

RADAR PREFLIGHT CHECKLIST

AUG 6 1980

FLIGHT # 800806 I 1

A.C. # 43RF

OPERATOR Marks/Lewis

RADAR TECH Burlis / Goldstein

NUMBER OF DIGITAL MAGNETIC TAPES ONBOARD 33

NUMBER OF VIDEO Cassettes TAPES ONBOARD 8

NUMBER OF TAPE LABELS ON BOARD 33

COMPONENT SYSTEMS UP AND CHECKED.

RDSC
COMPUTER
DMTR1
DMTR2

VTR
DSC1
DSC2
SCOPES

NO
LF
TA

← use scope having problems also trying to fix it. no scope
no tail. same problem as yesterday. trying to fix. no fail

Time correction between radar time and digital time 0

tried later still no tail

RADAR POSTFLIGHT SUMMARY

NUMBER OF DIGITAL TAPES USED DMTR 1 3
DMTR 2 2

NUMBER OF VIDEO Cassettes TAPES USED 1

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

DMTR: LF 10 min
NO 10 min
TA NA

while orbiting in outer rainband waiting for clearance to cross Cuba.

VTR: LF 0
NO 0
TA NA

OTHER PROBLEMS: (stabilization, interference, etc.)

DMTR1 and 2 lights are still backwards but they are working. DMTR lights are flakey; they're backwards and sometimes don't work. Computer had to be restarted 4-5 times. Some problem with DSCR's conv

STC override light

was on from first penetration
on through the rest of the flight.
made several attempts to get it off.

no tail: some problem
as yesterday. trying to fix
fix it. no score
nose scope lanes
problems also trying to

tail
no
still
later
tried

waiting for clearance to cross
Cuba
write up. If in outer windward

some problem with DECE? (cont)
and sometimes don't work. Computer had to be restarted. It's
one worked. DMR lights are flashing. They're backwands
DMR1 and 5 lights are still backwands but they

43RF
Hurricane Allex 6 August 1980

212 Fix mission

#1

Servy playing with LF and nose recording.
DITI all sorts of goodies for checking antenna on LF
184700 antenna at 2° deg. painting P.R.
in climb.

185139 went to 60° sector scan on LF to
test beam pattern on Hispaniola
elev. a/c altitude ~ 4800 m
 -5° just barely grazing Hispaniola

185300 42 nmi out

185350 $+1^\circ$ coast receded.

beam width seems pretty good.

185610 back to continuous 360° recording
elevation set to -2°
altitude 5100 m (RA)

183730 lowering beam to -5°

185830 - 1859

-3.5° shows possible slewing of antenna
inside of 40 nmi. No sea clutter.

Sea clutter pattern asymmetric
bearing $235 - 060^\circ$ no sea clutter while
there is to right rear of a/c.

190000 looking for sidelobes

190100 ant. -7° shows slewing of antenna

alt. 5100m (RA)

190210 ant. to -2° elev.

190300 went to $+5^\circ$ elev.

seems we parnt left wing but not right wing. again slewing

190345 went to $+10^\circ$ elev.

See sidelobes hitting wings
190410 stc off at console.

190530 Starting to drop antenna
 1° elev. ^{roughly} every 30sec. starting with

$+9^\circ$ at 190530

$+8^\circ$ " 190600

$+7^\circ$ ~~190720~~ 190720 → getting echo off nose.

6° 190751 → echo from tail

5° 190832 → extends to 30nmi out at level 1

4° 190910

3° 190940 → tail echo extending to 40nmi.

2° 191045 → ^{start} getting ground patterns

1° 191130 at level one

0° 191305

-1° 191415 bottom edge of beam hitting at 20nmi

-2° 191530

191630 started to turn. no stabilization light

yet it affected echo return from LP.

-3° 191700

-4° 191740

-5° 191835

191930 turning

South of Hispaniola

193
19

Se

2

2

2

2

"Allen"

6 Aug 1980 #2

192020 -1° elev.

