

Title: VORTEX-SE 2018 UAH MoDLS LiDAR Dataset

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1.0 Dataset Overview

The UAH Mobile Operated Doppler Lidar System (MoDLS) is housed within a trailer that also contains a Microwave Profile Radiometer. The main vehicle that pulls this system has a mobile surface station that is mounted on top of the vehicle. Data is separated into directories by IOPs. Then, data is separated into subdirectories by date.

IOP 1

Time Period: 2018/03/19 1643Z to 2018/03/20 0014Z

Location: 34.367, -86.889 Heading: 278 deg

IOP 2A

Time Period: 2018/03/28 0000Z to 2018/03/29 0000Z

Location: 34.725, -86.657 (UAH) Heading: 90 deg

IOP 2B - 2018/03/29 1643Z to 2018/03/30 1735 Z

Location: 34.367, -86.889

IOP 3

Time Period: 2018/04/03 2100Z to 2018/04/04 0356Z

Location: 34.943, -87.121 Heading: 267 deg

IOP 4 - Did not deploy

UFO 1

Time Period: 2018/04/09 2130Z to 2018/04/10 0145Z

Location: 34.625, -86.996 Heading: 313 deg

IOP 5

Time Period: 2018/04/14 1615Z to 2018/04/14 2054Z

Location: 34.367, -86.889 Heading: 290 deg

2.0 Instrument Description

The UAH MoDLS utilizes a Halo Photonics Stream Line Scanning Doppler Lidar. The instrument is mounted on a retractable rack inside a trailer that extends upward, allowing the lidar lens to be located outside.

3.0 Data Collection and Processing

No Processing has been completed.

4.0 Data Format

Each dataset contains 5 file types:

- Processed_Wind_Profile_58_YYYYMMDD_HHmmSS.hpl
- Stare_58_YYYYMMDD_HH.hpl
- User2_58_YYYYMMDD_HHmmSS.hpl
- VAD_58_YYYYMMDD_HHmmSS.hpl
- Wind_Profile_58_YYYYMMDD_HHmmSS.hpl

Where:

Processed	-> Halo processed data file
Stare	-> Vertical Stare file
User2	-> User defined file settings
VAD	-> Vertical Azimuth Display Profile
Wind_Profile	-> Raw Wind Profile file
YYYY	-> year
MM	-> Month
DD	-> Day
HH	-> Hour
mm	-> Minutes
SS	-> seconds
.hpl	-> Halo Photonics Lidar file

Please refer to the document "HPL_file_format_readme.pdf" for information about what each file is.

5.0 Data Remarks

There is an issue that may cause an azimuth offset. Please keep this in mind when using the data.

Surface Measurements from the Vehicle-mounted surface station is not available.