

0630 3351 29 7159 35

19990916H1-DROPS

HRD GPS Dropwindsonde Scientist Log (Revised 6/1999)

Storm 990916H1 Floyd Flight Director Stan Czyzka Page 1 of 2
 Flight ID 990916H1 Dropwindsonde Scientists Leigh- / Dodge Takeoff 03:10 UTC
 Mission ID WYKXA Floyd AVAPS Operators Juan Carlos Prades Landing _____ UTC

| Drop # | Sonde ID # | Time (UTC) | Lat (°N) | Lon (°W) | Surface Pressure (mb) | 10m wind (kn) | MBL wind (kn) | BT SST (°C) | Location Comment | Comments | Ob # |
|--------|------------|------------|----------|----------|-----------------------|---------------|---------------|-------------|------------------|----------------------------------|------|
| 1 | 991845148 | 04:41:06 | 32.21 | 79.4 | 984.0 | 4 | 32072 | - | 35 m/s | | 5 |
| 2 | 990935166 | 05:02:26 | 33 16 | 78 25 | | | | | 35.2 | Not sent | 1 |
| 3 | 991435107 | 05:14:25 | 33 50 | 77 40 | 968.4 | | 10084 | | 35.9 | NE eye wall | 7 |
| 4 | 991515138 | 05:14:50 | 33 52 | 77 40 | | | 10582 | 26.1 | 33.4 | NE eye wall | 12 |
| 5 | 991845159 | 05:33:30 | 31 39 | 76 55 | | | 11582 | | 22.0 | | 13 |
| 6 | 991515166 | 05:39:55 | 34 25 | 77 20 | | | 11563 | | 21.1 | Rain band | 15 |
| 7 | 990935144 | 05:45:45 | 34.9 | 77.38 | 974.3 | | | | 30.0 | No winds 60 sec winds 70 | 18 |
| 8 | 990935054 | 05:52:12 | 33 49 | 77.52 | 957.5 | | | | 28.0 | Cape Fear Beach | 19 |
| 9 | 990935144 | 06:06:22 | 33 82 | 78 16 | | | 35575 | | | | 21 |
| 10 | 990935150 | 06:11:11 | 33 42 | 78 41 | | | | | | No launch detect | 22 |
| 11 | 991515241 | 06:12:05 | 33 39 | 78 45 | | | 33584 | | | | 23 |
| 12 | 990935146 | 06:14:44 | 33 31 | 78 56 | | | 33074 | | | | 24 |
| 13 | 990935145 | 06:38:09 | 33 28 | 77 33 | | | 20566 | 26.4 | | BT#5 | 25 |
| 14 | 990415360 | 06:40:45 | 33 20 | 77 27 | | | | | | | 27 |
| 15 | 990415375 | 06:44:41 | 33 17 | 77.7 | | | 21073 | 26.0 | 34.0 | | 28 |
| 16 | 990935048 | 07:10:04 | 31 37 | 76 32 | 984.6 | | 13569 | | 30.0 | | 30 |
| 17 | 990935143 | 07:22:12 | 34 25 | 77 30 | | | | | 40.5 | No launch detect | |
| 18 | 992455398 | 07:22:53 | 34 24 | 77 32 | 963 | | 10088 | | 39.5 | Top sail Beach, NE eye wall, mud | 32 |

MITD
05

BT#3

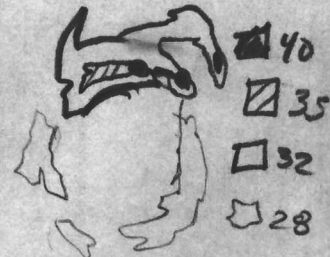
BT#5

*

X

19

GPS sonde Log

| Drop # | SONDE ID# | UTC | Lat. | Long. | BT SST ^{if poss.} | Location comments and when winds commence | Further comments |
|-----------------------------------|-----------|-------|----------|----------|----------------------------|--|--|
| ① | | 49108 | 3231 | 7906 | N/A | 21 sec on buoy 41004 Last report 19m, 30ms ⁻¹ | <ul style="list-style-type: none"> • 34 m/s @ sfc • Sfc winds stronger than FL • Dropping 2 mi. NW of buoy • no sig met features • Strat. conv. |
| ② | | 50213 | 33°16.7' | 78 25.6' | | SW eyewall 60 sec no wind sfc wind 15 knots | <ul style="list-style-type: none"> • ill-defined eyewall ^{between NOAA} • ragged to SW • northside shows refl. near 40dbz • sfc winds nears 85 mph (SE₁₀₀) • probably open • seems to be reminiscent of sheared system |
| <p>{ eye 33°26' 78°10' 505z }</p> | | | | | | | |
| ③ | | 51400 | 33 50.8 | 77 41.2' | | both good sondes into | <ul style="list-style-type: none"> • Eye is much more vigorous |
| ④ | | 14:43 | 33 51.5' | 7740.2' | | N/E eye 100' 34 m/s |  <ul style="list-style-type: none"> • 100 knots near eye @ sfc • Winds seem to be waxing and waning |

Eye is west of Frying Pan Shoals.

