



# RED DWARF

UPDATE

with your host

Dave "Lister" Berger



LESIA





# Dwarfish Doings

- *April '06: CHRAA Classic observing*
- *June '06: CHARA IV published in ApJ*
- *July '06: CHARA Classic observing*
- *Nov '06: contributed talk at Cool Stars Conference*
- *Nov '06: CHARA FLUOR observing*
- *Feb '07: Sky and Telescope feature article w/ Jason and Nils*



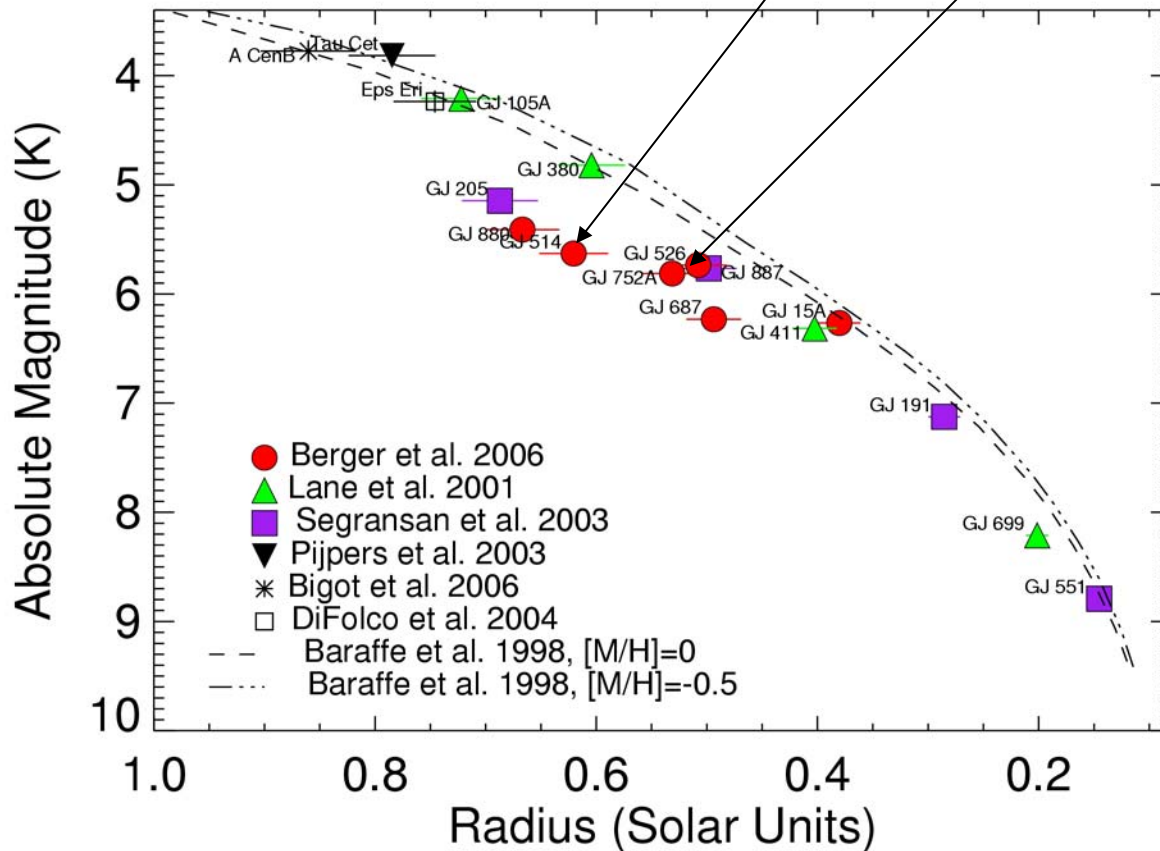


# Time Allocations

“Confirming the Angular Sizes of M-Dwarfs GJ 514 and GJ 526”

Berger (Michigan), **ten Brummelaar** (CHARA), Henry & Gies (GSU)

Allocation: 3 nights, 2006 April 17-19





# Time Allocations

“Stellar Diameters of K- and M-type Main Sequence Stars”

Berger (Michigan), van Belle (MSC), Gies & Henry (GSU)

