		IWGGMS-21 Scien	tific Program - Final Version 20250601 -			
		Monday	- Thursday, June 9 - 12, 2025			
Time (JST)	ID	Title	Chair/Speaker	Duration (min)	Session	Abstract ID
		Monday, June 9		•		
0.00		Opening - welcome, goals, setup	l l	15	1	
9:00 9:15		NIES and MOEJ JAMSTEC, NICT, Kagawa Univ, Chiba Univ, JpSAC		15		
9:25		CEOS AC-VC and WGCV/ACSG		5		
		Session 1: Status and results from current missions Session 2: Status and plans of future missions	Chairs: Abhishek Chatterjee (JPL), Naoko Saitoh (Chiba U) 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	– Hiroshi Suto (JAXA)	15	Session 1	64
		Local Emissions/Removals Observation by GOBLEU				
10:00	1.03	The OCO-2 and OCO-3 Missions: Status, Results and Plans The New Progress of DO-1 and the Pre-research of DO-2	Vivienne Payne (JPL/Caltech) Lu Zhang (CMA)	15	Session 1 Session 1	104
10:30	1101	Coffee Break	La Lindig (onit)	30	000010111	
11:00	1.05	GHGSat in 2024: Performance, Global Emissions Insights, and Constellation	Dylan Jervis (GHGSat)	15	Session 1	19
11:15	1.06	Expansion The MethaneSAT mission: current status and future direction	Jonathan Franklin (Harvard University)	15	Session 1	154
		Carbon Mapper updates and preliminary Tanager-1 greenhouse gas				
11:30	1.07	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
	1.00	Interface with users of GOSAT-GW TANSO-3 observation: observation		15	Constant.	
12:15	1.08	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	1	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	Ray Nassar (ECCC)	15	Session 2	111
10.40	2.00	(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
		Towards a remote sensing solution to quantify N2O emissions by integrating				<u> </u>
16:15	2.09	shortwave and longwave infrared bands	Ayesha Riaz (State University of New York at Buffalo)	15	Session 2	41
16-20	ODECIAL	Special session to celebrate Akihiko Kuze's retirement	Chairs: Hiroshi Suto (JAXA), Tsuneo Matsunaga (NIES)	20	1	
17:00	SPECIAL	Measuring Greenhouse Gases from Space: Past, Present, and Future	David Crisp, Tatsuya Yokota, Akihiko Kuze	30		
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17:30 20:00		Group Photo / Ice Breaker End of Day 1	Chair/Snaskar	150	Session	Abstract ID
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		Session 5	15	Sanam N. Vardag (Heidelberg University)	0	5.01	9:00
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International sector (International International Internation International International I		Session 5	15	Philippe Ricaud (CNRM, Toulouse)	Nitrous oxide (N2O) surface fluxes derived from IASI space-borne	5.04	9:45
International distribution in suggest of DCO2 MIP2         Peer Monetar (PL-Catech)         13         Peer Monetar (PL-Catech)         33           10.00         Section R Subsolvitor mode and suggests of Catech (PL-Catech)         10         30           10.10         6.00         Section R Subsolvitor mode and suggests of Catech (PL-Catech)         12         Section R Subsolvitor mode and suggests of Catech (PL-Catech)         12         Section R Subsolvitor mode and suggests of Catech (PL-Catech)         12         Section R Subsolvitor mode and suggests of Catech (PL-Catech)         12         Section R Subsolvitor mode and suggests of Catech (PL-Catech)         12         Section R Subsolvitor mode and suggests of Catech (PL-Catech)         12         Section R Subsolvitor mode and suggests of Catech (PL-Catech)         12         Section R Subsolvitor mode and suggests of Catech (PL-Catech)         12         Section R Subsolvitor mode and suggests of Catech (PL-Catech)         12         Section R Subsolvitor mode and suggests of Catech (PL-Catech)         12         Section R Subsolvitor mode and suggests of Catech (PL-Catech)         12         Section R Subsolvitor mode and suggests of Catech (PL-Catech)         12         Section R Subsolvitor mode and suggest of Catech (PL-Catech)         12         Section R Subsolvitor mode and suggest of Catech (PL-Catech)         12         Section R Subsolvitor mode and suggest of Catech (PL-Catech)         12         Section R Subsolvitor mode and suggest of Catech (PL-Catech)         12         Section R Subsolvitor mode		Session 5	15	Junjie Liu (JPL/Caltech)	Progress in understanding natural carbon fluxes with decade-long OCO-2/3	5.05	10:00
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Intel Bala         Intel Construction         Intel Construct		Soccion 8	12	Hirachi Tanimata (NIES)	Development of the Japan Greenhouse Gas Center and its stakeholder	8.04	11-26