192100 0.5° elev.

192210 -1° elev.

1936 computer failed stopped tapes
194025 back up. started tapes

painting coastline of
this paneola and Cuba to
check navigation and LF alignment.

194140 up to 2° elev.

194410 back to -1° elev. to paint coastline.

~1950 DITI ran off.

Stopped recording for a while.

202355 started recording DITI echoes at 5000m
bearing 0° . very suppressed to southeast of storm.
strong inversion. FL ~ 5000 m (RA)

LF taken remote by Naviz. 202800 in
Sector Scan mode. 80° sector of Jamaica.

203540 got LF back from Navigator.

203720 elev. down to 0°

2039 elev. to -1° - -2° to help navigator
locate storm to guide pilot into make fix

2050 up to 0° elev.

2051 up to 0.5° elev.

205633 descend to 5000' change tape D

2101 started VTR at the beginning of the fix.

STC override on from navigator.

210700 went to elev. 1.0° 3120m(RA)

210804 descend and turn.

Billy switching back and forth for VTR

21111 (RA) 1600m

elev. 2.5°

level 2 is set to 7 counts to get good video

1700m RA.
2115 crossing first outer rankband

max wind 178/22 some level 3's

eyewall appears much smaller.

diameter from LF appears to be ~ 20 mi.

2118

Scr froze.

211830 unfrozen.

212030 Billy set screen to nose for VTR

2121 turning for penetration.

"Allen"

6 Aug. 1980 #3

~~STC is off on the display.~~

212150 Switched to LF for VTR

first rainband about 25 nmi from eyewall on the east side.

eyewall very intense

212345 we see level 3 on west side

eye diameter 18 nmi 21247 only about 6-8 nmi wide.

through east side eyewall

2125

appear to be two maxima

one on the east and one on the west.

the west one much stronger.

21255 seeing level 4 on ~~SW~~ eyewall while in E. eyewall on LF.

east eyewall

max winds

200/41 m s⁻¹

2130 low scud^{SC} (eye overcast)

est. - 300' below a/c

a/c 1500m (RA)

east side eye wall has little structure.

~~scud~~ ^{some} SC above us. { east side of eyewall broken up

2132 computer down.

{ west side much smoother

213250 up again. orbiting in eye.

hunting for wind center.

2137 north and northwest side of storm still strong.

west side eye wall appears very strong, ^{solid} level 3

2138

still toding around eye

20° 49.7' N 81° 16.6' center fix.

eye appears open to south, ^{and east.} where
rain bands con

navigator had LF radar at 2140
back at 2143

214415 start run to ^{the west.} ~~west~~ eyewall.

214430 navigator has LF

214503 LF back to us

214600 in to eyewall

~~best~~ good level 3

214630 moderate rain at a/c

54 heavy rain at 4

max winds 025 / 8 ~~ms~~ ^{ms}⁻¹

sustain 60 ^{ms}⁻¹

214730 still have heavy rain at a/c.

214800 good attenuation on LF

2151 Billy took Polaroid after eyewall
penetration.

large rain area to north-NW of
Storm

1st outer rainband ~ 20-25 nmi from eyewall

215315 entering 1st outer rainband

~~2248~~ "Allen" 6 Aug. 1980

#4

215350 still see level 3, in eyewall
30-35 nmi away

2153

large area of precip to N-NW of storm

max wind in rainband:

035/45 ms^{-1}

215649 LF has tremendous rain area
to starboard side large region of
level 2, bearing 90°
 ~ 20 nmi wide at range 30-40 nmi.

2200 started heading SW to come around for
penetration from WSW

McFadden ^{saying} 170 kts peak 160 kts sustained

220830 took polaroid of ^{LF} PPE scope.
while NW of eye.

221055 appears as if 1st outer rainband connects
to eyewall on SW side. Eyewall max
is separate and farther north ~ 10 nmi.
still see level 3 ^{ONLY} at 37 nmi away, 1480 m (RA)
is that eyewall max.

