

19940924HI-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.

On-Board Lead Project Scientist Check List

Date SEP. 24 Aircraft N42RF Flight ID 940924#1

A. Participants

HRD		OAO	
Function	Participant	Function	Participant
Lead Proj. Sci.	<u>GAMACHE</u>	Flight Director	<u>BOBERT</u>
Cloud Physics		Pilots	<u>KENNEDY, PLAYER</u>
Radar	<u>DODGE</u>	Navigator	<u>STRONG</u>
Workstation		Sys. Engr.	<u>ROLES</u>
Photographer		Data Tech.	
Omegasonde	<u>BURDIE</u>	El. Tech.	
AXBT/AXCP	<u>P. Black</u>	Other	<u>MC FADDEN</u>
	<u>J. LAWRENCE</u>		

Take-Off	Location	Landing	Location
<u>1653 UTC</u>	<u>P.V.</u>	<u>0141 UTC</u>	<u>P.W.</u>

B. Past and Forecast Storm Locations

Date/Time	Latitude	Longitude	MSLP	Max. Wind
<u>13Z/24</u>	<u>15.2</u>	<u>117.3</u>		<u>70 kt</u>
<u>18Z</u>	<u>15.4</u>	<u>118.2</u>		
<u>02Z/25</u>	<u>15.8</u>	<u>119.3</u>		
<u>02Z/26</u>	<u>17 N</u>	<u>121 N</u>		

C. Mission Briefing

Briefed Phil & Jack. We will fly at ⁴²5 & ⁴³10 thousand feet. doing 5 passes through storm in inner core structure and evolution.

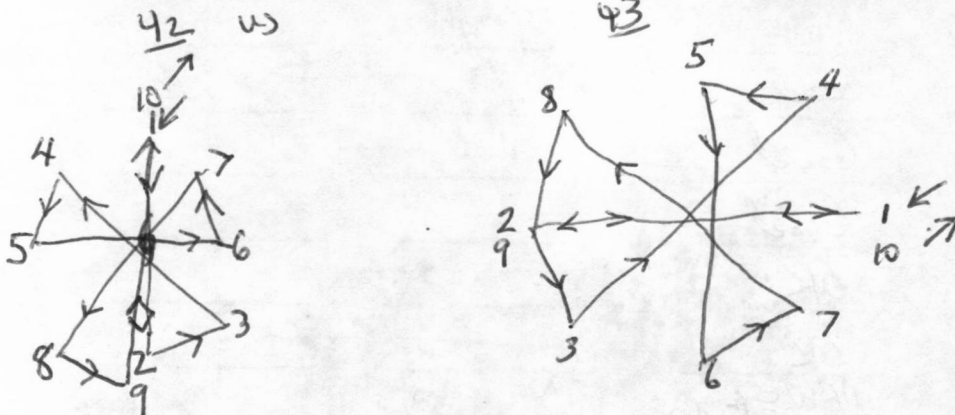
D. Equipment Status

<u>Equipment</u>	<u>Pre-Flight</u>	<u>In-Flight</u>	<u>Post-Flight</u>
Aircraft	<u>Good</u>	<u> </u>	<u> </u>
Radar/LF	<u>Good</u>	<u> </u>	<u> </u>
Radar/TA (Doppler)	<u>Good</u>	<u> </u>	<u> </u>
Cloud physics	<u>OK</u>	<u> </u>	<u> </u>
Data system	<u>OK</u>	<u> </u>	<u> </u>
Omegasondes	<u>DRIVES MAY BE FLAKY</u>	<u>No errors on drives</u>	<u> </u>
AXBT/AXCP	<u>OK I think</u>	<u> </u>	<u> </u>
Workstation	<u>NONE</u>	<u> </u>	<u> </u>
Photography	<u>OK</u>	<u>Videos recorded</u>	<u> </u>

REMARKS:

Things went very well on this flight. I
said a prayer for this flight and God
answered it with one of the best problem
flights I've been on.

