19810805HI_LPS

890805HI

Dean

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

JM 1. Confirm from OAO flight director/meteorologist that satellite data link is operative (information). (out)

JM 2. Confirm camera mode of operation.

JM 3. Confirm data recording rate.

JM 4. Complete Form E-2.

E.2.3 Postflight

JM 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.

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Channel 2 ODU Ch3 backup.

On-Board Lead Project Scientist Check List

Date 5 August 1989 Aircraft 42RF Flight ID 890805I1
Dean

A. Participants

HRD 12 kft. OAO

Function	Participant	Function	Participant
Lead Proj. Sci.	Marks	Flight Director	Bogert
Cloud Physics	B. Black	Pilots	Mckim, Tickner
Radar	P. Black	Navigator	Henderson
Doppler	Dorst	Sys. Engr.	Wade
Photographer		Data Tech.	Jay
Omegasonde	Willoughby	El. Tech.	Roles
AXBT/AXCP		Other	Gonzalez

Take-Off 1314Z Location SJU Landing 2216Z Location SJU
9h 2min

B. Past and Forecast Storm Locations

Date/Time	Latitude	Longitude	MSLP	Max. Wind
8/5 10Z	24.3	63.9		
14Z	25.3	64.0		
8/5 18Z	26.0	64.0		
8/5 06Z	28.5	64.0		

C. Mission Briefing
Energetics (see p 30-31 of ops plan)

D. Equipment Status

Equipment	Pre-Flight	In-Flight	Post-Flight	
Aircraft	✓	✓		
Radar	✓	Doppler down after 1558 Z		7 tapes
Cloud physics	✓	2DC bad (laser out) FSSP bad		14 tapes
Data system	✓	✓		
Omegasondes	✓	✓		50 DW's / 1 bad
AXBT/AXCP	✓	✓		10 AXBTS / 2 bad
Doppler	✓	Doppler had problems after 1600 Z		
Photography	✓	✓		

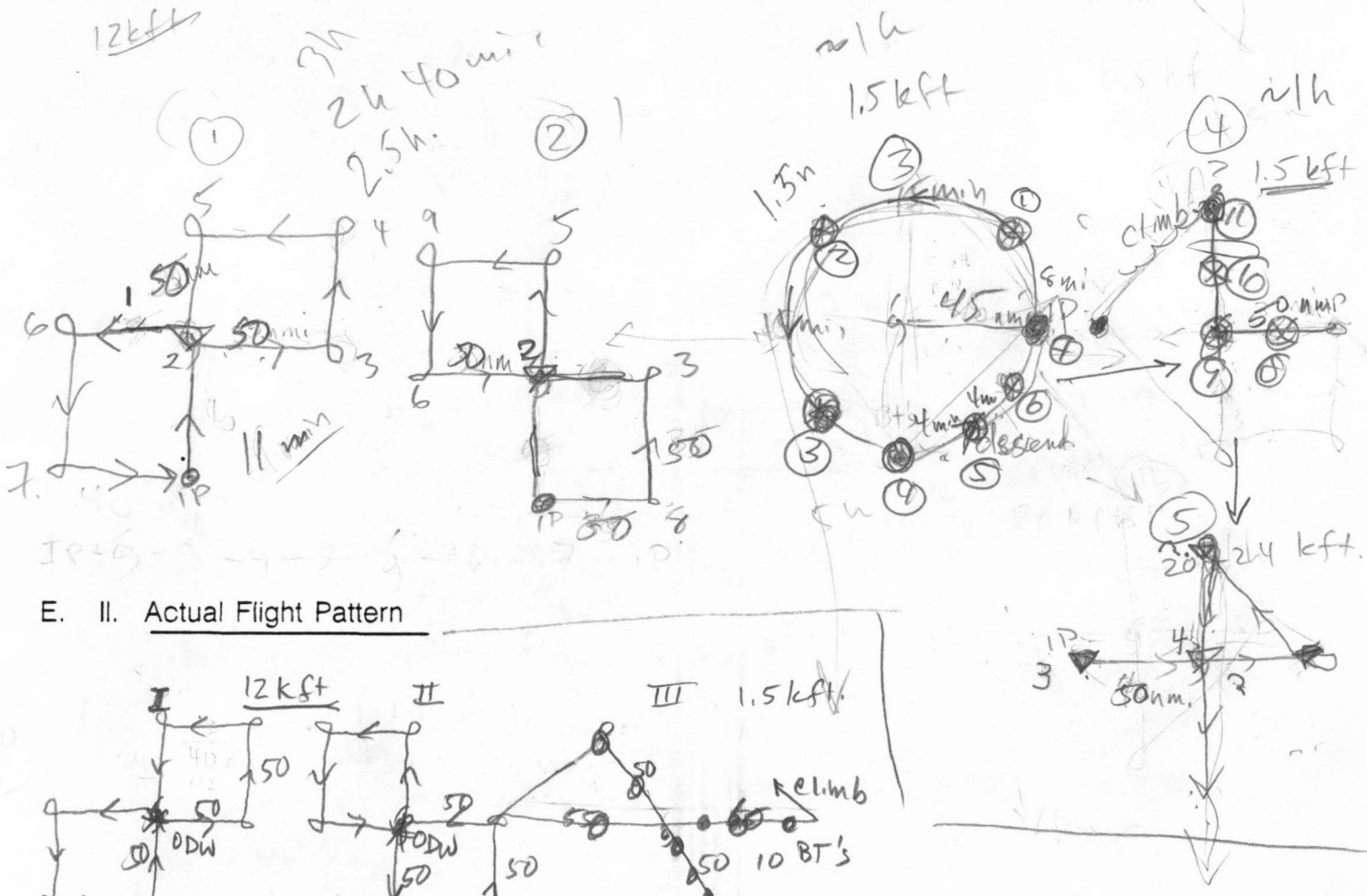
REMARKS:

