NOAA P-3 N43RF
Tropical Storm Ophelia

Flight ID: 050908I

Sensor or system	Number or Name
INE	1
Accelerometer	1
Temperature Probe	1
Dew Point Probe	2 (Edgetech)
Altitude (for vertical wind)	Radar Altimeter 159
Static Pressure	Rosemount Fuselage
Dynamic Pressure	Rosemount Fuselage 1281
Time Source	Micro 99
Constants File	CO3051.CON

Notes:
There were no time data/gaps during this flight.

Data from radar altimeter 232 was substituted in place of radar altimeter 159 from 073101Z-073540Z, 131631Z-131900Z.

The difference in values between the dynamic attack pressure from the radome and the fuselage is greater than 20 mb. No corrections were made to the data.

There were numerous times during the flight where the dewpoint temperature exceeded ambient temperature resulting in RH>100%. This was likely due to rain, 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. Edits to dewpoint sensor number two were made between 100001Z-100130Z to bring the relative humidity values below 120%.

The King Liquid Water sensor was not operating during this flight.

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	1010.8 mb	1007.3 mb
Corrected Tower Pressure	1012.4 mb	1011.0 mb

Flight Director: Martin Mayeaux (813) 828-3310 ext. 3086

U.S. Dept. of Commerce / NMAO / NOAA / Aircraft Operations Center

Flt ID: 050908I	From: KmCf	To: KmCf
Flt. No: 05 - 053	Blk In: 1324 Z	Time On: 1316 Z
ETD: 7:30 Z	Blk Out: 0724 Z	Time Off: 0734 Z
ETE: 6 + 00	Blk Time: 6 +00 (6.0) Hrs	Flt Time: 5 +42 (5.7) Hrs
Sponsoring Org: NHC	Program: Reconnaisance	Purpose: Ophelia (T.S.)

AOC Flight Crew

Aircraft Commander: Tebeest	Data System: Lynch
Co-Pilot: Silah , Choy	AVAPS: Torg
Navigator: Gallagher ,	System Eng:
Flight Eng: Floyd , Klippel	A A:
Flight Director: Mayeaux , Damiano	A A:
Avionics: Sans Souci	Crew Chief:

Participating Scientists / Visitors

Name (Last, First)	Activity on Aircraft	Affiliation
Aberson, S	Sci	HRD
Royer's, R	Sci	HRD
Dodge, P	Sci	HRD
Walsh, ED	Sci	HRD

Remarks (Storm Name, Mission ID, Recco Times, Fix Times) 306C

Recco Times 2958 2729 2831 8100 7841 7735 2653 7934

Fix # Fix Time

Storm Name: Ophelia

Mission ID: Noaa3 0516A ophelia

Penetration number and time

(See reverse for additional remarks)

U.S. Dept. of Commerce / NMAO / NOAA / Aircraft Operations Center

Flight ID: 050908I	Time Off: 0734 Z	Time On: 1316 Z

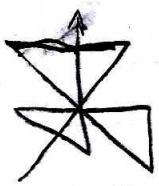
	A/C Takeoff	Wx Station - Takeoff	A/C - Land	Wx Station - Land
Pressure	1010.6 mb	2991 mb	1007.3 mb	2987 mb

ATIS	Time	Observation
Takeoff	0255 Z	36007G16KT P6SM 26/23 A2991
Land	1159 Z	33007KT P6SM 25/23 A2987

	Number	Data Disposition / Date / Quality
Flight Level Tapes		
Radar Tapes		
Cloud Physics Tapes / CDs		
Video Tapes		
Dropsondes	17	Good: 15 Bad: 2
AXBT		
AXCP		
AXCTD		

Remarks:

Plan 9z-12z-15z Alpha Patterns
850 mb flight Altitude. Drop in center and during max wind
In from SW-NE Shortened sw sides. Wrist guard all the way
to coast. Parallel Coast on Down wind legs.
No planes out there.
After our mission AF comes in Tail 38 fr 18,21,00Z
Possibly knock off last fix



