

## E.5 Doppler Radar Scientist (On-Board)

JUN 27 1995

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.

NOV 27 1995

NOV 27 1995

**Doppler Radar Scientist Check List**

Flight ID 950827I1  
Aircraft # 43RF  
Operators Marks  
Radar Tech. Lynch

Number of digital magnetic tapes on board 75

Number of tape labels on board 750

Component systems up and checked:

MARS	<u>✓</u>	Computer	<u>✓</u>
DMTR1	<u>✓</u>	DMTR2	<u>        </u>
LF	<u>✓</u>	R/T#	<u>103</u>
TA	<u>✓</u>	R/T#	<u><del>204</del> 201</u>

Time correction between radar time and digital time 00

**Radar Postflight Summary**

Number of digital tapes used: DMTR1 2 DATS  
DMTR2         

Significant down time:

DMTR 1	<u>210 min</u>	Radar LF	<u>210 min</u>
DMTR 2	<u>        </u>	Radar TA	<u>212 min</u>

Other problems:

system hung up from 164236-1652  
TA<sup>process</sup> hung up from 2335~~2~~2338



IRIS

[illegible]

HRD Radar Down-Time Log

Operator \_\_\_\_\_

Sheet \_\_\_\_ of \_\_\_\_

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

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

Alone Physics notes -

20:52 tape 2 start

To record:

A. Bias - Normal  
Eqn - Normal  
ANRS - off  
Input - A/H.

B. Record Levels  
Left - Max  
RT - Max

C. Record Master -

maxim  $\rightarrow (-15uV)??$

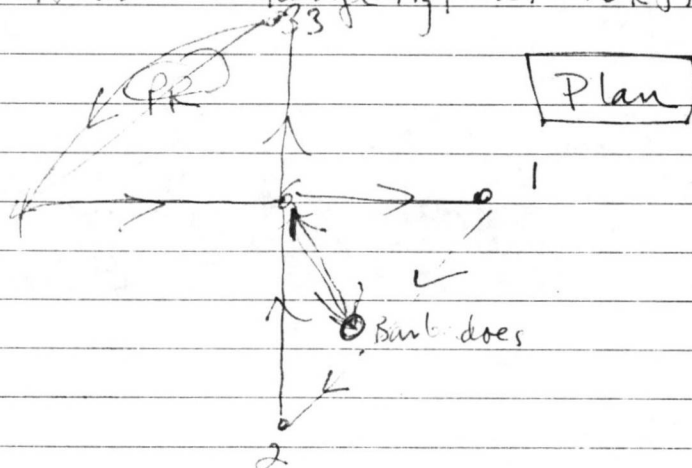
Mic is in Right only

Rec. Mode  $\rightarrow$  Stereo

(old settings were - ANRS  $\rightarrow$  Super  
Input  $\rightarrow$  Mic/din  
Rec. Master  $\rightarrow$  5  
(master pegged)

GARANTEE DUN AN  
Cette cartouche de données est garantie par Sony  
exemple de tout défaut de fabrication ou de matériel  
durée d'un (1) an à compter de la date

950827I IRIS (Marker)  
Tropical Cyclogenesis Mission  
N43RF large flight at 16kft.



TO 160315 Z Barbadoes

1621 - 1627

flying through status  
peaks on climb near 0°C  
level - check video and  
T, Td on ascent - at base  
of anvil turbulence

1632 started recording

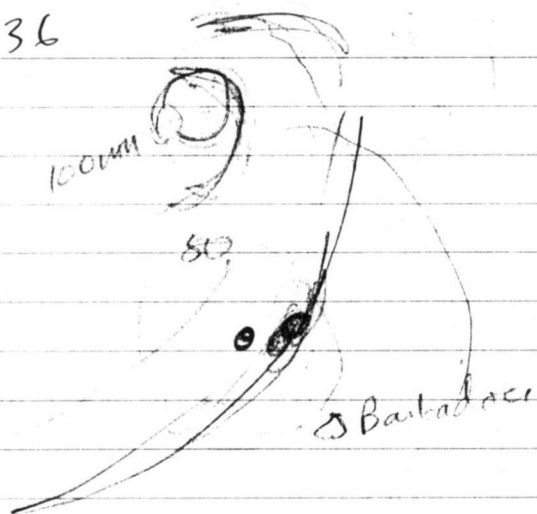
FAST + 180

set up LF with 2.1° tilt.



②

1636



- 163920 another starfish deck  
cloud of 10 or 15 vid  
1000 ft at 11400 4840m  
population deck 570mb

- 164115 in starfish deck  
+ 450P 1000 ft good  
T = 0.9°C in cloud

164236 Radar system locked up  
Terry Lynch waking out.

~1646 good bump + 12m/s

IRIS

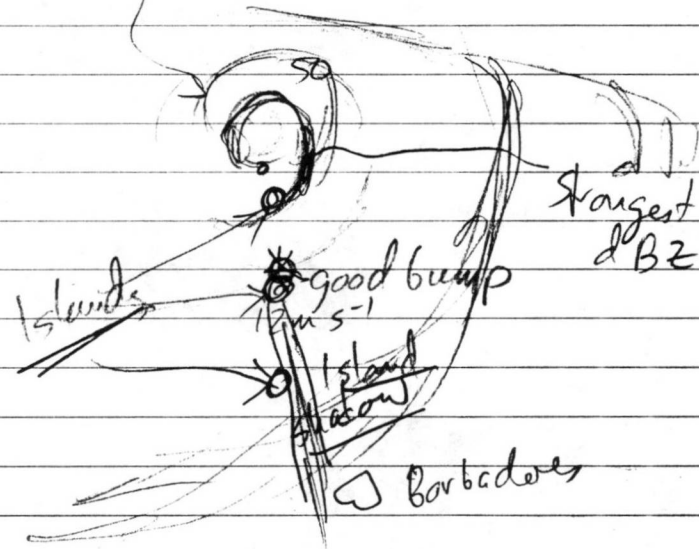
③

165630 FAST  $\pm 19^\circ$

1657 over Island TA goes  
wild

170230 =

weak reflecting  
1100



1802 outer rainband strong  
convergence/divergence  
Signal

1810 nice bumps on outer  
edge of band.

