

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

FLT ID: 20110826A	From: KMCF	To: KMCF
FLT #:	Blk In: 0224	Lnd Time: 0221 Z
ETD: 2000 Z	Blk Out: 1942 Z	T/O Time: 1957 Z
ETE: 7+00	Total Blk: 206.8	Total Flt: 606.4
Sponsoring Org: HRD	Program: HFIP	Purpose: 112ENE

AOC Flight Crew

Aircraft Commander: NEWMAN	Data System: BOSKO
Co-Pilot: KERNS / SWEENEY	Avaps: RICHARDS
Navigator: BRADY	System Engineer: HIRSCIT
Flight Eng: DABBI	AA:
Flt Director: SEARS	AA:
Avionics: OLNEY	Crew Chief:

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

of people listed on back:

	A/C - Takeoff	Wx Station - Takeoff	A/C - Land	Wx Station - Land
Pressure				

ATIS - Takeoff

ATIS - Land

Data Source	Number	Data Disposition / Date / Quality
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Flight Level Tapes

Radar Tapes

Dropsondes

Good: 21 Bad: Sent: 16

AXBT

List other data sources on back in Remarks section.

Remarks (Storm Name, Mission ID, Recco Times, Fix Times)

Storm Name: 3009A 1RONE

Mission ID: 1RONE

Recco

Times:

Fix #

Fix Time

2028

2107

15

25

35

2129

2238

0042

2302

0020

0146

0152

(3)

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

FLT ID:	T/O Time: Z	Lnd Time: Z
Name (Last, First)	Activity on Aircraft	Affiliation
ZIMMERMAN, E	VIP	FEMA
SULLIVAN, K	VIP	NOAA
CELLI, PHIL	PIOTO	FOX
SMITH, STEPH	GBS	NOAA
CORSICO, S	SCI	HRD.
ROGERS, R	LPS	HRD
KLOTZ, B	SCI	HRD

Remarks:

$$\begin{array}{r}
 8 \\
 25 \cancel{9} 1 \\
 \cancel{02} \cancel{34} \\
 1942 \\
 \hline
 749 \\
 47
 \end{array}$$

$$\begin{array}{r}
 7 \\
 25 \cancel{8} 1 \\
 1957 \\
 \hline
 624 \\
 7.8
 \end{array}$$



N42RF ERROR SUMMARY HURRICANE IRENE



Flight ID: 20110826H1

<u>Sensor or system</u>	<u>Number or Name</u>
INE (for wind derivation)	INE1
Accelerometer	ACCI1
Temperature Probe	TT1
Dew Point Probe	TDM2
Static Pressure	PSF
Dynamic Pressure	PQF1
Vert. Wind	ALTI1X
Constants File	/acdata/adc/42_11v5.adc
Project Directory	/acdata/2011/MET/20110826H1

Special note: There was a major problem with the attack angle output during this mission that results in erroneous vertical winds for the entire mission.

Notes:

There were two data gaps throughout the flight. The times are listed below.

230841Z

231131Z – 231132Z

Various parameters experienced erroneous spikes in the data following the 1 (one) second data gap at 230841Z. At 230842Z, the RINU-1550 GPS altitude (ALTI1), ground speed in the x and y direction (GSUI1 and GSVI1, respectively) and latitude (LATI1), longitude (LONI1) spiked. The erroneous output for each parameter was modified in the following manner.

$ALTI1X = ALTNVL + 0.95$, where NVL refers to Novatel output

$GSUI1X = GSUI2 + 0.90$

$GSVI1X = GSVI2 - 0.50$

$LATI1X = LATNVL$, where NVL refers to Novatel output

$LONI1X = LONNVL$, where NVL refers to Novatel output

During the flight there were instances where dewpoint temperature values exceeded derived ambient temperature values resulting in humidity values above 100%. These situations occurred during heavy precipitation events.

All other instruments worked optimally during the flight.

There were twenty-one (21) GPS dropsondes deployed. 18 were good 3 were bad.

Takeoff/Landing data: Data during landing and takeoff are potentially suspect. It is recommended that ground data not be used for scientific analysis.

