

19840911I1-LPS

On-board Lead Project Scientist Checklist

DATE 11 SEPT 1984 AIRCRAFT NOAA 43 FLT 840911I1

A. Participants Hurricane Diana

Function	Participant	Function	Participant
Lead Proj. Sci.	<u>BURPEE</u>	Gust Probe	<u>N.A.</u>
Cloud Physics	<u>R. BLACK</u>	Omegasonde	<u>N.A.</u>
AXBT	<u>N.A.</u>	Sys Eng	<u>SCHRICKE</u>
Hot Film	<u>N.A.</u>	Data Tech	<u>GOLDSTEIN</u>
Radar	<u>R. BLACK/TATNALL</u>	EI Tech	<u>CALVERT</u>
Flt Dir/Met	<u>DARBY</u>	Other	

Take Off 0106Z Location MIAMI Landing 1014Z Location MIAMI

B. Past and Forecast Storm Position

Date	Time	Latitude	Longitude	MSLP
<u>840910</u>	<u>1452Z</u>	<u>30° 37'</u>	<u>79° 44'</u>	<u>991</u>
	<u>1700Z</u>	<u>30° 37'</u>	<u>79° 37'</u>	<u>986</u>
	<u>2015Z</u>	<u>31° 02'</u>	<u>79° 23'</u>	<u>983</u>
	<u>~0000Z</u>	<u>31° 16'</u>	<u>79° 12'</u>	<u>977</u>

positions of wind center during the flight are in the event log

C. Mission Briefing

rotating 4 at 5000 ft, modified as necessary for
closeness to land, TAS calibration enroute to storm

D. Equipment Status

<u>Equipment</u>	<u>Pre Flt</u>	<u>In Flt</u>	<u>Post Flt</u>	<u>Reports Collected</u>
Aircraft	✓	✓	✓	
Radar	✓	* DOWN MOST OF FLIGHT		✓
Cloud Physics	✓	N.A.	✓	
Data Sys	✓	✓	✓	
Omegasondes	N.A.			
AXBT	N.A.			
Gust Probe	N.A.			
Hot Film	N.A.			
Photography	NIGHT FLIGHT			
<u>DOPPLER</u>	✓	✓	✓	✓

REMARKS

- * lower fuselage radar not working after takeoff until ~ 0230Z
intermittent problems until unit replaced at 0450Z
data system down for about 2 mins ~ 0515Z
- * lower fuselage radar inoperative for almost all of the flight.
tail radar recorded every sweep.

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

- ✓ 1. Participate in general mission briefing.
- ✓ 2. Determine specific mission and flight pattern(s) for his aircraft.
- ✓ 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.
- ✓ 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 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 HRD operations center.

E.1.2 In-Flight

- ✓ 1. Confirm from RFC flight director/meteorologist that satellite data link is operative (information).
- N.A. 2. Confirm camera mode of operation. *NIGHT FLIGHT*
- ✓ 3. Confirm data recording rate.
- ✓ 4. Complete form E-1.

