

**Title:** PERiLS 2023 UAH MAPNet RaDAPS Parsivel Disdrometer Dataset

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### **1.0 Dataset Overview**

The UAH Mobile Atmospheric Profiling Network (MAPNet) Rapidly Deployable Profiling System (RaDAPS) disdrometer was deployed onboard the RaDAPS platform for all 5 PERiLS IOPs.

IOP 1

Time Period: 2023/02/16 1430Z to 2023/02/17 0100Z

Location: 32.6015, -88.1992 elevation: 61 m

IOP 2

Time Period: 2022/03/03 0040 to 2022/03/03 1215Z

Location: 34.21916, -90.95392 elevation: 49 m

IOP 3

Time Period: 2022/03/24 1714Z to 2022/03/25 0245Z

Location: 33.29846, -90.904305 elevation: 36 m

IOP 4

Time Period: 2022/03/31 1840Z to 2022/04/01 0800Z

Location: 35.17621, -87.04821 elevation: 201 m

IOP 5

Time Period: 2022/04/05 1111Z to 2022/04/05 1830Z

Location: 35.77341, -90.34875 elevation: 70 m

### **2.0 Instrument Description**

UAH utilizes the OTT Hydromet Parsivel<sup>2</sup>.

More information regarding the RaDAPS system can be found here:

<https://www.nsstc.uah.edu/mapnet/facilities/radaps.php>

### **3.0 Data Collection and Processing**

Data is collected every 10 seconds in tabular format. No additional processing has been completed.

#### 4.0 Data Format

The UAH Parsivel data files are standard CSV files and follow the naming convention: platform\_YYYYMMDD\_parsivel.dat, where:

platform -> platform parsivel is on

YYYY -> year

MM -> month

DD -> day

Column Identifiers:

COLUMN VARIABLE

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0 -> Year

1 -> Julian Day

2 -> Hour & minute, Seconds(UTC)

3 -> sensor temperature (C)

4 -> total number of detected particles

5 -> rainfall intensity (mm/hr)

6-37 -> N(D) ( $\log[m^{-1} mm^{-3}]$ )

38-69 -> V(D) (m/s)