

APCTP SEMINAR

Tests of gravity in the late cosmos with gravitational wave observations: modeling and parameterization

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Apr. 2 (Fri) 15:00 KST

ZOOM Webinar

We review tests of modified gravity theories with gravitational waves in the scope of future experiments e.g. the Einstein Telescope and Cosmic Explorer. In the first half, we review modeling of propagation of GW for modified gravity. We show that the information in the amplitude and phase of GW are able to constrain a host of models of cosmic acceleration in scalar-tensor theories, i.e., Horndeski and DHOST theory. In the second half, we extend the parameterization of GW propagation for other cosmological observations. We compare with other common parameterizations used for CMB and galaxy surveys, revealing the shortcomings among the ad-hoc assumptions that are typically used. Finally, we discuss the future prospects of testing gravity and the synergy between GW, CMB, and galaxy surveys.

■ ZOOM Webinar

- 1) Please register through this ZOOM link
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