## Table 127: Muons in Cadmium telluride (CdTe)

| $\langle Z/A \rangle$ | $\rho$ [g/cm$^3$] | $I$ [eV] | $a$ | $k = m_s$ | $x_0$ | $x_1$ | $\overline{C}$ | $\delta_0$ |
|---|---|---|---|---|---|---|---|---|
| 0.41665 | 6.200 | 539.3 | 0.24840 | 2.6665 | 0.0438 | 3.2836 | 5.9096 | 0.00 |

| $T$ | $p$ [MeV/$c$] | Ionization | Brems | Pair prod | Photonucl | Total | CSDA range [g/cm$^2$] |
|---|---|---|---|---|---|---|---|
| | | [MeV cm$^2$/g] | | | | | |
| 10.0 MeV | $4.704 \times 10^1$ | 4.453 | | | | 4.453 | $1.273 \times 10^0$ |
| 14.0 MeV | $5.616 \times 10^1$ | 3.518 | | | | 3.518 | $2.294 \times 10^0$ |
| 20.0 MeV | $6.802 \times 10^1$ | 2.781 | | | | 2.781 | $4.233 \times 10^0$ |
| 30.0 MeV | $8.509 \times 10^1$ | 2.184 | | | | 2.184 | $8.345 \times 10^0$ |
| 40.0 MeV | $1.003 \times 10^2$ | 1.880 | | | | 1.880 | $1.331 \times 10^1$ |
| 80.0 MeV | $1.527 \times 10^2$ | 1.438 | | | | 1.438 | $3.838 \times 10^1$ |
| 100. MeV | $1.764 \times 10^2$ | 1.359 | | | | 1.359 | $5.272 \times 10^1$ |
| 140. MeV | $2.218 \times 10^2$ | 1.283 | | | | 1.283 | $8.314 \times 10^1$ |
| 200. MeV | $2.868 \times 10^2$ | 1.247 | | | | 1.247 | $1.307 \times 10^2$ |
| 242. MeV | $3.316 \times 10^2$ | 1.243 | | | | 1.243 | *Minimum ionization* |
| 300. MeV | $3.917 \times 10^2$ | 1.247 | 0.000 | | 0.000 | 1.248 | $2.111 \times 10^2$ |
| 400. MeV | $4.945 \times 10^2$ | 1.266 | 0.000 | | 0.000 | 1.267 | $2.907 \times 10^2$ |
| 800. MeV | $8.995 \times 10^2$ | 1.351 | 0.001 | | 0.000 | 1.352 | $5.959 \times 10^2$ |
| 1.00 GeV | $1.101 \times 10^3$ | 1.385 | 0.001 | | 0.000 | 1.387 | $7.418 \times 10^2$ |
| 1.40 GeV | $1.502 \times 10^3$ | 1.439 | 0.002 | 0.000 | 0.001 | 1.442 | $1.024 \times 10^3$ |
| 2.00 GeV | $2.103 \times 10^3$ | 1.498 | 0.003 | 0.001 | 0.001 | 1.503 | $1.432 \times 10^3$ |
| 3.00 GeV | $3.104 \times 10^3$ | 1.564 | 0.005 | 0.003 | 0.001 | 1.573 | $2.081 \times 10^3$ |
| 4.00 GeV | $4.104 \times 10^3$ | 1.609 | 0.007 | 0.005 | 0.002 | 1.623 | $2.706 \times 10^3$ |
| 8.00 GeV | $8.105 \times 10^3$ | 1.712 | 0.017 | 0.016 | 0.003 | 1.749 | $5.071 \times 10^3$ |
| 10.0 GeV | $1.011 \times 10^4$ | 1.743 | 0.022 | 0.023 | 0.004 | 1.793 | $6.199 \times 10^3$ |
| 14.0 GeV | $1.411 \times 10^4$ | 1.787 | 0.034 | 0.037 | 0.005 | 1.865 | $8.385 \times 10^3$ |