... to be free from defects  
upon return of this product for a period of one year  
purchase, the product together with original proof of  
Seller or Sony Corporation will be replaced by either  
Canada, Ltd.  
SUCH REPLACEMENT or  
OF THE PURCHASER  
BILITY

(4)

181230

100

hard cells

(g) St. n.

Searchlight

1816 Turn TK 225 to pt A <sup>~300nm</sup>  
7 S

1938



Strong cells

Bombard

100

Island

N coast of Venezuela

Thomson

(5)

1947 turn TK N → 6

1954 ↗ in cells in ram band

200015 pig up ~12 m/s

202510 → 202640 good up 3 and  
downs +6, +11 m/s  
-3 m/s

2034

150

Strong cells  
Stratiform  
Strong cells

204720 weak normal scan

1994 93

⑥

big ↑ +10m/s on N 50/6

205430 - 2055

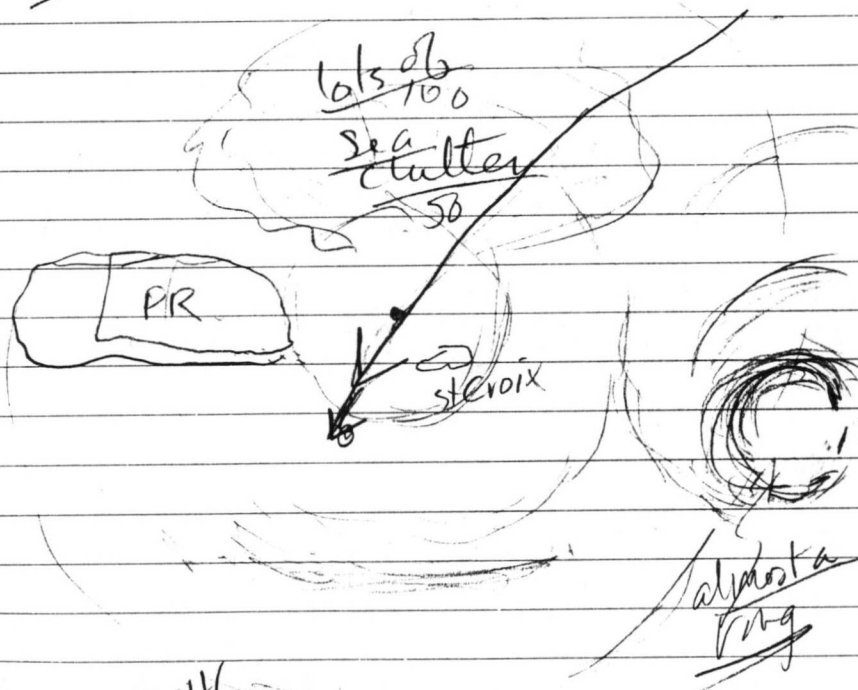
214115 switch to FAST

214353 turn TK 225 to pt 10/6

~~223250 turn TK 090 to 9~~

2240

150



2246  
 22414 skimming along top of  
 thin stratus 4829m  
 224540 turn TK 090 to 9

⑦

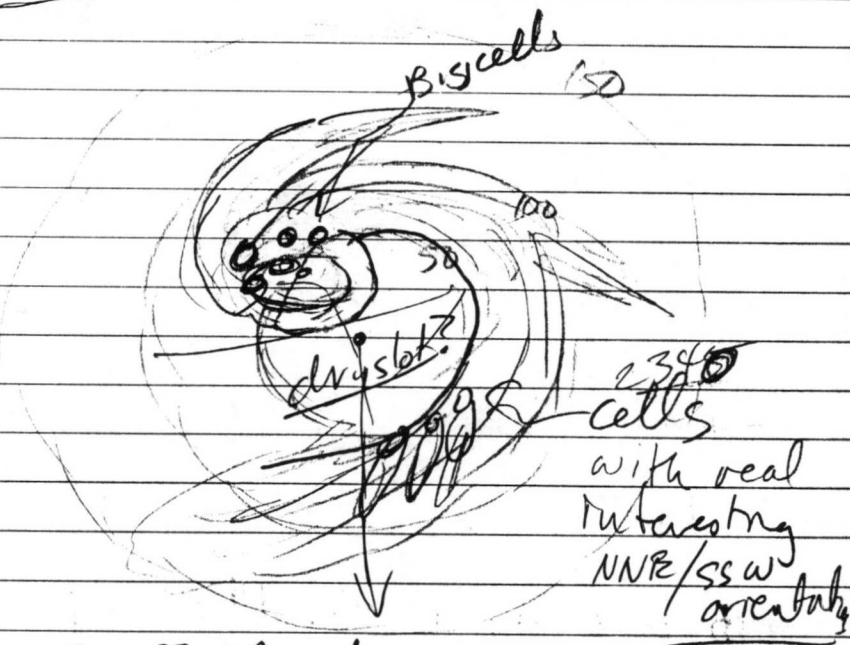
2258 climb to 17kft. Sw ATC

2303 shut down video

2307 descend to 15kft.

232057 turn TK to Barbadoes  
15kft.

2329



233527 TA down

233755 TA up

002330 shut down