

ctools - Bug #1007

ctskymap and ctbin give unhelpful error messages about GSkymap::operator(GSkyPixel&,int&)

11/29/2013 08:30 PM - Deil Christoph

Status:	In Progress	Start date:	11/29/2013
Priority:	Normal	Due date:	
Assigned To:	Knödlseider Jürgen	% Done:	50%
Category:		Estimated time:	0.00 hour
Target version:			
Description			
<p>I have an example event list (attached) that I am generating with a Python script ... I admit it most likely doesn't conform to the CTA event list format.</p> <p>Trying to bin the events with ctskymap or ctbin results in unhelpful error messages (see below). This only seems to happen for some events ... for others it works!?</p> <p>What's the problem? Is it possible to give better error messages to the user (e.g. event X has invalid value Y in the Z column)?</p> <p>Or if those checks are too slow to do always, maybe we should write validator scripts similar to `ftverify`, but specific to CTA event lists and IRF files that do all kinds of checks and evolve together with the specification documents?</p> <pre>eduroam-3-163:scripts deil\$ ctskymap Output file name [skymap.fits] Event data file name [test_events.fits] First coordinate of image center in degrees (RA or galactic l) [0] Second coordinate of image center in degrees (DEC or galactic b) [0] Minimum energy in TeV [0] Maximum energy in TeV [1e10] Projection method e.g. AIT ARC CAR GLS MER NCP SIN STG TAN [CAR] Coordinate system (CEL - celestial, GAL - galactic) (CEL GAL) [GAL] Image scale (in degrees/pixel) [0.1] Size of the X axis in pixels [3600] Size of the Y axis in pixels [1800]</pre> <ul style="list-style-type: none">• ERROR encountered in the execution of ctskymap. Run aborted ...• ERROR in GSkymap::operator(GSkyPixel&,int&): Matrix element (-2147483648,-2147483648) out of range ([0,3598], [0,1798]) <pre>eduroam-3-163:scripts deil\$ ctskymap Output file name [skymap.fits] Event data file name [test_events.fits] First coordinate of image center in degrees (RA or galactic l) [0] Second coordinate of image center in degrees (DEC or galactic b) [0] Minimum energy in TeV [0] Maximum energy in TeV [1e10] Projection method e.g. AIT ARC CAR GLS MER NCP SIN STG TAN [CAR] Coordinate system (CEL - celestial, GAL - galactic) (CEL GAL) [GAL] Image scale (in degrees/pixel) [0.1] Size of the X axis in pixels [3600] 1 Size of the Y axis in pixels [1800] 1</pre> <ul style="list-style-type: none">• ERROR encountered in the execution of ctskymap. Run aborted ...• ERROR in GSkymap::operator(GSkyPixel&,int&): Empty matrix cannot be indexed.			
Related issues:			
Related to GammaLib - Change request # 35: Rework exceptions		Closed	01/18/2016

History

#1 - 11/29/2013 09:32 PM - Knödlseider Jürgen

- Assigned To set to Knödlseider Jürgen

I see what can be done on this one. I seems that it's related to a problem that occurs when reading double precision values in a single precision FITS column. This is something I wanted to track done since a while ...

#2 - 11/29/2013 10:34 PM - Knödlseider Jürgen

- *Status changed from New to In Progress*

- *% Done changed from 0 to 50*

The bug itself was corrected in gammalib (just pushed in integration branch for testing). See #30 (the problem was known since a while [wink.png](#))

On the exception messages, there is feature #35 which forseees an extensive review of all exceptions. The actual one is in the list, as an exception written specifically for the matrix classes is used in the sky maps classes.

I related the current issue to feature #35 to make sure that it won't be forgotten.

Files

test_events.fits	141 KB	11/29/2013	Deil Christoph
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