

DOCUMENTED PROCESS OF UPLOADING 67P DATA

via FTP and ESA ASSIGNED PERSONAL FOLDERS

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FOREWARD

These are the methods that I have used to upload to my PSA account for the purpose of getting my 67P data gathered from the iTelescope network to a required format for ESA. The methods described here may not be suitable for everyone.

Everyone that signed up via the ESA site to take part in the observations of Comet 67P/Churyumov-Gerasimenko for the PACA Rosetta project would have had a thank you email with further instructions, mine arrived 18 September 2015.

As a note if you've had trouble finding the original thank you email sent to you with your login details, mine came from **rosftp** noreply@sciops.esa.int. It did not appear in my day to day email inbox but appeared on my gmail account which I use for anything cosmic.

That email then provided me with a **username** and **password** to access my own directories on their server for uploading FITS files, darks, flats etc.

Originally I had a lot of trouble to begin with because I was using a standard Win 7 64 bit MS-DOS command line FTP client that was just too basic to handle the task apart from logging in. I eventually found another FTP client.

RENAMING FILES FOR ESA

Before uploading my data I went through all 60 files I had at the time and renamed them to the nomenclature described by Padma and as outlined in the file formats required by ESA. I spent some time on a Skype call with Padma one evening whilst we agreed on the best way to do this for iTelescope files. I looked extensively for a piece of software that would cleanly rename for me but in the end decided my time was better spent just doing a renaming session from Windows Explorer for those 60 files. In terms of time spent, 12 files took me 6 minutes to rename, therefore the 72 I had in total took 45 minutes including a tea break ☺.

Before renaming I made a copy of every file so that if I messed up I would have something to refer back to again.

For iTelescope users the following may be of assistance since the way iTelescope names your files is longer in terms of characters than the requirement by ESA:

Example of how iTelescope names a file I've downloaded from them:

Calibrated-T24-twinklespinalot-0067P-20151110-041017-Luminance-BIN2-E-120-001.FITS

Example of how we agreed to rename the above file:

20151110_041017_67P_L120_WC.FITS

This renaming provides ESA with:

The date_The UTC Time_The Object_The Filter and Exposure in seconds_My initials.FITS

This fits the 27.3 character format as close as possible without losing meaning.

Any other information required is held within the FITS header in any event including the location of observatory, scope setup used and any binning. All the files were the original un-stretched versions as requested.

Before renaming I made a copy of every file so that if I messed up I had something to go back to and use again.

