

ASTROPHYSICS SEMINAR SERIES

Infrared light and the red dwarfs: HPF and the quest to understand our nearest neighbors

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12:30 pm - Rm 184 NSH

The lowest-mass stars, the so-called "M dwarfs", dominate the stellar population of the Solar neighborhood and the Galaxy as a whole. In addition to their proximity, their small masses and radii offer advantages for observational characterization of their planets. Indeed, the only chance for JWST to identify biosignatures in the atmosphere of a terrestrial planet will be for an M dwarf. To that end, we have developed the Habitable-zone Planet Finder (HPF) Spectrograph specifically to discover and characterize low-mass exoplanets orbiting M dwarfs. I will highlight some of the technological advances that went into this cutting-edge near-infrared spectrometer. Then, I will discuss the instrument's on-sky performance, and preview some early science results from commissioning observations.



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