

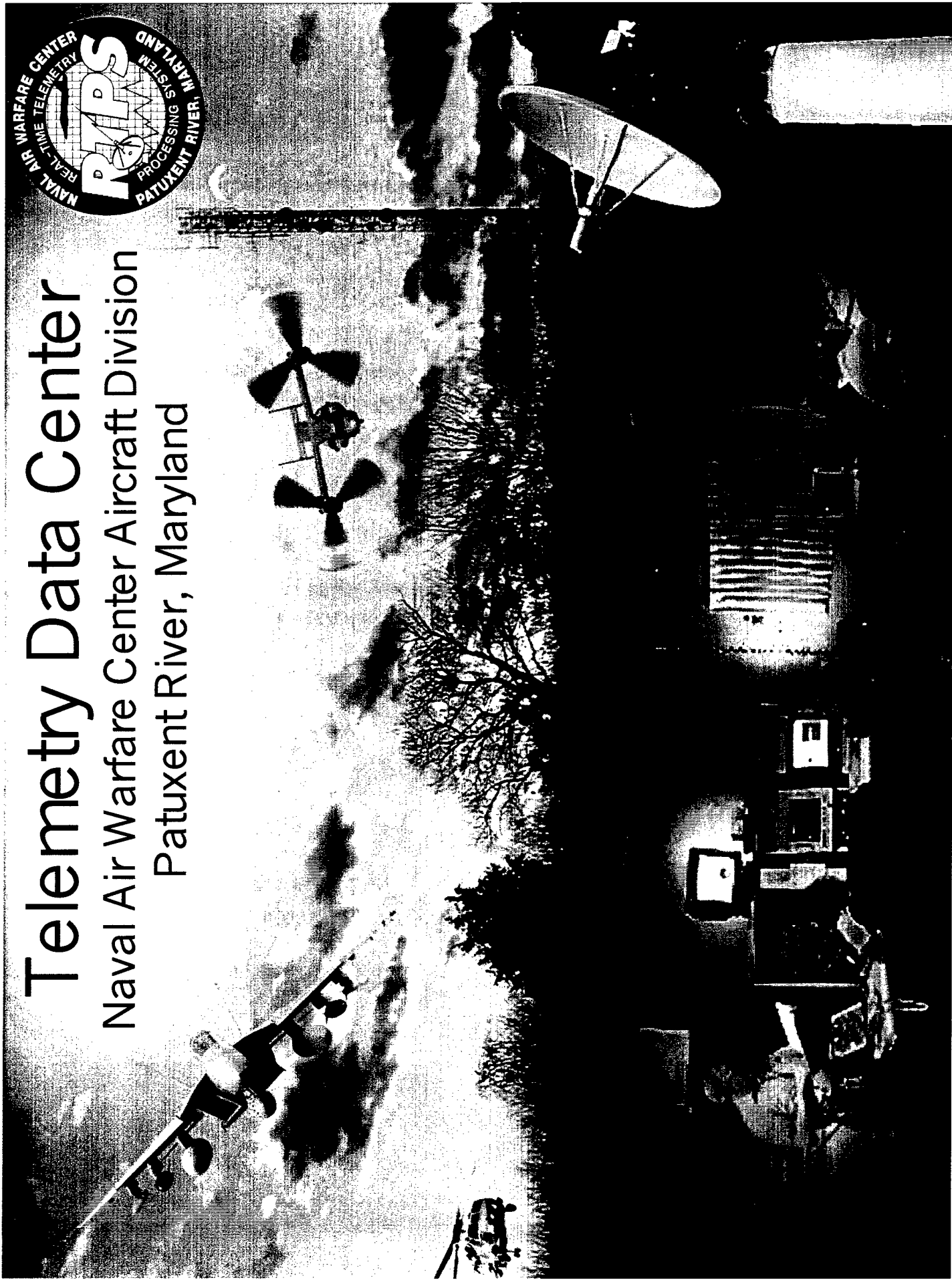
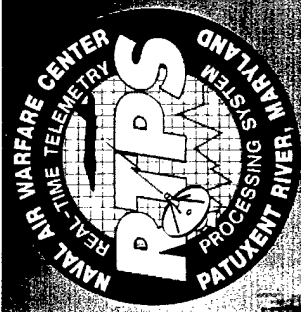
REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
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1. REPORT DATE		2. REPORT TYPE Viewgraphs		3. DATES COVERED	
4. TITLE AND SUBTITLE Telemetry Data Center				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) Peter Curry				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval Air Warfare Center Aircraft Division 22347 Cedar Point Road, Unit #6 Patuxent River, Maryland 20670-1161				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT SAR	18. NUMBER OF PAGES 25	19a. NAME OF RESPONSIBLE PERSON Peter Curry
a. REPORT	b. ABSTRACT	c. THIS PAGE			19b. TELEPHONE NUMBER (include area code)
Unclassified	Unclassified	Unclassified			(301) 342-1727

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std. Z39-18

20001031 062

Telemetry Data Center

Naval Air Warfare Center Aircraft Division
Patuxent River, Maryland





Range Instrumentation Division

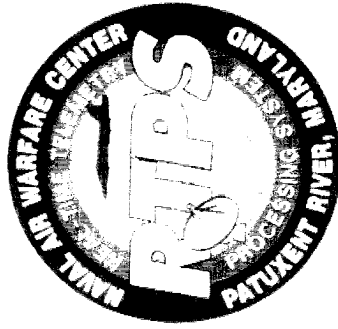
Telemetry Branch Assets

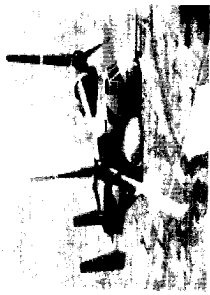


• RTPS (Real-Time Processing System)

7 Stream Central System, Each With:

- Four 10 Mbps PCM IRIG or non standard inputs.
- 64 analog inputs.
- 7 Color graphic displays - multifunction:
flutter, schematics, 3D, barchart, cockpit symbology, etc.
- EU data, all outputs, via Aydin S2K front-end.
- Derived measurements, limit checks, applications programs.
- TSPI inputs from & TM selected parameters to RCCS/EW.
- Universal capability for Fixed-wing, Rotary Wing and Avionics.
- Quick response; unique software not required.
- Accredited for classified work.





