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

FLT ID: 960716H	FM: BKF	TO: TPA
FLT NO: 96-040	BLK IN: 0040	ATA: 0030
ETD: 1800	BLK OUT: 1747	ATD: 1757
ETE: 6+30	BLK TIME: 6.9	FLT TIME:
SPONSOR ORG: NOAA	PROGRAM: STERAO	PURPOSE: Air Chem

OAO PERSONNEL

AC KENNEDY, P ✓	SYS ENG McMILLAN, S
CP TAGGART, B ✓	~~MECH~~ DATA SYS KINNEY, B ✓
NAV STRONG, T ✓	RADAR
FE WADE, S	DT/ODW
RADIO SANS SOUCI/ROGERS ✓	CLD PHYS
FD WHITE, S	DOPPLER

PARTICIPATING SCIENTIST/VISITORS/OAO

LAST, FIRST NAME	ACTIVITY ON A/C	AFFILIATION
HUBLER, G	Air Chem	AL
JOBSON, T	↓	AL
HOLCOMB/WILLIAMS		AL
PARRISH/FRIED, A		AL/NCAR
KUSTER/RYERSON, T	✓	AL

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

300 ~ 1017.2
340/6

30.1.2 ~ 1019.3
"W" 360/4

59

DATE : 16 July 96

TO : Chief, AOC Flight Operations

FROM : Pilot/Flight Director, Aircraft N42RE ON 0040 BLOCKTIME OFF 1747 6.9

SUBJECT: Hazardous Duty

PURPOSE OF FLIGHT: STERAO

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

Request based on POISONOUS GASES ONBOARD

Personnel on board authorized Hazard Pay:

WADE, S

SANS SOUCI, D

ROGERS, M

KINNEY, B

McMILLAN, S

PILOT/FLIGHT DIRECTOR: LCDR SEAN R. WHITE

APPROVED: _____ DISAPPROVED: _____

CHIEF, AOC FLIGHT OPERATIONS: _____

STERAO 96 TRANSIT

FLIGHT #14 H960714

TYPE OF DATA	SENSOR OR OPTION
INE	1
Accelerometer	1
Temperature probe	1
Altitude change option (for vertical winds)	PA
Static pressure	Rosemount fuselage
Dynamic pressure	Rosemount fuselage
Time source	Micro 99
Constants file	CO2963.CON

Notes:

There were five time/data gaps: 2013:01 2013:10 2040:06 2353:20 2353:30

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: Sean White: (813) 828-3310 ext. 3072

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TITLE (MAX 21 CHARACTERS) -- EX  HURRICANE PAINE
STERAO FLIGHT 14
YYMMDDL  FLT I.D.
960716H
HHMMSS START TIME    -99999 DEFAULT TO START OF DATA FOR PRINTOUT ONLY
175611
HHMMSS END TIME      999999 DEFAULT TO END OF DATA FOR PRINTOUT ONLY
003100
HHMMSS TAKE OFF TIME
175700
* NUMBER OF TAPES (I2) ...FOR STANDARD TAPE OUTPUT ONLY
14
* -------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]
1
* ---------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)
0
* ---------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
CO2963.CON
**************************************************************
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960716H

START: 1756:11
END: 0031:00

BAD BLOCKS

20 13:01
:10
20 40:06
2353:20
2353:30

Flightplan Denver to Tampa
16 July 1996

Point A: Buckley (39 42 N, 104 45W)
Doors closed:
Takeoff:

Default Climb Rate during Profiles will be 1500 ft/min.

HC samples at --:10 to --:15, --:25 to --:30, --:40 to --:45, --:55 to --:00

Calibration at 9 kft for 20 min (1800
Head direction of **Pt. B (39 42N, 103 13 W)**
Stay at constant altitude for approximately 20 min for calibration (**observer calls**)
Pt. A to Pt. B : 130 km, (~ 20 min)

Intercomparison with Citation in route from Pt. B to Pt. C (38 00N, 98 00W)
Rendevouz with Citation at given time (~ 30 min after planned takeoff to accomodate for delays)
Pt. B to Pt. C : 490 km, (~1 hr 10 min at 230 knots) 9.5k (1824 - 1830)
13.5k (1835 - 1847)

