

# Monthly Data Checks for CATCOS Aerosol Data

Nicolas Bukowiecki, 30.01.2014

## Recommended interval

We recommend processing the data every month (process the data of the previous month in the first week of every new month)

**Good luck!**

## Step 1: Data Import from FTP (the automatic way)

1. Open terminal (Ctrl-Alt-T)
2. Type **import\_rawdata\_bkt.sh** (or tll for El Tololo) and confirm with enter
3. Type **process\_monthly\_bkt.sh** (or tll for El Tololo) and confirm with enter
4. This will take approx. 2 hours for one month of raw data. Don't close the window!

## Step 2: Data Editing

0. To see the last week you have processed, type **latest** in a terminal (Ctrl-Alt-T)
1. Open terminal (Ctrl-Alt-T)
2. Type **cpx2 bkt 2013w1 1w** (or tll for El Tololo). 2013w1 = week number 1 in 2013
3. Click on the Edit mode (Display/Edit)
4. General remarks:
  - *If you do not want to zoom in the windows and already have the zoom box, then press the right mouse button, then it will disappear*
  - *Always wait until the loading bar (right bottom corner) has finished before you do something.*
5. Look at the hourly average data (Averaged Spectral). Are there any peaks? If yes, they have to be removed. **Also check the lab book entries** (Go to the "CPX2" Menu, select "View message log")
6. Go to the 1min data (Spectral, the tab to the left). If you see any peaks that do not influence the hourly average (double check) it is up to your mind if it's worth the effort to remove them.

**If everything is ok:**

7. Open a new terminal (Ctrl-Alt-T)
8. type **data.pass --no-comments bkt 2013w1** (or tll for El Tololo) **2013w1 is for example week 1 in 2013). THIS WILL SAVE YOUR EDITED DATA!**

### To remove spikes:

1. Zoom in. Click left mouse button on the time axis, select period, then click left again. THE LINES WILL DISAPPEAR, THEN PRESS THE REPLOT BUTTON. All graphs will zoom in
2. Go to the "CPX2" Menu, select "Mentor Edits"
3. Press Add
4. IMPORTANT: A new window ("Edit directive") appears. NOW FIRST OPEN THE GRAPH WINDOW (via Pinguine symbol) and mark the time that you want to remove (with the 2 lines). The time period is now marked grey
5. Please remember if you want to remove aethalometer (A11a) and/or nephelometer (S11a) data
6. Go back to the "Edit directive" window
7. Select "Invalidate" and right to it "A11a" or "S11a" or "ALL" (includes also meteo parameters)
8. Click in the variable window and select all (Ctrl-a)
9. Fill in notes and author, then press ok (the window closes)
10. Go back to mentor edit window, **PRESS SAVE!!!** and mark the last rule
11. Go back to the graph window (CPX2), which has now the spike removed and highlighted
12. Press the "a" button to zoom out to the full week
13. Any more peaks? Continue with first step otherwise pass the date like above step 7,8 and go for the next week
14. If you finished this week, then close CPX2
15. In the terminal, type **data.pass --no-comments bkt 2013w1 (or tll for El Tololo) 2013w1 is for example week 1 in 2013). THIS WILL SAVE YOUR EDITED DATA!**

### Step 3: Check the status of your clean data

1. **To see if you have any gaps, simply look at your clean data in CPX2 (Display→Hourly Averages)**

Or you can also type **data.status bkt** (or *tll for El Tololo*) in a terminal (Ctrl-Alt-T).

### Step 4: Transfer data to PSI

This step will zip the data base and transfer it to PSI.

