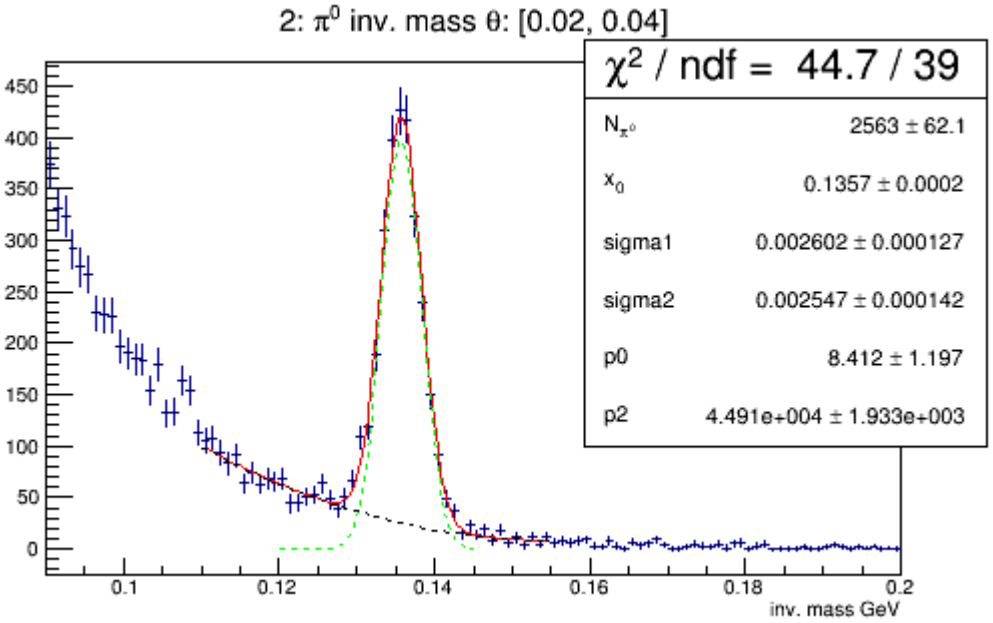
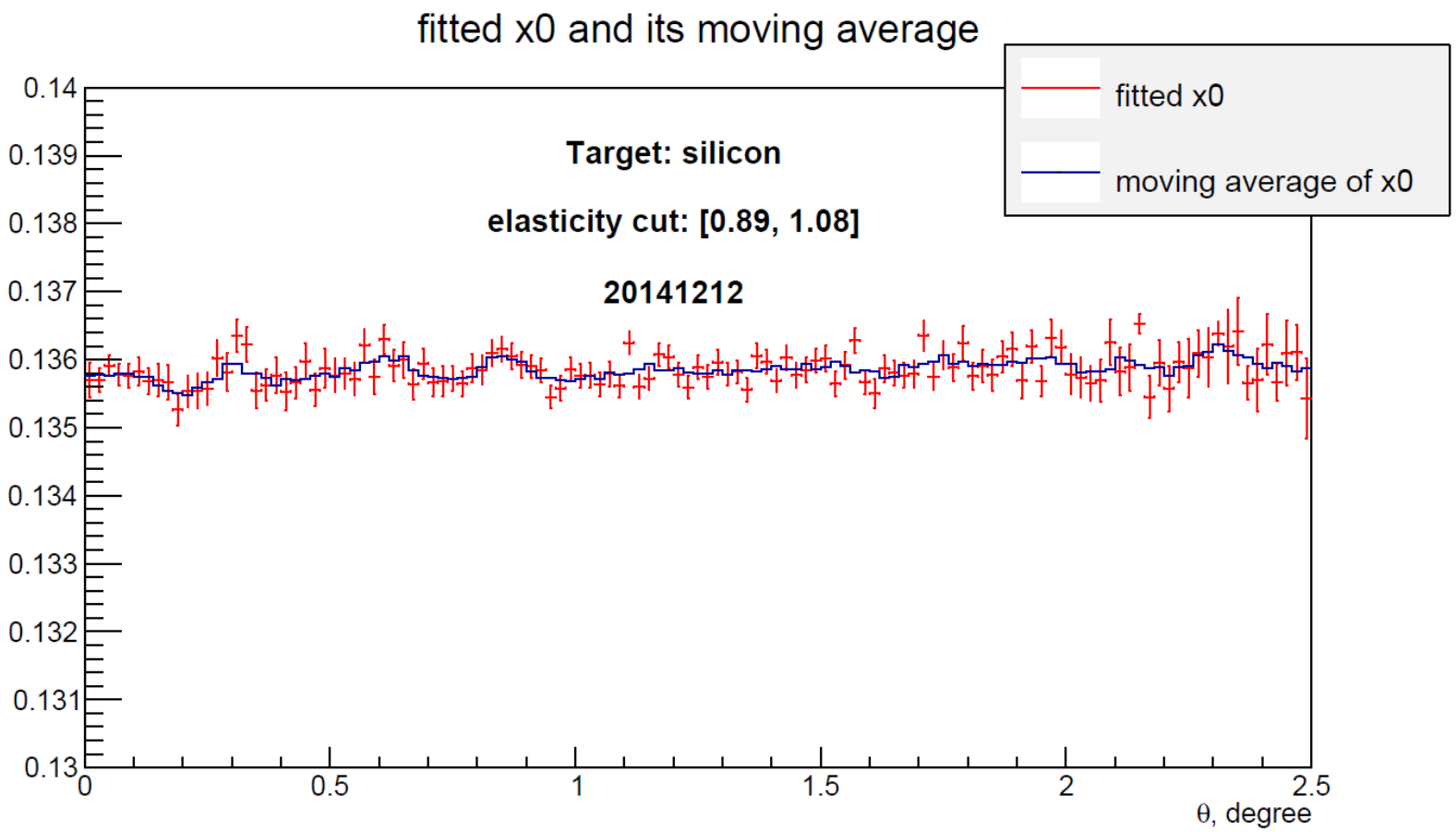
Fitting function

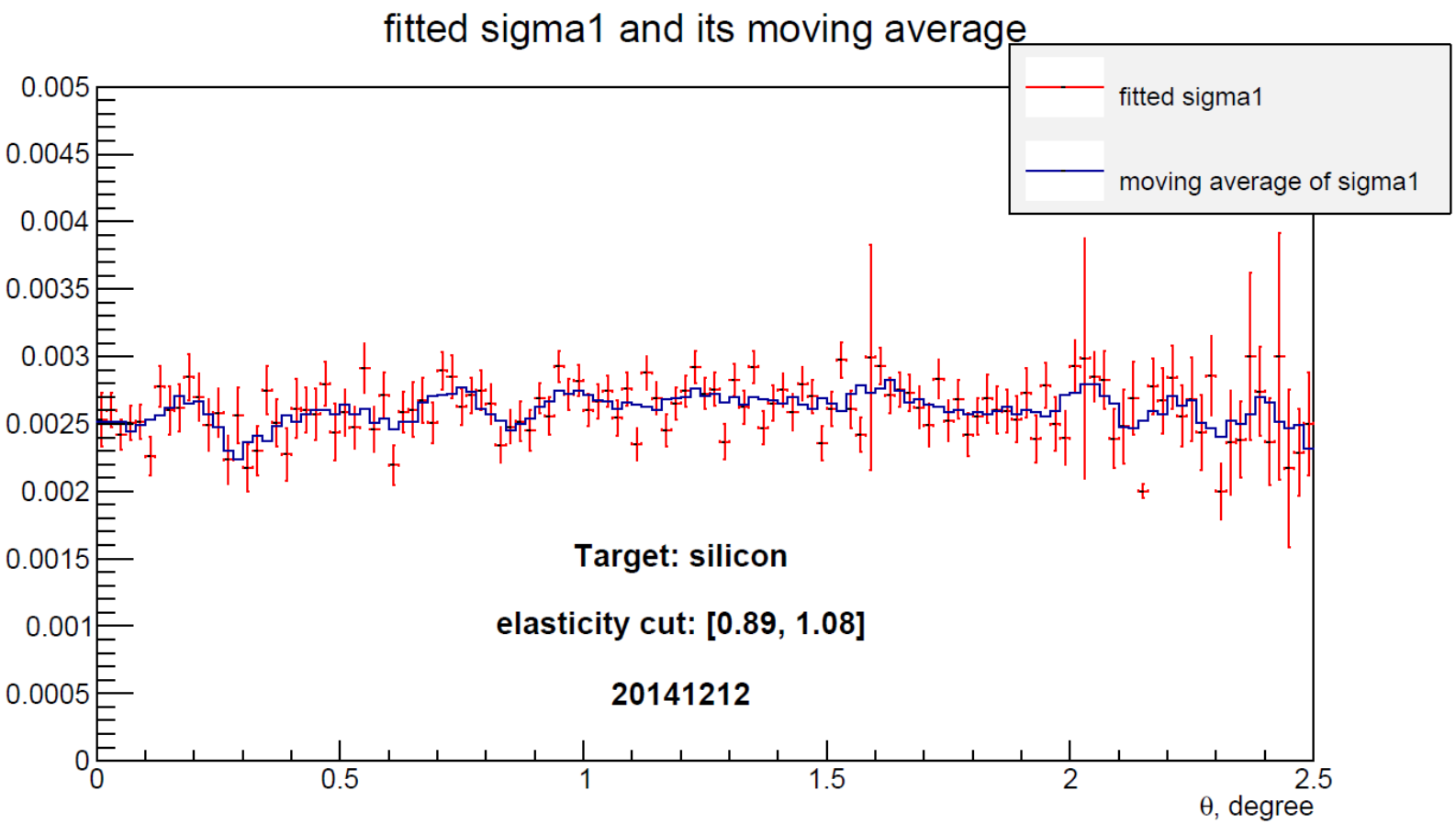
$\frac{2N_{\pi^0}}{\sigma_1+\sigma_2}\exp(-\frac{(x-x_0)^2}{\sigma_{1,2}})$+Pol. Bkg

