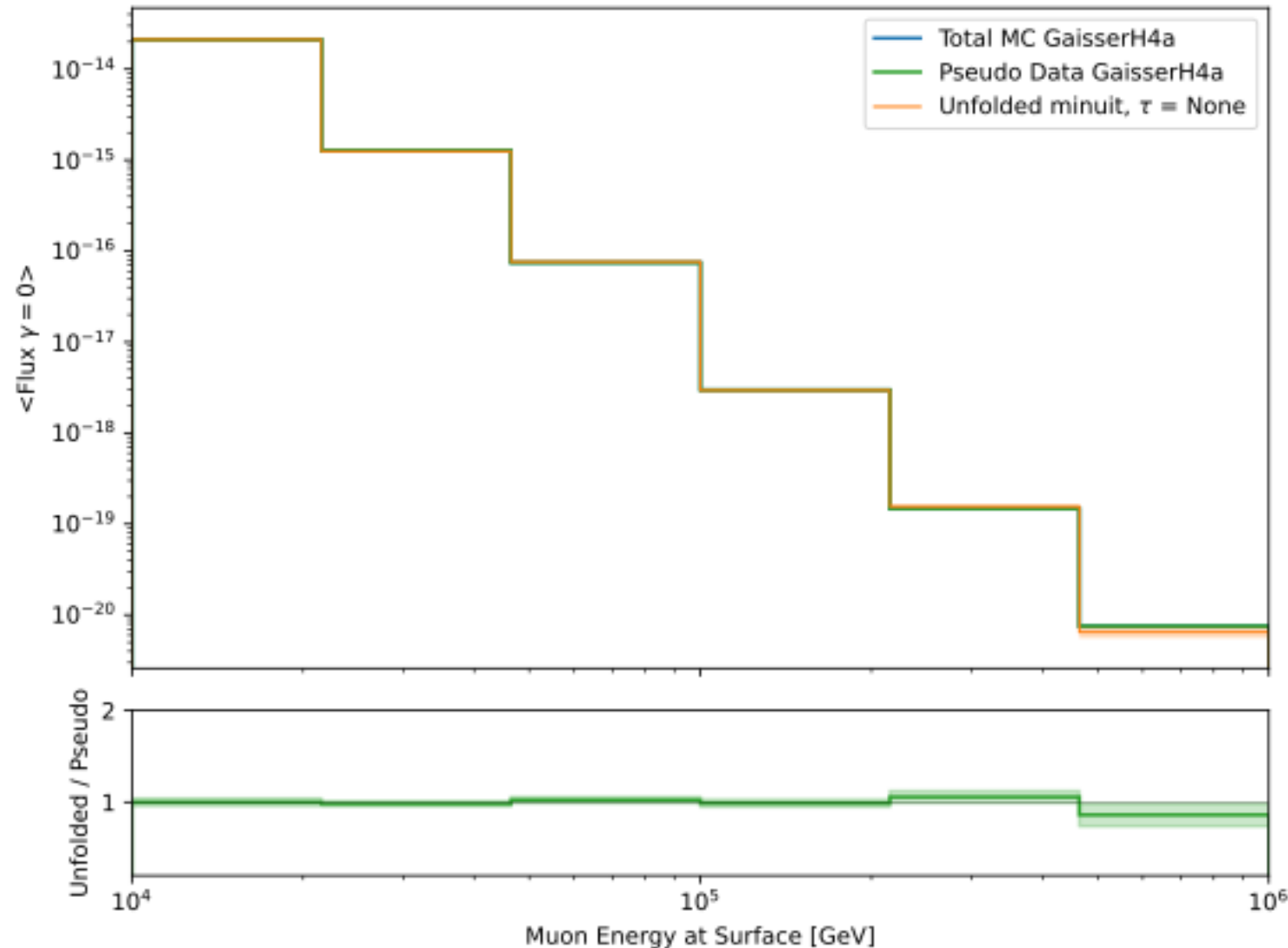


30.01.2025

Pascal

# Unfold muon flux up to 1 PeV, 5 