U.S. Dept. of Commerce/NOAA/Aircraft Operations Center — AOCWF1

Flt ID: I020823	From: KMCF	To: KMCF
Flt No.: 02-28	Blk In: 1943Z	ATA: 1935Z
ETD: 1400Z	Blk Out: 1347Z	ATD: 1358Z
ETE:	Blk Time: 5:56 (5.9)	Flt Time: 5:37 (5.6)
Sponsor Org: HRD	Program: HURRICANE RESEARCH	Purpose: CBLAST AND FORMATION FLYING

AOC Personnel

AC:	TENNESEN	Sys Eng:	
CP:	HALVERSON / SILAH	Data Sys:	LYNCH ✓
Nav:	ADLER ✓	Radar:	
FE:	FLOYD	GPS/BT:	TONG ✓
Avionics:	SANS SOUCI ✓	Cld Phys:	
FD:	DAMIANO ✓		GOLDSTEIN ✓

Participating Scientists/Visitors/AOC

Name (Last, First)	Activity on Aircraft	Affiliation
BLACK, M. ✓	PI	HRD
BLACK, P. ✓	PI	
WHITE, S.	OBS BAT	
UHLHORN, E. ✓	OBS AXBT	
VALDE, K ✓	OBS	
MATUSOV, P. ✓		SCRIPPS-HOWARD
SULLIVAN, C ✓	OBS (VIP)	NOAA HQ
KUESTER, S ✓	OBS (VIP)	
RENART, D. ✓	OBS (VIP)	

Proposed/Actual Mission/Remarks (Recco, Fixes, Storm, PENET, NHOP #)

FLY IN FORMATION AT 10K TO BUOY 42003 25°53'N 85°57'W 9am for safety brief
N43RF will be in lead
Bal DW1 1448Z
Vout at 10K
N43RF @12K then down to 10K
RA232 154940 9:15 Phone side
ET DWPT not working at T/O
Circles + Box pattern solo 1825Z - 1850Z

U.S. Dept. of Commerce/NOAA/Aircraft Operations Center

AOCWF2

Flt ID: I020823	Time Off: 1358Z	Time On: 1935Z

	A/C (Take Off)	Wx Stn (Take Off)	A/C (Land)	Wx Stn (Land)
Pressure	1018.8	30.10	1016.2	30.01

	Number	Data Disposition/Date/Quality
Slow/Fast Flt Lvl Tapes	4	
Radar Tapes	1	
Cloud Physics Tapes		
Video Tapes	3	
AXBT	4	
AXCP		
AXCTD		
Dropsondes	~~2~~ 2	Transmitted one message; 1 bad + 1 good
SONO BUOYS	6	

Video

	Forward	Left Side	Right Side	Down	Remarks
Time On					
Time Off					
Rate					

Remarks

Flight ID: I020823 Page 1 of 2

U.S. Dept. of Commerce/NOAA/Aircraft Operations Center Form

Time	Lat	Long	Trk	Hdg	Wind Dir	Wind Spd	T_a	T_d	Press. Alt.	Geo. Alt.	Sfc Press.	Press. Sfc	Dyn. Press	Remarks
141100	2725	8234	234	234	97	7	8.9	-2.2	3336	3553	1014.6	671.6	69.9	CLR
142009	2709	8311	226	224	134	6	5.0	-5.0	3826	4074	1015.5	630.4	61.8	DROPSAD
142630	2713	8310	243	243	127	6	4.9	-5.3	3821	4068	1015.7	631.0	63.6	DROP ④
143615	2703	8313	244	244	154	5	6.6	-2.8	5490	3704	1016.4	662.0	79.3	AXBT
145300	2634	8422	246	246	224	6	10.2	2.2	2842	3037	1017.7	715.3	81.5	SCT CLD BLW
150300		in formation												
150500	151500		220	IAS			10K Run							
151710	152330		190	IAS			waiting to clear clouds							
153550	154125				190	IAS	5K Run							
154230	154740				220	IAS								
160100	—	1606	40		220	IAS	1K Run			42 in lead				
160200	2604	8539	236	236	67	6	26.4	21.5	223	288	1019.1	986.7	79.8	IN FORM
160840	161400		190	IAS	at	1K								
162752														Sonobuoy
162800														AXBT
163030	2544	8558									AXBT	Ch. 23		Sonobuoy
163309	2535	8546										Ch. 25		Sonobuoy
164544	2553	8557										Ch. 19		Sonobuoy
164852	2558	8609										Ch. 17		Sonobuoy
165730	2545	8619										Ch.		Sonobuoy
171800	2557	8538	50	51	77	7	23.5	19.8	528	605	1019.0	957.6	88.5	SCT CLD
171515		start to buoy			at	2K								
172200		back to buoy			end	2K								
172430		start out from buoy at 1K												
172940		end leg												
173120		start toward buoy at 1K												
173640		end toward buoy												
173910		start out from buoy at 600 ft												
174400		end out												
174525		start toward buoy at 600 ft												
175010		end leg												

