

Oklahoma Mesonet / ARS Quality Assurance Report

October 2017

Prepared by Cindy Luttrell and Monique Sellers

qamgr@mesonet.org

- Mesonet technicians completed scheduled rotations of 4 batteries, 2 barometers (PRES), 1 relative humidity sensor (RELH), 5 pyranometers (SRAD), 5 PRT thermometers (TAIR/TA9M), 2 rain gauges (RAIN), 1 wind directions (WDIR), 5 wind sentries (WS2M), 3 wind monitor noses (WS2M), and 1 current excitation.
- Ninnekah Mesonet Site (NINN) was decommissioned on 11-OCT-2017.

MESO QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
TAIR				
RELH				
WSPD				
WDIR				
PRES				
SRAD	Current	BRIS	33660	Solar radiation has 5% high bias. Replace sensor.
RAIN	Resolved	BRIS	33255	Gauge missed rain events. Replaced gauge and damaged cable.
	Resolved	CHER	33287	Primary rain gauge reports significantly less than secondary gauge. Cable connectors cleaned.
	Resolved	WATO	33643	Primary gauge did not report precipitation during thunderstorms. Fixed.
	Resolved	WATO	33664	Secondary gauge randomly reports tips during clear dry conditions when tips are not expected. Replaced.

	Resolved	ALV2	33282	Secondary gauge missed start of rain event. Fixed.
TA9M				
WS2M	Resolved	GRA2	33228	2m Wind speed near zero and gust is spikey when 10m wind 5-7m/s. Replaced.
TB10	Resolved	HINT	33588	Soil temperature and soil moisture report either -7999 or very large positive negative values. Replaced.
TS05	Resolved	MANG	33200	Suspect sensor is too deep. Reburied at 5cm.
	Resolved	TIPT	33260	Suspect sensor is too deep. Reburied at 5cm.
TS10				
TS25				
TS60				
TR05	Resolved	NINN	31138	Sensor heats much more than expected. Sensor removed when site was decommissioned.
	Resolved	WYNO	33092	Stopped heating. Re-wired sensor.
	Current	BLAC	33728	Outside allowed calibration error.
	Current	STUA	33727	Outside allowed calibration error.
TRB10				
TRS10	Resolved	COOK	33278	Sensor not heating as much as expected. Replaced.
TR25				
TR60				

ARS QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
RAIN				
VW05	Resolved	A244	33589	Sensor frequently reports values near 0 for voltages 1-3. Soil temperature not affected. Replaced sensor.
VW25				
VW45				
V05T				
V25T				
V45T				

FCARS QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
RAIN				
VW05				
VW25	Current	F215	33525	Sensor frequently reports values near 0 for voltages 1-3. Soil temperature not affected.
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