

FLT ID: 970710 ² I	FM: MCF	TO: MCF
FLT NO: 97-020	BLK IN: 1725Z	RTA: 1717
ETD: 0945Z	BLK OUT: 0945Z	ATD: 0958
ETE: 7+	BLK TIME: 7:40 (7.6)	FLT TIME: 7:19 (7.3)
SPONSOR ORG: AOC	PROGRAM: AEROSTAT	PURPOSE: CALIBRATION

0A0 PERSONNEL

AC	KENDIGDY ✓	SYS ENG	Lynette ✓
CP	KODUL	DATA SYS	Prognosis
NAV	STRONG ✓	RADAR	Smith ✓
FE	MOORE ✓	BT/ODW	
RADIO	FAIRBANKS	CLD PHYS	
FD	FAIRBANKS ✓	DOPPLER	

PARTICIPATING SCIENTIST/VISITORS/OAO

[illegible]

180/4
26
22.5
1017.8

165
4 RTs

PROPOSED/ACTUAL MISSION/REMARKS (RECCO, FIXES, STORM, PENET, NHOP #) 30.09

✓ Sunrise 6:41 ACT 30.09 (1018.2)

1018.5
FM 51K
242nd
SP 1017.4
FM 51K

Floion mostly as planned.
Executed 51K, 10K, 15K, then 1K aerostat passes.
Flew box with TEAL 57 at 151K. Form box with 242 at 101K.
2 passes each airopped at 1K.

2/2nd Fle
SP 1017.4 2
Fm 15.4
250/6.
SP 1017.6
Fm. 314
28/22.2
PS 1018.2
on ground

