Overview of CelestLabX

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Description of CelestLabX

CelestLab is a Scilab toolbox for Space Flight Dynamics. It has been developed by CNES-DCT/SB (Centre National d'Etudes Spatiales - French Space Agency) for mission analysis purposes.

CelestLabX is an extension to CelestLab that mostly includes low-level interfaces to existing software. Most functions in CelestLabX are hidden. The only visible functions are the ones related to installation and setting.

CelestLabX (in particular) contains features related to:

- Two-Line Elements (interface to C code from the Celestrak web site)
- STELA software (interface to java code, see the CNES freeware server)

See CelestLab documentation for more details.

Installation

Installation of CelestLabX

Prerequisites

CelestLabX is compatible with the following software:

- Scilab 5.5.0 or higher
- STELA 2.6.1 or higher

Installation

The procedure for a manual installation (that is, not through ATOMS) is the following:

- Uncompress the CelestLabX archive somewhere on the filesystem.
- Run the "loader" script present in the CelestLabX directory:

```
exec "CelestLabX_path/loader.sce"
```

The following warning message should be displayed: *(Warning) STELA not registered*

- If necessary:

  - Register the location of STELA in CelestLabX by using: CLx_stela_register.

  - Restart Scilab and run the loader script again.

Now CelestLabX is ready to be used. It only needs to be loaded (by exec-ing the loader script) each time Scilab is started. For convenience, the "exec loader.sce" command can be copied in the Scilab start-up file ("scilab.ini" on Windows).