19930930 I 1_ 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.

✓ 3. Determine from CARCAH or field program director whether aircraft has operational fix responsibility and discuss with AOC 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 AOC 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

— 1. Confirm from AOC flight director that satellite data link is operative (information).

— 2. Confirm camera mode of operation.

✓ 3. Confirm data recording rate.

✓ 4. Complete Form E-2.

E.2.3 Postflight

✓ 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 AOC flight director.]

_____ 4. Obtain a copy of the 10-s flight listing from the AOC 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.

Form E-2
Page 1 of 5

On-Board Lead Project Scientist Check List

Date 9/30/93 Aircraft 43RF Flight ID 930930I

A. Participants

HRD		OAO	
Function	Participant	Function	Participant
Lead Proj. Sci.	Willis/Marks	Flight Director	Bogert
Cloud Physics	Black	Pilots	Jennings/Phillips/Berne
Radar	Dodge	Navigator	Kozak
Workstation	—	Sys. Engr.	Boles
Photographer	—	Data Tech.	Honeholt
Omegasonde	Aberson	El. Tech.	Barr
AXBT/AXCP	—	Other	SL Sonde Sean McMillan

Take-Off	Location	Landing	Location
1630/28	MIA	2245	MIA

B. Past and Forecast Storm Locations

Date/Time	Latitude	Longitude	MSLP	Max. Wind

C. Mission Briefing

See Attached — Clouds and Climate

D. Equipment Status

Equipment	Pre-Flight	In-Flight	Post-Flight
Aircraft	✓	✓	
Radar/LF	✓	✓	
Radar/TA (Doppler)	✓	✓	
Cloud physics	✓	✓	
Data system	✓	✓	
Omegasondes	✓	✓	
AXBT/AXCP	—	—	
Workstation	—	—	
Photography	Forward Video	✓	

REMARKS:

