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Service Change Notice 18-19 Updated
National Weather Service Headquarters Silver Spring MD
1115 AM EDT Wed May 16 2018

To: Subscribers:
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 -Emergency Managers Weather Information Network
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From: Allison Allen
 Chief, Marine, Tropical and Tsunami Services Branch

Subject: Updated: Format for the Reconnaissance Vortex Data
 Message changing on or around June 1, 2018

Updated to correct the implementation date of the format change for the Reconnaissance Vortex Data Message from on or around May 15, 2018, to on or around June 1, 2018

After soliciting comments during the 2017 hurricane season, the Office of the Federal Coordinator for Meteorology Working Group for Tropical Cyclone Operations and Research Forum (WG/TCORF), has approved changes to the Reconnaissance Vortex Data Message format beginning on or around June 1, 2018. This product is transmitted from NOAA and Air Force Hurricane Hunter aircraft.

This product is issued under the following AWIPS and WMO headers:

AWIPS Header	WMO Header
MIAREPNT2	URNT12 KNHC/KWBC/KBIX
MIAREPPN2	URPN12 KNHC/KWBC/KBIX

The format changes will enhance the utility of the Vortex Message by including important parameters previously not provided, or provided optionally in the comment section, and improving the organization of the message.

Changes to the Vortex Message include:

1. The current format has a formal entry only for inbound wind maxima, with any outbound wind maxima appearing in the comment section. In the new format, Items L through O comprise a new mandatory outbound wind maxima section to simplify data decoding and to ensure that no data are missed. The new outbound wind maxima section appears in a similar format to the inbound maxima data (Items H through K).

2. The latitude and longitude will be listed in decimal degrees instead of degrees and minutes to better accommodate NOAA's

National Hurricane Center and other users' needs.

3. The new message format includes a new tropical cyclone center data block section (Items C through G). The surface wind reported by dropsonde at the system's center is now given in Item E. Center/eye shape and size characteristic lines are moved up to Items F and G from Items L and M.

4. The current message lacks most wind observation times; the proposed format appends the observation times to the bearing and range location Items.

5. To better collect similar data together, the inbound maximum surface and flight-level wind block (Items D through G in the current format) is shifted downward to Items H through K.

A comparison of the current and new format is provided below.

Current format:

```
URNT12 KNHC 241133
VORTEX DATA MESSAGE   AL162016
A. 24/11:12:50Z
B. 10 deg 58 min N
   082 deg 46 min W
C. 700 mb 2927 m
D. 90 kt
E. 144 deg 5 nm
F. 253 deg 78 kt
G. 158 deg 8 nm
H. 977 mb
I. 10 C / 3042 m
J. 18 C / 3045 m
K. NA / NA
L. CLOSED
M. C20
N. 12345 / 7
O. 0.02 / 1 nm
P. AF301 0616A OTTO           OB 13
MAX OUTBOUND AND MAX FL WIND 108 KT 349 / 14 NM 11:17:00Z
CNTR DROPSONDE SFC WIND 210 / 11 KT
```

New format:

```
URNT12 KNHC 241133
VORTEX DATA MESSAGE   AL162016
A. 24/11:12:50Z
B. 10.97 deg N 082.77 deg W
C. 700 mb 2927 m
D. 977 mb
E. 210 deg 11 kt
F. CLOSED
G. C20
H. 90 kt
```

I. 144 deg 5 nm 11:07:00Z
J. 253 deg 78 kt
K. 158 deg 8 nm 11:07:30Z
L. 95 kt
M. 314 deg 5 nm 11:17:00Z
N. 033 deg 108 kt
O. 349 deg 14 nm 11:17:30Z
P. 10 C / 3042 m
Q. 18 C / 3045 m
R. NA / NA
S. 12345 / 7
T. 0.02 / 1 nm
U. AF301 0616A OTTO OB 13
MAX FL WIND 108 KT 349 / 14 NM 11:17:00Z

Current format definition can be found at:

<https://www.ofcm.gov/publications/nhop/FCM-P12-2017.pdf>

Under Figure 5-3, page 5-6

New format definition:

A. Date and Time of Fix
B. Latitude and Longitude of Vortex Center Fix
C. Minimum Height at Standard Atmospheric Level
D. Minimum Sea-Level Pressure from Dropsonde or Extrapolation
E. Dropsonde Center Wind Speed and Direction
F. Eye Character
G. Eye Shape/Orientation/Diameter
H. Estimate of Maximum Inbound Surface Wind Observed
I. Bearing, Range and Time of Wind observed in Item H
J. Maximum Inbound Flight-Level Wind
K. Bearing, Range and Time of Wind observed in Item J
L. Estimate of Maximum Outbound Surface Wind Observed
M. Bearing, Range and Time of Wind observed in Item L
N. Maximum Outbound Flight-Level Wind
O. Bearing, Range and Time of Wind observed in Item N
P. Maximum Flight-Level Temp/Pressure Altitude Outside Eye
Q. Maximum Flight-Level Temp/Pressure Altitude Inside Eye
R. Dewpoint Temp/Sea Surface Temp Inside Eye
S. Fix Determined By (Codes for Observation Type)
T. Navigation Fix Accuracy/Meteorological Accuracy
U. Aircraft ID, Mission Number, Cyclone Name, and Observation Number

End Remarks include: Maximum Flight-Level Wind, Bearing, Range and Time

For questions regarding this notice, please contact:

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