U.S. Dept. of Commerce / NOAA / Aircraft Operations Center AOC-WP3

Flt ID: 02092614	From: KMCF	To: KMCF
Flt No: 02—	Blk In: 1910	ATA: 1900
ETD: 1600	Blk Out: 1540	ATD: 1549
ETE: 4+00	Blk Time: 3.5	Flt Time: 3.2
Sponsor Org: NOAA/NESDIS	Program: OCEAN WINDS	Purpose: IWRAP CALIBRATION

AOC Personnel

AC: TAGGART, B ✓	Sys Eng: DELGADO, J ✓
CP: STRONG, T ✓	Data Sys: McMillan, S ✓
Nav: ADLER, J ✓	Radar:
FE: WADE, S	GPS/BT: PEEK, B ✓
FD: SHEPHERD, T ✓	Cld Phys:
Avionics:	

Participating Scientists / Visitors / AOC

Name (Last, First)	Activity on Aircraft	Affiliation
CHANG, P ✓	PI	NESDIS
CONNOR, L ✓	SFMR	〃
ZHANG, A ✓	〃	UMASS
ESTEBAN, D ✓	〃	〃
RICHTER, T ✓	OBS	USAF

Proposed/Actual Mission Remarks (Recco, Fixes, Storm, PENET, NHOP #)

buoy 42003 2553 8557

NOAA2 WxWXA TRAIN

ship 2554 8619 1727 ~TK345

1870
1540
330

U.S. Dept. of Commerce / NOAA / Aircraft Operations Center — AOC WP-3D

Flt ID:	Time Off:	Time On:
020926H	1549	1900

	A/C (Take Off)	Wx Station (Take Off)	A/C (Land)	Wx Station (Land)
Pressure	1008.6	29.79	1007.2	29.76

	Number	Data Disposition / Date / Quality
Flt Lvl Tapes	2	
Radar Tapes	1	
Cloud Physics Tapes	CD	
Video Tapes	4	
AXBT		
AXCP		
AXCTD		
Dropsondes	2	NESDIS

Video

	Forward	Left Side	Right Side	Down	Remarks
Time On					
Time Off					
Rate					

Remarks

NOAA P-3 N42RF
Ocean Winds 2002
IWRAP Calibration Flight

Flight ID: H020926

Sensor or system	Number or Name
INE	2
Accelerometer	2
Temperature Probe	1
Dew Point Probe	1 (General Eastern)
Altitude (for vertical wind)	Radar Altitude (RA-159)
Static Pressure	Rosemount Fuselage
Dynamic Pressure	Rosemount Fuselage
Time Source	Micro 99
Constants File	CO2023.CON

Take off: 1549Z
Land: 1900Z

Notes:

The Radar Altimeter (RA-159) was replaced by the RA-232 during take off and landing due to spiking (154601 - 161930 Take off and 184530 - 190300 Landing).

All other instruments worked optimally during the flight; however, there were multiple times when the dewpoint temperature exceeded ambient temperature resulting in an RH >100%. These times were during heavy rain events (as noted by the Johnson-Williams Liquid Water sensor) and were likely due to a wet-bulb effect on the total temperature sensor and/or an artificial warming of the dewpoint sensor as it tried to burn off excess moisture. No corrections were made during these events.

The aircraft INE positions were renavigated with respect to GPS.

SPECIAL NOTE!!! Locations 80, 81 and 82 of record five on the standard tape contain vertical ground, vertical air and vertical speeds, respectively, computed using Dave Jorgensen's vertical wind algorithm.
It is recommended that these values be used for vertical wind analysis.

	Takeoff	**Landing**
Aircraft Static Pressure	1008.6 mb	1007.2 mb
Corrected Tower Pressure	1008.8 mb	1007.8 mb

