

Title: VORTEX-SE Meso18-19 UAH RaDAPS Microwave Profile Radiometer Dataset

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1.0 Dataset Overview

The UAH Rapidly Deployable Atmospheric Profiling System (RaDAPS) is a mobile atmospheric profiling system that contains a 915 MHz wind profiler, a Microwave Profile Radiometer, a ceilometer, Micro Rain Radar, and a mounted surface station. RaDAPS often operated 24 hours a day when located at SWIRLL. Unless time periods are provided, RaDAPS data will include data for either most or the entire IOP length.

IOP 0

Location: 34.72484, -86.64625 (UAH)

IOP 1

Location: Location: 34.725, -86.647 (UAH)

IOP 2

Location: 34.725, -86.647 (UAH)

IOP 3

Location: 34.725, -86.647 (UAH)

IOP 4

Location: 34.725, -86.647 (UAH)

IOP5

Time Period: 2019/02/23 2131Z - 2019/02/24/0300Z

Location: 34.7862, -88.2089

IOP 7

Time Period: 2019/03/09 1830Z - 2019/03/10 0100Z

Location: 34.8078, -88.2595

IOP8

Time Period: 2019/04/13 2300Z - 2019/04/14 0800Z

Location: 34.8077, -88.2597

IOP9

Time Period: 2019/04/18 1700Z - 2019/04/19 0150Z

Location: 34.0848, -87.5943

2.0 Instrument Description

RaDAPS utilizes a Radiometrics MP-3000A microwave profiling radiometer which has 35 brightness temperature channels.

3.0 Data Collection and Processing

Data is collected every 1 minute. No data processing has been performed.

4.0 Data Format

NetCDF are provided of the lv2 data. Lv1 data can be provided upon request. NetCDF files include the following parameters:

Identifier	Units	Description
time	UTC Hours	UTC Time in Decimal Hours from 0000 UTC
epochTime	seconds	Seconds Since 00 UTC 1970 01 01
height	Meters	Height Above ground level
latitude	Degrees	Degrees North
Longitude	Degrees	Degrees East
Altitude	Meters AGL	Altitude of the RaDAPS Platform
temperature	Kelvin	Temperature (K)
vaporDensity	g/m ³	Water Vapor Density
liquidWater	g/m ⁻³	Liquid Water Content
relativeHumidity	%	Relative Humidity
intergratedLiquidWater	mm	Column integrated liquid water
integratedWaterWaterVapor	cm	Column integrated water vapor
cloudBaseHeight	km	Cloud Base Height
surfaceTemp	K	Surface Tempearture

SurfacePressure	mb	Surface Pressure
irTemp	K	Surface IR Temperature
sfcRh	%	Surface Relative Humidity
rainTag	Binary	Flag for Rain
dataQualityTag	Binary	Data Quality Flag

5.0 Data Remarks

- No MPR data for IOP 2