970712I AEROSTAT CAL FLIGHT

-24 1018.2 14300

Time	LAT	LONG	TK	WD	WS	PA	GA	TA	TD	PS				
100945	2826.5	8235.7	328	346	4.4	4239	4503	-0.2	-4.8	597.4				
102721	2931.1	8315.7	3	24	12	4550	4823	-0.2	-16.6	573.8				
103230	↓	to SK												
103639	↓	WACK	AEROSTAT											
104652	2930.6	8315.8		98	6	1455	1584	17.7	13.2	850	Pass 1	Practice		
105526	2930			90	7			17.7	13.1	850.2	Pass 1	180/3.44	16.5/13.5	
110236	2931.2			81	7.5	1451	1581	17.7	13.0	850.5	Pass 2	2		
110933	2930	8316		84	7	1459	1589	17.8	13.3	849.9	Pass 3	180 IAS		
111806	2930			82	8.1	1459	1586	17.7	13.5	849.9	Pass 1			
112341				80	8.8			17.6	13.9	850.2	Pass 2		210 IAS	
113030	2930	8316		78	8.2	1455	1583	17.6	13.5	850.2	Pass 3			
113734				88	8.9	1456	1589	17.5	13.8	850.1	Pass 1			
114417				91	8.5	1455	1586	17.7	13.0	850.5	Pass 2		240 IAS	
115011	2930	8316		90	7.7	1453	1581	17.7	13.5	850.1	Pass 3			
120528	2928.4	8321.7	358	17	13.4	3284	3606	-4.3	-36.0	1014.1	519.9	DACT	6000	
122630	2923.7	8323.0	359	304	3.5	3160	3370	7.7	-1.1	1018.5	687.1	0-bit		
125128	2930	8315		279	4.5	3008	3218	8.4	0.7	1018.9	700.1	Pass 1		
125847	2930	8315		268	4.7	3010	3213	8.1	2.0	1018.8	700.2	Pass 2	180 IAS	
130601				250	4.5	3012	3215	8.0	2.8	1019.0	700.1	Pass 3		
131236				258	5.1	3006	3210	8.0	2.4	1019.1	700.2	Pass 1		
131916				252	6.1	3009	3219	7.6	3.7	1020.3	700.2	Pass 2	210 IAS	
132541				245	6.1	3010	3220	7.5	4.2	1020.5	700.3	Pass 3		
133159				255	6.6	3011	3218	7.3	3.8	1020.7	700.1	Pass 1		
133754				266	6.0	3011	3221	7.2	3.9	1020.0	700.0	Pass 2	240 IAS	
134438				301	4.2	3011	3219	7.8	3.2	1019.4	700.1	Pass 3		
1354	Start	1514	130x	LEG 1								Start Box Log 1		
1355	2938.5	8347.0	270	8	10.8	4514	4835	0.7	-21.6	1016.2	574.1	Box leg 1		
135930	Start	1514	130x	LEG 2										
140215	2953.4	8402.6	0	15	9.4	4541	4832	1.0	-35.0	1015.4	574.2	Box leg 2		
140430	Start	1514	130x	LEG 3										
140630	3001.6	8349.3	89	13	6.5	4540	4829	0.6	-33.4	1015.7	574.3	Box leg 3		
141100	2956.9	8334.2	181	12	6.3	4541	4816	-0.2	-19.3	1015.7	574.2	Box leg 4	141430 End Box	
142252				36	7.8	4334	4607	1.9	-11.9	1015.9	590.0	Pass 1		
142936				40	6.9	4334	4608	1.9	-12.3	1015.8	590.0	Pass 2	180 IAS	
143614				40	5.9	4335	4612	2.2	-13.3	1014.4	590.0	Pass 3		
144215				52	4.5	4334	4616	2.0	-12.6	1015.9	590.1	Pass 1		
144919				25	4.0	4333	4607	1.9	-12.3	1015.7	590.0	Pass 2	210 IAS	
145537	2930.1	8355.9		28	3.0	4332	4610	1.9	-12.3	1015.9	590.2	Pass 3		
150153				6	7.3	4338	4615	1.8	-12.3	1014.6	589.8	Pass 1		
150724	2930	8316		8	6.6	4334	4614	1.7	-12.6	1015.7	590.0	Pass 2	240 IAS	
151405	2930	8316		20	7.7	4334	4614	1.4	-12.3	1016.2	590.0	Pass 3		
1520	3002.6	8340.2	206	294	4.0	3008	3451	8.5	-11.3		700.4	153100 W leg Form		
153215	2957.6	8405.3	178	329	5.0	3006	3868	9.5	-20.4		700.4	1537155 leg Form		
153830	2933.8	8359.0	90	275	3.8	3004	3217	8.5	-20.7	1021.0	700.4	154330 E leg Form		
154500	2940	8334	357	201	10.5	3010	3212	7.3	-5.6	1019.9	700.6	155000 N leg Form		

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Time	LAT	LONG	TR	WD	WS	PA	CA	TA	TD	SP	PS			
160642				38	2.5	282	355	25.6	22.1	1019.6	980	PASS	12	180 IAS
161258				15	6.1	278	345	25.9	22.5	1018.7	980.3	PASS	25	
162003				16	4.0	279	353	26.0	22.2	1019.6	980.3	PASS	12	280 IAS
162622				8	6.8	283	357	26.1	22.4	1019.4	979.4	PASS	25	
163247				40	9.5	278	350	26.3	22.2	1019.5	980.4	PASS	1	240 IAS
163916				49	7.6	278	352	26.4	21.9	1019.3	980	PASS	2	
164715	29 12	82 56	165	27	2.2	2687	2891	10.0	3.6	1020.3	729.0	-9K	PA	
1725	27 51	82 29.5				-43		27.8	21.4		10185	13LK		

970712I N43RF AEROSTAT CALIBRATION FLIGHT

<u>Sensor or system</u>	<u>Number or Name</u>
INE	1
Accelerometer	1
Temperature Probe	2
Dew Point Probe	1
Altimeter	APN-159
Altitude change option (for vertical winds)	RA
Static Pressure	Rosemount Fuselage
Dynamic Pressure	Rosemount Fuselage
Time Source	Micro 99
Constants File	CO3972.CON

Notes:

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

The APN-159 radar altimeter was corrected at take off and landing by substituting offset APN-232 values.

