

TAVOLA PERIODICA DEI NUCLEI ATOMICI

configurazione dei livelli nucleari degli isotopi **EUROPIO Z = 63-a**

$\frac{E_c(\text{MeV})}{E_s(\text{MeV})}$	Sa	$\frac{m_c}{m_s}$	n	1	2	3	4	5	6	7	$\frac{E_p(\text{eV})}{p \cdot T_{1/2}}$
$\frac{1033.66}{1033.9}$	Eu ¹³⁰ ₆₃	$\frac{129.96385}{129.96357}$	63n	2+0	8+0	18+0	14+0	17+2	0+2	0+0	$\frac{1.54024M}{p \ 1.10ms}$
$\frac{1047.26}{1047.4}$	Eu ¹³¹ ₆₃	$\frac{130.95791}{130.95775}$	63n	2+0	8+0	18+0	15+0	15+4	0+1	0+0	$\frac{1.44709M}{p \ 17.8ms}$
$\frac{1059.26}{1058.6}$	Eu ¹³² ₆₃	$\frac{131.95369}{131.95437}$	63n	2+0	8+0	18+0	16+0	12+6	1+0	0+0	$\frac{12.80M}{ce100ms}$
$\frac{1071.01}{1071.5}$	Eu ¹³³ ₆₃	$\frac{132.94975}{132.94924}$	63n	2+0	8+0	18+0	18+0	10+6	0+1	0+0	$\frac{9.800M}{ce200ms}$
$\frac{1081.42}{1082.1}$	Eu ¹³⁴ ₆₃	$\frac{133.94723}{133.94651}$	63n	2+0	8+0	18+0	19+0	8+7	0+1	0+0	$\frac{11.50M}{ce500ms}$
$\frac{1094.77}{1094.5}$	Eu ¹³⁵ ₆₃	$\frac{134.94157}{134.94182}$	63n	2+0	8+0	18+0	21+0	5+8	0+1	0+0	$\frac{8.800M}{ce1.50s}$
$\frac{1105.17}{1104.7}$	Eu ¹³⁶ ₆₃	$\frac{135.93907}{135.93960}$	63n	2+0	8+0	18+0	22+0	3+9	0+1	0+0	$\frac{10.71M}{ce3.30s}$
$\frac{1117.17}{1116.5}$	Eu ¹³⁷ ₆₃	$\frac{136.93485}{136.93557}$	63n	2+0	8+0	18+0	23+0	0+11	1+0	0+0	$\frac{8.010M}{ce11.0s}$
$\frac{1125.97}{1126.3}$	Eu ¹³⁸ ₆₃	$\frac{137.93407}{137.93371}$	63n	2+0	8+0	18+0	22+1	1+10	0+1	0+0	$\frac{9.750M}{ce12.1s}$
$\frac{1137.97}{1138.0}$	Eu ¹³⁹ ₆₃	$\frac{138.92985}{138.929792}$	63n	2+0	8+0	18+0	21+2	0+11	1+0	0+0	$\frac{6.982M}{ce17.9s}$
$\frac{1148.37}{1147.7}$	Eu ¹⁴⁰ ₆₃	$\frac{139.92735}{139.92809}$	63n	2+0	8+0	18+0	20+3	0+11	1+0	0+0	$\frac{8.470M}{ce1.51s}$
$\frac{1158.77}{1158.7}$	Eu ¹⁴¹ ₆₃	$\frac{140.92485}{140.924931}$	63n	2+0	8+0	18+0	19+4	0+11	1+0	0+0	$\frac{6.009M}{ce40.7s}$
$\frac{1167.57}{1168.2}$	Eu ¹⁴² ₆₃	$\frac{141.92407}{141.92343}$	63n	2+0	8+0	18+0	18+5	1+10	0+1	0+0	$\frac{7.670M}{ce2.34s}$
$\frac{1179.57}{1179.2}$	Eu ¹⁴³ ₆₃	$\frac{142.91985}{142.920298}$	63n	2+0	8+0	18+0	17+6	0+11	1+0	0+0	$\frac{5.275M}{ce2.59m}$
$\frac{1188.38}{1188.6}$	Eu ¹⁴⁴ ₆₃	$\frac{143.91906}{143.918817}$	63n	2+0	8+0	18+0	16+7	1+10	0+1	0+0	$\frac{6.347M}{ce10.2s}$
$\frac{1198.78}{1199.1}$	Eu ¹⁴⁵ ₆₃	$\frac{144.91656}{144.916265}$	63n	2+0	8+0	18+0	15+8	1+10	0+1	0+0	$\frac{2.660M}{ce5.93d}$

