$^{148}_{64}$Gd

Δ: –76280 *3* **S$_n$:** 8983.9 *14* **S$_p$:** 6014 *3*
Q$_\alpha$: 3271.21 *3*

Nuclear Bands

A SD-1 band (96De04,95DeZZ)(93Ha19,88De10)
B SD-2 band (96De04,95DeZZ)(93Ha19)
C SD-3 band (95DeZZ,96De04)
D SD-4 band (95DeZZ,96De04)
E SD-5 band (95DeZZ,96De04)
F SD-6 band (95DeZZ,96De04,97Ha19)

Levels and γ-ray branchings:

0, 0^+, 74.6 *30* y, %α=100
784.430 *16*, 2^+ γ_0***784.430*** *16* (†$_\gamma$100) E2
1273.479 *20*, 3^- γ_{784}***489.049*** *12* (†$_\gamma$100) E1
1416.377 *23*, 4^+ γ_{1273}***142.878*** *14* (†$_\gamma$2.90 *13*) E1 γ_{784}***631.947*** *17* (†$_\gamma$100.0 *19*) E2
1811.0, 6^+ γ_{1416}***394.6*** (†$_\gamma$100) E2
1834.58 *5*, $^+$ γ_{784}***1050.15*** *4* (†$_\gamma$100) E2,M1
1863.42 *5*, 2^+ γ_{1273}***589.9*** *7* (†$_\gamma$5.2 *3*) γ_{784}***1079.025*** *25* (†$_\gamma$100.0 *19*) E2+M1: δ=4.6 $^{+35}_{-14}$ γ_0***1863.391*** *38* (†$_\gamma$49.3 *10*)
1912.95 *10*, 4^- γ_{1273}***639.47*** *7* (†$_\gamma$100) M1
2082.04 *15*, 5^- γ_{1913}***169.2*** γ_{1811}***270.9*** (†$_\gamma$38) E1 γ_{1416}***665.6*** (†$_\gamma$<39) γ_{1273}***808.56*** *7* (†$_\gamma$100) E2
2188.65 *20*, 2^+ γ_{1273}***915.30*** *12* (†$_\gamma$14) γ_{784}***1404.224*** *35* (†$_\gamma$100) E2,M1 γ_0***2188.65*** *7* (†$_\gamma$80)
2233.59 *6*, 3^- γ_{1273}***960.09*** *7* (†$_\gamma$<100) E2,M1 γ_{784}***1449.16*** *4* (†$_\gamma$85)
2310.88 *7*, 2^+ γ_{784}***1526.45*** *7* (†$_\gamma$55) γ_0***2311.03*** *7* (†$_\gamma$100)
2424.09 *15*, $^+$ γ_{1416}***1007.72*** *9* (†$_\gamma$<100) γ_{784}***1639.66*** *22* (†$_\gamma$65) M1,E2
2503.86 *15*, $^-$ γ_{1273}***1230.18*** *5* (†$_\gamma$56) E2,M1 γ_{784}***1719.63*** *20* (†$_\gamma$100)
2506.4 *5*, 3^- γ_{1416}***1089.411*** *28* (†$_\gamma$100) E1 γ_{784}***1722.47*** *28* (†$_\gamma$15.3)
2522.0 *3*, 4^+ γ_{1416}***1105.65*** *11* (†$_\gamma$100) M1,E2 γ_{1273}***1248.2*** *8* (†$_\gamma$33) γ_{784}***1737.9*** *6* (†$_\gamma$27)
2563.8 *3*, 7^- γ_{2082}***481.65*** *10* (†$_\gamma$100) E2 γ_{1811}***752.8*** *2* (†$_\gamma$23.3) E1
2615.0 *8*, 2^+ γ_{1273}***1342.2*** *6* (†$_\gamma$9.2) γ_{784}***1830.14*** *4* (†$_\gamma$100) γ_0***2614.3*** *6* (†$_\gamma$38)
2632.8 *2*, 5^- γ_{784}***1848.36*** *8* (†$_\gamma$100)
2693.3 *2*, 8^+ γ_{2564}***129.5*** *2* (†$_\gamma$2.7 *4*) γ_{1811}***882.3*** E2
2694.6, 9^-, 16.5 *3* ns, μ=–0.162 *18*, Q=1.01 *5* γ_{2564}***130.8*** E2 γ_{1811}***883.6*** E3
2700.3 *2*, (2^+) γ_{1273}***1426.49*** *8* (†$_\gamma$44) γ_{784}***1915.54*** *19* (†$_\gamma$63) γ_0***2700.57*** *20* (†$_\gamma$100)
2763 *3*, 4^+
2872.9 *4* γ_{1913}***960.09*** *7* (†$_\gamma$<100) γ_{1273}***1599.39*** *6* (†$_\gamma$100) γ_{784}***2089*** *1* (†$_\gamma$41)
2886.3 *2* γ_{2504}***382.0*** *8* (†$_\gamma$24) γ_{1416}***1470.1*** *8* (†$_\gamma$20) γ_{784}***2101.87*** *10* (†$_\gamma$100)
2915.3 *3* γ_{1913}***1002.48*** *9* (†$_\gamma$28) γ_{1273}***1641.98*** *21* (†$_\gamma$37) γ_{784}***2131.14*** *11* (†$_\gamma$100)
2936.3, 7^- γ_{1811}***1125.3*** (†$_\gamma$100)
3029.3, 8^- γ_{2695}***334.7*** (†$_\gamma$100) M1 γ_{2564}***465.6*** (†$_\gamma$58) M1
3065 γ_{1835}***1230***
3076.1 *4* γ_{1273}***1802.62*** *24* (†$_\gamma$100)
3089.5 *4* γ_{2082}***1007.72*** *9* (†$_\gamma$<100) (E2,M1) γ_{1273}***1816.06*** *9* (†$_\gamma$68) γ_0***3090.5*** *15* (†$_\gamma$25)
3130.9 *2* γ_{784}***2345.1*** *8* (†$_\gamma$63) γ_0***3130.89*** *16* (†$_\gamma$100)
3152.1, 8^- γ_{3029}***122.9*** D+Q γ_{2695}***457.6*** γ_{2564}***588.3***
3295.0 *2* γ_{784}***2510.56*** *15* (†$_\gamma$100) γ_0***3295.5*** *10* (†$_\gamma$33)
3310.0 (?), 8^- γ_{2936}***373.7*** (†$_\gamma$100)
3366.8, 9^- γ_{3310}***57*** γ_{3152}***214.7*** γ_{3029}***337.2*** γ_{2936}***430.5*** (†$_\gamma$100) γ_{2693}***673.8*** (†$_\gamma$78) γ_{2564}***803.2***
3574.9 *4* γ_{1273}***2301.44*** *21* (†$_\gamma$100) γ_0***3574.6*** *10* (†$_\gamma$90)
3701.3, 11^- γ_{2695}***1006.7*** (†$_\gamma$100) E2
3757.9, 10^+ γ_{2695}***1063.3*** (†$_\gamma$100)
3822, 10^+ γ_{3758}***63*** γ_{2693}***1128*** γ_{2633}***1129***
3917.4, 10^- γ_{3367}***550.3*** γ_{3152}***765.3*** γ_{3029}***888.3***
3980.1, 12^+ γ_{3758}***221.6*** γ_{3701}***278.8*** E1 γ_{2695}***1285.4***
4050.8 *15* γ_{1416}***2634.6*** *10* (†$_\gamma$39) γ_{1273}***2777.5*** *10* (†$_\gamma$19) γ_{784}***3266.4*** *10* (†$_\gamma$100)
4068.7 *15* γ_{1913}***2155.33*** *25* (†$_\gamma$100) γ_{1273}***2794.6*** *10* (†$_\gamma$51) γ_0***4066.8*** *10* (†$_\gamma$43)
4121.2, 11^- γ_{3701}***420.1*** γ_{3367}***754.2***
4429.4, 12^- γ_{4121}***308.2*** γ_{3980}***449.1*** γ_{3917}***511*** γ_{3701}***728.3***

