

**Table 332: Muons in Cerium fluoride [CeF<sub>3</sub>]**

$\langle Z/A \rangle$	$\rho$ [g/cm <sup>3</sup> ]	$I$ [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
0.43123	6.160	348.4	0.18617	3.0000	0.2000	3.0000	5.0079	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	$4.704 \times 10^1$	4.958				4.958	$1.135 \times 10^0$	
14.0 MeV	$5.616 \times 10^1$	3.903				3.904	$2.054 \times 10^0$	
20.0 MeV	$6.802 \times 10^1$	3.075				3.075	$3.804 \times 10^0$	
30.0 MeV	$8.509 \times 10^1$	2.407				2.407	$7.529 \times 10^0$	
40.0 MeV	$1.003 \times 10^2$	2.068				2.068	$1.204 \times 10^1$	
80.0 MeV	$1.527 \times 10^2$	1.574				1.574	$3.489 \times 10^1$	
100. MeV	$1.764 \times 10^2$	1.486				1.487	$4.800 \times 10^1$	
140. MeV	$2.218 \times 10^2$	1.400				1.400	$7.585 \times 10^1$	
200. MeV	$2.868 \times 10^2$	1.357				1.357	$1.195 \times 10^2$	
257. MeV	$3.471 \times 10^2$	1.349			0.000	1.350	<i>Minimum ionization</i>	
300. MeV	$3.917 \times 10^2$	1.352	0.000		0.000	1.352	$1.935 \times 10^2$	
400. MeV	$4.945 \times 10^2$	1.369	0.000		0.000	1.369	$2.671 \times 10^2$	
800. MeV	$8.995 \times 10^2$	1.449	0.001		0.000	1.450	$5.507 \times 10^2$	
1.00 GeV	$1.101 \times 10^3$	1.482	0.001		0.000	1.483	$6.870 \times 10^2$	
1.40 GeV	$1.502 \times 10^3$	1.534	0.001	0.000	0.001	1.536	$9.517 \times 10^2$	
2.00 GeV	$2.103 \times 10^3$	1.590	0.002	0.001	0.001	1.594	$1.335 \times 10^3$	
3.00 GeV	$3.104 \times 10^3$	1.653	0.004	0.003	0.001	1.661	$1.948 \times 10^3$	
4.00 GeV	$4.104 \times 10^3$	1.696	0.006	0.004	0.002	1.709	$2.541 \times 10^3$	
8.00 GeV	$8.105 \times 10^3$	1.794	0.015	0.014	0.003	1.826	$4.798 \times 10^3$	
10.0 GeV	$1.011 \times 10^4$	1.823	0.020	0.020	0.004	1.867	$5.881 \times 10^3$	
14.0 GeV	$1.411 \times 10^4$	1.864	0.030	0.032	0.006	1.933	$7.985 \times 10^3$	
20.0 GeV	$2.011 \times 10^4$	1.906	0.047	0.053	0.008	2.013	$1.102 \times 10^4$	
30.0 GeV	$3.011 \times 10^4$	1.950	0.076	0.092	0.012	2.130	$1.585 \times 10^4$	
40.0 GeV	$4.011 \times 10^4$	1.979	0.108	0.135	0.015	2.238	$2.043 \times 10^4$	
80.0 GeV	$8.011 \times 10^4$	2.045	0.244	0.325	0.030	2.644	$3.684 \times 10^4$	
100. GeV	$1.001 \times 10^5$	2.065	0.316	0.427	0.037	2.846	$4.414 \times 10^4$	
140. GeV	$1.401 \times 10^5$	2.095	0.463	0.637	0.052	3.249	$5.728 \times 10^4$	
200. GeV	$2.001 \times 10^5$	2.127	0.695	0.971	0.074	3.867	$7.420 \times 10^4$	
241. GeV	$2.415 \times 10^5$	2.144	0.856	1.199	0.089	4.288	<i>Muon critical energy</i>	
300. GeV	$3.001 \times 10^5$	2.163	1.090	1.528	0.111	4.892	$9.715 \times 10^4$	
400. GeV	$4.001 \times 10^5$	2.188	1.498	2.106	0.147	5.941	$1.157 \times 10^5$	
800. GeV	$8.001 \times 10^5$	2.250	3.185	4.479	0.298	10.213	$1.664 \times 10^5$	
1.00 TeV	$1.000 \times 10^6$	2.270	4.052	5.693	0.375	12.391	$1.842 \times 10^5$	
1.40 TeV	$1.400 \times 10^6$	2.300	5.790	8.115	0.531	16.738	$2.119 \times 10^5$	
2.00 TeV	$2.000 \times 10^6$	2.333	8.450	11.811	0.768	23.363	$2.421 \times 10^5$	
3.00 TeV	$3.000 \times 10^6$	2.371	12.890	17.955	1.175	34.391	$2.772 \times 10^5$	
4.00 TeV	$4.000 \times 10^6$	2.398	17.390	24.164	1.588	45.542	$3.024 \times 10^5$	
8.00 TeV	$8.000 \times 10^6$	2.465	35.537	49.129	3.303	90.435	$3.635 \times 10^5$	
10.0 TeV	$1.000 \times 10^7$	2.487	44.683	61.679	4.184	113.035	$3.832 \times 10^5$	
14.0 TeV	$1.400 \times 10^7$	2.521	62.926	86.718	5.994	158.160	$4.130 \times 10^5$	
20.0 TeV	$2.000 \times 10^7$	2.557	90.454	124.439	8.770	226.221	$4.446 \times 10^5$	
30.0 TeV	$3.000 \times 10^7$	2.599	136.283	187.201	13.572	339.656	$4.804 \times 10^5$	
40.0 TeV	$4.000 \times 10^7$	2.629	182.280	250.115	18.490	453.515	$5.058 \times 10^5$	
80.0 TeV	$8.000 \times 10^7$	2.703	366.552	501.948	39.046	910.251	$5.668 \times 10^5$	
100. TeV	$1.000 \times 10^8$	2.728	458.848	627.982	49.670	1139.230	$5.864 \times 10^5$	