

$^{92}\text{Nb}$        $Z = 41$        $N = 51$       adopted link      ENSDF link

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

BE = 796.938 ( 0.002) MeV  
 Qbeta- = 0.355 ( 0.002) MeV  
 Qbeta+ = 2.006 ( 0.002) MeV

|         | Energy T | J+ | J- | J-other        | T1/2           |
|---------|----------|----|----|----------------|----------------|
| 92NB 1  | 0.000    | 7+ |    |                | 1 3.47E+7 Y 24 |
| 92NB 2  |          |    |    | 0.135 (2)+     | 2 10.15 D 2    |
| 92NB 3  |          |    |    | 0.226 (2)-     | 3 5.9 US 2     |
| 92NB 4  |          |    |    | 0.286 (3)+     | 4 1.1 NS +6-3  |
| 92NB 5  |          |    |    | 0.357 (5)+     | 5 1.91 NS 4    |
| 92NB 6  |          |    |    | 0.390 (3)-     | 6 10 NS LE     |
| 92NB 7  |          |    |    | 0.480 (4)+     | 7 0.62 NS 10   |
| 92NB 8  |          |    |    | 0.501 (6)+     | 8 0.35 NS 5    |
| 92NB 9  |          |    |    | 0.975 (1+,2-)  | 9 10 NS LE     |
| 92NB 10 |          |    |    | 1.089 (1)+     | 10 10 NS LE    |
| 92NB 11 |          |    |    | 1.150 (1-,2-)  | 11             |
| 92NB 12 |          |    |    | 1.311 (2-,3-)  | 12 10 NS LE    |
| 92NB 13 |          |    |    | 1.324 (2,3)-   | 13             |
| 92NB 14 |          |    |    | 1.345 (2+)     | 14 10 NS LE    |
| 92NB 15 |          |    |    | 1.374 -        | 15             |
| 92NB 16 |          |    |    | 1.374 +        | 16             |
| 92NB 17 |          |    |    | 1.406 (5+)     | 17             |
| 92NB 18 |          |    |    | 1.410 (5,6,7)  | 18             |
| 92NB 19 |          |    |    | 1.415 (3,4)    | 19 10 NS LE    |
| 92NB 20 |          |    |    | 1.423 (4-)     | 20 10 NS LE    |
| 92NB 21 |          |    |    | 1.468 (4+)     | 21             |
| 92NB 22 |          |    |    | 1.473 (4+)     | 22             |
| 92NB 23 |          |    |    | 1.481 (1+)     | 23             |
| 92NB 24 |          |    |    | 1.524          | 24             |
| 92NB 25 |          |    |    | 1.554 (1-,2,3) | 25 10 NS LE    |
| 92NB 26 |          |    |    | 1.566 (4)+     | 26             |
| 92NB 27 |          |    |    | 1.607 4+,5+    | 27             |
| 92NB 28 |          |    |    | 1.633 4+,5+    | 28             |
| 92NB 29 |          |    |    | 1.642 (2)-     | 29             |
| 92NB 30 |          |    |    | 1.650 (5)+     | 30             |
| 92NB 31 |          |    |    | 1.667 (1)-     | 31             |
| 92NB 32 |          |    |    | 1.678 (1)-     | 32             |
| 92NB 33 |          |    |    | 1.717 3-,4-    | 33             |
| 92NB 34 |          |    |    | 1.730 -        | 34             |
| 92NB 35 |          |    |    | 1.738 (3+)     | 35             |
| 92NB 36 |          |    |    | 1.768 (4)+     | 36             |