994 mb SLP
NW quad 61 KT
SE quad 54 KT
20 nm Eye
Coordinates 28°48'N 79°30'W
Stationary

Drop at Turns, max winds, ctr,

NOAA FORM 56-49
(2-95)

MISSION PREFLIGHT LOG

DESTINATION	MISSION	NAVIGATOR	AIRCRAFT COMMANDER	FLIGHT DIRECTOR	SCHEDULED / ACTUAL TAKEOFF Z	DATE OF TAKEOFF
KMCF	TS OPHELIA RECCO	LT GALLAGHER	LCDR TeBEEST	DAMIANO	07^{45} / 07^{35}	8SEP05

	WP	LAT / LON	RTE	MH	VAR +E==>	TH	DR +R==>	TRK	GS	WD	WS	ALT	TAS	LEG / TOT DIST	LEG / TOT TIME	PROP ETA	ETA	ATA	REMARKS
1	KMCF	27-51.0 082-31.3														07^{45}	07^{37}		
2	LAL	27-59.2 082-00.8	→	077	4W	073	—	073	250	L	J	9000	250	28 28	+07 +07	07^{52}	07^{42}		
3	MLB	28-06.3 080-38.1	↓	089	5W	084	—	084	↓	↓	↓	↓	↓	74 102	+18 +25	08^{10}	08^{00}		
4	IP	27-58.2 080-25.9	↓	132	5W	127	—	127	↓	↓	↓	↓	↓	14 116	+04 +29	08^{14}	08^{04}	08^{02}	
5	TS OPHELIA	28-48.0 079-30.0	↓	051	6W	045	—	045	↓	80	40+	5000	↓	70 186	+17 +46	08^{31}	08^{21}	08^{13}	
	+		↓						↓	↓	↓	↓	↓	1032 1218	4+08 4+54	12^{39}	12^{29}		
	OMN	29-18.2 081-06.8	↓	236	7W	229	—	229	↓	L	J	10000	↓	113 1331	+27 5+21	13^{06}	12^{56}		
	MCF	27-51.0 082-31.3	↓	226	5W	221	—	221	↓	↓	↓	↓	↓	114 1445	+27 5+48	13^{33}	13^{23}		

INS PERFORMANCE

	INS 1	INS 2
BEGIN ALIGN TIME	05^{34}	05^{34}
ALIGN STATUS (0-5)	Ø	0
END NAV TIME	13^{27}	13^{27}
START NAV TIME	07^{17}	07^{17}
DELTA T	6+10	6+10

TERMINAL ERRORS

	INS 1	INS 2
DELTA LAT	+5.7	+.8
DELTA LON	-1.2	-.4
RGS	2	0
RADIAL ERROR	6	1

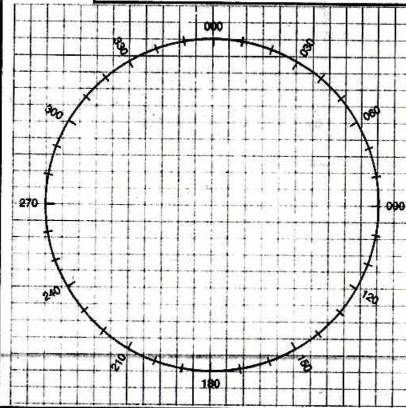
REMARKS

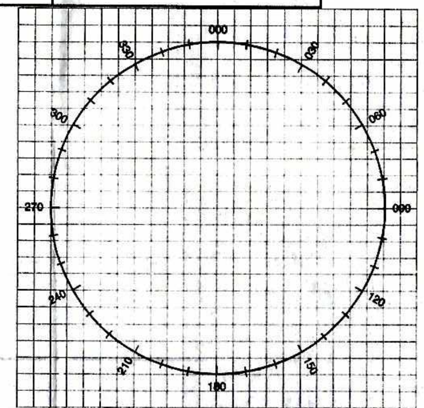
9 12 & 15

CLEARANCES			
FREQ	ALT	HDG	OTHER
119.9	1600	080 RT	MLB 130/15 EX 9000 @ +10 3664

MISSION LOG

PAGE ___ OF ___





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:

