

FLT ID: 961216I	FM: MCF	TO: MCF
FLT NO: 43-006	BLK IN: 2110	ATA: 2104
ETD: 1715Z	BLK OUT: 1718	ATD: 1731
ETE: 3+	BLK TIME: 3:52(3.9)	FLT TIME: 3:33(3.5)
SPONSOR ORG: AOC	PROGRAM: FLIGHT TEST	PURPOSE: G-IV. Dev Tests

OAD PERSONNEL

AC McKim ✓	SYS ENG Lynch ✓
CP Taggart ✓	DATA SYS Offutt ✓
NAV Rothburn ✓	RADAR Carpenter ✓
FE Bast	BT/ODW
RADIO	CLD PHYS
FD Parrish	DOPPLER

PARTICIPATING SCIENTIST/VISITORS/OAD

LAST, FIRST NAME	ACTIVITY ON A/C	AFFILIATION
McClain, G.	Visitor	ONCO
Dodge, P. ✓		MSD

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

8/1016.5
 140/8.5K
 3/1018.1
 1017.3
 47
 Flown as planned. Three levels 15, 20, 25K - 3 years 150, 200, 220.
 3 drops, vicinity buoy 42003: 193225Z, 195115Z, & 201750Z.
 1016.4 - 3K
 1015.5 - 1.5K
 Wind 215/4 low

145.5
149.3

961216I ZG-V. DROP, TEST FLIGHT

Time	LAT	LONG	TK	WD	WS	PA	GA	TA	TD	SP	PS				
1718	27 50.7	82 29.6	.			-38		20.8	11.1		40.8				
173445	27 47	82 19.9	178	122	5.3	1586	1657	13.2	-5.9	1013.2	828	25K	↑		
1740	27 43.5	82 37.6	278	258	12	3538	3650	1.4	-12.7	1012.4	647				
1752	27 19.3	83 23.4	225	233	10.5	4244	4421	-2.4	-20.6	1014	597	-14K			
180530	26 37	84 10	225	231	11.6	4242	4420	-2.3	-20.9	1014.1	597.2				
182835	25 36	85 22	240	230	12	4525	4711	-3.1	-21.8	1011.4	515.4	180 leg	183135		
183400	25 29	85 24	50	238	11.7	4517	4707	-3.3	-22.3		515.5	200 leg	8700		
183855	25 43.7	85 02.4	51	234	11.7	4517	4707	-3.0	-22.3	1012.0	516.3	220 leg	4155		
184855	26 01.5	84 34.5	228	261	15.3	6083	6328	-13.9	-21.9	1011.5	466.4	180 leg	5155		
185405	25 48	84 51	229	261	14	6083	6338	-14.3	-22.3	1012.6	466.4	200 leg	5705		
185810	25 35.8	85 06.6	228	281	13.4	6083	6343	-12.6	-22.0	1008.4	466.4	220 leg	0110		
190910	25 25	85 26	56	271	38.1	7606	7931	-23.4	-24.6	1005.4	376.8	1210	160		
191415	25 39.9	85 02.5	54	271	39.4	7602	7931	-23.9	-26.0	1012.1	377.1	1715	200		
192340	25 54	85 12.9	270	263	35.8	7601	7927	-23.8	-25.1	1010.4	377.1	2640	220		
193225	25 54	85 54	272	261	40	7600	7920	-24.0	-24.7	1011.6	377.0	DROP 1			
195115	26 01	85 54	77	261	42.8	7606	7925	-24.2	-25.8	1012.1	376.9	DROP 2			
200615	26 03.7	85 29.9	221	261	38.2	7598	7920	-23.9	-25.9	1010.8	377.2				
201750	25 56.6	85 55	5	261	43.3	7598	7918	-24.3	-25.7	1011.9	375.3	DROP 3			
202630	26 36.7	85 37.9	62	262	44.6	7641	7959	-24.9	-25.9	1013.1	374.9	→ to MCF			
2046	27 21	83 41	67	232	18.8	3863	4026	-0.3	-20.8	1015.4	6346	6 to land			
2110	27 50.9	82 29.5				-22		20.6	12.4	1015.9		BLK			

Aircraft Operations Center
P.O. Box 6829
MacDill AFB, FL 33608-0829

AOC1:SC

December 12, 1996

MEMORANDUM FOR: All Gulfstream-IVSP Participants

FROM: Stan Czyzyk

SUBJECT: Sixth Gulfstream-IVSP Calibration Flight

85°54'

The sixth test flight (tentatively scheduled for 16 December) will be an intercomparison flight with N43RF. James Franklin of HRD has requested that the dropsondes occur over a buoy. Depending on flight restrictions, if any, either buoy 42003 (25°56'N 85°5'W) or buoy 42036 (28°30'N 84°30'W) will be the likely target. This flight will be relatively short in duration (approximately 5 hours for N49RF and 2.5 hours for N43RF) and will consist of the following activities:

- 1) N43RF block out at 1215 local time, and N49RF at 1230 local time.
- 2) After take-off, both aircraft climb to 15000 feet pressure altitude (PA) and head west offshore. There both aircraft will form up in formation with the P-3 flying on the Gulfstream-IVSP.
- 3) Fly three (3) three minute legs varying indicated airspeed... 180, 200 and 220 knots in that order. The legs are not dependent upon wind direction.
- 4) Upon completion of the 220 indicated airspeed leg at 15000 feet PA, the aircraft will climb to 20000 feet PA. After the aircraft have formed up in formation (P-3 on the Gulfstream-IVSP) fly three (3) three minute legs varying indicated airspeed... 180, 200, 220 knots.
- 5) After the work at 20000 feet PA in completed, both aircraft will climb to 25000 feet PA, form up, then fly three (3) three minute legs varying indicated airspeed... 180, 200, and 220 knots. After the 220 knot leg has been completed, three (3) omega-sondes will be launched from the P-3, simultaneously with three (3) GPS sondes on

the Gulfstream-IVSP.

After the third sonde has splashed, **the P-3 will depart the area and ferry back to MacDill AFB.**

- 6) Upon completion of the work at 25000 feet PA, the jet will climb to 30000 feet PA and fly three (3) three minute legs varying indicated airspeed... 180, 210 and 240 knots. These legs **ARE dependent** upon wind direction.
- 7) Upon completion of the last leg at 30000 feet PA, the Gulfstream-IVSP will climb to 35000 feet PA and perform three (3) three minute legs varying indicated airspeed... 180, 210 and 240 knots.
- 8) Upon completion of the last leg at 35000 feet PA, the aircraft will climb to 40000 feet PA and perform the three (3) three minute legs varying indicated airspeed... 180, 210 and 240 knots. After the 210 indicated airspeed leg is completed, a yaw (side to side) maneuver of 5 cycles will be performed varying heading by 15-20 degrees. This will be followed by a pitch maneuver of ± 7 degrees.
- v 9) Upon completion of the 240 indicated airspeed leg at 40000 feet PA, the aircraft will climb to 45000 feet PA and perform two (2) three minute legs varying indicated airspeed... 180 and 210 knots. During the 210 indicated airspeed, four GPS dropsondes will be launched at two minute intervals.
- 10) After the last sonde has been launched at 45000 feet PA, the jet will begin a spiral descent at a rate of 1500 feet per minute. The descent will continue to 10000 feet PA.
- 11) After reaching 10000 feet PA, the jet will commence three (3) left turn circles then three (3) right turn circles at a 25° roll angle.
- 12) Upon completion of the circles the Gulfstream-IVSP will return to MacDill AFB.

DATE : 16. December 1996

TO : Chief, AOC Flight Operations

FROM : Pilot/Flight Director, Aircraft N438F ON 2110Z BLOCKTIME
OFF 1718Z 3.9

SUBJECT: Hazardous Duty

PURPOSE OF FLIGHT: N438F Test Flight (Intercomparison)

Hazardous Duty Pay is required for flight made on 16 Dec 96
(DATE)

Request based on close formation work with N438F

Personnel on board authorized Hazard Pay:

Bapt, G.

Parrish, J.

Lynch, T.

O'Fallon, D.

Carpenter, D.

PILOT/FLIGHT DIRECTOR: John A. P...

APPROVED: _____

DISAPPROVED: _____

CHIEF, AOC FLIGHT OPERATIONS: _____

NOAA FORM 56-49
(2-95)

MISSION PREFLIGHT LOG

MISSION

DESTINATION

WP

MCF

LAT / LON

27 50.9
82 29.6

RTE

MCF-2MCF

MH

97.000

VAR

97.000

TH

97.000

DR

97.000

TRK

97.000

GS

97.000

WD

97.000

WS

97.000

ALT

97.000

TAS

97.000

LEG / TOT DIST

97.000

LEG / TOT TIME

97.000

PROP ETA

97.000

ETA

97.000

ATA

97.000

REMARKS

97.000

SCHEDULED / ACTUAL TAKEOFF Z

1715Z

DATE OF TAKEOFF

16 DEC 96

FLIGHT DIRECTOR

PARALISA

AIRCRAFT COMMANDER

MCKIN

NAVIGATOR

RAEBURN

INS PERFORMANCE

INS 1

INS 2

BEGIN ALIGN TIME

1600Z

1600Z

ALIGN STATUS (0-5)

0

0

END NAV TIME

2105Z

2105Z

START NAV TIME

1715Z

1715Z

DELTA T

3750

3750

TERMINAL ERRORS

INS 1

INS 2

DELTA LAT

+7

+1

DELTA LON

+1.4

-1.0

RGS

0

1

RADIAL ERROR

1

1

REMARKS