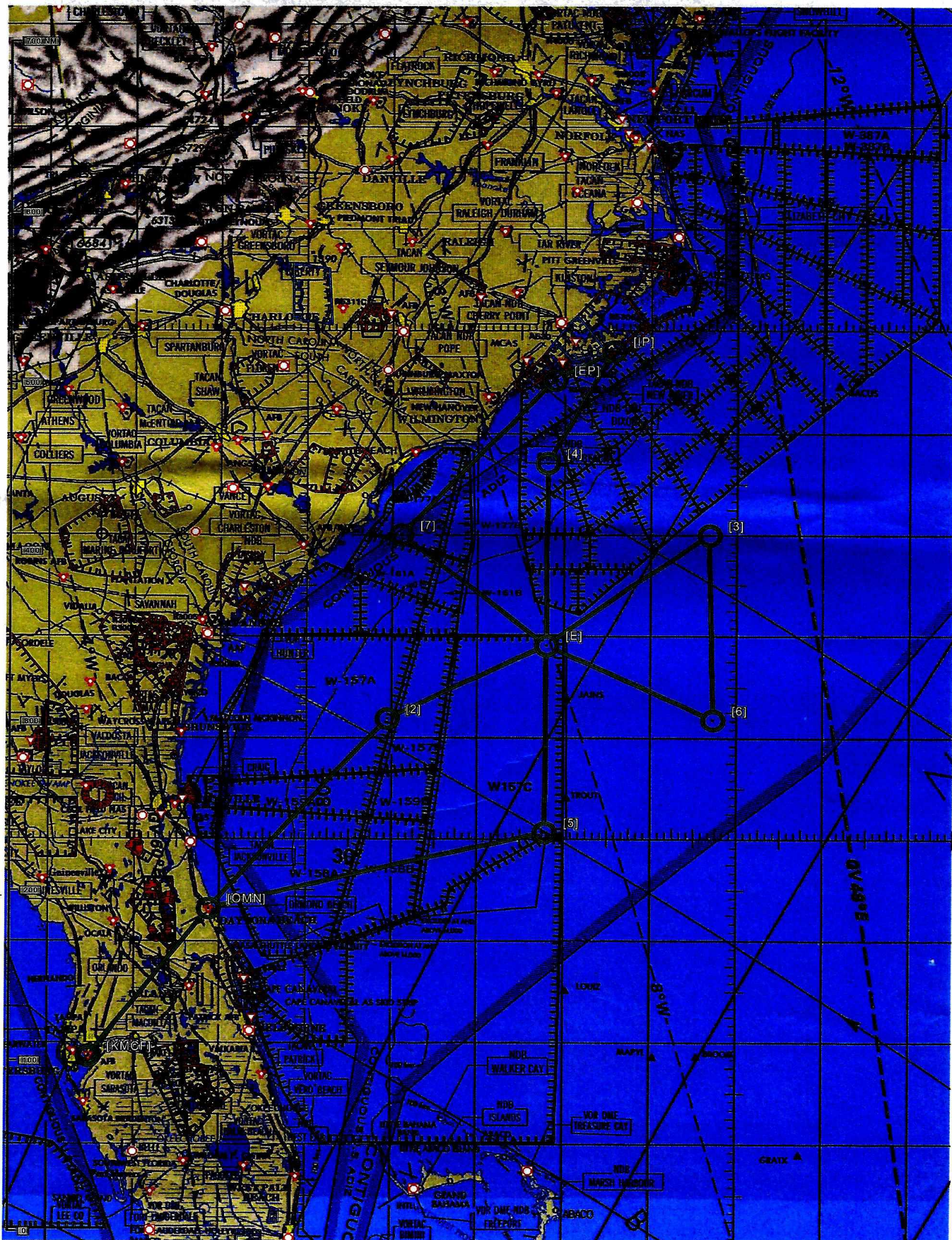
SPECIAL NOTE!!! The variable names dpj_wgs, dpj_was, and dpj_wz in the netCDF file represent vertical ground, vertical air, and vertical wind speeds respectively, computed using Dave Jorgensen's vertical wind algorithm. It is recommended that these values be used for vertical wind analysis.

