



**NOAA P-3 N42RF
T.S. Ophelia**

Flight ID: 050907H

Sensor or system

Number or Name

INE.....	2
Accelerometer.....	2
Temperature Probe.....	1
Dew Point Probe.....	1
Altimeter (for vertical wind).....	RA-159
Static Pressure.....	Rosemount (fuselage)
Dynamic Pressure.....	Rosemount (fuselage)
Time Source.....	Micro 99

Local Met. Data: Not copied at takeoff

Take off: 1337Z

Land: 1954Z

The RA-232 was substituted for the RA-159 during take off and landing due to spiking (T.O. 133401-134005; 194515-195700 Land).

The RA-159 had spikes that were removed and patched (135051-135105).

All other instruments functioned normally during the flight.

There were data gaps noted: 193921-193926

There were times during heavy precipitation events (e.g. eye wall penetrations) when the dew point exceeded ambient temperature yielding a RH of greater than 100%. This is probably due to a wet bulb effect on the total temperature probe and/or the dew pointer over heating while trying to remove excess moisture. In these instances, no corrections were attempted.

SPECIAL NOTE: These data have not had Dr. Dave Jorgensen's vertical wind algorithm applied to them. Only the Aircraft Operations Center standard vertical wind algorithm has been applied. A new post-flight data processing algorithm was employed which currently lacks the Jorgensen method. The data can and will be rerun if required by the investigator.

Take off

Land

Aircraft Static Pressure
Corrected Tower Pressure

1012.6 mb
1012.9 mb

1011.1 mb
1011.9 mb

Flight Director:

Tom Shepherd
813-828-3310 x3053

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

FLT ID: 050907H	From: KMCF	To: KMCF
Flt No: 05-	In: 2003 ^Z	On: 1954 ^Z
ETD: 1330 Z	Out: 1325	Off: 1337
ETE: 8+30	Blk Time: 6+38 6.6 Hrs	Flt Time: 6+17 6.3 Hrs
Sponsoring Org: NOAA/NHC	Program: Hurr 05	Purpose: T.S. OPHELIA

AOC Flight Crew

Aircraft Commander: KENNEDY, P ✓	Data System: MC Millam, S ✓
Co-Pilot: STRONG, T ✓	AVAPS:
Navigator: SIEGEL, P ✓	System Engineer:
Flight Eng: BAST, G ✓	AA:
Flight Director: SHEPHERD, T ✓	AA:
Avionics: ROGERS, M ✓	Crew Chief:

Participating Scientists / Visitors

Name (Last, First)	Activity on Aircraft	Affiliation
CHANG, P ✓		
ESTEBAN, D ✓		
CONTRERAS, R ✓		
ASUZU, P ✓		
BLACK, M ✓		
DESFLOTS, M ✓		

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

Storm Name: T.S. OPHELIA

Mission ID: 0316A OPHELIA

Recco Times	Fix #	Fix Time
1419	1	1450
2-1427		
3-1519	2	1627
4-1555	3	1751
5-~1655		
6-1727 (0614)		
1823		

(See reverse for additional remarks)

U.S. DEPT OF COMMERCE / NMAO / NOAA / AIRCRAFT OPERATIONS CENTER

FLT ID: 050907H		TIME OFF: 1337 Z		TIME ON: 1954 Z	
	A/C - Takeoff	WX Station - Takeoff	A/C - Land	WX Station - Land	
Pressure	1012.6	29.91	1011.1	29.88	
ATIS - Takeoff					
ATIS - Land					
Data Source	Number	Data Disposition / Date / Quality			
Flight Level Tapes	2				
Radar Tapes	1				
Cloud Physics Tapes / Cds	0				
Video Tapes	4				
Dropsondes	12	Good: 12	Bad:	Total:	3 NHC 9 HRD
AXBT	0				
AXCP					
AXCTD					
SONOBUOY					

REMARKS:

15 18 21

ONLY DP 1 DP.

