

ULTRASPEC Camera @ TNT

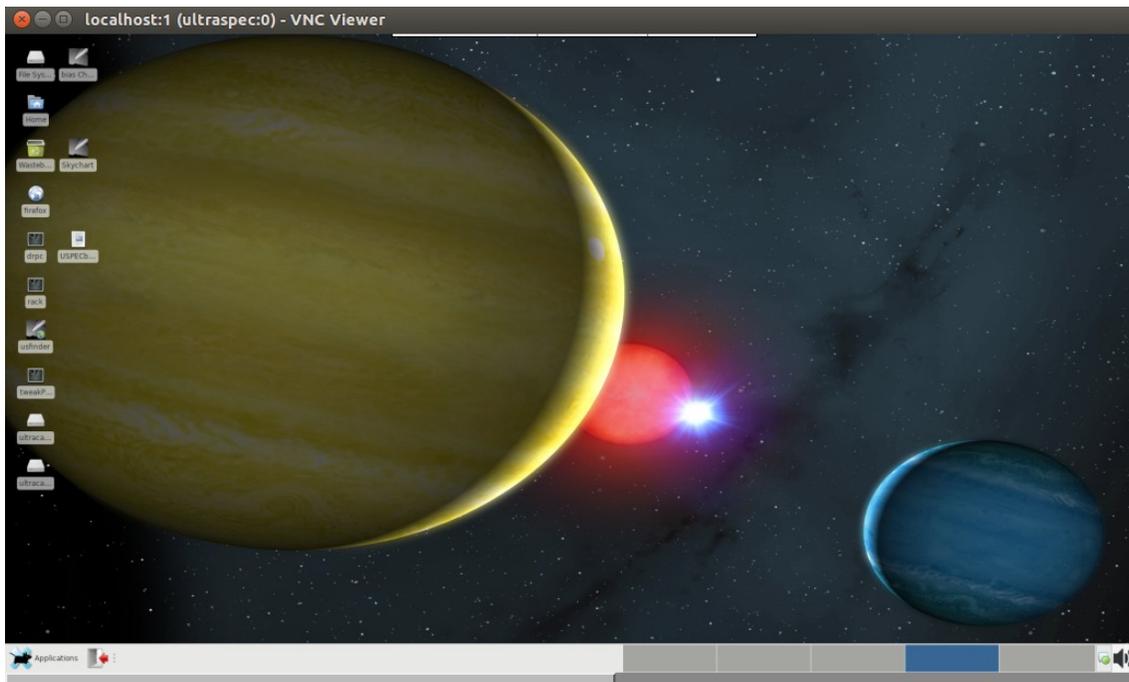
User guide (for remote station at AstroPark)

If you have any question or need help:

Contact: puji.irawati@narit.or.th or go to http://www.vikdhillon.staff.shef.ac.uk/ultraspec/userman/uspec_userman.html

Starting remote session

1. Please read the TNO Remote Control Manual before starting your remote observing session
2. Please refer to Remote Control Manual (page 9) to connect to DRPC using NARIT-VPN
3. After a successful VPN and VNCviewer connections, you will be able to see the desktop of DRPC and control the computer remotely



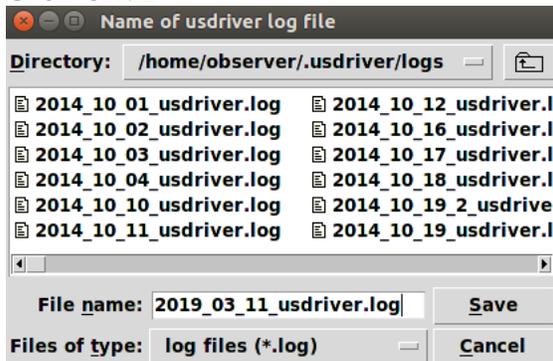
Starting the camera

4. Start connection from DRPC to RACK computer inside telescope dome
 - Double click icon “rack”
 - or
 - Open terminal and type “rack”
`ultracam@observer:~> rack`

Start usdriver (GUI to control ULTRASPEC camera)

5. Make sure you have established connection to RACK (step 1,2,3), then start the software:

- ucam6@observer:~> start_uspec
- this command will open four white colour windows and also the usdriver (see Figure A and Figure B in the Appendix below)
- it will ask you to input the name of usdriver log file
File name = YYYY_MM_DD_usdriver.log (starting date of your observation night)
Click 'SAVE'

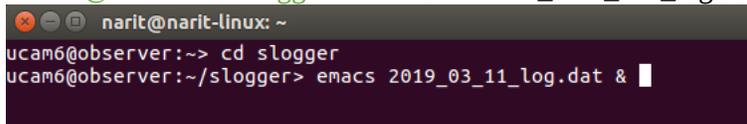


- go to 'Setup' window located on top left corner of usdriver window, and click 'Initialise'
This will start[POWON] the camera (the instrument will not work unless you initialize first)



Start slogger (for automatic observing log at the end of the observing night)

6. Open another terminal at RACK computer
 - You can open a new terminal by doing right click on terminal icon, or CTRL+TAB
 - Or repeat step 4
7. Change directory to slogger directory
 - ucam6@observer:~> cd slogger
 - Check if there is already an existing slogger file with your starting date of observation. If YES, then open the file and append/continue without altering existing input. If NOT, then prepare a new text file for observing log
 - ucam6@observer:~/slogger> emacs YYYY_MM_DD_log.dat &



Content should be in format, e.g.:
run001 POWON
run002 bias 1x1 etc

8. Start slogger
 - ucam6@observer:~/slogger> ./slogger
 - it will ask you to input several information:
enter full path to data directory = leave as default (just press enter)
enter log filename = make sure it has the correct date of your current observing night
enter file-size limit in MB = leave as default (just press enter)
do you want to test speaker ... = leave as default (just press enter)

```
ucam6@observer:~/slogger> ./slogger
enter full path to data directory [/data] :
enter log filename [2019_02_27_log] :
enter file-size limit in MB [6000] :
do you want to test the speaker volume (n/y) ? [n] : █
```

- It will open a konqueror window (see Figure C in the Appendix below)

You are now ready to start the observation!

