

**Clouds, their Properties, and their Climate Feedbacks: A symposium to
celebrate William B. Rossow's science contributions and retirement
New York, June 6-8 2017**

Agenda

Tuesday, June 6

8:30-9:00am – Registration/Breakfast (courtesy of NASA/GISS)

***9:00-9:15 – Welcome and logistics (George/Johnny, Gavin Schmidt, Reza
Khanbilvardi)***

***9:15am – Session A: 30 years of ISCCP – Challenges, achievements, and lessons
learned (Chair: Chris Kummerow, Rapporteur: Jimmy Booth)***

9:15-9:30 - William Rossow

9:30-9:45 - Graeme Stephens: Clouds from different points of view: how I remember
ISCCP, Bill and clouds in climate

9:45-10:00 - George Tselioudis: Satellites in the hunt for the elusive cloud feedback

10:00-10:15 – Johnny Luo: Process-oriented analysis of satellite observations of clouds:
A lifecycle view

10:15-10:30 – Discussion

10:30 – 11:00 – Coffee Break

***11:00 – Session B: Clouds and Climate Processes (Chair: Johnny Luo, Rapporteur:
Hanii Takahashi)***

11:00 – 11:15 - Christian Jakob: Radiative-Convective Anti-Equilibrium - The Truth
about the relationship of rainfall and radiation

11:15 – 11:30 - Hui Su: “Iris Effect” in Observations and Models

11:30 – 11:45 - Chris Kummerow: Tracking the Movement of Water and Energy from
the GEWEX Integrated Product

11:45 – 12:00 - Yi Huang: Cloud feedback during ENSO

12:00- - 12:15 - Tom Ackerman: A Possible Strategy for the Use of Solar Climate
Engineering

12:15 – 12:30 – Discussion

12:30 – 2:00 – Lunch

2:00 – Session B: Clouds and Climate Processes (continued)

2:00 – 2:15 - Mark Zelinka: Assessing the robustness and mechanisms of cloud responses to poleward jet shifts in observations and models

2:15 – 2:30 - Ying Li: Two-way interactions between cloud radiative effects and the atmospheric circulation in the extratropics

2:30 – 2:45 - Bernard Lipat, George Tselioudis, and Lorenzo Polvani: Midlatitude cloud shifts, their primary link to the Hadley cell, and their diverse radiative effect

2:45 – 3:00 - Kevin Grise: Dynamic and thermodynamic controls on midlatitude clouds: What can the observed satellite record teach us?

3:00 – 3:15 - Xianglei Huang: Spectral Decomposition of Cloud Radiative Effect and short-term Cloud Radiative Feedbacks

3:15 – 3:30 – Discussion

3:30 – 4:00 Coffee Break

4:00 – Session B: Clouds and Climate Processes (continued)

4:00 – 4:15 - Leo Donner: Cloud Updrafts, Climate Forcing, and Climate Sensitivity

4:15 – 4:30 - Katinka Bellomo: Observational and Model Estimates of Cloud Amount Feedback over the Indian and Pacific Oceans

4:30 – 4:45 - Alejandro Bodas-Salcedo: Cloud liquid water path and radiative feedbacks over the Southern Ocean

4:45 – 5:00 - Dave Winker: A Role for Active Sensors in Constraining Cloud Feedbacks

5:00 – 5:15 - Claudia Stubenrauch: The role of upper tropospheric cloud systems in climate: building observational metrics for Process Evaluation Studies

5:15 – 5:30 Discussion

6:00 – Symposium reception (courtesy of the CUNY CREST Institute)

Wednesday, June 7

Session C: New Datasets and Retrieval Methods (Chair: Claudia Stubenrauch, Rapporteur: June Wang)

9:00 - 9:15 - Alisa Young: ISCCP H-Series Data production at NCEI

9:15 - 9:30 - Yuanchong Zhang: The New Long-term, Global, 3-hourly, high-resolution ISCCP-FH Atmospheric Radiative Transfer Flux Profile Product

9:30 – 9:45 - Toshi Inoue: Cirrus cloud observed from Himawari-8

9:45 – 10:00: Kaori Sato: Cloud observations from the Arcs and EarthCARE project

10:00 – 10:15 - Hajime Okamoto: From CloudSat-CALIPSO to EarthCARE and new ground-based instruments

10:15 – 10:30 – Discussion

10:30 – 11:00 Coffee

Session C: New Datasets and Retrieval Methods (continued)

11:00 – 11:15 - Steve Schwartz: Cloud radiative fraction: Determination by high resolution photography from the surface looking upward

11:15 – 11:30 - Tamas Varnai: Deep space observations of oriented ice crystals and of the color of our planet

11:30 – 11:45 - Andrew Lacis: Efficient computation of the radiative effects of fractional cloudiness in a climate GCM setting

11:45 – 12:00 - Michael Mishchenko: Fluctuational QED theory of radiative transfer in clouds

12:00 – 12:14 – Erhard Raschke – On the influence of ancillary information on estimates of the earth's radiation budget

12:15 - 12:30 – Discussion

12:30 – 2:00 – Lunch

2:00 - Session D: Clouds, Radiation, and Microphysics (Chair: George Tselioudis,

Rapporteur: Bernard Lipat)

