IWGGMS-21 Scientific Program - Final Version 20250601 -

Monday - Thursday, June 9 - 12, 2025

Time (JST)	ID	Title	Chair/Speaker	Duration (min)	Session	Abstract ID
		Monday, June 9				
		Opening - welcome, goals, setup				
9:00		NIES and MOEJ		15		
9:15		JAMSTEC, NICT, Kagawa Univ, Chiba Univ, JpSAC		10		
9:25		CEOS AC-VC and WGCV/ACSG		5		
		Session 1: Status and results from current missions	**Chairs: Abhishek Chatterjee (JPL), Naoko Saitoh (Chiba U)**			
		Session 2: Status and plans of future missions	**Yasjka Meijer (ESA), Ray Nassar (ECCC)**			
9:30	1.01	Status of NIES GOSAT and GOSAT-2 Projects	Tsuneo Matsunaga (NIES)	15	Session 1	145
9:45	1.02	Long-term Global Greenhouse Gas Observation by GOSAT and GOSAT-2 and Local Emissions/Removals Observation by GOBLEU	Hiroshi Suto (JAXA)	15	Session 1	64
10:00	1.03	The OCO-2 and OCO-3 Missions: Status, Results and Plans	Vivienne Payne (JPL/Caltech)	15	Session 1	104
10:15	1.04	The New Progress of DQ-1 and the Pre-research of DQ-2	Lu Zhang (CMA)	15	Session 1	47
10:30		Coffee Break		30		
11:00	1.05	GHGSat in 2024: Performance, Global Emissions Insights, and Constellation Expansion	Dylan Jervis (GHGSat)	15	Session 1	19
11:15	1.06	The MethaneSAT mission: current status and future direction	Jonathan Franklin (Harvard University)	15	Session 1	154
11:30	1.07	Carbon Mapper updates and preliminary Tanager-1 greenhouse gas measurement performance	Riley Duren (Carbon Mapper)	15	Session 1	132
11:45	2.01	NASA's GHG Observation Plans Over the Next 4 Years	Ken Jucks (NASA Headquarters)	15	Session 2	147
12:00	2.02	The greenhouse gas observation mission with Global Observing SATellite for Greenhouse gases and Water cycle (GOSAT-GW): Updates	Hiroshi Tanimoto (NIES)	15	Session 2	18
12:15	1.08	Interface with users of GOSAT-GW TANSO-3 observation: observation requests, product downloads, and acquisition of information	Hisashi Yashiro (NIES)	15	Session 1	162
12:30	2.03	The Chinese GHG Status and Plan	Lin Chen (CMA)	15	Session 2	50
12:45	2.04	Carbon-I, a NASA Earth System Explorer Mission Concept for Global Carbon Cycle Science	Christian Frankenberg (Caltech)	15	Session 2	167
13:00		Lunch Break / Poster Session (Session 1, 2, 3) / 14:30-15:00 Coffee Break		120		
15:00	2.05	The Twin Anthropogenic Greenhouse Gas Observers Mission	Jochen Landgraf (SRON)	15	Session 2	90
15:15	2.06	The MicroCarb CO2 mission: imminent launch!	Denis Jouglet (CNES)	15	Session 2	101
15:30	2.07	The Copernicus anthropogenic CO2 Monitoring (CO2M) mission - status and results from product development	Ruediger Lang (EUMETSAT)	15	Session 2	55
15:45	2.08	Greenhouse gas observations from the proposed Arctic Observing Mission (AOM)	Ray Nassar (ECCC)	15	Session 2	111
16:00	1.09	Sub-Kilometer Hyperspectral Carbon Monitoring: Joint Radiance-Wavelength Calibration and Bayesian Spatiotemporal Collaborative Retrieval	Shichao Wu (Hefei Institutes of Physical Sciences, CAS)	15	Session 1	23
16:15	2.09	Towards a remote sensing solution to quantify N2O emissions by integrating shortwave and longwave infrared bands	Ayesha Riaz (State University of New York at Buffalo)	15	Session 2	41
		Special session to celebrate Akihiko Kuze's retirement	**Chairs: Hiroshi Suto (JAXA), Tsuneo Matsunaga (NIES)**			
16:30	SPECIAL	Measuring Greenhouse Gases from Space: Past, Present, and Future	David Crisp, Tatsuya Yokota, Akihiko Kuze	30		
