19930828HI_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.

Form E-2
Page 1 of 5

On-Board Lead Project Scientist Check List

Date Aug 28, 1993 Aircraft 930828H1 Flight ID _____
42RF

A. Participants

HRD		OAO	
Function	Participant	Function	Participant
Lead Proj. Sci.	Gamache	Flight Director	Parrish
Cloud Physics		Pilots	Player & Tichnor
Radar	Mike Black	Navigator	Strong
Workstation		Sys. Engr.	Jim Roles
Photographer		Data Tech.	
Omegasonde		El. Tech.	
AXBT/AXCP		Other	

Scatterometer Player & Damiano

Take-Off	Location	Landing	Location
Bermuda	1459	Miami	0106

B. Past and Forecast Storm Locations

Date/Time	Latitude	Longitude	MSLP	Max. Wind
28/15Z	27.6	67.5	981	70kts
29/0Z	28.2	68.7		
29/12	28.8	70.3		
30/0Z	29.5	72.1		
31/12	31.0	77.0		

C. Mission Briefing

Repeating Vortex Interaction We start from West.
~~42~~ 43RF from N. Will fly figure 4's all day.
60% of them coordinated with 43RF

coord.
IP

42RF

D. Equipment Status

Equipment	Pre-Flight	In-Flight	Post-Flight
Aircraft	✓		
Radar/LF	✓		
Radar/TA (Doppler)	✓ we thought	repaired	
Cloud physics	Not tuned		
Data system	✓	✓	✓
Omegasondes	✓	✓	✓
AXBT/AXCP			
Workstation			
Photography			

REMARKS:

We had trouble again with Doppler radar, which N2/3RF had trouble with ODW system. Tim Roles got the TA radar fixed on 42KF, but N43KF ODW still questionable. Drop at end of flight confirmed our system was working. Mark noted that wind profile seemed pretty flat.

Jack Parrish needs to know by 10:00, I guess we can tell him by 9:00, what we're doing and where we're returning.

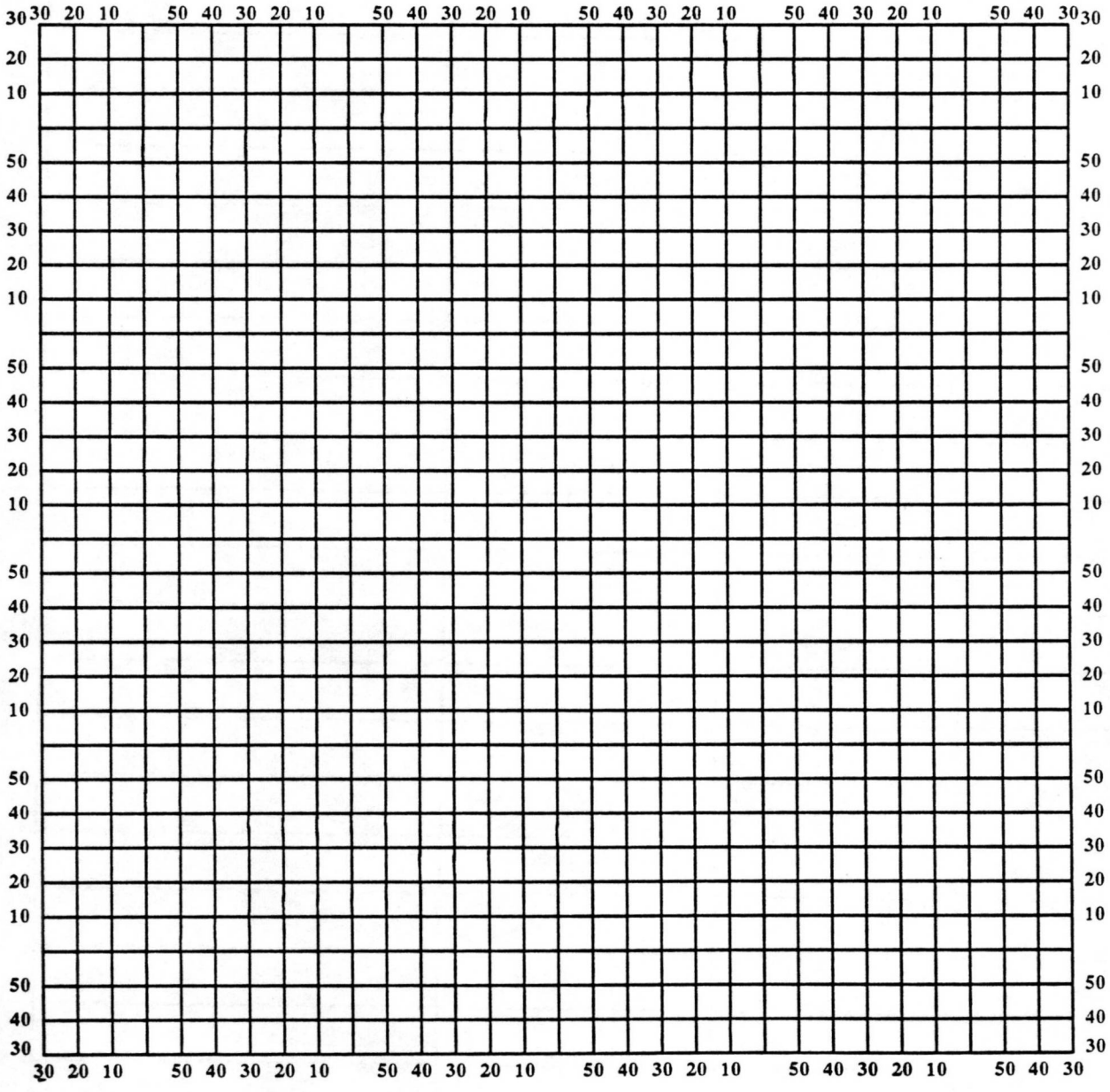
E. I. Proposed Flight Pattern (sketch or designate by number)

