

^{39}K $Z = 19$ $N = 20$ adopted link ENSDF link

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

BE = 333.724 (0.000) MeV

| | Energy T | J+ | J- | J-other | T1/2 |
|--------|----------|------|-------|-------------------------|--------------|
| 39K 1 | 0.000 | 3/2+ | | | 1 STABLE |
| 39K 2 | 2.523 | 1/2+ | | | 2 63 FS 6 |
| 39K 3 | | | 2.814 | 7/2- | 3 47 PS 4 |
| 39K 4 | | | 3.019 | 3/2- | 4 15 FS 3 |
| 39K 5 | | | 3.597 | 9/2- | 5 38 PS 3 |
| 39K 6 | | | 3.883 | 5/2- | 6 7.4 FS 15 |
| 39K 7 | 3.939 | 3/2+ | | | 7 73 FS 14 |
| 39K 8 | | | 3.944 | 11/2- | 8 8.5 PS 10 |
| 39K 9 | | | 4.082 | 3/2- | 9 21 FS 7 |
| 39K 10 | 4.096 | 1/2+ | | | 10 60 FS 10 |
| 39K 11 | | | 4.127 | 7/2- | 11 45 FS 10 |
| 39K 12 | | | | 4.474 1/2-, 3/2- | 12 0.23 PS 3 |
| 39K 13 | 4.514 | 5/2+ | | | 13 19 FS 7 |
| 39K 14 | | | 4.520 | 9/2- | 14 96 FS 25 |
| 39K 15 | | | 4.679 | 7/2- | 15 89 FS 21 |
| 39K 16 | | | | 4.738 5/2-, 7/2-, 9/2- | 16 0.08 PS 4 |
| 39K 17 | 4.738 | 5/2+ | | | 17 22 FS 6 |
| 39K 18 | 4.930 | 3/2+ | | | 18 21 FS 9 |
| 39K 19 | | | | 4.977 5/2-, 7/2- | 19 |
| 39K 20 | | | 5.010 | 7/2- | 20 0.24 PS 6 |
| 39K 21 | | | | 5.011 (3/2, 5/2-, 7/2-) | 21 35 FS 10 |
| 39K 22 | | | | 5.157 | 22 |
| 39K 23 | | | 5.164 | 9/2- | 23 55 FS 14 |
| 39K 24 | | | | 5.166 5/2-, 7/2-, 9/2- | 24 0.19 PS 5 |
| 39K 25 | | | | 5.174 (1/2, 3/2, 5/2) | 25 15 FS 6 |
| 39K 26 | 5.264 | 5/2+ | | | 26 1.3 FS 1 |
| 39K 27 | 5.320 | 3/2+ | | | 27 1.4 FS 1 |
| 39K 28 | | | 5.354 | 11/2- | 28 90 FS 35 |
| 39K 29 | | | | 5.370 (3/2:9/2)- | 29 |
| 39K 30 | 5.501 | 3/2+ | | | 30 |
| 39K 31 | | | 5.502 | 7/2- | 31 35 FS 20 |
| 39K 32 | 5.599 | 5/2+ | | | 32 2.0 FS 2 |
| 39K 33 | | | 5.644 | 7/2- | 33 0.07 PS 4 |
| 39K 34 | 5.715 | 3/2+ | | | 34 49 FS 31 |
| 39K 35 | | | 5.718 | 13/2- | 35 0.19 PS 5 |
| 39K 36 | | | | 5.789 (5/2, 7/2)+ | 36 31 FS 14 |
| 39K 37 | | | 5.801 | 7/2- | 37 14 FS 7 |
| 39K 38 | | | | 5.826 1/2-, 3/2- | 38 14 FS LT |

