

TAVOLA PERIODICA DEI NUCLEI ATOMICI

configurazione dei livelli nucleari degli isotopi **RENIO** **Z = 75-a**

$\frac{E_c(\text{MeV})}{E_s(\text{MeV})}$	Sa	$\frac{m_c}{m_s}$	n	1	2	3	4	5	6	7	$\frac{E_p(\text{eV})}{p \cdot T_{1/2}}$
$\frac{1249.77}{1249.4}$	Re ¹⁶⁰ ₇₅	$\frac{159.98171}{159.98212}$	75n	2+0	8+0	18+0	30+0	4+0	2+10	1+0	$\frac{1.79174M}{p \ 0.82ms}$
$\frac{1261.25}{1261.7}$	Re ¹⁶¹ ₇₅	$\frac{160.97805}{160.97759}$	75n	2+0	8+0	18+0	32+0	2+0	2+10	0+1	$\frac{1.70791M}{p \ 0.44ms}$
$\frac{1270.87}{1271.2}$	Re ¹⁶² ₇₅	$\frac{161.97639}{161.97600}$	75n	2+0	8+0	18+0	32+0	2+1	1+10	0+1	$\frac{6.240M}{\alpha \ 107ms}$
$\frac{1283.26}{1283.0}$	Re ¹⁶³ ₇₅	$\frac{162.97175}{162.972081}$	75n	2+0	8+0	18+0	32+0	1+3	0+10	1+0	$\frac{8.900M}{ce \ 390ms}$
$\frac{1292.87}{1292.7}$	Re ¹⁶⁴ ₇₅	$\frac{163.97010}{163.97032}$	75n	2+0	8+0	18+0	30+1	1+4	1+9	1+0	$\frac{5.926M}{\alpha \ 0.85s}$
$\frac{1304.21}{1303.7}$	Re ¹⁶⁵ ₇₅	$\frac{164.96659}{164.967089}$	75n	2+0	8+0	18+0	30+1	0+6	1+8	1+0	$\frac{8.210M}{ce \ 1s}$
$\frac{1312.78}{1313.0}$	Re ¹⁶⁶ ₇₅	$\frac{165.96605}{165.96581}$	75n	2+0	8+0	18+0	30+1	0+7	1+7	0+1	$\frac{9.990M}{ce \ 2.25s}$
$\frac{1324.13}{1324.1}$	Re ¹⁶⁷ ₇₅	$\frac{166.96260}{166.96260}$	75n	2+0	8+0	18+0	28+2	1+8	1+6	0+1	$\frac{7.250M}{ce \ 5.90s}$
$\frac{1333.05}{1333.1}$	Re ¹⁶⁸ ₇₅	$\frac{167.96164}{167.96157}$	75n	2+0	8+0	18+0	28+2	0+9	0+7	1+0	$\frac{9.100M}{ce \ 4.40s}$
$\frac{1343.36}{1343.8}$	Re ¹⁶⁹ ₇₅	$\frac{168.95922}{168.95879}$	75n	2+0	8+0	18+0	26+3	1+10	1+5	0+1	$\frac{6.508M}{ce \ 8.10s}$
$\frac{1352.28}{1352.4}$	Re ¹⁷⁰ ₇₅	$\frac{169.95831}{169.958220}$	75n	2+0	8+0	18+0	26+3	0+11	0+6	1+0	$\frac{8.380M}{ce \ 9.20s}$
$\frac{1362.58}{1362.8}$	Re ¹⁷¹ ₇₅	$\frac{170.95592}{170.95572}$	75n	2+0	8+0	18+0	24+4	1+12	1+4	0+1	$\frac{5.840M}{ce \ 15.2s}$
$\frac{1371.51}{1371.1}$	Re ¹⁷² ₇₅	$\frac{171.95500}{171.95542}$	75n	2+0	8+0	18+0	24+4	0+13	0+5	1+0	$\frac{7.570M}{ce \ 55.0s}$
$\frac{1381.12}{1381.2}$	Re ¹⁷³ ₇₅	$\frac{172.95332}{172.95324}$	75n	2+0	8+0	18+0	22+5	0+14	1+4	1+0	$\frac{5.170M}{ce \ 1.98m}$
$\frac{1389.00}{1389.4}$	Re ¹⁷⁴ ₇₅	$\frac{173.95355}{173.95312}$	75n	2+0	8+0	18+0	20+6	1+14	1+4	1+0	$\frac{6.550M}{ce \ 2.40m}$
$\frac{1398.62}{1399.1}$	Re ¹⁷⁵ ₇₅	$\frac{174.95189}{174.95138}$	75n	2+0	8+0	18+0	20+6	1+15	0+4	1+0	$\frac{4.340M}{ce \ 5.89m}$

