## Table 253: Muons in Sodium monoxide $Na_2O$

| $\langle Z/A \rangle$ | $\rho$ [g/cm$^3$] | $I$ [eV] | $a$ | $k = m_s$ | $x_0$ | $x_1$ | $\overline{C}$ | $\delta_0$ |
|---|---|---|---|---|---|---|---|---|
| 0.48404 | 2.270 | 148.8 | 0.07501 | 3.6943 | 0.1652 | 2.9793 | 4.1892 | 0.00 |

| $T$ | $p$ [MeV/$c$] | Ionization | Brems | Pair prod | Photonucl | Total | CSDA range [g/cm$^2$] |
|---|---|---|---|---|---|---|---|
| | | [MeV cm$^2$/g] | | | | | |
| 10.0 MeV | $4.704 \times 10^1$ | 6.330 | | | | 6.330 | $8.793 \times 10^{-1}$ |
| 14.0 MeV | $5.616 \times 10^1$ | 4.955 | | | | 4.956 | $1.601 \times 10^0$ |
| 20.0 MeV | $6.802 \times 10^1$ | 3.883 | | | | 3.884 | $2.984 \times 10^0$ |
| 30.0 MeV | $8.509 \times 10^1$ | 3.024 | | | | 3.024 | $5.943 \times 10^0$ |
| 40.0 MeV | $1.003 \times 10^2$ | 2.588 | | | | 2.588 | $9.541 \times 10^0$ |
| 80.0 MeV | $1.527 \times 10^2$ | 1.954 | | | | 1.954 | $2.789 \times 10^1$ |
| 100. MeV | $1.764 \times 10^2$ | 1.840 | | | | 1.840 | $3.846 \times 10^1$ |
| 140. MeV | $2.218 \times 10^2$ | 1.725 | | | | 1.725 | $6.102 \times 10^1$ |
| 200. MeV | $2.868 \times 10^2$ | 1.663 | | | | 1.664 | $9.656 \times 10^1$ |
| 283. MeV | $3.738 \times 10^2$ | 1.646 | | | 0.000 | 1.647 | *Minimum ionization* |
| 300. MeV | $3.917 \times 10^2$ | 1.647 | | | 0.000 | 1.647 | $1.571 \times 10^2$ |
| 400. MeV | $4.945 \times 10^2$ | 1.659 | | | 0.000 | 1.660 | $2.177 \times 10^2$ |
| 800. MeV | $8.995 \times 10^2$ | 1.738 | 0.000 | | 0.000 | 1.738 | $4.531 \times 10^2$ |
| 1.00 GeV | $1.101 \times 10^3$ | 1.771 | 0.000 | | 0.000 | 1.772 | $5.670 \times 10^2$ |
| 1.40 GeV | $1.502 \times 10^3$ | 1.823 | 0.000 | 0.000 | 0.001 | 1.825 | $7.893 \times 10^2$ |
| 2.00 GeV | $2.103 \times 10^3$ | 1.881 | 0.001 | 0.000 | 0.001 | 1.883 | $1.113 \times 10^3$ |
| 3.00 GeV | $3.104 \times 10^3$ | 1.945 | 0.001 | 0.001 | 0.001 | 1.949 | $1.634 \times 10^3$ |
| 4.00 GeV | $4.104 \times 10^3$ | 1.990 | 0.002 | 0.001 | 0.002 | 1.995 | $2.141 \times 10^3$ |
| 8.00 GeV | $8.105 \times 10^3$ | 2.090 | 0.005 | 0.004 | 0.004 | 2.103 | $4.087 \times 10^3$ |
| 10.0 GeV | $1.011 \times 10^4$ | 2.121 | 0.006 | 0.006 | 0.005 | 2.138 | $5.030 \times 10^3$ |
| 14.0 GeV | $1.411 \times 10^4$ | 2.164 | 0.009 | 0.010 | 0.006 | 2.191 | $6.877 \times 10^3$ |
