

Remote Operations at CHARA

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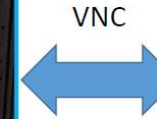
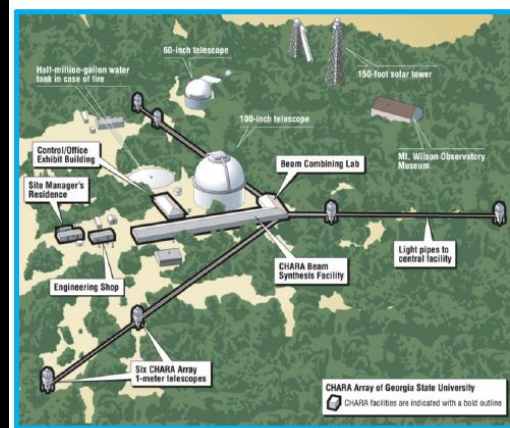
Remote Observing

The screenshot displays a complex software interface for remote telescope observing. The main window is titled "COSMIC DEBISS - PRIMARY" and shows telescope control parameters such as LOCAL TIME (03:27), CHARA TIME (11:27), SIDERAL TIME (08:55), and CHK: HD_91810. It includes a "CONTROL STARS" table with columns for SLEW TO, OBJECT, WHEN, FIND IRC, and HD, and a "SERVO CONTROL" section with buttons for EXP, CCD, MODXY, REMOTE, FAINT, STATUS, SEEING, PING, RESTART SOCKET, and REOPEN. A "TIPTILT STATUS" window shows tracking data for Local Tr, CHARA Tr, and various error rates. A "WEATHER" window displays atmospheric conditions like WIND, DIR, GUST, DIR, MEAN, Tdbt, Tskn, RH, DPP, Tef, and RHrel. A "CLIMB 3" window shows telescope alignment and beam status. On the right, a "PICO-IR123B" control panel has buttons for X=0, UP, Y=0, LEFT, RIGHT, SMALLER, DOWN, BIGGER, and a "QUIT" button. The bottom right corner features a grid of signal and spectrum plots, including "FRINGE 12 SIGNAL", "SUM", "FRINGE 21 SIGNAL", "FRINGE POWER SPECTRUM", "FRINGE 31 SIGNAL", and "FRINGE 41 SIGNAL". A small mouse cursor is visible over the interface.

Screenshot courtesy of Katie Lester

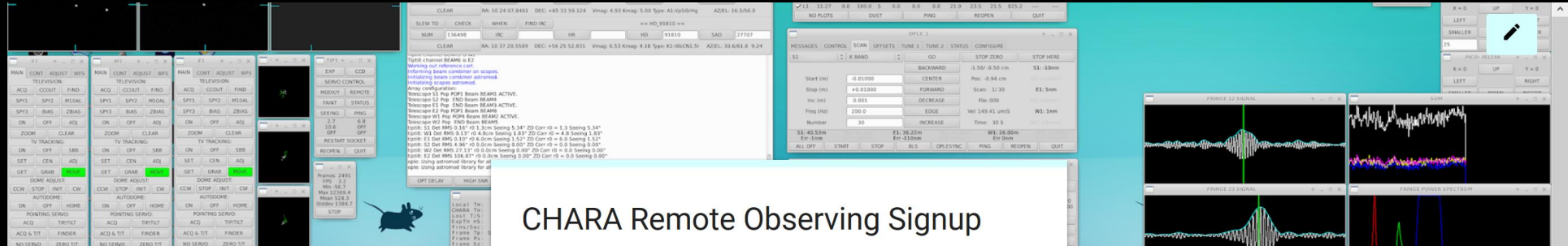
Remote Observing

- Connect to Atlanta machine using VNC
- Atlanta machine connects to mountain using SSH tunnel
- CHARA software runs as it does on the mountain



A screenshot of the CHARA control software interface. The interface is divided into several panels. The top panel shows system status and control buttons. The middle panel displays telescope status and control parameters. The bottom panel shows a grid of plots, including light curves and spectra. The interface is complex and contains many small windows and controls.

Signing up for Remote Observing



CHARA Remote Observing Signup

Use this form to sign up for remote observing dates.

*** Required**

Email address *

Your email

PI Name *

Who is the PI for these observations?

