

Light particle emissions from cosmic strings

Monday, 25 August 2025 11:30 (30 minutes)

Cosmic string is a topological defect associated with the spontaneous symmetry breaking in the early universe. After the formation of cosmic strings, they form a network and evolve following the scaling regime. In this talk, I present light particle emissions from the cosmic string network. In particular, I focus on the production of the axion and other pseudo-Nambu-Goldstone bosons and show that they can account for the dark matter and dark radiation in our universe today. I will show that such cosmic strings can be testable by combining the gravitational wave observations and the CMB observations.

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