

The actual schedule for this event can be found at this link:

<https://ams.confex.com/ams/93Annual/webprogram/19WXMOD.html>

For the purposes of demonstrating that aerosol programs and weather modification are actually in place and being discussed, the content of the above web link has been copied and pasted into a PDF file.

For quick reference, please scroll to page 3, Session 1: **Host: 19th Conference on Planned and Inadvertent Weather Modification**; page 4, Poster Session 1: **Weather Modification: Aerosol Effects, Urban Effects, Modeling Studies**; pages 4-5 Themed Joint Session 23 **Impacts of Anthropogenic Aerosols on Clouds, Precipitation, Circulation, and Severe Storms**; page 8, Themed Joint Session 51 **Aerosol-cloud Interactions in Weather Forecasting**
Hosts: (Joint between the 19th Conference on Planned and Inadvertent Weather Modification; and the Fifth Symposium on Aerosol-Cloud-Climate Interactions; and pay special attention to page 6, 2.6 Seeding of Cirrus Clouds to Reduce Global Warming
David L. Mitchell, DRI, Reno, NV; and J. Mejia, M. Kuebbeler, U. Lohmann, and M. Xiao
Recorded Presentation



AMERICAN METEOROLOGICAL SOCIETY

93rd American Meteorological Society Annual Meeting

January 05 - 10, 2013

19th Conference on Planned and Inadvertent Weather Modification



Program Chair: Daniel W. Breed , NCAR

[« Collapse View](#)



- Indicates paper has been withdrawn from meeting



- Indicates paper is an Award Winner

Saturday, 5 January 2013

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7:30 AM-10:00 AM: Saturday, 5 January 2013

Registration for Student Conference and Short Course

Location: 4th Street Atrium (Austin Convention Center)

Sunday, 6 January 2013

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7:30 AM-9:00 AM: Sunday, 6 January 2013

Registration for Short Course and Conference for Early Career Professionals
Location: 4th Street Atrium (Austin Convention Center)

9:00 AM-6:00 PM: Sunday, 6 January 2013

Registration Open for Annual Meeting
Location: 4th Street Atrium (Austin Convention Center)

12:00 PM-4:00 PM: Sunday, 6 January 2013

WeatherFest
Location: Exhibit Hall 1 (Austin Convention Center)

Monday, 7 January 2013

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7:30 AM-5:30 PM: Monday, 7 January 2013

Registration Continues Through January 9
Location: 4th Street Atrium (Austin Convention Center)

9:00 AM-11:00 AM: Monday, 7 January 2013

Spouses' Coffee
Location: Hilton Hotel (Austin Convention Center)

10:30 AM-11:00 AM: Monday, 7 January 2013

Coffee Break
Location: Ballroom D Foyer (Austin Convention Center)

12:00 PM-1:30 PM: Monday, 7 January 2013

Lunch Break

2:30 PM-4:00 PM: Monday, 7 January 2013

Formal Poster Viewing with Coffee Break

Location: Exhibit Hall 3 (Austin Convention Center)

5:30 PM-7:30 PM: Monday, 7 January 2013

Reception and Exhibits Opening

Location: Exhibit Hall 4 (Austin Convention Center)

Tuesday, 8 January 2013

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8:30 AM-9:45 AM: Tuesday, 8 January 2013

Session 1

Cloud Seeding: Conceptual Models and Program Evaluations

Location: Room 9A (Austin Convention Center)

Host: 19th Conference on Planned and Inadvertent Weather Modification

Cochairs: Terry W. Krauss, Alberta Severe Weather Management Society and Krauss Weather Services Inc., Red Deer, AB; Sarah Tessendorf, NCAR, Boulder, CO