17:00		Move to outside		30		
17:30		Group Photo / Ice Breaker		150		
20:00		End of Day 1				

Time (JST)	ID	Title	Chair/Speaker	Duration (min)	Session	Abstract ID
		Tuesday, June 10				
		Session 6: Urban/local/facility scale emissions - quantification and validat	**Chairs: John Worden (JPL), Julia Marshall (DLR)**			
9:00	6.01	Advanced Methane Plume Detection and Inversion Using GF-5B AHSI: A Statistical-Physical Coupling Approach	Zhonghua He (Zhejiang Climate Center, Zhejiang Meteorological Bureau)	12	Session 6	6
9:12	6.02	Methane emission estimates of localized sources from Sentinel-5 Precursor, PRISMA, EnMAP and EMIT using a cross-sectional-flux method	Michael Buchwitz (University of Bremen)	12	Session 6	7
9:24	6.03	Methane Discrete Source Detection and Quantification Using MethaneSAT	Zhan Zhang (Harvard University)	12	Session 6	33
9:36	6.04	Quantifying agricultural CH4 emissions using MethaneSAT, MethaneAIR and ground-based data	Sara Mikaloff-Fletcher (NIWA)	12	Session 6	26
9:48	6.05	Global Distributions of Super-Emitting Methane Sources	Daniel Cusworth (Carbon Mapper)	12	Session 6	54
10:00	6.06	Detection and quantification of CH4 and CO2 emissions at the facility scale with the GHGSat constellation	Jason McKeever (GHGSat)	12	Session 6	63
10:12		Session 6 Panel Discussion		18		
10:30		Coffee Break		30		
		Session 3: Retrieval algorithms, priors, and products	**Chairs: Yu Someya (NIES), Chris O'Dell (CSU)**			
11:00	3.01	OCO-3 Version 11 Snapshot Area Mapping (SAM) Mode Observations	Robert Nelson (JPL/Caltech)	15	Session 3	20
11:15	3.02	MethaneSAT XCH4 retrieval	Sebastien Roche (EDF)	15	Session 3	21
11:30	3.03	First quantification of atmospheric carbon dioxide from the Geostationary Operational Environmental Satellite (GOES East)	Aaron Sonabend (Google Research)	15	Session 3	115
11:45	3.04	Correlated albedo and elevation variability leading to retrieval artefacts	Julia Marshall (DLR/University of Leipzig)	15	Session 3	152
	3.05	withdrawn				
12:00	3.06	Impact of Raman scattering on XCO2 and SIF retrievals from OCO-2/3	Suniti Sanghavi (JPL/Caltech)	15	Session 3	52
12:15	3.07	Development of a principal components-based radiative transfer model and its application to IASI CH4 retrievals	Charles Robert (BIRA)	15	Session 3	4
12:30	3.08	Retrieval of GHG from interferogram : exploration, comparison with spectra from spectra	Sebastien Payan (Sorbonne Universite - CNRS - LATMOS)	15	Session 3	91
12:45		Lunch Break / Poster Session (Session 4, 5) / 14:30-15:00 Coffee Break		135		
		Session 4: Calibration and validation	**Chairs: Hirofumi Ohyama (NIES), Mahesh Kumar Sha (BIRA)**			
	4.01	withdrawn				
15:00	4.02	Evaluating satellite-based XCO2 measurements from v11.2 OCO-2 and v11 OCO-3 against ground-based measurements from TCCON and COCCON, and airborne measurements from ATom	Saswati Das (JPL/Caltech)	12	Session 4	2
15:12	4.03	Validation of satellite data of greenhouse gases based on observations of TCCON Hefei Site, China	Wei Wang (Anhui Institute of Optics and Fine Mechanics, CAS)	12	Session 4	66
15:24	4.04	The COllaborative Carbon Column Observing Network COCCON: Recent updates	Matthias Max Frey (Karlsruhe Institute of Technology)	12	Session 4	40

