

## PROGRAM TIMETABLE

Date Time	24 Oct. (Mon.) 2011					25 Oct.(Tue.) 2011					26 Oct.(Wed.) 2011
09:00~10:00	Opening Ceremony (Nurimaru)					Opening Ceremony for KMS (C205)					Excursion (Planned)
10:00~11:00	Plenary Session (Nurimaru)										
11:00~12:00						Poster Session/Lunch Break (BEXCO)					Poster Session/Lunch Break (BEXCO)
12:00~14:00	Poster Session/Lunch Break (BEXCO)										
14:00~15:40						C201	C202	C203	C204	C206	C201
	NWP (1)	MON (1)	CLC (1)	TYP (1)	SAT (1)	BOL (1)	MON (3)	CLC (3)	AGR (2)	SAT (3)	
15:40~16:00	Poster Session/Break					Poster Session/Break					Break
16:00~18:00	C201	C202	C203	C204	C206	C201	C202	C203	C204	C206	Session for KMS
	AGR (1)	MON (2)	CLC (2)	TYP (2)	SAT (2)	BOL (2)	NWP (2)	TYP (3)	AGR (3)	OTH (1)	
18:00~	Reception for KJC Joint Conference @ Haeundae Grand Hotel					Reception for KMS @ BEXCO					

Organized by

Korean Meteorological Society (KMS), Meteorological Society of Japan (MSJ), and  
Chinese Meteorological Society (CMS)

@ The Opening Ceremony on the first day will be held at the Nurimaru APEC House

@ Sessions: NWP (Numerical Weather Prediction), MON (Monsoon), AGR (Aerosol Gas and Radiation), CLC  
(Climate Change), TYP (Typhoon), SAT (Satellite), BOL (Boundary Layer), OTH (Others)

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# SCIENTIFIC SESSIONS(24 – 25 Oct. 2011)

## Guidelines for presentation

Scientific sessions take place at five oral session rooms and poster session at a lounge. **Please check information carefully for the exact time and location of the sessions.** A list of presentations is available at this circular. If you will make a presentation(s), **please check your name and the title of the presentation(s).**

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## ORAL PRESENTATION

### Time allocation

The time allocated for each presentation is **15 minutes** (12 minutes presentation, 3 minutes for Q&A), except invited presentations (**20 minutes** 16 minutes presentation, 4 minutes Q&A).

### Equipments

Oral presentations should be presented by PC only. The session rooms are provided with a Microsoft Windows computer with a projector. Acceptable formats for presentations are **Microsoft PowerPoint and PDF**. The presenters are requested to bring their presentation data file on an USB memory stick, or bring their own portable computers. Please **make sure that the presentation files are correctly displayed before the session begins**. If you use an **USB memory stick to bring your presentation file**, please also make sure that virus check is executed beforehand.

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## POSTER PRESENTATION

### Poster boards

Size: **Width 90 cm x Height 210 cm**

Posters should be displayed on the boards using push pins that will be available at the poster session lounge. The presenters are responsible for setting up and removing their posters.

Poster display and core time

All posters will be displayed at the poster session lounge. Posters should be set up **between 8:00 and 12:00 on 24 October** 2011, and **remain up to 14:00 on 25 October** 2011. Presenters must **show up in front of their posters at least for one hour** during the core time of 12:00 to 14:00 on 25 October 2011.

## PROGRAM

**Plenary Session (24 October 2011)**  
*(Place: Nurimaru APEC House, Haeundae)*

09:00- 09:30	<b>Registration</b>
09:30- 10:00	<b>Opening Ceremony, MC: Jae-Cheol Nam (KMA)</b> Welcome remarks: President of KMS(Hi-Ryong Byun) Congratulatory remarks: Representative of China, Japan
10:00	<b>Group Photos</b>

