



Western

Western University
Department of Physics and Astronomy

PHYSICS & ASTRONOMY COLLOQUIUM

Date: Thursday, 28 October 2021

Time: 1:30 p.m.

via Zoom: <https://westernuniversity.zoom.us/j/96619562747?pwd=Yk0rd29GNE9Kd2pHN1kvZ3YwM2RnUT09>

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“The importance of studying Be stars over a broad range of wavelengths with multi-observational techniques”

ABSTRACT

Be stars are mainly known by two specific characteristics: 1) emission lines in their spectra and, 2) fast rotation close to critical. Emission lines originate within a gaseous Keplerian disk surrounding the central star's equator. The simpler composition of these disks, compared to other astrophysical disks, e.g., protoplanetary disks, makes them a good laboratory to analyze our understanding of a variety of physical systems and concepts, e.g., from astrophysical disks to stellar evolution.

After several decades of investigation focusing on different models to describe the formation and evolution of Be disks, currently, the Viscous Decretion Disk model is favored and seems to be successful in predicting observations. Many of the first efforts to model Be disks were limited to an individual type of observational data, e.g., the spectroscopic data. However, it is known that the Be disks' apparent size depends on the wavelength. Also, observational techniques probe different regions of the disk. For example, studying the polarimetric data is ideal to probe the geometry and orientation of the disk and originates near the central star compared to radio emission which probes a much larger radial distance.

In this talk, I will demonstrate why the study of Be stars requires different observational techniques and in a broad range of wavelengths.

Host: Prof. C. Jones