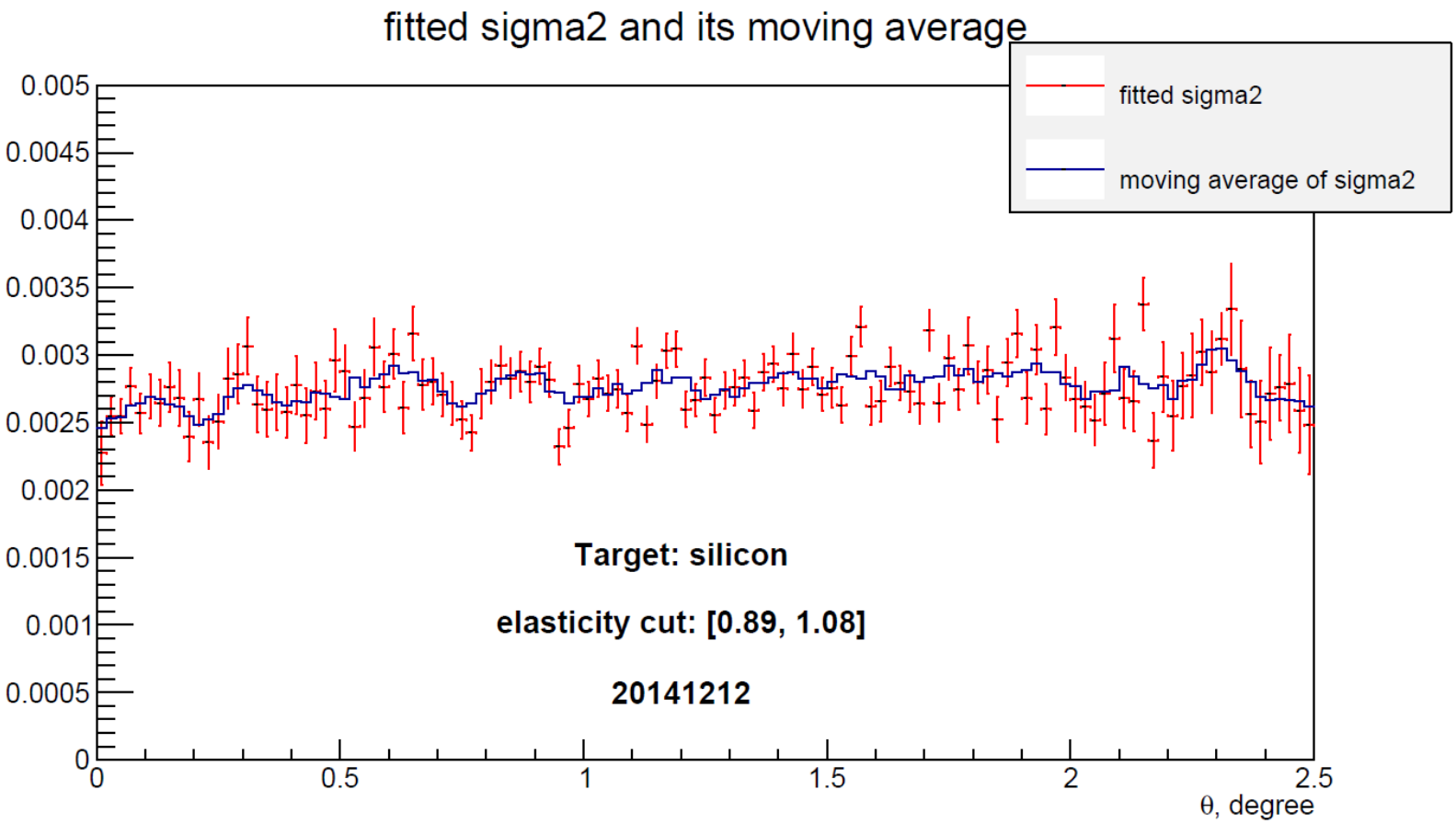
$x > x_0$, $\sigma = \sigma 1$

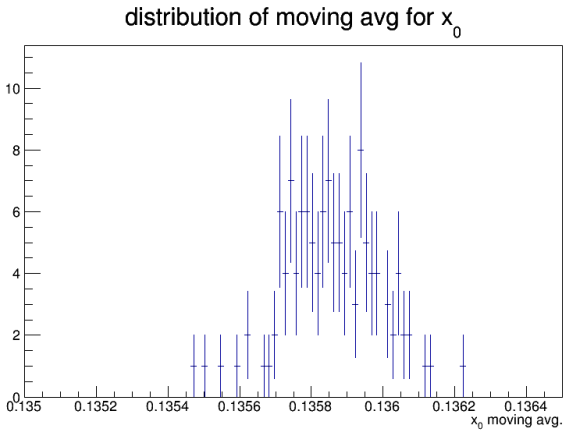
$X < x_0$, $\sigma = \sigma 2$

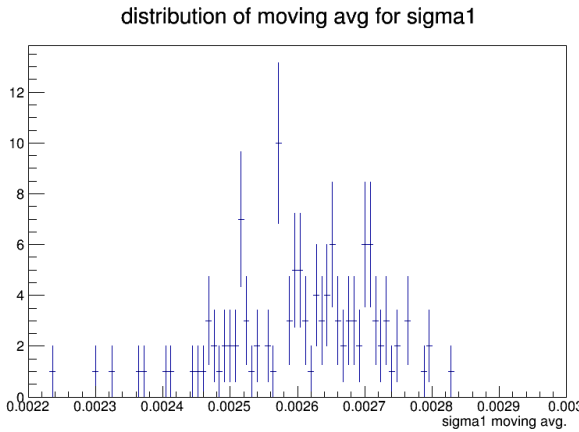


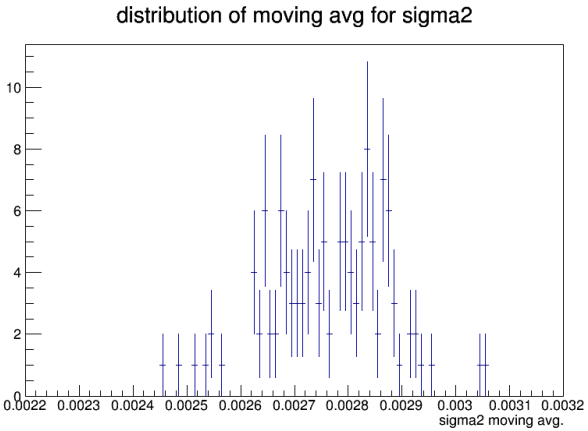

fitted x0 and its moving average
fitted x0
moving average of x0
Target: silicon
elasticity cut: [0.89, 1.08]
20141212
0.14
0.139
0.138
0.137
0.136
0.135
0.134
0.133
0.132
0.131
0.13
0
0.5
1
1.5
2
2.5
θ, degree


