GOSAT RA Workshop
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Scientific Application Using GOSAT Data

Validation

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Research proposals selected for GOSAT validation (1)

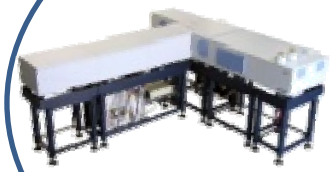
Principal Investigator	Research Theme
Claude Camy-Peyret	Correlative TIR, SWIR and NIR Measurements for GOSAT
Vanessa Sherlock	Southern Hemisphere Validation of GOSAT XCO_2 and XCH_4 from TCCON Solar FTS Measurements in Australia and New Zealand
Justus Notholt	Distributions of CO_2 and CH_4 over Eurasia between 30 Degree N – 90 Degree N
Kimberly Strong	Validation of GOSAT Measurements Using Ground-Based and Satellite Data
Yasuko Jessica Kasai	CH_4 Measurement with the Ground-Based Solar Absorption IR Spectrometer in Alaska Poker Flat
Thomas Blumenstock	TANSO CH_4 Validation Using a Ground-Based FTIR Spectrometer in Kiruna
Charles Miller	Validation of GOSAT Data Products and Joint GOSAT-OCO Intercomparisons
Michael Buchwitz	Towards CONsistent Long-Term SCIAMACHY and GOSAT Greenhouse Gas Data Sets (CONSCIGO)

Research proposals selected for GOSAT validation (2)

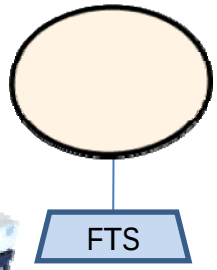
Principal Investigator	Research Theme
Masahiro Kawasaki	Remote Measurements of Column Densities of CO_2 and CH_4
Chikao Nagasawa	Validation of the SWIR/TIR Products Using Troposheric CO_2 Profiles by the Ground-Based Differential Absorption Lidar
Kohei Mizutani	Validation Study of GOSAT CO_2 Data with Coherent Differential Absorption Lidars
Daisuke Sakaizawa	Validation of the Optical Depth in the TANSO-CAI/FTS Products Using a 1.6-um Backscattring Lidar Observation
Yutaka Matsumi	Validation Experiments for GOSAT Using Balloon-Borne CO_2 Instruments
Tomoaki Miura	Evaluation and Validation of GOSAT CAI Vegetation Index Products Using MODIS, AVHRR, and *In Situ* Data over the Conterminous United States and Hawaii
Hideki Kobayashi	Evaluation and Improvement of the Phenology Monitoring Algorithm of Terrestrial Vegetation

Research Theme (Category)

Validation of TANSO L2 CO_2 and CH_4 column amounts by ground-based high resolution FTSs