1. Open terminal (Ctrl-Alt-T)
2. Type **send\_checked\_data\_psi.sh** (then press Enter). This can take 30 minutes! Don't close the window.
3. When finished, please notify Nicolas ([nicolas.bukowiecki@psi.ch](mailto:nicolas.bukowiecki@psi.ch)) via email

## For your data analysis: Exporting Data to Excel

1. Open terminal (Ctrl-Alt-T)
2. Type **export\_excel.sh** (then press Enter)
3. Follow the instructions in the script
  - Raw: 1-min raw data (not corrected)
  - Clean: 1-min clean data (corrected and passed edited data)
  - avgH: Hourly averages of the clean data
  - avgD: Daily averages of the clean data
  - avgM: Monthly averages of the clean data

## Checking the status of your clean data

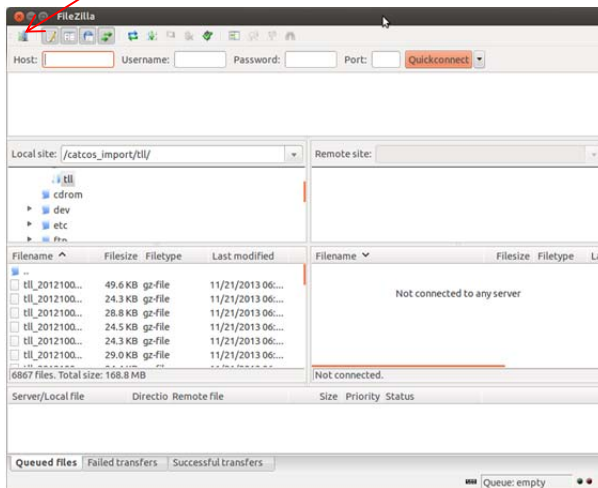
1. To see the last week you have processed, type **latest** in a terminal (Ctrl-Alt-T)
2. **To see if you have any gaps, simply look at your clean data in CPX2 (Display→Clean)**  
Or you can also type **data.status bkt** (or *tll for El Tololo*) in a terminal (Ctrl-Alt-T).

# Data Import from FTP (the manual way)

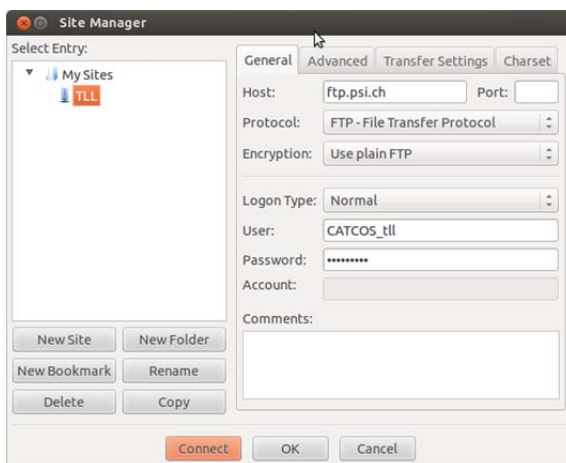
1. Import Raw data using Filezilla (page 24 of Handouts).  
To open filezilla, click on the red icon (Fz) at the left edge.



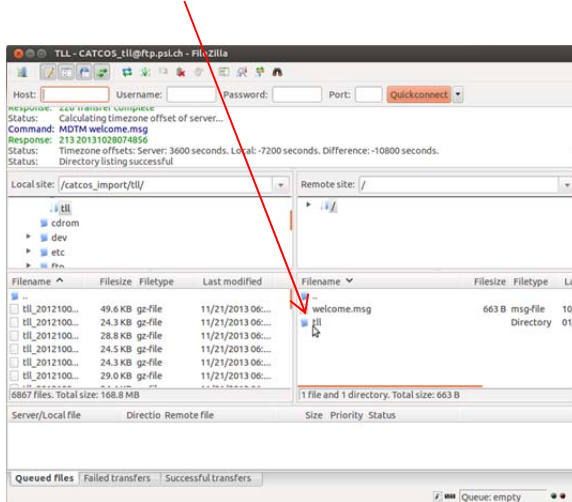
Then click here to open the connection manager



Click "connect"



Open your station folder (doubleclick)



First check if the local path is still correct (if not reenter it here and press enter)  
Now copy the new files from here to here (select first file, hold shift and select last file).  
Then drag the selection over to the left side.

