

Lead Project Scientist

Storm or Project A199 Experiment name GENESIS (NHC INVEST)
Flight ID 2016082811 Mission ID NOAA3 05EEA INVEST

Preflight

- ☐ 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 MGOC in Miami.
- ☐ 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 MGOC.
- ☐ 7. Determine next mission status, if any, and brief crews as necessary.
- ☐ 8. Notify MGOC 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 AL99 Experiment name GENESIS (NHC INVEST)

Flight ID 20160828I1 Mission ID NOAA3 OSEEA INVEST

A. Participants:

HRD		AOC	
Function	Participant	Function	Participant
Lead Project Scientist	<u>ZAWISLAK</u>	Flight Director	<u>SEARS / WILLIAMS</u>
Radar/Workstation	<u>ANNANE</u>	Pilots	<u>KERNS / ABITBL</u>
		Navigator	<u>GALLAGHER</u>
Cloud Physics		Systems Engineer	<u>LYNCH</u>
		Data Technician	<u>MASCARO</u>
Dropwindsonde	<u>ZAWISLAK</u>	Electronics Technician	
AXBT/AXCP		Other	
Photographer/Observer			
s/Guests			

B. Take-off and Landing Times and Locations:

Take-Off: 1703 UTC Location: MAC DILL

Landing: 0038 UTC Location: MAC DILL

Number of Eye Penetrations: _____

C. Past and Forecast Storm Locations:

Date/Time	Latitude	Longitude	MSLP	Maximum Wind
<u>28 / 0251Z</u>	<u>23.2</u>	<u>-79.5</u>	<u>N/A</u>	<u>N/A</u>
<u>28 / 1800Z</u>	<u>24.0</u>	<u>-81.8</u>	<u>N/A</u>	<u>N/A</u>
<u>28 / 1945Z</u>	<u>23.8</u>	<u>-81.8</u>		
<u>28 / 2142Z</u>	<u>23.5</u>	<u>-81.9</u>	<u>1009</u>	<u>46kt (SEAR HIRSHY RAIN)</u>

ASCAT PASS ←
CLEAR LOW-LEVEL
CIRCULATION.

NHC FORECAST
POSITION
VDM

280/6KT

D. Mission Briefing:

INITIALLY NHC TASKED INVEST MISSION TO CLOSE OFF ANY LOW-LEVEL CIRCULATION ASSOCIATED W/ AL99. FL WILL BE 1500 FT. TIME PERMITTING AFTER RELEASE FROM NHC, 2 OPTIONS, AND/OR, IF PRECIP, THEN FLY AT 10 KPT, ALSO IF NO PRECIP, OR TIME PERMITTING, CLIMB TO AS HIGH AS POSSIBLE FOR LAUNDMANER 600M WEST OF WAVE TROUGH TO SAMPLE SHEAR AND DRK AIR.

SHEAR (SHIPS, 00): 18 KT / 331°

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Flight ID 20160828 I 1 Mission ID NOAA3 05 EEA INVEST

E. — Equipment Status (Up ↑, Down ↓, 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	N/A			
Data System	↑	↑		
GPS sondes	↑	↑		
AXBT/AXCP	N/A	N/A		
Ozone instrument	N/A	N/A		
Workstation	↑	↑		
Cameras	↑	↑		

REMARKS:

