PHYSICS AND ASTRONOMY
ARCNet
SPECIAL SEMINAR

Dr. Henry Ngo

HAA - Herzberg Astronomy and Astrophysics

"Coronagraphic imaging performance prediction with random forests"

Abstract

Finding planets by direct imaging is hard. It is necessary to extinguish the host star's in order to distinguish the faint planetary light. In 2015, we commissioned a "vector vortex coronagraph" at Keck II, a new device to extinguish starlight. However, it is not possible to eliminate all starlight, so we have also implemented two post-processing algorithms ("ADI" and "RDI") to distinguish the remaining starlight from planet light. In this talk, I present a random forest model developed by our summer student, Jerry Xuan, which we use to characterize the telescope's performance and to predict planet sensitivity for given observing conditions. These models can be used to plan observations and inform future upgrade plans.

Thursday, March 14, 2019

11:00 a.m.

HAA - Herzberg Astronomy and Astrophysics

(5071 West Saanich Rd. Victoria, BC)

Large conference room