19950823H1-RADAR

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.

ime Log

Sheet ____ of ____

Problem
1533 - Radar system froze
1547 - system back up and recording
(too many error messages)
1747 - Tail down
signal keeps resetting itself
1756 - back up - DSC
Board #2 went bad - reset it
- bad board - will replace after Right

MP, MARS, LF, TA.

ıdar Scientist Check List

_____

_____

_____

_____

on board _____

_____

ked:

Computer _____

DMTR2 _____

R/T# _____

R/T# _____

ne and digital time _____

· Postflight Summary

DMTR1 _____

DMTR2 _____

Radar LF _____

Radar TA _____

HRD Radar Tape Log

TP #11

Flight 850835H Aircraft N42 Operator M. Black Sheet___ of ___

Tape #	Time On (HHMMSS)	Time Off (HHMMSS)	Comments
DIT1	1446	1533	hdg south along East coast of FL.
			1451 - F/AST - smooth sea surface WD 113° 14 kts
			1503 hdg N near WPB - center
			at 26° 46.6 & 79° 53.5 - smooth sea
			1504 - hdg back south along
			coast
			1510 - continuous - good LF
			and TA display
			1517 - switched LF data mend from ~~[illegible] to~~ SWMPI to WATR)
			1534 - Turn to NE
			1533 - LF not updating and TA - system froze
DIT2	1547	1747	Hdg NE to E of 5 1608 - hdg W to 5
			1633 - 5 hdg SE away from center
			1644 - AOC changing LF scan strategy
			1650 strong band north
			1703 hdg NE to east of center
			1742 - northeast of 5 - hdg SE to 5
			1747 - TAIC down
DIT3	1756	1950	1756 - back up
			1815 5 center right on coast
			or inland
			1840 - circles for scatterometer
			1847 - F/AST while doing circles
			1912 - end circles, climb to 5200 ft
			1920 - crossing rainband
			1922 - continuous ~~[illegible]~~
			re-crossing band
			1924 - in band
			1930 - heading for base

Doppler Radar Scientist Check List

Flight ID 950823H1 TD #11

Aircraft # N42RF

Operators M. Black

Radar Tech. Jim Roles

Number of digital magnetic tapes on board _____

Number of tape labels on board _____

Component systems up and checked:

MARS	✓	Computer	✓
DMTR1	✓	DMTR2	✓
LF	✓	R/T#	~~101~~ 122
TA	✓	R/T#	101-201

Time correction between radar time and digital time _____

Radar Postflight Summary

Number of digital tapes used: DMTR1 _____

DMTR2 _____

Significant down time:

DMTR 1		Radar LF	
DMTR 2		Radar TA	

Other problems:

94/925H1 (5)

9 [illegible] at [illegible] request.

1 0013 TOPS in N. eyewall ~13 km

0 0014 138 KTS E eyewall

0019 climbing out 111°28' 111°27'

4 0026 1 MASI as we climb out

9 but set till to 11, because drift of 10° so only good data to right of track (76°)

0

0045 tape stopped & Rewound.

J. Burr copied tape for JG.

0

2

1

2

950823H

— 1995 —

950823H1 TD #11

Radar: M. Black

El Tech: Jim Roles

Flt. Director: Jack Parrish

Combination rapid response mission and checkout flight of NOAA-42

Also, I will get trained on the scatterometer by Ivan from Quadrant Co.

Take off: 1355 Z

Note: Radar hardware (Sigmet, MARS) has been moved to data station behind radar station

Surface obs and radar loop indicate that the center of TD 11 is offshore from Ft. Lauderdale

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Start Recording
1446507 :

check on NHC
t-shirts for
Steve Wade
get 2 x-large
National Hurricane
Center

1452 - F/AST south along
coast

Found center off W. Palm Beach

PBI

1504 - one center Found
at 26°47.1 N 79°53.5 W

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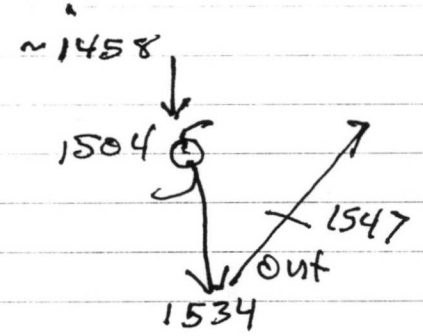
1510 - continuous
hdg south along coast PBI to
MIA - good LF and TA
display.

1517 - switched LF data file
from SWMP1 to HURRT

1519 - In precip

1525 - waterspout sighted
- I missed it!



1534 tu

1533 - radar system frozen
not updating

1547 - back up

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1556 - 40 kts east of center

Cloud physics up + outward

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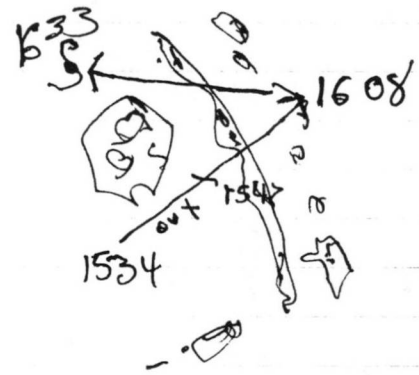
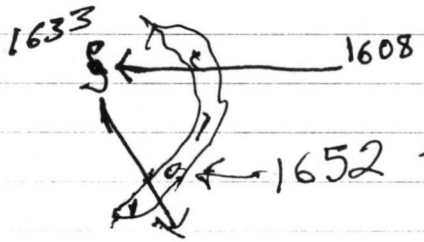


1612 in band east of center

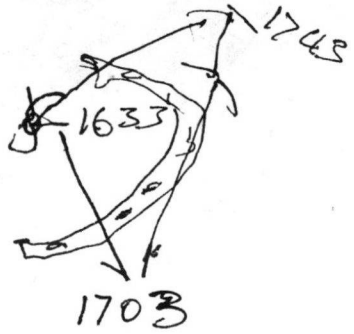
1620 48 kts east of center should be called "IRIS"

1633 - center 26°57 N 79°51' W just off VBI.
1006 mb



1652 - strong band 40 kts south of

1647 - in precip - cloud and precip probe data looks good but with some noise on cloud probe



1203 hdg N to west of S
1743 hdg SW to S

1743

FL S 1815 – 27°2' 80°2'

1747 - TA display went flaky - keeps resetting itself

S 1815

1828 climb to 3000 ft
1848 - circles in clear air for scatterometer

1847 - F/AST while doing circles
1917 - end circles
1920 - crossing rainband in F/AS.
1924 - re-crossing band continuous
1930 - heading for McD. II