

## **The 3<sup>rd</sup> GEMS Workshop**

**Date: October 8 – 10, 2012**

**Venue: Hotel Seokyo, Seoul, Korea**

### **October 8<sup>th</sup> (Mon)**

**09:00 – 10:00      Registration**

**10:00 – 10:20      Opening**

10:00 – 10:10      Opening Remark  
Park Seok-Soon (President, NIER)

10:10 – 10:20      Welcome Remark  
Yoon Jong-Soo (Vice Minister, Ministry of Environment)

**10:20 – 10:40      Group Photo and short break**

**10:40 – 11:50      Progress Report of GEMS Program (I)**

*Chair: Sukjo Lee (NIER)*

10:40 – 11:00      GEMS program and science requirements  
J. Kim (Yonsei Univ.)

11:00 – 11:30      GEMS instrument requirements and Status of Geo-KOMPSAT-2 program  
S.H. Lee (KARI)

11:30 – 11:50      CEOS air quality constellation  
J. Al-Saadi (NASA HQ)

**11:50 – 13:30      Lunch**

**13:30 – 14:30      Progress Report of GEMS Program (II)**

*Chair: Jhoon Kim (Yonsei Univ.)*

13:30 – 13:50      Input radiance for GEMS  
K.M. Lee (Kyungpook Nat'l Univ.)

13:50 – 14:10      Capability of ozone profiling from GEMS  
Jae H. Kim (Pusan Nat'l Univ.)

14:10 – 14:30      Development of NO<sub>2</sub> and SO<sub>2</sub> algorithm for GEMS  
Y.J. Kim (GIST)

**14:30 – 15:00      Coffee Break**

**15:00 – 17:30      Progress Report of GEMS Program (III)**

*Chair: C. K. Song (NIER)*

- 15:00 – 15:20    Development of HCHO algorithm for GEMS  
R. Park (SNU)
- 15:20 – 15:40    Development of aerosol algorithm for GEMS  
M.J. Kim and J. Kim (Yonsei Univ.)
- 15:40 – 16:00    Development of cloud algorithm for GEMS: Synthetic  
cloud data  
Y.S. Choi (Ewha Womans Univ.)
- 16:00 – 16:20    Development of surface property algorithm for GEMS  
J.M. Yoo (Ewha Womans Univ.)
- 16:20 – 16:40    Simulated temporal and spatial distribution of gases  
and aerosol concentration for the GEMS observation  
C.H. Song (GIST)
- 16:40 – 17:00    Data assimilation for GEMS  
S.K. Park (Ewha Womans Univ.)
- 17:00 – 17:30    Issues on patents for GEMS (*in Korean*)  
K.S. Jang (R&D patent Center)

**17:30 – 18:00      Discussion**

**18:30 – 21:00      Banquet** (please find the location in the brochure)  
All

## October 9<sup>th</sup> (Tue)

### **09:00 – 13:00      Sciences and Status of Geostationary Environmental Satellite Missions (I)**

*Chair: Jay Al-Saadi (NASA HQ)*

- 09:00 – 09:20      Science status for NASA decadal survey GEO-CAPE mission  
David Edwards (NCAR)
- 09:20 – 09:40      Concept for geostationary monitoring of North American atmospheric pollution  
Kelly Chance (Harvard Smithsonian CfA)
- 09:40 – 10:00      Satellite remote Sensing of NO<sub>2</sub> as an indicator of aerosol pollution: opportunities from GEMS (and GOCI) observations  
Randall Martin (Dalhousie Univ.)
- 10:00 – 10:20      JPL developments in retrieval algorithm for geostationary observations  
Thomas Kurosu (NASA GSFC)
- 10:20 – 10:40      JPL simulation and OSSE activities in support of GEO-CAPE  
Jessica Neu (NASA JPL)

### **10:40 – 11:20      Coffee Break**

*Chair: Y. S. Choi (Ewha Women's Univ.)*

- 11:20 – 11:40      A feasibility study for SO<sub>2</sub> detection from space  
Hitoshi Irie (Chiba Univ.)
- 11:40 – 12:00      Conversion of NO<sub>2</sub> slant columns onto vertical column  
Pawan K (PK) Bhartia (NASA GSFC)
- 12:00 – 12:20      Determining aerosol plume height from two GEO imagers: Lessons from MISR and GOES  
Dong Wu (NASA GSFC)
- 12:20 – 12:40      Concept for determining aerosol layer height using UV-Vis O<sub>4</sub> absorption bands  
SangSeo Park (Yonsei Univ.)
- 12:40 – 13:00      Retrieval of aerosol over clouds  
Omar Torres (NASA GSFC)

### **13:00 – 14:00      Lunch**

<b>14:00 – 17:20</b>	<b>Sciences and status of Geostationary Environmental Satellite Observations (II)</b> <i>Chair: Hanlim Lee (Yonsei Univ.)</i>
14:00 – 14:20	Plan of Japanese ISS mission of Atmospheric Chemistry (APOLLO ) Sachiko Hayashida (NARA Women's Univ.)
14:20 – 14:40	Instrumental polarization sensitivity and polarization correction: impacts on trace gas retrievals Xiong Liu (Harvard Smithsonian CfA)
14:40 – 15:00	Non-linearity in Array Detectors: From Detection to Correction C. Thomas McElroy (York Univ.)
15:00 – 15:20	Data distribution and processing Piet Stammes (KNMI)
<b>15:20 – 16:00</b>	<b>Coffee Break</b>
16:00 – 16:20	MAX-DOAS measurements of urban air pollution from an elevated mountain site: Technical setup and experience from the first two years of observations Jochen Stutz (UCLA)
16:20 – 16:40	PanFTS Instrument for Geostationary Carbon Cycle and Air Quality Missions Stan Sander (NASA JPL)
16:40 – 17:00	GRIPS – geostationary remote infrared pollution sounder J. Ryan Spackman (NOAA)
17:00 – 17:20	FTS and UV-Visible Instruments for the Polar Communications and Weather Satellite C. Thomas McElroy (York Univ.)
<b>17:20 – 18:30</b>	<b>Short break &amp; Discussion</b>

## October 10<sup>th</sup> (Wed)

*Chair: Jhoon Kim (Yonsei Univ.)*

<b>09:00 – 12:00</b>	<b>Discussion and wrap-up</b> -Remaining issues -Future plan
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