

TAVOLA PERIODICA DEI NUCLEI ATOMICI

configurazione dei livelli nucleari degli isotopi **IODIO Z = 53-a**

$\frac{E_c(\text{MeV})}{E_s(\text{MeV})}$	Sa	$\frac{m_c}{m_s}$	n	1	2	3	4	5	6	7	$\frac{E_p(\text{eV})}{p-T_{1/2}}$
$\frac{882.596}{882.89}$	I_{53}^{108}	$\frac{107.94379}{107.94348}$	53n	2+0	8+0	18+0	12+0	10+1	1+1	0+0	$\frac{4.100M}{\alpha 3.6ms}$
$\frac{896.489}{895.92}$	I_{53}^{109}	$\frac{108.93754}{108.93815}$	53n	2+0	8+0	18+0	14+0	8+2	0+1	0+0	$\frac{1.33531M}{p 93.5\mu s}$
$\frac{906.214}{906.70}$	I_{53}^{110}	$\frac{109.93577}{109.93524}$	53n	2+0	8+0	18+0	15+0	6+3	0+1	0+0	$\frac{11.77M}{ce650ms}$
$\frac{919.874}{919.40}$	I_{53}^{111}	$\frac{110.92977}{110.93028}$	53n	2+0	8+0	18+0	18+0	1+4	1+1	0+0	$\frac{8.634M}{ce2.50s}$
$\frac{929.596}{929.62}$	I_{53}^{112}	$\frac{111.92800}{111.92797}$	53n	2+0	8+0	18+0	17+1	1+4	1+1	0+0	$\frac{10.504M}{ce3.42s}$
$\frac{942.020}{941.72}$	I_{53}^{113}	$\frac{112.92332}{112.92364}$	53n	2+0	8+0	18+0	17+2	0+4	1+1	0+0	$\frac{7.230M}{ce6.60s}$
$\frac{951.742}{951.46}$	I_{53}^{114}	$\frac{113.92155}{113.92185}$	53n	2+0	8+0	18+0	16+3	0+4	1+1	0+0	$\frac{9.10M}{ce2.10s}$
$\frac{962.931}{963.07}$	I_{53}^{115}	$\frac{114.91820}{114.91805}$	53n	2+0	8+0	18+0	15+4	1+4	0+1	0+0	$\frac{5.720M}{ce1.30m}$
$\frac{972.653}{972.30}$	I_{53}^{116}	$\frac{115.91643}{115.91681}$	53n	2+0	8+0	18+0	14+5	1+4	0+1	0+0	$\frac{7.780M}{ce2.91s}$
$\frac{983.841}{983.31}$	I_{53}^{117}	$\frac{116.91309}{116.91365}$	53n	2+0	8+0	18+0	13+6	0+5	1+0	0+0	$\frac{4.660M}{ce2.22m}$
$\frac{992.097}{991.92}$	I_{53}^{118}	$\frac{117.91289}{117.913074}$	53n	2+0	8+0	18+0	12+7	1+4	0+1	0+0	$\frac{6.710M}{ce13.7m}$
$\frac{1003.28}{1002.8}$	I_{53}^{119}	$\frac{118.90955}{118.91007}$	53n	2+0	8+0	18+0	11+8	0+5	1+0	0+0	$\frac{3.420M}{ce19.1m}$
$\frac{1011.54}{1010.9}$	I_{53}^{120}	$\frac{119.90934}{119.910048}$	53n	2+0	8+0	18+0	10+9	1+4	0+1	0+0	$\frac{5.615M}{ce81.6m}$
$\frac{1021.26}{1021.5}$	I_{53}^{121}	$\frac{120.90757}{120.907367}$	53n	2+0	8+0	18+0	9+10	1+4	0+1	0+0	$\frac{2.290M}{ce2.12h}$
$\frac{1029.75}{1029.3}$	I_{53}^{122}	$\frac{121.90712}{121.907589}$	53n	2+0	8+0	18+0	7+11	1+5	1+0	0+0	$\frac{4.234M}{ce3.63m}$
$\frac{1039.47}{1039.3}$	I_{53}^{123}	$\frac{122.90535}{122.905589}$	53n	2+0	8+0	18+0	6+12	1+5	1+0	0+0	$\frac{1.228M}{ce13.2235h}$
$\frac{1046.49}{1046.7}$	I_{53}^{124}	$\frac{123.90648}{123.90621}$	53n	2+0	8+0	18+0	6+12	0+6	1+0	0+0	$\frac{3.1596M}{ce4.1760d}$

