Pico

Commander updates 03.06.2021

Ragnhild Aurlien and the Oslo group

New simulations 91.91

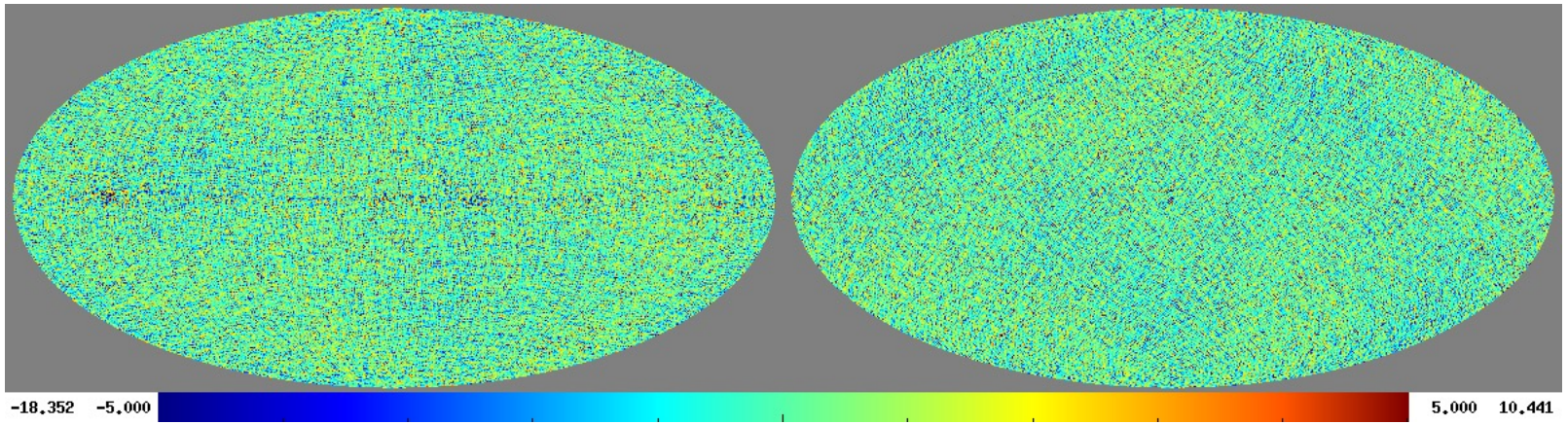
- Foreground model d1s1 (as 90.91)
- White noise up to $l = 4 \cdot nside$
  - Maps noise dominated at lmax
- A minimum beam size of 20 arcmin

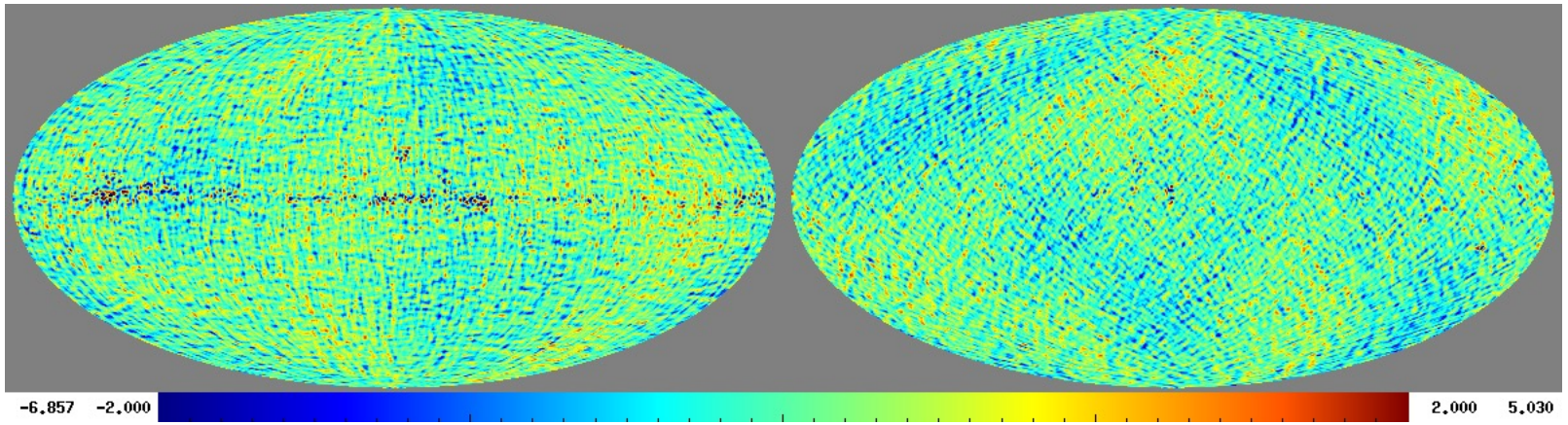
Commander2

- Running both 0000 ($r = 0.003$) and 0001 ($r = 0$)
- For now keeping spectral indexes ($\beta_{dust}, \beta_{synch}$) and dust temperature ($T_{dust}$) fixed to input maps