E. Proposed and Actual Flight Patterns

*see the attached copy of pattern from the field
program plan.*

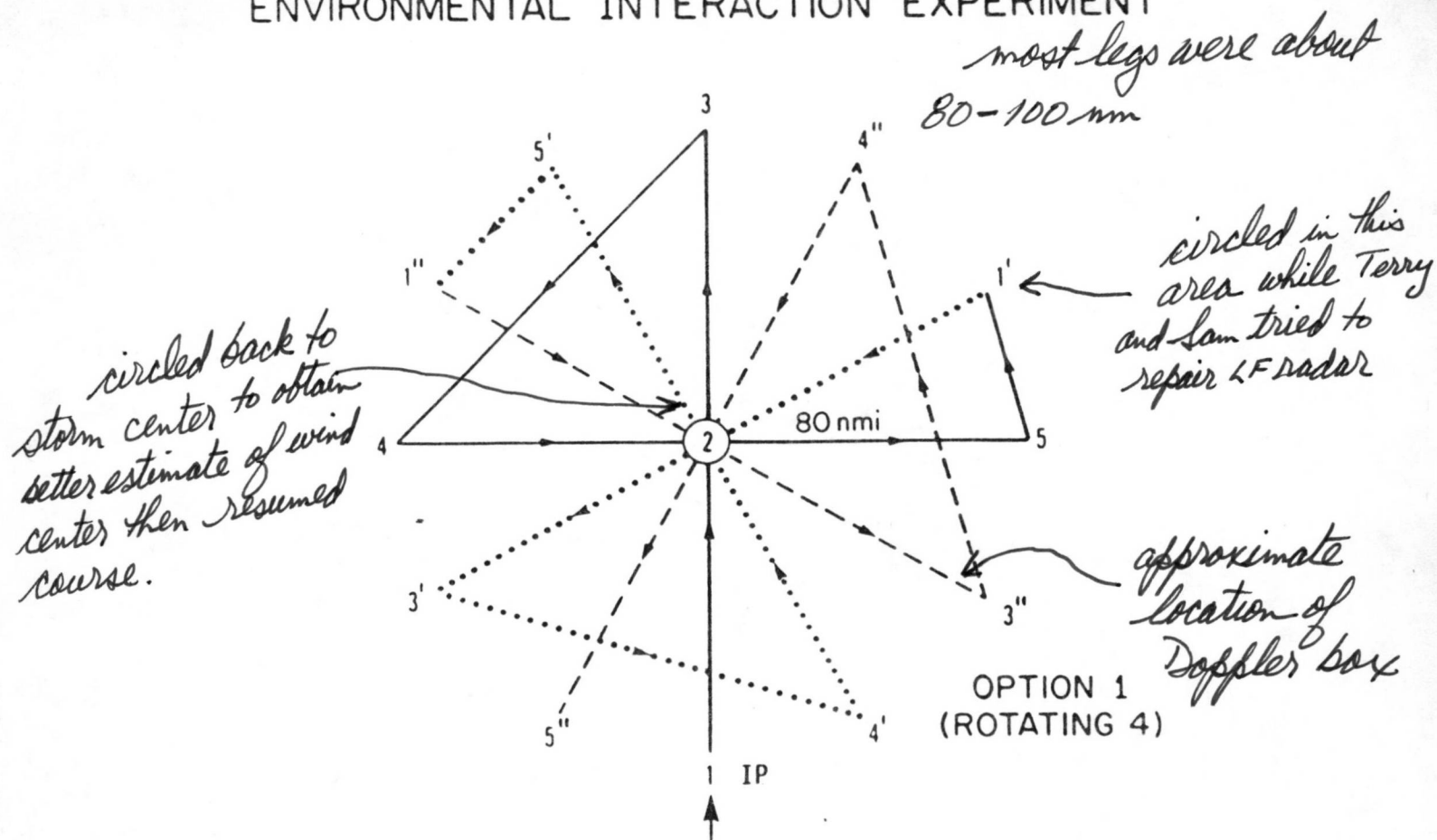
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NOAA 43

840911I1

Burpee

VORTEX DYNAMICS and ENVIRONMENTAL INTERACTION EXPERIMENT



OA0 Aircraft	Fly 1-2-3-4-2-5	(at 5 or 10,000 ft.)
#1 & 2	Fly 1'-2-3'-4'-2-5'	(at 5 or 10,000 ft.)
	Fly 1''-2-3''-4''-2-5''	(at 5 or 10,000 ft.)
Note 1:	Aircraft should be at assigned altitude upon reaching IP and should maintain same while in pattern.	
Note 2:	True airspeed calibration is required en route to and from storm (fig. C-1).	
Note 3:	Pattern may be reoriented as required.	
Note 4:	Aircraft should attempt a wind center fix each pass, but not "hunt" unless otherwise directed.	

Figure 3.311. Flight pattern for Vortex Evolution Investigation (Option 1).

