Muons in nitrogen liquid (N_2)

Z	A [g/mol]	ρ [g/cm^3]	I [eV]	a	$k = m_s$	x_0	x_1	$\overline{C}$	δ_0
7 (N)	14.007(2)	0.807	82.0	0.53289	3.0000	0.3039	2.0000	3.9996	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	7.084				7.084	7.814×10^{-1}
14.0 MeV	5.616×10^1	5.530				5.530	1.427×10^0
20.0 MeV	6.802×10^1	4.321				4.321	2.669×10^0
30.0 MeV	8.509×10^1	3.354				3.354	5.332×10^0
40.0 MeV	1.003×10^2	2.865				2.865	8.580×10^0
80.0 MeV	1.527×10^2	2.152				2.152	2.520×10^1
100. MeV	1.764×10^2	2.025				2.025	3.481×10^1
140. MeV	2.218×10^2	1.900				1.900	5.529×10^1
200. MeV	2.868×10^2	1.833				1.833	8.756×10^1
288. MeV	3.788×10^2	1.813			0.000	1.814	*Minimum ionization*
300. MeV	3.917×10^2	1.814			0.000	1.814	1.426×10^2
400. MeV	4.945×10^2	1.826			0.000	1.826	1.975×10^2
800. MeV	8.995×10^2	1.904	0.000		0.000	1.905	4.120×10^2
1.00 GeV	1.101×10^3	1.937	0.000		0.000	1.937	5.161×10^2
1.40 GeV	1.502×10^3	1.989	0.000		0.001	1.990	7.196×10^2
2.00 GeV	2.103×10^3	2.044	0.001	0.000	0.001	2.046	1.017×10^3
3.00 GeV	3.104×10^3	2.106	0.001	0.001	0.001	2.109	1.498×10^3
4.00 GeV	4.104×10^3	2.148	0.001	0.001	0.002	2.152	1.967×10^3
8.00 GeV	8.105×10^3	2.243	0.003	0.003	0.004	2.254	3.778×10^3
10.0 GeV	1.011×10^4	2.272	0.005	0.005	0.005	2.286	4.659×10^3
14.0 GeV	1.411×10^4	2.315	0.007	0.007	0.007	2.336	6.389×10^3
20.0 GeV	2.011×10^4	2.359	0.011	0.012	0.009	2.391	8.926×10^3
30.0 GeV	3.011×10^4	2.406	0.018	0.022	0.013	2.459	1.305×10^4
40.0 GeV	4.011×10^4	2.439	0.025	0.032	0.018	2.514	1.707×10^4
80.0 GeV	8.011×10^4	2.514	0.057	0.077	0.034	2.683	3.244×10^4
100. GeV	1.001×10^5	2.538	0.074	0.102	0.042	2.757	3.980×10^4
140. GeV	1.401×10^5	2.573	0.110	0.153	0.059	2.894	5.395×10^4
200. GeV	2.001×10^5	2.610	0.165	0.234	0.083	3.092	7.400×10^4
300. GeV	3.001×10^5	2.651	0.261	0.372	0.124	3.408	1.048×10^5
400. GeV	4.001×10^5	2.681	0.360	0.515	0.166	3.722	1.329×10^5
800. GeV	8.001×10^5	2.752	0.772	1.113	0.335	4.972	2.255×10^5
982. GeV	9.825×10^5	2.773	0.966	1.394	0.413	5.547	*Muon critical energy*
1.00 TeV	1.000×10^6	2.775	0.985	1.422	0.421	5.603	2.634×10^5
1.40 TeV	1.400×10^6	2.811	1.414	2.036	0.597	6.857	3.278×10^5
2.00 TeV	2.000×10^6	2.849	2.072	2.977	0.864	8.762	4.051×10^5
3.00 TeV	3.000×10^6	2.893	3.176	4.543	1.324	11.936	5.025×10^5
4.00 TeV	4.000×10^6	2.924	4.299	6.132	1.792	15.147	5.767×10^5
8.00 TeV	8.000×10^6	3.002	8.841	12.530	3.740	28.113	7.676×10^5
10.0 TeV	1.000×10^7	3.027	11.138	15.752	4.743	34.660	8.315×10^5
14.0 TeV	1.400×10^7	3.066	15.720	22.172	6.809	47.768	9.294×10^5
20.0 TeV	2.000×10^7	3.108	22.650	31.856	9.982	67.596	1.035×10^6
30.0 TeV	3.000×10^7	3.156	34.187	47.969	15.491	100.803	1.155×10^6
40.0 TeV	4.000×10^7	3.191	45.784	64.133	21.144	134.252	1.241×10^6
80.0 TeV	8.000×10^7	3.277	92.292	128.845	44.860	269.275	1.447×10^6
100. TeV	1.000×10^8	3.306	115.610	161.240	57.150	337.306	1.513×10^6