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

Flt ID: H010924	From: KILM	To: KILM
Flt No.: 01 – 45	Blk In: 0326Z	ATA: 0320Z
ETD: 1830Z	Blk Out: 1833Z	ATD: 1839Z
ETE:	Blk Time: 8:53 (8.9)	Flt Time: 8:41 (8.7)
Sponsor Org: NASA	Program: CAMEX	Purpose: H. HUMBERTO

AOC Personnel

AC:	TENNESEN ✓	Sys Eng:	DELGADO ✓
CP:	TAGGART	Data Sys:	McMILLAN
Nav:	NEWMAN ✓	Radar:	
FE:	BAST ✓	GPS/BT:	
Avionics:	ROGERS	Cld Phys:	
FD:	DAMIANO ✓		

Participating Scientists/Visitors/AOC

Name (Last, First)	Activity on Aircraft	Affiliation
MARKS ✓	PI	HRD
GAMACHE ✓	RADAR	↓
LANDSEA ✓	HAPS	↓
BLACK, R ✓	PMS	↓
HUDSON ✓	CCN	DRI

Proposed/Actual Mission/Remarks (Recco, Fixes, Storm, PENET, NHOP #) mike Craig 305-218-8224

1833Z 43 1730Z
NO King/JW
Bal OW1 1858Z
Bal OW2 1900Z
18Z Sat fix
36.0
65.3

43 Fix
3620'
6441'
2124Z
992 mb
3634 2252Z
6425

1852Z (36 65)

2119Z 3610' 6440
2249Z 3637' 6430 992mb
0029Z 3649' 6409

(3)

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

AOC WF2

Flt ID: H010924 | Time Off: 1839Z | Time On: 0320Z

	A/C (Take Off)	Wx Stn (Take Off)	A/C (Land)	Wx Stn (Land)
Pressure	1010.0	29.83 (1010.2)	1009.2	29.82 (1009.5)

	Number	Data Disposition/Date/Quality
Slow/Fast Flt Lvl Tapes	2	
Radar Tapes	1	
Cloud Physics Tapes	1	
Video Tapes	4	
AXBT	17	1 did not launch
AXCP		
AXCTD		
Dropsondes	49	1 bad; 48 good; 48 messages sent

Video

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

Remarks

21 29.83 ETA KILM 25/ OBS 01 THRU 50

21 TO KNHC VIA KWBC

01532

CAMEX (H. Humberto)

Flight #3 010924H

Sensor or system	Number or Name
INE	2
Accelerometer	2
Temperature Probe	1
Dew Point Probe	3 (Buck Research)
Altitude (for vertical wind)	RA159
Static Pressure	Rosemount Fuselage
Dynamic Pressure	Rosemount Fuselage
Time Source	Micro 99
Constants File	CO2012.CON

Notes:

There was one time/data gap: 185811Z - 185820Z.

Several small spikes were noted in the output from fuselage static pressure, PSF, during the following periods: 2029Z - 2034Z and 2056Z - 2059Z.
The spikes were removed and patched over.

The dynamic slip pressure, DBP, output experienced some problems during the period 2210Z - 2213Z. The erroneous data was removed and patched.

The dynamic attack pressure, DAP, output experienced some problems during the periods 1935Z - 1939Z and 2109Z - 2112Z. The erroneous data was removed and patched.

A spike was noted in the output from the radar altimeter, RA159, during the period 1835Z - 1842Z. The spike was removed and patched over.

Several small spikes were noted in the output from the Buck Research Dewpoint probe, DW3, during the following periods: 1852Z - 1855Z, 1903Z - 1906Z, 2136Z - 2139Z, 2142Z - 2155Z, 2210Z - 2214Z and 2229Z - 2234Z.
The spikes were removed and patched over.

During periods of heavy precipitation, the dewpoint temperature, TD, was greater than ambient temperature, TA.

The side radiometer, RS, shutter did not open properly so its' data for the entire flight is erroneous.

The King Liquid Water probe was inoperative for the entire flight.

All other instruments worked optimally during the flight.

	Takeoff	Landing
Aircraft static pressure	1010.0mb	1009.2mb
Corrected tower pressure	1010.2mb	1009.5mb

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.

