

TAVOLA PERIODICA DEI NUCLEI ATOMICI
configurazione dei livelli nucleari degli isodiaferi I = +18

| $\frac{E_c(\text{MeV})}{E_s(\text{MeV})}$ | Sa | $\frac{m_c}{m_s}$ | n | 1 | 2 | 3 | 4 | 5 | 6 | 7 | $\frac{E_\alpha(\text{eV})}{T_{1/2}}$ |
|---|--------------------------------|-----------------------------|-----|-----|-----|-----|------|-----|-----|-----|---------------------------------------|
| $\frac{411.922}{-}$ | Ar ⁵⁴ ₁₈ | $\frac{54.01057}{-}$ | 18n | 0+1 | 0+4 | 0+6 | 0+1 | 0+5 | 0+1 | 0+0 | $\frac{-}{\beta^-}$ |
| $\frac{433.139}{-}$ | K ⁵⁶ ₁₉ | $\frac{56.00428}{-}$ | 19n | 0+1 | 0+4 | 0+7 | 0+1 | 0+2 | 1+3 | 0+0 | $\frac{-}{\beta^-}$ |
| $\frac{453.025}{-}$ | Ca ⁵⁸ ₂₀ | $\frac{57.99942}{-}$ | 20n | 0+1 | 0+4 | 0+7 | 1+1 | 1+3 | 0+2 | 0+0 | $\frac{-12.955M}{\beta^- > 620ns}$ |
| $\frac{472.225}{471.85}$ | Sc ⁶⁰ ₂₁ | $\frac{59.99530}{59.99571}$ | 21n | 2+0 | 0+4 | 0+7 | 0+2 | 1+4 | 0+1 | 0+0 | $\frac{-14.60M}{\beta^- 3ms}$ |
| $\frac{494.765}{494.86}$ | Ti ⁶² ₂₂ | $\frac{61.98760}{61.98749}$ | 22n | 2+0 | 0+4 | 1+7 | 1+2 | 0+4 | 0+1 | 0+0 | $\frac{-13.90M}{\beta^- 10ms}$ |
| $\frac{513.791}{513.97}$ | V ⁶⁴ ₂₃ | $\frac{63.98366}{63.98347}$ | 23n | 2+0 | 2+3 | 0+8 | 0+3 | 0+2 | 1+1 | 0+1 | $\frac{-14.60M}{\beta^- 19.0ms}$ |
| $\frac{538.656}{538.73}$ | Cr ⁶⁶ ₂₄ | $\frac{65.97346}{65.97338}$ | 24n | 2+0 | 2+3 | 0+8 | 1+4 | 1+2 | 0+1 | 0+0 | $\frac{-15.00M}{\beta^- 23.0ms}$ |
| $\frac{557.981}{557.89}$ | Mn ⁶⁸ ₂₅ | $\frac{67.96920}{67.96930}$ | 25n | 2+0 | 2+3 | 0+9 | 0+3 | 1+2 | 1+1 | 1+0 | $\frac{-14.70M}{\beta^- 28.0ms}$ |
| $\frac{580.559}{580.55}$ | Fe ⁷⁰ ₂₆ | $\frac{69.96145}{69.96146}$ | 26n | 2+0 | 4+2 | 0+9 | 0+5 | 2+0 | 0+1 | 0+1 | $\frac{-14.40M}{\beta^- 71.0ms}$ |
| $\frac{599.393}{599.31}$ | Co ⁷² ₂₇ | $\frac{71.95772}{71.95781}$ | 27n | 2+0 | 4+2 | 0+9 | 1+5 | 1+1 | 1+0 | 0+1 | $\frac{-14.20M}{\beta^- 59.9ms}$ |
| $\frac{623.663}{623.74}$ | Ni ⁷⁴ ₂₈ | $\frac{73.94816}{73.94807}$ | 28n | 2+0 | 6+1 | 0+9 | 0+7 | 1+1 | 0+0 | 1+0 | $\frac{-14.80M}{\beta^- 680ms}$ |
| $\frac{641.919}{641.71}$ | Cu ⁷⁶ ₂₉ | $\frac{75.94505}{75.94527}$ | 29n | 2+0 | 8+0 | 0+9 | 0+8 | 1+0 | 0+0 | 0+1 | $\frac{-13.70M}{\beta^- 637ms}$ |
| $\frac{663.550}{663.44}$ | Zn ⁷⁸ ₃₀ | $\frac{77.93832}{77.93844}$ | 30n | 2+0 | 8+0 | 0+9 | 0+9 | 1+0 | 0+0 | 1+0 | $\frac{-11.20M}{\beta^- 1.47s}$ |
