

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

FLT ID: <u>2012004#1</u>	From: <u>KMCF</u>	To: <u>KMCF</u>
FLT #: <u>14-1</u>	Blk In: <u>1331</u> Z	Lnd Time: <u>1344</u> Z
ETD: _____ Z	Blk Out: <u>0545</u> Z	T/O Time: <u>0555</u> Z
ETE: _____	Total Blk: <u>8.1</u>	Total Flt: <u>7.8</u>
Sponsoring Org: <u>EMC</u>	Program: <u>HFIP</u>	Purpose: <u>KAREN (T.S.)</u>

AOC Flight Crew

Aircraft Commander: <u>KIBBEY</u>	SSA: <u>NAETHER</u>
Co-Pilot: <u>MARTIN, DIDIER</u>	AVAPS: <u>SMITH, NEWNAM</u>
Navigator: <u>GALLAGHER</u>	Scientists: <u>LISA BULLI</u>
Flight Eng: <u>HEYSTETK, DARBY</u>	Scientists: <u>JOE CIONE</u>
Flt Director: <u>SEARS,</u>	Scientists: <u>DAN WOLKE</u>
SEB: <u>PEER,</u>	Scientists: <u>JOE SAPP</u>

Crew Chief: _____ Visitors: DOZEMUS,

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

AS REQUIRED BY ORM	YES	NO	REMARKS
VOLCANIC ASH			
SCIENCE MISSION WITHIN BOUNDARY LAYER			
LACK OF PRECIPITATION			
RELATIVE HUMIDITY AT OR ABOVE 80%			
LARGE AIR-SEA TEMPERATURE GRADIENT			
HIGH SURFACE WINDS			
LONG FETCH AND/OR DURATION OF SFC WIND			
SEA SALT ACCRETION FORECAST			
SEA SALT ACCRETION OBSERVED			

Dropsondes	<u>20</u>	Good: <u>20</u> Bad: <u>0</u> Sent: <u>20</u>
AXBT	<u>9</u>	Good: <u>09</u> Bad: <u>0</u> Sent: <u>9</u>

List other data sources in Remarks section

Remarks (Storm VDM Identifier, Mission ID, Fix Times)	Fix #	VDM	
		Ob Num	Fix Time / SLP
Storm Number Identifier (VDM): <u>AL072012</u> (ie: AL072012)	<u>1</u>	<u>8</u>	<u>749 1002</u>
	<u>2</u>	<u>16</u>	<u>021913.002</u>
	<u>3</u>	<u>24</u>	<u>1021 1002</u>
	<u>4</u>		<u>1005</u>
TCPOD/WSPOD Mission ID: <u>NOAA3 0720 KAREN</u> (ie: NOAA2 2418A SANDY)			

Remarks:

RECCO
0625
0719
0816
0849
0939
0958
1048

1120
1219
1256



N42RF ERROR SUMMARY
TS KAREN 2013
04 October 2013



Flight ID: 20131004I1

<u>Sensor or system</u>	<u>Number or Name</u>
Static Pressure Probe	PSM.2
Dynamic Pressure Probe	PQM.2
Total Temperature Probe	TTM.1
Dewpoint Temp. Probe	TDM.2X
Vertical Accelerometer	AccZI.1
Altimeter	AltIGPS.3
INE Selection	INE 1
Flight Directory	acdata/MET/2013/20131004I1

Local Met Data:	<u>Takeoff (0555Z)</u>	<u>Landing (1344Z)</u>
Aircraft Static Pressure	1016.9mb	1018.4mb
Tower Pressure (corrected)	1017.0mb	1018.7mb

Notes:
 There were no data gaps.

The measured Dewpoint Temperature from the EdgeTech sensor (TDM.2) recorded erroneous values during the following timeframes.
 120000Z – 120010Z
 120711Z – 120719Z

The values from TDM.2 were replaced with values from the measured Dewpoint Temperature from the Buck sensor (TDM.1).

During the flight there were instances during heavy precipitation where the calculated ambient dewpoint temperature exceeded the calculated ambient temperature resulting in relative humidity values greater than 100%.