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

Flight ID: H010924 Page 1 of 2

U.S. Dept. of Commerce/NOAA/Aircraft Operations Center Form 413-50

Time	Lat	Long	Trk	Hdg	Wind Dir	Wind Spd	T_a	T_d	Press. Alt.	Geo. Alt.	Sfc Press.	Press. Sfc	Dyn. Press	Remarks
185200	3420	7656	86	92	224	33	1.2	-3.0	3939	4148	1014.6	619.6	68.6	BTN CLD
191300	3432	7452	85	90	233	33	-1.7	-12.1	4724	4974	1012.3	560.3	79.8	BTN THN CLD
193400	3443	7243	86	89	252	21	-2.4	-9.8	4722	4976	1013.3	560.6	75.7	CLD BLW
201600	3545	6912	86	85	270	12	-1.0	-16.8	4720	4973	1011.1	560.7	64.3	BTN THN CLD
205246	3557	6721	81	79	302	43	-1.1	-20.7	4717	4971	1011.0	560.9	72.4	(23) DROP
205642	3600	6657	86	83	305	25	-.4	-18.1	4718	4970	1009.6	560.9	79.4	NO W DROP
210157	3602	6625	86	82	320	32	-.6	-8.9	4716	4961	1008.6	560.9	79.3	(22) DROP
210438	3603	6608	85	80	316	36	.3	-10.1	4716	4953	1005.9	560.9	78.6	(12) DROP
210736	3605	6549												XBT
210738	3605	6549	86	80										(30) DROP
211016	3606	6534			348	44	6.0	2.4						(20) DROP
211327	3607	6517	85	77	320	44	10.5	2.6	3225	3325	1000.6	681.1	66.3	(30) DROP
211631	3608	6500	82	78	307	44	12.9	3.3			992.5			DROP
212144	3612	6430												(28) DROP
212434	3614	6413												XBT
212434	3614	6413												(29) DROP
212740	3615	6355	83	77	188	58								(30) DROP
213056	3617	6338												
213101	3617	6338												(23) DROP
213412	3619	6322	84	98	188	57	6.1	5.7	3228	—	1011.4	681.0	74.4	(12) DROP
213717	3620	6306												XBT
213721	3620	6306												(45) DROP
214336	3620	6232	9											XBT
214359	3620	6232	90	99	200	37	-1.7	-4.9	4686	4961	1013.0	561.0	61.1	(13) DROP
214603	3620	6157												XBT
214708	3620	6157	58	61	215	36	-1.7	-8.0	4728	5005	1016.0	560.3	70.0	(24) DROP
214914	3824	6317												XBT
221918	3824	6317	303	300	199	14	-2.2	-5.7						(16) DROP
222140	3807	6334												XBT
222144	3807	6334	209	206	119	16	-2.8	-5.0	4729	4988	1014.1	560.1	70.0	(36) DROP
223643	3744	6353												XBT
223107	3744	6353	214	207	135	40	3.7	3.4	3621	3788	1012.4	652.9	73.1	(13) DROP
223622	3732	6403	215	204	123	48	6.0	5.0	3192	3334	1011.5	684.2	68.4	(10) DROP
223743	3721	6411												XBT
223743	3721	6411												(18) DROP
224093	3710	6420												(23) DROP
224442	3655	6428												XBT
224463	3655	6428												(25) DROP