4499.8, 12^+ γ_{3980}***519.7*** (†$_\gamma$100) γ_{3822}***678*** γ_{3758}***742.1*** (†$_\gamma$100) γ_{3701}***799***

4542.3 *4* γ_{1416}***3125.44*** *29* (†$_\gamma$47) γ_{1273}***3269.22*** *30* (†$_\gamma$100)

4550.6, 13^- γ_{4429}***121.2*** γ_{4121}***429.4*** γ_{3980}***570***

4905.5, 14^- γ_{4551}***354.9***

5025.1, 14^+ γ_{4551}***475*** γ_{4500}***525.3*** γ_{3980}***1045.1***

5116.9, 15^- γ_{4906}***211.4*** (†$_\gamma$100) γ_{4551}***566.3*** (†$_\gamma$100)

5167.4, 14^+ γ_{3980}***1187.3*** (†$_\gamma$100)

5354.7, 16^+ γ_{5117}***237.9*** (†$_\gamma$14) γ_{5025}***329.6*** (†$_\gamma$100)

5437.7, 16^- γ_{5117}***320.8*** γ_{4906}***532***

5578 γ_{5167}***411***

5689, 17 γ_{5355}***334***

5800 γ_{5578}***222***

5831.8, 18^+ γ_{5689}***142*** γ_{5355}***476.8***

5882, 17 γ_{5438}***444***

5933, 17 γ_{5800}***133*** γ_{5438}***495*** γ_{5355}***578*** γ_{5117}***816***

6268, 18 γ_{5832}***436***

6381, 18 γ_{5933}***448*** γ_{5882}***499*** γ_{5832}***549***

6545, 18^- γ_{5933}***612*** γ_{5689}***855***

6574, 19^+ γ_{6381}***193*** γ_{6268}***306*** γ_{5832}***742***

6640, 19^- γ_{5832}***808***

6834, 20^-, ≈ 2 ns γ_{6640}***194*** γ_{6574}***259*** γ_{6545}***289*** γ_{5832}***1002***

7051, 19^+ γ_{6381}***670*** γ_{5832}***1219***

7110, 20^+ γ_{5832}***1278***

7155, 21^- γ_{6834}***321*** γ_{6640}***516***

7273, 20^+ γ_{7051}***223*** γ_{6574}***699***

7333 γ_{6574}***759***

7530, 21^+ γ_{7333}***197*** γ_{7273}***257*** γ_{7110}***420*** γ_{7051}***479***

7790, 22^+ γ_{7530}***260*** γ_{7110}***680***

8003, 22^- γ_{7155}***849*** γ_{6834}***1170***

8241, 22^- γ_{6834}***1408***

8304, 23^- γ_{7155}***1149***

8308, 23^+ γ_{7790}***518***

8363, 23^- γ_{7790}***574*** γ_{7155}***1208***

8453, 23^- γ_{8304}***151*** γ_{8241}***213*** γ_{8003}***451*** γ_{7790}***664***

