

## Lead Project Scientist

Storm or Project AL042014 Experiment name TDR research  
Flight ID 2014082411 Mission ID 0904A CHRISTOPAL

### 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 AL042014 Experiment name Research/TOR  
 Flight ID 20140824I1 Mission ID 0904A Christobal

**A. Participants:**

| HRD                              |                     | AOC                    |                        |
|----------------------------------|---------------------|------------------------|------------------------|
| Function                         | Participant         | Function               | Participant            |
| Lead Project Scientist           | <u>Sellwood</u>     | Flight Director        | <u>Homes/Sears</u>     |
| Radar/Workstation                | <u>Abersum</u>      | Pilots                 | <u>Kibby/Price</u>     |
|                                  |                     | Navigator              | <u>Spiegel</u>         |
| Cloud Physics                    |                     | Systems Engineer       | <u>Klippel/Lalonde</u> |
|                                  |                     | Data Technician        | <u>Green/Smith</u>     |
| Dropwindsonde                    | <u>Chen</u>         | Electronics Technician | <u>Nachler</u>         |
| <del>AXBT/AXCP</del> <u>SFma</u> | <u>Holbach</u>      | Other                  |                        |
| Photographer/Observer            | <u>Suppl/Frauer</u> |                        |                        |
| s/Guests                         | <u>Cassidy</u>      |                        |                        |

IRAP  
media

**B. Take-off and Landing Times and Locations:**

Take-Off /755 UTC Location: MacDill  
 Landing: \_\_\_\_\_ UTC Location: \_\_\_\_\_  
 Number of Eye Penetrations: \_\_\_\_\_

**C. Past and Forecast Storm Locations:**

IP 24,24 75.02

| Date/Time | Latitude | Longitude | MSLP   | Maximum Wind |
|-----------|----------|-----------|--------|--------------|
| 182 8/24  | 24.12N   | 72.46W    | 1001   | 40 KTS       |
| 1933      | 24.24    | 7332      | 999    | 38 KTS       |
| 2117      | 2432     | 7257      | AF fix | 45 KTS       |
| 2153      | 2424     | 7256      | 999    | 45 KTS       |
| 2319      | 2417     | 7305      | 999    | 45 KTS       |

**D. Mission Briefing:** TOR mission if FTP problem is resolved otherwise HRD research mission. Will try to execute high incidence SFma test in 2-30 Kt rainfree region w/ incident with IRAP request

1747 Vortex  
 10 6 KTS  
 0 6 KTS  
 340 6 KTS  
 from plane  
 at 202  
 275 2 KTS

Storm or Project \_\_\_\_\_ Experiment name \_\_\_\_\_

Flight ID \_\_\_\_\_ Mission ID \_\_\_\_\_

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:** *reduced TDR analysis from 0823I flight to be back up before 1st radar analysis is finished. storm appears to be under more snow than indicated on AMS, max winds at turn 2425 71.4 23.5 m/s, max flight level wind further out. Cut leg short due to convection at turn point about 20 nm short. Creating job files on AZ, from 2113 - 2141 completed (B) 15° (B) 250° (B) 45° banking circles for SFMR calibration during this time LF was switched off. Cut PW leg 2 short to avoid turning in convection about 20 nm short. Then noticed a bug in ASPEN skewT parameters - unable to change plotting max winds near turn into final pass. Last job file created on the ground*







## Mission Summary

### Storm name

YYMMDDA# Aircraft 4\_RF

### Scientific Crew (4 RF)

Lead Project Scientist Schwab/Arbison

Radar Scientist Abrison

Cloud Physics Scientist \_\_\_\_\_

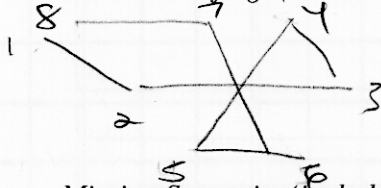
Dropwindsonde Scientist Chen

Boundary-Layer Scientist \_\_\_\_\_

Workstation Scientist \_\_\_\_\_

Observers (affiliation) Holbach FSU (SFMR)

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



drops at center & mid points  
with possible rmw drop on SE side  
of storm. Not EMC tested but will  
try to get TDR data into tank.

Mission Synopsis: (include plot of actual flight track)

high incidence test on second leg following 1st  
midpoint drop (1) 15° arc (2) 30° arc + (3) 45° arcs.  
RMW on SE side just after turn - was not able to  
get a drop out

Try to get SFMR high  
incidence data

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

All objectives met - TDR data made it into EMC  
data tanks SFMR maneuvers were completed successfully  
Tested new radar scripts to transit to alternative flip  
side with positive results

Problems: (list all problems)

FTP down until last leg of flight - alternate site was  
working in the meantime. All data made it to EMC  
data tank.

Expendables used in mission:

GPS sondes: 0

AXBTs: 0

Sonobuoys: 0