

U.S. DEPT. COMM./NOAA/OAO - DATA SECTION WORK FORM NO.1 OAOWF1 FILE

FLT ID: 970918H	FM: YJT	TO: YJT
FLT NO: 97-063	BLK IN: 1903Z	ATA: 1858Z
ETD: 1015Z	BLK OUT: 1017Z	RTD: 1040Z
ETE: 1915Z	BLK TIME: 8.46 8.8	FLT TIME: 8.18 8.3
SPONSOR ORG: NOAA/AL	PROGRAM: NARE/OZONE	PURPOSE: INTERCOMP...

OAO PERSONNEL

AC MCKIM, G ✓	SYS ENG MCMILLAN, S ✓
CP TAGGART, B	DATA SYS MCNAMARA, R ✓
NAV RATHBUN, D ✓	RADAR
FE TORREY, R	BT/ODW
RADIO	CLD PHYS
FD CZ4ZYK, S ✓	DOPPLER

PARTICIPATING SCIENTIST/VISITORS/OAO

LAST, FIRST NAME	ACTIVITY ON A/C	AFFILIATION
HUBLER, G ✓	P.I	
RYERSON, T -		
HUEY, G ✓		
FRIED, A -		
WILLIAMS, J		
JOHNSON, T -		
HOLLOWAY, J / JAKOBKE, R		
GOLDAN, B -		

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

DW#1 RESISTOR NOT CONNECTED. PROBLEMS FIXED LAST FEW DAYS
CAPACITOR CAME LOOSE
IS WORKING MUCH BETTER THIS FLIGHT
METMAN 1 SEC FAST (DATA)
LEG 4 METMAN A BIT HIGHER
TT#2 BURIED OUT 1528Z, 1530Z OK

