

Explaining nonlinearities in black hole ringdowns from symmetries

It has been recently pointed out that nonlinear effects are necessary to model the ringdown stage of the gravitational waveform produced by the merger of two black holes giving rise to a remnant Kerr black hole. We show that this nonlinear behavior is explained, both on the qualitative and quantitative level, by near-horizon symmetries of the Kerr black hole within the Kerr/CFT correspondence.

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