

Abstract Submitted
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An analogy between the merger of two black holes and the collision of two point-vortices MARIA BARBARA EL FAKHRI, GIUSEPPE DI LABBIO, LYES KADEM, HOI DICK NG, Concordia Univ, HAMID AIT ABDERRAHMANE, Khalifa University of Science and Technology — This work is an attempt to produce an analogy between the merger of two black holes and the collision of two point-vortices produced in a shallow water layer. The former collision generates gravitational waves propagating at the speed of light, while the latter creates waves propagating along the free surface. The two point-vortices are generated by spinning two small magnetic discs. The vortices were brought to collide by displacing the spinning discs toward each other at several constant speeds. The resulting flow dynamics and surface waves were quantitatively investigated using particle image velocimetry measurements and interferometry.

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