



# CHARA Operations

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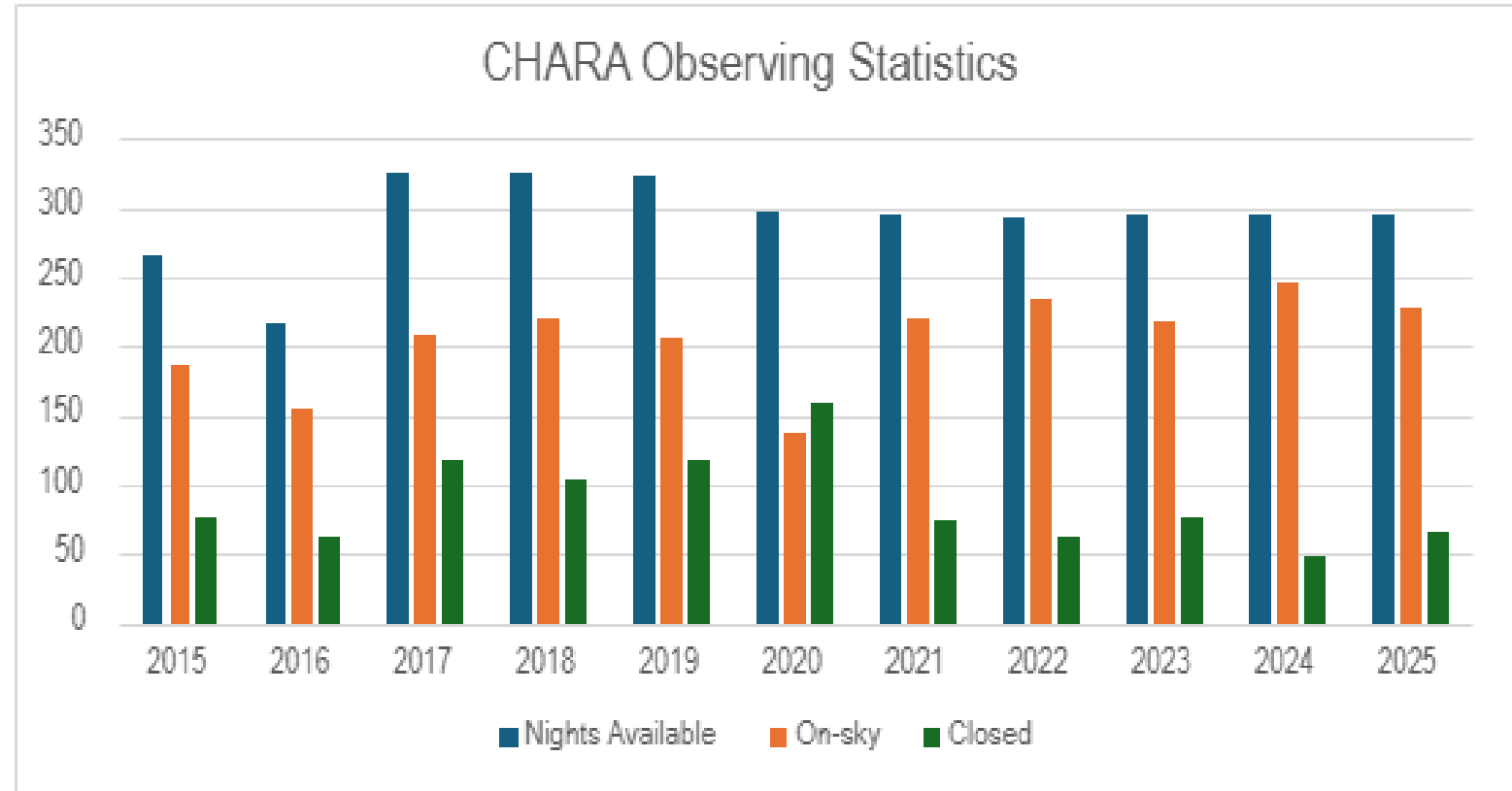


