

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

FLT ID: 990630I	FM: KBNA	TO: KBNA
FLT NO: 99-034	BLK IN: 2342Z	ATA: 2334Z
ETD: 1500Z	BLK OUT: 1625Z	RTD: 1632Z
ETE: 2130Z	BLK TIME: 7.17 7.3	FLT TIME: 7.02 7.0
SPONSOR ORG: NOAA/AL	PROGRAM: AESOP	PURPOSE: BNA/S. IND. TRACK

OAO PERSONNEL

AC TAGGART, B ✓	SYS ENG LYNCH, T ✓
CP KENNEDY, P ✓	DATA SYS HARBROOK, C ✓
NAV NEWMAN, C / RATHBUN, D ✓	RADAR
FE MOORE, H	DT/ODW
RADIO ROGERS, M	CLD PHYS
FD C2424K, S ✓	DOPPLER

PARTICIPATING SCIENTIST/VISITORS/OAO

LAST, FIRST NAME	ACTIVITY ON A/C	AFFILIATION
HUBLER, G ✓	PI	NOAA-AL
RYEASON, T ✓	SCIENTIST	"
HUEY, G ✓	"	"
FLOCKE, F ✓	"	NCAR
GOLDMAN, P / HOLLOWAY, J ✓	"	NOAA-AL
WASHENFELDER, R ✓	"	"
DISSLY, R ✓	"	NOAA-AL
LEE, Y ✓	"	BROOKHAVEN

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

U.S. DEPT. COMM./NOAA/OAD - DATA SECTION WORK FORM NO.2 OADWF2

FLT ID: 990630J

TIME OFF: 1632Z

TIME ON: 2334Z

	A/C T/O	WX STN	A/C LAND	WX STN
PRESSURE	991.2	29.93	989.8	29.86

NO DATA DISPOSITION/DATE/QUALITY

1/SEC FLT LVL TAPES	2	
FAST FLT LVL TAPES		
RADAR TAPES	1	
DOPPLER TAPES		
ODW CASSETTES	1	
HARD COPIES		
AXBT		
AXCP		
ODW		

PHOTOGRAPHY

	FWD	LS	RS	VERT
ON				
OFF				
RATE				

REMARKS

NOAA • AOC • SED Flight Performance Log

Aircraft : N43RF

Project : Ozone '99

Mission : BNA mission 1SED Crew: Lynch, Hornbrook, RogersFlight ID : 990630IPre-Flight: 1244Take-Off: 1623Landing: 2334

