International Cooperative for Aerosol Prediction (ICAP) 13th working group meeting: Interoperability and the Vertical Dimension

Meeting Organizers and POCs:
Bertrand Fougnie (bertrand.fougnie@eumetsat.int), local host from EUMETSAT
Bojan Bojkov (Bojan.Bojkov@eumetsat.int), local host from EUMETSAT
Angela Benedetti (Angela.Benedetti@ecmwf.int), ICAP co-chair
Peter Colarco (Peter.R.Colarco@nasa.gov), ICAP co-chair

When and Where:
November 8 – 10, 2023
Darmstadt, Germany (exact venue still TBD)
The meeting will be preceded on November 6-7 by a WMO SDS-WAS and expert teams meeting at the same (or nearby) venue. ICAP-member participation is encouraged, but please coordinate WMO meeting attendance with Sara Basart (sbasart@wmo.int) and Daniel Tong (qtong@gmu.edu).

ICAP Co-Chairs:
Angela Benedetti (Angela.Benedetti@ecmwf.int), ECMWF
Peter Colarco (Peter.R.Colarco@nasa.gov), NASA
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ICAP Website:
http://icap.atmos.und.edu

Rationale:
The International Cooperative for Aerosol Prediction is a grassroots community of aerosol modelers and data providers that provides a forum to discuss best practices and find optimal common solutions to the challenges of operational global aerosol prediction. ICAP meetings are functional operational working group meetings used to plan and coordinate global operational aerosol forecasting endeavors such as the ICAP multi-model ensemble (Sessions et al. 2015; Xian et al. 2019), and to discuss particular themes of interest.

Nearly twenty years of space-based observations from the NASA CALIOP lidar have provided a wealth of information on the vertical structure of clouds and aerosols in the atmosphere. Additional space-based observations have come from CATS-ISS and the European AEOLUS mission, and we are nearing the launch of the European EarthCARE mission which will provide for the first time high spectral resolution lidar measurements from space. Meanwhile, numerous ground-based lidar and ceilometer networks are providing high temporal resolution vertical information on clouds and aerosols. New passive spectroscopic techniques are seeing continued advancements. Finally field datasets are becoming ever more available.

With these existing and forthcoming datasets, and anticipation of future space-based lidar, spectroscopic observations, and field datasets, the purpose of the 13th Working Group Meeting of the International Cooperative for Aerosol Prediction is to survey the state of vertical profile data records and their utilization in informing and evaluating global aerosol prediction models. Challenges include data exchange/interoperability for measurements and models alike, near-real time delivery and utilization of data, ingestion of data into aerosol data assimilation systems, and interoperability to foster wide utility of these data products across divergent model platforms and in conjunction with synergistic datasets. Expert talks will be invited related to aerosol remote sensing, data assimilation, and modeling, and the meeting will as well update on the progress of the individual aerosol modeling centers.

Who may attend:
Meetings and presentations are by invitation only by core member organizations and their operational partners. Applications are also received for a limited number of observers who have a direct stake in the proceedings. If you believe an appropriate invitation has been overlooked or wish to apply for observer status, please contact the meeting organizers or a core member for sponsorship. Core modeling development organizations include: BSC, ECMWF, JMA, NASA GMAO, NOAA NCEP, NRL, UKMO, MétéoFrance and FMI. Core remote sensing partners are from ESA, EUMETSAT, JAXA, and NASA.

Format:

ICAP is a technical working group and not a conference. Much time will be devoted to discussion and action planning. A tentative schedule is:

Day 1: Summaries of recent developments by core ICAP centers
Day 2 AM: Summaries and updates by core remote sensing partners.
Day 2 PM: Current state of the new generation satellite data
Day 3: Final discussion

Invited Speakers: Please make suggestions to the ICAP Co-Chairs.

Meeting Location: TBD, but within walking distance of EUMETSAT, Darmstadt Germany.