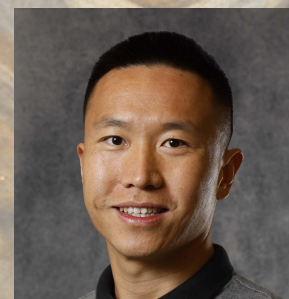


# Temporal and Spatial Variability of Ultra-Hot Jupiters

I will talk about recent developments in observing ultra-hot Jupiters (UHJs). For these close-in planets that are tidally-locked, their day-side temperatures are comparable to the coolest stars. In such extreme conditions, interesting phenomena happen, including strong winds that blow from the day-side to the night-side at speeds that have been seen in the solar system. More intriguingly, the wind speed is changing over time scales from weeks to years. Another unique phenomenon for UHJs is the detection of neutral and ionized atomic species (e.g., Fe and Fe<sup>+</sup>). The detection signal of the atomic species sometimes varies as a function of orbital phases, implying spatially inhomogeneous distribution due to varying physical and chemical conditions. In for conclusion, despite being firstly detected and studied almost three decades, hot Jupiters remain puzzling and continue offering opportunities to peering into physical processes under extreme conditions.

**Monday, October 21st**

2:30 - 3:30 p.m.

725 Commonwealth Ave | Room 502

**Ji Wang**

Ohio State University