

$^{132}\text{Nd}$        $Z = 60$        $N = 72$       adopted link      ENSDF link

Based on ensdf\_240402 (Apr 2024), and mass evaluation from 2020

BE = 1089.899 ( 0.024) MeV

Qbeta+ = 3.802 ( 0.038) MeV

|          | Energy T | J+       | J-    | J-other | T1/2          |
|----------|----------|----------|-------|---------|---------------|
| -----    |          |          |       |         |               |
| S-alpha= | -1.683   | ( 0.037) | ----- |         |               |
| -----    |          |          |       |         |               |
| 132ND 1  | 0.000    | 0+       |       |         | 1 94 S 8      |
| 132ND 2  | 0.213    | 2+       |       |         | 2 133 PS 8    |
| 132ND 3  | 0.611    | 4+       |       |         | 3 7.62 PS 28  |
| 132ND 4  | 0.824    | (2+)     |       |         | 4             |
| 132ND 5  | 1.022    | 4+       |       |         | 5             |
| 132ND 6  | 1.118    | (3+)     |       |         | 6             |
| 132ND 7  | 1.133    | 6+       |       |         | 7 1.59 PS 14  |
| 132ND 8  | 1.388    | (4+)     |       |         | 8             |
| 132ND 9  | 1.633    | (6+)     |       |         | 9             |
| 132ND 10 | 1.712    | 8+       |       |         | 10 1.04 PS 14 |
| -----    |          |          |       |         |               |
| 132ND 11 |          |          | 1.884 | (5-)    | 11            |
| 132ND 12 | 2.179    | (8+)     |       |         | 12            |
| 132ND 13 |          |          | 2.226 | (7-)    | 13            |
| 132ND 14 | 2.312    | 10+      |       |         | 14 2 PS LT    |
| 132ND 15 |          |          | 2.346 | (6-)    | 15            |
| 132ND 16 |          |          | 2.691 | (9-)    | 16            |
| 132ND 17 |          |          | 2.698 | (8-)    | 17            |
| 132ND 18 | 2.850    | (10+)    |       |         | 18            |
| 132ND 19 | 2.948    | (12+)    |       |         | 19            |
| 132ND 20 |          |          | 2.961 | (9-)    | 20            |
| -----    |          |          |       |         |               |
| 132ND 21 |          |          | 3.110 | (10-)   | 21            |
| 132ND 22 |          |          | 3.256 | (11-)   | 22            |
| 132ND 23 | 3.288    | (12+)    |       |         | 23            |
| 132ND 24 |          |          | 3.498 | (11-)   | 24            |
| 132ND 25 | 3.634    | (14+)    |       |         | 25            |
| 132ND 26 |          |          | 3.659 | 12-     | 26            |
| 132ND 27 | 3.848    | (14+)    |       |         | 27            |
| 132ND 28 |          |          | 3.907 | (13-)   | 28            |
| 132ND 29 |          |          | 4.164 | (13-)   | 29            |
| 132ND 30 |          |          | 4.304 | (14-)   | 30            |
| -----    |          |          |       |         |               |
| 132ND 31 | 4.373    | (16+)    |       |         | 31            |
| 132ND 32 | 4.381    | (16+)    |       |         | 32            |
| S-p =    | 4.414    | ( 0.053) | ----- |         |               |
| 132ND 33 | 4.578    | (16+)    |       |         | 33            |
| 132ND 34 |          |          | 4.620 | (15-)   | 34            |