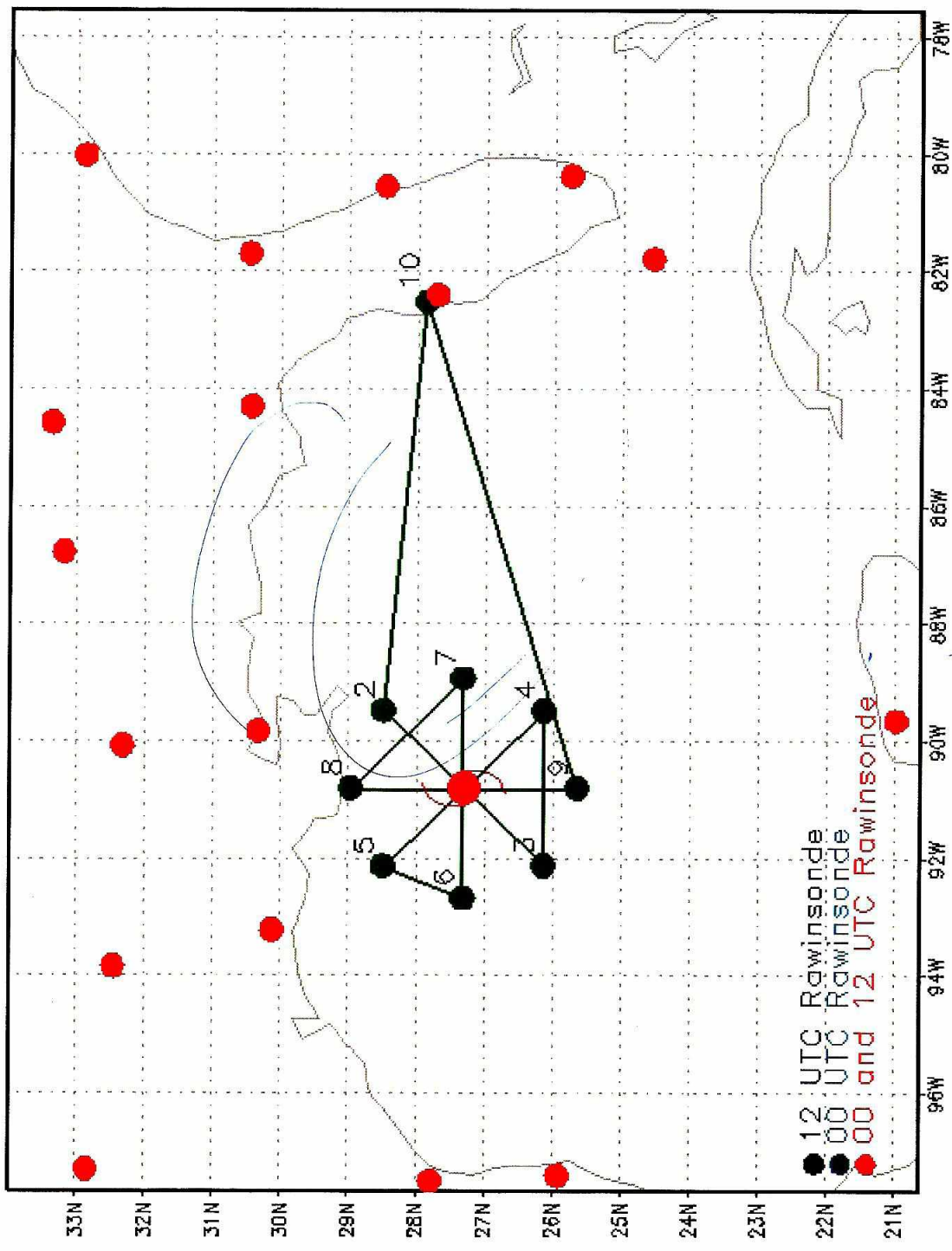
SPECIAL NOTE!!! The variable names DPJ_GSZ, DPJ_ASZ and DPJ_WSZ in the netCDF file represent vertical ground speeds, vertical air speeds and vertical wind speeds, respectively, computed using Dave Jorgensen's vertical wind algorithm. It is recommended that these values be used for vertical wind analysis.

