

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 18/9/1998

Aircraft N42RF

98098H
Flight ID WXØ7A GEORGES

A. Participants:

HRD		AOC	
Function	Participant	Function	Participant
Lead Project Scientist	<u>Aberson</u>	Flight Director	<u>Czyzyk</u>
Cloud Physics	_____	Pilots	<u>Phillipsborn/Taggart</u>
Radar	_____	Navigator	<u>Rayburn</u>
Workstation	<u>Leighton</u>	Systems Engineer	<u>Boles</u>
Photographer	_____	Data Technician	<u>Barr</u>
Omegasonde	<u>Aberson</u>	Electronics Technician	<u>Carpenter</u>
AXBT/AXCP GSCAT/VSDR	<u>Black/Popstefanija</u>	Other AVAPS	<u>Carpenter</u>

Take-Off: _____ Location: _____ Landing: _____ Location: _____

B. Past and Forecast Storm Locations:

Date/Time	Latitude	Longitude	MSLP	Maximum Wind

C. Mission Briefing:

D. Equipment Status

Equipment	Pre-Flight	In-Flight	Post-Flight
Aircraft			
Radar/LF			
Radar/TA (Doppler)			
Cloud Physics			
Data System			
Omegasondes			
AXB/AXCP			
Workstation	Initial problems talking to AVAPS & ASDL, fixed before takeoff		
Photography			

REMARKS:

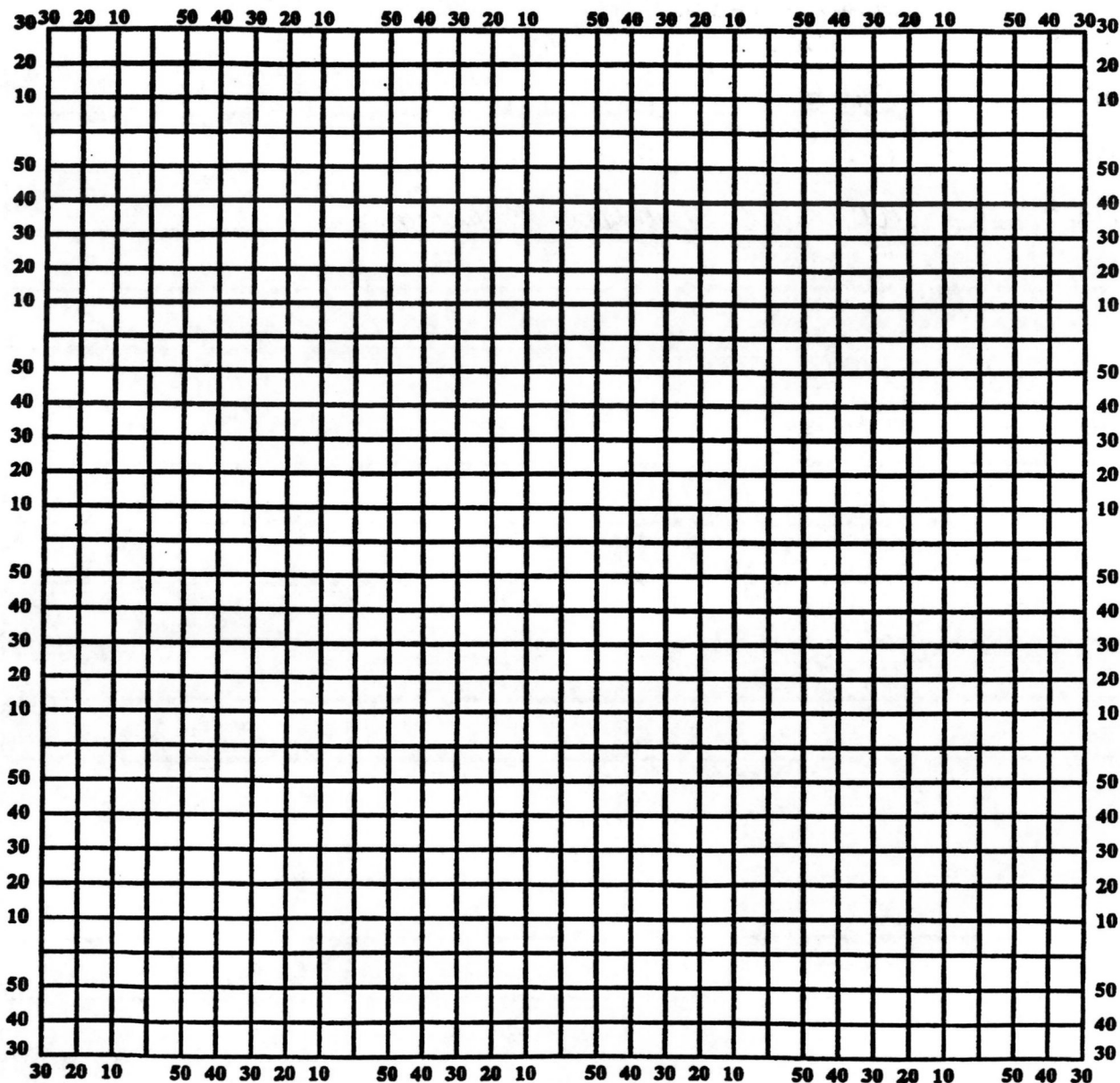
E. (I) **Proposed Flight Pattern** (sketch or designate by number)

