

^{86}Zr $Z = 40$ $N = 46$ adopted link ENSDF link

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

BE = 740.809 (0.004) MeV

Qbeta+ = 1.314 (0.015) MeV

| | Energy T | J+ | J- | J-other | T1/2 |
|----------|----------------|-----|----|-----------------|-------------------|
| 86ZR 1 | 0.000 | 0+ | | | 1 16.5 H 1 |
| 86ZR 2 | 0.752 | 2+ | | | 2 7.5 PS 14 |
| 86ZR 3 | | | | 1.422 (2+) | 3 |
| 86ZR 4 | 1.667 | 4+ | | | 4 5.4 PS 24 |
| 86ZR 5 | | | | 2.042 (0+:4+) | 5 |
| 86ZR 6 | | | | 2.344 (4+,3-) | 6 |
| 86ZR 7 | | | | 2.566 | 7 |
| 86ZR 8 | 2.670 | 6+ | | | 8 8.5 PS 34 |
| 86ZR 9 | | | | 2.705 | 9 |
| 86ZR 10 | | | | 2.706 (5-) | 10 6.7 PS 12 |
| 86ZR 11 | | | | 3.017 (5-) | 11 15 PS LT |
| 86ZR 12 | | | | 3.029 | 12 |
| 86ZR 13 | | | | 3.030 (5+,6+) | 13 |
| 86ZR 14 | | | | 3.254 (4+,5,6+) | 14 |
| 86ZR 15 | | | | 3.272 (6-) | 15 |
| 86ZR 16 | 3.298 | 8+ | | | 16 46 PS 6 |
| 86ZR 17 | | | | 3.418 (4+,5,6+) | 17 |
| 86ZR 18 | | | | 3.423 (7-) | 18 6.8 PS 15 |
| 86ZR 19 | 3.533 | 8+ | | | 19 3.3 PS 7 |
| 86ZR 20 | | | | 3.646 (7-) | 20 7 PS LT |
| 86ZR 21 | | | | 3.793 (7) | 21 |
| 86ZR 22 | | | | 4.134 (8-) | 22 |
| 86ZR 23 | 4.326 | 10+ | | | 23 2.1 PS 4 |
| S-alpha= | 4.384 (0.007) | | | | |
| 86ZR 24 | 4.419 | 10+ | | | 24 9 PS 3 |
| 86ZR 25 | | | | 4.429 (9-) | 25 7.6 PS 14 |
| 86ZR 26 | | | | 4.637 (9-) | 26 |
| 86ZR 27 | | | | 4.697 (9-) | 27 |
| 86ZR 28 | | | | 5.067 (10-) | 28 |
| 86ZR 29 | | | | 5.234 (11-) | 29 12 PS 6 |
| 86ZR 30 | | | | 5.389 (11-) | 30 2.8 PS 7 |
| 86ZR 31 | | | | 5.396 (12+) | 31 2.6 PS 6 |
| 86ZR 32 | | | | 5.524 (12+) | 32 0.34 PS +10-7 |
| 86ZR 33 | | | | 5.647 | 33 |
| 86ZR 34 | | | | 5.975 (12-) | 34 1.5 PS LT |
| 86ZR 35 | | | | 6.232 (13-) | 35 4.2 PS 7 |
| 86ZR 36 | | | | 6.286 (13+) | 36 0.55 PS +12-13 |

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|-------|----|-------|---|--------|-------|-------|----|-------|----|--------|
| 86ZR | 37 | | | | 6.321 | (14+) | 37 | 5.2 | PS | 6 |
| 86ZR | 38 | | | | 6.340 | (13-) | 38 | | | |
| 86ZR | 39 | | | | 6.462 | (13-) | 39 | | | |
| 86ZR | 40 | | | | 6.752 | (14+) | 40 | 0.31 | PS | 6 |
| ----- | | | | | | | | | | |
| 86ZR | 41 | | | | 6.794 | (14+) | 41 | | | |
| 86ZR | 42 | | | | 7.015 | (15+) | 42 | 0.40 | PS | 8 |
| 86ZR | 43 | | | | 7.061 | (14-) | 43 | | | |
| 86ZR | 44 | | | | 7.345 | (15-) | 44 | | | |
| 86ZR | 45 | | | | 7.396 | (16+) | 45 | 0.33 | PS | +6-4 |
| S-p | = | 7.416 | (| 0.019) | ----- | | | | | |
| 86ZR | 46 | | | | 7.470 | (15-) | 46 | 0.64 | PS | +17-12 |
| 86ZR | 47 | | | | 7.640 | (15-) | 47 | 1.23 | PS | +19-12 |
| 86ZR | 48 | | | | 7.954 | (16+) | 48 | 0.53 | PS | +15-9 |
| 86ZR | 49 | | | | 8.145 | (16+) | 49 | 0.19 | PS | +8-5 |
| 86ZR | 50 | | | | 8.212 | (16-) | 50 | 0.22 | PS | +5-4 |
| ----- | | | | | | | | | | |
| 86ZR | 51 | | | | 8.249 | (17+) | 51 | 0.194 | PS | 21 |
| 86ZR | 52 | | | | 8.575 | (17-) | 52 | 0.67 | PS | +6-5 |
| 86ZR | 53 | | | | 8.650 | (18+) | 53 | 0.201 | PS | 14 |
| 86ZR | 54 | | | | 8.671 | (17-) | 54 | | | |
| 86ZR | 55 | | | | 9.373 | (18-) | 55 | 0.33 | PS | +11-8 |
| 86ZR | 56 | | | | 9.533 | (18-) | 56 | 0.34 | PS | +17-9 |
| 86ZR | 57 | | | | 9.653 | (18+) | 57 | 0.37 | PS | +9-8 |
| 86ZR | 58 | | | | 9.880 | (19-) | 58 | 0.17 | PS | +4-3 |
| 86ZR | 59 | | | | 9.892 | (19+) | 59 | 0.229 | PS | +28-21 |

S-p = 7.416 (0.019)-----
S-n = 12.865 (0.007)-----
S-2p = 11.897 (0.004)-----
S-2n = 22.690 (0.007)-----
S-alpha= 4.384 (0.007)-----

S+p = -3.194 (0.008)
S+n = -9.449 (0.005)
S+2p = -9.295 (0.005)
S+2n = -21.802 (0.006)
S+alpha = -4.628 (0.005)

gap p = 4.221 (0.021)
gap n = 3.416 (0.009)
gap 2p = 2.602 (0.006)
gap 2n = 0.887 (0.009)
gap alpha = -0.244 (0.009)