

## GammaLib - Bug #2855

### CTYPE1 not found error with ctlike and Fermi data

03/21/2019 02:57 PM - de Bony Mathieu

<b>Status:</b>	Rejected	<b>Start date:</b>	03/21/2019
<b>Priority:</b>	Normal	<b>Due date:</b>	
<b>Assigned To:</b>		<b>% Done:</b>	0%
<b>Category:</b>		<b>Estimated time:</b>	0.00 hour
<b>Target version:</b>			
<b>Description</b>			
<p>I'm looking for making a fits on Fermi data with ctools. I followed the tutorial in the ctools documentation (same source, same parameter and xml configuration file, I just use the last IRF (P8R3_SOURCE_V2)). When I run ctlike i have got this error (ctlike.log):</p> <pre>2019-03-21T09:46:45: ***** 2019-03-21T09:46:45: *                               ctlike 2019-03-21T09:46:45: * -----* 2019-03-21T09:46:45: * Version: 1.5.2                               * 2019-03-21T09:46:45: ***** 2019-03-21T09:46:46: * <b>ERROR encountered in the execution of ctlike. Run aborted ...</b> 2019-03-21T09:46:46: * ERROR in GFitsHeaderCard&amp; GFitsHeader::at(std::string&amp;): Invalid argument. Keyword "CTYPE1" not found in FITS header. 2019-03-21T09:46:46: 2019-03-21T09:46:46: Application "ctlike" terminated after 1 wall clock seconds, consuming 0.11 seconds of CPU time.</pre> <p>After modification of the observation xml by puting random name for fits file and see if an error occurred, it's look like the error come from the srcmaps fits file.</p>			

#### History

##### #1 - 03/21/2019 03:30 PM - Tibaldo Luigi

This is a known issue (#2850). It is due to the removal of some WCS keywords from the output of gtsrmap in the latest versions of the Fermi Science Tools

<https://github.com/fermi-lat/Likelihood/issues/29>

A fix from the Gammalib side is on its way, in the mean time you can tweak the srcmap file to make it work with the current version, please find a code snippet below

```
from astropy.io import fits

srcmap = 'srcmaps.fits'
hdulist = fits.open(srcmap)
hd0 = hdulist[0].header
for card in hd0.cards:
    if card.keyword[0]=='C':
        for hdu in hdulist[3:]:
            hdu.header.append(card)
hdulist.writeto(srcmap,overwrite=True)
```

**#2 - 03/21/2019 04:42 PM - de Bony Mathieu**

Thanks, it's works. Did you know when the last IRF of Fermi will be supported by ctools ? clike works if I use P8R2\_SOURCE\_V6 but not if I use P8R3\_SOURCE\_V2.

**#3 - 03/21/2019 04:52 PM - Knödseder Jürgen**

- *Project changed from ctools to GammaLib*

- *Status changed from New to Rejected*

Duplication of existing issue #2850. Issue #2850 was fixed.

**#4 - 03/21/2019 04:55 PM - Tibaldo Luigi**

P8R3 IRFs are already supported in the development version.

**#5 - 03/21/2019 04:57 PM - de Bony Mathieu**

Ok Thanks for the information