

## TAVOLA PERIODICA DEI NUCLEI ATOMICI

### configurazione dei livelli nucleari degli isotopi **TERBIO Z = 65-a**

$\frac{E_c(\text{MeV})}{E_s(\text{MeV})}$	Sa	$\frac{m_c}{m_s}$	n	1	2	3	4	5	6	7	$\frac{E_p(\text{eV})}{P-T_{1/2}}$
$\frac{1082.718}{1082.8}$	Tb <sup>136</sup> <sub>65</sub>	$\frac{135.96149}{135.96138}$	65n	2+0	8+0	18+0	23+0	5+0	2+6	1+0	$\frac{13.00M}{ce200ms}$
$\frac{1096.23}{1095.9}$	Tb <sup>137</sup> <sub>65</sub>	$\frac{136.95565}{136.95598}$	65n	2+0	8+0	18+0	25+0	4+0	0+7	1+0	$\frac{10.50M}{ce600ms}$
$\frac{1106.76}{1106.6}$	Tb <sup>138</sup> <sub>65</sub>	$\frac{137.95301}{137.95316}$	65n	2+0	8+0	18+0	26+0	2+1	0+7	1+0	$\frac{12.20M}{ce800ms}$
$\frac{1119.29}{1119.2}$	Tb <sup>139</sup> <sub>65</sub>	$\frac{138.94822}{138.94829}$	65n	2+0	8+0	18+0	26+1	1+1	1+6	0+1	$\frac{9.600M}{ce1.60s}$
$\frac{1129.82}{1129.6}$	Tb <sup>140</sup> <sub>65</sub>	$\frac{139.94558}{139.94581}$	65n	2+0	8+0	18+0	25+2	1+1	1+6	0+1	$\frac{11.30M}{ce2.0s}$
$\frac{1141.97}{1141.7}$	Tb <sup>141</sup> <sub>65</sub>	$\frac{140.94121}{140.94145}$	65n	2+0	8+0	18+0	26+2	0+2	0+6	0+1	$\frac{8.680M}{ce3.50s}$
$\frac{1152.49}{1152.3}$	Tb <sup>142</sup> <sub>65</sub>	$\frac{141.93858}{141.93874}$	65n	2+0	8+0	18+0	25+3	0+2	0+6	0+1	$\frac{10.40M}{ce597ms}$
$\frac{1163.60}{1163.8}$	Tb <sup>143</sup> <sub>65</sub>	$\frac{142.93532}{142.93512}$	65n	2+0	8+0	18+0	23+4	0+3	1+6	0+0	$\frac{7.810M}{ce12.0s}$
$\frac{1174.38}{1173.8}$	Tb <sup>144</sup> <sub>65</sub>	$\frac{143.93241}{143.93305}$	65n	2+0	8+0	18+0	21+5	1+4	1+5	0+0	$\frac{9.390M}{ce1.0s}$
$\frac{1185.16}{1185.4}$	Tb <sup>145</sup> <sub>65</sub>	$\frac{144.92950}{144.92927}$	65n	2+0	8+0	18+0	21+5	0+6	1+4	0+0	$\frac{7.050M}{ce20m}$
$\frac{1195.69}{1195.3}$	Tb <sup>146</sup> <sub>65</sub>	$\frac{145.92686}{145.92725}$	65n	2+0	8+0	18+0	20+6	0+6	1+4	0+0	$\frac{8.320M}{ce8.0s}$
$\frac{1206.46}{1206.4}$	Tb <sup>147</sup> <sub>65</sub>	$\frac{146.92396}{146.924045}$	65n	2+0	8+0	18+0	18+7	1+7	1+3	0+0	$\frac{4.614M}{ce1.64h}$
$\frac{1214.00}{1214.2}$	Tb <sup>148</sup> <sub>65</sub>	$\frac{147.92453}{147.924272}$	65n	2+0	8+0	18+0	18+7	0+8	1+3	0+0	$\frac{5.729M}{ce60.0m}$
$\frac{1223.16}{1223.3}$	Tb <sup>149</sup> <sub>65</sub>	$\frac{148.92336}{148.923246}$	65n	2+0	8+0	18+0	18+7	0+9	0+3	0+0	$\frac{3.638M}{ce4.118h}$
$\frac{1230.69}{1231.0}$	Tb <sup>150</sup> <sub>65</sub>	$\frac{149.92395}{149.92366}$	65n	2+0	8+0	18+0	16+8	1+9	0+3	0+0	$\frac{4.658M}{ce3.48h}$
$\frac{1239.85}{1239.5}$	Tb <sup>151</sup> <sub>65</sub>	$\frac{150.92278}{150.923103}$	65n	2+0	8+0	18+0	14+9	1+10	1+2	0+0	$\frac{2.565M}{ce17.609h}$