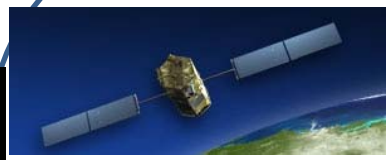


Validation and calibration



Comparison between GOSAT and other satellite data

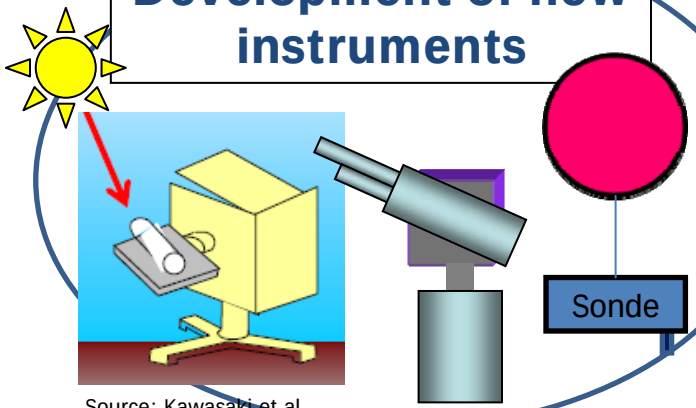
Source: GOSAT Pamphlet



Source: http://oco.jpl.nasa.gov/

Source: http://www.sciamachy.org/

Development of new instruments

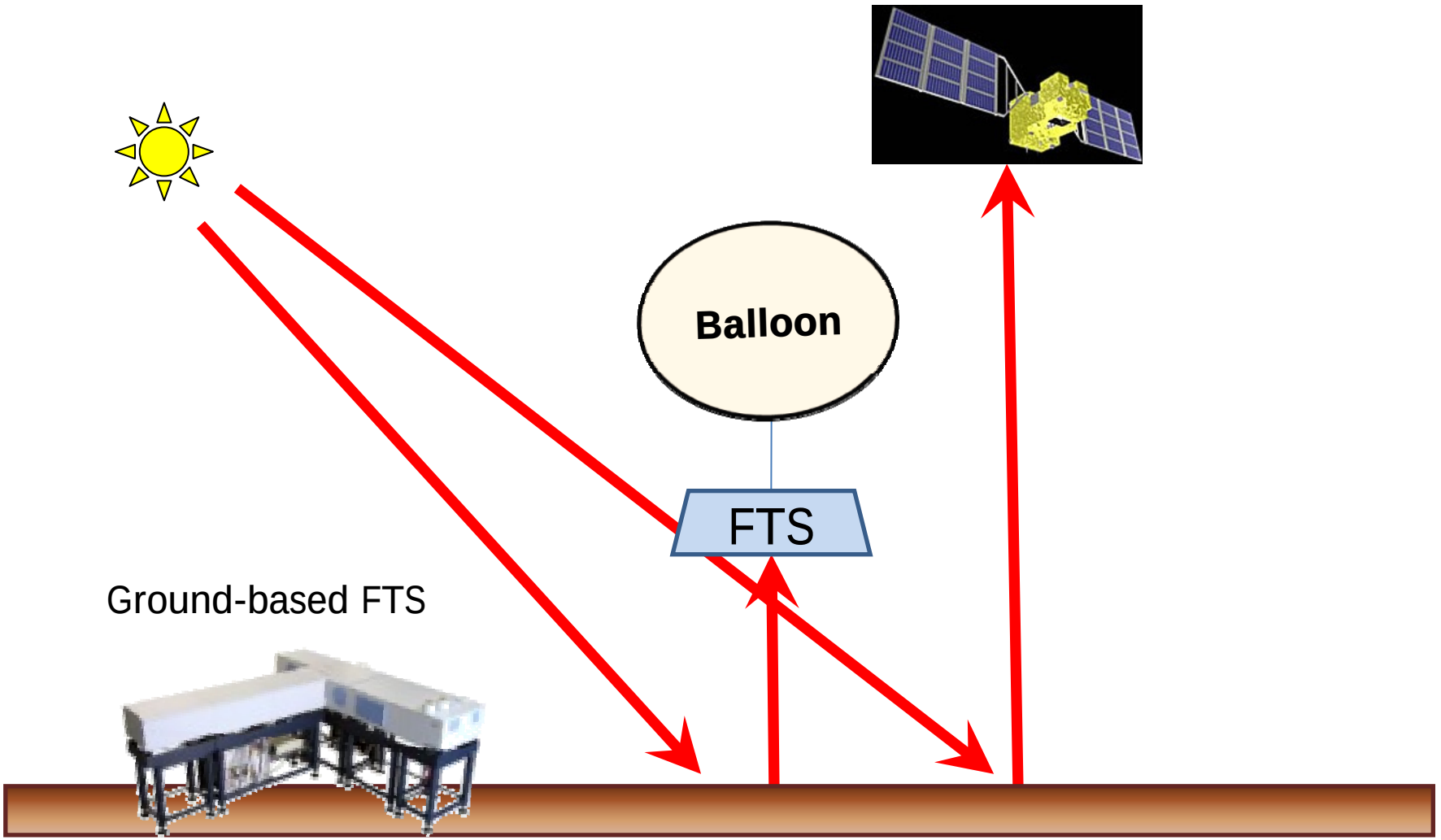


Source: Kawasaki et al.

CAI vegetation index

Source: http://modis-atmos.gsfc.nasa.gov/

Validation and Calibration



C. Camy-Peyret:
Calibration of TANSO-FTS TIR and validation of TANSO L2 CO_2 and CH_4 products

Validation of TANSO L2 CO_2 and CH_4 column amounts by ground-based high resolution FTSs

