$^{152}_{65}$Tb

Δ: −70730 *40*   **S_n:** 7160 *40*   **S_p:** 3820 *40*
Q_{EC}: 3990 *40*   **Q_α:** 3090 *40*

Nuclear Bands

- *A* $\pi h_{11/2}\nu i_{13/2}$
- *B* $\pi h_{11/2}\nu h_{9/2}$
- *C* $\pi h_{11/2}\nu f_{7/2}$
- *D*   SD-1 band (94De33)
- *E*   SD-2 band (94De33)

Levels and γ-ray branchings:

0, 2^-, 17.5 *1* h, μ=−0.58 *2*, Q=+0.5 *16*, %EC+%β^+=100, %α<7×10^{-7}

235.39 *9*, 3^- γ_0***235.4*** *1* M1

256.93 *13*, 1^+, 0.39 *8* ns γ_0***256.93*** *13* E1

277.19 *10*, 3^- γ_0***277.2*** *1* M1

283.29 *5*, 4^- γ_{277}***6.10*** γ_{235}***48.0*** *2* ($\dagger_\gamma$1.97 *15*) (M1) γ_0***283.29*** *5* ($\dagger_\gamma$100.0) E2

342.15 *16*, 5^-, 0.96 μs γ_{283}***58.9*** *2* ($\dagger_\gamma$100 *6*) (M1) γ_{277}***65.0*** *3* ($\dagger_\gamma$2.7 *2*) γ_{235}***106.6*** *3* ($\dagger_\gamma$3.7 *2*)

C **501.74** *19*, 8^+, 4.2 *1* m, %IT=78.8 *8*, %EC+%β^+=21.2 *8* γ_{342}***159.59*** *10* E3

C **600.3**, 9^+, <2 ns γ_{502}***98.55*** M1(+E2): δ=−0.05 *10*

B **806.1**, 10^+, <2 ns γ_{600}***205.74*** ($\dagger_\gamma$100) D(+Q): δ=+0.01 *5* γ_{502}***304.33*** ($\dagger_\gamma$13) E2

A **1212.4**, (9^-), <2 ns γ_{600}***612.1*** ($\dagger_\gamma$41) D+Q γ_{502}***710.7*** ($\dagger_\gamma$100) D

C **1230.1**, 11^+, <2 ns γ_{600}***629.8*** E2

A **1237.7**, $11^{(-)}$, 4.2 *2* ns γ_{1212}***25.3*** ($\dagger_{\gamma+e}$≈25) γ_{806}***431.66*** ($\dagger_\gamma$100) (E1+M2): δ=+0.15 *5*

B **1349.2**, 12^+, <2 ns γ_{806}***543.1*** E2

A **1370.2**, $12^{(-)}$, <2 ns γ_{1238}***132.44*** D(+Q): δ=+0.05 *3*

A **1712.1**, $13^{(-)}$, <2 ns γ_{1238}***474.37*** E2

B **1887.7**, 14^+, <2 ns γ_{1349}***538.5*** ($\dagger_\gamma$100) E2

C **1887.8**, (13^+), <2 ns γ_{1230}***657.7***

A **1920.3**, $14^{(-)}$, <2 ns γ_{1712}***208.11*** ($\dagger_\gamma$72) D(+Q): δ=+0.01 *5* γ_{1370}***550.1*** ($\dagger_\gamma$100) E2

A **2269.3**, $15^{(-)}$, <2 ns γ_{1712}***557.3*** ($\dagger_\gamma$100) E2

A **2499.4**, $16^{(-)}$, <2 ns γ_{2269}***229.93*** ($\dagger_\gamma$58) D(+Q): δ=+0.06 *6* γ_{1920}***579.3*** ($\dagger_\gamma$100) E2

2660.6, (16^-) γ_{2269}***391.5*** ($\dagger_\gamma$100) γ_{1920}***740.1*** ($\dagger_\gamma$85) E2

B **2688.6**, 16^+ $\gamma_{1887.7}$***800.9*** ($\dagger_\gamma$100) E2

2852, (17^-) γ_{2661}***191***

A **2889.4**, $17^{(-)}$, <2 ns γ_{2269}***620.0*** ($\dagger_\gamma$100) E2

A **3126.7**, $18^{(-)}$, <2 ns γ_{2889}***237.1*** ($\dagger_\gamma$43) γ_{2499}***627.4*** ($\dagger_\gamma$100) E2

