19940925H1-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 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.

Form E-2
Page 1 of 5

On-Board Lead Project Scientist Check List

Date 25 SEP 1994 Aircraft N42RF Flight ID 940925H1

A. Participants

HRD		OAO	
Function	Participant	Function	Participant
Lead Proj. Sci.	GAMACHE	Flight Director	BOGERT
Cloud Physics		Pilots	KENNEDY, PLAYER
Radar	DODGE	Navigator	STRONG
Doppler	DODGE	Sys. Engr.	ROLES, BARR, McMILLAN
Photographer		Data Tech.	
Omegasonde	BURPEE (Listening)	El. Tech.	
AXBT/AXCP	P. BLACK	Other	RADIO, PAUL MASON
Visitor	LAWRENCE		

Take-Off	Location	Landing	Location
	P.V		

B. Past and Forecast Storm Locations

Date/Time	Latitude	Longitude	MSLP	Max. Wind

C. Mission Briefing

D. Equipment Status

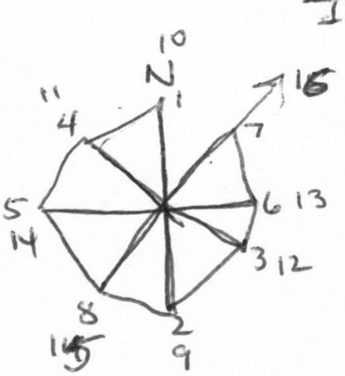
Equipment	Pre-Flight	In-Flight	Post-Flight
Aircraft			
Radar			
Cloud physics			
Data system			
Omegasondes			
AXBT/AXCP			
Doppler			
Photography			

REMARKS:

