$^{155}_{66}$Dy

Δ: –69164 *12* **S_n:** 6835 *14* **S_p:** 6300 *50*
Q_{EC}: 2094.5 *19* **Q_α:** 2610 *12*

Nuclear Bands

A 3/2[521]
B 11/2[505] α=-1/2
C 11/2[505] α=+1/2
D $i_{13/2}$ α=+1/2
E $i_{13/2}$ α=-1/2
F α=+1/2
G 3-QP α=+1/2
H 3-QP α=-1/2
I Band Structure
J SD band (96Fi08)

Levels and γ-ray branchings:

A **0**, 3/2⁻, 9.9 *2* h, %EC+%β⁺=100

A **39.384** *9*, 5/2⁻, 3.34 *3* ns **γ_{0}*39.39*** *2* (†$_\gamma$100) M1+E2: δ=0.222 *4*

A **86.767** *12*, 7/2⁻, 1.1 *2* ns **γ_{39}*47.37*** *2* (†$_\gamma$100 *11*) M1+E2: δ=0.115 *10* **γ_{0}*86.75*** *2* (†$_\gamma$34 *2*) E2

D **132.195** *22*, 9/2⁺, 51 *3* ns **γ_{87}*45.38*** *5* (†$_\gamma$100) E1

136.320 *9*, 5/2⁻, <0.4 ns **γ_{87}*49.52*** *5* (†$_\gamma$1.5 *3*) M1+E2: δ=0.11 *3* **γ_{39}*96.91*** *2* (†$_\gamma$21 *1*) M1+E2: δ=0.22 *4* **γ_{0}*136.30*** *2* (†$_\gamma$100 *5*) M1+E2: δ=0.195 *24*

D **154.48** *5*, 13/2⁺ **γ_{132}*22.15*** *5* (†$_\gamma$100)

202.413 *12*, 3/2⁻, <0.4 ns **γ_{136}*66.12*** *3* (†$_\gamma$9.6 *4*) M1+E2: δ=0.42 *5* **γ_{39}*163.02*** *2* (†$_\gamma$58 *3*) M1(+E2): δ<1.7 **γ_{0}*202.41*** *2* (†$_\gamma$199 *5*) M1

224.532 *13*, 7/2⁻, <5 ns **γ_{202}*22.15*** *5* (†$_\gamma$0.48 *9*) M1+E2: δ=0.07 $^{+3}_{-2}$ **γ_{136}*88.26*** *5* (†$_\gamma$0.94 *22*) M1 **γ_{132}*92.22*** *6* (†$_\gamma$1.7 *6*) **γ_{87}*137.76*** *4* (†$_\gamma$14 *3*) M1 **γ_{39}*185.13*** *2* (†$_\gamma$100 *5*) M1 **γ_{0}*224.55*** *2* (†$_\gamma$6.7 *22*) E2

A **225.285** *16*, 9/2⁻ **γ_{87}*138.46*** *4* (†$_\gamma$100 *10*) E2(+M1): δ>2.4 **γ_{39}*185.89*** *2* (†$_\gamma$39 *3*) E2

B **234.33** *3*, 11/2⁻, 6 *1* μs, %IT=100 **$\gamma_{225.3}$*9.1*** *1* (†$_\gamma$0.52 *6*) M1+E2: δ=0.017 **γ_{154}*79.72*** *5* (†$_\gamma$47 *4*) E1+M2: δ=0.23 *3* **γ_{132}*102.16*** *3* (†$_\gamma$100 *12*) E1+M2: δ=0.45 *6* **γ_{87}*147.63*** *6* (†$_\gamma$82 *12*)

240.196 *12*, 3/2⁺, <0.7 ns **γ_{202}*37.80*** *4* (†$_\gamma$10.7 *20*) (E1) **γ_{136}*103.89*** *2* (†$_\gamma$17.4 *9*) E1 **γ_{39}*200.86*** *7* (†$_\gamma$12.2 *5*) E1 **γ_{0}*240.19*** *2* (†$_\gamma$100 *5*) E1

247.791 *13*, 5/2⁺, <1 ns **γ_{136}*111.47*** *3* (†$_\gamma$7.1 *5*) E1 **γ_{132}*115.5*** *1* (†$_\gamma$51 *2*) E2 **γ_{87}*161.08*** *8* (†$_\gamma$16 *3*) **γ_{39}*208.41*** *2* (†$_\gamma$100 *5*) E1 **γ_{0}*247.77*** *2* (†$_\gamma$96 *5*) E1

