

Title: VORTEX-SE 2018 MIPS Surface Dataset

Authors:

Preston Pangle	ptp0001@uah.edu	University of Alabama In Huntsville
Kevin Knupp(PI)	kevin.knupp@uah.edu	University of Alabama In Huntsville
Dustin Phillips	phillips@nsstc.uah.edu	University of Alabama in Huntsville

1.0 Dataset Overview

The UAH Mobile Integrated Profiling System (MIPS) was deployed for 1 IOP (IOP 3) during the 2018 VORTEX-SE. When not deployed, MIPS was stationed at SWIRLL on the UAH campus. Data was continuously collected when located at UAH. During IOP 3, MIPS was struck and damaged by lightning. Therefore, there is no MIPS data after IOP 3. For IOPS where MIPS was located at UAH and operational, the UAH berm surface measurements should be used. This station is located just a few feet behind MIPS at UAH.

IOP 3

Time Period: 2018/04/03 2125Z to 2018/04/04 0235Z

Location: 34.712, -87.706

2.0 Instrument Description

The UAH MIPS has a 10 meter tower with 3 instruments mounted to it:

- RM Young wind monitor
- Vaisala platinum resistance temperature detector
- CS106 Vaisala Barometer

3.0 Data Collection and Processing

Data is collected at 1 second intervals. No data processing has been completed.

4.0 Data Format

The UAH MIPS surface station data files are named mips_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 9  
           | 101,2015,153,029,30,12.83,6.468,294.8,25.91,89.7
```

The data file records, column by column, are:

COLUMN VARIABLE

0 -> Program Constant
1 -> Year
2 -> Julian Day
3-4 -> Hour & minute, Second.fraction-of-second (UTC)
5 -> Battery Voltage (V)
6 -> Wind Speed at 10m (m/s)
7 -> Wind Direction at 10m (deg)
8 -> Temperature at 10m (C)
9 -> Pressure kPa (3m) (not corrected for elevation)

5.0 Data Remarks

As stated in section 1, please use the UAH berm surface data for days when MIPS was located at SWIRLL. During IOP 3, MIPS was struck by lightning. Because of this strike, no data was collected from MIPS after IOP 3.