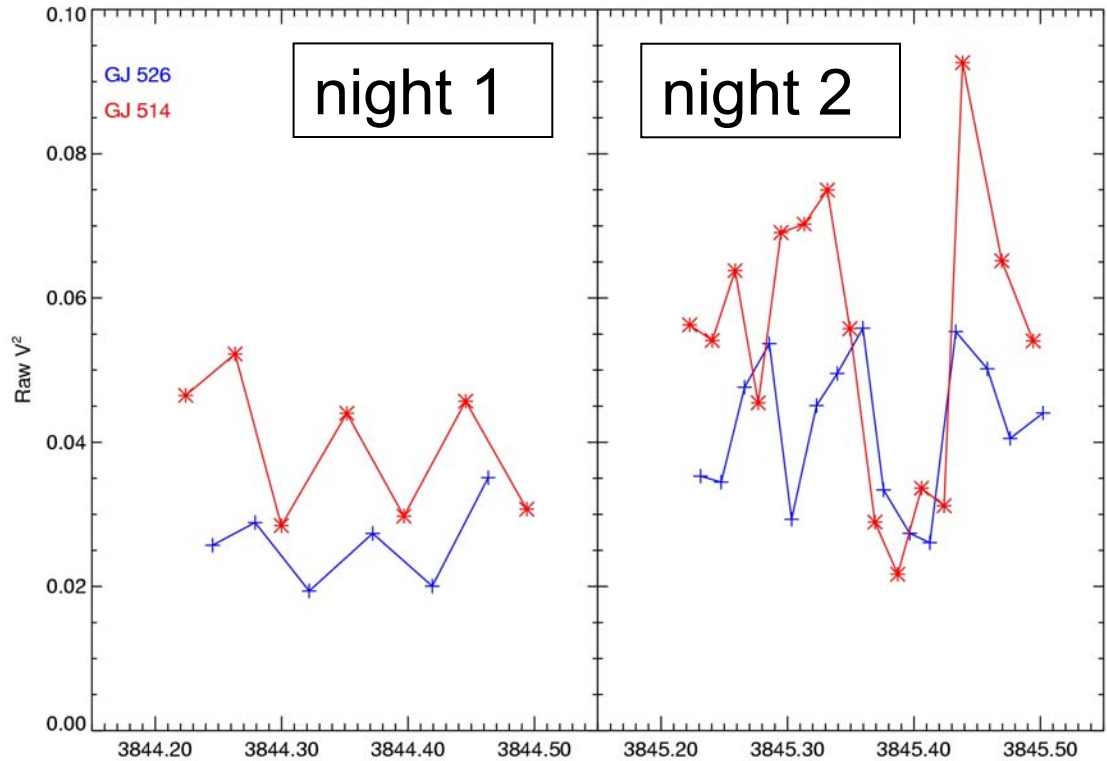
Allocation: 6 nights, 2006 July 21-26





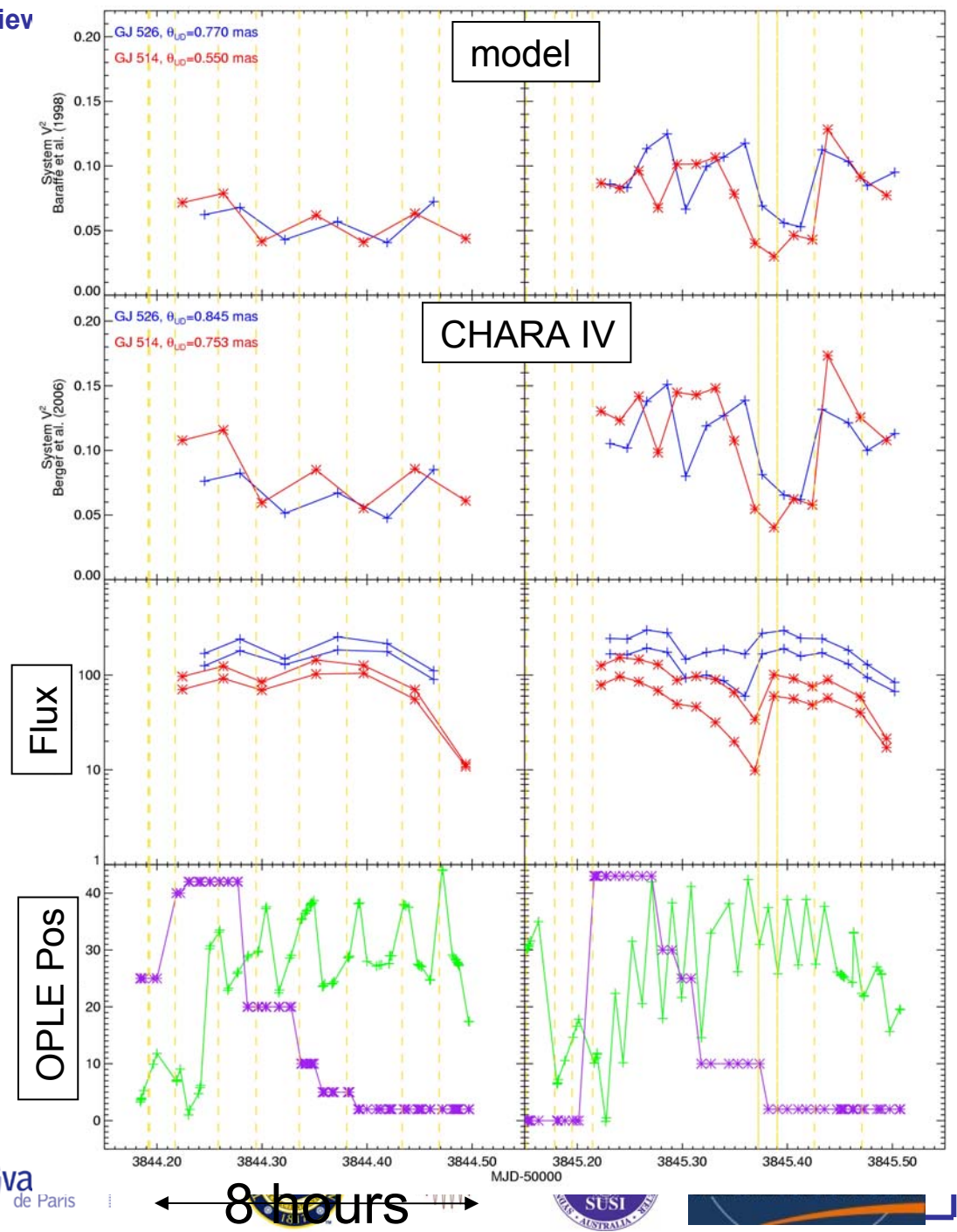
# GJ 514 and GJ 526

- confirm CHARA IV: similar K-band luminosities and metallicities, but different linear and angular sizes
- not predicted by models
- $\rho \sim 6^\circ \rightarrow$  similar transfer function
- 2 out of 3 nights of data
- error bars  $\sim 5\%$
