

## GammaLib - Action #1124

### implement region rotation

01/30/2014 10:17 AM - Kosack Karl

<b>Status:</b>	New	<b>Start date:</b>	01/30/2014
<b>Priority:</b>	Normal	<b>Due date:</b>	
<b>Assigned To:</b>		<b>% Done:</b>	0%
<b>Category:</b>		<b>Estimated time:</b>	0.00 hour
<b>Target version:</b>			
<b>Description</b>			
to implement a correct reflected-region background method, GSkyRegions must have a rotation angle implemented, so that arbitrary regions end up in the correct orientation on the sky.			
The suggested way to implement this is to add:			
@			
GSkyDir m_rotation_point;			
double m_rotation_angle;			
GSkyDir transform_to_region_system( GSkyDir &dir );			
GSkyDir transform_from_region_system( GSkyDir &dir);			
to the base GSkyRegion class. The transformation functions apply the rotation to any point for the current region, and should be applied in @contains() etc., before checking if a coordinate is inside a region. This way the mathematical definition of the regions does not need to take into account rotation. E.g. a rectangle region can be assumed to be aligned to the X-Y axis, and rotation is taken into account by the coordinate transformation.			

#### History

##### #1 - 02/17/2014 10:18 PM - Knödlseider Jürgen

- Target version set to 2nd coding sprint

##### #2 - 07/19/2014 02:10 AM - Knödlseider Jürgen

- Target version deleted (2nd coding sprint)

##### #3 - 03/11/2016 06:08 PM - Martin Pierrick

- Parent task deleted (#1044)