## Table 270: Muons in Uranium dicarbide $UC_2$

| $\langle Z/A \rangle$ | $\rho$ [g/cm$^3$] | $I$ [eV] | $a$ | $k = m_s$ | $x_0$ | $x_1$ | $\overline{C}$ | $\delta_0$ |
|---|---|---|---|---|---|---|---|---|
| 0.39687 | 11.280 | 752.0 | 0.21120 | 2.6577 | −0.2191 | 3.5208 | 6.0247 | 0.00 |

| $T$ | $p$ [MeV/$c$] | Ionization | Brems | Pair prod | Photonucl | Total | CSDA range [g/cm$^2$] |
|---|---|---|---|---|---|---|---|
| | | [MeV cm$^2$/g] | | | | | |
| 10.0 MeV | $4.704 \times 10^1$ | 3.996 | | | | 3.997 | $1.428 \times 10^0$ |
| 14.0 MeV | $5.616 \times 10^1$ | 3.167 | | | | 3.167 | $2.563 \times 10^0$ |
| 20.0 MeV | $6.802 \times 10^1$ | 2.512 | | | | 2.512 | $4.714 \times 10^0$ |
| 30.0 MeV | $8.509 \times 10^1$ | 1.982 | | | | 1.982 | $9.252 \times 10^0$ |
| 40.0 MeV | $1.003 \times 10^2$ | 1.710 | | | | 1.710 | $1.472 \times 10^1$ |
| 80.0 MeV | $1.527 \times 10^2$ | 1.309 | | | | 1.309 | $4.225 \times 10^1$ |
| 100. MeV | $1.764 \times 10^2$ | 1.238 | | | | 1.238 | $5.800 \times 10^1$ |
| 140. MeV | $2.218 \times 10^2$ | 1.170 | | | | 1.170 | $9.138 \times 10^1$ |
| 200. MeV | $2.868 \times 10^2$ | 1.138 | | | | 1.138 | $1.435 \times 10^2$ |
| 237. MeV | $3.260 \times 10^2$ | 1.135 | 0.000 | | | 1.135 | *Minimum ionization* |
| 300. MeV | $3.917 \times 10^2$ | 1.140 | 0.000 | | 0.000 | 1.140 | $2.315 \times 10^2$ |
| 400. MeV | $4.945 \times 10^2$ | 1.158 | 0.000 | | 0.000 | 1.159 | $3.186 \times 10^2$ |
| 800. MeV | $8.995 \times 10^2$ | 1.240 | 0.001 | | 0.000 | 1.241 | $6.516 \times 10^2$ |
| 1.00 GeV | $1.101 \times 10^3$ | 1.272 | 0.001 | | 0.000 | 1.274 | $8.105 \times 10^2$ |
| 1.40 GeV | $1.502 \times 10^3$ | 1.324 | 0.002 | | 0.001 | 1.327 | $1.118 \times 10^3$ |
| 2.00 GeV | $2.103 \times 10^3$ | 1.380 | 0.004 | 0.001 | 0.001 | 1.385 | $1.560 \times 10^3$ |
| 3.00 GeV | $3.104 \times 10^3$ | 1.443 | 0.007 | 0.003 | 0.001 | 1.454 | $2.263 \times 10^3$ |
| 4.00 GeV | $4.104 \times 10^3$ | 1.487 | 0.010 | 0.006 | 0.002 | 1.505 | $2.939 \times 10^3$ |
| 8.00 GeV | $8.105 \times 10^3$ | 1.587 | 0.025 | 0.021 | 0.003 | 1.636 | $5.477 \times 10^3$ |
| 10.0 GeV | $1.011 \times 10^4$ | 1.617 | 0.033 | 0.030 | 0.004 | 1.684 | $6.681 \times 10^3$ |
| 14.0 GeV | $1.411 \times 10^4$ | 1.660 | 0.051 | 0.049 | 0.005 | 1.766 | $8.999 \times 10^3$ |
| 20.0 GeV | $2.011 \times 10^4$ | 1.703 | 0.079 | 0.081 | 0.007 | 1.871 | $1.230 \times 10^4$ |