**Keynote lectures, Chair: Jae-Hwan Kim (PNU)**

10:00-10:20	<b>Taichu Y. Tanaka:</b> Numerical simulation of the seasonal variation of elevated dust aerosol from Taklimakan desert ..... 3
10:20-10:40	<b>B.J. Sohn</b> and Sang-Wook Yeh: Observational evidences supporting increased Walker circulation over the recent three decades ..... 4
10:40-11:00	<b>Kazuo Saito:</b> Studies at MRI toward the cloud resolving NWP ..... 5
11:00-11:20	<b>Riko Oki,</b> Takuji Kubota, Misako Kachi: Cloud and precipitation observation by space borne Radar in Japan: The current and future missions ..... 6
11:20-11:40	<b>Il-Ju Moon:</b> Effect of salinity on tropical cyclone intensity ..... 7
11:40-12:00	<b>Riyu Lu,</b> Chaofan Li, and Buwen Dong: Predictability of the western North Pacific summer climate demonstrated by the coupled models of ENSEMBLES ..... 8
12:10	<b>Lunch Break @ BEXCO</b>

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# Opening Session (25 October 2011)

(Place: Conference Room C205, BEXCO)

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09:00- 10:00

**Registration**

10:00- 10:30

**Opening Ceremony, MC: Il-Ung Chung (KWNU)**

Opening remarks: President of KMS(Hi-Ryong Byun)

Congratulatory remarks: KMA Administrator (Seok-Joon Cho)

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**Invited lectures, Chair: Byung-Ju Sohn (SNU)**

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10:30-11:00

**Seok-Joon Cho:** A New Perspective on the  
Weather and Climate Service ..... 11

Administrator  
Korea Meteorological Administration (KMA)



11:00-11:30

**Hiroyuki Murakami, Hiromasa Yoshimura,  
Ryo Mizuta, and Akio Kitoh:** Future changes in tropical  
cyclone activity projected by The New 20-Km-Mesh  
High-Resolution MRI-AGCM ..... 12

Project Researcher  
Japan Agency for Marine-Earth Science & Technology(JAMSTEC)  
Meteorological Research Institute (MRI)  
Japan Meteorological Agency (JMA)



11:30-12:00

**John T. Snow:** Urban meteorology: Challenges and  
emerging opportunities ..... 13

Regents' Professor, School of Meteorology  
Dean Emeritus, College of Atmospheric and Geographic Sciences  
University of Oklahoma



## Oral Presentation Schedule

**Session: Numerical Weather Prediction (NWP)**  
**Session Conveners: Hyeong-Bin Cheong, Tadashi Tsuyuki, and Jing Chen**

### NWP–1 Chair: Xing YU and Tadashi Tsuyuki (24 Oct. 2011)

(Place: BEXCO Room C201)

14:00-14:20	<b>Tadashi Tsuyuki:</b> Data assimilation in a two-scale model with Kalman filters. (invited lecture, 20 mins) .....	17
14:20-14:35	<b>Xing Yu, Seon Ki Park, Yong-Hee Lee, Kwang-Deuk Ahn, Sung-Ho Choo:</b> The gridding of MOS for high resolution forecasting .....	18
14:35-14:50	<b>SeHyun Kim</b> and Hyun Mee Kim: Adjoint-based forecast sensitivity applied to three Asian dust events affecting the Korean peninsula .....	22
14:50-15:05	<b>Ja-Rin Park, Hyeong-Bin Cheong, and Hyun-Gyu Kang:</b> Limited-Area Domain Spectral Filter on Mercator Map Projection .....	23
15:05-15:20	<b>Michiya Hayashi, and Hisanori Itoh:</b> On the importance of the non-traditional coriolis terms in the interaction between cumulus convection and large-scale motions in the tropics .....	24
15:20-15:35	<b>Ui-Yong Byun</b> and Song-You Hong: Numerical simulation of heavy rainfall event over Gyunggi-Province of Korea in September 2010 .....	25

### NWP–2 Chair: Kazuo Saito and Hyeong–Bin Cheong (25 Oct. 2011)

(Place: BEXCO Room C202)

16:00-16:20	<b>Seungbum Hong, Xing Yu, Seon K. Park, and Yong-Sang Choi:</b> Finding the bestland surface model for local applications using Coupled NOAH-MP and MGA Model (invited lecture, 20 mins) .....	26
16:20-16:35	<b>Hyun-Gyu Kang, Hyeong-Bin Cheong, and Ja-Rin Park:</b> Track and intensity prediction of typhoons in 2010 with SABV method .....	27