1200     0.00     The EAA-Curposed Commission Earth System Science Institution - A stripper Science Insting Science Institution - A stripper Science Institution -					engagement		
1212         8.00         patternstating and collaborative expertating for Annueleging         Edward Mainin (ESA ESNN)         12         Session 3           1212         8.00         Edward Mainin (ESA ESNN)         12         Session 3           1224         8.00         Edward Mainin (ESA ESNN)         12         Session 3           1223         0.00         Edward Mainin (ESA ESNN)         12         Session 3           1223         Session 4         20         Session 4         20           1233         Edward Mainin (ESA ESNN)         24         2           1234         Unch Brack Protes Session Reserve College Brack         24         2           4.00         workb Brack Protes Session Reserve College Brack         24         2           4.11         withdrawn         Chairs: Horduni Ohyaan ONES), Mahesh Kumar Sha (BIRA)         1         2           4.12         moned is Day 3         Chairs: Seare Mikalohf - Fletcher (NIWA), Hannakasa Lindquist (FM)         1         1           5.00         withdrawn         Samani Maksyntov (NIES)         15         Session 5           5.01         withdrawn         Samani Maksyntov (NIES)         15         Session 5           5.02         withdrawn         Samani Maksyntov (NIES)         15	1	Session 8			The ESA-European Commission Earth System Science Initiative – A unique		
1224     8.08     Choking the utility and Address in the inentory and policy communities observations by stakeholders in the inentory and policy communities observations by stakeholders in the inentory and policy communities     Devid Grisp Spectra LLC)     12     Session 8       1236     Design of Proceeding     24     120       1237     Session 6 Plant Discostion     24     120       1200     Chairs: Hirofumi Ohyama (NES), Mahesh Kumar Sha (BIRA)     24       4.10     withdrawn     12     120       4.11     moved to Day 3     12     12       5.07     withdrawn     12     12       5.07     withdrawn     12     12       6.00     Session 5 Global to regional flux estimates and validation     Chairs: Sara Mikaloff-Fletcher (NIWA), Hannakaisa Lindqvist (FMI)       5.07     withdrawn     Shami Makeyutov (NES)     15     Session 5       15.00     5.00     Antonionic and the attimates by NTFVAR Inverse model with surface and stamil Makeyutov (NES)     15     Session 5       15.01     5.00     Constraining thoulder season action fluxes (C2 and CH4) from the Arctic Bereal zone using ender-terring observations     Suman Matky (NES)     15     Session 5       15.03     5.10     Constraining thoulder season action fluxes (C2 and CH4) from the Arctic Bereal zone using observations     Suman Matky (NES)     15     Session 5 <td< td=""><td>1</td><td>Session 8</td><td>12</td><td>Edward Malina (ESA ESRIN)</td><td>06</td><td>8.06</td><td>12:00</td></td<>	1	Session 8	12	Edward Malina (ESA ESRIN)	06	8.06	12:00
12:23         Session Parameters in the inventory and policy communities         Used Charge Spectra LLU )         12         Session Parameters           12:30         Session Parameters         120         240         120           12:30         Session Parameters         120         240         120           Session A (Cabination and volidation 4:11         Session A (Cabination and volidation 4:11         120         120           4:10         Institutions         Cabination and volidation 4:11         Cabination and volidation 4:11         120         120           4:11         Institutions         Cabination and volidation 4:12         Cabination and volidation 4:12         120         120           4:11         Institutions         Cabination and volidation 4:12         Cabination and volidation 4:12         120         120           4:11         Institutions         Cabination and volidation 4:12         Cabination and volidation 4:12         120         120           5:11         Session 5: Clobal to regional flux estimates and validation 4:12         Cabination and validation 4:15         15         Session 5: Clobal to regional flux estimates and validation 4:15         Session 5: Clobal to regional flux estimates and validation 4:15         Session 5: Clobal to regional flux estimates and validation 4:15         Session 5: Clobal to regional flux estimates and validation 4:15         Session 5	1	Session 8	12	Daniel Moore (WattTime, Climate TRACE)		8.07	12:12