fitted sigma1 and its moving average
fitted sigma1
moving average of sigma1
0.005
0.0045
0.004
0.0035
0.003
0.0025
0.002
0.0015
0.001
0.0005
0
0
0.5
1
1.5
2
2.5
θ, degree
Target: silicon
elasticity cut: [0.89, 1.08]
20141212


fitted sigma2 and its moving average
fitted sigma2
moving average of sigma2
0.005
0.0045
0.004
0.0035
0.003
0.0025
0.002
0.0015
0.001
0.0005
0
0
0.5
1
1.5
2
2.5
θ, degree
Target: silicon
elasticity cut: [0.89, 1.08]
20141212







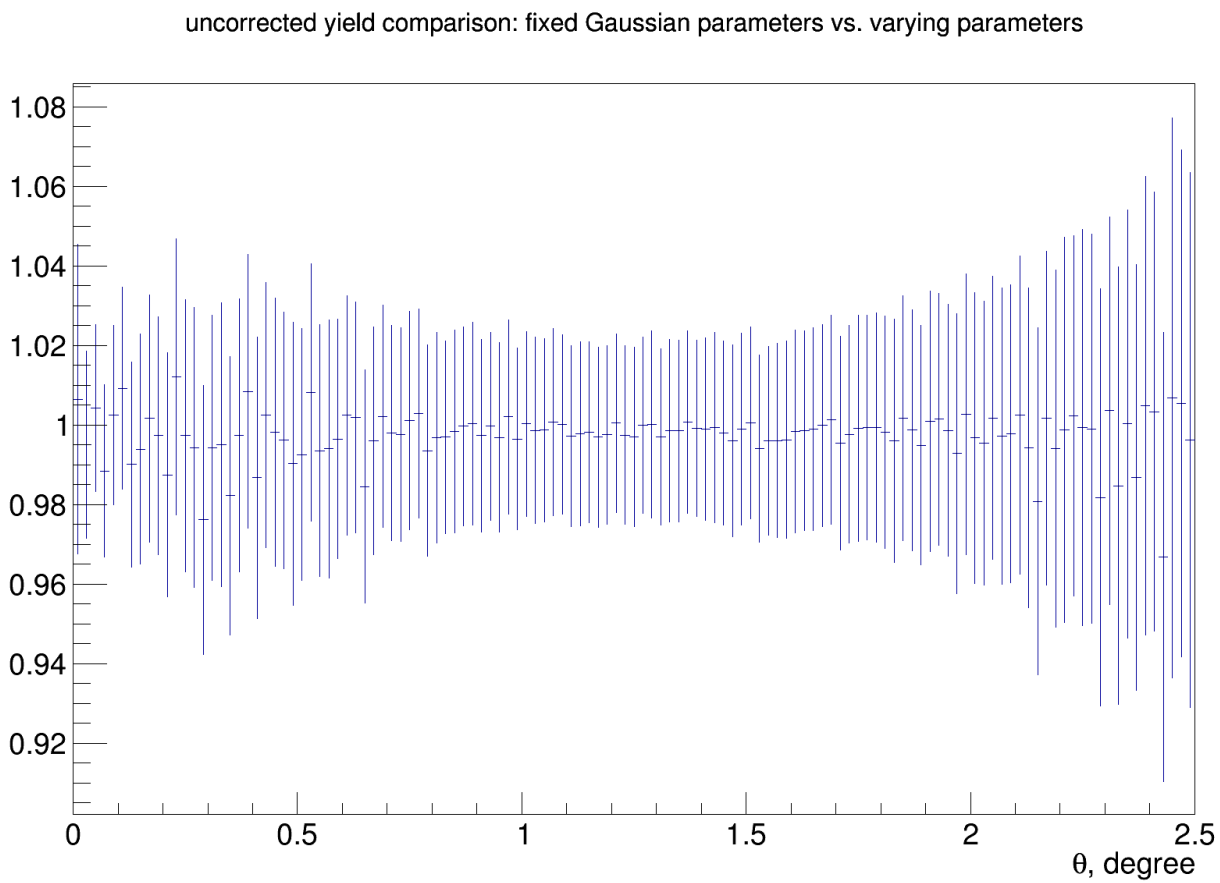
RMS x_0=

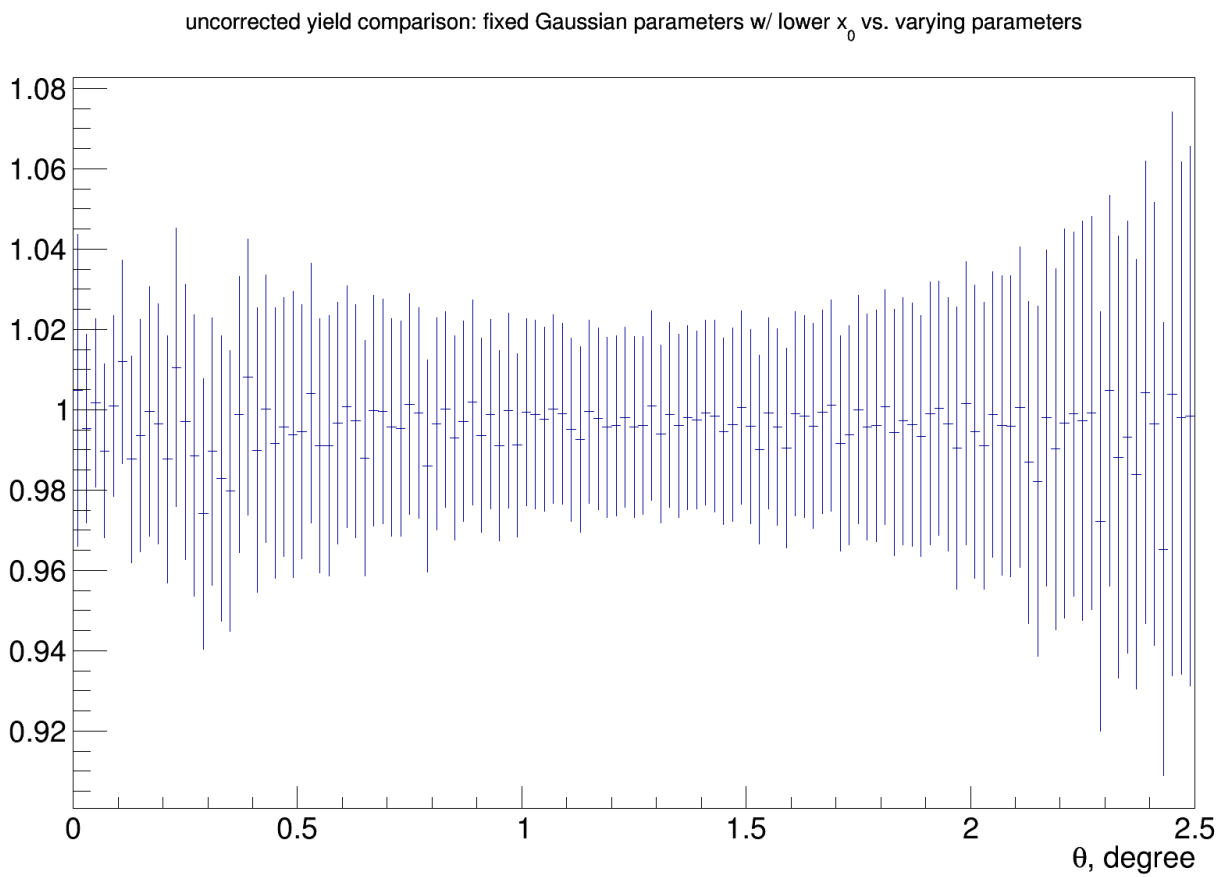
RMS sigma1 =

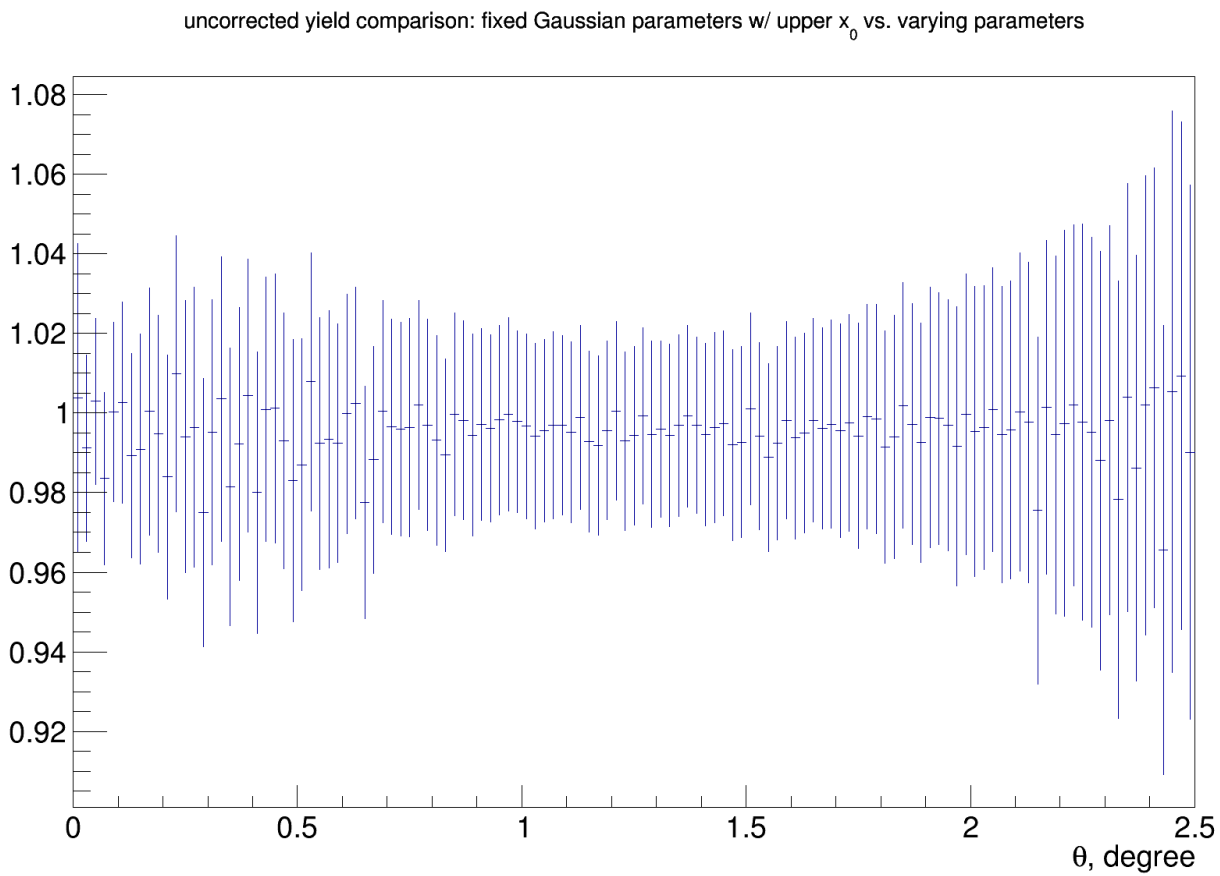
RMS sigma2 =

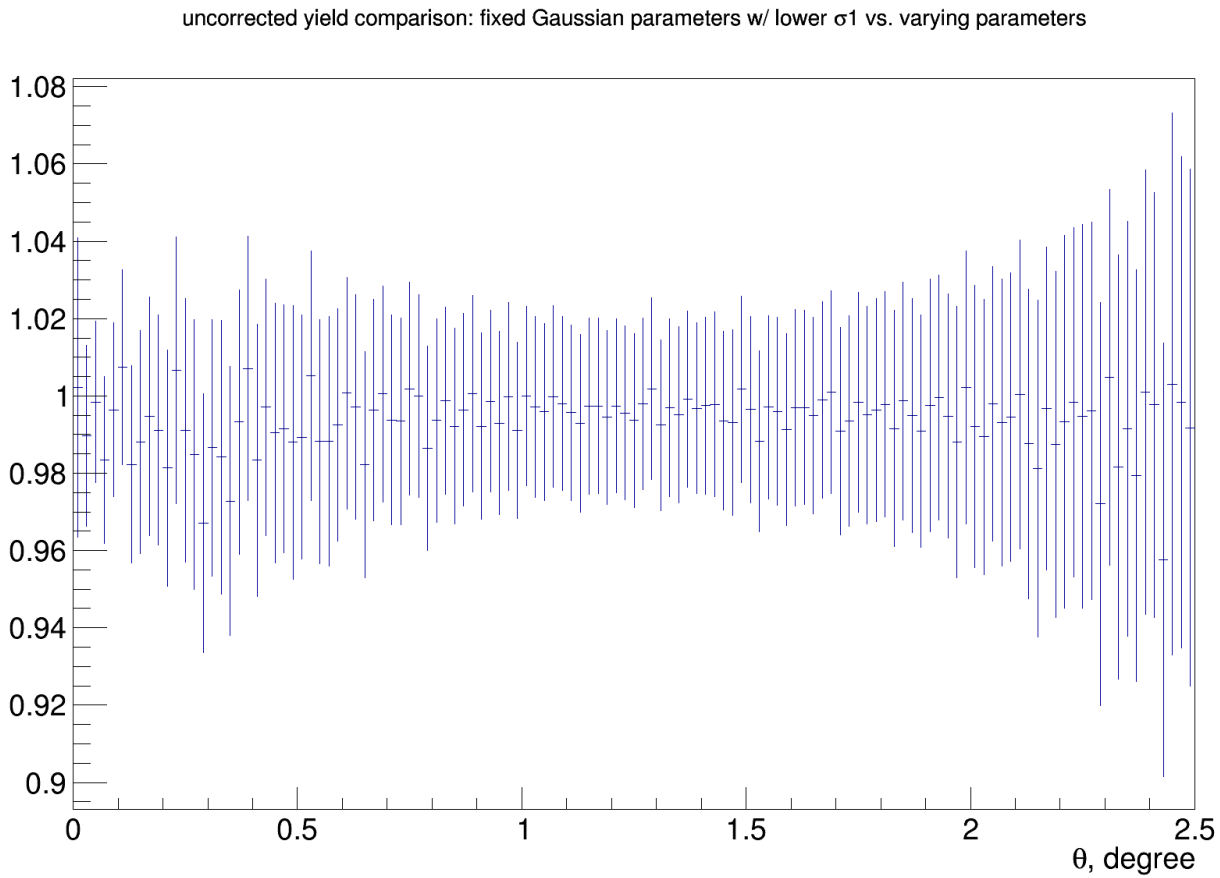
Extract uncorrected yield:

