

## Observing facilities at ARIES (Devasthal, India):

the 3.6m DOT and the  
4m ILMT telescopes

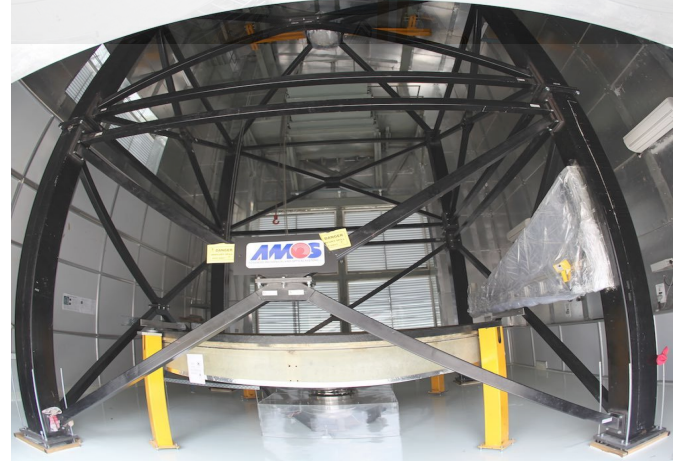
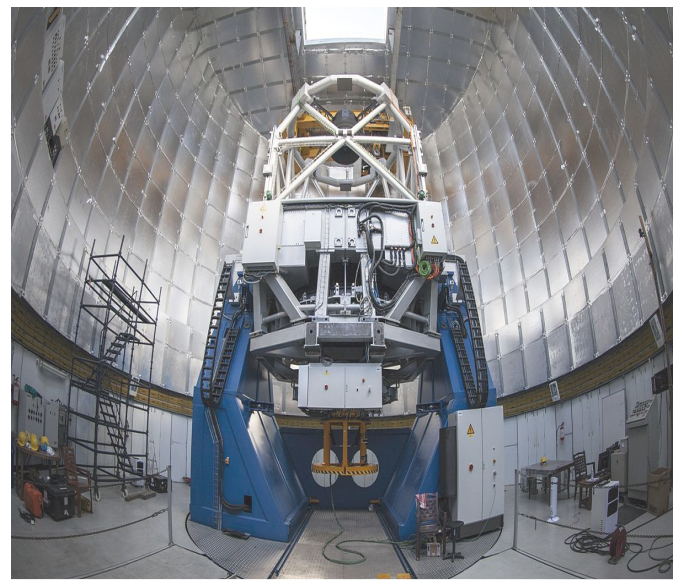
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PhD. in Space science

