

GammaLib - Bug #1580

ctools cannot read filename using "~" referring to home directory

11/19/2015 11:24 AM - Mayer Michael

Status:	Closed	Start date:	11/19/2015
Priority:	Low	Due date:	
Assigned To:	Knödseder Jürgen	% Done:	100%
Category:		Estimated time:	0.00 hour
Target version:			
Description			
<p>I am not sure if this is more a feature than a bug. Running a ctool on my mac and trying to load a file on my Desktop in the following way results in an error:</p> <pre>\$ ctselect Input event list or observation definition file [events.fits] ~/Desktop/obs.xml *** ERROR in GXml::load(std::string&): Unable to open file "~/Desktop/obs.xml" *** ERROR encountered in the execution of ctselect. Run aborted ...</pre> <p>The file is however present. The following call works:</p> <pre>\$ ctselect Input event list or observation definition file [~/Desktop/obs.xml] /Users/mimayer/Desktop/obs.xml</pre> <p>Tracing the problem, I wind up in <code>gammalib::expand_env</code>. The function does not interpret "~" in a string (e.g. as \$HOME).</p>			

History

#1 - 11/19/2015 11:32 PM - Knödseder Jürgen

Interesting, I thought that the decoding of the ~ symbol happens on the system level, but this seems not to be the case.

Note, however, that ~mike means /home/mike (or /Users/mike on Mac OS X).

I agree that both capabilities should be added to `gammalib::expand_env`.

#2 - 11/20/2015 05:44 PM - Mayer Michael

I just verified this does not work on Scientific Linux, too.

I am not sure how the function `gammalib::expand_env` works exactly. Is it an effort for you to implement this?

#3 - 11/20/2015 06:03 PM - Knödseder Jürgen

I can look into that. Is it an urgent issue?

#4 - 11/20/2015 06:03 PM - Knödseder Jürgen

- Assigned To set to Knödseder Jürgen

#5 - 11/20/2015 08:56 PM - Mayer Michael

This probably belongs to the `gammalib` project after all.

I can look into that. Is it an urgent issue?

Thanks. No, not urgent at all simple workaround is to specify absolut paths. I just noted it and wanted it to be documented that we do not forget.

#6 - 11/22/2015 05:55 PM - Knödseder Jürgen

- *Project changed from ctools to GammaLib*

#7 - 11/22/2015 06:17 PM - Knödseder Jürgen

Here the logic how bash treats the tilde: http://www.gnu.org/software/bash/manual/html_node/Tilde-Expansion.html

See the following link to learn how to access a users home directory: <http://stackoverflow.com/questions/2910377/get-home-directory-in-linux-c>

```
#include <unistd.h>
#include <sys/types.h>
#include <pwd.h>

const char *homedir;

if ((homedir = getenv("HOME")) == NULL) {
    homedir = getpwuid(getuid())->pw_dir;
}
```

Use getpwnam to retrieve the pw structure for an arbitrary user: <http://linux.die.net/man/3/getpwnam>

#8 - 11/22/2015 10:09 PM - Knödseder Jürgen

- *Status changed from New to Closed*

- *% Done changed from 0 to 100*

I added the interpretation of ~, ~user, ~+ and ~- to the gammalib::expand_env() function.

Merged into devel.