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Gravitational waves from pulsars to understand generation mechanism of fast radio bursts

This abstract is primarily based on my recent paper MNRAS 520 (2023) 3742. Since the discovery of fast radio bursts (FRBs), researchers have proposed several theories and models to explain their characteristics. One of the most recent models takes into account the Gertsenshtein-Zel'dovich (GZ) phenomenon, which suggests that a portion of gravitational radiation is converted into electromagnetic (EM) radiation when gravitational waves pass through a pulsar magnetosphere. This model can explain both repeating and non-repeating FRBs, and the pulsar's characteristics remain unchanged over time. My talk focuses on the gravitational radiation produced by the pulsar mechanism and how proposed gravitational wave detectors can detect these waves. If these detectors detect any continuous GW signal from the site of FRBs, it will provide significant support for the GZ theory and disprove the merger-like theories.

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