Promoter : Prof. Jean Surdej

# Outline

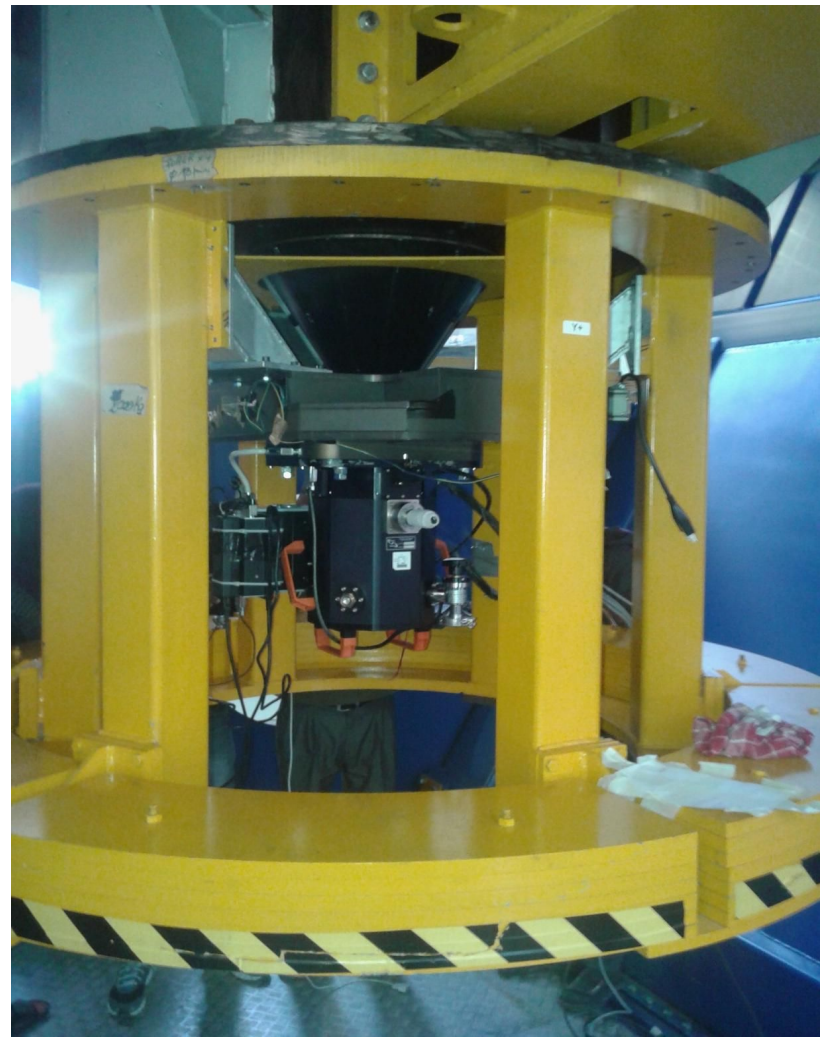
1. Available instruments at 3.6m Devasthal Optical Telescope (DOT)
  - a. 4Kx4K CCD Imager
  - b. TIRCAM2 (TIFR Near Infrared Imaging Camera - II)
2. 4m International Liquid Mirror Telescope (ILMT)



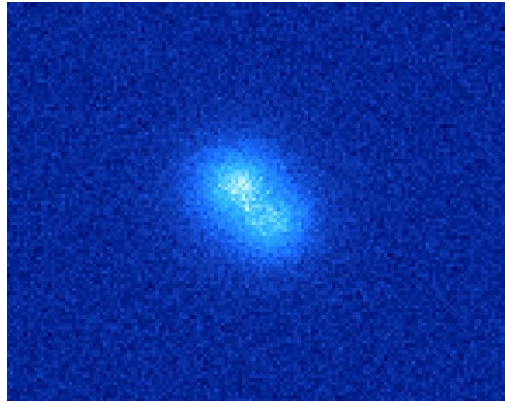
4k X 4k CCD Imager

## 4k X 4k CCD Imager

1. 6.5x6.5 arc-min of FoV
  - a. *0.1 arc-sec / pixel*
2. Median seeing of 1.1 arc-sec
  - a. *Best seeing ~ 0.6 arc-sec*
3. Customizable Gain, Binning and read-out speed
4. Standard Bessel and SDSS filters
  - a. *3600 Å --- 8900 Å*



LQAC\_243+017\_006



← 4.8" →

TIRCAM2 (TIFR Near Infrared Imaging Camera - II)



