

ctools - Feature #1069

Document which ctool works with which instrument

01/09/2014 01:41 PM - Owen Ellis

Status:	New	Start date:	01/09/2014
Priority:	Normal	Due date:	
Assigned To:		% Done:	0%
Category:		Estimated time:	0.00 hour
Target version:			
Description			
<p>I'm trying to run a Fermi LAT analysis with the ctools and get errors about missing header keywords:</p> <pre>eowen@hfm-1307f:~/analyses/ctools_crab\$ ctlike Event list, counts map or observation definition file [counts.fits] *** ERROR encountered in the execution of ctlike. Run aborted ... *** ERROR in GFitsHeaderCard& GFitsHeader::at(std::string&): Invalid argument. Keyword "RA_PNT" not found in FITS header. eowen@hfm-1307f:~/analyses/ctools_crab\$ ctselect Input event list or observation definition file [/home/eowen/data/fermi/photon/lat_photon_weekly_w009_p130_v001.fits] *** ERROR in GFitsTable::operator[](std::string&): Column "MULTIP" not found in table *** ERROR encountered in the execution of ctselect. Run aborted ...</pre> <p>The ctselect help page doesn't mention for which instruments it works: http://cta.irap.omp.eu/ctools/doc/ctselect.html</p> <p>The ctlike help page explicitly mentions that it's for CTA analysis, but it should work for HESS and Fermi LAT, too, I think. http://cta.irap.omp.eu/ctools/doc/ctlike.html</p> <p>Maybe add a section for each ctool listing the instruments it supports?</p> <p>How can I run ctselect, ctmodel and ctlike for Fermi LAT data?</p>			

History

#1 - 01/09/2014 02:44 PM - Knödlseeder Jürgen

The ctools are only intended to work for CTA data, and HESS, MAGIC, VERITAS in CTA data format.

ctlike can indeed also digest Fermi/LAT data, but not in the way you're trying to do this. To use Fermi/LAT data, you have to define the data in an observation definition XML file. Here an example (from the gammalib source code, see inst/lat/test/data/p6v3):

```
<observation_list title="observation library">
  <observation name="Crab" id="00001" instrument="LAT">
    <parameter name="CountsMap" file="$(PACKAGE_SOURCE)/inst/lat/test/data/p6v3/srcmap.fits"/>
    <parameter name="ExposureMap" file="$(PACKAGE_SOURCE)/inst/lat/test/data/p6v3/binmed_expmap.fits"/>
    <parameter name="LiveTimeCube" file="$(PACKAGE_SOURCE)/inst/lat/test/data/p6v3/lcube.fits"/>
    <parameter name="IRF" value="P6_v3_diff"/>
  </observation>
</observation_list>
```

You can then pass this file instead of counts.fits to ctlike, and it should work.

But you're fully right: the documentation of ctools is too sparse for the moment. All this has to be written down. I'm actually trying to get a first complete set of gammalib documents, once this is done, I'm also going to improve the ctools documentation.