



DEBRISK

Direction Adjointe

Service Assurance Qualité

Edition : 01 Date : 24/03/2026

Révision : 00 Date : 24/03/2026

RELEASE NOTE DEBRISK-LOS

1. VERSION HISTORY

1.1. VERSION V03.07.01

Minor bug fixes from the previous version:

- Fixed the XML tag for ballast conduction: the ballast method and conduction coefficient are now correctly exported to the XML file when both the "Satellite Ablation" and "Enable Parent/Child" parameters are enabled.
- Resized installation window (: the installation window can now be resized.
- Set the last line of the .dat file for the maximum acceleration criterion to 0.
- The plate object now follows the following logic: length > width > height.
- The length > width > height relationship is always enforced, even during the ablation phase, to ensure the consistency of the aerothermodynamic formulas.
- Debrisk installations are now independent of the Debrisk version used.
- Debrisk installations are independent, regardless of the Debrisk version used.
- Exception handling has been fixed.

1.2. VERSION V03.07

Correction of minor anomalies from previous version:

- Fixed the XML tag for the ballast conduction: The ballast method and conduction coefficient are now correctly exported in the XML file when the parameters "Satellite ablation" AND "Activate parent/child" are checked.

New functionalities:

- Plate / box object follows this logic – length > width > height:
Systematically force the relation length > width > height, even during the ablation phase in order to guarantee that the aerothermodynamic formulas are consistent.
- The code of Debrisk migrated to Java 21: Debrisk uses Java 21 LTS for both compilation and execution.
- Ablation of geometric parameters for objects with minimal thickness on stop condition : For more consistency, the ablation of the geometric values of the object at the end of the trajectory is forced. Previously, in Debrisk, for any object having reached a zero thickness, the non-zero geometric values of the object at the end of its trajectory were kept.
- Limit frames for LOS version and correct default parameter for new simulations in Debrisk (LOS Mode only)
: It was decided to limit the parameters accessible in Debrisk for the LOS version to these frames:
 - GCRF
 - ITRF
 - EME00
 - H0_MINUS_N

1.3. VERSION V03.06.01

Correction of minor anomalies from previous version :

DEBRISK

Release Note

- Correcting the content of <globalResult>/<impactMass>
- Suppressed undesired low speed multipliers previously introduced
- Correcting minor points concerning documents delivery in previous version
- Fixed the display of the last point concerning $C_b = \text{constant}$

1.4. VERSION V03.06

Correction of minor anomalies from previous versions:

- Handling of problem with ZIP file in case the generation of the KML is failing
- Warning message when Java version not compatible with Debrisk is used
- Removal of SpacecraftMass variable in time dependant output (Tecplo) file.
- Correction in output file: when object is ablated the values (such as impact energy) are set to 0

New functionalities:

- Removal of the constant CD option
- Addition of a constant ballistic coefficient option, deactivated by default. The C_b remains constant at value at creation of the object.
- A more flexible handling of the orbit definition allowing transformations between orbit definition

1.5. VERSION V03.05.02

Correction of minor anomalies from previous versions:

- Typos in some User interface labels.
- Problem displaying complex shapes in 3D viewer.

1.6. VERSION V03.05.01

Correction of minor anomalies from previous versions:

- Improvement of the detection of the final step of ablation of small objects.
- User interface minor corrections.
- Reordering of some tags of the XML configuration file.
- Typos in documentation, especially in the User Manual.

New functionalities:

- Update of *PATRIUS* and *Log4J* dependencies to newest versions.
- User interface usability improvements.
- Modification of default initial altitudes in the *Entry Conditions* panel.

DEBRISK
Release Note

- Addition of license to the *About* window.

1.7. VERSION V03.05

Correction of minor anomalies from previous versions:

- Addition of the *azimuth* to the output plots.
- Typos in documentation.

New functionalities:

- Update of *PATRIUS* and *Log4J* dependencies to newest versions.
- Improvement of the coherence of the parameters in the *Simulation Parameters* panel.

Addition of the computation of the weighted casualty area.