Table 050: Muons in Tin

Z	A [g/mol]	ρ [g/cm^3]	I [eV]	a	$k = m_s$	x_0	x_1	$\overline{C}$	δ_0
50 (Sn)	118.710 (7)	7.310	488.0	0.18689	2.8576	0.2879	3.2959	5.5340	0.14

T	p [MeV/c]	Ionization	Brems	Pair prod	Photonucl	Total	CSDA range [g/cm^2]
		[MeV cm^2/g]					
10.0 MeV	4.704×10^1	4.538				4.538	1.256×10^0
14.0 MeV	5.616×10^1	3.591				3.591	2.257×10^0
20.0 MeV	6.802×10^1	2.840				2.840	4.156×10^0
30.0 MeV	8.509×10^1	2.231				2.231	8.181×10^0
40.0 MeV	1.003×10^2	1.920				1.920	1.304×10^1
80.0 MeV	1.527×10^2	1.464				1.464	3.762×10^1
100. MeV	1.764×10^2	1.383				1.383	5.171×10^1
140. MeV	2.218×10^2	1.305				1.305	8.161×10^1
200. MeV	2.868×10^2	1.268				1.268	1.284×10^2
246. MeV	3.356×10^2	1.263				1.264	*Minimum ionization*
300. MeV	3.917×10^2	1.268	0.000		0.000	1.268	2.074×10^2
400. MeV	4.945×10^2	1.286	0.000		0.000	1.287	2.858×10^2
800. MeV	8.995×10^2	1.371	0.001		0.000	1.372	5.864×10^2
1.00 GeV	1.101×10^3	1.404	0.001		0.000	1.406	7.304×10^2
1.40 GeV	1.502×10^3	1.458	0.002	0.000	0.001	1.460	1.009×10^3
2.00 GeV	2.103×10^3	1.515	0.003	0.001	0.001	1.520	1.412×10^3
3.00 GeV	3.104×10^3	1.580	0.005	0.003	0.001	1.590	2.054×10^3
4.00 GeV	4.104×10^3	1.625	0.007	0.005	0.002	1.639	2.673×10^3
8.00 GeV	8.105×10^3	1.727	0.017	0.017	0.003	1.764	5.016×10^3
10.0 GeV	1.011×10^4	1.757	0.023	0.023	0.004	1.807	6.136×10^3
14.0 GeV	1.411×10^4	1.800	0.035	0.038	0.005	1.879	8.305×10^3
20.0 GeV	2.011×10^4	1.844	0.054	0.062	0.008	1.967	1.142×10^4
30.0 GeV	3.011×10^4	1.889	0.088	0.107	0.011	2.096	1.634×10^4
40.0 GeV	4.011×10^4	1.919	0.124	0.157	0.015	2.216	2.098×10^4
80.0 GeV	8.011×10^4	1.987	0.280	0.377	0.029	2.674	3.738×10^4
100. GeV	1.001×10^5	2.007	0.363	0.495	0.036	2.902	4.456×10^4
140. GeV	1.401×10^5	2.037	0.533	0.739	0.050	3.360	5.736×10^4
200. GeV	2.001×10^5	2.068	0.798	1.125	0.072	4.064	7.358×10^4
207. GeV	2.069×10^5	2.071	0.829	1.168	0.074	4.143	*Muon critical energy*
300. GeV	3.001×10^5	2.103	1.252	1.771	0.107	5.234	9.522×10^4
400. GeV	4.001×10^5	2.128	1.721	2.440	0.143	6.433	1.124×10^5
800. GeV	8.001×10^5	2.188	3.659	5.182	0.290	11.320	1.587×10^5
1.00 TeV	1.000×10^6	2.208	4.655	6.585	0.364	13.813	1.747×10^5
1.40 TeV	1.400×10^6	2.237	6.651	9.385	0.515	18.789	1.994×10^5
2.00 TeV	2.000×10^6	2.269	9.704	13.657	0.745	26.377	2.263×10^5
3.00 TeV	3.000×10^6	2.306	14.802	20.756	1.139	39.005	2.573×10^5
4.00 TeV	4.000×10^6	2.333	19.969	27.932	1.540	51.774	2.794×10^5
8.00 TeV	8.000×10^6	2.398	40.801	56.776	3.200	103.176	3.331×10^5
10.0 TeV	1.000×10^7	2.420	51.300	71.275	4.052	129.048	3.504×10^5
14.0 TeV	1.400×10^7	2.452	72.241	100.206	5.801	180.702	3.765×10^5
20.0 TeV	2.000×10^7	2.488	103.840	143.788	8.482	258.599	4.041×10^5
30.0 TeV	3.000×10^7	2.529	156.444	216.299	13.115	388.388	4.354×10^5
40.0 TeV	4.000×10^7	2.558	209.238	288.983	17.857	518.638	4.576×10^5
80.0 TeV	8.000×10^7	2.631	420.738	579.930	37.655	1040.955	5.110×10^5
100. TeV	1.000×10^8	2.655	526.670	725.540	47.880	1302.746	5.281×10^5