

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

FLT ID: 0507I	FM: OKC	TO: OKC
FLT NO: 95-39	BLK IN: 0133	ATA: 0124
ETD: 19Z	BLK OUT: 1853	ATD: 1901
EYE: 6+	BLK TIME: 6:40 (6.7)	FLT TIME: 6:29 (6.4)
SPONSOR ORG: NSSL	PROGRAM: VORTEX	PURPOSE: Research Flight 9

OAO PERSONNEL

RC Kennedy ✓	SYS ENG Lynch ✓
CP Tennesen ✓	DATA SYS McDermott
NAV Strong ✓	RADAR McMillan ✓
FE Wade ✓	BT/ODW
RADIO Sans Souer ✓	CLD PHYS
FD Parrish ✓	DOPPLER

PARTICIPATING SCIENTIST/VISITORS/OAO

LAST, FIRST NAME	ACTIVITY ON A/C	AFFILIATION
Watson, A.I. ✓	P.I.	NSSL
Zeigler, C. ✓	Comms	↓
Shepherd, T. ✓	Radar	
Lewis, S. ✓	Radar	
Westwater, E. ✓	DWMA	
Curl, S. ✓	Visitor	NWS
5959 Fm - 75K		

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

File Frederick, then Childress. LF AND PROBS AFTER T.O.
 1950 - started working by hailstorm line near Childress.
 2210 - Moved to ADMORE to investigate iso cell.
 2235-2340 - Worked ADMORE cell, may have spotted sm tornado on second NE-SW pass.
 2343 - Went back to line, but cells isolated.
 0014 - Released. Going SSW to find hole in line, head for OKC.

NOAA • AOC • SED Flight Performance Log

22 March 95

Aircraft : N43RF

Project: VORTEX • ARM '95

Mission : VortexSED Crew: Lynch, McMillianFlight ID : 950507I

Pre-Flight: _____

Take-Off: 19:01Landing: 01:23:52

System			Pre-Flight	In-Flight	Post-Flight		
N A V	INE #1	Aligned to : <u>5</u>	✓ TL		+5.9	+2.6	6
	INE #2	Aligned to : <u>0</u>	✓ TL		-32.4	-15.3	5
	GPS		✓ TL		Lat	Long	GS
R A D A R	Nose		✓ TL				
	L/F	R/T SN : <u>102</u>	✓ TL	③			Mod Switch Off ? ✓
	Tail	R&T SN : <u>2022201</u>	✓ TL				Mod Switch Off ? ✓
	ASAU's & RCU		✓ TL				
	MARS Data System		✓ TL				# DATs : /
P M S	2DG-C	Ch 1/64: <u>/</u>	✓ SIM				
	2DG-P	Ch 1/64: <u>/</u>	✓ TL	①			
	FSSP	Ref VDC:	✓ TL				
	SEA Data System		✓ TL				# DATs : /
T E M P		Cal High	Cal Low			Cal High	Cal Low
	Temp #1	<u>30.6</u>	<u>-30.1</u>	✓ TL		<u>30.6</u>	<u>-30.2</u>
	Temp #2	<u>30.5</u>	<u>-30.3</u>	✓ TL		<u>30.4</u>	<u>-30.3</u>
	Temp #3	(Starboard)		✓ TL			
	Dewpoint #1			✓ TL			
	Dewpoint #2			✓ TL			
P R E S S	Attack Angle (AP/DAP)		✓ TL				
	Slip Angle (BP/DBP)		✓ TL				
	Differential (PQ1/PQ2/PQ3)		✓ TL				
	Absolute (PS1/PS2)		✓ TL				
	Radome Transducers		Plugs Out ? ✓ RSM				
F L T L V L	Apn-159	SN: <u>66-024</u>	✓ TL				
	Apn-232	SN: <u>1699</u>	✓ TL				
	King Liquid Water		NY				
	J&W Liquid Water						
	Down PRT-5 (SST)		✓ TL				
	Side PRT-5 (CO ²)		✓ TL				
	Up PRT-5		Open ? ✓ TL				Closed ? ✓ TL
	RAMS Data System		✓ TL				# DATs : <u>2</u>
	Exterior Walk Around		✓ RSM				
	Video	(N) (L) (R) D	✓ TL	②			
	FCU	- A B C	✓ TL				
U S E R	Charge Probe		NY				Accelerometers
	Gerber Liquid Water	<u>1.61.8</u>	✓ TL				#1 (2 G) : <u>8148</u>
	Field Mills	(L) (R) U D	✓ TL				#2 (2.5 G) : <u>6684</u>
	ETL Dual-Channel uWave Radiometer		✓ TL				#3 (3 G) : <u>5967</u>
	Eppl Radiometers (PSP / PIR)		✓ TL				#4 (3.5 G) : <u>2892</u>
	2 Meter Repeater / Duplexer		✓ TL				
	Cappiccuno Machine		✓ TL				

