

83  
38Sr<sub>45</sub>S<sub>n</sub>: 8860<sub>10</sub>, S<sub>p</sub>: 7897<sub>11</sub>

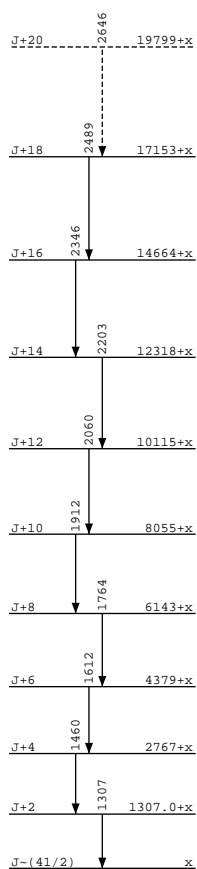
## Nuclear Bands

- A Band based on (35/2<sup>-</sup>)  
 B Band based on (17/2<sup>-</sup>)  
 C Band based on (9/2<sup>+</sup>)  
 D Band based on (23/2<sup>+</sup>)  
 E SD band (1995Ba26, 1995La21, 1999Le56)  
 Q<sub>0</sub>=3.60<sub>18</sub><sup>20</sup>

Levels and  $\gamma$ -ray branchings:

- 0, 7/2<sup>+</sup>, 32.41<sub>3</sub> h, %ε+%β<sup>+</sup>=100, μ=-0.829<sub>2</sub>, Q=+0.78<sub>7</sub>
- C 35.47<sub>6</sub>, 9/2<sup>+</sup>, < 15 ns, %IT=100, μ=+0.581<sub>4</sub>, γ<sub>0</sub>259.10<sub>10</sub>(100) M1
- 259.15<sub>9</sub>, 1/2<sup>-</sup>, 4.95<sub>12</sub> s, %IT=100, μ=+0.581<sub>4</sub>, γ<sub>0</sub>259.10<sub>10</sub>(100) E3
- 489.92<sub>8</sub>, γ<sub>35.47</sub>454.40<sub>20</sub>(43.3<sub>11</sub>), γ<sub>0</sub>489.90<sub>20</sub>(100.0<sub>22</sub>)  
 545.4<sub>3</sub>, γ<sub>0</sub>545.4<sub>3</sub>(100)
- 650.81<sub>15</sub>, (3/2<sup>-</sup>, 5/2<sup>-</sup>), γ<sub>259.15</sub>391.60<sub>20</sub>(100)  
 681.11<sub>23</sub>, (3/2<sup>-</sup>, 5/2<sup>-</sup>), γ<sub>259.15</sub>421.8<sub>3</sub>(100)  
 717.53<sub>9</sub>, (7/2<sup>-</sup>, 9/2<sup>-</sup>, 11/2<sup>-</sup>), γ<sub>489.92</sub>227.50<sub>20</sub>(9.1<sub>10</sub>),  
 γ<sub>35.47</sub>682.10<sub>10</sub>(100<sub>5</sub>), γ<sub>0</sub>717.60<sub>20</sub>(36.5<sub>15</sub>)  
 753.72<sub>16</sub>, (3/2<sup>-</sup>), γ<sub>259.15</sub>494.50<sub>20</sub>(100)  
 790.83<sub>17</sub>, γ<sub>0</sub>790.80<sub>20</sub>(100)
- 800.41<sub>10</sub>, (11/2<sup>+</sup>), 3.7<sub>25</sub> ps, γ<sub>35.47</sub>764.9<sub>6</sub>(80<sub>10</sub>), γ<sub>0</sub>800.40<sub>10</sub>(100<sub>6</sub>) E2
- 835.2<sub>7</sub>, (9/2<sup>-</sup>), γ<sub>35.47</sub>800, γ<sub>0</sub>835  
 846.3<sub>3</sub>, (5/2<sup>-</sup>, 7/2<sup>-</sup>, 9/2<sup>-</sup>), γ<sub>650.81</sub>195.4<sub>4</sub>(100)  
 894.15<sub>11</sub>, 11/2<sup>+</sup>, 1.6<sub>6</sub> ps, γ<sub>35.47</sub>858.70<sub>10</sub>(100<sub>4</sub>) M1+E2 δ = 0.83<sub>13</sub>,  
 γ<sub>0</sub>893.9<sub>4</sub>(3.5<sub>8</sub>) (E2)
- C 910.4<sub>6</sub>, 13/2<sup>+</sup>, 3.5<sub>2</sub> ps, γ<sub>35.47</sub>875.0<sub>10</sub>(100) E2
