

19980925I1-LPS

## **E.2 Lead Project Scientist (On-Board)**

### **E.2.1 Preflight**

- \_\_\_ 1. Participate in general mission briefing.
- \_\_\_ 2. Determine specific mission and flight requirements for assigned aircraft.
- \_\_\_ 3. Determine from CARCAH or field program director whether aircraft has operational fix responsibility and discuss with AOC flight director/meteorologist and CARCAH unless briefed otherwise by field program director.
- \_\_\_ 4. Contact HRD members of crew to:
  - a. Assure availability for mission.
  - b. Arrange ground transportation schedule when deployed.
  - c. Determine equipment status.
- \_\_\_ 5. Meet with AOC flight crew at least 90 minutes before takeoff, provide copies of flight requirements, and provide a formal briefing for the flight director, navigator, and pilots.
- \_\_\_ 6. Report status of aircraft, systems, necessary on-board supplies and crews to appropriate HRD operations center (MGOC in Miami or FGOC at remote recovery location).

### **E.2.2 In-Flight**

- \_\_\_ 1. Confirm from AOC flight director that satellite data link is operative (information).
- \_\_\_ 2. Confirm camera mode of operation.
- \_\_\_ 3. Confirm data recording rate.
- \_\_\_ 4. Complete Form E-2.

### **E.2.3 Postflight**

- \_\_\_ 1. Debrief scientific crew.
- \_\_\_ 2. Report landing time, aircraft, crew, and mission status along with supplies (tapes, etc.) remaining aboard the aircraft to the appropriate HRD operations center (MGOC or FGOC).
- \_\_\_ 3. Gather completed forms for mission and turn in at the appropriate operations center. [Note: all data removed from the aircraft by HRD personnel should be cleared with the AOC flight director.]
- \_\_\_ 4. Obtain a copy of the 10-s flight listing from the AOC flight director. Turn in with completed forms.
- \_\_\_ 5. Determine next mission status, if any, and brief crews as necessary.
- \_\_\_ 6. Notify the appropriate operations center (FGOC or MGOC) as to where you can be contacted and arrange for any further coordination required.
- \_\_\_ 7. Prepare written mission summary.

**On-Board Lead Project Scientist Check List**

Date 24 Sept 1998 Aircraft 43 Flight ID 980925I

**A. Participants:**

HRD		AOC	
Function	Participant	Function	Participant
Lead Project Scientist	<u>P. Dodge</u>	Flight Director	<u>J. Parrish</u>
Cloud Physics		Pilots	<u>T. O'Mara D. Tennessen</u>
Radar	<u>D. Cecil</u>	Navigator	<u>T. Strong</u>
Workstation	<u>P. Do</u>	Systems Engineer	<u>S. Wade Butch</u>
Photographer/Observer		Data Technician	<u>T. Lynch</u>
<del>GPS</del> <del>Omegasonde</del>	<u>WARDS</u>	Electronics Technician	<u>J. Smith</u>
<del>AXBT/AXCP/Guest</del>	<u>Wenchou Lee</u>	Other	

Take-Off: 012305 Location: Tampa Intl  
 Landing: 104430<sup>Z</sup> Location: Savannah GA Number of Eye Penetrations: 5

**B. Past and Forecast Storm Locations:**

Date/Time	Latitude	Longitude	MSLP	Maximum Wind


**C. Mission Briefing:** G. Georges Recco  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Lead Project Scientist Event Log

