

## GammaLib - Action #1307

### Implement GCTAResponseCube::npred()

07/31/2014 09:35 AM - Lu Chia-Chun

<b>Status:</b>	New	<b>Start date:</b>	07/31/2014
<b>Priority:</b>	Normal	<b>Due date:</b>	
<b>Assigned To:</b>	Lu Chia-Chun	<b>% Done:</b>	0%
<b>Category:</b>		<b>Estimated time:</b>	0.00 hour
<b>Target version:</b>			
<b>Description</b>			
In parallel to double GCTAResponseCube::npred(const GPhoton& photon, const GObservation& obs) const			

#### History

##### #1 - 07/31/2014 10:18 AM - Knödlseher Jürgen

- Description updated

The npred() is a method specifically designed for unbinned analysis. Are you sure you want such a method for binned? What is your purpose?

##### #2 - 07/31/2014 10:20 AM - Lu Chia-Chun

I want to calculate a spectrum. I try to use your analyses.py script to generate a spectrum but I got exception messages that this method is not implemented.

##### #3 - 07/31/2014 10:31 AM - Knödlseher Jürgen

Ok, so what is needed to implement either the

```
virtual double GCTAResponseCube::npred(const GSource& source, const GObservation& obs) const;
```

method or all four of the model specific methods

```
virtual double GCTAResponseCube::npred_ptsrc(const GSource& source, const GObservation& obs) const;  
virtual double GCTAResponseCube::npred_radial(const GSource& source, const GObservation& obs) const;  
virtual double GCTAResponseCube::npred_elliptical(const GSource& source, const GObservation& obs) const;  
virtual double GCTAResponseCube::npred_diffuse(const GSource& source, const GObservation& obs) const;
```

I guess it's easier to implement

```
virtual double GCTAResponseCube::npred(const GSource& source, const GObservation& obs) const;
```

where you would put a loop over the event cube and sum-up the values you get from

```
virtual double GCTAResponseCube::irf(const GEvent& event, const GSource& source, const GObservation& obs) const;
```

multiplied by the event bin size.