Range Instrumentation Division

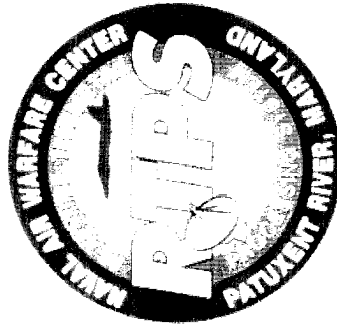
Telemetry Branch Assets



•RTPS (Cont)

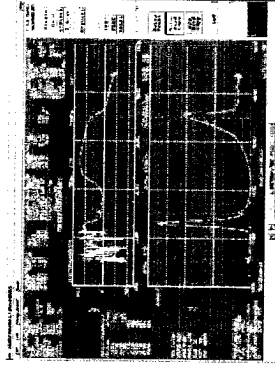
1553 Processing, IIRIG standard format:

- Automated decoding
- Message and measurement ID and throughput



Flutter Test Flight Capability :

- Only Navy facility that can support Flutter flight testing
- Integral to 7 streams
- Runs concurrently with all Real-Time Applications
- Utilizes advanced frequency and time domain based techniques





Range Instrumentation Division

Telemetry Branch Assets

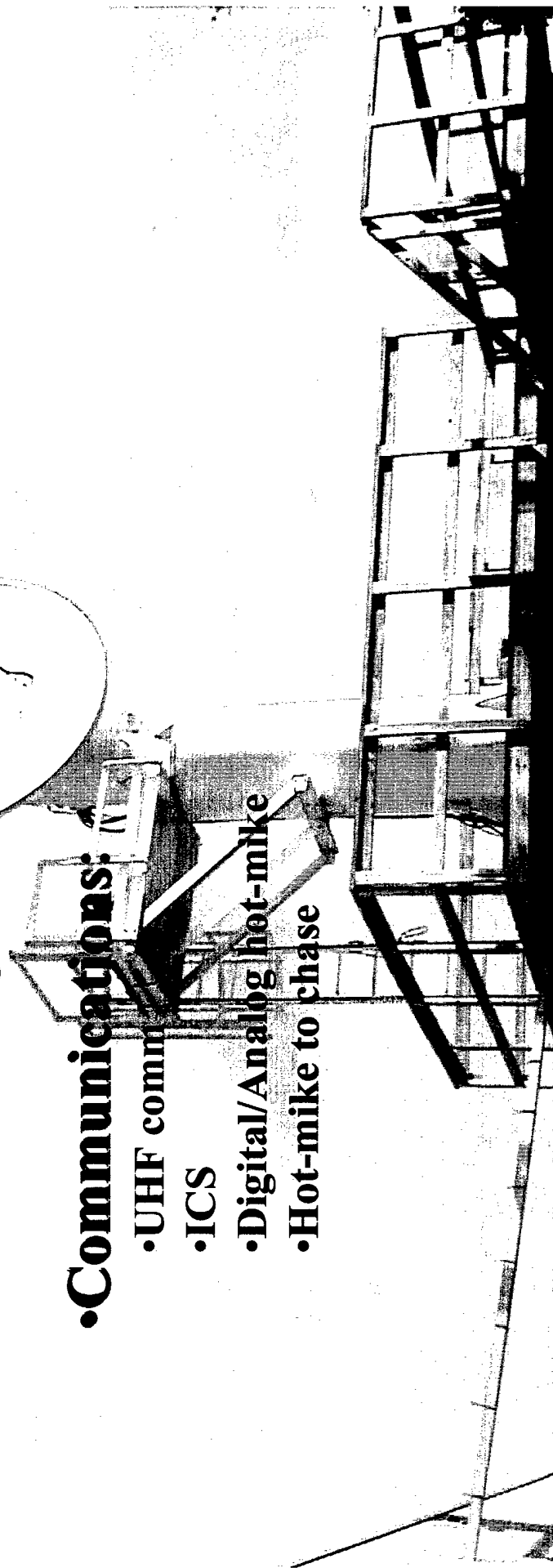


•Antenna Assets:

- 8 telemetry antenna systems at Pax
- 4 antennas at NASA Wallops Flight Facility
- 1 Transportable trailer mounted dual axis antenna
- 2 Portable single axis antennas

•Communications:

- UHF comm
- ICS
- Digital/Analog hot-mike
- Hot-mike to chase





Telemetry Branch Assets



Extended TM Coverage

NASA WALLOPS FLIGHT FACILITY

- 4 TM antennas
- Digital microwave link to Pax, 8 channel, 40 Mbps capacity
- Digital microwave link, 6 Mbps capacity
- 2 analog microwaves, 1.5 MHz each, or one single 6 MHz video channel
- 6 instrumented tracking radars
- MATS/GPS coverage
- Targets
 - Drone - BQM-74S or BQM-34S
 - Stationary - retired ships

G-1 (GULFSTREAM)

- Airborne TM relay, recording & quick-look displays
- PCM, PAM
- L&S band auto track, receive & re-rad
- Flight termination, command & target control
- MATS/GPS relay



Telemetry Branch Assets



Extended TM Coverage (Cont)

SATCOM

- 12 meter Earth Station
- Handles TM, timing, and voice
- CONUS coverage



REMOTE-SITE SUPPORT

- Provide air, land and carrier based mobile/remote support.



Rangel Instrumentation Division

Telemetry Branch



FUTURE ASSETS

• "TM Anywhere" via DREN (Defense Research & Engineering Network) includes data, voice communication, and video.

