

Muons in yttrium aluminum oxide (2) ($\text{Y}_3\text{Al}_5\text{O}_{12}$)

$\langle Z/A \rangle$	ρ [g/cm ³]	I [eV]	a	$k = m_s$	x_0	x_1	\bar{C}	δ_0
0.46831	4.560	218.0	0.15340	3.0000	0.2000	3.0000	4.2884	0.00
T	p [MeV/c]	Ionization	Brems	Pair prod	Photonucl	Total	CSDA range [g/cm ²]	
10.0 MeV	4.704×10^1	5.792				5.792	9.654×10^{-1}	
14.0 MeV	5.616×10^1	4.545				4.545	1.753×10^0	
20.0 MeV	6.802×10^1	3.570				3.570	3.259×10^0	
30.0 MeV	8.509×10^1	2.786				2.786	6.474×10^0	
40.0 MeV	1.003×10^2	2.388				2.388	1.038×10^1	
80.0 MeV	1.527×10^2	1.809				1.809	3.022×10^1	
100. MeV	1.764×10^2	1.704				1.704	4.163×10^1	
140. MeV	2.218×10^2	1.595				1.595	6.601×10^1	
200. MeV	2.868×10^2	1.537				1.537	1.045×10^2	
284. MeV	3.748×10^2	1.521			0.000	1.521	<i>Minimum ionization</i>	
300. MeV	3.917×10^2	1.521			0.000	1.522	1.700×10^2	
400. MeV	4.945×10^2	1.534	0.000		0.000	1.534	2.355×10^2	
800. MeV	8.995×10^2	1.611	0.000		0.000	1.612	4.898×10^2	
1.00 GeV	1.101×10^3	1.644	0.001		0.000	1.645	6.126×10^2	
1.40 GeV	1.502×10^3	1.696	0.001	0.000	0.001	1.698	8.517×10^2	
2.00 GeV	2.103×10^3	1.754	0.001	0.001	0.001	1.757	1.199×10^3	
3.00 GeV	3.104×10^3	1.819	0.003	0.002	0.001	1.825	1.756×10^3	
4.00 GeV	4.104×10^3	1.864	0.004	0.003	0.002	1.873	2.297×10^3	
8.00 GeV	8.105×10^3	1.967	0.009	0.009	0.004	1.988	4.363×10^3	
10.0 GeV	1.011×10^4	1.998	0.012	0.012	0.004	2.026	5.359×10^3	
14.0 GeV	1.411×10^4	2.042	0.018	0.020	0.006	2.086	7.303×10^3	
20.0 GeV	2.011×10^4	2.086	0.028	0.033	0.008	2.156	1.013×10^4	
30.0 GeV	3.011×10^4	2.133	0.046	0.057	0.012	2.249	1.467×10^4	
40.0 GeV	4.011×10^4	2.165	0.065	0.083	0.016	2.330	1.904×10^4	
80.0 GeV	8.011×10^4	2.236	0.147	0.199	0.032	2.615	3.522×10^4	
100. GeV	1.001×10^5	2.258	0.190	0.262	0.039	2.751	4.267×10^4	
140. GeV	1.401×10^5	2.291	0.280	0.391	0.055	3.018	5.655×10^4	
200. GeV	2.001×10^5	2.326	0.420	0.597	0.078	3.420	7.522×10^4	
300. GeV	3.001×10^5	2.364	0.659	0.941	0.117	4.082	1.020×10^5	
400. GeV	4.001×10^5	2.392	0.907	1.299	0.155	4.754	1.246×10^5	
405. GeV	4.050×10^5	2.393	0.919	1.317	0.157	4.787	<i>Muon critical energy</i>	
800. GeV	8.001×10^5	2.459	1.932	2.771	0.314	7.477	1.912×10^5	
1.00 TeV	1.000×10^6	2.481	2.460	3.526	0.395	8.862	2.157×10^5	
1.40 TeV	1.400×10^6	2.514	3.519	5.031	0.559	11.624	2.550×10^5	
2.00 TeV	2.000×10^6	2.550	5.142	7.331	0.810	15.832	2.991×10^5	
3.00 TeV	3.000×10^6	2.591	7.853	11.154	1.239	22.837	3.514×10^5	
4.00 TeV	4.000×10^6	2.620	10.604	15.020	1.676	29.921	3.896×10^5	
8.00 TeV	8.000×10^6	2.693	21.707	30.573	3.490	58.464	4.835×10^5	
10.0 TeV	1.000×10^7	2.717	27.308	38.395	4.423	72.844	5.141×10^5	
14.0 TeV	1.400×10^7	2.753	38.481	53.997	6.342	101.574	5.604×10^5	
20.0 TeV	2.000×10^7	2.792	55.353	77.507	9.286	144.940	6.096×10^5	
30.0 TeV	3.000×10^7	2.838	83.436	116.628	14.385	217.288	6.655×10^5	
40.0 TeV	4.000×10^7	2.871	111.632	155.852	19.611	289.966	7.052×10^5	
80.0 TeV	8.000×10^7	2.951	224.630	312.866	41.484	581.932	8.007×10^5	
100. TeV	1.000×10^8	2.978	281.244	391.453	52.800	728.475	8.313×10^5	