

Table 189: Muons in Lithium tetraborate $\text{Li}_2\text{B}_4\text{O}_7$

| $\langle Z/A \rangle$ | ρ [g/cm ³] | I [eV] | a | $k = m_s$ | x_0 | x_1 | \bar{C} | δ_0 |
|-----------------------|-----------------------------|------------|---------|---------------------------------------|-----------|---------|------------------------------------|------------|
| 0.48487 | 2.440 | 94.6 | 0.11075 | 3.4389 | 0.0737 | 2.6502 | 3.2093 | 0.00 |
| T | p [MeV/c] | Ionization | Brems | Pair prod [MeV cm ² /g] | Photonucl | Total | CSDA range [g/cm ²] | |
| 10.0 MeV | 4.704×10^1 | 6.748 | | | | 6.748 | 8.208×10^{-1} | |
| 14.0 MeV | 5.616×10^1 | 5.270 | | | | 5.270 | 1.499×10^0 | |
| 20.0 MeV | 6.802×10^1 | 4.120 | | | | 4.120 | 2.801×10^0 | |
| 30.0 MeV | 8.509×10^1 | 3.200 | | | | 3.200 | 5.593×10^0 | |
| 40.0 MeV | 1.003×10^2 | 2.735 | | | | 2.735 | 8.995×10^0 | |
| 80.0 MeV | 1.527×10^2 | 2.048 | | | | 2.048 | 2.642×10^1 | |
| 100. MeV | 1.764×10^2 | 1.920 | | | | 1.920 | 3.653×10^1 | |
| 140. MeV | 2.218×10^2 | 1.790 | | | | 1.790 | 5.821×10^1 | |
| 200. MeV | 2.868×10^2 | 1.716 | | | | 1.716 | 9.258×10^1 | |
| 300. MeV | 3.917×10^2 | 1.688 | | | 0.000 | 1.688 | 1.515×10^2 | |
| 314. MeV | 4.065×10^2 | 1.688 | | | 0.000 | 1.688 | <i>Minimum ionization</i> | |
| 400. MeV | 4.945×10^2 | 1.695 | | | 0.000 | 1.695 | 2.107×10^2 | |
| 800. MeV | 8.995×10^2 | 1.761 | 0.000 | | 0.000 | 1.762 | 4.422×10^2 | |
| 1.00 GeV | 1.101×10^3 | 1.791 | 0.000 | | 0.000 | 1.792 | 5.547×10^2 | |
| 1.40 GeV | 1.502×10^3 | 1.840 | 0.000 | | 0.001 | 1.841 | 7.748×10^2 | |
| 2.00 GeV | 2.103×10^3 | 1.893 | 0.001 | 0.000 | 0.001 | 1.895 | 1.096×10^3 | |
| 3.00 GeV | 3.104×10^3 | 1.954 | 0.001 | 0.001 | 0.001 | 1.957 | 1.614×10^3 | |
| 4.00 GeV | 4.104×10^3 | 1.996 | 0.001 | 0.001 | 0.002 | 2.001 | 2.120×10^3 | |
| 8.00 GeV | 8.105×10^3 | 2.093 | 0.003 | 0.003 | 0.004 | 2.103 | 4.064×10^3 | |
| 10.0 GeV | 1.011×10^4 | 2.122 | 0.004 | 0.004 | 0.005 | 2.136 | 5.007×10^3 | |
| 14.0 GeV | 1.411×10^4 | 2.165 | 0.007 | 0.007 | 0.007 | 2.185 | 6.857×10^3 | |
| 20.0 GeV | 2.011×10^4 | 2.208 | 0.010 | 0.012 | 0.009 | 2.239 | 9.568×10^3 | |
| 30.0 GeV | 3.011×10^4 | 2.255 | 0.017 | 0.021 | 0.013 | 2.306 | 1.396×10^4 | |
| 40.0 GeV | 4.011×10^4 | 2.286 | 0.024 | 0.030 | 0.018 | 2.359 | 1.825×10^4 | |
| 80.0 GeV | 8.011×10^4 | 2.359 | 0.055 | 0.074 | 0.034 | 2.523 | 3.462×10^4 | |
| 100. GeV | 1.001×10^5 | 2.382 | 0.071 | 0.098 | 0.042 | 2.593 | 4.244×10^4 | |
| 140. GeV | 1.401×10^5 | 2.416 | 0.105 | 0.146 | 0.059 | 2.727 | 5.748×10^4 | |
| 200. GeV | 2.001×10^5 | 2.452 | 0.158 | 0.224 | 0.083 | 2.917 | 7.874×10^4 | |
| 300. GeV | 3.001×10^5 | 2.492 | 0.250 | 0.356 | 0.125 | 3.222 | 1.113×10^5 | |
| 400. GeV | 4.001×10^5 | 2.521 | 0.344 | 0.493 | 0.166 | 3.525 | 1.410×10^5 | |
| 800. GeV | 8.001×10^5 | 2.590 | 0.739 | 1.066 | 0.335 | 4.730 | 2.386×10^5 | |
| 960. GeV | 9.603×10^5 | 2.608 | 0.902 | 1.302 | 0.404 | 5.217 | <i>Muon critical energy</i> | |
| 1.00 TeV | 1.000×10^6 | 2.613 | 0.943 | 1.361 | 0.421 | 5.339 | 2.784×10^5 | |
| 1.40 TeV | 1.400×10^6 | 2.647 | 1.353 | 1.950 | 0.598 | 6.548 | 3.459×10^5 | |
| 2.00 TeV | 2.000×10^6 | 2.684 | 1.984 | 2.851 | 0.866 | 8.385 | 4.267×10^5 | |
| 3.00 TeV | 3.000×10^6 | 2.726 | 3.040 | 4.352 | 1.326 | 11.445 | 5.284×10^5 | |
| 4.00 TeV | 4.000×10^6 | 2.757 | 4.115 | 5.874 | 1.795 | 14.541 | 6.058×10^5 | |
| 8.00 TeV | 8.000×10^6 | 2.832 | 8.464 | 12.004 | 3.746 | 27.047 | 8.044×10^5 | |
| 10.0 TeV | 1.000×10^7 | 2.857 | 10.663 | 15.092 | 4.751 | 33.363 | 8.708×10^5 | |
| 14.0 TeV | 1.400×10^7 | 2.895 | 15.050 | 21.243 | 6.821 | 46.010 | 9.725×10^5 | |
| 20.0 TeV | 2.000×10^7 | 2.935 | 21.685 | 30.522 | 10.001 | 65.145 | 1.082×10^6 | |
| 30.0 TeV | 3.000×10^7 | 2.982 | 32.732 | 45.961 | 15.520 | 97.197 | 1.206×10^6 | |
| 40.0 TeV | 4.000×10^7 | 3.016 | 43.836 | 61.450 | 21.184 | 129.487 | 1.295×10^6 | |
| 80.0 TeV | 8.000×10^7 | 3.100 | 88.359 | 123.458 | 44.947 | 259.863 | 1.509×10^6 | |
| 100. TeV | 1.000×10^8 | 3.127 | 110.678 | 154.499 | 57.261 | 325.566 | 1.578×10^6 | |