

The Wide–Angle Power Spectrum

Tuesday 23 May 2023 16:30 (15 minutes)

We examine the computation of wide-angle corrections to the galaxy power spectrum including redshift-space distortions and relativistic Doppler corrections, and also including multiple tracers with differing clustering, magnification and evolution biases. We show that the inclusion of the relativistic Doppler contribution, as well as radial derivative terms, are crucial for a consistent wide-angle expansion for large-scale surveys, both in the single and multi-tracer cases. We forecast how well upcoming surveys will be able to disentangle wide–angle relativistic effects at large scales.

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Session Classification: Scientific Talks