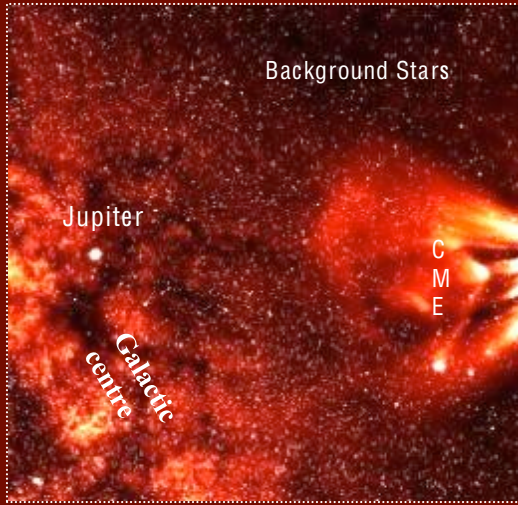


# STRESS

## STEREO TRansiting Exoplanet and Stellar Survey

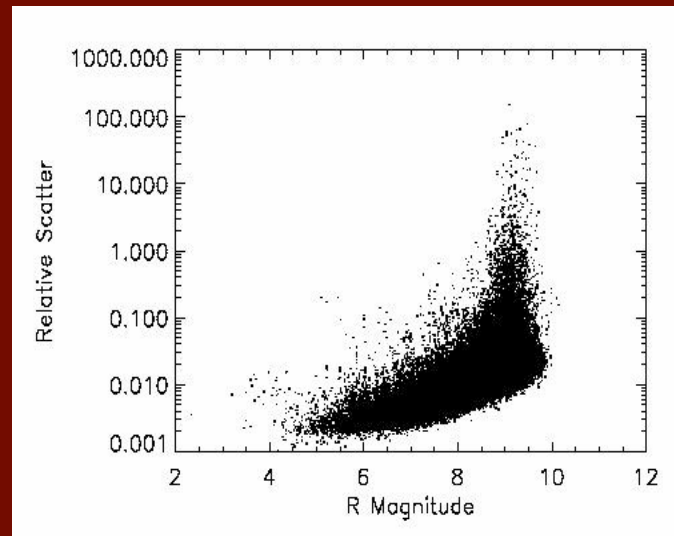
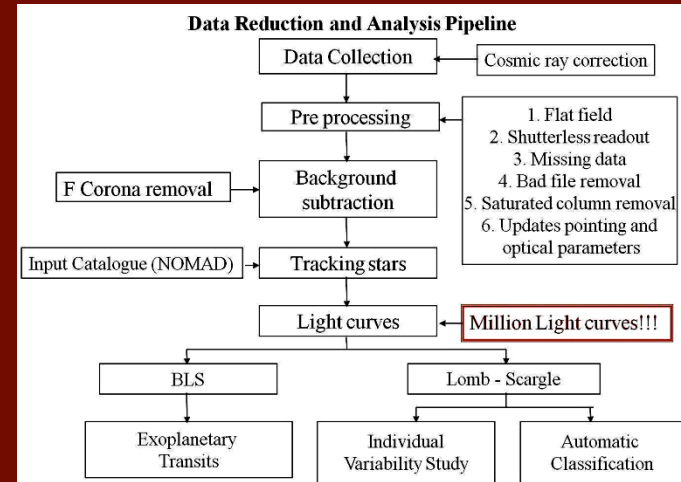
Vinothini Sangaralingam, Ian Stevens

School of Physics and Astronomy, University of Birmingham, UK.



	HI - 1	HI - 2
Field of view	20° X 20°	70° X 70°
Plate scale	35.15"/pixel	2.05"/pixel
Cadence	40 min	2 hours
Passband	6500Å - 7500Å	4000Å - 10000Å

HI-1A image showing a CME, the Galactic centre and Jupiter.



- A plot of Relative scatter in the lightcurves against R magnitude :

Lower cut-off of the scatter

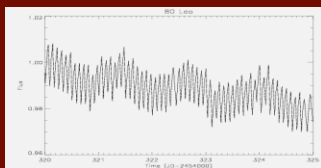
< 1 %, Rmag < 9.

~ few % , fainter than 9th mag.

