

## GammaLib - Change request #2695

### Allow Rol centres different from pointing direction in unbinned analysis

10/08/2018 01:50 PM - Knödlseider Jürgen

<b>Status:</b>	Closed	<b>Start date:</b>	10/08/2018
<b>Priority:</b>	Urgent	<b>Due date:</b>	
<b>Assigned To:</b>	Knödlseider Jürgen	<b>% Done:</b>	100%
<b>Category:</b>		<b>Estimated time:</b>	0.00 hour
<b>Target version:</b>	1.7.0		
<b>Description</b> So far the npred() methods of GCTAModelAeffBackground, GCTAModelIrfBackground and GCTAModelBackground assume that the Rol centre is identical to the pointing direction. Although this may often be the case, the more general case of a different Rol centre should be covered. For now, an exception will be thrown in the pointing direction differs from the Rol centre.			
<b>Related issues:</b> Related to GammaLib - Feature # 2694: Implement more complex background model... <span style="float: right;"><b>Closed</b>    <b>10/04/2018</b></span>			

#### History

##### #1 - 10/08/2018 01:50 PM - Knödlseider Jürgen

- Related to Feature #2694: Implement more complex background models for H.E.S.S. data analysis added

##### #2 - 01/21/2019 03:27 PM - Knödlseider Jürgen

- Target version deleted (1.6.0)

Postpone to release after 1.6.0

##### #3 - 02/03/2020 12:12 PM - Knödlseider Jürgen

- Assigned To set to Knödlseider Jürgen

- Priority changed from Normal to Urgent

- Target version set to 1.7.0

##### #4 - 02/17/2020 12:26 PM - Knödlseider Jürgen

- Status changed from New to Pull request

- % Done changed from 0 to 100

I modified the code so that Rol centres different from the pointing direction are supported. The classes that were modified are:

- GCTAModelAeffBackground
- GCTAModelIrfBackground
- GCTAModelSpatial

Note that GCTAModelRadialAcceptance allowed already Rol centres different from the pointing direction. I therefore wrote a script `inst/cta/test/dev/test_background_npred.py` that compares the npred computation for Rol centre different from the pointing direction between GCTAModelRadialAcceptance and GCTAModelSpatial models that are intrinsically identical. Within a relative precision of  $1e-4$ , the results were indeed identical.

##### #5 - 02/17/2020 01:57 PM - Knödlseider Jürgen

- Status changed from Pull request to Closed

Merged into devel.