

## Monday, 16 November 2020

09:30 -10:00 Introduction and objectives of the course. F. Fierli, C. Retscher, M. Parrington

10:00 - 10:55 Satellite instruments  live streamed on [Youtube](#)

- Atmospheric composition observations from EUMETSAT Satellites, R. Munro.
- Overview of ESA atmospheric instruments - status and recent results of the sentinel-5 precursor mission, C. Zehner.

11:05 - 12:00 In-situ Networks - chemistry & aerosol  live streamed on [Youtube](#)

- The added value of profiling observations from the ground based networks, L. Mona.
- An overview of the current in-situ observing system, P. Laj.


Open discussion. 12:00 - 12:45 Q&A session – *reserved to selected course participants*

Afternoon activities - *reserved to selected course participants*

Open discussion. 14:00 - 14:30 Virtual coffee and group formation

Work in groups. 14:30 - 16:30 Basics on pollution, remote sensing and data handling.

## Tuesday, 17 November 2020

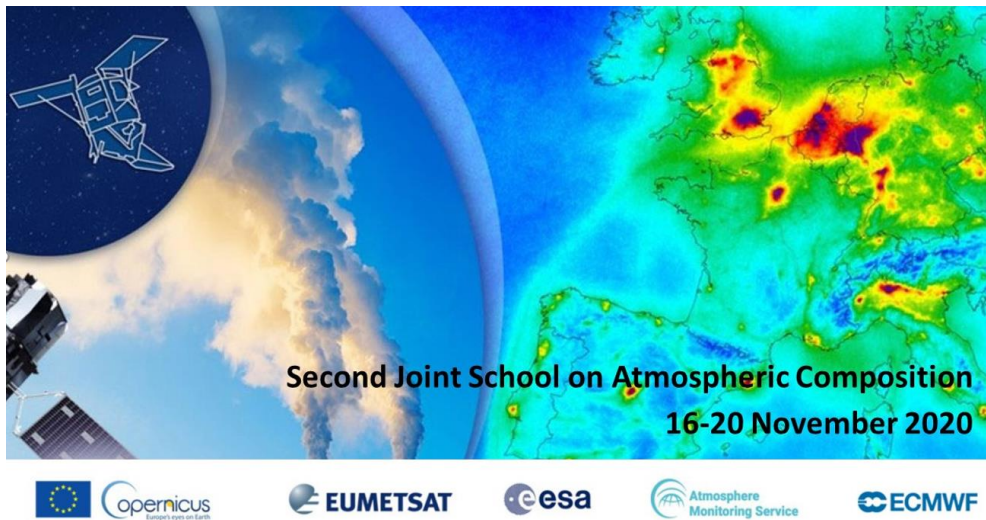
10:00 - 10:55 Satellite applications 1  live streamed on [Youtube](#)

- Satellite Applications: NO<sub>2</sub>, H. Eskes.
- Satellite Applications: SO<sub>2</sub>, HCHO, CHOCHO, CO, AI, A. Richter.

11:05 - 12:00 Atmospheric models  live streamed on [Youtube](#)

- Atmospheric models: basic principles and examples of process-based evaluation using satellite data, A. Voulgarakis.
- Atmospheric models: practical implementation and the example of the CAMS global system, V.-H. Peuch.

Open discussion. 12:00 - 12:45 Q&A session - *reserved to selected course participants*



**Afternoon activities** - reserved to selected course participants

**Open discussion. 14:00 - 14:30** Introduction to the training platform, JupyterLab and Python.

**Data discovery in groups. 14:30 - 16:00**


- 1 - Discover satellite data on atmospheric composition
- 2 - Harp toolbox - Gridding exercise

**Open discussion. 16:00 - 16:30**

**Wednesday, 18 November 2020**

**10:00 - 10:55** Data assimilation applications.  live streamed on [Youtube](#)

- Data Assimilation for Atmospheric Composition: Applications and Challenges, A. Inness, J. Barre

**11:05 - 12:00** Satellite applications 2  live streamed on [Youtube](#)

- Carbon monoxide from the IASI satellite: a good tracer for fire plumes and for local pollution, C. Clerbaux.
- Satellite applications on aerosols: from local sources to long-range transport, A.M. Sundstroem.

