

ESOV NG Version 2.3 - Release Notes

1. NEW RELEASE DESCRIPTION

1.1 Software and Hardware Requirements

The ESOV NG v2.3 software is available for the following computer platforms:

- Windows XP / Vista / 7 (32-bit)
- Mac OS X Intel 10.5 or above (64-bit)
- Linux (64-bit)

The ESOV NG software requires:

- Version 1.7 or higher of the Java Development kit (JRE). It is already included in the ESOV NG packages for Windows and Mac OS X.
- 350+ Mb of hard disk space
- 512+ Mb RAM
- It is advised to have at least 1024 x 786 resolution display

1.2 Installation Executables

An ESOV NG distribution consists of one installer file for each supported computer platform:

	32-bit	64-bit
Mac OS X Intel	-	EsovNG_macintel64_2_3.dmg
Linux	-	EsovNG_linux64_2_3.sh
Windows	EsovNG_windows_2_3.exe	-

1.3 Installation Hints

The installation of the ESOV NG will be guided through an *Install4j* installation wizard.

- Windows 32-bit:

Run the executable installer *EsovNG_windows_2_3.exe*. Follow the instructions displayed by the installation wizard.

- Mac OS X Intel 64-bit:

Unpack the disk image *EsovNG_macintel64_2_3.dmg* by double-clicking it in a Finder window. A new Finder window will be opened, showing the package 'ESOV NG Installer'. Double-click the installer package and follow the instructions displayed by the installation wizard.

- Linux 64-bit:

Simply run the shell script *EsovNG_linux64_2_3.sh* and follow the instructions displayed by the installation wizard. Note that you may have to set execution permission with the command:

```
sudo chmod a+x EsovNG_linux64_2_3.sh
```

Note that the ESOV NG installer will overwrite installation folders of previous versions if the application is installed in the same directory. Please remember to backup your own data files in case they are stored in the installation directory.

Please check Sections 2 and 3 of the ESOVNG user manual for further information about the installation and application start-up.

The Section 4.3 of these Release Notes (“Hints and Tips”) provides useful information regarding issues than may occur after starting Esov NG.

2. NEW FUNCTIONALITIES

This new release provides the following new functionalities with respect to v2.2:

- Core third-party libraries upgrade
 - ESOVNG-AN-327: The versions of the Esov NG external libraries (e.g. Geotools, EOCFI,...) upgraded to the latest available stable version. See Section 19.4 of the ESOVNG user manual for details
- Mission support
 - Add additional spacecrafts and their instrument swaths to the distribution package: METOP_SG_A, METOP_SG_B
 - JASON_CS renamed as SENTINEL6
 - New example satellite (SAT_EXAMPLE) has been provided, to facilitate adding user-defined missions
- Handling of ESOV NG input/output files:
 - ESOVNG-AN-295: Disable default File type filter based on extension (in all File selection windows). Use *.* by default and allow selection based on dedicated file types.
 - ESOVNG-AN-298: EsovNG shall display in the Orbit panel the MLST quadratic term (<Quadratic_Term>) from the Orbit Scenario File
 - ESOVNG-AN-307: EsovNG shall support all the attitude definitions that can be defined in an Swath Definition File
- Time segments calculation:
 - ESOVNG-AN-277: Calculation of visibility time segments with GEO satellites (DRS, Data Relay Satellites) has been implemented (in Sentinel-1 and Sentinel-2)
 - ESOVNG-AN-324: It is possible to display station visibility with an instrument swath. Currently setting instrument scope to “Station” uses ORBIT swath style by default.
 - ESOVNG-AN-325: The segments in file exports shall include a field indicating the element (zone/station/GEO) to which the segments refer.
- Miscellaneous features:
 - ESOVNG-AN-104: It is possible to reverse the order of zone points entered in the zone editor (to define counterclockwise).
 - ESOVNG-AN-297: It is possible to edit the location of an existing station in the Station DB editor.
 - ESOVNG-AN-299: The Absolute Orbit has been added as field to the orbit default settings in the IDF (currently it is assumed to be always equal to 1)

- ESOVNG-AN-300: The Command Line Interface has been enabled. The input shall be an Esov NG scenario file (XML). The output shall be any of the Export Segments (SCF, UTF, LLF).
- ESOVNG-AN-323: For missions without repeat cycle / cycle length (e.g. Goce, Swarm), the orbit panel will not display default orbit settings.

3. CLOSED SPRS

The following SPRs have been closed:

- ESOVNG-AN-241: Save scenario file with POF/ROF. Load scenario file. The number of orbits is not the one from scenario file, but the complete range.
- ESOVNG-AN-292: Groundstations file: If Satellite List is present and satellite name is not exactly equal to any of Esov NG satellites, the application does nothing without giving a message
- ESOVNG-AN-293: Zone Database file: When loading Zone BD file including a Point/Circular Zone with diameter zero, the application returns an error if zone added to scenario
- ESOVNG-AN-294: If syntax error in IDF, the error message "Spacecraft IDF file(s) cannot be read. Improper IDF file setup. Cannot continue - will exit" does not inform the user in which IDF file there is a problem
- ESOVNG-AN-302: When loading SCF, the swath colours in Style / Layer Manager are not consistent with colours as set in SCF
- ESOVNG-AN-306: Datum line (180 deg. longitude) looks thinner than other meridians (in world view)
- ESOVNG-AN-314: Error computing swath intersection with a zone for swaths that cross the pole
- ESOVNG-AN-330: Refreshing the map in azimuthal/gnomonic projection with the background image takes time. Map refresh duration reduced with Geotools upgrade.
- ESOVNG-AN-332: In Windows, the application returns an error and exits after making calculations and changing map projection when ground station is added to the scenario.
- ESOVNG-AN-354: Intersecting zones or station with the ORBIT swath takes longer than with any other point-like swath
- ESOVNG-AN-356: Zone defined in the zone database editor (i.e. not part of the default zones provided with the application) are not recognised if not used immediately after defining it
- ESOVNG-AN-358: An artefact appears when displaying the swath intersection over point-zone (diameter = 0.0 km)

