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Accretion variability and multiplicity

Thursday 28 August 2025 13:10 (40 minutes)

In this talk, I will summarize our current knowledge about accretion in multiple systems. I will talk about the structure of the circumstellar environment depending on the separation of the components and its potential effects on the disc-to-star accretion rate. I will discuss two special cases: one is that of the pulsed accretors. These are close spectroscopic SB2 binaries on eccentric orbit, where the accretion rate onto the central binary from the circumbinary disc is modulated at the orbital period, having a peak at periastron. The other special case is protostars with periodic variability typically seen at far-infrared or millimetre wavelengths. While the central object in these deeply embedded systems is hidden, they are believed to be binaries as well. I will show results from our optical-infrared accretion variability study of several T Tauri systems, both single stars and binaries. Finally, I will discuss the effect of variable accretion on the disc properties and, consequently, its potential influence on the planet-forming material.

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Session Classification: Accretion and variability in multiple systems