28.4 79.2 @15Z

330/3

1004

2938 > IP
8037

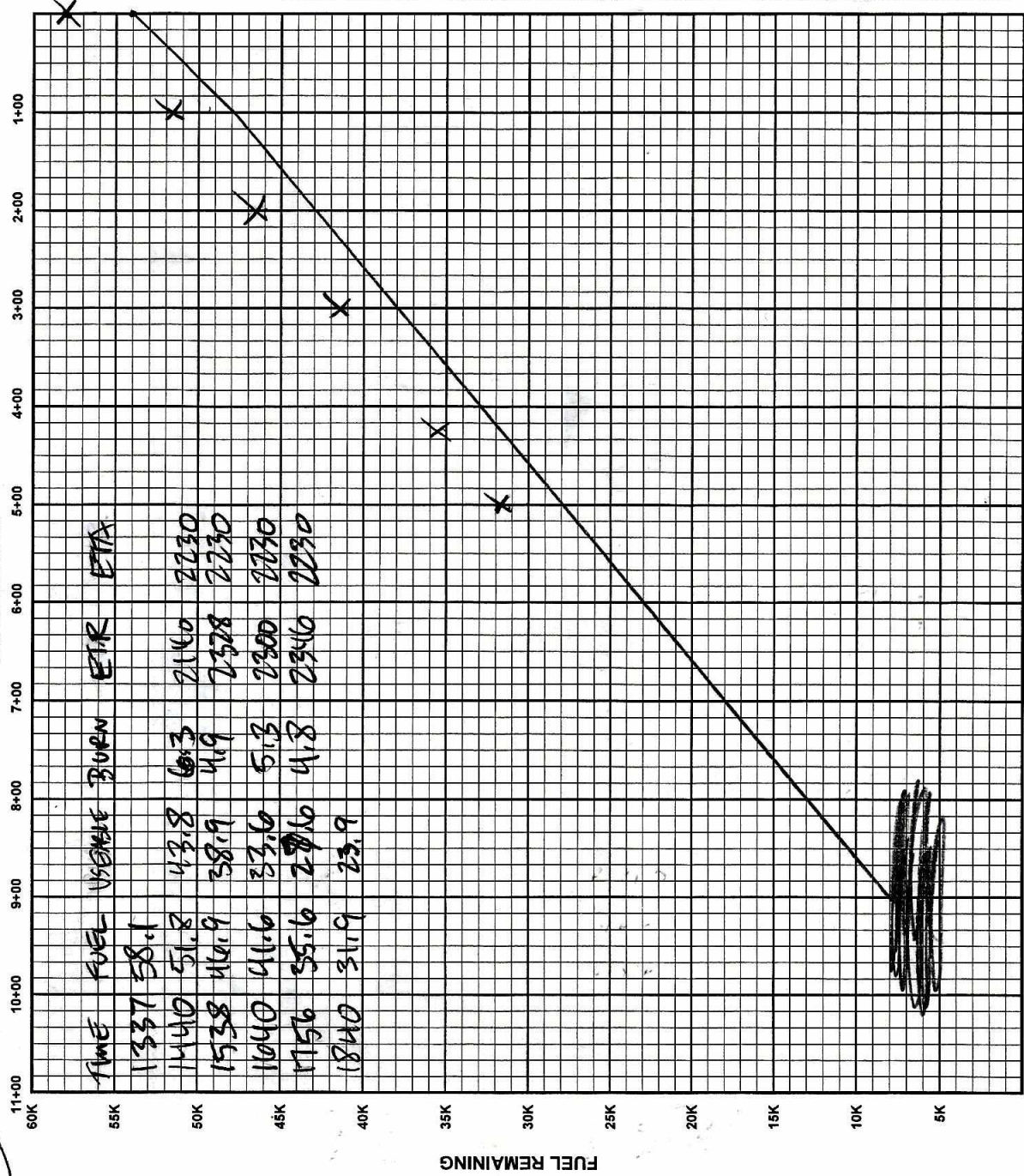
SHUT DOWN SFMR ~ 1734

START SFMR ~ 1841

27.5

RANGE CONTROL GRAPH

TIME REMAINING



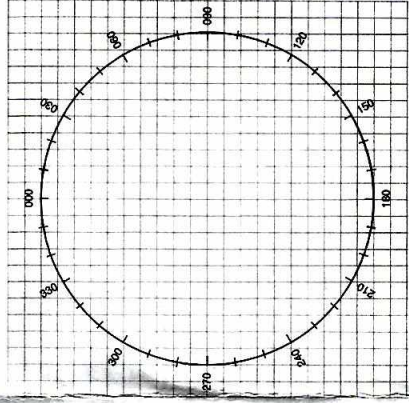
ENROUTE FUEL	
ENROUTE TIME	9:00
ENROUTE FUEL (6X 5K/4 5K RULE)	4600
RESERVE AT DESTINATION	8.0
REQUIRED RAMP	54.0
ACTUAL RAMP FUEL	58.1

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

POINT OF SAFE RETURN	
ETP DISTANCE (TO DEPARTURE)	
ENROUTE TIME (TO DEPARTURE)	
BURN RATE (LBS/HR)	4500
FUEL REQUIRED	5500
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 AW -E	
DEV				EXACT LHA	
				LAT	
				BODY	
				DEC	
				HC/D	
				CORR	
				HC	
				Z	
				ZN	

CEX - ERB 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)

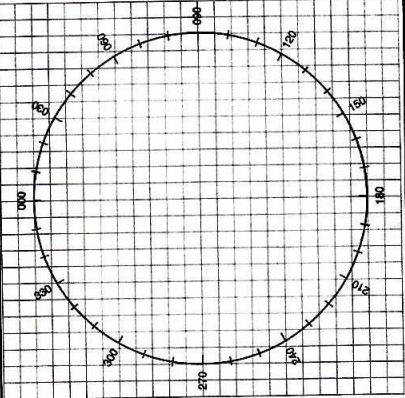
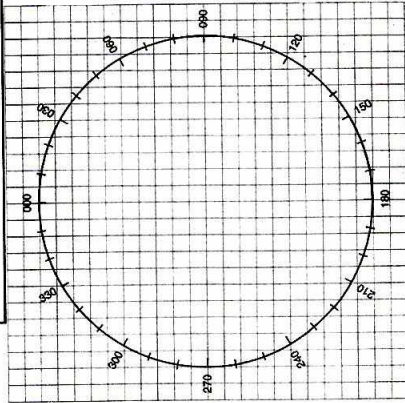
PRESS ALT		200		250		300		350	
10,000	1.0	.99	.98	.97	.96	.95	.94	.93	.92
20,000	.99	.98	.97	.96	.95	.94	.93	.92	.91
30,000	.97	.96	.95	.94	.93	.92	.91	.90	.89
40,000	.96	.95	.94	.93	.92	.91	.90	.89	.88

TRUE AIRSPEED CROSS-CHECK						
TIME	IAS	PRESS ALT	"F" FACTOR	EAS	OAT	ITAS
1401	210	080	X	X	22	233

REMARKS	
42	2130
43	2030
	03012/15/18

[illegible]

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

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

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 13 SOULS ON BOARD
NATURE OF EMERGENCY

- NATURE OF EMERGENCY
- ASSISTANCE DESIRED

- PILOT INTENTIONS
- WE HAVE
- ENDURANCE REMAINING

[illegible]

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

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

[illegible]

