

**Table 080: Muons in Mercury**

Z	A [g/mol]	$\rho$ [g/cm <sup>3</sup> ]	I [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
80 (Hg)	200.59 (2)	13.546	800.0	0.11014	3.0519	0.2756	3.7275	5.9605	0.14
$T$	$p$ [MeV/c]	Ionization	Brems	Pair prod [MeV cm <sup>2</sup> /g]	Photonucl	Total	CSDA range [g/cm <sup>2</sup> ]		
10.0 MeV	$4.704 \times 10^1$	3.877				3.878	$1.500 \times 10^0$		
14.0 MeV	$5.616 \times 10^1$	3.095				3.095	$2.665 \times 10^0$		
20.0 MeV	$6.802 \times 10^1$	2.467				2.467	$4.858 \times 10^0$		
30.0 MeV	$8.509 \times 10^1$	1.951				1.951	$9.474 \times 10^0$		
40.0 MeV	$1.003 \times 10^2$	1.685				1.685	$1.502 \times 10^1$		
80.0 MeV	$1.527 \times 10^2$	1.295				1.295	$4.290 \times 10^1$		
100. MeV	$1.764 \times 10^2$	1.226				1.226	$5.880 \times 10^1$		
140. MeV	$2.218 \times 10^2$	1.161				1.161	$9.248 \times 10^1$		
200. MeV	$2.868 \times 10^2$	1.133				1.133	$1.450 \times 10^2$		
233. MeV	$3.220 \times 10^2$	1.130	0.000			1.131	<i>Minimum ionization</i>		
300. MeV	$3.917 \times 10^2$	1.137	0.000		0.000	1.137	$2.333 \times 10^2$		
400. MeV	$4.945 \times 10^2$	1.157	0.000		0.000	1.158	$3.204 \times 10^2$		
800. MeV	$8.995 \times 10^2$	1.241	0.001		0.000	1.242	$6.534 \times 10^2$		
1.00 GeV	$1.101 \times 10^3$	1.274	0.001		0.000	1.276	$8.122 \times 10^2$		
1.40 GeV	$1.502 \times 10^3$	1.326	0.002		0.001	1.329	$1.119 \times 10^3$		
2.00 GeV	$2.103 \times 10^3$	1.382	0.004	0.001	0.001	1.388	$1.560 \times 10^3$		
3.00 GeV	$3.104 \times 10^3$	1.445	0.007	0.003	0.001	1.457	$2.263 \times 10^3$		
4.00 GeV	$4.104 \times 10^3$	1.489	0.010	0.006	0.002	1.507	$2.937 \times 10^3$		
8.00 GeV	$8.105 \times 10^3$	1.588	0.025	0.022	0.003	1.638	$5.473 \times 10^3$		
10.0 GeV	$1.011 \times 10^4$	1.617	0.033	0.031	0.004	1.685	$6.676 \times 10^3$		
14.0 GeV	$1.411 \times 10^4$	1.660	0.050	0.051	0.005	1.766	$8.993 \times 10^3$		
20.0 GeV	$2.011 \times 10^4$	1.702	0.078	0.083	0.007	1.872	$1.229 \times 10^4$		
30.0 GeV	$3.011 \times 10^4$	1.747	0.128	0.146	0.011	2.033	$1.741 \times 10^4$		
40.0 GeV	$4.011 \times 10^4$	1.777	0.180	0.216	0.014	2.188	$2.215 \times 10^4$		
80.0 GeV	$8.011 \times 10^4$	1.844	0.408	0.522	0.028	2.802	$3.826 \times 10^4$		
100. GeV	$1.001 \times 10^5$	1.864	0.528	0.687	0.035	3.114	$4.503 \times 10^4$		
140. GeV	$1.401 \times 10^5$	1.893	0.775	1.027	0.048	3.744	$5.674 \times 10^4$		
143. GeV	$1.430 \times 10^5$	1.895	0.794	1.052	0.049	3.791	<i>Muon critical energy</i>		
200. GeV	$2.001 \times 10^5$	1.923	1.162	1.565	0.068	4.719	$7.099 \times 10^4$		
300. GeV	$3.001 \times 10^5$	1.957	1.821	2.464	0.103	6.345	$8.921 \times 10^4$		
400. GeV	$4.001 \times 10^5$	1.980	2.502	3.395	0.137	8.016	$1.032 \times 10^5$		
800. GeV	$8.001 \times 10^5$	2.037	5.312	7.213	0.277	14.841	$1.393 \times 10^5$		
1.00 TeV	$1.000 \times 10^6$	2.056	6.755	9.166	0.347	18.326	$1.514 \times 10^5$		
1.40 TeV	$1.400 \times 10^6$	2.084	9.645	13.060	0.492	25.283	$1.700 \times 10^5$		
2.00 TeV	$2.000 \times 10^6$	2.114	14.063	19.002	0.712	35.893	$1.898 \times 10^5$		
3.00 TeV	$3.000 \times 10^6$	2.149	21.436	28.874	1.088	53.548	$2.124 \times 10^5$		
4.00 TeV	$4.000 \times 10^6$	2.175	28.903	38.850	1.469	71.398	$2.286 \times 10^5$		
8.00 TeV	$8.000 \times 10^6$	2.236	58.993	78.945	3.050	143.227	$2.673 \times 10^5$		
10.0 TeV	$1.000 \times 10^7$	2.257	74.149	99.097	3.862	179.367	$2.798 \times 10^5$		
14.0 TeV	$1.400 \times 10^7$	2.288	104.379	139.309	5.526	251.504	$2.985 \times 10^5$		
20.0 TeV	$2.000 \times 10^7$	2.321	149.976	199.880	8.076	360.255	$3.184 \times 10^5$		
30.0 TeV	$3.000 \times 10^7$	2.360	225.885	300.651	12.479	541.377	$3.409 \times 10^5$		
40.0 TeV	$4.000 \times 10^7$	2.388	302.052	401.654	16.984	723.080	$3.568 \times 10^5$		
80.0 TeV	$8.000 \times 10^7$	2.457	607.127	805.944	35.784	1451.313	$3.951 \times 10^5$		
100. TeV	$1.000 \times 10^8$	2.479	759.900	1008.270	45.490	1816.141	$4.074 \times 10^5$		