Date 980925I

Flight 23 Sept 1998

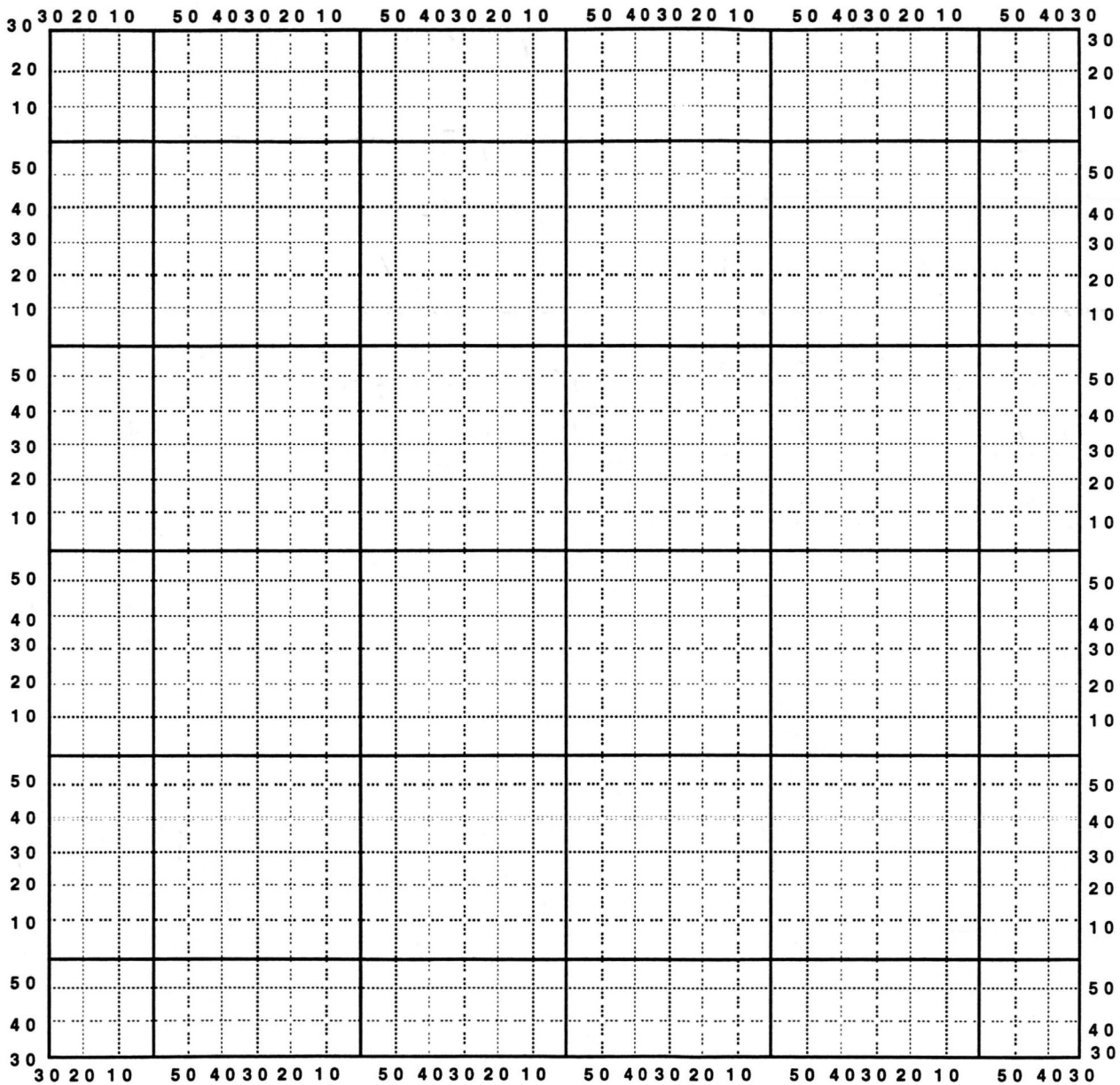
LPS Dodge  
(Bub it's reclo)

Time	Event	Position	Comments
012305	take off	Tampa Intl	
0153	start radar rec		PIAST ON
#1 0258	CPA/FIX	23°04.7' 79°37'	wind down to 2 KTS
03++	85 KTS	23, 79°06'	e eyewall
	I missed some turns. SORRY		
0408	Turn	25°20' 79°42'	ONLY 90 km
0437	Tamden sees ocean Below, circular clouds	23°22' 79°58'	
#2 0444	23°14' 80°	986 mb	Got down to 0.3 KTS → 290° 13 KTS
445	turn to 45°		TAIL stopped briefly
0504	turn to 270°	~24°26', 78°	After this I missed next turn
#3 0610	23°28' 80°13.6'	center	from pass starting in BT
	546 Turn at KEY WEST		
0630	turn	23°28' 78°22'	
0644	23°47' 78°40'	Jack had us scoot	S of a  shaped echo
707	25°06', 80°06'	turn to head W	and then S by 7/2
#4 737	23°35' 80°43'	and then turn	to 45°
74515	SONDE #2	got a wind max	eyewall NE
804	turn	24°49' 79°24'	
820-834	1/2 down	(no big whoop - we're on E-W leg to N)	
#5 851	23°36.7' 80°	46.9 983 mb	
	and climb out		

