



Cosmology and particle physics with POLARBEAR

Saturday, July 7, 2012 5:00 PM (15 minutes)

Cosmic inflation predicts that primordial gravitational waves were created during the inflationary era. Measurements of polarization of the Cosmic Microwave Background (CMB) radiation are known as the best probe to detect the primordial gravitational waves.

POLARBEAR is a telescope designed to detect the CMB B-mode with very sensitive polarimeters based on superconductive transition edge sensor (TES) detector technology. Its large primary mirror with a diameter of 3.5m also allows us to constrain or measure the sum of neutrino masses beyond the limit obtained so far. POLARBEAR is located on the Chajnantor plateau in the Atacama desert in northern Chile at an altitude of 5,200m. We received the first light in January 2012 and are taking CMB data at 150 GHz.

In this presentation we will describe the current status and prospect of POLARBEAR.

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