

Lead Project Scientist

Date 8/17/19

Flight ID 20190817H1

Storm or Project EP95

Experiment name GENESIS STAGE (PMOBE)

Mission ID WANXE GENESIS

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 EP 95 Experiment name GENESIS STAGE (PMODE)

Flight ID Z0190817H1 Mission ID NAWXE GENESIS

A. Participants:

Function	Participant	Function	Participant
Lead Project Scientist	ZPAWISLAK	Flight Director	LUNDY / HOLMES
Radar	DUNION	Pilot	DIDIER / ABITOL / MITCHELL
Workstation		Pilot	
Cloud Physics		Navigator	RICHARDS
Drosonde	BUCCI	Systems Engineer	
Drosonde		Data Technician	MASCARO
AXB/AXCP		Electronics Technicians	
Observer/Guest			
Observer/Guest		Flight Engineer	

B. Take-off and Landing Times and Locations:

Take-Off: 1303 UTC Location: LIR (LIBERIA, C.R.)

Landing: 2012 UTC Location: LIR

Number of Eye Penetrations:

C. Past and Forecast Storm Locations:

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

D. Mission Briefing:

HEARD OUT TO INVEST 95E THAT NHC IS GIVING A 40/30% CHANCE OF FORMATION IN 215 DAYS. PLAN IS FOR A LAWNMOWER PATTERN EAST-WEST ORIENTED, UP TO 20KFT OUTSIDE OF PRECIPITATION. PLENTY OF CONVECTION IN THIS THING, A LOT OF IT ON THE NORTH SIDE, SO HOPING TO GET PLENTY OF RADAR COVERAGE.

BOX IS SET UP FOR 10 → 13N
90 → 96W

TRACK MAY SHIFT TOW 2ND/3RD LEG TO THE EAST SINCE NOT MUCH GONE ON AT 96W, WE THINK

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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 8/17/19

Flight ID 20190817H1 LPS ZAWISLAW

Time	Event	Position	Comments
1303Z	T/O LIBERIA, CR		HEADED OUT TO CP95
			RIGHT NOW SATELLITE SUGGESTS A LOT OF CONVECTION WITH THE PATTERN, WHICH WILL BE GOOD FOR THE RADAR
			DOES LOOK LIKE THERE IS A CIRCULATION OUT THERE RIGHT NOW.
1346Z			SURE LOOKING LIKE A DEPRESSION
1408Z	SONDE #1 AT 13N/90W		
1419Z	SONDE #2 AT 13N/91W		SONDE W/ CLOUDS BELOW
1430Z	SONDE #3 AT 13N/92W		SONDE #3 ALONG 1ST E-W LEG
			(MOSTLY ANVIL AT OUR ALTITUDE SHALLOW CLOUD MOSTLY)
1432Z	SONDE #4 AT 13N/92.5W		BACKUP SONDE TO #3 ON LEG
			MOSTLY CLEAR UP HERE HEADED TOWARDS SOME CONVECTION BUT NOT BAD
	SONDE #5 AT 13N/93W		BAD PTV DATA → WILL DROP ADJUSTED
	SONDE #6 AT 13N/94W		BETTER LOOKING SOME
1453Z	SONDE #7 AT 13N/94W		IN CLEAR BUT A LOT OF DEAR CONVECTION
			DEFINITE SOME DEAR CONVECTION OUT ON THE WEST SIDE
1504Z	SONDE #8 AT 13N/95W		ENDPOINT SONDE AT THE END OF THE E-W LEG NOW HEAD R/W TO 2ND LONGITUDE LEG
1515Z			SO THE RADAR SINCE BELOW THE BASE WORKSTATION AND THE RAD WORKSTATION WE'RE IN SYNCH
1517Z	SONDE #9 AT 12N/95W	94°00' / 11°57'	NOW GOING TO BEGIN OUR 2ND LEG W → E
			GOING TO HAVE TO DESCEND JUST MORE WX ON THE LEG
1532Z	SONDE #10 AT 12N/94W		MORE CLEAR HERE

