

Plenary Talk

## COSMIC RADIO DIPOLE

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According to the inflationary model of cosmology, the Universe is statistically homogeneous and isotropic. The largest observed deviation from isotropy is a dipole in the cosmic microwave sky. This feature is typically interpreted as being due to the proper motion of the solar system. It also serves to establish a cosmic reference frame. Using the highest multipole moments, the Planck collaboration was able to derive very rough constraints on non-kinetic contributions to that dipole. A corresponding dipole is also expected for all other frequency bands, however, it is not easy to measure it due to shot noise, insufficient sky coverage or both. The radio sky allows us to perform such a test, but an additional contribution of a structure dipole is also to be expected. The NVSS catalogue of radio sources shows a mismatch of dipole amplitudes, other existing or upcoming surveys like WENSS, TGSS or LTSS can be used to study the radio dipole as a function of frequency. Here I will summarize the status of the measurements of the cosmic radio dipole and discuss how to discriminate a kinetic dipole from a structure dipole by means of multi-frequency observations.