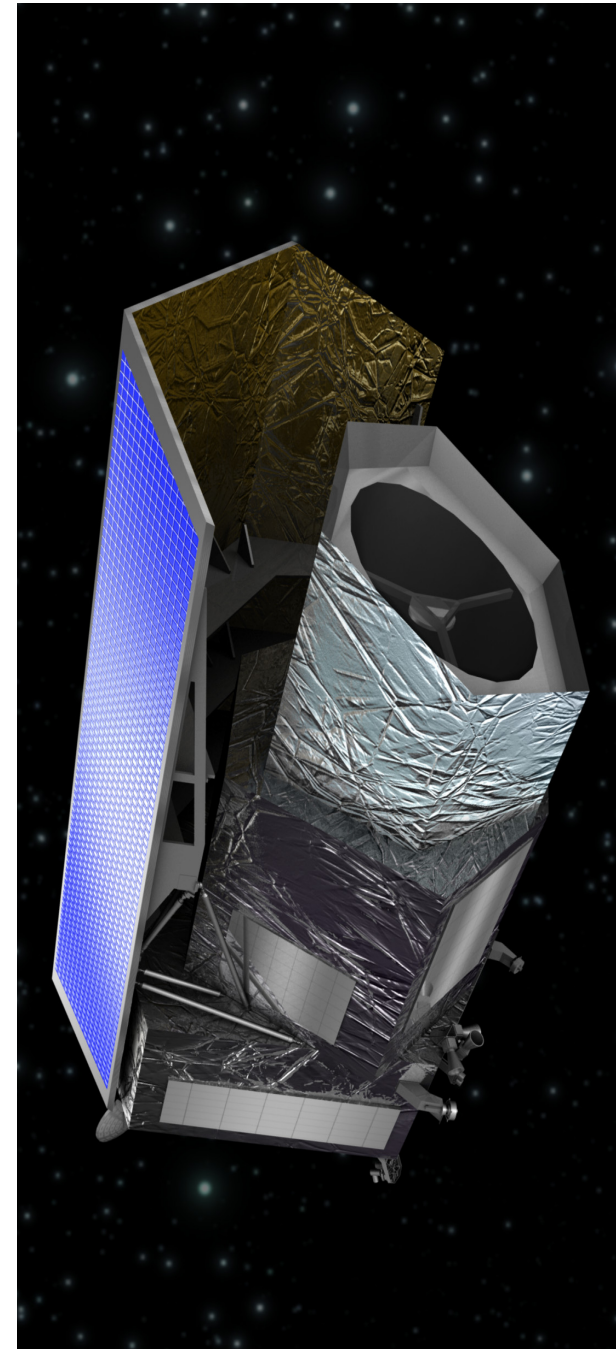


# Euclid and dark matter and dark energy

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- ESA's next big cosmology satellite
- To be launched in March 2020
- High resolution optic and near infrared imaging over billion galaxies
- Near infrared spectroscopy of  $\sim 10$  million galaxies
- Six years of observations covering over one third of the sky



# (Some) scientific goals

- Study the dark matter distribution with two measures: galaxy clustering and weak gravitational lensing
- Time dependence of the distribution from redshift (range corresponding to  $\frac{3}{4}$  of the history of the universe) -> equation of state for dark energy or modified gravity or...

# What do I actually do

- Participate in the (probably last stages of the) data analysis
- Galaxy position and lensing 2- and 3-point correlation functions and power spectra
- One of the 9 data processing centers is located in Finland -> infrastructure development and code integration