# 2024-2025 Statistics

| 2024 Nights Closed |    | By Month  |    | 2025 Nights Closed |    | By Month  |    |
|--------------------|----|-----------|----|--------------------|----|-----------|----|
| Humidity/rain      | 26 | December  | 2  | Humidity/rain      | 58 | December  | 1  |
| Clouds             | 2  | November  | 10 | Winds              | 2  | November  | 12 |
| Winds              | 3  | October   | 3  | Technical          | 4  | October   | 5  |
| Combination        | 11 | September | 5  | Temperature        | 3  | September | 11 |
| Technical          | 4  | August    | 0  |                    |    | August    | 0  |
| temperature        | 2  | July      | 0  |                    |    | July      | 0  |
| seeing             | 1  | June      | 0  |                    |    | June      | 2  |
|                    |    | May       | 3  |                    |    | May       | 6  |
| Total              | 49 | April     | 11 | Total              | 67 | April     | 13 |
|                    |    | March     | 15 |                    |    | March     | 17 |

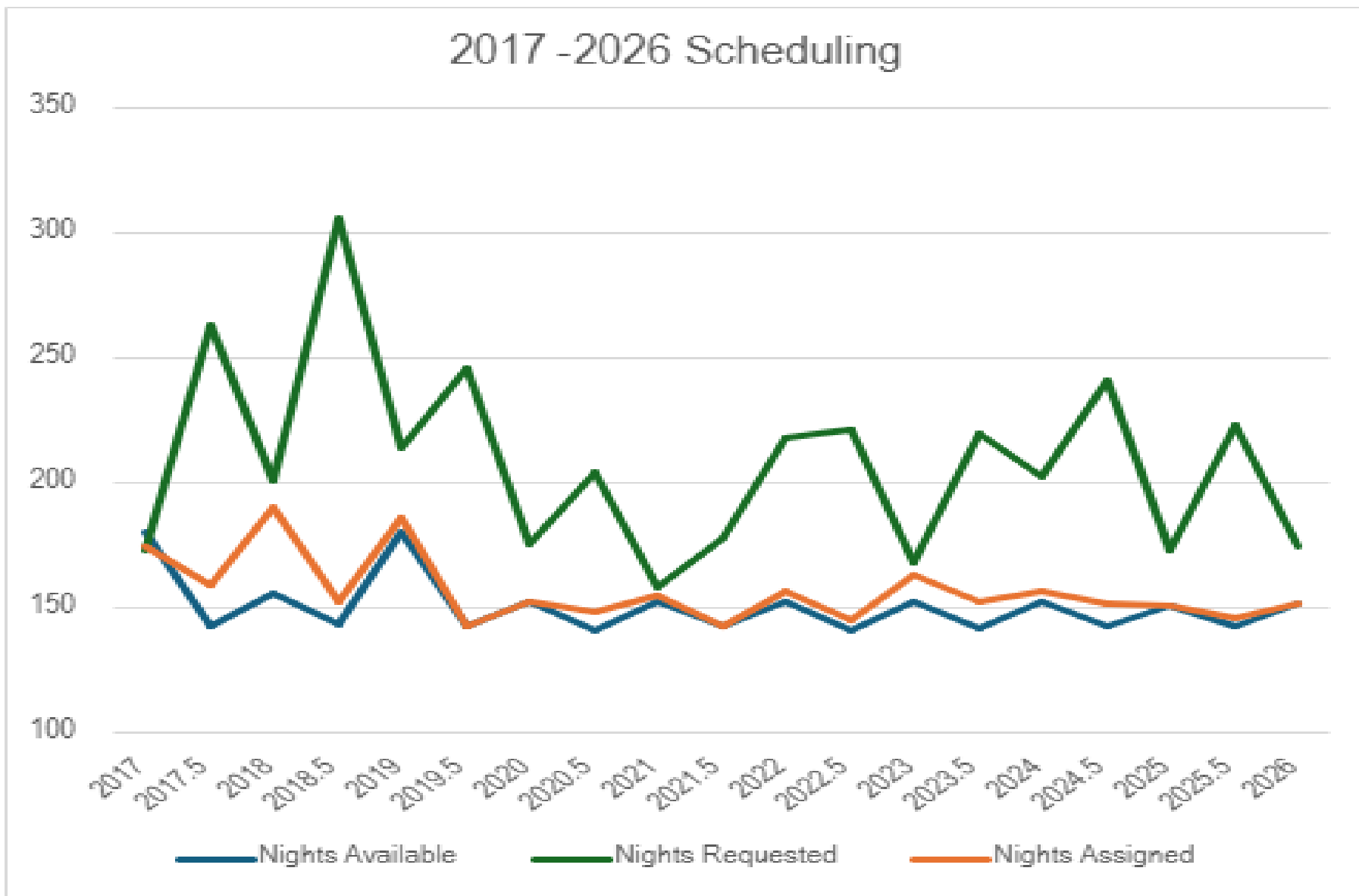
# 2017-2025 Operations Statistics

| Year | Total N | Data Collected | Closed |
|------|---------|----------------|--------|
| 2015 | 265     | 187            | 77     |
| 2016 | 217     | 155            | 62     |
| 2017 | 326     | 208            | 118    |
| 2018 | 325     | 221            | 104    |
| 2019 | 324     | 206            | 118    |
| 2020 | 297     | 138            | 159    |
| 2021 | 296     | 221            | 75     |
| 2022 | 293     | 234            | 62     |
| 2023 | 295     | 218            | 77     |
| 2024 | 295     | 246            | 49     |
| 2025 | 296     | 229            | 67     |

