RECIPE FOR TCP ADQUISITION

PROGRAM (QTCP15)

Latest Modified: 2010-04-21

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Or to the
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INITIALISATION:

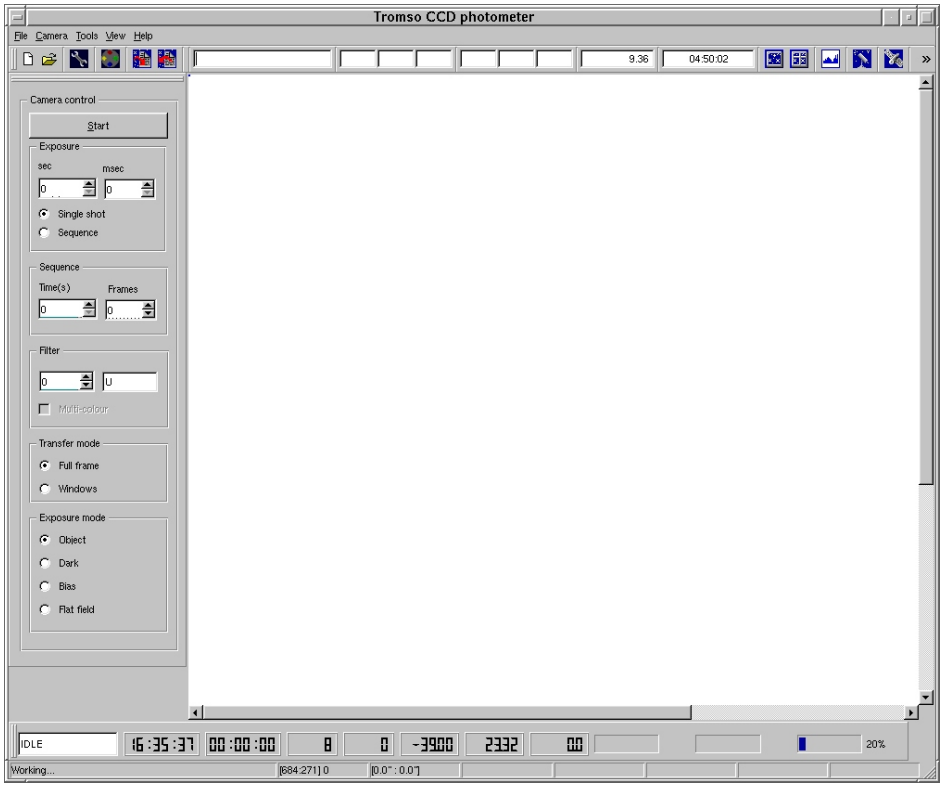
- Check TCP computer is on. If not, ask support astronomer for help for.
- Start a session in *asteroide*: logging as “obstcs1” (password: ask the support astronomer or the night assistant)
    - Open a terminal in *asteroide* and type: *>ssh –l observer tcp.ll.iac.es* (password: ask the support astronomer or the night assistant)
    - In a new *xterm* windowd, execute: *>download gpsold.hex* ; this initialise the camera

- Execute: *>Qtcp15* ; This will start the adquisition program. The program will also create a directory for the run and different subdirectories for flats, bias, dark, main frames (tcp) and windowed frames (data). The data will be stored there. The main directory created will be named using a date-time format, i.e, “3105052100” – 31 of May of 2006 at 21:00

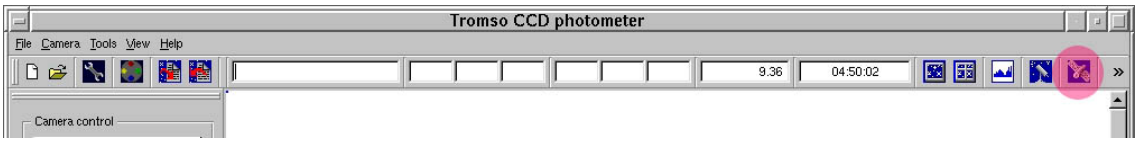
- **If there are problems with the remote connection from asteroide, the way to initialise the camera directly fom the TCP computer is the following:**

