

# Oklahoma Mesonet / ARS Quality Assurance Report January 2021

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- Mesonet technicians completed scheduled rotations of 1 barometer (PRES), 2 relative humidity sensors (RELH/TSLO), 1 pyranometer (SRAD), 4 PRT thermometers (TAIR/TA9M), 7 wind directions (WDIR), 4 wind sentries (WS2M), and 4 wind monitor nose cones (WSPD).
- An issue with the aspirator fan (FANS) at EVAX caused 1.5m air temperature to report higher than expected throughout January. This issue was resolved on 03-Feb-2021. Affected data are flagged.

## Mesonet QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
TAIR				
RELH	Resolved	BEAV	43471	Relative humidity sometimes reports values greater than 110 percent, then suddenly drops to 10 percent. Resetting sensor during issue did not resolve problem. Please replace sensor. Sensor replaced.
	Resolved	BEAV	43472	If not replaced after wildfire, please replace sensor cabling. Cable replaced as requested.
WSPD				
WDIR				
PRES	Resolved	STIL	43904	Barometer tubing again prone to water entrapment. Please replace external tubing, and drill 2mm hole on bottom of external barometer tube 1/2 inch from enclosure. Tubing replaced with new tubing and installed in accordance

				with provided instructions.
<b>SRAD</b>				
<b>RAIN</b>	<b>Resolved</b>	<b>NEWP</b>	<b>43480</b>	<b>Please replace primary gauge cable. Replaced cable.</b>
	<b>Resolved</b>	<b>NEWP</b>	<b>43479</b>	<b>Secondary gauge sometimes misses tips at start of rain events. Please replace rain gauge cable. Replaced cable.</b>
	<b>Resolved</b>	<b>OKCE</b>	<b>43483</b>	<b>Primary gauge fails to record precip. Before problem began, gauge had history of very low drip tests. Please replace gauge and RG cable. Replaced sensor and cable.</b>
	<b>Resolved</b>	<b>OKCE</b>	<b>43484</b>	<b>TIP2 measured 3 tips low for 2 consecutive post-cleaning drip tests. Please replace gauge and RG cable. Replaced sensor and cable.</b>
<b>TA9M</b>				
<b>WS2M</b>	<b>Current</b>	<b>HECT</b>	<b>43459</b>	<b>Mice nest found inside enclosure. Technician confirmed damage to WS2M cable. Damage patched with electrical tape. No problems found in data at this time. Replace sensor. Will increase priority if data become affected.</b>
<b>TB10</b>				
<b>TS05</b>				
<b>TS10</b>				
<b>TS25</b>				
<b>TS60</b>				

TR05	Resolved	BYAR	43908	Starting temp = final temp, suggesting failed heater. Please replace. Replaced.
TRB10	Current	TALI	43911	Values continue to climb well above allowed error. Suspect failing heater, difference between starting and final temperature continues to shrink despite absence of substantial moisture. Please replace.
TRS10				
TR25	Resolved	WATO	43907	Both starting and final temperature reporting -7999. Both soil temperature and soil moisture report errant or missing values. Sensor replaced.
TR60	Resolved	EVAX	43257	Both soil temperature and soil moisture frequently report -7999. Please replace sensor. Sensor replaced.

### ARS QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
RAIN				
VW05				
VW25				
VW45				
V05T				
V25T				
V45T				

## FCARS QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
<b>RAIN</b>	<b>Resolved</b>	<b>F101</b>	<b>43481</b>	<b>Gauge records less rainfall than expected during both warm rain and snow melt events. Obstruction cleared from inside gauge.</b>
<b>VW05</b>				
<b>VW25</b>				
<b>VW45</b>				
<b>V05T</b>				
<b>V25T</b>				
<b>V45T</b>				

'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>
<b>TAIR</b>	<b>Air temperature at 1.5 meters</b>
<b>RELH</b>	<b>Relative humidity at 1.5 meters</b>
<b>WDIR</b>	<b>Wind direction at 10 meters</b>
<b>WSPD</b>	<b>Wind speed at 10 meters</b>
<b>PRES</b>	<b>Air pressure</b>
<b>SRAD</b>	<b>Incident solar radiation</b>
<b>RAIN</b>	<b>Rainfall</b>
<b>TA9M</b>	<b>Air temperature at 9 meters</b>
<b>WS2M</b>	<b>Wind speed at 2 meters</b>
<b>TB10</b>	<b>Soil temperature at 10 cm under bare soil</b>
<b>TS05</b>	<b>Soil temperature at 5 cm under native sod</b>
<b>TS10</b>	<b>Soil temperature at 10 cm under native sod</b>
<b>TS25</b>	<b>Soil temperature at 25 cm under native sod</b>
<b>TS60</b>	<b>Soil temperature at 60 cm under native sod</b>
<b>TR05</b>	<b>Soil moisture: Calibrated DeltaT at 5 cm under native sod</b>
<b>TRB10</b>	<b>Soil moisture: Calibrated DeltaT at 10 cm under bare soil</b>
<b>TRS10</b>	<b>Soil moisture: Calibrated DeltaT at 10 cm under native sod</b>
<b>TR25</b>	<b>Soil moisture: Calibrated DeltaT at 25 cm under native sod</b>
<b>TR60</b>	<b>Soil moisture: Calibrated DeltaT at 60 cm under native sod</b>
<b>VW05</b>	<b>Soil moisture: Volumetric water content at 5 cm under native sod</b>
<b>VW25</b>	<b>Soil moisture: Volumetric water content at 25 cm under native sod</b>
<b>VW45</b>	<b>Soil moisture: Volumetric water content at 45 cm under native sod</b>
<b>V05T</b>	<b>Soil temperature at 5 cm under native sod</b>
<b>V25T</b>	<b>Soil temperature at 25 cm under native sod</b>
<b>V45T</b>	<b>Soil temperature at 45 cm under native sod</b>