

sentinel-3

→ DATA ACCESS AND PRODUCTS

The Sentinel-3 satellite carries multiple instruments to measure sea-surface topography, sea- and land-surface temperature, and ocean- and land-surface colour. It supports the Copernicus marine, land, atmosphere, emergency, security and cryosphere applications.

The sea and land surface temperature aspects are based on the SLSTR radiometer instrument. SLSTR is the successor of the (A)ATSR series, which were carried on ERS and Envisat.

Data from the SLSTR will provide key information for applications related to sea-surface temperature but land monitoring is also an important aspect of SLSTR. In addition, new technological features also extend applications to biomass burning (fire detection and classification). It also contributes to climate studies.

Coverage

The Sentinel-3 mission is based on a constellation of two identical satellites, Sentinel-3A and Sentinel-3B, launched separately. One satellite provides a revisit time of 27 days (385 orbits). SLSTR, with a dual view swath (1400 km for nadir view and 740 km width for oblique view defined at 55°), allows global coverage at the equator to be provided in two days with one satellite and less than one day with two satellites.

Observation Scenario

The Sentinel-3 observation scenario implements a pre-defined observation plan, and is focused on delivering the observation requirements of Copernicus Services. Data will be acquired systematically based on a pre-set nominal mission scenario. Operations for visible channels for SLSTR are based on specific solar illumination conditions ($SZA < 80^\circ$).

The Sentinel High-Level Operations Plan can be found at:
<https://sentinel.esa.int/web/sentinel/missions/sentinel-3/observation-scenario>

Data Access

Sentinel data products are made available systematically and free of charge to all data users including the general public, scientific and commercial users.

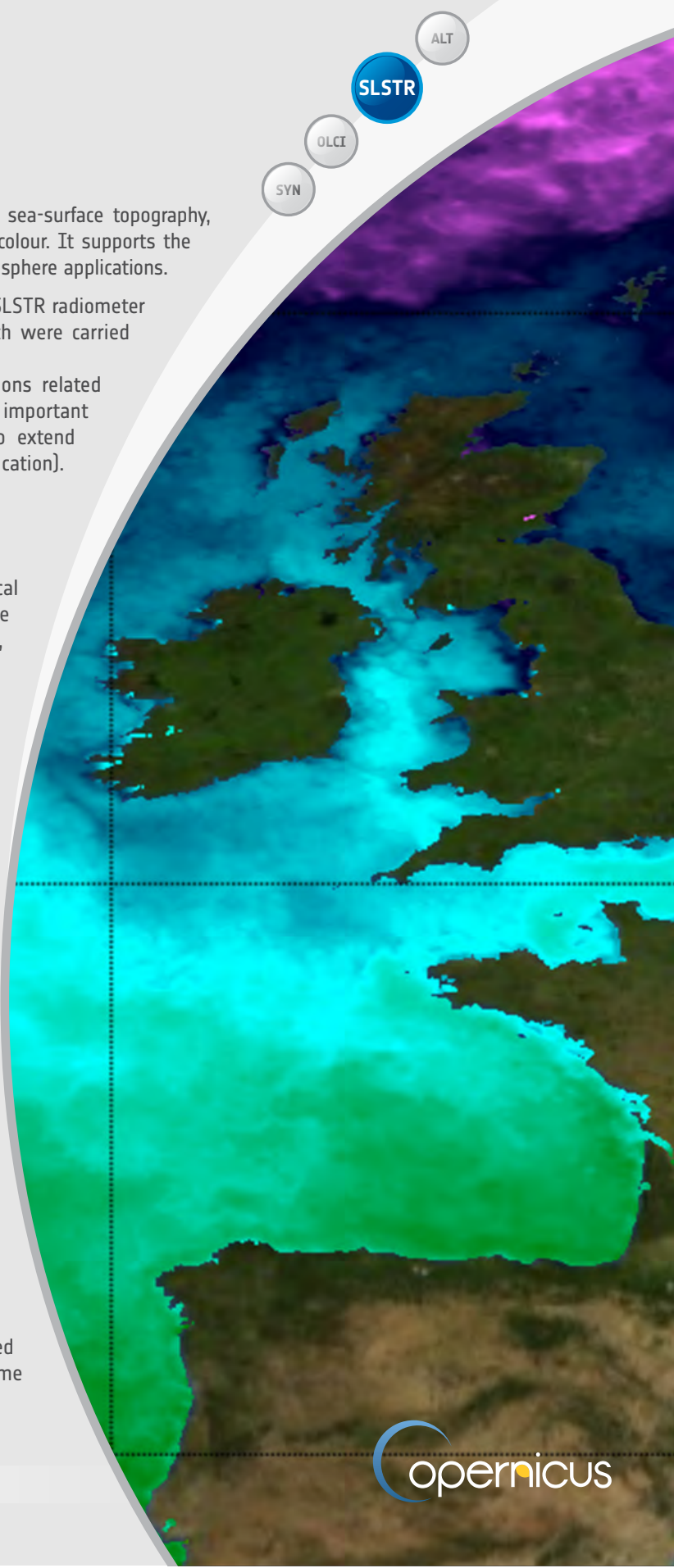
Sentinel-3 products are distributed in the Sentinel Standard Archive Format for Europe (SAFE) format, including image data in NetCDF4 format and metadata in xml format.