321 *2*, 1/2⁺

325.406 *13*, 3/2⁻,5/2⁻ **$\gamma_{224.5}$*100.84*** *6* (†$_\gamma$1.7 *6*) **γ_{202}*123.10*** *6* (†$_\gamma$0.9) (M1) **γ_{136}*189.09*** *2* (†$_\gamma$9.1 *9*) M1 **γ_{87}*238.54*** *9* (†$_\gamma$2.3 *9*) E2(+M1) **γ_{39}*286.02*** *2* (†$_\gamma$23 *1*) M1 **γ_{0}*325.40*** *2* (†$_\gamma$100 *5*) M1

345 *2*, 1/2⁻,3/2⁻

349.002 *12*, 5/2⁺ **γ_{248}*101.34*** *7* (†$_\gamma$5.8 *20*) **γ_{240}*108.79*** *2* (†$_\gamma$41 *2*) M1 **$\gamma_{224.5}$*124.54*** *5* (†$_\gamma$28 *1*) E1 **γ_{202}*146.57*** *2* (†$_\gamma$61 *7*) E1 **γ_{136}*212.70*** *2* (†$_\gamma$38 *2*) E1+M2: δ=0.12 $^{+3}_{-5}$ **γ_{87}*262.23*** *3* (†$_\gamma$100 *11*) E1 **γ_{39}*309.65*** *4* (†$_\gamma$86 *8*) E1 **γ_{0}*348.99*** *3* (†$_\gamma$62 *3*) E1

351.106 *19*, 5/2⁺,7/2⁺ **γ_{132}*218.93*** *2* (†$_\gamma$100 *5*) E2 **γ_{87}*264.35*** *14* (†$_\gamma$11.4 *18*) **γ_{39}*311.85*** *3* (†$_\gamma$38 *4*) E1

375.401 *24*, 5/2⁻,7/2⁻ **$\gamma_{225.3}$*150.09*** *6* (†$_\gamma$8 *2*) **γ_{87}*288.64*** *4* (†$_\gamma$100 *9*) M1 **γ_{39}*336.02*** *3* (†$_\gamma$79 *9*) M1+E2: δ=1.0 $^{+13}_{-6}$

D **381.8** *1*, 17/2⁺ **γ_{154}*227.3*** *1* (†$_\gamma$100) E2

382.89 *8*, 1/2⁻,3/2⁻ **γ_{0}*382.88*** *14* (†$_\gamma$100) M1

408.533 *14*, 3/2⁺,5/2⁺ **γ_{248}*160.76*** *4* (†$_\gamma$76 *15*) M1(+E2) **γ_{202}*206.08*** *8* (†$_\gamma$15) E1 **γ_{136}*272.22*** *2* (†$_\gamma$58 *10*) E1 **γ_{39}*369.10*** *10* (†$_\gamma$45 *9*) **γ_{0}*408.58*** *2* (†$_\gamma$100 *5*) E1

423.33 *4*, 5/2⁻,7/2⁻ **γ_{345}*74.33*** *3* (?) (†$_\gamma$4.2 *4*) M1+E2: δ=0.9 $^{+9}_{-5}$ **γ_{39}*383.95*** *14* (?) (†$_\gamma$100 *10*) E1

C **436.4** *2*, 13/2⁻ **γ_{234}*202.0*** *2* (†$_\gamma$100)

440.341 *14*, 5/2⁺,7/2⁺ **γ_{349}*91.35*** *3* (†$_\gamma$18 *3*) M1 **γ_{240}*200.17*** *2* (†$_\gamma$100 *9*) E2 **$\gamma_{225.3}$*215.03*** *2* (†$_\gamma$62 *3*) E1 **γ_{136}*304.02*** *2* (†$_\gamma$91 *6*) E1 **γ_{87}*353.49*** *9* (†$_\gamma$44 *26*) E1

