

## ctools - Support #1607

### gammalib: problem using libreadline in mac os 10.10.3

12/18/2015 03:13 PM - de Ona Wilhelmi Emma

|                 |                   |                 |            |
|-----------------|-------------------|-----------------|------------|
| Status:         | Closed            | Start date:     | 12/18/2015 |
| Priority:       | Normal            | Due date:       |            |
| Assigned To:    | Knödlseder Jürgen | % Done:         | 100%       |
| Category:       |                   | Estimated time: | 0.00 hour  |
| Target version: |                   |                 |            |

#### Description

Dear ctool help center,

I am trying to use the python utilities with ctools and I have a problem with some of the libraries. My python is installed through anaconda:

```
----> 4 from gammalib.app import *
5 from gammalib.base import *
6 from gammalib.fits import *
```

/usr/local/gamma/lib/python2.7/site-packages/gammalib/app.py in <module>()

```
26         fp.close()
27     return _mod
--> 28 _app = swig_import_helper()
29 del swig_import_helper
30 else:
```

/usr/local/gamma/lib/python2.7/site-packages/gammalib/app.py in swig\_import\_helper()

```
22     if fp is not None:
23         try:
--> 24             _mod = imp.load_module('_app', fp, pathname, description)
25     finally:
26         fp.close()
```

ImportError: dlopen(/usr/local/gamma/lib/python2.7/site-packages/gammalib/\_app.so, 2): Library not loaded: libreadline.6.2.dylib  
Referenced from: /usr/local/gamma/lib/python2.7/site-packages/gammalib/\_app.so

Reason: no suitable image found. Did find:Tha

/Users/emmadeonawilhelmi/anaconda/lib/libreadline.6.2.dylib/libreadline.6.2.dylib: stat() failed with errno=20

But it seems to be some incompatibility between my version of the readline library in condo and the one in gammalib. Any idea what might be going on?

Thanks a lot for your help!

Best  
Emma

#### History

#1 - 12/18/2015 03:14 PM - de Ona Wilhelmi Emma

Solved by Jurgen Knodlseder:

```
setenv DYLD_LIBRARY_PATH $ANACONDA_PATH/anaconda/lib:$DYLD_LIBRARY_PATH
```

#2 - 12/21/2015 06:38 PM - Kelley-Hoskins Nathan

I tried adding the miniconda lib path to DYLD\_LIBRARY\_PATH, but I still can't import gammalib.

```
$ echo $DYLD_LIBRARY_PATH
/Users/nkelhos/Software/miniconda3/lib:/Users/nkelhos/Software/gammalib-git/lib
```

```
$ python
Python 3.5.1 |Continuum Analytics, Inc.| (default, Dec 7 2015, 11:24:55)
[GCC 4.2.1 (Apple Inc. build 5577)] on darwin
Type "help", "copyright", "credits" or "license" for more information.
>>> import gammalib
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
  File "/Users/nkelhos/Software/gammalib-git/lib/python3.5/site-packages/gammalib/__init__.py", line 4, in <module>
    from gammalib.app import *
  File "/Users/nkelhos/Software/gammalib-git/lib/python3.5/site-packages/gammalib/app.py", line 28, in <module>
    _app = swig_import_helper()
  File "/Users/nkelhos/Software/gammalib-git/lib/python3.5/site-packages/gammalib/app.py", line 24, in swig_import_helper
    _mod = imp.load_module('_app', fp, pathname, description)
  File "/Users/nkelhos/Software/miniconda3/lib/python3.5/imp.py", line 242, in load_module
    return load_dynamic(name, filename, file)
  File "/Users/nkelhos/Software/miniconda3/lib/python3.5/imp.py", line 342, in load_dynamic
    return _load(spec)
ImportError: dlopen(/Users/nkelhos/Software/gammalib-git/lib/python3.5/site-packages/gammalib/_app.cpython-35m-darwin.so, 2): Symbol not found:
_ZN10GException12out_of_rangeC1ESsii
Referenced from: /Users/nkelhos/Software/gammalib-git/lib/python3.5/site-packages/gammalib/_app.cpython-35m-darwin.so
Expected in: dynamic lookup
```

```
$ conda --version
conda 3.18.9
```

### #3 - 12/22/2015 10:16 AM - de Ona Wilhelmi Emma

Hi, same here, I get similar error:

```
Emmas-MacBook-Pro:/usr/local/gammalib-0.11.0> ipython
Python 2.7.11 |Anaconda 2.1.0 (x86_64)| (default, Dec 6 2015, 18:57:58)
Type "copyright", "credits" or "license" for more information.
```

IPython 4.0.1 -- An enhanced Interactive Python.

? -> Introduction and overview of IPython's features.

%quickref -> Quick reference.

help -> Python's own help system.

object? -> Details about 'object', use 'object??' for extra details.

