

Report for JSPS Asian Science Seminar FY2009 <Summary>

Date 13 January 2010

1. Title of Seminar JSPS- KOSEF High-Impact Weather in Changing Climate

2. Purpose of Seminar

Global warming and extreme weather events are becoming great concern among researchers and people. This seminar provides lectures on basics of climate studies, numerical models and current studies on high impact weather for young researchers to improve their understanding on the topics and help their progress in research.

3. Period

From 5 October 2009 through 10 October 2009 (6 days)

4. Venue

International Conference Room (building 25-1), Seoul National University, Seoul, Korea

5. Organization

(1) Cosponsors

Japan Side	Japan Society for the Promotion of Science
Side	Korea Science and Engineering Foundation

(2) Organizer

1) Japan side

Name in full Hiroshi Uyeda  
Affiliation and position Hydrospheric Atmospheric Research Center (HyARC),  
Nagoya University, Professor

2) Korea side

Name in full Gyu-Ho Lim  
Affiliation and position School of Earth and Environmental Sciences,  
Seoul National University, Professor

6. Program: Agenda, topics, related activities (e.g., reception, excursion)  
Attached

7. Lecturers and Participants

1) Number of Persons

	Lecturers	Participants	Total
Japan side	11	21	32
(Number who participated under program funding)	(11)	(21)	(32)
Korea side	10	42	52
(Number who participated under program funding)	(0)	(0)	(0)
Other persons	1	0	1
(Number who participated under program funding)	(1)	0	(1)
Total	22	63	85
(Number who participated under program funding)	(12)	(21)	(32)

2) List

A: Lecturers

Name in full	Position /Affiliation/ Institution(Country of affiliated institution)	Remarks
-Japan side		
Atuhiro Nishida	Emeritus professor, Institute of Space and Astronautical Science	*
Taro Matsuno	Principal Scientist, JAMSTEC	*
Akio Kitoh	Director, Climate Research Department of Meteorological Research Institute/ JMA	*
Masahide Kimoto	Professor, Tokyo University	*
Masato Sugi	Principal Scientist, JAMSTEC	*
Masanori Yoshizaki	Principal Research Scientist, JAMSTEC	*
Masaki Sato	Associate Professor, Tokyo University	*
Sachie Kanada	Researcher, Climate Change Research Center Advanced Earth Science & Technology Organization	*
Masataka Murakami	Head, Physical Meteorology Research Department of Meteorological Research Institute/ JMA	*
Kazuhisa Tuboki	Associate Professor, Hydrospheric Atmospheric Research Center Nagoya University	*
Hiroshi Uyeda	Professor, Hydrospheric Atmospheric Research Center Nagoya University	*
-Korea side		
Joon Kim	Professor, Department of Atmospheric Sciences, Yonsei University	
In-Sik Kang	Professor, School of Earth and Environmental Sciences, Seoul National University	
Jai-Ho Oh	Professor, College of Environmental and Marine Science and Technology, Pukyong National University	
Jeong-Woo Kim	Emeritus professor, Department of Atmospheric Sciences, Yonsei University	
Joon Kim	Professor, Department of Atmospheric Sciences, Yonsei University	
Kwang Yul Kim	Professor, School of Earth and Environmental Sciences, Seoul National University	

Kyung-Ryul Kim	Professor, School of Earth and Environmental Sciences, Seoul National University	
Soon-Ung Park	Emeritus professor, School of Earth and Environmental Sciences, Seoul National University	
Won-Kyu Park	Professor, School of Forest Resources, Chungbuk National University, Director of Tree-Ring Material Bank	
Gyu-Ho Lim	Professor, School of Earth and Environmental Sciences, Seoul National University	
-Other Persons John M Wallace	Professor, Department of Atmospheric Sciences, University of Washington	*

Place a check [ \* ] in the Remark Column for those who participated using JSPS's seminar funding.

