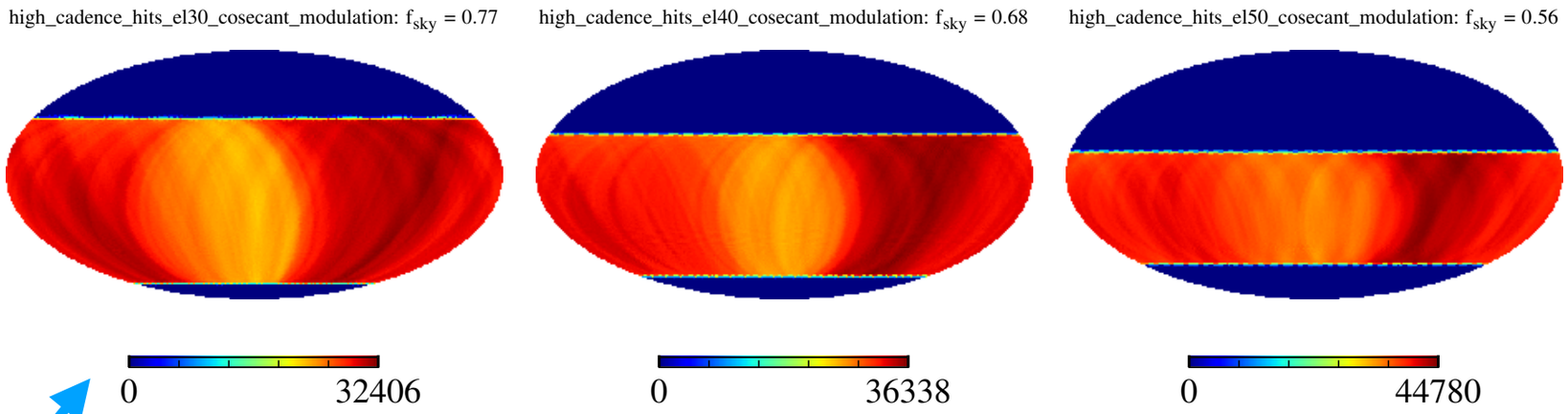
DRAFT tool update: Including galactic emission

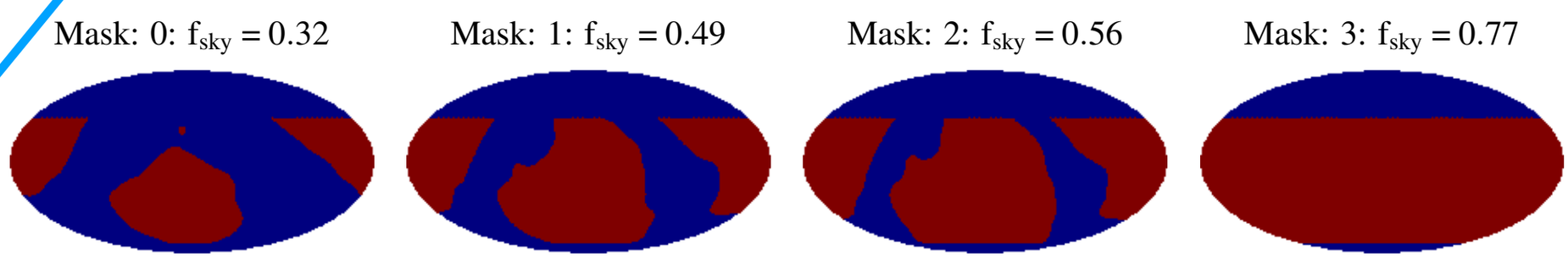
30 April, 2020

- Plan is to compute and store the covariances for galactic emission for some set of masks and footprints.
- ***To be fixed:*** currently using Planck galactic mask.

