CCSM Polar Climate and Land Ice Working Group Meeting

16 February 2010

National Center for Atmospheric Research – Boulder, Colorado

TUESDAY, 16 February

8:30 Marika Holland (NCAR) – Sea Ice Simulated by CCSM4

9:00 Jen Kay (NCAR) – Mean Arctic Climate and Climate Changes under GHG / Aerosol Forcing

9:30 Gokhan Danabasoglu (NCAR) – Update on Decadal Predictability Experiments with CCSM4

9:45 Rich Neale (NCAR) – Update on CAM4 Progress

10:00 Dave Lawrence (NCAR) – Land Model Working Group Update

10:45 Keith Lindsay (NCAR) – Biogeochemistry Working Group Update

11:00 Meibing Jin (UAF) – Coupling of Ice-ocean biogeochemical Cycles in the Arctic with POP-CICE-Ecosystem Model

11:20 Nicole Jeffrey (LANL) – Support for a Model of Tracer Transport in Sea Ice

11:40 Matt Long (Stanford) – Annual CO_2 and O_2 Dynamics in the Ross Sea, Antarctica

1:00 Gijs de Boer (LBNL) – Quantifying Seasonal Influence of Stratiform Mixed-phase Clouds on Arctic Sea Ice Growth Rates

1:20 Yafang Zhong (U. Colorado) – An Ocean-sea Ice Coupled Mechanism for Volcanic-triggered Centennial Sea Ice Expansion

1:40 Dave Schneider (NCAR) – Spring Warming in West Antarctica and its Connections with Trends in Regional Sea Ice Extent and the Atmospheric Circulation

2:00 Clara Deser (NCAR) – Climate Response to Future Arctic Sea Ice Loss

2:20 Wieslaw Maslowski (NPS) – Arctic Sea Ice Thickness Distribution: Modeling and Observations

2:40 Alex Jahn (NCAR) – A Tracer Study of the Arctic Ocean's Liquid Freshwater Export Variability

3:30 Update / Discussion Items:

- Laura Landrum (NCAR) – Improved Sea Ice Model Diagnostics
- Dave Bailey (NCAR) – CCSM4 Documentation
- Jen Kay / Marika Holland (NCAR) – CAM-DART Contribution to AON Design Effort
- PCWG Papers for *J. Climate* Special Issue – Marika Discussion Lead
- General Discussion (possible topics: CPT proposal, targeted future model developments, PCWG studies, etc.)

WEDNESDAY, 17 February

8:30 Marika Holland, Bill Lipscomb, Jesse Johnson – Welcome to the Joint Session, Announcements

8:45 Mariana Vertenstein – Update on CCSM4 Status

9:00 Tony Payne – Outline of the European Union's ice2sea Project: Predictions of the Cryosphere's Contribution to Sea Level over the Next 200 Years

9:15 Ed Andreas – The Physical and Aerodynamic Roughness of Sea Ice

9:30 Jean-Francois Lemieux – Improving the Numeral Convergence of Viscous-plastic Sea Ice Models with the Jacobian-free Newton-Krylov Method

9:45 David Holland – Long-term Ocean Observations at Jakobshavn and Helheim Fjords, Greenland

10:30 Bill Lipscomb – Initial Results from CCSM4 Simulations with a Dynamic Greenland Ice Sheet

10:45 Flo Colleoni – On the Late Saalian Glaciation (160 – 140 ka): A Climate Modeling Study

11:00 Jeremy Fyke – Development, Spinup Procedure, and Initial Synchronous Multi-millenial Simulations of a Coupled Ice Sheet / Global Climate Model

11:15 Stephen Price – Application of a Higher-order Flow Model to Greenland Outlet Glacier Dynamics

11:30 Ed Bueler – Verification, Validation, and Basal Strength in Models for the Present State of Ice Sheets

11:45 Jesse Johnson – Metrics for Assessing Ice Sheet Model Performance

1:00 Kate Evans – Overview of the ISICLES Projects

1:15 Omar Ghattas – Advanced Computational Methods for Large-scale Forward and Inverse Ice Sheet Dynamics

1:30 Jed Brown – Achieving Textbook Multigrid Efficiency for Hydrostatic Ice Flow

1:45 Haim Weisman / Ray Tuminaro – Initial Modeling Efforts of an Ice Shelf and Progress with AMG Applied to the Extended Finite Element Method

2:00 Erin Barker / Trey White – Progress on SEACISM; Initial Solver and Parallel Development

3:00 Ken Jezek – Melting Ice Sheets: Processes at the Surface and Base

3:15 Ute Herzfeld – Surface Roughness as Indicator of Geophysical Change in Greenland Glaciers and Ice Stream; Conclusions from ICESAT and ICEBRIDGE Data Analysis (and model implications?)

3:30 Sasha Carter – A Simple Parameterization for Subglacial Water Storage, Transport, and Episodicity Validated by Independent Geophysical Observations

3:45 Sebastian Mernild – Freshwater Flux from the Greenland Ice Sheet and the Jakobshavn and Helheim Glaciers

4:00 Xylar Asay-Davis – Coupling Glimmer-CISM to POP using an Immersed Boundary Method

4:15 Carl Gladish – Modeling Ice Shelf Basal Melt with Glimmer-CISM Coupled to a Meltwater Plume Model

4:30 Bill Lipscomb and Jesse Johnson – Open Discussion