



ISARRA Conference

Draft Program

DAY 1

Wednesday, 29th of October 2025

All times are in EET (Eastern Europe Standard Time)

08:30 – 09:00 Registration

09:00 – 09:30 Opening Session

Welcome & Introduction to the Conference

Workshop introduction and opening

Jean Sciare

The Cyprus Institute

The ACTRIS Research Infrastructure supporting UAV observations

Mikhail Paramonov

ACTRIS-ERIC

09:40 – Atmospheric dynamic and meteorology: session 1 (Chair: Brad Guay)

SAMURAI - Recent developments and application of drone-based sonic anemometry

Joachim Reuder

Geophysical Institute, University of Bergen, Norway

3D wind measurements with avionic data of quadcopter UAS - wind tunnel calibration and field validation

Johannes Kistner German Aerospace Center (DLR), Germany

10:45 -11:15

Coffee Break

11:15 - Advances in Airframe & sensors (Chair: Hugo Ricketts)

Meteodrone Deployment at Scale: Lessons and Outlook

Brad Guay

Meteomatics, Switzerland

Long endurance solar-UAV for atmospheric measurements

Graham Spelman

Limosaero Limited, UK

Highly-Automated "Metsprite Dock 3" System for High-Reliability Vertical Profiling

Nicholas Castledine

Menapia, UK

Towards FIKI-Capable Small UAS: Development and Validation of a Passive Robust Airspeed Sensor

Konrad Bärfuss

Technische Universität Braunschweig, Germany

12:45-14:15

Lunch

14:15 – UAS Field campaigns: session 1 (Aerosols) (Chair: Maria Kezoudi)

Unmanned Aerial Vehicles and Remote Sensing for satellite calibration and validation	Franco Marengo The Cyprus Institute, Cyprus
Aerosol profiling using uncrewed aerial systems in the Subarctic in spring 2025	Anna Voss Technische Universität Braunschweig, Germany
Can UAV-based and lidar synergistic observations improve mineral dust quantification?	Alkistis Papetta The Cyprus Institute, Cyprus
UAV observations reveal new insights into dust particle morphology and orientation	Kenneth M. Tschorn The Cyprus Institute, Cyprus
Vertical profiling of aerosol properties in the lower PBL in coastal environment of Hel Peninsula, Poland.	Aleksander Pietruczuk Institute of Geophysics PAS, Poland

16:00-16:30

Coffee Break

16:30 – Atmospheric dynamic and meteorology: session 2 (Chair: Joachim Reuder)

Investigating of air-sea coupling on diurnal time scale with UAS measurements	Michał Ciuryło University of Warsaw, Poland
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18:00 – Poster session and reception

Airborne measurement of GHG emissions from wetland vegetation	Gillian Simpson Uppsala University, Sweden
Quantifying methane emissions from UK Landfills Using Unmanned Aerial Vehicles	Maria Tsvlidou University of Manchester, UK
UAVs and ground-based lidar for the validation of EarthCARE Dust	Zuhir Bona The Cyprus Institute, Cyprus
UAS based cloud observations during the #CHOPIN campaign in Autumn 2024	Anna Voss Technische Universität Braunschweig, Germany
Challenges in the Deployment of Optical Particle Counters on Uncrewed Aircraft Systems for In-Situ Aerosol Measurements	Kjell zum Berge University Tübingen, Germany
Towards sensible heat flux measurements with multicopter UAS and fast-response fine-wire temperature sensors	Norman Wildmann German Aerospace Center (DLR e.V.), Germany
Implementation of an Autonomous Glider with Weather Balloon Data Collection	Kerrick Ray Oklahoma State University

End of DAY 1

DAY 2

Thursday, 30th of October 2025

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09:30 – UAS Field campaigns: session 2 (Methane) (Chair: Jean Sciare)

CH ₄ flux quantification in Dutch biodigesters: Preliminary results from UAV-Based plume measurements	Dylan Geissbühler Utrecht University, Netherlands
A dual-platform approach for quantifying methane emissions at site level	Roubina Papaconstantinou The Cyprus Institute, Cyprus
Quantifying emissions from coal mine ventilation shaft using Unmanned Aerial Vehicles	Pawel Jagoda AGH University of Krakow, Poland

11:00-11:30 Coffee Break

11:30 – Atmospheric dynamic and meteorology: session 3 (Chair: David Brus)

HOTSPOT — UAS measurements of turbulence in mountain valleys to improve numerical weather model parameterizations	Moritz Kippenberger Eberhard Karls Universität Tübingen, Germany
Using multirotor UAS fleets to gather high resolution observations in complex flows	Francesca Lappin DLR, Germany
Horizontal wind and turbulence measurements in the marine boundary layer	Stanisław Król Institute of Geophysics, Polish Academy of Sciences, Poland
Enhancing High Resolution Atmospheric Profiling Using UAS: Deployment and Validation of the PARASITE Sensor Package	Martin Schön University of Tübingen, Germany

12:30-14:00 Lunch

14:00 – UAS Field campaigns: session 3 (Aerosols, Clouds, Trace Gases) (Chair: Victoria Natalie)

Introduction of 4DCloud project	David Brus Finnish Meteorological Institute, Finland
Making fog visible: How Meteodrones improve forecast accuracy	Melanie Kobras Meteomatics AG, Switzerland
First Results from the AFN Measurements during the VENUSIAN Mission	Justin Fisher Droplet Measurement Technologies, UK
Advancing UAV-Based Monitoring of Stack Emission of Air Pollutants	Maria Kezoudi The Cyprus Institute, Cyprus
Direct measurements in volcanic plumes using balloon-borne multi-gas and particles sensor systems. The Vulcano Island and Etna 2025 field campaigns	Stefano Corradini INGV, Italy

15:45 -16:15 **Coffee Break**

16:15-18:00 – Open discussion

19:30 **Conference dinner – Militzis restaurant**

End of DAY 2

DAY 3

Friday, 31st of October 2025

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09:30 – UAS Research Infrastructure and Regulatory framework (Chair: Jens Bange)

What NWS Area Forecast Discussions Reveal About the Potential Value of UAS Profiles

Christopher Fiebrich
University of Oklahoma, USA

SCALES: A tale of an unlikely flight campaign's inception, implementation, and everything in-between.

Victoria Natalie
Oklahoma Aerospace Institute for
Research and Education, USA

CARGO-ACT – towards a global interoperability for aerosol, cloud and trace gas research infrastructures

Mikhail Paramonov
ACTRIS-ERIC, Finland

10:30-11:00 **Coffee Break**

11:00-12:00 - ISARRA Society Logistics Discussion

12:00-13:00 - Lunch

13:30 **Excursion to Cyprus Institute drone lab & airfield (flights demo)**

19:00 **Return to hotel**
End of Conference