

**Aerosols, Clouds, Precipitation and Climate (ACPC) Workshop, 3 – 6 April 2018**  
**University of Colorado, Boulder**



**Programme**

Please note: Except for the overview talks and the work performed in ACPC collaboration, we request short discussion contributions only, 10 min each.



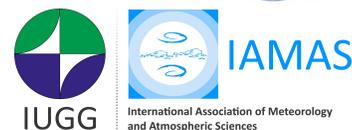
Tuesday, 3 April 2018

18:00 h Buffet supper

Opening session

20:00 h Opening (Graham Feingold / Danny Rosenfeld)

20:30 h Interaction with GAP (Sue van den Heever / Philip Stier)



Wednesday, 4 April 2018 – deep clouds

(chair persons and notetakers: Bethan White, Peter Marinescu, Jiaxi Hu)

Deep clouds session: Observations

9.00 h Fridlind, Ann: Observations overview

9.20 h Hu, Jiaxi: Observations of possible impacts of CN vs. CCN on cloud invigoration and electrification in the Houston area

9.30 h Collis, Scott: How many isolated convective cells will we see in Houston in a month? Designing an experiment using automated cell tracking

9.40 h Oue, Mariko: Capabilities and uncertainties of polarimetric measurements and vertical velocity retrievals: An investigation using a radar simulator

9.50 h Snyder, Jeff: Increasing Radar Sensitivity: What We Can Do to Maximize Our Odds of Detecting Subtle Differences in Precipitation Characteristics and Processes

10.00 h Ryzhkov, Alex: A novel method for ice microphysical retrievals using polarimetric radar

10.10 h Discussion

10.30 h Coffee

Deep clouds: Model studies

11.00 h Sue van den Heever – Simulations overview

11.30 h Heikenfeld, Max; Marinescu, Peter; White, Bethan: Microphysical aerosol effects in tracked convective cells in RAMS and WRF for the Houston deep convective case

12.00 h Discussions

12.30 h Lunch

13.50 h Fan, Jiwen: Substantial convection and precipitation enhancements by ultrafine aerosol particles and relevance to field experiment over Houston

14.10 h Grabowski, Wojtek: Contrasting impacts of aerosols with effects of meteorology in simulations of deep convection

14.20 h Barrett, Andrew: Why the choice of model timestep is confusing aerosol-cloud-convection modelling study results

14.30 h Coopman, Quentin: Analysis of thermodynamic phase transition by cloud tracking

14.40 h Deckers, Daniel: Exploring resolution requirements for tracking simulated cumulus thermals

14.50 h Glassmeier, Franziska: Analytical calculations of precipitation susceptibilities

15.00 h Discussion  
15.30 h Coffee  
  
Deep clouds: Plans  
16.00 h Jensen, Michael: ARM deployment plans  
16.30 h Rosenfeld, Daniel: Vision and Next steps on deep cloud analyses  
17.00 h Discussion

Thursday, 5 April 2018 – shallow clouds

(chair persons and notetakers: Franziska Glassmeier, Tom Goren, Takanobu Yamaguchi)

9.00 h Wood, Rob: Shallow working group overview  
9.30 h Gordon, Hamish: Smoke interacting with clouds in the south-east Atlantic: representing CLARIFY case studies with the Unified Model  
9.40 h Goren, Tom: Evidence for impeded breakup of decoupled precipitating Marine Stratocumulus  
9.50 h Kazil, Jan: Boundary layer clouds and biomass burning aerosol – towards realistic Lagrangian large eddy simulations  
10.00 h Discussions  
10.30 h Coffee  
11.00 h Vogel, Bernhard: Aerosol impact on low level clouds above South West Africa  
11.10 h Hoffmann, Fabian: Particle-based cloud microphysics for investigating entrainment and mixing in shallow convective clouds  
11.20 h Yamaguchi, Takanobu: Stratocumulus to cumulus transition by drizzle  
11.30 h Sinclair, Kenneth: Polarimetric Retrievals of Cloud Droplet Number Concentrations: Forward Modeling and Observational Results NASA/GISS  
11.40 h Discussions  
12.30 h Lunch  
14.00 h Interaction with GASS (Xubin Zeng, U Arizona, Tucson)  
  
Shallow clouds: precipitation susceptibility  
14.20 h Douglas, Alyson: Determining the environmental controls on precipitation suppression in warm clouds  
14.30 h Wang, Minghuai: Precipitation frequency and its susceptibility to aerosols in observations and climate models  
14.40 h Discussion  
15.10 h Coffee  
  
Shallow clouds: datasets  
15.40 h Glenn, Ian: Mutual Information Analysis of Aerosol-Cloud Interactions during LASSO  
15.50 h Muelmenstaedt, Johannes: Novel satellite datasets: surface latent heat flux, cloud subadiabaticity, and cloud base height  
16.00 h Suzuki, Kenta: Dichotomy between process-oriented and energy-based constraints on aerosol indirect forcing  
16.10 h Wood, Robert et al.: Vision and Next steps on shallow clouds  
16.40 h Discussions  
19.00 h SSC meeting

Friday, 6 April 2018 – next steps

9.00 h	Report by Notetakers: Deep and Shallow discussions
9.40 h	Discussions
10.30 h	Coffee
11.00 h	Planning for next steps
12.00 h	End of meeting