



Séminaire du Laboratoire de l'Accélérateur Linéaire

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Vendredi 7 Mars 2014 à 14 :00

POLARBEAR : CMB polarization first observations and beyond

POLARBEAR observes the Cosmic Microwave Background since 2012 from a 5150m altitude site, located on Chajnantor plateau in Atacama desert, Chile. The collaboration just reported the direct detection of gravitational lensing of the CMB polarization, based on maps of 30 square degrees of the sky measured to a depth of 6 microK*arcminute at 150 GHz. To detect the non-Gaussian signature of gravitational lensing, we measured 4-point correlations using, for the first time, the CMB polarization information only. We reject the absence of lensed B-modes with a 4.2 sigma significance including the contribution of systematic errors. Measurements of gravitational lensing of the CMB have a great potential for constraining cosmological parameters governing structures formation, e.g. the total neutrino mass or the dark energy equation of state. In addition to present POLARBEAR analysis and last results, I will mention the future of CMB observations from the ground, as recently forecasted by the Snowmass effort.

Auditorium Pierre Lehmann du LAL - Bât. 200, Orsay

Thé et café seront servis 1/4 h avant le séminaire



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