

# **International Symposium on Weather Modification**

## **Present State of Artificial Precipitation Enhancement**

**Date :**

January 31 – February 1, 2007

**Venue :**

Tsukuba International Congress Center (Conference Room 202)  
2-20-3, Takezono, Tsukuba, Ibaraki, 305-0032, Japan

\* Internet access with DHCP is available.

**Registration :**

from 09:30 a.m. on 31 (Wednesday) January, 2007,  
at the registration desk in front of the "Room 202"

**Transportation :**

Take the Bus bound for Tsuchiura. It departs at No.8 bus stop of the Airport Terminal 1 and No.10 bus stop of the Terminal 2. The ticket is sold at the KEISEI Counter in the Arrival Lobby (ground floor). It takes about an hour and 40 minutes to Tsukuba Center.

Bus ticket from Narita AP to Tsukuba Center (one way) costs 2,540 yen  
Tsukuba International Congress Center is located within walking distance from Tsukuba Center (5 minute walk).

**Organizer :**

Secretariat of Japanese Cloud Seeding Experiment for Precipitation Augmentation

<http://jcsepa.mri-jma.go.jp/>

Meteorological Research Institute, Japan Meteorological Agency

<http://www.mri-jma.go.jp/>

# Program

## International Symposium on Weather Modification Present State of Artificial Precipitation Enhancement

January 31 – February 1, 2007

Tsukuba International Congress Center (EPOCHAL TSUKUBA), Tsukuba, Japan

### Oral Sessions

**Wednesday, 31/1/2007**

09:30 – Registration

10:00 – 10:10 Opening remarks Room 202

**Dr. Masataka Murakami**

Principal Investigator,

JCSEPA (Japanese Cloud Seeding Experiment for Precipitation Augmentation)

10:10 – 14:40 Session 1. Cloud modification in the world Room 202

Chairperson **Prof. Kenji Nakamura**

Hydrospheric Atmospheric Research Center HyARC, JAPAN

10:10 – 10:50

**Dr. Deon E. Terblanche**

South African Weather Service, SOUTH AFRICA

**The South African experience in rainfall enhancement research in a global context**

10:50 – 11:30

**Dr. Steven Siems**

School of Mathematical Sciences, Monash University, AUSTRALIA

**An analysis of cloud seeding operations over Tasmania from 1964 to 2005**

11:30 – 12:10

**Prof. Daniel Rosenfeld**

Program of Atmospheric Sciences, Institute of Earth Sciences,

The Hebrew University of Jerusalem, ISRAEL

**The double-sided sensitivity of clouds to air pollution and advertent seeding**

12:10 – 13:30

————— Lunch —————

13:30 – 14:10

**Dr. Sergey Matrosov**

NOAA Environmental Technology Laboratory, USA

**Studies of cloud structure and microphysics  
with ground-based multi-sensor measurements**

14:10 – 14:40

**Dr. Akihiro Hashimoto**

Cloud Physics Section, Physical Meteorology Research Department,  
Meteorological Research Institute, JAPAN

**Statistical analysis with CRM data set on seeding potential  
for winter orographic cloud in Japan**

14:40 – 15:10

————— Coffee and Posters —————

15:10 – 17:00 Session 2. Hygroscopic seeding Room 202

Chairperson **Dr. Kikuo Okada**

Meteorological Research Institute, JAPAN

15:10 – 15:50

**Dr. Duncan Axisa**

Project Director, Seeding Operations and Atmospheric Research, USA

**Microphysical signatures of hygroscopic seeding with 2-5 micron salt powder  
using aircraft and sulfur hexafluoride (SF<sub>6</sub>) tracer**

