

## ctools - Bug #1831

### csiactcopy mistakes FITS columns and rows

08/01/2016 10:44 AM - Mayer Michael

|  |                                  |
|--|----------------------------------|
| <b>Status:</b> Closed  | <b>Start date:</b> 08/01/2016    |
| <b>Priority:</b> High  | <b>Due date:</b>                 |
| <b>Assigned To:</b>  | <b>% Done:</b> 100%              |
| <b>Category:</b>   | <b>Estimated time:</b> 0.00 hour |
| <b>Target version:</b>   |                                  |
| <b>Description</b>   |                                  |
| <p>I received a report from Nukri Komin that csiactcopy has a problem when copying a large number of runs using a runlist (and not the full production): some columns in the obs-index and hdu-index files stay empty showing only zeros.</p> <p>I checked the code and discovered a rather stupid mistake in \$CTOOLS/cscripts/csiactcopy.py:line 232:</p> <pre># Get old size of remote HDU size = remote_hdu.size()</pre> <p>The size() function returns the number of columns and not the number of rows as intended. Therefore the indexing gets mixed up. We simply have to replace this line by the following snippet:</p> <pre>size = remote_hdu.nrows()</pre> |                                  |
| <b>Related issues:</b>   |                                  |
| Related to GammaLib - Action # 1857: Remove GFitsTable::size() method  | <b>Closed</b> <b>10/03/2016</b>  |
| Related to GammaLib - Action # 1858: Remove GFitsImage::size() method  | <b>Closed</b> <b>10/03/2016</b>  |
| Related to GammaLib - Action # 1859: Rename GFitsHDU::size() method to GFitsH...   | <b>Closed</b> <b>10/03/2016</b>  |
| Related to GammaLib - Action # 1860: Rename GFitsTableCol::length() to GFitsT...   | <b>Closed</b> <b>10/03/2016</b>  |

### History

#### #1 - 08/02/2016 10:39 PM - Knödlseher Jürgen

I looked a bit in the GammaLib code and I think that the size() methods should be removed from the FITS HDU classes to avoid confusion.

The base class method GFitsHDU::size() returns in fact the number of header cards in a HDU.

The GFitsTable::size() method that overloads the GFitsHDU::size() method, returns the number of columns.

And the GFitsImage::size() method that overloads the GFitsHDU::size() method, returns the number of pixels.

The problem with the size() method is that it is not obvious to what size it refers to. And the actual implementations are definitely conflicting.

#### #2 - 08/03/2016 10:23 AM - Mayer Michael

I agree that the size method is a bit confusing. I was expecting something different from it to return. Therefore, having ncols() and nrows() should be sufficient and more clear.

I also stumbled upon a similar problem when accessing the number elements of a GFitsTableCol:

The function returning the number of rows is actually GFitsTableCol.length(), where I intuitively would have expected a size() method. Of course it is a bit more complicated here since an element of a GFitsTableCol can have multiple entries (like we have in response cubes).

**#3 - 08/11/2016 01:12 PM - Mayer Michael**

- Status changed from New to Resolved
- % Done changed from 0 to 100

Resolved by #1828. Maybe another issue for the FITS interface is useful.

**#4 - 10/03/2016 10:46 AM - Knödlseher Jürgen**

- Related to Action #1857: Remove GFitsTable::size() method added

**#5 - 10/03/2016 10:47 AM - Knödlseher Jürgen**

- Related to Action #1858: Remove GFitsImage::size() method added

**#6 - 10/03/2016 10:50 AM - Knödlseher Jürgen**

- Related to Action #1859: Rename GFitsHDU::size() method to GFitsHDU::cards() added

**#7 - 10/03/2016 10:59 AM - Knödlseher Jürgen**

- Related to Action #1860: Rename GFitsTableCol::length() to GFitsTableCol::nrows() added

**#8 - 10/03/2016 10:59 AM - Knödlseher Jürgen**

- Status changed from Resolved to Closed

Created issues for renaming of FITS methods.