

Agenda

RPWG Meeting (Nov 17-18)

Monday, November 17

0730 – 0845 Registration and continental breakfast

0900 – 1230 Plenary Session (Senior Room)

0900 – 0920 Introduction, logistics, purpose of meeting (Dave Turner)

0920 – 1000 Reports from recent conferences (5-10 min each)

- International Radiation Symposium (Dave Turner)
- CERES/GERB Science Team Meeting (Dave Turner)
- GEWEX Radiation Panel (Jim Mather)
- Global Dimming and Brightening (Chuck Long)
- BSRN (Chuck Long)
- GCSS (Sally McFarlane)
- ICCP (Jen Comstock)

1000 – 1030 Chief Scientist's Report and discussion (Warren Wiscombe)

1030 – 1100 Coffee Break

1100 – 1215 CLOWD (Led by Andy Vogelmann) (**Senior Room**)

1100 – 1130 CLOWD/BBHRP and preliminary results (Jennifer Comstock)

1130 – 1150 Overview of RACORO & Instrumentation issues (Andy Vogelmann)

1150 – 1200 Radiation measurements on RACORO aircraft (Chuck Long)

1200 – 1210 RACORO Spectoradiometer research (Alexander Marshak)

1210 – 1215 Discussion

1215 – 1315 LUNCH (provided by hotel)

1315 – 1500 Shortwave Spectrometry (Led by Peter Kiedron) (**Senior Room**)

1315 – 1330 Status of SWS (Connor Flynn)

1330 – 1345 Comparisons of clear-sky RSS spectral measurements and radiative transfer models in transmission (Joe Michalsky)

1345 – 1400 Comparison of Measured and Modeled Transmittances/Radiances in the Near-Infrared and Visible Spectral Regions (Jennifer Delamere)

1400 – 1415 Studying the transition from cloudy to clear skies using the ARM SWS (Alexander Marshak)

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1415 – 1430 Surface Spectral Albedo VAP (Sally McFarlane)

1430 – 1445 Establishing a NOAA-EPA UV-ozone monitoring network at SGP (Peter Kiedron)

1445 – 1500 Discussion (led by Peter Kiedron)

1500 – 1530 COFFEE BREAK

1530 – 1730 Breakout groups (2 groups running in parallel)

Instrumentation (Led by Chuck Long) (**Nassau Room**)

1530 – 1600 MFRSR discussions (status, upgrades, future spatial distribution, upwelling MFR to AMF sites, etc) (Jimmy Voyles)

1600 – 1620 MFRSR shadowband positioning algorithm and potential for improved optical depth retrievals (Joe Michalsky)

1620 – 1640 The case for a 1625 nm channel in the MFRSR (Joe Michalsky)

1640 – 1700 Results from the thin cloud rotating shadowband radiometer (Mary Jane Bartholomew)

1700 – 1720 Status of RSS refurbishment activities (Peter Kiedron)

1720 – 1730 Discussion

Atmospheric State (Led by Dave Turner) (**Senior Room**)

1530 – 1550 Retrieving fractional sky cover from the MFRSR (Qilong Min)

1550 – 1610 LW 3-D radiative transfer (Bob Ellingson)

1610 – 1630 Developing a parameterization of 3-D radiative effects for CRMs (Tamas Varnai)

1630 – 1650 2-D radiative transfer in CRMs (Jason Cole)

1650 – 1710 Continuous Intercomparison of Radiation Codes (CIRC) (Lazaros Oreopoulos)

1710 – 1730 Discussion

Tuesday, November 18

0700 – 0830 Breakfast/Registration

0830 – 1030 Breakout Groups (2 groups running in parallel)

Instrumentation (Led by Chuck Long) (**Ballroom**)

0830 – 0910 RCF upgrade status, future upgrades of SIRS & BORCAL, improving the pyrgeometer calibration blackbody system, tracing pygeometer calibrations to WISG, and results of recent NREL pyrhelimeter comparisons (Tom Stoffel)

0910 – 0930 AERI maintenance and status, new generation of AERI instruments (Bob Knuteson)

0930 – 0950 CLARREO: climate absolute radiance and refractivity observatory (Bob Knuteson)

0950 – 1010 Absolute scanning IR radiometer discussion (Tom Stoffel)

1010 – 1030 Discussion

Atmospheric State (Led by Dave Turner) (**Senior Room**)

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- 0830 – 0850 Validation of Observed and Computed Clear Sky OLR using CERES and AIRS (Leslie Moy)
- 0850 – 0910 Radiative heating rates in the TWP (Jim Mather)
- 0910 – 0930 Improving the SGP NB-BB fits for the VISST product (Mandy Khaiyer)
- 0930 – 0950 Global Dimming and Brightening (Chuck Long)
- 0950 – 1005 Overview of microwave focus group (Dave Turner for Maria Cadeddu)
- 1005 – 1020 Profiling from Microwave radiometers and AERI (Dave Turner)
- 1020 – 1030 Discussion

