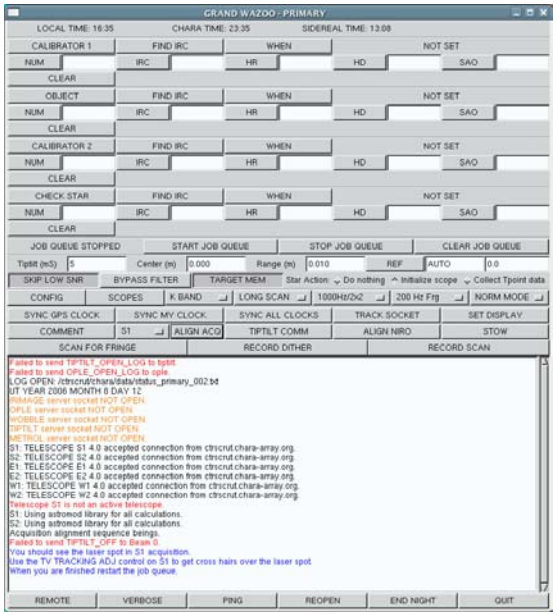
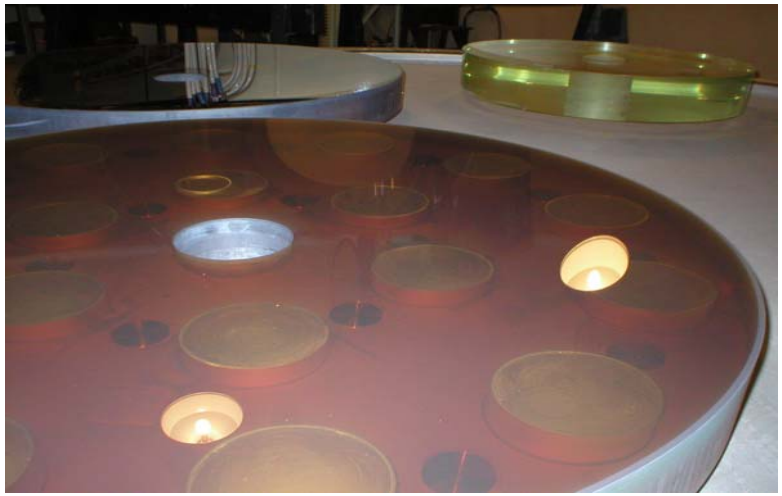


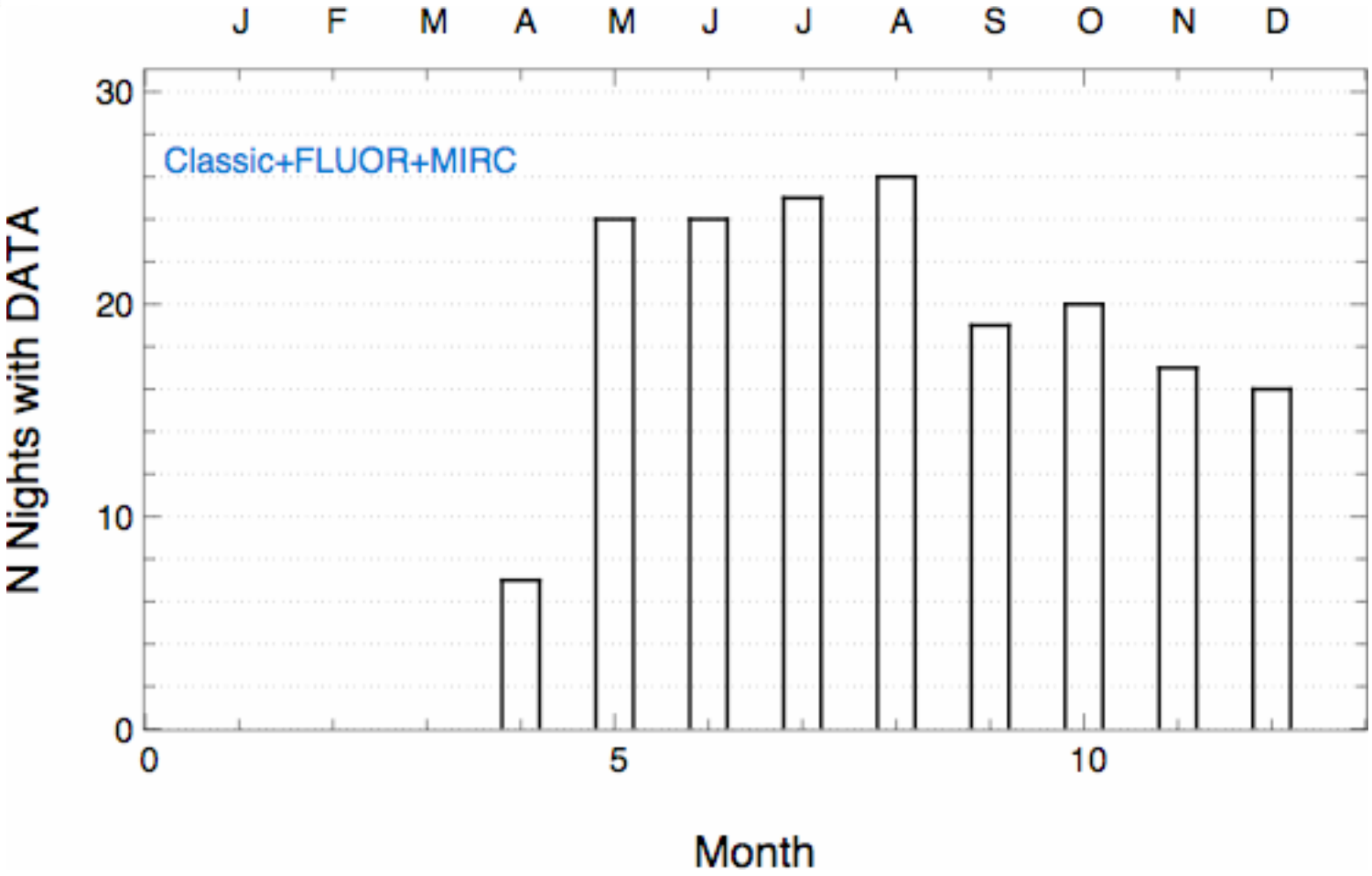
Observing Realities and Constraints 2006



