

## Muons in guanine (C<sub>5</sub>H<sub>5</sub>N<sub>5</sub>O)

	$\langle Z/A \rangle$	$\rho$ [g/cm <sup>3</sup> ]	$I$ [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
	0.51612	1.580	75.0	0.20530	3.0186	0.1163	2.4296	3.1171	0.00
$T$	$p$ [MeV/c]	Ionization	Brems	Pair prod	Photonucl	Total	CSDA range [g/cm <sup>2</sup> ]		
				[MeV cm <sup>2</sup> /g]					
10.0 MeV	$4.704 \times 10^1$	7.406				7.406			$7.463 \times 10^{-1}$
14.0 MeV	$5.616 \times 10^1$	5.777				5.777			$1.364 \times 10^0$
20.0 MeV	$6.802 \times 10^1$	4.511				4.512			$2.553 \times 10^0$
30.0 MeV	$8.509 \times 10^1$	3.500				3.500			$5.105 \times 10^0$
40.0 MeV	$1.003 \times 10^2$	2.989				2.989			$8.217 \times 10^0$
80.0 MeV	$1.527 \times 10^2$	2.237				2.237			$2.416 \times 10^1$
100. MeV	$1.764 \times 10^2$	2.095				2.095			$3.343 \times 10^1$
140. MeV	$2.218 \times 10^2$	1.949				1.949			$5.332 \times 10^1$
200. MeV	$2.868 \times 10^2$	1.865				1.865			$8.492 \times 10^1$
300. MeV	$3.917 \times 10^2$	1.832			0.000	1.832			$1.392 \times 10^2$
318. MeV	$4.105 \times 10^2$	1.832			0.000	1.832			<i>Minimum ionization</i>
400. MeV	$4.945 \times 10^2$	1.837			0.000	1.838			$1.937 \times 10^2$
800. MeV	$8.995 \times 10^2$	1.906	0.000		0.000	1.907			$4.075 \times 10^2$
1.00 GeV	$1.101 \times 10^3$	1.938	0.000		0.000	1.938			$5.115 \times 10^2$
1.40 GeV	$1.502 \times 10^3$	1.989	0.000		0.001	1.990			$7.150 \times 10^2$
2.00 GeV	$2.103 \times 10^3$	2.046	0.001	0.000	0.001	2.048			$1.012 \times 10^3$
3.00 GeV	$3.104 \times 10^3$	2.111	0.001	0.001	0.001	2.114			$1.492 \times 10^3$
4.00 GeV	$4.104 \times 10^3$	2.155	0.001	0.001	0.002	2.160			$1.960 \times 10^3$
8.00 GeV	$8.105 \times 10^3$	2.258	0.003	0.003	0.004	2.268			$3.761 \times 10^3$
10.0 GeV	$1.011 \times 10^4$	2.289	0.004	0.004	0.005	2.303			$4.636 \times 10^3$
14.0 GeV	$1.411 \times 10^4$	2.334	0.007	0.007	0.007	2.355			$6.353 \times 10^3$
20.0 GeV	$2.011 \times 10^4$	2.380	0.010	0.012	0.009	2.411			$8.869 \times 10^3$
30.0 GeV	$3.011 \times 10^4$	2.429	0.017	0.021	0.013	2.480			$1.296 \times 10^4$
40.0 GeV	$4.011 \times 10^4$	2.463	0.024	0.030	0.018	2.535			$1.694 \times 10^4$
80.0 GeV	$8.011 \times 10^4$	2.541	0.054	0.073	0.034	2.703			$3.220 \times 10^4$
100. GeV	$1.001 \times 10^5$	2.565	0.071	0.096	0.042	2.775			$3.950 \times 10^4$
140. GeV	$1.401 \times 10^5$	2.601	0.104	0.145	0.059	2.910			$5.357 \times 10^4$
200. GeV	$2.001 \times 10^5$	2.639	0.157	0.222	0.084	3.102			$7.354 \times 10^4$
300. GeV	$3.001 \times 10^5$	2.682	0.248	0.353	0.125	3.408			$1.043 \times 10^5$
400. GeV	$4.001 \times 10^5$	2.713	0.342	0.489	0.167	3.710			$1.324 \times 10^5$
800. GeV	$8.001 \times 10^5$	2.786	0.734	1.057	0.337	4.914			$2.258 \times 10^5$
1.00 TeV	$1.000 \times 10^6$	2.810	0.937	1.351	0.423	5.521			$2.641 \times 10^5$
1.04 TeV	$1.036 \times 10^6$	2.814	0.973	1.402	0.439	5.629			<i>Muon critical energy</i>
1.40 TeV	$1.400 \times 10^6$	2.847	1.345	1.935	0.601	6.727			$3.297 \times 10^5$
2.00 TeV	$2.000 \times 10^6$	2.886	1.972	2.830	0.870	8.558			$4.086 \times 10^5$
3.00 TeV	$3.000 \times 10^6$	2.931	3.023	4.321	1.333	11.609			$5.086 \times 10^5$
4.00 TeV	$4.000 \times 10^6$	2.964	4.093	5.833	1.803	14.694			$5.850 \times 10^5$
8.00 TeV	$8.000 \times 10^6$	3.044	8.423	11.924	3.764	27.156			$7.822 \times 10^5$
10.0 TeV	$1.000 \times 10^7$	3.070	10.613	14.993	4.775	33.451			$8.484 \times 10^5$
14.0 TeV	$1.400 \times 10^7$	3.111	14.983	21.105	6.856	46.055			$9.499 \times 10^5$
20.0 TeV	$2.000 \times 10^7$	3.154	21.593	30.326	10.053	65.126			$1.059 \times 10^6$
30.0 TeV	$3.000 \times 10^7$	3.204	32.600	45.667	15.603	97.074			$1.184 \times 10^6$
40.0 TeV	$4.000 \times 10^7$	3.240	43.665	61.058	21.300	129.263			$1.273 \times 10^6$
80.0 TeV	$8.000 \times 10^7$	3.329	88.030	122.676	45.207	259.242			$1.487 \times 10^6$
100. TeV	$1.000 \times 10^8$	3.358	110.270	153.522	57.600	324.750			$1.556 \times 10^6$