Your answer

CHARA Program ID

Your answer

Observing Dates *

What nights will the observations be taking place? (Please use local time dates, not UT dates)

Your answer

Beam Combiner

Your answer

Accessing the Remote Observing Machine

AutoSave Off CHARA_Summer_Seminar_Remote_Operations.pptx - AutoRecovered Search Jeremy Jones 23:00

File Home Insert Draw Design Transitions Animations Slide Show Review View Help

Paste New Slide Section Slides Font Paragraph Drawing Editing Voice Designer Webex

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VNC Viewer: Connection Details

VNC server: 131.96.55.79:7

Options... Load... Save As...

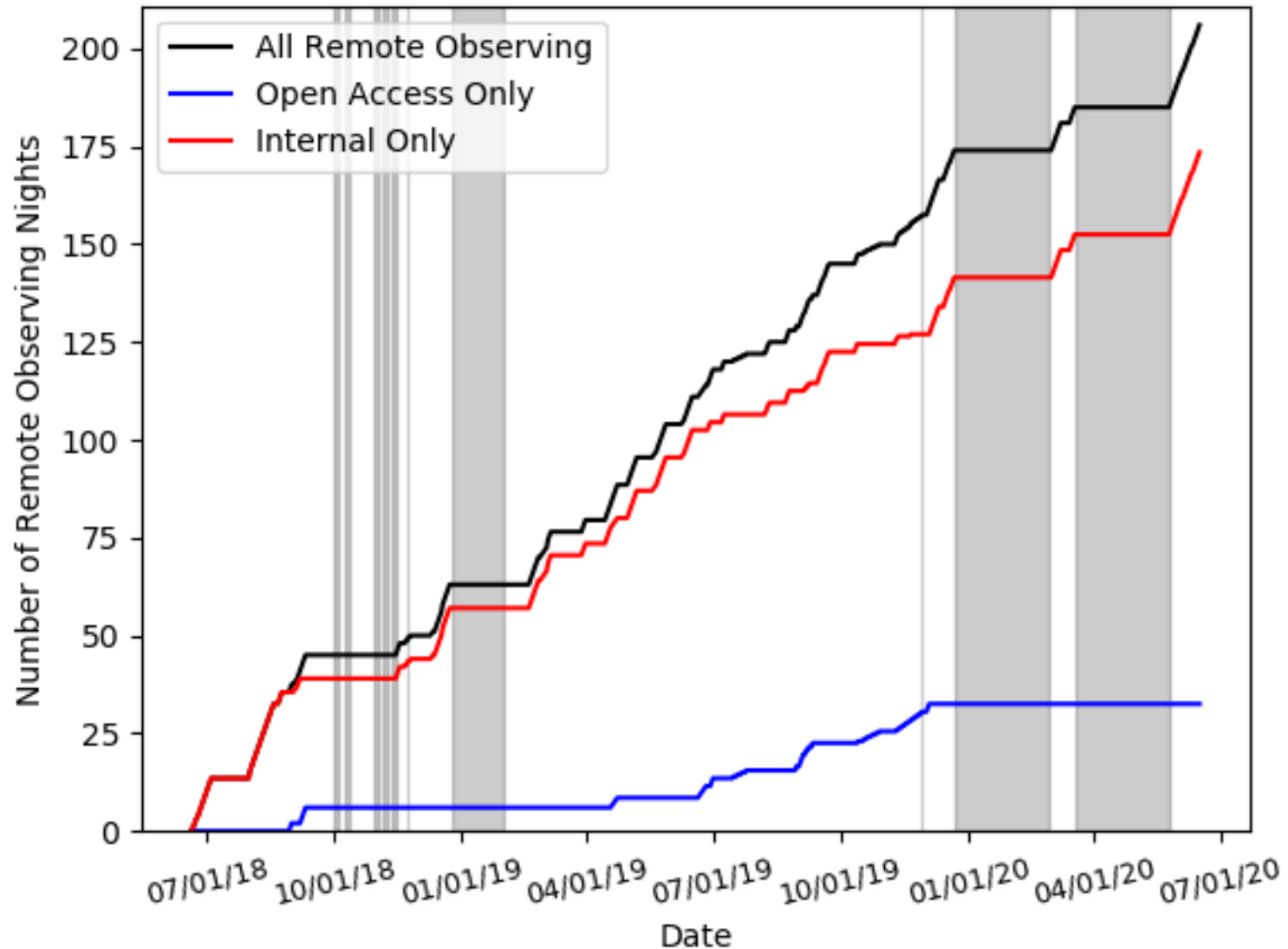
About... Cancel Connect

Slide 5 of 10 Recovered

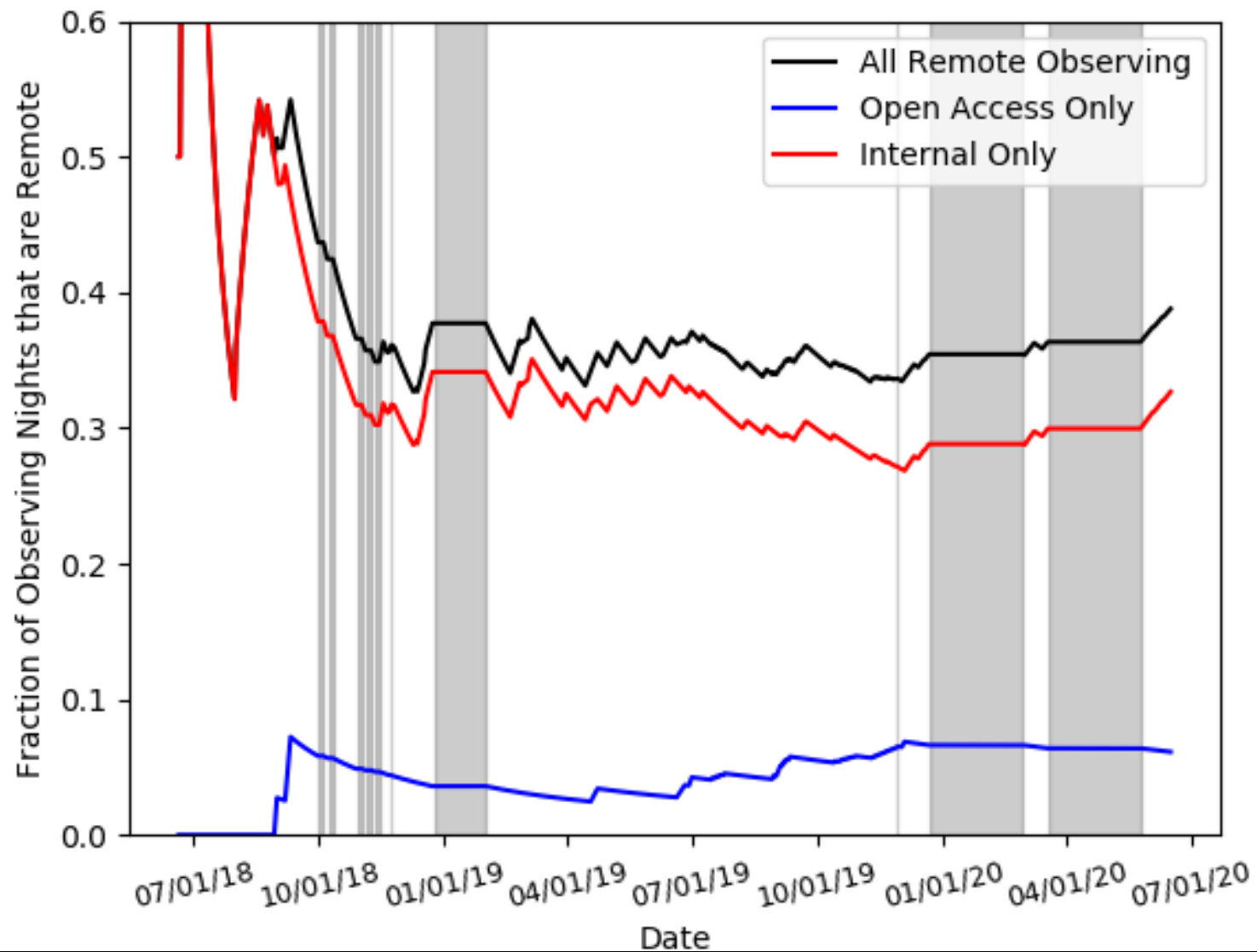
Accessing the Remote Observing Machine



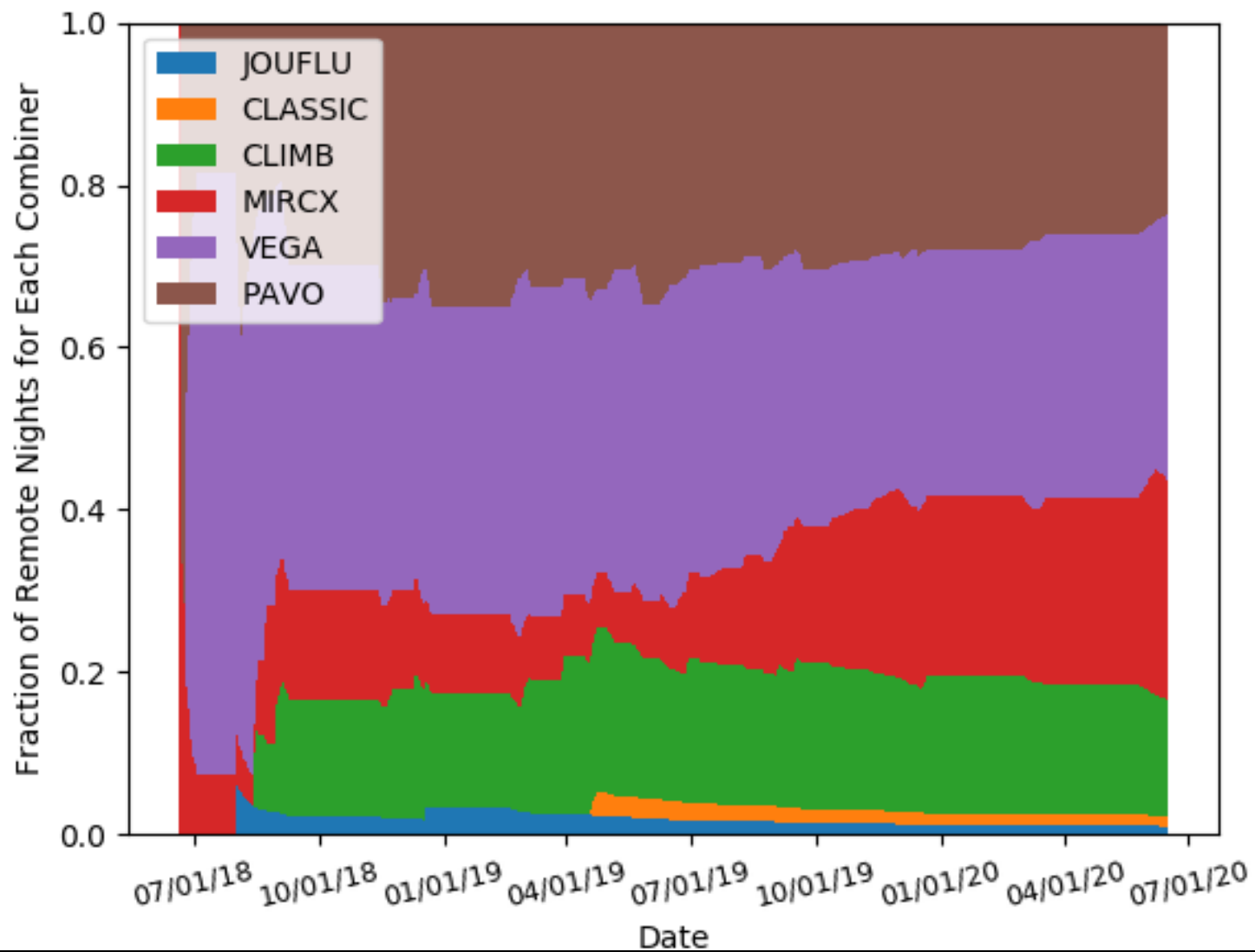
Remote Observing Stats