| $\frac{680.258}{680.58}$ | Ga ⁸⁰ ₃₁ | $\frac{79.93687}{79.93652}$ | 31n | 2+0 | 8+0 | 2+8 | 0+9 | 0+1 | 1+0 | 0+0 | $\frac{-10.673M}{\beta^- 1.676s}$ |
| $\frac{702.319}{702.44}$ | Ge ⁸² ₃₂ | $\frac{81.92968}{81.92955}$ | 32n | 2+0 | 8+0 | 2+8 | 1+10 | 0+0 | 1+0 | 0+0 | $\frac{-10.357M}{\beta^- 4.56s}$ |
| $\frac{718.317}{718.25}$ | As ⁸⁴ ₃₃ | $\frac{83.92899}{83.92906}$ | 33n | 2+0 | 8+0 | 2+8 | 1+10 | 1+0 | 1+0 | 0+0 | $\frac{-9.055M}{\beta^- 4.20s}$ |
| $\frac{738.443}{738.07}$ | Se ⁸⁶ ₃₄ | $\frac{85.92388}{85.92427}$ | 34n | 2+0 | 8+0 | 4+7 | 1+11 | 0+0 | 1+0 | 0+0 | $\frac{-7.513M}{\beta^- 14.3s}$ |

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|---|---------------------------------|--------------------------------|-----|-----|-----|------|------|-----|-----|-----|---|
| $\frac{753.371}{753.62}$ | Br ⁸⁸ ₃₅ | $\frac{87.92434}{87.92407}$ | 35n | 2+0 | 8+0 | 6+6 | 0+11 | 1+1 | 0+0 | 0+0 | $\frac{-7.287M}{\beta^- 16.29s}$ |
| $\frac{773.531}{773.22}$ | Kr ⁹⁰ ₃₆ | $\frac{89.91919}{89.91952}$ | 36n | 2+0 | 8+0 | 8+5 | 0+12 | 0+1 | 0+0 | 0+0 | $\frac{-6.881M}{\beta^- 32.32s}$ |
| $\frac{789.321}{788.39}$ | Rb ⁹² ₃₇ | $\frac{91.91873}{91.91973}$ | 37n | 2+0 | 8+0 | 8+5 | 0+12 | 1+1 | 0+0 | 0+0 | $\frac{-6.482M}{\beta^- 4.492s}$ |
| $\frac{807.278}{807.82}$ | Sr ⁹⁴ ₃₈ | $\frac{93.91594}{93.91536}$ | 38n | 2+0 | 8+0 | 8+5 | 1+12 | 1+1 | 0+0 | 0+0 | $\frac{-6.309M}{\beta^- 75.3s}$ |
| $\frac{822.751}{822.68}$ | Y ⁹⁶ ₃₉ | $\frac{95.91582}{95.91589}$ | 39n | 2+0 | 8+0 | 10+4 | 0+13 | 1+0 | 0+1 | 0+0 | $\frac{-5.997M}{\beta^- 5.34s}$ |
| $\frac{840.649}{840.98}$ | Zr ⁹⁸ ₄₀ | $\frac{97.91309}{97.91273}$ | 40n | 2+0 | 8+0 | 10+4 | 1+13 | 1+0 | 0+1 | 0+0 | $\frac{-4.877M}{\beta^- 30.7s}$ |
| $\frac{854.913}{855.00}$ | Nb ¹⁰⁰ ₄₁ | $\frac{99.91427}{99.91418}$ | 41n | 2+0 | 8+0 | 10+4 | 1+13 | 1+0 | 1+1 | 0+0 | $\frac{-3.887M}{\beta^- 1.50s}$ |
| $\frac{866.499}{865.86}$ | Mo ¹⁰¹ ₄₂ | $\frac{100.90966}{100.91035}$ | 42n | 2+0 | 8+0 | 12+3 | 1+13 | 1+1 | 1+0 | 0+0 | $\frac{-4.702M}{\beta^- 11.3m}$ |
| $\frac{888.154}{888.26}$ | Tc ¹⁰⁴ ₄₃ | $\frac{103.91156}{103.91145}$ | 43n | 2+0 | 8+0 | 14+2 | 0+14 | 0+1 | 1+1 | 0+0 | $\frac{-5.130M}{\beta^- 18.3m}$ |
