

Flt ID: 020925H	From: KMCF	To: KMCF
Flt No: 02-83	Blk In: 1315	ATA: 1307
ETD: 0400	Blk Out: 0350	ATD: 0403
ETE: 9+30	Blk Time: 9.4	Flt Time: 9.1
Sponsor Org: NOAA/NHC	Program: Hurr 2002	Purpose: T.S. ISIDORE

AOC Personnel

AC: TAGGART, B ✓	Sys Eng: DELGADO, J ✓
CP: TEBEEST, R ✓ / STRONG, T ✓	Data Sys: MEMMILLAN, S ✓
Nav: ADLER, J ✓	Radar:
FE: BAST, G ✓ / WADE, S	GPS/BT: PEEK, B ✓
FD: SHEPHERD, T ✓	Cld Phys:
Avionics: ROGERS, M ✓	

Participating Scientists / Visitors / AOC

Name (Last, First)	Activity on Aircraft	Affiliation
CHANG, P ✓	PI	NESDIS
CONNOR, L ✓	SENR / SCAT	
McLaughlin, DAVE ✓	↓	UMass
ZHANG, A ✓		
ESTERAN, D ✓		
BLACK, M ✓	HAPS / RADAR	HRD
LANDSEA, C ✓		
X SCHWARTZ, ROBERT ✓	NOAA Pub Affairs	NOAA HQ
X LABORDE, KENT ✓		NOAA HQ

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

NOAA2 2910A Isidore 2588
24.0 89.9 360/8

1275
350
925

Recco's

0415 1210
0450
0520
438

File ID:

020925H

Time Off:

0403

Time On:

1307

	A/C (Take Off)	Wx Station (Take Off)	A/C (Land)	Wx Station (Land)
Pressure	1013.1	29.94	1011.2	29.88
	Number	Data Disposition / Date / Quality		
Fit Lvl Tapes	2	IRS		
Radar Tapes	1	HRD Min Blank		
Cloud Physics Tapes	CD	HRD " "		
Video Tapes	4	HRD " "		
AXBT	10	All good		
AXCP				
AXCTD				
Dropsondes	17	9 HRD / 5 NESDIS / 3 NHC		

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



NOAA P-3 N42RF
Ocean Winds 2002
T.S. Isidore



Flight ID: H020925

<u>Sensor or system</u>	<u>Number or Name</u>
INE	1
Accelerometer	1
Temperature Probe	1
Dew Point Probe	3 (Buck Research)
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: 0403Z

Land: 1307Z

Notes:

There were two time gaps during the flight (044031 - 044040 and 075941 - 075950).

The Radar Altimeter (RA-159) was replaced by the RA-232 during take off and landing due to spiking (040001 - 042030 Take off and 125930 - 131000 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	1013.1 mb	1011.2 mb
Corrected Tower Pressure	1013.9 mb	1011.9 mb

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

Flight ID: 020925H

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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
043140	2710	8351	241	234	153	34.0	18.4	15.5	1423	1485	1012.0	853.4	73.0	
044448	2642	8451	248	239	153	36.4	18.9	17.8	1458	1526	1008.9	848.2	74.2	D1 NES 16 X
050740	2607	8602	240	229	149	44.6	19.1	14.4	1480	1504	1006.8	847.6	70.5	
051446	2553	8629	240	229	151	50.1	17.6	17.3	1496	1511	1006.1	845.9	69.7	D2 B2 16
052840	2527	8717	237	223	156	62.0	18.1	15.7	1516	1499	1001.4	844.0	81.6	D3 NES X
054130	2502	8800	237	223	153	53.6	18.1	17.7	1541	1490	998.0	841.3	72.2	D4 B3 12
060900	2415	8941	245	244	160	1.0								D5 B4 16 <u>CNTR</u>
070450	2259	8924	103	108	241	31.2	18.9	19.6	1584	1511	994.0	836.7	76.1	
071100	2253	8855	103	110	231	38.1	18.7	18.3	1586	1522	995.4	836.7	74.2	
071400	2250	8841												D6 B5
071615	2251	8831												D7
073430	2348	8915	310	304	226	26.9	18.9	19.5	1595	1507	992.1	835.7	74.0	
075015	2434	9000	320	320	230	1.0	19.3	19.2	1596	1492	990.2	835.8	74.5	D8 <u>NHC CNTR</u>
081635	2553	9117												D9 B6
084345	2557	8935	89	96	133	39.4	18.4	19.5	1596	1514	993.1	835.8	77.2	D10 B7
090350	2557	8824	90	102	156	47.3	18.5	17.5	1566	1509	996.4	838.6	73.9	
090800	2558	8804												D11 B8
090930	2555	8802	181	178	162	52.8	17.8	18.5	1570	1518	997.6	838.7	78.1	
092530	2506	8803	180	177	166	54.9	18.3	18.3	1564	1496	995.4	838.7	72.5	D12 NES 20 X
092618	2504	8803												D13 NES X
095400	2344	8802	180	184	191	62.5	18.2	19.1	1564	1501	996.1	838.5	74.8	D14 NES X
095845	2330	8802												D15 B9
100950	2325	8842	267	259	215	37.4	19.3	19.6	1562	1493	994.2	838.6	73.1	
104450	2344	9030	360	357	281	20.6	19.5	18.6	1580	1492	992.6	837.5	71.8	
111426	2523	9019	010	011	280	2.0	20.0	17.5	1588	1484	990.0	836.3	68.5	D16 <u>NHC CNTR</u>
113230	2653	9019												D17 B10
115410	2710	8845	081	086	149	22.5	-4.0	-5.3	5946	6210	988.2	475.4	70.6	FL195 RTB
122645	2731	8554	080	091	170	50.7	-2.1	-7.3	5332	5602	999.6	516.5	79.4	FL175
125610	2746	8306	112	116	163	20.4	11.6	5.9	2805	2913	1009.4	728.0	105.7	Descend → MCF