|         |  |  |  |       |         |    |        |  |    |
|---------|--|--|--|-------|---------|----|--------|--|----|
| 92NB 37 |  |  |  | 1.779 | -       | 37 |        |  |    |
| 92NB 38 |  |  |  | 1.816 |         | 38 |        |  |    |
| 92NB 39 |  |  |  | 1.831 | 4+,5+   | 39 |        |  |    |
| 92NB 40 |  |  |  | 1.832 | -       | 40 |        |  |    |
| -----   |  |  |  |       |         |    |        |  |    |
| 92NB 41 |  |  |  | 1.851 | -       | 41 |        |  |    |
| 92NB 42 |  |  |  | 1.875 |         | 42 |        |  |    |
| 92NB 43 |  |  |  | 1.907 | -       | 43 |        |  |    |
| 92NB 44 |  |  |  | 1.932 | -       | 44 |        |  |    |
| 92NB 45 |  |  |  | 1.945 | (7-,8+) | 45 | 6 NS   |  | LE |
| 92NB 46 |  |  |  | 1.972 | LE 5+   | 46 |        |  |    |
| 92NB 47 |  |  |  | 2.033 | +       | 47 |        |  |    |
| 92NB 48 |  |  |  | 2.056 | 4+,5+   | 48 |        |  |    |
| 92NB 49 |  |  |  | 2.082 | -       | 49 |        |  |    |
| 92NB 50 |  |  |  | 2.088 | (9)-    | 50 | 6 NS   |  | LE |
| -----   |  |  |  |       |         |    |        |  |    |
| 92NB 51 |  |  |  | 2.128 | LE 5+   | 51 |        |  |    |
| 92NB 52 |  |  |  | 2.142 | LE 5+   | 52 |        |  |    |
| 92NB 53 |  |  |  | 2.147 | (-)     | 53 |        |  |    |
| 92NB 54 |  |  |  | 2.162 | (+)     | 54 |        |  |    |
| 92NB 55 |  |  |  | 2.203 | (11-)   | 55 | 167 NS |  | 4  |
| 92NB 56 |  |  |  | 2.213 | (+)     | 56 |        |  |    |
| 92NB 57 |  |  |  | 2.236 | (10-)   | 57 | 6 NS   |  | LE |
| 92NB 58 |  |  |  | 2.240 | LE 5+   | 58 |        |  |    |
| 92NB 59 |  |  |  | 2.243 | -       | 59 |        |  |    |
| 92NB 60 |  |  |  | 2.254 | (3-)    | 60 |        |  |    |
| -----   |  |  |  |       |         |    |        |  |    |
| 92NB 61 |  |  |  | 2.271 | -       | 61 |        |  |    |
| 92NB 62 |  |  |  | 2.287 | (9+)    | 62 | 6 NS   |  | LE |
| 92NB 63 |  |  |  | 2.292 | (+)     | 63 |        |  |    |
| 92NB 64 |  |  |  | 2.294 | -       | 64 |        |  |    |
| 92NB 65 |  |  |  | 2.311 |         | 65 |        |  |    |
| 92NB 66 |  |  |  | 2.335 |         | 66 |        |  |    |
| 92NB 67 |  |  |  | 2.362 | +       | 67 |        |  |    |
| 92NB 68 |  |  |  | 2.391 | -       | 68 |        |  |    |
| 92NB 69 |  |  |  | 2.403 | (+)     | 69 |        |  |    |
| 92NB 70 |  |  |  | 2.407 | -       | 70 |        |  |    |
| -----   |  |  |  |       |         |    |        |  |    |
| 92NB 71 |  |  |  | 2.433 | LE 5+   | 71 |        |  |    |
| 92NB 72 |  |  |  | 2.463 | (4,5)+  | 72 |        |  |    |
| 92NB 73 |  |  |  | 2.498 |         | 73 |        |  |    |
| 92NB 74 |  |  |  | 2.515 |         | 74 |        |  |    |
| 92NB 75 |  |  |  | 2.530 | +       | 75 |        |  |    |
| 92NB 76 |  |  |  | 2.563 | +       | 76 |        |  |    |
| 92NB 77 |  |  |  | 2.580 | (10-)   | 77 |        |  |    |
| 92NB 78 |  |  |  | 2.594 | (+)     | 78 |        |  |    |
| 92NB 79 |  |  |  | 2.610 | LE 5+   | 79 |        |  |    |
| 92NB 80 |  |  |  | 2.656 | (+)     | 80 |        |  |    |
| -----   |  |  |  |       |         |    |        |  |    |
| 92NB 81 |  |  |  | 2.666 | -       | 81 |        |  |    |

