



NOAA P-3 N42RF
Hurricane Ophelia RECCO
KMCF - KMCF



Flight ID: H050909

Sensor or system

Number or Name

Inertial

2

Accelerometer Data

2

Temperature Probe

1

Dew Point Probe

1

Altitude (for vertical wind)

Radar Altitude

Radar Altitude

RA-159

Static and Dynamic Pressure

Rosemount Fuselage

Time Source

Micro 99

Constants File

CO2054.CON

Local meteorological data:

Observation taken at 0855Z, by KMCF. Wind from N at 7 knots. Visibility 7 miles. Temperature 28 C, Dewpoint 24 C. Surface Pressure 1012 mb.

Notes:

Used RA-232 to patch RA-159 053747Z-053750Z.

RA-159 was inoperative before take off, after landing.

There were several instances when the dew point temperature exceeded the ambient temperature resulting in a RH% above 100%. These times were during heavy precipitation events and were likely due to a wet-bulb effect on the total temperature sensor, and/or an artificial warming of the dew point sensor as it tried to burn off excess moisture. No corrections were made during these events unless noted above.

All other instruments worked optimally during the flight.

The aircraft INE1 positions were re-navigated with respect to GPS.

Flight Director:
Phone #:

Contact Jack Parrish
(813) 828-3310 ext. 3077

U.S. Dep't. of Commerce / NMAO / NOAA / Aircraft Operations Center

FLT ID: 050909H	From: KMCF	To: KMCF
Flt No: 05 - 43	In: 0802 Z	On: 0851 Z
ETD: 0130 Z	Out: 0119	Off: 0131
ETE: 8 +	Blk Time: 7 + 43 (7.7) Hrs	Flt Time: 7 + 20 (8.3) Hrs
Sponsoring Org: NHC	Program: Recco	Purpose: H. Ophelia

AOC Flight Crew

Aircraft Commander: Kennedy ✓	Data System: McMillan ✓
Co-Pilot: Strong Nelson	AVAPS: Olney ✓
Navigator: Brakob ✓	System Engineer: Kerr
Flight Eng: Bast Wade ✓	AA:
Flight Director: Parrish ✓	AA:
Avionics:	Crew Chief:

Participating Scientists / Visitors

Name (Last, First)	Activity on Aircraft	Affiliation
Chang, P. ✓	P.I.	NOFSDS
Estabrook, D. ✓	1W2P	↓
Catneras, R. -	1W2P	↓
Chu, T. ✓	1W2P	↓
Black, M.	P.I.	↑AD