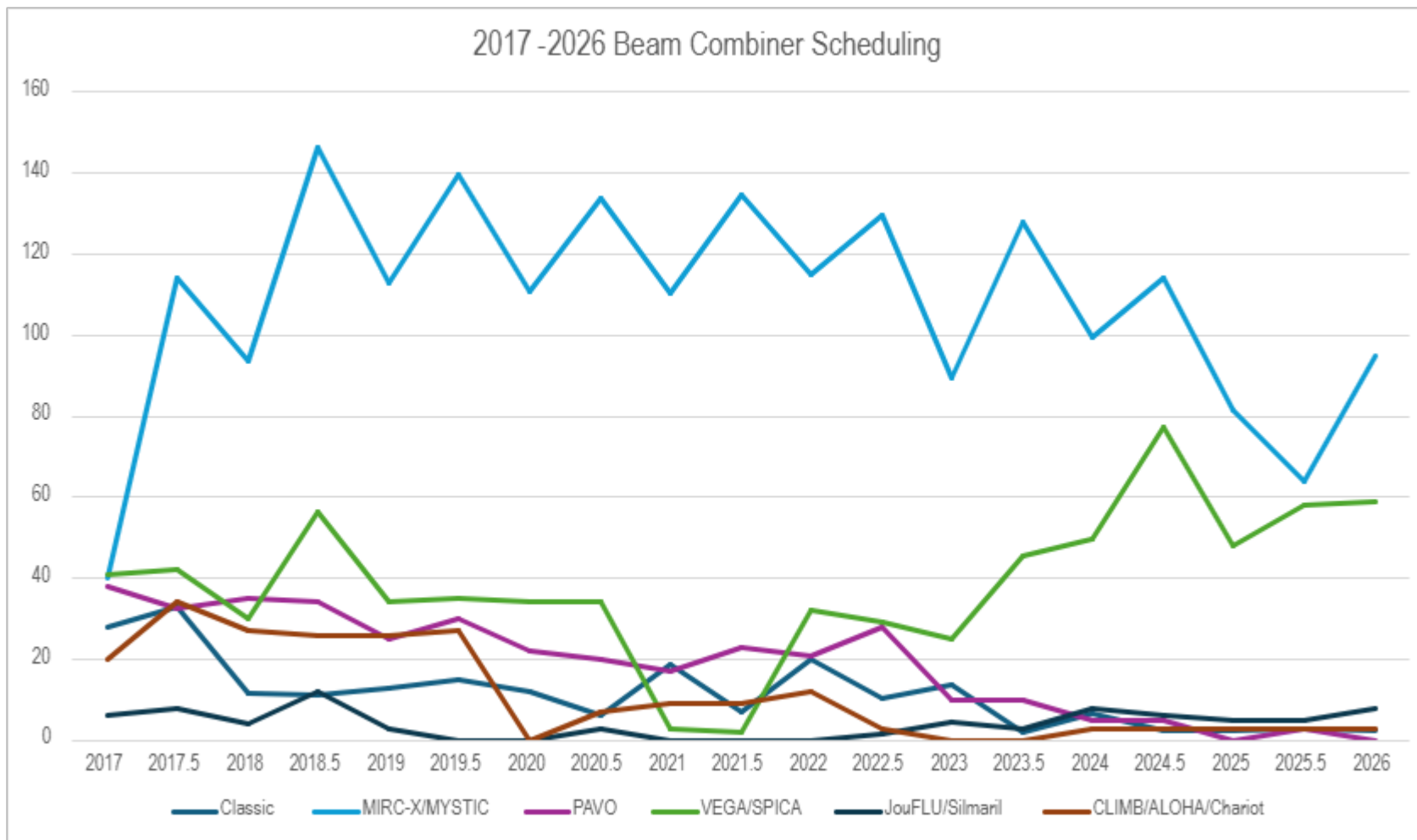


# 2017-2026 Scheduling Statistics

| Semester | # of proposals | Classic | Engineering | MIRC-X | PAVO | SPICA/VEGA | Silmari/JouFLU | NOIRLab | CLIMB/Chariot/Aloha | Available | Requested | Assigned | Oversubscription |
|----------|----------------|---------|-------------|--------|------|------------|----------------|---------|---------------------|-----------|-----------|----------|------------------|
| 2017     | 35             | 28      | 15          | 40     | 38   | 41         | 6              | 10      | 20                  | 181       | 173       | 174.5    | -4.4             |
| 2017.5   | 46             | 33      | 0           | 114    | 32.5 | 42         | 8              | 15      | 34                  | 143       | 263.5     | 159      | 84.3             |
| 2018     | 41             | 11.5    | 5           | 93.5   | 35   | 30         | 4              | 25      | 27                  | 156       | 201       | 190.5    | 11               |
| 2018.5   | 48             | 11      | 35          | 146.5  | 34   | 56.5       | 12             | 25      | 26                  | 144       | 306       | 152.5    | 114              |
| 2019     | 39             | 13      | 0           | 113    | 25   | 34         | 3              | 25      | 26                  | 181       | 214       | 186      | 18.2             |
| 2019.5   | 44             | 15      | 22          | 139.5  | 30   | 35         | 0              | 30      | 27                  | 143       | 246.5     | 143      | 72.5             |
| 2020     | 36             | 12      | 21          | 111    | 22   | 34         | 0              | 30      | 0                   | 153       | 176       | 153      | 15               |
| 2020.5   | 40             | 6       | 28          | 134    | 20   | 34         | 3              | 30      | 7                   | 141       | 204       | 149      | 44.7             |
| 2021     | 36             | 18.5    | 25          | 110.5  | 17   | 3          | 0              | 30      | 9                   | 153       | 158.5     | 155      | 3.6              |
| 2021.5   | 40             | 7       | 28          | 134.5  | 23   | 2          | 0              | 30      | 9                   | 143       | 178.5     | 143      | 24.8             |
