## Table 086: Muons in Radon

| Z | $A$ [g/mol] | $\rho$ [g/cm$^3$] | $I$ [eV] | $a$ | $k = m_s$ | $x_0$ | $x_1$ | $\overline{C}$ | $\delta_0$ |
|---|---|---|---|---|---|---|---|---|---|
| 86 (Rn) | [222.0176] | $9.066 \times 10^{-3}$ | 794.0 | 0.20798 | 2.7409 | 1.5368 | 4.9889 | 13.2839 | 0.00 |

| $T$ | $p$ [MeV/$c$] | Ionization | Brems | Pair prod | Photonucl | Total | CSDA range [g/cm$^2$] |
|---|---|---|---|---|---|---|---|
| | | | | [MeV cm$^2$/g] | | | |
| 10.0 MeV | $4.704 \times 10^1$ | 3.782 | | | | 3.782 | $1.535 \times 10^0$ |
| 14.0 MeV | $5.616 \times 10^1$ | 3.018 | | | | 3.018 | $2.730 \times 10^0$ |
| 20.0 MeV | $6.802 \times 10^1$ | 2.405 | | | | 2.405 | $4.980 \times 10^0$ |
| 30.0 MeV | $8.509 \times 10^1$ | 1.902 | | | | 1.902 | $9.715 \times 10^0$ |
| 40.0 MeV | $1.003 \times 10^2$ | 1.644 | | | | 1.644 | $1.540 \times 10^1$ |
| 80.0 MeV | $1.527 \times 10^2$ | 1.267 | | | | 1.267 | $4.394 \times 10^1$ |
| 100. MeV | $1.764 \times 10^2$ | 1.201 | | | | 1.201 | $6.019 \times 10^1$ |
| 140. MeV | $2.218 \times 10^2$ | 1.140 | | | | 1.140 | $9.452 \times 10^1$ |
| 200. MeV | $2.868 \times 10^2$ | 1.116 | | | | 1.117 | $1.479 \times 10^2$ |
| 216. MeV | $3.039 \times 10^2$ | 1.116 | | | | 1.116 | *Minimum ionization* |
| 300. MeV | $3.917 \times 10^2$ | 1.127 | 0.000 | | 0.000 | 1.128 | $2.372 \times 10^2$ |
| 400. MeV | $4.945 \times 10^2$ | 1.154 | 0.000 | | 0.000 | 1.154 | $3.249 \times 10^2$ |
| 800. MeV | $8.995 \times 10^2$ | 1.258 | 0.001 | | 0.000 | 1.260 | $6.559 \times 10^2$ |
| 1.00 GeV | $1.101 \times 10^3$ | 1.300 | 0.001 | | 0.000 | 1.302 | $8.119 \times 10^2$ |
| 1.40 GeV | $1.502 \times 10^3$ | 1.367 | 0.002 | | 0.001 | 1.371 | $1.111 \times 10^3$ |
| 2.00 GeV | $2.103 \times 10^3$ | 1.443 | 0.004 | 0.001 | 0.001 | 1.449 | $1.536 \times 10^3$ |
| 3.00 GeV | $3.104 \times 10^3$ | 1.531 | 0.007 | 0.003 | 0.001 | 1.543 | $2.204 \times 10^3$ |
| 4.00 GeV | $4.104 \times 10^3$ | 1.595 | 0.010 | 0.006 | 0.002 | 1.614 | $2.837 \times 10^3$ |
| 8.00 GeV | $8.105 \times 10^3$ | 1.745 | 0.026 | 0.022 | 0.003 | 1.796 | $5.173 \times 10^3$ |
| 10.0 GeV | $1.011 \times 10^4$ | 1.790 | 0.034 | 0.031 | 0.004 | 1.860 | $6.267 \times 10^3$ |
| 14.0 GeV | $1.411 \times 10^4$ | 1.855 | 0.052 | 0.051 | 0.005 | 1.964 | $8.357 \times 10^3$ |
| 20.0 GeV | $2.011 \times 10^4$ | 1.920 | 0.081 | 0.085 | 0.007 | 2.094 | $1.131 \times 10^4$ |