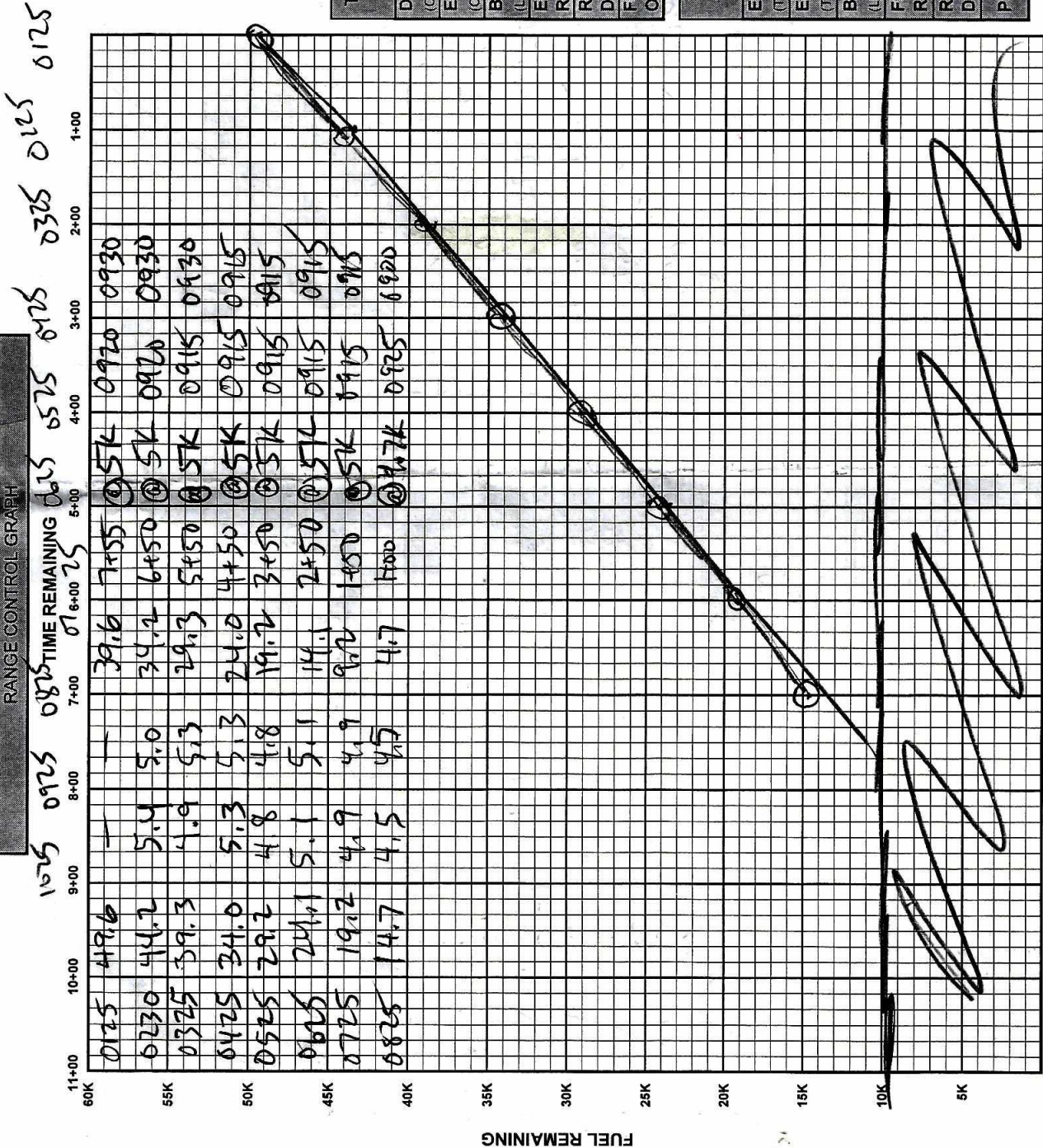
Remarks (Storm Name, Mission ID, Recco Times, Fix Times)

Storm Name:	Mission ID:	Recco Times	Fix #	Fix Time
Ophelia 03,06,09Z	0816A	29.1N 79.0W Center Max wind drop	4 eye	Penetrations
		FIX 0224Z 28°40'N 79°15'W E991mb		
		FIX 0431Z 28°47'N 79°20'W 990mb		
		FIX 0559Z 28°52'N 79°17'W 990mb		
		Fix 0732Z 29°02'N 79°15'W 991mb		
2600 28/20 21100P.3F.5K 3200 101.9 350/14 28/24 350/12 330/8 29.88 581011.7 Fm.8K 26/20 1012 581012 Fm.15K 29.86 1011.0 Land				

(See reverse for additional remarks)

U.S. DEP'T OF COMMERCE / NMAO / NOAA / AIRCRAFT OPERATIONS CENTER				
FLT ID:		TIME OFF: Z		TIME ON: Z
	A/C - Takeoff	WX Station - Takeoff	A/C - Land	WX Station - Land
Pressure				
ATIS - Takeoff				
ATIS - Land				
Data Source	Number	Data Disposition / Date / Quality		
Flight Level Tapes				
Radar Tapes				
Cloud Physics Tapes / Cds				
Video Tapes				
		6 → HRPD 11 → APC ^{NHL} 11 → 6 more <i>lockups</i>		
Dropsondes	17	Good: 6 Bad: 9 Total: 2 late <i>winds</i>		
AXBT	4			
AXCP				
AXCTD				
SONOBUOY				
REMARKS:				