- 951.77<sub>9</sub>, (5/2<sup>+</sup>, 7/2<sup>+</sup>), γ<sub>17.53</sub>234.4<sub>3</sub>(3.2<sub>6</sub>), γ<sub>681.11</sub>270.5<sub>3</sub>(3.9<sub>5</sub>),  
 γ<sub>35.47</sub>916.5<sub>5</sub>(4.2<sub>10</sub>), γ<sub>0</sub>951.80<sub>10</sub>(100<sub>5</sub>)  
 962.79<sub>8</sub>, (7/2<sup>-</sup>, 9/2<sup>-</sup>, 11/2<sup>-</sup>), γ<sub>17.53</sub>245.3<sub>4</sub>(7.2<sub>22</sub>),  
 γ<sub>35.47</sub>927.30<sub>10</sub>(100<sub>5</sub>), γ<sub>0</sub>962.80<sub>10</sub>(61<sub>4</sub>)  
 1092.8<sub>3</sub>, γ<sub>489.92</sub>603.0<sub>3</sub>(100<sub>20</sub>), γ<sub>0</sub>1092.4<sub>6</sub>(100<sub>30</sub>)  
 1098.06<sub>12</sub>, (7/2<sup>-</sup>, 9/2<sup>-</sup>, 11/2<sup>-</sup>), γ<sub>35.47</sub>1062.60<sub>10</sub>(100<sub>33</sub>),  
 γ<sub>0</sub>1097.2<sub>8</sub>(80<sub>40</sub>)  
 1140.71<sub>25</sub>, (7/2<sup>-</sup>, 9/2<sup>-</sup>), γ<sub>650.81</sub>489.90<sub>20</sub>(100)  
 1233.40<sub>11</sub>, (7/2<sup>-</sup>, 9/2<sup>-</sup>, 11/2<sup>-</sup>), γ<sub>489.92</sub>743.50<sub>10</sub>(100<sub>5</sub>),  
 γ<sub>35.47</sub>1197.90<sub>20</sub>(29.7<sub>26</sub>), γ<sub>0</sub>1233.3<sub>6</sub>(5.1<sub>10</sub>)  
 1239.19<sub>19</sub>, (7/2<sup>-</sup>, 9/2<sup>-</sup>, 11/2<sup>-</sup>), γ<sub>35.47</sub>1203.6<sub>5</sub>(12.1<sub>22</sub>),  
 γ<sub>0</sub>1239.20<sub>20</sub>(100<sub>4</sub>)  
 1365.9<sub>3</sub>, (7/2<sup>-</sup>, 9/2<sup>-</sup>, 11/2<sup>-</sup>), γ<sub>489.92</sub>875.8<sub>3</sub>(100<sub>17</sub>), γ<sub>0</sub>1366.4<sub>6</sub>(34<sub>10</sub>)  
 1371.98<sub>7</sub>, (7/2<sup>+</sup>), γ<sub>1233.40</sub>138.8<sub>4</sub>(1.6<sub>2</sub>), γ<sub>962.79</sub>409.3<sub>4</sub>(1.1<sub>2</sub>),  
 γ<sub>951.77</sub>420.3<sub>3</sub>(29.2<sub>20</sub>), γ<sub>846.3</sub>525.6<sub>4</sub>(1.2<sub>3</sub>), γ<sub>790.83</sub>581.1<sub>3</sub>(2.3<sub>3</sub>),  
 γ<sub>753.7</sub>618.2<sub>2</sub>(9.7<sub>7</sub>), γ<sub>717.53</sub>654.5<sub>2</sub>(3.1<sub>3</sub>), γ<sub>650.81</sub>721.2<sub>2</sub>(16.8<sub>7</sub>),  
 γ<sub>545.4</sub>827, γ<sub>489.92</sub>882.1<sub>1</sub>(100.0<sub>25</sub>), γ<sub>35.47</sub>1336.5<sub>1</sub>(49.0<sub>20</sub>),  
 γ<sub>0</sub>1371.9<sub>1</sub>(16.0<sub>8</sub>)  