# TIRCAM2

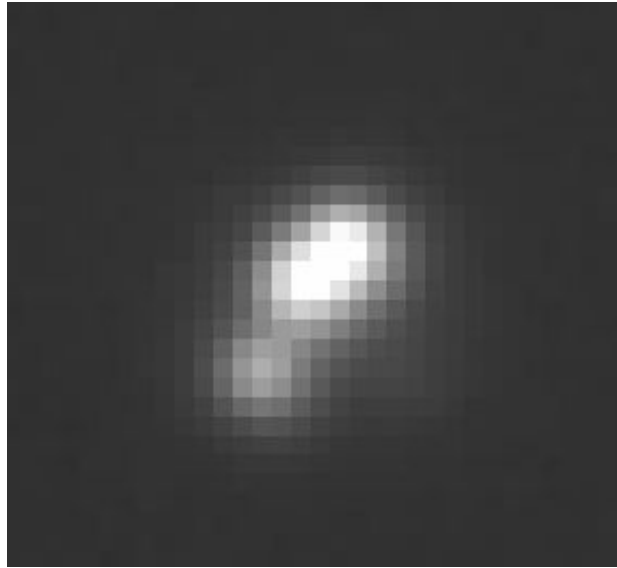
1. 512 x 512 InSb Aladdin III  
Quadrant focal plane array 86.5 x  
86.5 arcsec<sup>2</sup> .
2. 0.169 arcsec/pixel
  - a. Median seeing of 1.2 arc-sec
3. standard NIR filters
  - a. J, H, K, Kcont, Br-Gamma,  
PAH and nbL



Source :

*"Prospects for star formation studies with infrared instruments (TIRCAM2 and TANSPEC) on 3.6-meter Devasthal Optical Telescope", Ojha et. al, 2016*

QSO B1422+231



2.5"

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# Upcoming Facilities

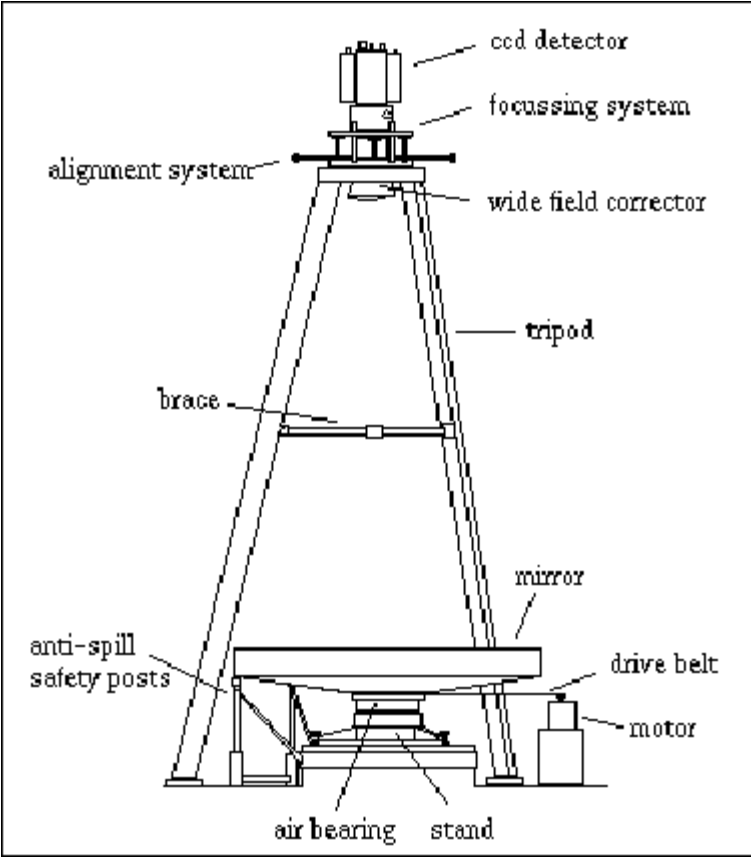
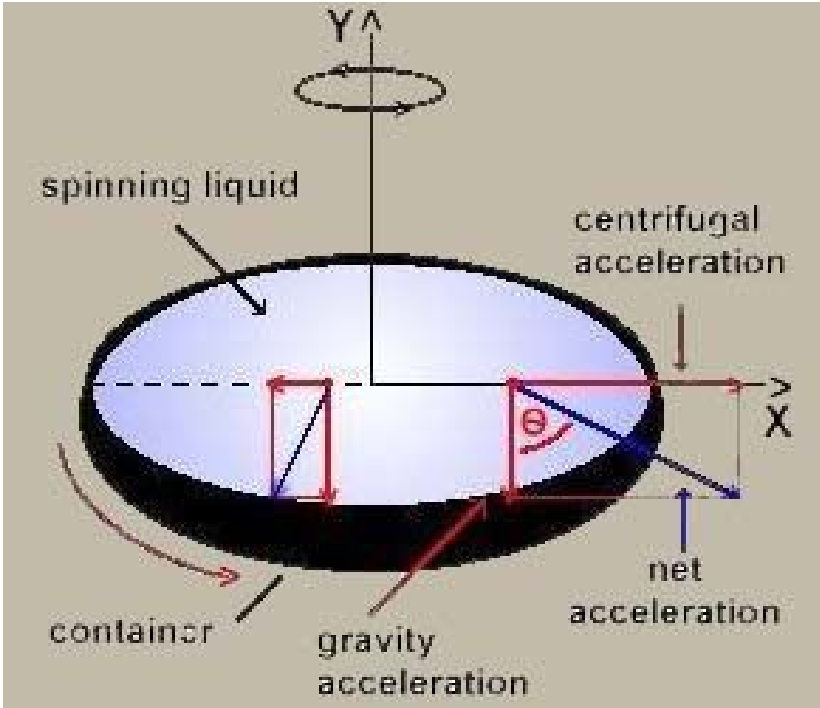
**FOSC (Faint Object Spectrograph Camera)**