Flight ID: H010924

U.S. Dept. of Commerce/NOAA/Aircraft Operations Center Form 413-60

Time	Lat	Long	Trk	Hdg	Wind Dir	Wind Spd	T_a	T_d	Press. Alt.	Geo. Alt.	Sfc Press.	Press. Sfc	Dyn. Press	Remarks
224740	3643	6430	185	181	75	25	10.8	9.7	3288	3341				(12) DROP
225958	3632	6430	185	190	326	24	12.1	8.1	3286	3326	989.6			EYE (13) DROP
225340	3618	6436	209	222	302	43	7.8	1.4						NOLAN DROP
225728	3605	6445	209	219	314	35	1.3	-2.5	4640	4858	1002.2	584.6	64.2	(11) DROP
230046	3552	6453	209	220	294	46	.2	-5.5	4724	4960	1005.0	580.6	70.2	(14) DROP
230352	3541	6502	213											XBT
230355	3541	6502	213	222	288	40	1.3	-13.0	4722	4969	1005.9	580.6	67.4	(15) DROP
230709	3529	6511	212	221	294	37	.5	-18.8	4725	4980	1008.6	580.3	79.3	(24) DROP
231014	3518	6520	213	221	290	34	.2	-21.7	4723	4985	1009.4	580.5	75.8	(53) DROP
231613	3455	6538												XBT
231648	3455	6538												(25) DROP
232009	3441	6549	179	183	285	22	.3	-18.3	4722	5004	1012.6	580.4	75.2	(23) DROP
234400	3441	6331	93	99	236	33	-2.1	-17.2	4723	5008	1016.7	580.5	58.7	—
235115	3440	6251	115	124	238	29	-1.0	-17.4	4724	5015	1015.0	580.6	58.2	(24) DROP
000628	3517	6313												XBT
000632	3517	6313	335	328	230	41	-1.0	-17.7	4724	4994	1012.4	580.5	72.2	(18) DROP
001229	3541	6328	331	322	251	49	-1.6	-4.9	4727	4977	1008.6	580.3	77.7	(14) DROP
001523	3552	6335	331	320	238	53	-2.5	-3.5	4725	4963	1010.6	580.6		(22) DROP
001821	3604	6344												XBT
001825	3605	6344	335	324	242	55	-2.2	-2.6	4725	4963	1008.2	580.6	70.3	(18) DROP
002115	3616	6351	333	324	242	42	3.7	.7	4115	4269	1003.0	610.8	78.3	(23) DROP
002043	3631	6400												XBT
002446	3631	6400	333	326	244	38	12.5	6.5	3269	3336	984.0	677.4	88.2	(30) DROP
002727	3642	6406	334	336	249	18	14.3	4.7	3272	3368	987.0	677.4	95.2	(16) DROP
003254	3705	6417	339	348	97	53	7.4	9.7	3418	3525	999.2	663.2	75.0	(66) DROP
003614	3718	6425	331	338	79	29	8.1	5.1	3235	3353	1005.7	680.0	75.6	(33) DROP
003921	3730	6434	329	336	74	28	7.1	3.9	3238	3370	1008.8	680.1	77.2	(25) DROP
004231	3742	6442												XBT
004234	3742	6442												(52) DROP
004536	3754	6451	329	335	53	25	3.4	-2.9	4173	4407	1008.7	594	73.7	(26) DROP
004840	3805	6459												XBT
004844	3806	6500	329	333	46	15	-4.6	-12.5	5250	5600	1008.8	515.2	62.6	(32) DROP
005433	3828	6517	329	333	33	14	-7.8	-25.3	5637	5948	1011.5	495.9	90.0	(26) XBT (NO)
005435	3828	6517												(25) DROP
005947	3851	6534	330	332	50	9	-8.4	-26.2	5637	5952	1013.6	495.8	92.3	(18) DROP
013900	3736	6936	245	245	240	15	-8.2	-17.5	5636	5951	1013.7	495.9	95.8	DARK CLR

