

TAVOLA PERIODICA DEI NUCLEI ATOMICI

configurazione dei livelli nucleari degli isotopi **PIOMBO** $Z = 82-a$

$\frac{E_c(\text{MeV})}{E_s(\text{MeV})}$	Sa	$\frac{m_c}{m_s}$	n	1	2	3	4	5	6	7	$\frac{E_p(\text{eV})}{p \cdot T_{1/2}}$
$\frac{1369.24}{1369.0}$	Pb ¹⁷⁸ ₈₂	$\frac{178.003546}{178.003830}$	82n	2+0	8+0	18+0	32+0	6+2	1+12	1+0	$\frac{7.790M}{\alpha 120\mu\text{s}}$
$\frac{1379.12}{1378.6}$	Pb ¹⁷⁹ ₈₂	$\frac{179.00160}{179.00215}$	82n	2+0	8+0	18+0	32+0	6+3	0+12	1+0	$\frac{7.598M}{\alpha 3.50\text{ms}}$
$\frac{1390.80}{1390.6}$	Pb ¹⁸⁰ ₈₂	$\frac{179.99773}{179.997918}$	82n	2+0	8+0	18+0	32+0	5+5	0+11	1+0	$\frac{7.419M}{\alpha 4.20\text{ms}}$
$\frac{1399.61}{1399.9}$	Pb ¹⁸¹ ₈₂	$\frac{180.99694}{180.99662}$	82n	2+0	8+0	18+0	32+0	5+6	0+10	0+1	$\frac{7.252M}{\alpha 36.0\text{ms}}$
$\frac{1411.28}{1411.7}$	Pb ¹⁸² ₈₂	$\frac{181.99307}{181.992672}$	82n	2+0	8+0	18+0	32+0	4+8	0+9	0+1	$\frac{7.066M}{\alpha 55.0\text{ms}}$
$\frac{1420.45}{1420.5}$	Pb ¹⁸³ ₈₂	$\frac{182.99189}{182.99187}$	82n	2+0	8+0	18+0	32+0	1+10	1+9	1+0	$\frac{6.928M}{\alpha 535\text{ms}}$
$\frac{1432.13}{1432.0}$	Pb ¹⁸⁴ ₈₂	$\frac{183.98802}{183.988142}$	82n	2+0	8+0	18+0	32+0	0+12	1+8	1+0	$\frac{6.774M}{\alpha 490\text{ms}}$
$\frac{1440.52}{1440.6}$	Pb ¹⁸⁵ ₈₂	$\frac{184.98767}{184.987610}$	82n	2+0	8+0	18+0	32+0	0+14	1+6	0+1	$\frac{8.210M}{ce 6.30\text{s}}$
$\frac{1451.90}{1451.8}$	Pb ¹⁸⁶ ₈₂	$\frac{185.98412}{185.984239}$	82n	2+0	8+0	18+0	30+1	0+14	1+7	1+0	$\frac{5.190M}{ce 4.82\text{s}}$
$\frac{1459.99}{1460.2}$	Pb ¹⁸⁷ ₈₂	$\frac{186.98411}{186.983918}$	82n	2+0	8+0	18+0	28+2	1+14	1+7	1+0	$\frac{7.453M}{ce 18.3\text{s}}$
$\frac{1471.66}{1471.1}$	Pb ¹⁸⁸ ₈₂	$\frac{187.98024}{187.980874}$	82n	2+0	8+0	18+0	28+2	0+16	1+6	1+0	$\frac{4.530M}{ce 25.1\text{s}}$
$\frac{1479.75}{1479.2}$	Pb ¹⁸⁹ ₈₂	$\frac{188.98022}{188.98081}$	82n	2+0	8+0	18+0	26+3	1+16	1+6	1+0	$\frac{6.720M}{ce 39.0\text{s}}$
$\frac{1489.64}{1489.8}$	Pb ¹⁹⁰ ₈₂	$\frac{189.97827}{189.978082}$	82n	2+0	8+0	18+0	26+3	1+17	0+6	1+0	$\frac{3.893M}{ce 71.0\text{s}}$
$\frac{1497.73}{1497.7}$	Pb ¹⁹¹ ₈₂	$\frac{190.97827}{190.97827}$	82n	2+0	8+0	18+0	26+3	0+18	0+6	1+0	$\frac{6.040M}{ce 1.33\text{s}}$
$\frac{1507.95}{1508.1}$	Pb ¹⁹² ₈₂	$\frac{191.97594}{191.975785}$	82n	2+0	8+0	18+0	24+4	0+19	1+5	1+0	$\frac{3.320M}{ce 3.50\text{m}}$
$\frac{1515.70}{1515.8}$	Pb ¹⁹³ ₈₂	$\frac{192.97622}{192.97617}$	82n	2+0	8+0	18+0	22+5	1+19	1+5	1+0	$\frac{5.110M}{ce 5\text{m}}$
$\frac{1525.58}{1525.9}$	Pb ¹⁹⁴ ₈₂	$\frac{193.97435}{193.974012}$	82n	2+0	8+0	18+0	22+5	1+20	0+5	1+0	$\frac{2.620M}{ce 10.7\text{m}}$

