



WEATHER MODIFICATION ASSOCIATION

ANNUAL MEETING

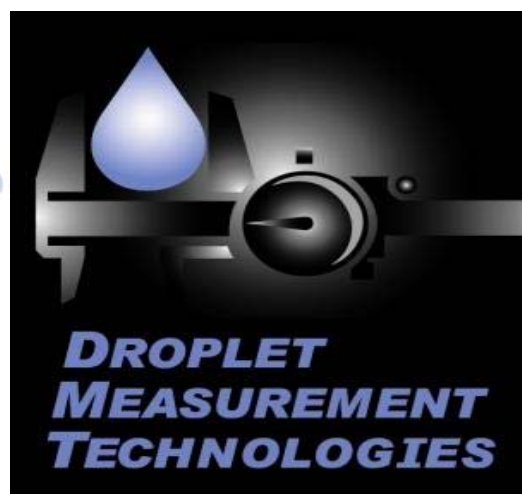
APRIL 21-25, 2009

ANAHEIM, CALIFORNIA



SEEDING OPERATIONS & ATMOSPHERIC RESEARCH

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**WEATHER MODIFICATION ASSOCIATION ANNUAL MEETING
ANAHEIM, CALIFORNIA**

WEDNESDAY, APRIL 22

8:30-8:40 Opening Remarks

OPERATIONAL AND EXPERIMENTAL PROGRAM DESIGN

Chair: Duncan Axisa

8:40-9:00 Krauss et al. - Designing a rain enhancement program based on the climatology of rainfall and radar-cell complexes in the Kingdom of Saudi Arabia

9:05-9:25 Silber - Cloud seeding opportunities in New Mexico

9:30-9:50 Sen et al. - Precipitation effect on the water levels in the lakes of Istanbul

BREAK 9:55-10:10

CLOUD AND AEROSOL MEASUREMENTS

Chair: Andrew Detwiler

10:10-10:30 DeFelice - Cloud-aerosol interaction basics and weather modification

10:35-10:55 Axisa et al. - Aircraft measurement of aerosol-cloud interactions over Istanbul, Turkey

11:00-11:20 Delene - Three years of airborne measurements in Mali, West Africa

11:25-11:45 Tessendorf et al. - Preliminary observations of the southeast Queensland cloud seeding research project: cloud base characteristics

11:50-12:10 Kauffman - Atmospheric DC corona effect ionization as a potential tool for aerosol deposition: an experiment

LUNCH 12:15-1:15

1:15-1:35 Pokharel & Snider (Deshler) - The removal of ultrafine nuclei in mountain wave clouds

1:40-2:00 DeFelice - Technology innovations of use to weather modification

2:05-2:25 Ware - Continuous liquid and thermodynamic profiling for weather modification applications (instrumentation for aerosol & cloud physics research)

SUMMER RESEARCH AND OPERATIONAL PROJECT UPDATES

Chair: Terry Krauss

2:30-2:50 Brintjes et al. - Preliminary observations of the southeast Queensland cloud seeding research project: mixed-phase processes and randomized seeding results

2:55-3:15 Delene et al. - Report on the polarimetric cloud analysis and seeding test 2 (POLCAST²)

BREAK 3:20-3:35

- 3:35-3:55 **Axisa et al.** - Hygroscopic seeding with 2-5 micron salt powder using aircraft and SF₆ tracer in Texas
- 4:00-4:20 **Murakami** - Japanese cloud seeding experiments for precipitation augmentation (JCSEPA): preliminary results from summertime weather modification program
- 4:25-4:45 **Beall et al.** - Texas weather modification operations in 2008
- 4:50-5:10 **Tsagalidis et al.** - Maximum hail size prediction

THURSDAY, APRIL 23

WINTER RESEARCH AND OPERATIONAL PROJECT UPDATES

Chair: Mark Solak

- 8:30-8:50 **Marler** - Pit-McCloud cloud seeding project - a new approach for California
- 8:55-9:15 **Stone** - An update on the design of the operational program of the SCE San Joaquin cloud seeding program
- 9:20-9:40 **Griffith** - A feasibility/design study for a winter weather modification program in the upper Snake basin in Idaho
- 9:45-10:05 **Boe** - Wyoming weather modification pilot project update: field operations 2008-2009
- 10:10-10:30 **Huggins** - Evaluating cloud seeding criteria for the Grand Mesa (Colorado) wintertime seeding project

BREAK 10:35-10:50

PRECIPITATION MEASUREMENTS AND SIMULATIONS

Chair: Mark Solak

- 10:50-11:10 **Borkhuu & Snider (Deshler)** - Snowfall at a high-elevation site: a comparison of six measurement techniques
- 11:15-11:35 **Rasmussen** - Simulation of snowfall over Colorado and Wyoming

LUNCH 11:40-1:00

SEVERE WEATHER MITIGATION

Chair: Todd Flanagan

- 1:00-1:20 **Cotton & Lerach** - Simulations of aerosol impacts on tornado genesis: implications to tornado mitigation?
- 1:25-1:45 **Cotton et al.** - Planned evaluation of hurricane mitigation (HURRMIT) hypothesis through an interactive program of numerical simulations and observational analyses
- 1:50-2:10 **Biggs** - The sky will be falling: future technologies and techniques for the disruption and diminishment of self-sustainment cycles in tropical cyclonic systems

BREAK 2:15-2:30

STATISTICAL ANALYSES AND MODELING

Chair: Duncan Axisa

- 2:30-2:50 Krauss** - An exploratory analysis of the effects of cloud seeding, accounting for large natural variability
- 2:55-3:15 Teller et al. (Rasmussen)** - The effects of mineral dust particles on cloud microphysics, dynamics and precipitation - a case study from the Saudi Arabia weather modification program
- 3:20-3:40 Krishna** - Statistical methods for evaluation of operational cloud seeding program
- 3:45-4:05 Bangsund & Leistritz (Langerud)** - Economic impacts of cloud seeding on agricultural crops in North Dakota

FRIDAY, APRIL 23

9:00-10:45 WMA BUSINESS MEETING

BREAK 10:45-11:00

SPECIAL SESSION: POTENTIAL ENVIRONMENTAL IMPACTS OF CLOUD SEEDING

AGENTS

Chair: Don Griffith

- 11:00-11:30 McGurty** - The silver lining to a seeded cloud: more than a rainbow
- 11:30-12:00 Marler & Henderson** - Silver iodide - friend or foe? (a little knowledge can be dangerous))

LUNCH 12:00-1:00

- 1:00-1:30 Williams & Denholm** - An assessment of the environmental toxicity of silver iodide and its application to a cloud seeding trial in the Snowy Mountains of Australia
- 1:30-2:00 Edwards** - Can wintertime cloud seeding increase silver levels in alpine water bodies?
- 2:00-3:00 Panel discussion** - McGurty, Marler, Denholm, Edwards, Stone