Lead Project Scientist Event Log

Date 20160928 11

Flight ID _____

LPS ZAWISUAR

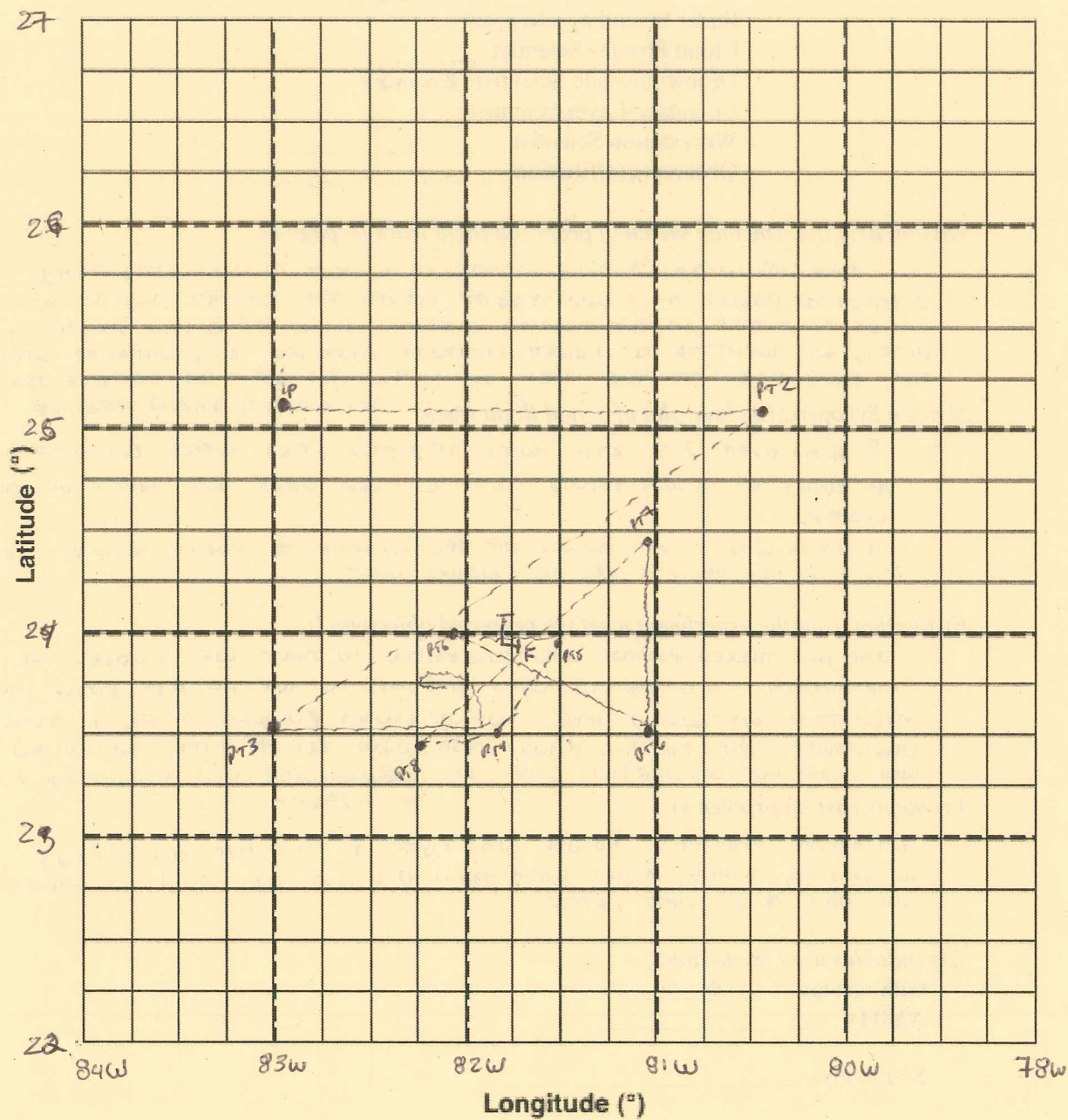
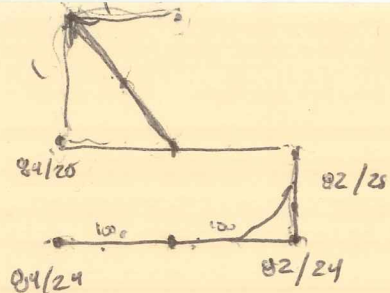
Time	Event	Position	Comments	
1703Z	T/O			
1750Z	10 / DELTA	25° 5' 50" / 82° 56' 9"	1P FIRST OF E/W LEG	
1832Z	PT 2 / DELTA	25° 0' 05" / 80° 24' 52"	PT 2, TURN SW TOWARDS CTR	1500 FT
1842Z			CONVECTION EAST OF CTR, EVEN OVER CTR, 55K FT	
1900Z	CENTER → PASSED WEST	23° 54' 30" / 81° 59' 0"	NEAR EAST PASS, LIGHT NE WINDS	1000 FT
1917Z	PT 3 / DELTA	23° 26' 25" / 82° 58' 0"	TURNING EAST ALONG CUBA RIDGE	
1934Z	PT 4 / DELTA		ECHO TOPS VIOLETA TO SOUTH	
	↳	23° 36' 57" / 81° 47'	TURN NE/N TOWARD CTR, LIGHT WEST WINDS	1000 FT
	PT 5		GUN RETURNS IN TA TO EAST	
1942Z	CTR	23° 55' / 81° 31'	SOUTHERLY TURNED SEASTERLY, NOW WEST	TO MAKE NW TO SE
1952Z	TURN AT PT 5 / DELTA	24° 2' / 82° 9'	GOING TOWARDS SW FOR CTR PASS	
	CTR	23° 44' / 81° 47'	MANEUVERING TO CENTER	23.7° / 81.7°
2010Z	PT 6 / DELTA	23° 34' / 81° 7'	TURN NORTH TO SOME WIND FIELD	
2023Z	PT 7 / DELTA	24° 25' / 81° 8'	TURN BACK FOR NE → SW PASS	BELOW 1000
2039Z	CTR	23° 43' / 81° 47'	NEAR CENTER	
2055Z	PT 8 / DELTA	23° 27' / 82° 12'	TURNED TO EAST	
2117Z		23° 57' / 81° 49'	DECISION TO MAKE ANOTHER NE-SW PASS	
2132Z		24° / 82°	INTERIM NW TO SE	
2140Z	CTR	23° 36' / 81° 56'	CTR - NW TO SE GOING CONVECTION	
2150Z			GOING EAST IN SE QUAD TURN NORTH	
2158Z			COMING ABOUT FOR E-W PASS	
2213Z			HENDING TOWARD CENTER (MUCH COM.)	
2254Z	SOUND 1	24N / 84W	LEG 1 - WEST - EAST	
2306Z	SOUND 2	24N / 83W	LEG 1 - WEST - EAST	
2316Z	SOUND 3	24N / 82W	LEG 1 - WEST - EAST	
2328	SOUND 4	25N / 82W	LEG 2 - EAST - WEST	