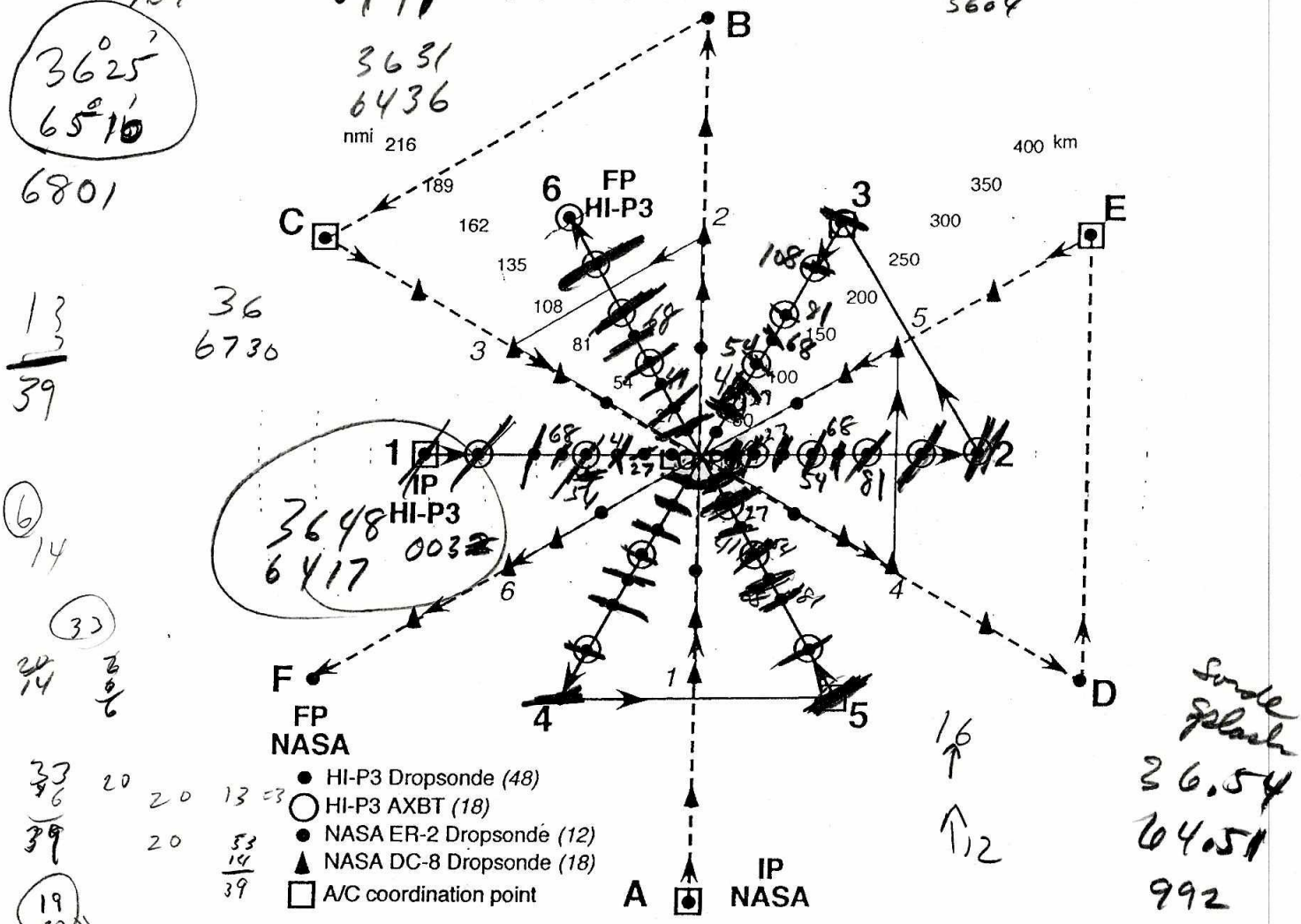
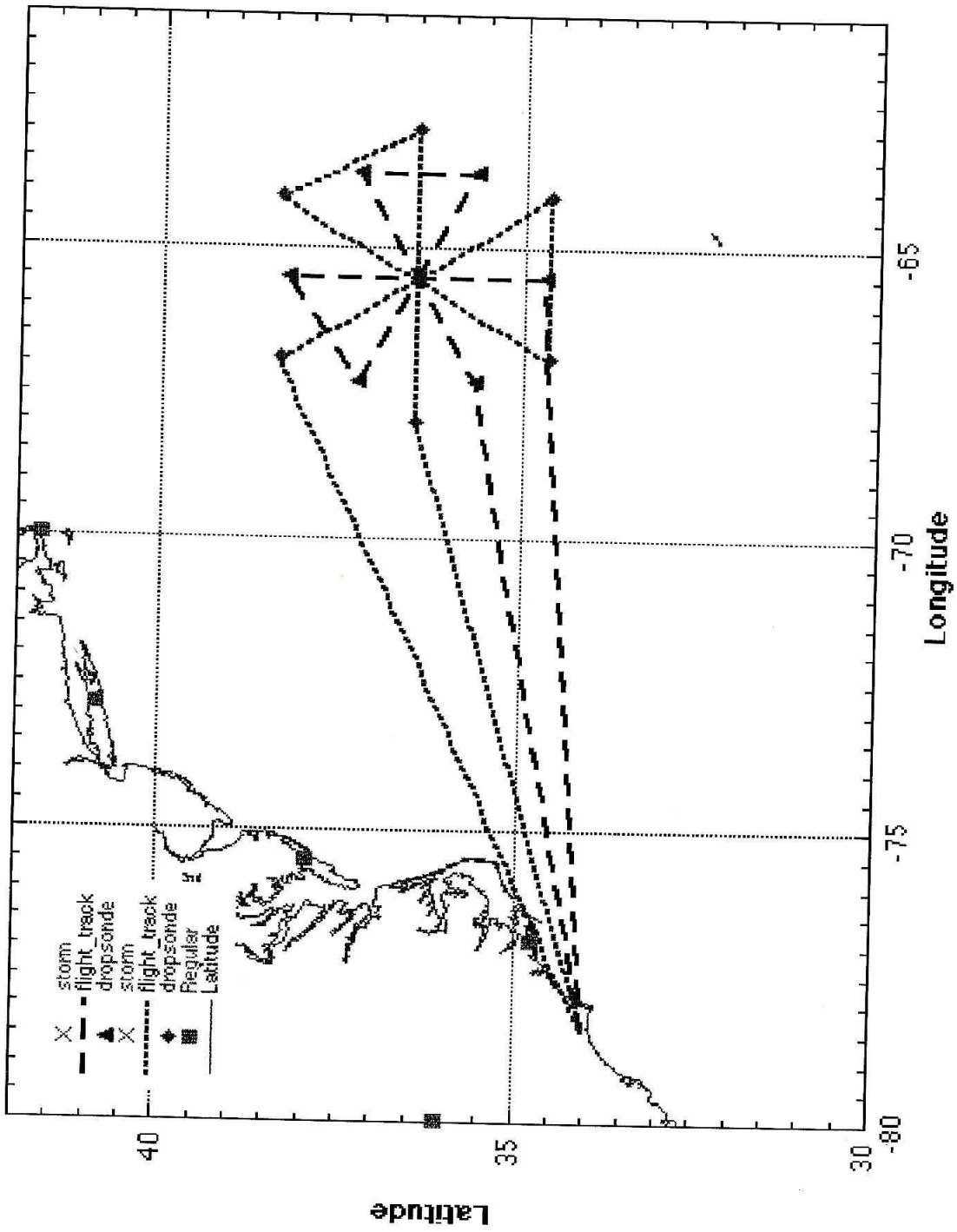


