

## Muons in darmstadtium (Ds)

Z	A [g/mol]	$\rho$ [g/cm <sup>3</sup> ]	I [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
110 (Ds)	[281.1645(6)]	??	1129.0	0.28068	3.0000	0.6632	3.0000	6.6357	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	$4.704 \times 10^1$	3.474				3.474	$1.716 \times 10^0$		
14.0 MeV	$5.616 \times 10^1$	2.806				2.806	$3.008 \times 10^0$		
20.0 MeV	$6.802 \times 10^1$	2.257				2.257	$5.414 \times 10^0$		
30.0 MeV	$8.509 \times 10^1$	1.800				1.800	$1.043 \times 10^1$		
40.0 MeV	$1.003 \times 10^2$	1.563				1.563	$1.643 \times 10^1$		
80.0 MeV	$1.527 \times 10^2$	1.214				1.214	$4.630 \times 10^1$		
100. MeV	$1.764 \times 10^2$	1.154				1.154	$6.323 \times 10^1$		
140. MeV	$2.218 \times 10^2$	1.099				1.099	$9.890 \times 10^1$		
200. MeV	$2.868 \times 10^2$	1.079	0.000			1.079	$1.542 \times 10^2$		
207. MeV	$2.943 \times 10^2$	1.079	0.000			1.079	<i>Minimum ionization</i>		
300. MeV	$3.917 \times 10^2$	1.093	0.000		0.000	1.093	$2.464 \times 10^2$		
400. MeV	$4.945 \times 10^2$	1.121	0.000		0.000	1.122	$3.368 \times 10^2$		
800. MeV	$8.995 \times 10^2$	1.220	0.001		0.000	1.222	$6.775 \times 10^2$		
1.00 GeV	$1.101 \times 10^3$	1.256	0.002		0.000	1.259	$8.387 \times 10^2$		
1.40 GeV	$1.502 \times 10^3$	1.312	0.003		0.000	1.316	$1.149 \times 10^3$		
2.00 GeV	$2.103 \times 10^3$	1.371	0.005	0.000	0.001	1.378	$1.594 \times 10^3$		
3.00 GeV	$3.104 \times 10^3$	1.436	0.009	0.003	0.001	1.449	$2.301 \times 10^3$		
4.00 GeV	$4.104 \times 10^3$	1.479	0.014	0.007	0.001	1.502	$2.978 \times 10^3$		
8.00 GeV	$8.105 \times 10^3$	1.576	0.034	0.025	0.003	1.639	$5.518 \times 10^3$		
10.0 GeV	$1.011 \times 10^4$	1.604	0.045	0.037	0.004	1.690	$6.719 \times 10^3$		
14.0 GeV	$1.411 \times 10^4$	1.644	0.068	0.061	0.005	1.780	$9.024 \times 10^3$		
20.0 GeV	$2.011 \times 10^4$	1.683	0.106	0.102	0.007	1.900	$1.229 \times 10^4$		
30.0 GeV	$3.011 \times 10^4$	1.724	0.174	0.183	0.010	2.093	$1.730 \times 10^4$		
40.0 GeV	$4.011 \times 10^4$	1.751	0.246	0.271	0.014	2.284	$2.187 \times 10^4$		
80.0 GeV	$8.011 \times 10^4$	1.812	0.557	0.664	0.027	3.061	$3.695 \times 10^4$		
100. GeV	$1.001 \times 10^5$	1.830	0.721	0.877	0.034	3.464	$4.309 \times 10^4$		
111. GeV	$1.108 \times 10^5$	1.838	0.810	0.992	0.037	3.679	<i>Muon critical energy</i>		
140. GeV	$1.401 \times 10^5$	1.857	1.058	1.315	0.047	4.280	$5.347 \times 10^4$		
200. GeV	$2.001 \times 10^5$	1.886	1.586	2.011	0.067	5.551	$6.576 \times 10^4$		
300. GeV	$3.001 \times 10^5$	1.919	2.485	3.171	0.100	7.676	$8.102 \times 10^4$		
400. GeV	$4.001 \times 10^5$	1.942	3.413	4.374	0.133	9.864	$9.249 \times 10^4$		
800. GeV	$8.001 \times 10^5$	1.998	7.241	9.308	0.269	18.817	$1.214 \times 10^5$		
1.00 TeV	$1.000 \times 10^6$	2.016	9.204	11.832	0.338	23.393	$1.309 \times 10^5$		
1.40 TeV	$1.400 \times 10^6$	2.044	13.136	16.864	0.479	32.524	$1.453 \times 10^5$		
2.00 TeV	$2.000 \times 10^6$	2.073	19.144	24.544	0.692	46.456	$1.607 \times 10^5$		
3.00 TeV	$3.000 \times 10^6$	2.108	29.165	37.302	1.057	69.634	$1.782 \times 10^5$		
4.00 TeV	$4.000 \times 10^6$	2.132	39.311	50.195	1.428	93.069	$1.905 \times 10^5$		
8.00 TeV	$8.000 \times 10^6$	2.193	80.180	102.015	2.964	187.355	$2.202 \times 10^5$		
10.0 TeV	$1.000 \times 10^7$	2.213	100.759	128.060	3.752	234.787	$2.297 \times 10^5$		
14.0 TeV	$1.400 \times 10^7$	2.243	141.804	180.030	5.368	329.447	$2.441 \times 10^5$		
20.0 TeV	$2.000 \times 10^7$	2.276	203.700	258.314	7.842	472.135	$2.592 \times 10^5$		
30.0 TeV	$3.000 \times 10^7$	2.314	306.840	388.542	12.115	709.814	$2.764 \times 10^5$		
40.0 TeV	$4.000 \times 10^7$	2.342	410.341	519.070	16.486	948.241	$2.885 \times 10^5$		
80.0 TeV	$8.000 \times 10^7$	2.409	824.301	1041.546	34.719	1902.978	$3.177 \times 10^5$		
100. TeV	$1.000 \times 10^8$	2.431	1031.400	1303.020	44.130	2380.983	$3.271 \times 10^5$		