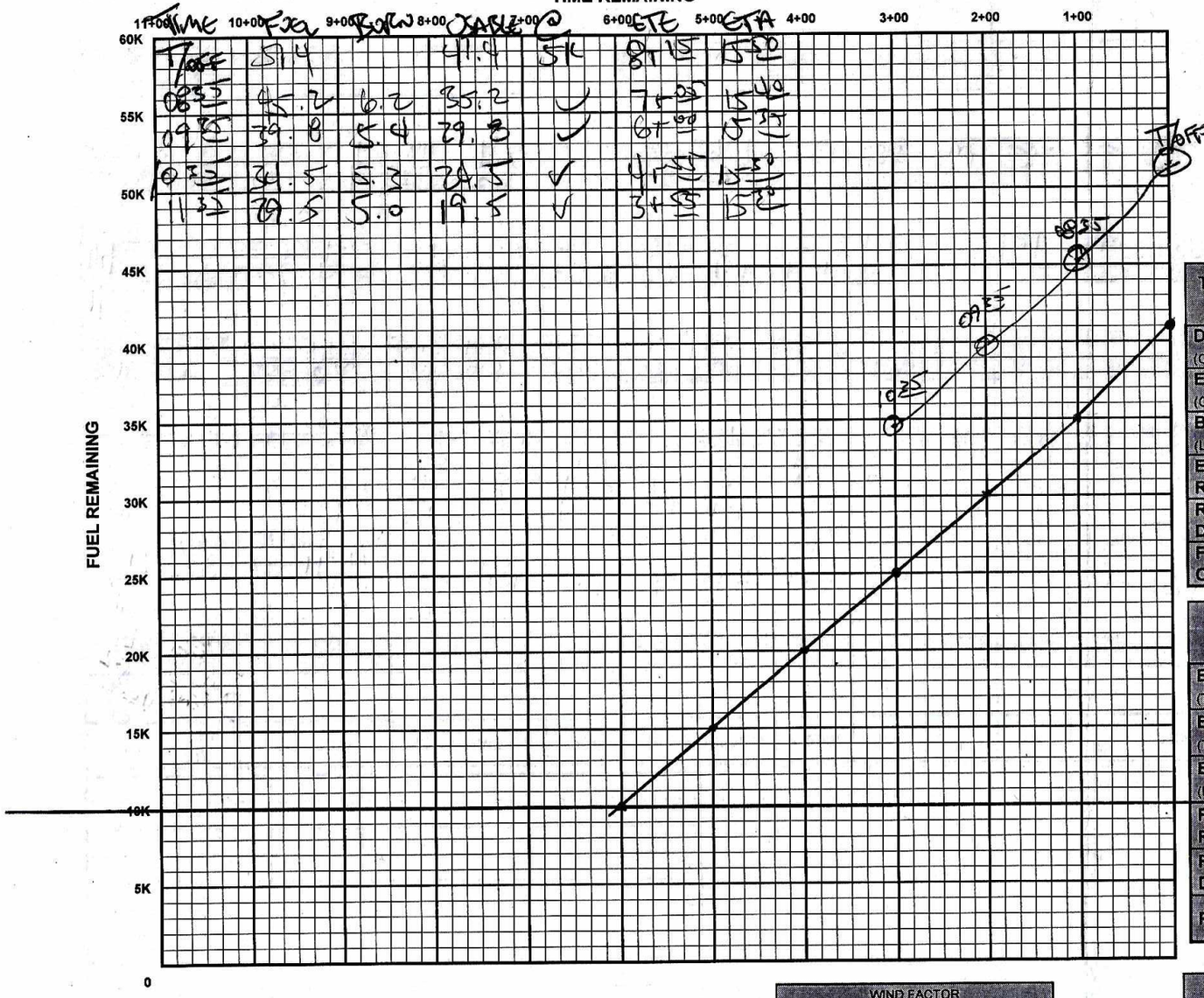
UHF/VOICE	VHF/VOICE	MF/VOICE	HF/CW	MF/CW
243.0	121.5	2182 KHZ	8364 KHZ	500 KHZ

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
07^23 / 07^24	ENG / TAXI																				
07[illegible] / 07[illegible]	BACK / TAXI																				
07^40	△	27-52.7 082-21.6	27-52.7 082-21.4	— +.2	27-52.7 082-21.4	— +.2	081	4W	077	2R	079	230	333	13	↗9000	215	LAL	10	+03	0743	INS #2 [illegible]
08^19	[illegible]	28-44.442 079-34.620																			
08^40	△	29-31.1 078-38.8	29-30.3 078-38.2	+.8 +.6	29-31.0 078-38.5	+.1 +.3	059	6W	053	8L	045	226	141	27	5000	246	2	28	+07	08^47	
09^40	△	28-52.4 079-51.1	28-52.0 079-50.9	+1.4 +.2	28-53.3 079-51.1	+.1 —	115	6W	109	10R	119	223	034	52	5000	228	[illegible]	12	+03	09^43	
09^49	[illegible]	28-40.533 079-34.233																			
10^40	△	28-39.6 077-48.9	28-38.8 077-48.8		28-39.0 077-48.8		269	6W	263	7R	270	224	197	30	5000	232	[illegible]	71	+19	10^52	
11^08	[illegible]	28-38.7 079-33.9																			
1140	△	27-15.8 079-43.5	27-12.0 079-43.7	+3.8 -.2	27-14.9 079-43.5	+.9 —	167	6W	161	8L	153	241	269	27	5000	229	7	14	+03	11^43	
