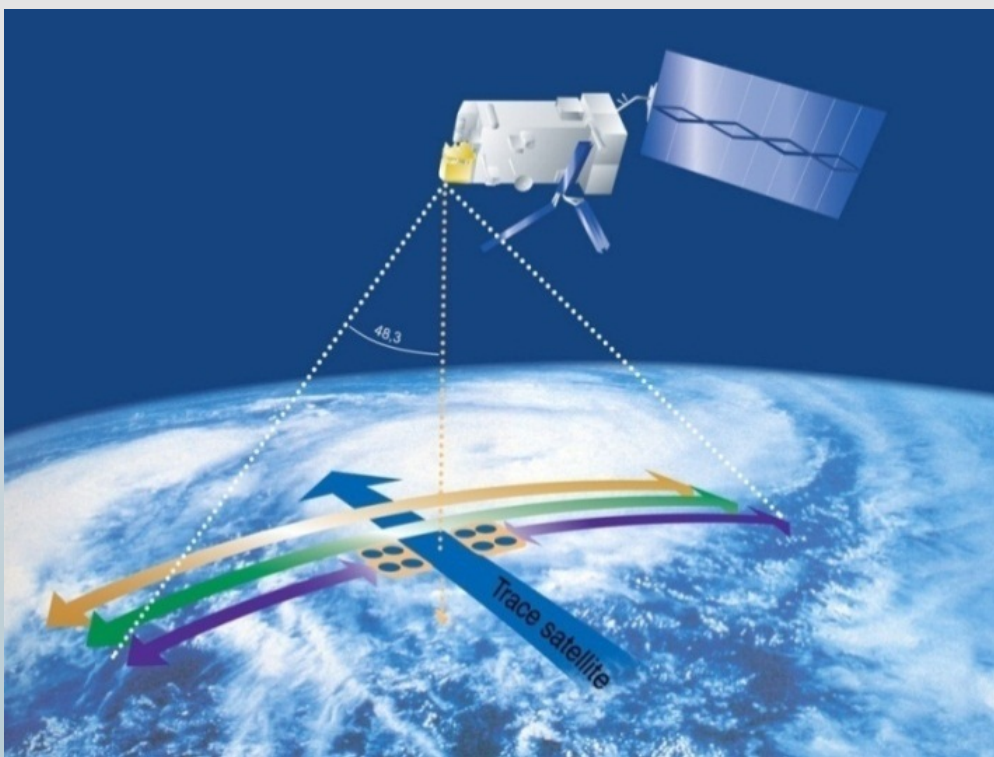


Monitoring of ozone using IASI/Metop



Cathy Clerbaux

+ the LATMOS/Paris Team
+ the ULB/Brussels Team



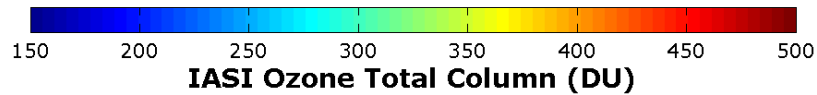
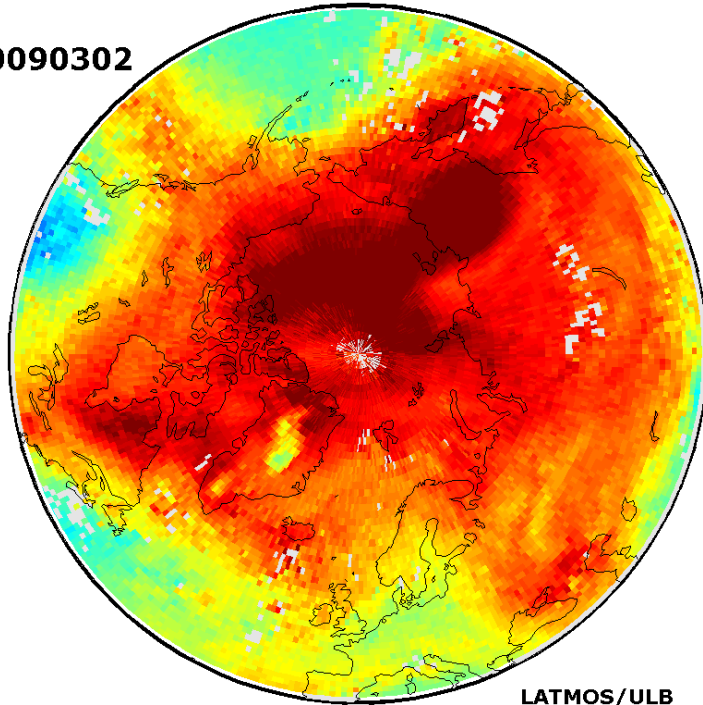
North Pole, comparison between March 2009 and March 2011