TA radar had alot of trouble's. 1st leg from S R/T out of tune after first box NE of center Doppler R/T shut down (overheating) brought back up at 1645 Z; reflectivity - OK; Doppler not coherent. Not much useful data (except reflectivity) after first box NE of S) reflectivity bad near end of 12kft legs and during 1.5 kft pattern.

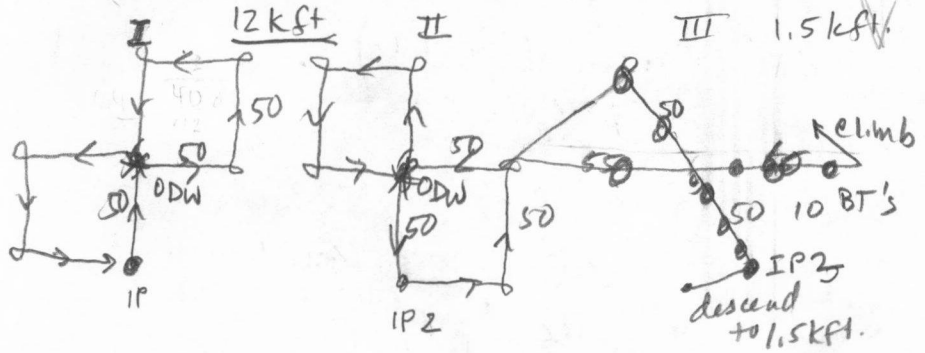
Cloud physics: 2DC laser out
FSSP problems.

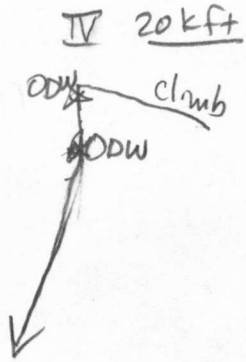
Patterns were strenuous. Need some work to make them more flyable.