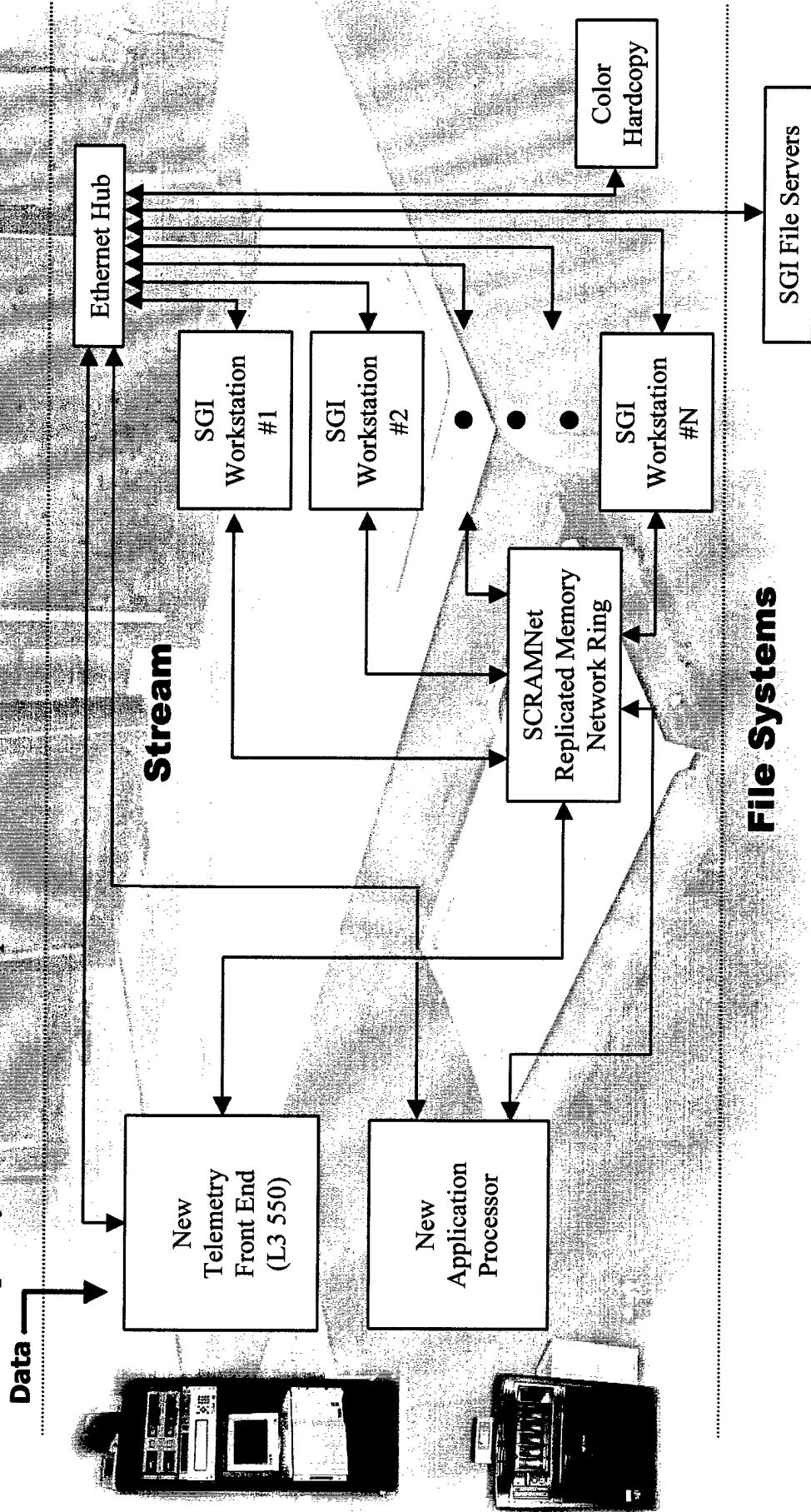
• G-1 → Command & Control Relay for TMD (Theatre Missile Defense)

• RTPS IV

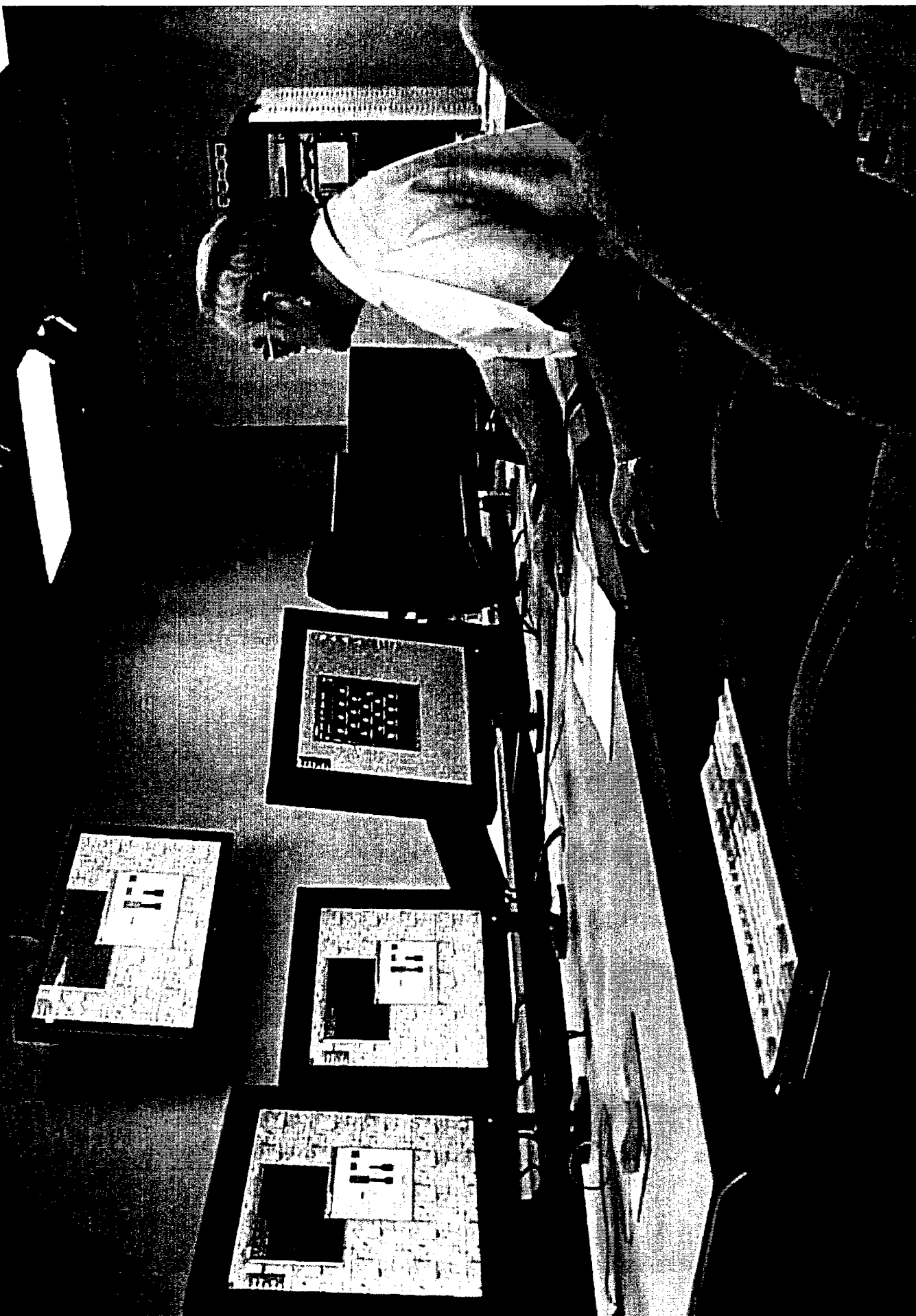
Prototype RTPS IV Architecture

Gradual Replacement (over four years) of RTPS III systems began in FY00, funded by I&M budget.

