



Reanalysis of stratospheric chemical composition based on assimilation of EOS Aura MLS and MIPAS data: latest improvements

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During last year EGU meeting, BIRA-IASB presented early results of a reanalysis of the stratospheric chemical composition based of assimilation of satellites observations using the Belgian Assimilation System for Chemical Observations (BASCOE). Presented results were based on an assimilation of MLS (O_3 , H_2O , HCl , HNO_3 , ClO) and MIPAS (CH_4 , N_2O , NO_2 , N_2O_5 , $ClONO_2$, CFC-11, CFC-12) for 2008. This year contribution will present the latest improvement achieved including the extended period (May 2007 to Dec 2010). As done last year, the quality of the analyses will be discussed using comparison against ozonesondes and ACEFTS data. We will also discuss the ability of the system to produce useful analyses in the following stratospheric conditions: polar winters (i.e. denitrification, dehydration, chlorine activation and ozone destruction), polar winters perturbed by descent of mesospheric NO_x , and the UTLS.