

AUG 9 1980

FLIGHT # 19800809I1-RADARA.C. # 43RFOPERATOR Marks/Zipser/Hawkins a group effort.RADAR TECH GoldsteinNUMBER OF DIGITAL MAGNETIC TAPES ONBOARD 12NUMBER OF VIDEO TAPES ONBOARD 10NUMBER OF TAPE LABELS ON BOARD 12

COMPONENT SYSTEMS UP AND CHECKED.

RDSC ✓
COMPUTER ✓
DMTR1 ✓
DMTR2 ✓VTR NO no battery packs
DSC1 ✓
DSC2 ✓
SCOPES ✓Crapped up
data may be garbage

NO

LF ✓TA ✓no tail taken off in Miami 8 Aug, 1980Time correction between radar time and digital time 0

RADAR POSTFLIGHT SUMMARY

NUMBER OF DIGITAL TAPES USED

DMTR 1 8DMTR 2 2NUMBER OF VIDEO TAPES USED 0Cassettes

SIGNIFICANT RECORDER DOWN TIME (other than for tape changes).

DMTR:

LF 23 min.NO 23 min.TA NA> 13 min major block while starting 11th pass. other time intermittent SCR crashes.

VTR:

LF XNO XTA X

OTHER PROBLEMS: (stabilization, interference, etc.)

Obvious stabilization problem in LF in -1° low on Starboard and $+1^\circ$ on port side.Wose Crapped out on scan converter at end of 10th pass data should be good on tape. problem appears to be connected

RADAR PREFLIGHT CHECKLIST

FLIGHT # _____
 A.C. # _____
 OPERATOR _____
 RADAR TECH _____
 NUMBER OF DIGITAL MAGNETIC TAPES ONBOARD _____
 NUMBER OF VIDEO TAPES ONBOARD _____
 NUMBER OF TAPE LABELS ON BOARD _____
 COMPONENT SYSTEMS UP AND CHECKED.

RDSC _____
 COMPUTER _____
 DMTR1 _____
 DMTR2 _____

VTR _____
 DSC1 _____
 DSC2 _____
 SCOPES _____

NO _____
 LF _____
 TA _____

Time correction between radar time and digital time _____

RADAR POSTFLIGHT SUMMARY

NUMBER OF DIGITAL TAPES USED DMTR 1 _____
 DMTR 2 _____

NUMBER OF VIDEO TAPES USED _____

SIGNIFICANT RECORDER DOWN TIME (other than for tape changes).

DMTR: LF _____
 NO _____
 TA _____

VTR: LF _____
 NO _____
 TA _____

OTHER PROBLEMS: (stabilization, interference, etc.)

in computer.

~~DMTR~~ Tape Drive 2

was acting up. Recording
 twice as fast as it
 should. Stopped recording
 on D2 after 4th pass.

Maybe in computer.

DMTR lights same problems

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NHEMIL RADAR TAPE LOG

FLIGHT 800809T AIRCRAFT 43RFOPERATOR Marles/Zipse SHEET 1 OF 2
Hawkins

TAPE #	TIME ON	TIME OFF	SOURCE RADARS			REWOUND?		COMMENTS
			NO	TA	LF	YES	NO	
DIT1	165520	174025	X		X		X	on Ferry out of New Orleans 162340' SCR down 162400 SCR up again.
D2T1	174030	1807	X		X		X	starting st 10000' run must be recording every scan.
DIT2	180950	190425	X		X		X	SCR down ~ 1812 up ~ 1813
D2T2	190427	193212	X		X		X	Seems back to every other scan 190945 SCR down 191003 SCR up again. still seems to be doing every scan. stopped using D2 here.
DIT3	193226	202407	X		X		X	at turn to go S
DIT3								SCR down 1956 SCR up 195700
DIT4	202828	211850	X		X		X	start of northbound leg end of eastbound leg
DIT5	212257	2222	X		X		X	start of westbound leg.
DIT6	222843	2327	X		X		X	standing north 2307 nose radar crapped out
	2327							radars down. Allen working to fix nose.
DIT7	234027	0040						Nose shaking. some wire loose near computer in bag. nose is crapping

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OPERATOR May 15/2002 SHEET 2 OF 2
Hankins

[illegible]

