Table 074: Muons in Tungsten

Z	A [g/mol]	ρ [g/cm^3]	I [eV]	a	$k = m_s$	x_0	x_1	$\overline{C}$	δ_0
74 (W)	183.84 (1)	19.300	727.0	0.15509	2.8447	0.2167	3.4960	5.4059	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	4.000				4.000	1.446×10^0
14.0 MeV	5.616×10^1	3.185				3.186	2.577×10^0
20.0 MeV	6.802×10^1	2.534				2.534	4.711×10^0
30.0 MeV	8.509×10^1	2.000				2.000	9.210×10^0
40.0 MeV	1.003×10^2	1.726				1.726	1.463×10^1
80.0 MeV	1.527×10^2	1.323				1.323	4.189×10^1
100. MeV	1.764×10^2	1.251				1.251	5.747×10^1
140. MeV	2.218×10^2	1.182				1.182	9.051×10^1
200. MeV	2.868×10^2	1.149				1.149	1.422×10^2
242. MeV	3.316×10^2	1.145	0.000			1.145	*Minimum ionization*
300. MeV	3.917×10^2	1.150	0.000		0.000	1.150	2.294×10^2
400. MeV	4.945×10^2	1.168	0.000		0.000	1.168	3.157×10^2
800. MeV	8.995×10^2	1.247	0.001		0.000	1.249	6.464×10^2
1.00 GeV	1.101×10^3	1.279	0.001		0.000	1.281	8.045×10^2
1.40 GeV	1.502×10^3	1.329	0.002		0.001	1.332	1.110×10^3
2.00 GeV	2.103×10^3	1.384	0.004	0.001	0.001	1.390	1.551×10^3
3.00 GeV	3.104×10^3	1.446	0.006	0.003	0.001	1.458	2.252×10^3
4.00 GeV	4.104×10^3	1.489	0.009	0.006	0.002	1.507	2.926×10^3
8.00 GeV	8.105×10^3	1.587	0.023	0.021	0.003	1.634	5.465×10^3
10.0 GeV	1.011×10^4	1.616	0.031	0.030	0.004	1.681	6.671×10^3
14.0 GeV	1.411×10^4	1.658	0.047	0.048	0.005	1.760	8.996×10^3
20.0 GeV	2.011×10^4	1.700	0.073	0.080	0.007	1.861	1.231×10^4
30.0 GeV	3.011×10^4	1.745	0.120	0.140	0.011	2.016	1.747×10^4
40.0 GeV	4.011×10^4	1.774	0.169	0.206	0.014	2.164	2.225×10^4
80.0 GeV	8.011×10^4	1.840	0.383	0.496	0.028	2.748	3.861×10^4
100. GeV	1.001×10^5	1.860	0.496	0.653	0.035	3.045	4.553×10^4
140. GeV	1.401×10^5	1.889	0.728	0.975	0.048	3.642	5.753×10^4
150. GeV	1.499×10^5	1.895	0.786	1.057	0.052	3.791	*Muon critical energy*
200. GeV	2.001×10^5	1.919	1.092	1.486	0.069	4.567	7.222×10^4
300. GeV	3.001×10^5	1.952	1.711	2.339	0.103	6.108	9.110×10^4
400. GeV	4.001×10^5	1.976	2.352	3.223	0.138	7.690	1.057×10^5
800. GeV	8.001×10^5	2.034	4.994	6.846	0.279	14.154	1.434×10^5
1.00 TeV	1.000×10^6	2.052	6.350	8.699	0.350	17.454	1.562×10^5
1.40 TeV	1.400×10^6	2.081	9.068	12.394	0.496	24.041	1.756×10^5
2.00 TeV	2.000×10^6	2.112	13.224	18.033	0.717	34.087	1.965×10^5
3.00 TeV	3.000×10^6	2.147	20.158	27.402	1.096	50.805	2.203×10^5
4.00 TeV	4.000×10^6	2.172	27.183	36.869	1.481	67.707	2.373×10^5
8.00 TeV	8.000×10^6	2.235	55.492	74.921	3.076	135.725	2.782×10^5
10.0 TeV	1.000×10^7	2.255	69.752	94.046	3.894	169.949	2.914×10^5
14.0 TeV	1.400×10^7	2.287	98.195	132.208	5.573	238.264	3.112×10^5
20.0 TeV	2.000×10^7	2.320	141.100	189.692	8.144	341.258	3.321×10^5
30.0 TeV	3.000×10^7	2.359	212.526	285.333	12.585	512.806	3.559×10^5
40.0 TeV	4.000×10^7	2.388	284.197	381.197	17.129	684.912	3.727×10^5
80.0 TeV	8.000×10^7	2.457	571.275	764.894	36.091	1374.719	4.131×10^5
100. TeV	1.000×10^8	2.480	715.040	956.910	45.880	1720.312	4.260×10^5