989.7

2521

1)	045800	-0.3	0.2	26 24.9	85 28.9	✓
	054000	-0.6	0.3	25 4.8	87 55.2	✓
	064300	-0.4	0.4	23 19.8	91 3.4	✓
	074700	0.6	1.2	24 24.4	89 51.6	✓
5)	085800	0.6	1.5	25 57.3	88 42.9	✓
	095300	-0.1	1.6	23 46.9	88 2.3	✓
	102000	0.2	1.7	23 22.4	89 20.4	✓
	110200	0.6	2.1	24 48.7	90 27.9	✓
	113800	0.3	2.8	26 58.6	89 59.1	✓
10)	122100	0.3	3.0	27 28.6	86 23.4	✓
11)	131000	-0.2	3.6	27 51.5	82 30.4	✓

Flight ID: 020925H

Takeoff: 0403

Land: 1307

TT # 1

TD # 3

INE # 1

AZI # 1

Altimeter 159

Time gaps

044030 - 044040

075940 - 075950

Sub RA 159 w/ RA 232

Take off: 040001 - 042030 ✓

Land: 125930 - 131000 ✓

Renav (OVER)

N42RF AVAPS DropSonde Log

N42RF Project: HURRICANE 02

Flight ID 020925H

Mission: ISIDORE

Flight #: _____

System Status: _____

Drop #	Sonde Serial Number	Chn. #	Time (Zulu)	Press. offset	Winds time	Operator Initials	Comments / Drop Status/ Failure Reason	GOOD ☒
1	020 215 357	1	0448	—	20	BGP		✓
2	022 928 023	2	0514	—	32	BGP		✓
3	022 928 025	3	0528	—	30	BGP		✓
4	020 615 319	4	0541	—	35	BGP		✓
5	022 945 174	1	0609	—	25	BGP		✓
6	020 615 030	2	0714	—		BGP		✓
7	020 615 264	3	0716	—		BGP		✓
8	022 945 173	4	0750	—	22	BGP		✓
9	011 245 237	1	0816	—	56	BGP		✓
10	011 245 464	2	0844	—	30	BGP		✓
11	013 635 244	3	0908	—	18	BGP		✓
12	013 635 093	4	0926	—	NED	BGP	NED	
13	013 515 036	1	0926	—	22	BGP		✓
	013 945 038	2	0954	—	24	BGP		✓
	013 635 240	3	0958	—	12	BGP		✓
16	013 635 082	4	1111	—	30	BGP		✓
17	013 635 248	1	1132	—	30	BGP		✓
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								

The map displays Mexico with various geographical features and flight paths. A yellow line connects several points labeled [1], [2], [3], [4], and [5]. A compass rose indicates North (N). The map includes labels for "CUBA ADIZ", "MEXICO", "GULF OF MEXICO", and "GULF DE BATAVIA".