2009

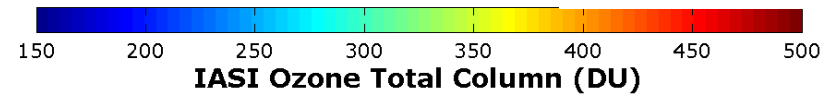
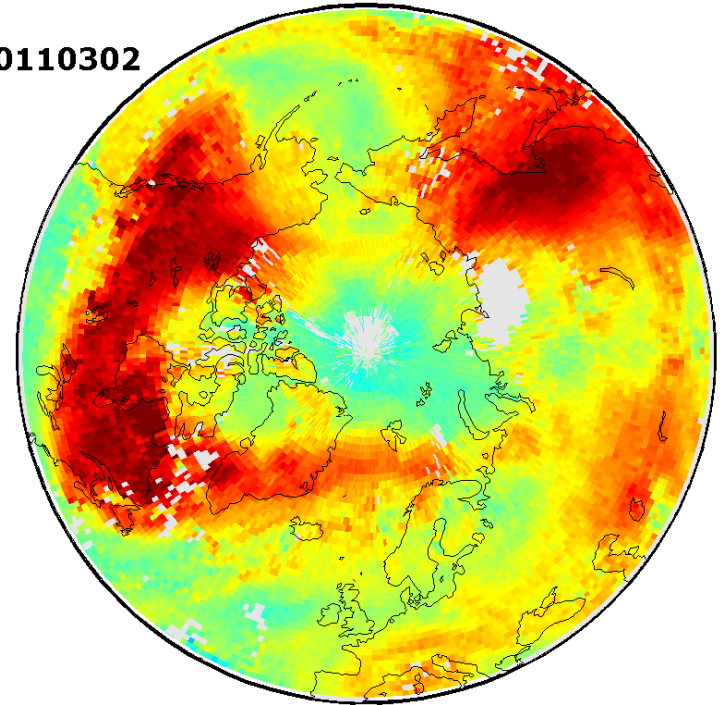
Arctic ozone, total columns