Resulting CMB map for 0000 ($r = 0.003$)

Q U

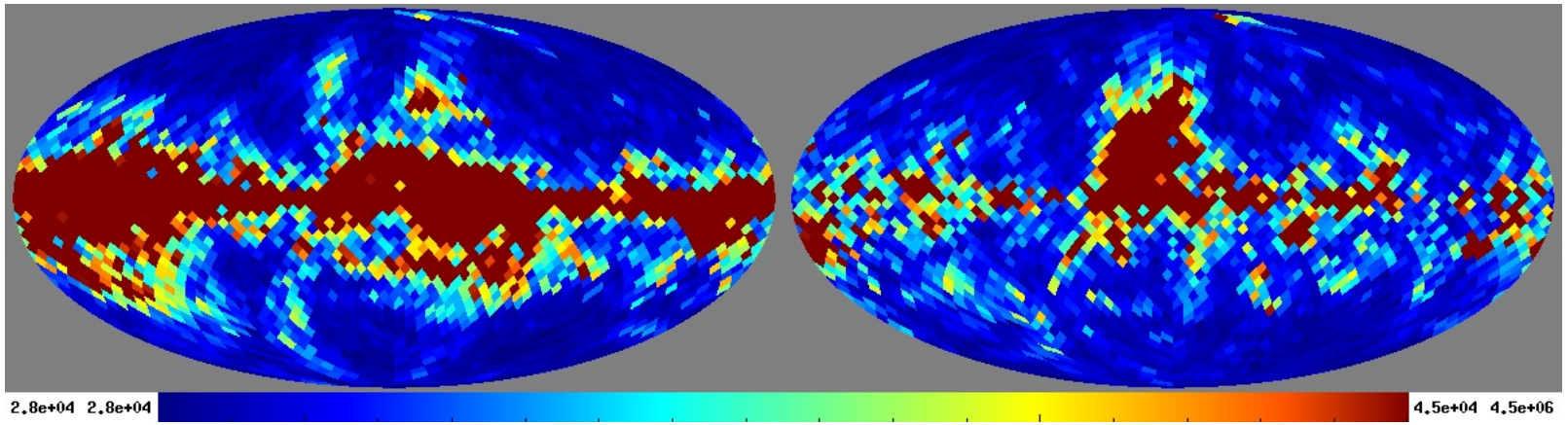




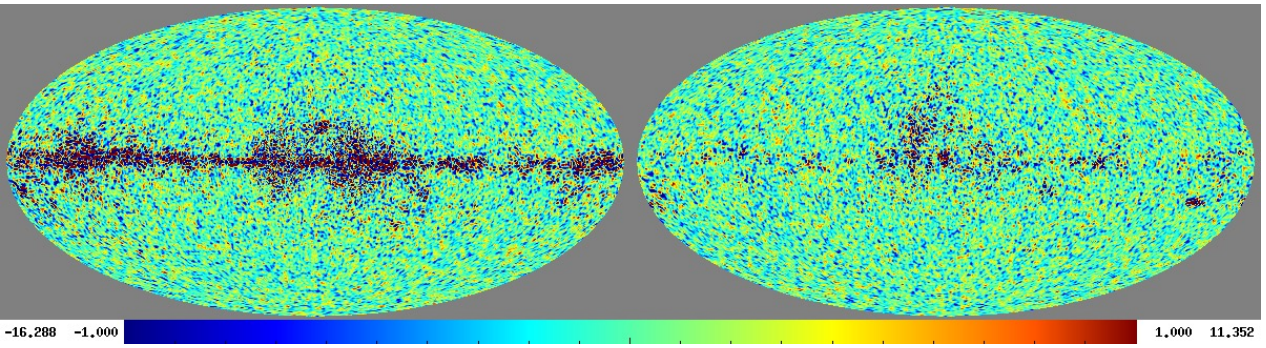
Smoothed to a
1 degree beam

