

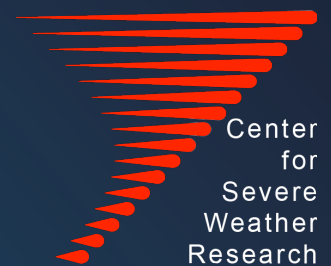
CSWR Mobile Mesonets

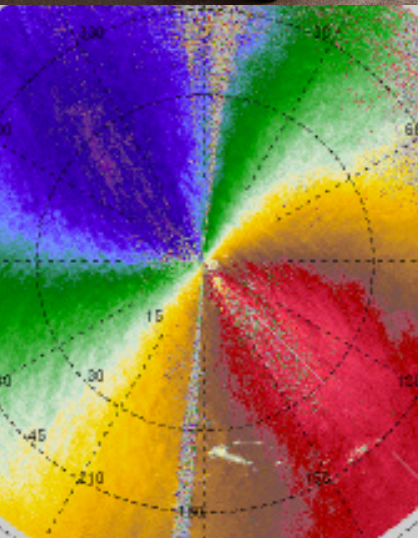
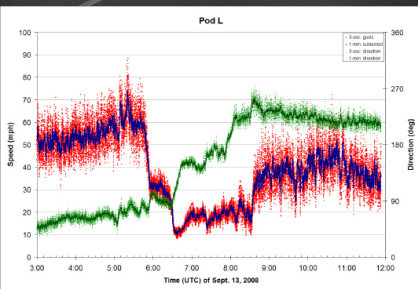
The Center for Severe Weather Research (CSWR) operates a fleet of Mobile Mesonets (MM) which are pickup trucks containing observing instruments. The Mobile Mesonet fleet is able to deploy inside and close to various meteorological phenomena such as supercells, mesoscale boundaries, hurricanes, lake effect snow bands, rainbands, microbursts and wildfires in order to observe thermodynamic, wind, and other parameters.

CSWR's MM fleet comprises 4 pickup trucks, outfitted with customizable instrumentation masts at the extreme front of the vehicles at 3.5 m above ground level. The masts are separated as much as reasonably possible from the thermal and kinematic contaminating effects of the vehicles. Mounted laptops and data loggers ingest and display data in real time. MMs can travel on most roads and at up to normal highway speeds to execute transects across slowly propagating phenomena, or can remain stationary. Typical measurements include temperature, relative humidity, wind, pressure, and GPS location. Instrumentation can be customized for each mission.



REQUESTABLE
FACILITY





MOBILE MESONET SCIENCE AND RESEARCH

The Mobile Mesonet network provides an adaptable targeted array of meteorological instrumentation capable of stationary and/or transecting observations in a variety of phenomena. The mesonet network permits a fine mesh of observations to be adapted to the needs of different projects. Standard meteorological instrumentation is provided and can be customized. PI provided instrumentations can often be hosted on the mesonet platforms.

TYPICAL RESEARCH APPLICATIONS

The Mobile Mesonet network can be used to transect near-surface boundaries and fronts, sea breezes, conduct uphill and downhill 'soundings' in terrain, augment stationary and PI operated Mobile Mesonets, provide near-ground boundary conditions for radar-based analyses, and host project crew and students collecting in-situ visual or other observations of phenomena. Within the constraints of driving safety, the Mobile Mesonets can transect severe weather including heavy snow, intense convection, tropical cyclones, and the like. Mobile Mesonets, with 1.1 m high topper enclosed beds, can carry CSWR Pods or PI supplied instrumentation such as disdrometers to adaptable deployment sites. Upper air soundings can be launched by MM crew, reducing costs.

MOBILE MESONET SPECIFICATIONS

- » 13' front-mounted mast hosting RM Young 5103 and/or other anemometers
- » T and RH sensors with reverse flow aspiration
- » Other customized instrumentation mounted to MM mast and vehicle as requested.
- » Campbell 1000X data loggers
- » Enclosed rear bed with topper (1.1 m height) with charging and data downloading stations to host Weather Pods or PI provided instrumentation, carrying helium or other supplies, etc.
- » Crew capacity: up to 5

REQUEST THE MOBILE MESONETS FOR HANDS-ON EXPERIENTIAL EDUCATION

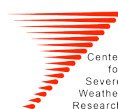
The Mobile Mesonets can be requested to aid in any level of education. A single or multiple Mobile Mesonets can be deployed on location for several weeks in support of a class with students designing experiments, operating the mesonet, and analyzing the collected data. For more information on requesting facilities for educational deployments: <http://www.eol.ucar.edu/ed-requests>

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