$^{136}_{60}$Nd

Δ: –79160 *60* **S_n:** (11070) **S_p:** 5540 *160*
Q_{EC}: 2211 *25* **Q_α:** (860)

Nuclear Bands

- *A* GS band
- *B* γ band
- *C* $\pi h_{11/2}\pi g_{7/2}$ α=-1
- *D* $\pi h_{11/2}\pi g_{7/2}$ α=0
- *E* $\nu h_{11/2}^2$
- *F* $\pi h_{11/2}^2$
- *G* $\nu h_{11/2}\nu g_{7/2}$? α=-1 γ≈-60°
- *H* α=-1
- *I* $\nu h_{11/2}\nu g_{7/2}$? α=0 γ≈-60°
- *J* Band Structure
- *K* SD-1 band (95Cl02,87Be32)
- *L* SD-2 band (95Cl02)

Levels and γ-ray branchings:

A **0**, 0^+, 50.65 *33* m, %EC+%β^+=100

A **373.6** *3*, 2^+ γ_{0}***373.8*** *2* (†$_\gamma$100) E2

B **862.51** *16*, 2^+ γ_{374}***488.7*** *2* (†$_\gamma$98 *10*) E2+M1 γ_{0}***862.5*** *2* (†$_\gamma$100 *10*) E2

A **976.3** *4*, 4^+, <8 ps γ_{374}***602.7*** *2* (†$_\gamma$100) E2

B **1231.04** *18*, $(3)^+$ γ_{976}***254.7*** *2* (†$_\gamma$≈2) γ_{863}***368.7*** *2* (†$_\gamma$27 *3*) γ_{374}***857.2*** *2* (†$_\gamma$100 *10*) E2+M1

B **1541.77** *20*, (4^+) γ_{976}***565.2*** *2* (†$_\gamma$33 *4*) γ_{863}***679.2*** *2* (†$_\gamma$100 *10*)

A **1746.8** *5*, 6^+, <14 ps γ_{976}***770.3*** *2* (†$_\gamma$100) E2
1775.6 *3* γ_{374}***1401.8*** *2* (†$_\gamma$100)
1817.83 *21* γ_{1231}***586.9*** *2* (†$_\gamma$100 *10*) γ_{863}***955.2*** *2* (†$_\gamma$100 *10*)
1926.03 *24* γ_{1231}***695.0*** *2* (†$_\gamma$100)

C **2035.9** *5*, $5^{(-)}$ γ_{976}***1059.4*** *2* (†$_\gamma$100) D

B **2045.9** *5*, (5^+) γ_{1542}***503.7*** *2* (†$_\gamma$4.3 *4*) γ_{1231}***814.7*** *2* (†$_\gamma$100 *10*) Q γ_{976}***1069.1*** *2* (†$_\gamma$16.1 *16*)
2181.2 *3* γ_{976}***1204.7*** *2* (†$_\gamma$100)
2227.93 *24*, (3,4,5) γ_{2036}***192.4*** *2* (†$_\gamma$74 *8*) γ_{976}***1251.3*** *2* (†$_\gamma$100 *10*)
2346.22 *25* γ_{2046}***300.6*** *2* (†$_\gamma$100 *10*) γ_{1926}***420.2*** *2* (†$_\gamma$31 *3*)
2416.7 *3* γ_{2046}***371.1*** *2* (†$_\gamma$100)

C **2439.9** *5*, $7^{(-)}$, 21 *7* ps γ_{2036}***404.5*** *2* (†$_\gamma$29.4 *10*) E2 γ_{1747}***693.1*** *2* (†$_\gamma$100.0 *14*)

D **2483.9** *5*, $6^{(-)}$ γ_{2046}***438.1*** *4* (†$_\gamma$59 *9*) γ_{2036}***448.0*** *5* (†$_\gamma$77 *9*) D γ_{1747}***737.1*** *5* (†$_\gamma$100 *18*) D
2522.9 *3* γ_{863}***1660.4*** *2* (†$_\gamma$100)

A **2632.7** *7*, 8^+, <7 ps γ_{1747}***886.1*** *3* (†$_\gamma$100) E2

D **2757.8** *5*, $8^{(-)}$ γ_{2484}***273.9*** *3* (†$_\gamma$66 *4*) Q γ_{2440}***317.9*** *3* (†$_\gamma$100 *4*) D