|       |    |        |         |       |       |               |    |  |
|-------|----|--------|---------|-------|-------|---------------|----|--|
| 132ND | 35 |        |         | 4.906 | (15-) |               | 35 |  |
| 132ND | 36 |        |         | 4.996 | (16-) |               | 36 |  |
| 132ND | 37 | 5.185  | (18+)   |       |       |               | 37 |  |
| 132ND | 38 |        |         | 5.368 | (17-) |               | 38 |  |
| 132ND | 39 | 5.431  | (18+)   |       |       |               | 39 |  |
| 132ND | 40 |        |         | 5.670 | (17-) |               | 40 |  |
| ----- |    |        |         |       |       |               |    |  |
| 132ND | 41 |        |         | 5.733 | (18-) |               | 41 |  |
| 132ND | 42 | 6.068  | (20+)   |       |       |               | 42 |  |
| 132ND | 43 | 6.162  | (18+)   |       |       |               | 43 |  |
| 132ND | 44 |        |         | 6.165 | (19-) |               | 44 |  |
| 132ND | 45 |        |         |       |       | 6.221 (17,18) | 45 |  |
| 132ND | 46 | 6.337  | (18+)   |       |       |               | 46 |  |
| 132ND | 47 | 6.379  | 20+     |       |       |               | 47 |  |
| 132ND | 48 |        |         | 6.434 | (19-) |               | 48 |  |
| 132ND | 49 |        |         | 6.556 | (20-) |               | 49 |  |
| S-2p  | =  | 6.581  | (0.037) | ----- |       |               |    |  |
| 132ND | 50 |        |         |       |       | 6.587 (18,19) | 50 |  |
| ----- |    |        |         |       |       |               |    |  |
| 132ND | 51 | 6.991  | (20+)   |       |       |               | 51 |  |
| 132ND | 52 | 7.013  | (22+)   |       |       |               | 52 |  |
| 132ND | 53 |        |         |       |       | 7.015 (19,20) | 53 |  |
| 132ND | 54 |        |         | 7.053 | (21-) |               | 54 |  |
| 132ND | 55 | 7.069  | (20+)   |       |       |               | 55 |  |
| 132ND | 56 |        |         | 7.231 | (21-) |               | 56 |  |
| 132ND | 57 | 7.413  | (22+)   |       |       |               | 57 |  |
| 132ND | 58 |        |         |       |       | 7.435 (20,21) | 58 |  |
| 132ND | 59 |        |         | 7.487 | (22-) |               | 59 |  |
| 132ND | 60 | 7.847  | (22+)   |       |       |               | 60 |  |
| ----- |    |        |         |       |       |               |    |  |
| 132ND | 61 |        |         |       |       | 7.877 (21,22) | 61 |  |
| 132ND | 62 | 8.015  | (24+)   |       |       |               | 62 |  |
| 132ND | 63 |        |         | 8.045 | (23-) |               | 63 |  |
| 132ND | 64 |        |         | 8.080 | (23-) |               | 64 |  |
| 132ND | 65 |        |         |       |       | 8.333 (22,23) | 65 |  |
| 132ND | 66 |        |         | 8.526 | (24-) |               | 66 |  |
| 132ND | 67 | 8.527  | (24+)   |       |       |               | 67 |  |
| 132ND | 68 | 8.724  | 24+     |       |       |               | 68 |  |
| 132ND | 69 |        |         |       |       | 8.806 (23,24) | 69 |  |
| 132ND | 70 |        |         | 8.981 | (25-) |               | 70 |  |
| ----- |    |        |         |       |       |               |    |  |
| 132ND | 71 | 9.077  | (26+)   |       |       |               | 71 |  |
| 132ND | 72 |        |         | 9.146 | (25-) |               | 72 |  |
| 132ND | 73 |        |         |       |       | 9.291 (24,25) | 73 |  |
| 132ND | 74 |        |         | 9.663 | (26-) |               | 74 |  |
| 132ND | 75 | 9.667  | (26+)   |       |       |               | 75 |  |
| 132ND | 76 | 9.719  | (26+)   |       |       |               | 76 |  |
| 132ND | 77 |        |         |       |       | 9.798 (25,26) | 77 |  |
| 132ND | 78 |        |         | 9.948 | (27-) |               | 78 |  |
| 132ND | 79 | 10.207 | (28+)   |       |       |               | 79 |  |

