

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 Operate the system(s) as specified in the operator's manual and as directed by the HRD/DRS, unless superseded by directions from the on-board LPS or as required for aircraft safety as determined by the OAO flight director or aircraft commander.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

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Doppler Radar Scientist Check List

Flight ID 890921 I1
Aircraft # 43
Operators DORST
Radar Tech. LYNCH/ROLES

Number of digital magnetic tapes on board 18

Number of tape labels on board 5

Component systems up and checked:

| | | | |
|-------|----------|----------|-------------|
| MARS | <u>✓</u> | Computer | <u>✓</u> |
| DMTR1 | <u>✓</u> | DMTR2 | <u>✓</u> |
| LF | <u>✓</u> | R/T# | <u>101M</u> |
| TA | <u>✓</u> | R/T# | <u>104</u> |

Time correction between radar time and digital time

Radar Postflight Summary

Number of digital tapes used:

DMTR1 4
DMTR2 4

Significant recorder down time:

DMTR 1
DMTR 2

Radar LF
Radar TA

Other problems:

Flight 89092171 Aircraft 43 Operator Dorst Sheet 1 of

[illegible]

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Form E-5
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HRD Radar Down-Time Log

Operator DORST

Sheet 1 of

| Item | Time Down | Time Up | Problem |
|------|-----------|---------|-------------------------------|
| DSCI | 22:15 | 09:00 | COME OUT, NO DUAL LF DISPLAYS |
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Item List: DMTR1, DMTR2, COMP, RDSC, LF, TA, DSC1, DSC2.

890921Z - RECCO ON HUGO
LPS - Dr HEW, RADAR - N DORST
CPS - Dr J HALLET (FIELD MILL MAW)
A TON OF PRESS CORP (Ch. 7, NBC, ?)

WAY LOW ON TAPE LABELS, WHAT
DO YOU GUYS DO? EAT THEM!?
T/O was scheduled for 3³⁰ PM EDT,
but fuel leak in wing tank delayed
up 2 hrs.

T/O 2141Z MIAMI LAND 0506Z MIAMI

21:58 - Radar system up & running. Not
recording, yet.

22:15 - Just sitting at radar station
minding my own bees wax when
DSC1 goes down! Roles can't
restore it, so we only have 1
LF display. Jack Parrish sez
put it on 52 display & change
it as needed.

22:36 - Eye on screen 150 NMi
out.

Sheets called the plane & charged
out flight pattern. Dr HEW is very
POed. Thinks any data we collect
will be of minimal utility.

22:50 - Started recording data. Due
to delay in setting up DSC 3 & 2 for
LF I didn't start recording 'til
we were in an outer band.

22:58Z



'tween bands.



20NMi eye closed

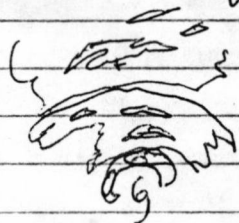
23:07 - In eye, clear above, sea is
boiling below. Last rays of sunlight
are striking cirrus above the eye.
ODW drop. Then orbit in the eye
for TV scans. Not much daylight left.
Shame as this is nice eye.

23:18 - Still orbiting, LF data coming.

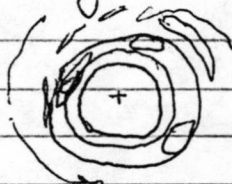
23:24 - Finally finished turns & rolls
2nd ODW drop good. LF presentation
is now OK.

23:33 - Passed thru NE eyewall max
winds 120+ kts. Maybe 2 mind max
very close together.

0008Z - North of center, large areas of stratiform precip.

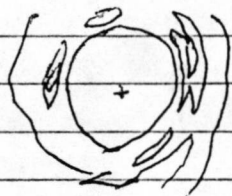


00:59Z - In the eye. A beaut, round & closed



01:23 - Est. wind speed of HUBO 20kts. it's 40NM offshore, so we expect landfall ~~at~~ or Midnight EDT (the witching hour).

0131Z - Back in the eye. Nice display.



0200Z - Jim Roles put TA on DSC2 for a while. Looks good

0245 - Painting coast of So Carolina



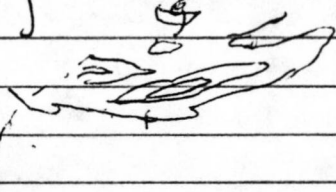
0251Z - Jack Parrish requested that on this possibly last eye pen for HUBO that the LF be filtered out to point any land in the eye, but not so do so if it ruins our radar data. I'll try to thread that needle.

0258Z - Appears if NW eyewall is over the coastline.

0300Z - Switched to INEZ. INEI may have problem.

0322Z - Our last eye pen. Coastline seen in NW quad of eye. 140 kt winds steady in NE eyewall.

0344Z - Heavy convective band S of storm heading for home. Fla



0354Z Chinking for flight home.

0416Z Stopped recording 1/2 thru tape. Last band 150NM away.

0506Z Touchdown Miami