Muons in shielding concrete

$\langle Z/A \rangle$	ρ [g/cm^3]	I [eV]	a	$k = m_s$	x_0	x_1	$\overline{C}$	δ_0
0.50274	2.300	135.2	0.07515	3.5467	0.1301	3.0466	3.9464	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	6.664				6.664	8.343×10^{-1}
14.0 MeV	5.616×10^1	5.214				5.214	1.520×10^0
20.0 MeV	6.802×10^1	4.084				4.084	2.835×10^0
30.0 MeV	8.509×10^1	3.178				3.178	5.649×10^0
40.0 MeV	1.003×10^2	2.719				2.719	9.073×10^0
80.0 MeV	1.527×10^2	2.049				2.049	2.655×10^1
100. MeV	1.764×10^2	1.925				1.925	3.664×10^1
140. MeV	2.218×10^2	1.801				1.801	5.822×10^1
200. MeV	2.868×10^2	1.732				1.732	9.232×10^1
293. MeV	3.844×10^2	1.711			0.000	1.711	*Minimum ionization*
300. MeV	3.917×10^2	1.711			0.000	1.711	1.506×10^2
400. MeV	4.945×10^2	1.722			0.000	1.722	2.089×10^2
800. MeV	8.995×10^2	1.800	0.000		0.000	1.801	4.360×10^2
1.00 GeV	1.101×10^3	1.834	0.000		0.000	1.834	5.460×10^2
1.40 GeV	1.502×10^3	1.888	0.001	0.000	0.001	1.889	7.607×10^2
2.00 GeV	2.103×10^3	1.947	0.001	0.000	0.001	1.949	1.073×10^3
3.00 GeV	3.104×10^3	2.014	0.001	0.001	0.001	2.018	1.577×10^3
4.00 GeV	4.104×10^3	2.060	0.002	0.002	0.002	2.066	2.066×10^3
8.00 GeV	8.105×10^3	2.165	0.005	0.005	0.004	2.179	3.945×10^3
10.0 GeV	1.011×10^4	2.197	0.007	0.007	0.005	2.216	4.855×10^3
14.0 GeV	1.411×10^4	2.243	0.010	0.011	0.006	2.271	6.637×10^3
20.0 GeV	2.011×10^4	2.289	0.016	0.019	0.009	2.333	9.242×10^3
30.0 GeV	3.011×10^4	2.338	0.027	0.033	0.013	2.411	1.346×10^4
40.0 GeV	4.011×10^4	2.372	0.038	0.048	0.017	2.474	1.755×10^4
80.0 GeV	8.011×10^4	2.448	0.085	0.115	0.033	2.682	3.305×10^4
100. GeV	1.001×10^5	2.472	0.110	0.151	0.041	2.775	4.038×10^4
140. GeV	1.401×10^5	2.507	0.162	0.226	0.057	2.953	5.435×10^4
200. GeV	2.001×10^5	2.544	0.244	0.346	0.081	3.215	7.382×10^4
300. GeV	3.001×10^5	2.586	0.384	0.548	0.122	3.639	1.030×10^5
400. GeV	4.001×10^5	2.615	0.529	0.759	0.162	4.065	1.290×10^5
700. GeV	7.005×10^5	2.673	0.978	1.409	0.286	5.347	*Muon critical energy*
800. GeV	8.001×10^5	2.687	1.130	1.629	0.328	5.774	2.112×10^5
1.00 TeV	1.000×10^6	2.711	1.441	2.077	0.412	6.640	2.434×10^5
1.40 TeV	1.400×10^6	2.746	2.065	2.969	0.583	8.364	2.970×10^5
2.00 TeV	2.000×10^6	2.784	3.022	4.335	0.845	10.987	3.594×10^5
3.00 TeV	3.000×10^6	2.828	4.624	6.607	1.294	15.354	4.361×10^5
4.00 TeV	4.000×10^6	2.860	6.252	8.908	1.750	19.770	4.934×10^5
8.00 TeV	8.000×10^6	2.938	12.832	18.169	3.650	37.589	6.376×10^5
10.0 TeV	1.000×10^7	2.964	16.155	22.831	4.627	46.577	6.854×10^5
14.0 TeV	1.400×10^7	3.003	22.789	32.122	6.640	64.554	7.580×10^5
20.0 TeV	2.000×10^7	3.045	32.815	46.131	9.730	91.721	8.356×10^5
30.0 TeV	3.000×10^7	3.094	49.496	69.444	15.087	137.121	9.242×10^5
40.0 TeV	4.000×10^7	3.129	66.253	92.826	20.582	182.791	9.871×10^5
80.0 TeV	8.000×10^7	3.216	133.445	186.432	43.612	366.705	1.139×10^6
100. TeV	1.000×10^8	3.244	167.127	233.286	55.538	459.196	1.187×10^6