221350 seeing rainbands well to south and west of storm
about 45 nmi from a/c bearing $330^\circ - 040^\circ$.

appears to be intensifying
2216 2 rainbands to the south ~ 40nm:
apart.

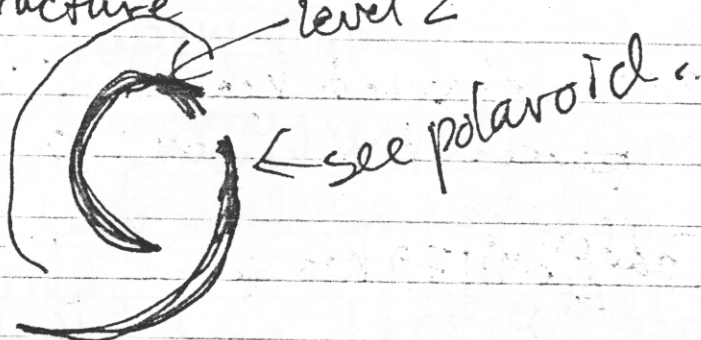
222230 2 polaroids one LF one nose.

2222 start Neastbound run for 2nd fix.

222238 went to nose for VTR
eye diameter about ~~20~~¹⁷⁻¹⁸ μm.

222630 in 2nd outer rainband on west side.

222750 eye structure level 2



222835 polaroid of LF

222945 eye look like a hexagon (or part of one.)

223010 in light rain. at a/c. 1493 m (RA)
eyewall is open to NE and S

1st outer rainband comes in from SE has level
west side of eyewall very intense extended in 3. it.
level 3 on LF

223200 polaroid of LF

223212 in eye.

Allen 6 Aug. 1980

#5

very weak eyewall to NE of Storm
break ~ 6-10 nmi to south.

223530 started fooling around the eye
2238 tried to free up STC override but couldn't.
223915 polaroid of LF

21.08 N 80.35 W center fix

starting north^{east} bound leg at 224210.

224245 seeing good level four in west side
eyewall

224247 polaroid of LF.

224420 heading ~~east~~^N out of storm.
extensive level one precip. to N^{and NW}
of the eyewall ~ 20-30 nmi across level 2 embedded
possibly ^{due to} uplift over Cuba. or is it Cuba itself.

224630 polaroid of LF

224830 polaroid of LF PPI no good.

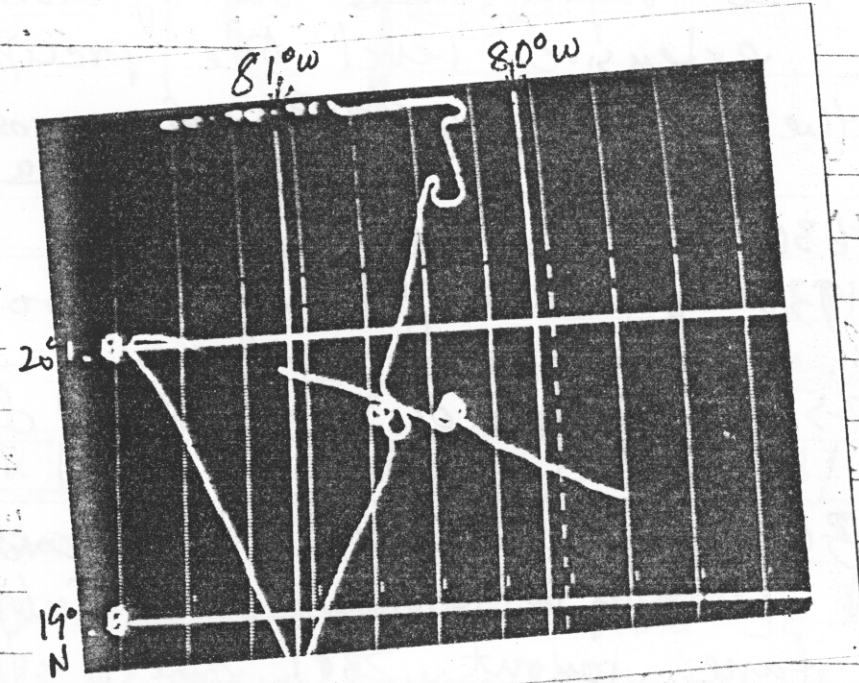
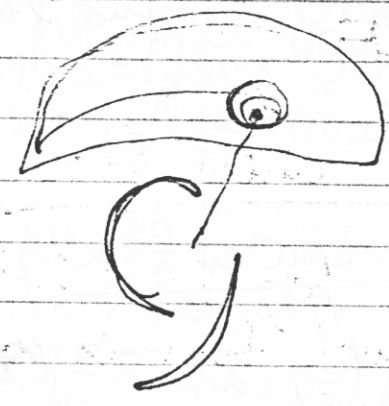
2256 polaroid of wind spd and direction.

