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Continuous gravitational waves from unknown neutron stars in binary systems

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Unknown neutron stars in binary systems might be one of the best sources of continuous gravitational waves (yet to be detected), due to their millisecond rotation rates, the accretion from their companion which can source the required asymmetry, and the vast unexplored parameter space. These searches have a prohibitive computational cost due to the large number of dimensions that need to be explored and the huge amount of data needed to achieve detectable signal-to-noise ratios. In this review talk we will present a summary of the different algorithms that have been used to carry out these searches, and we will review the different search results up to date.

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