 1434.12<sub>19</sub>, (7/2<sup>-</sup>, 9/2<sup>-</sup>, 11/2<sup>-</sup>), γ<sub>489.92</sub>943.6<sub>5</sub>(26<sub>8</sub>),  
 γ<sub>0</sub>1434.20<sub>20</sub>(100<sub>9</sub>)  
 1447.9<sub>8</sub>, (9/2<sup>-</sup>), γ<sub>753.72</sub>694  
 1498.83<sub>15</sub>, (7/2<sup>-</sup>, 9/2<sup>-</sup>), γ<sub>951.77</sub>547.1<sub>3</sub>(62<sub>12</sub>), γ<sub>35.47</sub>1463.4<sub>3</sub>(100<sub>12</sub>),  
 γ<sub>0</sub>1498.80<sub>20</sub>(93<sub>8</sub>)  
 1574.7<sub>8</sub>, (9/2<sup>+</sup>), γ<sub>894.15</sub>679.9<sub>100</sub> M1+E2 δ = +1.1<sub>8</sub>  
 1590.1<sub>9</sub>, (11/2<sup>-</sup>), γ<sub>835.2</sub>755  
 1604.8<sub>5</sub>, (7/2<sup>-</sup>, 9/2<sup>-</sup>, 11/2<sup>-</sup>), γ<sub>489.92</sub>1115.0<sub>5</sub>(100<sub>30</sub>),  
 γ<sub>0</sub>1604.6<sub>8</sub>(72<sub>20</sub>)  
 1745.4<sub>8</sub>, (7/2<sup>-</sup>, 9/2<sup>-</sup>, 11/2<sup>-</sup>), γ<sub>35.47</sub>1710.0<sub>15</sub>(56<sub>28</sub>),  
 γ<sub>0</sub>1745.3<sub>9</sub>(100<sub>29</sub>)  
 1752.6<sub>4</sub>, (7/2<sup>-</sup>, 9/2<sup>-</sup>, 11/2<sup>-</sup>), γ<sub>35.47</sub>1717.0<sub>8</sub>(22<sub>7</sub>), γ<sub>0</sub>1752.6<sub>4</sub>(100<sub>16</sub>)  
 1856.6<sub>6</sub>, 15/2<sup>+</sup>, γ<sub>910.4</sub>945.7<sub>100</sub> M1+E2 δ = +0.9<sub>6</sub>, γ<sub>894.15</sub>963,  
 γ<sub>800.41</sub>1056  
 1882.50<sub>23</sub>, (7/2<sup>-</sup>, 9/2<sup>-</sup>), γ<sub>951.77</sub>931.5<sub>5</sub>(68<sub>18</sub>), γ<sub>489.92</sub>1392.4<sub>3</sub>(100<sub>9</sub>),  
 γ<sub>35.47</sub>1846.8<sub>5</sub>(55<sub>14</sub>), γ<sub>0</sub>1882.2<sub>8</sub>(32<sub>14</sub>)  
 1915.4<sub>3</sub>, (7/2<sup>-</sup>, 9/2<sup>-</sup>), γ<sub>650.81</sub>1264.3<sub>4</sub>(36<sub>6</sub>), γ<sub>35.47</sub>1879.8<sub>7</sub>(48<sub>10</sub>),  
 γ<sub>0</sub>1915.7<sub>4</sub>(100<sub>12</sub>)  
 1964.1<sub>5</sub>, (7/2<sup>-</sup>, 9/2<sup>-</sup>, 11/2<sup>-</sup>), γ<sub>489.92</sub>1473.8<sub>6</sub>(87<sub>16</sub>),  
 γ<sub>35.47</sub>1928<sub>2</sub>(32<sub>16</sub>), γ<sub>0</sub>1964.5<sub>6</sub>(100<sub>16</sub>)
- C 1987.1<sub>8</sub>, 17/2<sup>+</sup>, 0.7<sub>2</sub> ps, γ<sub>910.4</sub>1077.0<sub>100</sub> E2
- 2017.0<sub>6</sub>, (7/2<sup>-</sup>, 9/2<sup>-</sup>, 11/2<sup>-</sup>), γ<sub>489.92</sub>1527.2<sub>10</sub>(34<sub>10</sub>),  
