

Muons in technetium (Tc)

Z	A [g/mol]	ρ [g/cm ³]	I [eV]	a	$k = m_s$	x_0	x_1	\bar{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 [MeV cm ² /g]	Photonucl	Total	CSDA range [g/cm ²]
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	<i>Minimum ionization</i>
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	0.002	0.000	0.001	1.516	9.668×10^2
2.00 GeV	2.103×10^3	1.571	0.003	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	1.693	2.574×10^3
8.00 GeV	8.105×10^3	1.779	0.016	0.015	0.003	1.814	4.848×10^3
10.0 GeV	1.011×10^4	1.810	0.021	0.021	0.004	1.856	5.938×10^3
14.0 GeV	1.411×10^4	1.853	0.031	0.035	0.005	1.925	8.053×10^3
20.0 GeV	2.011×10^4	1.895	0.049	0.057	0.008	2.009	1.110×10^4
30.0 GeV	3.011×10^4	1.941	0.080	0.098	0.011	2.131	1.593×10^4
40.0 GeV	4.011×10^4	1.971	0.113	0.144	0.015	2.244	2.050×10^4
80.0 GeV	8.011×10^4	2.039	0.255	0.345	0.030	2.669	3.682×10^4
100. GeV	1.001×10^5	2.060	0.330	0.453	0.037	2.881	4.403×10^4
140. GeV	1.401×10^5	2.091	0.484	0.676	0.051	3.304	5.699×10^4
200. GeV	2.001×10^5	2.123	0.726	1.030	0.073	3.952	7.358×10^4
230. GeV	2.300×10^5	2.135	0.848	1.204	0.084	4.272	<i>Muon critical energy</i>
300. GeV	3.001×10^5	2.159	1.139	1.621	0.109	5.029	9.596×10^4
400. GeV	4.001×10^5	2.185	1.566	2.233	0.146	6.131	1.139×10^5
800. GeV	8.001×10^5	2.248	3.330	4.746	0.294	10.620	1.629×10^5
1.00 TeV	1.000×10^6	2.269	4.237	6.032	0.370	12.908	1.800×10^5
1.40 TeV	1.400×10^6	2.300	6.055	8.597	0.524	17.477	2.065×10^5
2.00 TeV	2.000×10^6	2.333	8.837	12.513	0.757	24.442	2.354×10^5
3.00 TeV	3.000×10^6	2.372	13.483	19.020	1.158	36.035	2.689×10^5
4.00 TeV	4.000×10^6	2.399	18.193	25.598	1.565	47.756	2.930×10^5
8.00 TeV	8.000×10^6	2.467	37.185	52.043	3.254	94.950	3.512×10^5
10.0 TeV	1.000×10^7	2.490	46.758	65.337	4.121	118.707	3.700×10^5
14.0 TeV	1.400×10^7	2.524	65.853	91.863	5.901	166.142	3.984×10^5
20.0 TeV	2.000×10^7	2.561	94.670	131.824	8.630	237.686	4.284×10^5
30.0 TeV	3.000×10^7	2.603	142.642	198.312	13.347	356.906	4.625×10^5
40.0 TeV	4.000×10^7	2.634	190.792	264.961	18.177	476.566	4.867×10^5
80.0 TeV	8.000×10^7	2.710	383.703	531.750	38.344	956.507	5.448×10^5
100. TeV	1.000×10^8	2.735	480.330	665.270	48.760	1197.096	5.634×10^5