

U.S. Dep't. of Commerce / NMAO / NOAA / Aircraft Operations Center

FLT ID: 202082641	From: kmcf	To: KJAX
FLT #: <del>20</del>	Blk In: 0254 Z	Lnd Time(on): 0246 Z
ETD: 20 Z	Blk Out: 2001 Z	T/O Time (off): 2013 Z
ETE: 8	Total Blk:	Total Flt: 6+33 (6.6)
Sponsoring Org: EMC/RO	Program: TOR	Purpose: ISAAC

AOC Flight Crew

Aircraft Commander: Halverson	Data System: Lynch, T
Co-Pilot: Kibbey, Martin	Avaps: Paul, S
Navigator: Brakob, I	System Engineer: Richards
Flight Eng: Kippel, I	AA:
Flt Director: Flaherty, Williams	AA:
Avionics: Napher	Crew Chief:

Participating Scientists, Visitors, & Add'l Aircrew on back.

# of people listed on back:

	DSD A/C - Takeoff	Wx Station - Takeoff	PSD A/C - Land	Wx Station - Land
Pressure	1011.5	1010.7	1014.1	1014.5

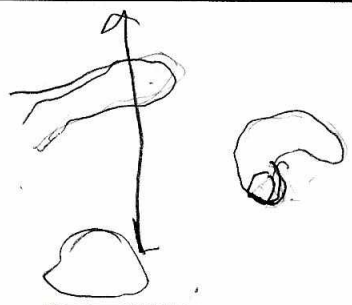
ATIS - Takeoff

ATIS - Land

Data Source	Number	Data Disposition / Date / Quality / File Name(s)	
Flight Level Tapes			
Radar Tapes			
Dropsondes	28	Good: 28	Bad: Sent:
AXBT	18	15 good	3 bad

List other data sources on back in Remarks section.

Remarks (Storm Name, Mission ID, Recco Times, Fix Times)	Recco Times:	Fix #	Fix Time
Storm Name: ISAAC			
Mission ID: 2309A			



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FLT ID: \_\_\_\_\_ T/O Time: \_\_\_\_\_ Z Lnd Time: \_\_\_\_\_ Z

Name (Last, First)                      Activity on Aircraft                      Affiliation

DR Lubchenko

DR DETRICK

LT Cox

Dunion

PI

Reasor

Radar

Bucci

Sandels

Remarks:



**N42RF ERROR SUMMARY**  
**TS ISAAC, KMCF - KJAX**  
**26 Aug 2012**



**Flight ID: 20120826H1**

<u>Sensor or system</u>	<u>Number or Name</u>
Inertial Selected (for wind derivation)	INE 1
Accelerometer	AccZfilterI-GPS.1
Temperature Probe	TTM.2
Dew Point Probe	TDM.2
Static Pressure	PSM.2
Dynamic Pressure	PQM.2
Altitude (for vertical wind)	AltI-GPS.1
Flight Directory	acdata/MET/2012/20120826H1
Constants File	20120826H1/AAMPSCconfig/core/n42.xml

Local Met Data:	<u>Takeoff (2013Z)</u>	<u>Landing (0246Z)</u>
Aircraft Static Pressure (PSM.2)	1011.5 mb	1014.1 mb
Tower Pressure (corrected)	1010.7 mb	1014.5 mb

**Notes:**

All Navigational Data, and therefore all derived parameters, were lost from 21:15:40Z until 21:24:31Z, when the data system was restarted. From 21:24:31Z to 21:37:50Z there was a data gap in all parameters due to the system restart. Because of this, there are two QC'd 1 hz flight level data files, 20120826H1\_AC.nc which runs until 21:24:31Z and 20120826H2\_BC.nc which runs from 21:37:50Z until block in.

There was a data gap in all parameters from 00:00:09Z – 00:00:51Z.

The Edgetech dewpoint, TDM.2, performed best and was used as default. Dew point values intermittently exceeded ambient temperature values during portions of flight where the aircraft was in precipitation, causing RH values greater than 100%.

The Novatel Alt, Lat and Lon (GPS.3) had 5 data spikes at 21:40:10Z, 21:43:42Z, 21:43:49Z, 21:44:58Z and 22:47:36Z. The blended inertial-GPS solution Alt, Lat and Lon (I-GPS.1) is the default position source.