8608, 23 γ_{7790}***818***

8637, 24^- γ_{8453}***184*** γ_{8308}***330*** γ_{8003}***634***

8831, 24 γ_{8608}***223*** γ_{8453}***377*** γ_{8363}***468*** γ_{8308}***523***

8986, 25^- γ_{8831}***155*** γ_{8637}***348*** γ_{8363}***623***

9241, 25^- γ_{8637}***604***

9258 γ_{8637}***620*** γ_{8363}***895***

9652, 26^- γ_{8986}***666***

9755, 26^- γ_{9241}***514*** γ_{8986}***771***

9933, 26 γ_{8831}***1102***

9956 γ_{9241}***714***

10045, 25^- γ_{9258}***788*** γ_{8363}***1682*** γ_{8304}***1742***

10060, 27 γ_{9755}***305***

10317, 27^- γ_{10045}***272*** γ_{9956}***361*** γ_{9755}***560*** γ_{9652}***665*** γ_{8986}***1331***

10472, 27^- γ_{9755}***717***

10694, 27^- γ_{9652}***1042***

10757, 28 γ_{10060}***697***

10867, 28 γ_{10060}***807***

11157, 28 γ_{10694}***464*** γ_{10472}***684*** γ_{10317}***840***

11183, 29 γ_{10060}***1123***

11455, 29 γ_{11183}***271*** γ_{11157}***298***

11478 γ_{10317}***1160***

11546, 29^- γ_{10694}***852*** γ_{10317}***1228***

11585, 30 γ_{11455}***130***

11725, 30 γ_{11183}***542*** γ_{10867}***858*** γ_{10757}***967***

12011 γ_{11455}***556***

12061, 30^- γ_{11183}***878***

12139, 31^- γ_{12061}***74*** γ_{11725}***411*** γ_{11585}***554*** γ_{11546}***593*** γ_{11478}***661***

