

## Telescope Start Up

- Main Telescope Power Turned **On**
- “**TR**” to start telescope tracking
- “**DM**” to start dome following
- “**PP**” to find PPM star
- “**UC**” to update coordinates
- “**GGS**” to get guide star
- “**GOS**” and “**GEG**” to calibrate guider
- “**GLK**” to restart guider

## Mimir Start Up

- Log into **Saturn** computer
- Open an **X11** window
- in that window: “**telnet mimir**”
- log in to **mimir** as **obs72** user
  - Issue “**ds9 &**”
  - Issue “**lois &**”
- Open another shell/window
- in this shell: “**ssh camera@yggdrasil**”
- in the yggdrasil shell
  - “**cd /home/camera/buie**”
  - “**filter**” – display settings
  - “**plate d**”; “**plate s**” – display current slit, decker positions

## LOIS Set Up

- Guiding must be **OFF**
- Click “**Configure**”
- In Configlois GUI:
  - Select “**Perkins**”
  - Select “**Mimir**”
  - Select “**MimirInst**”
  - Select “**DS9/XPA**”
  - Change User, Institution, as needed
  - Click “**Start**”
- **WAIT!!!** For telescope interface GUI to populate
- Click “**Storage**” and set up directory and file names
- Take a few test images
- For **CoAdds**, must hit <CR> to engage (window -> green)

## Mimir Commands and Scripts

### Mimir/LOIS Scripts – LOIS System window :

- change directories to script directory: “**cd ../tcl.mimir**”
- compile a script: “**source gpips.tcl**”
- show user buttons: click “**Show User Buttons**”
- run a script: “**script arg1 arg2 ...**”; or click script button
- Example Scripts:
  - “**gpips.tcl**” (7 position polarimetry dither and has all filter config stuff, too)
  - “**lindata**” (for linearity data collection)
  - “**slit\_dither**” (for 12 position spectroscopy dither)
  - “**phot\_dither**” (for 10 position imaging dither)

### Commands – Yggdrasil Window :

- “more command\_name” (eg. “more jhk”)
- Decker, Slit motion commands:
  - “**plate d 0**”, “**plate d 304**”
  - “**plate s 0**”, “**plate s 189**”
- Filter position verification: “**filter**”

# Problems -> Solutions

<b>Telescope Problems</b>	
Axes halted, dome crazy, lights turned on	System Failure – you must restart MOVE and do a MS (manual startup) of the axes
One axis quit, other works fine	Check axes motor controller units (under RA gear and up on Dec counterweight). If flashing red “20” – tripped current limit – must cycle main telescope power and restart MOVE
<b>Mimir Problems</b>	
Data collection hung	Image transfer interrupted. Press “ <b>White Button</b> ” on back of Mimir computer
LOIS acting odd	Lots of causes. Exit LOIS and restart
LOIS hung or frozen	If waiting 2 minutes doesn’t help, look in shell used to launch LOIS. If core dump, restart LOIS. If no core dump: <ul style="list-style-type: none"><li>– “ps -ef   grep LOIS” to find job number of running LOIS</li><li>– “kill -9 that_job_number”</li><li>– restart LOIS</li></ul>
Filter motion failed	Usual message is “bump...” to signify position lost. Move filter manually to find dark/home position (either from encoder readout or by taking images until dark is found). Then <ul style="list-style-type: none"><li>– edit filter position file (vi works) to reset position to “0”</li><li>– filter position files are<ul style="list-style-type: none"><li>• last.1, last.2, last.3, last.p</li></ul></li><li>– type “filter” to verify correct position</li><li>– move to desired filter position</li></ul>
Scripting failed	Most generally caused by guider reporting problems (no star). You are out of luck. Reposition telescope, do manual moves. Or, create a copy of the script, editing out the portions already accomplished and source then run the new script.
User Set Integration time too long	Click “Abort” button in Mimir IR Camera Control GUI
Scripting didn’t do what I wanted it to do	Click “Abort Current Script” in LOIS command window.