$\frac{E_c(\text{MeV})}{E_s(\text{MeV})}$	Sa	$\frac{m_c}{m_s}$	n	1	2	3	4	5	6	7	$\frac{E_p(\text{eV})}{p-T_{1/2}}$
$\frac{1247.38}{1246.7}$	Tb <sub>65</sub> <sup>152</sup>	$\frac{151.92336}{151.92407}$	65n	2+0	8+0	18+0	14+9	0+11	1+2	0+0	$\frac{3.990M}{ce\ 17.5h}$
$\frac{1254.91}{1255.4}$	Tb <sub>65</sub> <sup>153</sup>	$\frac{152.92394}{152.923435}$	65n	2+0	8+0	18+0	12+10	1+11	1+2	0+0	$\frac{1.569M}{ce\ 2.34d}$
$\frac{1262.45}{1262.3}$	Tb <sub>65</sub> <sup>154</sup>	$\frac{153.92451}{153.92468}$	65n	2+0	8+0	18+0	12+10	0+12	1+2	0+0	$\frac{3.550M}{ce\ 21.5h}$
$\frac{1271.61}{1271.5}$	Tb <sub>65</sub> <sup>155</sup>	$\frac{154.92334}{154.923505}$	65n	2+0	8+0	18+0	12+10	0+13	0+2	0+0	$\frac{823.0K}{ce\ 5.32d}$
$\frac{1279.14}{1278.4}$	Tb <sub>65</sub> <sup>156</sup>	$\frac{155.92392}{155.924747}$	65n	2+0	8+0	18+0	10+11	1+13	0+2	0+0	$\frac{2.445M}{ce\ 48.0m}$
$\frac{1286.68}{1287.1}$	Tb <sub>65</sub> <sup>157</sup>	$\frac{156.92449}{156.924025}$	65n	2+0	8+0	18+0	10+11	0+14	0+2	0+0	$\frac{60.0K}{ce\ 71.0a}$
$\frac{1294.21}{1293.9}$	Tb <sub>65</sub> <sup>158</sup>	$\frac{157.92507}{157.925413}$	65n	2+0	8+0	18+0	8+12	1+14	0+2	0+0	$\frac{1.2194M}{ce\ 180a}$
$\frac{1301.74}{1302.0}$	Tb <sub>65</sub> <sup>159</sup>	$\frac{158.92565}{158.925347}$	65n	2+0	8+0	18+0	8+12	0+15	0+2	0+0	<b>st</b>
$\frac{1307.65}{1308.4}$	Tb <sub>65</sub> <sup>160</sup>	$\frac{159.92797}{159.927168}$	65n	2+0	8+0	18+0	6+13	0+15	1+2	0+0	$\frac{1.8357M}{\beta^- 72.3d}$
$\frac{1316.81}{1316.1}$	Tb <sub>65</sub> <sup>161</sup>	$\frac{160.92681}{160.92757}$	65n	2+0	8+0	18+0	6+13	0+16	0+2	0+0	$\frac{593.5K}{\beta^- 6.89d}$
$\frac{1322.72}{1322.4}$	Tb <sub>65</sub> <sup>162</sup>	$\frac{161.92913}{161.92949}$	65n	2+0	8+0	18+0	4+14	0+16	1+2	0+0	$\frac{2.510M}{\beta^- 7.60m}$
$\frac{1328.63}{1329.4}$	Tb <sub>65</sub> <sup>163</sup>	$\frac{162.93145}{162.930648}$	65n	2+0	8+0	18+0	4+14	0+16	0+3	0+0	$\frac{1.785M}{\beta^- 19.5m}$
$\frac{1334.54}{1334.9}$	Tb <sub>65</sub> <sup>164</sup>	$\frac{163.93377}{163.93335}$	65n	2+0	8+0	18+0	2+15	0+16	1+3	0+0	$\frac{3.890M}{\beta^- 3.0m}$
$\frac{1342.07}{1341.6}$	Tb <sub>65</sub> <sup>165</sup>	$\frac{164.93435}{164.93488}$	65n	2+0	8+0	18+0	0+16	1+16	1+3	0+0	$\frac{2.950M}{\beta^- 2.11m}$
$\frac{1346.36}{1346.7}$	Tb <sub>65</sub> <sup>166</sup>	$\frac{165.93841}{165.93799}$	65n	2+0	8+0	18+0	0+16	0+16	1+4	0+0	$\frac{4.700M}{\beta^- 25.1s}$
$\frac{1352.27}{1352.9}$	Tb <sub>65</sub> <sup>167</sup>	$\frac{166.94073}{166.94005}$	65n	2+0	8+0	18+0	0+16	0+16	0+5	0+0	$\frac{4.00M}{\beta^- 19.4s}$

