

## Muons in hassium (Hs)

Z	A [g/mol]	$\rho$ [g/cm <sup>3</sup> ]	I [eV]	a	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
108 (Hs)	[269.1341 (1)]	??	1102.0	0.27500	3.0000	0.6392	3.0000	6.5619	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	$4.704 \times 10^1$	3.590				3.590	$1.656 \times 10^0$
14.0 MeV	$5.616 \times 10^1$	2.896				2.896	$2.907 \times 10^0$
20.0 MeV	$6.802 \times 10^1$	2.328				2.328	$5.240 \times 10^0$
30.0 MeV	$8.509 \times 10^1$	1.855				1.855	$1.011 \times 10^1$
40.0 MeV	$1.003 \times 10^2$	1.610				1.610	$1.593 \times 10^1$
80.0 MeV	$1.527 \times 10^2$	1.250				1.250	$4.493 \times 10^1$
100. MeV	$1.764 \times 10^2$	1.188				1.188	$6.138 \times 10^1$
140. MeV	$2.218 \times 10^2$	1.131				1.131	$9.603 \times 10^1$
200. MeV	$2.868 \times 10^2$	1.110				1.110	$1.497 \times 10^2$
207. MeV	$2.943 \times 10^2$	1.110	0.000			1.110	<i>Minimum ionization</i>
300. MeV	$3.917 \times 10^2$	1.124	0.000		0.000	1.125	$2.394 \times 10^2$
400. MeV	$4.945 \times 10^2$	1.153	0.000		0.000	1.153	$3.272 \times 10^2$
800. MeV	$8.995 \times 10^2$	1.253	0.001		0.000	1.254	$6.588 \times 10^2$
1.00 GeV	$1.101 \times 10^3$	1.289	0.002		0.000	1.292	$8.159 \times 10^2$
1.40 GeV	$1.502 \times 10^3$	1.346	0.003		0.000	1.350	$1.118 \times 10^3$
2.00 GeV	$2.103 \times 10^3$	1.406	0.005	0.000	0.001	1.413	$1.552 \times 10^3$
3.00 GeV	$3.104 \times 10^3$	1.472	0.009	0.003	0.001	1.485	$2.241 \times 10^3$
4.00 GeV	$4.104 \times 10^3$	1.517	0.013	0.006	0.001	1.538	$2.902 \times 10^3$
8.00 GeV	$8.105 \times 10^3$	1.615	0.032	0.024	0.003	1.675	$5.385 \times 10^3$
10.0 GeV	$1.011 \times 10^4$	1.644	0.042	0.035	0.004	1.726	$6.561 \times 10^3$
14.0 GeV	$1.411 \times 10^4$	1.685	0.064	0.058	0.005	1.814	$8.820 \times 10^3$
20.0 GeV	$2.011 \times 10^4$	1.725	0.100	0.097	0.007	1.931	$1.202 \times 10^4$
30.0 GeV	$3.011 \times 10^4$	1.767	0.164	0.173	0.010	2.116	$1.697 \times 10^4$
40.0 GeV	$4.011 \times 10^4$	1.795	0.232	0.258	0.014	2.300	$2.150 \times 10^4$
80.0 GeV	$8.011 \times 10^4$	1.857	0.525	0.631	0.027	3.040	$3.659 \times 10^4$
100. GeV	$1.001 \times 10^5$	1.876	0.680	0.832	0.033	3.423	$4.279 \times 10^4$
119. GeV	$1.188 \times 10^5$	1.890	0.827	1.024	0.040	3.782	<i>Muon critical energy</i>
140. GeV	$1.401 \times 10^5$	1.904	0.998	1.248	0.047	4.197	$5.333 \times 10^4$
200. GeV	$2.001 \times 10^5$	1.933	1.495	1.907	0.066	5.403	$6.590 \times 10^4$
300. GeV	$3.001 \times 10^5$	1.966	2.342	3.007	0.100	7.417	$8.165 \times 10^4$
400. GeV	$4.001 \times 10^5$	1.990	3.218	4.147	0.133	9.490	$9.354 \times 10^4$
800. GeV	$8.001 \times 10^5$	2.048	6.827	8.824	0.268	17.969	$1.237 \times 10^5$
1.00 TeV	$1.000 \times 10^6$	2.066	8.679	11.217	0.337	22.302	$1.337 \times 10^5$
1.40 TeV	$1.400 \times 10^6$	2.095	12.387	15.987	0.478	30.948	$1.488 \times 10^5$
2.00 TeV	$2.000 \times 10^6$	2.125	18.054	23.267	0.690	44.138	$1.650 \times 10^5$
3.00 TeV	$3.000 \times 10^6$	2.160	27.505	35.360	1.055	66.083	$1.834 \times 10^5$
4.00 TeV	$4.000 \times 10^6$	2.186	37.075	47.582	1.425	88.270	$1.964 \times 10^5$
8.00 TeV	$8.000 \times 10^6$	2.248	75.625	96.702	2.958	177.535	$2.277 \times 10^5$
10.0 TeV	$1.000 \times 10^7$	2.268	95.036	121.390	3.744	222.441	$2.378 \times 10^5$
14.0 TeV	$1.400 \times 10^7$	2.300	133.752	170.652	5.356	312.063	$2.529 \times 10^5$
20.0 TeV	$2.000 \times 10^7$	2.333	192.138	244.858	7.826	447.158	$2.689 \times 10^5$
30.0 TeV	$3.000 \times 10^7$	2.372	289.430	368.301	12.089	672.195	$2.870 \times 10^5$
40.0 TeV	$4.000 \times 10^7$	2.400	387.063	492.028	16.451	897.944	$2.998 \times 10^5$
80.0 TeV	$8.000 \times 10^7$	2.469	777.558	987.280	34.647	1801.957	$3.306 \times 10^5$
100. TeV	$1.000 \times 10^8$	2.492	972.920	1235.130	44.040	2254.585	$3.405 \times 10^5$