

# Healpix

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The source code is available here: <http://sourceforge.net/projects/healpix/>

## 3.30

### RHEL6-64

1. Download the source code into /afs/slac/g/glast/ground/GLAST\_EXT/redhat6-x86\_64-64bit-gcc44/healpix
2. `untar`
3. `cd` into Healpix subdirectory
4. `./configure -L` (follow the prompts)
  - a. Select to set up C, C++
  - b. Include our local cfitsio library (using v3370 as of Dec 3, 2015)
  - c. For C++ choose "basic\_gcc" rather than "generic\_gcc"
  - d. Edit the `src/cxx/config/config.basic_gcc` file by adding `-fPIC` to the `CXXCFLAGS_NO_C` and `CCFLAGS_NO_C` lines
5. `make c-all`
6. `make cpp-all`
7. `setenv LD_LIBRARY_PATH /afs/slac.stanford.edu/g/glast/ground/GLAST_EXT/redhat6-x86_64-64bit-gcc44/healpix/3.30/lib:$GLAST_EXT/cfitsio/v3370/lib:$LD_LIBRARY_PATH`
8. `make c-test`
9. `make cpp-test`

### RHEL5-64

1. Copy the source code from above into /afs/slac/g/glast/ground/GLAST\_EXT/redhat5-x86\_64-64bit-gcc41/healpix
2. `untar`
3. `cd` into Healpix subdirectory
4. `./configure -L` (follow the prompts)
  - a. Select to set up C, C++ and Python bindings
  - b. Include our local cfitsio library (using v3370 as of Dec 9, 2015)
  - c. For C++ choose "basic\_gcc" rather than "generic\_gcc"
  - d. Edit the `src/cxx/config/config.basic_gcc` file by adding `-fPIC` to the `CXXCFLAGS_NO_C` and `CCFLAGS_NO_C` lines
5. `make c-all`
6. `make cpp-all` ( I had to fix a few issues with `std::complex` in the `alice3.cc` and `hpctest.cc` programs to get them to compile )
7. `setenv LD_LIBRARY_PATH $GLAST_EXT/healpix/3.30/lib:$GLAST_EXT/cfitsio/v3370/lib`
8. `make c-test`
9. `make cpp-test` This failed at the vizualization step as with with the 3.20 build.

### RHEL5-32

1. Download the source code into /afs/slac/g/glast/ground/GLAST\_EXT/redhat5-i686-32bit-gcc41/healpix
2. `untar`
3. `cd` into Healpix subdirectory
4. `./configure -L` (follow the prompts)
  - a. Select to set up C, C++ and Python bindings
  - b. Include our local cfitsio library (using v3370 as of Dec 9, 2015)
  - c. For C++ choose "basic\_gcc" rather than "generic\_gcc"
  - d. Edit the `src/cxx/config/config.basic_gcc` file by adding `-fPIC` to the `CXXCFLAGS_NO_C` and `CCFLAGS_NO_C` lines
5. `make c-all`
6. `make cpp-all` ( I had to fix a few issues with `std::complex` in the `alice3.cc` and `hpctest.cc` programs to get them to compile )
7. `setenv LD_LIBRARY_PATH $GLAST_EXT/healpix/3.30/lib:$GLAST_EXT/cfitsio/v3370/lib`
8. `make c-test`
9. `make cpp-test` This failed at the vizualization step as with the 3.20 build.

## 3.20-gl1

Rebuild against cfitsio v3370 and pointing to python 2.7.6-gl2

## RHEL6-64

### 3.20

## RHEL5-32

1. Download the source code into /afs/slac/g/glast/ground/GLAST\_EXT/redhat5-i686-32bit-gcc41/healpix
2. untar
3. cd into Healpix subdirectory
4. Set up your environment to point to the GLAST\_EXT copy of python (we're using 2.7.6 as of March 12, 2015)
5. ./configure -L (follow the prompts)
  - a. Select to set up C, C++ and Python bindings
  - b. Include our local cfitsio library (using v3290-gl1 as of March 12, 2015)
  - c. For C++ choose "basic\_gcc" rather than "generic\_gcc"
  - d. Edit the src/cxx/config/config.basic\_gcc file by adding -fPIC to the CXXCFLAGS\_NO\_C and CCFLAGS\_NO\_C lines
6. make

take a look at setting prefix

## RHEL5-64

1. Copy the source code from above into /afs/slac/g/glast/ground/GLAST\_EXT/redhat5-x86\_64-64bit-gcc41/healpix
2. untar
3. cd into Healpix subdirectory
4. Set up your environment to point to the GLAST\_EXT copy of python (we're using 2.7.6 as of March 12, 2015)
5. ./configure -L (follow the prompts)
  - a. Select to set up C, C++ and Python bindings
  - b. Include our local cfitsio library (using v3290-gl1 as of March 12, 2015)
  - c. For C++ choose "basic\_gcc" rather than "generic\_gcc"
6. make c-all
7. make cpp-all
8. setenv LD\_LIBRARY\_PATH /afs/slac.stanford.edu/g/glast/ground/GLAST\_EXT/redhat5-x86\_64-64bit-gcc41/healpix/Healpix\_3.20/lib:\$GLAST\_EXT/cfitsio/v3290-gl1/lib:\$LD\_LIBRARY\_PATH
9. make c-test
10. make cpp-test This failed with the error message below:

Error encountered at /afs/slac.stanford.edu/g/glast/ground/GLAST\_EXT/redhat5-x86\_64-64bit-gcc41/healpix/Healpix\_3.20/src/cxx/cxxsupport/ls\_image.cc, line 130

(function void LS\_Image::write\_TGA(const std::string&) const)

error writing output file 'test.tga'

terminate called after throwing an instance of 'PlanckError'

./runtest.sh: line 19: 7773 Aborted \$BINPATH/map2tga test.fits test.tga -bar -title "Synthesized Map"

I (echarles) have not tried to install the python version yet.

## RHEL6-64

1. Copy the source code from above into /afs/slac/g/glast/ground/GLAST\_EXT/redhat6-x86\_64-64bit-gcc44/healpix
2. untar
3. cd into Healpix subdirectory
4. Set up your environment to point to the GLAST\_EXT copy of python (we're using 2.7.6 as of March 12, 2015)
5. ./configure -L (follow the prompts)
  - a. Select to set up C, C++ and Python bindings
  - b. Include our local cfitsio library (using v3290-gl1 as of March 12, 2015)
  - c. For C++ choose "basic\_gcc" rather than "generic\_gcc"
  - d. Edit the src/cxx/config/config.basic\_gcc file by adding -fPIC to the CXXCFLAGS\_NO\_C and CCFLAGS\_NO\_C lines
6. make c-all
7. make cpp-all
8. setenv LD\_LIBRARY\_PATH /afs/slac.stanford.edu/g/glast/ground/GLAST\_EXT/redhat6-x86\_64-64bit-gcc44/healpix/Healpix\_3.20/lib:\$GLAST\_EXT/cfitsio/v3290-gl1/lib:\$LD\_LIBRARY\_PATH
9. make c-test
10. make cpp-test

I (echarles) have not tried to install the python version yet.