

## Muons in cortical bone (ICRP)

	$\langle Z/A \rangle$	$\rho$ [g/cm <sup>3</sup> ]	$I$ [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
	0.52130	1.850	106.4	0.06198	3.5919	0.1161	3.0919	3.6488	0.00
$T$	$p$ [MeV/c]	Ionization	Brems	Pair prod	Photonucl	Total	CSDA range [g/cm <sup>2</sup> ]		
				[MeV cm <sup>2</sup> /g]					
10.0 MeV	$4.704 \times 10^1$	7.142				7.142		$7.765 \times 10^{-1}$	
14.0 MeV	$5.616 \times 10^1$	5.581				5.581		$1.417 \times 10^0$	
20.0 MeV	$6.802 \times 10^1$	4.366				4.366		$2.646 \times 10^0$	
30.0 MeV	$8.509 \times 10^1$	3.393				3.393		$5.281 \times 10^0$	
40.0 MeV	$1.003 \times 10^2$	2.900				2.901		$8.489 \times 10^0$	
80.0 MeV	$1.527 \times 10^2$	2.179				2.179		$2.489 \times 10^1$	
100. MeV	$1.764 \times 10^2$	2.044				2.044		$3.440 \times 10^1$	
140. MeV	$2.218 \times 10^2$	1.907				1.907		$5.475 \times 10^1$	
200. MeV	$2.868 \times 10^2$	1.830				1.830		$8.700 \times 10^1$	
300. MeV	$3.917 \times 10^2$	1.803			0.000	1.803		$1.422 \times 10^2$	
303. MeV	$3.950 \times 10^2$	1.803			0.000	1.803			<i>Minimum ionization</i>
400. MeV	$4.945 \times 10^2$	1.812			0.000	1.812		$1.976 \times 10^2$	
800. MeV	$8.995 \times 10^2$	1.888	0.000		0.000	1.889		$4.138 \times 10^2$	
1.00 GeV	$1.101 \times 10^3$	1.922	0.000		0.000	1.923		$5.187 \times 10^2$	
1.40 GeV	$1.502 \times 10^3$	1.976	0.000	0.000	0.001	1.978		$7.237 \times 10^2$	
2.00 GeV	$2.103 \times 10^3$	2.036	0.001	0.000	0.001	2.039		$1.022 \times 10^3$	
3.00 GeV	$3.104 \times 10^3$	2.105	0.001	0.001	0.001	2.108		$1.504 \times 10^3$	
4.00 GeV	$4.104 \times 10^3$	2.152	0.002	0.002	0.002	2.158		$1.973 \times 10^3$	
8.00 GeV	$8.105 \times 10^3$	2.260	0.005	0.005	0.004	2.274		$3.773 \times 10^3$	
10.0 GeV	$1.011 \times 10^4$	2.293	0.007	0.007	0.005	2.311		$4.645 \times 10^3$	
14.0 GeV	$1.411 \times 10^4$	2.340	0.010	0.011	0.006	2.368		$6.354 \times 10^3$	
20.0 GeV	$2.011 \times 10^4$	2.388	0.016	0.018	0.009	2.431		$8.853 \times 10^3$	
30.0 GeV	$3.011 \times 10^4$	2.439	0.026	0.031	0.013	2.510		$1.290 \times 10^4$	
40.0 GeV	$4.011 \times 10^4$	2.474	0.036	0.046	0.017	2.574		$1.683 \times 10^4$	
80.0 GeV	$8.011 \times 10^4$	2.553	0.082	0.111	0.033	2.780		$3.176 \times 10^4$	
100. GeV	$1.001 \times 10^5$	2.578	0.106	0.146	0.041	2.872		$3.884 \times 10^4$	
140. GeV	$1.401 \times 10^5$	2.614	0.157	0.219	0.058	3.048		$5.235 \times 10^4$	
200. GeV	$2.001 \times 10^5$	2.652	0.236	0.335	0.082	3.305		$7.125 \times 10^4$	
300. GeV	$3.001 \times 10^5$	2.696	0.371	0.530	0.123	3.720		$9.975 \times 10^4$	
400. GeV	$4.001 \times 10^5$	2.726	0.511	0.734	0.163	4.135		$1.252 \times 10^5$	
749. GeV	$7.492 \times 10^5$	2.794	1.018	1.467	0.309	5.588			<i>Muon critical energy</i>
800. GeV	$8.001 \times 10^5$	2.801	1.094	1.576	0.330	5.801		$2.065 \times 10^5$	
1.00 TeV	$1.000 \times 10^6$	2.825	1.394	2.009	0.415	6.644		$2.387 \times 10^5$	
1.40 TeV	$1.400 \times 10^6$	2.862	1.999	2.873	0.588	8.322		$2.924 \times 10^5$	
2.00 TeV	$2.000 \times 10^6$	2.902	2.926	4.195	0.851	10.875		$3.553 \times 10^5$	
3.00 TeV	$3.000 \times 10^6$	2.947	4.479	6.394	1.304	15.125		$4.330 \times 10^5$	
4.00 TeV	$4.000 \times 10^6$	2.980	6.056	8.622	1.765	19.423		$4.912 \times 10^5$	
8.00 TeV	$8.000 \times 10^6$	3.061	12.435	17.589	3.680	36.766		$6.384 \times 10^5$	
10.0 TeV	$1.000 \times 10^7$	3.088	15.657	22.103	4.667	45.515		$6.872 \times 10^5$	
14.0 TeV	$1.400 \times 10^7$	3.128	22.089	31.100	6.698	63.016		$7.616 \times 10^5$	
20.0 TeV	$2.000 \times 10^7$	3.172	31.812	44.665	9.817	89.467		$8.411 \times 10^5$	
30.0 TeV	$3.000 \times 10^7$	3.223	47.990	67.238	15.228	133.678		$9.319 \times 10^5$	
40.0 TeV	$4.000 \times 10^7$	3.259	64.243	89.878	20.778	178.159		$9.965 \times 10^5$	
80.0 TeV	$8.000 \times 10^7$	3.349	129.413	180.511	44.052	357.325		$1.152 \times 10^6$	
100. TeV	$1.000 \times 10^8$	3.378	162.080	225.877	56.108	447.445		$1.202 \times 10^6$	