P. Sallave-Goldfinger

Observing Responsibilities

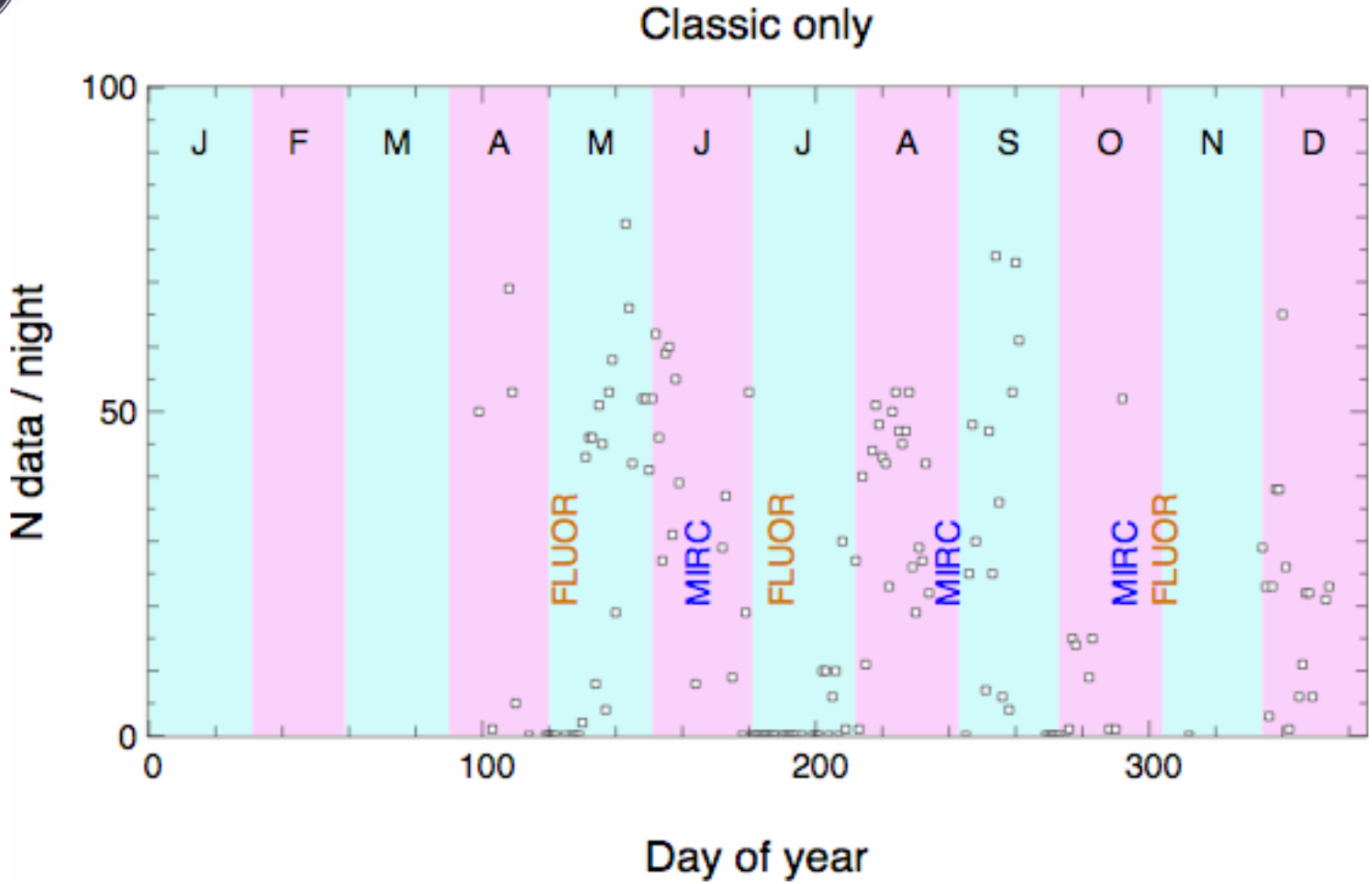
- To assure the Highest Quality of scientific output possible for the PI's and *at times* ***Protect the instrument from the PI.***
- The Observing Assistant has full responsibility for night-time operation of the Array/Observatory, related observing equipment, and ***all Beam Combiners running :)***
- To continually evaluate the Array system status, including environmental control functions, and schedules of the targets to be observed.
- Basically **" To make sure things don't go whacky "**



