

1st newsletter

SIROCCO (*Study of precipitation aeRosols and Clouds in a Coastal area of Cyprus*) uses the opportunity of the unique, continuous, vertically resolved, long-term observations of aerosols, clouds and winds to study in detail the aerosol-cloud-dynamics-precipitation processes in the region of Cyprus. These processes are responsible for the country's precipitation budget, whereby the focus is set on the area of Limassol, which is a coastal area with Middle East climate and complex aerosole mixtures. SIROCCO was selected of funding among 123 proposals under the call RESTART of the Research and Innovation Foundation of Cyprus.

On the 19th of October 2018, the CUT members of SIROCCO met the team TROPOS, which is the foreign partner of SIROCCO, for a preparatory meeting. The meeting was held at the premises of CUT in Limassol. SIROCCO-RESTART project officially kicked-off on the 1st of January 2019.

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Dr Bühl (TROPOS), Dr Mamouri (CUT), Dr Nisantzi (CUT), Dr Ansmann (TROPOS)

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From CyCARE to SIROCCO

SIROCCO project's main idea is based on the unique one-year dataset of CyCARE in Cyprus. TROPOS institute (foreign partner of the project) and close collaborator of CUT since 2012 has deployed its LACROS facility to Cyprus and offers a unique opportunity for continuous remote sensing observations of aerosols, clouds, atmospheric dynamics and precipitation. The state-of-the-art mobile active remote sensing LACROS (Leipzig Aerosol and Cloud Remote Observations System) facility combines an advanced aerosol lidar, a ceilometer, a Doppler lidar, cloud radar, a microwave radiometer, and a rain-quantifying Disdrometer, a solar radiation station and is thus an advanced CLOUDNET and ARM station.

Cy-CARE prototype activity provides for the first time continuously, synchronized and complementary datasets in such complex environment, characterized by typical Mediterranean meteorological conditions. This constellation operated for the first time in Cyprus providing a unique opportunity to perform sophisticated research on aerosols, clouds, precipitation, radiation and atmospheric dynamics, and contribute in this way significantly to a very important field of atmospheric and climate science.



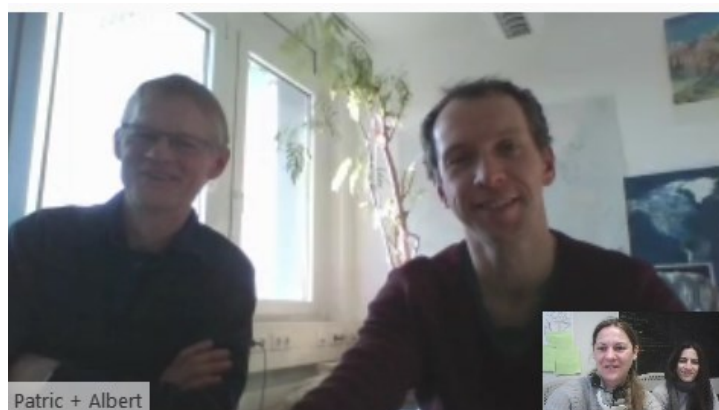
LACROS facilities at CUT premises, Limassol, Cyprus during CyCARE

SIROCCO Kick-off Meeting

22nd of January 2019, meeting held via WebEx

The Kick-Off meeting helped to communicate the scope, goal and objectives of the Project, as well as to convey the philosophy and the modus operandi for the activities of SIROCCO.

This meeting paved the way for target-orientation following the official start of the Project on 1st January 2019 and initiated the process for early and timely completion of the “calendar of activities” and of the deliverables.



Dr Ansmann, Dr Seifert, Dr Mamouri and Dr Nisantzi

PROJECT PROGRESS

SIROCCO progress meeting

26th of June 2019, meeting held via Skype

SIROCCO team held a progress meeting via Skype. During the meeting Mrs Eleni Loulli was introduced to the team. Mrs Loulli is a PhD student in Remote Sensing at CUT and will be involved in SIROCCO. Her role in the project will be to process active remote sensing data for the monitoring of precipitation and clouds in the study area of Cyprus.