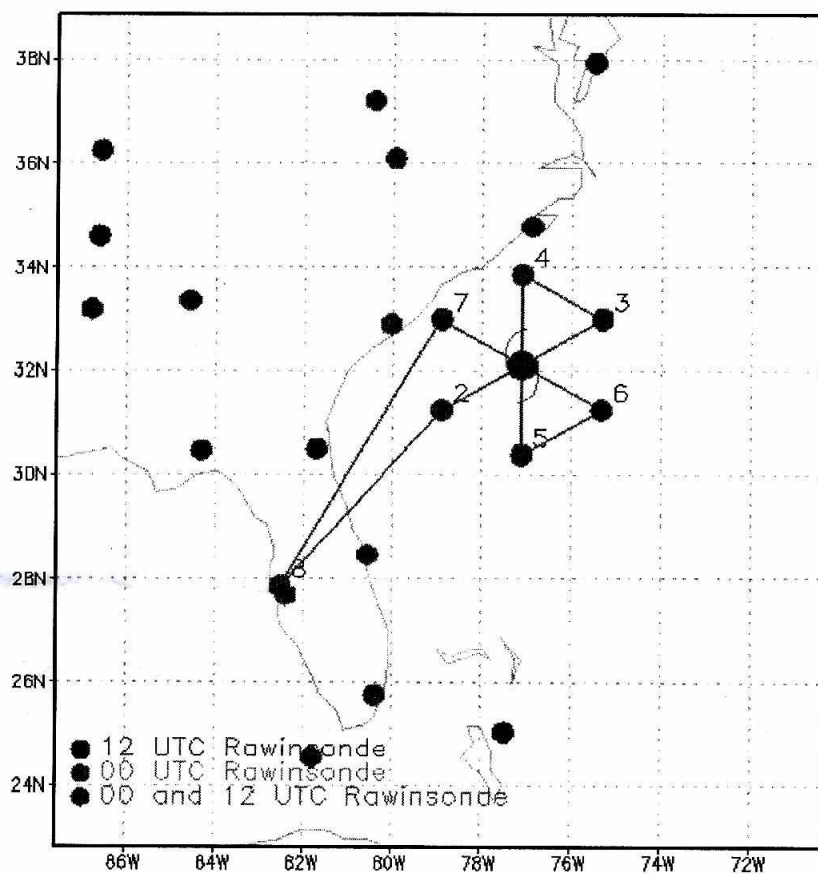
Takeoff(1957Z) Landing(0221Z)

Aircraft Static Pressure	1008.0 mb	1009.2 mb
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Corrected Tower Pressure	1008.3 mb	1009.4 mb
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Flight Director:	Ian Sears	(813) 828-3310 ext. 3039
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GrADS: COLA/IGES

2011-08-26-10:03

DATE		SCHEDULED RX TIME	AIRCRAFT NUMBER	FLIGHT DIRECTOR
WX MISSION IDENTIFIER				OB NUMBER
VORTEX DATA MESSAGE				
A	26 / 2129 Z	DATE and TIME of FIX		
B	31 DEG 45 MIN N S	LATITUDE of FIX		
	77 DEG 15 MIN W E	LONGITUDE of FIX		
C	NA M B M	MINIMUM HEIGHT of STANDARD LEVEL		
D	55 KT	ESTIMATE of MAXIMUM SURFACE WIND OBSERVED		
E	178 DEG 74 NM	BEARING and RANGE FROM CENTER of MAXIMUM SURFACE WIND		
F	255 DEG 89 KT	MAXIMUM FLIGHT LEVEL WIND NEAR CENTER		
G	178 DEG 82 NM	BEARING and RANGE FROM CENTER OF MAXIMUM FLIGHT LEVEL WIND		
NA	EXTRA 949 MB	MINIMUM SEA LEVEL PRESSURE COMPUTED FROM DROPSONDE OR EXTRAPOLATED FROM FLIGHT LEVEL. IF EXTRAPOLATED, CLARIFY IN REMARKS.		
I	15 C / 2418 M	MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE OUTSIDE EYE		
J	19 C / 2442 M	MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE INSIDE EYE		
K	18 C / NA C	DEWPOINT TEMP / SEA SURFACE TEMP INSIDE EYE		
L	NA	EYE CHARACTER: Closed wall, poorly defined, open SW, etc.		
M	NA	EYE SHAPE/ORIENTATION/DIAMETER: Code eye shape as: C - Circular; CO - Concentric; E - Elliptical. Transmit orientation of the major axis in tens of degrees, i.e., 01-010 to 190; 17-170 to 350. Transmit diameter in nautical miles. Examples: C8= Circular eye 8 miles in diameter; E09/15/5=Elliptical eye, major axis 090-270, length of major axis 15 NM, length of minor axis 5 NM. CO8-14=Concentric eye, diameter inner eye 8 NM, outer eye 14 NM.		
N	1345 NA	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; 1-1500 ft; 9-925mb; 8-850mb; 7-700mb; 5-500mb; 4-400mb; 3-300mb; 2-200mb; NA-Other		
O	21 / 1 NM	NAVIGATION FIX ACCURACY / METEOROLOGICAL ACCURACY		
P	REMARKS			