Antoine Merand

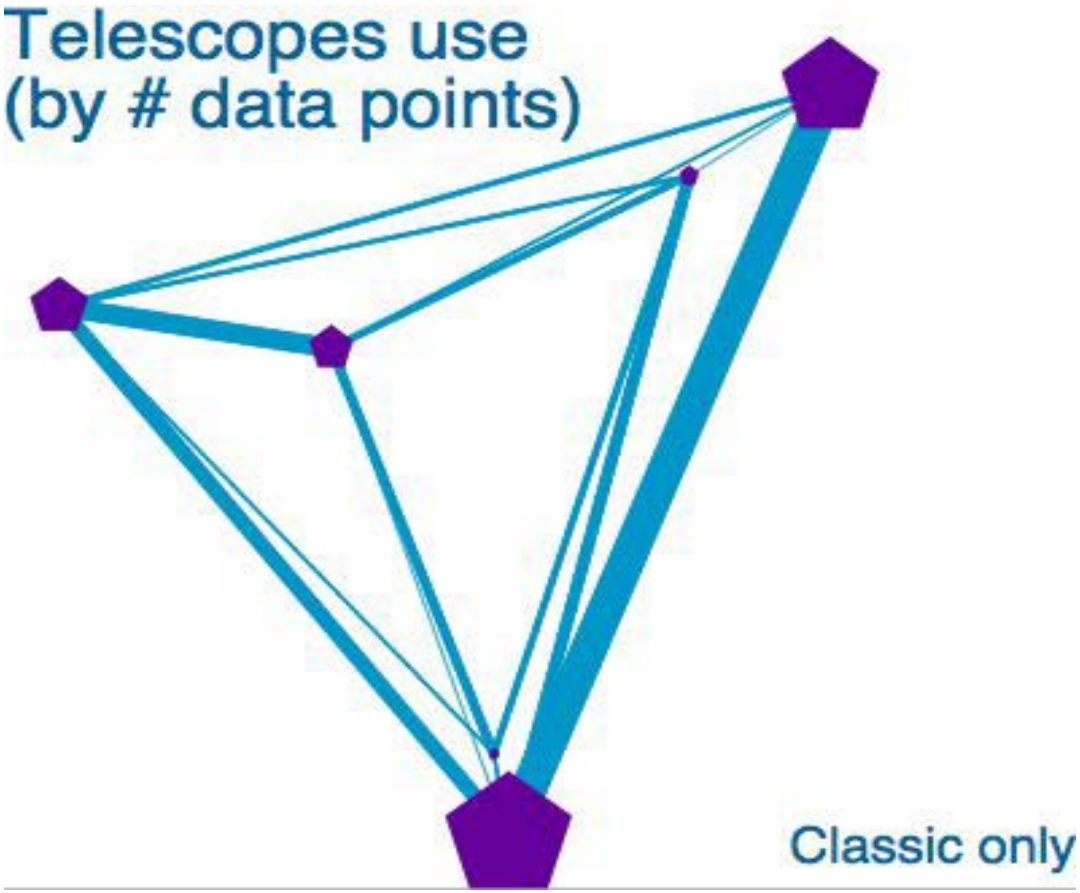
Observing Statistics 2006

- Current 2006 data from the CHARA Observing reports show that ***212*** observation nights were attempted total all beam combiners.
- Fringes were gathered on ***162*** nights.
- Around ***3500*** observations were made with CHARA Classic.
- ***2100*** data points were gathered on the S1/E1 baseline.
- Total AROC nights ***8***.
- AROC MIRC nights ***5***.
- AROC only ***3*** nights.
- The **Grand Wazoo** which makes this all possible was introduced October 1, 2006 !!!