Chisquare map

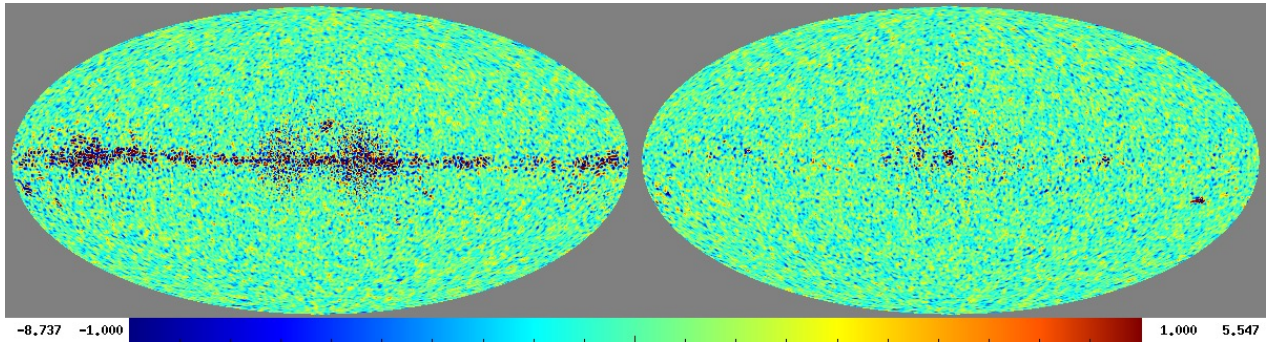
Q U



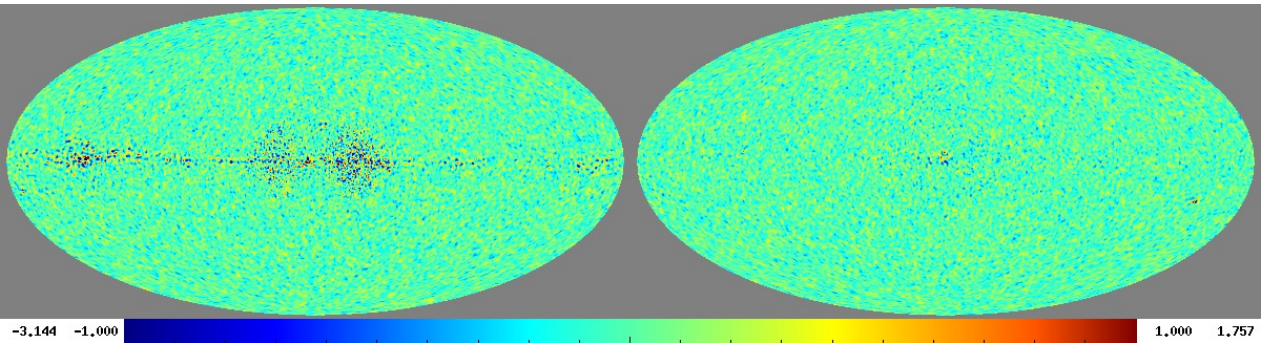
Residual maps (=data – model) for lowest frequencies



