Muons in liquid fluorine ($\mathbf{F_2}$)

Z	A [g/mol]	ρ [g/cm^3]	I [eV]	a	$k = m_s$	x_0	x_1	$\overline{C}$	δ_0
9 (F)	18.998403163(6)	1.507	115.0	0.14504	3.0000	0.2000	3.0000	4.1050	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	6.415				6.415	8.662×10^{-1}
14.0 MeV	5.616×10^1	5.017				5.017	1.579×10^0
20.0 MeV	6.802×10^1	3.927				3.927	2.946×10^0
30.0 MeV	8.509×10^1	3.054				3.054	5.874×10^0
40.0 MeV	1.003×10^2	2.611				2.611	9.438×10^0
80.0 MeV	1.527×10^2	1.967				1.967	2.764×10^1
100. MeV	1.764×10^2	1.850				1.850	3.815×10^1
140. MeV	2.218×10^2	1.726				1.726	6.064×10^1
200. MeV	2.868×10^2	1.657				1.657	9.626×10^1
298. MeV	3.894×10^2	1.634			0.000	1.634	*Minimum ionization*
300. MeV	3.917×10^2	1.634			0.000	1.634	1.572×10^2
400. MeV	4.945×10^2	1.643			0.000	1.643	2.183×10^2
800. MeV	8.995×10^2	1.716	0.000		0.000	1.717	4.565×10^2
1.00 GeV	1.101×10^3	1.748	0.000		0.000	1.749	5.719×10^2
1.40 GeV	1.502×10^3	1.800	0.000	0.000	0.001	1.801	7.971×10^2
2.00 GeV	2.103×10^3	1.857	0.001	0.000	0.001	1.859	1.125×10^3
3.00 GeV	3.104×10^3	1.922	0.001	0.001	0.001	1.926	1.653×10^3
4.00 GeV	4.104×10^3	1.967	0.002	0.001	0.002	1.972	2.165×10^3
8.00 GeV	8.105×10^3	2.070	0.004	0.004	0.004	2.082	4.133×10^3
10.0 GeV	1.011×10^4	2.101	0.005	0.005	0.005	2.117	5.085×10^3
14.0 GeV	1.411×10^4	2.146	0.008	0.009	0.006	2.169	6.951×10^3
20.0 GeV	2.011×10^4	2.190	0.013	0.015	0.009	2.227	9.679×10^3
30.0 GeV	3.011×10^4	2.238	0.021	0.026	0.013	2.298	1.410×10^4
40.0 GeV	4.011×10^4	2.270	0.030	0.038	0.017	2.354	1.839×10^4
80.0 GeV	8.011×10^4	2.342	0.067	0.091	0.033	2.534	3.474×10^4
100. GeV	1.001×10^5	2.364	0.087	0.120	0.041	2.613	4.251×10^4
140. GeV	1.401×10^5	2.397	0.129	0.180	0.057	2.764	5.739×10^4
200. GeV	2.001×10^5	2.432	0.194	0.275	0.082	2.983	7.828×10^4
300. GeV	3.001×10^5	2.471	0.305	0.436	0.122	3.336	1.100×10^5
400. GeV	4.001×10^5	2.499	0.421	0.604	0.163	3.687	1.385×10^5
800. GeV	8.001×10^5	2.567	0.901	1.301	0.329	5.099	2.303×10^5
811. GeV	8.109×10^5	2.568	0.914	1.320	0.334	5.137	*Muon critical energy*
1.00 TeV	1.000×10^6	2.589	1.149	1.661	0.414	5.813	2.670×10^5
1.40 TeV	1.400×10^6	2.623	1.648	2.375	0.587	7.233	3.286×10^5
2.00 TeV	2.000×10^6	2.659	2.413	3.470	0.850	9.392	4.012×10^5
3.00 TeV	3.000×10^6	2.700	3.695	5.292	1.301	12.989	4.914×10^5
4.00 TeV	4.000×10^6	2.730	4.998	7.138	1.761	16.627	5.593×10^5
8.00 TeV	8.000×10^6	2.804	10.269	14.569	3.672	31.314	7.318×10^5
10.0 TeV	1.000×10^7	2.828	12.932	18.311	4.656	38.727	7.891×10^5
14.0 TeV	1.400×10^7	2.865	18.245	25.768	6.682	53.559	8.766×10^5
20.0 TeV	2.000×10^7	2.904	26.276	37.012	9.792	75.985	9.702×10^5
30.0 TeV	3.000×10^7	2.950	39.648	55.724	15.187	113.509	1.077×10^6
40.0 TeV	4.000×10^7	2.983	53.085	74.493	20.722	151.283	1.153×10^6
80.0 TeV	8.000×10^7	3.065	106.962	149.635	43.923	303.586	1.336×10^6
100. TeV	1.000×10^8	3.092	133.970	187.250	55.940	380.252	1.395×10^6