

Training on data provided by the Copernicus Climate Change (C3S) and Atmosphere Monitoring (CAMS) Services

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UNOOSA/Austria Symposium 2023



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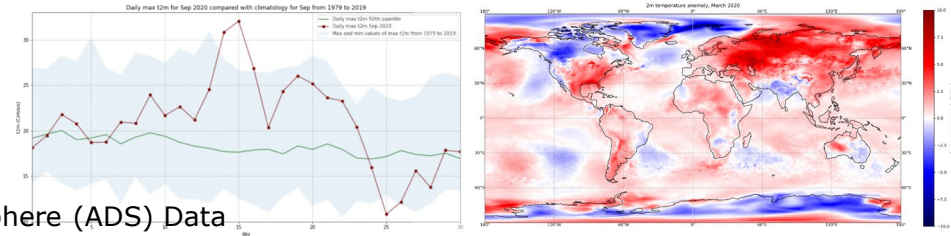
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Training on the Copernicus Climate Change (C3S) and Atmosphere Monitoring (CAMS) Services

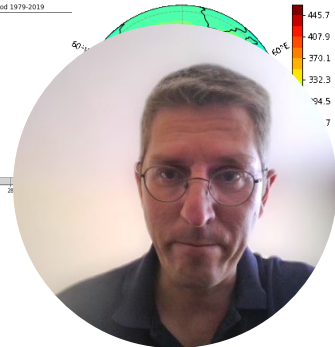
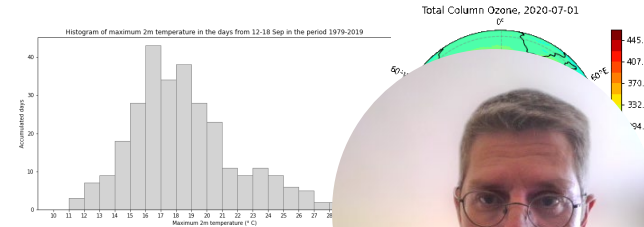
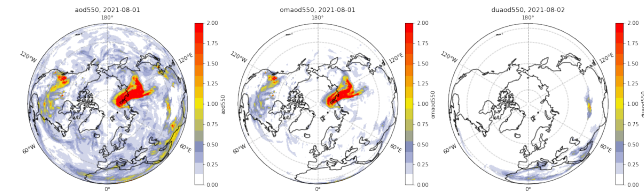
What you will learn:

- ✓ Free data, tools and services provided by the
- ✓ **Copernicus Climate Change (C3S)**
- ✓ **Atmosphere Monitoring (CAMS) Services**
- ✓ Access & process data from the Climate (CDS) & Atmosphere (ADS) Data Stores.



Agenda:

- ✓ **webinar, 1 hour duration.**
 1. Introduction to C3S (5 mins)
 2. Introduction to CAMS (5 mins)
 3. Live demonstration of data access through the CDS & ADS, & basic processing using Jupyter notebooks. (30 mins)
 4. Q&A (20 mins)
- ✓ Date & time: **4 October 2023, 12:00 - 13:00 UTC (14:00 - 15:00 CEST).**
- ✓ Language: **English**



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Target audience:

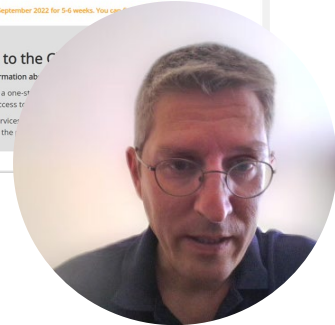
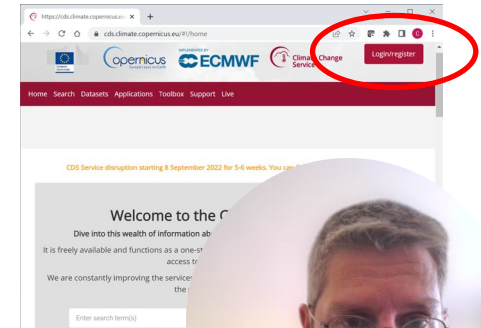
Scientists & data specialists interested to learn about climate and atmosphere data, and to acquire basic data processing skills.

