

Oklahoma Mesonet / ARS Quality Assurance Report

April 2018

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- Mesonet technicians completed scheduled rotations of 13 batteries , 7 rain gauges (RAIN), 9 barometers (PRES), 11 relative humidity sensors (RELH), 10 pyranometers (SRAD), 8 PRT thermometers (TAIR/TA9M), 9 wind sentries (WS2M), 6 wind monitor nose cones (WSPD), and 6 current excitations.
- Aspirator fan problem at the Burneyville Mesonet Site (BURN) caused the aspirated air temperature to have a high bias during sunny, low wind periods. Aspirator fan was replaced. Affected data were flagged.

MESO QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
TAIR				
RELH				
WSPD				
WDIR	Current	MEDI	35091	Wind direction errantly reports zero.
PRES				
SRAD	Current	FAIR	35197	Sensor intermittently reports -99999.
RAIN	Current	ERIC	35196	Primary gauge did not report precipitation during thunderstorms.
	Current	BUFF	35142	Low bias.
	Current	TALI	35147	Seondary gauge occassionally misses portion of rain event.

TA9M				
WS2M				
TB10	Resolved	WASH	35106	Errant spikes in soil moisture and soil temperature. Sensor replaced.
TS05				
TS10	Current	BURN	35159	Sensor has more diurnal variation than expected.
TS25				
TS60				
TR05				
TRB10	Resolved	CHAN	35005	Sensor intermittently stops heating. Replaced.
TRS10				
TR25				
TR60				

ARS QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
RAIN	Resolved	A282	35131	Gauge reported significantly less rain than expected. Clog removed from gauge.

	Current	A132	35191	Rain gauge reported significantly less than neighbors during thunderstorms.
VW05	Resolved	A262	35122	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				
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