12^14	[illegible]	28-36.521 079-32.651																			
12^40	△	28-58.4 080-58.9	28-53.3 080-59.7		28-57.5 080-59.4		238	5W	233	5L	228	279	000	33	10000	253	KMCF	89	+20	13^02	
13^17	LAND KMCF	27-51.0 082-29.6	27-45.3 082-30.8	+5.7 -1.2	27-50.2 082-30.0	+.8 -.4															

RANGE CONTROL GRAPH



TIME	FUEL	BURN	TABLE @	ETE	ETA
TOFF	51.4		41.4	5K	8T 15	15 50
0855	47.2	6.2	35.2	✓	7+00	15 40
0715	39.8	5.4	29.8	✓	6+00	15 35
1035	34.5	5.3	24.5	✓	4+55	15 30
1132	29.5	5.0	19.5	✓	3+55	15 25

ETP = .5(TOTAL DISTANCE x OUTBOUND WIND FACTOR)

WIND FACTOR		
WINDSPEED	HEADWIND	TAILWIND
10	1.03	.97
20	1.06	.94
30	1.10	.92
40	1.14	.89
50	1.18	.87
60	1.22	.85

ENROUTE FUEL		
ENROUTE TIME	6+00	8+00
ENROUTE FUEL (6K, 5K,4.5K RULE)	31.0	41.0
RESERVE AT DESTINATION	10.0	10.0
REQUIRED RAMP	41.0	51.0
ACTUAL RAMP FUEL		

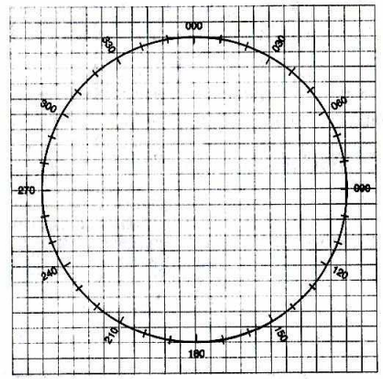
TACTICAL (OFFSTA TO DESTINATION)	4 ENG	3 ENG
DISTANCE (OFFSTA TO DEST)		
ENROUTE TIME (OFFSTA TO DEST)		
BURN RATE (LBS/HR)	4500	5500
ENROUTE FUEL REQUIRED		
RESERVE AT DESTINATION		
FUEL AT OFFSTA		