U.S. DEPT. COMM./NOAA/OAO - DATA SECTION WORK FORM NO.2 OROWF2

FLT ID: 970918H

TIME OFF: 1040Z

TIME ON: 1858Z

	A/C T/O	WX STN	A/C LAND	WX STN
PRESSURE	997.4	29.92	998.3	30.00

NO DATA DISPOSITION/DATE/QUALITY

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

PHOTOGRAPHY

	FWD	LS	RS	VERT
ON				
OFF				
RATE				

REMARKS

970918H

TIME	LOT	LOW	TK	HD	TA	TD	WD	WS	PA	GA	PS	SP	REMARKS
104120													
104345	4747	5251									1K FEET		CLOUD BASE
105530	4737	5139	106	100	-10.3	-32.0	23	31.8	4580	4592	571.3	1005.4	4K FEET CLOUD TOP LEVEL 15K
112900	4700	4821	104	101	-12.0	-25.1	29	15.4	4571	4559	571.9	1005.8	
113645	4651	4725	100	101	-12.6	-21.9	124	2.2	4568	4556	572.1	1005.5	WIND SHIFT
115345	4635	4545	105	111	-9.4	-31.1	166	32.1	4563	4572	572.4	1002.9	LOWEST PRES
120200	4626	4459	106	113	-7.9	-30.9	182	35.3					↓ DESCEND
121205	4615	4401											250 ASL ↑
122930	4602	4355											FLIGHT
123730	4552	4138	103	110	-15.9	-45.3	180	30.3	5971	6116	473.3	1007.5	11.5 LEVEL
131200	4459	3802	115	122	-15.1	-27.4	210	31.7	5962	6163	474.2	1012.1	
132140	4442	3701	112	119	-15.9	-20.6	206	29.9	6095	6317	465.7	1013.5	LEVEL 20K
134300	4410	3535	179	182	-15.4	-27.9	209	25.0	6087	6329	466.2	1014.4	BEGIN LEG 1 (20K)
134800					-15.1	-28.1	208	27.7			466.2		42 DATA
134800					-15.8	-24.6	210	15 m/s			469	(1 SEC FRT)	METMAN DATA
140010	4256	3535											END LEG ✓
1404													TURN N
140700	4245	3542	0	356	-3.1	-12.7	219	30.3	4267	4445	595.4	1014.5	LEVEL 14K
140800													BEGIN LEG 2
141315					-2.9	-28.9	207	10 m/s			598		METMAN DATA
141345					-2.2	-34.9	209	22.7			595.6		42 DATA
142300	4358	3542											END OF LEG
143100	4340	3550	185	186	7.9	2.9	197	17.4	2131	2226	781.6	1016.9	LEVEL 7K
143400	4328	3551	184	186									BEGIN LEG 3
143700					8.3	1.7	221	9 m/s			784		METMAN DATA
143730					8.4	1.8	207	14.9			782.1		42 DATA
144900	4236	3600											END LEG 3 TURN ✓
145645	4300	3607	0	359									LEVEL 1K
145700	4302	3607	0	359	20.2	17.1	197	22.5	306	337	977.0	1015.8	BEGIN LEG 4
150330					19.6	18.8	181	9 m/s			979		METMAN DATA
150400					19.7	18.6	196	17.0			976.6		42 DATA
151500	4410	3607											LEG 4 END
151800	4418	3614											250 FT ↑
152800													END INTERCOMP 10K
1540													20K
154510	4439	3847	273	267									DESCEND ✓
154800	4440	3903	275	270	-12.1	-14.7	169	30.7	5486	5650	505.9	1009.7	LEVEL 18K
1550													IN + OUT CLOUD
155430	4441	3946	273	266	-12.2	-16.0	180	36.3	5489	5644	505.8	1008.4	FRONT ? NO
160305	4441	4044	268	261	-11.9	-15.3	174	38.4					DESCEND ✓
160730	4441	4111	265	258	-2.7	-4.6	187	26.9	3662	3720	644.2	1009.0	LEVEL 12K
161805	4441	4212											DESCEND
1624													LEVEL 16K
163310													DESCEND
163800													CLOUD LAYER 25K
164020	4438	4407											250 FT ↑
164130	4438	4412	270	273	14.5	11.7	294	22.8	327	291	975.0	1008.6	LEVEL 1K
164810	4438	4442											DESCEND 300+ ↑
1651													TURN + 2K ↑
170830	4555	4455	0	003	-22.2	-32.8	164	36.1	6096	6147	465.6	1011.7	LEVEL 20K
171805	4648	4456											↓
173000	4740	4456											4K CLOUD TOP
173300													500 FT TURN + ↑
1745													15K CLOUD
182640	4734	4959	267	273									↑ 1K
183000	4733	5027	269	276	-15.5	-36.4	005	28.9	5809	5918	484.5	1005.8	LEVEL 19K, APPROX

C-130 INTERCOMPARISON

Flight #7 H970918

<u>Sensor or system</u>	<u>Number or Name</u>
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:

Radar altimeter (RA-159) had a spike at 1441:01-1441:44 and was replaced by RA-232 + 12.0. RA-159 was set to zero at landing (1857:34-1903:00).

	<u>Takeoff</u>	<u>Landing</u>
Aircraft static pressure	997.4	998.3
Corrected tower pressure	1013.2	1015.9

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

970918H

RENAL

113300, 0.3, -0.3	46	54.8	-47	49.3
124200, 0.5, -0.1	45	46.5	-41	9.7
132400, 0.4, -0.5	44	38.1	-36	47.4
140800, 0.5, -0.4	42	49.6	-35	41.6
144500, 0.5, -0.7	42	50.2	-35	55.5
150400, 0.7, -0.5	43	28.1	-36	6.5
154800, 0.6, -0.8	44	39.8	-39	3.6
163100, 1.0, -0.7	44	40.3	-43	19.7
170900, 1.1, -0.8	45	57.6	-44	55.7
174700, 1.5, -1.0	47	31.1	-45	21.4
183600, 1.7, -1.5	47	33.0	-51	0.4
190300, 1.9, -1.2	47	37.3	-52	44.2

