

U.S. DEPT. COMM./NOAA/DAO - DATA SECTION WORK FORM NO.1 DAOWF1 FILE

FLT ID: 970908H	FM: NYT	TO: NYT
FLT NO: 97-059	BLK IN: 2047Z	ATA: 2039Z
ETD: 1230Z	BLK OUT: 1257Z	RTD: 1309Z
ETE: 2000Z	BLK TIME: 7.50 7.8	FLT TIME: 7.30 7.5
SPONSOR ORG: NOAA	PROGRAM: NARE/OZONE	PURPOSE: 2ND DAY OUTFLOW

DAO PERSONNEL

AC MCKIM, G ✓	SYS ENG MCMILLAN, S ✓
CP OMARA, T	DATA SYS MCNAMARA, R ✓
NAV RATHBUN, D ✓	RADAR
FE TORREY, R ✓	DT/ODW
RADIO	CLD PHYS
FD CZYZYK, S ✓	DOPPLER

PARTICIPATING SCIENTIST/VISITORS/DAO

LAST, FIRST NAME	ACTIVITY ON A/C	AFFILIATION
HUBLER, G ✓	FS	NOAA/CIRES
RVERSON, T, KNAPP, K ✓	No/NOy	
JOHNSON, T ✓	Peroxides	
HUEY, G ✓	CIMS	
FRIED, A -	TDLOS	
WILLIAMS, J -	PANs	
HOLLOWAY, J -	pod CO	
BURGDORF, CATHY ✓		

PROPOSED/ACTUAL MISSION/REMARKS (RECCO, FIXES, STORM, PENET, NHOP #)

1319.20 BALANCE ~~DP~~ DW#1
 GUERLANN 13.18-1338; 1430-1437, 1720-
 UNDER CLOUDS 1349-1402

U.S. DEPT. COMM./NOAA/OAO - DATA SECTION WORK FORM NO.2 OAOWF2

FLT ID: 970908H

TIME OFF: 1309Z

TIME ON: 2039Z

	A/C T/O	WX STN	A/C LAND	WX STN
PRESSURE	1000.8	30.05	1001.2	30.07

NO DATA DISPOSITION/DATE/QUALITY

1/SEC FLT LVL TAPES		
FAST FLT LVL TAPES		
RADAR TAPES		
DOPPLER TAPES		
ODW CASSETTES		
HARD COPIES		
AXDT		
AXCP		
ODW		

PHOTOGRAPHY

	FWD	LS	RS	VERT
ON				
OFF				
RATE				

REMARKS

2nd DAY OUTFLOW

Flight #3 H970908

Sensor or system

Number or Name

INE	1
Accelerometer	1
Temperature Probe	1
Dew Point Probe	2
Altitude (for vertical wind)	RA-159
Static Pressure	Rosemount Fuselage
Dynamic Pressure	Rosemount Fuselage
Time Source	Micro 99
Constants File	CO2974.CON

Notes:

Downward spikes in radar altimeter are a result of overflying land (1314:31-1335:30, 1429:31-1437:00, 1622:01-1636:00, 1718:01-1849:30, 1853:31-1902:30, 1928:01-1947:00, 1952:01-1958:30, 2001:40-2005:00, and 2018:40-2023:30).

Radar altimeter (RA-159) had a spike at takeoff (1305:01-1309:12) and was replaced with RA-232. RA-159 was set to zero at landing due to spike (2039:25-2049:00).

Dewpoint #2 (DW2) was frozen (1520:14-1535:30, 1620:59-1628:45 and 2004:40-2015:20) and was replaced by DW3.

Dewpoint temperature exceeded ambient temperature a few times due to heavier precipitation.

Total temperature #1 (TT1) had a spike at landing (2039:30-2042:00).

Upward-looking radiometer was not operational 1305:01-152:00.

	<u>Takeoff</u>	<u>Landing</u>
Aircraft static pressure	1000.8	1001.2
Corrected tower pressure	1017.6	1018.3

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.