 γ<sub>0</sub>2016.9<sub>6</sub>(100<sub>16</sub>)
- 2045.8<sub>6</sub>, (13/2<sup>-</sup>), γ<sub>910.4</sub>1136, γ<sub>894.15</sub>1152, γ<sub>800.41</sub>1245  
 2074.0<sub>8</sub>, (7/2<sup>-</sup>, 9/2<sup>-</sup>, 11/2<sup>-</sup>), γ<sub>489.92</sub>1584.3<sub>10</sub>(70<sub>33</sub>),  
 γ<sub>0</sub>2073.6<sub>12</sub>(100<sub>40</sub>)  
 2089.7<sub>8</sub>, (7/2<sup>-</sup>, 9/2<sup>-</sup>, 11/2<sup>-</sup>), γ<sub>35.47</sub>2054.1<sub>12</sub>(100<sub>32</sub>),  
 γ<sub>0</sub>2089.8<sub>10</sub>(63<sub>32</sub>)  
 2107.0<sub>6</sub>, (13/2<sup>+</sup>), γ<sub>1590.1</sub>517, γ<sub>1447.9</sub>659, γ<sub>910.4</sub>1196,  
 γ<sub>894.15</sub>1213.1<sub>100</sub> M1  
 2373.2<sub>6</sub>, (7/2<sup>-</sup>, 9/2<sup>-</sup>, 11/2<sup>-</sup>), γ<sub>1371.98</sub>1001.2<sub>6</sub>(100)  
 2539.4<sub>7</sub>, (15/2<sup>-</sup>), γ<sub>2107.0</sub>432, γ<sub>1574.7</sub>964, γ<sub>910.4</sub>1630  
 2643.1<sub>6</sub>, 17/2<sup>-</sup>, γ<sub>2539.4</sub>104, γ<sub>2107.0</sub>536, γ<sub>2045.8</sub>598, γ<sub>1987.1</sub>656,  
 γ<sub>1856.6</sub>786  
 2847.7<sub>9</sub>, (17/2<sup>-</sup>), γ<sub>2643.1</sub>205, γ<sub>2539.4</sub>308  
 2905.2<sub>3</sub>, (7/2<sup>+</sup>, 9/2<sup>+</sup>, 11/2<sup>+</sup>), γ<sub>1498.83</sub>1407.1<sub>10</sub>(15<sub>4</sub>),  
 γ<sub>1371.98</sub>1532.2<sub>10</sub>(9<sub>4</sub>), γ<sub>962.79</sub>1942.3<sub>10</sub>(13<sub>4</sub>), γ<sub>894.15</sub>2011.1<sub>5</sub>(56<sub>9</sub>),  
 γ<sub>800.41</sub>2104.9<sub>8</sub>(29<sub>5</sub>), γ<sub>717.53</sub>2187.0<sub>10</sub>(15<sub>6</sub>), γ<sub>35.47</sub>2869.6<sub>15</sub>(20<sub>6</sub>),  
 γ<sub>0</sub>2905.3<sub>9</sub>(100<sub>12</sub>)  
 2943.9<sub>8</sub>, (7/2<sup>+</sup>, 9/2<sup>+</sup>, 11/2<sup>+</sup>), γ<sub>894.15</sub>2049.0<sub>15</sub>(17<sub>8</sub>),  
 γ<sub>35.47</sub>2909<sub>2</sub>(16<sub>8</sub>), γ<sub>0</sub>2944.0<sub>10</sub>(100<sub>12</sub>)  
 3008.9<sub>9</sub>, (19/2<sup>+</sup>), γ<sub>1987.1</sub>1022, γ<sub>1856.6</sub>1152  
 3046.7<sub>9</sub>, (19/2<sup>-</sup>), γ<sub>2847.7</sub>199, γ<sub>2643.1</sub>404
- C 3116.0<sub>11</sub>, (21/2<sup>+</sup>), < 0.7 ps, γ<sub>1987.1</sub>1129.1<sub>100</sub> E2