systematics

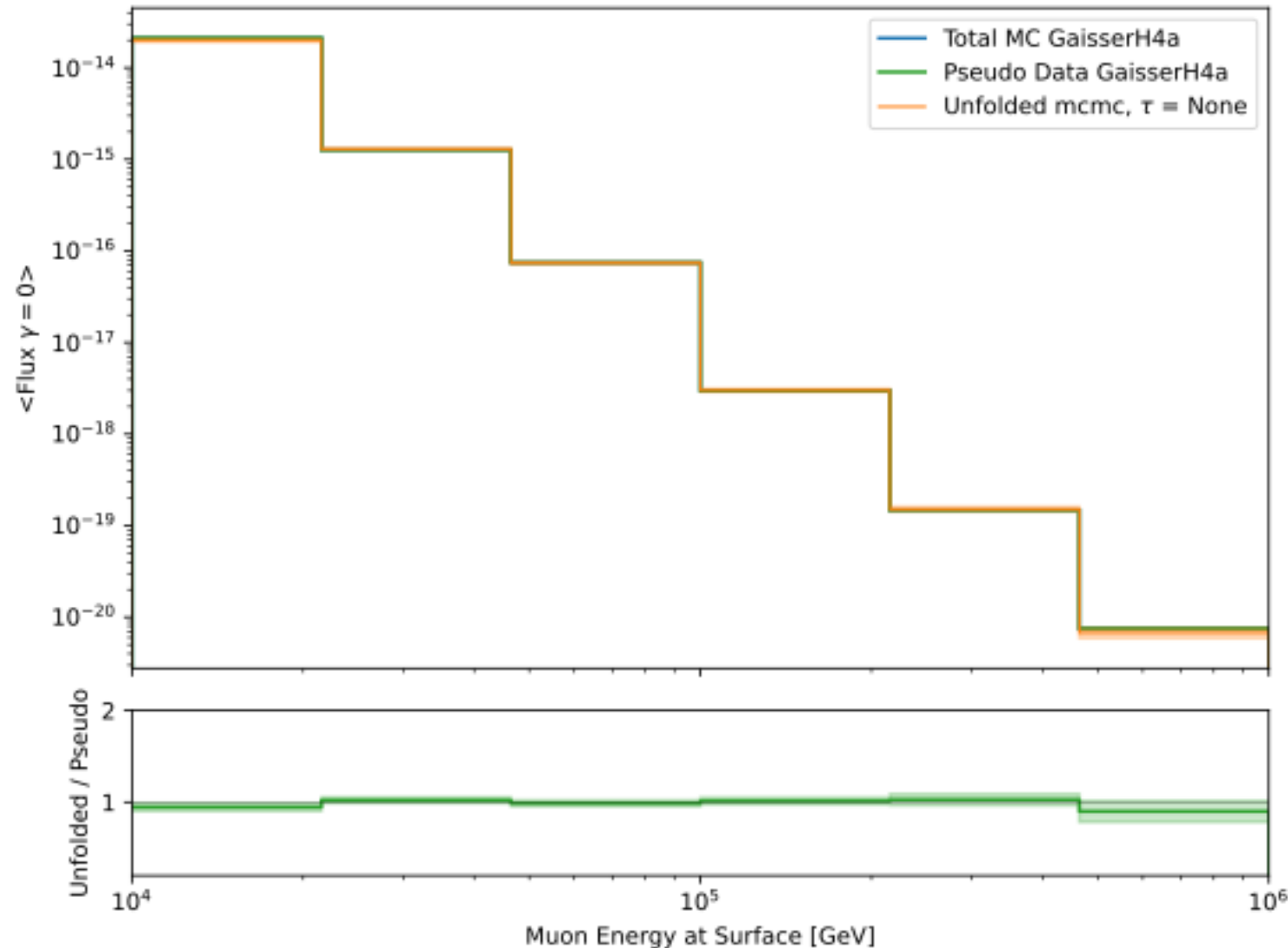
$X0 = [1e5, \dots, 1, 1, 1, 0.2, -0.05]$