Southern Hemisphere

V. Sherlock: Statistical comparison of total column CO_2 and CH_4 retrievals from ground-based FTS and TANSO

Eurasia

J. Notholt: Establishment of a homogenized, well calibrated dataset of column CO_2 and CH_4 over the Eurasian continent

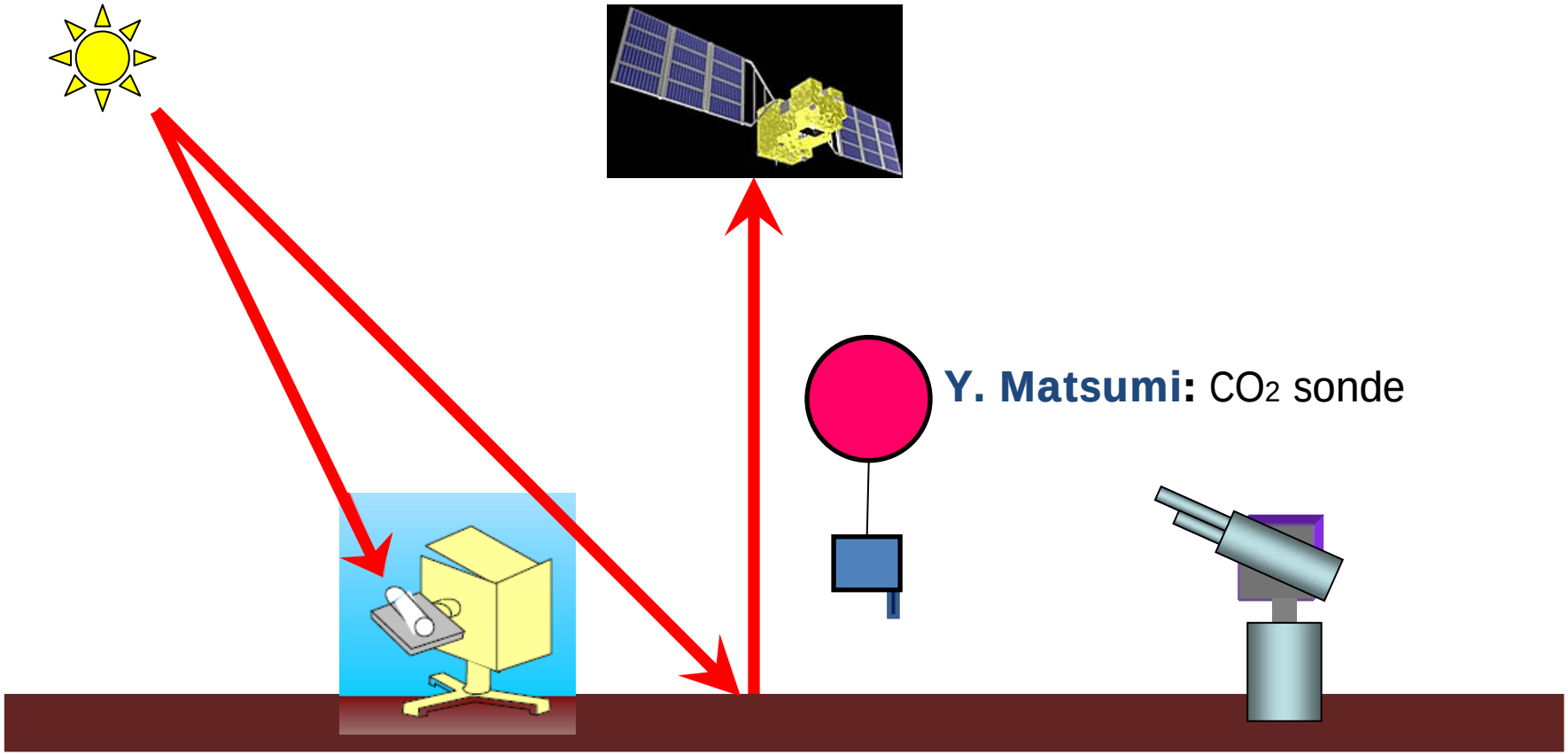
Northern high latitude

K. Strong: Including validation of H_2O, T, CAI L2 cloud flag, cloud properties, and aerosol products, and CAI L3 global aerosol properties in Eureka and Toronto

