Muons in cerium (Ce)

Z	A [g/mol]	ρ [g/cm^3]	I [eV]	a	$k = m_s$	x_0	x_1	$\overline{C}$	δ_0
58 (Ce)	140.116 (1)	6.770	523.0	0.18885	2.8592	0.2676	3.3395	5.7669	0.14

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	4.405				4.405	1.296×10^0
14.0 MeV	5.616×10^1	3.488				3.488	2.327×10^0
20.0 MeV	6.802×10^1	2.761				2.761	4.281×10^0
30.0 MeV	8.509×10^1	2.170				2.170	8.421×10^0
40.0 MeV	1.003×10^2	1.868				1.868	1.342×10^1
80.0 MeV	1.527×10^2	1.425				1.425	3.867×10^1
100. MeV	1.764×10^2	1.347				1.347	5.314×10^1
140. MeV	2.218×10^2	1.272				1.272	8.385×10^1
200. MeV	2.868×10^2	1.238				1.238	1.318×10^2
239. MeV	3.285×10^2	1.234				1.234	*Minimum ionization*
300. MeV	3.917×10^2	1.239	0.000		0.000	1.239	2.127×10^2
400. MeV	4.945×10^2	1.259	0.000		0.000	1.259	2.928×10^2
800. MeV	8.995×10^2	1.344	0.001		0.000	1.345	5.998×10^2
1.00 GeV	1.101×10^3	1.378	0.001		0.000	1.379	7.466×10^2
1.40 GeV	1.502×10^3	1.431	0.002	0.000	0.001	1.434	1.031×10^3
2.00 GeV	2.103×10^3	1.489	0.003	0.001	0.001	1.494	1.440×10^3
3.00 GeV	3.104×10^3	1.554	0.005	0.003	0.001	1.564	2.093×10^3
4.00 GeV	4.104×10^3	1.598	0.008	0.006	0.002	1.614	2.722×10^3
8.00 GeV	8.105×10^3	1.700	0.019	0.018	0.003	1.741	5.099×10^3
10.0 GeV	1.011×10^4	1.730	0.025	0.026	0.004	1.785	6.233×10^3
14.0 GeV	1.411×10^4	1.773	0.039	0.042	0.005	1.860	8.427×10^3
20.0 GeV	2.011×10^4	1.816	0.060	0.068	0.008	1.953	1.157×10^4
30.0 GeV	3.011×10^4	1.861	0.099	0.119	0.011	2.091	1.652×10^4
40.0 GeV	4.011×10^4	1.892	0.139	0.175	0.015	2.221	2.116×10^4
80.0 GeV	8.011×10^4	1.958	0.315	0.420	0.029	2.723	3.739×10^4
100. GeV	1.001×10^5	1.978	0.408	0.552	0.036	2.975	4.441×10^4
140. GeV	1.401×10^5	2.008	0.599	0.823	0.050	3.481	5.683×10^4
185. GeV	1.851×10^5	2.032	0.822	1.144	0.065	4.065	*Muon critical energy*
200. GeV	2.001×10^5	2.038	0.898	1.254	0.071	4.262	7.239×10^4
300. GeV	3.001×10^5	2.073	1.409	1.973	0.106	5.561	9.289×10^4
400. GeV	4.001×10^5	2.097	1.936	2.717	0.141	6.893	1.090×10^5
800. GeV	8.001×10^5	2.156	4.114	5.771	0.285	12.329	1.518×10^5
1.00 TeV	1.000×10^6	2.176	5.233	7.333	0.359	15.102	1.665×10^5
1.40 TeV	1.400×10^6	2.205	7.475	10.449	0.508	20.639	1.890×10^5
2.00 TeV	2.000×10^6	2.236	10.905	15.204	0.735	29.082	2.134×10^5
3.00 TeV	3.000×10^6	2.273	16.630	23.106	1.123	43.133	2.415×10^5
4.00 TeV	4.000×10^6	2.299	22.431	31.090	1.518	57.339	2.615×10^5
8.00 TeV	8.000×10^6	2.363	45.816	63.187	3.153	114.520	3.099×10^5
10.0 TeV	1.000×10^7	2.384	57.599	79.320	3.992	143.297	3.255×10^5
14.0 TeV	1.400×10^7	2.416	81.101	111.511	5.715	200.745	3.490×10^5
20.0 TeV	2.000×10^7	2.451	116.560	160.002	8.354	287.368	3.738×10^5
30.0 TeV	3.000×10^7	2.491	175.591	240.683	12.915	431.681	4.020×10^5
40.0 TeV	4.000×10^7	2.520	234.833	321.553	17.582	576.490	4.220×10^5
80.0 TeV	8.000×10^7	2.591	472.146	645.259	37.062	1157.061	4.700×10^5
100. TeV	1.000×10^8	2.615	591.000	807.260	47.120	1447.996	4.854×10^5