

Muons in radon gas (Rn)

Z	A [g/mol]	$\rho$ [g/cm <sup>3</sup> ]	I [eV]	a	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
86 (Rn)	[222.01758(2)]	$9.066 \times 10^{-3}$	794.0	0.20798	2.7409	1.5368	4.9889	13.2839	0.00

  

T	p [MeV/c]	Ionization	Brems	Pair prod [MeV cm <sup>2</sup> /g]	Photonucl	Total	CSDA range [g/cm <sup>2</sup> ]
10.0 MeV	$4.704 \times 10^1$	3.782				3.782	$1.535 \times 10^0$
14.0 MeV	$5.616 \times 10^1$	3.018				3.018	$2.730 \times 10^0$
20.0 MeV	$6.802 \times 10^1$	2.405				2.405	$4.980 \times 10^0$
30.0 MeV	$8.509 \times 10^1$	1.902				1.902	$9.715 \times 10^0$
40.0 MeV	$1.003 \times 10^2$	1.644				1.644	$1.540 \times 10^1$
80.0 MeV	$1.527 \times 10^2$	1.267				1.267	$4.394 \times 10^1$
100. MeV	$1.764 \times 10^2$	1.201				1.201	$6.019 \times 10^1$
140. MeV	$2.218 \times 10^2$	1.140				1.140	$9.452 \times 10^1$
200. MeV	$2.868 \times 10^2$	1.116				1.117	$1.479 \times 10^2$
216. MeV	$3.039 \times 10^2$	1.116				1.116	<i>Minimum ionization</i>
300. MeV	$3.917 \times 10^2$	1.127	0.000		0.000	1.128	$2.372 \times 10^2$
400. MeV	$4.945 \times 10^2$	1.154	0.000		0.000	1.154	$3.249 \times 10^2$
800. MeV	$8.995 \times 10^2$	1.258	0.001		0.000	1.260	$6.559 \times 10^2$
1.00 GeV	$1.101 \times 10^3$	1.300	0.001		0.000	1.302	$8.119 \times 10^2$
1.40 GeV	$1.502 \times 10^3$	1.367	0.002		0.001	1.371	$1.111 \times 10^3$
2.00 GeV	$2.103 \times 10^3$	1.443	0.004	0.001	0.001	1.449	$1.536 \times 10^3$
3.00 GeV	$3.104 \times 10^3$	1.531	0.007	0.003	0.001	1.543	$2.204 \times 10^3$
4.00 GeV	$4.104 \times 10^3$	1.595	0.010	0.006	0.002	1.614	$2.837 \times 10^3$
8.00 GeV	$8.105 \times 10^3$	1.745	0.026	0.022	0.003	1.796	$5.173 \times 10^3$
10.0 GeV	$1.011 \times 10^4$	1.790	0.034	0.031	0.004	1.860	$6.267 \times 10^3$
14.0 GeV	$1.411 \times 10^4$	1.855	0.052	0.051	0.005	1.964	$8.357 \times 10^3$
20.0 GeV	$2.011 \times 10^4$	1.920	0.081	0.085	0.007	2.094	$1.131 \times 10^4$
30.0 GeV	$3.011 \times 10^4$	1.989	0.132	0.149	0.011	2.282	$1.588 \times 10^4$
40.0 GeV	$4.011 \times 10^4$	2.035	0.187	0.221	0.014	2.457	$2.010 \times 10^4$
80.0 GeV	$8.011 \times 10^4$	2.135	0.422	0.535	0.028	3.121	$3.450 \times 10^4$
100. GeV	$1.001 \times 10^5$	2.165	0.547	0.704	0.034	3.452	$4.059 \times 10^4$
140. GeV	$1.401 \times 10^5$	2.208	0.804	1.053	0.048	4.114	$5.119 \times 10^4$
160. GeV	$1.602 \times 10^5$	2.224	0.936	1.235	0.054	4.450	<i>Muon critical energy</i>
200. GeV	$2.001 \times 10^5$	2.251	1.204	1.606	0.068	5.131	$6.423 \times 10^4$
300. GeV	$3.001 \times 10^5$	2.297	1.888	2.530	0.102	6.817	$8.110 \times 10^4$
400. GeV	$4.001 \times 10^5$	2.328	2.594	3.487	0.136	8.545	$9.418 \times 10^4$
800. GeV	$8.001 \times 10^5$	2.399	5.506	7.409	0.274	15.590	$1.283 \times 10^5$
1.00 TeV	$1.000 \times 10^6$	2.420	7.001	9.415	0.344	19.183	$1.399 \times 10^5$
1.40 TeV	$1.400 \times 10^6$	2.452	9.996	13.415	0.487	26.352	$1.576 \times 10^5$
2.00 TeV	$2.000 \times 10^6$	2.485	14.573	19.518	0.705	37.284	$1.767 \times 10^5$
3.00 TeV	$3.000 \times 10^6$	2.522	22.211	29.660	1.077	55.472	$1.985 \times 10^5$
4.00 TeV	$4.000 \times 10^6$	2.547	29.946	39.909	1.455	73.860	$2.141 \times 10^5$
8.00 TeV	$8.000 \times 10^6$	2.609	61.114	81.096	3.021	147.842	$2.516 \times 10^5$
10.0 TeV	$1.000 \times 10^7$	2.628	76.812	101.795	3.825	185.062	$2.637 \times 10^5$
14.0 TeV	$1.400 \times 10^7$	2.659	108.123	143.104	5.473	259.361	$2.819 \times 10^5$
20.0 TeV	$2.000 \times 10^7$	2.691	155.348	205.330	7.998	371.369	$3.011 \times 10^5$
30.0 TeV	$3.000 \times 10^7$	2.729	233.967	308.849	12.357	557.903	$3.229 \times 10^5$
40.0 TeV	$4.000 \times 10^7$	2.756	312.850	412.606	16.816	745.030	$3.384 \times 10^5$
80.0 TeV	$8.000 \times 10^7$	2.822	628.791	827.918	35.424	1494.957	$3.755 \times 10^5$
100. TeV	$1.000 \times 10^8$	2.844	787.000	1035.760	45.030	1870.636	$3.875 \times 10^5$