Table 018: Muons in Argon gas

Z	A [g/mol]	ρ [g/cm^3]	I [eV]	a	$k = m_s$	x_0	x_1	$\overline{C}$	δ_0
18 (Ar)	39.948 (1)	1.662×10^{-3}	188.0	0.19714	2.9618	1.7635	4.4855	11.9480	0.00

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	5.687				5.687	9.834×10^{-1}
14.0 MeV	5.616×10^1	4.461				4.461	1.786×10^0
20.0 MeV	6.802×10^1	3.502				3.502	3.321×10^0
30.0 MeV	8.509×10^1	2.731				2.731	6.598×10^0
40.0 MeV	1.003×10^2	2.340				2.340	1.058×10^1
80.0 MeV	1.527×10^2	1.771				1.771	3.084×10^1
100. MeV	1.764×10^2	1.670				1.670	4.250×10^1
140. MeV	2.218×10^2	1.572				1.572	6.731×10^1
200. MeV	2.868×10^2	1.525				1.526	1.062×10^2
242. MeV	3.316×10^2	1.519			0.000	1.520	*Minimum ionization*
300. MeV	3.917×10^2	1.525			0.000	1.526	1.719×10^2
400. MeV	4.945×10^2	1.551	0.000		0.000	1.551	2.369×10^2
800. MeV	8.995×10^2	1.666	0.000		0.000	1.667	4.854×10^2
1.00 GeV	1.101×10^3	1.714	0.000		0.000	1.715	6.037×10^2
1.40 GeV	1.502×10^3	1.791	0.001	0.000	0.001	1.793	8.316×10^2
2.00 GeV	2.103×10^3	1.878	0.001	0.001	0.001	1.881	1.158×10^3
3.00 GeV	3.104×10^3	1.980	0.002	0.001	0.001	1.985	1.675×10^3
4.00 GeV	4.104×10^3	2.054	0.003	0.002	0.002	2.061	2.168×10^3
8.00 GeV	8.105×10^3	2.226	0.007	0.007	0.004	2.244	4.018×10^3
10.0 GeV	1.011×10^4	2.277	0.010	0.010	0.004	2.301	4.897×10^3
14.0 GeV	1.411×10^4	2.349	0.015	0.016	0.006	2.386	6.603×10^3
20.0 GeV	2.011×10^4	2.420	0.023	0.026	0.008	2.477	9.068×10^3
30.0 GeV	3.011×10^4	2.494	0.037	0.046	0.012	2.589	1.301×10^4
40.0 GeV	4.011×10^4	2.542	0.052	0.067	0.016	2.678	1.681×10^4
80.0 GeV	8.011×10^4	2.647	0.118	0.161	0.032	2.959	3.098×10^4
100. GeV	1.001×10^5	2.677	0.153	0.212	0.039	3.083	3.760×10^4
140. GeV	1.401×10^5	2.721	0.225	0.318	0.055	3.319	5.010×10^4
200. GeV	2.001×10^5	2.764	0.338	0.485	0.078	3.666	6.729×10^4
300. GeV	3.001×10^5	2.810	0.532	0.766	0.117	4.225	9.268×10^4
400. GeV	4.001×10^5	2.842	0.732	1.058	0.156	4.787	1.149×10^5
572. GeV	5.723×10^5	2.879	1.085	1.571	0.223	5.759	*Muon critical energy*
800. GeV	8.001×10^5	2.913	1.561	2.258	0.314	7.048	1.833×10^5
1.00 TeV	1.000×10^6	2.935	1.989	2.874	0.395	8.194	2.096×10^5
1.40 TeV	1.400×10^6	2.969	2.847	4.104	0.560	10.480	2.527×10^5
2.00 TeV	2.000×10^6	3.003	4.161	5.985	0.810	13.960	3.022×10^5
3.00 TeV	3.000×10^6	3.043	6.360	9.110	1.240	19.754	3.621×10^5
4.00 TeV	4.000×10^6	3.071	8.592	12.272	1.677	25.613	4.064×10^5
8.00 TeV	8.000×10^6	3.141	17.605	24.995	3.493	49.235	5.171×10^5
10.0 TeV	1.000×10^7	3.164	22.154	31.395	4.427	61.141	5.535×10^5
14.0 TeV	1.400×10^7	3.199	31.236	44.156	6.347	84.938	6.088×10^5
20.0 TeV	2.000×10^7	3.237	44.956	63.386	9.292	120.872	6.677×10^5
30.0 TeV	3.000×10^7	3.281	67.769	95.400	14.391	180.841	7.349×10^5
40.0 TeV	4.000×10^7	3.312	90.675	127.504	19.616	241.108	7.826×10^5
80.0 TeV	8.000×10^7	3.390	182.502	256.012	41.480	483.384	8.975×10^5
100. TeV	1.000×10^8	3.416	228.520	320.330	52.790	605.056	9.344×10^5