

## The 8th GEMS Science Team Meeting

Date : September 25 - 27, 2017

Venue : Grand Ballroom A, Seoul Garden Hotel, Seoul, Korea

GEMS Meeting Room		
Sep. 25-27	Grand Ballroom A, Seoul Garden Hotel	
<b>September 25<sup>th</sup> (Mon.)</b>		
<b>8:00</b>	<b>9:00</b>	<b>Registration</b>
	<b>Opening</b>	
	9:00	9:05 Opening Remark
	9:05	9:10 Congratulatory Remark
	<b>Status of GEOKOMPSAT-2 mission</b>	
	9:10	9:25 AMI Mission Status
	9:25	9:40 GOCI-2 Mission Status
	9:40	9:55 GEMS Mission Status
	9:55	10:10 GEMS ground system and application
	10:10	10:20 Group Photo
<b>10:20</b>	<b>10:40</b>	<b>Coffee Break</b>
	<b>Status of International mission</b>	
	10:40	10:55 TEMPO Mission Status and CEOS Update
	10:55	11:10 KORUS AQ results
	11:10	11:25 Imaging Fourier Transform Spectrometer; Development Update
<b>11:25</b>	<b>12:40</b>	<b>Lunch</b>
	<b>Preflight Tests and Calibration</b>	
	12:40	13:00 GEMS pre-flight test and characterization
	13:00	13:15 Status of GEMS - Calibration
	13:15	13:35 Straylight Correction
	13:35	13:50 Polarization characteristics of the atmosphere : Sensitivity study and variable information
	13:50	14:10 Polarization Correction (via Webex)
	<b>Ground Validation Plan</b>	
	14:10	14:30 Pandonia network update
	14:30	14:50 The observation of Pandora spectrometer in the Korean peninsula
<b>14:50</b>	<b>15:10</b>	<b>Coffee Break</b>
	15:10	15:30 Network of Observations in India (via Webex)
	15:30	15:50 Asia Aerosol Network

### Grand Ballroom A

Jin-won Park (NIER President)  
 Barry Lefer (NASA Headquarters)

Chu-Yong Chung (National Meteorological Satellite Center, NMSC)  
 Myung-Sook Park (Korea Institute of Ocean Science & Technology, KIOST)  
 Jhoon Kim (Yonsei University)  
 Jongmin Yoon (NIER)

Jay Al-Saadi (NASA Langley Research Center, CEOS AC-VC Co-Chair)  
 Barry Lefer (NASA Headquarters)  
 Tom McElroy (York University)

Dai Ho Ko (KARI)  
 Myoung-Hwan Ahn (Ewha Womans Univ.)  
 David Flittner (NASA Langley Research Center)  
 Kwang-Mog Lee (Kyungpook National Univ.)  
 Ukkyo Jeong (University of Maryland, NASA GSFC)

Alexander Cede, Robert Swap (LuftBlick & NASA/GSFC)  
 Ja-Ho Koo and Heesung Chong (Yonsei Univ.)

Manish Naja (Aryabhata Research Institute of Observational Sciences)  
 Sang-Woo Kim (Seoul National Univ.)

15:50	16:10	A decade of MAX-DOAS observations in Asia & Russia: Progress in OMI Tropospheric NO <sub>2</sub> validation and synthetic analysis	Yugo Kanaya (JAMSTEC)
16:10	16:30	Remote sensing of trace gases from Chinese environmental satellite and MAX-DOAS network	Cheng Liu (University of Science and Technology of China)
16:30	16:50	Intercalibration and harmonization of MAX-DOAS measurements as part of CINDI-2 and FRM4DOAS projects	Michel Van Roozendael (Belgian Institute For Space Aeronomy)
16:50	17:10	Intercomparison of total column ozone data from the Pandora spectrophotometer with Dobson, Brewer, and OMI measurements over Seoul, Korea	Sangseo Park (Seoul National Univ.)
17:10	17:25	Status of GEMS - Validation Plan	Myong-In Lee and Chang-Keun Song (UNIST)
17:25	17:45	NASA Earth Exchange: High-end Capability Computing for Remote Sensing Applications	Ryan Spackman (NASA Ames Research Center)
<b>18:00</b>		<b>Reception</b>	<b>Grand Ballroom C</b>

