SEP 2 4 1994

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Doppler Radar Scientist Check List

Rec LF Tilt 2 – 2.5°

Flight ID 940924H1

Aircraft # 42

Operators Dodge y Burpee

Radar Tech. Jim Roles, Jim Barr

Number of digital magnetic tapes on board enough

Number of tape labels on board sufficient

Component systems up and checked: INE #1

MARS		Computer	
DMTR1		DMTR2	
LF		R/T#	~~102~~ 122 (spare 102)
TA		R/T#	201 / 102 R

Time correction between radar time and digital time

Radar Postflight Summary

Number of digital tapes used: DMTR1

DMTR2

Significant recorder down time:

DMTR 1		Radar LF	
DMTR 2		Radar TA	

Other problems:

Both Problems were computer not R/T.

2032 – 2036 system locked up ... ROLES resets

2205 LF out, but only for 1 sweep, or less.

NOTE: Jim BARR copied RADAR DAT for us, for redundancy.

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HRD Radar Tape Log

SEP 24 1994

INE #1

Flight 940924HH1 Aircraft 42 Operator Dodge Sheet ___ of ___

Tape #	Time On	Time Off	Tail Every, LF every other Comments
1739			1746 F/AST ON to paint sea surface
			175820 FAST OFF
			195747 F/AST ON 200513 OFF
			203014 F/AST ON 2032-2036 system down
			203910 F/AST OFF
			210414 F/AST ON
			210029 F/AST OFF
			213539 F/AST ON
			214430 F/AST OFF
			2302 – turn & climb out
			232554 F/AST on (for SEA surface)
~	2332		2330 F/AST OFF

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HRD Radar Down-Time Log

See Page 1.

Operator Dodge Sheet ___ of ___

Item	Time Down	Time Up	Problem

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

94092H1 OLIVIA
LPS: GAMACHE RADAR: DODGE
ODW (listen): Bob Burpee Scatt: P. Black
ISOTOPE STUFF Jim Lawrence (U. of Houston)
FM: P. Bogert & Tech: J. Roles
Cloud Physics: somebody
PVta: 20°41' 105°14'
16:48 T 31.6° T_D 23.7° on ground
Getting ready to fly dual plane
inner core experiment
16 52: 43 in the air
165245: We're rolling too
1734 radar systems up. will start
recording some sea-surface F/AST
1739 - started recording
1746 F/AST on tilt ±21.4° to
get sea-surface FAST off 175820

1848 maybe first hint of ⓖ at
200 nm out at 242°. Bob said
sat. est. now has OLIVIA at 955 mb
1859: eye at ~180 nmi. We're
still at 5.8 km.
1904 because eye small and est
MSLP lower, we will fly at 19,000' and

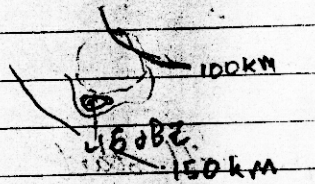
940924HI / 43 will be at 14000'. RADAR shows it only about 10 nmi diameter!
NAV 15°52' 117°57'W fix from ?

1917 starting descent, 1000' per minute

1918 starting cloud phy

1926 We're at "cruising" alt now. 43 will drop ODW (= reach their IP in ~6 min)

1929:



1932: starting to turn and depressurizing for AXBT. 16°36' 117°52'

1939: dBz max S. side
1939:30 AXBT drop 16°12' 117°53' first rainband. 1942 AXBT good
1943 100 KTS. 1944 109 KTS

1945 955 mb 15°44' 117°56'

S eyewall 118 kts, WET, not bumpy

1953 AXBT drop 1954 in S RB end
1956 (43 turning)
F/AST ON
1957:47 ~14°55 ~117°49'
we are taking 65 → 62.
TAIL looks good so far

200513 F/AST OFF,
2010 tracking 310°

201153 15°32' 117°38' 70 KTS
2013 really nice structure. we're going to penetrate the hottest core ~40-45 dBZ
MAX ~ 120 KTS
2017 951 mb
2020 only 100 KTS NE eyewall
Bob pointed out polygonal shape in eyewall
2022 in outer RB - really stratiform
2030 F/AST on

2032 Radar system locked up
2036 back on. JR not sure what happened.

43's radar had trouble too... SAME TIME!

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2038 – we're turning

~203910 F/AST OFF

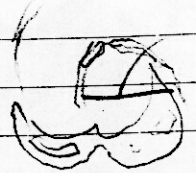
2040 we're tracking 90°

2041 in convective RB to W

first good bumps of flight

2047 back into eye

~25 KM



2048 2050 ~100 KTS westeyewall

2051 951 15°5[illegible]' 118° [illegible]6'.

2053 E eyewall 120 KTS, gust to 130?

205840 AXBT drop.

25 KM

2102 ~~Acorn~~ BT probably no good, acc PB

210414 F/AST ON trking 33L

I think crotches in eyewall are rotating around as they did in OUTER eyewall of Gilbert on the 14th

211029 F/AST off we're tracking 225°

2115 68 KTS 50 km from ctr

211523 AXBT drop 16°12.8', 117°47'

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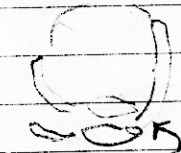
211856 BT drop just inside RB 16° 2', 117°57' No Good

114 KTS in NE eyewall

2121 949 mb

2123 some maneuvering in eye

2124 SW eyewall 100 KTS



2125 parallel bands

2126 last AXBT no good – pulling tube in...

2131 updrafts in SW outer rainband

2134 turn for first leg to trk 114

213539 F/AST ON

2141 – we'll do an outside turn so I will leave in F/AST until turn complete

214430 F/AST off

We're inbound trk 002° for Pass 5

~~2148~~ 2150 in Rainband ~60 km from center, 40 kts,

2151 949 ODW SFC P from 43

2153 LF dropped a couple rays

940924H1
(6)

2157

2200 118 KTS N eyewall

2205 LF GOING, BUT back. only lost ½ a sweep.
(BARR & ROLES watching ½)
FELLOW RADAR OPERATORS TAKE NOTE:
~½ hr ago F Marks (43) advised us that though Willoughby had now supassed 50% of the radar operators... which 50% does he speak of and where do you fit in?
2213: we've ~~doing 90~~ did -270 to line up for N→S pass (#6) are headed back. NO more F/AST (except on the way back)
2220 eye maybe getting some convection in N eyewall
2222 122 KTS N eye wall
2223 948.2 mb
2225 good downdrafts as we flew thru another crotch.
223517 begin last turn 15°11' 118°17'
bumpy as we fly back through STRATIFORM RB.

940924H1 (7) LAST PAGE! I PROMISE

2246 pass #7 approaching S eyewall
2246:48 GRAUPEL
25 m/s bump in S eyewall
~110 KTS max
224900 ctr ~949 mb

2251 118 KTS N eyewall

2259 16°49' 118°18' end pass 7 — and we just heard UW UP on UM 28-20 with 2 minutes left

2302 turn to climb out

0147 LANDED