

Table 065: Muons in Terbium

| Z | A [g/mol] | ρ [g/cm ³] | I [eV] | a | $k = m_s$ | x_0 | x_1 | \bar{C} | δ_0 |
|----------|---------------------|-----------------------------|---------|---------------------------------------|-----------|----------|------------------------------------|-----------|------------|
| 65 (Tb) | 158.92535 (2) | 8.229 | 614.0 | 0.24453 | 2.6056 | 0.0947 | 3.4224 | 5.9045 | 0.14 |
| 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 | 4.211 | | | | 4.212 | 1.363×10^0 | | |
| 14.0 MeV | 5.616×10^1 | 3.342 | | | | 3.342 | 2.440×10^0 | | |
| 20.0 MeV | 6.802×10^1 | 2.650 | | | | 2.650 | 4.477×10^0 | | |
| 30.0 MeV | 8.509×10^1 | 2.085 | | | | 2.085 | 8.786×10^0 | | |
| 40.0 MeV | 1.003×10^2 | 1.796 | | | | 1.796 | 1.399×10^1 | | |
| 80.0 MeV | 1.527×10^2 | 1.371 | | | | 1.371 | 4.026×10^1 | | |
| 100. MeV | 1.764×10^2 | 1.297 | | | | 1.297 | 5.529×10^1 | | |
| 140. MeV | 2.218×10^2 | 1.225 | | | | 1.225 | 8.715×10^1 | | |
| 200. MeV | 2.868×10^2 | 1.192 | | | | 1.192 | 1.370×10^2 | | |
| 239. MeV | 3.285×10^2 | 1.188 | 0.000 | | | 1.188 | <i>Minimum ionization</i> | | |
| 300. MeV | 3.917×10^2 | 1.193 | 0.000 | | 0.000 | 1.194 | 2.210×10^2 | | |
| 400. MeV | 4.945×10^2 | 1.212 | 0.000 | | 0.000 | 1.213 | 3.041×10^2 | | |
| 800. MeV | 8.995×10^2 | 1.297 | 0.001 | | 0.000 | 1.298 | 6.225×10^2 | | |
| 1.00 GeV | 1.101×10^3 | 1.330 | 0.001 | | 0.000 | 1.332 | 7.746×10^2 | | |
| 1.40 GeV | 1.502×10^3 | 1.383 | 0.002 | 0.000 | 0.001 | 1.386 | 1.069×10^3 | | |
| 2.00 GeV | 2.103×10^3 | 1.441 | 0.003 | 0.001 | 0.001 | 1.447 | 1.492×10^3 | | |
| 3.00 GeV | 3.104×10^3 | 1.507 | 0.006 | 0.003 | 0.001 | 1.517 | 2.166×10^3 | | |
| 4.00 GeV | 4.104×10^3 | 1.552 | 0.009 | 0.006 | 0.002 | 1.569 | 2.813×10^3 | | |
| 8.00 GeV | 8.105×10^3 | 1.655 | 0.021 | 0.020 | 0.003 | 1.700 | 5.253×10^3 | | |
| 10.0 GeV | 1.011×10^4 | 1.686 | 0.028 | 0.028 | 0.004 | 1.746 | 6.413×10^3 | | |
| 14.0 GeV | 1.411×10^4 | 1.731 | 0.043 | 0.045 | 0.005 | 1.824 | 8.653×10^3 | | |
| 20.0 GeV | 2.011×10^4 | 1.775 | 0.066 | 0.074 | 0.007 | 1.923 | 1.185×10^4 | | |
| 30.0 GeV | 3.011×10^4 | 1.822 | 0.108 | 0.129 | 0.011 | 2.071 | 1.686×10^4 | | |
| 40.0 GeV | 4.011×10^4 | 1.853 | 0.153 | 0.189 | 0.015 | 2.210 | 2.153×10^4 | | |
| 80.0 GeV | 8.011×10^4 | 1.921 | 0.346 | 0.455 | 0.028 | 2.752 | 3.771×10^4 | | |
| 100. GeV | 1.001×10^5 | 1.942 | 0.448 | 0.598 | 0.035 | 3.024 | 4.465×10^4 | | |
| 140. GeV | 1.401×10^5 | 1.972 | 0.657 | 0.893 | 0.049 | 3.573 | 5.680×10^4 | | |
| 169. GeV | 1.690×10^5 | 1.988 | 0.814 | 1.116 | 0.059 | 3.977 | <i>Muon critical energy</i> | | |
| 200. GeV | 2.001×10^5 | 2.002 | 0.985 | 1.361 | 0.070 | 4.419 | 7.188×10^4 | | |
| 300. GeV | 3.001×10^5 | 2.036 | 1.545 | 2.141 | 0.105 | 5.829 | 9.154×10^4 | | |
| 400. GeV | 4.001×10^5 | 2.061 | 2.123 | 2.950 | 0.140 | 7.275 | 1.069×10^5 | | |
| 800. GeV | 8.001×10^5 | 2.119 | 4.510 | 6.265 | 0.282 | 13.178 | 1.472×10^5 | | |
| 1.00 TeV | 1.000×10^6 | 2.138 | 5.735 | 7.961 | 0.355 | 16.191 | 1.608×10^5 | | |
| 1.40 TeV | 1.400×10^6 | 2.167 | 8.191 | 11.343 | 0.502 | 22.206 | 1.818×10^5 | | |
| 2.00 TeV | 2.000×10^6 | 2.198 | 11.947 | 16.504 | 0.727 | 31.378 | 2.045×10^5 | | |
| 3.00 TeV | 3.000×10^6 | 2.234 | 18.216 | 25.079 | 1.111 | 46.641 | 2.305×10^5 | | |
| 4.00 TeV | 4.000×10^6 | 2.260 | 24.567 | 33.745 | 1.501 | 62.074 | 2.490×10^5 | | |
| 8.00 TeV | 8.000×10^6 | 2.323 | 50.166 | 68.576 | 3.117 | 124.184 | 2.936×10^5 | | |
| 10.0 TeV | 1.000×10^7 | 2.344 | 63.063 | 86.083 | 3.947 | 155.439 | 3.080×10^5 | | |
| 14.0 TeV | 1.400×10^7 | 2.376 | 88.788 | 121.016 | 5.649 | 217.831 | 3.297×10^5 | | |
| 20.0 TeV | 2.000×10^7 | 2.410 | 127.596 | 173.638 | 8.258 | 311.904 | 3.526×10^5 | | |
| 30.0 TeV | 3.000×10^7 | 2.450 | 192.201 | 261.186 | 12.763 | 468.601 | 3.785×10^5 | | |
| 40.0 TeV | 4.000×10^7 | 2.478 | 257.032 | 348.937 | 17.372 | 625.821 | 3.969×10^5 | | |
| 80.0 TeV | 8.000×10^7 | 2.549 | 516.724 | 700.186 | 36.609 | 1256.069 | 4.412×10^5 | | |
| 100. TeV | 1.000×10^8 | 2.572 | 646.780 | 875.970 | 46.540 | 1571.864 | 4.554×10^5 | | |