Contribution ID: 8 Type: not specified

Structure Formation with Cosmic Strings

Thursday, 11 December 2025 17:00 (20 minutes)

Recent observations from the James Webb Space Telescope have revealed an unexpectedly high abundance of massive galaxies at very high redshifts, challenging the standard Λ CDM cosmological framework. Cosmic strings, which can act as nonlinear seeds in the early Universe, provide a promising explanation for this tension. In this talk, I will present our recent work on the impact of cosmic strings on early structure formation and how they may account for JWST high-redshift galaxies.

Primary author: JIAO, Hao (Institute for Basic Science)

Co-authors: Prof. BRANDENBERGER, Robert (McGill University); Prof. KANNAN, Rahul (York Univer-

sity); Ms KOEHLER, Sonja (Harvard University); Prof. REFREGIER, Alexandre (ETH Zurich)

Presenter: JIAO, Hao (Institute for Basic Science) **Session Classification:** Contributed session