

19890903HI-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.
- Ja 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.
- Ja 4. Contact HRD members of crew to:
 - a. Assure availability for mission.
 - b. Arrange ground transportation schedule when deployed.
 - c. Determine equipment status.
- Ja 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.
- Ja 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

- Ja 1. Confirm from OAO flight director/meteorologist that satellite data link is operative (information).
- Ja 2. Confirm camera mode of operation.
- Ja 3. Confirm data recording rate.
- Ja 4. Complete Form E-2.

E.2.3 Postflight

- Ja 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.

291-14E09078P

Form E-2
Page 1 of 5

On-Board Lead Project Scientist Check List

Date 9/3/89 Aircraft 42RF Flight ID 890903 H1

A. Participants

HRD		OAO	
Function	Participant	Function	Participant
Lead Proj. Sci.	<u>Markes</u>	Flight Director	<u>P. Bogert</u>
Cloud Physics	<u>B. Black</u>	Pilots	<u>Genzinger / McKim</u>
Radar	<u>N. Dorst</u>	Navigator	<u>Sham White</u>
Doppler	<u>"</u>	Sys. Engr.	<u>Schricker Moore</u>
Photographer	<u>—</u>	Data Tech.	<u>No Ram / D. Lmo</u>
Omegasonde	<u>H. Willoughby</u>	El. Tech.	<u>Schricker</u>
AXBT/AXCP	<u>P. Black</u>	Other	<u>Henderson, McFadden</u>

Take-Off Barbados Location Landing Location

B. Past and Forecast Storm Locations

Date/Time	Latitude	Longitude	MSLP	Max. Wind
<u>9/3 - 10Z</u>	<u>16.0</u>	<u>48.0</u>		<u>95 Kts</u>
<u>Forecast 9/3 - 16Z</u>	<u>16.5</u>	<u>49.8</u>		<u>102 Kts</u>
<u>9/3 - 18Z</u>	<u>16.4</u>	<u>50.0</u>		
<u>" 9/4 06Z</u>	<u>17.2</u>	<u>53.0</u>		

C. Mission Briefing

energetics experiment

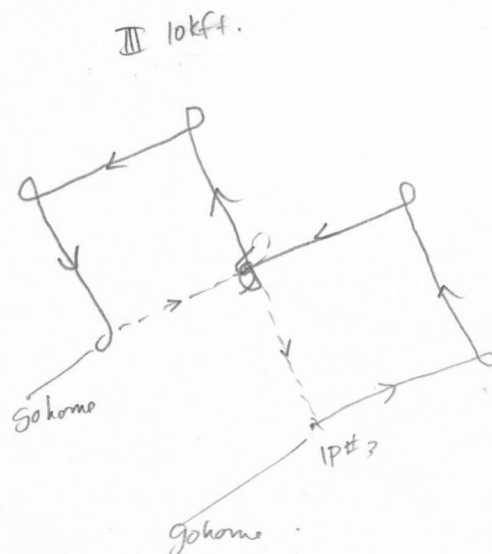
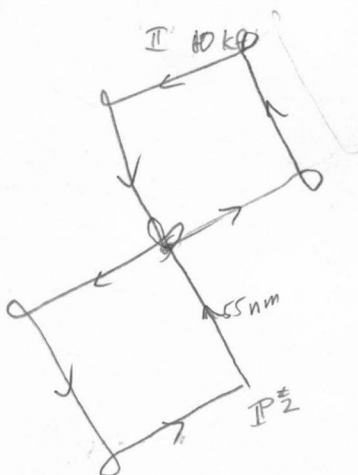
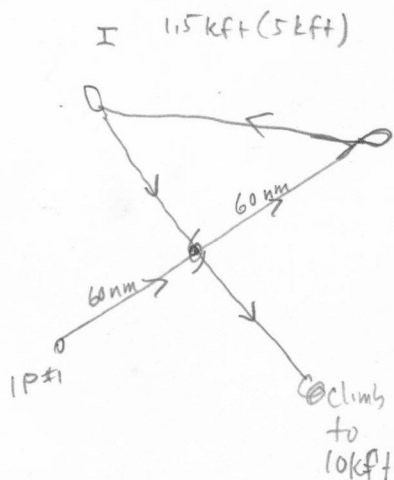
D. Equipment Status

