

ctools - Feature #2231

Adapt csspec for On/Off analysis

10/17/2017 10:49 PM - Knödlseeder Jürgen

Status:	Closed	Start date:	10/17/2017
Priority:	Normal	Due date:	
Assigned To:	Knödlseeder Jürgen	% Done:	100%
Category:		Estimated time:	0.00 hour
Target version:	1.5.0		
Description			
Make sure that csspec can be used for an On/Off analysis			

History

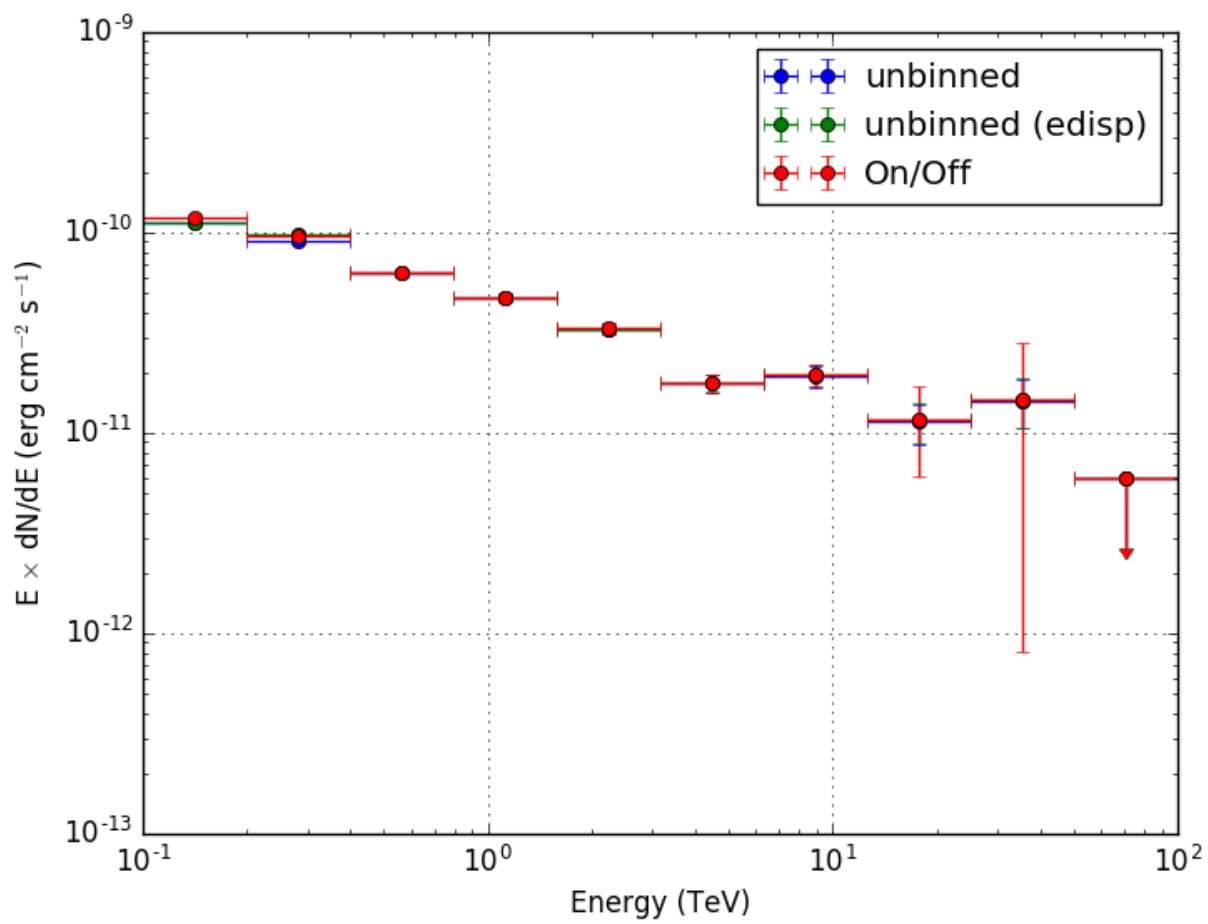
#1 - 10/18/2017 11:51 AM - Knödlseeder Jürgen

- *File comparison.png added*
- *Status changed from New to In Progress*
- *% Done changed from 0 to 80*

I adapted the script so that it can also handle On/Off data. This needed some minor changes in GammaLib, and in particular, the addition of a PHA, ARF and RMF constructor to GCTAOnOffObservation.

Below a comparison spectrum for a simulated 30 min Crab observation. Red are the spectral points obtained with csspec, blue the spectral points obtained using an unbinned analysis without energy dispersion, and green the spectral points obtained using an unbinned analysis with energy dispersion. Note that for a On/Off analysis, energy dispersion is always included.

The spectra are pretty consistent, and the error bars are larger for On/Off with respect to an unbinned analysis as expected from the larger uncertainty in the background model.



#2 - 10/18/2017 11:56 AM - Knödseder Jürgen

- File comparison.png added

#3 - 10/18/2017 11:56 AM - Knödseder Jürgen

- File deleted (comparison.png)

#4 - 10/18/2017 12:07 PM - Knödseder Jürgen

- File comparison20.png added

Same for 20 energy bins.

