Table 123: Muons in Brain (ICRP)

$\langle Z/A \rangle$	ρ [g/cm^3]	I [eV]	a	$k = m_s$	x_0	x_1	$\overline{C}$	δ_0
0.55423	1.030	73.3	0.08255	3.5585	0.2206	2.8021	3.4279	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	7.976				7.976	6.928×10^{-1}
14.0 MeV	5.616×10^1	6.221				6.221	1.267×10^0
20.0 MeV	6.802×10^1	4.858				4.858	2.371×10^0
30.0 MeV	8.509×10^1	3.768				3.768	4.741×10^0
40.0 MeV	1.003×10^2	3.218				3.218	7.631×10^0
80.0 MeV	1.527×10^2	2.415				2.415	2.244×10^1
100. MeV	1.764×10^2	2.271				2.271	3.100×10^1
140. MeV	2.218×10^2	2.115				2.115	4.934×10^1
200. MeV	2.868×10^2	2.025				2.025	7.844×10^1
300. MeV	3.917×10^2	1.991			0.000	1.991	1.284×10^2
318. MeV	4.105×10^2	1.990			0.000	1.990	*Minimum ionization*
400. MeV	4.945×10^2	1.997			0.000	1.997	1.786×10^2
800. MeV	8.995×10^2	2.071	0.000		0.000	2.072	3.753×10^2
1.00 GeV	1.101×10^3	2.106	0.000		0.000	2.106	4.710×10^2
1.40 GeV	1.502×10^3	2.161	0.000		0.001	2.163	6.583×10^2
2.00 GeV	2.103×10^3	2.223	0.001	0.000	0.001	2.225	9.316×10^2
3.00 GeV	3.104×10^3	2.293	0.001	0.001	0.001	2.296	1.374×10^3
4.00 GeV	4.104×10^3	2.341	0.001	0.001	0.002	2.346	1.804×10^3
8.00 GeV	8.105×10^3	2.453	0.004	0.003	0.004	2.464	3.463×10^3
10.0 GeV	1.011×10^4	2.487	0.005	0.005	0.005	2.501	4.268×10^3
14.0 GeV	1.411×10^4	2.536	0.007	0.008	0.007	2.557	5.849×10^3
20.0 GeV	2.011×10^4	2.585	0.011	0.013	0.009	2.619	8.166×10^3
30.0 GeV	3.011×10^4	2.639	0.018	0.022	0.013	2.693	1.193×10^4
40.0 GeV	4.011×10^4	2.675	0.026	0.033	0.018	2.752	1.560×10^4
80.0 GeV	8.011×10^4	2.759	0.059	0.080	0.034	2.932	2.966×10^4
100. GeV	1.001×10^5	2.785	0.077	0.105	0.042	3.010	3.639×10^4
140. GeV	1.401×10^5	2.824	0.113	0.158	0.059	3.154	4.937×10^4
200. GeV	2.001×10^5	2.864	0.171	0.242	0.084	3.361	6.779×10^4
300. GeV	3.001×10^5	2.910	0.269	0.384	0.125	3.689	9.617×10^4
400. GeV	4.001×10^5	2.943	0.372	0.532	0.167	4.014	1.221×10^5
800. GeV	8.001×10^5	3.022	0.799	1.149	0.337	5.308	2.085×10^5
1.00 TeV	1.000×10^6	3.048	1.019	1.468	0.424	5.960	2.441×10^5
1.05 TeV	1.046×10^6	3.053	1.069	1.540	0.444	6.107	*Muon critical energy*
1.40 TeV	1.400×10^6	3.088	1.463	2.102	0.601	7.255	3.048×10^5
2.00 TeV	2.000×10^6	3.130	2.146	3.075	0.871	9.221	3.780×10^5
3.00 TeV	3.000×10^6	3.178	3.290	4.693	1.334	12.496	4.708×10^5
4.00 TeV	4.000×10^6	3.213	4.454	6.335	1.806	15.808	5.418×10^5
8.00 TeV	8.000×10^6	3.299	9.169	12.946	3.769	29.183	7.253×10^5
10.0 TeV	1.000×10^7	3.327	11.553	16.275	4.780	35.937	7.869×10^5
14.0 TeV	1.400×10^7	3.371	16.312	22.910	6.864	49.457	8.814×10^5
20.0 TeV	2.000×10^7	3.417	23.512	32.916	10.067	69.912	9.830×10^5
30.0 TeV	3.000×10^7	3.471	35.500	49.566	15.625	104.162	1.099×10^6
40.0 TeV	4.000×10^7	3.510	47.553	66.269	21.330	138.662	1.182×10^6
80.0 TeV	8.000×10^7	3.605	95.899	133.136	45.276	277.917	1.382×10^6
100. TeV	1.000×10^8	3.637	120.142	166.609	57.689	348.078	1.446×10^6