Remote Operations at CHARA

Jeremy Jones, CHARA Data Scientist

Remote Observing

Screenshot courtesy of Katie Lester

Remote Observing

- Connect to Atlanta machine using VNC

- Atlanta machine connects to mountain using SSH tunnel

- CHARA software runs similar to on the mountain
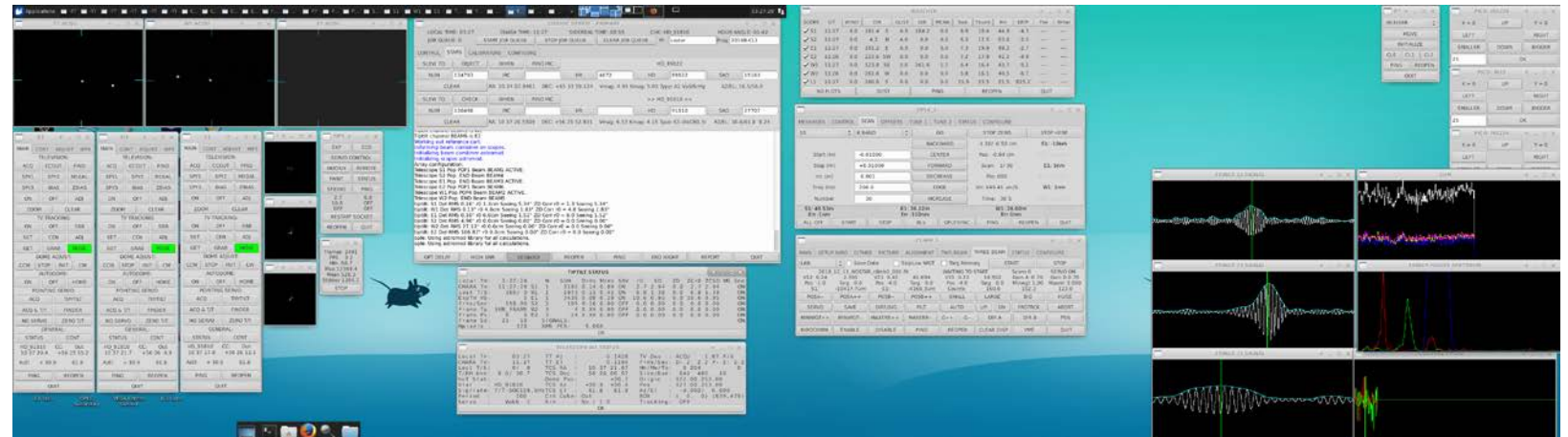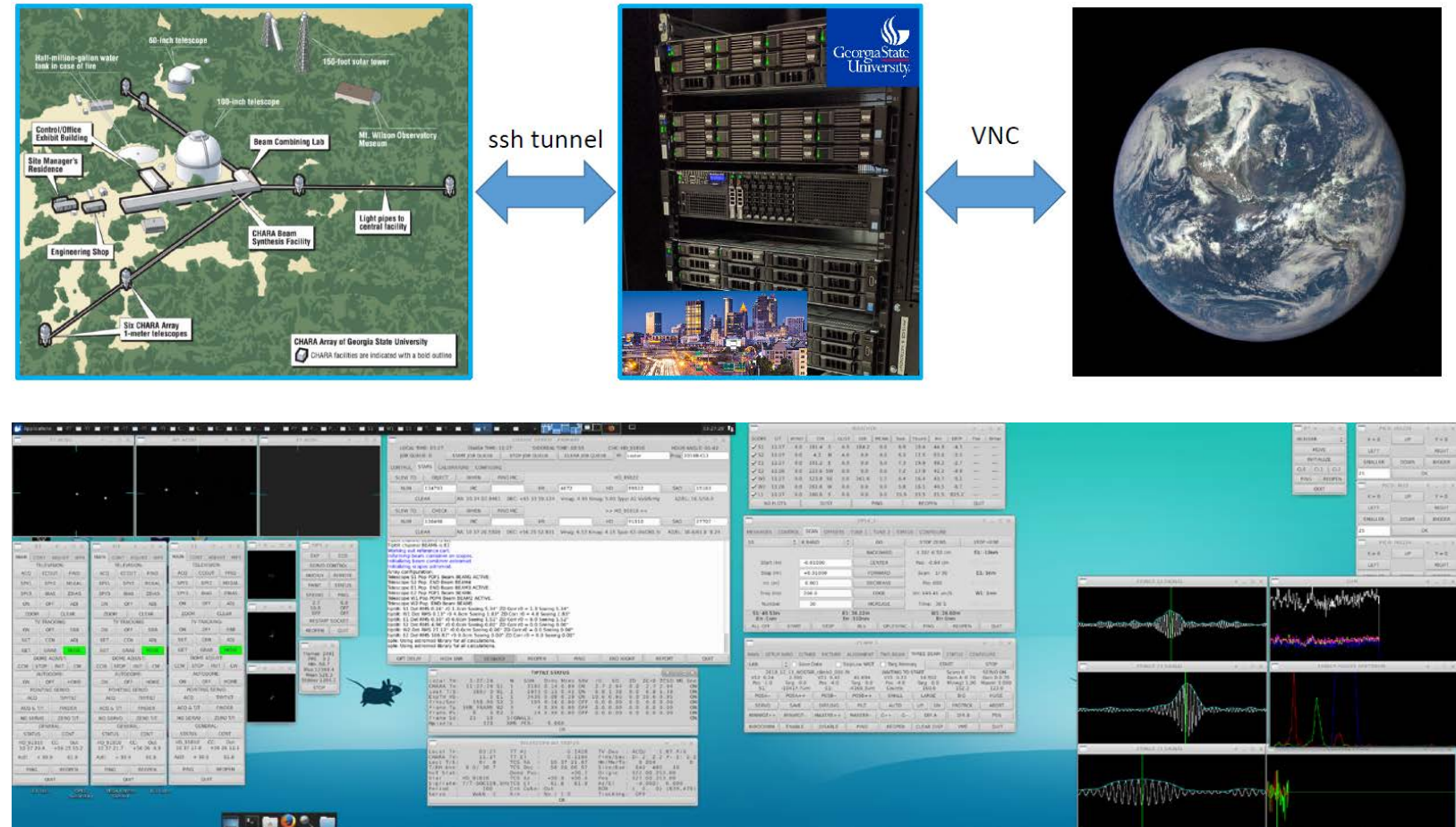
Remote Observing