CMB-S4 footprints:
high cadence cos mod footprints



Masks:
(Modified) Planck galaxy mask



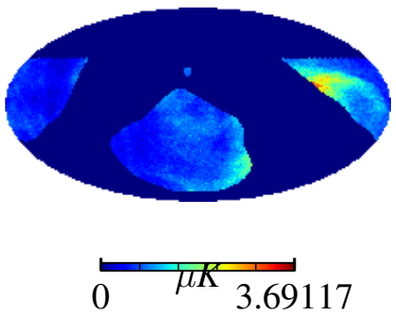
Covariance for galactic emission: 12 set of covariances: 3 footprints * 4 masks

To be fixed: Currently just tried the first footprint (f_{sky} = 0.77)

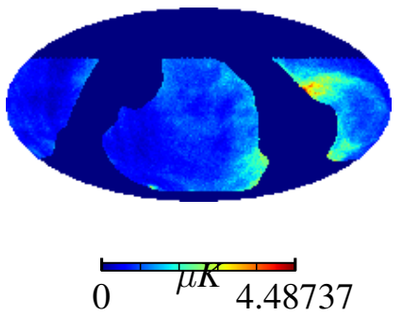
93 GHz

Synchrotron

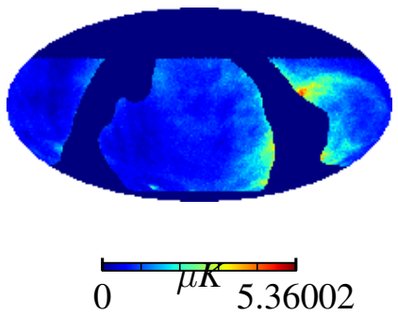
sync @ 145 GHz + Mask 0: f_{sky} = 0.32



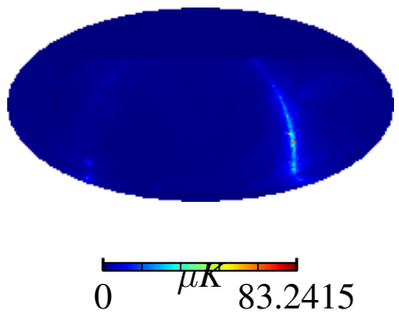
sync @ 145 GHz + Mask 1: f_{sky} = 0.49



sync @ 145 GHz + Mask 2: f_{sky} = 0.56

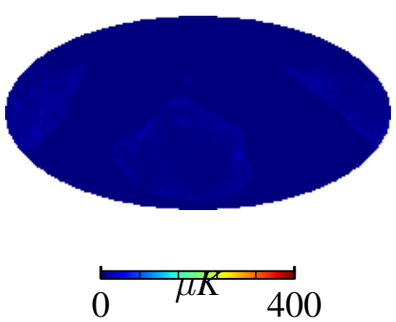


sync @ 145 GHz + Mask 3: f_{sky} = 0.77

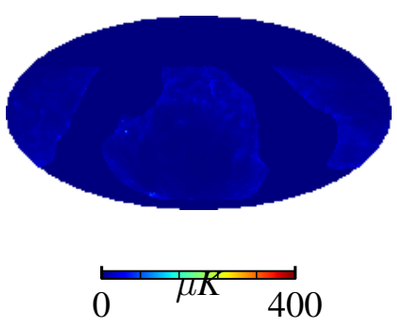


