

APOLLO 2024



SCIENTIFIC PROGRAM



Time Table

	Day 0	Day 1	Day 2	Day 3	Day 4
	17 Nov.	18 Nov.	19 Nov.	20 Nov.	21 Nov.
		9 :00 – 12 :30	9 :00 – 12 :30	9:00 – 12 :30	9 :00 – 12 :30
Morning 1		Opening Keynote Session 1	Session 6 Session 7	Session 11	Session 15
	Coffee Break				
Morning 2		Session 2	Session 8	Session 12	Session 16
	Lunch Break				
	15 :00 – 18 :00	14 :00 – 17 :30	14 :00 – 17 :30	14 :00 – 17 :30	14 :00 – 16 :00
Afternoon 1	Reception	Session 3 Session 4	Session 9 Session 10	Session 13 Session 14	Session 17 Closing
		Coffee Break		Coffee Break	
Afternoon 2		Session 5	Poster Session	Poster Session	
		Welcome Concert 18 :00 – 21 :00	Banquet 18 :30 – 21 :00		

Workshop Venue

The Kyoto College of Graduate Studies for Informatics
Google Maps: [The Kyoto College of Graduate Studies for Informatics](#)



Heian Jingu Shrine Restaurant & Banquet Hall
Google Maps: [Heian Jingu Event Hall](#)



Presentation Tips

Oral presentation

- **Invited** presentations are **15 min** (12 min for presentation +2 min for QA).
- **Regular** presentations are **12 min** (9 min for presentation +2 min for QA).
- The presentation material should be uploaded to **the below links (to be informed)** by **the day before the session**.
 - For accurate editing, please submit file names in the following format;
(Presentation order)-(Author's LAST name)-(Author's FIRST name).pptx
Example: S3-3-Mukai-Sonoyo.pptx
 - Each material should not exceed **100 MB**.
 - The PC used for the presentation is **Windows 11** and **MS PowerPoint version 2021**.

Poster presentation

- Poster Boards will be available to hang posters around lunchtime on the first day.
- Recommend Poster size: **1189 mm x 841 mm (A0)** with **portrait**.

Day 0: November 17

Reception (15:00 - 18:00) @ KCG main hall (6F)

Day 1 : November 18

8:00– 9:00 Reception @KCG Main Hall (6F)

Chairs: S. Mukai, O. Dubovik

Opening (9:00 – 9:30)

Oleg Dubovik – APOLO Organizing Committee

Sonoyo Mukai – APOLO Local Organizing Committee

Keynote (9:30 – 10:00)

Teruyuki Nakajima, Some considerations on the important problems regarding radiation scattering phenomena

Session 1 : PACE mission – Part 1 (10:00 – 11:03)

Chairs: B. Fougnie, V. Martins

10:00 - 10:15 (S1-1) Otto Hasekamp, Polarimetric Remote Sensing of atmospheric aerosols: First results from the SPeXone instrument on the PACE mission (invited)

10:15 - 10:27 (S1-2) Xiaoguang Xu, PACE HARP2 Level-1 Data Products: First Results and Performance

10:27 - 10:39 (S1-3) Bastiaan van Dierenhoven/Daniel Miller, Advanced cloud products from the PACE mission

10:39 - 10:51 (S1-4) Anin Puthukkudy, Aerosol and Surface Products from PACE Polarimeter HARP2 Observations using GRASP

10:51 - 11:03 (S1-5) Meng Gao, Validation and uncertainty analysis of PACE HARP2 aerosol product from FastMAPOL algorithm

Coffee Break, 27 min (11:03– 11:30)

Session 2 : EarthCARE mission (11:30 – 12:36)

Chairs: H. Maring, T. Nakajima

11:30 - 11:45 (S2-1) Hajime Okamoto, Properties of clouds, aerosols, radiation and vertical velocity using EarthCARE observations (invited)

