241300-55-T
Volume II

# Appendix for P-3/UWB Flight Portage, Maine 28-29 June 1995

## Volume I
(1st Set Passes)

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DTIC QUALITY INSPECTED 4

28 Jun 1995
Tape: E1416

## Post-line Data Sheet

Line 1
Mission: DAY 4 PORTAGE MAINE
UWB Synthetic Target

Time: 179:21:50:27
Pass 1
Req.# 0

### AIRCRAFT & CHANNEL DATA

| Altitude | |
|---|---|
| Desired: | 10000 ft |
| Baro: | 9999 ft |
| Slt. rng: | 18458 ft |
| Look: | Right |
| Depr Ang: | 25.0° |
| Des. trk: | 10.0° |
| Start Sq: | 90.0° |
| End Sq: | 90.0° |

| | CH 1 | CH 2 | CH 3 | CH 4 |
|---|---|---|---|---|
| Wave/Pol.: | p-VV | p-VH | p-HV | p-HH |
| Swath Ctr Ang: | 30.0° | 30.0° | 30.0° | 30.0° |
| Tgt Dep Ang: | 30.0° | 30.0° | 30.0° | 30.0° |
| St rng (ft): | 16922 | 16922 | 16922 | 16922 |
| Near Rng Dep: | 36.2° | 36.2° | 36.2° | 36.2° |
| Far Rng Dep: | 17.6° | 17.6° | 17.6° | 17.6° |
| Atten (dB): | 58.0 | 57.0 | 58.0 | 57.0 |

### WAYPOINTS

| | Latitude | Longitude |
|---|---|---|
| Line_up: | N 46:27.53 | W 68:37.06 |
| Start: | N 46:39.34 | W 68:34.06 |
| End: | N 46:49.18 | W 68:31.53 |
| From: | N 30:14.66 | W 71:50.72 |
| To: | N 62:59.35 | W 62:17.14 |

Main Target: GW
Mocomp Point:
Lat: N 46:43.81
Long: W 68:29.03
Tgt Trk: 0.0 Tgt Vel: 0.0
Alt: 771.0 ft

### RADAR PARAMETERS - for UWB

RTP Channel: 2
Resolution: N/A
Swath width: Single
RMS Time Constant: 2^7
Position Reference: ON
Atten. Tracking: OFF
Range Gate Delta: 0.0 ft
Azimuth Presum Rate: Presum6
TX Chirp Filename: CTL1U2A

Filter damping is Hi -> 10 sec
PRF Factor is FAST (262.5 kts)
Groundspeed: Real -> 262.0 kts
Mocomp Off for Chnl 1, 2, 3, 4
INS Vel/Pos Reference
Adj Gnd Scene: 5000.0 ft
Range Tracking is OFF
Clutterlock Reference: OFF
RX Chirp Filename: CRL1N0A

| CAL POWER | |
|---|---|
| X: | 0.0 |
| L: | 0.0 |
| C: | 0.0 |
| P: | -12.8 |

| ANT BIAS | |
|---|---|
| Elevation: | 0.0° |
| Azimuth: | 0.0° |
| Pitch: | 0.0° |

| Tape Footage | | Drive no. |
|---|---|---|
| Starting: | 200 ft | (1) |
| Ending: | 334 ft | (1) |

| Vel Bias | |
|---|---|
| X: | 2112.0 |
| Y: | 1874.0 |
| Z: | 5343.0 |

| CAL Atten | |
|---|---|
| X: | 63.8 dB |
| L: | 63.8 dB |
| C: | 63.8 dB |

LINE Map Time (UCT)
Start: 21:50:27
End: 21:50:28

CPA (UCT): 00:00:00
Alt: 0 ft (GPS)

### Mocomp Counters

| | Start | | End | |
|---|---|---|---|---|
| Ch 1: | 14357 | 00003815h | 15361 | 00003C01h |
| Ch 2: | 14357 | 00003815h | 15361 | 00003C01h |
| Ch 3: | 14357 | 00003815h | 15361 | 00003C01h |
| Ch 4: | 14357 | 00003815h | 15361 | 00003C01h |

28 Jun 1995 Post-line Data Sheet Time: 179:22:44:20
Tape: E1416 Line 53 Pass 2
Mission: DAY 4 PORTAGE MAINE Req.# 24

## AIRCRAFT & CHANNEL DATA

| | | | | CH 1 | CH 2 | CH 3 | CH 4 |
|---|---|---|---|---|---|---|---|
| Altitude | | | | | | | |
| Desired: | 4000 ft | | Wave/Pol.: | p-VV | p-VH | p-HV | p-HH |
| Baro: | 3927 ft s.d.= | 8 | Swath Ctr Ang: | 10.0° | 10.0° | 10.0° | 10.0° |
| Slt. rng: | 19234 ft | | Tgt Dep Ang: | 10.0° | 10.0° | 10.0° | 10.0° |
| Look: | Right | | St rng (ft): | 17700 | 17700 | 17700 | 17700 |
| Depr Ang: | 25.0° | | Near Rng Dep: | 12.8° | 12.8° | 12.8° | 12.8° |
| Des. trk: | 276.0° | | Far Rng Dep: | 6.7° | 6.7° | 6.7° | 6.7° |
| Start Sq: | 90.0° | | Atten (dB): | 60.0 | 65.0 | 60.0 | 65.0 |
| End Sq: | 90.0° | | RMS Video (%FS) | 6.3 | 5.0 | 4.4 | 5.6 |

## WAYPOINTS

| | Latitude | Longitude |
|---|---|---|
| Line_up: | N 46:40.05 | W 68:06.22 |
| Start: | N 46:41.34 | W 68:23.54 |
| End: | N 46:42.39 | W 68:38.00 |
| From: | N 42:35.75 | W 45:47.43 |
| To: | N 45:53.01 | W 92:36.72 |

Main Target: SIG
Mocomp Point:
Lat: N 46:44.97
Long: W 68:30.30
Tgt Trk: 0.0 Tgt Vel: 0.0
Alt: 660.0 ft

## RADAR PARAMETERS - for UWB

RTP Channel: 1
Resolution: N/A
Swath width: Single
RMS Time Constant: 2^7
Position Reference: ON
Atten. Tracking: OFF
Range Gate Delta: 0.0 ft
Azimuth Presum Rate: Presum6
TX Chirp Filename: CTL1U2A

Filter damping is Hi -> 10 sec
PRF Factor is FAST (262.5 kts)
Ave Gndspd: Real -> 253.1 kts
Mocomp Off for Chnl 1, 2, 3, 4
GPS Vel/Pos Reference
Adj Gnd Scene: 5000.0 ft
Range Tracking is OFF
Clutterlock Reference: OFF
RX Chirp Filename: CRL1N0A

Ave Ref Vel -> -.4 fps (s.d.= 2.1)
Ave Fil Vel -> -.9 fps (s.d.= 1.5)

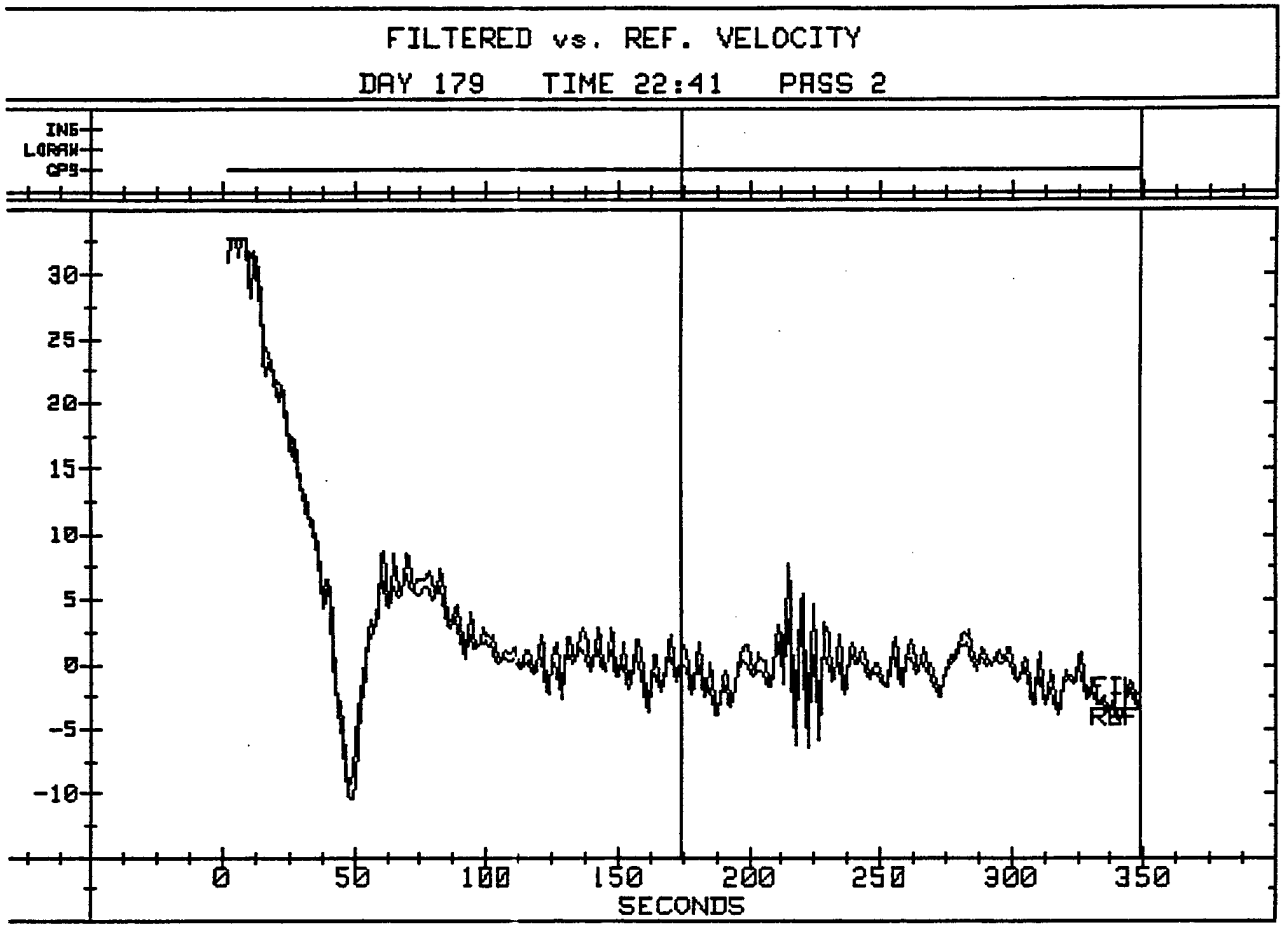
| NML XMIT PWR | ANT BIAS | | Tape Footage | | Drive no. |
|---|---|---|---|---|---|
| X: -70.0 | Elevation: | 0.0° | | | |
| L: -70.0 | Azimuth: | 0.0° | Starting: | 350 ft | (1) |
| C: -70.0 | Pitch: | 0.0° | Ending: | 1590 ft | (1) |
| P: 40.0 | | | | | |

| Vel Bias | CAL Atten | LINE Map Time (UCT) |
|---|---|---|
| X: 2112.0 | X: 63.8 dB | Start: 22:44:20 |
| Y: 1874.0 | L: 63.8 dB | End: 22:46:59 |
| Z: 5343.0 | C: 63.8 dB | |

Mocomp Counters

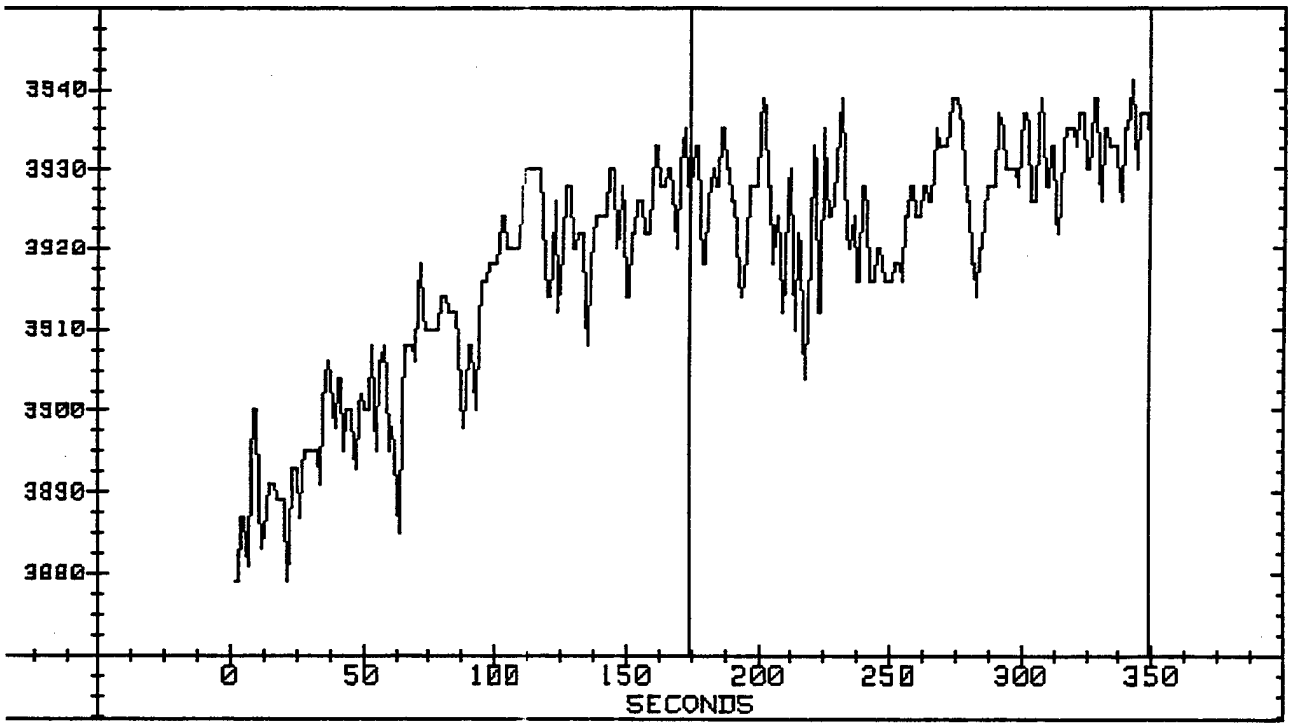
| | | |
|---|---|---|
| Start: | 47206 | 0000B866h |
| End: | 73874 | 00012092h |

CPA (UCT): 00:00:00
Alt: 0 ft (GPS)
Lat: N 0:00: 0
Lon: E 0:00: 0


FILTERED vs. REF. VELOCITY
DAY 179 TIME 22:41 PASS 2
INS
LORAN
GPS
30
25
20
15
10
5
0
-5
-10
FIL
REF
0
50
100
150
200
250
300
350
SECONDS

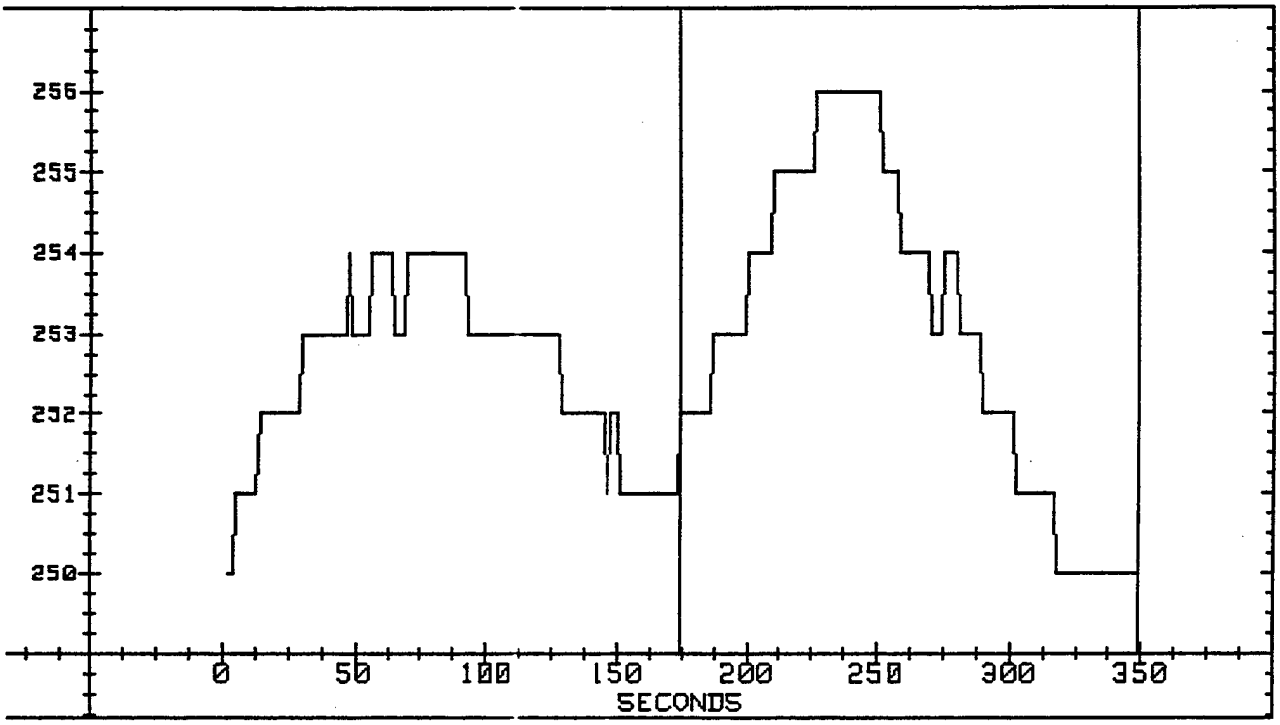
BARO ALTITUDE

DAY 179 TIME 22:41 PASS 2 m= 3927, sd= 7.80381



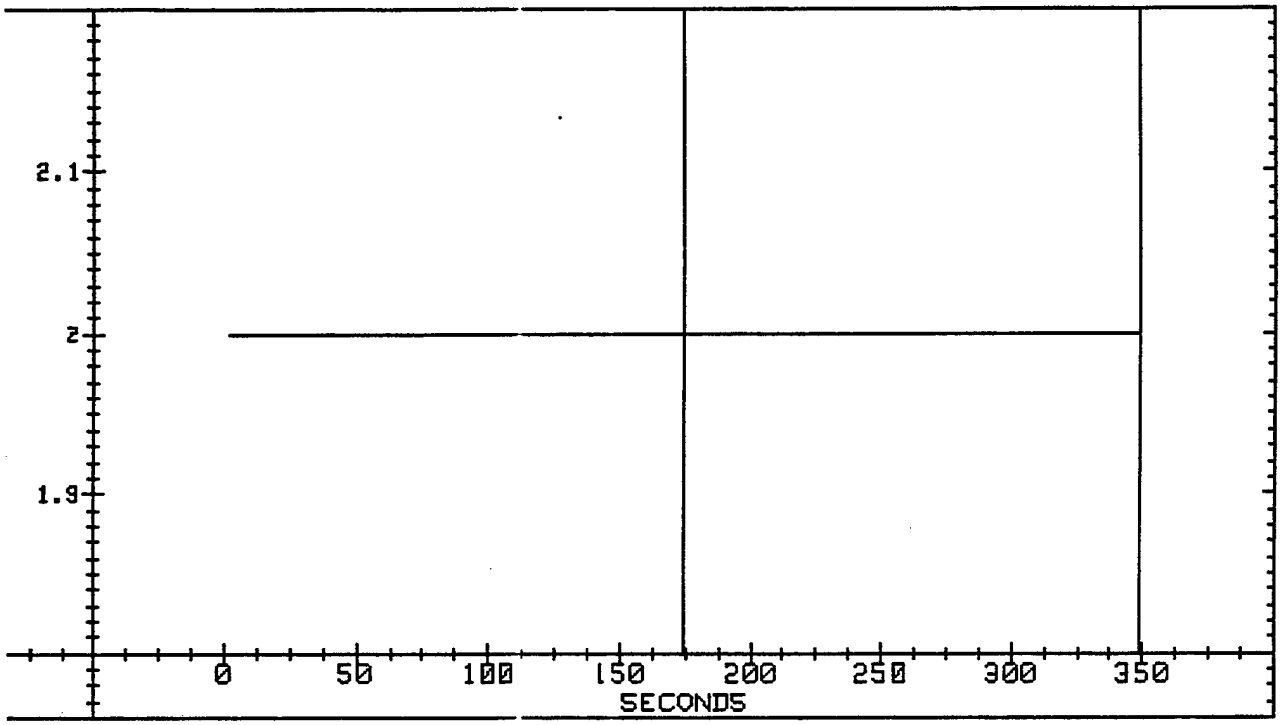
INS GROUND SPEED

DAY 179 TIME 22:41 PASS 2 m= 253.1, sd= 2.10858



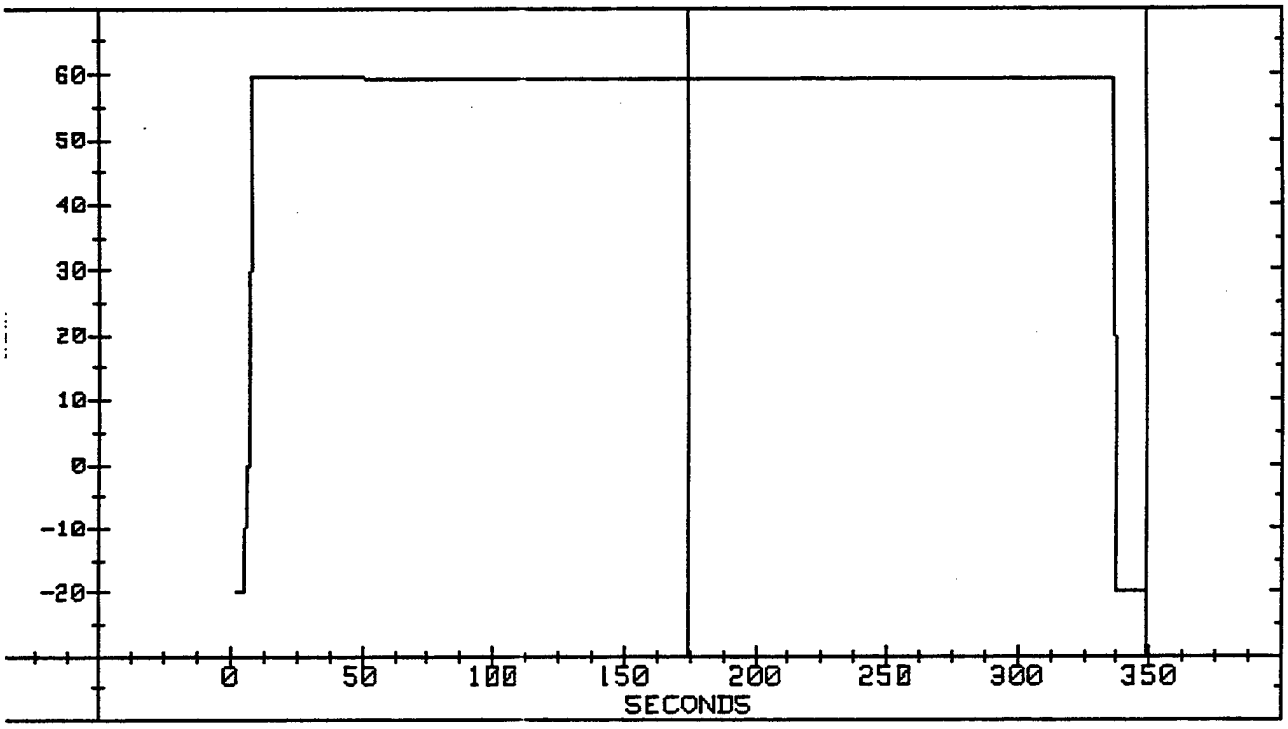
PASS NUMBER

DAY 179 TIME 22:41 PASS 2 m= 2, sd= 0



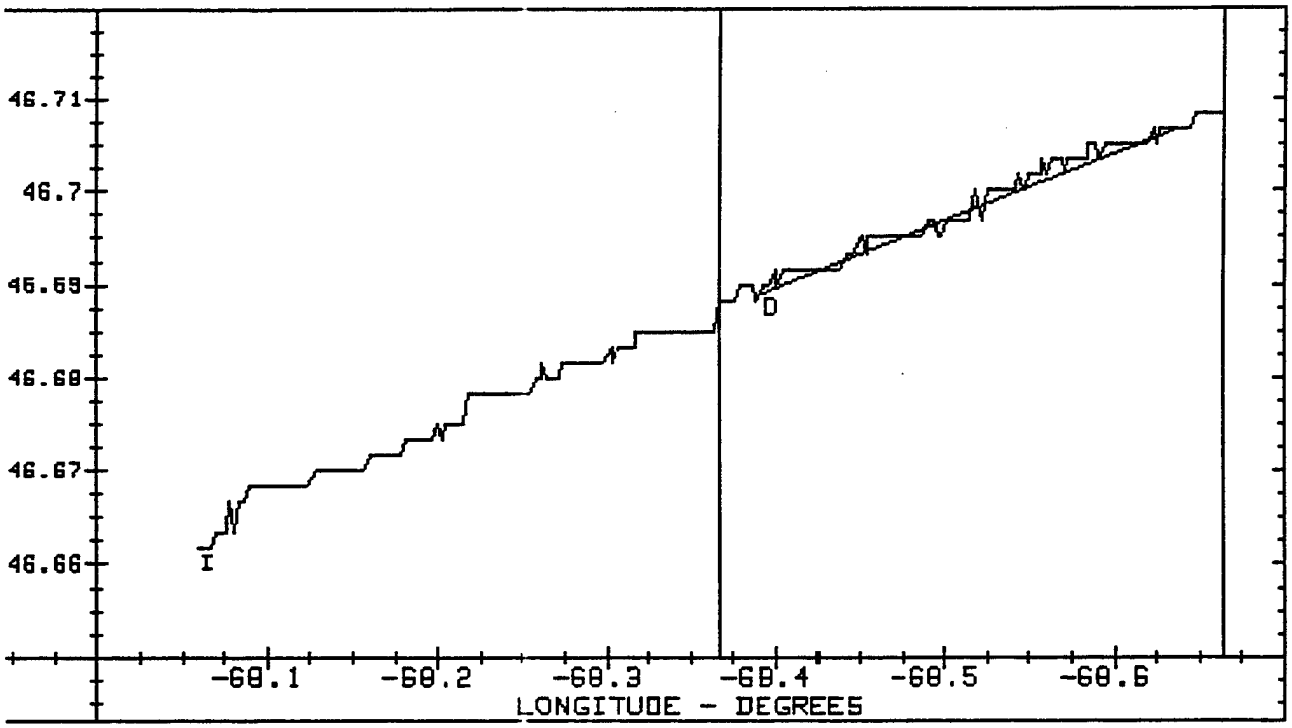
P Band Power

DAY 179 TIME 22:41 PASS 2 m= 52.79, sd= 21.6475



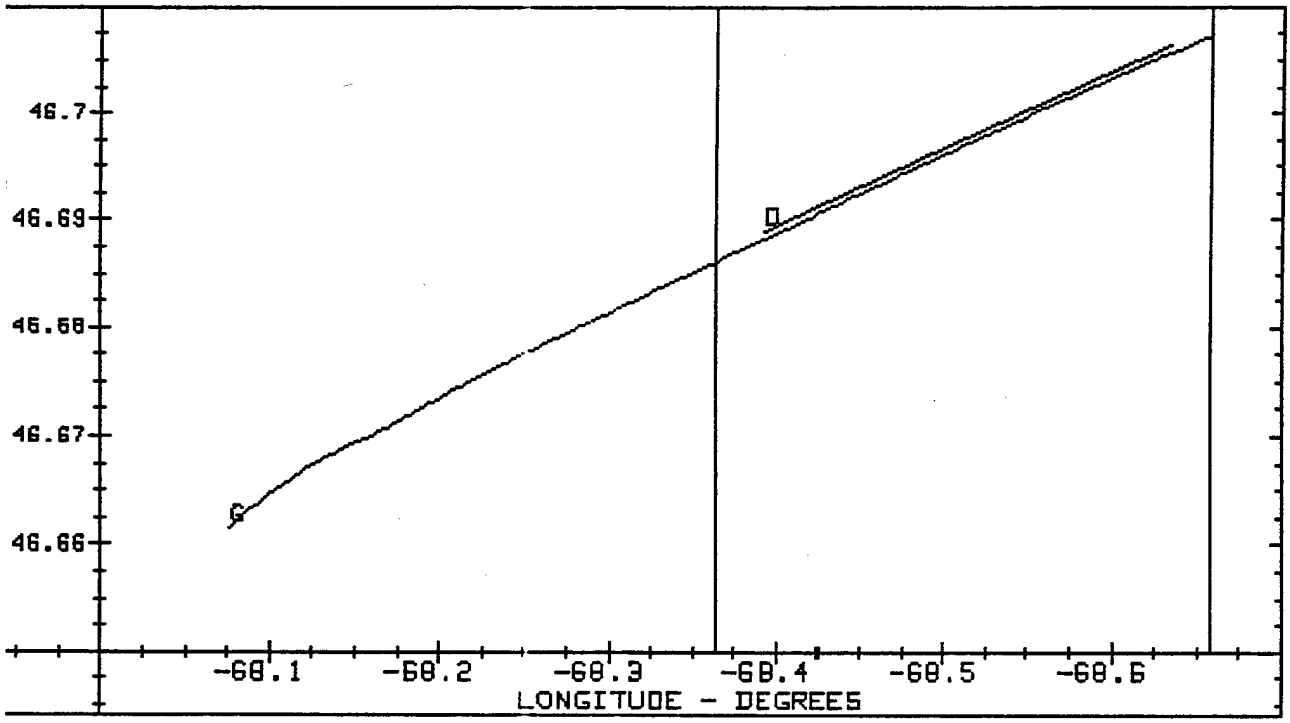
INS AIRCRAFT POSITION

DAY 179 TIME 22:41 PASS 2



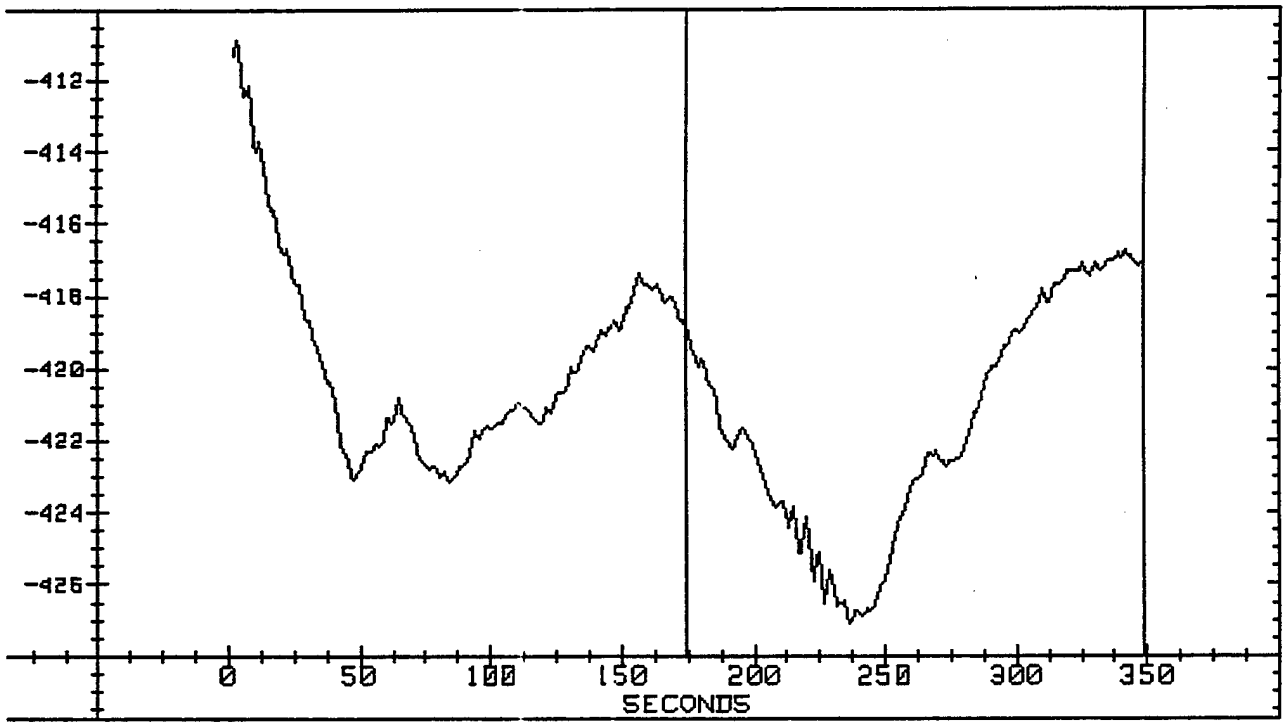
GPS AIRCRAFT POSITION

DAY 179 TIME 22:41 PASS 2



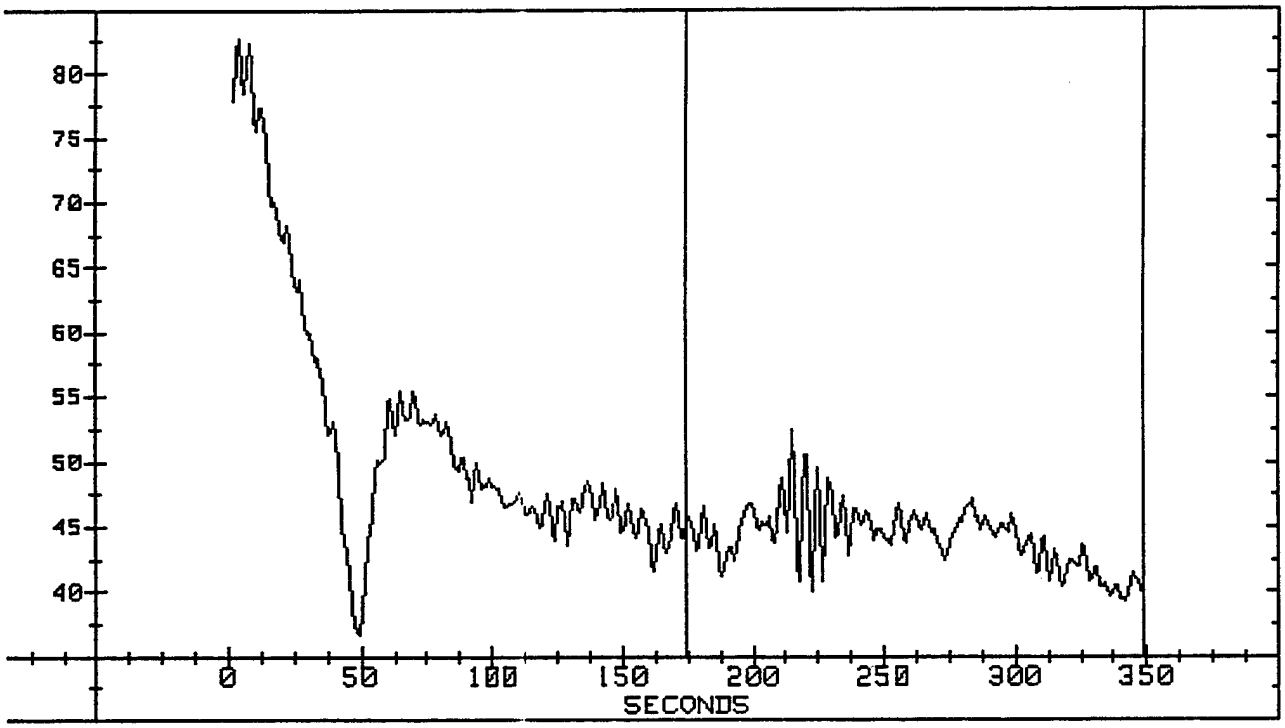
GPS Ve

DAY 179 TIME 22:41 PASS 2 m= -421.7, sd= 3.31881



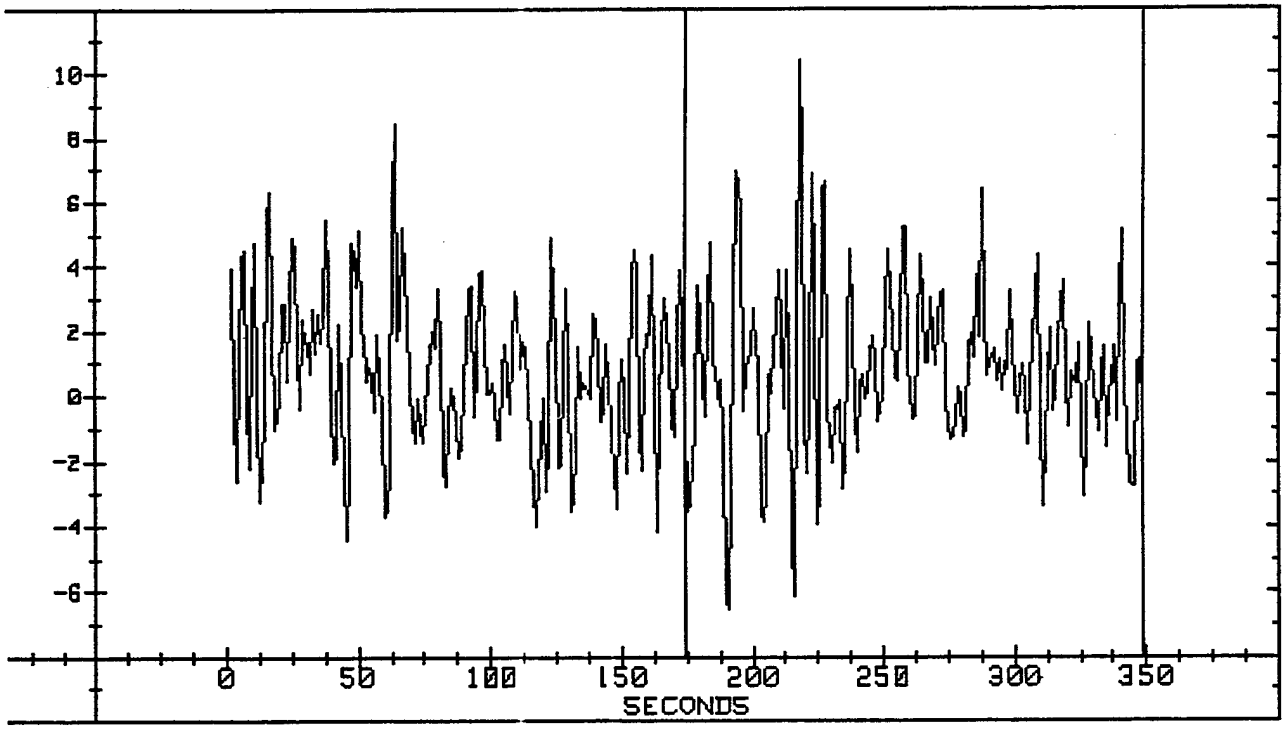
GPS Vn

DAY 179 TIME 22:41 PASS 2 m= 44.15, sd= 2.4221



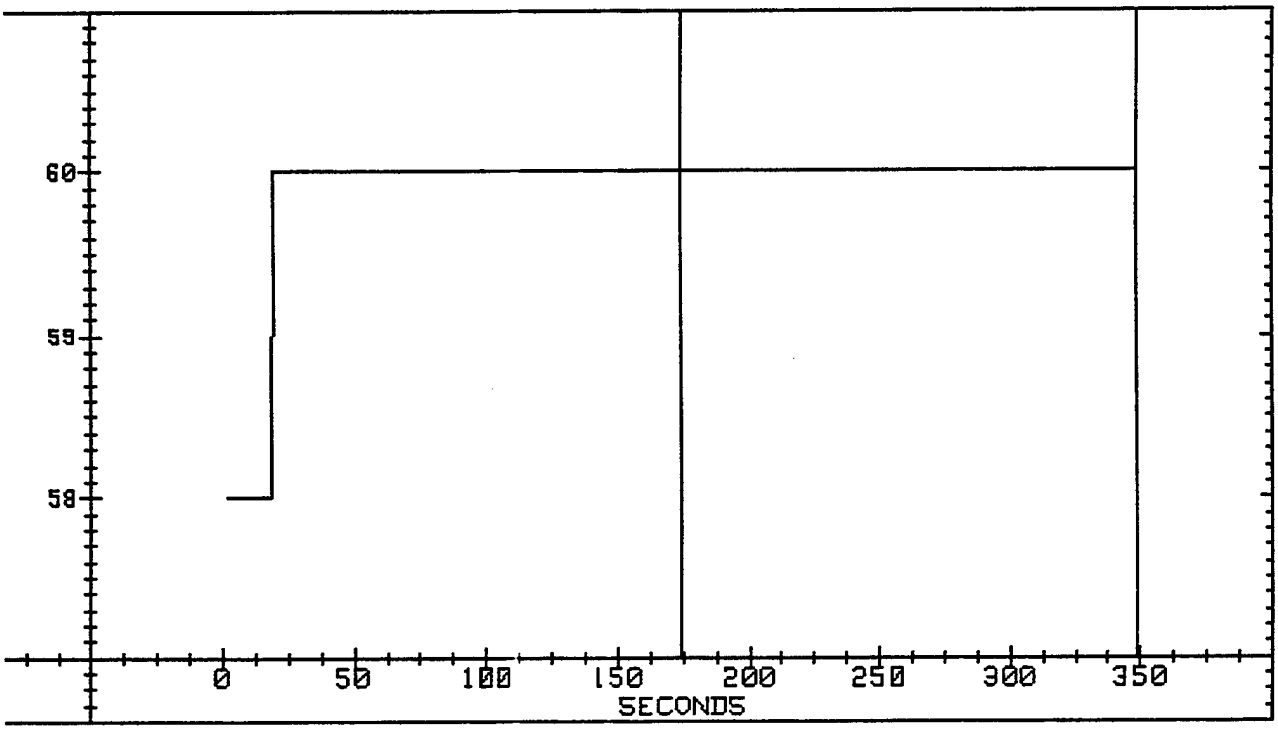
GPS Vv

DAY 179 TIME 22:41 PASS 2 m= .8354, sd= 2.62318



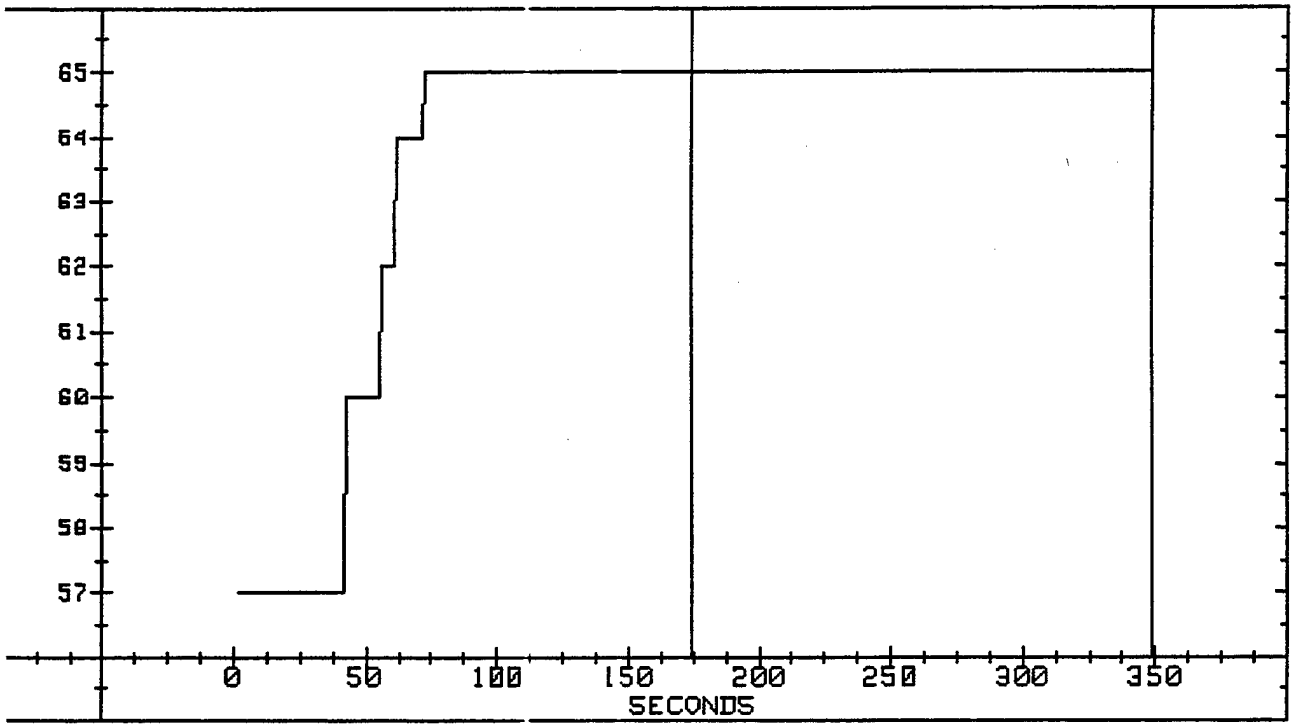
Ch1 RES Attenuation

DAY 179 TIME 22:41 PASS 2 m= 60, sd= 0



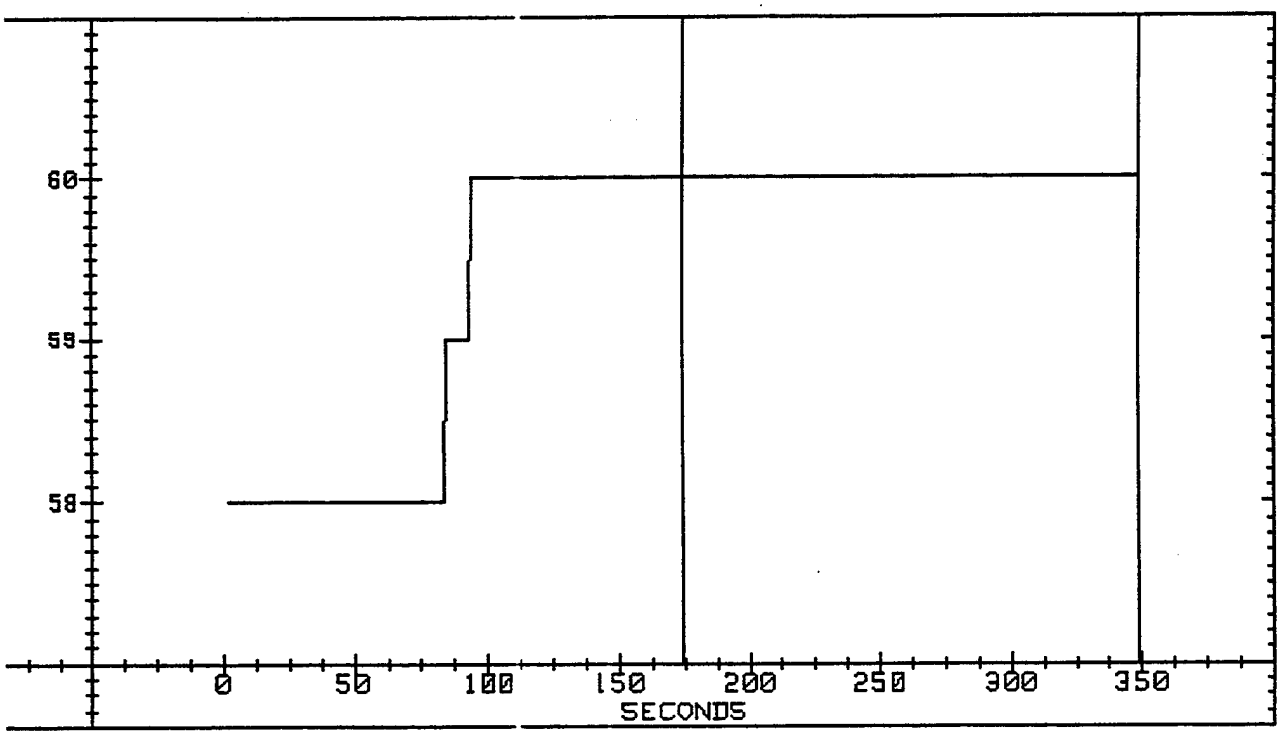
Ch2 RES Attenuation

DAY 179 TIME 22:41 PASS 2 m= 65, sd= 0



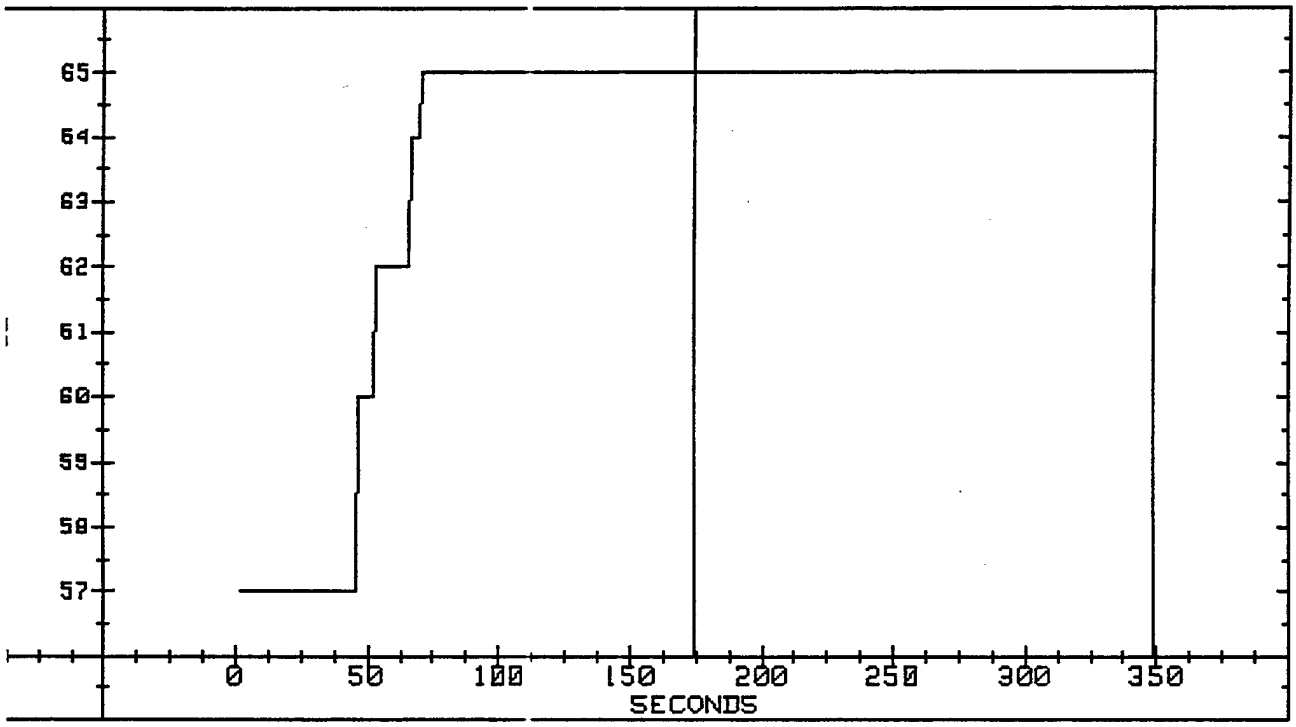
Ch3 RES Attenuation

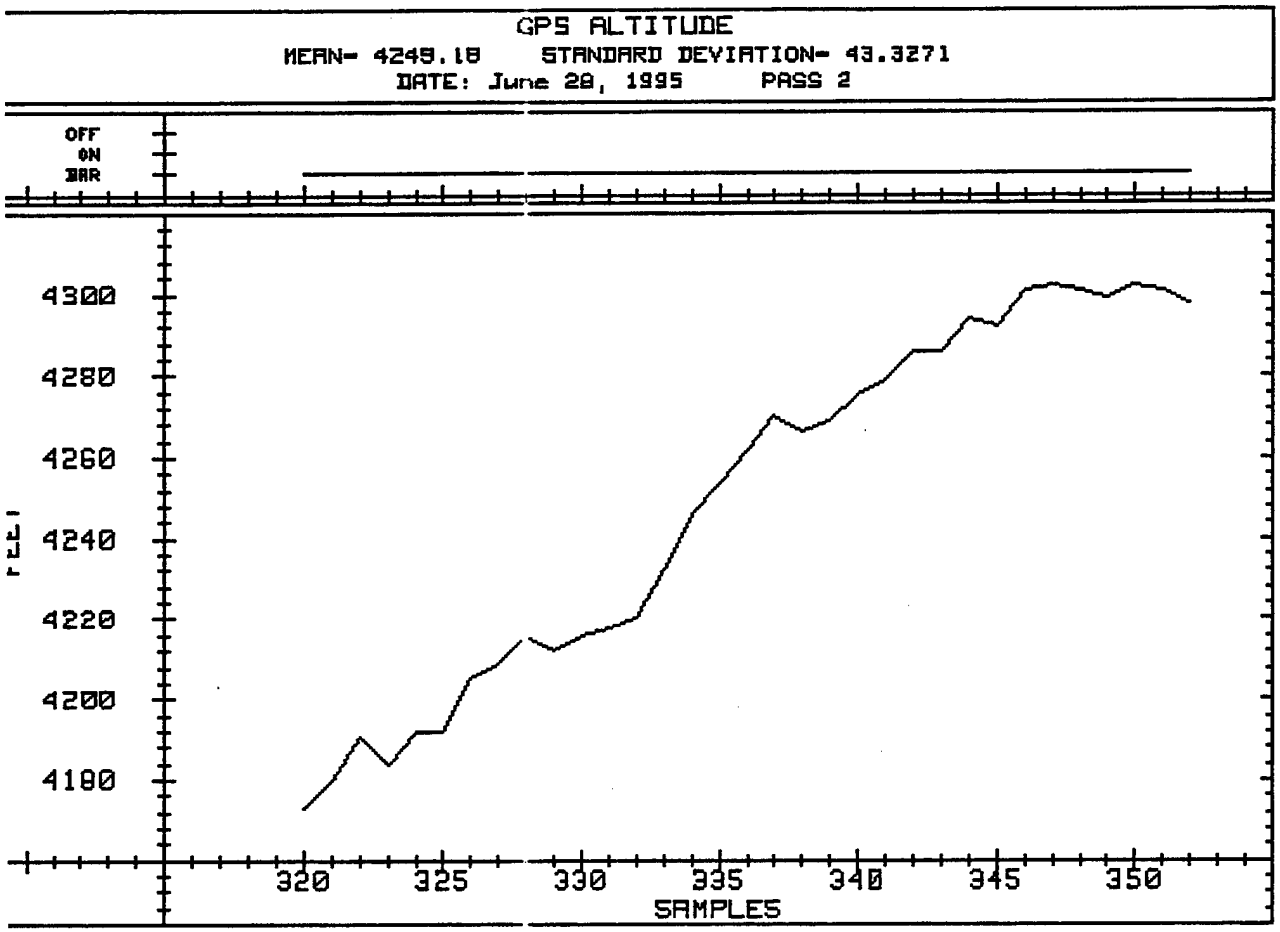
DAY 179 TIME 22:41 PASS 2 m= 60, sd= 0



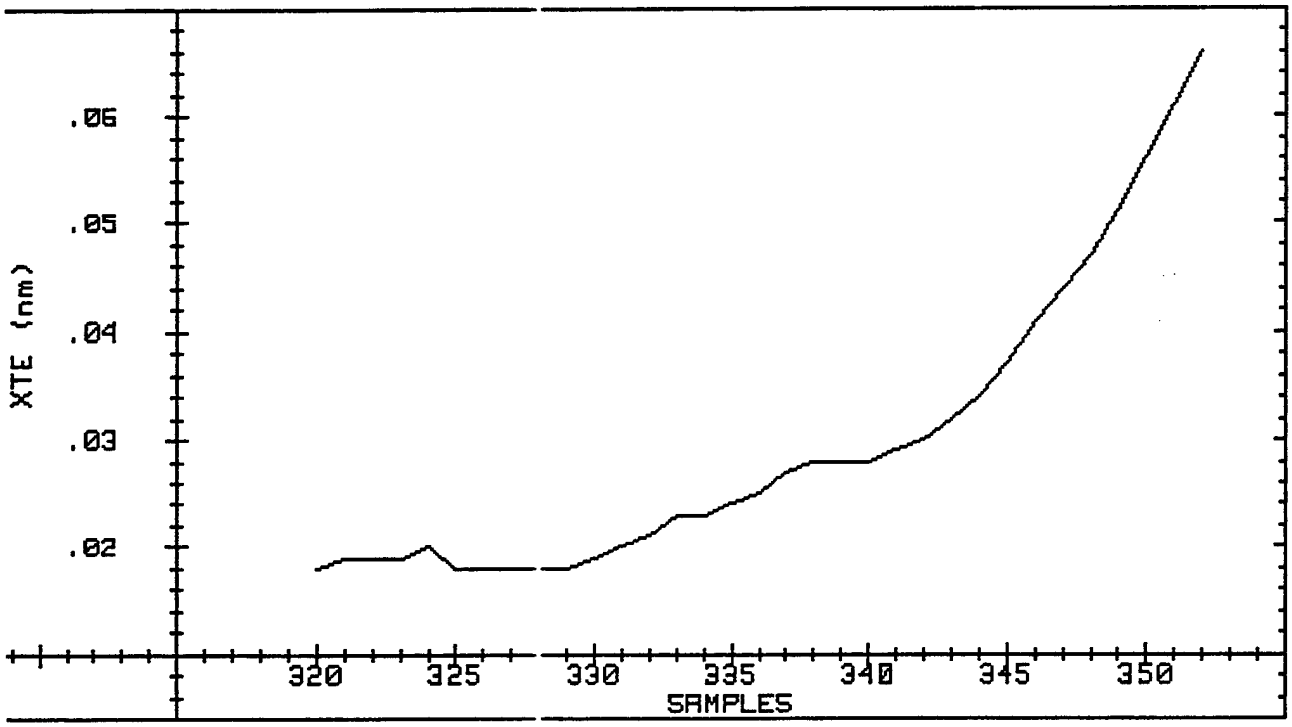
Ch4 RES Attenuation

DAY 179 TIME 22:41 PASS 2 m= 65, sd= 0

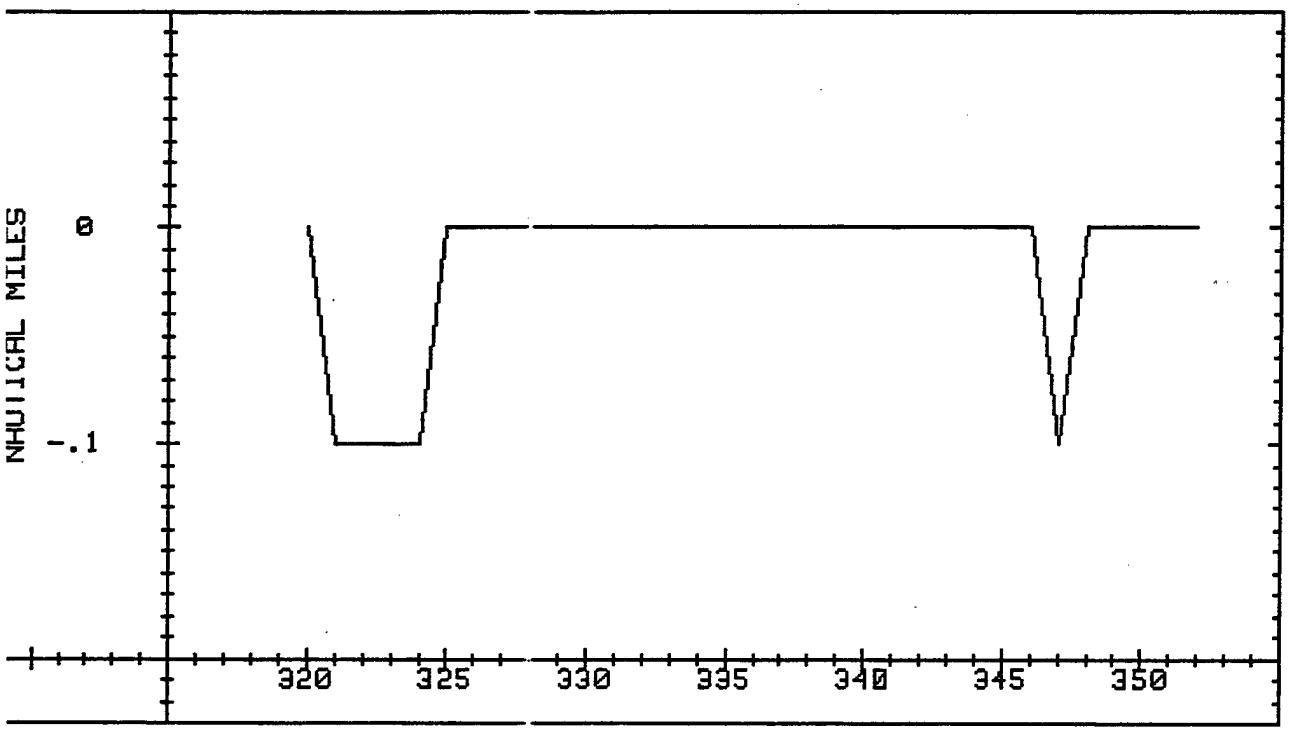



GPS ALTITUDE
MEAN= 4249.18 STANDARD DEVIATION= 43.3271
DATE: June 28, 1995 PASS 2
OFF
ON
BAR
4300
4280
4260
4240
4220
4200
4180
FEET
320
325
330
335
340
345
350
SAMPLES

GPS Cross Track Error
MEAN= .0296667 STANDARD DEVIATION= .0133204
DATE: June 28, 1995 PASS 2



INS CROSS TRACK ERROR
MEAN= -.0151515 STANDARD DEVIATION= .035855
DATE: June 28, 1995 PASS 2



29 Jun 1995
Tape: E1417

Post-line Data Sheet
Line 41
Mission: DAY 4 PORTAGE MAINE

Time: 180:00:10:32
Pass 9
Req.# 18

## AIRCRAFT & CHANNEL DATA

| | | | | CH 1 | CH 2 | CH 3 | CH 4 |
|---|---|---|---|---|---|---|---|
| Altitude | | | | | | | |
| Desired: | 5500 ft | | Wave/Pol.: | p-VV | p-VH | p-HV | p-HH |
| Baro: | 5429 ft | s.d.= 5 | Swath Ctr Ang: | 15.0° | 15.0° | 15.0° | 15.0° |
| Slt. rng: | 18275 ft | | Tgt Dep Ang: | 15.0° | 15.0° | 15.0° | 15.0° |
| Look: | Right | | St rng (ft): | 16740 | 16740 | 16740 | 16740 |
| Depr Ang: | 25.0° | | Near Rng Dep: | 18.9° | 18.9° | 18.9° | 18.9° |
| Des. trk: | 250.0° | | Far Rng Dep: | 9.5° | 9.5° | 9.5° | 9.5° |
| Start Sq: | 90.0° | | Atten (dB): | 57.0 | 61.0 | 56.0 | 61.0 |
| End Sq: | 90.0° | | RMS Video (%FS) | 11.1 | 8.2 | 8.7 | 10.2 |

## WAYPOINTS

| | Latitude | Longitude |
|---|---|---|
| Line_up: | N 46:46.84 | W 68:04.33 |
| Start: | N 46:42.77 | W 68:20.74 |
| End: | N 46:39.35 | W 68:34.40 |
| From: | N 49:51.41 | W 43:51.05 |
| To: | N 39:02.51 | W 88:42.50 |

Main Target: GW
Mocomp Point:
Lat: N 46:43.81
Long: W 68:29.03
Tgt Trk: 0.0 Tgt Vel: 0.0
Alt: 770.0 ft

## RADAR PARAMETERS - for UWB

RTP Channel: 1
Resolution: N/A
Swath width: Single
RMS Time Constant: 2^7
Position Reference: ON
Atten. Tracking: OFF
Range Gate Delta: 0.0 ft
Azimuth Presum Rate: Presum6
TX Chirp Filename: CTL1U2A

Filter damping is Hi -> 10 sec
PRF Factor is FAST (262.5 kts)
Ave Gndspd: Real -> 254.3 kts
Mocomp Off for Chnl 1, 2, 3, 4
GPS Vel/Pos Reference
Adj Gnd Scene: 5000.0 ft
Range Tracking is OFF
Clutterlock Reference: OFF
RX Chirp Filename: CRL1N0A

Ave Ref Vel -> 4.6 fps (s.d.= 12.5)
Ave Fil Vel -> 4.4 fps (s.d.= 12.5)

| NML XMIT PWR | ANT BIAS | | Tape Footage | | Drive no. |
|---|---|---|---|---|---|
| X: -70.0 | Elevation: | 0.0° | | | |
| L: -70.0 | Azimuth: | 0.0° | Starting: | 200 ft | (2) |
| C: -70.0 | Pitch: | 0.0° | Ending: | 1454 ft | (2) |
| P: 39.7 | | | | | |

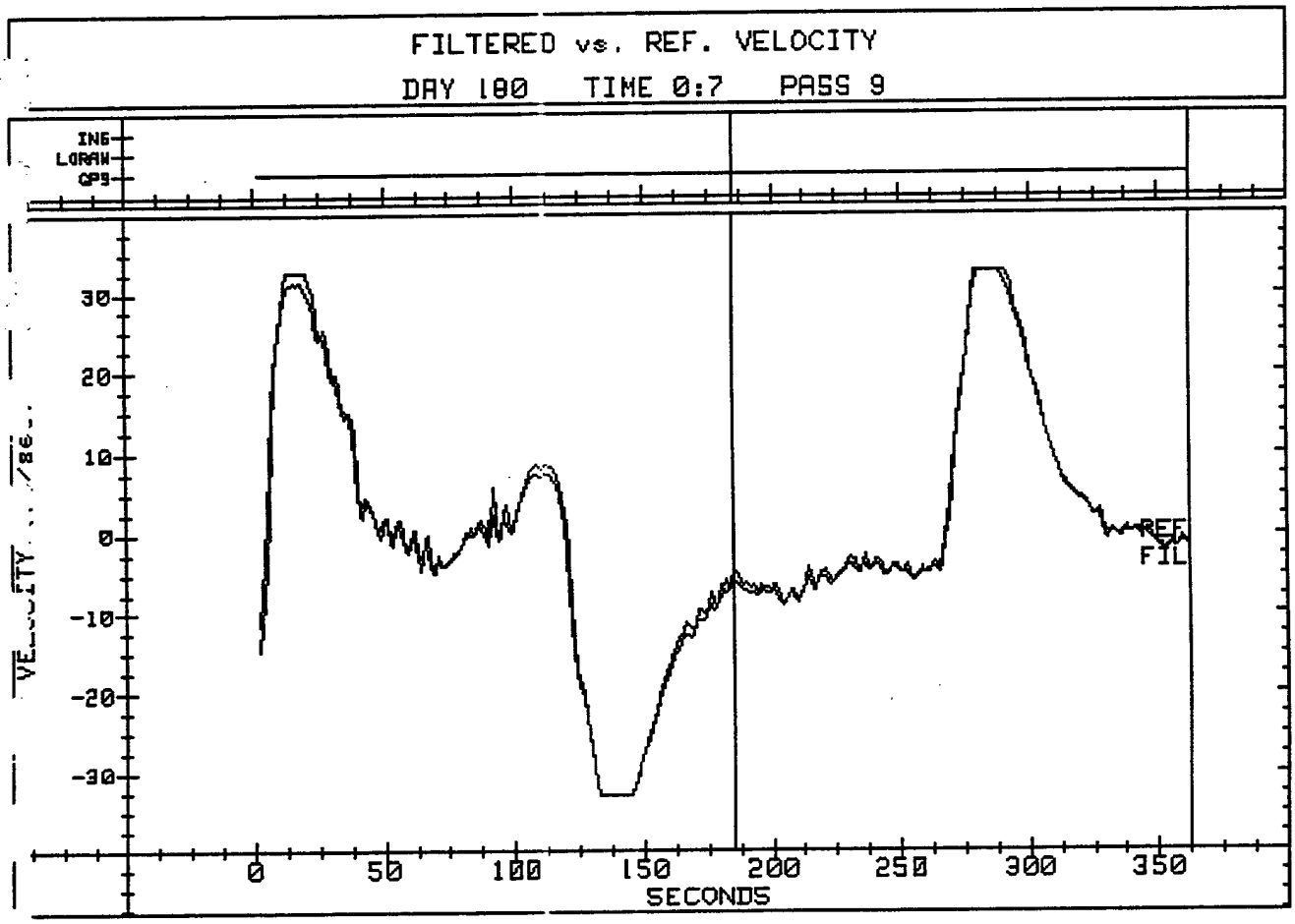
| Vel Bias | CAL Atten |
|---|---|
| X: 2112.0 | X: 63.8 dB |
| Y: 1874.0 | L: 63.8 dB |
| Z: 5343.0 | C: 63.8 dB |

LINE Map Time (UCT)
Start: 00:10:32
End: 00:13:11

Mocomp Counters

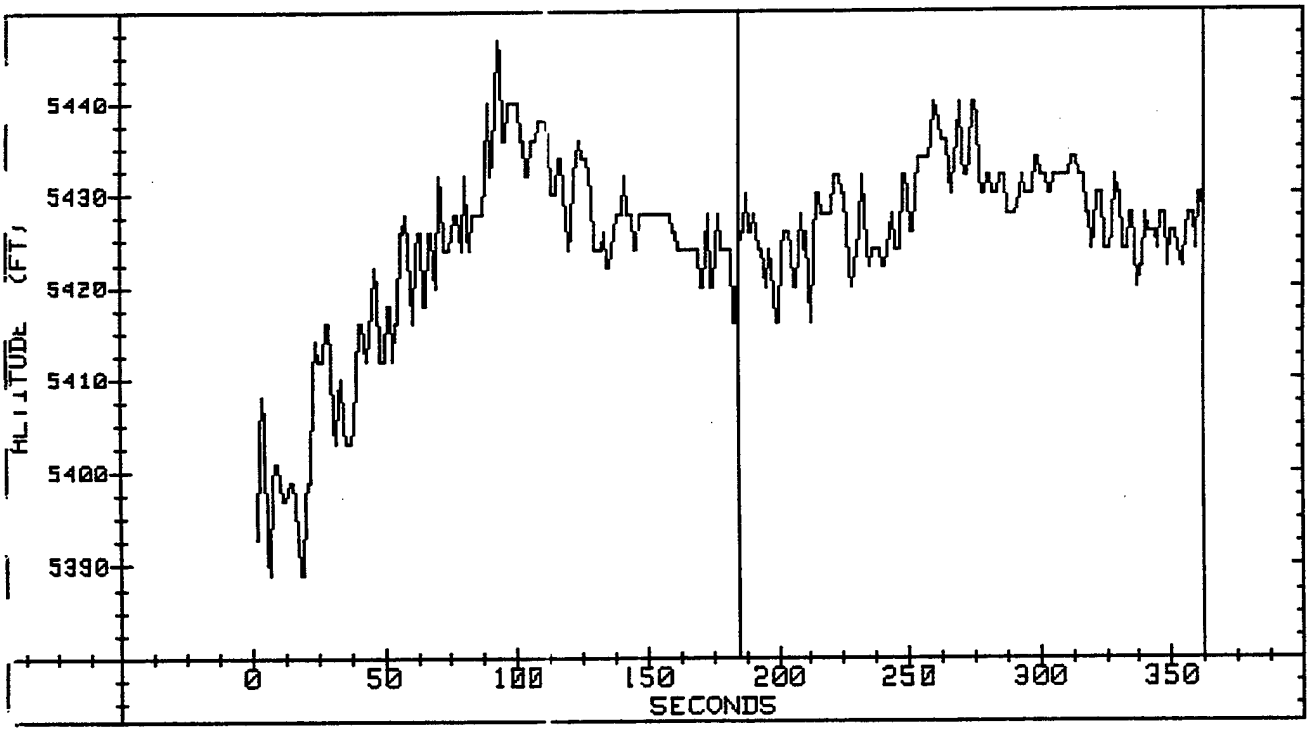
| | | |
|---|---|---|
| Start: | 435984 | 0006A710h |
| End: | 462650 | 00070F3Ah |

