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

AOCWF1

Flt ID:	08090[illegible]H	From:	KMCF	To:	KMCF
Flt No:	08 – 059	Blk In:	1251Z	ATA:	1243Z
ETD:	0330Z	Blk Out:	0315Z	ATD:	0327Z
ETE:		Blk Time:	9:36 (9.6)	Flt Time:	9:16 (9.3)
Sponsor Org:	NHC	Program:	HURRICANE	Purpose:	TS HANNA SE BAHAMAS

AOC Personnel

AC:	CHOY ✓	Sys Eng:	ROLES ✓
CP:	GIRIMONTE ✓ / EBHARDT	Data Sys:	
Nav:	GALLAGHER ✓	Radar:	
FE:	BAST / WADE ✓	GPS/BT:	BOSKO / GREENE ✓
FD:	DAMIANO ✓	Cld Phys:	
Avionics:	OLNEY ✓		

Participating Scientists / Visitors / AOC

Name (Last, First)	Activity on Aircraft	Affiliation
CHANG, P ✓	PI	NESDIS
JELENAK, Z ✓	PI (C-SCAT)	NESDIS
MANN ✓	C-SCAT	UMASS
STOFFELEN, A	OBS	
ABERSON, S ✓	PI	HRD
LORSOLO ✓	OBS	
ANNANE ✓	OBS	↓

AL082008

Proposed/Actual Mission Remarks (Recco, Fixes, Storm, PENET, NHOP #) 06Z NOAA2 0808A HANNA

IP 2430' 7400'

called CARCAH 0341Z

TA down 0351Z INOP for MISSION NALF

2450 NEW IP 7345

Reset HappyBoy 064023

5K 989 360/12

updated 06Z 23.2N 72.7W 06Z 23.6N 72.4W CENTER drops

0604Z 23°15' 72°15'

0734Z 23°41', 72°29'

0903Z 23°53' 72°50'

05/11 [illegible]

1033Z 24°02' 73°00'

NO

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

AOCWF2

Flt ID:	Time Off:	Time On:
080904H	0327Z	1243Z

	A/C (Take Off)	Wx Station (Take Off)	A/C (Land)	Wx Station (Land)
Pressure	1010.9	29.87 1011.5 1011.0	1010.9	29.84 1012.1 1011.6

	Number	Data Disposition / Date / Quality
Flt Lvl Tapes	2	
Radar Tapes	—	
Cloud Physics Tapes		
Video Tapes		
AXBT		
AXCP		
AXCTD		
Dropsondes	4	all in center; 1 quit at 2K feet NHC
		3 messages sent

Video

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

Remarks

N42RF ERROR SUMMARY
TS HANNA RECCO MISSION

Flight ID: 080904H

Sensor or system	Number or Name
Inertial	INE1
Accelerometer	ACC1
Temperature Probe	TT1
Dew Point Probe	TDM2X (EdgeTech)
Static Pressure	PSFX
Dynamic Pressure	PQF1
Vert. Wind	RA159X
Constants File	n42_hur08v3.adc
Project Directory	/acdata/2008/hur08

Notes:

There were no data gaps. Beginning with the H080829 H. Gustav flight and continuing through the H080912 H. Ike flight, there was observed a 3 to 4 second lag between all INE1 and INE2 outputs. INE1was selected since it best corresponded with the analog output.

There were no liquid water sensors available for the flight.

The inertial #1 data was erroneous from 064023Z – 064108Z. This will produce erroneous horizontal and vertical wind values.

The APN-159 (RA159X) radar altimeter output had several time periods of erroneous values. The RA159 data glitches were fixed using statistical techniques during the following time periods: 035901Z – 040100Z, 044700Z – 044900Z, 063500Z – 063700Z, 065300Z – 065500Z, 070200Z – 070400Z, 073800Z – 074000Z, 075300Z – 075500Z, 080000Z – 080200Z, 091800Z – 092000Z, 092700Z – 092900Z and 101500Z – 101700Z.

NOTE: The RA159X output was very noisy between 115635Z – 121100Z so vertical wind (WZ) output should be viewed very carefully.

Measured dewpoint temperature #2 (EdgeTech)...TDM2...exhibited several time periods of erroneous data during the flight. For 112310Z – 112511Z, and 122818Z - 123019Z the erroneous data was removed by substituting TDM3(Maycomm/TDL) output,

TDM2 = TDM3

For 120253Z – 120648Z the erroneous TDM2 data was removed by substituting TDM1(Buck) output,

TDM2 = TDM1

All other instruments worked optimally during the flight.