- S1/E1, Ks-band





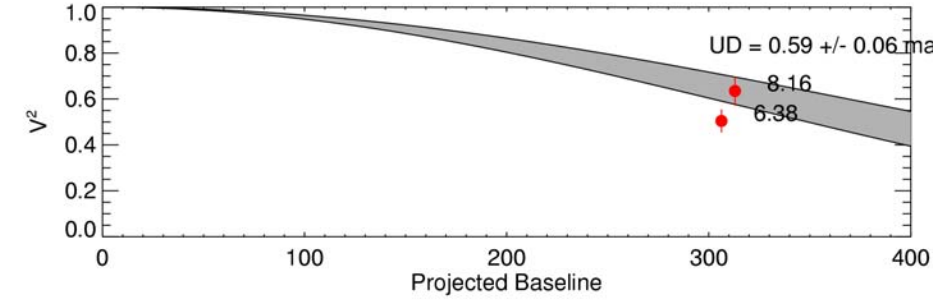
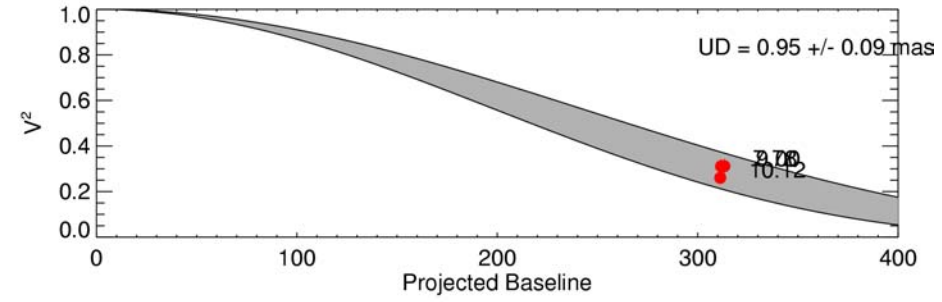
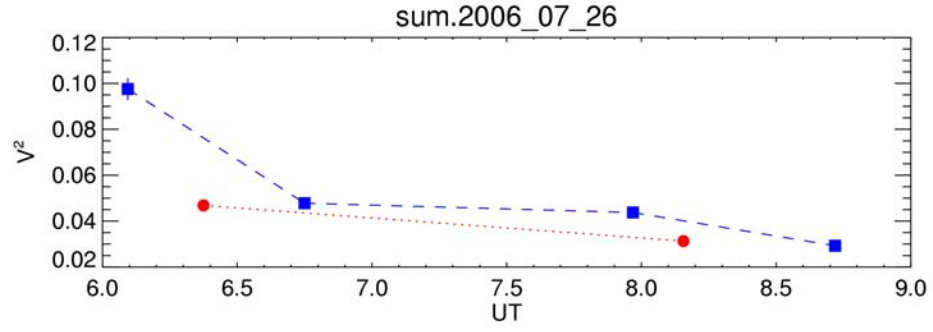
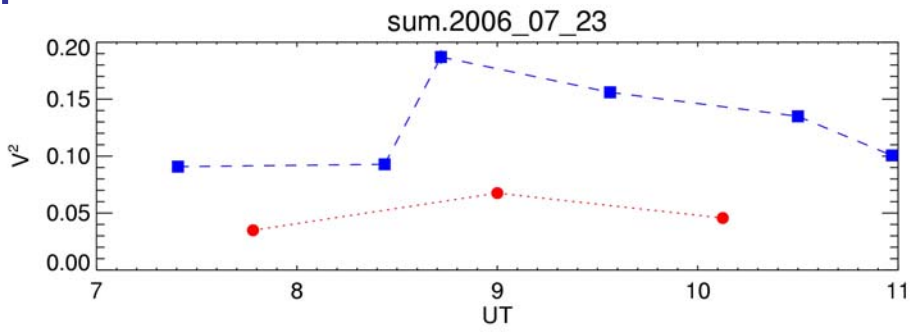
- transfer functions overlap better using model values
- however, systematics dominate
- beware of the NIRO alignment!
- 35-min offset - field rotation?
- best observing practices?