$\frac{E_c(\text{MeV})}{E_s(\text{MeV})}$	Sa	$\frac{m_c}{m_s}$	n	1	2	3	4	5	6	7	$\frac{E_p(\text{eV})}{\rho \cdot T_{1/2}}$
$\frac{1357.84}{1357.6}$	Tb <sub>65</sub> <sup>168</sup>	$\frac{167.94341}{167.94364}$	65n	2+0	8+0	16+1	0+16	1+16	0+4	0+1	$\frac{6.00M}{\beta^- 8.20s}$
$\frac{1363.10}{1363.3}$	Tb <sub>65</sub> <sup>169</sup>	$\frac{168.94643}{168.94622}$	65n	2+0	8+0	14+2	0+16	0+16	1+5	1+0	$\frac{5.400M}{\beta^- 2s}$
$\frac{1367.37}{1367.6}$	Tb <sub>65</sub> <sup>170</sup>	$\frac{169.95051}{169.95025}$	65n	2+0	8+0	12+3	0+16	1+15	1+6	1+0	$\frac{7.400M}{\beta^- 3s}$
$\frac{1372.31}{1372.8}$	Tb <sub>65</sub> <sup>171</sup>	$\frac{170.95387}{170.95330}$	65n	2+0	8+0	12+3	0+16	1+15	1+6	0+1	$\frac{6.400M}{\beta^- 500ms}$
$\frac{1376.60}{-}$	Tb <sub>65</sub> <sup>172</sup>	$\frac{171.95793}{-}$	65n	2+0	8+0	12+3	0+16	0+15	1+7	0+1	$\frac{7.800M}{\beta^-}$
$\frac{1384.12}{-}$	Tb <sub>65</sub> <sup>173</sup>	$\frac{172.95852}{-}$	65n	2+0	8+0	10+4	0+16	1+15	1+7	0+1	$\frac{4.380M}{\beta^-}$
$\frac{1388.41}{-}$	Tb <sub>65</sub> <sup>174</sup>	$\frac{173.96258}{-}$	65n	2+0	8+0	10+4	0+16	0+15	1+8	0+1	$\frac{5.990M}{\beta^-}$

$E_c(\text{MeV})$  = 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

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

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