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.

Lead Project Scientist Event Log

Date ____________________ Flight ____________________ LPS ____________________

Time	Event	Position	Comments

Lead Project Scientist Event Log

Date ______________ Flight ______________ LPS ______________

Time	Event	Position	Comments

Lead Project Scientist Event Log

Date ____________ Flight ____________ LPS ____________

Time	Event	Position	Comments

Lead Project Scientist Event Log

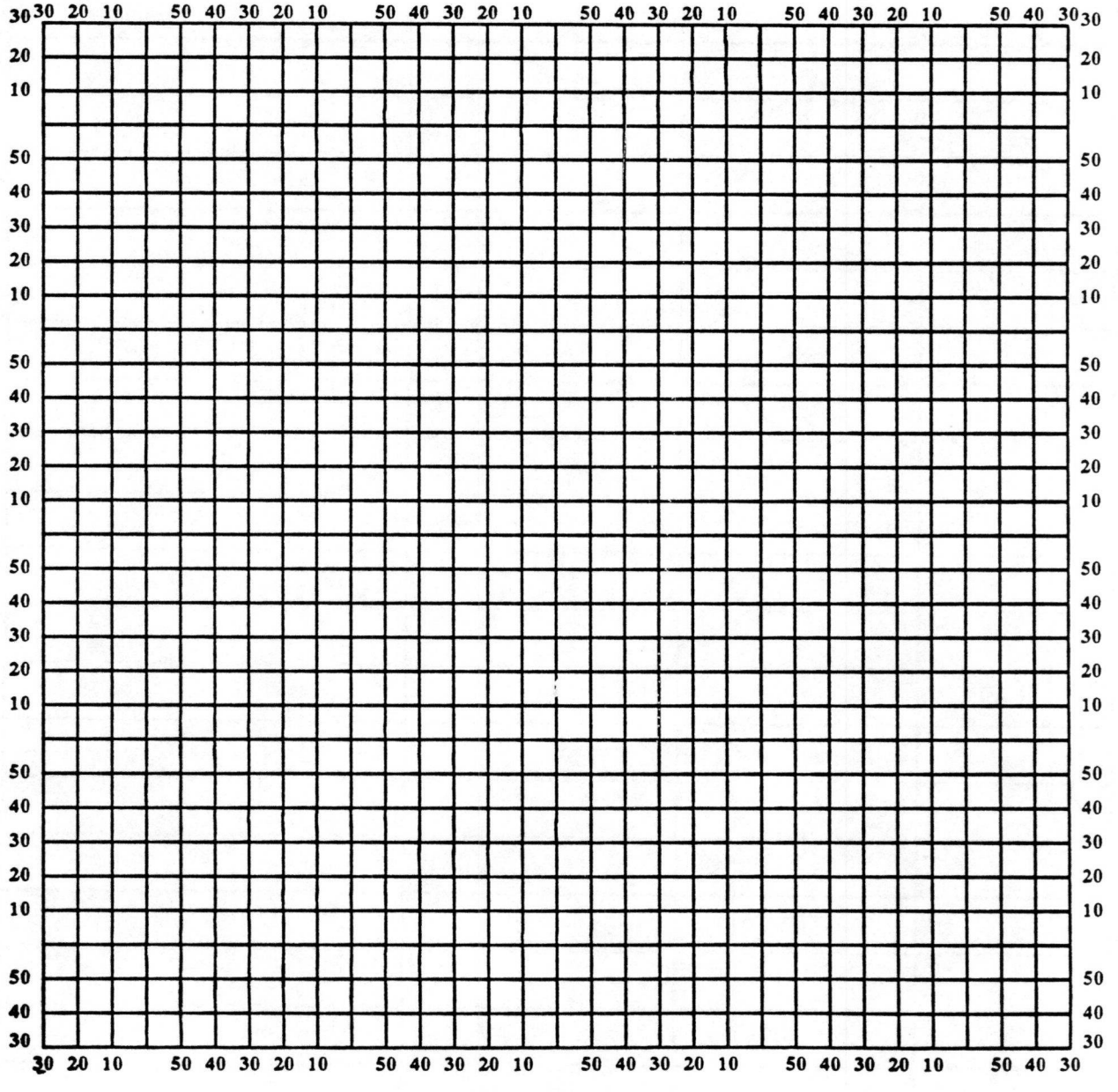
Date ________________ Flight ________________ LPS ________________

