

OKLAHOMA MESONETWORK QUALITY ASSURANCE REPORT
for the month of October, 1996

Based upon observations taken at 1800 UTC each day

Prepared by Curtis Marshall (curtis@ou.edu, qamgr@mesnet.mesonet.ou.edu)

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Notes:

Some very interesting meteorological phenomenon were observed in perusing the data for the month of October. Not terribly unusual, but especially pronounced in the data, was the diurnal cycle of backing and veering surface winds. Also, the vector averages over the LeFlore-Pushmataha-McCurtain County area show the Red River East Wind Anomaly quite well. After doing some hiking in that area of the state and familiarizing myself with the terrain (and with the aid of a high-resolution topographic map), I also believe there is a signature of some sort of obstacle flow around the highest terrain of the Ouachita Mountains. Contact me if you're interested in seeing what I might be talking about. As for other nuances in the data, recall that we had several dryline episodes during the month of October. The 1800 UTC dewpoint contours show a distinct gradient from about MEDF southwestward to ALTU. I believe this could be a reflection of average midday dryline position.

And now for the official business. Derek has completed the ARS version of the manual QA software. For now, I will be inspecting this data for problems, but an official written report for the ARS on a monthly basis will soon begin. As for the Mesonet, there weren't a whole lot of problems this month. Most, once again, can be attributed to gophers and lightning... both frightening, yet fascinating entities. Since the leaves are beginning to fall, rain gauges are getting clogged on occasion. This results in underreporting during actual rainfall events, and reporting when skies are clear (the bucket continues to tip as a result of seepage through the clogging material).

Just so there is no confusion, the tickets that are listed as "resolved" below are for those that were taken care of during the month of October. If a ticket has had action taken on it after 31 October and before this typing, that info will be included in the QA report for November data (in early December). And once again, tickets concerning standard rotations are not discussed in this report.

You know the routine by now... see below for the specific details.

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TAIR (Air Temperature at 1.5 meters):

Current t-tkts: #1107 BBOW Replace for Jerry Brotzge's research.
 #1108 NORM " "
 #1109 NOWA " "
 #1110 WEBB " "

Added: None.

Resolved: #1111 BEAV Replaced for JB research. In field 5 mos.

TDEW/RELH (RH is measured at 1.5 meters):

Current t-tkts: #1003 WOOD Reported 114% RH
Added: None.
Resolved: #974 RING Dismissed due lack of continued evidence.
#1079 EUFA "
#1081 PUTN Replaced after failing range test.
#1086 CLAR No comments given.
#1123 ALTU Replaced after lightning damage.

WDIR (Wind Direction at 10 meters):

Current t-tkts: None.
Added: None.
Resolved: #1122 ALTU Replaced after lightning damage.

WSPD (Wind Speed at 10 meters):

Current t-tkts: None.
Added: None.
Resolved: #1120 ALTU Replaced after lightning damage.

PRES/PALT (Sea level Pressure):

Current t-tkts: None.
Added: None.
Resolved: None.

SRAD (Incident Solar Radiation):

Current t-tkts: None.
Added: None.
Resolved: #996 HUGO Dismissed due to lack of continued evidence.
#1087 BREC Field test showed bad values being reported.
#1118 ALTU Replaced after lightning damage.

RAIN:

Current t-tkts: #1092 SALL Bearing failure. Temporary fix.
#1093 MCAL Drip test yields 41 tips. 51 typical.
Likely underreporting.
#1105 BLAC Zero Rain for October. Neighbors ~1".
#1114 COPA NWSRFC concerned about zero rain reported
when rain likely fell at site.

#1115 JAYX NWSRFC concered as with COPA. Screen
likely clogged (reporting rain w/clear sky).
#1116 BOWL Drip test yields 41 tips. Bucket has
internal water.
#1125 WCEL Gauge stopped reporting.
#1124 WASH Reported zero rain during flood event.
#1128 ALTU Please replace when gauge is available.
Added: None.
Resolved: #1083 WIST Switch failure.
#1094 RETR Unplugged seed.
#1106 ACME No problems found; cleaned and inspected.
#1117 SHAW Missing tips due to Hg streaming in switch.
#1119 ALTU Lightning damage. Not yet replaced (see
#1128)

TA9M (Air Temperature at 9 meters):

Current t-tkts: None.
Added: #1126 HUGO QA repeatedly suggests reading ~2 deg cool.

Resolved: None.

WS2M (Wind Run at 2 meters):

Current t-tkts: #1129 PRES Please replace temporarily fixed sensor when possible.

Added: None.

Resolved: #1044 PRES Temporary fix after vandals broke sensor.
(see #1129)

#1096 ERIC Replaced bearings.

#1097 CHEY Replaced bearings.

#1099 WOOD Replaced bearings.

#1121 WOOD Replaced bearings.

TS10 (Soil temperature at 10 cm under native sod):

Current t-tkts: #1082 MARS QA continues to indicate 8-9 deg warm bias.

Added: None.

Resolved: #963 NORM Dismissed-lack of continuing evidence.

#1095 ALVA Probe damaged by gophers.

TB10 (Soil temperature at 10 cm under bare soil):

Current t-tkts: #1076 WALT Drifting and periodically failing spatial test. Behavior has come back to normal and ticket may be dismissed if this continues.

Added: None.

Resolved: #925 HASK Ticket dismissed-lack of continued evidence.

TS05 (Soil temperature at 5 cm under native sod):

Current t-tkts: #967 NORM QA shows 4 deg warm bias.

#1089 MADI QA suggests 5-6 deg warm bias.

Added: None.

Resolved: None.

TB05 (Soil temperature at 5 cm under bare soil):

Current t-tkts: #1091 ARNE Failing range test on low end.

Added: #1127 OKEM QA repeatedly suggests sensor reading 2-3 deg low.

Resolved: #924 HASK Ticket dismissed-lack of continued evidence.

#1084 BUFF EXC and AG reversed during SM install.

#1088 BESS Field test showed sensor read 2 deg warm.

TS30 (Soil temperature at 30 cm under native sod):

Current t-tkts: None.

Added: None.

Resolved: #1077 ALVA Probe damaged by gophers.

Curtis H. Marshall, Jr.

9 November 1996

P.S. OU 27 - Pokes 17! Ain't that just too bad for the Stillwater gang...