12:28     Issues 19 Parel Deconsistent     24       12:00     Lunch Reark, Pater Session Gession 6, 7/ J L3:01:55:00 Coffee Beak     120       4.10     withdown     1       4.11     withdown     1       4.12     model to bay     1       4.12     model to bay     1       5.07     withdown     12       5.07     withdown     15       5.07     withdown     15       5.07     withdown     15       5.07     withdown     15       5.08     Regional carbon sink estimates by NTFVAR inverse model with surface and thatasyntor (NES)     15       5.00     Constraining shoulder season carbon fillues (CO2 and CH4) from the Artect and thatasyntor (NES)     15       5.15     5.00     Constraining shoulder season carbon fillues (CO2 and CH4) from the Artect and thatasyntor (NES)     15       5.16     End of Day 3     15       5.17     10     Title     Chair/Speaker     Duration (min) Seasion 5       5.18     Ford Day 3     N		Session 8	12	David Crisp (Crisp Spectra LLC)	08	8.08	12:24
Session 4: Calibration and validation         Chairs: Hirofumi Ohyama (NLES), Mahesh Kumar Sha (BIRA)           4.10         withdrawn             4.11         withdrawn             4.12         moved to Day 3             4.12         moved to Day 3          12           4.12         moved to Day 3          12           5.07         Withdrawn          12           5.07         Withdrawn           5           15:00         5.08         Ragional carbon site estimates by NTFVAR inverse model with surface and satallite observations         Surman Maity (NIES)         15         Session 5           15:15         5.09         Investigating anomalous growth of atmospheric CO2 in 2023-2024 using COAT XCOC carbotariani (mean modeling         Surman Maity (NIES)         15         Session 5           15:15         5.00         Investigating anomalous growth of atmospheric CO2 in 2023-2024 using COAT XCOC carbotarianic growth atmospheric CO2 in 2023-2024 using COAT XCOC carbotarianic growth atmospheric CO2 in 2023-2024 using COAT XCOC carbotarianic drive satisfies         Surman Maity (NIES)         15         Session 5           15:15         5:00         True GOT Diata Surgating anomalous growth atmospheric CO2 in 2023-2024 using COAT XCOC carbotaria dimes atmospheric CO2 in 20			24				12:36
4.10     withdrawn     model to Day 3     model to Day 3       4.11     withdrawn     model to Day 3     model to Day 3       4.12     model to Day 3     model to Day 3       5.00     Regional carbon sink estimates by NTFVAR Inverse model with surface and satellite deverations     Shamil Maksyutor (NES)     12       15.00     5.00     Regional carbon sink estimates by NTFVAR Inverse model with surface and satellite deverations     Shamil Maksyutor (NES)     15     Session 5       15.01     5.00     Constraining shoulder sason carbon fluxes (CO2 and CH4) from the Arctic Born and Sharing Research			120				13:00
4.11       withdrawn       mewed to Day 3       mewed to Day 3         4.02       mewed to Day 3       12         4.03       mewed to Day 3       12         5.07       withdrawn       12         5.07       withdrawn       12         5.07       withdrawn       15         5.08       Regional carbon sink estimates by NTFVAR inverse model with surface and carbon sink estimates by NTFVAR inverse model with surface and carbon sink estimates by NTFVAR inverse model with surface and carbon sink estimates by NTFVAR inverse model with surface and carbon sink estimates by NTFVAR inverse model with surface and carbon sink estimates by NTFVAR inverse model with surface and carbon sink estimates by NTFVAR inverse model with surface and carbon sink estimates by NTFVAR inverse model with surface and carbon sink estimates by NTFVAR inverse model with surface and carbon sink estimates by NTFVAR inverse model with surface and carbon sink estimates by NTFVAR inverse model with surface and carbon sink estimates by NTFVAR inverse model with surface and carbon sink estimates by NTFVAR inverse model with surface and carbon sink estimates by NTFVAR inverse model with surface and carbon sink estimates by NTFVAR inverse model with surface and carbon sink estimates by NTFVAR inverse model with surface and carbon sink estimates by NTFVAR inverse model with surface and carbon sink estimates by NTFVAR inverse model with surface and carbon sink estimates by NTFVAR inverse model with surface and carbon suite remote assign the season carbon fluxes (CO2 and CH4) fron the Arctic Season 5         15.68       End of Day 3       Intermode Season 5         16.09       <			1	Chairs: Hirotumi Ohyama (NIES), Manesh Kumar Sha (BIRA)		4.10	