CPA (UCT): 00:00:00
Alt: 0 ft (GPS)
Lat: N 0:00: 0
Lon: E 0:00: 0


FILTERED vs. REF. VELOCITY
DAY 180 TIME 0:7 PASS 9
INS
LORAN
GPS
30
20
10
0
-10
-20
-30
0
50
100
150
200
250
300
350
SECONDS
REF
FIL

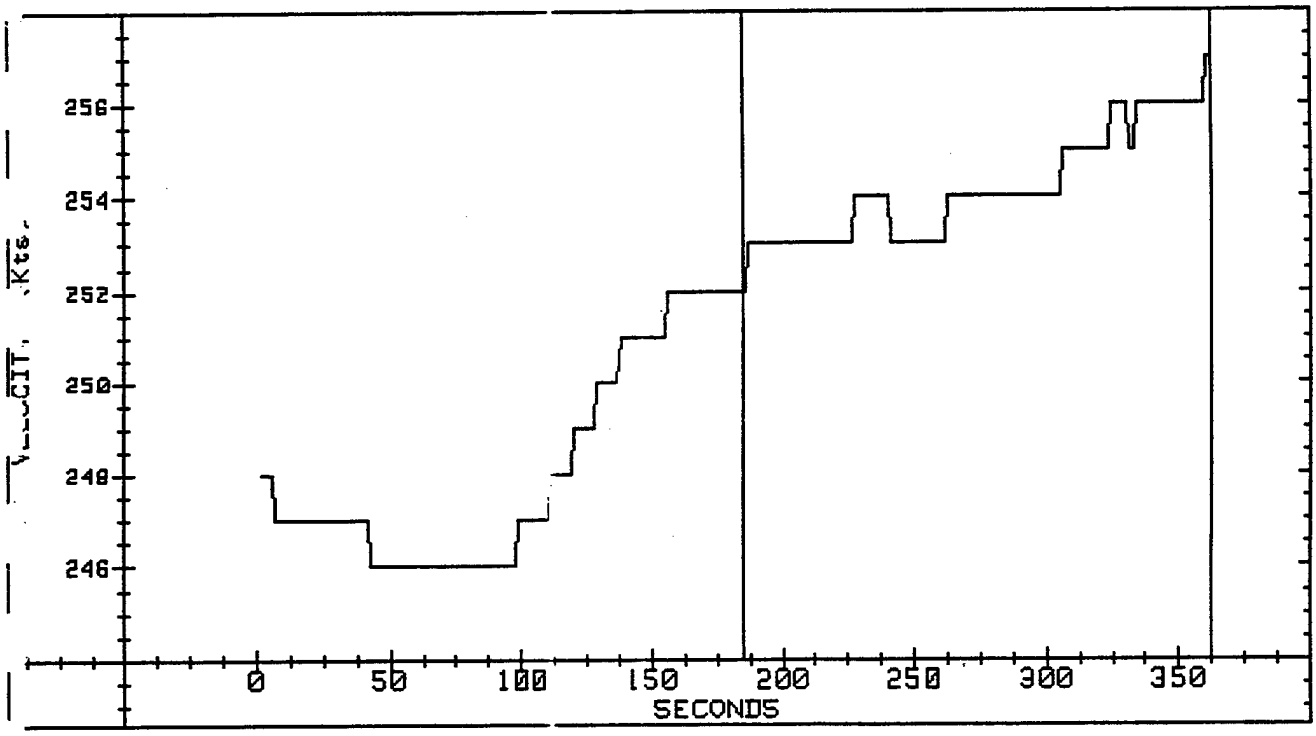
BARO ALTITUDE

DAY 180 TIME 0:7 PASS 9 m= 5429, sd= 4.52631



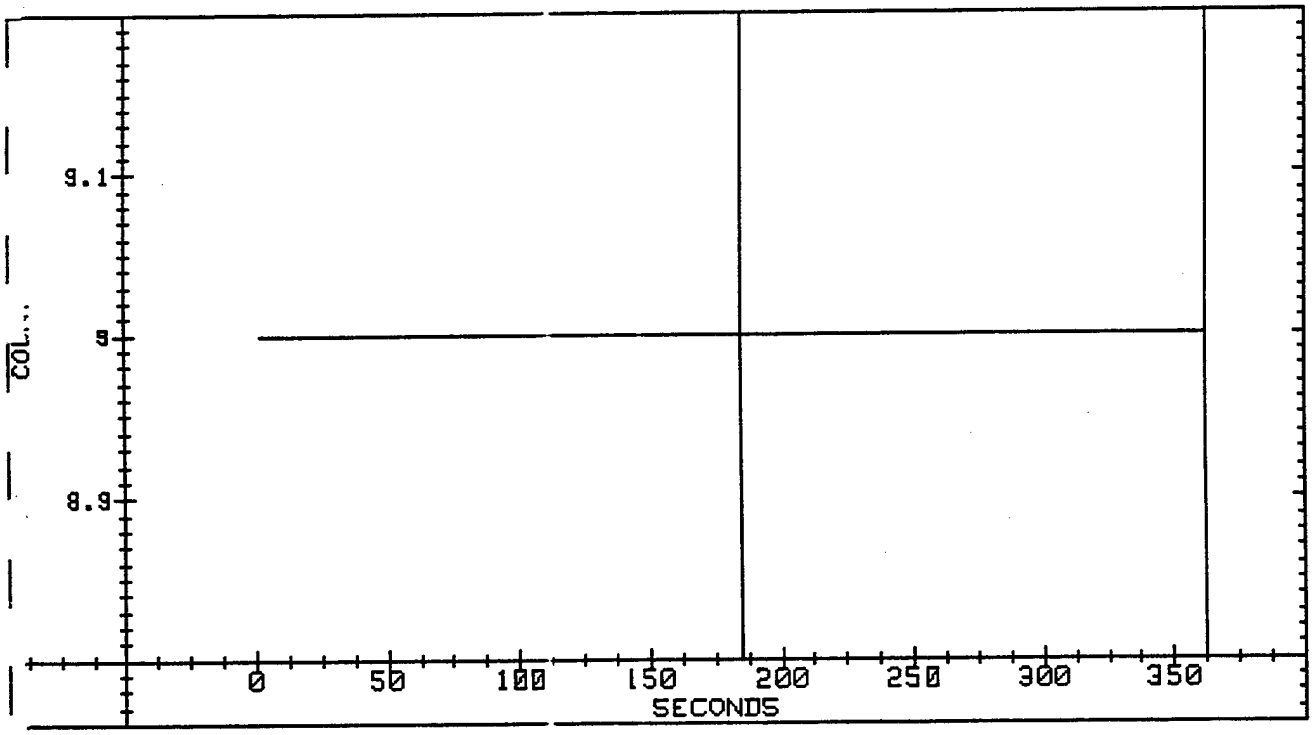
INS GROUND SPEED

DAY 180 TIME 0:7 PASS 9 m= 254.3, sd= 1.14667



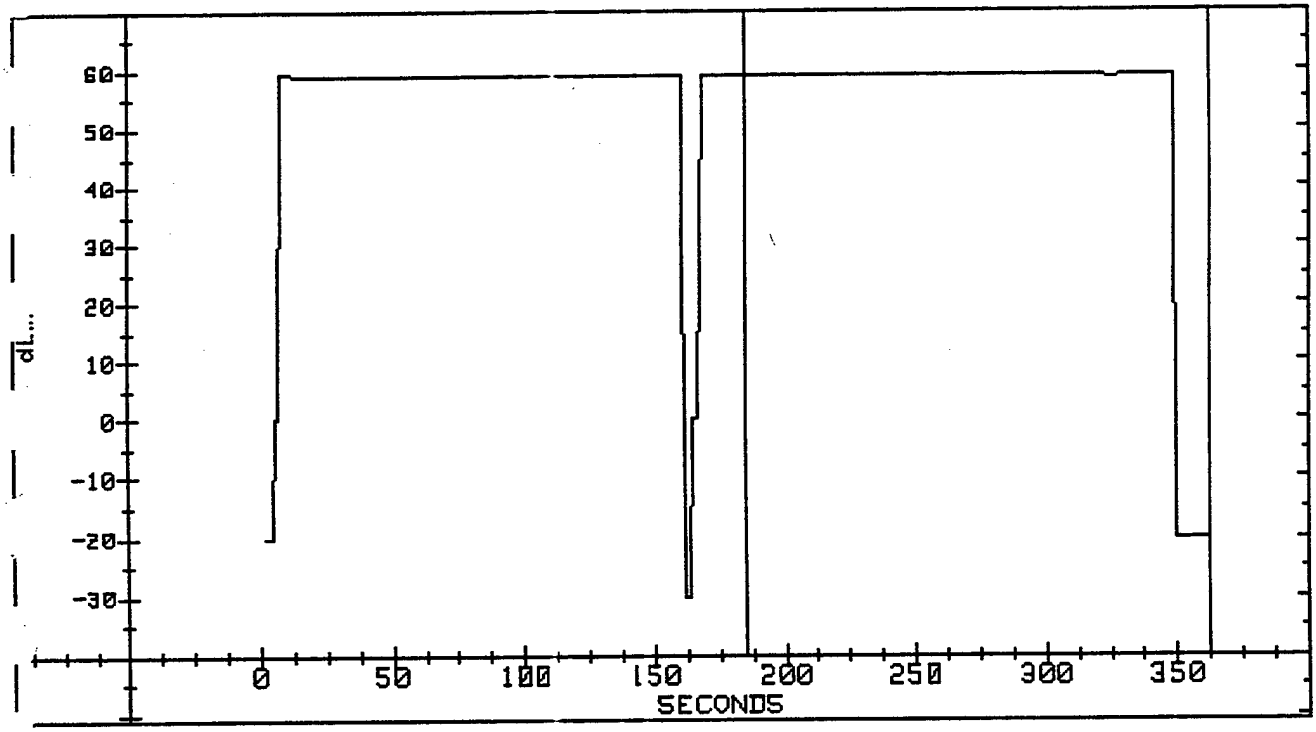
PASS NUMBER

DAY 100 TIME 0:7 PASS 9 m= 9. sd= 0



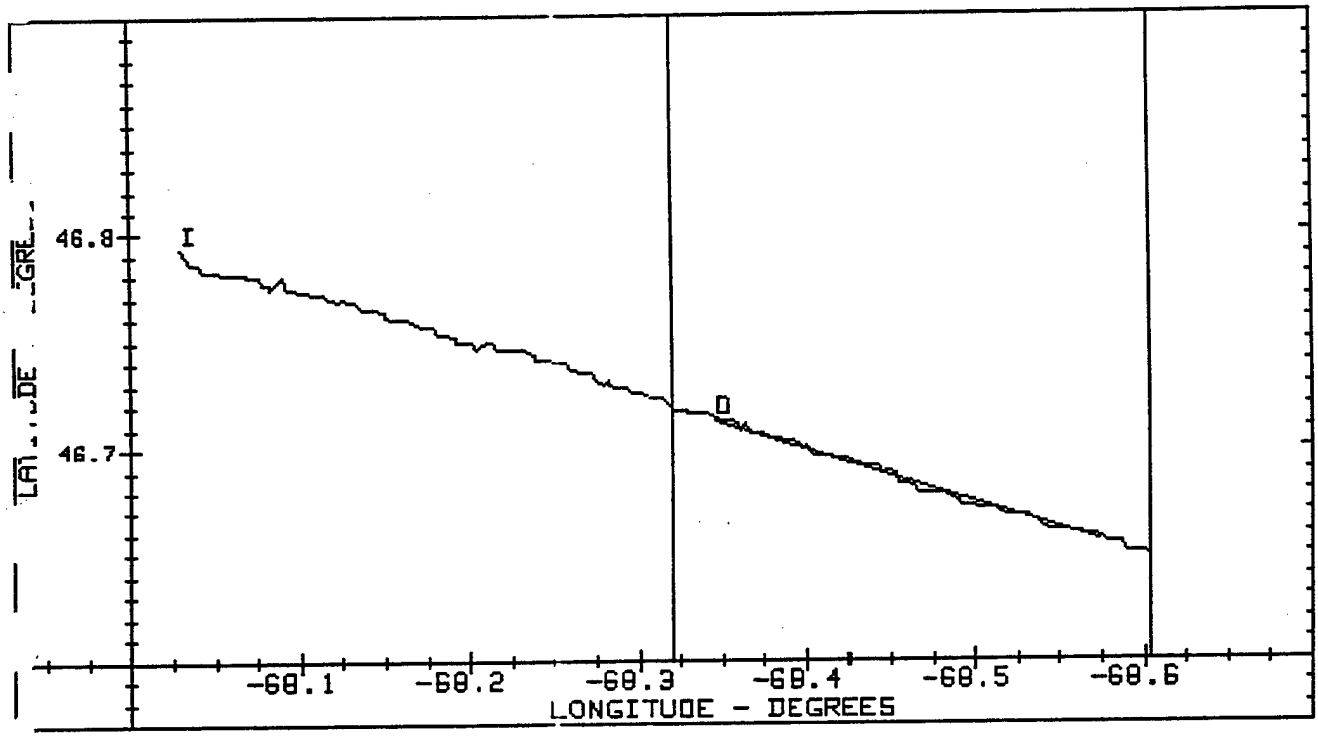
P Band Power

DAY 180 TIME 0:7 PASS 9 m= 52.49, sd= 21.556



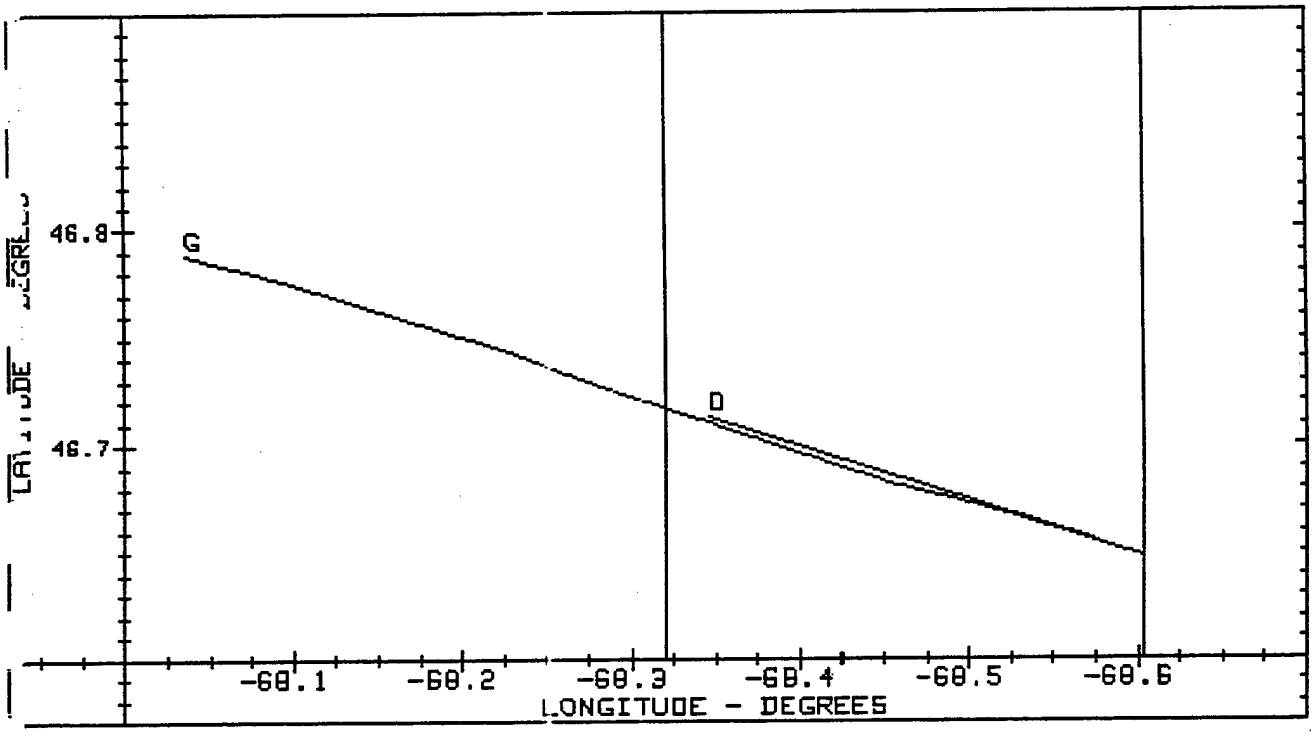
INS AIRCRAFT POSITION

DAY 180 TIME 0:7 PASS 9



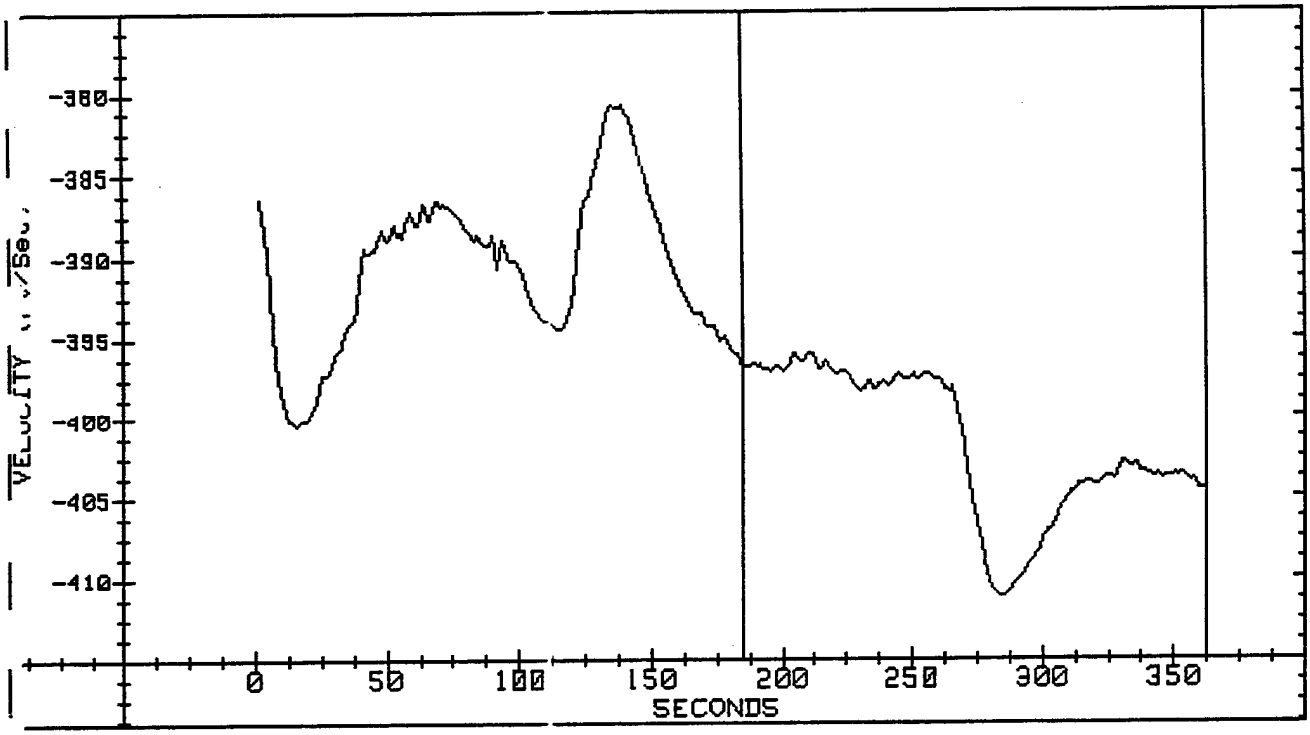
GPS AIRCRAFT POSITION

DAY 180 TIME 0:7 PASS 9



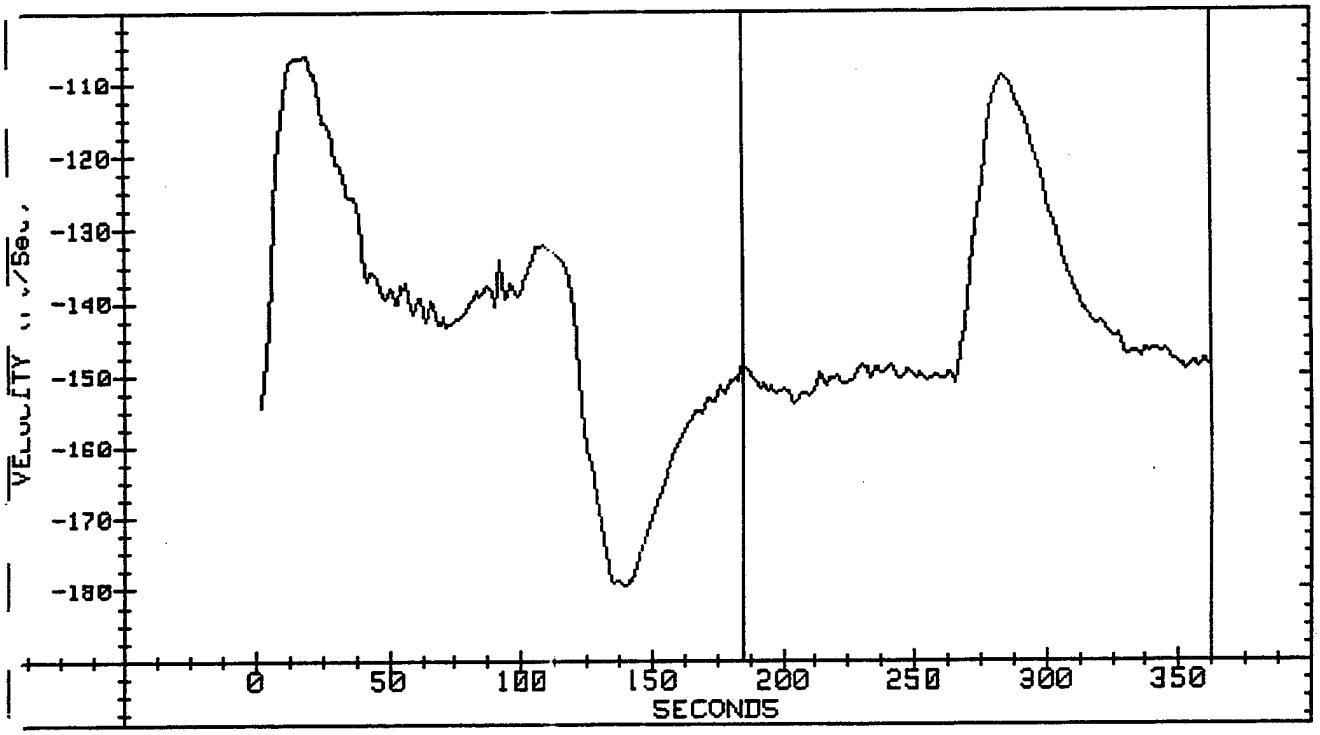
GPS Vc

DAY 180 TIME 0:7 PASS 9 m= -402.2, sd= 4.57016



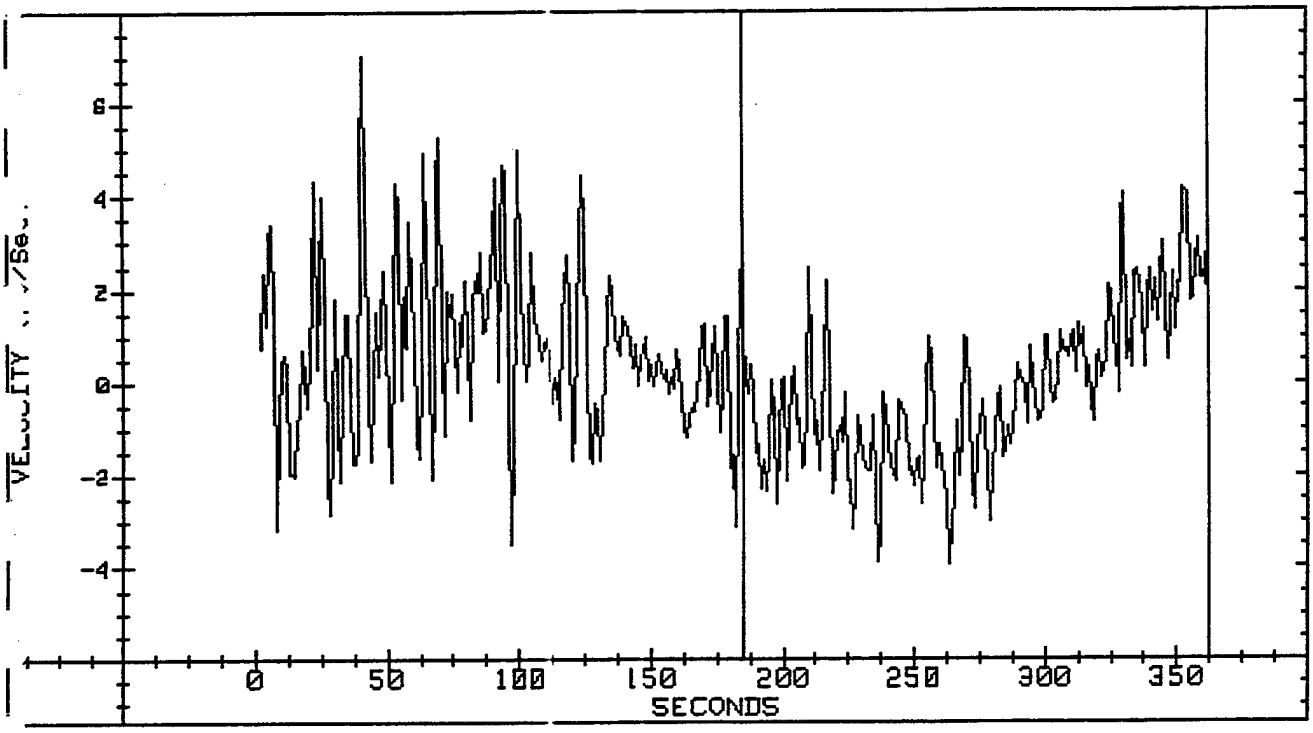
GPS Vn

DAY 180 TIME 0:7 PASS 9 m= -141.5, sd= 12.7394



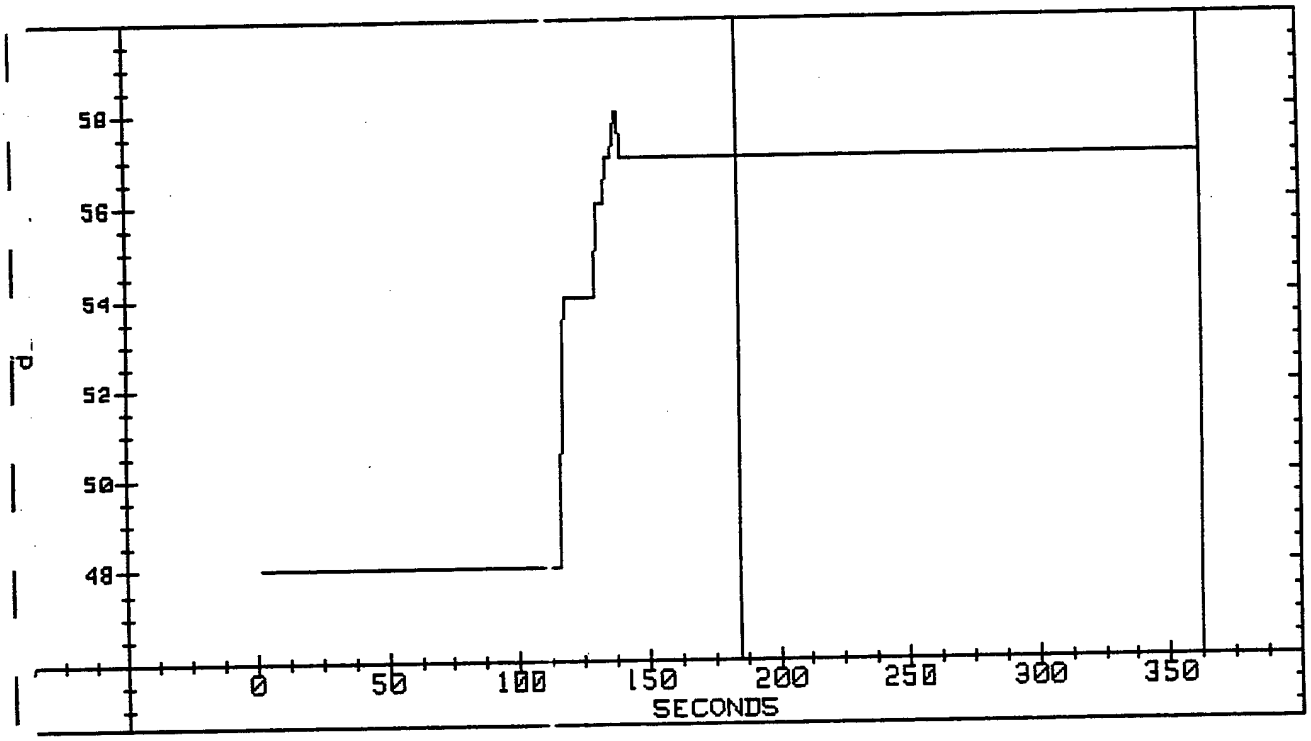
GPS Vv

DAY 180 TIME 0:7 PASS 9 m= -.1297, sd= 1.68529



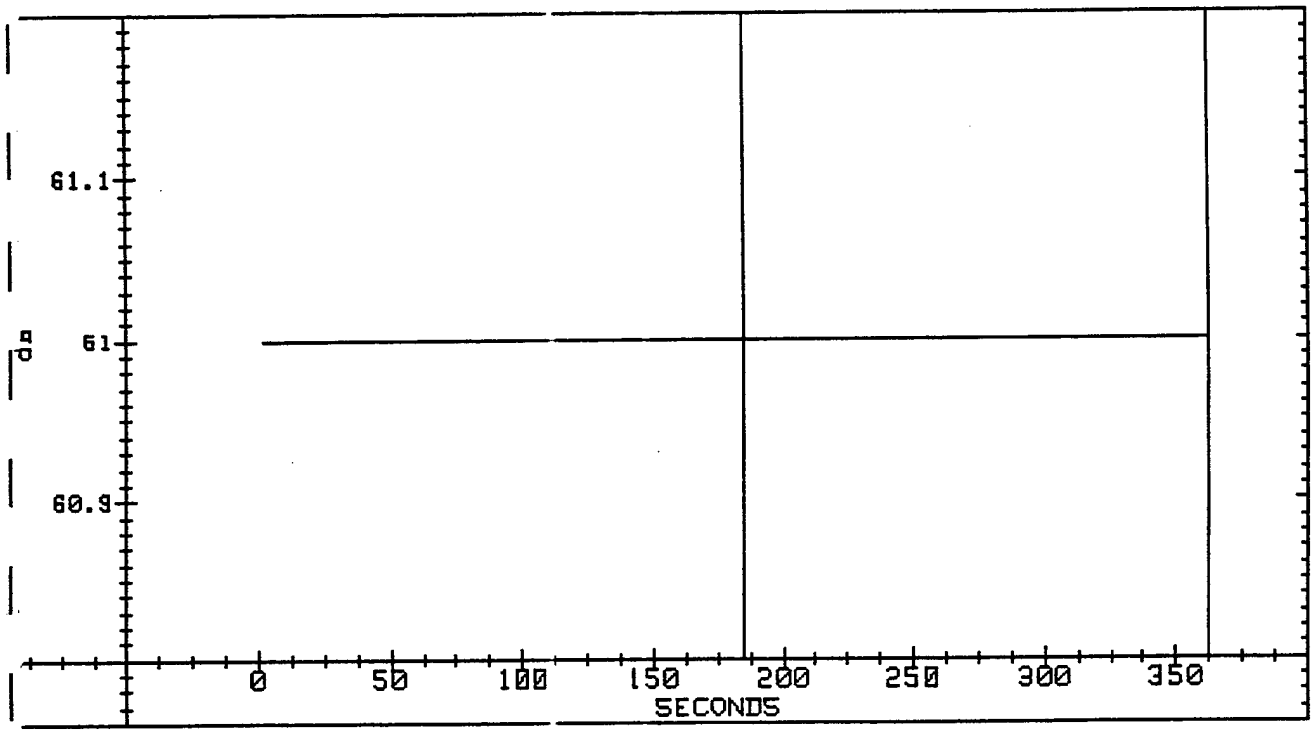
Ch1 RES Attenuation

DAY 100 TIME 0:7 PASS 9 m= 57. sd= 0



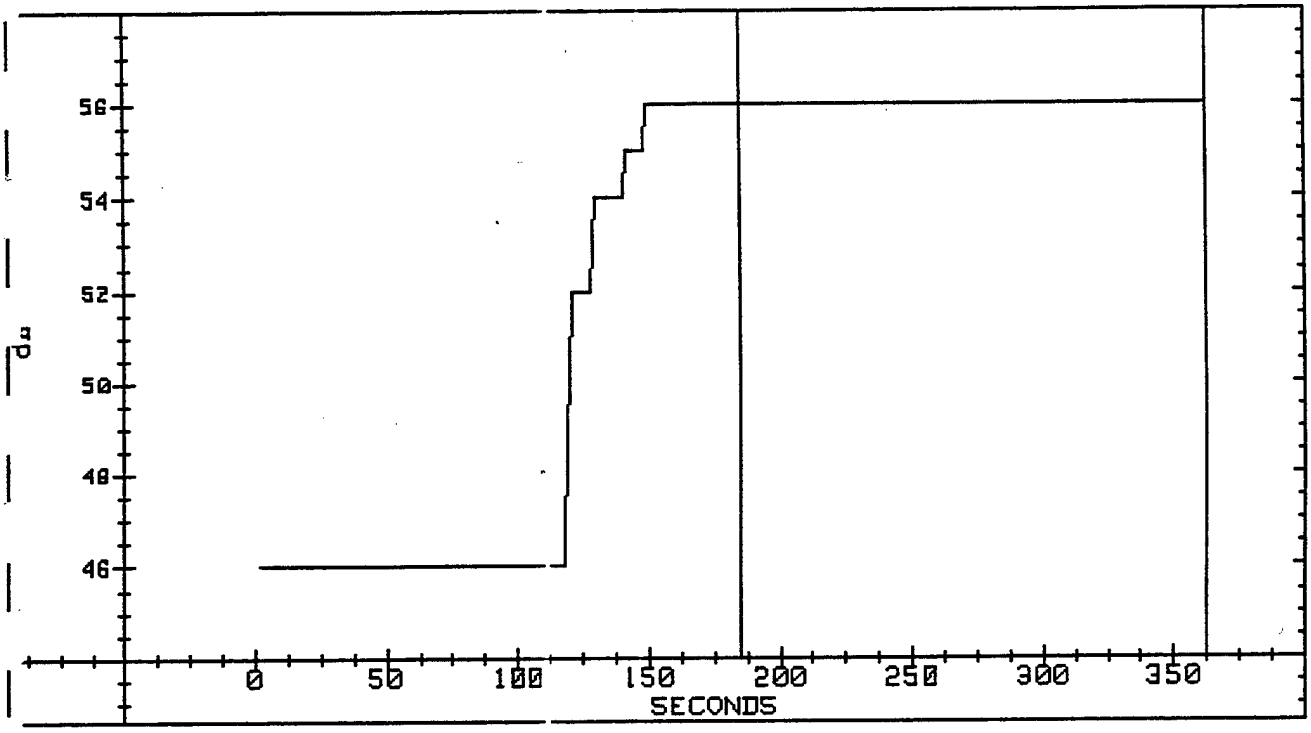
Ch2 RES Attenuation

DAY 180 TIME 0:7 PASS 9 m= 61. sd= 0



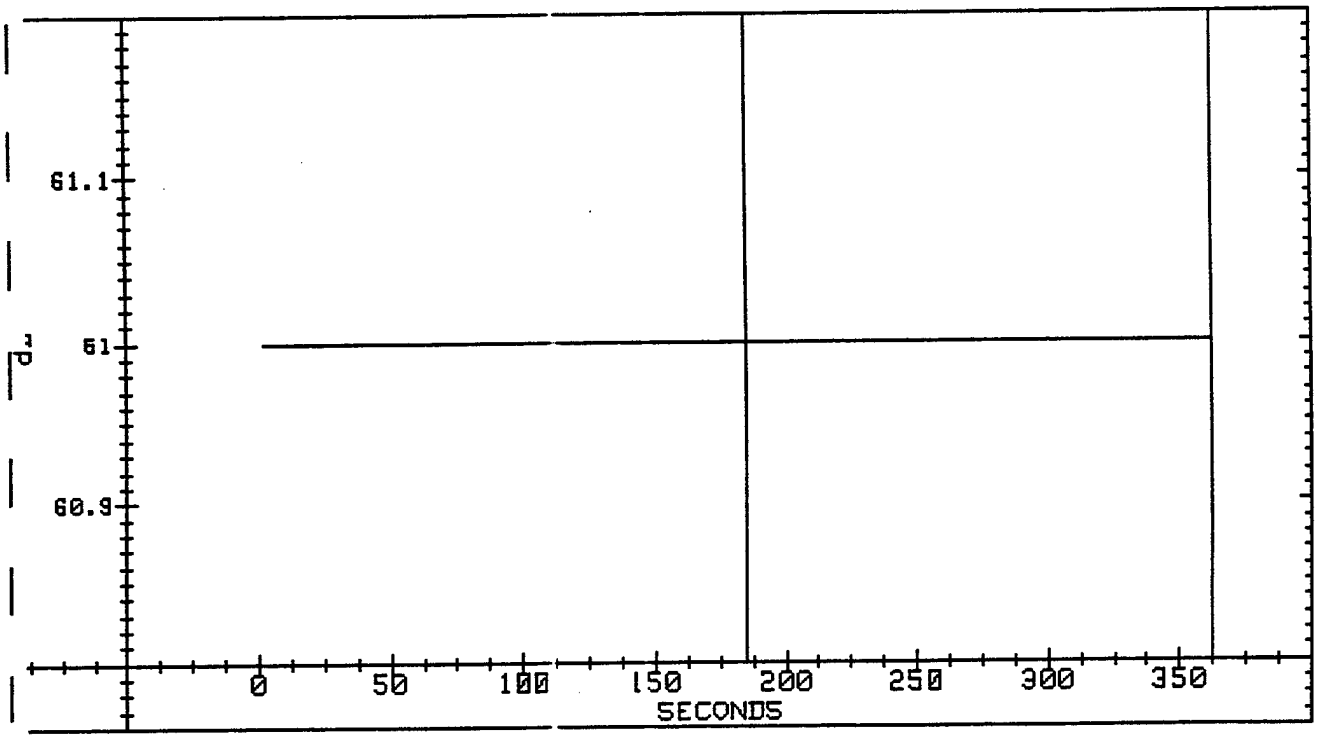
Ch3 RES Attenuation

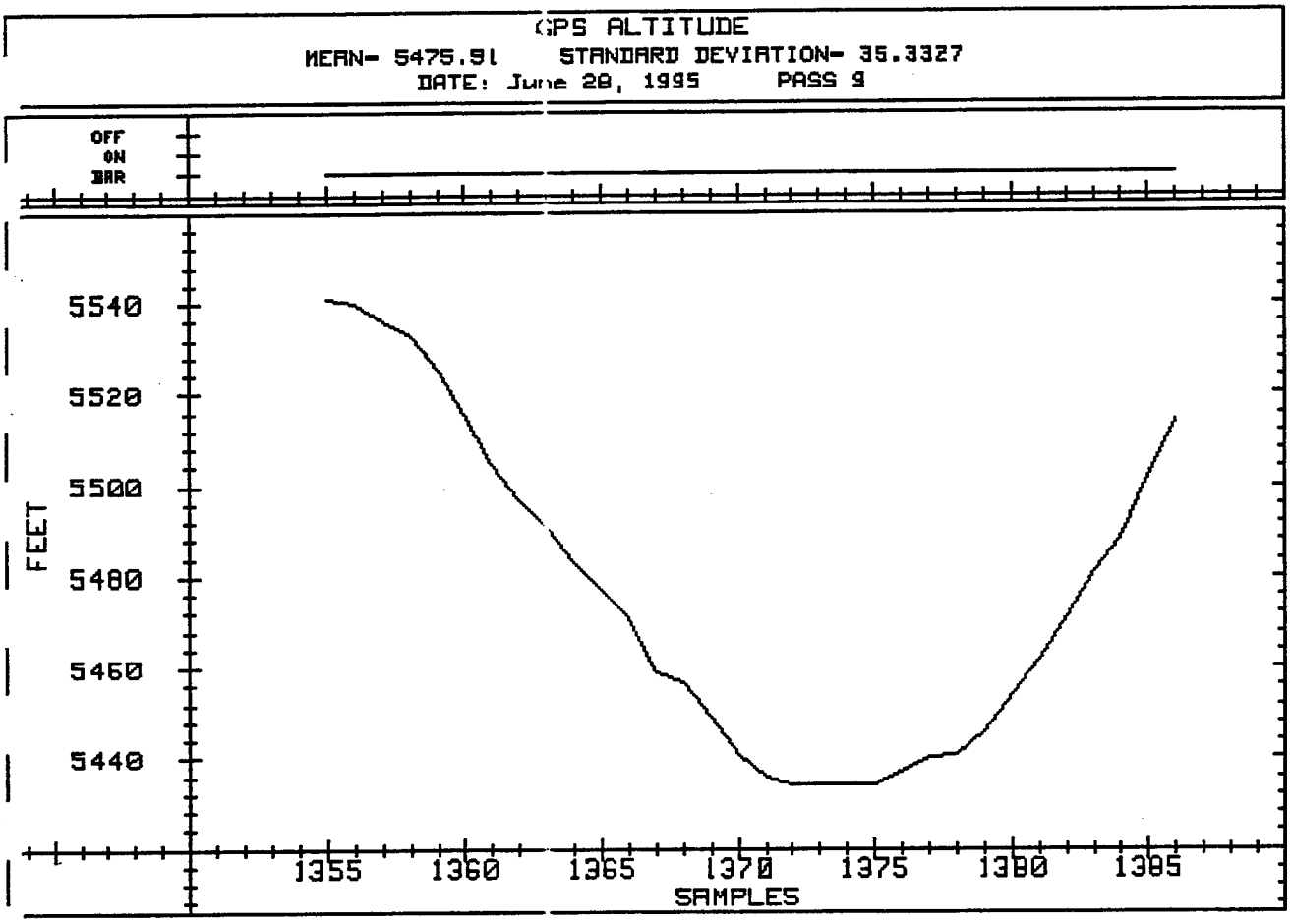
DAY 100 TIME 0:7 PASS 9 m= 56. sd= 0



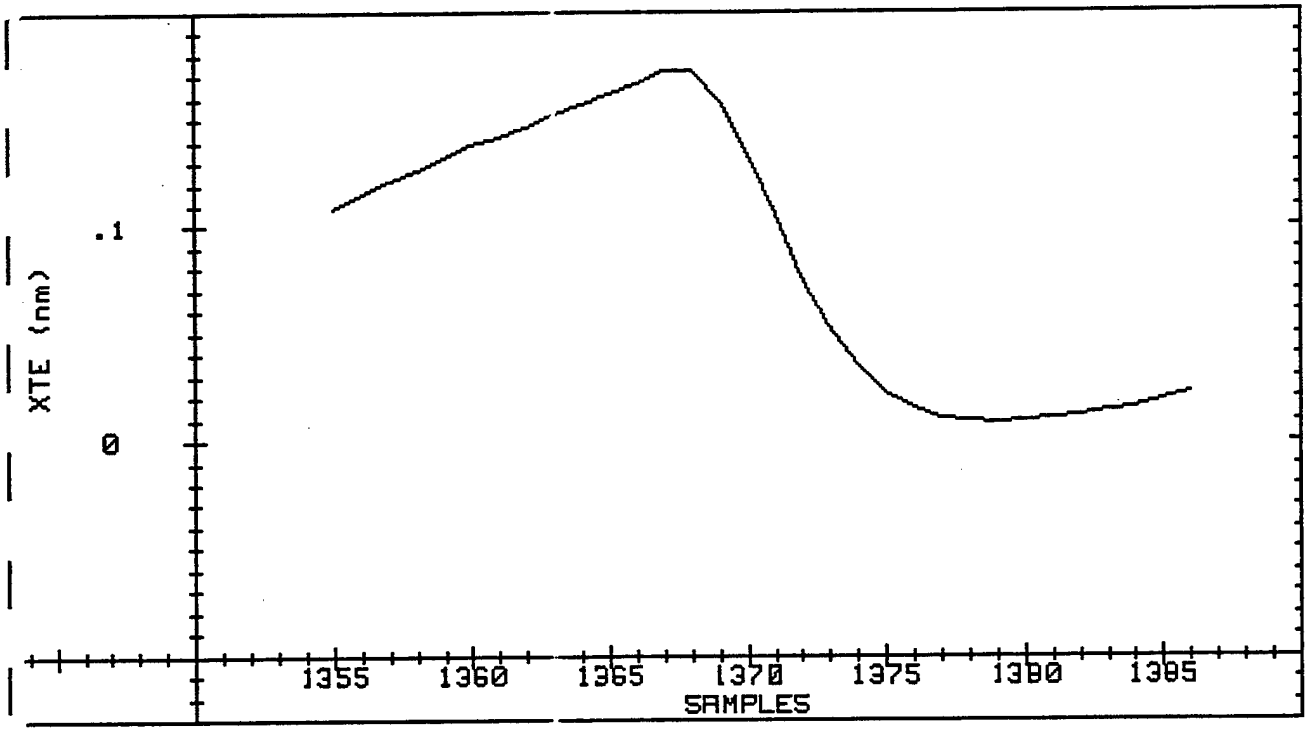
Ch4 RES Attenuation

DAY 180 TIME 0:7 PASS 9 m= 61. sd= 0




GPS ALTITUDE
MEAN= 5475.91 STANDARD DEVIATION= 35.3327
DATE: June 28, 1995 PASS 9
OFF
ON
BAR
5540
5520
5500
5480
5460
5440
FEET
1355
1360
1365
1370
1375
1380
1385
SAMPLES

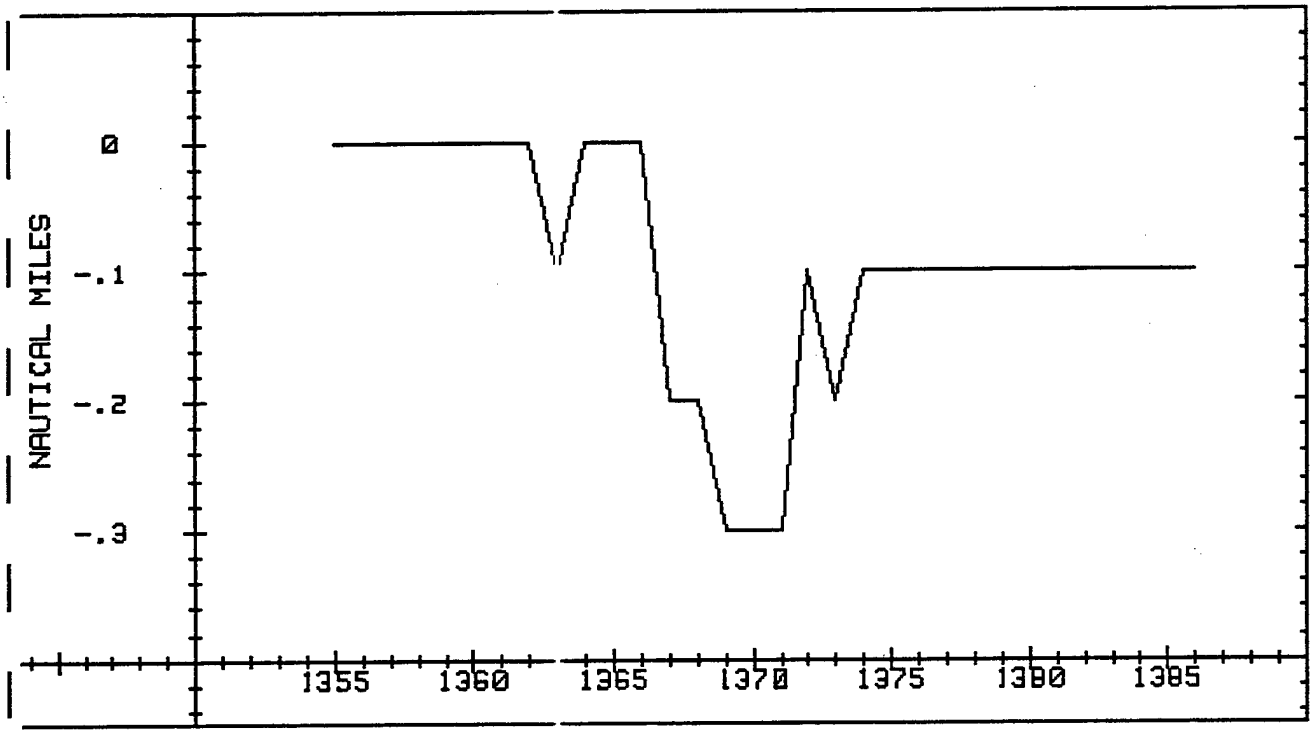
GPS Cross Track Error
MEAN= .0050437 STANDARD DEVIATION= .0630308
DATE: June 28, 1995 PASS 9



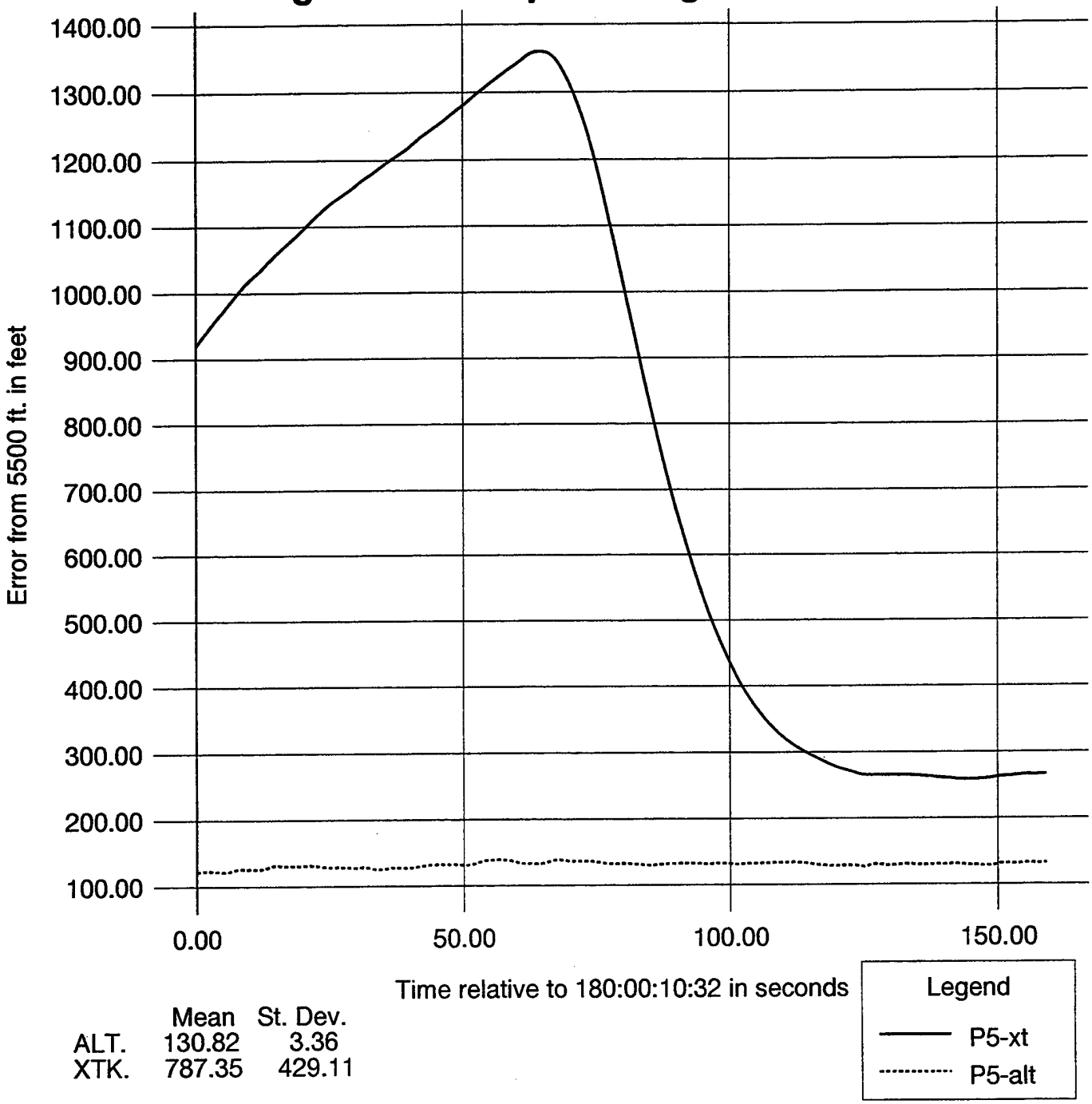
INS CROSS TRACK ERROR

MEAN= -.09375 STANDARD DEVIATION= .0899218

DATE: June 28, 1995 PASS 9



# Portage, ME - June 28, 1995 - Pass 9 - Xtk. and Alt. Errors
## Higher alt. and port are greater than zero




| | Mean | St. Dev. |
|---|---|---|
| ALT. | 130.82 | 3.36 |
| XTK. | 787.35 | 429.11 |

28 Jun 1995
Tape: E1416

Post-line Data Sheet
Line 43
Mission: DAY 4 PORTAGE MAINE

Time: 179:23:57:53
Pass 8
Req.# 19

## AIRCRAFT & CHANNEL DATA

| | | | | CH 1 | CH 2 | CH 3 | CH 4 |
|---|---|---|---|---|---|---|---|
| Altitude | | | | | | | |
| Desired: | 5500 ft | | Wave/Pol.: | p-VV | p-VH | p-HV | p-HH |
| Baro: | 5431 ft | s.d.= 5 | Swath Ctr Ang: | 15.0° | 15.0° | 15.0° | 15.0° |
| Slt. rng: | 18275 ft | | Tgt Dep Ang: | 15.0° | 15.0° | 15.0° | 15.0° |
| Look: | Right | | St rng (ft): | 16740 | 16740 | 16740 | 16740 |
| Depr Ang: | 25.0° | | Near Rng Dep: | 18.9° | 18.9° | 18.9° | 18.9° |
| Des. trk: | 70.0° | | Far Rng Dep: | 9.5° | 9.5° | 9.5° | 9.5° |
| Start Sq: | 90.0° | | Atten (dB): | 48.0 | 61.0 | 46.0 | 61.0 |
| End Sq: | 90.0° | | RMS Video (%FS) | 28.9 | 16.1 | 21.7 | 17.0 |

## WAYPOINTS

| | Latitude | Longitude |
|---|---|---|
| Line_up: | N 46:40.68 | W 68:53.66 |
| Start: | N 46:44.82 | W 68:37.30 |
| End: | N 46:48.24 | W 68:23.64 |
| From: | N 39:07.21 | W 88:46.54 |
| To: | N 49:56.91 | W 43:51.28 |

Main Target: GW
Mocomp Point:
Lat: N 46:43.81
Long: W 68:29.03
Tgt Trk: 0.0 Tgt Vel: 0.0
Alt: 770.0 ft

## RADAR PARAMETERS - for UWB

RTP Channel: 1
Resolution: N/A
Swath width: Single
RMS Time Constant: 2^7
Position Reference: ON
Atten. Tracking: OFF
Range Gate Delta: 0.0 ft
Azimuth Presum Rate: Presum6
TX Chirp Filename: CTL1U2A

Filter damping is Hi -> 10 sec
PRF Factor is FAST (262.5 kts)
Ave Gndspd: Real -> 247.3 kts
Mocomp Off for Chnl 1, 2, 3, 4
GPS Vel/Pos Reference
Adj Gnd Scene: 5000.0 ft
Range Tracking is OFF
Clutterlock Reference: OFF
RX Chirp Filename: CRL1N0A

Ave Ref Vel -> 2.6 fps (s.d.= 8.0)
Ave Fil Vel -> 2.4 fps (s.d.= 7.6)

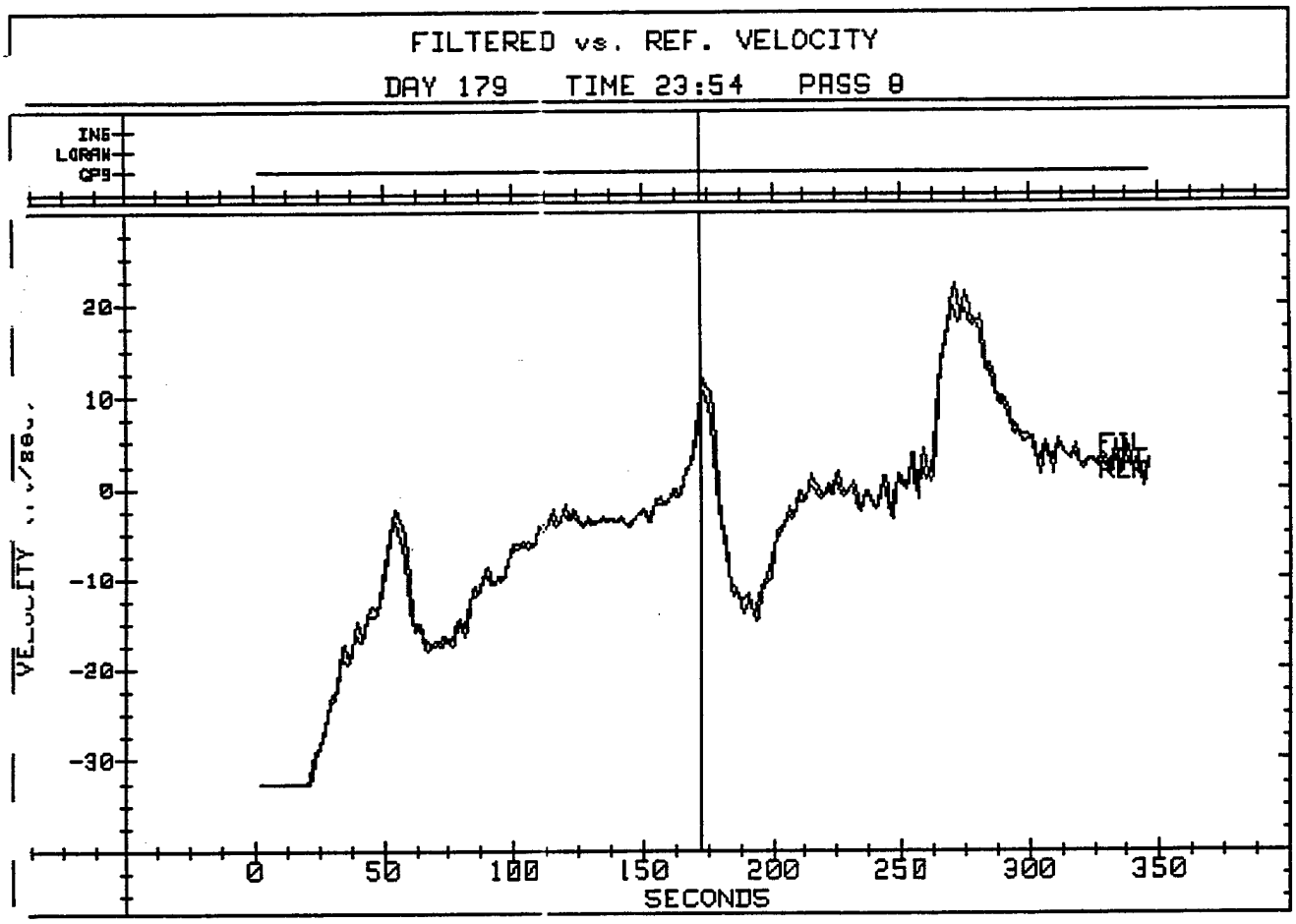
| NML XMIT PWR | ANT BIAS | | Tape Footage | | Drive no. |
|---|---|---|---|---|---|
| X: -70.0 | Elevation: | 0.0° | | | |
| L: -70.0 | Azimuth: | 0.0° | Starting: | 7994 ft | (1) |
| C: -70.0 | Pitch: | 0.0° | Ending: | 9224 ft | (1) |
| P: 40.3 | | | | | |

| Vel Bias | CAL Atten | LINE Map Time (UCT) |
|---|---|---|
| X: 2112.0 | X: 63.8 dB | Start: 23:57:53 |
| Y: 1874.0 | L: 63.8 dB | End: 00:00:36 |
| Z: 5343.0 | C: 63.8 dB | |

Mocomp Counters

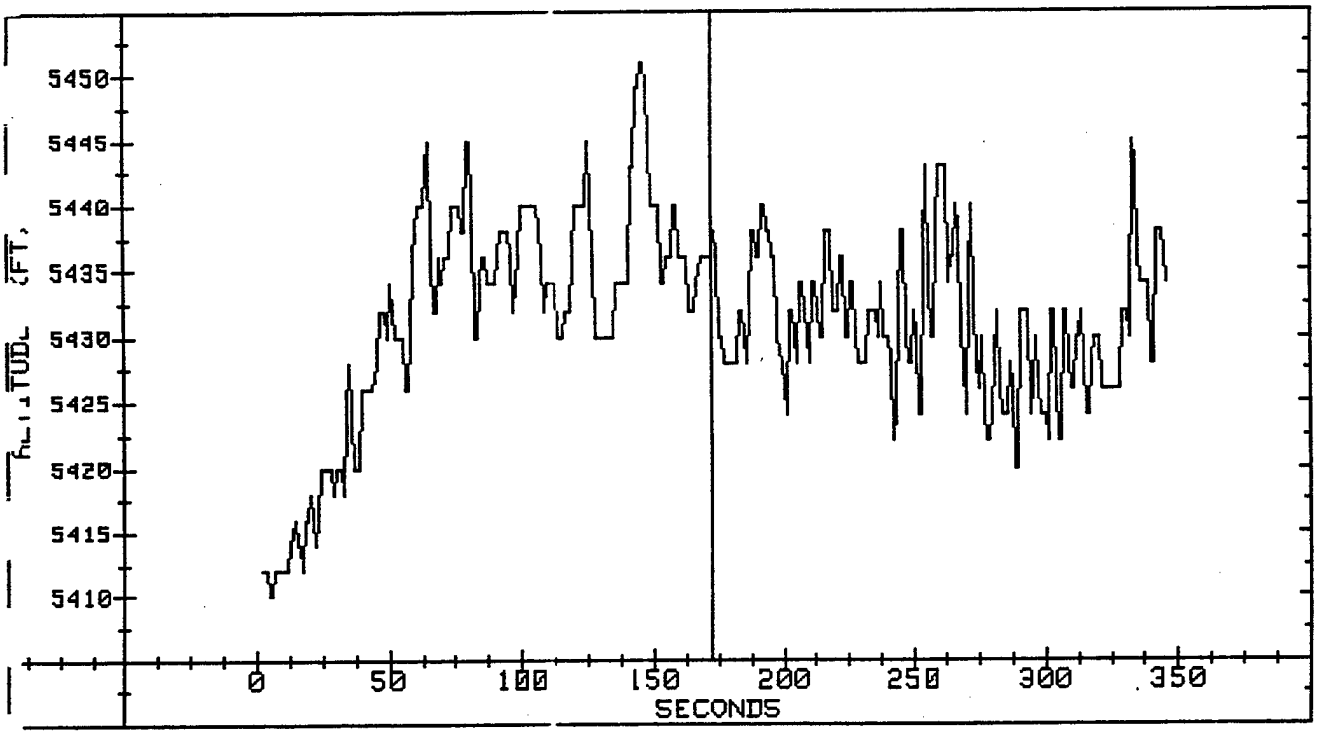
| | | |
|---|---|---|
| Start: | 374647 | 0005B777h |
| End: | 401972 | 00062234h |

CPA (UCT): 00:00:00
Alt: 0 ft (GPS)
Lat: N 0:00: 0
Lon: E 0:00: 0


FILTERED vs. REF. VELOCITY
DAY 179 TIME 23:54 PASS 8
INS
LORAN
GPS
20
10
0
-10
-20
-30
0
50
100
150
200
250
300
350
SECONDS

