## Table 320: Muons in Element 116

| Z | $A$ [g/mol] | $\rho$ [g/cm$^3$] | $I$ [eV] | $a$ | $k = m_s$ | $x_0$ | $x_1$ | $\overline{C}$ | $\delta_0$ |
|---|---|---|---|---|---|---|---|---|---|
| 116 (Un) | [293.200 (8)] | ?? | 1213.0 | 0.29132 | 3.0000 | 0.7064 | 3.0000 | 6.7681 | 0.00 |

| $T$ | $p$ [MeV/$c$] | Ionization | Brems | Pair prod | Photonucl | Total | CSDA range [g/cm$^2$] |
|---|---|---|---|---|---|---|---|
| | | [MeV cm$^2$/g] | | | | | |
| 10.0 MeV | $4.704 \times 10^1$ | 3.432 | | | | 3.432 | $1.750 \times 10^0$ |
| 14.0 MeV | $5.616 \times 10^1$ | 2.782 | | | | 2.782 | $3.056 \times 10^0$ |
| 20.0 MeV | $6.802 \times 10^1$ | 2.245 | | | | 2.245 | $5.479 \times 10^0$ |
| 30.0 MeV | $8.509 \times 10^1$ | 1.794 | | | | 1.794 | $1.052 \times 10^1$ |
| 40.0 MeV | $1.003 \times 10^2$ | 1.559 | | | | 1.560 | $1.653 \times 10^1$ |
| 80.0 MeV | $1.527 \times 10^2$ | 1.214 | | | | 1.214 | $4.643 \times 10^1$ |
| 100. MeV | $1.764 \times 10^2$ | 1.155 | | | | 1.155 | $6.335 \times 10^1$ |
| 140. MeV | $2.218 \times 10^2$ | 1.100 | | | | 1.100 | $9.899 \times 10^1$ |
| 200. MeV | $2.868 \times 10^2$ | 1.081 | 0.000 | | | 1.081 | $1.542 \times 10^2$ |
| 206. MeV | $2.933 \times 10^2$ | 1.081 | 0.000 | | | 1.081 | *Minimum ionization* |
| 300. MeV | $3.917 \times 10^2$ | 1.096 | 0.000 | | 0.000 | 1.096 | $2.462 \times 10^2$ |
| 400. MeV | $4.945 \times 10^2$ | 1.124 | 0.000 | | 0.000 | 1.125 | $3.363 \times 10^2$ |
| 800. MeV | $8.995 \times 10^2$ | 1.227 | 0.001 | | 0.000 | 1.229 | $6.754 \times 10^2$ |
| 1.00 GeV | $1.101 \times 10^3$ | 1.264 | 0.002 | | 0.000 | 1.267 | $8.356 \times 10^2$ |
| 1.40 GeV | $1.502 \times 10^3$ | 1.322 | 0.003 | | 0.000 | 1.326 | $1.144 \times 10^3$ |
| 2.00 GeV | $2.103 \times 10^3$ | 1.382 | 0.005 | | 0.001 | 1.389 | $1.585 \times 10^3$ |
| 3.00 GeV | $3.104 \times 10^3$ | 1.449 | 0.009 | 0.003 | 0.001 | 1.463 | $2.286 \times 10^3$ |
| 4.00 GeV | $4.104 \times 10^3$ | 1.493 | 0.014 | 0.006 | 0.001 | 1.516 | $2.957 \times 10^3$ |
| 8.00 GeV | $8.105 \times 10^3$ | 1.592 | 0.034 | 0.025 | 0.003 | 1.655 | $5.472 \times 10^3$ |
| 10.0 GeV | $1.011 \times 10^4$ | 1.621 | 0.046 | 0.037 | 0.004 | 1.708 | $6.661 \times 10^3$ |
| 14.0 GeV | $1.411 \times 10^4$ | 1.661 | 0.070 | 0.061 | 0.005 | 1.798 | $8.942 \times 10^3$ |
| 20.0 GeV | $2.011 \times 10^4$ | 1.701 | 0.109 | 0.102 | 0.007 | 1.920 | $1.217 \times 10^4$ |
