

**TAVOLA PERIODICA DEI NUCLEI ATOMICI**  
**configurazione dei livelli nucleari degli isodiaferi I = +29**

$\frac{E_c(\text{MeV})}{E_s(\text{MeV})}$	Sa	$\frac{m_c}{m_s}$	n	1	2	3	4	5	6	7	$\frac{E_\alpha(\text{eV})}{T_{1/2}}$
$\frac{820.209}{-}$	Kr <sup>101</sup> <sub>36</sub>	$\frac{100.96439}{-}$	36n	2+0	2+3	0+9	1+10	1+2	0+5	1+0	$\frac{-}{\beta^- > 635\text{ns}}$
$\frac{836.856}{-}$	Rb <sup>103</sup> <sub>37</sub>	$\frac{102.96301}{-}$	37n	2+0	4+2	0+9	1+10	1+3	0+4	0+1	$\frac{-}{\beta^- > 633\text{ns}}$
$\frac{856.411}{856.34}$	Sr <sup>105</sup> <sub>38</sub>	$\frac{104.95851}{104.95858}$	38n	2+0	6+1	0+9	0+11	0+4	1+3	0+1	$\frac{-7.609\text{M}}{\beta^- 40.0\text{ms}}$
$\frac{875.969}{875.84}$	Y <sup>107</sup> <sub>39</sub>	$\frac{106.95400}{106.95414}$	39n	2+0	6+1	0+9	1+11	1+4	0+3	0+1	$\frac{-10.79\text{M}}{\beta^- 41.0\text{ms}}$
$\frac{895.769}{895.76}$	Zr <sup>109</sup> <sub>40</sub>	$\frac{108.94923}{108.94924}$	40n	2+0	6+1	0+9	1+11	1+6	1+1	0+1	$\frac{-10.00\text{M}}{\beta^- 63.0\text{ms}}$
$\frac{914.652}{914.47}$	Nb <sup>111</sup> <sub>41</sub>	$\frac{110.94545}{110.94565}$	41n	2+0	8+0	0+9	1+12	0+5	0+3	1+0	$\frac{-9.100\text{M}}{\beta^- 51.0\text{ms}}$
$\frac{933.482}{933.34}$	Mo <sup>113</sup> <sub>42</sub>	$\frac{112.94173}{112.94188}$	42n	2+0	8+0	2+8	0+13	1+5	0+2	0+1	$\frac{-9.200\text{M}}{\beta^- 78.0\text{ms}}$
$\frac{951.259}{951.67}$	Tc <sup>115</sup> <sub>43</sub>	$\frac{114.93913}{114.93869}$	43n	2+0	8+0	2+8	1+13	0+5	0+3	1+0	$\frac{-9.500\text{M}}{\beta^- 83.0\text{ms}}$
$\frac{969.852}{969.93}$	Ru <sup>117</sup> <sub>44</sub>	$\frac{116.93566}{116.93558}$	44n	2+0	8+0	4+7	1+14	0+4	0+3	0+1	$\frac{-9.00\text{M}}{\beta^- 142\text{ms}}$
$\frac{988.636}{988.52}$	Rh <sup>119</sup> <sub>45</sub>	$\frac{118.93199}{118.93211}$	45n	2+0	8+0	4+7	0+15	1+4	0+2	1+1	$\frac{-9.200\text{M}}{\beta^- 171\text{ms}}$
$\frac{1006.87}{1006.9}$	Pd <sup>121</sup> <sub>46</sub>	$\frac{120.92890}{120.92887}$	46n	2+0	8+0	4+7	1+15	1+4	0+2	1+1	$\frac{-9.100\text{M}}{\beta^- 285\text{ms}}$
$\frac{1025.92}{1026.0}$	Ag <sup>123</sup> <sub>47</sub>	$\frac{122.92494}{122.92490}$	47n	2+0	8+0	6+6	0+16	1+4	1+2	0+1	$\frac{-9.120\text{M}}{\beta^- 300\text{ms}}$
$\frac{1044.36}{1044.7}$	Cd <sup>125</sup> <sub>48</sub>	$\frac{124.92163}{124.92125}$	48n	2+0	8+0	8+5	0+16	0+6	1+1	0+1	$\frac{-9.500\text{M}}{\beta^- 680\text{ms}}$