# Hurricane Recco Plotting Chart

True at 25° Latitude, in Degrees and Minutes

Date \_\_\_\_\_ Flight ID \_\_\_\_\_ LPS \_\_\_\_\_



**Note :** Label full degrees according to location of the flight area.

**Mission Summary  
Hurricane Georges  
Reconnaissance  
98090251 Aircraft: 43RF**

**Scientific Crew:**

Chief Scientist	(none: reconn flight)
Doppler Scientist	Dan Cecil
Cloud Physics	
Dropsonde Scientist	Peter Dodge
Workstation/AXBT:	Peter Dodge
WARDS	Wen-Chau Lee

**Aircraft Crew:**

Cockpit:	LCDR Tim O'Mara CAPT Dave Tennesen Steve Wade, Butch Moore
Navigator:	LCDR Tom Strong
Flight Director:	Jack Parrish
Engineers:	Terry Lynch, Jeff Smith, Damon SansSouci
Radio:	

**Mission Briefing:**

This was a reconnaissance flight; NOAA flying for the Air Force because Hurricane Georges was too close to Cuba. HRD went along to record radar and transmit radar images and a few sondes back to the Tropical Prediction Center (TPC). Because the Air Force was closing MacDill for the storm, we planned to take off from Tampa International airport and to land at Savannah, Georgia.

**Mission Synopsis:**

We left Tampa International at 0123 UTC . The hurricane was still close to the Cuban coast. Because it was a night flight at 5,000', we did not extend the legs over Cuba. So we did not attempt to send any EVTD images back. Georges was quite asymmetric at this time, almost a big comma cloud. Dan Cecil, a grad student at Texas A and M, noted that the elliptical shape of Georges was similar to that of Typhoon Herb. Wen-Chau Lee (NCAR), who has studied that typhoon, pointed out that Herb was a much stronger storm than Georges. We passed through the center 5 times, and transmitted 5 lower fuselage radar composites back to TPC. The aircraft flew several radials of the Key West and Miami WSR-88D's. Only two sondes were dropped, one North of Key West before we descended to 5,000' and another in the NE eyewall/ wind maximum. We landed in Savannah, Georgia at 1044 UTC.

**Evaluation:**

The Doppler data will be interesting to examine in relation to the WSR-88D data. However the wind maximum on the NE side was probably out of range of the WSR-88D's during this flight.

**Problems:**

The WARDS system did not work. The radar system froze briefly twice during the flight, at 0445 and again from 0820 to 0834 UTC.