1.1	8:30 AM
Winter Cloud Seeding Windows and Potential Influences of the Targeted Mountain Barriers <i>Don A. Griffith, North American Weather Consultants, Sandy, UT</i> Recorded Presentation	
1.2	8:45 AM
Guiding Cloud Seeding by Aircraft and Satellite Measurements of the Height for Onset of Precipitation Above Cloud Base in Growing Convective Clouds <i>Daniel Rosenfeld, Hebrew Univ. of Jerusalem, Jerusalem 91904, , Israel</i> Recorded Presentation	
1.3	9:00 AM
A 10-year Analysis of Operational Cloud Seeding Conducted by the Texas Weather Modification Association <i>Jonathan A. Jennings, Texas Weather Modification Association, San Angelo, TX; and T. R. Flanagan, S. D. Beall, J. Wright Puryear, and A. Ruiz Columbe</i> Recorded Presentation	
1.4	9:15 AM
A new look at statistical evaluations of cloud seeding experiments <i>Roelof T. Brientjes, NCAR, Boulder, CO; and M. Dixon, C. Weeks, and S. Tessendorf</i> Recorded Presentation	

9:00 AM-11:00 AM: Tuesday, 8 January 2013

Spouses' Coffee

Location: Hilton Hotel (Austin Convention Center)

9:30 AM-11:00 AM: Tuesday, 8 January 2013

Poster Session 1

Weather Modification: Aerosol Effects, Urban Effects, Modeling Studies.

Location: Exhibit Hall 3 (Austin Convention Center)

Host: 19th Conference on Planned and Inadvertent Weather Modification

Chair: Daniel Breed, NCAR/RAL, Boulder, CO

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[Validation of WRF and WRF LES Simulations of the Dispersal of Ground-generated AgI Nuclei](#)

Xia Chu, Univ. of Wyoming, Laramie, WY; and *L. Xue, B. Geerts, and B. A. Boe*

[Poster PDF \(1.0 MB\)](#)

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[Estimating Boundary Layer Depths in Mexico City](#)

Evi Becerra-Acosta, Secretaria del Medio Ambiente, Distrito Federal, Mexico; and *D. K. Adams*, A. Retama-Hernandez, W. Gutierrez-Lopez, M. Garcia-Espinoza, O. Hernandez-Rivera, and M. Robles-Roldan

9:45 AM-11:00 AM: Tuesday, 8 January 2013

Formal Poster Viewing with Coffee Break

Location: Exhibit Hall 3 (Austin Convention Center)

11:00 AM-12:00 PM: Tuesday, 8 January 2013

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Cause and Effect: Detecting Planned and Inadvertent Changes in the Weather

Location: Room 9A (Austin Convention Center)

Hosts: (Joint between the 19th Conference on Planned and Inadvertent Weather Modification; and the Symposium on the Role of Statistical Methods in Weather and Climate Prediction)

Moderators: Daniel W. Breed, NCAR, Boulder, CO; Barbara G. Brown, NCAR, Boulder, CO

Panelists: Arlen W. Huggins, DRI, Reno, NV; Marion P. Mittermaier, Met Office, Exeter, ;

Tressa Fowler, NCAR, Boulder, CO; David W. Pierce, Scripps Institution of Oceanography, La Jolla, CA

Detection and Attribution by David Pierce

11:00 AM

Panel Discussion

11:15 AM

12:00 PM-1:30 PM: Tuesday, 8 January 2013

Lunch Break

1:30 PM-3:00 PM: Tuesday, 8 January 2013

Themed Joint Session 23

Impacts of Anthropogenic Aerosols on Clouds, Precipitation, Circulation, and Severe Storms—Part I

Location: Room 5ABC (Austin Convention Center)

Hosts: (Joint between the Fifth Symposium on Aerosol-Cloud-Climate Interactions; and the 19th Conference on Planned and Inadvertent Weather Modification)