C **2941.1** *5*, $9^{(-)}$, 6 *2* ps γ_{2440}***501.2*** *3* (†$_\gamma$100) E2

D **3244.4** *6*, (10^-) γ_{2941}***303.3*** *3* (†$_\gamma$31 *3*) D γ_{2758}***486.5*** *3* (†$_\gamma$100 *4*) Q

E **3278.7** *6*, 10^+ γ_{2633}***645.8*** *3* (†$_\gamma$100) Q

F **3296.5** *6*, 10^+, 51 *6* ps, μ=+11.7 *39* γ_{2941}***355.4*** *3* (†$_\gamma$35.9 *9*) γ_{2633}***663.5*** *3* (†$_\gamma$100.0 *21*) E2

A **3552.6** *6*, 10^+ γ_{2633}***919.7*** *3* (†$_\gamma$100) Q

C **3602.3** *6*, $11^{(-)}$ γ_{2941}***661.2*** *3* (†$_\gamma$100) Q

F **3686.5** *6*, 12^+, 19 *3* ps, μ=+14.0 *46* γ_{3297}***390.1*** *3* (†$_\gamma$100) E2

G **3768.2** *7*, (9^-) γ_{2633}***1135.1*** *5* (†$_\gamma$100) D

E **3997.3** *7*, (12^+) γ_{3279}***718.6*** *3* (†$_\gamma$100) Q

D **4016.8** *8*, (12^-) γ_{3244}***772.4*** *5* (†$_\gamma$100)

G **4320.0** *6*, (11^-) γ_{3768}***551.8*** *3* (†$_\gamma$29 *3*) Q γ_{3553}***767.5*** *3* (†$_\gamma$100 *3*) D

F **4347.5** *6*, 14^+, <4 ps γ_{3687}***661.0*** *3* (†$_\gamma$100) E2

C **4426.6** *6*, (13^-) γ_{3602}***824.3*** *3* (†$_\gamma$4.7 *3*) Q

H **4455.7** *7*, (12) γ_{3687}***769.2*** *5* (†$_\gamma$15.7 *9*)

E **4849.1** *8*, (14^+) γ_{3997}***851.8*** *3* (†$_\gamma$100) Q

J **4855.9** *7*, (13) γ_{3687}***1169.3*** *5* (†$_\gamma$100) D

I **5022.5** *7*, (12^-) γ_{4320}***702.5*** *3* (†$_\gamma$100) D

D **5022.7** *8*, (14^-) γ_{4017}***1005.9*** *3* (†$_\gamma$100) Q

G **5032.0** *7*, (13^-) γ_{4320}***711.9*** *5* (†$_\gamma$100) Q

H **5132.7** *8*, (14) γ_{4456}***677.0*** *5* (†$_\gamma$74 *12*) Q γ_{4348}***785.2*** *5* (†$_\gamma$100 *6*) D

F **5192.2** *7*, (16^+) γ_{4348}***844.7*** *3* (†$_\gamma$100) Q

C **5415.8** *7*, (15^-) γ_{4427}***989.1*** *3* (†$_\gamma$1.9 *3*) Q

J **5570.2** *7*, (15) γ_{4856}***714.3*** *3* (†$_\gamma$93 *22*) Q γ_{4348}***1222.7*** *4* (†$_\gamma$100 *36*) D

I **5695.6** *7*, (14^-) γ_{5032}***663.3*** *5* (†$_\gamma$72 *21*) $\gamma_{5022.5}$***673.1*** *3* (†$_\gamma$100 *7*) Q

E **5844.1** *8*, (16^+) γ_{4849}***994.9*** *3* (†$_\gamma$100) Q

G **5876.0** *9*(?), (15^-) γ_{5032}***844.0*** *5*(?)

H **5942.2** *9*, (16) γ_{5133}***809.5*** *5* (†$_\gamma$100)

D **6040.4** *9*, (16^-) $\gamma_{5022.7}$***1017.7*** *3* (†$_\gamma$100) Q

F **6191.7** *7*, (18^+) γ_{5192}***999.5*** *3* (†$_\gamma$100) Q

C **6360.6** *7*, (17^-) γ_{5416}***944.8*** *3* (†$_\gamma$84 *8*) Q γ_{5192}***1168.4*** *3* (†$_\gamma$100 *8*) D

J **6472.1** *9*(?), (17) γ_{5570}***901.9*** *5*(?)