**TANSPEC (TIFR-ARIES Near Infrared Spectrometer)**



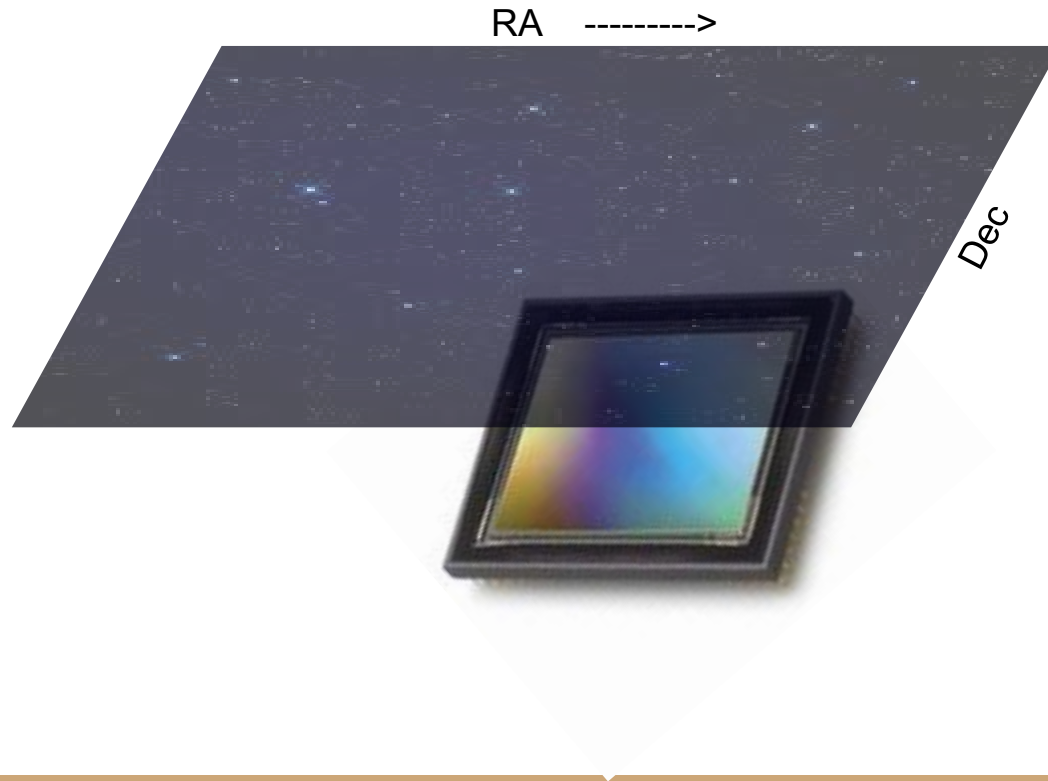
# 4m International Liquid Mirror Telescope