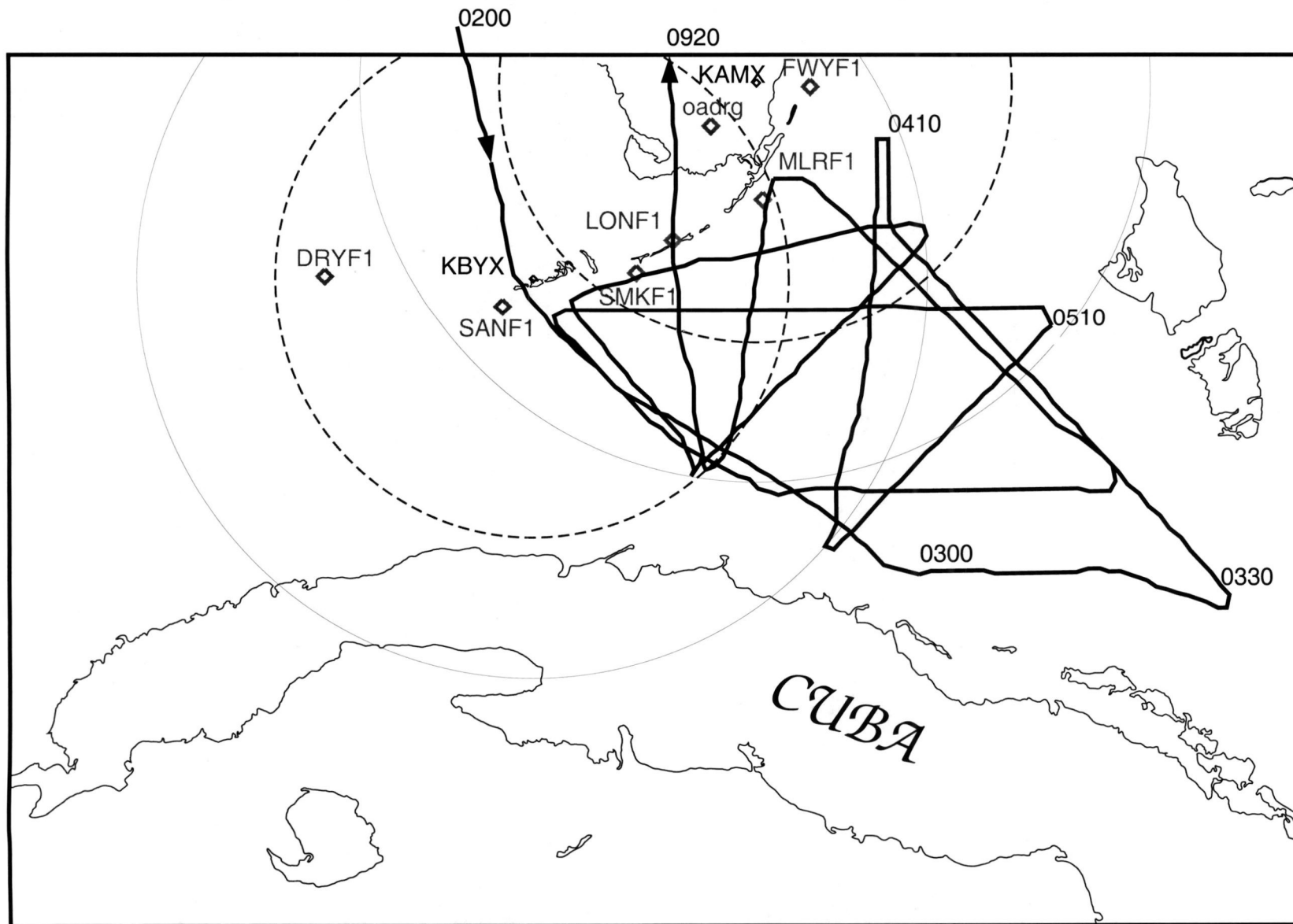
**Centers:**

0258	23° 05' 79° 37'
0444	23° 14' 80° 00' 986 mb
0610	23° 29' 80° 13'
0737	23° 35' 80° 43'
0851	23° 37' 80° 47' 983 mb

**Figures:**

1. Flight Track: (thor: /users/peter/geroges\_stuff.d/g980925\_i\_map.draw, \*.ps)

Hurricane Georges 25 September 1998 NOAA 43 Reconnaissance Flight 0123 - 0920 UTC