Flight Director: Tom Shepherd
Phone #: (813) 828-3310 ext. 3053

Flight ID: 020926H

U.S. Dept. of Commerce/NOAA/Aircraft Operations Center Form 413-50

Time	Lat	Long	Trk	Hdg	Wind Dir	Wind Spd	T_a	T_d	Press. Alt.	Geo. Alt.	Sfc Press.	Press. Sfc	Dyn. Press	Remarks
160735	2724	8329	242	238	200	31.5	17.9	17.5	1647	1669	1007.3	836.1	62.4	
163146	2644	8450	242	237	199	33.3	19.4	16.4	1462	1487	1006.7	849.3	72.7	
165030	2612	8548	202	204	211	30.7	19.1	14.4	1463	1481	1006.0	849.4	68.1	Begin Leg 1
165655	2553	8557	202	205	222	29.4	18.4	15.9	1463	1483	1006.4	849.4	68.5	DI NES Buoy
170300	2534	8605	202	205	219	28.5	18.7	15.7	1464	1485	1006.5	849.5	66.0	End Leg 1
171355	2546	8538	289	282	219	31.9	18.7	14.9	1463	1486	1006.7	849.4	68.7	Begin Leg 2
~1719	2553	8558												Buoy
172455	2559	8619	289	282	230	30.0	18.2	15.7	1463	1475	1005.4	849.4	68.7	End Leg 2
173540	2536	8606	025	021	235	32.0	18.8	15.6	1464	1484	1006.1	849.4	69.8	Begin Leg 3
174030	2554	8556	025	024	215	30.4	18.5	15.5	1462	1479	1005.9	849.4	69.0	Buoy DZ NES
174500	2611	8548	025	021	220	31.4	19.4	15.4	1463	1478	1005.4	849.7	66.3	End Leg 3
175600	2601	8617	114	121	229	29.3	17.8	16.3	1462	1474	1005.8	849.4	66.2	Begin leg 4
180100	2553	8556	114	122	227	30.2	19.2	15.3	1462	1477	1005.7	849.5	64.9	Buoy
180625	2544	8536	114	122	214	30.0	18.7	15.2	1462	1484	1006.2	849.5	64.5	End Leg 4 RTB

2553 8557 2976

Flight ID: N20926H

Takeoff: 1549
Land: 1900

IWRAP Calc Flt.

TT # 1
TD # 1
INE # 2
AZI # 2
Altimeter 159

Replace RA159 w/ RA232

Take off: 154601 – 161930

Land: 184530 – 190300

Renav (OVER)

1)	161200	0.3	0.0	27 17.6	83 43.4
	164000	0.6	-0.3	26 31.0	85 17.0
	170100	0.4	-0.2	25 40.1	86 2.2
	172900	0.4	0.4	25 47.5	86 17.1
		0.6	0.0	25 48.1	85 46.1
5)	180400			27 31.2	82 58.2
	184900	0.4	0.3	27 50.7	82 31.3
		0.7	0.5		
7)	190300				

N42RF AVAPS DropSonde Log

N42RF Project: HURRICANE 02 Flight ID 020926H

Mission: Calibration Flight #: _____ System Status: _____

Drop #	Sonde Serial Number	Chn. #	Time (Zulu)	Press. offset	Winds time	Operator Initials	Comments / Drop Status/ Failure Reason	GOOD ☑
1	011 345 025	1	1657		30	JEH	✓	
2	011 245 240	2	174030		42	JEH	✓	
3	~~013 035 243~~							
4	~~013 035 245~~							
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
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23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								

Drop #	Sonde Serial Number	Chn #	Time (ZULU)	Press. offset	Winds time	Operator Initials	Comments/ Drop Status /Reason for Failure	GOOD ☑
34	BUCS 3-1		FAL	1-2				
35	RAID 3-0		BILLS	2-2				
36	CARD 2-2		PAN	3-1				
37	Giants 2-2		COU	2-2				
38	Bengs 0-4		COLTS	2-1				
39	PATS 3-1		FINS	3-1				
40	PITTS 1-2		SAINT	3-1				
41	Redsk 1-2		T.T	1-3				
42	Charge 40		Bronc					
43	chiefs 2-2		Jets	1-3				
44	EAG 3-1		NAG	2-1				
45	RAMS 0-4		49	2-1				
46	RAV		Brown	2-2				
47								
48	Pack 3-1		Bears	2-2				
49								
50	Lions 1-3							
51	TEX 1-3							
52	Sea 1-3							
53	Vik 0-4							
54								
55								
56								
57								
58								
59								
60								