System			Pre-Flight	In-Flight	Post-Flight		
NAV	INE #1	Aligned to : <u>0</u>	<u>✓</u> <u>ch</u>		<u>7.4</u>	<u>-9</u>	<u>7.5</u>
	INE #2	Aligned to : <u>0</u>	<u>✓</u> <u>ch</u>		<u>-10.1</u>	<u>8.4</u>	<u>7.5</u>
	GPS	<u>Fm 1</u>	<u>✓</u> <u>ch</u>		Lat	Long	CS
RADAR	Nose		<u>✓</u> <u>TL</u>				
	L/F	R/T SN: <u>103</u>			Mod Switch Off? <u>✓</u> <u>ch</u>		
	MARS Data System		<u>Clean DAT?</u>		# DATs: <u>2</u>		
TEMP		Cal High	Cal Low			Cal High	Cal Low
	Temp #1	<u>+30.9</u>	<u>-30.3</u>	<u>✓</u> <u>ch</u>			
	Temp #2			<u>✓</u> <u>ch</u>			
PRESS	Dewpoint #1		<u>✓</u> <u>ch</u>				
	Dewpoint #2 (AOC)		<u>✓</u> <u>ch</u>				
	Attack Angle (AP/DAP)		<u>✓</u> <u>ch</u>				
PRESS	Slip Angle (BP/DBP)		<u>✓</u> <u>ch</u>				
	Differential (PQ1/PQ2/PQ3/PQ4)		<u>✓</u> <u>ch</u>				
	Absolute (PS1/PS2)		<u>✓</u> <u>ch</u>				
FLTLVL	Radome Transducers		<u>Plugs?</u> <u>✓</u> <u>TL</u>				
	Cabin Transducer (Station 5)		<u>✓</u> <u>ch</u>				
	Apn-159	SN: <u>Su 71-01</u>	<u>✓</u> <u>ch</u>		Off? :	<u>✓</u> <u>ch</u>	
FLTLVL	Apn-232	SN: <u>1699</u>	<u>✓</u> <u>ch</u>		Off? :	<u>✓</u> <u>ch</u>	
	J&W Liquid Water		<u>✓</u> <u>TL</u>				
	Lyman Alpha Hygrometer		<u>Plugs?</u> <u>✓</u> <u>ch</u>		Plugs? :	<u>✓</u> <u>TL</u>	
FLTLVL	Down PRT-5 (SST)		<u>✓</u> <u>ch</u>				
	Side PRT-5 (CO ₂)		<u>✓</u> <u>ch</u>				
	RAMS Data System		<u>Clean DAT?</u>		# DATs :	<u>2</u>	
MISC	F/D Laptop		<u>✓</u> <u>ch</u>		Off? :	<u>✓</u> <u>ch</u>	
	C.I. Printer		<u>✓</u> <u>ch</u>				
	ASDL		<u>✓</u> <u>ch</u>		Off? :	<u>N/A</u>	
MISC	Eppl Radiometers (PSP / PIR)		<u>✓</u> <u>ch</u>				
	Exterior Walk Around		<u>✓</u> <u>ch</u>				
	Video	<u>N L R D</u>	<u>✓</u> <u>CH</u>		Lens Covers? :	<u>LR</u>	
MISC	AVAPS		<u>N/A</u>		# Tapes :	<u>4</u>	
	GPS Digital Dropsondes (GD ²)		# On Board : <u>N/A</u>	# Dropped :	# Good :	<u>N/A</u>	
	FCU	<u>A-B-C</u>	<u>✓</u> <u>ch</u>		UPS Off? :		
USER	Wing Pods - Bolts & Covers		<u>✓</u> <u>ch</u>		Accelerometers		
	Zenith SAFS Radiometer		Secure? <u>✓</u> <u>TL</u>		#1 (2 G):	<u>0190</u>	
	Pump Bay Temp Sensor		<u>✓</u> <u>ch</u>		#2 (2.5 G):	<u>6686</u>	
USER	Window Inlet Covers		Removed? <u>✓</u> <u>ch</u>		#3 (3 G):	<u>5967</u>	
	CO & NO Alarm Operational		Test? <u>✓</u> <u>ch</u>		#4 (3.5 G):	<u>2892</u>	
	CO & NO Gas PSI Check		Start PSI : <u>370</u>		End PSI :	<u>320</u>	
USER	All Gas Cylinders Secure		Mounting? :		Valve Closed? :		

Behind C3x?

Gas Cylinders located in:

- (3) C1/C2 Cabinet
- (1) B3 Cabinet
- (3) Bookcase Sidewall
- (3) Station C3X
- (1) Station 2 Sidewall
- (3) Station 3
- (5) Aft Bottle Rack
- (3) Station 6
- (2) Station 7 Sidewall

Please Note any Discrepancies

[illegible]

