## TAVOLA PERIODICA DEI NUCLEI ATOMICI

### configurazione dei livelli nucleari degli isotopi **PLATINO Z = 78-a**

| $\frac{E_c(MeV)}{E_s(MeV)}$ | Sa | $\frac{m_c}{m_s}$ | n | 1 | 2 | 3 | 4 | 5 | 6 | 7 | $\frac{E_p(eV)}{p\text{-}T_{1/2}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $\frac{1283.24}{1283.6}$ | $Pt_{78}^{166}$ | $\frac{165.99525}{165.99486}$ | 78n | 2+0 | 8+0 | 18+0 | 31+0 | 2+0 | 6+10 | 1+0 | $\frac{7.286M}{\alpha\ 300\mu s}$ |
| $\frac{1293.40}{1293.4}$ | $Pt_{78}^{167}$ | $\frac{166.99298}{166.99298}$ | 78n | 2+0 | 8+0 | 18+0 | 32+0 | 2+0 | 5+10 | 0+1 | $\frac{7.160M}{\alpha\ 900\mu s}$ |
| $\frac{1305.95}{1306.0}$ | $Pt_{78}^{168}$ | $\frac{167.98820}{167.98815}$ | 78n | 2+0 | 8+0 | 18+0 | 32+0 | 5+0 | 0+12 | 1+0 | $\frac{6.990M}{\alpha\ 2.02ms}$ |
| $\frac{1315.69}{1315.4}$ | $Pt_{78}^{169}$ | $\frac{168.98641}{168.98672}$ | 78n | 2+0 | 8+0 | 18+0 | 32+0 | 3+2 | 1+11 | 1+0 | $\frac{6.858.M}{\alpha\ 7.0ms}$ |
| $\frac{1327.18}{1327.4}$ | $Pt_{78}^{170}$ | $\frac{169.98274}{169.982495}$ | 78n | 2+0 | 8+0 | 18+0 | 32+0 | 2+4 | 1+10 | 1+0 | $\frac{6.708M}{\alpha\ 13.8ms}$ |
| $\frac{1336.92}{1336.6}$ | $Pt_{78}^{171}$ | $\frac{170.98095}{170.98124}$ | 78n | 2+0 | 8+0 | 18+0 | 32+0 | 2+5 | 0+10 | 1+0 | $\frac{6.607M}{\alpha\ 45.5ms}$ |
| $\frac{1348.41}{1348.3}$ | $Pt_{78}^{172}$ | $\frac{171.97728}{171.977347}$ | 78n | 2+0 | 8+0 | 18+0 | 32+0 | 1+7 | 0+9 | 1+0 | $\frac{6.465M}{\alpha\ 97.6ms}$ |
| $\frac{1357.09}{1357.3}$ | $Pt_{78}^{173}$ | $\frac{172.97662}{172.97644}$ | 78n | 2+0 | 8+0 | 18+0 | 32+0 | 1+8 | 0+8 | 0+1 | $\frac{6.350M}{\alpha\ 382ms}$ |
| $\frac{1368.58}{1368.7}$ | $Pt_{78}^{174}$ | $\frac{173.97295}{173.972819}$ | 78n | 2+0 | 8+0 | 18+0 | 32+0 | 0+10 | 0+7 | 0+1 | $\frac{6.183M}{\alpha\ 889ms}$ |
| $\frac{1376.56}{1377.1}$ | $Pt_{78}^{175}$ | $\frac{174.97305}{174.972421}$ | 78n | 2+0 | 8+0 | 18+0 | 30+1 | 1+10 | 0+7 | 0+1 | $\frac{6.178M}{\alpha\ 2.53s}$ |
| $\frac{1388.05}{1388.5}$ | $Pt_{78}^{176}$ | $\frac{175.96938}{175.968945}$ | 78n | 2+0 | 8+0 | 18+0 | 30+1 | 0+12 | 0+6 | 0+1 | $\frac{4.926M}{ce\ 6.33s}$ |
| $\frac{1397.78}{1397.0}$ | $Pt_{78}^{177}$ | $\frac{176.96760}{176.968469}$ | 78n | 2+0 | 8+0 | 18+0 | 28+2 | 0+13 | 1+5 | 0+1 | $\frac{6.677M}{ce\ 10.6s}$ |
| $\frac{1407.52}{1407.7}$ | $Pt_{78}^{178}$ | $\frac{177.96581}{177.965649}$ | 78n | 2+0 | 8+0 | 18+0 | 28+2 | 0+14 | 0+5 | 0+1 | $\frac{4.253M}{ce\ 20.7s}$ |
| $\frac{1415.49}{1416.0}$ | $Pt_{78}^{179}$ | $\frac{178.96592}{178.965363}$ | 78n | 2+0 | 8+0 | 18+0 | 26+3 | 1+14 | 0+5 | 0+1 | $\frac{5.807M}{ce\ 21.2s}$ |
| $\frac{1426.28}{1426.3}$ | $Pt_{78}^{180}$ | $\frac{179.96300}{179.963031}$ | 78n | 2+0 | 8+0 | 18+0 | 24+4 | 1+15 | 0+5 | 1+0 | $\frac{3.541M}{ce\ 56.0s}$ |
| $\frac{1434.26}{1434.3}$ | $Pt_{78}^{181}$ | $\frac{180.96310}{180.963097}$ | 78n | 2+0 | 8+0 | 18+0 | 24+4 | 0+16 | 0+5 | 1+0 | $\frac{5.100M}{ce\ 52.0s}$ |
| $\frac{1443.99}{1444.1}$ | $Pt_{78}^{182}$ | $\frac{181.96132}{181.961171}$ | 78n | 2+0 | 8+0 | 18+0 | 22+5 | 0+17 | 1+4 | 1+0 | $\frac{2.880M}{ce\ 2.67m}$ |