15:36	4.05	What Are Fiducial Reference Measurements for Greenhouse Gases and How Reliable Are They For The Satellite Validation?	Mahesh Kumar Sha (BIRA)	12	Session 4	160
15:48	4.06	Status and upcoming plans of ground-based FTS measurements for evaluating space-based greenhouse gas measurements and carbon cycle studies at the National institute for Environmental Studies	Isamu Morino (NIES)	12	Session 4	148
16:00	4.07	The Copernicus anthropogenic CO2 Monitoring (CO2M) mission - operational product validation and monitoring	Catherine Hayer (Hamtec Consulting for EUMETSAT)	12	Session 4	102
16:12	4.08	Assessing the Effect of HITRAN Updates on Cross-Platform Calibration and Validation for Satellite-Based GHG Retrievals	Shin Ishida (JAXA)	12	Session 4	127
16:24	4.09	Comparison of the TIR spectral radiance between GHG satellite-based multi-sensors (GOSAT, GOSAT-2, AIRS, IASI, and CrIS) and aircraft-based S-HIS	Atsushi Yasuda (RESTEC)	12	Session 4	141
16:36	4.12	MethaneSAT L0 to L1B processor and in-Flight Calibration and Performance	Bingkun Luo (Harvard-Smithsonian Center for Astrophysics)	12	Session 4	117
16:48		Session 4 Panel Discussion		12		
17:00		End of Day 2				
Time (JST)	ID	Title	Chair/Speaker	Duration (min)	Session	Abstract ID
		Wednesday, June 11				
		Session 5: Global to regional flux estimates and validation	**Chairs: Sara Mikaloff-Fletcher (NIWA), Hannakaisa Lindqvist (FMI)**			
9:00	5.01	Studying the Carbon Cycle Dynamics in Semi-arid Regions of the Southern Hemisphere from Space	Sanam N. Vardag (Heidelberg University)	15	Session 5	93
9:15	5.02	Advance in understanding of the changes in the carbon cycle and its linkage to the water cycle during the 2023-2024 El Nino in Amazon region	Wenli Zhao (Columbia University)	15	Session 5	76
9:30	5.03	Inverse analysis with in-situ/flask and GOSAT observations to disentangle regional and sectoral emission contributions to the surge of atmospheric CH4 for 2020-2022	Yousuke Niwa (NIES)	15	Session 5	126
9:45	5.04	Nitrous oxide (N2O) surface fluxes derived from IASI space-borne observations	Philippe Ricaud (CNRM, Toulouse)	15	Session 5	84
10:00	5.05	Progress in understanding natural carbon fluxes with decade-long OCO-2/3 observations	Junjie Liu (JPL/Caltech)	15	Session 5	70
10:15	5.06	Progress in multiresolution flux inversion in support of OCO2-MIPv2	Kevin Bowman (JPL/Caltech)	15	Session 5	73
10:30		Coffee Break		30		
		Session 8: Stakeholder needs and engagement	**Chairs: Lesley Ott (NASA), Hiroshi Tanimoto (NIES)**			
11:00	8.01	Engaging with stakeholders through the Greenhouse Gas Task Team	Yasjka Meijer (ESA)	12	Session 8	58
11:12	8.02	UNEP's IMEO Methane Alert and Response System: Current status and new requirements to enhance the system	Itziar Irakulis-Loitxate (UNEP, IMEO)	12	Session 8	165
11:24	8.03	The U.S. GHG Center: improving the quality, transparency, and accessibility of GHG information for decision-making	Lesley Ott (NASA)	12	Session 8	163
11:36	8.04	Development of the Japan Greenhouse Gas Center and its stakeholder engagement	Hiroshi Tanimoto (NIES)	12	Session 8	82
11:48	8.05	The GOSAT series and its use in environmental policy and utilization concept	Hironari Ishihara (Ministry of the Environment, Japan)	12	Session 8	144
12:00	8.06	The ESA-European Commission Earth System Science Initiative – A unique partnership and collaborative opportunity for advancing GHG knowledge	Edward Malina (ESA ESRIN)	12	Session 8	168