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



E. II. Actual Flight Pattern

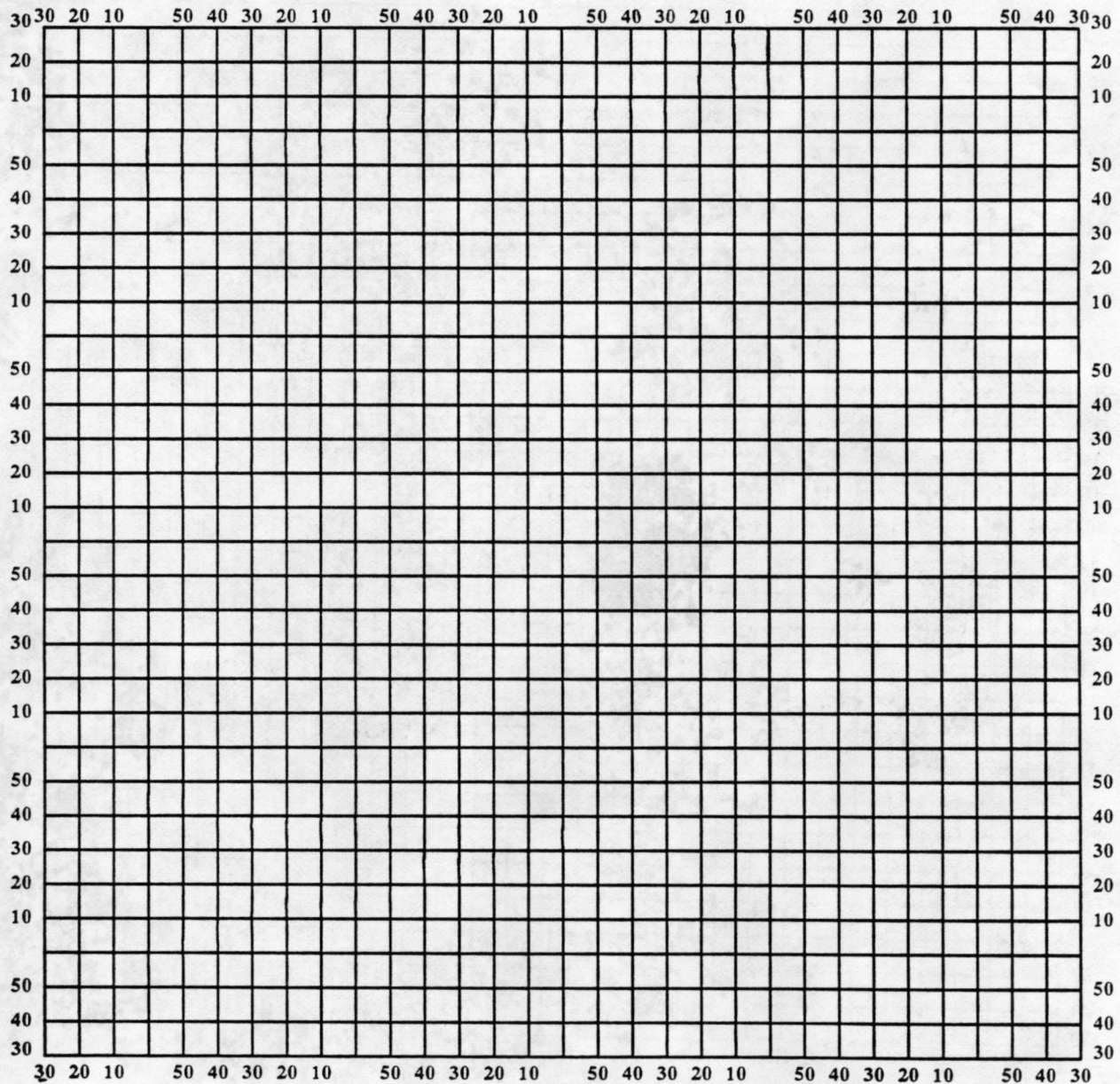
As above, but with one ~~extra~~ pair
of radial legs on each aircraft

