

$^{212}\text{Rn}$        $Z = 86$        $N = 126$       adopted link      ENSDF link

Based on ENSDF from Oct 2022, and mass evaluation from 2020

BE = 1652.497 ( 0.003) MeV

|          | Energy T | J+       | J-        | J-other     | T1/2          |
|----------|----------|----------|-----------|-------------|---------------|
| -----    |          |          |           |             |               |
| S-alpha= | -6.385   | ( 0.004) | -----     |             |               |
| 212RN 1  | 0.000    | 0+       |           |             | 1 23.9 M 12   |
| 212RN 2  | 1.274    | 2+       |           |             | 2             |
| 212RN 3  | 1.501    | 4+       |           |             | 3 8.80 NS 35  |
| 212RN 4  | 1.640    | 6+       |           |             | 4 118 NS 14   |
| 212RN 5  | 1.694    | 8+       |           |             | 5 0.91 US 3   |
| 212RN 6  | 2.116    | 8+       |           |             | 6             |
| 212RN 7  |          |          |           | 2.121 3     | 7             |
| 212RN 8  |          |          |           | 2.172 (6+)  | 8             |
| 212RN 9  |          |          |           | 2.306 5(+)  | 9             |
| 212RN 10 |          |          |           | 2.314 7(+)  | 10            |
| -----    |          |          |           |             |               |
| 212RN 11 | 2.324    | 4+       |           |             | 11            |
| 212RN 12 |          |          |           | 2.403       | 12            |
| 212RN 13 |          |          |           | 2.438       | 13            |
| 212RN 14 |          |          |           | 2.455       | 14            |
| 212RN 15 |          |          |           | 2.613       | 15            |
| 212RN 16 | 2.655    | 10+      |           |             | 16            |
| 212RN 17 |          |          |           | 2.686 (6+)  | 17            |
| 212RN 18 |          |          |           | 2.696       | 18            |
| 212RN 19 |          |          | 2.761 11- |             | 19 5.5 NS 2   |
| 212RN 20 |          |          |           | 2.833       | 20            |
| -----    |          |          |           |             |               |
| 212RN 21 |          |          |           | 2.865 (6+)  | 21            |
| 212RN 22 | 2.881    | 12+      |           |             | 22 2.08 NS 14 |
| 212RN 23 |          |          |           | 2.967       | 23            |
| 212RN 24 |          |          |           | 3.066 (10+) | 24            |
| 212RN 25 |          |          |           | 3.250       | 25            |
| 212RN 26 |          |          |           | 3.278 (11)  | 26            |
| 212RN 27 | 3.298    | 12+      |           |             | 27            |
| 212RN 28 | 3.358    | 14+      |           |             | 28 7.4 NS 9   |
| 212RN 29 |          |          |           | 3.476       | 29            |
| 212RN 30 |          |          |           | 3.494       | 30            |
| -----    |          |          |           |             |               |
| 212RN 31 |          |          |           | 3.510       | 31            |
| 212RN 32 |          |          |           | 3.687 (12+) | 32            |
| 212RN 33 |          |          |           | 3.735 (13-) | 33            |
| 212RN 34 |          |          | 3.991 15- |             | 34            |
| 212RN 35 |          |          |           | 3.998       | 35            |
| 212RN 36 |          |          |           | 4.046       | 36            |
| 212RN 37 |          |          | 4.067 17- |             | 37 28.9 NS 14 |

|       |    |  |       |     |        |       |       |       |          |    |
|-------|----|--|-------|-----|--------|-------|-------|-------|----------|----|
| 212RN | 38 |  |       |     |        |       | 4.135 | (16-) |          | 38 |
| 212RN | 39 |  |       |     |        |       | 4.151 | (15-) |          | 39 |
| S-p   | =  |  | 4.301 | (   | 0.004) | ----- |       |       |          |    |
| 212RN | 40 |  |       |     | 4.582  | 17-   |       |       |          | 40 |
| 212RN | 41 |  |       |     |        |       | 4.929 |       |          | 41 |
| 212RN | 42 |  |       |     | 5.114  | 18-   |       |       |          | 42 |
| 212RN | 43 |  |       |     |        |       | 5.357 |       |          | 43 |
| 212RN | 44 |  | 5.427 | 20+ |        |       |       |       | 5.2 NS   | 5  |
| 212RN | 45 |  |       |     | 5.772  | 19-   |       |       |          | 45 |
| 212RN | 46 |  |       |     |        |       | 5.794 |       |          | 46 |
| 212RN | 47 |  | 6.167 | 20+ |        |       |       |       |          | 47 |
| 212RN | 48 |  |       |     |        |       | 6.174 | (22+) | 101.8 NS | 35 |
| 212RN | 49 |  |       |     |        |       | 6.709 | (23+) |          | 49 |
| 212RN | 50 |  |       |     |        |       | 6.821 |       |          | 50 |
| 212RN | 51 |  |       |     |        |       | 7.142 | (25-) | 18.0 NS  | 6  |
| 212RN | 52 |  |       |     |        |       | 7.178 |       |          | 52 |
| S-2p  | =  |  | 7.284 | (   | 0.003) | ----- |       |       |          |    |
| 212RN | 53 |  |       |     |        |       | 7.525 | (25-) |          | 53 |
| 212RN | 54 |  |       |     |        |       | 7.819 | (26-) |          | 54 |
| 212RN | 55 |  |       |     |        |       | 7.863 | (26-) |          | 55 |
| 212RN | 56 |  |       |     |        |       | 7.878 | (27-) | 14 NS    | 4  |
| S-n   | =  |  | 7.975 | (   | 0.007) | ----- |       |       |          |    |
| 212RN | 57 |  |       |     |        |       | 8.362 | (27-) |          | 57 |
| 212RN | 58 |  |       |     |        |       | 8.497 | (28+) |          | 58 |
| 212RN | 59 |  |       |     |        |       | 8.557 | (28+) |          | 59 |
| 212RN | 60 |  |       |     |        |       | 8.579 | (30+) | 154 NS   | 14 |
| 212RN | 61 |  |       |     |        |       | 8.933 | (30+) |          | 61 |
| 212RN | 62 |  |       |     |        |       | 9.028 |       |          | 62 |
| 212RN | 63 |  |       |     |        |       | 9.447 | (31+) |          | 63 |
| 212RN | 64 |  |       |     |        |       | 9.509 | (31+) |          | 64 |
| 212RN | 65 |  |       |     |        |       | 9.608 | (31)  |          | 65 |
| 212RN | 66 |  |       |     |        |       | 9.696 | (33-) | 4.9 NS   | 7  |

S-p = 4.301 ( 0.004)-----  
S-n = 7.975 ( 0.007)-----  
S-2p = 7.284 ( 0.003)-----  
S-2n = 15.197 ( 0.006)-----  
S-alpha= -6.385 ( 0.004)-----

S+p = -2.184 ( 0.006)  
S+n = -5.108 ( 0.005)  
S+2p = -5.826 ( 0.006)  
S+2n = -11.803 ( 0.010)  
S+alpha = 9.526 ( 0.009)

gap p = 2.117 ( 0.007)

gap n = 2.867 ( 0.009)  
gap 2p = 1.458 ( 0.007)  
gap 2n = 3.394 ( 0.011)  
gap alpha = 3.141 ( 0.009)