- Went public in June 2018

- 80 nights (~40%) of remote observing requested in 2018

  - CLIMB: 11 nights

  - JouFLU: 2 nights

  - MIRC-X: 27 nights

  - PAVO: 23 nights

  - VEGA: 17 nights

Requests by Combiner

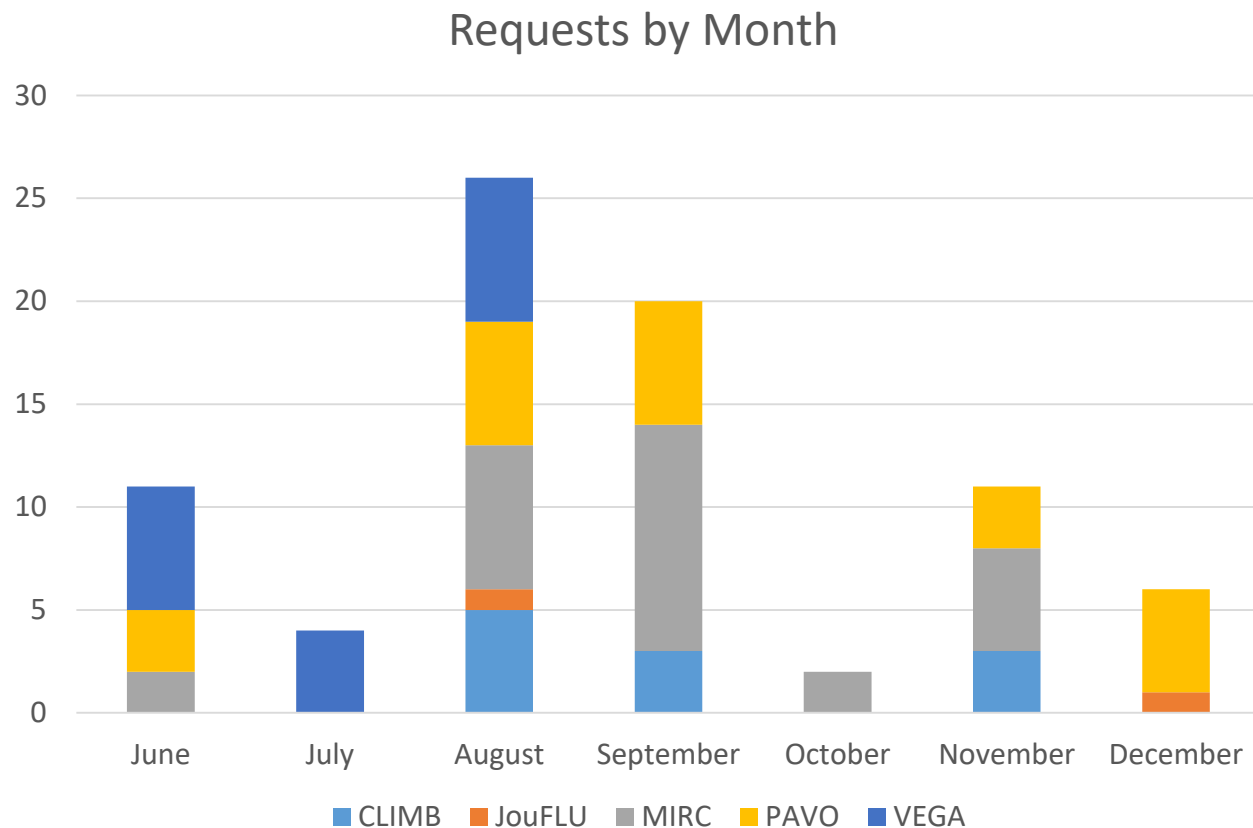■ CLIMB ■ JouFLU ■ MIRC-X ■ PAVO ■ VEGA
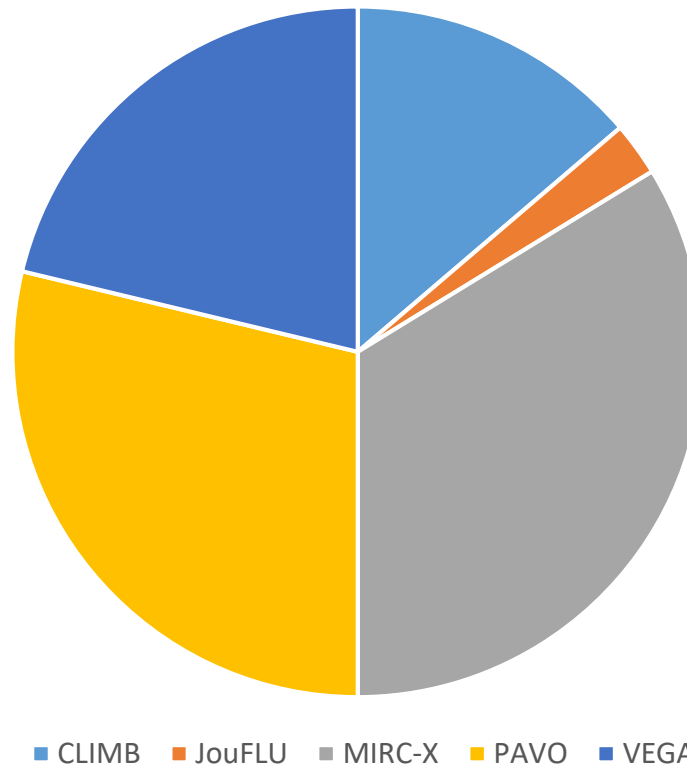
This counts nights where the remote observing system was used to spy on the observing