- Encore/Aydin/Adage equipment will be removed.
- New Telemetry Front End and Application Processing resources will be added.
- Existing SGI and SCRAMNet assets will remain, allowing for transparent transition of current projects.
- New display capabilities will be added.
- Data rate capacity infrastructure improvements will be made.

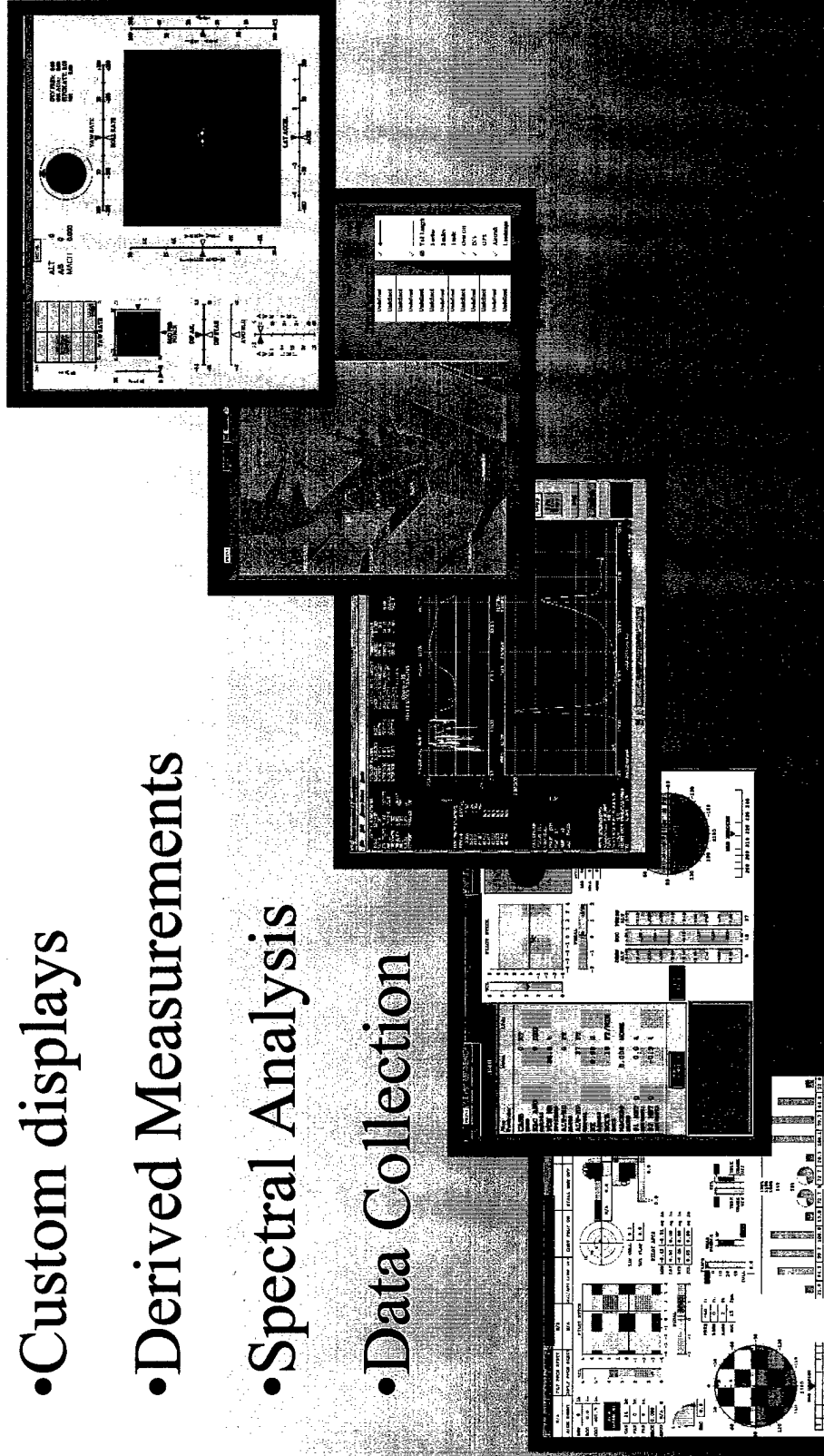


Prototype RTPS IV Console Layout



Real-Time Applications Products

- Custom displays
- Derived Measurements
- Spectral Analysis
- Data Collection



N/A	PLT PFCS RESET	N/A	DLC/ADU COMP OFF	CONV PROT ON	STALL WRN OFF	AOA LIM ON	LH ENGINE FAIL
AFCS RESET	COPLT PFCS RESET	N/A					RH ENGINE FAIL

