University of Victoria

PHYSICS AND ASTRONOMY SEMINAR
(Hybrid)

Prof. Ting Li
University of Toronto

"The Southern Stellar Stream Spectroscopic Survey: Latest Science Result"

Abstract

The Southern Stellar Stream Spectroscopic Survey (S5) is an ongoing spectroscopic program that maps the newly discovered stellar streams with the fiber-fed AAOmega spectrograph on the Anglo-Australian Telescope (AAT). S5 is the first systematic program pursuing a complete census of known streams in the Southern Hemisphere, providing a uniquely powerful sample for understanding the building blocks of the Milky Way's stellar halo, the progenitors and formation of stellar streams, the mass and shape of the Milky Way's halo, and ultimately the nature of dark matter. The survey started in Summer 2018 and has mapped ~20 streams with over 70 nights on AAT. In this talk, I will give a brief overview of the current status of the program, highlighting the latest science results from the survey, and end the talk with the first public data release of S5. The science results from S5 cover a wide range, including a homogeneous study of one dozen streams in our Milky Way, the finding of a stream perturbed by the dark matter subhalos, the confirmation of a globular cluster stream that is more metal-poor than any known Milky Way globular clusters, the constraints on the mass of the Large Magellanic Cloud with stellar streams, and the discovery of the fastest hyper velocity stars ejected from Galactic center, etc.

Friday, February 10, 2023
11:00 a.m. in ELL 060

Zoom: https://uvic.zoom.us/j/82592004400?pwd=STdRdU1pRWxDVVRUVUk1UVNVWkZEdz09
Meeting ID: 825 9200 4400
Password: 131543