| 30.0 GeV | $3.011 \times 10^4$ | 1.743 | 0.178 | 0.183 | 0.010 | 2.116 | $1.713 \times 10^4$ |
| 40.0 GeV | $4.011 \times 10^4$ | 1.770 | 0.252 | 0.273 | 0.014 | 2.310 | $2.165 \times 10^4$ |
| 80.0 GeV | $8.011 \times 10^4$ | 1.831 | 0.570 | 0.671 | 0.027 | 3.101 | $3.655 \times 10^4$ |
| 100. GeV | $1.001 \times 10^5$ | 1.850 | 0.738 | 0.887 | 0.033 | 3.510 | $4.261 \times 10^4$ |
| 110. GeV | $1.103 \times 10^5$ | 1.858 | 0.825 | 0.997 | 0.037 | 3.718 | *Muon critical energy* |
| 140. GeV | $1.401 \times 10^5$ | 1.878 | 1.083 | 1.330 | 0.046 | 4.340 | $5.285 \times 10^4$ |
| 200. GeV | $2.001 \times 10^5$ | 1.907 | 1.623 | 2.035 | 0.066 | 5.633 | $6.496 \times 10^4$ |
| 300. GeV | $3.001 \times 10^5$ | 1.940 | 2.543 | 3.210 | 0.099 | 7.794 | $8.000 \times 10^4$ |
| 400. GeV | $4.001 \times 10^5$ | 1.963 | 3.494 | 4.430 | 0.132 | 10.021 | $9.129 \times 10^4$ |
| 800. GeV | $8.001 \times 10^5$ | 2.019 | 7.411 | 9.430 | 0.267 | 19.130 | $1.197 \times 10^5$ |
| 1.00 TeV | $1.000 \times 10^6$ | 2.038 | 9.420 | 11.989 | 0.335 | 23.785 | $1.291 \times 10^5$ |
| 1.40 TeV | $1.400 \times 10^6$ | 2.066 | 13.444 | 17.089 | 0.475 | 33.076 | $1.433 \times 10^5$ |
| 2.00 TeV | $2.000 \times 10^6$ | 2.096 | 19.591 | 24.874 | 0.687 | 47.250 | $1.584 \times 10^5$ |
| 3.00 TeV | $3.000 \times 10^6$ | 2.131 | 29.844 | 37.805 | 1.049 | 70.832 | $1.756 \times 10^5$ |
| 4.00 TeV | $4.000 \times 10^6$ | 2.156 | 40.225 | 50.875 | 1.417 | 94.676 | $1.877 \times 10^5$ |
| 8.00 TeV | $8.000 \times 10^6$ | 2.217 | 82.037 | 103.402 | 2.941 | 190.600 | $2.169 \times 10^5$ |
| 10.0 TeV | $1.000 \times 10^7$ | 2.237 | 103.089 | 129.803 | 3.723 | 238.855 | $2.263 \times 10^5$ |
| 14.0 TeV | $1.400 \times 10^7$ | 2.268 | 145.078 | 182.482 | 5.326 | 335.156 | $2.403 \times 10^5$ |
| 20.0 TeV | $2.000 \times 10^7$ | 2.301 | 208.394 | 261.836 | 7.782 | 480.316 | $2.552 \times 10^5$ |
| 30.0 TeV | $3.000 \times 10^7$ | 2.340 | 313.904 | 393.843 | 12.022 | 722.111 | $2.721 \times 10^5$ |
| 40.0 TeV | $4.000 \times 10^7$ | 2.367 | 419.781 | 526.153 | 16.360 | 964.663 | $2.840 \times 10^5$ |
| 80.0 TeV | $8.000 \times 10^7$ | 2.435 | 843.235 | 1055.754 | 34.453 | 1935.879 | $3.127 \times 10^5$ |
| 100. TeV | $1.000 \times 10^8$ | 2.458 | 1055.080 | 1320.790 | 43.790 | 2422.120 | $3.219 \times 10^5$ |