

The DESI Peculiar Velocity survey: growth rate measurements with Data Release 1

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In this talk I will overview the preliminary cosmological results from the DESI Peculiar Velocity survey, using the first year of data. We measured about 100k peculiar velocities using the Tully-Fisher relation and the Fundamental Plane. We use auto and cross-correlations between our peculiar velocities and galaxy positions from the Bright Galaxy Survey at redshifts $z < 0.1$ to measure the growth rate of structures at 12.5% precision (preliminary). This measurement was performed with three different methods and consistently tested with the largest and most realistic set of mock catalogs. Thanks to this low-redshift growth rate measurement, we are able to reduce uncertainties on the gravitational index parameter γ by a factor of nearly 2.

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