PHD2 Guiding

C. Johnson

3/16/2018

updated Oct 3, 2018 by P Gabor & C Johnson

All of the required software is currently installed on the `vattcontrol` server; login as vattobs.

The legacy *VATT Guider App*
only controls the stepper motors
in the guide box.*
Guiding is done with *PHD2* !

(*) When using VATT4k and GUFI, these motors move the two filter wheels for the science camera, the guider camera's filter wheel, the guider camera's 3-axis translation stage, and the stage carrying the center mirror and the U mirror.

- start indiserver
  - click the indiserver icon on the desktop
  - (a terminal window should appear)
- start phd2 guiding
  - click the PHD2 icon on the desktop
  - (the PHD2 application should appear)
- configure phd2
  1. in the `Main tool bar`, click icon that looks like a usb male connector
     - (`connect equipment` window should appear)
  2. in `connect equipment` window verify the following settings:
     - camera type “INDI Camera”,
     - mount type “INDI Mount”,
     - aux type “None”
  3. in `connect equipment` window, in the camera row, click on the icon that looks like a screwdriver and wrench in an “X”
     - (`INDI Configuration` window should appear)
  4. in `INDI Configuration` window verify the following settings:
     - Hostname: localhost
     - port: 7600
     - driver: Apogee CCD
     - Dual CCD: Main
  5. click the `INDI` button near the bottom of the window

    - (`INDI options` window should appear)
6. select the `Apogee CCD` tab
7. verify the following settings:
    - in the port section `network` is selected
    - in the network section:
        - subnet: 10.0.255.255
        - ip:port : 10.0.3.14:2571
8. click the `connect` button in the `Connection` field
    - (after a few seconds, a bunch of new fields and tabs should appear.)
9. near the bottom of the window, turn on the cooler
10. IF YOU ARE GOING TO BE AUTOGUIDING:
    - click on the “INDI-VATT-GUIDE” TAB
    - click “Connect”
    - (a UT clock should appear and begin incrementing.)
11. exit the `INDI options` window
12. click OK in the `INDI Configuration` window
13. in `connect equipment` window, in the camera row, click on the icon that looks like a screwdriver and wrench in an “X”
    - (`INDI Configuration` window should appear)
14. click `Connect` in the `Connect Equipment` window, in the camera section
    - (the button should now say `Disconnect`)
15. IF YOU ARE GOING TO BE AUTOGUIDING:
    - in `INDI Configuration` window verify the following settings:
        - Hostname: localhost
        - port: 7600
        - driver: VATT-GUIDE-INDI
        - Port: [empty]
    - exit the INDI Configuration window
    - click `Connect` in the `Connect Equipment` window, in the mount section
    - (the button should now say `Disconnect`)
16. click `Close` in the `Connect Equipment` window
17. In the `Main tool bar` (it may be positioned anywhere in the window),
    - click the `Advanced setup` (brain icon) button (second from the right); a new window should appear.
18. Set binning to the allowed maximum of 8×8:
    - Select the `Camera` tab,
    - in the group `Camera-specific properties`, set binning to 8 (pull down selector).
    - [Note. Ostensibly, binning can be set via `INDI options` as NxM where N and M may take any value you wish. This feature does not work. Binning can really be set only via “brain” button.]
19. IF YOU WILL NOT BE AUTOGUIDING: Disable mount guide output:
    - Select the `Guiding` tab,
    - in the group `Shared parameters` disable *mount guide output* (uncheck the box); `Guide output DISABLED` should appear in the lower left of the main window. This should prevent PHD2 accidentally interfering, e.g., with the PEPSI guider.
20. Set up automatic frame capture:
    - Select the `Global` tab,
    - check `Enable diagnostic image logging`, then
    - in the group `Save Guider Images` check `Until this count is reached`,

and
- set the value (100 is the maximum).
- the files are stored on the `vattcontrol` server
- The Dark Library is located in the directory `/home/vattobs/.phd2/`.
- The directory `/home/vattobs/PHD2/PHD2_CameraFrames…` is automatically created for the session.
- If you need to capture more than 100 images, make a renamed copy of the session directory; new *fits* files should start populating the original sessIF YOU ARE GOING TO BE AUTOGUIDING:ion directory.

- Start Imaging
  1. in the bottom left of the PHD2 window there is a button with 2 arrows forming a circle. Click that button.
  2. the button should gray out, the stop sign button should turn red, and images should start appearing

Offset Guider Stage

Note: All numbers are GUI units. The travel limits are accurate but the diagram is only an approximation.

From:
https://lavinia.as.arizona.edu/~tscopewiki/ - **MOON**

Permanent link:
https://lavinia.as.arizona.edu/~tscopewiki/doku.php?id=phd2:phd2_guiding&rev=1538763472

Last update: **2018/10/05 11:17**