

Table 117: Muons in Bismuth germanate (BGO) $[(\text{Bi}_2\text{O}_3)_2(\text{GeO}_2)_3]$

$\langle Z/A \rangle$	ρ [g/cm ³]	I [eV]	a	$k = m_s$	x_0	x_1	\bar{C}	δ_0
0.42065	7.130	534.1	0.09569	3.0781	0.0456	3.7816	5.7409	0.00
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	4.503				4.503	1.259×10^0	
14.0 MeV	5.616×10^1	3.557				3.557	2.268×10^0	
20.0 MeV	6.802×10^1	2.811				2.812	4.186×10^0	
30.0 MeV	8.509×10^1	2.208				2.208	8.253×10^0	
40.0 MeV	1.003×10^2	1.901				1.901	1.316×10^1	
80.0 MeV	1.527×10^2	1.452				1.452	3.797×10^1	
100. MeV	1.764×10^2	1.371				1.371	5.218×10^1	
140. MeV	2.218×10^2	1.294				1.294	8.234×10^1	
200. MeV	2.868×10^2	1.256				1.256	1.296×10^2	
247. MeV	3.366×10^2	1.251	0.000			1.251	<i>Minimum ionization</i>	
300. MeV	3.917×10^2	1.255	0.000		0.000	1.255	2.094×10^2	
400. MeV	4.945×10^2	1.273	0.000		0.000	1.274	2.885×10^2	
800. MeV	8.995×10^2	1.356	0.001		0.000	1.358	5.924×10^2	
1.00 GeV	1.101×10^3	1.390	0.001		0.000	1.391	7.378×10^2	
1.40 GeV	1.502×10^3	1.443	0.002		0.001	1.445	1.020×10^3	
2.00 GeV	2.103×10^3	1.501	0.003	0.001	0.001	1.506	1.426×10^3	
3.00 GeV	3.104×10^3	1.566	0.005	0.003	0.001	1.576	2.074×10^3	
4.00 GeV	4.104×10^3	1.611	0.008	0.005	0.002	1.626	2.698×10^3	
8.00 GeV	8.105×10^3	1.714	0.020	0.018	0.003	1.755	5.057×10^3	
10.0 GeV	1.011×10^4	1.745	0.026	0.025	0.004	1.801	6.181×10^3	
14.0 GeV	1.411×10^4	1.790	0.040	0.041	0.006	1.876	8.356×10^3	
20.0 GeV	2.011×10^4	1.834	0.062	0.067	0.008	1.971	1.147×10^4	
30.0 GeV	3.011×10^4	1.881	0.102	0.117	0.011	2.113	1.637×10^4	
40.0 GeV	4.011×10^4	1.912	0.144	0.173	0.015	2.245	2.096×10^4	
80.0 GeV	8.011×10^4	1.982	0.326	0.418	0.029	2.756	3.700×10^4	
100. GeV	1.001×10^5	2.003	0.422	0.551	0.036	3.013	4.394×10^4	
140. GeV	1.401×10^5	2.034	0.620	0.823	0.050	3.529	5.620×10^4	
185. GeV	1.849×10^5	2.059	0.849	1.144	0.066	4.120	<i>Muon critical energy</i>	
200. GeV	2.001×10^5	2.066	0.929	1.255	0.071	4.323	7.154×10^4	
300. GeV	3.001×10^5	2.102	1.456	1.977	0.107	5.644	9.174×10^4	
400. GeV	4.001×10^5	2.127	2.001	2.726	0.143	6.998	1.076×10^5	
800. GeV	8.001×10^5	2.187	4.251	5.795	0.289	12.523	1.498×10^5	
1.00 TeV	1.000×10^6	2.206	5.407	7.366	0.363	15.343	1.642×10^5	
1.40 TeV	1.400×10^6	2.236	7.722	10.497	0.514	20.970	1.864×10^5	
2.00 TeV	2.000×10^6	2.268	11.262	15.277	0.743	29.552	2.104×10^5	
3.00 TeV	3.000×10^6	2.305	17.170	23.219	1.137	43.832	2.380×10^5	
4.00 TeV	4.000×10^6	2.332	23.155	31.246	1.537	58.271	2.578×10^5	
8.00 TeV	8.000×10^6	2.397	47.280	63.511	3.194	116.384	3.054×10^5	
10.0 TeV	1.000×10^7	2.418	59.434	79.730	4.046	145.629	3.207×10^5	
14.0 TeV	1.400×10^7	2.451	83.676	112.089	5.793	204.011	3.438×10^5	
20.0 TeV	2.000×10^7	2.486	120.247	160.836	8.472	292.043	3.683×10^5	
30.0 TeV	3.000×10^7	2.527	181.129	241.939	13.104	438.700	3.960×10^5	
40.0 TeV	4.000×10^7	2.557	242.222	323.233	17.846	585.859	4.157×10^5	
80.0 TeV	8.000×10^7	2.629	486.939	648.634	37.654	1175.858	4.629×10^5	
100. TeV	1.000×10^8	2.653	609.495	811.482	47.887	1471.519	4.781×10^5	