3218.3, (18^+), <2 ns γ_{2889}***328.8*** D

3250.5, (19^-) γ_{3218}***32*** γ_{3127}***123.78*** D γ_{2852}***399***

A **3596.2**, $19^{(-)}$, <2 ns γ_{2889}***706.7*** E2

3720, (20^-) γ_{3251}***469*** γ_{3127}***593***

A **3845.3**, $20^{(-)}$, <2 ns γ_{3127}***718.6*** E2

4002, (21) γ_{3720}***282***

4234, (21^-) γ_{3251}***983***

A **4350.2**, $21^{(-)}$, <2 ns γ_{3596}***754.0*** ($\dagger_\gamma$100) E2

4354, (22) γ_{4002}***352***

4361, (21^-) γ_{3596}***765***

4454, (24) γ_{4002}***452***

4502, (22^-) γ_{3720}***782***

4694, (23) γ_{4454}***240***

5103, (23^-) γ_{4361}***742*** γ_{4234}***869***

5182, (23^-) γ_{4361}***821***

5249, (24) γ_{4694}***555*** γ_{4354}***895***

5257, (24^-) γ_{4502}***755*** γ_{4454}***804***

5966, (25^-) γ_{5182}***785*** γ_{5103}***863***

5969, (26^-) γ_{5257}***712***

5985, (26)

6011, (25^-) γ_{5182}***829*** γ_{5103}***908***

6093, (26) γ_{5249}***844***

6371, (27^-) γ_{6011}***361*** γ_{5966}***405***

6696, (28) γ_{6093}***603*** γ_{5985}***711***

6873, (28^+) γ_{6371}***502*** γ_{5969}***904***

6916, (29^-) γ_{6696}***220***

7284, (29^-) γ_{6371}***913***

7617, (30^+) γ_{7284}***333*** γ_{6873}***744***

7728, (31^-) γ_{7284}***444*** γ_{6916}***813***

8290, (31) γ_{7284}***1006***

8371, (32^+) γ_{7617}***754***

8502, (31) γ_{7284}***1218***

8565, (33^-) γ_{7728}***837***

8961, (33) γ_{8290}***671***

9147, (34^+) γ_{8371}***776***

9398, (35^-) γ_{8565}***824***

9792, (36^+) γ_{9147}***645***

9804, (35) γ_{8961}***843***

9923, (37^-) γ_{9398}***534***

10283, (36^+) γ_{9147}***1136***

10614, (38^+) γ_{10283}***330*** γ_{9923}***691*** γ_{9792}***822***

10996, (39^-) γ_{9923}***1073***

11654, (40^+) γ_{10614}***1040***

12054, (41^-) γ_{10996}***1058***

12761, (42$^+$) γ_{11654}***1107***

13278, (43$^-$) γ_{12054}***1224***

13929, (44$^+$) γ_{12761}***1168***

D **x**, J≈(31)

D **823+x** *1*, J+2 γ_{x}***823*** *1* $I^{(2)}$*=96.9, ħω=0.422*

D **1687.3+x** *12*, J+4 γ_{823+x}***864.3*** *6* $I^{(2)}$*=89.1, ħω=0.443*

D **2596.5+x** *13*, J+6 γ_{1687+x}***909.2*** *5* $I^{(2)}$*=89.7, ħω=0.466*

D **3550.3+x** *14*, J+8 γ_{2597+x}***953.8*** *5* $I^{(2)}$*=86.6, ħω=0.488*

D **4550.3+x** *15*, J+10 γ_{3550+x}***1000.0*** *5* $I^{(2)}$*=86.6, ħω=0.512*

D **5596.5+x** *15*, J+12 γ_{4550+x}***1046.2*** *4* $I^{(2)}$*=82.6, ħω=0.535*

D **6691.1+x** *17*, J+14 γ_{5597+x}***1094.6*** *7* $I^{(2)}$*=86.2, ħω=0.559*

D **7832.1+x** *18*, J+16 γ_{6691+x}***1141.0*** *8* $I^{(2)}$*=82.6, ħω=0.583*

D **9021.5+x** *20*, J+18 γ_{7832+x}***1189.4*** *7* $I^{(2)}$*=78.7, ħω=0.607*

D **10261.7+x** *21*, J+20 γ_{9022+x}***1240.2*** *7* $I^{(2)}$*=76.9, ħω=0.633*

D **11553.9+x** *22*, J+22 $\gamma_{10262+x}$***1292.2*** *6* $I^{(2)}$*=79.4, ħω=0.659*

D **12896.5+x** *23*, J+24 $\gamma_{11554+x}$***1342.6*** *8* $I^{(2)}$*=76.9, ħω=0.684*

D **14291.1+x** *25*, J+26 $\gamma_{12897+x}$***1394.6*** *8* $I^{(2)}$*=77.8, ħω=0.710*

D **15737+x** *3*, J+28 $\gamma_{14291+x}$***1446*** *1*

E **y**, J≈(30)