Flight Meteorologist: Stan Czyzyk, (813) 828-3310 ext. 3086

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TIME	LOT	CON	TK	HD	TA	TD	WD	WS	PA	GA	PS	SP	REMARKS
131748	4735	5336	259	257	3.2		223	8.4	3024	3116	698.8	1011.6	LEVEL 10K
133830	4721	5338	260	258	1.9	-14.5	208	8.2	3016	3114	699.7	1015.5	OVER WATER + CLOUD
1339													↓
134956	4712	5642	254	254	10.5	9.2	319	5.5	224	271	986.7	1019.0	800 FT
140003	4704	5736	259	258	12.2	10.4	144	2.7	1				↓ 200 FT
140051													200 FT ↑
141445	4650	5900	259	258	-2.1	-12.0	172	5.1	3627	3737	646.8	1115.0	LEVEL 12K
141801	4648	5917											CLIMB
142930													LEVEL 20K
143301	4633	6042	255	253	-16.9	-34.6							↓
1440													IN CLOUD
144835	4638	6111											300 FT NR ALZ
145755	4652	6158											10K + DESCEND
150330													CLOUD TOP 4.5K
50510													3K +
50730	4710	6243											2K + CLIMB
151525	4724	6323											CLOUD TOP 10K
152506	4741	6409	295	297	11.4	-0.8	18	7.9	585	636	944.8	1019.2	CLOUD TOP 2K
152645	4744	6418											↓
152825	4746	6427											300 FT ↑
154245	4804	6317	77	77	-3.4	-31.6	256	7.5	3642	3734	645.8	1015.6	LEVEL 12K
154800	4809	6245											↑
155855	4820	6131	76	77	-18.6	-42.4	245	34.0	6124	6272	463.8	1012.2	LEVEL 20K
161302	4837	5943											↓
1621													CLOUD TOP 10K
162214	4845	5838											COAST LINE
162530	4848	5818	77	78	12.8	8.0	229	3.0	884	645	910.7	978.7	LEVEL 3K
163600	4901	5831											↓ OVER WATER
164010	4857	5835											300 FT ↑
164300													HOLD 1 MIN
164910	4917	5903											10K ↓
170020	4939	5954											300 FT
170140	4943	6004											CLIMB
171215	5002	6054											10K ↓
172140	5020	6140	302	303	16.5	10.1	347	10.7					REV 1000 FT
1724													TURN E DUE TO WARMING AIR
1725													CLIMB
174000	5030	6015	86	86	-4.7	-11.3	259	14.5	3305	3243	674.3	1001.6	11K
174250													CLIMB
175400	5118	5936	009	007	-27.8	-49.4	202	22.9	6714	6528	427.4	989.5	LEVEL 22K
180310	5203	5919	012	010									↓
181430	5255	5904											IN CLOUD TOP 7K
181720													3K FT BASE
181835	5256	5905											500 FT AGL
182600	5241	5822	127	128	-2.6	-7.8	291	8.3			705.5	976.3	10K ↓
183220	5225	5752	135	136	7.6	6.3	267	9.7	1168	801	880.6	973.6	4K LEVEL ↑
183720	5211	5728	130	132									CLOUD TOP
183930	5206	5719	130	133	-2.8	-8.0	241	14.2	2983	2697	705.7	976.5	10K ↓
1845													CONNECTION
185100	5136	5625	131	132	8.1	6.5	266	8.7	1348	1415	861.4	1019.7	LEVEL 4.5K
185800	5114	5558	157	154									400 FT ↑
191200	5022	5527	159	162	-7.2	-39.8	227	19.7	4276	4395	594.5	1015.8	14K LEVEL
191800	4958	5513	161	165									↑
193000			161	166	-28.5	-50.8	224	31.5	7634	7744	375.3	999.2	25K LEVEL

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RENAV

144900, -0.4, 0.5	46 38.5	-61 12.0
152100, , -0.4, 0.4	47 34.5	-63 50.1
155900, -0.3, 0.6	48 20.4	-61 31.6
164600, -0.6, 0.0	49 10.6	-58 44.5
171300, -0.1, 0.7	50 3.0	-60 56.4
175800, -0.3, 1.0	51 38.1	-59 30.2
183200, 0.2, 0.6	52 26.4	-57 53.7
190200, 0.8, 1.8	51 0.6	-55 51.3
194000, 0.2, 0.4	48 22.4	-54 22.1
200100, 1.5, 1.6	46 45.8	-53 5.6
204900, 1.1, 0.9	47 37.3	-52 44.2

1420:36 BAD POSITION
1421:00
1421:31 BAD POSITION
1421:40

RA-159 SPIKE @ TAKEOFF REPLACE W/232
RA-159 DIPS DUE TO OVERFLYING LAND

1221:01 - 1309:12 X
1314:31 - 1335:30 X
1429:31 - 1437:00 X
1622:01 - 1636:00 X
1718:01 - 1849:30 X
1853:31 - 1902:30 X
1928:01 - 1947:00 X
1952:01 - 1958:30 X
2001:40 - 2005:00 X
2018:40 - 2023:30 X

RA-159 SPIKE @ LANDING SET TO ZERO
DWZ FROZE REPLACE W/DW3
DWZ FROZE REPLACE W/DW3
DWZ FROZE REPLACE W/DW3

2039:25 - 2049:00 X
1520:44 - 1535:30 X
1620:59 - 1638:45 X
2004:40 - 2015:20 X

DWZ 1422:01 - 1424:00 OVERTSHOT?