Antoine Merand

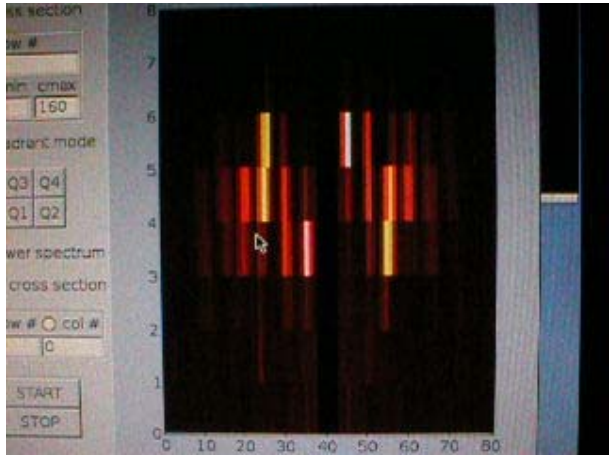
Building The CHARA Consortium

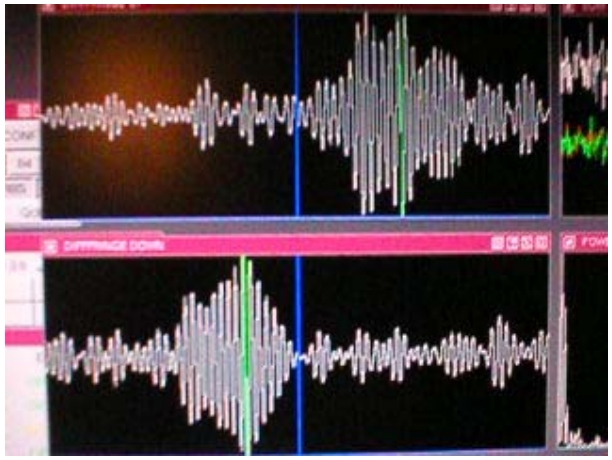


Antoine Merand

CHARA and MIRC

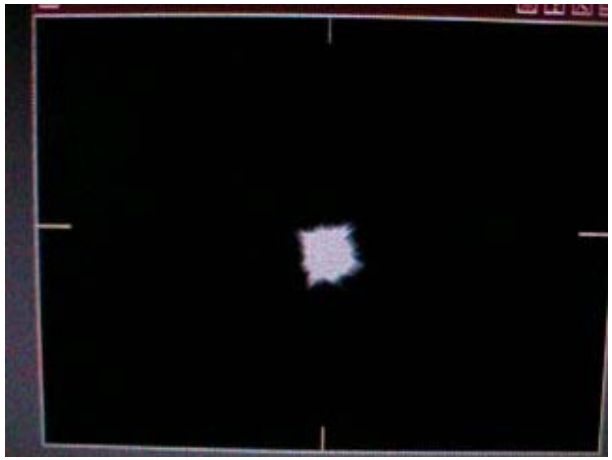
* Operated successfully together for 5 nights without a hitch -

