

Title – NOAA PSL Parsivel Disdrometer data

Authors

Author	Email	Institution	ORCID
Jim Wilczak	james.m.wilczak@noaa.gov	NOAA PSL	0000-0002-9912-6396
Dan Gottas	daniel.gottas@noaa.gov	NOAA PSL	
Allen White	allen.b.white@noaa.gov	NOAA PSL	

1.0 Data Set Description

This dataset contains disdrometer data from the Courtland, AL, site. Other instruments at this site include 915 MHz and 449 MHz radar wind profilers with RASS, surface meteorology, and a S-Band precipitation profiler. The instrument operated from 15 September 2021 to 3 May 2023.

- Data status: Final
- Time period: Courtland, AL: 15 September 2021 – 3 May 2023
- Site information:
 - Courtland, AL: https://psl.noaa.gov/data/obs/sites/view_site_details.php?siteID=ctd
- Site identifier: Courtland, AL: ctd
- Physical location: Courtland, AL: 34.66 N, 87.35 W, 187 m above mean sea level
- Data Frequency:
 - o The raw data from the instrument is saved at 10-second intervals. Raw records with no particle observations are not saved to conserve space.
 - o The stats files contain 2-minute binned particle counts and statistics. All observed time periods are included.
- Data set restrictions: none

2.0 Instrument Description

This instrument is an OTT Parsivel2 Optical Disdrometer. It measures particle size and velocity as the particle falls through the path between the laser transmitter and the receiver. The manual for this instrument can be found at

<https://psl.noaa.gov/data/obs/instruments/OpticalDisdrometer.pdf>.

3.0 Data Collection and Processing

Data are collected continuously. Particle data is streamed by the Parsivel2 every 10 seconds, which is formatted and written to *.raw files. If there are no particles detected, data is not written.

The raw files are processed with inhouse software to partition the drops into rain, snow, and mixed precipitation types. This data is written into a *. stats files. Every time period observed is included in this data.

4.0 Data Format

Disdrometer file formats:

Raw files containing the data as received from the disdrometer:

https://psl.noaa.gov/data/obs/data/view_data_type_info.php?DataTypeID=1

Files containing the processed disdrometer data:

https://psl.noaa.gov/data/obs/data/view_data_type_info.php?DataTypeID=2

The file naming conventions are as follows:
 sssIYYJJHH_type.txt

where sss = 3-letter site identifier; I is the instrument index; YY = 2-digit year; JJJ = 3-digit day of the year; type = 'raw' for raw particle counts and 'stats' for binned particle counts and statistics.

The time stamp of all data is in UTC.

5.0 Data Remarks

None

6.0 References

None

7.0 Appendix A

GCMD keywords

Category	Topic	Term	Variable Level 1	Variable Level 2	Variable Level 3	UUID
EARTH SCIENCE	ATMOSPHERE	PRECIPITATION	HYDROMETEORS			56f2cbbd-2a91-4267-97eb-1680e8582322
EARTH SCIENCE	ATMOSPHERE	PRECIPITATION	DROPLET SIZE			6eaed241-db16-4a1a-a06c-893da5d98b45
EARTH SCIENCE	ATMOSPHERE	PRECIPITATION	LIQUID PRECIPITATION			7d45f108-dda2-4341-b853-ee3a490aad59
EARTH SCIENCE	ATMOSPHERE	PRECIPITATION	LIQUID PRECIPITATION	RAIN		09a57dc7-3911-4a65-9f12-b819652b8671
EARTH SCIENCE	ATMOSPHERE	PRECIPITATION	PRECIPITATION AMOUNT			cad5c02a-e771-434e-bef6-8dced38a68e8
EARTH SCIENCE	ATMOSPHERE	PRECIPITATION	PRECIPITATION RATE			ac50c468-df2f-429c-8394-9d63efcc6f9d

