DOCUMENTATION FOR THE DATA COLLECTED BY THE CSWR MOBILE MESONET
VEHICLES DURING VORTEX2-2009

Each file contains the mobile mesonet data for a specific vehicle on a specific day. Files
ending in _QC have been qc-ed (presentable for external viewing).

Mobile mesonet data recorded by the CSWR mobile mesonets (DOW5, DOW6, DOW7,
Probe11, Probe12, Probe13, and Probe14) are formatted as follows:
> Date, Time, Temp, RelH, BladeWindSpeed, BladeWindDir, SonicWindSpeed,
> SonicWindDir, Lat, Lon, Speed, Heading, Altitude, Pressure, QC Flag

Date: Date in YYYYMMDD format
Time: UTC time in HHMMSS format
Temp: Temperature in Celsius
RelH: Relative humidity (%)
BladeWindSpeed: RM Young wind speed in m/s (adjusted for vehicle motion)
BladeWindDir: RM Young wind direction in degrees (adjusted for vehicle motion)
SonicWindSpeed: Sonic anemometer wind speed in m/s (adjusted for vehicle motion)
SonicWindDir: Sonic anemometer wind direction in degrees (adjusted for vehicle motion)
Lat: Latitude in decimal degree format
Lon: Longitude in decimal degree format
Speed: Vehicle speed in m/s
Heading: Vehicle heading in degrees
Altitude: Altitude in meters
Pressure: Pressure in millibars
QC Flag: QC flag to alert the user for potential data errors.
- "stopped vehicle" is when vehicle speed is under 2 m/s, alerting the user that the vehicle is nearly stopped and the heading and wind direction data could be inaccurate.
- "slow vehicle" is vehicle speed between 2 m/s and 8 m/s alerting the user that the vehicle is slowing, accelerating, or turning and the heading and wind speed and direction data could be inaccurate.
- "missing vehicle motion data" is when no vehicle motion data was recorded, and wind speed and direction data are marked as missing due to uncertainty in their ground relative motion.

All missing data have been designated with "-999".

Any 1-second observation in which significant data were missing has been removed.
Generally this occurred when the GPS data was erroneous, thus preventing any data for
speed, heading, and altitude. Consequently, all ground relative wind speeds and directions
could not be calculated.

If only a single instrument was missing, a missing data flag (-999) was inserted for that
instrument.

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