**SPECIAL NOTE!!!** The variable names GSZ\_DPJ, ASZ\_DPJ and WSZ\_DPJ in the netCDF file represent vertical ground speeds, vertical air speeds and vertical wind speeds, respectively, computed using Dave Jorgensen's vertical wind algorithm. It is recommended that these values be used for vertical wind analysis.

All other AOC instruments worked properly.

There were 28 GPS dropsondes and 18 AXBT's released from the aircraft.

*Flight Director:*  
*Phone #:*

*Jess Williams / Paul Flaherty*  
*(813) 828-3310 ext. 3140/3094*



**N42RF ERROR SUMMARY**  
***TS ISAAC, KMCF - KJAX***  
***26 Aug 2012***



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# NOAA AOC Experimental Flight Mapping Tool

Enter 2-digit Track number  
WSRP:

**Overlay Track**

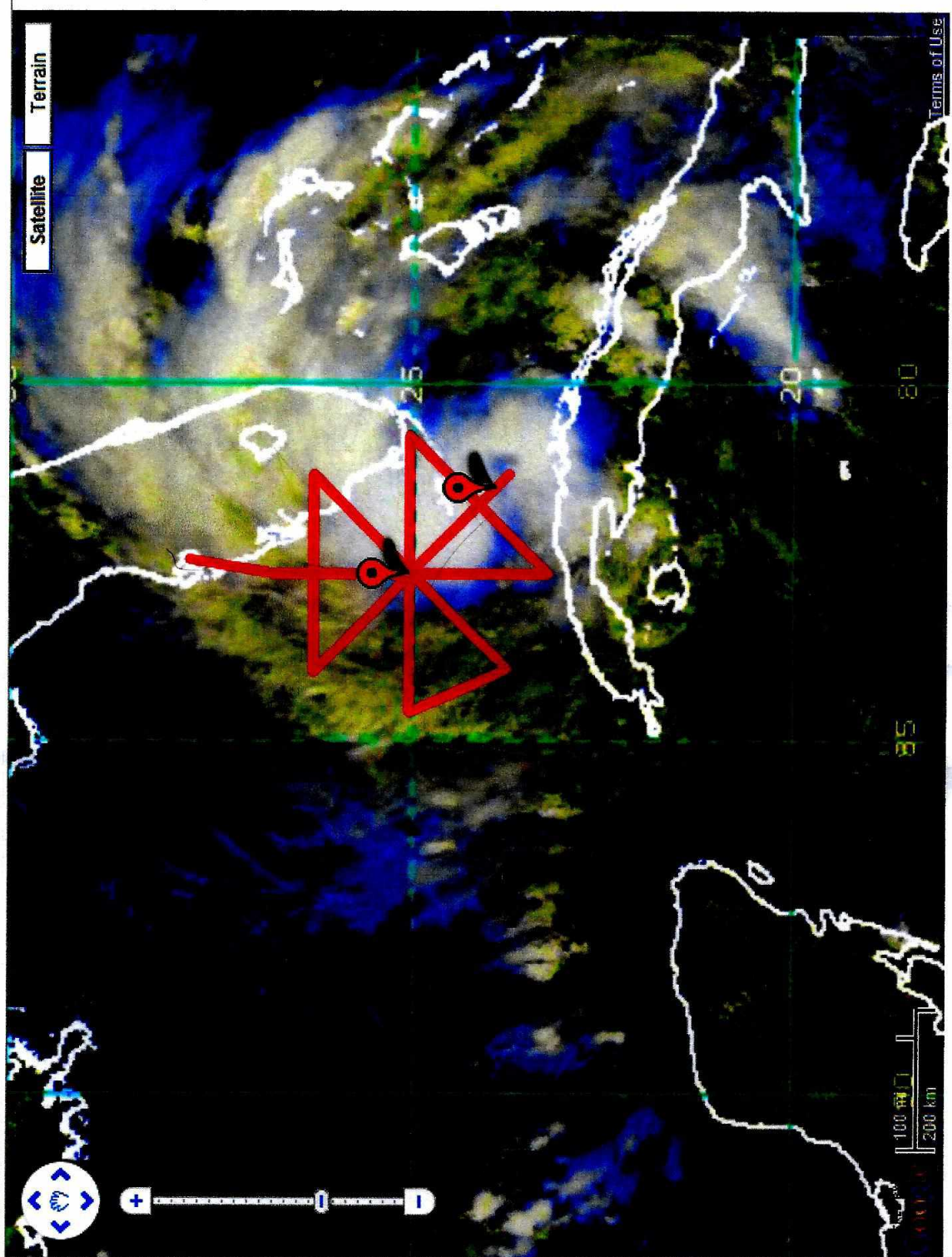
Or Enter Points Manually Below  
in Decimal Degrees

