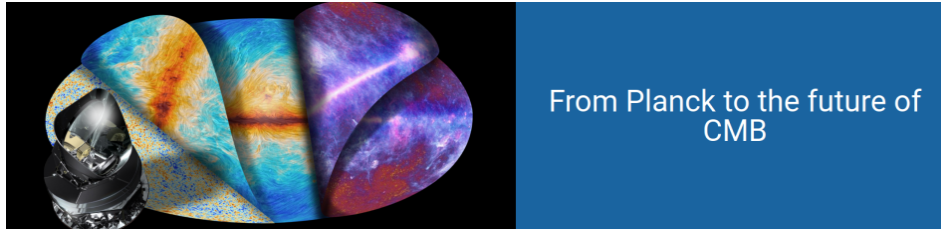


From Planck to the future of CMB



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CMB

Contribution ID: 108

Type: **not specified**

Invited talk by Jon Gudmundsson (Stockholm University) on "Knowing your beams"

Monday, 23 May 2022 14:40 (40 minutes)

The cosmic microwave background (CMB) has played a foundational role in the establishment of the standard model of cosmology. Driven by significant technological advances, future CMB experiments aim to make dramatic strides in our understanding of the universe. Some of our most ambitious efforts, however, run the risk of being hamstrung by poorly-understood instrument effects, systematics. A commonly-discussed class of systematic effects relate to our optical systems in one way or another. In this talk, I will review some of the challenges that past CMB missions have faced and highlight lessons learned. I will present algorithms that have been developed to help us understand the impact of optical non-idealities and summarize key results from the applications of those. I will conclude by reviewing some of the challenging calibration requirements for upcoming missions and discuss how the community can work towards meeting those.

Session Classification: Beams