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GIARPS/GRAVITY survey: broad-band 0.44-2.4 micron high-resolution spectra of T-Tauri and Herbig AeBe stars. Combining high spatial and high spectral resolution data to unveil the inner disc physics

jeudi 24 mai 2018 15:00 (20 minutes)

In this talk I will present the first results of our GIARPS survey of a sample of T-Tauri and Herbig AeBe stars ($\sim$ 100 objects), belonging to the GRAVITY/VLTI GTO sample of Young
Stellar Objects (YSOs).
GIARPS is a broad-band spectrometer combining HARPS-N and GIANO which allows obtaining high-resolution spectra from 0.44 micron (R $\sim$ 115000) to 2.44 micron (R $\sim$ 50000) in one shot.
By combining high spatial (milliarcsecond) and spectral (R $\sim$ 50000) observations, we will obtain an unprecedented view of the innermost regions of circumstellar discs in YSOs with a wide range of masses ($0.1 - 5 M_{\odot}$) and ages ($10^5 - 10^7$ yr).
The final goal is to model the accretion and ejection mechanisms and study how they evolve as a function of YSO mass and age, using the spatially- and spectrally-resolved observations of atomic and molecular lines from the inner gaseous regions.
The GIARPS survey has already been granted 4 nights at the TNG in December 2017, when a
first sample of 17 T-Tauri and Herbig AeBe stars were successfully
observed with GIARPS

Contribution

Talk

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