4.09       noved to Day 3       12         Session 5: Global to regional flux estimates and validation       Chairs: Sara Mikaloff-Fletcher (NIWA), Hannakaisa Lindqvist (FMI)       12         15:00       5:07       Withdrawn       Chairs: Sara Mikaloff-Fletcher (NIWA), Hannakaisa Lindqvist (FMI)         15:00       5:08       Regional carbon sink estimates by NTFVAR Inverse model with surface and satellite observations       Shamil Maksyutov (NES)       15       Session 5         15:15       5:00       Investigating anomalous growth of atmospheric CO2 in 2023-2024 using GOSAT XCO2-constrained inverse modeling       Suman Maity (NES)       15       Session 5         15:30       5:10       Constraining shoulder season carbon fluxes (CO2 and CH4) from the Arctic - Boreal zone using remote-sensing observations       Abishek Chatterjee (IPL/Caltech)       15       Session 5         15:45       End of Day 3       Chair/Speaker       Duration (min)       Session 7         7       Scale dependencies in ubin CO2 inversions constrained by satellite remote sources over South Rora using EMIT observations       Yu-Ri Lee (Seoul National University)       12       Session 6         9:12       6:08       Antework of EM2 FTS for urban mesurements of XCO2, XCH4, and XCO       Nicole Jacobs (University of Toronto)       12       Session 6         9:24       6:09       Antework of EM2 FTS for urban mesurements of XCO2, XCH4, and XCO							
Session 5: Global to regional flux estimates and validation         Chairs: Sara Mikaloff-Fletcher (NIWA), Hannakaisa Lindqvist (FMI)         12           5.07         withdrawn         15.07         withdrawn         15.07         Session 5           15.08         Segional carbon sink estimates by NTFVAR inverse model with surface and satellite observations         Shamil Maksyutov (NES)         15         Session 5           15.15         5.09         Investigating anomalous growth of stroopheric CO2 in 2023-2024 using GOSAT XCO2-constrained inverse modeling         Suman Maity (NES)         15         Session 5           15.39         5.00         Constraining shoulder seeson carbon fluxes (CO2 and CH4) from the Arctic- backing base and using remote-sensing observations         Abhishek Chatterjee (JPL/Caltech)         15         Session 5           15.46         End of Day 3         Chair/Speaker         Duration (min)         Session 7           11me (JST)         10         Title         Chair/Speaker         Duration (min)         Session 7           9:00         6:07         Scale dependencies in urban CO2 inversions constrained by satellite remote sensing measurements         Alohotsy Rafalimanana (University)         12         Session 6           9:12         6:00         Investigating the potential for detecting urban methane point sources over yru-Ric Lee (Seoul National University)         12         Session 6							
Session 5: Global to regional flux estimates and validation         Chairs: Sara Mikaloff-Fletcher (NIWA), Hannakaisa Lindqvist (FMI)         Image: Chair Comparison of Co			12		09 moved to Day 3	4.09	
15:00       5.08       Regional carbon sink estimates by NTFVAR inverse model with surface and statilite observations       Shamili Maksyutov (NIES)       15       Session 5         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         15:30       5.10       Constraining shoulder season carbon fluxes (CO2 and CH4) from the Arctic - Boreal zone using renote-sensing observations       Abhishek Chatterjee (PL/Caltech)       15       Session 5         15:45       End of Day 3       Amount of the Arctic - Session 5       Chair/Speaker       Duration (min)       Session 7         Time (JST)       ID       Title       Chair/Speaker       Duration (min)       Session 6         Session 6: Urban /Occi/facility scale emissions - quantification and validat Chairs: John Worden (JPL), Julia Marshall (DLR)         Session 6: Urban /Occi / facility scale emissions - quantification and validat Chairs: John Worden (JPL), Julia Marshall (DLR)         Session 6: Urban /Occi / facility scale emissions - quantification and validat Chairs: John Worden (JPL), Julia Marshall (DLR)         Secole dependencies in urban CQ2 Inversions constrained by satellite remote Alonosy Rafalimanana (University of Toronto)       12       Session 6         9:12       6.08       Investigating the potential for detecting urban methane point sources over Sou			, 	Chairs: Sara Mikaloff-Fletcher (NIWA), Hannakaisa Lindqvist (FMI)		5.07	
