

$^{175}\text{Lu}$        $Z = 71$        $N = 104$       adopted link      ENSDF link

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

BE      =      1412.100 ( 0.001) MeV

|          | Energy T | J+       | J-    | J-other       | T1/2          |
|----------|----------|----------|-------|---------------|---------------|
| -----    |          |          |       |               |               |
| S-alpha= | -1.620   | ( 0.002) | ----- |               |               |
| 175LU 1  | 0.000    | 7/2+     |       |               | 1 STABLE      |
| 175LU 2  | 0.114    | 9/2+     |       |               | 2 90 PS 4     |
| 175LU 3  | 0.251    | 11/2+    |       |               | 3 32.4 PS 16  |
| 175LU 4  | 0.343    | 5/2+     |       |               | 4 0.281 NS 10 |
| 175LU 5  |          |          | 0.353 | 5/2-          | 5 1.49 US 7   |
| 175LU 6  |          |          |       | 0.371 (1/2-)  | 6             |
| 175LU 7  |          |          | 0.396 | 9/2-          | 7 3.28 NS 6   |
| 175LU 8  | 0.412    | 13/2+    |       |               | 8 12.7 PS 4   |
| 175LU 9  |          |          |       | 0.415 (9/2-)  | 9             |
| 175LU 10 | 0.433    | 7/2+     |       |               | 10 0.1 NS LT  |
| -----    |          |          |       |               |               |
| 175LU 11 |          |          |       | 0.515 (3/2-)  | 11            |
| 175LU 12 |          |          |       | 0.529 (11/2-) | 12            |
| 175LU 13 |          |          |       | 0.546 (9/2+)  | 13            |
| 175LU 14 |          |          |       | 0.562 (13/2-) | 14            |
| 175LU 15 | 0.595    | 15/2+    |       |               | 15 7.65 PS 13 |
| 175LU 16 |          |          |       | 0.627 (1/2+)  | 16 10.6 NS 5  |
| 175LU 17 |          |          |       | 0.633 (3/2+)  | 17            |
| 175LU 18 |          |          |       | 0.673 (7/2-)  | 18            |
| 175LU 19 |          |          |       | 0.684 (11/2+) | 19            |
| 175LU 20 |          |          |       | 0.685 (13/2-) | 20            |
| -----    |          |          |       |               |               |
| 175LU 21 |          |          |       | 0.757 (5/2+)  | 21            |
| 175LU 22 |          |          |       | 0.773 (7/2+)  | 22            |
| 175LU 23 |          |          |       | 0.798 (17/2-) | 23            |
| 175LU 24 | 0.800    | 17/2+    |       |               | 24 4.05 PS 14 |
| 175LU 25 |          |          |       | 0.845 (13/2+) | 25            |
| 175LU 26 |          |          |       | 0.864 (15/2-) | 26            |
| 175LU 27 |          |          |       | 0.866         | 27            |
| 175LU 28 |          |          |       | 0.886 (11/2-) | 28            |
| 175LU 29 |          |          |       | 0.960         | 29            |
| 175LU 30 |          |          |       | 0.990 (9/2+)  | 30            |
| -----    |          |          |       |               |               |
| 175LU 31 |          |          |       | 0.999 (3/2-)  | 31            |
| 175LU 32 |          |          |       | 1.005 (7/2-)  | 32            |
| 175LU 33 |          |          |       | 1.020 (11/2+) | 33            |
| 175LU 34 | 1.024    | 19/2+    |       |               | 34 2.25 PS 17 |
| 175LU 35 | 1.028    | 15/2+    |       |               | 35            |
| 175LU 36 |          |          |       | 1.063 (5/2-)  | 36            |
| 175LU 37 |          |          |       | 1.064 (17/2-) | 37            |

