



GEMS Workshop

Geostationary
Environmental
Monitoring
Spectrometer

Date : August 31 – September 2, 2011
**Venue : 6th Floor, Digital Library (#24) , Yonsei University,
Seoul, Korea**

Please use the west entrance of the Digital Library, which is just across the science Hall

PROGRAM

----- August 30 (Tue) -----

19:30 **(Evening) Icebreaker** Meet at the lobby of Sangnam Hall, Yonsei Univ. and walk

----- August 31 (Wed) -----

09:00 – 10:30	Registration	
10:30 – 12:30	Progress Report of GEMS Program (I)	
10:30 – 10:35	Opening Remark	S.J. Lee (NIER)
10:35 – 10:50	GEMS Program Introduction	C.K. Song (NIER)
10:50 – 11:10	GEMS Program and Science Requirements	J. Kim (Yonsei Univ.)
11:10 – 11:30	GEMS Instrument Requirements	S.H. Lee (KARI)
11:30 – 11:50	Sentinel-4 Requirements	Pepijn Veefkind (KNMI)
11:50 – 12:10	GMAP Asia Requirements & status	S. Hayashida (Nara Women's Univ.)
12:10 – 13:30	Lunch & Photo Session	
13:30 – 18:00	Progress Report of GEMS Program (II)	
13:30 – 13:50	Input Radiance for GEMS	K.M. Lee (Kyungpook Nat'l Univ.)
13:50 – 14:10	Requirements for O ₃ Retrieval	J.H. Kim (Pusan Nat'l Univ.)
14:10 – 14:30	Requirements for NO ₂ and SO ₂ Retrieval	Y.J. Kim (GIST)
14:30 – 15:00	Coffee Break	
15:00 – 15:20	Requirements for HCHO Retrieval	R.J. Park (SNU)
15:20 – 15:40	Requirements for aerosol Retrieval	J. Kim (Yonsei Univ.)
15:40 – 16:00	Requirements for cloud Retrieval	Y.S. Choi (Ehwa Woman's Univ.)
16:00 – 16:20	Requirements for surface property retrieval	J.M. Yoo (Ehwa Woman's 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	Ozone Data Assimilation with WRF-CHEM Model	S.K. Park (Ehwa Woman's Univ.)
17:00 – 17:20	Ground-based Observation of O ₃ and H ₂ O	J.J. Oh (Sookmyung Woman's Univ.)
17:20 – 18:00	Discussion	Reviewers (Internal)
18:30 – 21:00	Dinner (Lotus Restaurant, 1st floor of Sangnam Hall)	

PROGRAM

----- September 1 (Thu) -----

GEMS Science and Instrument Requirements

09:00 – 10:15	SNR and Input Radiance for GEMS Ultraviolet and visible sensitivities and instrument requirements for monitoring tropospheric pollution from geostationary orbit: NO ₂ , SO ₂ , HCHO, and CHOCHO Retrieval noise in converting trace gas slant column density to vertical column density A feasibility study for GMAP-Asia and APOLLO UV-visible observations and its implications for GEMS	Kelly Chance (Harvard CfA) P.K. Bhartia (NASA GSFC) Hitoshi Irie (JAMSTEC)
10:15 – 11:30	Spatial Resolution and Coverage Aerosols products from GEMS- promises and challenges Spatial resolution requirements in aerosol retrieval Emission Requirements from GEMS : Importance of spatial resolution and extent	P.K. Bhartia (NASA GSFC) M.J. Kim, S.S. Park, J. Kim (Yonsei Univ.) J.H. Woo (Konkuk Univ.)
11:30 – 12:00	Polarization requirements OMI requirements and lessons in polarization requirements	Pepijn Veefkind (KNMI)
12:00 – 13:00	Lunch	
13:00 – 15:30	Extending Spectral Coverage to include Chappuis band Benefit and Issues to include Chappuis band Challenges in deriving boundary layer ozone from GEMS Benefit to include Chappuis band (O ₄ & O ₃) Impact in GEMS Design change	Kelly Chance (Harvard CfA) P.K. Bhartia (NASA GSFC) J.H. Kim (Pusan Nat'l Univ.) H. Lee, J. Kim (Yonsei Univ.) D.H. Ko, S.H. Kim, J.H. Yeon, S.S. Yong, S.H. Lee (KARI)
15:30 – 16:00	Coffee break	
16:00 – 18:00	Effect of Aerosol/Clouds on Trace Gases and Synergy with ABI/GOCI Use of ABI/GOCI data to improve GEMS products Spatial and temporal resolutions of cloud information from GOCI II Spatial and temporal resolutions of cloud information From ABI	P.K. Bhartia (NASA GSFC) J.H. Ryu, S.I. Jo (KORDI) D.B. Shin (Yonsei Univ.)

PROGRAM

----- September 2 (Fri) -----

GEMS Science and Instrument Requirements

09:00 – 10:30 Space Radiation

GEO environment and GEMS Design consideration
Space Radiation Protection for OMI Design and
Operation Results

D.H. Ko, S.H. Lee (KARI)

Pepijn Veefkind (KNMI)

10:30 – 12:00 Suggestion for GEMS Mission

Mapping of CO₂, CH₄, CO and GPP from GEMS using
Imaging Fourier Transform Spectroscopy
Synergy of GEMS with Meteorological and Ocean Color
Instrument
Any suggestions for GEMS requirements

Stanley Sander, Jason Hyon
(NASA JPL)

Dong Wu (NASA GSFC)

12:00 – 13:00 Lunch

13:00 – 15:00 Open issues

All

15:00 – 17:00 Wrap-up and Discussion

All

17:00 Adjourn

All