N-S on N42RP
E-W on N43RP

Hurricane Recco Plotting Chart

True at 25° Latitude, in Degrees and Minutes

Date _____ Aircraft _____ Observer _____

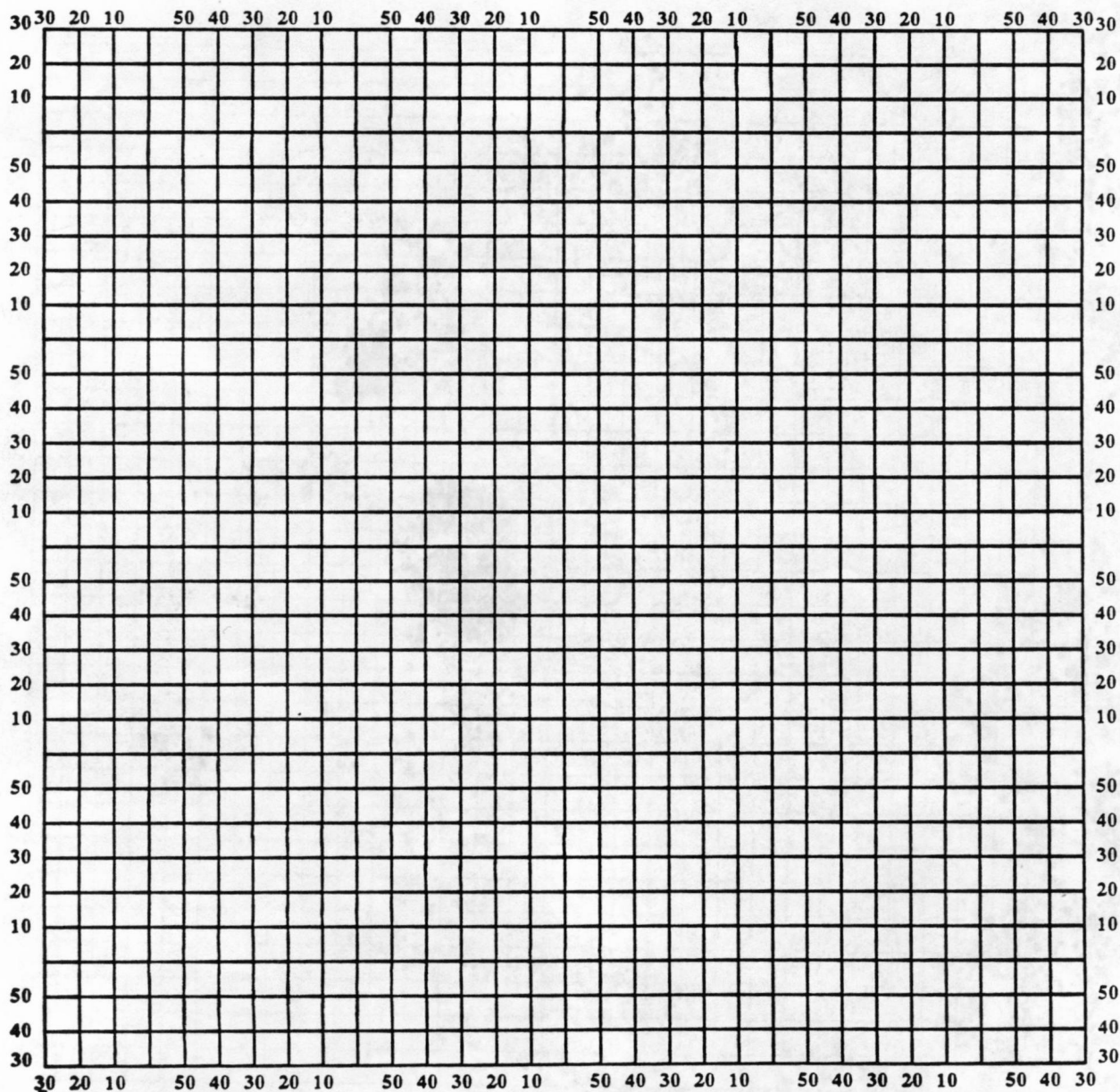


Note: Label full degrees according to location of flight area.

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.