Flight ID: I020823

U.S. Dept. of Commerce/NOAA/Aircraft Operations Center — Form

Time	Lat	Long	Trk	Hdg	Wind Dir	Wind Spd	T_a	T_d	Press. Alt.	Geo. Alt.	Sfc Press.	Press. Sfc	Dyn. Press	Remarks
175220		start out leg			buoy at		400 ft							
175710		end leg												
175915		start	toward	buoy at			400 ft							
180420		end leg												
180800		start leg	turn	buoy at			200 ft							
181300		end leg												
181600		start leg	toward	buoy at			200 ft							
182100		end leg												
182830		right turn	([redacted])	(40)										
183050		end turn												
183130		start turn	(240)											
183420		end turn												
183550		into wind					ISOK							
183750		end												
183850		start ⊥ to wind												
184050		end												
184150		start with wind												
184350		end												
184540		start ⊥ to wind												
184710		end												
184728	2600	8546	323	325	55	8	23.3	20.3						AXBT (12)
185227	2611	8530	65	65	329	7	8.6	2.9						AXBT
185510	2622	8503	66	66	319	5	7.0	-1.7	3478	3691	1014.6	659.5	109.2	CLD BLW

NOAA P-3 N43RF
Hurricane Research
Formation Flight/CBLAST

Flight ID: I020823

Sensor or system	Number or Name
INE	2
Accelerometer	2
Temperature Probe	1
Dew Point Probe	3 (Buck Research)
Altitude (for vertical wind)	Radar Altitude (RA-232)
Static Pressure	Rosemount Fuselage
Dynamic Pressure	Rosemount Fuselage
Time Source	Micro 99
Constants File	CO3021.CON

Notes:

Two GPS dropsondes were deployed: 27° 09'N 83° 11'W at time 1420Z
27° 13'N 83° 10'W at time 1426Z

There was one time/data gap: 172321Z - 172530Z.

The Johnson-Williams liquid water probe did not work.

All other instruments worked optimally during the flight.

The aircraft INE positions were renavigated with respect to GPS.

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.

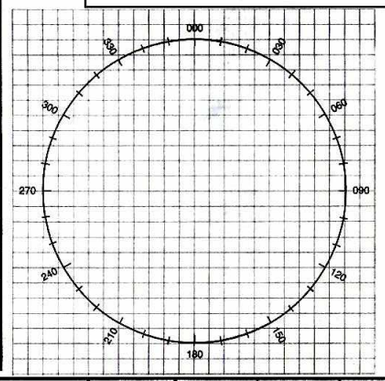
	Takeoff	**Landing**
Aircraft Static Pressure	1018.8 mb	1016.2 mb
Corrected Tower Pressure	1018.8 mb	1016.4 mb