Expendable Type	Number deployed	Number good	Number of messages transmitted
GPS dropwindsonde	20	20	20
AXBT	9	9	9

Flight Director:
Phone #:

Ian Sears
(813) 828-3310 ext. 3039

23
 12
 44
 30
 56
 12
 08



2013-10-04-11:02

GRADS: OOLAY/IGES

0855
12 9 07

knucf 120 05 k CLR

080 4k SET 050

28 89 15

2648 90 36

VH NEG
SS DEG
RJI VERY LOW

BTS - 9

SONDES - 20

293 - 20

27 52

89 52

4
35

37
26
11
9
12
21

038

DATE	SCHEDULED FIX TIME	AIRCRAFT NUMBER	ARWO
WX MISSION IDENTIFICATION		STORM NUMBER IDENTIFIER	OB
VORTEX DATA MESSAGE			
A	040749 32	DATE AND TIME OF FIX	
B	24 DEG 50 MIN N S	LATITUDE OF VORTEX FIX	
B	89 DEG 40 MIN E W	LONGITUDE OF VORTEX FIX	
C	700 313	MINIMUM HEIGHT AT STANDARD LEVEL	
D	46	ESTIMATE OF MAXIMUM SURFACE WIND OBSERVED	
E	315 13	BEARING AND RANGE FROM CENTER OF MAXIMUM SURFACE WIND	
F	82 32	MAXIMUM FLIGHT LEVEL WIND NEAR CENTER	
G	330 21	BEARING AND RANGE FROM CENTER OF MAXIMUM FLIGHT LEVEL WIND	
H	1002	MINIMUM SEA LEVEL PRESSURE COMPUTED FROM DROPSONDE OR EXTRAPOLATED FROM FLIGHT LEVEL. IF EXTRAPOLATED, CLARIFY IN REMARKS.	
I	16 2285	MAXIMUM FLIGHT LEVEL TEMP/PRESSURE ALTITUDE OUTSIDE EYE	
J	19 2371	MAXIMUM FLIGHT LEVEL TEMP/PRESSURE ALTITUDE INSIDE EYE	
K	14 NA	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 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	134 7	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	1/1	NAVIGATION FIX ACCURACY/METEOROLOGICAL ACCURACY	
REMARKS			
MAX FL			
WIND _____ KT _____ QUADBEARING/RANGE _____ Z			
MAX OUTBOUND FL			
WIND _____ KT _____ QUADBEARING/RANGE _____ 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.			

Figure 5-3. Vortex Data Message Worksheet

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DATE	SCHEDULED FIX TIME	AIRCRAFT NUMBER	ARWO
WX MISSION IDENTIFICATION		STORM NUMBER IDENTIFIER	
VORTEX DATA MESSAGE			OB
A	04 091310	DATE AND TIME OF FIX	
B	24 DEG 59 MIN N S	LATITUDE OF VORTEX FIX	
B	89 DEG 48 MIN E W	LONGITUDE OF VORTEX FIX	
C	700 317	MINIMUM HEIGHT AT STANDARD LEVEL	
D	05	ESTIMATE OF MAXIMUM SURFACE WIND OBSERVED	
E	45 71	BEARING AND RANGE FROM CENTER OF MAXIMUM SURFACE WIND	
F	169 46	MAXIMUM FLIGHT LEVEL WIND NEAR CENTER	
G	95 70	BEARING AND RANGE FROM CENTER OF MAXIMUM FLIGHT LEVEL WIND	
H	1002	MINIMUM SEA LEVEL PRESSURE COMPUTED FROM DROPSONDE OR EXTRAPOLATED FROM FLIGHT LEVEL. IF EXTRAPOLATED, CLARIFY IN REMARKS.	
I	14 2342	MAXIMUM FLIGHT LEVEL TEMP/PRESSURE ALTITUDE OUTSIDE EYE	
J	19 2320	MAXIMUM FLIGHT LEVEL TEMP/PRESSURE ALTITUDE INSIDE EYE	
K	12 NA	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 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	1345 7	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	1/2	NAVIGATION FIX ACCURACY/METEOROLOGICAL ACCURACY	
P	REMARKS MAX FL WIND _____ KT _____ QUADBEARING/RANGE _____ Z MAX OUTBOUND FL WIND _____ KT _____ QUADBEARING/RANGE _____ 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.			

