

# Phenomenology 2019 Symposium



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## Detecting Magnetic Dark Matter

*Tuesday 7 May 2019 18:00 (15 minutes)*

The evidence for dark matter is overwhelming, but its nature is unknown. Dark matter may be the magnetic monopoles of a hidden sector, which acquire small coupling to the visible photon through kinetic mixing. When the hidden sector  $U(1)$  is broken, the monopoles confine, connected by a tube of magnetic flux. These flux tubes give rise to phase shifts in Aharonov-Bohm experiments. I show the existing experimental constraints on this scenario, and explain how to search for dark matter with Aharonov-Bohm type detectors.

### Summary

**Author:** VERHAAREN, Christopher (University of California, Davis)

**Co-author:** TERNING, John (UC Davis)

**Presenter:** VERHAAREN, Christopher (University of California, Davis)

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