

TAVOLA PERIODICA DEI NUCLEI ATOMICI

configurazione dei livelli nucleari degli isotopi **SAMARIO Z = 62-a**

$\frac{E_c(\text{MeV})}{E_s(\text{MeV})}$	Sa	$\frac{m_c}{m_s}$	n	1	2	3	4	5	6	7	$\frac{E_p(\text{eV})}{P-T_{1/2}}$
$\frac{1023.53}{1023.7}$	Sm ₆₂ ¹²⁸	$\frac{127.95823}{127.95808}$	62n	2+0	8+0	18+0	15+0	15+2	0+2	0+0	$\frac{9.600M}{ce500ms}$
$\frac{1035.46}{1034.9}$	Sm ₆₂ ¹²⁹	$\frac{128.95409}{128.95464}$	62n	2+0	8+0	18+0	16+0	12+4	1+1	0+0	$\frac{11.20M}{ce550ms}$
$\frac{1048.72}{1048.3}$	Sm ₆₂ ¹³⁰	$\frac{129.94852}{129.94892}$	62n	2+0	8+0	18+0	18+0	9+5	1+1	0+0	$\frac{8.300M}{ce1.0s}$
$\frac{1059.06}{1059.0}$	Sm ₆₂ ¹³¹	$\frac{130.94608}{130.94611}$	62n	2+0	8+0	18+0	19+0	7+6	1+1	0+0	$\frac{10.00M}{ce1.20s}$
$\frac{1072.33}{1072.2}$	Sm ₆₂ ¹³²	$\frac{131.94050}{131.94069}$	62n	2+0	8+0	18+0	21+0	4+7	1+1	0+0	$\frac{6.900M}{ce4.0s}$
$\frac{1082.67}{1082.1}$	Sm ₆₂ ¹³³	$\frac{132.93807}{132.93867}$	62n	2+0	8+0	18+0	22+0	2+8	1+1	0+0	$\frac{8.580M}{ce2.89s}$
$\frac{1095.60}{1094.6}$	Sm ₆₂ ¹³⁴	$\frac{133.93397}{133.93397}$	62n	2+0	8+0	18+0	23+0	1+9	0+1	0+0	$\frac{5.520M}{ce9.50s}$
$\frac{1103.60}{1104.0}$	Sm ₆₂ ¹³⁵	$\frac{134.93293}{134.93252}$	62n	2+0	8+0	18+0	21+1	1+10	1+0	0+0	$\frac{7.120M}{ce10.3s}$
$\frac{1115.27}{1116.0}$	Sm ₆₂ ¹³⁶	$\frac{135.92906}{135.928276}$	62n	2+0	8+0	18+0	21+2	1+9	0+1	0+0	$\frac{4.390M}{ce47.0s}$
$\frac{1125.61}{1125.3}$	Sm ₆₂ ¹³⁷	$\frac{136.92663}{136.92697}$	62n	2+0	8+0	18+0	20+3	1+9	0+1	0+0	$\frac{6.050M}{ce45.0s}$
$\frac{1135.95}{1136.8}$	Sm ₆₂ ¹³⁸	$\frac{137.92419}{137.923244}$	62n	2+0	8+0	18+0	19+4	1+9	0+1	0+0	$\frac{3.440M}{ce3.10m}$
$\frac{1145.28}{1145.8}$	Sm ₆₂ ¹³⁹	$\frac{138.92284}{138.922297}$	62n	2+0	8+0	18+0	18+7	1+3	0+5	0+0	$\frac{5.120M}{ce2.57s}$
$\frac{1156.62}{1156.9}$	Sm ₆₂ ¹⁴⁰	$\frac{139.91933}{139.918995}$	62n	2+0	8+0	18+0	17+6	1+9	0+1	0+0	$\frac{2.750M}{ce14.82m}$
$\frac{1165.63}{1165.5}$	Sm ₆₂ ¹⁴¹	$\frac{140.91833}{140.918476}$	62n	2+0	8+0	18+0	15+7	1+10	1+0	0+0	$\frac{4.589M}{ce10.2m}$
$\frac{1175.96}{1176.6}$	Sm ₆₂ ¹⁴²	$\frac{141.91590}{141.915198}$	62n	2+0	8+0	18+0	14+8	1+10	1+0	0+0	$\frac{2.170M}{ce12.49m}$
$\frac{1184.72}{1185.2}$	Sm ₆₂ ¹⁴³	$\frac{142.91516}{142.914628}$	62n	2+0	8+0	18+0	15+8	0+10	0+1	0+0	$\frac{3.443M}{ce8.75m}$