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Requests by Month

This counts nights where the remote observing system was used to spy on the observing

Signing up for Remote Observing

Go here for more details:
chara.gsu.edu/observers/remote-observing

The Atlanta CHARA Data Center

The Atlanta CHARA Data Center

The Archive

- Up to date:

  - Classic

  - CLIMB

  - JouFLU

  - PAVO

- Partial:

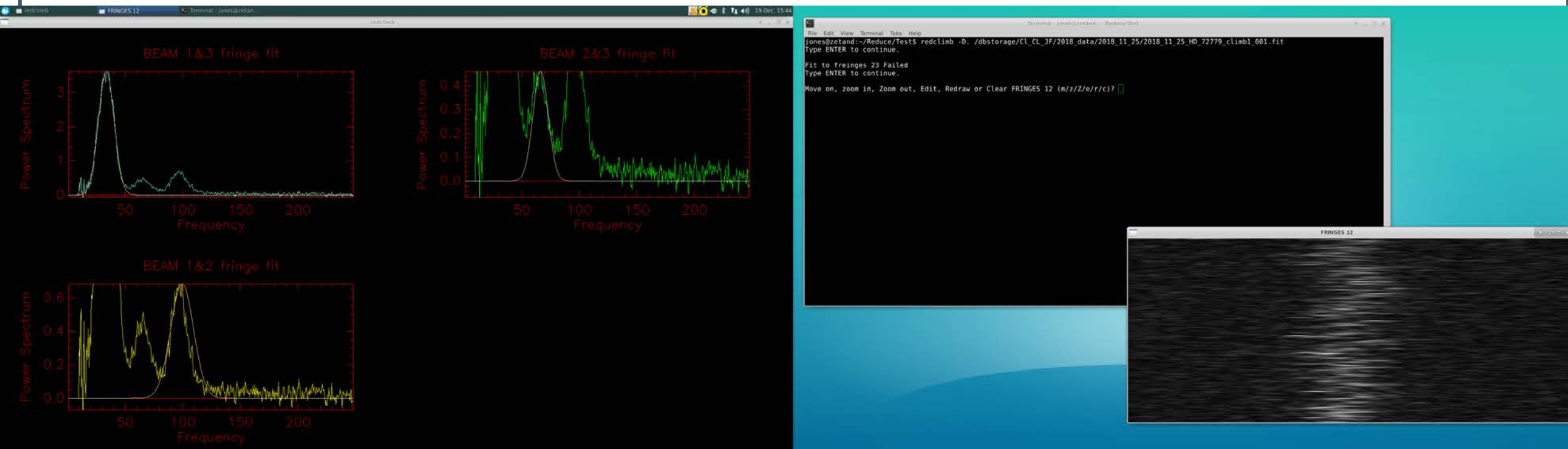 - VEGA

- To Do:

