Muons in vanadium (V)

Z	A [g/mol]	ρ [g/cm^3]	I [eV]	a	$k = m_s$	x_0	x_1	$\overline{C}$	δ_0
23 (V)	50.9415(1)	6.110	245.0	0.15436	3.0163	0.0691	3.0322	4.2659	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}	5.463				5.463	1.028×10^{0}
14.0 MeV	5.616×10^{1}	4.292				4.292	1.862×10^{0}
20.0 MeV	6.802×10^{1}	3.372				3.373	3.457×10^{0}
30.0 MeV	8.509×10^{1}	2.631				2.631	6.859×10^{0}
40.0 MeV	1.003×10^{2}	2.253				2.254	1.099×10^{1}
80.0 MeV	1.527×10^{2}	1.700				1.700	3.207×10^{1}
100. MeV	1.764×10^{2}	1.600				1.600	4.422×10^{1}
140. MeV	2.218×10^{2}	1.501				1.501	7.015×10^{1}
200. MeV	2.868×10^{2}	1.449				1.449	1.110×10^{2}
273. MeV	3.633×10^{2}	1.436			0.000	1.437	*Minimum ionization*
300. MeV	3.917×10^{2}	1.437			0.000	1.438	1.805×10^{2}
400. MeV	4.945×10^{2}	1.451	0.000		0.000	1.452	2.497×10^{2}
800. MeV	8.995×10^{2}	1.529	0.000		0.000	1.530	5.180×10^{2}
1.00 GeV	1.101×10^{3}	1.561	0.001		0.000	1.562	6.473×10^{2}
1.40 GeV	1.502×10^{3}	1.613	0.001	0.000	0.001	1.615	8.990×10^{2}
2.00 GeV	2.103×10^{3}	1.669	0.001	0.001	0.001	1.673	1.264×10^{3}
3.00 GeV	3.104×10^{3}	1.733	0.003	0.002	0.001	1.739	1.849×10^{3}
4.00 GeV	4.104×10^{3}	1.777	0.004	0.003	0.002	1.786	2.416×10^{3}
8.00 GeV	8.105×10^{3}	1.877	0.009	0.009	0.003	1.899	4.581×10^{3}
10.0 GeV	1.011×10^{4}	1.907	0.012	0.013	0.004	1.936	5.624×10^{3}
14.0 GeV	1.411×10^{4}	1.950	0.018	0.020	0.006	1.995	7.658×10^{3}
20.0 GeV	2.011×10^{4}	1.993	0.028	0.033	0.008	2.063	1.061×10^{4}
30.0 GeV	3.011×10^{4}	2.039	0.046	0.058	0.012	2.155	1.535×10^{4}
40.0 GeV	4.011×10^{4}	2.069	0.065	0.084	0.016	2.236	1.991×10^{4}
80.0 GeV	8.011×10^{4}	2.138	0.148	0.202	0.031	2.520	3.673×10^{4}
100. GeV	1.001×10^{5}	2.160	0.192	0.266	0.039	2.656	4.446×10^{4}
140. GeV	1.401×10^{5}	2.191	0.282	0.397	0.054	2.925	5.880×10^{4}
200. GeV	2.001×10^{5}	2.224	0.423	0.606	0.077	3.330	7.802×10^{4}
300. GeV	3.001×10^{5}	2.262	0.664	0.956	0.115	3.997	1.054×10^{5}
385. GeV	3.848×10^{5}	2.285	0.875	1.263	0.147	4.570	*Muon critical energy*
400. GeV	4.001×10^{5}	2.288	0.913	1.319	0.153	4.674	1.285×10^{5}
800. GeV	8.001×10^{5}	2.353	1.947	2.812	0.309	7.421	1.959×10^{5}
1.00 TeV	1.000×10^{6}	2.374	2.478	3.577	0.388	8.818	2.205×10^{5}
1.40 TeV	1.400×10^{6}	2.406	3.546	5.104	0.550	11.607	2.600×10^{5}
2.00 TeV	2.000×10^{6}	2.440	5.181	7.437	0.797	15.856	3.040×10^{5}
3.00 TeV	3.000×10^{6}	2.480	7.914	11.316	1.219	22.930	3.562×10^{5}
4.00 TeV	4.000×10^{6}	2.508	10.687	15.239	1.648	30.084	3.942×10^{5}
8.00 TeV	8.000×10^{6}	2.578	21.882	31.019	3.431	58.910	4.875×10^{5}
10.0 TeV	1.000×10^{7}	2.601	27.529	38.955	4.347	73.433	5.178×10^{5}
14.0 TeV	1.400×10^{7}	2.637	38.795	54.786	6.230	102.448	5.637×10^{5}
20.0 TeV	2.000×10^{7}	2.674	55.806	78.644	9.118	146.243	6.125×10^{5}
30.0 TeV	3.000×10^{7}	2.718	84.125	118.339	14.115	219.298	6.680×10^{5}
40.0 TeV	4.000×10^{7}	2.750	112.559	158.138	19.235	292.682	7.073×10^{5}
80.0 TeV	8.000×10^{7}	2.828	226.515	317.459	40.647	587.449	8.019×10^{5}
100. TeV	1.000×10^{8}	2.853	283.610	397.200	51.720	735.384	8.322×10^{5}