RANGE CONTROL GRAPH



0125	49.6	—	39.6	7.55	0.5K	0920	0930
0230	44.2	5.4	34.2	6.50	0.5K	0920	0930
0325	39.3	4.9	29.3	5.50	0.5K	0915	0930
0425	34.0	5.3	24.0	4.50	0.5K	0915	0915
0525	29.2	4.8	19.2	3.50	0.5K	0915	0915
0625	24.1	5.1	14.1	2.50	0.5K	0915	0915
0725	19.2	4.9	9.2	1.50	0.5K	0915	0915
0825	14.7	4.5	4.7	1.00	0.5K	0925	0920

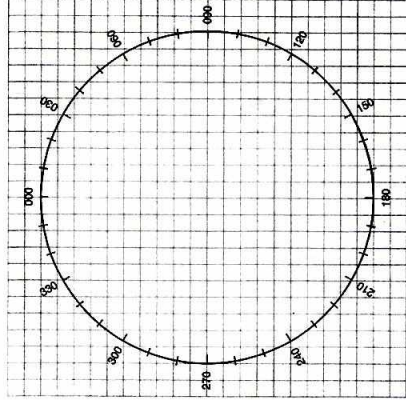
ENROUTE FUEL	
ENROUTE TIME	8:00
ENROUTE FUEL (6K SK 4.5K RULE)	41K
RESERVE AT DESTINATION	10K
REQUIRED RAMP	51K
ACTUAL RAMP FUEL	49.6

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

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

CEX - TRUE BEARING METHOD				CEX SIGHT	
COMPASS TYPE	INS1	INS2	WET	GMT	
MCH (READING)				GHA	
- MTH (SEXTANT)				CORR	
CE				GHA	
- VAR				LONG → W → E	
DEV				EXACT LHA	
				LAT	
				BODY	
				DEC	
				HC/D	
				CORR	
				HC	
				Z	
				ZN	

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



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

DISTANCE REMAINING

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

PRESS ALT		200	250	300	350
10,000	F. FACTOR	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	ITAS
0152	202	7K	X	X	+24	230
						231

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The top diagram shows a circle divided into 12 equal segments, each labeled with a category number (1 to 12) and a value of 83.3, indicating a uniform distribution of 1000 observations across 12 categories.

The bottom diagram shows a circle divided into 12 equal segments, each labeled with a category number (1 to 12) and a value representing the number of observations for that category. The values are: 1: 83.3, 2: 83.3, 3: 83.3, 4: 83.3, 5: 83.3, 6: 83.3, 7: 83.3, 8: 83.3, 9: 83.3, 10: 83.3, 11: 83.3, 12: 83.3. This also represents a uniform distribution of 1000 observations across 12 categories.

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 _____

[illegible]

- AT _____ KTS TRUE/INDICATED

- FLIGHT LEVEL OR ALTITUDE _____

- WE ARE A P-3 AIRCRAFT WITH  SOULS ON BOARD

- NATURE OF EMERGENCIES

- ASSISTANCE DESIRÉE
 BUT INTENTIONS

- PILOT INTENTIONS
- WE HAVE
- ENDURANCE REMAINING

[illegible]

7749

0830

FIX TYPES
(G) - GPS (I) - INS (R) - RADIO (V) - VISUAL (C) - CELESTIAL (D) - DR

MISSION LOG PAGE ____ OF ____

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
0206	WS																				
0209	WS																				
0219	WS																				
0235	FOUD	AVAFS	WINDSONDE	gate door	motor																
0424	WS																				
0805	DS																				
0223	G	28-40 79-15	28-41 79-15																		
0430	G	28-47 79-20																			
0559	G	28-52 79-17																			
0732	G	29-02 79-15																			

