EPS-HEP2019



Contribution ID: 660

Type: Parallel talk

Status and perspectives of the Euclid mission

Friday 12 July 2019 15:30 (30 minutes)

Euclid is the M2 mission of ESA's Cosmic Vision program dedicated to the study of the dark universe: Dark Matter and Dark Energy, with launch scheduled for 2022. Euclid will observe 15,000 square degrees of extragalactic sky in the visible band with resolution of 0.1arcsec (VIS), in IR photometry for the Y, J, H bands and in slitless spectroscopy between 1 and 2 microns (NISP). Euclid will be able to measure the gravitationally induced distortion of the apparent shapes of about one billion of galaxies (Weak Lensing), and Galaxy Clustering (BAO and RSD), using several tens of millions of spectroscopic redshift determinations and billions of photometric redshifts.

After a short introduction to the problem of the accelerated expansion of the Universe and Dark Energy the talk will illustrate the scientific objectives of Euclid and give an update of its current status, along with the expected results and foreseen precision and accuracy.

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Track Classification: Cosmology