

Radar Scientist

Flight ID 20210810II Storm AL94/T06

Radar Scientist Marks/Reasar Radar Technician Richards

The on-board radar scientist is responsible for data collection from all radar systems on his/her assigned aircraft. Detailed operational procedures and checklists are contained in the operator's manual. General supplementary procedures follow. (Check off or initial.)

Preflight

1. Determine status of equipment and report results to lead project scientist (LPS).
2. Confirm mission and pattern selection from the LPS.
3. Select the operational mode for radar system(s) after consultation with the LPS.
4. Complete the appropriate preflight check list.

In-Flight

1. Monitor the Tail Doppler Radar function regularly, using the real-time TA display, to make sure the Doppler radar is scanning and working normally.
2. Once at the IP, request that the tilt be adjusted to remove sea clutter.
3. Request that the LF radar is set to full scan (non-sector mode) for first Figure 4.
4. Maintain the Doppler Wind Parameter form as well as a written commentary in the Radar Event Log of event times, such as ending and restarting of radar recording. Also document any equipment problems or changes in R/T, INE, or signal status.

Post flight

1. Complete the summary checklist and all other appropriate forms.
2. Download all Belly (LF) scan radar data files to thumb drive.
3. Download all tar'd (TA) radar data files to thumb drive.
4. Brief the LPS on equipment status and turn in completed forms and thumb drives to the LPS.
5. Debrief at the base of operations.
6. Determine the status of future missions and notify HFP Director as to where you can be contacted.

HRD Radar Scientist Check List

Flight ID: 20210810T1

Aircraft Number: N43RF

Radar Scientist: Mark / Reasar

Radar Technician: Ridwan S

Component Systems Status (Up ↑, Down ↓, Not Available N/A, Not Used O):

Radar Computer _____

Lower Fuselage (LF) Antenna _____

Tail (TA) Antenna _____

Radar Post flight Summary

Significant down time:

Radar LF _____

Radar TA _____

Other Problems:

HRD Radar Event Log

Flight ID 20210810CP1 Storm AL94/TD6.

Radar Scientist Marks/Reasor Radar Technician Richards

(Include down time and times of when recording ended and was restarted)

Time (HHMMSS)	Event
0839	To Lakeland
1212	Started recording TDR descend to 1000 ft just outside outer rain bands
1221	① TR 185 1500' pick our way through rain bands
1248	climb to 2500'
1257	g? just on S side of shear line abrupt wind shift not sure of g
1313	② TR 030 along islands
1338	③ TR 225 to 600
1344	g? broad weak minima
1424	④ Turn TR 360 upwind to 600
1458	⑤ TR 135 to g
1504	g? broad weakness in winds
1540	Shutdown radar
	no apparent low-level circulation in DR analyses

1513 end leg
climb head to
Aruba

Lead Project Scientist

Date 8/10/2021

Flight ID 20210810J1

Storm or Project Mission ID 0106A Invest

Experiment name Invest ID 6/AL94

Pre-flight

- 1. Participate in general mission briefing.
- 2. Determine specific mission and flight requirements for assigned aircraft.
- 3. Determine from AOC flight director/meteorologist whether aircraft has operational fix responsibility and the mission designation.
- 4. Contact HRD members of crew to:
 - a. Assure availability for mission.
 - b. Review field program safety checklist
 - c. Arrange ground transportation schedule when deployed.
 - d. Determine equipment status.
- 5. Meet with AOC flight director and navigator at least 3 hours before take-off for initial briefing.
- 6. Meet with AOC flight crew at least 2 hours before take-off for crew briefing. Provide copies of flight requirements and provide a formal briefing for the flight director, navigator, and pilots.
- 7. Report status of aircraft, systems, necessary on-board supplies and crews to Field Program Director.
- 8. Before take-off, brief the on-board GPS dropsonde operator on times and positions of drop times.
- 9. Make sure each HRD flight crew member has a life vest.
- 10. Perform a headset operation check with all HRD flight crew members. Make sure everyone can hear and speak using the headset.

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 Lead Project Scientist Form.
- 5. Check in with the flight director to make sure the mission is going as planned (i.e. turns are made when they are supposed to be made).

Post-flight

- 1. Debrief scientific crew.
- 2. Gather completed forms for mission and turn in to data manager at HRD.
- 3. Obtain a copy of the 10-s flight listing from the AOC flight director. Turn in with completed forms.
- 4. Obtain a copy of the radar DAT tapes. Turn in with completed forms.
- 5. Obtain a copy of serial flight data on thumb drive. Turn in with completed forms.

