

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 OAO 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 OAO 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 OAO flight director/meteorologist 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 OAO flight director.]
- ☐ 4. Obtain a copy of the 10-s flight listing from the OAO 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.

On-Board Lead Project Scientist Check List

Date 9/22/92 Aircraft N43RF Flight ID 920922 I1

A. Participants

HRD		OAO	
Function	Participant	Function	Participant
Lead Proj. Sci.	<u>Garnade</u>	Flight Director	<u>Parrish</u>
Cloud Physics	<u>R. Black / Hallett</u>	Pilots	<u>Turner, McKim</u>
Radar	<u>Leighton</u>	Navigator	<u>McKim Rozak</u>
Doppler	<u> </u>	Sys. Engr.	<u>Goldstein</u>
Photographer	<u> </u>	Data Tech.	<u>Lynd, Leyva</u>
Omegasonde	<u>Willis</u>	El. Tech.	<u> </u>
AXBT/AXCP	<u> </u>	Other	<u>McFadden</u>

Take-Off	Location	Landing	Location
<u>0307</u>	<u>Puerto Vallarta</u>	<u>1222</u>	<u>Puerto Vallarta</u>

B. Past and Forecast Storm Locations

Date/Time	Latitude	Longitude	MSLP	Max. Wind
<u>1930</u>	<u>11.9</u>	<u>107.6</u>	<u> </u>	<u>6.5 kts</u>
<u>21</u>	<u>11.9</u>	<u>107.7</u>	<u> </u>	<u> </u>
<u>avg 22/6 Z</u>	<u>11.9</u>	<u>108.2</u>	<u> </u>	<u> </u>
<u>22/18 Z</u>	<u>12.0</u>	<u>109.1</u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

C. Mission Briefing

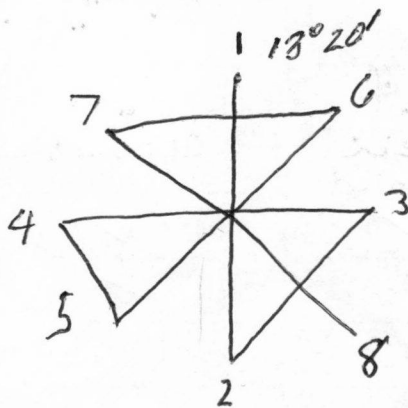
D. Equipment Status

<u>Equipment</u>	<u>Pre-Flight</u>	<u>In-Flight</u>	<u>Post-Flight</u>
Aircraft	✓	✓	?
Radar	✓ 2DC ?	worked well Bad 2DC	✓ 2DC needs help
Cloud physics	2DP	2DP worked	
Data system	✓	✓	✓
Omegasondes	✓	✓	✓
AXBT/AXCP			
Doppler	✓	✓	✓
Photography	Nighttime		

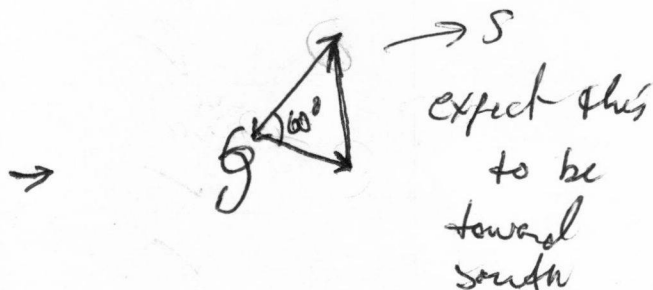
REMARKS: I don't want to do this too many times.
I hope we can fly this airplane again on Thurs.

