



## Abrupt Climate Change Studies

# Symposium

21-23 May 2013

### Climate Change: Recent Discoveries and Future Challenges

#### DAY 1 - TUESDAY

8:30 – 9:00

#### Morning refreshment

- Yochanan Kushnir – Welcome
- Peter Schlosser – Opening Remarks

#### *Session 1*

9:00 – 9:05 A.M.

#### *Ocean Change*

Conveners: R. Anderson, A. Gordon, & W. Smethie

9:05 – 9:30

- Syd Levitus: *Ocean Heat Content*

9:30 – 9:55

- Arnold Gordon: *The Ocean Has Floods And Droughts Too, You Know*

9:55 – 10:20

- Lynne Talley: *Closure Of The Global Overturning Circulation Through The Indian, Pacific And Southern Oceans*

#### Coffee break

10:40 – 11:05

- Martin Visbeck: *Two Aspects Of Global Ocean Dynamics: AMOC Observations At The Exit Of The Labrador Sea And Southern Ocean Eddies*

11:05 – 11:30

- Janet Sprintall: *The Role Of Tropical Inter-ocean Exchange Of The Indonesian Throughflow In Climate Variability*

11:30 – 11:55

- Jerry Mitrovica: *Leaving Eustasy Behind: Implications for Marine Ice Sheet Stability and Inferences of Ancient Ice Volumes*

11:55 – 12:30

#### Q & A Roundtable

12:30 – 1:45 P.M.

#### Lunch on your own

#### *Session 2*

1:45 – 1:55

#### *Hydroclimate Variability*

Conveners: E. Cook, Y. Kushnir, & R. Seager

1:55 – 2:20

- Richard Seager: *Mechanisms Of Hydroclimate Change Under Global Warming*

2:20 – 2:45

- William Boos: *Thermodynamic Scaling Of The Hydrological Cycle Of The Last Glacial Maximum*

**Location:** Columbia University Lamont Campus Monell Building Auditorium



- 2:45 – 3:10
- David Battisti: *Precessional Forcing, Monsoons, and Isotopic Composition of Precipitation*
- Coffee break**
- 3:30 – 3:55
- John Chiang: *Extratropical Cooling, Interhemispheric Thermal Gradients, And Tropical Climate Change*
- 3:55 – 4:20
- Aaron Putnam: *Hydroclimate Of The Tarim Basin, Western China, Over The Past Millennium: Clues From The Deep Desert*
- 4:20 – 4:45
- Ed Cook: *The Role Of Paleo-Drought Atlases In Climate Change Research*
- 4:45 – 5:15
- 5:15 – 6:30
- Q & A Roundtable**
- Evening poster session and reception**
- Keynote speaker: Wally Broecker: *What Drives Glaciation?*

**DAY 2 - WEDNESDAY**

- 8:30 – 9:00
- Morning refreshment**
- Session 3*
- 9:00 – 9:05 A.M.
- Cryosphere Change**
- Conveners: R. Bell, D. Martinson & J. Schaefer
- 9:05 – 9:30
- Garry Clarke: *The 21st Century Warming And The Deglaciation Of Western Canada*
- 9:30 – 9:55
- Beata Csatho: *The Stability of the Greenland Ice Sheet*
- 9:55 – 10:20
- Robin Bell: *Water Beneath Ice Sheets: Changing Paleoclimate Records Changing Ice Flow*
- Coffee break**
- 10:40 – 11:05
- Eric Steig: *The Role Of The Tropical Pacific In Climate Change And Ice Dynamics In Antarctica On Decadal To Millennial Timescales*
- 11:05 – 11:30
- Doug Martinson: *Changes In Antarctic Marine Glaciers, Sea Ice, And The Underlying Ocean*
- 11:30 – 11:55
- Joerg Schaefer / Summer Rupper: *Climate And Mountain Glacier Change Through The Holocene To Present Day*
- 11:55 – 12:30
- Q & A Roundtable**
- 12:30 – 1:45 P.M.
- Lunch on your own**
- Session 4*
- 1:45 – 1:55
- Climate Forcing**
- Conveners: G. Winckler, M. Previdi, & J. Smerdon
- 1:55 – 2:20
- Andreas Schmittner: *Climate Sensitivity Estimated From*

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2:20 – 2:45	<i>Paleoclimate Data</i>
2:45 – 3:10	<ul style="list-style-type: none"><li>• David Archer: <i>CO2 vs Methane</i></li><li>• Lorenzo Polvani: <i>Stratospheric Ozone and Southern Hemisphere Climate Change</i></li></ul>
<b>Coffee break</b>	
3:30 – 3:55	<ul style="list-style-type: none"><li>• Gavin Schmidt: <i>Last Millennium Forcings And Responses</i></li></ul>
3:55 – 4:20	<ul style="list-style-type: none"><li>• Gisela Winckler / Ron Miller: <i>Aerosol Forcing or Aerosol Feedback?</i></li></ul>
4:20 – 4:45	<ul style="list-style-type: none"><li>• Mike Previdi: <i>How Will Atmospheric Moisture Transport From Ocean To Land Change With Anthropogenic Climate Change?</i></li></ul>
4:45 – 5:15	<b>Q &amp; A Roundtable</b>
5:15 – 6:30	<b><i>Evening poster session and reception</i></b> <ul style="list-style-type: none"><li>• Keynote speaker: Peter Molnar: <i>Orographic Controls On Climate And Paleoclimate Of Asia: Thermal And Mechanical Roles For The Tibetan Plateau</i></li></ul>
<b>DAY 3 - THURSDAY</b>	
8:30 – 9:00	<b>Morning refreshment</b>
<i>Session 5</i>	
9:00 – 9:05 A.M.	<b><i>Human Perspectives</i></b> Conveners: M. Cane, P. DeMenocal, & Y. Kushnir
9:05 – 9:30	<ul style="list-style-type: none"><li>• Arlene Fiore: <i>Influence Of Changes In Emissions And Climate On Baseline And Extreme Levels Of Air Pollution</i></li></ul>
9:30 – 9:55	<ul style="list-style-type: none"><li>• Cynthia Rosenzweig: <i>Science for Hurricane Sandy Recovery</i></li></ul>
9:55 – 10:20	<ul style="list-style-type: none"><li>• Solomon Hsiang: <i>The Causal Effect of Environmental Catastrophe on Long Run Economic Growth</i></li></ul>
<b>Coffee break</b>	
10:40 – 11:05	<ul style="list-style-type: none"><li>• Kris Karnauskas: <i>The Hadley Circulation: Dynamics, Asymmetry, and CMIP5 Projections</i></li></ul>
11:05 – 11:30	<ul style="list-style-type: none"><li>• Connie Woodhouse: <i>A Paleoclimatic Perspective on Water Resource Vulnerability in the Western US</i></li></ul>
11:30 – 11:55	<ul style="list-style-type: none"><li>• Kim Knowlton: <i>Climate Change &amp; Health: Connecting The Dots</i></li></ul>
11:55 – 12:20 P.M.	<ul style="list-style-type: none"><li>• Lisa Goddard: <i>Beyond Climate Predictions</i></li></ul>
12:20 – 1:00	<b>Q &amp; A Roundtable and closing remarks</b>
1:00	<b>Lunch</b>

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