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Reconstructing gravitational wave source parameters via direct comparisons to numerical relativity II: Applications RICHARD O'SHAUGHNESSY, JACOB LANGE, JAMES HEALY, LOUSTO CARLOS, Rochester Institute of Technology, DEIRDRE SHOEMAKER, Georgia Institute of Technology, GEOFFREY LOVELACE, California State University, Fullerton, MARK SCHEEL, California Institute of Technology — In this talk, we apply a procedure to reconstruct the parameters of sufficiently massive coalescing compact binaries via direct comparison with numerical relativity simulations. We illustrate how to use only comparisons between synthetic data and these simulations to reconstruct properties of a synthetic candidate source. We demonstrate using selected examples that we can reconstruct posterior distributions obtained by other Bayesian methods with our sparse grid. We describe how followup simulations can corroborate and improve our understanding of a candidate signal.

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