In [1]: import gammalib

```

ImportError          Traceback (most recent call last)
<ipython-input-1-e04cb6bbc9a5> in <module>()
----> 1 import gammalib

/usr/local/gamma/lib/python2.7/site-packages/gammalib/_init__.py in <module>()
2 # Please do not modify, unless you exactly know what you do.
3 all = ['GApplication', 'GApplicationPar', 'GApplicationPars', 'GArf', 'GBase', 'GBilinear', 'GCOMEventBin', 'GCOMEventCube', 'GCOMInstDir',
'GCOMModelDRBFitting', 'GCOMObservation', 'GCOMResponse', 'GCTAAeff', 'GCTAAeff2D', 'GCTAAeffArf', 'GCTAAeffPerfTable',
'GCTABackground', 'GCTABackground3D', 'GCTABackgroundPerfTable', 'GCTACubeBackground', 'GCTACubeExposure', 'GCTACubePsf',
'GCTAEdisp', 'GCTAEdisp2D', 'GCTAEdispPerfTable', 'GCTAEdispRmf', 'GCTAEventAtom', 'GCTAEventBin', 'GCTAEventCube', 'GCTAEventList',
'GCTAInstDir', 'GCTAModelAeffBackground', 'GCTAModelCubeBackground', 'GCTAModelIrfBackground', 'GCTAModelRadial',
'GCTAModelRadialAcceptance', 'GCTAModelRadialGauss', 'GCTAModelRadialPolynom', 'GCTAModelRadialProfile', 'GCTAModelRadialRegistry',
'GCTAObservation', 'GCTAOFFObservation', 'GCTAOFFObservations', 'GCTAPointing', 'GCTAPsf', 'GCTAPsf2D', 'GCTAPsfKing',
'GCTAPsfPerfTable', 'GCTAPsfVector', 'GCTAResponse', 'GCTAResponseCube', 'GCTAResponseIrf', 'GCTAResponseTable', 'GCTARoi', 'GCaldB',
'GContainer', 'GCsv', 'GDerivative', 'GEbounds', 'GEnergies', 'GEnergy', 'GEvent', 'GEventAtom', 'GEventBin', 'GEventCube', 'GEventList', 'GEvents',
'GFits', 'GFitsAsciiTable', 'GFitsBinTable', 'GFitsHdu', 'GFitsHeader', 'GFitsHeaderCard', 'GFitsImage', 'GFitsImageByte', 'GFitsImageDouble',
'GFitsImageFloat', 'GFitsImageLong', 'GFitsImageLongLong', 'GFitsImageSByte', 'GFitsImageShort', 'GFitsImageULong', 'GFitsImageUShort',
'GFitsTable', 'GFitsTableBitCol', 'GFitsTableBoolCol', 'GFitsTableByteCol', 'GFitsTableCDoubleCol', 'GFitsTableCFloatCol', 'GFitsTableCol',
'GFitsTableDoubleCol', 'GFitsTableFloatCol', 'GFitsTableLongCol', 'GFitsTableLongLongCol', 'GFitsTableShortCol', 'GFitsTableStringCol',
'GFitsTableULongCol', 'GFitsTableUShortCol', 'GFunction', 'GGti', 'GHealpix', 'GHorizDir', 'GInstDir', 'GIntegral', 'GLATAeff', 'GLATEdisp',
'GLATEventAtom', 'GLATEventBin', 'GLATEventCube', 'GLATEventList', 'GLATInstDir', 'GLATLtCube', 'GLATMeanPsf', 'GLATObservation',
'GLATPsf', 'GLATResponse', 'GLATRoi', 'GLog', 'GMWLDatum', 'GMWLObservation', 'GMWLspectrum', 'GMatrix', 'GMatrixBase', 'GMatrixSparse',
'GMatrixSymmetric', 'GModel', 'GModelData', 'GModelPar', 'GModelRegistry', 'GModelSky', 'GModelSpatial', 'GModelSpatialDiffuse',
'GModelSpatialDiffuseConst', 'GModelSpatialDiffuseCube', 'GModelSpatialDiffuseMap', 'GModelSpatialElliptical', 'GModelSpatialEllipticalDisk',
'GModelSpatialEllipticalGauss', 'GModelSpatialPointSource', 'GModelSpatialRadial', 'GModelSpatialRadialDisk', 'GModelSpatialRadialGauss',
'GModelSpatialRadialShell', 'GModelSpatialRegistry', 'GModelSpectral', 'GModelSpectralBrokenPlaw', 'GModelSpectralConst',
'GModelSpectralExpPlaw', 'GModelSpectralFunc', 'GModelSpectralGauss', 'GModelSpectralLogParabola', 'GModelSpectralNodes',
'GModelSpectralPlaw', 'GModelSpectralPlaw2', 'GModelSpectralRegistry', 'GModelSpectralSuperExpPlaw', 'GModelTemporal',
'GModelTemporalConst', 'GModelTemporalRegistry', 'GModels', 'GNodeArray', 'GObservation', 'GObservationRegistry', 'GObservations', 'GOptimizer',
'GOptimizerFunction', 'GOptimizerLM', 'GOptimizerPar', 'GOptimizerPars', 'GPha', 'GPhoton', 'GPhotons', 'GPythonTestSuite', 'GRan', 'GRegistry',
'GResponse', 'GRmf', 'GRoi', 'GSkyDir', 'GSkyMap', 'GSkyPixel', 'GSkyProjection', 'GSkyRegion', 'GSkyRegionCircle', 'GSkyRegions', 'GSource',
'GTestCase', 'GTestSuite', 'GTestSuites', 'GTime', 'GTimeReference', 'GTimes', 'GUrl', 'GUrlFile', 'GUrlString', 'GVOClient', 'GVOHub', 'GVector',
'GWcs', 'GWcsAIT', 'GWcsAZP', 'GWcsCAR', 'GWcsMER', 'GWcsMOL', 'GWcsRegistry', 'GWcsSTG', 'GWcsTAN', 'GXml', 'GXmlAttribute',
'GXmlComment', 'GXmlDocument', 'GXmlElement', 'GXmlNode', 'GXmlPI', 'GXmlText']

----> 4 from gammalib.app import *
5 from gammalib.base import *
6 from gammalib.fits import *