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



E. II. Actual Flight Pattern





R. Black
roll of 36 pics taken 890805 1H

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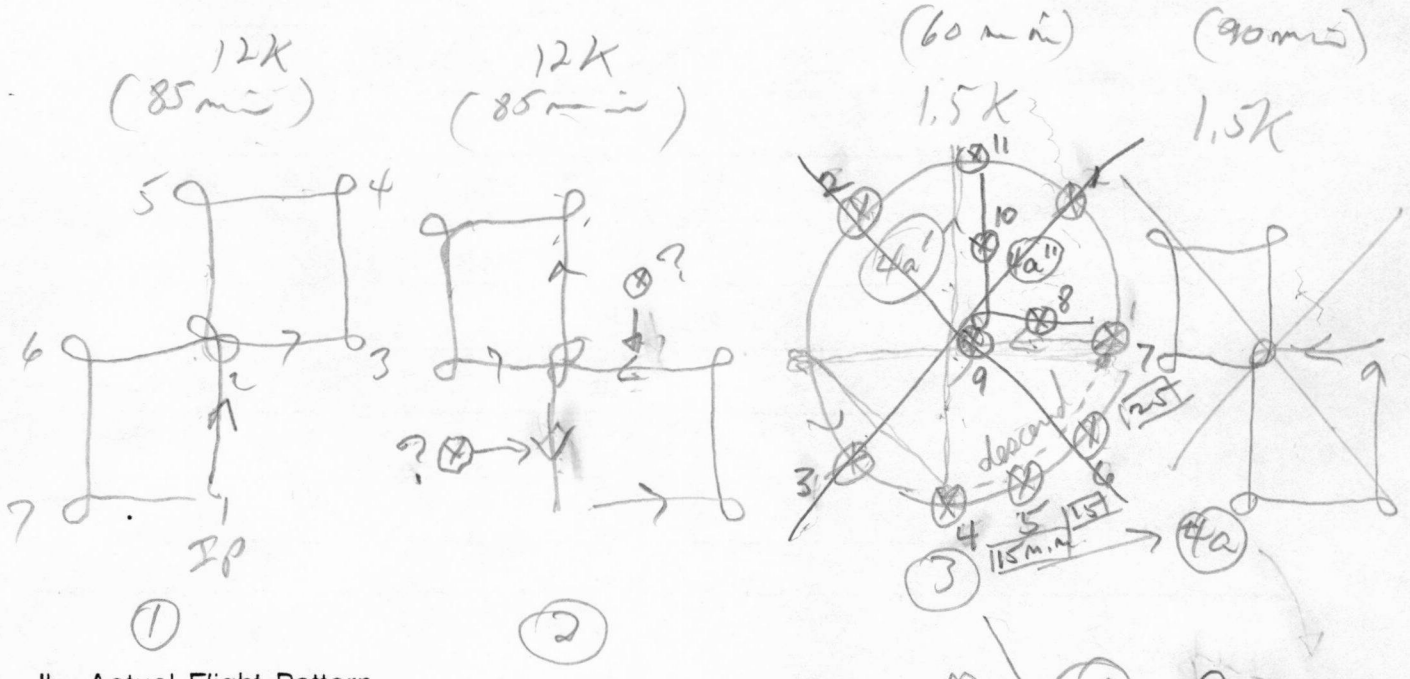
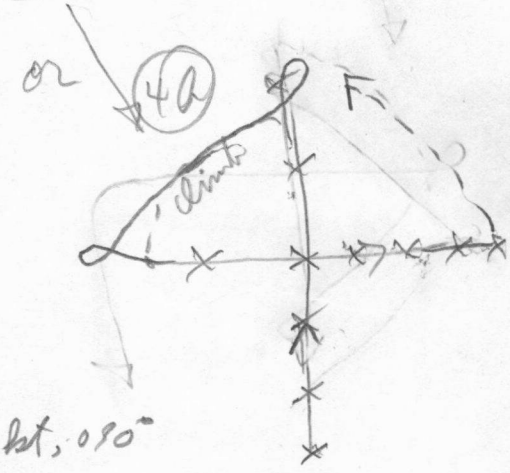
E. I. Proposed Flight Pattern (sketch or designate by number)



