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Toward Merger and Ringdown Waveforms for Modified Gravity Theories GABRIEL BONILLA, Cornell University — There is great interest in using binary black hole mergers to look for deviations from GR in the strong-field regime. The parameterized post-Einsteinian (ppE) formalism provides a framework for modifying frequency domain GR waveforms into corrected waveforms that account for leading PN order deviations predicted by a beyond-GR theory. These corrections are computed assuming a quasicircular inspiral, making the correction applicable only in the inspiral regime. We examine various procedures that can be used to extend the ppE correction into the merger and ringdown regimes with minimal assumptions, as well as the effect these assumptions have on parameter estimation efforts making use of ppE waveforms as matched filter templates.

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