Y. J. Kasai: Validation of TANSO L2 CH_4 column amount in Poker Flat

T. Blumenstock: Validation of TANSO L2 CH_4 column amount in Kiruna

Development of new instruments for GOSAT validation



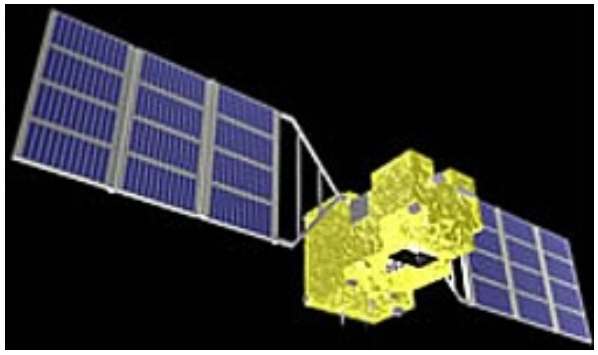
Y. Matsumi: CO_2 sonde

M. Kawasaki:
Fabry-Perot etalon and NIR spectrum analyzer

C. Nagasawa: 1.6-μm CO_2 DIAL
K. Mizutani: 2.0-μm CO_2 DIAL
D. Sakaizawa: 1.6-μm backscatter lidar

Comparison between GOSAT and other satellite data

GOSAT

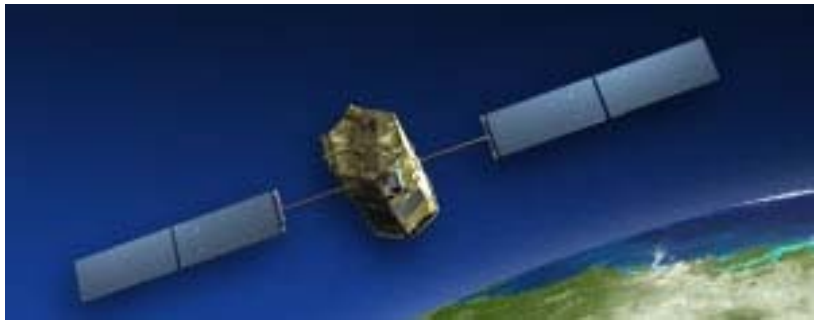


Source: GOSAT Pamphlet

SCIAMACHY

Source: http://www.sciamachy.org/

OCO

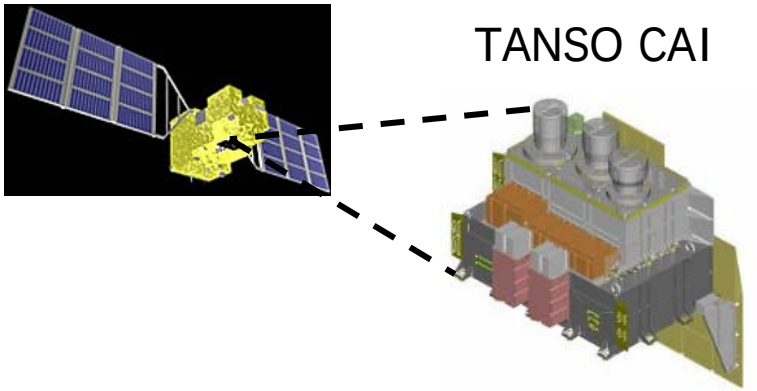


Source: http://oco.jpl.nasa.gov/

M. Buchwitz:
CONsistent long-term SCIAMACHY and GOSAT greenhouse gas data sets (CONSCIGO)

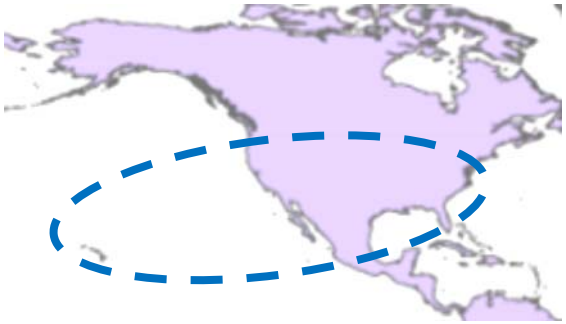
C. Miller:
Calibration of GOSAT radiances (L1B), and validation of XCO_2 (L2 and L3) and carbon flux (L4) data products using algorithms and analysis methods developed to support NASA's Orbiting Carbon Observatory (OCO) mission and the North American Carbon Program (NACP)

CAI vegetation index

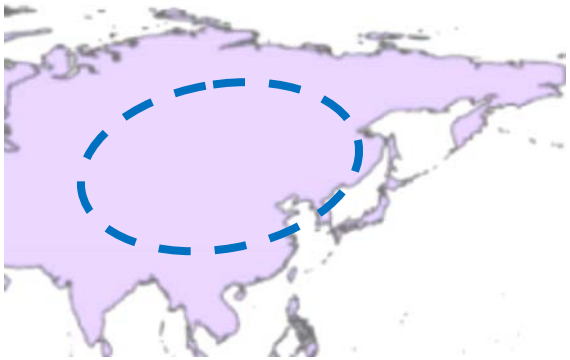


Source: JAXA

NDVI



T. Miura:
Evaluation and validation of CAI vegetation index products using MODIS, AVHRR, and *In-Situ* data
Area: Across the Conterminous USA and Over tropical Hawaii



H. Kobayashi:
Evaluation and improvement of the phenology monitoring method of terrestrial vegetation using CAI data
Area: Grassland (China, Mongol etc.)
Deciduous needle-leaf forest (East Siberia)