2011

20090302

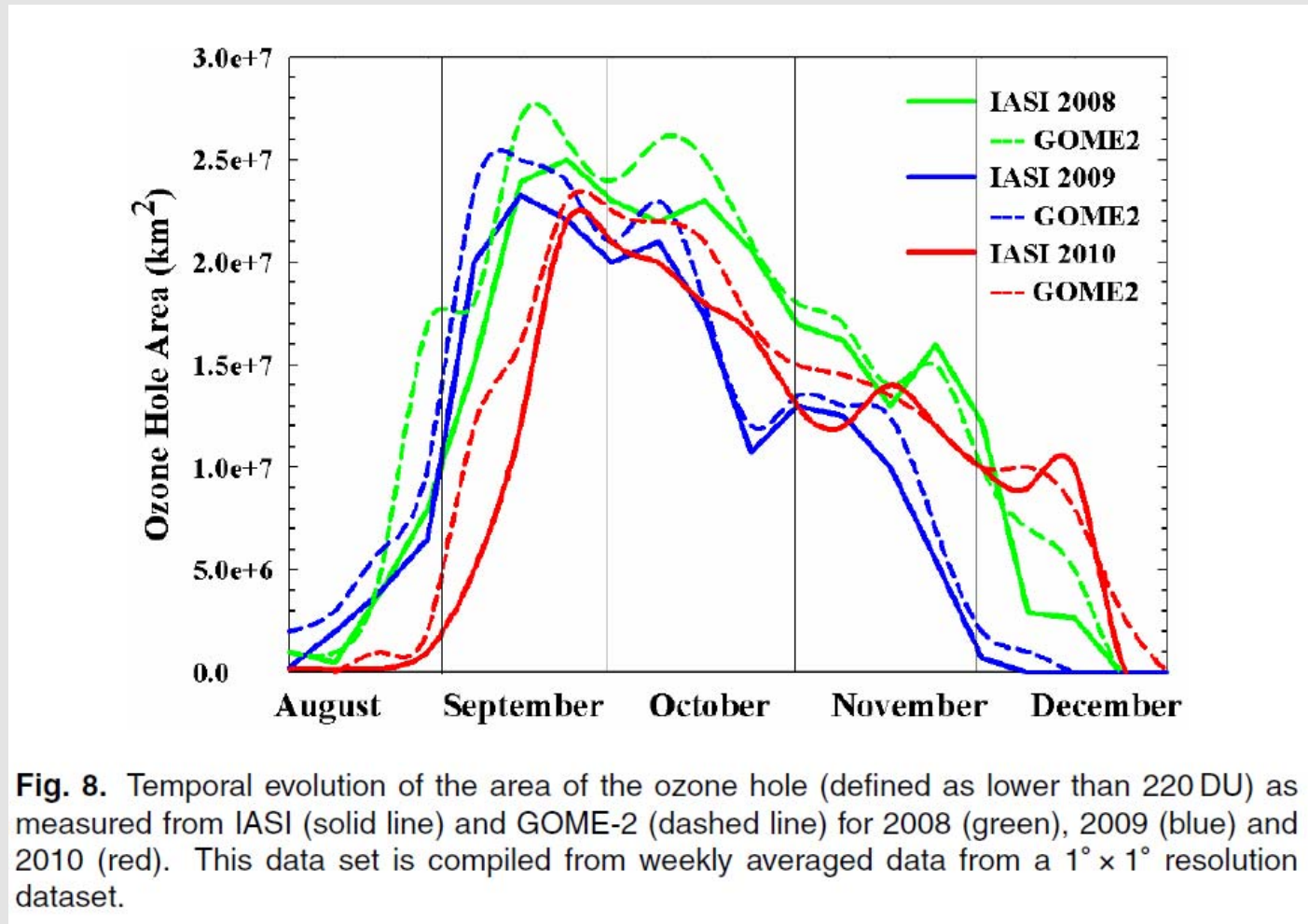


20110302



March 2 to 30, 3-day average
Courtesy Maya George, LATMOS

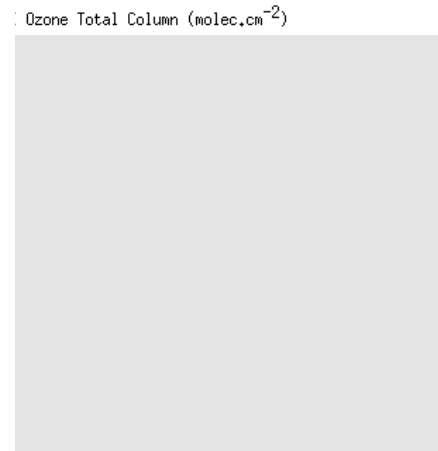
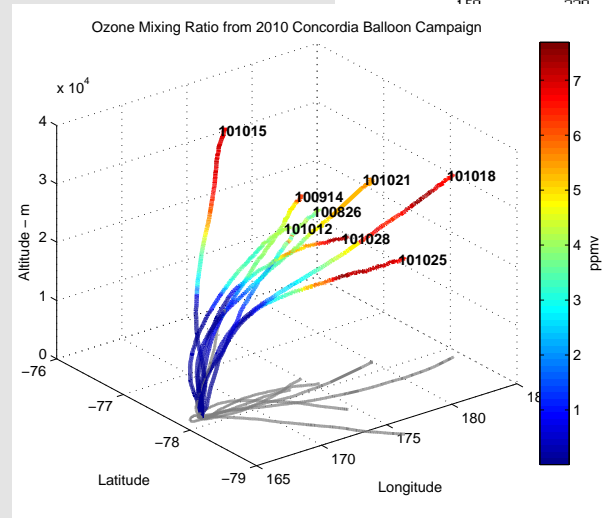
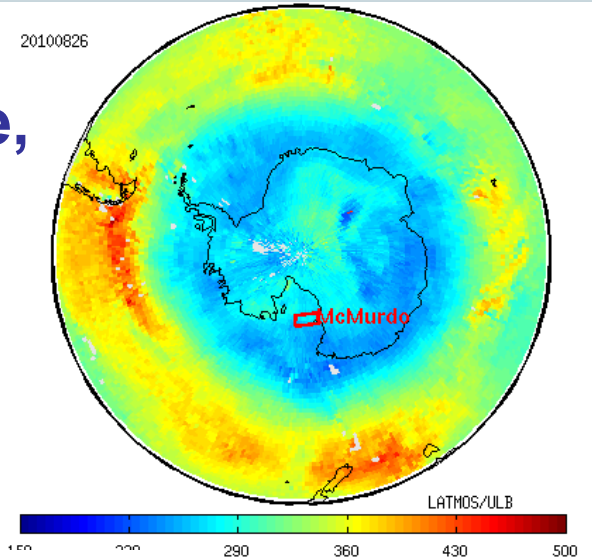
Antarctic ozone, total columns (daytime data)