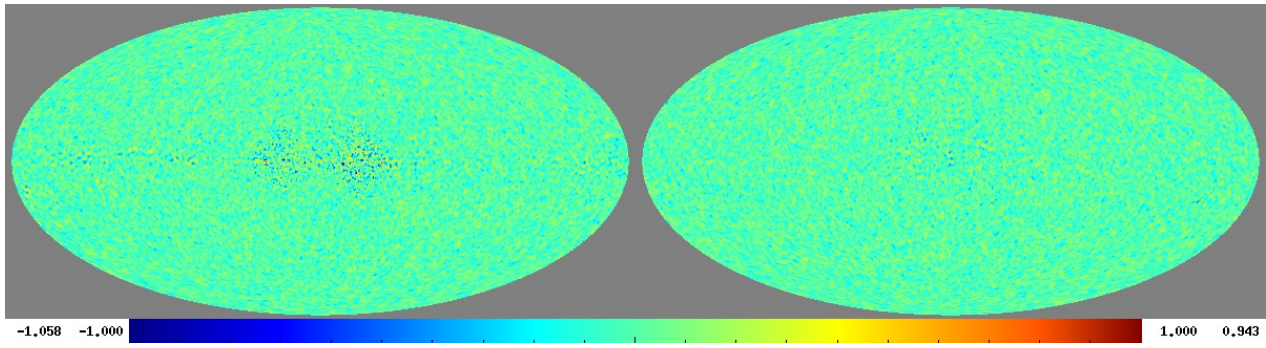
21 GHz



25 GHz



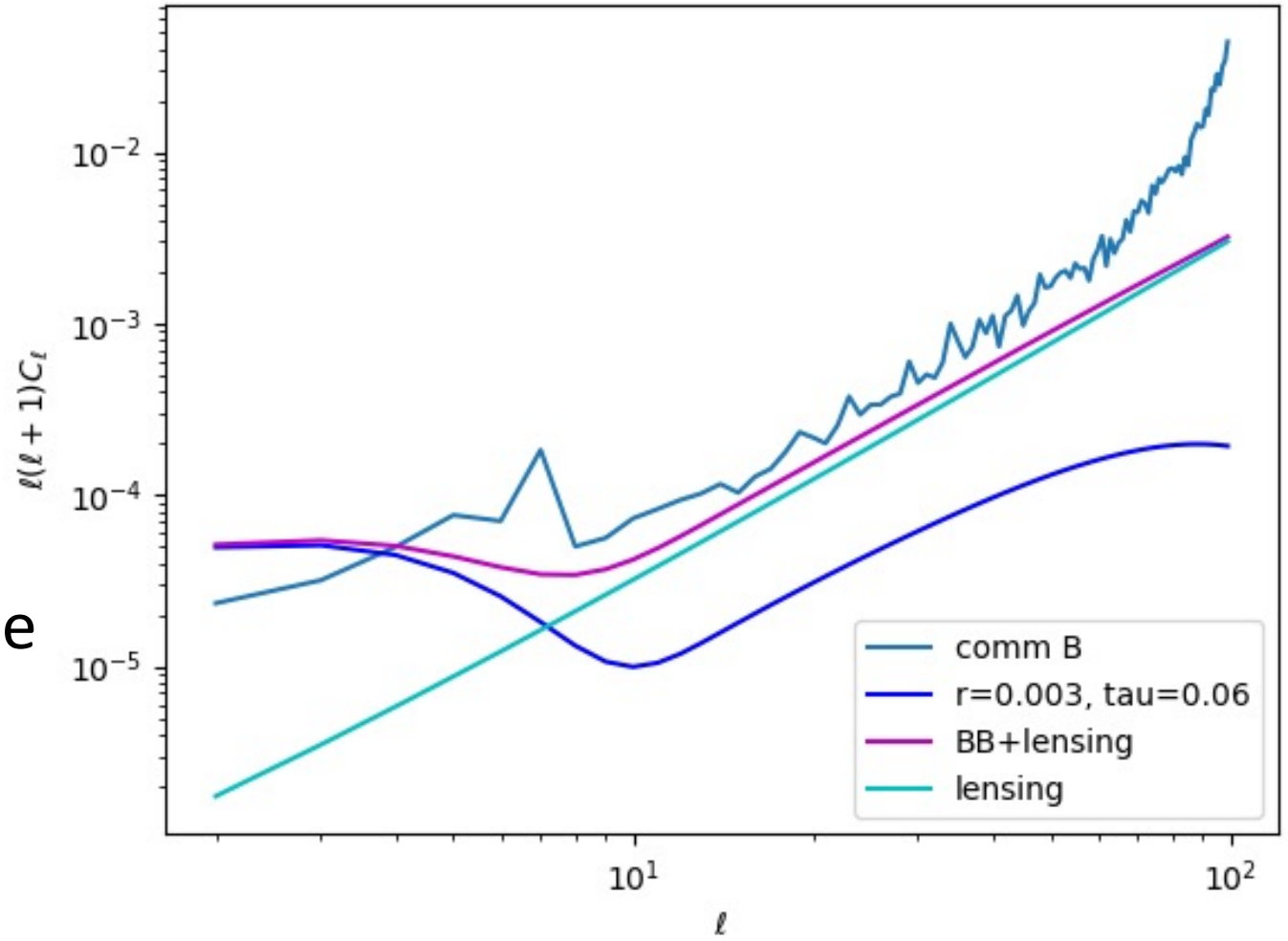
30 GHz



36 GHz

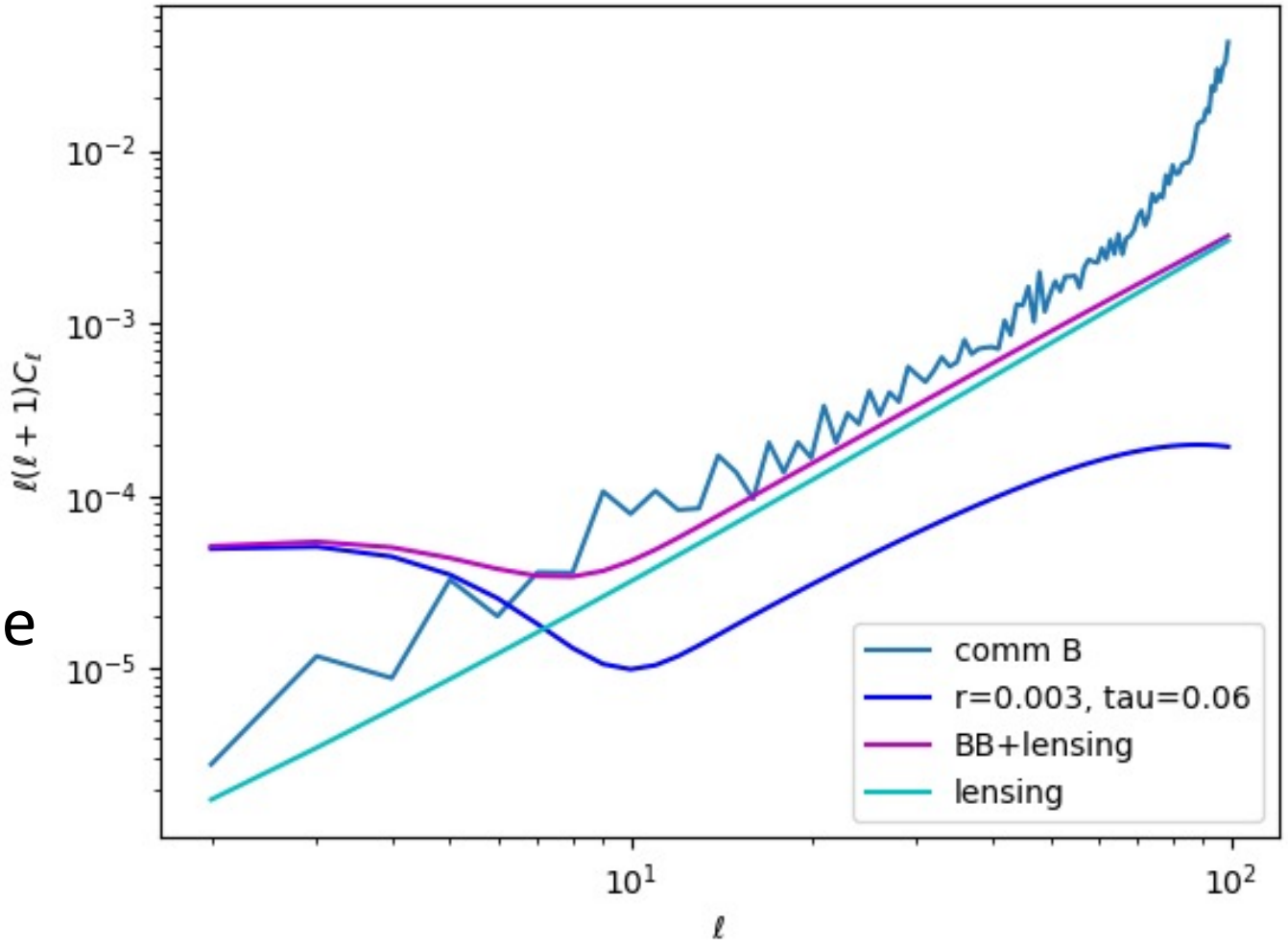
CMB power spectrum

- Run with $r = 0.003$
- Power spectrum from output CMB map from Commander
- Unmasked CMB map
- Slightly above theoretical spectrum due to white noise
  - Working on sampling the CMB Cls to fix this



CMB power spectrum

- Run with $\mathrm{r} = 0.003$
- Power spectrum from output CMB map from Commander
- Unmasked CMB map
- Slightly above theoretical spectrum due to white noise
  - Working on sampling the CMB Cls to fix this



Next steps

- Get Cl sampling for CMB running to get rid of white noise
- Gradually free parameters to eventually sample all parameters