| 30.0 GeV | $3.011 \times 10^4$ | 1.749 | 0.129 | 0.143 | 0.011 | 2.033 | $1.742 \times 10^4$ |
| 40.0 GeV | $4.011 \times 10^4$ | 1.779 | 0.182 | 0.212 | 0.014 | 2.189 | $2.216 \times 10^4$ |
| 80.0 GeV | $8.011 \times 10^4$ | 1.846 | 0.412 | 0.515 | 0.028 | 2.802 | $3.827 \times 10^4$ |
| 100. GeV | $1.001 \times 10^5$ | 1.866 | 0.534 | 0.679 | 0.035 | 3.115 | $4.504 \times 10^4$ |
| 140. GeV | $1.401 \times 10^5$ | 1.895 | 0.784 | 1.016 | 0.048 | 3.745 | $5.674 \times 10^4$ |
| 143. GeV | $1.433 \times 10^5$ | 1.897 | 0.804 | 1.044 | 0.050 | 3.796 | *Muon critical energy* |
| 200. GeV | $2.001 \times 10^5$ | 1.925 | 1.175 | 1.550 | 0.069 | 4.720 | $7.099 \times 10^4$ |
| 300. GeV | $3.001 \times 10^5$ | 1.959 | 1.841 | 2.442 | 0.103 | 6.346 | $8.920 \times 10^4$ |
| 400. GeV | $4.001 \times 10^5$ | 1.982 | 2.530 | 3.366 | 0.138 | 8.018 | $1.032 \times 10^5$ |
| 800. GeV | $8.001 \times 10^5$ | 2.039 | 5.371 | 7.157 | 0.278 | 14.847 | $1.393 \times 10^5$ |
| 1.00 TeV | $1.000 \times 10^6$ | 2.057 | 6.829 | 9.097 | 0.350 | 18.334 | $1.514 \times 10^5$ |
| 1.40 TeV | $1.400 \times 10^6$ | 2.085 | 9.749 | 12.964 | 0.495 | 25.295 | $1.699 \times 10^5$ |
| 2.00 TeV | $2.000 \times 10^6$ | 2.116 | 14.213 | 18.864 | 0.716 | 35.911 | $1.897 \times 10^5$ |
| 3.00 TeV | $3.000 \times 10^6$ | 2.150 | 21.662 | 28.668 | 1.095 | 53.576 | $2.124 \times 10^5$ |
| 4.00 TeV | $4.000 \times 10^6$ | 2.175 | 29.205 | 38.576 | 1.479 | 71.437 | $2.285 \times 10^5$ |
| 8.00 TeV | $8.000 \times 10^6$ | 2.237 | 59.598 | 78.396 | 3.072 | 143.305 | $2.673 \times 10^5$ |
| 10.0 TeV | $1.000 \times 10^7$ | 2.257 | 74.906 | 98.410 | 3.889 | 179.465 | $2.797 \times 10^5$ |
| 14.0 TeV | $1.400 \times 10^7$ | 2.288 | 105.438 | 138.346 | 5.568 | 251.642 | $2.984 \times 10^5$ |
| 20.0 TeV | $2.000 \times 10^7$ | 2.321 | 151.489 | 198.504 | 8.139 | 360.456 | $3.183 \times 10^5$ |
| 30.0 TeV | $3.000 \times 10^7$ | 2.360 | 228.153 | 298.581 | 12.582 | 541.677 | $3.407 \times 10^5$ |
| 40.0 TeV | $4.000 \times 10^7$ | 2.388 | 305.073 | 398.889 | 17.128 | 723.479 | $3.567 \times 10^5$ |
| 80.0 TeV | $8.000 \times 10^7$ | 2.456 | 613.150 | 800.406 | 36.105 | 1452.119 | $3.949 \times 10^5$ |
| 100. TeV | $1.000 \times 10^8$ | 2.479 | 767.421 | 1001.347 | 45.904 | 1817.153 | $4.072 \times 10^5$ |