  - MIRC/MIRC-X
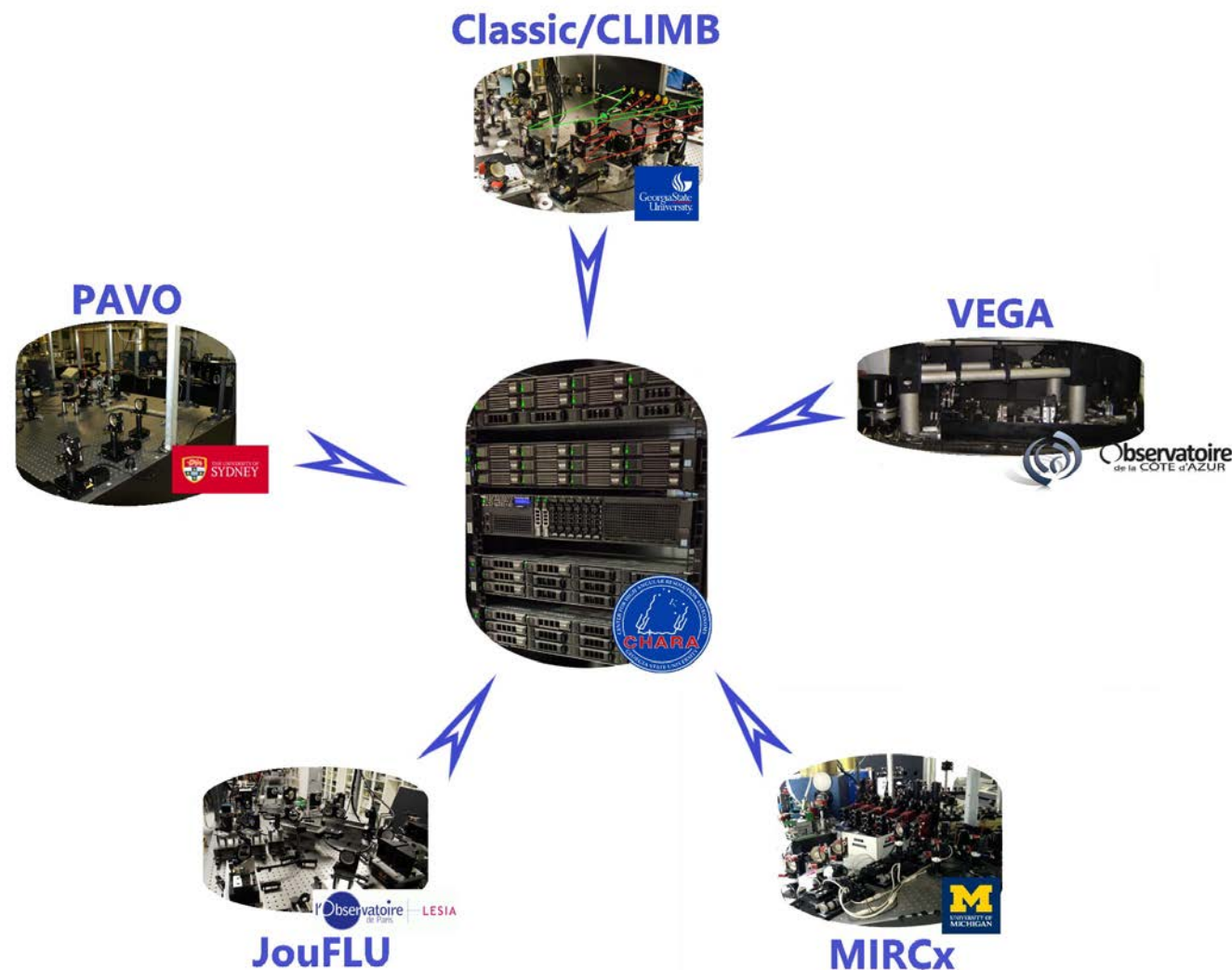
Remote Data Reduction
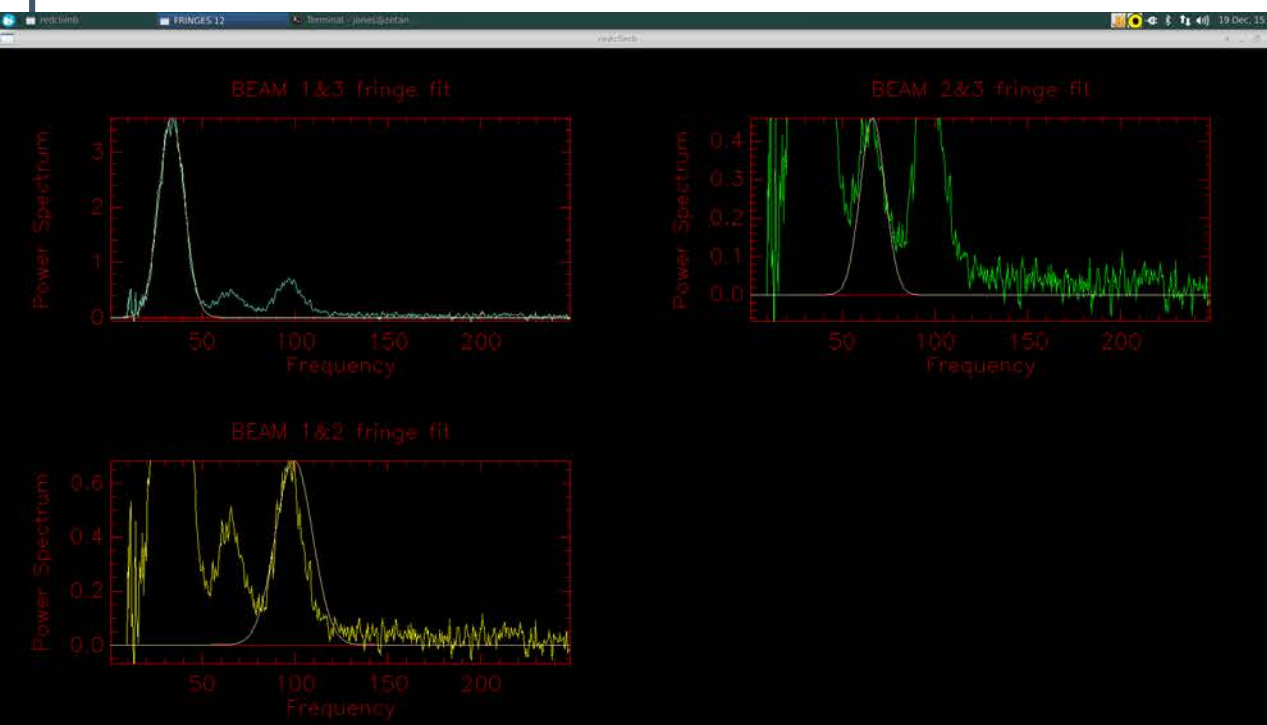
Remote Data Reduction
The Idea

