

What's new at the 61"?

2020

February

17

- New Liquid Nitrogen Policy implemented, see the top of the [61" wiki homepage](#)

2019

December

10

- The telescope is now equipped with a dome indexer. The dome should index its position every time it passes the indexer somewhere in the Southwest. In practice you should not have to initialize the dome anymore. You should still be checking to see if the dome is in position before you begin the night. If it's not, initialize and record it in the Trouble Report.

Coming out of Summer Shutdown 2019

- Operation Changes
 - Dome Shutter
 - The dome is now only able to open from the Safe Telescope GUI on Gerard.
 - Mirror Covers
 - The mirror covers are now only able to open from the Safe Telescope GUI on Gerard.
- Observers please follow the new procedures for the start of the night and end of the night
 - Start of Night Opening Procedure
 1. **In the control room**, open dome shutter using the GUI on Gerard
 2. **Upstairs in the dome**, fully raise the **top** wind screen and position the **lower** wind screen to desired level
 3. **In the control room**, open mirror covers using the GUI on Gerard
 - End of the Night Closing Procedure
 1. **In the control room**, close the mirror covers using the GUI on Gerard
 2. **Upstairs in dome**, visually verify mirror covers are closed
 3. **In the control room**, close the dome shutters using the GUI on Gerard
 4. **Upstairs in dome**, stow the wind screens
 - This new procedure is outlined in the [Kuiper 61" Operating Notes](#)
- Limits
 - The telescope limits were modified. We have new limit classes (S1, S2, H1, H2) and they

are described in detail [here](#).

- S1
 - S1 will act like slew limits in that you can get past S1 by tracking, with bias rates or with the paddle guide and drift rates. You can move past an S1 limit but the telescope will stop at the limit. You can then send the move command again and the telescope will continue at a very reduced rate.
- S2
 - S2 will be a no go zone by goto functions, bias rates and the paddle. Hitting this software limit will be functionally equivalent to hitting the cancel button on the GUI. The telescope will ramp down and come to a stop. You will be able to back out of this limit. If you try to move past this limit with the paddle you will move a little but TCS will cancel the move and send the telescope back to the limit.
- H1
 - H1 will act the same as S2 in that the telescope will ramp down to a stop when the limit is hit. The only difference will be that this limit is a hardware limit and immune from bad initialization. You will be able to back out of this limit.
- **It is possible that H1 is above S2**
- H2
 - H2 is the last hardware limit and will function the same as the final hardware limit currently at most of our telescopes. As soon as it is hit, it will cut power to the drive system either by powering off the drives or by activating the Safe Torque Off option. You will not be able to back out of this limit with the control system. It will have to be done manually.
- Quicklook Monitor
 - There is now another monitor mounted in the control room. This is a dedicated display for telemetry and telescope status.
 - If the webpage is not being loaded (and the network is fine), try power cycling the clear case raspberry pi located behind Gerard monitors.
- Maintenance
 - The Mont4k was baked out and had an extended pump time
 - The Mont4k filters were cleaned
 - The Mont4k guider box was cleaned

March

22

- Updated checklist for certifiers and updated form for observer certification. Only applies to certifiers.
- New “What's new for certifiers” page to better keep certifiers informed. Only applies to certifiers.

February

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- For lightning shutdown, the CSS monitors (the four monitors mounted on the wall) must be unplugged. There is a labeled black power strip that needs to be removed from the wall.