Time	Event	Position	Comments

Hurricane Recco Plotting Chart

True at 25° Latitude, in Degrees and Minutes

Date _____ Aircraft _____ Observer _____

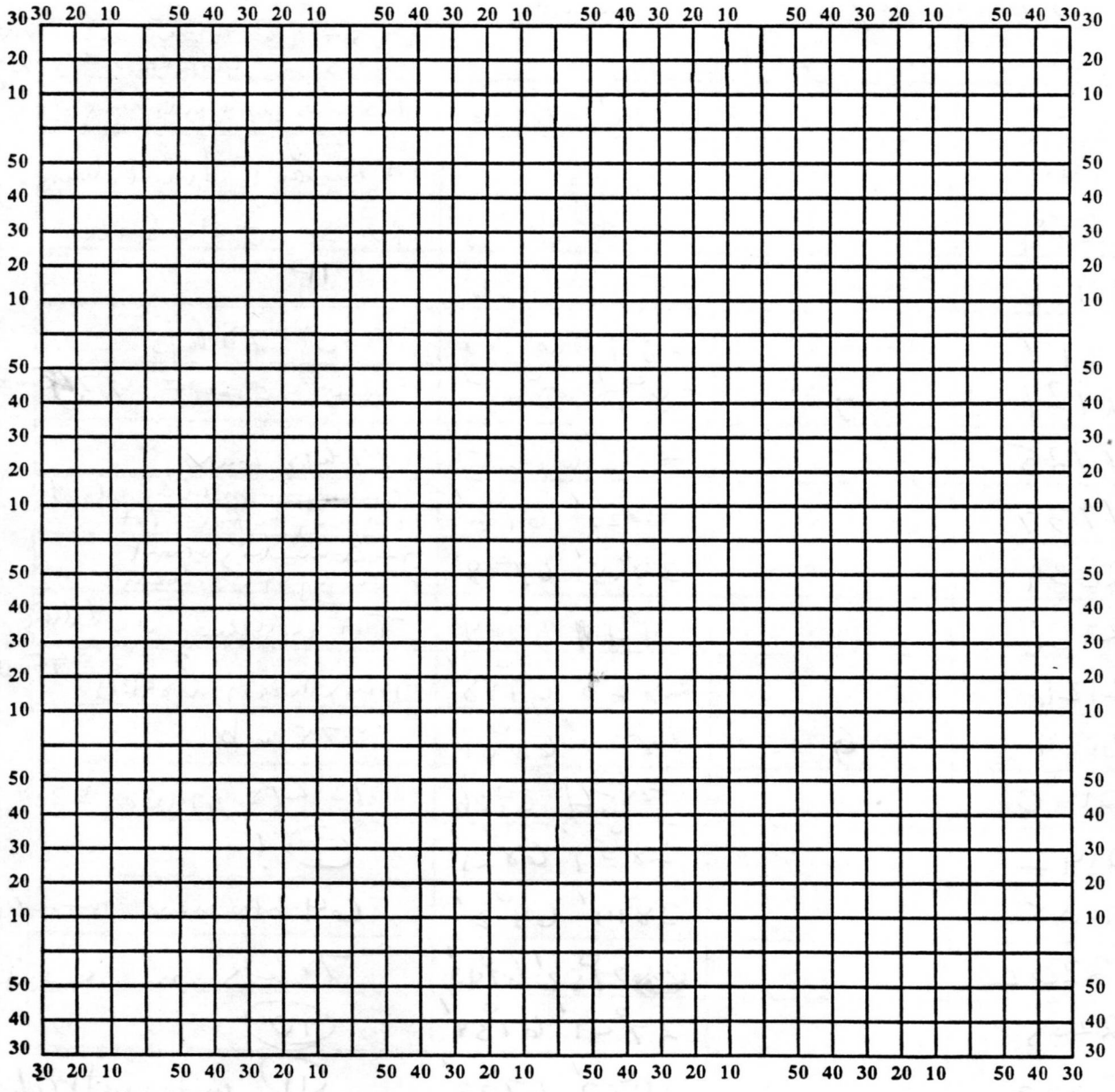


Note: Label full degrees according to location of flight area.

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.

Lead Project Scientist Event Log

Date Aug 28, 1993 Flight 930828H1 LPS GAMACHE

Time	Event	Position	Comments
1759	T/O	Bermuda	
1821	AF Fix		27°54' 67°33'W 75kts sfc 979mb 1703 flt lvl ~~ ~~ 88kts N quad
1822		31°20' 66°13'	Radars up & working yay!
1844			TA Radar just went down again
1854		29°20' 67°58'	Descent to 5,000
1911		28°1' 68°26'	IP
1917		28°1' 67°58'	330° 78kts
1921	[hurricane symbol]	28°5' 67°45'	~~28~~ ~~67~~ 979mb
1925		28°6' 67°25'	77kts max
1937		28°22' 67°6'	~~[illegible]~~ milling about trying to fix TA
2039		29°15' 67°18'	Still milling about Radar system down
2106		29°4' 67°24'	TA working heading inbound for [illegible]mb fix then to (9)
2126		28°28 67°58'	max winds ~85kts
2129	[hurricane symbol]	28°22' 68°01'	975mb
2140		28°56' 69°26'	75kts max on 330° runs from
2142		28°59' 68°25'	(9)!
2155		28°14' 68°2'	64kts max missed center
2202		27°52' 67°43'	75kts on SE side
2205		27°41' 67°34'	(10)
2223		28°59' 67°23'	(11) into eye track 240°
2232			87kts on NE side

Form E-2

Lead Project Scientist Event Log

Date ______________ Flight ______________ LPS ______________

Time	Event	Position	Comments
~~[illegible]~~			
2234	6	28°35' 68°08'	
2239		28°25' 68°28'	climbing
2245?		28°2' 69°16'	Dropped ODW for testing Got 8's + 9's quality