MAX FL WIND 89 KT S QUAD 2109 Z

MAX OUTBOUND FL WIND 73 KT N

QUA9

211 2144

DATE		SCHEDULED RX TIME	AIRCRAFT NUMBER	FLIGHT DIRECTOR
WX MISSION IDENTIFIER				OB NUMBER
VORTEX DATA MESSAGE				
A	28 / 2330 Z	DATE and TIME of FIX		
B	32 DEG 23 MIN N S	LATITUDE of FIX		
	77 DEG 05 MIN W E	LONGITUDE of FIX		
C	N/A M	MINIMUM HEIGHT of STANDARD LEVEL		
D	63 KT	ESTIMATE of MAXIMUM SURFACE WIND OBSERVED		
E	298 DEG 79 NM	BEARING and RANGE FROM CENTER of MAXIMUM SURFACE WIND		
F	24 DEG 77 KT	MAXIMUM FLIGHT LEVEL WIND NEAR CENTER		
G	299 DEG 94 NM	BEARING and RANGE FROM CENTER OF MAXIMUM FLIGHT LEVEL WIND		
H	EXTRAP 949 MB	MINIMUM SEA LEVEL PRESSURE COMPUTED FROM DROPSONDE OR EXTRAPOLATED FROM FLIGHT LEVEL. IF EXTRAPOLATED, CLARIFY IN REMARKS.		
I	13 C 2446 M	MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE OUTSIDE EYE		
J	20 C 2451 M	MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE INSIDE EYE		
K	17 C / N/A C	DEWPOINT TEMP / SEA SURFACE TEMP INSIDE EYE		
L	N/A	EYE CHARACTER: Closed wall, poorly defined, open SW, etc.		
M	N/A	EYE SHAPE/ORIENTATION/DIAMETER: Code eye shape as: C - Circular; CO - Concentric; E - Elliptical. Transmit orientation of the major axis in tens of degrees, i.e., 01-010 to 190; 17-170 to 350. Transmit diameter in nautical miles. Examples: C8= Circular eye 8 miles in diameter; E09/15/5=Elliptical eye, major axis 090-270, length of major axis 15 NM, length of minor axis 5 NM. CO8-14=Concentric eye, diameter inner eye 8 NM, outer eye 14 NM.		
N	1345	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; 1-1500 ft; 9-925mb; 8-850mb; 7-700mb; 5-500mb; 4-400mb; 3-300mb; 2-200mb; NA-Other		
O	1 / 1 NM	NAVIGATION FIX ACCURACY / METEOROLOGICAL ACCURACY		
P	REMARKS			

MAX FL WIND 89 KT S QUAD 2109 Z

MAX OUTBOUND FL W 83 KT SE QUAD
79
2340Z

DATE		SCHEDULED RX TIME	AIRCRAFT NUMBER	FLIGHT DIRECTOR
WX MISSION IDENTIFIER				OB NUMBER
VORTEX DATA MESSAGE				
A	27 0047Z		DATE and TIME of FIX	
B	32 DEG 17 MIN N S		LATITUDE of FIX	
	77 DEG 00 MIN W E		LONGITUDE of FIX	
C	NA M		MINIMUM HEIGHT of STANDARD LEVEL	
D	69 KT		ESTIMATE of MAXIMUM SURFACE WIND OBSERVED	
E	58 DEG 37 NM		BEARING and RANGE FROM CENTER of MAXIMUM SURFACE WIND	
F	58 DEG 46 KT		MAXIMUM FLIGHT LEVEL WIND NEAR CENTER	
G	59 DEG 68 NM		BEARING and RANGE FROM CENTER OF MAXIMUM FLIGHT LEVEL WIND	
H	25095 (MB)		MINIMUM SEA LEVEL PRESSURE COMPUTED FROM DROPSONDE OR EXTRAPOLATED FROM FLIGHT LEVEL. IF EXTRAPOLATED, CLARIFY IN REMARKS.	
I	15 C / 2446M		MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE OUTSIDE EYE	
J	20 C / 2443M		MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE INSIDE EYE	
K	18 C / NAC		DEWPOINT TEMP / SEA SURFACE TEMP INSIDE EYE	
L	EYE CHARACTER: Closed wall, poorly defined, open SW, etc. OPEN POORLY			
M	NA		EYE SHAPE/ORIENTATION/DIAMETER: Code eye shape as: C - Circular; CO - Concentric; E - Elliptical. Transmit orientation of the major axis in tens of degrees, i.e., 01-010 to 190; 17-170 to 350. Transmit diameter in nautical miles. Examples: C8= Circular eye 8 miles in diameter; E09/15/5=Elliptical eye, major axis 090-270, length of major axis 15 NM, length of minor axis 5 NM. CO8-14=Concentric eye, diameter inner eye 8 NM, outer eye 14 NM.	
N	12345		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; 1-1500 ft; 9-925mb; 8-850mb; 7-700mb; 5-500mb; 4-400mb; 3-300mb; 2-200mb; NA-Other	
O	1 / 1 NM		NAVIGATION FIX ACCURACY / METEOROLOGICAL ACCURACY	
P	REMARKS			
MAX FL WIND _____ KT _____ QUAD _____ Z _____ 022 10				