Figure 5-3. Vortex Data Message Worksheet

~~0816~~ 24

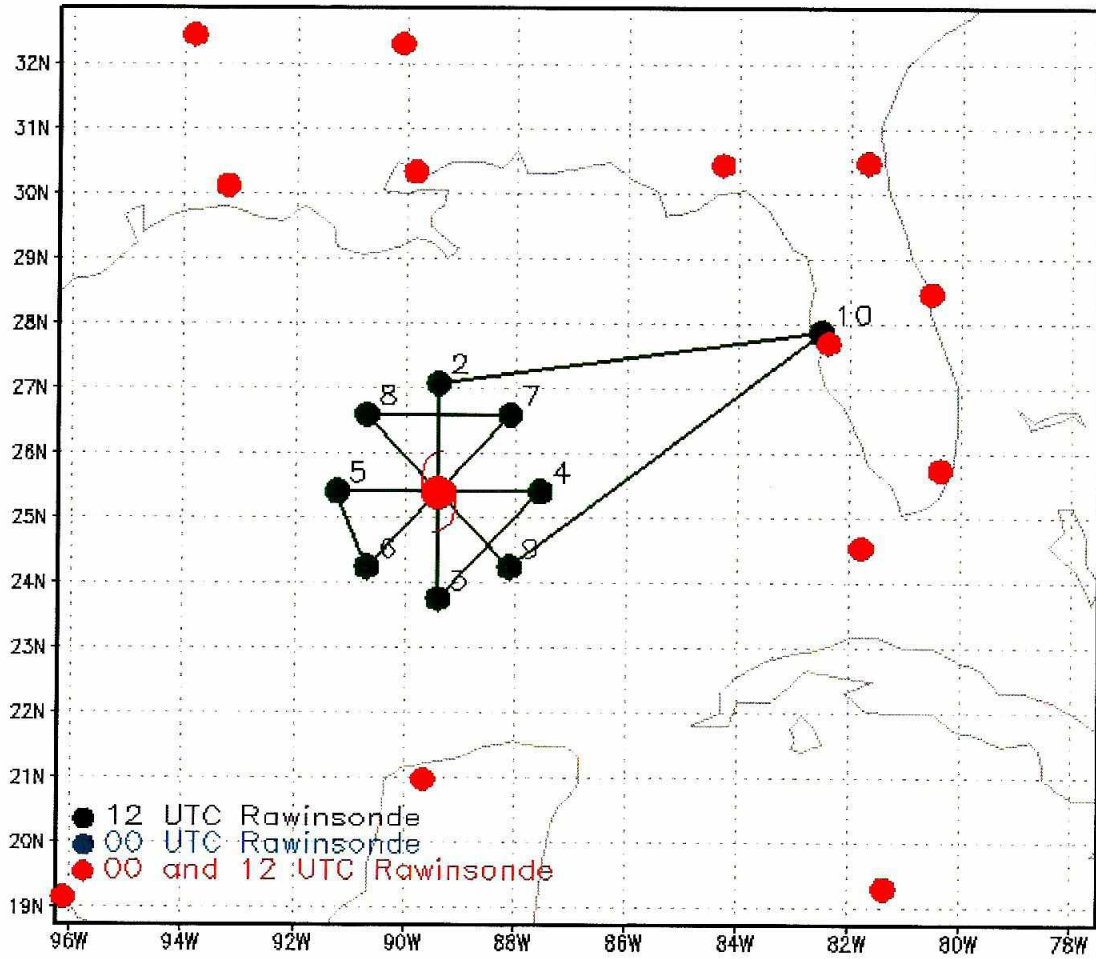
DATE	SCHEDULED FIX TIME	AIRCRAFT NUMBER	ARWO
WX MISSION IDENTIFICATION		STORM NUMBER IDENTIFIER	
			OB
VORTEX DATA MESSAGE			
A	04 10 21	DATE AND TIME OF FIX	
B	25 DEG 04 MIN N S	LATITUDE OF VORTEX FIX	
B	89 DEG 54 MIN E W	LONGITUDE OF VORTEX FIX	
C	700 317	MINIMUM HEIGHT AT STANDARD LEVEL	
D	38	ESTIMATE OF MAXIMUM SURFACE WIND OBSERVED	
E	188 15	BEARING AND RANGE FROM CENTER OF MAXIMUM SURFACE WIND	
F	284 22	MAXIMUM FLIGHT LEVEL WIND NEAR CENTER	
G	21 38	BEARING AND RANGE FROM CENTER OF MAXIMUM FLIGHT LEVEL WIND	
H	1002	MINIMUM SEA LEVEL PRESSURE COMPUTED FROM DROPSONDE OR EXTRAPOLATED FROM FLIGHT LEVEL. IF EXTRAPOLATED, CLARIFY IN REMARKS.	
I	15 2318	MAXIMUM FLIGHT LEVEL TEMP/PRESSURE ALTITUDE OUTSIDE EYE	
J	19 2321	MAXIMUM FLIGHT LEVEL TEMP/PRESSURE ALTITUDE INSIDE EYE	
K	12 NA	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 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	1345 7	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	1 1	NAVIGATION FIX ACCURACY/METEOROLOGICAL ACCURACY	
REMARKS			
MAX FL			
WIND _____ KT _____ QUAD BEARING/RANGE _____ Z			
MAX OUTBOUND FL			
WIND _____ KT _____ QUAD BEARING/RANGE _____ 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.			

