

Lead Project Scientist

Date 8/19/21

Flight ID 20210919H1

Storm or Project

Experiment name EMC TASK

Mission ID AC07/GRACE

1407A

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 10-3 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 EMC TASK

Flight ID 1407A

Mission ID 20210819H1

A. Participants:

Function	Participant	Function	Participant
Lead Project Scientist	ZAWISIAK / HAZETON	Flight Director	CARPENTER
Radar	ZAWISIAK / ALVEY	Pilot	MITCHELL / COPARE / LEGIARDES / RAMMELBERG
Workstation		Pilot	
Cloud Physics		Navigator	FREEMAN / HOUGH
Dropsonde	SELLWOOD	Systems Engineer	
Dropsonde		Data Technician	MASCARO
AXB/AXCP		Electronics Technicians	
Observer/Guest			AVAPS: UNDERWOOD
Observer/Guest		Flight Engineer	DARBY / WYSINGER

B. Take-off and Landing Times and Locations:

Take-Off: 1953 UTC Location: LAKELAND

6.4 FLIGHT TIME

Landing: 0217 UTC Location: LAKELAND

Number of Eye Penetrations: 3 CAT 1

C. Past and Forecast Storm Locations:

Date/Time	Latitude	Longitude	MSLP	Maximum Wind
18 / 1800Z	19.6 N	83.0 W	995	65 kt
18 / 2100Z	19.7 N	83.7 W	992	70 kt
19 / 0000Z	19.8 N	84.9 W	989 mb	70 kt
/				
/				

D. Mission Briefing:

FLY AN BUTTERFLY PATTERN AT 9KFT INTO HURRICANE GRACE.
 NW → SE, E → W, SW → NE. ENDPOINT, MIDPOINT, OR PASS? TO NWS
 THEN POSSIBLE QUADRANT OR RMW DRIPS TO OUR.
 WHEN DO AXBTs FOR OUR AT THE ENDPOINTS AT BEST AS WE CAN
 WITH THE TURBULENCE.

STORM NOT STRAIGHT AFTER INTENSIFYING OVERNIGHT. CONVECTION STILL DEVELOPING
 AROUND THE EYE WALL, BUT ALSO IN THE PERIODIC MINIMUM. STILL DEVELOPING A
 RAGGED EYE, WE THINK. IT COULD KEEP INTENSIFYING DURING THE FLIGHT

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 9/19/21 Flight ID 2021081841 LPS ZAWISLAK / HAZELTON

LP Combo w/B1
 W SW SOND #17
 MP SW SOND #18
 CRB PSW SOND #19
 RAW SW SOND #20
 CRB SOND #21
 PSW SOND #22
 PSW SOND #23
 SOND #24
 SOND #25
 SOND #26
 ESW RFB

Time	Event	Position	Comments
0001	LP INBOUND FROM THE SOUTHWEST	COMBO DRAP	(BT) NOT GETTING DATA
0010	MP INBOUND SW - BROKE DEC BELOW		
	SOME MRW CONVECTION BURSTING ON THE W TO S ELEVATION		
	REAR MAKE TIGHTEN UP ON THE ELEVATION NOW		
0018	QUARTER POINT SOUTHWEST INBOUND		
0021	RAW (ELEVATION SOME SW ELEVATION)	ELEVATION SONDIE	
0022	CRB'S SONDIE FOR (VAD PAB)		
0026	RAW / SONDIE NE	MRW RAW	ULD
0026	BACKUP UP MR RAW		
0029	"DEPART" NE BIT SOONER		
	DELTA BUMP!		
0037	MP SONDIE OUTBOUND	NE DRAPED IN STRATIFORM RAIN	
	LOT OF GENERAL CONVECTION B/W CRB AND MP		
0049	ED NR SONDIE BT COMBO → OUT OF PRECIP SHIELD		
	END OF PATTERN	(BT) WAS A DUD	
	LOOKED LIKE THE LAST PASS HAD THE LOWEST EXTREM MSW AT 987.6		
	SO OUR MSW LOWEST WAS LAST PASS 987.688 WHICH IS 3 MO LOWER THAN THE LAST WITH EARLIER		
	BUT NO REAL INCREASE IN THE WINDS - WE WERE OR LESS VERIFIED THE 70 KTS REAL WIND NUM WAS IN THEIR ADVISORY		

