Muons in carbon (gem diamond)

Z	A [g/mol]	ρ [g/cm^3]	I [eV]	a	$k = m_s$	x_0	x_1	$\overline{C}$	δ_0
6 (C)	12.0107(8)	3.520	78.0	0.26142	2.8697	-0.1135	2.2458	2.4271	0.12

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	7.109				7.109	7.776×10^{-1}
14.0 MeV	5.616×10^1	5.542				5.542	1.422×10^0
20.0 MeV	6.802×10^1	4.323				4.323	2.662×10^0
30.0 MeV	8.509×10^1	3.345				3.345	5.328×10^0
40.0 MeV	1.003×10^2	2.846				2.846	8.590×10^0
80.0 MeV	1.527×10^2	2.110				2.110	2.545×10^1
100. MeV	1.764×10^2	1.975				1.975	3.527×10^1
140. MeV	2.218×10^2	1.836				1.837	5.638×10^1
200. MeV	2.868×10^2	1.757				1.757	8.991×10^1
300. MeV	3.917×10^2	1.725			0.000	1.726	1.475×10^2
318. MeV	4.105×10^2	1.725			0.000	1.725	*Minimum ionization*
400. MeV	4.945×10^2	1.730			0.000	1.730	2.054×10^2
800. MeV	8.995×10^2	1.795	0.000		0.000	1.795	4.325×10^2
1.00 GeV	1.101×10^3	1.825	0.000		0.000	1.825	5.430×10^2
1.40 GeV	1.502×10^3	1.873	0.000		0.001	1.874	7.591×10^2
2.00 GeV	2.103×10^3	1.927	0.000	0.000	0.001	1.929	1.074×10^3
3.00 GeV	3.104×10^3	1.988	0.001	0.001	0.001	1.991	1.584×10^3
4.00 GeV	4.104×10^3	2.031	0.001	0.001	0.002	2.035	2.081×10^3
8.00 GeV	8.105×10^3	2.128	0.003	0.003	0.004	2.138	3.993×10^3
10.0 GeV	1.011×10^4	2.158	0.004	0.004	0.005	2.171	4.921×10^3
14.0 GeV	1.411×10^4	2.201	0.006	0.007	0.007	2.220	6.742×10^3
20.0 GeV	2.011×10^4	2.245	0.010	0.011	0.009	2.274	9.410×10^3
30.0 GeV	3.011×10^4	2.292	0.016	0.019	0.013	2.341	1.374×10^4
40.0 GeV	4.011×10^4	2.325	0.022	0.028	0.018	2.393	1.797×10^4
80.0 GeV	8.011×10^4	2.400	0.050	0.068	0.034	2.553	3.412×10^4
100. GeV	1.001×10^5	2.424	0.065	0.089	0.042	2.621	4.185×10^4
140. GeV	1.401×10^5	2.459	0.097	0.134	0.059	2.749	5.675×10^4
200. GeV	2.001×10^5	2.496	0.145	0.206	0.084	2.930	7.788×10^4
300. GeV	3.001×10^5	2.537	0.230	0.327	0.125	3.219	1.104×10^5
400. GeV	4.001×10^5	2.566	0.317	0.453	0.167	3.504	1.402×10^5
800. GeV	8.001×10^5	2.638	0.681	0.981	0.338	4.637	2.391×10^5
1.00 TeV	1.000×10^6	2.661	0.869	1.254	0.424	5.209	2.798×10^5
1.04 TeV	1.044×10^6	2.666	0.910	1.313	0.443	5.332	*Muon critical energy*
1.40 TeV	1.400×10^6	2.697	1.248	1.797	0.602	6.343	3.492×10^5
2.00 TeV	2.000×10^6	2.735	1.830	2.630	0.871	8.066	4.330×10^5
3.00 TeV	3.000×10^6	2.778	2.806	4.016	1.335	10.936	5.390×10^5
4.00 TeV	4.000×10^6	2.810	3.799	5.422	1.807	13.839	6.202×10^5
8.00 TeV	8.000×10^6	2.887	7.821	11.088	3.773	25.569	8.296×10^5
10.0 TeV	1.000×10^7	2.913	9.855	13.942	4.785	31.495	9.000×10^5
14.0 TeV	1.400×10^7	2.952	13.913	19.628	6.871	43.364	1.008×10^6
20.0 TeV	2.000×10^7	2.994	20.052	28.206	10.076	61.328	1.124×10^6
30.0 TeV	3.000×10^7	3.042	30.273	42.478	15.640	91.433	1.256×10^6
40.0 TeV	4.000×10^7	3.077	40.549	56.796	21.350	121.773	1.351×10^6
80.0 TeV	8.000×10^7	3.163	81.720	114.122	45.316	244.322	1.578×10^6
100. TeV	1.000×10^8	3.191	102.350	142.820	57.740	306.102	1.651×10^6