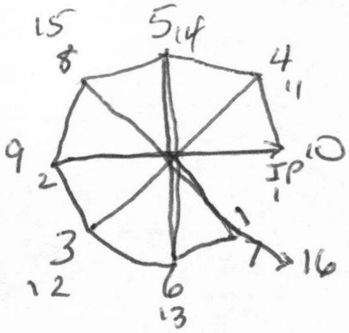
$8 \times 25 + 7 \times 10$

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

INNER CORE STRUCTURE + EVOLUTION



N42RF



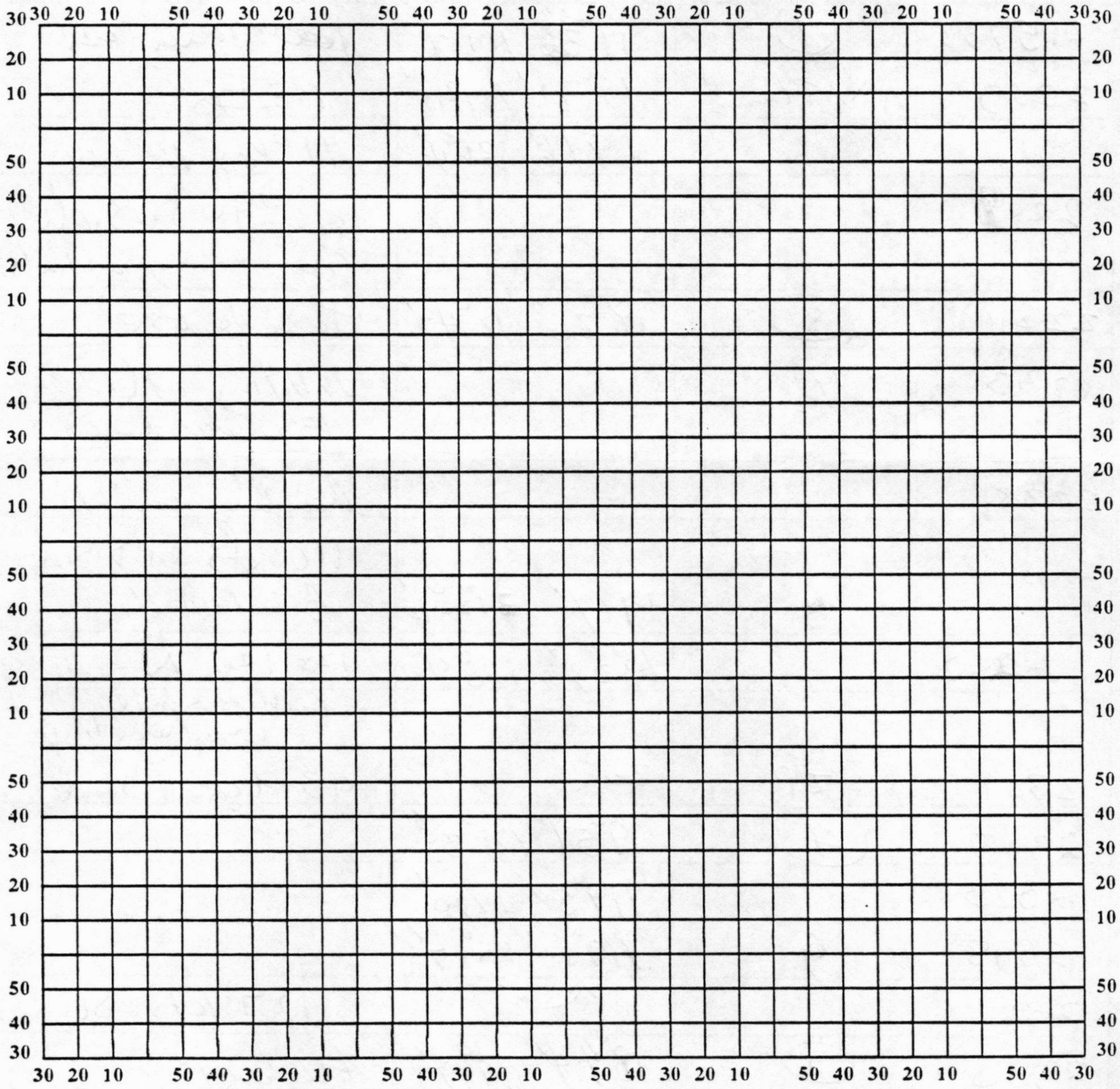
N43RF

E. II. Actual Flight Pattern

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.

Form E–2

Lead Project Scientist Event Log

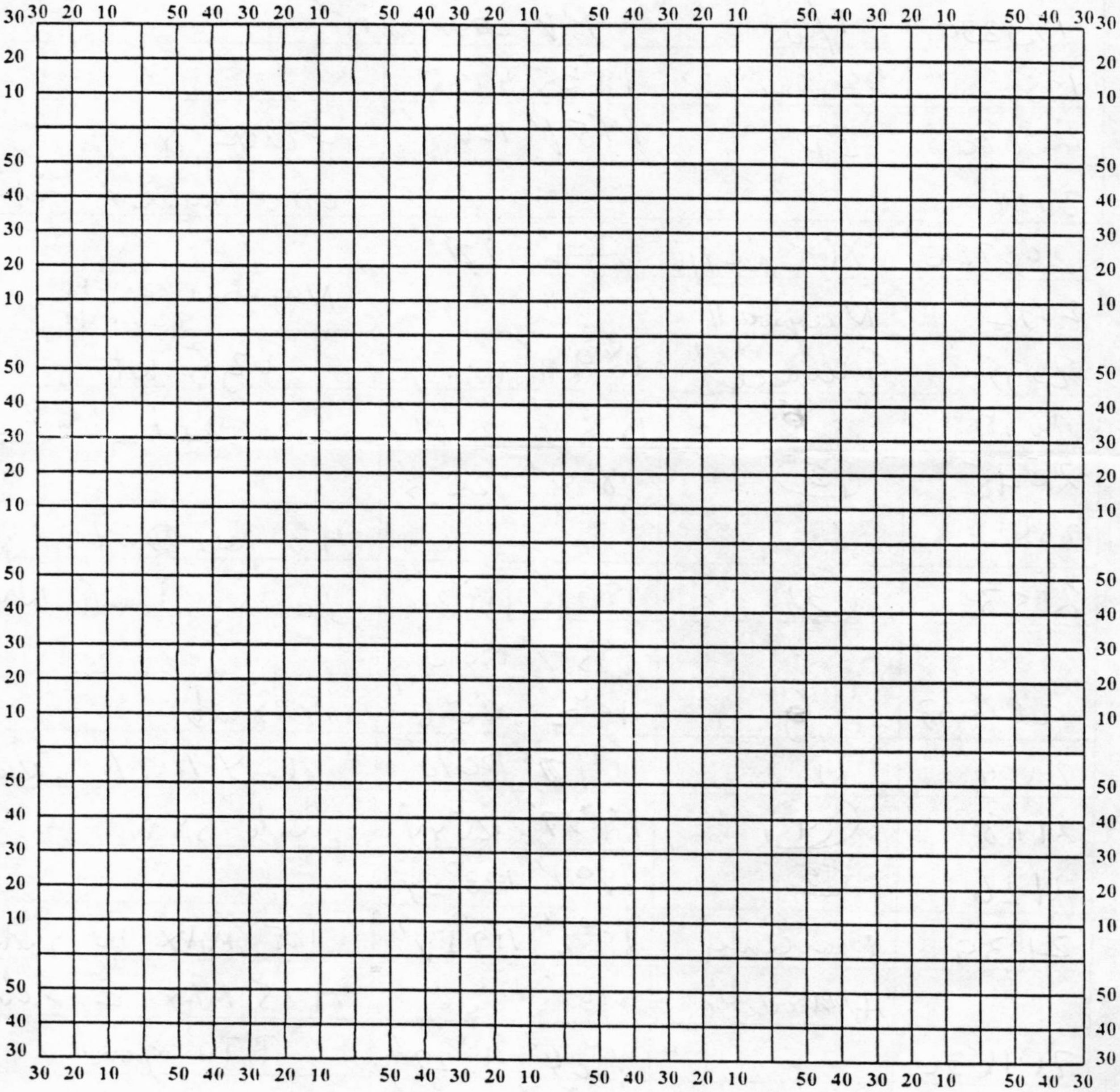
Date 25 SEP 1994 Flight 940925H1 LPS GAMACHE