```

```

/usr/local/gamma/lib/python2.7/site-packages/gammalib/app.py in <module>()
26         fp.close()
27     return _mod
--> 28 __app = swig_import_helper()
29 del swig_import_helper
30 else:

```

```

/usr/local/gamma/lib/python2.7/site-packages/gammalib/app.py in swig_import_helper()
22     if fp is not None:
23         try:
--> 24             _mod = imp.load_module('_app', fp, pathname, description)
25         finally:
26             fp.close()


```

```

ImportError: dlopen(/usr/local/gamma/lib/python2.7/site-packages/gammalib/_app.so, 2): Symbol not found:
__ZN10GException12out_of_rangeC1ESsii
Referenced from: /usr/local/gamma/lib/python2.7/site-packages/gammalib/_app.so
Expected in: dynamic lookup

```

Thanks  
Emma

#4 - 01/04/2016 02:05 PM - Knödlseder Jürgen

Sorry for the lazy reaction, I took a week off for vacations.

Nathan, can you provide the output of

```
otool -L /Users/nkelhos/Software/gammalib-git/lib/python3.5/site-packages/gammalib/_app.cpython-35m-darwin.so
```

Ona, can you do the same for

```
otool -L /usr/local/gamma/lib/python2.7/site-packages/gammalib/_app.so
```

(the symbol that is missing is in the libgamma library; for some reason he cannot find that library).

#5 - 01/04/2016 05:15 PM - Knödlseder Jürgen

- Status changed from New to In Progress

- Assigned To set to Knödlseder Jürgen

- % Done changed from 0 to 10

I could reproduce the problem here on a virtual Mac OS X using Anaconda (hence don't need the otool outputs). It seems to be linked to Anaconda. So far no clue what is going on, I'm working on that.

#6 - 01/04/2016 05:33 PM - Knödlseder Jürgen

For reference:

```
$ otool -L /Users/cta/test/install/lib/python2.7/site-packages/gammalib/_app.so
/Users/cta/test/install/lib/python2.7/site-packages/gammalib/_app.so:
    /Users/cta/test/install/lib/libgamma.0.dylib (compatibility version 1.0.0, current version 1.0.0)
    /usr/local/opt/cfitsio/lib/libcfitsio.2.dylib (compatibility version 2.0.0, current version 2.3.37)
    libreadline.6.2.dylib (compatibility version 6.0.0, current version 6.2.0)
    /usr/lib/libncurses.5.4.dylib (compatibility version 5.4.0, current version 5.4.0)
    /usr/lib/libstdc++.6.dylib (compatibility version 7.0.0, current version 104.1.0)
    /usr/lib/libSystem.B.dylib (compatibility version 1.0.0, current version 1213.0.0)
```

and

```
$ export DYLD_LIBRARY_PATH=/anaconda/lib
$ $ python
Python 2.7.11 |Anaconda 2.4.1 (x86_64)| (default, Dec  6 2015, 18:57:58)
[GCC 4.2.1 (Apple Inc. build 5577)] on darwin
Type "help", "copyright", "credits" or "license" for more information.
Anaconda is brought to you by Continuum Analytics.
Please check out: http://continuum.io/thanks and https://anaconda.org
>>> import gammalib
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
File "/Users/cta/test/install/lib/python2.7/site-packages/gammalib/__init__.py", line 4, in <module>
  from gammalib.app import *
```

```

File "/Users/cta/test/install/lib/python2.7/site-packages/gammalib/app.py", line 28, in <module>
    _app = swig_import_helper()
File "/Users/cta/test/install/lib/python2.7/site-packages/gammalib/app.py", line 24, in swig_import_helper
    _mod = imp.load_module('_app', fp, pathname, description)
ImportError: dlopen(/Users/cta/test/install/lib/python2.7/site-packages/gammalib/_app.so, 2): Symbol not found:
_ZN10GException12out_of_rangeC1ESsii
Referenced from: /Users/cta/test/install/lib/python2.7/site-packages/gammalib/_app.so
Expected in: dynamic lookup

