

***Missing the Hockey Season? Come to this Briefing!***  
***Understanding Changes in Earth's Temperature and Climate:  
The Science Behind the Hockey Stick Graphs and Model Simulations***

**LUNCHEON BRIEFING**

**Wednesday, April 6**

**11:30 a.m., Room 253, Senate Russell Building**

The NHL may have cancelled their season, but this briefing is on!! The “hockey stick” graphs, which show how global temperatures have varied over the last 1000 years, are at the center of a public debate on how humans are affecting the Earth’s climate. Named for their characteristic shape—a downward trending “shaft” from 1000 to 1900 A.D. followed by an upward-trending 20<sup>th</sup> century “blade”—the hockey stick became an icon for the Intergovernmental Panel on Climate Change’s (IPCC) conclusion that humans are partially responsible for a century’s worth of rising global temperatures. But this conclusion was based on much more information than the hockey stick graphs, including theoretical considerations, model simulations, and instrumental observations. Many of these topics will be addressed at the briefing.

How do we know with any certainty what the temperature was 1000 years ago and that the recent spike is caused by humans? How can we predict with any certainty what temperatures will be in the future? What are the causes for observed climate variations and the evidence for recent climate change? How do global temperatures relate to changes in a particular region? Please join us to learn the answers to these and other questions from some of the world’s most respected climate scientists. Following presentations, you will have the opportunity to ask questions of and discuss climate issues with this distinguished panel.

**Briefing Speakers:**

- **Ray Bradley** -- Director of the Climate System Research Center at the University of Massachusetts, Amherst and a University Distinguished Professor in the Department of Geosciences, Dr. Bradley is a renowned climate scientist who has written and edited ten books on climate science. He has been an advisor to various governments and international agencies and is active in the IPCC process.
- **Tom Crowley** -- Nicholas Chair of Earth Systems Science in the Nicholas School of the Environment, Duke University, Crowley is an esteemed scholar of climate science. His experience includes private sector work as well as former director of the National Science Foundation's Climate Dynamics Program, and NASA research fellow.
- **Caspar Ammann** – An outstanding young scientist in the Climate and Global Dynamics Division of the National Center for Atmospheric Research (NCAR), Dr. Amman has received honors and fellowships from the National Science Foundation and Earth Systems History. He has been elected to the Editorial Advisory Board for the Encyclopedia of Paleoclimatology.

**RSVP to Gloria Kelly at (303) 497-2102 or [gloriak@ucar.edu](mailto:gloriak@ucar.edu)**

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