Oklahoma Mesonet / ARS
Quality Assurance Report

May 2019

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- Mesonet technicians completed scheduled rotations of 3 batteries (BATV/BVAS), 4 barometers (PRES), 6 rain gauges (RAIN), 8 relative humidity sensors (RELH/TSLO), 2 pyranometers (SRAD), 3 PRT thermometers (TAIR/TA9M), 2 wind direction sensors (WDIR), 2 wind sentries (WS2M), 2 wind monitor nose cones (WSPD), and 2 current exciters.
- Arkansas River flooding at the Webbers Falls (WEBR) site caused both rain gauges to fail. Resolved on 3 June.

Mesonet QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
TAIR				
RELH				
WSPD	**Current**	**ELRE**	**39226**	**10m wind speed has a starting threshold problem and a low bias during high winds.**
WDIR				
PRES	**Resolved**	**CHER**	**39206**	**Barometer tubing prone to water entrapment. Data flagged as needed. Resolved.**
	Resolved	**MIAM**	**39157**	**Pressure samples sometimes 1-2mb too high. Replaced.**
	Resolved	**OKEM**	**39205**	**Barometer tubing prone to water entrapment. Data flagged as needed. Resolved.**
	Current	**PRYO**	**39147**	**Pressure samples sometimes 1-2mb too high. Data flagged as needed.**

SRAD	**Resolved**	**HUGO**	**39096**	**Solar radiation sometimes significantly less than expected. Replaced.**
RAIN	**Resolved**	**ERIC**	**39084**	**TIP2 sometimes misses tips during rainfall. Resolved. Obstruction removed.**
	Resolved	**MRSH**	**39212**	**Secondary rain gauge stopped reporting precip after 94mph wind gust. Suspect cover knocked off. Cover reinstalled. Resolved.**
	Resolved	**TAHL**	**39114**	**TIP2 sometimes misses tips during rainfall. Resolved.**
	Resolved	**TISH**	**39220**	**TIP2 sometimes misses tips during rainfall. Resolved.**
	Resolved	**TULN**	**39152**	**TIP2 sometimes misses tips during rainfall. Resolved.**
	Current	**ALV2**	**39169**	**Primary rain gauge sometimes reports significantly more than TIP2. Suspect cover problem.**
	Current	**COPA**	**39216**	**TIP2 sometimes misses tips at start of rainfall.**
	Current	**OILT**	**39166**	**TIP2 sometimes much higher than RTIP. Replace cover.**
	Current	**PRYO**	**39119**	**TIP2 over 10 percent higher than RTIP during heavy rain events. Suspect cover problem. Please replace top of rain gauge.**
TA9M				
WS2M				
TB10				
TS05				
TS10				
TS25				
TS60				
TR05				
TRB10				

TRS10	
TR25	
TR60	

ARS QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
RAIN				
VW05				
VW25	**Current**	**A256**	**39235**	**25 cm soil temperature reports errantly high values after rain events. Soil moisture data also affected.**
VW45				
V05T				
V25T				
V45T				

FCARS QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
RAIN				
VW05				
VW25				
VW45	**Current**	**F106**	**39160**	**45-cm soil moisture sometimes reports voltages near 0. Results in errant spikes in volumetric water data.**
V05T				
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.

Variable	Description
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