Lead Project Scientist Event

Date 8/17/19

Flight ID 20190817H1 LPS ZAWISLAK

Time	Event	Position	Comments
1547Z	SONDE #11 12N/93W		THE SONDE ON 2ND W-E LEG MOSTLY CLEAR CONDITIONS AROUND. JUST CAME OUT OF A CLOUD MASS NOW IN A CLEARER CONDITION W/ SCATTERED CLOUD BELOW SOME VARIOUS CLOUD DECK SOME ANVIL ABOVE THE MIDDLE OF THE PATTERN RESEMBLES HQ CUMULUS AIR WITH CONVECTION ON THE WEST AND EAST. BUT THIS SEEMS TO BE WHERE THE CIRCULATION MAY BE THE NORTH SIDE INFLOW W/ HIGHER LEVEL CLOUDS OR PRETTY INTERESTING.
1600Z	SONDE #12 12N/92W		WE HAVE DESCENDED SOME TO 4800 FEET TO KEEP BELOW DECK. SO WE'LL KEEP CHECKING DOWN AS WE GET MORE INTO PRECIP.
1612Z	SONDE #13 12N/91W		3RD TO LAST PT ON 2ND W-E LEG IT WAS DROPPED IN SOME PRECIP
1618Z			A LOT OF STRATIFORM NOW. HEADING INTO SOME OF THE BLUDEST PRECIP ON THE EAST SIDE
1624Z	SONDE #14 21N/90W		2ND TO LAST PT OF 2ND LAWNSOWER LEG DROPPED IN PRECIP - LOOK LIKE SNOW UP HERE AT 4800FT
1632Z			THINK WE WENT THROUGH AN HQ PT W/ WINDS AT 11N/90W, 100K JUST SHOWED A DISTANT WIND SHIFT
1634Z			SO NOW HIT EP OF 2ND LAWNSOWER LEG DROPPED IN PRECIP TURNING AND DROPPED A BIT EARTH TO MAKE WAY TO GET OUT OF HEAVY PRECIP.
1648Z	SONDE #15 11N/89W		NOW REACH THE START OF 3RD LAWNSOWER LEG. PATTERN CLEAR OUT HERE THINK WE'RE EAST OF MAIN CONVECTIVE AREA

HAD
WORKING
REBOSTER
TO FIX AN
ISSUE W/
SINCE BLW
DATA SIN-
AND RADA
SIN.
SEEM TO
FIX FOR
NOW.

CAME W/IN ABOUT 20-25 min
OF GV AT 11N/89W
WHICH IS THEIR
FURTHEST NW POINT OF
THEIR LAWNSOWER

Lead Project Scientist Event

Date

Flight ID

LPS

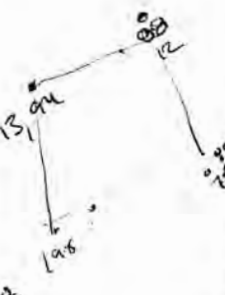
Time	Event	Position	Comments
1701Z	SONDE #16 11N/90W		THIS IS SONDE #2 OF 3 rd EAST-WEST LEG PRETTY CLEAR OUT HERE
			FIRST LOOK AT SHARDONAS SUGGEST POSSIBLE SE- CIRCULATION BETWEEN AND WEST OF THE FL WIND SHIFT WE SW
1710Z			STILL LOT OF CONVECTION ON EAST AND SOME START TALK LIKE LIKE CONVECTION DEVELOPING ON WEST SIDE
~1714Z	SONDE #17 11N/91W		3 rd SONDE IN 3 rd EAST-WEST LEG PATTERN
			STILL SWESTERLIES ALMOST WESTERLY AT FL
			KIND OF GOING THROUGH ANvil CLOUD- NOT MUCH ICM SEEM MOSTLY STRATIFORAL
1726Z	SONDE #18 11N/92W	THOUS WINDS FROM [unclear]	4 th LEG ON 3 rd LEG STILL IN SOME CLOUDY AREA LOOKS LIKE BLOWOFF FROM CONVECTION THAT IS WRAPPING AROUND THE SOUTH SIDE
			RF INTERFERENCE ON THAT AREA, LOST SEVERAL THOUSAND FT
1735Z			SEEMS LIKE A LOT OF STREAK JET, NOT MUCH CONVECTION THIS CONVECTIVE LINE SEEM TO BE MOST NATURAL
1738Z	SONDE #19 11N/93W		FLYING UNDER OR 3 rd LEG OR LAWMOWER
	WINDS COULD BE A LITTLE OFF ON THIS ONE		2 nd RADAR ANALYSIS SUGGEST A TIGHT MOV, DOWN TO 200, AS WELL IN THAT CONVECTION THAT COULD BE THE KIND OF FOCAL POINT WHERE LOWIN
1750Z	SONDE #20 11N/94W		
1803Z	SONDE #21 11N/95W		LAST AT ON 3 rd EAST-WEST LEG CLEAR FROM CIRCUIT ABOUT JUST FLYING THROUGH CLOUDS AT THIS POINT
1815Z	SONDE #22 10N/96W	CLEAR FROM, CIRCUIT DRAW	
1828Z	SONDE #23 10N/94W	GOING THROUGH CLEAR BLOWOFF	JUST THE ELONGATED CONVECTIVE BAND ON THE SOUTH SIDE OF THE PREVAIL CIRCULATION
1840Z	SONDE #24 10N/93W	1 st CLEAR FROM, CIRCUIT ABOVE	