| $\frac{907.251}{907.46}$ | Ru ¹⁰⁶ ₄₄ | $\frac{105.90755}{105.90733}$ | 44n | 2+0 | 8+0 | 14+2 | 1+14 | 1+1 | 0+1 | 0+0 | $\frac{-5.173M}{\beta^- 371.8d}$ |
| $\frac{921.428}{921.51}$ | Rh ¹⁰⁸ ₄₅ | $\frac{107.90882}{107.90873}$ | 45n | 2+0 | 8+0 | 16+1 | 0+14 | 0+3 | 1+0 | 0+0 | $\frac{-4.950M}{\beta^- 16.8s}$ |
| $\frac{940.295}{940.21}$ | Pd ¹¹⁰ ₄₆ | $\frac{109.90506}{109.90515}$ | 46n | 2+0 | 8+0 | 18+0 | 0+15 | 0+2 | 0+1 | 0+0 | $\frac{-4.453M}{st}$ |
| $\frac{954.100}{953.84}$ | Ag ¹¹² ₄₇ | $\frac{111.90673}{111.90701}$ | 47n | 2+0 | 8+0 | 18+0 | 0+15 | 0+2 | 1+1 | 0+0 | $\frac{-3.977M}{\beta^- 3.130h}$ |
| $\frac{971.975}{972.60}$ | Cd ¹¹⁴ ₄₈ | $\frac{113.90403}{113.90336}$ | 48n | 2+0 | 8+0 | 18+0 | 0+15 | 1+3 | 1+0 | 0+0 | $\frac{-4.095M}{2\beta^- 2.1 \cdot 10^{18}a}$ |
| $\frac{985.621}{986.19}$ | In ¹¹⁶ ₄₉ | $\frac{115.90587}{115.90526}$ | 49n | 2+0 | 8+0 | 18+0 | 2+14 | 1+3 | 0+1 | 0+0 | $\frac{-4.0909M}{\beta^- 14.10s}$ |
| $\frac{1004.62}{1005.0}$ | Sn ¹¹⁸ ₅₀ | $\frac{117.90196}{117.90160}$ | 50n | 2+0 | 8+0 | 18+0 | 3+14 | 0+4 | 1+0 | 0+0 | $\frac{-4.0597M}{st}$ |
| $\frac{1016.91}{1017.1}$ | Sb ¹²⁰ ₅₁ | $\frac{119.90526}{119.905072}$ | 51n | 2+0 | 8+0 | 18+0 | 4+13 | 0+5 | 1+0 | 0+0 | $\frac{-2.593M}{ce 15.89m}$ |

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|---|---------------------------------|---------------------------------|-----|-----|-----|------|-------|------|-----|-----|---|
| $\frac{1034.18}{1034.3}$ | Te ¹²² ₅₂ | $\frac{121.90321}{121.903044}$ | 52n | 2+0 | 8+0 | 18+0 | 4+14 | 1+3 | 1+1 | 0+0 | $\frac{-1.0879\text{M}}{st}$ |
| $\frac{1046.49}{1046.7}$ | I ¹²⁴ ₅₃ | $\frac{123.90648}{123.90621}$ | 53n | 2+0 | 8+0 | 18+0 | 6+12 | 0+6 | 1+0 | 0+0 | $\frac{-1.374\text{M}}{ce\ 4.176d}$ |
| $\frac{1063.90}{1063.9}$ | Xe ¹²⁶ ₅₄ | $\frac{125.904274}{125.904274}$ | 54n | 2+0 | 8+0 | 18+0 | 7+12 | 0+6 | 1+0 | 0+0 | $\frac{-1.255\text{M}}{st}$ |
| $\frac{1075.79}{1076.0}$ | Cs ¹²⁸ ₅₅ | $\frac{127.90801}{127.907749}$ | 55n | 2+0 | 8+0 | 18+0 | 8+11 | 0+7 | 1+0 | 0+0 | $\frac{-989\text{K}}{ce\ 3.66m}$ |
| $\frac{1093.10}{1092.7}$ | Ba ¹³⁰ ₅₆ | $\frac{129.90591}{129.906321}$ | 56n | 2+0 | 8+0 | 18+0 | 9+11 | 0+7 | 1+0 | 0+0 | $\frac{-541\text{K}}{2ce\ 4 \cdot 10^{-21}a}$ |
