**Red, Grey, or Blue?**  
**The Reflectance Spectra of Circumstellar Disks**

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**Spatially Resolved Spectroscopy of Circumstellar Disks**

- High contrast imaging allows resolved spectrophotometry of nearby disks.
- Reflectance spectra can give composition and grain properties.
- Most disks imaged in 1-2 wavelengths.

Schneider et al., 1999
**SEARCHING FOR ICE**

- HST program to observe well known resolved disks in four filters
  - F171M, F180M, F204M, F222M
- The filters probe water ice, methane absorption

**SCATTERED LIGHT BASICS**

\[ S = \frac{F \tau \omega \Phi}{4\pi R^2} \]

\[ F_d/F \propto \Theta_{sca} \]
Spectral Models

Best fit model for tholins:
- $r_{\text{min}} = 6.4 \mu\text{m}$
- $r_{\text{max}} = 100 \mu\text{m}$
- $X_\nu = 0.5$

See also Ardila et al., 2007 astro-ph/07041507

HD 100546

See also Ardila et al., 2007 astro-ph/07041507
We have three other target disks, are there any trends?

Spatially resolved spectroscopy, in concert with polarimetry, will provide constraints on dust (see posters by Hines, Fukagawa)

Simple grisms/spectrographs with coronagraphs could allow for more sophisticated models