

T-Tauri Stars

Presentation by:

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T- Tauri

- Named after prototype
T-Tauri in Taurus
- October 1852
- John Hind



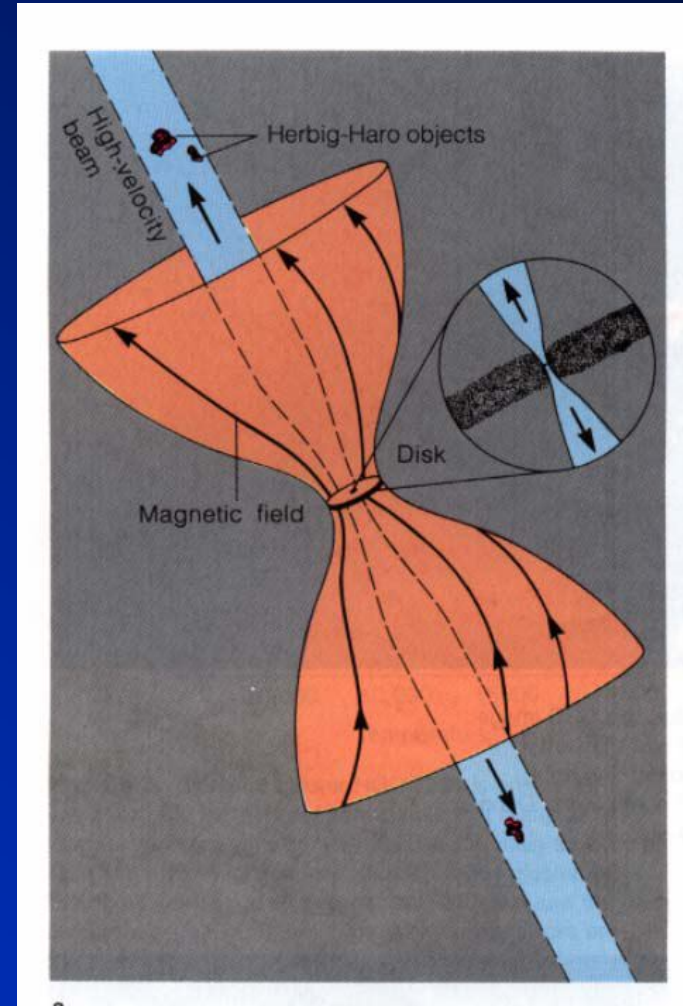
T-Tauri

Where are we on the evolution line?

- Dense part of the cloud collapses faster
- $t_{\text{ff}} \sim (\rho)^{-1/2}$
- Left over accretes on protostar
- $10^5 - 10^6$ yr

Properties

- < 2 Solar Masses
- Pre-main sequence
 - Accretion disk
 - Stellar wind
 - Bipolar flow
- Gravitational energy
 - Eddington luminosity: $L = \frac{4\pi GCM}{k}$
- Lower mass limit



Spectroscopy

- Balmer lines and Ca, H and K lines
 - Lithium
- Weak Line T Tauri Stars
- Classical T Tauri Stars
 - H Alpha

How can they be found?

- Not very common
- 500 known T-TS
- Hidden by Nebula
 - Infrared

Sources

- <http://www.astro.up.pt/~dfmf/Thesis/Hypertext/node5.html>
- <http://www.daviddarling.info/encyclopedia/T/TTauri.html>
- http://www.daviddarling.info/encyclopedia/T/T_Tauri.html
- <http://www.astro.up.pt/~dfmf/Thesis/Hypertext/node5.html>
- <http://jersey.uoregon.edu/~imamura/208/feb15/tauri.html>