Time	Event	Position	Comments
215733	7	19°~~33~~43' 119°31'	~~now~~ tracking 225°
2203	AXBT launch	19°30' 119°48'	~~185 kts~~
		19°16' 120°4'	115 kts NE side
2208			110 kts SW side
			This pass may have had slight blips
2221	8	18°26' 120°47'	Turn to ESE
2233	9		orbiting at 9
			43's radar down
2238			heading in N
			110 kts on S side
	9	19°14' 120°42'	BT launch
2252		19°28' 120°4'	125 kts N side graupel
			perhaps small wind max blip
2301	IP	30?	43 dropped sonde
2307	4	19°51' 120°35'	
2320		119°54' 19°10'	
2318	9	119°58' 19°17'	
~~231~~			127 kts SE side
2330	3	18°44' 119°19'	track 24°
2337	6	19°17' 119°5'	tracking W
2339			ODW drop

Hurricane Recco Plotting Chart

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

Date________________ Longitude ________________ Observer ________________



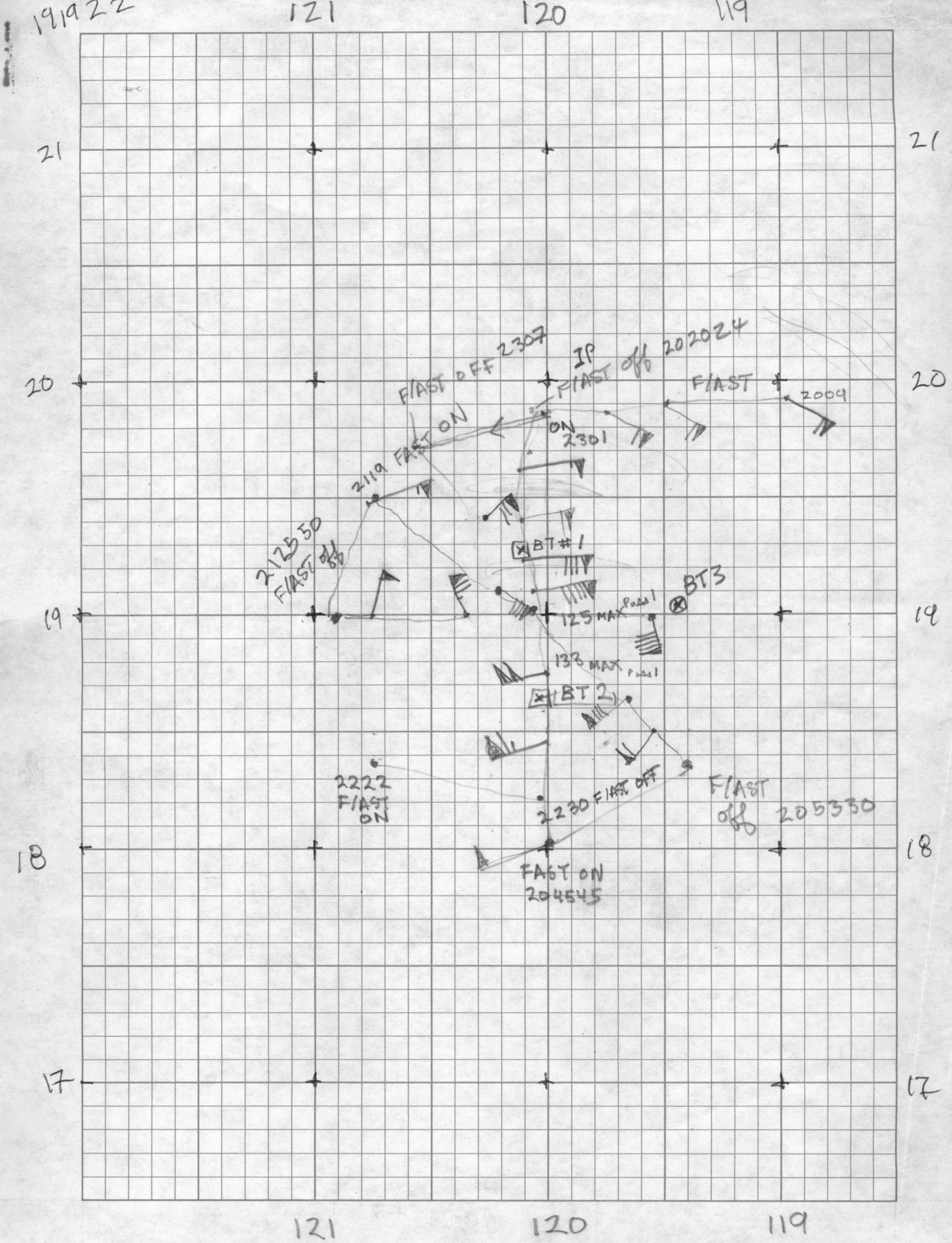
Note: Label full degrees according to location of flight area.

