

<http://www.youtube.com/watch?NR=1&v=WHayW92PjCA>

Interstellar Medium and Star Birth



Learning goals (based on textbook coverage)

16.1 Stellar Nurseries

✓ Where do stars form?

- interstellar medium - how gas and dust clouds can look so different
- star-forming clouds - giant molecular clouds
- interstellar dust

✓ Why do stars form?

- gravity vs pressure - collision of molecular clouds, SN blast
- preventing pressure build-up - radiation of 1/2 of energy
- formation of clusters - video
- fragmentation of molecular cloud

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16.2 Stages of star birth - How stars form

✓ What slows contraction?

- trapping of thermal energy in a protostar
- growth of protostar by gas infall - inside out growth

✓ What role does rotation play in star birth?

- protostellar disks (accretion disk)
- protostellar jets

✓ When does nuclear fusion start in a newborn star?

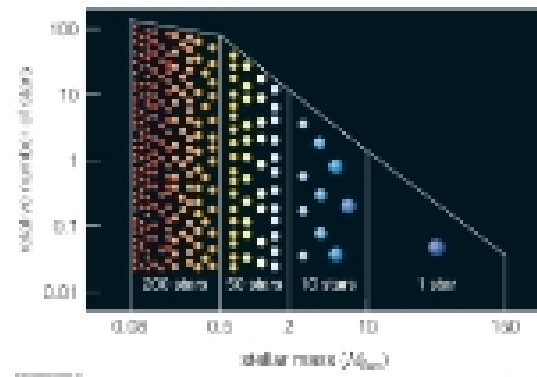
- protostar to main sequence - luminosity from contraction
- surface of protostar - constant temperature maintained
- birth stages on a life track

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16.3 Masses of newborn stars

✓ What are the range of masses of stars?

- Smallest and largest masses possible
- Typical masses?



What our Milky Way probably looks like

