

**Table 319: Muons in Element 115**

Z	A [g/mol]	$\rho$ [g/cm <sup>3</sup> ]	I [eV]	a	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
115 ( )	[288.192 (6)]	??	1199.0	0.28871	3.0000	0.6960	3.0000	6.7363	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	$4.704 \times 10^1$	3.475				3.475	$1.726 \times 10^0$		
14.0 MeV	$5.616 \times 10^1$	2.815				2.815	$3.016 \times 10^0$		
20.0 MeV	$6.802 \times 10^1$	2.270				2.270	$5.411 \times 10^0$		
30.0 MeV	$8.509 \times 10^1$	1.814				1.814	$1.040 \times 10^1$		
40.0 MeV	$1.003 \times 10^2$	1.576				1.576	$1.635 \times 10^1$		
80.0 MeV	$1.527 \times 10^2$	1.227				1.227	$4.592 \times 10^1$		
100. MeV	$1.764 \times 10^2$	1.167				1.167	$6.268 \times 10^1$		
140. MeV	$2.218 \times 10^2$	1.112				1.112	$9.795 \times 10^1$		
200. MeV	$2.868 \times 10^2$	1.092	0.000			1.092	$1.526 \times 10^2$		
206. MeV	$2.933 \times 10^2$	1.092	0.000			1.092	<i>Minimum ionization</i>		
300. MeV	$3.917 \times 10^2$	1.107	0.000		0.000	1.107	$2.437 \times 10^2$		
400. MeV	$4.945 \times 10^2$	1.135	0.000		0.000	1.136	$3.329 \times 10^2$		
800. MeV	$8.995 \times 10^2$	1.238	0.001		0.000	1.240	$6.688 \times 10^2$		
1.00 GeV	$1.101 \times 10^3$	1.276	0.002		0.000	1.279	$8.275 \times 10^2$		
1.40 GeV	$1.502 \times 10^3$	1.334	0.003		0.000	1.338	$1.133 \times 10^3$		
2.00 GeV	$2.103 \times 10^3$	1.395	0.005	0.000	0.001	1.401	$1.571 \times 10^3$		
3.00 GeV	$3.104 \times 10^3$	1.461	0.009	0.003	0.001	1.475	$2.265 \times 10^3$		
4.00 GeV	$4.104 \times 10^3$	1.506	0.014	0.006	0.001	1.529	$2.930 \times 10^3$		
8.00 GeV	$8.105 \times 10^3$	1.605	0.034	0.025	0.003	1.669	$5.425 \times 10^3$		
10.0 GeV	$1.011 \times 10^4$	1.634	0.046	0.037	0.004	1.721	$6.604 \times 10^3$		
14.0 GeV	$1.411 \times 10^4$	1.675	0.070	0.061	0.005	1.813	$8.867 \times 10^3$		
20.0 GeV	$2.011 \times 10^4$	1.716	0.109	0.103	0.007	1.935	$1.207 \times 10^4$		
30.0 GeV	$3.011 \times 10^4$	1.757	0.178	0.184	0.010	2.132	$1.699 \times 10^4$		
40.0 GeV	$4.011 \times 10^4$	1.785	0.252	0.274	0.014	2.326	$2.148 \times 10^4$		
80.0 GeV	$8.011 \times 10^4$	1.847	0.570	0.673	0.027	3.119	$3.629 \times 10^4$		
100. GeV	$1.001 \times 10^5$	1.865	0.739	0.889	0.033	3.529	$4.231 \times 10^4$		
111. GeV	$1.109 \times 10^5$	1.874	0.831	1.007	0.037	3.750	<i>Muon critical energy</i>		
140. GeV	$1.401 \times 10^5$	1.893	1.084	1.334	0.047	4.360	$5.250 \times 10^4$		
200. GeV	$2.001 \times 10^5$	1.923	1.625	2.040	0.066	5.656	$6.456 \times 10^4$		
300. GeV	$3.001 \times 10^5$	1.956	2.546	3.219	0.099	7.822	$7.954 \times 10^4$		
400. GeV	$4.001 \times 10^5$	1.979	3.497	4.441	0.132	10.052	$9.079 \times 10^4$		
800. GeV	$8.001 \times 10^5$	2.036	7.418	9.454	0.267	19.178	$1.191 \times 10^5$		
1.00 TeV	$1.000 \times 10^6$	2.055	9.430	12.019	0.336	23.842	$1.285 \times 10^5$		
1.40 TeV	$1.400 \times 10^6$	2.083	13.457	17.131	0.476	33.149	$1.426 \times 10^5$		
2.00 TeV	$2.000 \times 10^6$	2.114	19.611	24.934	0.688	47.349	$1.577 \times 10^5$		
3.00 TeV	$3.000 \times 10^6$	2.149	29.875	37.897	1.051	70.974	$1.749 \times 10^5$		
4.00 TeV	$4.000 \times 10^6$	2.174	40.266	50.998	1.420	94.860	$1.870 \times 10^5$		
8.00 TeV	$8.000 \times 10^6$	2.236	82.121	103.652	2.947	190.958	$2.161 \times 10^5$		
10.0 TeV	$1.000 \times 10^7$	2.256	103.195	130.116	3.730	239.299	$2.255 \times 10^5$		
14.0 TeV	$1.400 \times 10^7$	2.287	145.228	182.922	5.336	335.776	$2.395 \times 10^5$		
20.0 TeV	$2.000 \times 10^7$	2.320	208.612	262.468	7.796	481.199	$2.544 \times 10^5$		
30.0 TeV	$3.000 \times 10^7$	2.359	314.232	394.792	12.043	723.429	$2.712 \times 10^5$		
40.0 TeV	$4.000 \times 10^7$	2.387	420.220	527.420	16.388	966.417	$2.831 \times 10^5$		
80.0 TeV	$8.000 \times 10^7$	2.456	844.120	1058.295	34.514	1939.388	$3.117 \times 10^5$		
100. TeV	$1.000 \times 10^8$	2.479	1056.190	1323.970	43.870	2426.511	$3.209 \times 10^5$		