

Muons in toluene (C₆H₅CH₃)

| | $\langle Z/A \rangle$ | ρ [g/cm ³] | I [eV] | a | $k = m_s$ | x_0 | x_1 | \bar{C} | δ_0 |
|----------|-----------------------|-----------------------------|----------|--------------------------|-----------|---------|------------------------------------|-----------|-----------------------------|
| | 0.54265 | 0.867 | 62.5 | 0.13284 | 3.3558 | 0.1722 | 2.5728 | 3.3026 | 0.00 |
| T | p [MeV/c] | Ionization | Brems | Pair prod | Photonucl | Total | CSDA range [g/cm ²] | | |
| | | | | [MeV cm ² /g] | | | | | |
| 10.0 MeV | 4.704×10^1 | 7.970 | | | | 7.970 | | | 6.923×10^{-1} |
| 14.0 MeV | 5.616×10^1 | 6.212 | | | | 6.212 | | | 1.267×10^0 |
| 20.0 MeV | 6.802×10^1 | 4.847 | | | | 4.847 | | | 2.373×10^0 |
| 30.0 MeV | 8.509×10^1 | 3.757 | | | | 3.757 | | | 4.749×10^0 |
| 40.0 MeV | 1.003×10^2 | 3.206 | | | | 3.206 | | | 7.649×10^0 |
| 80.0 MeV | 1.527×10^2 | 2.404 | | | | 2.404 | | | 2.252×10^1 |
| 100. MeV | 1.764×10^2 | 2.253 | | | | 2.254 | | | 3.113×10^1 |
| 140. MeV | 2.218×10^2 | 2.098 | | | | 2.098 | | | 4.962×10^1 |
| 200. MeV | 2.868×10^2 | 2.008 | | | | 2.008 | | | 7.896×10^1 |
| 300. MeV | 3.917×10^2 | 1.973 | | | 0.000 | 1.973 | | | 1.294×10^2 |
| 318. MeV | 4.105×10^2 | 1.972 | | | 0.000 | 1.972 | | | <i>Minimum ionization</i> |
| 400. MeV | 4.945×10^2 | 1.978 | | | 0.000 | 1.978 | | | 1.800×10^2 |
| 800. MeV | 8.995×10^2 | 2.050 | 0.000 | | 0.000 | 2.051 | | | 3.787×10^2 |
| 1.00 GeV | 1.101×10^3 | 2.083 | 0.000 | | 0.000 | 2.084 | | | 4.754×10^2 |
| 1.40 GeV | 1.502×10^3 | 2.137 | 0.000 | | 0.001 | 2.138 | | | 6.648×10^2 |
| 2.00 GeV | 2.103×10^3 | 2.197 | 0.000 | 0.000 | 0.001 | 2.199 | | | 9.413×10^2 |
| 3.00 GeV | 3.104×10^3 | 2.265 | 0.001 | 0.001 | 0.001 | 2.268 | | | 1.389×10^3 |
| 4.00 GeV | 4.104×10^3 | 2.312 | 0.001 | 0.001 | 0.002 | 2.316 | | | 1.825×10^3 |
| 8.00 GeV | 8.105×10^3 | 2.420 | 0.003 | 0.003 | 0.004 | 2.429 | | | 3.506×10^3 |
| 10.0 GeV | 1.011×10^4 | 2.452 | 0.004 | 0.004 | 0.005 | 2.465 | | | 4.323×10^3 |
| 14.0 GeV | 1.411×10^4 | 2.500 | 0.006 | 0.006 | 0.007 | 2.519 | | | 5.928×10^3 |
| 20.0 GeV | 2.011×10^4 | 2.548 | 0.009 | 0.010 | 0.009 | 2.577 | | | 8.281×10^3 |
| 30.0 GeV | 3.011×10^4 | 2.600 | 0.015 | 0.018 | 0.014 | 2.647 | | | 1.211×10^4 |
| 40.0 GeV | 4.011×10^4 | 2.636 | 0.021 | 0.027 | 0.018 | 2.702 | | | 1.585×10^4 |
| 80.0 GeV | 8.011×10^4 | 2.717 | 0.048 | 0.065 | 0.035 | 2.866 | | | 3.020×10^4 |
| 100. GeV | 1.001×10^5 | 2.743 | 0.063 | 0.086 | 0.043 | 2.935 | | | 3.709×10^4 |
| 140. GeV | 1.401×10^5 | 2.781 | 0.093 | 0.129 | 0.060 | 3.063 | | | 5.043×10^4 |
| 200. GeV | 2.001×10^5 | 2.821 | 0.140 | 0.198 | 0.084 | 3.243 | | | 6.946×10^4 |
| 300. GeV | 3.001×10^5 | 2.866 | 0.221 | 0.315 | 0.127 | 3.529 | | | 9.900×10^4 |
| 400. GeV | 4.001×10^5 | 2.898 | 0.306 | 0.437 | 0.169 | 3.810 | | | 1.263×10^5 |
| 800. GeV | 8.001×10^5 | 2.975 | 0.658 | 0.947 | 0.341 | 4.921 | | | 2.184×10^5 |
| 1.00 TeV | 1.000×10^6 | 3.001 | 0.840 | 1.211 | 0.428 | 5.480 | | | 2.569×10^5 |
| 1.20 TeV | 1.204×10^6 | 3.022 | 1.026 | 1.477 | 0.519 | 6.044 | | | <i>Muon critical energy</i> |
| 1.40 TeV | 1.400×10^6 | 3.039 | 1.208 | 1.736 | 0.607 | 6.590 | | | 3.234×10^5 |
| 2.00 TeV | 2.000×10^6 | 3.080 | 1.773 | 2.542 | 0.879 | 8.274 | | | 4.044×10^5 |
| 3.00 TeV | 3.000×10^6 | 3.128 | 2.720 | 3.884 | 1.348 | 11.080 | | | 5.085×10^5 |
| 4.00 TeV | 4.000×10^6 | 3.162 | 3.685 | 5.245 | 1.824 | 13.917 | | | 5.889×10^5 |
| 8.00 TeV | 8.000×10^6 | 3.246 | 7.595 | 10.731 | 3.808 | 25.381 | | | 7.987×10^5 |
| 10.0 TeV | 1.000×10^7 | 3.274 | 9.574 | 13.495 | 4.831 | 31.174 | | | 8.697×10^5 |
| 14.0 TeV | 1.400×10^7 | 3.316 | 13.523 | 19.001 | 6.938 | 42.779 | | | 9.788×10^5 |
| 20.0 TeV | 2.000×10^7 | 3.362 | 19.499 | 27.309 | 10.178 | 60.347 | | | 1.096×10^6 |
| 30.0 TeV | 3.000×10^7 | 3.414 | 29.451 | 41.129 | 15.802 | 89.797 | | | 1.231×10^6 |
| 40.0 TeV | 4.000×10^7 | 3.452 | 39.461 | 54.995 | 21.577 | 119.485 | | | 1.328×10^6 |
| 80.0 TeV | 8.000×10^7 | 3.546 | 79.579 | 110.509 | 45.826 | 239.459 | | | 1.559×10^6 |
| 100. TeV | 1.000×10^8 | 3.577 | 99.687 | 138.300 | 58.401 | 299.965 | | | 1.634×10^6 |