2302 in light rain fooling around in 1st outer weather
waiting for clearance from Cuba.
fape ran out 2301 can't start next one yet

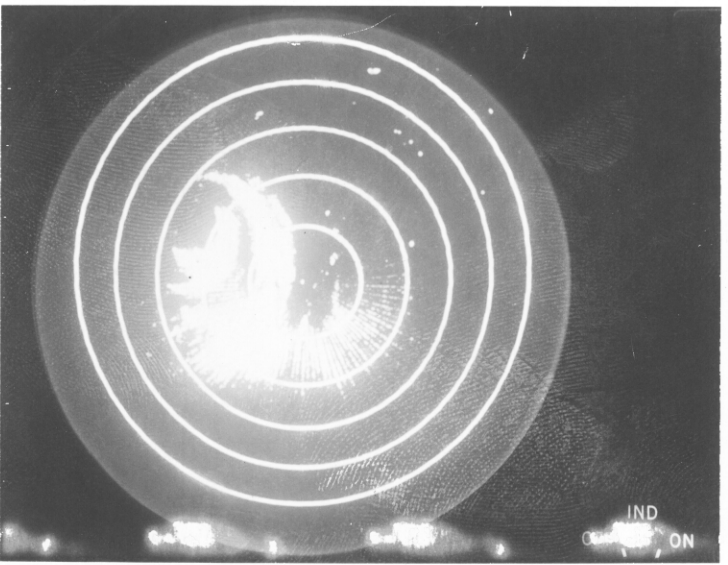
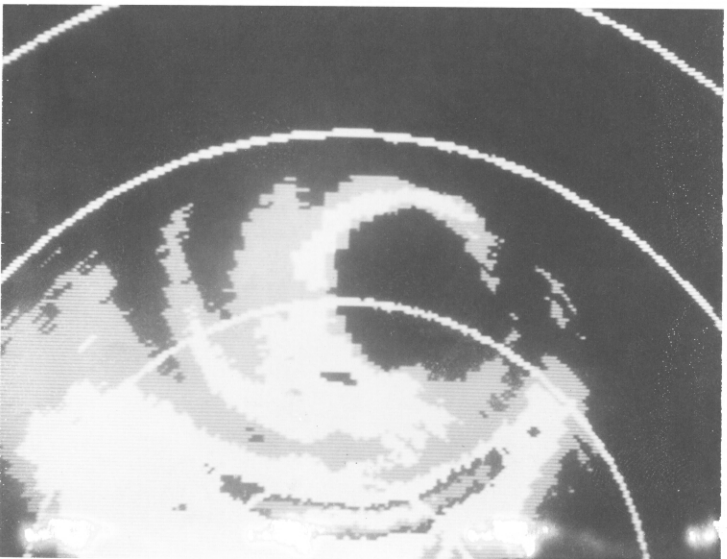
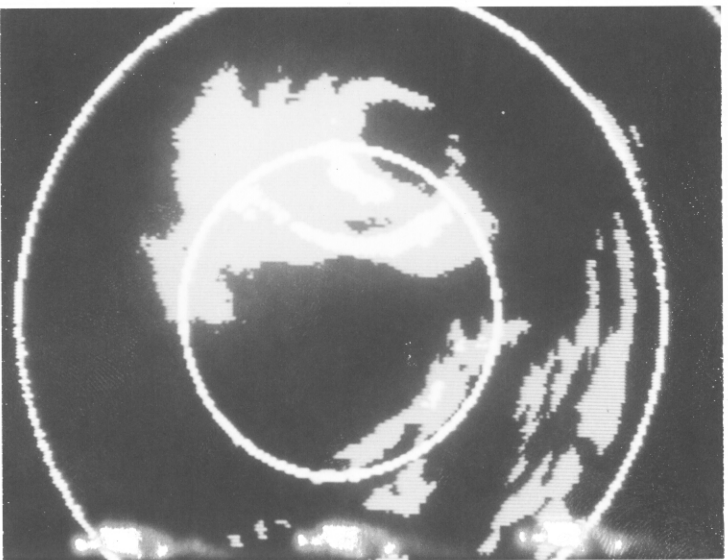
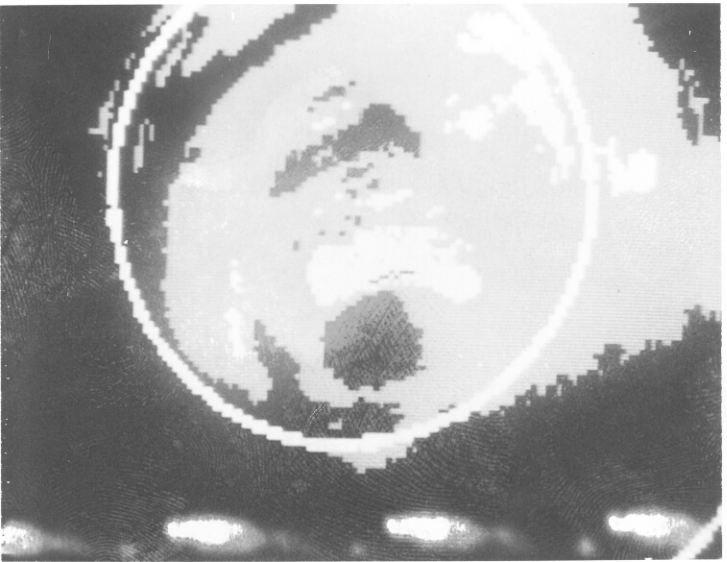
2312 got clearance.