Geopotential altitude (GA) values are bad between 1520Z and 1538Z. During this period, the APN-159 radar altimeter was switched off due to close proximity to the N42RF.

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

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AEROSTAT CALIBRATION FLIGHT - 0432F

	AERO TD	TD1 14K	PA	TD2	UNCOR PQF1	CAL PQF1	U PQF2	C PQF2			
142252		-11.8		-14.5	54.1	54.6	54.2	54.7			
142937		-12.1		-15.0	54.0	54.5	54.0	54.5			
143614		-12.1		-15.0	54.5	54.9	54.5	55.0			
144216		-12.2		-14.0	74.9	75.6	74.8	75.4			
144919		-12.1		-13.8	74.0	74.5	73.9	74.4			
145537		-12.3		-13.8	74.3	74.8	74.2	74.7			
150152		-12.2		-12.9	97.6	98.6	97.5	98.5			
150725		-12.3		-12.2	96.9	97.8	96.8	97.7			
151405		-12.6		-12.6	99.2	100.1	99.1	99.9			
		10K	PA								
25128		-0.5		-3.3	53.0	53.5	53.1	53.5			
25848		3.5		0.6	53.0	53.5	52.9	53.3			
130602		2.6		-0.2	52.8	53.3	52.8	53.3			
131236		2.4		0.4	74.6	75.2	74.7	75.2			
131917		3.2		0.5	74.8	75.2	74.8	75.2			
132540		3.6		1.3	72.3	72.8	72.3	72.7			
133200		4.0		1.6	94.2	95.0	94.2	94.9			
133755		4.0		1.6	98.6	99.5	98.6	99.5			
134439		1.8		-0.5	98.6	99.5	98.6	99.4			
		5K	PA								
25526		13.5		11.2	53.2	53.7	53.3	53.7			
110237		13.5		11.1	53.6	54.2	53.7	54.1			
110934		13.4		10.9	51.1	51.5	51.1	51.5			
111607		13.6		11.2	73.9	74.4	73.9	74.4			
112342		13.4		11.0	75.8	76.3	75.8	76.2			
113030		13.6		11.0	73.5	74.0	73.5	73.8			
113735		13.5		11.2	95.7	96.5	95.6	96.5			
114417		13.3		11.0	97.4	98.4	97.4	98.2			
115112		13.5		11.1	96.7	97.7	96.7	97.5			
		1K	PA								
60642		22.6		19.6	52.0	52.8	52.1	52.6			
61259		22.6		19.7	52.1	52.7	52.1	52.5			
62003		22.4		19.5	72.5	72.5	72.4	73.0			
62622		22.3		19.7	71.9	72.0	71.6	72.5			
63247		22.5		20.0	94.4	95.4	94.5	95.4			
63916		22.4		20.1	92.0	93.0	92.2	93.4			

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AEROSTAT CALIBRATION FLIGHT - 0432F