$\frac{1063.60}{1063.7}$	In <sup>127</sup> <sub>49</sub>	$\frac{126.91747}{126.91735}$	49n	2+0	8+0	8+5	0+16	1+7	0+1	1+0	$\frac{-9.770\text{M}}{\beta^- 1.09\text{s}}$
$\frac{1082.86}{1082.7}$	Sn <sup>129</sup> <sub>50</sub>	$\frac{128.91328}{128.91348}$	50n	2+0	8+0	10+4	0+16	0+9	1+0	0+0	$\frac{-9.670\text{M}}{\beta^- 2.23\text{m}}$
$\frac{1098.36}{1099.4}$	Sb <sup>131</sup> <sub>51</sub>	$\frac{130.91313}{130.911982}$	51n	2+0	8+0	10+4	0+16	1+9	1+0	0+0	$\frac{-7.509\text{M}}{\beta^- 23.03\text{m}}$
$\frac{1115.23}{1115.7}$	Te <sup>133</sup> <sub>52</sub>	$\frac{132.91151}{132.910955}$	52n	2+0	8+0	12+3	0+16	1+10	0+0	0+0	$\frac{-4.780\text{M}}{\beta^- 12.5\text{m}}$

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$\frac{1130.59}{1132.0}$	I <sub>53</sub> <sup>135</sup>	$\frac{134.91151}{134.910048}$	53n	2+0	8+0	14+2	0+16	0+11	0+0	0+0	$\frac{-4.240\text{M}}{\beta^- 6.58\text{h}}$
$\frac{1145.85}{1145.9}$	Xe <sub>54</sub> <sup>137</sup>	$\frac{136.911562}{136.911562}$	54n	2+0	8+0	14+2	0+16	1+11	0+0	0+0	$\frac{-1.864\text{M}}{\beta^- 3.818\text{m}}$
$\frac{1159.54}{1159.6}$	Cs <sub>55</sub> <sup>139</sup>	$\frac{138.91341}{138.913364}$	55n	2+0	8+0	14+2	0+16	1+11	1+0	0+0	$\frac{665\text{K}}{\beta^- 9.27\text{m}}$
$\frac{1174.63}{1174.0}$	Ba <sub>56</sub> <sup>141</sup>	$\frac{140.91370}{140.914411}$	56n	2+0	8+0	16+1	0+16	0+12	1+0	0+0	$\frac{225\text{K}}{\beta^- 18.27\text{m}}$
$\frac{1188.11}{1187.8}$	La <sub>57</sub> <sup>143</sup>	$\frac{142.91572}{142.916063}$	57n	2+0	8+0	18+0	0+16	0+12	0+1	0+0	$\frac{105\text{K}}{\beta^- 14.2\text{m}}$
$\frac{1201.48}{1202.1}$	Ce <sub>58</sub> <sup>145</sup>	$\frac{144.91786}{144.91723}$	58n	2+0	8+0	18+0	0+16	0+12	1+1	0+0	$\frac{220\text{K}}{\beta^- 3.01\text{m}}$
$\frac{1216.28}{1215.8}$	Pr <sub>59</sub> <sup>147</sup>	$\frac{146.91846}{146.918996}$	59n	2+0	8+0	18+0	0+16	1+12	1+1	0+0	$\frac{303\text{K}}{\beta^- 13.4\text{m}}$
$\frac{1229.45}{1230.1}$	Nd <sub>60</sub> <sup>149</sup>	$\frac{148.92081}{148.920149}$	60n	2+0	8+0	18+0	2+15	1+12	0+2	0+0	$\frac{290\text{K}}{\beta^- 1.728\text{h}}$
$\frac{1244.08}{1244.4}$	Pm <sub>61</sub> <sup>151</sup>	$\frac{150.92159}{150.921207}$	61n	2+0	8+0	18+0	4+14	0+13	0+2	0+0	$\frac{-370\text{K}}{\beta^- 28.40\text{h}}$
$\frac{1258.87}{1259.0}$	Sm <sub>62</sub> <sup>153</sup>	$\frac{152.92221}{152.922097}$	62n	2+0	8+0	18+0	5+13	0+15	0+1	0+0	$\frac{-609.9\text{K}}{\beta^- 46.284\text{h}}$