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

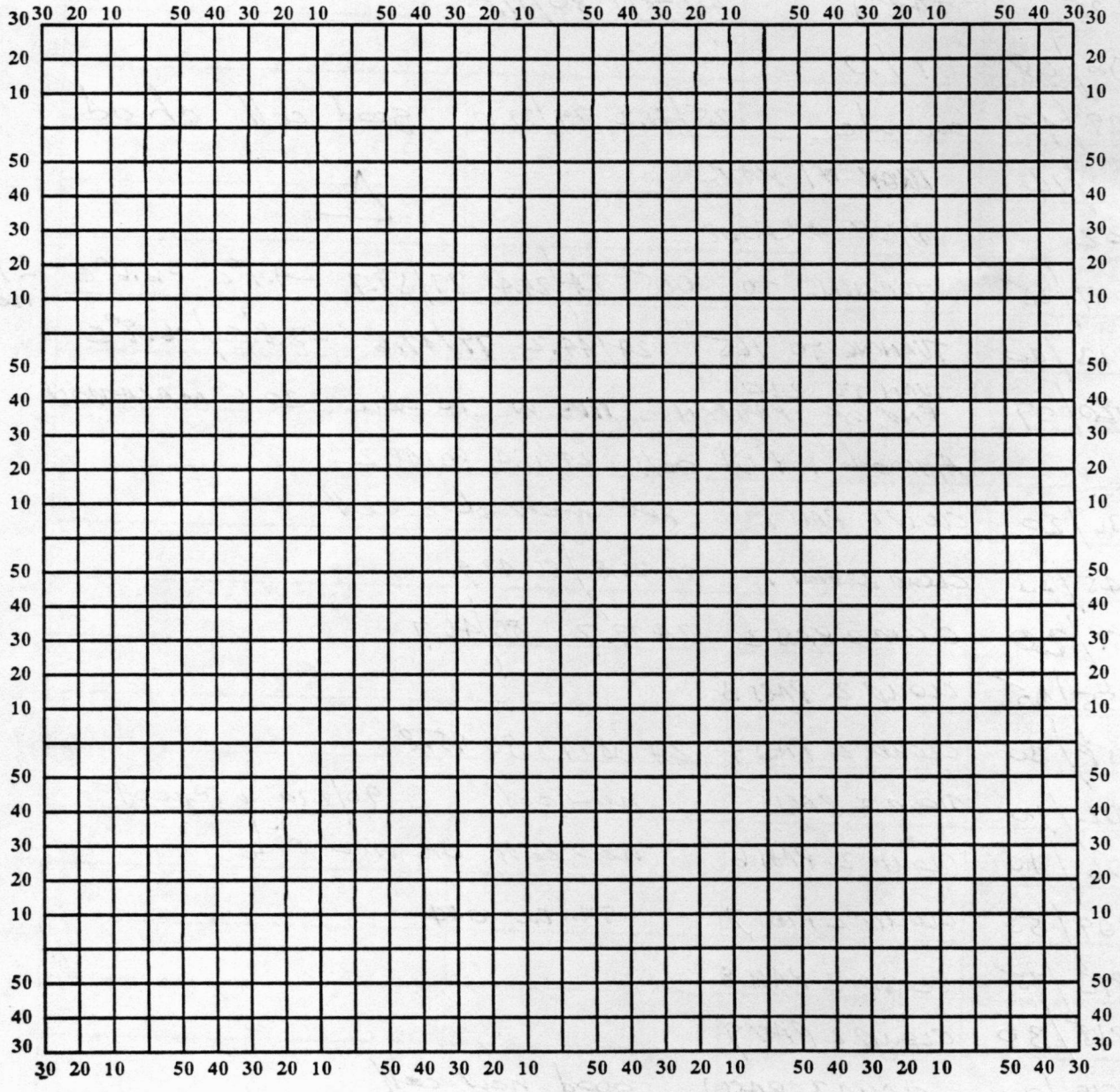
See Attached

E. II. Actual Flight Pattern

Hurricane Recco Plotting Chart

True at 25° Latitude, in Degrees and Minutes

Date _____ Aircraft _____ Observer _____



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

Lead Project Scientist Event Log

Date 9/30/93 Flight 930930I1 LPS Wilhi

Time	Event	Position	Comments
1625	TAXI	25/48.1 80/17.5	
1630/28	T/O		
1639/40	enroute	25/41.2 79/39.0	good cell ahead.
1701/14	DROP #1 PARK		
1702	DROP #LDOD2		Δ
1707/25	TURNING TO	025 24/29.4	79/39.7 -4.4°C -6.6°C mix/ice grp. needles
1713/40	TURNING TO 165	24/44.2 79/47.6	-3.8°C/-6.9°C
1720/09	TURN TO 270 END OF PATTERN	HDG W TO CELL	30 S MARATHON
	Approaching first	cell 24/15.4 80/48.2	
1736/20	CLOUD 1 PASS 1	not much of a cell	
1745/33	CLOUD 2 PASS 1	24 26.8/80 47.9	
1751/20	CLOUD 2 PASS 2	24 39.7 80/46.7	
1755/05	CLOUD 2 PASS 3		
1758/30	CLOUD 2 PASS 4	24 38.1 80 45.8	
1802/10	CLOUD 2 PASS 5	new cell	90/270 + repeat
1806/10	CLOUD 2 PASS 6	new cell on W/W side	
1809/50	CLOUD 2 PASS 7	TRACK OFF	
1813/35	CLOUD 2 PASS 8		
1818/30	CLOUD 2 PASS 9		
1818/20	CLOUD 3 PASS 1	good new	cell
1825/12	CLOUD 3 PASS 2	on rain	side