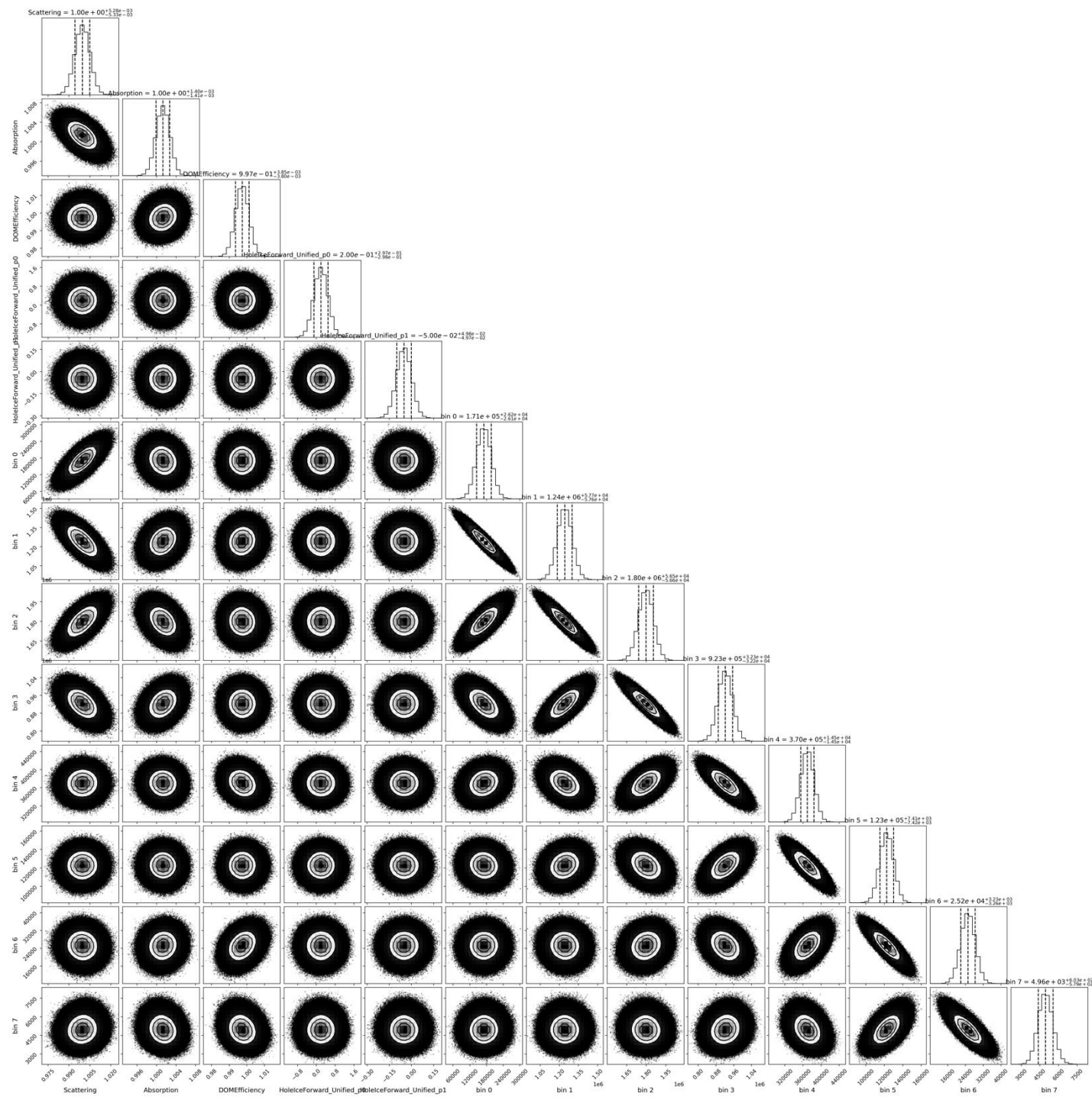
minuit

# Unfold muon flux up to 1 PeV, 5 systematics

$X0 = [1e5, \dots, 1, 1, 1, 0.2, -0.05]$

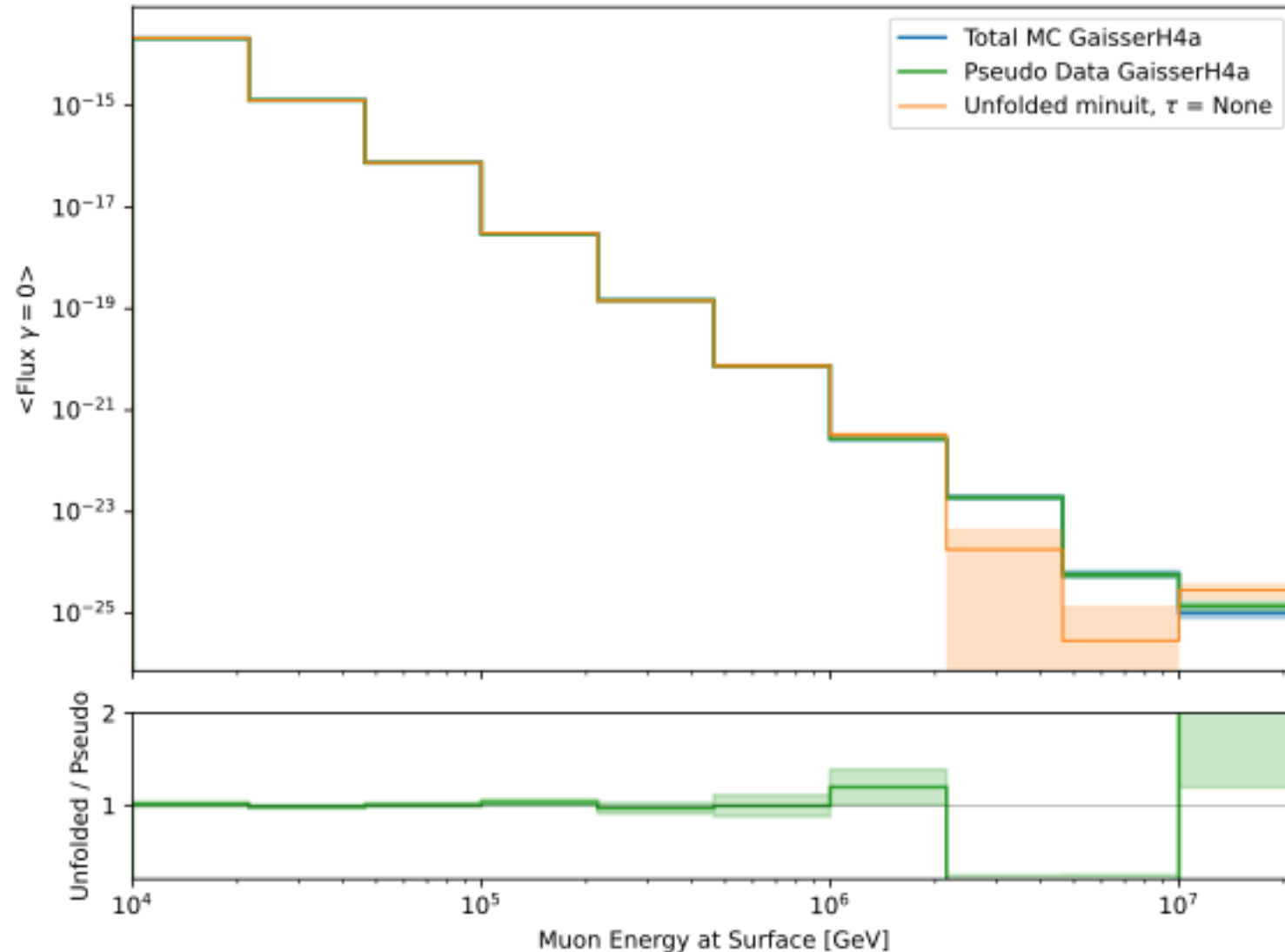


mcmc



# Unfold muon flux up to 