

151 66 Dy

Δ : -68763 4 S_n : 7513 5 S_p : 4937 8
 Q_{EC} : 2870 5 Q_α : 4180 3

Nuclear Bands

- A SD-1 band (88Ra19,95Ni06)
- B SD-2 band (95Ni06)
- C SD-3 band (95Ni06)
- D SD-4 band (95Ni06)
- E SD-5 band (95Ni06)

Levels and γ -ray branchings:

0, 7/2⁽⁻⁾, 17.9 3 m, % α =5.6 4,
 %EC+% β^+ =94.4 4, μ =-0.945 7,
 Q =-0.30 5

527.38 9, (9/2⁻) $\gamma_{0527.41}$ (\dagger_{γ} 100) D

775.57 11, (11/2⁻) $\gamma_{0775.5315}$ (\dagger_{γ} 100) E2

968.61 13, (13/2⁺) $\gamma_{776193.01}$ (\dagger_{γ} 100) D

984.75 22 $\gamma_{776209.52}$ (\dagger_{γ} 100)

1334.5 3 $\gamma_{985350.88}$ ($\dagger_{\gamma}2213$)

$\gamma_{969366.03}$ ($\dagger_{\gamma}10013$) $\gamma_{776559.45}$ ($\dagger_{\gamma}5013$)

1348.7 1, (13/2⁻) $\gamma_{776573.25}$ ($\dagger_{\gamma}7.515$)

(D) $\gamma_{527821.325}$ ($\dagger_{\gamma}1002$) E2

1511.16 12, (15/2⁻) $\gamma_{969542.51}$ ($\dagger_{\gamma}103$)

(D) $\gamma_{776735.595}$ ($\dagger_{\gamma}1003$) E2

1549.52 19, (9/2,11/2⁻) $\gamma_{969580.510}$

($\dagger_{\gamma}\approx 14$) $\gamma_{5271021.55}$ ($\dagger_{\gamma}368$)

$\gamma_{01549.72}$ ($\dagger_{\gamma}1007$)

1733.7 (?), (17/2⁺) $\gamma_{969765.33}$ (?)

(\dagger_{γ} 100) E2

1856.6 3(?) $\gamma_{985871.010}$ ($\dagger_{\gamma}\approx 71$)

$\gamma_{7761081.43}$ ($\dagger_{\gamma}10011$)

1918.58 11, (17/2⁻) $\gamma_{1511407.41}$

($\dagger_{\gamma}43.213$) (D) $\gamma_{1349569.885}$

($\dagger_{\gamma}1002$) E2

1961.3 6 $\gamma_{7761185.710}$ ($\dagger_{\gamma}\approx 77$)

$\gamma_{5271434.36}$ ($\dagger_{\gamma}10031$)

2263.02 11, (21/2⁻) $\gamma_{1919344.444}$

(\dagger_{γ} 100) E2

2402.0 (?), (21/2⁺) $\gamma_{1734668.33}$ (?)

(\dagger_{γ} 100) E2

2554.3 3(?) $\gamma_{7761779.13}$ ($\dagger_{\gamma}1009$)

$\gamma_{5272026.95}$ ($\dagger_{\gamma}413$)

2582.9 5(?) $\gamma_{7761807.76}$ ($\dagger_{\gamma}5518$)

$\gamma_{5272055.78}$ ($\dagger_{\gamma}10036$)

2866.1 4(?) $\gamma_{9851881.43}$ ($\dagger_{\gamma}10011$)

$\gamma_{7762090.411}$ ($\dagger_{\gamma}2111$)

2911.66 12, (25/2⁻) $\gamma_{2263648.645}$

(\dagger_{γ} 100) E2

2958.6 10, (27/2⁻), 1.3 6 ns $\gamma_{291246.9}$

(\dagger_{γ} 100) M1

3078.2 (?), (25/2⁺) $\gamma_{2402675.73}$ (?)

