Table 161: Muons in Freon-12 (CF_2Cl_2)

$\langle Z/A \rangle$	ρ [g/cm^3]	I [eV]	a	$k = m_s$	x_0	x_1	$\overline{C}$	δ_0
0.47969	1.120	143.0	0.07978	3.4626	0.3035	3.2659	4.8251	0.00

T	p [MeV/c]	Ionization	Brems	Pair prod	Photonucl	Total	CSDA range [g/cm^2]
		[MeV cm^2/g]					
10.0 MeV	4.704×10^1	6.308				6.308	8.819×10^{-1}
14.0 MeV	5.616×10^1	4.938				4.938	1.606×10^0
20.0 MeV	6.802×10^1	3.869				3.869	2.994×10^0
30.0 MeV	8.509×10^1	3.011				3.011	5.965×10^0
40.0 MeV	1.003×10^2	2.577				2.577	9.578×10^0
80.0 MeV	1.527×10^2	1.945				1.945	2.801×10^1
100. MeV	1.764×10^2	1.832				1.832	3.863×10^1
140. MeV	2.218×10^2	1.722				1.722	6.124×10^1
200. MeV	2.868×10^2	1.661				1.661	9.685×10^1
277. MeV	3.683×10^2	1.645			0.000	1.645	*Minimum ionization*
300. MeV	3.917×10^2	1.646			0.000	1.646	1.575×10^2
400. MeV	4.945×10^2	1.660			0.000	1.660	2.180×10^2
800. MeV	8.995×10^2	1.742	0.000		0.000	1.743	4.531×10^2
1.00 GeV	1.101×10^3	1.777	0.000		0.000	1.778	5.666×10^2
1.40 GeV	1.502×10^3	1.833	0.001	0.000	0.001	1.834	7.880×10^2
2.00 GeV	2.103×10^3	1.893	0.001	0.000	0.001	1.895	1.109×10^3
3.00 GeV	3.104×10^3	1.961	0.002	0.001	0.001	1.965	1.627×10^3
4.00 GeV	4.104×10^3	2.008	0.002	0.002	0.002	2.014	2.129×10^3
8.00 GeV	8.105×10^3	2.114	0.006	0.006	0.004	2.129	4.054×10^3
10.0 GeV	1.011×10^4	2.146	0.008	0.008	0.005	2.166	4.985×10^3
14.0 GeV	1.411×10^4	2.191	0.012	0.013	0.006	2.223	6.807×10^3
20.0 GeV	2.011×10^4	2.237	0.018	0.021	0.009	2.286	9.467×10^3
30.0 GeV	3.011×10^4	2.286	0.030	0.037	0.013	2.366	1.376×10^4
40.0 GeV	4.011×10^4	2.318	0.043	0.054	0.017	2.433	1.793×10^4
80.0 GeV	8.011×10^4	2.392	0.097	0.131	0.033	2.653	3.365×10^4
100. GeV	1.001×10^5	2.415	0.125	0.172	0.040	2.753	4.105×10^4
140. GeV	1.401×10^5	2.448	0.184	0.258	0.056	2.948	5.509×10^4
200. GeV	2.001×10^5	2.484	0.276	0.394	0.080	3.235	7.451×10^4
300. GeV	3.001×10^5	2.524	0.435	0.624	0.120	3.702	1.034×10^5
400. GeV	4.001×10^5	2.552	0.599	0.862	0.160	4.173	1.288×10^5
615. GeV	6.149×10^5	2.594	0.961	1.387	0.247	5.189	*Muon critical energy*
800. GeV	8.001×10^5	2.620	1.279	1.846	0.323	6.069	2.078×10^5
1.00 TeV	1.000×10^6	2.643	1.630	2.352	0.406	7.031	2.384×10^5
1.40 TeV	1.400×10^6	2.677	2.334	3.361	0.575	8.948	2.888×10^5
2.00 TeV	2.000×10^6	2.713	3.415	4.904	0.833	11.866	3.468×10^5
3.00 TeV	3.000×10^6	2.755	5.223	7.470	1.275	16.724	4.175×10^5
4.00 TeV	4.000×10^6	2.785	7.059	10.068	1.725	21.638	4.699×10^5
8.00 TeV	8.000×10^6	2.860	14.477	20.523	3.595	41.456	6.012×10^5
10.0 TeV	1.000×10^7	2.884	18.223	25.784	4.557	51.449	6.444×10^5
14.0 TeV	1.400×10^7	2.922	25.700	36.271	6.537	71.430	7.101×10^5
20.0 TeV	2.000×10^7	2.962	36.998	52.078	9.576	101.615	7.802×10^5
30.0 TeV	3.000×10^7	3.008	55.790	78.391	14.844	152.034	8.601×10^5
40.0 TeV	4.000×10^7	3.042	74.665	104.781	20.245	202.733	9.169×10^5
80.0 TeV	8.000×10^7	3.125	150.337	210.418	42.867	406.747	1.053×10^6
100. TeV	1.000×10^8	3.152	188.263	263.293	54.577	509.285	1.097×10^6