Fig. 3. Coordinated Short Pattern: (a) Upper WP-3D, DC-8, and ER-2

• Note 1.	All aircraft should reach their respective IP's as simultaneously as possible, and the upper WP-3D is responsible to ensure that all aircraft depart the coordination points together.
• Note 2.	Aircraft should not deviate from pattern to find the center in the eye.
• Note 3.	The pattern may be entered at any compass heading and the DC-8 and ER-2 entries should be along the same heading as the lower WP-3D, 90° downwind from the upper WP-3D.
Note 4.	The DC-8 should attain the 250-hPa level (about 37,000 ft or FL370) as early in the mission as possible and then maintain this altitude for the duration of the pattern. Upper WP-3D should begin the pattern at 18,000 ft, then climb to maintain maximum safe altitude.
• Note 5.	WP-3D Doppler radar should be operated in F/AST mode at a single PRF ≥2400 and 20° tilt.
• Note 6.	GPS-sondes and the downward-pointing laser on the NASA aircraft may pose a hazard to the WP-3D or WC-130. Communication with these aircraft is the responsibility of the NASA aircraft and must be obtained before sondes are released.


storm
flight_track
dropsonde
storm
flight_track
dropsonde
Regular
Latitude
40
35
30
-80
-75
-70
-65
Latitude
Longitude