E. II. Actual Flight Pattern



1459 FL 50 pic #5, 6, 7
1502 calm at SFC
1504 sfc wind 090 @ 25 kt w/s
1507 eye open S, lo cld band 1 sfc w/d
1508 calm at FL 25 21.8, 63 53.9
SFC center S of us, WS sfc w/s ≈ 30 kt, 090°
1511 pic 9, 10 sfc wind ~ 7580 kt
1554 FL WS = 12, SFMR WS = 46
1714 center at FL 25°59.5' 64°03.5' 25 57.6 64° 00.8'
1716 ODW #2
1719 SFMR 41.1 m/s FL 40 kt
1814 26 05.2 63 57.5 ODW #3 center
1841 lot more blue sky S of center
1845 pic 13, 14, 15
1853 pic 16 60 kt

D. Equipment Status

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

REMARKS:

2015
1820
1855

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IV 2015

3.75h
1636
1449

(2)

145
3.5

Lead Project Scientist Event Log

Date 8/5/89 Flight 890805H1 LPS Marks

1629
cld phys. status
2DC lost laser
1 tape drive out
2DP ok

Time	Event	Position	Comments
1636	IP2	24°49" 64°6"	164030 TA Doppler back
1647	(7)	24°49" 63°16"	Turn Tk 360° Doppler down.
			1650 radar system down, processor overheating.
1700	(8)	25°50" 63°7.8"	Tk 270° 1700:30 TA, radar system up. velocities look bad. dBZ ok
1716	6	25°56.5" 64°08"	turn tk 360°
		1716 sonde 2	
173025	(9)	26°54" 64°01"	turn tk 270°
			Doppler bad
1741	(10)	26°58" 64°50"	turn tk 180°
1754	(11)	26°08" 64°51"	turn tk 90°
1808	6	26°8" 63°55"	turn Tk 180°
	drop #3		
			1825 end pattern
1825	IP3		

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1.414
to
1.414

(1)

56560
2 1.4 | 80 0
70
100

Lead Project Scientist Event Log

Date 8/5/89 Flight 890805I1 Dean LPS Marks

Time	Event	Position	Comments
1314	TO	SJU	
1432	descend to 12Kft.	23 64	good radar presentation 45 nmi legs.
1449	IP	24°10' 63°40"	1454 data system crash
			1455 20 data system back. TA radar problem no reflectivity obs frequency
150530	6		outside turn to hk 90°
150830	ODW #1	25°21" 63°54.4"	982 ODW 978 mb AC STMP 80kt
			1510 TA looks better
1520	(2)	25°21" 62°59"	turn Tk 0°
1532	(3)	26°12" 63°1.4"	turn hk 270°
1544	(4)	26°11" 63°59"	turn hk 180° → 6
		1548 great TA display.	
1555	6	25°38" 64°6"	turn hk 270° 978mb
		1558 TA R/T	problem TA down
1609	(5)	25°38" 65°6"	turn hk 360°
1622	(6)	24°46" 65°2"	turn hk 90°

