# Lead Project Scientist

**Storm or Project** Rina **Experiment name** TDR
**Flight ID** 111026 H1 **Mission ID** 07/8A RINA

## 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

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**Flight ID** 111026I1 **Mission ID** 0718A Rina

**A. Participants:**

| HRD | | AOC | |
|---|---|---|---|
| **Function** | **Participant** | **Function** | **Participant** |
| Lead Project Scientist | Aberson | Flight Director | Williams / Parrish |
| Radar/Workstation | | Pilots | Nelson/Sweeney/Martin |
| | Marks | Navigator | Kidder |
| Cloud Physics | — | Systems Engineer | Klippel |
| Photographer/Observer /Guests | Stewart | Data Technician | Lynch |
| Dropwindsonde | Vukicevic | Electronics Technician | Warnecke/Carpenter |
| AXBT/AXCP | | Other | |

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

Take-Off: 1156 UTC Location: MacDill

Landing: 1833 UTC Location: MacDill

Number of Eye Penetrations: 2

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

| Date/Time | Latitude | Longitude | MSLP | Maximum Wind |
|---|---|---|---|---|
| | | | | |
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**D. Mission Briefing:** Hurricane Rina TDR Butterfly. 90-nmi legs. Drops at 90, 60, 30, 0 nmi, midpt of downwind legs. BTs at endpts and rnw NW, W, E. 8kft due to ice at 10k previous flight

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**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** _____ **Flight ID**_____ **LPS** _____

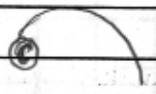
| | Time | Event | Position | Comments |
|---|---|---|---|---|
| | | | | Delay due to EDC engine 3 |
| | | | | not replaced strong w shear. |
| | 1156Z | Takeoff | | |
| | 1400Z | Leveled to 8000 | | |
| | 1402Z | In first band bumpy | heavy rain | some ice +5C |
| | | | | |
| | | GPS laptop bad | | |
| | | Must use sneakernet for sondes | | |
| | 1420 | Turn to 225 at IP | pressure problems in cabin | |
| 1 | 142140 | BT/sonde 90 nmi | NE | |
| 2 | 143006 | Sonde | | |
| | 1432 | Turn 235 to get center | | |
| 3 | 144045 | Sonde/BT RMW NE | | |
| 4 | 1443 | Sonde center (just | past center - bad communication with FD) | |
| | | | | |
| | | | just about everything north | |
| | | 17 48 8526 | 1443 82kt FL | |
| 5 | 1451 | BT/sonde 30 nmi SW | | |
| | | lots of convection popping for SW side | | |
| 6 | 1455 | Sonde 60 nmi SW | | |
| | 1507 | Left turn downwind | | |
| 7 | 1509 | BT/sonde 90 nmi SW | cut short due to winds | left field |
| 8 | 1509 | sonde replace | | back field |
| 9 | 1513 | sonde replace | lots of bumps in eye | Outer winds |
| 10 | 1519 | sonde and out downwind | | |
| 11 | 1531 | turn inbound | | |
| | 1532 | BT/sonde 90 nmi SE | | |

mission 28/03

19.5 87.0

## Lead Project Scientist Event Log

**Date** _____ **Flight ID**_____ **LPS** _____

| | Time | Event | Position | Comments |
|---|---|---|---|---|
| 12 | 1537 | sonde 60 nmi | SE | bad sonde |
| 13 | 1540 | sonde | | backup |
| 14 | 1545 | BT sonde 30 nmi | SE | |
| 15 | 1553 | center | | sort 2 missed |
| 16 | 1555 | BT/sonde | RHW NW | |
| | | | | |
| | |  | hook eyewall | |
| | | | center at head | |
| | | 1753 8534 | 155.3 | |
| | 1559 | LF displays/froze | | |
| 17 | 1605 | BT/sonde | 60 nmi NW | |
| 18 | 1613 | BT/sonde | 90 nmi NW | |
| | 1622 | final BT | | |
| | 1646 | climb out/off | | |
| | | Wrong mission ID | ID on sonde, CARCAH did not catch | |
| | | Communication ok. HAPS spotty | | |
| | | HAPS lost screen during archive - reboot | | |
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vortex

```
                    RAMS Data for Vortex Message   V1.4
Center: 25/2248:11  17°25'N  84°29'W  WS:  3 Kts  HT: 700 mB 2830 M  SP: 966
mB
  2 min HRD Center: 17°26'N  84°28'W is  1.1 NMi NNE of the marked center
Max Surface Wind:  95 Kts  Bearing: 348°  Dist:  7 NMi from Center
Max Wind:  61°  98 Kts  Bearing: 342°  Dist: 11 NMi from Center
Max Temp/Pres - Out: 20 C/ 3036 M   In: 20 C/ 3036 M  TD/SST   8 C/  9  22 [
25]
 C
```

nope

```
                    RAMS Data for Vortex Message   V1.4
Center: 25/2346:11  17°49'N  83°52'W  WS: 43 Kts  HT: 700 mB 3120*M  SP:1006
mB
  2 min HRD Center: 17°47'N  83°54'W is  3.1 NMi SW of the marked center
Max Surface Wind:  37 Kts  Bearing:  69°  Dist:  1 NMi from Center
Max Wind: 132°  54 Kts  Bearing:  69°  Dist:  2 NMi from Center
Max Temp/Pres - Out: 12 C/ 2457 M   In: 13 C/ 2457 M  TD/SST  11 C/ 12  19 C


                    RAMS Data for Vortex Message   V1.4
Center: 26/0057:26  17°23'N  84°37'W  WS:  3 Kts  HT: 700 mB 2840*M  SP: 964
mB
  2 min HRD Center: 17°23'N  84°37'W is   .2 NMi SE of the marked center
Max Surface Wind:  85 Kts  Bearing: 194°  Dist:  9 NMi from Center
Max Wind: 295°  85 Kts  Bearing: 194°  Dist: 10 NMi from Center
Max Temp/Pres - Out: 15 C/ 2479 M   In: 23 C/ 2455 M  TD/SST  12 C/ 15  24 [
26]
 C
```