

AQRP Monthly Technical Report

PROJECT TITLE	Using Satellite Observations to Quantify Surface PM_{2.5} Impacts from Biomass Burning Smoke	PROJECT #	20-005
PROJECT PARTICIPANTS	Matthew Alvarado, Archana Dayalu, Qiang Sun (AER)	DATE SUBMITTED	09/08/2020
REPORTING PERIOD	From: 08/01/2020 To: 08/31/2020	REPORT #	2

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 for reporting period

We gathered data from the NOAA HMS and GOES-R Smoke and Dust Mask products and developed Python scripts to apply quality flags, process, and compare the data (Task 1). We have also explored the use of TROPOMI UVAI data as an additional source of data on smoke aerosols.

Preliminary Analysis

Nothing to report.

Data Collected

Gathered NOAA HMS and GOES Smoke and Dust product data, as well as TROPOMI UVAI data, for recent US and Texas smoke events.

Identify Any Problems or Issues Encountered and Proposed Solutions or Adjustments

We found that the ASDTA data from our initial proposal is no longer being produced. To account for this, we have added a third smoke dataset from TROPOMI ultraviolet aerosol index (UVAI) observations to conserve the total amount of datasets being examined.

Goals and Anticipated Issues for the Succeeding Reporting Period

We will begin the comparison of the three different smoke products with OMI, AIRS, and CrIS data in September.

Detailed Analysis of the Progress of the Task Order to Date

We have gathered and begun comparisons of three different smoke products, the first milestone of Task 1 from the task order.

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 (ie: publications that cite the project) 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

Identifying Smoke-Impacted Regions using the Optical Properties of Brown Carbon Aerosol, submitted to AGU Fall Meeting

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

Have any personnel changes occurred that were not listed in the original proposal? If so, please include a detailed description of the personnel change(s) below.

Yes No

We added AER Sr. Research Associate Qiang Sun to the project to help gather and process data for Task 1.

Are any delays expected in the progress of the research? If so, please include a detailed description of the potential delay below.

Yes No

Describe any possible concerns/issues (technical or non-technical) that AQRP should be made aware of.

None

**Are you anticipating using all the available funds allocated to this project by the end date?
If not, why and approximately what is the amount to be returned?**

Yes No

Submitted to AQRP by
Matthew James Alvarado