Cosmology with Cosmic Microwave Background and Multi-line Intensity Mapping

Dr.

Anirban Roy

Department of Astronomy,
Cornell University, USA

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The observation of the Cosmic Microwave Background (CMB), also known as the first light in the Universe, is a powerful probe to unravel many mysteries of the late-time Universe. During the first half of the talk, I will summarize the recent findings of the different processes in the Universe inferred from the CMB measurements. In the second part of my talk, I will discuss the detailed physics behind the formation of first-generation stars, the evolution of galaxies, and missing baryon problems by considering CMB as a probe of the evolution of baryons and electrons. Furthermore, I will focus on some unsolved problems at the late-time Universe that we aim to solve in a decade. I will also talk about "line intensity mapping", a novel technique that will provide us with new information from the star formation in galaxies to the expansion of our Universe. I will conclude by describing how these new probes can be useful in resolving the current tension in Cosmology.

Everyone is invited to attend

Head, PAMU