15:15       5.09       Investigating anomalous growth of atmospheric CO2 in 2023-2024 using GOSAT XCO2-constrained inverse modeling GOSAT XCO2-constraining shoulder season carbon fluxes (CO2 and CH4) from the Arctic - Abhishek Chatterjee (JPL/Caltech)       15       Session 5         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         15:45       End of Day 3         Time (JST)       ID       Title       Chair/Speaker       Duration (min) Session       Session 6         Version 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         9:12       6.08       Investigating the potential for detecting urban methane point sources over South Korea using EMT observations       Yu-Ri Lee (Seoul National University of Toronto)       12       Session 6         9:24       6.09       Anetwork of EM27 FTS for urban measurements of XCO2, XCH4, and XCO avis revealed from space       Shobha Kondragunta (NOAA)       12       Session 6         9:36       6.		Session 5	15	Shamil Maksyutov (NIES)	Regional carbon sink estimates by NTFVAR inverse model with surface and		15:00
Image: Constrained inverse modeling       Image: Constrained inverse modeling       Image: Constrained inverse modeling         15:30       5.10       Constraining shoulders eason carbon fluxes (CO2 and CH4) from the Arctic - Boreal zone using remote-sensing observations       Abhishek Chatterjee (JPL/Caltech)       15       Session 5         15:45       End of Day 3       Image: Constrained System 2       Image: Constrained System 2       Image: Constrained System 2         Time (JST)       ID       Title       Chair/Speaker       Duration (min)       Session 7         Session 6: Urban/local/facility scale emissions - quantification and validate Chairs: John Worden (JPL), Julia Marshall (DLR)         Session 6: Urban/local/facility scale emissions - quantification and validate Chairs: John Worden (JPL), Julia Marshall (DLR)         Session 6: Urban/local/facility scale emissions - quantification and validate Chairs: John Worden (JPL), Julia Marshall (DLR)         Session 6: Urban/local/facility scale emissions - quantification and validate Chairs: John Worden (JPL), Julia Marshall (DLR)         Session 6: Urban/local/facility scale emissions - quantification and validate Chairs: John Worden (JPL), Julia Marshall (DLR)         Session 6: Urban/local/facility scale emissions - quantification and validate Chairs: John Worden (JPL), Julia Marshall (DLR)         Session 6: Urban/local/facility scale emissions - quantification and validate Chairs: John Worden (JPL), Julia Marshall (DLR)      <		Session 5	15	Suman Maity (NIES)	Investigating anomalous growth of atmospheric CO2 in 2023-2024 using	5.09	15:15
Boreal zone using remote-sensing observations		Session 5	15	Abhishek Chatteriee (IPI /Calterh)	Constraining shoulder season carbon fluxes (CO2 and CH4) from the Arctic -	5.10	15-30
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         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         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         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         9:48       6.11       Assessing Methane Detection Capabilities of Operational Satellite Sensors using Controlled Release Experiments       Shobha Kondragunta (NOAA)       12       Session 6         10:00       6.12       Session 5 Pauel Discussion       Using Remote Sensing       Paul Green (NPL)       12       Session 6         10:00       6.12       Session 5 Pauel Discussion       Session 5 Colobal to regional flux estimates and validation       Chairs: Sara Mikaloff-Fletche			1.7		Boreal zone using remote-sensing observations	5.10	
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           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           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           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           9:48         6.11         Assessing Methane Detection Capabilities of Operational Statellite Sensors using Controlled Release Experiments         Shobha Kondragunta (NOAA)         12         Session 6           10:00         6.12         Session 5 Pro Quantifying, Reporting, Validating and Assessing revealed from space         Paul Green (NPL)         12         Session 6           10:00         6.12         Session 5 Pro Quantifying, Reporting, Validating and		Consiste	Durati ( ; ; )	Obsta / Casalisa		10	Tim. (107)