E.1.3 Postflight

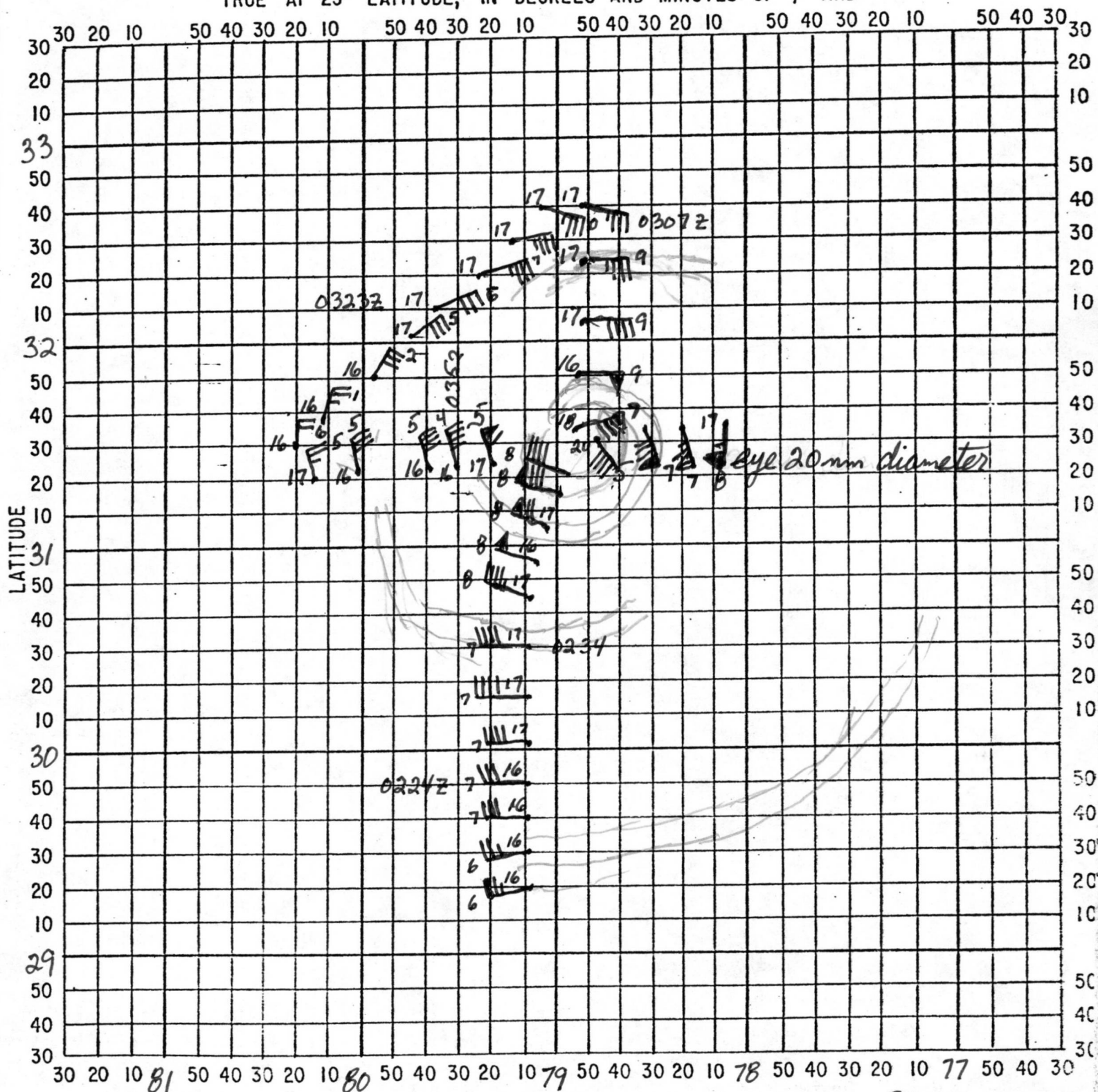
- ☒ 1. Debrief crew.
- ☒ 2. Report landing time, aircraft, crew and mission status to HRD operations center.
- ☒ 3. Gather completed forms for mission and turn in at the operations center.
- ☒ 4. Determine next mission status, if any, and brief crews as necessary.
- ☒ 5. Notify operations center as to where you can be contacted.

