

Video: New radar mission for Europe

March 8 2024



Credit: European Space Agency

The upcoming Copernicus Radar Observation System for Europe in L-band (ROSE-L) will provide continuous day-and-night all-weather monitoring of Earth's land, oceans and ice, and offer frequent observations of Earth's surface at a high spatial resolution.

ROSE-L will carry an active phased array synthetic aperture radar instrument. The [radar antenna](#) will be the largest deployable planar

antenna ever built measuring an impressive 40 sq m.

ROSE-L will deliver many benefits including essential information on forests and land cover, leading to improved monitoring of the terrestrial carbon cycle and carbon accounting.

The [mission](#) will also greatly extend our ability to monitor minute surface displacements and helping detect geohazards. It will automatically map surface soil moisture conditions over land helping improve hydrology and [weather forecasts](#), and support the operational monitoring of sea and land ice across the Arctic.

ROSE-L is one of six Copernicus Sentinel Expansion missions that ESA is developing on behalf of the EU. The missions will expand the current capabilities of the Copernicus Space Component—the world's biggest supplier of Earth observation data.

This [video](#) features interviews with Malcolm Davidson, ROSE-L Mission Scientist, Nico Gebert, ROSE-L Payload Manager and Gianluigi Di Cosimo, ROSE-L Project Manager.

Provided by European Space Agency

Citation: Video: New radar mission for Europe (2024, March 8) retrieved 27 April 2024 from <https://phys.org/news/2024-03-video-radar-mission-europe.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.