|          |  |  |       |         |             |
|----------|--|--|-------|---------|-------------|
| 92NB 82  |  |  | 2.680 | +       | 82          |
| 92NB 83  |  |  | 2.700 | (+)     | 83          |
| 92NB 84  |  |  | 2.720 | (+)     | 84          |
| 92NB 85  |  |  | 2.739 | +       | 85          |
| 92NB 86  |  |  | 2.756 |         | 86          |
| 92NB 87  |  |  | 2.785 |         | 87          |
| 92NB 88  |  |  | 2.802 | (3)-    | 88          |
| 92NB 89  |  |  | 2.811 | LE 5+   | 89          |
| 92NB 90  |  |  | 2.832 |         | 90          |
| -----    |  |  |       |         |             |
| 92NB 91  |  |  | 2.867 | (+)     | 91          |
| 92NB 92  |  |  | 2.905 |         | 92          |
| 92NB 93  |  |  | 2.926 |         | 93          |
| 92NB 94  |  |  | 2.948 | (6,5)+  | 94          |
| 92NB 95  |  |  | 2.964 |         | 95          |
| 92NB 96  |  |  | 2.981 |         | 96          |
| 92NB 97  |  |  | 2.998 | (11+)   | 97 6 NS LE  |
| 92NB 98  |  |  | 3.010 |         | 98          |
| 92NB 99  |  |  | 3.020 |         | 99          |
| 92NB 100 |  |  | 3.045 | (4,3)+  | 100         |
| -----    |  |  |       |         |             |
| 92NB 101 |  |  | 3.064 |         | 101         |
| 92NB 102 |  |  | 3.072 |         | 102         |
| 92NB 103 |  |  | 3.090 | LE 5+   | 103         |
| 92NB 104 |  |  | 3.110 | -       | 104         |
| 92NB 105 |  |  | 3.119 | (3+,4+) | 105         |
| 92NB 106 |  |  | 3.134 |         | 106         |
| 92NB 107 |  |  | 3.142 |         | 107         |
| 92NB 108 |  |  | 3.160 |         | 108         |
| 92NB 109 |  |  | 3.185 |         | 109         |
| 92NB 110 |  |  | 3.200 |         | 110         |
| -----    |  |  |       |         |             |
| 92NB 111 |  |  | 3.228 |         | 111         |
| 92NB 112 |  |  | 3.242 |         | 112         |
| 92NB 113 |  |  | 3.260 |         | 113         |
| 92NB 114 |  |  | 3.280 | LE 5+   | 114         |
| 92NB 115 |  |  | 3.294 | LE 5+   | 115         |
| 92NB 116 |  |  | 3.316 | -       | 116         |
| 92NB 117 |  |  | 3.326 | (13+)   | 117 6 NS LE |
| 92NB 118 |  |  | 3.330 | LE 5+   | 118         |
| 92NB 119 |  |  | 3.342 | -       | 119         |
| 92NB 120 |  |  | 3.345 | LE 5+   | 120         |
| -----    |  |  |       |         |             |
| 92NB 121 |  |  | 3.372 | LE 5+   | 121         |
| 92NB 122 |  |  | 3.385 | LE 5+   | 122         |
| 92NB 123 |  |  | 3.403 | -       | 123         |
| 92NB 124 |  |  | 3.445 | LE 5+   | 124         |
| 92NB 125 |  |  | 3.455 | -       | 125         |
| 92NB 126 |  |  | 3.489 | (+)     | 126         |
| 92NB 127 |  |  | 3.516 | -       | 127         |