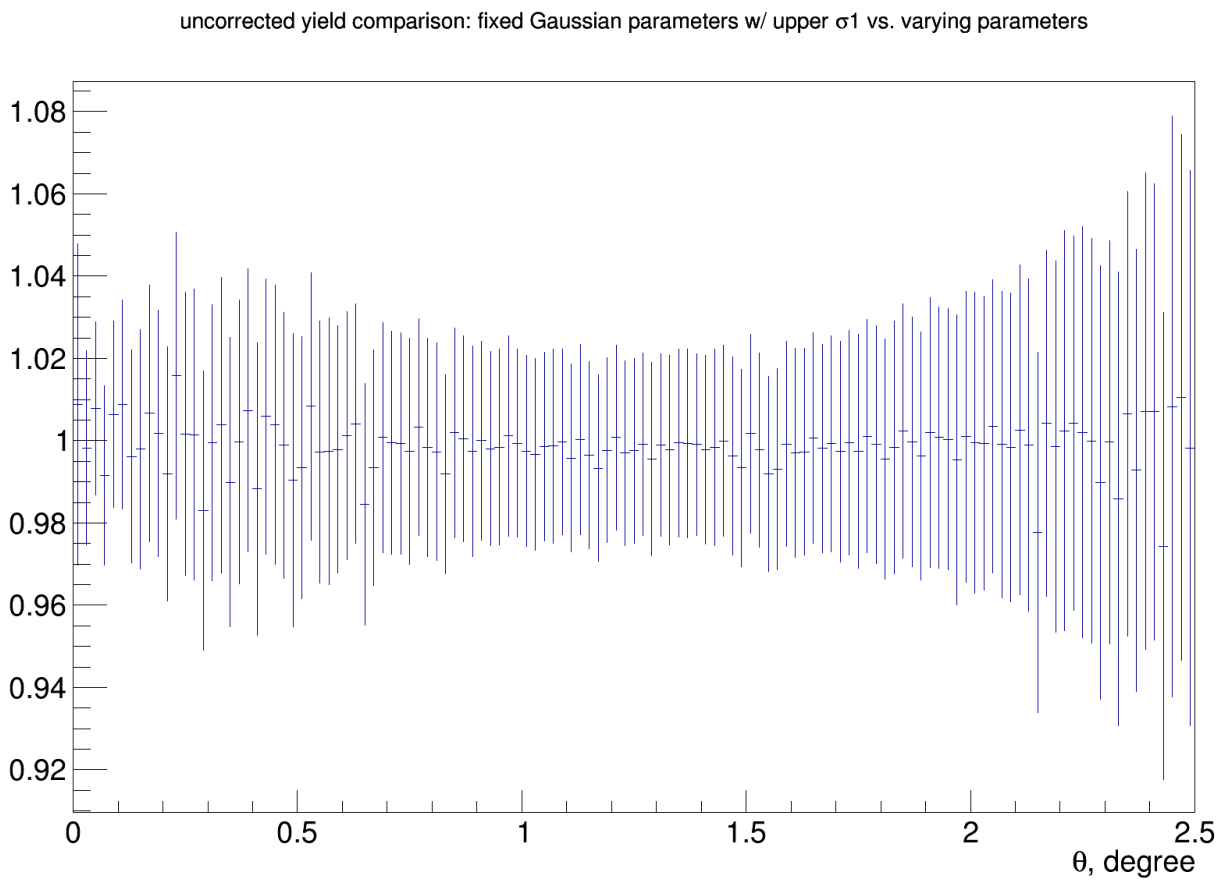
1. All parameters are variable
2. All Gaussian parameters are fixed to its avg.
3. All Gaussian parameters are fixed to its avg±RMS

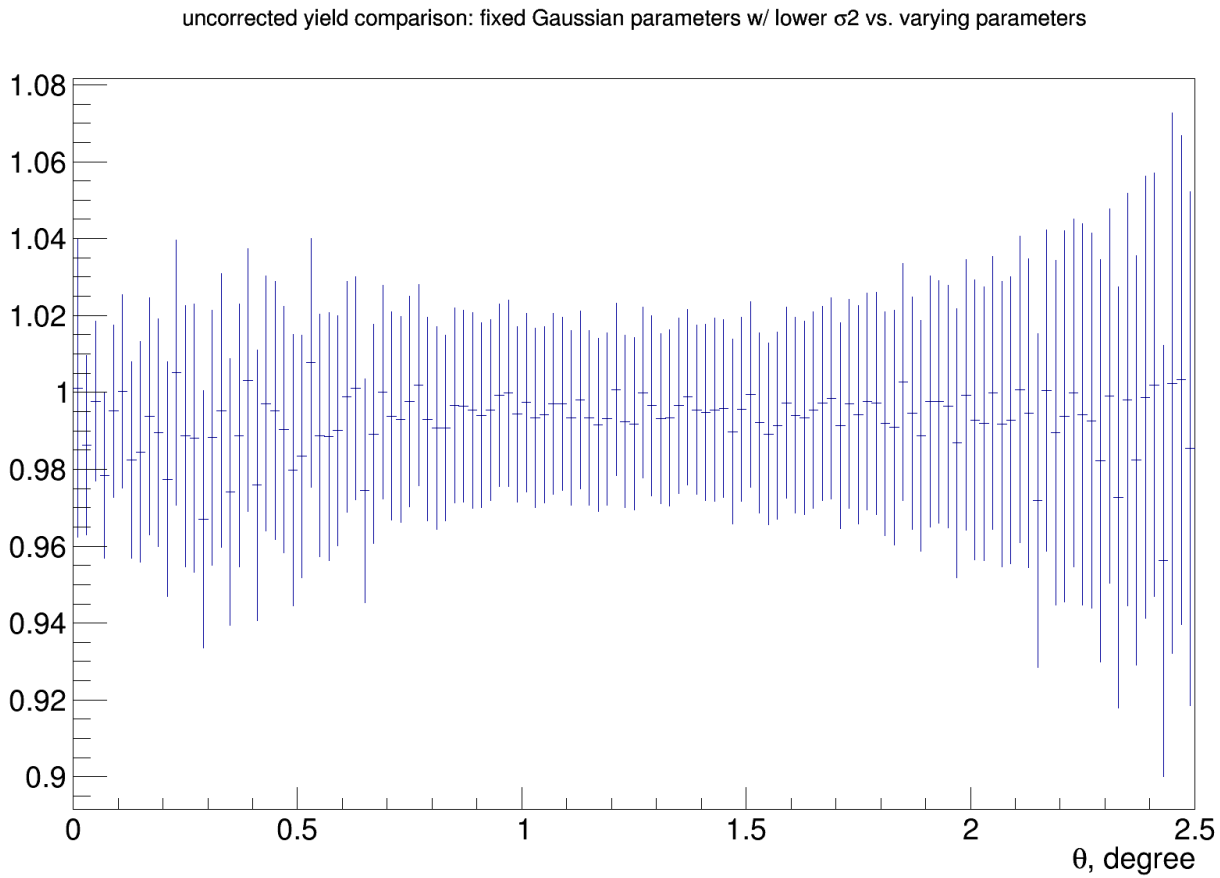

uncorrected yield comparison: fixed Gaussian parameters vs. varying parameters
1.08
1.06
1.04
1.02
1
0.98
0.96
0.94
0.92
0
0.5
1
1.5
2
2.5
θ, degree

