

## Muons in calcium oxide (CaO)

	$\langle Z/A \rangle$	$\rho$ [g/cm <sup>3</sup> ]	$I$ [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
	0.49929	3.300	176.1	0.12128	3.1936	-0.0172	3.0171	4.1209	0.00
$T$	$p$ [MeV/c]	Ionization	Brems	Pair prod	Photonucl	Total	CSDA range [g/cm <sup>2</sup> ]		
				[MeV cm <sup>2</sup> /g]					
10.0 MeV	$4.704 \times 10^1$	6.373				6.373		$8.750 \times 10^{-1}$	
14.0 MeV	$5.616 \times 10^1$	4.994				4.994		$1.591 \times 10^0$	
20.0 MeV	$6.802 \times 10^1$	3.918				3.918		$2.963 \times 10^0$	
30.0 MeV	$8.509 \times 10^1$	3.053				3.053		$5.894 \times 10^0$	
40.0 MeV	$1.003 \times 10^2$	2.615				2.615		$9.456 \times 10^0$	
80.0 MeV	$1.527 \times 10^2$	1.968				1.968		$2.764 \times 10^1$	
100. MeV	$1.764 \times 10^2$	1.850				1.850		$3.815 \times 10^1$	
140. MeV	$2.218 \times 10^2$	1.732				1.732		$6.060 \times 10^1$	
200. MeV	$2.868 \times 10^2$	1.668				1.668		$9.603 \times 10^1$	
284. MeV	$3.748 \times 10^2$	1.650			0.000	1.650		<i>Minimum ionization</i>	
300. MeV	$3.917 \times 10^2$	1.650			0.000	1.651		$1.565 \times 10^2$	
400. MeV	$4.945 \times 10^2$	1.663	0.000		0.000	1.664		$2.168 \times 10^2$	
800. MeV	$8.995 \times 10^2$	1.745	0.000		0.000	1.745		$4.515 \times 10^2$	
1.00 GeV	$1.101 \times 10^3$	1.779	0.000		0.000	1.780		$5.649 \times 10^2$	
1.40 GeV	$1.502 \times 10^3$	1.835	0.001	0.000	0.001	1.837		$7.860 \times 10^2$	
2.00 GeV	$2.103 \times 10^3$	1.896	0.001	0.001	0.001	1.898		$1.107 \times 10^3$	
3.00 GeV	$3.104 \times 10^3$	1.964	0.002	0.001	0.001	1.969		$1.624 \times 10^3$	
4.00 GeV	$4.104 \times 10^3$	2.012	0.003	0.002	0.002	2.019		$2.125 \times 10^3$	
8.00 GeV	$8.105 \times 10^3$	2.119	0.007	0.007	0.004	2.138		$4.043 \times 10^3$	
10.0 GeV	$1.011 \times 10^4$	2.152	0.010	0.010	0.005	2.176		$4.970 \times 10^3$	
14.0 GeV	$1.411 \times 10^4$	2.198	0.015	0.017	0.006	2.236		$6.782 \times 10^3$	
20.0 GeV	$2.011 \times 10^4$	2.245	0.023	0.027	0.009	2.304		$9.424 \times 10^3$	
30.0 GeV	$3.011 \times 10^4$	2.295	0.038	0.047	0.013	2.393		$1.368 \times 10^4$	
40.0 GeV	$4.011 \times 10^4$	2.328	0.054	0.069	0.017	2.468		$1.779 \times 10^4$	
80.0 GeV	$8.011 \times 10^4$	2.404	0.122	0.165	0.032	2.724		$3.319 \times 10^4$	
100. GeV	$1.001 \times 10^5$	2.428	0.158	0.218	0.040	2.844		$4.038 \times 10^4$	
140. GeV	$1.401 \times 10^5$	2.463	0.232	0.326	0.056	3.077		$5.390 \times 10^4$	
200. GeV	$2.001 \times 10^5$	2.499	0.348	0.497	0.079	3.424		$7.237 \times 10^4$	
300. GeV	$3.001 \times 10^5$	2.541	0.548	0.785	0.119	3.993		$9.939 \times 10^4$	
400. GeV	$4.001 \times 10^5$	2.570	0.754	1.084	0.158	4.567		$1.228 \times 10^5$	
507. GeV	$5.073 \times 10^5$	2.595	0.981	1.413	0.201	5.190		<i>Muon critical energy</i>	
800. GeV	$8.001 \times 10^5$	2.642	1.608	2.317	0.320	6.887		$1.936 \times 10^5$	
1.00 TeV	$1.000 \times 10^6$	2.665	2.049	2.950	0.402	8.065		$2.205 \times 10^5$	
1.40 TeV	$1.400 \times 10^6$	2.700	2.933	4.212	0.569	10.415		$2.640 \times 10^5$	
2.00 TeV	$2.000 \times 10^6$	2.738	4.288	6.143	0.824	13.993		$3.135 \times 10^5$	
3.00 TeV	$3.000 \times 10^6$	2.782	6.554	9.352	1.262	19.950		$3.731 \times 10^5$	
4.00 TeV	$4.000 \times 10^6$	2.813	8.854	12.600	1.706	25.974		$4.169 \times 10^5$	
8.00 TeV	$8.000 \times 10^6$	2.891	18.144	25.668	3.555	50.259		$5.257 \times 10^5$	
10.0 TeV	$1.000 \times 10^7$	2.916	22.833	32.243	4.506	62.499		$5.613 \times 10^5$	
14.0 TeV	$1.400 \times 10^7$	2.955	32.194	45.354	6.462	86.966		$6.153 \times 10^5$	
20.0 TeV	$2.000 \times 10^7$	2.997	46.335	65.116	9.465	123.914		$6.728 \times 10^5$	
30.0 TeV	$3.000 \times 10^7$	3.045	69.853	97.999	14.666	185.563		$7.383 \times 10^5$	
40.0 TeV	$4.000 \times 10^7$	3.080	93.468	130.972	19.997	247.518		$7.848 \times 10^5$	
80.0 TeV	$8.000 \times 10^7$	3.166	188.140	262.969	42.322	496.597		$8.967 \times 10^5$	
100. TeV	$1.000 \times 10^8$	3.195	235.584	329.037	53.876	621.691		$9.326 \times 10^5$	