B: Participants

Name in full	Position /Affiliation/ Institution(Country of affiliated institution)	Remarks
-Japan side		
Katuya Yamashita	Post.Doc., Meteorological Research Institute, Japan	*
Tsuyoshi Yamaura	Ph.D course , Department of Earth and Environments, Graduate School of Science and Technology, Kumamoto University	*
Takahiko Bessho	Master course , ERES, Graduate school of Engineering, Gifu University	*
Hideaki Ohtake	Post.Doc., Cloud Physics Section, Physical Meteorology Research Department, Meteorological Research Institute	*
Sho Arakane	Ph.D course, Center for Climate System Research , The University of Tokyo	*
Sachiho Adachi	Post.Doc., University of Tsukuba	*
Satoshi Watanabe	Ph.D course, Department of civil engineering, the University of Tokyo	*
Junichi Nagaoka	Ph.D course, Graduate School of Science, Chiba University	*
Kazuo Otani	Master course, Graduate School of Science, Okayama University	*
Chusei Fujiwara	Ph.D course, Graduate School of Science, Hokkaido University	*
Tomoko Nitta	Ph.D course, Department of Civil Engineering, Graduate School of Engineering, the University of Tokyo	*
Sueyoshi Tetuso	Post.Doc., Projection Research Program, Research Institute for Global Change Global Change, JAAMSTEC	*
Hyungjun Kim	Ph.D course , Department of civil engineering, the University of Tokyo	*
SHIN Suzuki	Post.Doc., National Institute of Polar Research	*
Tomoaki Kitayama	Master course, Graduate School of Science, Chiba University	*
Mariko Oue	Ph.D course, Hydrospheric Atmospheric Research Center, Nagoya University	*
Hiroto Takeuchi	Master course, Hydrospheric Atmospheric Research Center, Nagoya University	*
Takeharu Kouketsu	Master course, Hydrospheric Atmospheric Research Center, Nagoya University	*
Hiroki Okamoto	Master course, Hydrospheric Atmospheric Research Center, Nagoya University	*
Ryosuke Kondo	Master course, Hydrospheric Atmospheric Research Center, Nagoya University	*
Shimpei Koyama	Master course, Hydrospheric Atmospheric Research Center, Nagoya University	*

-Korea side			
Choi	Ildae	Ph.D course, Seoul National University	
Choi	Minhyeok	Student, Gangneung National University	
Eun	Seunghee	Student, Gangneung National University	
Kim	Daehyun	Ph.D course, Seoul National University	
Kim	Nayoung	Student, Seoul National University	
Kim	Yeonhee	Student, Kongju National University	
Kim	Youjoon	Graduate student, Gangneung National University	
kwon	Hataek	Ph.D course, Seoul National University	
Lee	Yoonkyoun	Ph.D course, Seoul National University	
Lee	Yunyoung	Ph.D course, Seoul National University	
Lim	Heejeong	Student, Kyungpook National University	
Na	Hanna	Ph.D course, Seoul National University	
Oh	Jihyun	Ph.D course, Seoul National University	
Roh	Joonwoo	Ph.D course, Seoul National University	
Shim	Taehyoun	Ph.D course, Seoul National University	
Song	Hwanjin	Master course, Seoul National University	
Sung	Mikyung	Ph.D course, Seoul National University	
Yang	Youngmin	Ph.D course, Seoul National University	
Choi	Eunho	Master course, Seoul National University	
Heo	Sora	Master course, Seoul National University	
Hong	Kiok	Student, Kongju National University	
Jo	Meehyun	Ph.D course, Seoul National University	
Jung	Euihyun	Ph.D course, Seoul National University	
Kim	Jihyun	Student, Kongju National University	
Lee	Eunjung	Master course, Seoul National University	
Lim	Ahyoung	Master course, Seoul National University	
Lim	Mijung	Master course, Seoul National University	
Min	Hyunjung	Student, Seoul National University	
Oh	Bonghyun	Master course, Seoul National University	
Park	Jongyeon	Master course, Seoul National University	
Park	Yongjin	Master course, Seoul National University	
Seo	Jihoon	Master course, Seoul National University	
Yeo	Saerim	Master course, Seoul National University	
Yun	Jiro	Master course, Seoul National University	
Jin	Chunsil	Ph.D course, Seoul National University	
Choi	Yonghan	Ph.D course, Seoul National University	
Woo	Sumin	Ph.D course, Pukyong National University	
Han	Kyungdong	Master course, Seoul National University	
Ham	Suryun	Ph.D course, Yonsei University	
Kim	Shinwoo	Ph.D course, Seoul National University	
Cha	Donghyun	Post.Doc., Seoul National University	
Trilochan	Pattanaik	Ph.D course, Pukyong National University	
-Other Persons			

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8. Please describe the achievements of the seminar.

This seminar provided lectures relating to climate and high impact weather for young researchers in Korea and Japan. Variety of lectures on basics of climate studies climate models, high resolution cloud models, and current studies on high impact weather helped young researcher's understanding on depth of climate studies and relating studies. Copies of lecture materials were provide to participants and lecturers by files during the seminar and DVD afterward. It would help them to promote their future studies. During the seminar, poster presentations on participants research activities were arranged to help their mutual understanding on their works. Group discussions among participant and a technical tour also gave good opportune for participants from Korea and Japan to exchange their understanding on research and cultures. In spite of a short announcement time the seminar had 63 participants (21 from Japan and 42 from Korea).

Considering future development of young researchers inclusion of more than little master course students may be effective as an experience.

## APPENDIX Asian Science Seminar Program Overview

※ The opening ceremony including two special lectures will be held at the bldg. 61 room 320.  
(AM schedule of Day 1, 5 Oct. 2009)

※ Other lectures are prepared at the International Conference Room (Bldg. 25-1).