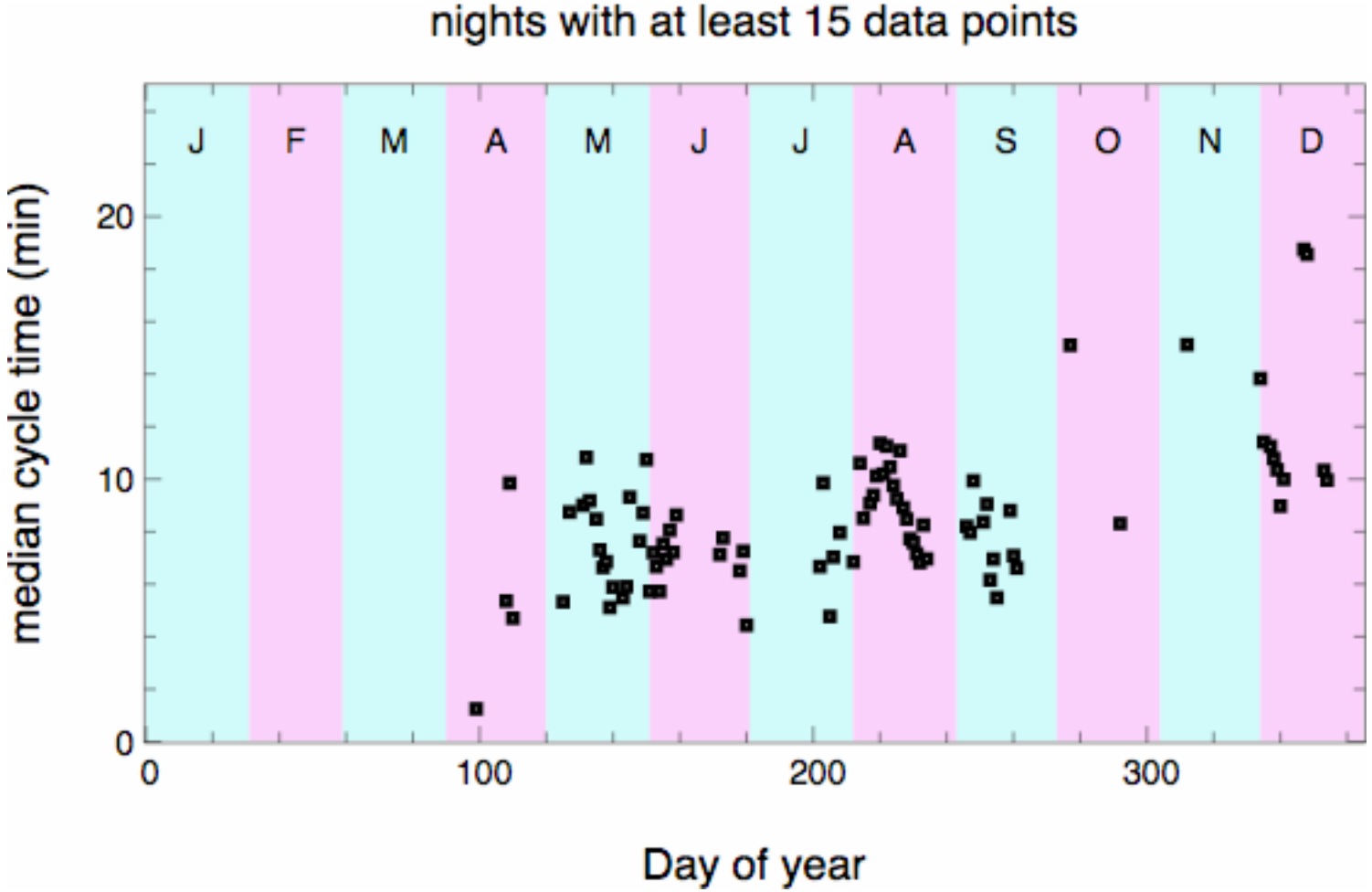




Go Fringes !!!

