



Physikalisches Kolloquium

Subir Sarkar, Oxford University

»What have we learnt about inflation from WMAP«

Einführung: D. Zeppenfeld

Precision observations of cosmic microwave background anisotropies by WMAP, in conjunction with studies of large-scale structure, have supposedly confirmed the indication from the SN Ia Hubble diagram that the universe is dominated by some form of dark energy with negative pressure. This conclusion is based on the assumption that the spectrum of primordial fluctuations is a smooth power law. Examined more closely however the WMAP data suggests that the spectrum may have features imprinted on it, such as may arise due to phase transitions occurring during inflation. The CMB and data can then be fitted without any need for dark energy but with $\sim eV$ mass neutrinos in addition to cold dark matter.

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Anschließend Nachsitzung im Gastdozentenhaus „Heinrich Hertz“**