- 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
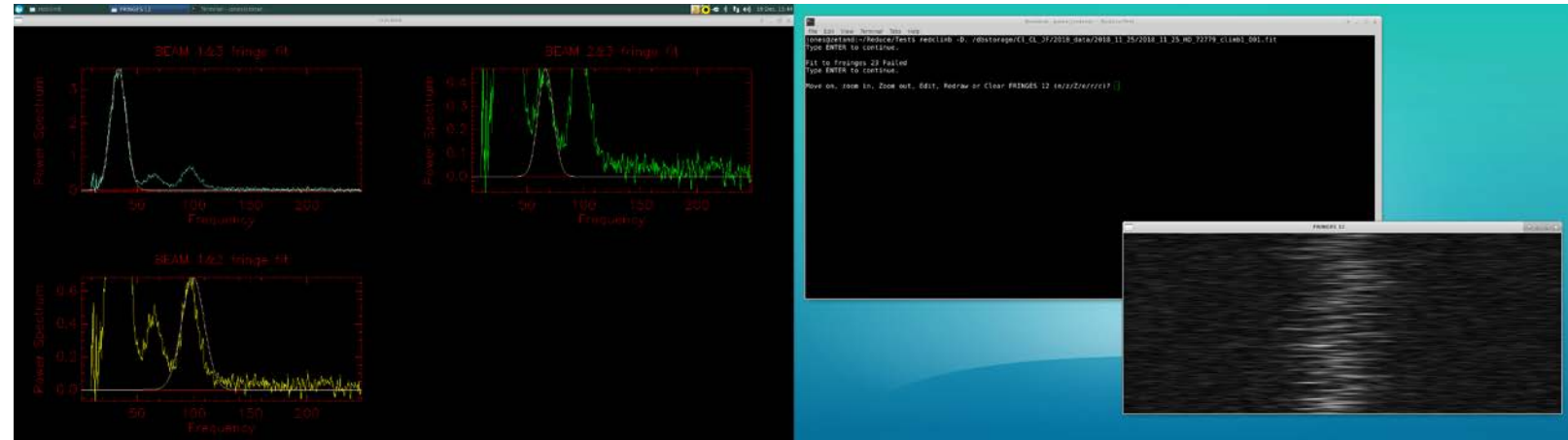
Remote Data Reduction
The Bad News

