Faculty of Arts & Science

University of Lethbridge

Department of Physics & Astronomy Colloquium

Crazy jet experiments: probing accretion and ejection physics with flashes, bursts, and eruptions

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Abstract: The most powerful cosmic engines in our universe are fueled by compact objects such as black holes and neutron stars. These cosmic engines consume large amounts of material and expel matter in the form of jets travelling at near the speed of light. Recent groundbreaking discoveries of gravitational waves from systems harbouring compact objects and the direct imaging of the black hole shadows with the Event Horizon Telescope, represent major steps forward in our understanding of such systems. However, there exists a huge population of compact objects in our own Galaxy which provides much more ideal laboratories, offering a real-time view of the behaviour of these objects and their dynamic environments. In this talk, I will discuss new experiments leveraging the capabilities of today's state-of-the-art telescopes to observe repetitive, (somewhat) predictable, energetic surges of radiation that allow us to track the path of material from inflow to outflow in these Galactic systems.

Thursday 6 February 2025, 1:30-2:45 PM Mountain Time
The talk will be in person in
Science Commons SA 8003
Attendance can be in-person or via Zoom:
https://uleth.zoom.us/j/98735210255
Everyone welcome!