06/21/00

AVAPS HINTS

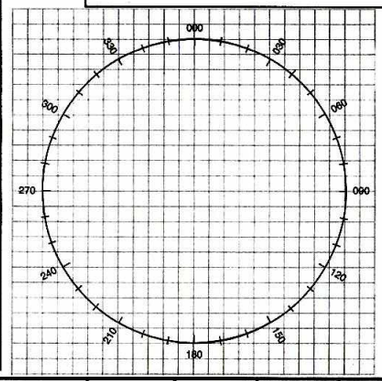
- N43's **RED PHONE** appears to interfere with AVAPS telemetry, don't allow its use while sondes are in the air
- ASDL transmits on 401.8MHz, and will trash AVAPS telemetry +/- 1 MHz from that point
- Rawinsondes transmit at 403.0. Caribbean taxi drivers and bandit radio stations transmit wherever they want.
- The sonde GPS Oscillator needs at least 2 minutes to warm-up and stabilize. If you drop early, the winds data (if any) will be initially not accurate and probably late.
- Below 10,000', open the P3 launch chute cover holes at least 2/3 of the way. From 10,000' to 18,000', open about ½ way, above 18,000' open 1/3 of the way.
- Dropping a backup sonde prior to selecting BEGIN **COLLECTING DATA** is the single most frequent operator error.
- 60 seconds is the cut-off time for Good vs. Late winds. If no satellites are locked on by 60 seconds, or no winds data by 80 seconds, drop the backup.
- Frequency block assignments: **Air Force - Block A** **N42RF - Block B** **N43RF - Block C** **N49RF - Bloc**
- P3 Drops only.... Shorten the ribbon to about 20" - 25"
- When sonde telemetry fails prematurely, wait until the normal drop time has elapsed to terminate data collection.
- If Pre-launch sonde telemetry is dependent upon hand position while holding the sonde in order to **NOT** generate CRC errors, the sonde transmitter is bad and it should not be dropped.

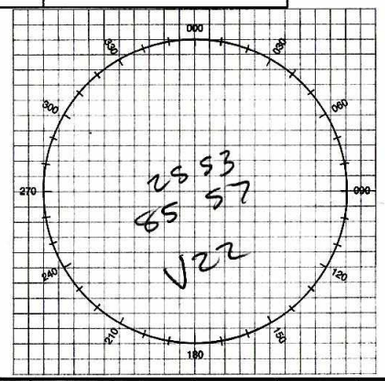
HD 242°T

MISSION LOG

PAGE ___ OF ___

CLEARANCES			
FREQ	ALT	HDG	OTHER
			L190° ↗600 4704q
			↗7K
			200
			↗6K
			200°
			J3K ↗2600
			040°





POSITION REPORT

1. POSITION
2. TIME
3. ALTITUDE
4. NEXT POSITION
5. ETA
6. NEXT POSITION

EMERGENCY MESSAGE

TRANSMIT THE FOLLOWING MESSAGE TO ANY AGENCY ON THE AIR-GROUND FREQUENCY IN USE. IF UNABLE TO ESTABLISH COMMS, ATTEMPT CONTACT ON ANY OF THE FOLLOWING EMERGENCY FREQUENCIES:

UHF/VOICE	VHF/VOICE	MF/VOICE	HF/CW	MF/CW
243.0	121.5	2182 KHZ	8364 KHZ	500 KHZ

MAYDAY, MAYDAY, MAYDAY
THIS IS NOAA _____, NOAA _____, NOAA _____

- POSITION _____ N / S
  _____ E / W AT _____ Z
- HEADING _____ TRUE/MAG
- AT _____ KTS TRUE/INDICATED
- FLIGHT LEVEL OR ALTITUDE _____
- WE ARE A P-3 AIRCRAFT WITH _____ SOULS ON BOARD
- NATURE OF EMERGENCY
- ASSISTANCE DESIRED
- PILOT INTENTIONS
- WE HAVE _____ ENDURANCE REMAINING

TIME	FIX TYPE	POSITION	INS 1 POSITION	K ERR	INS 2 POSITION	K ERR	MH	VAR +E==>	TH	DR +R==>	TRK	GS	WD	WS	ALT	TAS	NEXT PT	DIST	TIME	ETA	REMARKS
1534	ENG										/	/									
1540	TAXY																				
1540	BLOCK										/	/									
1549	TO																				
1551	↑	27 48.1 082 32.5	27 47.9 082 32.5	+.2 +0	27 47.8 082 32.5	+.3 +0				3R	202	176	200	35	↗6K	214					KMCF 196/4
1611	△	27 19.0 083 40.2	27 19.3 083 40.0	-.3 +.2	27 18.7 083 40.2	+.3 +0				4R	244	208	210	22	6K	227					
1717	△	25 50.3 085 49.5	25 51.4 085 49.2	-1.1 +.3	25 50.1 085 49.5	+.2 +0				7R	288	210	220	25	6K	220					
1803	△	25 49.5 085 49.5	25 51.3 085 48.5	-1.8 +1.0	25 48.8 085 49.3	+.7 +.2				9L	114	229	220	35	6K	221					
1900	△	KMCF																			
		27 50.9 082 31.3	27 51.8 082 29.3	-.9 +2.0	27 50.1 082 30.7	+.8 +.6															