

# OKLAHOMA MESONET / ARS / OKCnet QUALITY ASSURANCE REPORT

April 2009

Prepared by **Cindy Morgan** & **Alex McCombs**  
[gamgr@mesonet.org](mailto:gamgr@mesonet.org)

- Mesonet technicians performed scheduled rotations of 3 rain gauges (RAIN), 1 barometer (PRES), 7 pyranometers (SRAD), 10 temperature and relative humidity sensors (RELH) and 1 wind monitor (WSPD).
- Spring Pass 2009 began on 1 April 2009.
- A lightning strike at the Talihina (TALI) Mesonet site caused all data to be lost from 19-21 April 2009. Lightning damaged the aspirator fan, 25cm soil moisture, and datalogger.
- Aspirator fan at the Bixby (BIXB) Mesonet site affected air temperature data from 5 March – 9 April 2009.
- Aspirator fan at Weatherford (WEAT) Mesonet site began affecting air temperature data beginning on 28 April 2009.
- Air temperature, relative humidity and solar radiation sensors were removed from 7 ARS Fort Cobb Watershed Sites, soil temperature transitioned to 5, 25, and 45cm.

## Mesonet QA Report for Standard Variables

Variable	Status	Ticket	Site	Remarks
<b>TAIR</b>				
<b>RELH</b>	Current	18683	GUTH	Sensor has a low bias during high humidity
	Resolved	18581	OKCE	Sensor had a 4-6% low bias
	Resolved	18582	CLRM	Sensor had a low bias during high humidity
	Resolved	18624	BURN	Sensor reported 106% during high humidity
	Resolved	18621	CLRM	Sensor mis-wired during installation
<b>WSPD</b>				
<b>WDIR</b>	Resolved	18657	WYNO	Sensor had a loose wire
<b>PRES</b>				
<b>SRAD</b>	Resolved	18650	BROK	Sensor had a low bias compared to neighbors
<b>RAIN</b>				

<b>TA9M</b>				
<b>WS2M</b>	Resolved	18546	ALTU	Sensor had starting threshold problem
<b>TS10</b>				
<b>TB10</b>	Resolved	18584	HOOK	Tech found 12+ in of tumble weeds on bare plot
	Resolved	18662	TALI	Sensor had a 1.5 deg C low bias
<b>TS05</b>	Current	18688	FTCB	TS05 steps down 3 deg C during rainfall at site
<b>TB05</b>	Current	18618	GRA2	TB05 often 10C warmer than surrounding sites
	Current	18682	CLRM	Suspect bare plot may have been washed out
	Resolved	18380	NEWK	Bare plot 2cm high
	Resolved	18585	TALI	Sensor had a 2 deg C low bias
<b>TS30</b>				
<b>TR05</b>	Resolved	18474	VINI	Reporting negative fractional water
<b>TR25</b>				
<b>TR60</b>				
<b>TR75</b>				

### ARS Little Washita Watershed QA Report

Variable	Status	Ticket	Site	Remarks
<b>RAIN</b>				
<b>VW05</b>	Current	18680	A133	Sensor reports 0 at all times, except during rain
<b>VW25</b>	Resolved	18586	A131	Tightened wires to fix errant data
	Resolved	18660	A131	Errant data, sensor replaced
<b>VW45</b>	Current	18681	A132	Voltages dropping to near 0 values
<b>V05T</b>				
<b>V25T</b>				
<b>V45T</b>				

### ARS Ft. Cobb Watershed QA Report

Variable	Status	Ticket	Site	Remarks
<b>RAIN</b>				
<b>VW05</b>				
<b>VW25</b>				
<b>VW45</b>	Current	18661	F101	Sensor reporting out of range values
	Resolved	18649	F110	Spikes in data, voltages within specifications
<b>V05T</b>				
<b>V25T</b>				
<b>V45T</b>				

## Oklahoma City Micronet QA Report

Variable	Status	Ticket	Site	Remarks
TAIR				
RELH				
PRES				
RAIN				
WSPD				
WDIR				

“Current” tickets are the unresolved tickets as of the last day of the month OR those tickets added based on the Monthly QA analysis.

“Resolved” tickets are the sensor problems that were fixed during the entire month.

Variable	Description
TAIR	Air temperature measured at 1.5 meters
RELH	Relative humidity measured at 1.5 meters
WDIR	Wind direction measured at 10 meters
WSPD	Wind speed measured at 10 meters
PRES	Pressure
SRAD	Incident solar radiation
RAIN	Rainfall
TA9M	Air temperature measured at 9 meters
WS2M	Wind speed measured at 2 meters
TS10	Soil temperature measured at 10 cm under native sod
TB10	Soil temperature measured at 10 cm under bare soil
TS05	Soil temperature measured at 5 cm under native sod
TB05	Soil temperature measured at 5 cm under bare soil
TS15	Soil temperature measured at 15 cm under native sod
TS30	Soil temperature measured at 30 cm under native sod
TR05	Soil moisture: Calibrated DeltaT measured at 5 cm under native sod
TR25	Soil moisture: Calibrated DeltaT measured at 25 cm under native sod
TR60	Soil moisture: Calibrated DeltaT measured at 60 cm under native sod
TR75	Soil moisture: Calibrated DeltaT measured at 75 cm under native sod
VW05	Soil moisture: Volumetric water content measured at 5 cm under native sod
VW25	Soil moisture: Volumetric water content measured at 25 cm under native sod
VW45	Soil moisture: Volumetric water content measured at 45 cm under native sod
V05T	Soil Temperature measured at 5 cm under native sod
V25T	Soil Temperature measured at 25cm under native sod
V45T	Soil Temperature measured at 45cm under native sod