

Lead Project Scientist

Date **8/15/21**

Flight ID **20210915I2**

Storm or Project **AL07/GRACE**

Experiment name **NHC 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 ALD7 / GRACE Experiment name NHC FIX

Flight ID 20210815 I 1 Mission ID 0207A

A. Participants:

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

B. Take-off and Landing Times and Locations:

Take-Off: 1553 UTC Location: ARUA 4.6 hr FLIGHT TIME

Landing: 2031 UTC Location: ARUA

Number of Eye Penetrations: _____

C. Past and Forecast Storm Locations:

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

D. Mission Briefing:

NHC FIX MISSION W/ POTENTIALLY 3 PASSES NW → SE, NE → SW, THEN ANOTHER PASS IMPROVISED. 5000 ft. ORBIT AT ENDPOINTS AND CENTER. STORM IS STILL QUITE DISORGANIZED. LOOKING AT POSSIBLE MLC AND A BROAD LLC WHICH MAY BE FURTHER SOUTH THAN EXPECTED. LOTS OF DEEP CONVECTION, BUT WHERE IS IT IN RELATION TO THE CIRCULATION. THAT'S THE BIG QUESTION FOR TODAY. THIS SHOULD BE GOOD FOR PREFORM AS W/ THE G-10 WRP RESEARCH FLIGHT COINCIDING 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 20210615L0

Flight ID

LPS Zawlsok

Time	Event	Position	Comments
1553 Z	TAKEOFF FROM DEWEN		
	A RECENT SCATTERMETER PAST SHOW WHAT IS USUALLY AN		
	ELEVATED SSU → NINE TRACKS AT THE SURFACE		
	IT'S ALSO POSSIBLE W/ ALL OF THE CONVECTION THERE MAY BE		
	A FEW SWIRLS WITHIN THE BEAN REGION. BUT CERTAINLY		
	A CHECKING MLC		
	NO CHANGE IN PATTERN		
1638Z	PAUL IS MARKING THE START OF AN ANALYSIS AS WE FEEL TO THE IP		
	NOW A TON OF COVERAGE OF REFLECTION, BUT SOME POPCORN		
	DEEP CONVECTION.		
1708 Z	IP NW WINDS TO WHATEVER CENTER THERE MAY BE	17°53' / 69°1'	
	CIR N WIND TO AS DEVIATING FOR CONVECTION. A LOT OF		
	FRESH GROWTH OF CONVECTION. MATURING		
1824 Z	NO CENTER, BUT STILL DOING A SOUND TO GET		
	ONE OUT IN THE LIGHT WIND REGION.		
1847 Z	SOMEWHERE ESE	16°31' / 66°21'	
	HEADING NORTH TO 17°N		
1900Z	NE AT 17°31' / 66°22' PROBABLY IN THE SOUTHERLIES		
	NOW DOING A USW LEG ACROSS THE		
	NORTH OF THE CONVECTION AREA?		
	ANOTHER GOOD GENESIS FLIGHT → MLC WITH		
	A TRACKING DOWN LOW. THAT IS TILTED.		

