

AUG 31 1993

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.

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Doppler Radar Scientist Check List

Flight ID 930831H1
Aircraft # N42RF
Operators M. Black Bret Christoe
Radar Tech. Jim Roles

Number of digital magnetic tapes on board 2+ Boxes

Number of tape labels on board Enough

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>102</u>

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:

sec ctr 3/5
sec wid 100

HRD Radar Tape Log

Emily II

Flight 9308314 Aircraft N42RF Operator M. Black Sheet of

[illegible]

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Form E-5
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HRD Radar Down-Time Log

Operator M. Black, Bret
ChristoeSheet 1 of 1

Item	Time Down (HHMMSS)	Time Up (HHMMSS)	Problem
Doppler	looks a little off	+2 m/s on	
right	-2 m/s on left		
TTA	2026	2032	Heavy turbulence in eye 11

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

1993

930831 H Emily II

Lanfall mission

Heading to Hatteras

UPS - Pete Black (Mr. AKB)
Radar - M. Black, Bret Christ
Scatterometer - Andy Paylor
Emily was 105 mph 96 Sat
110 miles SE of HAT

Will do several overflights
over Buoys

3000 ft pressure Altitude
maybe 1500 ft

1709 descent to 3000 ft
Eye 375 km away

1800 in eye
Huge eye 40-50 miles
across

130+ kts 966 mb
Wide eyewall on
north side

1926 140 Hrs west side of eye
east side low reflectivity
but most turbulent

1952 Concentric eyewall?

Inner eye has contracted
from 40-50 nm diameter
to 30 nm!

Definitely concentric eyewalls
dropping ~ 1 mb/hr

Good bumps all quadrants
especially north eyewall

Bret greasy but no bags
yet

2300 heading for last eye fix
From north to south

will try F/A sector of eyewall
flying inside of eye!

1943
Hatteras probably in
west eyewall w/ 100+ mph
wind

Hope Peter Dodge + Co
are OK

Emily turned into an
interesting storm
See Yah!