ECMWF Annual Seminar: Data Assimilation for Atmosphere and Ocean

6-9 September 2011, Reading, UK

Report

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I have attended the ECMWF Annual Seminar on Data Assimilation for Atmosphere and Ocean which took place in Reading, UK between 6th and 9th September 2011 with the opportunity of EMS Young Scientist Travel Award. I want to thank to EMS Award committee for finding me worthy of this award.

A lot of proficient lecturers from Met Office, ECMWF, NOAA, Meteo-France, University of Reading, University of California, NASA, UCAR, and Environment Canada took part in the seminar. The seminar was very informative and enjoyable. Furthermore meeting with the scientists and researchers from all around the world who are interested in data assimilation was a real pleasure for me.

As it is known a successful forecast requires two basic components; the first one is modeling the atmosphere realistically and the second one is defining initial conditions accurately since time integration of an atmospheric model is an initial-value problem. The initialization of the forecast models is a very important and complex process. The Data Assimilation for Atmosphere and Ocean Seminar began with the talks about current developments in variational and ensemble data assimilation. During the seminar a detailed description of currently used data assimilation techniques and information about the principles behind these techniques was provided. Pre- and post- processes in data assimilation were discussed in detail. Available observational data sources and their characteristic properties were also mentioned.

In addition to this fundamental information, perspectives on future developments in data assimilation, such as ensemble based methods and weak constraint variational methods, were also included. Finally challenges related to the design of efficient data assimilation schemes on future computer architectures were explained.

Thanks to everyone who contributed to this seminar.