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esa EOPF SENTINEL ZARR SAMPLES



NEWSLETTER #10
December 2025

December EOPF Zarr Updates

Service update:

🚀 xarray-eopf v0.2.5 released!

We are excited to announce the release of xarray-eopf v0.2.5! 🎉
This update includes improvements from v0.2.4 and v0.2.5, bringing new capabilities for spatial subsetting, band-name flexibility, and more robust metadata handling.
Update now via conda/mamba or pip to benefit from the latest features.

✨ What's new?

1. Unified subsetting & reprojection (v0.2.5)
Analysis mode now supports:

- **crs** – reproject datasets directly when loading
- **resolution** – on-the-fly resampling
- **bbox** – spatial subsetting in a single call

These features streamline preprocessing and accelerate end-to-end workflows.

2. Sentinel-2: Support for STAC common band names (v0.2.4)
You can now request Sentinel-2 variables using familiar spectral names from the STAC EO extension, e.g.:

- blue
- green
- red
- nir
- …and more

This greatly improves interoperability with STAC-based tools and pipelines. This feature was initially developed during the hackathon at BiDS 2025.

3. Fix: Correct CRS extraction for Sentinel-2 (v0.2.4)
Since CPM v2.6.2, CRS metadata was missing from S2 data variables. CRS is now recovered from the dataset's other_metadata in the datatree, ensuring reliable geospatial processing.

Useful links

- GitHub: https://github.com/EOPF-Sample-Service/xarray-eopf
- PyPI: https://pypi.org/project/xarray-eopf/
- Conda: https://anaconda.org/conda-forge/xarray-eopf
- Documentation: https://eopf-sample-service.github.io/xarray-eopf

🚀 **xcube-eopf v0.3.1 released!**

xcube-eopf v0.3.1 is out! 🎉
It introduces improved CRS handling and support for more Sentinel-3 products. Upgrade via conda/mamba or pip to access the new capabilities.

✨ **What's new?**

1. Optional CRS parameter & native grid support (v0.3.1)

- The crs parameter is now optional, with default "EPSG:4326"
- Added support for crs="native" for Sentinel-2:
- Specify bounding boxes in latitude/longitude
- Return data in the original UTM grid

2. Support for Sentinel-3 SLSTR Level-1 RBT (v0.3.1)

- Added sentinel-3-slstr-l1-rbt: Level-1 radiances and brightness temperatures (RBT) from SLSTR
- Enables generating 3D analysis-ready data cubes for SLSTR radiances, similar to the Sentinel-3 workflows already available for OLCI and SLSTR L2 products.

🔗 **Useful links**

- GitHub: https://github.com/EOPF-Sample-Service/xcube-eopf
- PyPI: https://pypi.org/project/xcube-eopf/
- Conda: https://anaconda.org/conda-forge/xcube-eopf
- Documentation: https://eopf-sample-service.github.io/xcube-eopf
- Example notebook: https://github.com/EOPF-Sample-Service/xcube-eopf/blob/main/examples/sentinel_3.ipynb

📢 **Announcement: SNAP EOPF Zarr Sentinel-2 L2A Reader (v1.0)**

We are pleased to announce the release of **version 1.0** of the **SNAP EOPF Zarr Sentinel-2 Level-2A Reader**.

This reader is a **prototype plugin for ESA SNAP** designed to enable access to the new **EOPF Sentinel-2 L2A Zarr sample products**, provided through the **EOPF Zarr Sample Service**.
Its main objective is to **demonstrate compatibility between the EOPF Zarr data format and the SNAP processing ecosystem**, paving the way for future integration of cloud-native geospatial data structures.

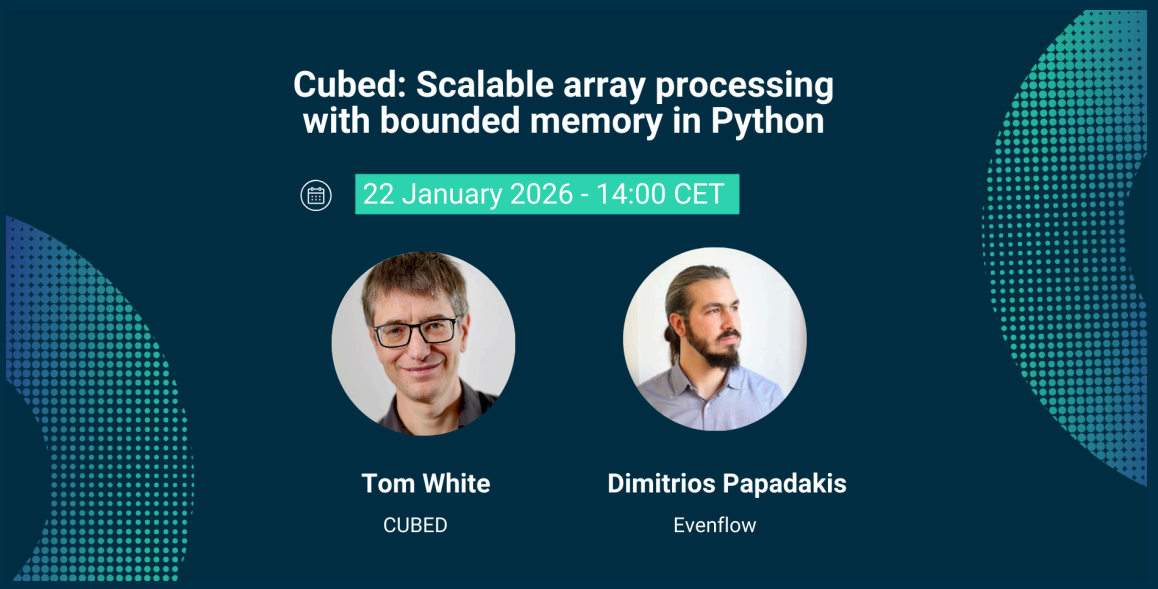
🔧 **Installation & Usage**
Full installation instructions and usage examples are available in the project **README**: https://github.com/EOPF-Sample-Service/snap-eopf/

The reader can be installed directly via the **SNAP Desktop GUI** as a **Community Plugin**:
Tools → Plugins → Available Plugins → EOPF S2 Zarr Reader

🚀 **Webinars**

We've now reached the **10th 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 #11 - Cubed: Scalable array processing with bounded memory in Python



Join us for a 45-minute webinar introducing *Cubed*—a powerful open-source Python library for scalable processing of large multi-dimensional arrays—and presenting the latest developments around the new EOPF Zarr data products.

To support the growing community of early adopters engaging with the new EOPF data format, this session forms part of an ongoing webinar series designed to build knowledge, share best practices, and connect users across diverse domains.

We are pleased to welcome a special guest speaker, **Tom White**, creator of Cubed and a recognised expert in open-source tools for scientific and large-scale data processing. Tom brings extensive experience from across the PyData ecosystem and the Apache Hadoop community, and is the author of *Hadoop: The Definitive Guide*.

During this session, participants will:

- Learn what Cubed is and how it enables scalable, bounded-memory array processing
- Discover how Cubed integrates with and supports workflows built on the new **EOPF Zarr** data products
- Follow a live demonstration showing how to start experimenting with Cubed
- Explore resources and opportunities to engage with the early-adopter community

📍 **Online**
📅 **Date:** 22/01/26 at 14:00

Register

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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