

Lead Project Scientist

Storm or Project TS Gordon Experiment type TDR
Flight ID 180903H1 Mission ID _____

Preflight

1. Participate in general mission briefing.
2. Determine specific mission and flight requirements for assigned aircraft from the Field Program Director.
3. 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.
4. Meet with AOC flight director and navigator at least 3 hours before take-off for initial briefing.
5. Determine from AOC flight director the mission designation and whether aircraft has operational fix responsibility
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 drops.
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. Request AOC flight director to leave radar in non-sector mode for initial Figure 4.
- ___ 5. Once at IP, request AOC flight director adjust radar tilt to minimize sea clutter.
- ___ 6. Complete Lead Project Scientist Form.
- ___ 7. Check in occasionally 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 Dropsonde raw and processed files from the AVAPS operator on thumb drive.
- ___ 4. Obtain a copy of the radar LF files from the radar technician on thumb drive.
- ___ 5. Obtain a copy of the tar'ed radar TA files from the radar scientist on thumb drive.
- ___ 6. Obtain a copy of serial flight data and raw NetCDF file on thumb drive from the data technician.
- ___ 7. Obtain a copy of SFMR data on thumb drive from the data technician.
- ___ 8. Obtain a copy of DMT data on thumb drive from the data technician.
- ___ 9. Report landing time, aircraft, crew, and mission status to the Field Program Director.
- ___ 10. Determine next mission status, if any, and brief crews as necessary
- ___ 11. Prepare written mission summary using **Mission Summary** form.

Lead Project Scientist Check List

Storm or Project TS Gordon Experiment name TDR

Flight ID 180903H1 Mission ID 0207A

A. Participants:

HRD		AOC	
Function	Participant	Function	Participant
Lead Project Scientist	<u>Rogers/Christopher</u>	Flight Director	<u>Sears</u>
Radar/Workstation	<u>Christopher / Rogers</u>	Pilots	<u>Prie, Axtell, Doremas</u>
		Navigator	<u>Richards</u>
Cloud Physics	<u>_____</u>	Systems Engineer	<u>Mascaro</u>
		Data Technician	<u>Greene</u>
Dropwindsonde	<u>Hazelfon/Christop.</u>	Electronics Technician	<u>Underwood</u>
AXBT/AXCP	<u>Hazelfon</u>	Other	
Photographer/Observer s/Guests	<u>Ahern (FSU)</u>		

B. Take-off and Landing Times and Locations:

Take-Off: 2026 UTC Location: LAL

Landing: 0000 UTC Location: LAL

Number of Eye Penetrations: _____

C. Past and Forecast Storm Locations:

Date/Time	Latitude	Longitude	MSLP	Maximum Wind

D. Mission Briefing: Conduct EMC-tasked mission into TS Gordon. Gordon has developed

from a wave moving through FL Keys. Encountering S, SW shear from upper-level low to S and SW of storm. Dry air on southern side too. Broad precip shield to WE over FL peninsula. Forecast calls for Gordon to track quick to NW, WW over eastern Gulf into LA/MS border in ~36 hours. Potential for intensification, especially if shear relaxes and symmetrization occurs.

Fly L-shaped line starting N-S at ~90W, then E-W at ~25N at ~18kft, sampling mid-levels. Then descend to 10kft, look for potential circles. CB module. Then butterfly, if on site for numbers. Probs at times, mid, center, possible RMM BT's at mid, N

Storm or Project TS Gordon Experiment name TR DR

Flight ID 18090361 Mission ID 0207A

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				
Data System	↑			
GPS sondes	↑			
AXBT/AXCP	↑			
Ozone instrument	—			
Workstation	—			
Cameras	↑			

REMARKS:

Lead Project Scientist Event Log

Date 9/3/18 Flight ID 18090341 LPS Rogers/Christopher

Time	Event	Position	Comments
2027	takeoff	Lakeland	
2052	turn, drop 1	NW part, 17 kft.	beginning N-S leg at 17 kft, in mostly cirrus shield
		28 N 84 W	
2105	drop 2	27 W 84 W	
2115	obs	middle of N-S leg, w/ center	clear below, cirrus shield above
2116	drop 3	26 N 84 W	climbed to 49.2 kft at ~ 2110, sub released from that altitude
2110	pattern	26.4 N 84 W	climb to 49.2 kft
2121	drop 4	25.5 N 84 W	
2122	pattern	25.5 N 84 W	turn to track 90, begin W-E leg
2130	drop 5	25.5 N 83.15 W	
2136	drop 6	25.5 N 82.6 W	
2138	obs	25.5 N 82.4 W, SE of center	drops # 2 + 3 show some dry air, more than #1, which was moist
2143	drop 7	25.5 N 82 W	completed leg from W-E, now descending to 10 kft, heading toward on SE, SE winds too weak, so no cirrus here, will maybe try on NW side.



25° 04' N
81° 48' W
IP

26.4
82.6
radar-est.
center

Mission Summary

Storm name

YYMMDDA# Aircraft 4 ZRF

Scientific Crew (4 RF)

Lead Project Scientist Rogers/ Christopherson

Radar Scientist Rogers / Hazelton

Cloud Physics Scientist _____

Dropwindsonde Scientist Christopherson / Hazelton

Boundary-Layer Scientist _____

Workstation Scientist _____

Observers (affiliation) Kyle Ahern (FSU)

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



Initial 20kft survey pattern then descend to 10kft to do a rotated butterfly pattern.

Mission Synopsis: (include plot of actual flight track)



Initial 20kft to finish "L" survey pattern, then descend to 10kft ~~at~~ SE side of the storm, ~90nm away from the storm. At the end of leg we did 3 @ 15°, 3 @ 30°, 5 @ 45° SFMR

Evaluation. (did the experiment meet the proposed objectives?) circles

Mission has to be aborted due to mechanic issues.

Problems: (list all problems)

Hydraulic issues with engine #1

Expendables used in mission.

GPS sondes 12

AXBTs: 3 released, only one was working (#2)

Sonobuoys: _____