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Building a Quantum Black Hole Simulator

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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