INAF
ISTITUTO NAZIONALE
DI ASTROFISICA

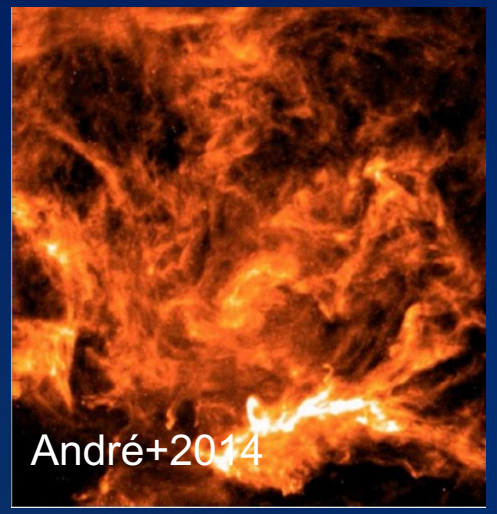
OSSERVATORIO ASTROFISICO DI ARCETRI

Understanding the origin of stars with HWO

GERMANO SACCO

The formation of stars: parsec scale

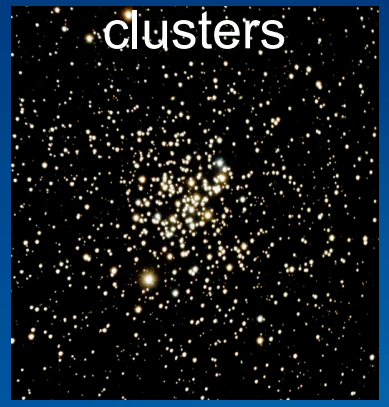
Filaments



< 1 Myr

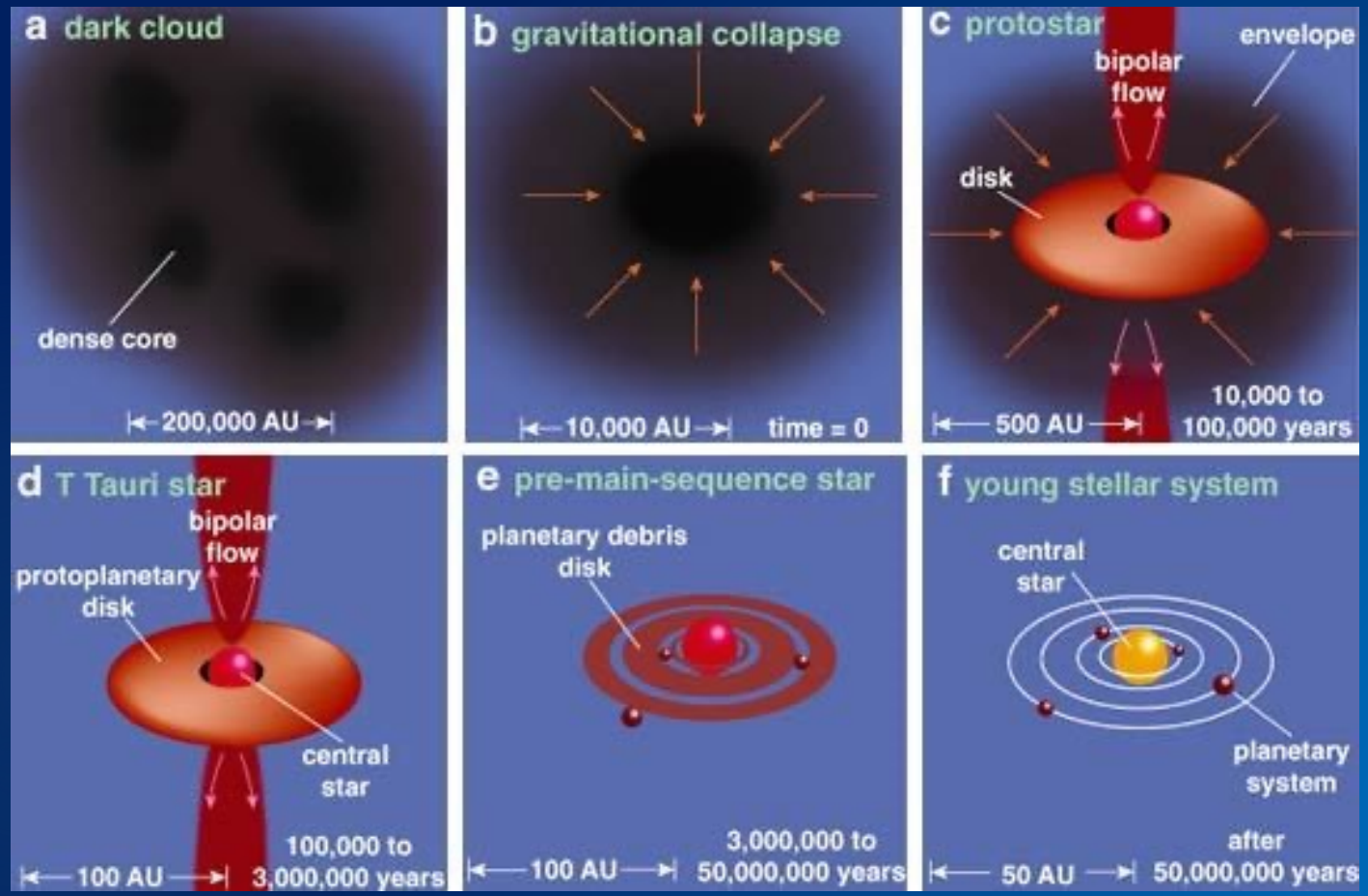
Stars and Gas

1-10 Myr

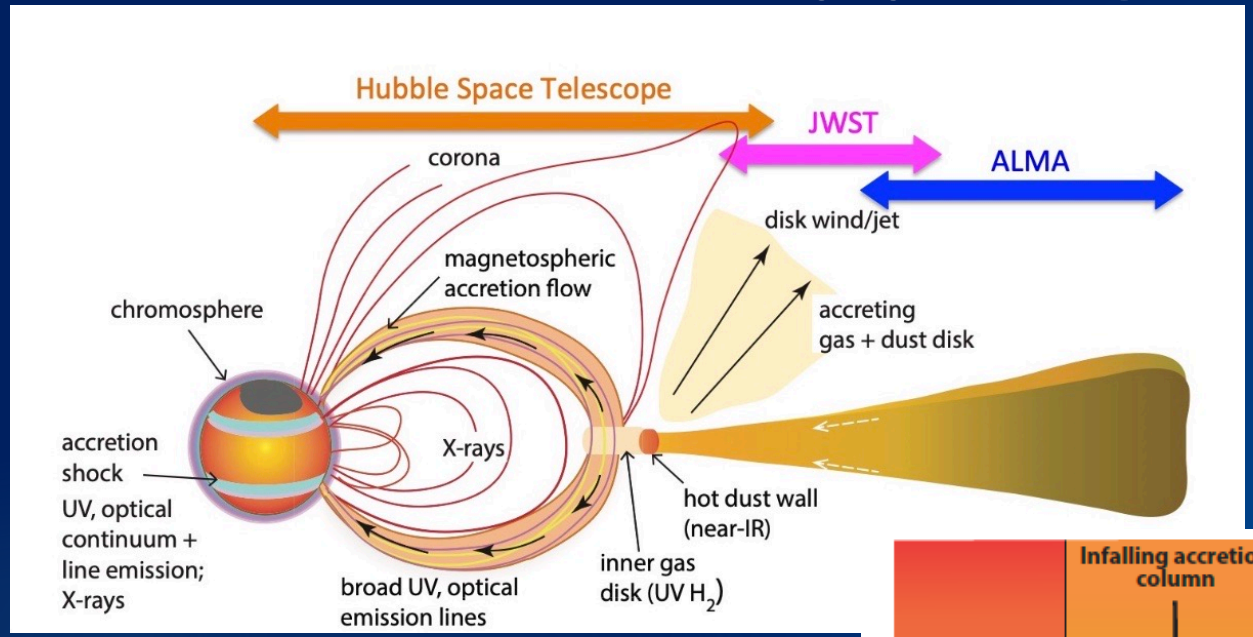


>100 Myr