Equipment	Pre-Flight	In-Flight	Post-Flight	tapes
Aircraft	✓	✓	✓	
Radar	✓	✓	✓	11
Cloud physics	✓	✓ FSSP out	✓ FSSP out	12
Data system	✓	✓	✓	1 slow tape
Omegasondes	✓	✓	✓	6/8
AXBT/AXCP	✓	✓	✓	5/7 worked
Doppler	✓	✓	✓	
Photography	✓	✓	✓	
Air Sampling	✓	✓	✓	4 samples

REMARKS:

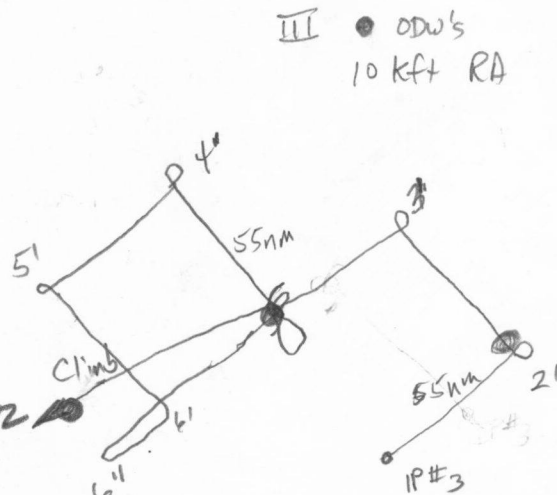
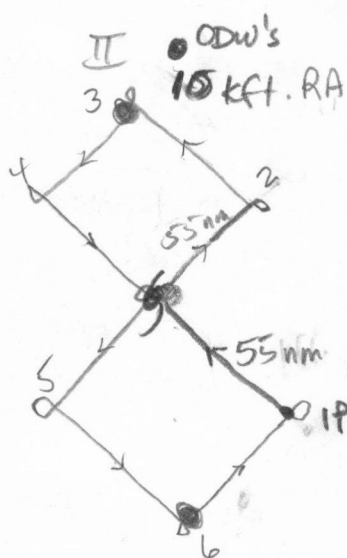
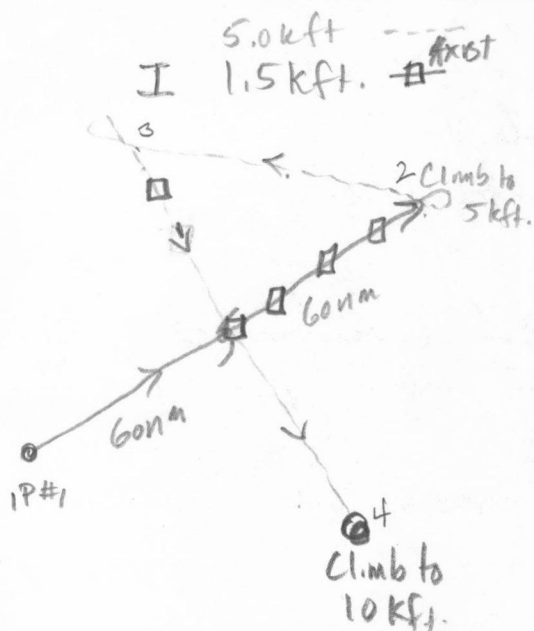
- FSSP didn't work
- 2DP, 2DC worked marginally.
- Doppler had intermittent noise problems on first 1500' pass through the storm. T. Schröder patched it up and worked super rest of the flight.
- AXBT's in one row of external tubes failed to launch. No continuity. Only 5 of 7 AXBT's worked, but we got good placement of the five.
- ODW's worked really well, had trouble with eye sounding early because of small size of the eye. But, last eye sounding was real good.
- Data system listing set up from INE #2. Radar set on INE #1. INE #1 worked best according to Nav.