Products are available either in NRT (Near Real Time), provided to the user within three hours after sensing, or in NTC (Non Time Critical) typically within 48hrs.

More information can be found at:

<https://sentinel.esa.int/web/sentinel/sentinel-data-access>

Level-1 False Color image.

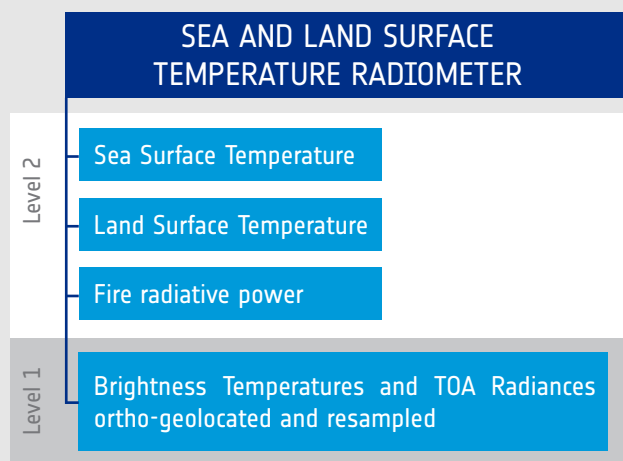


User Products

SLSTR **Level-1B** and **Level-2** data products available to the general public are:

- **Level-1B** products include brightness temperatures and TOA Radiances ortho-geolocated and re-sampled onto the product grid. The measurement, annotation and auxiliary datasets are generated separately in two instrument views and at two resolutions:
 - 500 m resolution for solar reflectance bands (0.555, 0.659, 0.865, 1.375, 1.61 and 2.25 μm)
 - 1 km resolution for thermal infrared bands (3.74, 10.85 and 12 μm)
- **Level-2** products consist of marine and land geophysical quantities derived at 1 km from the **Level-1** product.

Level-1 and **Level-2** products are disseminated as a frame (part of an orbit). The non-compressed size is 44.5 GB for a **Level-1B** stripe, 2.2GB for the marine **Level-2** and 1.4GB for a land **Level-2** stripe.