9 Aug. 1980

43RF

Allen reconnaissance
on Landfall in Texas

#

Takeoff from New Orleans 162630 Z 9 Aug. 1980

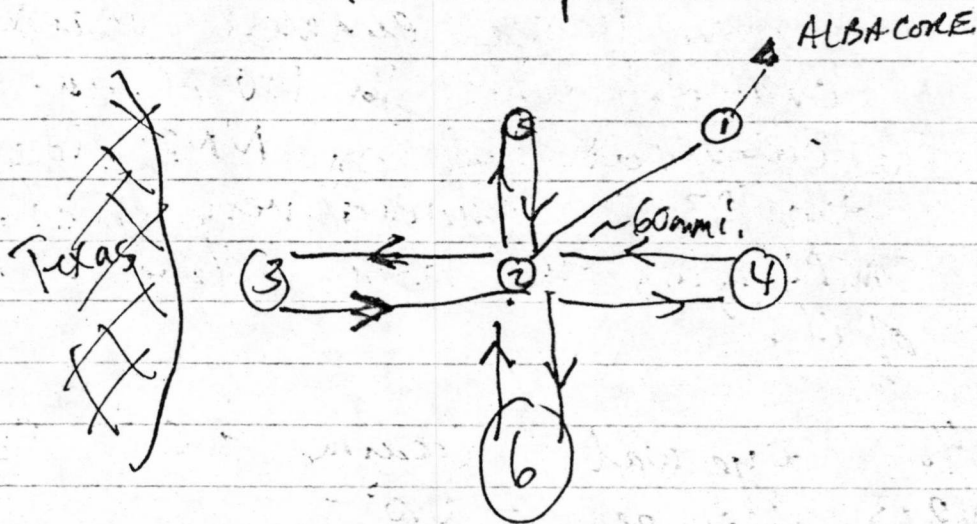
Allen — ^{9 Aug. 1980} 1441Z 25°16' 95°38' ~ 100 nmi off
Brownsville

LF elev. -1.0° to locate eye.
5080 m (RA)

165720 outer rainband seen to be 112,66
with LF at 100 nmi ^{range} bearing ~ 320° from
track.

170000 seeing good precipitation echoes at
~ 100-150 nmi. bearing

getting good painting of Louisiana and Texas
coast for beam alignment of LF
occasional strobing on LF still there. High
correlation with a/c power bursts,
pattern



1, 2, 3, 2, 4, 2, 5, 2, 6, 2
omit 2 → 72 as storm approaches land

162340 DSCR down

162400 rebooted the radar computer.

question: does rebooting affect the displays?
it appears to have some slight effect.

172750 staying at ~~to~~ 5087m (RA)
elev. -1.0°

172950 Victoria bearing $\sim 60^{\circ}$ from heading ~ 140 nmi.
LF Stabilization is not tracking the way it
should it appears to lag on any turns
even with the stabilizer light out.

173440 descent to 10000' at Albacore.
adjusting elev.

173520 elev. 0.0°

173720 " -0.5° still painting Texas Coast.

I hope Billy's there.

1740 starting to see eyewall bearing $60-70^{\circ}$
changed tapes for 10000' run.

in outer rainband on NNE side of storm.

type D2T1 raining very fast.

DNR lights out going to have to keep track
of it.

1748 eye wall bearing $\sim 0^{\circ}$ 80 nmi
174955 elev. get to 0.0°

9 Aug 1980 #2

1st outer rainband about 43 nmi out.
very small

175730 Nav. took LF Sector mode.
175815 got it back.

175835 polaroid of NO

East side very strong on nose

180035 polaroid of NO

eye diameter very small ~ 8 nmi

180240 polaroid of NO nice.

ENE of storm very strong.

180425 polaroid of NO

Nose is great LF is not doing well.

180740 eye very weak to SW outer rainband

180750 polaroid of NOSE. on south
~ 20 nmi out.

180845 in eye.

no bumps. tooling around.

tape must be recording every scan. ^{turned west}

it ran off an penetration after ~ 30 min.

eye fix 25.4°N 96.2°W 1809Z

lowest wind 2 kts.

~ 925 mb

tape D2T1 must have been recording every scan.

~ 100 kts

1818 started turn back east.

computer
rebooted
after scan.

1822 heading east,

2nd run heading east

nose looks much better than belly

182330 polaroid of the nose

7-8 nmi eye diameter strongest on east side of the storm.

1st small inner rainband come into eyewall where maximum echo is



very small

182930 in eye

no bumps at 10000' not very much fun.

183530 polaroid of LF showing outer rainband structure on east side.

good outer rainband ~ 70 nmi on east side.

with 2 other rainbands separated by about 20 nmi.

184400 Polaroid of No in rainbands on east side.

good wind max in bigger outer rainband.

184514 Polaroid of LF



~60-70 nmi.

appears like two pieces to circulation one in the eye region very tight ~ 15-25 nmi across find a series of outer rainbands and wind maxima ~ 60-70 nmi out.

185010 turning westbound

3000 m (RA)

#3
9 Aug 1982

3rd pass toward west turn to north.

190304 polaroid of nose
west side picking up strength.

