

## Muons in uranium dicarbide (UC<sub>2</sub>)

	$\langle Z/A \rangle$	$\rho$ [g/cm <sup>3</sup> ]	$I$ [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
	0.39687	11.280	752.0	0.21120	2.6577	-0.2191	3.5208	6.0247	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	$4.704 \times 10^1$	3.996				3.997		$1.428 \times 10^0$	
14.0 MeV	$5.616 \times 10^1$	3.167				3.167		$2.563 \times 10^0$	
20.0 MeV	$6.802 \times 10^1$	2.512				2.512		$4.714 \times 10^0$	
30.0 MeV	$8.509 \times 10^1$	1.982				1.982		$9.252 \times 10^0$	
40.0 MeV	$1.003 \times 10^2$	1.710				1.710		$1.472 \times 10^1$	
80.0 MeV	$1.527 \times 10^2$	1.309				1.309		$4.225 \times 10^1$	
100. MeV	$1.764 \times 10^2$	1.238				1.238		$5.800 \times 10^1$	
140. MeV	$2.218 \times 10^2$	1.170				1.170		$9.138 \times 10^1$	
200. MeV	$2.868 \times 10^2$	1.138				1.138		$1.435 \times 10^2$	
237. MeV	$3.260 \times 10^2$	1.135	0.000			1.135			<i>Minimum ionization</i>
300. MeV	$3.917 \times 10^2$	1.140	0.000		0.000	1.140		$2.315 \times 10^2$	
400. MeV	$4.945 \times 10^2$	1.158	0.000		0.000	1.159		$3.186 \times 10^2$	
800. MeV	$8.995 \times 10^2$	1.240	0.001		0.000	1.241		$6.516 \times 10^2$	
1.00 GeV	$1.101 \times 10^3$	1.272	0.001		0.000	1.274		$8.105 \times 10^2$	
1.40 GeV	$1.502 \times 10^3$	1.324	0.002		0.001	1.327		$1.118 \times 10^3$	
2.00 GeV	$2.103 \times 10^3$	1.380	0.004	0.001	0.001	1.385		$1.560 \times 10^3$	
3.00 GeV	$3.104 \times 10^3$	1.443	0.007	0.003	0.001	1.454		$2.263 \times 10^3$	
4.00 GeV	$4.104 \times 10^3$	1.487	0.010	0.006	0.002	1.505		$2.939 \times 10^3$	
8.00 GeV	$8.105 \times 10^3$	1.587	0.025	0.021	0.003	1.636		$5.477 \times 10^3$	
10.0 GeV	$1.011 \times 10^4$	1.617	0.033	0.030	0.004	1.684		$6.681 \times 10^3$	
14.0 GeV	$1.411 \times 10^4$	1.660	0.051	0.049	0.005	1.766		$8.999 \times 10^3$	
20.0 GeV	$2.011 \times 10^4$	1.703	0.079	0.081	0.007	1.871		$1.230 \times 10^4$	
30.0 GeV	$3.011 \times 10^4$	1.749	0.129	0.143	0.011	2.033		$1.742 \times 10^4$	
40.0 GeV	$4.011 \times 10^4$	1.779	0.182	0.212	0.014	2.189		$2.216 \times 10^4$	
80.0 GeV	$8.011 \times 10^4$	1.846	0.412	0.515	0.028	2.802		$3.827 \times 10^4$	
100. GeV	$1.001 \times 10^5$	1.866	0.534	0.679	0.035	3.115		$4.504 \times 10^4$	
140. GeV	$1.401 \times 10^5$	1.895	0.784	1.016	0.048	3.745		$5.674 \times 10^4$	
143. GeV	$1.433 \times 10^5$	1.897	0.804	1.044	0.050	3.796			<i>Muon critical energy</i>
200. GeV	$2.001 \times 10^5$	1.925	1.175	1.550	0.069	4.720		$7.099 \times 10^4$	
300. GeV	$3.001 \times 10^5$	1.959	1.841	2.442	0.103	6.346		$8.920 \times 10^4$	
400. GeV	$4.001 \times 10^5$	1.982	2.530	3.366	0.138	8.018		$1.032 \times 10^5$	
800. GeV	$8.001 \times 10^5$	2.039	5.371	7.157	0.278	14.847		$1.393 \times 10^5$	
1.00 TeV	$1.000 \times 10^6$	2.057	6.829	9.097	0.350	18.334		$1.514 \times 10^5$	
1.40 TeV	$1.400 \times 10^6$	2.085	9.749	12.964	0.495	25.295		$1.699 \times 10^5$	
2.00 TeV	$2.000 \times 10^6$	2.116	14.213	18.864	0.716	35.911		$1.897 \times 10^5$	
3.00 TeV	$3.000 \times 10^6$	2.150	21.662	28.668	1.095	53.576		$2.124 \times 10^5$	
4.00 TeV	$4.000 \times 10^6$	2.175	29.205	38.576	1.479	71.437		$2.285 \times 10^5$	
8.00 TeV	$8.000 \times 10^6$	2.237	59.598	78.396	3.072	143.305		$2.673 \times 10^5$	
10.0 TeV	$1.000 \times 10^7$	2.257	74.906	98.410	3.889	179.465		$2.797 \times 10^5$	
14.0 TeV	$1.400 \times 10^7$	2.288	105.438	138.346	5.568	251.642		$2.984 \times 10^5$	
20.0 TeV	$2.000 \times 10^7$	2.321	151.489	198.504	8.139	360.456		$3.183 \times 10^5$	
30.0 TeV	$3.000 \times 10^7$	2.360	228.153	298.581	12.582	541.677		$3.407 \times 10^5$	
40.0 TeV	$4.000 \times 10^7$	2.388	305.073	398.889	17.128	723.479		$3.567 \times 10^5$	
80.0 TeV	$8.000 \times 10^7$	2.456	613.150	800.406	36.105	1452.119		$3.949 \times 10^5$	
100. TeV	$1.000 \times 10^8$	2.479	767.421	1001.347	45.904	1817.153		$4.072 \times 10^5$	