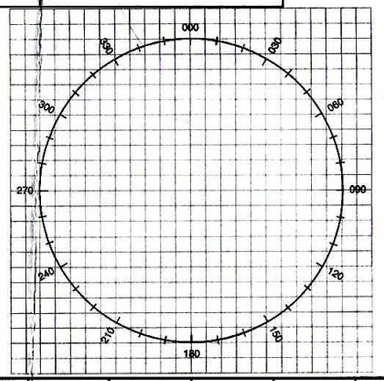
Flight Director: A. Barry Damiano
Phone #: (813) 828-3310 ext. 3073

247°M

CLEARANCES			
FREQ	ALT	HDG	OTHER
			R 080° 1600↗
			ex [redacted]K 119.9
			4536
			R4
			↗5K
			↗11K 200
			L030° 1600 4h

MISSION LOG PAGE ___ OF ___





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
1342	ENG										/	/									
1347	TAXI																				
1358	BLOCK T/O										/	/									
1400	X	27 53.2 082 25.4	27 53.0 082 25.2	+2 +.2	27 53.2 082 25.2	+0 +.2				2L	078	189	120	10	1600↗	222					074/5
1428	△	27 08.5 083 03.7	27 08.0 083 04.1	+.5 -.4	27 08.5 083 03.9	+0 -.2			holding	fix		43									242/31
1453	○	26 33.2 084 25.3	26 31.7 084 25.6	+1.5 -.3	26 32.9 084 25.4	+.3 -.1				○	246	254	4 ✓		10K	253					
1559	○	26 09.7 085 28.9	26 06.8 085 29.6	+2.9 -.7	26 09.0 085 29.0	+.7 -.1				○	236	236	4 ✓		1K	231					
1648	△	25 49.7 086 08.6	25 45.1 086 09.5	+4.6 -.9	25 49.3 086 08.8	+.4 -.2				1L	240	238	4 ✓		3500	237					
1742	△	26 04.0 085 47.1	25 57.8 085 48.0	+6.2 -.9	26 03.7 085 47.0	+.3 +.1				2L	050	236	4 ✓		6000	238					
1853	△	26 12.4 085 26.0	26 03.1 085 28.0	+9.3 -2.0	26 11.8 085 26.1	+.6 -.1				○	065	288	4 ✓		11500	286					
1935	LAND	final																			
		27 51.5 082 30.8	27 39.8 082 34.1	+11.7 -3.3	27 51.2 082 30.9	+.3 +.1															

INITIAL 21.6M

NOAA FORM 56-49
(2-95)

MISSION PREFLIGHT LOG

DESTINATION	MISSION	NAVIGATOR	AIRCRAFT COMMANDER	FLIGHT DIRECTOR	SCHEDULED / ACTUAL TAKEOFF Z	DATE OF TAKEOFF
KMCF	TWIN FLT	TPLER	TENNESSEN	DAMIANO	1400	23AUG02

WP	LAT / LON	RTE	MH	VAR +E==>	TH	DR +R==>	TRK	GS	WD	WS	ALT	TAS	LEG / TOT DIST	LEG / TOT TIME	PROP ETA	ETA	ATA	REMARKS
KMCF 9	27 50.0 082 29.6																	
1	SRQ 240/30																	
2	SRQ																	
3																		
4	26 10 086 10																	
5	BOUY 50 25 52.5																	
6	BLONDE																	
					TIME	FUEL	F/F	CALC FF	ENDUR	LAND								
					1353	37.9	/	/										
					1453	32.9	4.8	5.0	4+35	1928								
					1559	27.5	5.0	5.4	3+15	1915								
					1653	22.9	5.0	4.6	2+35	1928								
					1753	18.0	5.2	4.9	1+55	1928								

Kuester

19 SOB

INS PERFORMANCE

	INS 1	INS 2
BEGIN ALIGN TIME	1210	1210
ALIGN STATUS (0-5)	0	0
END NAV TIME	1935	1935
START NAV TIME	1331	1331
DELTA T	6+04	6+04

TERMINAL ERRORS

	INS 1	INS 2
DELTA LAT	+11.7	+.3
DELTA LON	-3.3	+.1
RGS	2	1
RADIAL ERROR	12	0.

REMARKS

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
AIRCRAFT OPERATIONS CENTER