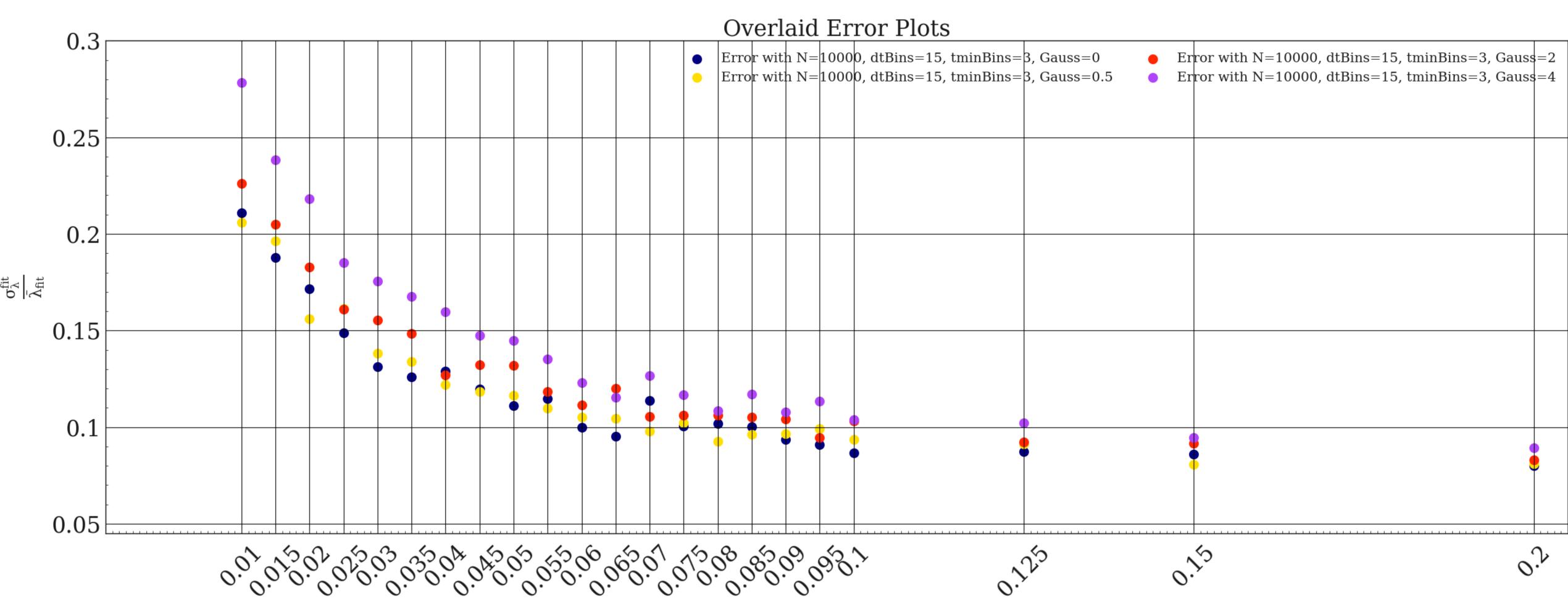


## Quantum Decoherence - Status Update





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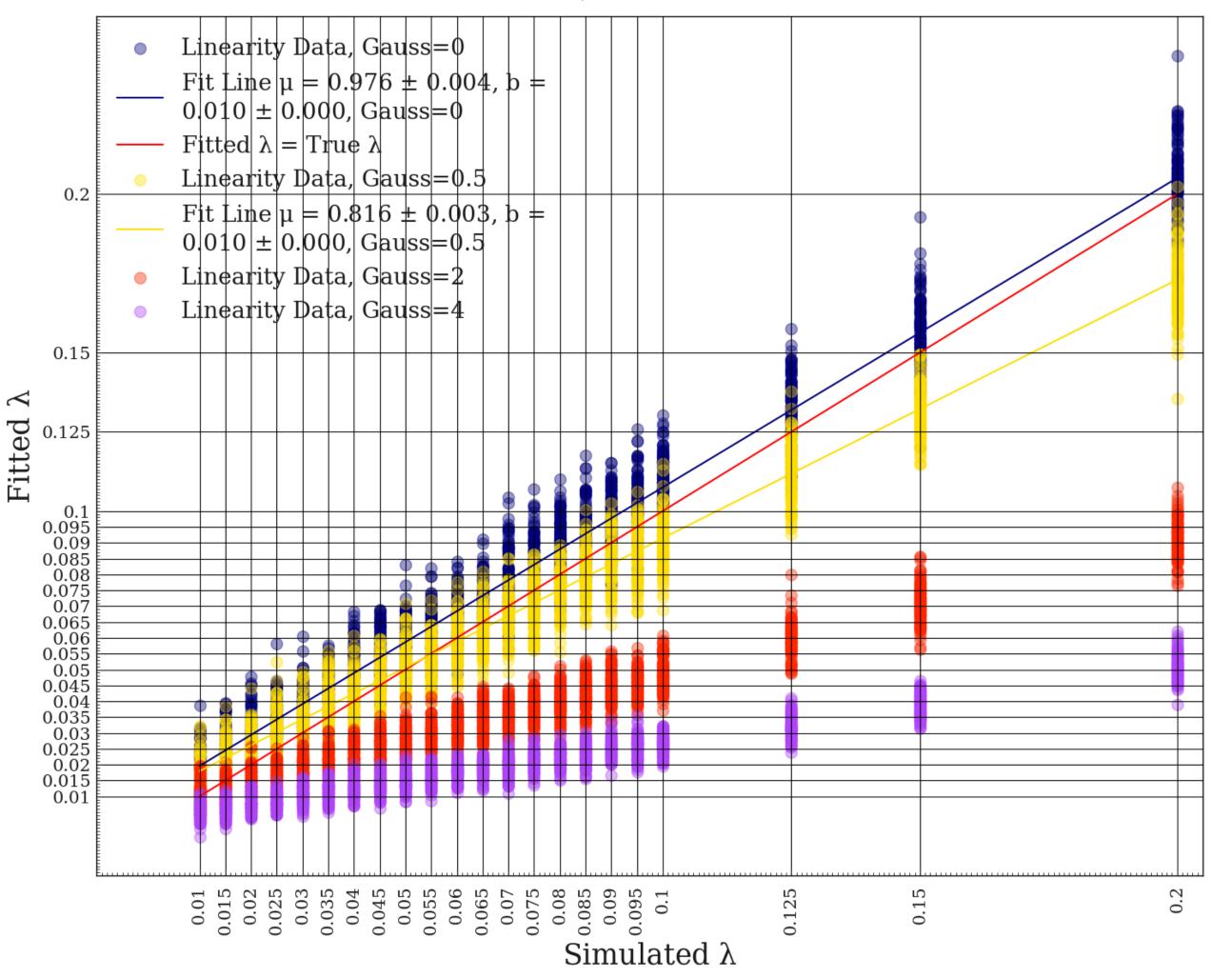
Simulated  $\lambda$ 



## Quantum Decoherence - Status Update



Linearity Plots for N=10000, dtBins=15, tminBins=3, 100 iterations





## Quantum Decoherence - Status Update



- What lambda value should we expect? Is there some sort of a limit yet?
  - → Paper of Bertlmann and Grimus (A model for decoherence of entangled beauty) give a value for the dileptonic decays of B mesons
  - They say  $\Lambda := \frac{\lambda}{\Gamma} = -0.11 \pm 0.18$
  - ⇒ In their calculation they defined a value  $x := \frac{\Delta m}{\Gamma} = 0.740 \pm 0.031$  (the numeric value comes from data of all LEP experiments)
  - $\Rightarrow$  Getting  $\Delta m = 0.5065 \, \mathrm{ps}$  (Particle Data Booklet/Group) we get  $\lambda \approx -0.0753 \, \mathrm{ms}$
- Were is the minus coming from?

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