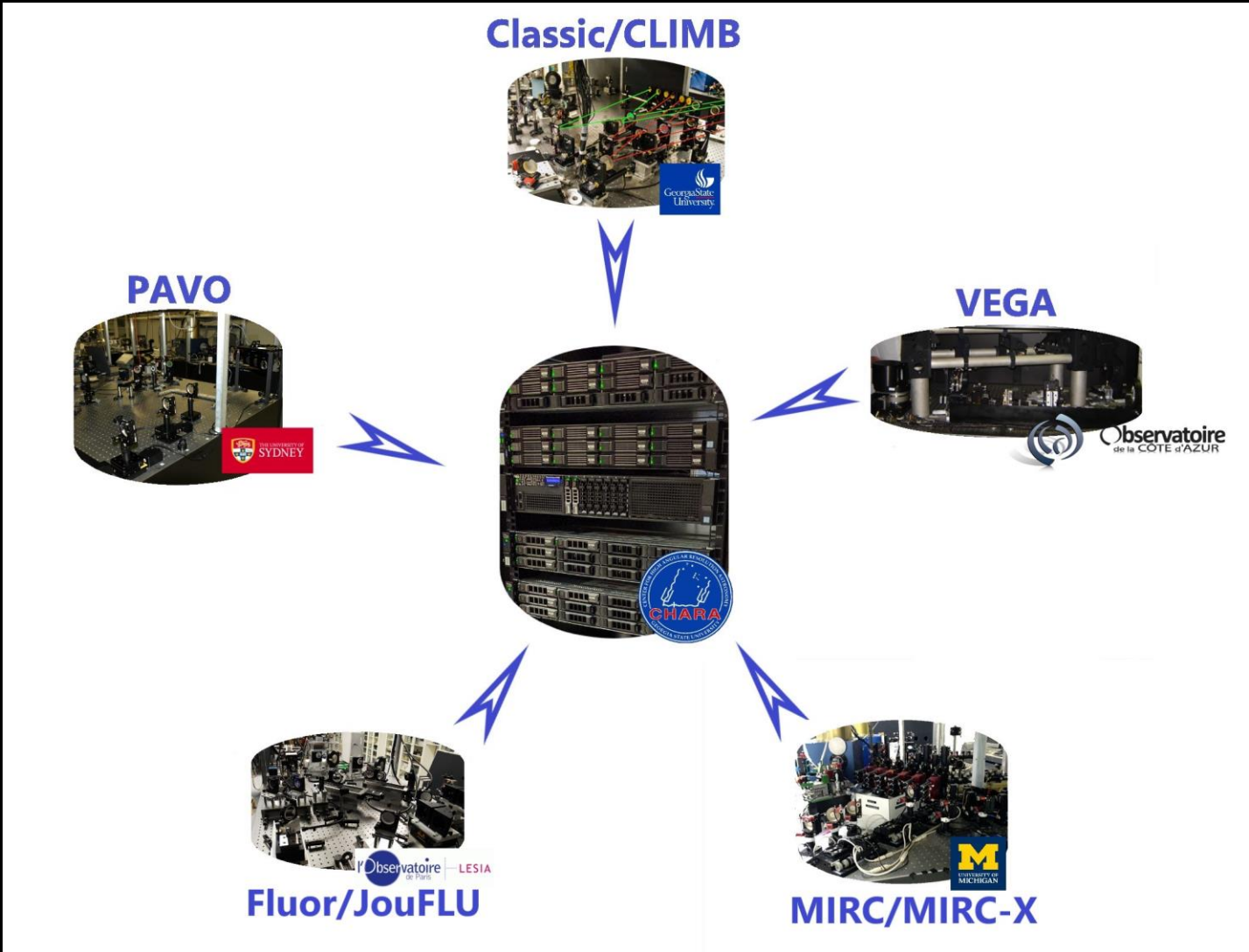
Remote Observing Stats



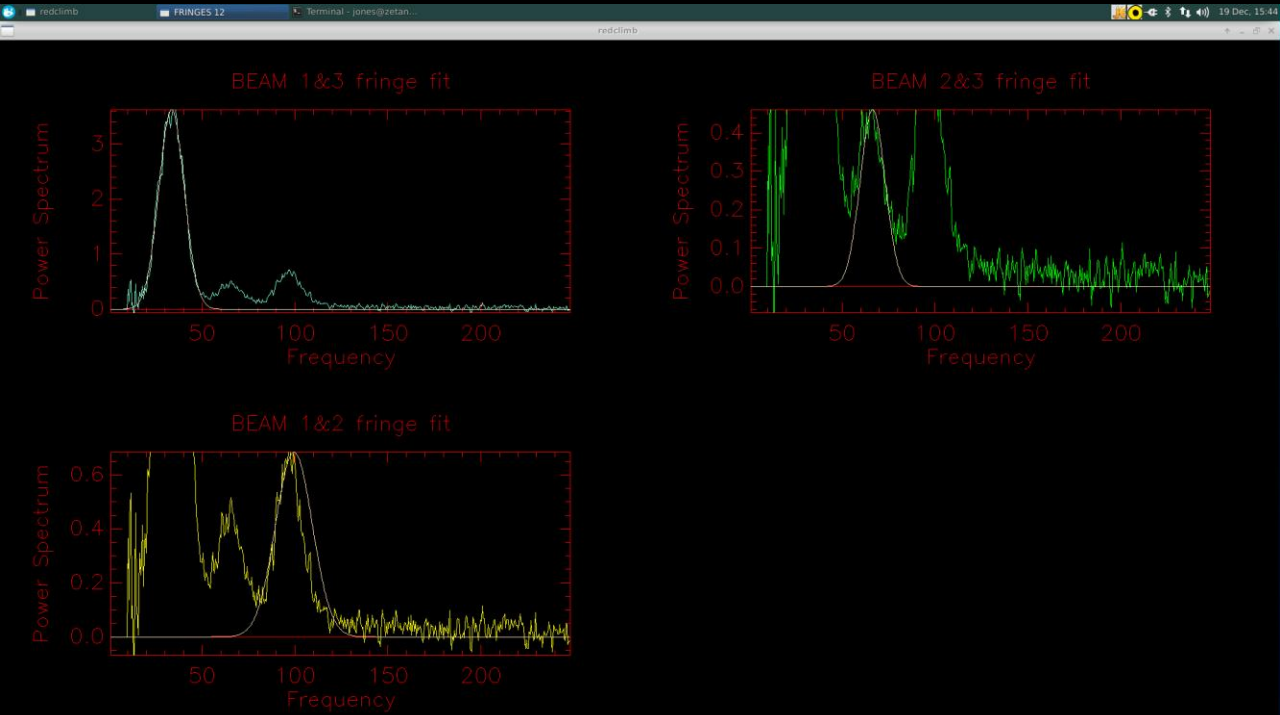
Remote Observing Stats



CHARA Data Archive



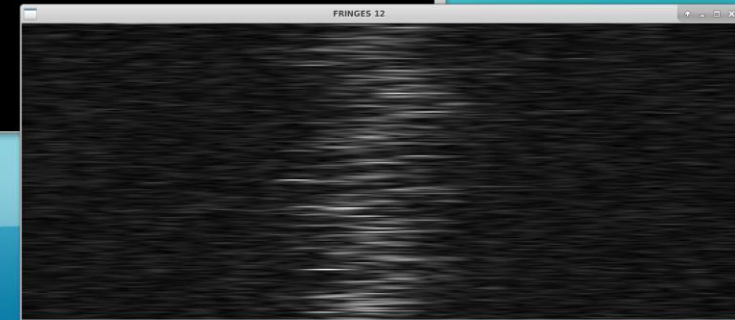
Remote Data Reduction



```
Terminal - jones@zetan: ~/Reduce/Test