640
200
10

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



Vortex Evolution



Hurricane Electrification

E. II. Actual Flight Pattern



1000 at 14,000
and -3°C

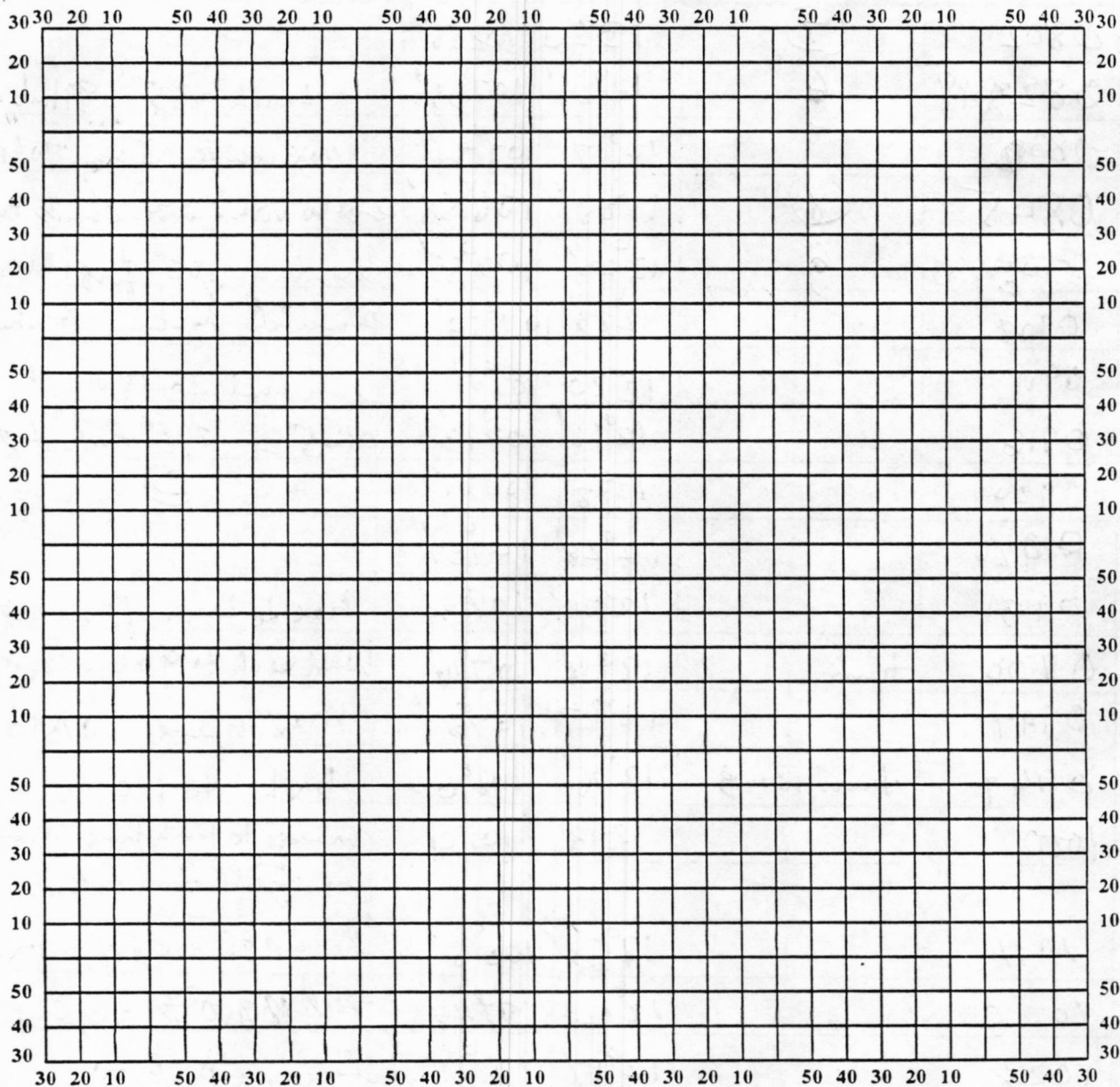


FAST pattern to catch
what we sampled.

Hurricane Recco Plotting Chart

True at 25° Latitude, in Degrees and Minutes of ϕ and λ .

