## Table 252: Muons in Sodium iodide (NaI)

| $\langle Z/A \rangle$ | $\rho$ [g/cm$^3$] | $I$ [eV] | $a$ | $k = m_s$ | $x_0$ | $x_1$ | $\overline{C}$ | $\delta_0$ |
|---|---|---|---|---|---|---|---|---|
| 0.42697 | 3.667 | 452.0 | 0.12516 | 3.0398 | 0.1203 | 3.5920 | 6.0572 | 0.00 |

| $T$ | $p$ [MeV/$c$] | Ionization | Brems | Pair prod | Photonucl | Total | CSDA range [g/cm$^2$] |
|---|---|---|---|---|---|---|---|
| | | [MeV cm$^2$/g] | | | | | |
| 10.0 MeV | $4.704 \times 10^1$ | 4.703 | | | | 4.703 | $1.202 \times 10^0$ |
| 14.0 MeV | $5.616 \times 10^1$ | 3.710 | | | | 3.710 | $2.169 \times 10^0$ |
| 20.0 MeV | $6.802 \times 10^1$ | 2.928 | | | | 2.928 | $4.009 \times 10^0$ |
| 30.0 MeV | $8.509 \times 10^1$ | 2.297 | | | | 2.297 | $7.917 \times 10^0$ |
| 40.0 MeV | $1.003 \times 10^2$ | 1.975 | | | | 1.975 | $1.264 \times 10^1$ |
| 80.0 MeV | $1.527 \times 10^2$ | 1.509 | | | | 1.509 | $3.652 \times 10^1$ |
| 100. MeV | $1.764 \times 10^2$ | 1.427 | | | | 1.427 | $5.019 \times 10^1$ |
| 140. MeV | $2.218 \times 10^2$ | 1.347 | | | | 1.348 | $7.916 \times 10^1$ |
| 200. MeV | $2.868 \times 10^2$ | 1.310 | | | | 1.310 | $1.245 \times 10^2$ |
| 243. MeV | $3.325 \times 10^2$ | 1.305 | | | | 1.305 | *Minimum ionization* |
| 300. MeV | $3.917 \times 10^2$ | 1.310 | 0.000 | | 0.000 | 1.310 | $2.010 \times 10^2$ |
| 400. MeV | $4.945 \times 10^2$ | 1.329 | 0.000 | | 0.000 | 1.330 | $2.768 \times 10^2$ |
| 800. MeV | $8.995 \times 10^2$ | 1.417 | 0.001 | | 0.000 | 1.418 | $5.677 \times 10^2$ |
| 1.00 GeV | $1.101 \times 10^3$ | 1.452 | 0.001 | | 0.000 | 1.453 | $7.070 \times 10^2$ |
| 1.40 GeV | $1.502 \times 10^3$ | 1.507 | 0.002 | 0.000 | 0.001 | 1.509 | $9.768 \times 10^2$ |
| 2.00 GeV | $2.103 \times 10^3$ | 1.567 | 0.003 | 0.001 | 0.001 | 1.571 | $1.366 \times 10^3$ |
| 3.00 GeV | $3.104 \times 10^3$ | 1.634 | 0.004 | 0.003 | 0.001 | 1.643 | $1.987 \times 10^3$ |
| 4.00 GeV | $4.104 \times 10^3$ | 1.681 | 0.006 | 0.005 | 0.002 | 1.694 | $2.586 \times 10^3$ |
| 8.00 GeV | $8.105 \times 10^3$ | 1.786 | 0.016 | 0.015 | 0.003 | 1.821 | $4.855 \times 10^3$ |
| 10.0 GeV | $1.011 \times 10^4$ | 1.817 | 0.021 | 0.022 | 0.004 | 1.864 | $5.940 \times 10^3$ |
| 14.0 GeV | $1.411 \times 10^4$ | 1.862 | 0.032 | 0.035 | 0.006 | 1.935 | $8.045 \times 10^3$ |
| 20.0 GeV | $2.011 \times 10^4$ | 1.907 | 0.050 | 0.057 | 0.008 | 2.022 | $1.108 \times 10^4$ |
