Muons in neodymium (Nd)

Z	A [g/mol]	ρ [g/cm^3]	I [eV]	a	$k = m_s$	x_0	x_1	$\overline{C}$	δ_0
60 (Nd)	144.242 (3)	7.008	546.0	0.23530	2.7050	0.1950	3.3029	5.8135	0.14

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	4.388				4.388	1.303×10^0
14.0 MeV	5.616×10^1	3.477				3.477	2.337×10^0
20.0 MeV	6.802×10^1	2.753				2.753	4.297×10^0
30.0 MeV	8.509×10^1	2.164				2.164	8.447×10^0
40.0 MeV	1.003×10^2	1.863				1.863	1.346×10^1
80.0 MeV	1.527×10^2	1.421				1.421	3.878×10^1
100. MeV	1.764×10^2	1.343				1.343	5.330×10^1
140. MeV	2.218×10^2	1.269				1.269	8.407×10^1
200. MeV	2.868×10^2	1.235				1.235	1.322×10^2
239. MeV	3.285×10^2	1.231	0.000			1.231	*Minimum ionization*
300. MeV	3.917×10^2	1.236	0.000		0.000	1.236	2.133×10^2
400. MeV	4.945×10^2	1.256	0.000		0.000	1.256	2.936×10^2
800. MeV	8.995×10^2	1.341	0.001		0.000	1.342	6.012×10^2
1.00 GeV	1.101×10^3	1.375	0.001		0.000	1.377	7.482×10^2
1.40 GeV	1.502×10^3	1.429	0.002	0.000	0.001	1.432	1.033×10^3
2.00 GeV	2.103×10^3	1.488	0.003	0.001	0.001	1.493	1.443×10^3
3.00 GeV	3.104×10^3	1.554	0.006	0.003	0.001	1.564	2.096×10^3
4.00 GeV	4.104×10^3	1.599	0.008	0.006	0.002	1.615	2.725×10^3
8.00 GeV	8.105×10^3	1.702	0.020	0.019	0.003	1.744	5.098×10^3
10.0 GeV	1.011×10^4	1.733	0.026	0.027	0.004	1.790	6.230×10^3
14.0 GeV	1.411×10^4	1.777	0.040	0.043	0.005	1.866	8.417×10^3
20.0 GeV	2.011×10^4	1.821	0.063	0.070	0.007	1.962	1.155×10^4
30.0 GeV	3.011×10^4	1.867	0.102	0.123	0.011	2.104	1.647×10^4
40.0 GeV	4.011×10^4	1.898	0.145	0.180	0.015	2.238	2.107×10^4
80.0 GeV	8.011×10^4	1.965	0.327	0.434	0.029	2.755	3.715×10^4
100. GeV	1.001×10^5	1.985	0.423	0.570	0.036	3.015	4.408×10^4
140. GeV	1.401×10^5	2.015	0.622	0.851	0.050	3.538	5.632×10^4
180. GeV	1.802×10^5	2.037	0.828	1.146	0.064	4.075	*Muon critical energy*
200. GeV	2.001×10^5	2.046	0.932	1.296	0.070	4.345	7.161×10^4
300. GeV	3.001×10^5	2.080	1.461	2.039	0.106	5.687	9.168×10^4
400. GeV	4.001×10^5	2.105	2.008	2.809	0.141	7.064	1.074×10^5
800. GeV	8.001×10^5	2.164	4.266	5.966	0.285	12.682	1.491×10^5
1.00 TeV	1.000×10^6	2.184	5.425	7.580	0.358	15.548	1.633×10^5
1.40 TeV	1.400×10^6	2.213	7.750	10.801	0.507	21.272	1.853×10^5
2.00 TeV	2.000×10^6	2.245	11.304	15.716	0.733	29.999	2.089×10^5
3.00 TeV	3.000×10^6	2.281	17.238	23.882	1.120	44.523	2.361×10^5
4.00 TeV	4.000×10^6	2.307	23.250	32.135	1.514	59.207	2.555×10^5
8.00 TeV	8.000×10^6	2.372	47.485	65.308	3.145	118.311	3.024×10^5
10.0 TeV	1.000×10^7	2.393	59.696	81.982	3.982	148.055	3.175×10^5
14.0 TeV	1.400×10^7	2.426	84.051	115.253	5.700	207.431	3.402×10^5
20.0 TeV	2.000×10^7	2.460	120.796	165.370	8.332	296.960	3.642×10^5
30.0 TeV	3.000×10^7	2.501	181.968	248.756	12.879	446.105	3.915×10^5
40.0 TeV	4.000×10^7	2.530	243.356	332.338	17.532	595.758	4.109×10^5
80.0 TeV	8.000×10^7	2.602	489.264	666.903	36.958	1195.728	4.573×10^5
100. TeV	1.000×10^8	2.625	612.420	834.340	46.990	1496.377	4.722×10^5