Scannell C. , D. Hurtmans, A. Boynard, J. Hadji-Lazaro, M. George, A. Delcloo, O. Tuinder, P.-F. Coheur, C. Clerbaux, A review of the ozone hole as measured by IASI, AMT, 2012.



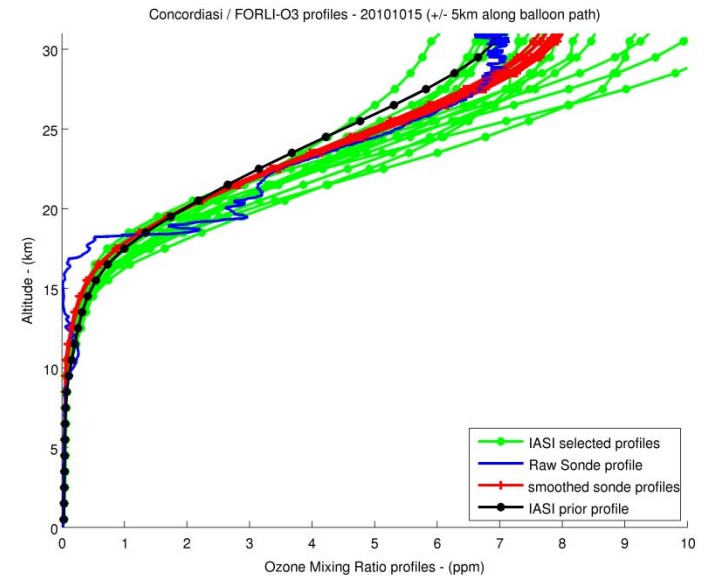
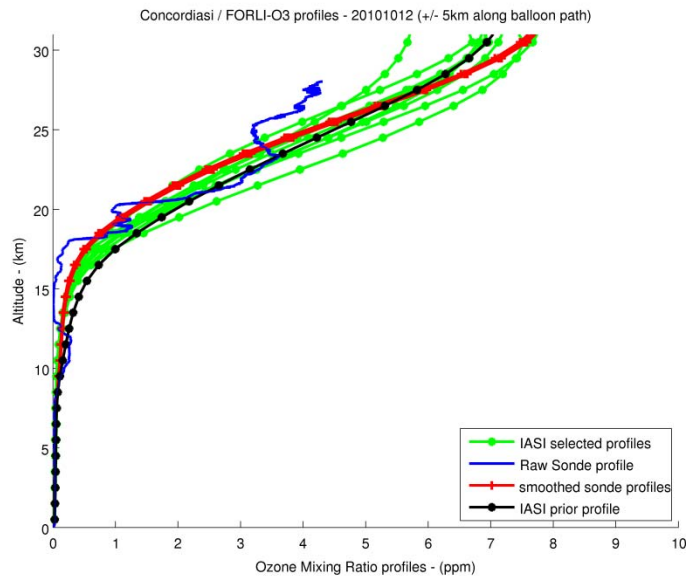
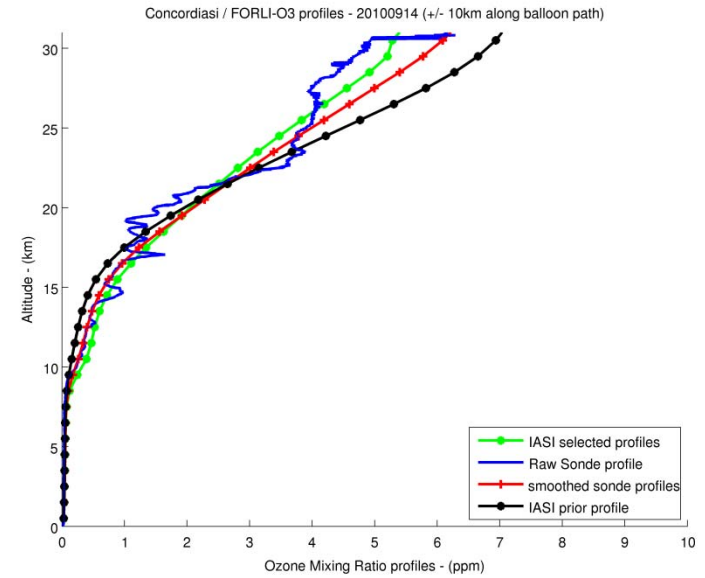
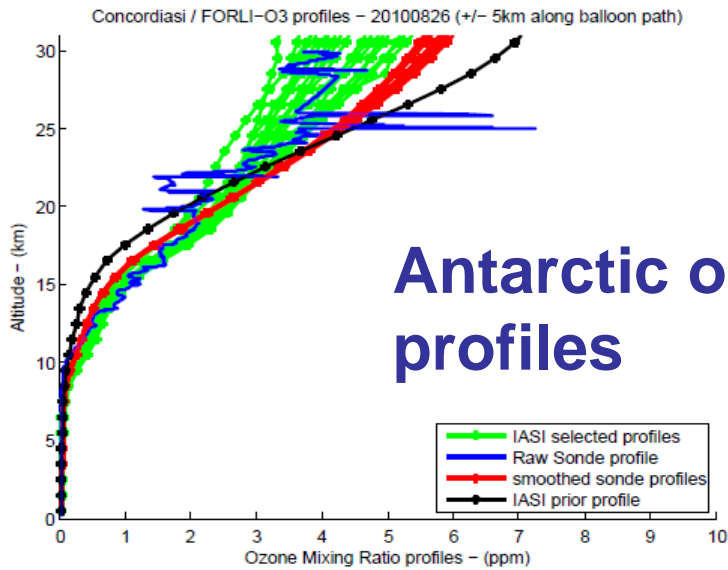
Antarctic ozone, profiles



