Lead Project Scientist

Date 8/15/21 Flight ID 20210815I1

Storm or Project AL07/GRACE Experiment name N4C fix

Mission ID 0207A

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 AL07 / GRACE Experiment name NHC FIX

Flight ID 20210815I1 ~~Mission ID~~ 0207A

A. Participants:

Function	Participant	Function	Participant
Lead Project Scientist	ZAWISLAK	Flight Director	CARPENTER
Radar	REASOR	Pilot	MITCHELL / LEGRANDE / RONNENBERG / COPARE
Workstation		Pilot	
Cloud Physics		Navigator	FREEMAN
Dropsonde	SELLWOOD	Systems Engineer	
Dropsonde		Data Technician	MASCARO
AXBT/AXCP		Electronics Technicians	
Observer/Guest			
Observer/Guest		Flight Engineer	DARBY / WEISINGER

B. Take-off and Landing Times and Locations:

Take-Off: 1553 UTC Location: ARUBA 4.6 HR FLIGHT TIME

Landing: 2031 UTC Location: ARUBA

Number of Eye Penetrations: ____

C. Past and Forecast Storm Locations:

Date/Time	Latitude	Longitude	MSLP	Maximum Wind
15 / 1500Z	17.2 N	66.0 W	1010	35 KT
/				
/				
/				
/				

D. Mission Briefing:

NHC FIX MISSION W/ POTENTIALLY 3 PASSES NW → SE, NE → SW, THEN ANOTHER PAST IMPROVISED. 5000 FT. DROP AT ENDPOINTS AND CENTER. STORM IS STILL QUITE DISORGANIZED. LOOKING AT POSSIBLE MLC TWO A BROAD LLC WHICH MAY BE FURTHER SOUTH THAN EXPECTED. LOTS OF DEEP CONVECTION, BUT UNSURE IS IT IN REGARD TO THE CIRCULATIONS. THAT'S THE BIG QUESTION FOR TODAY. THIS SHOULD BE GOOD FOR PREFORM AS WELL AS THE G-IV HRD RESEARCH FLIGHT CONCEPTS TODAY, JUST AS YESTERDAY

Storm or Project_____ Experiment name

Flight ID Mission ID

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

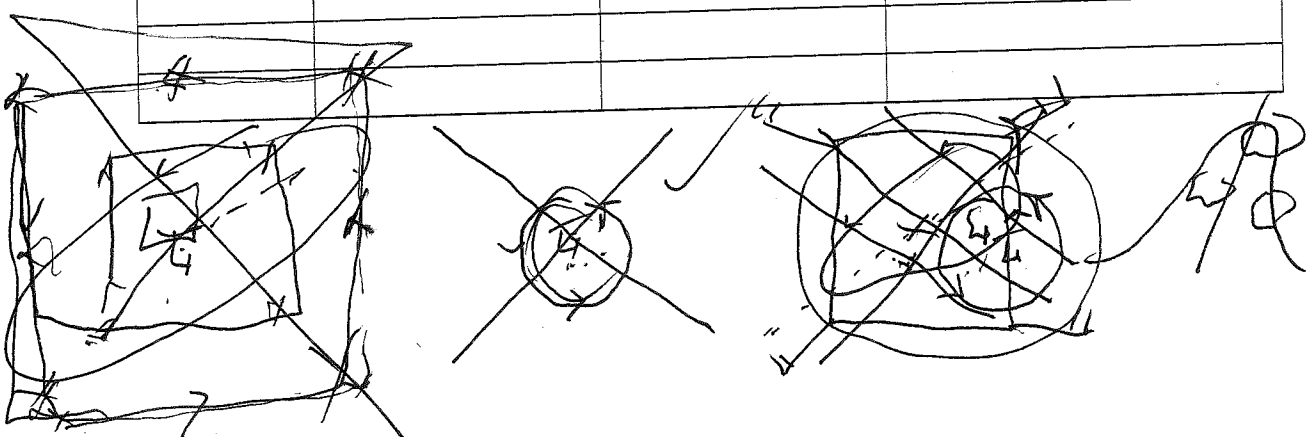
Equipment	Pre-Flight	In-Flight	Post-Flight	# DATs / CDs /Expendables/ Printouts
Radar/LF				
Doppler Radar/TA				
Cloud Physics				
Data System				
GPS sondes				
AXBT/AXCP				
Ozone instrument				
Workstation				
Cameras				

REMARKS:

Lead Project Scientist Event

Date 20210615Z Flight ID LPS Zawislak

Time	Event	Position	Comments
1553 Z	TAKEOFF FROM BRIDGETOWN		
	A RECENT SCATTEROMETER PASS SHOW WHAT IS LIKELY AN		
	ELONGATED SFC → MSLP TROUGH AT THE SURFACE		
	IT'S ALSO POSSIBLE W/ ALL OF THE CONVECTION THERE MAY BE		
	A FEW SWIRLS WITHIN THE BROAD REGION. BUT UNCERTAIN		
	A LINGERING MLC		
	NO CHANGE IN PATTERN		
1638Z	PAUL IS MARKING THE START OF AN ANALYSIS AS WE FERRY TO THE IP		
	NOT A TON OF COVERAGE OF REFLECTIVITY, JUST SOME POPCORN		
	OVER CONVECTION.		
IP NW SONDE #1	1708 Z	IP NW INBOUND TO	WHATEVER CENTER THERE MAY BE 17°53' / 58°1'
~~CORE #1 SONDE #2~~		C130 HAS TO DO	DEVIATIONS FOR CONVECTION. A LOT OF
		FREQUENT OF	CONVECTION. MATURING.
SONDE #2	1824 Z	NO CENTER, BUT STILL DOING A SONDE TO GET	
		ONE OUT IN THE	LIGHT WINDS REGION.
EP ESE SONDE #3	1847 Z	SOMEWHERE ESE	16°8' / 56°21'
		HEADING NORTH TO 17°N	
IP NE SONDE #4	1900 Z	NE PT	17°3' / 60°22' PROBABLY IN THE SOUTHERLIES
		NOW DOING A USW LEG ACROSS THE	
		NORTH OF THE CONVECTIVE AREA.	
		ANOTHER GOOD GENESIS FLIGHT → MLC WITH	
		A TROUGH ALSO DOWN LOW. TILT IS TILTED.	