(\dagger_{γ} 100) E2

3428.5 11, (29/2⁻) $\gamma_{2959469.9112}$ ($\dagger_{\gamma}100$)

D

3733.9 11, (31/2⁻) $\gamma_{3429305.3}$

$\gamma_{2959775.3815}$ E2

4306.3 11, (33/2⁻) $\gamma_{3734572.55}$

($\dagger_{\gamma}10014$) (D) $\gamma_{3429877.7916}$

($\dagger_{\gamma}4313$) (E2)

4387.3 11, (35/2⁻) $\gamma_{3734653.376}$ ($\dagger_{\gamma}100$)

E2

4741.5 11, (37/2⁻) $\gamma_{4387354.287}$

($\dagger_{\gamma}1002$) D $\gamma_{4306435.1613}$ ($\dagger_{\gamma}22.921$)

E2

4903.8 11, (41/2⁻), 5.9 7 ns $\gamma_{4742162.325}$

(\dagger_{γ} 100) E2

5742.9 11, (43/2⁻) $\gamma_{4904839.0210}$ ($\dagger_{\gamma}100$)

E1

6007.2 11, (47/2⁻) $\gamma_{5743264.298}$ ($\dagger_{\gamma}100$)

E2

6032.2 15, (49/2⁺), 11.9 8 ns $\gamma_{600725.0}$

(\dagger_{γ} 100) D,E2

7037.5 15, (51/2⁻), 1.2 6 ps

$\gamma_{60321005.33}$ ($\dagger_{\gamma}100$) E1

7219.5 15, (53/2⁻), 13.7 6 ps

$\gamma_{7038182.079}$ ($\dagger_{\gamma}100$) D

8177.8 15, (55/2⁻), 4.5 15 ps

$\gamma_{7220958.23}$ ($\dagger_{\gamma}100$) M1

8302.7 15, (57/2⁻), 20.8 12 ps

$\gamma_{8178124.83}$ ($\dagger_{\gamma}142$) D $\gamma_{72201083.23}$

($\dagger_{\gamma}10010$) E2

8680.3 15, (59/2⁻), 2.0 3 ps $\gamma_{8303377.73}$

(\dagger_{γ} 100) M1

8891.7 15, (61/2⁻), 19.8 20 ps

$\gamma_{8680211.53}$ ($\dagger_{\gamma}9910$) D $\gamma_{8303589.03}$

($\dagger_{\gamma}10010$) E2

9813.4 18(?) $\gamma_{868011331}$ (?)

10029.8 16, (63/2⁻), <1.4 ps

$\gamma_{88921138.13}$ ($\dagger_{\gamma}100$) (D)

10131.3 18(?) $\gamma_{868014511}$ ($\dagger_{\gamma}100$)

10279.1 21(?) $\gamma_{101311481}$ ($\dagger_{\gamma}100$)

10320.7 18(?), <1.4 ps $\gamma_{10030291.13}$

(\dagger_{γ} 100) (D)

10562.6 19(?), <1.4 ps $\gamma_{103212421}$

$\gamma_{100305331}$ (?) $\gamma_{9813749.13}$ (D)

10749.9 22(?) $\gamma_{102794711}$

11143.5 21(?) $\gamma_{102798641}$ (?)

$\gamma_{1013110121}$

11840.7 22(?) $\gamma_{111446971}$ $\gamma_{1075010911}$

$\gamma_{1056312811}$

A x, J=(43/2)

A 527.3+x (?), J+2 $\gamma_x527.31$ (?)

($\dagger_{\gamma}0.2115$)

A 1104.7+x, J+4 $\gamma_{527+x577.41}$ ($\dagger_{\gamma}0.625$)

A 1732.4+x, J+6 $\gamma_{1105+x627.71}$

($\dagger_{\gamma}0.7810$) $I^{(2)}=73.9$, $\hbar\omega=0.327$

A 2414.2+x, J+8 $\gamma_{1732+x681.81}$ ($\dagger_{\gamma}0.817$)