20 PeV, 5 systematics

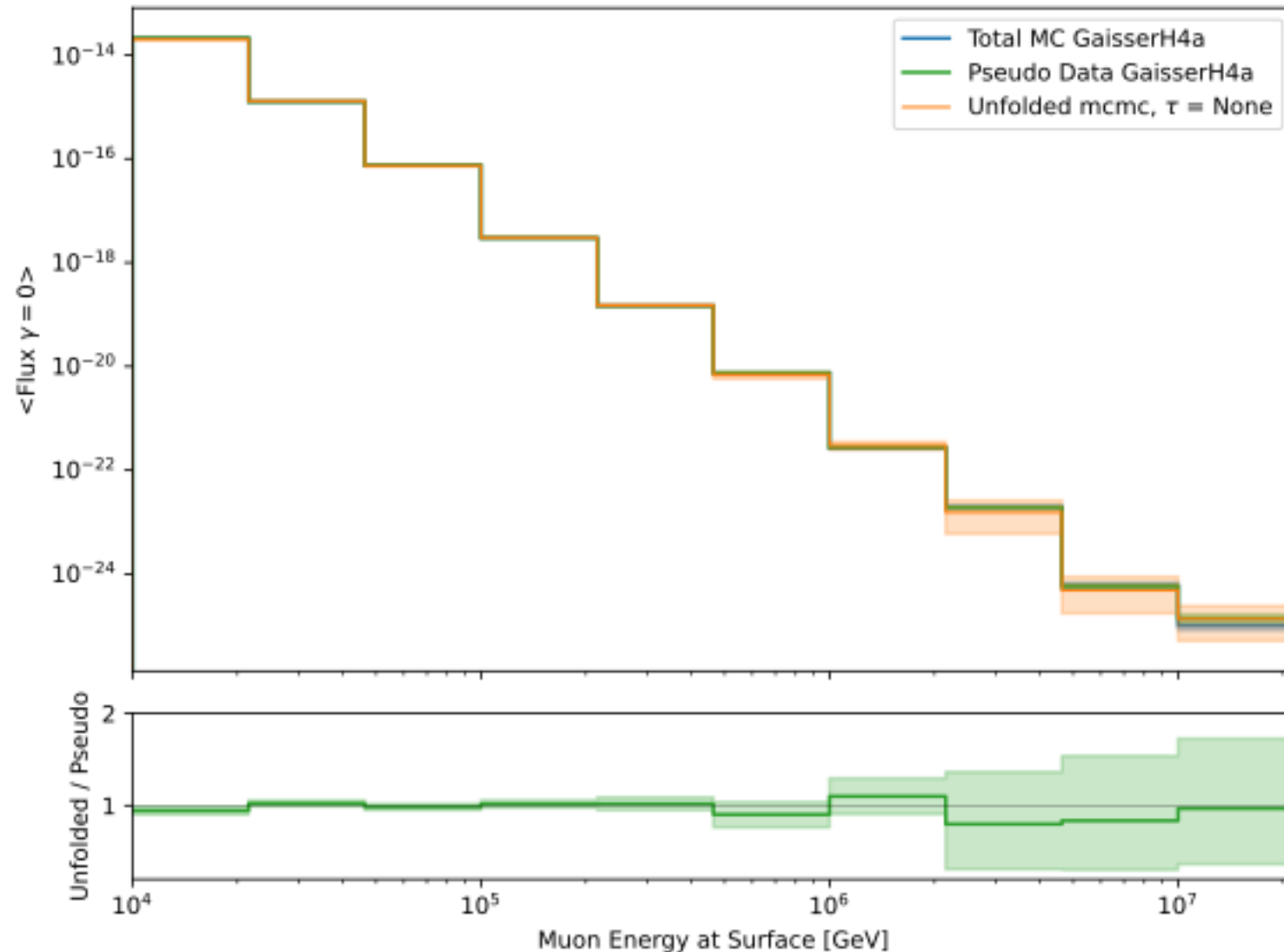
$X0 = [1e5, \dots, 1, 1, 1, 0.2, -0.05]$



