

## Europe okays project to seek alien life

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Europe has approved the launch of a deep-space observatory to sniff out habitable planets in other star systems, along with any life forms they may host.

"The PLATO mission will address fundamental questions such as 'how common are Earth-like <u>planets</u>?' and 'is our solar system unusual or even unique?'," the University of Warwick, whose scientists will take part in



the project, said on Wednesday.

The multi-million-euro undertaking "could eventually even lead to the detection of extra-terrestrial life," it added.

A committee of the European Space Agency (ESA), meeting in Madrid, green-lit the mission on Tuesday, meaning "it can move from a blueprint into construction," the university said in a statement.

When the candidate project was first announced three years ago, its cost was estimated at some 600 million euros (\$668 million).

With 26 onboard telescopes, PLATO will join NASA's Kepler observatory in a dedicated search for exoplanets revolving around stars other than our Sun.

Kepler has so far found more than 3,400 confirmed exoplanets.

Of these, 30 are less than twice the size of Earth and orbiting within the so-called "habitable" zone of their star—not so close that water evaporates and not so cold that it freezes.

Liquid water is a key requirement for life as we know it.

PLATO—PLAnetary Transits and Oscillations of stars)—will be launched 1.5 million kilometres (932,000 miles) into <u>space</u>, monitoring thousands of stars over a large area of sky.

Telescopes search for slight dips in light when a planet "transits" between the star it orbits and the telescopes watching it.

Planets do not emit their own light. Had they been visible to the naked eye, they would appear as dark dots tracking across their bright <u>stars</u>.



PLATO is due for launch in 2026, the ESA said.

Other projects that have contributed to the exoplanet search, though it was not their exclusive mission, include NASA's Hubble Space Telescope, as well as several dozen ground-based observatories.

The search for a planet capable of hosting life remains a distant pursuit—there is no solar system close enough for mankind to ever reach it, unless we develop time travel.

ESA also gave provisional approval for a project called LISA (Laser Interferometer Space Antenna), tasked with observing gravitational waves—created when black holes collide—from Space.

Predicted in Albert Einstein's General Theory of Relativity, gravitational waves were first observed with Earth-based instruments last year.

LISA will comprise free-floating detectors on three craft, separated by 2.5 million kilometres in a triangular formation, following Earth in its orbit around the Sun.

Launch is expected in 2034. But final approval will depend on the availability of technology and money, the ESA said.

The estimated mission cost is about a billion euros. Warwick University is based in central England.

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