

# Astronomers capture first visiting object from outside our solar system

October 27 2017

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Credit: Queen's University Belfast

A Queen's University Belfast scientist is leading an international team in studying a new visitor to our solar system - the first known comet or asteroid to visit us from another star.



The fast-moving object, now named A/2017 U1, was initially spotted on 18 October in Hawaii by the Pan-STARRS 1 [telescope](#) in Hawaii. Professor Alan Fitzsimmons from the School of Mathematics and Physics at Queen's, together with colleagues in the UK, USA and Chile have been tracking it using powerful telescopes across the world.

Commenting on the project, Professor Fitzsimmons said: "By Wednesday this week it became almost certain this object was alien to our solar system. We immediately started studying it that night with the William Herschel Telescope in the Canary Islands, then on Thursday night with the Very Large Telescope in Chile."

The initial data implies it is a small rocky or icy object that may have been drifting through our galaxy for millions or even billions of years, before entering our solar system by chance. The object flew into the solar system from above, was close to the Sun last month, and is now already on its way back out to the [stars](#).

Astronomers believe it was probably thrown out of another star system during a period of planet formation. The same process is thought to have unfolded 4.5 billion years ago around our own star, when Jupiter and Saturn formed. Despite suspecting such objects existed and looking out for them over past decades, scientists have never seen such an interstellar visitor until now.





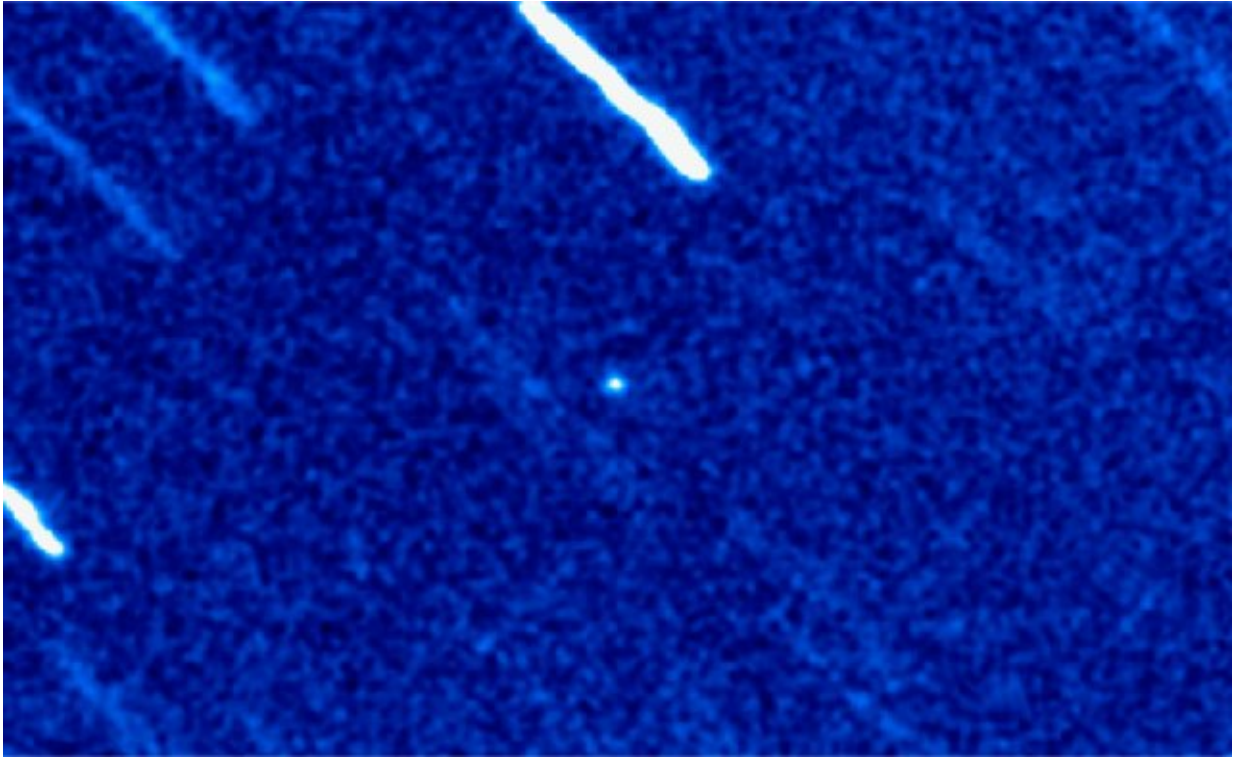
Credit:

During rapid investigations, Professor Fitzsimmons' team has now captured clear images of the unusual object, and obtained data on its possible chemical makeup.

Meabh Hyland, a PhD student from the Astrophysics Research Centre at Queen's University Belfast, said: "It's wonderful and exciting to see this object passing through our planetary system."

Commenting on the incredible findings, Professor Fitzsimmons added: "It sends a shiver down the spine to look at this object and think it has come from another star."





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More information is needed to pin down the exact details of where the visitor came from and what its properties are, but luckily the object should be visible in powerful telescopes for a few more weeks, allowing scientists to continue their investigations.

The team studying the object include Professor Alan Fitzsimmons and Ms Meabh Hyland (Queen's University Belfast), Dr Colin Snodgrass (Open University), Dr Robert Jedicke (University of Hawaii) and Dr Bin Yang (European Southern Observatory).

Provided by Queen's University Belfast



Citation: Astronomers capture first visiting object from outside our solar system (2017, October 27) retrieved 20 March 2024 from <https://phys.org/news/2017-10-astronomers-capture-solar.html>

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