RA NOT WORKING

TT1 SPIKE @ LANDING

1220:41 - 1520:00 X
2039:30 - 2042:00 X

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TITLE (MAX 21 CHARACTERS) -- EX HURRICANE PAINE
2ND DAY OUTFLOW
YYMMDDL FLT I.D.
970908H
HHMMSS START TIME -99999 DEFAULT TO START OF DATA FOR PRINTOUT ONLY
130501
HHMMSS END TIME 999999 DEFAULT TO END OF DATA FOR PRINTOUT ONLY
204400
HHMMSS TAKE OFF TIME
130900
* NUMBER OF TAPES (I2) ...FOR STANDARD TAPE OUTPUT ONLY
3
* -----LOGICAL UNIT OF INPUT DATA (I1) 5, 8 OR 9 FOR TAPE DRIVE
9
* -----LOGICAL UNIT OF OUTPUT TAPE DRIVE (I1) [FOR STANDARD TAPE ONLY]
9
* -----LOGICAL UNIT OF PRINTER (I1)
6
* -----DATE OF PROGRAM (MMDDY)
06094
* -----STATIC PRESSURE PROBE (I1)
* 1 = PSW (WINGTIP)
* 2 = PSF (CO-PILOT/FUSELAGE)
* 3 = FUTURE USE
2
* -----DYNAMIC PRESSURE PROBE (I1)
* 0 = PQW(WINGTIP)
* 1 = PQF1 (FUSELAGE 1281)
* 2 = PQF2 (FUSELAGE 1221)
* 3 =FUTURE US
1
* -----INE SELECTION (I1)
* 1 = INE 1
* 2 = INE 2
1
* -----ACCELEROMETER (I1) - USUALLY THE SAME AS YOUR INE SELECTION
1
* ----- TOTAL TEMPERATURE PROBE (I1) [1 OR 2]
1
* ----- DEWPONT TEMPERATURE PROBE (I1) [1 OR 2]
2
* -----ALTIMETER OPTION (I1) - FOR VERTICAL WIND COMPUTATION
* 0 = PRESSURE ALTITUDE (OVER LAND)
* 1 = RADAR ALTITUDE APN-159 (OVER WATER)
* 2 = RADAR ALTITUDE APN-232 (OVER WATER)
1
* -----PRINTOUT RATE SECONDS (I2)
10
* -----WINDSPEED/DIRECTION RUNNING AVERAGE TIME, SECONDS (I2)
10 ! FOR STANDARD TAPE OUTPUT ONLY
* -----TIME OPTION (I1)
* 1 = MICRO 29
* 2 = TIME BASED GENERATOR #1
* 3 = TIME BASED GENEATOR #2
1
* -----NAME OF CONSTANTS FILE EX CO3863.CON
CO2974.CON
*****

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DATE : 9/11/97
TO : Chief, AOC Flight Operations
FROM : Pilot/Flight Director, Aircraft N42RF ON 2039 BLOCKTIME
SUBJECT: Hazardous Duty OFF 1309 7.5

PURPOSE OF FLIGHT: OZONE / WARE

Hazardous Duty Pay is required for flight made on 9/8/97
(DATE)

Request based on HAZARDOUS GASES / CHEMICALS

Personnel on board authorized Hazard Pay:

<u>CZ424K, S</u>	
<u>MCMILLAN, S</u>	
<u>MCNAMARA, R</u>	
<u>TORREY, R</u>	

PILOT/FLIGHT DIRECTOR: 

APPROVED: _____ DISAPPROVED: _____

CHIEF, AOC FLIGHT OPERATIONS: _____

Science Crew

FS : Hibler, G

NO/NOY : Ryerson, T ; Knapp, K

CIMS : Huey, G

TLAS Fried, A

PAN's Williams, J.

Peroxide Jobson, B.T.

pool CO Holloway, J.

Flight planned for 8 Sept 1997

Takeoff: 8:00 to 9:00 1000

AL1 to AL2 climb to 10 kft for Calibration
after Calibration is finished descend to 1000 ft
Stutter profile to max altitude on way to AL2
half hour before arrival at Pt. AL2 descend to 500 ft at 1000ft/min

AL2 to AL3 Sawtooth pattern: 300 ft to 10000 ft, climb and descend at 1000 ft/min

AL3 to AL4 Stutter Profile up and Profile down (500ft to 25 kft) on way to AL4

AL4 to AL5 Sawtooth pattern: 300 ft to 10000 ft, climb and descend at 1000 ft/min

AL5 to AL6 Profile up and down (500ft to 25 kft) on way to AL5

AL6 to AL7 Sawtooth pattern: 300 ft to 10000 ft, climb and descend at 1000 ft/min

AL7 to AL8 Stutter profile up to max altitude, Calibration

at AL8 Racetrack Profile over Cape Pine, low level pass over ground site

AL8 to AL1 Return to St. John's at convenient flight level

AL1	47 37.3N	52 44.2W		St. John's
			640km	
AL2	46 30N	61 00W		
			303km	
AL3	47 50N	64 30W		
			492km	
AL4	48 50N	58 00W		
			342km	
AL5	50 30N	62 00W		
			345km	
AL6	53 00N	59 00W		
			263km	
AL7	51 30N	56 00W		
			466km	
AL8	46 37.03N	53 31.95W		Cape Pine
			125 km	
AL1	47 37.3N	52 44.2W		St. John's

Stutter Profile

Vertical Profile schedule repeated in 15 min interval

00:00 - 00:03	level flight (instrument zero)
00:03 - 00:10	climb or descend at 1000 ft/min
00:10 - 00:15	climb or descend at 500 ft/min

=> 2900m in 15 min

(HC sample)

POSITION REPORT

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:

- PILOT INTENTIONS
WE HAVE
ENDURANCE REMAINING

[illegible]