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BABEŞ-BOLYAI UNIVERSITÄT
BABEŞ-BOLYAI UNIVERSITY
TRADITIO ET EXCELLENTIA

FACULTY OF ENVIRONMENTAL SCIENCE AND ENGINEERING

INOE 2000

ELC 2023

Conference Programme

European Lidar Conference

2023 - Cluj-Napoca, ROMANIA

Abacus Laser

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Time		13/09/2023 (Wednesday)
08:00	**09:00**	On site registration
09:00	**10:30**	**Challenges: Strategic role of Research Infrastructures** **Chair: Eija Juurola (ACTRIS)**
09:00	09:15	Welcome
09:15	09:30	
09:30	09:45	**O1.1** Aerosol, Clouds and Trace gases Research Infrastructure - Eija Juurola (ACTRIS)
09:45	10:00	**O1.2** Access to research infrastructures: a resource in growing use by the space agencies - Doina Nicolae (INOE)
10:00	10:15	**O1.3** A Decade of Multiwavelength Mie-Raman, Polarization and Water Vapor Lidar Observations over Warsaw: Can we Effectively Measure Pollination Episodes? - Artur Tomczak (University of Warsaw - Faculty of Physics)
10:15	10:30	**O1.4** MARS- Romanian research infrastructure, a resource within COST Action PROBE CA 18235, Profiling the atmospheric boundary layer at European scale - Anca Nemuc (INOE)
10:30	11:00	Coffee break
11:00	**13:00**	**Lidar Tehnologies & Open forum for companies and users** **Chair: Livio Belegante (INOE)**
11:00	11:15	**O2.1** Intercomparison between Doppler lidars at the ACTRIS/AGORA facility: StreamLine and StreamLine XR+ models - Juana Andújar-Maqueda (University of Granada)
11:15	11:30	**O2.2** Quantifying the uncertainties introduced by narrow-band interference filters on the product profiles of rotational Raman lidar systems - Nikolaos Siomos (Ludwig-Maximilian University of Munich)
11:30	11:45	**O2.3** Long-distance dual-comb ranging in real-time with an update rate of 7.7 kHz using a free-running laser - Sandro Camenzind (ETH Zurich)
11:45	12:00	**O2.4** Laser Induced Fluorescence Explorer (LIFE): A high-power, multi-wavelength and flexible lidar developed in the framework of AGORA-Lab - William Boissiere (Laboratoire d'Optique Atmosphérique)
12:00	12:15	**O2.5** Setup and First Measurements of a Novel Coherent Heterodyne Green Doppler Lidar System - Achievements and Challenges - Felix Fritzsch (Leibniz-Institute for Trospheric Research e.V. (TROPOS))
12:15	12:30	**O2.6** ESA Mobile Raman Polarization Water Vapour Fluorescence Lidar – Extended Capabilities of Reference Instrument for the Cal/Val of Satellite Missions - Afwan Hafiz (University of Warsaw - Faculty of Physics)
12:30	12:45	**O2.7** Lidar observations of linear depolarization ratio by lidar with circular polarized laser transmitter at Hatfield, United Kingdom - Boyan Tatarov (University of Hertfordshire)
12:45	13:00	**OPEN FORUM**: Lasers for lidars - Livio Belegante (National Institute of Research and Development for Optoelectronics INOE)
13:00	14:30	Lunch break
14:30	**15:20**	**PICO SESSION** **Chairs: Lucia Mona (CNR-IMAA), Livio Belegante (INOE)**
14:30	14:35	**P1.1** Natural and anthropogenic phenomena that have played an important role in Romania in the last 5 years - Silviu Gurlui (Alexandru Ioan Cuza University of Iasi)
14:35	14:40	**P1.2** A Decade of Multiwavelength Mie-Raman, Polarization, Water Vapor Lidar Observations over Warsaw: Rising Importance of Mineral Dust Presence in Central Europe. - Dominika Szczepanik (University of Warsaw - Faculty of Physics)
14:40	14:45	**P1.3** A Decade of Multiwavelength Mie-Raman, Polarization and Water Vapor Lidar Observations over Warsaw: Relations between Optical Properties for Biomass Burning. - Lucja Janicka/Iwona Stachlewska (University of Warsaw - Faculty of Physics)
14:45	14:50	**P2.1** Intense Saharan dust outbreak over the Iberian Peninsula in Springtime 2021: II. Dust direct radiative impact in the shortwave range - María-Ángeles López-Cayuela/Jesus Abril-Gago (Instituto Nacional de Técnica Aerospacial)
14:50	14:55	**P2.2** New CIMEL high-power fluorescence Raman LIDAR: CE710 - Ioana Popovici (CIMEL)
14:55	15:00	**P2.3** Glass window effect in a depolarization lidar - Francesco Colao (ENEA)
15:00	15:05	**P3.1** Determination of latent heat flux by synergistic use of Doppler and Water Vapor Raman lidars, during WaLiNeAs campaing - Donato Summa (CNR-IMAA)
15:05	15:10	**P3.2** Prediction of Planetary Boundary Layer (PBL) using machine learning (ML) techniques - Razvan Ababei (Alexandru Ioan Cuza University)
15:10	15:15	**P3.3** The WaLiNeAs campaign: lidar water-vapor profiling for assimilation in numerical weather prediction model to forecast extreme rain events - Alejandro Rodríguez-Gómez (Universitat Politècnica de Catalunya)
15:15	15:20	**P3.4** Unveiling Atmospheric Aerosol Characterization: AI-Driven Tools Applications for Sustainable Environmental Governance - Horia Camarasan ("Babes-Bolyai" University of Cluj-Napoca)
15:20	15:25	
15:30	**17:30**	POSTER session

Time		14/09/2023 (Thursday)
08:30	**09:00**	On site registration
09:00	**10:30**	**Algorithms & data** **Chairs: Lucia Mona (CNR-IMAA)**
09:00	09:15	**O3.1** The EARLINET Single Calculus Chain Module for the Retrieval of Optical Products at Multiple Wavelengths – Update on ELDAmwl - Ina Mattis (DWD)
09:15	09:30	**O3.2** Deep-Pathfinder: A Boundary Layer Height Detection Algorithm Based on Image Segmentation - Arnoud Apituley (KNMI)
09:30	09:45	**O3.3** Depolarizing Aerosols: Retrieval of Microphysical Properties Using Optical Data of Irregular Particles - Jens Reichardt (DWD)
09:45	10:00	**O3.4** Is your aerosol backscatter retrieval afflicted by a sign error? - Johannes Speidel (Karlsruhe Institute of Technology (KIT))
10:00	10:15	**O3.5** Automated deep learning classification of aerosol layers using remote sensing measurements - Camelia Talianu (INOE 2000)
10:15	10:30	**O3.6** Analyzing raw data measured by a UV direct detection Doppler Wind Lidar comprising a Fringe Imaging Michelson Interferometer: challenges and limitations - Philippe Linsmayer (German Aerospace Center DLR - Institute of Atmospheric Physics)
10:30	11:00	Coffee break
11:00	**13:00**	**Lidar applications, synergies and campaigns (I)** **Chair: Silke Gross (DLR)**
11:00	11:15	**O4.1** Raman LIDAR measurements at Roque de los Muchachos Observatory - Marco Iarlori (University of L'Aquila)
11:15	11:30	**O4.2** Tropospheric particle intrusions in PBL. Towards NRT warnings. - Mariana Adam (National Institute of Research and Development for Optoelectronics - INOE 2000)
11:30	11:45	**O4.3** Multiwavelength lidar with capability to measure the depolarization ratio of fluorescence and water vapor Raman backscatter - Igor Veselovskii/Qiaoyun Hu (Lille University)
11:45	12:00	**O4.4** Wavelength Dependence of Birch Pollen Optical Properties Utilizing Ground-Based Lidar Observations - Maria Filioglou (Finnish Meteorological Institute)
12:00	12:15	**O4.5** Observations of Saharan dust properties and impact on radiative forcing over the Southern Italy (2002–2023) - Benedetto De Rosa (CNR)
12:15	12:30	**O4.6** Parameterization of Non-equilibrium Turbulence in Atmospheric Boundary Layer Based on Doppler Lidar Measurements – Preliminary Results - Maciej Karasewicz (University of Warsaw - Faculty of Physics)
12:30	12:45	**O4.7** Characterization of cirrus clouds in the arctic during warm air intrusions - Georgios Dekoutsidis (German Aerospace Center - DLR)
12:45	13:00	**O4.8** Particle fluxes over rural and urban ABL in Poland using remote sensing - Pablo Ortiz-Amezcua (University of Warsaw)
13:00	14:30	Lunch break
14:30	**15:30**	**PICO SESSION** **Chairs: Silke Gross (DLR), Nicolae Ajtai (UBB)**
14:30	14:35	**P4.1** How Future Aircraft May Lose Weight Thanks to Doppler Wind Lidar Technology – the Ultra Performing Wing Project of the EC Clean Aviation Joint Undertaking - Patrick Vrancken (DLR)
14:35	14:40	**P4.2** Optical and Microphysical Aerosol Properties During Cases of Long-transport of Mixed Biomass Burning and Polluted Dust Aerosols from Kazakhstan and Sahara deserts to Athens, Greece - Marilena Gidarakou (National Technical University of Athens)
14:40	14:45	**P4.3** Beyond the rainbow: tailored colourmaps for lidar studies - Nikolaos Papagiannopoulos (CNR-IMAA)
14:45	14:50	**P4.4** How can fluorescence lidar improve the detection and characterization of aerosol particles? - Implementation and first results at Leipzig, Germany. - Benedikt Gast (Leibniz Institute for Tropospheric Research (TROPOS), Leipzig)
14:50	14:55	**P4.5** Holistic characterization of a dust-induced heatwave as observed over the SW Iberian Peninsula using remote sensing observations and model data - María-Ángeles López-Cayuela/Jesus Abril-Gago (Instituto Nacional de Técnica Aeroespacial)
14:55	15:00	**P4.6** Vibrational and rotational Raman measurements at two wavelength: assessment of performance - Sol Fernández Carvelo (Universisy of Granada)
15:00	15:05	**P4.7** A New Scanning Lidar for the Arctic in the Framework of ACTRIS - Sandra Graßl (Alfred-Wegener-Institut)
15:05	15:10	**P4.8** Vertical characterization of pollen-rich layers over Madrid by fluorescence lidar - Ruben Barragan (CIEMAT)
15:10	15:15	**P4.9** What is the influence of aerosol to the cloud formation and evolution? - Rodanthi Elisavet Mamouri (ERATOSTHENES Centre of Excellence)
15:15	15:20	**P4.10** Understanding oil smoke plumes through CALIPSO measurements - Alexandru Mereuta ("Babes-Bolyai" University of Cluj-Napoca)
15:30	**17:30**	POSTER session
19:00	23:00	Conference event & dinner

Time		15/09/2023 (Friday)
08:30	**09:00**	On site registration
09:00	**10:30**	**Lidars onboard satellites** **Chair: Jonas von Bismark (ESA)**
09:00	09:15	**O5.1** ESA's Space Lidar Missions Aeolus and EarthCARE - Jonas von Bismarck (ESA)
09:15	09:30	**O5.2** Two years of continuous lidar observations at Cabo Verde and its application for the validation of Aeolus - Holger Baars (TROPOS)
09:30	09:45	**O5.3** Unmanned Aerial Vehicles for Aeolus calibration and validation - Franco Marenco (The Cyprus Institute)
09:45	10:00	**O5.4** Long-range transport of Saharan dust into the Arctic – airborne lidar measurement during the HALO-(AC)3 campaign - Silke Groß (German Aerospace Center (DLR))
10:00	10:15	**O5.5** Preliminary Studies and Performance Simulations in support of the space mission "CALIGOLA" - Paolo Di Girolamo (Università degli Studi della Basilicata)
10:15	10:30	**O5.6** Multiply: the HSRL instrument for the Cal/Val of satellite missions - Livio Belegante (National Institute of Research and Development for Optoelectronics INOE)
10:30	11:00	Coffee break
11:00	**13:00**	**Lidar applications, synergies and campaigns (II)** **Chair: Holger Baars (TROPOS)**
11:00	11:15	**O4.9** An Overview of the ASKOS Campaign in Cabo Verde - Eleni Marinou/Ioanna Tsikoudi (NOA)
11:15	11:30	**O4.10** Profiling of optical properties and spectral fluorescence in long-range transported biomass burning aerosols from Alberta wildfires in 2023 - Qiaoyun Hu (University of Lille)
11:30	11:45	**O4.11** Quantitative Comparison of Aerosol Particle Flux Retrieved by Doppler Lidar during Rural Field Campaigns in Southern Spain - Jesús Abril-Gago (University of Granada)
11:45	12:00	**O4.12** Retrospective lidar depolarization characterization and its application for the Cyprus 2021 Fall Campaign - Alkistis Papetta (The Cyprus Institute)
12:00	12:15	**O4.13** Exploring the eVe lidar dataset from the ASKOS campaign - Peristera Paschou (National Observatory of Athens)
12:15	12:30	**O4.14** Design and Development of a Raman Lidar for Cherenkov Gamma Array Experiments - George Vasileiadis (LUPM CNRS/U.Montpellier)
12:30	12:45	**O4.15** Ground-based Remote Sensing of Aerosol, Clouds, Dynamics, and Precipitation in Antarctica – First results from a one-year dataset at Neumayer-III - Ronny Engelmann (TROPOS)
13:00	14:30	Lunch break
14:30	**15:15**	**PICO SESSION** **Chairs: Holger Baars (TROPOS), Lucas Alados-Arboledas (Universidad de Granada)**
14:30	14:35	**P4.12** Lidar, ceilometer and UAV-based aerosol profiling during the EVIAN 2022 campaign in Cyprus - Georgia Peletidou (Aristotle University of Thessaloniki)
14:35	14:40	**P4.13** Aerosol, Temperature and Water Vapor profiling during the BIOSPHERE Athens Campaign (June-August 2023) - Marilena Gidarakou (National Technical University of Athens)
14:40	14:45	**P4.14** Monitoring the persistent stratospheric aerosol layer observed over a Southern European lidar station during 2019 - Kalliopi Artemis Voudouri/Nikolaos Siomos (National Observatory of Athens)
14:45	14:50	**P4.15** Atmospheric pollen using lidar, sunphotometer and Burkard measurements in Athens and Finokalia, Greece - Maria Christina Gatou/Elina Giannakaki (NATIONAL AND KAPODISTRIAN UNIVERSITY)
14:50	14:55	**P4.16** Profiling of CO2 mixing ratio with Raman lidar: preliminary results - Marco Di Paolantonio (University of Basilicata)
14:55	15:00	**P4.17** First estimation of CCN profiles obtained in the Southern of the Iberian Peninsula during a dust event - Juan Antonio Bravo-Aranda/Lucas Alados-Arboledas (University of Granada)
15:00	15:05	**P4.18** Intense Saharan dust outbreak over the Iberian Peninsula in Springtime 2021: I. Monitoring and characterization of transported dust particles - María-Ángeles López-Cayuela/Jesus Abril-Gago (Instituto Nacional de Técnica Aeroespacial)
15:05	15:10	**P4.19** Evaluation of the CloudSat products with ACTRIS lidar/radar measurements over the Eastern Mediterranean - Kalliopi Artemis Voudouri/oanna Tsikoudi (National Observatory of Athens)
15:10	15:15	**P4.20** Multiyear Raman lidar observations of free-tropospheric aerosol layers over Athens: Geometrical and optical properties - Elina Giannakaki (FMI, National and Kapodistrian University of Athens)
15:15	**17:15**	POSTER session