Airbus Completes Second Ocean Satellite Sentinel-6B

Airbus has completed Sentinel-6B, the second ocean monitoring satellite of the European Copernicus programme, and is now testing it extensively over the next six months in preparation for its use in space.

The Copernicus Sentinel-6 mission is already delivering high-precision measurements of the topography of ocean surfaces through the first of two satellites, Sentinel-6A, launched in November 2020. The mission's two satellites are built to measure the distance to the sea surface to an accuracy of a few centimetres and map it in a ten-day rhythm over a mission duration of up to seven years. The purpose is to record changes in the height of the sea surfaces and variations in sea levels and analyse and observe ocean currents.

Sea Surface Height Changes

The accurate observation of sea surface height changes provides information about global sea levels, the speed and direction of ocean currents and the heat stored in the oceans. The measurements – obtained from 1,336km above the Earth – are crucial for ocean modelling and predicting sea-level rise.

This information helps governments and institutions to establish effective protection for coastal regions. The data is also valuable for disaster management organizations and for authorities carrying out urban planning, flood protection schemes or dyke construction.

As a result of global warming, global sea levels are currently rising by an average of 3.3 millimetres per year – with potentially dramatic consequences for countries with densely populated coasts.

Part of Europe's Copernicus, Sentinel-6 is also an international collaboration between ESA, NASA, NOAA and Eumetsat.

Sentinel-6B loaded in container in Friedrichshafen. (Courtesy: Airbus / T. Locher)