| 20.0 GeV | $2.011 \times 10^4$ | 1.831 | 0.053 | 0.061 | 0.008 | 1.954 | $1.153 \times 10^4$ |
| 30.0 GeV | $3.011 \times 10^4$ | 1.878 | 0.087 | 0.106 | 0.011 | 2.083 | $1.648 \times 10^4$ |
| 40.0 GeV | $4.011 \times 10^4$ | 1.908 | 0.123 | 0.156 | 0.015 | 2.202 | $2.115 \times 10^4$ |
| 80.0 GeV | $8.011 \times 10^4$ | 1.976 | 0.277 | 0.373 | 0.029 | 2.656 | $3.765 \times 10^4$ |
| 100. GeV | $1.001 \times 10^5$ | 1.996 | 0.359 | 0.490 | 0.036 | 2.883 | $4.488 \times 10^4$ |
| 140. GeV | $1.401 \times 10^5$ | 2.026 | 0.527 | 0.732 | 0.050 | 3.337 | $5.776 \times 10^4$ |
| 200. GeV | $2.001 \times 10^5$ | 2.057 | 0.790 | 1.114 | 0.072 | 4.034 | $7.410 \times 10^4$ |
| 208. GeV | $2.077 \times 10^5$ | 2.060 | 0.824 | 1.162 | 0.074 | 4.121 | *Muon critical energy* |
| 300. GeV | $3.001 \times 10^5$ | 2.091 | 1.240 | 1.753 | 0.107 | 5.193 | $9.591 \times 10^4$ |
| 400. GeV | $4.001 \times 10^5$ | 2.116 | 1.704 | 2.416 | 0.143 | 6.380 | $1.133 \times 10^5$ |
| 800. GeV | $8.001 \times 10^5$ | 2.176 | 3.623 | 5.132 | 0.289 | 11.220 | $1.599 \times 10^5$ |
| 1.00 TeV | $1.000 \times 10^6$ | 2.195 | 4.608 | 6.521 | 0.363 | 13.689 | $1.761 \times 10^5$ |
| 1.40 TeV | $1.400 \times 10^6$ | 2.224 | 6.584 | 9.293 | 0.515 | 18.618 | $2.010 \times 10^5$ |
| 2.00 TeV | $2.000 \times 10^6$ | 2.256 | 9.607 | 13.524 | 0.744 | 26.133 | $2.281 \times 10^5$ |
| 3.00 TeV | $3.000 \times 10^6$ | 2.293 | 14.654 | 20.554 | 1.138 | 38.641 | $2.594 \times 10^5$ |
| 4.00 TeV | $4.000 \times 10^6$ | 2.319 | 19.770 | 27.659 | 1.538 | 51.287 | $2.818 \times 10^5$ |
| 8.00 TeV | $8.000 \times 10^6$ | 2.384 | 40.395 | 56.222 | 3.196 | 102.197 | $3.360 \times 10^5$ |
| 10.0 TeV | $1.000 \times 10^7$ | 2.405 | 50.789 | 70.579 | 4.048 | 127.822 | $3.534 \times 10^5$ |
| 14.0 TeV | $1.400 \times 10^7$ | 2.437 | 71.521 | 99.227 | 5.795 | 178.982 | $3.798 \times 10^5$ |
| 20.0 TeV | $2.000 \times 10^7$ | 2.472 | 102.805 | 142.384 | 8.472 | 256.134 | $4.076 \times 10^5$ |
| 30.0 TeV | $3.000 \times 10^7$ | 2.513 | 154.884 | 214.189 | 13.099 | 384.685 | $4.393 \times 10^5$ |
| 40.0 TeV | $4.000 \times 10^7$ | 2.542 | 207.153 | 286.164 | 17.834 | 513.695 | $4.617 \times 10^5$ |
| 80.0 TeV | $8.000 \times 10^7$ | 2.614 | 416.548 | 574.271 | 37.609 | 1031.043 | $5.156 \times 10^5$ |
| 100. TeV | $1.000 \times 10^8$ | 2.637 | 521.426 | 718.459 | 47.822 | 1290.345 | $5.329 \times 10^5$ |