

Muons in blood (ICRP)

	$\langle Z/A \rangle$	ρ [g/cm ³]	I [eV]	a	$k = m_s$	x_0	x_1	\bar{C}	δ_0
	0.54995	1.060	75.2	0.08492	3.5406	0.2239	2.8017	3.4581	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	7.888				7.888		7.006×10^{-1}	
14.0 MeV	5.616×10^1	6.153				6.153		1.281×10^0	
20.0 MeV	6.802×10^1	4.806				4.806		2.397×10^0	
30.0 MeV	8.509×10^1	3.728				3.728		4.793×10^0	
40.0 MeV	1.003×10^2	3.184				3.184		7.714×10^0	
80.0 MeV	1.527×10^2	2.390				2.390		2.268×10^1	
100. MeV	1.764×10^2	2.248				2.248		3.133×10^1	
140. MeV	2.218×10^2	2.094				2.094		4.985×10^1	
200. MeV	2.868×10^2	2.005				2.006		7.924×10^1	
300. MeV	3.917×10^2	1.972			0.000	1.972		1.297×10^2	
318. MeV	4.105×10^2	1.971			0.000	1.971			<i>Minimum ionization</i>
400. MeV	4.945×10^2	1.978			0.000	1.978		1.804×10^2	
800. MeV	8.995×10^2	2.053	0.000		0.000	2.053		3.789×10^2	
1.00 GeV	1.101×10^3	2.087	0.000		0.000	2.087		4.755×10^2	
1.40 GeV	1.502×10^3	2.142	0.000		0.001	2.143		6.645×10^2	
2.00 GeV	2.103×10^3	2.203	0.001	0.000	0.001	2.205		9.402×10^2	
3.00 GeV	3.104×10^3	2.273	0.001	0.001	0.001	2.276		1.386×10^3	
4.00 GeV	4.104×10^3	2.321	0.001	0.001	0.002	2.326		1.820×10^3	
8.00 GeV	8.105×10^3	2.432	0.004	0.003	0.004	2.443		3.493×10^3	
10.0 GeV	1.011×10^4	2.466	0.005	0.005	0.005	2.480		4.306×10^3	
14.0 GeV	1.411×10^4	2.514	0.007	0.008	0.007	2.536		5.900×10^3	
20.0 GeV	2.011×10^4	2.564	0.011	0.013	0.009	2.597		8.236×10^3	
30.0 GeV	3.011×10^4	2.617	0.018	0.023	0.013	2.671		1.203×10^4	
40.0 GeV	4.011×10^4	2.653	0.026	0.033	0.018	2.730		1.573×10^4	
80.0 GeV	8.011×10^4	2.736	0.060	0.080	0.034	2.910		2.990×10^4	
100. GeV	1.001×10^5	2.762	0.077	0.106	0.042	2.987		3.668×10^4	
140. GeV	1.401×10^5	2.800	0.114	0.159	0.059	3.132		4.975×10^4	
200. GeV	2.001×10^5	2.841	0.172	0.243	0.084	3.339		6.830×10^4	
300. GeV	3.001×10^5	2.886	0.271	0.386	0.125	3.669		9.685×10^4	
400. GeV	4.001×10^5	2.919	0.374	0.535	0.167	3.995		1.230×10^5	
800. GeV	8.001×10^5	2.997	0.803	1.156	0.337	5.294		2.096×10^5	
1.00 TeV	1.000×10^6	3.023	1.025	1.477	0.424	5.949		2.453×10^5	
1.03 TeV	1.032×10^6	3.027	1.061	1.528	0.438	6.054			<i>Muon critical energy</i>
1.40 TeV	1.400×10^6	3.062	1.472	2.115	0.601	7.250		3.061×10^5	
2.00 TeV	2.000×10^6	3.104	2.158	3.093	0.870	9.225		3.793×10^5	
3.00 TeV	3.000×10^6	3.152	3.309	4.721	1.333	12.515		4.720×10^5	
4.00 TeV	4.000×10^6	3.187	4.479	6.372	1.803	15.841		5.429×10^5	
8.00 TeV	8.000×10^6	3.272	9.219	13.021	3.764	29.276		7.258×10^5	
10.0 TeV	1.000×10^7	3.300	11.616	16.369	4.774	36.060		7.873×10^5	
14.0 TeV	1.400×10^7	3.343	16.401	23.042	6.856	49.641		8.815×10^5	
20.0 TeV	2.000×10^7	3.389	23.638	33.105	10.053	70.186		9.826×10^5	
30.0 TeV	3.000×10^7	3.442	35.689	49.850	15.604	104.585		1.099×10^6	
40.0 TeV	4.000×10^7	3.481	47.805	66.648	21.301	139.234		1.181×10^6	
80.0 TeV	8.000×10^7	3.575	96.402	133.898	45.210	279.085		1.380×10^6	
100. TeV	1.000×10^8	3.607	120.770	167.562	57.604	349.543		1.444×10^6	