Foreground Session: Introduction

Eiichiro Komatsu (Max-Planck-Institut für Astrophysik)

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Roles of the foreground study on “B-mode from Space”

- Mission definition aspect cannot be taken lightly
- Project management’s desire
    - To find at least one configuration (frequency coverage, sensitivity) that can satisfy mission’s success criterion (e.g., $\sigma(r)<0.57e\text{-}3$) within state-of-the-art knowledge of foreground emission today
- Astrophysicist’s desire
    - To explore/worry about unknowns (multi-component dust, polarised AME, …)

Separating two questions

- It is not productive to mix the questions of mission definition and astrophysicists' desires to make everything complicated

- Hence, two separate (but related) questions:

  A. Whether we can satisfy mission's success criterion within a given framework (e.g., 4-dimensional foreground model)

  B. How to protect ourselves against surprises

- The former is better defined than the latter, while the latter is perhaps scientifically more interesting [that's why astrophysicists like it so much :)]

A

14:00

Foreground Removal with Commander (Mathieu Remazeilles)

Berkeley

A

Foreground removal with xForecast and SMICA (Josquin Errard)

Berkeley

B

Dust (Brandon Hensley)

Berkeley

15:00

Dust in 3D from stellar photometry (Eddie Schlafly)

Berkeley

Coffee

Berkeley

B

16:00

Dust complexity (Dale Fixsen)

Berkeley

Planck results (Francois Boulanger)

Berkeley

Summary of UCSD workshop (Raphael Flauger)

Berkeley

17:00

Discussion on dust removal for B mode observation (Al Kogut)

Berkeley