2018

August

29

- AZCAM Changes
 - You now open Azcam using the desktop icon, "start mont4k". A red window comes up like before, but now there are 3 options you must select from. Most users will use "mont4k standard mode" by typing "1". RTS2 users will choose "mont4k for RTS2" and type "2". CSS users will choose "mont4k for CSS" and type "3". This window, and how you make selections, is very similar to bigguider's startup.
 - To do a focus sequence you can type "focus.run()" in the red window. Make sure you hit enter in the red window until you get a prompt to type at before doing this.
 - To set the focus sequence parameters type "focus.set_pars("exposure time in seconds", "# of exposures", "focus_step", "detector_shift"). So for example you could type in the red window focus.set_pars(3,7,40,30)
 - Observing scripts and templates are now located in the C:/data/mont4k directory.
 - Telescope tab-header info is no longer available here, the only thing you can do here is "enable telescope". Note this doesn't enable the telescope drives, just allows telescope info to be transferred into headers on IRAF.
 - Instrument tab- Instrument header info is no longer available here. You can change filters here and enable/disable instrument. Enabling instrument allows instrument header info to be written in IRAF headers.
- Changes to how things are plugged in on the bottom of the telescope
 - Please refresh yourself with the 61" Lightning Shutdown procedure
 - On the west side, two power strips are now plugged into the two outlets. Those are what need to be unplugged for lightning shutdown on this side.
 - The all cords are labeled and have matching outlets on the power strips. Please follow this convention when connecting and disconnecting everything for the M4K
 - The M4K CCD power supply AC power cord is the only cable plugged into the east orange outlet. It will need to be unplugged for lightning shutdown. Note - this is the only item to be plugged into the east outlet which is new.
 - The focus is no longer operating off the orange extension cord that plugged into the powerstrip on the south end of the scope, it's hardwired in, so you don't have to worry about it.
- Changes in the UPS room
 - The emergency stop plug (bright yellow) no longer needs to be unplugged when going into lightning shutdown.
 - The gray GPS power cord still has to be unplugged every time we go into lightning shutdown (no change)
 - There's a small white Trendnet adaptor plugged into the orange plugs by the GPS, leave that plugged in

- CSS will be utilizing the 4 monitors now mounted on the east wall.
- All stereo equipment, books and shelving have been moved to the west wall.
- The control room patch panel has been moved closer to the UPS room but is still on the east wall.
- Dome TV camera and finder scope
 - There is now a website where you can view the video finder scope, and the dome camera
 - Upstairs you can access the video feed using the laptop, and new monitor located on the top of the console on the north end of the platform. There is a desktop icon “Finder scope” on the laptop which will bring up the webpage. This monitor does not have to be unplugged during lightning shutdown. The laptop still needs to be unplugged for lightning shutdown
 - In the control room on Gerard there is another desktop icon that you can use to access the dome camera and the video finder scope feed.
 - The Dome TV Camera and Video Finder Scope monitors downstairs still work. The Video Finder Scope monitor is now located on the counter top. Both monitors work but the connections have been getting very flaky lately. There is a longer term plan to replace these, but for the moment, if they stop working, we have the website as a backup.
 - Once you open the webpage use the drop down menu under the “Video stream or PTZ preset” to select the views you are interested in. “Quad Stream” shows up to four video feeds. Video 1 (dome camera) and video 3 (finder scope) will be shown together. Currently video 2 and video 4 are not in use. If you would like to just display the dome camera or video finder scope by itself select “Video 1” or “Video 3” respectively.
- Other post-downtime reminders
 - We re-aluminized the mirror this year! Please ensure the coating is well cared for by not letting it rain/snow in the dome, not staying open during high windy/dusty conditions, not observing past the humidity limit, etc. etc. It needs to last another 3 - 5 years!
 - Please remember that if you are planning an observing run, and have not observed in over a year at the start of your run, you must take a refresher course
 - We need to receive your observer request forms prior to your run. These help Operations better serve you and allow us to plan ahead.

Older

- There is now a Telemetry Quick Look GUI on gerard's desktop.
 - Displays in large font information that astronomers want!
 - It is still in the process of being developed
- The password for bigccd1 is “azcam”.
- The “kill bigpop” icon on bigaux is working again. You will need to enter the username “bigobs” and the same password as Gerard.
- *The first time coming out of lightning shutdown, bigccd will freeze on the first exposure you take, locking the entire system and forcing you to hard shutdown the computer. To prevent this, when you first turn on bigccd restart the computer through the “start” menu before opening azcam.* This has now been fixed. You can use bigccd as you normally would.
- There is a new generator that fires up automatically when Trico power is lost.
- With a new instrument being used at the 61”, homing the focus at the beginning of each night is of utmost importance. After homing, select Mont4K from the FOCUS panel to set to a value close to the best focus for the Mont4K. Observers may not even see stars in images if the focus is too far off.**

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