Lead Project Scientist Event

Date Flight ID LPS

Time	Event	Position	Comments

Lead Project Scientist Event

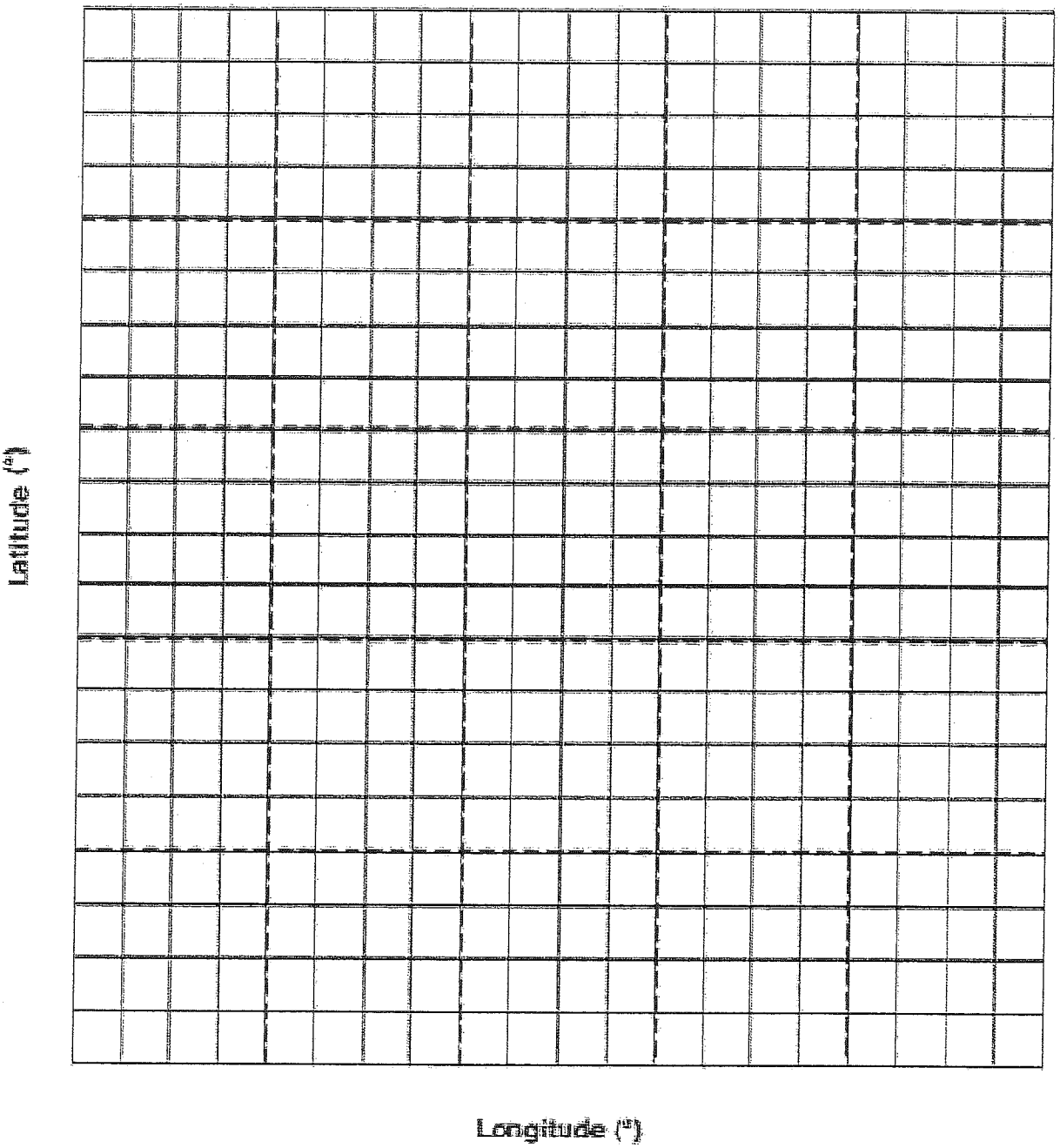
Date Flight ID LPS

Time	Event	Position	Comments

Observer's Flight Track Worksheet

Date ~~Flight~~ ~~Observer~~

Use highlighter to draw freehand on chart



Mission Summary

Scientific Crew (4 RF)
Lead Project Scientist
Radar Scientist
Cloud Physics Scientist
Dropwindsonde Scientist
Boundary-Layer Scientist
Workstation Scientist
Observers (affiliation)

Mission Briefing: (include sketch of proposed flight track or page #)

Mission Synopsis: (include plot of actual flight track)

Evaluation: (did the experiment meet the proposed objectives?)

Problems:(list all problems)

Expendables used in mission:

	Deployed	Good	Bad
GPS sondes :			
AXBTs :			
Sonobuoys:			
UAVs			