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|---------|----|--|-------|---------|--|-------|------------|----|------|----|----|
| 39K | 39 | | | | | 5.891 | (5/2,7/2)- | 39 | | | |
| 39K | 40 | | | | | 5.899 | 1/2-,3/2- | 40 | | | |
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| 39K | 41 | | 5.939 | 5/2+ | | | | 41 | 2.6 | FS | 3 |
| 39K | 42 | | | | | | | 42 | | | |
| 39K | 43 | | | | | 6.006 | 11/2- | 43 | 76 | FS | 28 |
| 39K | 44 | | | | | | | 44 | 35 | FS | 15 |
| 39K | 45 | | | | | | | 45 | 24 | FS | 14 |
| 39K | 46 | | | | | | | 46 | 14 | FS | LT |
| 39K | 47 | | | | | | | 47 | 76 | FS | 28 |
| 39K | 48 | | | | | | | 48 | | | |
| 39K | 49 | | | | | | | 49 | | | |
| 39K | 50 | | | | | | | 50 | | | |
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| 39K | 51 | | | | | | | 51 | 21 | FS | 14 |
| 39K | 52 | | 6.331 | 3/2+ | | | | 52 | 24 | FS | 14 |
| 39K | 53 | | | | | | | 53 | | | |
| 39K | 54 | | 6.356 | 5/2+ | | | | 54 | | | |
| S-p | = | | 6.381 | (0.000) | | | | | | | |
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| 39K | 55 | | | | | | | 55 | | | |
| 39K | 56 | | | | | | | 56 | 14 | FS | LT |
| 39K | 57 | | 6.434 | 13/2+ | | | | 57 | 128 | FS | 35 |
| 39K | 58 | | | | | | | 58 | 14 | FS | LT |
| 39K | 59 | | | | | | | 59 | | | |
| 39K | 60 | | 6.475 | 15/2+ | | | | 60 | 8.4 | PS | 4 |
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| 39K | 61 | | | | | | | 61 | 59 | FS | 21 |
| 39K | 62 | | | | | | | 62 | 0.09 | PS | 6 |
| 39K | 63 | | | | | 6.546 | 3/2 7/2- | 63 | 14 | FS | LT |
| 39K | 64 | | | | | | | 64 | | | |
| 39K | 65 | | | | | | | 65 | 24 | FS | 14 |
| 39K | 66 | | | | | | | 66 | 35 | FS | LT |
| 39K | 67 | | | | | | | 67 | 14 | FS | LT |
| 39K | 68 | | | | | | | 68 | | | |
| 39K | 69 | | | | | | | 69 | 49 | FS | LT |
| 39K | 70 | | | | | | | 70 | | | |
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| 39K | 71 | | | | | | | 71 | | | |
| 39K | 72 | | | | | | | 72 | | | |
| 39K | 73 | | | | | | | 73 | | | |
| 39K | 74 | | | | | | | 74 | 59 | FS | 21 |
| 39K | 75 | | | | | | | 75 | | | |
| 39K | 76 | | | | | 7.142 | 15/2- | 76 | 0.29 | PS | 8 |
| 39K | 77 | | | | | | | 77 | | | |
| 39K | 78 | | | | | | | 78 | | | |
| S-alpha | = | | 7.219 | (0.000) | | | | | | | |
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| 39K | 79 | | | | | | | 79 | | | |
| 39K | 80 | | | | | | | 80 | | | |
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| 39K | 81 | | | | | | | 81 | | | |