Four (4) GPS dropsondes were deployed with 3 being good. Three (3) tempdrop messages were sent to NHC.

	Takeoff 0327Z	**Landing 1243Z**
Aircraft Static Pressure	1010.9mb	1010.9mb
Corrected Tower Pressure	1011.0mb	1011.6mb

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

DATE	SCHEDULED RX TIME	AIRCRAFT NUMBER	FLIGHT DIRECTOR
		N42RF	DAWSON

WX MISSION IDENTIFIER	OB NUMBER
	5

VORTEX DATA MESSAGE

A	04 / 0604 Z	DATE and TIME of FIX
B	23 DEG 15 MIN (N) S	LATITUDE of FIX
	72 DEG 15 MIN (W) E	LONGITUDE of FIX
C	850 MB / 1339 M	MINIMUM HEIGHT of STANDARD LEVEL
D	60 KT	ESTIMATE of MAXIMUM SURFACE WIND OBSERVED
E	328 DEG 79 NM	BEARING and RANGE FROM CENTER of MAXIMUM SURFACE WIND
F	039 DEG 65 KT	MAXIMUM FLIGHT LEVEL WIND NEAR CENTER
G	326 DEG 89 NM	BEARING and RANGE FROM CENTER OF MAXIMUM FLIGHT LEVEL WIND
H	990 MB	MINIMUM SEA LEVEL PRESSURE COMPUTED FROM DROPSONDE OR EXTRAPOLATED FROM FLIGHT LEVEL. IF EXTRAPOLATED, CLARIFY IN REMARKS.
I	20 C / 1614 M	MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE OUTSIDE EYE
J	20 C / 1610 M	MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE INSIDE EYE
K	17 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	1234/8 5	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	

Sonde 989.8

MAX FL WIND 65 KT NW QUAD 0539 Z

MAX OUTBOUND FL WIND

INSTRUCTIONS: Items A thru 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 for scheduled fixes and at the Flight Director's discretion for unscheduled intermediate) fixes.

DATE	SCHEDULED RX TIME	AIRCRAFT NUMBER	FLIGHT DIRECTOR

WX MISSION IDENTIFIER	OB NUMBER 9

VORTEX DATA MESSAGE

A	04 / 0734 Z	DATE and TIME of FIX
B	23 DEG 41 MIN (N) S	LATITUDE of FIX
	72 DEG 29 MIN (W) E	LONGITUDE of FIX
C	850 MB 1338 M	MINIMUM HEIGHT of STANDARD LEVEL
D	45 KT	ESTIMATE of MAXIMUM SURFACE WIND OBSERVED
E	048 DEG 70 NM	BEARING and RANGE FROM CENTER of MAXIMUM SURFACE WIND
F	137 DEG 56 KT	MAXIMUM FLIGHT LEVEL WIND NEAR CENTER
G	049 DEG 94 NM	BEARING and RANGE FROM CENTER OF MAXIMUM FLIGHT LEVEL WIND
H	990 MB	MINIMUM SEA LEVEL PRESSURE COMPUTED FROM DROPSONDE OR EXTRAPOLATED FROM FLIGHT LEVEL. IF EXTRAPOLATED, CLARIFY IN REMARKS.
I	19 C / 1569 M	MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE OUTSIDE EYE
J	21 C / 1610 M	MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE INSIDE EYE
K	16 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	1345/8	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

989 Extrap

MAX FL WIND 65 KT NW QUAD 0539 Z

~~MAX OUTBOUND FL WIND~~

989.7

INSTRUCTIONS: Items A thru 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 for scheduled fixes and at the Flight Director's discretion for unscheduled (intermediate) fixes.

DATE	SCHEDULED RX TIME	AIRCRAFT NUMBER	FLIGHT DIRECTOR
			Damiano

WX MISSION IDENTIFIER	OB NUMBER
	13

VORTEX DATA MESSAGE

A	04 / 0903 Z	DATE and TIME of FIX
B	23 DEG 53 MIN (N) S	LATITUDE of FIX
	72 DEG 50 MIN (W) E	LONGITUDE of FIX
C	850 MB 1333 M	MINIMUM HEIGHT of STANDARD LEVEL
D	45 KT	ESTIMATE of MAXIMUM SURFACE WIND OBSERVED
E	130 DEG 100 NM	BEARING and RANGE FROM CENTER of MAXIMUM SURFACE WIND
F	220 DEG 50 KT	MAXIMUM FLIGHT LEVEL WIND NEAR CENTER
G	130 DEG 80 NM	BEARING and RANGE FROM CENTER OF MAXIMUM FLIGHT LEVEL WIND
H	EXTRAP 988 MB	MINIMUM SEA LEVEL PRESSURE COMPUTED FROM DROPSONDE OR EXTRAPOLATED FROM FLIGHT LEVEL. IF EXTRAPOLATED, CLARIFY IN REMARKS.
I	20 C / 1562 M	MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE OUTSIDE EYE
J	21 C / 1597 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	1345/8	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 65 KT NW QUAD 0539 Z

