

**Table 046: Muons in Palladium**

Z	A [g/mol]	$\rho$ [g/cm <sup>3</sup> ]	I [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
46 (Pd)	106.42 (1)	12.020	470.0	0.24178	2.7239	0.0563	3.0555	4.9358	0.14
$T$	$p$ [MeV/c]	Ionization	Brems	Pair prod [MeV cm <sup>2</sup> /g]	Photonucl	Total	CSDA range [g/cm <sup>2</sup> ]		
10.0 MeV	$4.704 \times 10^1$	4.682				4.682	$1.216 \times 10^0$		
14.0 MeV	$5.616 \times 10^1$	3.702				3.702	$2.186 \times 10^0$		
20.0 MeV	$6.802 \times 10^1$	2.926				2.926	$4.029 \times 10^0$		
30.0 MeV	$8.509 \times 10^1$	2.295				2.295	$7.940 \times 10^0$		
40.0 MeV	$1.003 \times 10^2$	1.972				1.972	$1.267 \times 10^1$		
80.0 MeV	$1.527 \times 10^2$	1.500				1.501	$3.664 \times 10^1$		
100. MeV	$1.764 \times 10^2$	1.417				1.417	$5.039 \times 10^1$		
140. MeV	$2.218 \times 10^2$	1.335				1.335	$7.961 \times 10^1$		
200. MeV	$2.868 \times 10^2$	1.295				1.295	$1.254 \times 10^2$		
253. MeV	$3.431 \times 10^2$	1.289				1.289	<i>Minimum ionization</i>		
300. MeV	$3.917 \times 10^2$	1.292	0.000		0.000	1.292	$2.029 \times 10^2$		
400. MeV	$4.945 \times 10^2$	1.309	0.000		0.000	1.310	$2.798 \times 10^2$		
800. MeV	$8.995 \times 10^2$	1.392	0.001		0.000	1.393	$5.756 \times 10^2$		
1.00 GeV	$1.101 \times 10^3$	1.425	0.001		0.000	1.427	$7.174 \times 10^2$		
1.40 GeV	$1.502 \times 10^3$	1.478	0.002	0.000	0.001	1.481	$9.924 \times 10^2$		
2.00 GeV	$2.103 \times 10^3$	1.535	0.003	0.001	0.001	1.540	$1.389 \times 10^3$		
3.00 GeV	$3.104 \times 10^3$	1.600	0.005	0.003	0.001	1.609	$2.023 \times 10^3$		
4.00 GeV	$4.104 \times 10^3$	1.645	0.007	0.005	0.002	1.658	$2.635 \times 10^3$		
8.00 GeV	$8.105 \times 10^3$	1.746	0.016	0.016	0.003	1.782	$4.953 \times 10^3$		
10.0 GeV	$1.011 \times 10^4$	1.776	0.022	0.022	0.004	1.824	$6.062 \times 10^3$		
14.0 GeV	$1.411 \times 10^4$	1.819	0.033	0.036	0.005	1.894	$8.212 \times 10^3$		
20.0 GeV	$2.011 \times 10^4$	1.862	0.051	0.059	0.008	1.981	$1.131 \times 10^4$		
30.0 GeV	$3.011 \times 10^4$	1.908	0.084	0.103	0.011	2.106	$1.620 \times 10^4$		
40.0 GeV	$4.011 \times 10^4$	1.938	0.118	0.150	0.015	2.222	$2.082 \times 10^4$		
80.0 GeV	$8.011 \times 10^4$	2.005	0.267	0.360	0.029	2.662	$3.724 \times 10^4$		
100. GeV	$1.001 \times 10^5$	2.025	0.345	0.473	0.037	2.881	$4.446 \times 10^4$		
140. GeV	$1.401 \times 10^5$	2.056	0.507	0.706	0.051	3.321	$5.738 \times 10^4$		
200. GeV	$2.001 \times 10^5$	2.087	0.760	1.075	0.072	3.995	$7.384 \times 10^4$		
218. GeV	$2.178 \times 10^5$	2.095	0.835	1.182	0.079	4.191	<i>Muon critical energy</i>		
300. GeV	$3.001 \times 10^5$	2.123	1.192	1.692	0.108	5.116	$9.591 \times 10^4$		
400. GeV	$4.001 \times 10^5$	2.149	1.639	2.331	0.145	6.264	$1.136 \times 10^5$		
800. GeV	$8.001 \times 10^5$	2.211	3.484	4.952	0.292	10.940	$1.613 \times 10^5$		
1.00 TeV	$1.000 \times 10^6$	2.231	4.432	6.293	0.367	13.324	$1.778 \times 10^5$		
1.40 TeV	$1.400 \times 10^6$	2.261	6.333	8.969	0.520	18.085	$2.035 \times 10^5$		
2.00 TeV	$2.000 \times 10^6$	2.294	9.242	13.053	0.752	25.343	$2.314 \times 10^5$		
3.00 TeV	$3.000 \times 10^6$	2.332	14.099	19.840	1.150	37.423	$2.637 \times 10^5$		
4.00 TeV	$4.000 \times 10^6$	2.359	19.022	26.700	1.554	49.637	$2.868 \times 10^5$		
8.00 TeV	$8.000 \times 10^6$	2.427	38.875	54.277	3.230	98.811	$3.428 \times 10^5$		
10.0 TeV	$1.000 \times 10^7$	2.449	48.881	68.141	4.091	123.563	$3.609 \times 10^5$		
14.0 TeV	$1.400 \times 10^7$	2.482	68.839	95.802	5.858	172.982	$3.881 \times 10^5$		
20.0 TeV	$2.000 \times 10^7$	2.518	98.956	137.472	8.566	247.514	$4.170 \times 10^5$		
30.0 TeV	$3.000 \times 10^7$	2.560	149.094	206.805	13.246	371.707	$4.497 \times 10^5$		
40.0 TeV	$4.000 \times 10^7$	2.591	199.416	276.306	18.037	496.350	$4.729 \times 10^5$		
80.0 TeV	$8.000 \times 10^7$	2.665	401.021	554.502	38.045	996.234	$5.287 \times 10^5$		
100. TeV	$1.000 \times 10^8$	2.690	502.000	693.730	48.380	1246.801	$5.466 \times 10^5$		