12:12	8.07	Meta-modeling for the Climate TRACE Emissions Inventory	Daniel Moore (WattTime, Climate TRACE)	12	Session 8	153
12:24	8.08	Enhancing the utility and adoption of space-based greenhouse gas observations by stakeholders in the inventory and policy communities	David Crisp (Crisp Spectra LLC)	12	Session 8	48
12:36		Session 8 Panel Discussion		24		
13:00		Lunch Break / Poster Session (Session 6, 7) / 14:30-15:00 Coffee Break		120		
		Session 4: Calibration and validation	**Chairs: Hirofumi Ohyama (NIES), Mahesh Kumar Sha (BIRA)**			
	4.10	withdrawn				
	4.11	withdrawn				
	4.12	moved to Day 3				
	4.09	moved to Day 3				
				12		
		Session 5: Global to regional flux estimates and validation	**Chairs: Sara Mikaloff-Fletcher (NIWA), Hannakaisa Lindqvist (FMI)**			
	5.07	withdrawn				
15:00	5.08	Regional carbon sink estimates by NTFVAR inverse model with surface and satellite observations	Shamil Maksyutov (NIES)	15	Session 5	71
15:15	5.09	Investigating anomalous growth of atmospheric CO2 in 2023-2024 using GOSAT XCO2-constrained inverse modeling	Suman Maity (NIES)	15	Session 5	78
15:30	5.10	Constraining shoulder season carbon fluxes (CO2 and CH4) from the Arctic - Boreal zone using remote-sensing observations	Abhishek Chatterjee (JPL/Caltech)	15	Session 5	59
15:45		End of Day 3				
Time (JST)	ID	Title	Chair/Speaker	Duration (min)	Session	Abstract ID
		Thursday, June 12				
		Session 6: Urban/local/facility scale emissions - quantification and validat	**Chairs: John Worden (JPL), Julia Marshall (DLR)**			
9:00	6.07	Scale dependencies in urban CO2 inversions constrained by satellite remote sensing measurements	Alohotsy Rafalimanana (Universite de Reims Champagne-Ardenne)	12	Session 6	97
9:12	6.08	Investigating the potential for detecting urban methane point sources over South Korea using EMIT observations	Yu-Ri Lee (Seoul National University)	12	Session 6	157
9:24	6.09	A network of EM27 FTS for urban measurements of XCO2, XCH4, and XCO across the city of Toronto	Nicole Jacobs (University of Toronto)	12	Session 6	8
9:36	6.10	Regional and socioeconomic characteristics in global cities' CO2 emissions revealed from space	Doyeon Ahn (GESTAR II, Morgan State University)	12	Session 6	53
9:48	6.11	Assessing Methane Detection Capabilities of Operational Satellite Sensors using Controlled Release Experiments	Shobha Kondragunta (NOAA)	12	Session 6	99
10:00	6.12	Common Practices For Quantifying, Reporting, Validating and Assessing Facility Scale Methane Emissions Using Remote Sensing	Paul Green (NPL)	12	Session 6	129
10:12		Session 6 Panel Discussion		18		
10:30		Coffee Break		30		
		Session 5: Global to regional flux estimates and validation	**Chairs: Sara Mikaloff-Fletcher (NIWA), Hannakaisa Lindqvist (FMI)**			
11:00	5.11	Can we detect CH4 emissions from permafrost with TROPOMI XCH4?	Ray Nassar (ECCC)	15	Session 5	110
11:15	5.12	Evaluating the consistency of the emissions estimated from atmospheric inversions using three methane TROPOMI products at the regional and global scales	Adrien Martinez (LSCE)	15	Session 5	143
11:30	5.13	European Methane Flux Estimates Using the Community Inversion Framework	Anteneh Getachew Mengistu (FMI)	15	Session 5	29