2328 started painting Cuba on LF 40-50 nmi range
2350 painting Florida

08/11/2014



No. 800806I1 43RF
Name Marks/Lewis
~~Order~~ 15 polaroids
Remarks
Retouched
Order Finished
Reorder



220830
6 Aug 1980

heading
160°
go into position
for second eye
crossing

west
of eye

②

6 August 1980
215100 GMT

heading ~ 310°
after first crossing of
eye WNW of eye

①

222825 GMT
6 Aug. 1980

heading
~ 030°
approaching eye
from SSW

⑤

222237 GMT
6 Aug. 1980

SSW of
eye

after turn
to heading
030°
start of second
eye crossing.

④

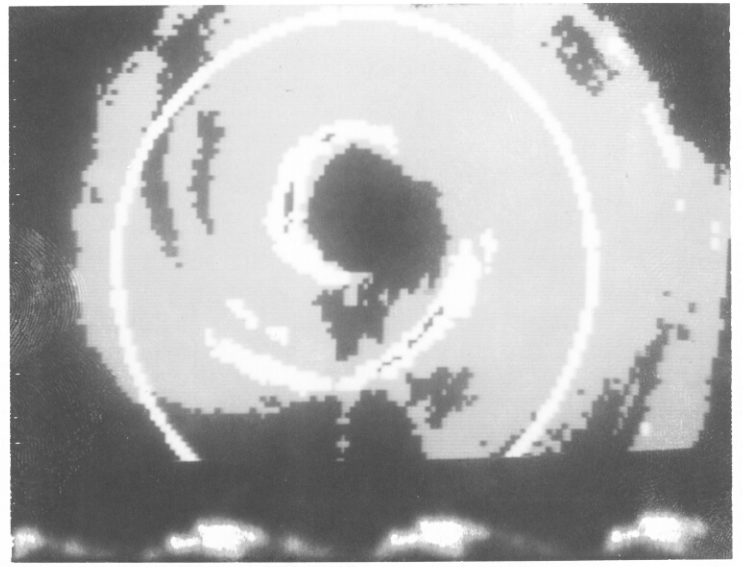
222230 GMT
6 Aug 1980

heading 160°
just before
turning NE

③

WSW of
eye

No. 800806 I 1 43RF
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Order 15 polaroids
Remarks
Retouched
Order Finished
Reorder



No. 800806 I 1 43RF

Name Marks/Lewis

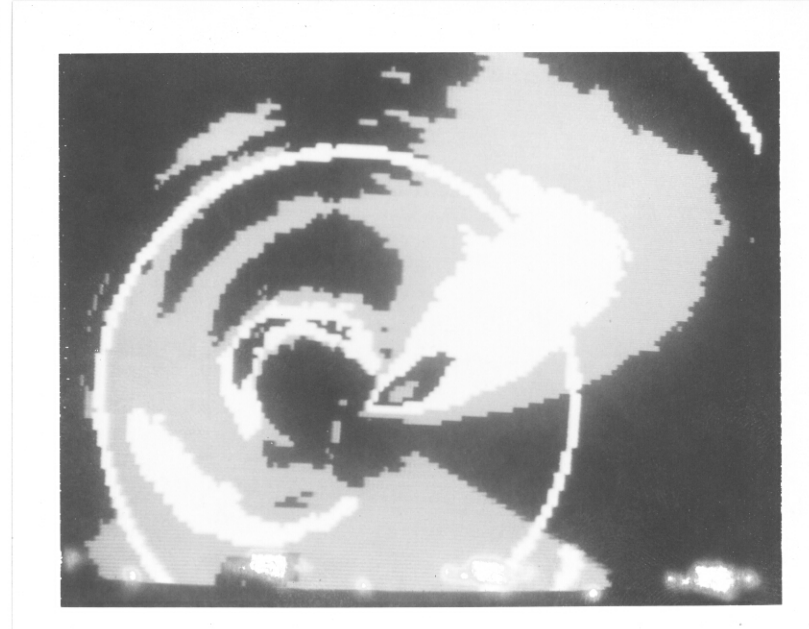
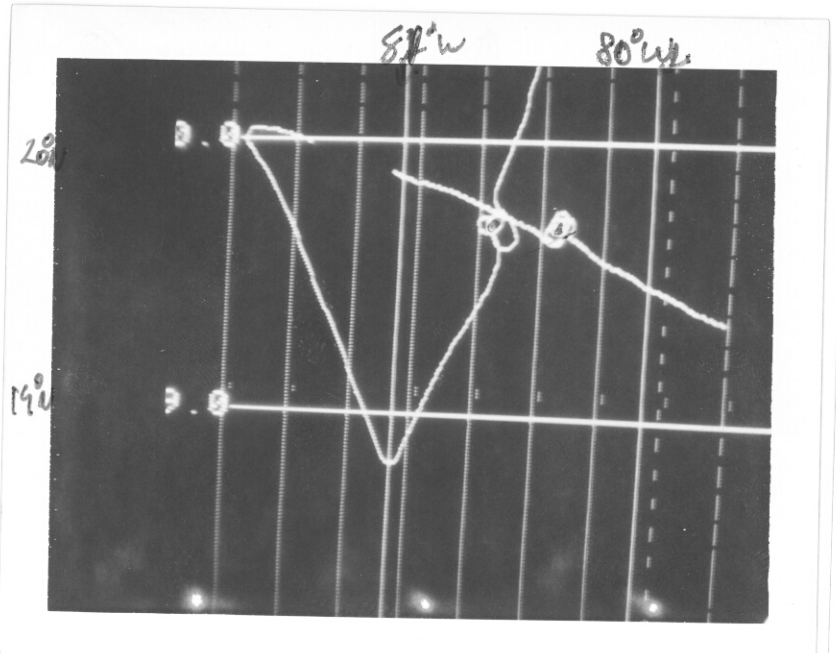
Order 15 polaroids

