Table 035: Muons in Bromine gas (Br_2)

Z	A [g/mol]	ρ [g/cm^3]	I [eV]	a	$k = m_s$	x_0	x_1	$\overline{C}$	δ_0
35 (Br)	79.904 (1)	7.072×10^{-3}	343.0	0.06335	3.4670	1.5262	4.9899	11.7307	0.00

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	5.027				5.027	1.125×10^0
14.0 MeV	5.616×10^1	3.963				3.963	2.030×10^0
20.0 MeV	6.802×10^1	3.125				3.125	3.753×10^0
30.0 MeV	8.509×10^1	2.448				2.448	7.418×10^0
40.0 MeV	1.003×10^2	2.103				2.103	1.185×10^1
80.0 MeV	1.527×10^2	1.601				1.601	3.432×10^1
100. MeV	1.764×10^2	1.513				1.513	4.720×10^1
140. MeV	2.218×10^2	1.429				1.429	7.453×10^1
200. MeV	2.868×10^2	1.391				1.391	1.172×10^2
232. MeV	3.210×10^2	1.388				1.388	*Minimum ionization*
300. MeV	3.917×10^2	1.396	0.000		0.000	1.396	1.892×10^2
400. MeV	4.945×10^2	1.423	0.000		0.000	1.423	2.601×10^2
800. MeV	8.995×10^2	1.537	0.001		0.000	1.538	5.300×10^2
1.00 GeV	1.101×10^3	1.584	0.001		0.000	1.585	6.580×10^2
1.40 GeV	1.502×10^3	1.660	0.001	0.000	0.001	1.662	9.042×10^2
2.00 GeV	2.103×10^3	1.745	0.002	0.001	0.001	1.749	1.256×10^3
3.00 GeV	3.104×10^3	1.844	0.004	0.002	0.001	1.852	1.810×10^3
4.00 GeV	4.104×10^3	1.916	0.005	0.004	0.002	1.927	2.339×10^3
8.00 GeV	8.105×10^3	2.077	0.013	0.013	0.003	2.106	4.314×10^3
10.0 GeV	1.011×10^4	2.125	0.017	0.018	0.004	2.164	5.250×10^3
14.0 GeV	1.411×10^4	2.193	0.026	0.029	0.006	2.254	7.059×10^3
20.0 GeV	2.011×10^4	2.260	0.040	0.047	0.008	2.356	9.661×10^3
30.0 GeV	3.011×10^4	2.329	0.066	0.082	0.012	2.490	1.379×10^4
40.0 GeV	4.011×10^4	2.375	0.093	0.120	0.015	2.604	1.771×10^4
80.0 GeV	8.011×10^4	2.475	0.211	0.287	0.030	3.003	3.198×10^4
100. GeV	1.001×10^5	2.504	0.273	0.377	0.037	3.192	3.844×10^4
140. GeV	1.401×10^5	2.545	0.401	0.563	0.052	3.562	5.029×10^4
200. GeV	2.001×10^5	2.587	0.601	0.858	0.074	4.120	6.594×10^4
300. GeV	3.001×10^5	2.632	0.943	1.351	0.111	5.037	8.786×10^4
327. GeV	3.267×10^5	2.641	1.036	1.485	0.121	5.284	*Muon critical energy*
400. GeV	4.001×10^5	2.663	1.296	1.862	0.148	5.969	1.061×10^5
800. GeV	8.001×10^5	2.733	2.758	3.959	0.299	9.751	1.580×10^5
1.00 TeV	1.000×10^6	2.756	3.510	5.033	0.376	11.675	1.767×10^5
1.40 TeV	1.400×10^6	2.788	5.018	7.176	0.532	15.516	2.064×10^5
2.00 TeV	2.000×10^6	2.823	7.325	10.448	0.770	21.368	2.392×10^5
3.00 TeV	3.000×10^6	2.862	11.181	15.886	1.178	31.108	2.778×10^5
4.00 TeV	4.000×10^6	2.890	15.090	21.384	1.592	40.957	3.057×10^5
8.00 TeV	8.000×10^6	2.958	30.860	43.490	3.310	80.619	3.740×10^5
10.0 TeV	1.000×10^7	2.981	38.811	54.604	4.193	100.590	3.962×10^5
14.0 TeV	1.400×10^7	3.015	54.670	76.779	6.006	140.471	4.297×10^5
20.0 TeV	2.000×10^7	3.051	78.608	110.188	8.786	200.634	4.652×10^5
30.0 TeV	3.000×10^7	3.094	118.459	165.776	13.592	300.922	5.057×10^5
40.0 TeV	4.000×10^7	3.125	158.463	221.502	18.513	401.603	5.343×10^5
80.0 TeV	8.000×10^7	3.200	318.748	444.574	39.070	805.593	6.033×10^5
100. TeV	1.000×10^8	3.225	399.040	556.220	49.690	1008.176	6.254×10^5