jones@zetan:~/Reduce/Test$ redclimb -D. /dbstorage/CL_CL_JF/2018_data/2018_11_25/2018_11_25_HD_72779_climb1_001.fit
Type ENTER to continue.

Fit to freinges 23 Failed
Type ENTER to continue.

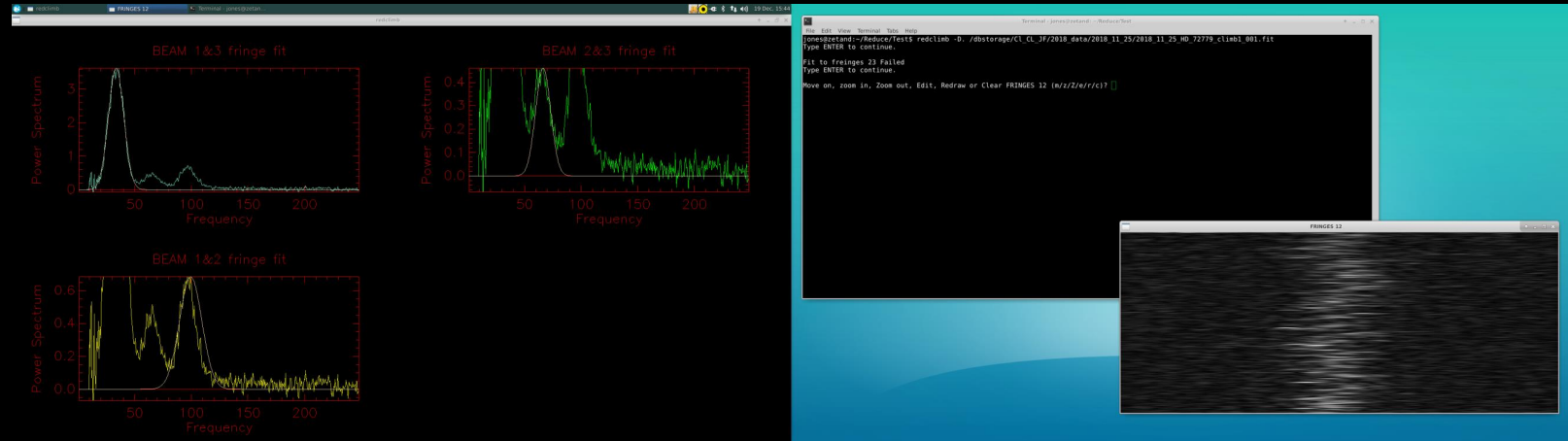
Move on, zoom in, Zoom out, Edit, Redraw or Clear FRINGES 12 (m/z/Z/e/r/c)?
```



