

Characterizing Imaged Exoplanets with Integral Field Spectrographs: 20 Years of Discoveries

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Integral field spectrographs are now commonly used in ground-based and space-based observatories. The angular resolution and rich data diversity they provide allow to efficiently remove the stellar halo and access high-quality medium-resolution emission spectra of exoplanets.

I will present the latest results obtained with the "historical" VLT/SINFONI spectrograph (2006-2019) on the system Beta Pictoris b and HIP 65426b and show how the data offer to constrain the elemental abundances of these exoplanets. I will also present science verification observations with the most advanced VLT/ERIS IFU (first light in 2022) of a young planetary system in Taurus. In both cases, I will highlight the advantages of these instruments and illustrate the adaptations that are needed to adapt them to reach high contrasts.