I **6522.7** *8*, (16^-) γ_{5696}***827.1*** *3* (†$_\gamma$100)

D **6675.9** *9*, (18^-) γ_{6040}***635.5*** *3* (†$_\gamma$100)

E **6756.3** *9*, (18^+) γ_{5844}***912.2*** *3* (†$_\gamma$100) Q

G **6771.0** *14*(?), (17^-) γ_{5876}***895*** *1*(?)

H **6930.8** *10*, (18) γ_{5942}***988.6*** *5* (†$_\gamma$100) Q

C **7142.1** *8*, (19^-) γ_{6361}***781.5*** *4* (†$_\gamma$100) Q

F **7238.1** *9*, (20^+) γ_{6192}***1046.4*** *5* (†$_\gamma$100) Q

I **7374.4** *9*(?), (18^-) γ_{6523}***851.7*** *3*(?)

J **7497.1** *14* (?), (19) γ_{6472}***1025*** *1* (?)

D **7533.4** *10*, (20^-) γ_{6676}***857.5*** *4* (†$_\gamma$100)

H **8025.8** *14* (?), (20) γ_{6931}***1095*** *1* (?)

C **8050.1** *9*, (21^-) γ_{7142}***908.0*** *5* (†$_\gamma$100) Q

F **8329.1** *14* (?), (22^+) γ_{7238}***1091*** *1* (?)

D **8566.4** *14* (?), (22^-) γ_{7533}***1033*** *1* (?)

C **9072.7** *11* (?), (23^-) γ_{8050}***1022.6*** *5* (?)

D **9728.4** *18* (?), (24^-) γ_{8566}***1162*** *1* (?)

C **10175.7** *15* (?), (25^-) γ_{9073}***1103*** *1* (?)

K **x**, J≈(16)

K **716.5+x**, J+2 γ_x***716.5*** *2* (†$_\gamma$0.4 *1*)
$I^{(2)}$*=51.0, ħω=0.378*

K **1511.4+x**, J+4 γ_{717+x}***794.9*** *2* (†$_\gamma$1.0 *1*)
$I^{(2)}$*=64.7, ħω=0.413*

K **2368.1+x**, J+6 γ_{1511+x}***856.7*** *3* (†$_\gamma$1.1 *1*)
$I^{(2)}$*=64.9, ħω=0.444*

K **3286.4+x**, J+8 γ_{2368+x}***918.3*** *3* (†$_\gamma$1.0 *1*)
$I^{(2)}$*=62.1, ħω=0.475*

K **4269.1+x**, J+10 γ_{3286+x}***982.7*** *3* (†$_\gamma$0.9 *1*)
$I^{(2)}$*=60.0, ħω=0.508*

K **5318.5+x**, J+12 γ_{4269+x}***1049.4*** *2*
(†$_\gamma$0.8 *1*) $I^{(2)}$*=58.7, ħω=0.542*

K **6436.0+x**, J+14 γ_{5319+x}***1117.5*** *2*
(†$_\gamma$0.7 *1*) $I^{(2)}$*=58.6, ħω=0.576*

K **7621.8+x**, J+16 γ_{6436+x}***1185.8*** *3*
(†$_\gamma$0.6 *1*) $I^{(2)}$*=57.7, ħω=0.610*

K **8876.9+x**, J+18 γ_{7622+x}***1255.1*** *4*
(†$_\gamma$0.5 *1*) $I^{(2)}$*=57.1, ħω=0.645*

K **10202.1+x**, J+20 γ_{8877+x}***1325.2*** *3*
(†$_\gamma$0.4 *1*) $I^{(2)}$*=54.6, ħω=0.681*

K **11600.6+x**, J+22 $\gamma_{10202+x}$***1398.5*** *4*
(†$_\gamma$0.3 *1*) $I^{(2)}$*=51.2, ħω=0.719*

K **13077.2+x**, J+24 $\gamma_{11601+x}$***1476.6*** *4*
(†$_\gamma$0.2 *1*) $I^{(2)}$*=49.0, ħω=0.759*

K **14635.4+x**, J+26 $\gamma_{13077+x}$***1558.2*** *4*
$I^{(2)}$*=46.9, ħω=0.800*

K **16278.9+x**, J+28 $\gamma_{14635+x}$***1643.5*** *5*
$I^{(2)}$*=44.9, ħω=0.844*

K **18011.5+x**, J+30 $\gamma_{16279+x}$***1732.6*** *7*
$I^{(2)}$*=48.5, ħω=0.887*

K **19826.5+x** (?), J+32 $\gamma_{18012+x}$***1815*** *1* (?)