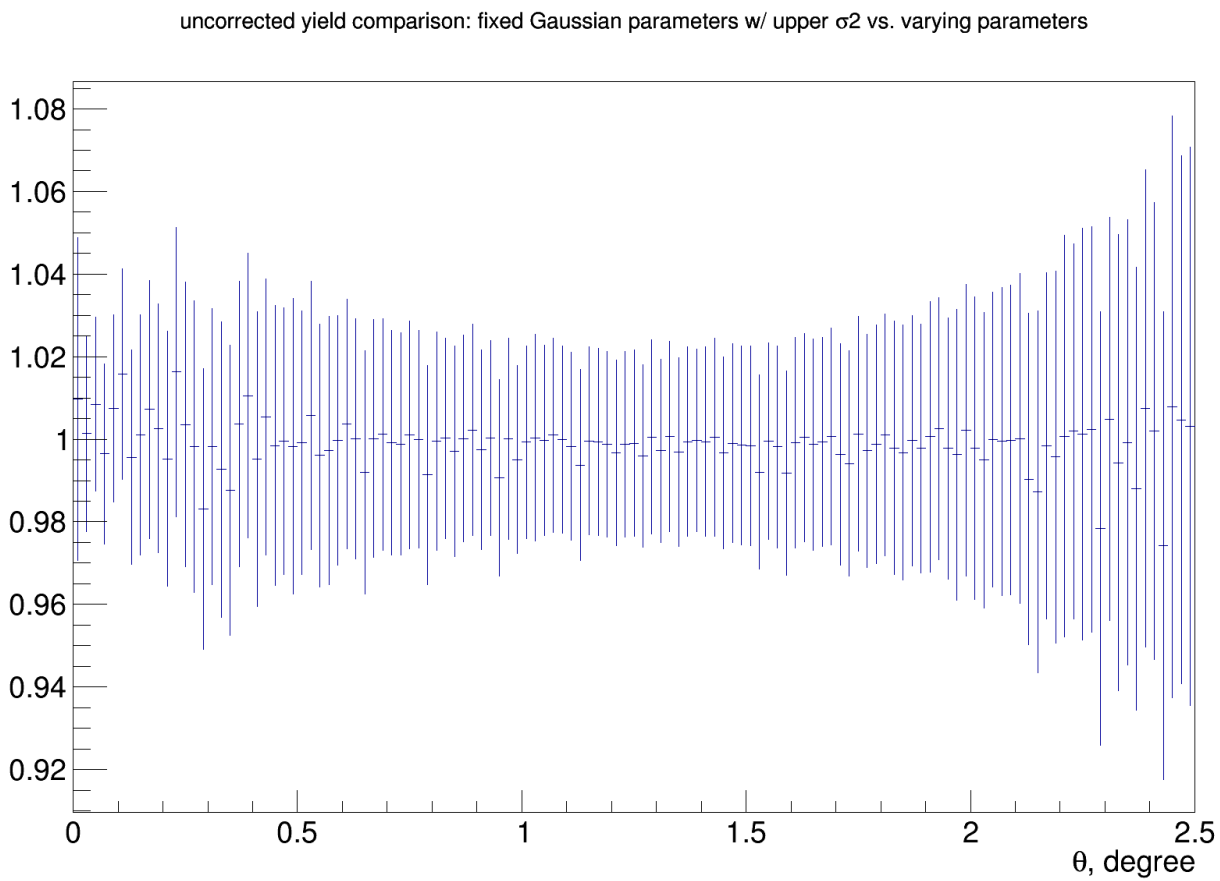

uncorrected yield comparison: fixed Gaussian parameters w/ lower x_0 vs. varying parameters
1.08
1.06
1.04
1.02
1
0.98
0.96
0.94
0.92
0
0.5
1
1.5
2
2.5
θ, degree

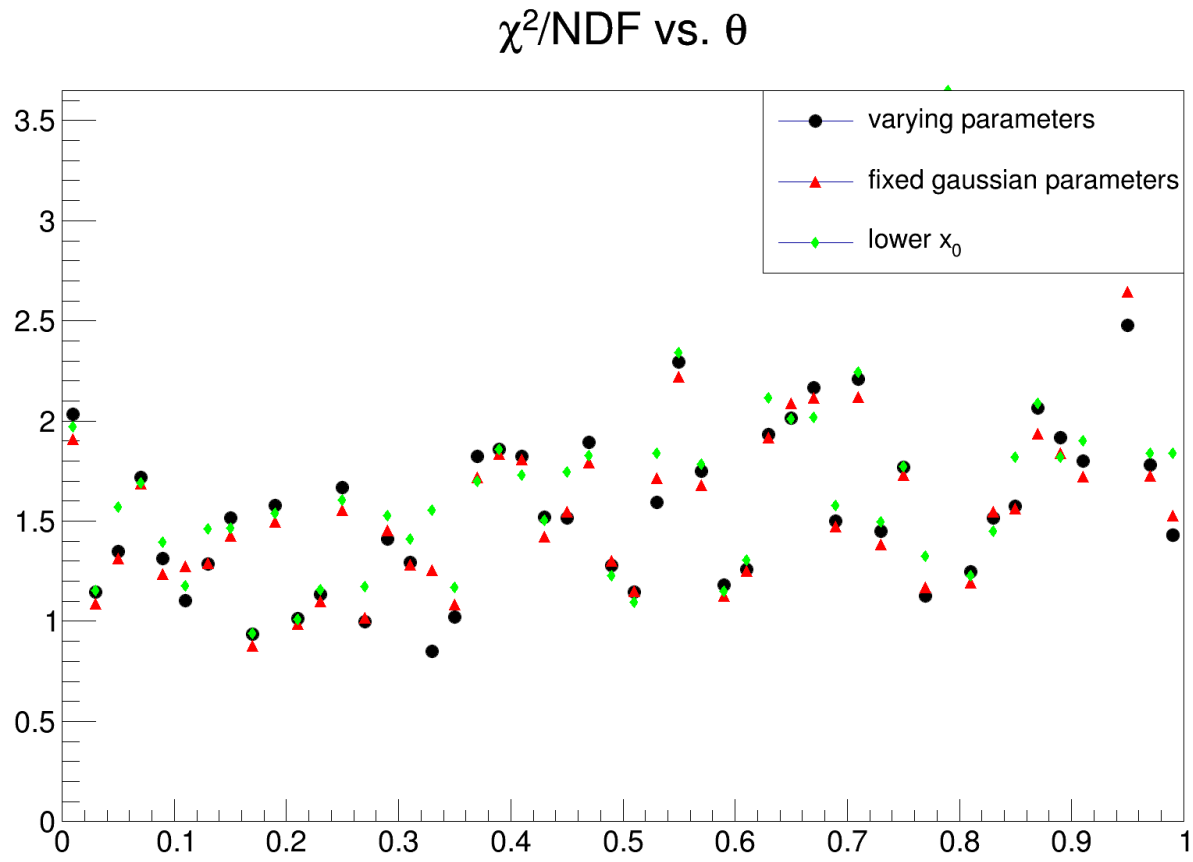

uncorrected yield comparison: fixed Gaussian parameters w/ upper x_0 vs. varying parameters
1.08
1.06
1.04
1.02
1
0.98
0.96
0.94
0.92
0
0.5
1
1.5
2
2.5
θ, degree