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           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           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           9:36         6.10         Regional and socioeconomic characteristics in global cities' CO2 emissions using Controlled Release Experiments         Doyeon Ahn (GESTAR II, Morgan State University)         12         Session 6           9:48         6.11         Assessing Methane Detection Capabilities of Operational Statellite Sensors using Controlled Release Experiments         Shobha Kondragunta (NOAA)         12         Session 6           10:00         6.12         Session 6 Panel Discussion         Juli Green (NPL)         12         Session 6           10:12         Session 5 Colbal to regional flux estimates and validation         Chaires: Sara Mikaloff-Fletcher (NIWA), Hannakaisa Lindqvist (FMI)         12	Abstract II	Session	Duration (min)	Chair/Speaker			Time (JST)
9:00       6.07       sensing measurements       Alohotsy Rafalimanana (Universite de Reims Champagne-Ardenne)       12       Session 6         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         9:24       6.09       A network of EM27 FTS for urban measurements of XCO2, XCH4, and XCO across the city of Toronto       12       Session 6         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         9:48       6.11       Assessing Methane Detection Capabilities of Operational Satellite Sensors using Controlled Release Experiments       Shobha Kondragunta (NOAA)       12       Session 6         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         10:12       Session 5 Global to regional flux estimates and validation       Chaires: Sara Mikaloff-Fletcher (NIWA), Hannakaisa Lindqvist (FMI)       U         11:00       5.11       Can we detect CH4 emissions from permafrost with TROPOMI XCH4?       Ray Nasar (ECCC)       15       Session 5         11:00       5.11       Can we detect CH4 emis				t Chairs: John Worden (JPL), Julia Marshall (DLR)			
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       9:24     6.09     A network of EM27 FTS for urban measurements of XCO2, XCH4, and XCO across the city of Toronto     12     Session 6       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       9:48     6.11     Assessing Methane Detection Capabilities of Operational Satellite Sensors using Controlled Release Experiments     Shobha Kondragunta (NOAA)     12     Session 6       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       10:00     6.12     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 estimated from atmospheric		Session 6	12	Alohotsy Rafalimanana (Universite de Reims Champagne-Ardenne)	07	6.07	9:00
9:12       6.08       South Korea using EMIT observations       Yu-Ri Lee (Seoul National University)       12       Session 6         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         9:36       6.00       Regional and socioeconomic characteristics in global cities' CO2 emissions using Controlled Release Experiments       Doyeon Ahn (GESTAR II, Morgan State University)       12       Session 6         9:48       6.11       Assessing Methane Detection Capabilities of Operational Satellite Sensors using Controlled Release Experiments       Shobha Kondragunta (NOAA)       12       Session 6         10:00       6.12       Common Practices For Quantifying, Reporting, Validating and Assessing Paul Green (NPL)       12       Session 6         10:12       Session 5 Paul Discussion       Paul Green (NPL)       12       Session 6         10:00       6.12       Facility Scale Methane Emissions Using Remote Sensing       Paul Green (NPL)       12       Session 6         10:12       Session 5 Global to regional flux estimates and validation       Chairs: Sara Mikaloff-Fletcher (NIWA), Hannakaisa Lindqvist (FMI)       12         11:00       5.11       Can we detect CH4 emissions from permafrost with TROPOMI XCH4?       Ray Nasar (ECCC)       15       Session 5		+			Investigating the notential for detecting urban methane point sources over		
