

# Oklahoma Mesonet / ARS Quality Assurance Report

**October 2018**

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- Mesonet technicians completed scheduled rotations of 7 batteries (BATV/BVAS), 3 rain gauges (RAIN), 2 barometers (PRES), 7 relative humidity sensors (RELH/TSLO), 5 pyranometers (SRAD), 6 PRT thermometers (TAIR/TA9M), 4 wind sentries (WS2M), 4 wind monitor nose cones (WSPD), and 2 current excitations.
- The Bowlegs Mesonet site (BOWL) was decommissioned on 31 October and replaced by the Seminole Mesonet site (SEMI), commissioned on 31 October.
- Battery voltage at the Freedom Mesonet site (FREE) suddenly dropped too low to record data, resulting in a few missed obs. Battery replaced.

## MESO QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
TAIR				
RELH				
WSPD				
WDIR				
PRES				
SRAD				
RAIN	Resolved	BLAC	36789	Primary gauge stops recording rain unexpectedly. Problem resolved on its own.
	Resolved	FAIR	36802	Primary rain gauge did not report any precipitation during 2 different light rain events. Fixed.

	<b>Resolved</b>	<b>HECT</b>	<b>36701</b>	<b>Primary gauge reports less than expected. Suspect clogged gauge. Fixed.</b>
	<b>Resolved</b>	<b>MTHE</b>	<b>36704</b>	<b>Primary gauge records much less than expected. Problem resolved on its own.</b>
	<b>Resolved</b>	<b>CARL</b>	<b>36699</b>	<b>Secondary rain gauge failed to record rainfall. Problem resolved on its own.</b>
	<b>Current</b>	<b>STUA</b>	<b>36951</b>	<b>TIP2 reports much less than expected. Suspect clogged gauge.</b>
<b>TA9M</b>				
<b>WS2M</b>				
<b>TB10</b>	<b>Current</b>	<b>TIPT</b>	<b>36632</b>	<b>10cm bare sensor reports errant data.</b>
<b>TS05</b>				
<b>TS10</b>				
<b>TS25</b>				
<b>TS60</b>				
<b>TR05</b>				
<b>TRB10</b>	<b>Resolved</b>	<b>NRMN</b>	<b>36822</b>	<b>10 cm under bare soil is not heating. Replaced.</b>
	<b>Current</b>	<b>BOIS</b>	<b>36589</b>	<b>10 cm under bare soil reports errant data.</b>
<b>TRS10</b>				
<b>TR25</b>	<b>Resolved</b>	<b>BYAR</b>	<b>36817</b>	<b>25 cm under sod reports errant data. Replaced.</b>
<b>TR60</b>				

### ARS QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
<b>RAIN</b>				
VW05	Current	A133	36612	5 cm soil moisture errantly reports near 0 values for voltages 1-3.
	Current	A282	36954	5cm soil moisture reports errant values.
VW25	Current	A235	36794	25cm soil moisture out of range.
	Current	A244	36962	Errant spikes in 25 cm soil moisture.
VW45				
V05T				
V25T				
V45T				

### FCARS QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
<b>RAIN</b>				
VW05	Current	F102	36608	5 cm soil moisture reports much lower than expected for voltages 1-3.
VW25	Current	F110	36786	25cm soil moisture values near zero.
VW45				
V05T				
V25T				

<b>V45T</b>	
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'*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>