

Abstract Submitted
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Testing Pulsar Timing Algorithms by Simulating Pulsar Data

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— The validity of Einstein's theory of general relativity has a direct relation to the detection of gravitational waves (G-waves). By the observation of radio pulsars, ultra-low frequency G-waves can be characterized and detected. This is possible through pulsar timing which is the measure of the time of arrival (TOA) of individual pulses. The development of a pulsar data simulator will help characterize different timing algorithms and determine which one provides the most accurate measure of the TOAs. This will allow us to improve pulsar timing techniques which will ultimately aid in the detection of G-waves.

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