"Olivia"

Lead Project Scientist Event Log

24 Sept 1994
Date ~~940924~~

Flight 940924 H1

LPS GAMACHE

Time	Event	Position	Comments
1653	T/O	Puerto Vallarta	
1837	ODW + LOD2 drop	17°48' 112°47'	Began listening to 43's ODW/drop. looks good.
1845	ODW listening	17°20' 113°54'	Listening on 1st drop still good
1852	Report from NUTC	17°8' 114°23'	15°7' 118.3° 100kts 955mb 29010kts.
1900		16°48' 115°9'	We will switch to 10,000 ft 42 to 14,000 ft
1905		1	118°16' 15°30' Tracks 1st rocket fix
1908	Adjusting course to storm further N.	16°41' 115°32'	Storm further N than expected.
			15°45' 118°00' Expected storm pos.
1929		16°40' 117°35'	Levelled out
2:41 1934	IP	16°38' 117°52'	IP tracking 5
1940		16°13' 117°54'	XBT away entering rain band
			XBT was good.
1943		15°56' 117°56'	100 kts as we enter eye
2:53 1746	6	15°44' 117°58'	954mb 15°44' 117°58'
1949	15°33' 117°58'	15°34' 117°56'	8 ~ 108 kts
1953	15°13' 117°51'	→ 15°	AXBT away
1957	Turn ②	14°57' 117°56'	Turn ②
1957			ODW away
3:12 2005	③	15°14' 117°18'	Turn to 345°
2015		15°49' 117°52'	about 120 Kts max
	9	15°54' 118°03'	

ODW Drop looks good.
42 to 14,000 ft
Tracks 1st rocket fix
Storm further N than expected.
Expected storm pos.
100 kts as we enter eye
954mb 15°44' 117°58'
8 ~ 108 kts
AXBT away
Turn ②
ODW away
Turn to 345°
about 120 Kts max
Phil says about 100kts at surface

1:32
1:32

Date 24 Sept 1994 Flight 940924H1 LPS GAMMA CHC=

[illegible]

1548 11755'

Sep 24 1994

Lead Project Scientist Event Log

Date 940924

Flight 94092411

LPS GAMACHE

Time	Event	Position	Comments
2030	(4)	16°28' 118°45'	Tracking 220°
2040	(5)	15°34' 118°57'	Tracking 090°
	6	15°54' 118°06'	949mb extrap press
2054		15°54' 117°53'	~ 130 kts E 2000
2059		15°54' 117°30'	Ax BT tracking BT looks good
2103	(6)	15°54' 117°14'	BT only had a few good data before stopping
2104			43 drops ODW
2110	(7)	16°24' 117°27'	heading 225 BT launched good
2119		16°07' 117°58'	BT launched - Bad
2120		16°14' 118°03'	~ 115 kts
2126		15°49' 118°19'	105 kts wind max behind us
2134	(8)	15°21' 118°46'	tracking 115
2142	(9)	15°03' 118°11'	20° bank pull
2146	(9)		heading N
		16°03' 118°16'	92 kts 947.5mb
	9		947.5mb 115 kts max
2200		16°12' 118°12'	115 kts max on N side
2209	IP (1)	16°44' 118°12'	90-270 2 more passes N-S
2222	N eye wall	16°14' 118°17'	117 kts max
2224	9	118°18'	measured 948.5mb
2235	(2)	15°17' 118°18'	heading N

1653

2150
2250
2311

Lead Project Scientist Event Log

Date _____

Flight _____

LPS _____

[illegible]