15:50 – 16:30

**Dr. Daniel W. Breed**

Project Scientist, NCAR Research Applications Laboratory, USA

**NCAR feasibility studies for weather modification programs over the past 10 years**

16:30 – 17:00

**Dr. Naomi Kuba**

Frontier Research Center for Global Change, JAPAN

**A numerical study on impact of hygroscopic seeding  
on the development of warm rain**

**- Numerical simulation with a hybrid microphysical model -**

**Thursday, 1/2/2007**

**09:30 – 12:30 Session 3. Asian activity in cloud modification study Room 202**

**Chairperson Dr. Toshiyuki Nakaegawa**

Meteorological Research Institute, JAPAN

09:30 – 10:10

**Dr. Masataka Murakami**

Head of Cloud Physics Section, Physical Meteorology Research Department,  
Meteorological Research Institute, JAPAN

**Recent Japanese research on orographic snow cloud modification  
for water resources augmentation**

10:10 – 10:50

**Prof. Zhanyu Yao**

Chinese Academy of Meteorological Sciences, CHINA

**Recent studies on precipitation enhancement in China**

10:50 – 11:10

————— Coffee and Posters —————

11:10 – 11:50

**Dr. Sung-Nam Oh**

Director of Remote Sensing Research Institute, Meteorological Research Institute,  
Korea Meteorological Administration, KOREA

**Weather modification experiments in Korea**

11:50 – 12:30

**Dr. Warawut Khantiyanan**

Director, Royal Rainmaking Section,  
Bureau of the Royal Rainmaking and Agricultural Aviation, THAILAND

**50 years of Thailand cloud seeding activity**

**12:30 – 12:35 Closing remarks**

**Room 202**

**Dr. Masataka Murakami**

Principal Investigator,

JCSEPA (Japanese Cloud Seeding Experiment for Precipitation Augmentation)

## Posters

14:40 – 15:10, Wednesday, 31/1/2007	Room 202
10:50 – 11:10, Thursday, 1/2/2007	Room 202

### **Dr. Ki-Ho Chang**

Remote Sensing Research Laboratory, METRI/KMA, KOREA  
**Cloud Physics Observation System, CPOS**

### **Dr. Fumiaki Fujibe**

Forecast Research Department, Meteorological Research Institute, JAPAN  
**Japanese Cloud Seeding Experiment for Precipitation Augmentation**  
**Subtheme 1: Meteorological and hydrological studies of droughts and validity of precipitation augmentation for drought mitigation**

### **Dr. Hajime Okamoto**

Graduate School of Science, Tohoku University, JAPAN  
**Japanese Cloud Seeding Experiment for Precipitation Augmentation**  
**Subtheme 2: Study on remote sensing technique for monitoring of seedable clouds and evaluation of seeding effects**

### **Mr. Narihiro Orikasa**

Physical Meteorology Research Department, Meteorological Research Institute, JAPAN  
**Japanese Cloud Seeding Experiment for Precipitation Augmentation**  
**Subtheme 3: Study on in-situ measurement and cloud seeding techniques from airborne and ground-based platforms**

### **Dr. Teruyuki Kato**

Forecast Research Department, Meteorological Research Institute, JAPAN  
**Japanese Cloud Seeding Experiment for Precipitation Augmentation**  
**Subtheme 4: Study on numerical modeling of precipitation augmentation for water resources management and drought mitigation**

## **Instructions to Paper Presentations**

### **Poster paper presentations**

Poster panels will be 2.1 m high and 1.0 m wide. Push tacks are available. Posters should be set up in the morning of 31 January and removed in the afternoon of 1 February.

### **Oral paper presentations**

Oral presentations of invited speakers will be 40 min and those of JCSEPA members will be 40 or 30 min, including discussions for 5 min. Chairperson will notify the time left for speakers at 10 and 5 min before the end.

## **Reception**

Reception will be held at 5:30 pm Wednesday evening, January 31, 2007 at the restaurant Espoir in the Tsukuba International Congress Center. Charge is 7,000 yen. Excellent foods and drinks will be served. Prof. Gabor Vali, University of Wyoming, USA is going to give a special talk "What will the doctor prescribe?". Participation registration on the day of the reception is possible.