



Chemical-dynamical coupling in data assimilation

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Many of the pressing questions about climate change and global air quality look to the development of an integrated atmospheric data assimilation system of meteorological and chemical observations that should be capable of delivering real time prediction as well as long term analyses.

Although there are many known interactions between dynamics and chemistry, there is usually in data assimilation no cross error covariances between dynamical and chemical variables. A new and collaborative effort between the Meteorological Service of Canada, the Belgian Institute for Space Aeronomy, and York University in Canada has recently been put in place to examine the linkages between dynamical and chemical data assimilation. An outline of the project will be presented, the main difficulties of its implementation will be discussed, as well as its potential impact.