**Open discussion. 12:00 - 12:45** Q&A session - reserved to selected course participants

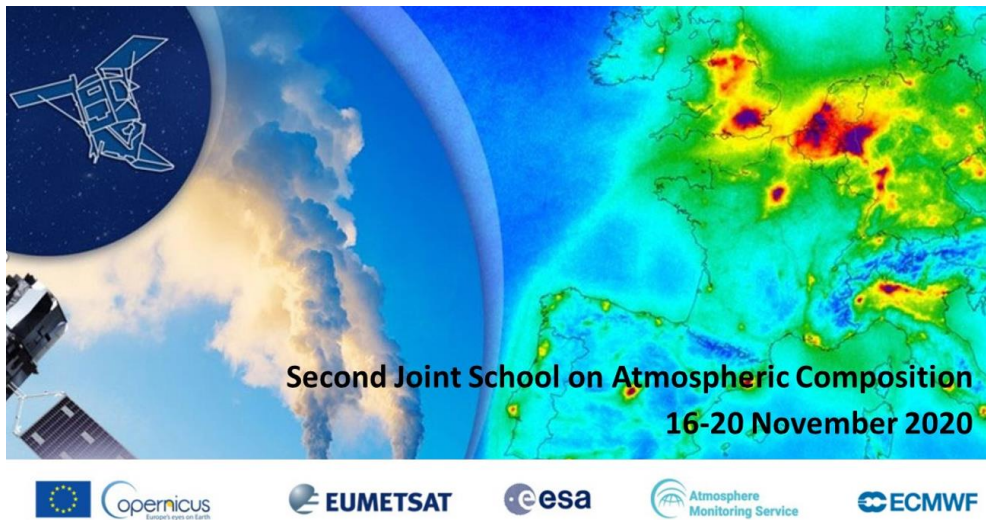
**Afternoon activities** - reserved to selected course participants

**Open discussion. 14:00 - 14:30** Handling data (2) Intro and group assignment based on participant choice.


**Data discovery in groups. 14:30 - 16:00**

- 3 - Discover CAMS data
- 4 - Harp toolbox - Comparison exercise

**Open discussion. 16:00 - 16:30**



Thursday, 19 November 2020

10:00 - 10:55 Remote sensing instruments, calibration and validation.  live streamed on [Youtube](#)

- UV-Vis remote sensing instruments – Calibration, A. Cede.
- UV-Vis remote sensing instruments - Retrieval and satellite validation, M. Van Roozendaal.

11:05 - 12:00 Regional model applications.  live streamed on [Youtube](#)

- What can regional air quality models bring us (in general and in the COVID-19 situation)?, A. Colette, H. Petetin.

Open discussion. 12:00 - 12:45 Q&A session - *reserved to selected course participants*

Afternoon activities - *reserved to selected course participants*

Work in groups. 14:30 - 16:00 Gather data and prepare your workflow.

Open discussion. 16:00 - 16:30

Friday, 20 November 2020 (*reserved to selected course participants*)

10:00 - 10:30 Introduction to workflows. J. Wagemann, S. Niemeyer, M. Razinger

10:30 - 12:45 Workflow Implementation (1). Participants make use of multiple datasets to develop an application (in groups). J. Wagemann, S. Niemeyer, M. Razinger

Afternoon activities

Work in groups. 14:00 - 16:00 Workflow Implementation (2). Participants make use of multiple datasets to develop an application (in groups), J. Wagemann, S. Niemeyer, M. Razinger.

Open discussion. 16:00 - 16:30 Team Reporting and Wrap-up.