Table 054: Muons in Xenon gas

Z	A [g/mol]	ρ [g/cm^3]	I [eV]	a	$k = m_s$	x_0	x_1	$\overline{C}$	δ_0
54 (Xe)	131.293 (6)	5.483×10^{-3}	482.0	0.23314	2.7414	1.5631	4.7372	12.7285	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	4.447				4.447	1.281×10^0
14.0 MeV	5.616×10^1	3.518				3.519	2.302×10^0
20.0 MeV	6.802×10^1	2.783				2.784	4.240×10^0
30.0 MeV	8.509×10^1	2.187				2.187	8.346×10^0
40.0 MeV	1.003×10^2	1.883				1.883	1.330×10^1
80.0 MeV	1.527×10^2	1.440				1.440	3.834×10^1
100. MeV	1.764×10^2	1.362				1.362	5.265×10^1
140. MeV	2.218×10^2	1.289				1.289	8.298×10^1
200. MeV	2.868×10^2	1.257				1.257	1.303×10^2
226. MeV	3.145×10^2	1.255				1.255	*Minimum ionization*
300. MeV	3.917×10^2	1.265	0.000		0.000	1.265	2.097×10^2
400. MeV	4.945×10^2	1.291	0.000		0.000	1.291	2.880×10^2
800. MeV	8.995×10^2	1.400	0.001		0.000	1.401	5.848×10^2
1.00 GeV	1.101×10^3	1.444	0.001		0.000	1.446	7.253×10^2
1.40 GeV	1.502×10^3	1.515	0.002	0.000	0.001	1.518	9.950×10^2
2.00 GeV	2.103×10^3	1.595	0.003	0.001	0.001	1.600	1.379×10^3
3.00 GeV	3.104×10^3	1.689	0.005	0.003	0.001	1.698	1.985×10^3
4.00 GeV	4.104×10^3	1.756	0.007	0.005	0.002	1.771	2.561×10^3
8.00 GeV	8.105×10^3	1.913	0.018	0.017	0.003	1.952	4.701×10^3
10.0 GeV	1.011×10^4	1.960	0.024	0.024	0.004	2.012	5.709×10^3
14.0 GeV	1.411×10^4	2.028	0.036	0.039	0.005	2.109	7.649×10^3
20.0 GeV	2.011×10^4	2.095	0.056	0.064	0.008	2.224	1.042×10^4
30.0 GeV	3.011×10^4	2.166	0.092	0.112	0.011	2.382	1.476×10^4
40.0 GeV	4.011×10^4	2.214	0.130	0.164	0.015	2.522	1.883×10^4
80.0 GeV	8.011×10^4	2.316	0.293	0.393	0.029	3.032	3.326×10^4
100. GeV	1.001×10^5	2.347	0.380	0.516	0.036	3.279	3.960×10^4
140. GeV	1.401×10^5	2.390	0.557	0.770	0.050	3.769	5.097×10^4
200. GeV	2.001×10^5	2.434	0.836	1.173	0.071	4.514	6.550×10^4
232. GeV	2.320×10^5	2.451	0.985	1.384	0.082	4.903	*Muon critical energy*
300. GeV	3.001×10^5	2.480	1.310	1.846	0.106	5.744	8.510×10^4
400. GeV	4.001×10^5	2.511	1.801	2.543	0.142	6.999	1.008×10^5
800. GeV	8.001×10^5	2.583	3.829	5.401	0.287	12.100	1.438×10^5
1.00 TeV	1.000×10^6	2.605	4.870	6.863	0.361	14.699	1.588×10^5
1.40 TeV	1.400×10^6	2.637	6.958	9.779	0.511	19.885	1.821×10^5
2.00 TeV	2.000×10^6	2.670	10.151	14.229	0.739	27.790	2.075×10^5
3.00 TeV	3.000×10^6	2.708	15.481	21.625	1.130	40.945	2.370×10^5
4.00 TeV	4.000×10^6	2.734	20.883	29.099	1.526	54.244	2.581×10^5
8.00 TeV	8.000×10^6	2.798	42.663	59.144	3.171	107.778	3.094×10^5
10.0 TeV	1.000×10^7	2.819	53.639	74.247	4.016	134.722	3.260×10^5
14.0 TeV	1.400×10^7	2.851	75.530	104.381	5.749	188.513	3.510×10^5
20.0 TeV	2.000×10^7	2.885	108.560	149.776	8.404	269.627	3.775×10^5
30.0 TeV	3.000×10^7	2.925	163.548	225.304	12.992	404.770	4.075×10^5
40.0 TeV	4.000×10^7	2.954	218.733	301.010	17.689	540.387	4.288×10^5
80.0 TeV	8.000×10^7	3.025	439.800	604.039	37.295	1084.161	4.801×10^5
100. TeV	1.000×10^8	3.048	550.520	755.690	47.420	1356.679	4.965×10^5