

**Table 181: Muons in Lanthanum oxysulfide  $\text{La}_2\text{O}_2\text{S}$**

$\langle Z/A \rangle$	$\rho$ [g/cm <sup>3</sup> ]	$I$ [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
0.42706	5.860	421.2	0.21501	2.7298	-0.0906	3.2664	5.4470	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	$4.704 \times 10^1$	4.760				4.760	$1.186 \times 10^0$	
14.0 MeV	$5.616 \times 10^1$	3.753				3.753	$2.142 \times 10^0$	
20.0 MeV	$6.802 \times 10^1$	2.961				2.961	$3.962 \times 10^0$	
30.0 MeV	$8.509 \times 10^1$	2.321				2.321	$7.828 \times 10^0$	
40.0 MeV	$1.003 \times 10^2$	1.996				1.996	$1.250 \times 10^1$	
80.0 MeV	$1.527 \times 10^2$	1.519				1.519	$3.617 \times 10^1$	
100. MeV	$1.764 \times 10^2$	1.433				1.433	$4.977 \times 10^1$	
140. MeV	$2.218 \times 10^2$	1.349				1.349	$7.866 \times 10^1$	
200. MeV	$2.868 \times 10^2$	1.308				1.308	$1.240 \times 10^2$	
252. MeV	$3.421 \times 10^2$	1.301				1.301	<i>Minimum ionization</i>	
300. MeV	$3.917 \times 10^2$	1.304	0.000		0.000	1.304	$2.007 \times 10^2$	
400. MeV	$4.945 \times 10^2$	1.322	0.000		0.000	1.322	$2.769 \times 10^2$	
800. MeV	$8.995 \times 10^2$	1.404	0.001		0.000	1.405	$5.701 \times 10^2$	
1.00 GeV	$1.101 \times 10^3$	1.438	0.001		0.000	1.439	$7.107 \times 10^2$	
1.40 GeV	$1.502 \times 10^3$	1.491	0.002	0.000	0.001	1.494	$9.833 \times 10^2$	
2.00 GeV	$2.103 \times 10^3$	1.549	0.003	0.001	0.001	1.554	$1.377 \times 10^3$	
3.00 GeV	$3.104 \times 10^3$	1.615	0.005	0.003	0.001	1.624	$2.005 \times 10^3$	
4.00 GeV	$4.104 \times 10^3$	1.660	0.007	0.005	0.002	1.674	$2.612 \times 10^3$	
8.00 GeV	$8.105 \times 10^3$	1.763	0.016	0.016	0.003	1.799	$4.908 \times 10^3$	
10.0 GeV	$1.011 \times 10^4$	1.794	0.022	0.022	0.004	1.842	$6.007 \times 10^3$	
14.0 GeV	$1.411 \times 10^4$	1.838	0.033	0.035	0.006	1.913	$8.136 \times 10^3$	
20.0 GeV	$2.011 \times 10^4$	1.882	0.051	0.058	0.008	2.000	$1.120 \times 10^4$	
30.0 GeV	$3.011 \times 10^4$	1.929	0.084	0.101	0.011	2.125	$1.605 \times 10^4$	
40.0 GeV	$4.011 \times 10^4$	1.960	0.118	0.148	0.015	2.242	$2.063 \times 10^4$	
80.0 GeV	$8.011 \times 10^4$	2.028	0.267	0.356	0.030	2.682	$3.691 \times 10^4$	
100. GeV	$1.001 \times 10^5$	2.049	0.346	0.468	0.037	2.900	$4.408 \times 10^4$	
140. GeV	$1.401 \times 10^5$	2.079	0.508	0.699	0.051	3.338	$5.693 \times 10^4$	
200. GeV	$2.001 \times 10^5$	2.110	0.761	1.065	0.073	4.010	$7.331 \times 10^4$	
221. GeV	$2.209 \times 10^5$	2.119	0.849	1.190	0.080	4.239	<i>Muon critical energy</i>	
300. GeV	$3.001 \times 10^5$	2.146	1.194	1.676	0.109	5.126	$9.533 \times 10^4$	
400. GeV	$4.001 \times 10^5$	2.171	1.641	2.310	0.145	6.268	$1.129 \times 10^5$	
800. GeV	$8.001 \times 10^5$	2.232	3.488	4.910	0.293	10.925	$1.607 \times 10^5$	
1.00 TeV	$1.000 \times 10^6$	2.252	4.438	6.240	0.368	13.299	$1.773 \times 10^5$	
1.40 TeV	$1.400 \times 10^6$	2.282	6.340	8.894	0.522	18.039	$2.030 \times 10^5$	
2.00 TeV	$2.000 \times 10^6$	2.315	9.251	12.943	0.755	25.266	$2.310 \times 10^5$	
3.00 TeV	$3.000 \times 10^6$	2.352	14.112	19.673	1.155	37.293	$2.634 \times 10^5$	
4.00 TeV	$4.000 \times 10^6$	2.379	19.037	26.476	1.560	49.454	$2.866 \times 10^5$	
8.00 TeV	$8.000 \times 10^6$	2.445	38.898	53.821	3.244	98.409	$3.428 \times 10^5$	
10.0 TeV	$1.000 \times 10^7$	2.467	48.907	67.567	4.109	123.051	$3.610 \times 10^5$	
14.0 TeV	$1.400 \times 10^7$	2.500	68.872	94.993	5.885	172.252	$3.883 \times 10^5$	
20.0 TeV	$2.000 \times 10^7$	2.536	98.997	136.310	8.608	246.453	$4.173 \times 10^5$	
30.0 TeV	$3.000 \times 10^7$	2.577	149.147	205.055	13.314	370.095	$4.502 \times 10^5$	
40.0 TeV	$4.000 \times 10^7$	2.607	199.479	273.965	18.132	494.184	$4.735 \times 10^5$	
80.0 TeV	$8.000 \times 10^7$	2.681	401.112	549.794	38.262	991.851	$5.295 \times 10^5$	
100. TeV	$1.000 \times 10^8$	2.705	502.101	687.836	48.663	1241.307	$5.475 \times 10^5$	