Remarks

Retouched

Order Finished

Reorder



↑
223915 GMT
6 Aug. 1980
in eye 2nd time
tooling around
heading ~ 200°

↑
223200 GMT
6 Aug. 1980
heading 030°
in edge of eyewall

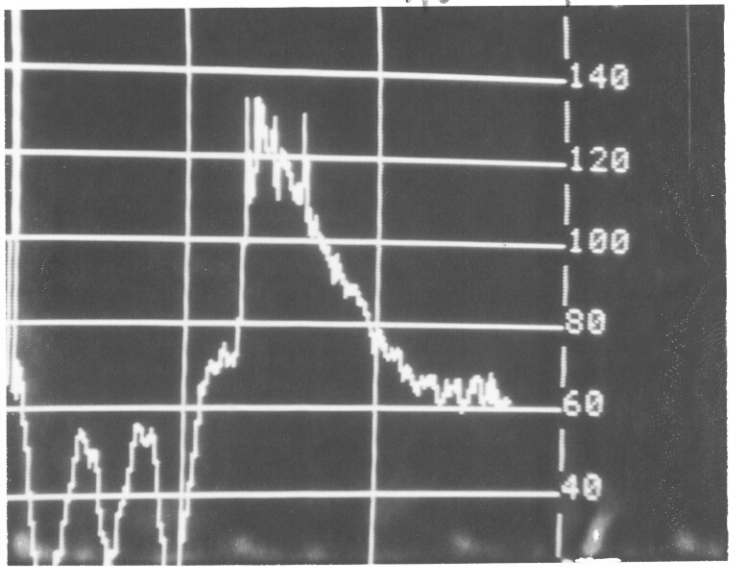
No. 800806I1 43RF
Name Marks/Lewis
Order 15 polaroids
Remarks
Retouched
Order Finished
Reorder

↑
6 August 1980

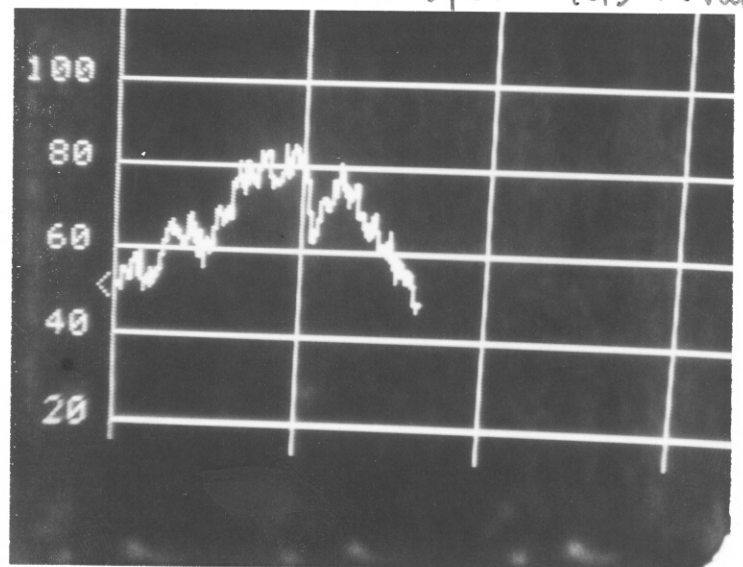
↑
224630 GMT
6 Aug. 1980
large outer
rainband
of eye
NNE
beyond
NNE eyewall
heading ~ 030°

