

TAVOLA PERIODICA DEI NUCLEI ATOMICI

configurazione dei livelli nucleari degli isotopi **RADIO Z = 88-a**

$\frac{E_c(\text{MeV})}{E_s(\text{MeV})}$	Sa	$\frac{m_c}{m_s}$	n	1	2	3	4	5	6	7	$\frac{E_p(\text{eV})}{P-T_{1/2}}$
$\frac{1552.01}{1552.3}$	Ra ²⁰² ₈₈	$\frac{202.01025}{202.00989}$	88n	2+0	8+0	18+0	32+0	1+17	1+8	0+1	$\frac{7.877M}{\alpha 16.0ms}$
$\frac{1561.36}{1561.0}$	Ra ²⁰³ ₈₈	$\frac{203.00888}{203.00927}$	88n	2+0	8+0	18+0	32+0	0+18	0+9	1+0	$\frac{7.740M}{\alpha 31.0ms}$
$\frac{1571.45}{1571.6}$	Ra ²⁰⁴ ₈₈	$\frac{204.00671}{204.006500}$	88n	2+0	8+0	18+0	30+1	0+19	1+8	1+0	$\frac{7.637M}{\alpha 57.0ms}$
$\frac{1579.70}{1579.9}$	Ra ²⁰⁵ ₈₈	$\frac{205.00652}{205.00627}$	88n	2+0	8+0	18+0	28+2	1+19	1+8	1+0	$\frac{7.490M}{\alpha 210ms}$
$\frac{1589.79}{1590.3}$	Ra ²⁰⁶ ₈₈	$\frac{206.00435}{206.003827}$	88n	2+0	8+0	18+0	28+2	1+20	0+8	1+0	$\frac{7.415M}{\alpha 240ms}$
$\frac{1598.03}{1598.4}$	Ra ²⁰⁷ ₈₈	$\frac{207.00417}{207.00380}$	88n	2+0	8+0	18+0	28+2	0+21	0+8	1+0	$\frac{7.270M}{\alpha 1.35s}$
$\frac{1608.12}{1608.3}$	Ra ²⁰⁸ ₈₈	$\frac{208.002005}{208.001840}$	88n	2+0	8+0	18+0	26+3	0+22	1+7	1+0	$\frac{7.273M}{\alpha 1.30s}$
$\frac{1616.36}{1616.2}$	Ra ²⁰⁹ ₈₈	$\frac{209.00182}{209.00199}$	88n	2+0	8+0	18+0	24+4	1+22	1+7	1+0	$\frac{7.144M}{\alpha 4.60s}$
$\frac{1625.35}{1625.7}$	Ra ²¹⁰ ₈₈	$\frac{210.000838}{210.000495}$	88n	2+0	8+0	18+0	24+4	1+23	1+6	0+1	$\frac{7.151M}{\alpha 3.70s}$
$\frac{1633.59}{1633.4}$	Ra ²¹¹ ₈₈	$\frac{211.000657}{211.000898}$	88n	2+0	8+0	18+0	24+4	0+24	1+6	0+1	$\frac{7.042M}{\alpha 13.0s}$
$\frac{1642.95}{1642.5}$	Ra ²¹² ₈₈	$\frac{211.99927}{211.999794}$	88n	2+0	8+0	18+0	22+5	1+24	0+7	1+0	$\frac{7.0316M}{\alpha 13.0s}$
$\frac{1650.09}{1650.0}$	Ra ²¹³ ₈₈	$\frac{213.00027}{213.000384}$	88n	2+0	8+0	18+0	22+5	0+25	1+6	0+1	$\frac{6.8618M}{\alpha 2.73m}$
$\frac{1657.60}{1658.3}$	Ra ²¹⁴ ₈₈	$\frac{214.000875}{214.000108}$	88n	2+0	8+0	18+0	20+6	0+25	1+7	1+0	$\frac{7.273M}{\alpha 2.46s}$
$\frac{1664.01}{1664.0}$	Ra ²¹⁵ ₈₈	$\frac{215.002720}{215.002720}$	88n	2+0	8+0	18+0	20+6	0+25	0+8	1+0	$\frac{8.864M}{\alpha 1.55ms}$
$\frac{1670.41}{1671.3}$	Ra ²¹⁶ ₈₈	$\frac{216.004453}{216.003533}$	88n	2+0	8+0	18+0	18+7	0+25	1+8	1+0	$\frac{9.526M}{\alpha 182ns}$
$\frac{1676.82}{1676.7}$	Ra ²¹⁷ ₈₈	$\frac{217.006237}{217.006320}$	88n	2+0	8+0	18+0	18+7	0+25	0+9	1+0	$\frac{9.161M}{\alpha 1.60\mu s}$