Prerequisites:

Undergraduate-level knowledge of science & basic knowledge of Python is desirable.

Non-essential homework, but to make the most of the training!

- **Register with the CDS.** <https://cds.climate.copernicus.eu/>
- **Register with the ADS.** <https://ads.atmosphere.copernicus.eu/>
- **Obtain a CDS API Key.** <https://cds.climate.copernicus.eu/api-how-to>
- **Obtain an ADS API Key.** <https://ads.atmosphere.copernicus.eu/api-how-to>






Climate
Change

C3S Jupyter notebooks for training

Copernicus Climate Change Servi x +

← → ↻ <https://ecmwf-projects.github.io/copernicus-training-c3s> 🌐 ⚙️ 📄 🌐

 Climate Change Service
climate.copernicus.eu

C3S Training

🔍 Search this book...

Copernicus Climate Change Service
(C3S) Data Tutorials

CLIMATE DATA STORE (CDS)

CDS tutorial

REANALYSIS TUTORIALS

Climatology
Climate Indices
Heatwave Analysis

TUTORIALS ON CLIMATE PROJECTIONS

Climate Projections (CMIP6)
Climate Projections (CORDEX)

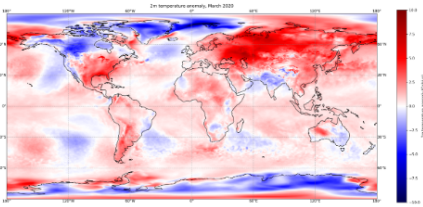
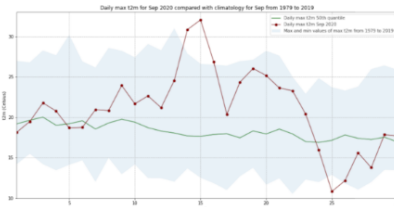
TUTORIALS ON SEASONAL FORECASTS

Seasonal Forecast Anomalies

Copernicus Climate Change Service (C3S) Data Tutorials

Discover how to access and handle data of the past, present and future climate!

This website contains Jupyter notebook based tutorials that demonstrate how to access and process the wide variety of climate data provided by the [Climate Data Store \(CDS\)](#) of the [Copernicus Climate Change Service \(C3S\)](#). Each tutorial provides interactive examples of common workflows to derive information about the past, present and future climate. They include code in Python and content in Markdown to provide clear, engaging and practical instructions on data handling which can be run in various cloud environments without any need for installation. You are invited to experiment with these tutorials and tailor them to your needs to extract results meaningful to you! The tutorials make use of climate data freely available on the CDS and accessed using an Application Programming Interface (API).





Copernicus Atmosphere Monitor

<https://ecmwf-projects.github.io/copernicus-training-cams>

Atmosphere Monitoring Service
atmosphere.copernicus.eu

CAMS Training

Search this book...

Copernicus Atmosphere Monitoring Service (CAMS) Data Tutorials

DATA ACCESS TUTORIALS

- Atmosphere Data Store (ADS) Tutorial
- Import, Reduce, Export

DATA VISUALISATION TUTORIALS

- Maps
- Animations
- Time Series
- Profile Plots and Zonal Means

DATA PROCESSING TUTORIALS

- European Air Quality Index Calculation
- Antarctic Ozone Hole Monitoring

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Copernicus Atmosphere Monitoring Service (CAMS) Data Tutorials

Discover how to access and handle atmospheric composition data!

This website contains Jupyter notebook based tutorials that demonstrate how to access, process and visualise the wide variety of data provided by the [Atmosphere Data Store \(ADS\)](#) of the [Copernicus Atmosphere Monitoring Service \(CAMS\)](#). Each tutorial includes code in Python and content in Markdown to provide clear, engaging and practical instructions on data handling which can be run in various cloud environments without any need for installation. You are invited to experiment with these tutorials and tailor them to your needs to extract results meaningful to you! The tutorials make use of data freely available on the ADS.

I look forward to meeting
you!



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