448.98 *3*, 1/2⁻,3/2⁻ **γ_{0}*448.98*** *3* (†$_\gamma$100) M1

456.218 *24*, 5/2⁻ **γ_{87}*369.30*** *10* (†$_\gamma$36 *18*) (M1) **γ_{39}*416.84*** *3* (†$_\gamma$48 *4*) M1 **γ_{0}*456.23*** *4* (†$_\gamma$100 *5*) M1

483.73 *3*, 5/2⁺ **γ_{240}*243.55*** *3* (†$_\gamma$100 *13*) M1 **$\gamma_{224.5}$*259.09*** *7* (†$_\gamma$83 *4*) E1 **γ_{87}*397.14*** *15* (†$_\gamma$61 *9*) E1

515 *2*, (1/2⁺)

547 *2*

557.550 *19*, 3/2⁻,5/2⁻,7/2⁻ **γ_{409}*149.24*** *4* (†$_\gamma$13 *1*) **γ_{351}*206.52*** *2* (†$_\gamma$52 *13*) E1 **γ_{248}*309.65*** *4* (†$_\gamma$100 *9*) E1 **γ_{136}*420.97*** *3* (†$_\gamma$73 *4*) M1

γ_{39}***518.43*** *15* (†$_\gamma$16 *6*) γ_{0}***557.6*** *2* (†$_\gamma$<36)

569.11 *6*, 3/2$^-$,5/2$^-$,7/2$^-$ γ_{409}***160.55*** (†$_\gamma$37 *7*) γ_{248}***321.31*** *6* (†$_\gamma$100 *6*) E1 γ_{0}***569.2*** *2* (†$_\gamma$43 *15*) E2

F **577**, (13/2$^-$) $\gamma_{225.3}$***352***

594 *2*

E **644**, (15/2$^+$) γ_{382}***263*** γ_{154}***490***

656 *2*, (3/2$^+$,5/2$^+$)

B **657.5** *3*, 15/2$^-$ γ_{436}***221.0*** *3* (†$_\gamma$100 *18*) γ_{234}***423.7*** *5* (†$_\gamma$55 *18*)

I **659** (?), (13/2$^+$)

702.73 *20* $\gamma_{224.5}$***478.2*** *2* (†$_\gamma$100)

D **745.2** *1*, 21/2$^+$ γ_{382}***363.4*** *1* (†$_\gamma$100) E2

752.70 *8*, 3/2$^+$,5/2$^+$ γ_{409}***344.18*** *8* (†$_\gamma$100 *15*) M1 γ_{136}***616.2*** *4* (†$_\gamma$14 *5*) E1 γ_{0}***752.5*** *4*

774 *2*, (9/2$^-$,11/2$^-$)

803 *2*

874 *2*, (1/2$^+$)

I **894**, (17/2$^+$) γ_{659}***235*** (?) γ_{382}***512*** γ_{154}***739***

895 *2*, (1/2$^-$,3/2$^-$)

C **897.3** *5*, 17/2$^-$ γ_{658}***239.7*** *4* γ_{436}***461***

902.06 *5*, 3/2$^+$,5/2$^+$ γ_{409}***493.3*** *3* (†$_\gamma$42 *4*) E2 γ_{248}***654.16*** *9* (†$_\gamma$69 *8*) γ_{202}***699.50*** *15* (†$_\gamma$46 *4*) γ_{136}***765.85*** *7* (†$_\gamma$70 *4*) γ_{0}***902.03*** *11* (†$_\gamma$100 *8*)

925 *2*

E **1006**, (19/2$^+$) γ_{745}***261*** γ_{644}***361*** γ_{382}***624***

F **1032**, (17/2$^-$) γ_{577}***454***

1033.47 *4*, 3/2$^+$,5/2$^+$ γ_{136}***897.14*** *7* (†$_\gamma$94 *5*) E1 γ_{39}***994.10*** *7* (†$_\gamma$71 *6*) E1 γ_{0}***1033.47*** *4* (†$_\gamma$100 *5*) E1

1037 *2*, 5/2$^-$,7/2$^-$

1061 *2*

1084 *2*, 5/2$^-$,7/2$^-$

1119 *2*

1145 *2*

B **1151.6** *6*, 19/2$^-$ γ_{897}***254.2*** *4* (†$_\gamma$75 *25*) γ_{656}***495*** *2* (†$_\gamma$100 *38*)