Wilm 10 o'clock at 20 mile.

Cape Fear VISUAL 10 mi to west

N42RF

N43RF

Temp-Drop Communication Worksheet

revised 7/98

UZNT13 ^KWBC^ _ _ _ _

Manop header

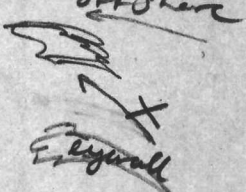


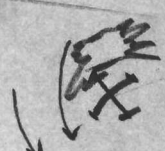
(^ = space)

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| XXAA | ^ | ^ | | ^ | 99 | ^ | | ^ | | ^ | | ^ | | ^ | | ^ | | 2 CR |
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| | | | | | | | | | | | | | | | | | | 1 LF |

For N42RF : 61 616 ^NOAA2^ _ _ _ _ ^ OB^ _ ^KWBC=^ CNTRL 'T' Aircraft # / Mission #
 Storm Name

For N43RF : 61 616 ^NOAA3^ _ _ _ _ ^ OB^ _ ^KWBC=^ CNTRL 'T' (select correct line
 scratch out the other)

Note : Scratch out all unused code blocks

| Drop # | Sonde ID # | UTC | Lat. | Long. | BT SST | Location comments and when winds commence | Further comments |
|--------|------------|---------|----------|----------|--------|--|--|
| 5 | | S3330 | 34°39.3' | 76°55.7' | | KHMY | 5 miles offshore  winds onshore rainband off to north |
| 6 | | S403955 | 34°25.1' | 77°20.1' | | Topsail B. goods winds @ 25 sec |  winds onshore |
| 7 | | S4548 | 34°9.4' | 77°37.9' | | Wrightsville B. Just outside rainband of eyewall drop lost winds @ 13 m. Winds @ 70 sec |  right in eyewall |
| 8 | | | | | | Not really peak wind rainband 14m 28 m/s-1 | had 92 knot FL wind. |
| 9 | | SS242 | 33°49.7' | 77°52.1' | | Cape Fear Good sonde 15m 38 m/s | lost radar basically in eye |
| | | | | | | Lowest eye pressure: 954.3 eye fix 33°42' 78°06' 12 miles south of Cape Fear! | |
| 9 | | 60616 | 33°52.5' | 78°15.3' | | Holden Beach w/ 2 miles Good winds @ 25 sec. |  slightly offshore |

N42RF

N43RF

Temp-Drop Communication Worksheet

revised 7/98

UZNT13 ^KWBC^ _ _ _ _

Manop header

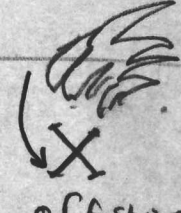


(^ = space)

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For N42RF : 61 616 ^NOAA2^ _ _ _ _ ^ OB^ _ ^KWBC=^ CNTRL 'T' Aircraft # / Mission #
 Storm Name

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 scratch out the other)

Note : Scratch out all unused code blocks

| Drop # | Sonde ID # | UTC | Lat. | Long. | RT SST | Location comments + when winds start | Further Comments |
|--------|---|-------|----------|----------|--------|---|--|
| (10) | Bad sonde | 61111 | 33°43' | 78°41' | | ? | |
| (11) | | 612 | 33°40' | 78°45.0' | | Good sonde "CPL" |  offshore |
| (12) | | 61444 | 33°31.7' | 78°55.6' | | Myrtle Beach Good sonde |  |
| (13) | Back into eye for 3rd time 953.6 mb real close to Cape Fear 33°51' 77°59' → heading to Prying Pan | 63806 | 33°29.0' | 77°34.2' | | F.P.S. | Poorly defined south edge  |
| (14) | | 64050 | 33°20.5' | 77°27.5' | | Peak wind near F.P.S. 978 mb 967 mb | Similar no eyewall but high FL winds. |

Good
sonde
(14)
18 sec.

N42 RF

N43 RF

Temp-Drop Communication Worksheet

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UZNT13 ^KWBC^ _ _ _ _

Manop header

(^ = space)

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 scratch out the other)

Note : Scratch out all unused code blocks

Sonde#

Time* Lat. Long.

