Muons in UM rock for Doug

$\langle Z/A \rangle$	ρ [g/cm^3]	I [eV]	a	$k = m_s$	x_0	x_1	$\overline{C}$	δ_0
0.49407	2.700	152.7	0.14240	3.0000	0.2000	3.0000	4.0469	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	6.437				6.437	8.649×10^{-1}
14.0 MeV	5.616×10^1	5.040				5.040	1.574×10^0
20.0 MeV	6.802×10^1	3.951				3.951	2.934×10^0
30.0 MeV	8.509×10^1	3.076				3.076	5.842×10^0
40.0 MeV	1.003×10^2	2.633				2.633	9.378×10^0
80.0 MeV	1.527×10^2	1.988				1.988	2.741×10^1
100. MeV	1.764×10^2	1.871				1.871	3.780×10^1
140. MeV	2.218×10^2	1.747				1.747	6.003×10^1
200. MeV	2.868×10^2	1.678				1.678	9.521×10^1
293. MeV	3.844×10^2	1.656			0.000	1.656	*Minimum ionization*
300. MeV	3.917×10^2	1.656			0.000	1.656	1.554×10^2
400. MeV	4.945×10^2	1.667			0.000	1.667	2.156×10^2
800. MeV	8.995×10^2	1.743	0.000		0.000	1.744	4.502×10^2
1.00 GeV	1.101×10^3	1.777	0.000		0.000	1.778	5.637×10^2
1.40 GeV	1.502×10^3	1.831	0.001	0.000	0.001	1.832	7.852×10^2
2.00 GeV	2.103×10^3	1.890	0.001	0.000	0.001	1.893	1.107×10^3
3.00 GeV	3.104×10^3	1.958	0.002	0.001	0.001	1.962	1.625×10^3
4.00 GeV	4.104×10^3	2.005	0.002	0.002	0.002	2.011	2.128×10^3
8.00 GeV	8.105×10^3	2.112	0.006	0.005	0.004	2.127	4.056×10^3
10.0 GeV	1.011×10^4	2.144	0.007	0.008	0.005	2.164	4.988×10^3
14.0 GeV	1.411×10^4	2.190	0.011	0.012	0.006	2.221	6.811×10^3
20.0 GeV	2.011×10^4	2.237	0.018	0.020	0.009	2.284	9.474×10^3
30.0 GeV	3.011×10^4	2.286	0.029	0.035	0.013	2.364	1.377×10^4
40.0 GeV	4.011×10^4	2.320	0.041	0.052	0.017	2.430	1.795×10^4
80.0 GeV	8.011×10^4	2.395	0.092	0.125	0.033	2.646	3.369×10^4
100. GeV	1.001×10^5	2.418	0.120	0.165	0.041	2.744	4.112×10^4
140. GeV	1.401×10^5	2.453	0.176	0.246	0.057	2.932	5.521×10^4
200. GeV	2.001×10^5	2.489	0.265	0.376	0.081	3.210	7.476×10^4
300. GeV	3.001×10^5	2.530	0.416	0.595	0.121	3.663	1.039×10^5
400. GeV	4.001×10^5	2.559	0.573	0.823	0.161	4.117	1.296×10^5
641. GeV	6.407×10^5	2.607	0.962	1.386	0.259	5.215	*Muon critical energy*
800. GeV	8.001×10^5	2.630	1.225	1.766	0.325	5.947	2.100×10^5
1.00 TeV	1.000×10^6	2.653	1.561	2.251	0.409	6.874	2.413×10^5
1.40 TeV	1.400×10^6	2.688	2.236	3.216	0.580	8.721	2.929×10^5
2.00 TeV	2.000×10^6	2.726	3.272	4.694	0.839	11.531	3.525×10^5
3.00 TeV	3.000×10^6	2.769	5.005	7.152	1.285	16.211	4.253×10^5
4.00 TeV	4.000×10^6	2.800	6.766	9.640	1.738	20.944	4.795×10^5
8.00 TeV	8.000×10^6	2.877	13.880	19.656	3.623	40.036	6.153×10^5
10.0 TeV	1.000×10^7	2.902	17.472	24.696	4.594	49.664	6.600×10^5
14.0 TeV	1.400×10^7	2.940	24.642	34.744	6.590	68.917	7.281×10^5
20.0 TeV	2.000×10^7	2.982	35.477	49.891	9.656	98.006	8.008×10^5
30.0 TeV	3.000×10^7	3.030	53.504	75.100	14.970	146.603	8.836×10^5
40.0 TeV	4.000×10^7	3.064	71.611	100.381	20.420	195.476	9.425×10^5
80.0 TeV	8.000×10^7	3.149	144.209	201.589	43.253	392.200	1.084×10^6
100. TeV	1.000×10^8	3.177	180.596	252.248	55.075	491.097	1.130×10^6