

GammaLib - Action #494

Feature # 490 (Closed): Avoid casts for derived classes

Rework GObservation interface

09/19/2012 08:55 PM - Knödseder Jürgen

<b>Status:</b>	Closed	<b>Start date:</b>	09/20/2012
<b>Priority:</b>	Normal	<b>Due date:</b>	
<b>Assigned To:</b>	Knödseder Jürgen	<b>% Done:</b>	100%
<b>Category:</b>		<b>Estimated time:</b>	0.00 hour
<b>Target version:</b>	00-07-00		
<b>Description</b>			
Here a list of additional methods that are implement in the derived classes of GObservation:			
GCOMObservation:			
<ul style="list-style-type: none"><li>• void load(const std::string&amp; drename, const std::string&amp; drbname, const std::string&amp; drgname, const std::string&amp; drxname);</li><li>• void response(const std::string&amp; iaqname, const std::string&amp; caldb = "");</li><li>• void obs_id(const double&amp; id);</li><li>• void ontime(const double&amp; ontime);</li><li>• void livetime(const double&amp; livetime);</li><li>• void deadc(const double&amp; deadc);</li><li>• double obs_id(void) const;</li></ul>			
Note: the load function can definitely not be implemented on the base class method, but usually when loading explicitly an observation one knows with which observation one deals. The load function could also be put protected, so that loading can only be done through a constructor.			
GCTAObservation:			
<ul style="list-style-type: none"><li>• void load_unbinned(const std::string&amp; filename);</li><li>• void load_binned(const std::string&amp; filename);</li><li>• void save(const std::string&amp; filename, bool clobber) const;</li><li>• void response(const std::string&amp; irfname, std::string caldb = "");</li><li>• void pointing(const GCTAPointing&amp; pointing);</li><li>• void obs_id(const int&amp; id);</li><li>• void ra_obj(const double&amp; ra);</li><li>• void dec_obj(const double&amp; dec);</li><li>• void ontime(const double&amp; ontime);</li><li>• void livetime(const double&amp; livetime);</li><li>• void deadc(const double&amp; deadc);</li><li>• int obs_id(void) const;</li><li>• double ra_obj(void) const;</li><li>• double dec_obj(void) const;</li><li>• std::string eventfile(void) const;</li><li>• void eventfile(const std::string&amp; filename);</li></ul>			
Note: All methods concerning standard attributes should be added as member functions to the GObservation base class.			
GLATObservation:			
<ul style="list-style-type: none"><li>• void load_unbinned(const std::string&amp; ft1name, const std::string&amp; ft2name, const std::string&amp; ltcube_name);</li><li>• void load_binned(const std::string&amp; cntmap_name, const std::string&amp; expmap_name, const std::string&amp; ltcube_name);</li><li>• void response(const std::string&amp; irfname, std::string caldb = "");</li><li>• GLATLtCube* ltcube(void) const;</li></ul>			
GMWLObservation:			
<ul style="list-style-type: none"><li>• void load(const std::string&amp; filename);</li><li>• void load(const std::string&amp; filename, const int&amp; extno);</li><li>• void load(const std::string&amp; filename, const std::string&amp; extname);</li></ul>			

- `std::string filename(void) const;`
- `std::string extno(void) const;`
- `std::string extname(void) const;`
- `void filename(const std::string& filename);`
- `void extno(const std::string& extno);`
- `void extname(const std::string& extname);`

## History

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### #1 - 09/19/2012 09:30 PM - Knödlseider Jürgen

- *Description updated*

### #2 - 09/20/2012 05:21 PM - Knödlseider Jürgen

- *Start date set to 09/20/2012*

due to changes in a related task

### #3 - 09/20/2012 06:49 PM - Knödlseider Jürgen

- *Assigned To set to Knödlseider Jürgen*

### #4 - 12/18/2012 09:44 PM - Knödlseider Jürgen

- *Status changed from New to Closed*

- *% Done changed from 0 to 100*

- *Remaining (hours) set to 0.0*

All casts in the instrument specific classes have been removed. No rework has been done on the GObservation interface. Not clear whether we really need a rework, as long as we don't have the need for a cast.