Dust

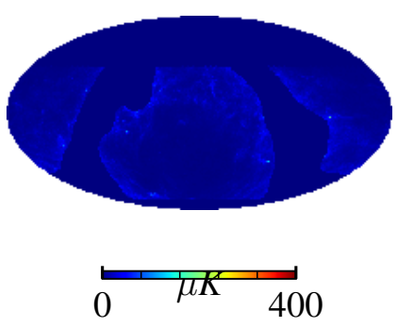
dust @ 145 GHz + Mask 0: f_{sky} = 0.32



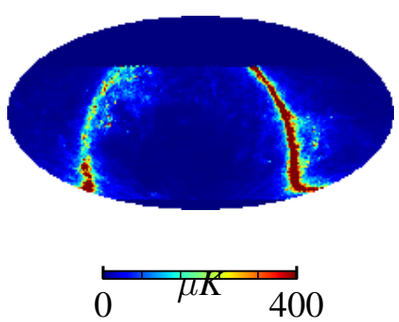
dust @ 145 GHz + Mask 1: f_{sky} = 0.49



dust @ 145 GHz + Mask 2: f_{sky} = 0.56



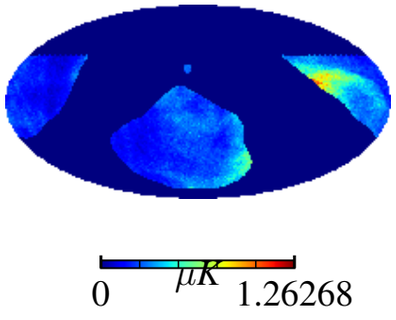
dust @ 145 GHz + Mask 3: f_{sky} = 0.77



