THEMIS/ARTEMIS Software Users,

The THEMIS/ARTEMIS Project announces the release of Version 7.00 of the THEMIS Science Data Analysis Software. Version 7.00 contains the following significant New Features and Enhancements to the THEMIS/ARTEMIS Graphical User Interface (GUI):

Error/Status reporting

- thm_gui has been modified so that it no longer re-prompts the user on whether they want to overwrite tplot variables when loading a THEMIS GUI document. This should result in more reliable THEMIS document reading, but it will break compatibility with older THEMIS documents.
- When importing data into the GUI from the command line using tplot_gui, there is now the option to rename the variables as they are loaded, to prevent overwriting variables of the same name that have already been loaded into the GUI.
- Improved handling of draw errors in the GUI, providing more useful information to the user when plots cannot be drawn as requested.
- The manage/import data panel in the GUI now allows tplot variables to be renamed before importing.
- More consistent reporting of error and status messages to the status bar widget and history window.
- Updated GUI particle spectrum load routine so that the user is asked to confirm before overwriting previously loaded data.
- Better validity checks for "spinner" controls (e.g. font size, margins, line weights, etc.)

Plotting/Layout

- The GUI Axis options now correctly remembers the Align Ticks At value and no longer incorrectly applies log scaling to time axes.
- TDAS GUI Layout Option Enhancements:
  a. Various new formatting enhancements were added to assist in more user friendly layout control
  b. There is now an option so that adding variables will automatically create a new panel.
  c. Much of the page formatting has been automated.
- Both the gui and tplot now support filled symbols. The tplot crib, 'thm_crib_tplot_annotation' has command line examples.
- The dimensions of the GUI's plot area can now be modified through the Page Options window. This allows plotting with custom dimension and the settings will carry over to exports. Other options were enhanced with regards to this new feature, as follows:
  a. Canvas size input is now checked for validity
  b. GUI start-up and resizing now take variable canvas size into account
  c. Opening and closing windows now displays page layout correctly.
- GUI overview plots now use blank panels as placeholders when variables are missing.
- The "lazy labels" option in the GUI now works with stacked labels. Some defaults were also changed to yield the most desirable behavior.
- Zoom behavior changed (now zooms in/out by fixed percentage instead of major ticks)
- More intuitive behavior for axis options panel (tick placement, annotations, issues with log vs. linear and time vs. non-time axes).
- Removed "Edit Trace" controls from line options panel (should be done via "layout options").

Other

- The Load Data panels for ASI and GMAG now autoselect datatype "*", since there is only one valid data type.
- The GUI will now automatically load support data (lunar position and attitude) for Earth-Moon coordinate transforms (GSE to SSE, SSE to SEL).
- Calculate panel now has a button to insert a variable into program area, instead of just clicking data tree (fixes problems with unintended events from tree widget)
- Several bug fixes for rubberband selection and marker creation.

- The thm_ui_timefix date-time validation routine now accepts years prior to 1960.
- Support for numerical month and T separator, in the "Save Data as ASCII" option for the THEMIS GUI has been added.
- Exporting to postscript now supports CMYK colors for improved printing.

THEMIS/ARTEMIS Science Team