

Abstract Submitted
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Beating the spin-down limit on gravitational wave emission from the Crab pulsar MICHAEL LANDRY, LIGO Hanford Observatory, LIGO SCIENTIFIC COLLABORATION — Using nine months of data from the fifth science run of the LIGO Scientific Collaboration, we have determined new upper limits on the gravitational wave emission from the Crab pulsar. The result is a stronger constraint than that derived from arguments based on spin down and energy conservation, providing insight into the Crab energy budget. Limits from two searches are presented, one assuming the Crab pulsar emits gravitational radiation at twice the rotation frequency as determined by radio observations, while the other search relaxes this assumption and places an upper limit over a region in frequency and spin-down parameter space centered on twice the rotation frequency.

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