NWS #11 BT#4
 NWS #12
 ONR DRAP 7
 ONR DRAP 8
 NWS #13
 ONR DRAP 9
 ONR DRAP 10
 ONR DRAP 11
 NWS #14
 NWS 15 ONR BT 5

So NWS: 15 SONDIES
 ONR: 11 SONDIES / 5 BT'S
 1 CR, NW, CRB W, 2 SW, 1 NE
 BAD ↑
 1 NLD
 COUPLE W/ IFFI WINDS INCLUDING OUR ELEVATION W DRAP AND NLD IN MR ELEVATION DRAP

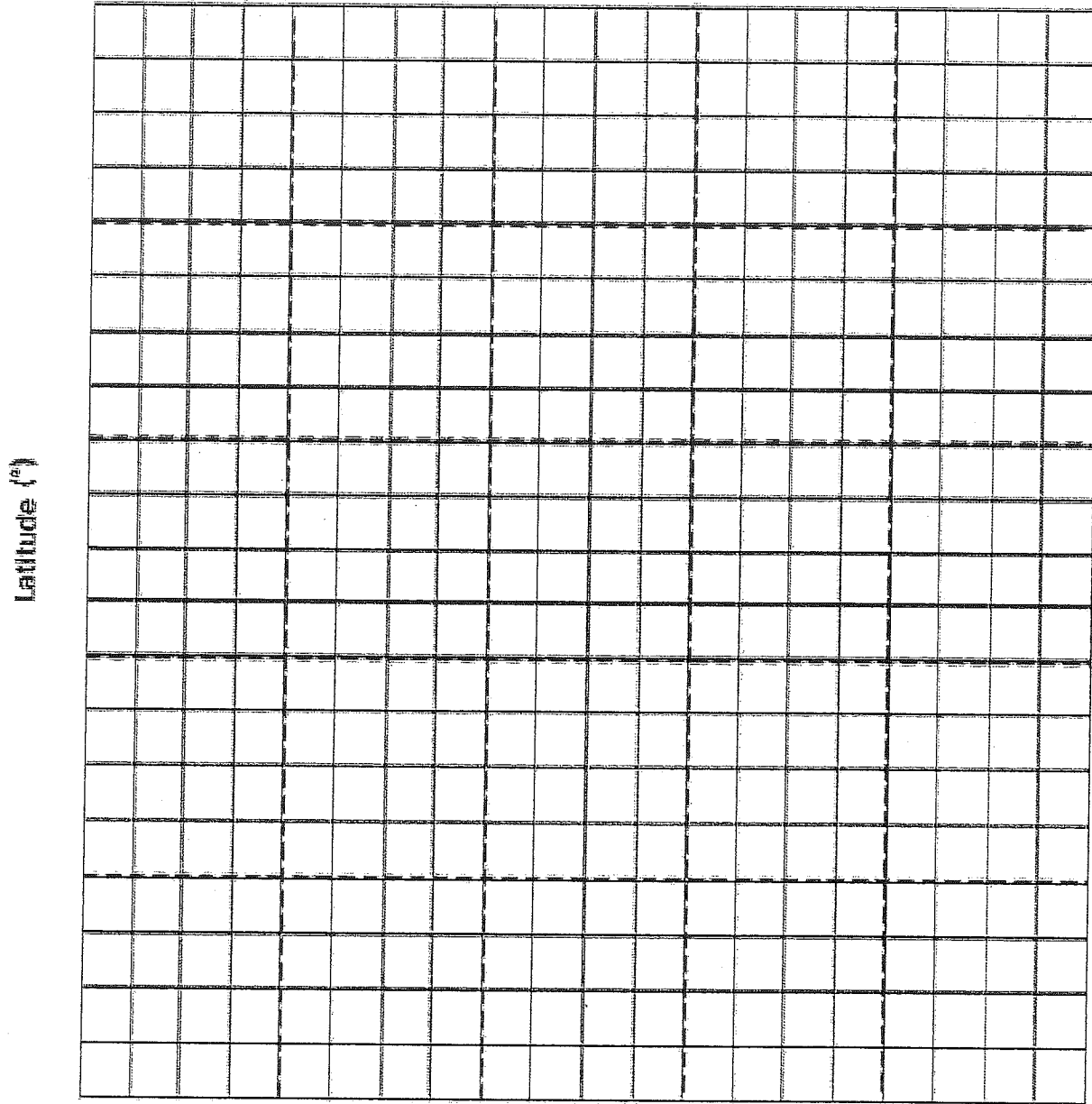
Observer's Flight Track Worksheet

Date

Flight

Observer

Use highlighter to draw freehand on chart



Latitude (^o)

