

**Table 162: Muons in Freon-12B2 (CF<sub>2</sub>Br<sub>2</sub>)**

	$\langle Z/A \rangle$	$\rho$ [g/cm <sup>3</sup> ]	$I$ [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
	0.44901	1.800	284.9	0.05144	3.5565	0.3406	3.7956	5.7976	0.00
$T$	$p$ [MeV/c]	Ionization	Brems	Pair prod	Photonucl	Total	CSDA range [g/cm <sup>2</sup> ]		
				[MeV cm <sup>2</sup> /g]					
10.0 MeV	$4.704 \times 10^1$	5.330				5.330	$1.053 \times 10^0$		
14.0 MeV	$5.616 \times 10^1$	4.190				4.190	$1.908 \times 10^0$		
20.0 MeV	$6.802 \times 10^1$	3.297				3.297	$3.540 \times 10^0$		
30.0 MeV	$8.509 \times 10^1$	2.577				2.577	$7.017 \times 10^0$		
40.0 MeV	$1.003 \times 10^2$	2.212				2.212	$1.123 \times 10^1$		
80.0 MeV	$1.527 \times 10^2$	1.680				1.680	$3.263 \times 10^1$		
100. MeV	$1.764 \times 10^2$	1.586				1.586	$4.491 \times 10^1$		
140. MeV	$2.218 \times 10^2$	1.496				1.496	$7.099 \times 10^1$		
200. MeV	$2.868 \times 10^2$	1.452				1.452	$1.118 \times 10^2$		
252. MeV	$3.421 \times 10^2$	1.445			0.000	1.445	<i>Minimum ionization</i>		
300. MeV	$3.917 \times 10^2$	1.448			0.000	1.449	$1.809 \times 10^2$		
400. MeV	$4.945 \times 10^2$	1.467	0.000		0.000	1.468	$2.496 \times 10^2$		
800. MeV	$8.995 \times 10^2$	1.556	0.000		0.000	1.557	$5.139 \times 10^2$		
1.00 GeV	$1.101 \times 10^3$	1.592	0.001		0.000	1.593	$6.409 \times 10^2$		
1.40 GeV	$1.502 \times 10^3$	1.648	0.001	0.000	0.001	1.650	$8.874 \times 10^2$		
2.00 GeV	$2.103 \times 10^3$	1.709	0.002	0.001	0.001	1.713	$1.244 \times 10^3$		
3.00 GeV	$3.104 \times 10^3$	1.778	0.003	0.002	0.001	1.784	$1.815 \times 10^3$		
4.00 GeV	$4.104 \times 10^3$	1.825	0.004	0.003	0.002	1.835	$2.367 \times 10^3$		
8.00 GeV	$8.105 \times 10^3$	1.932	0.011	0.011	0.003	1.957	$4.470 \times 10^3$		
10.0 GeV	$1.011 \times 10^4$	1.964	0.014	0.015	0.004	1.998	$5.481 \times 10^3$		
14.0 GeV	$1.411 \times 10^4$	2.010	0.022	0.024	0.006	2.062	$7.451 \times 10^3$		
20.0 GeV	$2.011 \times 10^4$	2.056	0.034	0.039	0.008	2.137	$1.031 \times 10^4$		
30.0 GeV	$3.011 \times 10^4$	2.104	0.055	0.068	0.012	2.240	$1.487 \times 10^4$		
40.0 GeV	$4.011 \times 10^4$	2.137	0.078	0.100	0.016	2.330	$1.925 \times 10^4$		
80.0 GeV	$8.011 \times 10^4$	2.209	0.175	0.239	0.031	2.655	$3.530 \times 10^4$		
100. GeV	$1.001 \times 10^5$	2.231	0.227	0.314	0.038	2.811	$4.262 \times 10^4$		
140. GeV	$1.401 \times 10^5$	2.263	0.334	0.469	0.053	3.120	$5.612 \times 10^4$		
200. GeV	$2.001 \times 10^5$	2.297	0.501	0.715	0.076	3.589	$7.404 \times 10^4$		
300. GeV	$3.001 \times 10^5$	2.334	0.786	1.127	0.114	4.361	$9.929 \times 10^4$		
342. GeV	$3.425 \times 10^5$	2.346	0.910	1.306	0.130	4.693	<i>Muon critical energy</i>		
400. GeV	$4.001 \times 10^5$	2.361	1.082	1.553	0.152	5.148	$1.204 \times 10^5$		
800. GeV	$8.001 \times 10^5$	2.425	2.303	3.307	0.307	8.343	$1.808 \times 10^5$		
1.00 TeV	$1.000 \times 10^6$	2.446	2.931	4.206	0.385	9.969	$2.028 \times 10^5$		
1.40 TeV	$1.400 \times 10^6$	2.478	4.192	5.999	0.546	13.215	$2.375 \times 10^5$		
2.00 TeV	$2.000 \times 10^6$	2.512	6.121	8.737	0.790	18.161	$2.761 \times 10^5$		
3.00 TeV	$3.000 \times 10^6$	2.551	9.346	13.288	1.209	26.395	$3.215 \times 10^5$		
4.00 TeV	$4.000 \times 10^6$	2.579	12.616	17.890	1.635	34.721	$3.545 \times 10^5$		
8.00 TeV	$8.000 \times 10^6$	2.649	25.812	36.397	3.402	68.262	$4.351 \times 10^5$		
10.0 TeV	$1.000 \times 10^7$	2.672	32.467	45.704	4.311	85.154	$4.613 \times 10^5$		
14.0 TeV	$1.400 \times 10^7$	2.707	45.741	64.269	6.178	118.896	$5.008 \times 10^5$		
20.0 TeV	$2.000 \times 10^7$	2.744	65.779	92.243	9.042	169.809	$5.429 \times 10^5$		
30.0 TeV	$3.000 \times 10^7$	2.788	99.138	138.788	13.998	254.713	$5.906 \times 10^5$		
40.0 TeV	$4.000 \times 10^7$	2.819	132.629	185.450	19.075	339.975	$6.245 \times 10^5$		
80.0 TeV	$8.000 \times 10^7$	2.897	266.826	372.245	40.306	682.275	$7.059 \times 10^5$		
100. TeV	$1.000 \times 10^8$	2.922	334.053	465.736	51.283	853.995	$7.320 \times 10^5$		