	TAS	AERO TA	(u) TA1	(L) TA1	(u) TA2	(L) TA2	(C) TA3	RS	PSF
		14 K	PA						
142252	118.4		1.7	1.8	1.0	1.1	-0.7	0.8	590.6
142937	118.3		1.9	2.0	1.2	1.3	-0.6	0.7	590.4
143614	118.8		1.9	2.0	1.2	1.3	-0.6	0.8	590.4
144216	138.5		1.7	1.9	1.0	1.2	-1.2	0.9	590.6
144919	137.6		1.6	1.8	0.9	1.1	-1.2	0.8	590.6
145537	138.0		1.7	1.9	1.0	1.2	-1.2	0.8	590.5
150152	157.1		1.5	1.9	0.8	1.2	-1.8	0.8	590.9
150725	156.5		1.4	1.8	0.7	1.1	-1.9	0.7	590.9
151405	158.1		1.2	1.5	0.4	0.8	-2.1	0.5	590.8
		10 K	PA						
25128	109.4		8.5	8.5	7.7	7.8	4.3	7.4	700.7
25848	109.2		7.7	7.7	6.9	7.0	3.8	6.9	700.5
130602	109.0		8.0	8.1	7.3	7.4	4.0	7.1	700.7
31236	128.9		7.8	8.0	7.1	7.3	3.5	7.0	700.6
31917	129.0		7.6	7.8	6.9	7.1	3.4	6.9	700.7
32540	126.8		7.2	7.4	6.5	6.7	6.1	6.5	700.7
33200	143.9		7.0	7.3	6.3	6.6	2.6	6.3	701.0
33755	147.2		6.9	7.2	6.2	6.5	2.5	6.4	700.8
34439	147.4		8.0	8.3	7.4	7.6	3.2	7.3	701.0
		5 K	PA						
25526	101.5		17.6	17.7	17.1	17.1	11.1	16.7	850.7
10237	101.9		17.6	17.7	17.0	17.0	11.1	16.7	850.8
110934	99.5		17.7	17.8	17.4	17.4	11.3	16.7	850.3
11607	119.1		17.5	17.6	16.9	17.1	10.8	16.7	850.3
112342	120.5		17.5	17.6	16.9	17.1	10.8	16.9	850.5
113030	118.7		17.4	17.55	16.9	17.0	10.7	16.7	850.4
13735	134.8		17.4	17.6	16.8	17.0	10.4	16.7	851.0
114417	136.0		17.5	17.8	17.0	17.2	10.4	17.0	851.2
115112	135.5		17.5	17.7	16.9	17.1	10.4	16.9	851.3
		1 K	PA						
06042	95.0		25.6	25.7	25.1	25.2	17.1	24.7	980.2
61259	95.1		25.9	25.9	25.3	25.4	17.2	24.9	980.5
62003	111.8		25.9	26.0	25.4	25.5	17.0	25.0	980.7
62622	111.4		26.0	26.1	25.5	25.6	17.1	25.2	980.6
63247	127.2		26.0	26.1	25.4	25.6	16.8	25.4	980.8
63916	125.9		26.0	26.15	25.5	25.6	16.8	25.4	980.9

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AEROSTAT CALIBRATION FLIGHT - 0432F

	Aero PS	TC PSF	Δ PA	C PSW	Δ	Aero WD	A/C WD1	Δ	A/C WD2	Δ	Aero WS1	A/C WS1	Δ	A/C WS2	Δ
		14K	PA												
142252		590.6		592.0			33		21		3.1	4.2		5.1	
142937		590.4		591.8			47		36		3.5	3.6		3.6	
143614		590.4		591.7			43		44		3.1	2.5		2.5	
144216		590.6		591.0			53		74		2.4	1.7		1.7	
144919		590.6		591.1			29		71		1.8	0.6		0.6	
145537		590.5		591.0			22		25		2.5	1.1		1.1	
150152		590.9		590.2			20		17		3.3	2.0		2.0	
150725		590.9		590.2			17		8		4.0	3.4		3.4	
151405		590.8		590.1			15		6		4.1	4.3		4.3	
		10K	PA												
125128		700.7		701.9			275		289		2.2	4.2		4.2	
125848		700.5		701.8			268		291		2.3	3.6		3.6	
130602		700.7		702.0			250		282		2.3	2.4		2.4	
131236		700.6		701.0			253		269		2.3	1.9		1.9	
131917		700.7		701.2			254		251		3.1	2.4		2.4	
132540		700.7		701.2			249		231		2.7	2.3		2.3	
133200		701.0		700.4			262		235		2.5	2.3		2.3	
133755		700.8		700.1			284		263		2.5	2.1		2.1	
134439		701.0		700.2			303		286		2.2	2.3		2.3	
		5K	PA												
105526		850.7		852.1			92		92		3.7	3.6		3.6	
110237		850.8		852.0			82		91		3.8	3.1		3.1	
110934		850.3		851.4			80		88		4.1	3.0		3.0	
111607		850.3		850.7			77		75		4.3	2.5		2.5	
112342		850.5		850.7			82		73		4.7	3.0		3.0	
113030		850.4		850.7			80		59		4.5	3.3		3.3	
113735		851.0		850.0			86		61		4.5	3.7		3.7	
114417		851.2		850.1			92		68		4.6	4.2		4.2	
115112		851.3		850.2			88		69		4.1	4.7		4.7	
		1K	PA												
160642		980.2		981.6			35		94		2.3	1.9		1.9	
161259		980.5		981.9			14		82		2.9	0.8		0.8	
162003		980.7		981.1			13		241		3.0	0.1		0.1	
162622		980.6		981.1			10		325		3.8	1.8		1.8	
163247		980.8		980.0			32		3		4.2	2.4		2.4	
163916		980.9		980.1			41		14		4.1	3.5		3.5	

