

WCRP
Grand Challenge Workshop:
Clouds, Circulation and Climate Sensitivity



Ringberg, 23-28 20 March 14

MONDAY 24 March

09:00	09:15	Sandrine Bony & Bjorn Stevens: WCRP Grand Challenge and team.
09:15	09:30	Bjorn Stevens & Sandrine Bony : Goals and organization of the workshop.
09:30	09:45	Michael White: How Nature can help support the Grand Challenge. <i>Chair : Kerry Emanuel</i>
09:45	10:00	Steve Sherwood (UNSW) Seeking systematic model failure.
10:00	10:15	Mark Webb (Met Office) De-Evolving Climate Models.
10:15	10:30	Courtney Schumacher (Texas A&M) Low level heating in the tropics.
10:30	11:00	Coffee break
11:00	11:15	Dargan Frierson (U. Washington) Remote cloud influences on the double ITCZ problem.
11:15	11:30	Ted Shepherd (U. Reading) How predictable is the atmospheric circulation response to climate change.
11:30	11:45	Adam Sobel (Columbia) MJO mechanism denial experiments. <i>Chair : Martin Miller</i>
11:45	12:00	Robert Pincus (NOAA) Seeking consistent estimates of Earth's energy budget
12:00	12:15	Masa Kageyama (LSCE/IPSL). Methodologies, targets and analyses in the context of the grand challenge on clouds and circulation.
12:15	12:30	Masahiro Watanabe (U Tokyo) How can we identify, attribute, and effectively use climate model biases?
12:30	14:00	Lunch
14:00	14:15	Christian Jakob (Monash U) The future of cumulus parametrization - no deadlocks in sight!
14:15	14:30	Sandrine Bony (LMD/IPSL) Influence of cloud-circulation coupling on climate.
14:30	14:45	Bjorn Stevens (MPI) Stratocumulus, the root of unrealistic cloud feedbacks.
14:45	15:00	Anthony Del Genio (GISS) What do we need to know about convection?
15:00	15:30	Coffee break <i>Chair: Ted Shepherd</i>
15:30	15:45	Kerry Emanuel (MIT) Radiative-Convective Instability.
15:45	16:00	Isaac Held (GFDL) Non-stationary relationship between tropical TOA fluxes and surface temperatures in a model.
16:00	16:15	Brian Hoskins (Imperial College) Potential vorticity perspectives on (a) the output from parametrisations and (b) the Hadley Cell.
16:15	17:45	Breakout sessions for set A.
18:00	19:00	Dinner, followed by ice breaker "Hexenzimmer".

TUESDAY 25 March

		<i>Chair : Dargan Frierson</i>
09:00	09:15	Stephen Klein (LLNL) Emergent constraints and cloud trends.
09:15	09:30	Michela Biasutti (Columbia) Changes in the seasonality of tropical rainfall under global warming: lessons from idealized simulations.
09:30	09:45	Sarah Kang (UNIST) Dependence of climate response on meridional structure of thermal forcing.
09:45	10:00	Qiang Fu (U. Washington) Tropical cirrus.
10:00	10:15	Thorsten Mauritsen (MPI) Europe What if the Earth had an adaptive infrared iris?
10:15	10:30	Hideaki Kawai (MRI) Importance of minor treatments in parameterizations in GCMs for the cloud representations and the cloud feedbacks.
10:30	11:00	Coffee break <i>Chair : Mark Webb</i>
11:00	11:15	Dorian Abbot (U Chicago) Convective self-aggregation in a cloud resolving model at very low temperature.
11:15	11:30	Caroline Muller (École Polytechnique) Organization of convection in the tropical atmosphere, and implication for the large scales.
11:30	11:45	Brian Mapes (U Miami) Anomaly physics to isolate moisture coupling and its rectified climate signatures.
11:45	12:00	Hervé Douville(CNRM) Bridging the gap between CMIP and CFMIP experimental strategies.
12:00	12:15	Cathy Hohenegger (MPI) What determines the coupling strength between convection and the land surface?
12:15	12:30	Colin Prentice (Imperial College) Representation of carbon-water cycle coupling through land plants.
12:30	14:00	Lunch
14:00	15:30	Plenum discussion of breakout discussions A.
15:30	16:00	Coffee break
16:00	17:30	Breakout sessions for set A.
17:30	18:00	Castle Tour
18:00	19:00	Dinner
19:00	21:00	Informal discussion

WEDNESDAY 26 March

Chair : Masa Kageyama

08:30	08:45	Julia Hargreaves (JAMSTEC) The power of paleo; identifying climate model biases?
08:45	09:00	Sandy Harrison (U. Reading) Reconstructing palaeoclouds: potential ways forward.
09:00	09:15	Masakazu Yoshimori (U. Tokyo) An overall perspective on constraining uncertainty in climate sensitivity from the last glacial maximum.
09:15	09:30	Camille Risi (LMD/IPSL) How can we make use of water isotopic observations to better evaluate the representation of moist processes in climate models?
09:30	09:45	Norm Loeb (NASA) Observing Clouds and Earth's Radiation Budget from CERES: Recent Progress.
09:45	10:00	Bruce Wielicki (NASA) Climate observing systems.
10:00	10:30	Coffee break
		<i>Chair : M. Watanabe</i>
10:30	10:45	Peter Bauer (ECMWF) Model error assessment methods in NWP.
10:45	11:00	Jean-Louis Dufresne (LMD/IPSL) Some aspects of cloud heterogeneity.
11:00	11:15	Pier Siebesma (KNMI) How large domain LES can inform cloud-circulation interactions in GCMs.
11:15	11:30	Paquita Zuidema (U Miami) The Southeast Atlantic and its place within the global circulation - Inferences from observations.
11:30	11:45	Masaki Satoh (U. Tokyo) Global nonhydrostatic model simulations with single and double momentum cloud microphysics schemes and evaluation using satellite simulators.
11:45	12:00	Martin Miller (ECMWF) Clouds and the global circulation: a model developers experience.
12:00	13:30	Lunch
13:30	14:30	Plenary discussion/presentation of issues identified in breakout groups (A).
14:30	18:30	Hike
18:30	19:30	Dinner
19:30	21:00	Informal Discussion (report on hike conversations?)

THURSDAY 27 March

09:00	10:30	Breakout sessions for set B.
10:30	11:00	Coffee break
11:00	12:30	Plenum discussion of breakout discussions B.
12:30	14:00	Lunch
14:00	15:30	Breakout sessions for set B.
15:30	16:00	Coffee break
16:00	18:00	Free time
18:00	19:00	Plenary discussion/presentation of issues identified in breakout groups (B).
19:00	20:00	Dinner
20:00	22:00	Open discussion

FRIDAY 28 March

09:00	12:00	Wrap up and next steps.
12:00	13:00	Lunch
13:00		Departure