| $\frac{E_c(MeV)}{E_s(MeV)}$ | Sa | $\frac{m_c}{m_s}$ | n | 1 | 2 | 3 | 4 | 5 | 6 | 7 | $\frac{E_p(eV)}{p\text{-}T_{1/2}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $\frac{1451.96}{1451.8}$ | $Pt_{78}^{183}$ | $\frac{182.96143}{182.961597}$ | 78n | 2+0 | 8+0 | 18+0 | 20+6 | 1+17 | 1+4 | 1+0 | $\frac{4.420M}{ce\ 6.50m}$ |
| $\frac{1461.70}{1461.4}$ | $Pt_{78}^{184}$ | $\frac{183.95963}{183.959922}$ | 78n | 2+0 | 8+0 | 18+0 | 20+6 | 1+18 | 0+4 | 1+0 | $\frac{2.280M}{ce\ 17.3m}$ |
| $\frac{1469.68}{1468.9}$ | $Pt_{78}^{185}$ | $\frac{184.95973}{184.96062}$ | 78n | 2+0 | 8+0 | 18+0 | 20+6 | 0+19 | 0+4 | 1+0 | $\frac{3.650M}{ce\ 70.9m}$ |
| $\frac{1477.65}{1478.1}$ | $Pt_{78}^{186}$ | $\frac{185.95984}{185.959351}$ | 78n | 2+0 | 8+0 | 18+0 | 18+7 | 1+19 | 0+4 | 1+0 | $\frac{1.310M}{ce\ 2.08h}$ |
| $\frac{1485.63}{1485.0}$ | $Pt_{78}^{187}$ | $\frac{186.95994}{186.96059}$ | 78n | 2+0 | 8+0 | 18+0 | 18+7 | 0+20 | 0+4 | 1+0 | $\frac{2.820M}{ce\ 2.35h}$ |
| $\frac{1494.66}{1494.2}$ | $Pt_{78}^{188}$ | $\frac{187.95891}{187.959395}$ | 78n | 2+0 | 8+0 | 18+0 | 16+8 | 1+20 | 1+4 | 0+0 | $\frac{522.0K}{ce\ 10.2d}$ |
| $\frac{1500.88}{1500.9}$ | $Pt_{78}^{189}$ | $\frac{188.96090}{188.960834}$ | 78n | 2+0 | 8+0 | 18+0 | 16+8 | 1+20 | 0+5 | 0+0 | $\frac{1.971M}{ce\ 10.87h}$ |
| $\frac{1510.61}{1509.9}$ | $Pt_{78}^{190}$ | $\frac{189.95912}{189.959932}$ | 78n | 2+0 | 8+0 | 18+0 | 14+9 | 1+21 | 1+4 | 0+0 | $\frac{3.252M}{\frac{\alpha\ 6.5\cdot10^{11}a}{0.014\%}}$ |
| $\frac{1516.83}{1516.3}$ | $Pt_{78}^{191}$ | $\frac{190.96110}{190.961677}$ | 78n | 2+0 | 8+0 | 18+0 | 14+9 | 1+21 | 0+5 | 0+0 | $\frac{1.009M}{ce\ 2.83d}$ |
| $\frac{1524.81}{1525.0}$ | $Pt_{78}^{192}$ | $\frac{191.96120}{191.961038}$ | 78n | 2+0 | 8+0 | 18+0 | 14+9 | 0+22 | 0+5 | 0+0 | $\frac{\mathbf{st}}{0.782\%}$ |
| $\frac{1531.02}{1531.2}$ | $Pt_{78}^{193}$ | $\frac{192.96320}{192.962987}$ | 78n | 2+0 | 8+0 | 18+0 | 12+10 | 0+22 | 1+5 | 0+0 | $\frac{56.6K}{ce\ 50.0a}$ |
| $\frac{1539.00}{1539.6}$ | $Pt_{78}^{194}$ | $\frac{193.96330}{193.962680}$ | 78n | 2+0 | 8+0 | 18+0 | 10+11 | 1+22 | 1+5 | 0+0 | $\frac{\mathbf{st}}{32.967\%}$ |
| $\frac{1545.22}{1545.7}$ | $Pt_{78}^{195}$ | $\frac{194.96529}{194.964791}$ | 78n | 2+0 | 8+0 | 18+0 | 10+11 | 1+22 | 0+6 | 0+0 | $\frac{\mathbf{st}}{33.832\%}$ |
| $\frac{1553.19}{1553.6}$ | $Pt_{78}^{196}$ | $\frac{195.96539}{195.964951}$ | 78n | 2+0 | 8+0 | 18+0 | 10+11 | 0+23 | 0+6 | 0+0 | $\frac{\mathbf{st}}{25.242\%}$ |
| $\frac{1559.41}{1559.4}$ | $Pt_{78}^{197}$ | $\frac{196.96738}{196.967340}$ | 78n | 2+0 | 8+0 | 18+0 | 8+12 | 0+23 | 1+6 | 0+0 | $\frac{719.0K}{\beta^-\ 19.8915h}$ |
| $\frac{1567.38}{1567.0}$ | $Pt_{78}^{198}$ | $\frac{197.96749}{197.967893}$ | 78n | 2+0 | 8+0 | 18+0 | 6+13 | 1+23 | 1+6 | 0+0 | $\frac{1.0492M}{\frac{\beta^-\ 3.2\cdot10^{14}a}{7.163\%}}$ |

