

# Searching for long-duration gravitational wave transients from glitching pulsars

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Neutron stars can emit gravitational waves (GWs) on many different time-scales, ranging from milliseconds to the quasi-permanent continuous-wave regime. Nearby known radio pulsars like the Crab and Vela are among the most promising sources. Sudden spin-up events are observed in the radio timing of many pulsars, but the mechanism behind these glitches remains enigmatic. Besides posing a challenge for continuous-wave searches, glitches could also themselves trigger transient GW emission from otherwise quiescent neutron stars. Here I will present a search for long-duration transient GWs, from hours to months in duration, associated with glitches from the Crab and Vela pulsars during the second Advanced LIGO observing run. Studying this new class of GW signals can help to constrain glitch mechanisms, and thus open a new window into the interior structure and dynamics of neutron stars.

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