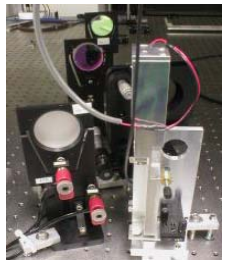
Around The Array 2007



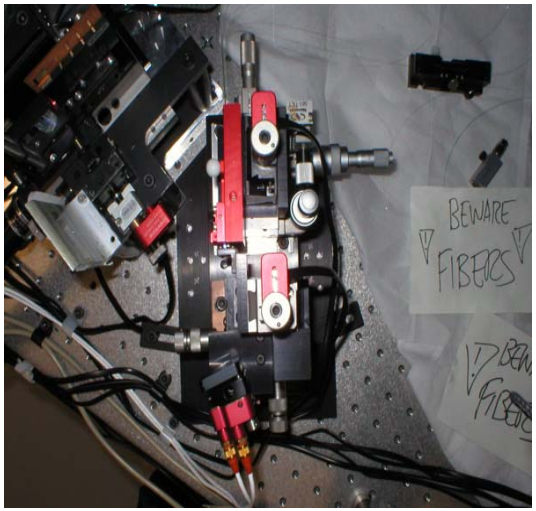


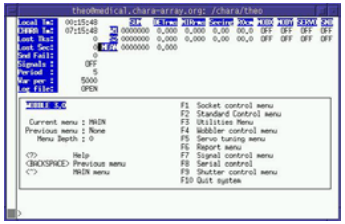
Antoine Merand

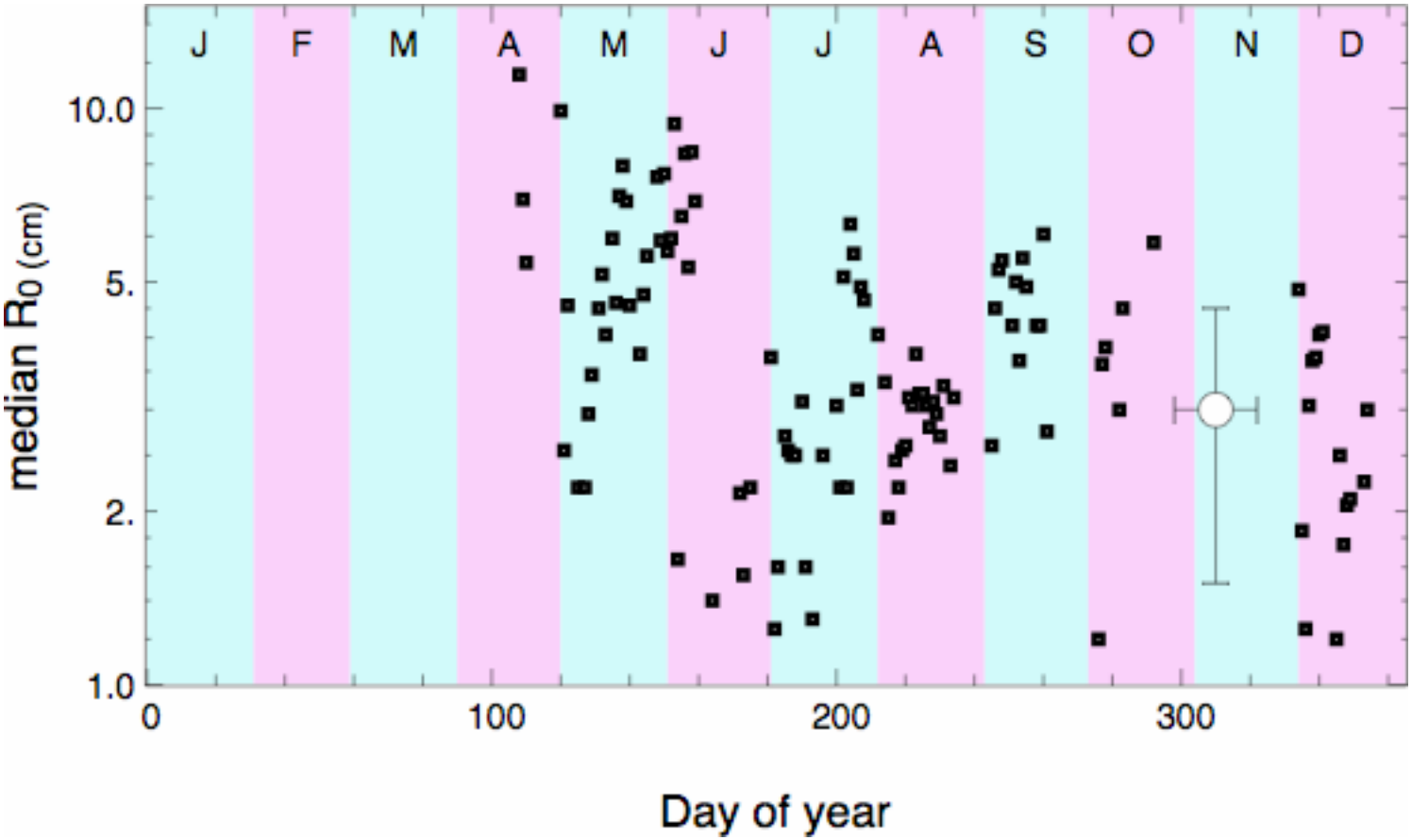
Array Initialization 2007



- Over *4000* pieces of Hardware, Software and Equipment need to be started and shutdown each observing session with six beams.
- Does not include technical problems !!!