11:45 - 12:00 (S2-2) Vassilis Amiridis, LIVAS: a desert dust climate data record based on particle depolarization/backscatter lidar observations (invited)

12:00 - 12:12 (S2-3) Shunsuke Aoki, First images from Earth Cloud Aerosol and Radiation Explorer (EarthCARE) and the Japanese activities for the EarthCARE mission

12:12 - 12:24 (S2-4) Alexander Konoshonkin, Light scattering on ice crystals of cirrus clouds for application in EarthCARE inversion algorithms

12:24 - 12:36 (S2-5) Minrui Wang, Development of the Algorithm for EarthCARE/MSI L2 Cloud Product

Lunch, 1.5 h (12:36 – 14:00)

Session 3: GCOM-C/SGLI mission (14:00 - 14:54)

Chairs: M. Sekiguchi, K. Knobelspiesse

14:00 - 14:15 (S3-1) Kazuhiro Tanaka, Over 6 years observation of GCOM-C/SGLI sensor (invited)

14:15 - 14:30 (S3-2) Makiko Nakata, Exploring wildfire-derived aerosols from satellite and model simulations (invited)

14:30 - 14:42 (S3-3) Sonoyo Mukai, Elucidation of atmospheric particles through the integrated use of SGLI's unique features

14:42 - 14:54 (S3-4) Souichiro Hioki, Global distribution of 3MI's motion-induced polarimetric measurement error

Session 4: CO2M mission (14:54 - 15:36)

Chairs: J. Landgraf, P. Litvinov

14:54 - 15:09 (S4-1) Yasjka Meijer, Multi-Angle Polarimeter observations supporting the Copernicus Anthropogenic CO2 Monitoring (CO2M) Mission (invited; **online**)

15:09 - 15:24 (S4-2) Ruediger Lang, The Multi-Angle Polarimeter product and its co-registration in context of the Copernicus Anthropogenic CO2 Monitoring (CO2M) Mission product processing (invited; **online**)

15:24 - 15:36 (S4-3) Pepe Phillips, Multi-Angle Polarimeter (MAP) in the Context of Atmospheric Correction for CO2 Retrievals (**online**)

Coffee Break, 24 min (15:36 – 16:00)

Session 5: Improvement of polarimetric instrumentation quality and information content (16:00 - 17:33)

Chairs: O. Hasekamp, J. Redeman

16:00 - 16:15 (S5-1) Vanderlei Martins, The use of multi-angle polarization exploiting the synergy between in-situ and remote sensing measurements of aerosol and cloud particles (invited)

16:15 - 16:30 (S5-2) Jochen Landgraf, Greenhouse gases and aerosols: A symbiotic relationship (invited; **online**)

16:30 - 16:45 (S5-3) Lei Yan, Quantum remote sensing: a road path for future remote sensing technique (invited)

16:45 - 16:57 (S5-4) Marcos Herreras-Giralda, Combination of multiangular-polarimetric and SWIR spectrometric measurements for the simultaneous CO2, CH4 and aerosol retrieval in GRASP algorithm

16:57 - 17:09 (S5-5) Gaojun Chi, Enhancing Hyperspectral Remote Sensing Data Quality: Real-Time On-Orbit Atmospheric Correction with Advanced Synchronization Monitoring Atmospheric Corrector (ASMAC)

17:09 - 17:21 (S5-6) Noah Rubin, Metasurface Polarization Optics and Instrumentation (**online**)

17:21 - 17:33 (S5-7) Haofei Wang, Supercooled water clouds detection from Polarization Multi-Angel Imager data using the 1.37 μm water vapor polarized channel (**online**)

Concert Reception (18:00 – 21:00)

Day 2 : November 19

Session 6: AOS (Atmosphere Observing System) mission (9:00 - 9:42)

Chairs: D. Winker, V. Amiridis

9:00 - 9:15 (S6-1) Hal Maring, The Atmosphere Observing System (AOS): Future Observations for the Study of Coupled Aerosol-Cloud-Convection-Precipitation Interactions (invited)

