GammaLib - Action #492

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

Rework GEvents interface

09/19/2012 08:54 PM - Knödlseder Jürgen

Status:	Closed	**Start date:**	09/20/2012
Priority:	Normal	**Due date:**	
Assigned To:	Knödlseder Jürgen	**% Done:**	100%
Category:		**Estimated time:**	0.00 hour
Target version:	00-07-00		

Description

Here a list of the additional methods that are implement in the derived classes of GEvents:

GEventList:

- virtual void roi(const GRoi& roi) = 0;
- virtual const GRoi& roi(void) const = 0;

GCTAEventList:

- void append(const GCTAEventAtom& event);
- void reserve(const int& number);

GLATEventList:
None

GEventCube:

- virtual int dim(void) const = 0;
- virtual int naxis(int axis) const = 0;

GCOMEventCube:

- void map(const GSkymap& map, const double& phimin, const double& dphi);
- const GSkymap& map(void) const;
- int nchi(void) const;
- int npsi(void) const;
- int nphi(void) const;
- int npix(void) const;

Note that the nchi(), npsi(), nphi(), and npix() method functionalities can all be satisfied using dim() and naxis(), hence we do not strictly need these methods.

GCTAEventCube:

- void map(const GSkymap& map);
- const GSkymap& map(void) const;
- int nx(void) const;
- int ny(void) const;
- int npix(void) const;
- int ebins(void) const;

Note that the nx(), ny(), npix(), and ebins() method functionalities can all be satisfied using dim() and naxis(), hence we do not strictly need these methods.

GLATEventCube:

- void time(const GTime& time);
- void map(const GSkymap& map);
- void enodes(const GNodeArray& enodes);
- void ontime(const double& ontime);

- const GTime& time(void) const;
- const GSkymap& map(void) const;
- const GNodeArray& enodes(void);
- const double& ontime(void) const;
- int nx(void) const;
- int ny(void) const;
- int npix(void) const;
- int ebins(void) const;
- int ndiffrsp(void) const;
- std::string diffname(const int& index) const;
- GSkymap* diffrsp(const int& index) const;
- double maxrad(const GSkyDir& dir) const;

History

#1 - 09/19/2012 09:18 PM - Knödlseder Jürgen

- Description updated

#2 - 09/19/2012 09:33 PM - Knödlseder Jürgen

- Description updated

#3 - 09/20/2012 05:21 PM - Knödlseder Jürgen

- Start date set to 09/20/2012

due to changes in a related task

#4 - 09/20/2012 06:49 PM - Knödlseder Jürgen

- Assigned To set to Knödlseder Jürgen

#5 - 12/18/2012 04:03 PM - Knödlseder Jürgen

A GEvents* output typemap has been added to GObservation.i that automatically casts to GEventList and GEventCube and a GEvent* output typemap has been added to GEvents.i that automatically casts to GEventAtom and GEventBin.

We thus have to make sure that the instrument specific implementations to these interfaces do not add new methods.

#6 - 12/18/2012 09:45 PM - Knödlseder 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 GEvents interface. Not clear whether we really need a rework, as long as we don't have the need for a cast.