

UQ researchers reach the outer limits of space

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If you've just come back from holidays and think it was a long trip, spare a thought for Dr Kevin Pimbblet. Dr Pimbblet, an astrophysicist with The University of Queensland's School of Physical Sciences, has been traveling to the edges of the Universe.

He has just finished a decade-long project cataloguing clusters of galaxies that stretch almost 3 billion light years away.

To give you an idea of how far that is, the nearest star outside of our solar system is 4.22 light years away.

And not only was he looking at things a long, long way away, he was also looking at the biggest structures in the Universe.

“Clusters of galaxies are the most massive gravitationally bound objects in the Universe,” Dr Pimbblet said.

“These are some of the largest structures you will find, with the distance from the core to the edge of the clusters reaching up to 10 megaparsecs, or 32.6 million light years.”

Again to put that into perspective, when you look up into the night sky and see our galaxy, the Milky Way, it is only 100,000 light years across.

Dr Pimbblet said apart from cataloguing galaxy clusters in the southern hemisphere for the first time, his work is also helping us gain a greater

understanding of how our Universe evolved.

“One obstacle in our understanding is that many studies to date have only examined clusters of galaxies in isolation to their surroundings, an obstacle this research overcomes,” Dr Pimblet said.

“If we can't understand how galaxies form and evolve we can't understand our Universe.”

Dr Pimblet's research was recently published in the Monthly Notices of the Royal Astronomical Society.

Source: University of Queensland

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