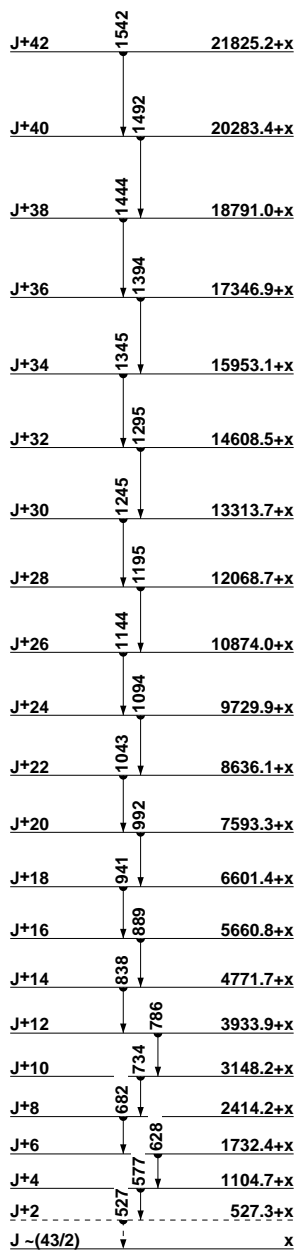
$I^{(2)}=76.6$, $\hbar\omega=0.354$

A 3148.2+x, J+10 $\gamma_{2414+x734.01}$

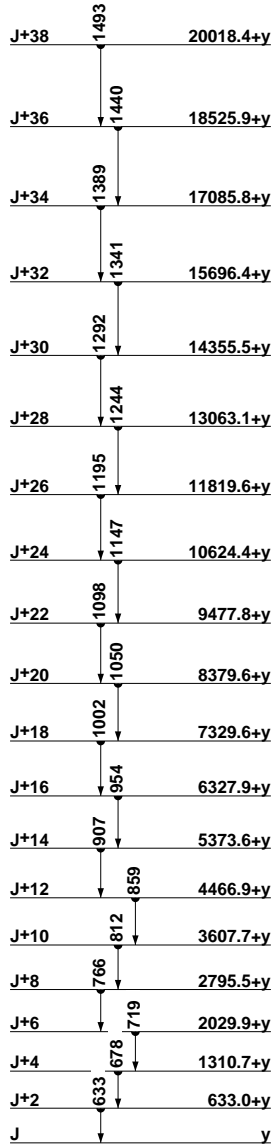
($\dagger_{\gamma}0.9010$) $I^{(2)}=77.4$, $\hbar\omega=0.380$

