

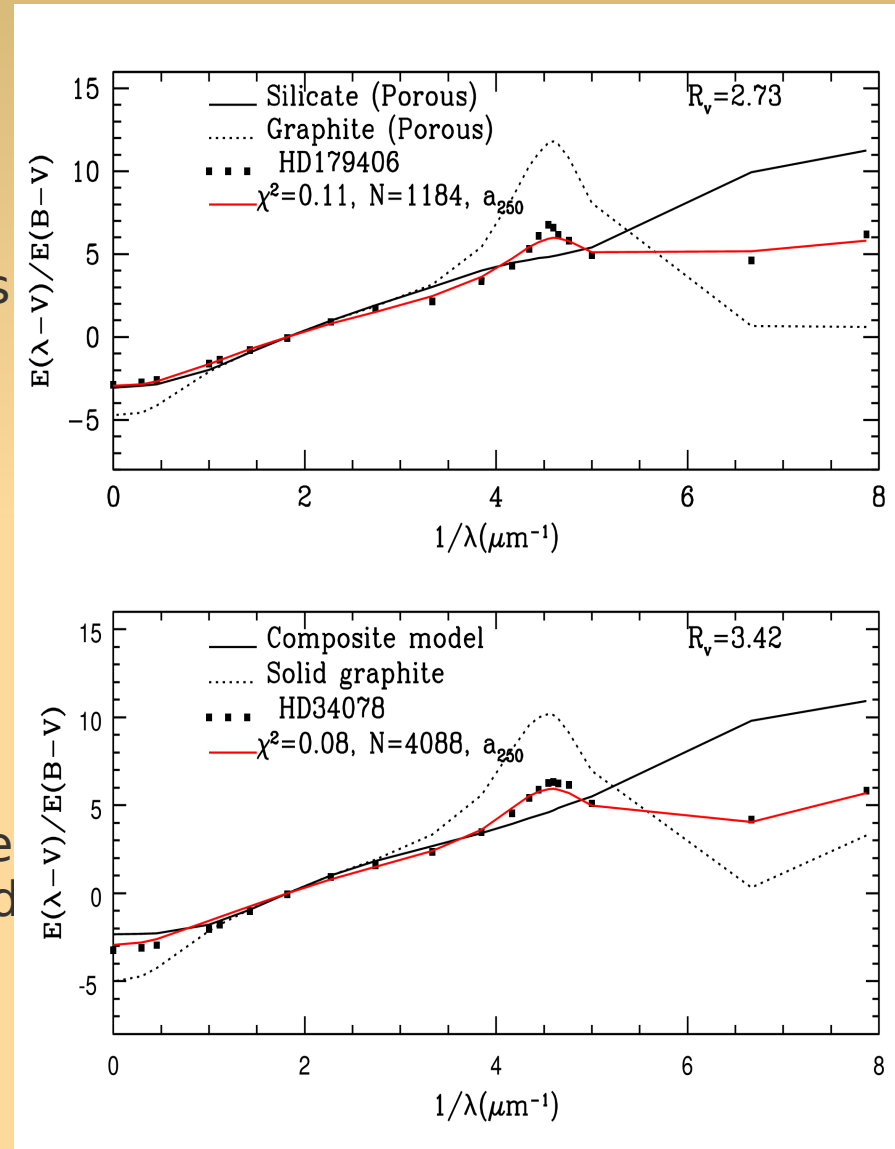
Interstellar Dust Models towards some IUE stars

Nisha Katyal¹, Ranjan Gupta¹, D B Vaidya²

¹Inter University centre for Astronomy and Astrophysics (IUCAA), Pune, India

²ICCSIR, Ahmedabad, India

- We study the extinction properties of 26 IUE stars lying in various dust environments. Variation in shape of extinction curves provides insight about grains along the sight lines.
- These stars are modeled with the help of porous and composite spheroidal grain models generated using DDA.
- Composite spheroidal grain models, with axial ratios 1.33 & 2.00 and volume fraction of inclusions 0.1-0.3, fit 14 observed extinction curves reasonably well (eg. HD34078).
- The porous spheroidal grain models with different porosities viz. $P=0, 0.5$ & 0.7 and same axial ratio ($AR=1.33$) fit the remaining observed extinction curves quite satisfactorily (eg. HD179406).
- From the sample of 26 observed IUE stars, about 88% fit the model curves with larger size distribution, $a=0.005-0.250\mu$ (a_{250}).



Fitting of observed extinction using two different types of models viz porous and composite model.