11:45	5.14	Assessing South Asia's Methane Budget Using Satellite Observations and Inverse Modeling	Rakesh Subramanian (University of Vienna)	15	Session 5	17
12:00	5.15	Estimating methane emissions consistent with both satellite and isotope constraints	Sourish Basu (University of Maryland)	15	Session 5	13
12:15	5.16	The MethaneSAT CORE algorithm: quantification of diffuse sources from oil and gas production regions	Jacob Bushey (Harvard University)	15	Session 5	109
12:30	5.17	Methane Budgets of East, Southeast and South Asia (2010-2021): An Inversion Inter-Comparison for Asia (MICA)	Fenjuan Wang (NIES)	15	Session 5	80
12:45	5.18	Benchmarking USA Methane Inventories using GOSAT based Methane Fluxes	John Worden (JPL/Caltech)	15	Session 5	49
13:00		Lunch Break		60		
		Session 7: Multi-species observations/modeling and GHG-AQ synergy	**Chairs: Jochen Landgraf (SRON), Helen Worden (NCAR)**			
14:00	7.01	Column and Surface Concentration Observations of CO2 and NO2 at Yokosuka, Japan, in Support of GOSAT-GW/TANSO-3	Yugo Kanaya (JAMSTEC)	15	Session 7	95
14:15	7.02	Towards shipborne emission monitoring and satellite validation of CO2, CH4, CO, and NO2 through simultaneous columnar and in situ observations	Astrid Mueller (NIES)	15	Session 7	116
14:30	7.03	Step change in boreal fire emissions? A Canadian case study	Helen Worden (NCAR)	15	Session 7	46
14:45	7.04	Predicting fossil fuel CO2 using air quality emissions and emerging CO2 satellite observations for global carbon cycle assessment	Kazuyuki Miyazaki (JPL/Caltech)	15	Session 7	15
15:00	7.05	Monitoring the "atmospheric stock" of greenhouse gases from space	Brad Weir (Morgan State University & NASA GSFC)	15	Session 7	89
15:15	7.06	Top-down emission estimates of CO2 and co-emitted air pollutants through a sector-based inversion framework	Zhen Qu (North Carolina State University)	15	Session 7	9
15:30		Session 7 Panel Discussion		30		
		Closing - thank you, next IWGGMS				
16:00		MOEJ and NIES		15		
16:15		IWGGMS-22 LOC		15		
16:30		End of IWGGMS-21				
Time (JST)	ID	Title	Presenter	Duration (min)	Session	Abstract ID
		Poster Session				
	1.10	Evaluation of Carbon dioxide (CO2) variations and underlying processes over India using satellite observations and transport models	Aparna Aparajita (Indian Institute of Technology Delhi)		Session 1	103
	1.11	Ground-Based_FTIR_Atmospheric_CFCs-HCFCs_Spatiotemporal_Variations	Shiyi Wang (Hefei Institutes of Physical Science, CAS)		Session 1	83
	1.12	Long-term XCO2 from GOSAT observations with IAPCAS retrieval algorithm	Lu Yao (Institute of Atmospheric Physics, CAS)		Session 1	65
	2.10	The greenhouse gas emission monitoring spectrometer onboard CubeSat platforms: current status and plans in Korea	Hoejun Choi (Pukyong National University)		Session 2	124
	2.11	The plans for the Greenhouse gases absorption spectrometer on FengYun -3H	Qian Wang (CMA)		Session 2	27
	2.12	Hyperspectral imaging detection technology for greenhouse gases with variable spatial resolution based on DMD coding	Haiyan Luo (Hefei Institutes of Physical Science, CAS)		Session 2	118
	3.09	withdrawn				
	3.10	Release and demonstration of a new open retrieval algorithm toolset	Peter Somkuti (University of Maryland / NASA)		Session 3	158
	3.11	Latest topics about the GOSAT-2 SWIR L2 products	Yukio Yoshida (NIES)		Session 3	140
