

Lead Project Scientist

Storm or Project JS Don

Experiment name TDR

Flight ID 20110728H1

Mission ID _____

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.

IP 10.10.16.15
 subnet 255.255.255.0
 default 10.42.16.1

Lead Project Scientist Check List

Storm or Project TS Don Experiment name TDR

Flight ID 2011072841 Mission ID 0304 ADOX

A. Participants:

| HRD | | AOC | |
|------------------------|----------------|------------------------|-----------------------|
| Function | Participant | Function | Participant |
| Lead Project Scientist | <u>Rogers</u> | Flight Director | <u>Sears</u> |
| Radar/Workstation | | Pilots | <u>Newman, Martin</u> |
| | <u>Gamache</u> | Navigator | <u>Kiddler</u> |
| Cloud Physics | <u>—</u> | Systems Engineer | <u>Bosko</u> |
| Photographer/Observer | <u>—</u> | Data Technician | <u>Olney</u> |
| /Guests | | Electronics Technician | |
| Dropwindsonde | <u>Rogers</u> | Other | |
| AXBT/AXCP | | | |

B. Take-off and Landing Times and Locations:

Take-Off: 1955 UTC Location: KMcP

Landing: — UTC Location: —

Number of Eye Penetrations: —

C. Past and Forecast Storm Locations:

| Date/Time | Latitude | Longitude | MSLP | Maximum Wind |
|-----------|----------|-----------|------|--------------|
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D. Mission Briefing:

Fly TDR mission into TS Don. 105 nm leg lengths, 8000 ft. pressure. Drops at all end and midpoints, plus at RHW on 1st and 3rd pass. Also center drops on first and third pass. Drop BT is at end mid-, and RHW points on first and third pass. IP is 105 nm at 60° azimuth. If present, drop sondes across arc cloud. Also if possible fly modified convective burst mode near such a system. Fly 2nd passes within 5 nm from convective system, leg length ~ 50 km.

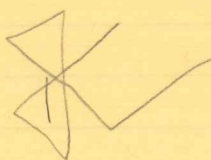
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Mission Summary
Storm name
YYMMDDA# Aircraft 4_RF

Scientific Crew (4 RF)

Lead Project Scientist Rogers
Radar Scientist Gamacho
Cloud Physics Scientist _____
Dropwindsonde Scientist Rogers
Boundary-Layer Scientist _____
Workstation Scientist Rogers/Gamacho
Observers _____

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



See previous

Mission Synopsis: (include plot of actual flight track)

Flw first leg and half of second leg. System was still experiencing shear, and vortex clearly showed tilt. Strong convection with much lightning at center and south of center (at PL). Storm is intensifying. Unfortunately TDR never worked except for first part of first leg, with prospect for repair before next flight whereby missions were cancelled and this mission aborted after second pass.

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

Because of TDR failure mission was not accomplished. Props worked reasonably well (9/12), BT's mostly worked well.

Problems: (list all problems)

TDR out, communication b/w AVAPS + workstation out until end of flight, so had to be compensated by using flash drives.

Expendables used in mission:

GPS sondes : 12
AXBTs : 12
Sonobuoys: _____