Please refer to the HiPERCAM pipeline userguide for a quick look at your data or visit the following page

http://www.vikdhillon.staff.shef.ac.uk/ultraspec/userman/uspec_userman.html#Looking%20at%20data

<http://deneb.astro.warwick.ac.uk/phsaap/hipercam/docs/html/>

If you are the last observer, you will need to switch off the camera at the end of the night. Go to the next page for detailed instruction or visit Vik Dhillon's page

http://www.vikdhillon.staff.shef.ac.uk/ultraspec/userman/uspec_userman.html#Before%20you%20go%20to%20bed

Switching of usdriver and the camera (at the end of the of the night)

9. Make sure that you have taken all of the calibration files before shutting down the camera.
10. Go to 'Setup' window located on top left corner of usdriver window, and click 'Power off'

This will switch down [POWON] the camera



11. ULTRASPEC does automatic observation log, so please make sure that the slogger window (Figure C) is up-to-date and the txt file (YYYY_MM_DD_usdriver.log) has been saved.
12. Closing down slogger
 - This step **MUST** be done carefully or your observing run and notes may not be logged properly
 - Go to the terminal window where you initiated slogger. You should see running dots which indicates that the slogger is still running
 - Wait until it has finished updating your log, and press CTRL+C as instructed
NOTE: You should NOT press CTRL+C while the dots is still running on the terminal
13. Closing down usdriver
 - Close the four camera windows (white windows, see Figure A) by pressing CTRL+C in these order
 1. Filesave window
 2. Camera window
 3. Lakeshore camera temperature window
 4. Fileserver window
 - Go to usdriver and click 'Quit'



14. Perform automatic data archival

- Go to any DRPC terminal (your working terminal, or open a new DRPC terminal)
- Check that the two portable external hard drive are mounted
- Type: `end_of_night_task`
- `observer@ultraspec:~> end_of_night_tasks`
- Inform the night operator that you have completed the `end_of_night` script

Appendix

Warning: DO NOT close any of these windows during your observation

Figure. A

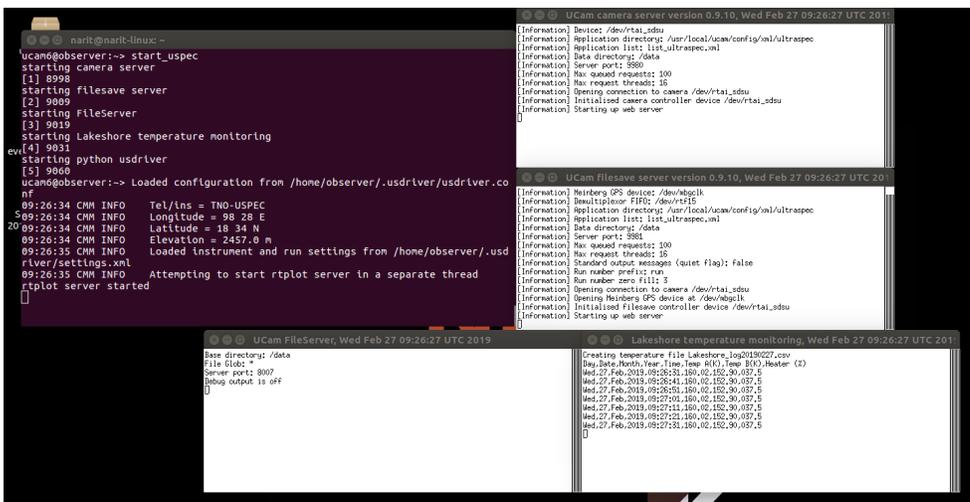


Figure B. usdriver window

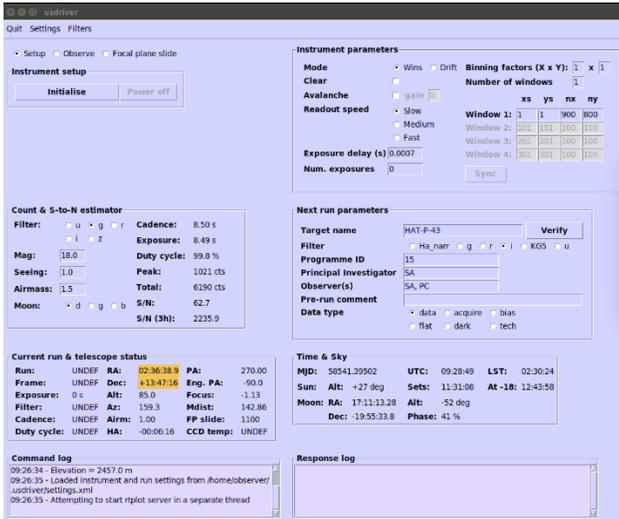


Figure C. slogger window

