

19890903HI-RADAR

E.5 Doppler Radar Scientist (On-Board)

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

E.5.1 Preflight

- MMD 1. Determine the status of equipment and report results to the on-board lead project scientist (LPS).
- MMD 2. Confirm mission and pattern selection from the on-board LPS.
- MMD 3. Select the operational mode for radar system(s) after consultation with the HRD/DRS and the on-board LPS.
- MMD 4. Complete the appropriate preflight calibrations and check lists as specified in the radar operator's manual.

E.5.2 In-Flight

- MMD 1. Operate the system(s) as specified in the operator's manual and as directed by the HRD/DRS, unless superseded by directions from the on-board LPS or as required for aircraft safety as determined by the OAO flight director or aircraft commander.

E.5.3 Postflight

- MMD 1. Complete the summary check lists and all other appropriate check lists and forms.
- MMD 2. Brief the on-board LPS on equipment status and turn in completed forms to the LPS.
- MMD 3. Hand-carry all radar tapes and arrange delivery as follows:
 - a. Outside of Miami - to the HRD operations center (FGOC).
 - b. In Miami - to MGOC or to AOML/HRD. [Note: all data removed from the aircraft by HRD personnel should be cleared with the OAO flight director.]
- MMD 4. Debrief at the appropriate operations center (FGOC or MGOC).
- MMD 5. Determine the status of future missions and notify the appropriate operations center (FGOC or MGOC) as to where you can be contacted.

SEP 2 1989

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Doppler Radar Scientist Check List

SEP 3 1989

Flight ID 890903 HI
Aircraft # 42 RF
Operators DORST
Radar Tech. SCHRIKER / GOLDSTEIN

Number of digital magnetic tapes on board 30

Number of tape labels on board +

Component systems up and checked:

MARS	<u>✓</u>	Computer	<u>✓</u>
DMTR1	<u>✓</u>	DMTR2	<u>✓</u>
LF	<u>✓</u>	R/T#	<u>103M</u>
TA	<u>✓</u>	R/T#	<u>42671 GRN</u>

Time correction between radar time and digital time _____

Radar Postflight Summary

Number of digital tapes used:	DMTR1	<u>6</u>
	DMTR2	<u>5</u>

Significant recorder down time:

DMTR 1	_____	Radar LF	_____
DMTR 2	_____	Radar TA	_____

Other problems: RADAR SYSTM 14 mins.

890903 H - Energetics experiment
into Hurricane Gabrielle; inner plane
CPS - Dr F Marks, ODW - Dr HEW, Sea Air -
Dr P Black, CPS - B Black, radar - N Dorst
Doppler radar of inner storm core is
most important.

1/0 - BARBADOS

LAND - BARBADOS

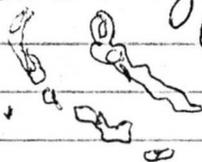
16:08 Z

01:08 Z

1659 Z - System stopped running, No
explanation.

1704 Z - System running, again. Picking
up large outer band, not recording
data yet.

172245 Z - Started data recording. Some
eyewall visible at 200 nm range. Large
rainband 25 nm out. Very white in
the sunlight



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1729 Z - Through eye
outer band, by way

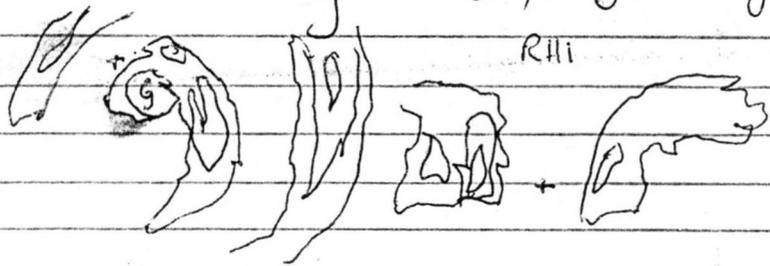
1740 Z - Ambiguous area might be the
eye wall at 100 nm out.



18:45 - Had to move to our
Sampling Station. At 1835Z
Radar sys went down. T Shriker
trying to restart, put 2 new
tapes in, don't know when tapes
D1/T1 & D2/T1 swapped.
18:49 - System restarted. Recording
DATA again on D1/2.

1905Z - Trying next eye pen.

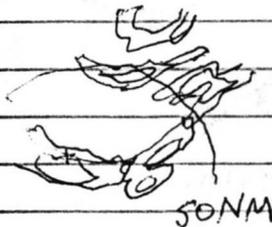
1912Z - Really small, tight eye



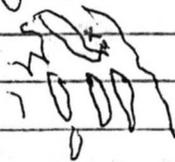
1950Z - Higher alt. pass into eye.



2105Z - Outer band, heavy turb.



2145Z - In large precip area NE
of eye, several active bands



2320Z - Climb out of eye, heading
for 'home'. Tilt down to keep eye.

2352Z - Last tape done, just as we
pass thru an outer band.

0108Z - Land BARBADOS

890904H1 - FERRY from BARBADOS to
SAN JUAN