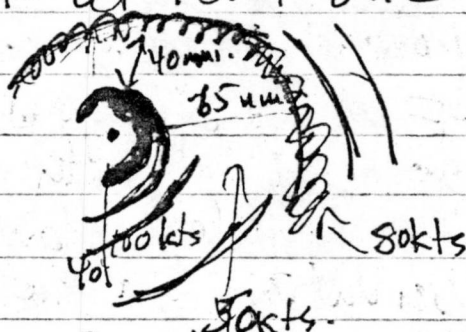
190652 polaroid of the NO
190825 LF possible intervening attenuation
good level 3's in east side eyewall
eye tightening 278 nmi
LF much better 0.5° thru run

191102 polaroid of Nose. 50 m s⁻¹ max wind.
eye wall ~ 8-10 nmi wide on east. 5-6 on west.

191155 turning in eye a little toward north

191310 heading north.

west-side of eye wall relatively weak.
is open on LF at level one



191740 nose shows first large outer rainband ~
35-45 nmi north of eye wall.

191945 polaroid of the NO

must check calibrations on nose and LF. Nose consists
sees more and much clearer than can be
accounted for by beamwidth difference.
suspect 43 LF curve different than settings on plan

1928

checked Harlan's DSCRI settings for nose.
he has proper settings in for the different ^{site} contour levels and also has STC override on.
second tape on D2 ran off in 25 min.

1935 → D2 may be flakey going to try and stick with D1 only the rest of the flight.

1935 turned South again.
4th pass going N-S.

194538 polaroid of the Nose
pointing Texas Coast on LF
east side very strong.
nothing on WSW side of the eye.
eyewall open on

194905 polaroid of the nose Jeff outdid himself.
N-NE-E side of eyewall 18-10 mi wide
Nose looks pretty but LF seems to
be pretty close on intensity I take back
my reservations on the LF data. Could be some
problems and we must check calib.

1956 good level 3's off LF on east side eyewall.

200027 polaroid of nose shows south rainband
~ 35-40 km outside eyewall

2000 East max in eyewall moving toward N
side of eye. min press. tucked up next foot.

203

2038

204

204

20

9 Aug. 1980

#4

200630 in 1st outer rainband.

9 Aug. 1980

1st major outer rainband. 45-60 mi. out
winds in first outer rainbands are almost
as strong as eye. Are we seeing the
reformation of the eye at larger diameter

2015Z turning

2016Z heading N again -

5th pass North to eye then turn west

202640 polaroid of NO

202828 started recording again. (lost 7 min.)

203410 in the eye. see level 3 on LF on ENE
eye wall ~ 8-10 mi. diameter
eyewall open to SW

203500 turning west.

203615 finished turn heading toward Texas
Coast.

N rainband at ~ 35-40 mi distance from eye.

203750 hitting Texas Coast. ~ bearing 45° ~ 50 mi

2038 eye ~ 50 mi off of coast of Texas.
passing Texas coast. elev. 0.50 3038 m (RA)

2040-2041 dipping antenna to -0.5° over coast and back
to +0.5° over ocean.

204320 turning west to start 6th pass

204450 end turn.

6th pass East bound.

204620 polaroid of NO ~ 20 nmi east of coast

205127 level 3's in NE eye wall

Eye wall strongest on LF on NNE side now.
that eyewall max is moving toward North side
of eye.

East ^{outer} rainband is ~ 35⁴⁰ nmi out from the
eye.

We appear to be in a phase of the storm
somewhere between what we heard about
Monday night and saw on Tuesday

211020 in 1st outer rainband polaroid of
next outer rainband of LF

211105 turn to go west then north.

Start 7th pass west then north.

211235 start west bound.

212415 polaroid of Nose.

inner eye is starting to look like the
mump cloud we saw on Tuesday.

eye diameter 7-8 nmi. ^{on NO} NNE eyewall

still strongest ~ 10-12 nmi. wide

LF has eye open to S and SW.

929 mb press.

213242 started turn to N

213320 started North

213735 polaroid of nose showing 1st outer
rainband ~ 50 nmi
north of the eye. LF paralleling Texas Coast well.
214030

9 Aug 1980 #5

Nose on this run should compare with ^{Billy and Grebe}
214400 in 1st major outer rainband.
winds as stronger or stronger than in inner eye.

NO appears to see the Northern rainband better than LF.

2147 nice painting of Texas on LF can see Barrier Islands
215110 turning south for pass 8
215245 end of turn.
pass #8 N → S

beginning of pass has good mapping of Texas coast can see the barrier islands and everything.
220855 polaroid of NO ^{None} whole double pack of film is defective. out of polaroid film.

2212 in the eye.
only about 30 nmi off the Texas coast.

223120 turn N for run to eye then. W again
pass #9

224230 Storm about 25 nmi off coast at Brownsville
~~*** maybe good data set to composite the nose~~

224940 set elev. to -0.5 for a sweep or two
eye diameter ~6 nmi

225125 in the eye and turning a little.

