

## 40 inch Change: SAAO CCD ON

Mar 2014	JC
Jan 2015	PS
Jan 2105	GPE
Nov 2015	ACM
Feb 2016	MR
Sept. 2016	DBC
Nov 2016	ACM

For SAAO STE3 and STE4 detectors.

### Observing Floor

1. Ensure the following are mounted on the telescope (they are never removed):
  - Acquisition box with pneumatics connected
  - XY Slide
  - Merlin Acquisition controller (fiber colour-to-colour) and camera
  - Merlin acquisition power supply
  - Filter wheel box
2. Mount CCD cryostat on the telescope (mechanical responsibility).
3. Mount CCD power supply at the NE corner of the telescope. Ensure that the correct power supply is used - they are marked STE 3 and STE 4, respectively.
  - a. Connect the CCD power cable to the power supply, at the circular connector interface.
  - b. Connect the mains power cable to the CCD power supply.
4. Connect Fiber cable to the Merlin CCD camera (color-to-color).
5. Check that the correct filter wheel units are installed – refer to the filter rota on the electronics web page.
6. Connect the Filter wheel cables. Connector interface is one DSUB at the controller, branching to two DSUBs at the filter box.
7. Connect CCD/Acquisition cable, a nana connector with fixing ring, to the acquisition box.

### Warm Room

1. Using Imag40.suth PC (Industrial PC), ensure that all peripherals as well as fiber (rev. col) and network are connected.
2. Log in to Imag40 PC.
  - Login: `ccd`
  - Password: `Saaoccd`
3. Open a terminal (xterm) // (Link to Application (short cut))??
4. Change to the Diag directory: `cd diag`
5. Start Science Program
  - a. Enter: `RunImage`
  - b. Select CCD in use: STE3 or STE4.

- c. Initialise & move the filter wheels
  - d. Read CCD (take an exposure)
6. Check the time on science program RunImage – to check that the computer (Imag40) clock is properly synced (by NTP) with the SALT GPS time server.
- a. Check that Imag40 PC time and RunImage program time agree with the time service time
  - b. If the times do not agree, or the NTP box on the RunImage GUI stays permanently red, the NTP daemon status of the computer must be checked:
  - c. Open another xterm window, Remember to log on as: **su root** and password: Saaoccd, at the prompt type

**/etc/init.d/ntpd status**

The response should be:

**ntpd (pid 851 848) is running**

If the NTP is not running, then start it by typing

**/etc/init.d/ntpd start**

If that doesn't work, reboot the PC

7. TCS and TCS software checks:
- a. Initialise the XY slides
  - b. Move the guide mirror in/out of beam
  - c. Take some acquisition/guider camera exposures, check for correct response
  - d. Check the TCS PC clock against the time server.