| 2022     | 41             | 20      | 47          | 115    | 21   | 32         | 0              | 40      | 12                  | 153       | 218       | 156.5    | 42.5             |
| 2022.5   | 48             | 10.5    | 24.5        | 129.5  | 28   | 29         | 1.5            | 40      | 3                   | 141       | 221.5     | 145      | 57.1             |
| 2023     | 38             | 13.5    | 30          | 89.5   | 10   | 25         | 4.5            | 45      | 0                   | 153       | 168       | 163.5    | 9.8              |
| 2023.5   | 50             | 2       | 22          | 128    | 10   | 45.5       | 3              | 45      | 0                   | 142       | 220       | 152.5    | 54.9             |
| 2024     | 40             | 6.5     | 42          | 99.5   | 5    | 49.5       | 8              | 45      | 3                   | 153       | 202.5     | 156.5    | 32.5             |
| 2024.5   | 55             | 2.5     | 44          | 114    | 5    | 77.5       | 6              | 50      | 3                   | 143       | 241       | 152      | 69.7             |
| 2025     | 48             | 2.5     | 35          | 81.5   | 0    | 48         | 5              | 50      | 3                   | 151       | 173       | 151      | 14.6             |
| 2025.5   | 57             | 3       | 42.5        | 64     | 3    | 58         | 5              | 50      | 3                   | 143       | 223       | 146      | 55.9             |
| 2026     | 44             | 2.5     | 33          | 95     | 0    | 59         | 8              | 50      | 3                   | 152       | 175       | 152      | 15.1             |



# 2017-2026 Scheduling Statistics





# Observing Feedback Form

## CHARA Array Observing Feedback Form

Thank you for working with the staff of the CHARA Array to complete your program's observing run. We appreciate your interest in collecting data with us and would like to ask you a few questions about your experience with your observing run. You are also welcome to message me directly with any questions or comments not covered by the form at the email address below.

