

Oklahoma Mesonet / ARS Quality Assurance Report

January 2018

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- Mesonet technicians completed scheduled rotations of 3 batteries, 2 barometers (PRES), 4 rain gauges (RAIN), 5 relative humidity sensors (RELH), 3 PRT thermometers (TAIR/TA9M), 1 wind sentries (WS2M), 3 wind monitor nose cones (WS2M), and 1 current excitation.
- Battery voltage at the Camargo (CAMA) Mesonet site was too low to record observations, which caused data loss January 16-17. Battery was replaced.
- Auxiliary battery voltage too low to power aspirator fan at the Mangum Mesonet Site (MANG). This caused the aspirated air temperature to have a high bias. Battery was replaced. Affected data were flagged.

MESO QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
TAIR				
RELH				
WSPD	Resolved	CLOU	34691	Low bias in 10m wind. Sensor replaced.
WDIR				
PRES				
SRAD	Current	APAC	34697	Solar radiation has high bias.
RAIN	Current	WEBR	34011	Primary rain gauge reports significantly less than secondary 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	34710	Errant spikes in soil moisture caused by variations in the second voltage.

VW45	Current	A132	34679	Sensor frequently reports values near 0 for voltages 1-3. Soil temperature looks fine.
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