

International Cooperative for Aerosol Prediction (ICAP)/ AEROCAS: 3rd Workshop: Ensemble Forecasts and Assimilation

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When and Where: May 11 – 13, 2011, Boulder, CO, USA.
Meeting hosted at: University of Colorado, Boulder, Laboratory for Atmospheric and Space Physics (LASP). See information at bottom.

ICAP Website: <http://bobcat.aero.und.edu/jzhang/ICAP/>

Rationale: This third meeting of the aerosol forecasting community will focus on the use of ensemble forecasts to improve event predictability. The NWP community has for some time been exploring the potential of multi-model ensembles to enhance understanding of forecast uncertainty (e.g., the WMO TIGGE project). At the same time, the European air quality community has already implemented an operational multi-model ensemble of regional forecasting system to enhance air quality forecast skill, which has been a major achievement both in terms of coordination between different modeling centers and also with the data providers. Meanwhile, the global aerosol community is just beginning to explore the possibility of ensembles (e.g., the “AeroCom Median” model, composed of several independent, deterministic models). So far, however, this latter effort has not been applied to the issue of predictability, but rather has been focused on “climate” applications (e.g., how well the ensemble compares to MODIS over the EOS period). Lessons from the NWP and European AQ communities’ efforts suggest considerations for the aerosol forecasting community, from practical issues such as assembling the multi-model ensemble from disparate forecasting efforts, to optimal methods of creating the multi-model ensemble (e.g., bias correction), issues of ensemble data assimilation, and ultimately the evaluation of the benefit of such a system. This workshop will be an initial foray into these endeavors.

Overarching Goals and Outcomes of Aerosol Ensemble Forecast Meeting:

- a) Provide baseline information on how the NWP community currently assembles and evaluates ensembles, including recent efforts in multi-model ensembles.
- b) Determine computational and infrastructure needs for generating and disseminating the multi-model ensemble of aerosol forecasts.
- c) Suggest metrics for evaluating the value and skill of the multi-model ensemble.
- d) Plan for advancing research on ensemble aerosol forecasting and ensemble-based data assimilation issues.

Format: This meeting will host a few key presentations and open discussions. Presentations are by invitation only. Most of the time will be devoted to discussion and action planning. A tentative schedule is to be determined. However, key topics for presentation and discussion include:

- a) Recent activities in operational aerosol forecasting development.
- b) Follow-up on the verification meeting and ensemble verification.
- c) Early findings from the multi-model ensemble.
- d) Strategies for EnKF aerosol data assimilation.
- e) Issues of statistical post processing.
- f) Code, variables, verification standardization.

Questions for discussion or debate:

- a) What do we expect the ensembles to give us in regards to predictability and observability?
- b) How do you evaluate the correlation length scales in the problems of ensemble data assimilation?
- c) What are the technical and philosophical issues associated with the use of model output statistics?
- d) Is it time to approach WMO on GRIB2 definitions?

Registration Fee: None requested.

Hotel Information:

Reservations can be made at the:

Millennium Harvest House Hotel (+1 800 545 6285)

A block of rooms is reserved for the "International Cooperative for Aerosol Prediction Workshop." Rooms are available at a guaranteed rate for May 10 – 13, and may be available outside that time window as well. **Room reservations must be made by April 11, 2011.** The meeting facility is a longish walk from the hotel, as is the downtown Boulder area, so a car is advisable.

Getting To Boulder:

Denver International Airport (DIA) serves Boulder, CO. From DIA there are various bus and taxi services that can transport you to Boulder (about 45 minutes away), or it is recommended you rent a car. More details about the area, including travel directions, may be gotten from the hotel web site: <http://www.millenniumhotels.com/millenniumboulder/attractions/>

Meeting Location:

The meeting is held at the LASP Space Technology Building, 1234 Innovation Dr., room A200. Directions to the facility can be found at: <http://lasp.colorado.edu/home/about/address-directions/>

Point of Contact:

Questions regarding travel, meeting organization and format can be directed to:
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