```

## #7 - 01/04/2016 05:36 PM - Knödlseder Jürgen

Note that the name mangling seems a bit special:

```

$ nm /Users/cta/test/install/lib/libgamma.0.dylib | grep ZN10GException12out_of_range
000000000002b330 T __ZN10GException12out_of_rangeC1ENS3_112basic_stringIcNS1_11char_traitsIcEENS1_9allocatorIcEEEEddd
000000000002b510 T __ZN10GException12out_of_rangeC1ENS3_112basic_stringIcNS1_11char_traitsIcEENS1_9allocatorIcEEEEii
000000000002b090 T __ZN10GException12out_of_rangeC1ENS3_112basic_stringIcNS1_11char_traitsIcEENS1_9allocatorIcEEEEiii
000000000002b860 T __ZN10GException12out_of_rangeC1ENS3_112basic_stringIcNS1_11char_traitsIcEENS1_9allocatorIcEEEEiiii
0000000000001680 T
__ZN10GException12out_of_rangeC1ERKNS3_112basic_stringIcNS1_11char_traitsIcEENS1_9allocatorIcEEEEES9_RKiSB_S9_
000000000002b0a0 T __ZN10GException12out_of_rangeC2ENS3_112basic_stringIcNS1_11char_traitsIcEENS1_9allocatorIcEEEEddd
000000000002b340 T __ZN10GException12out_of_rangeC2ENS3_112basic_stringIcNS1_11char_traitsIcEENS1_9allocatorIcEEEEii
000000000002ae50 T __ZN10GException12out_of_rangeC2ENS3_112basic_stringIcNS1_11char_traitsIcEENS1_9allocatorIcEEEEiii
000000000002b520 T __ZN10GException12out_of_rangeC2ENS3_112basic_stringIcNS1_11char_traitsIcEENS1_9allocatorIcEEEEiiii
0000000000001220 T
__ZN10GException12out_of_rangeC2ERKNS3_112basic_stringIcNS1_11char_traitsIcEENS1_9allocatorIcEEEEES9_RKiSB_S9_
000000000002b10 t __ZN10GException12out_of_rangeD0Ev
000000000002b00 t __ZN10GException12out_of_rangeD1Ev

```

while on my Mac (OS X 10.6) I get

```

00000000000214b0 T __ZN10GException12out_of_rangeC1ERKSsS2_RKiS4_S2_
000000000004e6b0 T __ZN10GException12out_of_rangeC1ESddd
000000000004e370 T __ZN10GException12out_of_rangeC1ESsii
000000000004e9c0 T __ZN10GException12out_of_rangeC1ESsiii
000000000004e120 T __ZN10GException12out_of_rangeC1ESiiii
0000000000020ab0 T __ZN10GException12out_of_rangeC2ERKSsS2_RKiS4_S2_
000000000004e380 T __ZN10GException12out_of_rangeC2ESddd
000000000004e130 T __ZN10GException12out_of_rangeC2ESsii
000000000004e6c0 T __ZN10GException12out_of_rangeC2ESsiii
000000000004dc90 T __ZN10GException12out_of_rangeC2ESiiii
0000000000022d80 T __ZN10GException12out_of_rangeD0Ev
0000000000022db0 T __ZN10GException12out_of_rangeD1Ev

```

- % Done changed from 10 to 20

It looks like the name mangling is the problem. On Mac OS X 10.10 without Anaconda, the gammalib library also has the long names

```
$ nm /Users/cta/test/install/lib/libgamma.0.dylib | grep ZN10GException12out_of_range
000000000002b330 T __ZN10GException12out_of_rangeC1ENSt3__112basic_stringIcNS1_11char_traitsIcEENS1_9allocatorIcEEEEddd
000000000002b510 T __ZN10GException12out_of_rangeC1ENSt3__112basic_stringIcNS1_11char_traitsIcEENS1_9allocatorIcEEEEii
000000000002b090 T __ZN10GException12out_of_rangeC1ENSt3__112basic_stringIcNS1_11char_traitsIcEENS1_9allocatorIcEEEEiii
000000000002b860 T __ZN10GException12out_of_rangeC1ENSt3__112basic_stringIcNS1_11char_traitsIcEENS1_9allocatorIcEEEEiiii
0000000000001680 T
__ZN10GException12out_of_rangeC1ERKNS3__112basic_stringIcNS1_11char_traitsIcEENS1_9allocatorIcEEEEES9_RKiSB_S9_
000000000002b0a0 T __ZN10GException12out_of_rangeC2ENSt3__112basic_stringIcNS1_11char_traitsIcEENS1_9allocatorIcEEEEddd
000000000002b340 T __ZN10GException12out_of_rangeC2ENSt3__112basic_stringIcNS1_11char_traitsIcEENS1_9allocatorIcEEEEii
000000000002ae50 T __ZN10GException12out_of_rangeC2ENSt3__112basic_stringIcNS1_11char_traitsIcEENS1_9allocatorIcEEEEiii
000000000002b520 T __ZN10GException12out_of_rangeC2ENSt3__112basic_stringIcNS1_11char_traitsIcEENS1_9allocatorIcEEEEiiii
0000000000001220 T
__ZN10GException12out_of_rangeC2ERKNS3__112basic_stringIcNS1_11char_traitsIcEENS1_9allocatorIcEEEEES9_RKiSB_S9_
000000000002b10 t __ZN10GException12out_of_rangeD0Ev
000000000002b00 t __ZN10GException12out_of_rangeD1Ev
```