- 3349.3<sub>11</sub>, (21/2<sup>+</sup>), γ<sub>3116.0</sub>233, γ<sub>1987.1</sub>1362  
 3469.5<sub>11</sub>, 21/2<sup>-</sup>, γ<sub>3046.7</sub>423  
 3525.6<sub>10</sub>, (21/2<sup>-</sup>), γ<sub>3046.7</sub>480, γ<sub>2643.1</sub>882
- D 3643.8<sub>12</sub>, 23/2<sup>+</sup>, 8.7<sub>4</sub> ps, γ<sub>3349.3</sub>294, γ<sub>3116.0</sub>528.0<sub>100</sub>  
 M1+E2 δ = 0.14<sub>4</sub>
- B 4043.5<sub>12</sub>, 23/2<sup>-</sup>, γ<sub>3469.5</sub>574
- C 4168.0<sub>13</sub>, 25/2<sup>+</sup>, γ<sub>3643.8</sub>524, γ<sub>3116.0</sub>1052  
 4195.3<sub>11</sub>, (23/2<sup>-</sup>), γ<sub>3525.6</sub>670, γ<sub>3469.5</sub>726, γ<sub>3046.7</sub>1148  
 4395.8<sub>13</sub>, (25/2<sup>+</sup>), γ<sub>3643.8</sub>752, γ<sub>3116.0</sub>1280  
 4633.5<sub>12</sub>, (25/2<sup>-</sup>), γ<sub>4043.5</sub>590, γ<sub>3525.6</sub>1108, γ<sub>3469.5</sub>1165(?)
- D 4752.0<sub>13</sub>, 27/2<sup>+</sup>, γ<sub>4168.0</sub>584, γ<sub>3643.8</sub>1108  
 4947.6<sub>14</sub>, (-), γ<sub>4043.5</sub>904  
 5090.8<sub>15</sub>, (27/2<sup>+</sup>), γ<sub>4395.8</sub>695
- B 5207.7<sub>13</sub>, 27/2<sup>-</sup>, γ<sub>4947.6</sub>260, γ<sub>4633.5</sub>574, γ<sub>4043.5</sub>1164
- C 5378.0<sub>14</sub>, 29/2<sup>+</sup>, γ<sub>4752.0</sub>626, γ<sub>4168.0</sub>1210  
 5394.4<sub>13</sub>, (-), γ<sub>4195.3</sub>1199, γ<sub>4043.5</sub>1351  
 5611.7<sub>14</sub>, (29/2<sup>+</sup>), γ<sub>5090.8</sub>521, γ<sub>4752.0</sub>860, γ<sub>4395.8</sub>1216  
 5855.1<sub>14</sub>, (29/2<sup>-</sup>), γ<sub>5207.7</sub>647, γ<sub>4633.5</sub>1222
- D 6204.3<sub>14</sub>, 31/2<sup>+</sup>, γ<sub>5611.7</sub>593, γ<sub>5378.0</sub>826, γ<sub>5090.8</sub>1114(?),  
 γ<sub>4752.0</sub>1452
- B 6427.7<sub>16</sub>, 31/2<sup>-</sup>, γ<sub>5207.7</sub>1220
- C 6752.0<sub>15</sub>, 33/2<sup>+</sup>, γ<sub>6204.3</sub>548, γ<sub>5378.0</sub>1374  
 7101.7<sub>17</sub>, (+), γ<sub>5611.7</sub>1490  
 7234.1<sub>17</sub>, (-), γ<sub>5855.1</sub>1379
- B 7739.1<sub>19</sub>, 35/2<sup>-</sup>, γ<sub>6427.7</sub>1312  
 7770.7<sub>19</sub>, γ<sub>6427.7</sub>1343  
 7797.1<sub>19</sub>, γ<sub>6427.7</sub>1369
- A 7805.9<sub>18</sub>, 35/2<sup>-</sup>, γ<sub>6427.7</sub>1378
- D 7853.5<sub>16</sub>, 35/2<sup>+</sup>, γ<sub>6204.3</sub>1649
- C 8119.8<sub>17</sub>, 37/2<sup>+</sup>, γ<sub>7853.5</sub>266, γ<sub>6752.0</sub>1368  
