

Workshop I: Equation Hierarchies for Climate Modeling

Monday March 22, 2010

- 8:00–8:45 *Check-In/Light Breakfast (Hosted by IPAM)*
- 8:45–9:00 *Welcome and Opening Remarks*
- 9:00–9:50 **Rupert Klein** (Freie Universität Berlin)
- 10:00–10:15 *Break*
- 10:15–11:05 **Stamen Dolaptchiev** (Institut für Atmosphäre und Umwelt)
Reduced asymptotic models for planetary and synoptic motions in the atmosphere
- 11:15–11:30 *Break*
- 11:30–12:20 **Andrew Majda** (New York University)
- 12:30–2:30 *Lunch (on your own)*
- 2:30–3:20 **Sam Stechmann** (University of California, Los Angeles (UCLA))
Gravity waves in shear and implications for organized convection
- 3:30–4:00 *Break*
- 4:00–4:50 **(Keith Julien)** (University of Colorado, Boulder)
The Nonhydrostatic Balanced-Geostrophic Equations
- 5:00–6:30 *Reception and Poster Session (Hosted by IPAM)*

Tuesday March 23, 2010

- 8:00–9:00 *Continental Breakfast*
- 9:00–9:50 **J. Neelin** (University of California, Los Angeles (UCLA))
Transport, tails & transition to deep convection
- 10:00–10:15 *Break*
- 10:15–11:05 **Sukyoung Lee** (Pennsylvania State University)
Dissipative Energization of Baroclinic Waves by Surface Ekman Pumping
- 11:15–11:30 *Break*

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- 11:30–12:20 **Simona Bordoni** (California Institute of Technology)
Monsoons in idealized general circulation models
- 12:30–2:30 *Lunch (on your own)*
- 2:30–3:20 **Boualem Khouider** (University of Victoria)
Convectively coupled waves in a sheared environment.
- 3:30–4:00 *Break*
- 4:00–4:50 **Joseph Biello** (University of California, Davis (UC Davis))

Wednesday March 24, 2010

- 8:00–9:00 *Continental Breakfast*
- 9:00–9:50 **Bjorn Stevens** (Max Planck Institute for Meteorology)
- 10:00–10:15 *Break*
- 10:15–11:05 **James McWilliams** (University of California, Los Angeles (UCLA))
Fronts and Filaments as an Efficient Route Across Model Hierarchies
- 11:15–11:30 *Break*
- 11:30–12:20 **Joao Teixeira** (Jet Propulsion Laboratory)
Subtropical Cloud Transitions and Climate: From Complex Models to Simple Theories
- 12:30–2:30 *Lunch (on your own)*
- 2:30–3:20 **Dargan Frierson** (University of Washington)
Energy Transports in Warmer Climates
- 3:30–4:00 *Break*
- 4:00–4:50 **Cecilia Bitz** (University of Washington)

Thursday March 25, 2010

- 8:00–9:00 *Continental Breakfast*
- 9:00–9:50 **Andy Ingersoll** (California Institute of Technology)
Dynamics of giant planet atmospheres
- 10:00–10:15 *Break*

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- 10:15–11:05 **Jonathan Mitchell** (University of California, Los Angeles (UCLA))
Idealized models for planetary climate & circulation: From Earth to Titan
- 11:15–11:30 *Break*
- 11:30–12:20 **Ray Pierrehumbert** (University of Chicago)
Explaining Snowball Earth, and Explaining the Explanations
- 12:30–2:30 *Lunch (on your own)*
- 2:30–3:20 **Jonathan Aurnou** (University of California, Los Angeles (UCLA))
Zonal Flows in Deep Convection Systems
- 3:30–3:45 *Break*
- 3:45–4:45 **Edwin Gerber** (New York University)
On the time scales of midlatitude atmospheric variability: Eddy-mean flow interactions and coupling from on high

Friday March 26, 2010

- 8:00–9:00 *Continental Breakfast*
- 9:00–9:50 **Gregory Hakim** (University of Washington)
Asymptotic and Probabilistic Approaches for Balance Dynamics
- 10:00–10:15 *Break*
- 10:15–11:05 **Steve Cavallo** (National Center for Atmospheric Research (NCAR))
Understanding the intensification of tropopause polar vortices over the Arctic
- 11:15–11:30 *Break*
- 11:30–12:20 **Tiffany Shaw** (New York University)
Wave-activity conservation laws and their application to subgrid-scale parameterization in climate models
- 12:30–2:00 *PIZZA LUNCH HOSTED BY IPAM*
- 2:00–3:00 **Sarah Kang** (Columbia University)
Understanding the extratropical influence on the tropical precipitation using idealized slab-ocean experiments

