Table 016: Muons in Sulfur

Z	A [g/mol]	ρ [g/cm^3]	I [eV]	a	$k = m_s$	x_0	x_1	$\overline{C}$	δ_0
16 (S)	32.065 (5)	2.000	180.0	0.33992	2.6456	0.1580	2.7159	4.6659	0.14

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	6.332				6.332	8.825×10^{-1}
14.0 MeV	5.616×10^1	4.964				4.964	1.603×10^0
20.0 MeV	6.802×10^1	3.894				3.894	2.983×10^0
30.0 MeV	8.509×10^1	3.033				3.033	5.933×10^0
40.0 MeV	1.003×10^2	2.596				2.596	9.520×10^0
80.0 MeV	1.527×10^2	1.955				1.955	2.783×10^1
100. MeV	1.764×10^2	1.840				1.840	3.841×10^1
140. MeV	2.218×10^2	1.726				1.727	6.095×10^1
200. MeV	2.868×10^2	1.667				1.667	9.645×10^1
273. MeV	3.633×10^2	1.652			0.000	1.653	*Minimum ionization*
300. MeV	3.917×10^2	1.654			0.000	1.654	1.568×10^2
400. MeV	4.945×10^2	1.670	0.000		0.000	1.670	2.170×10^2
800. MeV	8.995×10^2	1.759	0.000		0.000	1.760	4.502×10^2
1.00 GeV	1.101×10^3	1.796	0.000		0.000	1.797	5.627×10^2
1.40 GeV	1.502×10^3	1.855	0.001	0.000	0.001	1.857	7.815×10^2
2.00 GeV	2.103×10^3	1.920	0.001	0.001	0.001	1.923	1.099×10^3
3.00 GeV	3.104×10^3	1.992	0.002	0.001	0.001	1.997	1.608×10^3
4.00 GeV	4.104×10^3	2.042	0.003	0.002	0.002	2.049	2.102×10^3
8.00 GeV	8.105×10^3	2.154	0.007	0.007	0.004	2.172	3.991×10^3
10.0 GeV	1.011×10^4	2.188	0.010	0.010	0.004	2.212	4.903×10^3
14.0 GeV	1.411×10^4	2.235	0.015	0.016	0.006	2.272	6.686×10^3
20.0 GeV	2.011×10^4	2.283	0.023	0.026	0.009	2.340	9.286×10^3
30.0 GeV	3.011×10^4	2.332	0.037	0.046	0.013	2.428	1.348×10^4
40.0 GeV	4.011×10^4	2.366	0.052	0.067	0.017	2.502	1.753×10^4
80.0 GeV	8.011×10^4	2.441	0.118	0.161	0.032	2.753	3.275×10^4
100. GeV	1.001×10^5	2.465	0.153	0.211	0.040	2.870	3.986×10^4
140. GeV	1.401×10^5	2.500	0.226	0.315	0.056	3.097	5.328×10^4
200. GeV	2.001×10^5	2.536	0.339	0.480	0.079	3.434	7.167×10^4
300. GeV	3.001×10^5	2.578	0.532	0.761	0.118	3.990	9.866×10^4
400. GeV	4.001×10^5	2.607	0.733	1.053	0.158	4.551	1.221×10^5
527. GeV	5.270×10^5	2.635	0.993	1.434	0.208	5.271	*Muon critical energy*
800. GeV	8.001×10^5	2.678	1.564	2.255	0.319	6.816	1.935×10^5
1.00 TeV	1.000×10^6	2.702	1.992	2.870	0.401	7.965	2.206×10^5
1.40 TeV	1.400×10^6	2.737	2.852	4.100	0.568	10.257	2.647×10^5
2.00 TeV	2.000×10^6	2.775	4.170	5.980	0.823	13.748	3.151×10^5
3.00 TeV	3.000×10^6	2.819	6.375	9.105	1.259	19.558	3.758×10^5
4.00 TeV	4.000×10^6	2.850	8.613	12.267	1.703	25.435	4.205×10^5
8.00 TeV	8.000×10^6	2.928	17.655	24.993	3.549	49.125	5.317×10^5
10.0 TeV	1.000×10^7	2.953	22.219	31.395	4.498	61.066	5.681×10^5
14.0 TeV	1.400×10^7	2.992	31.331	44.160	6.450	84.933	6.234×10^5
20.0 TeV	2.000×10^7	3.034	45.098	63.398	9.446	120.976	6.823×10^5
30.0 TeV	3.000×10^7	3.082	67.988	95.422	14.635	181.128	7.494×10^5
40.0 TeV	4.000×10^7	3.117	90.974	127.537	19.954	241.583	7.971×10^5
80.0 TeV	8.000×10^7	3.203	183.132	256.094	42.225	484.654	9.117×10^5
100. TeV	1.000×10^8	3.231	229.320	320.440	53.750	606.742	9.485×10^5