

19930829H1 - RADAR

AUG 29 1993

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 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 on-board LPS or as required for aircraft safety as determined by the AOC 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 AOC 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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Form E-5
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Doppler Radar Scientist Check List

Flight ID 9308 29H1
Aircraft # N42RF
Operators GAMACHE, GOLDENBERG, DORST
Radar Tech. ROLES

Number of digital magnetic tapes on board 7 + 30

Number of tape labels on board OK

Component systems up and checked:

| | | | |
|-------|----------|----------|--------------------------|
| MARS | <u>✓</u> | Computer | <u>✓</u> |
| DMTR1 | <u>?</u> | DMTR2 | <u>✓</u> |
| LF | <u>✓</u> | R/T# | <u>122</u> <u>103</u> |
| TA | <u>✓</u> | R/T# | <u>102</u> |

Time correction between radar time and digital time -

Radar Postflight Summary

Number of digital tapes used:

| | |
|-------|----------|
| DMTR1 | <u>4</u> |
| DMTR2 | <u>3</u> |

Significant down time:

| | | | |
|--------|-------------------|----------|-------------------|
| DMTR 1 | <u> </u> | Radar LF | <u> </u> |
| DMTR 2 | <u> </u> | Radar TA | <u> </u> |

Other problems:

HRD Radar Tape Log

Flight 930829H1 Aircraft N42RF Operator GAMACHE Sheet 1 of 1
etal

[illegible]

AUG 29 1993

1993

930829H1 - Hurricane Emily
 Synoptic flow experiment on
 Emily (LPS) Dr Hugh Willoughby
 (ODW Dr Gemache, Goldenberg, Dorst
 Faylor (~~Dr~~ of Mass)

Pilot Tiekner ODW Tech Gonzales
 Flight Dr Parrish El Tech Roles

T/O KMIA 1828 Z LAND KMIA 0355Z
 RADAR XMT 1920Z

1924Z - Began recording on Drive 2
 Drive 1 suspect so will record the
 eye pass on 2nd drive.

~1940Z - LF return became bad w/
~~for~~ spots of return in a ring of
 constant distance. R/T 122 was
 replaced w/ R/T 103 & TAPE #1 was
 restarted at beginning.

1958Z - Began recording (again) picking
 up eye ~ 350 km out.

Recording some sea clutter so as to pick
 up eye at a distance.

2019Z - Brought tilt up to ~3° to kill
 some sea clutter but still paint eye.

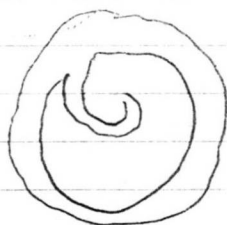
2047 Drive 2 Tape off Drive 1 Tape on

20 54 Tape write error 5121 Drive 1

20 56 "

2107Z - TA RADAR COMPUTER WENT DOWN. ATTEMPTS TO REBOOT ARE UNSUCCESSFUL. MAY BE JUST A DISPLAY PROBLEM. DSC 2 IS KAPUT, JIM ROLES SAYS!

2100Z - DURING BOTH EYE PASSES A SMALL BAND CURVED INTO THE EYE AND CLOSED OFF.



2230Z - DR 6. SWITCHED TALL RADAR TO FAST MODE. WORK CONTINUES ON DSC 2. WE HOPE NO ADVERSE AFFECTS ON DATA BEING RECORDED. FEW ECHOS.

0034Z - Missed a tape change by a few minutes. Mea culpa, Paul.

0120Z - Passing south of Emily, painting outer bands 300+ km away.

0316Z - Painting Andros

0321Z - Stopped recording radar
System shut down.