How Many Points:

**Flight Path**

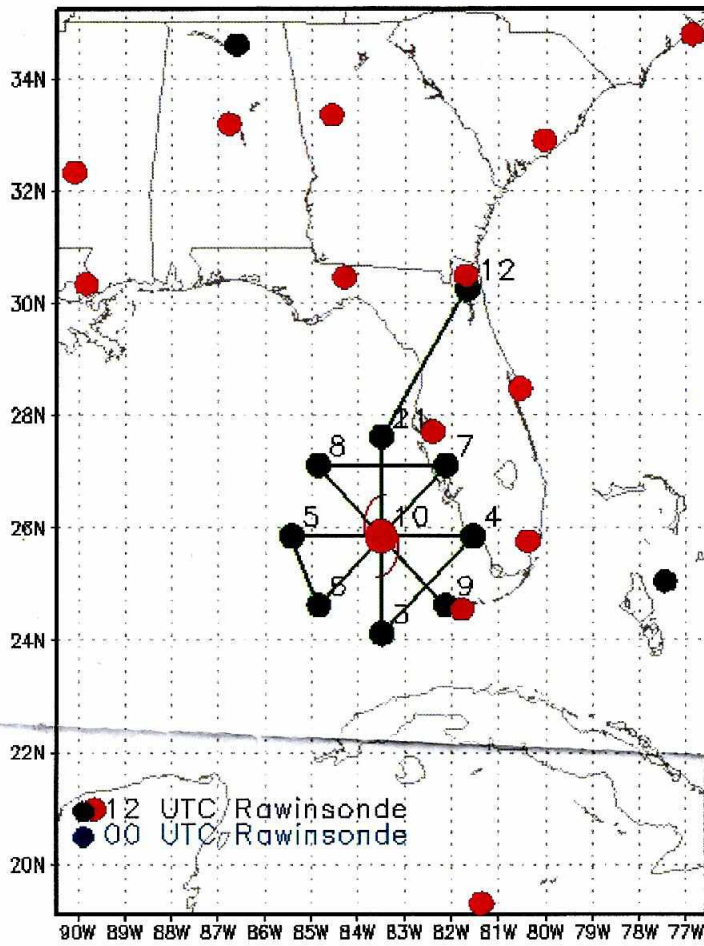
**Drop Points**

Pt #	Lat	Lon
1	27.8	-82.5
2	26.75	-82.7
3	23.25	-82.7
4	25	-80.75
5	25	-84.63
6	23.76	-84.05
7	26.23	-81.3
8	26.23	-84.08
9	23.75	-81.3
10	25	-82.7



