

19830817I2-LPS

E.1 Lead Project Scientist (On-Board)

The on-board lead project scientist is responsible for carrying out the scientific mission of his assigned aircraft. (Check off and initial when completed.)

E.1.1 Preflight

- HW 1. Participate in general mission briefing.
- HW 2. Determine specific mission and flight pattern(s) for his aircraft.
- HW 3. Determine from CARCAH or field program director whether aircraft has operational fix responsibility and discuss with RFC flight director/meteorologist and CARCAH, unless briefed otherwise by field program director.
- HW 4. Contact NHRL members of crew to:
 - a. Assure availability for mission.
 - b. Arrange ground transportation schedule when deployed.
 - c. Determine equipment status.
- HW 5. Meet with RFC flight crew 90 minutes before takeoff, provide copies of flight plans and give a formal briefing to the flight director, navigator, and pilots.
- HW 6. Report status of aircraft, systems and crews to appropriate NHRL operations center.

E.1.2 In-Flight

- HW 1. Confirm from RFC flight director/meteorologist that satellite data link is operative (information).
- HW 2. Confirm camera mode of operation.
- HW 3. Confirm data recording rate.

- 94-579180-8
- HH 4. Discuss flight pattern and possible changes to the flight pattern directly with the flight director. Proper in-flight coordination between the lead project scientist, the flight director, the pilots and the navigator, may permit the lead project scientist to specify in flight the end of one pattern leg and the beginning of the next leg.
 - HH 5. Accomplish the true airspeed calibration pattern en route to or from the storm.
 - HH 6. Complete all form E-1 checklists.

E.1.3 Postflight

1. Debrief crew.
2. Gather completed forms for mission and turn in at the operations center.
3. Contact the local NHRL ground operations center before leaving the aircraft area, if possible. Report landing time, aircraft, crew and mission status to NHRL operations center. Transmit any important messages to all NHRL participants.
4. Determine next mission status, if any, and brief crews as necessary.
5. Notify operations center as to where you can be contacted.

On-board Lead Project Scientist Checklist

DATE 17 AUG 83 AIRCRAFT N143DF FLT 83081712

A. Participants

<u>Function</u>	<u>Participant</u>	<u>Function</u>	<u>Participant</u>
Lead Proj. Sci.	<u>WILLOUGHBY</u>	Gust Probe	_____
Cloud Physics	<u>BOGERT</u>	Omegasonde	_____
AXBT	_____	Sys Eng	_____
Hot Film	_____	Data Tech	_____
Radar	_____	El Tech	<u>DURANARCI</u>
Flt Dir/Met	<u>PARRISH</u>	Other	<u>JATHALL (PHOTO)</u> <u>ZIPSEIZ</u>
Take Off <u>171944Z</u>	Location <u>NOR</u>	Landing	Location

B. Past and Forecast Storm Position

<u>Date</u>	<u>Time</u>	<u>Latitude</u>	<u>Longitude</u>	<u>MSLP</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

C. Mission Briefing

VORTEX DYNAMICS FLY PATTERN I AS
MUCH AS POSSIBLE GET 2100, 00, 03 FIXES
150 km LEGS ON I

D. Equipment Status

<u>Equipment</u>	<u>Pre Flt</u>	<u>In Flt</u>	<u>Post Flt</u>	<u>Reports Collected</u>
Aircraft	↑	↑	↑	_____
Radar	↑	↑	↑ *	_____
Cloud Physics	↑	↑	↑	_____
Data Sys	↑	↑	↑	_____
Omegasondes	NOB	_____	_____	_____
AXBT	NOB	_____	_____	_____
Gust Probe	NOB	_____	_____	_____
Hot Film	NOB	_____	_____	_____
Photography	↑	↑	↑	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

