

## **The very early phases of star formation**

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In this talk I will illustrate how important is the spatial resolution in the far-infrared spectrum to observe a star in the very early phase of its birth. The formation of an optically thick core in the centre of a collapsing cloud, the so-called first hydrostatic core (FHSC), can be considered the  $t_0$  in the star lifetime. The FHSC phase is very short, making it difficult to catch an object passing through this phase; but beside that, for this class of objects we face the difficulty to observe the inner parts of an FHSC which require a resolution well below 1 arcsec at wavelengths of  $\sim 100 \mu\text{m}$ . After a brief introduction on the FHSCs and on their importance for the star-formation theory, I will show what kind of observations can be done with a space interferometry.