Muons in gadolinium oxysulfide (Gd_2O_2S)

$\langle Z/A \rangle$	ρ [g/cm^3]	I [eV]	a	$k = m_s$	x_0	x_1	$\overline{C}$	δ_0
0.42266	7.440	493.3	0.22161	2.6300	−0.1774	3.4045	5.5347	0.00

T	p [MeV/c]	Ionization	Brems	Pair prod	Photonucl	Total	CSDA range [g/cm^2]
		[MeV cm^2/g]					
10.0 MeV	4.704×10^1	4.587				4.587	1.234×10^0
14.0 MeV	5.616×10^1	3.621				3.621	2.225×10^0
20.0 MeV	6.802×10^1	2.860				2.860	4.110×10^0
30.0 MeV	8.509×10^1	2.244				2.244	8.109×10^0
40.0 MeV	1.003×10^2	1.929				1.929	1.294×10^1
80.0 MeV	1.527×10^2	1.466				1.466	3.745×10^1
100. MeV	1.764×10^2	1.384				1.384	5.153×10^1
140. MeV	2.218×10^2	1.303				1.303	8.145×10^1
200. MeV	2.868×10^2	1.263				1.263	1.284×10^2
253. MeV	3.431×10^2	1.257	0.000			1.257	*Minimum ionization*
300. MeV	3.917×10^2	1.260	0.000		0.000	1.261	2.078×10^2
400. MeV	4.945×10^2	1.278	0.000		0.000	1.278	2.866×10^2
800. MeV	8.995×10^2	1.360	0.001		0.000	1.361	5.895×10^2
1.00 GeV	1.101×10^3	1.393	0.001		0.000	1.395	7.346×10^2
1.40 GeV	1.502×10^3	1.447	0.002	0.000	0.001	1.449	1.016×10^3
2.00 GeV	2.103×10^3	1.505	0.003	0.001	0.001	1.510	1.421×10^3
3.00 GeV	3.104×10^3	1.571	0.005	0.003	0.001	1.580	2.067×10^3
4.00 GeV	4.104×10^3	1.616	0.007	0.005	0.002	1.631	2.690×10^3
8.00 GeV	8.105×10^3	1.720	0.018	0.017	0.003	1.759	5.042×10^3
10.0 GeV	1.011×10^4	1.752	0.024	0.024	0.004	1.804	6.164×10^3
14.0 GeV	1.411×10^4	1.797	0.037	0.039	0.005	1.878	8.335×10^3
20.0 GeV	2.011×10^4	1.842	0.057	0.064	0.008	1.970	1.145×10^4
30.0 GeV	3.011×10^4	1.889	0.093	0.111	0.011	2.105	1.636×10^4
40.0 GeV	4.011×10^4	1.921	0.131	0.163	0.015	2.231	2.097×10^4
80.0 GeV	8.011×10^4	1.991	0.297	0.392	0.029	2.710	3.720×10^4
100. GeV	1.001×10^5	2.012	0.385	0.516	0.036	2.950	4.427×10^4
140. GeV	1.401×10^5	2.042	0.565	0.771	0.050	3.429	5.684×10^4
198. GeV	1.985×10^5	2.073	0.839	1.163	0.071	4.147	*Muon critical energy*
200. GeV	2.001×10^5	2.074	0.847	1.174	0.072	4.167	7.270×10^4
300. GeV	3.001×10^5	2.109	1.328	1.848	0.108	5.394	9.374×10^4
400. GeV	4.001×10^5	2.134	1.826	2.546	0.143	6.650	1.104×10^5
800. GeV	8.001×10^5	2.194	3.880	5.410	0.290	11.776	1.550×10^5
1.00 TeV	1.000×10^6	2.214	4.935	6.876	0.364	14.391	1.704×10^5
1.40 TeV	1.400×10^6	2.244	7.050	9.799	0.516	19.610	1.941×10^5
2.00 TeV	2.000×10^6	2.276	10.285	14.259	0.747	27.568	2.198×10^5
3.00 TeV	3.000×10^6	2.313	15.685	21.671	1.142	40.812	2.494×10^5
4.00 TeV	4.000×10^6	2.340	21.157	29.163	1.543	54.203	2.706×10^5
8.00 TeV	8.000×10^6	2.405	43.215	59.276	3.206	108.103	3.219×10^5
10.0 TeV	1.000×10^7	2.427	54.330	74.412	4.060	135.231	3.384×10^5
14.0 TeV	1.400×10^7	2.460	76.500	104.614	5.815	189.390	3.633×10^5
20.0 TeV	2.000×10^7	2.495	109.951	150.110	8.504	271.061	3.896×10^5
30.0 TeV	3.000×10^7	2.536	165.634	225.807	13.152	407.131	4.195×10^5
40.0 TeV	4.000×10^7	2.566	221.515	301.684	17.910	543.676	4.407×10^5
80.0 TeV	8.000×10^7	2.639	445.373	605.398	37.781	1091.192	4.916×10^5
100. TeV	1.000×10^8	2.663	557.489	757.394	48.044	1365.591	5.079×10^5