

## Muons in lutetium fluoride (LuF<sub>3</sub>)

	$\langle Z/A \rangle$	$\rho$ [g/cm <sup>3</sup> ]	$I$ [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
	0.42248	8.300	458.7	0.19861	3.0000	0.2214	3.0000	5.2803	0.00
$T$	$p$ [MeV/c]	Ionization	Brems	Pair prod	Photonucl	Total	CSDA range [g/cm <sup>2</sup> ]		
10.0 MeV	$4.704 \times 10^1$	4.642				4.642	$1.218 \times 10^0$		
14.0 MeV	$5.616 \times 10^1$	3.662				3.662	$2.198 \times 10^0$		
20.0 MeV	$6.802 \times 10^1$	2.891				2.891	$4.062 \times 10^0$		
30.0 MeV	$8.509 \times 10^1$	2.268				2.268	$8.019 \times 10^0$		
40.0 MeV	$1.003 \times 10^2$	1.951				1.951	$1.280 \times 10^1$		
80.0 MeV	$1.527 \times 10^2$	1.489				1.489	$3.699 \times 10^1$		
100. MeV	$1.764 \times 10^2$	1.408				1.408	$5.083 \times 10^1$		
140. MeV	$2.218 \times 10^2$	1.331				1.331	$8.018 \times 10^1$		
200. MeV	$2.868 \times 10^2$	1.293				1.294	$1.261 \times 10^2$		
246. MeV	$3.356 \times 10^2$	1.288				1.289	<i>Minimum ionization</i>		
300. MeV	$3.917 \times 10^2$	1.293	0.000		0.000	1.293	$2.036 \times 10^2$		
400. MeV	$4.945 \times 10^2$	1.311	0.000		0.000	1.312	$2.804 \times 10^2$		
800. MeV	$8.995 \times 10^2$	1.394	0.001		0.000	1.396	$5.756 \times 10^2$		
1.00 GeV	$1.101 \times 10^3$	1.427	0.001		0.000	1.429	$7.172 \times 10^2$		
1.40 GeV	$1.502 \times 10^3$	1.480	0.002	0.000	0.001	1.482	$9.918 \times 10^2$		
2.00 GeV	$2.103 \times 10^3$	1.536	0.003	0.001	0.001	1.541	$1.388 \times 10^3$		
3.00 GeV	$3.104 \times 10^3$	1.598	0.005	0.003	0.001	1.608	$2.023 \times 10^3$		
4.00 GeV	$4.104 \times 10^3$	1.641	0.007	0.005	0.002	1.656	$2.635 \times 10^3$		
8.00 GeV	$8.105 \times 10^3$	1.738	0.018	0.017	0.003	1.776	$4.959 \times 10^3$		
10.0 GeV	$1.011 \times 10^4$	1.767	0.024	0.023	0.004	1.819	$6.072 \times 10^3$		
14.0 GeV	$1.411 \times 10^4$	1.808	0.037	0.038	0.006	1.889	$8.228 \times 10^3$		
20.0 GeV	$2.011 \times 10^4$	1.849	0.057	0.062	0.008	1.976	$1.133 \times 10^4$		
30.0 GeV	$3.011 \times 10^4$	1.892	0.093	0.109	0.011	2.106	$1.623 \times 10^4$		
40.0 GeV	$4.011 \times 10^4$	1.921	0.131	0.161	0.015	2.229	$2.084 \times 10^4$		
80.0 GeV	$8.011 \times 10^4$	1.985	0.297	0.388	0.029	2.700	$3.712 \times 10^4$		
100. GeV	$1.001 \times 10^5$	2.005	0.385	0.510	0.037	2.938	$4.422 \times 10^4$		
140. GeV	$1.401 \times 10^5$	2.035	0.565	0.762	0.051	3.414	$5.684 \times 10^4$		
199. GeV	$1.989 \times 10^5$	2.065	0.841	1.153	0.072	4.132	<i>Muon critical energy</i>		
200. GeV	$2.001 \times 10^5$	2.066	0.847	1.161	0.072	4.147	$7.277 \times 10^4$		
300. GeV	$3.001 \times 10^5$	2.101	1.328	1.828	0.108	5.367	$9.392 \times 10^4$		
400. GeV	$4.001 \times 10^5$	2.126	1.826	2.520	0.144	6.617	$1.107 \times 10^5$		
800. GeV	$8.001 \times 10^5$	2.186	3.879	5.356	0.292	11.715	$1.555 \times 10^5$		
1.00 TeV	$1.000 \times 10^6$	2.206	4.934	6.808	0.367	14.316	$1.710 \times 10^5$		
1.40 TeV	$1.400 \times 10^6$	2.236	7.047	9.702	0.520	19.506	$1.948 \times 10^5$		
2.00 TeV	$2.000 \times 10^6$	2.268	10.280	14.119	0.752	27.420	$2.206 \times 10^5$		
3.00 TeV	$3.000 \times 10^6$	2.305	15.675	21.460	1.150	40.591	$2.504 \times 10^5$		
4.00 TeV	$4.000 \times 10^6$	2.332	21.142	28.878	1.555	53.908	$2.717 \times 10^5$		
8.00 TeV	$8.000 \times 10^6$	2.397	43.180	58.699	3.233	107.511	$3.233 \times 10^5$		
10.0 TeV	$1.000 \times 10^7$	2.419	54.284	73.690	4.095	134.488	$3.399 \times 10^5$		
14.0 TeV	$1.400 \times 10^7$	2.452	76.431	103.598	5.865	188.347	$3.649 \times 10^5$		
20.0 TeV	$2.000 \times 10^7$	2.487	109.845	148.653	8.578	269.565	$3.914 \times 10^5$		
30.0 TeV	$3.000 \times 10^7$	2.528	165.471	223.616	13.269	404.886	$4.214 \times 10^5$		
40.0 TeV	$4.000 \times 10^7$	2.558	221.294	298.757	18.074	540.683	$4.427 \times 10^5$		
80.0 TeV	$8.000 \times 10^7$	2.630	444.905	599.527	38.150	1085.214	$4.939 \times 10^5$		
100. TeV	$1.000 \times 10^8$	2.654	556.893	750.049	48.525	1358.124	$5.104 \times 10^5$		