Workshop on Very Light Dark Matter 2023



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Cosmic birefringence tomography with late-time polarization signals

Tuesday, 28 March 2023 14:40 (20 minutes)

In this presentation, I consider polarization signals after the reionization epoch to constrain rotation angles of CMB polarization plane for the cosmic birefringence tomography. The late-time polarization signals, the so-called polarized SZ (pSZ) effect, arises in the process of the scattering of the cosmic microwave background (CMB) photons off the electrons. The pSZ signals can be reconstructed by combining CMB and galaxy surveys. I will present expected constraints on the rotation angles with future CMB experiments from pSZ signals and discuss potential application for constraining late-time cosmic birefringence.

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