1030 – 1100 Coffee break

1100 – 1230 Breakout Groups (2 groups running in parallel)

Instrumentation (Led by Chuck Long) (**Ballroom**)

- 1100 – 1110 Status of IRT network deployment (Vic Morris)
- 1110 – 1130 TSI Operations, maintenance, and options for measuring nighttime cloud fraction using IR sky imaging (Vic Morris)
- 1130 – 1140 AMF-2 project plans (Brad Orr)
- 1140 – 1230 Discussion

Atmospheric State (Led by Dave Turner) (**Senior Room**)

- 1100 – 1115 Comparisons of microwave observations at 183 GHz (Dave Turner)
- 1115 – 1130 Modifications to the water vapor continuum in the microwave suggested by 150 GHz observations (Dave Turner)
- 1130 – 1150 WV Continuum in microwave and far-IR spectroscopic improvements (Eli Mlawer)
- 1150 – 1205 RHUBC-II update (Eli Mlawer)
- 1205 – 1230 Discussion

1230 – 1330 Lunch (provided by hotel)

1330 – 1700 Plenary Session (Ballroom)

- 1330 – 1415 Focus group reports
 - 1330 – 1340 CLOWD FG summary and science questions (Vogelmann)
 - 1340 – 1350 Shortwave Spectroscopy FG summary and science questions (Kiedron)
 - 1350 – 1405 Instrument FG summary and science questions (Long)
 - 1405 – 1420 Atmospheric State FG summary and science questions (Turner)

1420 – 1500 Discussion: RPWG science direction/focus

1500 - 1530 Coffee Break

1530 – 1700 Discussion: RPWG science direction/focus/recommendations

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RP/CM Joint Meeting (Nov 19) (Ballroom)

Wednesday, November 19

0700 - 0820: Continental Breakfast

0820 - 0840: Introduction

Alapaty, Ferrell, Wiscombe, Turner, Klein

0840 - 1010: Invited talks (Steve Klein)

0840 – 0910 Recent climate model developments at GFDL - Leo Donner

0910 – 0940 Recent climate model developments at NCAR - Phil Rasch

0940 – 1010 Recent climate model developments at Met Office - Jon Petch

1010 - 1040: BREAK

1040 - 1200: Radiation/Modeling talks (Dave Turner)

1040 – 1100 RTMIP Forcing for the AER Models and Status of the CAM/RRTMG Application

- Mike Iacono/Eli Mlawer

1100 – 1120 Accurate and affordable radiative transfer for cloud scale models - Robert Pincus

1120 – 1140 ICRCCM III, Phase 2: Longwave Model Comparisons for Inhomogeneous Clouds

- Bob Ellingson

1140 – 1200 Radiation Diagnostics for the TWP-ICE CRM Intercomparison - Ann Fridlind

1200 - 1300: LUNCH (provided by hotel)

1300 – 1500: ARM programmatic issues (Sally McFarlane/Shaocheng Xie)

1300 – 1320 RACORO Update - Andy Vogelmann

1320 – 1340 VAP status and recommendations - Jim Mather

1340 – 1405 RPWG VAPs and BBHRP - Sally McFarlane/Eli Mlawer

1405 – 1410 Update on climate modeling Best-Estimate Data – Shaocheng Xie

1410 – 1430 Instrument Overview/Priorities – Jimmy Voyles

1430 – 1445 Roving ARM system - Dave Billesbach

1445 – 1500 Adding PAR sensors to radiometer mix - David Cook

***** End of the RP/CM Joint Session *****

CMWG Meeting (Nov 19 - 21)

Wednesday, November 19

1520 – 1640 Surface Flux Breakout (Ric Cederwall) (Senior Room)

1520 – 1640 Cloud and Convection I (Tony Del Genio) (Ballroom)

1520 – 1540 Representation of 3D heterogeneous cloud fields using copulas: Theory for water clouds
-Lazaros Oreopoulos

1540 – 1600 Understanding the Link between Convection Parameterization and Tropical Pacific Double
ITCZ and Upper Ocean Biases in the NCAR CCSM3 - Guang Zhang

1600 – 1620 Observed Updraft and Mass Flux in Shallow Cumulus at SGP - Yunyan Zhang

1620 – 1640 The DualM parameterization in the IFS - from development to verification
- Maik Ahlgrimm

1640 - 1700 Break

1700 – 1800 New ARM PI talks (Steve Klein) (Senior Room)

1700 – 1710 Improving the Representation of Subgrid-Scale Clouds in Cloud Resolving Models to GCMs
-Steve Krueger

1710 – 1720 Modeling the interaction between cumulus convection and linear waves in a single column
-Zhiming Kuang

