

Gravitational Wave Burst Search in LIGO: Methods and Results

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The Laser Interferometer Gravitational-wave Observatory (LIGO) Burst Analysis group is pursuing searches for un-modeled gravitational-wave transients of short duration (< 1 sec) in the 100-2000 Hz frequency band. Plausible sources of this type of signal are core-collapse supernovae and the merger and ring-down phases of coalescing binary systems. In this talk I will describe the methods used in this search to optimize the detection efficiency and to suppress the false alarm rate with minimal assumptions on the signal's morphology. I will present the most recent upper limit results and discuss possible future directions for the LIGO burst analysis.