

Oklahoma Mesonet / ARS Quality Assurance Report

December 2018

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- Mesonet technicians completed scheduled rotations of 1 battery (BATV/BVAS), 2 rain gauges (RAIN), 1 PRT thermometer (TAIR/TA9M), 11 wind directions (WDIR), and 1 wind monitor nose cone (WSPD).
- A lightning strike at A159 on 26 December resulted in data loss.
- An aspirator fan issue at Grandfield (GRA2) is causing a high bias in TAIR on sunny days. Affected data are flagged.

MESO QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
TAIR				
RELH				
WSPD				
WDIR				
PRES	Resolved	MIAM	37025	Pressure samples sometimes too high. Replaced sensor and tubing.
SRAD				
RAIN	Resolved	HUGO	37003	Primary gauge records rain slower than expected. Suspect clogged gauge. Gauge appeared to be fine. Cleaned and tested satisfactory.
	Resolved	CHIC	37276	TIP2 fails to record rainfall. Obvious blockage of large spider den. Cleaned.
	Resolved	KIN2	36998	TIP2 fails to record rainfall. Spider web removed.
	Resolved	STUA	36951	TIP2 reports much less than expected. Suspect clogged

				gauge. Cleaned gauge of spider web.
	Current	OILT	38768	Primary gauge records less than expected. If no clog found, check cables connections for damage.
	Current	KETC	38763	TIP2 often records rainfall slower than expected or misses rain altogether. Gauge could be clogged.
TA9M				
WS2M				
TB10	Resolved	TIPT	36632	10cm bare sensor reports errant values. Replaced.
TS05	Resolved	CARL	37055	5 cm sod temperature has more diurnal variation than neighbors. Suspect sensor is too shallow. Replaced.
TS10				
TS25				
TS60				
TR05	Resolved	LANE	37267	5-cm sod stopped heating. Final temperature same as starting temperature. Replaced.
TRB10				
TRS10	Resolved	MCAL	37018	10cm sod soil moisture final temperature sometimes less than expected. Replaced.
	Current	OKCE	38003	10-cm under sod sensor stopped heating. Starting and final temperatures are the same.
TR25				
TR60				

ARS QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
RAIN				
VW05	Resolved	A133	36612	5 cm soil moisture errantly reports near 0 values. Replaced.
	Resolved	A282	36954	5cm soil moisture reports errant values affecting volumetric water. Replaced.
	Resolved	A282	37256	5cm soil sensor reports errant values. Rewired sensor.
VW25	Resolved	A235	36794	25cm soil moisture out of range. Rewired sensor.
	Resolved	A244	36962	Errant spikes in 25cm volumetric water. Replaced.
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