$\frac{E_c(\text{MeV})}{E_s(\text{MeV})}$	Sa	$\frac{m_c}{m_s}$	n	1	2	3	4	5	6	7	$\frac{E_p(\text{eV})}{P-T_{1/2}}$
$\frac{1406.50}{1406.9}$	Re ₇₅ ¹⁷⁶	$\frac{175.95209}{175.95162}$	75n	2+0	8+0	18+0	20+6	0+16	0+4	1+0	$\frac{5.580M}{ce 5.30m}$
$\frac{1416.11}{1416.2}$	Re ₇₅ ¹⁷⁷	$\frac{176.95044}{176.95033}$	75n	2+0	8+0	18+0	18+7	0+17	1+3	1+0	$\frac{3.430M}{ce 14.0m}$
$\frac{1424.00}{1423.7}$	Re ₇₅ ¹⁷⁸	$\frac{177.95064}{177.95099}$	75n	2+0	8+0	18+0	16+8	1+17	1+3	1+0	$\frac{4.760M}{ce 13.2m}$
$\frac{1431.88}{1432.7}$	Re ₇₅ ¹⁷⁹	$\frac{178.95084}{178.949988}$	75n	2+0	8+0	18+0	16+8	0+18	1+3	1+0	$\frac{2.710M}{ce 19.5m}$
$\frac{1439.76}{1440.0}$	Re ₇₅ ¹⁸⁰	$\frac{179.95105}{179.950789}$	75n	2+0	8+0	18+0	14+9	1+18	1+3	1+0	$\frac{3.799M}{ce 2.44m}$
$\frac{1448.70}{1448.7}$	Re ₇₅ ¹⁸¹	$\frac{180.950068}{180.950068}$	75n	2+0	8+0	18+0	16+8	0+19	0+4	0+0	$\frac{1.730M}{ce 19.9h}$
$\frac{1456.58}{1455.8}$	Re ₇₅ ¹⁸²	$\frac{181.95032}{181.95121}$	75n	2+0	8+0	18+0	14+9	1+19	0+4	0+0	$\frac{2.800M}{ce 64.0h}$
$\frac{1464.46}{1464.2}$	Re ₇₅ ¹⁸³	$\frac{182.95053}{182.950820}$	75n	2+0	8+0	18+0	14+9	0+20	0+4	0+0	$\frac{556.0K}{ce 70.0d}$
$\frac{1470.61}{1470.7}$	Re ₇₅ ¹⁸⁴	$\frac{183.952611}{183.952521}$	75n	2+0	8+0	18+0	12+10	0+20	1+4	0+0	$\frac{1.483M}{ce 35.4d}$
$\frac{1478.50}{1478.3}$	Re ₇₅ ¹⁸⁵	$\frac{184.95278}{184.952955}$	75n	2+0	8+0	18+0	10+11	1+20	1+4	0+0	$\frac{st}{37.40\%}$
$\frac{1484.65}{1484.5}$	Re ₇₅ ¹⁸⁶	$\frac{185.95485}{185.954986}$	75n	2+0	8+0	18+0	10+11	1+20	0+5	0+0	$\frac{1.0717M}{\beta^- 3.7186d}$
$\frac{1492.54}{1491.9}$	Re ₇₅ ¹⁸⁷	$\frac{186.95504}{186.955753}$	75n	2+0	8+0	18+0	10+11	0+21	0+5	0+0	$\frac{2.469M}{\beta^- 4.33 \cdot 10^{10} a}$ 62.60%
$\frac{1496.96}{1497.7}$	Re ₇₅ ¹⁸⁸	$\frac{187.95896}{187.958114}$	75n	2+0	8+0	18+0	8+12	1+20	0+6	0+0	$\frac{2.12029M}{\beta^- 17.003h}$
$\frac{1504.84}{1504.8}$	Re ₇₅ ¹⁸⁹	$\frac{188.959229}{188.959229}$	75n	2+0	8+0	18+0	8+12	0+21	0+6	0+0	$\frac{1.007M}{\beta^- 24.3h}$
$\frac{1510.99}{1510.4}$	Re ₇₅ ¹⁹⁰	$\frac{189.96123}{189.96182}$	75n	2+0	8+0	18+0	6+13	0+21	1+6	0+0	$\frac{3.140M}{\beta^- 3.10m}$
$\frac{1517.15}{1517.3}$	Re ₇₅ ¹⁹¹	$\frac{190.96328}{190.963125}$	75n	2+0	8+0	18+0	6+13	0+21	0+7	0+0	$\frac{2.045M}{\beta^- 9.80m}$