INNER CORE STRUCTURE AND EVOLUTION EXPERIMENT

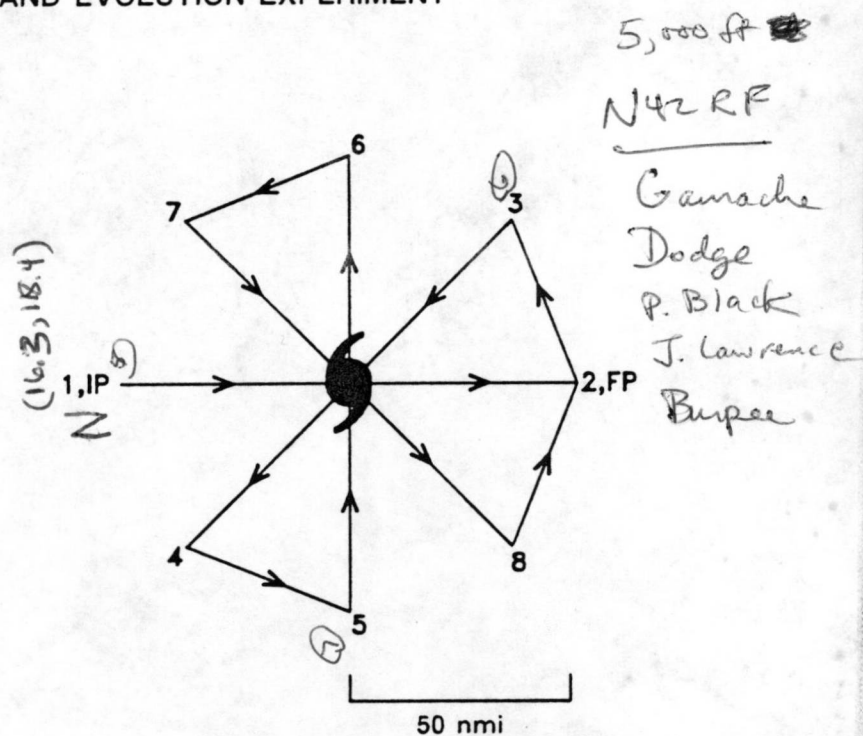
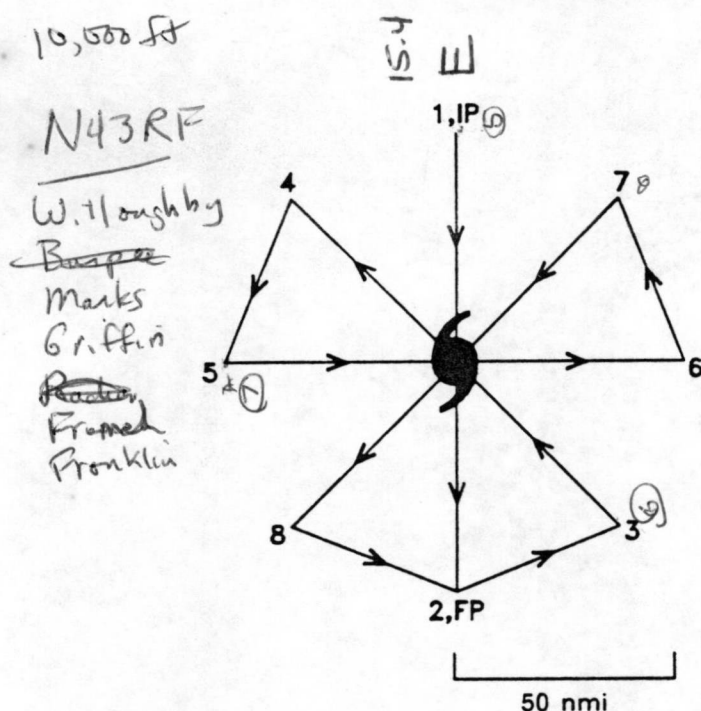


Fig. 9. Inner Core Structure and Evolution Experiment: Upper aircraft pattern.

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.)

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119

SEP 24 1994

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~~116~~ 117

46 0780

KE 10 X 10 TO THE INCH • 7 X 10 INCHES
KEUFFEL & ESSER CO. MADE IN U.S.A.

NOAA 42 940924H1

^{RADAR}
Summary of Legs:

1746-175820 F/AST (Sea Surf on Ferry)

1926 - 1957 N-S ①

195747 - 200513 F/AST

2005 - 2031 SE-NW ②

203114 - 203910 F/AST (2032-2036 data gap)

2039 - 2104 ~~W~~ W → E ③

210414 - 211029 F/AST

211029 - 2134 NE → SW ④

213539 - 214430 F/AST

2144 S → N, N → S, S → N 3 passes ⑤ → ⑦

232554 - 233041 F/AST (Sea Surf on return)