NOAA P-3 N42RF
Ocean Winds Helene

Flight ID: 060919H

Sensor or system	Number or Name
INE	2
Accelerometer	2
Temperature Probe	1
Dew Point Probe	1 (General Eastern)
Altitude (for vertical wind)	Radar Altimeter 159
Static Pressure	Rosemount Fuselage
Dynamic Pressure	Rosemount Fuselage 1281
Time Source	Micro 99
Constants File	CO2062.con

Notes:
There was one time/data gap during this flight which occurred from 171951Z-172000Z.

The King liquid water sensor was inoperative throughout the flight.

The Johnson Williams Liquid Water Sensor was inoperative from takeoff through 162607Z.

Altitude from inertial one and two were both inoperative throughout the entire flight.

Temperature and dewpoint values from sensor number 3 are also erroneous.

From takeoff through 134530Z, data from radar altimeter 232 was substituted into radar altimeter 159.

Data from dewpoint sensor number 2 was substituted into sensor number 1 from 140030Z-143730Z.

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. Corrections were made to the data at from 160331Z-160630Z. These corrections were made to bring the relative humidity values down below 120%.

Otherwise, all sensors worked optimally during this flight.

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	1010.4 mb	1007.9 mb
Corrected Tower Pressure	1009.7 mb	1006.7 mb

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

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

Flt ID: 060919H	From: TBPB	To: TBPB
Flt. No: 06 - 066	Blk In: 2302 Z	Time On: 2259 Z
ETD: 2000 Z	Bl k Out: 1339 Z	Time Off: 1345 Z
ETE: 9 + 30	Blk Time: 9 + 23 (9.4) Hrs	Flt Time: 9 + 14 (9.2) Hrs
Sponsoring Org: NESDIS	Program: Ocean Winds	Purpose: Helene

AOC Flight Crew

Aircraft Commander: Strong	Data System: Mcmillan
Co-Pilot: Giramonte /	AVAPS: Rasco
Navigator: Bishop / Gallagher	System Eng:
Flight Eng: Bast / ~~Torrey~~ Klippel	A A:
Flight Director: Mayeaux /	A A:
Avionics: Olney	Crew Chief:

Participating Scientists / Visitors

Name (Last, First)	Activity on Aircraft	Affiliation
Mcfadden, J	PM	AOC
Black, M	obs	HRD
Chang, P	~~obs~~ PI	NESDIS
Jelenak, Z	obs	NESDIS
Tao, C	obs	UMASS
Esteban, D	obs	JPL

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

Storm Name: Helene

Mission ID: NOAA WXWXA Helene 03

Penetration number and time

LWC JW ??/Not operable

Recco Times

1312 LF Trouble at beginning of flight

Fix # *Fix Time*

2423 5331 1637

1658Z No fix Reqd

1715Z No fix Reqd

1741Z 2421 5340

1800 No fix Reqd

1820 No fix Reqd

1835 No fix Reqd

1850Z No fix Reqd

1914Z No fix Reqd

1946Z No fix Reqd

2012Z No fix Reqd

(See reverse for additional remarks)

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

Flight ID: 0809191H	Time Off: 1345 Z	Time On: 2259 Z

[redacted]	A/C Takeoff	Wx Station - Takeoff	A/C Land	Wx Station - Land
Pressure	1010.4 mb	3000 mb	1007.9 mb	1013-2994 mb

ATIS	Time	Observation
Takeoff	NA Z	
Land	2100Z	16006KT few010CB Sct012 29/23 1013

	Number	Data Disposition / Date / Quality
Flight Level Tapes		
Radar Tapes		
Cloud Physics Tapes / CDs		
Video Tapes		
Dropsondes	23	Good: 17 Bad: 6 3 NHC Sondes 2 5+5 HOD
AXBT		
AXCP		
AXCTD		

Remarks:

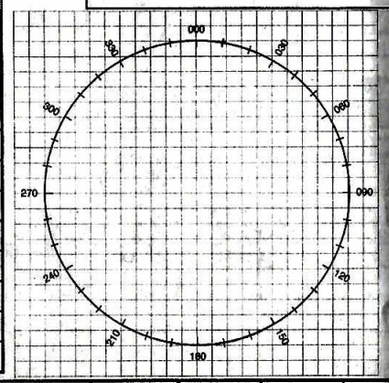
2201Z 18004KT P6sm few010CB Sct012 28/24 1013

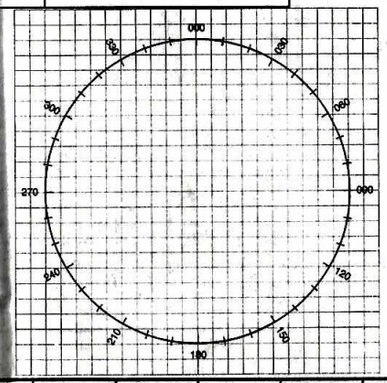
CLEARANCES

FREQ	ALT	HDG	OTHER
			Taxi Hold Short Ex 72
			Squwk 1072
123.7			FL 150 (60)
127.35			
			18N 57W
			140 NM
			121.0
			R 140/230

