

## Muons in testes (ICRP)

$\langle Z/A \rangle$	$\rho$ [g/cm <sup>3</sup> ]	$I$ [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
0.55108	1.040	75.0	0.08533	3.5428	0.2274	2.7988	3.4698	0.00
$T$	$p$ [MeV/c]	Ionization	Brems	Pair prod [MeV cm <sup>2</sup> /g]	Photonucl	Total	CSDA range [g/cm <sup>2</sup> ]	
10.0 MeV	$4.704 \times 10^1$	7.907				7.907	$6.989 \times 10^{-1}$	
14.0 MeV	$5.616 \times 10^1$	6.168				6.168	$1.278 \times 10^0$	
20.0 MeV	$6.802 \times 10^1$	4.817				4.817	$2.391 \times 10^0$	
30.0 MeV	$8.509 \times 10^1$	3.737				3.737	$4.781 \times 10^0$	
40.0 MeV	$1.003 \times 10^2$	3.191				3.191	$7.696 \times 10^0$	
80.0 MeV	$1.527 \times 10^2$	2.396				2.396	$2.262 \times 10^1$	
100. MeV	$1.764 \times 10^2$	2.253				2.253	$3.125 \times 10^1$	
140. MeV	$2.218 \times 10^2$	2.100				2.100	$4.973 \times 10^1$	
200. MeV	$2.868 \times 10^2$	2.011				2.011	$7.904 \times 10^1$	
300. MeV	$3.917 \times 10^2$	1.977			0.000	1.977	$1.293 \times 10^2$	
318. MeV	$4.105 \times 10^2$	1.976			0.000	1.977	<i>Minimum ionization</i>	
400. MeV	$4.945 \times 10^2$	1.983			0.000	1.984	$1.799 \times 10^2$	
800. MeV	$8.995 \times 10^2$	2.058	0.000		0.000	2.059	$3.779 \times 10^2$	
1.00 GeV	$1.101 \times 10^3$	2.092	0.000		0.000	2.093	$4.742 \times 10^2$	
1.40 GeV	$1.502 \times 10^3$	2.148	0.000		0.001	2.149	$6.627 \times 10^2$	
2.00 GeV	$2.103 \times 10^3$	2.209	0.001	0.000	0.001	2.211	$9.377 \times 10^2$	
3.00 GeV	$3.104 \times 10^3$	2.279	0.001	0.001	0.001	2.282	$1.382 \times 10^3$	
4.00 GeV	$4.104 \times 10^3$	2.327	0.001	0.001	0.002	2.332	$1.816 \times 10^3$	
8.00 GeV	$8.105 \times 10^3$	2.438	0.004	0.003	0.004	2.449	$3.484 \times 10^3$	
10.0 GeV	$1.011 \times 10^4$	2.472	0.005	0.005	0.005	2.487	$4.294 \times 10^3$	
14.0 GeV	$1.411 \times 10^4$	2.521	0.007	0.008	0.007	2.543	$5.884 \times 10^3$	
20.0 GeV	$2.011 \times 10^4$	2.570	0.011	0.013	0.009	2.604	$8.214 \times 10^3$	
30.0 GeV	$3.011 \times 10^4$	2.624	0.019	0.023	0.013	2.678	$1.200 \times 10^4$	
40.0 GeV	$4.011 \times 10^4$	2.660	0.026	0.033	0.018	2.737	$1.569 \times 10^4$	
80.0 GeV	$8.011 \times 10^4$	2.743	0.060	0.080	0.034	2.917	$2.982 \times 10^4$	
100. GeV	$1.001 \times 10^5$	2.769	0.077	0.106	0.042	2.995	$3.659 \times 10^4$	
140. GeV	$1.401 \times 10^5$	2.807	0.114	0.159	0.059	3.140	$4.963 \times 10^4$	
200. GeV	$2.001 \times 10^5$	2.848	0.172	0.243	0.084	3.347	$6.813 \times 10^4$	
300. GeV	$3.001 \times 10^5$	2.894	0.272	0.387	0.125	3.677	$9.661 \times 10^4$	
400. GeV	$4.001 \times 10^5$	2.926	0.375	0.536	0.167	4.004	$1.227 \times 10^5$	
800. GeV	$8.001 \times 10^5$	3.005	0.805	1.158	0.337	5.305	$2.092 \times 10^5$	
1.00 TeV	$1.000 \times 10^6$	3.031	1.027	1.479	0.424	5.960	$2.447 \times 10^5$	
1.03 TeV	$1.034 \times 10^6$	3.034	1.064	1.532	0.438	6.069	<i>Muon critical energy</i>	
1.40 TeV	$1.400 \times 10^6$	3.070	1.474	2.118	0.601	7.263	$3.054 \times 10^5$	
2.00 TeV	$2.000 \times 10^6$	3.112	2.162	3.098	0.870	9.241	$3.785 \times 10^5$	
3.00 TeV	$3.000 \times 10^6$	3.160	3.314	4.728	1.333	12.535	$4.711 \times 10^5$	
4.00 TeV	$4.000 \times 10^6$	3.195	4.486	6.381	1.803	15.866	$5.419 \times 10^5$	
8.00 TeV	$8.000 \times 10^6$	3.280	9.234	13.040	3.765	29.319	$7.245 \times 10^5$	
10.0 TeV	$1.000 \times 10^7$	3.308	11.635	16.394	4.775	36.112	$7.859 \times 10^5$	
14.0 TeV	$1.400 \times 10^7$	3.351	16.426	23.076	6.856	49.710	$8.799 \times 10^5$	
20.0 TeV	$2.000 \times 10^7$	3.397	23.675	33.154	10.054	70.282	$9.809 \times 10^5$	
30.0 TeV	$3.000 \times 10^7$	3.451	35.746	49.924	15.605	104.726	$1.097 \times 10^6$	
40.0 TeV	$4.000 \times 10^7$	3.489	47.881	66.747	21.303	139.420	$1.179 \times 10^6$	
80.0 TeV	$8.000 \times 10^7$	3.584	96.556	134.097	45.214	279.452	$1.378 \times 10^6$	
100. TeV	$1.000 \times 10^8$	3.616	120.964	167.811	57.610	350.001	$1.442 \times 10^6$	