

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

- Hb 1. Participate in general mission briefing.
- Hb 2. Determine specific mission and flight pattern(s) for his aircraft.
- Hb 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.
- Hb 4. Contact NHRL members of crew to:
 - a. Assure availability for mission.
 - b. Arrange ground transportation schedule when deployed.
 - c. Determine equipment status.
- Hb 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.
- 6. Report status of aircraft, systems and crews to appropriate NHRL operations center.

E.1.2 In-Flight

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



- _____ 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.
- _____ 5. Accomplish the true airspeed calibration pattern en route to or from the storm.
- _____ 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 15 AUG 85 AIRCRAFT N422F FLT 850815H

A. Participants

Function	Participant	Function	Participant
Lead Proj. Sci.	<u>WILLOUGHBY</u>	Gust Probe	<u> </u>
Cloud Physics	<u>WILLIS</u>	Omegasonde	<u> </u>
AXBT	<u> </u>	Sys Eng	<u> </u>
Hot Film	<u> </u>	Data Tech	<u> </u>
Radar	<u>MARKS LORD</u>	EI Tech	<u> </u>
Flt Dir/Met	<u>DAIRISH</u>	Other RADIO	<u>ZYKCO</u>

Take Off 15/0345 Location MIA Landing 15/1335 Location MIA

B. Past and Forecast Storm Position

Date	Time	Latitude	Longitude	MSLP
<u>15/06</u>	<u> </u>	<u>27</u>	<u>92</u>	<u>995</u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
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C. Mission Briefing

FLY ROTATING FOUR 3 COMPLETE
PATTERNS.

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				
Gust Probe				
Hot Film				
Photography	↓			

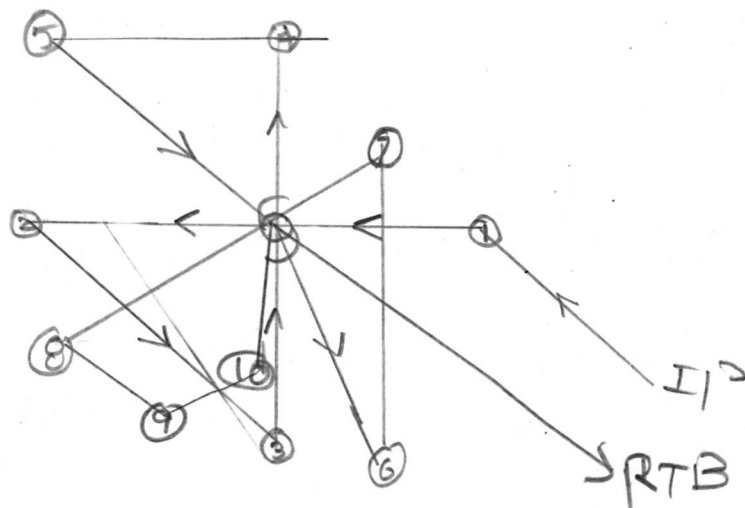
REMARKS

HAD INTERMITTANT BAD DYNAMIC PRESSURE
WHICH LED TO BAD WINDS.

LOGGED POSITIONS ~ 10 MI IN OF
ACTUAL

E. Proposed and Actual Flight Patterns

ROTATING FOUR



LESS TO N AND HE LIMITED
BY PROXIMITY TO LAND

HURRICANE RECCO PLOTTING CHART

TRUE AT 25° LATITUDE, IN DEGREES AND MINUTES OF ϕ AND λ

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DATE _____ LONGITUDE _____ OBSERVER _____

NOTE: Label full degrees according to location of flight area



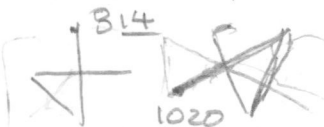
724
50
14

DATE 15 AUG 85

FLIGHT 850815H

LPS WILLOUGHBY

Lead Project Scientist Event Log



EVENT	TIME*	POSITION	COMMENTS**
T/O	15/0345	MIA	
STORM GUN RADAR	0524	27.01 88.34	DESCENT STARTS
REAL FIX COORDS	0531		28-92 - COORDS 052 FIX
IP	0535	27.33 89.22	AT 5000' RADAR ALT.
TURN ①	0545	27.44 89.68	270 → 6
①	0627	28-12 92.08	TRAK 6 → 270 993 MB
TURN ②	0652	28-13 93.97	TURN → 125 DIAGONAL OF FIRST FOUR
TURN ③	0724	26.62 92.19	TRAK 360 TO 6
②	0751	28.38 92.37	TRAK 6 → 360 994 MB
TURN ④	0807	29-36 92.41	OUTSIDE TURN TO TRAK 270
TURN ⑤	0831	29-37 94-30	TRAK 116 → 6
③	0858	28.90 92.59	TRAK 6 → 150 991
TURN ⑥	0924	27.53 91.63	TRAK N TO COASTLINE
TURN ⑦	0948	29.43 91.62	TRAK 240 → 6
④	1005	29.03 92.73	TRAK 240 6 → 988
TURN ⑧	1030	28.24 94.32	TRAK 120
TURN ⑨	1039	27.41 93.74	TRAK 082
TURN ⑩	1050	28.00 92.83	TRAK 60 TO 6
⑤	1106	29.04 92.65	TRAK 110 6 → 989 MB
FINAL POINT	1131	28.48 90.94	CLIMB
LAND	1335	MIA	

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