Table 124: Muons in Butane (C_4H_{10})

$\langle Z/A \rangle$	ρ [g/cm^3]	I [eV]	a	$k = m_s$	x_0	x_1	$\overline{C}$	δ_0
0.59497	2.489×10^{-3}	48.3	0.10852	3.4884	1.3792	3.7528	8.5651	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	9.023				9.023	6.102×10^{-1}
14.0 MeV	5.616×10^1	7.024				7.024	1.118×10^0
20.0 MeV	6.802×10^1	5.475				5.475	2.097×10^0
30.0 MeV	8.509×10^1	4.239				4.239	4.202×10^0
40.0 MeV	1.003×10^2	3.615				3.615	6.773×10^0
80.0 MeV	1.527×10^2	2.705				2.706	1.998×10^1
100. MeV	1.764×10^2	2.542				2.542	2.762×10^1
140. MeV	2.218×10^2	2.380				2.381	4.396×10^1
200. MeV	2.868×10^2	2.296				2.296	6.972×10^1
266. MeV	3.567×10^2	2.278			0.000	2.278	*Minimum ionization*
300. MeV	3.917×10^2	2.281			0.000	2.281	1.135×10^2
400. MeV	4.945×10^2	2.307			0.000	2.307	1.572×10^2
800. MeV	8.995×10^2	2.451	0.000		0.000	2.452	3.252×10^2
1.00 GeV	1.101×10^3	2.513	0.000		0.000	2.514	4.058×10^2
1.40 GeV	1.502×10^3	2.614	0.000		0.001	2.616	5.616×10^2
2.00 GeV	2.103×10^3	2.729	0.000	0.000	0.001	2.730	7.859×10^2
3.00 GeV	3.104×10^3	2.851	0.001	0.000	0.001	2.854	1.143×10^3
4.00 GeV	4.104×10^3	2.928	0.001	0.001	0.002	2.932	1.489×10^3
8.00 GeV	8.105×10^3	3.097	0.003	0.003	0.004	3.106	2.809×10^3
10.0 GeV	1.011×10^4	3.146	0.004	0.004	0.005	3.158	3.447×10^3
14.0 GeV	1.411×10^4	3.215	0.006	0.006	0.007	3.234	4.698×10^3
20.0 GeV	2.011×10^4	3.283	0.009	0.010	0.009	3.312	6.530×10^3
30.0 GeV	3.011×10^4	3.354	0.014	0.017	0.014	3.400	9.508×10^3
40.0 GeV	4.011×10^4	3.400	0.020	0.026	0.018	3.464	1.242×10^4
80.0 GeV	8.011×10^4	3.501	0.047	0.062	0.035	3.645	2.366×10^4
100. GeV	1.001×10^5	3.531	0.061	0.083	0.043	3.718	2.909×10^4
140. GeV	1.401×10^5	3.575	0.089	0.124	0.060	3.849	3.966×10^4
200. GeV	2.001×10^5	3.620	0.135	0.190	0.085	4.031	5.489×10^4
300. GeV	3.001×10^5	3.670	0.213	0.303	0.128	4.314	7.886×10^4
400. GeV	4.001×10^5	3.705	0.295	0.421	0.170	4.592	1.013×10^5
800. GeV	8.001×10^5	3.790	0.636	0.913	0.344	5.683	1.795×10^5
1.00 TeV	1.000×10^6	3.818	0.813	1.169	0.432	6.231	2.131×10^5
1.40 TeV	1.400×10^6	3.860	1.169	1.676	0.612	7.317	2.722×10^5
1.56 TeV	1.557×10^6	3.873	1.311	1.879	0.684	7.747	*Muon critical energy*
2.00 TeV	2.000×10^6	3.905	1.716	2.456	0.887	8.965	3.462×10^5
3.00 TeV	3.000×10^6	3.957	2.636	3.754	1.359	11.707	4.436×10^5
4.00 TeV	4.000×10^6	3.995	3.573	5.071	1.840	14.480	5.202×10^5
8.00 TeV	8.000×10^6	4.087	7.373	10.381	3.843	25.685	7.249×10^5
10.0 TeV	1.000×10^7	4.118	9.298	13.057	4.876	31.348	7.953×10^5
14.0 TeV	1.400×10^7	4.164	13.140	18.386	7.005	42.695	9.042×10^5
20.0 TeV	2.000×10^7	4.214	18.956	26.428	10.277	59.875	1.022×10^6
30.0 TeV	3.000×10^7	4.271	28.645	39.804	15.962	88.683	1.159×10^6
40.0 TeV	4.000×10^7	4.313	38.392	53.226	21.799	117.731	1.256×10^6
80.0 TeV	8.000×10^7	4.416	77.477	106.962	46.325	235.180	1.492×10^6
100. TeV	1.000×10^8	4.449	97.073	133.863	59.049	294.436	1.568×10^6