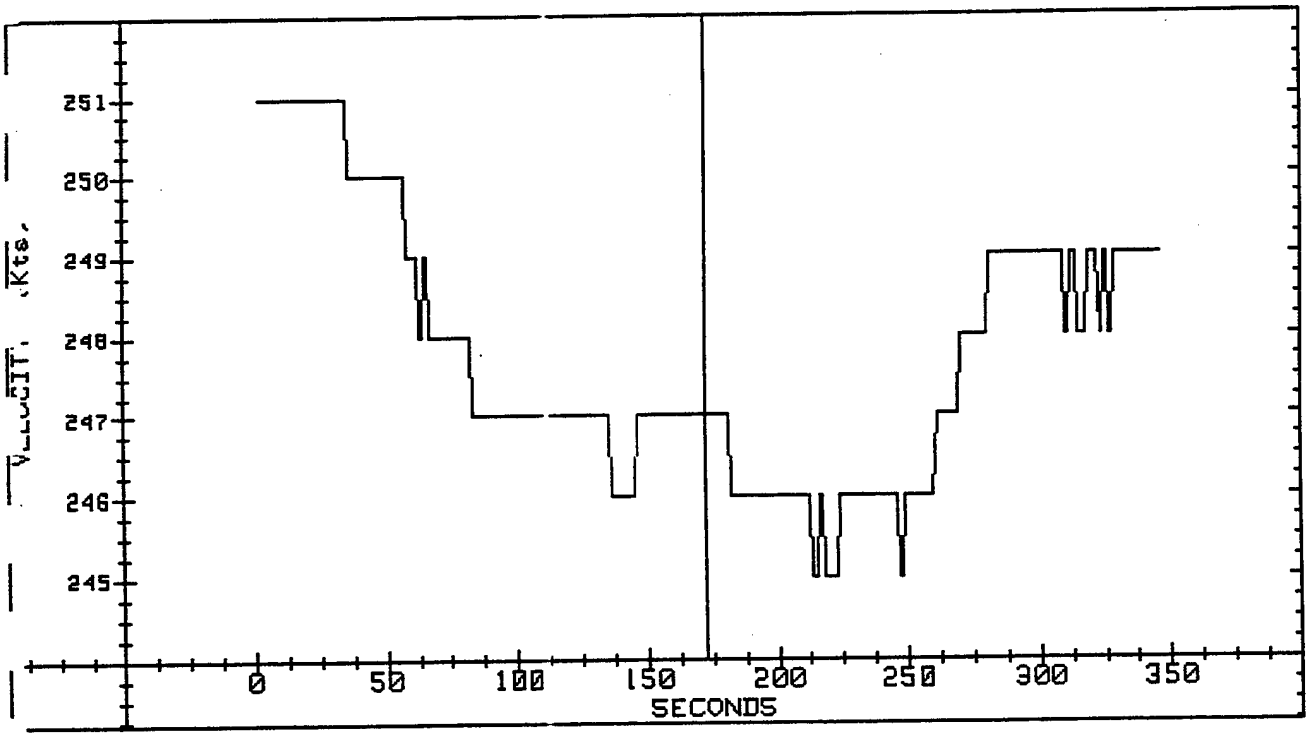
BARO ALTITUDE

DAY 179 TIME 23:54 PASS 8 m= 5431. sd= 5.22237



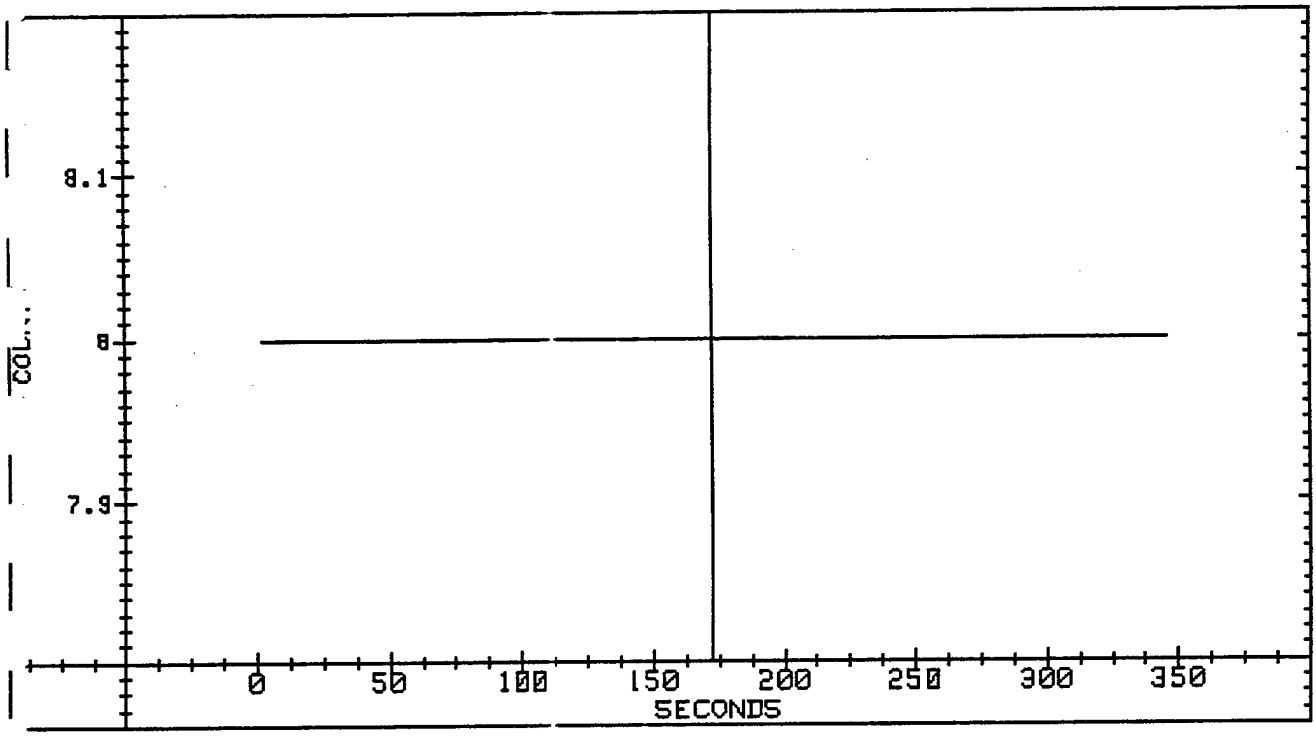
INS GROUND SPEED

DAY 179 TIME 23:54 PASS 8 m= 247.3, sd= 1.45387



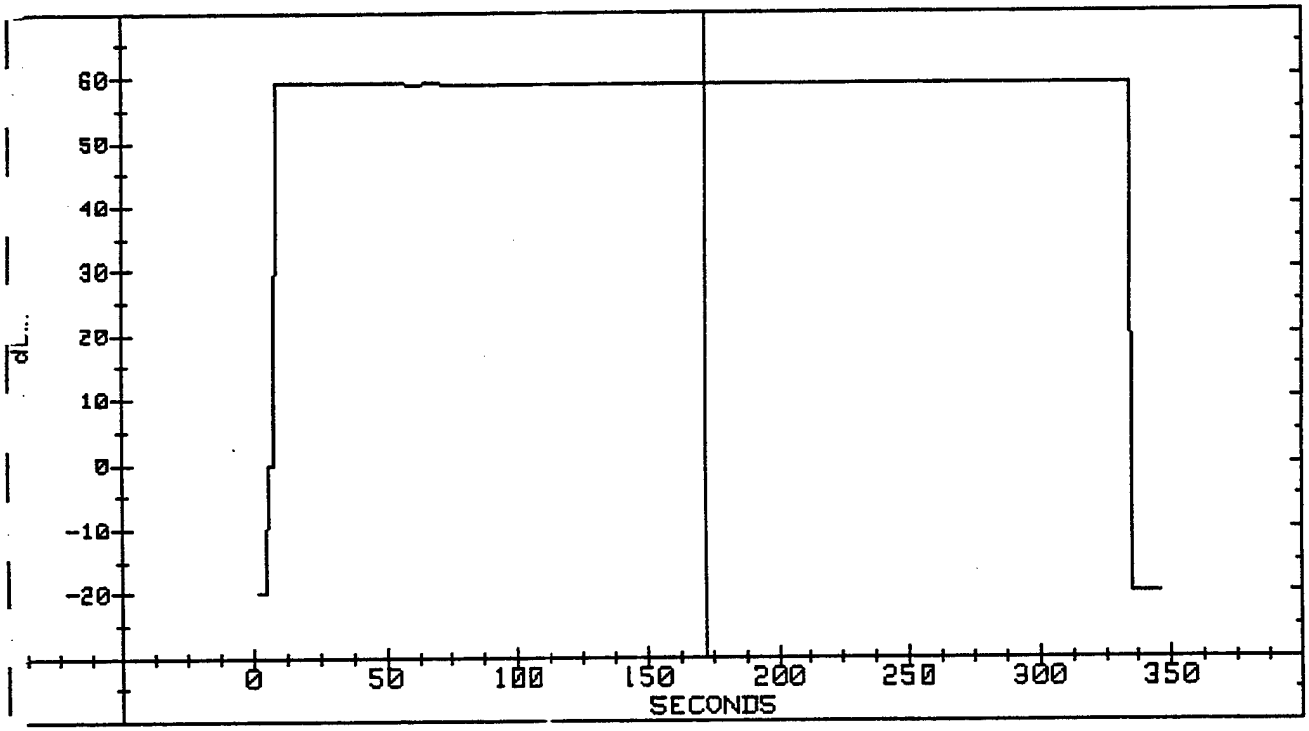
PASS NUMBER

DAY 179 TIME 23:54 PASS 8 m= 8, sd= 0



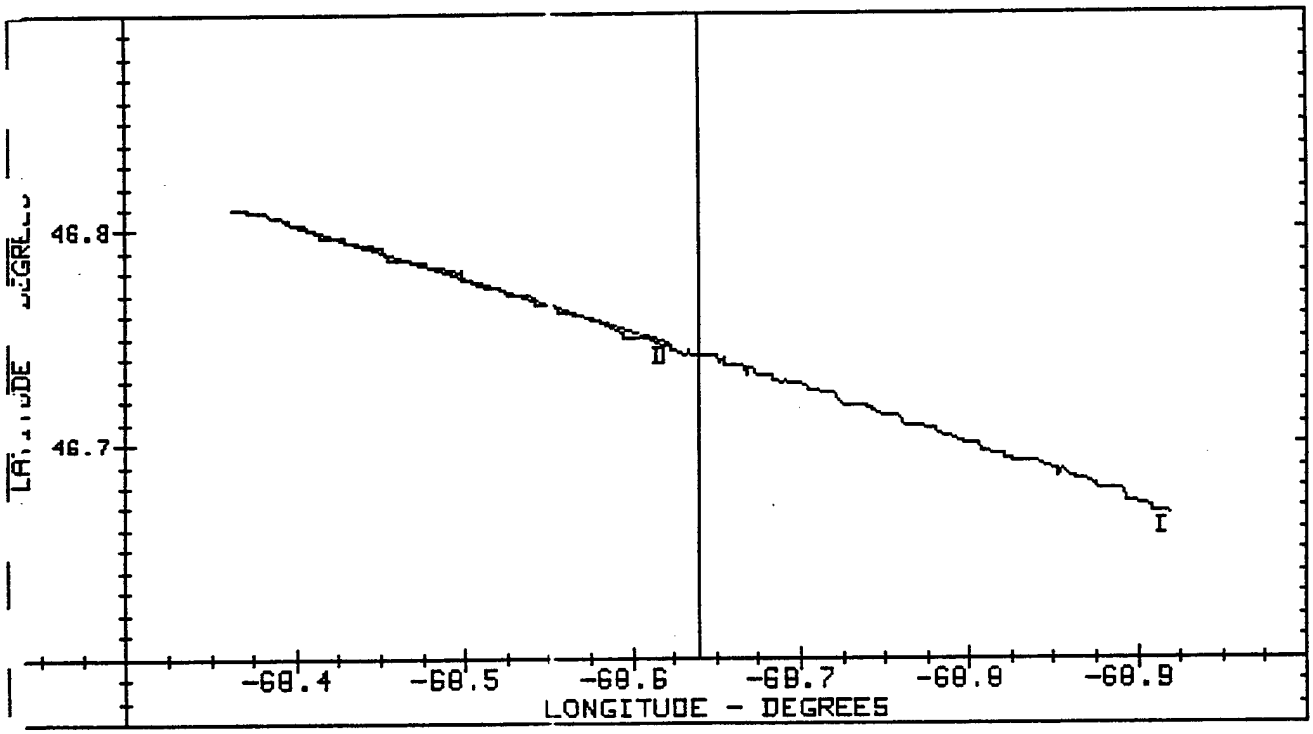
P Band Power

DAY 179 TIME 23:54 PASS 8 m= 53.08, sd= 20.5341



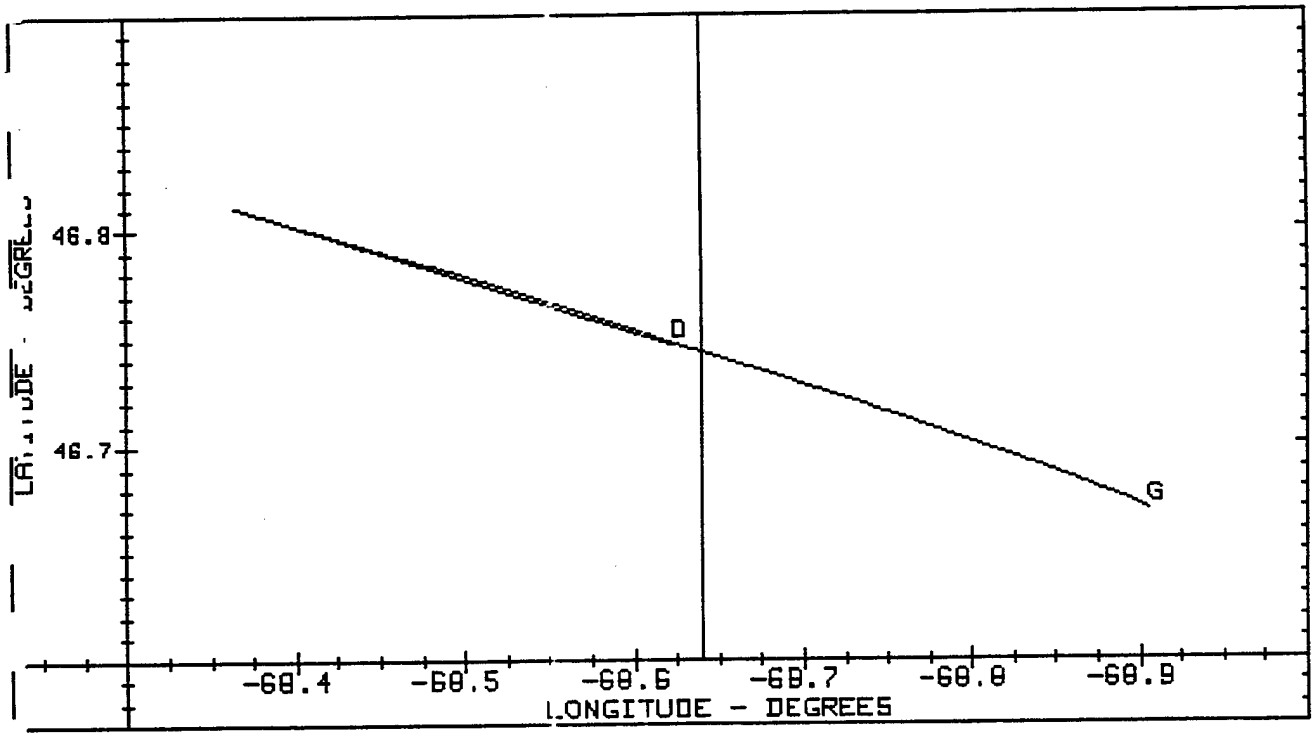
INS AIRCRAFT POSITION

DAY 179 TIME 23:54 PASS 8



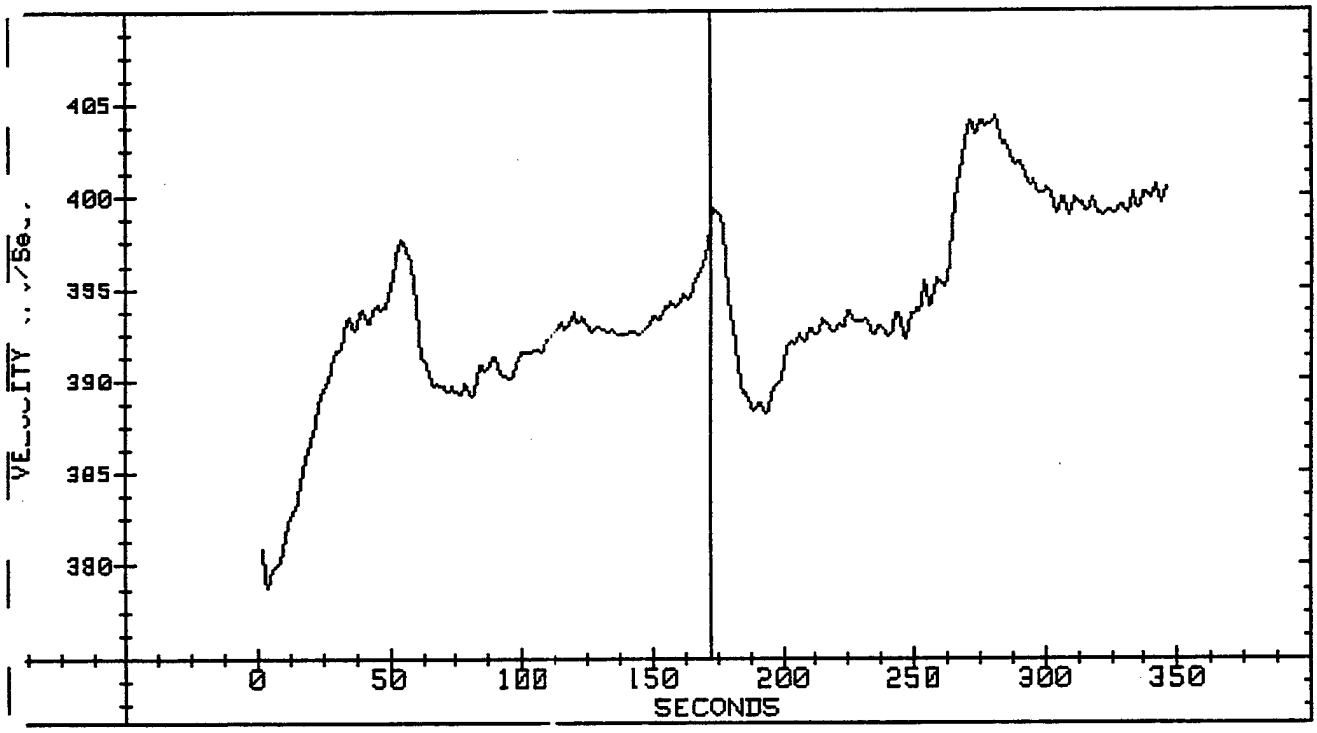
GPS AIRCRAFT POSITION

DAY 179 TIME 23:54 PASS 8



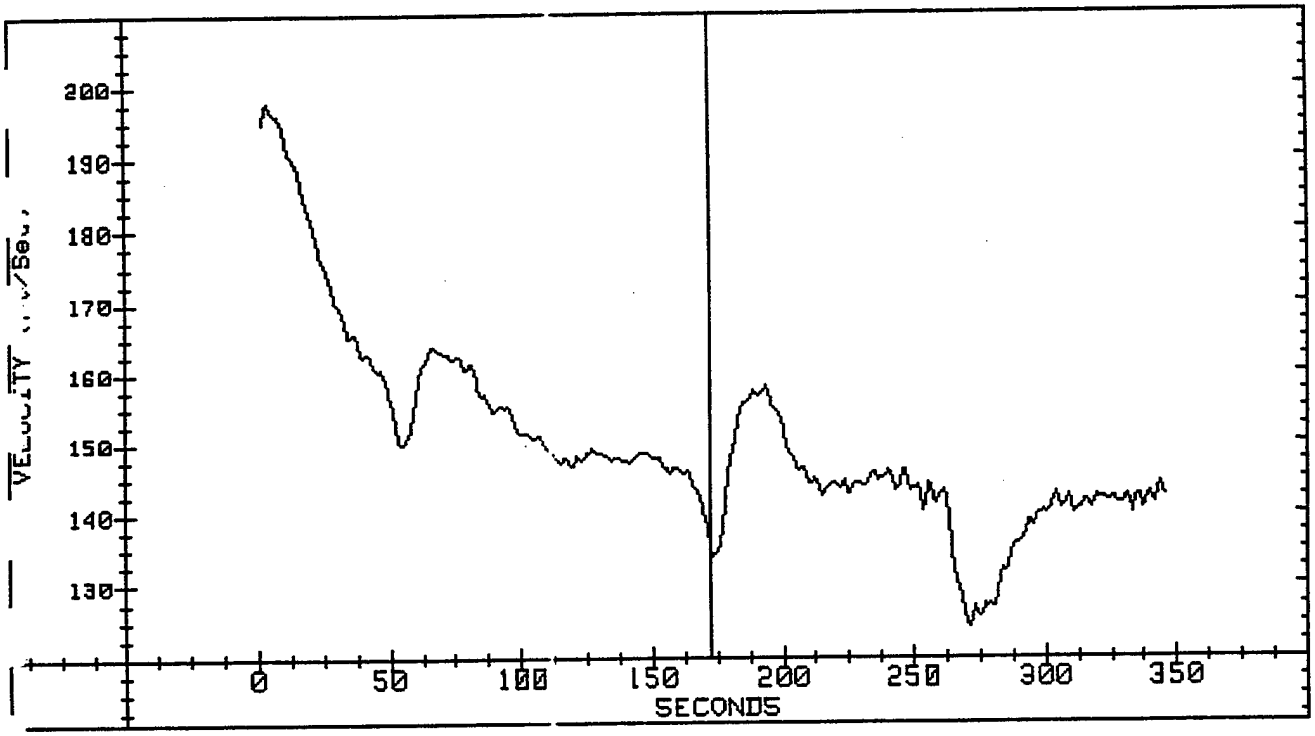
GPS Ve

DAY 179 TIME 23:54 PASS 8 m= 396.6, sd= 4.59998



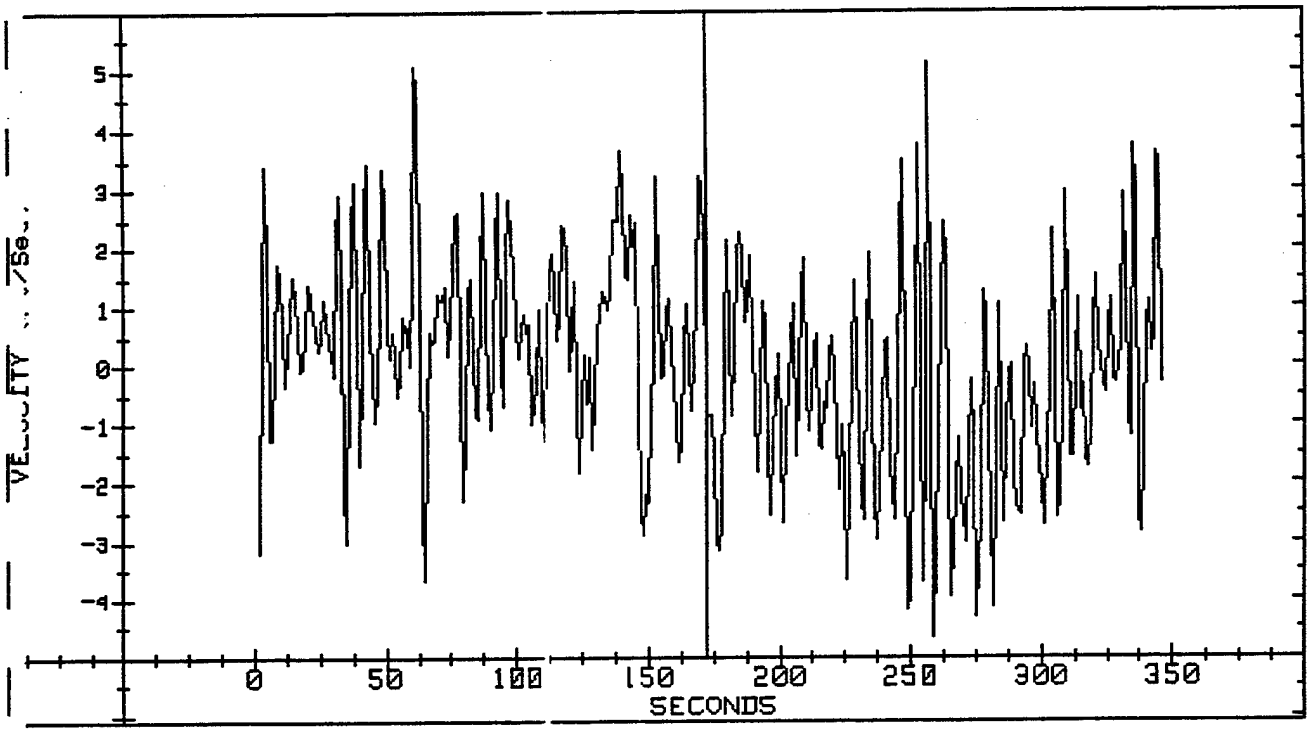
GPS Vn

DAY 179 TIME 23:54 PASS 8 m= 142.2, sd= 7.33681



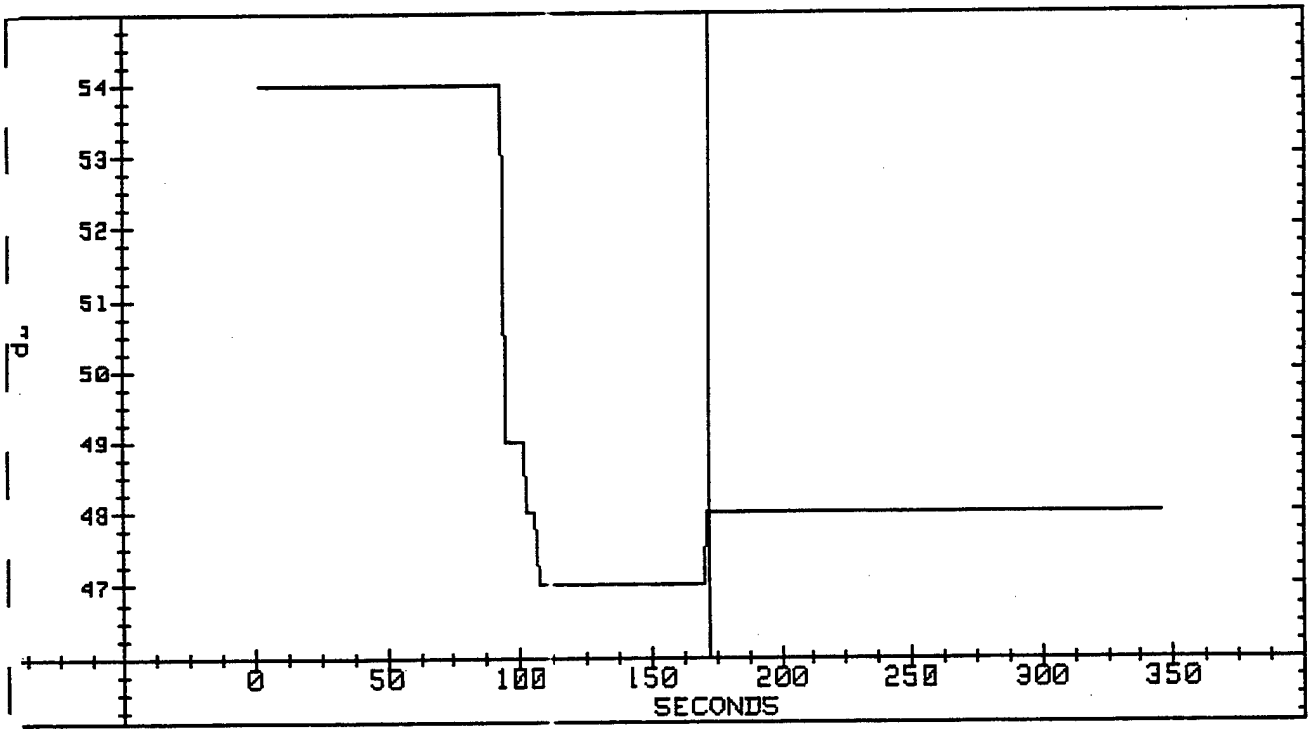
GPS Vv

DAY 179 TIME 23:54 PASS 8 m= -.5433, sd= 1.81522



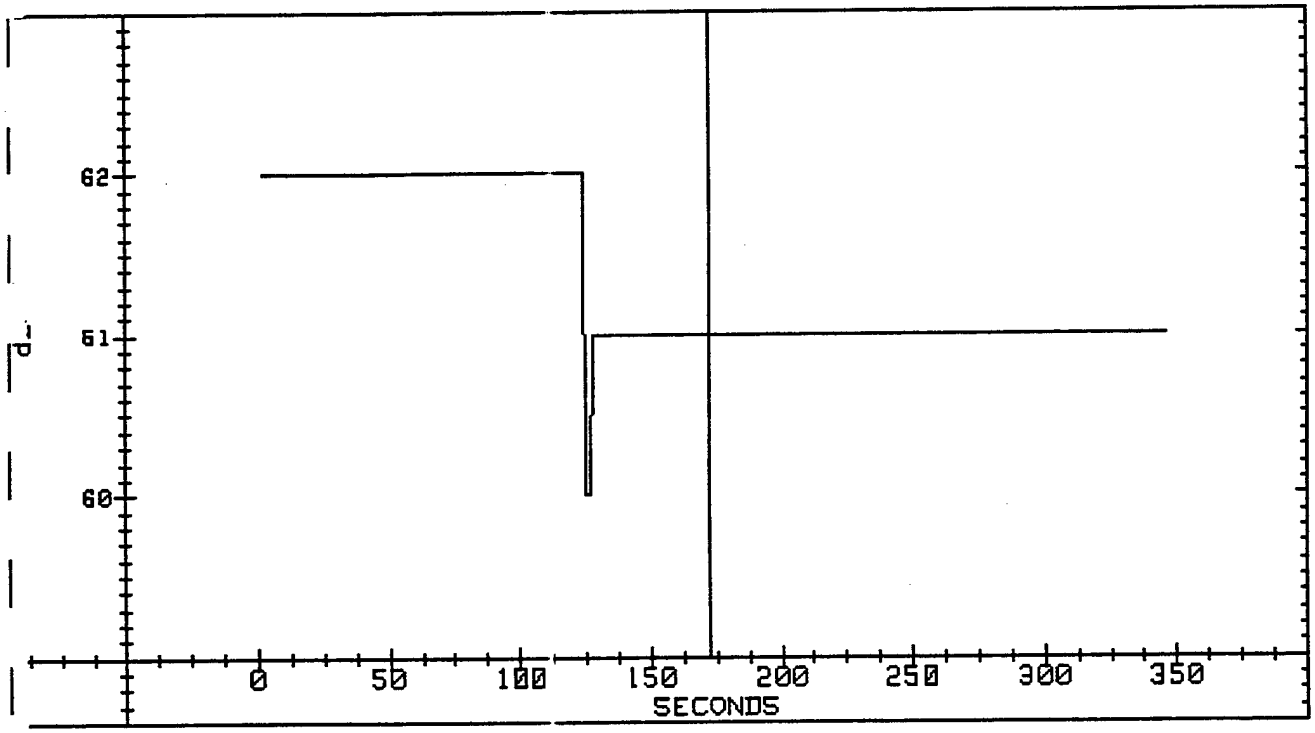
Ch1 RES Attenuation

DAY 179 TIME 23:54 PASS 0 m= 48, sd= 0



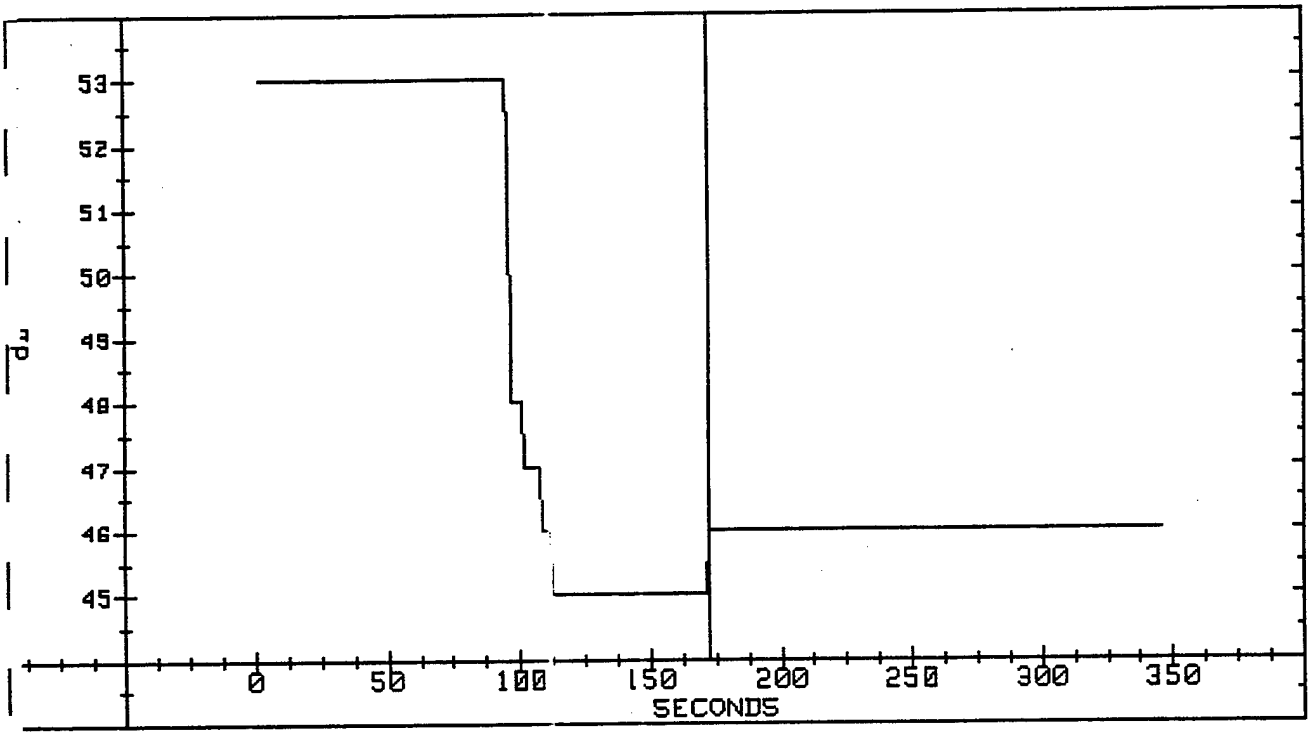
Ch2 RES Attenuation

DAY 179 TIME 23:54 PASS 8 m= 61, sd= 0



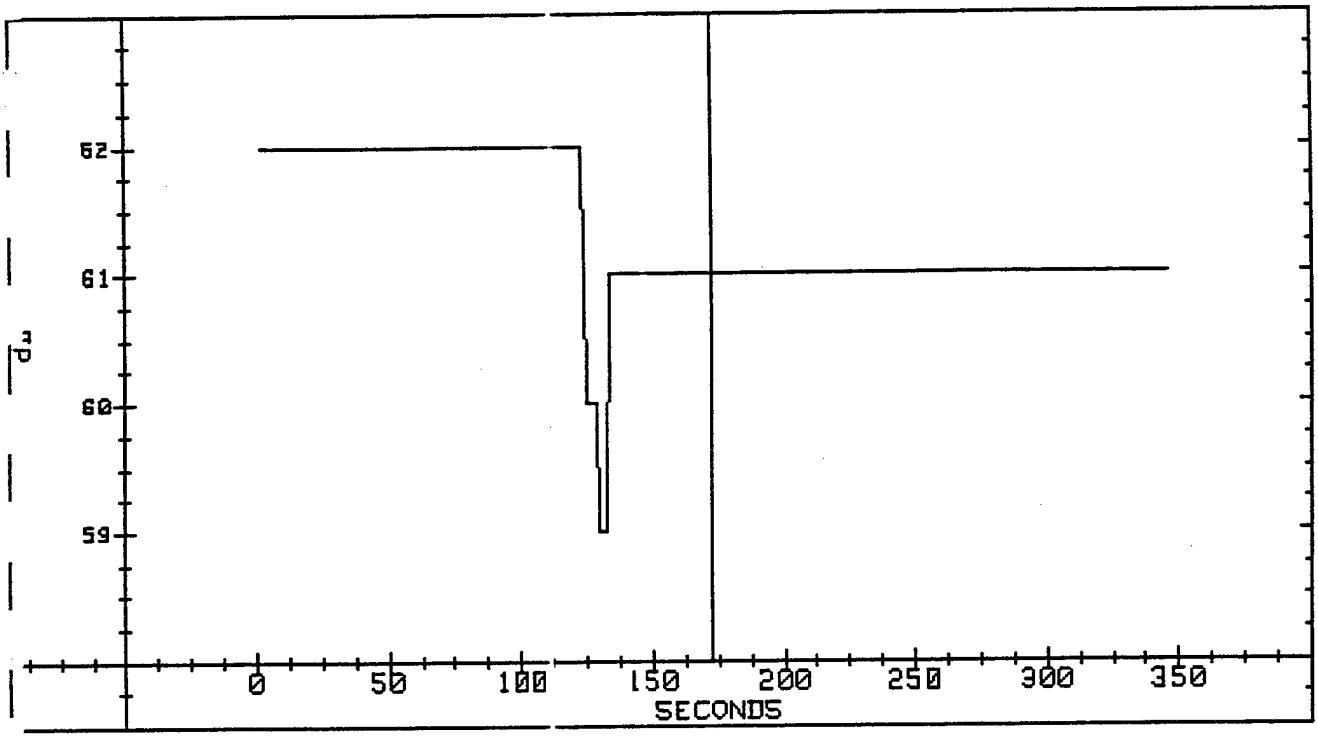
Ch3 RES Attenuation

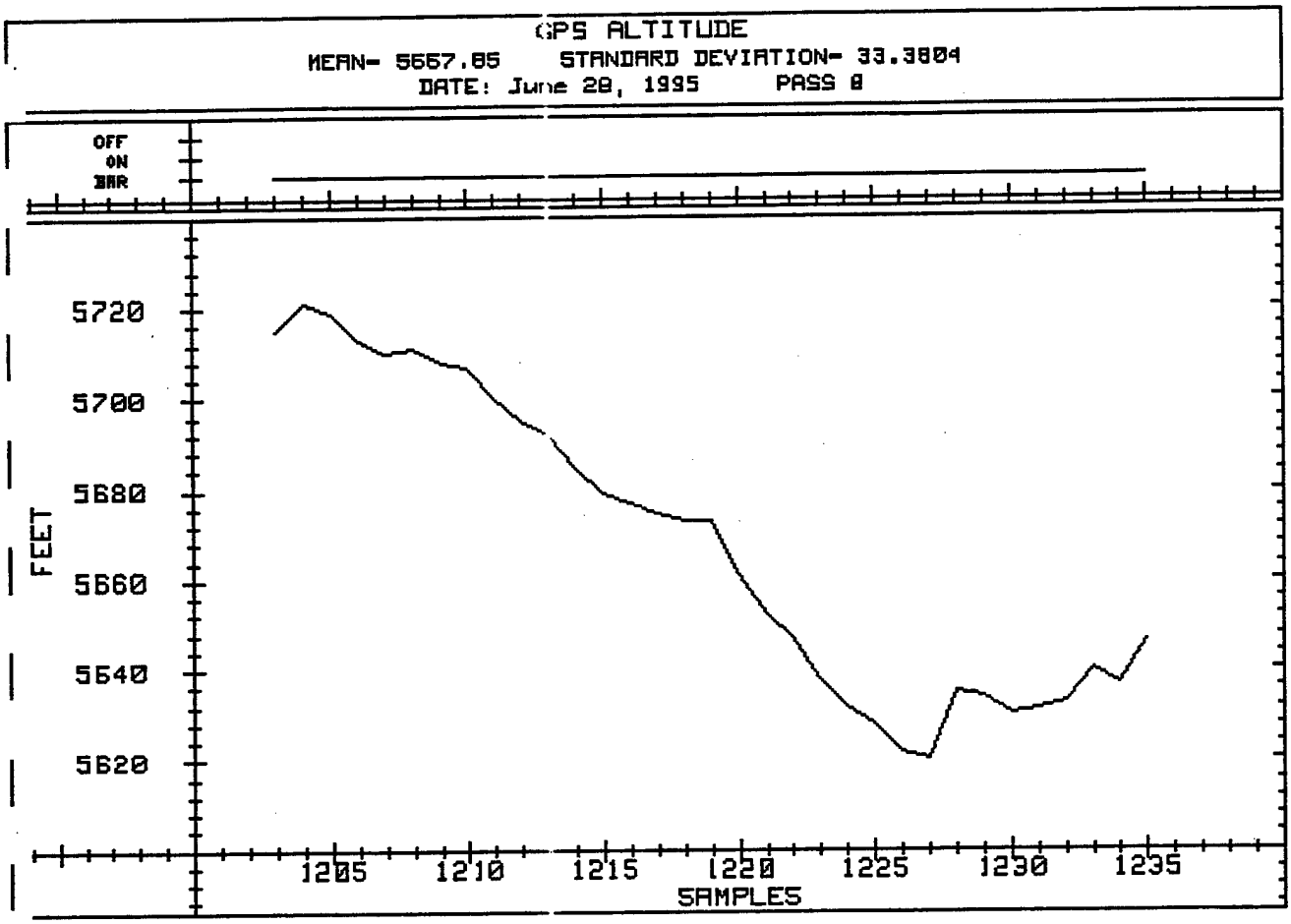
DAY 179 TIME 23:54 PASS 8 m= 46. sd= 0



Ch4 RES Attenuation

DAY 179 TIME 23:54 PASS 8 m= 61. sd= 0

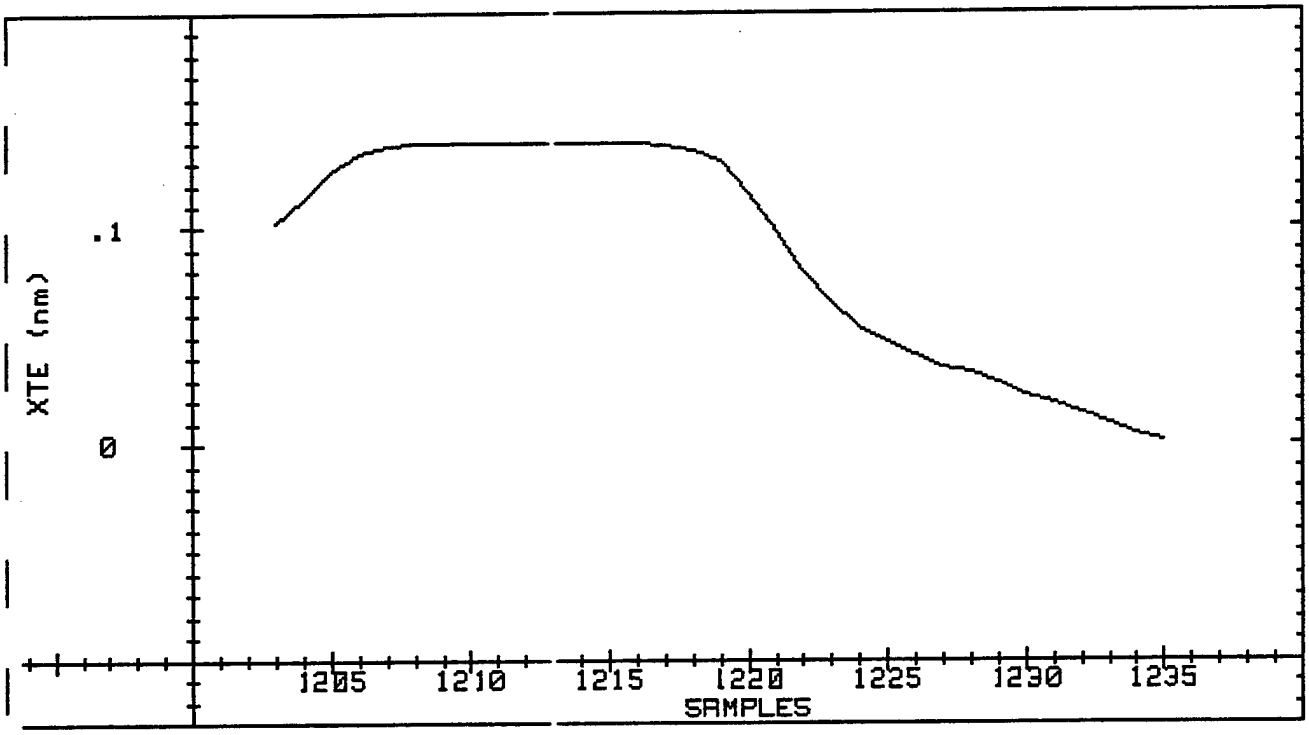



GPS ALTITUDE
MEAN= 5667.85 STANDARD DEVIATION= 33.3804
DATE: June 28, 1995 PASS 8
OFF
ON
BAR
5720
5700
5680
5660
5640
5620
FEET
1205
1210
1215
1220
1225
1230
1235
SAMPLES

GPS Cross Track Error

MEAN= .0894242 STANDARD DEVIATION= .0517559

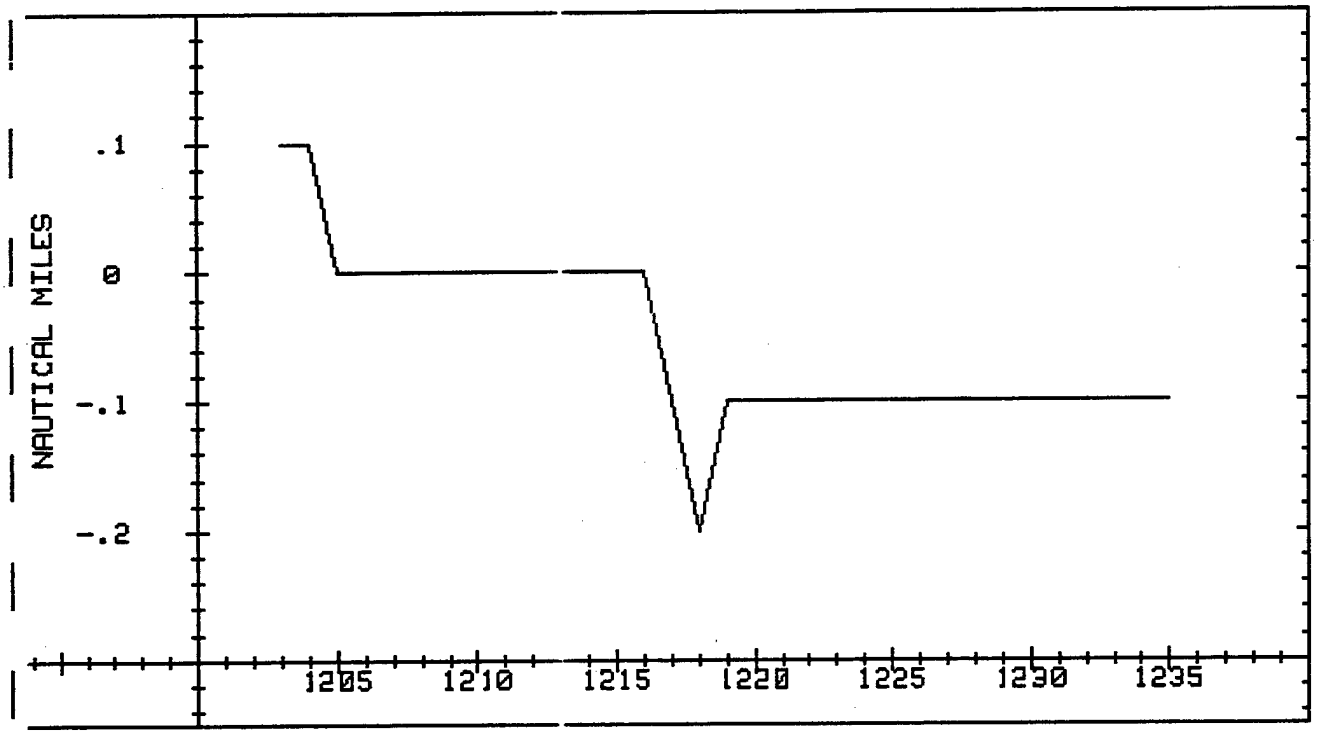
DATE: June 28, 1995 PASS 8



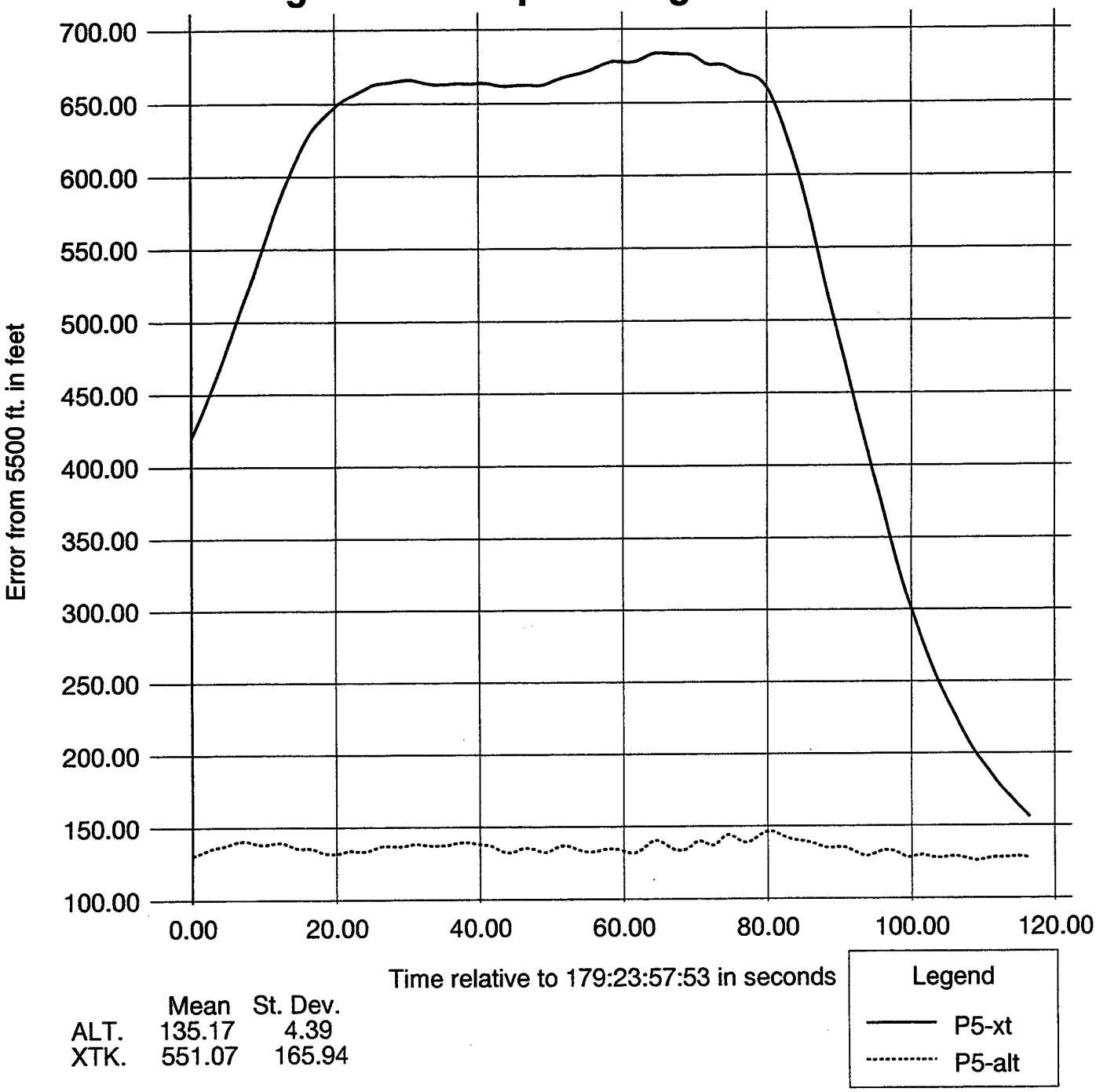
INS CROSS TRACK ERROR

MEAN= -.0545455 STANDARD DEVIATION= .0655555

DATE: June 28, 1995 PASS 8



# Portage, ME - June 28, 1995 - Pass 8 - Xtk. and Alt. Errors
## Higher alt. and port are greater than zero




| | Mean | St. Dev. |
|---|---|---|
| ALT. | 135.17 | 4.39 |
| XTK. | 551.07 | 165.94 |

28 Jun 1995
Tape: E1416

Post-line Data Sheet
Line 45
Mission: DAY 4 PORTAGE MAINE

Time: 179:23:46:23
Pass 7
Req.# 20

## AIRCRAFT & CHANNEL DATA

| | | | | CH 1 | CH 2 | CH 3 | CH 4 |
|---|---|---|---|---|---|---|---|
| Altitude | | | | | | | |
| Desired: | 5500 ft | | Wave/Pol.: | p-VV | p-VH | p-HV | p-HH |
| Baro: | 5422 ft | s.d.= 5 | Swath Ctr Ang: | 15.0° | 15.0° | 15.0° | 15.0° |
| Slt. rng: | 18275 ft | | Tgt Dep Ang: | 15.0° | 15.0° | 15.0° | 15.0° |
| Look: | Right | | St rng (ft): | 16740 | 16740 | 16740 | 16740 |
| Depr Ang: | 25.0° | | Near Rng Dep: | 18.9° | 18.9° | 18.9° | 18.9° |
| Des. trk: | 220.0° | | Far Rng Dep: | 9.5° | 9.5° | 9.5° | 9.5° |
| Start Sq: | 90.0° | | Atten (dB): | 54.0 | 62.0 | 53.0 | 62.0 |
| End Sq: | 90.0° | | RMS Video (%FS) | 12.8 | 7.7 | 9.6 | 9.5 |

## WAYPOINTS

| | Latitude | Longitude |
|---|---|---|
| Line_up: | N 46:54.93 | W 68:09.83 |
| Start: | N 46:45.76 | W 68:21.10 |
| End: | N 46:38.10 | W 68:30.45 |
| From: | N 57:58.16 | W 48:11.15 |
| To: | N 33:07.12 | W 81:07.40 |

Main Target: GW
Mocomp Point:
Lat: N 46:43.81
Long: W 68:29.03
Tgt Trk: 0.0 Tgt Vel: 0.0
Alt: 770.0 ft

## RADAR PARAMETERS - for UWB

RTP Channel: 1
Resolution: N/A
Swath width: Single
RMS Time Constant: 2^7
Position Reference: ON
Atten. Tracking: OFF
Range Gate Delta: 0.0 ft
Azimuth Presum Rate: Presum6
TX Chirp Filename: CTL1U2A

Filter damping is Hi -> 10 sec
PRF Factor is FAST (262.5 kts)
Ave Gndspd: Real -> 250.7 kts
Mocomp Off for Chnl 1, 2, 3, 4
GPS Vel/Pos Reference
Adj Gnd Scene: 5000.0 ft
Range Tracking is OFF
Clutterlock Reference: OFF
RX Chirp Filename: CRL1N0A

Ave Ref Vel -> -1.7 fps (s.d.= 1.8)
Ave Fil Vel -> -2.2 fps (s.d.= 1.8)

| NML XMIT PWR | ANT BIAS | |
|---|---|---|
| X: -70.0 | Elevation: | 0.0° |
| L: -70.0 | Azimuth: | 0.0° |
| C: -70.0 | Pitch: | 0.0° |
| P: 39.9 | | |

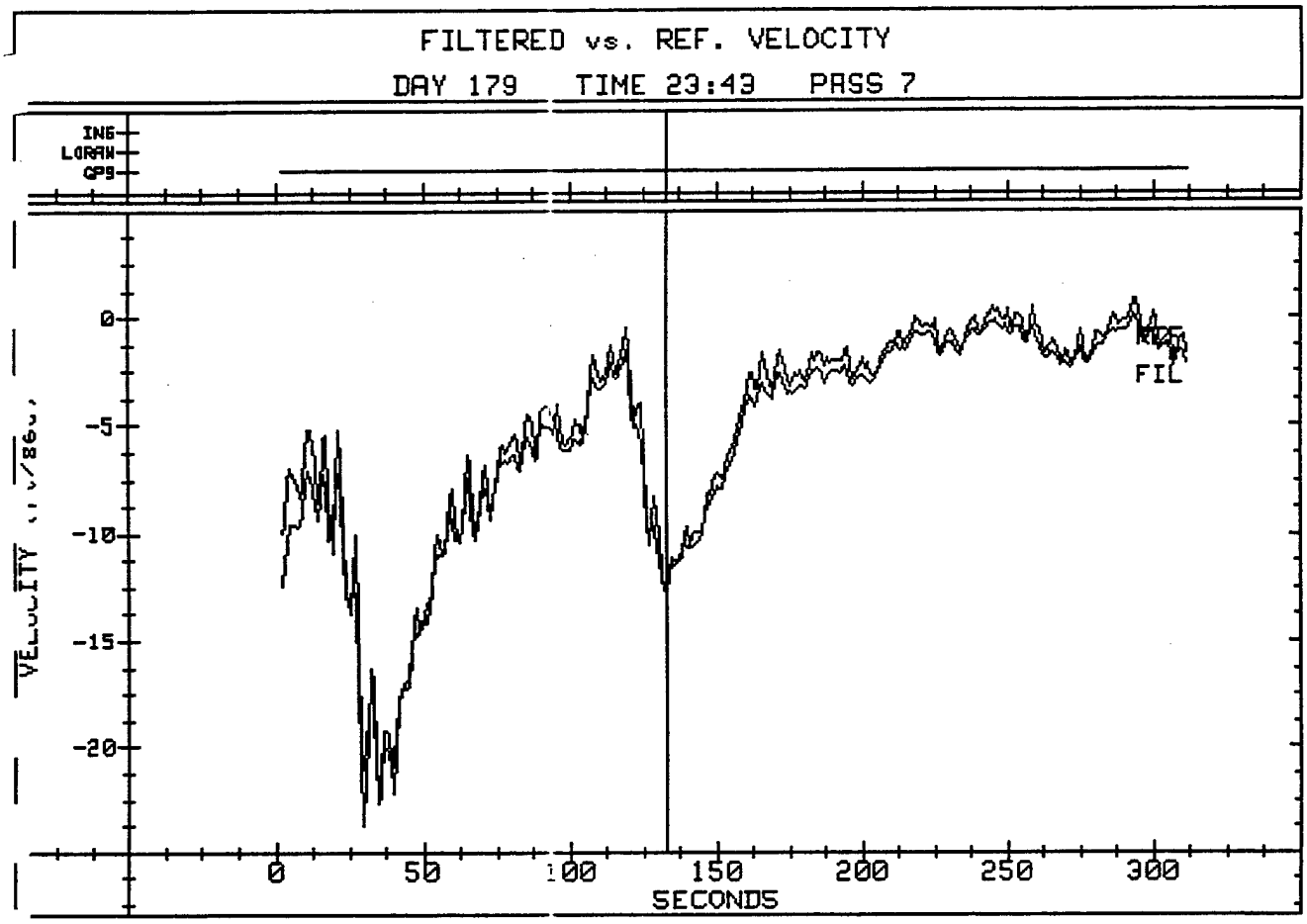
| Tape Footage | | Drive no. |
|---|---|---|
| Starting: | 6719 ft | (1) |
| Ending: | 7978 ft | (1) |

| Vel Bias | CAL Atten | LINE Map Time (UCT) |
|---|---|---|
| X: 2112.0 | X: 63.8 dB | Start: 23:46:23 |
| Y: 1874.0 | L: 63.8 dB | End: 23:49:08 |
| Z: 5343.0 | C: 63.8 dB | |

Mocomp Counters

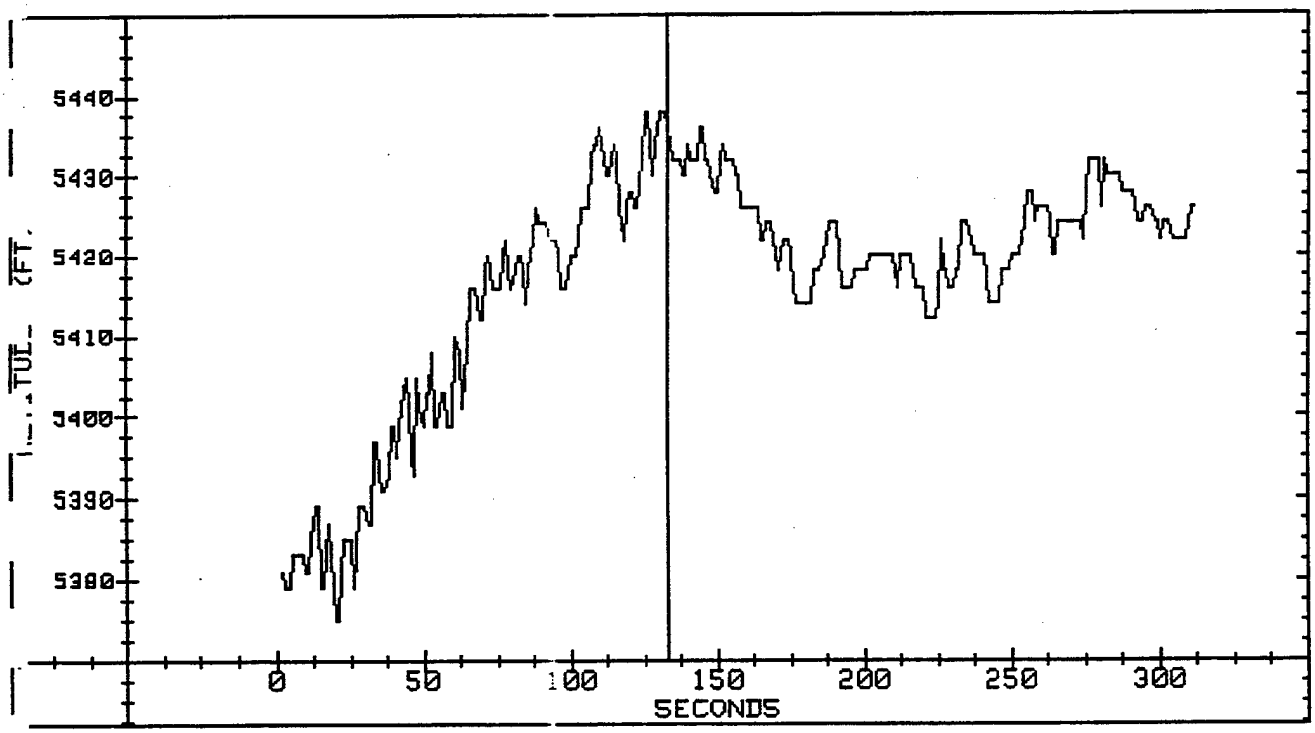
| | | |
|---|---|---|
| Start: | 316292 | 0004D384h |
| End: | 343958 | 0005BF96h |

CPA (UCT): 00:00:00
Alt: 0 ft (GPS)
Lat: N 0:00: 0
Lon: E 0:00: 0


FILTERED vs. REF. VELOCITY
DAY 179 TIME 23:43 PASS 7
INS
LORAN
GPS
0
-5
-10
-15
-20
VELOCITY
REF
FIL
0
50
100
150
200
250
300
SECONDS

