

^{198}Au $Z = 79$ $N = 119$ adopted link ENSDF link

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

BE = 1565.896 (0.001) MeV
 Qbeta- = 1.374 (0.001) MeV
 Qbeta+ = 0.323 (0.002) MeV

| | Energy T | J+ | | J- | | J-other | | T1/2 |
|----------|----------|----------|-------|-------|----|---------|-------|---------------|
| ----- | | | | | | | | |
| S-alpha= | -0.526 | (0.001) | ----- | | | | | |
| 198AU 1 | | | | 0.000 | 2- | | | 1 2.6941 D 2 |
| 198AU 2 | | | | 0.055 | 1- | | | 2 0.28 NS 14 |
| 198AU 3 | | | | 0.091 | 0- | | | 3 |
| 198AU 4 | | | | 0.193 | 1- | | | 4 0.7 NS 2 |
| 198AU 5 | | | | 0.215 | 4- | | | 5 0.4 NS 2 |
| 198AU 6 | | | | 0.236 | 3- | | | 6 0.15 NS LE |
| 198AU 7 | | | | 0.248 | 1- | | | 7 0.4 NS 1 |
| 198AU 8 | | | | 0.259 | 1- | | | 8 0.2 NS LE |
| 198AU 9 | | | | 0.261 | 2- | | | 9 0.2 NS LE |
| 198AU 10 | 0.312 | 5+ | | | | | | 10 124 NS 4 |
| ----- | | | | | | | | |
| 198AU 11 | | | | 0.328 | 3- | | | 11 0.15 NS LE |
| 198AU 12 | | | | 0.339 | 1- | | | 12 0.4 NS LE |
| 198AU 13 | | | | 0.347 | 2- | | | 13 0.15 NS LE |
| 198AU 14 | | | | | | 0.359 | | 14 |
| 198AU 15 | | | | 0.363 | 2- | | | 15 0.15 NS LE |
| 198AU 16 | | | | 0.368 | 1- | | | 16 0.15 NS LE |
| 198AU 17 | 0.381 | 3+ | | | | | | 17 2.3 NS 2 |
| 198AU 18 | | | | | | 0.397 | (+) | 18 |
| 198AU 19 | | | | 0.406 | 2- | | | 19 |
| 198AU 20 | | | | 0.450 | 3- | | | 20 |
| ----- | | | | | | | | |
| 198AU 21 | | | | 0.454 | 2- | | | 21 |
| 198AU 22 | 0.482 | 4+ | | | | | | 22 |
| 198AU 23 | | | | 0.496 | 1- | | | 23 |
| 198AU 24 | | | | 0.512 | 3- | | | 24 |
| 198AU 25 | 0.516 | 6+ | | | | | | 25 |
| 198AU 26 | | | | 0.529 | 3- | | | 26 |
| 198AU 27 | | | | 0.530 | 1- | | | 27 |
| 198AU 28 | | | | 0.544 | 4- | | | 28 |
| 198AU 29 | | | | 0.549 | 2- | | | 29 |
| 198AU 30 | | | | 0.571 | 1- | | | 30 |
| ----- | | | | | | | | |
| 198AU 31 | | | | | | 0.573 | | 31 |
| 198AU 32 | | | | | | 0.596 | | 32 |
| 198AU 33 | | | | 0.625 | 3- | | | 33 |
| 198AU 34 | | | | | | 0.632 | 1-,2- | 34 |
| 198AU 35 | 0.637 | 4+ | | | | | | 35 |

