Exploring Galaxy Clustering with the Dark Energy Survey Dataset.

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Abstract

The Dark Energy Survey is an international collaboration whose main goal is to understand the nature of the dark energy. To achieve this, it is performing a 5-year photometric survey from Cerro Tololo (Chile), covering around 5000 square degrees of the southern sky up to magnitude i =23.7 or redshifts of about 1.2. One of the main cosmological probes used by DES is the angular galaxy clustering in photometric redshift shells.

When studying galaxy clustering, the impact of systematics and observing conditions must be taken into account, since they can introduce an artificial clustering. In order to mitigate the influence of these conditions, Survey Property maps (SPs) are created, allowing to characterize their magnitude. The aim of this contribution is to showcase how the influence of these SPs on the clustering is identified and to explain the procedure that is followed to reduce their impact. (See poster).