Dr Nisantzi, Dr Mamouri, Mrs Loulli, Dr Bühl, Dr Seifert

SIROCCO internal meeting

21st of October 2019, Cyprus University of Technology, Limassol

The project coordinator Prof Diofantos Hadjimitsis held an internal meeting with Dr Rodanthi Mamouri, Dr Argyro Nisantzi and Ms Eleni Loulli. The progress of the ongoing work packages was discussed during the meeting. Additionally, the team organized an educational training for Ms Loulli. Mrs Loulli will be trained by TROPOS on the processing of radar precipitation data. The training will take place in December 2019 at the premises of TROPOS in Leipzig.



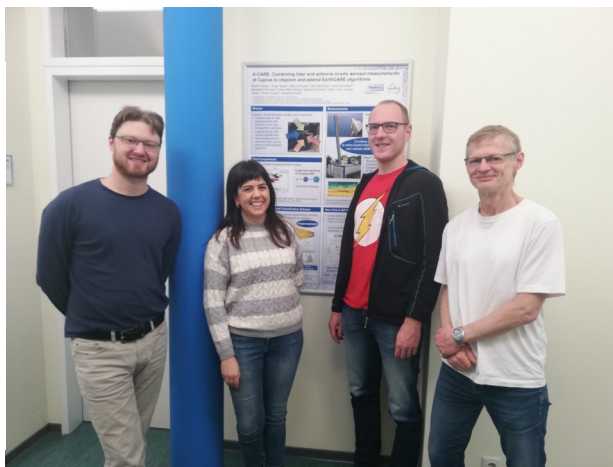
Dr Mamouri, Prof Hadjimitsis, Ms Loulli and Dr Nisantzi

Visit of Mrs Loulli at TROPOS premises in Leipzig

25th of November to 6th of December 2019, TROPOS, Leipzig

TROPOS team hosted Mrs Eleni Loulli at their premises in Leipzig and supported her with the analysis of precipitation data from both ground-based and spaceborne radars.

Particularly, during her 2-weeks stay in Leipzig, Mrs Loulli had the chance to process raw radar precipitation data provided by the Department of Meteorology of Cyprus, as well as GPM data. She then collocated both datasets in order to examine their correlation.



Dr Bühl, Mrs Loulli, Mr Radenz and Dr Ansmann at the premises of TROPOS in Leipzig

EVENTS AND OUTREACH ACTIVITIES

High school students' visit at CUT premises

18th of January 2019, Cyprus University of Technology, Limassol

Professor Diofantos Hadjimitsis presented SIROCCO project to students of the Lanition Lyceum. During his presentation Professor Hadjimitsis mentioned the importance of remote sensing techniques and encouraged the students to study a relevant scientific field in the future.

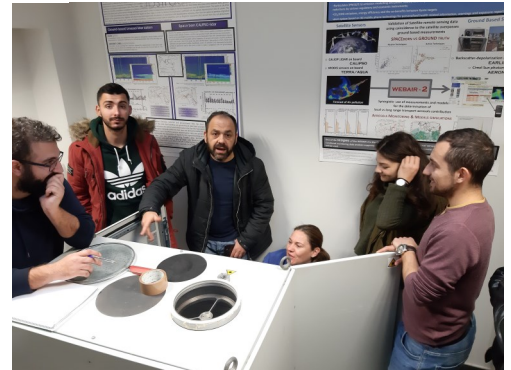


Prof Hadjimitsis presents above others SIROCCO project

SIROCCO

22nd of January 2019, Cyprus University of Technology, Limassol

Dr Rodanthi Mamouri presented SIROCCO project to MSc students of the MSc in Geoinformatics and Geospatial Technologies of the Department of Civil Engineering and Geomatics of CUT. During her presentation Dr Mamouri mentioned the importance of lidar measurements for retrieving valuable outcomes for the formation of clouds.



