Muons in calcium sulfate ($CaSO_4$)

$\langle Z/A \rangle$	ρ [g/cm^3]	I [eV]	a	$k = m_s$	x_0	x_1	$\overline{C}$	δ_0
0.49950	2.960	152.3	0.07708	3.4495	0.0587	3.1229	3.9388	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	6.510				6.510	8.551×10^{-1}
14.0 MeV	5.616×10^1	5.098				5.098	1.557×10^0
20.0 MeV	6.802×10^1	3.995				3.995	2.901×10^0
30.0 MeV	8.509×10^1	3.111				3.111	5.777×10^0
40.0 MeV	1.003×10^2	2.663				2.663	9.273×10^0
80.0 MeV	1.527×10^2	2.003				2.004	2.712×10^1
100. MeV	1.764×10^2	1.882				1.882	3.745×10^1
140. MeV	2.218×10^2	1.760				1.760	5.953×10^1
200. MeV	2.868×10^2	1.693				1.693	9.441×10^1
288. MeV	3.788×10^2	1.673			0.000	1.673	*Minimum ionization*
300. MeV	3.917×10^2	1.673			0.000	1.673	1.540×10^2
400. MeV	4.945×10^2	1.685			0.000	1.685	2.136×10^2
800. MeV	8.995×10^2	1.763	0.000		0.000	1.763	4.456×10^2
1.00 GeV	1.101×10^3	1.796	0.000		0.000	1.797	5.579×10^2
1.40 GeV	1.502×10^3	1.851	0.001	0.000	0.001	1.852	7.770×10^2
2.00 GeV	2.103×10^3	1.910	0.001	0.000	0.001	1.913	1.095×10^3
3.00 GeV	3.104×10^3	1.977	0.002	0.001	0.001	1.982	1.608×10^3
4.00 GeV	4.104×10^3	2.024	0.003	0.002	0.002	2.030	2.107×10^3
8.00 GeV	8.105×10^3	2.130	0.006	0.006	0.004	2.146	4.017×10^3
10.0 GeV	1.011×10^4	2.162	0.008	0.008	0.005	2.183	4.940×10^3
14.0 GeV	1.411×10^4	2.208	0.012	0.014	0.006	2.241	6.748×10^3
20.0 GeV	2.011×10^4	2.254	0.019	0.022	0.009	2.305	9.386×10^3
30.0 GeV	3.011×10^4	2.304	0.032	0.039	0.013	2.387	1.365×10^4
40.0 GeV	4.011×10^4	2.337	0.045	0.057	0.017	2.456	1.777×10^4
80.0 GeV	8.011×10^4	2.413	0.101	0.137	0.033	2.684	3.333×10^4
100. GeV	1.001×10^5	2.437	0.131	0.180	0.041	2.788	4.064×10^4
140. GeV	1.401×10^5	2.472	0.192	0.269	0.057	2.990	5.449×10^4
200. GeV	2.001×10^5	2.509	0.289	0.410	0.080	3.288	7.361×10^4
300. GeV	3.001×10^5	2.550	0.454	0.649	0.120	3.774	1.020×10^5
400. GeV	4.001×10^5	2.580	0.625	0.898	0.160	4.263	1.269×10^5
599. GeV	5.993×10^5	2.621	0.975	1.405	0.241	5.243	*Muon critical energy*
800. GeV	8.001×10^5	2.651	1.335	1.924	0.324	6.235	2.040×10^5
1.00 TeV	1.000×10^6	2.674	1.701	2.451	0.407	7.234	2.338×10^5
1.40 TeV	1.400×10^6	2.710	2.436	3.502	0.577	9.226	2.826×10^5
2.00 TeV	2.000×10^6	2.748	3.564	5.110	0.836	12.258	3.389×10^5
3.00 TeV	3.000×10^6	2.791	5.450	7.783	1.280	17.305	4.072×10^5
4.00 TeV	4.000×10^6	2.823	7.366	10.490	1.731	22.410	4.579×10^5
8.00 TeV	8.000×10^6	2.900	15.106	21.382	3.608	42.998	5.845×10^5
10.0 TeV	1.000×10^7	2.926	19.014	26.863	4.575	53.378	6.262×10^5
14.0 TeV	1.400×10^7	2.965	26.815	37.791	6.563	74.134	6.895×10^5
20.0 TeV	2.000×10^7	3.007	38.603	54.263	9.614	105.488	7.570×10^5
30.0 TeV	3.000×10^7	3.055	58.210	81.676	14.904	157.845	8.340×10^5
40.0 TeV	4.000×10^7	3.090	77.902	109.168	20.328	210.488	8.887×10^5
80.0 TeV	8.000×10^7	3.176	156.854	219.222	43.050	422.302	1.020×10^6
100. TeV	1.000×10^8	3.204	196.424	274.308	54.814	528.751	1.062×10^6