Poster Session #F
Gravitational Wave detectors and other sources

F06

First search for r-mode gravitational waves from J0537-6910

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We report results of the first search to date for continuous gravitational waves from unstable r-modes from the pulsar J0537-6910. We use data from the first two observing runs of the Advanced LIGO network. We find no significant signal candidate and set upper limits on the amplitude of gravitational wave signals, which are within an order of magnitude of the spin-down values. We highlight the importance of having timing information at the time of the gravitational wave observations, i.e. rotation frequency and frequency-derivative values, and glitch occurrence times, such as those that a NICER campaign could provide. Based on the paper https://arxiv.org/abs/2001.07605. published in The Astrophysical Journal, Volume 895, Number 1, 2020