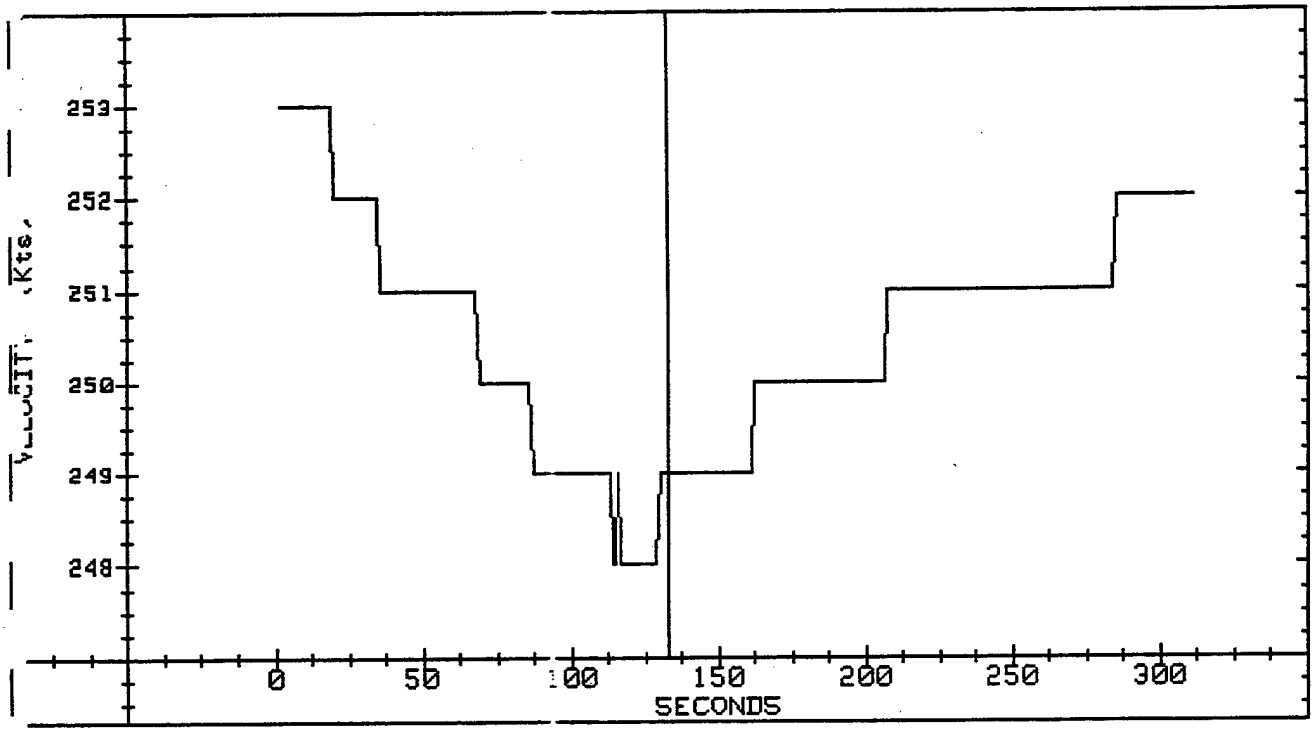
BARO ALTITUDE

DAY 179 TIME 23:43 PASS 7 m= 5422. sd= 5.22642



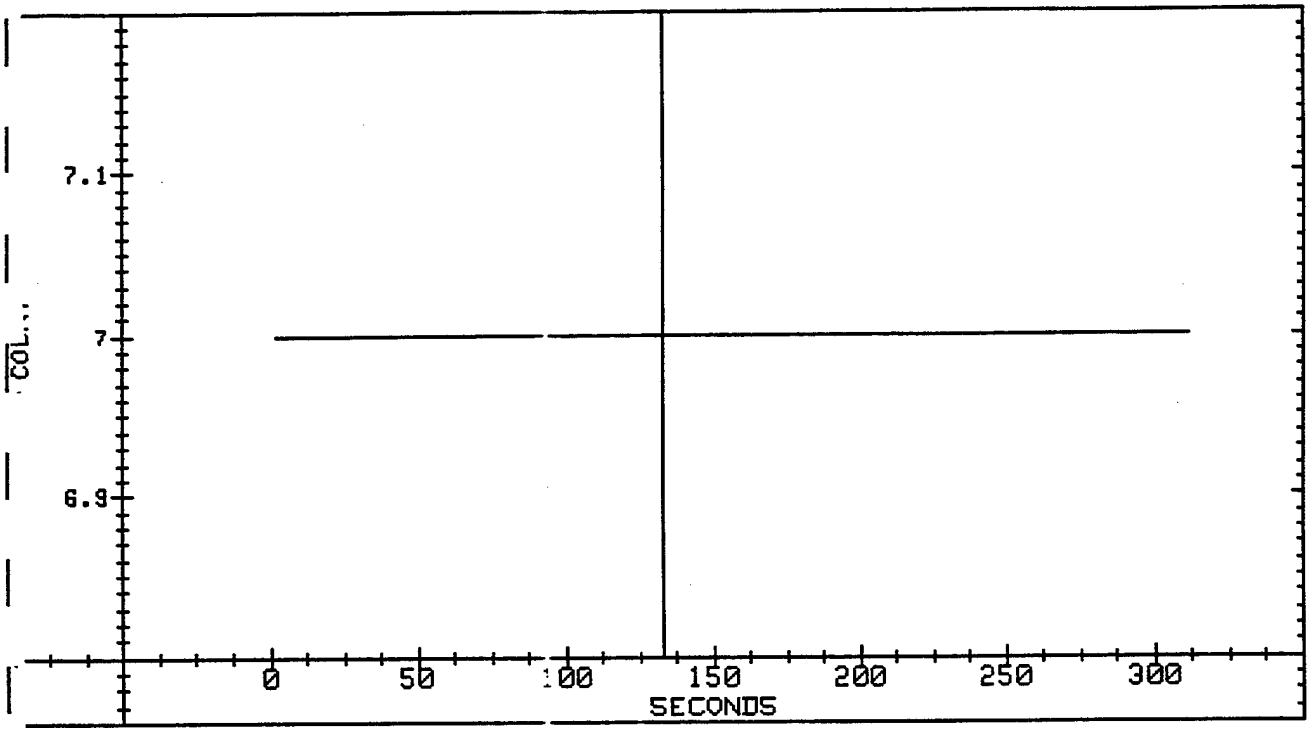
INS GROUND SPEED

DAY 179 TIME 23:43 PASS 7 m= 250.7, sd= .053553



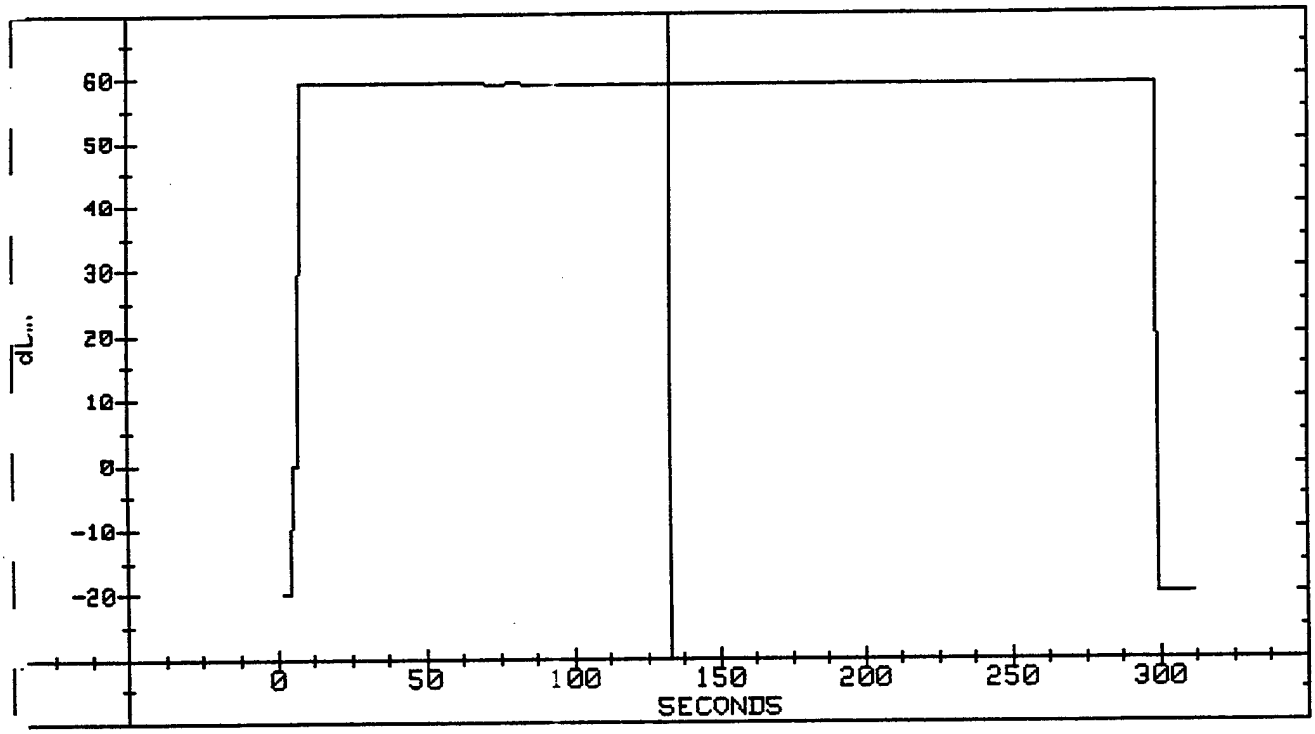
PASS NUMBER

DAY 179 TIME 23:43 PASS 7 m= 7, sd= 0



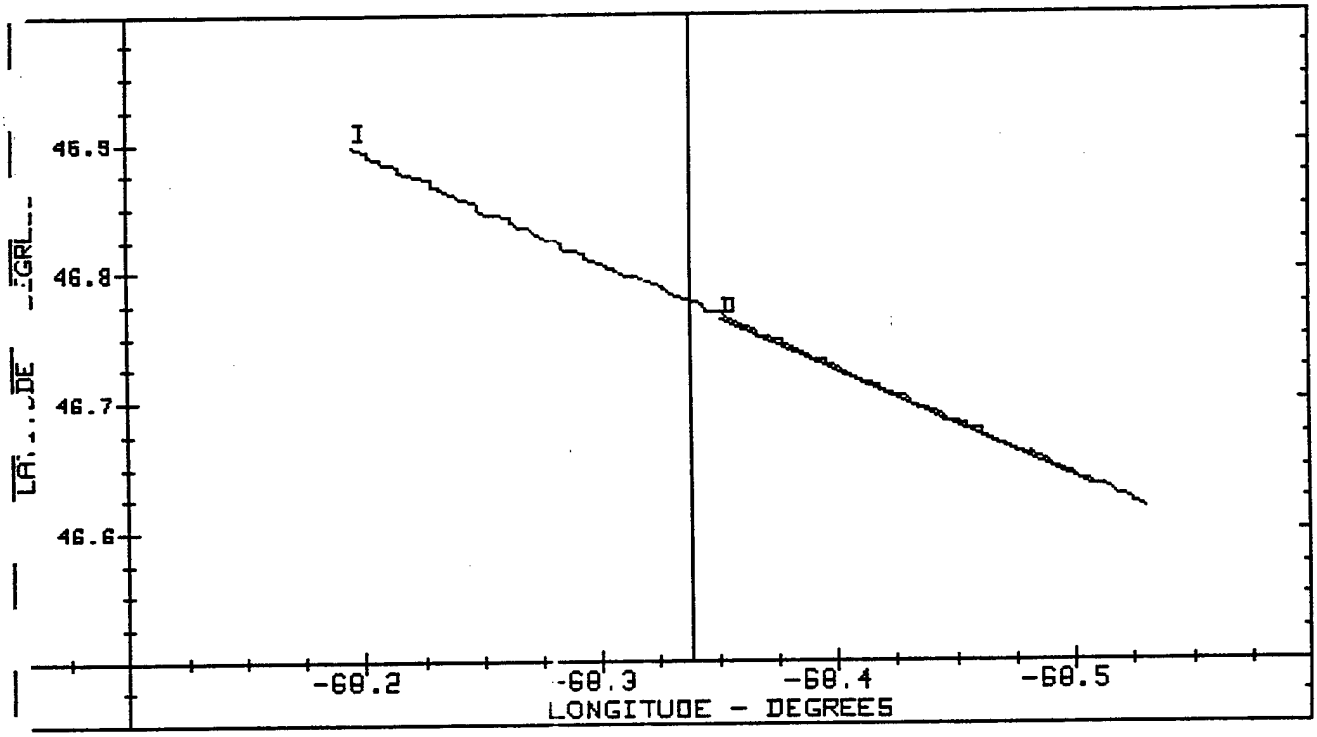
P Band Power

DAY 179 TIME 23:43 PASS 7 m= 52.73, sd= 21.2017



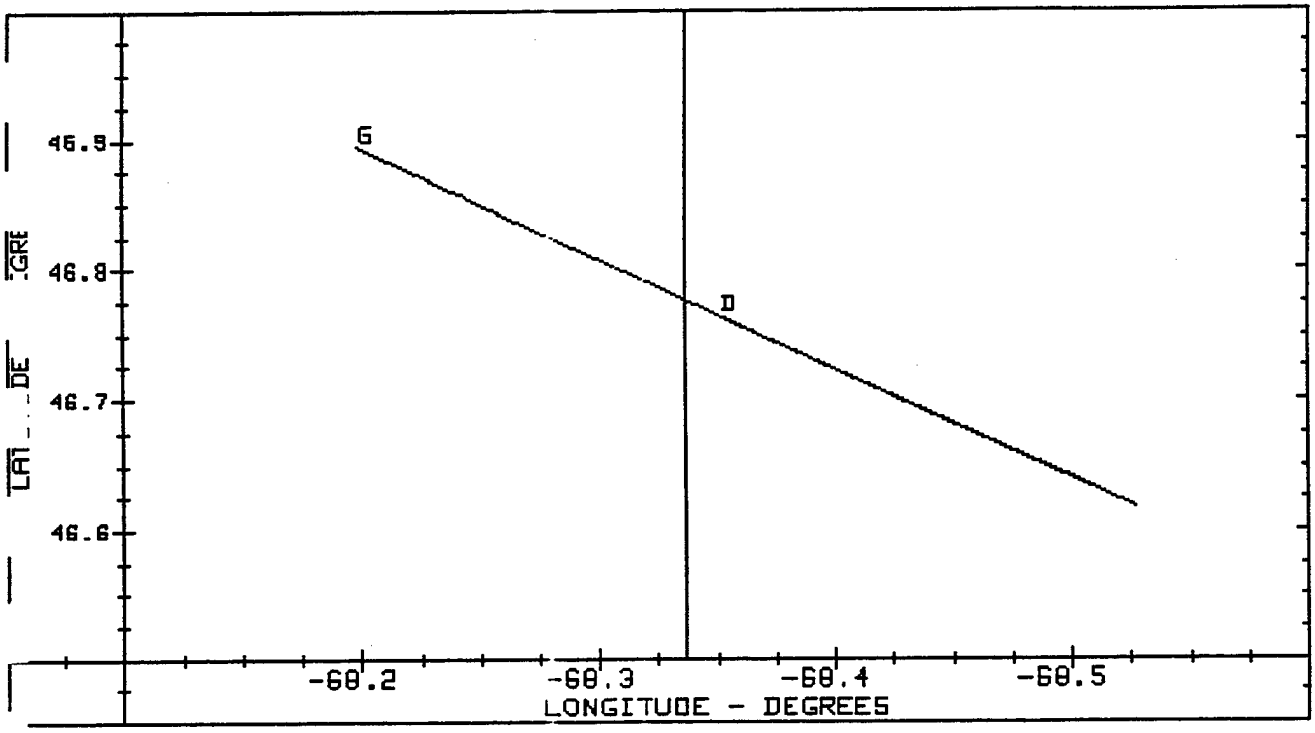
INS AIRCRAFT POSITION

DAY 179 TIME 23:43 PASS 7



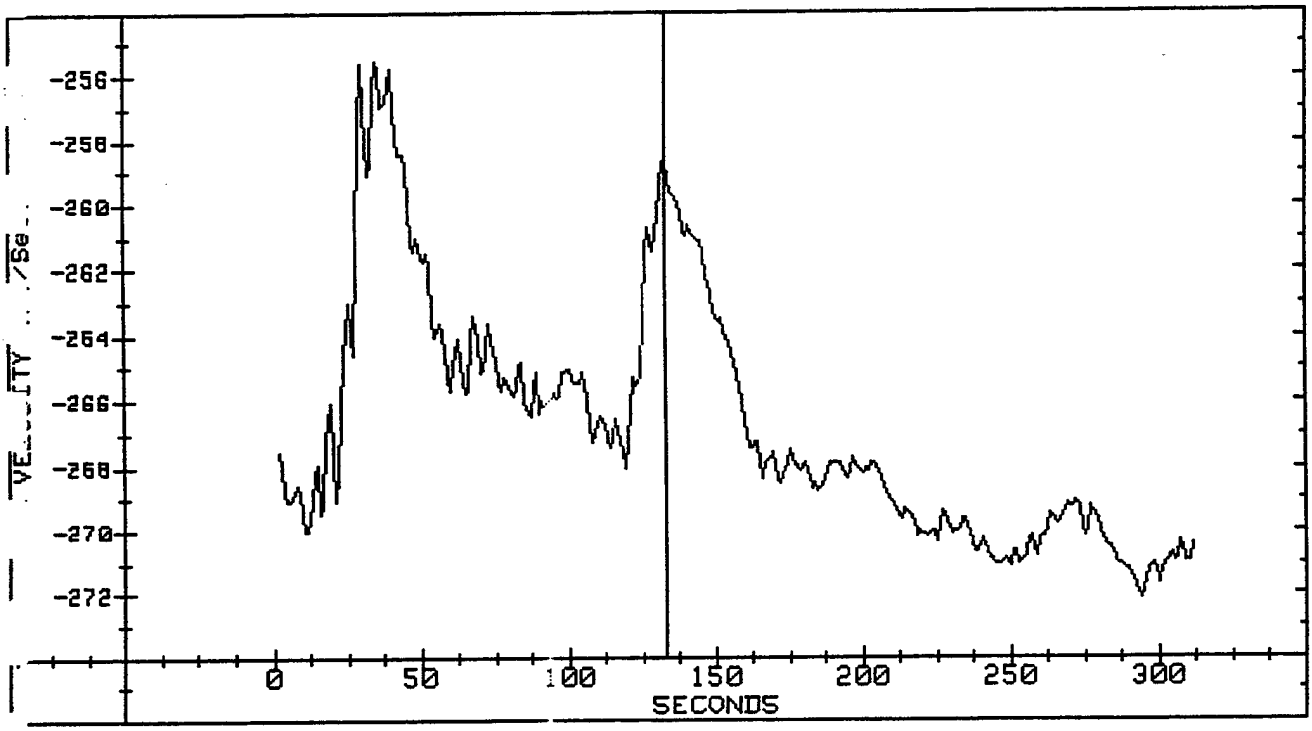
GPS AIRCRAFT POSITION

DAY 179 TIME 23:43 PASS 7



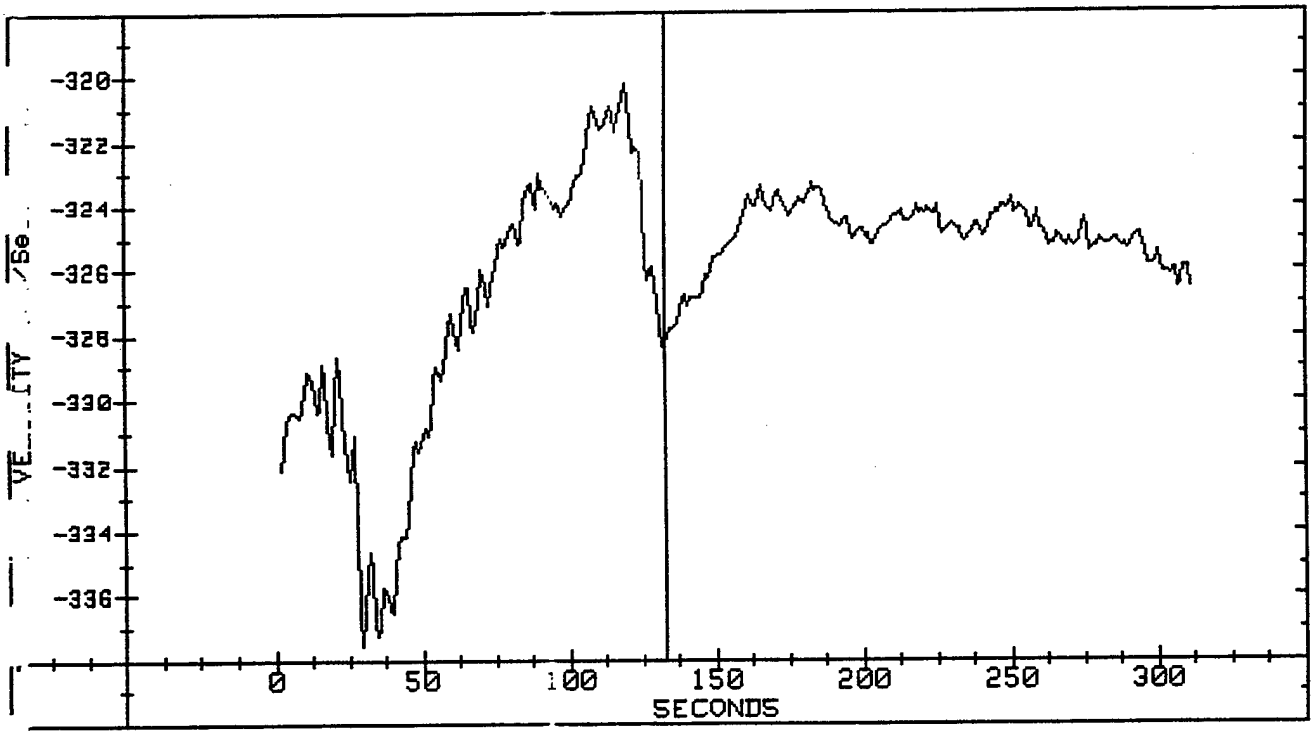
GPS Ve

DAY 179 TIME 23:43 PASS 7 m= -269.1, sd= 2.02848



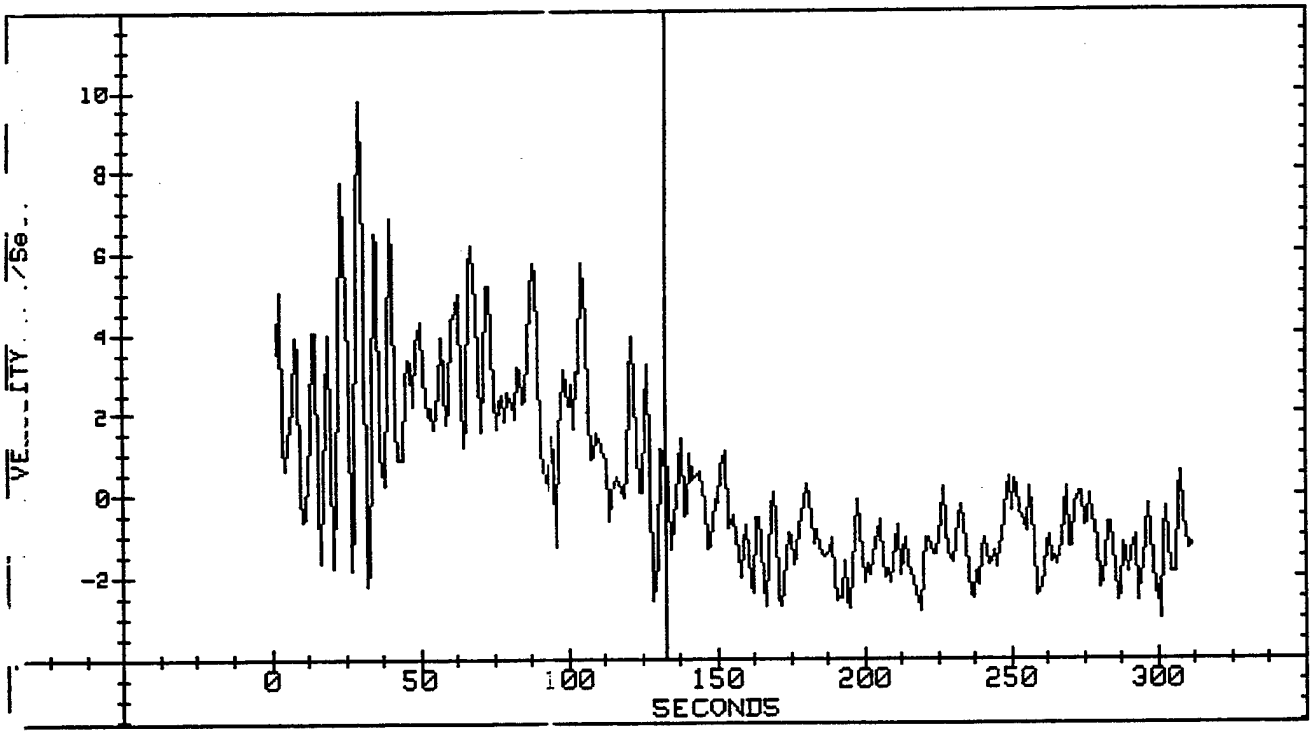
GPS Vn

DAY 179 TIME 23:43 PASS 7 m= -324.7, sd= .692914



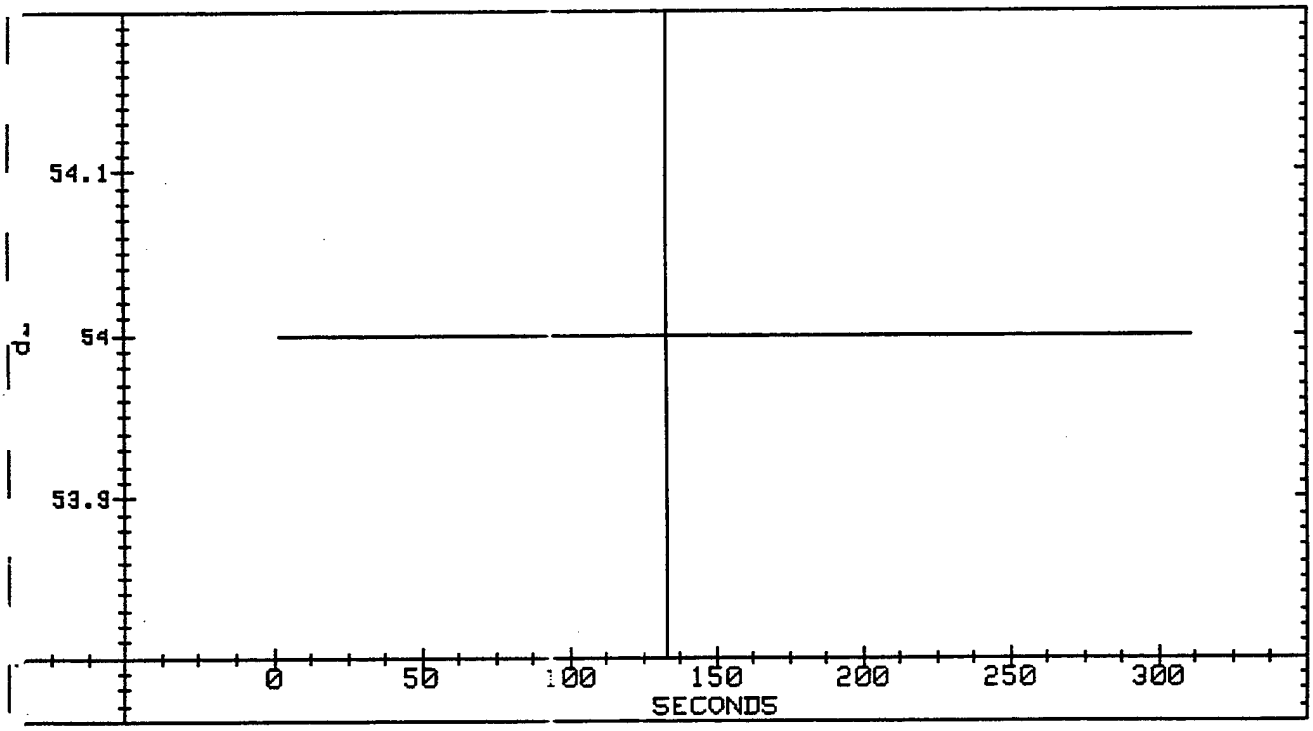
GPS Vv

DAY 179 TIME 23:43 PASS 7 m= -1.214, sd= .854748



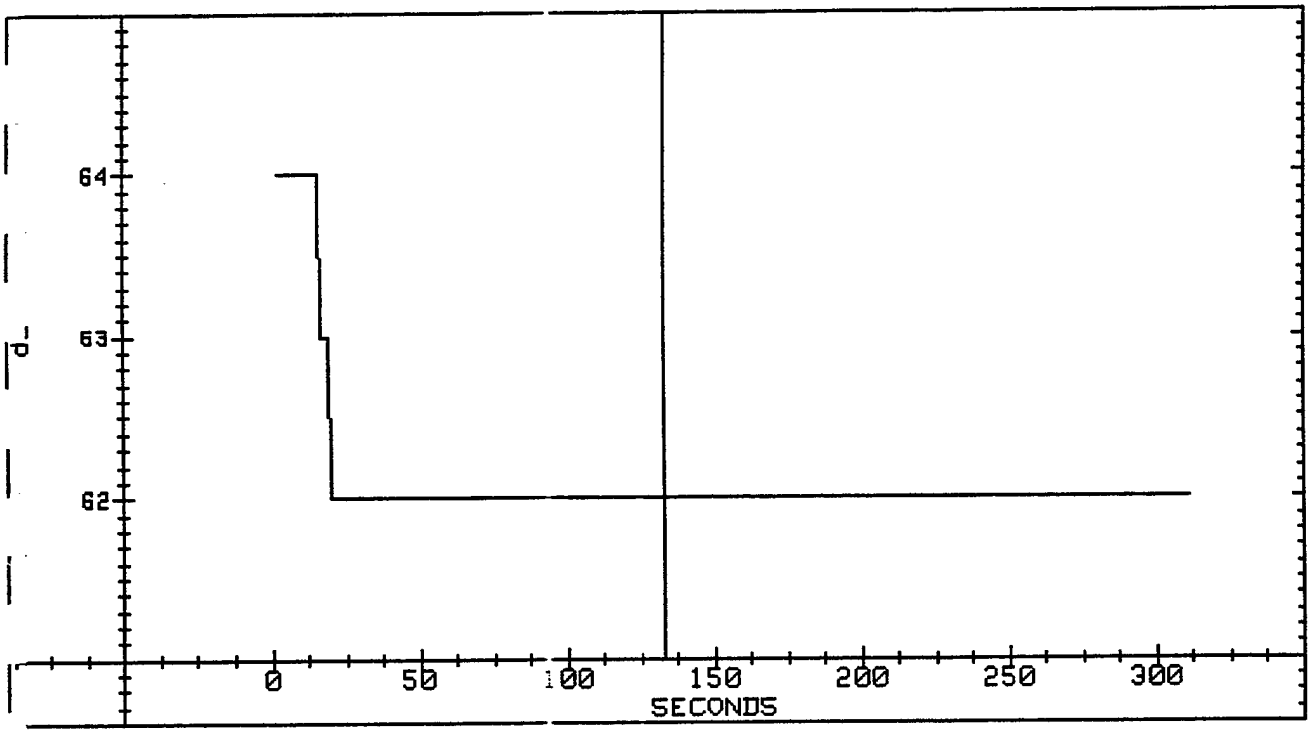
Ch1 RES Attenuation

DAY 179 TIME 23:43 PASS 7 m= 54. sd= 0



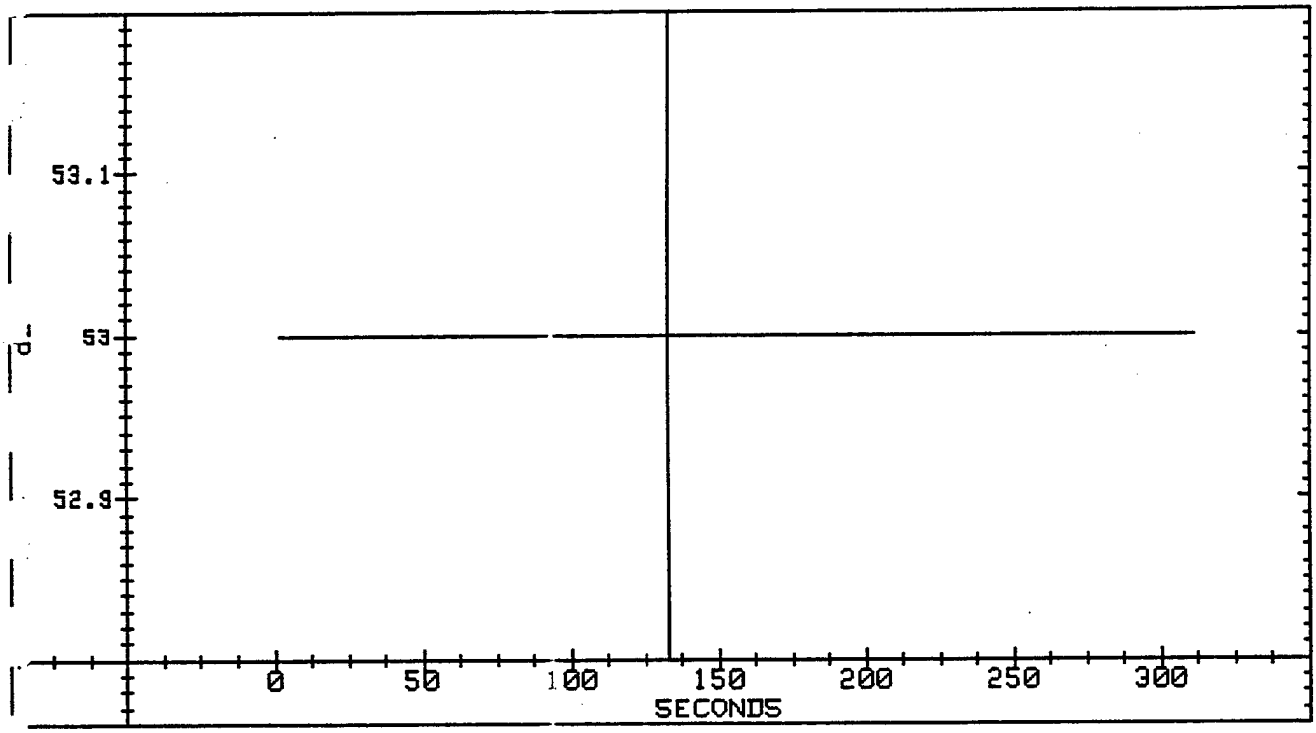
Ch2 RES Attenuation

DAY 179 TIME 23:43 PASS 7 m= 62, sd= 0



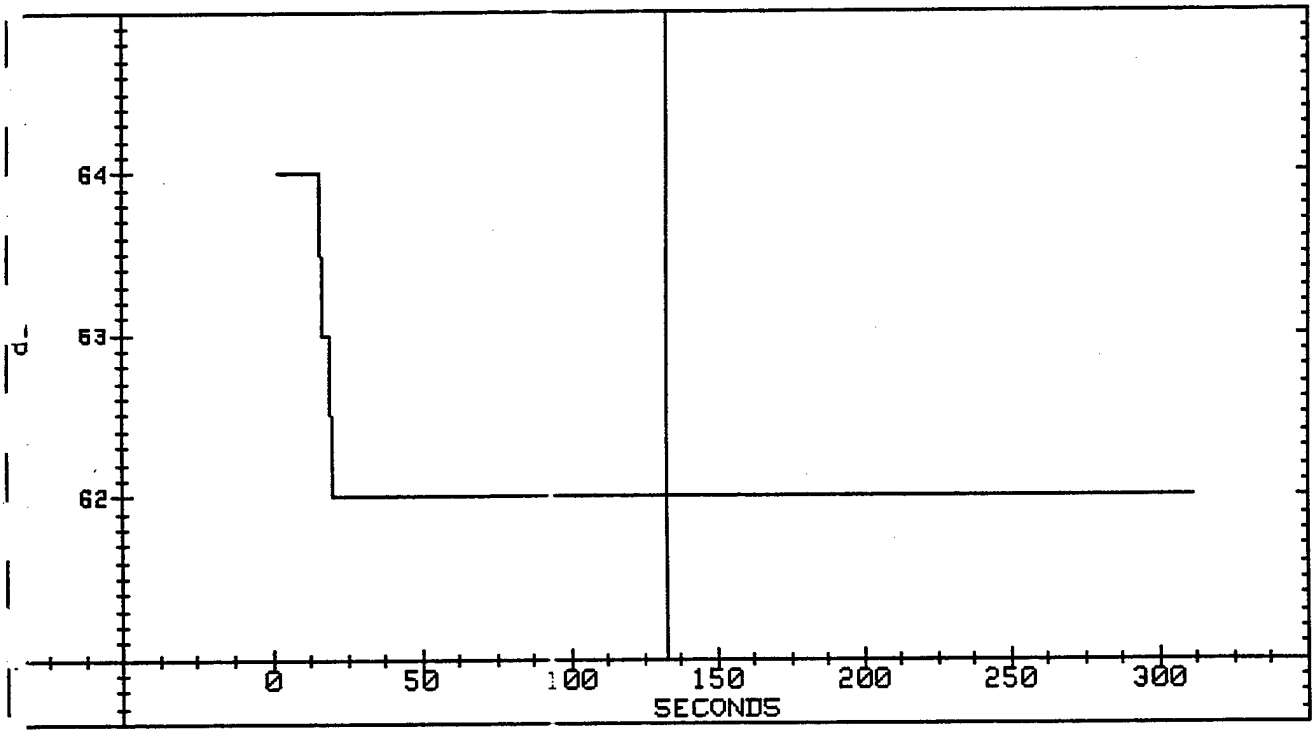
Ch3 RES Attenuation

DAY 179 TIME 23:43 PASS 7 m= 53. sd= 0



Ch4 RES Attenuation

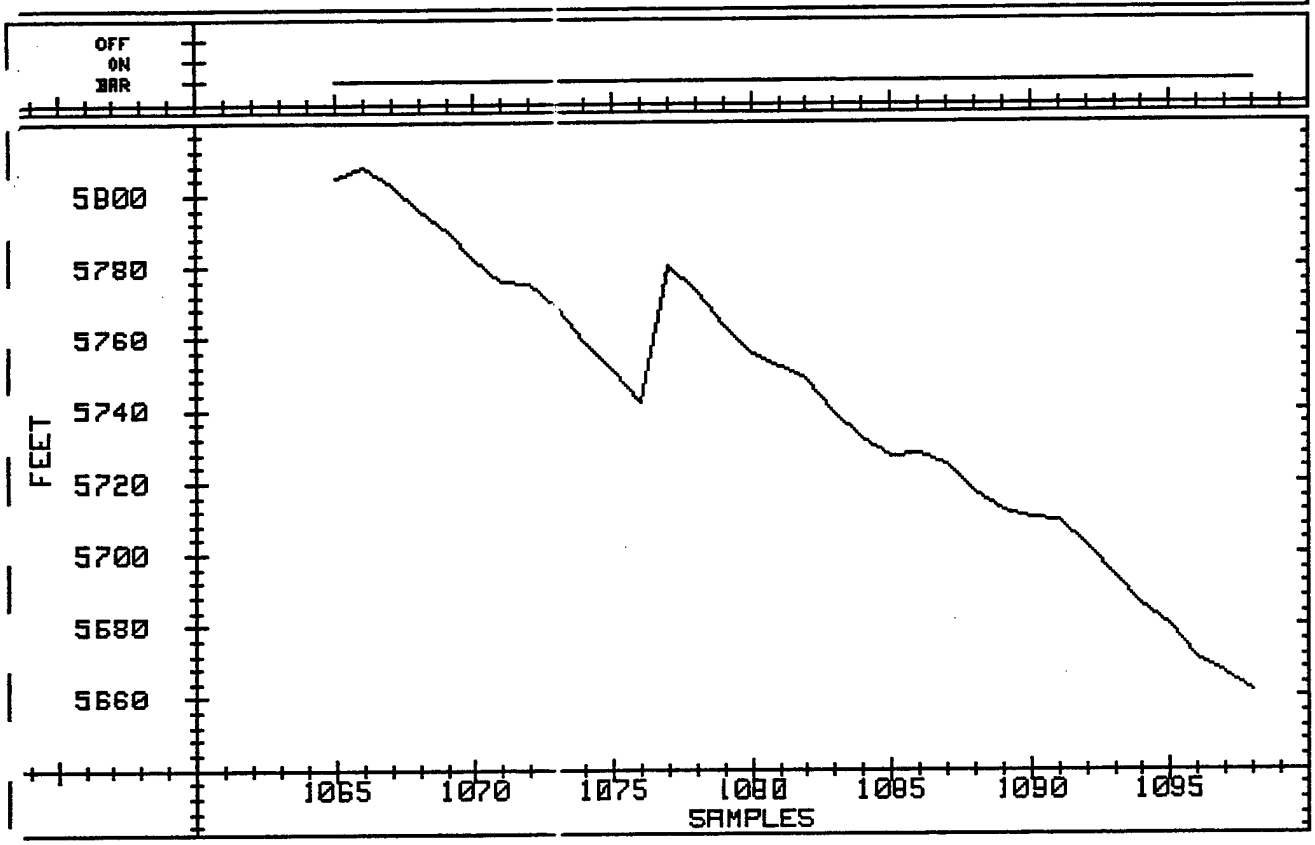
DAY 179 TIME 23:43 PASS 7 m= 62, sd= 0



GPS ALTITUDE

MEAN= 5740.82 STANDARD DEVIATION= 41.2028

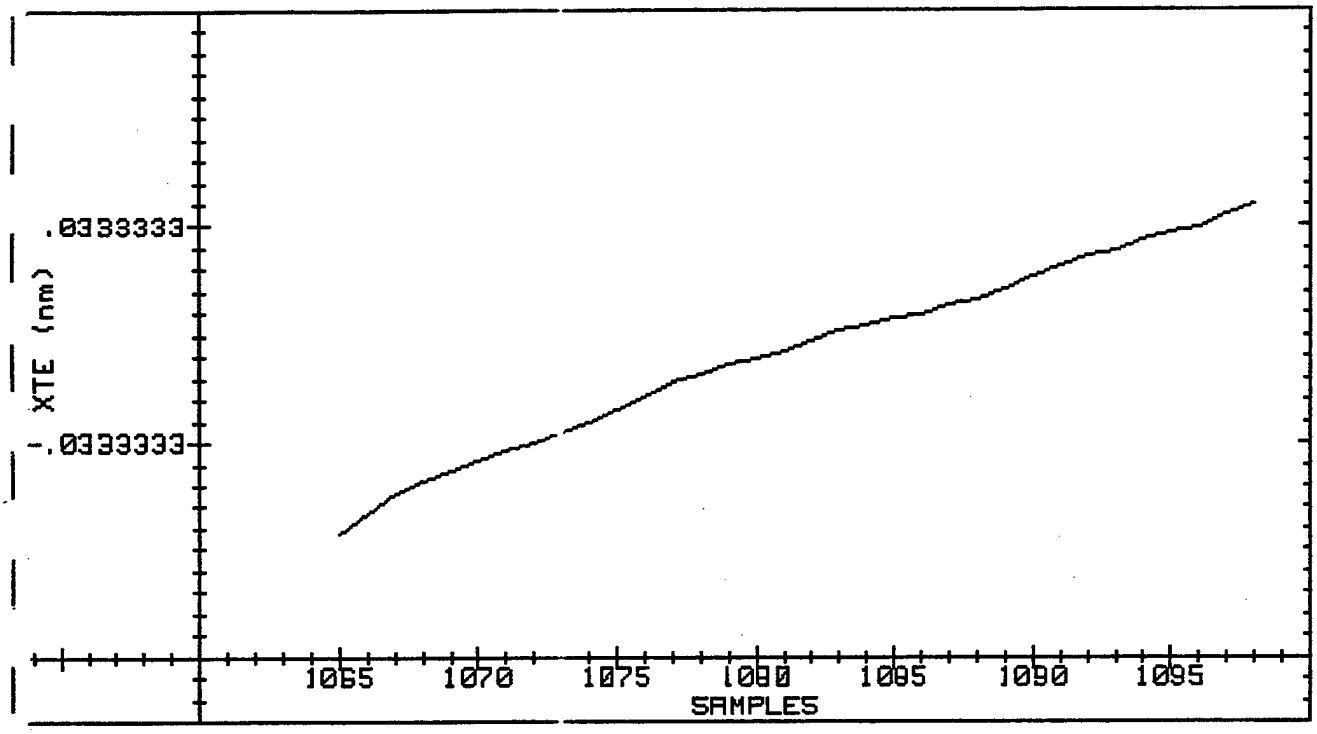
DATE: June 28, 1995 PASS 7



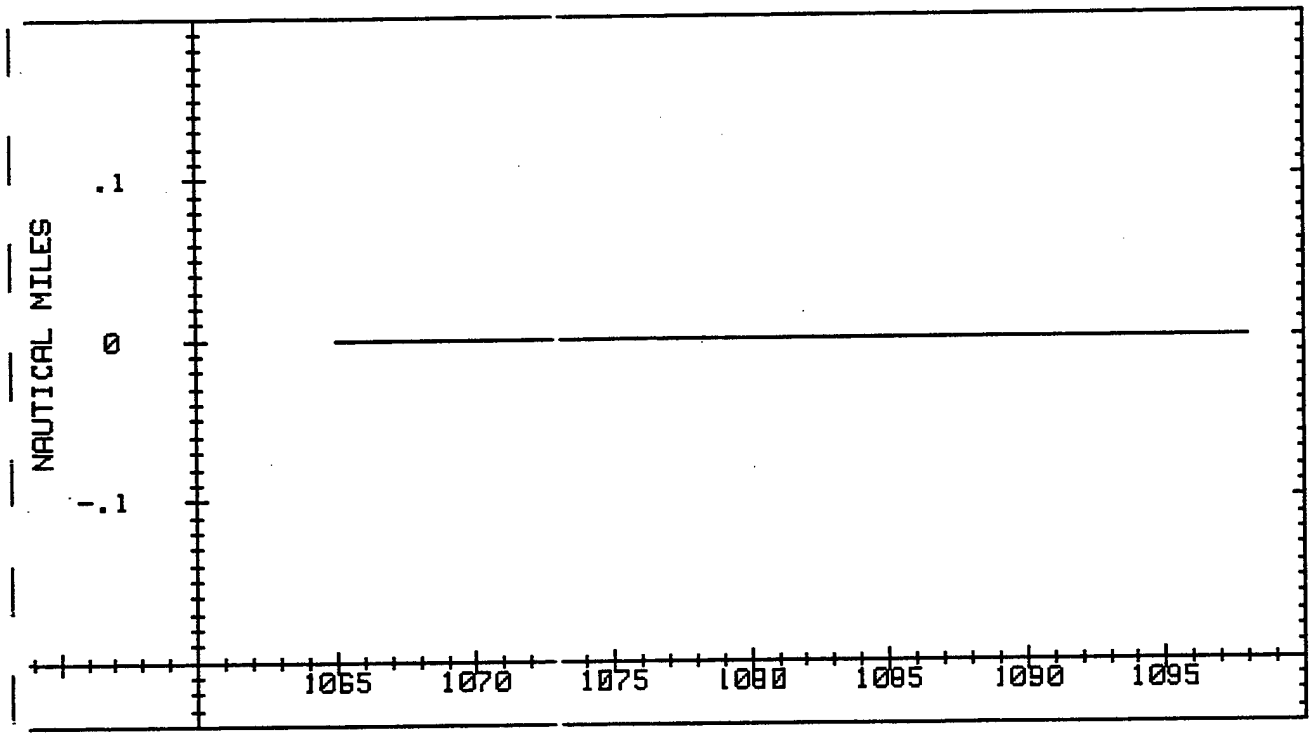
GPS Cross Track Error

MEAN= -.00591176 STANDARD DEVIATION= .0282534

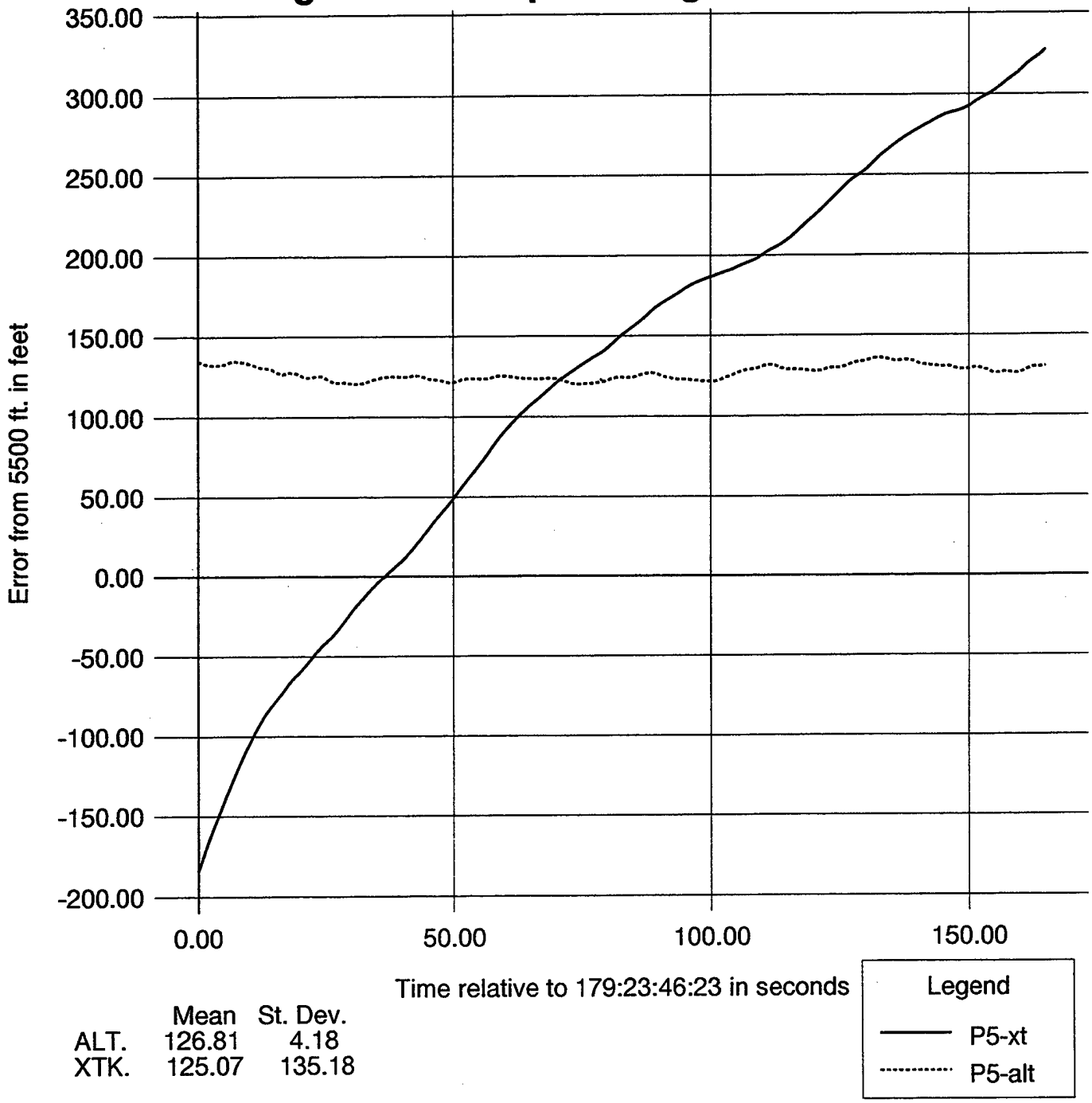
DATE: June 28, 1995 PASS 7



INS CROSS TRACK ERROR
MEAN= 0 STANDARD DEVIATION= 0
DATE: June 28, 1995 PASS 7



# Portage, ME - June 28, 1995 - Pass 7 - Xtk. and Alt. Errors
## Higher alt. and port are greater than zero




| | Mean | St. Dev. |
|---|---|---|
| ALT. | 126.81 | 4.18 |
| XTK. | 125.07 | 135.18 |

28 Jun 1995 | Post-line Data Sheet | Time: 179:23:36:20
Tape: E1416 | Line 47 | Pass 6
Mission: DAY 4 PORTAGE MAINE | Req.# 21

## AIRCRAFT & CHANNEL DATA

| | | | | CH 1 | CH 2 | CH 3 | CH 4 |
|---|---|---|---|---|---|---|---|
| Altitude | | | | | | | |
| Desired: | 5500 ft | | Wave/Pol.: | p-VV | p-VH | p-HV | p-HH |
| Baro: | 5427 ft s.d.= | 4 | Swath Ctr Ang: | 15.0° | 15.0° | 15.0° | 15.0° |
| Slt. rng: | 18275 ft | | Tgt Dep Ang: | 15.0° | 15.0° | 15.0° | 15.0° |
| Look: | Right | | St rng (ft): | 16740 | 16740 | 16740 | 16740 |
| Depr Ang: | 25.0° | | Near Rng Dep: | 18.9° | 18.9° | 18.9° | 18.9° |
| Des. trk: | 40.0° | | Far Rng Dep: | 9.5° | 9.5° | 9.5° | 9.5° |
| Start Sq: | 90.0° | | Atten (dB): | 54.0 | 64.0 | 53.0 | 64.0 |
| End Sq: | 90.0° | | RMS Video (%FS) | 15.1 | 13.4 | 11.4 | 13.8 |

## WAYPOINTS

| | Latitude | Longitude |
|---|---|---|
| Line_up: | N 46:32.64 | W 68:48.09 |
| Start: | N 46:41.84 | W 68:36.93 |
| End: | N 46:49.50 | W 68:27.59 |
| From: | N 33:10.49 | W 81:13.86 |
| To: | N 58:02.12 | W 48:16.16 |

Main Target: GW
Mocomp Point:
Lat: N 46:43.81
Long: W 68:29.03
Tgt Trk: 0.0 Tgt Vel: 0.0
Alt: 770.0 ft

## RADAR PARAMETERS - for UWB

RTP Channel: 1
Resolution: N/A
Swath width: Single
RMS Time Constant: 2^7
Position Reference: ON
Atten. Tracking: OFF
Range Gate Delta: 0.0 ft
Azimuth Presum Rate: Presum6
TX Chirp Filename: CTL1U2A

Filter damping is Hi -> 10 sec
PRF Factor is FAST (262.5 kts)
Ave Gndspd: Real -> 249.5 kts
Mocomp Off for Chnl 1, 2, 3, 4
GPS Vel/Pos Reference
Adj Gnd Scene: 5000.0 ft
Range Tracking is OFF
Clutterlock Reference: OFF
RX Chirp Filename: CRL1N0A

Ave Ref Vel -> -4.3 fps (s.d.= 1.8)
Ave Fil Vel -> -4.5 fps (s.d.= 1.5)

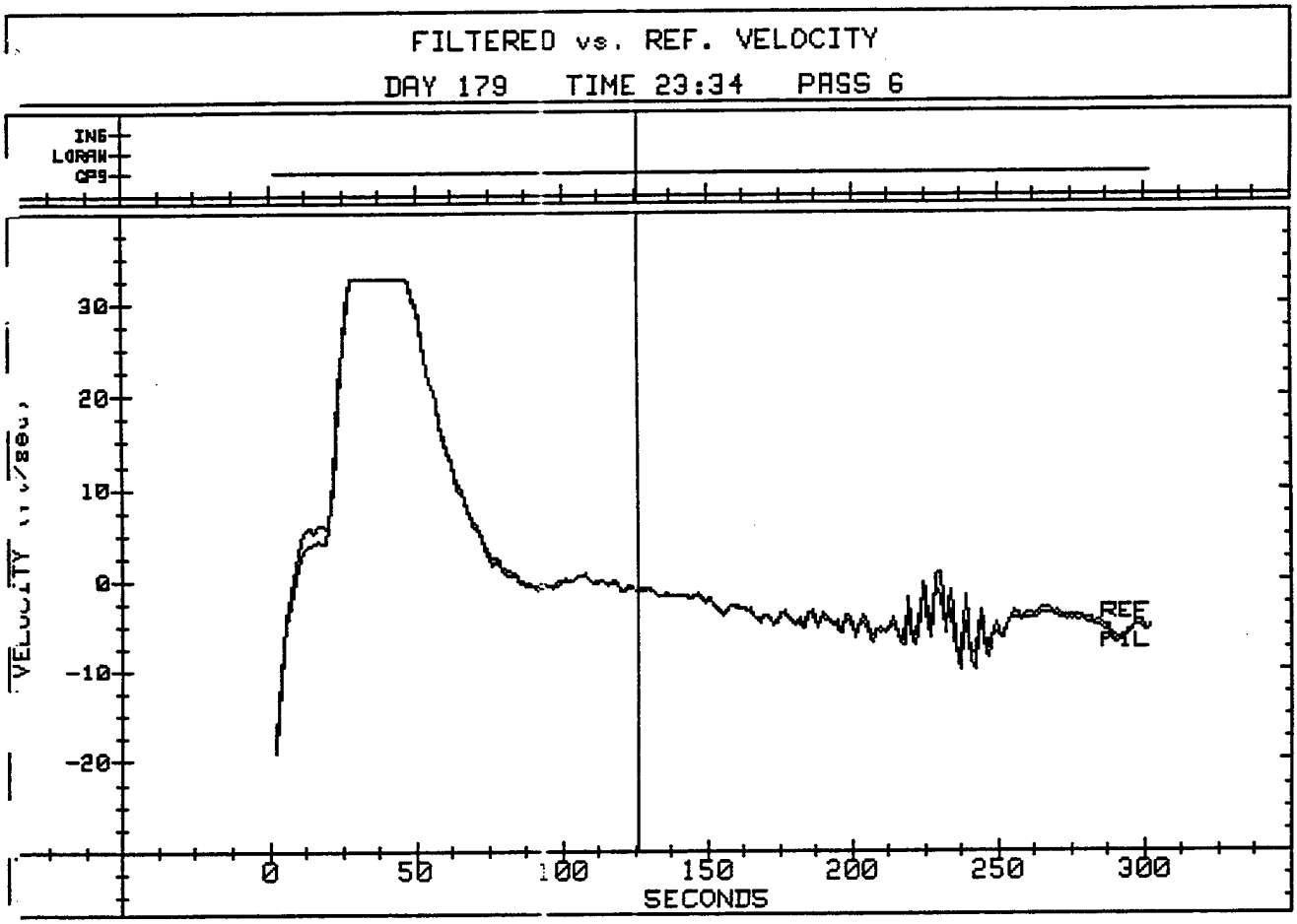
| NML XMIT PWR | ANT BIAS | | Tape Footage | | Drive no. |
|---|---|---|---|---|---|
| X: -70.0 | Elevation: | 0.0° | | | |
| L: -70.0 | Azimuth: | 0.0° | Starting: | 5459 ft | (1) |
| C: -70.0 | Pitch: | 0.0° | Ending: | 6705 ft | (1) |
| P: 40.0 | | | | | |

| Vel Bias | CAL Atten | LINE Map Time (UCT) |
|---|---|---|
| X: 2112.0 | X: 63.8 dB | Start: 23:36:20 |
| Y: 1874.0 | L: 63.8 dB | End: 23:39:05 |
| Z: 5343.0 | C: 63.8 dB | |

Mocomp Counters

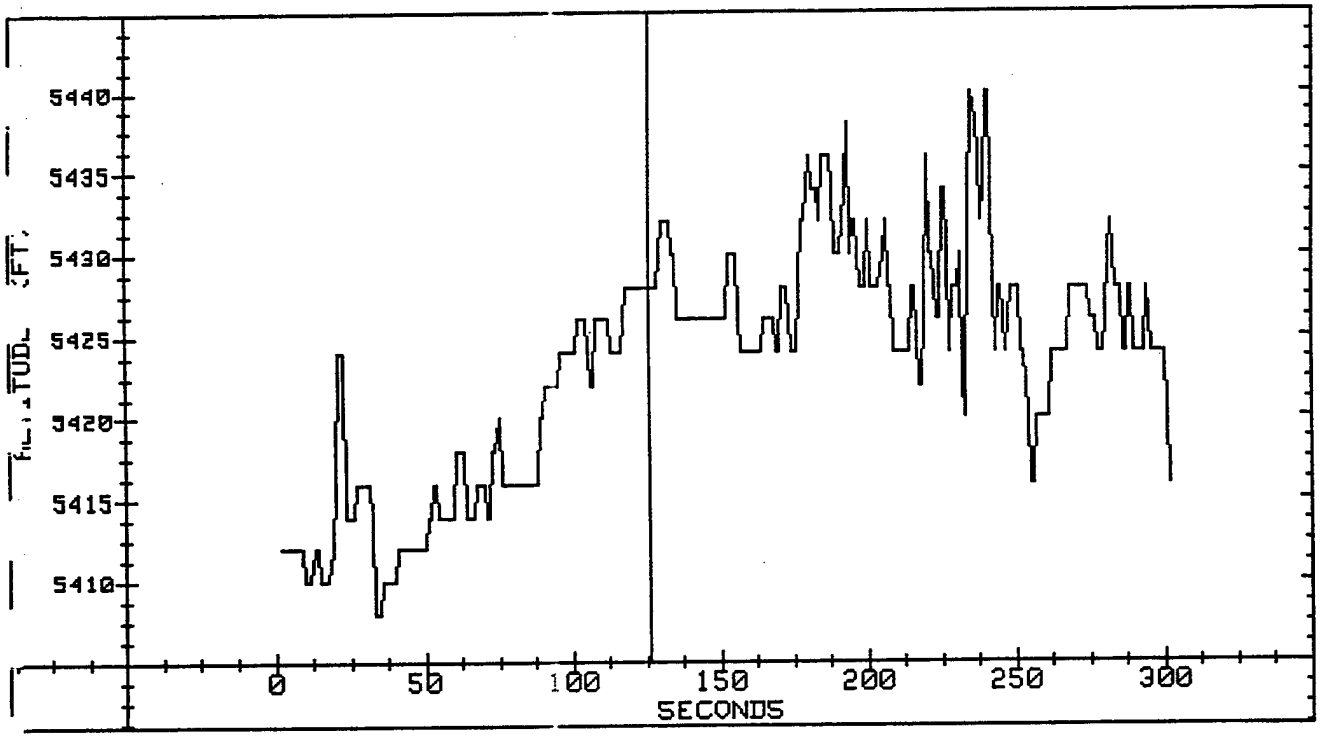
| | | |
|---|---|---|
| Start: | 264112 | 000407B0h |
| End: | 291778 | 000473C2h |

CPA (UCT): 00:00:00
Alt: 0 ft (GPS)
Lat: N 0:00: 0
Lon: E 0:00: 0


FILTERED vs. REF. VELOCITY
DAY 179 TIME 23:34 PASS 6
INS
LORAN
GPS
30
20
10
0
-10
-20
VELOCITY
REF
FIL
0
50
100
150
200
250
300
SECONDS