Date 9/22/92 Longitude _____ Observer Gemache



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

Lead Project Scientist Event Log

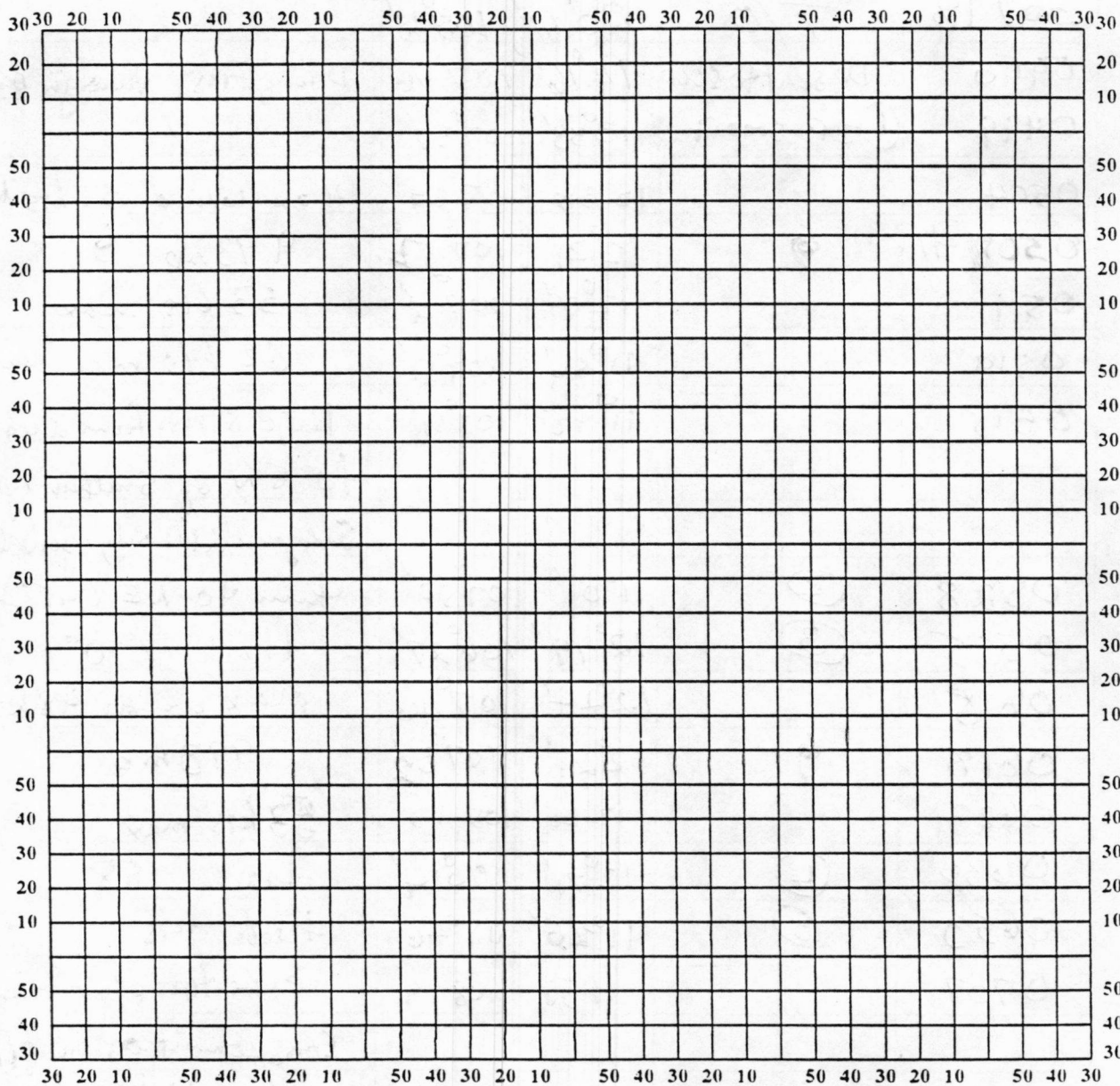
Date 9/22/11 Flight 920922 I1 LPS Garnache

Time	Event	Position	Comments
0802	(7)	13°20' 108°56'	
082348	9	12°25' 107°55'	track 135 991mb
0830		12° 7' 107°34'	max winds SE were 70 kts
0845	(8)	11°25' 106°58'	end to vortex evol. climb to 14,000 ft
0850 0903	9	12°23' 107°55'	heading 100° first pass outside
0907		12°23' 107°50'	potential lightning strike ahead
0911		12°20' 107°33'	in climb to 19,000 ft ← more winds 50 kts
0916		12°16' 107°13'	at -5°C 290° track into 9
0920		12°18' 107°31'	eye on eye like feature seems to be forming
0926		12°28' 107°57'	
0931		12°29' 107°39'	had to back off in altitude -2°C (5600m)
0938	turn	12°18' 107°16'	head back to 9 along 280° -30°C
0947		12°27' 107°53'	max wind 50 kts
0949	turn now 9	12°28' 108°06'	back to 100
1000		12°18' 107°21'	manage to trash things again
			will of FAST from outside
1011		12°58' 108°06'	track 065 near of previous FAST pass
1020		12°12' 107°44'	track 135° to complete outside
1028		12°47' 108°01'	heading back to FAST around hook
			Puerto Vallarta

Hurricane Recco Plotting Chart

True at 25° Latitude, in Degrees and Minutes of ϕ and λ .