Dr Mamouri explaining the use of the measuring equipment to the MSc students

SIROCCO at Researchers' Night 2019

26th of September 2019, Filoxenia Conference Centre, Nicosia

Dr Argyro Nisantzi and Dr Rodanthi Mamouri represented SIROCCO project at the Researchers' Night 2019 in Nicosia. There they demonstrated an experiment to explain to primary school students the formation of clouds and the role of the aerosol. Visitors at the stations of SIROCCO had the opportunity to get informed about the project and its role on the study of cloud-aerosol interaction.



Dr Nisantzi and Dr Mamouri explaining the formation of clouds

SCIENTIFIC EVENTS

SIROCCO at RSCy2019

22nd of March 2019, Aliathon hotel, Paphos

The team of SIROCCO project successfully attended the Seventh International Conference on Remote Sensing and Geoinformation of Environment organized by Cyprus Remote Sensing Society. There, our researchers had the opportunity to network with leading experts in the field of Remote Sensing and Geo-information, to gather information about Copernicus services and to explore opportunities for exploitation of SIROCCO results via Copernicus atmospheric services.



SIROCCO at RSCy2019

Presentation during COP25

12th of December 2019, presentation held via Skype

Dr Rodanthi-Elisavet Mamouri presented the importance of studying the aerosol-cloud interaction in Cyprus during the annual UN climate conference, COP25 in Madrid. The presentation was held on a live link from Cyprus in the framework of the Side Event at the German Pavillon with topic: “Aerosol-cloud interactions in a changing climate: opportunity or threat”.



Dr Mamouri, on a live link from Limassol, Cyprus

SIROCCO at the COST InDust 3rd general meeting

24th of October 2019, Porto, Portugal

Dr Mamouri represented Cyprus at the 3rd general meeting of the International Network to Encourage the Use of Monitoring and Forecasting Dust Products (inDust). InDust is the COST Action CA16202. It started in November 2017 and has a duration of four years. Its overall objective is to establish a network involving research institutions, service providers and potential end users of information on airborne dust. InDust also searches to coordinate and harmonize the process of transferring dust observation and prediction data to users as well as to assist the diverse socio-economic sectors affected by the presence of high concentrations of airborne mineral dust.



SIROCCO at the COST InDust 3rd general meeting

SIROCCO at EXCELSIOR Public Inauguration event

22nd of November 2019, Cyprus University of Technology, Limassol



Dr Bühl, Dr Seifert, Dr Mamouri, Dr Nisantzi, Mrs Loulli and Dr Ansmann

SIROCCO team attended the Public Inauguration of the Horizon 2020 WIDESPREAD Teaming Phase 2 Project “ERATOSTHENES: Excellence Research Centre for Earth Surveillance & Space-Based Monitoring of the Environment (EXCELSIOR)”. The event was held under the auspices of The President of the Republic of Cyprus, H.E. Mr. Nicos Anastasiades.

TROPOS is a member of the EXCELSIOR consortium and will transfer this knowledge regarding implementation and the cutting edge technologies and facilities for the establishment of a large field site at CUT.

Aerosols, which are tiny dust particles in the atmosphere, influence the properties of the clouds. They affect e.g. about how much solar energy is reflected or when precipitation occurs. These interactions are very important for weather and climate. That is why TROPOS examines the relationships between aerosols and clouds in the laboratory, in the model and in the great outdoors. In recent years, Cyprus has proven to be of particular scientific interest for field experiments. The island in the eastern Mediterranean lies on the border between the temperate Mediterranean climate and the dry and hot desert climate. In addition, a wide variety of dust sources meet here: “Depending on the weather conditions, polluted air from Europe, sea air or dust from the Sahara or from the deserts of the Middle East dominate. The central location in the dust belt of the northern hemisphere makes Cyprus so interesting for us. This dust belt ranges from the Sahara in Morocco in the west to the Taklamakan Desert in China in the east. Its significance for the global climate is correspondingly great. In addition, Cyprus is not far from large metropolises and we can also investigate the influence of mineral dust on air pollution there,” explains Dr. Johannes Bühl from TROPOS.

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Consortium



Cyprus
University of
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Leibniz Institute for
Tropospheric Research

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