| $\frac{E_c(MeV)}{E_s(MeV)}$ | Sa | $\frac{m_c}{m_s}$ | n | 1 | 2 | 3 | 4 | 5 | 6 | 7 | $\frac{E_p(eV)}{p\text{-}T_{1/2}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $\frac{1571.84}{1572.6}$ | $Pt_{78}^{199}$ | $\frac{198.97137}{198.970593}$ | 78n | 2+0 | 8+0 | 18+0 | 6+13 | 0+23 | 1+7 | 0+0 | $\frac{1.7046M}{\beta^- 30.80m}$ |
| $\frac{1579.81}{1579.8}$ | $Pt_{78}^{200}$ | $\frac{199.971441}{199.971441}$ | 78n | 2+0 | 8+0 | 18+0 | 4+14 | 1+23 | 1+7 | 0+0 | $\frac{6.700M}{\beta^- 12.6h}$ |
| $\frac{1585.67}{1585.1}$ | $Pt_{78}^{201}$ | $\frac{200.97385}{200.97451}$ | 78n | 2+0 | 8+0 | 18+0 | 4+14 | 0+24 | 1+6 | 0+1 | $\frac{2.660M}{\beta^- 2.50m}$ |
| $\frac{1591.89}{1592.0}$ | $Pt_{78}^{202}$ | $\frac{201.97584}{201.97574}$ | 78n | 2+0 | 8+0 | 18+0 | 4+14 | 0+24 | 0+7 | 0+1 | $\frac{1.800M}{\beta^- 44.0h}$ |
| $\frac{1598.11}{-}$ | $Pt_{78}^{203}$ | $\frac{202.97783}{-}$ | 78n | 2+0 | 8+0 | 18+0 | 2+15 | 0+24 | 1+7 | 0+1 | $\frac{3.400M}{\beta^- 10.0s}$ |
| $\frac{1604.33}{-}$ | $Pt_{78}^{204}$ | $\frac{203.97981}{-}$ | 78n | 2+0 | 8+0 | 18+0 | 2+15 | 0+24 | 0+8 | 0+1 | $\frac{1.170M}{\beta^-}$ |
| $\frac{1608.78}{-}$ | $Pt_{78}^{205}$ | $\frac{204.98370}{-}$ | 78n | 2+0 | 8+0 | 18+0 | 0+16 | 1+23 | 0+9 | 0+1 | $\frac{6.100M}{\beta^- >300ns}$ |
| $\frac{1614.99}{-}$ | $Pt_{78}^{206}$ | $\frac{205.98570}{-}$ | 78n | 2+0 | 8+0 | 16+1 | 0+16 | 1+23 | 1+9 | 0+1 | $\frac{2.100M}{\beta^-}$ |

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

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

$\mathbf{m_c}$ = valore calcolato della massa atomica

$\mathbf{m_s}$ = valore sperimentale della massa atomica

n = numero di neutroni centrali attivi

1-7 = numero quantico associato al livello

$\mathbf{p} + \mathbf{d} = (\text{numero di protoni}) + (\text{numero di deutoni})$ in orbita

p -$\mathbf{T}_{1/2}$ = particella emessa – periodo di dimezzamento

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

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