$\frac{1273.33}{1273.6}$	Eu <sub>63</sub> <sup>155</sup>	$\frac{154.92317}{154.922893}$	63n	2+0	8+0	18+0	5+13	1+15	0+1	0+0	$\frac{-853\text{K}}{\beta^- 4.753\text{a}}$
$\frac{1287.97}{1288.0}$	Gd <sub>64</sub> <sup>157</sup>	$\frac{156.92395}{156.923960}$	64n	2+0	8+0	18+0	6+12	1+17	0+0	0+0	$\frac{-688.6\text{K}}{st}$
$\frac{1301.74}{1302.0}$	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	$\frac{-139.5\text{K}}{st}$
$\frac{1315.94}{1315.9}$	Dy <sub>66</sub> <sup>161</sup>	$\frac{160.92690}{160.926933}$	66n	2+0	8+0	18+0	8+12	1+15	0+2	0+0	$\frac{343.9\text{K}}{st}$
$\frac{1330.07}{1329.6}$	Ho <sub>67</sub> <sup>163</sup>	$\frac{162.92822}{162.928734}$	67n	2+0	8+0	18+0	10+11	0+16	0+2	0+0	$\frac{729.7\text{K}}{ce 4570\text{a}}$
$\frac{1344.10}{1343.1}$	Er <sub>68</sub> <sup>165</sup>	$\frac{164.92965}{164.930726}$	68n	2+0	8+0	18+0	10+11	1+16	0+2	0+0	$\frac{1.1088\text{M}}{ce 10.36\text{h}}$
$\frac{1358.04}{1356.5}$	Tm <sub>69</sub> <sup>167</sup>	$\frac{166.93117}{166.932852}$	69n	2+0	8+0	18+0	12+10	0+17	0+2	0+0	$\frac{1.4091\text{M}}{ce 9.25\text{d}}$

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$\frac{1370.22}{1369.7}$	Yb <sup>169</sup> <sub>70</sub>	$\frac{168.93459}{168.93519}$	70n	2+0	8+0	18+0	12+10	0+17	1+2	0+0	$\frac{1.7194\text{M}}{\text{ce } 32.018\text{d}}$
$\frac{1382.29}{1382.5}$	Lu <sup>171</sup> <sub>71</sub>	$\frac{170.93812}{170.937913}$	71n	2+0	8+0	18+0	14+9	0+17	0+3	0+0	$\frac{2.2893\text{M}}{\text{ce } 8.24\text{d}}$
$\frac{1395.95}{1395.4}$	Hf <sup>173</sup> <sub>72</sub>	$\frac{172.93995}{172.94051}$	72n	2+0	8+0	18+0	14+9	1+17	0+3	0+0	$\frac{2.540\text{M}}{\text{ce } 23.6\text{h}}$
$\frac{1406.77}{1407.8}$	Ta <sup>175</sup> <sub>73</sub>	$\frac{174.94482}{174.94374}$	73n	2+0	8+0	18+0	14+9	1+17	0+3	1+0	$\frac{3.00\text{M}}{\text{ce } 10.5\text{h}}$
$\frac{1420.24}{1420.4}$	W <sup>177</sup> <sub>74</sub>	$\frac{176.94685}{176.94664}$	74n	2+0	8+0	18+0	16+8	0+18	0+3	1+0	$\frac{3.290\text{M}}{\text{ce } 132\text{m}}$
$\frac{1431.88}{1432.7}$	Re <sup>179</sup> <sub>75</sub>	$\frac{178.95084}{178.949988}$	75n	2+0	8+0	18+0	16+8	0+18	1+3	1+0	$\frac{3.400\text{M}}{\text{ce } 19.5\text{m}}$
$\frac{1445.16}{1445.0}$	Os <sup>181</sup> <sub>76</sub>	$\frac{180.95308}{180.95324}$	76n	2+0	8+0	18+0	16+8	1+18	1+3	1+0	$\frac{3.720\text{M}}{\text{ce } 105\text{m}}$
