

# Pico

Commander updates 9.12.2021

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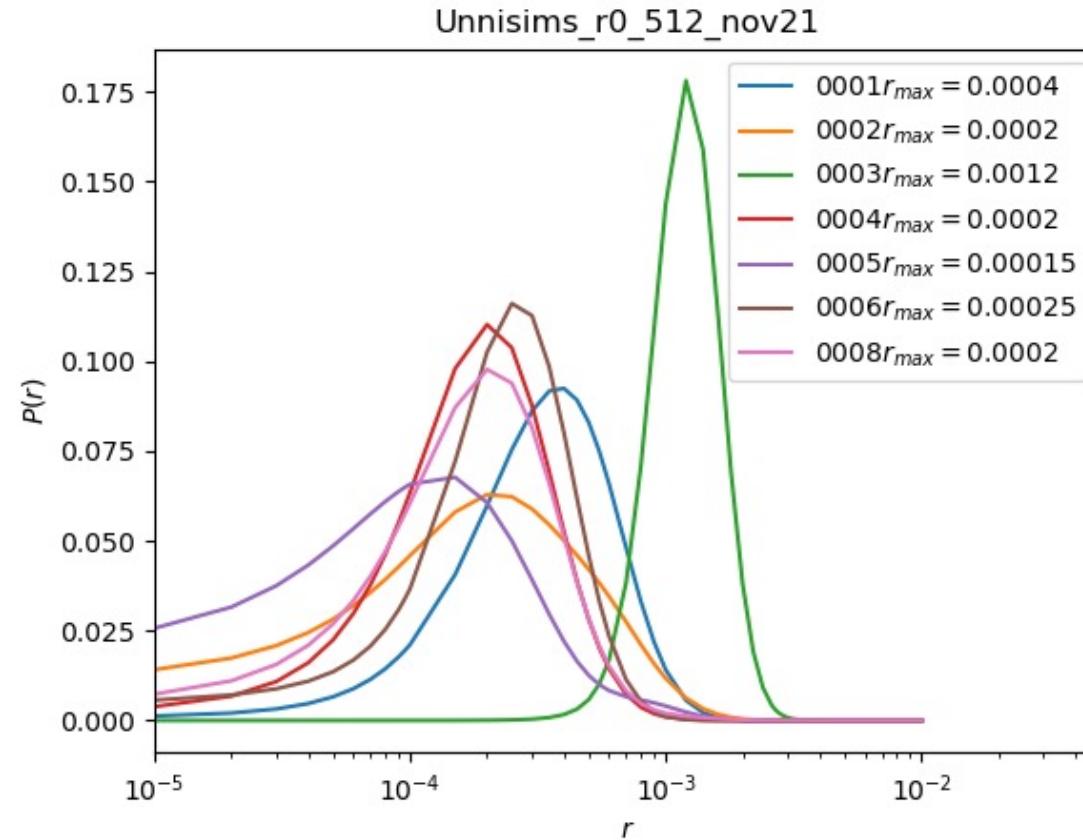
# 90.91

- Running Commander1 fitting 6 parameters pr pixel
  - CMB ( $A_{cmb}$ )
  - One dust model ( $A_{dust}, T_{dust}, \beta_{dust}$ ) (nside 256)
  - Synchrotron model ( $A_{sync}, \beta_{synch}$ ) (nside64)
- 10 simulation sets with  $r = 0$  and 10 with  $r = 0.003$
- Masking 25% of the sky
  - Mask based on the  $\chi^2$  map
- $\sim 100$  iterations with infilling inside the mask (pr simulation set)
- Blackwell-Rao estimator for estimating r