Lead Project Scientist Event Log

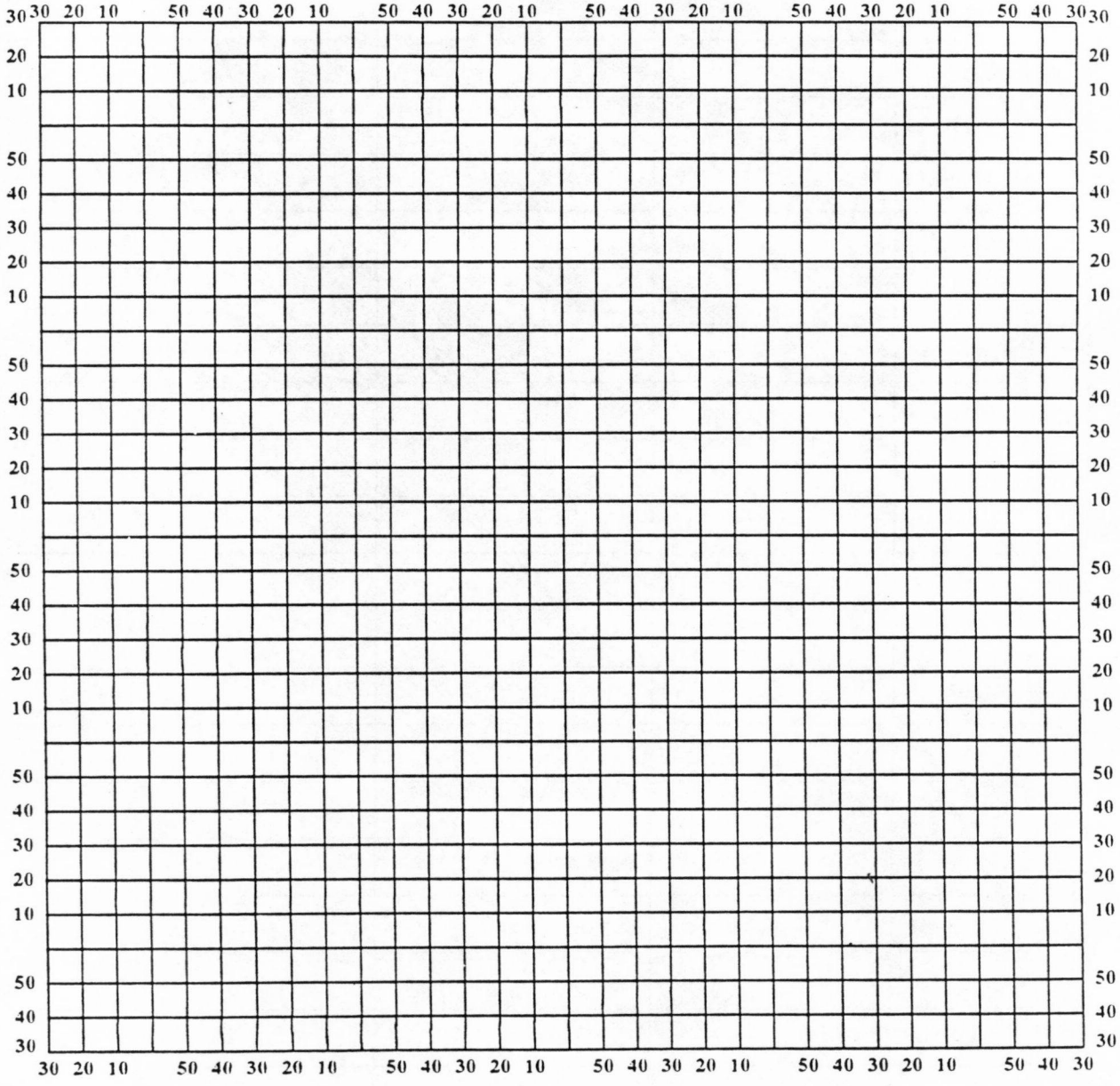
Date _____ Flight 890805H LPS Marks

Time	Event	Position	Comments
1847	PRE17	65kt	
1918			sharp wind shift
			at sfc 070° to 360° in
			in < 1 min
1922			wind back to 030 at sfc
1925	mistake on drop log		250 should have
	from 210 – swell		from 120°

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.

