

Allgemeines Physikalisches Kolloquium

Donnerstag, 07.07.2022 um 16 Uhr c.t.

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Cosmology with the Dark Energy Spectroscopic Instrument (DESI)

In this talk, I will explain how we can constrain fundamental cosmological parameters using galaxy redshift surveys with a particular focus on the Dark Energy Spectroscopic Instrument (DESI). The galaxy clustering signal allows to measure the sum of the neutrino masses, provides tests of Dark Matter and Dark Energy as well as modified gravity models, and is sensitive to primordial/inflationary processes. The DESI experiment has now finished its first year of a 5-year observing campaign, which ultimately will provide datasets more than an order of magnitude larger than existing experiments. I will give an overview of the experiment and provide a preview of the exciting analysis of the first-year dataset, which will commence later this year.