| 20.0 GeV | $2.011 \times 10^4$ | 2.208 | 0.015 | 0.017 | 0.009 | 2.249 | $9.579 \times 10^3$ |
| 30.0 GeV | $3.011 \times 10^4$ | 2.256 | 0.024 | 0.029 | 0.013 | 2.322 | $1.395 \times 10^4$ |
| 40.0 GeV | $4.011 \times 10^4$ | 2.288 | 0.034 | 0.043 | 0.017 | 2.382 | $1.820 \times 10^4$ |
| 80.0 GeV | $8.011 \times 10^4$ | 2.361 | 0.077 | 0.104 | 0.033 | 2.575 | $3.432 \times 10^4$ |
| 100. GeV | $1.001 \times 10^5$ | 2.384 | 0.100 | 0.137 | 0.041 | 2.662 | $4.196 \times 10^4$ |
| 140. GeV | $1.401 \times 10^5$ | 2.418 | 0.147 | 0.205 | 0.057 | 2.827 | $5.654 \times 10^4$ |
| 200. GeV | $2.001 \times 10^5$ | 2.453 | 0.221 | 0.313 | 0.081 | 3.069 | $7.690 \times 10^4$ |
| 300. GeV | $3.001 \times 10^5$ | 2.493 | 0.347 | 0.497 | 0.122 | 3.459 | $1.076 \times 10^5$ |
| 400. GeV | $4.001 \times 10^5$ | 2.522 | 0.479 | 0.687 | 0.162 | 3.850 | $1.350 \times 10^5$ |
| 735. GeV | $7.354 \times 10^5$ | 2.583 | 0.935 | 1.348 | 0.300 | 5.165 | *Muon critical energy* |
| 800. GeV | $8.001 \times 10^5$ | 2.591 | 1.024 | 1.478 | 0.327 | 5.421 | $2.221 \times 10^5$ |
| 1.00 TeV | $1.000 \times 10^6$ | 2.614 | 1.306 | 1.886 | 0.412 | 6.217 | $2.565 \times 10^5$ |
| 1.40 TeV | $1.400 \times 10^6$ | 2.648 | 1.872 | 2.696 | 0.583 | 7.800 | $3.139 \times 10^5$ |
| 2.00 TeV | $2.000 \times 10^6$ | 2.685 | 2.740 | 3.937 | 0.845 | 10.207 | $3.809 \times 10^5$ |
| 3.00 TeV | $3.000 \times 10^6$ | 2.727 | 4.194 | 6.001 | 1.294 | 14.216 | $4.636 \times 10^5$ |
| 4.00 TeV | $4.000 \times 10^6$ | 2.758 | 5.671 | 8.093 | 1.750 | 18.272 | $5.255 \times 10^5$ |
| 8.00 TeV | $8.000 \times 10^6$ | 2.833 | 11.645 | 16.511 | 3.650 | 34.638 | $6.819 \times 10^5$ |
| 10.0 TeV | $1.000 \times 10^7$ | 2.857 | 14.662 | 20.748 | 4.627 | 42.895 | $7.337 \times 10^5$ |
| 14.0 TeV | $1.400 \times 10^7$ | 2.895 | 20.686 | 29.194 | 6.639 | 59.415 | $8.126 \times 10^5$ |
| 20.0 TeV | $2.000 \times 10^7$ | 2.936 | 29.792 | 41.929 | 9.728 | 84.386 | $8.969 \times 10^5$ |
| 30.0 TeV | $3.000 \times 10^7$ | 2.983 | 44.938 | 63.122 | 15.085 | 126.129 | $9.932 \times 10^5$ |
| 40.0 TeV | $4.000 \times 10^7$ | 3.016 | 60.153 | 84.380 | 20.580 | 168.130 | $1.062 \times 10^6$ |
| 80.0 TeV | $8.000 \times 10^7$ | 3.100 | 121.170 | 169.478 | 43.606 | 337.353 | $1.226 \times 10^6$ |
| 100. TeV | $1.000 \times 10^8$ | 3.127 | 151.757 | 212.073 | 55.529 | 422.487 | $1.279 \times 10^6$ |