1207 *2*

D **1209.7** *2*, 25/2$^+$ γ_{745}***464.5*** *2* (†$_\gamma$100) E2

1217.75 *3*, 3/2$^+$,5/2$^+$ γ_{558}***659.6*** *2* (†$_\gamma$24 *4*) γ_{383}***834.85*** *9* (†$_\gamma$31 *7*) E1 γ_{325}***892.2*** *2* (†$_\gamma$78 *9*) E1 γ_{202}***1015.35*** *6* (†$_\gamma$87 *7*) E1 γ_{136}***1081.40*** *6* (†$_\gamma$100 *9*) E1 γ_{39}***1178.39*** *4* (†$_\gamma$82 *4*) E1 γ_{0}***1218.0*** *3* (†$_\gamma$21 *3*)

I **1226**, (21/2$^+$) γ_{894}***332*** γ_{745}***481*** γ_{382}***844***

1295 *2*

1325 *2*

C **1420**, (21/2$^-$) γ_{1152}***268*** *1* γ_{897}***523***

1424 *2*, (9/2$^-$,11/2$^-$)

1441 *2*, 5/2$^-$,7/2$^-$

E **1463**, (23/2$^+$) γ_{1210}***253*** γ_{1006}***457*** γ_{745}***718***

F **1534**, (21/2$^-$) γ_{1032}***502***

1547 *2*, (9/2$^-$,11/2$^-$)

1573 *2*

1625 *5*

I **1651**, (25/2$^+$) γ_{1226}***425*** γ_{1207}***442***

1688 *2*, (9/2$^-$,11/2$^-$)

B **1701**, (23/2$^-$) γ_{1420}***281*** γ_{1152}***550***

1731 *5*

D **1754.0** *3*, 29/2$^+$ γ_{1210}***544.4*** *2* E2

C **1993**, (25/2$^-$) γ_{1701}***292*** γ_{1420}***573***

E **2000**, (27/2$^+$) γ_{1463}***537*** γ_{1210}***790***

G **2013**, (25/2$^-$) γ_{1534}***479*** γ_{1210}***803***

F **2083**, (25/2$^-$) γ_{1534}***549***

I **2171**, (29/2$^+$) γ_{1651}***519***

B **2294**, (27/2$^-$) γ_{1993}***300*** γ_{1701}***593***

D **2359.3** *5*, 33/2$^+$ γ_{1754}***605.3*** *4* E2

G **2477**, (29/2$^-$) γ_{2013}***463*** γ_{1754}***723***

C **2602**, (29/2$^-$) γ_{2294}***308*** γ_{1993}***609***

E **2603**, (31/2$^+$) γ_{2000}***603***

F **2689**, (29/2$^-$) γ_{2083}***606***

I **2787**, (33/2$^+$) γ_{2171}***616***

B **2913**, (31/2$^-$) γ_{2602}***311*** γ_{2294}***619***

G **2991**, (33/2$^-$) γ_{2477}***514*** γ_{2359}***633*** (?)