Date _____ Longitude _____ Observer _____



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

Lead Project Scientist Event Log

Date 9/22/92 Flight 920922I1 LPS Gamache

Time	Event	Position	Comments
30718	T/O	20°41' 105°15'	
0440	Descent to 5000	14°16' 107°46'	Doing FAST through outer
0449	① IP 5000 ft	13°33' 107°51'	streak of principal band
0504		12°38' 107°54'	Max wind 51 kts N side
0507 41	9	12°21' 107°52'	993 mb 9
0511		12°7' 107°51'	-53 kts max
0514		11°56' 107°51'	62 kts max (new max) S side
0515		11°42' 107°51'	large stratiform area
			to SW of southern eyewall
			S. eyewall the only eyewall
0528	②	11°01' 107°50'	turn to NE (45°)
0555	③	12°19' 106°27'	track 270°
0618		12°24' 107°46'	max winds 48 kts
0618	9	12°21' 107°52'	" 993 mb
0623		12°21' 108°13'	53 kts max
0638	④	12°21' 108°14'	track 158°
0653	⑤	11°20' 108°46'	track 045°
0707		11°56' 108°9'	echo tops about 14 km here
			Some convection happened along
0714 40	9	12°21' 107°58'	max winds to SW of 50 kts
0734	⑥	13°20' 106°56'	max NE 42 kts

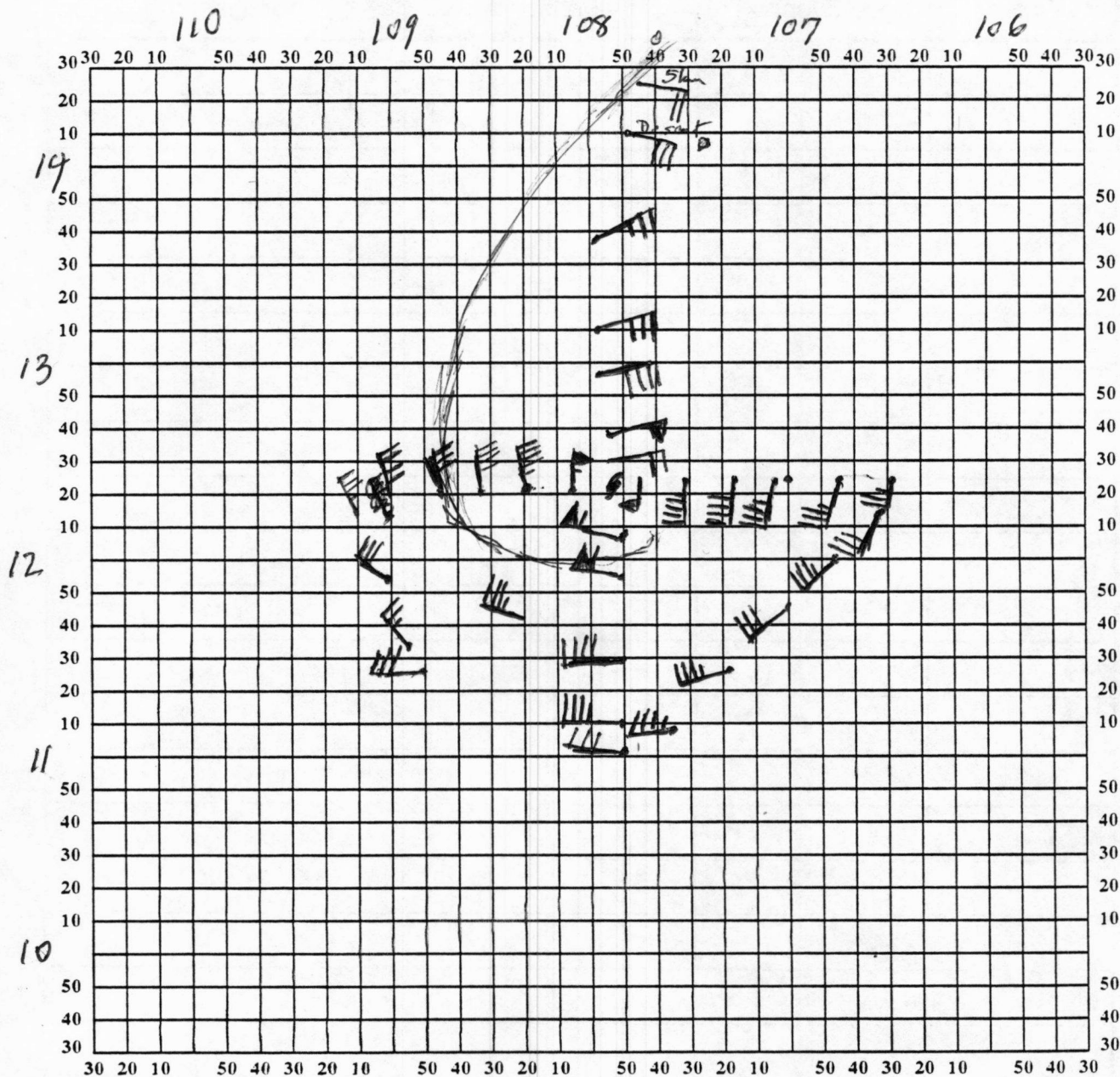
north
streak of
principal
band

convergence
since
principal band

Hurricane Recco Plotting Chart

True at 25° Latitude, in Degrees and Minutes of ϕ and λ .

