

# Phenomenology 2025 Symposium



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## Cheshire $\theta$ terms, Aharonov-Bohm effects, and axions

*Tuesday 20 May 2025 14:15 (15 minutes)*

We discuss unusual  $\theta$  terms that can appear in field theories that allow global vortices. These “Cheshire  $\theta$  terms” induce Aharonov-Bohm effects for some particles that move around vortices. For example, a Cheshire  $\theta$  term can appear in QCD coupled to an axion and induces Aharonov-Bohm effects for baryons and leptons moving around axion strings. We point out a potential experimental signature left on the spectrum of gravitational waves from axion cosmic string network by the Cheshire  $\theta$  term.

### Mini Symposia (Invited Talks Only)

### Plenary (Invited talks only)

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