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800

1400
to
400

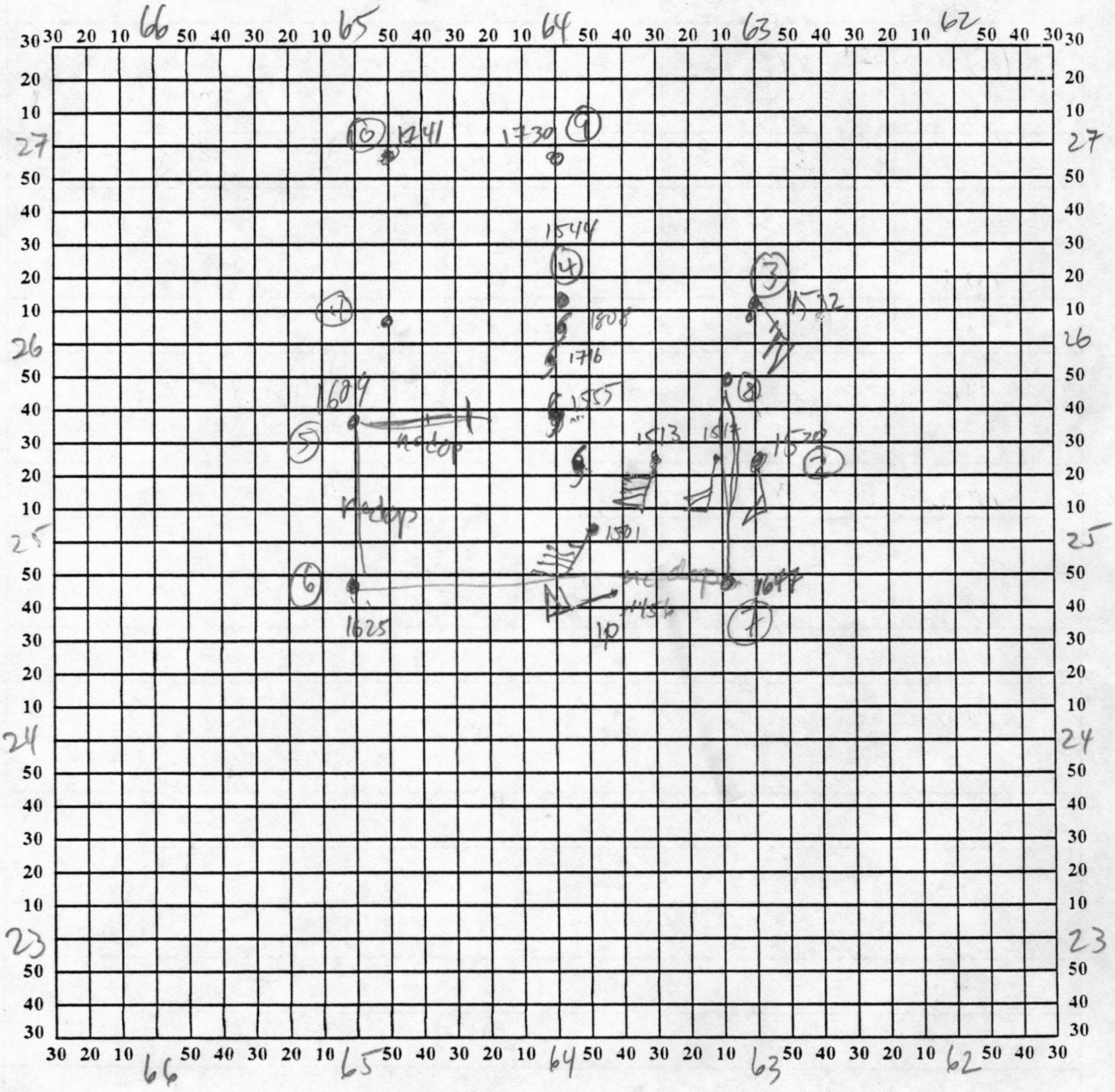
1.414
50
707.00

(1)

Hurricane Recco Plotting Chart

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

Date 8/5/89 Longitude 890805H1 Observer Marks
Dean



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

~~100~~
200

270

Form E-2
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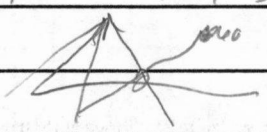
(3)

