Séminaire Lundi 14 Juillet 14h00 / Seminar Monday July 14, 2:00 PM

Conférencier/Lecturer: Jean-Noël Thépaut (Head of Data Division, ECMWF)

Sujet/Subject: Research Progress and Plans at ECMWF

Présentation/Presentation: Français / French

Lieu/Room: Grande salle du premier étage CMC

Résumé / Abstract:

The European Centre for Medium-Range Weather Forecasts (ECMWF) NWP system comprises a global spectral forecast model running at a spectral truncation of T799 (~25 km) with 91 model levels in the vertical. This model produces medium-range forecasts predicting the weather up to 15 days ahead, monthly forecasts predicting the weather on a weekly basis 30 days ahead, and seasonal forecasts up to 12 months ahead. Initial conditions for the medium range weather forecasts are provided through the advanced four dimensional variational data assimilation scheme, which makes an optimal use of a vast amount of meteorological observations, in particular from a large variety of satellite instruments.

This talk will review the latest developments and research applications undertaken over the last few years to improve the quality of the NWP model at large. A special emphasis will be dedicated to the latest developments in data assimilation and more specifically the use of satellite data.

An important activity at ECMWF concerns the production of high quality atmospheric reanalyses that are widely used in climate applications. The status of ERA-interim (a new enhanced reanalysis which covers 1989 into real time) will be given and future plans in this area will also be discussed. Last, the ECMWF project related to atmospheric composition monitoring (the so-called GEMS project) will be presented and its foreseen contribution to a Global Atmospheric Service will be exposed.