



## **Global atmospheric composition : offline versus online comparison using CIFS-MOCAGE and MOCAGE-CTM**

Joaquim ARTETA (1), Johannes FLEMMING (2), Beatrice JOSSE (1), and Vincent-Henri PEUCH (2)

(1) Meteo-France, CNRM-GAME, Toulouse, France, (2) ECMWF, Reading, UK

As part of the MACCII-project (EU-FP7) ECMWF's integrated forecast system (IFS) is being extended by modules for chemistry, deposition and emission of reactive gases. This integration of the chemistry complements the integration of aerosol processes in IFS.

C-IFS (Composition-IFS) provides global forecasts and analysis of atmospheric composition. Atmospheric chemistry in C-IFS can be represented by several chemical scheme, including RACMOBUS scheme as already implemented in the MOCAGE Chemistry-Transport-Model.

We will show the comparison of online versus offline use of the RACMOBUS scheme in an otherwise identical model setup (emissions, meteorology) over a one year run.

We will focus on global mass budget on troposphere and stratosphere, and validate fields of  $O_3$ ,  $NO_x$ , CO and HCHO.