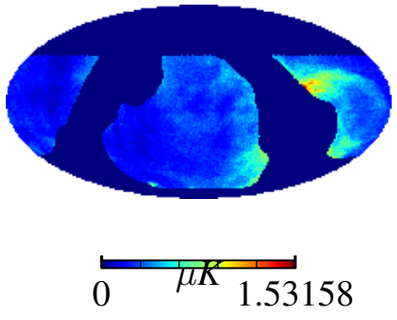
145 GHz

Synchrotron

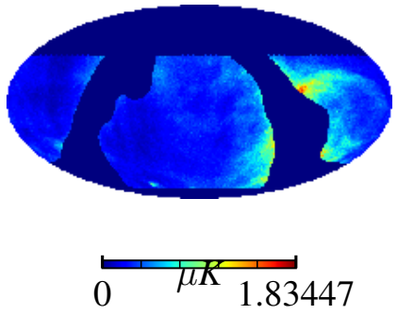
sync @ 145 GHz + Mask 0: f_{sky} = 0.32



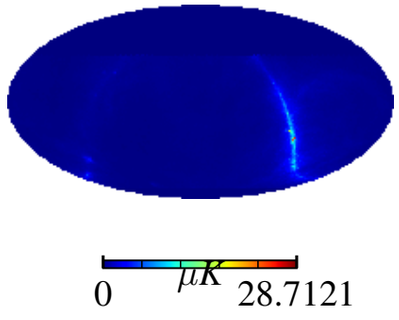
sync @ 145 GHz + Mask 1: f_{sky} = 0.49



sync @ 145 GHz + Mask 2: f_{sky} = 0.56

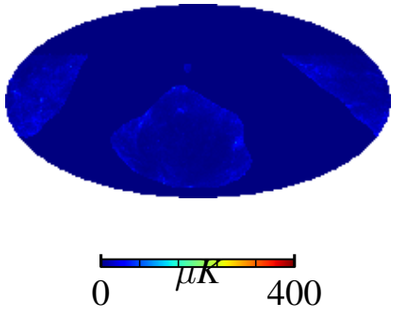


sync @ 145 GHz + Mask 3: f_{sky} = 0.77