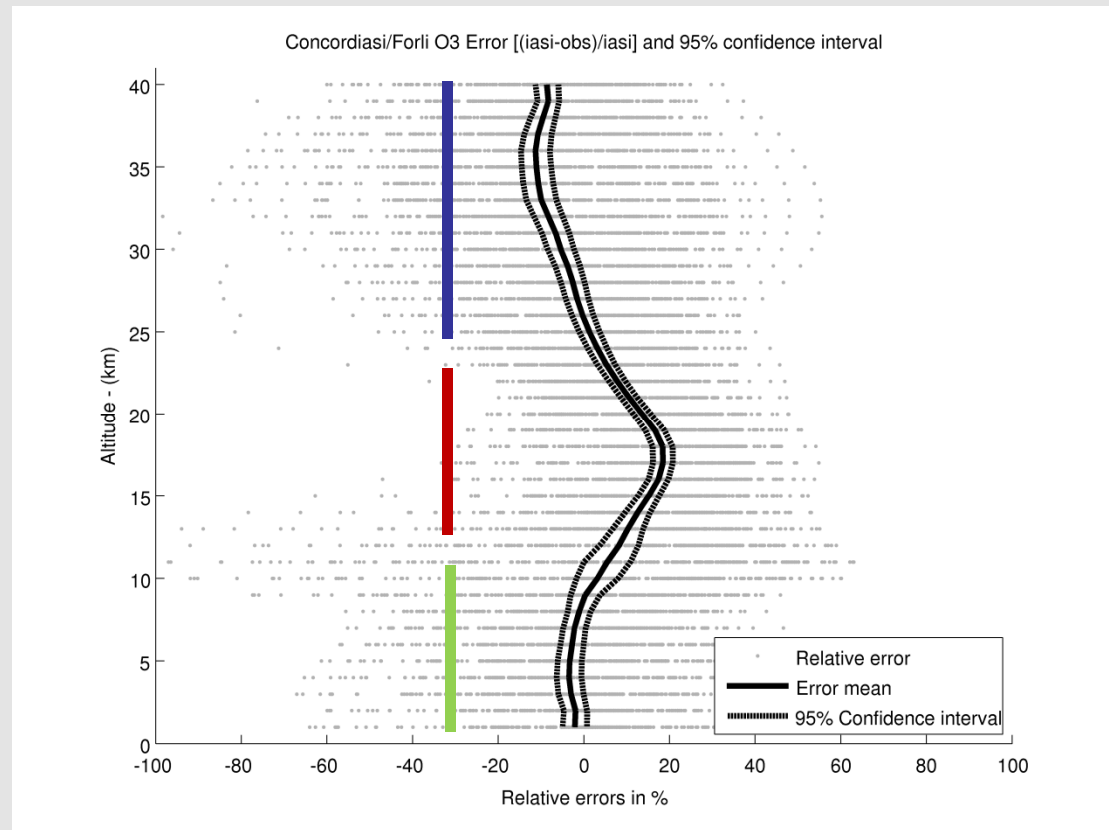
O₃ IASI profiles retrieved by the ULB/LATMOS Forli algorithm, for Aug 26 2010 are compared to the sondes data launched at Mc Murdo