Remote Data Reduction
The Good News

- Improved Security

- Archive unaffected

- redfluor, redclimb reinstalled

- PAVO reduction software resinstalled

- **To Do:**

  - Set up appropriate permissions

  - Reinstall VEGA & MIRC-X pipelines
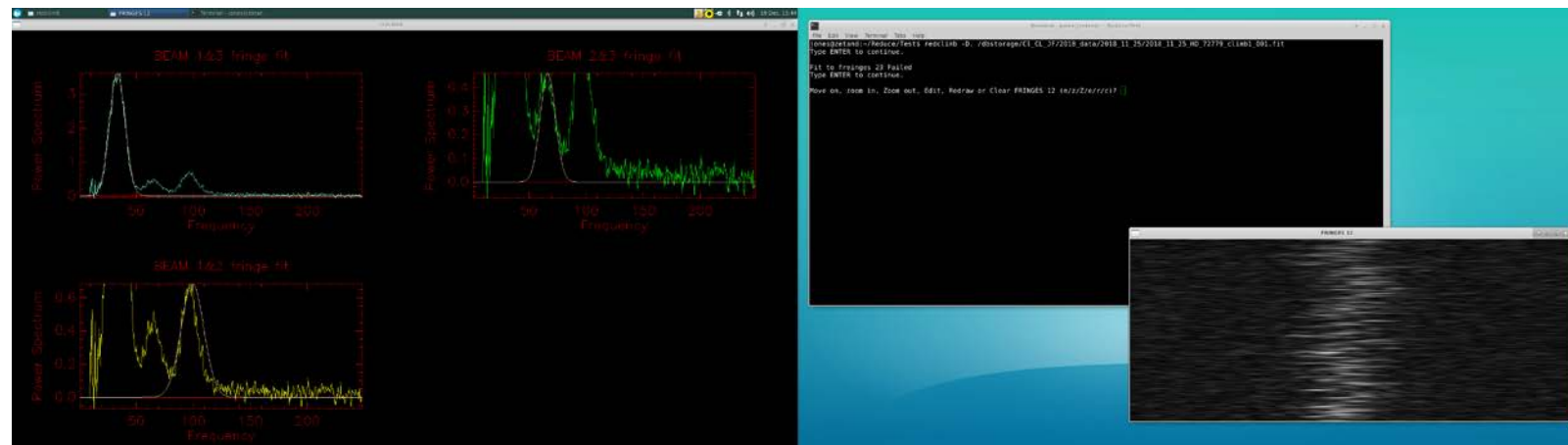
Signing up for Remote Data Reduction

Go here for more details:
chara.gsu.edu/observers/data-reduction-software

Automated Observing Logs

Night Log

- Converts output from CD to be human-readable
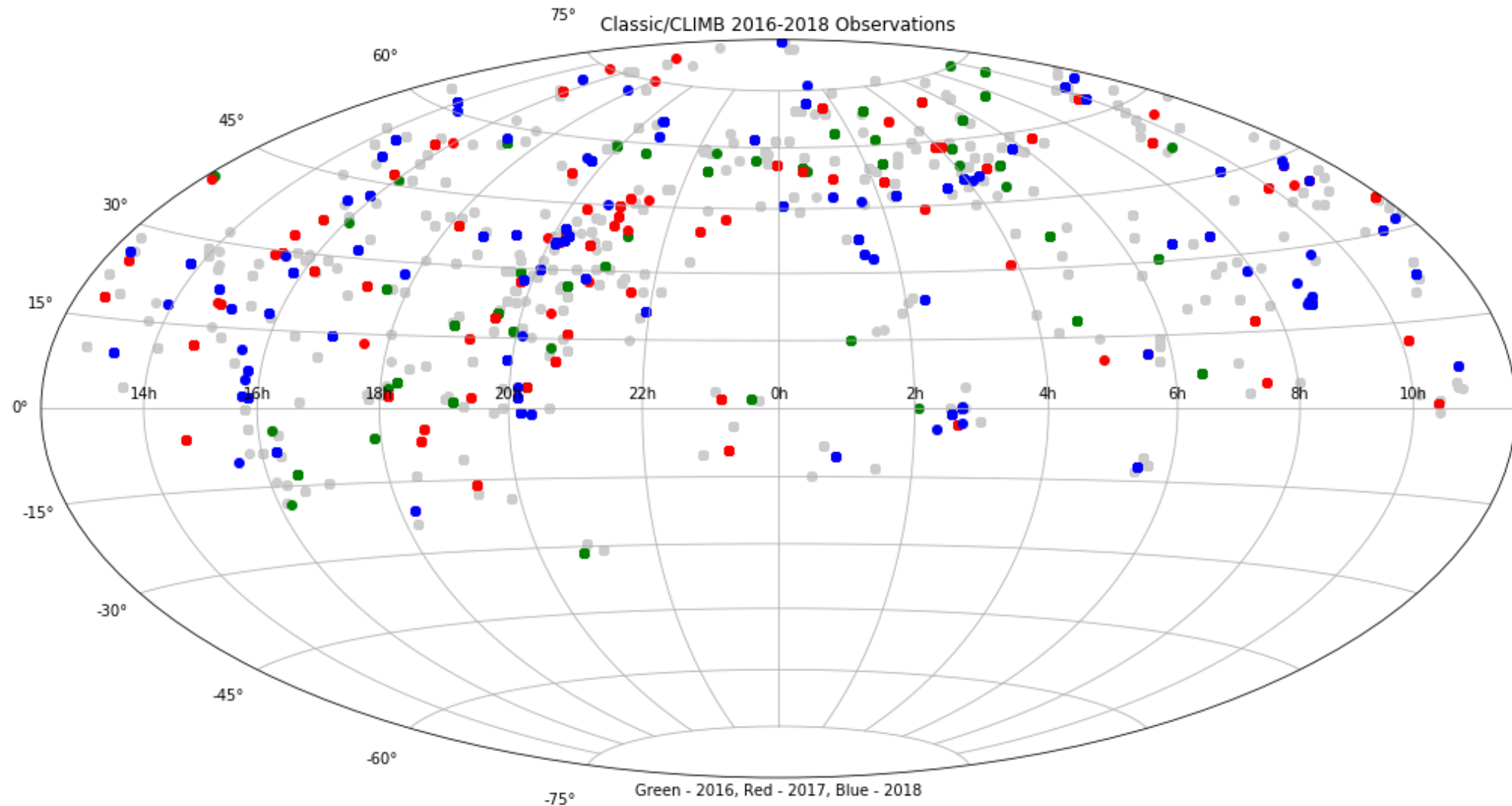- Similar to night report email, but with more info
- Convenient csv format