RA-159 SPIKE @ ~~1441:01~~ 1441:01 - 1441:44 REPLACE W/232+12 X

RA-159 DIPS DUE TO OVERFLYING LAND 1040:10 - 1045:00, 1855:35 - 1858:00 NO NEED

PQFL SPIKE 1247:50 - 1248:10, 1304:15 - 1304:30

RA-159 SPIKE @ LANDING 1857:34 - 1903:00 SET TO ZERO X

TT2 TURNED OFF BY MISTAKE 1522:01 - 1530:30

TT2 PROBS 1550:01 - 1609:00

DWI CAN WARM FAST BUT COOLS DOWN REAL SLOW

RPR PROBS 1242:01 - 1301:00, 1546:00 - 1610:00

PQFL SPIKES ~~1220:01 - 1223:00~~, ~~1247:00 - 1251:00~~, ~~1302:00 - 1307:00~~

DATE : 9/22/77
TO : Chief, AOC Flight Operations
FROM : Pilot/Flight Director, Aircraft N42KE ON 1903Z BLOCKTIME
SUBJECT: Hazardous Duty OFF 1017Z 8.8

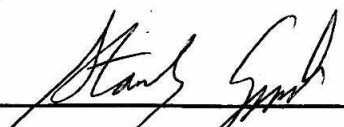
PURPOSE OF FLIGHT: C-130 INTERCOMPARISON

Hazardous Duty Pay is required for flight made on 9/18/77
(DATE)

Request based on HAZARDOUS GASES + CHEMICALS ONBOARD

Personnel on board authorized Hazard Pay:

<u>C2424K, S</u>	
<u>MC MILLAN, S</u>	
<u>MC NAMARA, R</u>	
<u>TORREY, R</u>	

PILOT/FLIGHT DIRECTOR: 

APPROVED: _____

DISAPPROVED: _____

CHIEF, AOC FLIGHT OPERATIONS: _____

Flight planned for 16 Sept 1997

Takeoff: ??:00

AL1 to AL2 climb to 15 kft for Calibration
At 44W longitude descend to 500 ft
Profile to max altitude on way to AL2

