

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

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

E.5.2 In-Flight

- ☒ 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

- ☐ 1. Complete the summary check lists and all other appropriate check lists and forms.
- ☐ 2. Brief the on-board LPS on equipment status and turn in completed forms to the LPS.
- ☐ 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.

AUG

5 1997

Form E-5

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Doppler Radar Scientist Check List

Flight ID 910805 I
Aircraft # 43RF
Operators Kaberhe
Radar Tech. Lynch

Number of digital magnetic tapes on board >10Number of tape labels on board >50

Component systems up and checked:

MARS	<u>✓</u>	Computer	<u>✓</u>
DMTR1	<u>✓</u>	DMTR2	<u>✓</u>
LF	<u>✓</u>	R/T#	<u>SN 121</u>
TA	<u>✓</u>	R/T#	<u>SN 102</u>

Time correction between radar time and digital time 0:0:01

Radar Postflight Summary

Number of digital tapes used: DMTR1 2
DMTR2 1

Significant down time:

DMTR 1 _____ Radar LF _____
DMTR 2 _____ Radar TA 2017-2036 periodically

Other problems:

4.3 h

see lead
project log

HRD Radar Down-Time Log

AUG 5 1991

Operator 910805T1

Sheet 1 of 1

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

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

HRD Radar Tape Log

AUG 5 1991

Flight 910805I Aircraft 43RF Operator Kabeche Sheet 1 of 1

[illegible]

101

*** LOGGED INTO WSI SYSTEM G ***
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HURRICANE FEFA and HURRICANE GUILLERMO in the Pacific! For information on data available for both oceans, type: INFO TROPIC

The time sheets for July are now online. For more information, type: LASTMONTH

For information on the 'El Nino' Trends, type: INFO ENSO or INFO SSTPAC

For information on additional products and services, type: ADDMSG

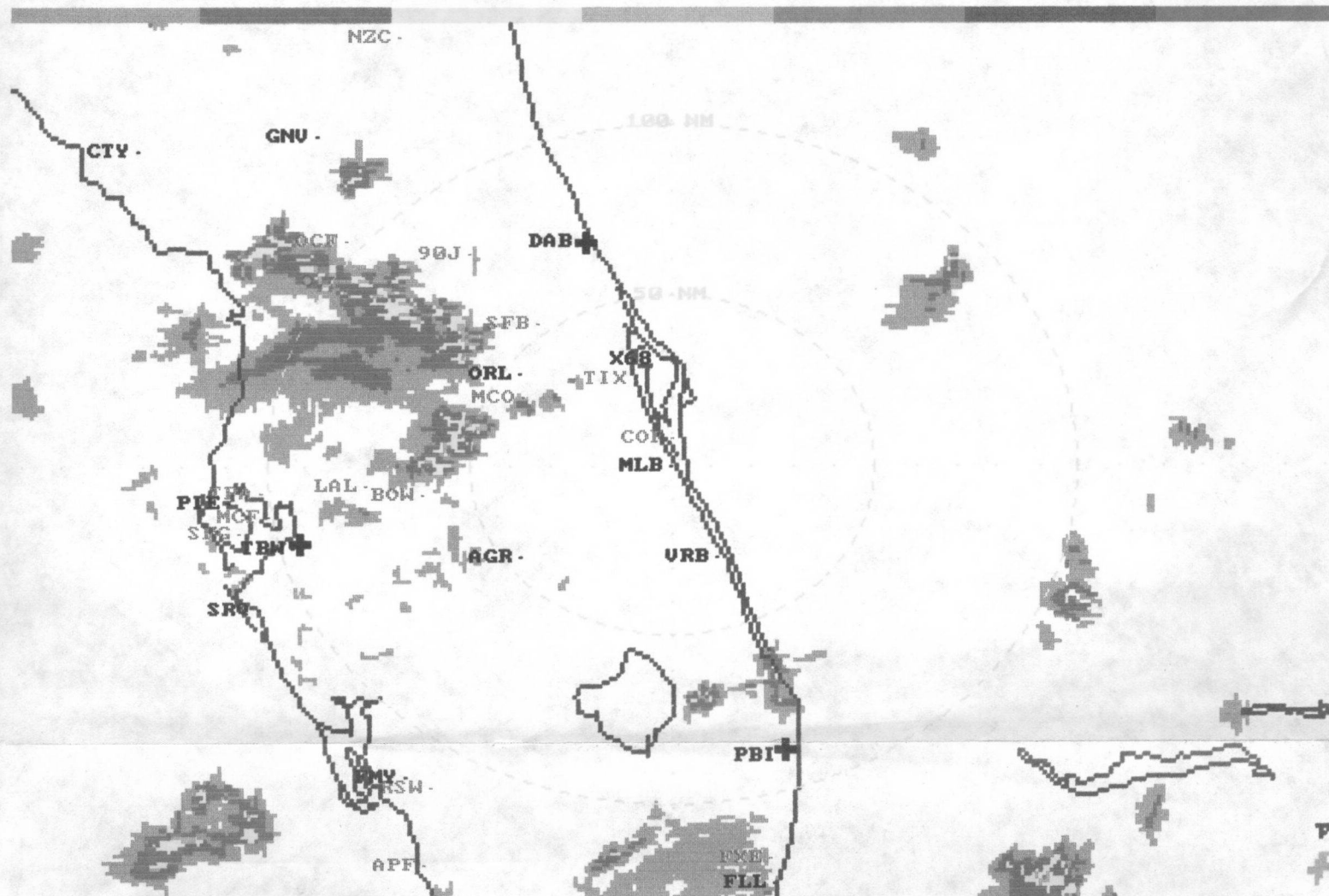
K. Coakley
WSI Meteorological Operations
Updated: Mon Aug 5 11:51:10 EDT 1991

