

Oklahoma Mesonet / ARS Quality Assurance Report

November 2019

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- Mesonet technicians completed scheduled rotations of 11 batteries, 10 aspirator fans, 3 barometers (PRES), 6 rain gauges (RAIN/TIP2), 9 relative humidity sensors (RELH/TSLO), 3 pyranometers (SRAD), 9 PRT thermometers (TAIR/TA9M), 12 wind directions (WDIR), 2 wind sentries (WS2M), 6 wind monitor nose cones (WSPD), and 2 current excitation modules.

Mesonet QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
TAIR				
RELH				
WSPD				
WDIR				
PRES	Resolved	OKCE	40818	PRES sometimes reports bad values. Typically occurs while temps are falling. Rewired.
SRAD				
RAIN	Resolved	NRMN	40606	Primary rain gauge drip tested 2 tips low previous pass visit.

				Replaced due to nearby rain experiment.
	Resolved	WEST	40600	Primary rain gauge sometimes reports significantly more than TIP2. Suspect cover problem. Replaced top.
	Resolved	MINC	40571	TIP2 records rainfall slower than expected or misses rain altogether. Suspect clogged gauge. Clog removed.
	Resolved	OKEM	40475	TIP2 fails to record rainfall. Cattle damage. Gauge fixed.
	Current	RING	40453	Confirm serial number for cover and base of rain gauge.
TA9M	Resolved	BUTL	40615	TA9M reports bad values. Wiring fixed.
WS2M	Resolved	CENT	40795	2m-wind speed often reports zero for extended periods of time when 10m-wind speed exceeds 5m/s. Problem resolved automatically.
	Resolved	GUTH	40782	2m-wind often reports 0 when winds are greater than 5 m/s. Replaced.
	Resolved	WEST	40605	WS2M sometimes reports values lower than expected for a few observations. Replaced.
	Current	HECT	40840	WS2M sometimes reports 0 when winds are > 3.5 m/s. Suspect starting threshold problem. Please replace sensor.
TB10	Resolved	SLAP	39314	10cm bare sensor reports bad values. Replaced.
	Current	LAHO	40180	10cm bare soil temperature reports bad data.
TS05	Resolved	GOOD	39317	5cm sod sensor reports values much lower than expected. Replaced.
TS10	Resolved	MADI	40566	10-cm under sod temperature and moisture report bad data. Replaced.
	Resolved	PERK	40177	10cm sod temperature reports errant data. Replaced.

TS25				
TS60				
TR05	Resolved	OKCE	40541	5 cm sod sensor not heating. Replaced.
	Resolved	WATO	40775	5-cm sod sensor reports errant data. Replaced.
TRB10	Resolved	BUFF	40594	10cm bare soil moisture final temperature is not as high as expected. Replaced.
	Resolved	HINT	40589	10cm bare soil moisture final temperature reports errant data. Replaced.
	Current	HOLD	40842	10cm under bare soil sometimes reports errant data.
	Current	PUTN	40789	10cm bare soil sensor reports bad data.
TRS10	Resolved	PAUL	40585	10cm sod final temperature lower than expected. Replaced
	Current	ERIC	40498	10-cm sod sensor often reports bad data. Please replace.
TR25	Resolved	HINT	40591	25cm soil moisture final temperature sometimes higher than expected for several obs. Replaced.
TR60	Resolved	BUFF	40327	60 cm soil sensor reports bad data. Wiring corrected.
	Resolved	OKCE	40206	Sensor reports errant data. Replaced.
	Resolved	PAUL	40582	60cm soil moisture fails to heat. Rewired sensor.
	Current	FTCB	40205	Sensor not heating. Please replace.

ARS QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
RAIN				
VW05	Current	A148	40576	5cm soil sensor reports errant data.
	Current	A154	40357	5cm soil sensor reports errant data.
VW25	Resolved	A124	40361	25cm soil sensor reports errant data. Replaced.
	Resolved	A133	40363	25cm soil sensor reports errant data. Replaced.
VW45	Current	A262	40279	Errantly low 45cm soil moisture. Please rewire sensor.
V05T				
V25T				
V45T				

FCARS QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
RAIN	Current	F111	40826	Gauge records much less than neighbors or misses rainfall completely.
VW05	Current	F113	40353	5cm soil sensor reports errant data.
VW25	Current	F102	40778	25-cm sensor reports errant data.
	Current	F105	40282	25cm soil moisture is errantly high.
VW45				

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