$\frac{E_c(\text{MeV})}{E_s(\text{MeV})}$	Sa	$\frac{m_c}{m_s}$	n	1	2	3	4	5	6	7	$\frac{E_p(\text{eV})}{p \cdot T_{1/2}}$
$\frac{1683.22}{1684.1}$	Ra ₈₈ ²¹⁸	$\frac{218.008031}{218.007140}$	88n	2+0	8+0	18+0	16+8	0+25	1+9	1+0	$\frac{8.546M}{\alpha 25.2\mu s}$
$\frac{1689.63}{1689.4}$	Ra ₈₈ ²¹⁹	$\frac{219.009815}{219.010085}$	88n	2+0	8+0	18+0	16+8	0+25	0+10	1+0	$\frac{8.138M}{\alpha 10.0ms}$
$\frac{1696.03}{1696.6}$	Ra ₈₈ ²²⁰	$\frac{220.01161}{220.011028}$	88n	2+0	8+0	18+0	14+9	0+25	1+10	1+0	$\frac{7.592M}{\alpha 18.0ms}$
$\frac{1702.44}{1702.0}$	Ra ₈₈ ²²¹	$\frac{221.01339}{221.013917}$	88n	2+0	8+0	18+0	14+9	0+25	0+11	1+0	$\frac{6.679M}{\alpha 38.0s}$
$\frac{1708.84}{1708.7}$	Ra ₈₈ ²²²	$\frac{222.01518}{222.015375}$	88n	2+0	8+0	18+0	12+10	0+25	1+11	1+0	$\frac{6.4578M}{\alpha 286.1s}$
$\frac{1714.52}{1713.8}$	Ra ₈₈ ²²³	$\frac{223.01775}{223.018502}$	88n	2+0	8+0	18+0	12+10	1+24	0+13	0+0	$\frac{5.97899M}{\alpha 11.43d}$
$\frac{1720.92}{1720.3}$	Ra ₈₈ ²²⁴	$\frac{224.01955}{224.020212}$	88n	2+0	8+0	18+0	10+11	1+24	1+13	0+0	$\frac{5.78884M}{\alpha 3.6319d}$
$\frac{1725.49}{1725.2}$	Ra ₈₈ ²²⁵	$\frac{225.02331}{225.023612}$	88n	2+0	8+0	18+0	10+11	0+24	1+14	0+0	$\frac{357.0M}{\beta^- 14.9d}$
$\frac{1731.89}{1731.6}$	Ra ₈₈ ²²⁶	$\frac{226.02510}{226.025410}$	88n	2+0	8+0	18+0	10+11	0+24	0+15	0+0	$\frac{4.87062M}{\alpha 1600a}$
$\frac{1736.46}{1736.2}$	Ra ₈₈ ²²⁷	$\frac{227.02886}{227.029178}$	88n	2+0	8+0	18+0	8+12	1+23	0+16	0+0	$\frac{1.3273M}{\beta^- 42.2m}$
$\frac{1742.86}{1742.5}$	Ra ₈₈ ²²⁸	$\frac{228.03065}{228.031070}$	88n	2+0	8+0	18+0	6+13	1+23	1+16	0+0	$\frac{45.8K}{\beta^- 5.75a}$
$\frac{1747.42}{1746.9}$	Ra ₈₈ ²²⁹	$\frac{229.03442}{229.034958}$	88n	2+0	8+0	18+0	6+13	0+23	1+17	0+0	$\frac{1.810M}{\beta^- 4.0m}$
$\frac{1751.99}{1753.0}$	Ra ₈₈ ²³⁰	$\frac{230.03818}{230.037056}$	88n	2+0	8+0	18+0	4+14	1+22	1+18	0+0	$\frac{700.0K}{\beta^- 93.0m}$
$\frac{1757.28}{1757.2}$	Ra ₈₈ ²³¹	$\frac{231.04117}{231.04122}$	88n	2+0	8+0	18+0	2+15	1+22	1+18	1+0	$\frac{2.310M}{\beta^- 104.1s}$
$\frac{1763.68}{1763.0}$	Ra ₈₈ ²³²	$\frac{232.04296}{232.04364}$	88n	2+0	8+0	18+0	2+15	1+22	0+19	1+0	$\frac{1.350M}{\beta^- 4.20m}$
$\frac{1767.14}{1767.0}$	Ra ₈₈ ²³³	$\frac{233.04791}{233.04806}$	88n	2+0	8+0	18+0	2+15	0+22	1+19	0+1	$\frac{3.100M}{\beta^- 30.0s}$

$\frac{E_c(\text{MeV})}{E_s(\text{MeV})}$	Sa	$\frac{m_c}{m_s}$	n	1	2	3	4	5	6	7	$\frac{E_p(\text{eV})}{p \cdot T_{1/2}}$
$\frac{1772.81}{1772.6}$	Ra_{88}^{234}	$\frac{234.05049}{234.05070}$	88n	2+0	8+0	18+0	0+16	1+21	0+21	1+0	$\frac{2.100M}{\beta^- 30.0s}$
$\frac{1776.27}{-}$	Ra_{88}^{235}	$\frac{235.05544}{-}$	88n	2+0	8+0	18+0	0+16	0+21	1+21	0+1	$\frac{3.700M}{\beta^-}$
$\frac{1781.93}{-}$	Ra_{88}^{236}	$\frac{236.05803}{-}$	88n	2+0	8+0	16+1	0+16	1+20	0+23	1+0	$\frac{2.552M}{\beta^-}$

$E_c(\text{MeV})$ = 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

$p \cdot T_{1/2}$ = particella emessa – periodo di dimezzamento

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

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