	3.12	Improved CO2 retrievals with modified aerosol information using GOSAT measurements over East-Asia	Yeonjin Jung (Pukyong National University)		Session 3	134
Day 1	3.13	A machine learning approach to fill the gap in global XCO2 using multiple satellite measurements	Jonghyuk Lee (Seoul National University)		Session 3	131
	3.14	Updates of retrieval algorithm for GOSAT-2/TANSO-FTS-2 TIR bands	Naoko Saitoh (Chiba University)		Session 3	121
	3.15	Sensitivity analysis of XCH4 retrieval algorithm for the Narsha microsatellites	Jaemin Hong (Seoul National University)		Session 3	119
	3.16	Advances on the emission estimation using the divergence method for individual satellite overpasses with noise reduction	Anssi Koskinen (FMI/University of Helsinki)		Session 3	98
	3.17	withdrawn				
	3.18	Monitoring formic acid emissions from GOSAT-2 satellite observations	Fengxin Xie (The University of Tokyo)		Session 3	92
	3.19	Comparative validation of satellite-based GHG observations using FTS	Minju Kang (Ewha Womans University)		Session 3	74
	3.20	Air mass factor calculation using deep neural network	Yajun Xu (NICT)		Session 3	44
	3.21	Reprocessing the GOSAT TANSO-FTS record via ACOS v11 full physics retrieval algorithm	Christopher O'Dell (CSU/CIRA)		Session 3	34
	3.22	Retrieving the Vertical Profiles of Carbon Dioxide (CO2) and Methane (CH4) Using TCCON Fourier Transform Spectrometer (FTS)	Man-Hae Kim (Seoul National Unversity)		Session 3	28
	3.23	Satellite Multi-Band Multi-Path Approaches for Methane Quantification	Wook Kang (Yonsei University)		Session 3	22
	3.24	Dual-domain injection network for methane plumes segmentation	Yuquan Liu (Hefei Institutes of Physical Science, CAS)		Session 3	16
	4.20	What to expect from the HITRAN2024 database?	Thibault Bertin (Center for Astrophysics, Harvard & Smithsonian)		Session 4	112
	4.14	Inverse modeling of GOSAT observations and machine learning predictions highlight the role of wet tropics in driving the 2020-2022 methane surge	Zhen Qu (North Carolina State University)		Session 4	11
	4.15	Establishing an Arctic-Boreal Earth science, Cal/Val supersite at the FMI Arctic Space Centre in Sodankylä	Hannakaisa Lindqvist (FMI)		Session 4	164
	4.16	Pre-launch and on-orbit spectral calibration of MethaneSAT	David Miller (Harvard University)		Session 4	155
	4.17	Validation plan for GOSAT-GW TANSO-3 Level 2 products	Hirofumi Ohyama (NIES)		Session 4	149
	4.18	Greenhouse gases validation and monitoring over the East Asia by satellite based observation	Eunha Sohn (NMSC/KMA)		Session 4	139
	4.19	Bridging the Gap: Ground-Based and Airborne Measurements of CO2 and CH4 over the Tibetan Plateau for Satellite Validation	Yilong Wang (Institute of Tibetan Plateau Research, CAS)		Session 4	120
	4.21	An Overview of the Multi-instrument Dataset Collected during the 2023 AEROMMA Campaign	Dustin Roten (JPL/Caltech)		Session 4	107
	4.22	Aircraft-based CO2 and CH4 vertical distributions at the Anmyeon-do GAW site and the Yellow Sea in Korea for satellite retrievals validation	Sunran Lee (National Institute of Meteorological Sciences)		Session 4	88
	4.23	Short- and long-term ground-based FTIR GHG measurements at the Qinghai-Tibetan Plateau and contributes to satellite validation	Minqiang Zhou (Institute of Atmospheric Physics, CAS)		Session 4	57