Satellite Terrain

Terms of Use



5kt Tead76  
 2030z  
 Tead77 5 ↑ ADK ~~→~~ 2309A ISAAC



DATE	SCHEDULED FIX TIME	AIRCRAFT NUMBER	ARWO
WX MISSION IDENTIFICATION		STORM NUMBER IDENTIFIER	OB
VORTEX DATA MESSAGE			
A		DATE AND TIME OF FIX	
B	23 DEG 57 MIN N S	LATITUDE OF VORTEX FIX	
	82 DEG 18 MIN E W	LONGITUDE OF VORTEX FIX	
C	NA / GA	MINIMUM HEIGHT AT STANDARD LEVEL	
D	38	ESTIMATE OF MAXIMUM SURFACE WIND OBSERVED	
E	093 / 16	BEARING AND RANGE FROM CENTER OF MAXIMUM SURFACE WIND	
F	wd / WS	MAXIMUM FLIGHT LEVEL WIND NEAR CENTER	
G		BEARING AND RANGE FROM CENTER OF MAXIMUM FLIGHT LEVEL WIND	
H	992	MINIMUM SEA LEVEL PRESSURE COMPUTED FROM DROPSONDE OR EXTRAPOLATED FROM FLIGHT LEVEL. IF <u>EXTRAPOLATED</u> , CLARIFY IN REMARKS.	
I	/ PA	MAXIMUM FLIGHT LEVEL TEMP/PRESSURE ALTITUDE OUTSIDE EYE	
J	/ PA	MAXIMUM FLIGHT LEVEL TEMP/PRESSURE ALTITUDE INSIDE EYE	
K	/ (WB)	DEWPOINT TEMP/SEA SURFACE TEMP INSIDE EYE	
L		EYE CHARACTER: Closed wall, poorly defined, open SW, etc.	
M	C CO - E / /	EYE SHAPE/ORIENTATION/DIAMETER. CODE EYE SHAPE AS: C -Circular; CO - Concentric; E - Elliptical. TRANSMIT ORIENTATION OF MAJOR AXIS IN TENS OF DEGREE (i.e., 01-010 to 190; 17-170 to 350). TRANSMIT DIAMETER IN NAUTICAL MILES. Examples: C8 - Circular eye 8 miles in diameter. EO9/15/5 - Elliptical eye, major axis 090-270, length of major axis 15 NM, length of minor axis 5NM. CO8-14 - Concentric eye, diameter inner eye 8 NM, outer eye 14 NM.	
N		FIX DETERMINED BY/FIX LEVEL. FIX DETERMINED BY: 1 - Penetration; 2 - Radar; 3 - Wind; 4 - Pressure; 5 - Temperature. FIX LEVEL: Indicate surface center if visible; indicate both surface and flight level centers only when same: 0 - Surface; 1 - 1500ft; 9-925mb; 8 - 850 mb; 7 - 700 mb; 5 - 500 mb; 4 - 400 mb; 3 - 300 mb; 2 - 200 mb; NA - Other.	
O		NAVIGATION FIX ACCURACY/METEOROLOGICAL ACCURACY	
P	REMARKS	MAX FL WIND _____ KT _____ QUAD _____ Z MAX OUTBOUND FL WIND _____ KT _____ QUAD _____ Z SLP EXTRAP FROM (Below 1500 FT/ 925 MB/ 850 MB/ DROPSONDE) SFC CNTR _____ / _____ NM FROM FL CNTR MAX FL TEMP _____ C _____ / _____ NM FROM FL CNTR SURFACE WIND OBSERVED VISUALLY	
INSTRUCTIONS: Items A through G (and H when extrapolated) are transmitted from the aircraft immediately following the fix. The remainder of the message is transmitted as soon as available.			

018  
0133

Figure 5-3. Vortex Data Message Worksheet

991.9  
3.6 m/s ~6  
21482 47025



Project: Hurricane 2012

Mission: ISGCL

Flight ID: 001202 26 H4

Take Off: 2013Z

Landing: 0246Z

Flt Dir: WILLIAMS/FLAHERTY

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge \$\$ To	Comments	Good ?
1	111 745 143	1/8	Ø	2035	SCP	NWS	IP combo	✓
2	111 745 253	2/8	Ø	2050	SCP	NWS	MP combo	✓
3	103 845 054	1/8	Ø	2105	SCP	NWS	data loss ~ 45 sec	✓
4	103 845 060	2/8	Ø	2124	SCP	NWS	EP combo	✓
5	111 745 243	1/8	Ø	2149	SCP	NWS	EP combo	✓
6	111 745 310	2/8	Ø	2159	SCP	NWS	MP combo	✓
7	111 755 130	1/8	Ø	2215	SCP	NWS		✓
8	111 745 301	2	Ø	2218	SCP	NWS	CP combo	✓
9	103 845 055	3/8	Ø	2223	SCP	NWS		✓
10	111 745 131	1/8	Ø	2233	SCP	NWS	MP combo 4c	✓
11	122 455 015	2/8	Ø	2244	SCP	NWS	EP combo 5	✓
12	111 755 158	1/8	Ø	2258	SCP	NWS	IP combo 6	✓
13	111 755 171	2/8	Ø	2306	SCP	NWS	<del>MP</del> combo 7	✓
14	122 215 149	1	Ø	2310	SCP	NWS	CP combo 6A	✓
15	111 755 162	3/8	Ø	2313	SCP	NWS	~30 sec data missing	✓
16	111 625 055	1/8	Ø	2322	SCP	NWS	MP combo 6B	✓
17	103 845 007	2/8	Ø	2329	SCP	NWS		✓
18	122 215 152	1	Ø	2337	SCP	NWS	EP combo 7	✓
19	122 215 138	3/8	Ø	2340	SCP	NWS	IP combo 8	✓
20	111 925 090	1	Ø	0023	DAW	NWS	MP Combo 8	✓
21	111 925 068	3/8	Ø	0031	DAW	NWS	MP MAX winds 8	✓
22	122 215 156	1	Ø	0034	DAW	NWS	Center Combo 8	✓
23	111 625 027	2/8	Ø	0047	DAW	NWS	EP Combo 8	✓
24	111 755 062	1	Ø	0055	DAW	NWS	SEP Combo	✓
25	103 845 045	3/8	Ø	0000	DAW	NWS	MP Sonde only	✓
26	111 925 006	1	Ø	0105	DAW	NWS	Center Combo	✓
27	111 755 156	3/8	Ø	0120	DAW	NWS		✓
28	122 455 016	1	Ø	0132	DAW	NWS		✓
29	111 755 181	2/8	Ø	N/A			Drop Behind op.	
30								
31								
32								
33								
34								

