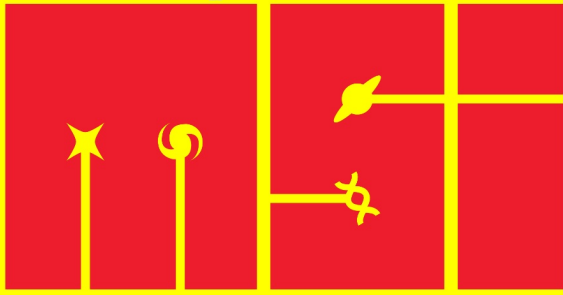


Institut Spatial de McGill



McGill Space Institute

SEMINAR SERIES

Seeing Through the Clouds: The Thermal Emission and Reflected Light of Super-Earths with Flat Transmission Spectra

Caroline Morley
UC Santa Cruz

Vast resources have been dedicated to characterizing the handful of planets with radii between Earth's and Neptune's that are accessible to current telescopes. Observations of their transmission spectra have been inconclusive and do not constrain the atmospheric composition. Of the approximately four small planets studied to date, all have radii in the near-IR consistent with being constant in wavelength, likely showing that these small planets are consistently enshrouded in thick hazes and clouds.

I will explore the types of clouds and hazes that can completely obscure transmission spectra. I will then show the effect that these thick clouds have on the thermal emission and reflected light spectra of small exoplanets. I present a path forward for understanding this class of small planets: by understanding the thermal emission and reflectivity of small planets, we can potentially break the degeneracies and better constrain the atmospheric compositions.

Tuesday Oct 6, 3:30 pm
MSI Conference Room, 3550 University

