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A Time Series Waveform Consistency Test for Binary Inspirals in LIGO data ANDRES RODRIGUEZ, GABRIELA GONZALEZ, Louisiana State University, EVAN OCHSNER, University of Maryland, PETER SHAWHAN, LIGO Laboratory, California Institute of Technology, LIGO SCIENTIFIC COLLABORATION — Searches for binary neutron star inspiral signals in data collected by earth based interferometric gravitational wave detectors utilize matched filtering techniques. Simple matched filtering is the optimal detection strategy if the detector noise is stationary and white. However, non-stationary noise sources, which are often found in gravitational wave detectors, can lead to ringing of the matched filter, resulting in a false inspiral "trigger". In order to minimize the number of these false candidates that pass our search pipeline, new tests must be developed. I will present a new waveform consistency test based upon the time series of the matched filter output.

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