All answers will be kept confidential and you are free to express any opinions or difficulties you might have experienced. We want to improve all aspects of personal interaction and data collection, so any comments here will only be used to improve your and other PI's experience with future observing runs. Thank you for your feedback and I hope your data collection leads to quality scientific advancement.

Christopher Farrington  
Chief Operations Scientist  
[cfarrington1@gsu.edu](mailto:cfarrington1@gsu.edu)

1. Name: (you can submit anonymously if you wish)

Enter your answer

2. Email contact: (if you want a response to your feedback)

Enter your answer



# 2025 New Operator



**Heven Renteria**

Telescope Operations Specialist

- 11 years in Marine Corps and national guard – Aircraft ordinance technician
- Vice president and Outreach coordinator – LAAS
- 15 years of hands on astronomy – Griffith Observatory

# What to expect from Operators

- What Operators will do:
  - Setup the lab and array
  - Align the AO systems and STST
  - Slew the telescopes
  - Monitor the weather
  - Move the carts and monitor the OPLE system
  - Change pops when needed
  - Fix Array specific problems
  - Communicate with the PIs and facilitate the night of observing
- What Operators do NOT do:
  - Read instrument manuals and troubleshoot instrument problems
  - Aligning instruments (aside from Classic)
  - Change beam order in the middle of the night if a scope is removed from config
  - Keep track of offsets

# New PIs/Grad Students

- Get yourself a sponsor
  - CO-I, Support Scientist, more experienced grad student
- Make sure that the staff knows who is actually going to be doing the observing – on the proposal form
- Will add a check box for “new observer”
- Returning to an instrument certification system
  - Being able to use the instrument without outside help
- Certification – (tentative levels)
  - Watch the tutorial video
  - Read the manual – Test?
  - Visit the Array, tour the lab, instruments, shadow the operators and scientists
  - Successfully observe with a support scientist at least 3 nights
  - Starting from camera and instrument stopped, no guis opened, successfully get flux and fringes on STS and demonstrate how to monitor flux and fringes
  - Find fringes on sky with no direct support for at least 2 nights

# CHARA Observing Protocol

- Before your run:
  - RTFM for your beam combiner
    - We have links on the CHARA wiki for each combiner.
  - Check your calibrators -  $<0.5\text{mas}$  is suggested, single unresolved stars with similar magnitudes to the object  $\pm 1$  mag in the appropriate waveband, preferably not flare, RSCvn, pulsing, no-IR excess, etc. Plain boring stars work best.
    - Check the distance of cal from your object and which direction (RA/Dec) they are oriented.
    - This is especially important for when following a star for a significant portion of the night
- At least 3 days in advance, please send your setup and beam order through the online form
  - For Classic/PAVO/non-6T runs, please list all beam orders you will want to use during the night, this is important
- Send any changes to an already submitted setup request ASAP before the run starts so that adjustments can be taken into account.
- Check in with the staff the day before for any last-minute Array changes (tech problems with scopes, things out of service, etc) or to ask any questions.
- Remember, only the operators are on-hand during the weekend, and to clear up any problems before the weekend starts
- Show up early on the first night of your run

# CHARA Observing Protocol

- The first night of your run:
  - Show up at least an hour before sunset
  - Connect with the operator to check to see if everything is setup properly, lab aligned, etc.
  - Leave enough time to take STS data or any special setup, confirm spectral resolution, alternate beam order...
  - If you are going to be late in arrival (online or in-person, let the operator know so that they can get everything ready, and even pointed at the first star while you are catching up
  - Please think ahead. Give the operator the info for at least one, preferably two stars in advance
  - Nearing the end of a data sequence, let the operator know where you are going next:
    - “At the end of the shutter sequence, we will next go to Obj/cal/check”
- If there are problems, have patience, the array is complicated and there are many things to adjust/check.
- If you have a problem with an instrument (rather than the array itself), and you do not know how to fix it, please ask someone before attempting to fix yourself.
- If the operators tell you the weather is bad and we need to close at the end of the data file, or immediately, please do not argue with them.
- If you want weather conditions, use the bot-spam discord channel rather than the operations channel
- MIRC specific – Do not change the configuration without having light from the previous night's setup visible.
- SPICA specific – When its time for a pop change, please ensure the STS Vis is out, and periscope is up for the operators