

## Muons in diethyl ether [(CH<sub>3</sub>CH<sub>2</sub>)<sub>2</sub>O]

$\langle Z/A \rangle$	$\rho$ [g/cm <sup>3</sup> ]	$I$ [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
0.56663	0.714	60.0	0.10550	3.4586	0.2231	2.6745	3.3721	0.00
$T$	$p$ [MeV/c]	Ionization	Brems	Pair prod [MeV cm <sup>2</sup> /g]	Photonucl	Total	CSDA range [g/cm <sup>2</sup> ]	
10.0 MeV	$4.704 \times 10^1$	8.365				8.365	$6.594 \times 10^{-1}$	
14.0 MeV	$5.616 \times 10^1$	6.518				6.518	$1.207 \times 10^0$	
20.0 MeV	$6.802 \times 10^1$	5.085				5.086	$2.261 \times 10^0$	
30.0 MeV	$8.509 \times 10^1$	3.941				3.941	$4.526 \times 10^0$	
40.0 MeV	$1.003 \times 10^2$	3.363				3.363	$7.291 \times 10^0$	
80.0 MeV	$1.527 \times 10^2$	2.521				2.521	$2.147 \times 10^1$	
100. MeV	$1.764 \times 10^2$	2.370				2.370	$2.967 \times 10^1$	
140. MeV	$2.218 \times 10^2$	2.205				2.205	$4.725 \times 10^1$	
200. MeV	$2.868 \times 10^2$	2.110				2.110	$7.518 \times 10^1$	
300. MeV	$3.917 \times 10^2$	2.072			0.000	2.073	$1.231 \times 10^2$	
324. MeV	$4.161 \times 10^2$	2.072			0.000	2.072	<i>Minimum ionization</i>	
400. MeV	$4.945 \times 10^2$	2.077			0.000	2.078	$1.714 \times 10^2$	
800. MeV	$8.995 \times 10^2$	2.152	0.000		0.000	2.153	$3.606 \times 10^2$	
1.00 GeV	$1.101 \times 10^3$	2.187	0.000		0.000	2.188	$4.527 \times 10^2$	
1.40 GeV	$1.502 \times 10^3$	2.243	0.000		0.001	2.244	$6.331 \times 10^2$	
2.00 GeV	$2.103 \times 10^3$	2.306	0.000	0.000	0.001	2.307	$8.966 \times 10^2$	
3.00 GeV	$3.104 \times 10^3$	2.377	0.001	0.001	0.001	2.379	$1.323 \times 10^3$	
4.00 GeV	$4.104 \times 10^3$	2.426	0.001	0.001	0.002	2.430	$1.739 \times 10^3$	
8.00 GeV	$8.105 \times 10^3$	2.539	0.003	0.003	0.004	2.549	$3.341 \times 10^3$	
10.0 GeV	$1.011 \times 10^4$	2.573	0.004	0.004	0.005	2.586	$4.120 \times 10^3$	
14.0 GeV	$1.411 \times 10^4$	2.623	0.006	0.007	0.007	2.643	$5.649 \times 10^3$	
20.0 GeV	$2.011 \times 10^4$	2.674	0.009	0.011	0.009	2.703	$7.892 \times 10^3$	
30.0 GeV	$3.011 \times 10^4$	2.728	0.016	0.019	0.014	2.776	$1.154 \times 10^4$	
40.0 GeV	$4.011 \times 10^4$	2.765	0.022	0.028	0.018	2.833	$1.510 \times 10^4$	
80.0 GeV	$8.011 \times 10^4$	2.851	0.050	0.068	0.035	3.004	$2.879 \times 10^4$	
100. GeV	$1.001 \times 10^5$	2.877	0.065	0.089	0.043	3.075	$3.537 \times 10^4$	
140. GeV	$1.401 \times 10^5$	2.917	0.097	0.134	0.060	3.208	$4.810 \times 10^4$	
200. GeV	$2.001 \times 10^5$	2.959	0.146	0.206	0.085	3.395	$6.628 \times 10^4$	
300. GeV	$3.001 \times 10^5$	3.006	0.230	0.328	0.127	3.691	$9.451 \times 10^4$	
400. GeV	$4.001 \times 10^5$	3.039	0.318	0.455	0.169	3.981	$1.206 \times 10^5$	
800. GeV	$8.001 \times 10^5$	3.120	0.685	0.985	0.341	5.131	$2.088 \times 10^5$	
1.00 TeV	$1.000 \times 10^6$	3.146	0.875	1.259	0.429	5.709	$2.458 \times 10^5$	
1.22 TeV	$1.221 \times 10^6$	3.170	1.084	1.558	0.527	6.341	<i>Muon critical energy</i>	
1.40 TeV	$1.400 \times 10^6$	3.187	1.257	1.805	0.608	6.857	$3.096 \times 10^5$	
2.00 TeV	$2.000 \times 10^6$	3.230	1.845	2.643	0.881	8.599	$3.876 \times 10^5$	
3.00 TeV	$3.000 \times 10^6$	3.279	2.832	4.037	1.350	11.499	$4.879 \times 10^5$	
4.00 TeV	$4.000 \times 10^6$	3.315	3.837	5.453	1.827	14.431	$5.653 \times 10^5$	
8.00 TeV	$8.000 \times 10^6$	3.403	7.909	11.154	3.815	26.281	$7.678 \times 10^5$	
10.0 TeV	$1.000 \times 10^7$	3.432	9.970	14.027	4.839	32.268	$8.363 \times 10^5$	
14.0 TeV	$1.400 \times 10^7$	3.476	14.084	19.749	6.951	44.260	$9.418 \times 10^5$	
20.0 TeV	$2.000 \times 10^7$	3.523	20.311	28.382	10.196	62.413	$1.055 \times 10^6$	
30.0 TeV	$3.000 \times 10^7$	3.578	30.680	42.744	15.832	92.836	$1.186 \times 10^6$	
40.0 TeV	$4.000 \times 10^7$	3.618	41.110	57.154	21.619	123.502	$1.279 \times 10^6$	
80.0 TeV	$8.000 \times 10^7$	3.716	82.932	114.845	45.921	247.413	$1.503 \times 10^6$	
100. TeV	$1.000 \times 10^8$	3.748	103.900	143.725	58.525	309.898	$1.576 \times 10^6$	