RGW 0 lb

RCG 0.0 in

CCG 401.9 in

SHOW DATACODES

CAS 24 kt

EAS 0 kt

TAS 0 kt

MACH 0.000

MZCG N/A g

TCL 6

PILOT STICK

5

4

3

2

1

0

-1

-2

-3

-4

-4

-3

-2

-1

0

1

2

3

4

15

10

5

15

10

5

TIP COLL 0.3

TOT FLAP 0.0

TIP COLL 0.1

TOT FLAP 0.0

0.0

0.0

0.0

PILOT AFCS

LON -0.45 eq in

LAT 0.20 eq in

DIR -0.06 eq in

TCL 0.65 eq in

FLAPS

AUTO 0

10

20

40

FULL

0.0

GEAR HANDLE

UP

DOWN

FLY

FLY

FLY

FLY

FLY

FLY

120%

110%

100%

84%

50%

120

110

100

84

50

MAG HEADING

0 30 60 90 120 150 180

±180

FUEL

LH 593

RH 594 lb

FEED 593

FWD 3257

AFT 2025 lb

TOTAL 0 lb

FLOW 1036

OILP 54.2

OILT 73.0

1052 pph

55.0 psi

80.0 deg C

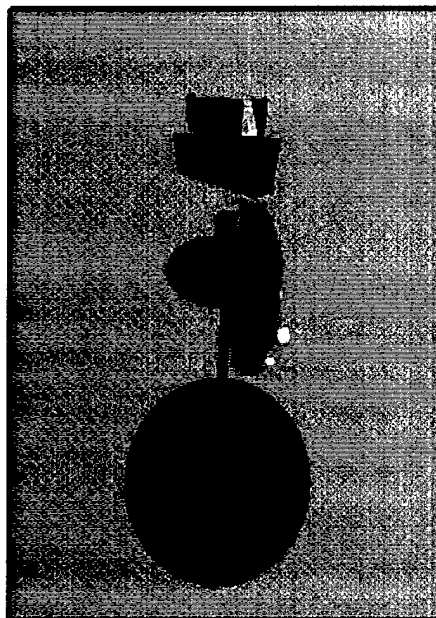
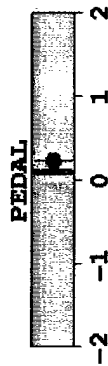
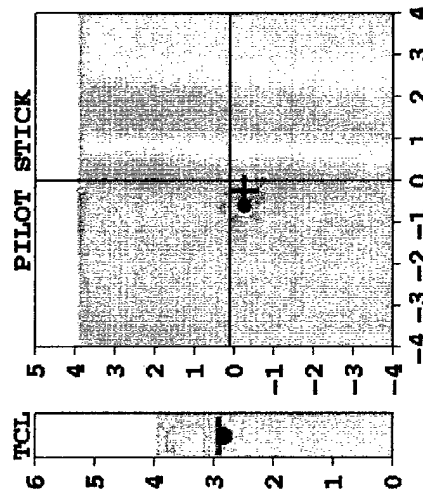
FLIGHT

Alias	Parameter	Value	Units
-------	-----------	-------	-------

CASB		0	KT
CASB			
NAC ANG		0	DEG
DM8203			
FCS NR		36.0	%
BP82RM09			
ALT-HD		0	FT
ALTD8			
ALT-HP		37	FT
00DV02			
NZ		0.98	G
00GV05			
ROCB		19	FT/MIN
ROCB			
MACHB#		0.000	NONE
MACHB			
#1 MST Q		0.0	%
BP20MT51			
#2 MST Q		-0.3	%
BP20MT53			

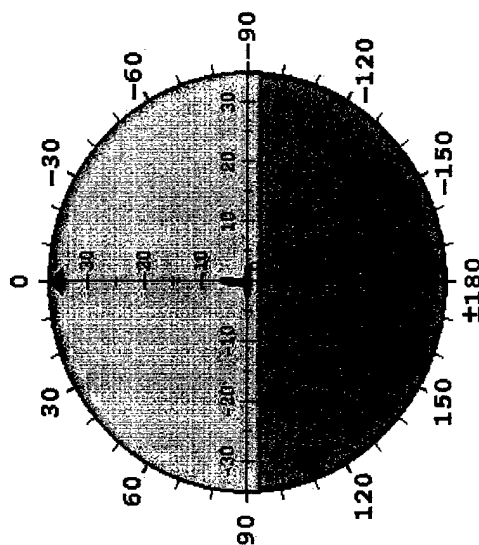
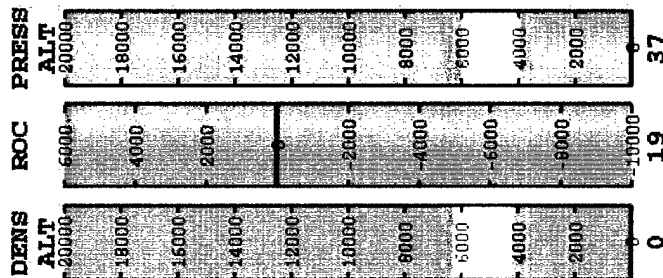
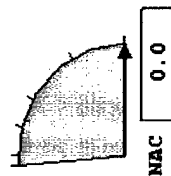
DISPLAY DESCRIPTION

SHOW DATACORES

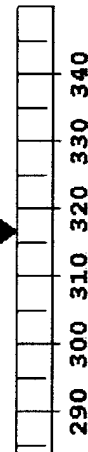


ATTITUDE	
AOA	44.8
ROLL	0.2
AOSS	-88.2

RATE	
PITCH	0.0
ROLL	0.0
YAW	-163.0



MAG HEADING



INITIAL CONDITIONS
TIME 12.39.29
RUN# 8.000
RECUPROG 99.000
NB ALT -357.580
NB MACH 0.000
NB EQ AS 0.000
INS NZ 0.999
INT FUEL 13843.000

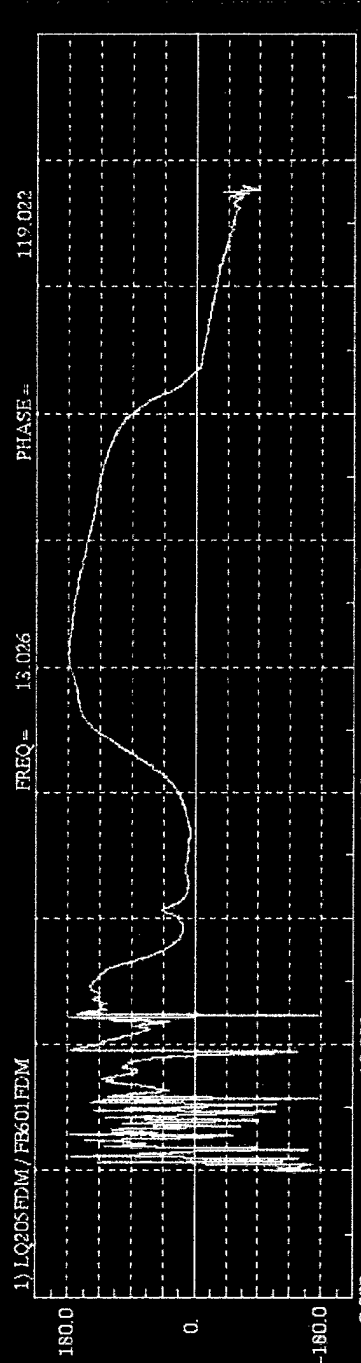
CURRENT VALUES
MM2617 18500.000
MM2612 0.830
MFG30506 0.000
MFG30603 0.000
MFG30901 25.000

14-12-09 - CFIL: 16407407
04/30/87 - FLT ID: FBI75
F/A-18 E1 FLUTTER TEST
CONFIG: CLEAN WING
STA 1 AND 11: LAU-127,
& CATW-98
STA 5 AND 7: LAU-116

CURRENT VALUES
XHD911 15.000
V79102 1.000
X46710 84.115
X46720 84.712
X46742 -11.861

ENDING CONDITIONS
TIME 12.41.19
RUN# 8.000
RECUPROG 99.000
NB ALT -357.580
NB MACH 0.000
NB EQ AS 0.000
INS NZ 0.997
INT FUEL 13799.000