# GJ 725A & B

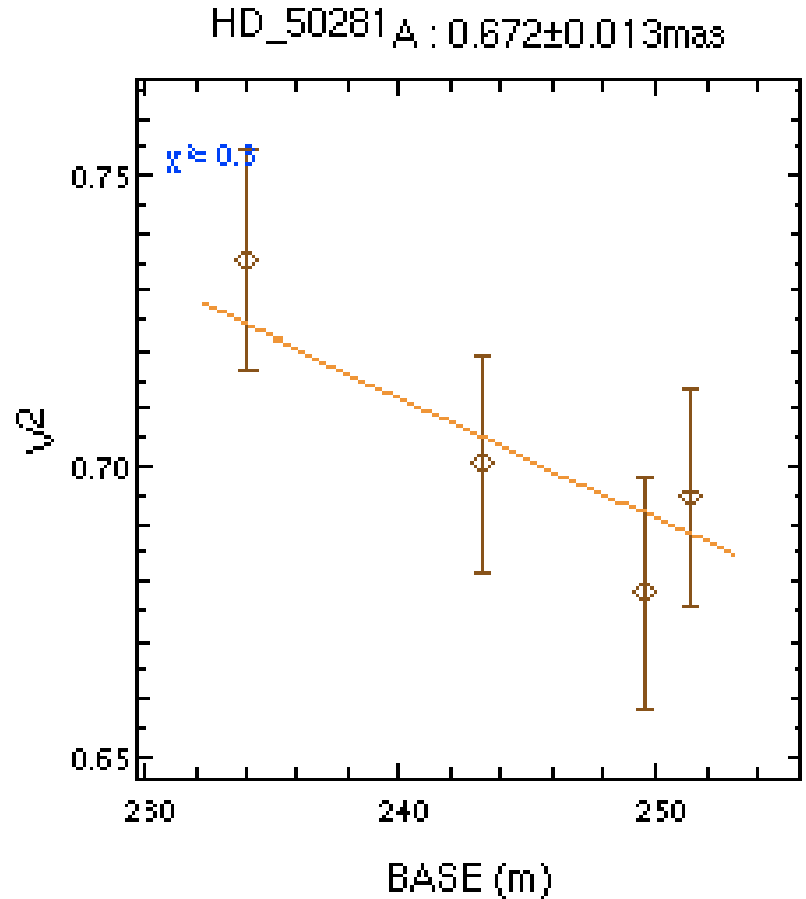
- M3V and M3.5V,  $r=12.5''$ , CPM binary, low metallicity  $[Fe/H]\sim-0.3$
- poor weather/tech issues; 2 of 6 nights were marginal
- Calibrators: no fringes on one and the other *may* be an SB2 (Brian and Bill are on the case)