Figure 5-3. Vortex Data Message Worksheet

OB 32

DATE	SCHEDULED FIX TIME	AIRCRAFT NUMBER	ARWO
WX MISSION IDENTIFICATION		STORM NUMBER IDENTIFIER	OB
VORTEX DATA MESSAGE			
A	4 1144	DATE AND TIME OF FIX	
B	25 DEG 10 MIN N S	LATITUDE OF VORTEX FIX	
	29 DEG 48 MIN E W	LONGITUDE OF VORTEX FIX	
C	200 312J	MINIMUM HEIGHT AT STANDARD LEVEL	
D	38	ESTIMATE OF MAXIMUM SURFACE WIND OBSERVED	
E	304 35	BEARING AND RANGE FROM CENTER OF MAXIMUM SURFACE WIND	
F	26 25	MAXIMUM FLIGHT LEVEL WIND NEAR CENTER	
G	301 26	BEARING AND RANGE FROM CENTER OF MAXIMUM FLIGHT LEVEL WIND	
H	1003	MINIMUM SEA LEVEL PRESSURE COMPUTED FROM DROPSONDE OR EXTRAPOLATED FROM FLIGHT LEVEL. IF EXTRAPOLATED, CLARIFY IN REMARKS.	
I	14 2310	MAXIMUM FLIGHT LEVEL TEMP/PRESSURE ALTITUDE OUTSIDE EYE	
J	20 2362	MAXIMUM FLIGHT LEVEL TEMP/PRESSURE ALTITUDE INSIDE EYE	
K	14 NA	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 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	1345 7 1/E	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	1/2	NAVIGATION FIX ACCURACY/METEOROLOGICAL ACCURACY	
P	REMARKS MAX FL WIND _____ KT _____ QUADBEARING/RANGE _____ Z MAX OUTBOUND FL WIND _____ KT _____ QUADBEARING/RANGE _____ 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.			