*Approximate position
of major rainbands shown
in pencil*

1 of 3

HURRICANE RECCO PLOTTING CHART

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



DATE 840911 014

LONGITUDE

OBSERVER Burpee

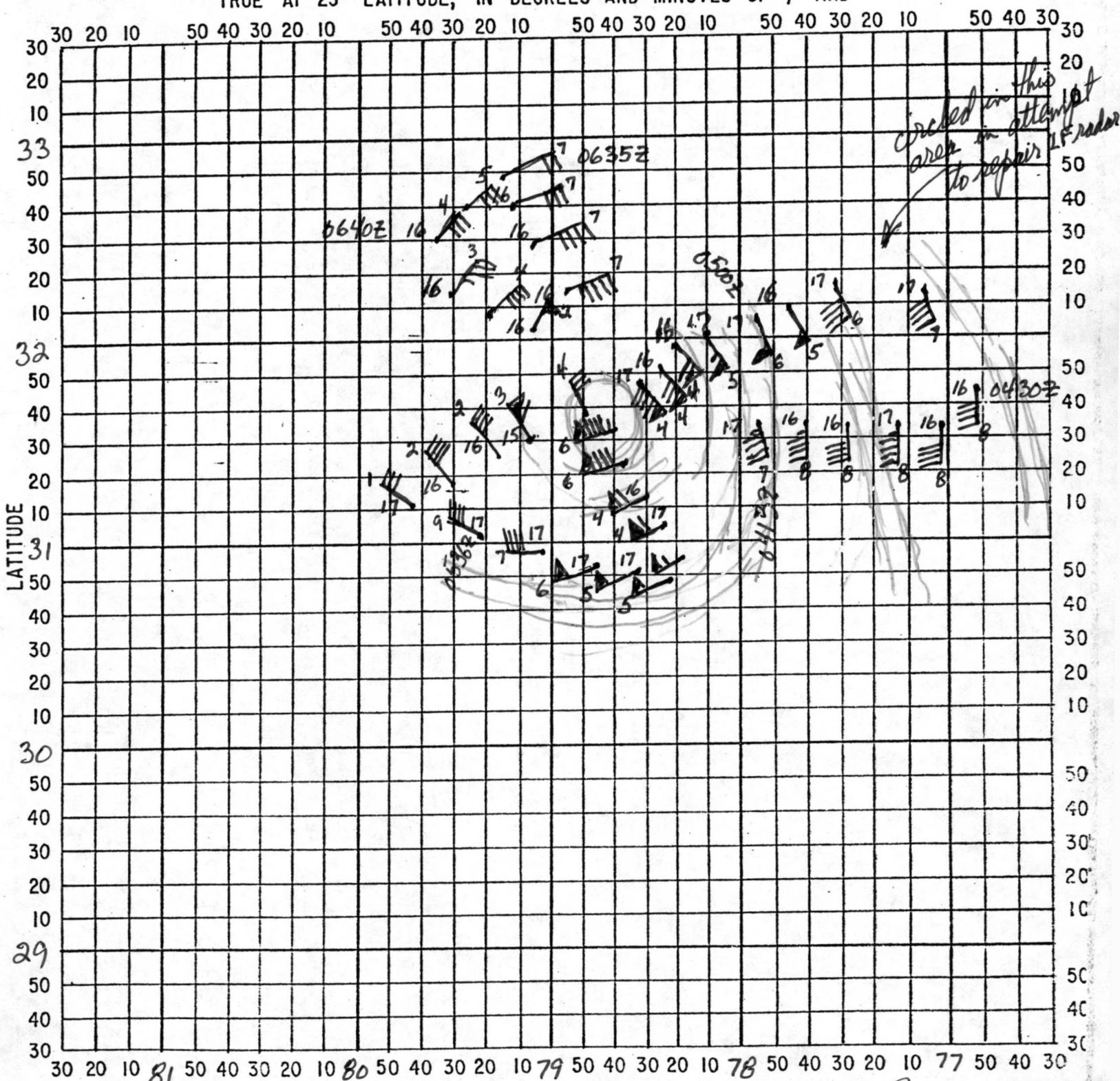
NOTE: Label full degrees according to location of flight area

