GammaLib - Feature #2455

Implement a time dependent spectral model

04/19/2018 05:03 PM - Knödlseder Jürgen

Status:	New	**Start date:**	04/19/2018
Priority:	Normal	**Due date:**	
Assigned To:		**% Done:**	0%
Category:		**Estimated time:**	0.00 hour
Target version:			

Description

Implement a spectral model that depends on time. The model should be defined by a two-dimensional table that provides spectral vectors, like a filefunction, as fonction of time. The input data should be provided as FITS file.

History

#1 - 06/07/2018 11:43 AM - Knödlseder Jürgen

It should be checked with the CTA GRB people in which format their data are (-> Ghirlanda). It should also be checked with the AGN people that the format is okay for them.

The idea would be to have spectral vectors as function of time, hence a table F(\nu, t), stored in a FITS file.

A possible format would be a vector column to store the data, and a time column to store the time nodes for which the data are valid. As usual, times should be in seconds, counted from a reference time that is stored in the FITS file header. A second ENERGIES extension would then define the energy nodes for the table.

Alternatively, one could store the spectral information as rows, and have the time information as the elements of a vector. One would then store the energy nodes in a column, and have a TIMES extension to define the time nodes. The advantage of this data model is that it also could be used for time-independent file functions. In that case the vector dimension would be 1, and there won't be a time extension.

#2 - 12/12/2018 11:37 AM - Knödlseder Jürgen

- Target version deleted (1.6.0)