~~Combo Drop~~ ~~safe Drop~~ ~~WHD~~ ~~NWS~~



Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge \$\$ To	Comments	Good ?
35								
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								
50								
51								
52								
53								
54								
55								
56								
57								

Drop Station Operator Notes

Charge \$\$ To Options: AOC, NWS, HFIP, NESDIS, or HRD ONLY – Do not use accounting codes!!!

AVAPS Pre-Flight Check:

- If time-permits, verify cabin pressure sensor w/ lab standard
- Start AVAPS., then start Soundings and set the Project Name and full Flight ID (example 20110823h2).
- Update the Frequency band allocation as required:  
Band A - W53rd, Band B - N42RF, Band C - N43RF, Band D - N49RF, Band E - not allocated
- Perform a prelaunch check on each channel, look for reasonable data and no CRC error status lights. Verify data is available on Remote AVAPS at the FD Station, then terminate the sonde by selecting **Abort** to cancel the sonde initialization. Verify the AVAPS Data mission folder has been created.

AVAPS Launch:

- Select a sonde frequency in the Green band and away from other sondes
- Enter sonde pressure error offset if 0.4mB or greater
- Select "begin data collection" and verify good data (including Winds) prior to putting sonde in launch tube
- Below 10,000', cut off about 1/2 of ribbon
- Loosen ribbon and extend end of ribbon to near, but not over, the sensor end of the sonde
- Place the sonde in the launch tube, sensor arm up, with the power pin socket facing starboard
- Verify the sonde is actively tracking GPS data prior to launch and no Early Launch detect

