Documentation for *Scilab* and GNU *Octave* Software Interfaces for GNATS

IMPORTANT NOTE: These interfaces have been tested only with the specific versions of *Scilab* and *GNU Octave* identified in this document.

Instructions for *Scilab*:

1. Install *Scilab* by running "`sudo apt-get install scilab`". GNATS currently supports *Scilab* version 6.0.0.

2. Run *scilab* by running "`sudo scilab`" command in terminal.

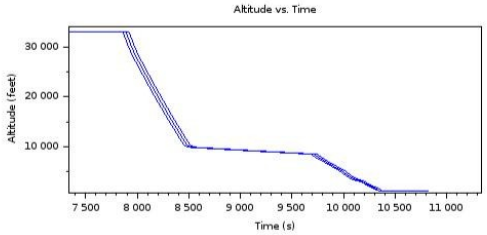
3. Open the provide sample file in *Scilab* window using:

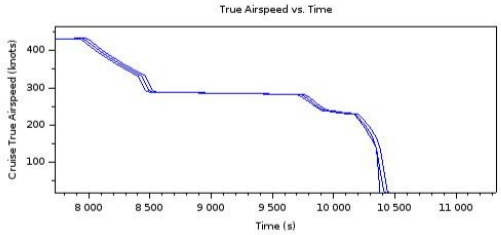
"`File→Open...../GNATS_Client/sample/Scilab_SampleMonteCarlo……._Beta_1.9.sce`". On line 12 and 13, provide the location of GNATS Client and GNATS Server directories, respectively.

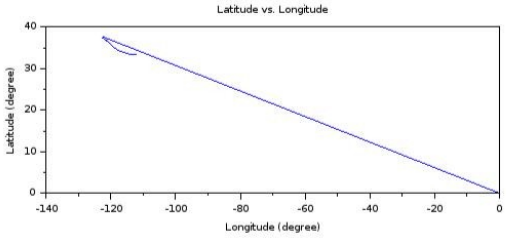
4. Start the GNATS Server.

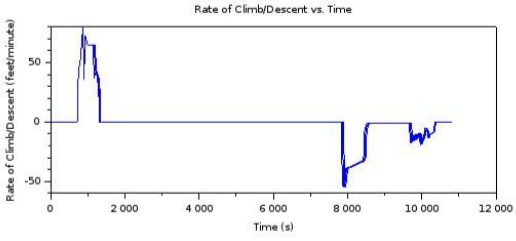
5. Click execute button (5th from right) on the toolbar in *Scilab* window.

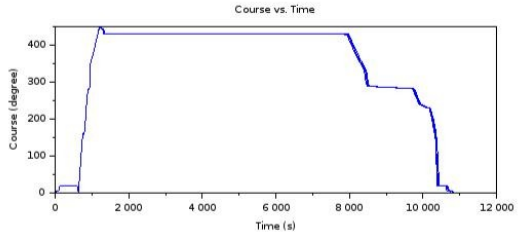
6. Once Simulation is complete, the output should be present in GNATS_Server/share/mcSimulation/, in the file "`AIRCRAFT_CALLSIGN-Scilab-Monte-Carlo-Sim-Trajectory_INDEX.csv`". Also, output graphs such as the ones in the following will be generated:











Instructions for using the *GNU Octave* Software Interface:

1. Install *Octave* by running "`sudo apt-get install octave`". GNATS currently supports *Octave* version 4.2.x.

2. Run *Octave* by running "`sudo octave`" command in terminal.

3. Start GNATS Server.

4. Go to GNATS_Client directory in the terminal, and run "`octave --persist sample/Octave_SampleMonteCarlo..._Beta_1.9.m`". The "`--persist`" argument is to make sure the graphs generated do not close once the program is executed.

5. Once Simulation is complete, the output should be present in GNATS_Server/share/mcSimulation/ folder, under the file name "`AIRCRAFT_CALLSIGN-Octave-Monte-Carlo-Sim-Trajectory_INDEX.csv`". Also, the output graphs generated, as shown in the following: