

2026 7-SEAS Workshop and 20th Anniversary of LABS

7-SEAS 國際研討會暨鹿林山大氣背景站 20 週年慶



July 14-15, 2026
Taipei, Taiwan



Lulin Atmospheric
Background Station

Hosted by



環境部
Ministry of Environment

Organized by



台灣氣膠研究學會
Taiwan Association for Aerosol Research



國立中央大學

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About

About the Workshop

Following the success of the 2024 KPEx and NASA/ASIA-AQ airborne mission, the 7-SEAS community has continued to advance the 2024–2026 7-SEAS/Urban-AQ (Urban Air Quality) initiative. Building upon this momentum, Taiwan is honored to host the 2026 7-SEAS Workshop, providing an international forum for scientific exchange, interdisciplinary collaboration, and the development of future strategies to improve air quality research and environmental sustainability throughout Asia.

The Workshop is held in conjunction with the 20th Anniversary of the Lulin Atmospheric Background Station (LABS), one of Taiwan's most important long-term atmospheric observation facilities. As a strategic downwind receptor site within the 7-SEAS regional observation network, LABS has, over the past two decades, generated an invaluable long-term record of atmospheric composition and transport. These observations have significantly enhanced scientific understanding of biomass burning emissions, transboundary air pollution, aerosol chemistry, and regional climate interactions across Southeast and East Asia.

The 2026 7-SEAS Workshop and the celebration of the 20th Anniversary of LABS represent not only an opportunity to review two decades of scientific achievement, but also a platform for shaping future collaborative research. Through keynote presentations, scientific sessions, technical discussions, and field activities, participants will exchange the latest research findings, identify emerging scientific challenges, strengthen international partnerships, and explore innovative approaches to advancing atmospheric observation, air quality management, and climate research.

We warmly welcome researchers, government representatives, and partners from around the world to Taiwan. We sincerely hope that this Workshop will foster enduring collaborations, inspire new scientific discoveries, and further strengthen the international community's collective commitment to protecting the atmosphere and promoting a sustainable environment for future generations.

Agenda

13 July, 2026 (Monday)

17:00 – 19:00 **Icebreaker at Taipei Garden Hotel**

14 July, 2026 (Tuesday)

08:30 – 09:00 Registration

09:00 – 09:40 **Opening Ceremony**

Opening Address

Remarked by: *Yen-Ru Hsieh, Deputy Minister, Ministry of Environment*

Group Photo

Special Talk

Chairperson: Neng-Huei (George) Lin, National Central University

09:40 – 10:10 Updates and activities with the Pandonia Global Network
Thomas Hanisco, NASA Goddard Space Flight Center

10:10 – 10:40 Coffee Break

Session I: Overview of 7-SEAS Recent Activities and Networks (I)

Chairperson: Simone Lolli, National Research Council of Italy

10:40 – 11:00 Taking the Pulse of the Planet: Updates from the NOAA Global Monitoring Laboratory Networks and Observatories
Christine Smith, NOAA Global Monitoring Laboratory

11:00 – 11:20 AERONET in Asia: The Emerging Role of APAC
Sheng-Hsiang (Carlo) Wang, National Central University

11:20 – 11:40 Implications of Over the 30 Years Observation of Aerosol Optical Properties by Using PREDE Sky Radiometer
Kazuma Aoki, University of Toyama

11:40 – 12:00 Urban Secondary Organic Carbon Formation During and Beyond ASIA-AQ/KPEX: Observations from Dual AQ Supersites in Southern Taiwan
Ta-Chih Hsiao, National Taiwan University

12:00 – 13:30 Lunch

Session II: Overview of 7-SEAS Recent Activities and Networks (II)

Chairperson: Thomas Hanisco, NASA Goddard Space Flight Center

- 13:30 – 13:50 Updates on Satellite Aerosol Products from LEO/GEO Sensors and Their Application in the Studies of Long-Term Aerosol Trends
Christina Hsu, University of Maryland at Baltimore and NASA GSFC
- 13:50 – 14:10 An AI-Assisted Framework for Interpreting Seasonal Aerosol-Cloud Interaction Climatology: Four Years of MPLNET Lidar Observations in Subtropical East Asia
Simone Lolli, National Research Council of Italy
- 14:10 – 14:30 Hourly PM_{2.5} Chemistry, Transport, and Visibility Impacts in a Southern Taiwan Metropolitan Area
Li-Hao Young, China Medical University
- 14:30 – 14:50 Simultaneous Retrievals of Industrial Pollution Aerosols and Trace Gases from SMART-s During PACE and 7-SEAS/KPEX Deployment Over Southern Taiwan
Si-Chee Tsay, NASA Goddard Space Flight Center

14:50 – 15:20 Coffee Break

Session III: Lulin Station and High-altitude Observations

Chairperson: Sheng-Hsiang (Carlo) Wang, National Central University

- 15:20 – 15:40 Decadal Observations of Greenhouse Gases and Trace Gases at LABS
Chang-Feng Ou-Yang, National Central University
- 15:40 – 16:00 Two Summits, Twenty Years: Mt. Lulin and Mt. Fuji as Complementary Observatories above the Clouds of East Asia
Kotaro Murata, Center for Environmental Science in Saitama
- 16:00 – 16:20 Long-Term Atmospheric Mercury Monitoring at the Lulin Atmospheric Background Station and Major Findings
Guey-Rong Sheu, National Central University
- 16:20 – 16:40 The Characteristics of Temporal Trends and Long-Range Transport in Atmospheric PCDD/Fs, PAHs and PFASs Observations at Mt. Lulin
Shih-Yu Pan, National Yang Ming Chiao Tung University
- 16:40 – 17:00 Long-Term Observations of Black Carbon Aerosols at LABS, Taiwan
Shantanu Kumar Pani, National Central University
- 17:00 Day 2 Wrap-up
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15 July, 2026 (Wednesday)

09:00 – 09:40 **Welcome Address and Lecture by Minister**
Chi-Ming Peng, Minister, Ministry of Environment

Group photo

Session IV: Overview of 7-SEAS Activities in Individual Countries (I)
Chairperson: Santo Salinas, National University of Singapore

09:40 – 10:00 Integrated Air Quality Research and Management in Thailand: From Atmospheric Observations to Decision Support
Somporn Chantara, Chiang Mai University

10:00 – 10:20 Chemical Composition of Urban PM_{2.5}: Findings from a Short-Term Sampling Campaign in Ho Chi Minh City, Vietnam
To Thị Hien, VNUHCM-University of Science

10:20 – 10:40 Air Quality Research and Monitoring at the Manila Observatory
Maria Obiminda Cambaliza, Manila Observatory

10:40 – 11:10 Coffee Break

Session V: Overview of 7-SEAS Activities in Individual Countries (II)
Chairperson: To Thị Hien, VNUHCM-University of Science

11:10 – 11:30 MyCMAQ: Operational Air Quality Forecast System for Malaysia and Southeast Asia
Maggie Chel Gee Ooi, National University of Malaysia

11:30 – 11:50 Monitoring the South-East Asian Environment Using Satellites, Ground Instruments and Modeling
Santo Salinas, National University of Singapore

11:50 – 12:10 Revealing the Discrepancy in Potential Driving Factors of Particulate-Bound Mercury Between Urban and Suburban Sites in a Southeast Asian Megacity Using a Generalized Additive Model
Ly Sy Phu Nguyen, VNUHCM-University of Science

12:10 – 13:30 Lunch

Session VI: KPEx Campaign and Urban Air Quality
Chairperson: Somporn Chantara, Chiang Mai University

13:30 – 13:45 Influence of Mesoscale Atmospheric Systems on Air Quality in Southwestern Taiwan During the KPEx Campaign
Hsin-Chih Lai, Chang Jung University

13:45 – 14:00	Exploration of Complex Physical and Chemical Processes of a Severe Haze Episode over Central Taiwan <i>Chuan-Yao Lin, Academia Sinica</i>
14:00 – 14:15	Spatiotemporal Dynamics of Atmospheric Microplastics and Organic Pollutants in Central and Southern Taiwan <i>Lin-Chi Wang, National Kaohsiung University of Science and Technology</i>
14:15 – 14:30	Spatiotemporal Variations in the Chemical Composition of Atmospheric Aerosols in the Yunlin-Chiayi-Tainan and Kaohsiung-Pingtung Regions During the 2025 Campaign <i>Ying-I Tsai, Chia Nan University of Pharmacy and Science</i>
14:30 – 15:45	Poster Presentation and Coffee Break
15:45 – 16:30	Session VII: Discussion on 7-SEAS Future Planning <i>Chairperson: Neng-Huei (George) Lin, National Central University</i>
16:30	Day 3 Wrap-up and Closing

Organizer Contact Information

Dr. Neng-Huei (George) Lin, Co-Convener of Local Organizing Committee

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Prof. Chang-Feng Ou-Yang, Workshop Secretary