|       |     |        |          |        |         |     |
|-------|-----|--------|----------|--------|---------|-----|
| 132ND | 80  |        |          | 10.323 | (26,27) | 80  |
| ----- |     |        |          |        |         |     |
| 132ND | 81  |        | 10.341   | (27-)  |         | 81  |
| 132ND | 82  | 10.676 | (28+)    |        |         | 82  |
| 132ND | 83  |        |          | 10.863 | (27,28) | 83  |
| 132ND | 84  |        | 10.892   | (28-)  |         | 84  |
| 132ND | 85  |        | 10.982   | (29-)  |         | 85  |
| 132ND | 86  | 10.983 | (28+)    |        |         | 86  |
| 132ND | 87  | 11.411 | (30+)    |        |         | 87  |
| 132ND | 88  |        |          | 11.419 | (28,29) | 88  |
| 132ND | 89  |        | 11.599   | (29-)  |         | 89  |
| S-n   | =   | 11.729 | ( 0.037) |        |         |     |
| ----- |     |        |          |        |         |     |
| 132ND | 90  | 11.746 | (30+)    |        |         | 90  |
| ----- |     |        |          |        |         |     |
| 132ND | 91  |        |          | 11.996 | (29,30) | 91  |
| 132ND | 92  |        | 12.091   | (31-)  |         | 92  |
| 132ND | 93  |        | 12.211   | (30-)  |         | 93  |
| 132ND | 94  | 12.310 | (30+)    |        |         | 94  |
| 132ND | 95  |        |          | 12.582 | (30,31) | 95  |
| 132ND | 96  | 12.693 | (32+)    |        |         | 96  |
| 132ND | 97  | 12.883 | (32+)    |        |         | 97  |
| 132ND | 98  |        |          | 13.196 | (31,32) | 98  |
| 132ND | 99  |        | 13.279   | (33-)  |         | 99  |
| 132ND | 100 |        |          | 13.812 | (32,33) | 100 |
| ----- |     |        |          |        |         |     |
| 132ND | 101 | 14.051 | (34+)    |        |         | 101 |
| 132ND | 102 | 14.094 | (34+)    |        |         | 102 |
| 132ND | 103 |        |          | 14.464 | (33,34) | 103 |
| 132ND | 104 |        | 14.549   | (35-)  |         | 104 |
| 132ND | 105 |        |          | 15.111 | (34,35) | 105 |
| 132ND | 106 | 15.364 | (36+)    |        |         | 106 |
| 132ND | 107 | 15.507 | (36+)    |        |         | 107 |
| 132ND | 108 |        |          | 15.799 | (35,36) | 108 |
| 132ND | 109 |        | 15.905   | (37-)  |         | 109 |
| 132ND | 110 |        |          | 16.480 | (36,37) | 110 |
| ----- |     |        |          |        |         |     |
| 132ND | 111 | 16.720 | (38+)    |        |         | 111 |
| 132ND | 112 | 17.041 | (38+)    |        |         | 112 |
| 132ND | 113 |        |          | 17.202 | (37,38) | 113 |
| 132ND | 114 |        | 17.350   | (39-)  |         | 114 |
| 132ND | 115 |        |          | 17.923 | (38,39) | 115 |
| 132ND | 116 | 18.155 | (40+)    |        |         | 116 |
| 132ND | 117 | 18.654 | (40+)    |        |         | 117 |
| 132ND | 118 |        |          | 18.676 | (39,40) | 118 |
| 132ND | 119 |        | 18.888   | (41-)  |         | 119 |
| 132ND | 120 |        |          | 19.441 | (40,41) | 120 |
| ----- |     |        |          |        |         |     |
| 132ND | 121 | 19.674 | (42+)    |        |         | 121 |

S-p = 4.414 ( 0.053) -----  
S-n = 11.729 ( 0.037) -----  
S-2p = 6.581 ( 0.037) -----  
S-2n = 20.972 ( 0.037) -----  
S-alpha= -1.683 ( 0.037) -----

S+p = -1.271 ( 0.056)  
S+n = -8.978 ( 0.052)  
S+2p = -4.479 ( 0.136)  
S+2n = -20.363 ( 0.027)  
S+alpha = 2.190 ( 0.027)

gap p = 3.144 ( 0.077)  
gap n = 2.751 ( 0.064)  
gap 2p = 2.102 ( 0.141)  
gap 2n = 0.609 ( 0.046)  
gap alpha = 0.507 ( 0.046)