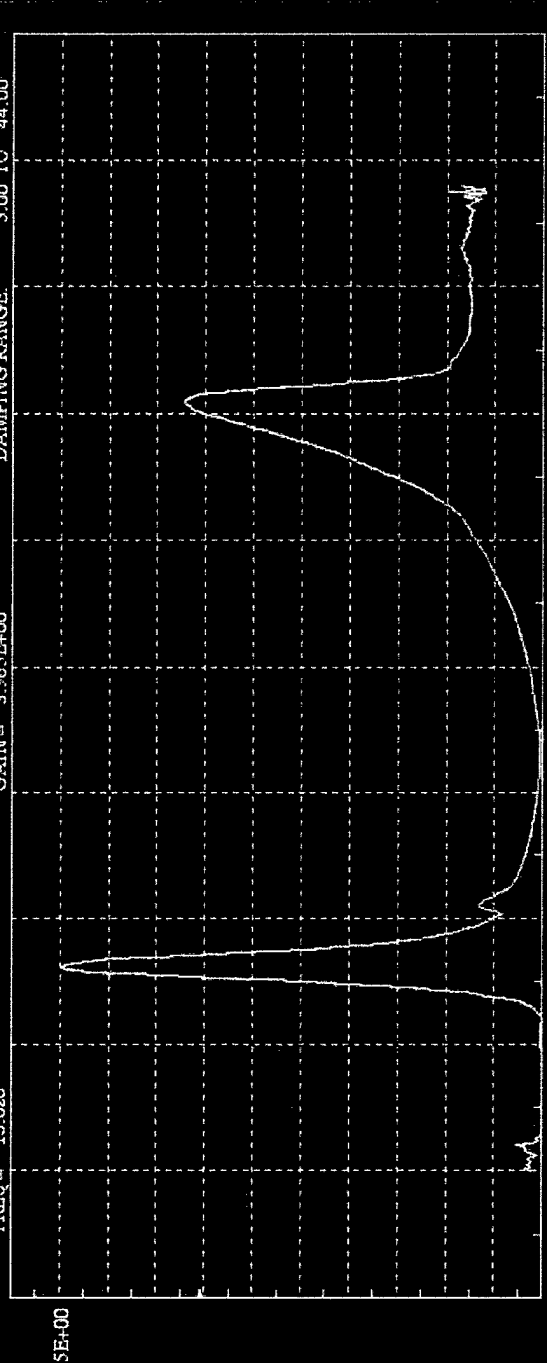
Group - 02
F18 E1 STAB PARAMS



FREQUENCY & DAMPING	
FREQ (Hz)	DAMP (g)
13.026	0.067
35.504	0.056
43.764	0.008
37.013	0.363
41.540	N/A
43.605	N/A
41.222	N/A
43.208	N/A
42.096	N/A
40.984	N/A

PLOT RANGE: 5.00 TO 44.00
DAMPING RANGE: 5.00 TO 44.00

FREQ = 13.026
GAIN = 3.965E+00



FEU STATUS
STATUS: RUN
SURF: STAB
PHASE: SYM
BIAS: 0.0
AMP: 30
EXC: SWEEP

FFT PROCESSING INFO
SAMPLE SIZE 71680
SAMPLE RATE 8192
NO FFT AVGS 32
WINDOW & OVERLAP HANN 75%

Run 002 restored

FREQUENCY (HERTZ)

Last Run Saved: 003

FILE NAME:
wsatu22.f31

- Single
- Quad
- 4-Stack
- 3-tier
- 2-tier
- Nyquist

- AVG
- INST
- PEAK
- THIST

BLOCK FILTER

Batch Print

Color Hard Copy

B/W Hard Copy

SAVE

EXIT

HOME

OUT

IN

17:38:18.314

00:00:00.000

Altitude 1385

Velocity 16.075

Rate 1151

Latitude 0.000

Longitude 0.000

From PAX 000 ft miles

000 ft radial

Could not find the location of the
aircraft in the map data.

Undefined
Undefined
Undefined
Undefined
Undefined
Undefined
Undefined
Undefined
Undefined
Undefined
Undefined
Undefined
Undefined

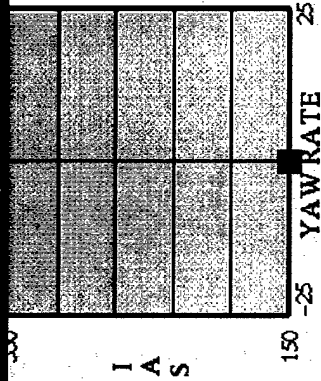
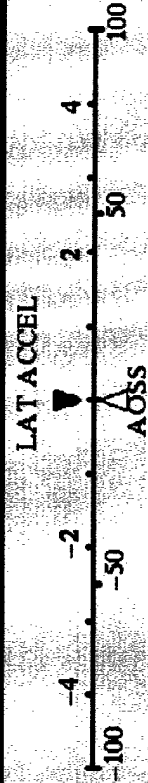
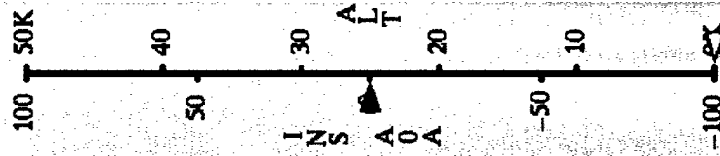
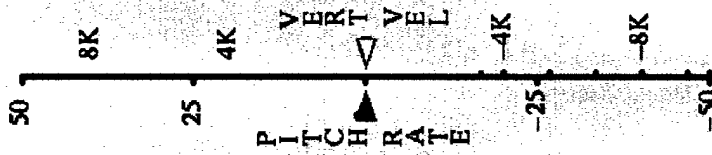
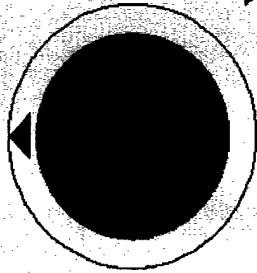
✓	←
✓	-----
✓	
60	Tail Length
5 miles	
2 miles	
1 mile	
✓	Grid Off
✓	INS
	GPS
✓	Aircraft
	Landscape



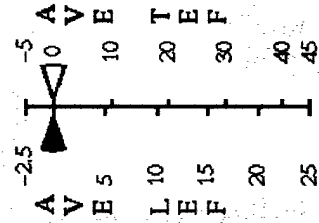
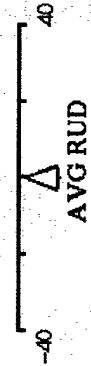
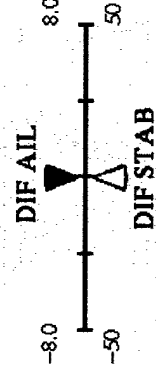
18:01:45