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|---------|-------|-------|-------|-------|-----------------|-----|---------|----|
| 39K 82 | | | | 7.287 | | 82 | | |
| 39K 83 | | | | 7.337 | (3/2:9/2)- | 83 | | |
| 39K 84 | | | | 7.381 | | 84 | | |
| 39K 85 | | | | 7.439 | | 85 | | |
| 39K 86 | | | | 7.449 | | 86 | | |
| 39K 87 | | | | 7.462 | (3/2-,5/2,7/2+) | 87 | | |
| 39K 88 | | | | 7.482 | | 88 | | |
| 39K 89 | | | | 7.502 | 3/2+,5/2+ | 89 | | |
| 39K 90 | | | | 7.536 | (1/2,3/2,5/2+) | 90 | | |
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| 39K 91 | | | | 7.541 | | 91 | | |
| 39K 92 | | | | 7.552 | | 92 | | |
| 39K 93 | | | | 7.560 | | 93 | | |
| 39K 94 | | | | 7.569 | 15/2(+) | 94 | 0.24 PS | 7 |
| 39K 95 | | | | 7.588 | | 95 | 0.21 PS | LT |
| 39K 96 | | | | 7.602 | (3/2-,5/2,7/2+) | 96 | | |
| 39K 97 | | | | 7.605 | | 97 | | |
| 39K 98 | | | | 7.633 | (3/2-,5/2+) | 98 | | |
| 39K 99 | | | | 7.700 | (3/2-,5/2,7/2-) | 99 | | |
| 39K 100 | | | | 7.714 | (5/2-) | 100 | | |
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| 39K 101 | | | 7.738 | 3/2- | | 101 | 1.1 KEV | 2 |
| 39K 102 | | | | 7.756 | (3/2-,5/2+) | 102 | | |
| 39K 103 | | | | 7.766 | | 103 | | |
| 39K 104 | | | | 7.773 | (3/2-,5/2+) | 104 | | |
| 39K 105 | 7.776 | 17/2+ | | | | 105 | 1.0 PS | 3 |
| 39K 106 | | | | 7.785 | (1/2,3/2,5/2+) | 106 | | |
| 39K 107 | | | | 7.797 | (3/2-,5/2+) | 107 | | |
| 39K 108 | | | | 7.802 | (5/2-) | 108 | | |
| 39K 109 | | | | 7.805 | (5/2-) | 109 | | |
| 39K 110 | | | | 7.821 | (1/2-,3/2,5/2+) | 110 | | |
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| 39K 111 | | | | 7.847 | (3/2,5/2+) | 111 | | |
| 39K 112 | | | | 7.867 | | 112 | 0.17 PS | LT |
| 39K 113 | 7.868 | 5/2+ | | | | 113 | | |
| 39K 114 | | | | 7.900 | | 114 | | |
| 39K 115 | | | | 7.958 | (1/2,3/2,5/2+) | 115 | | |
| 39K 116 | | | | 7.979 | (3/2-,5/2) | 116 | | |
| 39K 117 | | | | 7.982 | | 117 | | |
| 39K 118 | | | | 7.983 | (3/2,5/2+) | 118 | | |
| 39K 119 | | | | 7.986 | | 119 | | |
| 39K 120 | | | | 7.992 | 3/2(-) | 120 | | |
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| 39K 121 | | | | 7.996 | | 121 | | |
| 39K 122 | | | | 7.998 | | 122 | | |
| 39K 123 | | | | 8.010 | (15/2-) | 123 | | |
| 39K 124 | | | | 8.019 | | 124 | | |
| 39K 125 | | | 8.028 | 19/2- | | 125 | 13.8 PS | 70 |
| 39K 126 | | | | 8.031 | (1/2,3/2,5/2) | 126 | | |
| 39K 127 | | | | 8.034 | (1/2,3/2,5/2) | 127 | | |

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| 39K 128 | | | | | | 8.038 | (3/2-,5/2) | 128 | |
| 39K 129 | | | | | | 8.080 | (1/2-,3/2,5/2+) | 129 | |
| 39K 130 | | | | | | 8.082 | (1/2-,3/2,5/2+) | 130 | |
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| 39K 131 | | | | | | 8.087 | | 131 | |
| 39K 132 | | | | 8.094 | 3/2- | | | 132 | |
| 39K 133 | | 8.099 | 9/2+ | | | | | 133 | |
| 39K 134 | | | | | | 8.108 | (3/2,5/2+) | 134 | |
| 39K 135 | | | | | | 8.118 | (3/2-,5/2+) | 135 | |
| 39K 136 | | | | | | 8.129 | | 136 | |
| 39K 137 | | | | | | 8.138 | (3/2-,5/2) | 137 | |
| 39K 138 | | | | | | 8.170 | | 138 | |
| 39K 139 | | | | | | 8.185 | | 139 | |
| 39K 140 | | | | | | 8.189 | | 140 | |
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| 39K 141 | | | | | | 8.191 | | 141 | |
| 39K 142 | | | | | | 8.198 | (3/2-,5/2,7/2+) | 142 | |
| 39K 143 | | | | | | 8.203 | | 143 | |
| 39K 144 | | | | | | 8.253 | (1/2:7/2+) | 144 | |
| 39K 145 | | | | | | 8.262 | (1/2:7/2+) | 145 | |
| 39K 146 | | | | | | 8.271 | | 146 | |
| 39K 147 | | | | | | 8.280 | (1/2:7/2+) | 147 | |
| 39K 148 | | | | | | 8.285 | | 148 | |
| 39K 149 | | | | | | 8.294 | | 149 | |
| 39K 150 | | | | | | 8.305 | (3/2-,5/2+) | 150 | |
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| 39K 151 | | | | | | 8.315 | | 151 | |
| 39K 152 | | | | | | 8.326 | | 152 | |
| 39K 153 | | | | | | 8.341 | | 153 | |
| 39K 154 | | | | | | 8.347 | | 154 | |
| 39K 155 | | | | | | 8.370 | (1/2:7/2+) | 155 | 35 FS 17 |
| 39K 156 | | | | | | 8.380 | | 156 | |
| 39K 157 | | | | | | 8.386 | | 157 | |
| 39K 158 | | | | | | 8.391 | (1/2:7/2+) | 158 | |
| 39K 159 | | | | | | 8.395 | | 159 | |
| 39K 160 | | | | | | 8.414 | | 160 | |
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| 39K 161 | | | | | | 8.427 | | 161 | |
| 39K 162 | | | | | | 8.430 | | 162 | |
| 39K 163 | | | | | | 8.466 | | 163 | |
| 39K 164 | | | | | | 8.476 | | 164 | |
| 39K 165 | | | | | | 8.484 | | 165 | |
| 39K 166 | | | | | | 8.509 | | 166 | |
| 39K 167 | | | | | | 8.514 | | 167 | |
| 39K 168 | | | | | | 8.524 | | 168 | |
| 39K 169 | | | | | | 8.531 | (3/2-,5/2) | 169 | |
| 39K 170 | | | | | | 8.548 | | 170 | |
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| 39K 171 | | | | | | 8.559 | | 171 | |
| 39K 172 | | | | | | 8.567 | | 172 | |

