

ctools - Change request #1314

TS computation for GModelData should be omitted

08/26/2014 01:53 PM - Mayer Michael

Status:	Closed	Start date:	08/26/2014
Priority:	Normal	Due date:	
Assigned To:	Mayer Michael	% Done:	100%
Category:		Estimated time:	0.50 hour
Target version:	00-08-00		
Description			
<p>I tested the new feature to compute TS values with ctlike. For the source models it works quite nicely. However, for the background models, I get meaningless, negative values like TS=-10390. I assume the fit has problems to adjust the parameters if a background model is missing. The fit considers every event from such a run without background model as pure source photon, which causes problems. Please find attached the printed models with the TS computation flag turned on in ctlike.</p> <p>I therefore suggest to omit the TS computation for instances of GModelData. Not only that it saves computational time, a background TS value of a background-dominated experiment also doesn't make too much sense to me. In ctlike, we could achieve that by introducing an 'if' statement questioning the type of the respective GModel and only proceed with the TS calculation in case a GModelSky is given.</p> <p>I furthermore noticed that the TS value of a GModelData model (GCTAModelIrfBackground) is not written out to the optimised xml-file which seems ok if we drop its computation anyway.</p>			

History

#1 - 09/23/2014 02:49 PM - Mayer Michael

Thinking more about this, I suggest the user should be able to steer for which sources TS values are calculated for. We could extend the hidden parameter *tscal* in ctlike to a string. The input could be "all", "no", or a comma-separated list of model names which should be considered in the TS computation.

This would save a large amount of computational time and would simplify e.g. the creation of a TS map (#1323). Do you agree on this?

#2 - 09/23/2014 11:34 PM - Knödseder Jürgen

An alternative would be to control this over the XML file. I have no strong opinion about the way it should be done. Anyone has an opinion about that?

#3 - 09/25/2014 10:34 AM - Mayer Michael

Going via the xml file sounds also good to me. We could add a boolean to GModel called *m_tscal*, which controls if the TS should be computed in ctlike. This flag can be set via the python interface or in the xml file directly.

If you agree with this approach, I could implement this.

#4 - 09/30/2014 02:20 PM - Mayer Michael

- Assigned To set to Mayer Michael

- Target version set to 00-08-00

I've added #1326 to include such a flag in to GModel.

#5 - 09/30/2014 02:40 PM - Mayer Michael

- Status changed from New to Pull request

- % Done changed from 0 to 100

- Estimated time set to 0.50

To code is available on branch *1314-TS-computation-from-xml-in-ctlake*. It is only working in combination with the *gammalib* branch from #1326.

#6 - 09/30/2014 09:09 PM - Knödseder Jürgen

- *Status changed from Pull request to Closed*

Merged into devel branch.

Files

ctlake_TS_results.txt	3.17 KB	08/26/2014	Mayer Michael
-----------------------	---------	------------	---------------