- A 3933.9+x, J+12 γ_{3148+x} **785.71**
 $(\dagger_{0.91} 10)$ $I^{(2)}=76.8$, $\bar{h}\omega=0.406$
- A 4771.7+x, J+14 γ_{3934+x} **837.81**
 $(\dagger_{1.00} 10)$ $I^{(2)}=78.0$, $\bar{h}\omega=0.432$
- A 5660.8+x, J+16 γ_{4772+x} **889.11**
 $(\dagger_{0.93} 10)$ $I^{(2)}=77.7$, $\bar{h}\omega=0.457$
- A 6601.4+x, J+18 γ_{5661+x} **940.61**
 $(\dagger_{1.03} 10)$ $I^{(2)}=78.0$, $\bar{h}\omega=0.483$
- A 7593.3+x, J+20 γ_{6601+x} **991.91**
 $(\dagger_{1.07} 15)$ $I^{(2)}=78.6$, $\bar{h}\omega=0.509$
- A 8636.1+x, J+22 γ_{7593+x} **1042.81**
 $(\dagger_{1.02} 10)$ $I^{(2)}=78.4$, $\bar{h}\omega=0.534$
- A 9729.9+x, J+24 γ_{8636+x} **1093.81**
 $(\dagger_{1.00} 10)$ $I^{(2)}=79.5$, $\bar{h}\omega=0.559$
- A 10874.0+x, J+26 γ_{9730+x} **1144.11**
 $(\dagger_{0.69} 7)$ $I^{(2)}=79.1$, $\bar{h}\omega=0.585$
- A 12068.7+x, J+28 $\gamma_{10874+x}$ **1194.71**
 $(\dagger_{0.59} 7)$ $I^{(2)}=79.5$, $\bar{h}\omega=0.610$
- A 13313.7+x, J+30 $\gamma_{12069+x}$ **1245.01**
 $(\dagger_{0.57} 10)$ $I^{(2)}=80.3$, $\bar{h}\omega=0.635$
- A 14608.5+x, J+32 $\gamma_{13314+x}$ **1294.82**
 $(\dagger_{0.48} 7)$ $I^{(2)}=80.3$, $\bar{h}\omega=0.660$
- A 15953.1+x, J+34 $\gamma_{14609+x}$ **1344.62**
 $(\dagger_{0.34} 7)$ $I^{(2)}=81.3$, $\bar{h}\omega=0.685$
- A 17346.9+x, J+36 $\gamma_{15953+x}$ **1393.83**
 $(\dagger_{0.38} 7)$ $I^{(2)}=79.5$, $\bar{h}\omega=0.709$
- A 18791.0+x, J+38 $\gamma_{17347+x}$ **1444.14**
 $(\dagger_{0.22} 5)$ $I^{(2)}=82.8$, $\bar{h}\omega=0.734$
- A 20283.4+x, J+40 $\gamma_{18791+x}$ **1492.46**
 $(\dagger_{0.09} 5)$ $I^{(2)}=81.0$, $\bar{h}\omega=0.759$
- A 21825.2+x, J+42 $\gamma_{20283+x}$ **1541.86**
- B y, J
- B 633.0+y, J+2 $\gamma_{633.0} 10$ $I^{(2)}=89.5$,
 $\bar{h}\omega=0.328$
- B 1310.7+y, J+4 γ_{633+y} **677.75** ($\dagger_{0.35} 8$)
 $I^{(2)}=96.4$, $\bar{h}\omega=0.349$
- B 2029.9+y, J+6 γ_{1311+y} **719.21**
 $(\dagger_{0.67} 10)$ $I^{(2)}=86.2$, $\bar{h}\omega=0.371$
- B 2795.5+y, J+8 γ_{2030+y} **765.61**
 $(\dagger_{0.95} 13)$ $I^{(2)}=85.8$, $\bar{h}\omega=0.394$
- B 3607.7+y, J+10 γ_{2796+y} **812.21**
 $(\dagger_{0.92} 13)$ $I^{(2)}=85.1$, $\bar{h}\omega=0.418$
- B 4466.9+y, J+12 γ_{3608+y} **859.21**
 $(\dagger_{0.94} 14)$ $I^{(2)}=84.2$, $\bar{h}\omega=0.441$
- B 5373.6+y, J+14 γ_{4467+y} **906.71**
 $(\dagger_{1.10} 10)$ $I^{(2)}=84.0$, $\bar{h}\omega=0.465$
- B 6327.9+y, J+16 γ_{5374+y} **954.31**
 $(\dagger_{1.00} 8)$ $I^{(2)}=84.4$, $\bar{h}\omega=0.489$
- B 7329.6+y, J+18 γ_{6328+y} **1001.72**
 $(\dagger_{1.00} 12)$ $I^{(2)}=82.8$, $\bar{h}\omega=0.513$
- B 8379.6+y, J+20 γ_{7330+y} **1050.01**
 $(\dagger_{1.02} 19)$ $I^{(2)}=83.0$, $\bar{h}\omega=0.537$
- B 9477.8+y, J+22 γ_{8380+y} **1098.21**
 $(\dagger_{0.95} 8)$ $I^{(2)}=82.6$, $\bar{h}\omega=0.561$
- B 10624.4+y, J+24 γ_{9478+y} **1146.62**
 $(\dagger_{0.74} 7)$ $I^{(2)}=82.3$, $\bar{h}\omega=0.585$
- B 11819.6+y, J+26 $\gamma_{10624+y}$ **1195.22**
 $(\dagger_{0.67} 7)$ $I^{(2)}=82.8$, $\bar{h}\omega=0.610$
- B 13063.1+y, J+28 $\gamma_{11820+y}$ **1243.52**
 $(\dagger_{0.54} 7)$ $I^{(2)}=81.8$, $\bar{h}\omega=0.634$
- B 14355.5+y, J+30 $\gamma_{13063+y}$ **1292.42**
 $(\dagger_{0.45} 8)$ $I^{(2)}=82.5$, $\bar{h}\omega=0.658$
- B 15696.4+y, J+32 $\gamma_{14356+y}$ **1340.93**
 $(\dagger_{0.35} 8)$ $I^{(2)}=82.5$, $\bar{h}\omega=0.683$
- B 17085.8+y, J+34 $\gamma_{15696+y}$ **1389.43**
 $(\dagger_{0.18} 6)$ $I^{(2)}=78.9$, $\bar{h}\omega=0.707$
- B 18525.9+y, J+36 $\gamma_{17086+y}$ **1440.15**
 $(\dagger_{0.18} 6)$ $I^{(2)}=76.3$, $\bar{h}\omega=0.733$
- B 20018.4+y, J+38 $\gamma_{18526+y}$ **1492.510**
- C z, J
- C 728.5+z, J+2 γ_z **728.51** $I^{(2)}=109.3$,
 $\bar{h}\omega=0.373$
- C 1493.6+z, J+4 γ_{729+z} **765.12** $I^{(2)}=83.5$,
 $\bar{h}\omega=0.395$
- C 2306.6+z, J+6 γ_{1494+z} **813.01** $I^{(2)}=84.2$,
 $\bar{h}\omega=0.418$
- C 3167.1+z, J+8 γ_{2307+z} **860.52** $I^{(2)}=81.5$,
 $\bar{h}\omega=0.443$
- C 4076.7+z, J+10 γ_{3167+z} **909.62**
 $I^{(2)}=81.6$, $\bar{h}\omega=0.467$
- C 5035.3+z, J+12 γ_{4077+z} **958.62**
 $I^{(2)}=83.5$, $\bar{h}\omega=0.491$
- C 6041.8+z, J+14 γ_{5035+z} **1006.51**
 $I^{(2)}=79.7$, $\bar{h}\omega=0.516$
- C 7098.5+z, J+16 γ_{6042+z} **1056.72**
 $I^{(2)}=81.1$, $\bar{h}\omega=0.541$
- C 8204.5+z, J+18 γ_{7099+z} **1106.02**
 $I^{(2)}=80.5$, $\bar{h}\omega=0.565$
- C 9360.2+z, J+20 γ_{8205+z} **1155.72**
 $I^{(2)}=81.5$, $\bar{h}\omega=0.590$
- C 10565.0+z, J+22 γ_{9360+z} **1204.82**
 $I^{(2)}=80.2$, $\bar{h}\omega=0.615$
- C 11819.7+z, J+24 $\gamma_{10565+z}$ **1254.72**
 $I^{(2)}=81.8$, $\bar{h}\omega=0.640$
- C 13123.3+z, J+26 $\gamma_{11820+z}$ **1303.62**
 $I^{(2)}=82.6$, $\bar{h}\omega=0.664$
- C 14475.3+z, J+28 $\gamma_{13123+z}$ **1352.04**
 $I^{(2)}=77.8$, $\bar{h}\omega=0.689$
- C 15878.7+z, J+30 $\gamma_{14475+z}$ **1403.45**
 $I^{(2)}=86.2$, $\bar{h}\omega=0.713$
- C 17328.5+z, J+32 $\gamma_{15879+z}$ **1449.86**
- D u, J
- D 712.0+u, J+2 γ_0 **712.04** ($\dagger_{0.41} 10$)
 $I^{(2)}=85.7$, $\bar{h}\omega=0.368$

