

Oklahoma Mesonet / ARS Quality Assurance Report

November 2018

Prepared by Ethan Becker and Cindy Luttrell
qamgr@mesonet.org

- Mesonet technicians completed scheduled rotations of 6 batteries (BATV), 4 rain gauges (RAIN), 1 barometer (PRES), 5 relative humidity sensors (RELH/TSLO), 1 pyranometer (SRAD), 6 PRT thermometers (TAIR/TA9M), 11 wind directions (WDIR), 5 wind sentries (WS2M), 3 wind monitor nose cones (WSPD), and 5 current excitations.

MESO QA Report for Standard Variables

| Variable | Status | Site | Ticket | Remarks |
|-------------|----------------|-------------|--------------|--|
| | | | | |
| TAIR | | | | |
| | | | | |
| RELH | | | | |
| | | | | |
| WSPD | | | | |
| | | | | |
| WDIR | | | | |
| | | | | |
| PRES | Current | MIAM | 37025 | Pressure samples sometimes 1-2mb too high. Data flagged as needed. |
| | | | | |
| SRAD | | | | |
| | | | | |
| RAIN | Current | HUGO | 37003 | Primary gauge records rain slower than expected, and continues to tip after rain ends. Suspect clogged gauge. |
| | Current | KIN2 | 36998 | TIP2 fails to record rainfall. |
| | Current | STUA | 36951 | TIP2 reports much less than expected. Suspect clogged gauge. |
| | | | | |
| TA9M | | | | |
| | | | | |

| | | | | |
|--------------|-----------------|-------------|--------------|--|
| WS2M | | | | |
| TB10 | Current | TIPT | 36632 | 10cm bare sensor reports errant values. |
| TS05 | Current | CARL | 37055 | 5 cm sod temperature is too shallow. Please rebury. |
| TS10 | | | | |
| TS25 | | | | |
| TS60 | | | | |
| TR05 | Current | LANE | 37267 | 5-cm sod stopped heating. |
| TRB10 | Resolved | BOIS | 36589 | 10 cm under bare soil reports errant values. Replaced sensor. |
| TRS10 | Current | MCAL | 37018 | 10cm sod soil moisture final temperature sometimes too low. |
| TR25 | | | | |
| TR60 | | | | |

ARS QA Report for Standard Variables

| Variable | Status | Site | Ticket | Remarks |
|-----------------|-----------------|-------------|---------------|--|
| RAIN | | | | |
| VW05 | Resolved | A282 | 36954 | 5cm soil moisture occasionally reports 0. Replaced sensor. |
| | Resolved | A282 | 37256 | 5cm soil sensor reports errant values. Wired incorrectly. Resolved. |
| | Current | A133 | 36612 | 5 cm soil moisture reports errant values. |

| | | | | |
|-------------|-----------------|-------------|--------------|---|
| VW25 | Resolved | A244 | 36962 | Errant spikes in 25cm volumetric water. Replaced sensor. |
| | Current | A235 | 36794 | 25cm soil moisture out of range. Check wiring. |
| | | | | |
| VW45 | | | | |
| | | | | |
| V05T | | | | |
| | | | | |
| V25T | | | | |
| | | | | |
| V45T | | | | |
| | | | | |

FCARS QA Report for Standard Variables

| Variable | Status | Site | Ticket | Remarks |
|-----------------|-----------------|-------------|---------------|--|
| | | | | |
| RAIN | | | | |
| | | | | |
| VW05 | Resolved | F102 | 36608 | 5 cm soil moisture reports errant values. Replaced. |
| | Resolved | F207 | 37021 | 5cm soil moisture sometimes reports bad values. Replaced. |
| | | | | |
| VW25 | Resolved | F101 | 37099 | 25-cm soil moisture sometimes reports 0. Replaced. |
| | Resolved | F110 | 36786 | 25cm soil moisture reports errant values. Replaced. |
| | | | | |
| 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 |