

**Table 108: Muons in Ammonia (NH<sub>3</sub>)**

$\langle Z/A \rangle$	$\rho$ [g/cm <sup>3</sup> ]	$I$ [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
0.59719	$8.260 \times 10^{-4}$	53.7	0.08315	3.6464	1.6822	4.1158	9.8763	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	$4.704 \times 10^1$	8.939				8.939	$6.164 \times 10^{-1}$	
14.0 MeV	$5.616 \times 10^1$	6.962				6.962	$1.129 \times 10^0$	
20.0 MeV	$6.802 \times 10^1$	5.429				5.429	$2.116 \times 10^0$	
30.0 MeV	$8.509 \times 10^1$	4.205				4.206	$4.238 \times 10^0$	
40.0 MeV	$1.003 \times 10^2$	3.587				3.587	$6.830 \times 10^0$	
80.0 MeV	$1.527 \times 10^2$	2.687				2.687	$2.013 \times 10^1$	
100. MeV	$1.764 \times 10^2$	2.525				2.525	$2.783 \times 10^1$	
140. MeV	$2.218 \times 10^2$	2.365				2.366	$4.427 \times 10^1$	
200. MeV	$2.868 \times 10^2$	2.283				2.283	$7.019 \times 10^1$	
266. MeV	$3.567 \times 10^2$	2.265			0.000	2.266	<i>Minimum ionization</i>	
300. MeV	$3.917 \times 10^2$	2.268			0.000	2.269	$1.143 \times 10^2$	
400. MeV	$4.945 \times 10^2$	2.295			0.000	2.296	$1.581 \times 10^2$	
800. MeV	$8.995 \times 10^2$	2.441	0.000		0.000	2.441	$3.270 \times 10^2$	
1.00 GeV	$1.101 \times 10^3$	2.503	0.000		0.000	2.504	$4.078 \times 10^2$	
1.40 GeV	$1.502 \times 10^3$	2.605	0.000		0.001	2.606	$5.643 \times 10^2$	
2.00 GeV	$2.103 \times 10^3$	2.719	0.001	0.000	0.001	2.721	$7.893 \times 10^2$	
3.00 GeV	$3.104 \times 10^3$	2.855	0.001	0.001	0.001	2.858	$1.147 \times 10^3$	
4.00 GeV	$4.104 \times 10^3$	2.952	0.001	0.001	0.002	2.956	$1.491 \times 10^3$	
8.00 GeV	$8.105 \times 10^3$	3.155	0.003	0.003	0.004	3.165	$2.791 \times 10^3$	
10.0 GeV	$1.011 \times 10^4$	3.210	0.004	0.004	0.005	3.224	$3.417 \times 10^3$	
14.0 GeV	$1.411 \times 10^4$	3.289	0.006	0.007	0.007	3.309	$4.641 \times 10^3$	
20.0 GeV	$2.011 \times 10^4$	3.365	0.010	0.011	0.009	3.395	$6.429 \times 10^3$	
30.0 GeV	$3.011 \times 10^4$	3.443	0.016	0.020	0.014	3.493	$9.330 \times 10^3$	
40.0 GeV	$4.011 \times 10^4$	3.495	0.023	0.029	0.018	3.564	$1.216 \times 10^4$	
80.0 GeV	$8.011 \times 10^4$	3.605	0.052	0.070	0.035	3.762	$2.306 \times 10^4$	
100. GeV	$1.001 \times 10^5$	3.637	0.068	0.093	0.043	3.841	$2.833 \times 10^4$	
140. GeV	$1.401 \times 10^5$	3.684	0.100	0.139	0.060	3.983	$3.855 \times 10^4$	
200. GeV	$2.001 \times 10^5$	3.731	0.151	0.213	0.085	4.180	$5.325 \times 10^4$	
300. GeV	$3.001 \times 10^5$	3.783	0.239	0.340	0.127	4.488	$7.632 \times 10^4$	
400. GeV	$4.001 \times 10^5$	3.819	0.330	0.471	0.169	4.789	$9.789 \times 10^4$	
800. GeV	$8.001 \times 10^5$	3.905	0.710	1.020	0.342	5.977	$1.725 \times 10^5$	
1.00 TeV	$1.000 \times 10^6$	3.933	0.907	1.304	0.429	6.574	$2.044 \times 10^5$	
1.40 TeV	$1.400 \times 10^6$	3.975	1.303	1.870	0.609	7.757	$2.603 \times 10^5$	
1.47 TeV	$1.469 \times 10^6$	3.981	1.373	1.968	0.640	7.963	<i>Muon critical energy</i>	
2.00 TeV	$2.000 \times 10^6$	4.021	1.913	2.737	0.882	9.553	$3.299 \times 10^5$	
3.00 TeV	$3.000 \times 10^6$	4.073	2.937	4.181	1.351	12.542	$4.210 \times 10^5$	
4.00 TeV	$4.000 \times 10^6$	4.111	3.979	5.647	1.828	15.564	$4.925 \times 10^5$	
8.00 TeV	$8.000 \times 10^6$	4.203	8.202	11.550	3.818	27.774	$6.823 \times 10^5$	
10.0 TeV	$1.000 \times 10^7$	4.234	10.340	14.524	4.843	33.941	$7.473 \times 10^5$	
14.0 TeV	$1.400 \times 10^7$	4.280	14.607	20.449	6.957	46.294	$8.478 \times 10^5$	
20.0 TeV	$2.000 \times 10^7$	4.330	21.067	29.387	10.205	64.990	$9.567 \times 10^5$	
30.0 TeV	$3.000 \times 10^7$	4.388	31.825	44.257	15.847	96.318	$1.082 \times 10^6$	
40.0 TeV	$4.000 \times 10^7$	4.430	42.647	59.175	21.640	127.892	$1.172 \times 10^6$	
80.0 TeV	$8.000 \times 10^7$	4.533	86.070	118.900	45.974	255.478	$1.389 \times 10^6$	
100. TeV	$1.000 \times 10^8$	4.567	107.853	148.799	58.595	319.815	$1.459 \times 10^6$	