4. ADDITIONAL COMMENTS AND KNOWN PROBLEMS

4.1 Mission Support

Orbit Scenario Files (OSF) for the supported missions can be found in the EOP System Support web server, under the link:

http://eop-cfi.esa.int/index.php?option=com_content&view=article&id=99&Itemid=507&jsmallfib=1&dir=JSROOT/DOWNLOAD/AUX_DATA/

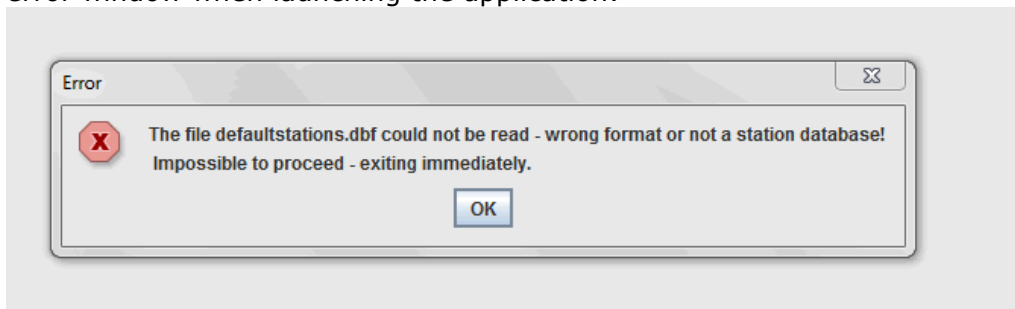
4.2 Known Problems

The current ESOV NG release has de following open anomalies:

- ESOVNG-AN-357: Loading saved Esov NG scenario file (using POF) and de-selecting the 'Use POF/ROF' flag (back to default parameters) the application returns an error message. The same happens when selecting 'Use OSF', make a calculation and then going back to default parameters.
- ESOVNG-AN-359: Loading saved Esov NG scenario file (using POF) and de-selecting the 'Use POF/ROF' flag (back to default parameters) the application returns an error message. The same happens when selecting 'Use OSF', make a calculation and then going back to default parameters.
- ESOVNG-AN-361: Segments in SCF are displayed in segment window with a single colour (no matter if some of them have with a different colour given in the SCF)
- ESOVNG-AN-362: Presence of swath-related artefacts (datumline crossing and wide- swath distortions)
- ESOVNG-AN-363: When loading OSF, then POF and then coming back to OSF, the Start Orbit is set to 1 (default value) instead of being set to the first orbit of the select orbital change (last item in OSF list)
- ESOVNG-AN-377: The validity of a POF/ROF file (as given in the Info sub- panel) should not change depending on the orbit range provided in Start Orbit, #of Orbits
- ESOVNG-AN-378: When centering the map away from Greenwich meridian, the grid labels on the negative longitude range appear to be misplaced, away from the map border

4.3 Hints and Tips

- If your system has a previous installation of ESOV NG, you may see the following error window when launching the application:



This problem is due to an incompatibility with the previous version of the defaultstations.dbf file. The way to solve the problem is to delete the existing file defaultstations.dbf. This file can be found in the user application folder. See Section 2.5.2 in the User Manual for further instructions about how to locate the user application directory (location is platform dependent)

- If your system has a previous installation of ESOV NG you may not see the latest default layout. In order to see it, just go to the user application directory (see Section 2.5.2 in the User Manual), rename (or remove) the existing file myLayout.layout and launch again ESOV NG.
- If for any reason the tool windows do not appear in the main window frame, you can restore the default layout by selecting "Window → Reset Layout"

- If the style of the segments is changed, a window pops up to warn the user that the style of the individual segments is lost after recomputation. To block the warning window please select the option 'Do not show this message again'
- In order to import a LLF or UTF file export type .csv using a spreadsheet application, load it as external data and select 'semicolon' as delimiter. To correctly import the decimal seconds in the UTC time, you just need to customize the cell format to hh:mm:ss.000
- Missions defined by the user with previous versions of Esov NG may not work with the current version. A new field that has been added to the IDF (satellite identification file):

```
<Absolute_Reference_Orbit>1</Absolute_Reference_Orbit>
```

This new field has to be added to IDF file of the user-defined mission, for example:

```
<Default_Settings>  
  <Repeat_Cycle unit="day">12</Repeat_Cycle>  
  <Cycle_Length unit="orbit">175</Cycle_Length>  
  <ANX_Longitude unit="deg">0.000000</ANX_Longitude>  
  <MLST unit="h">18.0</MLST>  
  <MLST_Drift unit="s/day">0.0</MLST_Drift>  
  <Date>2000-01-01T00:00:00</Date>  
  <Absolute_Reference_Orbit>1</Absolute_Reference_Orbit>  
</Default_Settings>
```

- Please check the ESOV NG user manual for further information.

5. REPORTING PROBLEMS

For any problems or questions please send an e-mail to the ESOV NG helpdesk:
esov@eopp.esa.int