

2018 Sagan Summer Workshop
Did I Really Just Find an Exoplanet?
July 23-27, 2018

HANDS-ON SESSIONS

Xterm:

The software for the hands-on sessions will be installed on the Amazon cloud (Amazon Web Services, or AWS). To log in to your AWS account (log in information will be provided when you pick up your badge) and then run the software, you will need an X terminal and X server. On macOS, the Terminal app is already included as your terminal emulator. You may also have to install XQuartz (<https://www.xquartz.org/>). On Windows operating systems, you will need to install a software package such as Cygwin (<https://cygwin.com/>) to get a terminal emulator and X server.

Some **simple commands** you may need:

| | | |
|----------------------------------|--|--|
| ssh -Y workshop_usr@<ip address> | log in to the AWS instance (type “logout” to log out) | |
| cd directory | change to a certain directory | |
| cd .. | change to one directory level up | |
| cd | change to your home directory | |
| mkdir directory | create a new directory | |
| pwd | print the working directory | |
| ls | list files (“ls -l” or “ll” provides a more detailed list) | } for these, you can use “*” as a wildcard (e.g. “ls *.ps”) |
| cp filename new_filename | copy a file to a new file | |
| mv filename new_filename | rename file to a new name | |
| mv filename directory/. | move a file to a different directory | |
| rm filename | remove a file (note you will not be asked to confirm) | |
| rm -r folder | remove a folder and all its files | |
| Control + c | terminate a program (that is not responding) | |

To launch a **text editor**:

emacs use the menu to open a file, edit it, save it, etc.

To launch a **viewer for postscript, pdf, or png files**:

okular use the menu to open a file, zoom in and out, etc. } adding “&”
after the
command
launches the
program in the
background

To **transfer files** to/from your local computer:

- to copy files from a local computer to AWS:
scp filename user@remote_host:directory/
(for home directory, use “~/”)
- to copy files from AWS to a local computer:
scp user@remote_host:directory/filename .
(the “.” can be replaced with a different name if the file should be renamed)
- to copy a whole folder from AWS to a local computer:
scp -r user@remote_host:directory/ .
(the “.” can be replaced with a different name if the folder should be renamed)
- to copy a whole folder from a local computer to AWS:
scp -r directory/ user@remote_host:directory/

To run fits in a separate shell, independently of the current AWS session:

- `screen` creates a window running a shell; type commands into this shell
- `screen -list` list all screens
- to detach a screen:
 - `screen -d` detaches the screen (type in a different terminal window)
 - `Control+a d` detaches the screen in the current terminal window
- to reattach a screen:
 - `screen -r` resume a detached screen session
 - `screen -r ID` resume the screen with identifier “ID” (from `screen -list`)
- to exit/quit a screen
 - `exit` when typed within a screen session, exit the screen
 - `Control+a w` quit the screen in current terminal window
- `Control+a <esc>` when typed within a screen session, it enters the scrollbar mode (allows the cursor to scroll up and down in the window)

VESPA

To run **Jupyter Lab** remotely:

(substitute user with username and remote_host with IP address of the AWS instance)

In one local terminal window:

```
ssh user@remote_host  
[enter your password]  
jupyter lab --no-browser --port=8889
```

In another local terminal window:

```
ssh -N -L localhost:8888:localhost:8889 user@remote_host
```

On your local machine, open browser to: localhost:8888

(it will ask for the AWS account password)

JupyterLab will open in your browser window.

EXOFASTV2

- Start IDL by typing “idl”. Quit by typing “exit”.
- To process the **LaTeX** file (prefix.median.tex):
 - `pdflatex prefix.median.tex`
(repeat this command twice to make sure the table is formatted ok)
- View the output file with:
 - `okular prefix.median.pdf`

Network:

To find your computer’s IP address, go to: <https://whatismyipaddress.com/>