Table 080: Muons in Mercury

Z	A [g/mol]	ρ [g/cm^3]	I [eV]	a	$k = m_s$	x_0	x_1	$\overline{C}$	δ_0
80 (Hg)	200.59 (2)	13.546	800.0	0.11014	3.0519	0.2756	3.7275	5.9605	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	3.877				3.878	1.500×10^0
14.0 MeV	5.616×10^1	3.095				3.095	2.665×10^0
20.0 MeV	6.802×10^1	2.467				2.467	4.858×10^0
30.0 MeV	8.509×10^1	1.951				1.951	9.474×10^0
40.0 MeV	1.003×10^2	1.685				1.685	1.502×10^1
80.0 MeV	1.527×10^2	1.295				1.295	4.290×10^1
100. MeV	1.764×10^2	1.226				1.226	5.880×10^1
140. MeV	2.218×10^2	1.161				1.161	9.248×10^1
200. MeV	2.868×10^2	1.133				1.133	1.450×10^2
233. MeV	3.220×10^2	1.130	0.000			1.131	*Minimum ionization*
300. MeV	3.917×10^2	1.137	0.000		0.000	1.137	2.333×10^2
400. MeV	4.945×10^2	1.157	0.000		0.000	1.158	3.204×10^2
800. MeV	8.995×10^2	1.241	0.001		0.000	1.242	6.534×10^2
1.00 GeV	1.101×10^3	1.274	0.001		0.000	1.276	8.122×10^2
1.40 GeV	1.502×10^3	1.326	0.002		0.001	1.329	1.119×10^3
2.00 GeV	2.103×10^3	1.382	0.004	0.001	0.001	1.388	1.560×10^3
3.00 GeV	3.104×10^3	1.445	0.007	0.003	0.001	1.457	2.263×10^3
4.00 GeV	4.104×10^3	1.489	0.010	0.006	0.002	1.507	2.937×10^3
8.00 GeV	8.105×10^3	1.588	0.025	0.022	0.003	1.638	5.473×10^3
10.0 GeV	1.011×10^4	1.617	0.033	0.031	0.004	1.685	6.676×10^3
14.0 GeV	1.411×10^4	1.660	0.050	0.051	0.005	1.766	8.993×10^3
20.0 GeV	2.011×10^4	1.702	0.078	0.083	0.007	1.872	1.229×10^4
30.0 GeV	3.011×10^4	1.747	0.128	0.146	0.011	2.033	1.741×10^4
40.0 GeV	4.011×10^4	1.777	0.180	0.216	0.014	2.188	2.215×10^4
80.0 GeV	8.011×10^4	1.844	0.408	0.522	0.028	2.802	3.826×10^4
100. GeV	1.001×10^5	1.864	0.528	0.687	0.035	3.114	4.503×10^4
140. GeV	1.401×10^5	1.893	0.775	1.027	0.048	3.744	5.674×10^4
143. GeV	1.430×10^5	1.895	0.794	1.052	0.049	3.791	*Muon critical energy*
200. GeV	2.001×10^5	1.923	1.162	1.565	0.068	4.719	7.099×10^4
300. GeV	3.001×10^5	1.957	1.821	2.464	0.103	6.345	8.921×10^4
400. GeV	4.001×10^5	1.980	2.502	3.395	0.137	8.016	1.032×10^5
800. GeV	8.001×10^5	2.037	5.312	7.213	0.277	14.841	1.393×10^5
1.00 TeV	1.000×10^6	2.056	6.755	9.166	0.347	18.326	1.514×10^5
1.40 TeV	1.400×10^6	2.084	9.645	13.060	0.492	25.283	1.700×10^5
2.00 TeV	2.000×10^6	2.114	14.063	19.002	0.712	35.893	1.898×10^5
3.00 TeV	3.000×10^6	2.149	21.436	28.874	1.088	53.548	2.124×10^5
4.00 TeV	4.000×10^6	2.175	28.903	38.850	1.469	71.398	2.286×10^5
8.00 TeV	8.000×10^6	2.236	58.993	78.945	3.050	143.227	2.673×10^5
10.0 TeV	1.000×10^7	2.257	74.149	99.097	3.862	179.367	2.798×10^5
14.0 TeV	1.400×10^7	2.288	104.379	139.309	5.526	251.504	2.985×10^5
20.0 TeV	2.000×10^7	2.321	149.976	199.880	8.076	360.255	3.184×10^5
30.0 TeV	3.000×10^7	2.360	225.885	300.651	12.479	541.377	3.409×10^5
40.0 TeV	4.000×10^7	2.388	302.052	401.654	16.984	723.080	3.568×10^5
80.0 TeV	8.000×10^7	2.457	607.127	805.944	35.784	1451.313	3.951×10^5
100. TeV	1.000×10^8	2.479	759.900	1008.270	45.490	1816.141	4.074×10^5