

Abstract Submitted
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Gravitational-Wave

Cosmology with the Next Generation of Ground-Based Gravitational-Wave Detectors - A Trade Study ARNAB DHANI, SSOHRAB BORHANIAN, ANURADHA GUPTA, B SATHYAPRAKASH, Pennsylvania State University —

The third generation of gravitational-wave detectors are expected to come up in the latter half 2030s. The exact specifications of these detectors have not been decided yet and the science case for them is being developed. It is imperative, therefore, that we understand the science that can be done with different detectors and detector networks. One of the major areas of focus for these detectors is the precise estimation of cosmological parameters. To this effect, we carry out a Fisher matrix study to estimate the errors in the measurement of the dark energy equation of state parameter, and dark matter and dark energy density parameters for different detectors and detector networks.

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