Muons in deuterium gas (D_2)

Z	A [g/mol]	ρ [g/cm^3]	I [eV]	a	$k = m_s$	x_0	x_1	$\overline{C}$	δ_0
1 (D)	2.014101764 (13)	0.677×10^{-4}	19.2	0.14092	5.7273	1.8793	3.2872	9.6543	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	8.379				8.379	6.528×10^{-1}
14.0 MeV	5.616×10^1	6.500				6.500	1.201×10^0
20.0 MeV	6.802×10^1	5.049				5.049	2.261×10^0
30.0 MeV	8.509×10^1	3.895				3.895	4.548×10^0
40.0 MeV	1.003×10^2	3.313				3.313	7.350×10^0
80.0 MeV	1.527×10^2	2.466				2.466	2.180×10^1
100. MeV	1.764×10^2	2.312				2.313	3.020×10^1
140. MeV	2.218×10^2	2.159				2.159	4.819×10^1
200. MeV	2.868×10^2	2.076			0.000	2.076	7.663×10^1
284. MeV	3.748×10^2	2.053			0.000	2.054	*Minimum ionization*
300. MeV	3.917×10^2	2.054			0.000	2.054	1.252×10^2
400. MeV	4.945×10^2	2.072			0.000	2.073	1.737×10^2
800. MeV	8.995×10^2	2.188			0.000	2.189	3.615×10^2
1.00 GeV	1.101×10^3	2.239			0.001	2.240	4.518×10^2
1.40 GeV	1.502×10^3	2.323	0.000		0.001	2.324	6.269×10^2
2.00 GeV	2.103×10^3	2.418	0.000		0.001	2.420	8.797×10^2
3.00 GeV	3.104×10^3	2.530	0.000	0.000	0.002	2.533	1.283×10^3
4.00 GeV	4.104×10^3	2.611	0.001	0.000	0.002	2.615	1.671×10^3
8.00 GeV	8.105×10^3	2.806	0.001	0.001	0.005	2.814	3.140×10^3
10.0 GeV	1.011×10^4	2.860	0.002	0.002	0.006	2.870	3.843×10^3
14.0 GeV	1.411×10^4	2.927	0.003	0.003	0.008	2.941	5.218×10^3
20.0 GeV	2.011×10^4	2.984	0.005	0.006	0.011	3.005	7.235×10^3
30.0 GeV	3.011×10^4	3.039	0.008	0.010	0.015	3.073	1.052×10^4
40.0 GeV	4.011×10^4	3.074	0.012	0.015	0.020	3.121	1.375×10^4
80.0 GeV	8.011×10^4	3.150	0.028	0.038	0.038	3.255	2.628×10^4
100. GeV	1.001×10^5	3.174	0.037	0.050	0.047	3.309	3.238×10^4
140. GeV	1.401×10^5	3.209	0.055	0.076	0.066	3.406	4.429×10^4
200. GeV	2.001×10^5	3.245	0.085	0.118	0.093	3.541	6.156×10^4
300. GeV	3.001×10^5	3.286	0.137	0.191	0.139	3.753	8.898×10^4
400. GeV	4.001×10^5	3.315	0.191	0.268	0.185	3.960	1.149×10^5
800. GeV	8.001×10^5	3.387	0.423	0.592	0.373	4.774	2.068×10^5
1.00 TeV	1.000×10^6	3.410	0.544	0.761	0.468	5.183	2.470×10^5
1.40 TeV	1.400×10^6	3.445	0.791	1.101	0.663	6.001	3.186×10^5
1.86 TeV	1.858×10^6	3.475	1.083	1.501	0.890	6.950	*Muon critical energy*
2.00 TeV	2.000×10^6	3.483	1.175	1.627	0.961	7.246	4.095×10^5
3.00 TeV	3.000×10^6	3.526	1.827	2.504	1.474	9.331	5.309×10^5
4.00 TeV	4.000×10^6	3.557	2.496	3.399	1.996	11.448	6.275×10^5
8.00 TeV	8.000×10^6	3.634	5.240	7.012	4.180	20.067	8.882×10^5
10.0 TeV	1.000×10^7	3.660	6.642	8.837	5.308	24.447	9.783×10^5
14.0 TeV	1.400×10^7	3.698	9.452	12.466	7.642	33.258	1.118×10^6
20.0 TeV	2.000×10^7	3.740	13.734	17.952	11.236	46.662	1.270×10^6
30.0 TeV	3.000×10^7	3.788	20.884	27.062	17.498	69.232	1.445×10^6
40.0 TeV	4.000×10^7	3.823	28.113	36.210	23.940	92.085	1.570×10^6
80.0 TeV	8.000×10^7	3.908	57.248	72.833	51.135	185.124	1.870×10^6
100. TeV	1.000×10^8	3.937	71.920	91.170	65.290	232.317	1.966×10^6