[Note: all data removed from the aircraft by HRD personnel should be cleared with the AOC flight director.]

- 6. Report landing time, aircraft, crew, and mission status along with supplies (tapes, etc.) remaining aboard the aircraft to Field Program Director
- 7. Determine next mission status, if any, and brief crews as necessary.
- 8. Notify Field Program Director as to where you can be contacted and arrange for any further coordination required.
- 9. Prepare written mission summary using Mission Summary form.

Lead Project Scientist Check List

Storm or Project _____

Experiment name Invest TD 6

Flight ID 20210810II

Mission ID 0106A Invest

A. Participants:

Function	Participant	Function	Participant
Lead Project Scientist	<u>Marks/Wadler</u>	Flight Director	<u>Ludwig/Hatthaus</u>
Radar	<u>Marks</u>	Pilot	<u>Abitbol</u>
Workstation	_____	Pilot	<u>Stacher/SNOW</u>
Cloud Physics	_____	Navigator	<u>Wagner/Rickert</u>
Dropsonde	<u>Wadler</u>	Systems Engineer	<u>Todd</u>
Dropsonde	_____	Data Technician	<u>Wagner/Plum</u>
AXBT/AXCP	_____	Electronics Technicians	<u>Kiraga/Stotes</u>
Observer/Guest	<u>Crawf</u>	Flight Engineer	<u>Sanchez</u>
Observer/Guest	<u>Teleurk</u>		

B. Take-off and Landing Times and Locations:

Take-Off: 0830 UTC Location: La Ceiba

Landing: _____ UTC Location: _____

Number of Eye Penetrations: _____

C. Past and Forecast Storm Locations:

Date/Time	Latitude	Longitude	MSLP	Maximum Wind
/				
/				
/				
/				
/				

D. Mission Briefing:

Takeoff must into FL94 TD6
 transit to Pt 1 (IP) 60nm N of estimated 5
 TR 180 through 6) to Pt 2 60nm S of 5
 TR 030 to Pt 3 60nm NE of 5
 TR 225 to 6) to Pt 4 60nm SW of 5
 #5 continue Alpha
 # no 5 box pattern search

Storm or Project AL94/TOL Experiment name tasked mission

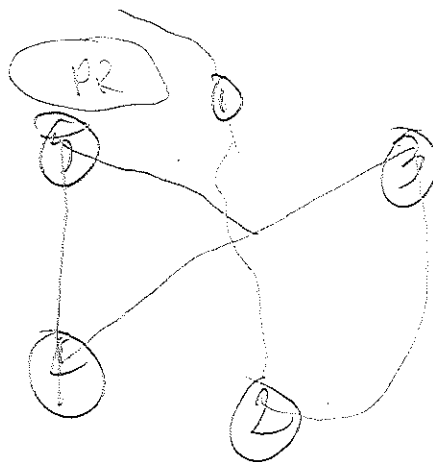
Flight ID 207:0810II Mission ID 0106 A Invest

E. — Equipment Status (Up U, Down D, Not Available N/A, Not Used O)

Equipment	Pre-Flight	In-Flight	Post-Flight	# DATs / CDs / Expendables / Printouts
Radar/LF	✓			
Doppler Radar/TA	✓			
Cloud Physics	✓			
Data System	✓			
GPS sondes	✓			
AXBT/AXCP	—			
Ozone instrument	—			
Workstation	✓			
Cameras	✓			

REMARKS:

Tasked mission:



Lead Project Scientist Event

Date 8/16/21

Flight ID 20210821 LPS

11:45/13:15

Time	Event	Position	Comments
0839	TO	Lakeland	
	IP	16.3 -63	
115630	181001 181000	18.9 x 66.1	TORT 1
120300	2	18.5 65.5W	TORT 2
1215	3	18.0 64.5W	TORT 3
			drops are around
			major heading
1212	start descent		
1221	①	1500	
1238			MANILA
1248			50 miles
125330	6	shear	2500'
1313	②	Turn to -K MNE	along beach
1338	③	turn TK	225°
1352	④		
1424	④	Turn TK	360
1450	⑤	Turn TK	135
1504	⑥		

slowly descending

islands

1538
557
8000

⑥