

**Table 016: Muons in Sulfur**

Z	A [g/mol]	$\rho$ [g/cm <sup>3</sup> ]	I [eV]	a	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
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 <sup>2</sup> /g]	Photonucl	Total	CSDA range [g/cm <sup>2</sup> ]		
10.0 MeV	$4.704 \times 10^1$	6.332				6.332	$8.825 \times 10^{-1}$		
14.0 MeV	$5.616 \times 10^1$	4.964				4.964	$1.603 \times 10^0$		
20.0 MeV	$6.802 \times 10^1$	3.894				3.894	$2.983 \times 10^0$		
30.0 MeV	$8.509 \times 10^1$	3.033				3.033	$5.933 \times 10^0$		
40.0 MeV	$1.003 \times 10^2$	2.596				2.596	$9.520 \times 10^0$		
80.0 MeV	$1.527 \times 10^2$	1.955				1.955	$2.783 \times 10^1$		
100. MeV	$1.764 \times 10^2$	1.840				1.840	$3.841 \times 10^1$		
140. MeV	$2.218 \times 10^2$	1.726				1.727	$6.095 \times 10^1$		
200. MeV	$2.868 \times 10^2$	1.667				1.667	$9.645 \times 10^1$		
273. MeV	$3.633 \times 10^2$	1.652			0.000	1.653	<i>Minimum ionization</i>		
300. MeV	$3.917 \times 10^2$	1.654			0.000	1.654	$1.568 \times 10^2$		
400. MeV	$4.945 \times 10^2$	1.670	0.000		0.000	1.670	$2.170 \times 10^2$		
800. MeV	$8.995 \times 10^2$	1.759	0.000		0.000	1.760	$4.502 \times 10^2$		
1.00 GeV	$1.101 \times 10^3$	1.796	0.000		0.000	1.797	$5.627 \times 10^2$		
1.40 GeV	$1.502 \times 10^3$	1.855	0.001	0.000	0.001	1.857	$7.815 \times 10^2$		
2.00 GeV	$2.103 \times 10^3$	1.920	0.001	0.001	0.001	1.923	$1.099 \times 10^3$		
3.00 GeV	$3.104 \times 10^3$	1.992	0.002	0.001	0.001	1.997	$1.608 \times 10^3$		
4.00 GeV	$4.104 \times 10^3$	2.042	0.003	0.002	0.002	2.049	$2.102 \times 10^3$		
8.00 GeV	$8.105 \times 10^3$	2.154	0.007	0.007	0.004	2.172	$3.991 \times 10^3$		
10.0 GeV	$1.011 \times 10^4$	2.188	0.010	0.010	0.004	2.212	$4.903 \times 10^3$		
14.0 GeV	$1.411 \times 10^4$	2.235	0.015	0.016	0.006	2.272	$6.686 \times 10^3$		
20.0 GeV	$2.011 \times 10^4$	2.283	0.023	0.026	0.009	2.340	$9.286 \times 10^3$		
30.0 GeV	$3.011 \times 10^4$	2.332	0.037	0.046	0.013	2.428	$1.348 \times 10^4$		
40.0 GeV	$4.011 \times 10^4$	2.366	0.052	0.067	0.017	2.502	$1.753 \times 10^4$		
80.0 GeV	$8.011 \times 10^4$	2.441	0.118	0.161	0.032	2.753	$3.275 \times 10^4$		
100. GeV	$1.001 \times 10^5$	2.465	0.153	0.211	0.040	2.870	$3.986 \times 10^4$		
140. GeV	$1.401 \times 10^5$	2.500	0.226	0.315	0.056	3.097	$5.328 \times 10^4$		
200. GeV	$2.001 \times 10^5$	2.536	0.339	0.480	0.079	3.434	$7.167 \times 10^4$		
300. GeV	$3.001 \times 10^5$	2.578	0.532	0.761	0.118	3.990	$9.866 \times 10^4$		
400. GeV	$4.001 \times 10^5$	2.607	0.733	1.053	0.158	4.551	$1.221 \times 10^5$		
527. GeV	$5.270 \times 10^5$	2.635	0.993	1.434	0.208	5.271	<i>Muon critical energy</i>		
800. GeV	$8.001 \times 10^5$	2.678	1.564	2.255	0.319	6.816	$1.935 \times 10^5$		
1.00 TeV	$1.000 \times 10^6$	2.702	1.992	2.870	0.401	7.965	$2.206 \times 10^5$		
1.40 TeV	$1.400 \times 10^6$	2.737	2.852	4.100	0.568	10.257	$2.647 \times 10^5$		
2.00 TeV	$2.000 \times 10^6$	2.775	4.170	5.980	0.823	13.748	$3.151 \times 10^5$		
3.00 TeV	$3.000 \times 10^6$	2.819	6.375	9.105	1.259	19.558	$3.758 \times 10^5$		
4.00 TeV	$4.000 \times 10^6$	2.850	8.613	12.267	1.703	25.435	$4.205 \times 10^5$		
8.00 TeV	$8.000 \times 10^6$	2.928	17.655	24.993	3.549	49.125	$5.317 \times 10^5$		
10.0 TeV	$1.000 \times 10^7$	2.953	22.219	31.395	4.498	61.066	$5.681 \times 10^5$		
14.0 TeV	$1.400 \times 10^7$	2.992	31.331	44.160	6.450	84.933	$6.234 \times 10^5$		
20.0 TeV	$2.000 \times 10^7$	3.034	45.098	63.398	9.446	120.976	$6.823 \times 10^5$		
30.0 TeV	$3.000 \times 10^7$	3.082	67.988	95.422	14.635	181.128	$7.494 \times 10^5$		
40.0 TeV	$4.000 \times 10^7$	3.117	90.974	127.537	19.954	241.583	$7.971 \times 10^5$		
80.0 TeV	$8.000 \times 10^7$	3.203	183.132	256.094	42.225	484.654	$9.117 \times 10^5$		
100. TeV	$1.000 \times 10^8$	3.231	229.320	320.440	53.750	606.742	$9.485 \times 10^5$		