

Probing High-Energy Physics with Topological Defects

Topological defects provide a powerful framework for exploring nonperturbative phenomena across high-energy physics and cosmology. In this talk, I will present a general overview of recent developments on the role of cosmic strings as probes of physics beyond the Standard Model. Particular emphasis will be placed on gravitational-wave signatures generated by cosmic string networks and their potential as observational windows into otherwise inaccessible high-energy physics. I will discuss how current and future cosmological observations can constrain the underlying particle-physics scenarios responsible for the formation and evolution of these defects.

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