

Contributed Talk

Splinter Euclid

HOW TO FORECAST A EUCLID SKY: SIMULATING THE EUCLID
TELESCOPE

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In anticipation of Euclid survey data, cosmological and instrument simulations are essential to develop an analysis pipeline adapted to the survey, integrate it across multiple science data centres, and validate end-to-end performance. Very recently, in June 2017, a major milestone in this effort was achieved with the completion of the Euclid Flagship cosmological simulation and galaxy catalogue. Instrument simulations were and are used to assess the impact of specific survey conditions and instrumental effects on the science performance. More visible outside of the instrument teams, simulation challenges of increasing level of detail and data volume are set up, providing homogeneous output for given input source catalogues, instrument parameters, and environment conditions, across the Euclid VIS and NISP, and external, currently KiDS and DES, instruments. The data produced in these challenges are used to validate and verify the simulation software itself, in addition to supporting development of the analysis pipeline, including shear and redshift estimation. I will provide a brief overview of this effort, focusing on the instrument simulations.