GammaLib - Action #1170

Feature # 591 (In Progress): Investigate how GammaLib can be made VO compliant.

Add object to coordinate transformation using VO services to GSkyDir

03/12/2014 02:04 PM - Knödlseder Jürgen

Status:	New	**Start date:**	03/12/2014
Priority:	High	**Due date:**	12/31/2014
Assigned To:	Louge Thierry	**% Done:**	0%
Category:		**Estimated time:**	0.00 hour
Target version:			

Description

A method should be added that allows conversion of an object name to a sky coordinate, making use of Virtual Observatory services. For example:

GSkyDir dir("Crab");

should create a sky direction object that is initialised to the location of the Crab nebula.

Virtual Observatory services should be used to do the coordinate transformation. This may fail if:

- the user is not connected to the web
- the name is not know to the service

On both cases, exceptions should be thrown.

It can also be envisioned to hard-code a reduced list of coordinates for well-known gamma-ray emitters. The hard coding could be done within the code, or by providing a file (e.g. FITS file) that is shipped with the system.

History

#1 - 06/19/2014 02:56 PM - Knödlseder Jürgen

- Assigned To set to Louge Thierry

#2 - 06/19/2014 03:54 PM - Knödlseder Jürgen

Here an example how the problem can be solved in IDL: http://idlastro.gsfc.nasa.gov/ftp/pro/sockets/querysimbad.pro

For testing, this query works:

http://cdsweb.u-strasbg.fr/cgi-bin/nph-sesame?Crab

and returns a pretty short string

Crab   #Q1911886

#=S=Simbad (via url):   1
%@ 795871
%I.0 M 1
%C.0 SNR
%C.N0 13.13.00.00
%J 83.633083 +22.014500 = 05:34:31.93 +22:00:52.2
%J.E [~ ~ ~] C 2011A&A...533A..10L
%D 7 5 90 (32767) (R) E 2009BASI...37...45G
%#B 4511

#====Done (2014-Jun-19,13:53:40z)====

(see http://cdsweb.u-strasbg.fr/doc/sesame.htx).

#3 - 12/11/2014 10:45 PM - Knödlseder Jürgen

- Priority changed from Normal to High

Any progress here? We should get this working, even if the VO query is hard wired.

#4 - 12/11/2014 10:48 PM - Knödlseder Jürgen

- Due date set to 12/31/2014

#5 - 12/12/2014 12:35 PM - Knödlseder Jürgen

Need to find out how to make a http get in C.

Useful links:

- http://stackoverflow.com/questions/11208299/http-get-request-using-c-without-libcurl
- http://cboard.cprogramming.com/c-programming/142841-sending-http-get-request-c.html
- http://coding.debuntu.org/c-linux-socket-programming-tcp-simple-http-client