Lead Project Scientist Event Log

Date 25 SEP 1994 Flight 940925 H1 LPS GAMACHE

Time	Event	Position	Comments
173230	T/O	P.V 20°40' 105°15'	
1955	Begin descent to IP	19°55' 117°35'	
202000	IP	19°51' 120°8'	track S.
2024			ODW launched we're reading nothing
202720	XBT dropped	~~XBT~~ 19°21' 120°8'	
2032	N eyewall		Neywall 125 kts 926 mb
2035	S eyewall	18°49' 120°3'	135 kts
2037	6	18°58' 120°04'	fix report about 2033
2045	2	18°8' 120°3'	
2046			43 does ODW drop getting signal
2053	3	18°22' 119°26'	heading inbound NW
		18°57' 120°0'	
210633	6	19°2' 120°6'	925 mb
2108?	N.	19°~~7~~' 120°10'	about 120 kts in NW eyewall
2118	4	19°37' 120°44'	high SSW
2126	5	19°1' 120°59'	
2139	Near center	19°7' 119°59'	115 MAX W. Side
	Approx center	19°07' 120°06'	125 MAX E. Side
214630		19°04' 119°28'	BT good
2150		19°9' 119°11'	
2151			43 ODW drop S side weak signal on sonde

191922

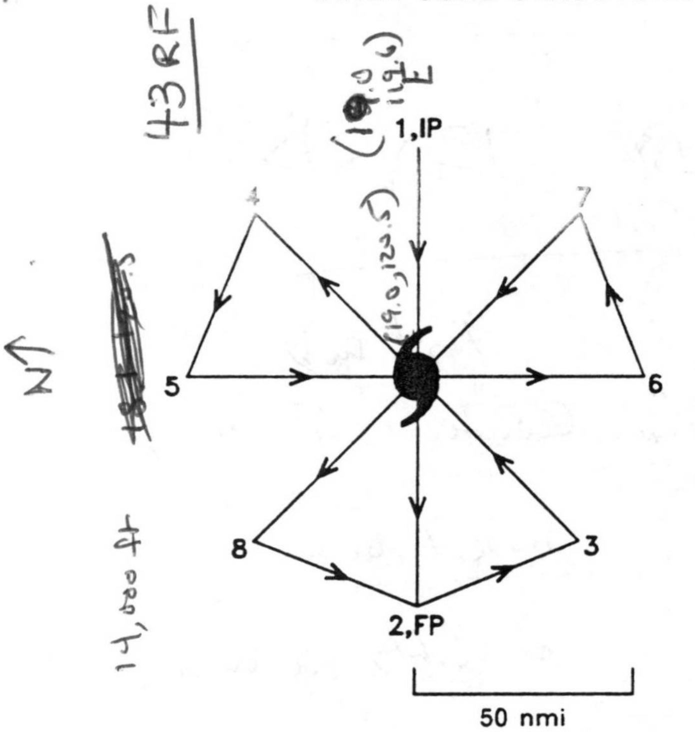

121
120
119
21
20
19
18
17
F/AST OFF 2307
IP
F/AST off 202024
F/AST
2009
2119 FAST ON
ON
2301
212550
F/AST off
BT#1
BT3
125 MAX Pass1
133 MAX Pass1
BT2
2222
F/AST
ON
2230 F/AST OFF
F/AST
off
205330
FAST ON
204545

