

AQRP Monthly Technical Report

PROJECT TITLE	Characterization of Boundary-Layer Meteorology During DISCOVER-AQ Using Radar Wind Profiler and Balloon Sounding Measurements	PROJECT #	14-006 UTA14-000538
PROJECT PARTICIPANTS	Sonoma Technology, Inc., and Gary Morris (St. Edwards University)	DATE SUBMITTED	9/8/2014
REPORTING PERIOD	From: August 1, 2014 To: August 31, 2014	REPORT #	3

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

Task 1: Characterize the Atmospheric Boundary Layer

- Plotted and reviewed ozonesonde data from the Smith Point and University of Houston launch sites.
- Reviewed upper-air and surface meteorological data, surface ozone data, and satellite and radar imagery from flight days and days with high ozone levels during the DISCOVER-AQ program.

Task 2: Determine Representativeness of Meteorological Conditions

- No activities performed on this task.

Task 3: Derive and Deliver Continuous Mixing Heights

- Continued retrieval and processing of upper-air data from the seven radar wind profilers (RWP) operated in the Houston area as part of the DISCOVER-AQ program.
- Derived continuous mixing heights from the College Station, Jefferson County, La Porte, and Round Top profilers.

Preliminary Analysis

No analysis has yet been performed as of the period covered by this report.

Data Collected

- RWP data from the Beaumont, College Station, La Porte, Round Top, Smith Point, and Wharton sites.
- Satellite and radar imagery from flight days and days with high ozone levels during the DISCOVER-AQ program.

Identify Problems or Issues Encountered and Proposed Solutions or Adjustments

No issues identified during this reporting period.

Goals and Anticipated Issues for the Succeeding Reporting Period

During the month of September 2014, we plan to complete deriving continuous mixing heights from the RWPs and the ozonesonde for Task 3. We will use this data to help complete analysis for Tasks 1 and 2.

Detailed Analysis of the Progress of the Task Order to Date

We have continued to focus on Task 3 of this project as the data required to complete this task are readily available and the derived mixing heights will be necessary in completing Tasks 1 and 2. We have already retrieved most of the needed ozonesonde and RWP data required to complete Task 3. No major technical issues have arisen regarding the air quality and meteorological data that have been collected thus far, aside from five ozonesonde launches that experienced data loss. The budget for this Task Order remains on track.

Submitted to AQRP by: Daniel M. Alrick

Principal Investigator: Clinton P. MacDonald