The MACC reanalysis: An 8-year data set of atmospheric composition

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MACC (Modelling Atmospheric Composition and Climate) is a research project with the aim of establishing the core global and regional atmospheric environmental services for the European GMES (Global Monitoring for Environment and Security) initiative. The project was funded from 1 June 2009 to 31 October 2011 under the Seventh Framework Programme of the European Union, and continues as the FP7 funded project MACCII until . As part of MACC an eight-year long reanalysis of atmospheric composition data was constructed. This reanalysis covers the period 2003-2010 and combines satellite data of global reactive gases, aerosols and greenhouse gases, with a state-of the art numerical model. In this talk we describe the setup of the reactive gases data assimilation system used in the MACC reanalysis and present and validate reanalysis fields of CO, O_3, NO_x and HCHO.