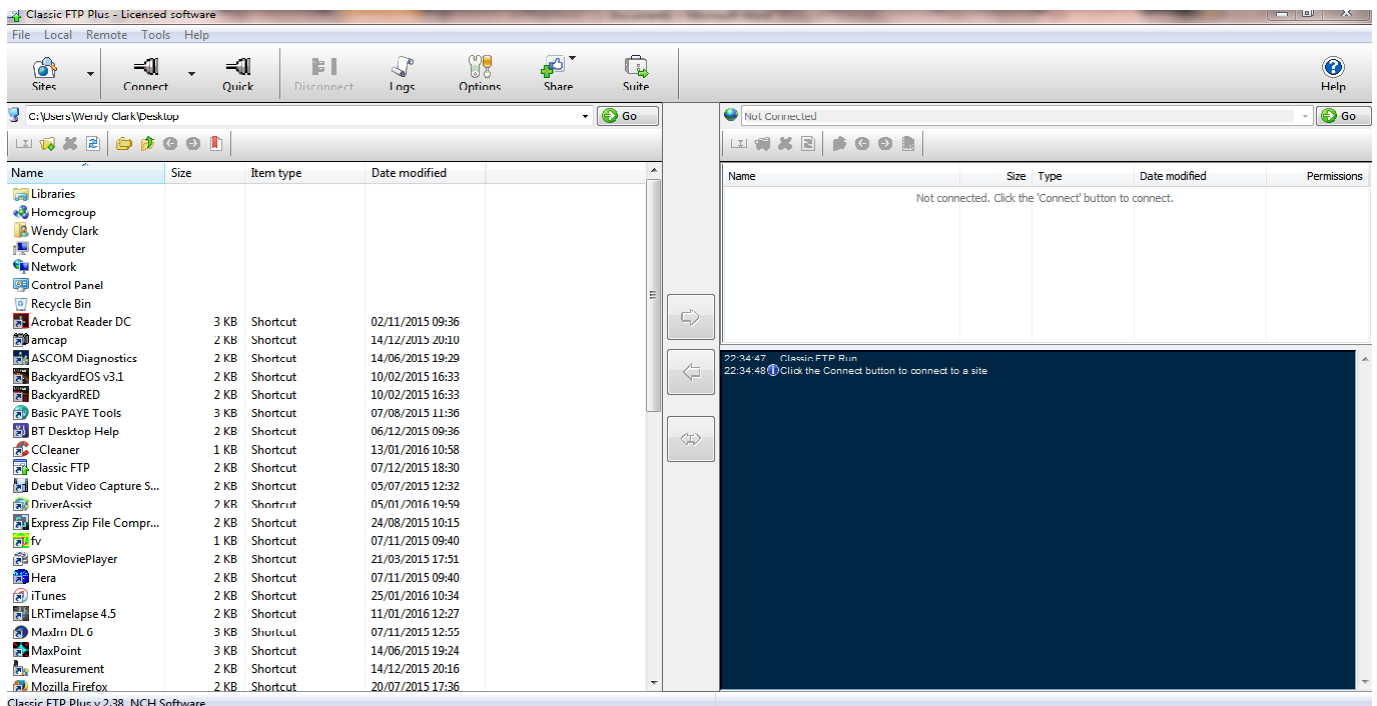
FTP CLIENT

I sought another FTP client from the internet and in doing so realised I already had demo mode access to one as part of the NCH Software suite I had downloaded some time ago.

I use the NCH Debut Video capture and Video Pad Editor extensively from this suite, the FTP Classic version link is here <http://www.nchsoftware.com/classic/index.html> but the whole software range can be found here <http://www.nchsoftware.com/software/index.html?ref=nlswlcm4>

Please note for downloading: The demo version is the same as the full feature version - after you activate and register the software all the extra paid features will turn on. The demo version usually lasts 30 days before needing to be fully registered. The price at the time for the full FTP Classic software was \$39.95.

Here is a screenshot unconnected to the PSA directories:



FTP CLIENT (CONT'D)

I could connect easily to my PSA folders using the instructions below provided within the original ESA email:

Type:

`$ ftp`

press enter

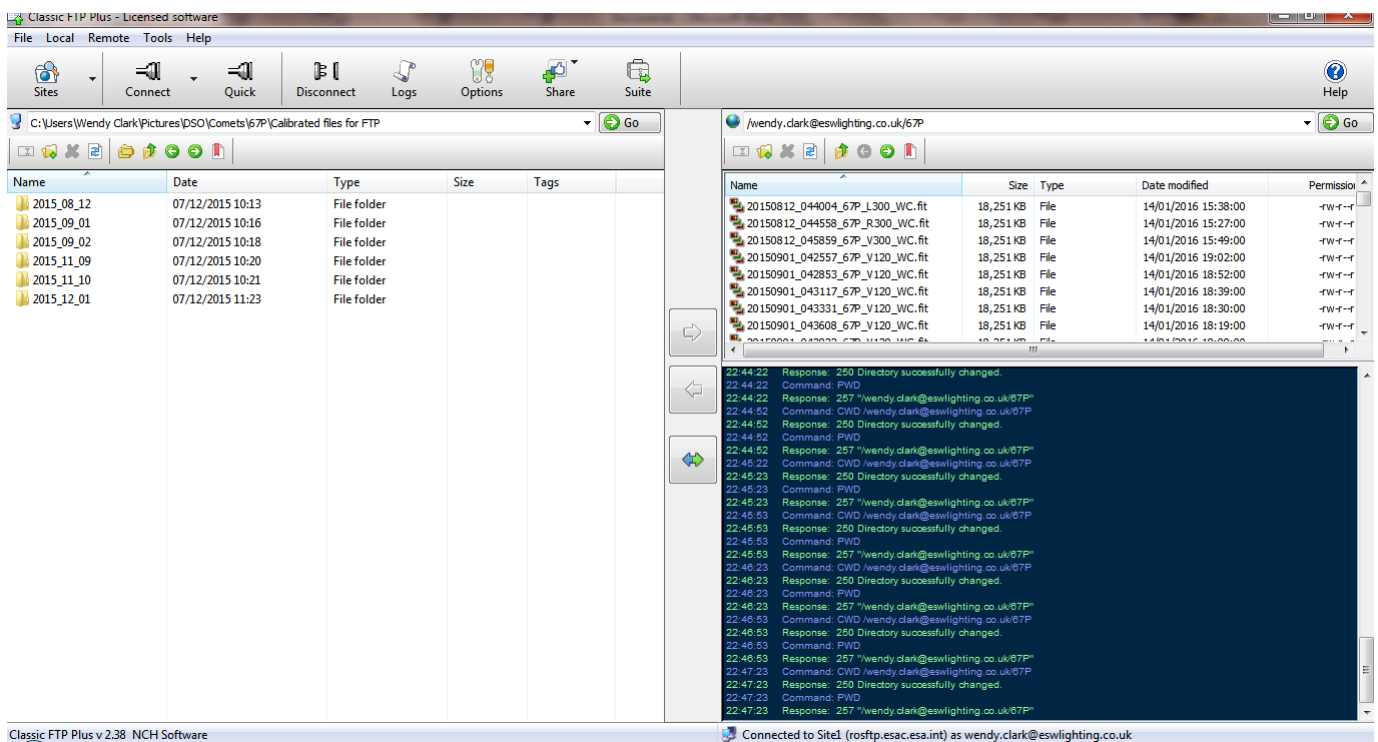
Once in FTP> Type:

`ftp> open rosftp.esac.esa.int`

(this last command starts the actual connection process)

Once connected, a username and password prompt will appear – follow the instructions on screen and enter the details given in the ESA email.