### September 26th (Tues.)

<b>8:50</b>	<b>9:00</b>	<b>Opening</b>	<b>Grand Ballroom A</b>
		<b>Aerosol, Cloud, and Surface</b>	
	9:00	9:15 Status of GEMS Aerosol Algorithm	Mijin Kim, Sujung Go, and Jhoon Kim (Yonsei Univ.)
	9:15	9:30 Status of GEMS Surface Reflectance Algorithm	Kwonho Lee(GWNU) and Jung Moon Yoo (Ewha Womans Univ.)
	9:30	9:50 Aerosol type classification using AERONET sun/sky radiometer derived depolarization ratio	Youngmin Noh (Gwangju Institute of Science and Technology)
<b>9:50</b>	<b>10:10</b>	<b>Coffee Break</b>	
		<b>Atmospheric composition (I): NO<sub>2</sub>, SO<sub>2</sub> and HCHO</b>	
	10:10	10:25 Development of NO <sub>2</sub> retrieval algorithm for the GEMS	Hanlim Lee (Pukyong Nat'l University)
	10:25	10:40 Development of SO <sub>2</sub> retrieval algorithm for the GEMS	Hanlim Lee (Pukyong Nat'l University)
	10:40	11:00 Explicit and observation-based aerosol treatment in tropospheric retrieval of NO <sub>2</sub> , HCHO and other species	Mengyao Liu (Peking University & KNMI)
	11:00	11:20 NO <sub>2</sub> Retrievals from Space: Separating the troposphere from the stratospheric background	Eric Bucsela (SRI International)
	11:20	11:35 Status of GEMS Formaldehyde Algorithm	Rokjin Park (Seoul National Univ.)
	11:35	11:55 Impact of high-resolution a priori model information on satellite formaldehyde retrievals	Si-Wan Kim (NOAA/ESRL, CIRES, Yonsei Univ.)
	11:55	12:10 Status of GEMS Cloud Algorithm	Yong-Sang Choi (Ewha Womans Univ.)
<b>12:10</b>	<b>13:30</b>	<b>Lunch</b>	
		<b>Atmospheric composition (II): Ozone</b>	
	13:30	13:45 Status of GEMS Ozone Algorithm	Jae Hwan Kim (Busan National Univ.)
	13:45	14:05 Characterization and Correction of OMPS Nadir Mapper Measurements for Ozone Profile Retrievals	Juseon Bak (Harvard-Smithsonian Astrophysical Observatory)
	14:05	14:25 Seasonal clustering of lower tropospheric ozone over central China observed using an Ozone Monitoring Instrument (OMI)	Sachiko Hayashida (Nara Women's University)
		<b>Chemistry, Modeling, Data Assimilation and Application</b>	
	14:25	14:40 Monthly trends of tropospheric NO <sub>2</sub> columns over remote region, Mongolia	Kyung Man Han and Chul Han Song (GIST)
	14:40	15:00 Modeling Analysis Using GOCI Data	Greg Carmichael (University of Iowa)
	15:00	15:20 Studies in joint assimilation of carbon monoxide and aerosol	David Edwards (NCAR)

<b>15:20</b>	<b>15:40</b>	<b>Coffee Break</b>	
	15:40	15:55	Status of GEMS Synthetic Data generation Yebon Lee and Seon-Ki Park (Ewha Womans Univ.) Christopher Chan Miller (Harvard-Smithsonian Astrophysical Observatory)
	15:55	16:15	Synthetic data generation for TEMPO and GEMS
	16:15	16:35	Estimation of ground PM concentrations using multi-sensor satellite data and machine learning Jungho Im (UNIST)
	16:35	16:40	Introduction of GEMS UV Index Hana Lee (Yonsei University)
<b>16:40</b>	<b>18:00</b>	<b>Discussion</b>	

**September 27th (Wed.)**

Tutorial			Grand Ballroom A
9:30	10:10	Improving Air Quality (and Weather) Predictions Through Close Integration of Observations and Models	Greg Carmichael (University of Iowa)
10:20	11:00	Introduction to Global Climate Change and Air Quality	Barry Lefer (NASA Headquarters)
11:10	11:50	Differential Absorption Spectroscopy -- MAESTRO* in its 15th year on orbit (* Measurement of Aerosol Extinction in the Stratosphere and Troposphere Retrieved by Occultation)	Tom McElroy (York University)
<b>12:00</b>	<b>13:30</b>	<b>Lunch</b>	



- The closest exit of Gongdeok Station to the hotel is Exit 8.
- The closest exit of Gongdeok Station to the Jokbal zone is Exit 5.