0 50 100 km  
Center Lat: 23.50 Lon: -81.00

○ 150 km haze rings  
○ 200 km haze rings

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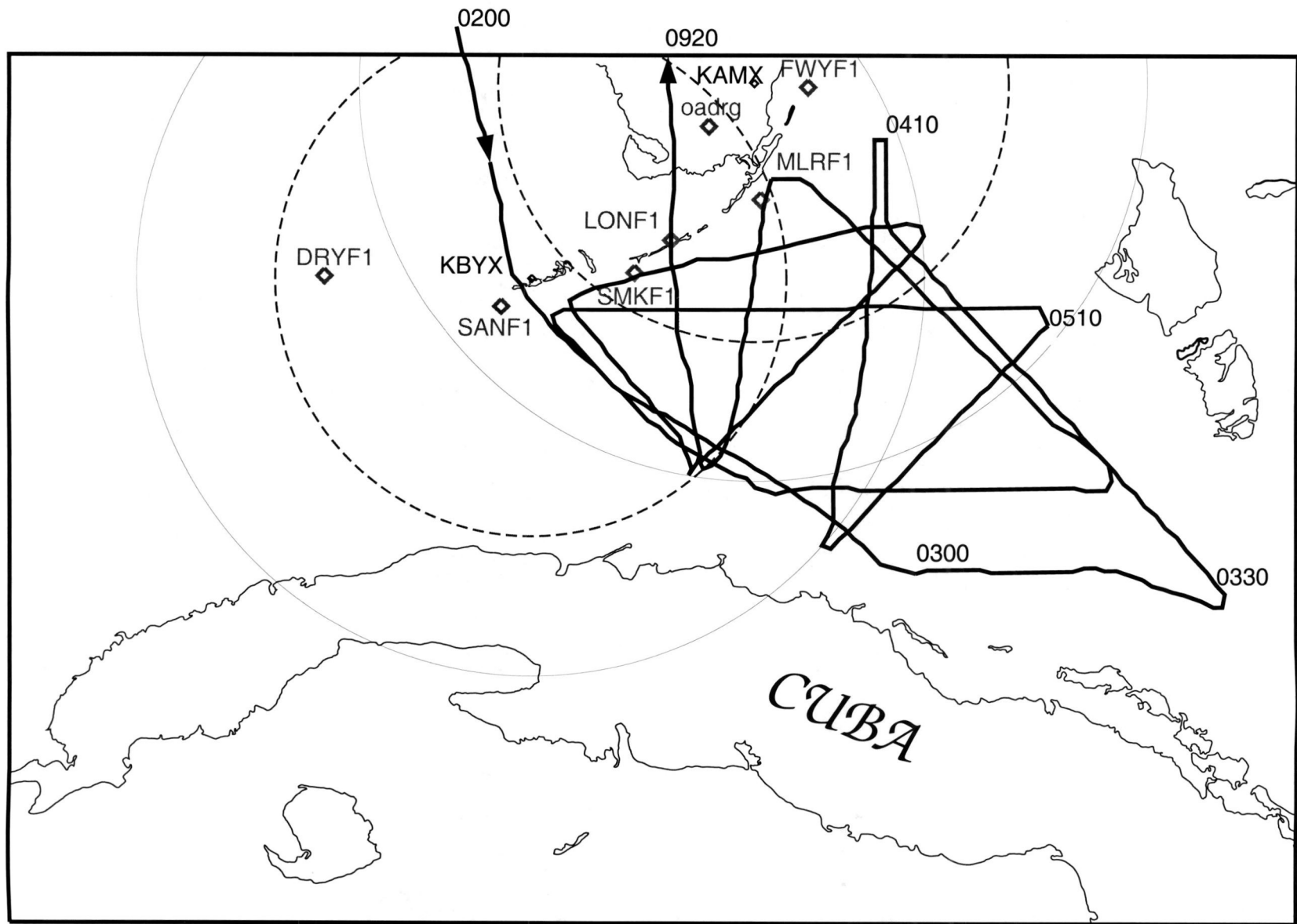
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0 50 100 km  
Center Lat: 23.50 Lon: -81.00

○ 150 km haze rings  
○ 200 km haze rings



NDAA3 1807A

GPS drop #1 (before wednesday) This sonde for GALE FC Wind  
Bdry...

981810012 21057 50° 34KTS 3520m 9.7° 4.5°

then descend 25° 04' 81° 55'

MBL 60° 30KTS

MID #11

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GPS DROP #2 (964910151) ~~2886~~ 23.95 -80.37 23° 57'  
80° 23'