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



air samples: one at 1500'
one in eye or enroute
two in eyewall

E. II. Actual Flight Pattern



#1

155 70

In turns
0° isodop lines along the
roll angle is 0° uncorrected
#2

Lead Project Scientist Event Log

Date 9/3/89 Flight 890903 #1 LPS Markus

data system listing is on INE#2, INE#1 is better

Time	Event	Position	Comments
1958	6	16° 44" 50° 44"	ODW failed chute streamer - try next pass
2009 44	2	17° 8.7" 50° 1.9"	TK 315°
2020 58	3	17° 47" 50° 40"	TK 225°
2034	4	17° 8.7" 51° 24.8"	TK 130°
2046	6	16° 49.1" 50° 36.1"	TK 230° ^{missed ODW ring} 305°/13 2052 UTC 43RF landed Barbados
2100	5	16° 9" 51° 43"	TK 130°
2113	6	16° 31" 50° 53"	TK 045°
2125	IP#3	16° 12" 50° 16"	TK 045° to point E of 6
2133	2'	16° 42" 49° 43"	TK 310°
2145	3'	17° 16" 50° 27"	TK 230°
2202	6	16° 54.5" 51° 12.9"	TK 320° 245°/14

Radon
system
on
INE#1

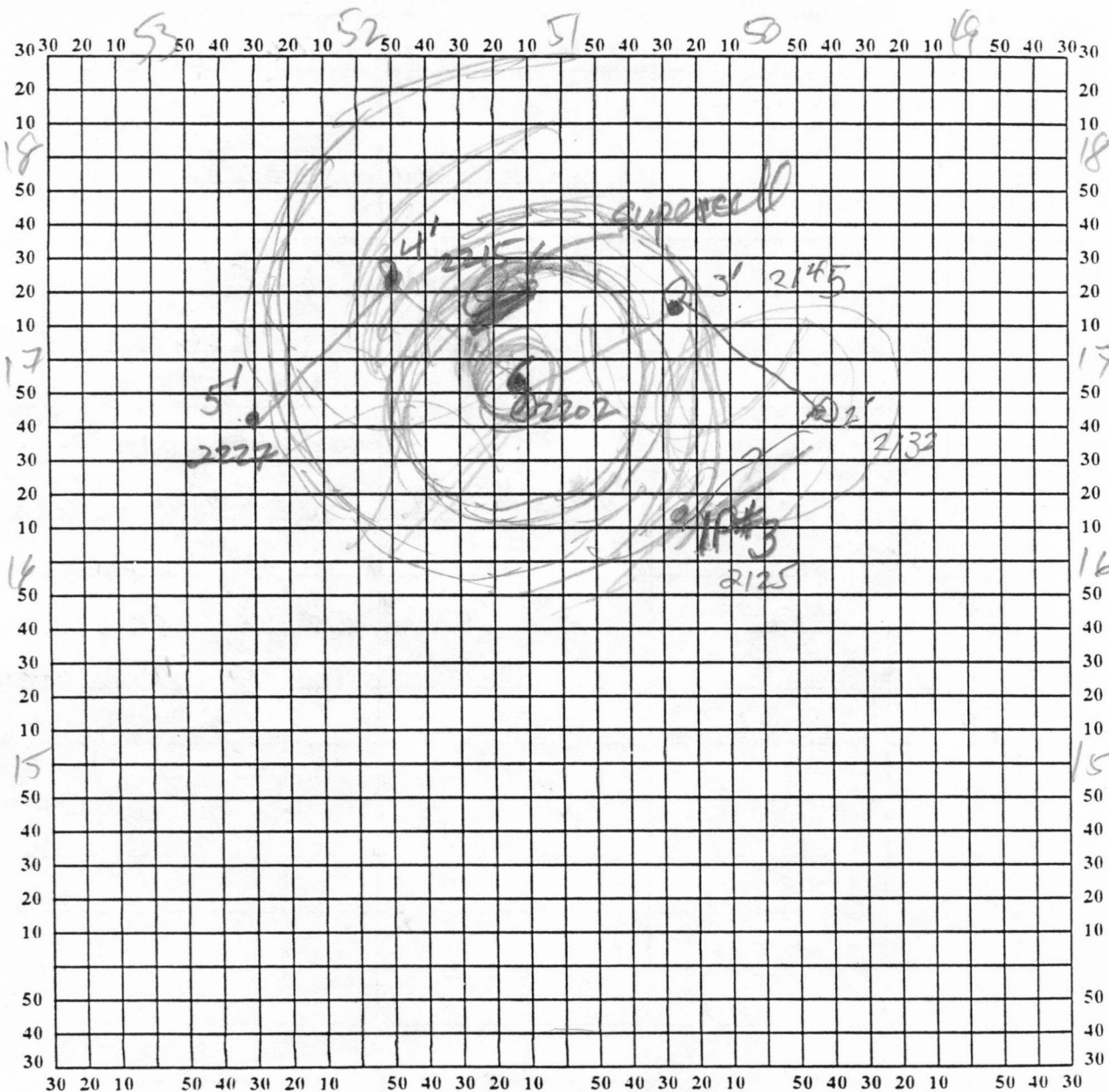
ODW 939 hydrostatic Ps
942 Ps splash not
quite in center