IASI-O3 profiles versus Concordias balloon sondes

Antarctic ozone profiles

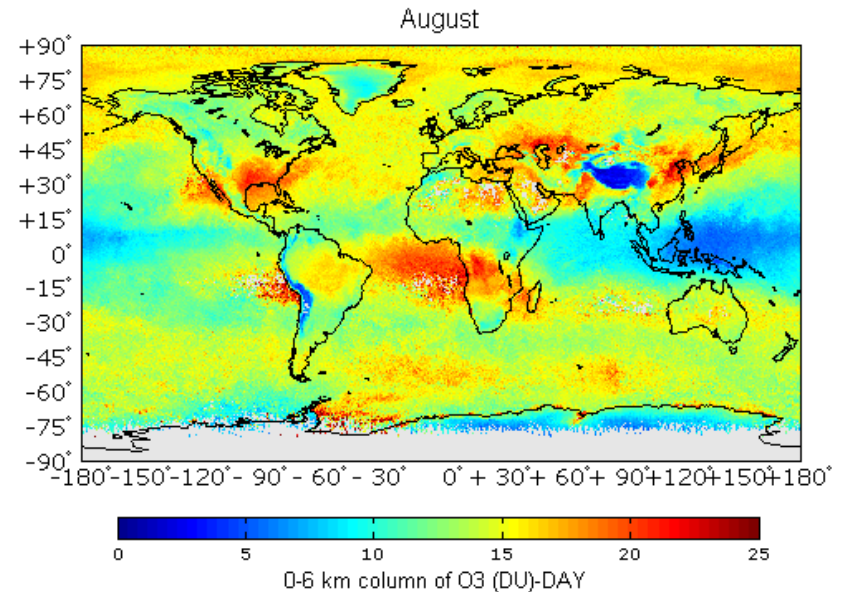
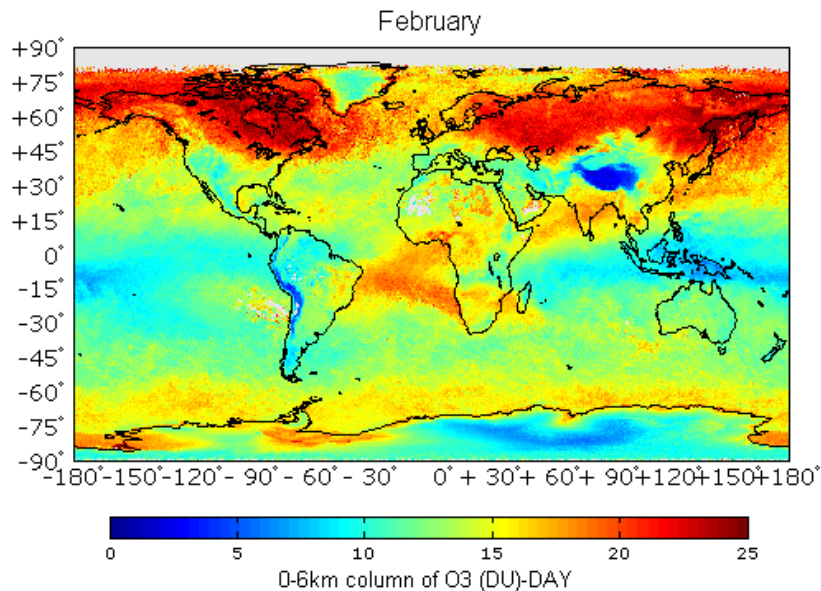


