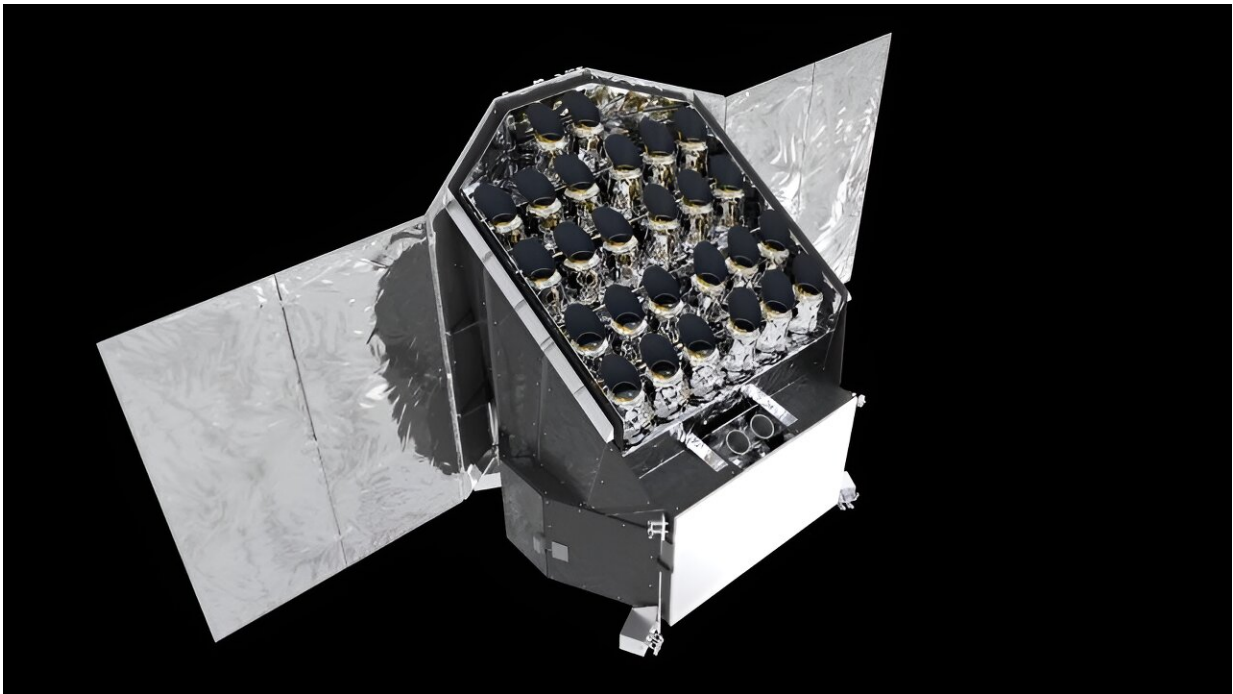


Exoplanet-hunting telescope to begin search for another Earth in 2026

July 18 2024



An artist's impression of the European Space Agency's PLATO spacecraft.
Credit: ESA/ATG medialab, [Attribution \(CC BY 4.0\)](#)

Europe's next big space mission—a telescope that will hunt for Earth-like rocky planets outside of our solar system—is on course to launch at the end of 2026.

PLATO, or PLAnetary Transits and Oscillations of stars, is being built to

find nearby potentially habitable worlds around [sun-like stars](#) that we can examine in detail.

The [space telescope](#) will blast into orbit on Europe's new rocket, Ariane-6, which made its maiden flight last week after being developed at a cost of €4 billion (£3.4 billion).