Lead Project Scientist Event Log

Date 9/30/93 Flight 930930I1 LPS Willis/Marks

Time	Event	Position	Comments
1833/02	CLOUD 3 PASS 3	24/33.2 GPS 80 47.9	HDG 026
1838/10	CLOUD 3 PASS 4	new cell? 24/37.5 80 45.7	will try HDG 238 new cell on UP side
1848/42	CLOUD 3 PASS 5	? 24/36.2 80/42.1	HDG 295
1856/30	CLOUD 3 PASS 6		HDG 226
1903/15	CLOUD 3 PASS 7	24 34.4 80 46	DISSIPATED ? CLIMBING TO 175
	SONDE #2	NO WINDS	
1950/50	HDG 074	24/33.5 80/43.0	in lots of ice looking for cells
2030/15	CLOUD 4 PASS 1	23 46.5 78 6.6	HDG 189
2035/00	CLOUD 4 PASS 2	23 38.5 78/9.5	under cell w/ pilots cap E OF W
	~~CLOUD 4 PASS 3~~	radar problem	staying out.
2049/43	radar back	up?, no maybe	not still staying out
2102/15	~~CLOUD 4 PASS 3~~	orbiting, waiting for radar	
	will go with just 2		
2112/XX	CLOUD 5 PASS 1	23/49.7 78/17.3	S–N guide 4 ways above my
2122/25	CLOUD 5 PASS 2	23 57.2 78/19.9	chopping S side of dead cloud well to east
2128/??	CLOUD 4? PASS 3	23/46.4 78/12.1	way to right.
2129/18	CLOUD 4 PASS 4	23/36.0 78/11.7	
2134/45	CLOUD 4 PASS 5	23/38.2 78/14.7	will go thru center of new
2136/33	2nd cell	lightning hit	radar echo PMS all
2150	PMS BACK UP		
2153/56	CLOUD 6 PASS 1	23 50.1 78/11.1	
2157/40	CLOUD 7 PASS 1	23 39.8 78/5.8	
2206/40	SL SONDE DROP - NW OF CLOUD GROUND		
2245/00	Landed Miami.		

Form E-2

Lead Project Scientist Event Log

Date ____________ Flight ____________ LPS ____________

Time	Event	Position	Comments

Lead Project Scientist Event Log

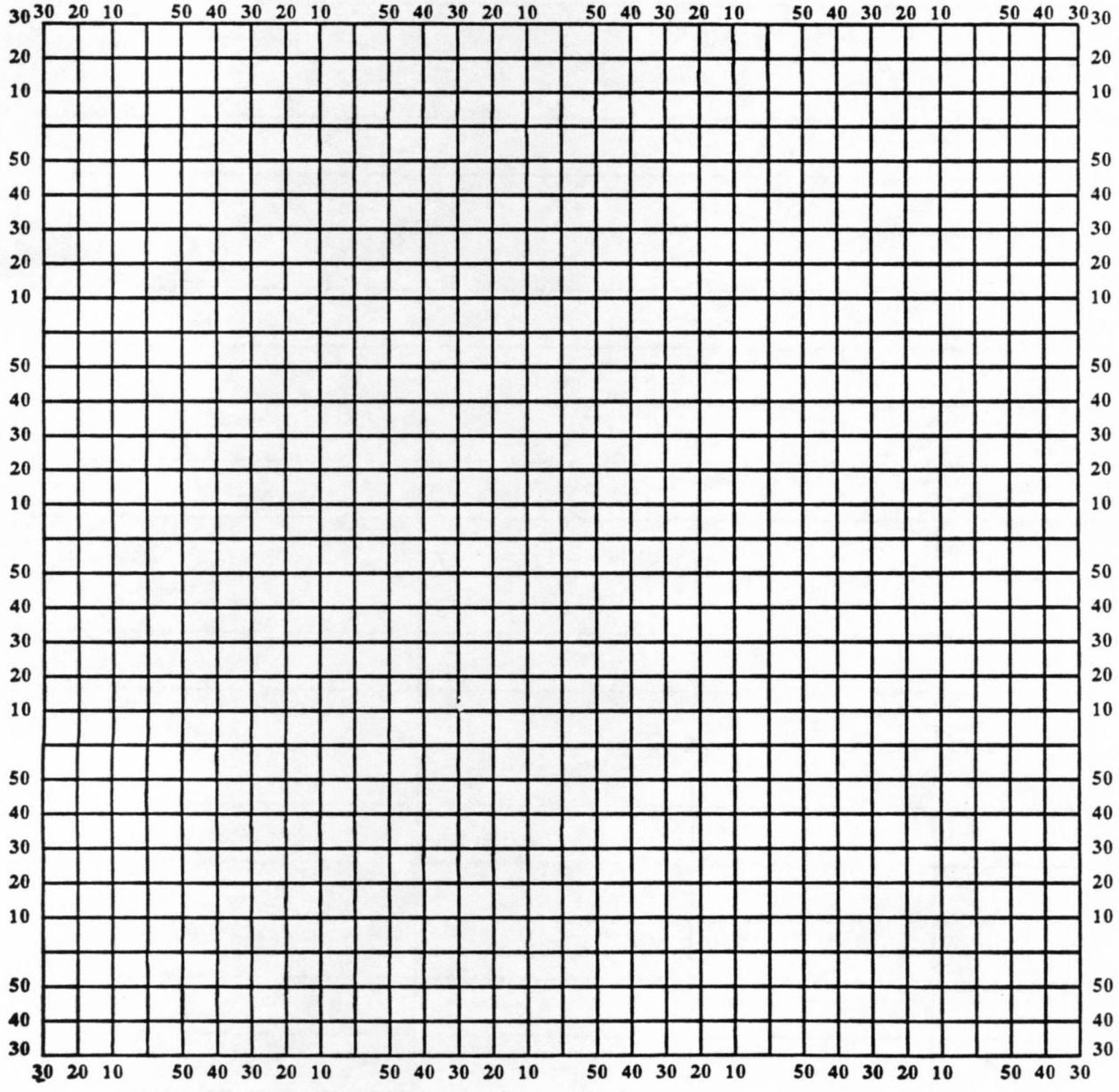
Date ________________ Flight ________________ LPS ________________

