

# Department of Physics and Astronomy Colloquium Series

**Tuesday, November 4, 2025, 2:30pm in PSE 317**

**Speaker:** Wendy Taylor

**Institution:** York University

**Title:** Searches for Magnetic Monopoles at the LHC and Beyond

**Abstract:**

The possible existence of the magnetic monopole, a hypothetical particle with only a north or a south magnetic pole, has been pondered for over a century. Physicists have searched for magnetic monopoles coming from space, in polar volcanic rocks, and in particle colliders. In this colloquium, I will briefly debunk the notion that magnetic charge sources can't exist. I will present some theoretical motivations for the magnetic monopole and describe its unique properties. I will review some of the many magnetic monopole experiments, including those using the ATLAS Detector at the CERN Large Hadron Collider. Finally, I will explain how physicists searched for magnetic monopoles produced in the largest magnetic fields in the Universe.