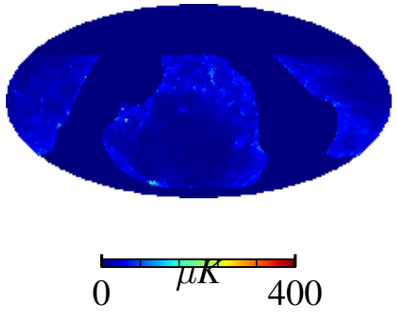


Dust

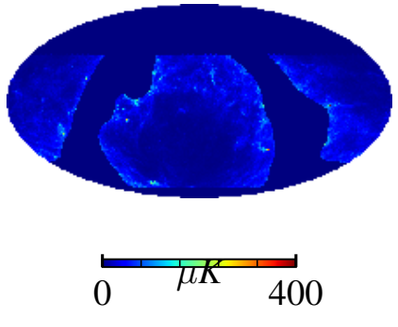
dust @ 145 GHz + Mask 0: f_{sky} = 0.32



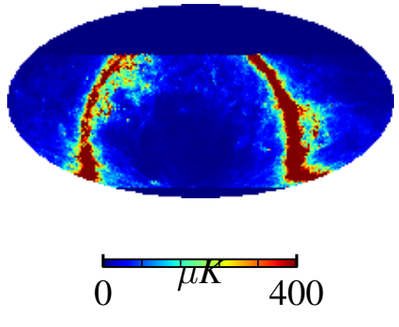
dust @ 145 GHz + Mask 1: f_{sky} = 0.49



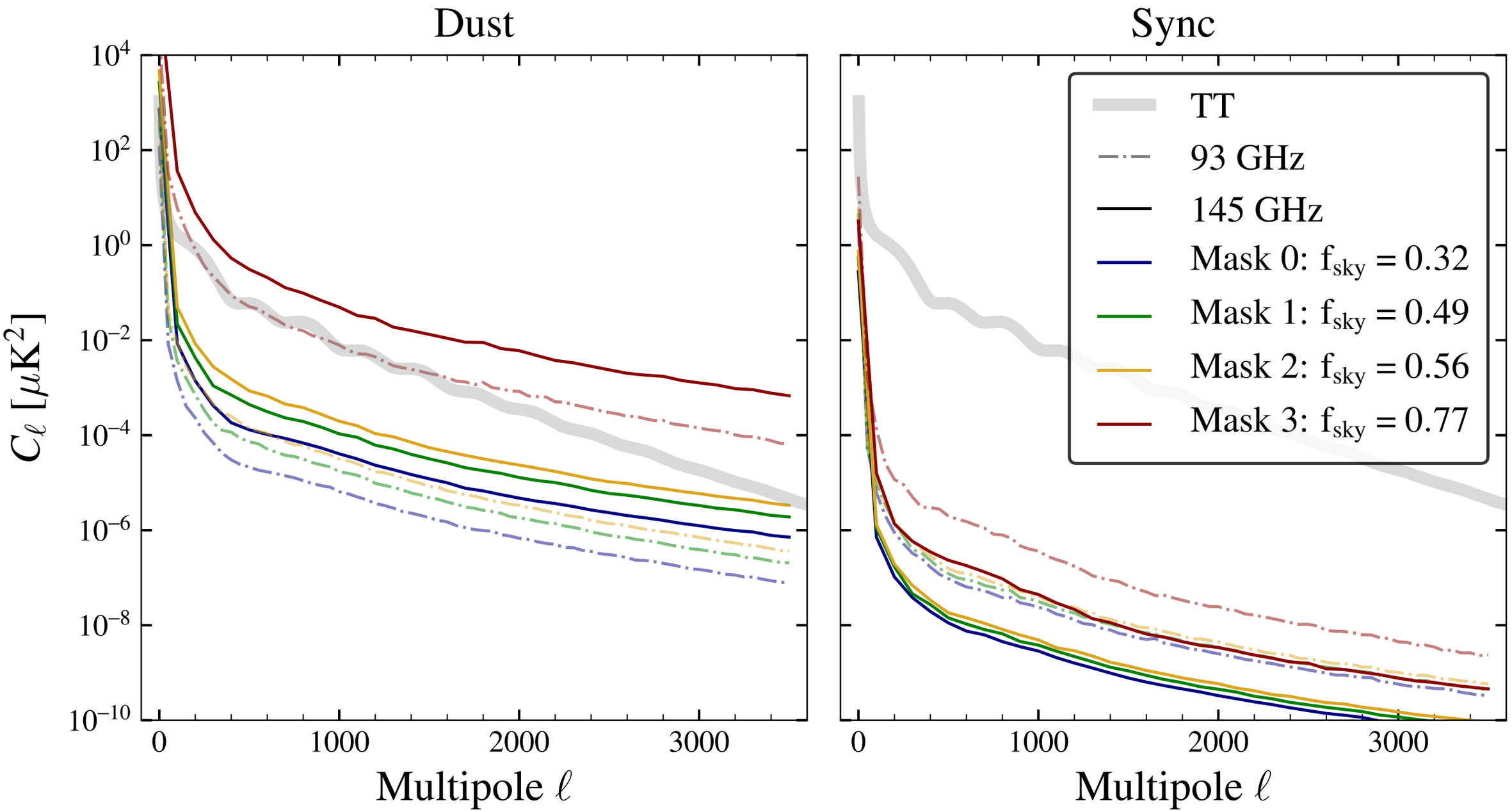
dust @ 145 GHz + Mask 2: f_{sky} = 0.56



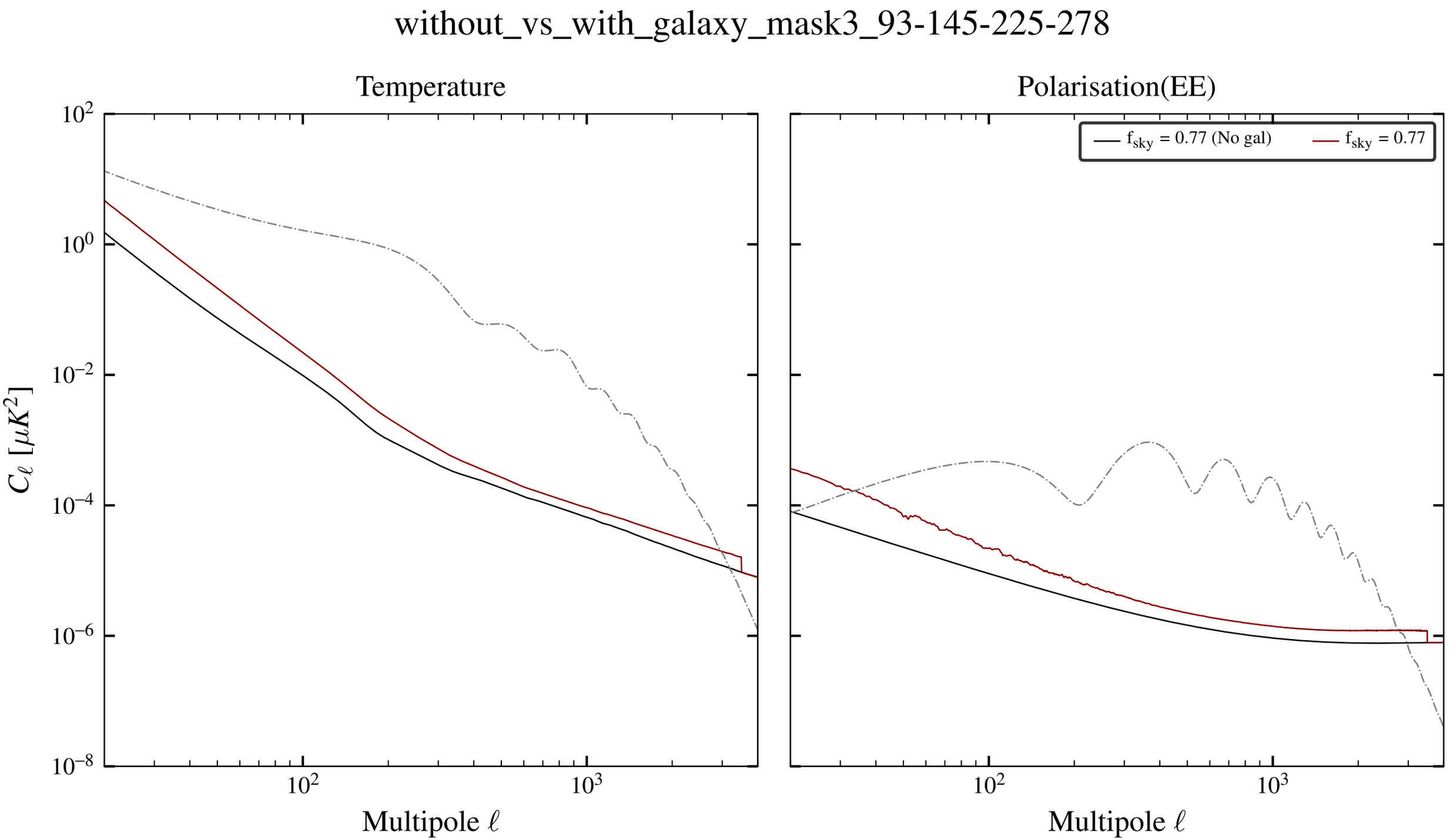
