

Main differences between V7.2.4 and V7.2.3

This version mainly includes some minor corrections:

MINOR IMPROVEMENTS

- A more explicit error message is displayed when a solar activity file is not available.
- Improvement of the **GUI** error management.
- Reentry date (and error on it) are now stored in xlsx/csv files even if no Orbit Determination is required.
- The choice of the maneuver detection method is now displayed with the **GUI** and both "Frequential" and "Kepler" methods are now available.
- Additional filtering in the maneuver "Frequential" algorithm to avoid errors when TLEs are built regularly at the same period (for example every day at the same hour).
- Use of the V1.10 version of the [GENIUS](#) Library

ANOMALY CORRECTIONS

- The **SmSRPRefined** (S/m obtained after orbit determination process) is now correctly displayed.
- Solar activity is now enabled at the **GUI** when a context file is loaded.
- Correction of the log4j initialization in the detection maneuver mode.
- Correction of an anomaly in the maneuver detection mode considering now the gap between two consecutive TLEs in seconds and no more in Julian days.

Main differences between V7.2.3 and V7.2.2

This version mainly includes some minor corrections and also some code improvements regards to quality aspects (so fully transparent to users).

- Correction of an anomaly when considering **TLEs** too near when checking for maneuvers existence
- The **SLIDING_WINDOW_TIME** property name was not correctly taken into account if users wanted to set it manually.
- Better initialization of [PATRIUS_DATASET](#) when asking for Pdf reports.

Main differences between V7.2.2 and V7.2.1

XLSX/CSV FILES

After each run when using **GUI** or, for the batch mode, using the **"-o"** option, both **xlsx** and **csv** files will be created with a lot of interesting information.

SYNTHESIS FILES

A new option have been added to the batch mode allowing to concatenate several previous results in a **xlsx** or **csv** synthesis file.

PLOTS

Based on the previous **xlsx/csv** files, when using the **GUI**, it is possible to plot some information as the **S/m** or the reentry date evolution or the reentry dates intervals.

POSSIBILITY TO INITIALIZE CONFIGURATIONS WITHOUT A FILE

Using a constructor without arguments, it is possible to initialize an opera-configuration without using an internal or external file. All parameters values will be initialized with by default values as the ones used with the **GUI**.

```
// Opera properties configuration
//final OperaConfigurationProperties conf =
//    OperaReadUtils.getConfigurationProperties("data/opera-configuration.properties");
final OperaConfigurationProperties conf = new OperaConfigurationProperties();
```

INTERNAL ARCHITECTURE MODIFICATIONS

In order to be consistent with other **CNES** Flight Dynamics Tools, the package architecture has been internally modified. For **GUI** users, there are no impacts. On the contrary, for those using the **Java API**, some "import" may have to be changed.

Moreover some improvements have been done for quality purposes but there are fully transparent for any kind of users.

OBJECT LIST

Due to the use of a the specific **GENIUS GList** widget, if the user wants to select all the object list, it will have to click two times on a same object then type on Ctrl-A.

CALENDAR DATES ON BATCH MODE

It is now possible to give dates with the following **ISO 8601** calendar date format (rather than only in Julian dates) for option that need it : **YYYY-MM-DDThh:mm:ss.sss** or **YYYY-MM-DDThh:mm:ss**

Main differences between V7.2.1 and V7.2

NON OBFUSCATED METHODS

- the [LEOManIncInfo.getInc\(\)](#) method is now available (no more obfuscated)

ADDITIONAL OUTPUT INFORMATION

- Adding information on the object

```
Name           : DELTA 1 DEB
Country        : US
Hper           : 234.02019063088298 km
Hapo           : 261.37029874148595 km
Incl           : 29.0708 deg
```

- Adding the margin on the reentry date as below:

```
Re-entry date      : 2011-11-30T15:37:29.221
Re-entry date error : +/-10.6 days
```

- When Orbit Determination (OD) is not successful, reentry date (and margin on it) using the refined S/m is still displayed
- Adding units on S/m results:

```
SmDragApriori : 0.05916134793505359 kg/m2
SmDragRefined : 0.05457889062590913 kg/m2
SmDragAfterOD : 0.050351376463313384 kg/m2
SmSRPRefined  : 0.0 kg/m2
```

- Changing type of font for better readability.

ANOMALY CORRECTIONS

- When the computation exits in error mode due to the [OperaException](#) type (typically if there is a problem when reading [TLE](#)), the management of such exception allows now going on computation for next Norad Ids.
- **OPERA** does correctly take into account [PATRIUS_DATASET](#) and the [Opera configuration file](#) for some batch configurations (for [Search by Sat](#) or [Search by Orb](#) options).
- The [Opera configuration file](#) (including all the by default configurations) is now correctly read if the name of a directory will start by "/".
- No more erroneous error messages between **BYSAT** et **BYORB**.
- No more error on the reentry date margin when the computation is executed from the [GUI](#) (previously divided by 100).