 9189.1<sub>21</sub>, γ<sub>7797.1</sub>1392
- B 9276.5<sub>19</sub>, 39/2<sup>-</sup>, γ<sub>7805.9</sub>1470, γ<sub>7739.1</sub>1538
- A 9289.5<sub>19</sub>, 39/2<sup>-</sup>, γ<sub>7805.9</sub>1484, γ<sub>7797.1</sub>1492  
 9351.7<sub>22</sub>, γ<sub>7770.7</sub>1581  
 9467.7<sub>22</sub>, γ<sub>7770.7</sub>1697
- C 9649.8<sub>20</sub>, 41/2<sup>+</sup>, γ<sub>8119.8</sub>1530
- D 9781.6<sub>19</sub>, 39/2<sup>+</sup>, γ<sub>7853.5</sub>1928
- A 10859.5<sub>20</sub>, 43/2<sup>-</sup>, γ<sub>9289.5</sub>1570
- B 10951.5<sub>20</sub>, 43/2<sup>-</sup>, γ<sub>9276.5</sub>1675  
 11103.7<sub>24</sub>, γ<sub>9351.7</sub>1752
- C 11461.8<sub>22</sub>, 45/2<sup>+</sup>, γ<sub>9649.8</sub>1812
- C 11856.8<sub>22</sub>, γ<sub>9649.8</sub>2207
- A 12566.5<sub>21</sub>, 47/2<sup>-</sup>, γ<sub>10951.5</sub>1615, γ<sub>10859.5</sub>1707
- B 12846.6<sub>23</sub>, 47/2<sup>-</sup>, γ<sub>10951.5</sub>1895
- C 13425.9<sub>24</sub>, 49/2<sup>+</sup>, γ<sub>11461.8</sub>1964
- C 14130.9<sub>24</sub>, γ<sub>11856.8</sub>2274
- C 14295.9<sub>24</sub>, γ<sub>11461.8</sub>2834

- A 14343.6<sub>23</sub>, 51/2<sup>-</sup>,  $\gamma_{12566.5}$  1777
- B 14898.6<sub>25</sub>, 51/2<sup>-</sup>,  $\gamma_{12846.6}$  2052
- C 15539<sub>3</sub>,  $\gamma_{13425.9}$  2113
- C 15755<sub>3</sub>, 53/2<sup>+</sup>,  $\gamma_{13425.9}$  2329
- C 16223<sub>3</sub>,  $\gamma_{13425.9}$  2797
- A 16611.6<sub>25</sub>, 55/2<sup>-</sup>,  $\gamma_{14343.6}$  2268
- C 18115<sub>3</sub>,  $\gamma_{15539}$  2576
- A 19436<sub>3</sub>, 59/2<sup>-</sup>,  $\gamma_{16611.6}$  2824
- E x, J  $\approx$  (41/2)
- E 1307.0+x, J+2,  $\gamma_x$  1307<sub>2</sub>
- E 2767+x, J+4,  $\gamma_{1307.0+x}$  1460<sub>2</sub>
- E 4379+x, J+6,  $\gamma_{2767+x}$  1612<sub>2</sub>
- E 6143+x, J+8,  $\gamma_{4379+x}$  1764<sub>2</sub>
- E 8055+x, J+10,  $\gamma_{6143+x}$  1912<sub>2</sub>
- E 10115+x, J+12,  $\gamma_{8055+x}$  2060<sub>2</sub>
- E 12318+x, J+14,  $\gamma_{10115+x}$  2203<sub>2</sub>
- E 14664+x, J+16,  $\gamma_{12318+x}$  2346<sub>2</sub>
- E 17153+x, J+18,  $\gamma_{14664+x}$  2489<sub>2</sub>
- E 19799+x(?), J+20,  $\gamma_{17153+x}$  2646<sub>2</sub>(?)



SD band  
(1995Ba26.1995La21)  
 $^{83}_{38}\text{Sr}_{45}$