Date 9/22/92 Longitude _____ Observer Garcia



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

Lead Project Scientist Event Log

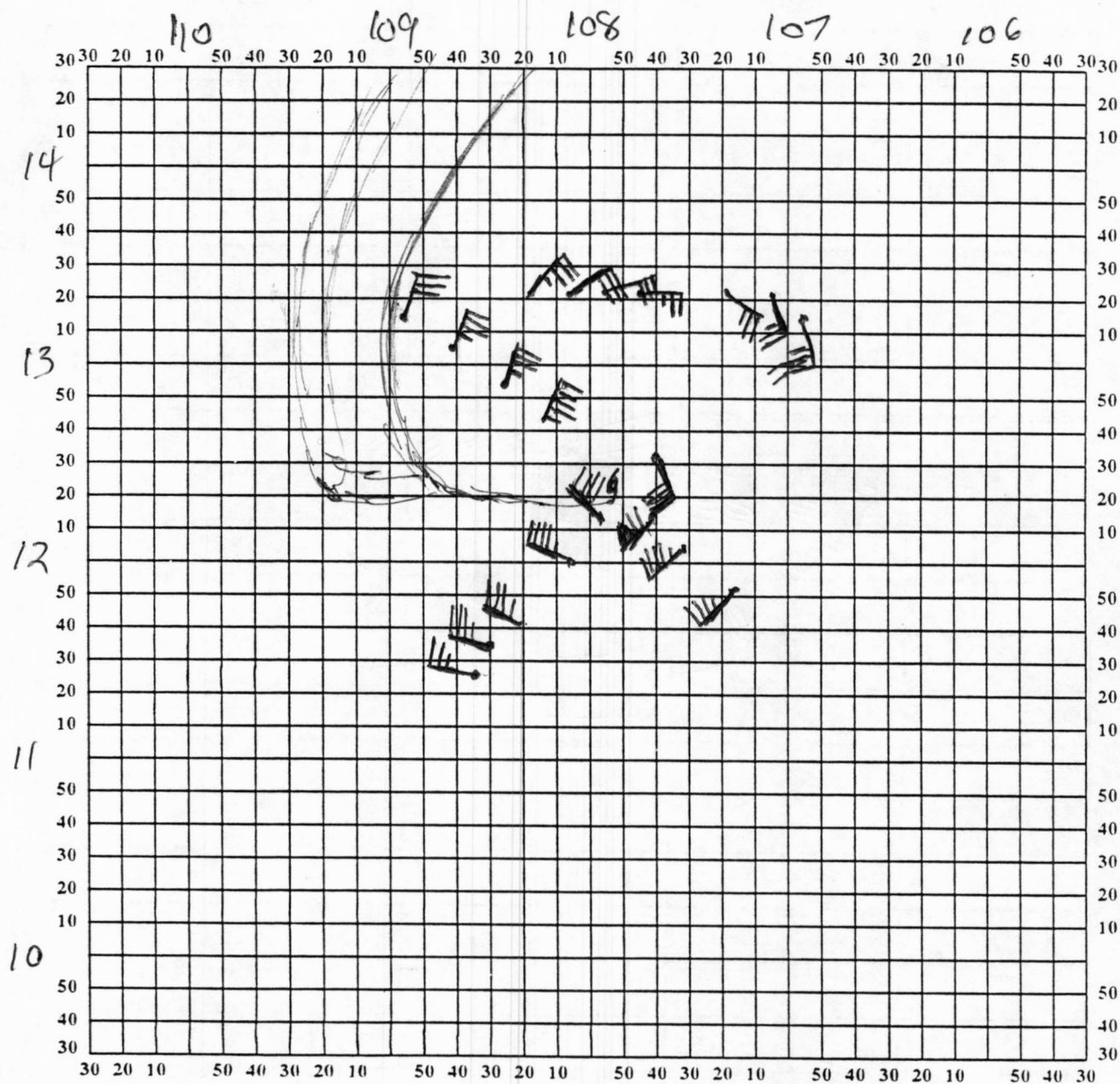
Date _____ Flight _____ LPS _____

[illegible]

Hurricane Recco Plotting Chart

True at 25° Latitude, in Degrees and Minutes of ϕ and λ .

Date 9/22/92 Longitude _____ Observer Gonzales



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

Lead Project Scientist Event Log

Date _____ Flight _____ LPS _____

[illegible]