

Table 078: Muons in Platinum

| Z | A [g/mol] | ρ [g/cm ³] | I [eV] | a | $k = m_s$ | x_0 | x_1 | \bar{C} | δ_0 |
|----------|---------------------|-----------------------------|---------|---------------------------------------|-----------|----------|------------------------------------|-----------|------------|
| 78 (Pt) | 195.084 (9) | 21.450 | 790.0 | 0.11128 | 3.0417 | 0.1484 | 3.6212 | 5.4732 | 0.12 |
| T | p [MeV/c] | Ionization | Brems | Pair prod [MeV cm ² /g] | Photonucl | Total | CSDA range [g/cm ²] | | |
| 10.0 MeV | 4.704×10^1 | 3.896 | | | | 3.896 | 1.492×10^0 | | |
| 14.0 MeV | 5.616×10^1 | 3.109 | | | | 3.109 | 2.651×10^0 | | |
| 20.0 MeV | 6.802×10^1 | 2.477 | | | | 2.477 | 4.836×10^0 | | |
| 30.0 MeV | 8.509×10^1 | 1.958 | | | | 1.958 | 9.435×10^0 | | |
| 40.0 MeV | 1.003×10^2 | 1.690 | | | | 1.690 | 1.496×10^1 | | |
| 80.0 MeV | 1.527×10^2 | 1.297 | | | | 1.297 | 4.278×10^1 | | |
| 100. MeV | 1.764×10^2 | 1.228 | | | | 1.228 | 5.866×10^1 | | |
| 140. MeV | 2.218×10^2 | 1.162 | | | | 1.162 | 9.229×10^1 | | |
| 200. MeV | 2.868×10^2 | 1.132 | | | | 1.132 | 1.448×10^2 | | |
| 237. MeV | 3.260×10^2 | 1.128 | 0.000 | | | 1.129 | <i>Minimum ionization</i> | | |
| 300. MeV | 3.917×10^2 | 1.134 | 0.000 | | 0.000 | 1.134 | 2.332×10^2 | | |
| 400. MeV | 4.945×10^2 | 1.153 | 0.000 | | 0.000 | 1.153 | 3.207×10^2 | | |
| 800. MeV | 8.995×10^2 | 1.233 | 0.001 | | 0.000 | 1.234 | 6.555×10^2 | | |
| 1.00 GeV | 1.101×10^3 | 1.265 | 0.001 | | 0.000 | 1.267 | 8.154×10^2 | | |
| 1.40 GeV | 1.502×10^3 | 1.315 | 0.002 | | 0.001 | 1.318 | 1.125×10^3 | | |
| 2.00 GeV | 2.103×10^3 | 1.370 | 0.004 | 0.001 | 0.001 | 1.376 | 1.570×10^3 | | |
| 3.00 GeV | 3.104×10^3 | 1.431 | 0.007 | 0.003 | 0.001 | 1.443 | 2.278×10^3 | | |
| 4.00 GeV | 4.104×10^3 | 1.474 | 0.010 | 0.006 | 0.002 | 1.492 | 2.959×10^3 | | |
| 8.00 GeV | 8.105×10^3 | 1.570 | 0.024 | 0.022 | 0.003 | 1.620 | 5.523×10^3 | | |
| 10.0 GeV | 1.011×10^4 | 1.599 | 0.032 | 0.031 | 0.004 | 1.666 | 6.740×10^3 | | |
| 14.0 GeV | 1.411×10^4 | 1.641 | 0.049 | 0.050 | 0.005 | 1.746 | 9.083×10^3 | | |
| 20.0 GeV | 2.011×10^4 | 1.683 | 0.076 | 0.082 | 0.007 | 1.849 | 1.242×10^4 | | |
| 30.0 GeV | 3.011×10^4 | 1.727 | 0.125 | 0.144 | 0.011 | 2.007 | 1.761×10^4 | | |
| 40.0 GeV | 4.011×10^4 | 1.756 | 0.177 | 0.212 | 0.014 | 2.160 | 2.241×10^4 | | |
| 80.0 GeV | 8.011×10^4 | 1.821 | 0.399 | 0.513 | 0.028 | 2.763 | 3.874×10^4 | | |
| 100. GeV | 1.001×10^5 | 1.841 | 0.517 | 0.675 | 0.035 | 3.070 | 4.561×10^4 | | |
| 140. GeV | 1.401×10^5 | 1.870 | 0.759 | 1.009 | 0.048 | 3.688 | 5.748×10^4 | | |
| 144. GeV | 1.438×10^5 | 1.872 | 0.782 | 1.041 | 0.049 | 3.746 | <i>Muon critical energy</i> | | |
| 200. GeV | 2.001×10^5 | 1.900 | 1.138 | 1.538 | 0.069 | 4.646 | 7.196×10^4 | | |
| 300. GeV | 3.001×10^5 | 1.933 | 1.784 | 2.422 | 0.103 | 6.243 | 9.047×10^4 | | |
| 400. GeV | 4.001×10^5 | 1.957 | 2.451 | 3.337 | 0.137 | 7.884 | 1.047×10^5 | | |
| 800. GeV | 8.001×10^5 | 2.014 | 5.204 | 7.090 | 0.277 | 14.587 | 1.414×10^5 | | |
| 1.00 TeV | 1.000×10^6 | 2.033 | 6.618 | 9.009 | 0.348 | 18.009 | 1.538×10^5 | | |
| 1.40 TeV | 1.400×10^6 | 2.061 | 9.449 | 12.836 | 0.493 | 24.841 | 1.726×10^5 | | |
| 2.00 TeV | 2.000×10^6 | 2.091 | 13.779 | 18.675 | 0.713 | 35.261 | 1.928×10^5 | | |
| 3.00 TeV | 3.000×10^6 | 2.126 | 21.002 | 28.378 | 1.090 | 52.599 | 2.159×10^5 | | |
| 4.00 TeV | 4.000×10^6 | 2.152 | 28.319 | 38.183 | 1.473 | 70.128 | 2.323×10^5 | | |
| 8.00 TeV | 8.000×10^6 | 2.214 | 57.805 | 77.589 | 3.058 | 140.669 | 2.717×10^5 | | |
| 10.0 TeV | 1.000×10^7 | 2.234 | 72.658 | 97.395 | 3.872 | 176.161 | 2.844×10^5 | | |
| 14.0 TeV | 1.400×10^7 | 2.265 | 102.282 | 136.916 | 5.541 | 247.006 | 3.035×10^5 | | |
| 20.0 TeV | 2.000×10^7 | 2.299 | 146.966 | 196.448 | 8.098 | 353.813 | 3.237×10^5 | | |
| 30.0 TeV | 3.000×10^7 | 2.338 | 221.354 | 295.488 | 12.513 | 531.696 | 3.466×10^5 | | |
| 40.0 TeV | 4.000×10^7 | 2.365 | 295.996 | 394.757 | 17.031 | 710.151 | 3.628×10^5 | | |
| 80.0 TeV | 8.000×10^7 | 2.434 | 594.964 | 792.106 | 35.880 | 1425.386 | 4.018×10^5 | | |
| 100. TeV | 1.000×10^8 | 2.457 | 744.680 | 990.960 | 45.610 | 1783.709 | 4.143×10^5 | | |