Figure 5-3. Vortex Data Message Worksheet



GRADS: COLA/IGES

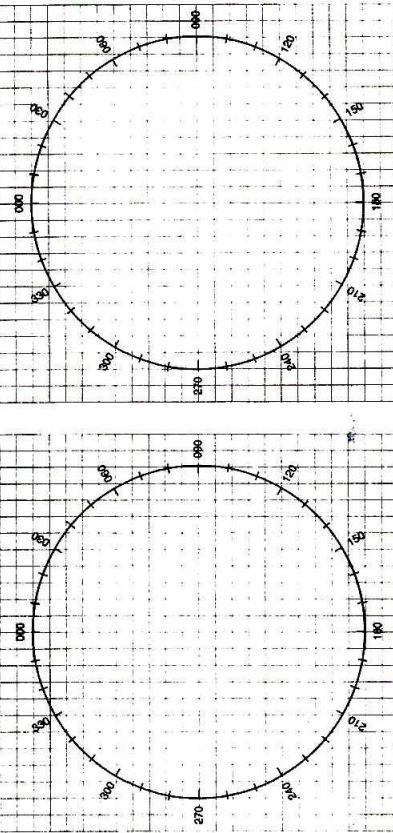
2013-10-03-10:51

120 06 : ~~SLR~~ F2W 22000
 130 09 : SLR 070 SLR 090 BKN 150

SEA SALT
 VA
 RAPID I

1645 4+26 11330 619 24.33 039-37 24 49 08148 0807 135.77

CLEARANCES		
FREQ.	ALT	HDG
135.7	1600	1600
1446	1400	1400
6586	1400	1400
8918		



MISSION LOG PAGE 1 OF 1

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 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	KERR	INS 2 POSITION	KERR	VAR +E=>	TH	DR +R=>	TRK	GS	WD	WS	ALT	TAS	NEXT PT	DIST	TIME	ETA	REMARKS
0600	A	27-53.4 160-23.0	27-53.4 160-23.0		27-53.4 160-23.0		SW	077	-	077	224	170	4	1524	227	160	131	33	0633	
0700	A	27-53.4 160-23.0	27-53.4 160-23.0		27-53.4 160-23.0		-	253	42	257	264	130	26	814	232	18	74	17	0712	
0750	VADEN	24-20 160-40	24-20 160-40		24-20 160-40		-	186	56	181	228	26	26	818	232	5	52	15	0812	
0800	A	24-20 160-40	24-20 160-40		24-20 160-40		-	186	56	181	228	26	26	818	232	5	52	15	0812	
0900	A	24-20 160-40	24-20 160-40		24-20 160-40		-	186	56	181	228	26	26	818	232	5	52	15	0812	
0910	A	24-20 160-40	24-20 160-40		24-20 160-40		-	186	56	181	228	26	26	818	232	5	52	15	0812	
0912	A	24-20 160-40	24-20 160-40		24-20 160-40		-	186	56	181	228	26	26	818	232	5	52	15	0812	
0900	A	24-20 160-40	24-20 160-40		24-20 160-40		-	186	56	181	228	26	26	818	232	5	52	15	0812	
1022	VADEN	24-20 160-40	24-20 160-40		24-20 160-40		-	186	56	181	228	26	26	818	232	5	52	15	0812	
1100	A	24-20 160-40	24-20 160-40		24-20 160-40		-	186	56	181	228	26	26	818	232	5	52	15	0812	
1145	VADEN	24-20 160-40	24-20 160-40		24-20 160-40		-	186	56	181	228	26	26	818	232	5	52	15	0812	
1200	A	24-20 160-40	24-20 160-40		24-20 160-40		W	030	-	030	282	150	35	818	232	19	61	35	1235	
1200	A	24-20 160-40	24-20 160-40		24-20 160-40		W	030	-	030	282	150	35	818	232	19	61	35	1235	
1215	A	24-20 160-40	24-20 160-40		24-20 160-40		W	030	-	030	282	150	35	818	232	19	61	35	1235	
1315	VADEN	24-20 160-40	24-20 160-40		24-20 160-40		W	030	-	030	282	150	35	818	232	19	61	35	1235	
1327	VADEN	24-20 160-40	24-20 160-40		24-20 160-40		W	030	-	030	282	150	35	818	232	19	61	35	1235	

24 49 08148 0807 135.77