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|----------|--|-------|----|--|-------|----|-------|----------|-------|
| 198AU 36 | | 0.646 | 0+ | | | | | | 36 |
| 198AU 37 | | | | | | | 0.664 | | 37 |
| 198AU 38 | | | | | | | 0.673 | 1-,2-,3- | 38 |
| 198AU 39 | | | | | | | 0.695 | | 39 |
| 198AU 40 | | 0.697 | 8+ | | | | | | 40 |
| ----- | | | | | | | | | |
| 198AU 41 | | | | | 0.702 | 2- | | | 41 |
| 198AU 42 | | | | | 0.704 | 1- | | | 42 |
| 198AU 43 | | | | | 0.729 | 0- | | | 43 |
| 198AU 44 | | | | | | | | 0.745 | 1-,2- |
| 198AU 45 | | 0.758 | 4+ | | | | | | 45 |
| 198AU 46 | | | | | 0.764 | 4- | | | 46 |
| 198AU 47 | | | | | 0.787 | 2- | | | 47 |
| 198AU 48 | | | | | 0.789 | 1- | | | 48 |
| 198AU 49 | | | | | 0.800 | 2- | | | 49 |
| 198AU 50 | | | | | | | | 0.802 | 1-,2- |
| ----- | | | | | | | | | |
| 198AU 51 | | 0.810 | 3+ | | | | | | 51 |
| 198AU 52 | | | | | | | | 0.812 | (12-) |
| 198AU 53 | | 0.825 | 3+ | | | | | | 53 |
| 198AU 54 | | | | | | | | 0.833 | 1+,2+ |
| 198AU 55 | | | | | 0.835 | 3- | | | 55 |
| 198AU 56 | | | | | | | | 0.868 | (3+) |
| 198AU 57 | | | | | 0.869 | 3- | | | 57 |
| 198AU 58 | | | | | | | | 0.892 | 1-,2- |
| 198AU 59 | | | | | 0.894 | 3- | | | 59 |
| 198AU 60 | | | | | | | | 0.897 | 1-,2- |
| ----- | | | | | | | | | |
| 198AU 61 | | | | | | | | 0.916 | 1-,2- |
| 198AU 62 | | | | | | | | 0.919 | 1-,2- |
| 198AU 63 | | | | | 0.932 | 3- | | | 63 |
| 198AU 64 | | | | | 0.932 | 0- | | | 64 |
| 198AU 65 | | 0.936 | 0+ | | | | | | 65 |
| 198AU 66 | | 0.951 | 3+ | | | | | | 66 |
| 198AU 67 | | | | | | | | 0.957 | 1-,2- |
| 198AU 68 | | 0.961 | 3+ | | | | | | 68 |
| 198AU 69 | | | | | 0.972 | 3- | | | 69 |
| 198AU 70 | | 0.983 | 2+ | | | | | | 70 |
| ----- | | | | | | | | | |
| 198AU 71 | | | | | 0.988 | 3- | | | 71 |
| 198AU 72 | | | | | | | | 0.999 | 1-,2- |
| 198AU 73 | | | | | | | | 1.018 | 1-,2- |
| 198AU 74 | | | | | | | | 1.021 | 1-,2- |
| 198AU 75 | | | | | 1.032 | 3- | | | 75 |
| 198AU 76 | | | | | 1.038 | 3- | | | 76 |
| 198AU 77 | | | | | | | | 1.039 | 1-,2- |
| 198AU 78 | | | | | | | | 1.047 | 1-,2- |
| 198AU 79 | | | | | 1.057 | 2- | | | 79 |
| 198AU 80 | | | | | 1.061 | 3- | | | 80 |
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|-----------|--|-------|----|-------|----|-------|----------|-----|
| 198AU 81 | | | | | | 1.076 | 1-,2-,3- | 81 |
| 198AU 82 | | | | 1.093 | 0- | | | 82 |
| 198AU 83 | | | | | | 1.094 | (+) | 83 |
| 198AU 84 | | 1.095 | 3+ | | | | | 84 |
| 198AU 85 | | | | | | 1.105 | 0-,1-,2- | 85 |
| 198AU 86 | | | | | | 1.109 | 1-,2- | 86 |
| 198AU 87 | | | | | | 1.113 | 1-,2- | 87 |
| 198AU 88 | | | | 1.115 | 3- | | | 88 |
| 198AU 89 | | | | | | 1.125 | 1-,2- | 89 |
| 198AU 90 | | | | | | 1.135 | | 90 |
| ----- | | | | | | | | |
| 198AU 91 | | | | | | 1.147 | 1-,2- | 91 |
| 198AU 92 | | | | | | 1.149 | 1+,2+ | 92 |
| 198AU 93 | | | | 1.157 | 3- | | | 93 |
| 198AU 94 | | | | 1.160 | 3- | | | 94 |
| 198AU 95 | | | | | | 1.166 | 1-,2- | 95 |
| 198AU 96 | | | | | | 1.176 | 1-,2- | 96 |
| 198AU 97 | | | | | | 1.192 | 1+,2+,3+ | 97 |
| 198AU 98 | | | | | | 1.199 | | 98 |
| 198AU 99 | | | | | | 1.202 | 1-,2- | 99 |
| 198AU 100 | | | | 1.209 | 3- | | | 100 |
| ----- | | | | | | | | |
| 198AU 101 | | | | 1.233 | 3- | | | 101 |
| 198AU 102 | | | | 1.240 | 3- | | | 102 |
| 198AU 103 | | | | | | 1.256 | 1-,2- | 103 |
| 198AU 104 | | | | | | 1.266 | 1-,2-,3- | 104 |
| 198AU 105 | | | | 1.272 | 3- | | | 105 |
| 198AU 106 | | | | 1.287 | 2- | | | 106 |
| 198AU 107 | | | | | | 1.294 | 1-,2- | 107 |
| 198AU 108 | | | | | | 1.297 | 1-,2-,3- | 108 |
| 198AU 109 | | | | 1.301 | 2- | | | 109 |
| 198AU 110 | | | | 1.305 | 3- | | | 110 |
| ----- | | | | | | | | |
| 198AU 111 | | | | 1.307 | 2- | | | 111 |
| 198AU 112 | | | | | | 1.319 | 1-,2- | 112 |
| 198AU 113 | | | | 1.326 | 2- | | | 113 |
| 198AU 114 | | | | | | 1.336 | 1-,2-,3- | 114 |
| 198AU 115 | | | | 1.338 | 3- | | | 115 |
| 198AU 116 | | | | | | 1.359 | 1-,2-,3- | 116 |
| 198AU 117 | | | | | | 1.363 | 1-,2-,3- | 117 |
| 198AU 118 | | | | | | 1.372 | 1-,2- | 118 |
| 198AU 119 | | | | | | 1.376 | 1-,2- | 119 |
| 198AU 120 | | | | 1.381 | 3- | | | 120 |
| ----- | | | | | | | | |
| 198AU 121 | | | | | | 1.386 | | 121 |
| 198AU 122 | | | | 1.390 | 2- | | | 122 |
| 198AU 123 | | | | | | 1.395 | | 123 |
| 198AU 124 | | | | 1.396 | 3- | | | 124 |
| 198AU 125 | | | | | | 1.399 | 2-,3- | 125 |
| 198AU 126 | | | | | | 1.402 | 1-,2- | 126 |