MAX FL TEMP 22 C / 130/44 NM FROM FL CNTR

11.64

NSTRUCTIONS: Items A thru G (and H when extrapolated) are transmitted from the aircraft immediately following the fix. The emainder of the message is transmitted as soon as available for scheduled fixes and at the Flight Director's discretion for unscheduled intermediate) fixes.

ETA 1230Z

DATE	SCHEDULED RX TIME	AIRCRAFT NUMBER	FLIGHT DIRECTOR
			Damon

WX MISSION IDENTIFIER	OB NUMBER
	17

VORTEX DATA MESSAGE

A	04 / 1033 Z	DATE and TIME of FIX
B	24 DEG 02 MIN (N) S	LATITUDE of FIX
	73 DEG 50 MIN (W) E	LONGITUDE of FIX
C	850 MB 1336 M	MINIMUM HEIGHT of STANDARD LEVEL
D	~~45~~ ~~KT~~ KT	ESTIMATE of MAXIMUM SURFACE WIND OBSERVED
E	225 DEG 95 NM	BEARING and RANGE FROM CENTER of MAXIMUM SURFACE WIND
F	335 DEG 42 KT	MAXIMUM FLIGHT LEVEL WIND NEAR CENTER
G	226 DEG 91 NM	BEARING and RANGE FROM CENTER OF MAXIMUM FLIGHT LEVEL WIND
H	989 MB	MINIMUM SEA LEVEL PRESSURE COMPUTED FROM DROPSONDE OR EXTRAPOLATED FROM FLIGHT LEVEL. IF EXTRAPOLATED, CLARIFY IN REMARKS.
I	20 C / 1605 M	MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE OUTSIDE EYE
J	22 C / 1604 M	MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE INSIDE EYE
K	17 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	~~NA~~ 1345/8	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	

989

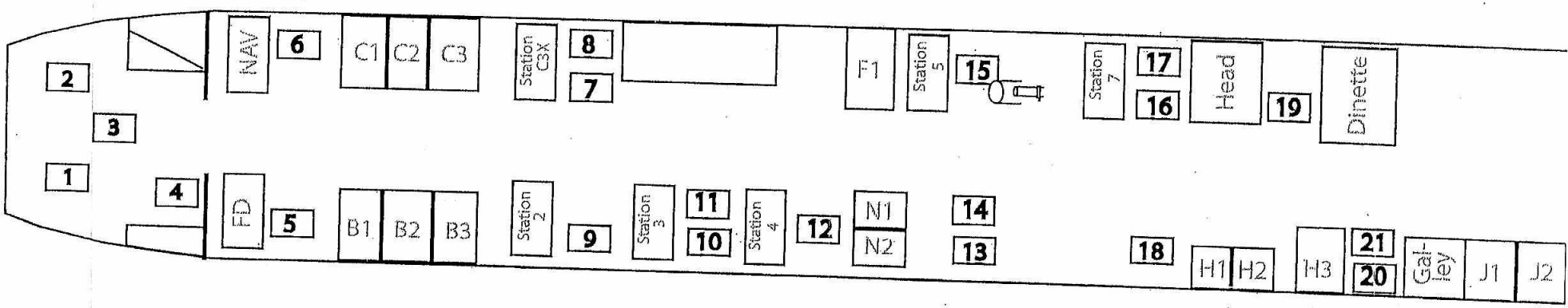
MAX FL WIND 68 KT NE QUAD 0539 Z

988.7mb sonde

INSTRUCTIONS: Items A thru 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 for scheduled fixes and at the Flight Director's discretion for unscheduled intermediate) fixes.