Chair: Jiwen Fan, PNNL, Richland, WA

CoChair: Daniel Rosenfeld, Hebrew University, Jerusalem,

	1:30 PM
TJ23.1 Invited Presentation: Increasing Evidences of the Impact of Aerosols on Cloud, Precipitation and Radiation due to Aerosol Indirect Effects Zhanqing Li , Univ. of Maryland, College Park, MD Recorded Presentation	
TJ23.2 Do hailstorms and tornadoes really 'rest on weekends'?	
	2:15 PM
TJ23.3 Aerosol effects on the microphysics of precipitation development in tropical and sub-tropical convective clouds Roelof Bruintjes , NCAR, Boulder, CO; and C. Weeks, S. Tessendorf, and D. Axisa Recorded Presentation	
	2:30 PM
TJ23.4 Does aerosol pollution of orographic clouds result in precipitation suppression in the Australian Snowy Mountains? Thomas H. Chubb , Monash Univ., Melbourne, VIC, Australia; and S. T. Siems and M. J. Manton Recorded Presentation	
TJ23.5 Cloud Aerosol Interaction and Precipitation Enhancement Experiment (CAIPEEX) over India: Overview and Results	
	2:45 PM
TJ23.5A Electrical Activity and Microphysics of Deep Convective Clouds Nir Benmoshe , Hebrew University, Jerusalem, Israel; and A. P. Khain Recorded Presentation	

3:00 PM-3:30 PM: Tuesday, 8 January 2013

Coffee Break

Location: Exhibit Hall 4 (Austin Convention Center)

Meet the President

Location: Room 1 (Austin Convention Center)

3:30 PM-5:30 PM: Tuesday, 8 January 2013

Session 2

Applications of Numerical Models to Weather and Climate Modification

Location: Room 9A (Austin Convention Center)

Host: 19th Conference on Planned and Inadvertent Weather Modification

Cochairs: Paul A. Kucera, NCAR, Boulder, CO; Bruce A. Boe, Weather Modification, Inc., Fargo, ND

2.1	3:30 PM
Effects of Increased Horizontal Resolution on Resolving Convection and Convective Initiation Mariusz Starzec , Univ. of North Dakota, Grand Forks, ND; and G. Mullendore, P. A. Kucera, D. Delene, and D. Langerud Recorded Presentation	
2.2	3:45 PM
Utilizing Surface Observations and Modeling with HYSPLIT to Assess Low-Level Stability for the Targeting of Cloud Seeding Material David P. Yorty , North American Weather Consultants, Sandy, UT; and W. Weston, M. Solak, and D. Griffith Recorded Presentation	
2.3	4:00 PM
Agl cloud seeding effects as seen in WRF simulations Lulin Xue , NCAR, Boulder, CO; and A. Hashimoto, M. Murakami, S. Tessendorf, R. M. Rasmussen, E. Nelson, D. Breed, D. Blestrud, P. Holbrook, and S. Parkinson Recorded Presentation	
2.4	4:15 PM
A real-time cloud seeding guidance system based on the WRF model Sarah Tessendorf , NCAR, Boulder, CO; and L. Xue, R. Rasmussen, D. Blestrud, P. Holbrook, and S. Parkinson Recorded Presentation	
2.5	4:30 PM
Comparisons between WRF simulations and ground observed trace chemistry Roy M. Rasmussen , NCAR, Boulder, CO; and L. Xue, S. Tessendorf, D. Blestrud, P. Holbrook, and S. Parkinson Recorded Presentation	
2.6	4:45 PM
Seeding of Cirrus Clouds to Reduce Global Warming David L. Mitchell , DRI, Reno, NV; and J. Mejia, M. Kuebbeler, U. Lohmann, and M. Xiao Recorded Presentation	
2.7	5:00 PM
Land use change impacts on cloud and precipitation formation in the coastal regions of Sarawak, Malaysia Udaysankar S. Nair , Univ. of Alabama, Huntsville, AL; and J. G. Fairman Jr., S. Cantonwine, J. S. Reid, and S. Christopher	
2.8	5:15 PM
New York City's Summer 2010 Numerical Simulations using WRF's Building Energy Parameterization Estatio Gutierrez , City College of New York, New York, NY; and J. Gonzalez , M. Arend, and R. D. Bornstein Recorded Presentation	

7:30 PM-9:30 PM: Tuesday, 8 January 2013

Duce Symposium Banquet
Location: Hilton Hotel (Austin Convention Center)