Lead Project Scientist Event Log

Date ______________ Flight ______________ LPS ______________

Time	Event	Position	Comments

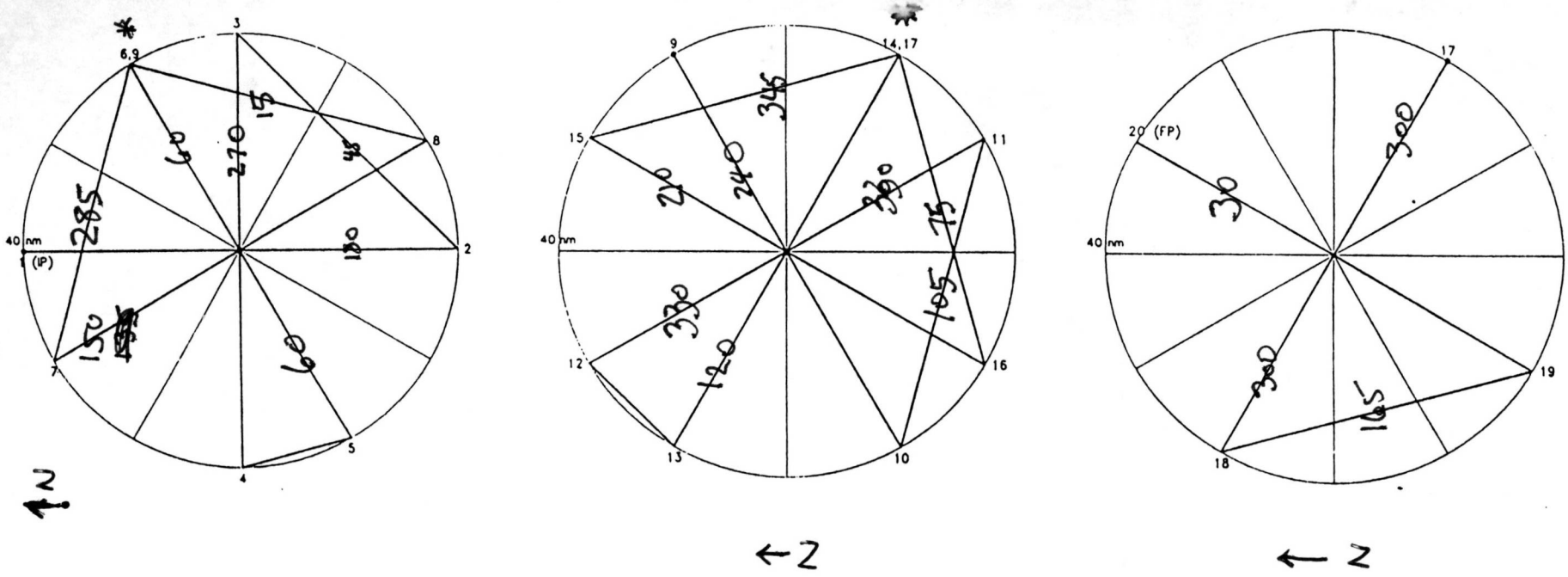
42 IP 27.2 64.8
43 IP 26.5 67.8
TEAL 03 2315Z
22Z on VHF

SECONDARY (LOWER) FLIGHT PATTERN

Navigation points:

Segment	Dist (nm)	GS (kt)	Seg/Tot Time (h:mm)	
-1			/ 0:00	
1-2	80	250	0:19 / 0:19	
2-3	56	290	0:12 / 0:31	
3-4	80	250	0:19 / 0:50	
4-5	22	290	0:05 / 0:55	
5-6	80	250	0:19 / 1:14	
6-7	56	290	0:12 / 1:26	
7-8	80	250	0:19 / 1:45	
8-9	56	290	0:12 / 1:57	(Delay ~20 m until upper A/C reaches pt. 8)
9-10	80	250	0:19 / 2:36	
10-11	56	290	0:12 / 2:48	
11-12	80	250	0:19 / 3:07	
12-13	22	290	0:05 / 3:12	
13-14	80	250	0:19 / 3:31	
14-15	56	290	0:12 / 3:43	
15-16	80	250	0:19 / 4:02	
16-17	56	290	0:12 / 4:14	(Delay ~20 m until upper A/C reaches pt. 14)
17-18	80	250	0:19 / 4:53	
18-19	56	290	0:12 / 5:05	
19-20	80	250	0:19 / 5:24	

Note: Lower aircraft begins its pattern (point 1) when upper aircraft reaches its point 2.



• COORDINATION POINTS WITH HIGHER A/C

Fig. 28. Secondary (lower) flight pattern.

True airspeed calibration is required.

Lower aircraft will drop no ODWs. Unless there is a conflict with USAF reconnaissance aircraft, the lower plane will operate at FL 100.

Radial legs are 40 nmi long.

All turns are initiated upwind.

The pattern may be entered at any compass heading, but entry azimuth will always be 90° upwind of entry azimuth of the primary (upper) aircraft. Refer to note 3, Fig. 27, for operating level(s) of upper aircraft.

Point 1 must be reached at the same time the upper aircraft reaches its point 2 (Fig. 27). Point 9 must be reached at the same time the upper aircraft reaches its point 14. Point 17 must be reached at the same time the upper aircraft reaches its point 14.

Set airborne Doppler radar to continuously scan perpendicular to the track on radial penetrations and, F/AST on downwind legs.