View in browser

esa EOPF SENTINEL ZARR SAMPLES



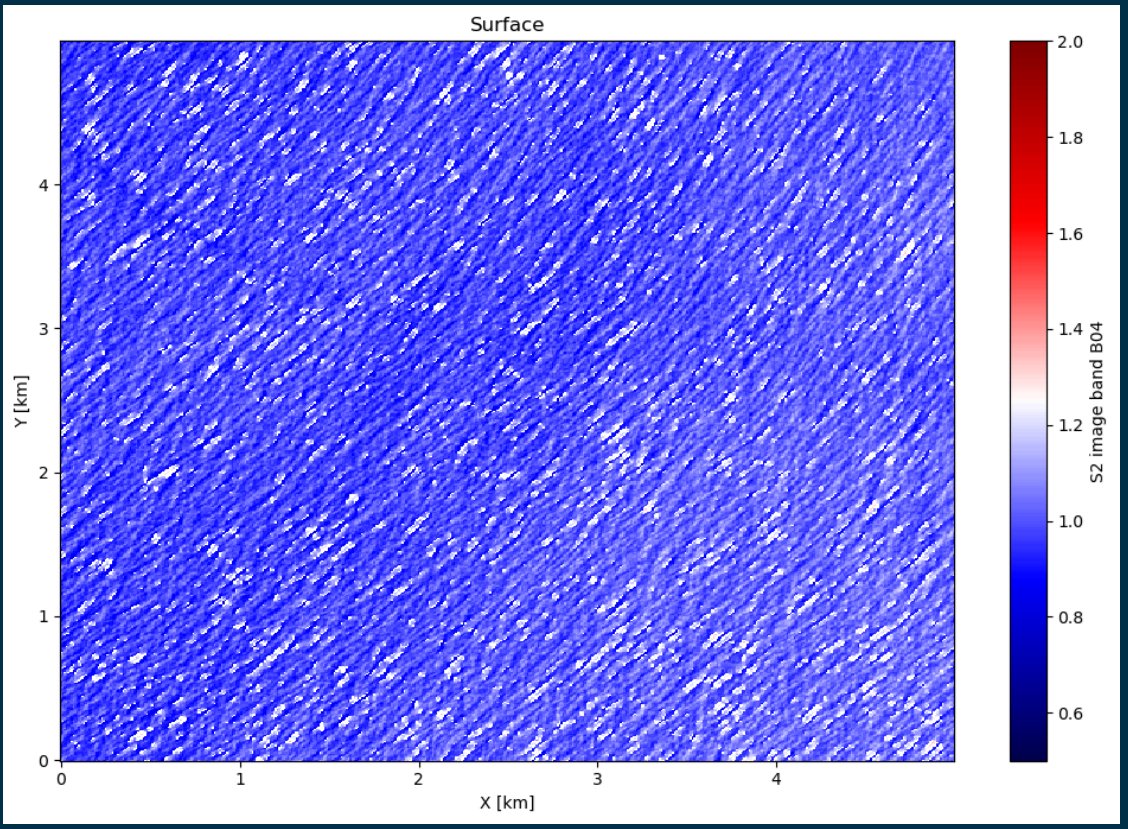
NEWSLETTER #6

August 2025

Zarr in Action: Learning & Building Together

Service Update

Check out our latest notebook:



Transforming Oceanographic Wave Analysis with Sentinel-2 Zarr Data

This new Jupyter notebook showcases an improved workflow for wave spectral analysis in oceanography by moving from the traditional Sentinel-2 SAFE format to the cloud-optimised **EOPF Zarr** format. The transition streamlines data access, boosts computational efficiency, and enables scalable analyses. Through practical steps, the notebook demonstrates how to:

- Access Sentinel-2 data in Zarr format via STAC and xarray
- Ensure detector consistency and apply image normalisation and filtering
- Perform **2D Fourier and cross-spectral analysis** for wave characterisation
- Compute viewing geometry metrics and interpret results with spectrum plots, coherence maps, and phase differences

By simplifying preprocessing and enhancing analysis capabilities, this workflow makes Sentinel-2 data more accessible for advanced oceanographic applications.

Each notebook can now be started instantly using the **launch button** included in all rendered notebooks, making it easier than ever to run and explore them. For example, see the Oceanographic Wave Spectral Analysis notebook.

💻 **EOPF open source plugins**

🚀 **GDAL EOPF-Zarr Plugin v2.0.0 is here!**

This release brings a powerful GDAL driver for accessing **EOPF Sentinel Zarr Samples**, with seamless QGIS integration, automatic CRS & geotransform detection, and improved metadata handling.

It's **cloud-native** (HTTP/HTTPS, VSI support), **cross-platform** (Linux, macOS, Windows), and comes with a ready-to-use **Docker image** including GDAL 3.10.2, Rasterio, and JupyterLab.

👉 See the README for installation and usage: https://github.com/EOPF-Sample-Service/GDAL-ZARR-EOPF/tree/v2.0.0

Webinars

We've now reached the seventh session in our webinar series on adopting the new EOPF Zarr data format. Each edition builds on previous insights, providing practical guidance and expert perspectives tailored to diverse user needs. Explore the resources from the latest webinar.

Webinar #7: EOPF Zarr Data Access with openEO and STAC



Join us for a practical introduction to accessing and processing **EOPF Zarr products** through the **openEO API**, a unified interface that makes Earth Observation workflows more **standardised, portable, and reproducible**.

This 45-minute session will guide participants through:

- Accessing EOPF Zarr data with openEO
- Creating customised virtual data cubes
- Running simple processing workflows

Designed for **beginner to intermediate users**, the webinar will also share the latest updates on the **Sentinels EOPF Sample Service** and support the growing community of early adopters.

📍 **Online**
📅 **Thursday, 25 September, 14:00 CEST**

Register

EOPF Zarr Hackathon: From Exploration to Optimization in Cloud-Native Earth



As a side event of BIDS25, in collaboration with the EOPF Toolkit project, the EOPF Zarr hackathon invites participants, from newcomers to experts, to dive into the Earth Observation Processing Framework (EOPF) using cloud-native formats like Zarr, STAC, Dask, and Julia.

The event tackles real-world challenges across the Copernicus Sentinel missions, fostering collaboration and innovation around topics such as chunking strategies, DGGS, GeoZarr, CF-conventions, and more.

To kick things off, a full-day tutorial on EOPF tools and technologies will be held in advance, equipping participants with the skills to explore, experiment, and make the most of the hackathon.

BiDS25 Hackathon

Community Support Platform

To support users of the new data formats, we have launched a dedicated **Community Support Forum,** a space to ask **questions**, share **knowledge**, and **collaborate**. Whether you are looking for help, exchanging tips, or uploading community notebooks, the platform is here to grow a strong network of users.

Community Support Platform





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