$\frac{E_c(\text{MeV})}{E_s(\text{MeV})}$	Sa	$\frac{m_c}{m_s}$	n	1	2	3	4	5	6	7	$\frac{E_p(\text{eV})}{p \cdot T_{1/2}}$
$\frac{1195.05}{1195.7}$	Sm_{62}^{144}	$\frac{143.91274}{143.911999}$	62n	2+0	8+0	18+0	14+9	0+10	0+1	0+0	$\frac{\text{st}}{3.07\%}$
$\frac{1202.47}{1202.5}$	Sm_{62}^{145}	$\frac{144.91341}{144.91341}$	62n	2+0	8+0	18+0	12+10	1+10	0+1	0+0	$\frac{616.0\text{K}}{ce\ 340\text{d}}$
$\frac{1211.47}{1210.9}$	Sm_{62}^{146}	$\frac{145.91244}{145.913041}$	62n	2+0	8+0	18+0	10+11	1+11	1+0	0+0	$\frac{2.528\text{M}}{\alpha\ 10.3 \cdot 10^7\text{a}}$
$\frac{1217.30}{1217.3}$	Sm_{62}^{147}	$\frac{146.914898}{146.914898}$	62n	2+0	8+0	18+0	10+11	1+11	0+1	0+0	$\frac{2.3109\text{M}}{\alpha\ 1.06 \cdot 10^{11}\text{a}}$ 14.99%
$\frac{1224.97}{1225.4}$	Sm_{62}^{148}	$\frac{147.91528}{147.914823}$	62n	2+0	8+0	18+0	9+11	1+13	0+0	0+0	$\frac{1.9866\text{M}}{\alpha\ 7 \cdot 10^{15}\text{a}}$ 11.24%
$\frac{1230.79}{1231.3}$	Sm_{62}^{149}	$\frac{148.91769}{148.917185}$	62n	2+0	8+0	18+0	7+12	1+13	1+0	0+0	$\frac{1.8713\text{M}}{\alpha\ > 2 \cdot 10^{15}\text{a}}$ 13.82%
$\frac{1239.80}{1239.2}$	Sm_{62}^{150}	$\frac{149.91668}{149.917276}$	62n	2+0	8+0	18+0	7+12	1+14	0+0	0+0	$\frac{\text{st}}{7.38\%}$
$\frac{1244.29}{1244.8}$	Sm_{62}^{151}	$\frac{150.91937}{150.919932}$	62n	2+0	8+0	18+0	6+12	1+15	0+0	0+0	$\frac{76.2\text{K}}{\beta^- 90.0\text{a}}$
$\frac{1253.04}{1253.1}$	Sm_{62}^{152}	$\frac{151.91980}{151.919732}$	62n	2+0	8+0	18+0	5+13	0+15	1+0	0+0	$\frac{\text{st}}{26.75\%}$
$\frac{1258.87}{1259.0}$	Sm_{62}^{153}	$\frac{152.92221}{152.922097}$	62n	2+0	8+0	18+0	5+13	0+15	0+1	0+0	$\frac{806.8\text{K}}{\beta^- 46.284\text{h}}$
$\frac{1266.54}{1266.9}$	Sm_{62}^{154}	$\frac{153.92264}{153.922209}$	62n	2+0	8+0	18+0	4+13	0+17	0+0	0+0	$\frac{1.2507\text{M}}{2\beta^- 2.3 \cdot 10^{18}\text{a}}$ 22.75%
$\frac{1272.37}{1272.7}$	Sm_{62}^{155}	$\frac{154.92388}{154.92464}$	62n	2+0	8+0	18+0	2+14	0+17	1+0	0+0	$\frac{1.6264\text{M}}{\beta^- 22.3\text{m}}$
$\frac{1279.78}{1280.0}$	Sm_{62}^{156}	$\frac{155.92575}{155.925528}$	62n	2+0	8+0	18+0	0+15	1+17	1+0	0+0	$\frac{722.0\text{K}}{\beta^- 9.40\text{h}}$
$\frac{1285.61}{1285.4}$	Sm_{62}^{157}	$\frac{156.92816}{156.92836}$	62n	2+0	8+0	18+0	0+15	1+17	0+1	0+0	$\frac{2.730\text{M}}{\beta^- 8.03\text{m}}$
$\frac{1291.70}{1292.0}$	Sm_{62}^{158}	$\frac{157.93029}{157.92999}$	62n	2+0	8+0	16+1	1+14	0+19	1+0	0+0	$\frac{1.999\text{M}}{\beta^- 5.30\text{m}}$
$\frac{1297.28}{1297.0}$	Sm_{62}^{159}	$\frac{158.93296}{158.93321}$	62n	2+0	8+0	16+1	0+15	1+17	0+2	0+0	$\frac{3.800\text{M}}{\beta^- 11.37\text{s}}$