04022 2577 7370 25400 7370 7370

2 of 3

HURRICANE RECCO PLOTTING CHART

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



DATE 840911I1

LONGITUDE

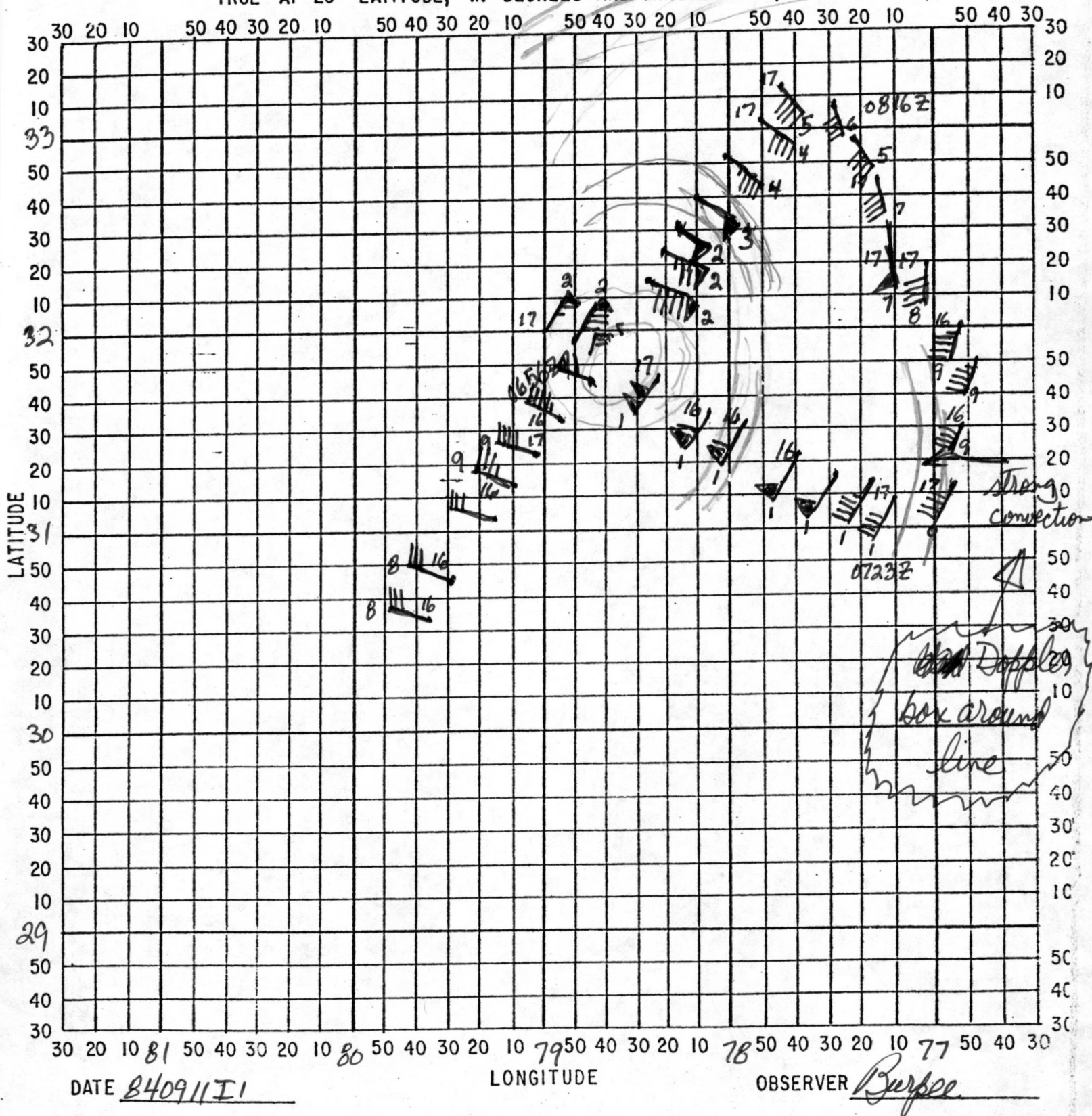
OBSERVER Burpee

NOTE: Label full degrees according to location of flight area

084225 065 067 971 30/3
32.13 16.52 21.9 13.65

HURRICANE RECCO PLOTTING CHART

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



NOTE: Label full degrees according to location of flight area

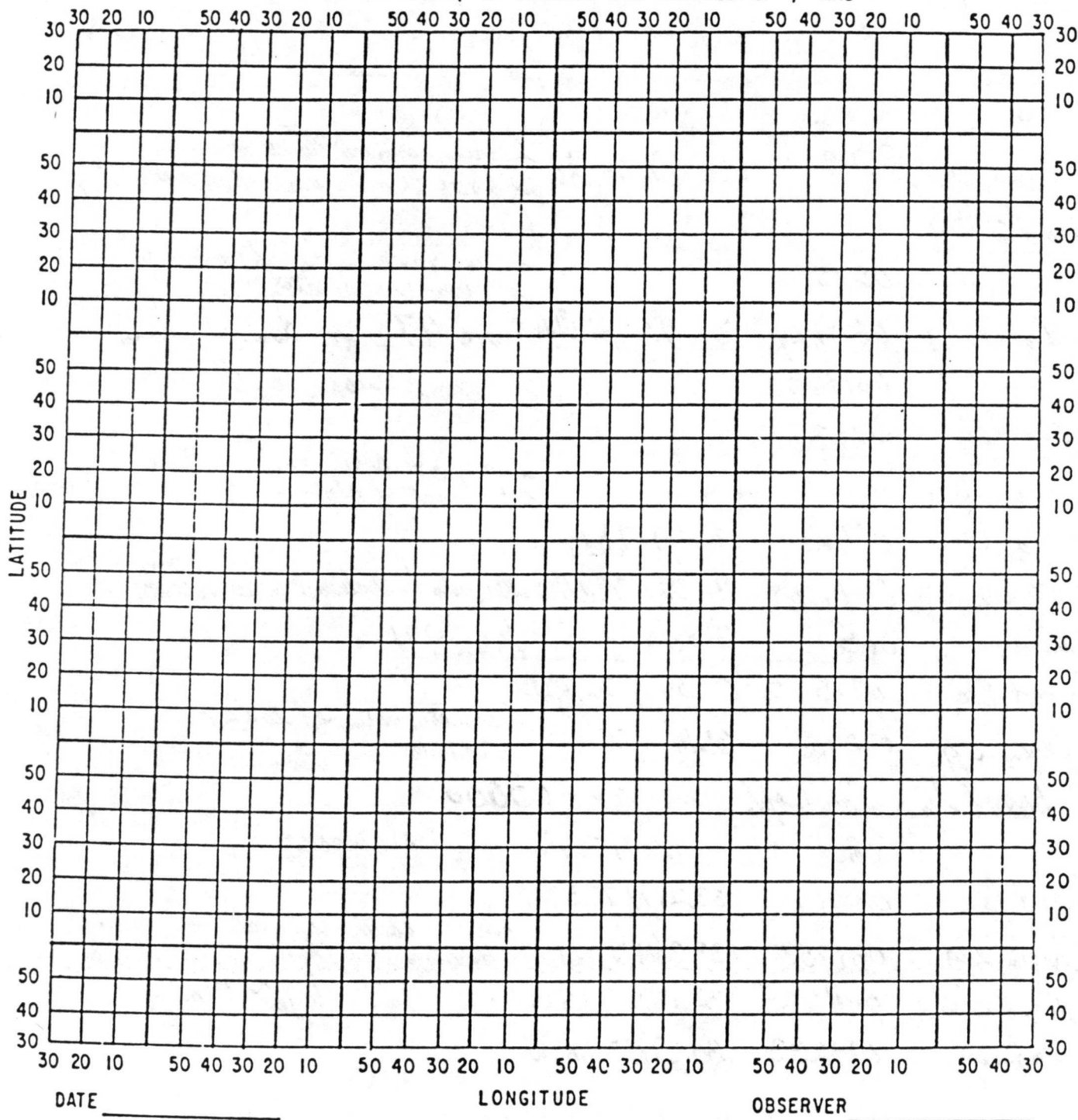
HURRICANE RECCO PLOTTING CHART

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

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



NOTE: Lobe: full degrees according to location of flight area

DATE 11 Sept. 1984

FLIGHT B40911I1

LPS Burpee

Lead Project Scientist Event Log

begin

EVENT	TIME*	POSITION	COMMENTS**
TAS calibration	014700	~27.51°N 78.68°W	calibration enroute 5000ft
end TAS calibration	015640	27.96°N 78.68°W	
begin leg	020300		heading north through storm center to point ~ 80 nm to north