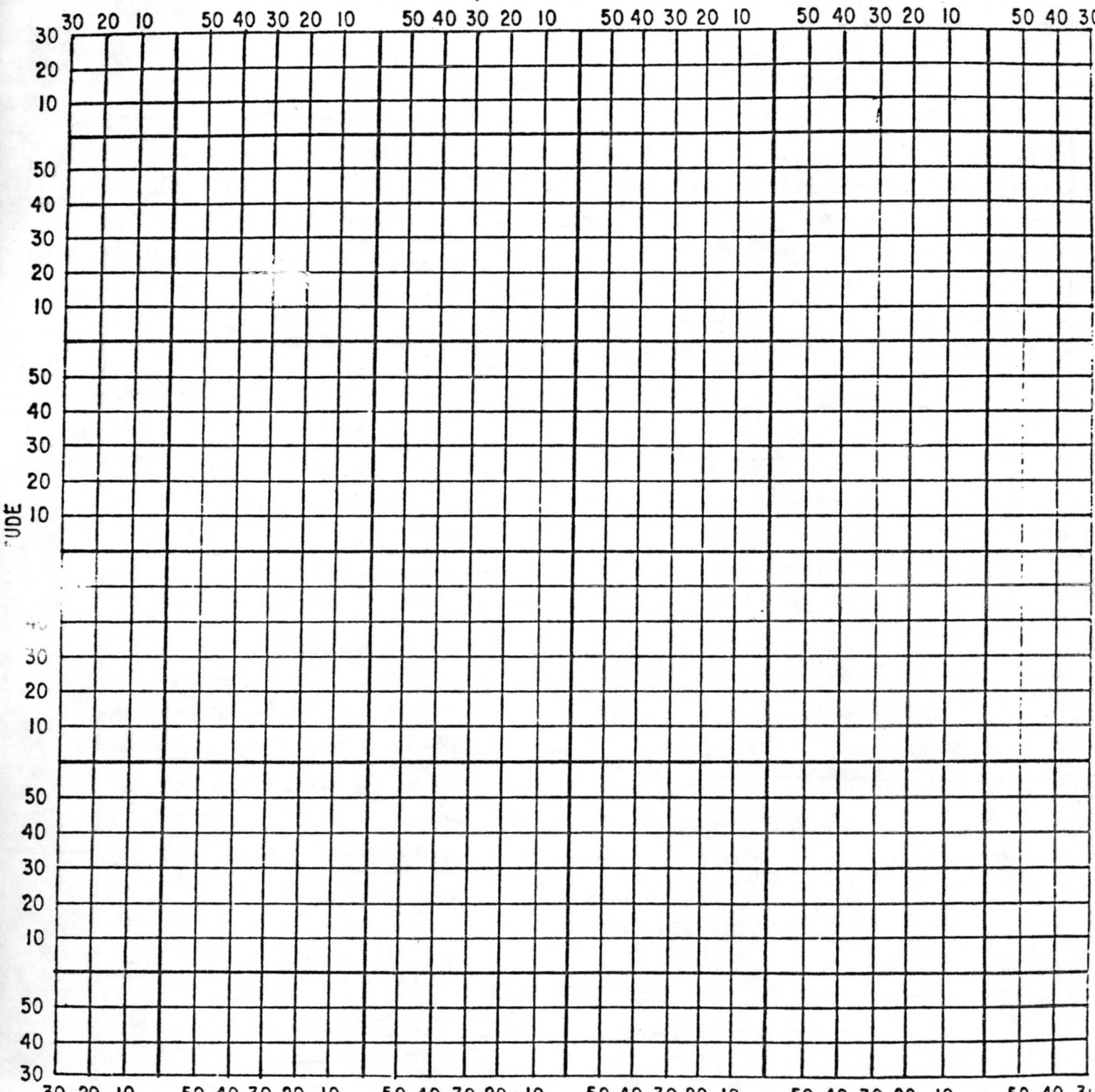
REMARKS AT 2238 NOTED TIME ON RADAR IS 10 MIN BEHIND TIME ON DATA SYS
 AT 2303 NOTED TIMES ON RADAR ARE JUST PLAIN BAD (IE > 1 hr IN ERROR)
 EXTENDED LEG TO PASS OUTER BAND
 AT 170148 ADC ↓ BACK ↑ AT 0148

* NATURE OF PROBLEM WITH RADAR TIME:
 NONE OF THE DIGITS ARE ODD IE # MAY BE EITHER 4 OR 5. THUS ANY ACTUAL TIME THAT IS ALL EVEN DIGITS IS OK, BUT ANY ACTUAL TIME WITH ODD DIGITS WILL HAVE SAID DIGITS CONVERTED TO THE NEXT SMALLER EVEN DIGIT.