D **3014.2** *6*, 37/2$^+$ γ_{2359}***654.9*** *3* E2

C **3213**, (33/2$^-$) γ_{2913}***300*** γ_{2602}***611***

F **3243**, (33/2$^-$) γ_{2689}***554***

E **3258**, (35/2$^+$) γ_{2603}***655***

H **3306**, (35/2$^-$) γ_{2787}***519*** γ_{2359}***947***

B **3475**, (35/2$^-$) γ_{3213}***262*** γ_{2913}***562***

I **3484**, (37/2$^+$) γ_{2787}***697***

G **3557**, (37/2$^-$) γ_{2991}***566***

D **3713.6** *8*, (41/2$^+$), 0.27$^{+76}_{-24}$ ps γ_{3014}***699.4*** *5*

C **3738**, (37/2$^-$) γ_{3475}***263*** γ_{3213}***525***

F **3834**, (37/2$^-$) γ_{3243}***591***

H **3914**, (39/2$^-$) γ_{3306}***608***

E **3953**, (39/2$^+$) γ_{3258}***695***

B **4017**, (39/2$^-$) γ_{3738}***279*** γ_{3475}***542***

G **4181**, (41/2$^-$) γ_{3557}***624***

I **4230**, (41/2$^+$) γ_{3484}***746***

C **4318**, (41/2$^-$) γ_{4017}***300*** γ_{3738}***580***

D **4455.4** *11*, (45/2$^+$), 0.13 *4* ps γ_{3714}***741.8*** *7*

F **4474**, (41/2$^-$) γ_{3834}***640***

H **4576**, (43/2$^-$) γ_{3914}***662***

B **4637**, (43/2$^-$) γ_{4318}***320*** γ_{4017}***620***

E **4687**, (43/2$^+$) γ_{3953}***734***

G **4866**, (45/2$^-$), 0.21 *11* ps γ_{4181}***685***

C **4977**, (45/2$^-$) γ_{4637}***340*** γ_{4318}***660***

I **5014**, (45/2$^+$) γ_{4230}***783***

F **5159**, (45/2$^-$) γ_{4474}***685***

D **5239**, (49/2$^+$), 0.05^{+3}_{-2} ps γ_{4455}***784***

H **5291**, (47/2$^-$) γ_{4576}***715***

B **5335**, (47/2$^-$) γ_{4977}***357*** γ_{4637}***697***

E **5461**, (47/2$^+$) γ_{4687}***774***

G **5610**, (49/2$^-$), 0.17^{+3}_{-6} ps γ_{4866}***744***

C **5710**, (49/2$^-$) γ_{5335}***375*** γ_{4977}***733***

F **5898**, (49/2$^-$) γ_{5159}***739***

H **6063**, (51/2$^-$) γ_{5291}***772***

D **6068**, (53/2$^+$), 0.13 *5* ps γ_{5239}***829***

B **6102**, (51/2$^-$) γ_{5710}***392*** γ_{5335}***767***

E **6277** (?), (51/2$^+$) γ_{5461}***816*** (?)

G **6404**, (53/2$^-$), 0.18 *4* ps γ_{5610}***794***

C **6510**, (53/2$^-$) γ_{6102}***409*** γ_{5710}***799***

F **6686**, (53/2$^-$) γ_{5898}***788***

H **6893**, (55/2$^-$) γ_{6063}***830***

B **6930**, (55/2$^-$) γ_{6102}***830***

D **6944**, (57/2$^+$), 0.15 *4* ps γ_{6068}***876***

G **7240**, (57/2$^-$), <0.07 ps γ_{6404}***836***

C **7369**, (57/2$^-$) γ_{6510}***859***

F **7507** (?), (57/2$^-$) γ_{6686}***821*** (?)

H **7778**, (59/2$^-$) γ_{6893}***885***

B **7818**, (59/2$^-$) γ_{6930}***888***

D **7871**, (61/2$^+$), 0.12^{+76}_{-7} ps γ_{6944}***927***

G **8108**, (61/2$^-$), 0.16 *8* ps γ_{7240}***868***

C **8283**, (61/2$^-$) γ_{7369}***914***

H **8696**, (63/2$^-$) γ_{7778}***918***

B **8759**, (63/2$^-$) γ_{7818}***941***

D **8850**, (65/2$^+$), 0.06^{+28}_{-3} ps γ_{7871}***979***

G **9007**, (65/2$^-$), 0.12^{+7}_{-10} ps γ_{8108}***899***

C **9253**, (65/2$^-$) γ_{8283}***970***

H **9624**, (67/2$^-$) γ_{8696}***928***

B **9755**, (67/2$^-$) γ_{8759}***996***

D **9884**, (69/2$^+$), <0.8 ps γ_{8850}***1034***

G **9964**, (69/2$^-$), <0.15 ps γ_{9007}***957***

C **10277** (?), (69/2$^-$) γ_{9253}***1024*** (?)

H **10519**, (71/2$^-$), >1.0 ps γ_{9624}***895***

B **10807** (?), (71/2$^-$) γ_{9755}***1052*** (?)

G **10972**, (73/2$^-$), 0.4^{+14}_{-1} ps γ_{9964}***1008***

H **11447**, (75/2$^-$), >1.0 ps γ_{10519}***928***

G **11972**, (77/2$^-$), <0.14 ps γ_{10972}***1000***

G **12983**, (81/2$^-$), 0.44^{+24}_{-17} ps γ_{11972}***1011***

G **14041**, (85/2$^-$) γ_{12983}***1058***

G **15160** (?), (89/2$^-$) γ_{14041}***1119*** (?)