$\frac{E_c(\text{MeV})}{E_s(\text{MeV})}$	Sa	$\frac{m_c}{m_s}$	n	1	2	3	4	5	6	7	$\frac{E_p(\text{eV})}{p \cdot T_{1/2}}$
$\frac{1206.23}{1206.2}$	Eu ₆₃ ¹⁴⁶	$\frac{145.91722}{145.917205}$	63n	2+0	8+0	18+0	15+8	0+11	0+1	0+0	$\frac{3.879M}{ce4.61d}$
$\frac{1215.29}{1214.7}$	Eu ₆₃ ¹⁴⁷	$\frac{146.91616}{146.916746}$	63n	2+0	8+0	18+0	13+9	0+12	1+0	0+0	$\frac{1.7215M}{ce24.1d}$
$\frac{1221.14}{1221.6}$	Eu ₆₃ ¹⁴⁸	$\frac{147.91855}{147.918086}$	63n	2+0	8+0	18+0	13+9	0+12	0+1	0+0	$\frac{3.036M}{ce54.5d}$
$\frac{1230.20}{1229.8}$	Eu ₆₃ ¹⁴⁹	$\frac{148.91749}{148.917931}$	63n	2+0	8+0	18+0	11+10	0+13	1+0	0+0	$\frac{695.0K}{ce93.1d}$
$\frac{1236.31}{1236.2}$	Eu ₆₃ ¹⁵⁰	$\frac{149.91959}{149.919702}$	63n	2+0	8+0	18+0	10+10	1+14	0+0	0+0	$\frac{972.0K}{ce36.9a}$
$\frac{1243.77}{1244.1}$	Eu ₆₃ ¹⁵¹	$\frac{150.92025}{150.919850}$	63n	2+0	8+0	18+0	10+10	0+15	0+0	0+0	$\frac{1.9649M}{a1.7 \cdot 10^{18}a}$ 47.81%
$\frac{1250.97}{1250.4}$	Eu ₆₃ ¹⁵²	$\frac{151.92118}{151.921744}$	63n	2+0	8+0	18+0	9+11	0+14	0+1	0+0	$\frac{1.8751M}{\beta^-13.528a}$
$\frac{1258.68}{1259.0}$	Eu ₆₃ ¹⁵³	$\frac{152.92157}{152.921230}$	63n	2+0	8+0	18+0	8+11	0+16	0+0	0+0	st 52.19%
$\frac{1265.88}{1265.4}$	Eu ₆₃ ¹⁵⁴	$\frac{153.92251}{153.922979}$	63n	2+0	8+0	18+0	7+12	0+15	0+1	0+0	$\frac{1.9686M}{\beta^-8.601a}$
$\frac{1273.33}{1273.6}$	Eu ₆₃ ¹⁵⁵	$\frac{154.92317}{154.922893}$	63n	2+0	8+0	18+0	5+13	1+15	0+1	0+0	$\frac{252.5K}{\beta^-4.753a}$
$\frac{1280.53}{1279.9}$	Eu ₆₃ ¹⁵⁶	$\frac{155.92411}{155.924752}$	63n	2+0	8+0	18+0	4+14	1+14	0+2	0+0	$\frac{2.449M}{\beta^-15.19d}$
$\frac{1287.99}{1287.4}$	Eu ₆₃ ¹⁵⁷	$\frac{156.92477}{156.925424}$	63n	2+0	8+0	18+0	4+14	0+15	0+2	0+0	$\frac{1.363M}{\beta^-15.18h}$
$\frac{1293.84}{1293.2}$	Eu ₆₃ ¹⁵⁸	$\frac{157.92715}{157.92785}$	63n	2+0	8+0	18+0	2+15	0+15	1+2	0+0	$\frac{3.490M}{\beta^-45.9m}$
$\frac{1299.70}{1300.1}$	Eu ₆₃ ¹⁵⁹	$\frac{158.92952}{158.929089}$	63n	2+0	8+0	18+0	2+15	0+15	0+3	0+0	$\frac{2.515M}{\beta^-18.1m}$
$\frac{1305.56}{1305.5}$	Eu ₆₃ ¹⁶⁰	$\frac{159.93190}{159.93197}$	63n	2+0	8+0	18+0	0+16	0+15	1+3	0+0	$\frac{4.700M}{\beta^-3.80s}$
$\frac{1311.42}{1312.0}$	Eu ₆₃ ¹⁶¹	$\frac{160.93427}{160.93368}$	63n	2+0	8+0	18+0	0+16	0+15	0+4	0+0	$\frac{3.710M}{\beta^-26.0s}$

