

# Main differences between V4.1 and V4.0

De Wiki

Aller à : [navigation](#), [rechercher](#)

[Main differences between V4.1 and V4.0](#)

## Sommaire

- [1 New functionalities](#)
- [2 Bugs fixes](#)
- [3 API incompatibilities](#)
- [4 Régressions](#)

## New functionalities

- New methods for Cartesian/Spherical transformation Jacobian matrixes computation
- New **RK6** interpolator (more precise one as its order is 2; error in position is about some centimeters on a **LEO** orbit rather than few hundreds of meters as previously).
- New class to collect environment models data ([ForceModelsData](#) class).
- Access to potential coefficients.
- Rediffused **SRP** modified when reduction of the amount of sources (see JavaDoc).
- Glint position vector available ([GlintApproximatePointingDirection](#) class).
- Adding several classes and methods (as getters or clone/copy) from [GENOPUS](#).
- New [IntervalleOccurrenceDetector](#) class

## Bugs fixes

- Correction when using **Eckstein-Hechler** propagator constructor with an attitude law.
- Matrixes multiplications in the [CovarianceUtils](#) class are now well coded.
- [TankProperty](#) and [PropulsiveProperty](#) did not need the name of the part in the constructor.
- [IsisSunPointing](#) class: in the [getAttitude\(\)](#) method, the xSun vector is normalized.
- Performance problems for multithreading due to a bad use of synchronization.
- Correction of the [getDate\(\)](#) method in the [GalileoAlmanacParameters](#) class, considering **GST** epoch as 1999/08/22 0h0mn0s **UTC**.
- Correction of the equivalent maximal inertia in the [AbstractIsisSpinBiasSlew](#) class taking into account all the wheels.
- Anomaly when reading some **TLE**.
- Useless computations in the [Rotation](#) class constructor.
- Improvement of the [HelmholtzPolynomial.computeHelmholtzPolynomial\(\)](#) method: Balmino model is 30% more rapid.
- SI value for hydrogen mass
- Error messages for [MultiNumericalPropagator](#) and [NumericalPropagator](#) classes have been modified.

## API incompatibilities

- [TankProperty](#) and [PropulsiveProperty](#) constructors.

# Régressions

- When using **RK6** integrator.

Récupérée de

« [http://patrius.cnes.fr/index.php?title=Main\\_differences\\_between\\_V4.1\\_and\\_V4.0&oldid=1876](http://patrius.cnes.fr/index.php?title=Main_differences_between_V4.1_and_V4.0&oldid=1876) »

## Menu de navigation

### Outils personnels

- [3.141.31.209](#)
- [Discussion avec cette adresse IP](#)
- [Créer un compte](#)
- [Se connecter](#)

### Espaces de noms

- [Page](#)
- [Discussion](#)

### Variantes

### Affichages

- [Lire](#)
- [Voir le texte source](#)
- [Historique](#)
- [Exporter en PDF](#)

### Plus

### Rechercher

|                      |                                           |                                     |
|----------------------|-------------------------------------------|-------------------------------------|
| <input type="text"/> | <input type="button" value="Rechercher"/> | <input type="button" value="Lire"/> |
|----------------------|-------------------------------------------|-------------------------------------|

### PATRIUS

- [Welcome](#)

## **Evolutions**

- [Main differences between V4.13 and V4.12](#)
- [Main differences between V4.12 and V4.11](#)
- [Main differences between V4.11 and V4.10](#)
- [Main differences between V4.10 and V4.9](#)
- [Main differences between V4.9 and V4.8](#)
- [Main differences between V4.8 and V4.7](#)
- [Main differences between V4.7 and V4.6.1](#)
- [Main differences between V4.6.1 and V4.5.1](#)
- [Main differences between V4.5.1 and V4.4](#)
- [Main differences between V4.4 and V4.3](#)
- [Main differences between V4.3 and V4.2](#)
- [Main differences between V4.2 and V4.1.1](#)
- [Main differences between V4.1.1 and V4.1](#)
- [Main differences between V4.1 and V4.0](#)
- [Main differences between V4.0 and V3.4.1](#)

## **User Manual**

- [User Manual 4.13](#)
- [User Manual 4.12](#)
- [User Manual 4.11](#)
- [User Manual 4.10](#)
- [User Manual 4.9](#)
- [User Manual 4.8](#)
- [User Manual 4.7](#)
- [User Manual 4.6.1](#)
- [User Manual 4.5.1](#)
- [User Manual 4.4](#)
- [User Manual 4.3](#)
- [User Manual 4.2](#)
- [User Manual 4.1](#)
- [User Manual 4.0](#)
- [User Manual 3.4.1](#)
- [User Manual 3.3](#)

## **Tutorials**

- [Tutorials 4.5.1](#)
- [Tutorials 4.4](#)
- [Tutorials 4.1](#)
- [Tutorials 4.0](#)

## **Links**

- [CNES freeware server](#)

## Navigation

- [Accueil](#)
- [Modifications récentes](#)
- [Page au hasard](#)
- [Aide](#)

## Outils

- [Pages liées](#)
- [Suivi des pages liées](#)
- [Pages spéciales](#)
- [Adresse de cette version](#)
- [Information sur la page](#)
- [Citer cette page](#)

• Dernière modification de cette page le 20 décembre 2018 à 15:36.

- [Politique de confidentialité](#)
- [À propos de Wiki](#)
- [Avertissements](#)

