

Towards a "Quantum Black Hole" Simulator

Thursday 10 April 2025 09:00 (1 hour)

Horizons can occur in a wide range of physical situations, many of which we can construct in the lab, leading to the field of Analog Gravity. Most gravity simulators observe features, like super-radiance, that are analysed as a continuum effect in gravity, whereas many interesting "beyond GR" features theorise about the impact of quantised aspects of the black hole.

In this talk, I will discuss recent experimental work on a liquid helium giant vortex that naturally has quantisation, and how we hope to build a quantised analog black hole that can start to explore "black hole" phenomena in a much broader context.

Presenter: GREGORY, Ruth

Session Classification: Plenary talks

Track Classification: Experiments