

**Table 327: Muons in Lanthanum bromide [LaBr<sub>3</sub>]**

$\langle Z/A \rangle$	$\rho$ [g/cm <sup>3</sup> ]	$I$ [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
0.42787	5.290	454.5	0.21967	3.0000	0.3581	3.0000	5.6997	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	$4.704 \times 10^1$	4.709				4.709	$1.201 \times 10^0$	
14.0 MeV	$5.616 \times 10^1$	3.715				3.715	$2.167 \times 10^0$	
20.0 MeV	$6.802 \times 10^1$	2.932				2.932	$4.004 \times 10^0$	
30.0 MeV	$8.509 \times 10^1$	2.300				2.300	$7.907 \times 10^0$	
40.0 MeV	$1.003 \times 10^2$	1.978				1.978	$1.262 \times 10^1$	
80.0 MeV	$1.527 \times 10^2$	1.510				1.510	$3.648 \times 10^1$	
100. MeV	$1.764 \times 10^2$	1.428				1.428	$5.013 \times 10^1$	
140. MeV	$2.218 \times 10^2$	1.350				1.351	$7.906 \times 10^1$	
200. MeV	$2.868 \times 10^2$	1.316				1.316	$1.242 \times 10^2$	
237. MeV	$3.260 \times 10^2$	1.313				1.313	<i>Minimum ionization</i>	
300. MeV	$3.917 \times 10^2$	1.319	0.000		0.000	1.319	$2.003 \times 10^2$	
400. MeV	$4.945 \times 10^2$	1.340	0.000		0.000	1.340	$2.755 \times 10^2$	
800. MeV	$8.995 \times 10^2$	1.429	0.001		0.000	1.430	$5.640 \times 10^2$	
1.00 GeV	$1.101 \times 10^3$	1.464	0.001		0.000	1.465	$7.021 \times 10^2$	
1.40 GeV	$1.502 \times 10^3$	1.519	0.001	0.000	0.001	1.521	$9.698 \times 10^2$	
2.00 GeV	$2.103 \times 10^3$	1.577	0.002	0.001	0.001	1.582	$1.356 \times 10^3$	
3.00 GeV	$3.104 \times 10^3$	1.643	0.004	0.003	0.001	1.651	$1.974 \times 10^3$	
4.00 GeV	$4.104 \times 10^3$	1.687	0.006	0.005	0.002	1.700	$2.570 \times 10^3$	
8.00 GeV	$8.105 \times 10^3$	1.787	0.015	0.015	0.003	1.820	$4.836 \times 10^3$	
10.0 GeV	$1.011 \times 10^4$	1.817	0.020	0.021	0.004	1.862	$5.922 \times 10^3$	
14.0 GeV	$1.411 \times 10^4$	1.859	0.030	0.033	0.006	1.928	$8.031 \times 10^3$	
20.0 GeV	$2.011 \times 10^4$	1.901	0.047	0.054	0.008	2.010	$1.108 \times 10^4$	
30.0 GeV	$3.011 \times 10^4$	1.945	0.077	0.095	0.012	2.128	$1.591 \times 10^4$	
40.0 GeV	$4.011 \times 10^4$	1.974	0.109	0.138	0.015	2.237	$2.049 \times 10^4$	
80.0 GeV	$8.011 \times 10^4$	2.039	0.246	0.332	0.030	2.648	$3.689 \times 10^4$	
100. GeV	$1.001 \times 10^5$	2.060	0.319	0.437	0.037	2.852	$4.417 \times 10^4$	
140. GeV	$1.401 \times 10^5$	2.090	0.468	0.652	0.051	3.261	$5.728 \times 10^4$	
200. GeV	$2.001 \times 10^5$	2.121	0.702	0.992	0.073	3.888	$7.411 \times 10^4$	
237. GeV	$2.373 \times 10^5$	2.136	0.848	1.201	0.086	4.273	<i>Muon critical energy</i>	
300. GeV	$3.001 \times 10^5$	2.156	1.101	1.562	0.109	4.929	$9.691 \times 10^4$	
400. GeV	$4.001 \times 10^5$	2.182	1.513	2.153	0.146	5.994	$1.153 \times 10^5$	
800. GeV	$8.001 \times 10^5$	2.243	3.218	4.575	0.294	10.332	$1.655 \times 10^5$	
1.00 TeV	$1.000 \times 10^6$	2.263	4.095	5.815	0.369	12.543	$1.831 \times 10^5$	
1.40 TeV	$1.400 \times 10^6$	2.293	5.852	8.289	0.523	16.959	$2.104 \times 10^5$	
2.00 TeV	$2.000 \times 10^6$	2.326	8.540	12.065	0.757	23.689	$2.402 \times 10^5$	
3.00 TeV	$3.000 \times 10^6$	2.363	13.030	18.340	1.158	34.893	$2.748 \times 10^5$	
4.00 TeV	$4.000 \times 10^6$	2.390	17.581	24.683	1.565	46.221	$2.996 \times 10^5$	
8.00 TeV	$8.000 \times 10^6$	2.457	35.936	50.185	3.253	91.831	$3.598 \times 10^5$	
10.0 TeV	$1.000 \times 10^7$	2.478	45.187	63.005	4.120	114.792	$3.793 \times 10^5$	
14.0 TeV	$1.400 \times 10^7$	2.512	63.640	88.584	5.901	160.638	$4.086 \times 10^5$	
20.0 TeV	$2.000 \times 10^7$	2.547	91.487	127.119	8.630	229.786	$4.397 \times 10^5$	
30.0 TeV	$3.000 \times 10^7$	2.589	137.847	191.235	13.347	345.020	$4.749 \times 10^5$	
40.0 TeV	$4.000 \times 10^7$	2.619	184.379	255.507	18.176	460.683	$4.999 \times 10^5$	
80.0 TeV	$8.000 \times 10^7$	2.693	370.802	512.781	38.344	924.621	$5.600 \times 10^5$	
100. TeV	$1.000 \times 10^8$	2.717	464.178	641.540	48.762	1157.198	$5.793 \times 10^5$	