



ID de Contribution: 67

Type: **Oral presentation**

Characterization of exoplanetary atmospheres with high resolution spectroscopy

Over the last decade, the field of exoplanet research and study has entered a new era of atmospheric characterisation, made possible by the development of detection methods based on high-resolution spectroscopy. The instrumental capabilities of *SPIRou*, the infrared spectropolarimeter installed at *CFHT*, allow us to provide new constraints on the composition and atmospheric dynamics of hot Jupiters, which represents a major challenge for our understanding of the formation and evolution of exoplanetary systems.

The objective of my PHD thesis is to develop and implement a complete pipeline of processing and analysis tools for the detection of molecules in the atmosphere of transiting exoplanets atmospheres, using high-resolution spectroscopy data and cross-correlation technics. During this talk, I will briefly present the methods commonly used to detect molecules in a transiting exoplanet spectra whose amplitude is several orders of magnitude below the stellar and earth signal contribution, and the atmospheric properties that can be inferred from it, using concrete examples of exoplanets that I have studied during the beginning of my PHD.

Field

Planetology (including small bodies and exoplanets)

Day constraints

I can present my talk on any of the 3 conference days, except for Thursday the 24th March afternoon due to lecture attending obligations.

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Classification de Session: Talk

Classification de thématique: Astrophysics