but these long names are also present in the Python module

```
$ nm /Users/cta/test/install/lib/python2.7/site-packages/gammalib/_app.so | grep ZN10GException12out_of_range
U __ZN10GException12out_of_rangeC1ENSt3__112basic_stringIcNS1_11char_traitsIcEENS1_9allocatorIcEEEEii
0000000000018f0e t __ZN10GException12out_of_rangeD1Ev
```

On a system with Anaconda installed, one gets

```
$ nm /Users/cta/test/install/lib/python2.7/site-packages/gammalib/_app.so | grep ZN10GException12out_of_range
U __ZN10GException12out_of_rangeC1ESii
000000000001c4a0 T __ZN10GException12out_of_rangeD1Ev
```

hence the name in the Python module differs from the name in the library.

## #9 - 01/04/2016 06:01 PM - Knödlseder Jürgen

The compilation of the code is different. Without Anaconda the cc compiler and c++ linker are used:

```
cc -fno-strict-aliasing -fno-common -dynamic -arch x86_64 -arch i386 -g -Os -pipe -fno-common -fno-strict-aliasing -fwrapv -DENABLE_DTRACE -DMACOSX -DNDEBUG -Wall -Wstrict-prototypes -Wshorten-64-to-32 -DNDEBUG -g -fwrapv -Os -Wall -Wstrict-prototypes -DENABLE_DTRACE -arch x86_64 -arch i386 -pipe -l../include -I/System/Library/Frameworks/Python.framework/Versions/2.7/include/python2.7 -l../inst/mwl/include -l../inst/cta/include -l../inst/lat/include -l../inst/com/include -I/System/Library/Frameworks/Python.framework/Versions/2.7/include/python2.7 -c gammalib/app_wrap.cpp -o build/temp.macosx-10.10-intel-2.7/gammalib/app_wrap.o  
c++ -bundle -undefined dynamic_lookup -arch x86_64 -arch i386 -WI,-F. build/temp.macosx-10.10-intel-2.7/gammalib/app_wrap.o -L../src/.libs -L/Users/cta/test/install/lib -lgamma -lcfitsio -lreadline -lncurses -o build/lib.macosx-10.10-intel-2.7/gammalib/_app.so  
$ cc --version  
Apple LLVM version 7.0.0 (clang-700.1.76)  
Target: x86_64-apple-darwin14.5.0  
Thread model: posix
```

With Anaconda, the gcc compiler and g++ linker are used:

```
gcc -fno-strict-aliasing -I/anaconda/include -arch x86_64 -DNDEBUG -g -fwrapv -O3 -Wall -Wstrict-prototypes -l../include -l/anaconda/include/python2.7 -l../inst/mwl/include -l../inst/cta/include -l../inst/lat/include -l../inst/com/include -I/anaconda/include/python2.7 -c gammalib/app_wrap.cpp -o build/temp.macosx-10.5-x86_64-2.7/gammalib/app_wrap.o  
g++ -bundle -undefined dynamic_lookup -L/anaconda/lib -arch x86_64 -arch x86_64 build/temp.macosx-10.5-x86_64-2.7/gammalib/app_wrap.o -L../src/.libs -L/anaconda/lib -L../src/.libs -L/Users/cta/test/install/lib -lgamma -lcfitsio -lreadline -lncurses -o build/lib.macosx-10.5-x86_64-2.7/gammalib/_app.so  
$ gcc -help  
OVERVIEW: clang LLVM compiler
```

## #10 - 01/04/2016 11:38 PM - Knödlseder Jürgen

Coming back to the readline problem, Anaconda apparently replaces /usr/lib/libedit.3.dylib by libreadline.6.2.dylib:

```
$ otool -L src/.libs/libgamma.0.dylib  
src/.libs/libgamma.0.dylib:  
/Users/cta/test/install/lib/libgamma.0.dylib (compatibility version 1.0.0, current version 1.0.0)  
/usr/lib/libedit.3.dylib (compatibility version 2.0.0, current version 3.0.0)  
/usr/lib/libncurses.5.4.dylib (compatibility version 5.4.0, current version 5.4.0)  
/usr/local/opt/cfitsio/lib/libcfitsio.2.dylib (compatibility version 2.0.0, current version 2.3.37)  
/usr/lib/libSystem.B.dylib (compatibility version 1.0.0, current version 1213.0.0)  
$ otool -L pyext/build/gammalib/_app.so  
pyext/build/gammalib/_app.so:  
/Users/cta/test/install/lib/libgamma.0.dylib (compatibility version 1.0.0, current version 1.0.0)
```

```
/usr/local/opt/cfitsio/lib/libcfitsio.2.dylib (compatibility version 2.0.0, current version 2.3.37)
libreadline.6.2.dylib (compatibility version 6.0.0, current version 6.2.0)
/usr/lib/libcurses.5.4.dylib (compatibility version 5.4.0, current version 5.4.0)
/usr/lib/libstdc++.6.dylib (compatibility version 7.0.0, current version 104.1.0)
/usr/lib/libSystem.B.dylib (compatibility version 1.0.0, current version 1213.0.0)
```