12283, 30^- γ_{11455}***880*** γ_{11157}***1126***

12380, 31 γ_{11455}***925***

12527, 32 γ_{12283}***244*** γ_{12139}***391*** γ_{11585}***943***

12681, 31 γ_{11585}***1096***

13037, 33 γ_{12681}***361*** γ_{12527}***510*** γ_{12380}***657***

13123, 33^- γ_{12139}***987***

13146, 32 γ_{12681}***462*** γ_{12380}***766*** γ_{12139}***1009***

13242, 32 γ_{12681}***561***

13352, 34 γ_{12527}***825***

13734, 34 γ***181*** γ_{13242}***492*** γ_{13146}***588*** γ_{13037}***697***

13868, 35, ≈ 2 ns γ_{13734}***134*** γ_{12527}***1340***

13886 γ_{13037}***849***

14009, 34 γ_{13037}***972***

14144, 35 γ_{13037}***1107***

14827, 37 γ_{13868}***959***

14923, 36 γ_{14144}***779*** γ_{13886}***1036*** γ_{13868}***1056***

15122, 38 γ_{14827}***295***

15164, 38 γ_{14827} ***337***
15726 γ_{14923} ***803***
16076 γ_{15726} ***350***
16111, 38 γ_{14923} ***1188***
16203, 40 γ_{15164} ***1039***
16256, 40 γ_{15164} ***1092***
16406, 40 γ_{16111} ***295***
16472, 39 γ_{15164} ***1308***
17240 γ_{16406} ***834***
17318 γ_{16472} ***846***
17370, 42 γ_{16406} ***964***
18481, 44 γ_{17370} ***1111***
19148 γ_{18481} ***667***
A **x**, J≈(29)
A **699.9+x**, J+2 γ_{x} ***699.9*** *1* ($†_\gamma$0.54 *15*) $I^{(2)}$*=83.3, ħω=0.362*
A **1447.8+x**, J+4 γ_{700+x} ***747.9*** *1* ($†_\gamma$0.87 *9*) $I^{(2)}$*=83.5, ħω=0.386*
A **2243.6+x**, J+6 γ_{1448+x} ***795.8*** *1* ($†_\gamma$0.99 *8*) $I^{(2)}$*=78.6, ħω=0.411*
A **3090.3+x**, J+8 γ_{2244+x} ***846.7*** *1* ($†_\gamma$0.97 *8*) $I^{(2)}$*=78.1, ħω=0.436*
A **3988.2+x**, J+10 γ_{3090+x} ***897.9*** *1* ($†_\gamma$1.00 *8*) $I^{(2)}$*=76.3, ħω=0.462*
A **4938.5+x**, J+12 γ_{3988+x} ***950.3*** *1* ($†_\gamma$0.97 *8*) $I^{(2)}$*=74.6, ħω=0.489*
A **5942.4+x**, J+14 γ_{4939+x} ***1003.9*** *1* ($†_\gamma$1.00 *10*) $I^{(2)}$*=73.0, ħω=0.516*
A **7001.1+x**, J+16 γ_{5942+x} ***1058.7*** *1* ($†_\gamma$0.98 *9*) $I^{(2)}$*=72.1, ħω=0.543*
A **8115.3+x**, J+18 γ_{7001+x} ***1114.2*** *1* ($†_\gamma$0.99 *10*) $I^{(2)}$*=70.9, ħω=0.571*
A **9285.9+x**, J+20 γ_{8115+x} ***1170.6*** *1* ($†_\gamma$1.00 *15*) $I^{(2)}$*=69.9, ħω=0.600*
A **10513.7+x**, J+22 γ_{9286+x} ***1227.8*** *1* ($†_\gamma$0.84 *7*) $I^{(2)}$*=69.2, ħω=0.628*
A **11799.3+x**, J+24 $\gamma_{10514+x}$ ***1285.6*** *1* ($†_\gamma$0.71 *8*) $I^{(2)}$*=68.5, ħω=0.657*
A **13143.3+x**, J+26 $\gamma_{11799+x}$ ***1344.0*** *2* ($†_\gamma$0.66 *7*) $I^{(2)}$*=68.4, ħω=0.687*
A **14545.8+x**, J+28 $\gamma_{13143+x}$ ***1402.5*** *2* ($†_\gamma$0.55 *6*) $I^{(2)}$*=67.9, ħω=0.716*
A **16007.2+x**, J+30 $\gamma_{14546+x}$ ***1461.4*** *2* ($†_\gamma$0.48 *7*) $I^{(2)}$*=67.7, ħω=0.745*
A **17527.7+x**, J+32 $\gamma_{16007+x}$ ***1520.5*** *3* ($†_\gamma$0.34 *5*) $I^{(2)}$*=66.7, ħω=0.775*
