

ICEHAP Seminar

May 15th, Thursday, 2pm, 2014

place: Fac. of Sci. Bldg 2, 2F, room No.209

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**"The cosmological implications from
the recent results of the CMB polarization experiments,
and the prospect for a future satellite mission."**

abstract

The recent measurements of the cosmic microwave background (CMB) polarization started to open the new window to probe the signature of inflation and the large-scale structure using the B-mode polarization. The CMB polarization contains a particular polarization pattern called B-mode that allow us to probe beyond the standard Big Bang cosmology. The recent results from the ground based CMB polarization experiment, POLARBEAR, disclose the first data points to map the polarization pattern from the large scale structure of the Universe via gravitational lensing effect. Also another ground based CMB polarization experiment, BICEP-2, announced the detection of the inflationary B-mode polarization signal. In this talk we introduce the overview of the observational cosmology using the CMB polarization and the experimental techniques. We discuss the recent results and their cosmological implications. We also discuss a future prospect of a next generation satellite proposal, LiteBIRD.