050907H

Time	Lat	Lon	TA	TD	Trk	Hdg	RA	PS	SP	WD	WS	WZ	Comments
132451	27.50.94	-82.29.58	31.1	22.9	138.2	134.6	13.0	1012.5	1014.0	123.6	4.4	90.5	Block out
133657	27.50.88	-82.31.38	26.1	21.5	40.5	39.9	-5.0	1014.0	1013.5	355.2	3.4	1.1	Take off
135109	28.33.30	-82.18.42	13.2	10.1	359.8	2.4	2558.0	751.5	1008.9	17.4	9.8	1.1	8K PA; bkn blo, ovc abv
140546	29.19.20	-81.57.60	13.6	7.8	52.1	53.7	2551.0	753.4	1010.5	57.4	11.8	1.2	8K PA; sct blo, bkn abv
142852	29.35.04	-80.33.06	17.7	14.7	136.5	130.3	1515.0	852.1	1013.6	46.0	15.2	1.4	Inbound pass 1; 5000 RA
144055	29.3.12	-79.56.22	18.0	16.3	135.1	128.6	1508.0	850.3	1010.3	38.9	16.0	1.6	D1 -HRD
144758	28.49.32	-79.30.66	18.9	18.5	112.9	104.1	1502.0	846.6	1004.5	13.9	19.6	1.4	D2 hrd
145018	28.46.74	-79.20.76	21.5	19.0	121.1	127.2	1507.0	844.0	1000.5	205.5	8.4	1.3	Cntr drop D3 (NHC) fix 1; 999mb
151441	27.40.56	-78.6.00	19.1	14.0	135.5	142.6	1542.0	848.9	1012.1	225.4	12.6	1.1	D4 hrd time 1506Z
152453	28.1.74	-77.54.30	19.7	13.3	358.8	356.8	1527.0	850.5	1011.9	215.4	11.5	1.3	On SE side hdg N to NE inbound pt.
153544	28.47.76	-77.53.88	18.2	16.0	359.7	1.8	1519.0	850.9	1012.2	170.9	11.7	1.5	Some conv. cells on E side
153656	28.52.80	-77.54.00	18.7	17.1	359.2	1.9	1520.0	850.7	1011.8	168.6	13.6	1.7	
155302	30.0.24	-77.51.54	17.9	16.4	353.5	358.4	1513.0	853.2	1014.4	118.7	13.4	1.1	At NE pt turn to trk 225
160837	29.22.20	-78.43.08	18.1	17.2	212.4	206.1	1522.0	849.1	1010.4	123.4	15.0	1.3	D5 (hrd)
161346	29.8.46	-78.58.92	19.0	18.1	239.2	232.5	1507.0	848.9	1007.8	130.6	16.5	1.4	D6 (hrd)
162710	28.44.94	-79.22.44	22.8	15.7	28.0	30.0	1502.0	842.7	997.9	111.4	2.8	1.1	D7 (NHC); 998mb fix 2
165813	27.31.50	-79.43.86	18.5	15.0	87.7	87.5	1531.0	849.7	1012.0	276.8	12.9	1.2	D8 (hrd) @ 1638Z
165846	27.31.62	-79.41.16	18.4	15.1	87.7	87.8	1524.0	850.3	1012.1	274.7	12.8	1.1	Now trk 090 to SE inbound pt.
171907	27.33.72	-78.3.90	18.5	13.3	21.3	18.8	1524.0	850.7	1012.6	220.6	14.3	1.1	At SE pt; turn to trk 315
173708	28.23.70	-78.57.66	19.6	14.9	316.3	307.9	1503.0	849.1	1007.5	232.5	18.8	1.6	D9 (hrd)
175125	28.44.58	-79.18.96	22.0	16.4	200.1	205.9	1493.0	843.5	998.3	275.3	7.1	1.3	D10 (NHC) Fix 3; 998mb
183052	29.37.86	-80.22.20	18.1	16.5	135.5	127.0	1510.0	851.3	1011.7	47.2	18.4	1.3	D11 (hrd) at 1802Z
183150	29.35.40	-80.19.20	18.0	17.0	131.9	125.1	1512.0	850.9	1011.5	43.0	15.4	1.1	Hdg back for another fix then RTB
185714	28.46.44	-79.19.26	20.5	17.4	207.9	213.7	1513.0	841.4	998.8	307.8	9.8	1.3	D12 (NHC); fix 4 997mb
192337	28.5.70	-80.52.38	16.6	12.9	267.4	273.1	1937.0	808.6	1009.5	350.2	10.7	1.0	We are now RTB; 6000 feet, ovc abv, sct blo
195413	27.50.40	-82.31.80	28.6	23.6	39.9	37.2	-7.0	1013.1	1012.3	269.9	4.5	1.3	Land

N42RF AVAPS DROP LOG

Flight ID: 050907H

Landing :

ALLC 2