Wednesday, 9 January 2013

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8:30 AM-10:00 AM: Wednesday, 9 January 2013

Session 3

Research Field Programs and Physical Evidence of Seeding Effects

Location: Room 9A (Austin Convention Center)

Host: 19th Conference on Planned and Inadvertent Weather Modification

Cochairs: Arlen W. Huggins, DRI, Reno, NV; Roelof Bruintjes, NCAR, Boulder, CO

	8:30 AM
3.1 Overview of the POLarimetric Cloud Analysis and Seeding Test (POLCAST) Field Program in Eastern North Dakota <i>Paul A. Kucera</i> , NCAR, Boulder, CO; and <i>C. Weeks</i> , <i>D. J. Delene</i> , <i>G. L. Mullendore</i> , and <i>D. Langerud</i> Recorded Presentation	
	8:45 AM
3.2 Ground based evaluations of an experimental cloud seeding module implemented in a high-resolution (1.8km) WRF model for wintertime orographic cloud seeding <i>Melvin L. Kunkel</i> , Idaho Power, Boise, ID; and <i>D. Blestrud</i> , <i>P. Holbrook</i> , <i>S. Parkinson</i> , <i>R. Rasmussen</i> , <i>S. Tessendorf</i> , <i>L. Xue</i> , and <i>M. Leuthold</i>	
	9:00 AM
3.3 An overview of the ASCII 2012 (Agl Cloud Seeding Impact Investigation) campaign <i>Bart Geerts</i> , Univ. of Wyoming, Laramie, WY; and <i>X. Chu</i> , <i>B. Pokharel</i> , <i>K. Friedrich</i> , and <i>D. Breed</i> Recorded Presentation	
	9:15 AM
3.4 Airborne and Ground-based Sampling of Ice Nuclei over the Medicine Range of Wyoming <i>Bruce A. Boe</i> , Weather Modification, Inc., Fargo, ND; and <i>J. T. McPartland</i> , <i>T. W. Krauss</i> , <i>J. A. Heimbach</i> , <i>L. Xue</i> , and <i>X. Chu</i> Recorded Presentation	
	9:30 AM
3.5 Dual-Polarization Radar Observations of an Enhanced Precipitation Hail and Flash Flood Event <i>Kristin N. Scotten</i> , NOAA/NWSFO, Amarillo, TX; and <i>T. T. Lindley</i> , <i>J. B. Boettcher</i> , <i>M. Martinez</i> , and <i>J. Puryear</i> Recorded Presentation	

9:00 AM-11:00 AM: Wednesday, 9 January 2013

Spouses' Coffee
Location: Hilton Hotel (Austin Convention Center)

10:00 AM-10:30 AM: Wednesday, 9 January 2013

Coffee Break

Location: Exhibit Hall 4 (Austin Convention Center)

Meet the President

Location: Room 1 (Austin Convention Center)

10:30 AM-12:00 PM: Wednesday, 9 January 2013

Themed Joint Session 51

Aerosol-cloud Interactions in Weather Forecasting

Location: Room 9A (Austin Convention Center)

Hosts: (Joint between the 19th Conference on Planned and Inadvertent Weather Modification; and the Fifth Symposium on Aerosol-Cloud-Climate Interactions)

Cochairs: William. R. Cotton, Colorado State University, Fort Collins, CO; Daniel Rosenfeld, Hebrew University, Jerusalem, Non US