N42RF AVAPS DropSonde Log

N42RF Project: COUES Flight ID 010924H

Mission: Humberto Flight #: 2 System Status: ✓

Drop #	Sonde Serial Number	Chn. #	Time (Zulu)	Press. offset	Winds time	Operator Initials	Comments / Drop Status/ Failure Reason	GOOD ☑
1	003 135 327	1	2052		23			✓
2	003 338 074	2	2056				NO winds	
3	991 515 002	3	2101		22		NO NO Fish string	
4	003 338 051	4	2104		17			
5	003 515 067	1	2107		40		ch 16	
6	003 248 074	2	2110		30			
7	003 338 052	3	2113		30			
8	003825 238	4	2116				NO winds	
9	010 748 072	1	2121		28			
10	003 115 092	2	2124		20		ch 14	
11	003 338 140	3	2127		30			
12	011 245 367	4	2131		23			
13	003 248 003	1	2134		12		ch 14	
14	002 428 043	2	2137		45		ch 14	
15	003 115 400	3	2144		13		ch 14	
16	003 135 178	4	2150		24		ch 14	
17	002 428 046	1	2219		16		ch 14	
18	003 515 041	2	2224		36		ch 14	
19	003 135 122	3	2231		13		ch 14	
20	002 428 040	4	2234		10			
21	003 115 023	1	2237		18		ch 14	
22	003 115 196	2	2241		23		NO Fish string	
23	003 135 147	3	2244		25		ch 14	
24	003 135 120	4	2247		18			
25	003 115 406	1	2250		12			
26	002 428 039	2	2253				no Detect	
27	003 115 125	3	2257		11			
28	003 115 403	4	2300		34			
29	003 115 401	1	2303		15		ch 16	
30	003 135 296	2	2307		24			
31	002 428 041	3	2310		32			
32	003 248 049	4	2316		25		ch 16	
33	003 115 400	1	2320		23			

Drop #	Sonde Serial Number	Chn #	Time (ZULU)	Press. offset	Winds time	Operator Initials	Comments/ Drop Status /Reason for Failure	GOOD ☑
34	003 135 303	1	2351		24			
35	003 135 152	2	0006		18		ch 16	
36	010 715 174	3	0012		14			
37	003 148 160	4	0015		22			
38	003 115 124	1	0018		18		ch 16	
39	990 435 485	2	0021		22			
40	010 715 165	3	0024		30		ch 16	
41	003 248 063	4	0027		16			
42	003 115 127	1	0032		66			
43	003 115 020	2	0036		37			
44	990 415 188	3	0039		25			
45	003 115 128	4	0042		52		ch 16	
46	003 148 005	1	0045		26			
47	990 435 486	2	0048		36		ch 16	
48	003 115 019	3	0054		25		ch 16 NO light NO BT	
49	003 148 002	4	0059		18			
50								
51								
52								
53								
54								
55								
56								
57								
58								
59								
60								

06/21/00

AVAPS HINTS

- N43's **RED PHONE** appears to interfere with AVAPS telemetry, don't allow its use while sondes are in the air
- ASDL transmits on 401.8MHz, and will trash AVAPS telemetry +/- 1 MHz from that point
- Rawinsondes transmit at 403.0. Caribbean taxi drivers and bandit radio stations transmit wherever they want.
- The sonde GPS Oscillator needs at least 2 minutes to warm-up and stabilize. If you drop early, the winds data (if any) will be initially not accurate and probably late.
- Below 10,000', open the P3 launch chute cover holes at least 2/3 of the way. From 10,000' to 18,000', open about ½ way, above 18,000' open 1/3 of the way.
- Dropping a backup sonde prior to selecting BEGIN **COLLECTING DATA** is the single most frequent operator error.
- 60 seconds is the cut-off time for Good vs. Late winds. If no satellites are locked on by 60 seconds, or no winds data by 80 seconds, drop the backup.
- Frequency block assignments: **Air Force - Block A** **N42RF - Block B** **N43RF - Block C** **N49RF - Bloc**
- P3 Drops only.... Shorten the ribbon to about 20" - 25"
- When sonde telemetry fails prematurely, wait until the normal drop time has elapsed to terminate data collection.
- If Pre-launch sonde telemetry is dependent upon hand position while holding the sonde in order to **NOT** generate CRC errors, the sonde transmitter is bad and it should not be dropped.