E **801+y** *1*, J+2 γ_{y}***801*** *1* $I^{(2)}$*=93.0, ħω=0.411*

E **1645+y** *1*, J+4 γ_{801+y}***844*** *1* $I^{(2)}$*=91.5, ħω=0.433*

E **2532.7+y** *15*, J+6 γ_{1645+y}***887.7*** *5* $I^{(2)}$*=89.7, ħω=0.455*

E **3465.0+y** *16*, J+8 γ_{2533+y}***932.3*** *5* $I^{(2)}$*=87.1, ħω=0.478*

E **4443.2+y** *17*, J+10 γ_{3465+y}***978.2*** *6* $I^{(2)}$*=89.3, ħω=0.500*

E **5466.2+y** *18*, J+12 γ_{4443+y}***1023.0*** *6* $I^{(2)}$*=85.3, ħω=0.523*

E **6536.1+y** *19*, J+14 γ_{5466+y}***1069.9*** *5* $I^{(2)}$*=83.0, ħω=0.547*

E **7654.2+y** *20*, J+16 γ_{6536+y}***1118.1*** *6* $I^{(2)}$*=85.5, ħω=0.571*

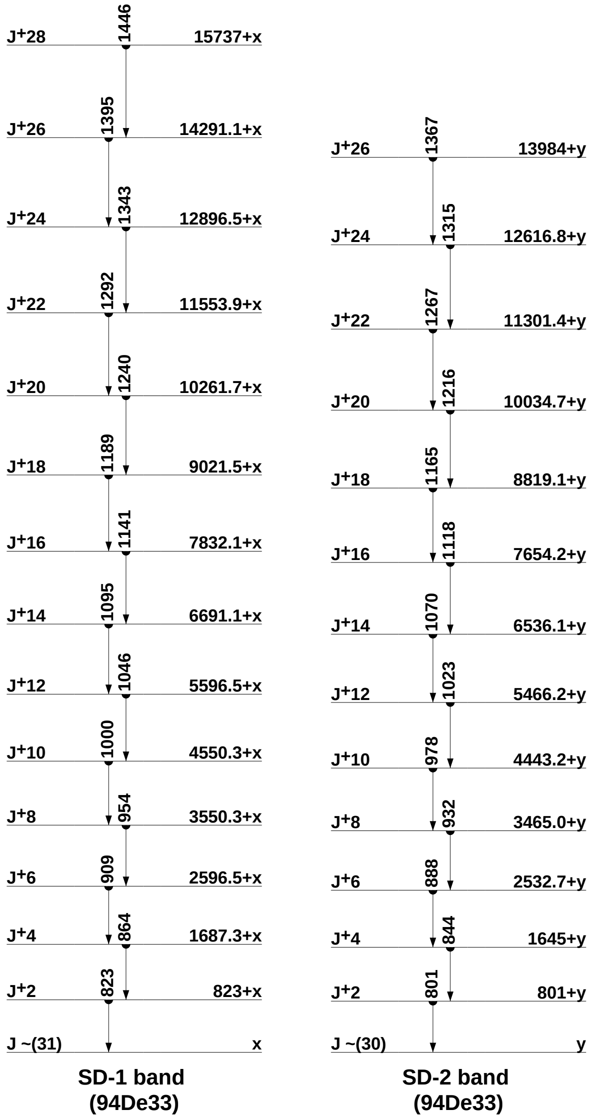
E **8819.1+y** *21*, J+18 γ_{7654+y}***1164.9*** *7* $I^{(2)}$*=78.9, ħω=0.595*

E **10034.7+y** *22*, J+20 γ_{8819+y}***1215.6*** *6* $I^{(2)}$*=78.3, ħω=0.621*

E **11301.4+y** *23*, J+22 $\gamma_{10035+y}$***1266.7*** *7* $I^{(2)}$*=82.1, ħω=0.646*

E **12616.8+y** *24*, J+24 $\gamma_{11301+y}$***1315.4*** *7* $I^{(2)}$*=77.5, ħω=0.671*

E **13984+y** *3*, J+26 $\gamma_{12617+y}$***1367*** *1*


J+28 1446 15737+x
J+26 1395 14291.1+x
J+24 1343 12896.5+x
J+22 1292 11553.9+x
J+20 1240 10261.7+x
J+18 1189 9021.5+x
J+16 1141 7832.1+x
J+14 1095 6691.1+x
J+12 1046 5596.5+x
J+10 1000 4550.3+x
J+8 954 3550.3+x
J+6 909 2596.5+x
J+4 864 1687.3+x
J+2 823 823+x
J ~(31) x
SD-1 band
(94De33)
J+26 1367 13984+y
J+24 1315 12616.8+y
J+22 1267 11301.4+y
J+20 1216 10034.7+y
J+18 1165 8819.1+y
J+16 1118 7654.2+y
J+14 1070 6536.1+y
J+12 1023 5466.2+y
J+10 978 4443.2+y
J+8 932 3465.0+y
J+6 888 2532.7+y
J+4 844 1645+y
J+2 801 801+y
J ~(30) y
SD-2 band
(94De33)

$^{152}_{65}$Tb