Assistant Professor, Department of Chemistry

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Poster Presentation

- P1 Decadal AERONET Observations at Mt. Lulin (2,862 m): Implications for Regional Background and Calibration Standards
Sheng-Hsiang Wang, National Central University
- P2 Long-Range Dust Transport over Taiwan: A Multi-Year Study at the Lulin Atmospheric Background Site
Chuan-Jin Chen, National Central University
- P3 Holo–Hilbert Spectral Analysis Reveals Multiscale CO Variability at the Lulin High-Elevation Background Station in the Asia-Pacific Region
Linh Do, National Central University
- P4 Characteristics and Source Analysis of Volatile Organic Compounds at Lulin Atmospheric Background Station
Yi-Wen Wang, National Central University
- P5 A Comprehensive Database of Atmospheric Measurements at the Lulin Background Station: Parameters and Availability
Chia-Ching Lin, National Central University
- P6 KPEX/Post-KPEX and NASA/ASIA-AQ Aircraft Campaign
Wei-Syun Huang, National Central University
- P7 Preliminary Study on Concurrent Heatwaves and Ozone Pollution at an Urban Site in Kuala Lumpur, Malaysia
Lay Enn Ong, Universiti Kebangsaan Malaysia
- P8 VOC Characterization and Ozone Formation Potential in Key Urban and Industrial Regions of Luzon During the ASIA-AQ Field Campaign in the Philippines
Chareeze Raiza Bayad, Ateneo de Manila University
- P9 Hourly Variations of Ambient VOCs and Their Ozone and Secondary Organic Aerosol Formation Potentials in Urban Chiang Mai During the Smoke Haze Period, 2026
Primruthai Dokkhatai, Chiang Mai University
- P10 Experimental Investigation of the Ozone Budget in Taiwan during the OSEAMS Campaign
Stephen M. Griffith, National Taiwan University
- P11 Typhoon-Induced Surface Ozone Enhancement in Subtropical East Asia: Climatology, Physical Controls, and Attribution from 169 Typhoons
Sheng-Po Chen, Chung Yuan Christian University
- P12 Establishment of the Ozone Production Rate (OPR) Measurement System in Taiwan
Yu-Hsun Lee, National Central University
- P13 The Dewater-Thermal Desorption-Gas Chromatography System for Aerial VOC Profiling
Jen-He Wang, National Central University
- P14 UAV–PAMS Integrated Framework for Interpreting Vertical NMHC Structure and Source Signatures in a Coastal Industrial Region
Hieu-Duy Nguyen, National Central University

- P15 Aircraft Observations of OVOC Characteristics in Southwestern Taiwan during 2024 ASIA-AQ/KPEX
Chih-Ling Ke, National Central University
- P16 3-D Characteristics of VOCs in Southwestern Taiwan During 2024 ASIA-AQ/KPEX Campaign
Chia-Yu Lin, National Central University
- P17 Source Apportionment of Isoprene and Its Contribution to Ozone Formation in Taiwan's Major Urban Areas
Yi-Hsun Chung, National Central University
- P18 Contrasting Drivers of PM_{0.49} Oxidative Potential Between Biomass Burning Period and Background Air
Duangduean Thepnuan, Chiang Mai Rajabhat University
- P19 Temporal Variations in Aerosol Sources Inferred from Black Carbon Observations in Urban Chiang Mai, Thailand, 2026
Nuttipon Yabueng, Chiang Mai University
- P20 A Spectrometer-Based Approach to Aerosol Optical Depth Retrieval
Somjet Pattarapanitchai, Silpakorn University
- P21 Variations in PM_{2.5} Concentration in the Area of Yatika Boutique, Chiang Dao District, Chiang Mai Province, Using Aerobox
Witchanikul Jirasithithamrong, Silpakorn University
- P22 Current Status of the Pandora Asia Network and Algorithm Updates
Serin Kim, Pukyong National University
- P23 Aerosol Property Retrievals Using the Pandora and AERONET
Seongyoung Kim, Pukyong National University
- P24 Validating PACE Aerosol Columnar Properties and OCI Water-Leaving Radiances from Ground-Based Network Spectroradiometer Measurements
Hsiang-Yu Huang, NASA Goddard Space Flight Center
- P25 Chemical Composition and Source Apportionment for Atmospheric Particulates Collected during Taiwan KPEX and NASA ASIA-AQ Campaigns
Mao-Chang Liang, Academia Sinica
- P26 Tracking Transient Pollution Spikes in Complex Urban Atmospheres: Firework Events in the KPEX and ASIA-AQ Campaigns
Jian-Xian Wu, National Taiwan University
- P27 Observation-Based Diagnosis of Wintertime Nitrate Formation and Control Implications in Urban Kaohsiung
Chin-Yu Chen, National Taiwan University
- P28 Hourly PM_{2.5} Chemistry, Temporal Variability, and Air-Mass Transport in a Southern Taiwan Metropolitan Area
Shi-Ya Tang, China Medical University
- P29 Seasonal Dynamics and Sources of Ultrafine Particles and Particle Number Size Distributions at Dual Supersites in Kaohsiung (2024–2025)
Hsin-Yi Lin, National Sun Yat-sen University