9:15 - 9:30 (S6-2) Juan Cuesta, Overview of French aerosol research activities for the future Atmosphere Observing System mission (invited)

9:30 - 9:42 (S6-3) Anton Lopatin, Synergy of PARASOL and CALIOP observations using GRASP algorithm for enhanced aerosol characterization

Session 7: PACE mission - Part 2 (9:42 - 10:45)

Chairs: B. Van Diedenhoven, M. Gao

9:42 - 9:57 (S7-1) Kirk Knobelspiesse, Validation of PACE Mission data, with a focus on the PACE-PAX field campaign (invited)

9:57 - 10:09 (S7-2) Matteo Ottaviani, Global Sensitivity Analysis of polarimetric measurements over snow

10:09 - 10:21 (S7-3) Zhibo Zhang, Detection and retrievals of dust and above-cloud smoke aerosols using PACE observations: preliminary case studies

10:21 - 10:33 (S7-4) Ahmed El-Habashi, Retrieval of ocean waves slopes from measured light polarization

10:33 - 10:45 (S7-5) Alex Gilerson, Retrieval of in-water attenuation to absorption ratios from PACE mission measurements using neural networks (**online**)

Coffee Break, 24 min (10:45– 11:05)

Session 8: Development of advanced retrieval algorithms and data processing - Part 1 (11:05 - 12:35)

Chairs: M. Chin, Z. Li

11:05 - 11:20 (S8-1) Pavel Lytvynov, Synergetic retrieval from multi-instrument measurements for advanced aerosol and surface characterization (invited)

11:20 - 11:35 (S8-2) Miho Sekiguchi, Improvement of a Simultaneous Retrieval Algorithm for Atmospheric Aerosol Optical Properties using Multi-Wavelength and Multi-Pixel Satellite Observations (invited)

11:35 - 11:47 (S8-3) Oleg Dubovik, Recent evolutions in GRASP concept: Achievements and Challenges in aerosol remote sensing

11:47 - 11:59 (S8-4) Jens Redemann, Machine Learning (ML) derived CCN concentrations provide better constraints on the first aerosol indirect effect than aerosol optical properties

11:59 - 12:11 (S8-5) Yevgeny Derimian, Aerosol components retrieval in GRASP algorithm: advantages and limitations

12:11 - 12:23 (S8-6) Babak Jahani, Sub-pixel Cloud Fraction Retrieval Based on the CO2M Multi-Angular Polarimetric Satellite Measurements

12:23 - 12:35 (S8-7) Lei Li, Aerosol component concentration derived by the GRASP algorithm from multi-angular polarimetric satellite observations

Lunch, 1.5 h (12:35 – 14:00)

Session 9: EPS-SG/3MI mission (14:00 - 14:39)

Chairs: G. Shuster, C. Chen

14:00 - 14:15 (S9-1) Bertrand Fougine, Polarimetric Missions in the context of Operational Aerosol Products (invited)

14:15 - 14:27 (S9-2) Margarita Vazquez Navarro, Overview of the EPS-SG 3MI Mission - Instrument, Level-1, and their Performances to Support Operational Atmospheric Characterisation

14:27 - 14:39 (S9-3) Soheila Jafariserajehlou, Aerosol Characterisation in the Operational Context of EPS-SG/3MI

Session 10: Other advanced and cubesat missions (14:39 - 15:45)

Chairs: Z. Li, V. Martins

14:39 - 14:54 (S10-1) David Diner, Prelaunch status of the Multi-Angle Imager for Aerosols (MAIA) satellite instrument and ground-based air pollution monitoring network (invited; **online**)

14:54 - 15:09 (S10-2) Yiming Zhao, Space-born Multi-beam laser radar on 'Gou Mang Hao' satellite (invited)