225150 turn to the west heading for the Coast.

225315 heading west.

lots of sea clutter to the north on the LF
225657 turning east for pass #10

225812 heading east.

pass #10 W → E

2259 eyewall maximum is now on the ^NNW ~~side~~ side of the storm now

2301 in the eye heading E

2302 turning in the eye.

2303 Stopped turning.

→ eye appeared much weaker this pass
no level 3's visible in maximum on NNW side.

Nose doing very good.

2307 something happened to nose. appears to be seeing lots of clutter

230830 Harlan just flagged Alan.

major east-southwest rainband very wide. ~30-40 nmi

Alan set nose to DSC2

→ noise is on nose fine will be on the data most likely.

secondary ^{ward} max is in rainband ~50 nmi away from the eye.

nose cleared up for about 1 1/2 min. at 231855

LT appears to be doing well though.

232300 Begin turn back to heading of W

232430 End of turn heading ~~27~~ 271°.

Pass # ~~11~~ W to eye then N

pilots nose radar display is still working.

Loose wire apparently - near computer

DIT7 may have flakey data at the beginning
Alan still working to get the nose working.

9 Aug. 1980

#6

234437 turning N in eye.

234526 heading North.

LF looks pretty good a little spiky

2346 nose still not good.

Alan says keep recording nose may only
be going to the DSC bad. (I hope I hope)
I hope

2348-2358 great view of the Texas Coast
as well as rain bands

235832 in rainband north of Brownsville.

000242 turning to go south

000420 heading south.

Pass #12 N-S

000520 turn to line up.

000538 back on.

Nose appears fine on the raw video scope.

002130 in the eye.

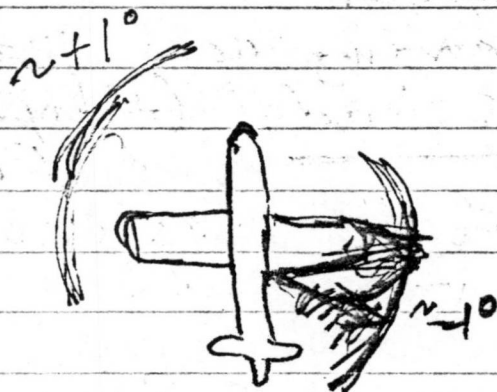
002225 turning a little in the eye. to the east
major and then heading home.

east side rainband ~45 nmi outside eye.

inner eye is weakening considerably
on this pass the outer wind maximum are
stronger than the inner eye.

003110 seeing nice outer rainband pattern on LF
can see 3 bands. one very strong at 45 nm out.
then one ~25²⁰ nm beyond that
the one out 25 nmi further.

between 0032 and 0036 I was dithering with
 LF antenna on port forward lower to -0.5 on starboard to +0.80
 My guess would be that the antenna
 is tilted ^{down} or canted $\sim 1.0^\circ$ on the starboard side
 say $\sim 120^\circ$ ~~from~~ off the nose of the aircraft.
 on 43 RF



0041 Climbing ~~at~~ of pattern

0047 5300 m (RA) ~~set~~ set to -4.0°

Ferry to N. Orleans,

alt. 6100 m (RA)

005320 - 005540 twittling antenna again.

~ -1.5 on port side to $+0.5$ on starboard.

DLT
 good
 ant.
 checks

010050 ant. $\rightarrow -3.0^\circ$ shows asymmetry of
 antenna.

010140 -4.0°

010238 -5.0°

010340 -6.0°

010440 -7.0°

010520 ~~turning~~ turning.

010559 stopped turning

010640 -6.0°

010740 -5.0°

010806 $\neq$ turning

010903 stopped turning

010940 -4.0°

011040 -3.0°

011140 -2.0°

011240 -1.0°

011312 turning.

011408 stopped turn.

9 Aug 1980

#7

012250 ~ 6100m alti (RA)

starting to see the coast ~ 130 n mi out.

trying elev. stepping of coast

-1° elev.

012502 -2° elev.

012602 -3° elev.

012702 -4° elev.

012802 -5° elev.

012902 -4° elev.

013002 -2° elev.

013102 0° elev.

013202 going to sector scan on coast.

013232 -2° elev.

013302 -4° elev.

013332 -5° elev.

013402 0° elev.

013420 +0.5

013440 +2.5

013500 -5.0° elev.

013535 back to continuous at -2° elev.

descending.

checked Tape Drive #2 on Ferry it appears to be working again. No its not.

Nose Time Pri's was set to 7 when I shut down system. I can't remember when it might have happened, probably at start of 11th pass when allen was playing with the NOSR. Eye stalled off Brownsville.