

## GammaLib - Feature #340

### Optimize Romberg integrator precision

07/18/2012 12:06 AM - Knödlseeder Jürgen

<b>Status:</b> Closed	<b>Start date:</b> 07/18/2012
<b>Priority:</b> Normal	<b>Due date:</b>
<b>Assigned To:</b> Knödlseeder Jürgen	<b>% Done:</b> 100%
<b>Category:</b>	<b>Estimated time:</b> 0.00 hour
<b>Target version:</b> 1.0.0	

**Description**

The precision of the Romberg integrator has been set arbitrary to 1e-6. This was the original value taken from Numerical recipes.

Several studies have shown so far that a precision of 1e-5 seem to be sufficient, at least for CTA response computations (see for example [[GCTAResponse]]). We should investigate, based on extensive tests, what the default precision should be.

#### History

**#1 - 07/11/2014 04:14 PM - Knödlseeder Jürgen**

- Target version set to 1.0.0

**#2 - 10/31/2014 04:29 PM - Knödlseeder Jürgen**

- Status changed from New to Closed

- Assigned To set to Knödlseeder Jürgen

- % Done changed from 0 to 100

The precision is no longer use for response computation, but rather the integration depth. This considerable stabilizes the convergence behavior. Consider as closed now.