

# Oklahoma Mesonet / ARS Quality Assurance Report

May 2022

Prepared by Ethan Becker and Cindy Luttrell  
qamgr@mesonet.org

- Mesonet technicians completed scheduled rotations of 8 rain gauges, 8 batteries, 1 barometer, 3 relative humidity sensors, 5 pyranometers, 6 PRT thermometers, 3 wind directions, 4 wind sentries, 4 wind monitor nose cones, and 3 current excitations
- The Bessie (BESS) air temperature aspirator failed, causing a high bias in air temperature especially during sunny low wind periods. Affected data are flagged.

## Mesonet QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
<b>TAIR</b>				
RELH	Current	JAYX	45792	Errant variations in REHL and TSLO. Flagged.
<b>WSPD</b>				
<b>WDIR</b>				
PRES	Resolved	EUFA	45574	Replaced barometer tube.
<b>SRAD</b>				
RAIN	Resolved	LANE	45694	Replaced primary rain gauge and cable for missed tips.
	Resolved	LANE	45696	Replaced secondary rain gauge cable.
	Resolved	PRYO	45676	Rain gauge funnel paint peeling. Replaced.
	Current	BURN	45738	Replace rain gauge cable. Does not affect data.
	Current	BURN	45736	Secondary gauge reports less than primary gauge.

**Current HOOK 45727 Primary gauge drip tests 3 tips low.**  
**Current CHIC 45771 Secondary gauge misses rain events.**  
**Current PUTN 45773 Secondary gauge under reports following strong wind gust May 19<sup>th</sup>.**

**TA9M Current EVAX 45809 Low bias after extended period of high humidity.**

**WS2M**

**TB10**

**TS05**

**TS10**

**TS25 Resolved MANG 45573 Sensor reports -7999. Replaced.**

**TS60**

**TR05 Current ALV2 45768 Slow to respond to moisture.**

**TRB10 Resolved STIL 45679 Sensor reports -7999. Replaced.**

**Current BUTL 45774 Reports -7999.**

**TRS10 Resolved SHAW 45700 Does not heat. Replaced.**

**Current ALV2 45790 Does not heat.**

**TR25 Current BIXB 45745 Does not heat.**

**Current ERIC 45743 Reports -7999.**

**Current STUA 45699 Does not heat.**

**TR60 Resolved SHAW 45702 Does not heat. Replaced.**

### ARS QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
<b>RAIN</b>				
VW05	Resolved	A154	45681	Errant 1 <sup>st</sup> /3 <sup>rd</sup> voltages. Replaced.
VW25	Resolved	A152	45580	Raw voltages 1-3 report near 0. Replaced.
	Current	A253	45591	Errant 2 <sup>nd</sup> voltage.
VW45	Resolved	A159	45744	First voltage returns -7999. Replaced.
<b>V05T</b>				
<b>V25T</b>				
<b>V45T</b>				

### FCARS QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
RAIN	Current	F215	45807	Misses rain events. Flagged.
<b>VW05</b>				
VW25	Current	F101	45677	Voltages 1-4 report -7999.
VW45	Current	F106	45585	Reports -7999.
	Current	F213	45740	Reports -7999.
<b>V05T</b>				

V25T

V45T

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