Location
Comment

Further
Comments

(13)

64440 33° 17.8' 77° 7.6'

Near
high
winds
94 kt.
Good
sonde

In
Stratiform
convection
South of
eyewall
No sig. reflectivity

Further north

(16)

74003

34° 57.5' 76° 32.3'

CLKN7

Good
sonde
26 sees



(17)

72204 34° 25.8' 77° 29.5'

NO WINDS!

Bad Sonde!

Bad sonde
no num



(18)

72250 34° 24' N 77° 31.3'

"Top Sail
Beach"

peak eyewall drop

LAND DROP! 45 m s⁻¹ @ 10 ntc

"DON"
near center

4th
Center fix over

Wrightsville Beach

34° 17' 77° 48'

(19)

73954

33° 26.0' 77° 32.0'

BAD SONDE.

Frying
Pan
Shoals
60 sec, no winds

Stratiform
precip
to
S

(20)

75126

33° 14.7' 76° 33.2'

Stratiform

GRAP

Good
sonde
@ 10 sec

N42RF

N43RF

Temp-Drop Communication Worksheet

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UZNT13^KWBC^_ _ _ _ _

Manop header

(^ = space)

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Aircraft # / Mission #
Storm Name

For N43RF : 61 616 ^NOAA3^_ _ _ _ _ ^ _ _ _ _ _ ^ OB^ _ ^KWBC=^ CNTRL 'T'

(select correct line
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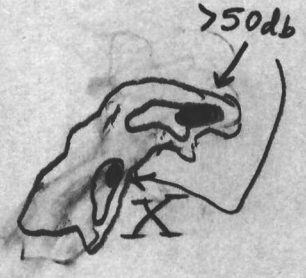
21

80840

34°37.1 76°31.1

Cape Lookout

Good sonde
@ 51 sec



22

81909

34°29.1 77°18'

Topsail
Beh.
Good sonde
@ 12 sec

Strange pooling
eyewall
feature extending
SW-NE.
Cells appear to
be convectively
active, more so
than earlier



23

8:21:10

34°26 77°27.1'

Top Sail
Good sonde @ 26 sec
Center pressure still 955

Based on
pressure
we are near
eye

5th Center
0023 34°20' 77°57'

1 mile SE of
TopSail Beach

24

8:37:23

33°27.1' 77°31.7'

Frying Pan
Shoals

Winds @
26 sec.

Stratiform
convection

25

90445

34°37.4' 76°39'

Cape Lookout

Nothing
buddy

26

90903

34°36.4' 76°58.4'

Topsail Beh.

near knots
peak in FL

27

91200

34°36' 77°12'

Shoal
Strange behavior
so another sonde
launched

Winds @
20 sec.

34°27' 77°27'

6th eye fix 954 mb Center just on coast
Still showing warm core

N42 RF

N43 RF

Temp-Drop Communication Worksheet

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UZNT13 ^KWBC^ _ _ _ _

Manop header

(^ = space)

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For N42RF : 61 616 ^NOAA2^ _ _ _ _ ^ OB^ _ ^KWBC=^ CNTRL 'T'

Aircraft # / Mission #
Storm Name

For N43RF : 61 616 ^NOAA3^ _ _ _ _ ^ OB^ _ ^KWBC=^ CNTRL 'T'

(select correct line
scratch out the other)

Note : Scratch out all unused code blocks

(28)

92207 34°11 77°45

Wrightsville

Beach

Winds @ 20 sec

60 knots off
Shore

@ FL

and sfc.

(29)

92344 34°6 77°49

Cape Fear

~ 6.5 knots off shore

Winds @ 33 sec

(30)

Gain in for 7th fix!

953 mb

41004

N42RF

N43RF

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UZNT13 ^KWBC^ _ _ _ _

Manop header

(^ = space)

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| X | X | A | A | ^ | ^ | | | | | 9 | 9 | ^ | | | | | | ^ | | | | | | ^ | | | | | | ^ | | | | | | ^ | | | | | | 2 | CR |
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For N42RF : 61 616 ^NOAA2^ _ _ _ _ ^ _ _ _ _ ^ OB^ _ ^KWBC=^ CNTRL 'T'

Aircraft # / Mission #
Storm Name

For N43RF : 61 616 ^NOAA3^ _ _ _ _ ^ _ _ _ _ ^ OB^ _ ^KWBC=^ CNTRL 'T'

(select correct line
scratch out the other)

Note : Scratch out all unused code blocks