

Instructions to install Healpix and ISAP package

The following is a detailed description of a typical installation for linux/mac to be able to use the ISAP package, with the latest packages. Note that you first need the cfitsio package. Commands to be type on the command line are indicated in the following inside “ ”.

Cfitsio

- Download here: <http://heasarc.gsfc.nasa.gov/fitsio/>, or <ftp://heasarc.gsfc.nasa.gov/software/fitsio/c/cfitsio3300.tar.gz>
- Copy the tar file cfitsio3300.tar or file cfitsio3300.tar.gz in your working directory. Untar it by typing “tar -xzf name_of_cfitsio_tar” with the right name for the tar package.
- *For Healpix version before 2.15: You may need to tar and compress the cfitsio directory if the file with extension .tar.gz does not exist (may have already been uncompressed): “tar -czf cfitsio3300.tar.gz cfitsio”.*
- Go in the cfitsio directory and compile
 - Type “./configure”
 - Type “make all”
 - A library libcfitsio.a should have been created
- Type “pwd” in the directory to show the name of the path to be used in HEALPix installation

HEALPix:

- Get Healpix from <http://sourceforge.net/projects/healpix/>
- Copy the tar in your working directory
- Untar by typing: “tar -xzf name_of_healpix_tar”
- Go in the Healpix directory created
- Type “./configure”
 - Type 1 (IDL package)
 - Type either a4 or letter or enter
 - Type whatever postcrip viewer you have or enter
 - Type whatever program you have to see gif/png or enter
 - Type “y”
 - Type 2 (C Package)
 - Type “Y”
 - Type the name of your compiler or enter (gcc)
 - Type enter (C compiler options, use default)
 - Type enter (ar -rsv, use default)
 - Type enter (libcfitsio.a)
 - Type the path to the libcfitsio.a file that you have previously created
 - Type enter (same path for fitsio.h as libcfitsio.a)
 - Type enter (no static library)
 - Type 4 (C++ Package)
 - *For Healpix version before 2.15: You may need to specify the link to the tar.gz cfitsio package instead of the following 2 steps.*
 - Type enter (libcfitsio.a)

- Type the path to libcfitsio.a or type enter if the value by default is correct
 - Type enter (cfitsio header, same path)
 - Type the number corresponding to your compiler (e.g. osx, generic_gcc..)
 - Type 0 (exit)
- Type “make all” (do not worry if doxygen is not found)
- Check in NAME_HEALPIX_DIR/src/cxx/NAME_COMPILER_CHOSEN/bin that the executables have been created (e.g. anafast_cxx, syn_alm_cxx...)
- Do a “source ~/.profile” so that HEALPIX environment variables are defined in your current shell (or restart a shell). Check with “echo \$HEALPIX” that the HEALPIX environment variable has been set.

ISAP Package:

- Get ISAP from http://jstarck.free.fr/ISAP_V1.0.tgz
- Copy the package on your working directory
- Untar it using “tar -xzf name_of_ISAP_tar”
- Go to the ISAP directory created, type pwd to show the name of the path (path_2_isap)
- Define environment variable:
 - in tcsh: type “setenv ISAP path_2_isap” directly on the command line or in your ~/.tcshrc if you want it to be done at the beginning of each shell session
 - in bash: type “export ISAP= path_2_isap” directly on the command line or in your ~/.profile if you want it to be done at the beginning of each shell session
- Create alias:
 - If this is has not yet been defined, first create alias for idl:
 - In bash, type “ alias idl='path_2_idl_bin/idl' “. Typical location of idl in macosX is “/Applications/itt/idl/idl81/bin/idl”
 - In tcsh, type “ alias idl path_2_idl_bin/idl
 - Then create alias for isap
 - In bash type: “alias isap='idl \$ISAP/idl/isap.pro’ “.
 - In tcsh type: “alias isap idl \$ISAP/idl/isap “
- Type “isap” in the command line. At the startup of idl, several lines are printed. Check that “MRS V2.0” appears in “IDL libraries” and “Healpix idl Lib” point to the right path of the Healpix library. You’re done !