Intercomparison with UK Met Research C130 Hercules

330 nm
1:20
240 TAS

44 N

Rendezvous at 44N 35W at 20kft at 13:30 UTC

Fly southbound along 35W to about 40N 35W

38.5 N

Flightlevels : 20, 14, 7, and 1kft MSL

Length per level about 15 min

Speed: 200 knts

Descent Rate: 1000 ft/min

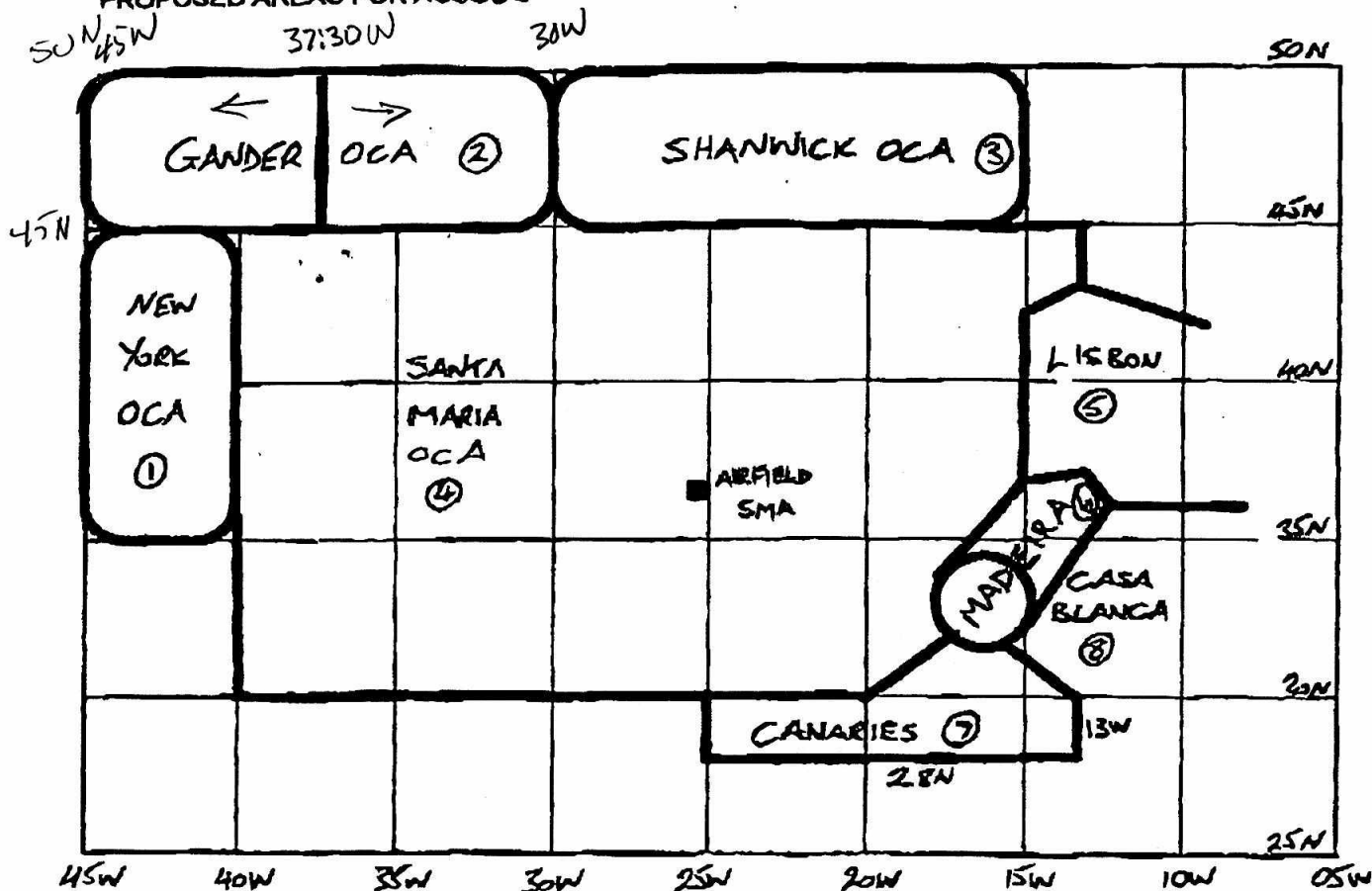
AL3 to AL4 Climb to max altitude
Profile down to 300ft, constant altitude for HC samples at 18kft, 12kft, 7kft
Continue descent to lowest altitude

AL4 to AL1 Up and down profiles between 300 ft and max altitude as air traffic control allows.
Fly north along 45W as long as time allows.

AL1	47 37.3N	52 44.2W			St. John's
AL2	44 00N	35 00W	1426km	3.0hrs	
		Intercomparison Maneuvers		1.5hrs	
AL3	40 00N	35 00W			
			555km	1.2hrs	
AL4	35 00N	45 00W			
			1540km	3.4hrs	
AL1	47 37.3N	52 44.2W			St. John's

47N - 19FT
37:30N - 22FT

PROPOSED AREAS FOR ACSOE 2



Areas

1. New York OCA as shown on map.
2. Gander OCA as shown on map.
3. Shanwick OCA as shown on map.
4. Santa Maria OCA as shown on map, remaining clear of land.
5. Lisbon FIR west of Portuguese coast by 12 miles.
6. Madeira Sector complete, remaining clear of land.
7. Canaries FIR, as shown on map, remaining clear of land.
8. Casablanca FIR west of Moroccan coast by 12 miles.

