

E.5 Radar/Airborne Doppler Radar Scientist (On-Board)

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 Operate the system(s) as specified in the operator's manual and as directed by the HRD/RS, unless superseded by directions from the on-board LPS or as required for aircraft safety as determined by the OAO flight director or aircraft commander.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

- ☒ 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 OAO 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 26 1988

Radar Scientist Check List

Flight ID 880826 I 1
Aircraft # 43
Operators Dorst Dodge
Radar Tech. Terry Schricker

Number of digital magnetic tapes on board plenty

Number of tape labels on board enough

Component systems up and checked:

RDSC	<u>✓</u>	DSC1	<u>✓</u>
Computer	<u>✓</u>	DSC2	<u>✓</u>
DMTR1	<u>✓</u>	DMTR2	<u>✓</u>
LF	<u>✓</u>	R/T#	<u>SN 101 M</u>
TA	<u>✓</u>	R/T#	<u>SN 104</u>

Time correction between radar time and digital time _____

Radar Postflight Summary

Number of digital tapes used: DMTR 1 2
DMTR 2 1

Significant recorder down time:

DMTR 1	<u>none</u>	Radar LF	<u>yes - see notes</u>
DMTR 2	<u>none</u>	Radar TA	<u>no</u>

Other problems:

T. Schricker says LF R/T is rebuilt unit.

LF had AFC problems until Terry repaired RT...
but calibration is unknown (but maybe not too far off)

**Number of pulses averaged (32, 64, 128, 256); scan rate (min, max); range resolution (150 m, 300 m).

HRD Radar Down-Time Log

AUG 26 1988

Operator _____

Sheet ____ of ____

Item	Time Down	Time Up	Problem

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

880826I1- RECCO OF TD (?) #7 OFF
WINDWARD PASSAGE.

LPS - DR F MARKS; RADAR - DODGE, DORST

GUEST OBS - DR. R. CARBONE


RADAR ENG - T. SCHRICKE

T/O MIAMI 1012Z LAND

No! 143 Dorst - Dodge!

1054Z is still early. FM playing
with display. LF RT maybe
having problems - heating? TS
working on. We're over Andros,
not recording yet.

Upper tape drive is 1,
lower tape drive is 2. TS says
to put a kink in leader before
loading - a slight kink
to help autoloader.

 Loading tape is easy
but it takes a while.

1143 → TS started LF again -

1212 TS fixed LF we started
recording. We are SE of "center"
under cirrus shield...

FM playing with thresholding
on LF at 1219

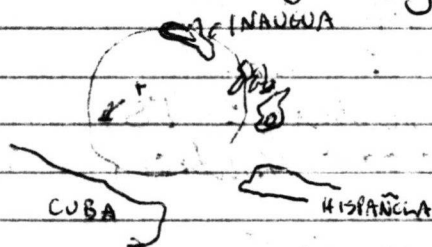
122057 - picking up cirrus
on TA display

1228 LF just peaked up again
by TS - .

1236 - turning

1241 - we're in the stuff - had
a lightning flash.

1310 - Pulling away from main band.



1334 - CLEAR AIR; PRETTY SKIES; CALM WINDS

1401 some anvil stuff to our right
as we head South. very little refl
on LF now, except sea clutter.
HIT is ~~3.6~~ 3.6, bat wings
rather prominent.

1420 - END 1st tape - lasted 2 hours!

1433 shallow cloud deck below us

1508 trk 110° 38 kts at 151° ^{FLT}
ocean has lots of whitecaps
breaking waves. _{sw} winds

we're at ~ 24°44' 73°20' north
of "center" - see some bubble patches

IN DATA MANAGEMENT menu
TASKIP 1 evidently means every sweep?

1517 turned off thresh for LF
1518 on (=1.0) [at 151855]

1524: ~~elaborate~~ reflectivity on LF seems
low but FM pointed that TA also shows
low dBZ - so OK. we're in stratiform
stuff

1529 - turned, now headed west,
to go back through area of ... well what
the hell is it? A strong T wave, a
sausage shaped depression)

1542 headed -250° into band

1544 21 kts 140°

1625 - flying by good cells to
to ~~go~~ right.

1748 - RGB5's lost sync about
5 min pred. We started climb
to head home so stopped
collection by going to DATA
menu - select AUTOSW OFF, ^(so no drive swapping) then
select tape drive off - then
select REW to rewind tape.
Then TS reset system...