

Table 138: Muons in Cellulose nitrate ($C_{12}H_{14}O_4(ONO_2)_6$)_n

| | $\langle Z/A \rangle$ | ρ [g/cm ³] | I [eV] | a | $k = m_s$ | x_0 | x_1 | \bar{C} | δ_0 |
|----------|-----------------------|-----------------------------|----------|-----------|-----------|---------|------------------------------------|-----------|------------|
| | 0.51424 | 1.490 | 87.0 | 0.11813 | 3.3237 | 0.1897 | 2.7253 | 3.4762 | 0.00 |
| T | p [MeV/c] | Ionization | Brems | Pair prod | Photonucl | Total | CSDA range [g/cm ²] | | |
| 10.0 MeV | 4.704×10^1 | 7.237 | | | | 7.237 | 7.647×10^{-1} | | |
| 14.0 MeV | 5.616×10^1 | 5.649 | | | | 5.649 | 1.397×10^0 | | |
| 20.0 MeV | 6.802×10^1 | 4.415 | | | | 4.415 | 2.612×10^0 | | |
| 30.0 MeV | 8.509×10^1 | 3.428 | | | | 3.428 | 5.219×10^0 | | |
| 40.0 MeV | 1.003×10^2 | 2.928 | | | | 2.928 | 8.396×10^0 | | |
| 80.0 MeV | 1.527×10^2 | 2.201 | | | | 2.201 | 2.465×10^1 | | |
| 100. MeV | 1.764×10^2 | 2.066 | | | | 2.067 | 3.405×10^1 | | |
| 140. MeV | 2.218×10^2 | 1.926 | | | | 1.926 | 5.420×10^1 | | |
| 200. MeV | 2.868×10^2 | 1.845 | | | | 1.845 | 8.615×10^1 | | |
| 300. MeV | 3.917×10^2 | 1.815 | | | 0.000 | 1.816 | 1.410×10^2 | | |
| 314. MeV | 4.065×10^2 | 1.815 | | | 0.000 | 1.815 | <i>Minimum ionization</i> | | |
| 400. MeV | 4.945×10^2 | 1.822 | | | 0.000 | 1.822 | 1.960×10^2 | | |
| 800. MeV | 8.995×10^2 | 1.894 | 0.000 | | 0.000 | 1.894 | 4.113×10^2 | | |
| 1.00 GeV | 1.101×10^3 | 1.926 | 0.000 | | 0.000 | 1.927 | 5.160×10^2 | | |
| 1.40 GeV | 1.502×10^3 | 1.979 | 0.000 | | 0.001 | 1.980 | 7.206×10^2 | | |
| 2.00 GeV | 2.103×10^3 | 2.037 | 0.001 | 0.000 | 0.001 | 2.038 | 1.019×10^3 | | |
| 3.00 GeV | 3.104×10^3 | 2.102 | 0.001 | 0.001 | 0.001 | 2.105 | 1.501×10^3 | | |
| 4.00 GeV | 4.104×10^3 | 2.148 | 0.001 | 0.001 | 0.002 | 2.152 | 1.971×10^3 | | |
| 8.00 GeV | 8.105×10^3 | 2.252 | 0.004 | 0.003 | 0.004 | 2.263 | 3.777×10^3 | | |
| 10.0 GeV | 1.011×10^4 | 2.284 | 0.005 | 0.005 | 0.005 | 2.298 | 4.654×10^3 | | |
| 14.0 GeV | 1.411×10^4 | 2.329 | 0.007 | 0.008 | 0.007 | 2.351 | 6.374×10^3 | | |
| 20.0 GeV | 2.011×10^4 | 2.376 | 0.011 | 0.013 | 0.009 | 2.409 | 8.894×10^3 | | |
| 30.0 GeV | 3.011×10^4 | 2.425 | 0.018 | 0.022 | 0.013 | 2.479 | 1.298×10^4 | | |
| 40.0 GeV | 4.011×10^4 | 2.459 | 0.026 | 0.033 | 0.018 | 2.535 | 1.697×10^4 | | |
| 80.0 GeV | 8.011×10^4 | 2.537 | 0.059 | 0.079 | 0.034 | 2.709 | 3.221×10^4 | | |
| 100. GeV | 1.001×10^5 | 2.561 | 0.076 | 0.104 | 0.042 | 2.784 | 3.949×10^4 | | |
| 140. GeV | 1.401×10^5 | 2.597 | 0.112 | 0.156 | 0.059 | 2.924 | 5.351×10^4 | | |
| 200. GeV | 2.001×10^5 | 2.635 | 0.169 | 0.239 | 0.083 | 3.126 | 7.334×10^4 | | |
| 300. GeV | 3.001×10^5 | 2.677 | 0.267 | 0.380 | 0.125 | 3.449 | 1.038×10^5 | | |
| 400. GeV | 4.001×10^5 | 2.708 | 0.368 | 0.527 | 0.166 | 3.769 | 1.315×10^5 | | |
| 800. GeV | 8.001×10^5 | 2.781 | 0.790 | 1.137 | 0.335 | 5.044 | 2.229×10^5 | | |
| 974. GeV | 9.745×10^5 | 2.802 | 0.979 | 1.412 | 0.410 | 5.605 | <i>Muon critical energy</i> | | |
| 1.00 TeV | 1.000×10^6 | 2.805 | 1.008 | 1.453 | 0.421 | 5.687 | 2.603×10^5 | | |
| 1.40 TeV | 1.400×10^6 | 2.841 | 1.446 | 2.081 | 0.598 | 6.966 | 3.237×10^5 | | |
| 2.00 TeV | 2.000×10^6 | 2.881 | 2.120 | 3.043 | 0.865 | 8.909 | 3.997×10^5 | | |
| 3.00 TeV | 3.000×10^6 | 2.926 | 3.249 | 4.644 | 1.326 | 12.145 | 4.955×10^5 | | |
| 4.00 TeV | 4.000×10^6 | 2.958 | 4.397 | 6.267 | 1.794 | 15.417 | 5.684×10^5 | | |
| 8.00 TeV | 8.000×10^6 | 3.038 | 9.045 | 12.806 | 3.745 | 28.634 | 7.559×10^5 | | |
| 10.0 TeV | 1.000×10^7 | 3.064 | 11.395 | 16.099 | 4.750 | 35.308 | 8.186×10^5 | | |
| 14.0 TeV | 1.400×10^7 | 3.104 | 16.084 | 22.660 | 6.819 | 48.668 | 9.148×10^5 | | |
| 20.0 TeV | 2.000×10^7 | 3.147 | 23.176 | 32.556 | 9.998 | 68.878 | 1.018×10^6 | | |
| 30.0 TeV | 3.000×10^7 | 3.197 | 34.984 | 49.023 | 15.515 | 102.720 | 1.136×10^6 | | |
| 40.0 TeV | 4.000×10^7 | 3.233 | 46.854 | 65.542 | 21.177 | 136.807 | 1.220×10^6 | | |
| 80.0 TeV | 8.000×10^7 | 3.322 | 94.446 | 131.677 | 44.931 | 274.376 | 1.423×10^6 | | |
| 100. TeV | 1.000×10^8 | 3.351 | 118.305 | 164.783 | 57.241 | 343.680 | 1.488×10^6 | | |