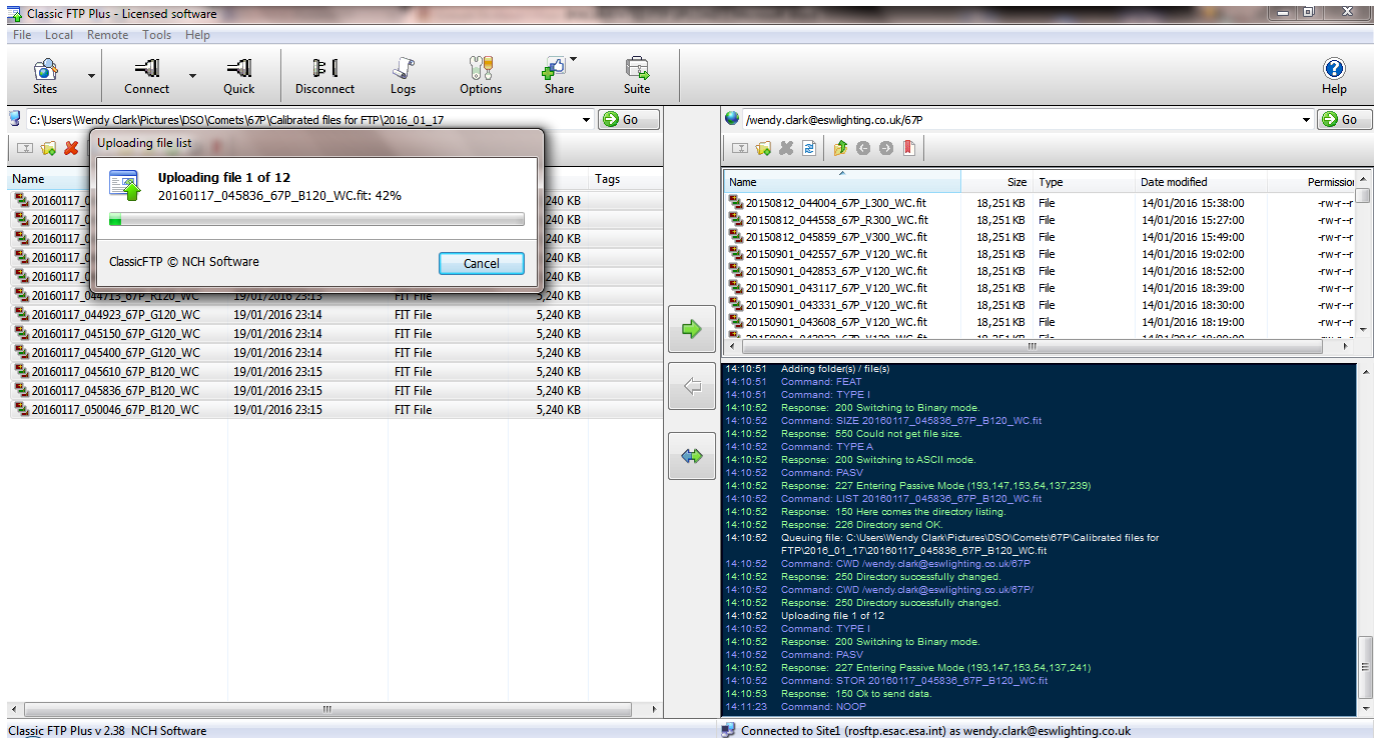
Here is a screenshot connected to my PSA directories showing my data uploaded on the right hand side.



The left side contains my laptop 67p data directories originally in date order and the right side the server directories I've connected and uploaded to. In NCH Classic FTP it's just a case of selecting the files on the left and using the arrows in the middle to transfer the files over.

FTP CLIENT (CONT'D)

As you carry out the green arrow click, the software tells you it is adding files and you'll see the blue area on the right go whizzing by with commands, followed by this:



I completed my uploads taking the contents of one directory at a time from the left, but due to the fact that the PSA directory structure on the right would not allow me to create date directories under /67p, I could not put them into such on the PSA folder. Instead they are all lumped together under folder /67p which had already been created for me.

The length of time it takes to upload on FTP depends very much on your internet speeds. Due to being in a rural area I get around 6,500 mbps on upload. The 12 files each of 5,240kb above took 20 minutes to upload at this speed.

A note during selection process: If you select a file, upload it to the PSA directories and later discover you didn't want to upload that one, for some reason the icon marked **X** to delete the file will not allow you to do so, giving the error in green on the log as:

Response: 550 permission denied

I do not know if this is peculiar to my directory, the FTP client itself or the Read/Write assignments on my PSA directory.

Either way, make sure you have all your files renamed and ready in one place to upload.

It's been a pleasure to take part in these observations and if one such project came up again I would assist at the drop of a hat. I have learned more by following and taking part in this project in 12 months than I did in 12 years of tedious number crunching in my day job. Thank you ESA for letting us amateurs make a contribution.