9:24       6.09       across the city of Toronto       12       Session 6         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         9:36       6.10       Assessing Methane Detection Capabilities of Operational Satellite Sensors using Controlled Release Experiments       Shobha Kondragunta (NOAA)       12       Session 6         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         10:00       6.12       Session 6 Panel Discussion       18          10:30       Coffee Break       30       30         Session 5: Global to regional flux estimates and validation         Chaires: 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         11:00       5.11       Can we detect CH4 emissions estimated from atmospheric       15       Session 5       5	1	Session 6	12	Yu-Ri Lee (Seoul National University)	08 South Korea using EMIT observations	6.08	9:12
9:36     6.10     revealed from space     Doyeon Ann (GESTAR II, Morgan State University)     12     Session 6       9:48     6.11     Assessing Methane Detection Capabilities of Operational Satellite Sensors using Controlled Release Experiments     Shobha Kondragunta (NOAA)     12     Session 6       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       10:12     Session 6 Panel Discussion     18     12     Session 6       10:30     Coffee Break     30     30       Common Fractices For Quantifying, Reporting, Validating and Assessing facility Scale Methane Emissions Using Remote Sensing       10:12     Session 6 Panel Discussion     18       Session 5 Clobal to regional flux estimates and validation       Chairs: Sara Mikaloff-Fletcher (NIWA), Hannakaisa Lindqvist (FMI)       11:00     5.11     Can we detect CH4 emissions rom permafrost with TROPOMI XCH4?     Ray Nasar (ECCC)     15     Session 5       11:00     5.11     Evaluating the consistency of the emissions estimated from atmospheric     Integration 5     Integration 5		Session 6	12	Nicole Jacobs (University of Toronto)	09 across the city of Toronto	6.09	9:24
948     6.11     using Controlled Release Experiments     Shoona Kondragunta (NOAA)     12     Session 6       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       10:12     Session 6 Panel Discussion     18     1       10:30     Coffee Break     30     30       Scale Methane Emissions Using Remote Sensing       11:00     5: Global to regional flux estimates and validation     Chairs: Sara Mikaloff-Fletcher (NIWA), Hannakaisa Lindqvist (FMI)       11:00       11:00     5.11     Can we detect CH4 emissions from permafrost with TROPOMI XCH4?     Ray Nassar (ECCC)     15     Session 5       Evaluating the consistency of the emissions estimated from atmospheric		Session 6	12	Doyeon Ahn (GESTAR II, Morgan State University)	10	6.10	9:36
10:00     6.12     Facility Scale Methane Emissions Using Remote Sensing     Paul Green (NPL)     12     Session 6       10:12     Session 6 Panel Discussion     18     18       10:30     Coffee Break     30       Coffee Break       Convertige Constraints       Convertige Constrai		Session 6	12	Shobha Kondragunta (NOAA)		6.11	9:48
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       Evaluating the consistency of the emissions estimated from atmospheric     Evaluating the consistency of the emission setimated from atmospheric     Image: Constraint of the emission setimated from atmospheric	1	Session 6	12	Paul Green (NPL)	12	6.12	10:00
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           Evaluating the consistency of the emissions estimated from atmospheric         Evaluating the consistency of the emission setimated from atmospheric         10<					•		
11:00     5.11     Can we detect CH4 emissions from permafrost with TROPOMI XCH4?     Ray Nassar (ECCC)     15     Session 5       Evaluating the consistency of the emissions estimated from atmospheric     For a session for a set of the emission for atmospheric     15			30	Chairer Sara Mikaloff Elatebar (NIMA) Hannahatar Lindrata (CMI)			10:30
Evaluating the consistency of the emissions estimated from atmospheric	1	Session 5	15				11:00
11:15 5.12 inversions using three methane TROPOMI products at the regional and global Adrien Martinez (LSCE) 15 Session 5	1				Evaluating the consistency of the emissions estimated from atmospheric inversions using three methane TROPOMI products at the regional and global		
scales 11:30 5.13 European Methane Flux Estimates Using the Community Inversion Framework Anteneh Getachew Mengistu (FMI) 15 Session 5		Session 5	15	Anteneh Getachew Mengistu (FMI)		5 1 3	11-20

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