IRA F INSTALLATION ON INTEL MAC OS X:

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Assumptions:
You are running Mac OS X.
You have root access to your machine (i.e. an Admin account).
You are running either a c-shell (csh) or a t-shell (tcsh). If you don't know what shell you're running, bring up a REGULAR terminal - it will say, "Terminal - [shell type] - [dimensions] " You can change the terminal type in System Preferences -> Accounts, open the lock to make changes, and right clicking on your user name.

1. Open System Preferences, Accounts, and create an account with the long user name "IRA F Manager" and the short user name (i.e. regular login name) "iraf". Give the account an appropriate password that you will be able to remember. It may be useful to use the same password as on other machines; if you want to do that, ask me for it. IMPORTANT: be certain to check "Allow user to administer on this computer" when you set up the iraf account. Also choose csh as the shell. Otherwise you can accept the defaults.

1a. As long as you are in System Preferences, Accounts, you may also want to look under Login Options and check "Enable fast user switching." This will let you be logged in as yourself and as iraf and flip back and forth without having to log off first.

2. Log in as iraf (fast user switch - click your name in the upper right corner of the screen and switch to IRAF Manager), and open a terminal or xterm window. It's good to have a nice long window with a scrollbar enabled so you can see what has come out on the screen. By default the iraf account's home directory is /Users/iraf, but this is not where IRAF is going to be installed.

3. Do the following (unix prompt indicated by "%"):
   % cd /
   % sudo mkdir iraf   (type the iraf account password when prompted)
   % sudo chown iraf iraf
   % cd iraf

4. You are now in the directory /iraf. Create the following tree of subdirectories under it:

   /iraf
   -------------------------
   |                        |
   |  irafbin                |
   |  iraf                   |
   |  extern                 |
   -------------------------
   |
   |   bin.macintel          |
   |   noao.bin.macintel     |
   |   local                 |

4.5 Check to see if /usr/local/bin exists:

   % cd /usr/local
   % ls -F

   If the directory bin/ is not there, do the following:

   % sudo mkdir bin
   % sudo chmod ugo+rwx bin

5. Set the IRAF environment variable:

   % setenv iraf /iraf/iraf/

   IMPORTANT: There are THREE slashes in that.

6. From the NOAO or iraf.net website, download the following 3 files and put them in the /iraf directory:

   as.pcix.gen.gz
   ib.macx.x86.gz
   nb.macx.x86.gz

   IMPORTANT: Make sure you have the Jan 14 2008 (or later) versions of these files.

7. Unpack the files in the following way. IMPORTANT: the order in which you do this and the directories in
which you do it are crucial, so pay attention to the cd's and syntax.

% cd $iraf      (if this doesn't work it's because you didn't do step 5 right)
% cat ../as.pcix.gen.gz | zcat | tar -xpf -
% cd $iraf/bin.macintel
% cat ../../ib.macx.x86.gz | zcat | tar -xpf -
% cd $iraf/noao/bin.macintel
% cat ../../nb.macx.x86.gz | zcat | tar -xpf -

8. You are now ready for a trial dry run of the install script. The "-n" option in the install script (see
below) means that the installation will not actually happen, even though all the messages coming our will
make it look like the installation is happening. The point here is that you don't want any errors in the
trial run. If there are errors then the real installation won't work either and there is no point in going
forward with it until the errors are resolved.

% cd $iraf/unix/hlib
% source irafuser.csh
% sudo ./install -n

You will be asked to specify the iraf root directory, the root image storage directory, and the local unix
commands directory. If you did all the preceding steps correctly, the default values will be /iraf/iraf, /iraf/imdirs, and /usr/local/bin, respectively, and you can accept these defaults by just hitting return. You
then get a bunch of messages about "verifying system settings." You want everything to say "OK" on the right
side. If all is well you are then asked if you want to proceed with the installation. You can say "yes"-- but
remember that because you specified "-n" the installation is not actually happening. In response to your
"yes" you will get a large number of status messages, and again you want to make sure they are all OK. (But
you only really care about the first set of "OK"s -- nothing really matters after that, so you can quit
without running the second set.)

9. If the dry run completed with no errors, you can do the real installation. Assuming you are still in the
hlib directory, do

% sudo ./install

and answer the questions as before. When the installation is done you will be asked if you want to proceed to
post-installation configuration. You can reply "no" and skip this step.

10. Now you should be able to log out of the iraf account, and not log in again until you want to install a
new version or add external packages. Go back to your own account, and go to an appropriate directory. You
should be able to run 'mkiraf' in the usual way, and then start iraf with 'cl'.

11. In order for plots to appear correctly, we need to use an xgterm instead of an xterm, which is not
included in the standard iraf distribution.

Go to http://iraf.net/ftp/iraf/x11iraf/ and download the file x11iraf-v1.5DEV.macintel.tar.gz to your
desktop.

% cd ~Desktop
% gtar -xvzf  x11iraf-v1.5DEV.macintel.tar.gz
% sudo mv bin.macintel/xgterm  /usr/local/bin/

After you do this you can trash the tarball and the folders that the tarball created.

12. I added the following two lines to my .cshrc file (located in the home directory -- you may need to
create it. aka .tcshrc for the t-shell):

alias newxg "xgterm -geometry 85x50+100+100 -bg black -fg white &"
alias iraf "xgterm -geometry 85x50+300+200 -bg black -fg white -e cl &"

The first line just allows you to bring up a new xg terminal. The second automatically opens iraf in that
terminal.