dust @ 145 GHz + Mask 3: f_{sky} = 0.77



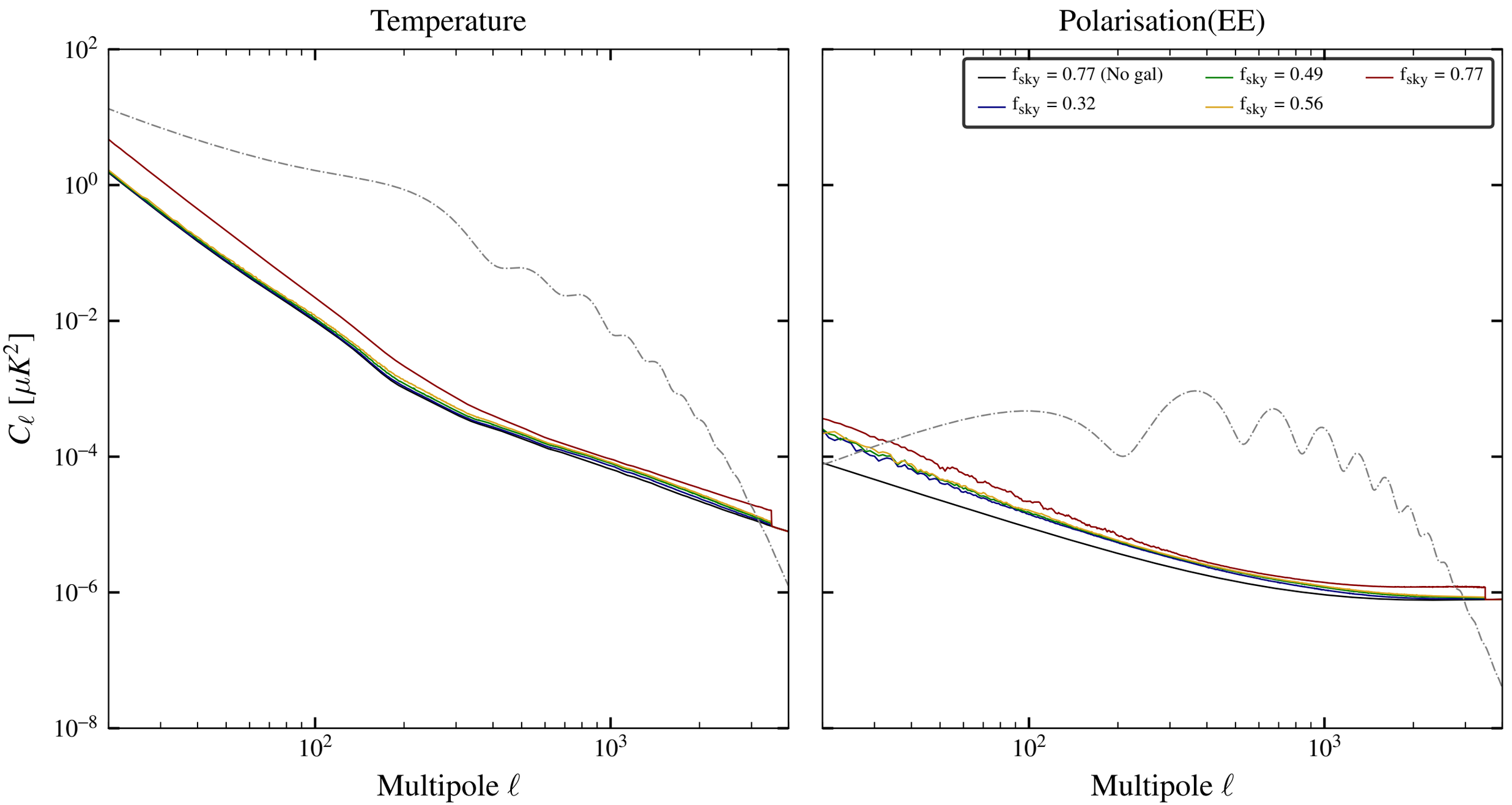
Dust / Sync TT power spectra



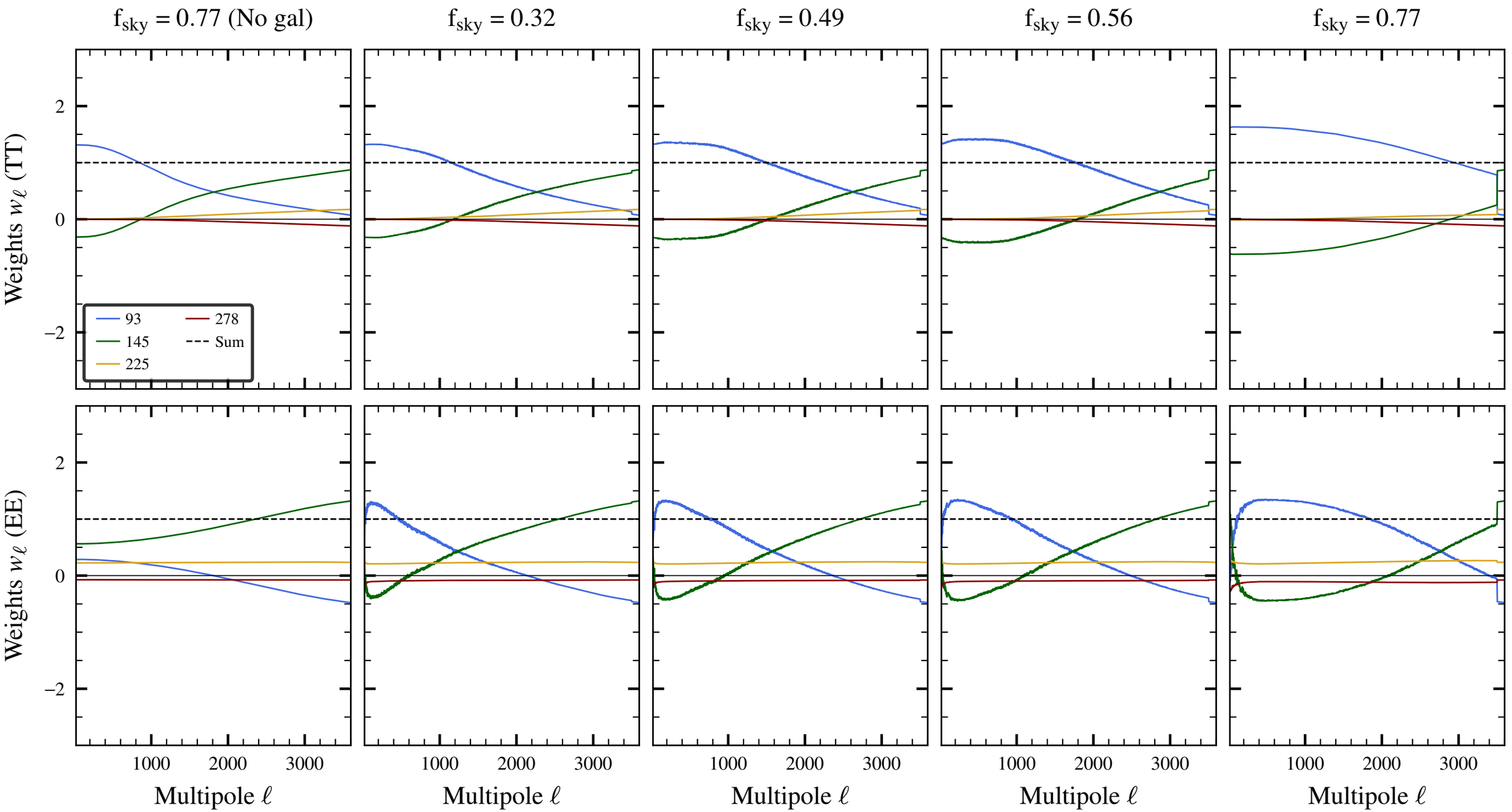
ILC curves - W/o vs w/ galaxy (4 bands)



ILC curves - W/o vs w/ galaxy (4 bands, 4 masks)



Weights (4 bands, 4 masks)



Eliminating bands, removing 1/f, …