LIMITED DISTRIBUTION
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CADRG current as of Feb 12 2001

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LIMITED DISTRIBUTION

DATE 020925	SCHEDULED RX TIME 0600	AIRCRAFT NUMBER N42RF	FLIGHT DIRECTOR SHEPHERD
WX MISSION IDENTIFIER			OB NUMBER 9
VORTEX DATA MESSAGE			
A	25 / 0609Z	DATE and TIME of FIX	
B	24 DEG 15 MIN (N) S	LATITUDE of FIX	
	89 DEG 43 MIN (W) E	LONGITUDE of FIX	
C	850 MB 1344 M	MINIMUM HEIGHT of STANDARD LEVEL	
D	NA KT	ESTIMATE of MAXIMUM SURFACE WIND OBSERVED	
E	NA-DEG NM	BEARING and RANGE FROM CENTER of MAXIMUM SURFACE WIND	
F	169 DEG 57 KT	MAXIMUM FLIGHT LEVEL WIND NEAR CENTER	
G	063 DEG 80 NM	BEARING and RANGE FROM CENTER OF MAXIMUM FLIGHT LEVEL WIND	
H	990 MB	MINIMUM SEA LEVEL PRESSURE COMPUTED FROM DROPSONDE OR EXTRAPOLATED FROM FLIGHT LEVEL. IF EXTRAPOLATED, CLARIFY IN REMARKS.	
I	18 C / 1544 M	MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE OUTSIDE EYE	
J	20 C / 1602 M	MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE INSIDE EYE	
K	18 C / NA C	DEWPOINT TEMP / SEA SURFACE TEMP INSIDE EYE	
L	Poor DEFINED	EYE CHARACTER: Closed wall, poorly defined, open SW, etc.	
M	NA	EYE SHAPE/ORIENTATION/DIAMETER: Code eye shape as: C - Circular; CO - Concentric; E - Elliptical. Transmit orientation of the major axis in tens of degrees, i.e., 01-010 to 190; 17 - 170 to 350. Transmit diameter in nautical miles. Examples: C8= Circular eye 8 miles in diameter. E09/15/5=Elliptical eye, major axis 090-270, length of major axis 15 NM, length of minor axis 5 NM. CO8-14=Concentric eye, diameter inner eye 8 NM, outer eye 14 NM.	
N	1345/8	FIX DETERMINED BY / FIX LEVEL. FIX DETERMINED BY: 1-Penetration; 2-Radar; 3-Wind; 4-Pressure; 5-Temperature. FIX LEVEL (Indicate surface center if visible; indicate both surface and flight level centers ONLY when same): 0-Surface; 1-1500 ft; 9-925mb; 8-850mb; 7-700mb; 5-500mb; 4-400mb; 3-300mb; 2-200mb; NA-Other	
O	/ / / NM	NAVIGATION FIX ACCURACY / METEOROLOGICAL ACCURACY	
P	REMARKS MAX FL WIND <u>57</u> KT <u>NE</u> QUAD <u>0539</u> Z SLP <u>990</u> MB Dropsonde 67 2518 0533 8732 132 miles		

INSTRUCTIONS: Items A thru G (and H when extrapolated) are transmitted from the aircraft immediately following the fix. The remainder of the message is transmitted as soon as available for scheduled fixes and at the Flight Director's discretion for unscheduled (intermediate) fixes.

990.5

DATE 020925H	SCHEDULED RX TIME /	AIRCRAFT NUMBER N42RF	FLIGHT DIRECTOR Shepherd
WX MISSION IDENTIFIER NOAA2 29 2910A Ts. Dore			OB NUMBER 16
VORTEX DATA MESSAGE			
A	25 10750 Z	DATE and TIME of FIX	
B	24 DEG 34 MIN (N) S	LATITUDE of FIX	
	90 DEG 00 MIN (W) E	LONGITUDE of FIX	
C	850 MB 1341 M	MINIMUM HEIGHT of STANDARD LEVEL	
D	NA KT	ESTIMATE of MAXIMUM SURFACE WIND OBSERVED	
E	NA DEG NM	BEARING and RANGE FROM CENTER of MAXIMUM SURFACE WIND	
F	201 DEG 54 KT	MAXIMUM FLIGHT LEVEL WIND NEAR CENTER	
G	138 DEG 124 NM	BEARING and RANGE FROM CENTER OF MAXIMUM FLIGHT LEVEL WIND	
H	990 MB	MINIMUM SEA LEVEL PRESSURE COMPUTED FROM DROPSONDE OR EXTRAPOLATED FROM FLIGHT LEVEL. IF EXTRAPOLATED, CLARIFY IN REMARKS.	
I	18 C 1583 M	MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE OUTSIDE EYE	
J	20 C 1595 M	MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE INSIDE EYE	
K	19 C 1 NA C	DEWPOINT TEMP / SEA SURFACE TEMP INSIDE EYE	
L	Poorly defined	EYE CHARACTER: Closed wall, poorly defined, open SW, etc.	
M	NA	EYE SHAPE/ORIENTATION/DIAMETER: Code eye shape as: C - Circular; CO - Concentric; E - Elliptical. Transmit orientation of the major axis in tens of degrees, i.e., 01-010 to 190; 17 - 170 to 350. Transmit diameter in nautical miles. Examples: C8= Circular eye 8 miles in diameter. E09/15/5=Elliptical eye, major axis 090-270, length of major axis 15 NM, length of minor axis 5 NM. CO8-14=Concentric eye, diameter inner eye 8 NM, outer eye 14 NM.	
N	1345/8	FIX DETERMINED BY / FIX LEVEL. FIX DETERMINED BY: 1-Penetration; 2-Radar; 3-Wind; 4-Pressure; 5-Temperature. FIX LEVEL (Indicate surface center if visible; indicate both surface and flight level centers ONLY when same): 0-Surface; 1-1500 ft; 9-925mb; 8-850mb; 7-700mb; 5-500mb; 4-400mb; 3-300mb; 2-200mb; NA-Other	
O	1 1 2 NM	NAVIGATION FIX ACCURACY / METEOROLOGICAL ACCURACY	
P	REMARKS MAX FL WIND 60 KT SE QUAD 0717 Z SLP 990 MB DROPSONDE 22.9 88.5 2434 09000		