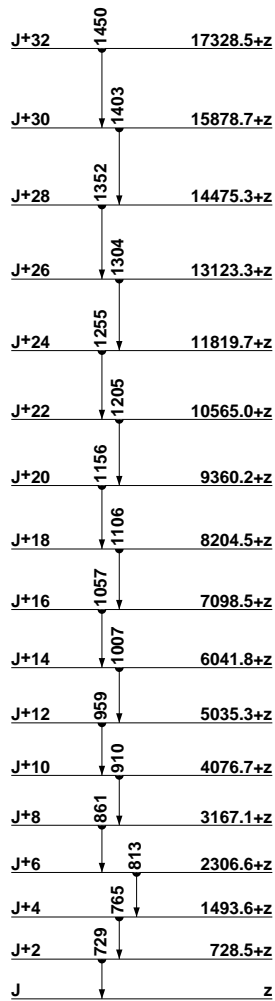
- D 1470.7+u, J+4 γ_{712+u} **758.73** ($\dagger_{\gamma} 0.92$ 15)
 $I^{(2)}=85.8, \bar{h}\omega=0.391$
- D 2276.0+u, J+6 γ_{1471+u} **805.32**
($\dagger_{\gamma} 0.96$ 15) $I^{(2)}=84.9, \bar{h}\omega=0.414$
- D 3128.4+u, J+8 γ_{2276+u} **852.42**
($\dagger_{\gamma} 1.00$ 20) $I^{(2)}=85.3, \bar{h}\omega=0.438$
- D 4027.7+u, J+10 γ_{3128+u} **899.32**
($\dagger_{\gamma} 0.84$ 20) $I^{(2)}=84.2, \bar{h}\omega=0.462$
- D 4974.5+u, J+12 γ_{4028+u} **946.84**
($\dagger_{\gamma} 1.00$ 19) $I^{(2)}=84.0, \bar{h}\omega=0.485$
- D 5968.9+u, J+14 γ_{4975+u} **994.42**
($\dagger_{\gamma} 1.08$ 22) $I^{(2)}=83.0, \bar{h}\omega=0.509$
- D 7011.5+u, J+16 γ_{5969+u} **1042.64**
($\dagger_{\gamma} 1.00$ 18) $I^{(2)}=83.5, \bar{h}\omega=0.533$
- D 8102.0+u, J+18 γ_{7012+u} **1090.52**
($\dagger_{\gamma} 0.98$ 18) $I^{(2)}=83.9, \bar{h}\omega=0.557$
- D 9240.2+u, J+20 γ_{8102+u} **1138.22**
($\dagger_{\gamma} 0.68$ 12) $I^{(2)}=83.0, \bar{h}\omega=0.581$
- D 10426.6+u, J+22 γ_{9240+u} **1186.46**
($\dagger_{\gamma} 0.48$ 10) $I^{(2)}=82.5, \bar{h}\omega=0.605$
- D 11661.5+u, J+24 $\gamma_{10427+u}$ **1234.93**
($\dagger_{\gamma} 0.41$ 15) $I^{(2)}=83.3, \bar{h}\omega=0.629$
- D 12944.4+u, J+26 $\gamma_{11662+u}$ **1282.92**
($\dagger_{\gamma} 0.35$ 12) $I^{(2)}=85.5, \bar{h}\omega=0.653$
- D 14274.1+u, J+28 $\gamma_{12944+u}$ **1329.76**
($\dagger_{\gamma} 0.16$ 8) $I^{(2)}=81.5, \bar{h}\omega=0.677$
- D 15652.9+u, J+30 $\gamma_{14274+u}$ **1378.88**
($\dagger_{\gamma} 0.17$ 8) $I^{(2)}=86.8, \bar{h}\omega=0.701$
- D 17077.8+u, J+32 $\gamma_{15653+u}$ **1424.910**
- E v, J
- E 959.3+v, J+2 γ_0 **959.35** $I^{(2)}=81.5,$
 $\bar{h}\omega=0.492$
- E 1967.7+v, J+4 γ_{959+v} **1008.45** $I^{(2)}=77.1,$
 $\bar{h}\omega=0.517$
- E 3028.0+v, J+6 γ_{1968+v} **1060.34**
 $I^{(2)}=77.5, \bar{h}\omega=0.543$
- E 4139.9+v, J+8 γ_{3028+v} **1111.95**
 $I^{(2)}=74.1, \bar{h}\omega=0.569$
- E 5305.8+v, J+10 γ_{4140+v} **1165.95**
 $I^{(2)}=80.6, \bar{h}\omega=0.595$
- E 6521.3+v, J+12 γ_{5306+v} **1215.55**
 $I^{(2)}=83.9, \bar{h}\omega=0.620$
- E 7784.5+v, J+14 γ_{6521+v} **1263.25**
 $I^{(2)}=79.7, \bar{h}\omega=0.644$
- E 9097.9+v, J+16 γ_{7785+v} **1313.48**
 $I^{(2)}=76.5, \bar{h}\omega=0.670$
- E 10463.6+v, J+18 γ_{9098+v} **1365.75**