29-04 79-14

Flight Data Log

Flight ID: 050909H H. ORNELIA RECO

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Form 413-50

Time	Lat	Long	Trk	Hdg	Wind Dir	Wind Spd	T _a	T _s	Press. Alt	Geo. Alt	Sfc Press.	Press. Sfc	Dyn. Press	Remarks
014030	28 00	81 56	77	71	0	27.9	15.2	9.8	2163	2220	1006	779	74.8	Over Labe land
0155	28 00	80 50												↓ to SK
020629	27 51	80 04	45	38	322	33.9	19.1	16.5						Drop 1 Do sets
020942	28 00	79 54	46	36	315	40	19.8	13.4	1474	1497	1005.9	842.1		Drop 2
021940	Drop SW	eye wall							HT↓					
0224	28 46	79 15					19	22	1363		991			\$
0301	28 56	79 03	45	59	133	54	19.3	11.9	1575	1538	1000.6	841		NE of center
0308	29 16	78 40												Drop
031025	29 21	78 34	43	53	129	38	19.0	16.7	1483	1514	1006.8	847	74.5	BT Drop
032330	29 57	77 54	2	2	127	26	19.7	14.2	1483	1544	1010.2	847	72.2	NE corner
035606	30 02	80 35			MAKE OVER	BT								
040415	30 01	80 33	138	131	50	29	18.6	12.1	1464	1511	1010	849	74.6	Drop, BT
042411	Drop NE	eye wall							HT↓					
0431	28 47	79 20					21	16	1361		990			\$
043415	Drop													
050730	28 09	77 53	359	355	204	44	20.3	13.2	1474	1514	1007.8	848	69.7	
052330	29 20	77 57	2	6	165	40	19.1	15.3	1477	1519	1008.2	847.9	81	
0532	29 57	77 53	30	37	149	27	18.1	16.3	1477	1534	1010.4	848	75	NE QUAD
0541	29 41	78 20	28	221	141	38	18.7	16.0	1475	1508	1007.4	848	74.4	Drop
044730	29 24	78 43	Drop NE	Eye wall					HT↓					
0559	28 52	79 18					23	17	1363		990			\$
060318	28 41	79 28	223	239	318	52	23.7	12.9	1573	1522	995	836		
0621	27 55	80 08	96	93	313	25	18.9	14.4	1483	1515	1007.5	847		
0641	27 42	78 33	97	105	221	37.5	19.3	14.9	1474	1511	1007.5	848.8	74	
0711	28 03.5	78 084	314	303	213	44	19.0	14.8	1482	1512	1007.1	847.6	68.6	In boundary SE
0732	29 02	76 16					20	21	1364		991			\$
075330	↑ to	10K												
080130	28 43	80 18	156	153	359	37.9	10.2	8.4	3030	3168	1005	696		1 leg @ 10K to SK
0820	28 04	80 44	262	267	328	25	10.4	5.7	3103	3228	1004.7	691.9		
0902	27 51	82 28.6					25.7	18.2	24	11	1011.7	1010.4	0.0	Black h

NOAA · AOC · SED
N42RF AVAPS DROP LOG

Project : Hurricane '05

Mission : OPHELIA

Flight ID : 0509091

Take Off :

Landing :

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Winds Time	Operator	Comments	Good ?
1	012625017	1	-.5	0206		OLNEY	NO WINDS/NO LAUNCH	
2	012225008	5	-.7	0209	47			✓
3	012225007	1	-.4	0219			NO WINDS	
4	012225005	6	-.3	0230			STUCK IN TUBE	BURN
5	012225004	1	-.5	0308	30			✓
6	012225058	1	-.6	0404			NO WINDS FAST FALL	
7	012025021	2	-.7	0405	16			✓
8	012225126	1	-.5	0424			NO WIND	
9	012225108	2	-.4	0430	50		CENTER	✓
10	012225110	3	0	0434	13			✓
11	012225176	1	-.5	0541			NO WINDS	
12	010715228	3	-1.0	0547			NO LAUNCH DET	
13	012225149	4	-.5	0559	1.50		LATE WINDS	
14	010748104	1	-.4	0603			NO WINDS	
15	012225173	1	-.6	0619	@1.40		LATE WINDS ON CHASIS 2 NO WINDS ON	
16	003115340	1	0	0732		Kerr	No launch detect	
17	002648006	2	-.2	0745	46			✓
	002615604	3	1.3					

RES 500 285

Moř a

KHAS