L **y**, J

L **888+y**, J+2 γ_y***888*** *1* $I^{(2)}$*=63.5, ħω=0.460*

L **1839+y**, J+4 γ_{888+y}***951*** *1* $I^{(2)}$*=60.6, ħω=0.492*

L **2856+y**, J+6 γ_{1839+y}***1017*** *1* $I^{(2)}$*=62.5, ħω=0.524*

L **3937+y**, J+8 γ_{2856+y}***1081*** *1* $I^{(2)}$*=57.1, ħω=0.558*

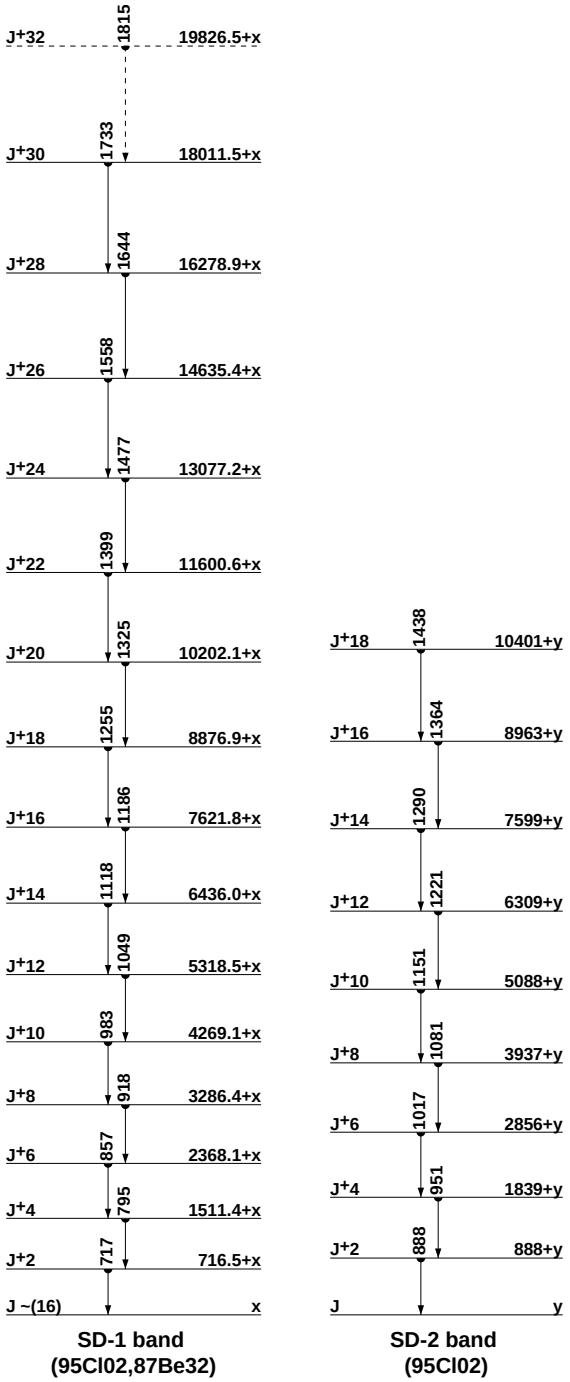
L **5088+y**, J+10 γ_{3937+y}***1151*** *1* $I^{(2)}$*=57.1, ħω=0.593*

L **6309+y**, J+12 γ_{5088+y}***1221*** *1* $I^{(2)}$*=58.0, ħω=0.628*

L **7599+y**, J+14 γ_{6309+y}***1290*** *1* $I^{(2)}$*=54.1, ħω=0.664*

L **8963+y**, J+16 γ_{7599+y}***1364*** *1* $I^{(2)}$*=54.1, ħω=0.700*

L **10401+y**, J+18 γ_{8963+y}***1438*** *1*



SD-1 band
(95Cl02,87Be32)

SD-2 band
(95Cl02)

$^{136}_{60}$Nd