SUBARU School Tutorial Session

For the tutorial, you will be given an account at a server in KASI (you will be given an account name and other required information during the school). **You have to bring your own laptop computer** and connect to the server for any tutorial works (you don't need to connect the server if you have all the required program installed in your laptop).

Minimum requirement

* ssh client
* X-window (or equivalent) and/or VNC client

If you are bringing a laptop computer with linux or mac os X (w/ X11 installed), you should be okay. If you are bringing a windows box, make sure that you have a ssh client installed. You further require an X-windows system (running on windows) and/or a VNC client. Often, a commercial version of ssh client and X-windows system will be available from your university (or institute). Also, there are tools such as MobaXterm(http://mobaxterm.mobatek.net/) that is freely available. If you're bringing a windows box and do not have a ssh of any other program installed, I recommend you to install MobaXterm (installing this single program will suffice for your tutorial).

If you have a Linux or a Mac os X, and you want to install the required program by yourself, here is some guidelines.

Supreme-Cam

You need to install "sdfred2" and sextractor. Please consult their own web page for installation. We also encourage you to install "iraf".

- sdf2red2 : http://subarutelescope.org/Observing/Instruments/SCam/sdfred/sdfred2.html.en
- sextractor : https://www.astromatic.net/software/sextractor

MOIRCS

Installing MOIRCS can be very tricky and I recommend this to only experienced. You need to install MCSMDP, which is based on "pyraf" and depends on several python packages. The MCSMDP package can be found in http://www.cc.kyoto-su.ac.jp/~tomohiro/MCSMDP/ with some installation instruction. However, this is based on rather old version of linux distribution and it may become tricky if you use a recent distribution.

Below, I describe how one can install MCSMDP with Ureka (http://ssb.stsci.edu/ureka/) which includes pyraf (+iraf) and most of the python dependencies.

1. First you need to install Ureka

Visit http://ssb.stsci.edu/ureka/ and follow their instruction for installation.

If you are on 64bit linux, note that some of the installed program is still in 32bit, i.e., you may need to install 32bit libraries separately. On debian/ubuntu, you may install them by

```
sudo apt-get install ia32-libs
```

```
or
```

```
sudo apt-get install libstdc++6:i386 libgcc1:i386 zlib1g:i386
libncurses5:i386
```

2. install xpa binaries.

http://hea-www.harvard.edu/RD/ds9/site/XPA.html

You may install them under Ureka/bin/ (where Ureka is a directory where ureka is installed) or wherever you like to (should be covered by your PATH environment).

3. install RO

You first load ureka environment (by "ur_setup"),

> ur_setup
> which pip # Make sure this point to a "pip" binary inside the ureka installation.
> pip install RO

4. Optionally, you may install rpy/rpy2

- I don't think a task that depends on this will be required for the tutorial session. It is best if your linux distribution have a binary package of this.

In Debian/Ubuntu,

> sudo apt-get install python-rpy2

Otherwise, you have to install from the source which could be tricky (again). You should install this inside the ureka installation.

http://rpy.sourceforge.net/rpy2.html

5. Now, install MCSMDP and MDPDB

http://www.cc.kyoto-su.ac.jp/~tomohiro/MCSMDP/

Be sure to run "MCSMDP_v1_1_2/setup.sh" and setup your environment.

6. Patch some python files of MCSMDP

> cd MCSMDP_v1_1_2 # directory where you install MCSMDP
> wget https://dl.dropboxusercontent.com/u/178748/mcsmdp_v1_1_2_jjlee.patch # download a patch file
> patch -p1 < mcsmdp_v1_1_2_jjlee.patch # apply the patch

Now you should be ready to run "mcsmdp".