$\frac{E_c(\text{MeV})}{E_s(\text{MeV})}$	Sa	$\frac{m_c}{m_s}$	n	1	2	3	4	5	6	7	$\frac{E_p(\text{eV})}{p \cdot T_{1/2}}$
$\frac{1523.30}{1522.7}$	Re ₇₅ ¹⁹²	$\frac{191.96534}{191.96596}$	75n	2+0	8+0	18+0	4+14	0+21	1+7	0+0	$\frac{4.110M}{\beta^- 16.0s}$
$\frac{1530.13}{1529.4}$	Re ₇₅ ¹⁹³	$\frac{192.96668}{192.96747}$	75n	2+0	8+0	18+0	2+15	1+21	0+7	1+0	$\frac{3.180M}{\beta^- 30s}$
$\frac{1534.56}{1534.7}$	Re ₇₅ ¹⁹⁴	$\frac{193.97058}{193.97042}$	75n	2+0	8+0	18+0	2+15	0+21	0+8	1+0	$\frac{5.00M}{\beta^- 5.0s}$
$\frac{1540.71}{-}$	Re ₇₅ ¹⁹⁵	$\frac{194.97265}{-}$	75n	2+0	8+0	18+0	0+16	0+21	1+8	1+0	$\frac{4.100M}{\beta^- 6.0s}$
$\frac{1546.86}{-}$	Re ₇₅ ¹⁹⁶	$\frac{195.97471}{-}$	75n	2+0	8+0	18+0	0+16	0+21	0+9	1+0	$\frac{5.700M}{\beta^- 3.0s}$
$\frac{1551.98}{-}$	Re ₇₅ ¹⁹⁷	$\frac{196.97788}{-}$	75n	2+0	8+0	18+0	0+16	0+21	0+9	0+1	$\frac{4.180M}{\beta^-}$

$E_c(\text{MeV})$ = valore calcolato dell'energia di legame

$E_s(\text{MeV})$ = valore sperimentale dell'energia di legame

m_c = valore calcolato della massa atomica

m_s = valore sperimentale della massa atomica

n = numero di neutroni centrali attivi

1-7 = numero quantico associato al livello

p + d = (numero di protoni) + (numero di deutoni) in orbita

p - $T_{1/2}$ = particella emessa - periodo di dimezzamento

$E_p(\text{eV})$ = energia della particella emessa