Muons in magnesium carbonate $MgCO_3$

$\langle Z/A \rangle$	ρ [g/cm^3]	I [eV]	a	$k = m_s$	x_0	x_1	$\overline{C}$	δ_0
0.49814	2.958	118.0	0.09219	3.5003	0.0860	2.7997	3.4319	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	6.729				6.729	8.251×10^{-1}
14.0 MeV	5.616×10^1	5.261				5.261	1.504×10^0
20.0 MeV	6.802×10^1	4.118				4.118	2.808×10^0
30.0 MeV	8.509×10^1	3.202				3.202	5.600×10^0
40.0 MeV	1.003×10^2	2.738				2.738	9.000×10^0
80.0 MeV	1.527×10^2	2.056				2.056	2.638×10^1
100. MeV	1.764×10^2	1.930				1.930	3.644×10^1
140. MeV	2.218×10^2	1.801				1.801	5.800×10^1
200. MeV	2.868×10^2	1.729				1.729	9.213×10^1
300. MeV	3.917×10^2	1.704			0.000	1.704	1.506×10^2
303. MeV	3.950×10^2	1.704			0.000	1.704	*Minimum ionization*
400. MeV	4.945×10^2	1.712			0.000	1.713	2.091×10^2
800. MeV	8.995×10^2	1.784	0.000		0.000	1.785	4.379×10^2
1.00 GeV	1.101×10^3	1.816	0.000		0.000	1.816	5.490×10^2
1.40 GeV	1.502×10^3	1.867	0.000	0.000	0.001	1.868	7.660×10^2
2.00 GeV	2.103×10^3	1.923	0.001	0.000	0.001	1.925	1.082×10^3
3.00 GeV	3.104×10^3	1.986	0.001	0.001	0.001	1.990	1.592×10^3
4.00 GeV	4.104×10^3	2.031	0.002	0.001	0.002	2.036	2.089×10^3
8.00 GeV	8.105×10^3	2.131	0.004	0.004	0.004	2.144	3.998×10^3
10.0 GeV	1.011×10^4	2.162	0.006	0.006	0.005	2.178	4.923×10^3
14.0 GeV	1.411×10^4	2.206	0.009	0.009	0.006	2.231	6.736×10^3
20.0 GeV	2.011×10^4	2.251	0.013	0.015	0.009	2.289	9.390×10^3
30.0 GeV	3.011×10^4	2.299	0.022	0.027	0.013	2.361	1.369×10^4
40.0 GeV	4.011×10^4	2.332	0.031	0.039	0.017	2.419	1.787×10^4
80.0 GeV	8.011×10^4	2.407	0.070	0.094	0.034	2.605	3.378×10^4
100. GeV	1.001×10^5	2.431	0.091	0.124	0.042	2.688	4.133×10^4
140. GeV	1.401×10^5	2.466	0.134	0.186	0.058	2.844	5.580×10^4
200. GeV	2.001×10^5	2.502	0.201	0.285	0.082	3.070	7.609×10^4
300. GeV	3.001×10^5	2.543	0.317	0.452	0.123	3.435	1.069×10^5
400. GeV	4.001×10^5	2.573	0.437	0.626	0.164	3.799	1.345×10^5
800. GeV	8.001×10^5	2.644	0.935	1.348	0.331	5.258	2.237×10^5
809. GeV	8.090×10^5	2.645	0.946	1.364	0.335	5.291	*Muon critical energy*
1.00 TeV	1.000×10^6	2.667	1.192	1.720	0.416	5.996	2.593×10^5
1.40 TeV	1.400×10^6	2.703	1.710	2.461	0.590	7.463	3.189×10^5
2.00 TeV	2.000×10^6	2.740	2.504	3.595	0.854	9.694	3.893×10^5
3.00 TeV	3.000×10^6	2.784	3.834	5.483	1.308	13.409	4.767×10^5
4.00 TeV	4.000×10^6	2.815	5.186	7.395	1.770	17.167	5.424×10^5
8.00 TeV	8.000×10^6	2.893	10.655	15.097	3.692	32.336	7.094×10^5
10.0 TeV	1.000×10^7	2.918	13.418	18.974	4.682	39.992	7.650×10^5
14.0 TeV	1.400×10^7	2.957	18.932	26.701	6.719	55.310	8.497×10^5
20.0 TeV	2.000×10^7	2.999	27.270	38.352	9.849	78.470	9.403×10^5
30.0 TeV	3.000×10^7	3.047	41.144	57.743	15.277	117.211	1.044×10^6
40.0 TeV	4.000×10^7	3.082	55.084	77.193	20.846	156.206	1.118×10^6
80.0 TeV	8.000×10^7	3.168	110.984	155.059	44.194	313.405	1.295×10^6
100. TeV	1.000×10^8	3.196	139.005	194.035	56.289	392.526	1.352×10^6