16:35-16:50	<b>Eun-Gyeong Claire Yang</b> , and Hyun Mee Kim: Adaptive observations to improve numerical weather prediction for an Asian dust affecting Korea : An observation system simulation experiment ..... 28
16:50-17:05	<b>Daisaku Uesawa</b> : Verification of cloud overlap parameterization schemes for satellite radiance assimilation by using CloudSat data ..... 29
17:05-17:20	<b>Byoung-Kwon Park</b> , Song You Hong: Impacts of physical processes on medium- range forecasts in a Global Spectral Model ..... 30
17:20-17:35	<b>Hiromu Seko</b> , Tadashi Tsuyuki, and Kazuo Saito: Development of an Letkf Two-Way Nesting System for A Cloud Resolving Model ..... 31

**Session: Monsoon (MON)**  
**Session Conveners: Kyung-Ja Ha, Hiroaki Ueda, and Riyu Lu**

**MON-1 Chair: Riyu-Lu and Hyung-Jin Kim (24 Oct. 2011)**

(Place: BEXCO Room C202)

14:00-14:20	<b>Hiroaki Ueda</b> : A comparison look at driving forces of the Asian Monsoon between colder and warmer climate (invited lecture, 20 mins) ..... 35
14:20-14:35	<b>Hyung-Jin Kim</b> , Kumiko Takata, Bin Wang, Masahiro Watanabe, Masahide Kimoto, Tokuta Yokohata and Tetsuzo Yasunari: Global monsoon, El Niño, and Their interannual linkage simulated by MIROC5 and the CMIP3 CGCMs ..... 37
14:35-14:50	<b>Woonseon Jung</b> , Dong-In Lee, Sung-Hwa Park and Kyungsik Kim: Characteristics of distribution of sea surface temperature in three seas ..... 38
14:50-15:05	<b>Wei Chen</b> , Riyu Lu and Buwen Dong: Impacts of El Niño transition on the western North Pacific anticyclone anomalies in the decaying summer ..... 39
15:05-15:20	<b>Feng Xue</b> and Tonghua Su: Two Northward Jumps of the Summertime Western Pacific Subtropical High and their associations with the Tropical SST Anomalies ..... 40
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## MON–2 Chair: Kyung–Ja Ha and Kunihiro Koderu (24 Oct. 2011)

(Place: BEXCO Room C202)

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16:55-17:10	<b>Chi-Yung Tam</b> , Ying Lut Tung, Soo-Jin Sohn and Jung-Lien Chu: Predicting the station-scale summertime rainfall in South China-Comparison between direct model outputs and statistical downscaling .....	45
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## MON–3 Chair: Hiroaki Ueda and Congwen Zhu (25 Oct. 2011)

(Place: BEXCO Room C202)

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14:20-14:35	<b>Zhongda Lin</b> : Two types of abrupt northward jumps of the East Asian upper-tropospheric jet stream in mid-summer: Impact and dynamics .....	50
14:35-14:50	<b>Tadahiro Hayasaka</b> : Air-Sea interaction in Monsoon Asia through cloud and radiation processes .....	51

14:50-15:05	<b>Xu Kang</b> , Zhu CongWen, and He JinHai: The impact of the surface air temperature warming around Lake Baikal on the trend of summer precipitation in North China over the past 50 years ..... 52
15:05-15:20	<b>Ki-Young Heo</b> , Kyung-Ja Ha, and Sun-Seon Lee: Interdecadal change in pacific storm track activity and its possible causes ..... 53

**Session: Aerosol Gas and Radiation (AGR)**  
**Session Conveners: Jhoon Kim, Teruo Aoki, and Xiao-Ye Zhang**

**AGR-1 Chair: Xiao-Ye Zhang and Sang-Woo Kim (24 Oct. 2011)**

(Place: BEXCO Room C201)