J **x**, J

J **909.6+x** *9*, J+2 γ_{x}***909.6*** *9* ($\dagger_{\gamma}$0.28 *14*)
$I^{(2)}$*=93.2, ħω=0.466*

J **1862.1+x** *10*, J+4 γ_{910+x}***952.5*** *4*
($\dagger_{\gamma}$0.52 *12*) $I^{(2)}$*=87.7, ħω=0.488*

J **2860.2+x** *10*, J+6 γ_{1862+x}***998.1*** *2*
($\dagger_{\gamma}$0.98 *12*) $I^{(2)}$*=85.3, ħω=0.511*

J **3905.2+x** *11*, J+8 γ_{2860+x}***1045.0*** *2*
($\dagger_{\gamma}$0.92 *10*) $I^{(2)}$*=87.1, ħω=0.534*

J **4996.1+x** *11*, J+10 γ_{3905+x}***1090.9*** *2*
($\dagger_{\gamma}$1.04 *15*) $I^{(2)}$*=86.2, ħω=0.557*

J **6133.4+x** *11*, J+12 γ_{4996+x}***1137.3*** *2*
($\dagger_{\gamma}$0.96 *11*) $I^{(2)}$*=86.4, ħω=0.580*

J **7317.0+x** *11*, J+14 γ_{6133+x}***1183.6*** *2*
($\dagger_{\gamma}$1.07 *11*) $I^{(2)}$*=86.8, ħω=0.603*

J **8546.7+x** *11*, J+16 γ_{7317+x}***1229.7*** *2*
($\dagger_{\gamma}$0.98 *11*) $I^{(2)}$*=85.8, ħω=0.627*

J **9823.0+x** *12*, J+18 γ_{8547+x}***1276.3*** *2*
($\dagger_{\gamma}$0.97 *10*) $I^{(2)}$*=86.0, ħω=0.650*

J **11145.8+x** *12*, J+20 γ_{9823+x}***1322.8*** *2*
($\dagger_{\gamma}$0.92 *8*) $I^{(2)}$*=87.3, ħω=0.673*

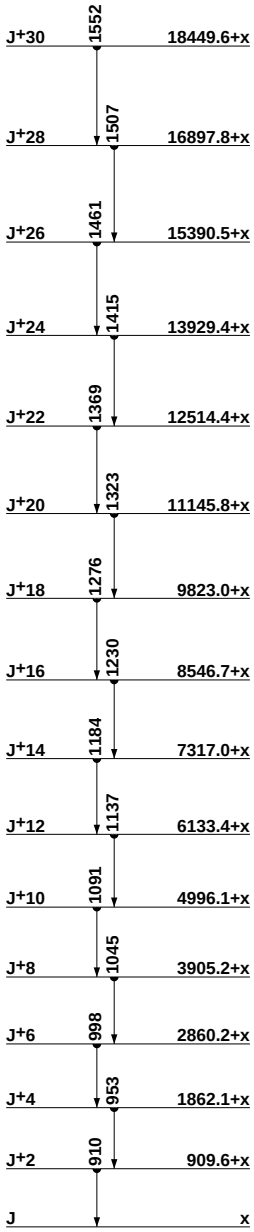
J **12514.4+x** *12*, J+22 $\gamma_{11146+x}$***1368.6*** *2*
($\dagger_{\gamma}$1.00 *11*) $I^{(2)}$*=86.2, ħω=0.696*

J **13929.4+x** *12*, J+24 $\gamma_{12514+x}$***1415.0*** *2*
($\dagger_{\gamma}$0.81 *10*) $I^{(2)}$*=86.8, ħω=0.719*

J **15390.5+x** *12*, J+26 $\gamma_{13929+x}$***1461.1*** *2*
($\dagger_{\gamma}$0.56 *10*) $I^{(2)}$*=86.6, ħω=0.742*

J **16897.8+x** *13*, J+28 $\gamma_{15391+x}$***1507.3*** *3*
($\dagger_{\gamma}$0.45 *9*) $I^{(2)}$*=89.9, ħω=0.765*

J **18449.6+x** *14*, J+30 $\gamma_{16898+x}$***1551.8*** *6*
($\dagger_{\gamma}$0.16 *10*)



SD band
(96Fi08)

$^{155}_{66}$Dy