※ Poster presentations are prepared at the lobby & 2<sup>nd</sup> floor of Bldg. 25-1.

### Day 1 - 5 Oct. 2009 Mon

Time	ID	Detailed
08:30 - 09:00		Registration
09:00 - 10:00		Opening remarks & Congratulatory addresses JSPS's director, NRF's director, Prof. Nishida
10:00 - 11:00	D1SL1	Special Lecture(1) – T. Matsuno (JAMSTEC)
11:00 - 12:00	D1SL2	Special Lecture(2) – J. M. Wallace (UW) [Video Conference]
12:00 - 13:30		Lunch
13:30 - 14:50	D1L1	In-Sik Kang (SNU) – Moisture Physics of High-Resolution Global Climate Model
14:50 - 15:10		coffee break
15:10 - 16:30	D1L2	Jeong-Woo Kim (Emeritus, YSU) - TBD
17:30 -		Banquet (3 <sup>rd</sup> floor of bldg. 75)

### Day 2 - 6 Oct. 2009 Tue

Time	ID	Detailed
09:00 - 10:20	D2L3	A. Kitoh (MRI/JMA) - Future changes in extreme weather events projected by 20-km/60-km mesh global atmospheric models
10:20 - 10:40		coffee break
10:40 - 12:00	D2L4	T. Matsuno (JAMSTEC) - Lecture on Basics of Climate Change
12:00 - 13:30		Lunch
13:30 - 14:50	D2L5	M. Kimoto (U-TOKYO) - Natural modes of global climate variability: current understanding and projected changes
14:50 - 15:10		coffee break
15:10 - 16:30	D2L6	Won-Kyu Park (CBNU) - Reconstruction of paleoclimate by tree rings for climate change studies
16:30 - 18:00		Poster presentation / open discussion

### Day 3 - 7 Oct. 2009 Wed

Time	ID	Detailed
09:00 - 10:20	D3L7	Jai-Ho Oh (PKNU) - TBD
10:20 - 10:40		coffee break
10:40 - 12:00	D3L8	M. Murakami (MRI/JMA) - Weather Modification, Scientific Basis and Present Status of Precipitation Enhancement Technology

12:00 - 13:30		Lunch
13:30 - 14:50	<b>D3L9</b>	<b>M. Sato (U-TOKYO)</b> - Status of global cloud-system resolving simulations with NICAM
14:50 - 15:10		coffee break
15:10 - 16:30	<b>D3L10</b>	<b>Soon-Ung Park (Emeritus, SNU)</b> - Effect of radiative forcing of aerosols on the regional climate change in Asia
16:30 - 18:00		Poster presentation / open discussion

#### Day 4 - 8 Oct. 2009 Thu

Time	ID	Detailed
09:00 - 10:20	<b>D4L11</b>	<b>S. Kanada (JAMSTEC)</b> - Heavy rainfall events during warm season in East Asia and their changes in global warming climate experiments
10:20 - 10:40		Coffee break
10:40 - 12:00	<b>D4L12</b>	<b>M. Sugi (MRI/JMA-JAMSTEC)</b> - Tropical Cyclones and Climate Change
12:00 - 13:30		Lunch
13:30 - 14:50	<b>D4L13</b>	<b>Kwang Yul Kim (SNU)</b> - Physical mechanisms of seasonal, subseasonal and high-frequency variability of summer precipitation in Korea
14:50 - 15:10		coffee break
15:10 - 16:30	<b>D4L14</b>	<b>K. Tuboki (NAGOYA-U)</b> - Cloud-resolving model and its application for high-resolution simulation of high-impact weather systems.
16:30 - 18:00		Open discussion

#### Day 5 - 9 Oct. 2009 Fri

Time	ID	Detailed
09:00 - 10:20	<b>D5L15</b>	<b>M. Yoshizaki (JAMSTEC)</b> - Roles of cumulonimbus clouds and precipitation in high-impact weather
10:20 - 10:40		coffee break
10:40 - 12:00	<b>D5L16</b>	<b>Kyung-Ryul Kim (SNU)</b> - Recent trends on monitoring and diagnosing ODP and GWP trace gases in the atmosphere
12:00 - 13:30		Lunch
13:30 - 14:50	<b>D5L17</b>	<b>Joon Kim (YSU)</b> - Climate Change Crisis: Science, Service, and Stewardship
14:50 - 15:10		coffee break
15:10 - 16:30	<b>D5L18</b>	<b>Dong-Kyou Lee (SNU)</b> - Regional Climate Modeling for High-impact Weather
16:30 -		Closing remarks

#### Day 6 - 10 Oct. 2009 Sat

Time	Detailed
08:00 - 14:00	<b>DMZ or Seoul City Tour, free and open to all participants.</b>