	4.24	Validation of the latest GOSAT series L2 products	Yukitomo Tsutsumi (NIES)		Session 4	42
	4.25	Calibration and performance of MethaneSat and GeoXO-ACX at BAE Systems Inc.	Betsy Farris (BAE Systems, Inc.)		Session 4	32
	4.26	The HITRAN2024 methane update	Thibault Bertin (Center for Astrophysics, Harvard & Smithsonian)		Session 4	31
	5.19	Capacity of observing systems to estimate CH4 fluxes at regional and sectorial scales through OSSEs	Nicole Montenegro (LSCE)		Session 5	161
	5.20	The Community Inversion Framework: A Flexible and Scalable Data Assimilation Framework for Satellite Greenhouse Gas Observations	Adrien Martinez (LSCE)		Session 5	159
	5.21	Localized CO2 enhancements observed by the GOSAT satellite and their relation to country-level anthropogenic emissions	Rajesh Janardanan (NIES)		Session 5	146

Day 2	5.22	Global carbon dioxide and methane flux estimates based on GOSAT-2 observations	Makoto Saito (NIES)		Session 5	137
	5.23	Quantifying Indian terrestrial biospheric CO2 flux using observations from ground-based network and GOSAT	Lorna Raja Nayagam (NIES)		Session 5	125
	5.24	Development of the OCO-2 inverse analysis system introducing independent bias correction method	Takashi Maki (MRI)		Session 5	123
	5.25	Preliminary CO2 flux inversion results from the OCO-2 v11 MIP	David Baker (CSU/CIRA)		Session 5	122
	5.26	withdrawn				
	5.27	Slow down in China's methane emission growth	Min Zhao (Institute of Tibetan Plateau, CAS)		Session 5	85
	5.28	Integrating Isotopic, Satellite, and Modeling Techniques for Enhanced Methane Flux Estimation in Global CH4 Monitoring	Dmitry Belikov (Chiba University)		Session 5	79
	5.29	Differentiable Land Model Reveals Global Environmental Controls on Latent Ecological Functions	Kevin Bowman (JPL/Caltech)		Session 5	77
	5.30	Investigating the causes of increasing methane emissions from Africa using inverse analysis of TROPOMI satellite observations	Nicholas Balasus (Harvard University)		Session 5	72
	5.31	withdrawn				
	5.32	Understanding Fire dynamics and its contributions to carbon flux variability in South Asia	Chiranjit Das (Indian Institute of Technology Delhi)		Session 5	56
	5.33	CH4 emissions estimates and sensitivity analysis using STILT-inversion over South Korea (2010-2021)	Samuel Takele Kenea (National Institute of Meteorological Sciences)		Session 5	35
	5.34	Using satellite data and atmospheric inversion modelling to estimate global and high resolution CO2 budgets: project FICOCOSS	Anteneh Mengistu (FMI)		Session 5	12
	5.35	withdrawn				
	5.36	Global Methane Flux Estimates Using the GOSAT Partial Column Retrievals and CTE-CH4 Atmospheric Inverse Model	Aki Tsuruta (FMI)		Session 5	156
	5.37	The integrated Land Ecosystems Atmospheric Processes Study (iLEAPS)	Masayuki Kondo (Hiroshima University)		Session 5	170
	5.38	Global carbon budgets estimated from atmospheric O2 and CO2 observations in the western Pacific over a 20-year period	Yasunori Tohjima (NIES)		Session 5	171
Day 3	6.13	Utilization of GEMS and OCO-3 data on the identification of CO2-NO2 relationship and CO2 emission estimation in Asian Urban areas	Yun Gon Lee (Chungnam National University)		Session 6	142
	6.14	High resolution CO2 simulation over Kanto region in Japan	Jagat Bisht (NIES)		Session 6	135