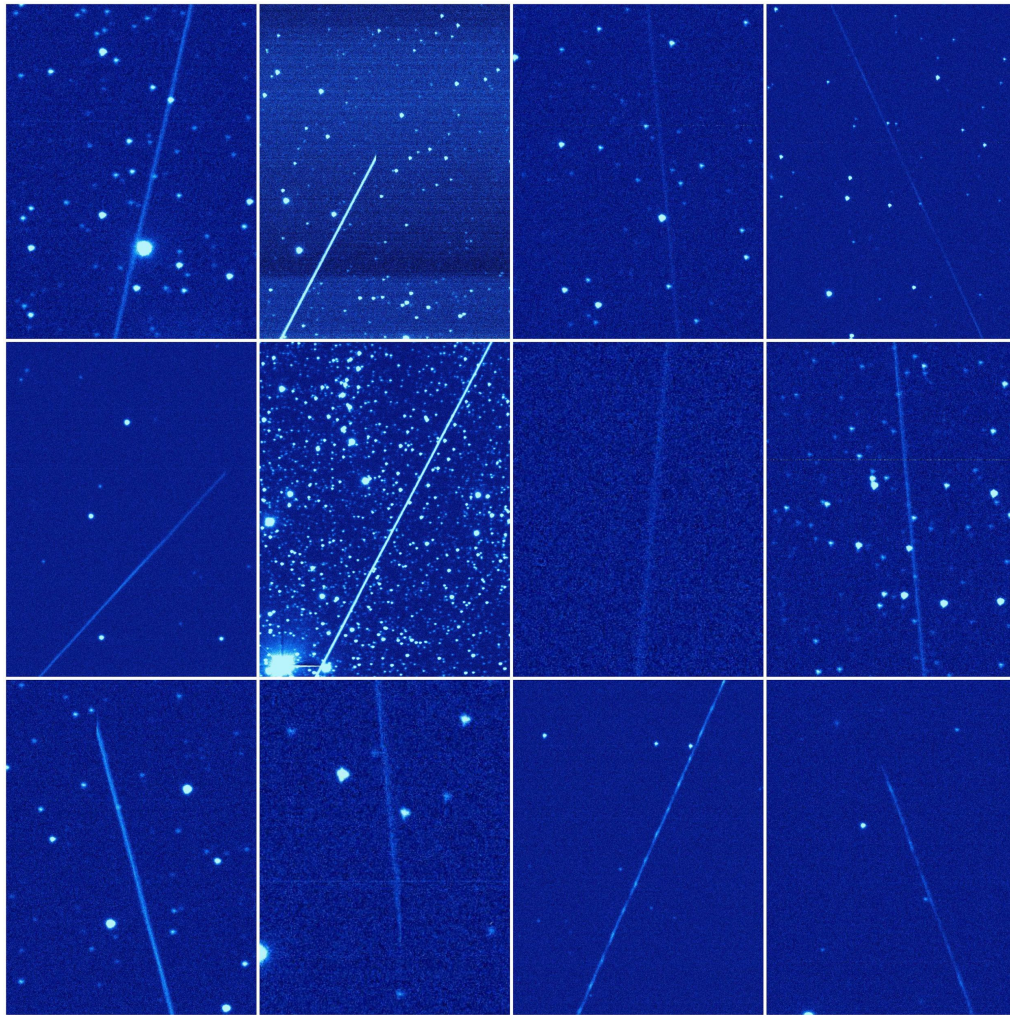
# ILMT : Basic Principle



## ILMT : Image Acquisition

Time Delay Integration (TDI) or Drift scanning.





Detected Space debris with TDI  
mode  
From 1.3m Telescope

**Thank you**



.... For your Patience