1720 – 1730 Development of ensemble neural network convection parameterizations for climate models
using ARM data: Initiation of the project - Michael Fox-Rabinovitz

1730 – 1740 Plans for data assimilation and cloud-resolving modeling using WRF in the Tropical West
Pacific Region - Jimmy Dudhia

1740 – 1750 Towards producing multi-year cloud properties and radiative heating rates for evaluating
GCMs over ARM SGP and TWP - Xiaoqing Wu

1750 – 1800 Novel approach for representing ice microphysics in models - Hugh Morrison

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Thursday, November 20

0730 – 0830 Continental Breakfast

0830 – 1200 Plenary session (Ballroom)

0830 – 1010 Cloud and Convection II (Steve Krueger)

0830 – 0850 A CFMIP-GCSS project to study cloud feedbacks in climate models and the role of ARM data - Minghua Zhang

0850 – 0910 Comparing ARM mm-wave radar statistics with CloudSat statistics - Tom Ackerman

0910 – 0930 ISCCP simulator validation - Jay Mace

0930 – 0950 Global mapping of anvil clouds associated with mesoscale convective systems - Bob Houze

0950 – 1010 Relationships between meteorological regime and convective precipitation characteristics near Darwin, Australia - Ed Zipser

1010 – 1040 Break

1040 – 1220 Cloud and Convection III (Minghua Zhang)

1040 – 1100 entrainment rate and their role in the transition from shallow to deep convection during TWP-ICE - Jingbo Wu/Tony Del Genio

1100 - 1120 Ensemble forcing for TWP-ICE - Christian Jakob

1120 – 1140 Resolution dependencies of CAM forecasts of TWP-ICE convection – J. Boyle/S. Klein

1140 – 1200 High-resolution cloud-permitting weather research and forecasting (WRF) model simulations of TWP-ICE - Yi Wang

1200 – 1220 Tropical Anvil Characteristics from Different Homogeneous Freezing Parameterizations and Impacts on Water Content of the Tropical Tropopause Layer (TTL) - Jiwen Fan

1220 – 1330 Lunch

1330 – 1410 Introduction of new case studies (Christian Jakob) (Ballroom)

1330 – 1350 ARM/GCSS Joint TWP-ICE CRM Intercomparison: Case Overview - A. Fridlind/J. Petch

1350 – 1400 ARM/GCSS Joint TWP-ICE SCM Intercomparison: Case Overview - Laura Davies

1400 – 1410 ISDAC case overview - Steve Ghan

1410 – 1530 Breakouts

TWP-ICE (Ann Fridlind/Jon Petch) (Senior Room)

Jon Petch - Early TWP-ICE results from Met Office Models

Laura Davies - More results from ensemble SCM simulations of TWP-ICE

Yi Wang - TWP-ICE results from WRF simulations at PNNL

Ann Fridlind - Preliminary answers to the scientific questions

Open discussion

ISDAC (Steve Ghan) (Ballroom)

Hugh Morrison - lessons learned from M-PACE

Steve Ghan - ISDAC overview

Shaocheng Xie - ISDAC forcing dataset

Mikhail Ovtchinnikov - ISDAC modeling

Open discussion

1530 – 1600 Break

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1600 – 1740 TWP-ICE Breakout (Continued) (Senior Room)

Open Discussion

1600 – 1740 Cloud microphysics and aerosol (Larry Berg) (Ballroom)

1600 – 1620 Impact of entrainment and mixing on optical properties of boundary layer clouds
- Wojtek Grabowski

1620 – 1640 Aerosol indirect effect in Arctic clouds - Yi Ming

1640 – 1700 An evaluation of ice formation in large-eddy simulations of supercooled Arctic stratocumulus using ground-based lidar and cloud radar - Bastiaan van Dierenhoven

1700 – 1720 Testing a simple ice supersaturation scheme in a higher-order turbulence model
- Anning Cheng

1720 - 1740 Results from the Cloud and Land Surface Interaction Campaign and the Cumulus Humilis Aerosol Processing Study – Larry Berg

Friday, November 21

0730 - 0830: Continental Breakfast

0830 - 1200: Plenary Session (S. Klein) (Ballroom)

0830 – 1030: Discussion on ARM and CMWG future science direction

- What science do we think ARM should do in the next five years?
- What are we most going to want to know in 10 years? Is ARM data going to be sufficient to answer that? If not, could it be and how?
- From the CMWG's standpoint, why do we care or not care about the existence of the AMF, and assuming we do care, what has to be done to make it useful to us?
- How can we handle some of the findings/recommendations by the IPCC (and/or NAS, if relevant) during the upcoming 5 years?

1030 – 1100: Break

1100 – 1200: Other ARM/CMWG issues

S. Xie - CMWG Data development

S. Klein - Vertical velocity products from ARM profiling radars

R. Cederwall – surface turbulent flux measurements

Wrap up

Boxed Lunch (provided by hotel)