

AQRP Monthly Technical Report

PROJECT TITLE	Spatial Mapping of Ozone Formation near San Antonio	PROJECT #	17-032
PROJECT PARTICIPANTS	Ezra Wood	DATE SUBMITTED	4/10/2017
REPORTING PERIOD	From: 3/1/2017 To: 3/31/2017	REPORT #	4

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

As mentioned in an earlier MTR, the goal of Task #1 “Recruit Post-doc” has been accomplished: Daniel Anderson started as a post-doc at Drexel in early February, and a computer has been ordered for his use (not with AQRP funds). Additionally, the PI has hired a co-op undergraduate student who will work full-time in the PI’s research group from six months from April through September, and will work part-time on this AQRP project. Jessica Pavelec, a 4th year chemistry major at Drexel, started work in on April 3 and has been learning about the two instruments and assisting both the post-doc and PI in laboratory activities.

For task 2 “Laboratory preparation”, the following activities have been executed:

- The time response of the peroxy radical system has been investigated using various configurations of the solenoid valves.
- The peroxy radical instrument has been calibrated with both calibration methods (CH₃I and H₂O photolysis).
- The thermal dissociation – CAPS instrument for quantifying organic nitrates has been set-up. A temperature logging device for the quartz heaters has been constructed, and temperature scans for dilute mixtures of an n-propyl nitrate standard have been recorded and agree with past results.
- The usual CAPS cell has been replaced with a low-volume cell that should minimize the interferences which can negatively affect thermal-dissociation measurements.

Preliminary Analysis

No preliminary analysis has been conducted

Data Collected

NA

Identify Problems or Issues Encountered and Proposed Solutions or Adjustments

Goals and Anticipated Issues for the Succeeding Reporting Period

The instruments will be shipped on 4/19 from Drexel to Aerodyne for integration into the Aerodyne mobile laboratory. Dr. Anderson and Dr. Wood will travel to Aerodyne to install the instruments from 4/24 to 4/27.

Detailed Analysis of the Progress of the Task Order to Date

Task 1 "Recruit Post-doc" has been completed. Task 2 "Laboratory Preparation" has started and will continue through April.

Do you have any publications related to this project currently under development? If so, please provide a working title, and the journals you plan to submit to.

Yes No

Do you have any publications related to this project currently under review by a journal? If so, what is the working title and the journal name? Have you sent a copy of the article to your AQRP Project Manager and your TCEQ Liaison?

Yes No

Do you have any bibliographic publications related to this project that have been published? If so, please list the reference information. List all items for the lifetime of the project.

Yes No

Do you have any presentations related to this project currently under development? If so, please provide working title, and the conference you plan to present it (this does not include presentations for the AQRP Workshop).

Yes No

Do you have any presentations related to this project that have been published? If so, please list reference information. List all items for the lifetime of the project.

Yes No

Submitted to AQRP by

Ezra Wood,
Principal Investigator