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BBH Classification Using Principal Component Analysis¹ DEIRDRE SHOEMAKER, LAURA CADONATI, JAMES CLARK, BRIAN DAY, Georgia Inst of Tech, IK SIONG JENG, University of Glasgow, ALEXANDER LOMBARDI, University of Massachusetts Amherst, LIONEL LONDON, Georgia Inst of Tech, NICHOLAS MANGINI, University of Massachusetts Amherst, JOSH LOGUE, University of Glasgow — Binary black holes will inspiral, merge and ringdown in the LIGO/VIRGO band for an interesting range of total masses. We present an update on our approach of using Principal Component Analysis to build models of NR BBH waveforms that focus on the merger for generic BBH signals. These models are intended to be used to conduct coarse parameter estimation for gravitational wave burst candidate events. The proposed benefit is a fast, optimized catalog that classifies bulk features in the signal.

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