ctools - Change request #1707

Review ASCII output of cscripts and ctools

02/22/2016 09:26 PM - Knödlseder Jürgen

Status:	Closed	**Start date:**	02/22/2016
Priority:	High	**Due date:**	
Assigned To:	Knödlseder Jürgen	**% Done:**	100%
Category:		**Estimated time:**	0.00 hour
Target version:	2.0.0		

Description

While writing the paper I recognised that we really should clean up the various output formats of the cscripts. I think it would be good to support FITS files as much as we can. Upper limits can certainly also be handled using the model XML file. Maybe the general discussion about IACT data formats can also help to better understand what we need. Michael summarized the status of the actual output file formats below.

Here a list of the cscripts and their output formats:

- csspec: FITS table
- cslightcrv: FITS table
- csfindobs: ASCII file (compatible with what is used with current IACTs)
- csiactobs: XML file
- csresmap: FITS sky map
- cstsmapmerge: FITS sky map
- cspull: **CSV ascii table**
- cssens: **CSV ascii table**
- cstsdist: **CSV ascii table**

And here a list of the ctools:

- ctbin: FITS sky map
- ctbkgcube: FITS sky map and model XML file
- ctexpcube: FITS sky map
- ctpsfcube: FITS sky map
- ctcubemask: FITS sky map
- ctselect: FITS files
- ctskymap: FITS sky map
- ctlike: model XML file
- cttsmap: FITS sky map
- ctmodel: FITS sky map
- ctulimit: **None**
- cterror: Model XML file (without asymmetric errors #1700).
- ctbutterfly: **CSV ascii table**

Highlighted in bold face are those tools that don't support FITS or XML output. Note that if we changed this format, we need to adapt the example plotting scripts as well.

History

#1 - 06/21/2016 09:45 PM - Knödlseder Jürgen

- Target version set to 1.2.0

#2 - 03/03/2017 10:49 AM - Knödlseder Jürgen

- Priority changed from Normal to High

- Target version changed from 1.2.0 to 1.3.0

#3 - 06/07/2017 05:50 PM - Knödlseder Jürgen

- Target version changed from 1.3.0 to 1.4.0

#4 - 08/01/2017 09:56 AM - Knödlseder Jürgen

- Target version changed from 1.4.0 to 1.5.0

#5 - 01/23/2018 04:42 PM - Knödlseder Jürgen

- Priority changed from High to Normal

- Target version deleted (1.5.0)

#6 - 05/07/2021 11:09 PM - Knödlseder Jürgen

- Priority changed from Normal to High

- Target version set to 2.0.0

This should be definitely fixed for version 2.0.0

#7 - 05/10/2021 04:21 PM - Knödlseder Jürgen

- Status changed from New to In Progress

- Assigned To set to Knödlseder Jürgen

- % Done changed from 0 to 10

I implemented FITS output for cssens.py and modified show_sensitivity.py so that it digests both the new FITS and the old CSV files.

#8 - 05/12/2021 10:49 PM - Knödlseder Jürgen

I replaced the ASCII output of ctbutterfly by a FITS file. The ctbutterfly::butterfly() method now returns a GFits object instead of a GCsv object. The show_butterfly.py script was adapted so that it accepts both a CSV or a FITS file on input. This allows for backwards compatibility of the script with already existing butterfly CSV files.

#9 - 05/19/2021 03:38 PM - Knödlseder Jürgen

- % Done changed from 10 to 50

I replaced the ASCII output of cspull by a FITS file.

Methods cspull::save() and cspull::pull_distribution() were added to implement saving of the FITS file and recovery of the FITS object.

The show_pull_histogram.py and show_pull_evolution.py scripts were adapted so that both scripts can deal with the old ASCII format and the new FITS file format. This allows for backwards compatibility of the script with already existing butterfly CSV files.

#10 - 05/19/2021 05:30 PM - Knödlseder Jürgen

- Status changed from In Progress to Pull request

- % Done changed from 50 to 90

I replaced the ASCII output of cstsdist by a FITS file.

Methods cstsdist::save() and cstsdist::ts_distribution() were added to implement saving of the FITS file and recovery of the FITS object.

The show_ts_distribution.py script was adapted so that both scripts can deal with the old ASCII format and the new FITS file format. This allows for backwards compatibility of the script with already existing butterfly CSV files.

#11 - 05/20/2021 07:46 AM - Knödlseder Jürgen

- Status changed from Pull request to Closed

- % Done changed from 90 to 100

I needed to adjust the science-verification.py script to the new FITS output of cspull. I merged the changes into devel.