

NOUS41 KWBC 121535
PNSWSH

TECHNICAL IMPLEMENTATION NOTICE 05-51
NATIONAL WEATHER SERVICE HEADQUARTERS WASHINGTON DC
1135 AM EDT TUE JUL 12 2005

TO: SUBSCRIBERS:
-FAMILY OF SERVICES /FOS/
-NOAA WEATHER WIRE SERVICE /NWS/
-EMERGENCY MANAGERS WEATHER INFORMATION NETWORK /EMWIN/
-NOAAPORT
OTHER NWS CUSTOMERS...PARTNERS AND EMPLOYEES

FROM: MIKE CAMPBELL
CHIEF...OCWWS OBSERVING SERVICES DIVISION

SUBJECT: REPLACEMENT OF AUTOMATED SURFACE OBSERVING SYSTEM WIND SENSOR

NOTE: THE FOLLOWING CHANGES HAVE NO IMPACT ON NOAA WEATHER WIRE SERVICE SUBSCRIBERS.

THE AUTOMATED SURFACE OBSERVING SYSTEM /ASOS/ PRODUCT IMPROVEMENT PROGRAM WILL SOON DEPLOY A REPLACEMENT WIND SENSOR. THE NEW SENSOR WILL REPORT WIND INFORMATION USING THE 3-SECOND WORLD METEOROLOGICAL ORGANIZATION /WMO/ GUST STANDARD.

THE CURRENT ASOS WIND SENSOR /BELFORT 2000/ USES ROTATING CUPS TO MEASURE WIND SPEED AND A VANE TO MEASURE WIND DIRECTION. OVER A 2-MINUTE PERIOD...ASOS USES 24 5-SECOND AVERAGES TO DETERMINE THE 2-MINUTE AVERAGE WIND SPEED AND DIRECTION. EVERY MINUTE...ASOS STORES THE HIGHEST 5-SECOND AVERAGE SPEED FOR THE PAST MINUTE...ALONG WITH ITS DIRECTION...IN THE 12-HOUR ARCHIVE FOR ADDITIONAL PROCESSING. THIS HIGHEST SPEED VALUE IS USED TO DETERMINE IF A GUST AND/OR A PEAK WIND REMARK WILL BE REPORTED.

THE NEW ASOS WIND SENSOR /VAISALA 425NWS/ IS A SONIC ANEMOMETER. IT HAS NO MOVING PARTS AND WILL OPERATE BETTER IN WINTER WEATHER CONDITIONS. AS WITH THE BELFORT SENSOR...OVER A 2-MINUTE PERIOD...ASOS USES 24 5-SECOND AVERAGES TO DETERMINE THE MINUTE AVERAGE WIND SPEED AND DIRECTION. BUT THE HIGHEST SECOND RUNNING AVERAGE SPEED IS STORED FOR GUST AND PEAK WIND PROCESSING.

WHILE THERE WILL BE LITTLE DIFFERENCE IN 2-MINUTE AVERAGE WIND SPEED AND DIRECTION REPORTING...THE CHANGES IN GUST AND PEAK WIND REPORTING MAY BE SIGNIFICANT. WE CAN EXPECT TO SEE MORE GUSTS AND PEAK WINDS REPORTED WITH THE NEW SENSOR. THE MASS OF THE MOVING PARTS IN EXISTING SENSORS LIMITS RESPONSIVENESS. THE NEW SENSOR WILL BE MORE RESPONSIVE TO SHORT TERM GUSTS.

THE NEW SENSOR... KNOWN AS THE ICE FREE WIND /IFW/ SENSOR...WILL BE DEPLOYED AT ALL ASOS LOCATIONS OVER A 12-MONTH PERIOD BEGINNING LATER THIS MONTH. MORE SPECIFIC INFORMATION WILL BE ISSUED BY THE RESPONSIBLE WEATHER FORECAST OFFICE /WFO/ FOR EACH INDIVIDUAL SITE WHEN THE IFW IS IMPLEMENTED. THESE SITE SPECIFIC NOTICES WILL INDICATE THE DATE OF

TRANSITION TO THE IFW AND CONTAIN THE FOLLOWING INFORMATION:

SID STATION NAME
CONFIGURATION
DEPLOYMENT DATE

FURTHER INFORMATION ON IFW IMPLEMENTATION PLANS AND STATUS CAN BE FOUND ON THE SURFACE OBSERVATIONPROGRAM WEBPAGE AT /USE LOWER CASE EXCEPT...PLEASE NOTE THAT S IN SURFACE IS IN UPPER CASE/:

WWW.NWS.NOAA.GOV/OPS2/SURFACE/INDEX.HTM

IF YOU HAVE ANY QUESTIONS ABOUT THIS CHANGE...PLEASE CONTACT ONE OF THE FOLLOWING INDIVIDUALS AT NWS HEADQUARTERS:

DAVID MANNARANO
ASOS IMPLEMENTATION MANAGER
PHONE: 301-713-2093 X 103
EMAIL: DAVID.MANNARANO@NOAA.GOV

OR

RICHARD AHLBERG
ASOS PLANNED PRODUCT IMPROVEMENT PROGRAM MANAGER
PHONE: 301-713-1975 X 160
EMAIL: RICHARD.AHLBERG@NOAA.GOV

NATIONAL TECHNICAL IMPLEMENTATION NOTICES ARE ONLINE AT /USE LOWER CASE/:

[HTTPS://WWW.WEATHER.GOV/NOTIFICATIONS/ARCHIVE](https://WWW.WEATHER.GOV/NOTIFICATIONS/ARCHIVE)

\$\$
NNNN