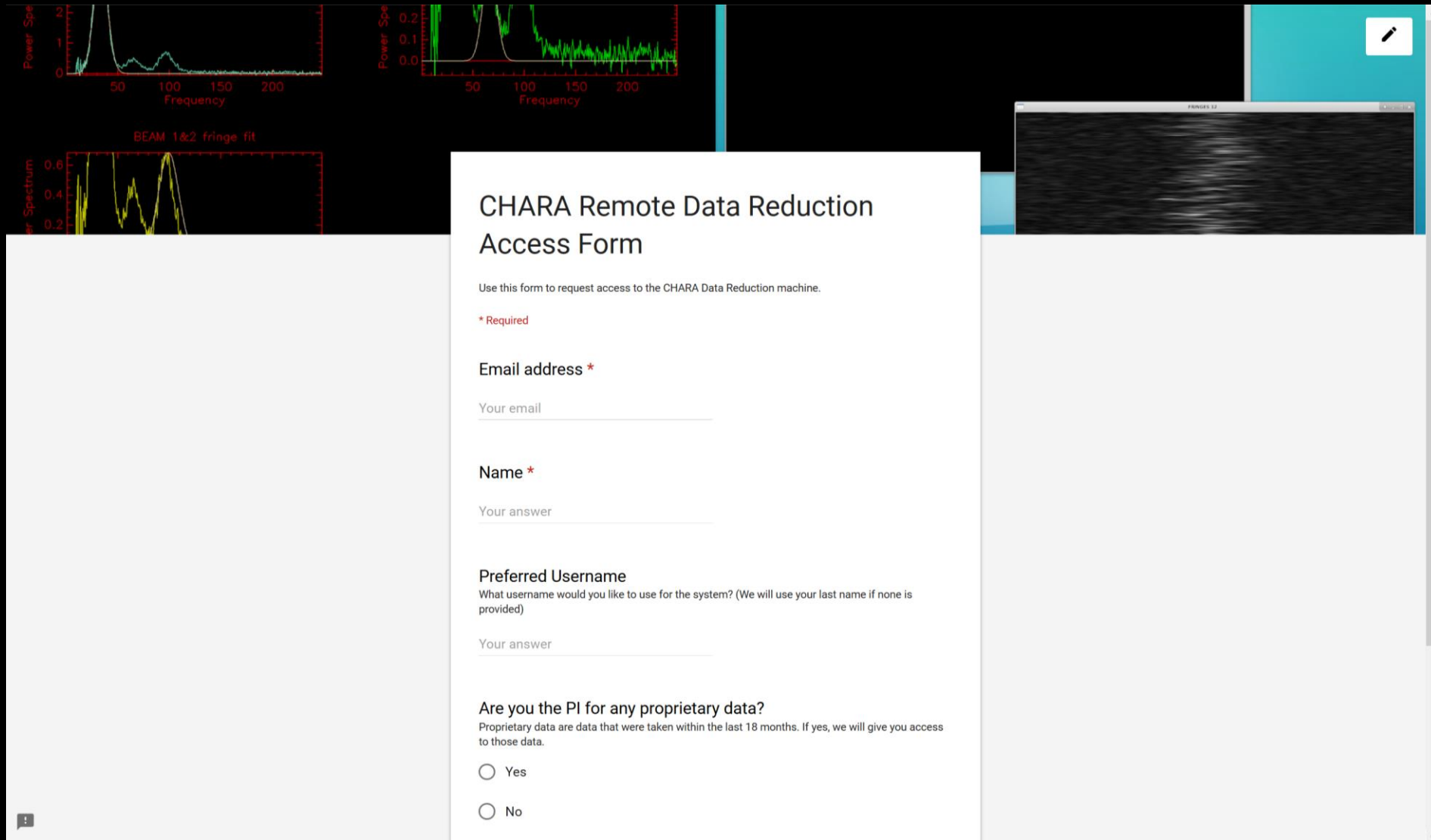
Remote Data Reduction

The Idea

- Data Reduction Machine linked to archive
- Reduce data remotely
- Download final reduction
- **Benefits:**
 - Reduction software always up to date
 - No need to download raw data
 - Cross-platform



Signing Up for the Remote Data Reduction



The background of the screenshot shows three plots: a Power Spectrum vs Frequency plot (top left), a Power Spectrum vs Frequency plot (top right), and a BEAM 1&2 fringe fit plot (bottom left). The form is centered on the screen.

