

## 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

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

### E.5.2 In-Flight

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 Operate the system(s) as specified in the operator's manual and as directed by the HRD/DRS, unless superseded by directions from the on-board LPS or as required for aircraft safety as determined by the OAO flight director or aircraft commander.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

- NMD 1. Complete the summary check lists and all other appropriate check lists and forms.
- NMD 2. Brief the on-board LPS on equipment status and turn in completed forms to the LPS.
- NMD 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.]
- NMD 4. Debrief at the appropriate operations center (FGOC or MGOC).
- NMD 5. Determine the status of future missions and notify the appropriate operations center (FGOC or MGOC) as to where you can be contacted.

890903 HI  
RADAR

Form E-5  
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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 6  
DMTR2 5

Significant recorder down time:

DMTR 1 \_\_\_\_\_ Radar LF \_\_\_\_\_  
DMTR 2 \_\_\_\_\_ Radar TA \_\_\_\_\_

Other problems: RADAR SYSTM 14 mins.

## HRD Radar Tape Log

Flight 890903 H1 Aircraft 42 RF Operator DORST Sheet 1 of 1

[illegible]

SEP 3 1989



HRD Radar Down-Time Log

SEP 3 1989

Operator DORST

Sheet 1 of 1

Item	Time Down	Time Up	Problem
RADAR SYS	~1835	1849	AFTER EYE PEN. SYSTEM DOWN

Item List: DMTR1, DMTR2, COMP, RDSC, LF, TA, DSC1, DSC2.

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



1729 Z - Thoroughly  
outer band, by way

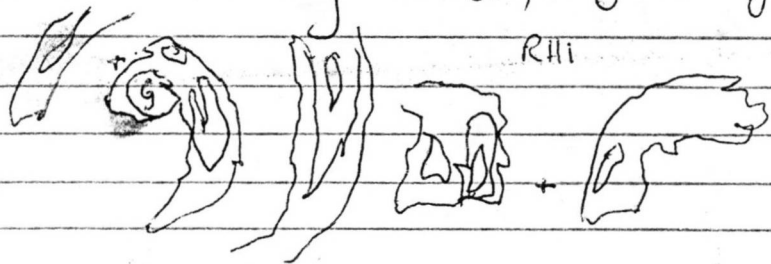
1740 Z - Ambiguous area might be the  
eye wall at 100 nm out.



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/T2.

1905Z - Trying next eye pen.

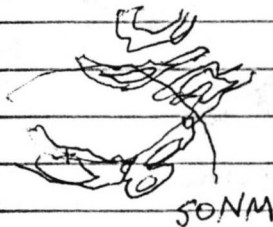
1912Z - Really small, tight eye



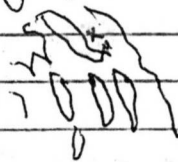
1950Z - Higher alt. pass into eye.



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.

0100Z - Land BARBADOS

890904H1 - FERRY from BARBADOS to  
SAN JUAN