15:09 - 15:21 (S10-3) David Fuertes, GAPMAP: The First Commercial Multi-Angle Polarimeter Constellation for Aerosol Characterization and Monitoring

15:21 - 15:33 (S10-4) Snorre Stamnes, The PolCube CubeSat polarimeter for Earth Science

15:33 - 15:45 (S10-5) Laura Horton, A Compact Multi-Angle Polarimeter, C-MAP

Group Photo

Posters Session (16:00 – 17:30) @KCGI West Building (4F)

Banquet (18:30 – 21:00) @Heian Jingu Shrine Restaurant & Banquet Hall

Day 3 : November 20

Session 11: In situ and ground-based validation observations / calibration and validation (9:00 - 10:30)

Chairs: M. Chin, L. Bi

9:00 - 9:15 (S11-1) Elena Lind/Brent Holben Global warming, Asian Aerosols and an imperfect model for AERONET growth (invited; **online/in person**)

9:15 - 9:30 (S11-2) Monica Campanelli, The SKYNET network, a ground-based validation observatory: present status and future developments (invited)

9:30 - 9:42 (S11-3) Kazuma Aoki, Validation of aerosol optical properties measure by sky radiometer in Mountain areas

9:42 - 9:54 (S11-4) Benjamin Torres, Three years of Aerosol Measurements Using an Automated Photometer on the First long-term AERONET Ship Site

9:54 - 10:06 (S11-5) Maria Fernanda Sanchez Barrero, Enhancing Mobile Aerosol Monitoring with Two-Wavelength Polarization Micropulse Lidar

10:06 - 10:18 (S11-6) Leiku Yang, The first aerosol retrieval result from MERSI onboard Fengyun-3F satellite

10:18 - 10:30 (S11-7) Kira Shanks, Polarimetric calibration strategy for the Multi-Angle Imager for Aerosols (MAIA) satellite instrument (**online**)

Coffee Break, 30 min (10:30 – 11:00)

Session 12: Polarization CrossFire/GF-5 series & DQ-1 mission (11:00 - 12:27)

Chairs: G. Schuster, J.-C. Roger

11:00 - 11:15 (S12-1) Xiaobing Sun, Research progress of atmospheric aerosol and cloud Characteristics based on remote sensing of dual-polarization satellite payloads of China (invited)

11:15 - 11:27 (S12-2) Zhengqiang Li, Polarization Crossfire sensors onboard Chinese satellites for atmospheric environment monitoring

11:27 - 11:39 (S12-3) Jing Li, Retrieval of aerosol and surface properties over land from the Gaofen-5 Directional Polarimetric Camera measurements

11:39 - 11:51 (S12-4) Yingying Ma, Application of GF-5 satellite DPC Data to Retrieve the Aerosol and Surface Properties and analyze their interannual variation

11:51 - 12:03 (S12-5) Cheng Chen, Retrieval of aerosol and surface from single-view multi-spectral polarimetric scanner POSP/GF-5B based on the GRASP algorithm

12:03 - 12:15 (S12-6) Zhenhai Liu, Chinese Spaceborne Polarimetric Sensors In-Orbit Data Quality Assurance: Framework and Progress

12:15 - 12:27 (S12-7) Lili Qie, In-flight calibration of Chinese polarimetric sensors based on various calibration methods using natural targets

Lunch, 1.5 h (12:27 – 14:00)

Session 13: Development of advanced retrieval algorithms and data processing - Part 2 (14:00 - 15:03)

Chairs: O. Dubovik, S. Stamnes

14:00 - 14:15 (S13-1) Chong Shi, Remote Sensing of aerosols and clouds from new satellite imagers combining radiative transfer and machine learning techniques (invited)

14:15 - 14:27 (S13-2) Hongbin Yu, Estimating dust abundance and transport from satellite depolarization measurements

14:27 - 14:39 (S13-3) Masahiro Momoi, New GRASP core program version 2 with exposed flexibility allowing "In principle, yes"

