

^{131}La $Z = 57$ $N = 74$ adopted link ENSDF link

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

BE = 1096.518 (0.028) MeV

Qbeta+ = 2.910 (0.028) MeV

| | Energy T | J+ | J- | J-other | T1/2 |
|----------|----------|----------|-------------|------------------------|---------------|
| ----- | | | | | |
| S-alpha= | -0.046 | (0.028) | ----- | | |
| 131LA 1 | 0.000 | 3/2+ | | | 1 59 M 2 |
| 131LA 2 | 0.026 | 5/2+ | | | 2 0.85 NS 10 |
| 131LA 3 | | | | 0.145 (5/2+) | 3 0.3 NS LE |
| 131LA 4 | 0.196 | 7/2+ | | | 4 0.20 NS 8 |
| 131LA 5 | | | | 0.230 (1/2+) | 5 30 NS LE |
| 131LA 6 | | | | 0.231 (7/2+) | 6 |
| 131LA 7 | | | 0.305 11/2- | | 7 170 US 7 |
| 131LA 8 | | | | 0.417 (7/2+,9/2+) | 8 30 NS LE |
| 131LA 9 | | | | 0.422 (7/2+) | 9 30 NS LE |
| 131LA 10 | | | | 0.440 (9/2+) | 10 30 NS LE |
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| 131LA 11 | | | | 0.460 (5/2,7/2+) | 11 30 NS LE |
| 131LA 12 | | | | 0.463 (3/2,1/2) | 12 30 NS LE |
| 131LA 13 | | | | 0.588 (9/2+) | 13 30 NS LE |
| 131LA 14 | | | | 0.595 (3/2,1/2) | 14 30 NS LE |
| 131LA 15 | | | 0.641 15/2- | | 15 38.3 PS 12 |
| 131LA 16 | | | | 0.672 (11/2+) | 16 30 NS LE |
| 131LA 17 | | | | 0.743 (5/2+,7/2+) | 17 30 NS LE |
| 131LA 18 | | | | 0.907 (13/2-) | 18 |
| 131LA 19 | | | | 0.911 (5/2+,7/2+) | 19 30 NS LE |
| 131LA 20 | | | | 0.946 | 20 30 NS LE |
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| 131LA 21 | | | | 1.024 (11/2+) | 21 |
| 131LA 22 | | | | 1.055 (13/2+) | 22 |
| 131LA 23 | | | 1.174 19/2- | | 23 3.8 PS 4 |
| 131LA 24 | | | | 1.224 | 24 |
| 131LA 25 | | | | 1.226 (13/2+) | 25 |
| 131LA 26 | | | | 1.329 (15/2+) | 26 |
| 131LA 27 | | | | 1.357 (15/2-) | 27 |
| 131LA 28 | | | | 1.411 (17/2-) | 28 |
| 131LA 29 | | | | 1.445 | 29 |
| 131LA 30 | | | | 1.705 | 30 |
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| 131LA 31 | | | | 1.752 (17/2-) | 31 |
| 131LA 32 | | | | 1.752 (15/2+) | 32 |
| 131LA 33 | | | | 1.775 (3/2+,5/2+,7/2+) | 33) 30 NS LE |
| 131LA 34 | | | | 1.782 | 34 |
| 131LA 35 | | | | 1.809 (17/2+) | 35 |
| 131LA 36 | | | 1.846 23/2- | | 36 1.02 PS 24 |

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|----------|--|-------|-------|-------|---------|----|---------|----|
| 131LA 37 | | | | 1.890 | | 37 | 30 NS | LE |
| 131LA 38 | | | | 1.910 | (7/2+) | 38 | 30 NS | LE |
| 131LA 39 | | | | 1.918 | | 39 | | |
| 131LA 40 | | | | 1.933 | (19/2-) | 40 | | |
| ----- | | | | | | | | |
| 131LA 41 | | | | 1.951 | | 41 | | |
| 131LA 42 | | | | 1.997 | (17/2+) | 42 | | |
| 131LA 43 | | | | 2.091 | (21/2-) | 43 | | |
| 131LA 44 | | | | 2.116 | (19/2+) | 44 | | |
| 131LA 45 | | | | 2.122 | (21/2)- | 45 | 38 NS | 2 |
| 131LA 46 | | | | 2.160 | | 46 | | |
| 131LA 47 | | | | 2.235 | (19/2+) | 47 | | |
| 131LA 48 | | | | 2.268 | (15/2+) | 48 | | |
| 131LA 49 | | | | 2.346 | (17/2+) | 49 | | |
| 131LA 50 | | | | 2.355 | (21/2-) | 50 | | |
| ----- | | | | | | | | |
| 131LA 51 | | | | 2.477 | (19/2-) | 51 | | |
| 131LA 52 | | | | 2.498 | (19/2+) | 52 | | |
| 131LA 53 | | | | 2.545 | (21/2-) | 53 | | |
| 131LA 54 | | | | 2.549 | (23/2-) | 54 | | |
| 131LA 55 | | | | 2.621 | (23/2-) | 55 | | |
| 131LA 56 | | 2.639 | 27/2- | | | 56 | 0.35 PS | 28 |
| 131LA 57 | | | | 2.641 | (21/2+) | 57 | | |
| 131LA 58 | | | | 2.680 | (23/2+) | 58 | | |
| 131LA 59 | | | | 2.681 | (21/2+) | 59 | | |
| 131LA 60 | | | | 2.700 | (23/2-) | 60 | | |
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| 131LA 61 | | | | 2.845 | (21/2+) | 61 | | |
| 131LA 62 | | | | 2.848 | (25/2-) | 62 | | |
| 131LA 63 | | | | 2.915 | | 63 | | |
| 131LA 64 | | | | 2.936 | (25/2-) | 64 | | |
| 131LA 65 | | | | 2.942 | (23/2+) | 65 | | |
| 131LA 66 | | | | 2.975 | (23/2+) | 66 | | |
| 131LA 67 | | | | 3.019 | (25/2-) | 67 | | |
| 131LA 68 | | | | 3.119 | (25/2-) | 68 | | |
| 131LA 69 | | | | 3.146 | (25/2+) | 69 | | |
| 131LA 70 | | | | 3.244 | (27/2-) | 70 | | |
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| 131LA 71 | | | | 3.268 | (27/2+) | 71 | | |
| 131LA 72 | | | | 3.287 | | 72 | | |
| 131LA 73 | | | | 3.369 | (25/2+) | 73 | | |
| 131LA 74 | | | | 3.399 | (27/2-) | 74 | | |
| 131LA 75 | | | | 3.483 | | 75 | | |
| 131LA 76 | | | | 3.527 | (27/2-) | 76 | | |
| 131LA 77 | | 3.541 | 31/2- | | | 77 | 0.31 PS | 9 |
| 131LA 78 | | | | 3.544 | | 78 | | |
| 131LA 79 | | | | 3.581 | | 79 | | |
| 131LA 80 | | | | 3.611 | (29/2-) | 80 | | |
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| 131LA 81 | | | | 3.619 | | 81 | | |