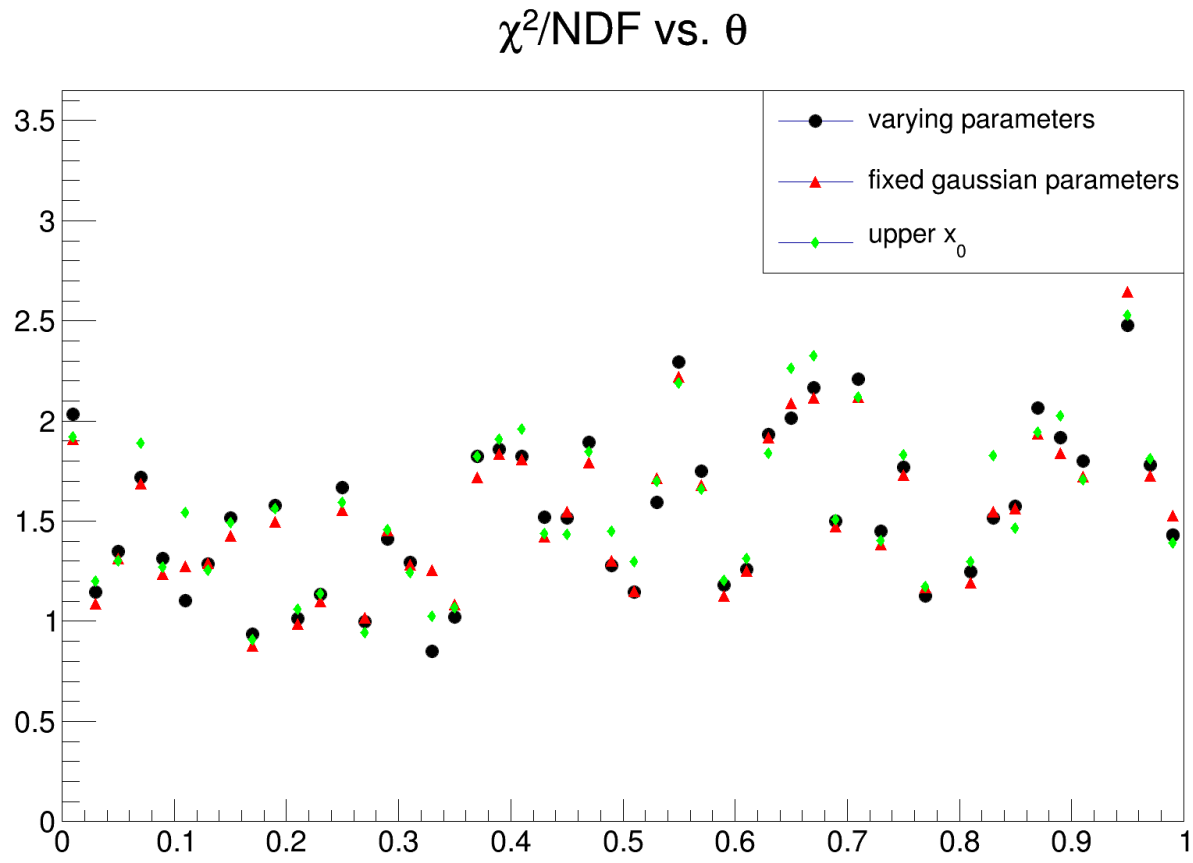

uncorrected yield comparison: fixed Gaussian parameters w/ lower σ1 vs. varying parameters
1.08
1.06
1.04
1.02
1
0.98
0.96
0.94
0.92
0.9
0
0.5
1
1.5
2
2.5
θ, degree

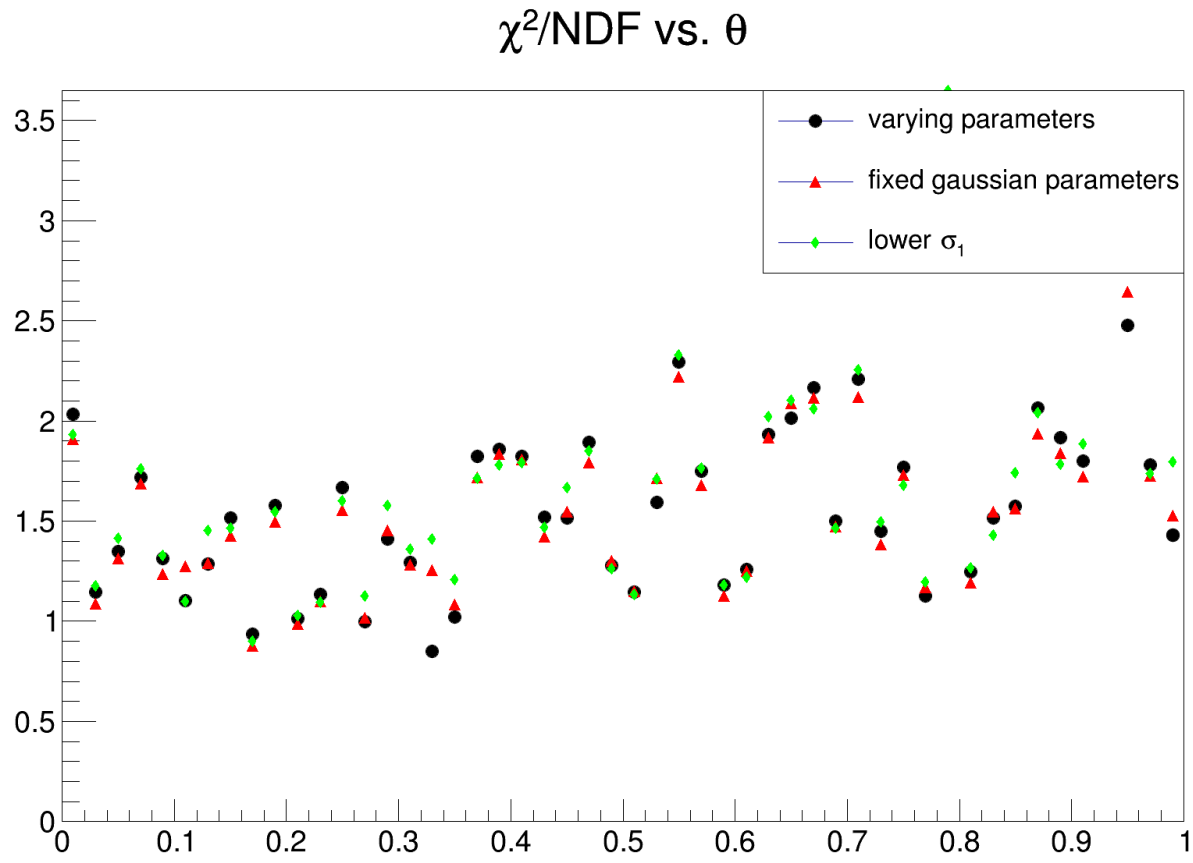

uncorrected yield comparison: fixed Gaussian parameters w/ upper σ1 vs. varying parameters
1.08
1.06
1.04
1.02
1
0.98
0.96
0.94
0.92
0
0.5
1
1.5
2
2.5
θ, degree

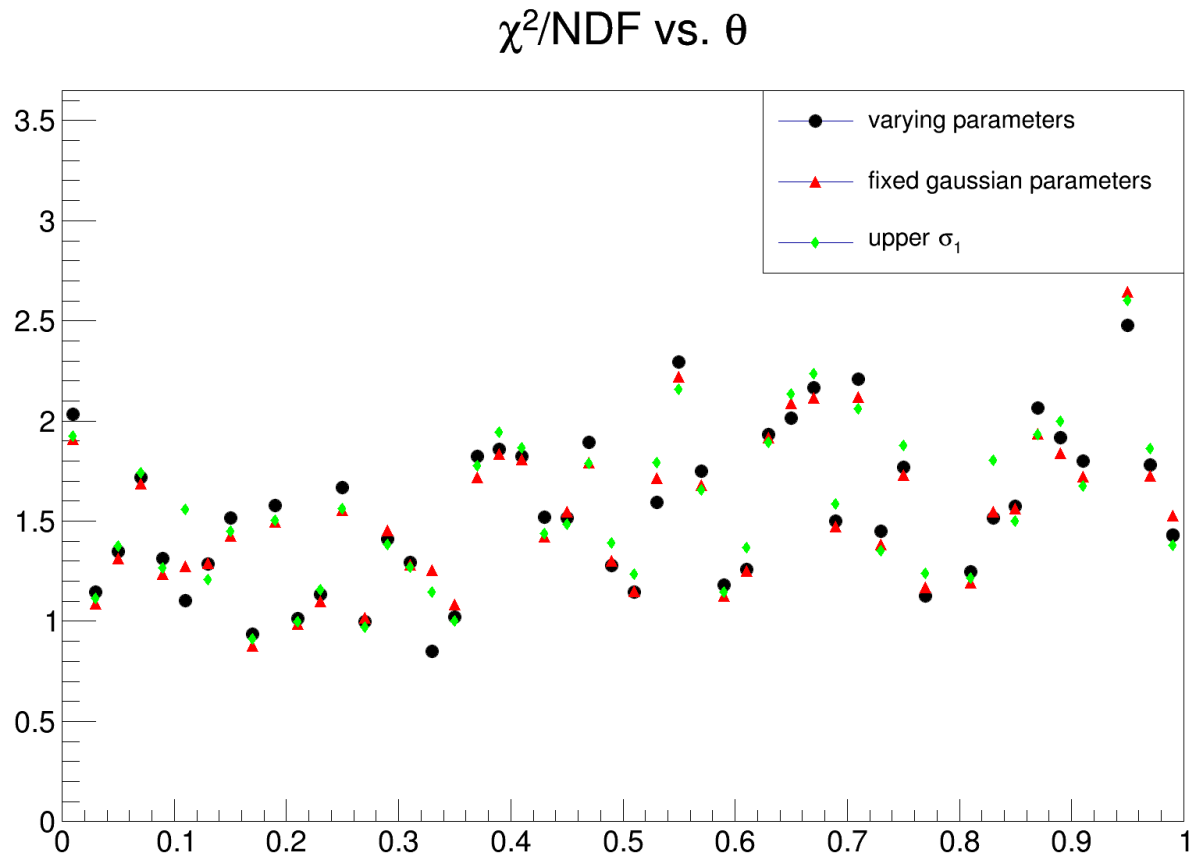

uncorrected yield comparison: fixed Gaussian parameters w/ lower σ2 vs. varying parameters
1.08
1.06
1.04
1.02
1
0.98
0.96
0.94
0.92
0.9
0
0.5
1
1.5
2
2.5
θ, degree