Time	Event	Position	Comments

Hurricane Recco Plotting Chart

True at 25° Latitude, in Degrees and Minutes

Date _____ Aircraft _____ Observer _____



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

CLOUDS AND CLIMATE FLIGHT PLAN

Objective: To document precipitation formation and development and electrification in a range classes of convective clouds growing in a range of environments (maritime, continental, low shear, high shear, etc.).

Where: Area A - within 120 n.mi. range of MIA, probably SE thru WSW.

Area B - SE Bahamas out islands (Exuma)

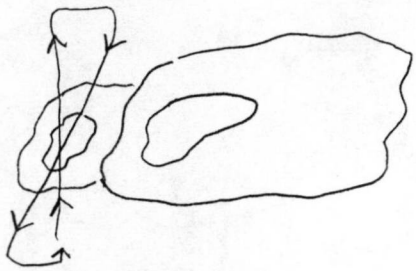
When: 27 - 30 Sep
17Z T/O from MIA with 6 hr duration from MIA

Flight Pattern:

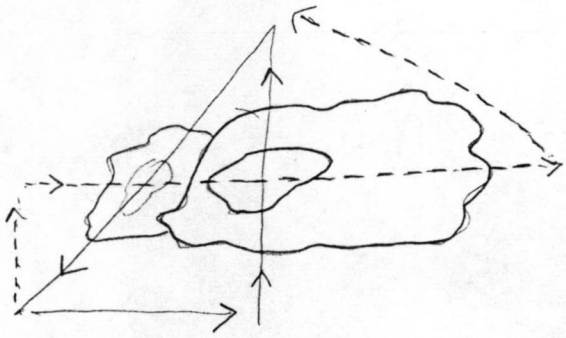
A. Single Aircraft - 43RF

Cloud Penetrations at 100 to 210
Rainshaft Penetrations at 005-010
2 Dropwindsondes