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| 131LA 82 | | | | 3.655 | | 82 |
| 131LA 83 | | | | 3.682 | (29/2-) | 83 |
| 131LA 84 | | | | 3.689 | (29/2+) | 84 |
| S-p = 3.801 (0.028)----- | | | | | | |
| 131LA 85 | | | | 3.809 | (27/2+) | 85 |
| 131LA 86 | | | | 3.922 | | 86 |
| 131LA 87 | | | | 3.974 | (31/2+) | 87 |
| 131LA 88 | | | | 3.989 | (29/2-) | 88 |
| 131LA 89 | | | | 4.024 | (31/2-) | 89 |
| 131LA 90 | | | | 4.043 | | 90 |
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| 131LA 91 | | | | 4.231 | (31/2-) | 91 |
| 131LA 92 | | | | 4.332 | | 92 |
| 131LA 93 | | | | 4.377 | (33/2+) | 93 |
| 131LA 94 | | | | 4.381 | | 94 |
| 131LA 95 | | | | 4.480 | (33/2-) | 95 |
| 131LA 96 | | 4.527 | 35/2- | | | 96 0.47 PS 9 |
| 131LA 97 | | | | 4.531 | (31/2+) | 97 |
| 131LA 98 | | | | 4.580 | (33/2-) | 98 |
| 131LA 99 | | | | 4.704 | | 99 |
| 131LA 100 | | | | 4.775 | (35/2+) | 100 |
| ----- | | | | | | |
| 131LA 101 | | | | 4.839 | | 101 |
| 131LA 102 | | | | 4.968 | (35/2-) | 102 |
| 131LA 103 | | | | 5.104 | (35/2-) | 103 |
| 131LA 104 | | | | 5.184 | | 104 |
| 131LA 105 | | | | 5.211 | (37/2+) | 105 |
| 131LA 106 | | | | 5.490 | (37/2-) | 106 |
| 131LA 107 | | 5.581 | 39/2- | | | 107 0.48 PS 11 |
| 131LA 108 | | | | 5.654 | (39/2+) | 108 |
| 131LA 109 | | | | 6.038 | (39/2-) | 109 |
| 131LA 110 | | | | 6.139 | (41/2+) | 110 |
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| 131LA 111 | | | | 6.602 | (43/2+) | 111 |
| 131LA 112 | | | | 6.606 | (41/2-) | 112 |
| 131LA 113 | | 6.672 | 43/2- | | | 113 0.33 PS 9 |
| 131LA 114 | | | | 7.148 | (45/2+) | 114 |
| 131LA 115 | | | | 7.185 | (43/2-) | 115 |
| 131LA 116 | | | | 7.618 | (47/2+) | 116 |
| 131LA 117 | | | | 7.733 | (47/2-) | 117 |
| 131LA 118 | | | | 8.250 | (49/2+) | 118 |
| 131LA 119 | | | | 8.706 | (51/2+) | 119 |
| 131LA 120 | | | | 8.832 | (51/2-) | 120 |
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| 131LA 121 | | | | 9.436 | (53/2+) | 121 |
| 131LA 122 | | | | 9.877 | (55/2+) | 122 |
| 131LA 123 | | | | 9.974 | (55/2-) | 123 |

S-p = 3.801 (0.028)-----

S-n = 10.213 (0.038)-----
S-2p = 10.848 (0.028)-----
S-2n = 18.588 (0.035)-----
S-alpha= -0.046 (0.028)-----

S+p = -5.988 (0.035)
S+n = -8.026 (0.046)
S+2p = -8.746 (0.031)
S+2n = -17.868 (0.040)
S+alpha = 0.408 (0.030)

gap p = -2.187 (0.044)
gap n = 2.187 (0.060)
gap 2p = 2.102 (0.042)
gap 2n = 0.720 (0.053)
gap alpha = 0.362 (0.042)