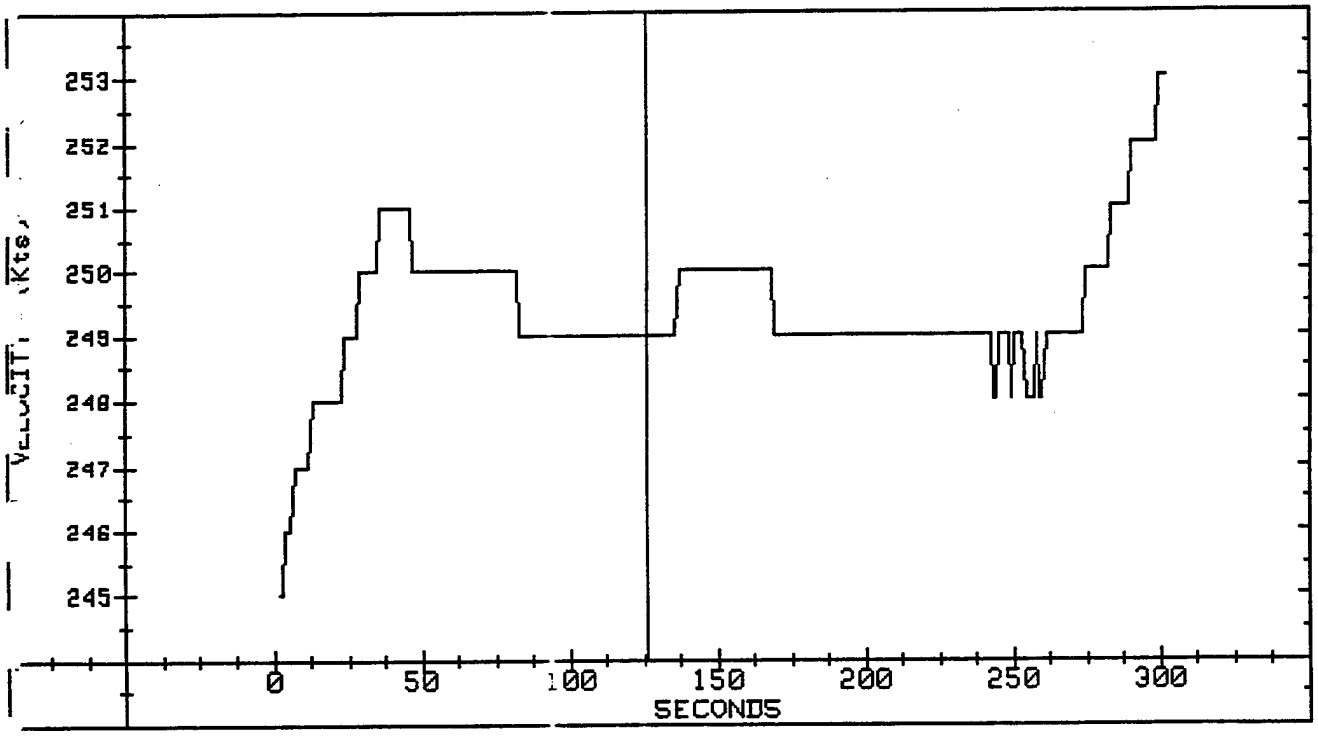
BARO ALTITUDE

DAY 179 TIME 23:34 PASS 6 m= 5427. sd= 4.4487



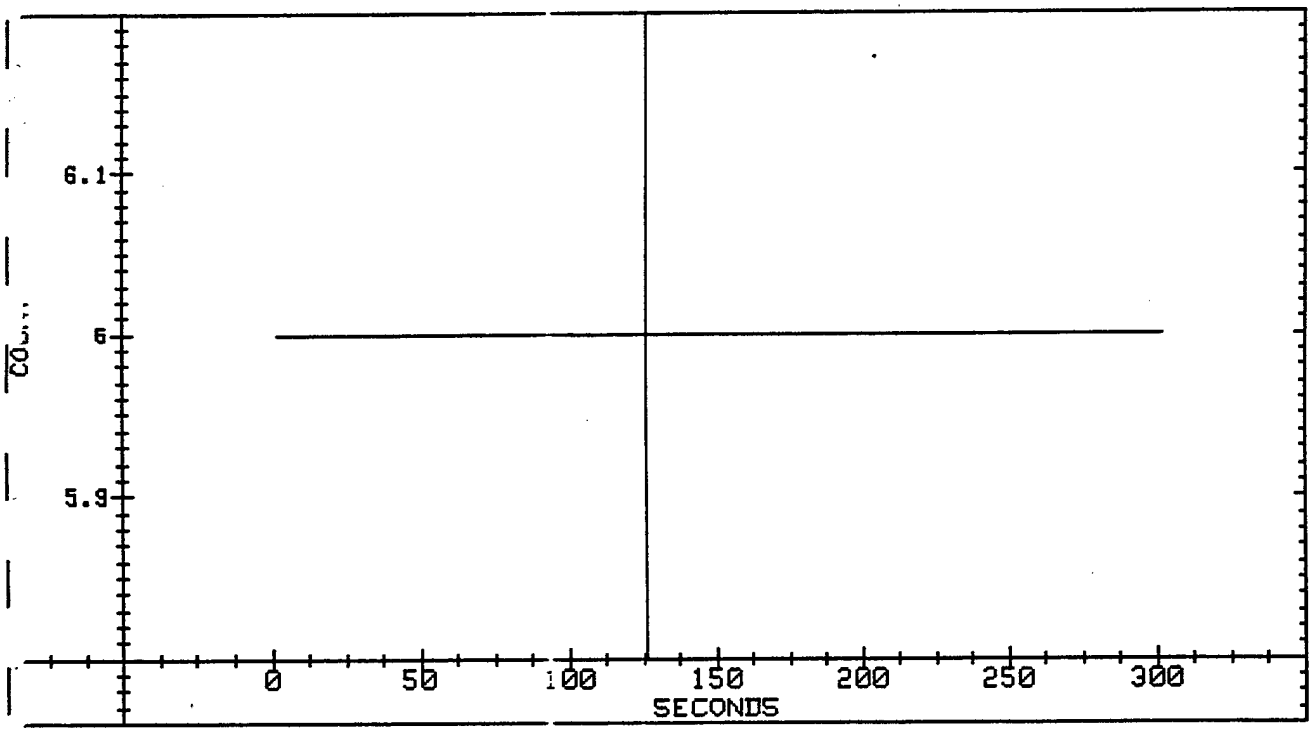
INS GROUND SPEED

DAY 179 TIME 23:34 PASS 6 m= 249.5, sd= 1.02758



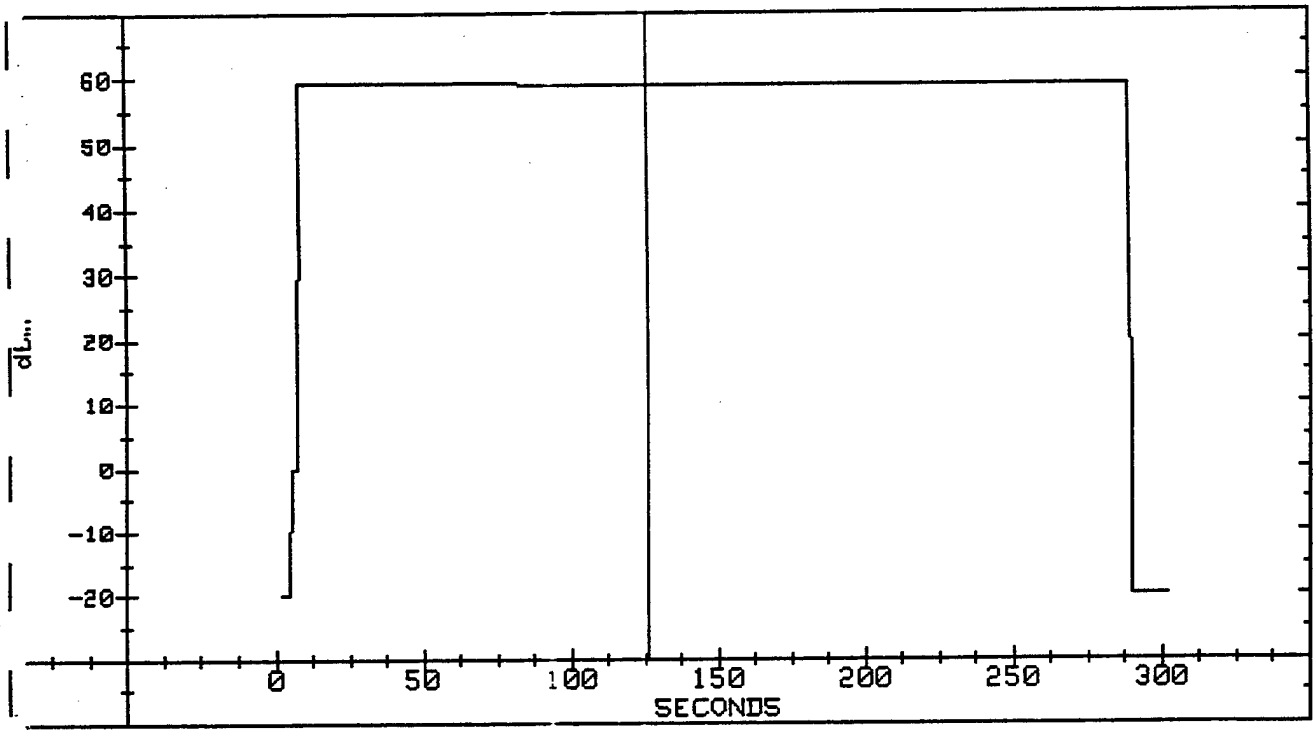
PASS NUMBER

DAY 179 TIME 23:34 PASS 6 m= 6, sd= 0



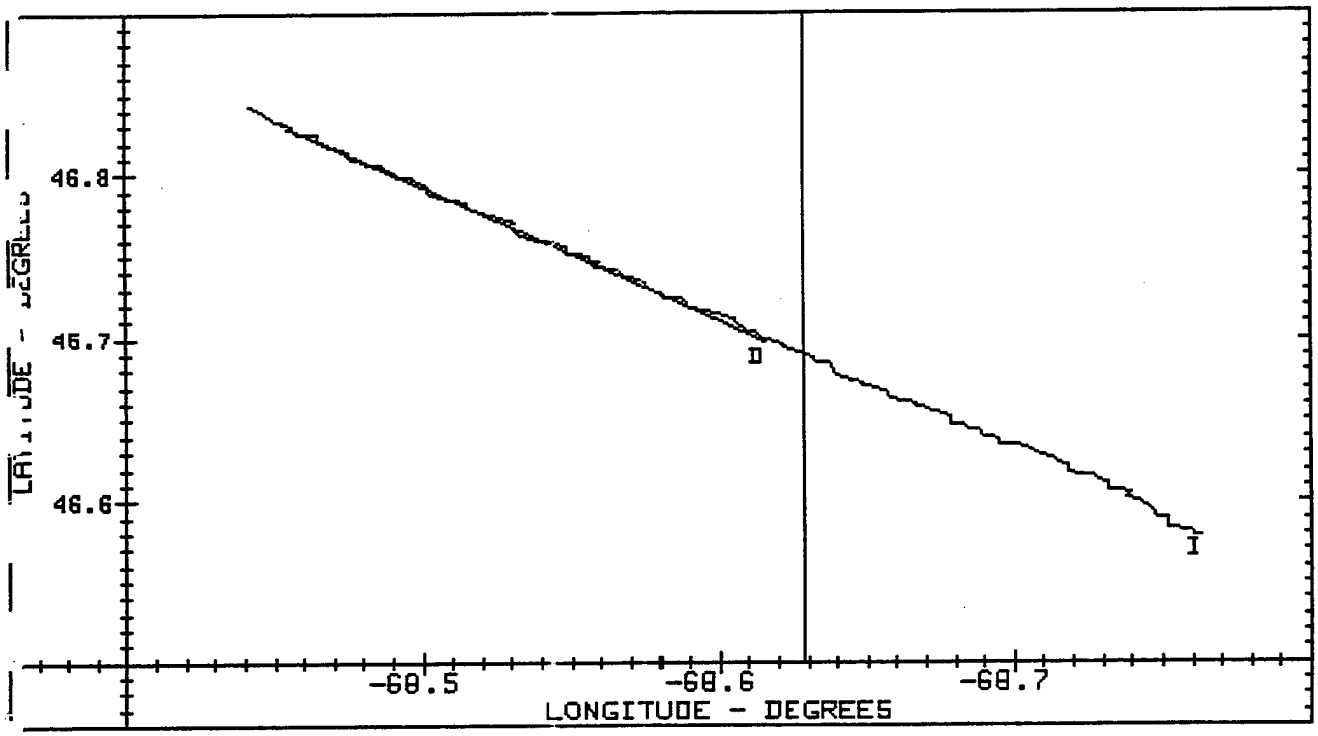
P Band Power

DAY 179 TIME 23:34 PASS 6 m= 52.78, sd= 21.2152



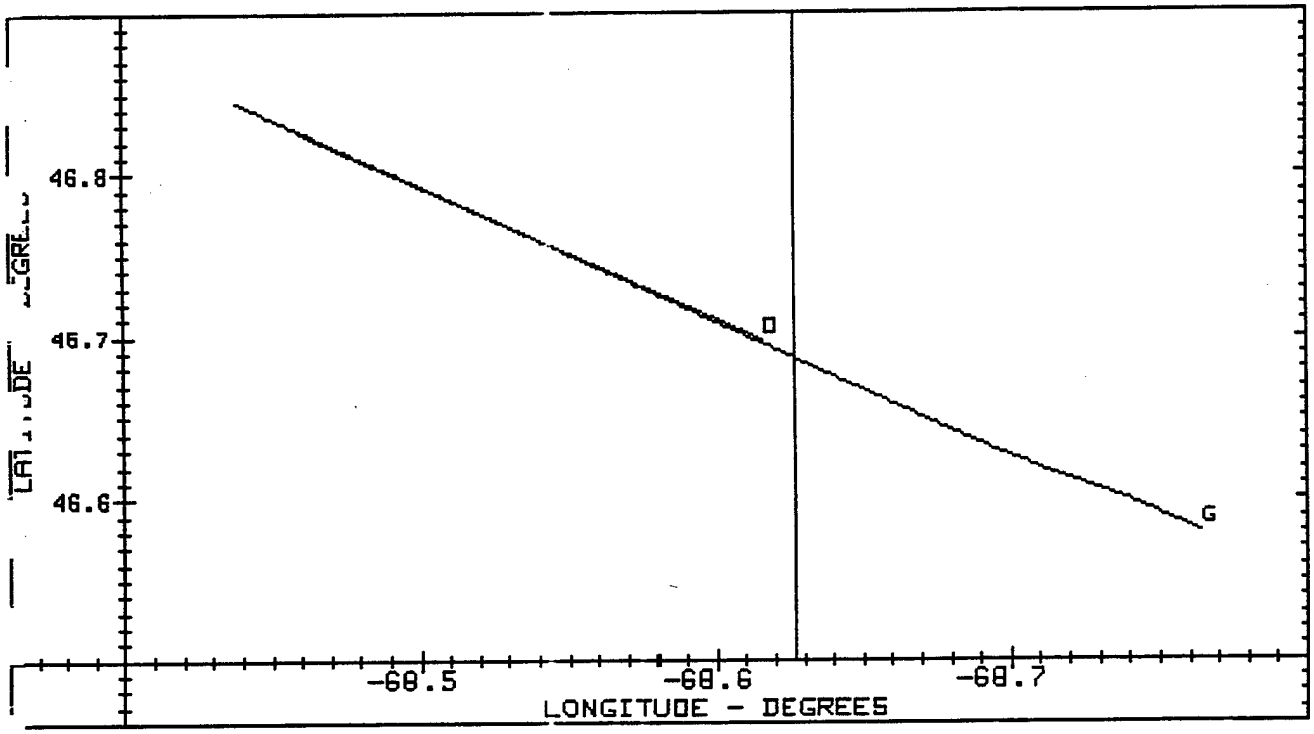
INS AIRCRAFT POSITION

DAY 179 TIME 23:34 PASS 6



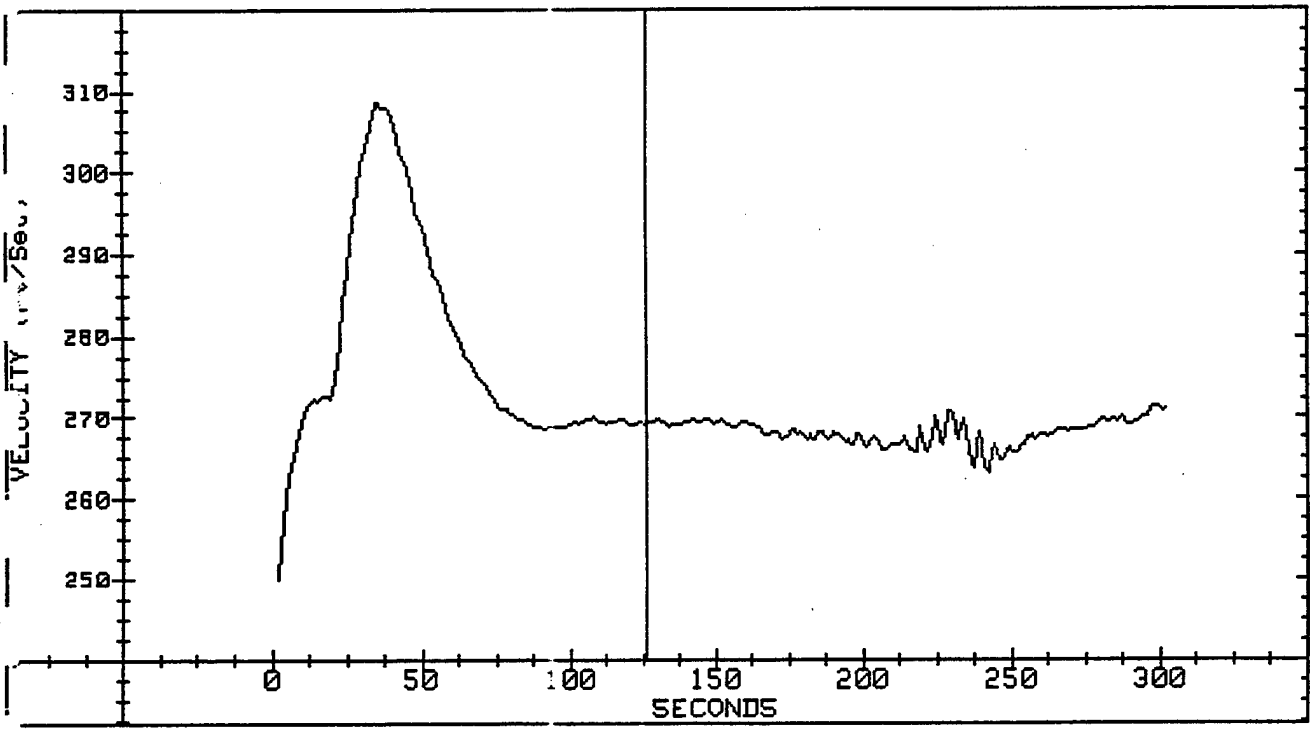
GPS AIRCRAFT POSITION

DAY 179 TIME 23:34 PASS 6



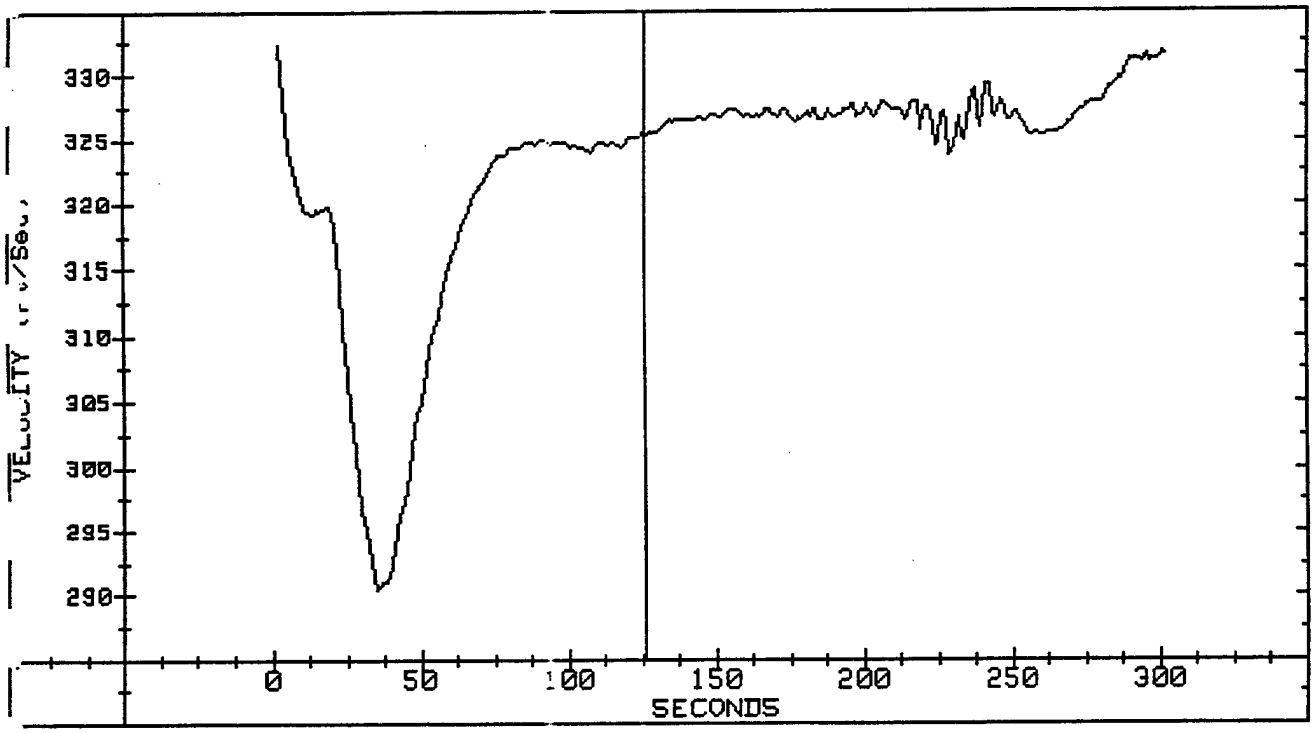
GPS Vb

DAY 179 TIME 23:34 PASS 6 m= 268.1, sd= 1.53686



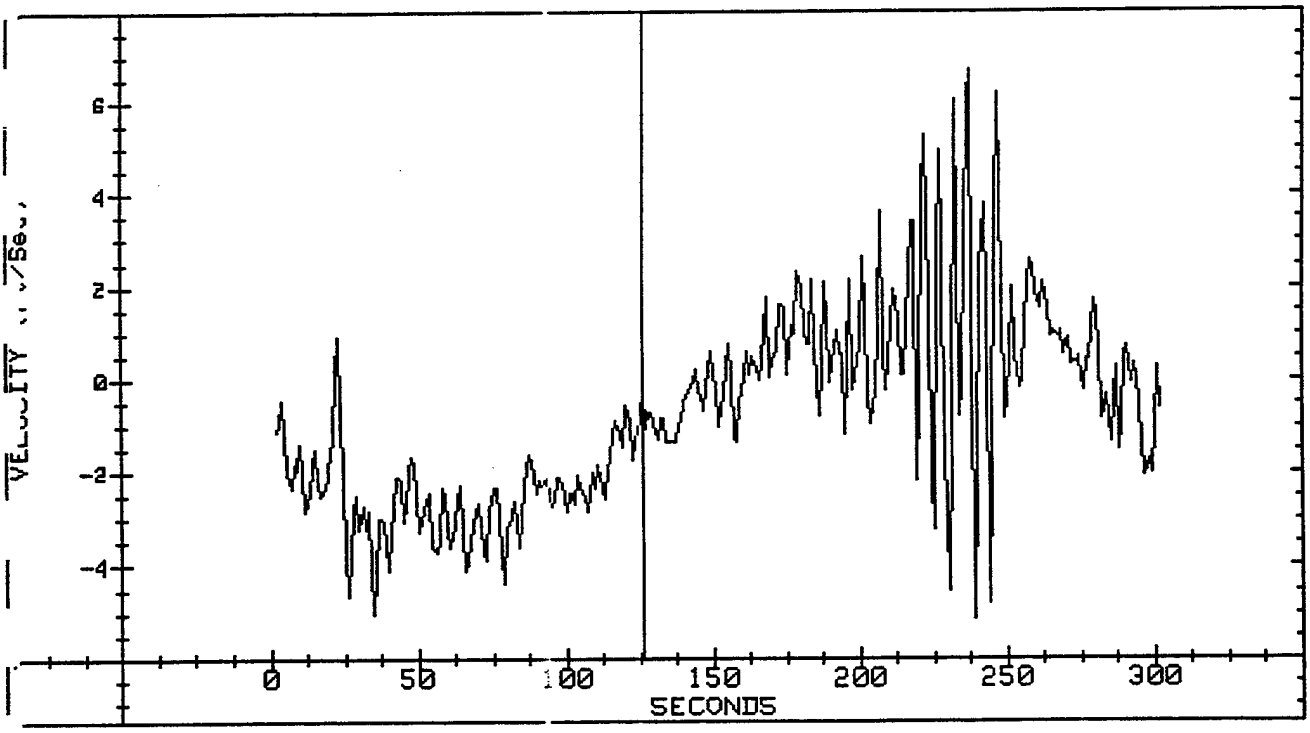
GPS Vn

DAY 179 TIME 23:34 PASS 6 m= 327.3, sd= 1.55186



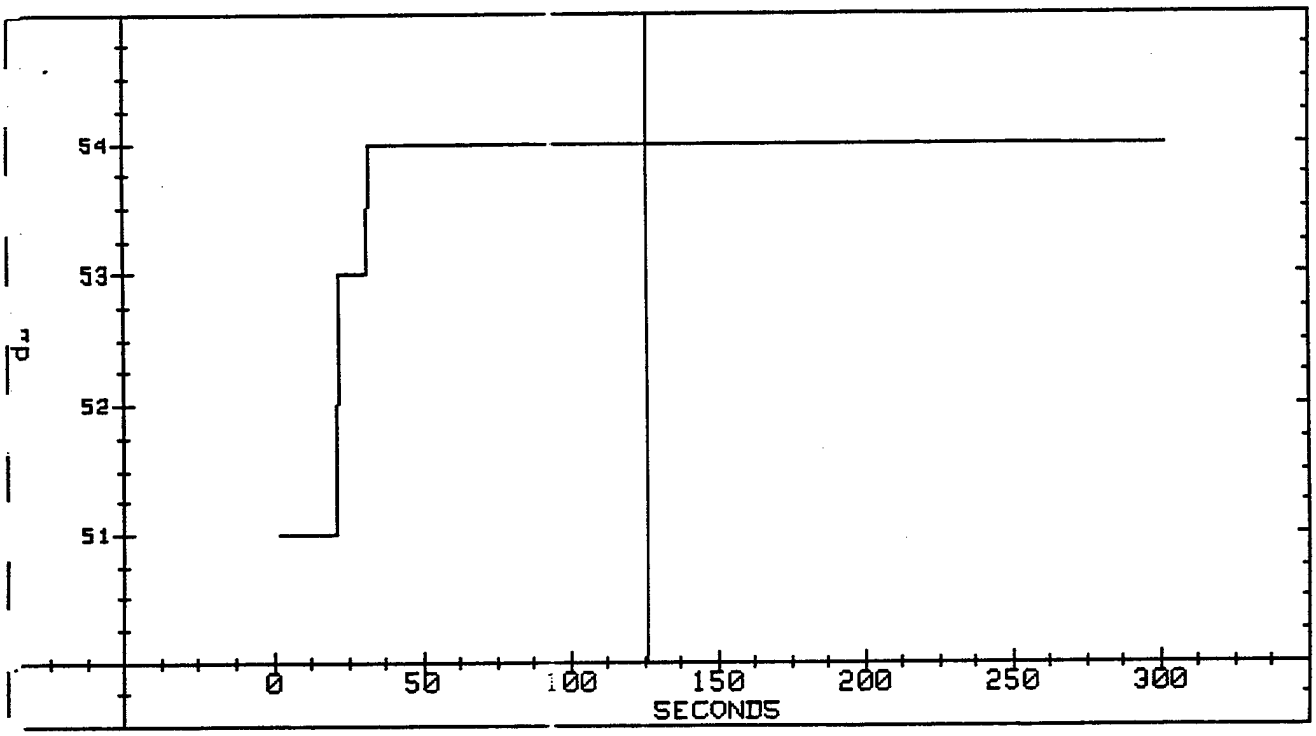
GPS Vv

DAY 179 TIME 23:34 PASS 6 m= .5463, sd= 1.79012



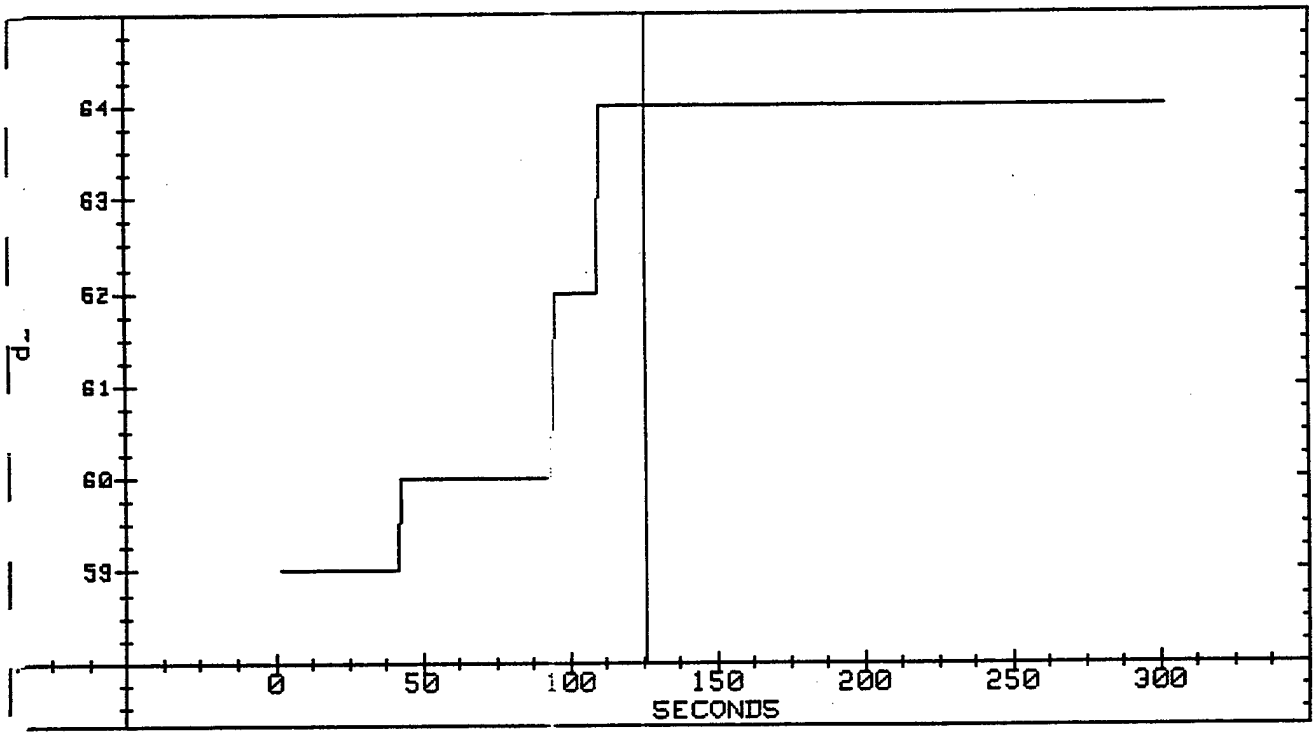
Ch1 RES Attenuation

DAY 179 TIME 23:34 PASS 6 m= 54, sd= 0



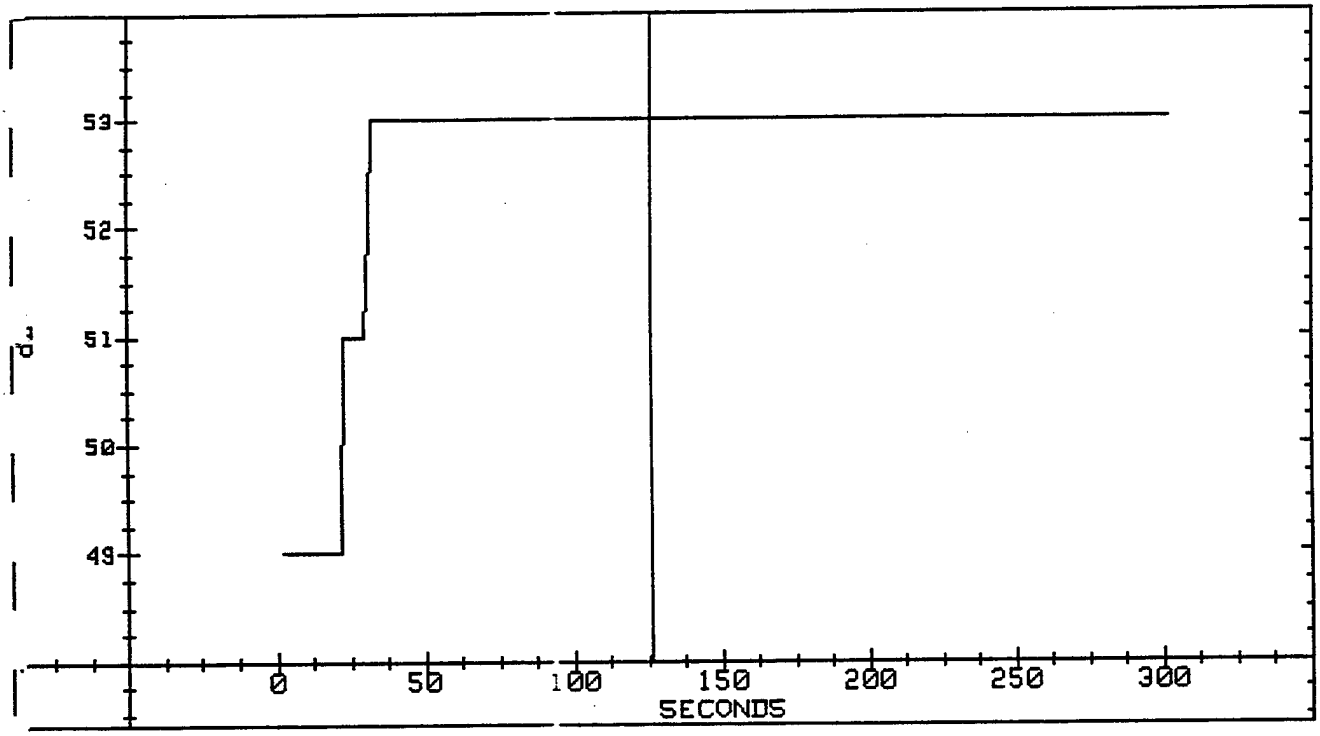
Ch2 RES Attenuation

DAY 179 TIME 23:34 PASS 6 m= 64, sd= 0



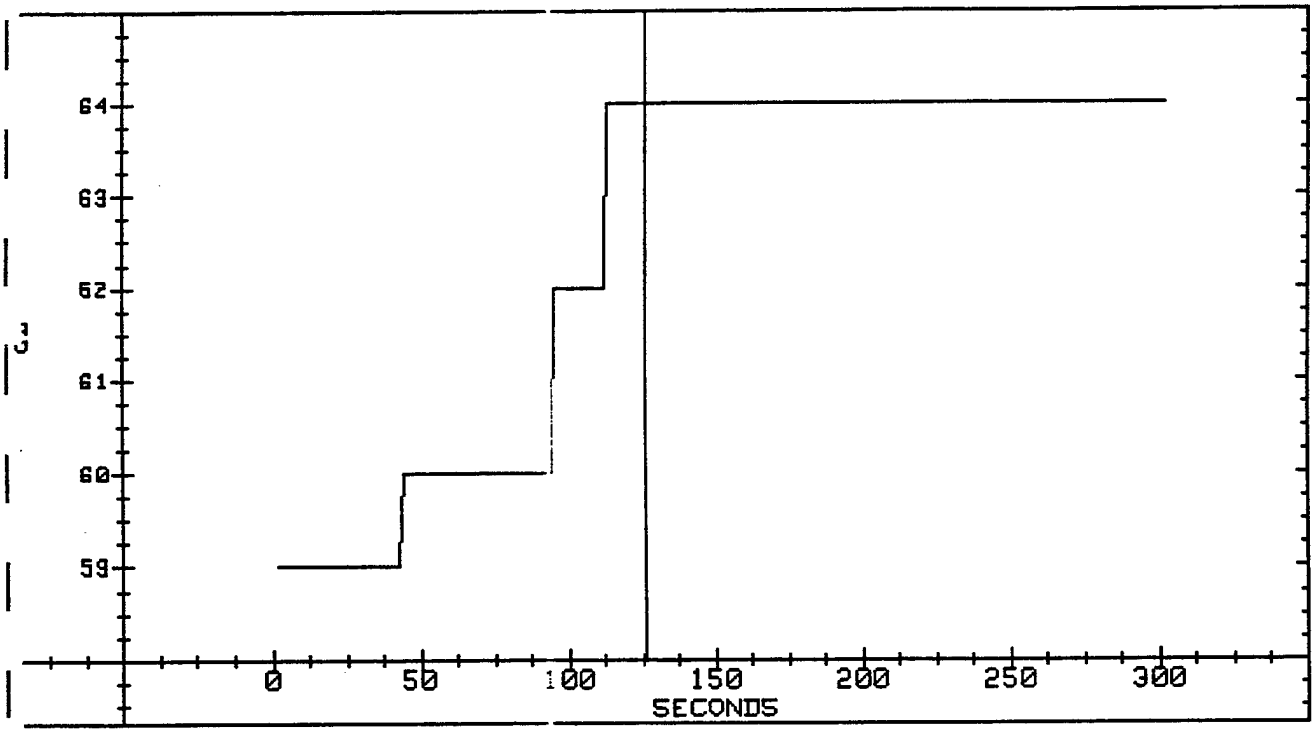
Ch3 RES Attenuation

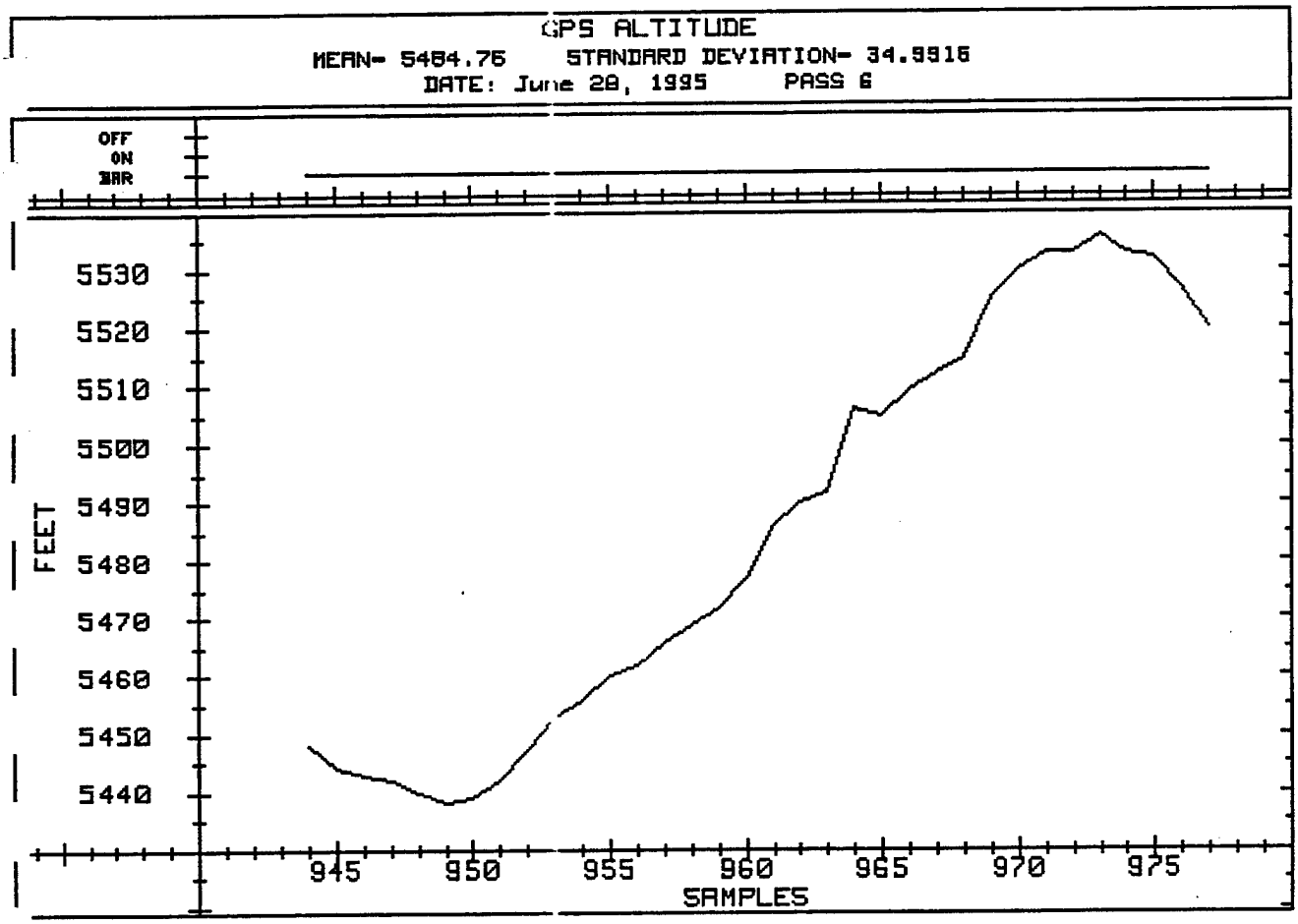
DAY 179 TIME 23:34 PASS 6 m= 53. sd= 0



Ch4 RES Attenuation

DAY 179 TIME 23:34 PASS 6 m= 64, sd= 0

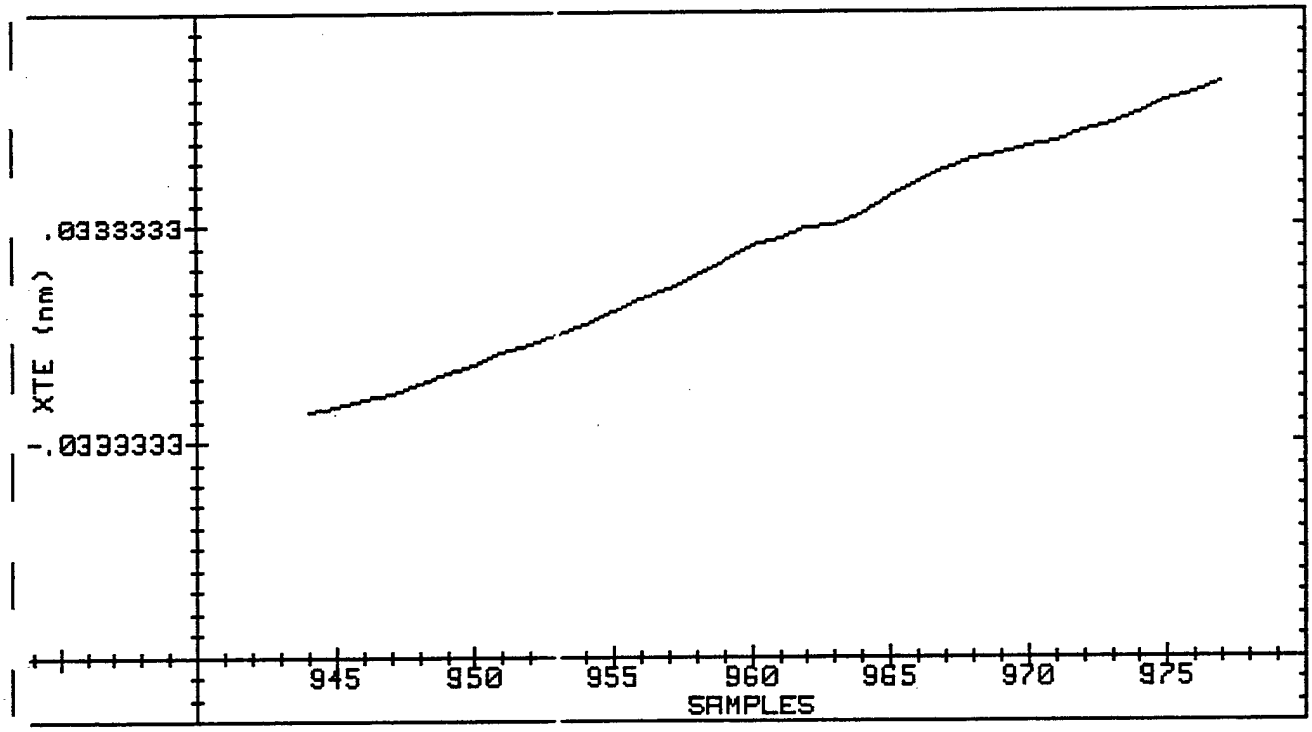



GPS ALTITUDE
MEAN= 5484.76 STANDARD DEVIATION= 34.9916
DATE: June 28, 1995 PASS 6
OFF
ON
BAR
5530
5520
5510
5500
5490
5480
5470
5460
5450
5440
FEET
945
950
955
960
965
970
975
SAMPLES

GPS Cross Track Error

MEAN= .0263529 STANDARD DEVIATION= .0318349

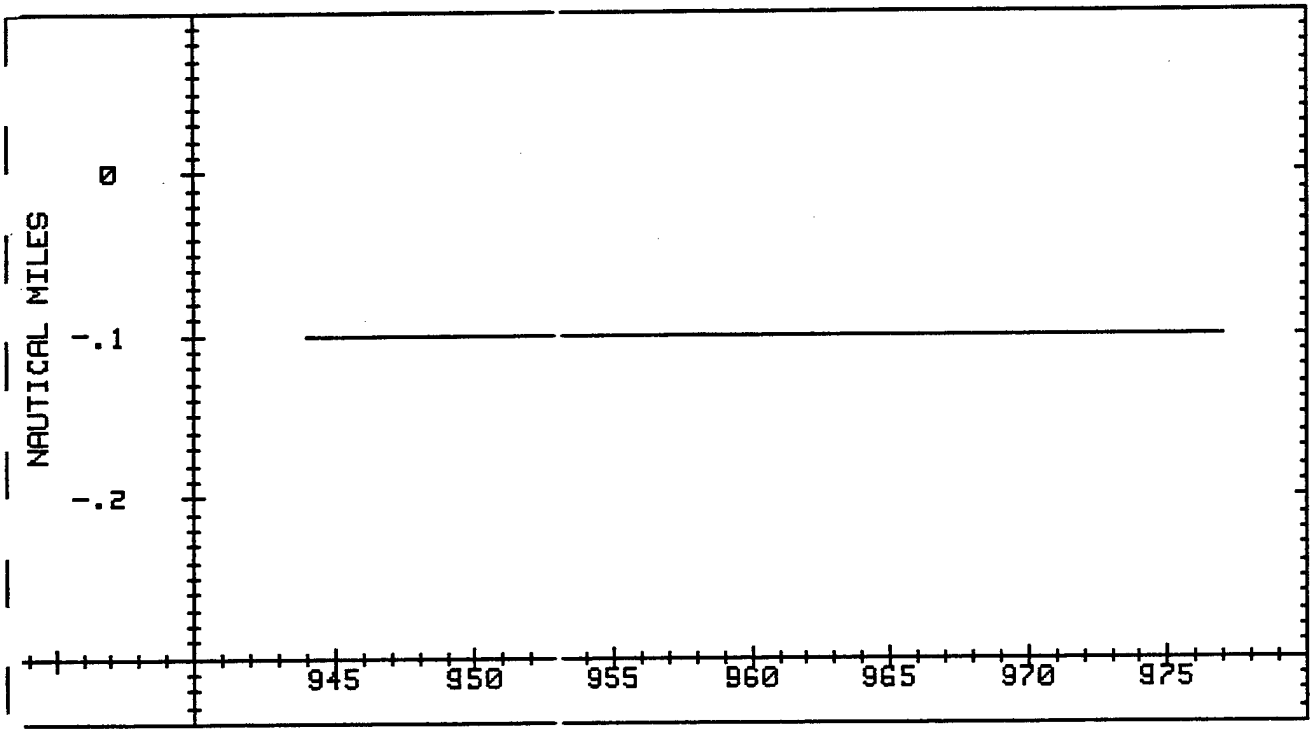
DATE: June 28, 1995 PASS 6



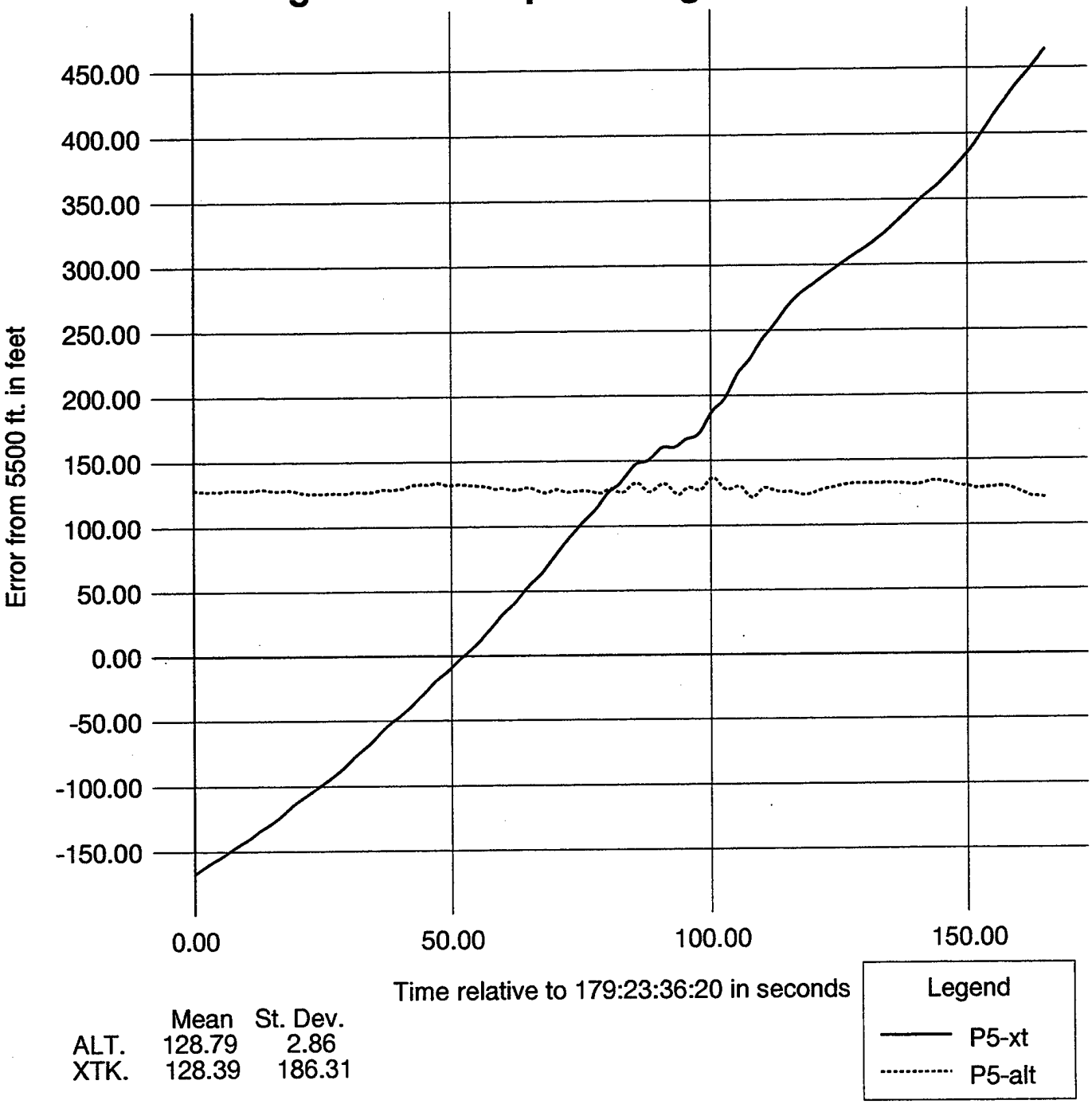
INS CROSS TRACK ERROR

MEAN= -.1 STANDARD DEVIATION= 1.31709E-9

DATE: June 28, 1995 PASS 6



# Portage, ME - June 28, 1995 - Pass 6 - Xtk. and Alt. Errors
## Higher alt. and port are greater than zero




| | Mean | St. Dev. |
|---|---|---|
| ALT. | 128.79 | 2.86 |
| XTK. | 128.39 | 186.31 |

28 Jun 1995 | Post-line Data Sheet | Time: 179:23:24:49
Tape: E1416 | Line 49 | Pass 5
Mission: DAY 4 PORTAGE MAINE | Req.# 22

## AIRCRAFT & CHANNEL DATA

| | | | | CH 1 | CH 2 | CH 3 | CH 4 |
|---|---|---|---|---|---|---|---|
| Altitude | | | | | | | |
| Desired: | 5500 ft | | Wave/Pol.: | p-VV | p-VH | p-HV | p-HH |
| Baro: | 5414 ft | s.d.= 6 | Swath Ctr Ang: | 15.0° | 15.0° | 15.0° | 15.0° |
| Slt. rng: | 18275 ft | | Tgt Dep Ang: | 15.0° | 15.0° | 15.0° | 15.0° |
| Look: | Right | | St rng (ft): | 16740 | 16740 | 16740 | 16740 |
| Depr Ang: | 25.0° | | Near Rng Dep: | 18.9° | 18.9° | 18.9° | 18.9° |
| Des. trk: | 190.0° | | Far Rng Dep: | 9.5° | 9.5° | 9.5° | 9.5° |
| Start Sq: | 90.0° | | Atten (dB): | 51.0 | 59.0 | 49.0 | 59.0 |
| End Sq: | 90.0° | | RMS Video (%FS) | 17.3 | 10.5 | 14.0 | 12.6 |

## WAYPOINTS

| | Latitude | Longitude |
|---|---|---|
| Line_up: | N 47:00.03 | W 68:20.55 |
| Start: | N 46:48.22 | W 68:23.60 |
| End: | N 46:38.38 | W 68:26.12 |
| From: | N 62:58.39 | W 62:09.31 |
| To: | N 30:13.70 | W 71:42.81 |

Main Target: GW
Mocomp Point:
Lat: N 46:43.81
Long: W 68:29.03
Tgt Trk: 0.0 Tgt Vel: 0.0
Alt: 770.0 ft

## RADAR PARAMETERS - for UWB

RTP Channel: 1
Resolution: N/A
Swath width: Single
RMS Time Constant: 2^7
Position Reference: ON
Atten. Tracking: OFF
Range Gate Delta: 0.0 ft
Azimuth Presum Rate: Presum6
TX Chirp Filename: CTL1U2A

Filter damping is Hi -> 10 sec
PRF Factor is FAST (262.5 kts)
Ave Gndspd: Real -> 251.5 kts
Mocomp Off for Chnl 1, 2, 3, 4
GPS Vel/Pos Reference
Adj Gnd Scene: 5000.0 ft
Range Tracking is OFF
Clutterlock Reference: OFF
RX Chirp Filename: CRL1N0A

Ave Ref Vel -> 1.1 fps (s.d.= 1.9)
Ave Fil Vel -> .7 fps (s.d.= 1.7)

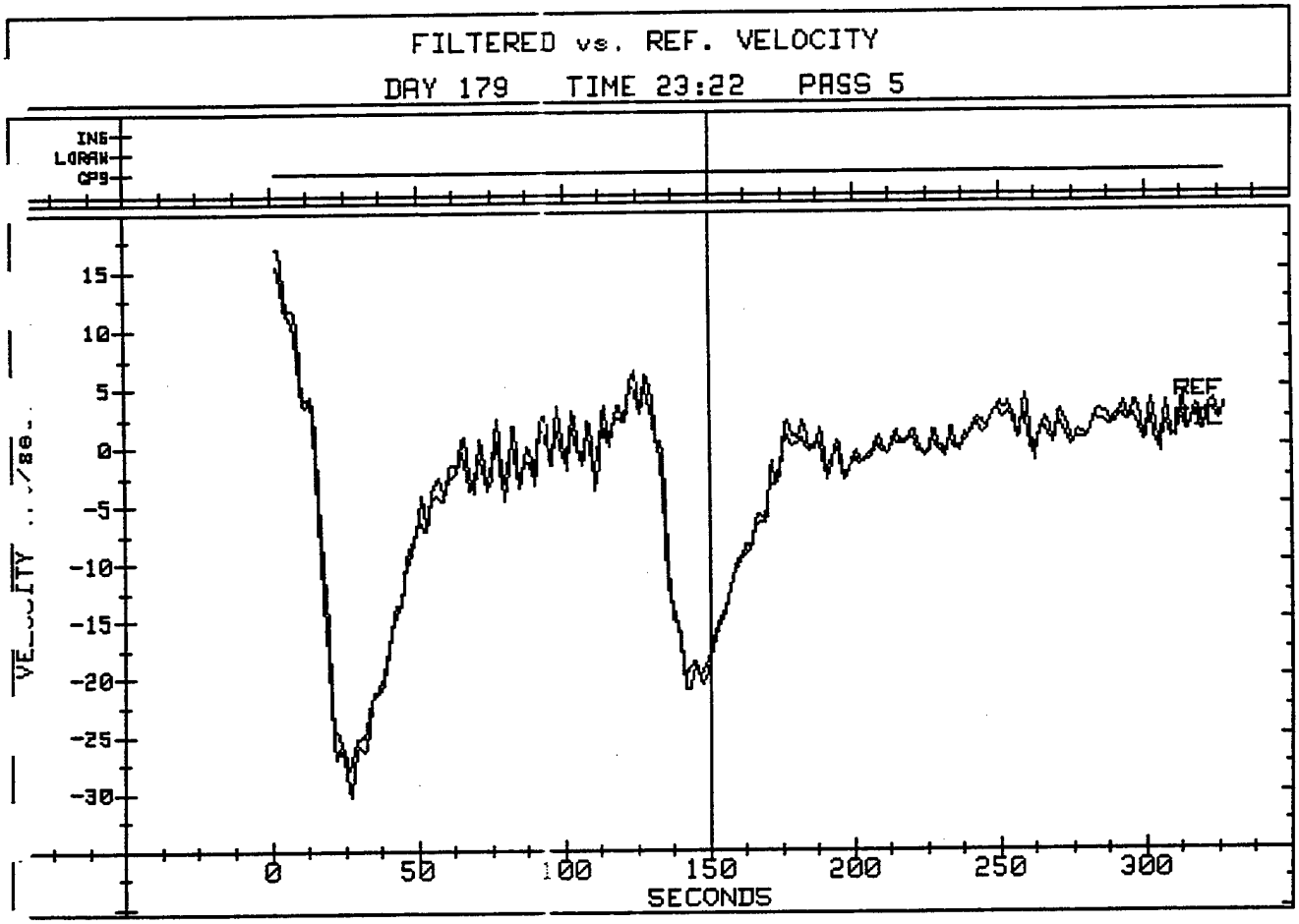
| NML XMIT PWR | ANT BIAS | | Tape Footage | | Drive no. |
|---|---|---|---|---|---|
| X: -70.0 | Elevation: | 0.0° | | | |
| L: -70.0 | Azimuth: | 0.0° | Starting: | 4187 ft | (1) |
| C: -70.0 | Pitch: | 0.0° | Ending: | 5443 ft | (1) |
| P: 39.7 | | | | | |

| Vel Bias | CAL Atten | LINE Map Time (UCT) |
|---|---|---|
| X: 2112.0 | X: 63.8 dB | Start: 23:24:49 |
| Y: 1874.0 | L: 63.8 dB | End: 23:27:28 |
| Z: 5343.0 | C: 63.8 dB | |

Mocomp Counters

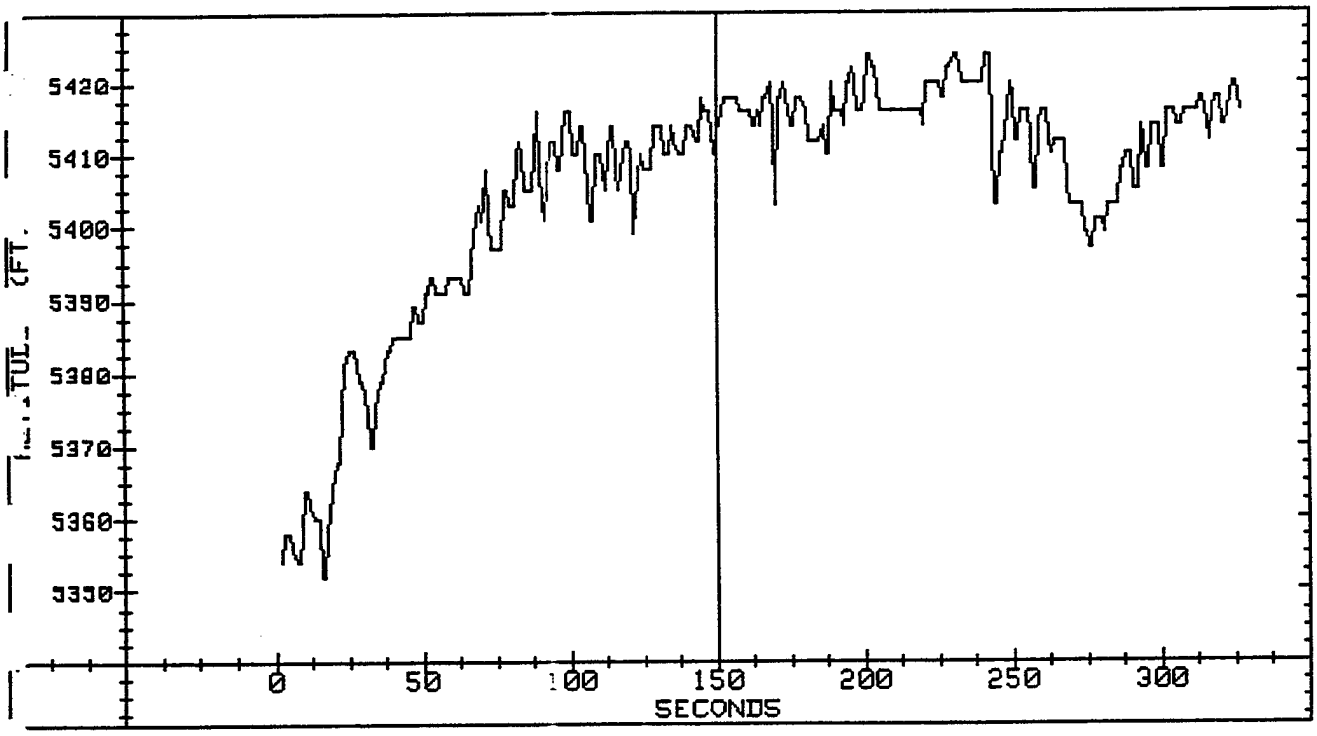
| | | |
|---|---|---|
| Start: | 214429 | 0003459Dh |
| End: | 241099 | 0003ADCBh |

CPA (UCT): 00:00:00
Alt: 0 ft (GPS)
Lat: N 0:00: 0
Lon: E 0:00: 0


FILTERED vs. REF. VELOCITY
DAY 179 TIME 23:22 PASS 5
INS
LORAN
GPS
15
10
5
0
-5
-10
-15
-20
-25
-30
REF
0
50
100
150
200
250
300
SECONDS