Removing the -L//anaconda/lib linker argument when calling g++ resolves this issue:

```
$ g++ -bundle -undefined dynamic_lookup -arch x86_64 -arch x86_64 build/temp.macosx-10.5-x86_64-2.7/gammalib/app_wrap.o -L../src/.libs
-L../src/.libs -L/Users/cta/test/install/lib -lgamma -lcfitsio -hreadline -lncurses -o
build/lib.macosx-10.5-x86_64-2.7/gammalib/_app.so CTAs-Mac-OS-X-2:pyext cta
$ otool -L build/lib.macosx-10.5-x86_64-2.7/gammalib/_app.sobuild/lib.macosx-10.5-x86_64-2.7/gammalib/_app.so:
/Users/cta/test/install/lib/libgamma.0.dylib (compatibility version 1.0.0, current version 1.0.0)
/usr/local/opt/cfitsio/lib/libcfitsio.2.dylib (compatibility version 2.0.0, current version 2.3.37)
/usr/lib/libedit.3.dylib (compatibility version 2.0.0, current version 3.0.0)
/usr/lib/libcurses.5.4.dylib (compatibility version 5.4.0, current version 5.4.0)
/usr/lib/libc++.1.dylib (compatibility version 1.0.0, current version 120.0.0)
/usr/lib/libSystem.B.dylib (compatibility version 1.0.0, current version 1213.0.0)
```

## #11 - 01/05/2016 02:01 PM - Kelley-Hoskins Nathan

I've got libreadline.6.2.dylib :

```
$ otool -L /Users/nkelhos/Software/gammalib-git/lib/python3.5/site-packages/gammalib/_app.cpython-35m-darwin.so
/Users/nkelhos/Software/gammalib-git/lib/python3.5/site-packages/gammalib/_app.cpython-35m-darwin.so:
@rpath/libgamma.1.dylib (compatibility version 2.0.0, current version 2.0.0)
/opt/local/lib/libcfitsio.dylib (compatibility version 0.0.0, current version 0.0.0)
libreadline.6.2.dylib (compatibility version 6.0.0, current version 6.2.0)
/usr/lib/libcurses.5.4.dylib (compatibility version 5.4.0, current version 5.4.0)
/usr/lib/libstdc++.6.dylib (compatibility version 7.0.0, current version 104.1.0)
/usr/lib/libSystem.B.dylib (compatibility version 1.0.0, current version 1225.1.1)
/usr/lib/libgcc_s.1.dylib (compatibility version 1.0.0, current version 955.0.0)
```

#12 - 01/05/2016 03:39 PM - Knödlseder Jürgen

user#111 wrote:

I've got libreadline.6.2.dylib :

[...]

Thanks. I solved the readline problem, but the missing symbol problem is really tricky. I keep investigating...

#13 - 01/05/2016 05:19 PM - Knödlseder Jürgen

At least not the only one suffering from that problem:

- <http://stackoverflow.com/questions/13461400/opency-unresolved-symbols-name-mangling-mismatch-xcode>

#14 - 01/05/2016 05:22 PM - Knödl seder Jürgen

- % Done changed from 20 to 50

Got it. It is again the "famous" MACOSX\_DEPLOYMENT\_TARGET environment variable that impacts how the compiler generates the code. Here the proof:

```

$ gcc -fno-strict-aliasing -I/usr/include/anaconda/include -arch x86_64 -DNDEBUG -g -fwrapv -O3 -Wall -Wstrict-prototypes -I./include -I./inst/mwl/include
-I./inst/cta/include -I./inst/lat/include -I./inst/com/include -I/usr/include/anaconda/include/python2.7 -c gammalib/app_wrap.cpp -o
build/temp.macosx-10.5-x86_64-2.7/gammalib/app_wrap.o
$ nm build/temp.macosx-10.5-x86_64-2.7/gammalib/app_wrap.o | grep ZN10GException12out_of_range
U __ZN10GException12out_of_rangeC1ENst3__112basic_stringIcNS1_11char_traitsIcEENS1_9allocatorIcEEEEii
000000000000c92e0 S __ZN10GException12out_of_rangeD1Ev
$ export MACOSX_DEPLOYMENT_TARGET=10.5
$ gcc -fno-strict-aliasing -I/usr/include/anaconda/include -arch x86_64 -DNDEBUG -g -fwrapv -O3 -Wall -Wstrict-prototypes -I./include -I./inst/mwl/include
-I./inst/cta/include -I./inst/lat/include -I./inst/com/include -I/usr/include/anaconda/include/python2.7 -c gammalib/app_wrap.cpp -o
build/temp.macosx-10.5-x86_64-2.7/gammalib/app_wrap.o
$ nm build/temp.macosx-10.5-x86_64-2.7/gammalib/app_wrap.o | grep ZN10GException12out_of_range
U __ZN10GException12out_of_rangeC1ESsii
000000000000ca930 S __ZN10GException12out_of_rangeD1Ev

