

Title – NOAA PSL Parsivel Disdrometer data

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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 was installed 15 September 2021. Data until 11 April 2022 are available so far. More data will be added.

- Data status: Final
- Time period: Courtland, AL: 15 September 2021 – 11 April 2022
- 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			56f2cdbc-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 ctd02128002_raw.txt ctd02130415_raw.txt ctd02135220_raw.txt ctd02203514_raw.txt ctd02206617_raw.txt
 ctd02125820_raw.txt ctd02128004_raw.txt ctd02130416_raw.txt ctd02135300_raw.txt ctd02203515_raw.txt ctd02206618_raw.txt
 ctd02125821_raw.txt ctd02128008_raw.txt ctd02130417_raw.txt ctd02135302_raw.txt ctd02203516_raw.txt ctd02206619_raw.txt
 ctd02125822_raw.txt ctd02128010_raw.txt ctd02130418_raw.txt ctd02135303_raw.txt ctd02203517_raw.txt ctd02206620_raw.txt
 ctd02125823_raw.txt ctd02128011_raw.txt ctd02130419_raw.txt ctd02135304_raw.txt ctd02203518_raw.txt ctd02206621_raw.txt
 ctd02125900_raw.txt ctd02128012_raw.txt ctd02130420_raw.txt ctd02135305_raw.txt ctd02203519_raw.txt ctd02206622_raw.txt
 ctd02125901_raw.txt ctd02128014_raw.txt ctd02130421_raw.txt ctd02135306_raw.txt ctd02203521_raw.txt ctd02206701_raw.txt
 ctd02125906_raw.txt ctd02128015_raw.txt ctd02130422_raw.txt ctd02135307_raw.txt ctd02203522_raw.txt ctd02206718_raw.txt
 ctd02125910_raw.txt ctd02128017_raw.txt ctd02130508_raw.txt ctd02135308_raw.txt ctd02203600_raw.txt ctd02206721_raw.txt
 ctd02125911_raw.txt ctd02128018_raw.txt ctd02130511_raw.txt ctd02135309_raw.txt ctd02203601_raw.txt ctd02206722_raw.txt
 ctd02125912_raw.txt ctd02128019_raw.txt ctd02130512_raw.txt ctd02135421_raw.txt ctd02203921_raw.txt ctd02206723_raw.txt
 ctd02125913_raw.txt ctd02128020_raw.txt ctd02130513_raw.txt ctd02135522_raw.txt ctd02204018_raw.txt ctd02206800_raw.txt

ctd02129305_stats.txt ctd02132722_stats.txt ctd02136215_stats.txt ctd02203208_stats.txt ctd02206701_stats.txt ctd02210118_stats.txt
ctd02129306_stats.txt ctd02132723_stats.txt ctd02136216_stats.txt ctd02203209_stats.txt ctd02206702_stats.txt ctd02210119_stats.txt
ctd02129307_stats.txt ctd02132800_stats.txt ctd02136217_stats.txt ctd02203210_stats.txt ctd02206703_stats.txt ctd02210120_stats.txt
ctd02129308_stats.txt ctd02132801_stats.txt ctd02136218_stats.txt ctd02203211_stats.txt ctd02206704_stats.txt ctd02210121_stats.txt
ctd02129309_stats.txt ctd02132802_stats.txt ctd02136219_stats.txt ctd02203212_stats.txt ctd02206705_stats.txt ctd02210122_stats.txt
ctd02129310_stats.txt ctd02132803_stats.txt ctd02136220_stats.txt ctd02203213_stats.txt ctd02206706_stats.txt ctd02210123_stats.txt