

## Muons in carbon tetrachloride (CCl<sub>4</sub>)

	$\langle Z/A \rangle$	$\rho$ [g/cm <sup>3</sup> ]	$I$ [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
	0.49107	1.594	166.3	0.19018	3.0116	0.1773	2.9165	4.7712	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	$4.704 \times 10^1$	6.320				6.320			$8.817 \times 10^{-1}$
14.0 MeV	$5.616 \times 10^1$	4.951				4.951			$1.604 \times 10^0$
20.0 MeV	$6.802 \times 10^1$	3.883				3.883			$2.988 \times 10^0$
30.0 MeV	$8.509 \times 10^1$	3.025				3.025			$5.946 \times 10^0$
40.0 MeV	$1.003 \times 10^2$	2.590				2.590			$9.542 \times 10^0$
80.0 MeV	$1.527 \times 10^2$	1.957				1.957			$2.786 \times 10^1$
100. MeV	$1.764 \times 10^2$	1.843				1.843			$3.842 \times 10^1$
140. MeV	$2.218 \times 10^2$	1.729				1.730			$6.092 \times 10^1$
200. MeV	$2.868 \times 10^2$	1.669				1.669			$9.636 \times 10^1$
277. MeV	$3.673 \times 10^2$	1.654			0.000	1.655			<i>Minimum ionization</i>
300. MeV	$3.917 \times 10^2$	1.655			0.000	1.656			$1.567 \times 10^2$
400. MeV	$4.945 \times 10^2$	1.671	0.000		0.000	1.671			$2.168 \times 10^2$
800. MeV	$8.995 \times 10^2$	1.757	0.000		0.000	1.757			$4.501 \times 10^2$
1.00 GeV	$1.101 \times 10^3$	1.793	0.000		0.000	1.794			$5.627 \times 10^2$
1.40 GeV	$1.502 \times 10^3$	1.850	0.001	0.000	0.001	1.852			$7.820 \times 10^2$
2.00 GeV	$2.103 \times 10^3$	1.913	0.001	0.001	0.001	1.915			$1.100 \times 10^3$
3.00 GeV	$3.104 \times 10^3$	1.983	0.002	0.001	0.001	1.988			$1.612 \times 10^3$
4.00 GeV	$4.104 \times 10^3$	2.031	0.003	0.002	0.002	2.038			$2.109 \times 10^3$
8.00 GeV	$8.105 \times 10^3$	2.140	0.007	0.007	0.004	2.158			$4.010 \times 10^3$
10.0 GeV	$1.011 \times 10^4$	2.172	0.009	0.010	0.004	2.196			$4.928 \times 10^3$
14.0 GeV	$1.411 \times 10^4$	2.219	0.014	0.016	0.006	2.255			$6.724 \times 10^3$
20.0 GeV	$2.011 \times 10^4$	2.265	0.022	0.025	0.009	2.322			$9.345 \times 10^3$
30.0 GeV	$3.011 \times 10^4$	2.315	0.036	0.044	0.013	2.408			$1.357 \times 10^4$
40.0 GeV	$4.011 \times 10^4$	2.348	0.051	0.065	0.017	2.480			$1.766 \times 10^4$
80.0 GeV	$8.011 \times 10^4$	2.422	0.115	0.156	0.032	2.725			$3.302 \times 10^4$
100. GeV	$1.001 \times 10^5$	2.445	0.148	0.205	0.040	2.839			$4.021 \times 10^4$
140. GeV	$1.401 \times 10^5$	2.480	0.218	0.307	0.056	3.061			$5.378 \times 10^4$
200. GeV	$2.001 \times 10^5$	2.516	0.327	0.468	0.079	3.391			$7.240 \times 10^4$
300. GeV	$3.001 \times 10^5$	2.557	0.515	0.740	0.118	3.930			$9.977 \times 10^4$
400. GeV	$4.001 \times 10^5$	2.585	0.709	1.022	0.158	4.474			$1.236 \times 10^5$
538. GeV	$5.381 \times 10^5$	2.615	0.983	1.420	0.212	5.231			<i>Muon critical energy</i>
800. GeV	$8.001 \times 10^5$	2.656	1.513	2.183	0.319	6.671			$1.964 \times 10^5$
1.00 TeV	$1.000 \times 10^6$	2.679	1.927	2.780	0.400	7.786			$2.241 \times 10^5$
1.40 TeV	$1.400 \times 10^6$	2.713	2.759	3.970	0.568	10.010			$2.693 \times 10^5$
2.00 TeV	$2.000 \times 10^6$	2.751	4.034	5.790	0.821	13.397			$3.209 \times 10^5$
3.00 TeV	$3.000 \times 10^6$	2.794	6.166	8.816	1.257	19.034			$3.833 \times 10^5$
4.00 TeV	$4.000 \times 10^6$	2.825	8.331	11.879	1.701	24.736			$4.292 \times 10^5$
8.00 TeV	$8.000 \times 10^6$	2.901	17.076	24.201	3.543	47.722			$5.436 \times 10^5$
10.0 TeV	$1.000 \times 10^7$	2.926	21.491	30.400	4.491	59.308			$5.811 \times 10^5$
14.0 TeV	$1.400 \times 10^7$	2.964	30.303	42.759	6.440	82.467			$6.381 \times 10^5$
20.0 TeV	$2.000 \times 10^7$	3.005	43.618	61.386	9.431	117.440			$6.987 \times 10^5$
30.0 TeV	$3.000 \times 10^7$	3.053	65.758	92.394	14.612	175.818			$7.679 \times 10^5$
40.0 TeV	$4.000 \times 10^7$	3.087	87.991	123.491	19.923	234.492			$8.170 \times 10^5$
80.0 TeV	$8.000 \times 10^7$	3.172	177.123	247.966	42.154	470.416			$9.350 \times 10^5$
100. TeV	$1.000 \times 10^8$	3.200	221.794	310.268	53.656	588.918			$9.730 \times 10^5$