SEP 25 1994

EPS form
940925H1
GAMACHE "OLIVIA"

Time	Event	Position	Comments
	E eyewall	~ 19°23' 119°54'	125 kts
2349	6	19°25'N 120°0'W 119°59'W	931 mb Center ODW drop
2352			SeaScat down
			~ 90 kts on W side
0000	5	19°24' 120°51'	heading back E 1800 turn do fix go home
			935 mb lowest press seen.
0012			
0015	6	19°28' 119°58'	125 kts on E side
0019	climbout	19°20' 119°27'	
30506Z	landing	P.V.	Just passed through impressive line of thunderstorms. Thanks to pilots, pretty smooth

INNER CORE STRUCTURE AND EVOLUTION EXPERIMENT



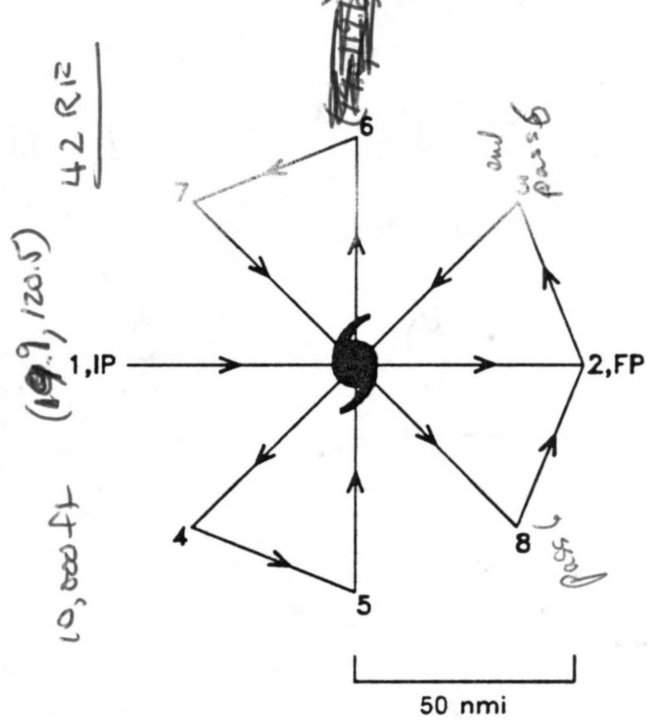


Fig. 9. Inner Core Structure and Evolution Experiment: Upper aircraft pattern.

Fig. 10. Inner Core Structure and Evolution Experiment: Lower aircraft pattern.

Note 1. AOC upper and lower aircraft fly 1-2-3-4-5-6-7-8-2 in their respective patterns (Figs. 9 and 10, respectively).

Note 2. Each aircraft should be at the designated altitude upon reaching the IP and should maintain that altitude until point 8.

Note 3. True air speed calibration is required (Fig. C-1).

Note 4. The patterns may be entered along any compass heading, but the upper aircraft pattern should always be rotated 90° counterclockwise from the lower pattern.

Note 5. Aircraft may attempt to find a wind center on each pass, but should not "hunt" unless directed to do so. Track deviations should be kept to a minimum (10° or less).

Note 6. Cross checks between the aircraft INE and hard reference points or radio navigation aids are essential.

Note 7. During each pattern, the ODW drop in the eye should occur during the first pass through the center (a backup would be dropped in the second pass). During passes with ODW drops, the upper aircraft should be 5 min behind lower aircraft.

Note 8. During downwind legs, Doppler radar should be operated in FAST (forward/aft scanning technique) mode. (Not applicable to aircraft with dual-beam antenna.)

N43RF
MARKS
WILLOUGHBY
FRANKLIN
GRIFFIN
R. BLACK
J. PREMEL

N42RF
GAMACHE
DODGE
P. BLACK
R. BURPEE
J. LAWRENCE