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Signatures from metastable oppositely-charged black hole binaries

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In this talk, I will present recent developments aimed at simulating black hole binaries beyond general relativity in Spectre, an open-source numerical relativity code by the SXS Collaboration. For concreteness, I will focus on scalar Gauss-Bonnet (sGB) gravity. I describe results derived from a parameter space exploration of a model of sGB gravity using initial data sequences of equal-mass black hole binaries in quasistationary equilibrium. Leveraging the strengths of two numerical relativity evolution codes, we find potential tell-tale signatures for such binaries near the scalarization threshold.

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