

PHAROS Conference 2020: The multi-messenger physics and astrophysics of neutron stars



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Long-duration gravitational wave transients - recent results and future prospects

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Gravitational waves can provide unique insight into the interiors of neutron stars. The signal types and timescales accessible to ground-based detectors range from the final orbits of binary mergers to continuous waves from mature spinning objects, with various long-duration transients in between. In this presentation I will focus on pulsar glitches as possible sources of long-duration quasi-monochromatic gravitational waves. I will present the first upper limits on signals from the Crab and Vela using Advanced LIGO data and prospects for improved searches during the most recent LIGO-Virgo observing run. I will also briefly cover efforts to detect post-merger gravitational waves from remnants of binary mergers.

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