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**Probing the Association of Gravitational-Wave and Gamma-Ray Bursts with LIGO and Virgo** LAURA CADONATI, University of Massachusetts, Amherst, LIGO SCIENTIFIC COLLABORATION, VIRGO COLLABORATION — Gamma Ray Bursts (GRBs), intense flashes of  $\gamma$ -rays routinely detected by satellite-based detectors, have been a target of gravitational wave searches since the early days of laser interferometer data acquisition. A measured correlation between GRBs and gravitational wave transients would provide not only a smoking-gun evidence for the detection of gravitational waves, but also new insights in the physics of GRB progenitors. This talk presents the results of a search for gravitational wave bursts associated with 137 GRBs detected during the fifth LIGO Science run and the first Virgo science run. We discuss the astrophysical interpretation and implication of these results for future investigations of GRBs and gravitational wave bursts.

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