

Abstract Submitted  
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**Search for transient gravitational waves associated with Soft Gamma Repeaters using the LIGO detectors** PETER KALMUS, Columbia University, LSC COLLABORATION — During part of LIGO's fifth science run from November 2005 to May 2007, satellite-based gamma-ray detectors observed more than 200 bursts from the Soft Gamma Repeaters SGR 1806-20 and SGR 1900+14. These objects are located within our galaxy and their sky locations are known to high precision. Models predict gravitational wave emission via excitation of non-radial modes in the compact source, making them plausible targets for a gravitational wave search. The majority of the SGR events occurred while multiple LIGO detectors were collecting data with high sensitivity. We present the status of the search for transient gravitational waves associated with SGR events using coherent combination of data from multiple LIGO detectors. Coherent methods can be used to search for any transient gravitational wave signal in the band 100-3000 Hz, including neutron star ringdowns. Upper limits on gravitational wave emission energies can be estimated using simulated white noise burst and ringdown waveforms.

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