```

Anaconda's Python is compiled for a MACOSX DEPLOYMENT TARGET=10.5, and this environment is used when compiling the swig extension.

For completeness: the name mangling has changed from Mac OS X 10.9 on (old was up to 10.8).

#15 - 01/06/2016 12:19 AM - Knödlseder Jürgen

- % Done changed from 50 to 60

I think I have fixed the gammalib problem. You may try and checkout the code from gitlab (devel branch).

I need to check whether ctools also has problems (probably).

#16 - 01/06/2016 02:10 AM - Knödlseder Jürgen

- Status changed from In Progress to Feedback

This should now be fixed for gammalib and ctools. Can you check whether it's also okay on your side (devel branch)?

#17 - 01/06/2016 02:58 PM - Kelley-Hoskins Nathan

With the latest pull, I was able to import gammalib and ctools in python again, so the problem is resolved for me.

#18 - 01/11/2016 05:18 PM - de Ona Wilhelmi Emma

user#111 wrote:

With the latest pull, I was able to import gammalib and ctools in python again, so the problem is resolved for me.

Dear Jurgen,

thanks a lot and apologize for my late reaction. Only now I had time to try the develop version and I still have some problems, but this time of different nature. I tried to compile it and got:

GammaLib configuration summary =====

- FITS I/O support (yes) /opt/local/lib /opt/local/include
- Readline support (yes)
- Ncurses support (yes)
- Make Python binding (yes) use swig for building
- Python (yes)
- Python.h (yes)
  - Python wrappers (no)
- swig (yes)
- Multiwavelength interface (yes)
- Fermi-LAT interface (yes)
- CTA interface (yes)
- COMPTEL interface (yes)
  - Doxygen (no)
- Perform NaN/Inf checks (yes) (default)
- Perform range checking (yes) (default)
- Optimize memory usage (yes) (default)
  - Enable OpenMP (no)
  - Compile in debug code (no) (default)
  - Enable code for profiling (no) (default)

