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Search for gravitational-wave signals produced by cosmic strings in the Advanced LIGO and Virgo data.

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Cosmic strings are topological line defects expected to form during phase transitions in the early Universe [1]. They were first introduced by Kibble [2]. It has also been realized that fundamental objects from string theory could, in certain scenarios, expand to cosmic size and play the role of cosmic superstrings [[3]-[4]]. Cosmic strings can be probed by their powerful bursts of gravitational waves. They also may form a background from the incoherent sum of individual bursts. Both the stochastic background and individual bursts have been searched in data collected by Advanced LIGO [5] in the first (O1) and second (O2) observing runs [6]. In this talk I first review the new results of the stochastic and burst searches using O1 and O2 data. Then I will present, our search plans and the updated theoritical models we will consider for the third observing run of Advanced LIGO and Advanced Virgo (O3).

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