wind center	~024900	31.42°N 78.92°W	pmin 977mb eye 20 nm diameter
end leg	030930	32.78°N 78.88°W	
begin leg	031100	32.80°N 78.97°W	heading southwest to position ~ 80 nm to west of storm center
end leg	~033620		
begin leg	~033840	~31.33°N 80.40°W	heading east through storm center to about 100 nm east of center
wind center	~0359	31.50°N 78.86°W	pmin 977mb d _{eye} ~ 20 nm
end leg	042700	31.56°N 76.87°W	
begin leg	~0428	31.64°N 76.85°W	heading north, northwest then northeast side of storm
end leg	043822	32.36°N 77.15	
begin leg	044000		circle between bands while Terry Schriker tries to repair
end	045025	32.40°N 77.32°N	lower fuselage radar
begin leg	045025	32.40°N 77.32°N	heading southwest through center to point
wind center	051400	31.65°N 78.80°W	pmin 974mb d _{eye} ~ 15 nm
end leg	052940	31.15°N 79.81°W	
begin leg	053045	31.10°N 79.78°W	heading east southeast to position about 60 nm southeast of center
	054747	30.81°N 78.30°W	

*Log times of all significant altitude changes, turns, and eye fixes

**New altitude, heading, center position, etc.

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LPS Burpee

Lead Project Scientist Event Log

EVENT	TIME*	POSITION	COMMENTS**
begin leg	054920	30.88°N 78.28°W	heading north northwest through center to 80 mm north northwest of center
wind center			
	061020		return to center to improve fix position, navigator error
wind center	0617XX	31.79°N 78.70°W	Pmin 973 day ~15 mm
	061940		resume track 330°
end leg	~063500		
begin leg			heading to southwest on northwest of storm
end leg	064200	32.37 79.74	
begin leg	064400	32.32°N 79.66°W	heading to southeast through center
wind center	065	31.88°N 78.65°W	Pmin 971
end leg	072532	31.04°N 76.96°W	
begin leg	072700	31.10' 76.91°W	head north northwest to east of center
boxed line for Doppler	~0738-0800		
	0800	~32.00°N 76.90°W	resume course
end leg	081810	33.29°N 77.57°W	
begin leg	081955	33.30°N 77.66°W	heading south southwest through the center
wind center	084225	33.13°N 78.52°W	Pmin 967 day ~17 mm
end leg	091233	30.53°N 79.63°W	

*Log times of all significant altitude changes, turns, and eye fixes

**New altitude, heading, center position, etc.