Please Note any Discrepancies

[illegible]



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Washington, D.C. 20230

OFFICE OF THE ADMINISTRATOR
Office of NOAA Corps Operations
Aircraft Operations Center
P.O. Box 020197
Miami, FL 33102-0197

MEMORANDUM FOR: *RE. BOB MADDOX, NOAA*
DIRECTOR, OSSL

FROM: *CAPT ~~GEORGE C. PLATKA~~*
Rear Admiral ~~R.H. Speer~~, NOAA
Director, Aircraft Operations Center

SUBJECT: Hazard Duty Flight

The mission flown on AOC aircraft # *143CF* on *7 May 95* has been declared hazardous. The following personnel from your laboratory participated in this mission:

WATSON, A.I.
ZEIGLER, C.
SHEPHERD, T.
LEWIS, S.

For purposes of computing allowable hazard duty time, the hazard period during this mission was from *1353* local time on *7 May 95* until *2033* on *7 May 95*.



950507I N43RF Vortex-95 Ardmore Tornado & Altus Squall Line

<u>Sensor or system</u>	<u>Number or Name</u>
INE	1 (See note)
Accelerometer	1
Temperature Probe	1
Dew Point Probe	1
Altimeter	APN-159
Altitude change option (for vertical winds)	PA
Static Pressure	Rosemount Fuselage
Dynamic Pressure	Rosemount Fuselage
Time Source	Micro 99
Constants File	C03956.CON

Notes:

INE 1 positions were corrected periodically with good GPS positions. No corrections were made to INE 1 groundspeeds.

The APN-159 Radar Altimeter failed after landing, at 012500Z.

Special note. Locations 80, 81 and 82 of the Type 5 record on the Standard Tape contain vertical groundspeed, vertical airspeed and vertical wind, respectively, computed using Dave Jorgensen's vertical wind algorithm. It is recommended that these values be used for vertical wind analysis.

Jack Parrish, Flight Director

I950507
INE1 RENAV

NO GAPS

20 2800, +1.3, +.6
212800, +2.7, 3.2
222800, +2.3, +3.7
232800, +3.4, 2.9
002800, +2.3, 3.2
012800, 5.6, 2.5

96, 100

33, 36

~~190100~~
194500 +0.1 +0.1 23.2 36.3
202900 +0.9 +0.4 17.7 43.2
211400 +1.2 +0.7 27.7 47.7
220030 +1.6 +2.9 54.8 17.3
224500 +2.7 +2.7 27.6 52.8
224500 +4.3 +4.1 20.9 04.4
233000 +3.2 +3.0 10.6 07.3
001500 +6.9 +3.1 28.5 19.9
010000 +4.5 +3.2 32.2 14.2
013100 +5.9 +2.6 (10)24.1 36.2

2000 +1.4 -0.2 20.2 57.4
2045 +0.6 -1.4 30.9 34.2
2140 +3.4 -3.0 13.3 02.0
2220 +1.6 -3.4 39.9 15.5
2300 +5.5 -3.7 30.1 56.5
2345 +2.8 -3.1 14.3 03.1
0020 +7.3 -3.1 18.6 35.3
0105 +4.3 -3.0 52.6 58.9
0131 +5.9 -2.6 24.1 36.2

