Oscillations in the CMB angular power spectra at ell~120

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Cosmic Microwave Background (CMB) has been well known as a proof of the hot big bang model. In recent years, thanks to the precise observations by WMAP and PLANCK satellites, we come to see the detailed structure of CMB temperature (or polarization) fluctuations. In this work, we forces on the irregular oscillations of their angular power spectra around multipole $\ell \sim 120$. These oscillations were indicated in the analysis of WMAP5 data by Ichiki et al. (2010). We look for these oscillations in the 2015 year's PLANCK temperature and polarization data by adopting a Markov-Chain Monte-Carlo (MCMC) method. We find the oscillations in the data at $\ell \sim 123.7$ and their amplitude is about 4.5×10^{-9} , which are consistent with those found in the WMAP5 data. In this presentation, we talk about the result of the MCMC analysis and the influence of the oscillations to the other cosmological parameters.

Summary

Author: HORIGUCHI, Kouichirou (Nagoya University)

Presenter: HORIGUCHI, Kouichirou (Nagoya University)

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