

Abstract Submitted
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Coherent search for gravitational wave transients in the first advanced LIGO run¹ SERGEY KLIMENKO, Univ of Florida - Gainesville, LIGO SCIENTIFIC COLLABORATION COLLABORATION² — Recently LIGO detectors have been upgraded, targeting detection of gravitational waves from astrophysical sources. Advanced LIGO performed the first observing run in September, 2015 - January, 2016 at almost three times better strain sensitivity than the initial detectors. We describe a baseline search for generic gravitational wave transients conducted during the first observing run. The search pipeline coherently combines data from all detectors and identifies gravitational wave candidates with a few minutes latency. By using the constrained likelihood method, it reconstructs signal waveform and finds a source location in the sky. We present the status of the search, the performance of the search algorithm, and extensive studies of the background due to environmental and instrumental transient events.

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