

Table 033: Muons in Arsenic

| Z | A [g/mol] | ρ [g/cm ³] | I [eV] | a | $k = m_s$ | x_0 | x_1 | \bar{C} | δ_0 |
|----------|---------------------|-----------------------------|---------|---------------------------------------|-----------|---------|------------------------------------|-----------|------------|
| 33 (As) | 74.92160 (2) | 5.730 | 347.0 | 0.06633 | 3.4176 | 0.1767 | 3.5702 | 5.0510 | 0.08 |
| 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 | 5.040 | | | | 5.040 | 1.122×10^0 | | |
| 14.0 MeV | 5.616×10^1 | 3.973 | | | | 3.973 | 2.025×10^0 | | |
| 20.0 MeV | 6.802×10^1 | 3.133 | | | | 3.133 | 3.744×10^0 | | |
| 30.0 MeV | 8.509×10^1 | 2.453 | | | | 2.453 | 7.400×10^0 | | |
| 40.0 MeV | 1.003×10^2 | 2.107 | | | | 2.107 | 1.183×10^1 | | |
| 80.0 MeV | 1.527×10^2 | 1.600 | | | | 1.600 | 3.428×10^1 | | |
| 100. MeV | 1.764×10^2 | 1.510 | | | | 1.510 | 4.717×10^1 | | |
| 140. MeV | 2.218×10^2 | 1.422 | | | | 1.422 | 7.458×10^1 | | |
| 200. MeV | 2.868×10^2 | 1.378 | | | | 1.378 | 1.176×10^2 | | |
| 257. MeV | 3.471×10^2 | 1.370 | | | 0.000 | 1.370 | <i>Minimum ionization</i> | | |
| 300. MeV | 3.917×10^2 | 1.373 | 0.000 | | 0.000 | 1.373 | 1.905×10^2 | | |
| 400. MeV | 4.945×10^2 | 1.389 | 0.000 | | 0.000 | 1.390 | 2.629×10^2 | | |
| 800. MeV | 8.995×10^2 | 1.472 | 0.001 | | 0.000 | 1.472 | 5.422×10^2 | | |
| 1.00 GeV | 1.101×10^3 | 1.505 | 0.001 | | 0.000 | 1.506 | 6.765×10^2 | | |
| 1.40 GeV | 1.502×10^3 | 1.558 | 0.001 | 0.000 | 0.001 | 1.560 | 9.372×10^2 | | |
| 2.00 GeV | 2.103×10^3 | 1.615 | 0.002 | 0.001 | 0.001 | 1.619 | 1.314×10^3 | | |
| 3.00 GeV | 3.104×10^3 | 1.680 | 0.003 | 0.002 | 0.001 | 1.687 | 1.918×10^3 | | |
| 4.00 GeV | 4.104×10^3 | 1.725 | 0.005 | 0.004 | 0.002 | 1.736 | 2.502×10^3 | | |
| 8.00 GeV | 8.105×10^3 | 1.826 | 0.012 | 0.012 | 0.003 | 1.854 | 4.724×10^3 | | |
| 10.0 GeV | 1.011×10^4 | 1.857 | 0.016 | 0.017 | 0.004 | 1.894 | 5.790×10^3 | | |
| 14.0 GeV | 1.411×10^4 | 1.900 | 0.025 | 0.028 | 0.006 | 1.959 | 7.865×10^3 | | |
| 20.0 GeV | 2.011×10^4 | 1.944 | 0.038 | 0.045 | 0.008 | 2.036 | 1.087×10^4 | | |
| 30.0 GeV | 3.011×10^4 | 1.990 | 0.063 | 0.078 | 0.012 | 2.144 | 1.565×10^4 | | |
| 40.0 GeV | 4.011×10^4 | 2.021 | 0.089 | 0.114 | 0.016 | 2.240 | 2.021×10^4 | | |
| 80.0 GeV | 8.011×10^4 | 2.091 | 0.200 | 0.274 | 0.030 | 2.596 | 3.677×10^4 | | |
| 100. GeV | 1.001×10^5 | 2.112 | 0.260 | 0.359 | 0.038 | 2.769 | 4.423×10^4 | | |
| 140. GeV | 1.401×10^5 | 2.143 | 0.381 | 0.537 | 0.052 | 3.114 | 5.784×10^4 | | |
| 200. GeV | 2.001×10^5 | 2.176 | 0.572 | 0.817 | 0.074 | 3.640 | 7.565×10^4 | | |
| 290. GeV | 2.898×10^5 | 2.209 | 0.863 | 1.238 | 0.108 | 4.420 | <i>Muon critical energy</i> | | |
| 300. GeV | 3.001×10^5 | 2.213 | 0.897 | 1.288 | 0.111 | 4.510 | 1.003×10^5 | | |
| 400. GeV | 4.001×10^5 | 2.238 | 1.234 | 1.775 | 0.149 | 5.397 | 1.205×10^5 | | |
| 800. GeV | 8.001×10^5 | 2.301 | 2.627 | 3.776 | 0.300 | 9.005 | 1.773×10^5 | | |
| 1.00 TeV | 1.000×10^6 | 2.322 | 3.343 | 4.801 | 0.378 | 10.844 | 1.975×10^5 | | |
| 1.40 TeV | 1.400×10^6 | 2.353 | 4.779 | 6.845 | 0.535 | 14.514 | 2.293×10^5 | | |
| 2.00 TeV | 2.000×10^6 | 2.387 | 6.978 | 9.967 | 0.774 | 20.107 | 2.643×10^5 | | |
| 3.00 TeV | 3.000×10^6 | 2.425 | 10.652 | 15.156 | 1.184 | 29.418 | 3.052×10^5 | | |
| 4.00 TeV | 4.000×10^6 | 2.453 | 14.378 | 20.402 | 1.600 | 38.834 | 3.347×10^5 | | |
| 8.00 TeV | 8.000×10^6 | 2.521 | 29.408 | 41.497 | 3.327 | 76.755 | 4.066×10^5 | | |
| 10.0 TeV | 1.000×10^7 | 2.544 | 36.986 | 52.104 | 4.215 | 95.850 | 4.298×10^5 | | |
| 14.0 TeV | 1.400×10^7 | 2.578 | 52.103 | 73.265 | 6.038 | 133.985 | 4.650×10^5 | | |
| 20.0 TeV | 2.000×10^7 | 2.615 | 74.922 | 105.148 | 8.832 | 191.518 | 5.022×10^5 | | |
| 30.0 TeV | 3.000×10^7 | 2.658 | 112.909 | 158.197 | 13.665 | 287.430 | 5.446×10^5 | | |
| 40.0 TeV | 4.000×10^7 | 2.689 | 151.042 | 211.379 | 18.614 | 383.725 | 5.746×10^5 | | |
| 80.0 TeV | 8.000×10^7 | 2.765 | 303.838 | 424.259 | 39.294 | 770.156 | 6.467×10^5 | | |
| 100. TeV | 1.000×10^8 | 2.790 | 380.380 | 530.800 | 49.980 | 963.951 | 6.699×10^5 | | |