$\frac{E_c(\text{MeV})}{E_s(\text{MeV})}$	Sa	$\frac{m_c}{m_s}$	n	1	2	3	4	5	6	7	$\frac{E_p(\text{eV})}{p-T_{1/2}}$
$\frac{1056.22}{1056.3}$	I ₅₃ ¹²⁵	$\frac{124.90470}{124.904630}$	53n	2+0	8+0	18+0	5+13	0+6	1+0	0+0	$\frac{185.77K}{ce59.407d}$
$\frac{1063.24}{1063.4}$	I ₅₃ ¹²⁶	$\frac{125.90583}{125.905624}$	53n	2+0	8+0	18+0	3+14	1+6	1+0	0+0	$\frac{1.234M}{ce12.93d}$
$\frac{1072.96}{1072.6}$	I ₅₃ ¹²⁷	$\frac{126.90406}{126.904473}$	53n	2+0	8+0	18+0	2+15	1+6	1+0	0+0	st
$\frac{1079.98}{1079.4}$	I ₅₃ ¹²⁸	$\frac{127.90519}{127.905809}$	53n	2+0	8+0	18+0	2+15	0+7	1+0	0+0	$\frac{2.121M}{\beta^- 24.97m}$
$\frac{1088.47}{1088.2}$	I ₅₃ ¹²⁹	$\frac{128.90474}{128.904988}$	53n	2+0	8+0	18+0	2+15	0+8	0+0	0+0	$\frac{189.0K}{\beta^- 1.57 \cdot 10^7 a}$
$\frac{1095.49}{1094.7}$	I ₅₃ ¹³⁰	$\frac{129.90587}{129.906674}$	53n	2+0	8+0	18+0	0+16	1+8	0+0	0+0	$\frac{2.944M}{\beta^- 12.36h}$
$\frac{1102.51}{1103.3}$	I ₅₃ ¹³¹	$\frac{130.90700}{130.906125}$	53n	2+0	8+0	18+0	0+16	0+9	0+0	0+0	$\frac{970.8K}{\beta^- 8.0252d}$
$\frac{1109.53}{1109.6}$	I ₅₃ ¹³²	$\frac{131.90813}{131.907997}$	53n	2+0	8+0	16+1	0+16	1+9	0+0	0+0	$\frac{3.581M}{\beta^- 2.295h}$
$\frac{1116.55}{1117.9}$	I ₅₃ ¹³³	$\frac{132.90925}{132.907797}$	53n	2+0	8+0	16+1	0+16	0+10	0+0	0+0	$\frac{1.757M}{\beta^- 20.83h}$
$\frac{1123.57}{1124.2}$	I ₅₃ ¹³⁴	$\frac{133.91038}{133.909744}$	53n	2+0	8+0	14+2	0+16	1+10	0+0	0+0	$\frac{4.052M}{\beta^- 52.5m}$
$\frac{1130.59}{1132.0}$	I ₅₃ ¹³⁵	$\frac{134.91151}{134.910048}$	53n	2+0	8+0	14+2	0+16	0+11	0+0	0+0	$\frac{2.626M}{\beta^- 6.58h}$
$\frac{1136.14}{1135.7}$	I ₅₃ ¹³⁶	$\frac{135.91422}{135.91465}$	53n	2+0	8+0	12+3	0+16	0+11	1+0	0+0	$\frac{6.857M}{\beta^- 83.4s}$
$\frac{1140.22}{1140.8}$	I ₅₃ ¹³⁷	$\frac{136.91850}{136.917871}$	53n	2+0	8+0	10+4	0+16	1+10	1+1	0+0	$\frac{5.880M}{\beta^- 24.5s}$
$\frac{1144.88}{1144.7}$	I ₅₃ ¹³⁸	$\frac{137.92217}{137.92235}$	53n	2+0	8+0	8+5	0+16	1+10	1+1	1+0	$\frac{8.070M}{\beta^- 6.23s}$
$\frac{1149.55}{1149.3}$	I ₅₃ ¹³⁹	$\frac{138.92582}{138.92610}$	53n	2+0	8+0	8+5	0+16	1+10	1+1	0+1	$\frac{7.120M}{\beta^- 2.280s}$
$\frac{1153.05}{1152.8}$	I ₅₃ ¹⁴⁰	$\frac{139.93072}{139.93100}$	53n	2+0	8+0	6+6	0+16	1+9	1+3	1+0	$\frac{9.390M}{\beta^- 0.86s}$
$\frac{1157.72}{1157.1}$	I ₅₃ ¹⁴¹	$\frac{140.93438}{140.93503}$	53n	2+0	8+0	6+6	0+16	1+9	1+3	0+1	$\frac{7.900M}{\beta^- 430ms}$

$\frac{E_c(\text{MeV})}{E_s(\text{MeV})}$	Sa	$\frac{m_c}{m_s}$	n	1	2	3	4	5	6	7	$\frac{E_p(\text{eV})}{p-T_{1/2}}$
$\frac{1160.34}{1160.4}$	I ₅₃ ¹⁴²	$\frac{141.94023}{141.94018}$	53n	2+0	8+0	6+6	0+16	1+8	0+5	0+1	$\frac{10.20M}{\beta^- 222ms}$
$\frac{1164.43}{1164.4}$	I ₅₃ ¹⁴³	$\frac{142.94450}{142.94456}$	53n	2+0	8+0	6+6	0+16	0+8	0+6	0+1	$\frac{9.100M}{\beta^- 130ms}$
$\frac{1167.05}{1167.4}$	I ₅₃ ¹⁴⁴	$\frac{143.95035}{143.94999}$	53n	2+0	8+0	4+7	0+16	0+7	1+7	0+1	$\frac{11.10M}{\beta^- 50ms}$
$\frac{1171.13}{-}$	I ₅₃ ¹⁴⁵	$\frac{144.95464}{-}$	53n	2+0	8+0	2+8	0+16	1+6	1+8	0+1	$\frac{6.170M}{n\beta^- >407ns}$
$\frac{1175.22}{-}$	I ₅₃ ¹⁴⁶	$\frac{145.95891}{-}$	53n	2+0	8+0	2+8	0+16	0+6	1+9	0+1	$\frac{8.890M}{\beta^-}$
$\frac{1179.30}{-}$	I ₅₃ ¹⁴⁷	$\frac{146.96320}{-}$	53n	2+0	8+0	2+8	0+16	1+5	1+10	0+1	$\frac{5.500M}{n\beta^-}$
$\frac{1183.39}{-}$	I ₅₃ ¹⁴⁸	$\frac{147.96747}{-}$	53n	2+0	8+0	0+9	0+16	0+5	1+11	0+1	$\frac{4.110M}{n\beta^-}$
$\frac{1187.45}{-}$	I ₅₃ ¹⁴⁹	$\frac{148.97178}{-}$	53n	2+0	8+0	0+9	0+16	1+4	1+12	0+1	$\frac{3.230M}{n\beta^-}$

$E_c(\text{MeV})$ = 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