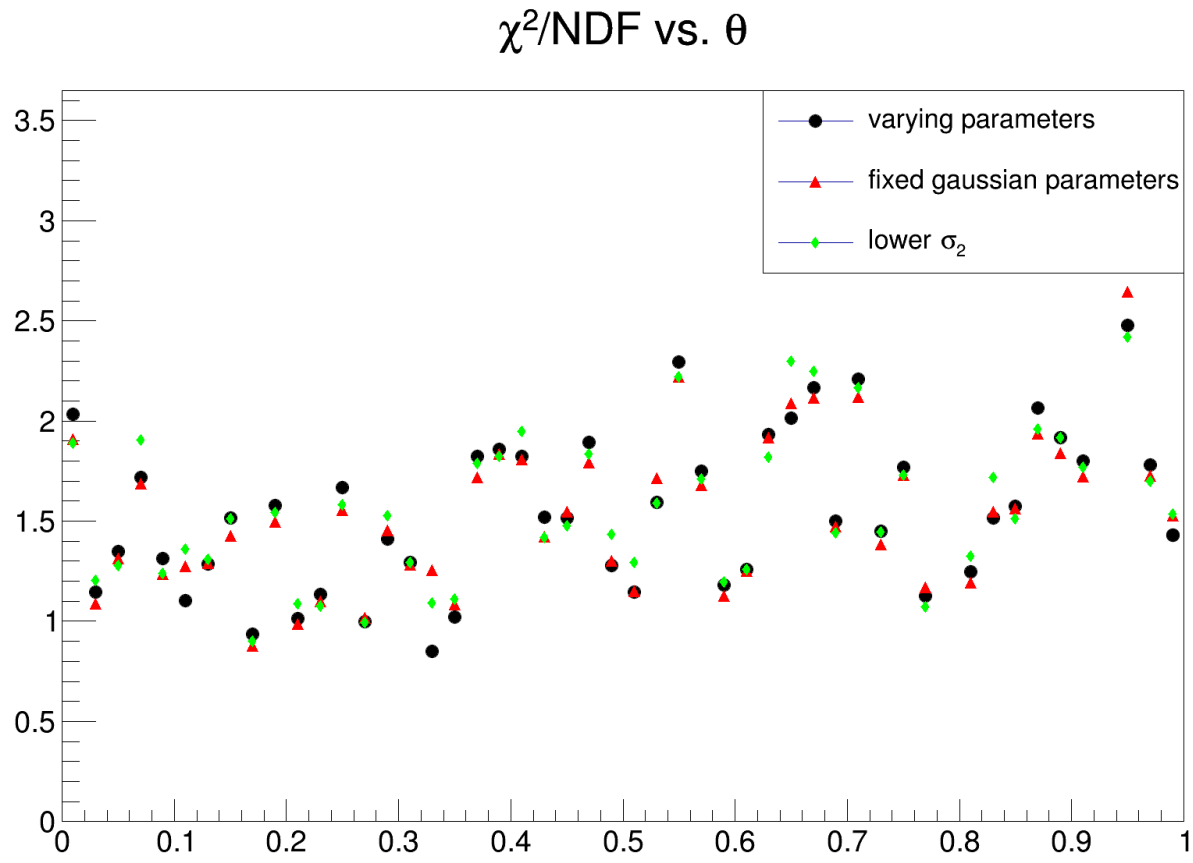

uncorrected yield comparison: fixed Gaussian parameters w/ upper σ2 vs. varying parameters
1.08
1.06
1.04
1.02
1
0.98
0.96
0.94
0.92
0
0.5
1
1.5
2
2.5
θ, degree

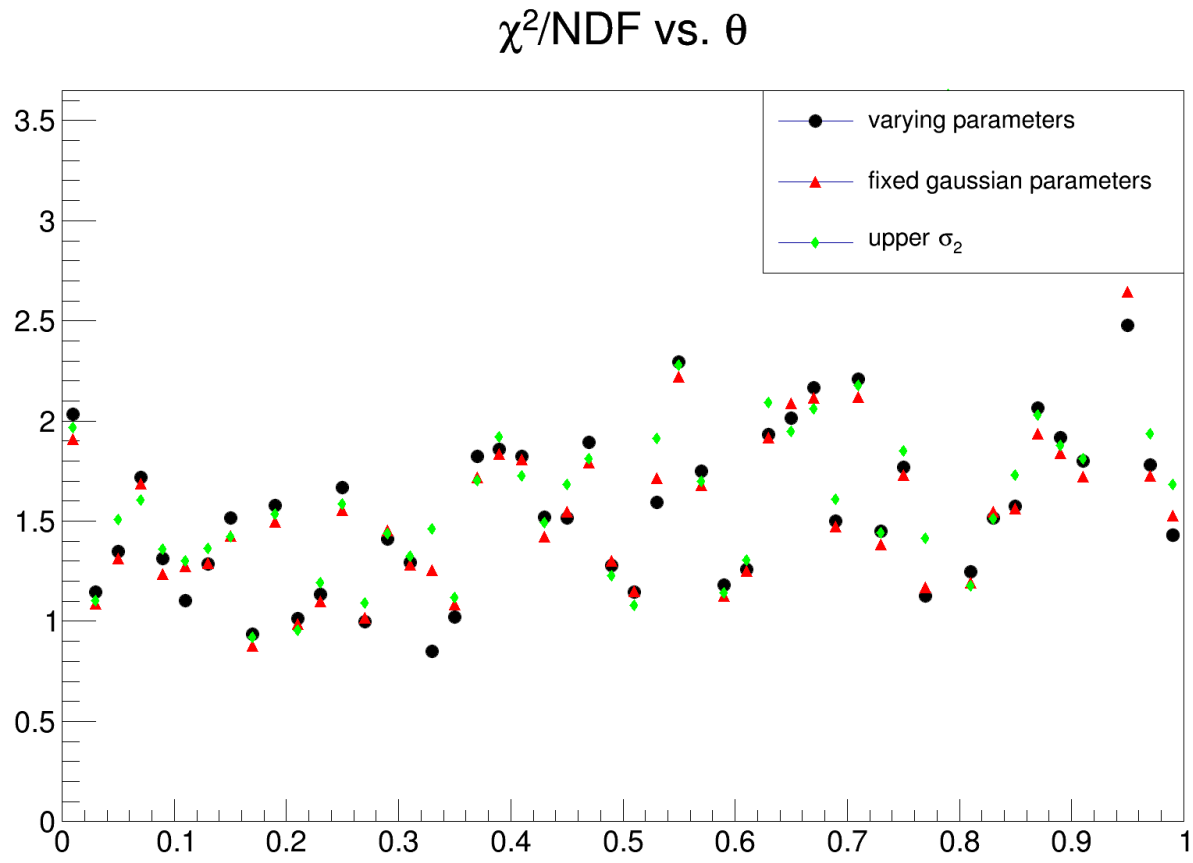

χ^2/NDF vs. θ
varying parameters
fixed gaussian parameters
lower x_0
3.5
3
2.5
2
1.5
1
0.5
0
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1


χ^2/NDF vs. θ
varying parameters
fixed gaussian parameters
upper x_0
3.5
3
2.5
2
1.5
1
0.5
0
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1


χ^2/NDF vs. θ
varying parameters
fixed gaussian parameters
lower σ_1
3.5
3
2.5
2
1.5
1
0.5
0
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1


χ^2/NDF vs. θ
varying parameters
fixed gaussian parameters
upper σ_1
3.5
3
2.5
2
1.5
1
0.5
0
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1


χ^2/NDF vs. θ
varying parameters
fixed gaussian parameters
lower σ_2
3.5
3
2.5
2
1.5
1
0.5
0
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1


χ^2/NDF vs. θ
varying parameters
fixed gaussian parameters
upper σ_2
3.5
3
2.5
2
1.5
1
0.5
0
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1