14:39 - 14:51 (S13-4) Ajmal Rasheeda Satheesh, Quantification Of Type-Specific Sub- And Super-Micron Aerosol Fluxes Over The Ocean Using CALIPSO Retrievals

14:51 - 15:03 (S13-5) Cheng Fan, Aerosol Retrieval over Ocean Utilizing Extended Ocean Body Models for RemoTAP

Session 14: Advances in the theory of polarimetric remote sensing (15:03 - 15:27)

Chairs: J. Cuesta, I. Sano

15:03 - 15:15 (S14-1) Ping Yang/Masanori Saito, Radiative transfer in a medium with oriented particles

15:15 - 15:27 (S14-2) Evgenij Zubko, Light-scattering properties of forsterite particles modeled with four different types of irregularly shaped particles

Coffee Break, 33 min (15:27 – 16:00)

Posters Session (16:00 – 17:30) @KCGI West Building (4F)

Day 4 : November 21

Session 15: Scattering of light by terrestrial aerosols, clouds, oceans, and land surfaces (9:00 - 10:36)

Chairs: C. Shi, Z. Zhang

9:00 - 9:12 (S15-1) Lei Bi, How machine learning approaches are useful in computing the optical properties of non-spherical particles?

9:12 - 9:24 (S15-2) Adam Ahern, Measurements of in situ aerosol light scattering phase functions during FIREX-AQ

9:24 - 9:36 (S15-3) Yu-Wen Chen, The Impact of Polarization on OCO-2 Bias Mitigation in the Vicinity of Clouds

9:36 - 9:48 (S15-4) Anna Gialitaki, Using mixtures of hexahedrals and spheroids to model dust particles, and reproduce lidar observations in Cabo Verde

9:48 - 10:00 (S15-5) Shuai Li, Marine Skylight Polarization Patterns Measurement and Polarization Navigation in the South China Sea

10:00 - 10:12 (S15-6) Zhaoyu Liu, Advances in typical ground object observation and recognition based on polarized optical remote sensing

10:12 - 10:24 (S15-7) Ioana Popovici, Polarimetric measurements for characterization of aerosol properties with CIMEL instruments: photometer and lidars

10:24 - 10:36 (S15-8) Daniel Ramirez, Vertical profiling of aerosol microphysics by synergy combination of space lidar and polarimetry in GRASP (**online**)

Coffee Break, 24 min (10:36 – 11:00)

Session 16: Models, In situ and Remote sensing of Aerosols (MIRA) Collaborations (11:00 - 12:24)

Chairs: B. Holben, J. Li

11:00 - 11:12 (S16-1) Mian Chin, Aerosol components/types: what are they and how useful are they? – viewpoints from a modeler

11:12 - 11:24 (S16-2) Dave Winker, On the CALIOP Aerosol Typing Algorithm

11:24 - 11:36 (S16-3) Greg Schuster, The Tables of Aerosol Optics (TAO)

11:36 - 11:48 (S16-4) Yevgeny Derimian, Relational database construction for Table of Aerosol Optics

11:48 - 12:00 (S16-5) Jean-Claude Roger, Monitoring the composition of Aerosol and their Radiative Efficiency

12:00 - 12:12 (S16-6) Oleg Dubovik, Harmonization of aerosol assumptions in remote sensing and climate models: results and perspectives

12:12 - 12:24 (S16-7) Masanori Saito, Characterizing the optical and microphysical properties of dust plumes with multi-wavelength lidar observations

Lunch, 1.5 h (12:24 – 14:00)

Session 17: Development of advanced retrieval algorithms and data processing - Part 3 (14:00 - 15:24)

Chairs: A. Siniuk, Y. Derimian

14:00 - 14:12 (S17-1) Guangliang Fu, The RemoTAP algorithm for characterization of aerosol microphysical and optical properties

14:12 - 14:24 (S17-2) Nirandi Jayasinghe, Aerosol Retrievals using GRASP from HARP instruments in Twilight Regions

