



## **Data assimilation: a tool for climate-chemistry studies**

**W.A. Lahoz** (1)

1. NILU, Norway (wal@nilu.no / Fax: +47 63898050 / Phone: +47 63898257)

In Numerical Weather Prediction, the routine confrontation of short-range weather forecasts with observations, facilitated by the analyses-prediction-comparison cycles built into the data assimilation method, has identified numerous shortcomings in the forecast model, leading to steady improvements in model performance over the years. This approach has not been hitherto applied to climate models (or climate-chemistry models), though the scientific value of doing so has been recognized, largely because these models are not generally developed in conjunction with an appropriate data assimilation scheme. Constituent data assimilation is now becoming mature and as well as being used to provide forecasts and analyses, it is being used to evaluate observations and models. Thus, it is timely to explore its use as a tool for improving climate-chemistry models and reducing their uncertainty. This talk will provide a brief review of the current state of stratospheric constituent data assimilation, with emphasis on ozone, and will discuss possible strategies for implementing data assimilation in climate-chemistry studies.