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

Flt ID: H010925	**From:** KLM	**To:** KMCF
Flt No.: 01 – 46	**Blk In:** 1937Z	**ATA:** 1926Z
ETD: 1730Z	**Blk Out:** 1713Z	**ATD:** 1723Z
ETE:	**Blk Time:** 2:24 (2.4)	**Flt Time:** 2:03 (2.0)
Sponsor Org: NASA	**Program:** CAMEX	**Purpose:** Ferry to MacDill from Wilmington, NC

AOC Personnel

AC: JENNESEN	**Sys Eng:** DELGADO ✓
CP: TAGGART	**Data Sys:** McMILLAN
Nav: NEWMAN ✓	**Radar:**
FE: BAST	**GPS/BT:**
Avionics: ROGERS	**Cld Phys:**
FD: DAMIANO ✓	

Participating Scientists/Visitors/AOC

Name (Last, First)	Activity on Aircraft	Affiliation
CURRY	MECH	AOC
MARKS ✓	PI	HRD
BLACK, M ✓	PI	
BLACK, R ✓	PMS	
GAMACHE, J ✓	RADAR	
HUDSON ✓	CCN	DRI

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

19302 end data

Bal DW1 1735Z

Bal DW2 1802Z

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

Flt ID: H010925	Time Off: 1723Z	Time On: 1926Z	
	A/C (Take Off)	Wx Stn (Take Off)	A/C (Land)	Wx Stn (Land)
Pressure	1013.5	29.93 (1013.2)	1013.2	1013.2

	Number	Data Disposition/Date/Quality
Slow/Fast Flt Lvl Tapes	DH 1	
Radar Tapes		
Cloud Physics Tapes		
Video Tapes		
AXBT		
AXCP		
AXCTD		
Dropsondes		

Video

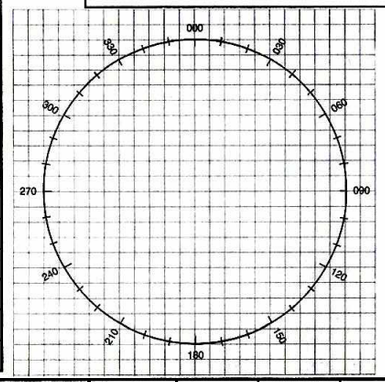
	Forward	Left Side	Right Side	Down	Remarks
Time On					
Time Off					
Rate					

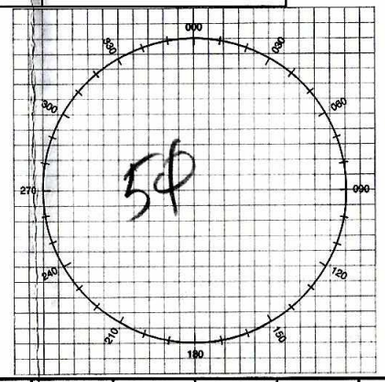
Remarks 1995 29.95
30
25

MISSION LOG

PAGE ___ OF ___

CLEARANCES			
FREQ	ALT	HDG	OTHER
			29.93





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
1833		TAXI																			293 57.3K
1839		TOF																			TOF
2109	△	3605.4 65 40.3	36 06.0 65 38.9	-.6 +1.4	36 05.7 65 40.1	-.3 +.2			76	8R	84	278	344	44	11.0	271					
2134			FUEL		15	41.7															MY EYE ON 225
2142	△	3702.6 64 24.7	3704.3 64 22.2	-1.7 +2.5	37 03.9 64 24.6	-.3 +.1			194	5R	199	252	104	31	11	251					
2253		CNTR	36 34		64 28																992 MB
2337		FUEL												5	25						ETA 0022 32.1K
0013	△	3544.8 63 30.2	35 47.4 63 26.5	-2.6 +3.5	35 44.3 63 30.2	+.5 0			324	9R	330	273	244	51	150	282					
0030		36	52 64 15																		
0118	△	3818.5 67 30.8	3821.8 67 26.2	-3.3 +4.6	38 17.8 67 30.8	+.7 0	263	17W	246	0	246	317	000	3	185	317					
0300	△	34 43.9 76 09.8	34 47.8 76 03.6	-3.9 +6.0	34 42.1 76 09.9	+1.8 -.3															160/3 10 29.8B
0324																					LAND