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|-----------|--|-------|----|-------|----------|-----|
| 198AU 127 | | | | 1.403 | | 127 |
| 198AU 128 | | | | 1.405 | 2-,3- | 128 |
| 198AU 129 | | 1.409 | 3- | | | 129 |
| 198AU 130 | | | | 1.419 | 3+,4+ | 130 |
| ----- | | | | | | |
| 198AU 131 | | 1.424 | 3- | | | 131 |
| 198AU 132 | | | | 1.432 | 2-,3- | 132 |
| 198AU 133 | | | | 1.435 | 1-,2- | 133 |
| 198AU 134 | | 1.444 | 3- | | | 134 |
| 198AU 135 | | | | 1.451 | | 135 |
| 198AU 136 | | 1.454 | 3- | | | 136 |
| 198AU 137 | | 1.459 | 3- | | | 137 |
| 198AU 138 | | 1.472 | 3- | | | 138 |
| 198AU 139 | | 1.476 | 2- | | | 139 |
| 198AU 140 | | | | 1.487 | 1-,2- | 140 |
| ----- | | | | | | |
| 198AU 141 | | | | 1.488 | | 141 |
| 198AU 142 | | 1.496 | 3- | | | 142 |
| 198AU 143 | | | | 1.498 | | 143 |
| 198AU 144 | | | | 1.505 | 1-,2- | 144 |
| 198AU 145 | | | | 1.506 | | 145 |
| 198AU 146 | | | | 1.514 | 1-,2- | 146 |
| 198AU 147 | | | | 1.518 | | 147 |
| 198AU 148 | | | | 1.523 | 1+,2+,3+ | 148 |
| 198AU 149 | | | | 1.531 | 1-,2- | 149 |
| 198AU 150 | | | | 1.533 | | 150 |
| ----- | | | | | | |
| 198AU 151 | | | | 1.536 | 1-,2-,3- | 151 |
| 198AU 152 | | 1.543 | 3- | | | 152 |
| 198AU 153 | | | | 1.554 | 1-,2- | 153 |
| 198AU 154 | | 1.560 | 3- | | | 154 |
| 198AU 155 | | | | 2.224 | | 155 |
| 198AU 156 | | | | 2.245 | | 156 |
| 198AU 157 | | | | 2.266 | | 157 |
| 198AU 158 | | | | 2.283 | | 158 |
| 198AU 159 | | | | 2.296 | | 159 |
| 198AU 160 | | | | 2.304 | | 160 |
| ----- | | | | | | |
| 198AU 161 | | | | 2.326 | | 161 |
| 198AU 162 | | | | 2.343 | | 162 |
| 198AU 163 | | | | 2.361 | | 163 |
| 198AU 164 | | | | 2.381 | | 164 |
| 198AU 165 | | | | 2.393 | | 165 |
| 198AU 166 | | | | 2.469 | | 166 |
| 198AU 167 | | | | 2.479 | | 167 |
| 198AU 168 | | | | 2.490 | | 168 |
| 198AU 169 | | | | 2.505 | | 169 |
| 198AU 170 | | | | 2.520 | | 170 |
| ----- | | | | | | |
| 198AU 171 | | | | 2.598 | | 171 |

S-p = 6.450 (0.001)-----
S-n = 6.512 (0.001)-----
S-2p = 14.723 (0.038)-----
S-2n = 14.585 (0.003)-----
S-alpha= -0.526 (0.001)-----

S+p = -7.254 (0.001)
S+n = -7.584 (0.001)
S+2p = -12.044 (0.006)
S+2n = -13.802 (0.027)
S+alpha = 1.175 (0.002)

gap p = -0.804 (0.001)
gap n = -1.072 (0.001)
gap 2p = 2.679 (0.039)
gap 2n = 0.783 (0.027)
gap alpha = 0.649 (0.002)