

# Particle Cosmology after Planck



DESY THEORY WORKSHOP  
23 - 26 September 2014

**Particle Cosmology  
after Planck**

DESY Hamburg, Germany



Contribution ID: 63

Type: **not specified**

## Probing primordial statistical anisotropy with WMAP and Planck data.

*Thursday, 25 September 2014 14:40 (20 minutes)*

We constrain several models of the early Universe that predict statistical anisotropy of the cosmic microwave background (CMB) sky. We make use of WMAP9 and Planck maps deconvolved with beam asymmetries. As compared to previous releases of CMB data, they do not exhibit the anomalously large quadrupole of statistical anisotropy. This allows to strengthen the limits on the parameters of models established earlier in the literature. Among the others, we discuss constraints on the class of models with the Maxwellian term non-minimally coupled to the inflaton and a row of alternatives to inflation, i.e., Galilean genesis and conformal rolling scenario.

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**Session Classification:** Cosmology & Astroparticle Physics B