Table 302: Muons in Californium

Z	A [g/mol]	ρ [g/cm^3]	I [eV]	a	$k = m_s$	x_0	x_1	$\overline{C}$	δ_0
98 (Cf)	[251.0796]	??	966.0	0.25796	3.0000	0.5623	3.0000	6.3262	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	1.240				1.241	4.510×10^1
100. MeV	1.764×10^2	1.178				1.178	6.168×10^1
140. MeV	2.218×10^2	1.120				1.120	9.666×10^1
200. MeV	2.868×10^2	1.098				1.098	1.509×10^2
212. MeV	2.999×10^2	1.097	0.000			1.098	*Minimum ionization*
300. MeV	3.917×10^2	1.111	0.000		0.000	1.111	2.417×10^2
400. MeV	4.945×10^2	1.136	0.000		0.000	1.137	3.307×10^2
800. MeV	8.995×10^2	1.229	0.001		0.000	1.231	6.679×10^2
1.00 GeV	1.101×10^3	1.264	0.002		0.000	1.266	8.280×10^2
1.40 GeV	1.502×10^3	1.318	0.003		0.000	1.321	1.137×10^3
2.00 GeV	2.103×10^3	1.375	0.005	0.001	0.001	1.381	1.581×10^3
3.00 GeV	3.104×10^3	1.437	0.008	0.003	0.001	1.450	2.286×10^3
4.00 GeV	4.104×10^3	1.480	0.012	0.006	0.002	1.500	2.964×10^3
8.00 GeV	8.105×10^3	1.574	0.029	0.024	0.003	1.630	5.511×10^3
10.0 GeV	1.011×10^4	1.602	0.039	0.034	0.004	1.679	6.720×10^3
14.0 GeV	1.411×10^4	1.641	0.059	0.056	0.005	1.762	9.044×10^3
20.0 GeV	2.011×10^4	1.680	0.092	0.092	0.007	1.872	1.235×10^4
30.0 GeV	3.011×10^4	1.721	0.150	0.164	0.011	2.047	1.745×10^4
40.0 GeV	4.011×10^4	1.748	0.212	0.243	0.014	2.218	2.214×10^4
80.0 GeV	8.011×10^4	1.808	0.480	0.591	0.027	2.908	3.785×10^4
100. GeV	1.001×10^5	1.826	0.622	0.780	0.034	3.264	4.434×10^4
124. GeV	1.239×10^5	1.843	0.794	1.008	0.042	3.688	*Muon critical energy*
140. GeV	1.401×10^5	1.853	0.914	1.168	0.047	3.983	5.543×10^4
200. GeV	2.001×10^5	1.882	1.369	1.783	0.067	5.102	6.871×10^4
300. GeV	3.001×10^5	1.914	2.146	2.809	0.100	6.971	8.543×10^4
400. GeV	4.001×10^5	1.937	2.948	3.873	0.134	8.894	9.810×10^4
800. GeV	8.001×10^5	1.993	6.256	8.236	0.271	16.758	1.304×10^5
1.00 TeV	1.000×10^6	2.011	7.953	10.468	0.340	20.775	1.411×10^5
1.40 TeV	1.400×10^6	2.039	11.353	14.917	0.482	28.793	1.573×10^5
2.00 TeV	2.000×10^6	2.069	16.549	21.707	0.697	41.023	1.747×10^5
3.00 TeV	3.000×10^6	2.103	25.216	32.987	1.065	61.373	1.945×10^5
4.00 TeV	4.000×10^6	2.127	33.994	44.386	1.438	81.947	2.086×10^5
8.00 TeV	8.000×10^6	2.188	69.354	90.199	2.986	164.729	2.423×10^5
10.0 TeV	1.000×10^7	2.208	87.161	113.225	3.780	206.376	2.531×10^5
14.0 TeV	1.400×10^7	2.238	122.678	159.172	5.408	289.498	2.694×10^5
20.0 TeV	2.000×10^7	2.271	176.242	228.382	7.902	414.799	2.867×10^5
30.0 TeV	3.000×10^7	2.309	265.501	343.520	12.207	623.539	3.062×10^5
40.0 TeV	4.000×10^7	2.336	355.077	458.921	16.612	832.949	3.200×10^5
80.0 TeV	8.000×10^7	2.403	713.359	920.843	34.992	1671.599	3.532×10^5
100. TeV	1.000×10^8	2.426	892.610	1152.010	44.480	2091.528	3.639×10^5