# r-estimation for each simulation

## From last week

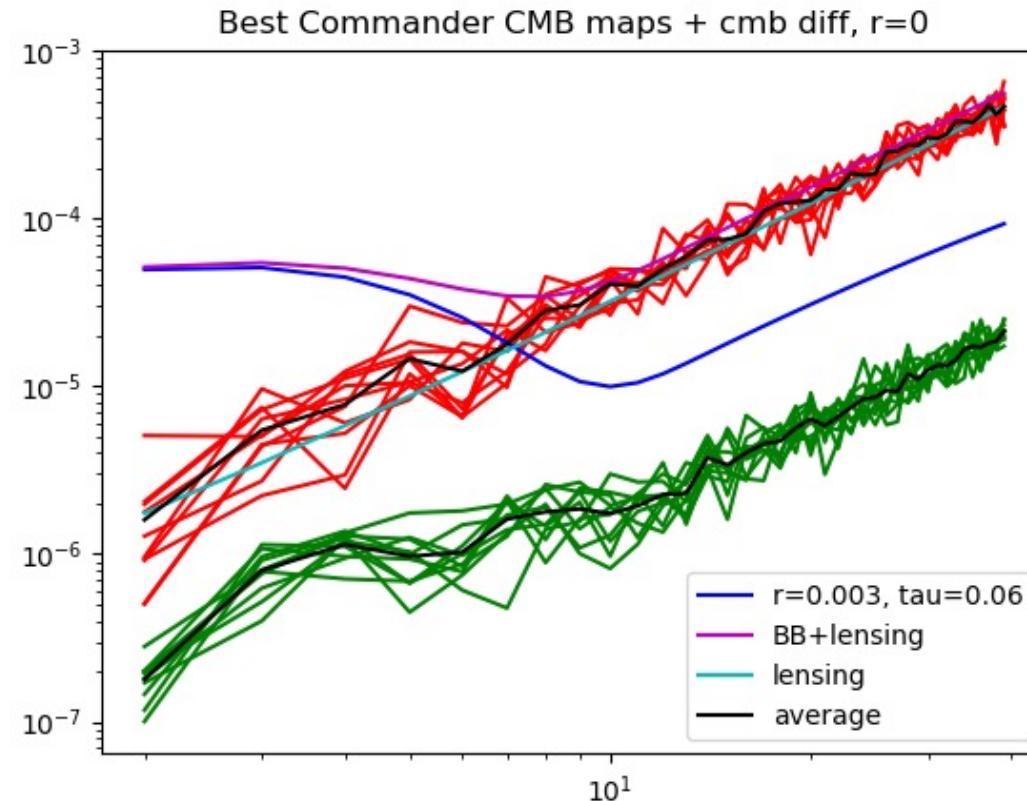
0003 has a very high input CMB value



# Powerspectrum of CMB maps and CMB difference maps

$$r = 0$$

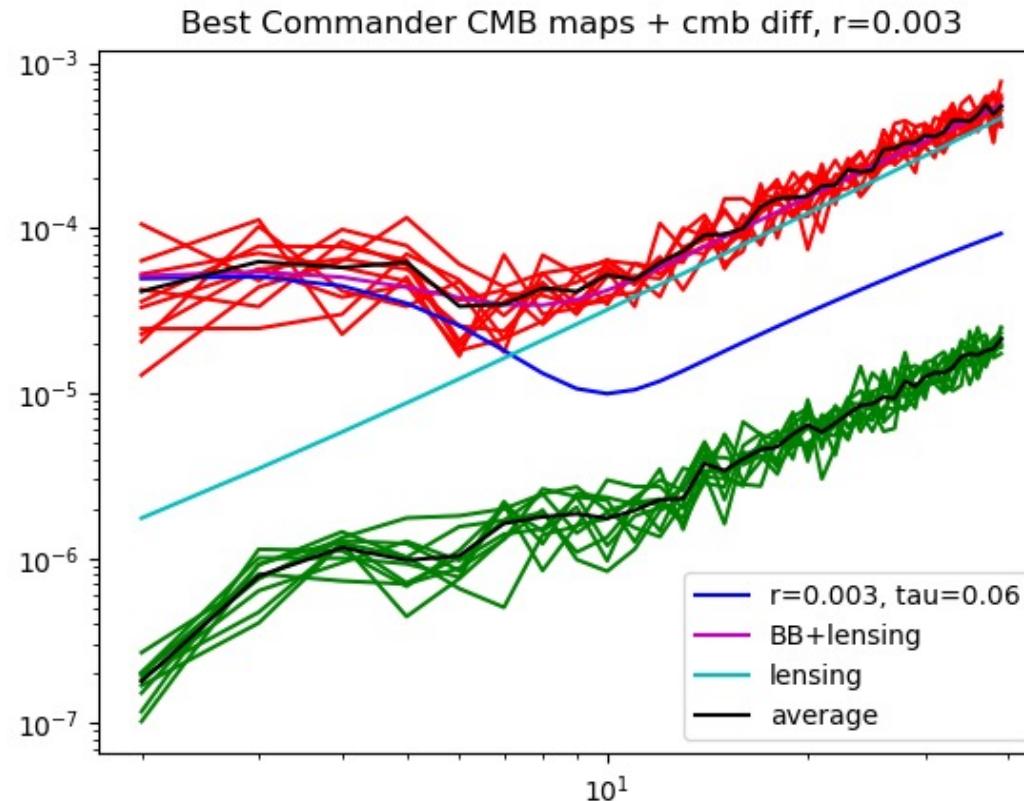
- Unmasked maps
- Best CMB map for all 10 simulation set (red lines)
- Subtract input and output CMB map (green lines)
- No masking or infilling