Automated Observing Logs

Data Log

- Based on saved data
  - More accurate
  - More complete
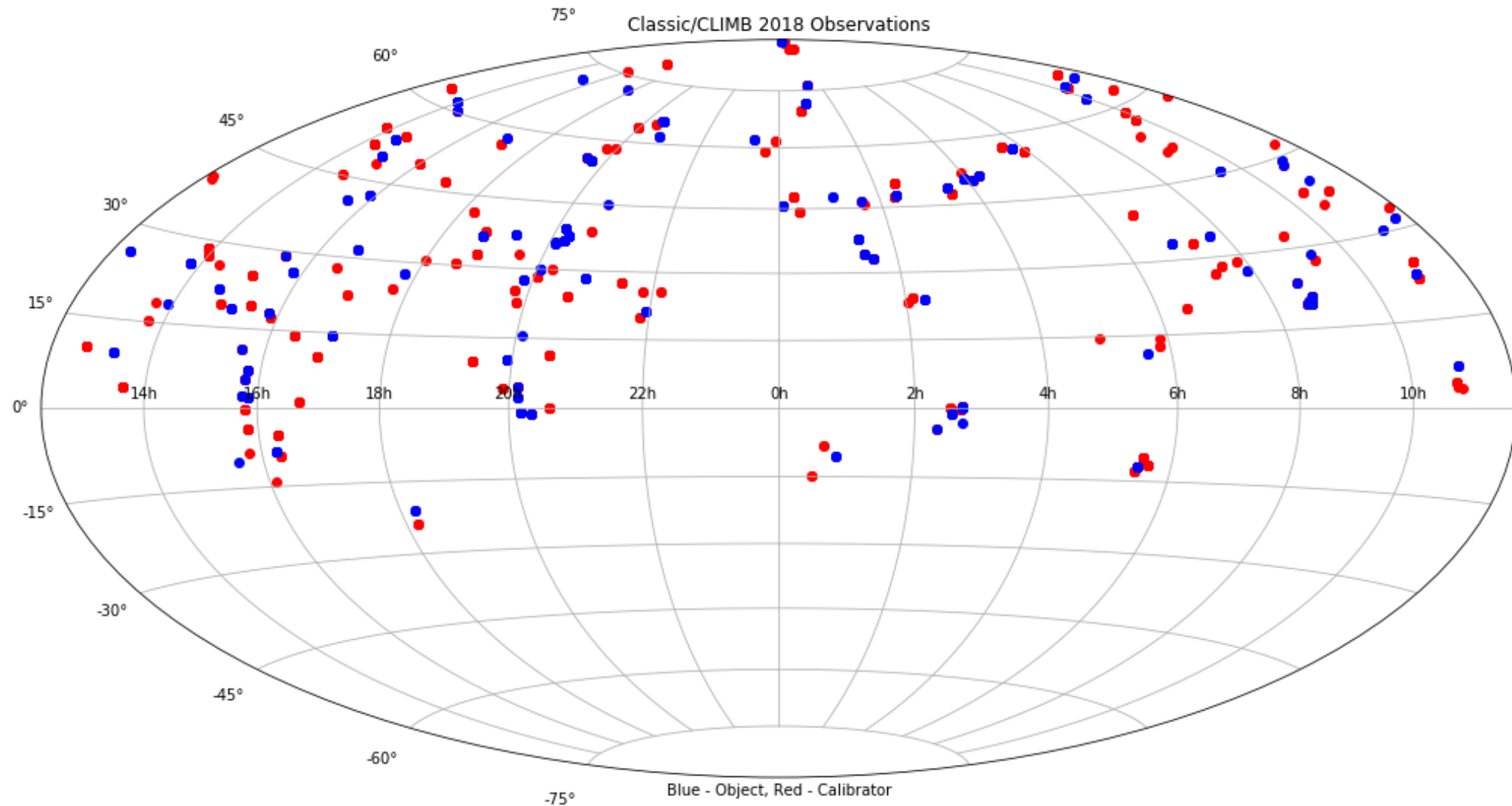 - Slower to generate
- Same convenient csv format

