

# The Weather-Climate Intersection: Advances and Challenges

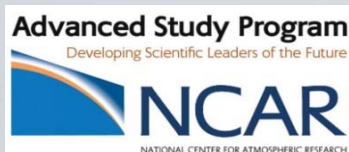
## Organizers:

Lance Bosart (SUNY/Albany)  
George Kiladis (NOAA/ESRL)  
Mitch Moncrieff (NCAR/NESSL)

This three-week colloquium will be held at the National Center of Atmospheric Research in Boulder, Colorado, USA

For more information, see the NCAR Advanced Study Program website:

[http://www.asp.ucar.edu/colloquium/summer\\_colloquia.php](http://www.asp.ucar.edu/colloquium/summer_colloquia.php)



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## Objective

Global prediction models have traditionally had great difficulty with realistically representing atmospheric variability at subseasonal timescales (the weather-climate intersection), particularly in the tropics. With the advent of cutting-edge observations, modeling and theory of tropical convection and its organization on scales upward from the mesoscale, we are entering a new era, where weather and climate should be considered as a continuous system. The rate of progress will depend in no small measure on the quality of the research effort. The rewards for achieving a deeper understanding of our physical climate system, and the payback for improved prediction models cannot be overestimated. This colloquium seeks to garner the interest of young scientists in addressing this important frontier.

## Colloquium Organization

- Week 1: An educational component that introduces students to basic aspects of observations, modeling and theory, and orientates them for the following two weeks
- Week 2: A researcher colloquium geared toward the state-of-the-art for observations, numerical modeling and theory at the weather-climate intersection, and elucidation of the scientific challenges
- Week 3: A project component where the students work (in groups) on selected projects, assisted by discussions of real-time meteorological events, and talks by early-career scientists on their research results and experiences

## Participants

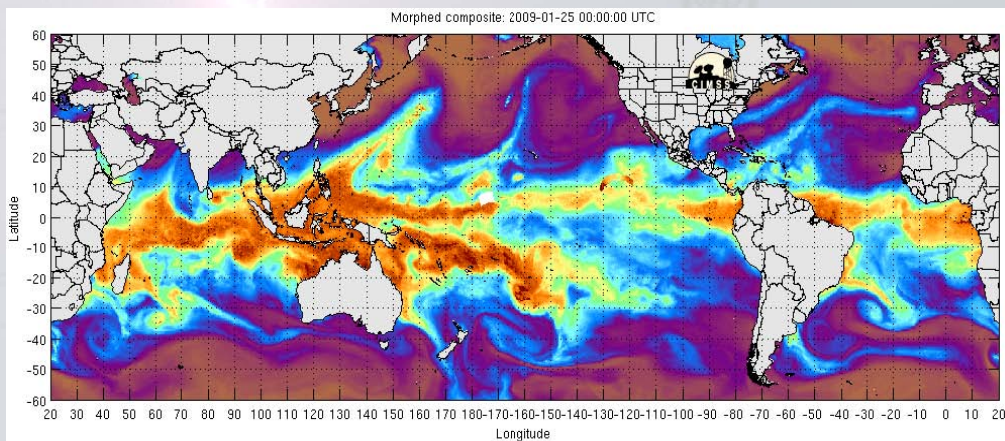
- Designed for graduate students who have completed at least 2 years of doctoral-level study in atmospheric science or related disciplines
- Students are required to attend all three weeks of the ASP colloquium
- ASP will fund travel and local expenses for about 25 students
- Deadline for application is January 31, 2012 with online applications being available starting December 1, 2011

## Researcher Colloquium (June 11-15)

- Lectures will be given by invited experts on frontiers associated with the weather-climate intersection
- A primary focus will be group discussions involving all attendees on the critical research issues
- ASP will fund travel and local expenses for about 25 invited speakers

Student Applications may be submitted from Dec 1, 2011 until Jan 31, 2012

[http://www.asp.ucar.edu/colloquium/summer\\_colloquia.php](http://www.asp.ucar.edu/colloquium/summer_colloquia.php)



Snapshot of total precipitable water (TPW) derived from satellite data. TPW maxima indicate cloud systems organized on large-scales, e.g., MJO in the Indian Ocean and "atmospheric rivers" flowing poleward in association with midlatitude fronts, planetary waves, and the extratropical transition of tropical disturbances. [Courtesy: Tony Wimmers and Chris Velden, University of Wisconsin at Madison.]