

Cosmic gauge strings and superstrings in the Early Universe

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Cosmic string is a well-known topological defect widely predicted in field theories. It is regarded as one of the main sources of gravitational wave (GW) background that might be observed in the coming future. Most relevant studies have focused on cosmic strings in gauge field theory, which we call cosmic gauge strings. On the other hand, superstring theories also predict this defect, and it is called cosmic superstring. More than what we know about cosmic gauge strings, cosmic superstrings provide different types of cosmic strings and predict different inter-commutating probabilities among them, making the phenomenological consequences distinguishable from gauge strings. In this talk, I will compare the evolution between cosmic gauge strings and superstrings. The consequent GW signals and experimental hints will also be discussed.

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