Table 089: Muons in Actinium

Z	A [g/mol]	ρ [g/cm^3]	I [eV]	a	$k = m_s$	x_0	x_1	$\overline{C}$	δ_0
89 (Ac)	[227.02775 (2)]	10.070	841.0	0.08567	3.2683	0.4559	3.7966	6.3742	0.14

T	p [MeV/c]	Ionization	Brems	Pair prod	Photonucl	Total	CSDA range [g/cm^2]
		[MeV cm^2/g]					
10.0 MeV	4.704×10^1	3.774				3.774	1.544×10^0
14.0 MeV	5.616×10^1	3.015				3.015	2.740×10^0
20.0 MeV	6.802×10^1	2.405				2.405	4.991×10^0
30.0 MeV	8.509×10^1	1.904				1.904	9.723×10^0
40.0 MeV	1.003×10^2	1.646				1.646	1.541×10^1
80.0 MeV	1.527×10^2	1.268				1.268	4.390×10^1
100. MeV	1.764×10^2	1.202				1.202	6.014×10^1
140. MeV	2.218×10^2	1.140				1.140	9.445×10^1
200. MeV	2.868×10^2	1.113				1.113	1.479×10^2
219. MeV	3.074×10^2	1.112	0.000			1.112	*Minimum ionization*
300. MeV	3.917×10^2	1.121	0.000		0.000	1.122	2.376×10^2
400. MeV	4.945×10^2	1.144	0.000		0.000	1.144	3.259×10^2
800. MeV	8.995×10^2	1.231	0.001		0.000	1.232	6.621×10^2
1.00 GeV	1.101×10^3	1.264	0.002		0.000	1.266	8.221×10^2
1.40 GeV	1.502×10^3	1.317	0.003		0.001	1.320	1.131×10^3
2.00 GeV	2.103×10^3	1.374	0.004	0.001	0.001	1.380	1.575×10^3
3.00 GeV	3.104×10^3	1.437	0.007	0.003	0.001	1.450	2.281×10^3
4.00 GeV	4.104×10^3	1.481	0.011	0.006	0.002	1.500	2.959×10^3
8.00 GeV	8.105×10^3	1.579	0.027	0.023	0.003	1.632	5.504×10^3
10.0 GeV	1.011×10^4	1.609	0.035	0.032	0.004	1.681	6.711×10^3
14.0 GeV	1.411×10^4	1.651	0.054	0.053	0.005	1.764	9.033×10^3
20.0 GeV	2.011×10^4	1.693	0.084	0.088	0.007	1.873	1.233×10^4
30.0 GeV	3.011×10^4	1.737	0.138	0.155	0.011	2.041	1.744×10^4
40.0 GeV	4.011×10^4	1.766	0.195	0.229	0.014	2.205	2.215×10^4
80.0 GeV	8.011×10^4	1.831	0.442	0.555	0.027	2.856	3.805×10^4
100. GeV	1.001×10^5	1.851	0.572	0.731	0.034	3.189	4.467×10^4
134. GeV	1.337×10^5	1.876	0.796	1.034	0.045	3.753	*Muon critical energy*
140. GeV	1.401×10^5	1.880	0.840	1.093	0.048	3.862	5.606×10^4
200. GeV	2.001×10^5	1.909	1.259	1.668	0.068	4.905	6.982×10^4
300. GeV	3.001×10^5	1.942	1.973	2.627	0.101	6.645	8.729×10^4
400. GeV	4.001×10^5	1.965	2.710	3.621	0.135	8.434	1.006×10^5
800. GeV	8.001×10^5	2.021	5.753	7.697	0.273	15.747	1.348×10^5
1.00 TeV	1.000×10^6	2.040	7.315	9.781	0.344	19.481	1.462×10^5
1.40 TeV	1.400×10^6	2.067	10.443	13.937	0.486	26.936	1.636×10^5
2.00 TeV	2.000×10^6	2.097	15.225	20.279	0.703	38.307	1.822×10^5
3.00 TeV	3.000×10^6	2.132	23.203	30.816	1.075	57.227	2.034×10^5
4.00 TeV	4.000×10^6	2.156	31.282	41.464	1.452	76.356	2.185×10^5
8.00 TeV	8.000×10^6	2.217	63.835	84.258	3.015	153.327	2.547×10^5
10.0 TeV	1.000×10^7	2.237	80.230	105.766	3.817	192.052	2.664×10^5
14.0 TeV	1.400×10^7	2.268	112.930	148.684	5.461	269.345	2.839×10^5
20.0 TeV	2.000×10^7	2.301	162.250	213.332	7.980	385.865	3.024×10^5
30.0 TeV	3.000×10^7	2.339	244.356	320.882	12.330	579.909	3.234×10^5
40.0 TeV	4.000×10^7	2.366	326.736	428.679	16.780	774.563	3.382×10^5
80.0 TeV	8.000×10^7	2.434	656.686	860.159	35.347	1554.627	3.740×10^5
100. TeV	1.000×10^8	2.456	821.910	1076.090	44.930	1945.388	3.854×10^5