E. Proposed and Actual Flight Patterns

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

DATE 17 AUG 83

FLIGHT 830817E2

LPS WILLOUGHBY

Lead Project Scientist Event Log

28.13° 94 40

EVENT	TIME*	POSITION	COMMENTS**
T.O.	171944	NOR	
	2030		RAINBAND 30 NMI AHEAD WND 151/22
CENTER	2100z	28.2 94.6	TK 270 FROM G 28.2 94.6
TURN 115	2124		TURN 115
TURN 360	2148	26.98 94.67	TURN 360
G	2208	28.20 - 94.60	TRACK 360 FROM G
	2228	28.24 94.65	TRACKING ← 150 → G
G	2238	28.25 94.65	MIN SLP 969 NOTED TIME ON LF RADAR 2228
	2312	26.31 93.30	TURN PARALLEL TO BAND ON OUTSIDE
	2326	27.24 92.74	TURN ACROSS BAND HEAD FOR NEXT POINT
	2350	28.33 93.10 ~	TURN FOR G
G	0010	28.35 94.66	G 968 mb 44 m/s
	0019		HEADING OUT 45+ m ON EXIT 15
	0040	27.53 95.90	TURN 130
	0050		TURN 025 BACK TO G
G	0109	28.37 94.70	TRACK 033 OUT
	0120	29.38 93.92	TRACK 239 PARALLEL TO COAST
	0150	28.40 94.77	TRACK TOWARD G
G	0154	28.40 94.77	MIN SLP 967 EXIT 137
			TRACK 024

315T →
300
18
151 N
28 W →

*Log times of all significant altitude changes, turns, and eye fixes
**New altitude, heading, center position, etc.