A **19108.2+x**, J+34 $\gamma_{17528+x}$ ***1580.5*** *6* ($†_\gamma$0.19 *3*) $I^{(2)}$*=67.2, ħω=0.805*
A **20748.2+x**, J+36 $\gamma_{19108+x}$ ***1640.0*** *10* ($†_\gamma$0.15 *5*) $I^{(2)}$*=66.3, ħω=0.835*
A **22448.5+x**, J+38 $\gamma_{20748+x}$ ***1700.3*** *6* ($†_\gamma$0.07 *3*)
B **y**, J≈(30)
B **741.8+y**, J+2 γ_{y} ***741.8*** *3* $I^{(2)}$*=84.9, ħω=0.383*
B **1530.7+y**, J+4 γ_{742+y} ***788.9*** *2* ($†_\gamma$0.46 *10*) $I^{(2)}$*=80.2, ħω=0.407*
B **2369.5+y**, J+6 γ_{1531+y} ***838.8*** *2* ($†_\gamma$0.88 *9*) $I^{(2)}$*=79.5, ħω=0.432*
B **3258.6+y**, J+8 γ_{2370+y} ***889.1*** *2* ($†_\gamma$0.89 *9*) $I^{(2)}$*=78.9, ħω=0.457*
B **4198.4+y**, J+10 γ_{3259+y} ***939.8*** *2* ($†_\gamma$0.93 *15*) $I^{(2)}$*=79.1, ħω=0.483*
B **5188.8+y**, J+12 γ_{4198+y} ***990.4*** *3* ($†_\gamma$1.00 *11*) $I^{(2)}$*=81.1, ħω=0.508*
B **6228.5+y**, J+14 γ_{5189+y} ***1039.7*** *2* ($†_\gamma$0.95 *20*) $I^{(2)}$*=83.2, ħω=0.532*
B **7316.3+y**, J+16 γ_{6229+y} ***1087.8*** *2* ($†_\gamma$1.03 *15*) $I^{(2)}$*=84.4, ħω=0.556*
B **8451.5+y**, J+18 γ_{7316+y} ***1135.2*** *2* ($†_\gamma$0.94 *10*) $I^{(2)}$*=84.2, ħω=0.579*
B **9634.2+y**, J+20 γ_{8452+y} ***1182.7*** *2* ($†_\gamma$0.82 *8*) $I^{(2)}$*=82.5, ħω=0.603*
B **10865.4+y**, J+22 γ_{9634+y} ***1231.2*** *2* ($†_\gamma$0.79 *8*) $I^{(2)}$*=80.5, ħω=0.628*
B **12146.3+y**, J+24 $\gamma_{10865+y}$ ***1280.9*** *2* ($†_\gamma$0.77 *8*) $I^{(2)}$*=78.0, ħω=0.653*
B **13478.5+y**, J+26 $\gamma_{12146+y}$ ***1332.2*** *2* ($†_\gamma$0.62 *7*) $I^{(2)}$*=78.3, ħω=0.679*
B **14861.8+y**, J+28 $\gamma_{13479+y}$ ***1383.3*** *3* ($†_\gamma$0.56 *6*) $I^{(2)}$*=73.8, ħω=0.705*
B **16299.3+y**, J+30 $\gamma_{14862+y}$ ***1437.5*** *5* ($†_\gamma$0.44 *5*) $I^{(2)}$*=74.6, ħω=0.732*
B **17790.4+y**, J+32 $\gamma_{16299+y}$ ***1491.1*** *8* ($†_\gamma$0.27 *4*) $I^{(2)}$*=72.6, ħω=0.759*
B **19336.6+y**, J+34 $\gamma_{17790+y}$ ***1546.2*** *10* ($†_\gamma$0.23 *4*)
C **z**, J
C **830.3+z**, J+2 γ_{z} ***830.3*** *6* ($†_\gamma$0.23 *5*) $I^{(2)}$*=88.1, ħω=0.426*
C **1706.0+z**, J+4 γ_{830+z} ***875.7*** *3* ($†_\gamma$0.42 *6*) $I^{(2)}$*=81.1, ħω=0.450*
C **2631.0+z**, J+6 γ_{1706+z} ***925.0*** *2* ($†_\gamma$0.43 *7*) $I^{(2)}$*=78.9, ħω=0.475*
C **3606.7+z**, J+8 γ_{2631+z} ***975.7*** *3* ($†_\gamma$0.62 *7*) $I^{(2)}$*=77.2, ħω=0.501*
C **4634.2+z**, J+10 γ_{3607+z} ***1027.5*** *2* ($†_\gamma$0.63 *8*) $I^{(2)}$*=76.8, ħω=0.527*
C **5713.8+z**, J+12 γ_{4634+z} ***1079.6*** *3* ($†_\gamma$0.95 *11*) $I^{(2)}$*=75.3, ħω=0.553*
C **6846.5+z**, J+14 γ_{5714+z} ***1132.7*** *2* ($†_\gamma$1.00 *12*) $I^{(2)}$*=75.2, ħω=0.580*
C **8032.4+z**, J+16 γ_{6847+z} ***1185.9*** *3*