NOAA • AOC • SED
N43RF DATA STATION LOG

Project : Ozone '99

Mission : Ozone 99-mission 1 Flight ID : 99 0630 I

Operators : Lyner, Hornbein, Rogers

Take Off : 1633

Landing : 2334

RAMS DAT 1 On [8/9] : <u>1624</u>	RAMS DAT 1 Off : <u>2330</u>	Data : <u>Slow</u> <u>Fast</u> AVAPS
RAMS DAT 2 On [8/9] : <u>1625</u>	RAMS DAT 2 Off :	Data : <u>Slow</u> <u>Fast</u> AVAPS
RAMS DAT 3 On [8/9] :	RAMS DAT 3 Off :	Data : Slow Fast AVAPS
Printer On : <u>1625</u>	Printer Off :	
MARS DAT 1 On [8/9] : <u>1635</u>	MARS DAT 1 Off : <u>2338</u>	CPU Selected : <u>A</u> B
MARS DAT 2 On [8/9] :	MARS DAT 2 Off :	VCR's Used : <u>N</u> <u>Q</u> <u>Q</u> <u>Q</u> <u>D</u>
MARS DAT 3 On [8/9] :	MARS DAT 3 Off :	VCR Mode <u>VHS</u> S-VHS 2/12 <u>6hr</u>
PMS DAT 1 On :	PMS DAT 1 Off :	
PMS DAT 2 On :	PMS DAT 2 Off :	Tapes Given To
PMS DAT 3 On :	PMS DAT 3 Off :	RAMS :
VCR Tape 1 On : <u>1626</u>	VCR Tape 1 Off : <u>2349</u>	MARS :
VCR Tape 2 On : <u>1626</u>	VCR Tape 2 Off : <u>2349</u>	PMS :
VCR Tape 3 On : <u>1626</u>	VCR Tape 3 Off : <u>2349</u>	VCR :

1626

2349

CARCAH Tasking

Mission Number : _____

Storm Name : _____

Data Station Operator Notes

DATE : 6/30/99
TO : Chief, AOC Flight Operations
FROM : Pilot/Flight Director, Aircraft N43RE ON _____ BLOCKTIME
OFF 1625Z
SUBJECT: Hazardous Duty

PURPOSE OF FLIGHT: AIR CHEMISTRY SURVEY

Hazardous Duty Pay is required for flight made on 6/30/99
(DATE)

Request based on HAZ. MATERIALS ONBOARD

Personnel on board authorized Hazard Pay:

<u>CZYRKA, S</u>	_____
<u>ROGERS, M</u>	_____
<u>HORN BROOK, C</u>	_____
<u>LYNCH, T</u>	_____
<u>MOORE, H</u>	_____
_____	_____
_____	_____
_____	_____
_____	_____

PILOT/FLIGHT DIRECTOR: _____

APPROVED: _____

DISAPPROVED: _____

CHIEF, AOC FLIGHT OPERATIONS: _____

990630 I

INE2, TTL, DW2, PA

~~AT~~ DP exceeded AT @ 1642-1643
 DP6EF a little slower responding
 + a few small probs during flight

TTL SPIKES

9-sec / 20 sec

RENAV

174600	-1.2, 0.6	36 18.6	-86 42.9
181700	-1.9, 1.4	36 31.4	-86 41.7
190500	-2.6, 1.8	38 2.0	-87 15.7
201900	-4.0, 3.1	38 15.4	-87 16.0
212500	-4.9, 4.1	38 33.3	-87 16.5
223100	-5.7, 6.3	38 41.5	-87 33.4
233400	-6.0, 8.2	36 8.4	-86 40.4
234200	-6.1, 8.4	36 7.2	-86 40.6

RO-159 SET TO ZERO 1625:01-1633:34 X ✓
 REFLORE w/272 1633:34-1635:32 X ✓
 SET TO ZERO 2334:23-2342:00 X ✓

DP2 PROBS AT DESCENDS NOTE -

38 94

1638:00-1638:50 ~~mt~~ (1638:30-1638:50) X ✓
 1641:00-1643:00 (1642:05-1642:50) X ✓
 1856:00 - ~~1857:00~~ 1857:00 + 1857:10-1858:10 (1856:40-1857:00) X (1857:40-1858:10) X ✓
 — 1953:20-1955:50 NO CONNECTION ✓
 2134:25- ~~2136:00~~ 2141:00 (2) (2135:50-2136:40) X (2139:20-2140:00) X ✓
 2242:00-2345:00 — QUESTIONABLE X NO CONNECTION