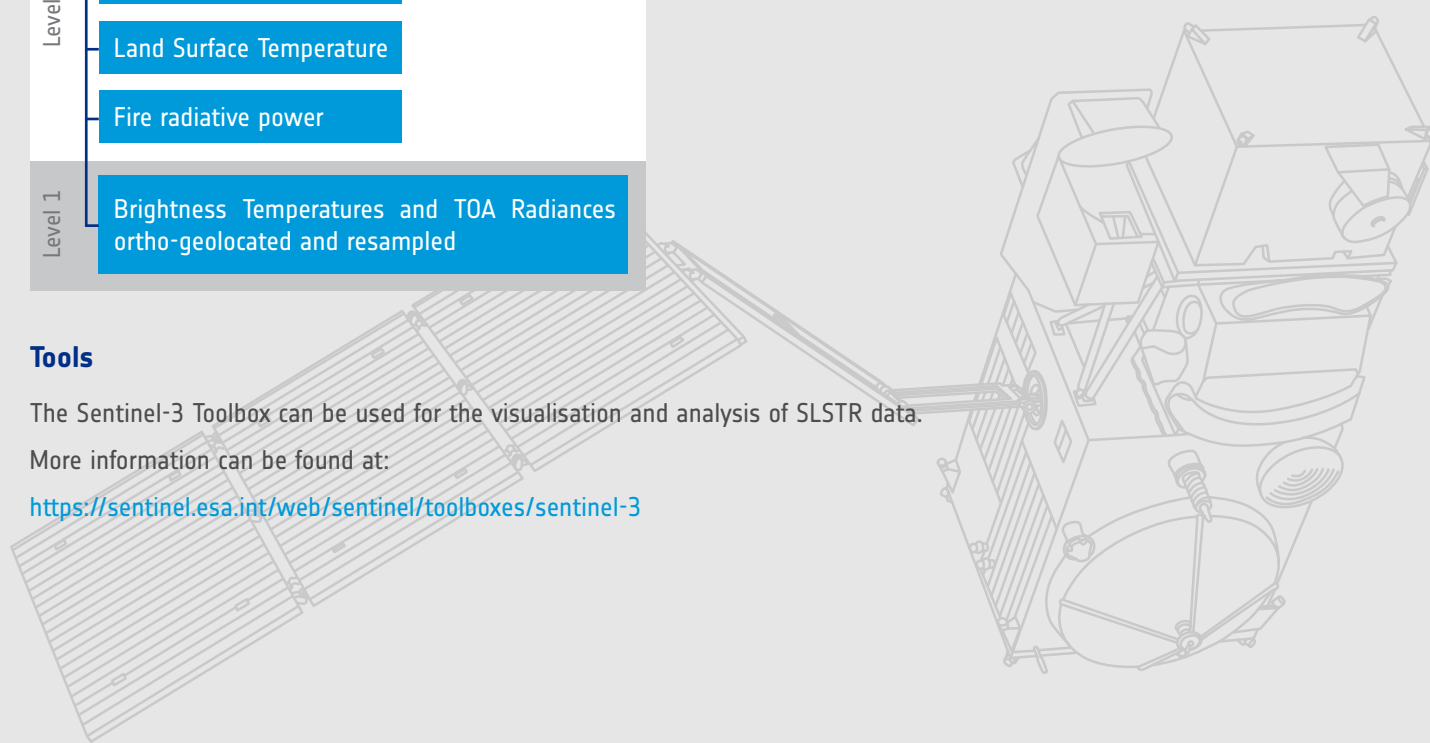


Tools

The Sentinel-3 Toolbox can be used for the visualisation and analysis of SLSTR data.

More information can be found at:

<https://sentinel.esa.int/web/sentinel/toolboxes/sentinel-3>



last update march 2015

The Sentinel Online Handbook

The **Sentinel-3 Mission Guide** is an overview of the mission, its objectives, the satellite, its payload, the ground segment, generated data products and related news.

<https://sentinel.esa.int/web/sentinel/missions/sentinel-3/SLSTR>

Further Information

For Copernicus User support, please contact EOSupport@Copernicus.esa.int

The **Sentinel-3 User Guide** provides a high-level description of the instruments, coverage and acquisition, and available product levels.

<https://sentinel.esa.int/web/sentinel/user-guides/sentinel-3-slstr>

The **Sentinel-3 Technical Guide** provides a point of engagement for ESA and technical users who have previous experience of similar Earth observation missions, and possess in-depth understanding of data manipulation and management.

<https://sentinel.esa.int/web/sentinel/sentinel-3-slstr-wiki>