



Contribution ID: 58

Type: Oral presentation

Signatures from metastable oppositely-charged black hole binaries in scalar Gauss-Bonnet gravity

Thursday 19 June 2025 15:00 (30 minutes)

Gravitational wave observations of compact objects have provided new opportunities to test our understanding of gravity in the strong-field, highly dynamical regime. To perform model-dependent tests of General Relativity with these observations, as well as to guide theory-agnostic tests, it is crucial to develop inspiral-merger-ringdown waveforms in alternative theories of gravity. In this talk, we present an example of a type of binary system in an alternative theory of gravity that undergoes a sudden state transition during the inspiral. This gives rise to telltale signatures such as a change in the multipolar character of the scalar radiation and the introduction of eccentricity in the orbit.

Author: CORMAN, Maxence (Max Planck Institute for Gravitational Physics)

Presenter: CORMAN, Maxence (Max Planck Institute for Gravitational Physics)