

Oklahoma Mesonet / ARS Quality Assurance Report

February 2018

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- Mesonet technicians completed scheduled rotations of 9 batteries, 2 rain gauges (RAIN), 4 relative humidity sensors (RELH), 2 pyranometers (SRAD), 2 PRT thermometers (TAIR/TA9M), 12 wind directions (WDIR), 1 wind sentries (WS2M), 5 wind monitor nose cones (WS2M), and 2 current excitations.

MESO QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
TAIR				
RELH				
WSPD	Current	IDAB	34905	10m wind speed intermittently reports values much less than expected.
WDIR				
PRES				
SRAD	Resolved	APAC	34697	Solar radiation has high bias. Cleaned and leveled sensor.
	Resolved	MRSB	34930	Solar radiation peaks later than expected. Re-leveled sensor.
RAIN	Resolved	WEBR	34011	Primary rain gauge reports significantly less than secondary rain gauge. Replaced connectors on cable.
	Resolved	BIXB	34910	Secondary rain gauge is reporting less than primary rain gauge. Cleaned connectors on cable.
	Current	VALL	34919	Secondary rain gauge is reporting less than primary

				rain gauge.
TA9M	Current	LANE	34974	9m air temperature has low bias after precipitation.
WS2M	Current	TAHL	34856	2m wind speed often has 1-2 m/s low bias compared to 10m wind and neighbors.
TB10				
TS05	Resolved	ACME	34859	Sensor is too deep. Reburied at 5cm.
TS10				
TS25				
TS60				
TR05				
TRB10				
TRS10				
TR25	Resolved	KETC	34900	Sensor stopped heating. Replaced sensor.
TR60				

ARS QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
RAIN				

VW05				
VW25	Resolved	A256	34710	Errant spikes in soil moisture caused by variations in the second voltage. Sensor replaced.
VW45	Resolved	A132	34679	Sensor frequently reports values near 0 for voltages 1-3. Soil temperature looks fine. Sensor replaced.
V05T				
V25T				
V45T				

FCARS QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
RAIN				
VW05	Current	F111	34839	Sensor frequently reports values near 0 for voltages 4. Soil temperature and soil moisture affected.
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