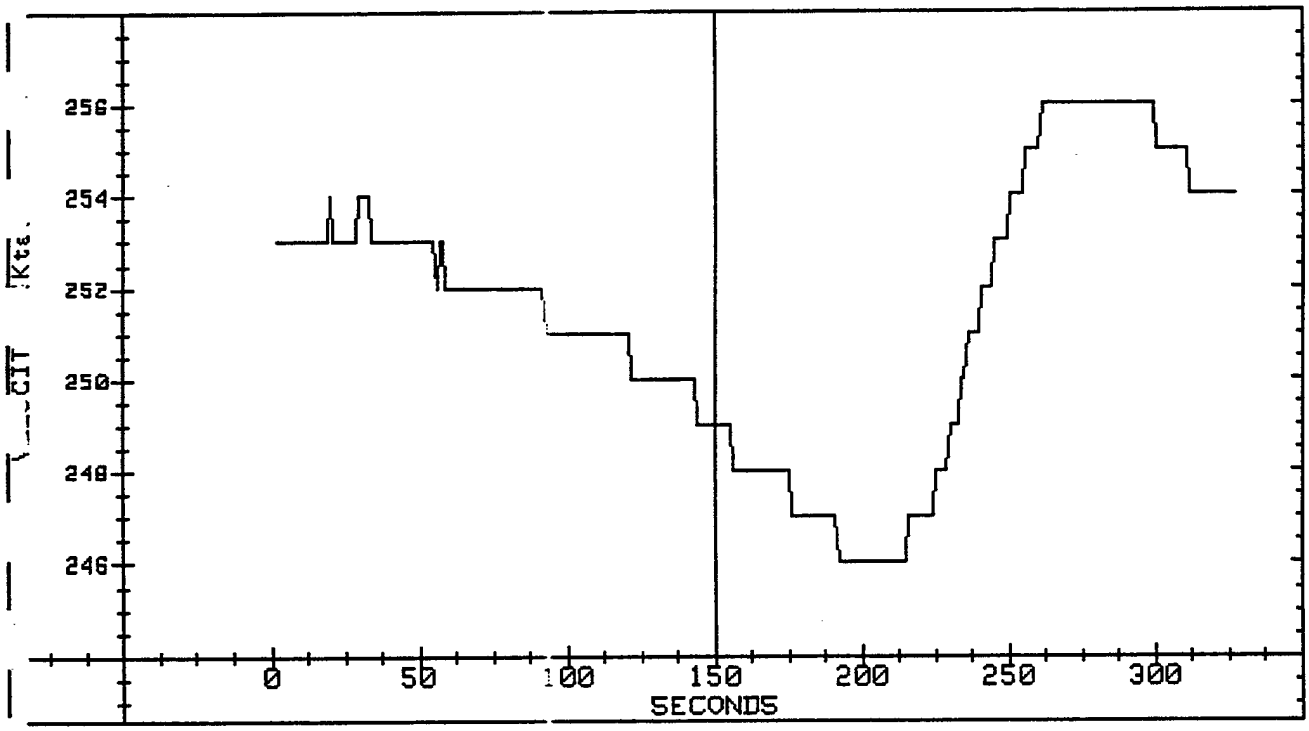
BARO ALTITUDE

DAY 179 TIME 23:22 PASS 5 m= 5414. sd= 6.23094



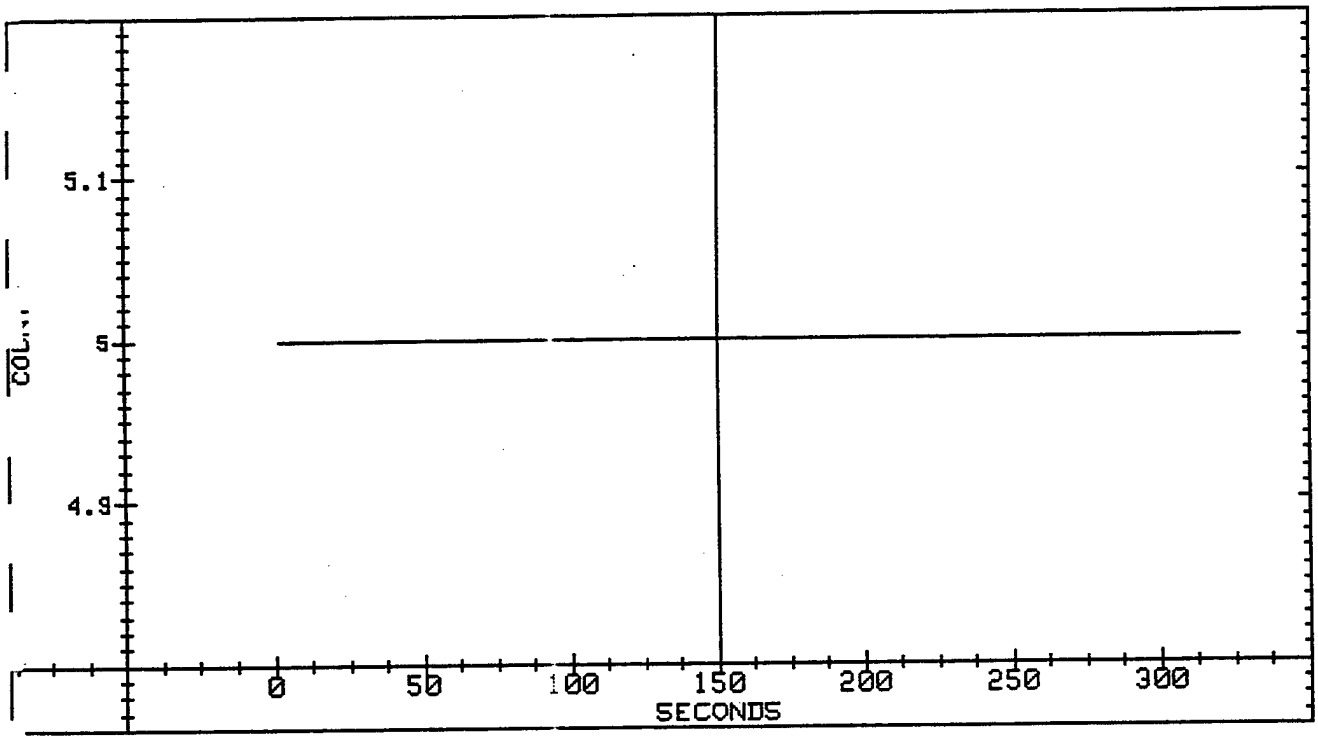
INS GROUND SPEED

DAY 179 TIME 23:22 PASS 5 m= 251.5, sd= 4.00763



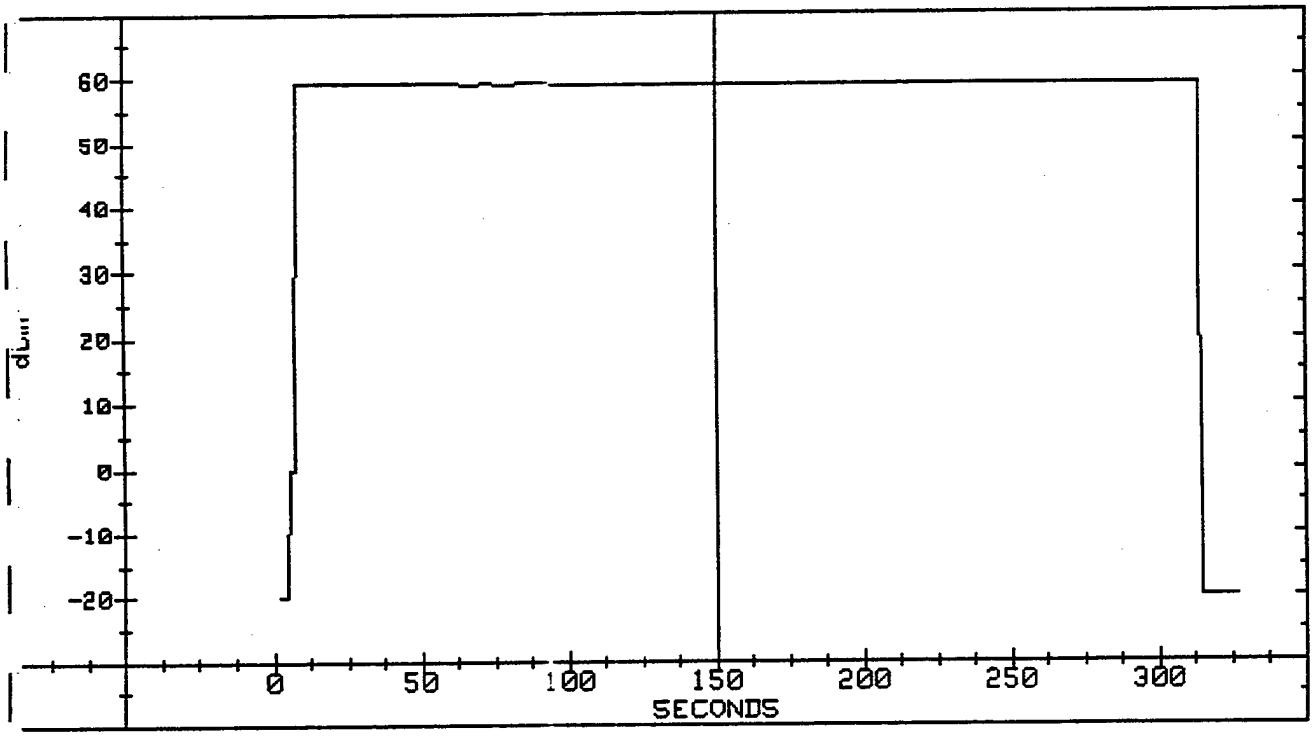
PASS NUMBER

DAY 179 TIME 23:22 PASS 5 m= 5, sd= 0



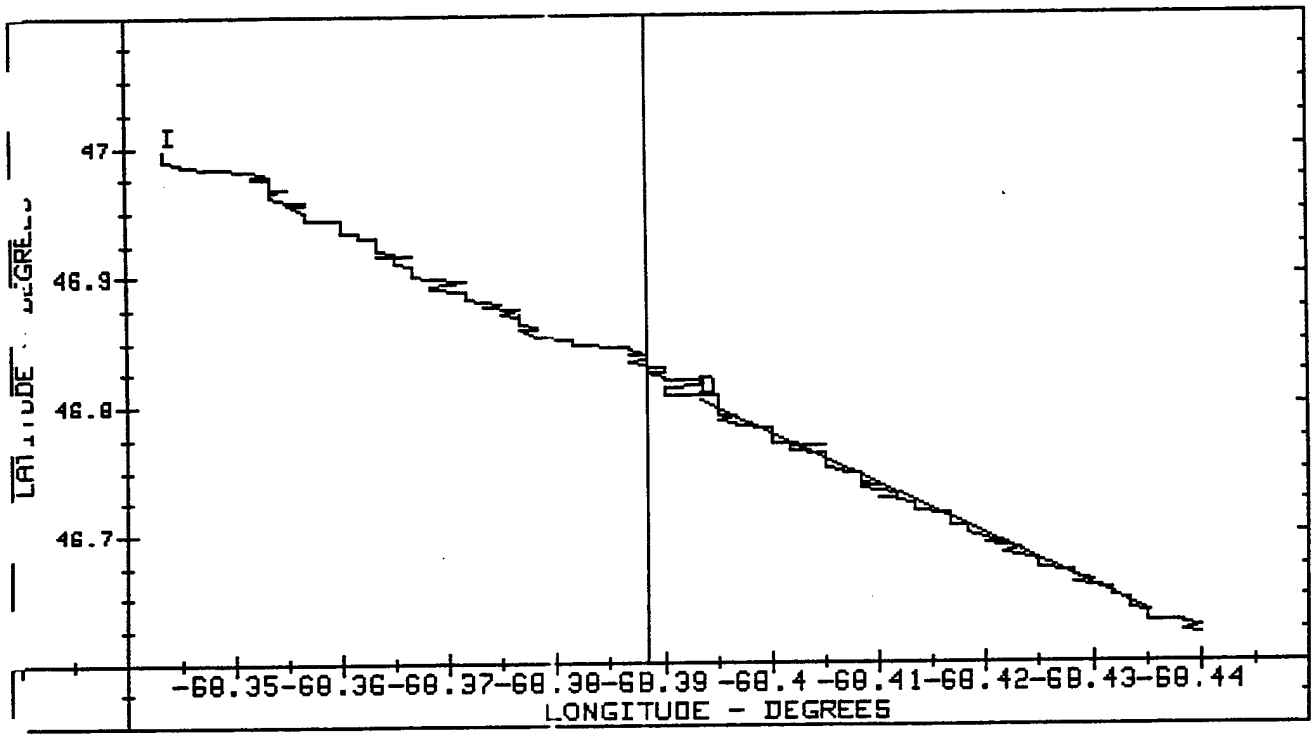
P Band Power

DAY 179 TIME 23:22 PASS 5 m= 52.5, sd= 21.5614



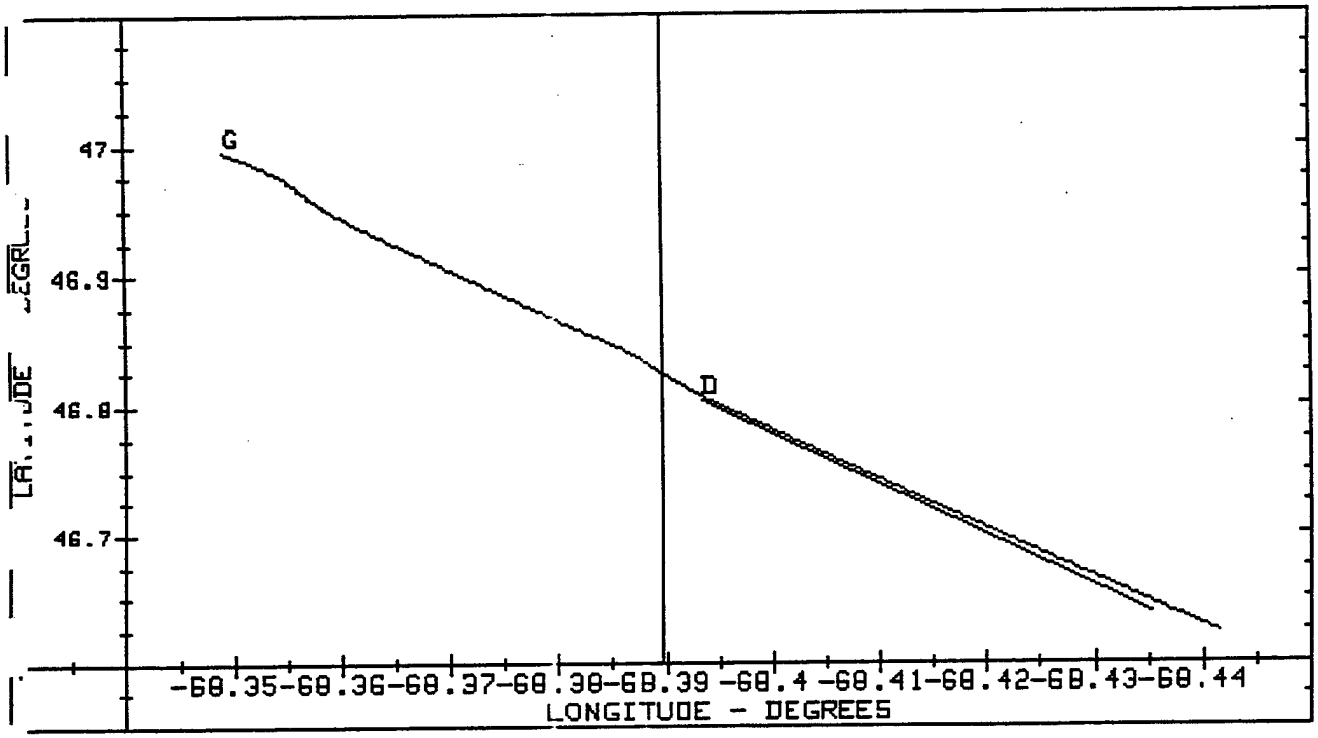
INS AIRCRAFT POSITION

DAY 179 TIME 23:22 PASS 5



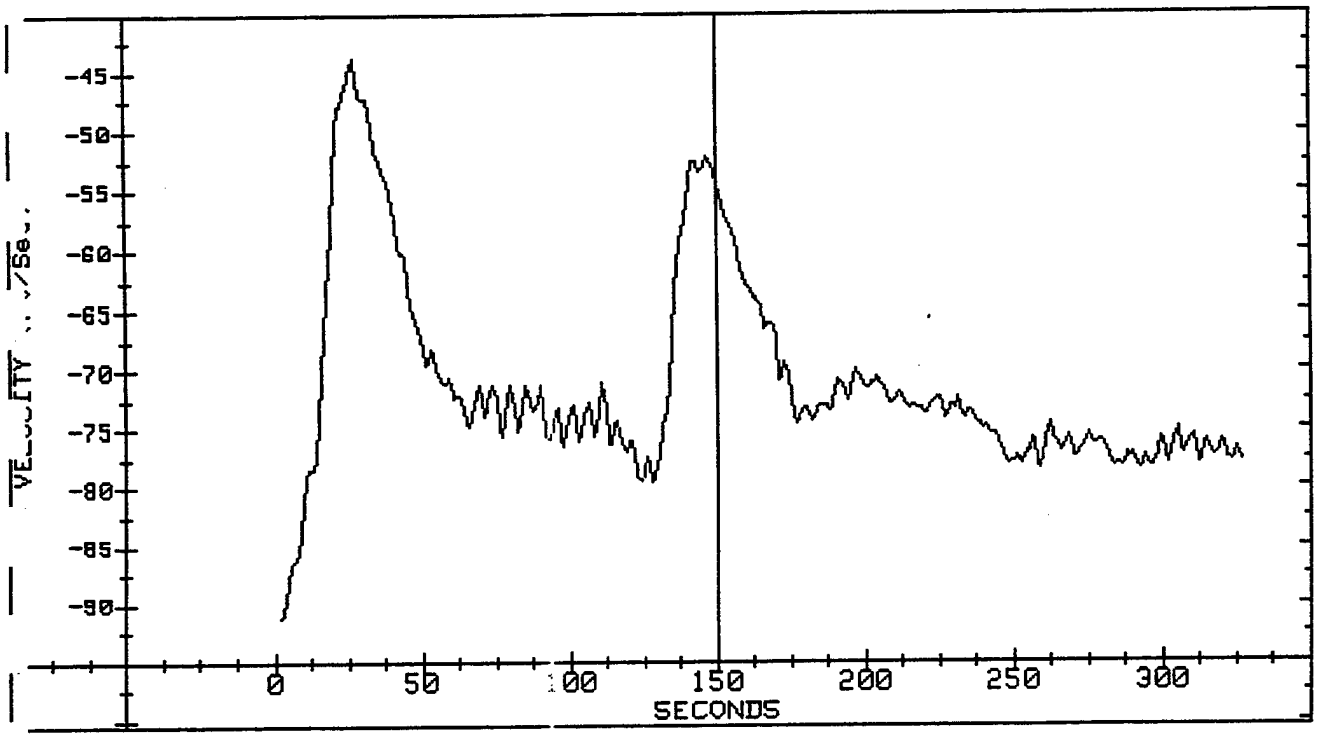
GPS AIRCRAFT POSITION

DAY 179 TIME 23:22 PASS 5



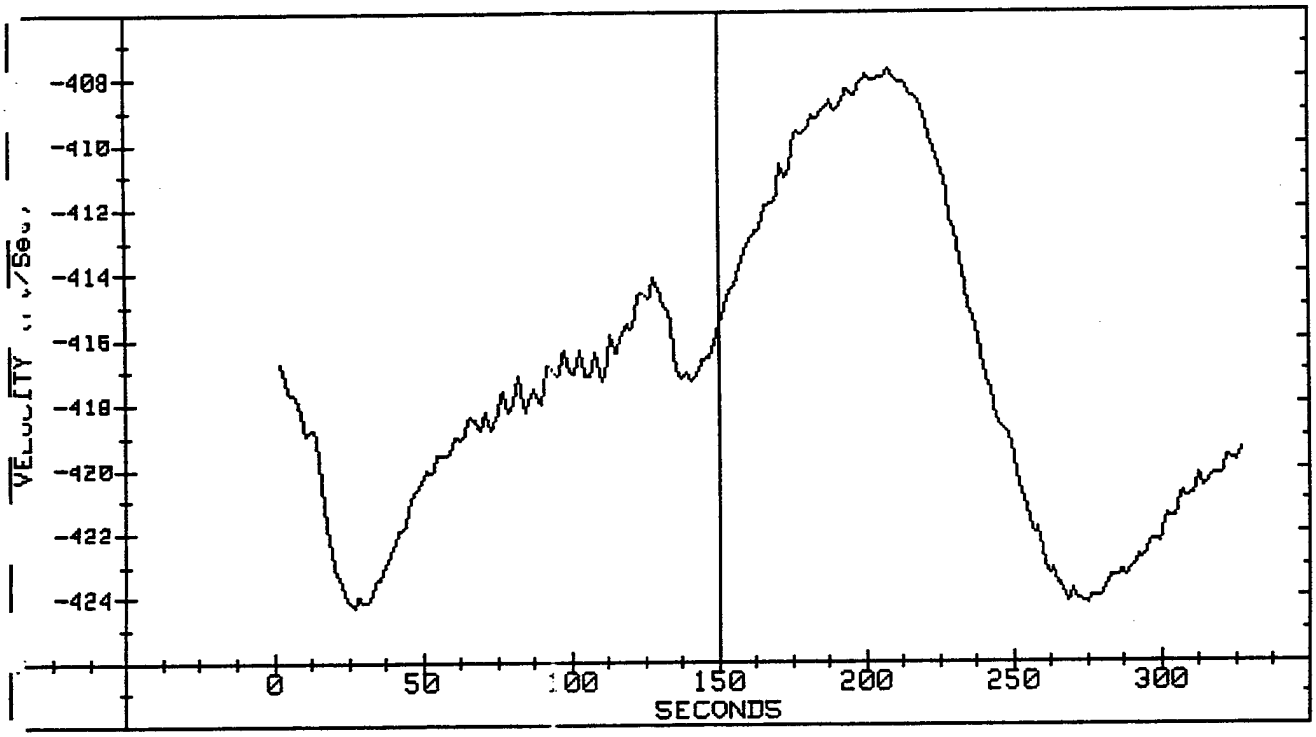
GPS Ve

DAY 179 TIME 23:22 PASS 5 m= -74.75, sd= 2.60596



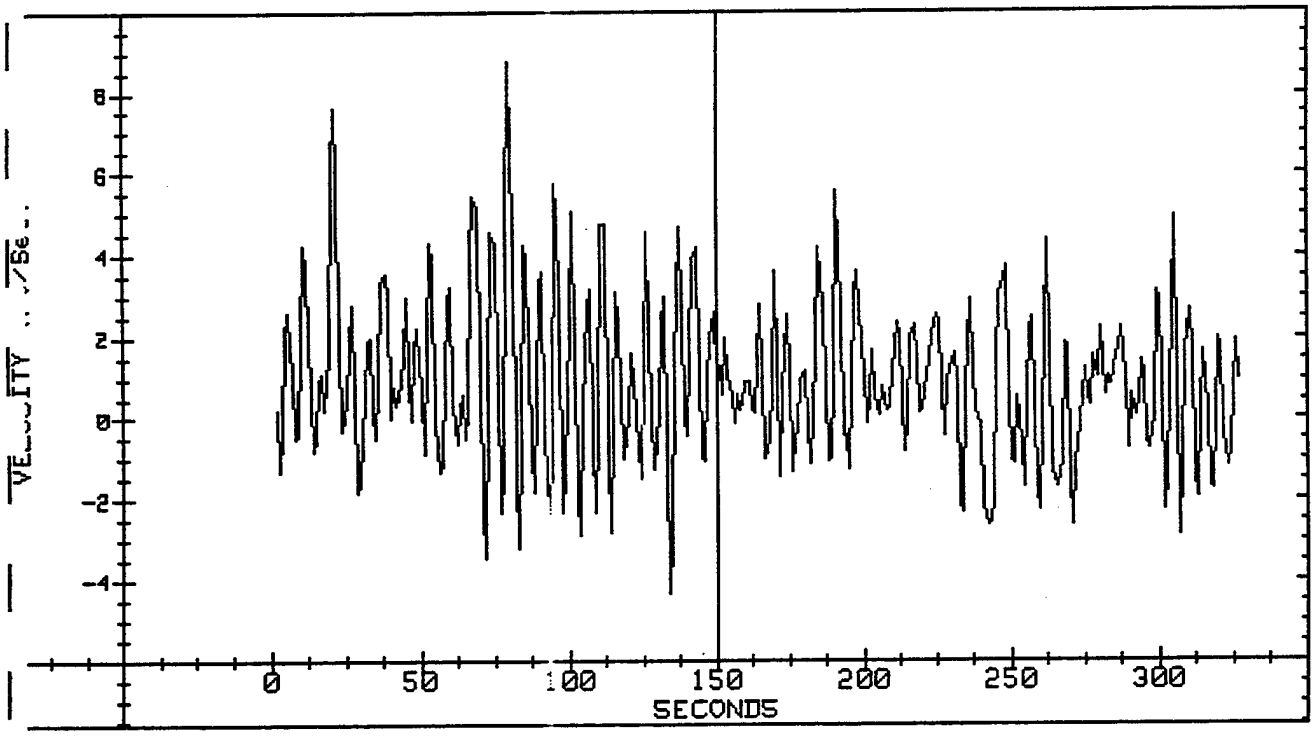
GPS Vn

DAY 179 TIME 23:22 PASS 5 m= -416.4, sd= 6.14382



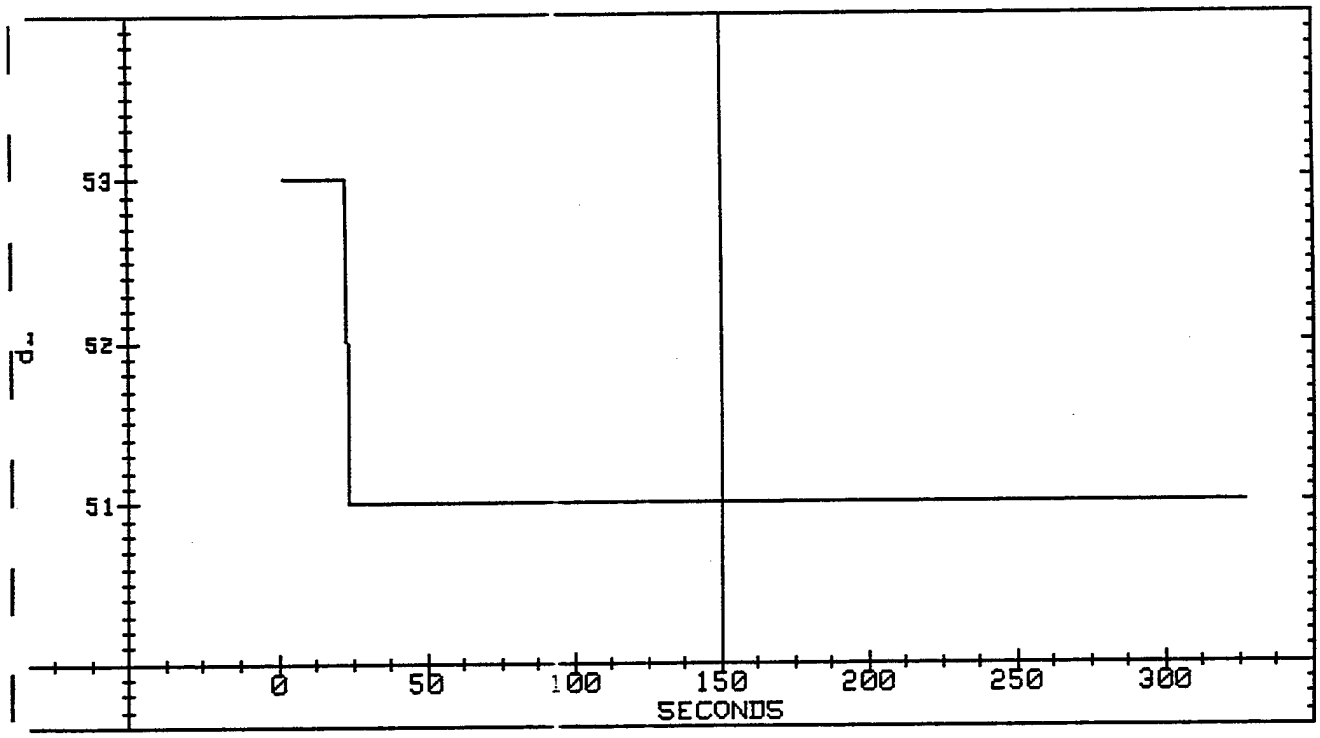
GPS Vv

DAY 179 TIME 23:22 PASS 5 m= .6391, sd= 1.62429



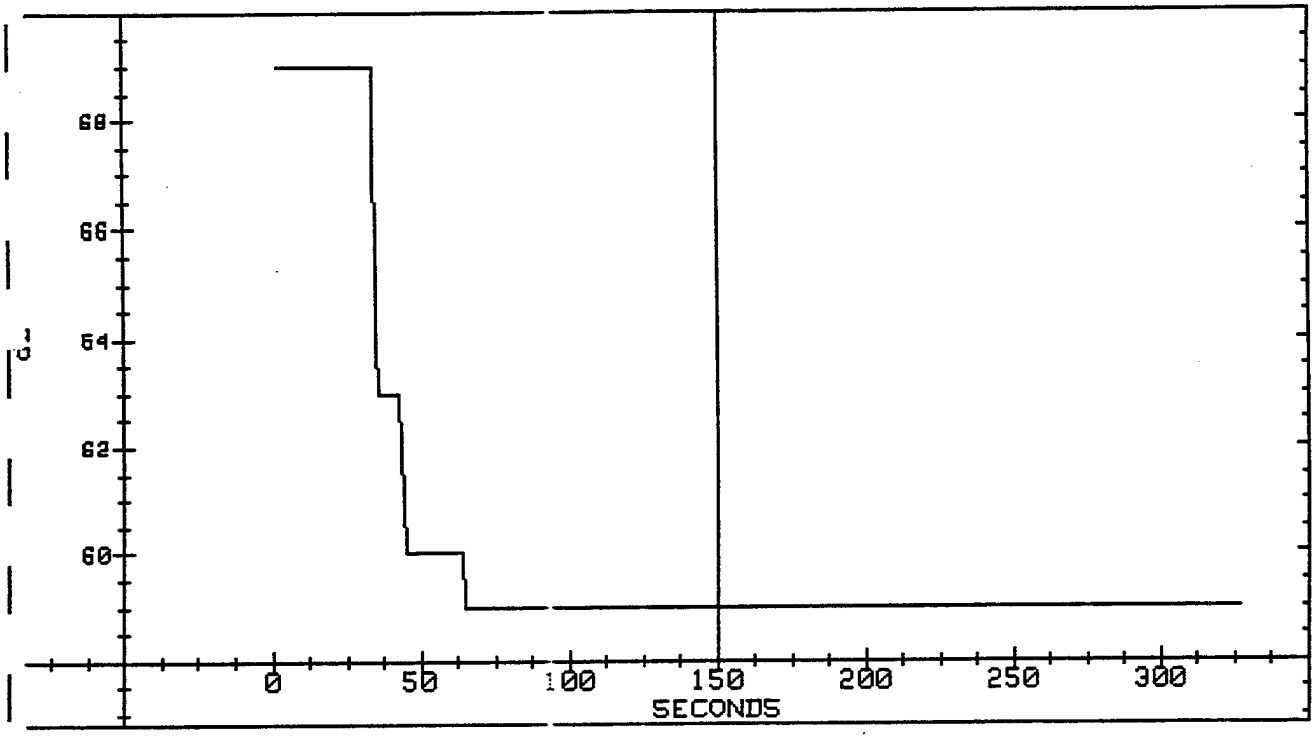
Ch1 RES Attenuation

DAY 179 TIME 23:22 PASS 5 m= 51. sd= 0



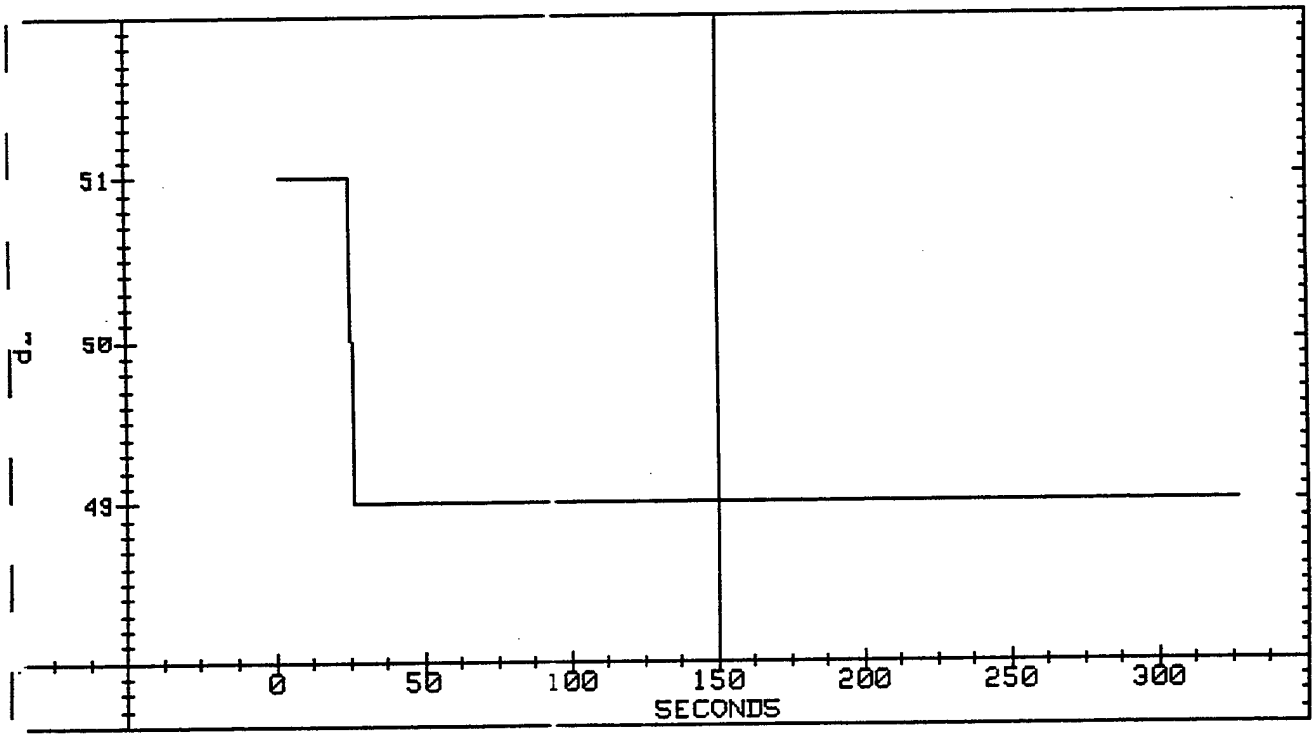
Ch2 RES Attenuation

DAY 179 TIME 23:22 PASS 5 m= 59, sd= 0



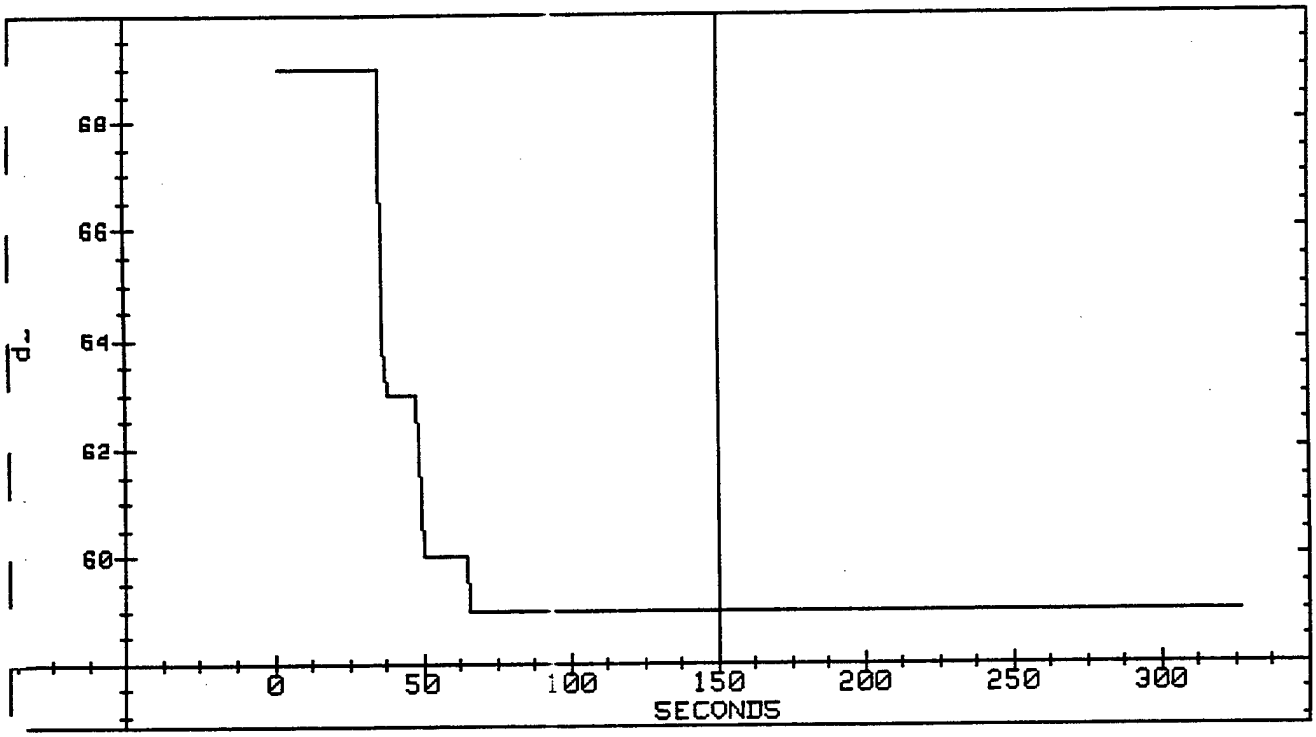
Ch3 RES Attenuation

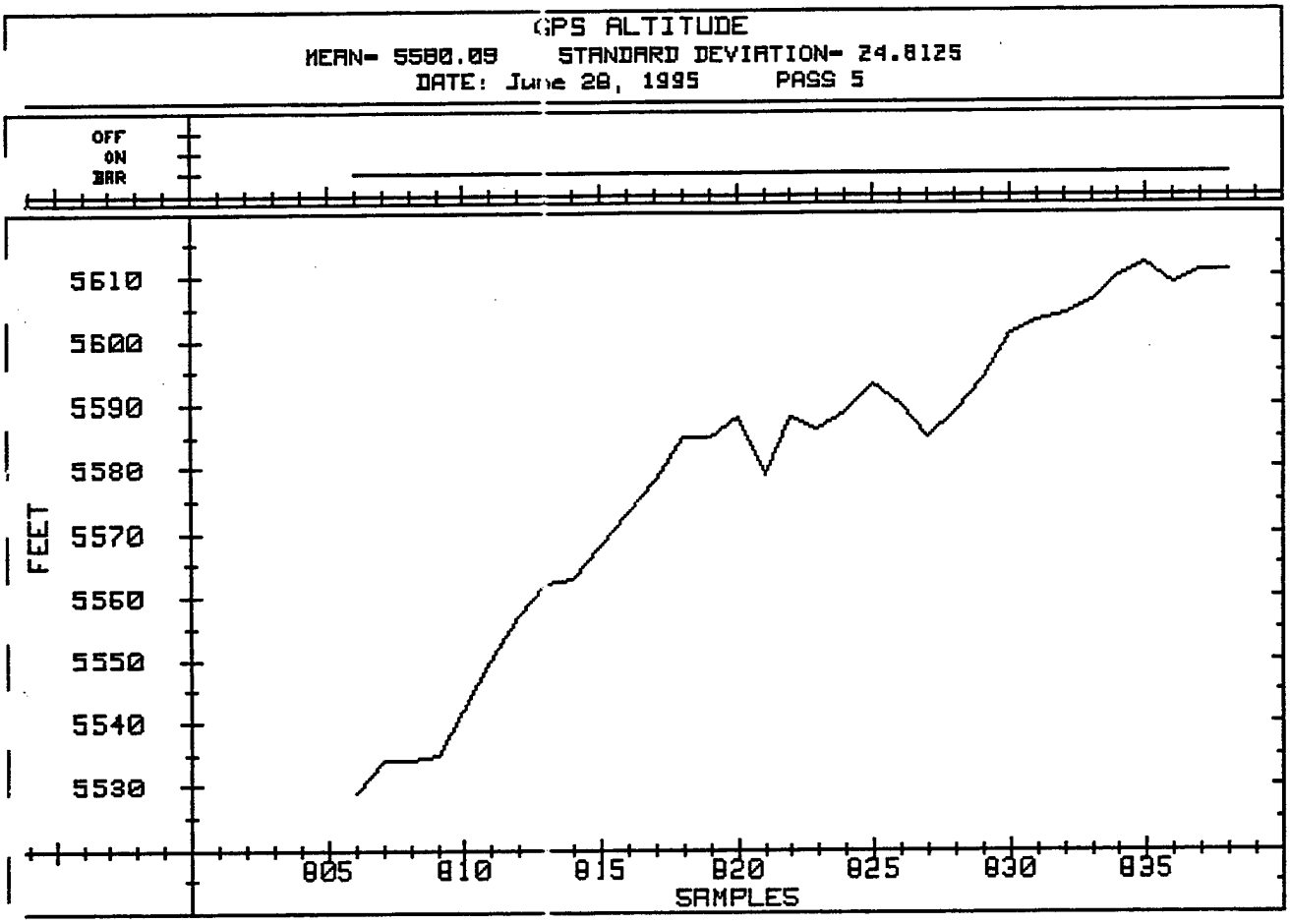
DAY 179 TIME 23:22 PASS 5 m= 49. sd= 0



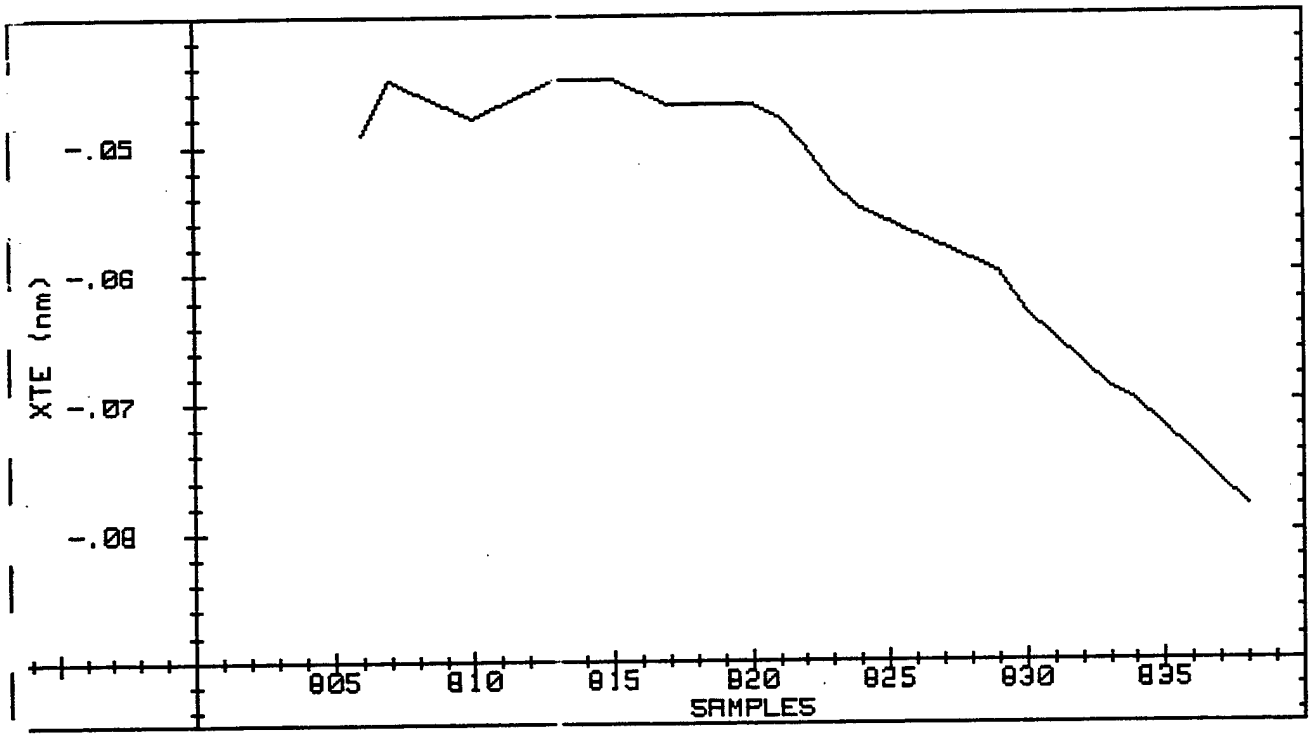
Ch4 RES Attenuation

DAY 179 TIME 23:22 PASS 5 m= 59. sd= 0

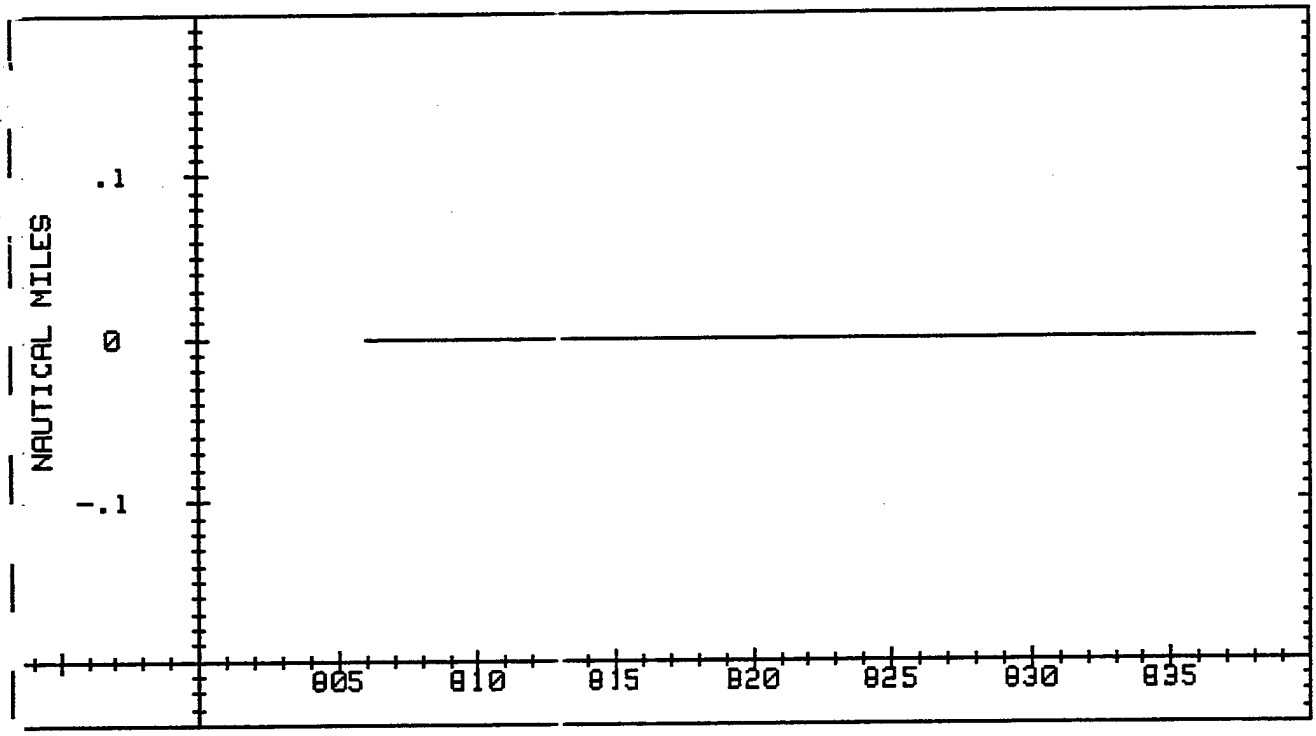



GPS ALTITUDE
MEAN= 5580.09 STANDARD DEVIATION= 24.8125
DATE: June 28, 1995 PASS 5
OFF
ON
BAR
5610
5600
5590
5580
5570
5560
5550
5540
5530
FEET
805
810
815
820
825
830
835
SAMPLES

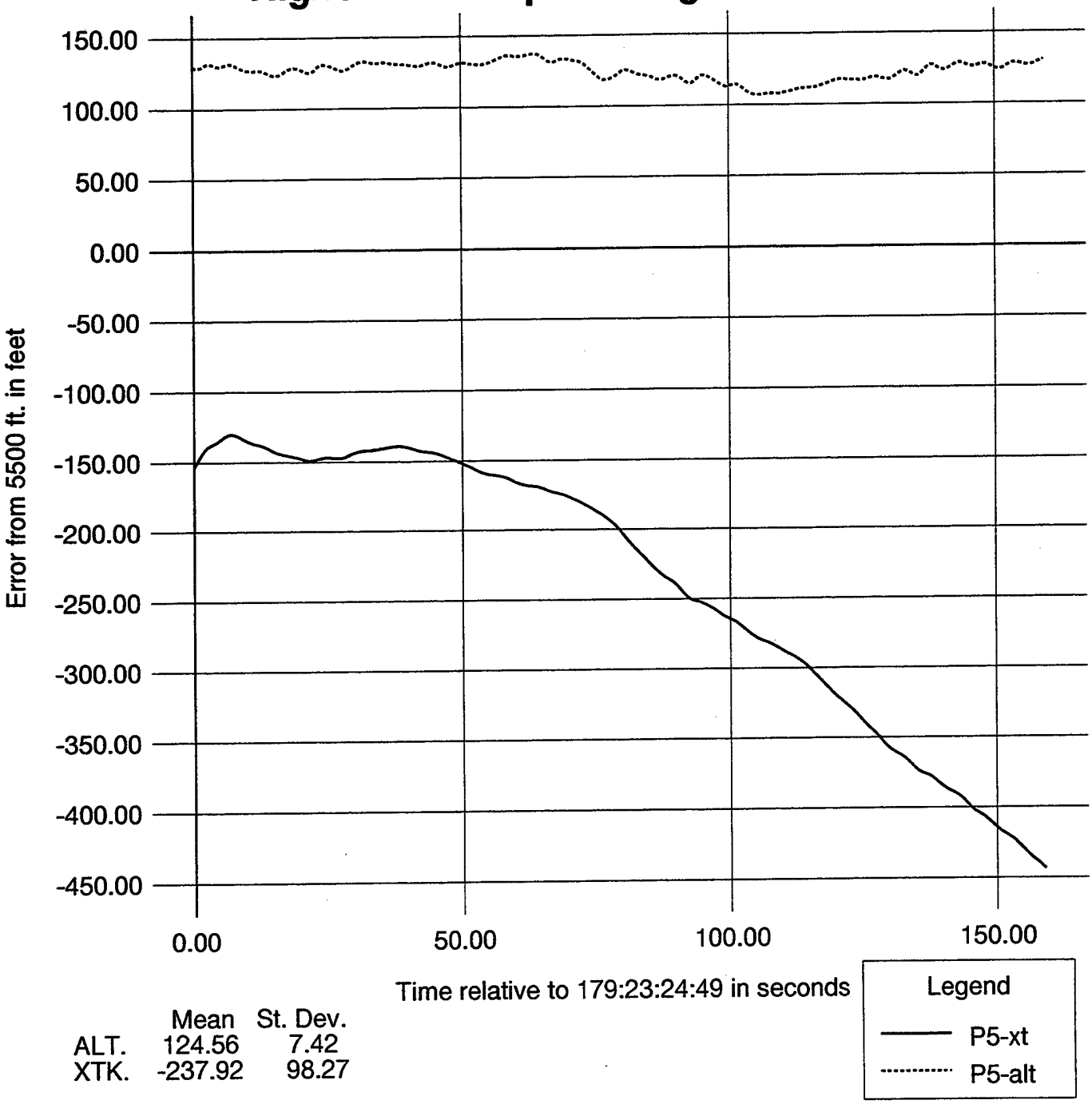
GPS Cross Track Error
MEAN= -.0553636 STANDARD DEVIATION= .0104296
DATE: June 28, 1995 PASS 5



INS CROSS TRACK ERROR
MEAN= 0 STANDARD DEVIATION= 0
DATE: June 28, 1995 PASS 5



# Portage, ME - June 28, 1995 - Pass 5 - Xtk. and Alt. Errors
## Higher alt. and port are greater than zero




| | Mean | St. Dev. |
|---|---|---|
| ALT. | 124.56 | 7.42 |
| XTK. | -237.92 | 98.27 |

28 Jun 1995
Tape: E1416

Post-line Data Sheet
Line 51
Mission: DAY 4 PORTAGE MAINE

Time: 179:23:14:08
Pass 4
Req.# 23

## AIRCRAFT & CHANNEL DATA

| | | | | CH 1 | CH 2 | CH 3 | CH 4 |
|---|---|---|---|---|---|---|---|
| Altitude | | | | | | | |
| Desired: | 5500 ft | | Wave/Pol.: | p-VV | p-VH | p-HV | p-HH |
| Baro: | 5421 ft | s.d.= 7 | Swath Ctr Ang: | 15.0° | 15.0° | 15.0° | 15.0° |
| Slt. rng: | 18275 ft | | Tgt Dep Ang: | 15.0° | 15.0° | 15.0° | 15.0° |
| Look: | Right | | St rng (ft): | 16740 | 16740 | 16740 | 16740 |
| Depr Ang: | 25.0° | | Near Rng Dep: | 18.9° | 18.9° | 18.9° | 18.9° |
| Des. trk: | 10.0° | | Far Rng Dep: | 9.5° | 9.5° | 9.5° | 9.5° |
| Start Sq: | 90.0° | | Atten (dB): | 53.0 | 69.0 | 51.0 | 69.0 |
| End Sq: | 90.0° | | RMS Video (%FS) | 16.0 | 5.9 | 12.5 | 6.2 |

## WAYPOINTS

| | Latitude | Longitude |
|---|---|---|
| Line_up: | N 46:27.57 | W 68:37.46 |
| Start: | N 46:39.39 | W 68:34.45 |
| End: | N 46:49.23 | W 68:31.92 |
| From: | N 30:14.71 | W 71:51.11 |
| To: | N 62:59.40 | W 62:17.53 |

Main Target: GW
Mocomp Point:
Lat: N 46:43.81
Long: W 68:29.03
Tgt Trk: 0.0 Tgt Vel: 0.0
Alt: 770.0 ft

## RADAR PARAMETERS - for UWB

RTP Channel: 1
Resolution: N/A
Swath width: Single
RMS Time Constant: 2^7
Position Reference: ON
Atten. Tracking: OFF
Range Gate Delta: 0.0 ft
Azimuth Presum Rate: Presum6
TX Chirp Filename: CTL1U2A

Filter damping is Hi -> 10 sec
PRF Factor is FAST (262.5 kts)
Ave Gndspd: Real -> 248.5 kts
Mocomp Off for Chnl 1, 2, 3, 4
GPS Vel/Pos Reference
Adj Gnd Scene: 5000.0 ft
Range Tracking is OFF
Clutterlock Reference: OFF
RX Chirp Filename: CRL1N0A

Ave Ref Vel -> 2.8 fps (s.d.= 9.4)
Ave Fil Vel -> 2.6 fps (s.d.= 8.9)

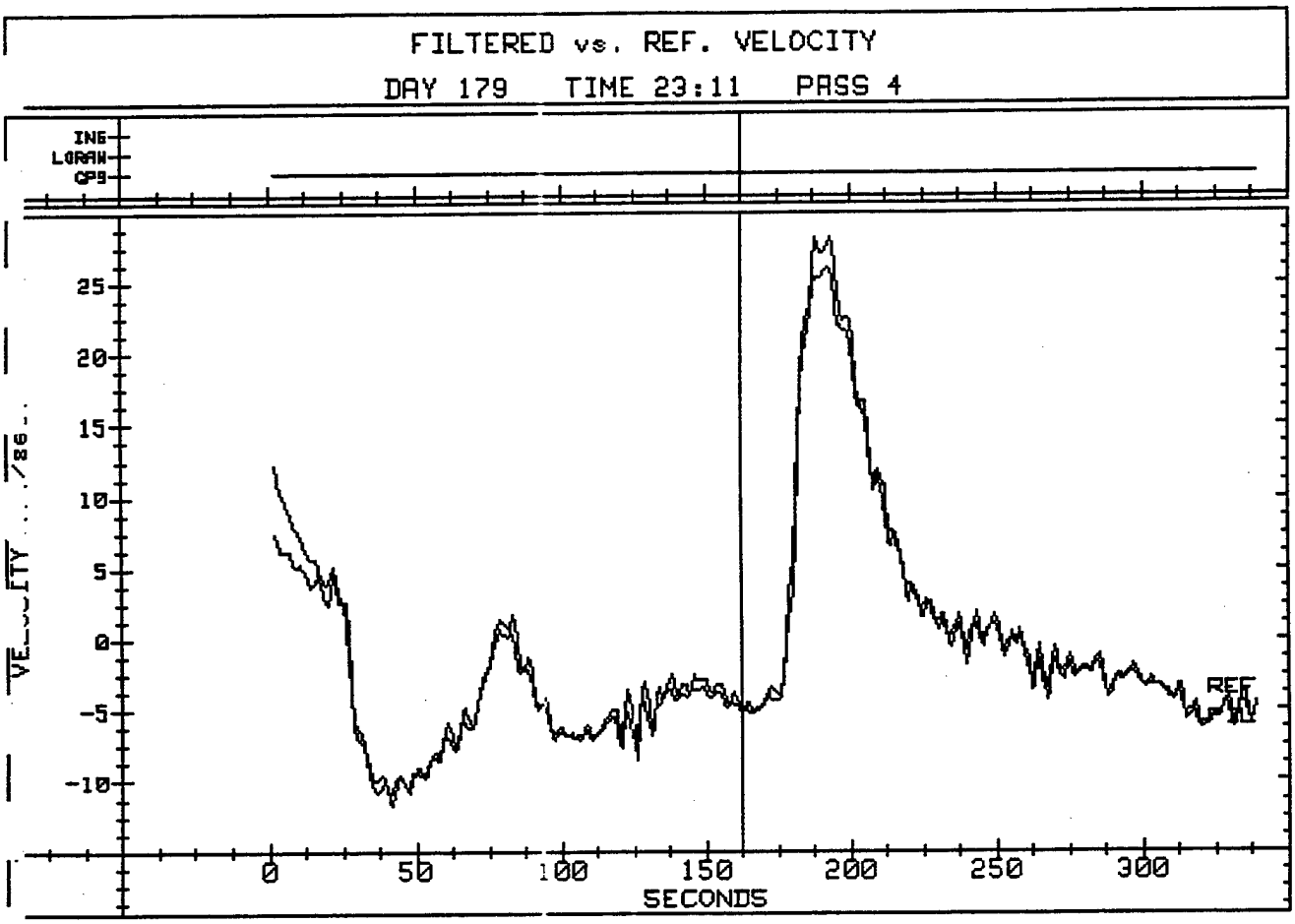
| NML XMIT PWR | ANT BIAS | | Tape Footage | | Drive no. |
|---|---|---|---|---|---|
| X: -70.0 | Elevation: | 0.0° | | | |
| L: -70.0 | Azimuth: | 0.0° | Starting: | 2914 ft | (1) |
| C: -70.0 | Pitch: | 0.0° | Ending: | 4175 ft | (1) |
| P: 39.8 | | | | | |

| Vel Bias | CAL Atten | LINE Map Time (UCT) |
|---|---|---|
| X: 2112.0 | X: 63.8 dB | Start: 23:14:08 |
| Y: 1874.0 | L: 63.8 dB | End: 23:16:48 |
| Z: 5343.0 | C: 63.8 dB | |

Mocomp Counters

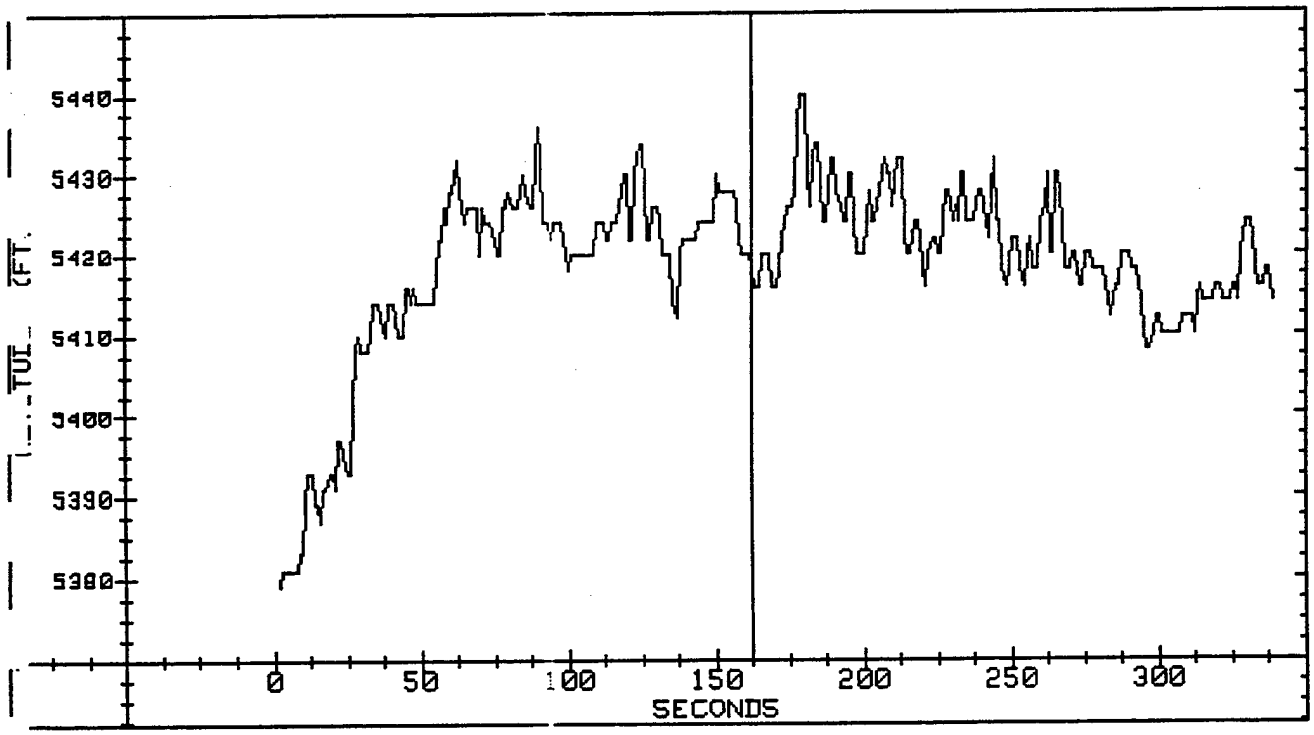
| | | |
|---|---|---|
| Start: | 159434 | 00026ECAh |
| End: | 186251 | 0002D78Bh |

CPA (UCT): 00:00:00
Alt: 0 ft (GPS)
Lat: N 0:00: 0
Lon: E 0:00: 0


FILTERED vs. REF. VELOCITY
DAY 179 TIME 23:11 PASS 4
INS
LORAN
GPS
25
20
15
10
5
0
-5
-10
0
50
100
150
200
250
300
SECONDS
REF

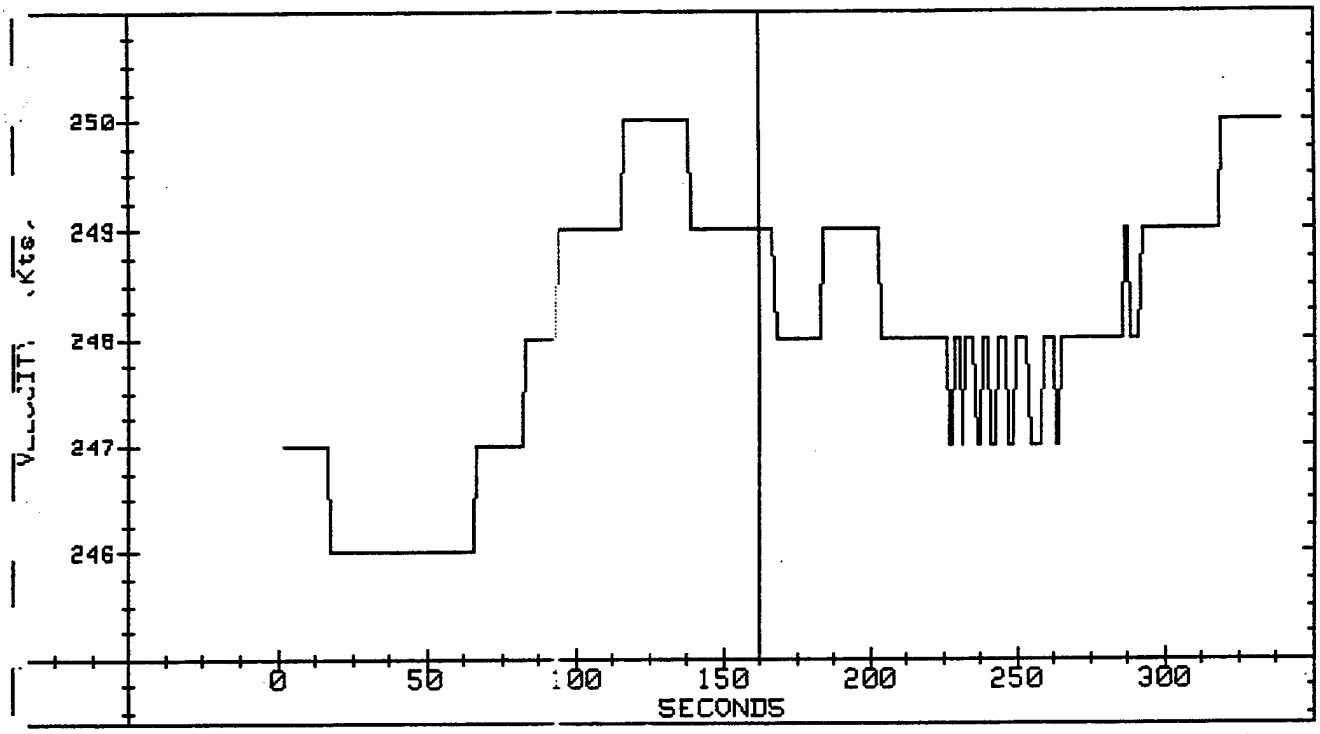
BARO ALTITUDE

DAY 179 TIME 23:11 PASS 4 m= 5421. sd= 6.6378



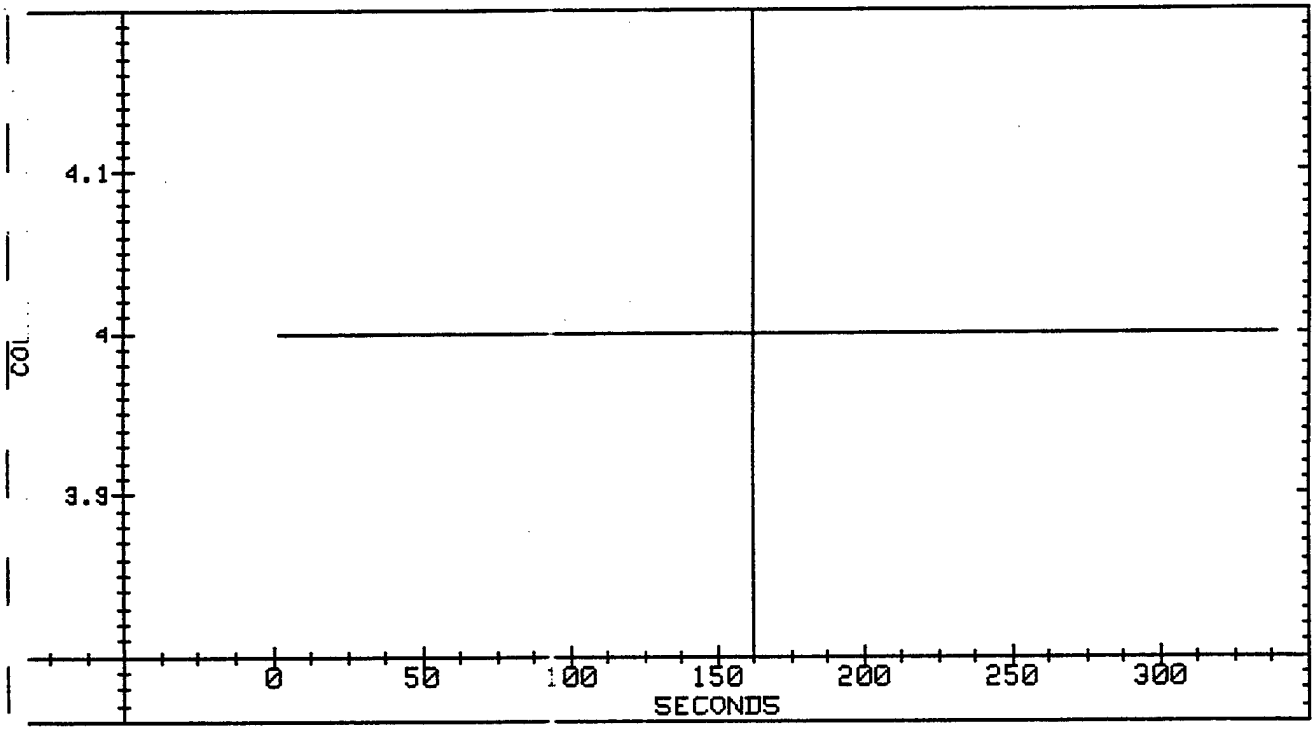
INS GROUND SPEED

DAY 179 TIME 23:11 PASS 4 m- 248.5, sd- .841701



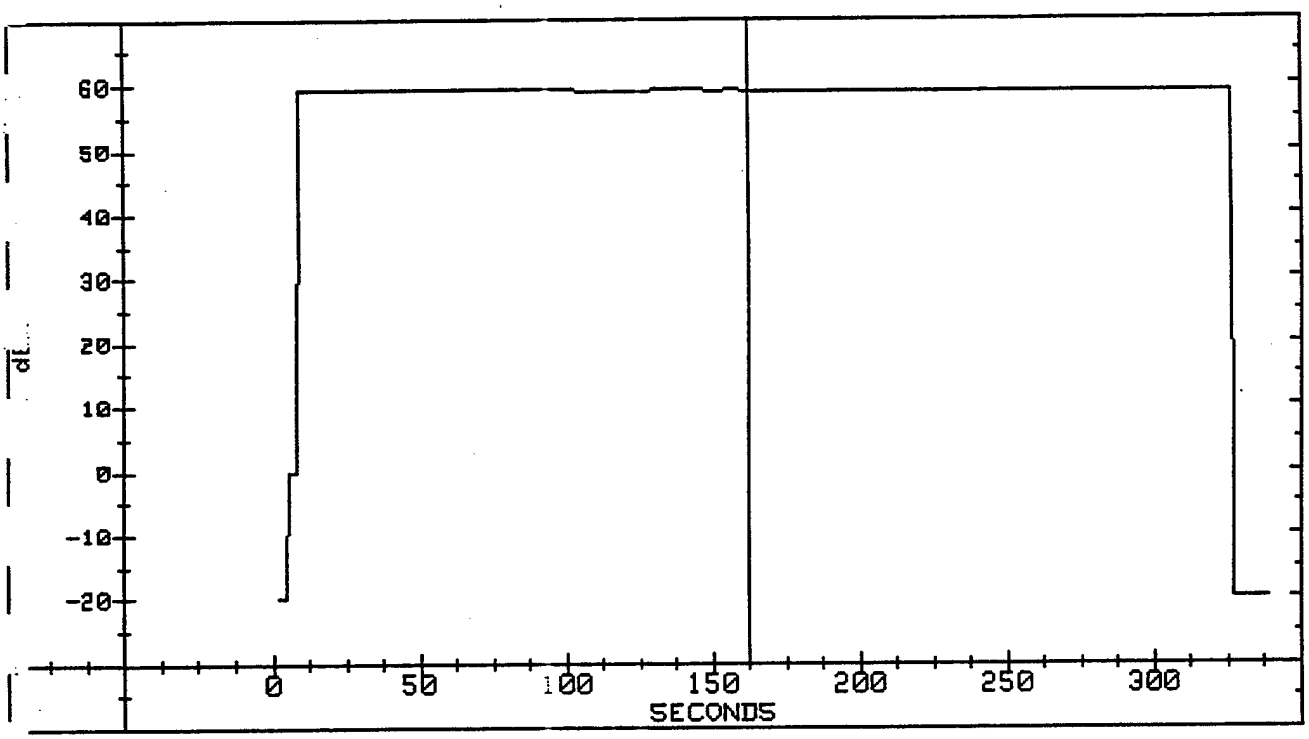
PASS NUMBER

DAY 179 TIME 23:11 PASS 4 m= 4, sd= 0



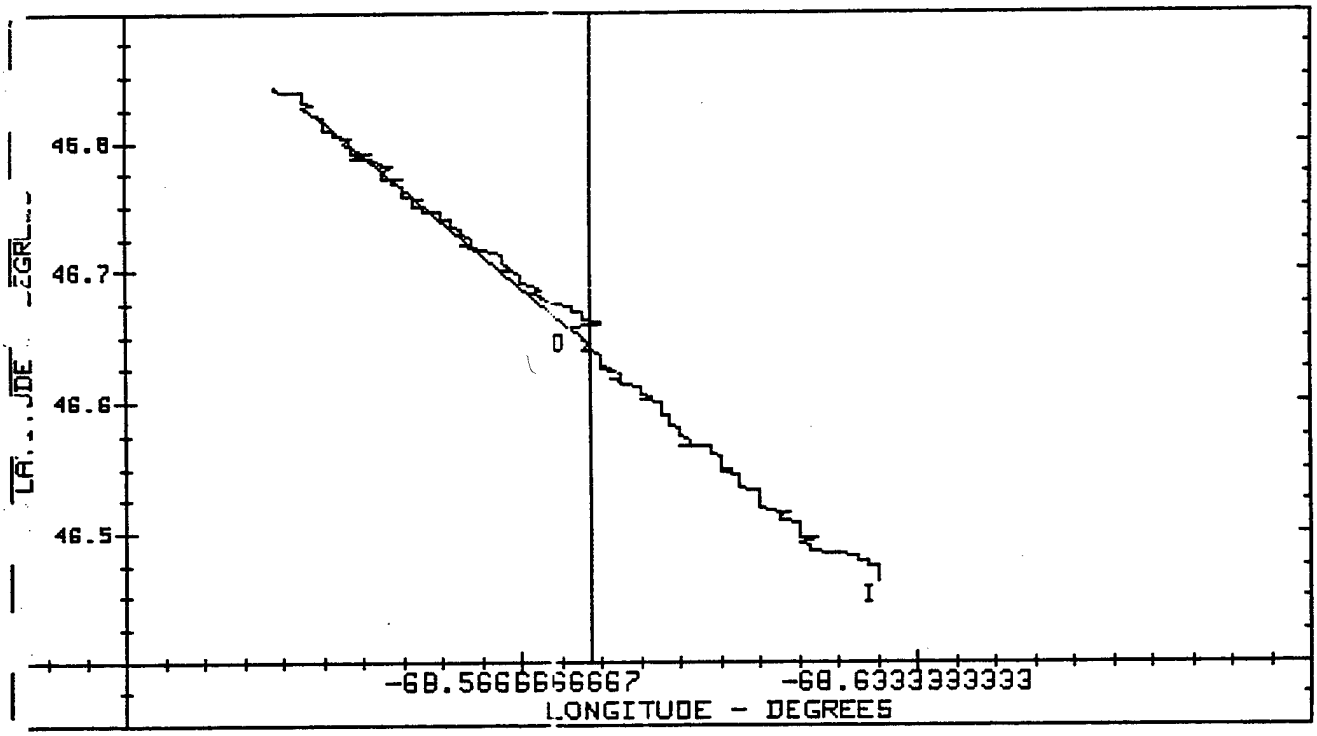
P Band Power

DAY 179 TIME 23:11 PASS 4 m= 52.58, sd= 21.5117



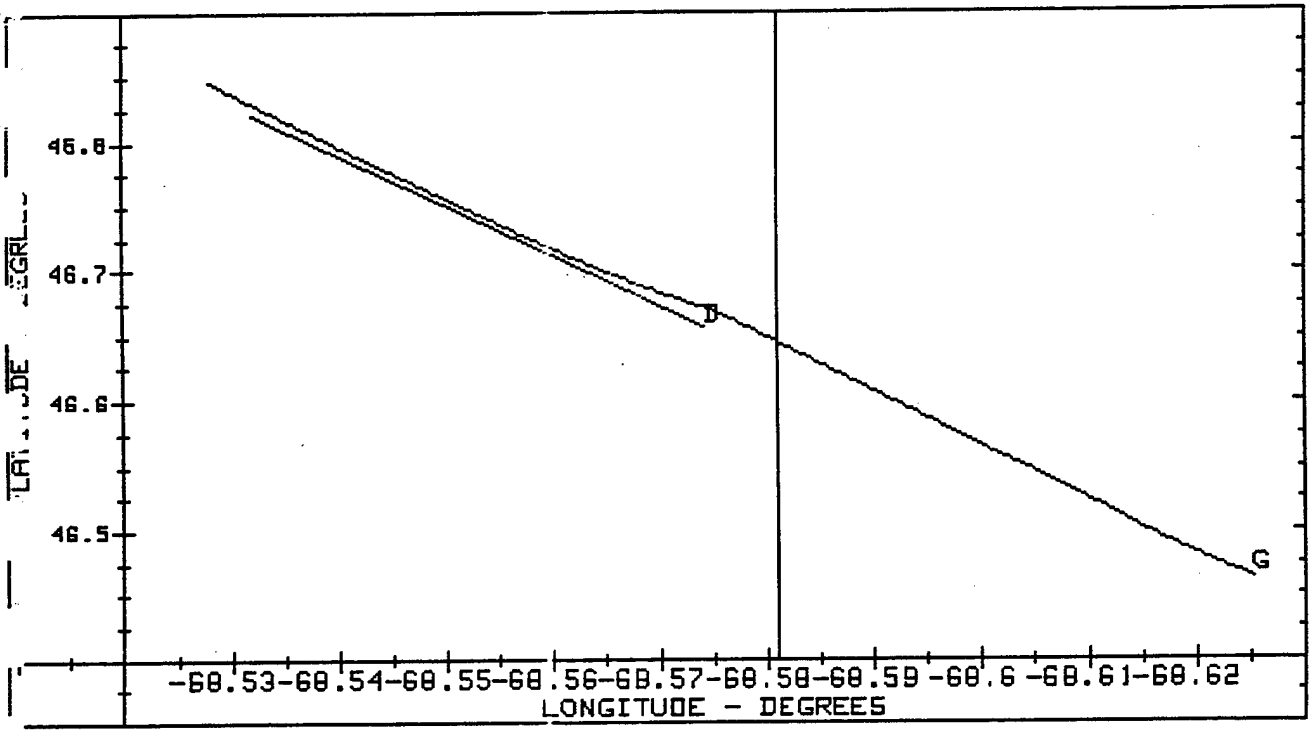
INS AIRCRAFT POSITION

DAY 179 TIME 23:11 PASS 4



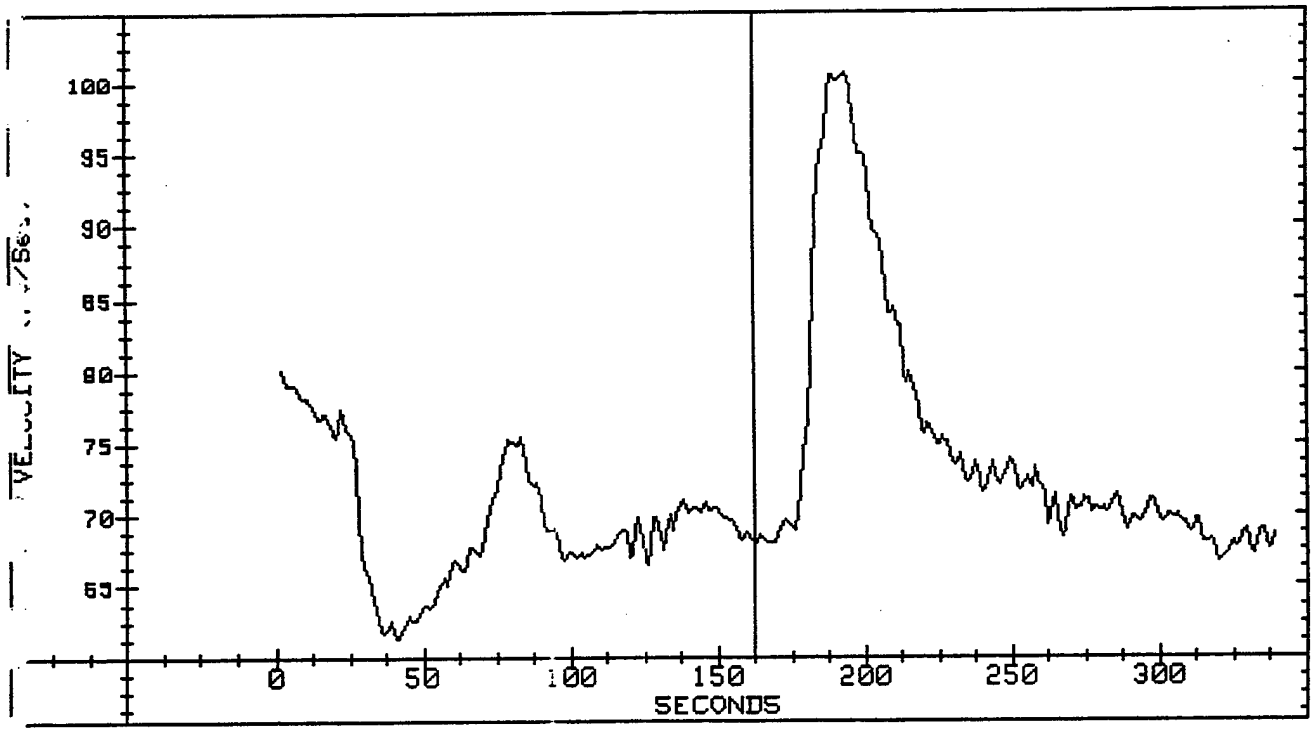
GPS AIRCRAFT POSITION

DAY 179 TIME 23:11 PASS 4



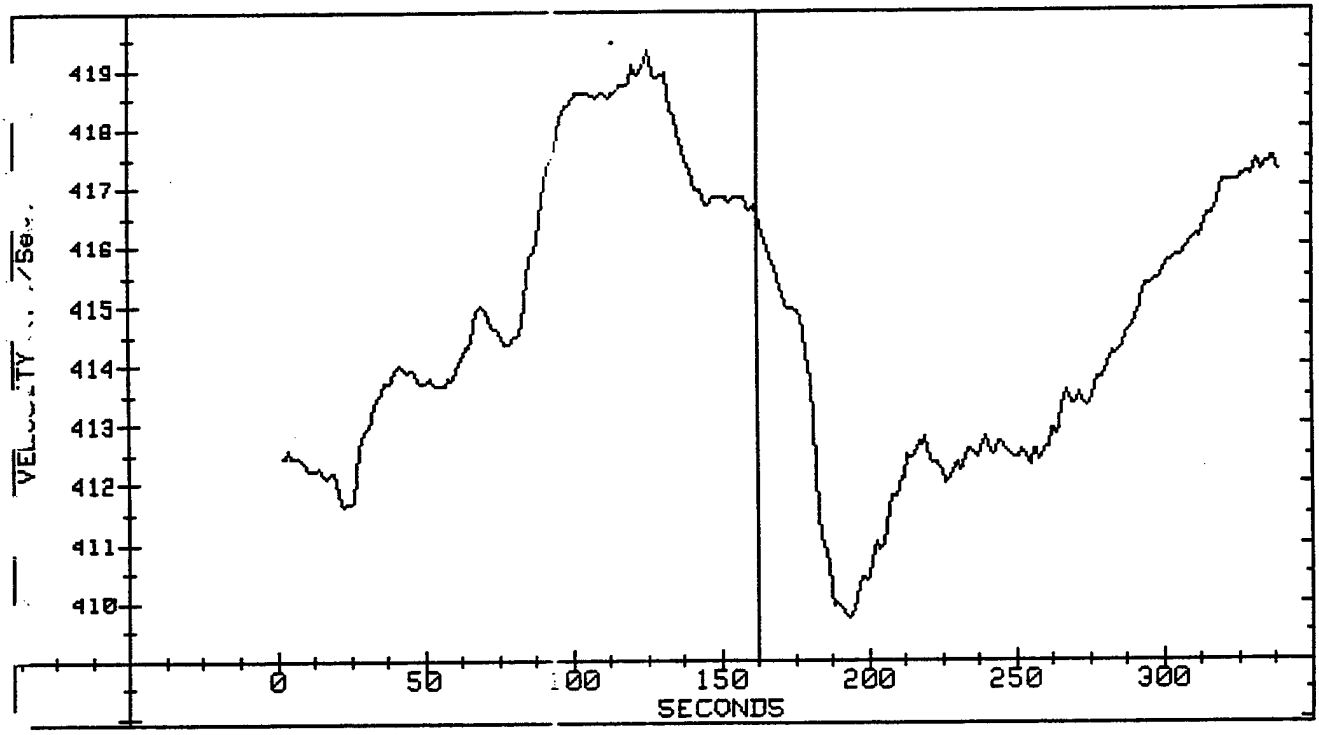
GPS Ve

DAY 179 TIME 23:11 PASS 4 m= 75.59, sd= 9.36144



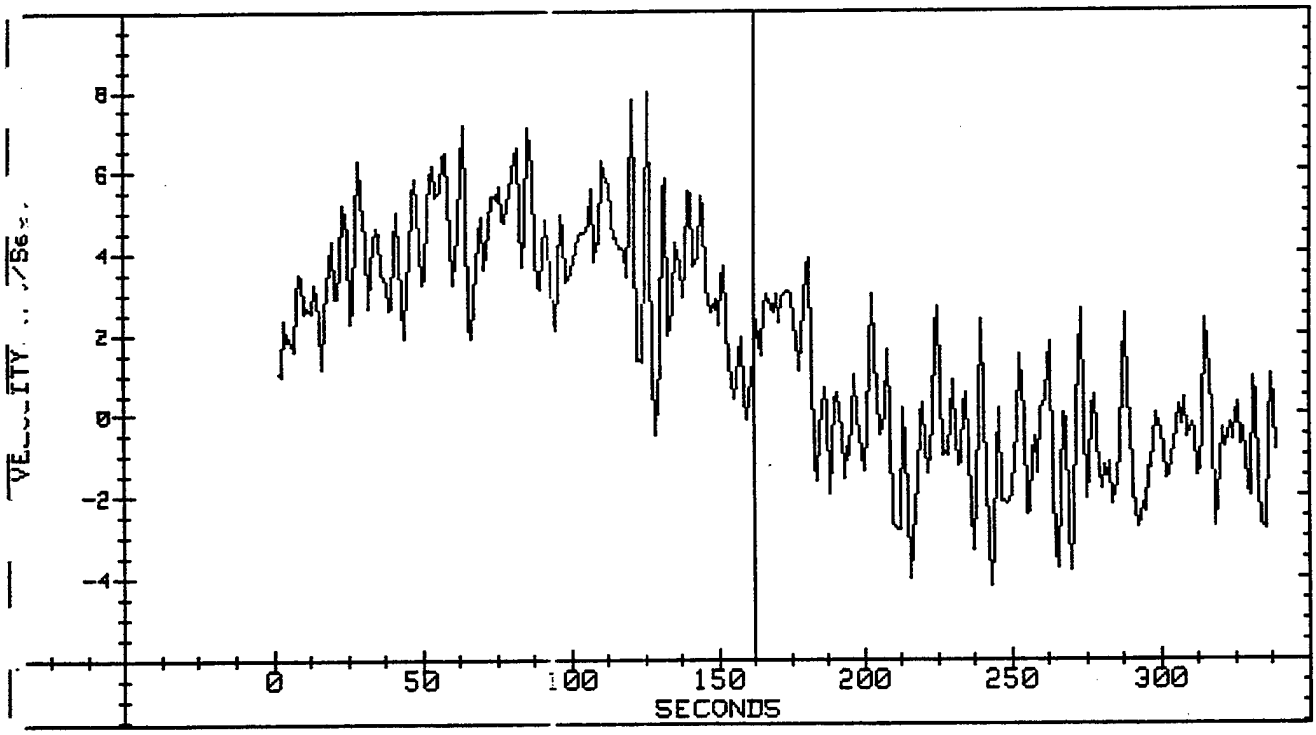
GPS Vn

DAY 179 TIME 23:11 PASS 4 m= 413.6, sd= 2.17651



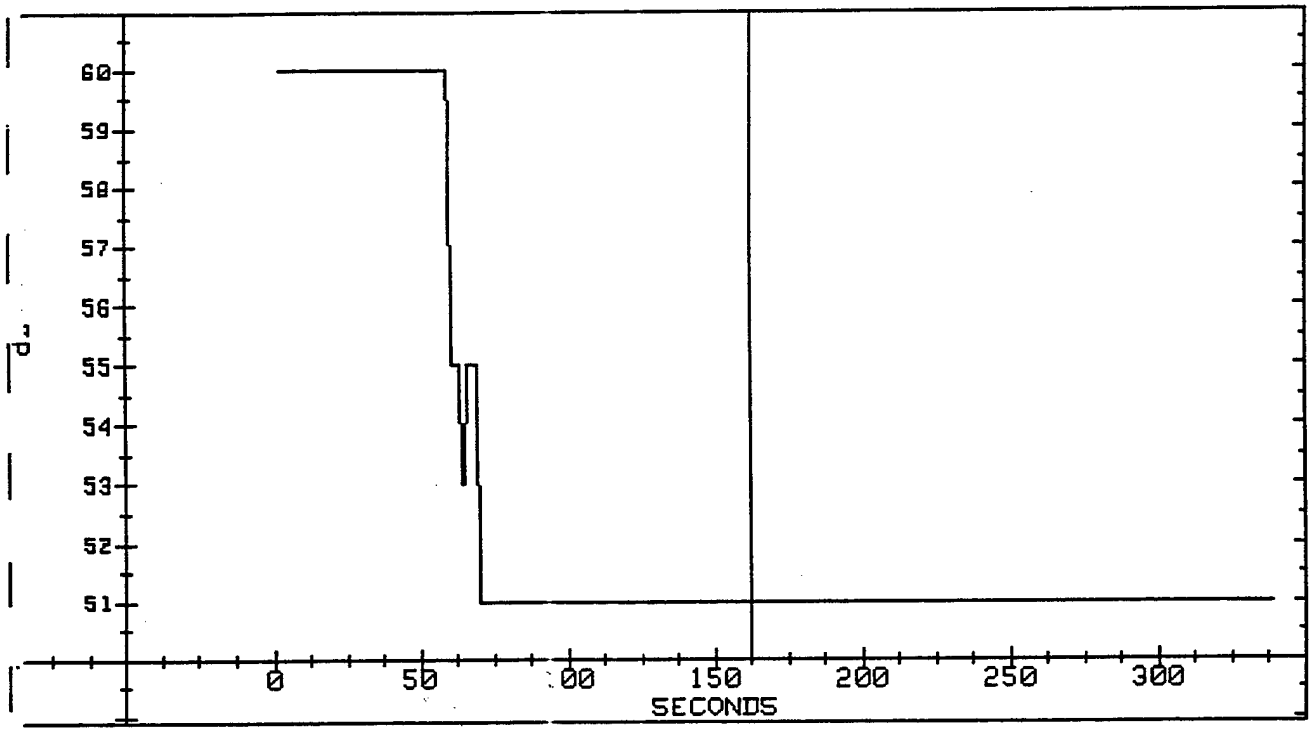
GPS Vv

DAY 179 TIME 23:11 PASS 4 m= -.6561, sd= 1.49511



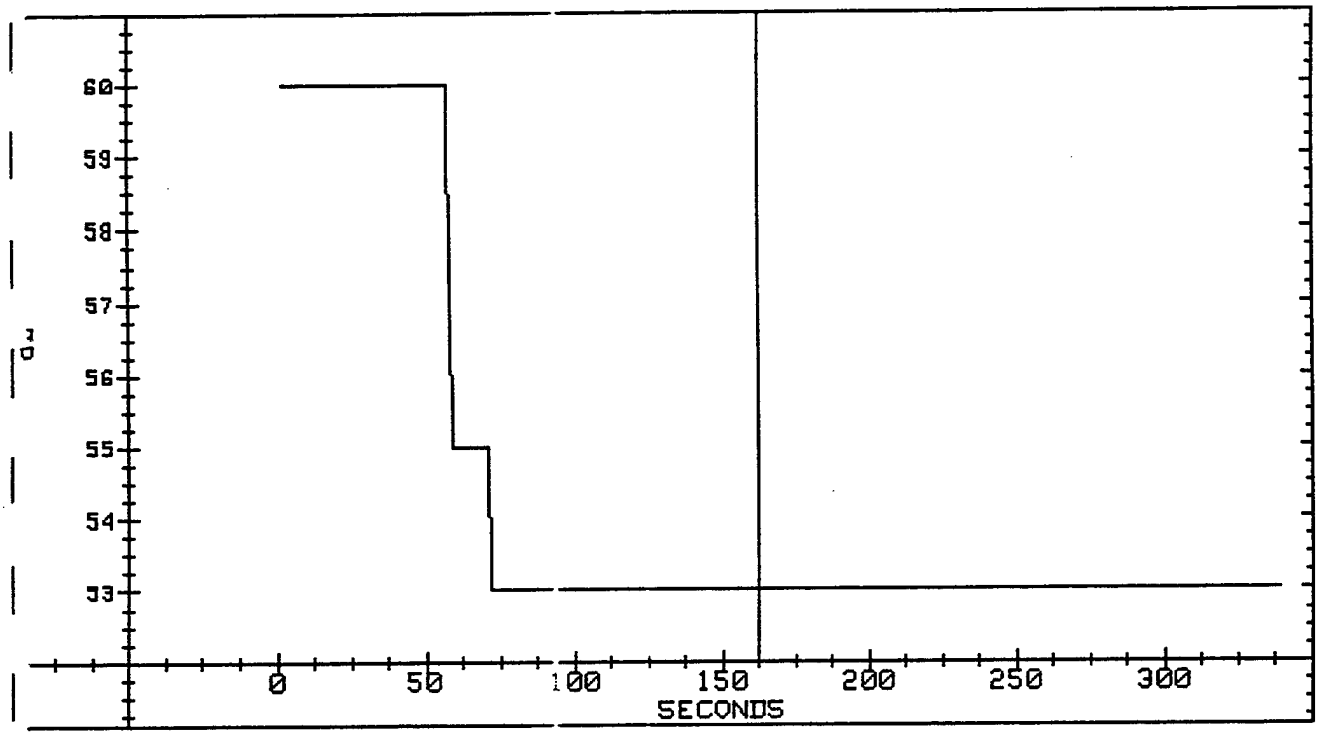
Ch3 RES Attenuation

DAY 179 TIME 23:11 PASS 4 m= 51. sd= 0



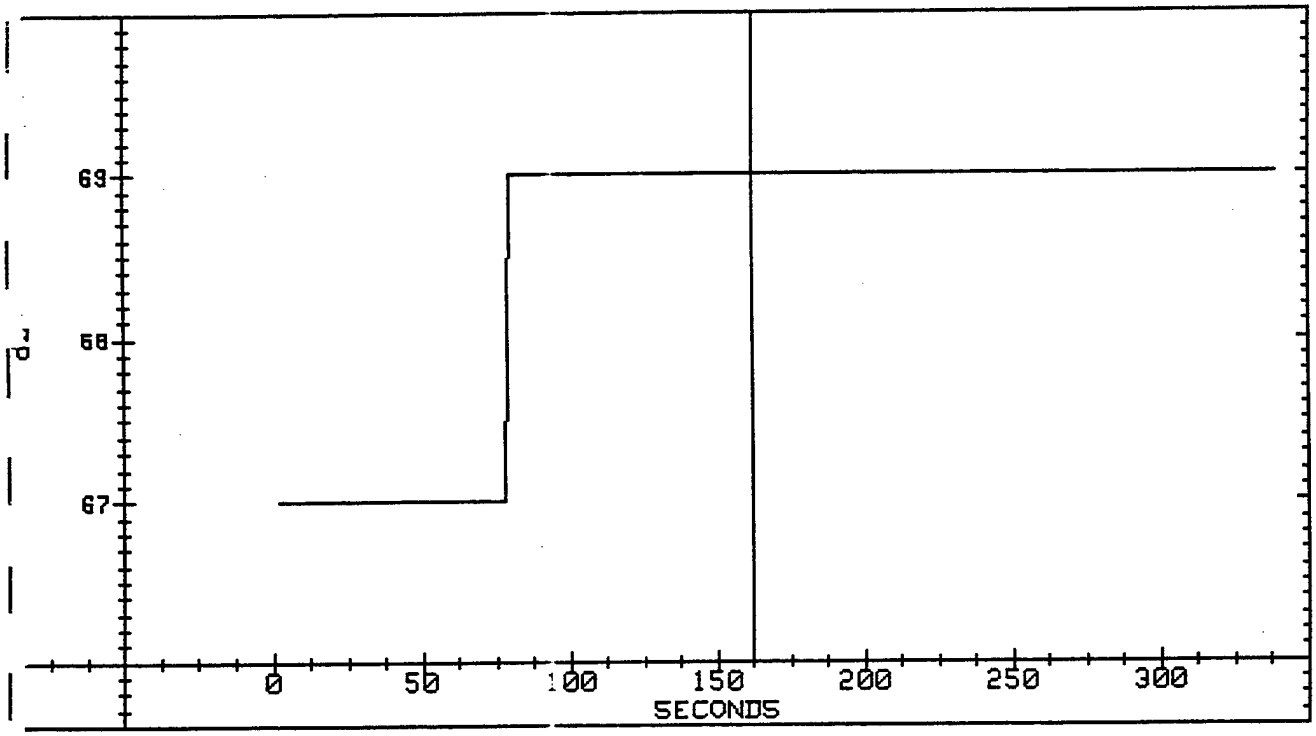
Ch1 RES Attenuation

DAY 179 TIME 23:11 PASS 4 m= 53. sd= 0



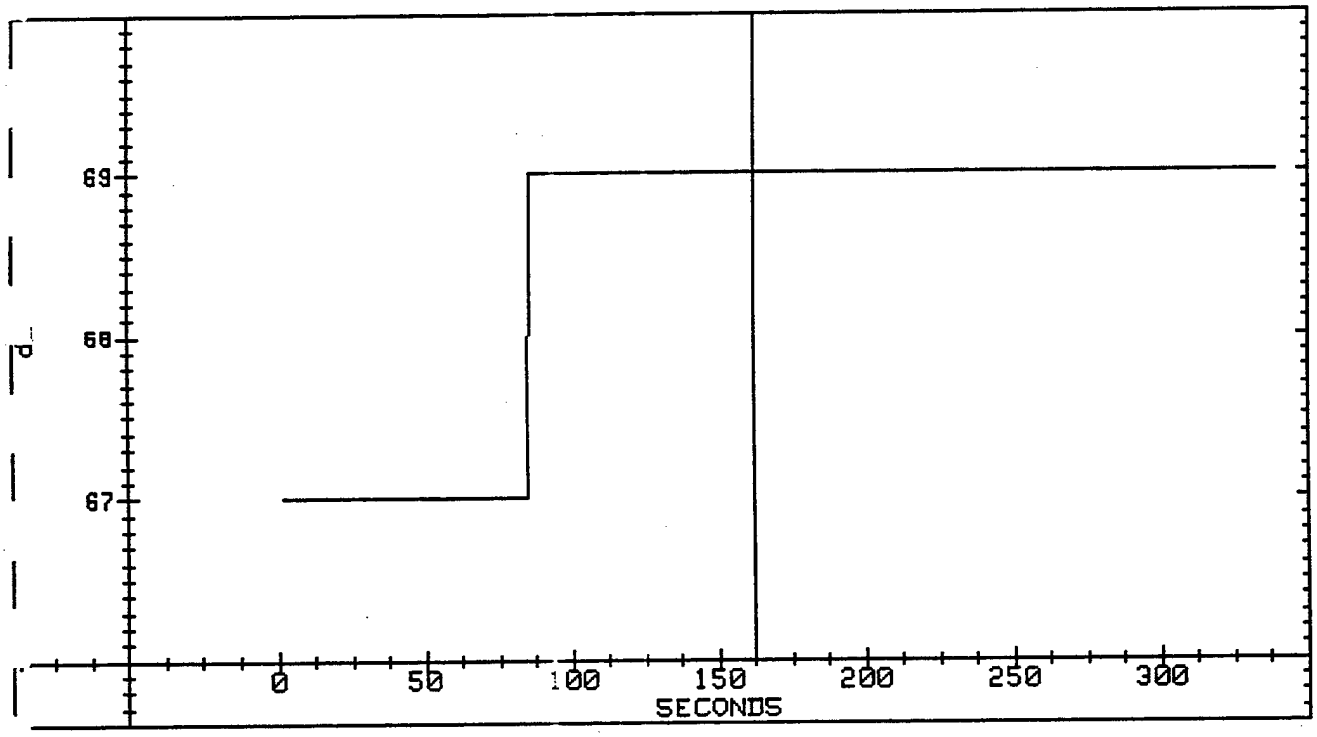
Ch2 RES Attenuation

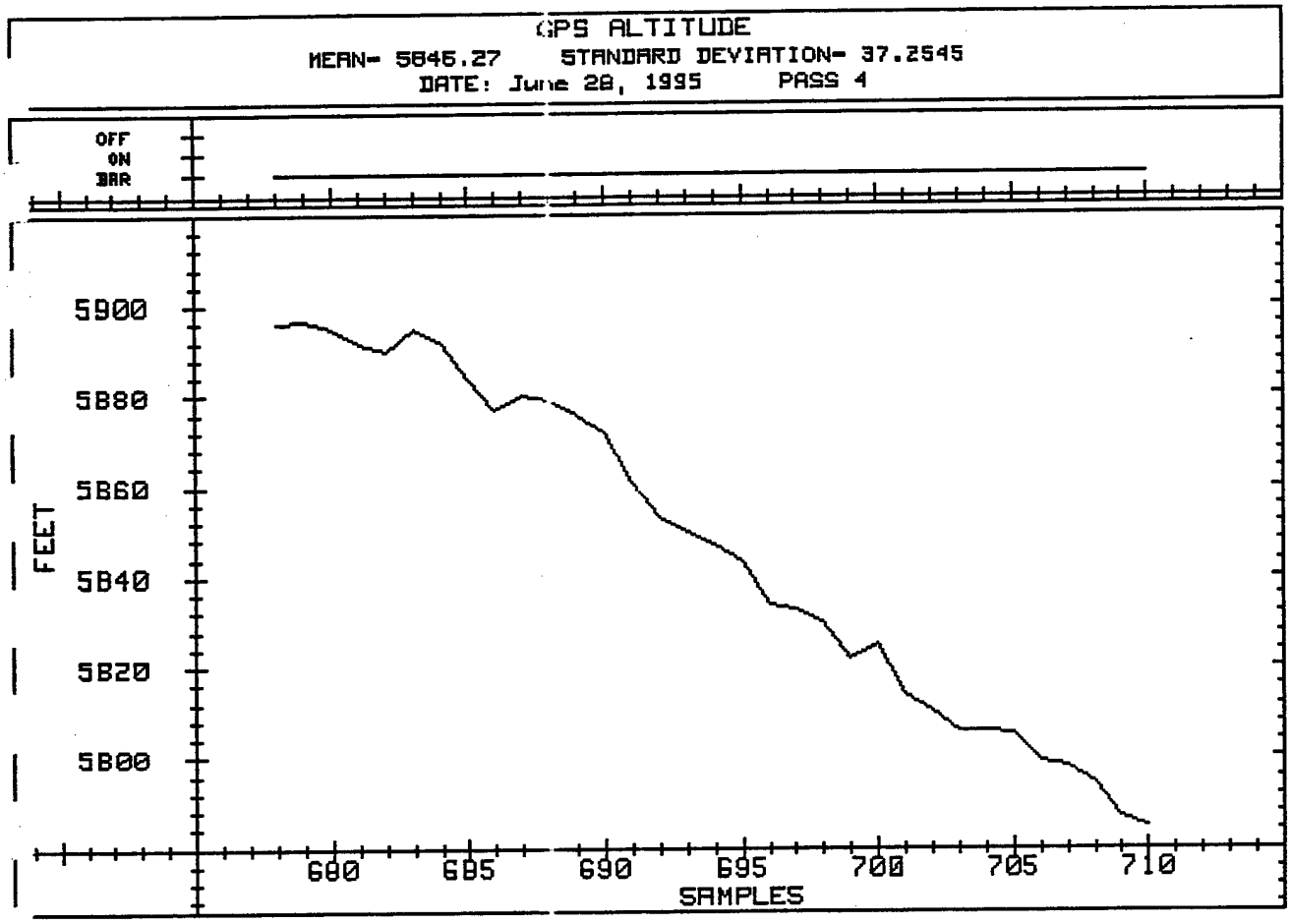
DAY 179 TIME 23:11 PASS 4 m= 69, sd= 0



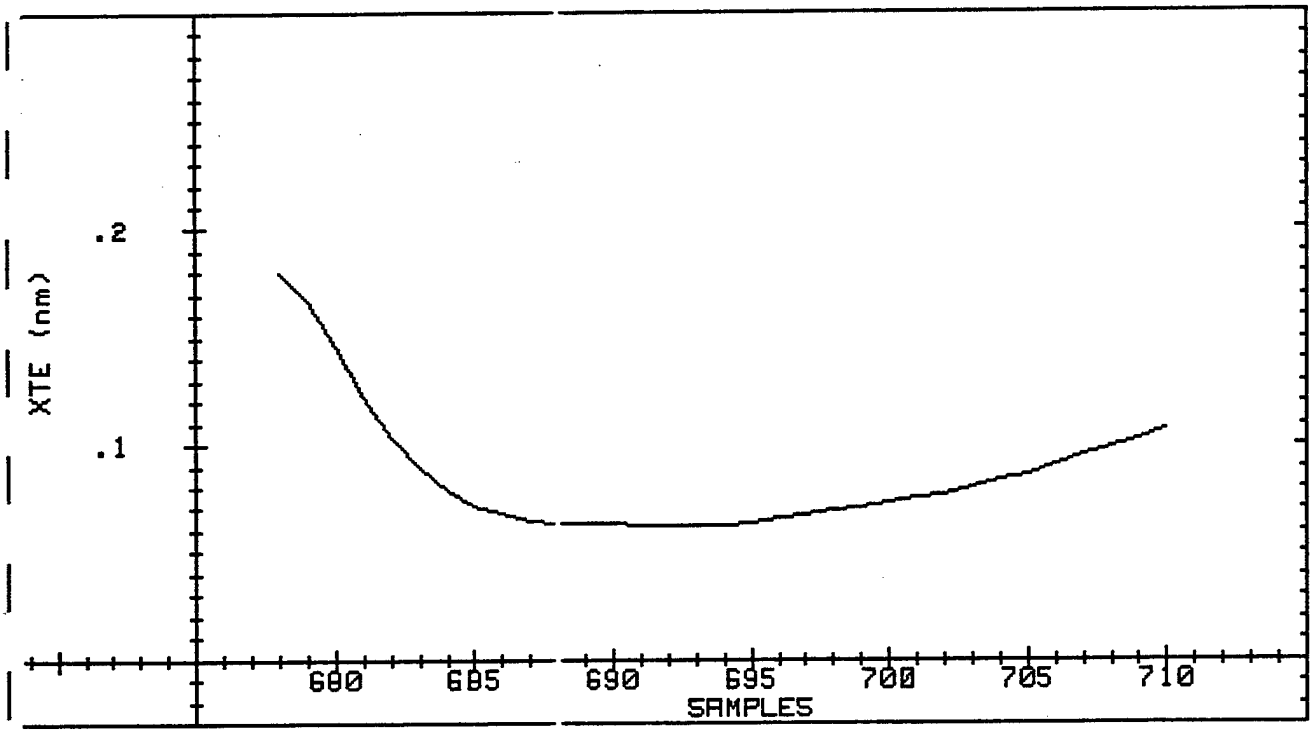
Ch4 RES Attenuation

DAY 179 TIME 23:11 PASS 4 m= 69, sd= 0




GPS ALTITUDE
MEAN= 5846.27 STANDARD DEVIATION= 37.2545
DATE: June 28, 1995 PASS 4
OFF
ON
BAR
5900
5880
5860
5840
5820
5800
FEET
680
685
690
695
700
705
710
SAMPLES

