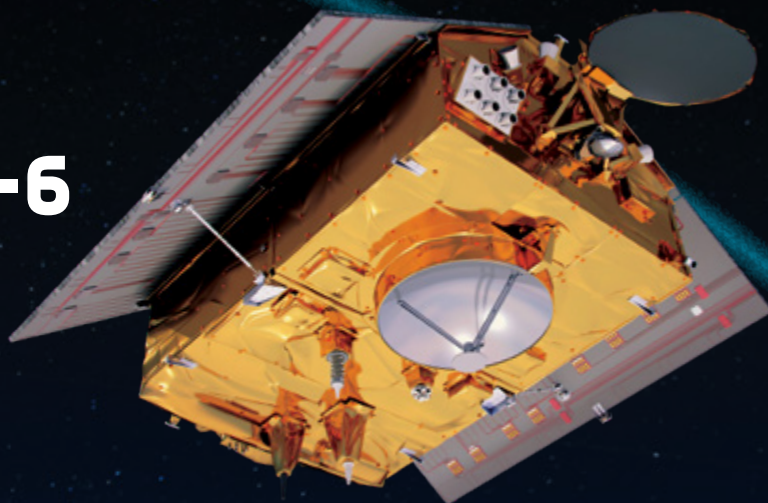




# sentinel-6



## Mission factsheet

The collaborative, joint European-US Copernicus Sentinel-6 satellite radar altimetry mission is unique. Its primary aim is to continue highly accurate measurements of the mean sea level in our changing climate. It relies on close international cooperation to achieve this aim.





## SEA LEVEL RISE

Mean sea level rise is both an impact and sensitive indicator of climate change with particular repercussions for coastal areas and small island States. Copernicus Sentinel-6's provision of reliable, highly accurate mean sea level measurements will be crucial for achieving the central aims of the 2015 Paris Agreement. Those aims are to strengthen the global response to the threat of climate change, as well as countries' ability to deal with its impacts.

### THE MISSION WILL:

- improve knowledge and understanding of the role of the ocean in climate change;
- increase understanding of how human activities impact the health of the global ocean;
- be crucial for developing mitigation and adaptation policies in coastal areas and for small island States.

## USES OF THE DATA

Monitoring and forecasting ocean currents, which is important for ship routing, and support for off-shore and other marine industries, such as fishing, and for responses to environmental hazards.

Short-range forecasting of high-impact weather.

Medium-range forecasting of the trajectory and intensity of cyclones and hurricanes; forecasting of heat waves in days or weeks ahead, etc.

Extended-range forecasting of seasonal and multiannual variability, e.g. El Nino episodes, the likelihood of droughts or active cyclone seasons, severe or mild winters.

Copernicus Sentinel-6 altimetry data will be the reference data against which all other altimetry measurements will be calibrated for accuracy.

## PARTNERS

 **Europe:** The European Commission, EUMETSAT and the European Space Agency, with support from the French Space Agency (CNES),

 **United States:** NASA and NOAA

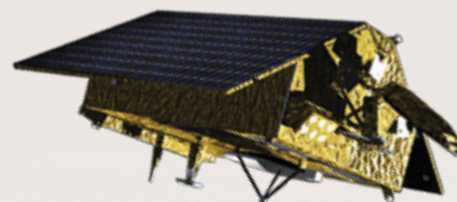
## HISTORY

The high-precision ocean altimetry data time series began in 1992 with the launch of the TOPEX/Poseidon mission (1992-2006). The initial European-US partnership involved NASA and CNES.

It was continued by Jason-1 (2001-2013), Jason-2 (2008-2019, when EUMETSAT and NOAA became involved), and Jason-3 (launched in 2016, when the EC also became involved.).

The Copernicus Sentinel-6 mission will ensure this time series continues until at least 2030 through two successive satellites, Jason-CS A\* and B.

\*In January 2020, the Sentinel-6/Jason-CS A satellite was renamed the Sentinel-6 "Michael Freilich" in honour of the former Director of NASA's Earth Science Division.



## FACTS AND FIGURES



**DIMENSIONS**  
5.13m x 4.17m x 2.34m  
(in-orbit configuration)



**PAYLOAD**  
Six instruments



**MASS**  
1,200kg (including fuel)



**POWER**  
891W (average consumption)



**DESIGN LIFETIME**  
5.5 years



**ORBIT**  
non-sun-synchronous orbit,  
1,336km altitude, 66° inclination



**REPEAT CYCLE**  
10 days (127 orbits)