

**Muons in strontium (Sr)**

Z	A [g/mol]	$\rho$ [g/cm <sup>3</sup> ]	I [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
38 (Sr)	87.62(1)	2.540	366.0	0.07165	3.4435	0.4585	3.6778	5.9867	0.14

  

$T$	$p$ [MeV/c]	Ionization	Brems	Pair prod [MeV cm <sup>2</sup> /g]	Photonucl	Total	CSDA range [g/cm <sup>2</sup> ]
10.0 MeV	$4.704 \times 10^1$	4.921				4.921	$1.150 \times 10^0$
14.0 MeV	$5.616 \times 10^1$	3.881				3.882	$2.074 \times 10^0$
20.0 MeV	$6.802 \times 10^1$	3.062				3.062	$3.834 \times 10^0$
30.0 MeV	$8.509 \times 10^1$	2.399				2.399	$7.572 \times 10^0$
40.0 MeV	$1.003 \times 10^2$	2.062				2.062	$1.210 \times 10^1$
80.0 MeV	$1.527 \times 10^2$	1.569				1.569	$3.502 \times 10^1$
100. MeV	$1.764 \times 10^2$	1.482				1.482	$4.816 \times 10^1$
140. MeV	$2.218 \times 10^2$	1.398				1.398	$7.608 \times 10^1$
200. MeV	$2.868 \times 10^2$	1.358				1.358	$1.198 \times 10^2$
237. MeV	$3.260 \times 10^2$	1.353				1.354	<i>Minimum ionization</i>
300. MeV	$3.917 \times 10^2$	1.359	0.000		0.000	1.359	$1.936 \times 10^2$
400. MeV	$4.945 \times 10^2$	1.380	0.000		0.000	1.381	$2.666 \times 10^2$
800. MeV	$8.995 \times 10^2$	1.471	0.001		0.000	1.472	$5.467 \times 10^2$
1.00 GeV	$1.101 \times 10^3$	1.507	0.001		0.000	1.509	$6.808 \times 10^2$
1.40 GeV	$1.502 \times 10^3$	1.564	0.001	0.000	0.001	1.566	$9.408 \times 10^2$
2.00 GeV	$2.103 \times 10^3$	1.624	0.002	0.001	0.001	1.629	$1.316 \times 10^3$
3.00 GeV	$3.104 \times 10^3$	1.692	0.004	0.003	0.001	1.700	$1.916 \times 10^3$
4.00 GeV	$4.104 \times 10^3$	1.739	0.006	0.004	0.002	1.751	$2.495 \times 10^3$
8.00 GeV	$8.105 \times 10^3$	1.844	0.014	0.014	0.003	1.875	$4.694 \times 10^3$
10.0 GeV	$1.011 \times 10^4$	1.875	0.018	0.019	0.004	1.917	$5.749 \times 10^3$
14.0 GeV	$1.411 \times 10^4$	1.920	0.028	0.031	0.006	1.985	$7.798 \times 10^3$
20.0 GeV	$2.011 \times 10^4$	1.965	0.043	0.050	0.008	2.066	$1.076 \times 10^4$
30.0 GeV	$3.011 \times 10^4$	2.012	0.070	0.087	0.012	2.181	$1.547 \times 10^4$
40.0 GeV	$4.011 \times 10^4$	2.043	0.099	0.128	0.015	2.286	$1.994 \times 10^4$
80.0 GeV	$8.011 \times 10^4$	2.113	0.224	0.305	0.030	2.673	$3.609 \times 10^4$
100. GeV	$1.001 \times 10^5$	2.134	0.291	0.401	0.037	2.864	$4.332 \times 10^4$
140. GeV	$1.401 \times 10^5$	2.165	0.427	0.599	0.052	3.244	$5.644 \times 10^4$
200. GeV	$2.001 \times 10^5$	2.198	0.640	0.912	0.073	3.824	$7.346 \times 10^4$
265. GeV	$2.651 \times 10^5$	2.223	0.875	1.250	0.097	4.446	<i>Muon critical energy</i>
300. GeV	$3.001 \times 10^5$	2.234	1.004	1.436	0.110	4.785	$9.680 \times 10^4$
400. GeV	$4.001 \times 10^5$	2.259	1.381	1.979	0.147	5.767	$1.158 \times 10^5$
800. GeV	$8.001 \times 10^5$	2.321	2.938	4.208	0.297	9.765	$1.685 \times 10^5$
1.00 TeV	$1.000 \times 10^6$	2.342	3.738	5.349	0.373	11.802	$1.871 \times 10^5$
1.40 TeV	$1.400 \times 10^6$	2.372	5.343	7.626	0.528	15.870	$2.163 \times 10^5$
2.00 TeV	$2.000 \times 10^6$	2.405	7.799	11.101	0.764	22.071	$2.482 \times 10^5$
3.00 TeV	$3.000 \times 10^6$	2.443	11.902	16.877	1.169	32.392	$2.854 \times 10^5$
4.00 TeV	$4.000 \times 10^6$	2.471	16.062	22.715	1.580	42.829	$3.122 \times 10^5$
8.00 TeV	$8.000 \times 10^6$	2.538	32.842	46.191	3.284	84.856	$3.772 \times 10^5$
10.0 TeV	$1.000 \times 10^7$	2.560	41.301	57.993	4.160	106.015	$3.983 \times 10^5$
14.0 TeV	$1.400 \times 10^7$	2.594	58.173	81.542	5.958	148.268	$4.300 \times 10^5$
20.0 TeV	$2.000 \times 10^7$	2.630	83.638	117.020	8.714	212.003	$4.637 \times 10^5$
30.0 TeV	$3.000 \times 10^7$	2.672	126.032	176.049	13.479	318.233	$5.020 \times 10^5$
40.0 TeV	$4.000 \times 10^7$	2.702	168.586	235.223	18.357	424.870	$5.291 \times 10^5$
80.0 TeV	$8.000 \times 10^7$	2.777	339.085	472.087	38.739	852.688	$5.942 \times 10^5$
100. TeV	$1.000 \times 10^8$	2.802	424.490	590.630	49.270	1067.193	$6.151 \times 10^5$