    - Turn on computer and logging (as observer, passwd: ask the support astronomer or the night assistant)
    - Type comand: >startx
    - In terminal execute: >download gpsold.hex ; this initialise the camera
    - Execute: >/home/bin/Qtcp15

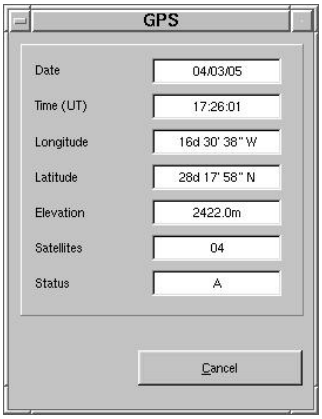
- The user interface will appear on screen:



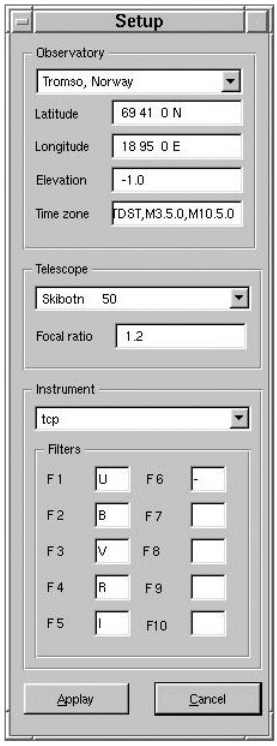
- **Check that the system is receiving signal from GPS**, by clicking in the bottom indicated below. If it is not receiving, contact your support astronomer



You should see the following display:

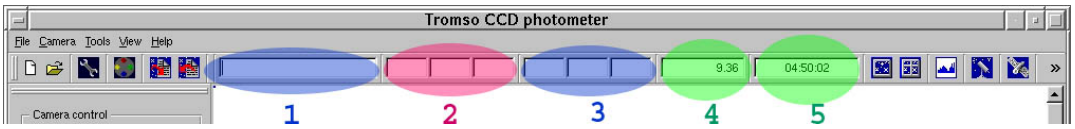


- **Set your localization**. This information about telescope, observatory and instrument will be written in fits file. Go to ´File´in the main menu, and click over ´localisation´. The following box will appear:

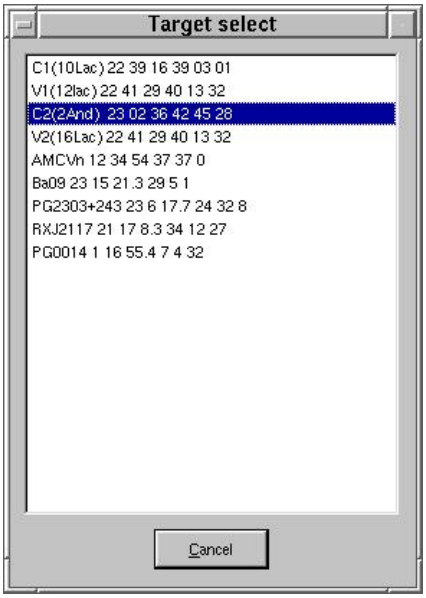


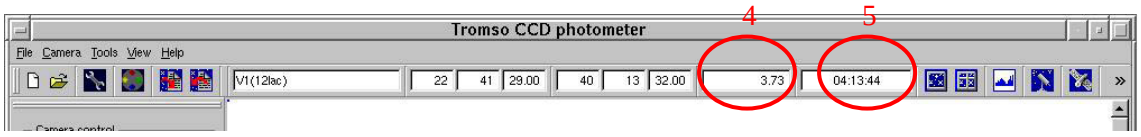
Select: Teide observatory (in observatory field) and IAC80 (in the telescope field)

- **Set target information**: If your object has not been defined, you can add its info writing in the upper part of the program: name star, RA and Dec, and then add to the list; in main menu: File - Add to list, or by clicking 