14:24 - 14:36 (S17-3) Greema Regmi, A Comparative Study of Combined Lidar-Polarimeter Aerosol Retrievals using Spheroidal and Hexahedral Particle Shape Models with Data from the ORACLES Field Campaign

14:36 - 14:48 (S17-5) Chong Li, Aerosol Retrievals and PM_{2.5} concentration estimations from Nephelometers using GRASP Algorithm and machine learning method

14:48 - 15:00 (S17-6) Mikhail Alexandrov/Daniel Miller, Correction of cloud optical thickness retrievals from airborne and satellite measurements and its application to cloud tomography

15:00 - 15:12 (S17-7) Philippe Lesueur, Retrieval of aerosol inhomogeneity by application of modified GRASP-Components algorithm to AERONET and PARASOL

Opening (15:12 – 15:30)

Oleg Dubovik – APOLO Organizing Committee

Posters

Upcoming and current satellite missions and field campaigns

Kamal Aryal, Assessment of retrieval capabilities of two polarimeters in the NASA PACE mission using synthetic and real measurements for the joint retrieval of aerosol and ocean color information over coastal waters

Neranga Hannadige, Estimation of Cloud Condensation Nuclei (CCN) from SPEXone on PACE

Zihao Yuan, Above Cloud Aerosol Retrieval from Multi-Angular Polarimetric Satellite Measurements using a Neural Network Ensemble Approach

Xiaodong Zhang, BRDF correction for PACE's OCI using multi-angle polarimetry

Maurice Roots, Comparative Analysis of Aerosol Layer Heights: PACE vs. MPLNET Surface-Based Lidars

Noah Sienkiewicz, PACE-HARP2 Pre-Launch Calibration Uncertainties

Jaclyn John, LWIR Spectro-Polarimeter Cloud Top Observations and Ice-Water Discriminatory Studies

Tianle Yuan, Tip of iceberg: indirect forcing from ship emissions from bottom-up and top-down approaches

Advances in the theory of polarimetric remote sensing

Daniel Miller, Development of advanced hyperangular polarimetric cloud retrievals for current and future NASA missions

Feng Zhang, Polarized discrete ordinate adding approximation (POLDDA) for radiative transfer

Daniel González-Fernández, Comparison of polarization for sky radiance simulations with two radiative transfer models

Rachel Smith, Retrieving Liquid Cloud Droplet Size Distribution from the Geometric Parameters of Polarized Cloudbow: Novel Algorithm Development and Demonstrations

Scattering of light by terrestrial aerosols, clouds, oceans, and land surfaces

Evgenij Zubko, Contribution of underlying terrain to sunlight scattered by atmospheric aerosols

Liudmyla Berdina, Randomly oriented fractal-like clusters as a model of smoke particles: implementation into GRASP algorithm and tests on AERONET measurements

Edward Blocker, The Emergence of Non-Principal Meridian Neutral Points in Maritime Polarized Light Fields

Monica Campanelli, Effect of aerosol optical scattering and absorbing properties on the Urban heat island intensity during summertime in Rome, Italy

Erica Venkatesulu, Cloud thermodynamic phase measurements from low-cost pixelated polarization cameras

Zihan Zhang, Development and evaluation of the angular polarization feature for marine observation

Roberto Román, Comparison between two 3D polarized radiative transfer models: MCstar and MYSTIC

Polarimetric applications in astrophysics and planetary science

Africa Barreto, Modelling the degree of linear polarization (DoLP) of the Moon's light with a Cimel CE318-TP9

Ivan Syniavskiy, Imaging Stokes polarimeters for the BOOTES Global Telescope Network

Minsup Jeong, Polarimetric Characteristics of Lunar Simulant JSC-1A Depending on Incidence Angle

Improvement of polarimetric instrumentation quality and information content

Guangfeng Xiang, Application of atmospheric correction algorithm to enhance the accuracy of on-orbit geometric calibration