245 / 07

017

1730 8918 8533 28.13 40KM

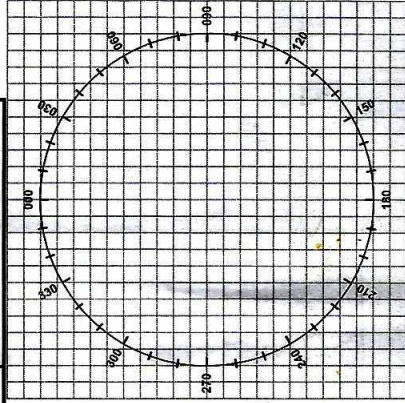
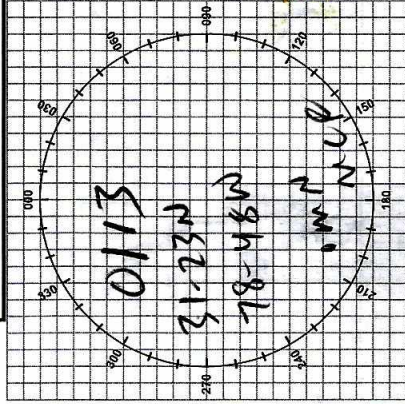
"E": 1855Z 2907 G16 V10 CL 12K 33/24 29.80 +118 04JLS

CLEARANCES			
FREQ	ALT	HQ	OTHER
119.9	1.6	RWY	CAP R 080 Ex 13K +10
135.05	11K		50 7442
135.05			
135.87			LAMMA SITU
			BETHO DRL L2ADS

24M
6K

MISSION LOG

PAGE 1 OF 2



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 121.5 VHF/VOICE 2182 KHZ HF/CW 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 17 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
1935	ENG	N	N																		NYA 11330 1902Z
1942	TAXI	W	W																		1V15V 2V 25V
1946	SLK																				HUMTRESS 7402 1914Z
1957	TD																				MC F 060/10 58V
2000	XV	27-57.7 82-21.4	27-57.7 82-21.4	0	27-57.7 82-21.4	0															
2046	A	29-42.7 79-02.5	29-42.7 79-03.1	-1.3 -0.6	29-42.7 79-03.2	-1.7 -0.7															
2052	C	NYA	H330																		
2147	A	32-30.8 77-15.0	32-29.9 77-15.0	+0.9 0	32-33.1 77-16.0	-2.3 -1.0															
2149	C	NYA	8918																		
2247	A	33-39.8 77-48.3	33-39.2 77-49.6	-1.6 -1.3	33-43.7 77-49.3	-3.9 -1.2															
2250	C	NYA	8918																		
2346	A	31-28.4 75-55.3	31-28.1 75-55.0	+0.3 +0.3	31-29.0 75-55.3	-0.6 +0.3															
2350	C	NYA	8918																		
0046	A	32-21.2 76-52.6	32-19.3 76-52.3	+1.9 -0.3	32-20.5 76-51.3	-0.3 +1.2															
0052	C	NYA	8918																		
0133	C	CHOL	W17K																		
0209	A	28-09.8 82-04.5	28-07.6 82-04.8	-2.2 -0.3	28-15.3 82-01.0	-5.5 +3.3															
0224	LAND	0208	0208																		

⑦ 3301 7903

② 3205 7715

⑥ 31-10 75-19

③ 33-10 75-04

② 31-23 7848

32-16 76-56

LAMMA

32-14

MISSION LOG	PAGE ____ OF ____
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77-07

FIX TYPES
(G) - GPS (I) - INS (R) - RADIO (M) - VISUAL (C) - CELESTIAL (D) - DR

[illegible]