

Muons in californium (Cf)

Z	A [g/mol]	ρ [g/cm ³]	I [eV]	a	$k = m_s$	x_0	x_1	\bar{C}	δ_0
98 (Cf)	[251.07959(3)]	15.100	966.0	0.25796	3.0000	0.0623	2.5000	4.0236	0.00

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	3.627				3.627	1.621×10^0
14.0 MeV	5.616×10^1	2.910				2.910	2.863×10^0
20.0 MeV	6.802×10^1	2.330				2.330	5.190×10^0
30.0 MeV	8.509×10^1	1.850				1.851	1.007×10^1
40.0 MeV	1.003×10^2	1.603				1.603	1.591×10^1
80.0 MeV	1.527×10^2	1.239				1.239	4.511×10^1
100. MeV	1.764×10^2	1.174				1.174	6.173×10^1
140. MeV	2.218×10^2	1.111				1.111	9.691×10^1
200. MeV	2.868×10^2	1.081				1.081	1.518×10^2
242. MeV	3.316×10^2	1.077	0.000			1.078	<i>Minimum ionization</i>
300. MeV	3.917×10^2	1.081	0.000		0.000	1.082	2.445×10^2
400. MeV	4.945×10^2	1.097	0.000		0.000	1.098	3.363×10^2
800. MeV	8.995×10^2	1.168	0.001		0.000	1.169	6.888×10^2
1.00 GeV	1.101×10^3	1.195	0.002		0.000	1.198	8.578×10^2
1.40 GeV	1.502×10^3	1.239	0.003		0.000	1.242	1.185×10^3
2.00 GeV	2.103×10^3	1.286	0.005	0.001	0.001	1.292	1.658×10^3
3.00 GeV	3.104×10^3	1.338	0.008	0.003	0.001	1.350	2.414×10^3
4.00 GeV	4.104×10^3	1.373	0.012	0.006	0.002	1.394	3.143×10^3
8.00 GeV	8.105×10^3	1.454	0.029	0.024	0.003	1.510	5.891×10^3
10.0 GeV	1.011×10^4	1.478	0.039	0.034	0.004	1.555	7.195×10^3
14.0 GeV	1.411×10^4	1.513	0.059	0.056	0.005	1.633	9.704×10^3
20.0 GeV	2.011×10^4	1.548	0.092	0.092	0.007	1.740	1.326×10^4
30.0 GeV	3.011×10^4	1.585	0.150	0.164	0.011	1.911	1.874×10^4
40.0 GeV	4.011×10^4	1.611	0.212	0.243	0.014	2.081	2.376×10^4
80.0 GeV	8.011×10^4	1.670	0.480	0.591	0.027	2.770	4.037×10^4
100. GeV	1.001×10^5	1.688	0.622	0.780	0.034	3.126	4.716×10^4
115. GeV	1.156×10^5	1.700	0.734	0.927	0.039	3.401	<i>Muon critical energy</i>
140. GeV	1.401×10^5	1.715	0.914	1.168	0.047	3.845	5.869×10^4
200. GeV	2.001×10^5	1.744	1.369	1.783	0.067	4.964	7.240×10^4
300. GeV	3.001×10^5	1.776	2.146	2.809	0.100	6.833	8.951×10^4
400. GeV	4.001×10^5	1.799	2.948	3.873	0.134	8.756	1.024×10^5
800. GeV	8.001×10^5	1.855	6.256	8.236	0.271	16.620	1.350×10^5
1.00 TeV	1.000×10^6	1.873	7.953	10.468	0.340	20.637	1.458×10^5
1.40 TeV	1.400×10^6	1.901	11.353	14.917	0.482	28.655	1.622×10^5
2.00 TeV	2.000×10^6	1.931	16.549	21.707	0.697	40.885	1.796×10^5
3.00 TeV	3.000×10^6	1.965	25.216	32.987	1.065	61.235	1.995×10^5
4.00 TeV	4.000×10^6	1.989	33.994	44.386	1.438	81.809	2.136×10^5
8.00 TeV	8.000×10^6	2.050	69.354	90.199	2.986	164.591	2.474×10^5
10.0 TeV	1.000×10^7	2.070	87.161	113.225	3.780	206.238	2.582×10^5
14.0 TeV	1.400×10^7	2.100	122.678	159.172	5.408	289.360	2.745×10^5
20.0 TeV	2.000×10^7	2.133	176.242	228.382	7.902	414.661	2.917×10^5
30.0 TeV	3.000×10^7	2.171	265.501	343.520	12.207	623.401	3.113×10^5
40.0 TeV	4.000×10^7	2.198	355.077	458.921	16.612	832.811	3.251×10^5
80.0 TeV	8.000×10^7	2.265	713.359	920.843	34.992	1671.462	3.583×10^5
100. TeV	1.000×10^8	2.288	892.610	1152.010	44.480	2091.390	3.690×10^5