| 30.0 GeV | $3.011 \times 10^4$ | 1.955 | 0.082 | 0.099 | 0.011 | 2.148 | $1.587 \times 10^4$ |
| 40.0 GeV | $4.011 \times 10^4$ | 1.986 | 0.115 | 0.145 | 0.015 | 2.263 | $2.040 \times 10^4$ |
| 80.0 GeV | $8.011 \times 10^4$ | 2.056 | 0.260 | 0.349 | 0.030 | 2.696 | $3.657 \times 10^4$ |
| 100. GeV | $1.001 \times 10^5$ | 2.078 | 0.337 | 0.459 | 0.037 | 2.911 | $4.370 \times 10^4$ |
| 140. GeV | $1.401 \times 10^5$ | 2.108 | 0.495 | 0.685 | 0.051 | 3.341 | $5.652 \times 10^4$ |
| 200. GeV | $2.001 \times 10^5$ | 2.140 | 0.742 | 1.043 | 0.073 | 4.000 | $7.292 \times 10^4$ |
| 228. GeV | $2.283 \times 10^5$ | 2.152 | 0.860 | 1.210 | 0.083 | 4.305 | *Muon critical energy* |
| 300. GeV | $3.001 \times 10^5$ | 2.176 | 1.164 | 1.642 | 0.109 | 5.093 | $9.503 \times 10^4$ |
| 400. GeV | $4.001 \times 10^5$ | 2.201 | 1.601 | 2.263 | 0.145 | 6.211 | $1.128 \times 10^5$ |
| 800. GeV | $8.001 \times 10^5$ | 2.262 | 3.404 | 4.809 | 0.294 | 10.770 | $1.611 \times 10^5$ |
| 1.00 TeV | $1.000 \times 10^6$ | 2.282 | 4.330 | 6.113 | 0.369 | 13.095 | $1.779 \times 10^5$ |
| 1.40 TeV | $1.400 \times 10^6$ | 2.312 | 6.187 | 8.712 | 0.523 | 17.735 | $2.041 \times 10^5$ |
| 2.00 TeV | $2.000 \times 10^6$ | 2.345 | 9.028 | 12.679 | 0.756 | 24.809 | $2.326 \times 10^5$ |
| 3.00 TeV | $3.000 \times 10^6$ | 2.382 | 13.772 | 19.272 | 1.157 | 36.584 | $2.656 \times 10^5$ |
| 4.00 TeV | $4.000 \times 10^6$ | 2.409 | 18.579 | 25.936 | 1.563 | 48.489 | $2.892 \times 10^5$ |
| 8.00 TeV | $8.000 \times 10^6$ | 2.475 | 37.966 | 52.724 | 3.250 | 96.417 | $3.466 \times 10^5$ |
| 10.0 TeV | $1.000 \times 10^7$ | 2.497 | 47.737 | 66.191 | 4.116 | 120.543 | $3.651 \times 10^5$ |
| 14.0 TeV | $1.400 \times 10^7$ | 2.530 | 67.227 | 93.061 | 5.895 | 168.714 | $3.931 \times 10^5$ |
| 20.0 TeV | $2.000 \times 10^7$ | 2.566 | 96.636 | 133.539 | 8.622 | 241.364 | $4.226 \times 10^5$ |
| 30.0 TeV | $3.000 \times 10^7$ | 2.608 | 145.594 | 200.886 | 13.335 | 362.424 | $4.562 \times 10^5$ |
| 40.0 TeV | $4.000 \times 10^7$ | 2.638 | 194.730 | 268.395 | 18.162 | 483.926 | $4.800 \times 10^5$ |
| 80.0 TeV | $8.000 \times 10^7$ | 2.711 | 391.580 | 538.619 | 38.319 | 971.231 | $5.372 \times 10^5$ |
| 100. TeV | $1.000 \times 10^8$ | 2.735 | 490.176 | 673.855 | 48.733 | 1215.500 | $5.556 \times 10^5$ |