|          |  |  |  |       |         |    |         |    |
|----------|--|--|--|-------|---------|----|---------|----|
| 175LU 38 |  |  |  | 1.112 | (9/2-)  | 38 |         |    |
| 175LU 39 |  |  |  | 1.122 | (21/2-) | 39 |         |    |
| 175LU 40 |  |  |  | 1.151 | (3/2+)  | 40 |         |    |
| -----    |  |  |  |       |         |    |         |    |
| 175LU 41 |  |  |  | 1.167 | (15/2-) | 41 |         |    |
| 175LU 42 |  |  |  | 1.180 | (7/2-)  | 42 |         |    |
| 175LU 43 |  |  |  | 1.219 | (5/2+)  | 43 |         |    |
| 175LU 44 |  |  |  | 1.233 | (17/2+) | 44 |         |    |
| 175LU 45 |  |  |  | 1.242 | (11/2-) | 45 |         |    |
| 175LU 46 |  |  |  | 1.269 | (21/2+) | 46 | 1.52 PS | 12 |
| 175LU 47 |  |  |  | 1.270 | (9/2-)  | 47 |         |    |
| 175LU 48 |  |  |  | 1.285 | (19/2-) | 48 |         |    |
| 175LU 49 |  |  |  | 1.312 | (7/2+)  | 49 |         |    |
| 175LU 50 |  |  |  | 1.317 | (3/2-)  | 50 |         |    |
| -----    |  |  |  |       |         |    |         |    |
| 175LU 51 |  |  |  | 1.317 | (13/2+) | 51 |         |    |
| 175LU 52 |  |  |  | 1.346 | (3/2+)  | 52 |         |    |
| 175LU 53 |  |  |  | 1.364 | (15/2+) | 53 |         |    |
| 175LU 54 |  |  |  | 1.392 | (19/2+) | 54 | 984 US  | 30 |
| 175LU 55 |  |  |  | 1.394 | (13/2-) | 55 |         |    |
| 175LU 56 |  |  |  | 1.401 |         | 56 |         |    |
| 175LU 57 |  |  |  | 1.415 | (7/2-)  | 57 |         |    |
| 175LU 58 |  |  |  | 1.435 | (9/2+)  | 58 |         |    |
| 175LU 59 |  |  |  | 1.437 |         | 59 |         |    |
| 175LU 60 |  |  |  | 1.511 |         | 60 |         |    |
| -----    |  |  |  |       |         |    |         |    |
| 175LU 61 |  |  |  | 1.527 | (21/2-) | 61 |         |    |
| 175LU 62 |  |  |  | 1.531 | (23/2+) | 62 | 1.05 PS | 9  |
| 175LU 63 |  |  |  | 1.545 | (7/2-)  | 63 |         |    |
| 175LU 64 |  |  |  | 1.566 |         | 64 |         |    |
| 175LU 65 |  |  |  | 1.574 | (11/2+) | 65 |         |    |
| 175LU 66 |  |  |  | 1.588 |         | 66 |         |    |
| 175LU 67 |  |  |  | 1.611 | (9/2-)  | 67 |         |    |
| 175LU 68 |  |  |  | 1.622 |         | 68 |         |    |
| 175LU 69 |  |  |  | 1.638 | (11/2-) | 69 |         |    |
| 175LU 70 |  |  |  | 1.644 |         | 70 |         |    |
| -----    |  |  |  |       |         |    |         |    |
| 175LU 71 |  |  |  | 1.689 |         | 71 |         |    |
| 175LU 72 |  |  |  | 1.693 |         | 72 |         |    |
| 175LU 73 |  |  |  | 1.704 | (9/2-)  | 73 |         |    |
| 175LU 74 |  |  |  | 1.715 |         | 74 |         |    |
| 175LU 75 |  |  |  | 1.725 |         | 75 |         |    |
| 175LU 76 |  |  |  | 1.732 |         | 76 |         |    |
| 175LU 77 |  |  |  | 1.752 |         | 77 |         |    |
| 175LU 78 |  |  |  | 1.785 |         | 78 |         |    |
| 175LU 79 |  |  |  | 1.799 |         | 79 |         |    |
| 175LU 80 |  |  |  | 1.811 | (25/2+) | 80 | 0.72 PS | 9  |
| -----    |  |  |  |       |         |    |         |    |
| 175LU 81 |  |  |  | 1.816 |         | 81 |         |    |
| 175LU 82 |  |  |  | 1.827 |         | 82 |         |    |