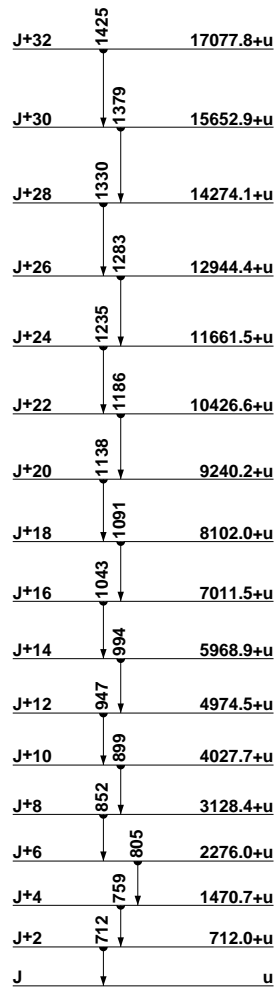
SD-1 band
(88Ra19,95Ni06)



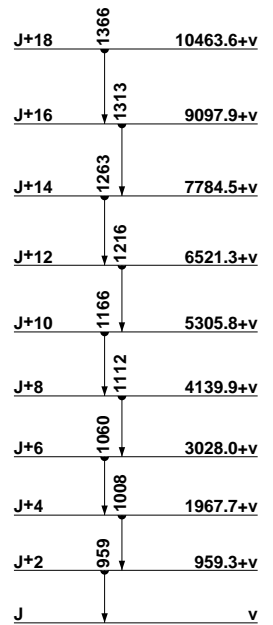
SD-2 band
(95Ni06)



SD-3 band
(95Ni06)



SD-4 band
(95Ni06)



SD-5 band
(95Ni06)

¹⁵¹Dy
66