POINT OF SAFE RETURN	4 ENG	3 ENG
ETP DISTANCE (TO DEPARTURE)		
ENROUTE TIME (TO DEPARTURE)		
BURN RATE (LBS/HR)	4500	5500
FUEL REQUIRED		
RESERVE AT DEPARTURE		
PSR FUEL		

CEX - TRUE BEARING METHOD	INS1	INS2	WET
COMPASS TYPE			
MCH (READING)			
- MTH (SEXTANT)			
CE			
- VAR			
DEV			

CEX - ERB METHOD	INS1	INS2	WET
COMPASS TYPE			
MERB (DIAL 000)			
+ ZN			
= MTH			
MCH (READING)			
CE			
- VAR			
= DEV			

CEX SIGHT	
GMT	
GHA	
CORR	
GHA	
LONG +W -E	
EXACT LHA	
LAT	
BODY	
DEC	
HC / D	
CORR	
HC	
Z	
ZN	



F-FACTOR	PRESS ALT	200	250	300	350
	10,000	1.0	1.0	.99	.99
	20,000	.99	.98	.97	.97
	30,000	.97	.96	.95	.94
	40,000	.96	.94	.92	.90

TRUE AIRSPEED CROSS-CHECK							
TIME	IAS	PRESS ALT	"F" FACTOR	EAS	OAT	TAS	ITAS

NOAA • AOC • SED

N43RF AVAPS DROP LOG

Project : Hurricane '05 / RAINEX Mission : TS OPAREA Flight ID : 050908 1

Take Off : 0735 Landing : _____ Flt Dir : _____ Launcher S/N: _____

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Winds Time	Operator	Comments	Good ?
1	017 225 095	1	-.3	802	—	DSS	NO WINDS	
2	002 615 579	3	.0	804	1:04	DSS		✓
3	002 615 565	1	0	814	45			✓
4	002 615 341	2	.1	818	48			✓
5	002 615 581	3	.1	822	31			✓
6	002 615 300	1	-.2	0847	20			✓
7	002 158 072	1	.2	0921	19			✓
8	002 615 507	1	.2	0945	15			✓
9	002 615 576	3	0	0948	26			✓
10	003 115 475	1	.5	0952	32			✓
11	002 525 130	1	-.1	1016	37			✓
12	002 615 509	1	2.9	1035	25			✓
13	002 525 298	1	0	055	—		NO LAUNCH NO	
14	001 915 170	3	.5	1057	23			✓
15	002 615 301	2	0	1107	35			✓
16	002 525 270	1	0	1113	46			✓
17	002 615 578	3	.4	1148	94	RT	Late Winds	✓