INSTRUCTIONS: Items A thru G (and H when extrapolated) are transmitted from the aircraft immediately following the fix. The remainder of the message is transmitted as soon as available for scheduled fixes and at the Flight Director's discretion for unscheduled (intermediate) fixes.

DATE 020925H	SCHEDULED RX TIME 12Z	AIRCRAFT NUMBER N42RF	FLIGHT DIRECTOR Shepherd
WX MISSION IDENTIFIER 2910A Isidore			OB NUMBER 30 31
VORTEX DATA MESSAGE			
A	251 1111 Z	DATE and TIME of FIX	
B	25 DEG 23 MIN (N) S	LATITUDE of FIX	
	90 DEG 19 MIN (W) E	LONGITUDE of FIX	
C	850 MB 1344 M	MINIMUM HEIGHT of STANDARD LEVEL	
D	NA KT	ESTIMATE of MAXIMUM SURFACE WIND OBSERVED	
E	NA DEG NM	BEARING and RANGE FROM CENTER of MAXIMUM SURFACE WIND	
F	281 DEG 26 KT	MAXIMUM FLIGHT LEVEL WIND NEAR CENTER	
G	185 DEG 115 NM	BEARING and RANGE FROM CENTER OF MAXIMUM FLIGHT LEVEL WIND	
H	990 MB	MINIMUM SEA LEVEL PRESSURE COMPUTED FROM DROPSONDE OR EXTRAPOLATED FROM FLIGHT LEVEL. IF EXTRAPOLATED, CLARIFY IN REMARKS.	
I	20 C 11581 M	MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE OUTSIDE EYE	
J	21 C 11588 M	MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE INSIDE EYE	
K	18 C / NA C	DEWPOINT TEMP / SEA SURFACE TEMP INSIDE EYE	
L	NA	EYE CHARACTER: Closed wall, poorly defined, open SW, etc.	
M	NA	EYE SHAPE/ORIENTATION/DIAMETER: Code eye shape as: C - Circular; CO - Concentric; E - Elliptical. Transmit orientation of the major axis in tens of degrees, i.e., 01-010 to 190; 17 - 170 to 350. Transmit diameter in nautical miles. Examples: C8= Circular eye 8 miles in diameter. E09/15/5=Elliptical eye, major axis 090-270, length of major axis 15 NM, length of minor axis 5 NM. CO8-14=Concentric eye, diameter inner eye 8 NM, outer eye 14 NM.	
N	1345/8	FIX DETERMINED BY / FIX LEVEL. FIX DETERMINED BY: 1-Penetration; 2-Radar; 3-Wind; 4-Pressure; 5-Temperature. FIX LEVEL (Indicate surface center if visible; indicate both surface and flight level centers ONLY when same): 0-Surface; 1-1500 ft; 9-925mb; 8-850mb; 7-700mb; 5-500mb; 4-400mb; 3-300mb; 2-200mb; NA-Other	
O	/ / / NM	NAVIGATION FIX ACCURACY / METEOROLOGICAL ACCURACY	
P	REMARKS MAX FL WIND <u>67</u> KT <u>E</u> QUAD <u>0948</u> Z 65 0959 2329 8802 67 0948 2401 8802		

INSTRUCTIONS: Items A thru G (and H when extrapolated) are transmitted from the aircraft immediately following the fix. The remainder of the message is transmitted as soon as available for scheduled fixes and at the Flight Director's discretion for unscheduled (intermediate) fixes.