ALT 0
A/S 0
MACH 0.000

DYN PRES: 0.00
INS AOA: 0.00
PITCH ATT: 0.00
NZ: 0.00



RUD PED FORCE

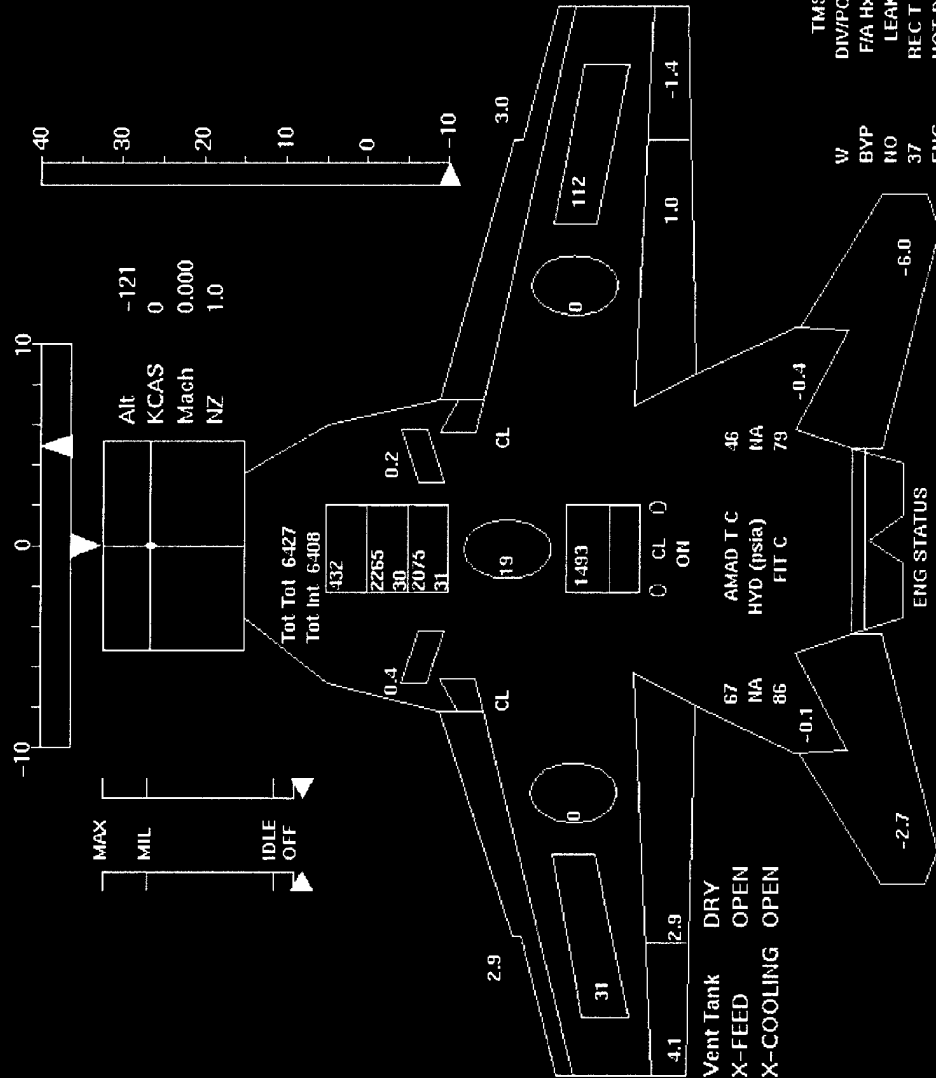


BINGO	HYD 5000	ECS DEL P	APU FIRE	L EGT	L ENG FIRE	R EGT	R ENG FIRE
FUEL LOW	FCS	OBOGS DEG	FADEC	L OIL HOT	HYD 1 HOT	R OIL HOT	HYD 2 HOT

Yaw Rate
 Ny
 0.00
 0.0
 Roll Angle
 Roll Rate
 -1.8
 0.0
 Pitch Angle
 Pitch Rate
 AOA
 -0.3
 0.00
 -81.7

Radar Alt
 Nx
 ROC
 Q
 Wt.
 CG
 Asymetry
 bQ
 -1
 -0.01
 NA
 0
 43078
 26.67
 0

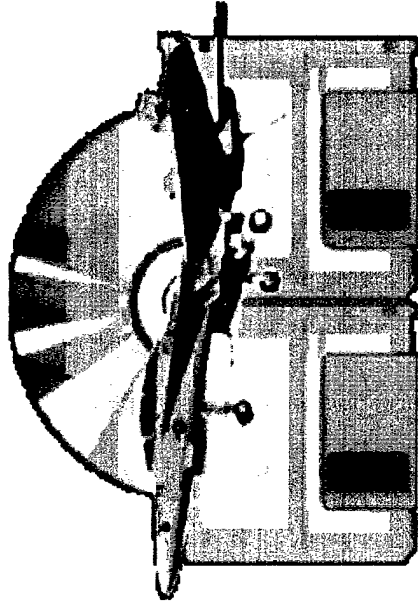
Heading
 Range
 Bearing
 Video
 O/B Tape
 TM Power
 Tape Rem
 263
 0.8
 199
 ** TBD **
 ON
 LO
 981



Memory Change Values
 Stores Weight
 WIP Code 4
 WIP Code 6
 WIP Code 8
 Wip Code
 Nz Ref
 Flaps Sch
 6675
 NA
 NA
 NA
 VALID
 7.3
 0

TMS
 DIV/POS
 F/A Hx
 LEAK
 RECT C
 HOT DIV
 W
 BYP
 NO
 37
 ENG
 -6.0
 -0.4
 -1.4
 1.0
 112
 0
 19
 1493
 0.2
 0.4
 2.9
 4.1
 2.9
 67
 NA
 86
 -0.1
 -2.7
 0.5
 26
 51
 217
 0
 0
 23
 14
 B
 39
 118
 0.3
 25
 10
 210
 0
 0
 15
 15
 A
 0
 110
 THA
 N1%
 N2%
 T5 C
 WFM (pph)
 WERT (pph)
 PS3
 A8
 FADEC CH
 POIL (psid)
 ENG OIL (deg C)

Post Flight



Atlantic Test Range

Products and Services



Data Conversion

→ EU, MDC, TSPI



Classified Processing

→ Accredited for
classified work.



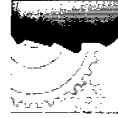
Data Distribution

→ Web, Secure FTP, CD,
ZIP, Floppy, etc.



