# Radar Scientist

Flight ID __20180912H1__    Storm __Isaac__

**Radar Scientist** _Christophersen_ **Radar Technician** __Mascaro__

The on-board radar scientist is responsible for data collection from all radar systems on his/her assigned aircraft. Detailed operational procedures and checklists are contained in the operator's manual. General supplementary procedures follow. (Check off or initial.)

## Preflight

___✓___ 1.    Determine status of equipment and report results to lead project scientist (LPS).

___✓___ 2.    Confirm mission and pattern selection from the LPS.

___✓___ 3.    Select the operational mode for radar system(s) after consultation with the LPS.

___✓___ 4.    Complete the appropriate preflight check list.

## In-Flight

_____ 1.    Monitor the Tail Doppler Radar function regularly, using the real-time TA display, to make sure the Doppler radar is scanning and working normally.

_____ 2.    Once at the IP, request that the tilt be adjusted to remove sea clutter.

_____ 3.    Request that the LF radar is set to full scan (non-sector mode) for first Figure 4.

_____ 4.    Maintain the Doppler Wind Parameter form as well as a written commentary in the Radar Event Log of event times, such as ending and restarting of radar recording. Also document any equipment problems or changes in R/T, INE, or signal status.

## Post flight

_____ 1.    Complete the summary checklist and all other appropriate forms.

_____ 2.    Download all Belly (LF) scan radar data files to thumb drive.

_____ 3.    Download all tar'd (TA) radar data files to thumb drive.

_____ 4.    Brief the LPS on equipment status and turn in completed forms and thumb drives to the LPS.

_____ 5.    Debrief at the base of operations.

_____ 6.    Determine the status of future missions and notify HFP Director as to where you can be contacted.

## HRD Radar Scientist Check List

Flight ID: _20180912H1_

Aircraft Number: _N42RF_

Radar Scientist: _Christophersen_

Radar Technician: _Mascaro_

Component Systems Status (Up ↑, Down ↓, Not Available **N/A**, Not Used **O**):

Radar Computer _↑_

Lower Fuselage (LF) Antenna _N/A_

Tail (TA) Antenna _____

## Radar Post flight Summary

Significant down time:

Radar LF _____

Radar TA _____

**Other Problems:**

| | |
|---|---|
| 1546 | 15°9', 53°28' end pnt sonde outbound tracking 90° |
| 1557 | track 85 to extend to 105 nmi |
| 1608 | end of downwind leg |
| 1624 | 15°47' 54°17' mid-pnt, track 225 |
| 1643 | 15°12' 5517° center drop |
| 1653 | 15°38' 55°47' mid-pnt track NW |
| 1702 | end pnt |

# HRD Radar Event Log

Flight ID ___20180912H1___    Storm ___Isaac___

Radar Scientist ___Christophersen___ Radar Technician ___Mascaro___

(Include down time and times of when recording ended and was restarted)

| Time (HHMMSS) | Event |
|---|---|
| 0944 | Take off |
| 1134 | 15°28', 55°46° IP, tracking 135° |
| 1143 | 15°4' 55°22' mid-pnt |
| 120834 | 13°59° 54°19 mark center |
| | 145° ckt from center drop sonde |
| 1217 | mid-drop 13°35' 53°51' |
| 1225 | 13°20', 53°28' end pnt sonde |
| 1248 | 14°53° 53°41' end of downwind leg |
| 1257 | 14°33' 54°6' mid-ptt. inbound 225 |
| | less than 5 kt winds in NE inbound leg |
| 1311 | 13°52' 54°38' mark center sonde |
| 1325 | 13°14° 55°15' mid-pnt sonde |
| 1331 | 12°58' 55°31' end pnt sonde |
| 1353 | 13°46' 54°19' cend pnt downwind 50° |
| 1353 | track 360° Inbound |
| 1359 | descend to 1500ft |
| 1439 | climb to 5000 ft |
| 1503 | 14°59'56°7 downwind end pnt |
| 1517 | 14°57' 55°19' mid-pnt inbound tracking 90 |
| | storm is moving NNW @ 13 kt |
| 1525 | 15°6 54°47' center drop |
| 1541 | 15°8' 53°49' mid-pnt outbound |
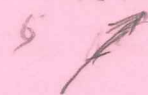
# Doppler Wind parameters

| Flight ID: | 20180912 H1 | | | Doppler flight-leg notes (for use in automatic QC and analysis) | | | | | Scientist: Christophersen | |
|---|---|---|---|---|---|---|---|---|---|---|

| Leg Start Time | Leg End Time | Storm Motion | | Center Fix | | | Inbound | Outbound | Max Radius (km) | Horz. Res (km) | Sent ? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Time | Latitude | Longitude | | | | | |
| HHMMSS | HHMMSS | Degrees | Knots | HHMMSS | (Deg/Min) | (Deg/Min) | track | track | Default = 245 | Default = 5 | (Y/N) |
| 113400 | 1225 | 180 | 13 | 120904 | 13.99 | 54.29 | 135 | 135 | | | |
| 1248 | 1331 | | | | | | 225 | 225 | | | |
| 1353 | 1437 | | | | | | 360 | 360 | | | |
| 1503 | 1547 | | | | | | 90 | 90 | | | |
| 1608 | 1702 | | | | | | 225 | 315 | | | |
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