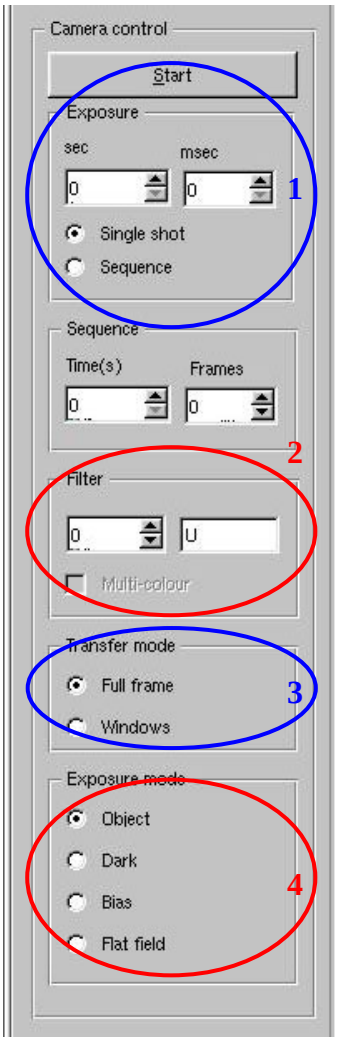
- You can select an existing object from the list by going to *File - Get from the list* or by clicking  and double click in the selected object.





- The information about the object will appear on screen, including the current airmass (4) and hour angle (5) of the object.

TAKING FULL FRAMES



► Check that the "single shot" option (*'Exposure'* section) is activated.

► Select exposure time by writing in the indicated box (1).

► Select filter by clicking arrows in filter section (2)

► Check that the *'Full frame'* option is selected (3)

► Select the type of image: *Flat field*, *Dark*, *Bias* or *Object* (4).

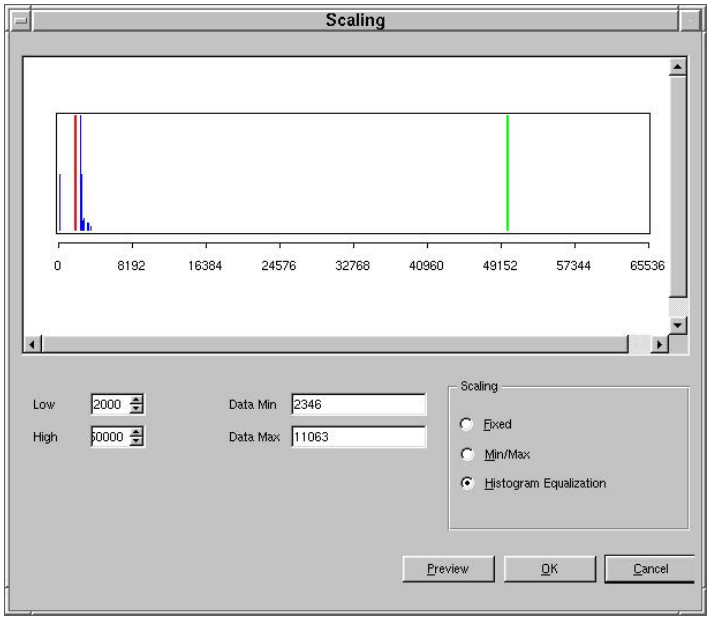
► Take image by clicking START in area 1.

We can see the relative position of the cursor and the number of counts/pixel, by clicking (left button) over the image. This information is displayed in the bottom of the user interface.

VISUALIZATION MODES:

The user interface provides some possibilities to display the images. These can be accessed by clicking the button 

The following box will be opened. Then select the *Scaling* (*Min-Max, Fixed,* or *Histogram equalization*).



ADDDITIONAL NOTES:

This guide offers an overview about the TCP adquisition program. A more delailed explanation will be given by the support astronomer during the first observing night.

The chip used by TCP is a Tektronic 1024x1024 covering a field of around 10x10 arcmin in the IAC80.

The program can also be used for fast CCD photometry generating on-line light curves of variables objects (using the multiwindowing system). The support astronomer will inform how to proceed if the user want to use this option.