) Q *$I^{(1)}$=53.1, $I^{(2)}$=65.8, ħω=0.386*

C **7744**, (45/2$^+$), 0.180 *14* ps γ_{6941}***802.4*** *4* (†$_\gamma$0.99 *4*) Q *$I^{(1)}$=54.1, $I^{(2)}$=67.7, ħω=0.416*

C **8606**, (49/2$^+$), 0.118 *14* ps γ_{7744}***861.5*** (†$_\gamma$0.99 *3*) *$I^{(1)}$=55.0, $I^{(2)}$=67.7, ħω=0.446*

C **9527**, (53/2$^+$), 0.104 *14* ps γ_{8606}***920.6*** (†$_\gamma$0.88 *4*) *$I^{(1)}$=55.7, $I^{(2)}$=63.2, ħω=0.476*

C **10512**, (57/2$^+$), 0.104 *21* ps γ_{9527}***983.9*** (†$_\gamma$0.76 *3*) *$I^{(1)}$=56.1, $I^{(2)}$=60.7, ħω=0.508*

C **11562**, (61/2$^+$), 0.083 *14* ps γ_{10512}***1049.8*** (†$_\gamma$0.57 *2*) *$I^{(1)}$=56.4, $I^{(2)}$=61.2, ħω=0.541*

C **12679**, (65/2$^+$), 0.069 *14* ps γ_{11562}***1115.2*** (†$_\gamma$0.37 *2*) *$I^{(1)}$=56.7, $I^{(2)}$=63.8, ħω=0.573*

C **13858**, (69/2$^+$), 0.076 *35* ps γ_{12679}***1177.9*** (†$_\gamma$0.25 *1*) *$I^{(1)}$=57.1, $I^{(2)}$=65.5, ħω=0.604*

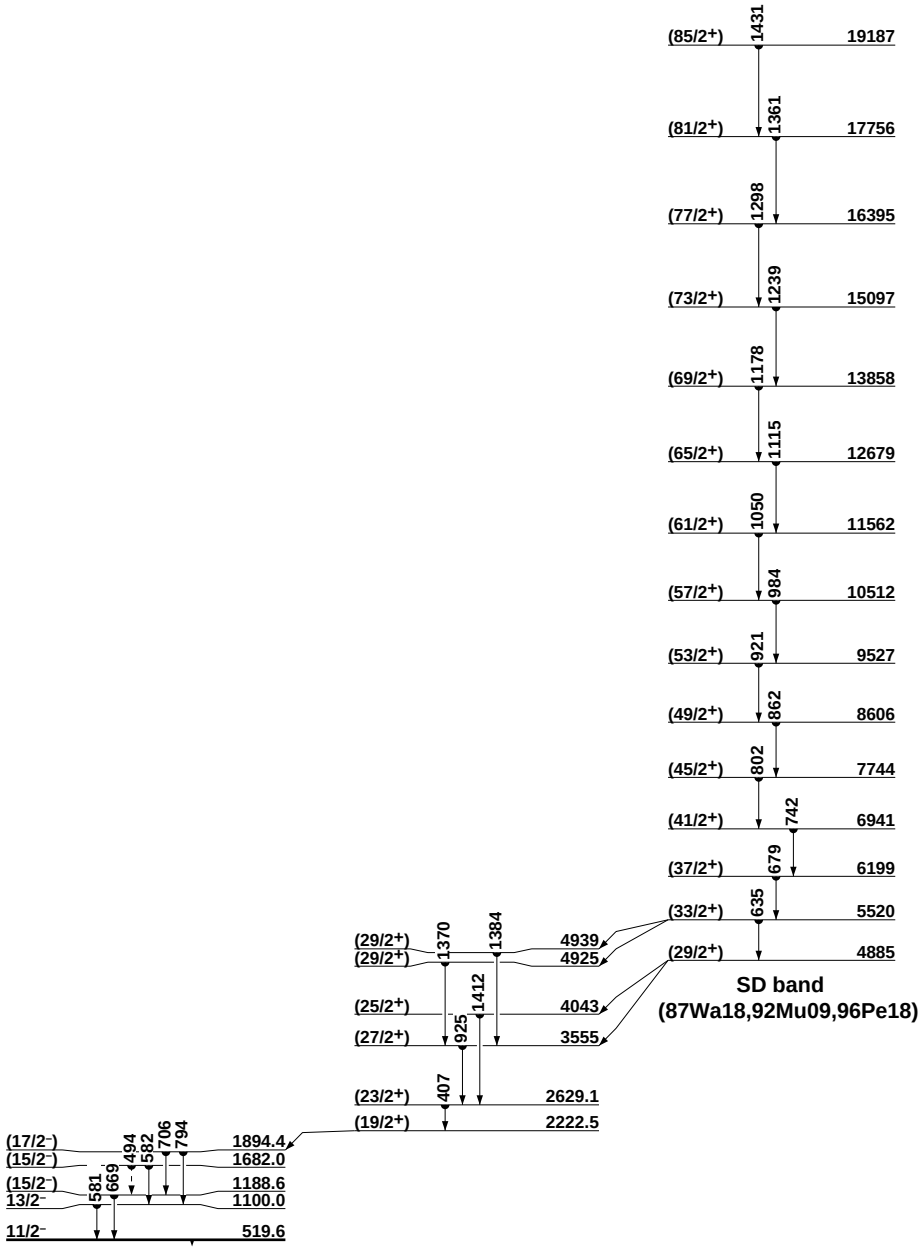
C **15097**, (73/2$^+$) γ_{13858}***1239*** (†$_\gamma$0.25 *5*) *$I^{(1)}$=57.5, $I^{(2)}$=67.8, ħω=0.634*

C **16395**, (77/2$^+$) γ_{15097}***1298*** (†$_\gamma$0.20 *5*) *$I^{(1)}$=57.9, $I^{(2)}$=63.5, ħω=0.665*

C **17756**, (81/2$^+$) γ_{16395}***1361*** (†$_\gamma$0.15 *5*)

$I^{(1)}$*=58.0,* $I^{(2)}$*=57.1,* $\hbar\omega$*=0.698*

C **19187**, (85/2$^+$) γ_{17756}***1431*** (†$_\gamma$0.10 *3*)


(85/2+) 19187
(81/2+) 17756
(77/2+) 16395
(73/2+) 15097
(69/2+) 13858
(65/2+) 12679
(61/2+) 11562
(57/2+) 10512
(53/2+) 9527
(49/2+) 8606
(45/2+) 7744
(41/2+) 6941
(37/2+) 6199
(33/2+) 5520
(29/2+) 4885
1431
1361
1298
1239
1178
1115
1050
984
921
862
802
742
679
635
SD band
(87Wa18,92Mu09,96Pe18)
(29/2+) 4939
(29/2+) 4925
(25/2+) 4043
(27/2+) 3555
(23/2+) 2629.1
(19/2+) 2222.5
1370
1384
1412
925
407
(17/2−) 1894.4
(15/2−) 1682.0
(15/2−) 1188.6
13/2− 1100.0
11/2− 519.6
494
582
706
794
581
669

$^{137}_{60}$Nd