Summary of Algorithm Session

Haruhisa Shimoda

Atmospheric Constituents

Christian Frankenberg	Retrieve CH4 and water vapor from FTS SWIR using similar algorithm with SCIAMACHY. These results are cross validated with SCIAMACHY. Also, retrieve CO2 and CH4 using OCO full vector code and O2 A-band. Further, retrieve CH4 profile and total column using both FTS SWIR and TIR. Solve inverse model using these results.	SWIR
Kataev Mikhail Yurievich	Train neural network using radiative transfer code. After training, retrieve CO2 and CH4 using the neural network.	SWIR
Pierre-Yves Deschamps	Retrieve optical properties and vertical distribution of aerosols using FTS SWIR and CAI. Estimate fluorescence from vegetations. These results are validated by AERONET and CALIPSO. Retrieve CO2 and CH4 using these aerosol data from FTS SWIR.	SWIR/CAI
Naoko Saito	Retrieval of atmospheric constituents like N2O, O3, SO2, CFCs and PSCs from TANSO-FTS TIR	TIR
Tasuku Tanaka	New algorithm development to retrieve temperature and other trace gases from FTS TIR data.	TIR
Konstantin G. Gribanov	Improve existing algorithm to retrieve CO2 and CH4 from FTS SWIR and TIR.	SWIR/TIR
Ryoichi Imasu	Retrieve CO2 concentration in lower atmosphere using FTS SWIR and TIR. Evaluate vertical transfer of CO2.	SWIR/TIR

Clouds and aerosols

Alexander Kokhanovsky	Retrieve optical thickness, drop size, phase and cloud top height from CAI and FTS SWIR. Also, cross validate the results with MERIS, SCIAMACHY and AATSR.	SWIR/CAI
Pierre-Yves Deschamps	Retrieve optical properties and vertical distribution of aerosols using FTS SWIR and CAI. Estimate fluorescence from vegetations. These results are validated by AERONET and CALIPSO. Retrieve CO_2 and CH_4 using these aerosol data from FTS SWIR.	SWIR/CAI
Thomas Wagner	Retrieve cloud optical properties, cloud top height, atmospheric light path distribution, surface albedo, aerosol identification, sun glint and thin clouds from FTS SWIR and CAI.	SWIR/CAI
Itaru Sano	Retrieve aerosols over land using CAI data, FTS polarization data and other satellite data.	SWIR/CAI

Forward model

Vladimir P. Budak	Develop high speed full vector radiative transfer code.	SWIR