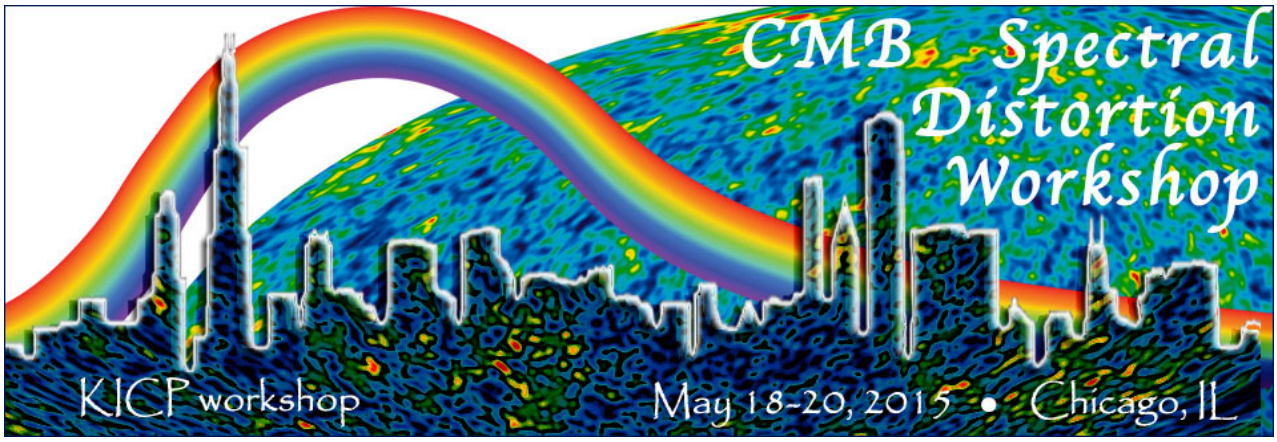

http://kicp-workshops.uchicago.edu/CMB_Distortion/

LIST OF PARTICIPANTS

PURPOSE
The Kavli Institute for Cosmological Physics (KICP) at the University of Chicago is hosting a workshop on CMB spectral distortions.

The frequency spectrum of the Cosmic Microwave Background has been shown to be a blackbody to a precision of 50 parts per million. However, at higher sensitivity the CMB is expected to show distortions from the blackbody shape. These distortions contain the signatures of energy-releasing processes in the early universe. A new experiment could improve the sensitivity to distortions by a factor of 1000 or more, opening a new window into the physics of the early universe.

This workshop will explore the science potential and design requirements for such an experiment. A series of working sessions will examine the spectral signatures from different effects, instrument trades to reach different sensitivity levels, and data analysis techniques to maximize the science return from the spatial/spectral maps.

ORGANIZATION
The conference will be three days, Monday May 18 through Wednesday May 20.

- The first day, Monday, will include an overview of the scientific questions accessible with CMB spectral distortion measurements, both from a theoretical and experimental perspective. These include predictions for the type and amplitude of distortions due to specific energy inputs in the early universe as well as predictions for the competing Galactic foreground emission. Experimental considerations include the sensitivity and accuracy of possible instruments and the trade space for optimization.

- The second day, Tuesday, will consist of splinter sessions followed by short plenary reports. The goal is to allow workshop participants to exchange ideas and potentially develop collaborations for future research. Each splinter session will have a workshop leader who will give a brief splinter report. Reports from earlier sessions will inform and modify later sessions as freewheeling discussion leads to new critical topics. The topics for the splinter sessions are open for modification. The last topic of the Monday program is to update the splinter session topics. Suggestions for additional topics are invited.

- The third day, Wednesday, will consist of topical reviews of the activities leading into a discussion of priorities for future research, both theoretical and experimental.

Organizing Committee

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Daniel Grin
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