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$\frac{E_c(\text{MeV})}{E_s(\text{MeV})}$	Sa	$\frac{m_c}{m_s}$	n	1	2	3	4	5	6	7	$\frac{E_p(\text{eV})}{p-T_{1/2}}$
$\frac{1303.21}{1303.3}$	Sm_{62}^{160}	$\frac{159.93526}{159.93514}$	62n	2+0	8+0	14+2	0+16	0+15	1+3	1+0	$\frac{2.830M}{\beta^- 9.60s}$
$\frac{1308.08}{1308.0}$	Sm_{62}^{161}	$\frac{160.93870}{160.93883}$	62n	2+0	8+0	14+2	0+16	0+15	1+3	0+1	$\frac{5.050M}{\beta^- 4.80s}$
$\frac{1313.91}{1313.8}$	Sm_{62}^{162}	$\frac{161.94110}{161.94122}$	62n	2+0	8+0	14+2	0+16	0+15	0+4	0+1	$\frac{3.900M}{\beta^- 2.40s}$
$\frac{1318.14}{1318.0}$	Sm_{62}^{163}	$\frac{162.94523}{162.94536}$	62n	2+0	8+0	12+3	0+16	1+14	0+5	0+1	$\frac{5.900M}{\beta^- 1s}$
$\frac{1322.70}{1323.4}$	Sm_{62}^{164}	$\frac{163.94900}{163.94828}$	62n	2+0	8+0	10+4	0+16	0+14	1+6	1+0	$\frac{5.200M}{\beta^- 500ms}$
$\frac{1327.56}{1327.1}$	Sm_{62}^{165}	$\frac{164.95244}{164.95298}$	62n	2+0	8+0	8+5	0+16	1+13	1+7	1+0	$\frac{7.00M}{\beta^- 200ms}$
$\frac{1332.44}{-}$	Sm_{62}^{166}	$\frac{165.95587}{-}$	62n	2+0	8+0	8+5	0+16	1+13	1+7	0+1	$\frac{4.760M}{\beta^- 200ms}$
$\frac{1335.09}{-}$	Sm_{62}^{167}	$\frac{166.96169}{-}$	62n	2+0	8+0	8+5	0+16	1+12	0+9	0+1	$\frac{6.31M}{\beta^-}$
$\frac{1340.91}{-}$	Sm_{62}^{168}	$\frac{167.96411}{-}$	62n	2+0	8+0	6+6	0+16	1+12	1+9	0+1	$\frac{4.740M}{\beta^-}$

$E_c(\text{MeV})$ = 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