- P30 Contrasting Aerosol Vertical Structures under Local and Regional Transport Regimes over Southern Taiwan during the 2024 KPEX and ASIA-AQ Campaigns
Yueh-Chen Wang, National Central University
- P31 Spatial-Temporal Variation of Aerosol Optical Properties and Aerosol Types Revealed by a High-Density AERONET Deployment over Southern Taiwan during the 2024 KPEX/Asia-AQ
Huynh-Duy Tran, National Central University
- P32 SMART-s and AERONET Observations for BC and BrC Absorption Retrievals during KPEX
Kuo-En Chang, National Central University
- P33 Overview of KPEX Intensive Observation Periods from Himawari Deep Blue Aerosol Products
Kuo-En Chang, National Central University
- P34 Reducing Biomass-Burning Emission Uncertainty Using Satellite-Derived Fire Radiative Power (FRP): CMAQ v5.5 Study of the 2026 Northern Thailand Smoke Haze Episode
Oraya Yodai, Chiang Mai University
- P35 Simulating the PM_{2.5} in Southern Taiwan under High-Pressure Return Flow during the Kao-Ping Experiment (KPEX)
Ming-Tung Chuang, Academic Sinica
- P36 Impacts of a Leaside Vortex-Induced Shear Line on PM_{2.5} Accumulation over Southwestern Taiwan: Observational Analysis during the 2024 KPEX and WRF Simulations
Wei-Kuo Soong, Air Force Institute of Technology
- P37 Characteristics of Lee-Side Vortices and Air Pollution Transport over Southwestern Taiwan during the KPEX Intensive Observation Period
Yu-Lun Ho, Chang Jung Christian University
- P38 Record-Breaking Aerosol-Induced Radiative Impacts over the South China Sea in April 2023: An Observational Study Based on Satellite Measurements
Ravindra Babu, National Central University
- P39 Modeling the High-Resolution CMAQ Ozone Vertical Profile over Southern Taiwan during 2024 KPEX and NASA/ASIA-AQ Campaign
Steven Soon-Kai Kong, National Central University
- P40 Updated Report on 7-SEAS Activities in Vietnam: Current Status and Future Plans
Hiep Van Nguyen, Vietnam Academy of Science and Technology
- P41 Size-Segregated Distribution Characteristics of Per- and Polyfluoroalkyl Substances (PFAS) in Particulate Matter During the Dry Season at a Central Urban Site in Ho Chi Minh City, Vietnam
Hong Nguyen Van Khanh, VNUHCM-University of Science
- P42 Unveiling the First Two-Year Dataset on Atmospheric Deposition of Heavy Metals in Southern Vietnam Megacity
Le Quoc Hau, VNUHCM-University of Science
- P43 Atmospheric PFAS Characteristics across Different Coastal Environments
Yu-Lun Hsieh, National Cheng Kung University

- P44 Influence of Long-Range Transport on Atmospheric PFAS Characteristics in East Asia
Yen-Yu Ko, National Cheng Kung University
- P45 Source- and Size-Resolved Oxidative Potential of PM in Industrial- and Traffic-Influenced Regions of Taiwan: Insights from PM_{2.5}-Bound PAHs during KPEX 2024
Po Jui Chen, National Yang Ming Chiao Tung University
- P46 Source Apportionment and Chemical Oxidative Potential Analysis of 7SEAS Atmospheric PAHs and PFAS in TSP in Da Nang, Vietnam
Van Sang Phan, National Yang Ming Chiao Tung University
- P47 Characterizing Legacy POPs, PFAS, and Oxidative Potential in Size-Segregated Atmospheric Particulate Matter across Taiwan
Asma Asif, National Yang Ming Chiao Tung University
- P48 Monsoon-Driven Variability of Atmospheric Microplastics in Southern Taiwan
Thi-Hieu Le, National Kaohsiung University of Science and Technology
- P49 Spatial and Temporal Characteristics of Atmospheric PAHs, OPEs, and PBDEs in Central and Southern Taiwan
Thi-Cuc Le, National Kaohsiung University of Science and Technology
- P50 Concentrations, Speciation, and Distribution of Atmospheric Mercury over Western Taiwan during the 2025 KPEX
Da-Wei Lin, National Central University

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