|           |  |  |       |         |     |
|-----------|--|--|-------|---------|-----|
| 175LU 83  |  |  | 1.874 |         | 83  |
| 175LU 84  |  |  | 1.899 |         | 84  |
| 175LU 85  |  |  | 1.931 |         | 85  |
| 175LU 86  |  |  | 1.945 |         | 86  |
| 175LU 87  |  |  | 1.949 |         | 87  |
| 175LU 88  |  |  | 1.977 |         | 88  |
| 175LU 89  |  |  | 1.981 |         | 89  |
| 175LU 90  |  |  | 1.992 |         | 90  |
| -----     |  |  |       |         |     |
| 175LU 91  |  |  | 2.012 |         | 91  |
| 175LU 92  |  |  | 2.089 |         | 92  |
| 175LU 93  |  |  | 2.106 | (27/2+) | 93  |
| 175LU 94  |  |  | 2.123 |         | 94  |
| 175LU 95  |  |  | 2.207 |         | 95  |
| 175LU 96  |  |  | 2.286 |         | 96  |
| 175LU 97  |  |  | 2.297 |         | 97  |
| 175LU 98  |  |  | 2.320 |         | 98  |
| 175LU 99  |  |  | 2.335 |         | 99  |
| 175LU 100 |  |  | 2.379 |         | 100 |
| -----     |  |  |       |         |     |
| 175LU 101 |  |  | 2.386 |         | 101 |
| 175LU 102 |  |  | 2.394 |         | 102 |
| 175LU 103 |  |  | 2.410 |         | 103 |
| 175LU 104 |  |  | 2.419 |         | 104 |
| 175LU 105 |  |  | 2.442 |         | 105 |
| 175LU 106 |  |  | 2.497 |         | 106 |
| 175LU 107 |  |  | 2.527 |         | 107 |
| 175LU 108 |  |  | 2.548 |         | 108 |
| 175LU 109 |  |  | 2.707 |         | 109 |
| 175LU 110 |  |  | 2.713 |         | 110 |
| -----     |  |  |       |         |     |
| 175LU 111 |  |  | 2.742 |         | 111 |
| 175LU 112 |  |  | 2.760 |         | 112 |
| 175LU 113 |  |  | 2.833 |         | 113 |
| 175LU 114 |  |  | 2.843 |         | 114 |
| 175LU 115 |  |  | 2.865 |         | 115 |
| 175LU 116 |  |  | 2.890 |         | 116 |
| 175LU 117 |  |  | 2.897 |         | 117 |
| 175LU 118 |  |  | 2.952 |         | 118 |
| 175LU 119 |  |  | 2.998 |         | 119 |
| 175LU 120 |  |  | 3.002 |         | 120 |
| -----     |  |  |       |         |     |
| 175LU 121 |  |  | 3.011 |         | 121 |
| 175LU 122 |  |  | 3.022 |         | 122 |
| 175LU 123 |  |  | 3.029 |         | 123 |
| 175LU 124 |  |  | 3.066 |         | 124 |
| 175LU 125 |  |  | 3.172 |         | 125 |
| 175LU 126 |  |  | 3.238 |         | 126 |
| 175LU 127 |  |  | 3.243 |         | 127 |
| 175LU 128 |  |  | 3.267 |         | 128 |

|           |  |  |       |     |
|-----------|--|--|-------|-----|
| 175LU 129 |  |  | 3.286 | 129 |
| 175LU 130 |  |  | 3.293 | 130 |
| -----     |  |  |       |     |
| 175LU 131 |  |  | 3.300 | 131 |
| 175LU 132 |  |  | 3.329 | 132 |
| 175LU 133 |  |  | 3.333 | 133 |
| 175LU 134 |  |  | 3.343 | 134 |
| 175LU 135 |  |  | 3.347 | 135 |
| 175LU 136 |  |  | 3.398 | 136 |
| 175LU 137 |  |  | 3.404 | 137 |
| 175LU 138 |  |  | 3.524 | 138 |

S-p = 5.510 ( 0.001)-----  
S-n = 7.667 ( 0.002)-----  
S-2p = 13.488 ( 0.005)-----  
S-2n = 14.427 ( 0.002)-----  
S-alpha= -1.620 ( 0.002)-----

S+p = -6.700 ( 0.002)  
S+n = -6.288 ( 0.002)  
S+2p = -11.127 ( 0.004)  
S+2n = -13.361 ( 0.002)  
S+alpha = 2.383 ( 0.002)

gap p = -1.189 ( 0.002)  
gap n = 1.379 ( 0.003)  
gap 2p = 2.360 ( 0.006)  
gap 2n = 1.067 ( 0.003)  
gap alpha = 0.764 ( 0.002)