↑
224247 GMT
6 Aug. 1980
in eye just at
start of
ture.
heading ~ 310°

Wind spd right half



windspd. Kts in rain bed

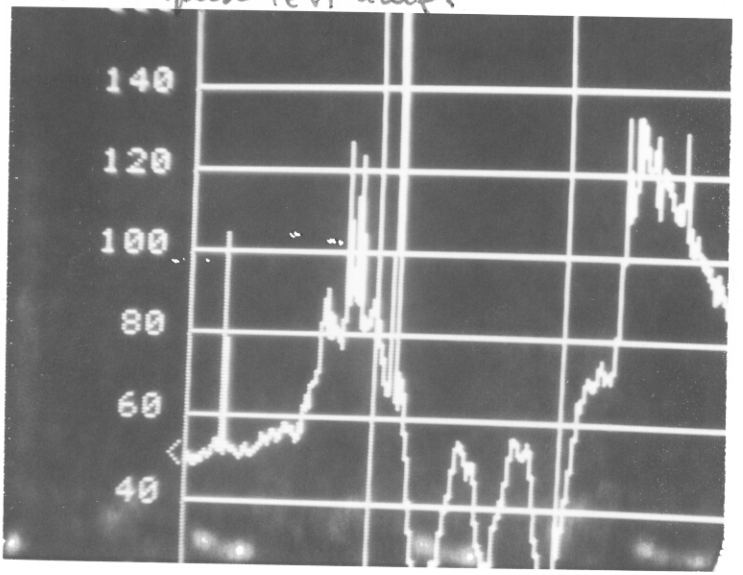


2300 10 min ticks

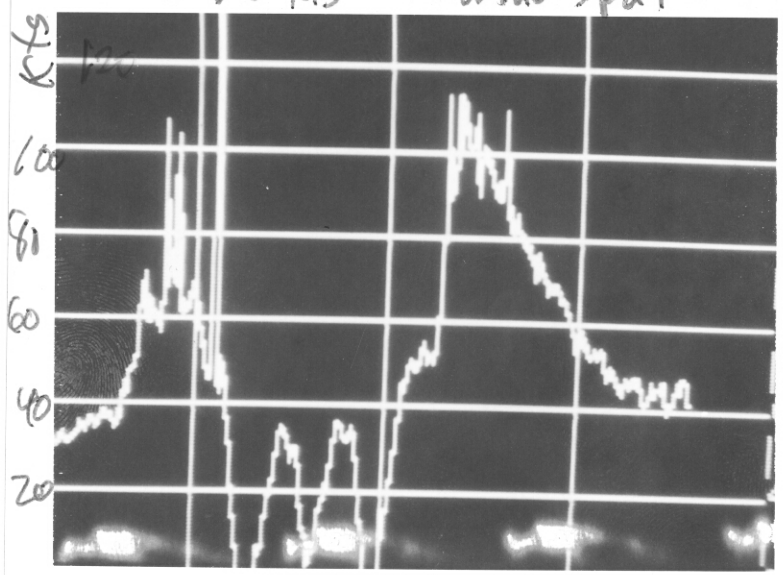
No. 800806I1 43RF
 Name Marks/Lewis
 Order 15 polaroids

Remarks
 Retouched
 Order Finished
 Reorder

windspeed left half.



160kts Wind spd.



↑

6 August
2259

H 9 0 4 4 9 1 X

↑

last pass of
eyewall
6 August.

H 9 0 4 4 9 1 X

No. 800806I1 43RF

Name Marks/Lewis

Order 15 polaroids

Remarks

Retouched

Order Finished

Reorder

↑

224930 GMT
6 Aug. 1980

H 9 0 4 4 9 1 X

↑

6 August
2259

H 9 0 4 4 9 1 X

↑

6 August. 1980

H 9 0 4 4 9 1 X