8.0 Appendix B: List of files transferred

List of the raw files transferred:

ctd02125819_raw.txt ctd02133920_raw.txt ctd02208116_raw.txt ctd02221314_raw.txt ctd02228016_raw.txt ctd02304702_raw.txt
 ctd02125820_raw.txt ctd02134004_raw.txt ctd02208117_raw.txt ctd02221315_raw.txt ctd02228017_raw.txt ctd02304703_raw.txt
 ctd02125821_raw.txt ctd02134005_raw.txt ctd02208118_raw.txt ctd02221316_raw.txt ctd02228018_raw.txt ctd02304704_raw.txt
 ctd02125822_raw.txt ctd02134006_raw.txt ctd02208119_raw.txt ctd02221317_raw.txt ctd02228019_raw.txt ctd02304705_raw.txt
 ctd02125823_raw.txt ctd02134007_raw.txt ctd02208120_raw.txt ctd02221318_raw.txt ctd02228021_raw.txt ctd02304706_raw.txt
 ctd02125900_raw.txt ctd02134008_raw.txt ctd02208121_raw.txt ctd02221319_raw.txt ctd02228022_raw.txt ctd02304707_raw.txt
 ctd02125901_raw.txt ctd02134009_raw.txt ctd02208122_raw.txt ctd02221320_raw.txt ctd02228023_raw.txt ctd02304709_raw.txt
 ctd02125906_raw.txt ctd02134010_raw.txt ctd02208123_raw.txt ctd02221321_raw.txt ctd02228101_raw.txt ctd02304710_raw.txt
 ctd02125910_raw.txt ctd02134011_raw.txt ctd02208200_raw.txt ctd02221322_raw.txt ctd02228114_raw.txt ctd02304711_raw.txt
 ctd02125911_raw.txt ctd02134012_raw.txt ctd02208201_raw.txt ctd02221400_raw.txt ctd02228117_raw.txt ctd02304712_raw.txt
 ctd02125912_raw.txt ctd02134013_raw.txt ctd02208202_raw.txt ctd02221411_raw.txt ctd02228118_raw.txt ctd02304715_raw.txt
 ctd02125913_raw.txt ctd02134014_raw.txt ctd02208203_raw.txt ctd02221412_raw.txt ctd02228119_raw.txt ctd02304716_raw.txt
 ctd02125914_raw.txt ctd02134015_raw.txt ctd02208204_raw.txt ctd02221414_raw.txt ctd02228120_raw.txt ctd02304719_raw.txt