$\frac{E_c(\text{MeV})}{E_s(\text{MeV})}$	Sa	$\frac{m_c}{m_s}$	n	1	2	3	4	5	6	7	$\frac{E_p(\text{eV})}{p - T_{1/2}}$
$\frac{1317.26}{1316.9}$	Eu ¹⁶² ₆₃	$\frac{161.93667}{161.93704}$	63n	2+0	8+0	16+1	0+16	0+15	1+4	0+0	$\frac{5.590M}{\beta^- 10.6s}$
$\frac{1322.78}{1323.0}$	Eu ¹⁶³ ₆₃	$\frac{162.93941}{162.93921}$	63n	2+0	8+0	14+2	0+16	1+15	1+3	0+1	$\frac{4.680M}{\beta^- 7.70s}$
$\frac{1327.04}{1327.5}$	Eu ¹⁶⁴ ₆₃	$\frac{163.94350}{163.94299}$	63n	2+0	8+0	14+2	0+16	0+15	1+4	0+1	$\frac{6.440M}{\beta^- 4.20s}$
$\frac{1332.90}{1333.0}$	Eu ¹⁶⁵ ₆₃	$\frac{164.94587}{164.94572}$	63n	2+0	8+0	14+2	0+16	0+15	0+5	0+1	$\frac{5.800M}{\beta^- 2.30s}$
$\frac{1337.15}{1337.2}$	Eu ¹⁶⁶ ₆₃	$\frac{165.94997}{165.94997}$	63n	2+0	8+0	12+3	0+16	1+14	0+6	0+1	$\frac{7.700M}{\beta^- 400ms}$
$\frac{1341.40}{-}$	Eu ¹⁶⁷ ₆₃	$\frac{166.95408}{-}$	63n	2+0	8+0	12+3	0+16	0+14	0+7	0+1	$\frac{7.00M}{\beta^- 200ms}$
$\frac{1345.65}{-}$	Eu ¹⁶⁸ ₆₃	$\frac{167.95818}{-}$	63n	2+0	8+0	10+4	0+16	1+13	0+8	0+1	$\frac{8.350M}{\beta^-}$
$\frac{1351.50}{-}$	Eu ¹⁶⁹ ₆₃	$\frac{168.96056}{-}$	63n	2+0	8+0	8+5	0+16	1+13	1+8	0+1	$\frac{6.900M}{\beta^-}$
$\frac{1355.76}{-}$	Eu ¹⁷⁰ ₆₃	$\frac{169.96465}{-}$	63n	2+0	8+0	8+5	0+16	0+13	1+9	0+1	$\frac{8.790M}{\beta^-}$

$E_c(\text{MeV})$ = 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