END OF
NHC TASKING
~2230Z

Lead Project Scientist Event Log

Date 29 JUL 1971 Flight ID ZAC 0978 I1 LPS ZAWNSLAK

[illegible]



Mission Summary

Storm name

YYMMDDA# Aircraft 43RF

160828

Scientific Crew (4 RF)

Lead Project Scientist ZAWISLAK

Radar Scientist ANNANE

Cloud Physics Scientist _____

Dropwindsonde Scientist ZAWISLAK

Boundary-Layer Scientist _____

Workstation Scientist _____

Observers (affiliation) _____

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

THIS WAS INITIALLY AN NHC TASKED INVEST MISSION INTO AL99. A SERIES OF PASSES AT 1000-1500 FT CLOSED THE CENTER AND PROVIDED A ZIG ZAG OF NOW TO 9 IN THE FORWARD STRAITS. ONCE RELEASED FROM TASKING ORDERS, WE WENT TO A HIGHER ALTITUDE AND DID A LAWNMOWER SURVEY OF THE ENVIRONMENT TO THE WEST OF TO 9. THIS WAS TO SAMPLE BOTH THE DRY AIR AND SHEAR PROFILE.

Mission Synopsis: (include plot of actual flight track)

8 DROPS OVER 2.5 EAST-WEST ORIENTED LEGS WERE EXECUTED W/ DROPS AT TURNS AND MIDDLE POINTS. WE GOT ONE DROP JUST NORTH OF THE CENTER.

HUMIDITY WAS DECENT THROUGH THE TROPOSPHERE TO 500MB, THEN DROVE ABOVE. MUCH GREATER DEPTH OF DRY AIR FARTHER WEST.

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

THE NHC TASKED PORTION WAS SUCCESSFUL IN THAT WE CLOSED THE CIRCULATION. OUR PORTION WAS A BONUS AS WE DID NOT KNOW HOW MUCH TIME WE WOULD HAVE. WE ORIGINALLY PLANNED A FIG. 4 THEN LAWNMOWER, BUT THE FIG. 4 WAS ABANDONED DUE TO TIME AND GIVEN HOW MUCH WORK COVERAGE WE ALREADY HAD. THE LAWNMOWER WAS FLOWN SUCCESSFULLY AT ~29KFT.

Problems: (list all problems)

NO MAJOR PROBLEMS. POWER WAS LOST ON THE A/C ON LANDING SWITCHOVER, WHICH MEANS DATA TECH DID NOT GET DATA OFF AIRPLANE. WILL HAVE TO DO THAT LATER.

Expendables used in mission:

GPS sondes : 8

AXBTs : _____

Sonobuoys: _____