

Cosmologists provide new measurement of cosmic controversy

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Blanco telescope and star trails. Credit: Reidar Hahn, Fermilab

Researchers from the University of Portsmouth have come up with a new measurement of one of the most debated topics in cosmology.

Three cosmologists from the University's Institute of Cosmology and Gravitation analysed [new data](#) to provide one of the most accurate measurements of the Hubble Constant to date.

The Hubble Constant has a long and contentious history with famous disagreements between astronomers, with people still debating its value after nearly a century of measurements.

The Hubble Constant is the local [expansion rate](#) of the Universe and is the cornerstone of modern cosmology. This expansion was first measured by Edwin Hubble in 1929 and is known as Hubble's Law. A key part of this law is Hubbles' Constant, which represents the exact expansion rate now (i.e., how fast space is expanding in our local cosmic neighbourhood).

To obtain this new measurement, the ICG

researchers used a new methodology, the 'inverse distance ladder' method, to add new cosmological results using Type Ia supernovae from the Dark Energy Survey (DES) to existing distance measurements.

Professor Bob Nichol, Acting Pro Vice-Chancellor (Research and Innovation) and co-author of the study, said: "We have used this new data, and new methodology, to obtain one of the most [accurate measurements](#) of this constant to date. In fact, I'm surprised how good it is.

"Our value agrees with many others, but does not agree with the Nobel Prize winning astronomer Adam Riess and his team, which leads to some tension. Or it could be telling us that we don't really understand our local Universe, which would be fascinating."

The study is one of eight new papers presenting exciting results from DES, and it was presented at a special DES meeting at the Royal Astronomical Society in London on 9 November.

Provided by University of Portsmouth

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