950507I VORTEX FLIGHT 9

Time	LAT	LONG	TK	WD	WS	PA	GA	TA	TD	SP	PS				
1853	35 27.0	97 26.2				451		16.8	15.4		960.2	BLK out			
1903	35 19	97 39	256	226	59	1587	1221	15.8	8.0	961.9	825	↑			
1908	35 13.8	97 52.2	249	217	57	3011	2810	5.1	0.8	963.4	277.4	Coming out of line			
191715	35 02	98 32	246	218	31	3085	2706	6.7	-6.8	954.6	6935	-10/c			
193315	34 20	98 59	177	222	24	3139	2815	5.9	0.6	961.2	688.6	NEAR FROD			
194945			030	257	287	266									
195545			200	2nd	100	266									
200235				Leg	3										
200930	34 39.8	99 46	206	192	27	3134	2677	5.6	1.3	942.2	689.5	Leg 4			
201640	34 24	99 50	24	218	48	3132	2688	5.7	1.7	947.6	689.1	Leg 5			
202315	34 44	99 43	195	183	37	3133	2692	5.6	0.4	948.0	696.5	Leg 7			
203000	34 28	99 42										Leg 8			
203730	34 53	99 28	194	193	21	3129	2654	7.9	2.7	948.5	6	Leg 9			
204610	Leg 10											Leg 10			
205445	Leg 11		190	180	30	3131	2665	5.9	-3.5	945.1	689.6	Leg 11			
210330	Leg 12														
210930	Leg 13														
2116	34 48	99 19	↓ to 3.4K												
213140	34 44	60.106	206	206	20	ELECTRA						FOR 1 LEGS W/ SEC			
214205	35 13	98 59	197	153	40	1045	461	18.8	17.1	943.2	883.5				
214830	35 04	98 59	15	166	44	1045	486	19.0	17.1	944.6	883.9				
215830	35 32	98 53													
220520	35 13	98 48	↑ to 5K to 60 \$, check cells, -										CELL 125/100mi		
2210	→ to ARMORE FOR ISOLATED CELL WORK														
2230	↑ to ~3K to work under start, near SW end of Gig cell														
2239	END OF E-W LEG 5 OF CELL														
224815	34 19	97 07	53	148	31	700	350	20.7	19.0	967.7	931.7	BOARD W/ SE 3.06 SS			
225030	LEG 2 - SE SIDE CELL	WORKING SW, STOPPED SW TOWARD													
2307	LEG 4	ND													
233300	34 08	98 09	51	LEG TO 26											
233855	34 20	97 55	237	139	33	833	470	21.3	19.0	967.1	916.8				
2343	NE LEG	050													
2350	SW LEG	220													
235930	E LEG 5 OF TARGET 4														
000400	ESC LEG 5 OF TARGET 5														
0004	RELEASED														
002330	34 09	97 41	196	174	38	833	500	21.7	18.3	970.8	917.1	LOOKING FOR HORIZON LINE			
002730	↑														
0034	33 39	97 52	237	209	58	8509	2263	11.2	5.4	969.7	744.6				
005330	34 06	98 31	26	248	54	1946	1627	10.5	6.7	968.7	800.8	BACK OF LINE, REGULAR			
0117	35 36	97 34	82	255	50	1276	874	13.4	9.2	961.2	867.0	↓ to land.			
0131	35 24	97 32				463		15.4	14.6		958.8	BLOCKS			

DATE : 5/8/95

TO : Chief, AOC Flight Operations

FROM : Pilot/Flight Director, Aircraft 0431ZF ON 0133 BLOCKTIME

OFF 1853 6.7

SUBJECT: Hazardous Duty

PURPOSE OF FLIGHT: VORTEX RESEARCH FLIGHT 9

Hazardous Duty Pay is required for flight made on 5/7/95
(DATE)

Request based on penetration of squall line
thunderstorms.

Personnel on board authorized Hazard Pay:

Wade, S.

SADS SOUCI, D.

PARRISH, J.

LYDCH, T.

McMILLAN, S.

PILOT/FLIGHT DIRECTOR:

APPROVED:

DISAPPROVED:

CHIEF, AOC FLIGHT OPERATIONS:

