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

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UNOOSA/Austria Symposium
13th September 2022

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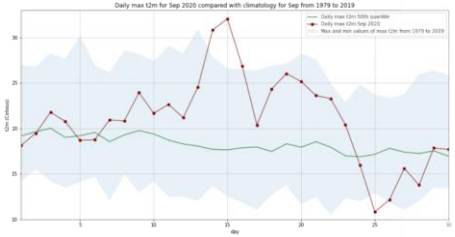

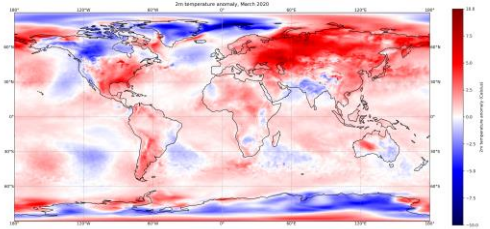

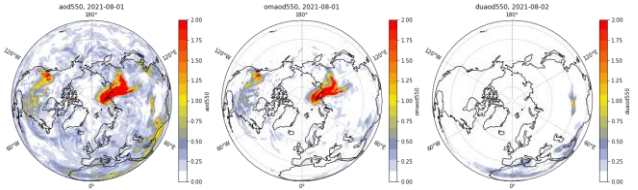

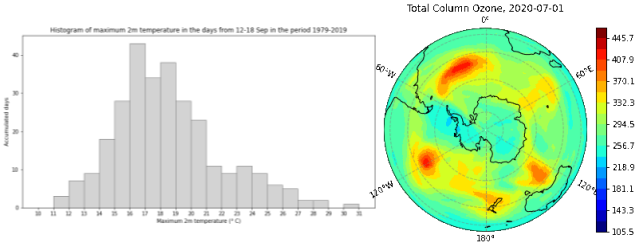

What you will learn:

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

Format:

- ✓ **webinar, one-hour duration** with 40 minutes of presentation and 20 minutes of Q&A.
- ✓ Date and time: **20 September 2022 from 14:00 – 15:00 CEST**.
- ✓ Language: **English**

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Non-essential homework, but would help 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**

Target audience:

Students and young professionals interested to learn about climate and atmosphere data, and to acquire basic data processing skills.

Prerequisites:

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

C3S Jupyter notebooks for training

Climate Change

Copernicus Climate Change Serv

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

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Contents

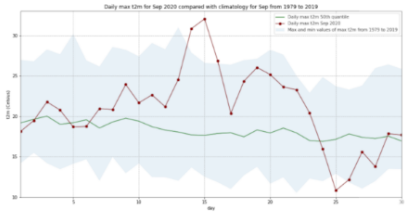
How to run these tutorials

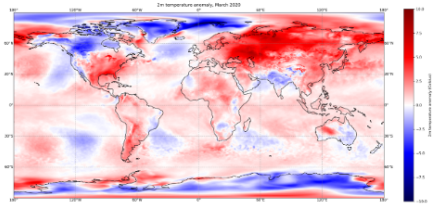
Contents

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).





CAMS Jupyter notebooks for training

Atmosphere Monitoring

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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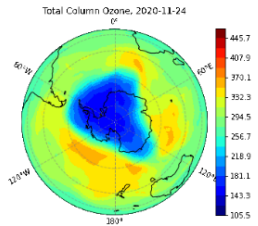
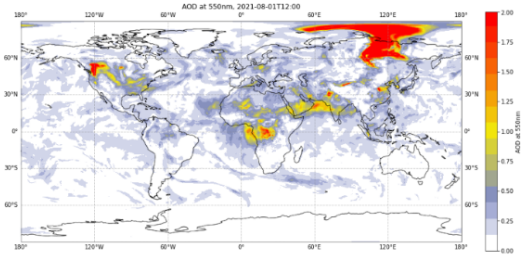
Copernicus Atmosphere Monitoring Service (CAMS) Data Tutorials

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 (CDS) 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.





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How to run these tutorials

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successfully completed the

Online Training on the Copernicus Climate Change and Atmosphere Monitoring Services,

held on 20 September 2022.

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Climate Change Service climate.copernicus.eu

Atmosphere Monitoring Service atmosphere.copernicus.eu