16:00-16:15	<b>Sihye Lee</b> , Soon-Chang Yoon, Sang-woo Kim, Yong Pyo Kim and Young Sung Ghim: Spectral dependency of light scattering/absorption and hygroscopicity of pollution and dust aerosols in Northeast Asia ..... 57
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16:30-16:45	<b>A.S. Panicker</b> , S. Park and Dong-In Lee, Dong-Chul Kim, Yu-Won Kim, Eun-Sil Kim and Harrison Jeong: Particulate matter characteristics over A Global Atmosphere Watch Supersite (Anmyeon) in South Korea ..... 59
16:45-17:00	<b>Eunha Kang</b> , William H. Brune, Soon Chang Yoon, Sang Woo Kim, Sungho Woo and Meehye Lee: Secondary aerosol forming potential of air masses observed at Jeju, Korea: Experimental Potential Aerosol Mass (PAM) chamber study ..... 60
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## AGR-2 Chair: Jhoon Kim and Rokjin Park (25 Oct. 2011)

(Place: BEXCO Room C204)

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## AGR-3 Chair: Teruo Aoki and Youngsin CHUN (25 Oct. 2011)

(Place: BEXCO Room C204)

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**Session: Climate Change (CLC)**  
**Session Conveners: Won-Tae Kwon, Akio Kitoh, and Yong Luo**

**CLC-1 Chair: Won-Tae Kwon (24 Oct. 2011)** (Place: BEXCO Room C203)

14:00-14:15	<b>WonMoo Kim</b> , Sang-Wook Yeh, Joo-Hong Kim, Jong-Seoung Kug, and MinHo Kwon: The unique 2009–2010 EL NIÑO Event: A fast phase transition of warm pool EL NIÑO TOLA NIÑA ..... 79
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**CLC-2 Chair: Hiroyuki Murakami (24 Oct. 2011)** (Place: BEXCO Room C203)

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16:15-16:30	<b>Hee-Jeong Baek</b> , Johan Lee, Hyo-Shin Lee, ChunHo Cho, Sun-Yeong Gan, Min-Ji Kim, Kyoung-On Boo and Hyun-Suk Kang: Climate change projections using Representative Concentrations Pathways and Hadgem2-AO Climate Model ..... 87
16:30-16:45	<b>Sachie Kanada</b> , Masuo Nakano and Teruyuki Kato: Projections of future changes in precipitation and the vertical structure of the frontal zone during the Baiu Season in the vicinity of Japan using A 5-Km-Mesh Regional Climate Model ..... 88
16:45-17:00	<b>Suhee Park</b> , In-Hye Lee, Hyun-Suk Kang, and ChunHo Cho: Regional climate projection for East Asia and Korea using the HadGEM3-RA ..... 89
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### CLC–3 Chair: Byung–Ju Sohn (25 Oct. 2011)

(Place: BEXCO Room C203)

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14:15-14:30	<b>Yoon-Kyoung Lee</b> , Sang-Wook Yeh, Boris Dewitte, Byung-Kwon Moon, Jong-Ghap Jhun, Chang-Hoi Ho: The influences of interannual stratification variability and wind stress forcing on ENSO before and after the 1976 climate shift ..... 92
14:30-14:45	<b>Mi-Jin Hong</b> , Jai-Ho Oh, In-Won Kim, Morang Her, Su-Min Woo: Estimation of best Ensemble size for seasonal prediction with the use of high resolution Global Model ..... 93
14:45-15:00	<b>Chang-Eui Park</b> , Chang-Hoi Ho, Su-Jong Jeong, Jinwon Kim, Feng Song: Potential impact of vegetation feedback on alleviation of climate aridity over the United States in a 2CO <sub>2</sub> climate condition ..... 94
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**Session: Typhoon (TYP)**  
**Session Conveners: H. Joe Kwon, Kazuo Saito, and Xiaotu Lei**

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**TYP-1 Chair: H. Joe Kwon and Qingqing Li (24 Oct. 2011)**

(Place: BEXCO Room C204)