Hurricane Recco Plotting Chart

#3

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

Date 9/3/89 Longitude 99°03'41" Observer Markin



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

#1

Lead Project Scientist Event Log

Date 9/3/89 Flight 890903H1 LPS Marks
Gabrielle

25.5h
in
storm

Time	Event	Position	Comments
160505	T.O	Bambados 13°4.2' 59°30.5"	43RF of 1603Z
1745			Radon presentation show double G 1-60km diameter 2-15 nmi. diameter
1749	IP	15°41.1" 52°7.4"	start descent to 1.5 kft.
180420	IP	15°55" 51°11.8"	1500' TK 060° in outer band 60 nmi out.
181300	ABT #1	16°10.9' 50°43.9"	Doppler noisy
1820	↑	16°55.4 50°28.7"	9.38 mb 110 kHz
183429	←		inner eye collapsing Radar system down
184045	2	17°3" 49°30"	climb to 5000' TK 285° Radar back up 1843Z
1859	3	17°22" 51°9"	TK 160°
1914	↓	16°39.0" 50°38.0"	283°/ 10.7 Hz
1931	4	15°36" 50°16"	climb to 10 kft
1941	IP #2	15°50" 50°7.2"	TK 315°

2334

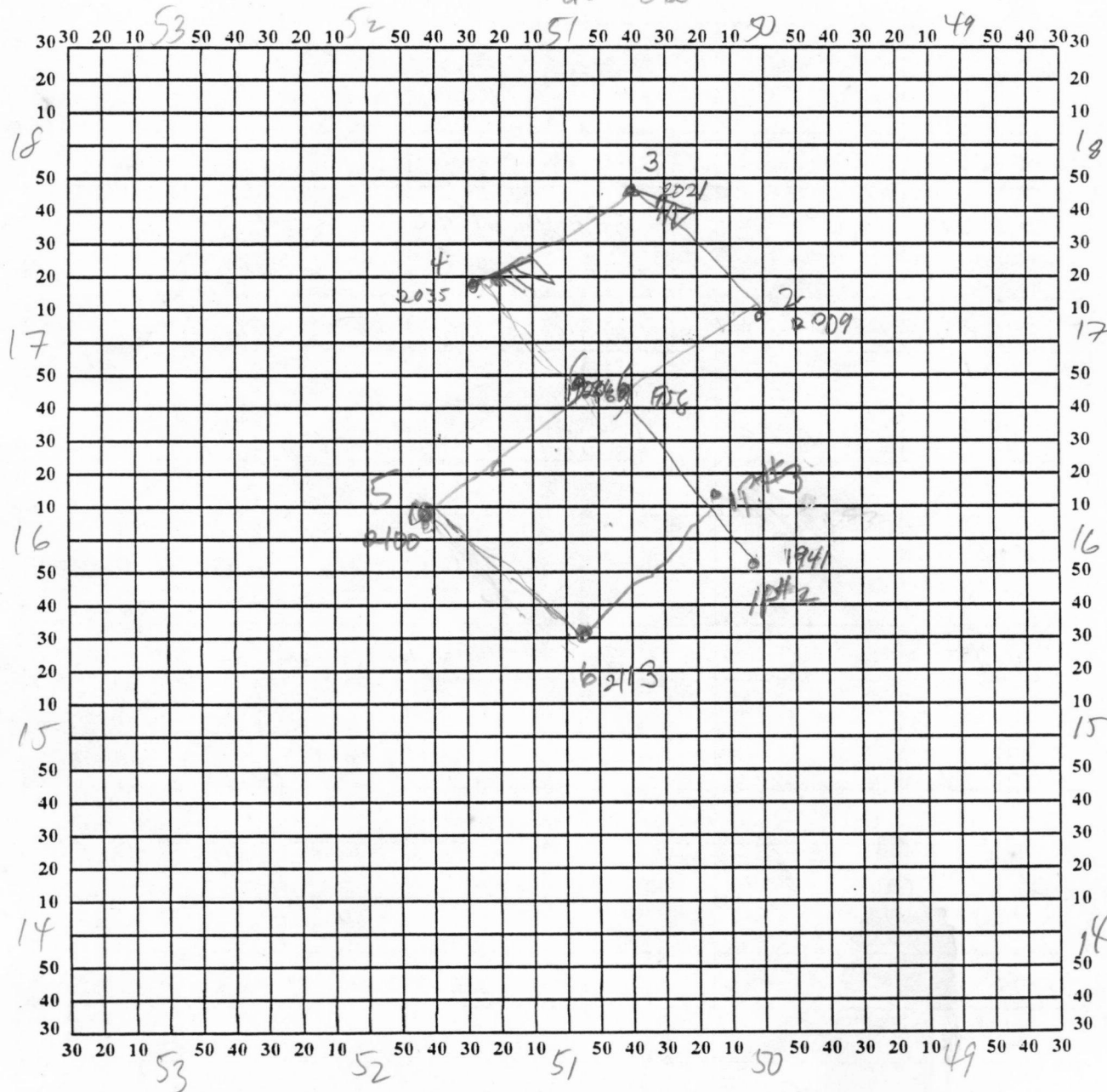
Hurricane Recco Plotting Chart

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

Date 9/3/89 Longitude 890903H1 Observer Monks

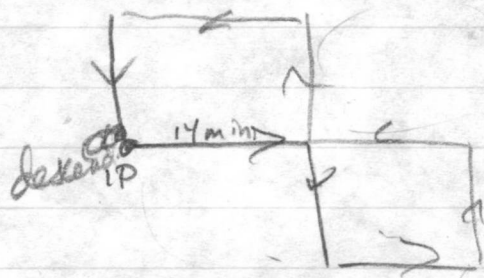
Galapagos

#2



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

10 kft

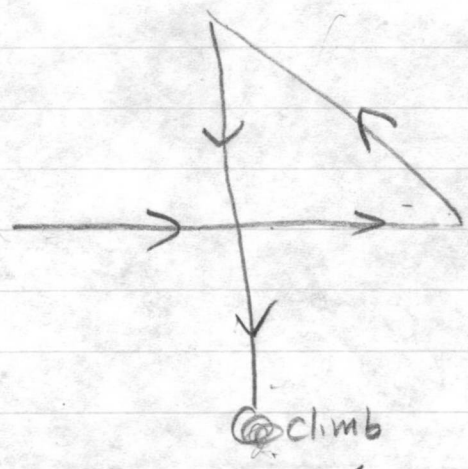


$$\begin{array}{r} 14 \\ 8 \\ \hline 112 \\ 10 \\ \hline 122 = 24 \end{array}$$

2

2h

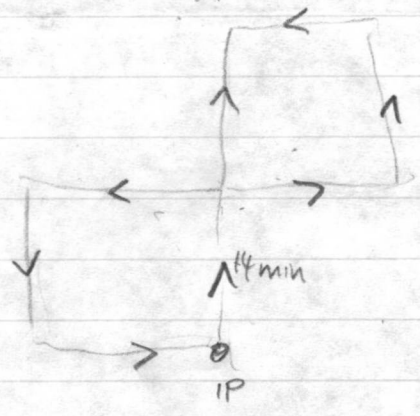
1.5 kft



$$\begin{array}{r} 28 \\ 28 \\ 20 \\ \hline 46 = 8h \end{array}$$

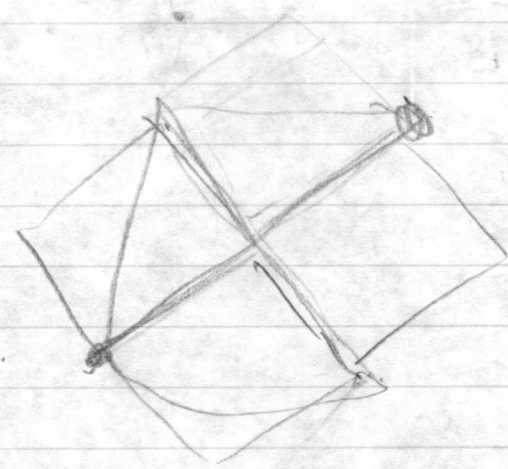
3h

10 kft



$$\begin{array}{r} 14 \\ 8 \\ \hline 112 \\ 10 \\ \hline 122 = 2.2h \end{array}$$