Sara Herrero Anta, Improvement on the retrieval of aerosol properties when accounting for light polarization in inversion algorithms

Celia Herrero del Barrio, Evaluation of the improvements in the aerosol retrieval adding polarization information in the sky radiances

Jia Liu, A new method for direct measurement of polarization characteristics of water-leaving radiation

Development of advanced retrieval algorithms and data processing

James Allen, MOCMAC: Polarimetric ocean color atmospheric correction with Bayesian inference

Milagros Herrera, Complementing Quality Assurance in Satellite Data using GRASP's Dynamic Error Estimates

Taozhong Huang, Comparing MAIAC and MISR Surface Bidirectional Reflectance Factors: Implications for MAIA Aerosol Retrievals

Ken Hirata, A three-dimensional atmospheric retrieval framework using an ensemble Kalman filter and three-dimensional radiative transfer

Tangyu Sui, Atmospheric compensation algorithm for high-resolution satellite images with extreme oblique observations

Ting Yang, New Remote Sensing Inversion and Numerical Assimilation Technique of the Vertical Structure of PM_{2.5} Ammonium Concentration

Haoran Gu, Information Content Analysis for multiangle satellite ultraviolet polarimetric measurements

William Julstrom, Potassium Emission Lines as Tool for Remote Sensing of Biomass Burning

Gaurav Kumar, Retrieval of nighttime Aerosol Optical Depth with a PREDE POM radiometer

Christian Matar, Versatile Aerosol and Cloud Obstruction Mask (ACOM) for Diverse Remote Sensing Applications

Tianfeng Pan, Advancing Ocean and Atmospheric Research through Polarimetric Remote Sensing Innovations

Yuyang Chang, An optimal inverse method with regularization for retrieving dust aerosol microphysical properties from extinction, backscattering and depolarization lidar measurements

In situ and ground-based validation observations

Masahiro Momoi, Harmonization of aerosol inversion products from AERONET and SKYNET sun-sky radiometer observations with GRASP algorithm

Ying Zhang, Exploring the use of ground-based remote sensing to identify new particle formation events: A case study in the Beijing area

Calibration and validation

Mengfan Li, Pre-Launch and On-Orbit Testing of SMAC on-board GFDM satellite

Xuefeng Lei, Onboard polarization calibration and polarimetric accuracy verification method for the particulate observing scanning polarimeter (POSP)

Models, In situ and Remote sensing of Aerosols (MIRA) Collaborations

Konstantin Kuznetsov, High-Resolution Retrieval of Local Road Emissions from Coarse Satellite Images Using CFD Modeling

Abhinna Behera, Black Carbon on a High-Resolution Map with Coupled Chemistry-Transport Models: Improving Regional Emissions with Adjoint GEOS-Chem and WRF-CHEM Calculations

Summary of presentation at APOLO 2024

Session	I	O	P
Advances in the theory of polarimetric remote sensing	-	2	4
Scattering of light by terrestrial aerosols, clouds, oceans, and land surfaces	-	8	7
Polarimetric applications in astrophysics and planetary science	-	-	3
Improvement of polarimetric instrumentation quality and information content	3	4	4
Development of advanced retrieval algorithms and data processing	3	15	12
Upcoming and current satellite missions and field campaigns			
AOS (Atmosphere Observing System) mission	2	1	-
CO2M mission	2	1	-
EarthCARE mission	2	3	-
EPS-SG/3MI mission	1	2	1
GCOM-C/SGLI mission	2	2	-
PACE mission	2	8	6
Polarization CrossFire/GF-5 series & DQ-1 mission	1	6	-
Other advanced and cubesat missions	2	3	1
Calibration and validation	-	2	2
In situ and ground-based validation observations	2	3	2
Models, In situ and Remote sensing of Aerosols (MIRA) Collaborations	-	7	2
Total	22	67	44