

Monthly Technical Report

(Due to AQRP Project Manager on the 8th day of the month following the last day of the reporting period.)

PROJECT TITLE	Analysis of VOC, NO ₂ , SO ₂ and HCHO data from SOF, mobile DOAS and MW-DOAS during DISCOVER-AQ,	PROJECT #	14-007
PROJECT PARTICIPANTS (Enter all institutions with Task Orders for this Project)	Chalmers University of Technology University of Houston	DATE SUBMITTED	6/10/15
REPORTING PERIOD	From: May 1, 2015 To: 5/31/2015	REPORT #	10

A Financial Status Report (FSR) and Invoice will be submitted separately from each of the Project Participants reflecting charges for this Reporting Period. I understand that the FSR and Invoice are due to the AQRP by the 15th of the month following the reporting period shown above.

Detailed Accomplishments by Task *(Include all Task actions conducted during the reporting month.)*

Task 1c) A method to derive mixing layer columns of HCHO and NO₂ from the evaluated DOAS columns (both zenith and off-zenith measurements) using the air-mass factors from the radiative transfer simulations has been implemented. This method has been applied to measurements on September 25 and 26, which were the best days from a measurement perspective, as well as the most interesting photochemical smog episode.

Task 1d) A filter based on the color index developed previously was applied to the DOAS measurement series. Limits were chosen independently for each day to suit the different conditions. Filtered measurement series files were produced to enable new emission calculations.

Task 3) Measurements from Pandora instruments, the ACAM system and columns derived from the spiral flights have been compiled identification of the times and places suitable for comparison has been initiated.

Task 4c) The MW-DOAS measurements and the Aerodyne PTR-MS measurements were matched in time and space to enable comparisons and scatterplots were produced in order to quantify the agreement for different aromatic species.

Task 4d) A draft for the paper on the MW-DOAS measurements was completed.

The final draft of the report was written and submitted to AQRP.

Preliminary Analysis *(Include graphs and tables as necessary.)*

NA

Data Collected *(Include raw and refine data.)*

NA

Identify Problems or Issues Encountered and Proposed Solutions or Adjustments

None

Goals and Anticipated Issues for the Succeeding Reporting Period

We will finalize the data for Task 1 and 2 and the comparisons in Task 3 will go into detail. The Final report and drafts for the two paper will be finalized.

Detailed Analysis of the Progress of the Task Order to Date *(Discuss the Task Order schedule, progress being made toward goals of the Work Plan, explanation for any delays in completing tasks and/or project goals. Provide justification for any milestones completed more than one (1) month later than projected.)*

Submitted to AQRP by: _____

Principal Investigator: Johan Mellqvist_____

(Printed or Typed)