

## Lecture for the general public on the Euclid space mission at the Safran Aerospace Museum on March 29 at 5:00 pm

On Wednesday, March 29 at 5:00 pm at the Safran Aerospace Museum, the astrophysicist Yannick Mellier will give a lecture on the European agency's "Euclid" space mission

Free lecture, no reservation required, open to the general public.

### LECTURE

"DARK MATTER AND DARK ENERGY:  
WHAT WILL WE LEARN FROM EUCLID?"

By Yannick MELLIER Astrophysicist IAP

At the Safran Aerospace Museum

Wednesday, March 29, 2017 at 5:00 pm

**Euclid** (Space telescope) is a space mission of the [European Space Agency](#) (ESA), whose objective is to understand the origin of the [acceleration of the Universe's](#) expansion and the nature of its source, generically referred to as [dark energy](#). This could be explained fairly simply through our theory of gravitation, [Einstein's General Relativity](#), whose equations include a concept called the [cosmological constant](#) that closely simulates the effects of dark energy. But some [physicists](#) and [astrophysicists](#) consider it to be a true enigma with the potential to revolutionize [fundamental physics](#), implying the existence of a new interaction or a modification of General Relativity. The exploration of the profound nature of dark energy being beyond the scope of the [Planck mission](#), Euclid is a complementary cosmological mission, in the continuity of the Planck mission and the great spatial missions of [contemporary](#) cosmology.

To collect the data necessary to achieve these objectives, Euclid is equipped with a telescope observing both in visible light and infrared that will measure the shape and redshift of galaxies and groups of galaxies to identify the distance between the two. The analysis stretches back to 10 billion years ago, thus covering the period during which dark energy played a significant role in accelerating the expansion of the universe. **The launch is planned for 2020.** The mission name refers to [Euclid](#), a Greek mathematician considered the father of [geometry](#).