NOAA AIRCRAFT OPERATIONS CENTER

Flight ID [redacted]080903H



1. GIRIMONTE — PILOT
2. CHOY — COPILOT
3. WADE — FLIGHT ENGINEER
4. ~~[redacted]~~ STOFFELEN — STATION 1
5. DAMIANO — FLIGHT DIRECTOR
6. GALLAGHER — NAVIGATOR
7. BAST — STATION C3X
8. ABERSON — STATION C3X
9. CHANG — STATION 2
10. ~~[redacted]~~ LORSOLO — STATION 3
11. ~~[redacted]~~ ANNANAE — STATION 3
12. ROLES — STATION 4
13. GREENE — PROJECT SEAT
14. — PROJECT SEAT
15. BOSKO — STATION 5
16. ~~[redacted]~~ MANUS — STATION 7
17. JELENAK — STATION 7
18. OLNEY — STATION 8
19. EBHARDT — DINETTE
20. — GALLEY
21. — GALLEY

NOAA • AOC • SED

N42RF AVAPS DROP LOG

Project : Hurricane '08 **Mission :** 08 GUSTAV **Flight ID :** 0809014

Take Off : ________ **Landing :** ________ **Flt Dir :** DAMIANO **Launcher S/N:** ________

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Winds Time	Operator	Charge $$ To	Comments	Good ?
1	063019058	1	5.4	0603	5	[illegible]	NHC		✓
2	063019054	2	0	0734		↓	↓		✓
3	063019057	1	0	0902	5	Wto	↓	LOST PTH @ 910mb	✓
4	063019003	1	0	1033	6	↓	↓		✓
5	[illegible]	[illegible]	0			↓			
						↓			
						↓			

N2325 07320 10 15 SFC FL100   24 73 ZQA KMCF   11370   2424 7302

MISSION LOG

PAGE ___ OF ___

CLEARANCES			
FREQ	ALT	HDG	OTHER
133.4	MIAMI		KMCF 080 16°° 1700
			070 135.5 4707
			6586 6640 5550 5520
			8933 (631) 244 2492/3
			436623
			122.22

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
0312 / 0315	ENG / TAXI																				
0324 / 0329	BLK / T/O																				
0330	A	27-37.2 081-48.4	27-37.2 081-48.4	—	27-37.2 081-48.4	—	116	5W	111	—	111	259	000	6	13000	256	ZFP	768	+39	0414	
0430	A	26-12.4 077-57.9	26-12.9 077-57.8	[illegible]	26-11.9 077-57.9	[illegible]	121	7W	114	5L	119	263	026	21	13000	261	[illegible]	14	+03	0432	
0530	A	24-39.7 073-28.9	24-40.9 073-28.6	-1.2 +.3	24-39.5 073-28.5	+.2 +.4	118	10W	108	12R	120	231	026	47	5000	233	HANNA	80	+20	0550	
0600		23-16.407 15.897											220	49	5000	232	3	140	+32	0702	
0630	A	22-12.0 070-52.7	22-14.1 070-51.7	-2.1 +1.0	22-11.9 070-51.5	+.1 +1.2	002	11W	351	6R	357	267	220	49	5000	232	3	140	+32	0702	
0730	A	22-35.2 073-38.8	22-38.2 073-37.5	-2.0 +1.3	22-34.4 073-37.7	+.8 +1.1	227	9W	218	7L	225	246	147	30	5000	235	HANNA	9	+02	0732	
0735	◯	23-39.826 072-29.304	23-00.4 071-43.1		2'																
0830	A	23-00.4 071-43.1	23-04.1 071-42.4	-3.7 +.7	22-59.9 071-43.2	+.5 -.1	313	10W	303	7L	310	232	220	36	5000	234	HANNA	47	+12	0842	
0903	◯	23-51.855 072-48.544																			
0930	A	24-36.9 074-17.6	24-41.6 074-15.5	-5.3 +2.1	24-35.9 074-16.9	+1.0 +.7	189	9W	180	3R	183	287	010	60	5000	227	7	96	+20	0950	
1030	A	24-26.7 073-29.1	24-32.9 073-27.0		24-26.6 073-29.1		337	10W	327	11L	316	231	052	42	5000	231	8	44	+12	1042	
1035	◯	24-01.790 072-38.674																			
1130	A	26-06.2 076-46.7	26-13.1 076-44.7	-6.9 +2.0	26-06.2 076-47.6	— .9	307	8W	299	8L	291	289	047	34	14000	272	KMCF	318	1+10	1240	
1243	LAND	27-50.9 082-29.6	27-59.2 082-27.1	-8.3 +2.5	27-51.3 082-30.6	-.4 +1.0															

1253 6145 1108   2424 7135   2245 7120

1251 0713 BLK 2425N 07135 SFC 020/8.57 -10 470 297/.98   2225N 07250   2425 07335 0915