

Title: VORTEX-SE 2018 UAH MAX Surface Station Dataset

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1.0 Dataset Overview

The UAH Mobile Alabama X-Band radar (MAX) is a mobile radar platform that has an X-Band radar, a mounted surface station, and a 5m Campbell Scientific WXT510 Weather transmitter. Data from MAX was collected during each IOP unless otherwise noted. Locations and operating times are as follows:

IOP 1 - Sand Mountain

Time Period: 2018/03/19 1711Z to 2018/03/20 0119Z

Location: Sylvania, AL 34.5357 N, -85.7563 W elevation: 405 m

IOP 2A - Western AL

Time Period: 2018/03/28 2116Z to 2018/03/28 2208Z

Location: Tanner, AL 34.7307 deg N, -86.9375 deg W elevation: 189 m

IOP 2B - Sand Mountain

Time Period: 2018/03/29 1646Z to 2018/03/29 1901Z

Location: Lakeview, AL 34.4191 deg N, -86.0263 deg W elevation: 355 m

IOP 3 - Western AL

Time Period: 2018/04/03 2015Z to 2018/04/04 0404Z

Location: Tanner, AL 34.7307 deg N, -86.9375 deg W elevation: 189 m

IOP 4 - Northern LA; Did not deploy

UFO 1 - Western AL

Time Period: 2018/04/09 2048Z to 2018/04/10 0115Z

Location: Tanner, AL 34.7307 deg N, -86.9375 deg W elevation: 189 m

IOP 5 - Western AL

Time Period: 2018/04/14 1653Z to 2018/04/14 1829Z

Location: Tanner, AL 34.7307 deg N, -86.9375 deg W elevation: 189 m

2.0 Instrument Description

The surface station is mounted on a tower that is raised to 10m above ground level. The tower is outfitted with the following instruments:

- Campbell Scientific CR800 Data Logger

- RM Young Wind Monitor
- Campbell Scientific HMP45AC Temperature and relative humidity sensor

3.0 Data Collection and Processing

The surface data is collected every 1 second. No data processing has been completed.

4.0 Data Format

The UAH MAX surface station data files contain data from each IOP and are named max_YYYYMMDD_sfc.dat, where:

YYYY -> year
 MM -> month
 DD -> day
 sfc.dat -> sfc station data

A sample data line is given below:

(Column #)		0	1	2	3	4	5	6	7	8
		101	,2016	,73	,2241	,44	,2.254	,122.9	,55.06	,22.36

The data file records, column by column, are:

COLUMN	VARIABLE

0	-> Program Constant
1	-> Year
2	-> Julian Day
3	-> Hour (UTC)
4	-> Minute (UTC)
5	-> Second (UTC)
6	-> Wind Speed at 10m (m/s)
7	-> Wind Direction at 10m (deg)
8	-> Relative Humidity at 10 m (%)
9	-> Temperature at 10m (C)

5.0 Data Remarks

Data unavailable after IOP3