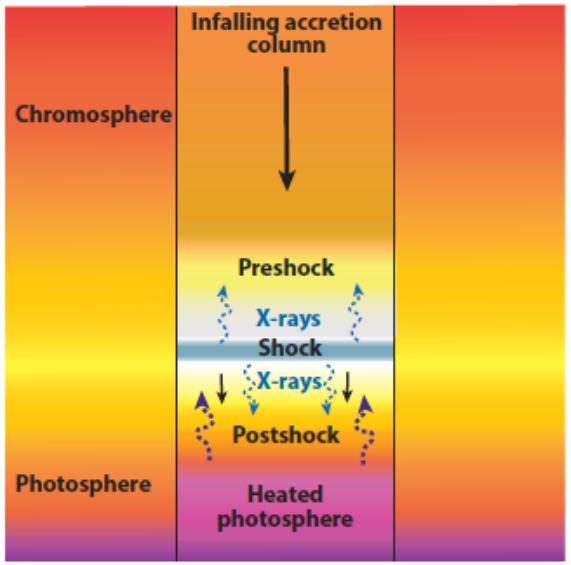
The formation of stars: AU scale

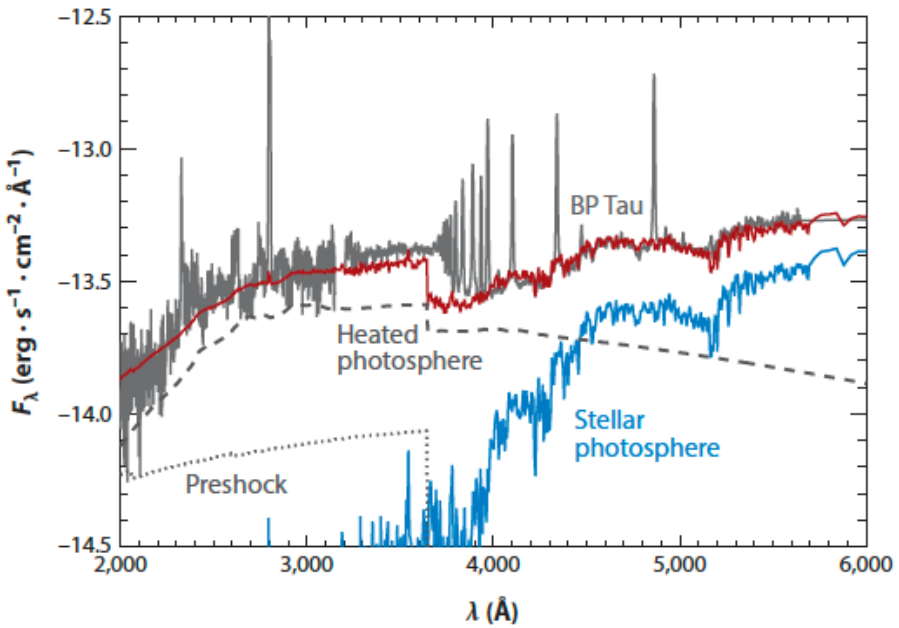


How do we study young stars



(Hartmann+2016)



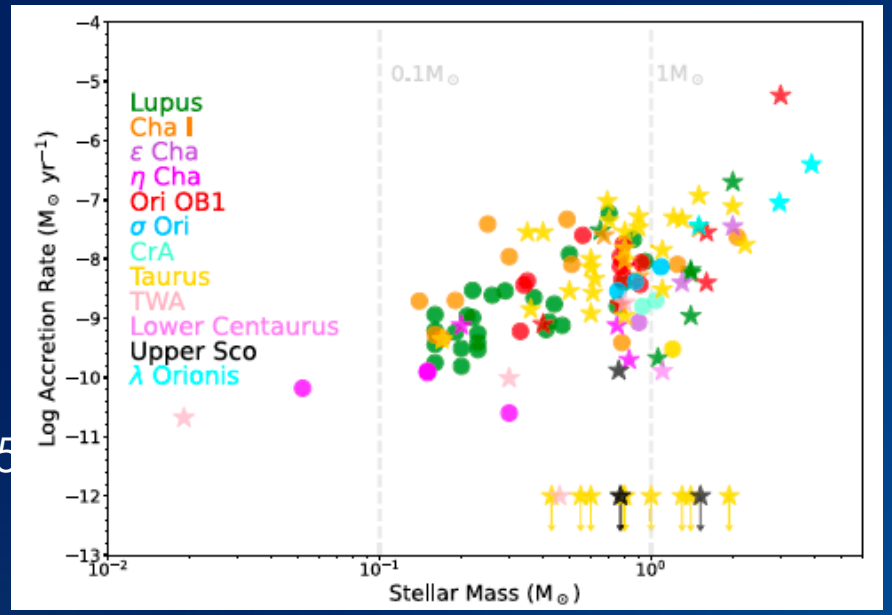


UV observations are critical to probe the stars

Towards a multi-wavelength view of local star formation

ULLYSES

(Roman-Duval+ 2025



HST legacy Survey of low mass young stars in the solar neighborhood

Limitations of the current observational scenaro

Star formation in massive star forming regions

Star Formation at low metallicity

Goal: Investigating star formation at different scales in a low metallicity environment.
Potential Synergies: SKAO

Requirements

- G <23 mag
- Resolution 5000
- IFS (clusters)+fibers
- It will benefit from an extension in the NIR

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