TJ51.1	10:30 AM
The Potential Impact of Aerosols on Severe and Tropical Storms <i>Barry H. Lynn, Hebrew Univ., Jerusalem, Israel; and A. Khain</i> Recorded Presentation	
TJ51.2	10:45 AM
What is the Role of Aerosol Particle Size Distributions on Precipitation in Coastal Urban Environments? <i>Nathan Hosannah, City College, New York, NY; and J. E. González, D. Comarazamy, and R. D. Bornstein</i> Recorded Presentation	
TJ51.3	11:00 AM
CCN Pollution Impacts on Hailstorms <i>William. R. Cotton, Colorado State Univ., Fort Collins, CO; and A. Loftus and G. G. Carrio</i> Recorded Presentation	
TJ51.4	11:15 AM
Potential Influences of Aerosol Concentrations on Mode and Degree of Development in Mid-continental Convective Clouds during POLCAST4 <i>Jeffrey S. Tilley, Univ. of North Dakota, Grand Forks, ND ; and D. Delene and P. A. Kucera</i> Recorded Presentation	
TJ51.5	11:30 AM
Improving tropical cyclone forecasting skill: Investigating the impact of aerosols on the intensity of an idealized tropical cyclone <i>Stephen R. Herbener, Colorado State Univ., Fort Collins, CO; and S. van den Heever</i> Recorded Presentation	
TJ51.6	11:45 AM
Indirect radiative forcing of climate due to aerosols over the continental United States simulated by the two-way coupled WRF-CMAQ model <i>Shaocai Yu, EPA, Research Triangle Park, NC; and R. Mathur, J. Pleim, D. Wong, and R. Gilliam</i> Recorded Presentation	

12:00 PM-1:30 PM: Wednesday, 9 January 2013

Lunch Break

1:30 PM-2:30 PM: Wednesday, 9 January 2013

Session 4

Urban Impacts on Thunderstorms and Weather Extremes - Part I

Location: Room 9A (Austin Convention Center)

Host: 19th Conference on Planned and Inadvertent Weather Modification

Cochairs: Dev Niyogi, Purdue University, West Lafayette, IN; Robert D. Bornstein, San Jose State Univ., San Jose, CA

4.1	1:30 PM
Invited Presentation: Satellite detection of impacts of urban pollution plumes on cloud microstructure and precipitation forming processes <i>Daniel Rosenfeld, The Hebrew University of Jerusalem, Jerusalem, Israel</i> Recorded Presentation	
4.2	1:45 PM
Invited Presentation: Urban Land use – land cover feedbacks on regional climate – Current Understanding, Future needs <i>Dev Niyogi, Purdue Univ., West Lafayette, IN</i> Recorded Presentation	
4.3	2:00 PM
Invited Presentation: Evaluation of urban-dynamic and aerosol impacts on summer thunderstorms <i>R. Bornstein, San Jose State Univ., San Jose, CA</i> Recorded Presentation	
4.4	2:15 PM
Probing the Effects of City Size, Shape, and Pollution State on Storm Behavior: Prospectus for a New NASA Project <i>Geoffrey M. Henebry, South Dakota State Univ., Brookings, SD; and D. J. Stensrud, A. L. Steiner, C. Small, L. R. Musacchio, and K. M. de Beurs</i>	

2:30 PM-4:00 PM: Wednesday, 9 January 2013

Formal Poster Viewing with Coffee Break

Location: Exhibit Hall 3 (Austin Convention Center)

4:00 PM-5:30 PM: Wednesday, 9 January 2013

Session 5

Urban Impacts on Thunderstorms and Weather Extremes - Part II

Location: Room 9A (Austin Convention Center)

Host: 19th Conference on Planned and Inadvertent Weather Modification

Cochairs: Robert D. Bornstein, San Jose State Univ., San Jose, CA; Dev Niyogi, Purdue University, West Lafayette, IN

5.1	4:00 PM
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[Improving the Conceptual Understanding of Urban Thunderstorm Modification Using the Real Atmosphere Idealized Land-surface \(RAIL\) Method](#)

Paul Schmid, *Purdue Univ., West Lafayette, IN*; and *D. Niyogi*

[Recorded Presentation](#)

4:15 PM

5.2

[A technique for understanding effects of urbanization on local precipitation using ground station data](#)

Cassie A. Stearns, *Howard Univ., Beltsville, MD*; and *E. Joseph*

[Recorded Presentation](#)

4:30 PM

5.3

[Modeling Urban Impacts on Regional Weather of Central U.S](#)

Laura J. Schisler, *Embry-Riddle Aeronautical Univ., Prescott, AZ*; and *J. Young, X. Fan, and R. Mahmood*