NOAA42 -

METMAN 59 - CHRIS
60 - MARK PURSE92 -
29 -

Notes

- A. All areas are requested from sea surface to FL260, although some restriction on upper level is acceptable.
- B. 24 hours notice will be given.
- C. We will guarantee to remain within the notified area.
- D. Not all the area will be required at one time. Typically we will require one quarter, ie
 - N & W of Santa Maria airfield
 - N & E of Santa Maria airfield
 - S & W of Santa Maria airfield
 - S & E of Santa Maria airfield.
- E. 2 hours before takeoff we will be able to give detailed information of our flight plan.

0000

(SIV)JNR

1/13/98 08:10 FAX 01880 863371

Alt. Henry McKim,
 Henry Wood forward to seeing you tomorrow.
 I have booked the Airspace reservation with SANTA MARIA.
BRIEFING FOR INTER-COMPARISON FLIGHTS Best Regards Chris O'Brien.

ANNEX A TO
 MRF SOP 6

1. The MRF Hercules crew will normally maintain the No 2 position in any Inter-comparison flying. The Captain will take-on the responsibilities of "Trials co-ordinator" and prepare a comprehensive briefing for all participating crews as set out below:

a. CALLSIGNS

Formation

No 1

No 2

No 3

RAF C130

MET FORMATION

NOA 42 (LEADER)

METMAN 160 (TRIAL CO-ORD)

b. Frequencies

Air-to-Air

HF 5562 8876 10015, 17901

VHF 122.925

UHF

c. Timings

Scientist Briefing

Met Briefing

Crew Briefing

Radio Check-in

Take-off

No1..... No2..... No3.....

AS REQUIRED

d. Join-Up

Position

Time

Altitude

44 NW 35 NW
 No1 1330Z No2 1330Z No3.....
 No1 FL210 No2 FL180 No3.....

TRACK

44N 35W

TO

38N 35W

IAS 200KTS

DESCENT

RATE

1000'/min

(Maintain briefed altitude until in radio and visual contact with the No 1 and clearance to join has been given).

Navigation Aids for Join-up:

(1) VOR/DME

(2) Air to Air TACAN MRF C130 CHAN 92 OTHERS 29

AIRSPACE RESERVATION 37N-45N, 33W-40W.
Separation procedures.

No 1: Maintain briefed heading, height and speed.

No 2: When cleared by leader, Turn Right 30° or more and climb or descend as briefed.

No 3: When cleared by leader, Turn Left 30° or more and climb or descend as briefed.

f. Weather Penetration.

Base Hdg.....° Mag; Base Speed.....Kts; Base Alt.....; Press Set.....

No 1: Climb on Base heading at Base speed to Base Altitude.

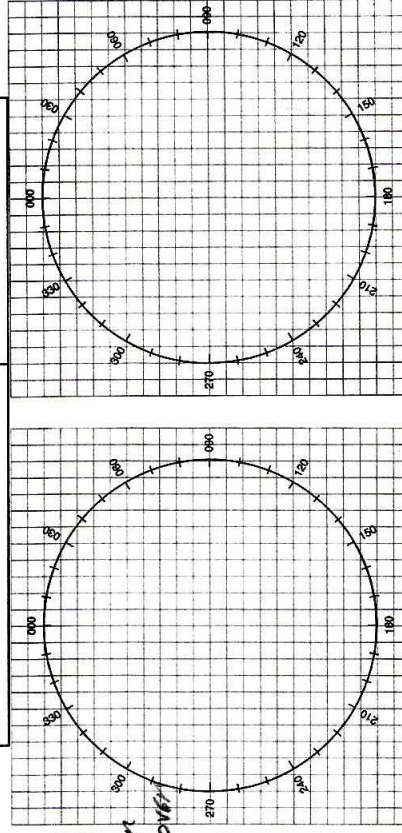
climb to Base Alt + 500ft

CLEARANCES

[illegible]

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

[illegible]