| $\frac{1104.78}{1104.6}$ | La ¹³² ₅₇ | $\frac{131.90987}{131.91010}$ | 57n | 2+0 | 8+0 | 18+0 | 10+10 | 0+8 | 1+0 | 0+0 | $\frac{-2.200\text{M}}{ce\ 4.80h}$ |
| $\frac{1120.46}{1121.0}$ | Ce ¹³⁴ ₅₈ | $\frac{133.90952}{133.908925}$ | 58n | 2+0 | 8+0 | 18+0 | 11+10 | 1+7 | 0+1 | 0+0 | $\frac{-24\text{K}}{ce\ 3.16d}$ |
| $\frac{1133.48}{1132.9}$ | Pr ¹³⁶ ₅₉ | $\frac{135.91204}{135.912692}$ | 59n | 2+0 | 8+0 | 18+0 | 12+9 | 0+9 | 1+0 | 0+0 | $\frac{-13\text{K}}{ce\ 13.1m}$ |
| $\frac{1149.03}{1148.9}$ | Nd ¹³⁸ ₆₀ | $\frac{137.91183}{137.91195}$ | 60n | 2+0 | 8+0 | 18+0 | 13+9 | 1+8 | 0+1 | 0+0 | $\frac{393\text{K}}{ce\ 5.04h}$ |
| $\frac{1160.30}{1160.5}$ | Pm ¹⁴⁰ ₆₁ | $\frac{139.91622}{139.91604}$ | 61n | 2+0 | 8+0 | 18+0 | 14+8 | 1+9 | 0+1 | 0+0 | $\frac{700\text{K}}{ce\ 9.20s}$ |
| $\frac{1175.96}{1176.6}$ | Sm ¹⁴² ₆₂ | $\frac{141.91590}{141.915198}$ | 62n | 2+0 | 8+0 | 18+0 | 14+8 | 1+10 | 1+0 | 0+0 | $\frac{606\text{K}}{ce\ 72.49m}$ |
| $\frac{1188.38}{1188.6}$ | Eu ¹⁴⁴ ₆₃ | $\frac{143.91906}{143.918817}$ | 63n | 2+0 | 8+0 | 18+0 | 16+7 | 1+10 | 0+1 | 0+0 | $\frac{160\text{K}}{ce\ 10.2s}$ |
| $\frac{1203.91}{1204.4}$ | Gd ¹⁴⁶ ₆₄ | $\frac{145.91888}{145.918311}$ | 64n | 2+0 | 8+0 | 18+0 | 16+7 | 1+11 | 1+0 | 0+0 | $\frac{475\text{K}}{ce\ 48.27d}$ |
| $\frac{1214.00}{1214.2}$ | Tb ¹⁴⁸ ₆₅ | $\frac{147.92453}{147.924272}$ | 65n | 2+0 | 8+0 | 18+0 | 18+7 | 0+8 | 1+3 | 0+0 | $\frac{2.654\text{M}}{ce\ 60.0m}$ |
| $\frac{1227.75}{1228.4}$ | Dy ¹⁵⁰ ₆₆ | $\frac{149.92626}{149.925585}$ | 66n | 2+0 | 8+0 | 18+0 | 18+7 | 1+8 | 1+3 | 0+0 | $\frac{4.3513\text{M}}{ce\ 7.17m}$ |
| $\frac{1238.13}{1238.0}$ | Ho ¹⁵² ₆₇ | $\frac{151.93161}{151.931714}$ | 67n | 2+0 | 8+0 | 18+0 | 20+6 | 0+8 | 1+4 | 0+0 | $\frac{4.5073\text{M}}{ce\ 161.8s}$ |
| $\frac{1252.36}{1252.4}$ | Er ¹⁵⁴ ₆₈ | $\frac{153.93282}{153.932783}$ | 68n | 2+0 | 8+0 | 18+0 | 20+6 | 0+9 | 1+3 | 1+0 | $\frac{4.280\text{M}}{ce\ 3.73m}$ |

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|---|---------------------------------|---------------------------------|-----|-----|-----|------|------|------|------|-----|---|
| $\frac{1262.52}{1262.0}$ | Tm ₆₉ ¹⁵⁶ | $\frac{155.93840}{155.93898}$ | 69n | 2+0 | 8+0 | 18+0 | 20+6 | 1+8 | 1+4 | 1+0 | $\frac{4.344\text{M}}{ce\ 83.8\text{S}}$ |
| $\frac{1276.59}{1276.5}$ | Yb ₇₀ ¹⁵⁸ | $\frac{157.93979}{157.939866}$ | 70n | 2+0 | 8+0 | 18+0 | 22+5 | 1+9 | 1+3 | 0+1 | $\frac{4.173\text{M}}{ce\ 1.49\text{m}}$ |
