

Muons in bismuth silicate (BSO) $[(\text{Bi}_2\text{O}_3)_2(\text{SiO}_2)_3]$

	$\langle Z/A \rangle$	ρ [g/cm ³]	I [eV]	a	$k = m_s$	x_0	x_1	\bar{C}	δ_0
	0.42260	7.120	519.2	0.21867	3.0000	0.4077	3.0557	5.9374	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	4.546				4.546	1.246×10^0		
14.0 MeV	5.616×10^1	3.590				3.590	2.246×10^0		
20.0 MeV	6.802×10^1	2.837				2.837	4.147×10^0		
30.0 MeV	8.509×10^1	2.228				2.228	8.177×10^0		
40.0 MeV	1.003×10^2	1.917				1.917	1.305×10^1		
80.0 MeV	1.527×10^2	1.466				1.466	3.763×10^1		
100. MeV	1.764×10^2	1.387				1.387	5.169×10^1		
140. MeV	2.218×10^2	1.313				1.313	8.147×10^1		
200. MeV	2.868×10^2	1.281				1.281	1.279×10^2		
229. MeV	3.179×10^2	1.279				1.279	<i>Minimum ionization</i>		
300. MeV	3.917×10^2	1.286	0.000		0.000	1.287	2.060×10^2		
400. MeV	4.945×10^2	1.308	0.000		0.000	1.309	2.830×10^2		
800. MeV	8.995×10^2	1.399	0.001		0.000	1.401	5.779×10^2		
1.00 GeV	1.101×10^3	1.435	0.001		0.000	1.436	7.189×10^2		
1.40 GeV	1.502×10^3	1.490	0.002		0.001	1.493	9.918×10^2		
2.00 GeV	2.103×10^3	1.549	0.003	0.001	0.001	1.554	1.385×10^3		
3.00 GeV	3.104×10^3	1.615	0.006	0.003	0.001	1.625	2.013×10^3		
4.00 GeV	4.104×10^3	1.660	0.008	0.005	0.002	1.675	2.619×10^3		
8.00 GeV	8.105×10^3	1.760	0.020	0.018	0.003	1.802	4.912×10^3		
10.0 GeV	1.011×10^4	1.790	0.027	0.025	0.004	1.847	6.009×10^3		
14.0 GeV	1.411×10^4	1.832	0.041	0.041	0.006	1.921	8.131×10^3		
20.0 GeV	2.011×10^4	1.874	0.064	0.068	0.008	2.014	1.118×10^4		
30.0 GeV	3.011×10^4	1.918	0.105	0.120	0.011	2.155	1.598×10^4		
40.0 GeV	4.011×10^4	1.947	0.148	0.176	0.015	2.287	2.048×10^4		
80.0 GeV	8.011×10^4	2.012	0.335	0.427	0.029	2.804	3.624×10^4		
100. GeV	1.001×10^5	2.032	0.434	0.562	0.036	3.066	4.306×10^4		
140. GeV	1.401×10^5	2.062	0.636	0.841	0.050	3.591	5.511×10^4		
183. GeV	1.833×10^5	2.085	0.864	1.156	0.066	4.172	<i>Muon critical energy</i>		
200. GeV	2.001×10^5	2.093	0.954	1.282	0.071	4.402	7.018×10^4		
300. GeV	3.001×10^5	2.128	1.496	2.020	0.107	5.753	9.001×10^4		
400. GeV	4.001×10^5	2.153	2.056	2.785	0.143	7.138	1.056×10^5		
800. GeV	8.001×10^5	2.213	4.366	5.922	0.289	12.792	1.469×10^5		
1.00 TeV	1.000×10^6	2.233	5.553	7.527	0.363	15.677	1.610×10^5		
1.40 TeV	1.400×10^6	2.263	7.930	10.728	0.514	21.436	1.827×10^5		
2.00 TeV	2.000×10^6	2.295	11.564	15.612	0.744	30.217	2.062×10^5		
3.00 TeV	3.000×10^6	2.332	17.630	23.729	1.137	44.830	2.332×10^5		
4.00 TeV	4.000×10^6	2.359	23.774	31.932	1.537	59.604	2.525×10^5		
8.00 TeV	8.000×10^6	2.424	48.539	64.905	3.196	119.066	2.991×10^5		
10.0 TeV	1.000×10^7	2.446	61.015	81.478	4.048	148.989	3.140×10^5		
14.0 TeV	1.400×10^7	2.479	85.900	114.546	5.797	208.724	3.366×10^5		
20.0 TeV	2.000×10^7	2.514	123.439	164.360	8.478	298.793	3.605×10^5		
30.0 TeV	3.000×10^7	2.555	185.930	247.239	13.114	448.840	3.876×10^5		
40.0 TeV	4.000×10^7	2.585	248.637	330.313	17.861	599.397	4.069×10^5		
80.0 TeV	8.000×10^7	2.658	499.816	662.835	37.691	1203.001	4.530×10^5		
100. TeV	1.000×10^8	2.682	625.606	829.246	47.937	1505.472	4.679×10^5		