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
ENG 1334																					
BLK/Taxi 1339																					
T/O 1345																					
XV 1350	XV	18-17.8 57-20.7	18-19.9 57-20.6	-2.1 -1.4	18-17.8 57-21.3	0.0 +0.6	037	13W	024	1R	035	219	209	04	15.0	219					DEP 039-R
1450	△	17-21.7 57-20.0	17-20.6 57-20.5	+1.1 -0.5	17-21.5 57-20.2	+0.3 -0.2	042	15W	027	Ø	027	283	284	06	15.0	281					
1548	△	21-24.7 55-14.6	21-20.6 55-14.2	+4.1 +0.4	21-24.4 55-14.6	+0.3 +0.4	036	16W	020	2R	025	271	316	33	12.0	275					
1657	△	24-33.4 53-34.3	24-30.4 53-32.7	+3.0 +1.6	24-33.7 53-33.5	-0.3 +1.8	173	17W	156	18R	174	225	085	71	15.0	237					
1759	△	24-29.0 53-21.5	24-25.5 53-22.4	+3.5 -0.9	24-29.2 53-21.8	-0.2 -0.3	346	17W	329	19R	340	243	173	30	15.0	244					
1857	△	24-29.2 53-45.7	24-25.8 53-49.6	+3.4 -3.9	24-30.2 53-45.9	-1.0 -0.2	247	17W	230	Ø	230	230	128	28	6.0	238					
1957	△	24-18.4 53-30.5	24-14.6 53-34.3	+3.8 +3.8	24-19.9 53-31.8	-1.5 +2.7	312	17W	295	3R	298	231	231	18	6.0	236					
2057	△	21-33.9 55-01.1	21-30.5 55-03.6	+3.4 -2.5	21-35.0 55-00.4	-1.1 +0.7	232	16W	218	102	208	271	300	040	20.0	277					
2152	△	17-25.0 57-18.4	17-21.6 57-24.5	+3.4 -6.1	17-24.1 57-18.8	+0.9 -0.4	227	15W	212	2R	210	368	002	15	20.0	246					
2234	XV	14-16.9 59-00.1	14-14.7 59-02.9	+2.2 +2.8	14-18.5 58-59.4	-1.6 +1.7	229	14W	215	Ø	215	284	49	05	160	277					BGI 025/170
2259		LAND	AT	PAR	BASE																
		13-04.6 59-27.5	13-04.7 59-25.7	-0.1 -1.8	13-07.0 59-30.0	-2.4 +2.5															

NOAA FORM 56-49
(2-95)

MISSION PREFLIGHT LOG

DESTINATION	MISSION	NAVIGATOR	AIRCRAFT COMMANDER	FLIGHT DIRECTOR	SCHEDULED / ACTUAL TAKEOFF Z	DATE OF TAKEOFF
		LCDR Bishop	CDR Strong	Meyers	1400	

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	N 13-04 W 59-29		041	15W	026	Ø	026	280	L	✓	10.0	280	0 0	0 0				
2	24-42 53-24		043	17W	026	Ø	026	280	✓	✓	10.0	280	776 776	2+46 2+46				
3	25-25 52-56		047	17W	030	Ø	030	250	✓	✓	10.0	250	50 826	+12 2+58				
4	25-32 52-24		302	17W	285	Ø	285	250	✓	✓	10.0	250	26 852	+06 3+04				
5	24-42 52-24		197	17W	180	Ø	180	250	✓	✓	10.0	250	50 902	+12 3+16				
6	23-51 52-24		197	17W	180	Ø	180	250	✓	✓	10.0	250	50 952	+12 3+28				
7	23-58 52-56		092	17W	075	Ø	075	250	✓	✓	10.0	250	26 978	+06 3+34				
8	24-42 53-24		347	17W	330	Ø	330	250	✓	✓	10.0	250	50 1028	+12 3+46				
9	25-25 53-51		347	17W	330	Ø	330	250	✓	✓	10.0	250	50 1078	+12 3+58				
10	25-06 54-11		242	17W	225	Ø	225	250	✓	✓	10.0	250	26 1104	+06 4+04				
11	24-42 53-24		137	17W	120	Ø	120	250	✓	✓	10.0	250	50 1154	+12 4+16				
12	13-04 59-29		223	15W	208	Ø	208	280	✓	✓	10.0	280	776 1931	2+46 7+13				

INS PERFORMANCE

	INS 1	INS 2
BEGIN ALIGN TIME	1245	1245
ALIGN STATUS (0-5)	1	Ø
END NAV TIME	2307	2307
START NAV TIME	1330	1330
DELTA T	9+37	9+37