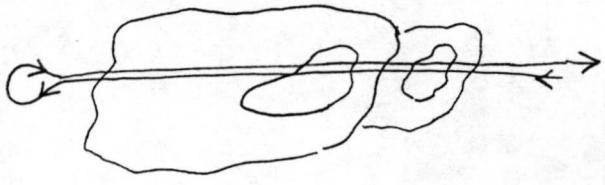
A1 Upshear New Cells



A2 Total Cloud



A3 Rainshafts

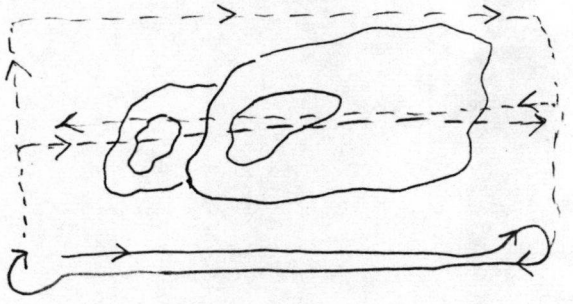


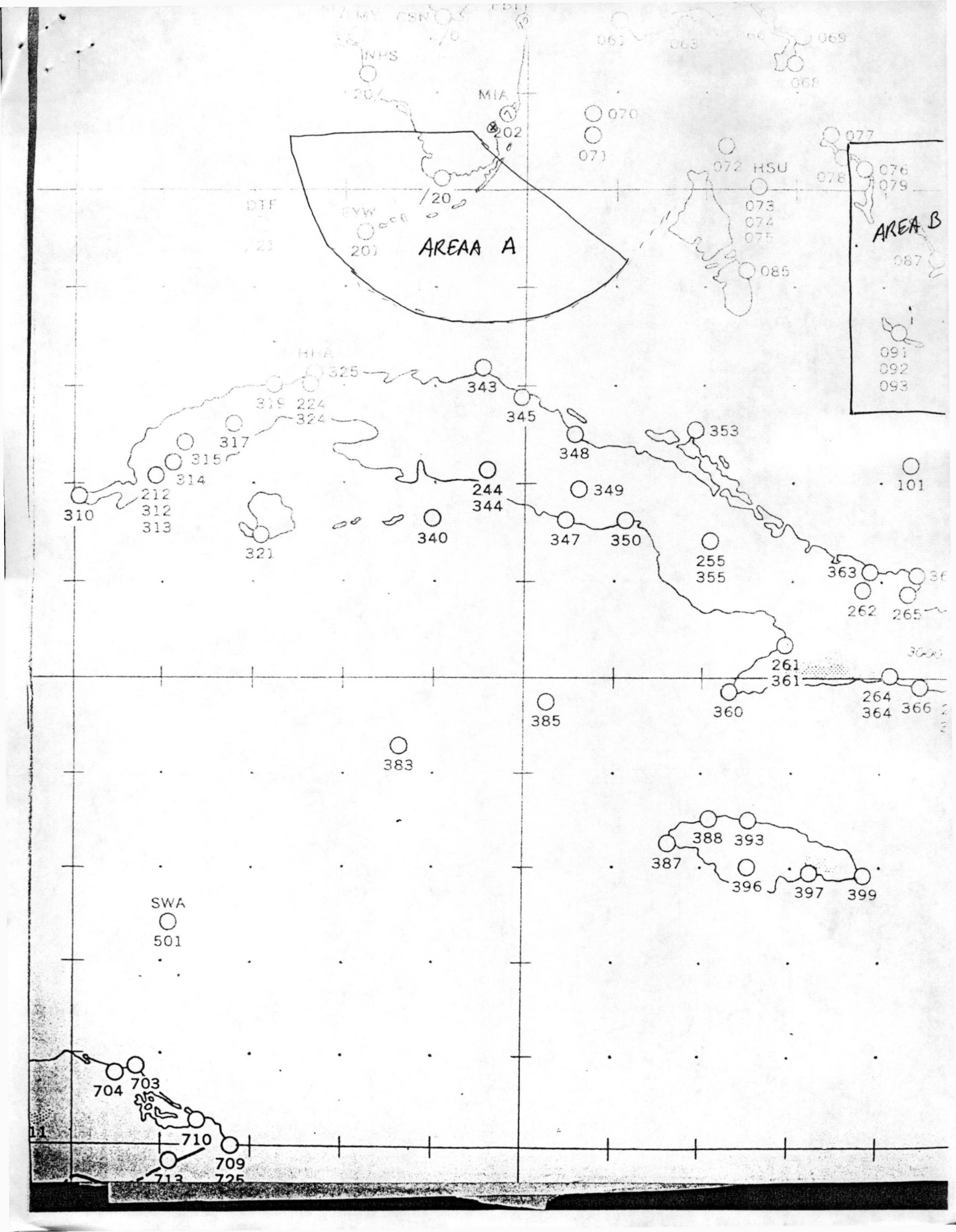
B. Two aircraft

43RF - high level
Patterns A1 and A2
Warm rain - ice transition
Electrical Development

42RF - low level
Doppler and Z mapping
Rainshafts
Boundary Layer Fluxes - box or partial box.

B1 Radar Mapping
Rainshafts
Boundary Layer Flux Box




INPS
MIA
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AREAA A
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