CHARA Remote Data Reduction Access Form

Use this form to request access to the CHARA Data Reduction machine.

*** Required**

Email address *

Your email

Name *

Your answer

Preferred Username

What username would you like to use for the system? (We will use your last name if none is provided)

Your answer

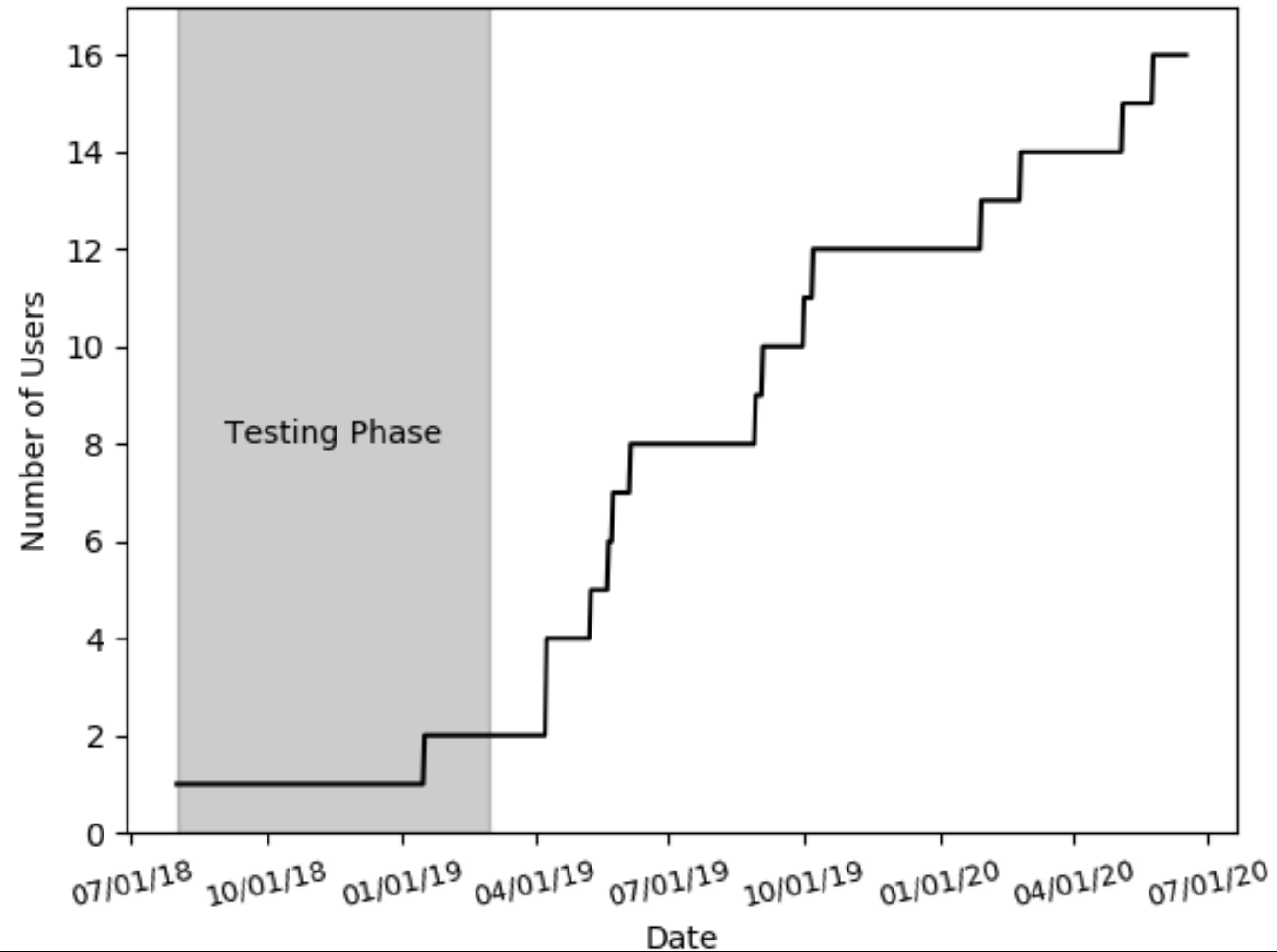
Are you the PI for any proprietary data?

Proprietary data are data that were taken within the last 18 months. If yes, we will give you access to those data.

Yes

No

Remote Data Reduction Stats



Summary

Remote Observing



Remote Data Reduction

Archive