Table 043: Muons in Technetium

Z	A [g/mol]	ρ [g/cm^3]	I [eV]	a	$k = m_s$	x_0	x_1	$\overline{C}$	δ_0
43 (Tc)	[97.90722 (3)]	11.500	428.0	0.16572	2.9738	0.0949	3.1253	4.7769	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	4.842				4.842	1.173×10^0
14.0 MeV	5.616×10^1	3.824				3.824	2.112×10^0
20.0 MeV	6.802×10^1	3.019				3.019	3.897×10^0
30.0 MeV	8.509×10^1	2.367				2.367	7.687×10^0
40.0 MeV	1.003×10^2	2.033				2.033	1.227×10^1
80.0 MeV	1.527×10^2	1.545				1.545	3.554×10^1
100. MeV	1.764×10^2	1.459				1.459	4.889×10^1
140. MeV	2.218×10^2	1.374				1.374	7.727×10^1
200. MeV	2.868×10^2	1.332				1.333	1.218×10^2
253. MeV	3.431×10^2	1.325				1.326	*Minimum ionization*
300. MeV	3.917×10^2	1.328	0.000		0.000	1.329	1.971×10^2
400. MeV	4.945×10^2	1.346	0.000		0.000	1.346	2.719×10^2
800. MeV	8.995×10^2	1.428	0.001		0.000	1.429	5.601×10^2
1.00 GeV	1.101×10^3	1.461	0.001		0.000	1.462	6.984×10^2
1.40 GeV	1.502×10^3	1.514	0.001	0.000	0.001	1.516	9.668×10^2
2.00 GeV	2.103×10^3	1.571	0.002	0.001	0.001	1.575	1.355×10^3
3.00 GeV	3.104×10^3	1.635	0.004	0.003	0.001	1.644	1.975×10^3
4.00 GeV	4.104×10^3	1.679	0.006	0.005	0.002	1.692	2.574×10^3
8.00 GeV	8.105×10^3	1.779	0.015	0.015	0.003	1.814	4.849×10^3
10.0 GeV	1.011×10^4	1.810	0.020	0.021	0.004	1.856	5.939×10^3
14.0 GeV	1.411×10^4	1.853	0.031	0.034	0.005	1.924	8.054×10^3
20.0 GeV	2.011×10^4	1.895	0.048	0.056	0.008	2.008	1.110×10^4
30.0 GeV	3.011×10^4	1.941	0.079	0.097	0.011	2.129	1.594×10^4
40.0 GeV	4.011×10^4	1.971	0.111	0.142	0.015	2.241	2.051×10^4
80.0 GeV	8.011×10^4	2.039	0.252	0.341	0.030	2.662	3.686×10^4
100. GeV	1.001×10^5	2.060	0.326	0.448	0.037	2.872	4.409×10^4
140. GeV	1.401×10^5	2.091	0.479	0.669	0.051	3.290	5.710×10^4
200. GeV	2.001×10^5	2.123	0.718	1.018	0.073	3.933	7.376×10^4
232. GeV	2.324×10^5	2.136	0.848	1.204	0.084	4.274	*Muon critical energy*
300. GeV	3.001×10^5	2.159	1.126	1.603	0.109	4.998	9.627×10^4
400. GeV	4.001×10^5	2.185	1.548	2.209	0.145	6.088	1.144×10^5
800. GeV	8.001×10^5	2.248	3.292	4.693	0.294	10.529	1.638×10^5
1.00 TeV	1.000×10^6	2.269	4.189	5.965	0.369	12.792	1.810×10^5
1.40 TeV	1.400×10^6	2.300	5.986	8.502	0.523	17.312	2.077×10^5
2.00 TeV	2.000×10^6	2.333	8.736	12.375	0.757	24.202	2.369×10^5
3.00 TeV	3.000×10^6	2.372	13.329	18.811	1.157	35.669	2.708×10^5
4.00 TeV	4.000×10^6	2.399	17.984	25.316	1.564	47.264	2.951×10^5
8.00 TeV	8.000×10^6	2.467	36.760	51.469	3.251	93.948	3.539×10^5
10.0 TeV	1.000×10^7	2.490	46.224	64.616	4.117	117.448	3.729×10^5
14.0 TeV	1.400×10^7	2.524	65.101	90.848	5.896	164.370	4.016×10^5
20.0 TeV	2.000×10^7	2.561	93.588	130.368	8.622	235.140	4.319×10^5
30.0 TeV	3.000×10^7	2.603	141.013	196.123	13.334	353.074	4.664×10^5
40.0 TeV	4.000×10^7	2.634	188.613	262.037	18.158	471.444	4.909×10^5
80.0 TeV	8.000×10^7	2.710	379.318	525.878	38.304	946.210	5.496×10^5
100. TeV	1.000×10^8	2.735	474.840	657.920	48.710	1184.206	5.684×10^5