

QUIET Experiment - Ground-based probe of CMB Polarization

Tuesday 5 October 2010 11:00 (30 minutes)

The Q/U Imaging Experiment (QUIET) is a ground-based radiometer array designed to measure the polarization of the Cosmic Microwave Background (CMB) radiation. The polarization of the CMB can be decomposed into a curl-free component, or E-modes, and divergence-free component, or B-modes. Previous observations for the E-modes as well as temperature anisotropy of the CMB have been used to constrain the cosmological parameters that model the history of our universe. On the other hand, the B-modes are uniquely sensitive to primordial gravity waves from the inflationary epoch. The B-modes have not been observed yet. QUIET and other current and future experiments are aiming for the detection of the inflationary B-modes.

In this presentation, I will talk about the instrumentation, observation strategy as well as the current status of the analysis, and discuss about future upgrade of QUIET.

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Session Classification: The Universe - from the Big Bang to the Present