# Powerspectrum of CMB maps and CMB difference maps

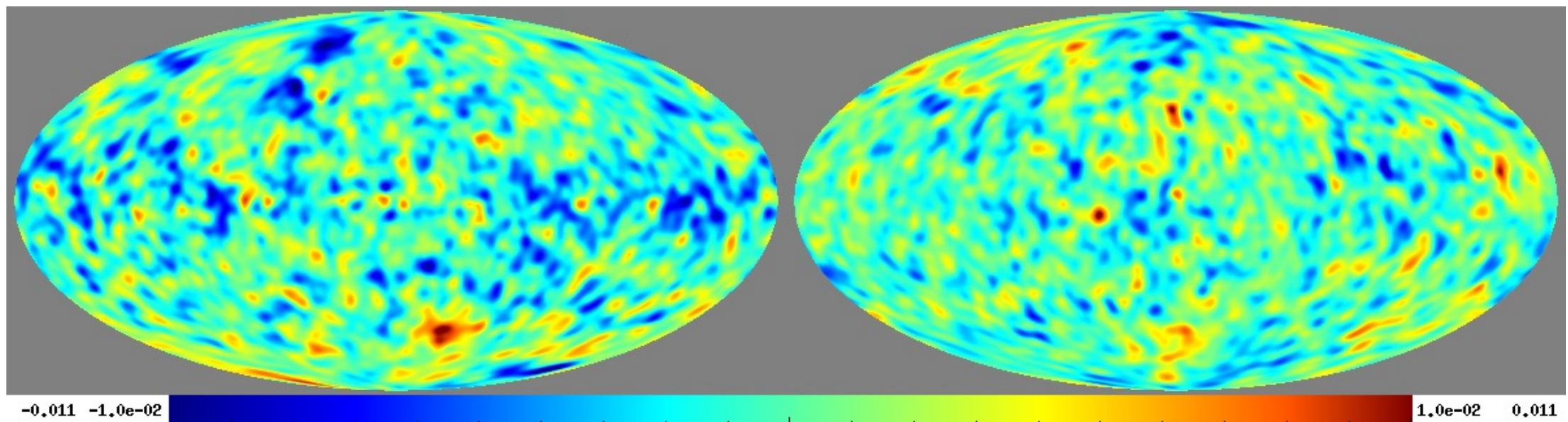
$r = 0.003$

- Unmasked maps
- Best CMB map for all 10 simulation set (red lines)
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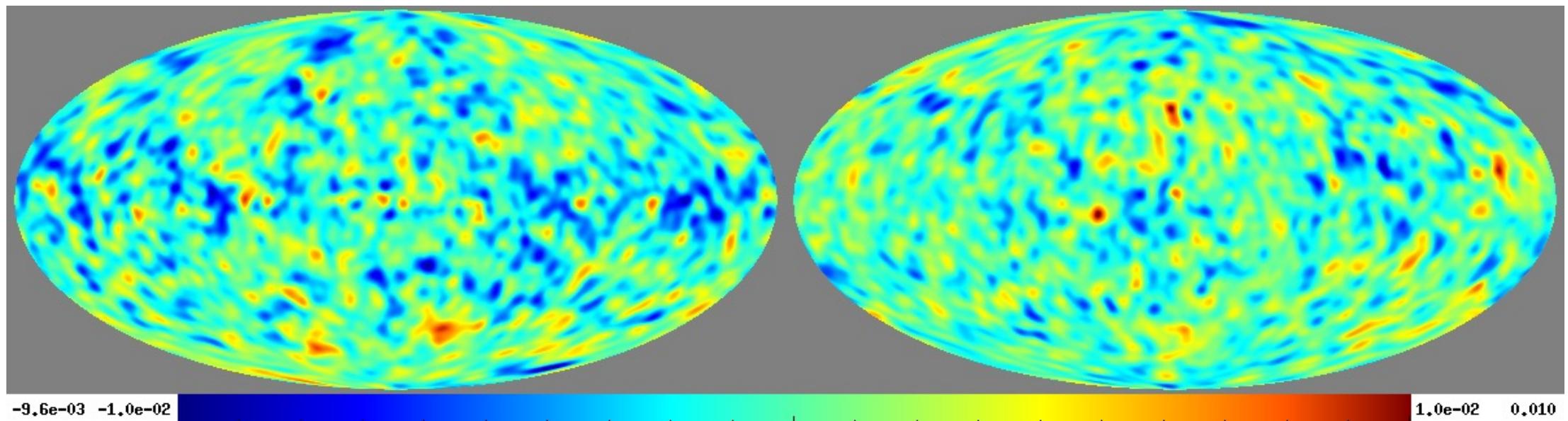
# CMB difference map (output – input)

From last week



# CMB difference map (output – input)

With new priors



# Work in progress

- Run with different priors to further optimize output
- Component separation for 90.92 is in progress