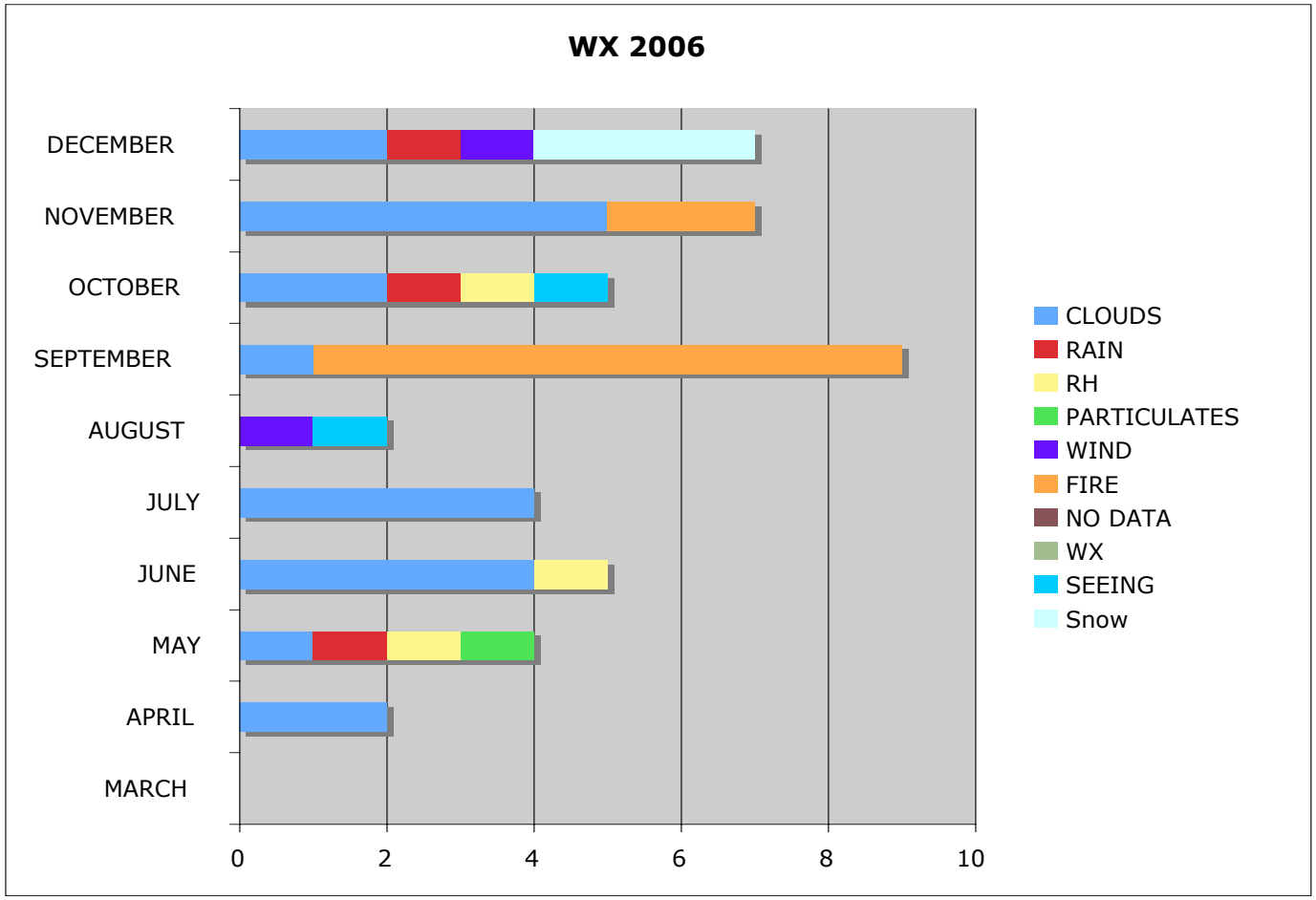
A.Merand

Array Functionality

- The Array ***Still*** works best whenever Theo calls or is Observing.
- More stable with two full time operators !!!
- Works very well even after being static for awhile.
- Doing up to ***4 baseline changes*** a night with MIRC - Great -
- **Hail** to the new Baseline solutions implemented !!!!

Alternative Observing Scenarios

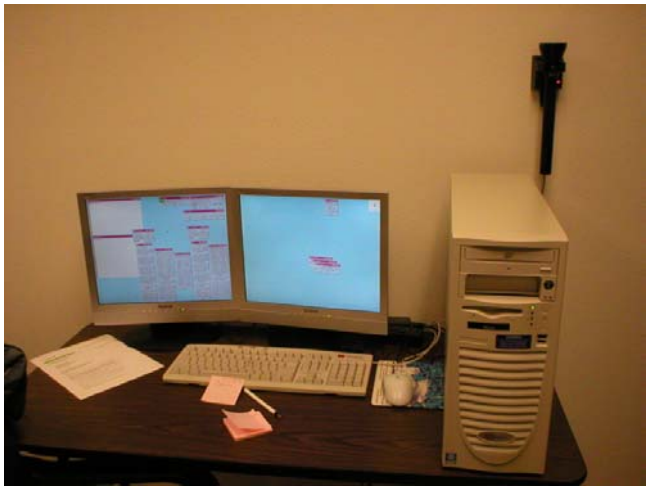
- The Q Rules !!!
- Inquiring about substitute observing modes.
- Choose Targets that are in different parts of the sky.
- Have targets ready for capricious weather conditions. Ex: Bad seeing,wind, a bright source would be better
- Time Saving - Pre Check for background stars in the star fields.



Based on 2006 Observing Reports

Off the Observing list going for Nova Scorpii 2007

Mag 4.8 the night previous estimate Monsignor Royer



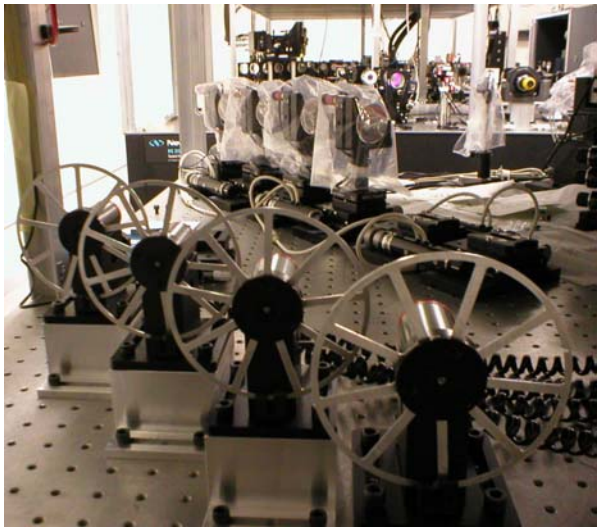
AROC Winter Nights

- About 45 Nights attempted
- 16 data gathered
- 29 Weather prevailed

CHARA Control Room

With Multiple Beam Combiner Operation

Hey Ming from MIRC



MIRC Optical Choppers

Weather Particulars for 2006

- Many California brush fires.
- California wild fires closed the Array for about 14 days.
- Closed due to particulates only 1 day for 2006.
- Precipitation at low RH levels.
- Extreme fluctuations in atmospheric conditions from one arm of the Array to the other.
- Decrease in atmospheric stability…**Especially looking out over the exhaust pipe of Los Angeles !!!**

2006 Observing Memoirs *confessions*….

- Who do we call for a backup of any system ;-} Dr. Berger !!!
- Tired grouchy Array observers sharing information in the Observing report that has absolutely nothing to do with observing!!!
- Senior observer slapped verbally by a Hungarian Scientist.
- A certain person shall remain nameless… A CHARA PI & Deputy Director of The ISC at IPAC…never the less…. locked themselves out on the 100” catwalk and was heard yelling for assistance !!!

Hey lets not forget these Guys -

Steve Golden Assistant Site manager

The list is Endless !!!!

