

CMB Birefringence from Axion Strings

Sunday 26 May 2024 09:50 (25 minutes)

A cosmological network of axion strings in our Universe today may leave its imprint on the polarization pattern of the cosmic microwave background radiation through the phenomenon of axion-string-induced birefringence. I will explain how this signal arises, discuss how it depends on the properties of the string network and the axion-photon coupling, describe how existing measurements of anisotropic birefringence place constraints on axion strings, and discuss how the non-Gaussian nature of this signal could be leveraged in searches with future data.

Author: LONG, Andrew (Rice University)

Presenter: LONG, Andrew (Rice University)

Session Classification: Dark Matter, Axion