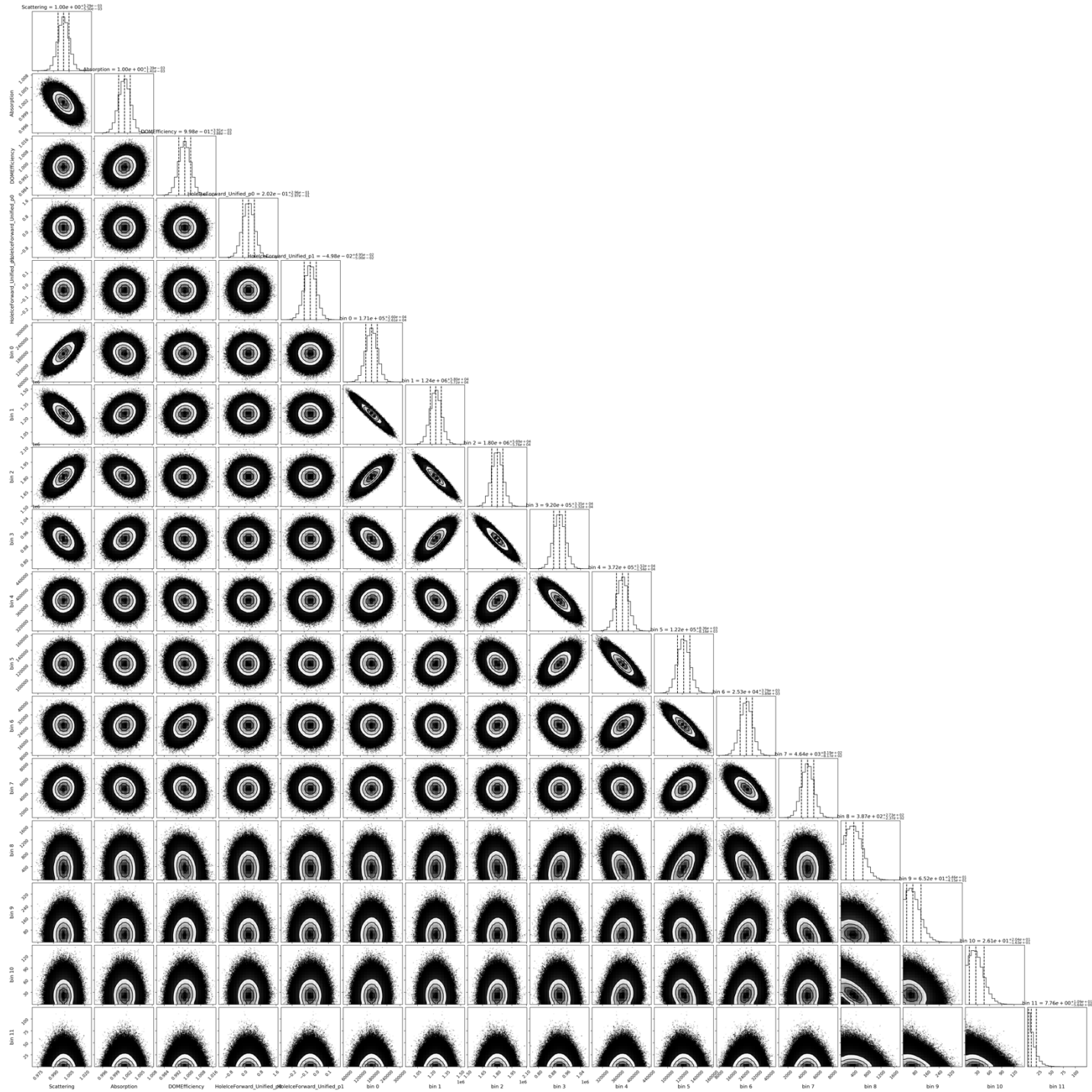
minuit

# Unfold muon flux up to 20 PeV, 5 systematics

$X0 = [1e5, \dots, 1, 1, 1, 0.2, -0.05]$

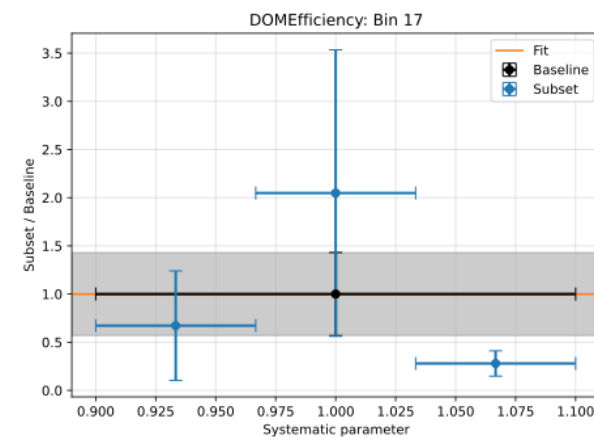
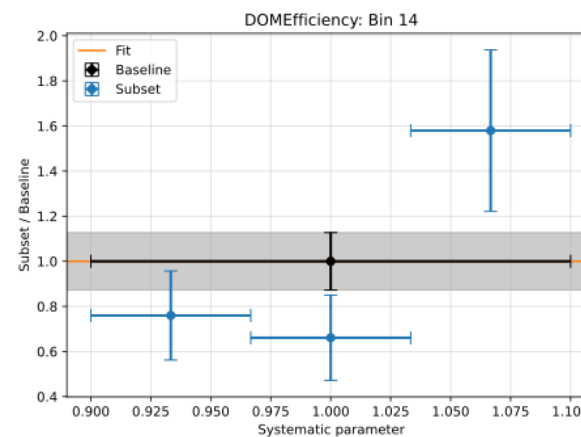
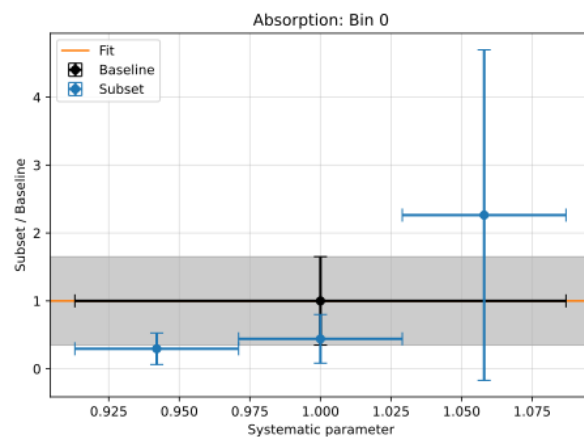
