

Abstract Submitted
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First search for r-mode gravitational waves from J0537-6910 LI-
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tionsphysik — We report results of the first search to date for continuous gravita-
tional 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 sig-
nals, 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 oc-
currence times, such as those that a NICER campaign could provide.

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