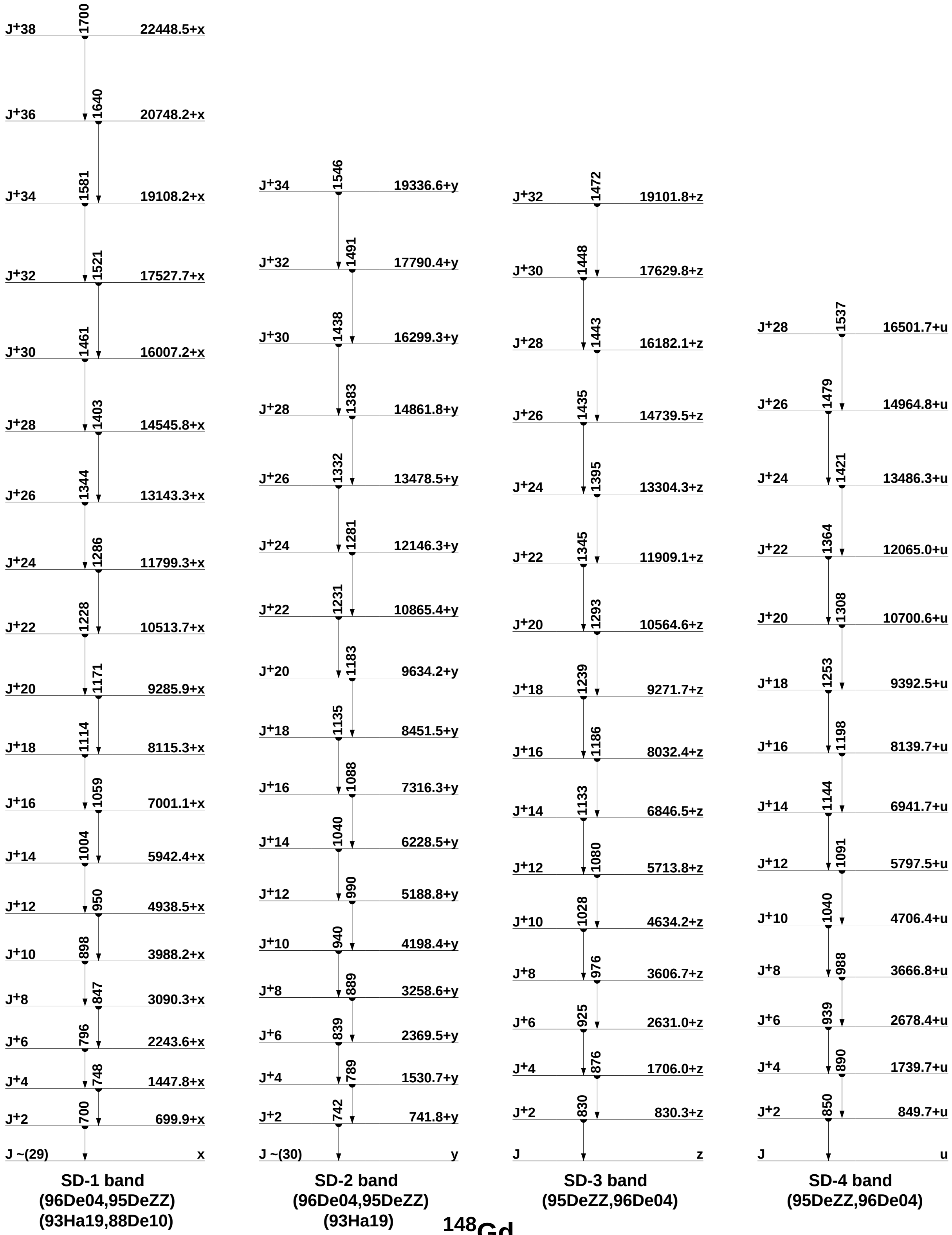
(†$_\gamma$0.93 *30*) $I^{(2)}$=*74.9*, $\hbar\omega$=*0.606*
C **9271.7+z**, J+18 γ_{8032+z}***1239.3*** *3*
(†$_\gamma$0.72 *15*) $I^{(2)}$=*74.6*, $\hbar\omega$=*0.633*
C **10564.6+z**, J+20 γ_{9272+z}***1292.9*** *3*
(†$_\gamma$0.95 *20*) $I^{(2)}$=*77.5*, $\hbar\omega$=*0.659*
C **11909.1+z**, J+22 $\gamma_{10565+z}$***1344.5*** *3*
(†$_\gamma$0.71 *18*) $I^{(2)}$=*78.9*, $\hbar\omega$=*0.685*
C **13304.3+z**, J+24 $\gamma_{11909+z}$***1395.2*** *4*
(†$_\gamma$0.64 *15*) $I^{(2)}$=*100.0*, $\hbar\omega$=*0.708*
C **14739.5+z**, J+26 $\gamma_{13304+z}$***1435.2*** *5*
(†$_\gamma$0.46 *8*) $I^{(2)}$=*540.5*, $\hbar\omega$=*0.719*
C **16182.1+z**, J+28 $\gamma_{14740+z}$***1442.6*** *10*
(†$_\gamma$0.40 *12*) $I^{(2)}$=*784.3*, $\hbar\omega$=*0.723*
C **17629.8+z**, J+30 $\gamma_{16182+z}$***1447.7*** *6*
(†$_\gamma$0.18 *9*) $I^{(2)}$=*164.6*, $\hbar\omega$=*0.730*
C **19101.8+z**, J+32 $\gamma_{17630+z}$***1472.0*** *10*
(†$_\gamma$0.22 *8*)
D **u**, J
D **849.7+u**, J+2 γ_0***849.7*** *3* $I^{(2)}$=*99.3*, $\hbar\omega$=*0.435*
D **1739.7+u**, J+4 γ_{850+u}***890.0*** *2* (†$_\gamma$0.62 *15*) $I^{(2)}$=*82.1*, $\hbar\omega$=*0.457*
D **2678.4+u**, J+6 γ_{1740+u}***938.7*** *2*
(†$_\gamma$0.60 *12*) $I^{(2)}$=*80.5*, $\hbar\omega$=*0.482*
D **3666.8+u**, J+8 γ_{2678+u}***988.4*** *3*
(†$_\gamma$0.64 *10*) $I^{(2)}$=*78.1*, $\hbar\omega$=*0.507*
D **4706.4+u**, J+10 γ_{3667+u}***1039.6*** *3*
(†$_\gamma$0.68 *10*) $I^{(2)}$=*77.7*, $\hbar\omega$=*0.533*
D **5797.5+u**, J+12 γ_{4706+u}***1091.1*** *3*
(†$_\gamma$0.92 *15*) $I^{(2)}$=*75.3*, $\hbar\omega$=*0.559*
D **6941.7+u**, J+14 γ_{5798+u}***1144.2*** *3*
(†$_\gamma$1.05 *20*) $I^{(2)}$=*74.3*, $\hbar\omega$=*0.586*
D **8139.7+u**, J+16 γ_{6942+u}***1198.0*** *3*
(†$_\gamma$1.00 *15*) $I^{(2)}$=*73.0*, $\hbar\omega$=*0.613*
D **9392.5+u**, J+18 γ_{8140+u}***1252.8*** *3*
(†$_\gamma$1.02 *13*) $I^{(2)}$=*72.3*, $\hbar\omega$=*0.640*
D **10700.6+u**, J+20 γ_{9393+u}***1308.1*** *3*
(†$_\gamma$0.88 *15*) $I^{(2)}$=*71.0*, $\hbar\omega$=*0.668*
D **12065.0+u**, J+22 $\gamma_{10701+u}$***1364.4*** *3*
(†$_\gamma$0.90 *18*) $I^{(2)}$=*70.3*, $\hbar\omega$=*0.696*
D **13486.3+u**, J+24 $\gamma_{12065+u}$***1421.3*** *4*
(†$_\gamma$0.82 *10*) $I^{(2)}$=*69.9*, $\hbar\omega$=*0.725*
D **14964.8+u**, J+26 $\gamma_{13486+u}$***1478.5*** *4*
(†$_\gamma$0.57 *9*) $I^{(2)}$=*68.5*, $\hbar\omega$=*0.754*
D **16501.7+u**, J+28 $\gamma_{14965+u}$***1536.9*** *10*
(†$_\gamma$0.30 *10*)
E **v**, J
E **853.7+v**, J+2 γ_0***853.7*** *3* (†$_\gamma$0.45 *6*) $I^{(2)}$=*86.6*, $\hbar\omega$=*0.438*
E **1753.6+v**, J+4 γ_{854+v}***899.9*** *2* (†$_\gamma$0.83 *9*) $I^{(2)}$=*88.9*, $\hbar\omega$=*0.461*
