OKLAHOMA MESONET/ARS QUALITY ASSURANCE REPORT

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Soil temperature sensors have been the hardest to quality assure over the past month. Due to the daily occurrence of many soil sensors reaching 50+ C (for the first time in the Mesonet's history!), we raised the maximum range on the 5 cm bare and sod sensors to 55 C.

The prescence of dry, cracked ground in many locations has also contributed to much greater than normal variations in the observed soil temperatures at neighboring sites.

The hotspot: The monthly-averaged Air Temperature field for 1800 UTC revealed Walters, OK as the hottest location. WALT's average 1800 UTC temperature was 37.3 C (99.1 F). Not only did WALT have the highest average 1800 UTC temperature, but the average high at WALT for the month was 104.7! (thanks for that fact, Derek).

And now, on to the report...

	Mesonet QA Report for Standard Variables
TAIR	**Current: #1974 SPEN Reporting 5-10 F too warm** **Resolved: #1961 WOOD Lightning strike; replaced sensor** **Resolved: #1897 MCAL Replaced sensor with frequent -7999 reports**
RELH	**Current: #1814 MARS Sensor reporting as high as 110%** **Resolved: #1872 KETC Replaced sensor with extended 0% RELH reports** **Resolved: #1948 WOOD Replaced lightning-damaged sensor** **Resolved: #1900 MARE Replaced sensor that reported 20-30% dips** **Resolved: #1810 KING Large spider web removed from cap** **Resolved: #1968 WIST Replaced sensor reporting data spikes daily** **Resolved: #1731 CLAY Replaced sensor with frequent -7999 reports**
WDIR	Current: **Resolved: #1901 OKMU Replaced sensor reporting ~80 out of phase** **Resolved: #1964 CAMA Replaced lightning-damaged sensor** **Resolved: #1966 WOOD Replaced lightning-damaged sensor** **Resolved: #1951 CLAY Replacing CR10T corrected continuous 0.0 WDIR reports**
WSPD	**Current: #1913 SPEN Low wind gusts during severe storm event** **Resolved: #1967 WOOD Replaced sensor to correct high bias** **Resolved: #1950 CLAY Replacing CR10T corrected continuous 0.0 WSPD reports**
PRES	Current: **Resolved: #1877 ALVA Replaced malfunctioning sensor** **Resolved: #1915 SKIA Replaced sensor suspect of 1.0 mb high bias** **Resolved: #1916 BUTL Replaced sensor suspect of 1.0 low bias**
SRAD	**Current: #1839 HOOK Reporting -1 for extended periods at night** **Current: #1965 IDAB Sensor reporting ~50% of expected values** **Current: #1987 OKMU Sensor reporting ~150 W/M^2 low during pm**

	Resolved: #1843 GRAN Sensor began reporting normal values after being rain-washed **Resolved: #1960 CAMA Replaced lightning-damaged sensor** **Resolved: #1963 WOOD Replaced lightning-damaged sensor** **Resolved: #1903 CHAN "Deep" bird droppings removed which shaded sensor** **Resolved: #1917 KING "Large" bird droppings removed which shaded sensor**
RAIN	**Current: #1972 CHEY Sensor suspected of over-reporting rainfall** **Current: #1984 MIAM Sensor suspected of under-reporting rainfall** **Resolved: #1954 CALV Irrigation system on nearby farm causing rainfall reports**
TA9M	**Current: #1989 HUGO Monthly QA suggests 2 C cool bias** Resolved:
WS2M	Current: **Resolved: #1952 CLAY New CR10T corrected continuous 0.0 WS2M reports**
TS10	Current: Resolved:
TB10	**Current: #1779 WILB Monthly QA suggests 4 C cool bias** **Current: #1970 NINN Sensor reporting 8 C cooler than neighbors** **Resolved: #1959 FTCB Erosion at site caused readings too warm**
TS05	**Current: #1847 SHAW Data suggests 3-6 C cool bias** **Current: #1988 EUFA TB05 reporting cooler than TB10** **Resolved: #1846 KETC Suspected cool bias found to be not true**
TB05	**Current: #1808 WOOD Monthly QA suggests possible 4 C warm bias** **Current: #1878 PAUL Sensor reporting values below 0 C** **Current: #1899 IDAB Sensor reporting over 50 C** **Current: #1971 NINN Sensor reporting 8-10 C cooler than neighbors** **Resolved: #1845 KETC Sensor found to have ~3 C warm bias** **Resolved: #1958 FTCB Erosion at site caused readings too warm**
TS30	**Current: #1956 SHAW Data suggests TS05 and TS30 wires are crossed** Resolved:

	ARS QA Report
TAIR	Current: Resolved:
RELH	Current: **Resolved: #1947 A151 Sensor found out of calibration replaced** **Resolved: #1928 A110 Replaced sensor that failed meso-comparison**
SRAD	Current: Resolved:

RAIN	Current: Resolved:
TS05	**Current: #1924 A157 Awaiting new sensor after site move** **Resolved: #1919 A160 Sensor found to be 13 C too high** **Resolved: #1918 A159 Sensor found to be 4 C too high** **Resolved: #1920 A156 Sandy soil found to be cause of warm bias**
TS10	**Current: #1927 A157 Awaiting new sensor after site move** Resolved:
TS15	**Current: #1926 A157 Awaiting new sensor after site move** **Current: #1957 A146 Sensor reporting sporadically to -10 C** Resolved:
TS30	**Current: #1925 A157 Awaiting new sensor after site move** Resolved:

"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 measured at 1.5 meters
RELH	Relative humidity measured at 1.5 meters
WDIR	Wind direction measured at 10 meters
WSPD	Wind speed measured at 10 meters
PRES	Pressure
SRAD	Incident solar radiation
RAIN	Rainfall
TA9M	Air temperature measured at 9 meters
WS2M	Wind speed measured at 2 meters
TS10	Soil temperature measured at 10 cm under native sod
TB10	Soil temperature measured at 10 cm under bare soil
TS05	Soil temperature measured at 5 cm under native sod
TB05	Soil temperature measured at 5 cm under bare soil
TS15	Soil temperature measured at 15 cm under native sod
TS30	Soil temperature measured at 30 cm under native sod