

## Lead Project Scientist

Storm or Project ALOY Experiment name TDR  
Flight ID 2014082617 Mission ID 1704A Castoba1

### 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 \_\_\_\_\_ Experiment name \_\_\_\_\_

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

**A. Participants:**

| HRD                    |                       | AOC                    |                     |
|------------------------|-----------------------|------------------------|---------------------|
| Function               | Participant           | Function               | Participant         |
| Lead Project Scientist | <u>Sellwood/Ammon</u> | Flight Director        | <u>Holmes/Scars</u> |
| Radar/Workstation      | <u>Aberso</u>         | Pilots                 | <u>Kibbey/Price</u> |
|                        | _____                 | Navigator              | <u>Stegal</u>       |
| Cloud Physics          | _____                 | Systems Engineer       | <u>Kippel</u>       |
|                        | _____                 | Data Technician        | <u>Nacher</u>       |
| Dropwindsonde          | <u>Hwa Chen</u>       | Electronics Technician | <u>Greene/Smith</u> |
| AXBT/AXCP              | _____                 | Other                  |                     |
| Photographer/Observer  | _____                 |                        |                     |
| s/Guests               | <u>Holbach</u>        |                        |                     |

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

Take-Off: \_\_\_\_\_ UTC Location: \_\_\_\_\_

Landing: \_\_\_\_\_ UTC Location: \_\_\_\_\_

Number of Eye Penetrations: \_\_\_\_\_

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

| Date/Time     | Latitude    | Longitude   | MSLP       | Maximum Wind |
|---------------|-------------|-------------|------------|--------------|
| <u>170220</u> | <u>2755</u> | <u>7124</u> | <u>989</u> | <u>74</u>    |
| <u>195654</u> | <u>2837</u> | <u>7127</u> | <u>986</u> | <u>75</u>    |
| <u>211201</u> | <u>2907</u> | <u>7123</u> | <u>986</u> | <u>75</u>    |
| <u>230044</u> | <u>2927</u> | <u>7131</u> | <u>983</u> | <u>85</u>    |
|               |             |             |            |              |

353 14  
011 24  
344 12

**D. Mission Briefing:**

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<br>/Expendables/<br>Printouts |
|------------------|------------|-----------|-------------|--|
| Radar/LF         |            |           |             |  |
| Doppler Radar/TA |            |           |             |  |
| Cloud Physics    |            |           |             |  |
| Data System      |            |           |             |  |
| GPS sondes       |            |           |             |  |
| AXBT/AXCP        |            |           |             |  |
| Ozone instrument |            |           |             |  |
| Workstation      |            |           |             |  |
| Cameras          |            |           |             |  |

**REMARKS:**

No significant drop in wind on E side of storm ~23 m/s out to end of leg. Flight level winds near 45 m/s in SE lightning in that quadrant. Did a maneuver to cross RMW for Paul Chung - turned W to E then back across some NE to SW then back towards NW then outwards center. Executed 30° and 45° arcs NW of eye for high incidence SFMR

Lead Project Scientist Event Log

Date 8/26/14 Flight ID 20468957 LPS Selwood/Aberson

| Time   | Event         | Position   | Comments             |
|--------|---------------|------------|----------------------|
| 173947 | take off      |            |                      |
| 192627 | 1 P (drop)    |            |                      |
| 194129 | Mid (drop)    |            |                      |
| 1954   | Rmw           | 2834 7139  |                      |
| 195625 | Center        | 2837 7129  |                      |
| 201115 | mid           | 2838 7019  |                      |
| 202916 | end           | 2837 6918  |                      |
| 204807 | turn          | 3017 7018  |                      |
| 2049   | drop          | 3015 7021  |                      |
| 2104   | mid (drop)    | 2932 7131  |                      |
| 2112   | center        | 29.71 7123 |                      |
| 2125   | mid           | 2818 7156  |                      |
| 213939 | turn          | 2730 7927  |                      |
| 220648 | drop          |            |                      |
| 220700 | turn          | 2747 7082  |                      |
| 222830 | Rmw (PC)      | 2915 71.1  | test drops           |
| 2238   | Rmw (PC)      | 296 7055   | might be a bit early |
| 2239   | Rmw (hrd)     | 295 7053   | outside eyewall      |
| 2255   | Rmw (PC)      | 2940 7110  |                      |
| 2300   | Center        | 2828 7131  |                      |
| 2316   | Mid           | 3022 7210  |                      |
| 2326   | ardes (drop)  | 3100 7235  |                      |
| 2341   | end point     | 3115 7285  |                      |
| 0131   | labeled model |            |                      |
|        |               |            |                      |
|        |               |            |                      |
|        |               |            |                      |



## Mission Summary

### Storm name

YYMMDDA# Aircraft 4\_RF

### Scientific Crew (4 RF)

Lead Project Scientist Sellwood/Aberson

Radar Scientist Aberson

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

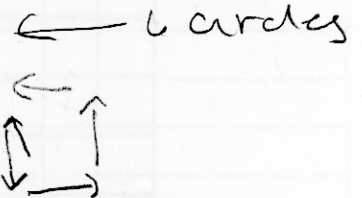
Dropwindsonde Scientist Chen

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

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

Observers (affiliation) \_\_\_\_\_

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



Mission Synopsis: (include plot of actual flight track)

Completed first figure 4 final sat data to EME on final leg. Recovered data Paul Chen & added 2 sondes across RMM for thermo data in addition to PC sonde, IR & mini sonde with BT prior to RMM backup BT launched after PC maneuver since 1st fuel al

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

3 TDR analysis to EME in real time for 182 and 02 cycles, high incidence test thermo sampling across eyewall all successful

Problems: (list all problems)

- miss communication minor issues
- 1) # of hrs persons on flight
  - 2) flight plan for final leg

Expendables used in mission:

GPS sondes: 19 (17 hr ip 2 resch's 1 clone)

AXBTs: 2 (Joe Crane) 1 final used backup

Sonobuoys: \_\_\_\_\_