

## Muons in liquid krypton (Kr)

Z	A [g/mol]	$\rho$ [g/cm <sup>3</sup> ]	I [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
36 (Kr)	83.798 (2)	2.418	352.0	0.23491	3.0000	0.4454	3.0000	5.9674	0.00

  

$T$	$p$	Ionization	Brems	Pair prod	Photonucl	Total	CSDA range
	[MeV/c]	[MeV cm <sup>2</sup> /g]			[MeV cm <sup>2</sup> /g]		[g/cm <sup>2</sup> ]
10.0 MeV	$4.704 \times 10^1$	4.909				4.909	$1.152 \times 10^0$
14.0 MeV	$5.616 \times 10^1$	3.870				3.870	$2.079 \times 10^0$
20.0 MeV	$6.802 \times 10^1$	3.053				3.053	$3.844 \times 10^0$
30.0 MeV	$8.509 \times 10^1$	2.392				2.392	$7.594 \times 10^0$
40.0 MeV	$1.003 \times 10^2$	2.055				2.055	$1.213 \times 10^1$
80.0 MeV	$1.527 \times 10^2$	1.565				1.565	$3.512 \times 10^1$
100. MeV	$1.764 \times 10^2$	1.479				1.479	$4.829 \times 10^1$
140. MeV	$2.218 \times 10^2$	1.397				1.397	$7.624 \times 10^1$
200. MeV	$2.868 \times 10^2$	1.360				1.360	$1.199 \times 10^2$
236. MeV	$3.250 \times 10^2$	1.357				1.357	<i>Minimum ionization</i>
300. MeV	$3.917 \times 10^2$	1.364	0.000		0.000	1.364	$1.935 \times 10^2$
400. MeV	$4.945 \times 10^2$	1.386	0.000		0.000	1.386	$2.662 \times 10^2$
800. MeV	$8.995 \times 10^2$	1.478	0.001		0.000	1.479	$5.452 \times 10^2$
1.00 GeV	$1.101 \times 10^3$	1.514	0.001		0.000	1.515	$6.788 \times 10^2$
1.40 GeV	$1.502 \times 10^3$	1.570	0.001	0.000	0.001	1.572	$9.377 \times 10^2$
2.00 GeV	$2.103 \times 10^3$	1.630	0.002	0.001	0.001	1.634	$1.312 \times 10^3$
3.00 GeV	$3.104 \times 10^3$	1.697	0.004	0.002	0.001	1.705	$1.910 \times 10^3$
4.00 GeV	$4.104 \times 10^3$	1.743	0.005	0.004	0.002	1.754	$2.488 \times 10^3$
8.00 GeV	$8.105 \times 10^3$	1.844	0.013	0.013	0.003	1.874	$4.686 \times 10^3$
10.0 GeV	$1.011 \times 10^4$	1.874	0.017	0.018	0.004	1.914	$5.742 \times 10^3$
14.0 GeV	$1.411 \times 10^4$	1.917	0.026	0.029	0.006	1.978	$7.796 \times 10^3$
20.0 GeV	$2.011 \times 10^4$	1.959	0.041	0.047	0.008	2.055	$1.077 \times 10^4$
30.0 GeV	$3.011 \times 10^4$	2.004	0.066	0.082	0.012	2.164	$1.551 \times 10^4$
40.0 GeV	$4.011 \times 10^4$	2.033	0.094	0.120	0.015	2.263	$2.002 \times 10^4$
80.0 GeV	$8.011 \times 10^4$	2.099	0.211	0.288	0.030	2.630	$3.639 \times 10^4$
100. GeV	$1.001 \times 10^5$	2.119	0.274	0.379	0.037	2.810	$4.375 \times 10^4$
140. GeV	$1.401 \times 10^5$	2.149	0.402	0.566	0.052	3.170	$5.715 \times 10^4$
200. GeV	$2.001 \times 10^5$	2.181	0.603	0.861	0.074	3.720	$7.461 \times 10^4$
277. GeV	$2.772 \times 10^5$	2.210	0.866	1.241	0.102	4.420	<i>Muon critical energy</i>
300. GeV	$3.001 \times 10^5$	2.217	0.946	1.356	0.110	4.631	$9.866 \times 10^4$
400. GeV	$4.001 \times 10^5$	2.242	1.302	1.870	0.147	5.561	$1.183 \times 10^5$
800. GeV	$8.001 \times 10^5$	2.303	2.769	3.976	0.298	9.347	$1.732 \times 10^5$
1.00 TeV	$1.000 \times 10^6$	2.323	3.524	5.054	0.374	11.276	$1.927 \times 10^5$
1.40 TeV	$1.400 \times 10^6$	2.354	5.038	7.205	0.530	15.128	$2.232 \times 10^5$
2.00 TeV	$2.000 \times 10^6$	2.386	7.355	10.490	0.767	20.999	$2.568 \times 10^5$
3.00 TeV	$3.000 \times 10^6$	2.424	11.225	15.949	1.173	30.773	$2.959 \times 10^5$
4.00 TeV	$4.000 \times 10^6$	2.451	15.150	21.468	1.585	40.655	$3.241 \times 10^5$
8.00 TeV	$8.000 \times 10^6$	2.518	30.981	43.658	3.297	80.454	$3.927 \times 10^5$
10.0 TeV	$1.000 \times 10^7$	2.540	38.962	54.815	4.176	100.494	$4.149 \times 10^5$
14.0 TeV	$1.400 \times 10^7$	2.573	54.882	77.074	5.981	140.511	$4.484 \times 10^5$
20.0 TeV	$2.000 \times 10^7$	2.609	78.910	110.610	8.748	200.878	$4.839 \times 10^5$
30.0 TeV	$3.000 \times 10^7$	2.651	118.912	166.409	13.532	301.505	$5.243 \times 10^5$
40.0 TeV	$4.000 \times 10^7$	2.681	159.067	222.346	18.431	402.525	$5.529 \times 10^5$
80.0 TeV	$8.000 \times 10^7$	2.755	319.956	446.262	38.896	807.870	$6.216 \times 10^5$
100. TeV	$1.000 \times 10^8$	2.779	400.550	558.330	49.470	1011.130	$6.437 \times 10^5$