| $\frac{1286.53}{1286.1}$ | Lu ₇₁ ¹⁶⁰ | $\frac{159.94561}{159.94603}$ | 71n | 2+0 | 8+0 | 18+0 | 24+4 | 0+9 | 1+4 | 0+1 | $\frac{4.140\text{M}}{ce\ 36.1\text{S}}$ |
| $\frac{1300.78}{1300.4}$ | Hf ₇₂ ¹⁶² | $\frac{161.94680}{161.94721}$ | 72n | 2+0 | 8+0 | 18+0 | 24+4 | 1+9 | 0+5 | 1+0 | $\frac{4.417\text{M}}{ce\ 39.4\text{S}}$ |
| $\frac{1310.51}{1309.9}$ | Ta ₇₃ ¹⁶⁴ | $\frac{163.95284}{163.95353}$ | 73n | 2+0 | 8+0 | 18+0 | 26+3 | 0+9 | 0+6 | 1+0 | $\frac{4.560\text{M}}{ce\ 14.2\text{S}}$ |
| $\frac{1323.55}{1323.8}$ | W ₇₄ ¹⁶⁶ | $\frac{165.95534}{165.955027}$ | 74n | 2+0 | 8+0 | 18+0 | 26+3 | 1+9 | 0+6 | 1+0 | $\frac{4.856\text{M}}{ce\ 19.2\text{S}}$ |
| $\frac{1333.05}{1333.1}$ | Re ₇₅ ¹⁶⁸ | $\frac{167.96164}{167.96157}$ | 75n | 2+0 | 8+0 | 18+0 | 28+2 | 0+9 | 0+7 | 1+0 | $\frac{5.063\text{M}}{ce\ 4.40\text{S}}$ |
| $\frac{1346.61}{1346.6}$ | Os ₇₆ ¹⁷⁰ | $\frac{169.963577}{169.963577}$ | 76n | 2+0 | 8+0 | 18+0 | 30+1 | 0+10 | 0+6 | 0+1 | $\frac{5.539\text{M}}{ce\ 7.37\text{S}}$ |
| $\frac{1355.20}{1355.5}$ | Ir ₇₇ ¹⁷² | $\frac{171.97083}{171.97046}$ | 77n | 2+0 | 8+0 | 18+0 | 30+1 | 0+9 | 0+8 | 1+0 | $\frac{5.991\text{M}}{ce\ 4.40\text{S}}$ |
| $\frac{1368.58}{1368.7}$ | Pt ₇₈ ¹⁷⁴ | $\frac{173.97295}{173.972819}$ | 78n | 2+0 | 8+0 | 18+0 | 32+0 | 0+10 | 0+7 | 0+1 | $\frac{6.183\text{M}}{\alpha\ 0.889\text{S}}$ |
| $\frac{1376.94}{1377.3}$ | Au ₇₉ ¹⁷⁶ | $\frac{175.98047}{175.98010}$ | 79n | 2+0 | 8+0 | 18+0 | 32+0 | 0+9 | 0+9 | 1+0 | $\frac{6.558\text{M}}{\alpha\ 1.08\text{S}}$ |
| $\frac{1390.14}{1390.4}$ | Hg ₈₀ ¹⁷⁸ | $\frac{177.98278}{177.982483}$ | 80n | 2+0 | 8+0 | 18+0 | 32+0 | 2+9 | 0+8 | 0+1 | $\frac{6.577\text{M}}{\alpha\ 1.08\text{S}}$ |
| $\frac{1398.98}{1398.9}$ | Tl ₈₁ ¹⁸⁰ | $\frac{179.98979}{179.98991}$ | 81n | 2+0 | 8+0 | 18+0 | 32+0 | 3+8 | 0+9 | 0+1 | $\frac{6.710\text{M}}{ce\ 1.09\text{S}}$ |
| $\frac{1411.28}{1411.7}$ | Pb ₈₂ ¹⁸² | $\frac{181.99307}{181.992672}$ | 82n | 2+0 | 8+0 | 18+0 | 32+0 | 4+8 | 0+9 | 0+1 | $\frac{7.066\text{M}}{\alpha\ 55.0\text{ms}}$ |
| $\frac{1419.18}{1419.1}$ | Bi ₈₃ ¹⁸⁴ | $\frac{184.001083}{184.00112}$ | 83n | 2+0 | 8+0 | 18+0 | 32+0 | 4+7 | 0+11 | 1+0 | $\frac{8.020\text{M}}{\alpha\ 13.0\text{ms}}$ |