Table 299: Muons in Liquid deuterium (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)	0.169	21.8	0.13483	5.6249	0.4399	1.8855	3.0975	0.00

T	p [MeV/c]	Ionization	Brems	Pair prod [MeV cm^2/g]	Photonucl	Total	CSDA range [g/cm^2]
10.0 MeV	4.704×10^1	8.261				8.261	6.627×10^{-1}
14.0 MeV	5.616×10^1	6.412				6.412	1.218×10^0
20.0 MeV	6.802×10^1	4.983				4.983	2.292×10^0
30.0 MeV	8.509×10^1	3.846				3.846	4.610×10^0
40.0 MeV	1.003×10^2	3.272				3.273	7.447×10^0
80.0 MeV	1.527×10^2	2.437				2.437	2.207×10^1
100. MeV	1.764×10^2	2.286				2.286	3.057×10^1
140. MeV	2.218×10^2	2.135				2.135	4.876×10^1
200. MeV	2.868×10^2	2.054			0.000	2.054	7.752×10^1
300. MeV	3.917×10^2	2.021			0.000	2.021	1.267×10^2
345. MeV	4.382×10^2	2.019			0.000	2.019	*Minimum ionization*
400. MeV	4.945×10^2	2.021			0.000	2.021	1.762×10^2
800. MeV	8.995×10^2	2.069			0.000	2.070	3.719×10^2
1.00 GeV	1.101×10^3	2.093			0.001	2.093	4.680×10^2
1.40 GeV	1.502×10^3	2.132	0.000		0.001	2.133	6.572×10^2
2.00 GeV	2.103×10^3	2.178	0.000		0.001	2.179	9.353×10^2
3.00 GeV	3.104×10^3	2.231	0.000	0.000	0.002	2.234	1.388×10^3
4.00 GeV	4.104×10^3	2.270	0.001	0.000	0.002	2.273	1.832×10^3
8.00 GeV	8.105×10^3	2.362	0.001	0.001	0.005	2.369	3.551×10^3
10.0 GeV	1.011×10^4	2.390	0.002	0.002	0.006	2.400	4.390×10^3
14.0 GeV	1.411×10^4	2.433	0.003	0.003	0.008	2.447	6.040×10^3
20.0 GeV	2.011×10^4	2.476	0.005	0.006	0.011	2.497	8.465×10^3
30.0 GeV	3.011×10^4	2.524	0.008	0.010	0.015	2.558	1.242×10^4
40.0 GeV	4.011×10^4	2.556	0.012	0.015	0.020	2.603	1.629×10^4
80.0 GeV	8.011×10^4	2.631	0.028	0.038	0.038	2.736	3.126×10^4
100. GeV	1.001×10^5	2.655	0.037	0.050	0.047	2.789	3.850×10^4
140. GeV	1.401×10^5	2.689	0.055	0.076	0.066	2.887	5.259×10^4
200. GeV	2.001×10^5	2.726	0.085	0.118	0.093	3.022	7.289×10^4
300. GeV	3.001×10^5	2.767	0.137	0.191	0.139	3.234	1.049×10^5
400. GeV	4.001×10^5	2.796	0.191	0.268	0.185	3.440	1.348×10^5
800. GeV	8.001×10^5	2.867	0.423	0.592	0.373	4.255	2.392×10^5
1.00 TeV	1.000×10^6	2.890	0.544	0.761	0.468	4.664	2.841×10^5
1.40 TeV	1.400×10^6	2.926	0.791	1.101	0.663	5.482	3.631×10^5
1.59 TeV	1.592×10^6	2.939	0.913	1.268	0.758	5.879	*Muon critical energy*
2.00 TeV	2.000×10^6	2.963	1.175	1.627	0.961	6.726	4.618×10^5
3.00 TeV	3.000×10^6	3.007	1.827	2.504	1.474	8.812	5.913×10^5
4.00 TeV	4.000×10^6	3.038	2.496	3.399	1.996	10.929	6.930×10^5
8.00 TeV	8.000×10^6	3.115	5.240	7.012	4.180	19.548	9.631×10^5
10.0 TeV	1.000×10^7	3.141	6.642	8.837	5.308	23.928	1.055×10^6
14.0 TeV	1.400×10^7	3.179	9.452	12.466	7.642	32.739	1.198×10^6
20.0 TeV	2.000×10^7	3.221	13.734	17.952	11.236	46.143	1.352×10^6
30.0 TeV	3.000×10^7	3.269	20.884	27.062	17.498	68.713	1.528×10^6
40.0 TeV	4.000×10^7	3.304	28.113	36.210	23.940	91.566	1.654×10^6
80.0 TeV	8.000×10^7	3.389	57.248	72.833	51.135	184.605	1.956×10^6
100. TeV	1.000×10^8	3.417	71.920	91.170	65.290	231.798	2.052×10^6