do I need to enable some of the (no) options? when I do make:

```
Emmas-MBP:/Users/emmadeonawilhelmi/gammalib> make
/Library/Developer/CommandLineTools/usr/bin/make all-recursive
Making all in include
make2: Nothing to be done for `all'.
Making all in inst
Making all in mwl
/bin/sh ../../libtool --tag=CXX --mode=compile g++ -DHAVE_CONFIG_H -I. -I../../include -I../../src -I../../src/support -I../../inst/mwl/include
-I/opt/local/include -fPIC -c -o src/GMWLEception.lo src/GMWLEception.cpp
libtool: compile: g++ -DHAVE_CONFIG_H -I. -I../../include -I../../src -I../../src/support -I../../inst/mwl/include -I/opt/local/include -fPIC -c
src/GMWLEception.cpp -o src/.libs/GMWLEception.o
libtool: compile: g++ -DHAVE_CONFIG_H -I. -I../../include -I../../src -I../../src/support -I../../inst/mwl/include -I/opt/local/include -fPIC -c
src/GMWLEException.cpp >/dev/null 2>&1
/bin/sh ../../libtool --tag=CXX --mode=compile g++ -DHAVE_CONFIG_H -I. -I../../include -I../../src -I../../src/support -I../../inst/mwl/include
-I/opt/local/include -fPIC -c -o src/GMWLObservation.lo src/GMWLObservation.cpp
```

```

libtool: compile: g++ -DHAVE_CONFIG_H -I. -I../.. -I../../include -I../../src/support -I../../inst/mwl/include -I/opt/local/include -fPIC -c
src/GMWLObservation.cpp -o src/.libs/GMWLObservation.o
libtool: compile: g++ -DHAVE_CONFIG_H -I. -I../.. -I../../include -I../../src/support -I../../inst/mwl/include -I/opt/local/include -fPIC -c
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libtool: compile: g++ -DHAVE_CONFIG_H -I. -I../.. -I../../include -I../../src/support -I../../inst/mwl/include -I/opt/local/include -fPIC -c
src/GMWLSpectrum.cpp -o src/.libs/GMWLSpectrum.o
libtool: compile: g++ -DHAVE_CONFIG_H -I. -I../.. -I../../include -I../../src/support -I../../inst/mwl/include -I/opt/local/include -fPIC -c
src/GMWLSpectrum.cpp >/dev/null 2>&1
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-I/opt/local/include -fPIC -c -o src/GMWLDatum.lo src/GMWLDatum.cpp
libtool: compile: g++ -DHAVE_CONFIG_H -I. -I../.. -I../../include -I../../src/support -I../../inst/mwl/include -I/opt/local/include -fPIC -c
src/GMWLDatum.cpp -o src/.libs/GMWLDatum.o
libtool: compile: g++ -DHAVE_CONFIG_H -I. -I../.. -I../../include -I../../src/support -I../../inst/mwl/include -I/opt/local/include -fPIC -c
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-I/opt/local/include -fPIC -c -o src/GMWLInstDir.lo src/GMWLInstDir.cpp
libtool: compile: g++ -DHAVE_CONFIG_H -I. -I../.. -I../../include -I../../src/support -I../../inst/mwl/include -I/opt/local/include -fPIC -c
src/GMWLInstDir.cpp -o src/.libs/GMWLInstDir.o
libtool: compile: g++ -DHAVE_CONFIG_H -I. -I../.. -I../../include -I../../src/support -I../../inst/mwl/include -I/opt/local/include -fPIC -c
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-I/opt/local/include -fPIC -c -o src/GMWLResponse.lo src/GMWLResponse.cpp
libtool: compile: g++ -DHAVE_CONFIG_H -I. -I../.. -I../../include -I../../src/support -I../../inst/mwl/include -I/opt/local/include -fPIC -c
src/GMWLResponse.cpp -o src/.libs/GMWLResponse.o
libtool: compile: g++ -DHAVE_CONFIG_H -I. -I../.. -I../../include -I../../src/support -I../../inst/mwl/include -I/opt/local/include -fPIC -c
src/GMWLResponse.cpp >/dev/null 2>&1
/bin/sh ../../libtool --tag=CXX --mode=link g++ -fPIC -L/opt/local/lib -o libmwl.la src/GMWLEception.lo src/GMWLObservation.lo
src/GMWLSpectrum.lo src/GMWLDatum.lo src/GMWLInstDir.lo src/GMWLResponse.lo -lstdc++ -ledit -lcurses -lcfitsio -lm
libtool: link: unsupported hardcode properties
libtool: link: See the libtool documentation for more information.
libtool: link: Fatal configuration error.
make3: * [libmwl.la] Error 1
make2: [all-recurse] Error 1
make1: [all-recurse] Error 1
make: * [all] Error 2

```

Thanks again

Emma

user#170 wrote:

user#111 wrote:

With the latest pull, I was able to import gammalib and ctools in python again, so the problem is resolved for me.

Dear Jurgen,

thanks a lot and apologize for my late reaction. Only now I had time to try the develop version and I still have some problems, but this time of different nature. I tried to compile it and got:

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libtool: compile: g++ -DHAVE_CONFIG_H -I. -I../../include -I../../src -I../../src/support -I../../inst/mwl/include -I/opt/local/include -fPIC -c
src/GMWLInstDir.cpp -o src/.libs/GMWLInstDir.o
libtool: compile: g++ -DHAVE_CONFIG_H -I. -I../../include -I../../src -I../../src/support -I../../inst/mwl/include -I/opt/local/include -fPIC -c
```

```
src/GMWLInstDir.cpp >/dev/null 2>&1
/bin/sh ../../libtool --tag=CXX --mode=compile g++ -DHAVE_CONFIG_H -I. -I../../include -I../../src -I../../src/support -I../../inst/mwl/include
-I/opt/local/include -fPIC -c -o src/GMWLResponse.lo src/GMWLResponse.cpp
libtool: compile: g++ -DHAVE_CONFIG_H -I. -I../../include -I../../src -I../../src/support -I../../inst/mwl/include -I/opt/local/include -fPIC -c
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make3: * [libmwl.la] Error 1
make2: [all-recursive] Error 1
make1: [all-recursive] Error 1
make: * [all] Error 2
```

Thanks again

Emma

Hi Emma,

I never have seen this before. It should not be related to any of the no's you see.

Have you made a clean checkout of the code, run eventually ./autogen.sh, make clean before ./configure, or even delete the code and clone again?

If the problem persists, what is:

- your libtool version
- your autoconf version
- your clang++ version

#20 - 01/11/2016 06:49 PM - de Ona Wilhelmi Emma

Dear Jurgen,

the cleaning didnt help but I removed the old version and started a new one and it worked. I also compiled everything in bash instead of cshrc which

might have some effect. Anyways, now it is nicely working, many thanks again for your help

Best

Emma

**#21 - 01/11/2016 10:12 PM - Knödlseder Jürgen**

- *Status changed from Feedback to Closed*

- *% Done changed from 60 to 100*

user#170 wrote:

Dear Jurgen,

the cleaning didnt help but I removed the old version and started a new one and it worked. I also compiled everything in bash instead of cshrc which might have some effect. Anyways, now it is nicely working, many thanks again for your help

Best

Emma

I suspect that something got mixed up. Good to see that it's working now. I close the issue.