Thank you for your Acknowledgment

This makes my Mother and family VERY Proud

For 2007 Your CHARA ARRAY Operators

PJ Goldfinger & Chris Farrington

Observing with AROC

Ellyn Baines

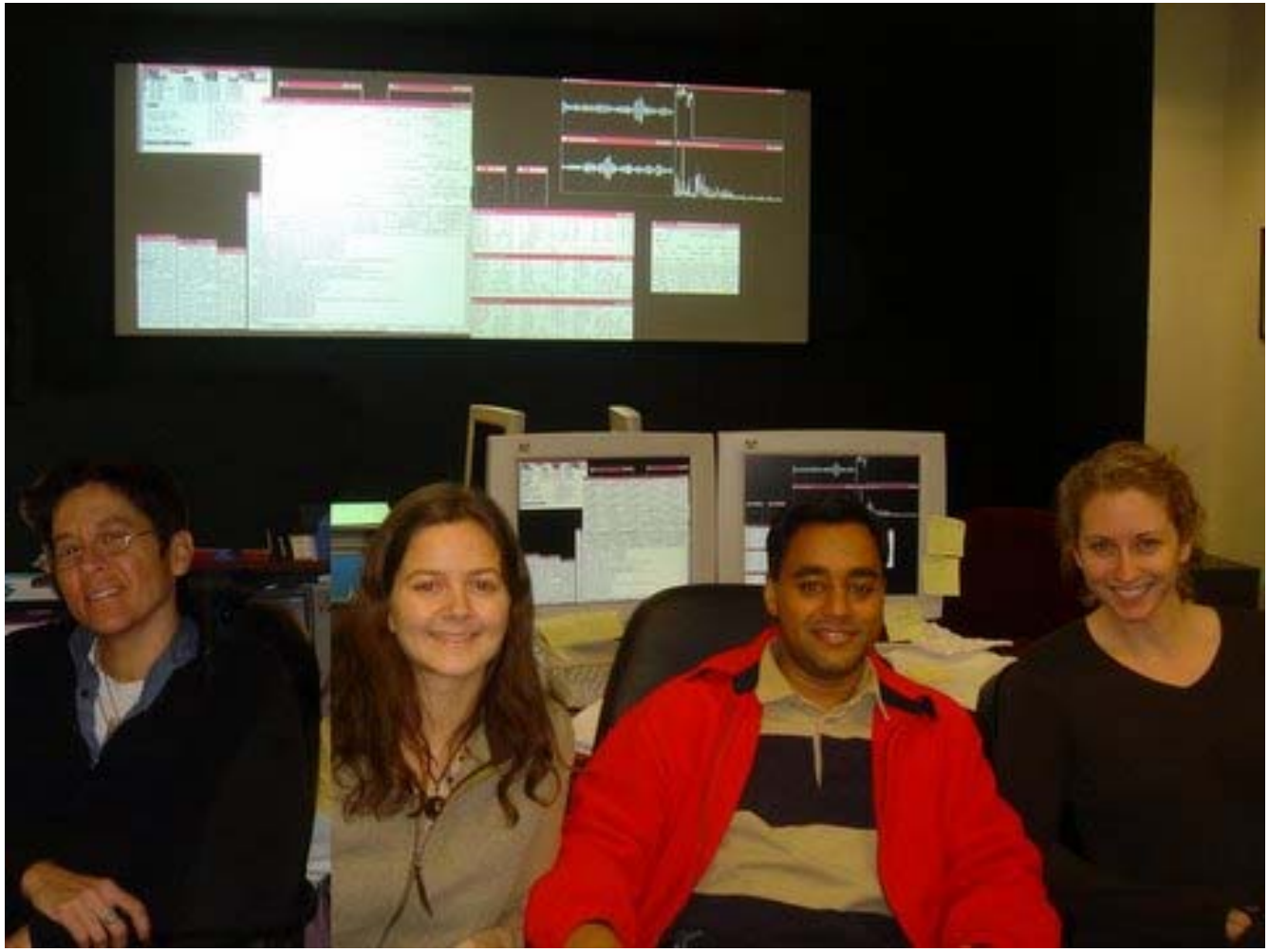
AROC Basics

- AROC = Arrington Remote Operations Center
- Located in Science Annex on GSU campus
- Dedicated 2/28/02
- In regular use from Jan. 2007 on

Outfitted Nicely

- Uses Virtual Private Network to talk to the mountain machines
- Has 2 Proxima projection screens, comfy chairs, coffee maker

Current AROC Crew



Observing

- All servers (except OPLE) are run on Mt. Wilson machines
- We keep the number of GUIs/status windows to a minimum
- Beyond that, observing is pretty much the same!

Primary vs. Secondary

- Primary observing:
  - Just like normal observing
  - Use Primary GW & OPLE
- Secondary observing:
  - We try to stay out of the way
  - Use Secondary GW & OPLE

Failure Modes

- Scope TVs freeze ("Too little memory") - restart scope server

- The other normal crashes, etc.

Advantages vs. Disadvantages

- No airfare costs
- Can stay home
- It's so darn cool
- Can really confuse GSU cops

- Not on Mt. Wilson
- You can't check clouds/weather
- Dependent on others to fix problems

Success or not?

Yes!!