Black hole ringdown beyond General Relativity

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Black hole quasi-normal modes (QNMs) provide a powerful probe of deviations from General Relativity. We analyze the relative contributions of shifts in the QNM spectrum of Kerr black holes and the presence of additional modes sourced by extra fields in a theory-agnostic framework. By exploring different regimes, we identify when each effect dominates and propose suitable ansätze for the corresponding waveforms.

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