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AEROSTAT CALIBRATION FLIGHT - 0432F (SPOT values)

	INE1 HD	INE2 HD	Δ	INE1 GS	INE2 GS	Δ	INE1 WD	INE2 WD	Δ	INE1 WS	INE2 WS	Δ	INE1 W	INE2 W	Δ
	14K	PA													
142252	358.5	358.4		115.7	114.4		33	21		4.2	5.1		0.6	0.5	
142937	8.3	8.2		116.3	115.8		47	36		3.5	3.6		-0.1	0.0	
143614	4.4	4.2		117.1	117.5		43	44		3.1	2.5		-0.7	0.0	
144216	9.8	9.6		137.5	138.5		53	74		2.4	1.7		-0.5	-0.2	
144919	7.3	7.2		136.5	137.9		29	71		1.8	0.6		-0.3	-0.1	
145537	11.6	11.4		136.1	137.5		22	25		2.5	1.1		-0.1	-0.1	
150152	1.6	1.4		154.9	156.2		20	17		3.3	2.0		-0.5	-0.5	
150725	90.8	10.6		153.6	154.1		17	8		4.0	3.4		-0.3	-0.3	
151405	5.5	5.4		155.1	154.8		15	6		4.1	4.3		-0.8	-0.7	
	10K	PA													
25128	359.3	359.1		109.6	108.4		275	289		2.2	4.2		0.1	0.2	
25848	358.2	358.0		109.6	108.3		268	291		2.3	3.6		0.5	0.6	
130602	1.3	1.3		110.3	109.1		250	282		2.3	2.4		0.2	0.4	
31236	355.0	354.9		130.0	129.4		253	269		2.3	1.9		0.1	0.1	
31917	1.0	0.9		130.4	130.3		254	251		3.1	2.4		0.3	0.5	
32540	5.5	5.3		128.5	128.9		249	231		2.7	2.3		0.3	0.3	
332001	352.3	352.2		144.7	145.8		262	235		2.5	2.3		0.2	0.3	
33755	5.6	5.4		147.8	148.6		284	263		2.5	2.1		-0.2	-0.1	
134439	1.6	1.4		147.1	147.6		303	286		2.2	2.3		0.1	0.2	
	5K	PA													
25526	2.3	2.2		102.0	102.0		92	92		3.7	3.6		-0.6	-0.2	
10237	3.2	3.1		101.8	102.4		82	91		3.8	3.1		0.2	0.2	
110934	5.6	5.5		99.1	99.7		80	88		4.1	3.0		-0.6	-0.6	
11607	4.3	4.2		118.4	118.8		77	75		4.3	2.5		0.4	0.6	
112342	4.5	4.4		120.0	119.9		82	73		4.7	3.0		0.5	0.5	
113030	2.9	2.8		118.2	117.3		80	59		4.5	3.3		0.2	0.2	
13735	6.8	6.7		134.7	133.4		86	61		4.5	3.7		0.1	0.1	
114417	9.0	8.9		136.4	134.7		92	68		4.6	4.2		0.2	0.3	
15112	4.3	4.2		135.9	134.3		88	69		4.1	4.7		-0.6	-0.5	
	1K	PA													
0642	3.0	2.8		93.5	95.6		35	94		2.3	1.9		0.2	0.2	
61259	5.6	5.5		92.6	95.3		14	82		2.9	0.8		0.1	0.3	
62003	4.7	4.6		109.2	112.2		13	241		3.0	0.1		0.3	0.2	
62622	4.7	4.5		108.1	110.5		10	325		3.8	1.8		-1.6	-1.6	
63247	3.8	3.6		124.0	125.3		32	3		4.2	2.4		-0.7	-1.0	
63916	5.3	5.1		123.3	123.1		41	14		4.1	3.5		-0.7	-0.5	