|          |       |          |          |         |              |
|----------|-------|----------|----------|---------|--------------|
| 92NB 128 |       |          | 3.530    | LE 5+   | 128          |
| 92NB 129 |       |          | 3.550    |         | 129          |
| 92NB 130 |       |          | 3.560    |         | 130          |
| -----    |       |          |          |         |              |
| 92NB 131 |       |          | 3.580    |         | 131          |
| 92NB 132 |       |          | 3.590    |         | 132          |
| 92NB 133 |       |          | 3.619    | LE 5+   | 133          |
| 92NB 134 |       |          | 3.650    | LE 5+   | 134          |
| 92NB 135 |       |          | 3.665    | -       | 135          |
| 92NB 136 |       |          | 3.672    | LE 5+   | 136          |
| 92NB 137 |       |          | 3.696    | LE 5+   | 137          |
| 92NB 138 |       |          | 3.716    | -       | 138          |
| 92NB 139 |       |          | 3.753    | +       | 139          |
| 92NB 140 |       |          | 3.790    |         | 140          |
| -----    |       |          |          |         |              |
| 92NB 141 |       |          | 3.797    | (12,13) | 141 6 NS LE  |
| 92NB 142 |       |          | 3.805    | -       | 142          |
| 92NB 143 |       |          | 3.837    |         | 143          |
| 92NB 144 |       |          | 3.875    |         | 144          |
| 92NB 145 |       |          | 3.882    |         | 145          |
| 92NB 146 |       |          | 3.920    |         | 146          |
| 92NB 147 |       |          | 4.032    |         | 147          |
| 92NB 148 |       |          | 4.079    | -       | 148          |
| 92NB 149 |       |          | 4.135    | +       | 149          |
| 92NB 150 |       |          | 4.172    |         | 150          |
| -----    |       |          |          |         |              |
| 92NB 151 |       |          | 4.285    |         | 151          |
| 92NB 152 |       |          | 4.355    |         | 152          |
| 92NB 153 |       |          | 4.450    |         | 153          |
| S-alpha= | 4.579 | ( 0.002) | -----    |         |              |
| 92NB 154 |       |          | 4.830    |         | 154          |
| 92NB 155 |       |          | 4.930    |         | 155          |
| 92NB 156 |       |          | 5.210    |         | 156          |
| 92NB 157 |       |          | 5.620    |         | 157          |
| S-p      | =     | 5.847    | ( 0.002) | -----   |              |
| 92NB 158 |       |          | 6.000    | (+)     | 158          |
| 92NB 159 |       |          | 6.280    | (+)     | 159          |
| S-n      | =     | 7.887    | ( 0.003) | -----   |              |
| 92NB 160 |       |          | 9.008    | (0+)    | 160          |
| -----    |       |          |          |         |              |
| 92NB 161 |       |          | 9.956    | (2+)    | 161 33 KEV 2 |
| -----    |       |          |          |         |              |
| S-p      | =     | 5.847    | ( 0.002) | -----   |              |
| S-n      | =     | 7.887    | ( 0.003) | -----   |              |
| S-2p     | =     | 14.534   | ( 0.002) | -----   |              |
| S-2n     | =     | 19.934   | ( 0.004) | -----   |              |
| S-alpha= | 4.579 | ( 0.002) | -----    |         |              |
| S+p      | =     | -7.643   | ( 0.002) | -----   |              |

S+n = -8.831 ( 0.002)  
S+2p = -12.283 ( 0.004)  
S+2n = -16.058 ( 0.002)  
S+alpha = -1.793 ( 0.005)

gap p = -1.796 ( 0.003)  
gap n = -0.944 ( 0.004)  
gap 2p = 2.251 ( 0.005)  
gap 2n = 3.876 ( 0.004)  
gap alpha = 2.786 ( 0.006)