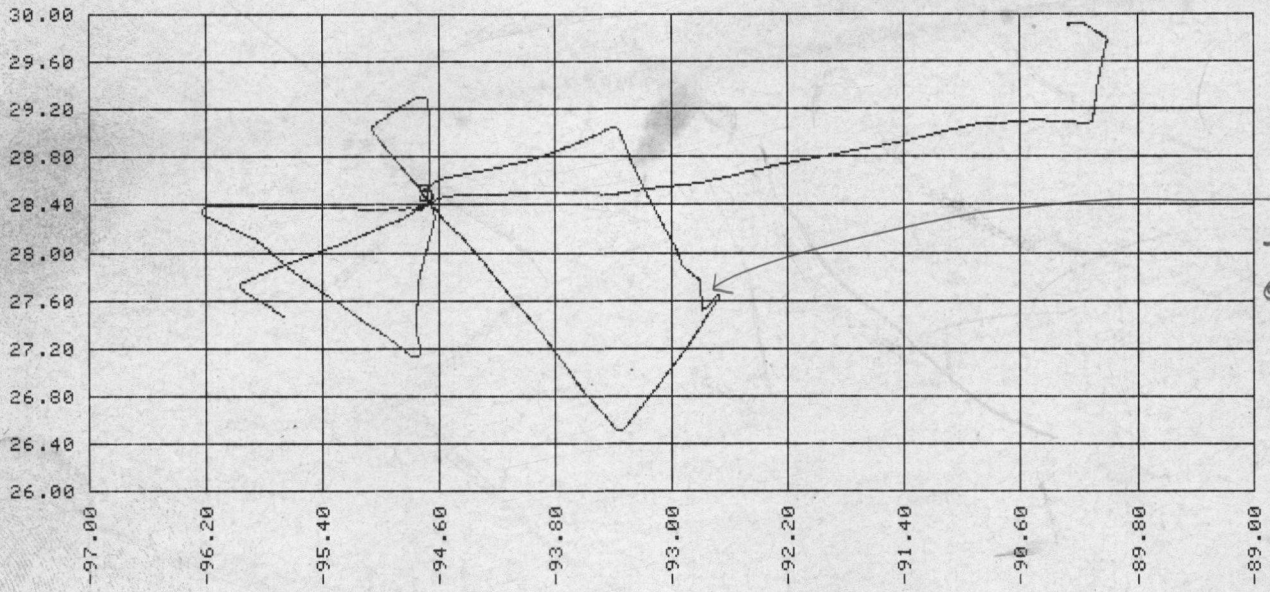
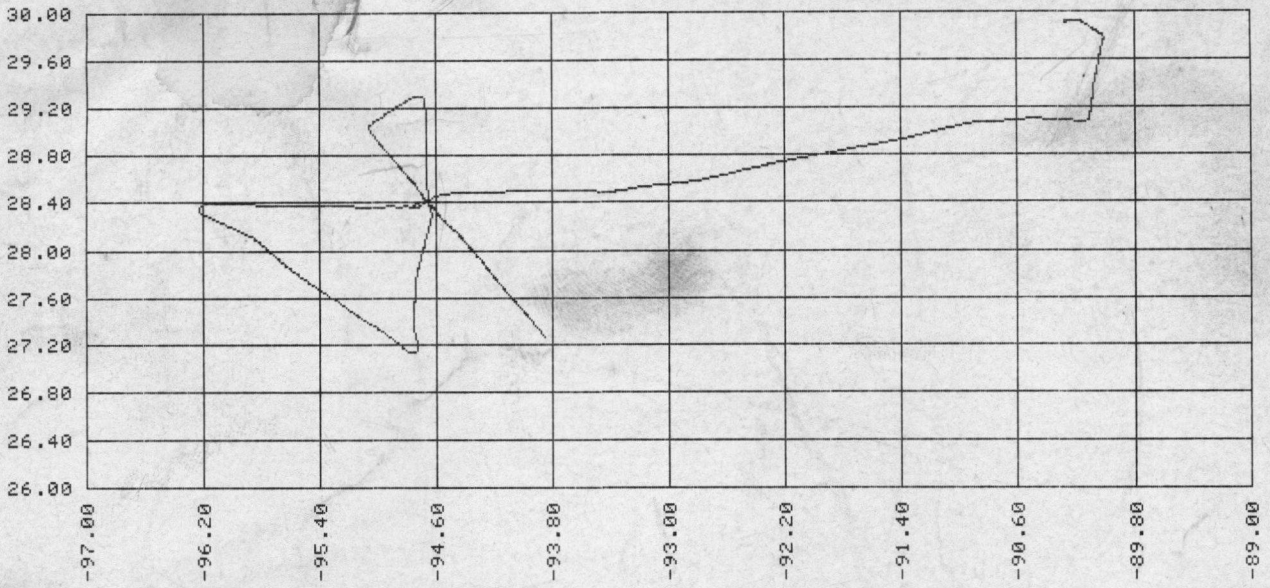
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318/