	6.15	The role of satellite observations in constraining urban CO2 emissions	Sojung Sim (Seoul National University)		Session 6	130
	6.16	Estimating urban CH4 emissions from satellite-derived enhancement ratios of CH4, CO2, and CO	Jon-Paul Mastrogiacomo (University of Toronto)		Session 6	113
	6.17	Maximizing the Use of Spatial Information in Dense XCO2 Observations for Bayesian Inversions	Dustin Roten (JPL/Caltech)		Session 6	100
	6.18	withdrawn				
	6.19	Tracking CO2 emission changes of point sources in China using OCO-3 Snapshot Area Mapping mode observations	Zhongwei Liu (Institute of Tibetan Plateau Research, CAS)		Session 6	39
	6.20	High resolution methane modelling using satellite observations: a case study of the coal mining region in New South Wales in Australia	Ida Jandl (University of Melbourne)		Session 6	38
	6.21	COCCON-Spain: Toward an Integrated Greenhouse Gas Observation System in Spain	Eliezer Sepulveda (AEMET-TRAGSATEC)		Session 6	37
	6.22	CO2 emissions from China and their impact on Japan's coastal regions inferred from ΔXCO2/ΔXCH4 of GOSAT and GOSAT-2 observations	Yusuke Hayashi (Chiba University)		Session 6	36
	6.23	Carbon dioxide emission quantification and validation for the Carbon Mapper Coalition/Tanager-1 satellite	Jinsol Kim (Carbon Mapper)		Session 6	25
	6.24	Characteristics of methane in South Asia inferred from enhancement ratios of greenhouse gas concentrations based on satellite observations	Taichi Yoshii (Chiba University)		Session 6	24
	6.25	withdrawn				
	6.26	Deep-learning-based point source emission estimation for future satellite missions	Thomas Plewa (Heidelberg University)		Session 6	94
	6.27	Urban CO2 simulations for the Greater Tokyo Area based on high-resolution modeling and comparison with tower observation network	Zhenglun Yang (NIES)		Session 6	169
	7.07	Estimation of CO2 and NOx emissions using the divergence method applied to pseudo satellite observations	Masahiro Yamaguchi (JAMSTEC)		Session 7	150
	7.08	The SMART-s NO2 vertical profile products from Pandora for GOSAT-GW validation	Serin Kim (Pukyong National University)		Session 7	136
	7.09	High-precision monitoring of combustion-origin CO2 concentrations in a megacity using simultaneous observations of CO2 and other combustion-origin species	Hitoshi Irie (Chiba University)		Session 7	128
	7.10	Retrieval algorithm development for TANSO-3 NO2 product	Tamaki Fujinawa (NIES)		Session 7	105
	7.11	Estimation of Direct Aerosol Radiative Forcing in Urban Areas of South Korea Using GEMS AOD and a Radiative Transfer Model	Juhee Lee (Yonsei University)		Session 7	87
	7.12	Comparison of morning-afternoon difference of AOD in Southeast Asia	Seonggyun Na (Yonsei University)		Session 7	86
	7.13	Development Of A Simple NOx Emission Estimation Method Using Satellite Observations And A Chemistry-Transport Model	Yousuke Yamashita (NIES)		Session 7	75
	7.14	withdrawn				
	7.15	Evaluation of aerosol layer height using O2-O2 and O2-A band from TANSO-3/GOSAT-GW	Hyunkwang Lim (NIES)		Session 7	51
	7.16	Quantification of Ambient Volatile Organic Compounds (VOCs) in Malaysia Using Ground-Based Measurements	Nor Syamimi Sufiera Limi Hawari (UKM)		Session 7	151
	7.17	Top-down estimates of European emissions of black carbon for 2022	Saurabh Annadate (University of Urbino)		Session 7	30