

Milestone report covering MS 7, 8 & 9

Milestone date: 31/10/2012

Date of issue: 31/10/2012

Introduction

The milestone of the 31st of October 2012 (M12) concerns:

- MS7 Selection of statistical method for integrating O3 data products (WP6)
- MS8 Start of NDACC-TCCON Xcalibration (WP4)
- MS9 First Progress Meeting and SC meeting (WP1)

1. MS7 Selection of statistical method for integrating O3 data products (WP6)

Written by Maud Pastel & Sophie Godin-Beekmann, LATMOS.

From our previous results, a good agreement has been shown between LIDAR and Microwave data. FTIR measurements are on average larger by 15% in the 30 to 40 km altitude range than the former measurements. At some altitude levels, observed biases could be related to the variation of the equivalent latitude between the two stations.

In order to integrate the data from the various components of the alpine station, the next steps of our study will be the following:

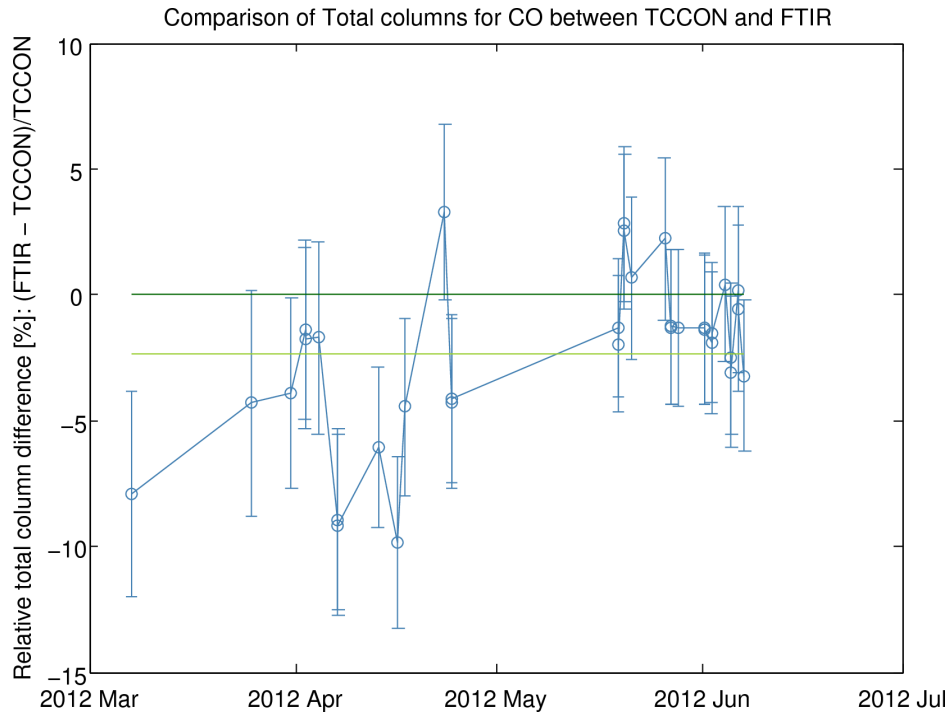
- Calculate the range of equivalent latitude at each level above Jungfraujoch, Berne/Payerne and OHP during the year.
- Estimate the ozone gradient as a function of equivalent latitude, using MLS satellite data.
- Establish integrated ozone profiles from lidar-MW-FTIR, using a statistical analysis of ozone differences as a function of equivalent latitude difference.

The selection of the statistical method has been delayed because the delivery of microwave ozone data with averaging kernels and a priori profiles was itself delayed. Now that the data are available for the year 2009 to 2011, we will finalize our method by the end of January 2013. This delay will not affect the deliverable D6.1 "S/W for Ozone data integration" expected in November 2013 (M24).

2. MS8 Start of NDACC-TCCON Xcalibration (WP4)

Written by Bavo Langerock & Filip Desmet, BIRA-IASB.

We started investigating the agreement between NDACC and TCCON observations of CO at the Ile de La Réunion site. NDACC CO retrievals at La Reunion Island have been implemented for a new FTIR instrument, a Bruker 125HR. This instrument has replaced the formerly operated Bruker 120M instrument in December 2011. TCCON CO measurements are performed using the same Bruker 125HR instrument since October 2011. The NDACC and TCCON sets of measurements have an intersecting time window between March and July 2012. Due to a malfunction in July, the time window is interrupted. In the diagram below, the difference between collocated FTIR and TCCON total columns is plotted, relative to the TCCON measurements.



The horizontal lines indicate the zero difference level (green line) and the average of the mean difference (yellow line), i.e., the bias between the TCCON and NDACC CO measurements. A TCCON measurement is temporally co-located with a NDACC measurement if it lies within a time frame of 12 hours before or after the NDACC measurement. The total column of the TCCON measurements that we considered in this comparison is an average of all TCCON measurements for these co-located times.

This study will be extended at La Réunion, and expanded to the other NORS stations, with the objective to get a clear statistically significant conclusion concerning possible biases and differences in precision between the NDACC and TCCON measurements of CO.

3. MS9 First Progress Meeting and SC meeting (WP1)

Written by Nathalie Kalb, BIRA-IASB.

The First Progress Meeting joined with the third Steering Committee (SC) meeting will take place on 20 and 21 November 2012 at BIRA-IASB (we met with the SC during the KO meeting and we had a first teleconference with the SC on April 12, 2012). The minutes and presentations will be distributed to REA and the NORS consortium. They will also be made available on the NORS website. The agenda of the meeting is given hereafter; it has already been communicated to all attendees.

Agenda of First Progress Meeting

Tuesday 20/11/2012

9h30 – 10h

Welcome with coffee / tea

10h – 10h15

Opening of the meeting

Review of the agenda

Logistics of the meeting

M. De Mazière

10h15 – 10h40

Reminder about the project objectives, structure and management for the reviewer

Webpage and Outreach

Outline of the meeting

M. De Mazière

10h40 – 11h30

Status of formatting issues

E. Mahieu

Progress in WP3: Rapid data delivery to NDACC database

K. Hocke

Interactions with MACC-II (cf. report of Workshop on metadata)

11h30 – 12h30

Progress in WP4: Advanced characterisation of NORS data products

A. Richter et al.

12h30 – 13h30

Sandwich lunch

13h30 – 14h

Progress in WP 5: Integration of tropospheric products

S. Henne

14h00 – 14h30

Progress in WP6: Integration of ozone products

S. Godin-Beekmann

14h30 – 15h00

Coffee Break

15h00 – 15h45

Status of WP10: Capacity building and sustainability

M. De Mazière with inputs from all

15h45 – 17h00

Reporting issues

only NORS partners

17h00

End of 1st day

19h00

Group Dinner at 't Misverstand

Wednesday 21/11/2012

9h00 – 10h15

Bavo Langerock and S. Niemeijer discuss current status of development of NORS Validation Server (WP8 & WP9: Web-based validation server for GAS):

- User Requirements
- Design
- Access to and availability of MACC-II products in MARS Archive

Bavo Langerock and S. Niemeijer

10h15 – 11h00

Discussion with Steering Committee and MACC-II team

11h00 – 11h30

Coffee Break

11h30 – 12h30

Reviewer's and EU Officer's comments

S. Vermoote & H. Kelder

12h30 – 13h30

Sandwich lunch

13h30 – 14h00

Report about the GEO-AQCP Workshop on metadata

M. De Mazière

14h00 – 16h00

Time for addressing open questions among NORS partners and discuss tasks for next 6 months

15h00 – 15h30

Coffee Break

16h00

End of meeting