[Recorded Presentation](#)

[Poster PDF \(553.4 kB\)](#)

4:45 PM

5.4

[The Impacts of Urbanization on Daily Precipitation Trends in the Kentucky-Ohio River Valley](#)

Andrew J. Fultz, *Mississippi State Univ., Mississippi State, MS*; and *J. D. Durkee and R. Mahmood*

[Recorded Presentation](#)

5:00 PM

5.5

[Observation and Modeling of Split Summer Thunderstorms Over New York City](#)

Nathan Hosannah, *City College of New York, New York, NY*; and *J. Gonzalez and R. D. Bornstein*

[Recorded Presentation](#)

5:15 PM

5.6

[The June 2010 Oklahoma City Flood: Insights into Urban Hydrometeorological Processes using Precipitable Water Analysis and Dual-polarization Radar Data](#)

Amanda J. Schroeder, *Univ. of Georgia, Athens, GA*; and *J. B. Basara, J. M. Shepherd, and S. E. Nelson*

[Recorded Presentation](#)

5:30 PM-6:30 PM: Wednesday, 9 January 2013

Awards Banquet Reception in the Exhibit Hall

Location: Exhibit Hall 4 (Austin Convention Center)

7:00 PM-10:00 PM: Wednesday, 9 January 2013

93rd AMS Awards Banquet

Location: Ballroom D (Austin Convention Center)

Thursday, 10 January 2013

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8:30 AM-9:30 AM: Thursday, 10 January 2013

Themed Joint Session 44

Impacts of Anthropogenic Aerosols on Clouds, Precipitation, Circulation, and Severe Storms, Part II

Location: Room 5ABC (Austin Convention Center)

Hosts: (Joint between the Fifth Symposium on Aerosol-Cloud-Climate Interactions; and the 19th Conference on Planned and Inadvertent Weather Modification)

Chair: Daniel Rosenfeld, Hebrew University , Jerusalem,

CoChair: Zhanqing Li, University of Maryland, College Park, MD

J44.1	8:30 AM
Invited Presentation: Impact of Aerosols on Convective Clouds and Precipitation <i>Wei-Kuo Tao</i> , NASA/GSFC, Greenbelt, MD; and <i>J. P. Chen, C. Wang, C. Zhang, and Z. Li</i> Recorded Presentation	
J44.2	8:45 AM
Evidence of Microphysical Buffering of CCN Impacts on Wintertime Orographic clouds <i>W. R. Cotton</i> , Colorado State Univ., Fort Collins, CO; and <i>G. G. Carrio and S. M. Saleeby</i> Recorded Presentation Manuscript (705.8 kB)	
J44.3	9:00 AM
Aerosol-Induced Feedbacks within Tropical Anvil Clouds <i>Susan C. van den Heever</i> , Colorado State Univ., Fort Collins, CO Recorded Presentation	
J44.4	9:15 AM
Pre-Monsoon Aerosol-Cloud-Rainfall Interactions in the Central Himalayas due to Regional-Scale Pollution in the Indo-Gangetic Plains <i>Prabhakar Shrestha</i> , Duke Univ., Durham, NC; and <i>A. P. Barros, A. Khlystov, and A. Wilson</i> Recorded Presentation	

9:45 AM-11:00 AM: Thursday, 10 January 2013

Formal Poster Viewing with Coffee Break

Location: Exhibit Hall 3 (Austin Convention Center)

12:00 PM-1:30 PM: Thursday, 10 January 2013

Lunch Break

3:00 PM-3:05 PM: Thursday, 10 January 2013

Registration Closes

3:00 PM-3:30 PM: Thursday, 10 January 2013

Coffee Break

Location: Levels 3 and 4 (Austin Convention Center)

Meet the President
Location: Room 1 (Austin Convention Center)

5:00 PM-5:05 PM: Thursday, 10 January 2013

AMS 93rd Annual Meeting Adjourns

When:

January 05 - 10, 2013

Where:

Austin, TX

Additional Information

- [Personal Scheduler](#)
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