+regrad mlb +

NOWRAD image printed by "WX-View" from Robertson Software.

MLB 16:30(16)GMT 05-AUG-91 NOWRAD COPYRIGHT WSI CORPORATION 240150

The following 7 shades represent Radar levels (1 - 6) and sites not reported.



START
CAPE

ON SINS Range

~~TRV~~

1 Volt \equiv 16 kV cm⁻¹.

Set display @ $\pm 2V$.

SINS

Field null only

R43D - Cape w/field null 21
05
Aug

Mon 5 August

Frank marks:

Frank antenna installed
04.

Charge probe arrived Fri

C/m

R & H ext (-22°C)

fr - low

100

10

1 100

the charge rate
then - re display

all LWC + and -ve,

Calculations - error in LWC ($\approx \times 0.5$)

Clive G; Paul W; Jack Partridge

other acct - 2 hours almost, Taccap, T 28 0124

No Replicator, No Q probe.

(2 PM 05) local.

19 05 61 Tolo off

Run J111 2-3

max count - 30 (less)

10 kV means for any (less)

problem with display then clear.

23

05

about 3-30 Pump through Volts to
 these a/c. Turn off at a/c change,
 with no indication of current change,
 which was a no Volt camp of
 2 μ amps. Current in case only

for $V > 12/15$ kv, but offset
 occurs for about $V > 10$ kv.

up/down tracked rate error, was
 a $\times 2$ rate error low value.

Clear air offset 19-54
 1.6 kv 2/3 per unit, gas
 offset of 13 μ | 12 μ .

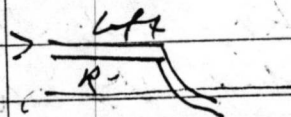
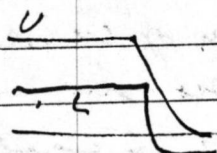
but offset 20¹¹ kv 2/4
 19 57 30

Auto off HV from offset to

+ ve radius on all units.

2.5/3.5 \uparrow , 1/1.5

22-22 25 0-15



Reflected wave
from

35
+ 2.9°C

Change to

2/11

13 hr.

20 23 05

PA 3902

"

14

20 24 20

} off

3

15

24 40

av.

7

16

20 26 15

12

17

20 28 10

14

18

20 29 50

18

19

20 31 44

off

~~20 33~~

20 33

on

20 35

strange effect on side null.
~ 20.41

off - 20 51 40

Field null pair off 21 24 20

Side nulls - to 200.

Top wave - to 200 of 3 m/s

Line 22 12 45

De Bruij

NAVI Problem

W/E good corr.

E-W Cor

Dual Doppler - need more > 134 ft
old.

around intra Echelon
work with CP2 (down to 1000 ft)

Dual Polarization + Location (CP2)

Jim Wilson -

407 543 4669

$\frac{1}{2}$ minute Δt radar beams

128 - 155° -
no CP2 below 2°

(110° \rightarrow 170° full circle
from CP2)

LC07 255 1702
CHPE data

Flake H. 271 7443

CP2 407 453 4368

~~Flake H.~~

Tues

French Haberman Vibration
problem of sensors installed but not
powered. Tues pm.

Wed. Vibration problem on station.