25 82 42  
24 52 82W  
23 27  
23 30 82Y  
24 82 82Y

IP 26 45 82 42W 190  
23 30 82Y  
24 82 82Y

Flight ID 260807C

45  
OK (Canso)

2016 MPC

00000000  
00 HELIX

26 F1050  
55K

5005

CNTRETS

300H

82  
23 30  
82 36

25 SE

EPS  
MPC  
RMW  
W  
W  
5PC

30010

24-

25 15  
SC 18

18

83

82

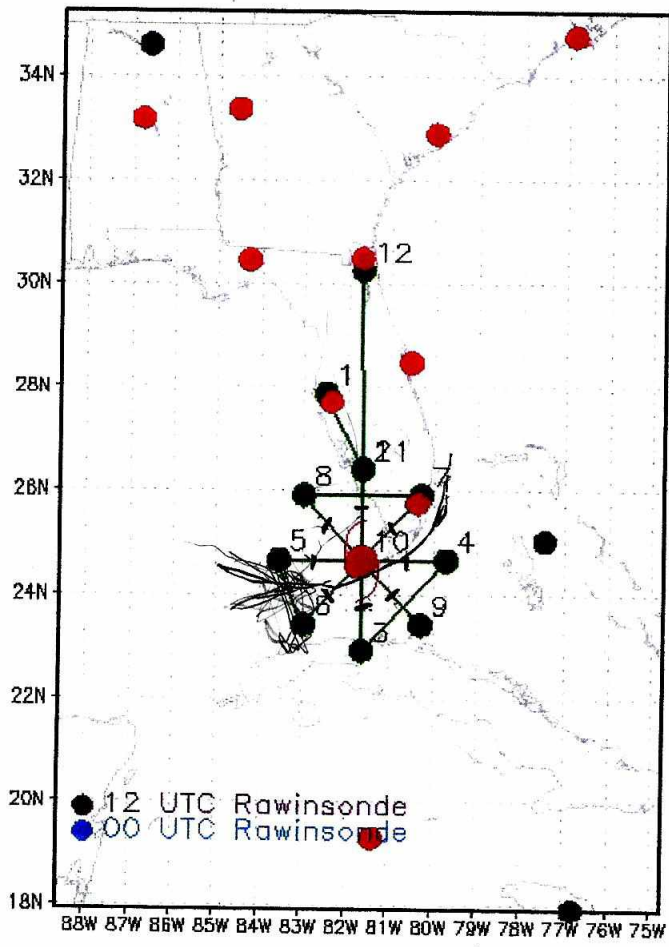
81

82 82 82 82

STREET

MPC



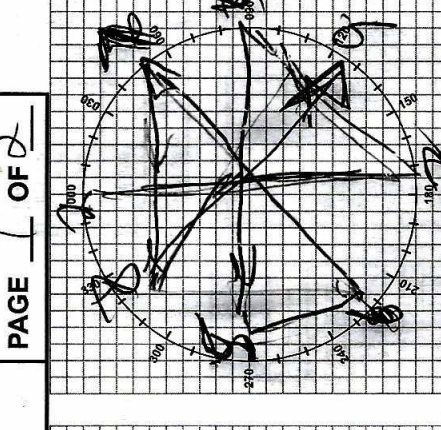
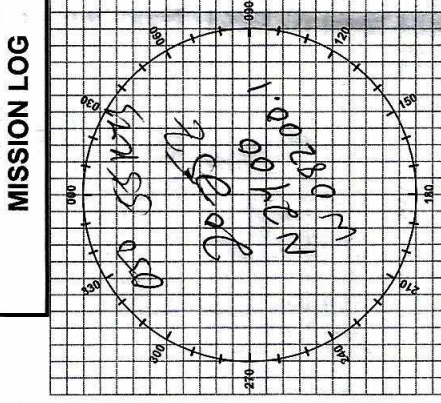


2	EP	Sippican	12		12	14	16
	MP	Sippican	14				
	CP	S	16	Sippican	11(3)	111(3)	1111(4)
	MP	Hermes	12				
3	EP	Hermes	14	Hermes	111(3)	111(3)	11(2)
4	EP	Hermes	16				
	MP	Hermes	12	8	2521	8400	
	MP	S	14				
5	EP	S	16	00202 MP			
6	EP	Hermes	12				
	MP	Hermes	14				
	MP	S	16				
7	EP	S	12	0034242			
8	EP	S	14				
	MP	S	16				
	<del>EP</del>	<del>S</del>	<del>12</del>				
	MP	Hermes	14				
9	EP	Hermes	16				
10	CP	S	12				



"V": 1855Z 070156Z V10 523.9 P029 26 29.89 +35 84 ILS04 W1003 35-49

CLEARANCES		
FREQ	ALT	HGD OTHER
119.9		TAXI KGA
124.35	116	CLWY CAP 27080 SK 410
	170	30.1454
		KMAX D>
		SL



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:  
 UHFVOICE VHFVOICE MFVOICE HF/CW MF/CW  
 243.0 121.5 2182 KHZ 8364 KHZ 500 KHZ  
 MAYDAY, MAYDAY, MAYDAY  
 THIS IS NOAA, NOAA, NOAA 42  
 - 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	VAR +E=>	TH	DR +R=>	TRK	GS	WD	WS	ALT	TAS	NEXT PT	DIST	TIME	ETA	REMARKS
1955	ENG IN																			
2001	TAXI W																			
2001	BLK																			
2002	76																			
2018	XV	27-53 82-13	27-53 82-13	0	27-54 82-13	-1	SW		220	200	256	073	45	040	222					NYR HF1 010 HF2 515 SELV
2031	A	23-30 81-31	23-29 81-31	+1	23-29 81-30	+1	SW			069	263	208	30	080	241					MCP 090/16 27-51V 82-41V
2005	A	24-00 81-37	24-00 81-38	0	24-00 81-36	0	SW			271	249	155	30	080	238					
2005	A	23-46 82-37	23-46 82-37	0	23-44 82-36	+2	44			031	240	297	19	080	240					
2005	A	25-21 83-34	25-21 83-34	0	25-21 83-34	0	44			269	282	056	42	080	247					
0107	A	24-15 82-49	24-15 82-49	0	24-17 82-46	+2	44			310	297	389	7	080	247					
0203	A	28-04 82-23	28-04 82-24	-1	28-04 82-25	-2	SW			332	282	082	35	130	272					
0245	LANA																			
0253	BUL																			

16001 904-741-0904 TEAM 76 8k C16AR 124.82



