

# OKLAHOMA MESONET/ARS QUALITY ASSURANCE REPORT

July 2004

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Summer Pass 2004 began in July with 22 sites visited.

The Tahlequah site was struck by lightning on August 9<sup>th</sup>. The datalogger, multiplexer, radio, modem, Temp/RelH, pyranometer, soil temperature and soil moisture sensors were replaced.

In order to expand our soil moisture network, a new soil moisture sensor at 60 cm was installed at the Wilburton site. During the next few months, several new installations will be performed at various sites.

Power upgrades were completed at 13 Mesonet sites. Prop anemometers were replaced at 2 Mesonet sites.

At the Micronet, 7 Temp/RelH sensors, 5 pyranometers and 3 soil temperature sensors were rotated.

<b>Mesonet QA Report for Standard Variables</b>	
<b>TAIR</b>	<b>Current: #10077 JAYX Sensor has developed a 0.5 to 2 °C high bias</b> <b>Current: #10189 ARD2 Sensor has developed a 4 °C low bias</b> <b>Resolved: #10032 BURB Cleaned mud dauber nest off of sensor that had exhibited an abnormal drop in temperature</b> <b>Resolved: #10033 VINI Cleaned mud dauber nest off of sensor that had exhibited a sudden 6 °C drop</b>
<b>RELH</b>	Current: Resolved:
<b>WDIR</b>	Current: Resolved:
<b>WSPD</b>	Current: Resolved:
<b>PRES</b>	Current: <b>Resolved: #9977 HOBA Replaced sensor that reported barometer errors each day</b>
<b>SRAD</b>	Current: Resolved:
<b>RAIN</b>	<b>Current: #10191 BEAV Reported very little rain during 7/23 event and none during 7/28-7/29 event</b> <b>Resolved: #10090 CHEY Replaced failed switch that caused gauge to not report rain</b>
<b>TA9M</b>	Current: Resolved:
<b>WS2M</b>	Current: Resolved:

<b>TS10</b>	Current: #9836 DURA Sensor has developed a 4 to 5 °C low bias Resolved: #10049 WILB Replaced sensor that had reported large negative values
<b>TB10</b>	Current: #10154 BOIS Data spiking on multiple days Current: #10241 PERK Sensor has developed a 7 °C low bias Resolved: #10069 WYNO Replaced sensor after the temp increased 10 °C during rain
<b>TS05</b>	Current: Resolved:
<b>TB05</b>	Current: #10076 WASH Data jumped to 46 °C when 1 inch of rain fell Current: #10075 VANO Sensor has developed a 5 °C bias Current: #10118 VINI Sensor reporting negative temperatures Current: #10159 LAHO Temps are 15 °C higher than other levels and nearby sites Current: #10248 MIAM Sensor has developed a 5 °C bias Resolved: #9966 ANTL Replaced sensor after 10 °C drop in temperature during rain Resolved: #10070 CLAY Replaced sensor that had developed a 2-10 °C low bias
<b>TS30</b>	Current: Resolved: #10071 MINC Replaced sensor that developed a 5-10 °C bias
<b>TR05</b>	Current: #10078 RING Reporting out-of-range data Current: #9742 GRA2 Reporting out-of-range data Current: #10127 BRIS Reporting out-of-range data Current: #10160 ARNE Data has been erratic since 7/22 Resolved: #9939 BLAC Replaced after reporting out-of-range data
<b>TR25</b>	Current: Resolved:
<b>TR60</b>	Current: Resolved:
<b>TR75</b>	Current: Resolved:

<b>ARS QA Report</b>	
<b>TAIR</b>	Current: Resolved:
<b>RELH</b>	Current: Resolved:
<b>SRAD</b>	Current: Resolved: #9430 A181 Replaced sensor that had reported negative values at night Resolved: #10158 A148 Replaced sensor that had reported negative values at night

<b>RAIN</b>	Current: <b>Resolved: #10029 A125 Cleaned spider webbing that had prevented tipping</b>
<b>TS05</b>	Current: <b>Resolved: #10072 A152 Replaced sensor that had developed a 3 °C high bias</b>
<b>TS10</b>	<b>Current: #10238 A130 Sensor has developed a 2 °C low bias</b> <b>Current: #10239 A132 Sensor has developed a 2 °C low bias</b> <b>Current: #10240 A161 Sensor has developed a 2 °C low bias</b> Resolved:
<b>TS15</b>	Current: <b>Resolved: #10073 A153 Replaced sensor that had reported erratic data</b>
<b>TS30</b>	Current: Resolved:

“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.

<b>Variable</b>	<b>Description</b>
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