

Plains Elevated Convection at Night (PECAN) ASOS 5-Minute Data Set

1.0 Contacts

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2.0 Dataset Overview

This data set contains the 5-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).

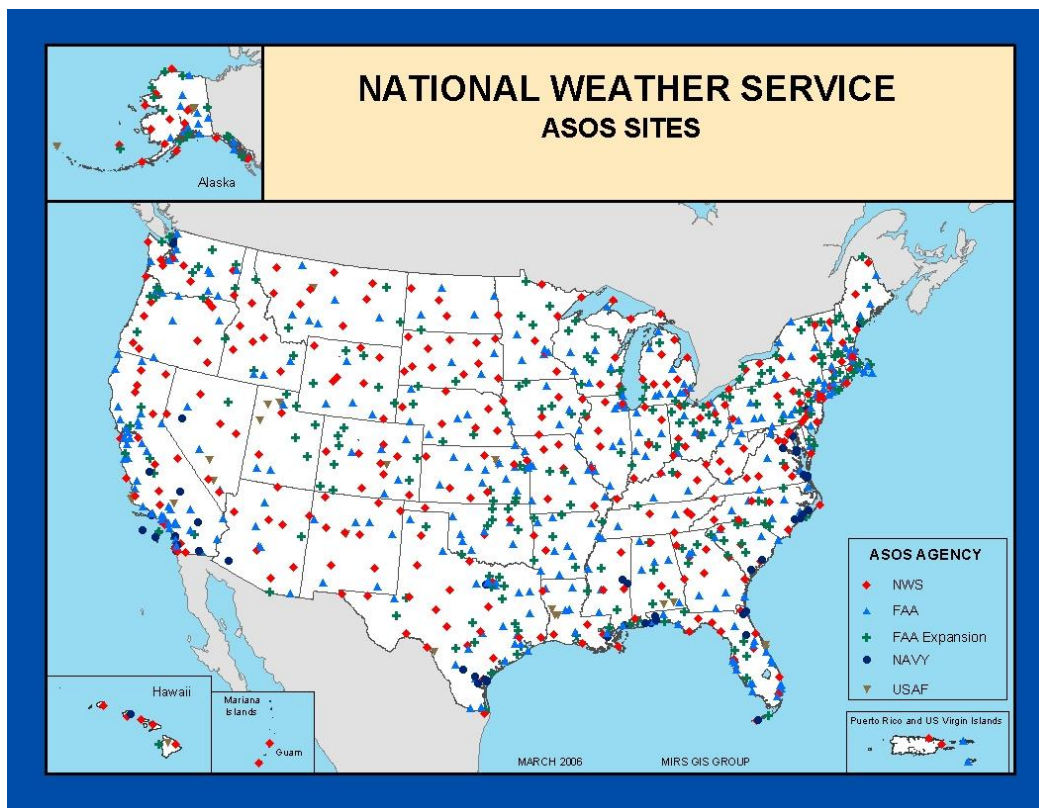


Figure 1. Map of ASOS locations (only those in the contiguous US are included in this data set).

3.0 Project Overview

Plains Elevated Convection At Night (PECAN) was a multi-agency project designed to advance the understanding of continental, nocturnal, warm-season precipitation. It focused on nocturnal convection in conditions over the central United States plains states with a stable boundary layer (SBL), a nocturnal low-level jet and the largest convective available potential energy located above the SBL. Three aircraft (University of Wyoming King Air, NOAA P-3, and NASA DC-8) as well as a large array of fixed and mobile ground instrumentation were deployed out of Kansas from 1 June to 15 July 2015.

4.0 Data Format Description

The 5-minute ASOS data are in monthly tar.gz files follow the naming convention:

ASOS_5min_6401_201506.tar.gz

6401 signifies 5-minute data

201506 is the four digit year and two digit month

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

64010KWST201507.dat

6401 signifies 5-minute data

KWST is the call sign for the station

201507 is the four digit year and two digit month

The file format for the 5-minute ASOS data can be found in the td6401.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/td6401.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