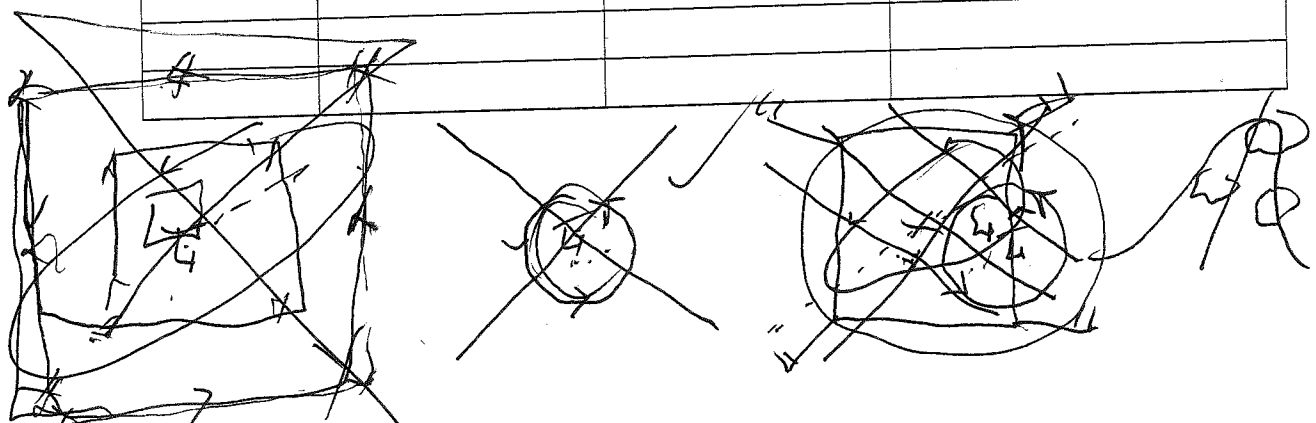
(PNW SOURCE #1

SOURCE #2

SOURCE #2

EPESE SOURCE #3

IP NE SOURCE #4



Observer's Flight Track Worksheet

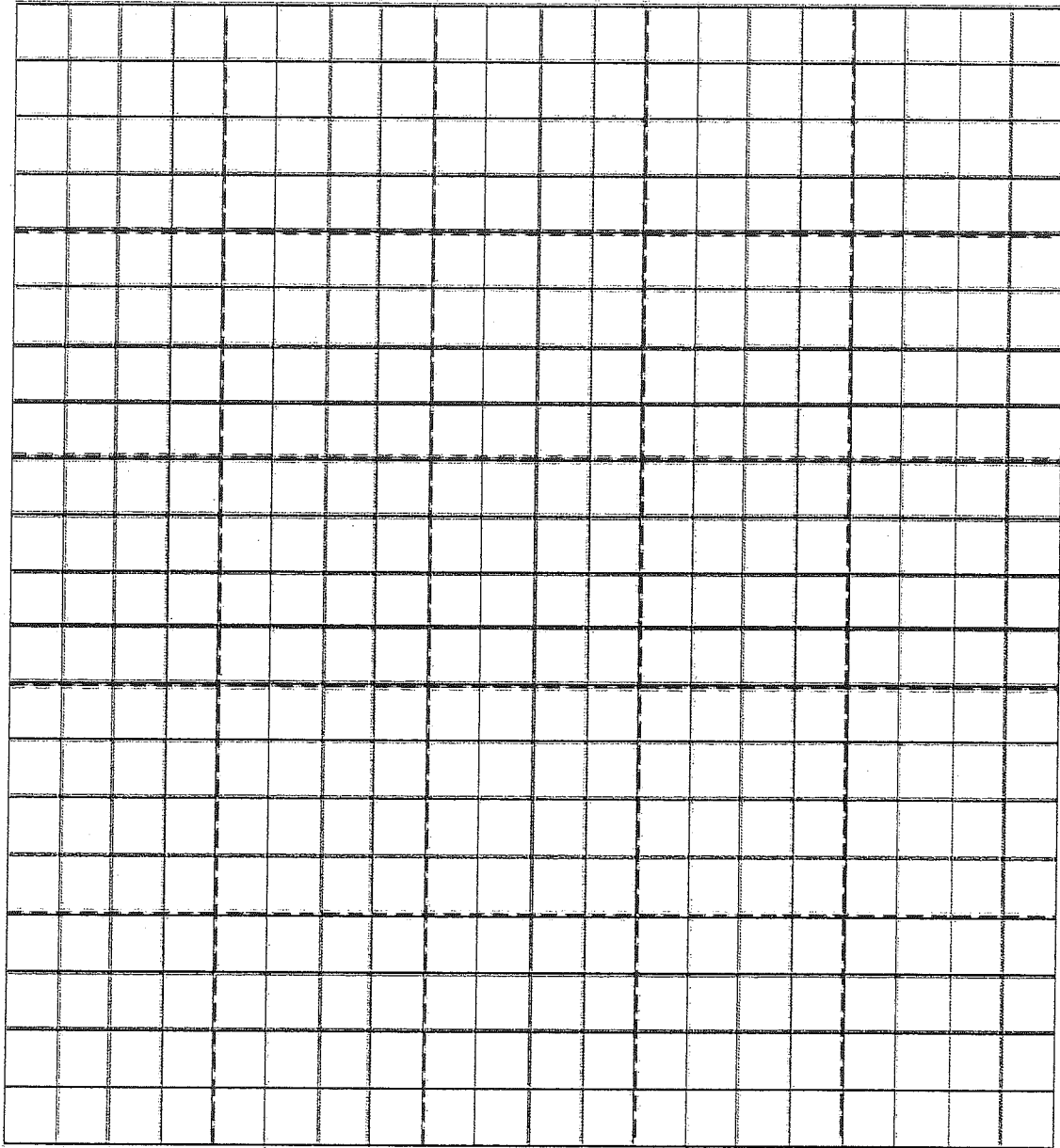
Date

Flight

Observer

Use highlighter to draw freehand on chart

Latitude (°)



Longitude (°)

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
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GPS sondes :

AXBTs :

Sonobuoys:

UAVs