==> Be at Pt. B at 12 kft MSL at given time. ~~12~~ 17k (1901 - 1908) 500' 1924
Intercomparison at ~~12~~ kft MSL, ~~17~~ kft MSL, ~~22~~ kft MSL, and ~~25~~ kft (or max P3 altitude)
Change altitude at --:03, --:18, --:33, --:48 to accomodate HC schedule on P3. 17.5 (1940 - 1955)

Head direction of Pt. D (36 40, -95 40) Pt. C to Pt. D: 250 km, (36 min at 230 knots)
Descend along the way to Pt. D, arrive at Pt. D at 1500-2000 ft AGL. 8k (2037 - 2048)
7.5k (2122 - 2133)
7.5k (2237 - 2248)

Hydrocarbon Transect within PBL on way from Pt. D to Pt. G
Every 3rd HC sample above the PBL (default 8000 ft AGL).
==> Be within the PBL (1500-2000 ft AGL) near **(32 21.7N, -88 12.1W)** (Kinterbish)

Head direction of Pt. E (32 35, -90 00) Pt. D to Pt. E: 690 km, (1 hr 45 min at 220 knots)
Head direction of Pt. F (32 21.7, -88 12.1) Pt. E to Pt. F: 170 km, (27 min at 220 knots)
Head direction of Pt. G (32 00, -84 30) Pt. F to Pt. G: 350 km, (53 min at 220 knots)

Head direction of Tampa
Head direction of **Pt. H** MacDill AFB (27 51N, 82 31W)
Point G to Point H : 500 km, (1 hr 10 min at 240 knots) (2339 - 2348)
climb in route to 25 kft MSL for 1 HC sample (if possible)
return to ~~18~~ kft MSL for calibration,
Time for calibration 19k (2352 - 0005
30 min before reaching Tampa, calibration at constant altitude (18 kft MSL)

