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Gravitational Wave Burst Search in LIGO's Fifth Science Run

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— We report on an ongoing search for gravitational wave bursts in LIGO's fifth science run, during which the LIGO interferometers are collecting one year of coincident data at design sensitivity. The LIGO burst search targets gravitational wave transients whose waveform and population are not well known, such as core-collapse supernovae or binary black hole mergers. Its “eyes-wide-open” approach was developed by the LIGO scientific collaboration over the past five years; only minimal assumptions are made on waveform or source population and detection depends on finding simultaneous statistically significant excesses of power in the three LIGO interferometers. Coherent follow-ups, consistency criteria and veto conditions effectively suppress false alarms. The talk will describe this analysis and its performance, report its preliminary results and briefly discuss its prospects.

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