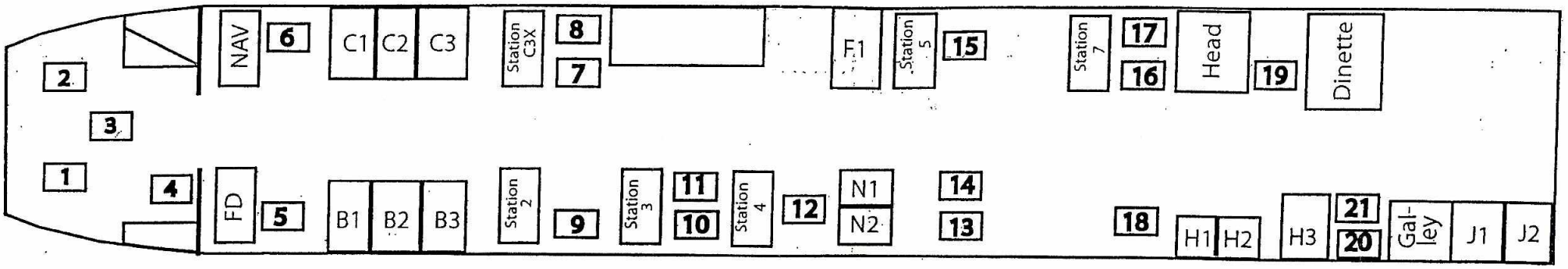
NHC - 15

AOC - 2

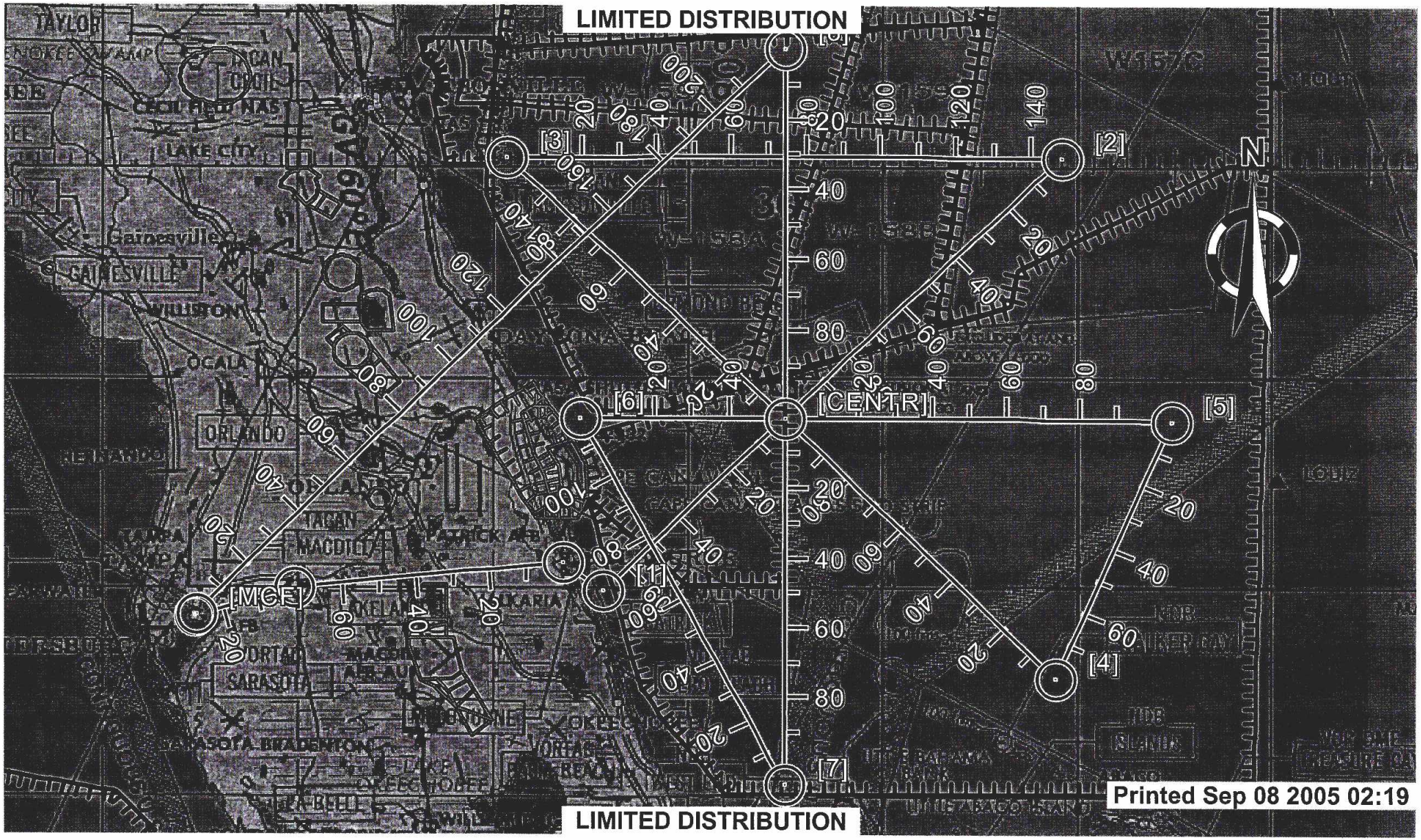
050908I	TIME	LAT	LON	PS	SP	TA	TD	TK
RA	WD	WS	WZ	Comment				
	065238	27.50.94	-82.29.58	1011.2	1018.5	25.1	19.4	206.0
64.0	71.7	1.5	-.0	Test				
	073555	27.51.84	-82.29.16	977.4	1009.5	23.5	21.5	84.8
285.0	11.2	11.6	.1	takeoff				
	074146	27.51.90	-82. 6.06	776.2	1004.3	15.2	11.4	107.9
2247.0	322.6	5.5	.2					
	080228	27.55.50	-80.22.20	840.0	1005.5	19.1	16.5	46.2
1580.0	308.2	13.1	-.6	drop1 no wind				
	080407	28. 0.12	-80.16.56	846.9	1005.2	18.7	17.1	46.0
1503.0	303.8	14.4	-.1	drop2 backup				
	081421	28.29.82	-79.43.80	841.3	995.1	20.7	18.2	36.1
1483.0	300.0	25.2	.5	drop3				
	082212	28.55.08	-79.27.12	841.8	991.9	19.8	19.2	43.8
1446.0	118.1	25.6	-1.5	drop4				
	084719	29.58.68	-78.11.04	844.7	1007.9	17.8	17.3	270.2
1545.0	140.8	13.1	.0	drop5				
	092157	29.50.22	-80.59.04	845.0	1007.7	18.8	15.3	133.8
1544.0	43.2	16.8	-.2	drop6				
	092728	29.35.40	-80.41.82	845.0	1006.9	18.2	16.8	137.0
1535.0	40.3	18.3	-.2	Eye center drop 7 between 3 and 4				
	094516	28.49.86	-79.43.38	844.7	990.3	22.0	19.8	119.1
1411.0	31.7	23.7	.4	drop 8				
	094911	28.39.66	-79.33.00	844.9	986.8	21.7	19.6	134.4
1376.0	238.7	12.8	-.1	center drop 9				