DP2 OSCILLATING THROUGHOUT

DP EXCEEDED AT BRIEFLY DET. PRELIP

Time	LAT	Lon	TR	HD	TA	TD	WD	WS	PA	GA	PS	SP	REMARKS
1638												4500 FT	BD LAYER
1640												DESCR	6500 FT PT 1
164350	35 48	86 38	312	310	22.4	18.8	200	8.0	605	376	942.2	985.5	LEVEL 2K PA
165618	36 17	87 19	314	314	22.4	16.0	209	5.2	605	438	942.7	986.9	PT 2
170200	36 17	87 00											PT 3
171040	35 56	86 34	134	136	23.2	17.8	255	7.3	598	395	943.0	987.0	PT 4
1714													PT 5
171930	36 44	86 50										1500 AGL	DESCEND
172028													CLIMB
1723	36 19	87 00	318	317	22.3	14.8	202	5.2					PT 6
172655	36 23	86 55											PT 7
172944	36 17	86 45											DESCEND
173025													CLIMB
173123													CORNELIA FORT
173530													SMOKE PLUME
173420	36 00	86 26			22.9	18.4	267	5.2					PT 8
173945	36 06	86 22											PT 9
1748	36 2	86 5	308	307	23.0	16.1	219	3.2	611	405	941.7	987.0	PT 10
175226	36 29	86 47											PT 11
180132	36 06	86 19	136	139	23.3	16.9	213	8.2	610	383	941.6	983.2	PT 12
180430	36 05	86 06											PT 13
181910	36 37	86 49	313	311	23.3	16.5	228	8.6	620	446	941.4	991.7	PT 14
181948													CLIMB
182740	37 06	87 03	336	332	6.4	5.2	262	22.9	3041	2953	697.5	991.7	LEVEL 10K
183430													IN + OUT CLOUD
184630													PT 15
1852													IN + DESCEND
1858	38 03	87 33	255	254	20.6	14.8	198	8.4	616	477	941.3	997.6	LEVEL 2K PA
185930													PT 15
193116	38 01	85 17	90	91	22.5	15.0	241	4.2	619	421	941.2	991.2	PT 16
195105	38 08	86 02											PT 17
195401	38 04	86 13											6500
1957													LEVEL 2K
201250	38 09	87 35	268	266	21.1	15.7	181	4.8	620	466	941.2	994.7	PT 18
201430	38 13	87 35											PT 19
2031													DESCEND 0.1 P
2045													PT 20
204740	38 22	85 16											PT 21
205030	38 23	85 28	267	268	22.3	15.0	315	2.5	615	375			
211825	38 23	87 33											PT 22
212050	38 32	87 34											PT 23
213330	38 34	86 37											PT 24
213720													4500 A PBL
213815													DESCEND 6500
214105	38 33	86 01	91	93	22.0	15.0	195	9.0	614	351	941.6	997.5	6000 A top of day
215113	38 32	85 1	91	92	21.9	15.6	236	1.3					LEVEL 2K
215405	38 42	85 14											PT 24
2200	38 45	85 25											PT 25
222915	38 44	87 34	272	273	21.4	15.2	107	11.1	614	439	941.7	989.5	CHIEF PLUMP
224710	38 44	87 35	187	195	-11.5	-20.2	240	49.4	6423	6572	445.1	983.4	PT 26
2312													SPARE UP
232930	36 11	86 42											LEVEL 21K
													DESCEND
													CORNELIA

INS PERFORMANCE		INS 1	INS 2
BEGIN ALIGN TIME		1240	1240
ALIGN STATUS (0-5)		0	0
END NAV TIME		2347	2347
START NAV TIME		1617	1617
DELTA T		7.5	7.5

TERMINAL ERRORS		INS 1	INS 2
DELTA LAT	4.4	-6.1	
DELTA LON	-9	+8.4	
RGS	5	1	
RADIAL ERROR	1 NM	0 NM	

REMARKS
15" 25.93 20
VFL 2000 118.4
Ø445