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| 39K 173 | | | | 8.584 | (3/2-,5/2,7/2+) | 173 | | |
| 39K 174 | | | | 8.592 | | 174 | | |
| 39K 175 | | | | 8.598 | | 175 | | |
| 39K 176 | | | | 8.611 | | 176 | | |
| 39K 177 | | | | 8.625 | (3/2,5/2,7/2+) | 177 | | |
| 39K 178 | | | | 8.627 | (3/2-,5/2) | 178 | | |
| 39K 179 | | | | 8.639 | | 179 | | |
| 39K 180 | | | | 8.655 | | 180 | | |
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| 39K 181 | | | | 8.667 | | 181 | | |
| 39K 182 | | | | 8.672 | | 182 | | |
| 39K 183 | | | | 8.674 | | 183 | | |
| 39K 184 | | | | 8.683 | (15/2+) | 184 | | |
| 39K 185 | | | | 8.684 | | 185 | | |
| 39K 186 | | | | 8.688 | | 186 | | |
| 39K 187 | | | | 8.693 | | 187 | | |
| 39K 188 | | | | 8.704 | | 188 | | |
| 39K 189 | | | | 8.709 | | 189 | | |
| 39K 190 | | | | 8.714 | | 190 | | |
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| 39K 191 | | | | 8.720 | | 191 | | |
| 39K 192 | | | | 8.893 | 3/2+,5/2+ | 192 | | |
| 39K 193 | | | | 9.012 | 3/2+,5/2+ | 193 | | |
| 39K 194 | | | | 9.107 | (3/2+,5/2+) | 194 | | |
| 39K 195 | | | | 9.272 | (19/2-) | 195 | | |
| 39K 196 | | | | 9.300 | | 196 | | |
| 39K 197 | | | | 9.365 | (17/2+) | 197 | | |
| 39K 198 | | | | 9.405 | | 198 | | |
| 39K 199 | | | | 9.616 | | 199 | | |
| 39K 200 | | | | 9.665 | | 200 | | |
| ----- | | | | | | | | |
| 39K 201 | | | | 9.694 | | 201 | | |
| 39K 202 | | | | 9.704 | (3/2+,5/2+) | 202 | | |
| 39K 203 | | | | 9.772 | | 203 | | |
| 39K 204 | | | | 9.808 | | 204 | | |
| 39K 205 | | | | 9.909 | (21/2+) | 205 | 1.4 PS | LT |
| 39K 206 | | | | 9.928 | | 206 | | |
| 39K 207 | | | | 9.987 | | 207 | | |
| 39K 208 | | | | 9.996 | | 208 | | |

S-p = 6.381 (0.000)-----
S-n = 13.078 (0.000)-----
S-2p = 16.624 (0.000)-----
S-2n = 25.150 (0.000)-----
S-alpha= 7.219 (0.000)-----

S+p = -8.328 (0.000)
S+n = -7.800 (0.000)
S+2p = -9.413 (0.000)

S+2n = -17.895 (0.000)
S+alpha = -4.806 (0.002)

gap p = -1.947 (0.000)
gap n = 5.278 (0.000)
gap 2p = 7.210 (0.000)
gap 2n = 7.255 (0.000)
gap alpha = 2.413 (0.002)