

Lead Project Scientist

Date 0/6/20

Flight ID 20201006 I1

Storm or Project Delta

Experiment name TAR

Mission ID

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 Delta

Experiment name IND NMC Fix

~~Flight ID 20201006I1~~

~~Mission ID _____~~

A. Participants:

Function	Participant	Function	Participant
Lead Project Scientist	Rogers, Dunin	Flight Director	Ludlow
Radar	Rogers	Pilot	Rossi, Doremus
Workstation	Rogers	Pilot	
Cloud Physics		Navigator	Freeman
Drosonde	Dunin, Rogers	Systems Engineer	Richards
Drosonde		Data Technician	McAlister
AXB/AXCP	_____	Electronics Technicians	
Observer/Guest			
Observer/Guest		Flight Engineer	

B. Take-off and Landing Times and Locations:

Take-Off: _____ UTC Location: KLAL

Landing: _____ UTC Location: _____

Number of Eye Penetrations: _____

C. Past and Forecast Storm Locations:

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

D. Mission Briefing:

NMC tasked fix mission into Delta. Delta has undergone RT in past 24h and is now a Cat 4. It is a very small storm showing polygonal eyewall structure. The environment remains favorable for continued intensification, though small size and potential ELCs may constrain that intensification.

Fly 2 alpha patterns, 1P on NW, both alphas on same orientation. 105nm leg lengths. Drop sondes at end points, RMW, and center, plus an additional drop about 1min ^{outside} wave module, likely in SE quad, for min. of 60 sec. Fly 10km

Lead Project Scientist Event

Date 10/1/20

Flight ID 201006DI

LPS Rogers, Duvion

Time	Event	Position	Comments
2119	takeoff	KLAL	
2350	obs	SE outboard leg	1st pass had very different structure than anticipated.
			only 105 kt FL, 105 kt SF. Almost a spiral-type eyewall appearance.
			Possible ERC?
0015	obs	very broad outer wind max on NW side, likely not an outer wind max.	Very small cloud shield on IR. System seems to be struggling. Not sure why.
0054	obs	open eyewall	on S side
0134	pattern	downwind leg on S side	can't do a gravity wave module on SE side b/c need fix early. No time for module now. Will try once return to SW point.
0239	obs	downwind leg on W side	swath analyses on NE-SW pass shows wind max 180 deg out of phase b/w 4 & 9 km. Wind max on SW at 11 km, on NE at 9 km. Lightning in S eyewall (DSL)
0350	obs	downwind on N	zoomed radar swathes show a circulation tilted about 5 nmi to WSW from low-level center. Doesn't sound like much, but that's almost scale of RWV

0634 landing

KLAL