

**Table 053: Muons in Iodine**

Z	A [g/mol]	$\rho$ [g/cm <sup>3</sup> ]	I [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
53 (I)	126.90447 (3)	4.930	491.0	0.23766	2.7276	0.0549	3.2596	5.9488	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	$4.704 \times 10^1$	4.499				4.499	$1.267 \times 10^0$		
14.0 MeV	$5.616 \times 10^1$	3.561				3.561	$2.276 \times 10^0$		
20.0 MeV	$6.802 \times 10^1$	2.818				2.818	$4.191 \times 10^0$		
30.0 MeV	$8.509 \times 10^1$	2.214				2.215	$8.247 \times 10^0$		
40.0 MeV	$1.003 \times 10^2$	1.907				1.907	$1.314 \times 10^1$		
80.0 MeV	$1.527 \times 10^2$	1.459				1.459	$3.785 \times 10^1$		
100. MeV	$1.764 \times 10^2$	1.380				1.380	$5.197 \times 10^1$		
140. MeV	$2.218 \times 10^2$	1.304				1.304	$8.192 \times 10^1$		
200. MeV	$2.868 \times 10^2$	1.267				1.268	$1.288 \times 10^2$		
242. MeV	$3.316 \times 10^2$	1.263				1.263	<i>Minimum ionization</i>		
300. MeV	$3.917 \times 10^2$	1.268	0.000		0.000	1.268	$2.078 \times 10^2$		
400. MeV	$4.945 \times 10^2$	1.287	0.000		0.000	1.287	$2.861 \times 10^2$		
800. MeV	$8.995 \times 10^2$	1.372	0.001		0.000	1.374	$5.866 \times 10^2$		
1.00 GeV	$1.101 \times 10^3$	1.407	0.001		0.000	1.408	$7.303 \times 10^2$		
1.40 GeV	$1.502 \times 10^3$	1.461	0.002	0.000	0.001	1.463	$1.009 \times 10^3$		
2.00 GeV	$2.103 \times 10^3$	1.519	0.003	0.001	0.001	1.524	$1.410 \times 10^3$		
3.00 GeV	$3.104 \times 10^3$	1.585	0.005	0.003	0.001	1.595	$2.050 \times 10^3$		
4.00 GeV	$4.104 \times 10^3$	1.631	0.007	0.005	0.002	1.645	$2.667 \times 10^3$		
8.00 GeV	$8.105 \times 10^3$	1.734	0.018	0.017	0.003	1.772	$5.000 \times 10^3$		
10.0 GeV	$1.011 \times 10^4$	1.764	0.024	0.024	0.004	1.817	$6.114 \times 10^3$		
14.0 GeV	$1.411 \times 10^4$	1.808	0.036	0.039	0.005	1.890	$8.272 \times 10^3$		
20.0 GeV	$2.011 \times 10^4$	1.852	0.056	0.064	0.008	1.980	$1.137 \times 10^4$		
30.0 GeV	$3.011 \times 10^4$	1.898	0.092	0.112	0.011	2.113	$1.626 \times 10^4$		
40.0 GeV	$4.011 \times 10^4$	1.928	0.130	0.164	0.015	2.237	$2.085 \times 10^4$		
80.0 GeV	$8.011 \times 10^4$	1.996	0.293	0.393	0.029	2.711	$3.706 \times 10^4$		
100. GeV	$1.001 \times 10^5$	2.016	0.379	0.516	0.036	2.948	$4.414 \times 10^4$		
140. GeV	$1.401 \times 10^5$	2.046	0.557	0.770	0.050	3.424	$5.672 \times 10^4$		
200. GeV	$2.000 \times 10^5$	2.076	0.834	1.171	0.071	4.154	<i>Muon critical energy</i>		
200. GeV	$2.001 \times 10^5$	2.076	0.835	1.172	0.071	4.155	$7.261 \times 10^4$		
300. GeV	$3.001 \times 10^5$	2.111	1.309	1.845	0.107	5.373	$9.373 \times 10^4$		
400. GeV	$4.001 \times 10^5$	2.136	1.799	2.541	0.142	6.620	$1.105 \times 10^5$		
800. GeV	$8.001 \times 10^5$	2.195	3.824	5.398	0.288	11.707	$1.553 \times 10^5$		
1.00 TeV	$1.000 \times 10^6$	2.215	4.865	6.860	0.362	14.302	$1.708 \times 10^5$		
1.40 TeV	$1.400 \times 10^6$	2.244	6.950	9.775	0.512	19.483	$1.946 \times 10^5$		
2.00 TeV	$2.000 \times 10^6$	2.276	10.140	14.224	0.741	27.382	$2.205 \times 10^5$		
3.00 TeV	$3.000 \times 10^6$	2.313	15.466	21.617	1.133	40.530	$2.503 \times 10^5$		
4.00 TeV	$4.000 \times 10^6$	2.339	20.863	29.089	1.531	53.823	$2.717 \times 10^5$		
8.00 TeV	$8.000 \times 10^6$	2.404	42.622	59.124	3.181	107.332	$3.233 \times 10^5$		
10.0 TeV	$1.000 \times 10^7$	2.425	53.587	74.222	4.028	134.264	$3.399 \times 10^5$		
14.0 TeV	$1.400 \times 10^7$	2.458	75.458	104.347	5.767	188.031	$3.650 \times 10^5$		
20.0 TeV	$2.000 \times 10^7$	2.493	108.458	149.728	8.432	269.112	$3.915 \times 10^5$		
30.0 TeV	$3.000 \times 10^7$	2.533	163.396	225.232	13.036	404.198	$4.216 \times 10^5$		
40.0 TeV	$4.000 \times 10^7$	2.562	218.532	300.914	17.748	539.758	$4.430 \times 10^5$		
80.0 TeV	$8.000 \times 10^7$	2.634	439.406	603.853	37.415	1083.309	$4.942 \times 10^5$		
100. TeV	$1.000 \times 10^8$	2.658	550.030	755.460	47.570	1355.719	$5.107 \times 10^5$		