Table 067: Muons in Holmium

Z	A [g/mol]	ρ [g/cm^3]	I [eV]	a	$k = m_s$	x_0	x_1	$\overline{C}$	δ_0
67 (Ho)	164.93032 (2)	8.795	650.0	0.24638	2.5726	0.0761	3.4782	5.9587	0.14

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	4.132				4.132	1.393×10^0
14.0 MeV	5.616×10^1	3.283				3.283	2.489×10^0
20.0 MeV	6.802×10^1	2.605				2.605	4.562×10^0
30.0 MeV	8.509×10^1	2.051				2.051	8.945×10^0
40.0 MeV	1.003×10^2	1.767				1.767	1.423×10^1
80.0 MeV	1.527×10^2	1.350				1.350	4.091×10^1
100. MeV	1.764×10^2	1.277				1.277	5.618×10^1
140. MeV	2.218×10^2	1.207				1.207	8.854×10^1
200. MeV	2.868×10^2	1.174				1.174	1.391×10^2
237. MeV	3.260×10^2	1.170	0.000			1.170	*Minimum ionization*
300. MeV	3.917×10^2	1.175	0.000		0.000	1.176	2.244×10^2
400. MeV	4.945×10^2	1.195	0.000		0.000	1.195	3.089×10^2
800. MeV	8.995×10^2	1.278	0.001		0.000	1.279	6.319×10^2
1.00 GeV	1.101×10^3	1.311	0.001		0.000	1.313	7.861×10^2
1.40 GeV	1.502×10^3	1.365	0.002	0.000	0.001	1.367	1.084×10^3
2.00 GeV	2.103×10^3	1.422	0.003	0.001	0.001	1.428	1.513×10^3
3.00 GeV	3.104×10^3	1.488	0.006	0.003	0.001	1.498	2.196×10^3
4.00 GeV	4.104×10^3	1.533	0.009	0.006	0.002	1.550	2.851×10^3
8.00 GeV	8.105×10^3	1.636	0.021	0.020	0.003	1.681	5.319×10^3
10.0 GeV	1.011×10^4	1.667	0.028	0.028	0.004	1.728	6.492×10^3
14.0 GeV	1.411×10^4	1.712	0.043	0.046	0.005	1.807	8.754×10^3
20.0 GeV	2.011×10^4	1.757	0.067	0.075	0.007	1.907	1.198×10^4
30.0 GeV	3.011×10^4	1.804	0.110	0.131	0.011	2.057	1.703×10^4
40.0 GeV	4.011×10^4	1.835	0.156	0.192	0.014	2.199	2.173×10^4
80.0 GeV	8.011×10^4	1.904	0.353	0.463	0.028	2.749	3.796×10^4
100. GeV	1.001×10^5	1.924	0.457	0.609	0.035	3.027	4.489×10^4
140. GeV	1.401×10^5	1.954	0.671	0.909	0.049	3.585	5.703×10^4
165. GeV	1.649×10^5	1.968	0.808	1.103	0.058	3.938	*Muon critical energy*
200. GeV	2.001×10^5	1.985	1.006	1.385	0.070	4.447	7.203×10^4
300. GeV	3.001×10^5	2.019	1.577	2.180	0.104	5.882	9.154×10^4
400. GeV	4.001×10^5	2.043	2.167	3.003	0.139	7.354	1.067×10^5
800. GeV	8.001×10^5	2.101	4.604	6.379	0.281	13.366	1.465×10^5
1.00 TeV	1.000×10^6	2.120	5.855	8.105	0.354	16.435	1.600×10^5
1.40 TeV	1.400×10^6	2.149	8.362	11.548	0.501	22.561	1.807×10^5
2.00 TeV	2.000×10^6	2.180	12.195	16.802	0.724	31.903	2.029×10^5
3.00 TeV	3.000×10^6	2.215	18.593	25.532	1.107	47.449	2.285×10^5
4.00 TeV	4.000×10^6	2.241	25.075	34.354	1.496	63.166	2.467×10^5
8.00 TeV	8.000×10^6	2.304	51.200	69.812	3.106	126.424	2.906×10^5
10.0 TeV	1.000×10^7	2.324	64.362	87.634	3.933	158.255	3.047×10^5
14.0 TeV	1.400×10^7	2.356	90.614	123.196	5.629	221.797	3.259×10^5
20.0 TeV	2.000×10^7	2.390	130.218	176.764	8.228	317.602	3.484×10^5
30.0 TeV	3.000×10^7	2.430	196.147	265.887	12.716	477.182	3.739×10^5
40.0 TeV	4.000×10^7	2.458	262.306	355.216	17.309	637.291	3.920×10^5
80.0 TeV	8.000×10^7	2.528	527.313	712.789	36.475	1279.108	4.354×10^5
100. TeV	1.000×10^8	2.551	660.030	891.740	46.370	1600.693	4.494×10^5