Table 031: Muons in Gallium

Z	A [g/mol]	ρ [g/cm^3]	I [eV]	a	$k = m_s$	x_0	x_1	$\overline{C}$	δ_0
31 (Ga)	69.723 (1)	5.904	334.0	0.09440	3.1314	0.2267	3.5434	4.9353	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	5.119				5.119	1.104×10^0
14.0 MeV	5.616×10^1	4.034				4.034	1.993×10^0
20.0 MeV	6.802×10^1	3.179				3.179	3.687×10^0
30.0 MeV	8.509×10^1	2.488				2.488	7.290×10^0
40.0 MeV	1.003×10^2	2.136				2.136	1.166×10^1
80.0 MeV	1.527×10^2	1.620				1.620	3.382×10^1
100. MeV	1.764×10^2	1.528				1.528	4.656×10^1
140. MeV	2.218×10^2	1.436				1.436	7.369×10^1
200. MeV	2.868×10^2	1.388				1.389	1.163×10^2
263. MeV	3.527×10^2	1.379			0.000	1.379	*Minimum ionization*
300. MeV	3.917×10^2	1.381			0.000	1.381	1.887×10^2
400. MeV	4.945×10^2	1.396	0.000		0.000	1.397	2.608×10^2
800. MeV	8.995×10^2	1.477	0.001		0.000	1.478	5.390×10^2
1.00 GeV	1.101×10^3	1.510	0.001		0.000	1.512	6.727×10^2
1.40 GeV	1.502×10^3	1.564	0.001	0.000	0.001	1.566	9.325×10^2
2.00 GeV	2.103×10^3	1.622	0.002	0.001	0.001	1.625	1.308×10^3
3.00 GeV	3.104×10^3	1.687	0.003	0.002	0.001	1.694	1.910×10^3
4.00 GeV	4.104×10^3	1.733	0.005	0.004	0.002	1.743	2.491×10^3
8.00 GeV	8.105×10^3	1.836	0.012	0.012	0.003	1.863	4.702×10^3
10.0 GeV	1.011×10^4	1.867	0.015	0.016	0.004	1.904	5.764×10^3
14.0 GeV	1.411×10^4	1.912	0.024	0.026	0.006	1.968	7.829×10^3
20.0 GeV	2.011×10^4	1.957	0.037	0.043	0.008	2.045	1.082×10^4
30.0 GeV	3.011×10^4	2.005	0.060	0.074	0.012	2.151	1.558×10^4
40.0 GeV	4.011×10^4	2.036	0.085	0.109	0.016	2.246	2.013×10^4
80.0 GeV	8.011×10^4	2.107	0.191	0.261	0.030	2.591	3.668×10^4
100. GeV	1.001×10^5	2.129	0.248	0.343	0.038	2.758	4.416×10^4
140. GeV	1.401×10^5	2.161	0.364	0.512	0.053	3.090	5.785×10^4
200. GeV	2.001×10^5	2.194	0.545	0.780	0.075	3.595	7.584×10^4
300. GeV	3.001×10^5	2.231	0.856	1.230	0.112	4.429	1.009×10^5
304. GeV	3.043×10^5	2.232	0.870	1.249	0.114	4.465	*Muon critical energy*
400. GeV	4.001×10^5	2.257	1.177	1.695	0.149	5.280	1.215×10^5
800. GeV	8.001×10^5	2.321	2.507	3.607	0.302	8.737	1.798×10^5
1.00 TeV	1.000×10^6	2.341	3.190	4.586	0.380	10.498	2.007×10^5
1.40 TeV	1.400×10^6	2.373	4.562	6.540	0.538	14.014	2.336×10^5
2.00 TeV	2.000×10^6	2.407	6.661	9.525	0.778	19.372	2.698×10^5
3.00 TeV	3.000×10^6	2.446	10.169	14.484	1.190	28.291	3.123×10^5
4.00 TeV	4.000×10^6	2.474	13.727	19.499	1.609	37.310	3.430×10^5
8.00 TeV	8.000×10^6	2.543	28.082	39.666	3.347	73.638	4.179×10^5
10.0 TeV	1.000×10^7	2.565	35.321	49.806	4.240	91.933	4.421×10^5
14.0 TeV	1.400×10^7	2.600	49.760	70.036	6.074	128.470	4.788×10^5
20.0 TeV	2.000×10^7	2.637	71.556	100.516	8.886	183.596	5.177×10^5
30.0 TeV	3.000×10^7	2.680	107.841	151.232	13.750	275.504	5.618×10^5
40.0 TeV	4.000×10^7	2.711	144.268	202.076	18.731	367.787	5.931×10^5
80.0 TeV	8.000×10^7	2.788	290.229	405.605	39.550	738.173	6.684×10^5
100. TeV	1.000×10^8	2.813	363.350	507.470	50.310	923.944	6.925×10^5