

---

# The data reduction challenges of very high contrast imaging: How to characterise exoplanets and circumstellar disks

Maud Langlois\*<sup>1</sup>

<sup>1</sup>Observatoire de Lyon – Observatoire de Lyon – France

## Résumé

The characterisation of exoplanets and circumstellar disks is a very active topic in astronomy that largely benefits from the new high contrast instrument SPHERE installed at the VLT/ESO. Several techniques are used to achieve this goal such as angular and spectral differential imaging, or differential polarimetry. Exoplanet and circumstellar disks detection by direct imaging or polarimetry require both dedicated instruments to mask out the host star using coronagraphy and very efficient image processing methods to remove instrumental artefacts. Data processing is particularly challenging because the exoplanet signal is very faint and hidden in a much stronger non-stationary background. I will present typical datasets from the SPHERE instrument and review the current algorithms in use that enable very high contrast detections.

---

\*Intervenant