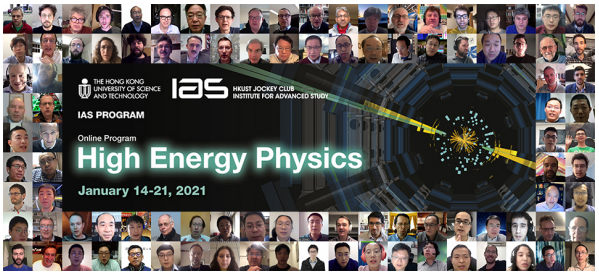

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Probing Dark Matter with future CMB measurements

Cascade of particles injected due to the decay and annihilation of dark matter (DM) particles and Primordial black hole (PBH), which has gained increasing interests as an alternative candidate for DM, can potentially change the cosmic recombination history by ionizing and heating the intergalactic medium, which results in altering the anisotropy spectra of the Cosmic Microwave Background (CMB). Current CMB data from Planck satellite can already give very stringent and robust constraints on the annihilation cross-section and decay lifetime of particle DM and the abundance of PBH, future CMB missions such as AdvACTPol, AliCPT, CMB-S4 and PICO, can improve current constraints by about two orders of magnitudes.

Scheduling Preferences

Authors: CANG, Junsong (Chinese Academy of Sciences); Prof. GAO, Yu (IHEP, Chinese Academy of Sciences); MA, Yinzhe (University of KwaZulu-Natal)

Presenter: CANG, Junsong (Chinese Academy of Sciences)

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