14:00-14:20	<b>Kazuo Saito</b> , Yoshinori Shoji, Seiji Origuchi, Hiromu Seko and Le Duc : GPS TPW assimilation with the JMA Nonhydrostatic 4DVAR and cloud resolving ensemble forecast for the 2008 August Tokyo metropolitan area local heavy rainfalls (invited lecture, 20 mins) .....	99
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14:35-14:50	<b>Yoshiaki Miyamoto</b> and Tetsuya Takemi : A transition mechanism for the Spontaneous Axisymmetric Intensification of Tropical Cyclones .....	101
14:50-15:05	<b>Sung-A Jung</b> , Masayuki Maki, Dong-In Lee, Dong-Soon Kim, and Shyuichi Tsuchiya : Retrieval of microphysical properties of localized convective precipitation using 2DVD and X-band polarimetric radar network .....	102

**TYP-2 Chair: Xiaotu Lei and Masahiro Sawada (24 Oct. 2011)**

(Place: BEXCO Room C204)

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16:20-16:35	<b>Sho Yokoda</b> , Hiroshi Niino and Wataru Yanase : A numerical experiment on the Genesis of Tropical Cyclones due to ITCZ breakdown mechanism .....	104
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### TYP–3 Chair: Kazuo Saito and Gyu–Won Lee (25 Oct. 2011)

(Place: BEXCO Room C203)

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16:35-16:50      **Tetsuya Takemi**, SENSITIVITY OF THE EVOLUTION AND STRUCTURE OF SIMULATED TROPICAL CYCLONES TO TURBULENCE MIXING PARAMETERIZATION ..... 111

16:50-17:05      **Kenji Tanaka**: Origins of atmospheric disturbance resulted in Meteotsunami propagated to Kyushu, Japan ..... 112

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### Session: Satellite (SAT)

**Session Conveners: Myoung-Seok Suh, Riko Oki, and Jun Yang**

### SAT–1 Chair: Myoung–Seok Suh and Tadahiro Hayasaka (24 Oct. 2011)

(Place: BEXCO Room C206)

14:00-14:20      **Jun Wen**, Rong Liu, Yue Kang: Land surface vapotranspiration estimated from Chinese Meteorological Satellite Measurements (invited lecture, 20 mins) ..... 117

14:20-14:35      **Nobuo Sugimoto**, Tomoaki Nishizawa, and Hajime Okamoto: Aerosol classification Retrieval Algorithm for Earthcare/Atlid. .... 118

14:35-14:50      **Sang-Sam Lee** and Byung-Ju Sohn: Artificial Neural Network approach for retrieving nighttime AOT of Asian Dusts from MODIS IR measurements. .... 119

14:50-15:05	<b>Seung-Woo Lee</b> , Hosung Suh, Dohyeong Kim, Jeongrae Kim and Young Jae Lee: Real-Time Determination of precipitable water vapor using Global Navigation Satellites System ..... 120
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15:20-15:35	<b>Juseon Bak</b> , Xiong Liu, Jennifer C. Wei, Laura L. Pan, Jae H. Kim, Kelly Chance, Christopher D. Barnett: Improvement of OMI ozone profile retrievals in the troposphere and lower stratosphere by use of a tropopause-based ozone profile climatology ..... 122

## SAT-2 Chair: Riko Oki and Jun Yang (24 Oct. 2011)

(Place: BEXCO Room C206)

16:00-16:20	<b>Yukari N. Takayabu</b> , Atsushi Hamada, Takuji Kubota, Misako Kachi, Shoichi Shige, and Riko Oki: What we have learned from TRMM and what we should connect them to GPM? (invited lecture, 20 mins) ..... 123
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16:50-17:05	<b>Takuji Kubota</b> , Naofumi Yoshida, Shuji Shimizu, Riko Oki, Shinta Seto, Hiroshi Hanado, and Toshio Iguchi: Development of synthetic GPM/DPR data using the TRMM/PR observations ..... 126
17:05-17:20	<b>Tetsuya Kodama</b> and Koh-Ichiro Oyama: The ELMOS Constellation: GPS Occultation Measurements by Small Satellite Constellation ..... 127
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**SAT–3 Chair: Jun Wen and Kyoung–Wook Jin (25 Oct. 2011)**

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