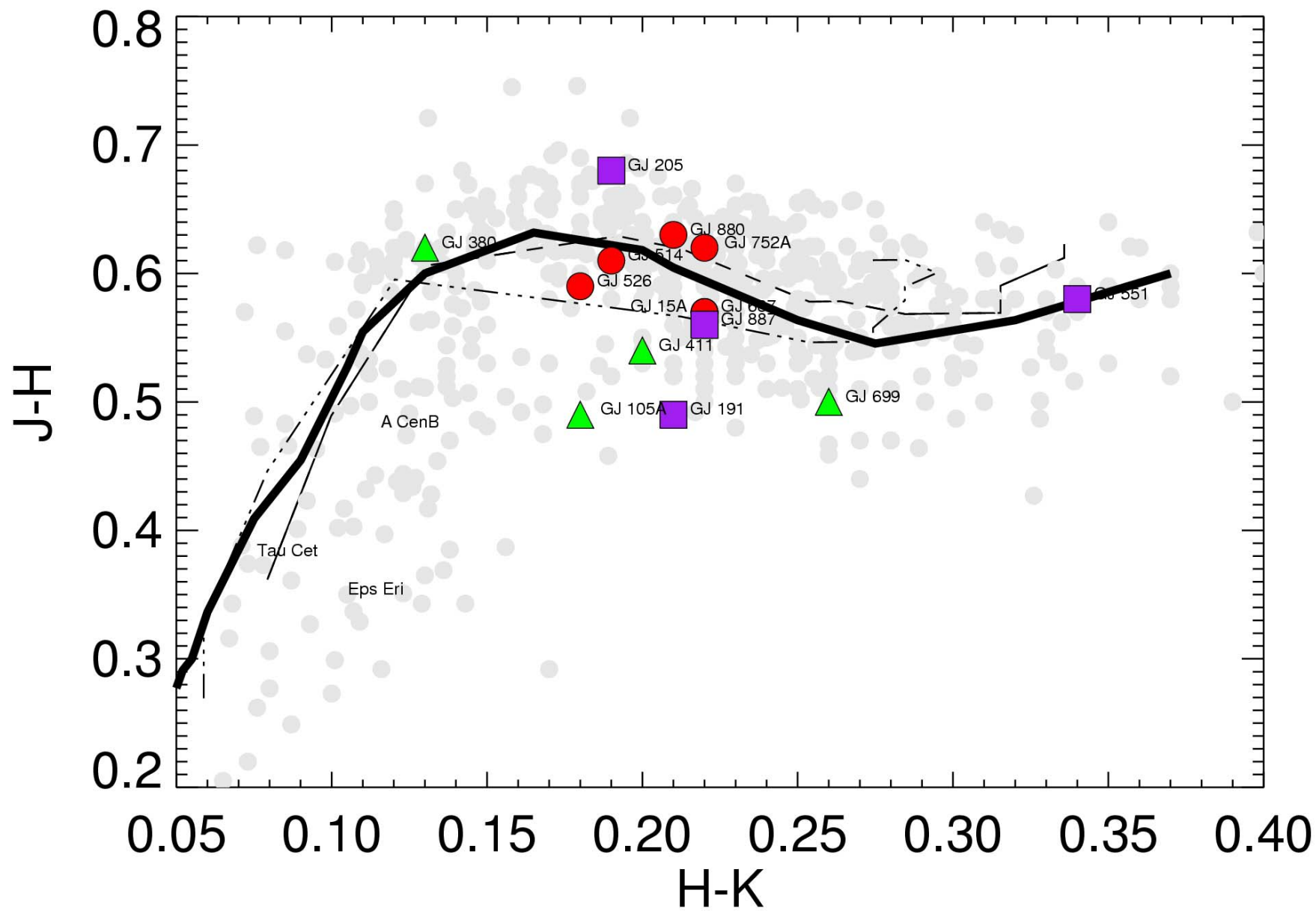
# GJ 250A

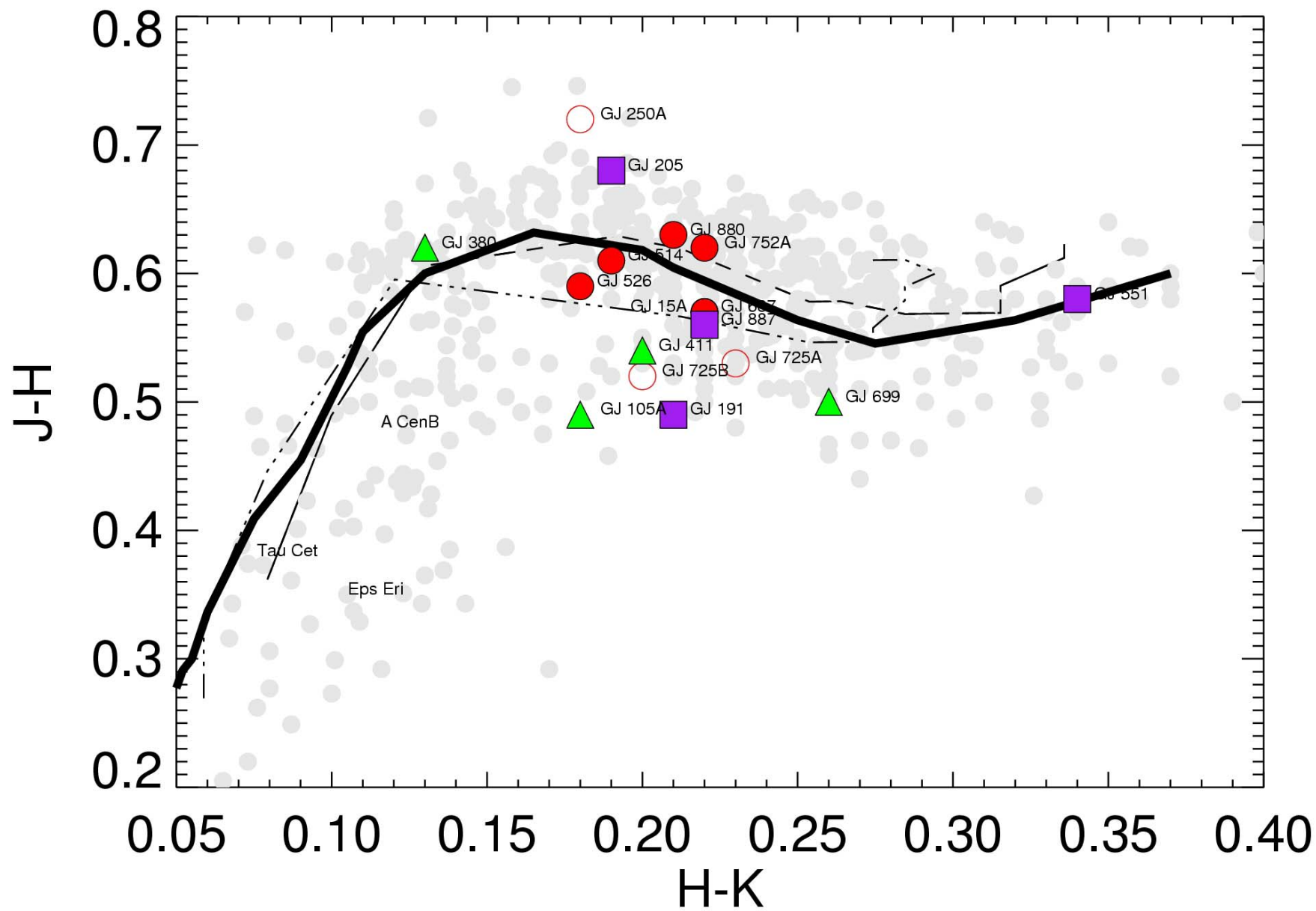
- K3V,  $m_K=4.17$ ,  $[Fe/H]=-0.15$
- NICMOS chip collateral damage
- Antoine salvages the run with several calibrated points (FLUOR+NIRO)
- $UD=0.672\pm 0.013$  mas
- using Hipparchos plx:  $R=0.66 R_{sun}$