Aero TA	uncal TA3		Cal TA3
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Aero TA	uncal TA3		Cal TA3
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DATE : 14 July 1997

TO : Chief, AOC Flight Operations

FROM : Pilot/Flight Director, Aircraft ON 1725Z BLOCKTIME
243AF
OFF 0945Z 7.6

SUBJECT: Hazardous Duty

PURPOSE OF FLIGHT: Aerostat Calibration

Hazardous Duty Pay is required for flight made on 12 July 97
(DATE)

Request based on close formation flight with 242AF

Personnel on board authorized Hazard Pay:

Moore, H.

Parrish, J.

Lynch, T.

Smith, J.

PILOT/FLIGHT DIRECTOR: John A. Smith

APPROVED: _____

DISAPPROVED: _____

CHIEF, AOC FLIGHT OPERATIONS: _____



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Rockville, MD 20852-3019

OFFICE OF NOAA CORPS OPERATIONS

Aircraft Operations Center
P.O. Box 6829
Tampa, Florida 33608-0829

MEMORANDUM FOR:

*Dr. Hugh Willoughby, NOAA
Director, HED, ADML*

FROM:

CAPT George C. Player III, NOAA
Acting Director, Aircraft Operations Center

SUBJECT:

Hazard Duty Flight

The mission flown on AOC aircraft # N43AF on 12 July 1997 has been declared hazardous. The following personnel from your laboratory participated in this mission.

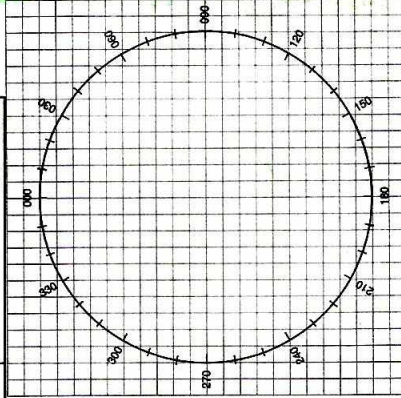
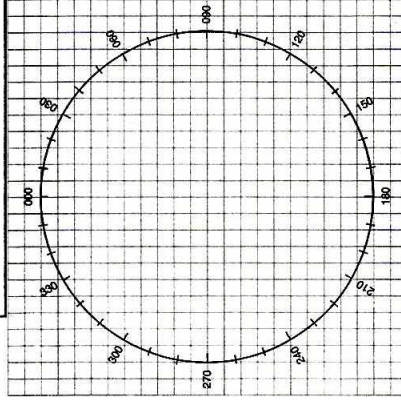
Michael Black

For purposes of computing allowable hazard duty time, the hazard period during this mission was from 0545 local time on 12 July until 1325 on 12 July.



[illegible]

PAGE OF



1. POSITION
2. TIME
3. ALTITUDE
4. NEXT POSITION
5. ETA
6. NEXT POSITION

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

- 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 DESIR

- PILOT INTENTIONS
- WE HAVE _____ ENDURANCE REMAINING

[illegible]

7-1
8560
5499

NOV 2001

[illegible]