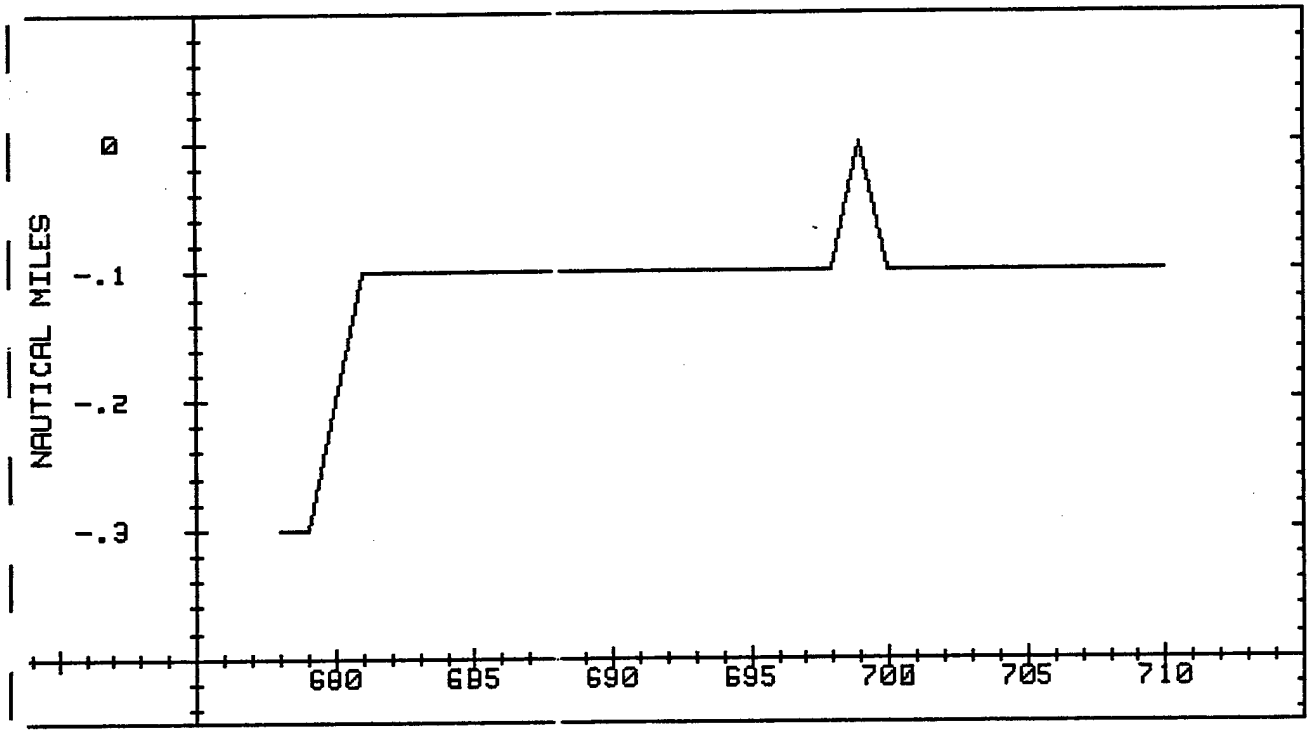
GPS Cross Track Error
MEAN= .0859697 STANDARD DEVIATION= .0297275
DATE: June 28, 1995 PASS 4



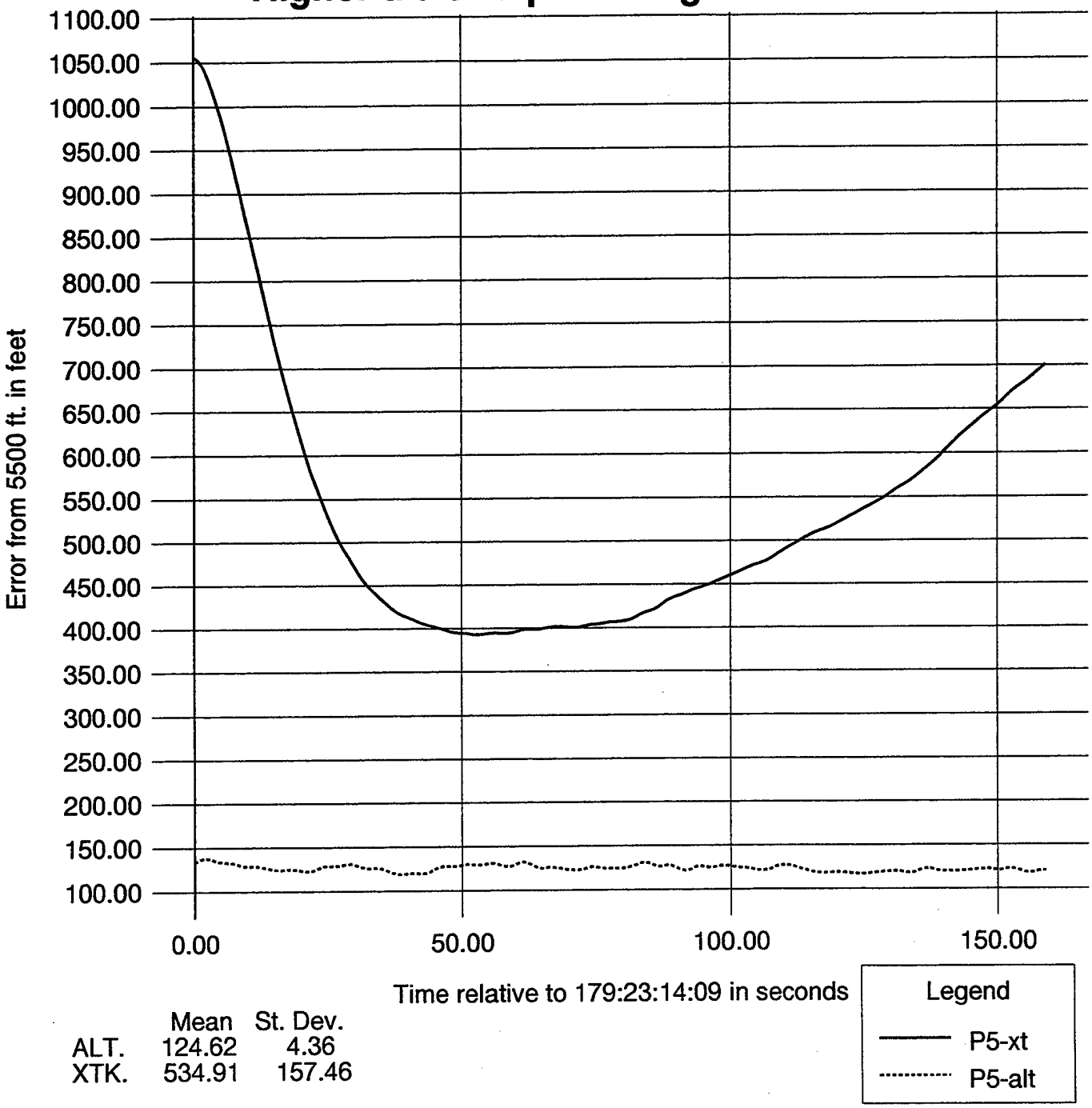
INS CROSS TRACK ERROR

MEAN= -.1121121 STANDARD DEVIATION= .0536971

DATE: June 28, 1995 PASS 4

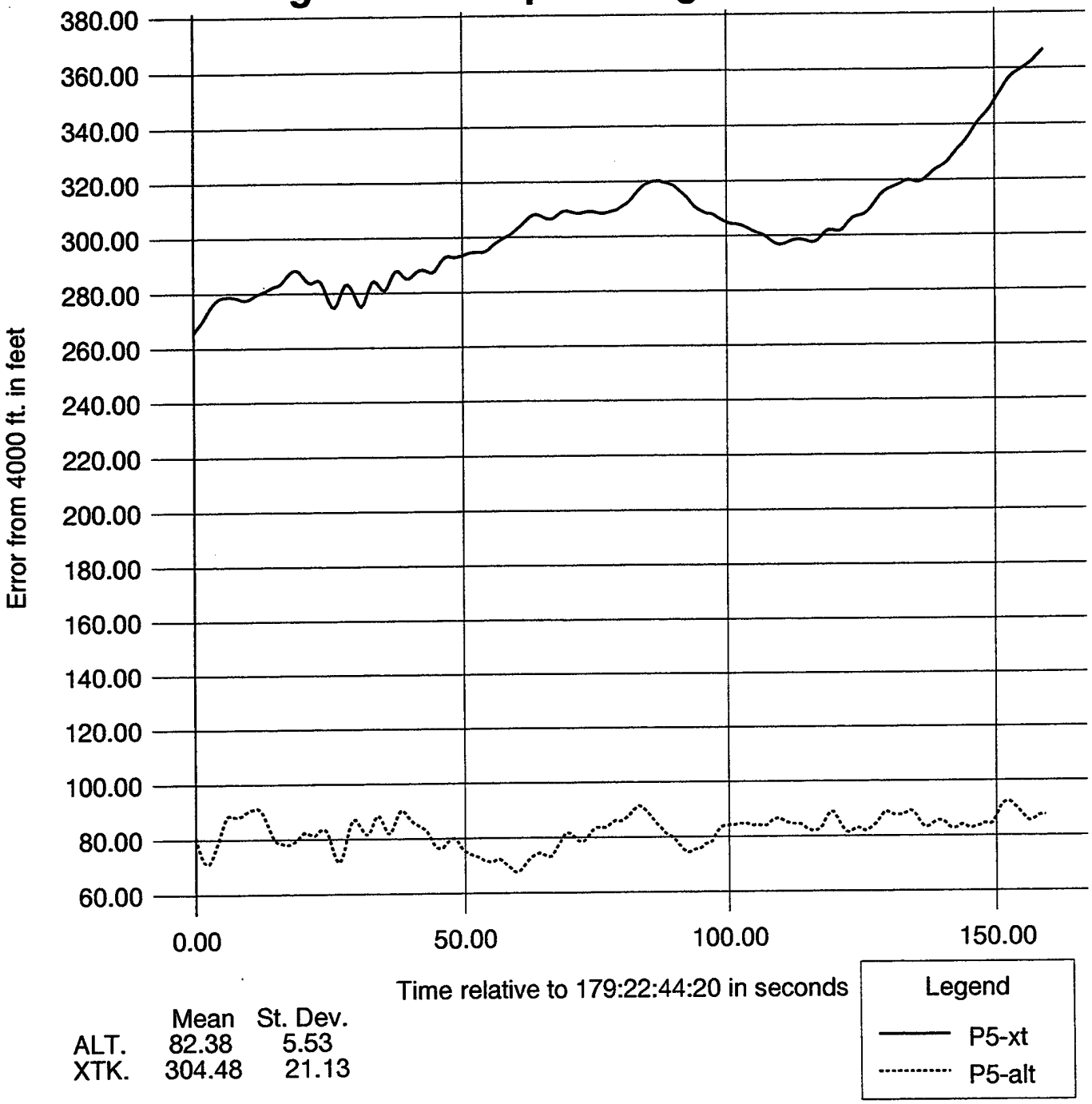


# Portage, ME - June 28, 1995 - Pass 4 - Xtk. and Alt. Errors
## Higher alt. and port are greater than zero




| | Mean | St. Dev. |
|---|---|---|
| ALT. | 124.62 | 4.36 |
| XTK. | 534.91 | 157.46 |

# Portage, ME - June 28, 1995 - Pass 2 - Xtk. and Alt. Errors
## Higher alt. and port are greater than zero




| | Mean | St. Dev. |
|---|---|---|
| ALT. | 82.38 | 5.53 |
| XTK. | 304.48 | 21.13 |

28 Jun 1995 | Post-line Data Sheet | Time: 179:23:00:51
Tape: E1416 | Line 55 | Pass 3
Mission: DAY 4 PORTAGE MAINE | Req.# 25

## AIRCRAFT & CHANNEL DATA

| | | | | CH 1 | CH 2 | CH 3 | CH 4 |
|---|---|---|---|---|---|---|---|
| Altitude | | | | | | | |
| Desired: | 3500 ft | | Wave/Pol.: | p-VV | p-VH | p-HV | p-HH |
| Baro: | 3337 ft s.d.= | 4 | Swath Ctr Ang: | 8.0° | 8.0° | 8.0° | 8.0° |
| Slt. rng: | 20406 ft | | Tgt Dep Ang: | 8.0° | 8.0° | 8.0° | 8.0° |
| Look: | Right | | St rng (ft): | 18872 | 18872 | 18872 | 18872 |
| Depr Ang: | 25.0° | | Near Rng Dep: | 10.2° | 10.2° | 10.2° | 10.2° |
| Des. trk: | 276.0° | | Far Rng Dep: | 5.5° | 5.5° | 5.5° | 5.5° |
| Start Sq: | 90.0° | | Atten (dB): | 60.0 | 67.0 | 60.0 | 67.0 |
| End Sq: | 90.0° | | RMS Video (%FS) | 5.3 | 3.3 | 3.5 | 3.7 |

## WAYPOINTS

| | Latitude | Longitude |
|---|---|---|
| Line_up: | N 46:39.84 | W 68:06.25 |
| Start: | N 46:41.13 | W 68:23.57 |
| End: | N 46:42.18 | W 68:38.04 |
| From: | N 42:35.56 | W 45:47.53 |
| To: | N 45:52.81 | W 92:36.67 |

Main Target: SIG
Mocomp Point:
Lat: N 46:44.97
Long: W 68:30.30
Tgt Trk: 0.0 Tgt Vel: 0.0
Alt: 660.0 ft

## RADAR PARAMETERS - for UWB

RTP Channel: 1
Resolution: N/A
Swath width: Single
RMS Time Constant: 2^7
Position Reference: ON
Atten. Tracking: OFF
Range Gate Delta: 0.0 ft
Azimuth Presum Rate: Presum6
TX Chirp Filename: CTL1U2A

Filter damping is Hi -> 10 sec
PRF Factor is FAST (262.5 kts)
Ave Gndspd: Real -> 242.7 kts
Mocomp Off for Chnl 1, 2, 3, 4
GPS Vel/Pos Reference
Adj Gnd Scene: 5000.0 ft
Range Tracking is OFF
Clutterlock Reference: OFF
RX Chirp Filename: CRL1N0A

Ave Ref Vel -> -.3 fps (s.d.= 1.3)
Ave Fil Vel -> -1.0 fps (s.d.= 1.2)

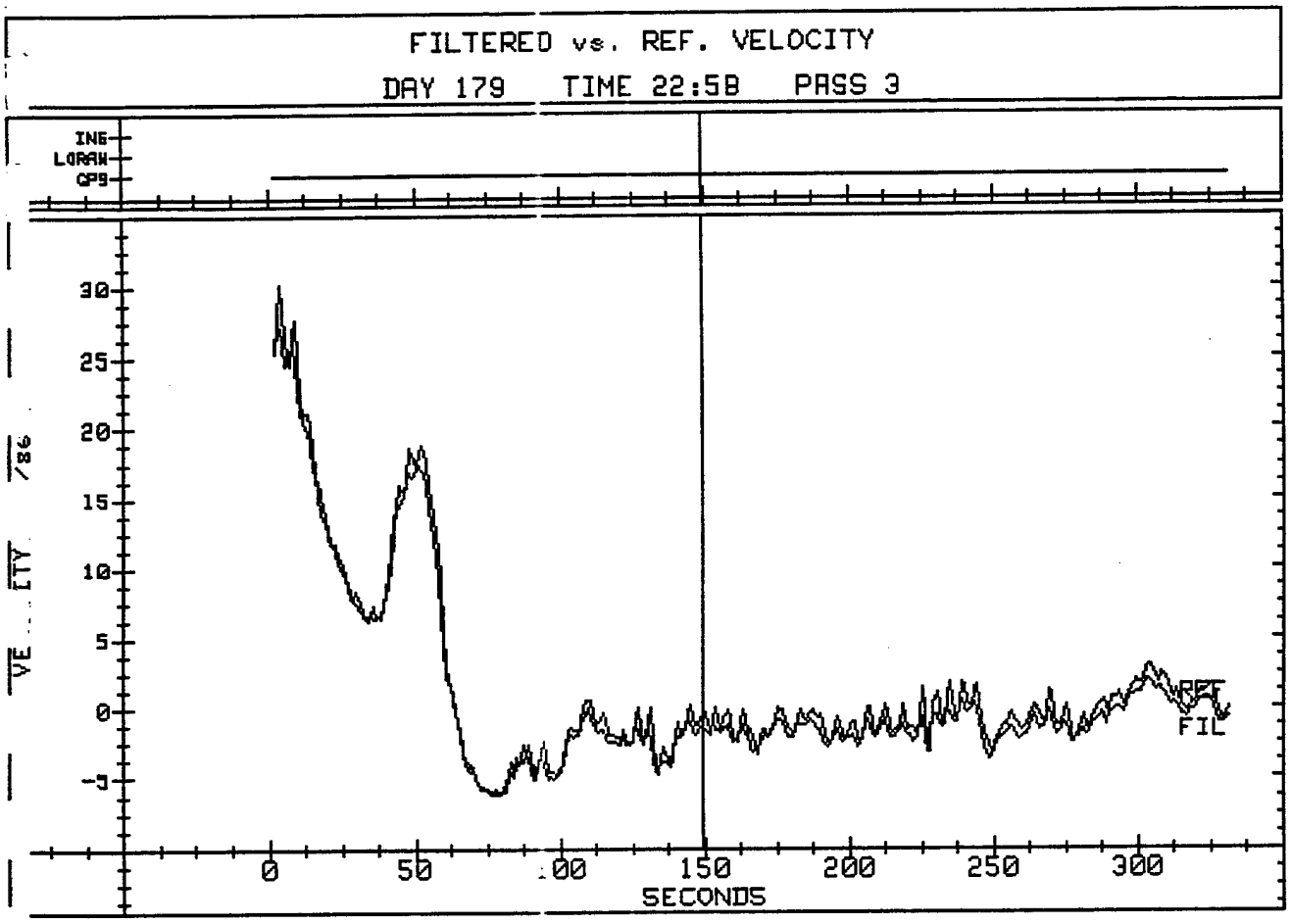
| NML XMIT PWR | ANT BIAS | | Tape Footage | | Drive no. |
|---|---|---|---|---|---|
| X: -70.0 | Elevation: | 0.0° | | | |
| L: -70.0 | Azimuth: | 0.0° | Starting: | 1605 ft | (1) |
| C: -70.0 | Pitch: | 0.0° | Ending: | 2899 ft | (1) |
| P: 40.1 | | | | | |

| Vel Bias | CAL Atten | LINE Map Time (UCT) |
|---|---|---|
| X: 2112.0 | X: 63.8 dB | Start: 23:00:51 |
| Y: 1874.0 | L: 63.8 dB | End: 23:03:36 |
| Z: 5343.0 | C: 63.8 dB | |

Mocomp Counters

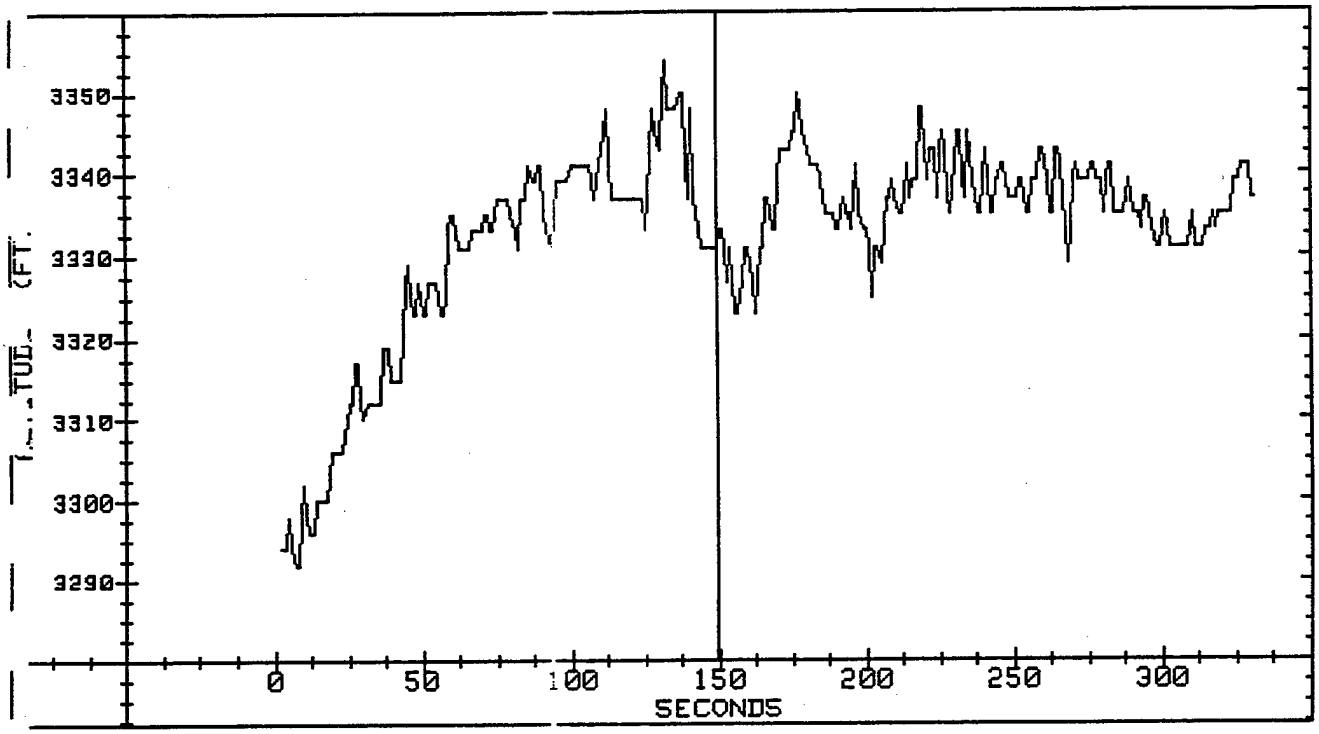
| | | |
|---|---|---|
| Start: | 101759 | 00018D7Fh |
| End: | 129388 | 0001F96Ch |

CPA (UCT): 00:00:00
Alt: 0 ft (GPS)
Lat: N 0:00: 0
Lon: E 0:00: 0


FILTERED vs. REF. VELOCITY
DAY 179 TIME 22:58 PASS 3
INE
LORAN
GPS
VELOCITY M/S
30
25
20
15
10
5
0
-5
0
50
100
150
200
250
300
SECONDS
REF
FIL

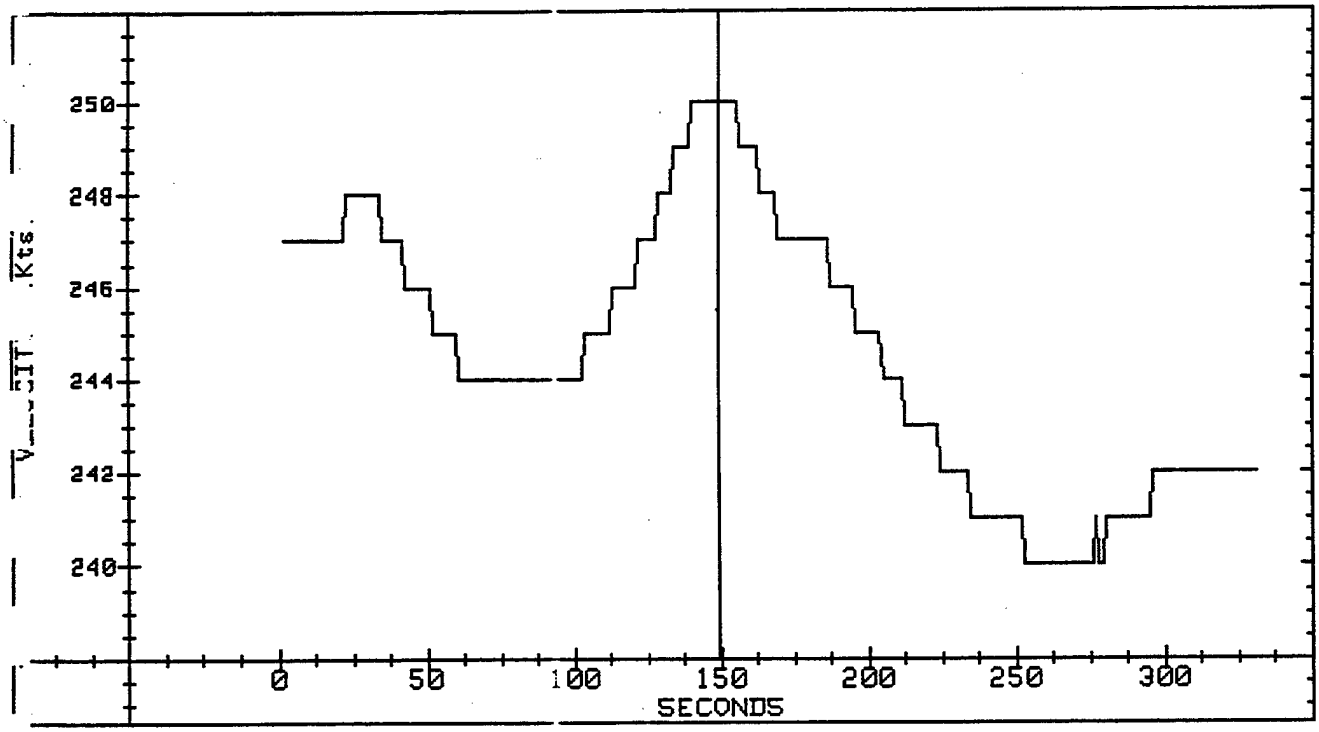
BARO ALTITUDE

DAY 179 TIME 22:58 PASS 3 m= 3337. sd= 4.36086



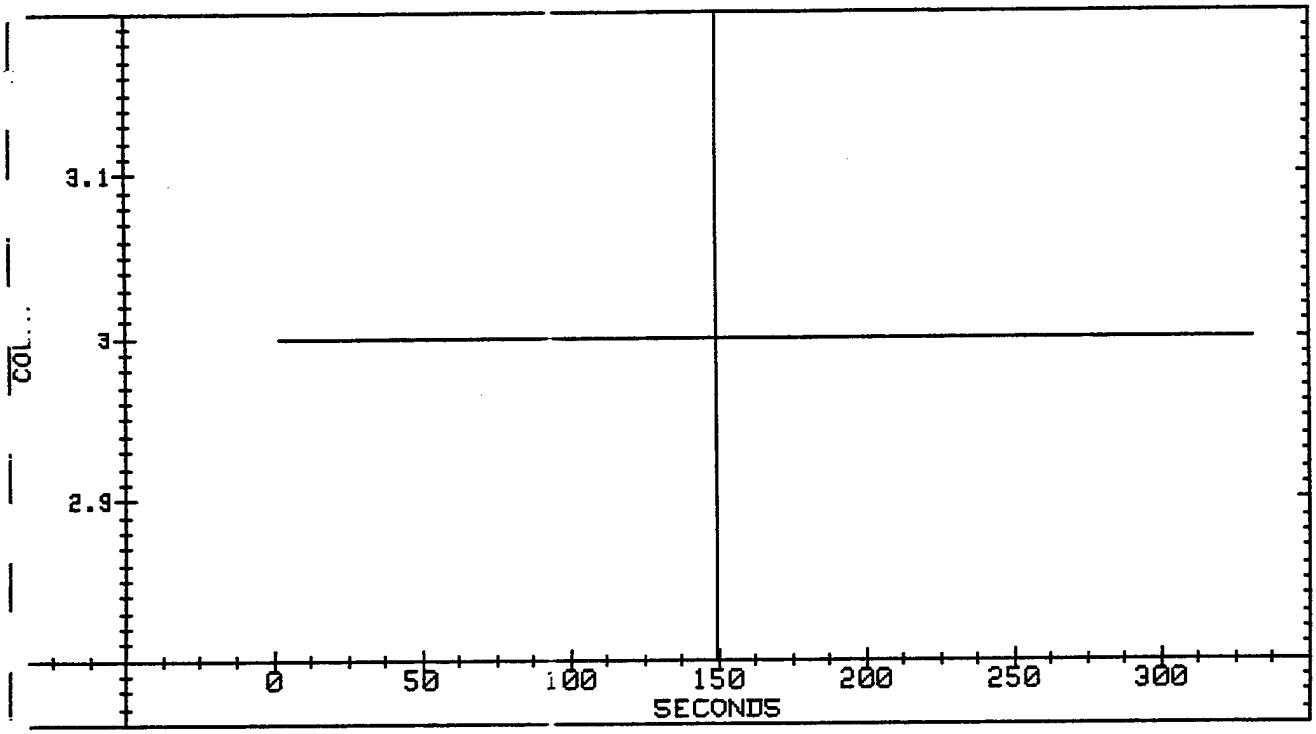
INS GROUND SPEED

DAY 179 TIME 22:58 PASS 3 m- 242.7, sd- 2.31432



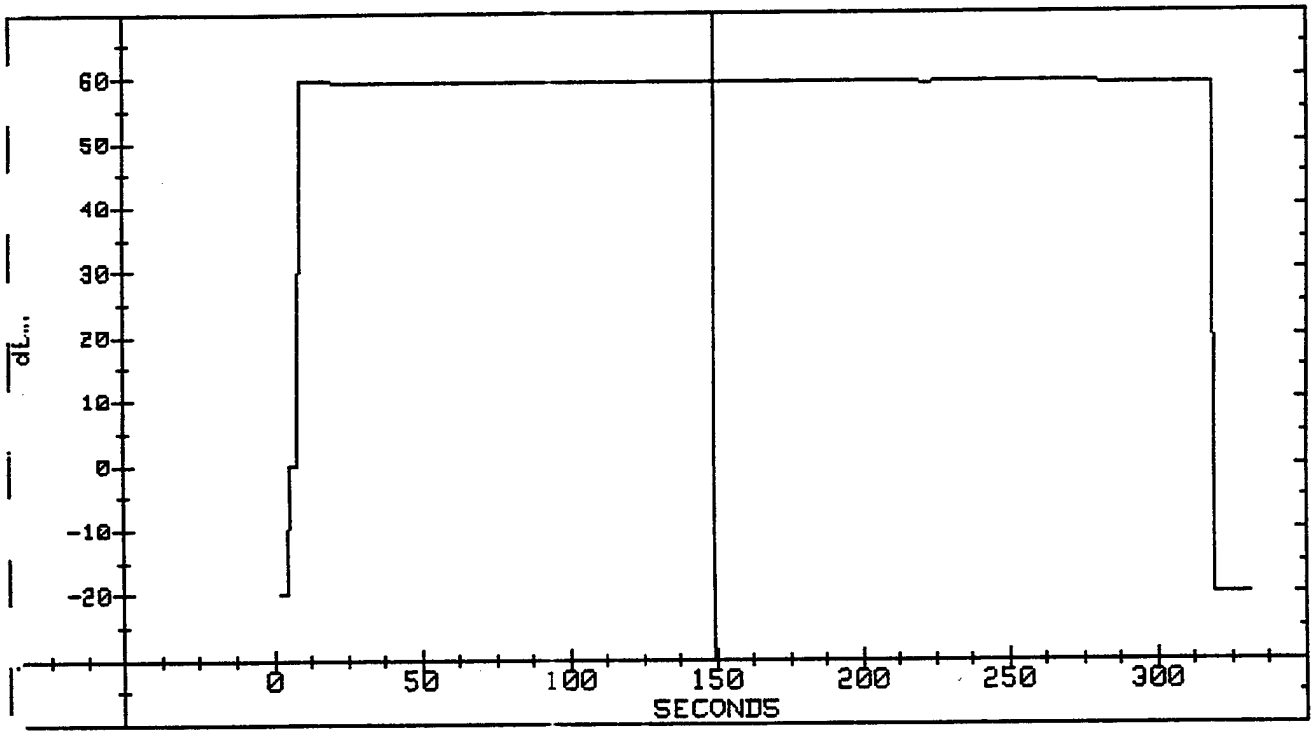
PASS NUMBER

DAY 179 TIME 22:58 PASS 3 m= 3, sd= 0



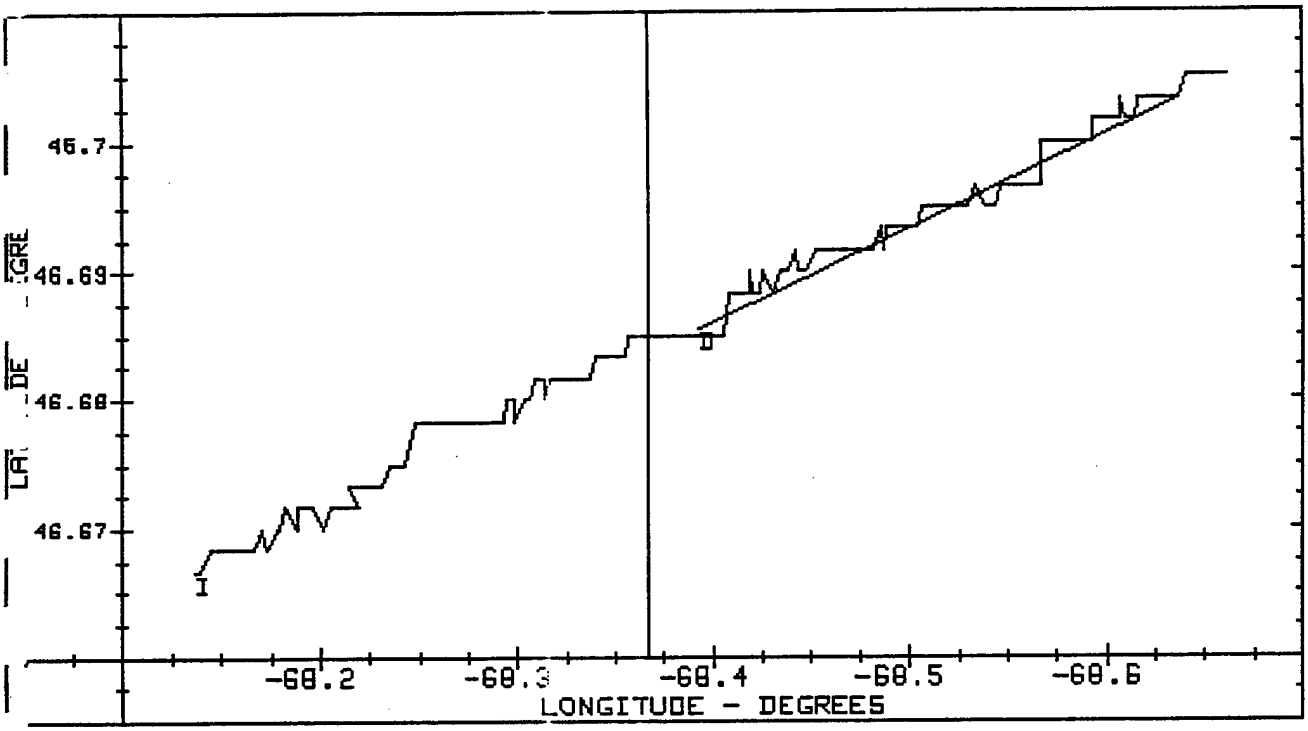
P Band Power

DAY 179 TIME 22:58 PASS 3 m= 52.88, sd= 21.2451



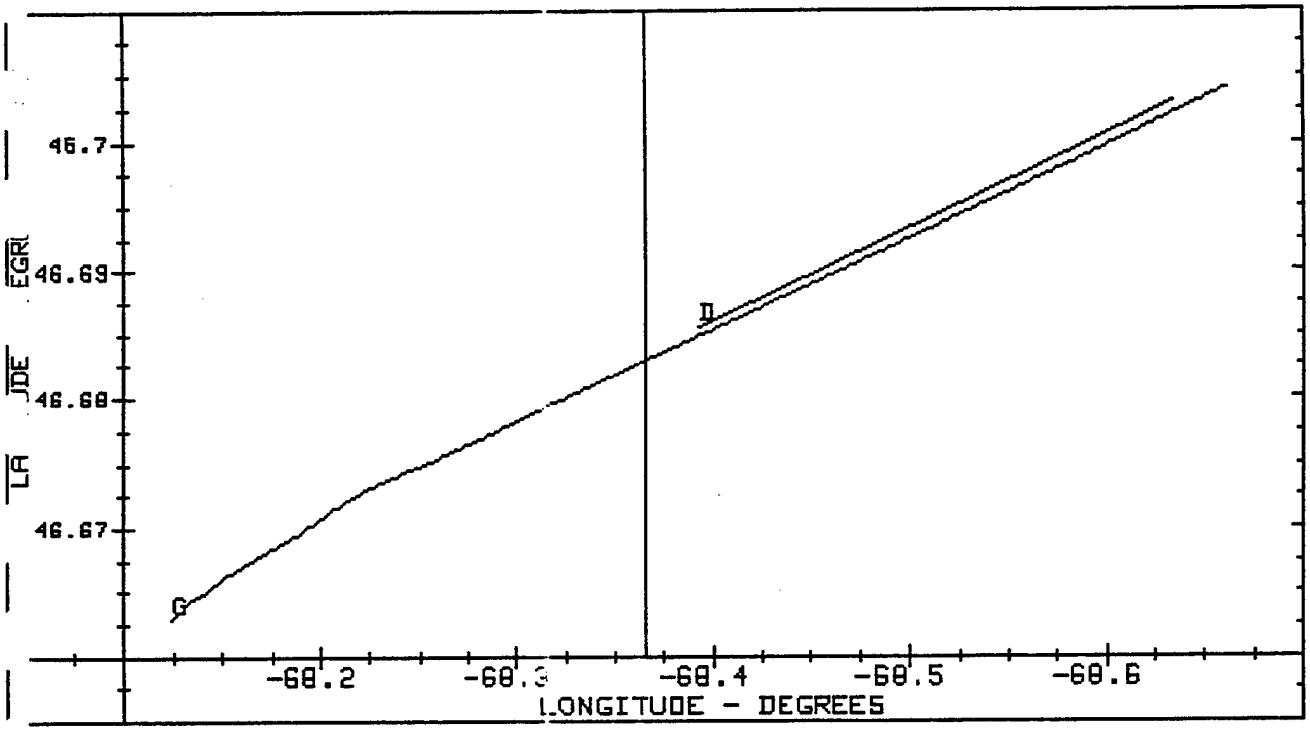
INS AIRCRAFT POSITION

DAY 179 TIME 22:58 PASS 3



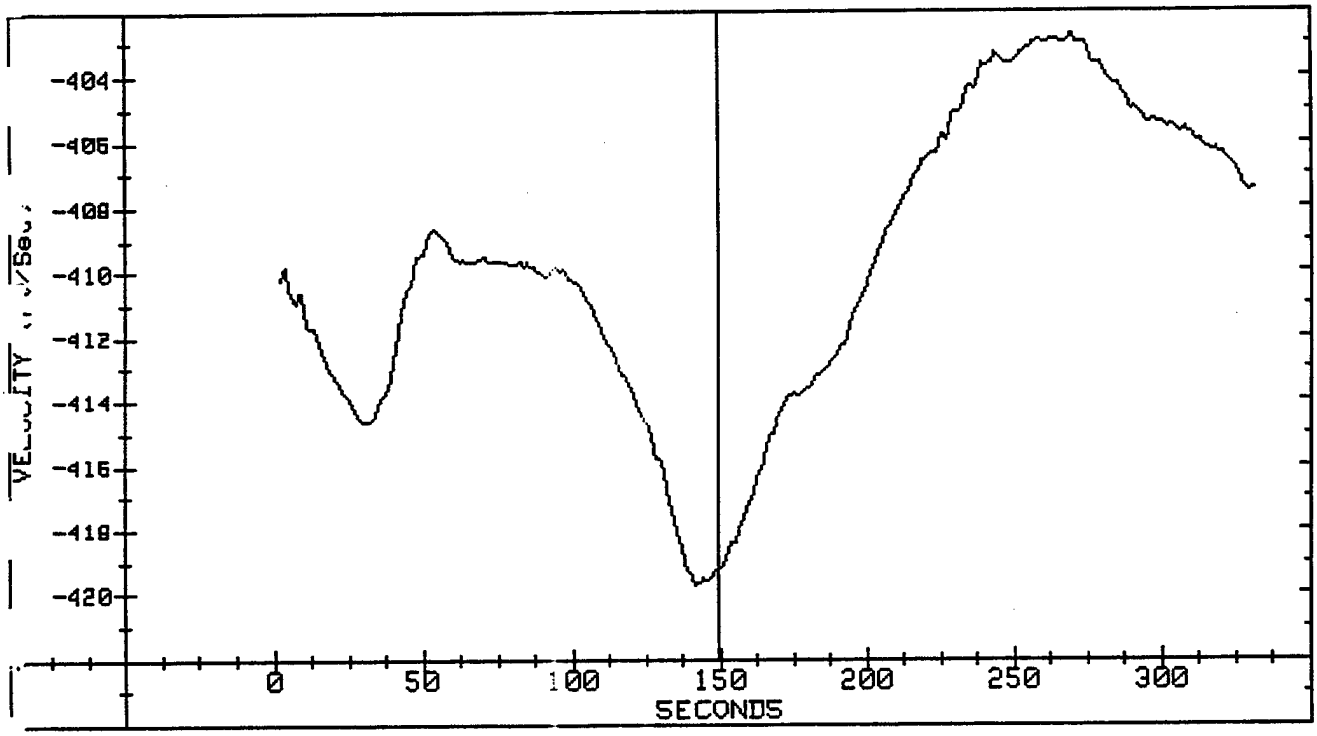
GPS AIRCRAFT POSITION

DAY 179 TIME 22:58 PASS 3



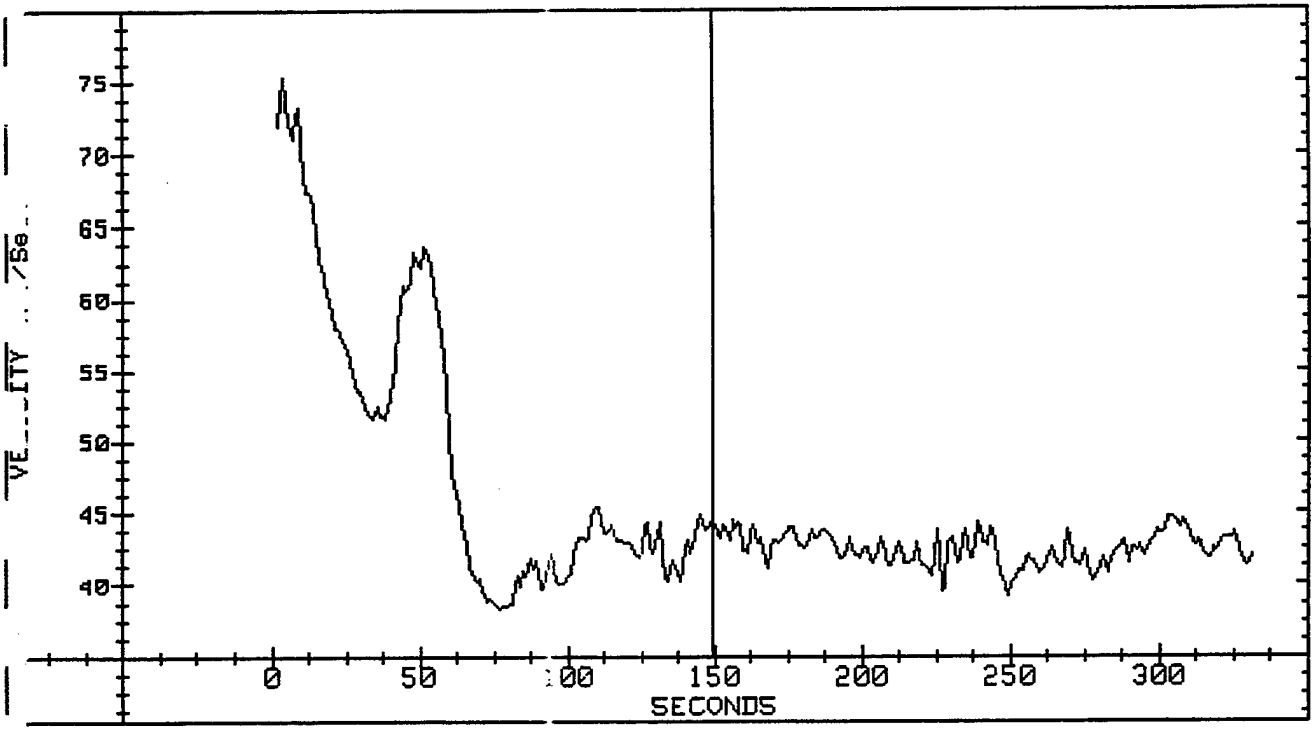
GPS Ve

DAY 179 TIME 22:58 PASS 3 m= -406.9, sd= 3.62162



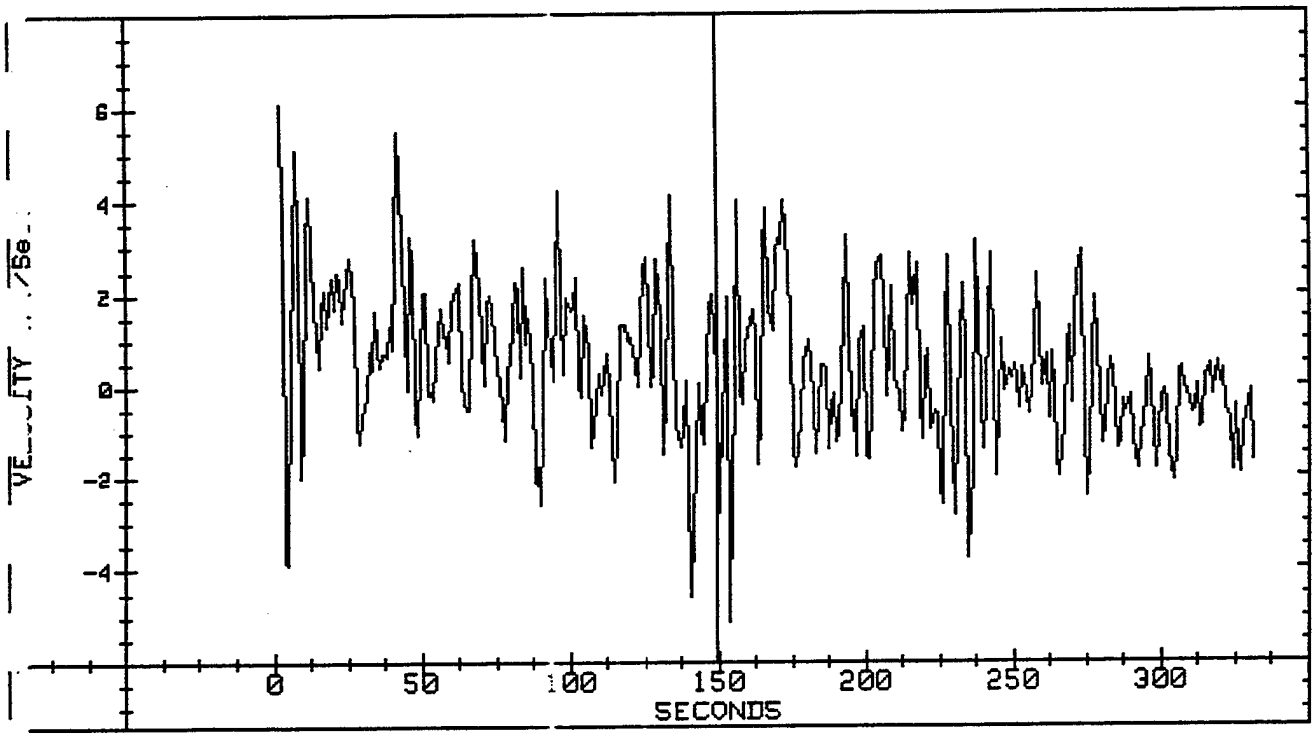
GPS Vn

DAY 179 TIME 22:58 PASS 3 m= 42.42, sd= 1.08379



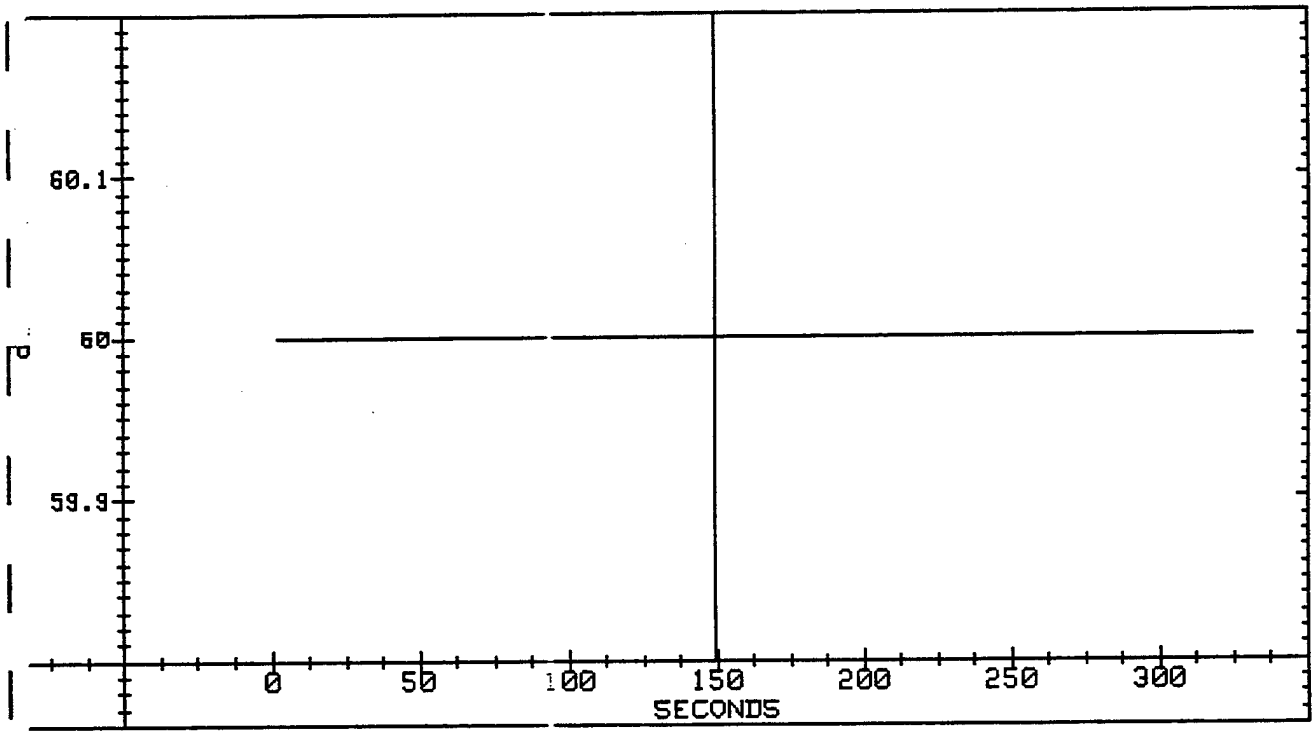
GPS Vv

DAY 179 TIME 22:58 PASS 3 m= .04895, sd= 1.44544



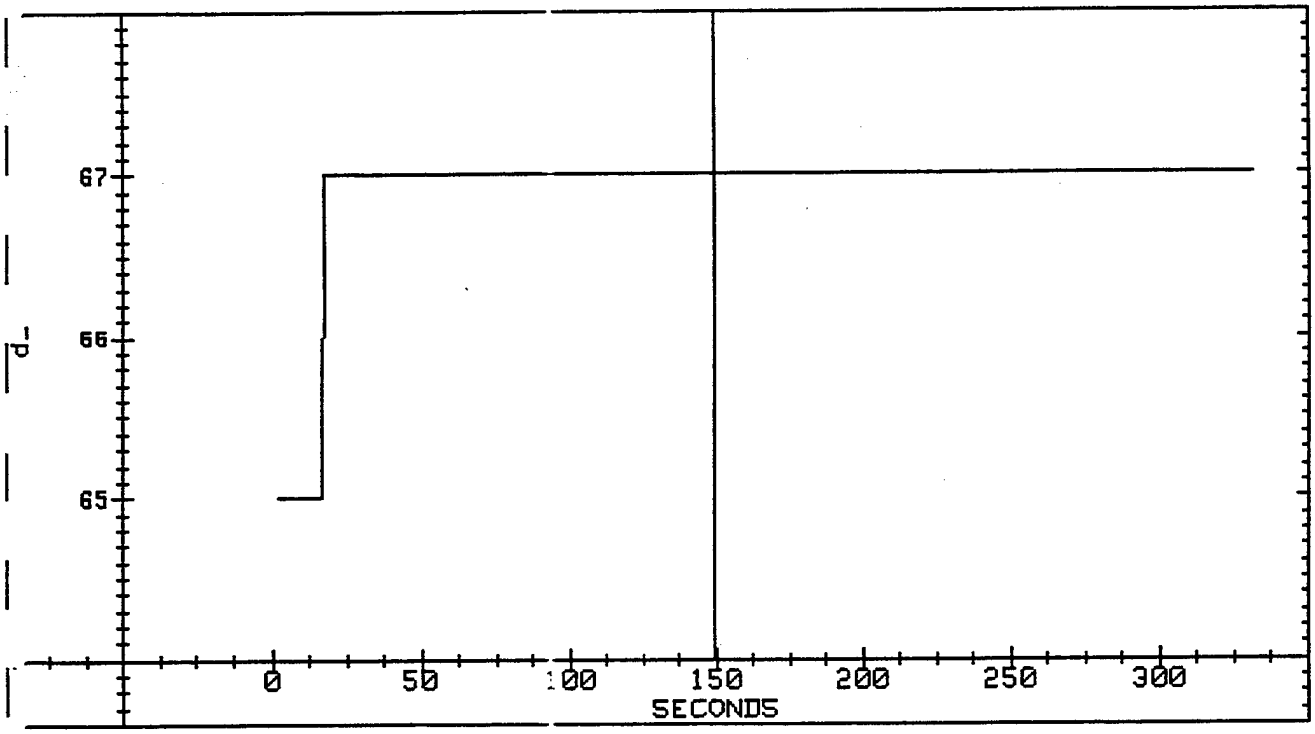
Ch1 RES Attenuation

DAY 179 TIME 22:58 PASS 3 m= 60. sd= 0



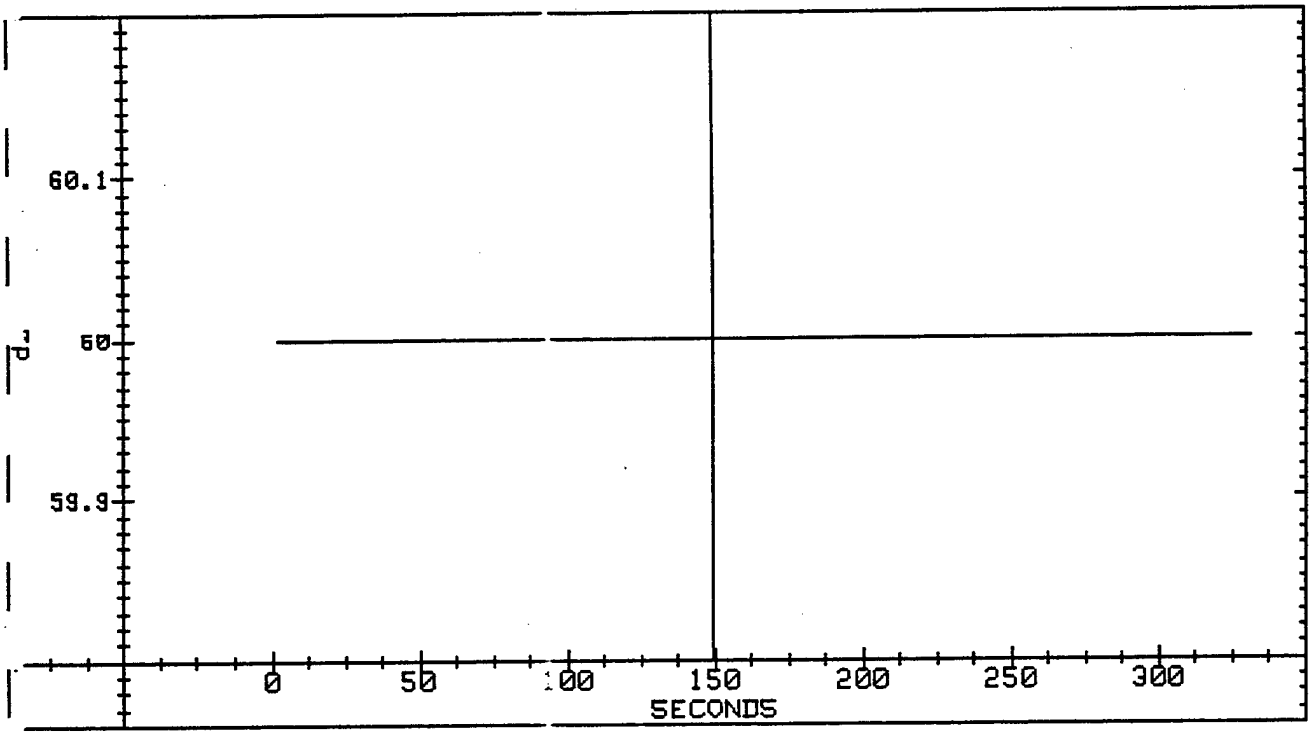
Ch2 RES Attenuation

DAY 179 TIME 22:50 PASS 3 m= 67, sd= 0



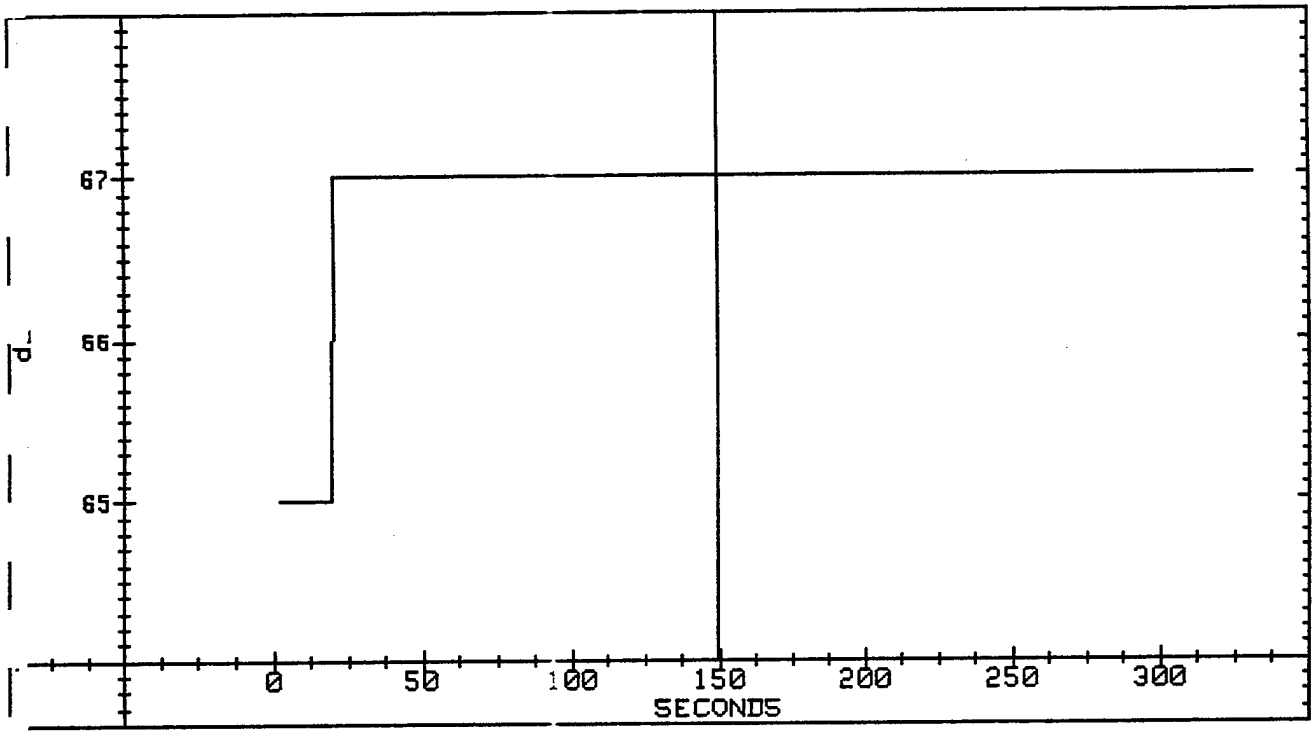
Ch3 RES Attenuation

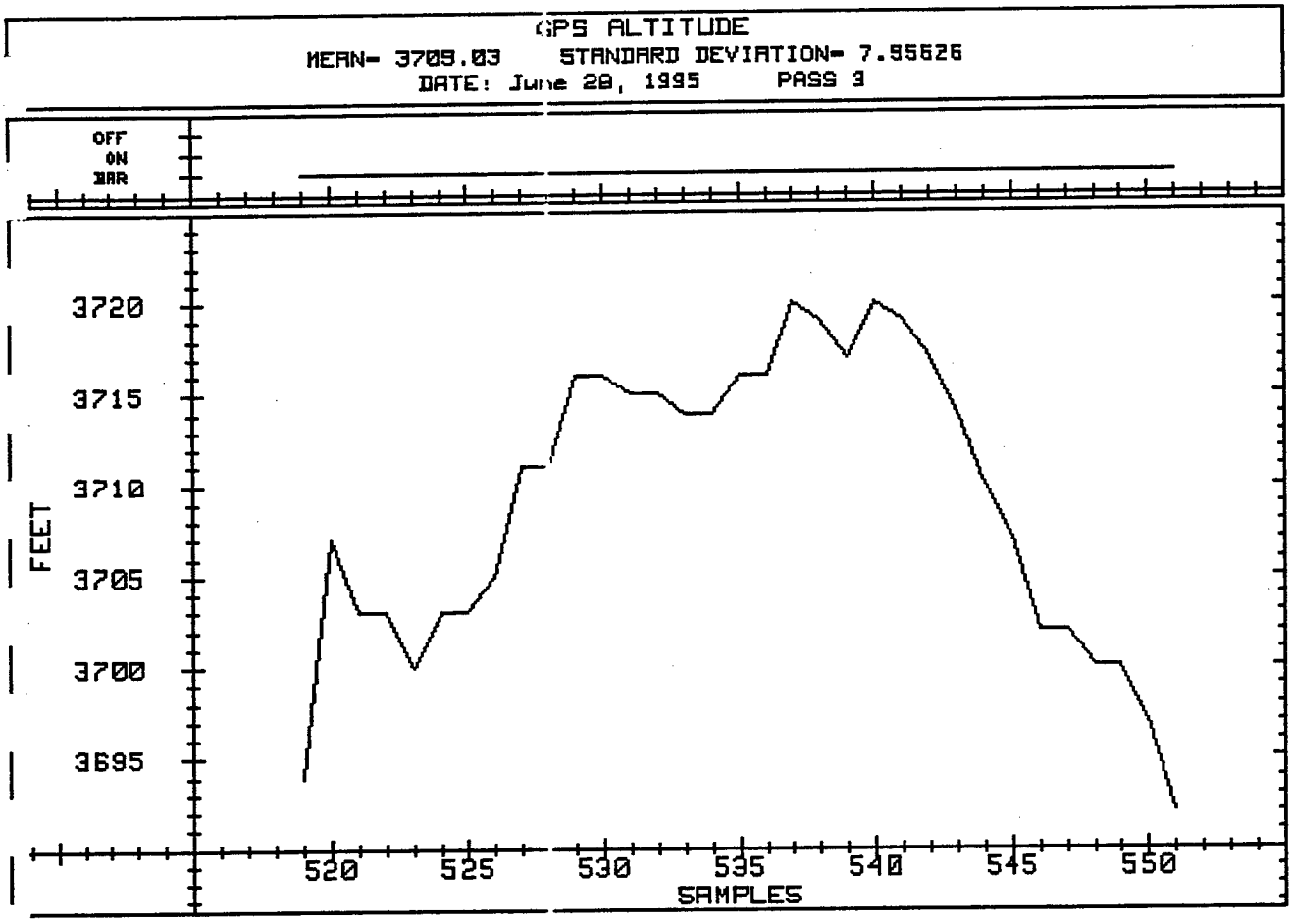
DAY 179 TIME 22:58 PASS 3 m= 60, sd= 0



Ch4 RES Attenuation

DAY 179 TIME 22:58 PASS 3 m= 67, sd= 0

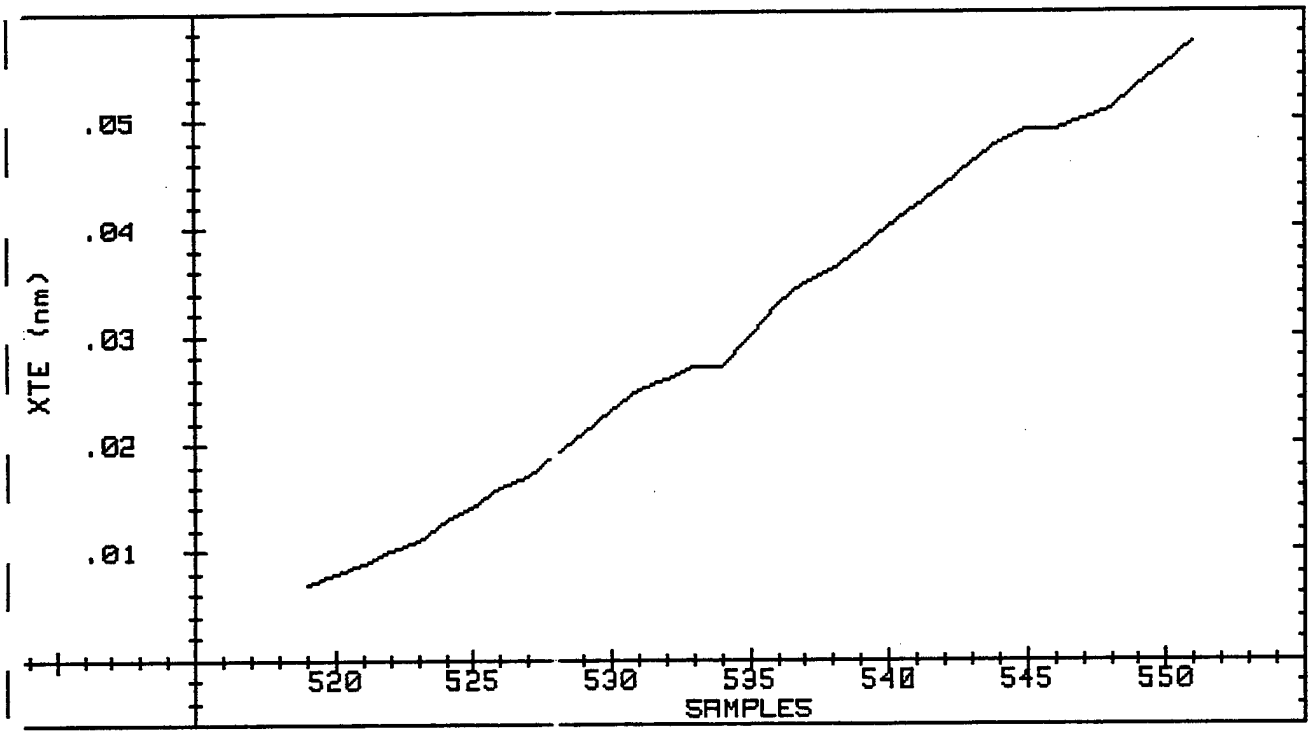



GPS ALTITUDE
MEAN= 3709.03 STANDARD DEVIATION= 7.85626
DATE: June 28, 1995 PASS 3
OFF
ON
BAR
3720
3715
3710
3705
3700
3695
FEET
520
525
530
535
540
545
550
SAMPLES