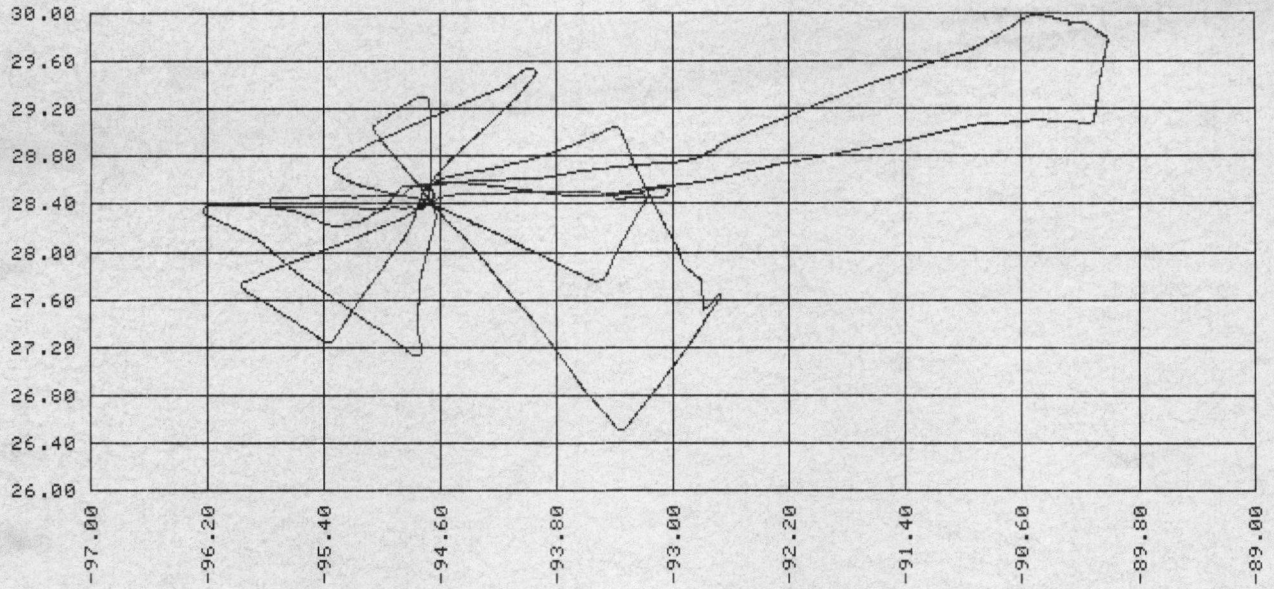
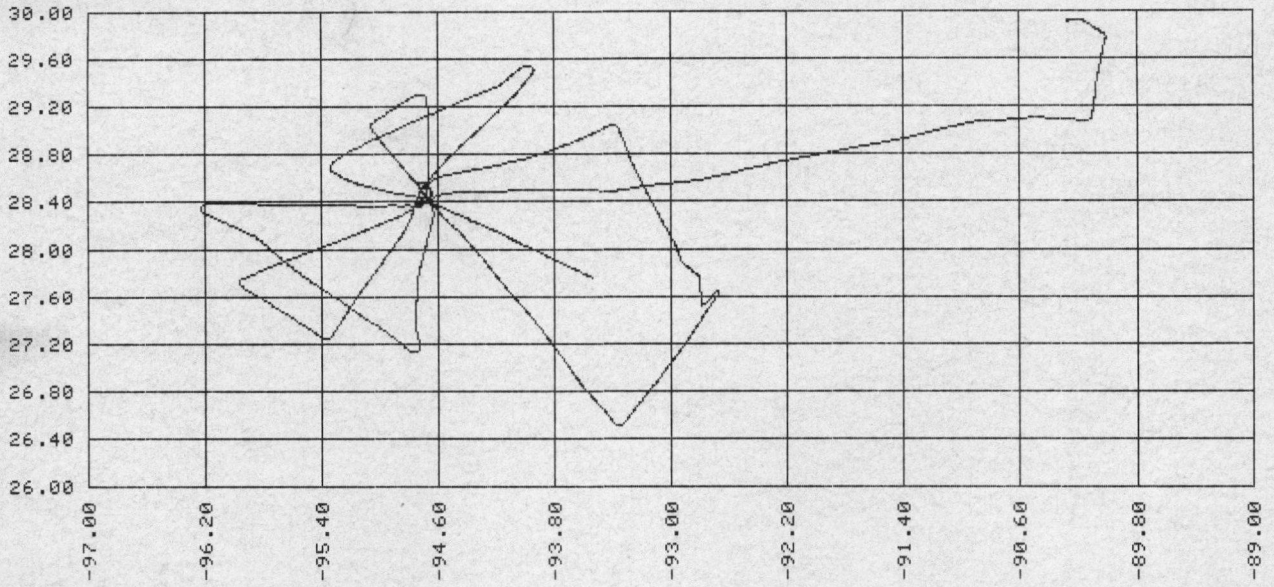
LPS EVENT LOG CONT.

EVENT	TIME	POSITION	COMMENT
TURN	0226		ORBITING →
TURN	0239		TRACK 270 →
TURN	0259	28.47 94.84	TRACK 270 → SLP 966
TURN	0312	27 4	TRACK 120
TURN	0309		TRACK 052 →
	~0328	28.49 94.88	TRACK 080 → NOR 966
	0355		CLIMB TO 9000'
LANDING	0434	NOIC 29.91N 90.26W	

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830817IZ



28.50

28.40

28.30

28.20

28.10

272650 265930

255445

250905

240935

241715

223710

210120

220820

.90 10x10 TO THE INCH .85

.80

.75

.70

.65

.60

.55