Antarctic ozone, profiles



O₃ [0-10 km]: good agreement;
UT/LS : positive biais (+20%@18 km);
Above 30 km : small negative biais

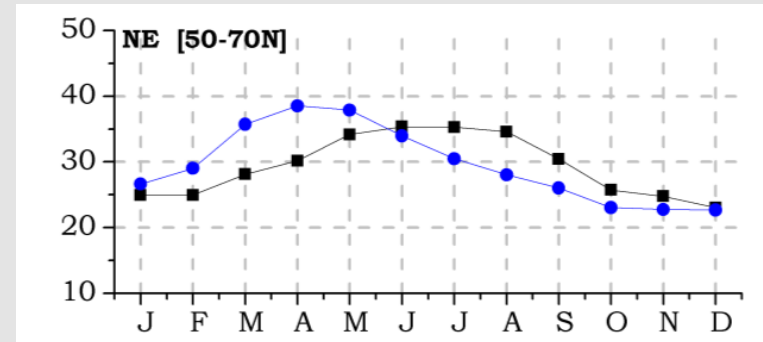
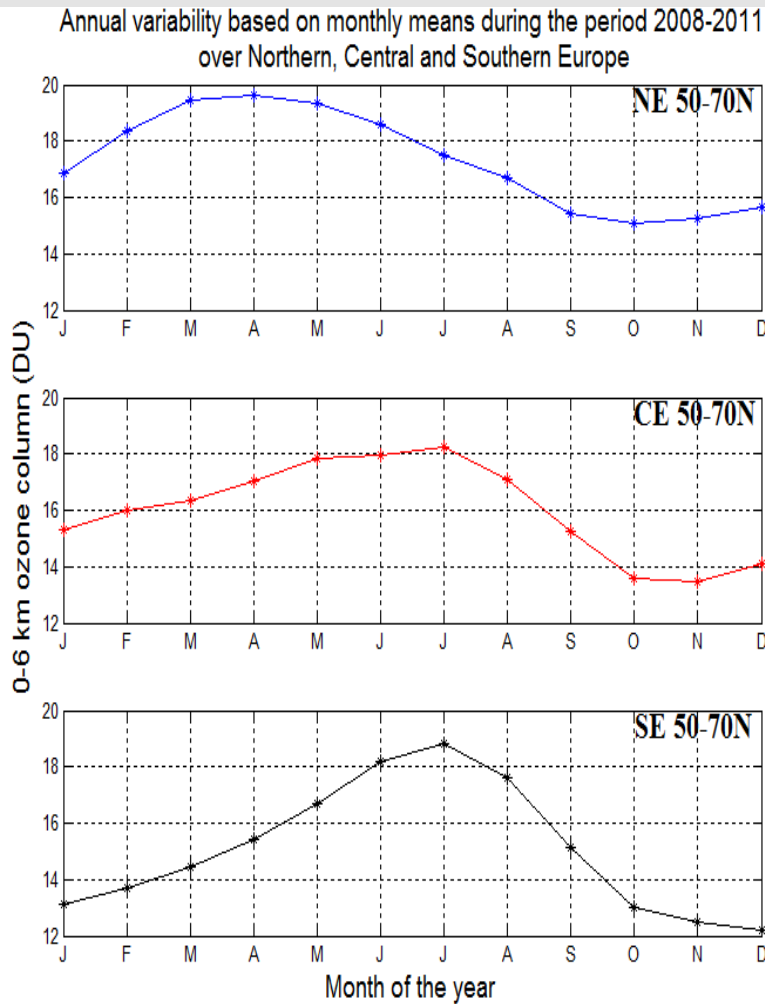
Tropospheric ozone, global scale



5 years of data now available, all reproced with the same version of the algorithm