ctd02134314_stats.txt ctd02206417_stats.txt ctd02221202_stats.txt ctd02229813_stats.txt ctd02303522_stats.txt ctd02312218_stats.txt
ctd02134315_stats.txt ctd02206418_stats.txt ctd02221203_stats.txt ctd02229814_stats.txt ctd02303523_stats.txt ctd02312219_stats.txt
ctd02134316_stats.txt ctd02206419_stats.txt ctd02221204_stats.txt ctd02229815_stats.txt ctd02303600_stats.txt ctd02312220_stats.txt
ctd02134317_stats.txt ctd02206420_stats.txt ctd02221205_stats.txt ctd02229816_stats.txt ctd02303601_stats.txt ctd02312221_stats.txt
ctd02134318_stats.txt ctd02206421_stats.txt ctd02221206_stats.txt ctd02229817_stats.txt ctd02303602_stats.txt ctd02312222_stats.txt
ctd02134319_stats.txt ctd02206422_stats.txt ctd02221207_stats.txt ctd02229818_stats.txt ctd02303603_stats.txt ctd02312223_stats.txt
ctd02134320_stats.txt ctd02206423_stats.txt ctd02221208_stats.txt ctd02229819_stats.txt ctd02303604_stats.txt ctd02312300_stats.txt
ctd02134321_stats.txt ctd02206500_stats.txt ctd02221209_stats.txt ctd02229820_stats.txt ctd02303605_stats.txt ctd02312301_stats.txt
ctd02134322_stats.txt ctd02206501_stats.txt ctd02221210_stats.txt ctd02229821_stats.txt ctd02303606_stats.txt ctd02312302_stats.txt
ctd02134323_stats.txt ctd02206502_stats.txt ctd02221211_stats.txt ctd02229822_stats.txt ctd02303607_stats.txt ctd02312303_stats.txt
ctd02134400_stats.txt ctd02206503_stats.txt ctd02221212_stats.txt ctd02229823_stats.txt ctd02303608_stats.txt ctd02312304_stats.txt
ctd02134401_stats.txt ctd02206504_stats.txt ctd02221213_stats.txt ctd02229900_stats.txt ctd02303609_stats.txt ctd02312305_stats.txt
ctd02134402_stats.txt ctd02206505_stats.txt ctd02221214_stats.txt ctd02229901_stats.txt ctd02303610_stats.txt ctd02312306_stats.txt
ctd02134403_stats.txt ctd02206506_stats.txt ctd02221215_stats.txt ctd02229902_stats.txt ctd02303611_stats.txt ctd02312307_stats.txt
ctd02134404_stats.txt ctd02206507_stats.txt ctd02221216_stats.txt ctd02229903_stats.txt ctd02303612_stats.txt ctd02312308_stats.txt
ctd02134405_stats.txt ctd02206508_stats.txt ctd02221217_stats.txt ctd02229904_stats.txt ctd02303613_stats.txt ctd02312309_stats.txt
ctd02134406_stats.txt ctd02206509_stats.txt ctd02221218_stats.txt ctd02229905_stats.txt ctd02303614_stats.txt ctd02312310_stats.txt
ctd02134407_stats.txt ctd02206510_stats.txt ctd02221219_stats.txt ctd02229906_stats.txt ctd02303615_stats.txt ctd02312311_stats.txt
ctd02134408_stats.txt ctd02206511_stats.txt ctd02221220_stats.txt ctd02229907_stats.txt ctd02303616_stats.txt ctd02312312_stats.txt
ctd02134409_stats.txt ctd02206512_stats.txt ctd02221221_stats.txt ctd02229908_stats.txt ctd02303617_stats.txt ctd02312313_stats.txt
ctd02134410_stats.txt ctd02206513_stats.txt ctd02221222_stats.txt ctd02229909_stats.txt ctd02303618_stats.txt ctd02312314_stats.txt
ctd02134411_stats.txt ctd02206514_stats.txt ctd02221223_stats.txt ctd02229910_stats.txt ctd02303619_stats.txt ctd02312315_stats.txt
ctd02134412_stats.txt ctd02206515_stats.txt ctd02221300_stats.txt ctd02229911_stats.txt ctd02303620_stats.txt ctd02312316_stats.txt
ctd02134413_stats.txt ctd02206516_stats.txt ctd02221301_stats.txt ctd02229912_stats.txt ctd02303621_stats.txt ctd02312317_stats.txt
ctd02134414_stats.txt ctd02206517_stats.txt ctd02221302_stats.txt ctd02229913_stats.txt ctd02303622_stats.txt ctd02312318_stats.txt
ctd02134415_stats.txt ctd02206518_stats.txt ctd02221303_stats.txt ctd02229914_stats.txt ctd02303623_stats.txt ctd02312319_stats.txt
ctd02134416_stats.txt ctd02206519_stats.txt ctd02221304_stats.txt ctd02229915_stats.txt ctd02303700_stats.txt ctd02312320_stats.txt
ctd02134417_stats.txt ctd02206520_stats.txt ctd02221305_stats.txt ctd02229916_stats.txt ctd02303701_stats.txt ctd02312321_stats.txt
ctd02134418_stats.txt ctd02206521_stats.txt ctd02221306_stats.txt ctd02229917_stats.txt ctd02303702_stats.txt ctd02312322_stats.txt
ctd02134419_stats.txt ctd02206522_stats.txt ctd02221307_stats.txt ctd02229918_stats.txt ctd02303703_stats.txt ctd02312323_stats.txt
ctd02134420_stats.txt ctd02206523_stats.txt ctd02221308_stats.txt ctd02229919_stats.txt ctd02303704_stats.txt