

Table 164: Muons in Freon-13B1 (CF₃Br)

$\langle Z/A \rangle$	ρ [g/cm ³]	I [eV]	a	$k = m_s$	x_0	x_1	\bar{C}	δ_0
0.45665	1.500	210.5	0.03925	3.7194	0.3522	3.7554	5.3555	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	5.678				5.678	9.844×10^{-1}	
14.0 MeV	5.616×10^1	4.454				4.454	1.788×10^0	
20.0 MeV	6.802×10^1	3.498				3.498	3.325×10^0	
30.0 MeV	8.509×10^1	2.729				2.729	6.606×10^0	
40.0 MeV	1.003×10^2	2.339				2.339	1.059×10^1	
80.0 MeV	1.527×10^2	1.771				1.771	3.086×10^1	
100. MeV	1.764×10^2	1.671				1.671	4.251×10^1	
140. MeV	2.218×10^2	1.574				1.574	6.729×10^1	
200. MeV	2.868×10^2	1.524				1.524	1.062×10^2	
266. MeV	3.567×10^2	1.513			0.000	1.513	<i>Minimum ionization</i>	
300. MeV	3.917×10^2	1.515			0.000	1.515	1.721×10^2	
400. MeV	4.945×10^2	1.531	0.000		0.000	1.532	2.378×10^2	
800. MeV	8.995×10^2	1.616	0.000		0.000	1.616	4.919×10^2	
1.00 GeV	1.101×10^3	1.650	0.001		0.000	1.651	6.142×10^2	
1.40 GeV	1.502×10^3	1.705	0.001	0.000	0.001	1.707	8.523×10^2	
2.00 GeV	2.103×10^3	1.765	0.001	0.001	0.001	1.768	1.197×10^3	
3.00 GeV	3.104×10^3	1.833	0.002	0.002	0.001	1.838	1.751×10^3	
4.00 GeV	4.104×10^3	1.879	0.004	0.003	0.002	1.887	2.288×10^3	
8.00 GeV	8.105×10^3	1.984	0.009	0.009	0.004	2.005	4.336×10^3	
10.0 GeV	1.011×10^4	2.016	0.012	0.012	0.004	2.044	5.324×10^3	
14.0 GeV	1.411×10^4	2.061	0.018	0.019	0.006	2.104	7.251×10^3	
20.0 GeV	2.011×10^4	2.106	0.027	0.032	0.008	2.174	1.005×10^4	
30.0 GeV	3.011×10^4	2.154	0.045	0.055	0.012	2.267	1.455×10^4	
40.0 GeV	4.011×10^4	2.187	0.063	0.081	0.016	2.347	1.889×10^4	
80.0 GeV	8.011×10^4	2.259	0.143	0.194	0.032	2.628	3.496×10^4	
100. GeV	1.001×10^5	2.281	0.185	0.256	0.039	2.761	4.239×10^4	
140. GeV	1.401×10^5	2.313	0.272	0.382	0.055	3.023	5.623×10^4	
200. GeV	2.001×10^5	2.347	0.408	0.582	0.078	3.416	7.489×10^4	
300. GeV	3.001×10^5	2.385	0.641	0.918	0.116	4.061	1.017×10^5	
400. GeV	4.001×10^5	2.412	0.882	1.267	0.155	4.717	1.245×10^5	
418. GeV	4.177×10^5	2.416	0.925	1.329	0.162	4.833	<i>Muon critical energy</i>	
800. GeV	8.001×10^5	2.478	1.880	2.702	0.314	7.373	1.918×10^5	
1.00 TeV	1.000×10^6	2.499	2.393	3.438	0.394	8.724	2.167×10^5	
1.40 TeV	1.400×10^6	2.531	3.424	4.905	0.559	11.419	2.567×10^5	
2.00 TeV	2.000×10^6	2.566	5.002	7.147	0.809	15.524	3.016×10^5	
3.00 TeV	3.000×10^6	2.606	7.640	10.874	1.238	22.358	3.550×10^5	
4.00 TeV	4.000×10^6	2.635	10.317	14.644	1.674	29.270	3.940×10^5	
8.00 TeV	8.000×10^6	2.706	21.120	29.807	3.486	57.120	4.901×10^5	
10.0 TeV	1.000×10^7	2.729	26.570	37.433	4.418	71.151	5.214×10^5	
14.0 TeV	1.400×10^7	2.764	37.441	52.645	6.334	99.185	5.688×10^5	
20.0 TeV	2.000×10^7	2.803	53.855	75.567	9.275	141.501	6.192×10^5	
30.0 TeV	3.000×10^7	2.847	81.181	113.708	14.368	212.105	6.765×10^5	
40.0 TeV	4.000×10^7	2.879	108.618	151.949	19.587	283.035	7.172×10^5	
80.0 TeV	8.000×10^7	2.958	218.569	305.033	41.431	567.991	8.150×10^5	
100. TeV	1.000×10^8	2.983	273.654	381.653	52.731	711.022	8.464×10^5	