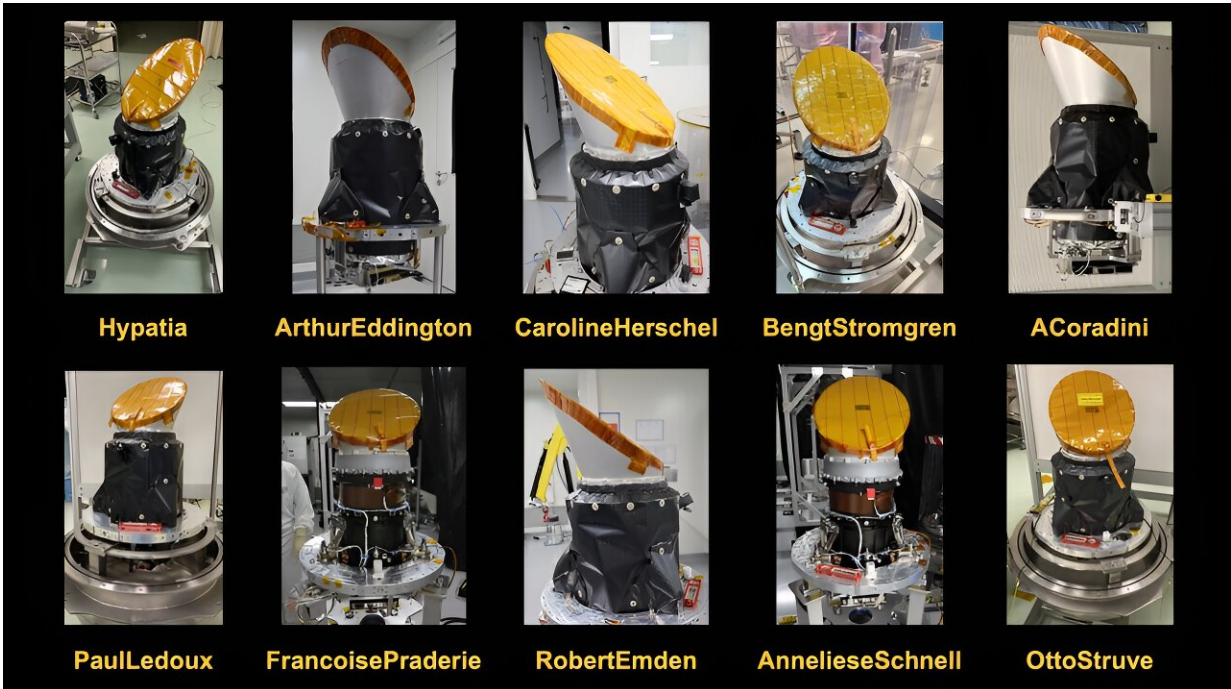
Dr. David Brown, of the University of Warwick, gives an update on the mission at the [Royal Astronomical Society's National Astronomy Meeting](#) at the University of Hull, held 14–19 July.

"PLATO's goal is to search for exoplanets around stars similar to the sun and at [orbital periods](#) long enough for them to be in the [habitable zone](#)," he said.

"One of the main mission objectives is to find another Earth-sun equivalent pair, but it is also designed to carefully and precisely characterize the exoplanets that it finds (i.e. work out their masses, radii, and bulk density)."

PLATO isn't just an [exoplanet](#) hunter, however. It is also a stellar science mission.

As well as searching for exoplanets, it will study the stars using a range of techniques including asteroseismology (measuring the vibrations and oscillations of stars) to work out their masses, radii, and ages.



Unlike most space telescopes, PLATO has multiple cameras – including a UK-named one called ArthurEddington, after the famous astronomer and physicist. Credit: Royal Astronomical Society, [Attribution \(CC BY 4.0\)](#)

Unlike most space telescopes, PLATO has multiple cameras—including a UK-named one called ArthurEddington, after the famous astronomer and physicist who won the Royal Astronomical Society's prestigious Gold Medal in 1924.

It has 24 "Normal" cameras (N-CAMs) and 2 "Fast" cameras (F-CAMs). The N-CAMs are arranged into four groups of six cameras, with the cameras in each group pointing in the same direction but the groups slightly offset.

This gives PLATO a very large field of view, improved scientific performance, redundancy against failures, and a built-in way to identify

"false positive" signals that might mimic an exoplanet transit, Dr. Brown explained.

"The planned observing strategy is to stare at two patches of sky, one in the North and one in the South, for two years each," he added.

"The Southern patch of sky has been chosen, while the Northern patch won't be confirmed for another few years."

Several of the spacecraft's components have finished their manufacturing programs and are close to completing their calibration tests. This includes the UK-provided Front-End Electronics (FEE) for the N-CAMs.

Built by the Mullard Space Science Laboratory of University College London, these operate the cameras, digitize the images, and transfer them to the onboard data processing.

Ten of the final cameras have been built and tested and the first of these was mounted onto the optical bench—the surface which keeps all cameras pointed in the right direction—earlier this year.

The mission is on track to launch in December 2026.

Provided by Royal Astronomical Society

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