

Workshop on “Severe Convection and Climate”

March 14-15, 2013

Monell Auditorium

sponsored by:

**The Lamont Climate Center
The International Research Institute for Climate and Society
The Lamont-Doherty Earth Observatory
Office of Naval Research (N00014-12-1-0911)**

Organizing committee: Harold Brooks, Suzana Camargo, Adam Sobel, Michael K. Tippett,

	Thursday March 14, 2013	
8:30am	<i>Coffee Monell Lobby</i>	
9:00am	Opening remarks	Adam Sobel, CU
	Observations	<i>Chairs: Michael Tippett, Michela Biasutti</i>
9:10am	Long-term observational records of tornadoes, wind and hail.	Greg Carbin, NOAA/NCEP/SPC
9:30am	The Multi-Year Reanalysis of Remotely Sensed Storms (MYRORSS) Project	Travis Smith, NOAA/NSSL
9:50am	How tornadoes develop: Ideas emerging from decades of theory, simulation, and field observations	Paul Markowski, PSU
10:10am	Our understanding of tornadic storms from initiation to tornado maintenance based on theory, numerical modeling, and field observations	Yvette Richardson, PSU
10:30am	<i>Coffee break Monell Lobby</i>	
11:00am	Observations of Severe Storms Within Visible and IR Satellite Imagery: Severe Weather Detectability, Quantitative Relationships, and Climate Applications	Kris Bedka, NASA
11:20am	Lightning and climate	Earle Williams, MIT
11:40am	<i>Discussion 1</i> 1. Inhomogeneity of the record 2. Observed trends? 3. Novel approaches	<i>Harold Brooks</i>

12:10pm	<i>Lunch Lamont Hall</i>	
	Statistical methods	<i>Chair: Scott Weaver</i>
1:20pm	The ingredients approach for severe weather	Harold Brooks, NOAA/NSSL
1:40pm	Diagnosing a daily index of tornado variability with global reanalysis	Phil Pegion, NOAA/ESRL
2:00pm	A monthly index for U.S. tornado activity	Tippett, CU/IRI
2:20pm	A Spatial Climatology and Long Term Trends of Convective Storms over the Northeast U.S	Brian Colle, SUNY Stonybrook
2:40pm	<i>Discussion 2</i> 1. Applications: trends, ENSO. 2. Limitation 3. Extensions	<i>Michael Tippett</i>
3:10pm	<i>Coffee Monell Lobby</i>	
	Risk management/reinsurance prospective	<i>Chair: Adam Sobel</i>
3:40pm	Needs and challenges in catastrophe modelling	Jan Kleinn, Aspen Re
3:50pm	Risk Management and Reinsurance: The Broker Perspective	Alice Underwood, Willis
4:00pm	Rising variability in thunderstorm-related U.S. losses as a reflection of changes in large-scale thunderstorm forcing	Dr. Eberhard Faust, Munich Re
4:20pm	<u>Panel Discussion</u> Moderator: Kyle Beatty, <i>AER</i> 1. What are the needs and interests of business? 2. On what time-scales can information be used? 3. How useful is static risk information?	Alice Underwood, Roy Cloutier, Willis Dr. Eberhard Faust, Munich Re Jan Kleinn, Aspen Re
5:30pm-7:00pm	<i>Reception</i> <i>Monell lobby</i>	

	Friday March 15, 2013	
	Modelling, Prediction and Projection	<i>Chairs: John Allen, Michela Biasutti</i>
9:00am	Current SPC outlooks, tools and verification.	Greg Carbin, NOAA/NCEP/SPC
9:20am	Evaluating theories for severe convective weather using numerical simulation	George Bryan, NCAR
9:40am	The Relationship between the Madden-Julian Oscillation and U.S. Violent Tornado Outbreaks in the Spring	Paul Roundy, SUNY Albany
10:00am	Climatic Role of North American Low-Level Jets on U.S. Regional Tornado Activity	Scott Weaver, NOAA/NCEP/CPC
10:20am	Perspectives for extended-range prediction and predictability	Tippett, IRI
10:40am	<i>Coffee</i>	
11:10am	Tornado Frequency: Can we point the finger at ENSO?	John Allen, IRI
11:30am	Severe thunderstorm environments in the CMIP5 ensemble	Noah Diffenbaugh, Stanford
11:50am	<i>Break/Discussion 3</i> 1. Prospects for extended range prediction 2. What is predictable vs. what is useful? 3. Climate change	<i>Michael Tippett</i>
12:20pm	<i>Close</i>	
3:30pm	<i>Lamont Earth Science Colloquium: Severe Thunderstorms and Climate Change</i> <i>Monell Auditorium</i>	Harold Brooks, NOAA/NSSL