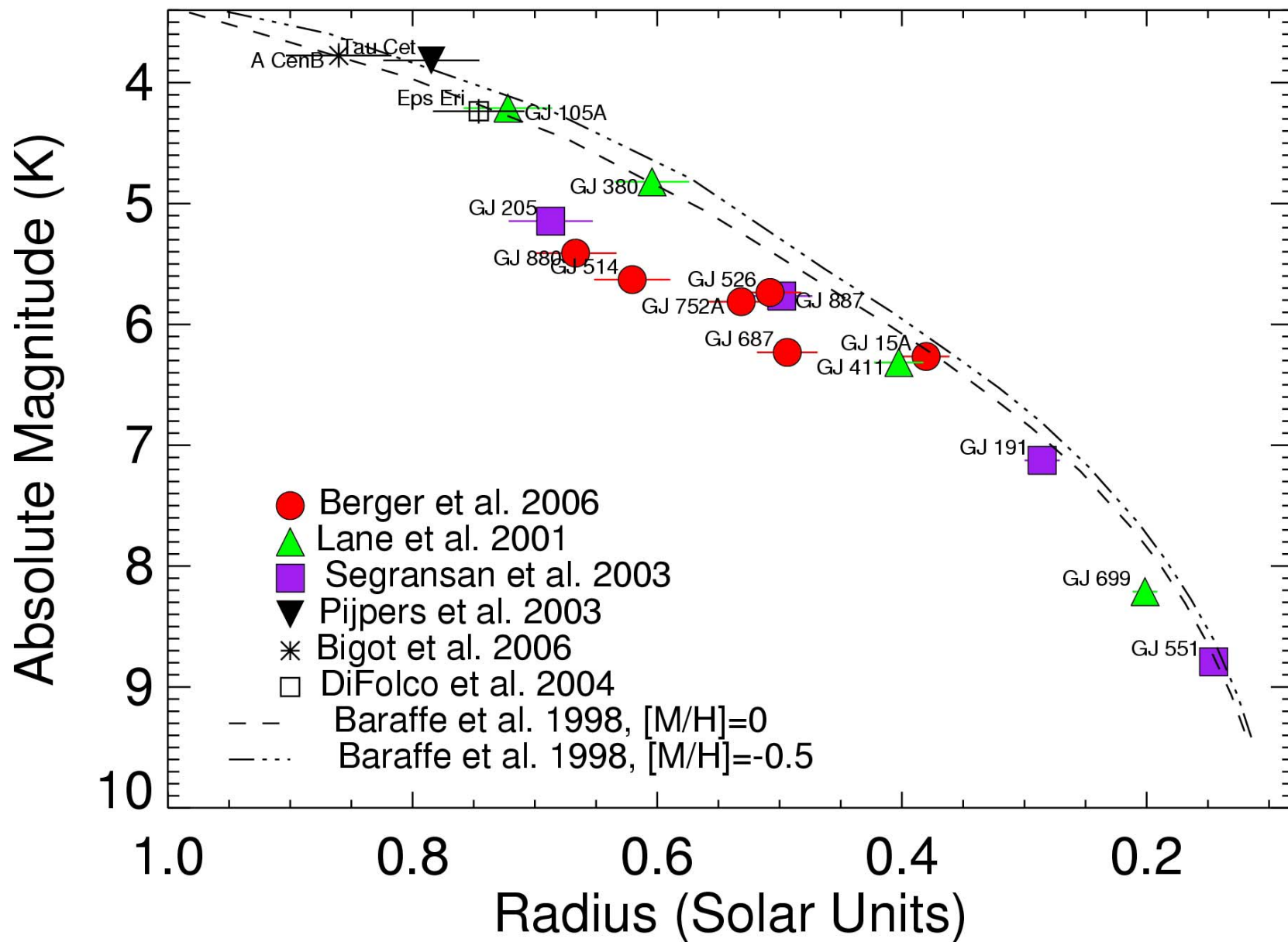


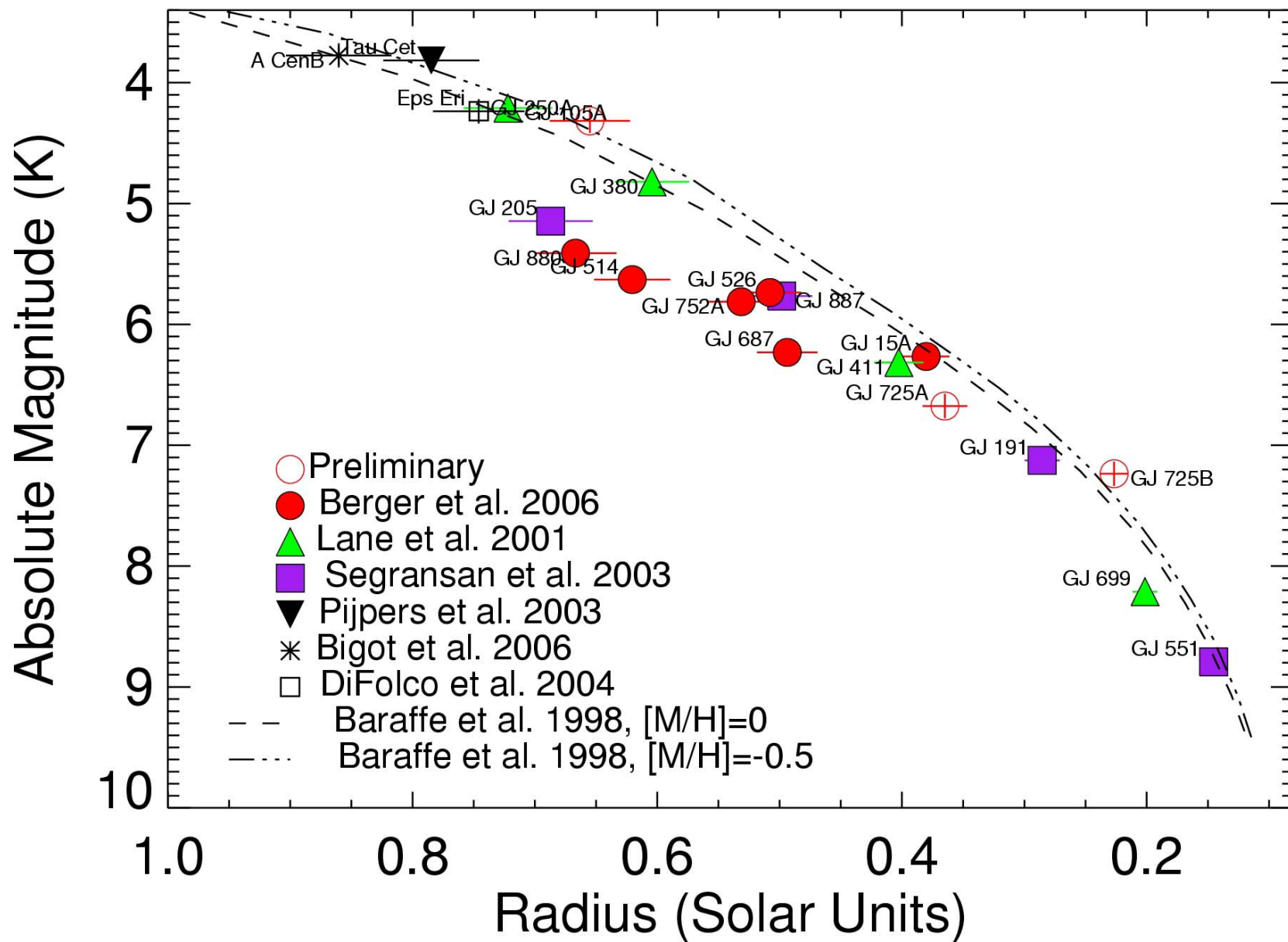
graphic courtesy Antoine Merand









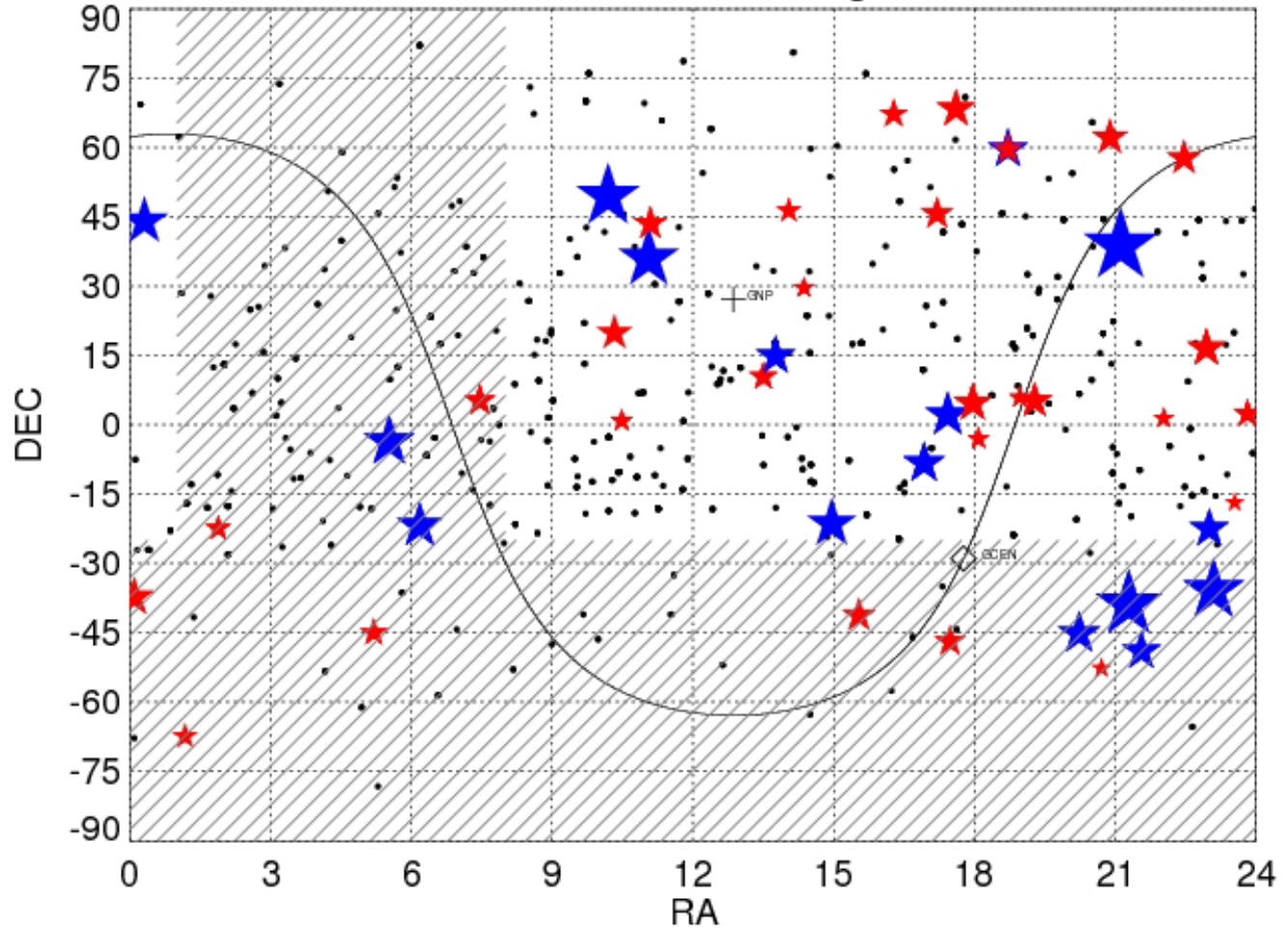




# The Future

- 6 nights allocated for 2007-1
- CHARA Classic in H and K band (yeah for J?)
- next year: VEGA? CHAMP + MIRC?

NStars/CHARA Targets





# ENJOY THE SNOW! THANKS FOR A GREAT MEETING!