Longitude (^o)

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			

Observer's Flight Track Worksheet

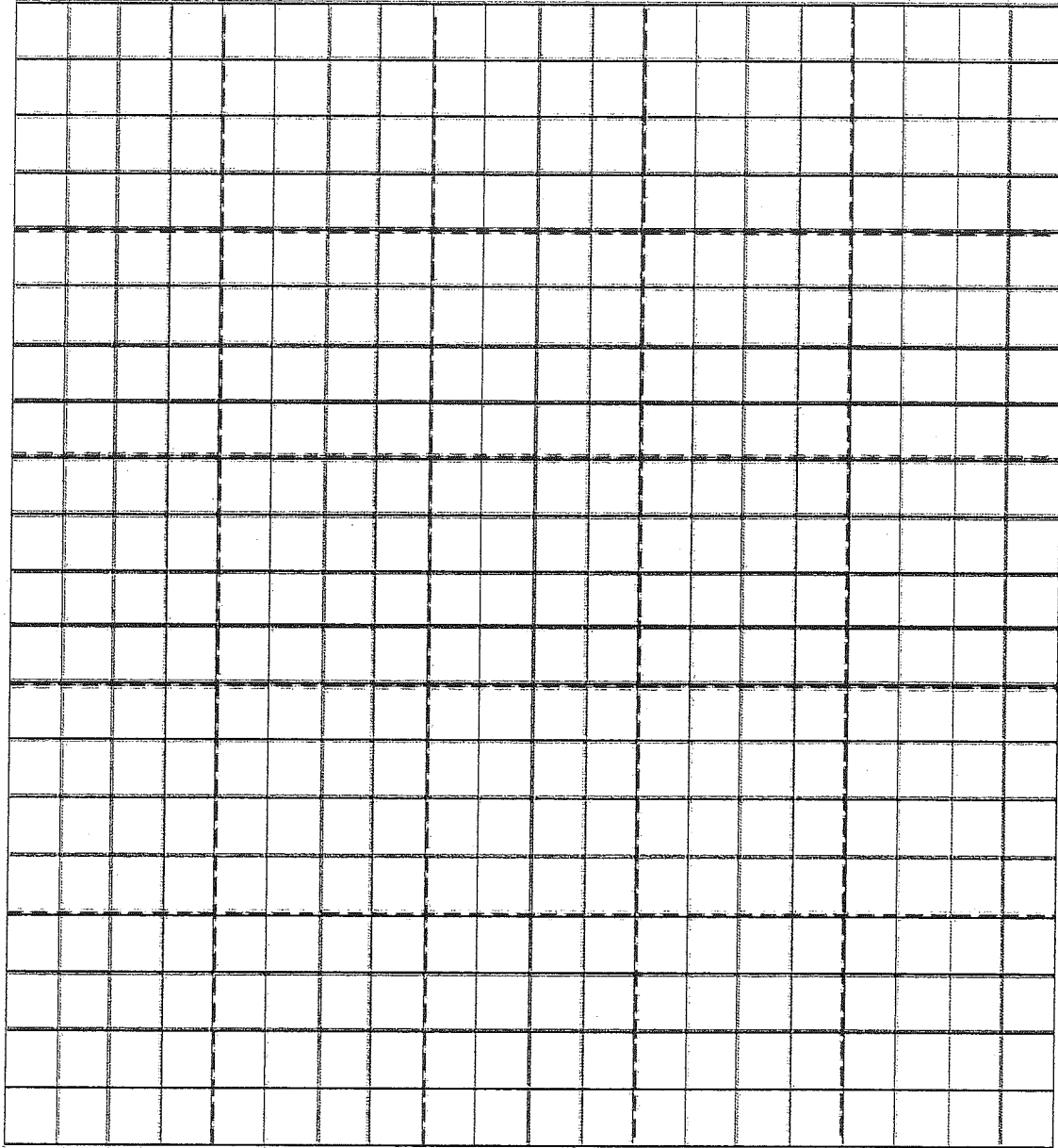
Date _____

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
--	----------	------	-----

GPS sondes :

AXBTs :

Sonobuoys:

UAVs