

EU researchers set to create world's first semi-commercial space mission

May 18 2016



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An EU-funded project is aiming to raise private sector funds for a new space telescope to study exoplanets, potentially becoming the world's first semi-commercial space mission.

The EXODATA [project](#) is aiming to raise as much as half of the cost of

a new [space mission](#) by selling satellite time and data internationally. If successful, this mission could revolutionise the funding model for space missions which, up until now, have been largely funded by the public sector.

The space mission, called Twinkle, is set to launch in three years. The Twinkle telescope will scan exoplanets – the planets orbiting the stars we see in the night sky – and will aim to find out what they are made of.

Information gathered by the satellite is likely to include a planet's chemical composition and its weather systems. Ultimately the mission will allow scientists to determine whether or not it could support life or indeed is already inhabited. EXODATA has already determined where there might be a market for data gathered by the Twinkle satellite.

'Research institutes and universities in regions of the world that do not have access to space technology, including South America and South East Asia, are strongly interested in our project,' outlines Jonathan Tennyson, EXODATA project coordinator.

According to Tennyson, market surveys carried out by the project have uncovered a particular interest in buying satellite time. This could mean selling a slice of time such as a few satellite orbits of the Earth which lasts around 90 minutes. Those buying the time would then be able to determine which data collected by the satellite they are interested in. 'We are now at the stage of getting potential buyers to commit to writing letters of intent to buy Twinkle's time and data. To achieve this, we have hired two business development managers who will tour the world to secure our potential customers,' he adds.

The funds raised by the private sector will support the technical development stage of the Twinkle telescope over the next three years. Meanwhile, the remaining project costs will be paid for by the [public sector](#) and philanthropists.

As well as being the world's first commercially-backed space telescope, the Twinkle mission is also aiming to reduce the costs of a space mission. 'The overall cost of Twinkle is a fraction of the cost of a publically-funded space mission,' says Tennyson.

To bring down the costs, the mission will use [satellite](#) technology that has already been tried and tested. Surrey Satellite Technology Ltd will construct the spacecraft using a platform it has already developed for high-resolution Earth imaging.

Twinkle will also reuse existing software and have a high level of autonomy to minimise operational costs. The semi-commercial funding model is another way of helping to bring down costs since it is faster and cheaper, he adds.

'The project seems to be going well. I am cautiously optimistic that our novel funding model will succeed. If it works, we already have other scientists interested in using us and our model to fund the launch of their satellites,' Tennyson concludes.

More information: Twinkle – A Mission to Unravel the Story of Planets in Our Galaxy: www.twinkle-spacemission.co.uk/

Provided by CORDIS

Citation: EU researchers set to create world's first semi-commercial space mission (2016, May 18) retrieved 20 April 2024 from <https://phys.org/news/2016-05-eu-world-semi-commercial-space-mission.html>

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