

OKLAHOMA MESONETWORK QUALITY ASSURANCE REPORT
for the month of July 1996.

Based upon observations taken at 1800 UTC each day.

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Notes:

The most notable item in July's data is the excessive rainfall, particularly across portions of central Oklahoma. SPEN received over 13", most of which fell in two separate nocturnal convection events. However, some parts of the state remain quite dry despite this. Ringling received its first rainfall in over two months, totalling 27 mm (about 1 in.) for July.

Early in July, the heat was the big story. On the 5th, several sites in north-central OK topped out above 115 F.

On an unrelated note, the QA program written by Derek Arndt (see last month's report) is now fully operational, and I used it to prepare this report. Due to the ease of producing the QA data now, it is likely that in the future I will expand the monthly QA to (perhaps) biweekly, and begin basing the analyses on times other than just 1800 UTC. I welcome your suggestions and comments on this matter. Also, a new account has been created on the Mesonet VAX, and the user name is QAMGR. In the future, please email QA concerns to this account. Tim Hughes will discuss this in more detail at the next Steering Committee meeting.

As far as QA problems noted in July's data, they are quite few. At a first glance, it would appear that there is a healthy cool bias with the soil temperature sensors at Newkirk. However, it is supported by observations at BLAC and FORA as well. It is likely that this is due to the native vegetation cover in that area (tall grass prairie). Even the bare soil temps are slightly cool, likely a product of lateral conduction.

And that's the monologue. The rap sheet follows below!

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TAIR (Air Temperature at 1.5 meters):

Looks good as usual!
Current t-tkts: None.
Added: None.
Resolved: None.

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

A few sensors (e.g., WOOD and ADAX) reported erratically after rainfall events (in excess of 115% at times). However, this was likely a product of the sensors getting wet, and corrected itself upon drying.
Current t-tkts: #974 RING QA suggests RH reading too low.
#1003 WOOD Began reporting 114% after rainfall event, but returned to normal after drying.
#1007 NOWA Fell to 18% on 07/15.

#1036 RETR Possible storm damage on 08/13
Added: #1037 BIXB High bias. Reflected in average midday
dewpoint few degrees warmer than neighbors.
Resolved: #920 ALTU Replaced. Old sensor reading high.
#945 BUTL Replaced. Erratic old sensor.
#1006 SPEN Replaced. Old censor dropped to 0%.

WDIR (Wind Direction at 10 meters):

No problems.
Current t-tkts: None.
Added: None.
Resolved: None.

WSPD (Wind Speed at 10 meters):

No problems.
Current t-tkts: None.
Added: None.
Resolved: None.

PRES/PALT (Sea level Pressure):

Worms and insects seem to like making homes out of the baro tubes.
I, too, believe in helping the homeless. But they must find a more
suitable dwelling. No problems in July however.
Current t-tkts: None.
Added: None.
Resolved: None.

SRAD (Incident Solar Radiation):

Field looks better than ever. Current problems mainly due to lightning
and birds. Enough said.
Current t-tkts: #804 MIAM Tech concerned about possible spliced wire.
#930 OILT QA suggests slight (~10%) high bias.
#996 HUGO QA suggests reading ~10% low.
Added: #1039 BREC QA suggests ~10% low.
Resolved: #972 SEIL Field test showed within 1% of truth.
#994 ERIC Old sensor damaged by lightning.
#1008 MAYR Field test showed to be off 7.74%.
#995 ELRE Field test showed -6.75% error.

RAIN:

Routine checks seem to be in order for SPEN after two excessive events,
and for RING after receiving no rain in May and June, despite rainfall
at nearby neighbors. Also low compared to neighbors for July.
No problems otherwise.
Current t-tkts: #1015 WATO Howie Johnson's long term averages suggest
sensor possibly reading low.
Added: #1038 SPEN Routine check after excessive events.
#1041 RING Routine check after receiving zero rain
during May-June and minimum in July in
comparison to nearby neighbors.
Resolved: #992 OILT Bad switch found during calibration check.
#1010 WIST Tipping bucket full of internal water.
#1011 ARDM Tipping bucket full of internal water.

TA9M (Air Temperature at 9 meters):

No real problems.

Current t-tkts: None.
Added: None.
Resolved: #1034 TISH Mis-wire with Brotzge's 1.5m experimental data confirmed and corrected.

WS2M (Wind Run at 2 meters):

No problems. A few old and noisy bearings here and there.
Current t-tkts: None.
Added: None.
Resolved: #825 MARE Bearings replaced.
#993 PUTN Replaced bearings with ones with fiberglass insert.

Please note that in the soil section below, several t-tkts are still out for sensors with somewhat small biases. These were issued before it was decided to relax the criterion for declaring a sensor faulty (see last month's report). These t-tkts may be declared "dead in the water" in the future.

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

Current t-tkts: #963 NORM QA suggests ~2 deg warm bias.
Added: None.
Resolved: #962 PUTN Field test showed