

5th International Workshop on CO₂/CH₄ DIAL remote sensing
(Chikushi Campus, Kyushu University, March 6 and 7, 2012)

Agenda

March 6, 2012 - Day 1

9:20-9:25 Welcome note

1. Workshop objectives

9:25-9:30 Pierre H. Flamant (IPSL, France), Robert T. Menzies (NASA JPL, US)

2. Spaceborne mission program in Japan and GOSAT project

9:30-10:00 JAXA's future Earth Observation Mission

Masakatsu Nakajima (JAXA, Japan)

10:00-10:30 Benefit of GOSAT observations to regional CO₂ flux estimation

Hiroshi Takagi (NIES, Japan)

10:30-11:00 COFEE BREAK

3. Earth observation missions

11:00-11:30 MERLIN mission: Satellite aspect and issues

Pierre Flamant et. al, (IPSL, France)

11:30-12:00 New results from MERLIN performance analysis

Gerhard Ehret et. al, (DLR, Germany)

12:00-12:30 CHARM-F, the airborne pulsed direct detection IPDA for CO₂ and CH₄ measurement: current developments and future plans

Andreas Fix et. al, (DLR, Germany)

12:30-13:30 LUNCH

13:30-14:00 Summary of progress with the ASCENDS OSSE

David Crisp (NASA JPL, US)

14:00-14:30 ISS-JEM lidar observation of vegetation experiment

Kazuhiro Asai et. al, (TIT, Japan)

14:30-15:00 GRAIL: Green and Blue Carbon Budget Investigation by Lidar on ISS

Pierre H. Flamant (IPSL, France)

15:00-15:30 COFEE BREAK

4. Airborne measurement 1

15:30-16:00 JPL airborne Laser Absorption Spectrometer 2011 flight campaign highlights and data products

Robert T. Menzies (NASA JPL, US)

16:00-16:30 Advancements in Airborne IM-CW Lidar Measurements of CO₂ in 1.57-um Region

Edward V. Browell et al. (NASA LaRC, US; presented by Wallace Harrison)

5. Ground-based CO₂, CH₄, and other gas measurements 1

16:30-17:00 Recent results of ground-based CO₂ experiment at NICT: atmospheric and hard target returns

Shoken Ishii et al. (NICT, Japan)

17:00-19:00 Get Together at "Tea room Sonne" Adjourn

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March 7, 2012 - Day 2

6. Ground-based CO₂, CH₄, and other gas measurements 2

- 9:00-9:30 Profiling tropospheric water vapor using the CO₂ DIAL system developed in NICT: A sensitivity study
Philippe Baron et. al, (NICT, Japan)
- 9:30-10:00 Direct detection 1.6µm CO₂ DIAL for measurements of concentration profiles in the troposphere
Yasukuni Shibata et. al, (TMU, Japan)
- 10:00-10:30 Recent progress towards the development of 2-micron pulsed direct detection lidar for integrated path differential absorption measurement of CO₂
U. N. Singh et. al, (NASA LaRC, US)
- 10:30-11:00 COFEE BREAK
- 11:30-12:00 COWI/g: CO₂ and Wind ground-based Lidar, preliminary results
Fabien Gibert et. al, (IPSL, France; Presented by Pierre H. Flamant)

7. Airborne measurement 2

- 12:00-12:30 CO₂ mixing ratio retrievals: measurement bias considerations and implications for payload and ancillary data requirements
Robert T. Menzies (NASA JPL, US)
- 12:30 - 13:30 LUNCH
- 13:30-14:00 Analysis of FM-CW 1.57µm-LAS system for separation of cloud/ground signals
Disuke Sakaizawa et. al, (JAXA, Japan)
- 14:00-14:30 Analysis of Pulsed Lidar Measurements of Atmospheric CO₂ Column Absorption during the ASCENDS 2009-2011 Airborne Campaigns
James Abshire et al. (NASA GSFC, US; Presented by Robert T. Menzies)
- 14:30-15:00 Airborne Lidar Measurements of Atmospheric Pressure using the Oxygen-A Band
Haris Riris et al. (NASA GSFC, US; Presented by Wallace Harrison)
- 15:00-15:30 COFEE BREAK

8. Technology

- 15:30-16:00 2-micron laser developments for CO₂ measurements
Kohei Mizutani et. al, (NICT, Japan)
- 16:00-16:30 GaSb-based laterally coupled distributed-feedback (DFB) diode lasers
Jason Hyon et. al, (NASA JPL, US)
- 16:30-17:00 APD detector concept jointly developed with Stanford for ASCENDS
Jason Hyon et. al, (NASA JPL, US)
- 17:00-18:00 Discussion and Adjourn
Pierre H. Flamant (IPSL, France), Robert T. Menzies (NASA JPL, US)

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March 8, 2012 - Day 3

10:00-12:00 Discussion about future mission and partnership
All

Adjourn