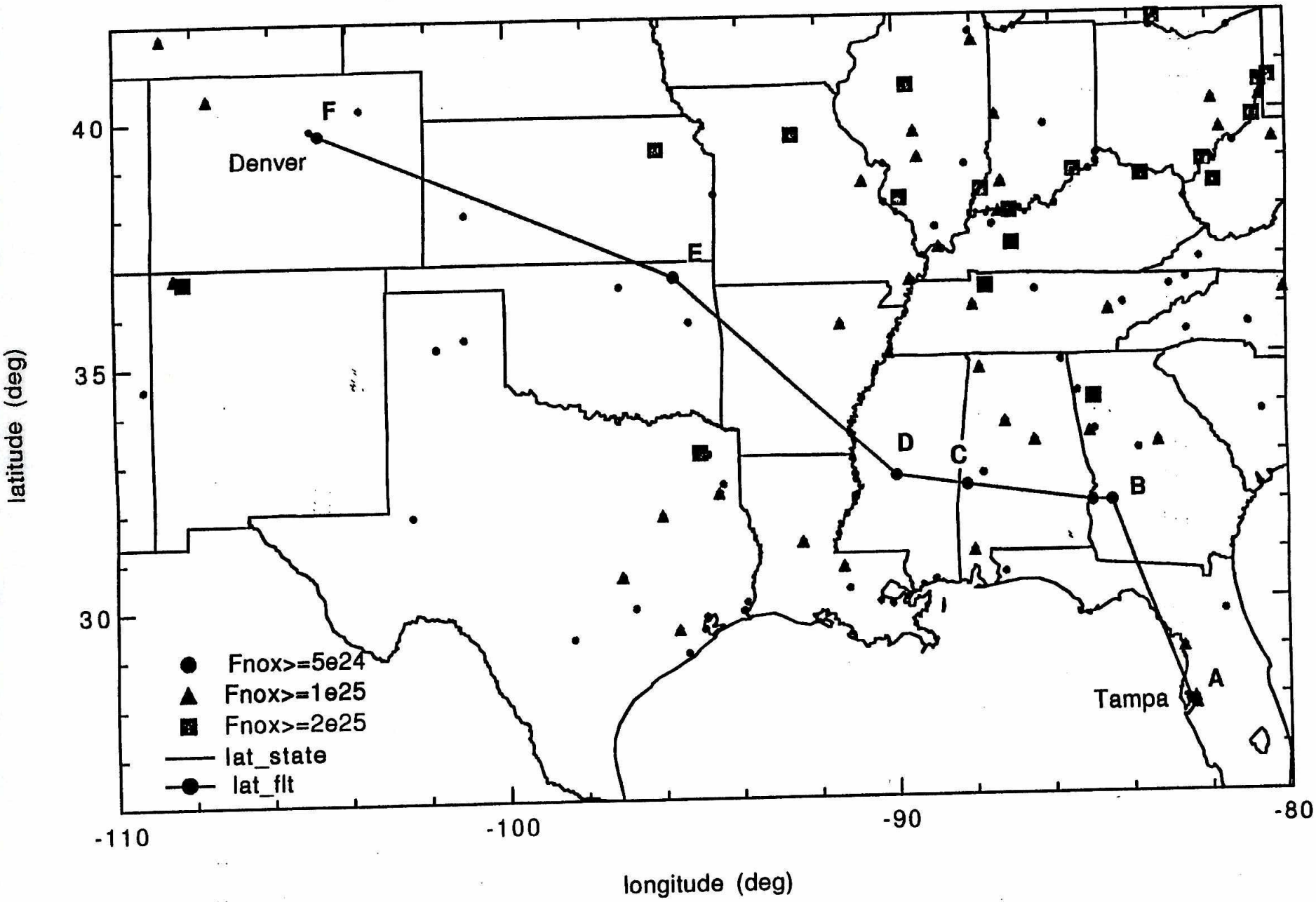
Flight time : 6 hr 30 min

Pt. A (39 42, -104 45)

NOAA FORM 59-4
(2-72)

Time	TA	TD	WD	WS	Remarks				
1753	5.5	4.9	—	—	T/O				
1928	17.0	15.0	210	29	cld base	3/8	5100	climb	
1929	11.8	5.1	215	32	cld top		7000		
2001	11.7	-20	240	21	cld top	3/8	8500	descend	
2004	17.3	13.3	~~224~~	12	cld base		5000		

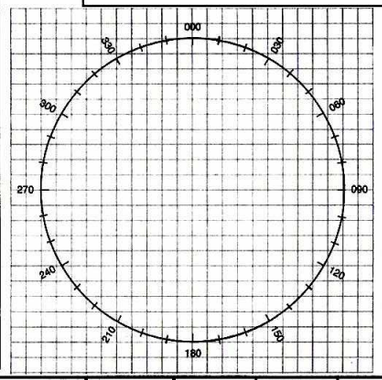
Pt. B (39 42, -103 13)
Pt. C (38 00, -98 00)
Pt. D (36 40, -95 40)
Pt. E (32 35, -90 00)
Pt. F (32 21.7, -88 12.1)
Pt. G (32 00, -84 30)
Pt. H (27 51, -82 31)

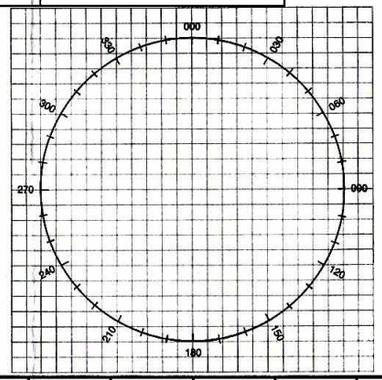

40
35
30
latitude (deg)
-110
-100
-90
-80
longitude (deg)
Denver
F
E
D
C
B
A
Tampa
Fnox>=5e24
Fnox>=1e25
Fnox>=2e25
lat_state
lat_flt

MISSION LOG

PAGE ___ OF ___

CLEARANCES			
FREQ	ALT	HDG	OTHER
			HWT VIA PLAINS.GLD
			↗OK FXP 9 F10
			128.45 SQ 0601





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
1945	G	37-34.2 97-11.1	37-33.3 97-10.2	+.9 +.9	37-28.8 97-13.3	+4.4 -2.1	124		133	3L	130	270	262	12	17.5	262	D				FM1
2335	G	30-53.8 83-58.1	30-50.9 83-56.8	+3.9 +1.3	31-00.5 83-58.9	+6.7 -.8			162		160	256/180		9	7	266					
0035	V	27-51.0 82-29.6	27-47.7 82-27.7	+2.3 +1.9	28-02.7 82-27.1	-11.7 +2.5															