Tropospheric ozone, continental scale

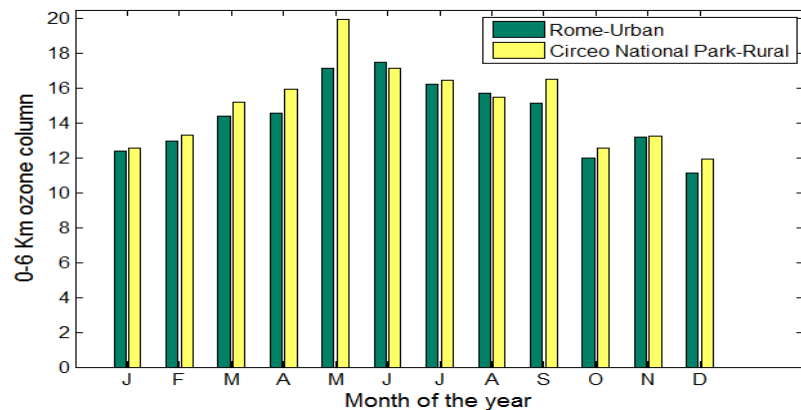
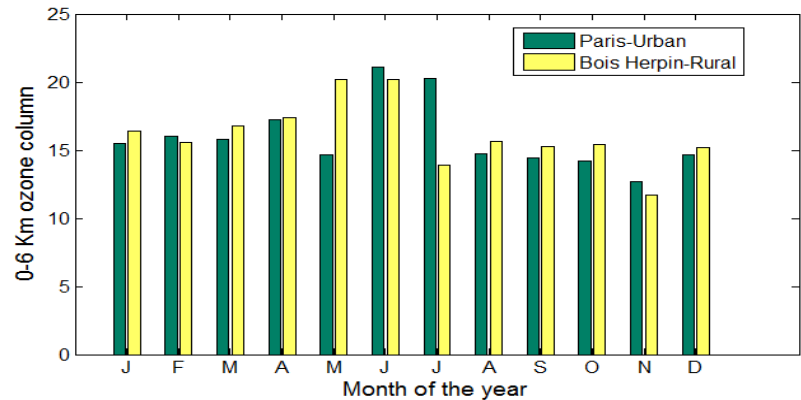
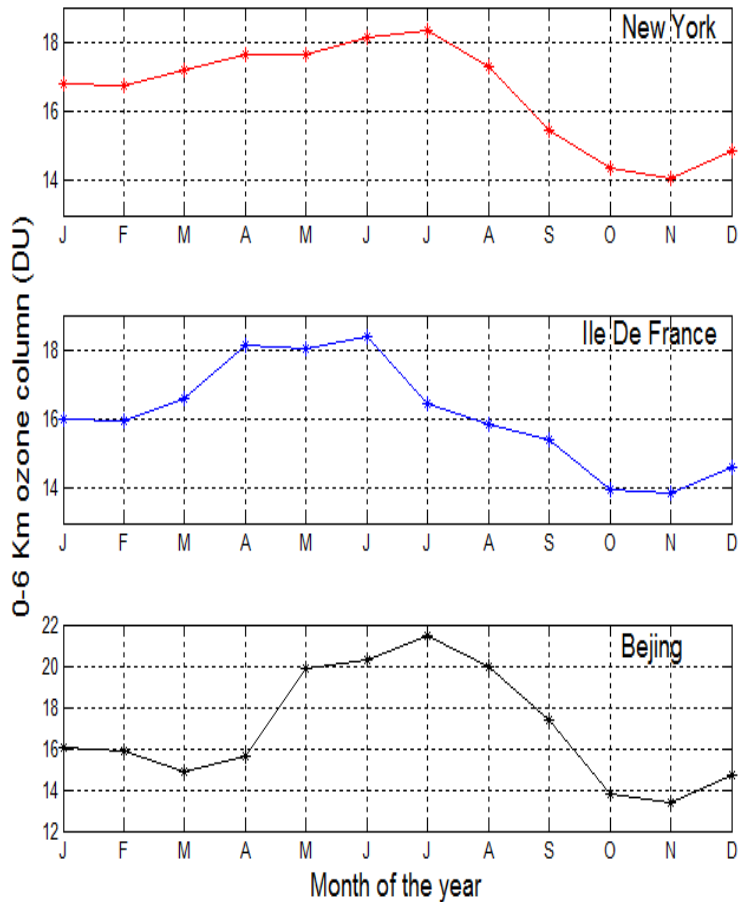
IASI data, 2008-2011 average



Annual variability (based on monthly means during the period 2003-2008) of the **MACC reanalysis simulations (black squared line)**, **EMEP observations (blue dotted line)** over Northern Europe based on 72 available monitoring stations (courtesy MACC project)

Tropospheric ozone, city scale

Annual variability for the years 2008-2011



Paris, Roma and surroundings: as expected an increase of O₃ is observed outside the city

Available in NRT through Eumetcast in 2014



Access to Forli-O3 data before 2014:
Available on ftp upon request, for selected zones and or times
(cathy.clerbaux@latmos.ipsl.fr)