E. (II) **Actual Flight Pattern**

Hurricane Recco Plotting Chart

True at 25° Latitude, in Degrees and Minutes

Date _____ Aircraft _____ Observer _____

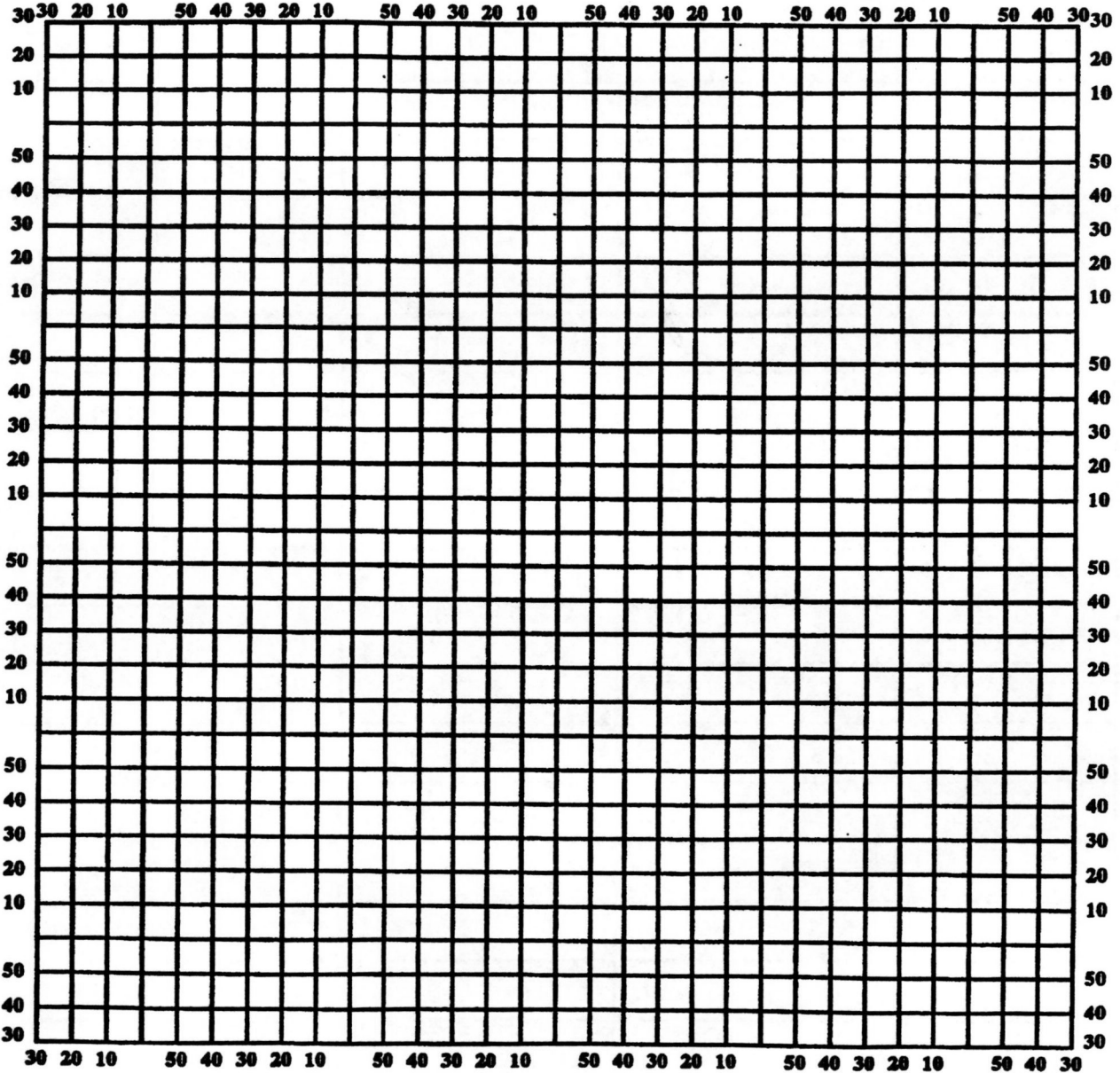


Note: Label full degrees according to location of flight area.

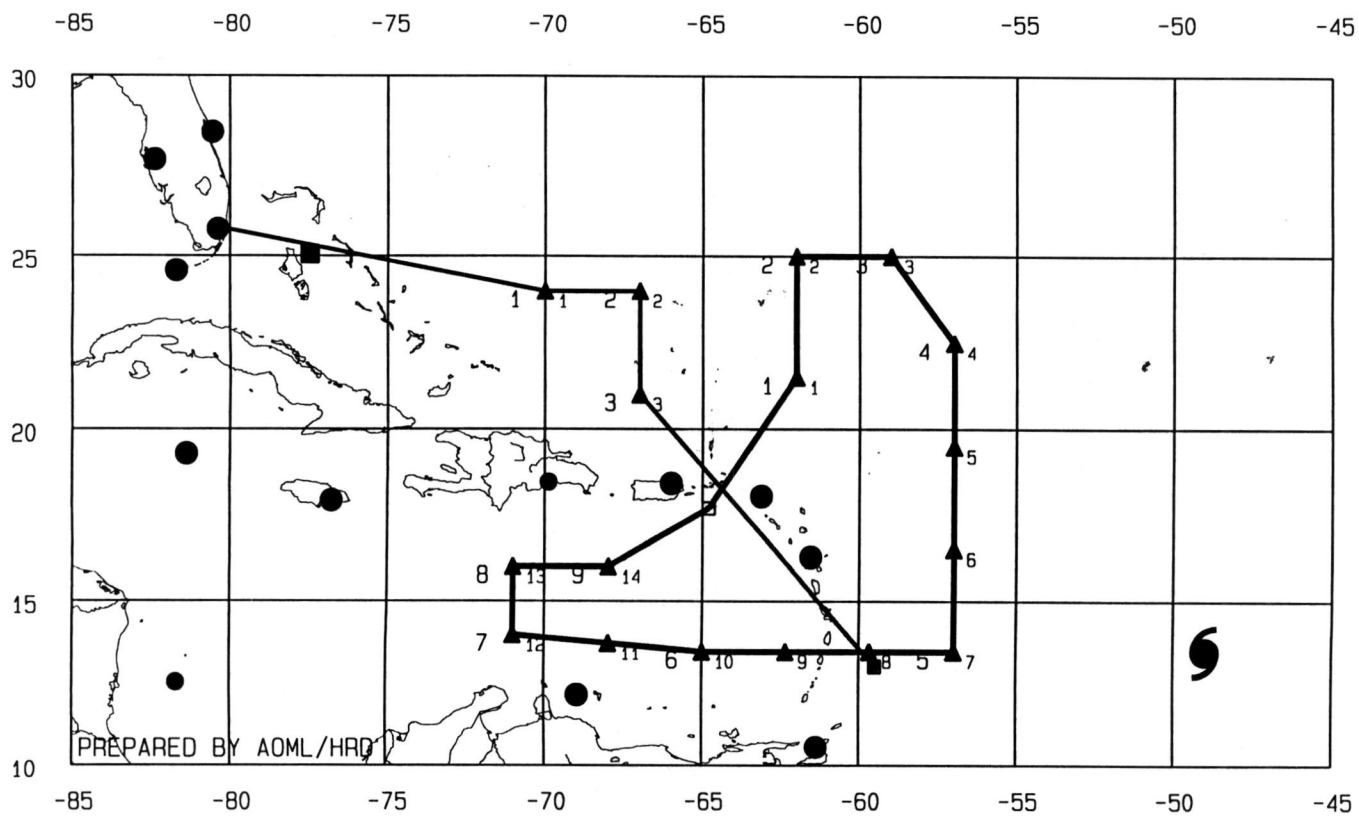
Hurricane Recco Plotting Chart

True at 25° Latitude, in Degrees and Minutes

Date _____ Aircraft _____ Observer _____



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



FLIGHT TRACKS GEORGES

— 980918np.ftk
 - - - 980918hp.ftk

RAWINSONDES 9808

- Regular
- 12Z only
- ◐ 00Z only
- Infrequent
- ◐ Infrequent 00Z
- ◑ Infrequent 12Z