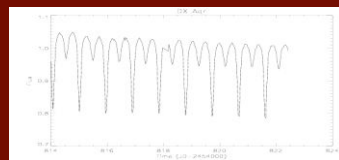
- Nyquist frequency – 18 cycles/day
- Suitable for study of variables like  $\beta$  Cepheid,  $\delta$  Scuti,  $\gamma$  Doradus and exoplanetary transits.
- Not for short period variables like the ro-AP stars or longer period Cepheids.

# Stellar Variability Results :

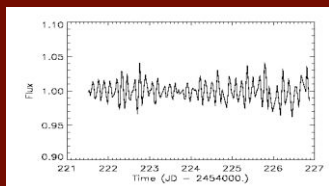
## Known Variables



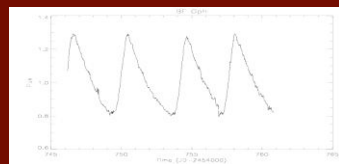
80 Leo –  $\gamma$  Dor –  
V : 6.37 – A0



DX Aqr – Eclipsing  
Binary – V : 6.3 – A0/A1



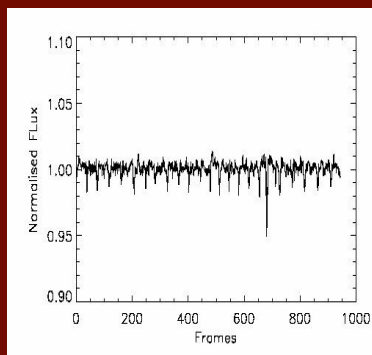
44 Tau –  $\delta$  Scuti –  
V : 5.3 – F2



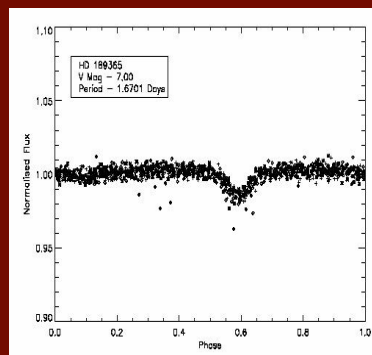
BF Oph – delta Cepheid –  
V : 7.3 – G0

## Transit Search Results:<sup>2</sup>

### HD 189365 :

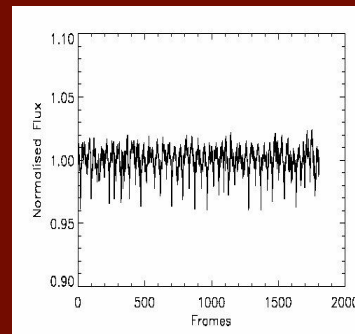


V Mag : 7.00  
Type : K0



Found Period : 1.6701 Days

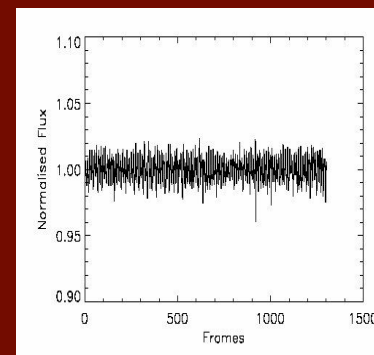
### HD 13018 :



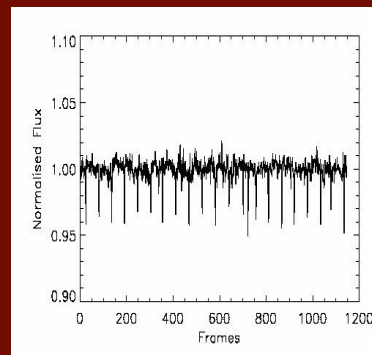
V Mag : 6.7  
Type : A3  
Found Period :  
Binary : 2.574 Days  
 $\delta$  Scu – 0.05 Days

### HD 219256 :

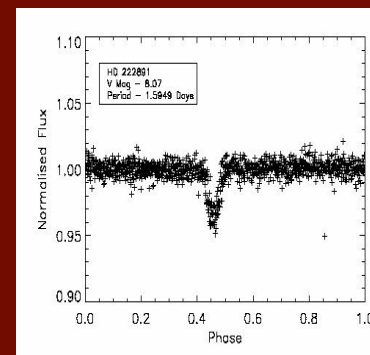
V Mag : 7.53  
Type : A3  
Found Period :  
2.977 Days  
Unconfirmed but suspected  
variable (Koen & Eyer, 2002).



### HD 222891 :



V Mag : 8.07  
Type : F8



Found Period : 1.5949 Days