

Table 293: Muons in Solid carbon dioxide (dry ice; CO₂)

| $\langle Z/A \rangle$ | ρ [g/cm ³] | I [eV] | a | $k = m_s$ | x_0 | x_1 | \bar{C} | δ_0 |
|-----------------------|-----------------------------|------------|---------|-----------|-----------|---------|------------------------------------|------------|
| 0.49989 | 1.563 | 85.0 | 0.43387 | 3.0000 | 0.2000 | 2.0000 | 3.4513 | 0.00 |
| T | p [MeV/c] | Ionization | Brems | Pair prod | Photonucl | Total | CSDA range [g/cm ²] | |
| | | | | | | | | |
| 10.0 MeV | 4.704×10^1 | 7.057 | | | | 7.057 | 7.841×10^{-1} | |
| 14.0 MeV | 5.616×10^1 | 5.508 | | | | 5.508 | 1.432×10^0 | |
| 20.0 MeV | 6.802×10^1 | 4.304 | | | | 4.304 | 2.679×10^0 | |
| 30.0 MeV | 8.509×10^1 | 3.341 | | | | 3.341 | 5.353×10^0 | |
| 40.0 MeV | 1.003×10^2 | 2.854 | | | | 2.854 | 8.612×10^0 | |
| 80.0 MeV | 1.527×10^2 | 2.145 | | | | 2.145 | 2.529×10^1 | |
| 100. MeV | 1.764×10^2 | 2.017 | | | | 2.017 | 3.493×10^1 | |
| 140. MeV | 2.218×10^2 | 1.886 | | | | 1.886 | 5.554×10^1 | |
| 200. MeV | 2.868×10^2 | 1.812 | | | | 1.812 | 8.811×10^1 | |
| 300. MeV | 3.917×10^2 | 1.787 | | | 0.000 | 1.787 | 1.438×10^2 | |
| 303. MeV | 3.950×10^2 | 1.787 | | | 0.000 | 1.787 | <i>Minimum ionization</i> | |
| 400. MeV | 4.945×10^2 | 1.795 | | | 0.000 | 1.795 | 1.997×10^2 | |
| 800. MeV | 8.995×10^2 | 1.866 | 0.000 | | 0.000 | 1.866 | 4.182×10^2 | |
| 1.00 GeV | 1.101×10^3 | 1.896 | 0.000 | | 0.000 | 1.897 | 5.245×10^2 | |
| 1.40 GeV | 1.502×10^3 | 1.946 | 0.000 | | 0.001 | 1.947 | 7.325×10^2 | |
| 2.00 GeV | 2.103×10^3 | 1.999 | 0.001 | 0.000 | 0.001 | 2.001 | 1.036×10^3 | |
| 3.00 GeV | 3.104×10^3 | 2.060 | 0.001 | 0.001 | 0.001 | 2.063 | 1.528×10^3 | |
| 4.00 GeV | 4.104×10^3 | 2.101 | 0.002 | 0.001 | 0.002 | 2.106 | 2.007×10^3 | |
| 8.00 GeV | 8.105×10^3 | 2.196 | 0.004 | 0.003 | 0.004 | 2.207 | 3.857×10^3 | |
| 10.0 GeV | 1.011×10^4 | 2.225 | 0.005 | 0.005 | 0.005 | 2.240 | 4.757×10^3 | |
| 14.0 GeV | 1.411×10^4 | 2.268 | 0.007 | 0.008 | 0.007 | 2.290 | 6.522×10^3 | |
| 20.0 GeV | 2.011×10^4 | 2.312 | 0.011 | 0.013 | 0.009 | 2.345 | 9.110×10^3 | |
| 30.0 GeV | 3.011×10^4 | 2.359 | 0.019 | 0.023 | 0.013 | 2.415 | 1.331×10^4 | |
| 40.0 GeV | 4.011×10^4 | 2.392 | 0.027 | 0.034 | 0.017 | 2.470 | 1.740×10^4 | |
| 80.0 GeV | 8.011×10^4 | 2.468 | 0.061 | 0.081 | 0.034 | 2.644 | 3.303×10^4 | |
| 100. GeV | 1.001×10^5 | 2.491 | 0.079 | 0.107 | 0.042 | 2.719 | 4.049×10^4 | |
| 140. GeV | 1.401×10^5 | 2.526 | 0.116 | 0.161 | 0.058 | 2.862 | 5.482×10^4 | |
| 200. GeV | 2.001×10^5 | 2.563 | 0.174 | 0.247 | 0.083 | 3.067 | 7.507×10^4 | |
| 300. GeV | 3.001×10^5 | 2.604 | 0.275 | 0.392 | 0.124 | 3.395 | 1.060×10^5 | |
| 400. GeV | 4.001×10^5 | 2.634 | 0.379 | 0.543 | 0.165 | 3.722 | 1.342×10^5 | |
| 800. GeV | 8.001×10^5 | 2.705 | 0.813 | 1.172 | 0.334 | 5.025 | 2.263×10^5 | |
| 927. GeV | 9.270×10^5 | 2.720 | 0.955 | 1.377 | 0.388 | 5.441 | <i>Muon critical energy</i> | |
| 1.00 TeV | 1.000×10^6 | 2.728 | 1.037 | 1.497 | 0.420 | 5.683 | 2.637×10^5 | |
| 1.40 TeV | 1.400×10^6 | 2.764 | 1.489 | 2.143 | 0.595 | 6.991 | 3.271×10^5 | |
| 2.00 TeV | 2.000×10^6 | 2.802 | 2.181 | 3.133 | 0.862 | 8.978 | 4.026×10^5 | |
| 3.00 TeV | 3.000×10^6 | 2.846 | 3.342 | 4.781 | 1.320 | 12.289 | 4.975×10^5 | |
| 4.00 TeV | 4.000×10^6 | 2.877 | 4.523 | 6.451 | 1.786 | 15.638 | 5.695×10^5 | |
| 8.00 TeV | 8.000×10^6 | 2.955 | 9.300 | 13.178 | 3.728 | 29.160 | 7.539×10^5 | |
| 10.0 TeV | 1.000×10^7 | 2.980 | 11.714 | 16.565 | 4.728 | 35.988 | 8.155×10^5 | |
| 14.0 TeV | 1.400×10^7 | 3.019 | 16.532 | 23.316 | 6.787 | 49.654 | 9.097×10^5 | |
| 20.0 TeV | 2.000×10^7 | 3.061 | 23.817 | 33.496 | 9.949 | 70.324 | 1.011×10^6 | |
| 30.0 TeV | 3.000×10^7 | 3.110 | 35.946 | 50.437 | 15.437 | 104.930 | 1.126×10^6 | |
| 40.0 TeV | 4.000×10^7 | 3.144 | 48.136 | 67.432 | 21.069 | 139.781 | 1.209×10^6 | |
| 80.0 TeV | 8.000×10^7 | 3.231 | 97.010 | 135.468 | 44.687 | 280.396 | 1.407×10^6 | |
| 100. TeV | 1.000×10^8 | 3.259 | 121.509 | 169.526 | 56.926 | 351.220 | 1.471×10^6 | |