Table 008: Muons in Oxygen gas (O_2)

Z	A [g/mol]	ρ [g/cm^3]	I [eV]	a	$k = m_s$	x_0	x_1	$\overline{C}$	δ_0
8 (O)	15.9994 (3)	1.332×10^{-3}	95.0	0.11778	3.2913	1.7541	4.3213	10.7004	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	6.951				6.951	7.977×10^{-1}
14.0 MeV	5.616×10^1	5.429				5.430	1.456×10^0
20.0 MeV	6.802×10^1	4.246				4.246	2.720×10^0
30.0 MeV	8.509×10^1	3.298				3.298	5.429×10^0
40.0 MeV	1.003×10^2	2.818				2.819	8.731×10^0
80.0 MeV	1.527×10^2	2.120				2.120	2.561×10^1
100. MeV	1.764×10^2	1.995				1.995	3.536×10^1
140. MeV	2.218×10^2	1.873				1.873	5.615×10^1
200. MeV	2.868×10^2	1.812				1.812	8.884×10^1
256. MeV	3.462×10^2	1.801			0.000	1.801	*Minimum ionization*
300. MeV	3.917×10^2	1.805			0.000	1.805	1.443×10^2
400. MeV	4.945×10^2	1.830			0.000	1.831	1.993×10^2
800. MeV	8.995×10^2	1.955	0.000		0.000	1.956	4.105×10^2
1.00 GeV	1.101×10^3	2.007	0.000		0.000	2.008	5.114×10^2
1.40 GeV	1.502×10^3	2.093	0.000	0.000	0.001	2.094	7.063×10^2
2.00 GeV	2.103×10^3	2.189	0.001	0.000	0.001	2.191	9.861×10^2
3.00 GeV	3.104×10^3	2.302	0.001	0.001	0.001	2.306	1.430×10^3
4.00 GeV	4.104×10^3	2.384	0.002	0.001	0.002	2.389	1.856×10^3
8.00 GeV	8.105×10^3	2.567	0.004	0.004	0.004	2.578	3.458×10^3
10.0 GeV	1.011×10^4	2.617	0.005	0.005	0.005	2.632	4.225×10^3
14.0 GeV	1.411×10^4	2.687	0.008	0.008	0.006	2.710	5.722×10^3
20.0 GeV	2.011×10^4	2.757	0.012	0.014	0.009	2.792	7.901×10^3
30.0 GeV	3.011×10^4	2.829	0.020	0.024	0.013	2.887	1.142×10^4
40.0 GeV	4.011×10^4	2.876	0.028	0.036	0.017	2.958	1.484×10^4
80.0 GeV	8.011×10^4	2.977	0.064	0.087	0.034	3.163	2.789×10^4
100. GeV	1.001×10^5	3.007	0.084	0.114	0.042	3.247	3.413×10^4
140. GeV	1.401×10^5	3.050	0.123	0.171	0.058	3.403	4.616×10^4
200. GeV	2.001×10^5	3.092	0.185	0.262	0.082	3.623	6.324×10^4
300. GeV	3.001×10^5	3.139	0.292	0.416	0.123	3.971	8.959×10^4
400. GeV	4.001×10^5	3.170	0.403	0.577	0.165	4.315	1.137×10^5
800. GeV	8.001×10^5	3.245	0.863	1.244	0.333	5.684	1.943×10^5
1.00 TeV	1.000×10^6	3.268	1.101	1.588	0.418	6.375	2.275×10^5
1.05 TeV	1.050×10^6	3.274	1.160	1.673	0.440	6.547	*Muon critical energy*
1.40 TeV	1.400×10^6	3.304	1.579	2.273	0.593	7.749	2.843×10^5
2.00 TeV	2.000×10^6	3.342	2.313	3.322	0.858	9.836	3.529×10^5
3.00 TeV	3.000×10^6	3.386	3.544	5.068	1.314	13.312	4.400×10^5
4.00 TeV	4.000×10^6	3.417	4.794	6.837	1.779	16.828	5.066×10^5
8.00 TeV	8.000×10^6	3.495	9.855	13.962	3.711	31.023	6.791×10^5
10.0 TeV	1.000×10^7	3.520	12.412	17.550	4.706	38.189	7.371×10^5
14.0 TeV	1.400×10^7	3.559	17.515	24.700	6.755	52.529	8.260×10^5
20.0 TeV	2.000×10^7	3.601	25.230	35.482	9.902	74.216	9.217×10^5
30.0 TeV	3.000×10^7	3.650	38.075	53.425	15.361	110.511	1.031×10^6
40.0 TeV	4.000×10^7	3.685	50.983	71.424	20.963	147.055	1.110×10^6
80.0 TeV	8.000×10^7	3.771	102.749	143.480	44.451	294.452	1.298×10^6
100. TeV	1.000×10^8	3.799	128.700	179.550	56.620	368.670	1.359×10^6