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Measurement of the Hubble Constant from Gravitational Waves and Supernova Theory KARAN JANI, KELLY HOLLEY-BOCKELMANN, Vanderbilt University — Gravitational-wave detections of compact binaries provide a powerful independent technique to measure the expansion rate of the Universe. Using the recent binary black hole events from LIGO-Virgo detectors, we provide a unique set of correlation between the Hubble constant (H_0) and the pair-instability supernovae mass-gap. Our results do not rely on electromagnetic counterparts to gravitational-wave events, nor associating host galaxies. We discuss the implications of our results in context of the existing constraint on H_0.

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