5.2h

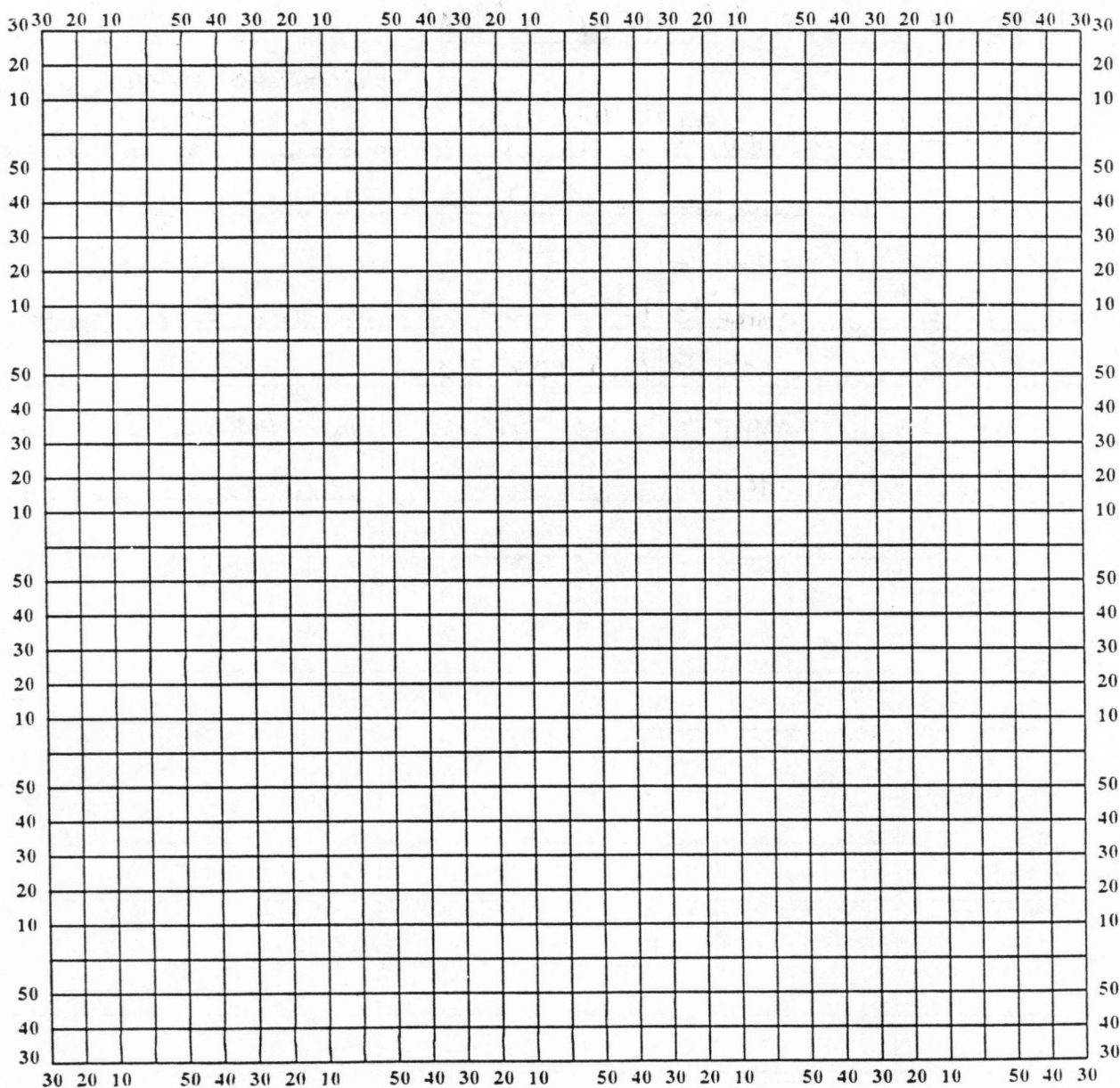


[illegible]

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.