$\frac{E_c(\text{MeV})}{E_s(\text{MeV})}$	Sa	$\frac{m_c}{m_s}$	n	1	2	3	4	5	6	7	$\frac{E_p(\text{eV})}{p-T_{1/2}}$
$\frac{1525.58}{1525.9}$	Pb ¹⁹⁴ ₈₂	$\frac{193.97435}{193.974012}$	82n	2+0	8+0	18+0	22+5	1+20	0+5	1+0	$\frac{2.620M}{ce 10.7m}$
$\frac{1533.67}{1533.5}$	Pb ¹⁹⁵ ₈₂	$\frac{194.97433}{194.974542}$	82n	2+0	8+0	18+0	22+5	0+21	0+5	1+0	$\frac{4.440M}{ce 15m}$
$\frac{1543.55}{1543.2}$	Pb ¹⁹⁶ ₈₂	$\frac{195.97238}{195.972774}$	82n	2+0	8+0	18+0	20+6	0+22	1+4	1+0	$\frac{2.135M}{ce 37.0m}$
$\frac{1550.57}{1550.6}$	Pb ¹⁹⁷ ₈₂	$\frac{196.97347}{196.973431}$	82n	2+0	8+0	18+0	20+6	1+22	0+4	0+1	$\frac{3.592M}{ce 8.10m}$
$\frac{1559.73}{1560.0}$	Pb ¹⁹⁸ ₈₂	$\frac{197.97234}{197.972034}$	82n	2+0	8+0	18+0	18+7	0+23	1+4	1+0	$\frac{1.440M}{ce 2.40h}$
$\frac{1567.11}{1567.3}$	Pb ¹⁹⁹ ₈₂	$\frac{198.97309}{198.972917}$	82n	2+0	8+0	18+0	18+7	0+23	1+5	0+0	$\frac{2.830M}{ce 90.0m}$
$\frac{1577.00}{1576.4}$	Pb ²⁰⁰ ₈₂	$\frac{199.97113}{199.971827}$	82n	2+0	8+0	18+0	18+7	0+24	0+5	0+0	$\frac{792.0K}{ce 21.5h}$
$\frac{1583.29}{1583.4}$	Pb ²⁰¹ ₈₂	$\frac{200.97304}{200.972885}$	82n	2+0	8+0	18+0	16+8	0+24	1+5	0+0	$\frac{1.920K}{ce 9.33h}$
$\frac{1591.38}{1592.2}$	Pb ²⁰² ₈₂	$\frac{201.97303}{201.972159}$	82n	2+0	8+0	18+0	14+9	1+24	1+5	0+0	$\frac{48.0K}{ce 52.5 \cdot 10^3 a}$
$\frac{1599.47}{1599.1}$	Pb ²⁰³ ₈₂	$\frac{202.97301}{202.973391}$	82n	2+0	8+0	18+0	14+9	0+25	1+5	0+0	$\frac{975.0K}{ce 51.92h}$
$\frac{1605.77}{1607.5}$	Pb ²⁰⁴ ₈₂	$\frac{203.97491}{203.973044}$	82n	2+0	8+0	18+0	14+9	0+25	0+6	0+0	$\frac{1.9680M}{\alpha > 1.4 \cdot 10^{17} a}$ 1.40%
$\frac{1612.06}{1614.2}$	Pb ²⁰⁵ ₈₂	$\frac{204.97682}{204.974482}$	82n	2+0	8+0	18+0	12+10	0+25	1+6	0+0	$\frac{50.6K}{ce 1.73 \cdot 10^7 a}$
$\frac{1618.36}{1622.3}$	Pb ²⁰⁶ ₈₂	$\frac{205.97872}{205.974465}$	82n	2+0	8+0	18+0	12+10	0+25	0+7	0+0	$\frac{st}{24.1\%}$
$\frac{1624.66}{1629.1}$	Pb ²⁰⁷ ₈₂	$\frac{206.98062}{206.975897}$	82n	2+0	8+0	18+0	10+11	0+25	1+7	0+0	$\frac{st}{22.1\%}$
$\frac{1630.95}{1636.4}$	Pb ²⁰⁸ ₈₂	$\frac{207.98254}{207.976652}$	82n	2+0	8+0	18+0	10+11	0+25	0+8	0+0	$\frac{st}{52.4\%}$
$\frac{1637.25}{1640.4}$	Pb ²⁰⁹ ₈₂	$\frac{208.98444}{208.981090}$	82n	2+0	8+0	18+0	8+12	0+25	1+8	0+0	$\frac{644.0K}{\beta^- 3.253h}$