Fun Plots from the Observing Logs

Classic/CLIMB 2016-2018 Observations

Green - 2016, Red - 2017, Blue - 2018

Fun Plots from the Observing Logs

Classic/CLIMB 2018 Observations
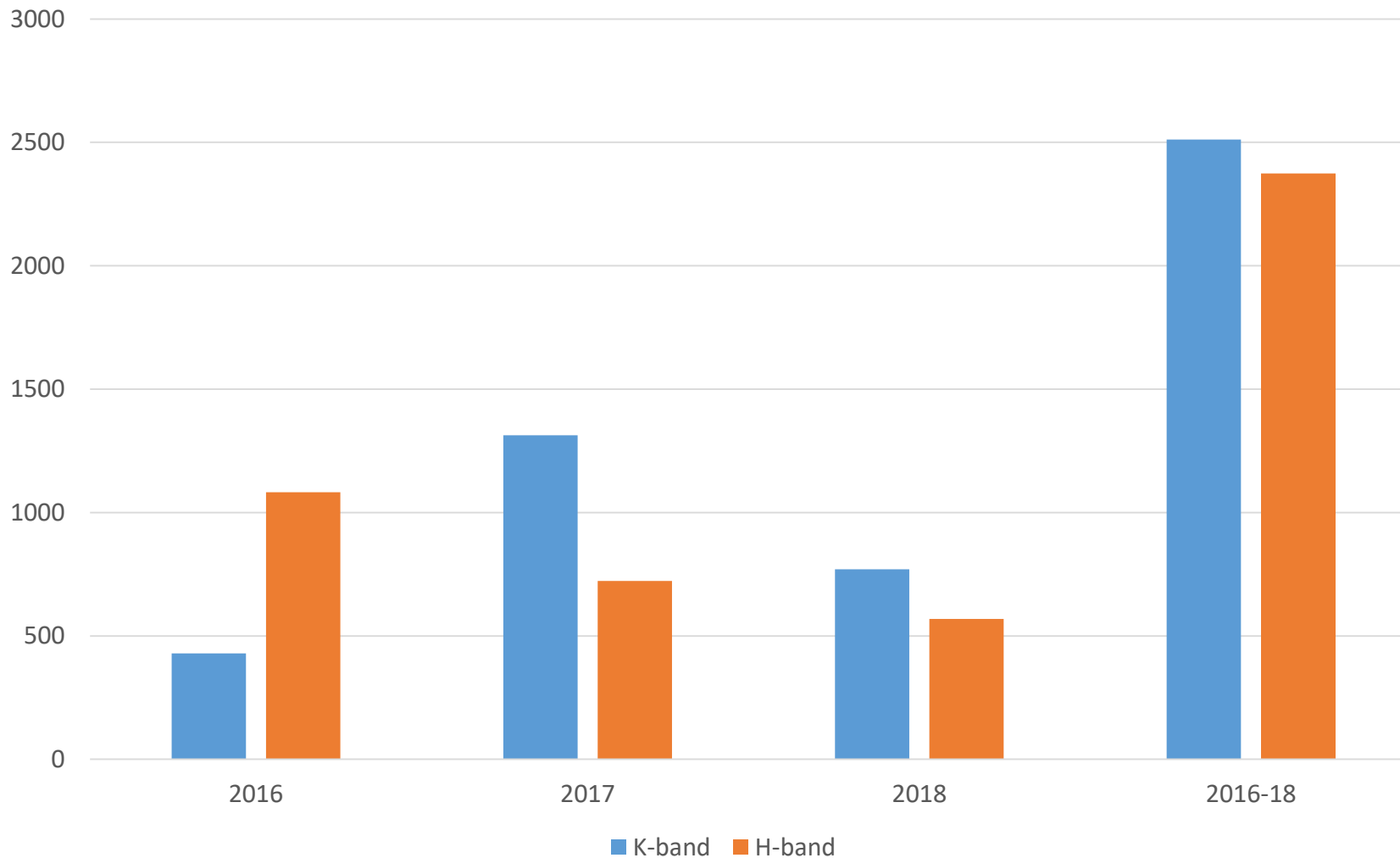
Blue - Object, Red - Calibrator

Fun Plots from the Observing Logs

Most Popular Wavebands

Fun Plots from the Observing Logs

Most Popular Scopes