

**Table 334: Muons in Lanthanum chloride [LaCl<sub>3</sub>]**

$\langle Z/A \rangle$	$\rho$ [g/cm <sup>3</sup> ]	$I$ [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
0.44034	3.860	329.5	0.20155	3.0000	0.2418	3.0000	5.3428	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	$4.704 \times 10^1$	5.109				5.109	$1.101 \times 10^0$	
14.0 MeV	$5.616 \times 10^1$	4.020				4.020	$1.992 \times 10^0$	
20.0 MeV	$6.802 \times 10^1$	3.166				3.166	$3.693 \times 10^0$	
30.0 MeV	$8.509 \times 10^1$	2.477				2.477	$7.312 \times 10^0$	
40.0 MeV	$1.003 \times 10^2$	2.127				2.127	$1.169 \times 10^1$	
80.0 MeV	$1.527 \times 10^2$	1.618				1.618	$3.392 \times 10^1$	
100. MeV	$1.764 \times 10^2$	1.529				1.529	$4.666 \times 10^1$	
140. MeV	$2.218 \times 10^2$	1.442				1.442	$7.372 \times 10^1$	
200. MeV	$2.868 \times 10^2$	1.400				1.400	$1.161 \times 10^2$	
253. MeV	$3.431 \times 10^2$	1.393			0.000	1.394	<i>Minimum ionization</i>	
300. MeV	$3.917 \times 10^2$	1.397	0.000		0.000	1.397	$1.878 \times 10^2$	
400. MeV	$4.945 \times 10^2$	1.415	0.000		0.000	1.416	$2.589 \times 10^2$	
800. MeV	$8.995 \times 10^2$	1.501	0.001		0.000	1.502	$5.329 \times 10^2$	
1.00 GeV	$1.101 \times 10^3$	1.536	0.001		0.000	1.537	$6.645 \times 10^2$	
1.40 GeV	$1.502 \times 10^3$	1.590	0.001	0.000	0.001	1.592	$9.199 \times 10^2$	
2.00 GeV	$2.103 \times 10^3$	1.649	0.002	0.001	0.001	1.653	$1.289 \times 10^3$	
3.00 GeV	$3.104 \times 10^3$	1.714	0.004	0.002	0.001	1.722	$1.881 \times 10^3$	
4.00 GeV	$4.104 \times 10^3$	1.759	0.006	0.004	0.002	1.771	$2.453 \times 10^3$	
8.00 GeV	$8.105 \times 10^3$	1.860	0.014	0.013	0.003	1.891	$4.631 \times 10^3$	
10.0 GeV	$1.011 \times 10^4$	1.890	0.018	0.019	0.004	1.932	$5.677 \times 10^3$	
14.0 GeV	$1.411 \times 10^4$	1.933	0.028	0.030	0.006	1.997	$7.712 \times 10^3$	
20.0 GeV	$2.011 \times 10^4$	1.976	0.043	0.049	0.008	2.077	$1.066 \times 10^4$	
30.0 GeV	$3.011 \times 10^4$	2.021	0.071	0.086	0.012	2.190	$1.534 \times 10^4$	
40.0 GeV	$4.011 \times 10^4$	2.051	0.100	0.126	0.015	2.293	$1.980 \times 10^4$	
80.0 GeV	$8.011 \times 10^4$	2.118	0.226	0.303	0.030	2.678	$3.592 \times 10^4$	
100. GeV	$1.001 \times 10^5$	2.139	0.293	0.398	0.037	2.868	$4.313 \times 10^4$	
140. GeV	$1.401 \times 10^5$	2.170	0.430	0.595	0.052	3.248	$5.623 \times 10^4$	
200. GeV	$2.001 \times 10^5$	2.202	0.645	0.906	0.074	3.828	$7.323 \times 10^4$	
266. GeV	$2.657 \times 10^5$	2.228	0.884	1.246	0.098	4.456	<i>Muon critical energy</i>	
300. GeV	$3.001 \times 10^5$	2.239	1.012	1.427	0.111	4.790	$9.655 \times 10^4$	
400. GeV	$4.001 \times 10^5$	2.265	1.391	1.968	0.148	5.772	$1.155 \times 10^5$	
800. GeV	$8.001 \times 10^5$	2.328	2.959	4.184	0.299	9.771	$1.682 \times 10^5$	
1.00 TeV	$1.000 \times 10^6$	2.348	3.765	5.319	0.376	11.809	$1.868 \times 10^5$	
1.40 TeV	$1.400 \times 10^6$	2.379	5.381	7.584	0.533	15.878	$2.159 \times 10^5$	
2.00 TeV	$2.000 \times 10^6$	2.413	7.854	11.040	0.771	22.079	$2.479 \times 10^5$	
3.00 TeV	$3.000 \times 10^6$	2.451	11.985	16.785	1.179	32.401	$2.850 \times 10^5$	
4.00 TeV	$4.000 \times 10^6$	2.479	16.171	22.593	1.594	42.838	$3.118 \times 10^5$	
8.00 TeV	$8.000 \times 10^6$	2.547	33.058	45.942	3.315	84.863	$3.769 \times 10^5$	
10.0 TeV	$1.000 \times 10^7$	2.570	41.571	57.681	4.199	106.021	$3.979 \times 10^5$	
14.0 TeV	$1.400 \times 10^7$	2.604	58.553	81.099	6.016	148.273	$4.297 \times 10^5$	
20.0 TeV	$2.000 \times 10^7$	2.641	84.182	116.381	8.802	212.007	$4.633 \times 10^5$	
30.0 TeV	$3.000 \times 10^7$	2.684	126.839	175.090	13.619	318.232	$5.016 \times 10^5$	
40.0 TeV	$4.000 \times 10^7$	2.715	169.653	233.944	18.552	424.865	$5.287 \times 10^5$	
80.0 TeV	$8.000 \times 10^7$	2.791	341.193	469.524	39.171	852.679	$5.938 \times 10^5$	
100. TeV	$1.000 \times 10^8$	2.815	427.120	587.423	49.827	1067.186	$6.147 \times 10^5$	