

# Verification of the Origins of Rotation in Thunderstorms Experiment-Southeast (VORTEX-SE) ASOS 1-Minute Data Set

## 1.0 Contacts

### **NCAR/EOL:**

Scot Loehrer

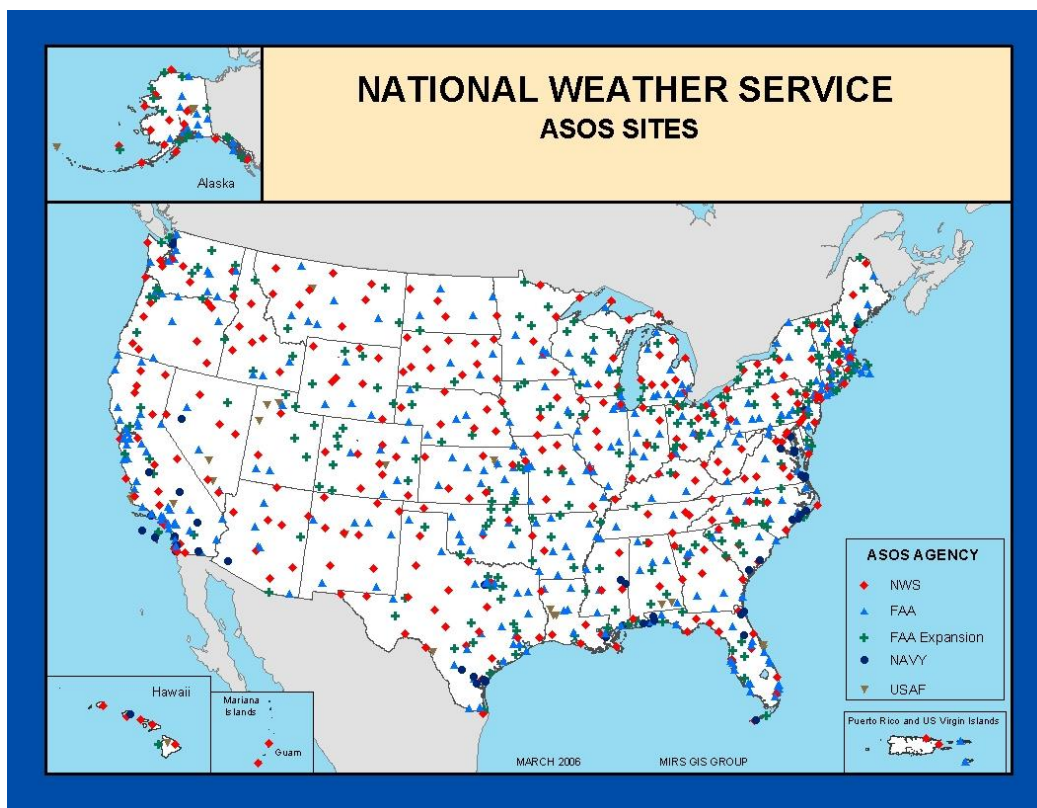
[loehrer@ucar.edu](mailto:loehrer@ucar.edu)

### **NCEI:**

[ncdc.orders@noaa.gov](mailto:ncdc.orders@noaa.gov)

## 2.0 Dataset Overview

This data set contains the 1-minute resolution observations from the Automated Surface Observing System (ASOS) network of ~860 stations (Fig. 1) in the contiguous United States. These data were collected and archived by the National Centers for Environmental Information (NCEI; formerly the National Climatic Data Center).



**Figure 1.** Map of ASOS locations (only those in the contiguous US are included in this data set).

### 3.0 Project Overview

The **Verification of the Origins of Rotation in Tornadoes EXperiment-Southeast (VORTEX-SE)** is a research program to understand how environmental factors characteristic of the southeastern United States affect the formation, intensity, structure, and path of tornadoes in this region. VORTEX-SE will also determine the best methods for communicating forecast uncertainty related to these events to the public, and evaluate public response. For the Meso18-19 field season an array of 10 research radiosonde systems operated at locations around the southeastern United States and several profiling systems operated in locations around northern Alabama from 1 November 2018 to 20 April 2019. Further information on VORTEX-SE is available at the VORTEX-SE web site at NCAR/EOL: [https://www.eol.ucar.edu/field\\_projects/vortex-se](https://www.eol.ucar.edu/field_projects/vortex-se) and information on the Meso18-19 deployments is available at the VORTEX-SE Field Catalog: <http://catalog.eol.ucar.edu/meso18-19/tools/missions>

### 4.0 Data Format Description

The ASOS data are in two parts, called "Page 1" and "Page 2". "Page 1" (6405 files) contains visibility and wind data and "Page 2" (6406 files) contains precipitation, pressure, temperature, and dew point data. The tar.gz contain both file types following the naming convention:  
ASOS\_1min\_YYYYMM.tar.gz

Each tar file contains a file for every station that follows the naming convention:

64050KWST201803.dat

6405 represents the "Page"

KWST is the call sign for the station

201803 is the four digit year and two digit month

The file format for the "Page 1" or 6405 files can be found in the td6405.pdf file that is included with this data set. At the time this readme was created this document was available from NCEI at:

<http://www1.ncdc.noaa.gov/pub/data/documentlibrary/tddoc/td6405.pdf>

The file format for the "Page 2" or 6406 files can be found in the td6406.pdf file that is included with this data set. At the time this readme was created this document was available from NCEI at:

<http://www1.ncdc.noaa.gov/pub/data/documentlibrary/tddoc/td6406.pdf>

## **5.0 Data Quality Control Procedures**

These data are provided as is, no quality control procedures were conducted by NCAR/EOL.

Information on the ASOS algorithms and sensor specifications is available in the ASOS\_Users\_Guide\_199803.pdf and ASOS\_Users\_Guide\_Appen.pdf files that are included with this data set. At the time this readme was created these documents were also available from the National Weather Service at:

<http://www.nws.noaa.gov/asos/pdfs/aum-toc.pdf>

and

<http://www.nws.noaa.gov/asos/pdfs/appen.pdf>

## **6.0 References**