$\frac{E_c(\text{MeV})}{E_s(\text{MeV})}$	Sa	$\frac{m_c}{m_s}$	n	1	2	3	4	5	6	7	$\frac{E_p(\text{eV})}{p-T_{1/2}}$
$\frac{1643.55}{1645.6}$	Pb ₈₂ ²¹⁰	$\frac{209.98634}{209.984188}$	82n	2+0	8+0	18+0	8+12	0+25	0+9	0+0	$\frac{63.5K}{\beta^- 22.20a}$
$\frac{1649.84}{1649.4}$	Pb ₈₂ ²¹¹	$\frac{210.98825}{210.988737}$	82n	2+0	8+0	18+0	6+13	0+25	1+9	0+0	$\frac{1.368M}{\beta^- 36.1m}$
$\frac{1653.98}{1654.5}$	Pb ₈₂ ²¹²	$\frac{211.99247}{211.991897}$	82n	2+0	8+0	18+0	6+13	0+25	0+9	0+1	$\frac{567.1K}{\beta^- 10.64h}$
$\frac{1658.48}{1658.2}$	Pb ₈₂ ²¹³	$\frac{212.99631}{212.996581}$	82n	2+0	8+0	18+0	4+14	1+24	0+10	0+1	$\frac{2.030M}{\beta^- 10.2m}$
$\frac{1662.98}{1663.3}$	Pb ₈₂ ²¹⁴	$\frac{214.00014}{213.999805}$	82n	2+0	8+0	18+0	4+14	0+24	0+11	0+1	$\frac{1.019M}{\beta^- 26.8m}$
$\frac{1666.77}{1666.7}$	Pb ₈₂ ²¹⁵	$\frac{215.00473}{215.00481}$	82n	2+0	8+0	18+0	2+15	0+23	0+13	1+0	$\frac{2.900M}{\beta^- 147s}$
$\frac{1671.27}{-}$	Pb ₈₂ ²¹⁶	$\frac{216.00856}{-}$	82n	2+0	8+0	18+0	0+16	1+22	0+14	1+0	$\frac{1.790M}{\beta^- >300ns}$
$\frac{1674.69}{-}$	Pb ₈₂ ²¹⁷	$\frac{217.01356}{-}$	82n	2+0	8+0	18+0	0+16	0+22	1+14	0+1	$\frac{3.500M}{\beta^- >300ns}$
$\frac{1679.19}{-}$	Pb ₈₂ ²¹⁸	$\frac{218.01739}{-}$	82n	2+0	8+0	16+1	0+16	1+21	1+15	0+1	$\frac{2.400M}{\beta^- >300ns}$

$E_c(\text{MeV})$ = 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