

# Main differences between V1.2.1 and V1.3

De Wiki

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[Main differences between V1.2.1 and V1.3](#)

Some corrections and new features mainly due to the update of the [[PATRIUS](#)] version (3.3) and use of **GENOPUS** by [PSIMU](#).

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## Compatibility with PATRIUS V3.3

This **GENOPUS** version is compatible with [[PATRIUS](#)] V3.3 (especially with its new management of exceptions due to divisions by zero).

## Copy&Paste

Some **Copy&Paste** (and **Import/Export**) functionnalities have been added to **GENOPUS** widgets as [GPOrbit](#), [GPVehicle](#), [GPManeuverSequence](#), ...)

## GPFramesConfiguration

It is now possible to initialize the [GPFramesConfiguration](#) widget with a specific configuration not necessarily issued from a Factory thanks to [setFramesConfiguration\(\)](#), [setDefaultFramesConfiguration\(\)](#) and [setSavedFramesConfiguration\(\)](#) as well as adapted constructors with a [FramesConfiguration](#) object as input.

## GPEventDetectors

- It is now possible to specify the list of available actions associated to the event and, when only one action is indicated, it does not appear on the **GUI**.
- for events which manage multiple occurrences, changes occurred to be more obvious for the user with now three entries:

- From n<sup>th</sup> occurrence
- Every n occurrence
- Until n<sup>th</sup> occurrence
- There is no more CodingEvents in the events definition

=> incompatibility in the code due to the possibility to specify the list of available actions and to the occurrence management

## GPVehicle

The way to manage mass properties has been improved in order to allow to make mandatory the fact to display dry mass value. Moreover, when this value is equal to zero, it raises a warning and no more an error.

## GPForceModels

- It is possible now to hide the choice of the "attraction models" (i.e. **Balmino**, **Cunningham**, ...) as well as to define which models will be displayed.
- Maximum degrees are now displayed when variable potential is selected.
- By default values are proposed for **SRP**.
- Name of the model must be set as a new parameter of the constructor.

=> incompatibility in the code due to additional arguments for the full constructor

## GPManeuvers

- If engines and/or tanks needed to define a maneuver is set to **NONE**, the maneuver (and the sequence) raised an error.
- by default, maneuvers components are set to "**Angular**" as event is a "**Relative date**".

## GPAttitudeSequence

- It is now possible to define an attitude sequence more simply than using switches, using a single attitude law.
- the constructor has changed as it is also possible to define how the attitude laws list will be displayed (one by one or all in a vertical lists allowed by the [GENIUS GComponentList](#) widget).
- If an attitude law is set to **NONE**, the sequence raised an error.
- only **RESET\_STATE** or **RESET\_DERIVATIVE** may be selected as actions for switch events.
- by default, attitude laws angular bias definition is set to "**ZYX Cardan Angles**".

=> incompatibility in the code due to the new boolean flag

## GPGeodeticPoint

A new argument has been added to the constructor with a boolean that indicates if the name of the geodetic point will be displayed or not.

=> incompatibility in the code due to the new boolean flag

# CustomUS76, CustomMSISE2000

The ellipsoid used as an entry is now necessarily a [PATRIUS] `ExtendedOneAxisellipsoid` object and no more a `BodyShape` which is one of its interface.

=> may be some incompatibility in the code if the `BodyShape` interface was used

## Variable names

Some names changed in the XML files in order to be more consistent (for example, capitals vs lowercase letters).

=> some incompatibility with old XML files

## Anomaly corrections

- bad management of the clear function of the `GVehicle` when it is not yet initialized
- problem in the `getLaw()` method of the `GPSunPointingAttitudeLaw` class as the first argument when creating the `CustomSunPointing` object was the Sun. It implied that the second direction was normal to the satellite orbit rather than the poles axis as described.
- bad update of the units for the `GPDateOffset` widget.
- bug when the initial list of maneuvers was null.
- bug when a rotation was initialized

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