Muons in uranium oxide (UO_2)

$\langle Z/A \rangle$	ρ [g/cm^3]	I [eV]	a	$k = m_s$	x_0	x_1	$\overline{C}$	δ_0
0.39996	10.960	720.6	0.20463	2.6711	−0.1938	3.5292	5.9605	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	4.059				4.059	1.405×10^0
14.0 MeV	5.616×10^1	3.215				3.215	2.523×10^0
20.0 MeV	6.802×10^1	2.548				2.548	4.641×10^0
30.0 MeV	8.509×10^1	2.009				2.009	9.118×10^0
40.0 MeV	1.003×10^2	1.732				1.732	1.451×10^1
80.0 MeV	1.527×10^2	1.326				1.326	4.170×10^1
100. MeV	1.764×10^2	1.253				1.253	5.725×10^1
140. MeV	2.218×10^2	1.184				1.184	9.024×10^1
200. MeV	2.868×10^2	1.151				1.151	1.418×10^2
239. MeV	3.285×10^2	1.147	0.000			1.148	*Minimum ionization*
300. MeV	3.917×10^2	1.152	0.000		0.000	1.153	2.288×10^2
400. MeV	4.945×10^2	1.171	0.000		0.000	1.172	3.149×10^2
800. MeV	8.995×10^2	1.252	0.001		0.000	1.254	6.445×10^2
1.00 GeV	1.101×10^3	1.285	0.001		0.000	1.287	8.018×10^2
1.40 GeV	1.502×10^3	1.337	0.002		0.001	1.340	1.106×10^3
2.00 GeV	2.103×10^3	1.393	0.004	0.001	0.001	1.399	1.544×10^3
3.00 GeV	3.104×10^3	1.457	0.007	0.003	0.001	1.468	2.241×10^3
4.00 GeV	4.104×10^3	1.501	0.010	0.006	0.002	1.518	2.910×10^3
8.00 GeV	8.105×10^3	1.601	0.024	0.020	0.003	1.650	5.428×10^3
10.0 GeV	1.011×10^4	1.631	0.032	0.029	0.004	1.697	6.622×10^3
14.0 GeV	1.411×10^4	1.675	0.049	0.048	0.005	1.778	8.923×10^3
20.0 GeV	2.011×10^4	1.718	0.077	0.079	0.007	1.883	1.220×10^4
30.0 GeV	3.011×10^4	1.764	0.126	0.140	0.011	2.042	1.730×10^4
40.0 GeV	4.011×10^4	1.795	0.178	0.207	0.014	2.196	2.202×10^4
80.0 GeV	8.011×10^4	1.862	0.403	0.504	0.028	2.798	3.811×10^4
100. GeV	1.001×10^5	1.882	0.522	0.664	0.035	3.105	4.490×10^4
140. GeV	1.401×10^5	1.911	0.767	0.994	0.049	3.722	5.665×10^4
147. GeV	1.472×10^5	1.916	0.811	1.054	0.051	3.833	*Muon critical energy*
200. GeV	2.001×10^5	1.942	1.149	1.517	0.069	4.678	7.101×10^4
300. GeV	3.001×10^5	1.975	1.801	2.390	0.104	6.271	8.942×10^4
400. GeV	4.001×10^5	1.999	2.475	3.295	0.138	7.908	1.036×10^5
800. GeV	8.001×10^5	2.056	5.254	7.006	0.279	14.597	1.403×10^5
1.00 TeV	1.000×10^6	2.075	6.680	8.905	0.351	18.012	1.526×10^5
1.40 TeV	1.400×10^6	2.103	9.537	12.690	0.497	24.829	1.714×10^5
2.00 TeV	2.000×10^6	2.133	13.905	18.467	0.719	35.226	1.916×10^5
3.00 TeV	3.000×10^6	2.168	21.192	28.064	1.099	52.526	2.147×10^5
4.00 TeV	4.000×10^6	2.194	28.572	37.764	1.485	70.017	2.312×10^5
8.00 TeV	8.000×10^6	2.256	58.310	76.748	3.085	140.401	2.707×10^5
10.0 TeV	1.000×10^7	2.276	73.287	96.343	3.906	175.814	2.834×10^5
14.0 TeV	1.400×10^7	2.307	103.161	135.440	5.592	246.503	3.025×10^5
20.0 TeV	2.000×10^7	2.341	148.220	194.335	8.176	353.074	3.228×10^5
30.0 TeV	3.000×10^7	2.380	223.232	292.313	12.639	530.565	3.457×10^5
40.0 TeV	4.000×10^7	2.407	298.495	390.517	17.207	708.628	3.620×10^5
80.0 TeV	8.000×10^7	2.476	599.943	783.611	36.275	1422.307	4.010×10^5
100. TeV	1.000×10^8	2.499	750.896	980.338	46.121	1779.857	4.136×10^5