

Galactic foreground bias in CMB lensing reconstruction

Thursday, 16 November 2023 09:15 (60)

Cosmic Microwave Background (CMB) photons experience weak gravitational lensing by the large-scale structure of the Universe along their journey. The weak lensing remaps the primordial anisotropies of CMB temperature and polarisation, contaminating the measurements of primordial fluctuations. Estimating the lensing potential field and delensing the CMB maps from recent and upcoming surveys are crucial tasks to improve cosmological measurements. However, one of the main obstacles to these tasks is the presence of foreground contamination from our own galaxy.

In my talk, I will give a overview of CMB polarisation, CMB weak lensing and Galactic foreground emission, followed by my results on foreground contamination in reconstructing the lensing potential field.

Presenter(s) : DEKA, Kishan (NCBJ)