Data Merging

→ Merging data from
different sources.



Analysis Tools

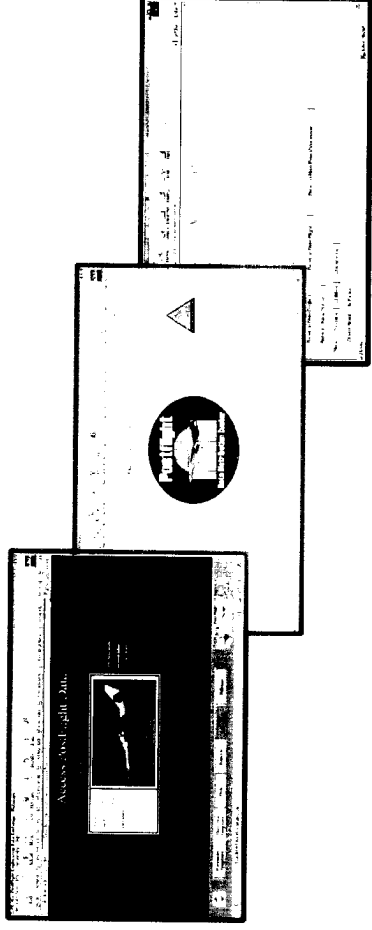
→ Different tools are
available--Project specific.



Other Services

→ Digital Filters,
Calculated
Parameters

Web Interfaces to Flight Data



Three Web sites exist for Customer to:

- Analyze Flight Data on line.
- Simply Downloading ASCII Flight Data from any ATR Post Flight Group.
- Interface with ASAP (Advanced Scientific Analysis Package).

On-Line Data Analysis Post Flight Web

PostFlight Data Distribution Center - Netscape
File Edit View Go Communicator Help

Back Forward Reload Home Search Netscape Print Security Shop Stop

Bac-PostFlt-Ctr Bac-PEDEX Neb-PEDEX Neb-PostFlt-Ctr Gry-Pedex Gry-PostFlt-Ctr PEDEX-Mattn PEDEX-Michelo ASAP RCS-Cmds Neb-Mat-pl

Bookmarks Netsite: https://postflight_pub.sunbelt.navy.mil/html/plddc/ What's Related





Postflight
Data Distribution Center

[Help](#)

[Services](#)

[Mission](#)

[Contact Us](#)

[Access Flight Data](#)

[PC Download](#)

Document: Data

Access Flight Data

PEDEX: PostFlight Engineering Data Exchange - Netscape
File Edit View Go Communicator Help
Back Forward Reload Home Search Netscape
BPR Postflight BAC-PEDEX NetRm205 GIP-PostFlt GIP-Pedex PEDEX-Matm PEDEX-Michale WorkREQST ASAP PDS-On
Bookmarks Netsite: https://postflight_pub.surfbelt.navy.mil/html/pedex/

Access PostFlight Data

Your Current Settings Are

Project: s3b

Flight: test59C

Parameters: brown

TimeSlices: brown



[Helpful Hints](#)

[What's New](#)



Parameter
Templates

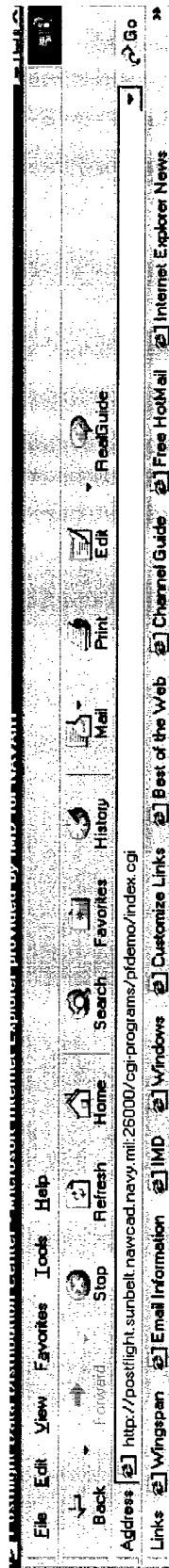
Time Slice
Templates

What's
New

Reports

Search the Internet for information

Post Flight Web for all ATR Customers



Atlantic Test Range

Post Flight Team
TELEMETRY
Services
Mission
Contact Us

Action Menu
Download Data
Upload Data
Add New Users
Edit Users
Add New Shared Folder
Edit Shared Folder
Folder Cleanup

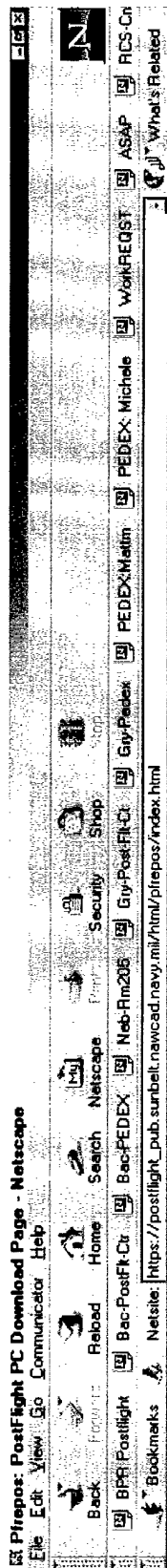


DoD Warning

This Site Serves EW, GPS, Photogrammetrics, RCCS, and Telemetry Customers

Done Local Internet

PC Download of ASCII Flight Data



PC Download

Select [FOLDER], [PROJECT] and [FLIGHT] then [CONTINUE] to display a list of files to download

Select a folder, then click	Select a Project, then click	Select a Flight, then click
SET FOLDER	SET PROJECT	SET FLIGHT
Name : Brown, Andy, brown	Name : Description	Name : Description
s3b : -	s3b : -	test50C : -



Document Done

Web Version of ASAP

Advanced Scientific Analysis Package

http://gyiphoon.surbel.net/navcad.navy.mil:26001/cgi-programs/broker - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print

Address http://gyiphoon.surbel.net/navcad.navy.mil:26001/cgi-programs/broker

Advanced Scientific Analysis Package

Project is Demo 1 Flight is 2 Event is 2036

Printer is Color Laser in Bldg 1490

Titles

demo1
DEMO Number 555
Flight Number 2 25OCT1992
roll right 2
test 36

Footnotes

Maneuver Number 036

Select a New Project Select a New Flight Select a New Event/Maneuver

Select a New Printer

Plots Reports Utilities Comments

Check Batch Job Status No Batch Jobs Running

Done

Post Flight

Network Configuration