Lead Project Scientist Event Log

Date 8/5/89 Flight 890805H1 LPS Mahoney

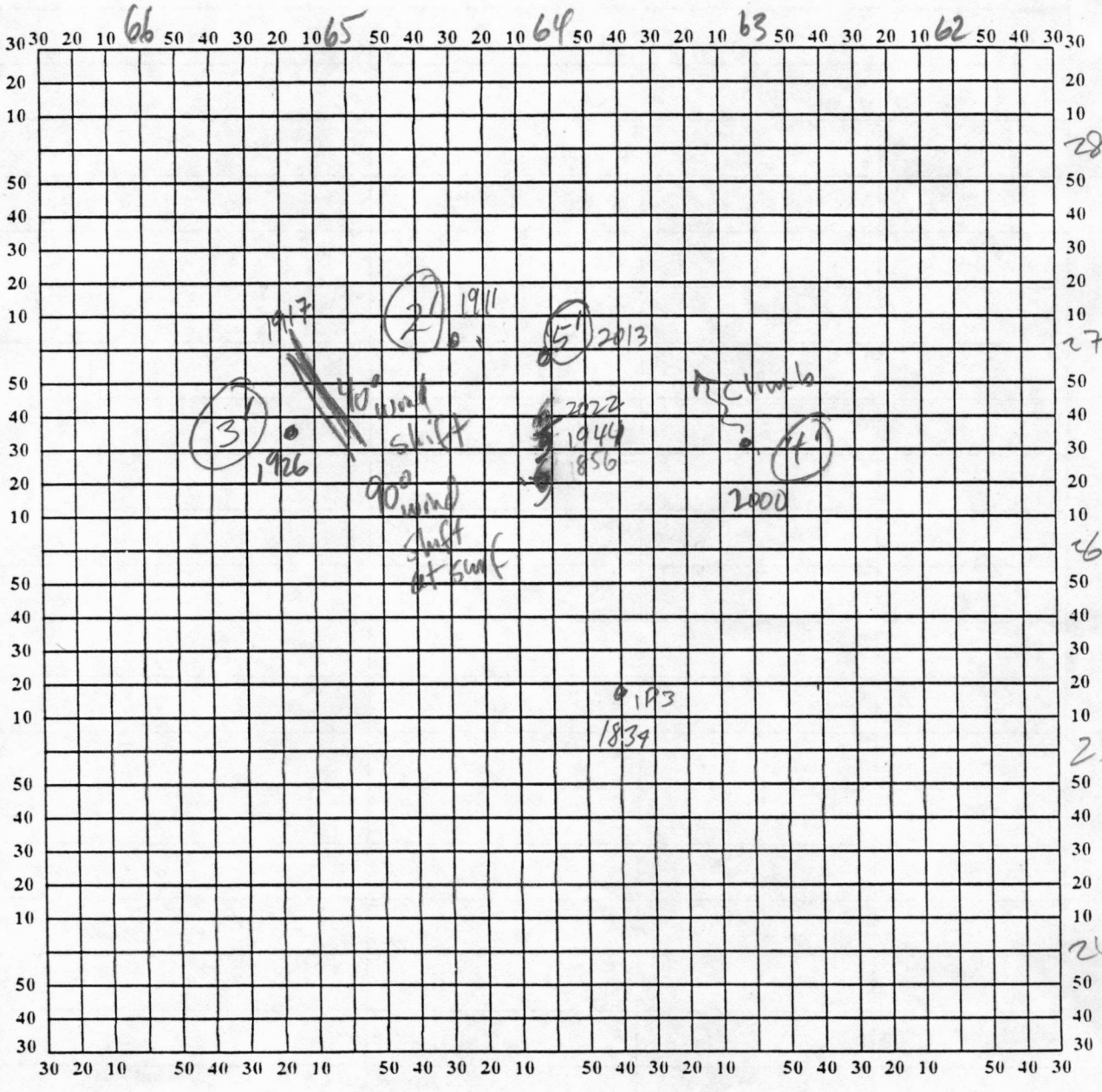
Time	Event	Position	Comments
1837 IP3	25° 19"	63° 30"	1.5kft turn Hc 330° to 6 Fig 4
1838	BT 1		
	BT 2		
	BT 3		
1856	5	26° 21.6" 64° 2.9"	
1911	(2')	27 4.4" 64° 29"	turn tk 240°
1926	(3')	26° 38" 65° 17"	turn tk 060°
1944	4	26° 33" 64° 4"	
2000	(4')	26° 31 63° 06"	climb to 20 kft
			turn TK 315°
2013	(5')	26° 57" 64° 04"	
2022	6	26° 40" 64° 04"	circle in eye 2018
2023			head for home TK 210°

(2)

Hurricane Recco Plotting Chart

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

Date 8/5/89 Longitude 890805#1 Dean Observer Marks



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

Form E-2

(3)

Lead Project Scientist Event Log

Date 8/5/89 Flight 890805H1 LPS Marks

Dean

Time	Event	Position	Comments