074515

~~121 33.9 KT~~  
~~125 50 r 21° 18° 1501m~~

ASDL ID 60

MBL 115° 73KTS

98092511 Recd

98092511



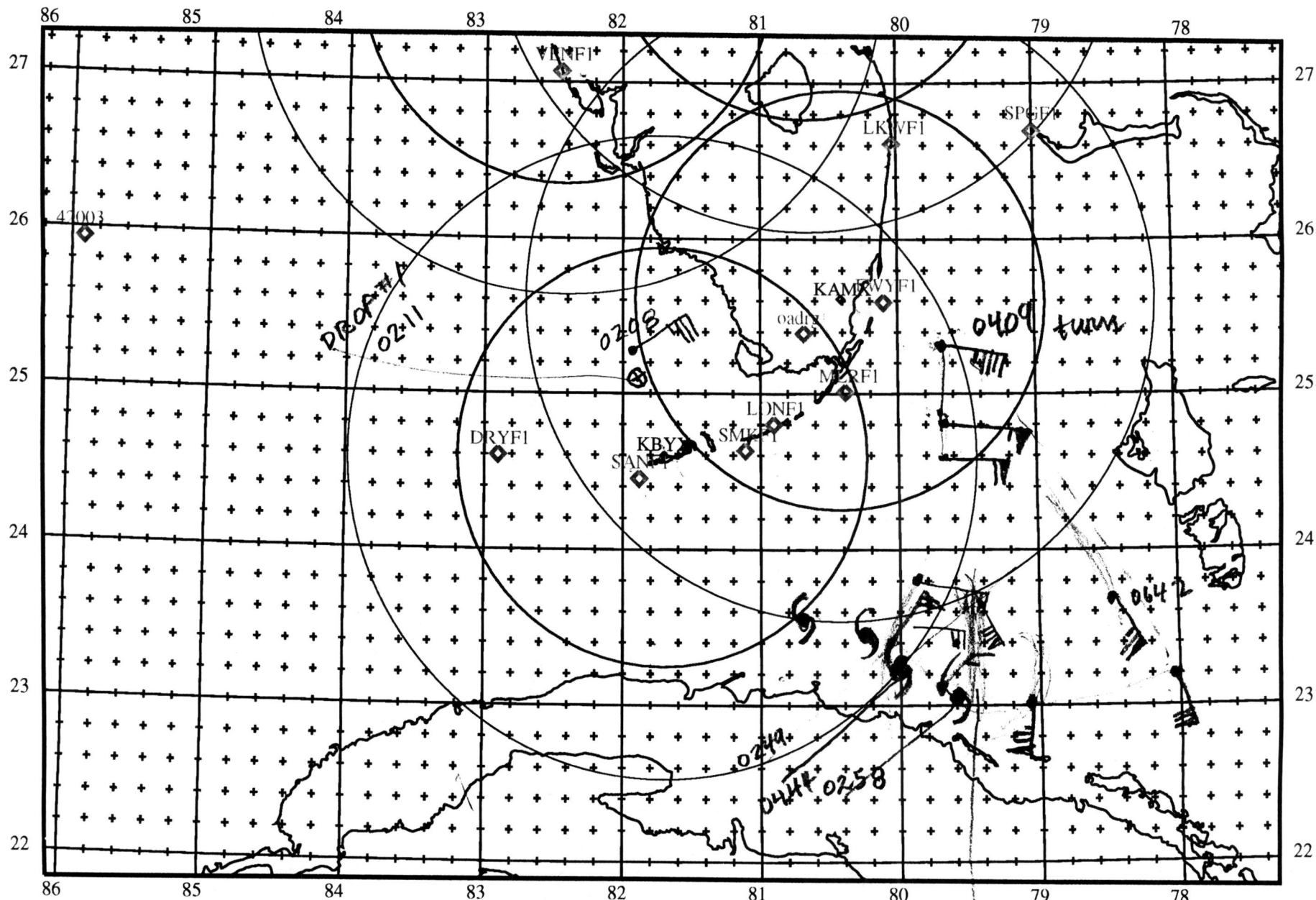
# TAHITIAN INN

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*MOTEL and COFFEE SHOP*

601 South Dale Mabry - Hwy. 92 / Tampa, Florida 33609 / Telephones (813) 876-1397 & 877-6721

Center Lat: 24.60 Lon: -81.70



WKSTN 980915I ①

g 25. kpac

242-246  
would have been  
OK

0238 →

302 → 315

238 → 315 smeared but compressed  
version looks good!

15) 23.22, 79.45 FROM COMPOSITE

LF Comp 1-1, 1-2 MID 017, 018

.0430?

345 →

~~417 - 445~~

44138 ~~→~~

~~421 - 515~~

449

~~440 - 500~~

g25-1.  
kpac

437 -

451 - 455

end g25. kpac

~~445 - 449~~

451 - 505

at 511

~~453 - 457~~

some  
smearing

restart at  
430

2nd IMAGE LF Comp 2-1, 2-2 MID 37, 38

0608 center hunting

0600 23° 28.8 00° 13.6 0.1 KTS

986 mb

② 557 - 609 X HAS BAD FRAME  
611 - 623 ← send this

LF Comp 3-1, 3-2 MID 047, 048

649 -

711 - 732 - 734

0709  
~~644~~  
734  
GOOD  
MID 64, 65  
LF Comp

JACKS: 0.4 KTS  
07 36 57  
23° 35' 80° 43'

KILLED subcompac  
at 0830 while  
they reboot 1/2's. → G25-2.KPAC

~~0845~~  
~~0849~~  
0851 climb  
23° 36.7 80° 46.9 CENTER  
983mb

~~845 no good~~  
830 - 845 last composite  
5-1, 5-2 MID 74, 75

Summary: Sent two sondes,  
5 lower fuselage composites.