

19980820 H1 - RADAR

AUG 20 1998

### 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

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

#### E.5.2 In-Flight

- Jm 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

- Jm 1. Complete the summary check lists and all other appropriate check lists and forms.
- Jm 2. Brief the on-board LPS on equipment status and turn in completed forms to the LPS.
- Jm 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.]
- \_\_\_\_\_ 4. Debrief at the appropriate operations center (FGOC or MGOC).
- \_\_\_\_\_ 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 980820 #1  
Aircraft # 42 RF  
Operators Manks  
Radar Tech. Barr

Number of digital magnetic tapes on board >10

Number of tape labels on board >10

Component systems up and checked:

MARS ↑  
DMTR1 ↑  
LF ↑  
TA ↑

Computer ↑  
DMTR2 ↑  
R/T# 102  
R/T# 123/202

Time correction between radar time and digital time 1

**Radar Postflight Summary**

Number of digital tapes used:

DMTR1 1

DMTR2       

Significant down time:

DMTR 1 0

Radar LF 0

DMTR 2 0

Radar TA       

Other problems:

Waked fantastic!!!

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HRD Radar Down-Time Log

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Operator Marks

Sheet 1 of 1

Item	Time Down (HHMMSS)	Time Up (HHMMSS)	Problem

Item List: DMTR1, DMTR2, COMP, MARS, LF, TA.

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[illegible]

1756  
6040

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W43KF

(Include start and end times of DATs, as well as times of F/AST legs and any changes of radar equipment status)

[illegible]

## HRD Radar Tape Log

Flight \_\_\_\_\_ Aircraft \_\_\_\_\_ Operator \_\_\_\_\_ Sheet \_\_\_\_ of \_\_\_\_

LF RPM \_\_\_\_\_ TA RPM \_\_\_\_\_

(Include start and end times of DATs, as well as times of F/AST legs and any changes of radar equipment status)

[illegible]

[illegible]

## HRD Radar Down-Time Log

Operator \_\_\_\_\_ Flight ID \_\_\_\_\_ Sheet \_\_\_\_ of \_\_\_\_

[illegible]

Item List: DAT1, DAT2, COMP, MARS, LF, TA.

Include serial numbers of any new R/Ts.

TD  
980820 H 1 soon "Bonnie" ①

3-plane synoptic-flow  
from St. Croix

17°42" 64°48"

radar (Marks/Bracken)  
To 174620 UTC LPS P. Blach  
GPS M. Blach  
Walestaban Leighton  
old physics Cizne

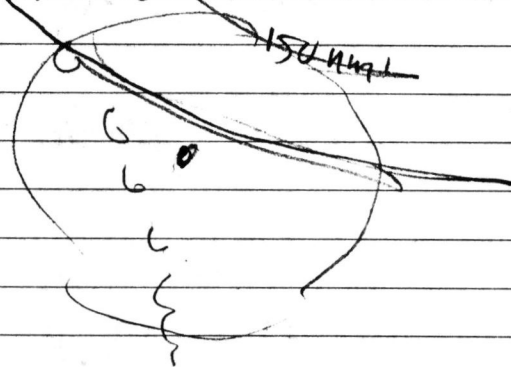
set up radar system and  
saved menus

HURR3 for TA dual PRF 2100/1400  
pulse width 375 us

HURR3 for LF color tables adjusted

2013 switch to FAST crossing  
islands 260 nm S of G

154° 60°35'





②

202230 entering small band  
nice FAST E of Guadalup

18°23" 60°30" 570 m/h

17°56" 60°40" 850 m/h

start leg 2044

end leg 2102

FAST downwind to 400m W of G  
good rainband - high reflectivity

start leg 2114

2115 Pearl W of G

to clear dropsonde sys.

start leg 212345

nice little hook like

15000 ft.

Guillap

1991



G 2129 18°30" 60°36"

end leg 213900

got FAST

impression TA 007 7-10 dB low  
contoured 10 ft

③

2200 running along S edge  
of rooster tail 1500m E of G  
good FAST in cells.

0159 Tape of G

When

Drops; Where

Winds Comm

- |    |      |                   |                |             |
|----|------|-------------------|----------------|-------------|
| 1  | 1948 | N. eyewall        | Yes            | 130 Kts SFC |
| 2  | 1950 | middle N eyewall  | <del>Yes</del> | 120 Kts     |
| 3  | 1953 | outer N eyewall   | NO             |             |
| 4  | 2120 | SE eyewall        | NO             |             |
| 5  | 2123 | middle SE eyewall | Yes            | 100 Kts     |
| 6  | 2125 | inner SE eyewall  | <del>Yes</del> | 110 Kts     |
| 7  | 2342 | SW eyewall        | Yes            |             |
| 8  | 2348 | inner NE eyewall  | Yes            | 125 Kts     |
| 9  | 2351 | middle NE eyewall | Yes            |             |
| 10 | 2354 | outer NE eyewall  | NO             |             |

0028 - eastern eyewall  
lightning - graupel  
at 10°C 115 Kts

0036 - climb out  
back to Puerta Vallento

0137 - end recording  
Good bye Guillermo



1998  
HURRICANE  
SEASON



980819H1 Ferry to St. Croix

Playing with PRF 184747  
3200/2133

~185006 Switch to 3200/2400

RA's screwy up to ~1850

RA off during formation  
flying

1. the cell to look at at 1858/70

All switch to 2100/1400

1923 "Small fire" Sean McMillan

ACU problem

"Beginning rain" - Paul Leighton  
1941 LF down to the flight  
194250 ~~was~~ a little something to  
look at

194700 a little klp more  
to look at

200150 2400/1600

206440 2400/1800

~2007 Went through positive  
fills at 2400/1800

~201730 Switch back to 2100/1400

~222202

222230 approx into FARE APT

203230 Switch to 2100/1575

~2109 Switch to 2100/1400  
still in FARE

211658

No ground connection  
Surface alternating  
ground suggest jump. Look  
for white spots with low  
spectral width

212340 END RECORDING