1851Z SONDE #25 10N/92W

1902Z SONDE #26 10N/91W
NOW HEADING TOWARD A
NEW CONVECTIVE
LINE THAT HAS DEVELOPED
TO THE SOUTH OF
THE CONVECTIVE BAND
WE SAW EARLIER
GET SOME BLOWOFF
AT ALTITUDE,
BASED ON DECK BELOW
→ SONDE#27 WILL SAMPLE THE
INFLUX INTO THAT BAND

1914Z SONDE #26 LAST POINT OF LAWMOVER

MAJOR A WIRE BIT OF STREAK
AFFECTING THE CIRCULATION
BLOWOFF FROM THE CONVECTION
IS STILL TO THE SOUTH
GENERALLY CLEAR CONVECTION



Mission Summary

Scientific Crew (42RF)
 Lead Project Scientist ZAWISLUK
 Radar Scientist DUNSON
 Cloud Physics Scientist
 Dropwindsonde Scientist BUCCI
 Boundary-Layer Scientist
 Workstation Scientist
 Observers (affiliation)

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

LAUNCH/RETRIEVAL PATTERN ENCOMPASSING INVEST CASE IN THE EAST
 PACIFIC ADJUSTED IN FLIGHT TO BE BETWEEN 89W AND 95W AND
 10N TO 13N. 4 URS. AT 20KFT AND BELOW AS NEEDED IN REGION

Mission Synopsis: (include plot of actual flight track)

EXECUTED FAIRLY WELL WITH ONLY A FEW DEVIATIONS (2 ON THE N SIDE)
 LOW ENDFIRE THAT MEANT WE DIDN'T GET ALL THE WAY TO 89W.
 DEFINITELY A BROAD CIRCULATION AT LOW LEVELS WITH LOTS OF CUMULUS TRAIL
 MOUNTAIN HEIGHTS. THINK WE DO SEE AN MCV ON THE EAST SIDE OF PATTERN IN
 SOME SPOTS. DECENT SUBSIDIARIES / SUBANTICIPATED ON EAST SIDE. SU GUID
 UPON IN. BUT NUMBERS ON WEST SIDE MUCH HIGHER → MORE STRENGTH?
 Evaluation: (did the experiment meet the proposed objectives?) Su R

RENEW GOOD PATTERN STRENGTH COMPLETES THEIR 12 PAGES TO THE JUNCTION
 OF OUR SU THE "COORDINATION" WORKS OUT WELL
 CIRCULATION IS TRYING TO GET UP BUT TOGETHER, BUT STILL BROAD AND NOW
 IS CONVECTIVE MINIMUM. GOOD NEWS... WE WERE ABLE TO COMPLETE MOST
 OF THE MISSION AT 20KFT

Problems: (list all problems)

THE HRD WORKSTATION DID NOT SYNC W/ ONIA TECH STATION TO GET
 THE SWEEP FURTHER. HAD TO KIND OF MANUALLY DO IT. BUT THAT
 PROBLEM STILL ALLOWED US TO GET AN REAL-TIME ANALYSIS

Expendables used in mission:

	Deployed	Good	Bad	
GPS sondes:	28	28	2	26 RTS 2 BACKUPS
AXBTs:				
Sonobuoys:				
UAVs				

DROUGHT GOOD W/ COORDINATION W/ OTHER. THERE'LL BE BENEFIT FROM THE DATA AND WE BENEFIT FROM THEIRS.

W/ 2 OPS,
 SO 20 IS 5.
 SO A BIT
 OF AN
 INCREASE RISK
 ON OUR PART

INTERMITTENT BANDS SET UP AS THE END OF
 SOUTH SIDE, BUT NORTH OF OUR SWEEP WORKSTATION