2:00 – 2:15 - Paul Stackhouse: The Effect of Clouds on Surface Radiation: Contributions of Global ISCCP-based Surface Radiation Toward Establishing Relationships, Narrowing Uncertainties and Fostering Interdisciplinary Application

2:15 – 2:30 - Carol Anne Clayson: Relationships between ocean-atmosphere surface heat and moisture fluxes, clouds, and weather regimes

2:30 – 2:45 - Anastasia Romanou and Rebecca Latto: Ocean carbon-climate states based on cluster analysis of air-sea carbon fluxes and ocean color satellite measurements

2:45 – 3:00 - Hamid Norouzi: Surface Energy Balance Study and Temporal and Spatial Downscaling of Surface Temperature in Urban Area

3:00 – 3:15 - Tristan L'Ecuyer: Revisiting the Role of Cloud Type in the Global Energy Budget

3:15 – 3:30 – Discussion

3:30 – 4:00 Coffee Break

4:00 – Session D: Clouds, Radiative budget, and Microphysical Scales (continued)

4:00 – 4:15 - Stefan Kinne: Global distributions of aerosol optical properties

4:15 – 4:30 - Jonathan Jiang: Impacts of Different Aerosol Types on Convective Cloud as Observed by CALIPSO/CloudSat Satellites

4:30 – 4:45 - Zhanqing Li: Joint Impact of Aerosol-Radiation-Interaction (ARI) and Aerosol-Cloud-Interactions (ACI) on Convective Clouds, Lightning and Thunderstorms

4:45 – 5:00 - Luiz Machado: Tropical Cloud Process and sensitivities to environmental conditions

5:00 – 5:15 - Matt Igel: The Modeled and Observed Dependence of Precipitation Onset and Cloud Type on Layer-Moisture

5:15 – 5:30 – Discussion

Thursday, June 8

9:00 Session E: Clouds at Weather Scales (Chair: Christian Jakob, Rapporteur: Jackson Tan)

9:00 – 9:15 - Ademe Mekonnen: The Interaction Between Cloud Regimes and Easterly Wave Activity over Africa: Convective Transitions And Mechanisms

9:15 – 9:30 - Brian Vant-Hull: Global Tracking of Meso-Scale Convective Systems

9:30 – 9:45 - Greg Elsaesser: Fusing Multiple Satellite Datasets to Define and Understand Organized Convection

9:45 – 10:00 - Tony Del Genio: Toward the Representation of the Convective Lifecycle in Climate Models

10:00 – 10:15 - Mitch Moncrieff: Multiscale Coherent Structure Parameterization (MCSP) for Organized Tropical Convection

10:15 – 10:30 – Discussion

10:30 – 11:00 – Coffee Break

11:00 Session E: Clouds at Weather Scales (Continued)

11:00 – 11:15 - Hanii Takahashi: Level of Neutral Buoyancy, Deep Convective Outflow and Convective Core: New Perspectives Based on 5-Years of CloudSat Data

11:15 – 11:30 - Lazaros Oreopoulos: ISCCP Weather States and MODIS Cloud Regimes: Organizing passive cloud observations for understanding the nature of global cloudiness

11:30 – 11:45 - Qiang Fu: Variability of Tropical Tropopause Layer Cirrus

11:45 – 12:00 - Ulrich Schumann: Do cirrus clouds cool or warm the Earth surface?

12:00 – 12:30 – Discussion

12:30 – 2:00 Lunch

2:00 Session E: Clouds at Weather Scales (Continued)

2:00 – 2:15 - Brian Kahn: Low-latitude variability of ice cloud properties and cloud

thermodynamic phase observed by the Atmospheric Infrared Sounder (AIRS)

2:15 – 2:30 - Roger Marchand: An Overview of MISR Cloud-Top-Heights and Optical Depth Histograms

2:30 – 2:45 - Zhien Wang: Global Cloud Type Distributions: ISCCP Cloud Type to CloudSat Type

2:45 – 3:00 - Jackson Tan: Evaluating Rainfall Errors in Global Climate Models through Cloud Regimes

3:00 – 3:15 – Steve Ackerman: Cloud detection from Satellites: What I learned from Bill Rossow

3:15 – 3:30 – Discussion

3:30 – 4:00 Coffee Break

4:00 Session E: Clouds at Weather Scales (Continued)

4:00 – 4:15 - Catherine Naud: A Climatology of Clouds and Precipitation in Extratropical Cyclones based on Satellite Observations

4:15 – 4:30 - Jimmy Booth: Cloud and Water Vapor Conditions over the Ocean Western Boundary Currents during Winter

4:30 – 4:45 - Junhong (June) Wang: Diurnal cycle of clouds from satellite data and climate models

4:45 – 5:00 - Ulrika Willen: ENSO variability in multiple satellite observations and climate models

5:00 – 5:15 - Kanhu Charan Pattnayak: Investigation of the Moisture Recycling Ratio over South America: A Modelling Approach using HadCM3

5:15 – 5:30 - Discussion

5:30 – 6:00 Conference recap – William Rossow