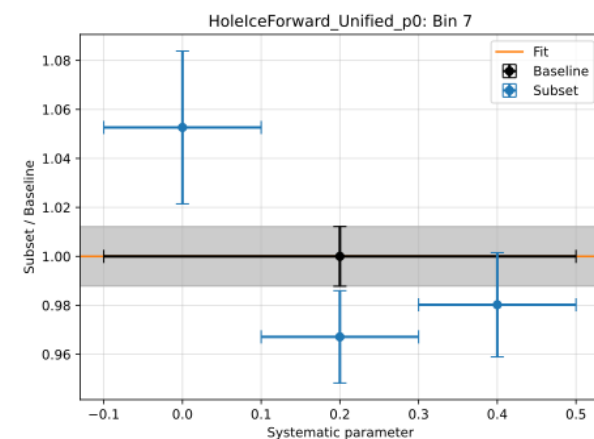
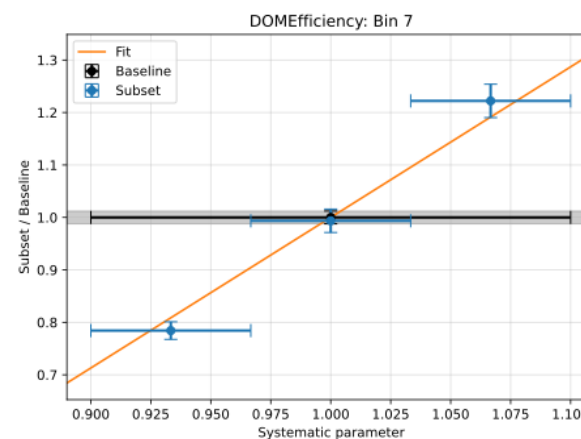
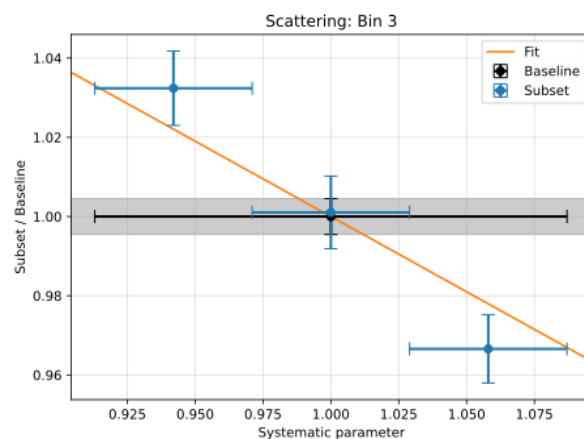
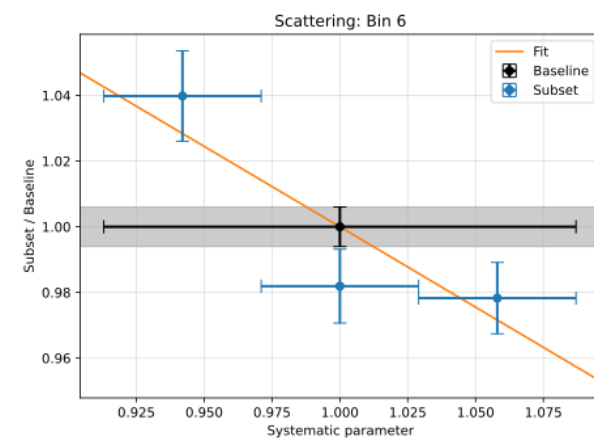
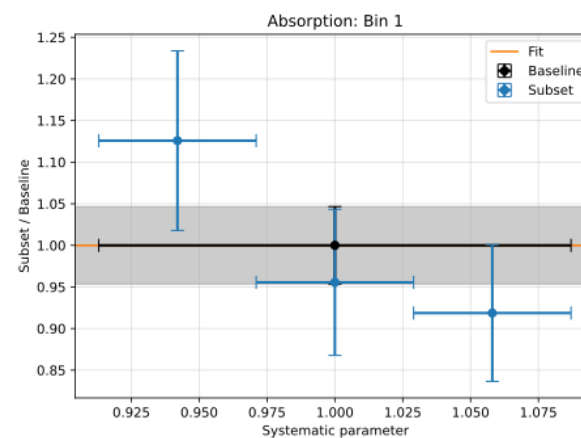


mcmc



# Fit systematic bins

- Test if fit is compatible with a constant  $y = 1$  ( $p\_value = 0.05$ )
- Find linear fit with the lowest slope that is compatible with a  $p\_value = 0.2$
- Require fit is going through (1,1)





# Relation between primary energy and muon energy at surface and entry