E **2698.5+v**, J+6 γ_{1754+v}***944.9*** *3*
(†$_\gamma$0.85 *10*) $I^{(2)}$=*86.0*, $\hbar\omega$=*0.484*
E **3689.9+v**, J+8 γ_{2699+v}***991.4*** *2*
(†$_\gamma$0.86 *10*) $I^{(2)}$=*86.0*, $\hbar\omega$=*0.507*
E **4727.8+v**, J+10 γ_{3690+v}***1037.9*** *2*
(†$_\gamma$0.85 *20*) $I^{(2)}$=*85.7*, $\hbar\omega$=*0.531*
E **5812.4+v**, J+12 γ_{4728+v}***1084.6*** *2*
(†$_\gamma$1.00 *15*) $I^{(2)}$=*84.6*, $\hbar\omega$=*0.554*
E **6944.3+v**, J+14 γ_{5812+v}***1131.9*** *2*
(†$_\gamma$1.00 *13*) $I^{(2)}$=*84.0*, $\hbar\omega$=*0.578*
E **8123.8+v**, J+16 γ_{6944+v}***1179.5*** *2*
(†$_\gamma$0.90 *10*) $I^{(2)}$=*85.1*, $\hbar\omega$=*0.602*
E **9350.3+v**, J+18 γ_{8124+v}***1226.5*** *2*
(†$_\gamma$0.80 *10*) $I^{(2)}$=*84.6*, $\hbar\omega$=*0.625*
E **10624.1+v**, J+20 γ_{9350+v}***1273.8*** *2*
(†$_\gamma$0.80 *10*) $I^{(2)}$=*82.8*, $\hbar\omega$=*0.649*
E **11946.2+v**, J+22 $\gamma_{10624+v}$***1322.1*** *2*
(†$_\gamma$0.52 *8*) $I^{(2)}$=*84.2*, $\hbar\omega$=*0.673*
E **13315.8+v**, J+24 $\gamma_{11946+v}$***1369.6*** *2*
(†$_\gamma$0.50 *10*) $I^{(2)}$=*84.2*, $\hbar\omega$=*0.697*
E **14732.9+v**, J+26 $\gamma_{13316+v}$***1417.1*** *3*
(†$_\gamma$0.44 *7*) $I^{(2)}$=*83.7*, $\hbar\omega$=*0.721*
E **16197.8+v**, J+28 $\gamma_{14733+v}$***1464.9*** *4*
(†$_\gamma$0.31 *5*) $I^{(2)}$=*83.0*, $\hbar\omega$=*0.744*
E **17710.9+v**, J+30 $\gamma_{16198+v}$***1513.1*** *10*
(†$_\gamma$0.26 *4*) $I^{(2)}$=*81.8*, $\hbar\omega$=*0.769*
E **19272.9+v**, J+32 $\gamma_{17711+v}$***1562*** *1*
(†$_\gamma$0.20 *6*)
F **w**, J
F **802.2+w**, J+2 γ_0***802.2*** *3* $I^{(2)}$=*84.7*, $\hbar\omega$=*0.413*
F **1651.6+w**, J+4 γ_{802+w}***849.44*** *22* $I^{(2)}$=*83.4*, $\hbar\omega$=*0.437*
F **2549.0+w**, J+6 γ_{1652+w}***897.40*** *16*
(†$_\gamma$0.91 *12*) $I^{(2)}$=*82.5*, $\hbar\omega$=*0.461*
F **3494.9+w**, J+8 γ_{2549+w}***945.86*** *15*
(†$_\gamma$1.00 *12*) $I^{(2)}$=*79.6*, $\hbar\omega$=*0.485*
F **4491.0+w**, J+10 γ_{3495+w}***996.08*** *19*
(†$_\gamma$1.00 *22*) $I^{(2)}$=*78.8*, $\hbar\omega$=*0.511*
F **5537.8+w**, J+12 γ_{4491+w}***1046.83*** *14*
(†$_\gamma$1.00 *10*) $I^{(2)}$=*76.1*, $\hbar\omega$=*0.537*
F **6637.2+w**, J+14 γ_{5538+w}***1099.39*** *16*
(†$_\gamma$0.95 *18*) $I^{(2)}$=*75.7*, $\hbar\omega$=*0.563*
F **7789.4+w**, J+16 γ_{6637+w}***1152.20*** *15*
(†$_\gamma$0.97 *10*) $I^{(2)}$=*73.3*, $\hbar\omega$=*0.590*
F **8996.2+w**, J+18 γ_{7789+w}***1206.76*** *24*
(†$_\gamma$1.00 *15*) $I^{(2)}$=*73.7*, $\hbar\omega$=*0.617*
F **10257.2+w**, J+20 γ_{8996+w}***1261.00*** *16*
(†$_\gamma$1.00 *19*) $I^{(2)}$=*72.0*, $\hbar\omega$=*0.644*
F **11573.7+w**, J+22 $\gamma_{10257+w}$***1316.57*** *14*
(†$_\gamma$0.96 *10*) $I^{(2)}$=*72.0*, $\hbar\omega$=*0.672*