	095217	28.31.08	-79.23.04	839.1	995.7	18.8	19.6	134.4
1503.0	229.6	25.4	-.9	drop10				
	101624	27.32.16	-78.10.74	841.5	1007.2	18.4	16.7	25.6
1576.0	213.8	15.9	.2	drop11				
	103509	28.38.28	-77.35.16	841.8	1006.8	19.1	15.5	280.2
1572.0	188.3	16.8	.5	drop12				
	105551	28.41.22	-79. 3.90	842.7	1000.2	18.3	18.1	270.1
1502.0	182.3	24.2	.1	drop13 bad				
	105707	28.41.22	-79. 9.48	842.8	998.4	19.2	18.8	270.1
1489.0	177.6	23.8	.3	drop14 backup				
	110742	28.38.70	-79.34.14	834.9	987.4	22.0	18.1	282.7
1488.0	108.8	1.8	.4	drop15				
	111318	28.38.70	-79.59.10	835.0	996.9	20.2	18.3	268.8
1564.0	356.3	26.0	.1	drop16				
	114808	26.58.74	-79.29.82	846.4	1007.5	19.4	14.3	356.3
1530.0	262.7	14.0	.0	drop17				

NOAA AIRCRAFT OPERATIONS CENTER

Flight ID I050906



1. TEBEEST — PILOT
2. SILAH — COPILOT
3. KLIPPEL — FLIGHT ENGINEER
4. ~~MAYEAUX~~ ROGERS — STATION 1
5. DAMIANO — FLIGHT DIRECTOR
6. GALLAGHER — NAVIGATOR
7. OFF DUTY FE — STATION C3X
8. — STATION C3X
9. ~~ROGERS~~ MAYEAUX — STATION 2
10. DODGE — STATION 3
11. ABERSON — STATION 3
12. LYNCH — STATION 4
13. — PROJECT SEAT
14. — PROJECT SEAT
15. OLNEY — STATION 5
16. — STATION 7
17. — STATION 7
18. SANS SOUCI — STATION 8
19. — DINETTE
20. — GALLEY
21. — GALLEY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