| 30.0 GeV | $3.011 \times 10^4$ | 1.989 | 0.132 | 0.149 | 0.011 | 2.282 | $1.588 \times 10^4$ |
| 40.0 GeV | $4.011 \times 10^4$ | 2.035 | 0.187 | 0.221 | 0.014 | 2.457 | $2.010 \times 10^4$ |
| 80.0 GeV | $8.011 \times 10^4$ | 2.135 | 0.422 | 0.535 | 0.028 | 3.121 | $3.450 \times 10^4$ |
| 100. GeV | $1.001 \times 10^5$ | 2.165 | 0.547 | 0.704 | 0.034 | 3.452 | $4.059 \times 10^4$ |
| 140. GeV | $1.401 \times 10^5$ | 2.208 | 0.804 | 1.053 | 0.048 | 4.114 | $5.119 \times 10^4$ |
| 160. GeV | $1.602 \times 10^5$ | 2.224 | 0.936 | 1.235 | 0.054 | 4.450 | *Muon critical energy* |
| 200. GeV | $2.001 \times 10^5$ | 2.251 | 1.204 | 1.606 | 0.068 | 5.131 | $6.423 \times 10^4$ |
| 300. GeV | $3.001 \times 10^5$ | 2.297 | 1.888 | 2.530 | 0.102 | 6.817 | $8.110 \times 10^4$ |
| 400. GeV | $4.001 \times 10^5$ | 2.328 | 2.594 | 3.487 | 0.136 | 8.545 | $9.418 \times 10^4$ |
| 800. GeV | $8.001 \times 10^5$ | 2.399 | 5.506 | 7.409 | 0.274 | 15.590 | $1.283 \times 10^5$ |
| 1.00 TeV | $1.000 \times 10^6$ | 2.420 | 7.001 | 9.415 | 0.344 | 19.183 | $1.399 \times 10^5$ |
| 1.40 TeV | $1.400 \times 10^6$ | 2.452 | 9.996 | 13.415 | 0.487 | 26.353 | $1.576 \times 10^5$ |
| 2.00 TeV | $2.000 \times 10^6$ | 2.485 | 14.573 | 19.519 | 0.705 | 37.285 | $1.767 \times 10^5$ |
| 3.00 TeV | $3.000 \times 10^6$ | 2.522 | 22.211 | 29.661 | 1.077 | 55.473 | $1.985 \times 10^5$ |
| 4.00 TeV | $4.000 \times 10^6$ | 2.547 | 29.946 | 39.909 | 1.455 | 73.860 | $2.141 \times 10^5$ |
| 8.00 TeV | $8.000 \times 10^6$ | 2.609 | 61.114 | 81.099 | 3.021 | 147.844 | $2.516 \times 10^5$ |
| 10.0 TeV | $1.000 \times 10^7$ | 2.628 | 76.812 | 101.800 | 3.825 | 185.067 | $2.637 \times 10^5$ |
| 14.0 TeV | $1.400 \times 10^7$ | 2.659 | 108.123 | 143.108 | 5.473 | 259.364 | $2.819 \times 10^5$ |
| 20.0 TeV | $2.000 \times 10^7$ | 2.691 | 155.348 | 205.330 | 7.998 | 371.369 | $3.011 \times 10^5$ |
| 30.0 TeV | $3.000 \times 10^7$ | 2.729 | 233.967 | 308.849 | 12.357 | 557.903 | $3.229 \times 10^5$ |
| 40.0 TeV | $4.000 \times 10^7$ | 2.756 | 312.850 | 412.606 | 16.816 | 745.030 | $3.384 \times 10^5$ |
| 80.0 TeV | $8.000 \times 10^7$ | 2.822 | 628.791 | 827.918 | 35.424 | 1494.957 | $3.755 \times 10^5$ |
| 100. TeV | $1.000 \times 10^8$ | 2.844 | 787.000 | 1035.760 | 45.030 | 1870.636 | $3.875 \times 10^5$ |