F **12945.8+w**, J+24 $\gamma_{11574+w}$***1372.10*** *22*
($\dagger_{\gamma}$0.78 *9*) $I^{(2)}$*=70.9, ħω=0.700*

F **14374.4+w**, J+26 $\gamma_{12946+w}$***1428.55*** *24*
($\dagger_{\gamma}$0.77 *10*) $I^{(2)}$*=70.7, ħω=0.728*

F **15859.5+w**, J+28 $\gamma_{14374+w}$***1485.15*** *26*
($\dagger_{\gamma}$0.70 *15*) $I^{(2)}$*=69.9, ħω=0.757*

F **17401.9+w**, J+30 $\gamma_{15860+w}$***1542.4*** *4*
($\dagger_{\gamma}$0.63 *15*)


J+38 1700 22448.5+x
J+36 1640 20748.2+x
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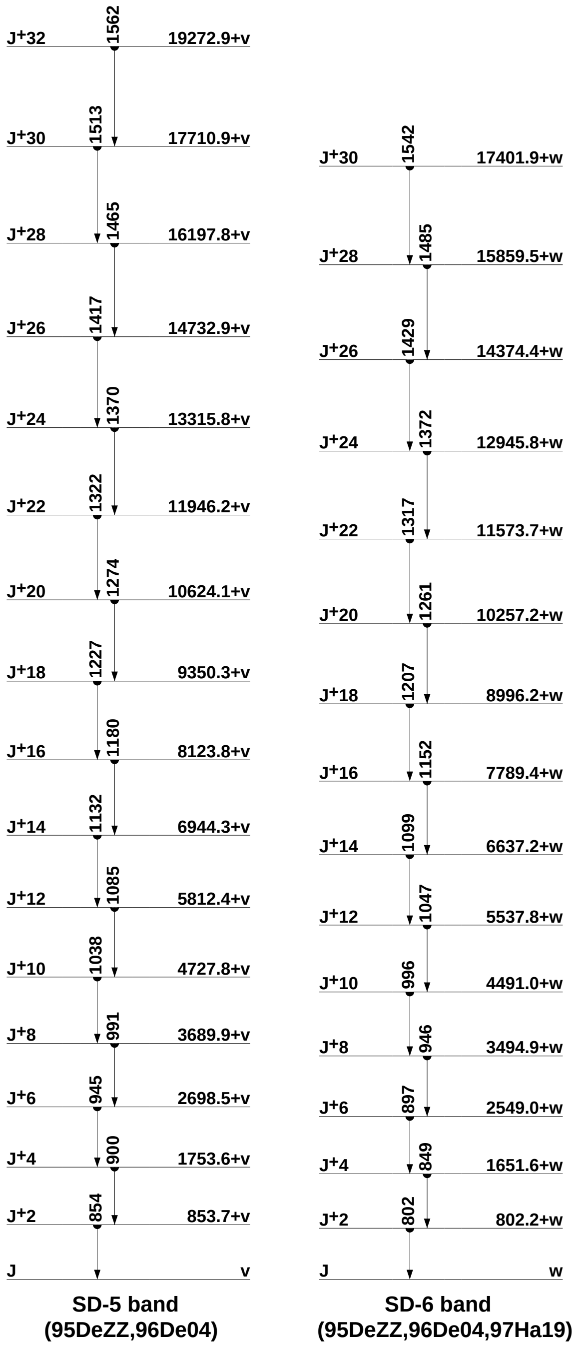
J+32 1521 17527.7+x
J+30 1461 16007.2+x
J+28 1403 14545.8+x
J+26 1344 13143.3+x
J+24 1286 11799.3+x
J+22 1228 10513.7+x
J+20 1171 9285.9+x
J+18 1114 8115.3+x
J+16 1059 7001.1+x
J+14 1004 5942.4+x
J+12 950 4938.5+x
J+10 898 3988.2+x
J+8 847 3090.3+x
J+6 796 2243.6+x
J+4 748 1447.8+x
J+2 700 699.9+x
J ~(29) x
SD-1 band
(96De04,95DeZZ)
(93Ha19,88De10)
J+34 1546 19336.6+y
J+32 1491 17790.4+y
J+30 1438 16299.3+y
J+28 1383 14861.8+y
J+26 1332 13478.5+y
J+24 1281 12146.3+y
J+22 1231 10865.4+y
J+20 1183 9634.2+y
J+18 1135 8451.5+y
J+16 1088 7316.3+y
J+14 1040 6228.5+y
J+12 990 5188.8+y
J+10 940 4198.4+y
J+8 889 3258.6+y
J+6 839 2369.5+y
J+4 789 1530.7+y
J+2 742 741.8+y
J ~(30) y
SD-2 band
(96De04,95DeZZ)
(93Ha19)
J+32 1472 19101.8+z
J+30 1448 17629.8+z
J+28 1443 16182.1+z
J+26 1435 14739.5+z
J+24 1395 13304.3+z
J+22 1345 11909.1+z
J+20 1293 10564.6+z
J+18 1239 9271.7+z
J+16 1186 8032.4+z
J+14 1133 6846.5+z
J+12 1080 5713.8+z
J+10 1028 4634.2+z
J+8 976 3606.7+z
J+6 925 2631.0+z
J+4 876 1706.0+z
J+2 830 830.3+z
J z
SD-3 band
(95DeZZ,96De04)
J+28 1537 16501.7+u
J+26 1479 14964.8+u
J+24 1421 13486.3+u
J+22 1364 12065.0+u
J+20 1308 10700.6+u
J+18 1253 9392.5+u
J+16 1198 8139.7+u
J+14 1144 6941.7+u
J+12 1091 5797.5+u
J+10 1040 4706.4+u
J+8 988 3666.8+u
J+6 939 2678.4+u
J+4 890 1739.7+u
J+2 850 849.7+u
J u
SD-4 band
(95DeZZ,96De04)

$^{148}_{64}$Gd


J+32 19272.9+v
1562
J+30 17710.9+v
1513
J+28 16197.8+v
1465
J+26 14732.9+v
1417
J+24 13315.8+v
1370
J+22 11946.2+v
1322
J+20 10624.1+v
1274
J+18 9350.3+v
1227
J+16 8123.8+v
1180
J+14 6944.3+v
1132
J+12 5812.4+v
1085
J+10 4727.8+v
1038
J+8 3689.9+v
991
J+6 2698.5+v
945
J+4 1753.6+v
900
J+2 853.7+v
854
J v
SD-5 band
(95DeZZ,96De04)
J+30 17401.9+w
1542
J+28 15859.5+w
1485
J+26 14374.4+w
1429
J+24 12945.8+w
1372
J+22 11573.7+w
1317
J+20 10257.2+w
1261
J+18 8996.2+w
1207
J+16 7789.4+w
1152
J+14 6637.2+w
1099
J+12 5537.8+w
1047
J+10 4491.0+w
996
J+8 3494.9+w
946
J+6 2549.0+w
897
J+4 1651.6+w
849
J+2 802.2+w
802
J w
SD-6 band
(95DeZZ,96De04,97Ha19)

$^{148}_{64}$Gd