

Muons in germanium (Ge)

Z	A [g/mol]	ρ [g/cm ³]	I [eV]	a	$k = m_s$	x_0	x_1	\bar{C}	δ_0
32 (Ge)	72.630(1)	5.323	350.0	0.07188	3.3306	0.3376	3.6096	5.1411	0.14
T	p [MeV/c]	Ionization	Brems	Pair prod [MeV cm ² /g]	Photonucl	Total	CSDA range [g/cm ²]		
10.0 MeV	4.704×10^1	5.033				5.033	1.124×10^0		
14.0 MeV	5.616×10^1	3.968				3.968	2.028×10^0		
20.0 MeV	6.802×10^1	3.129				3.129	3.749×10^0		
30.0 MeV	8.509×10^1	2.451				2.451	7.408×10^0		
40.0 MeV	1.003×10^2	2.105				2.105	1.184×10^1		
80.0 MeV	1.527×10^2	1.600				1.600	3.430×10^1		
100. MeV	1.764×10^2	1.510				1.510	4.720×10^1		
140. MeV	2.218×10^2	1.423				1.423	7.461×10^1		
200. MeV	2.868×10^2	1.378				1.378	1.176×10^2		
257. MeV	3.471×10^2	1.370			0.000	1.370	<i>Minimum ionization</i>		
300. MeV	3.917×10^2	1.372	0.000		0.000	1.373	1.905×10^2		
400. MeV	4.945×10^2	1.389	0.000		0.000	1.389	2.629×10^2		
800. MeV	8.995×10^2	1.471	0.001		0.000	1.472	5.424×10^2		
1.00 GeV	1.101×10^3	1.504	0.001		0.000	1.506	6.767×10^2		
1.40 GeV	1.502×10^3	1.558	0.001	0.000	0.001	1.560	9.375×10^2		
2.00 GeV	2.103×10^3	1.615	0.002	0.001	0.001	1.619	1.315×10^3		
3.00 GeV	3.104×10^3	1.681	0.003	0.002	0.001	1.688	1.919×10^3		
4.00 GeV	4.104×10^3	1.726	0.005	0.004	0.002	1.737	2.502×10^3		
8.00 GeV	8.105×10^3	1.828	0.012	0.012	0.003	1.856	4.722×10^3		
10.0 GeV	1.011×10^4	1.859	0.016	0.017	0.004	1.896	5.788×10^3		
14.0 GeV	1.411×10^4	1.903	0.024	0.027	0.006	1.960	7.861×10^3		
20.0 GeV	2.011×10^4	1.947	0.037	0.044	0.008	2.037	1.086×10^4		
30.0 GeV	3.011×10^4	1.994	0.061	0.076	0.012	2.144	1.564×10^4		
40.0 GeV	4.011×10^4	2.026	0.086	0.111	0.016	2.239	2.021×10^4		
80.0 GeV	8.011×10^4	2.096	0.195	0.266	0.030	2.588	3.679×10^4		
100. GeV	1.001×10^5	2.117	0.253	0.350	0.038	2.758	4.428×10^4		
140. GeV	1.401×10^5	2.148	0.371	0.522	0.052	3.095	5.796×10^4		
200. GeV	2.001×10^5	2.181	0.556	0.796	0.075	3.608	7.591×10^4		
297. GeV	2.976×10^5	2.217	0.865	1.242	0.111	4.435	<i>Muon critical energy</i>		
300. GeV	3.001×10^5	2.218	0.873	1.253	0.112	4.456	1.008×10^5		
400. GeV	4.001×10^5	2.244	1.200	1.728	0.149	5.322	1.213×10^5		
800. GeV	8.001×10^5	2.307	2.555	3.676	0.301	8.840	1.791×10^5		
1.00 TeV	1.000×10^6	2.327	3.252	4.674	0.378	10.632	1.997×10^5		
1.40 TeV	1.400×10^6	2.358	4.650	6.664	0.536	14.210	2.321×10^5		
2.00 TeV	2.000×10^6	2.392	6.790	9.705	0.776	19.663	2.679×10^5		
3.00 TeV	3.000×10^6	2.431	10.365	14.757	1.187	28.740	3.097×10^5		
4.00 TeV	4.000×10^6	2.458	13.990	19.866	1.604	37.920	3.399×10^5		
8.00 TeV	8.000×10^6	2.527	28.618	40.409	3.336	74.891	4.135×10^5		
10.0 TeV	1.000×10^7	2.549	35.994	50.739	4.226	93.509	4.374×10^5		
14.0 TeV	1.400×10^7	2.583	50.707	71.347	6.054	130.692	4.734×10^5		
20.0 TeV	2.000×10^7	2.620	72.916	102.396	8.856	186.789	5.116×10^5		
30.0 TeV	3.000×10^7	2.663	109.889	154.059	13.702	280.314	5.550×10^5		
40.0 TeV	4.000×10^7	2.694	147.006	205.851	18.665	374.217	5.858×10^5		
80.0 TeV	8.000×10^7	2.770	295.728	413.181	39.403	751.084	6.597×10^5		
100. TeV	1.000×10^8	2.795	370.230	516.950	50.120	940.096	6.835×10^5		