Table 053: Muons in Iodine

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