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HURRICANE SYNOPTIC SURVEILLANCE MISSION PLAN: GEORGES
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Prepared by the Hurricane Research Division at 08:24:17 AM on 09/18/98.
File: /users/james/field_prm/flight_tracks/980918np.ftk

Aircraft: N49RF Altitude: FL410-450 Proposed takeoff: 18/1800Z
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TRACK DISTANCE TABLE (nm)

Table with 6 columns: #, LAT, LON, LEG, TOTAL, TIME. Rows 0-10 showing track points from ST CROIX to ST CROIX with cumulative distance and time.

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HURRICANE SYNOPTIC SURVEILLANCE MISSION PLAN: GEORGES

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DROP LOCATIONS

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#	LAT	LON	TIME
1	21 30	62 00	0:48
2	25 00	62 00	1:16
3	25 00	59 00	1:39
4	22 30	57 00	2:04
5	19 30	57 00	2:28
6	16 30	57 00	2:53
7	13 30	57 00	3:17
8	13 30	59 40	3:38
9	13 30	62 20	4:00
10	13 30	65 00	4:21
11	13 45	68 00	4:45
12	14 00	71 00	5:08
13	16 00	71 00	5:25
14	16 00	68 00	5:48

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HURRICANE SYNOPTIC SURVEILLANCE MISSION PLAN: GEORGES

Prepared by the Hurricane Research Division at 08:35:59 AM on 09/18/98.
File: /users/james/field_prgm/flight_tracks/980918hp.ftk

Aircraft: N42RF Altitude: FL180-250 Proposed takeoff: 18/1500Z

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TRACK DISTANCE TABLE (nm)

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#	LAT	LON	LEG	TOTAL	TIME
0	MIAMI		0.	0.	0:00
1	24 00	70 00	571.	571.	2:08
2	24 00	67 00	165.	736.	2:42
3	21 00	67 00	180.	916.	3:20
4	BARBADOS		643.	1559.	5:43

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HURRICANE SYNOPTIC SURVEILLANCE MISSION PLAN: GEORGES

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Mission Summary Georges

980918h Aircraft N42RF

Scientific Crew

Lead Project Scientist:	Sim Aberson
Dropwindsonde Scientists:	Sim Aberson
Workstation Scientist:	Paul Leighton
CSCAT/VSDR Scientists:	Peter Black, Ivan Popstefanija

Mission Briefing:

Hurricane George beginning to rapidly intensify east of the Leeward Islands, moving westward at about 18 kt (Fig. 1). The subtropical ridge extends east to west across the entire basin between 20N and 30N, suggesting a continuing westerly motion for the storm. A weakness in the ridge near 55W could allow Georges to slow, or turn more northward and miss the islands. The upper-level cold low located near Puerto Rico could also allow a more northward turn. The large cyclonic circulation over the Gulf of Mexico was soon to become Tropical Storm Hermine. Due to the rapid motion, George was expected to impact the U. S. Virgin Islands within 48 h, so the G-IV was quickly tasked to fly a mission during its scheduled ferry flight to St. Croix.

Ensemble perturbations (Fig. 2) suggest that the main areas of uncertainty in this forecast coincide with Georges itself, with the subtropical ridge axis to the north of Georges, and with the cold low near Puerto Rico. A short mission for N43RF was called to sample the area near the cold low which N49RF could not reach during its mission (Fig. 3).

Mission synopsis:

The most exciting part of the flight was the strong convection near the Bahamas. Vertical velocity couplets of 6 ms⁻¹ up and down were experienced twice in this area. Another bit of excitement was the thought that an AFRES plane was experiencing difficulties south of Puerto Rico. This turned out to be two Customs planes which collided over the Caribbean while evacuating Puerto Rico in front of Georges, killing one of the pilots.

Of the three expected dropwindsonde launches, the first had a late launch detect and was replaced. The data soon came in, so four drops were made, and the mission was completed.

DLM wind 98091800 24h T126

