Table 068: Muons in Erbium

Z	A [g/mol]	ρ [g/cm^3]	I [eV]	a	$k = m_s$	x_0	x_1	$\overline{C}$	δ_0
68 (Er)	167.259 (3)	9.066	658.0	0.24823	2.5573	0.0648	3.4922	5.9521	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	4.125				4.125	1.396×10^0
14.0 MeV	5.616×10^1	3.277				3.277	2.494×10^0
20.0 MeV	6.802×10^1	2.601				2.601	4.571×10^0
30.0 MeV	8.509×10^1	2.048				2.048	8.959×10^0
40.0 MeV	1.003×10^2	1.764				1.764	1.425×10^1
80.0 MeV	1.527×10^2	1.349				1.349	4.097×10^1
100. MeV	1.764×10^2	1.275				1.275	5.626×10^1
140. MeV	2.218×10^2	1.205				1.205	8.867×10^1
200. MeV	2.868×10^2	1.172				1.172	1.393×10^2
237. MeV	3.260×10^2	1.168	0.000			1.168	*Minimum ionization*
300. MeV	3.917×10^2	1.173	0.000		0.000	1.174	2.248×10^2
400. MeV	4.945×10^2	1.192	0.000		0.000	1.193	3.093×10^2
800. MeV	8.995×10^2	1.276	0.001		0.000	1.277	6.329×10^2
1.00 GeV	1.101×10^3	1.309	0.001		0.000	1.311	7.874×10^2
1.40 GeV	1.502×10^3	1.362	0.002	0.000	0.001	1.365	1.086×10^3
2.00 GeV	2.103×10^3	1.420	0.003	0.001	0.001	1.426	1.516×10^3
3.00 GeV	3.104×10^3	1.486	0.006	0.003	0.001	1.496	2.199×10^3
4.00 GeV	4.104×10^3	1.531	0.009	0.006	0.002	1.548	2.856×10^3
8.00 GeV	8.105×10^3	1.634	0.022	0.020	0.003	1.680	5.326×10^3
10.0 GeV	1.011×10^4	1.666	0.029	0.028	0.004	1.727	6.500×10^3
14.0 GeV	1.411×10^4	1.711	0.044	0.046	0.005	1.807	8.762×10^3
20.0 GeV	2.011×10^4	1.755	0.068	0.076	0.007	1.907	1.199×10^4
30.0 GeV	3.011×10^4	1.802	0.112	0.132	0.011	2.059	1.703×10^4
40.0 GeV	4.011×10^4	1.834	0.158	0.195	0.014	2.202	2.173×10^4
80.0 GeV	8.011×10^4	1.903	0.358	0.469	0.028	2.759	3.792×10^4
100. GeV	1.001×10^5	1.924	0.464	0.617	0.035	3.041	4.482×10^4
140. GeV	1.401×10^5	1.954	0.681	0.921	0.049	3.606	5.689×10^4
163. GeV	1.630×10^5	1.967	0.809	1.102	0.057	3.935	*Muon critical energy*
200. GeV	2.001×10^5	1.985	1.020	1.403	0.070	4.479	7.180×10^4
300. GeV	3.001×10^5	2.019	1.600	2.208	0.104	5.932	9.115×10^4
400. GeV	4.001×10^5	2.043	2.199	3.042	0.139	7.424	1.062×10^5
800. GeV	8.001×10^5	2.101	4.670	6.461	0.281	13.515	1.456×10^5
1.00 TeV	1.000×10^6	2.120	5.939	8.210	0.353	16.623	1.589×10^5
1.40 TeV	1.400×10^6	2.148	8.482	11.697	0.500	22.830	1.793×10^5
2.00 TeV	2.000×10^6	2.179	12.371	17.018	0.723	32.294	2.013×10^5
3.00 TeV	3.000×10^6	2.215	18.861	25.861	1.106	48.044	2.266×10^5
4.00 TeV	4.000×10^6	2.241	25.436	34.796	1.494	63.968	2.446×10^5
8.00 TeV	8.000×10^6	2.304	51.934	70.711	3.102	128.053	2.879×10^5
10.0 TeV	1.000×10^7	2.324	65.284	88.762	3.928	160.300	3.018×10^5
14.0 TeV	1.400×10^7	2.356	91.911	124.781	5.622	224.673	3.228×10^5
20.0 TeV	2.000×10^7	2.390	132.080	179.038	8.218	321.728	3.450×10^5
30.0 TeV	3.000×10^7	2.430	198.951	269.308	12.700	483.391	3.702×10^5
40.0 TeV	4.000×10^7	2.458	266.054	359.789	17.286	645.589	3.880×10^5
80.0 TeV	8.000×10^7	2.528	534.841	721.955	36.427	1295.753	4.309×10^5
100. TeV	1.000×10^8	2.551	669.450	903.200	46.310	1621.513	4.447×10^5