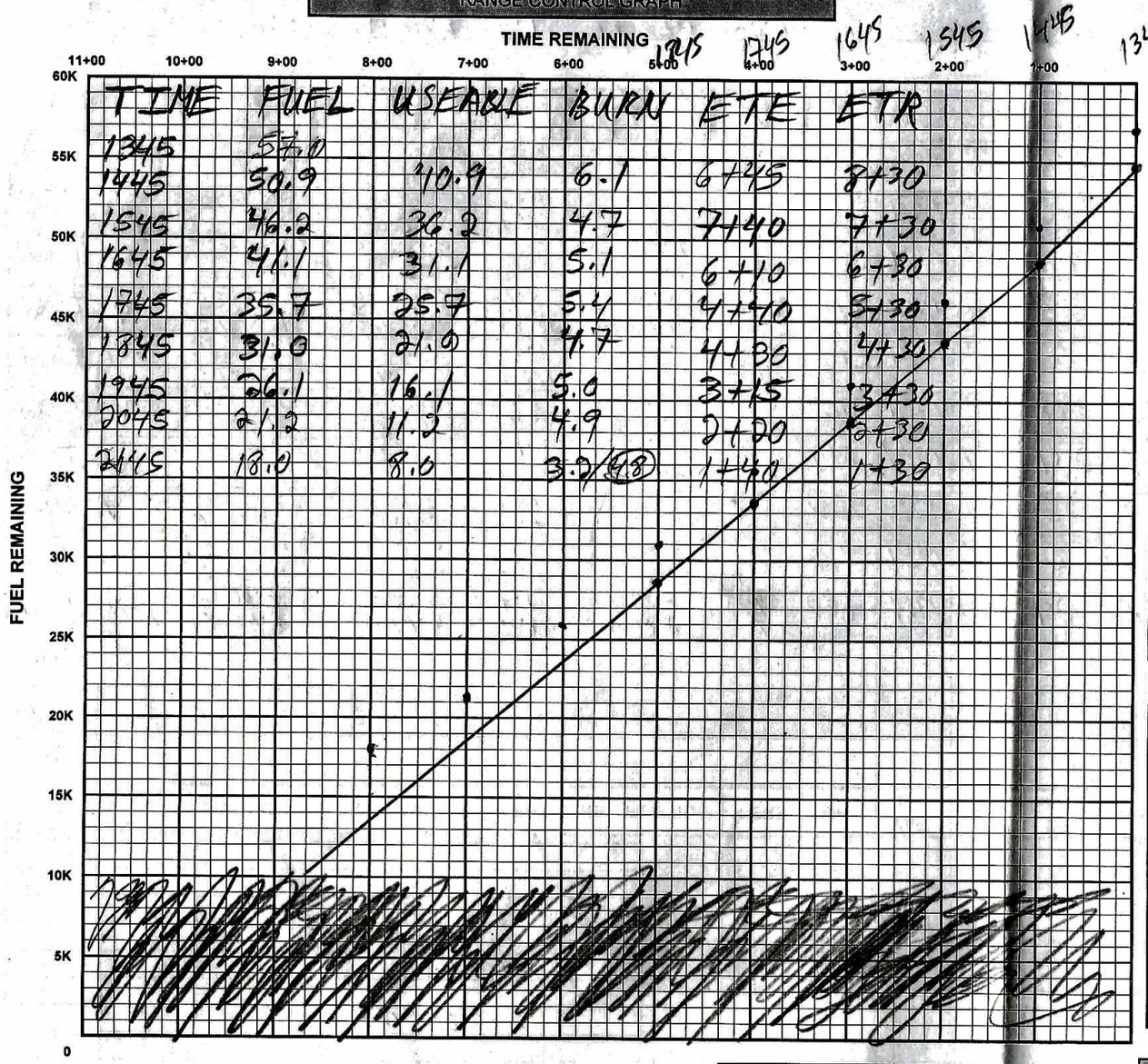
TERMINAL ERRORS

	INS 1	INS 2
DELTA LAT	-.1	-2.4
DELTA LON	-6.2	-.5
RGS	6	2
RADIAL ERROR	6	2

REMARKS

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
AIRCRAFT OPERATIONS CENTER

RANGE CONTROL GRAPH



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	9+30
ENROUTE FUEL (6K 5K 4.5K RULE)	448
RESERVE AT DESTINATION	10.0
REQUIRED RAMP	54.8
ACTUAL RAMP FUEL	57.0

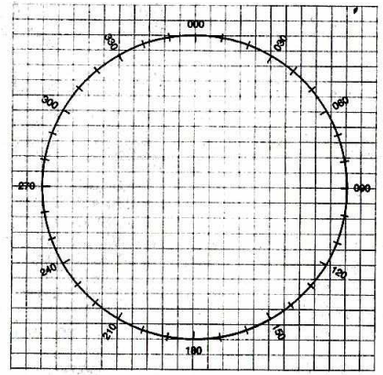
TACTICAL (OFFSTA TO DESTINATION)	4 ENG	3 ENG
DISTANCE (OFFSTA TO DEST)		
ENROUTE TIME (OFFSTA TO DEST)		
BURN RATE (LBS/HR)	4500	5500
ENROUTE FUEL REQUIRED		
RESERVE AT DESTINATION		
FUEL AT OFFSTA		

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	
CHA	
CORR	
CHA	
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