Phenomenology 2017 Symposium



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Inflationary theory and pulsar timing investigations of primordial black holes and gravitational waves

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The gravitational waves measured at LIGO are presumed here to come from merging primordial black holes. We ask how these primordial black holes could arise through inflationary models while not conflicting with current experiments. Among the approaches that work, we investigate the opportunity for corroboration through experimental probes of gravitational waves at pulsar timing arrays. We provide examples of theories that are already ruled out, theories that will soon be probed, and theories that will not be tested in the foreseeable future. The models that are most strongly constrained are those with a relatively broad primordial power spectrum.

Summary

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