$\frac{1456.59}{1457.0}$	Ir <sup>183</sup> <sub>77</sub>	$\frac{182.95730}{182.956846}$	77n	2+0	8+0	18+0	18+7	1+18	0+4	1+0	$\frac{3.960\text{M}}{\text{ce } 57.0\text{m}}$
$\frac{1469.68}{1468.9}$	Pt <sup>185</sup> <sub>78</sub>	$\frac{184.95973}{184.96062}$	78n	2+0	8+0	18+0	20+6	0+19	0+4	1+0	$\frac{4.440\text{M}}{\text{ce } 70.9\text{m}}$
$\frac{1480.90}{1480.5}$	Au <sup>187</sup> <sub>79</sub>	$\frac{186.96418}{186.964568}$	79n	2+0	8+0	18+0	20+6	0+19	1+4	1+0	$\frac{4.770\text{M}}{\text{ce } 8.30\text{m}}$
$\frac{1492.01}{1492.5}$	Hg <sup>189</sup> <sub>80</sub>	$\frac{188.96874}{188.96819}$	80n	2+0	8+0	18+0	22+5	0+19	0+5	1+0	$\frac{4.630\text{M}}{\text{ce } 7.60\text{m}}$
$\frac{1504.80}{1504.5}$	Tl <sup>191</sup> <sub>81</sub>	$\frac{190.97150}{190.971786}$	81n	2+0	8+0	18+0	22+5	1+19	0+5	1+0	$\frac{4.300\text{M}}{\text{ce } 20\text{m}}$
$\frac{1515.70}{1515.8}$	Pb <sup>193</sup> <sub>82</sub>	$\frac{192.97622}{192.97617}$	82n	2+0	8+0	18+0	22+5	1+19	1+5	1+0	$\frac{5.010\text{M}}{\text{ce } 5\text{m}}$
$\frac{1526.49}{1527.0}$	Bi <sup>195</sup> <sub>83</sub>	$\frac{194.98119}{194.980651}$	83n	2+0	8+0	18+0	24+4	1+19	0+6	1+0	$\frac{5.832\text{M}}{\text{ce } 183\text{s}}$
$\frac{1537.22}{1537.7}$	Po <sup>197</sup> <sub>84</sub>	$\frac{196.98617}{196.98566}$	84n	2+0	8+0	18+0	24+4	1+19	1+6	1+0	$\frac{6.412\text{M}}{\text{ce } 84.0\text{s}}$
$\frac{1548.64}{1548.5}$	At <sup>199</sup> <sub>85</sub>	$\frac{198.99040}{198.99053}$	85n	2+0	8+0	18+0	28+2	0+20	0+6	0+1	$\frac{6.7785\text{M}}{\alpha } 7.03\text{s}$
$\frac{1559.29}{1559.1}$	Rn <sup>201</sup> <sub>86</sub>	$\frac{200.99545}{200.99563}$	86n	2+0	8+0	18+0	28+2	0+20	1+6	0+1	$\frac{6.8607\text{M}}{\alpha } 7.0\text{s}$

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$\frac{1569.16}{1569.6}$	Fr <sup>203</sup> <sub>87</sub>	$\frac{203.00135}{203.000925}$	87n	2+0	8+0	18+0	28+2	1+19	0+8	1+0	$\frac{7.275\text{M}}{\alpha 0.55\text{s}}$
$\frac{1579.70}{1579.9}$	Ra <sup>205</sup> <sub>88</sub>	$\frac{205.00652}{205.00627}$	88n	2+0	8+0	18+0	28+2	1+19	1+8	1+0	$\frac{7.490\text{M}}{\alpha 210\text{ms}}$
$\frac{1590.18}{1590.0}$	Ac <sup>207</sup> <sub>89</sub>	$\frac{207.01176}{207.01195}$	89n	2+0	8+0	18+0	30+1	0+20	1+8	1+0	$\frac{7.840\text{M}}{\alpha 27.0\text{ms}}$
$\frac{1600.61}{1600.0}$	Th <sup>209</sup> <sub>90</sub>	$\frac{209.01705}{209.01772}$	90n	2+0	8+0	18+0	30+1	1+19	1+9	1+0	$\frac{8.270\text{M}}{\alpha 2.50\text{ms}}$