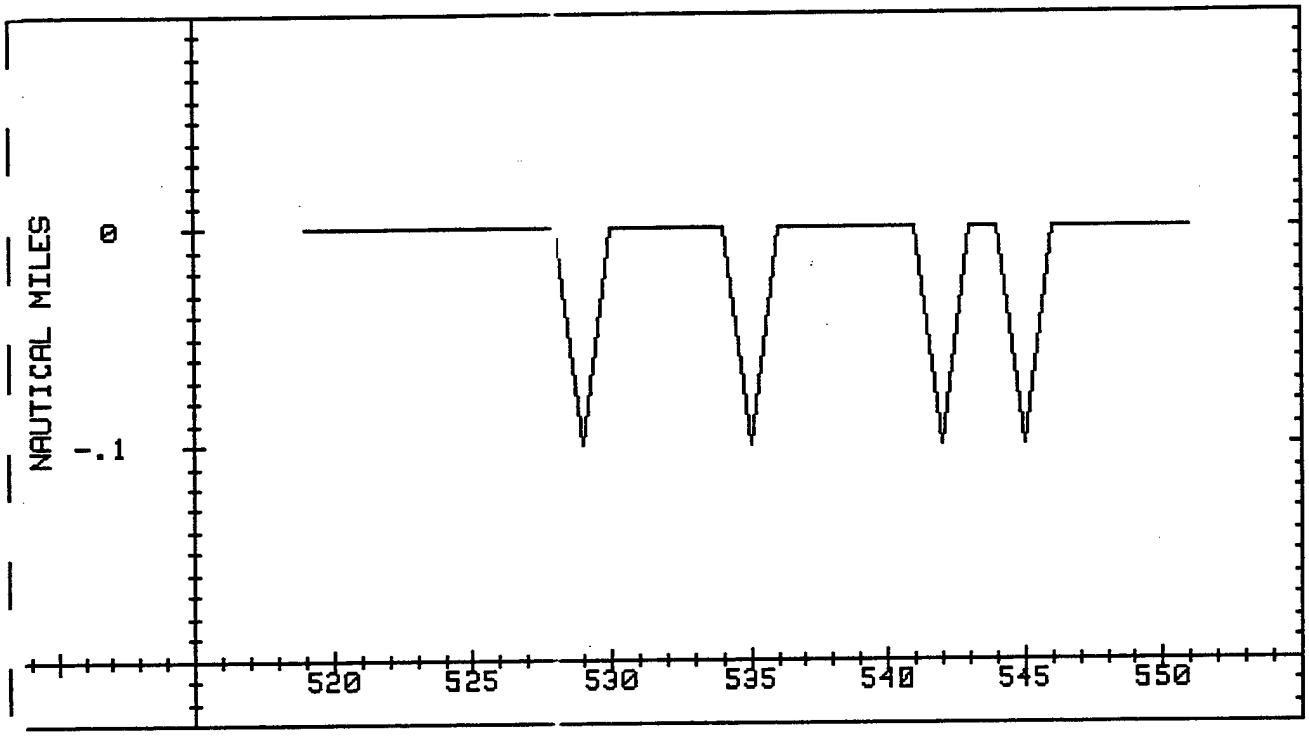
GPS Cross Track Error

MEAN= .0311818 STANDARD DEVIATION= .0155592

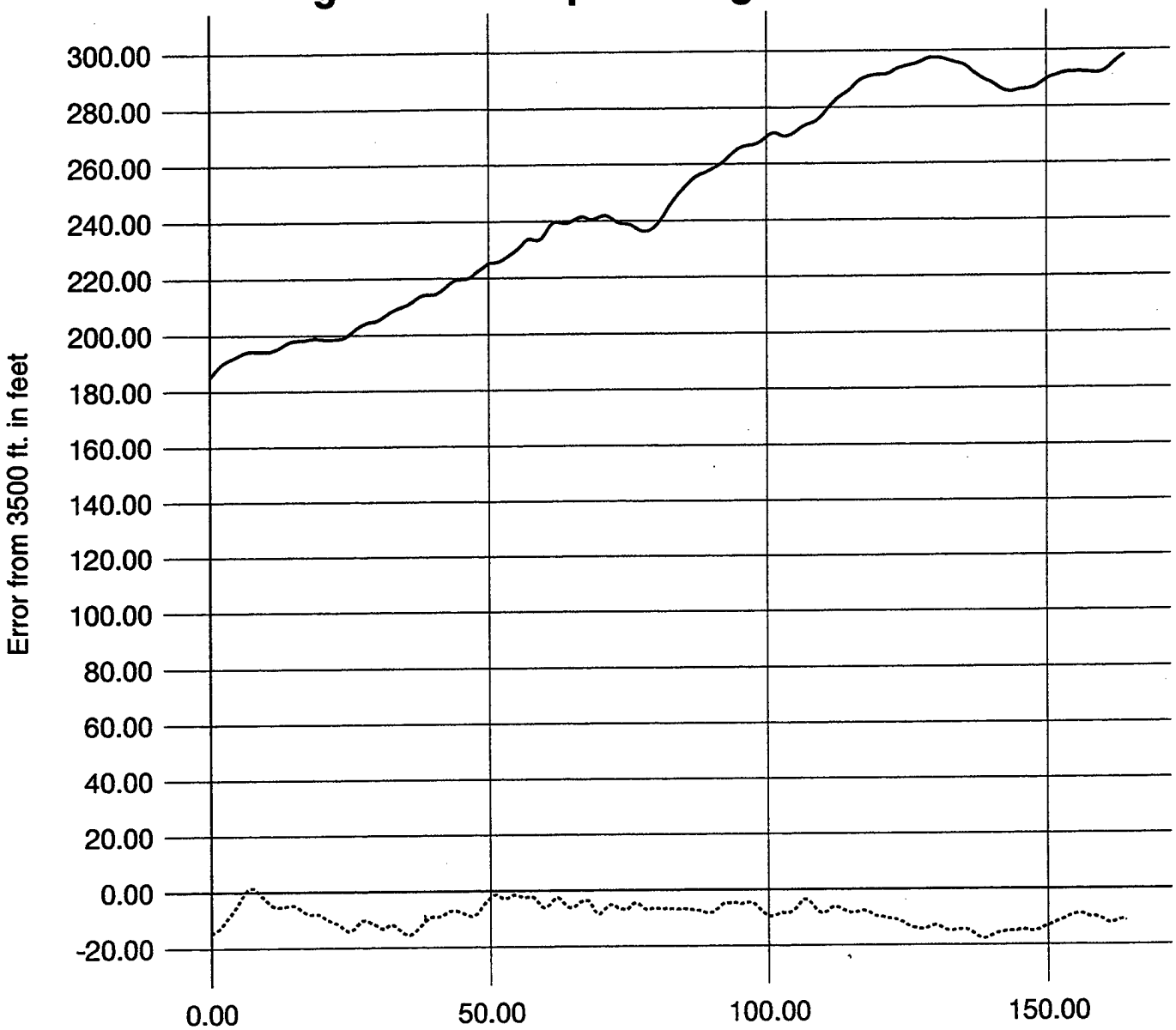
DATE: June 28, 1995 PASS 3



INS CROSS TRACK ERROR
MEAN= -.0121212 STANDARD DEVIATION= .0326374
DATE: June 28, 1995 PASS 3



# Portage, ME - June 28, 1995 - Pass 3 - Xtk. and Alt. Errors
## Higher alt. and port are greater than zero




| | Mean | St. Dev. |
|---|---|---|
| ALT. | -8.66 | 4.13 |
| XTK. | 249.17 | 36.47 |

29 Jun 1995
Tape: E1417

Post-line Data Sheet
Line 37
Mission: DAY 4 PORTAGE MAINE

Time: 180:00:34:43
Pass 11
Req.# 16

## AIRCRAFT & CHANNEL DATA

| | | | | CH 1 | CH 2 | CH 3 | CH 4 |
|---|---|---|---|---|---|---|---|
| Altitude Desired: | 5500 ft | | Wave/Pol.: | p-VV | p-VH | p-HV | p-HH |
| Baro: | 5430 ft | s.d.= 3 | Swath Ctr Ang: | 12.0° | 12.0° | 12.0° | 12.0° |
| Slt. rng: | 23279 ft | | Tgt Dep Ang: | 12.0° | 12.0° | 12.0° | 12.0° |
| Look: | Right | | St rng (ft): | 21740 | 21740 | 21740 | 21740 |
| Depr Ang: | 25.0° | | Near Rng Dep: | 14.5° | 14.5° | 14.5° | 14.5° |
| Des. trk: | 276.0° | | Far Rng Dep: | 8.2° | 8.2° | 8.2° | 8.2° |
| Start Sq: | 90.0° | | Atten (dB): | 59.0 | 66.0 | 58.0 | 66.0 |
| End Sq: | 90.0° | | RMS Video (%FS) | 6.4 | 5.6 | 5.8 | 6.0 |

## WAYPOINTS

| | Latitude | Longitude |
|---|---|---|
| Line_up: | N 46:39.42 | W 68:06.32 |
| Start: | N 46:40.72 | W 68:23.64 |
| End: | N 46:41.76 | W 68:38.10 |
| From: | N 42:35.19 | W 45:47.74 |
| To: | N 45:52.41 | W 92:36.55 |

Main Target: SIG
Mocomp Point:
Lat: N 46:44.97
Long: W 68:30.30
Tgt Trk: 0.0 Tgt Vel: 0.0
Alt: 660.0 ft

## RADAR PARAMETERS - for UWB

RTP Channel: 1
Resolution: N/A
Swath width: Single
RMS Time Constant: 2^7
Position Reference: ON
Atten. Tracking: OFF
Range Gate Delta: 0.0 ft
Azimuth Presum Rate: Presum6
TX Chirp Filename: CTL1U2A

Filter damping is Hi -> 10 sec
PRF Factor is FAST (262.5 kts)
Ave Gndspd: Real -> 248.3 kts
Mocomp Off for Chnl 1, 2, 3, 4
GPS Vel/Pos Reference
Adj Gnd Scene: 5000.0 ft
Range Tracking is OFF
Clutterlock Reference: OFF
RX Chirp Filename: CRL1N0A

Ave Ref Vel -> .9 fps (s.d.= 1.1)
Ave Fil Vel -> .3 fps (s.d.= 1.1)

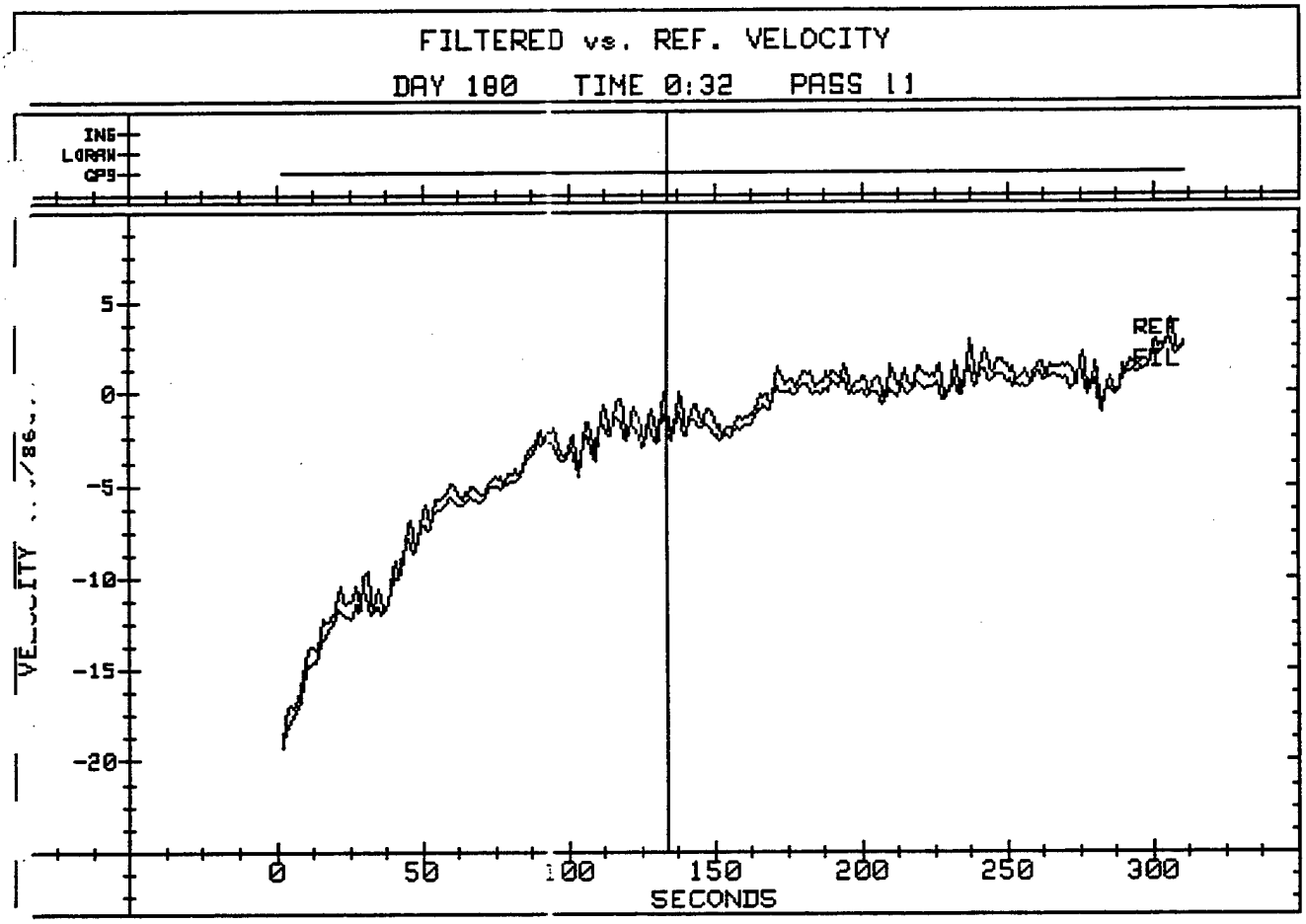
| NML XMIT PWR | ANT BIAS | | Tape Footage | | Drive no. |
|---|---|---|---|---|---|
| X: -70.0 | Elevation: | 0.0° | | | |
| L: -70.0 | Azimuth: | 0.0° | Starting: | 2751 ft | (2) |
| C: -70.0 | Pitch: | 0.0° | Ending: | 4001 ft | (2) |
| P: 39.9 | | | | | |

| Vel Bias | CAL Atten | LINE Map Time (UCT) |
|---|---|---|
| X: 2112.0 | X: 63.8 dB | Start: 00:34:43 |
| Y: 1874.0 | L: 63.8 dB | End: 00:37:24 |
| Z: 5343.0 | C: 63.8 dB | |

Mocomp Counters

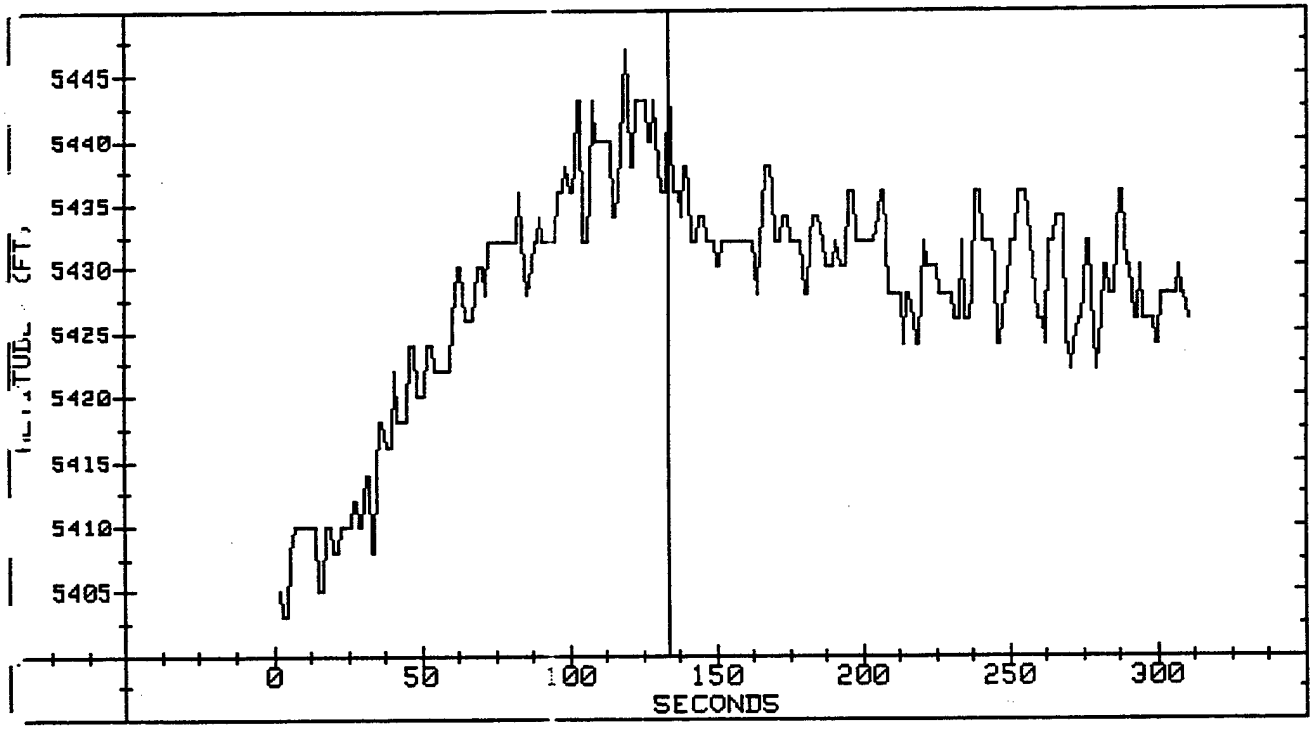
| | | |
|---|---|---|
| Start: | 551847 | 00086BA7h |
| End: | 578847 | 0008D51Fh |

CPA (UCT): 00:00:00
Alt: 0 ft (GPS)
Lat: N 0:00: 0
Lon: E 0:00: 0


FILTERED vs. REF. VELOCITY
DAY 180 TIME 0:32 PASS 11
INS
LORAN
GPS
5
0
-5
-10
-15
-20
REF
FIL
0
50
100
150
200
250
300
SECONDS

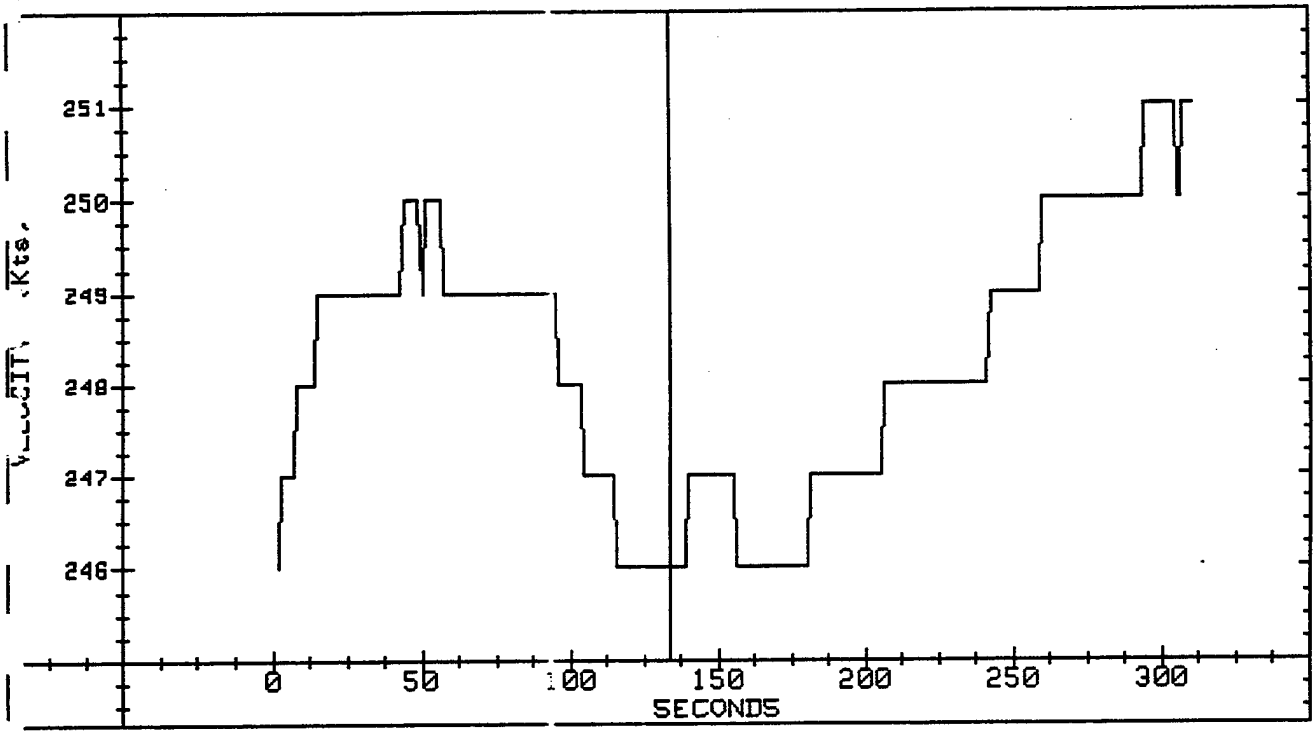
BARO ALTITUDE

DAY 180 TIME 0:32 PASS 11 m= 5430, sd= 3.49426



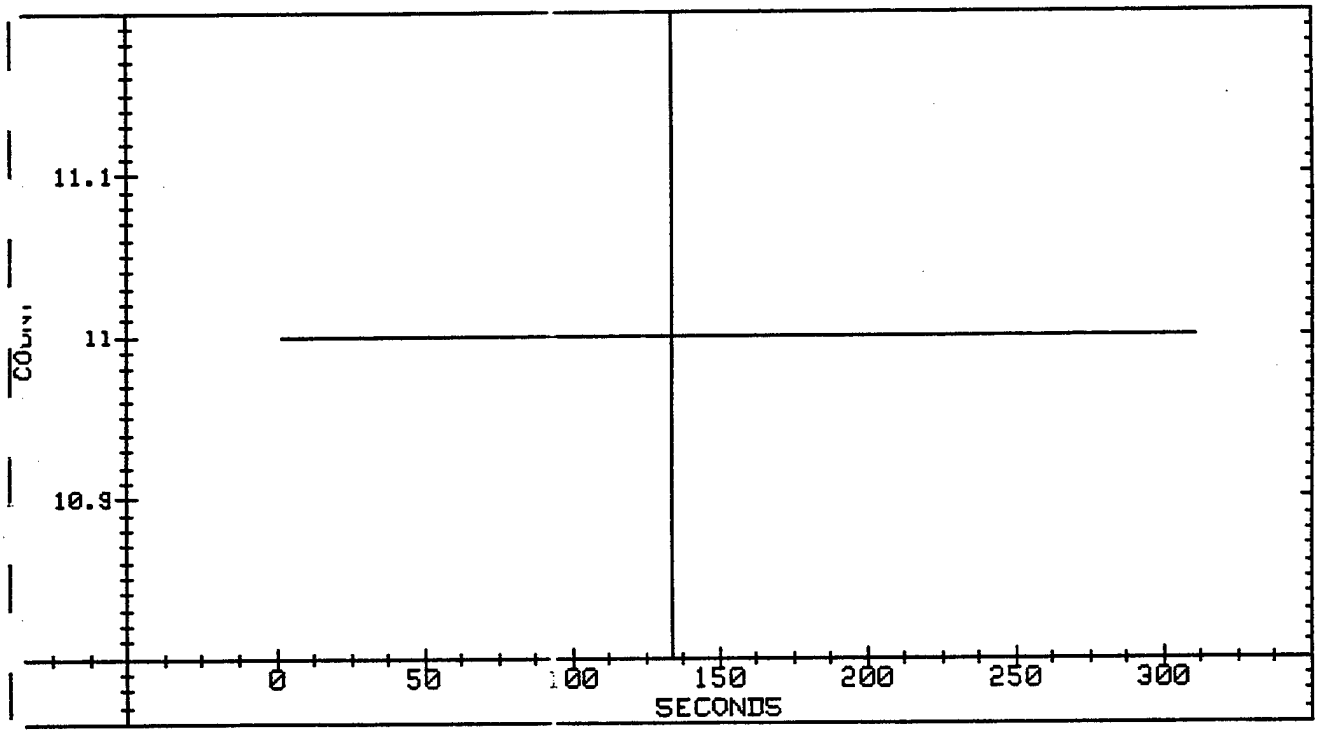
INS GROUND SPEED

DAY 180 TIME 0:32 PASS 11 m= 248.3, sd= 1.59409



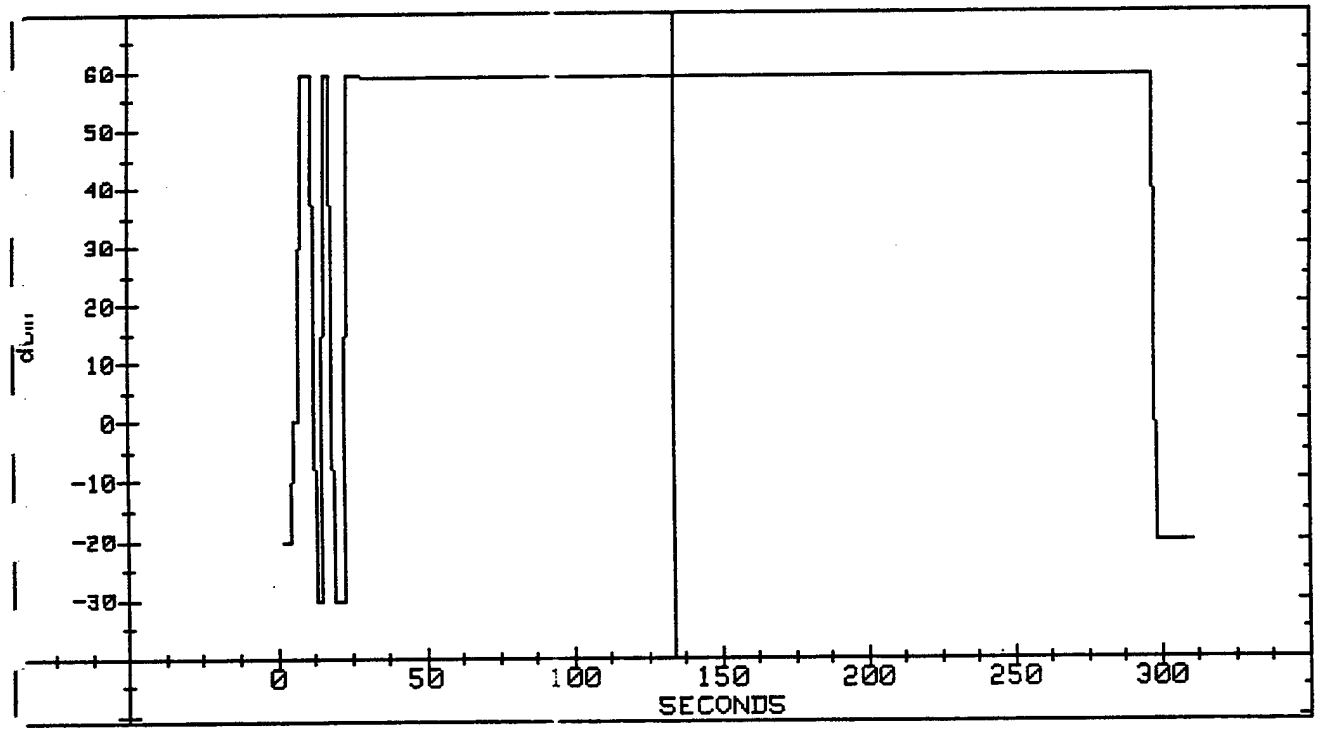
PASS NUMBER

DAY 180 TIME 0:32 PASS 11 m= 11. sd= 0



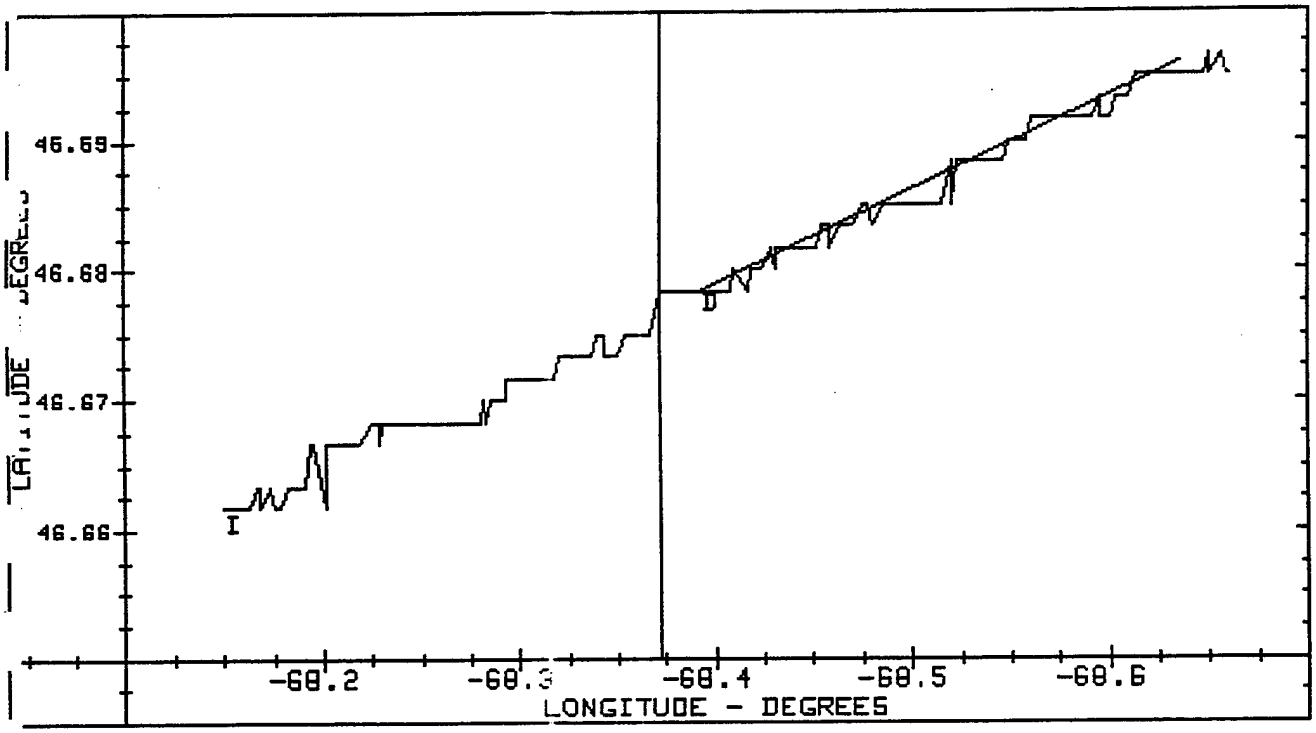
P Band Power

DAY 180 TIME 0:32 PASS 11 m= 52.66, sd= 21.4636



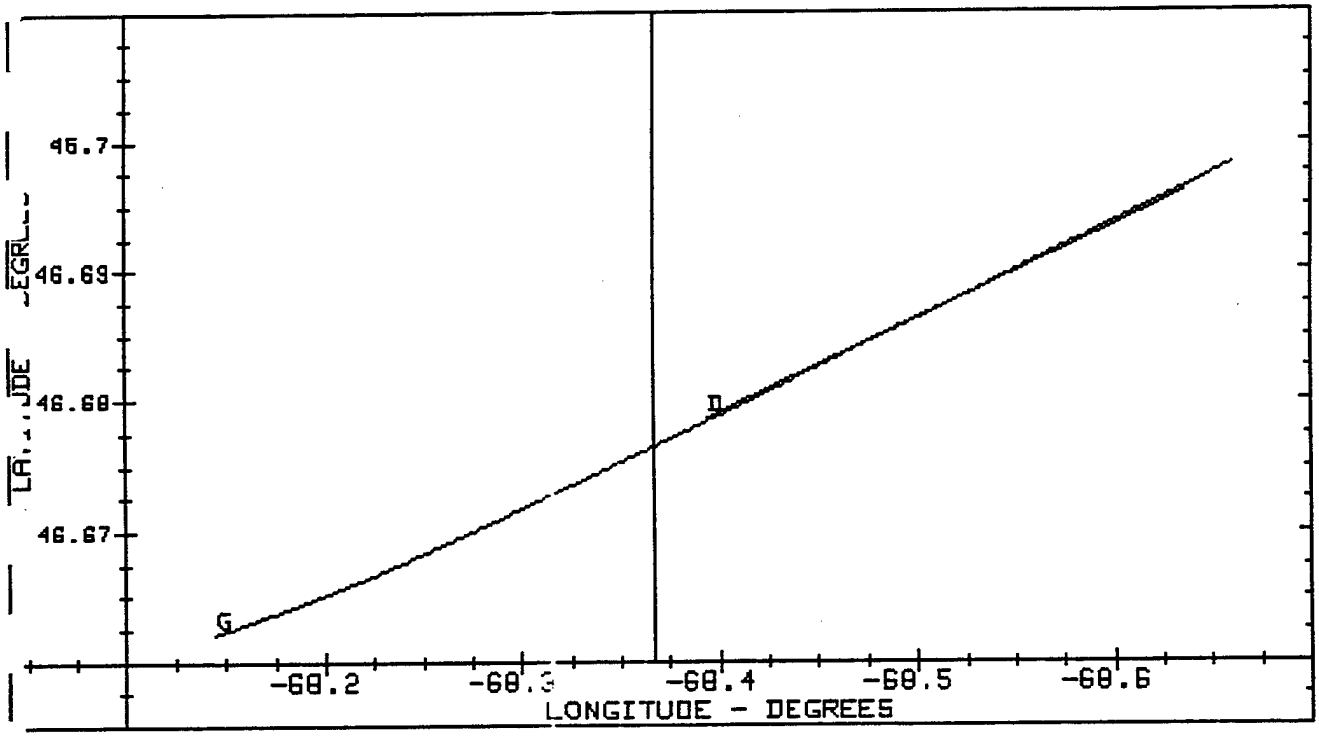
INS AIRCRAFT POSITION

DAY 180 TIME 0:32 PASS 11



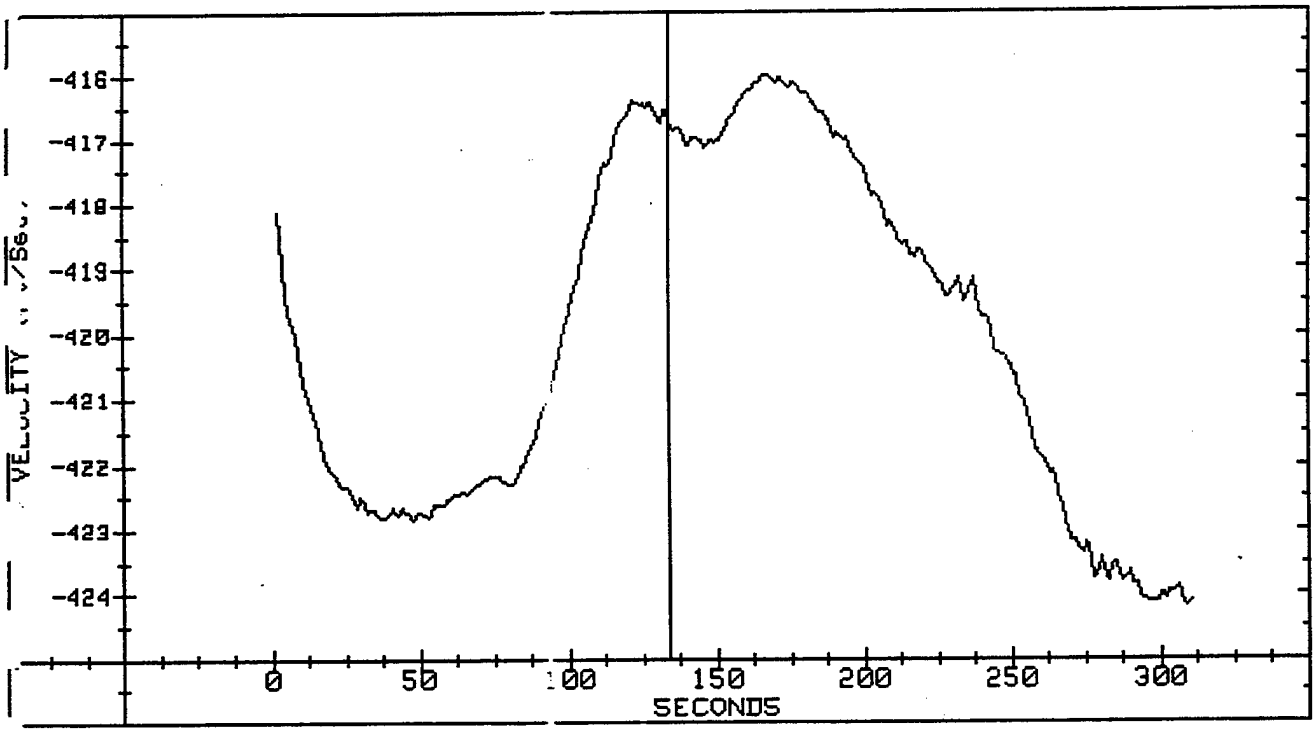
GPS AIRCRAFT POSITION

DAY 180 TIME 0:32 PASS 11



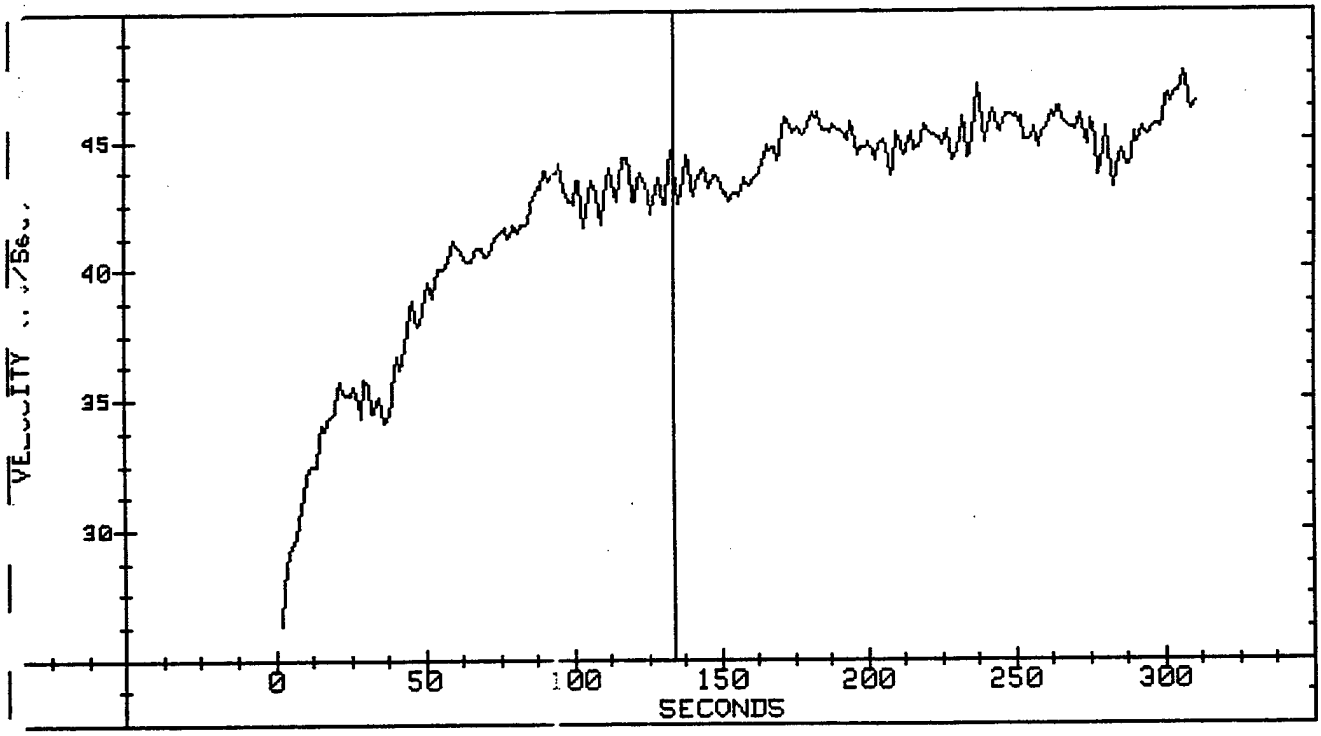
GPS Ve

DAY 180 TIME 0:32 PASS 11 m= -419.8, sd= 2.88191



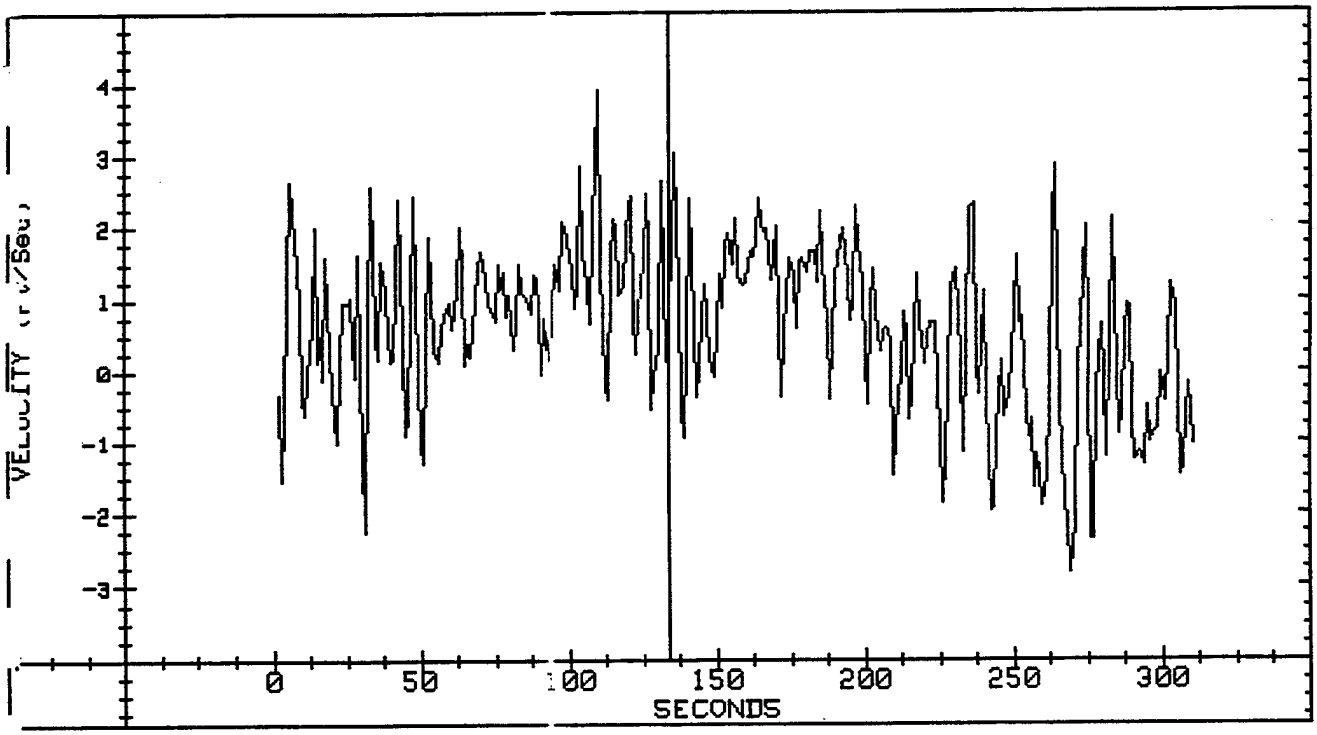
GPS Vn

DAY 180 TIME 0:32 PASS 11 m= 45.06, sd= .95536



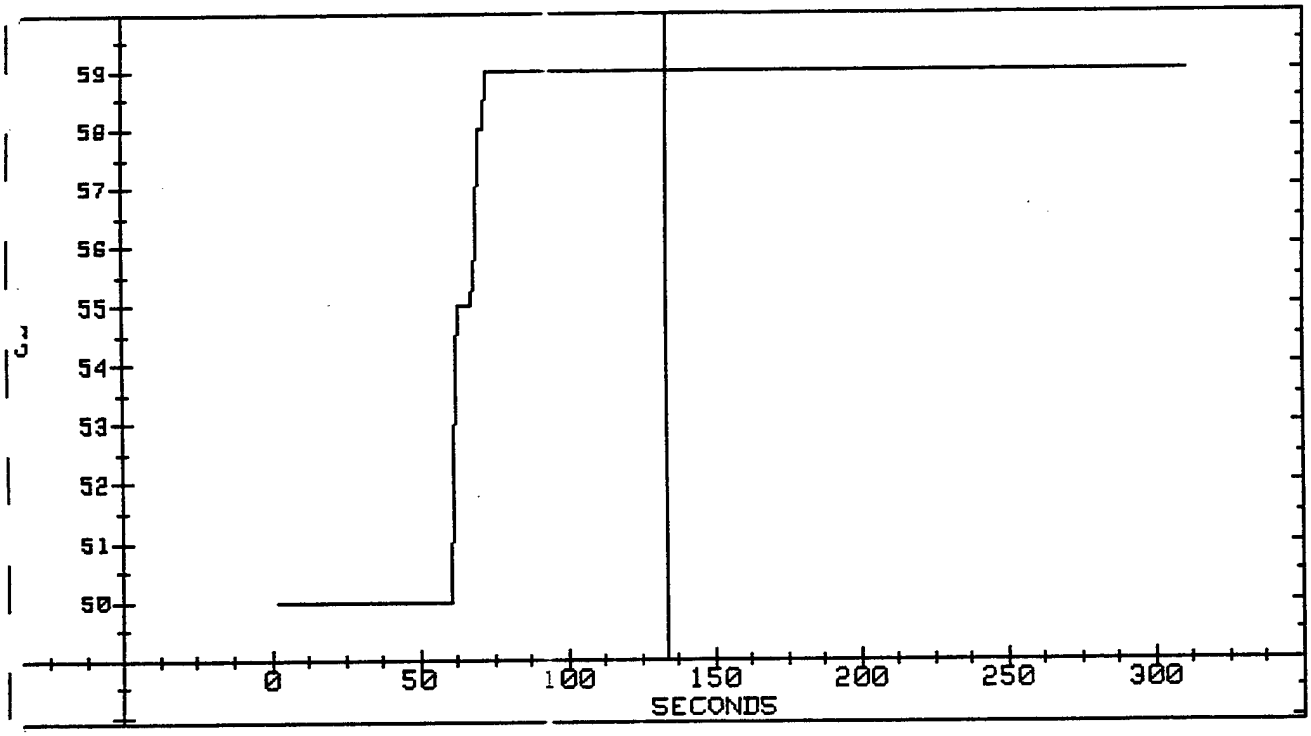
GPS Vv

DAY 180 TIME 0:32 PASS 11 m= .321, sd= 1.2233



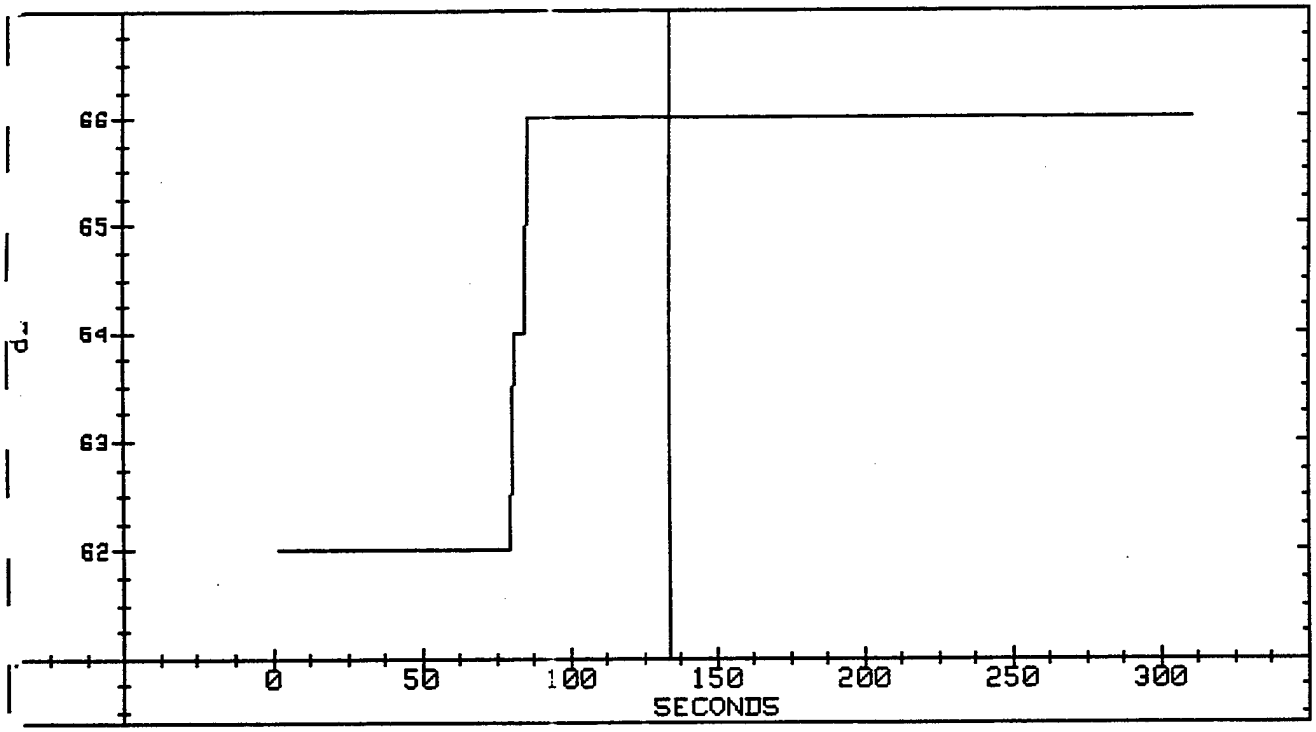
Ch1 RES Attenuation

DAY 180 TIME 0:32 PASS 11 m= 59, sd= 0



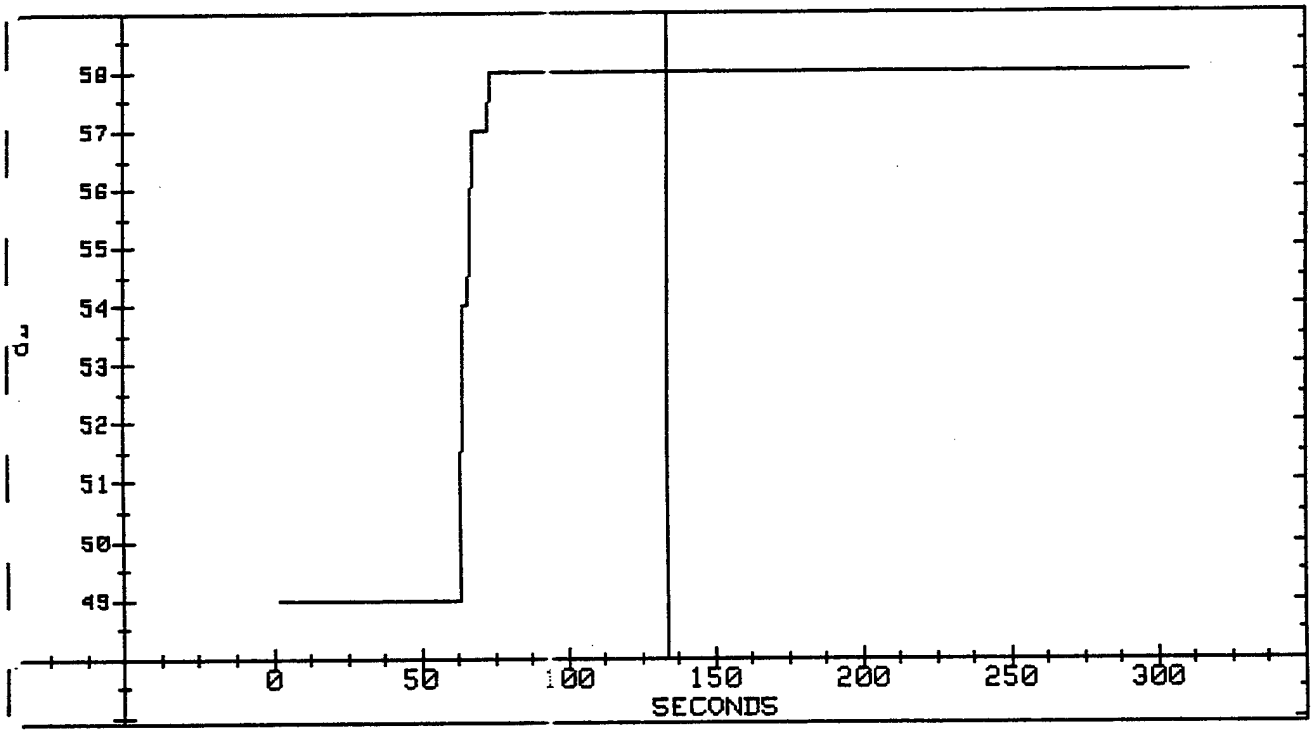
Ch2 RES Attenuation

DAY 180 TIME 0:32 PASS 11 m= 66, sd= 0



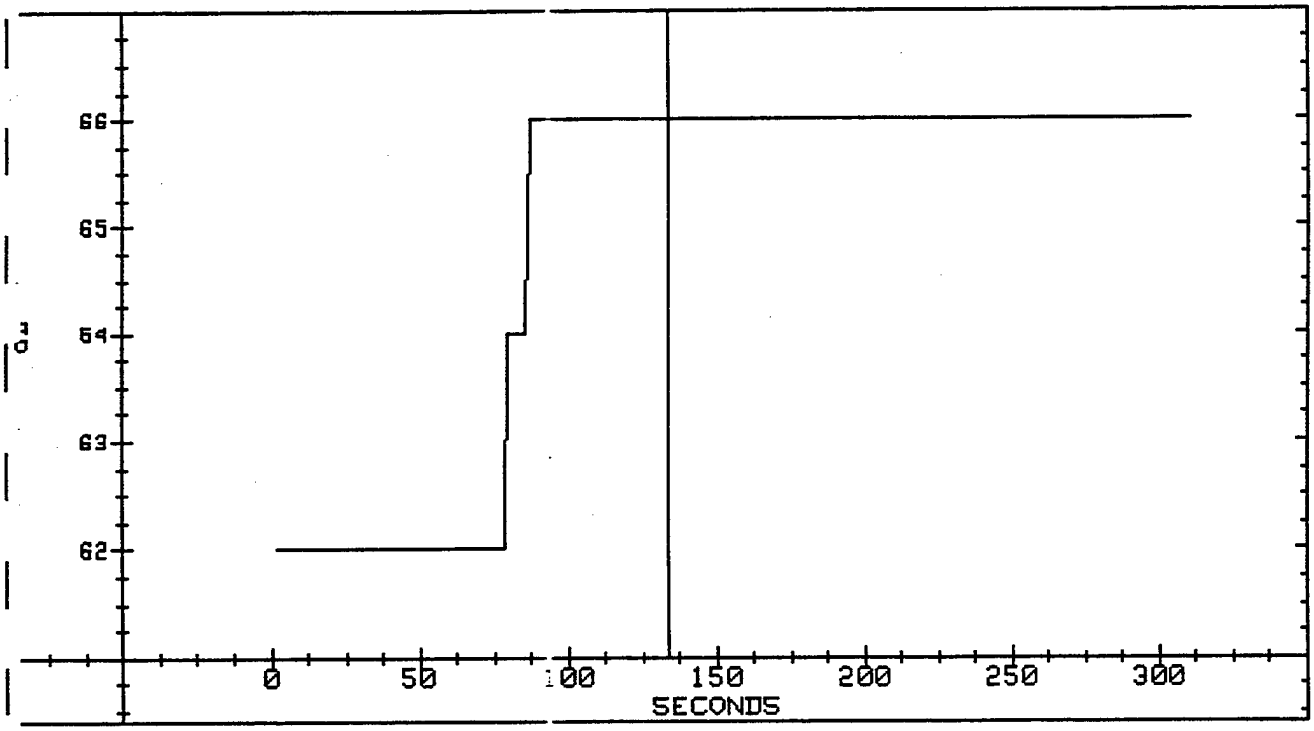
Ch3 RES Attenuation

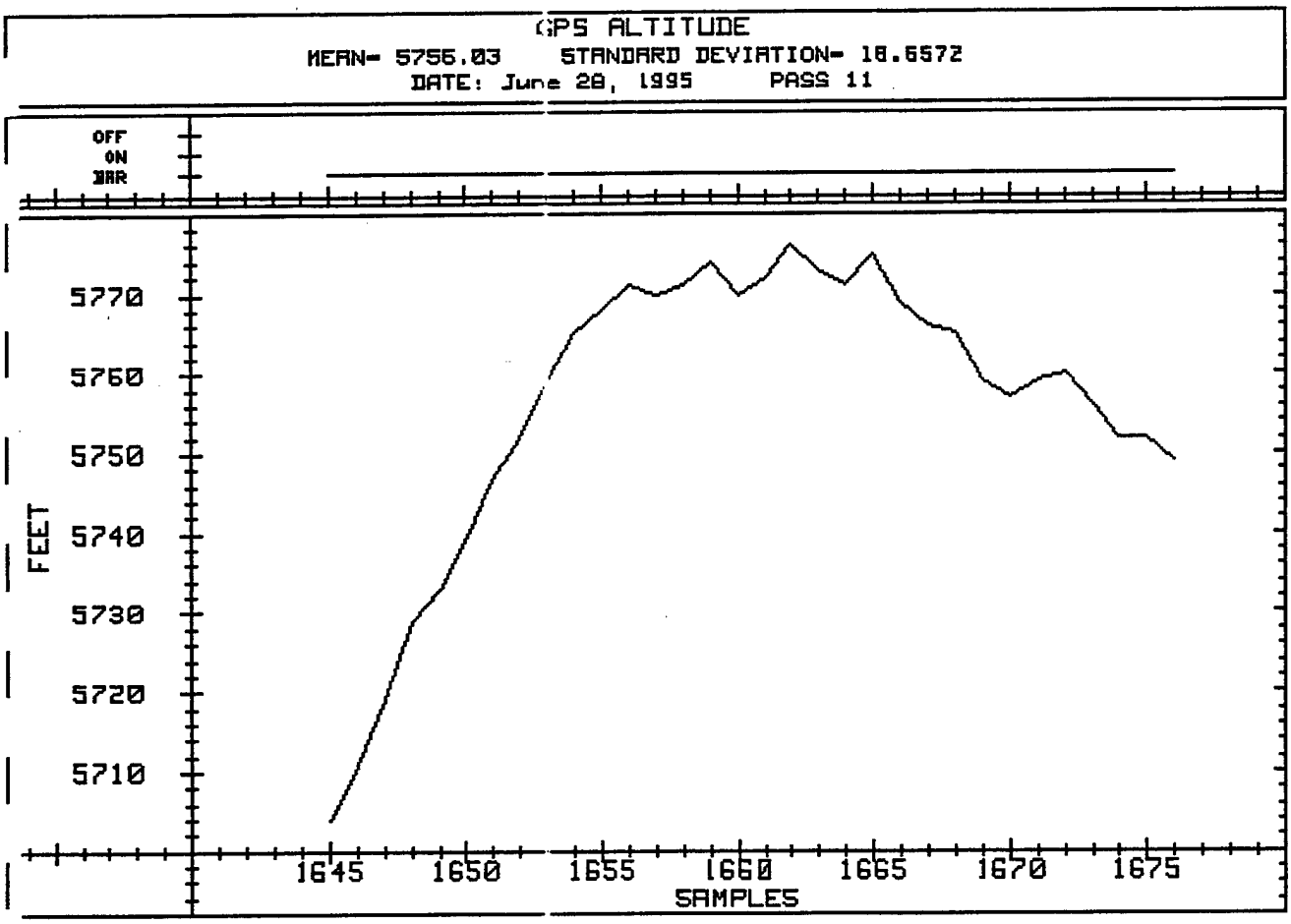
DAY 180 TIME 0:32 PASS 11 m= 58. sd= 0



Ch4 RES Attenuation

DAY 180 TIME 0:32 PASS 11 m= 66, sd= 0

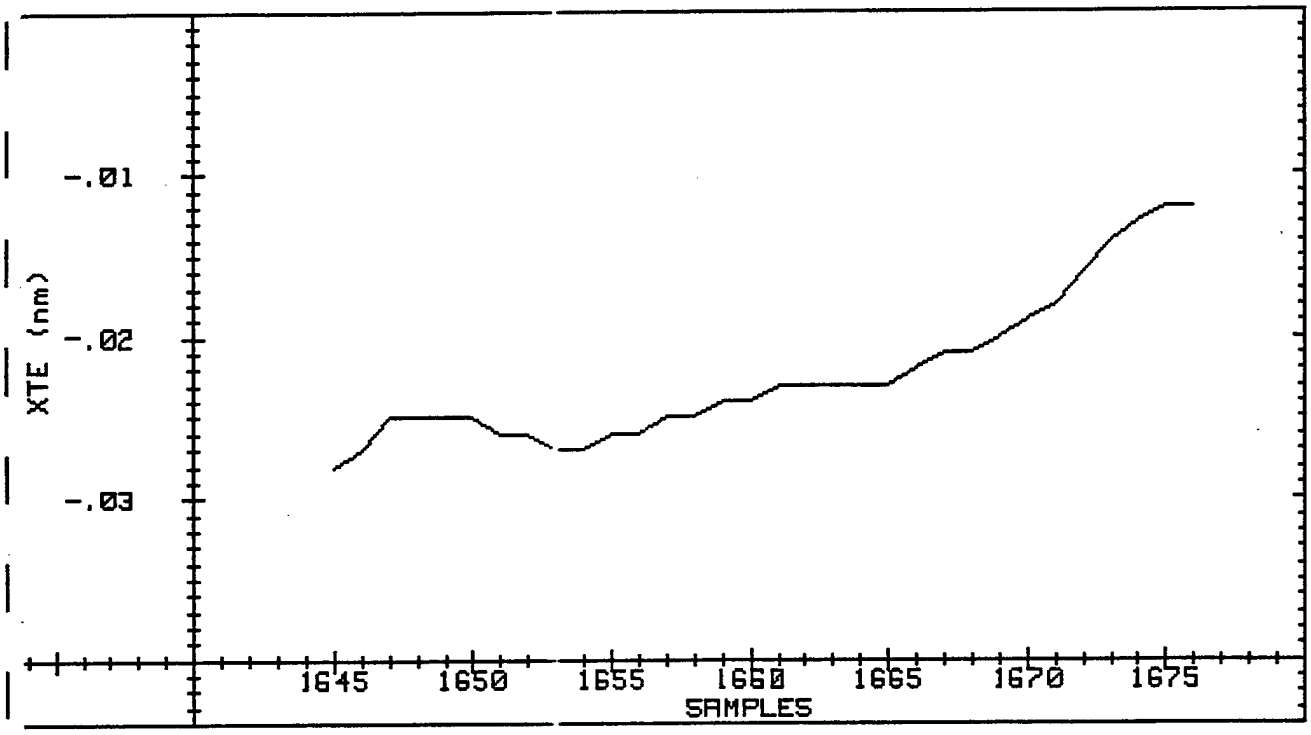



GPS ALTITUDE
MEAN= 5756.03 STANDARD DEVIATION= 18.6572
DATE: June 28, 1995 PASS 11
OFF
ON
BAR
5770
5760
5750
5740
5730
5720
5710
FEET
1645
1650
1655
1660
1665
1670
1675
SAMPLES

GPS Cross Track Error

MEAN= -.0223125 STANDARD DEVIATION= .00450997

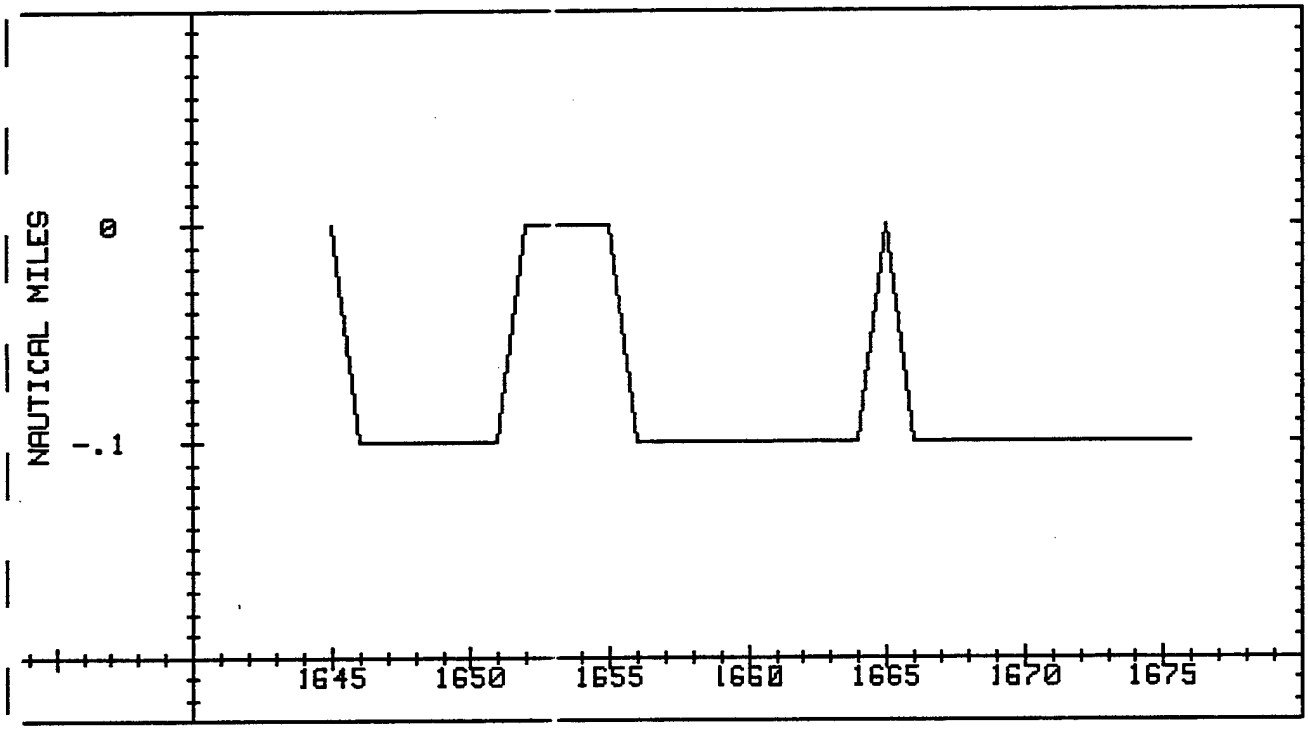
DATE: June 28, 1995 PASS 11



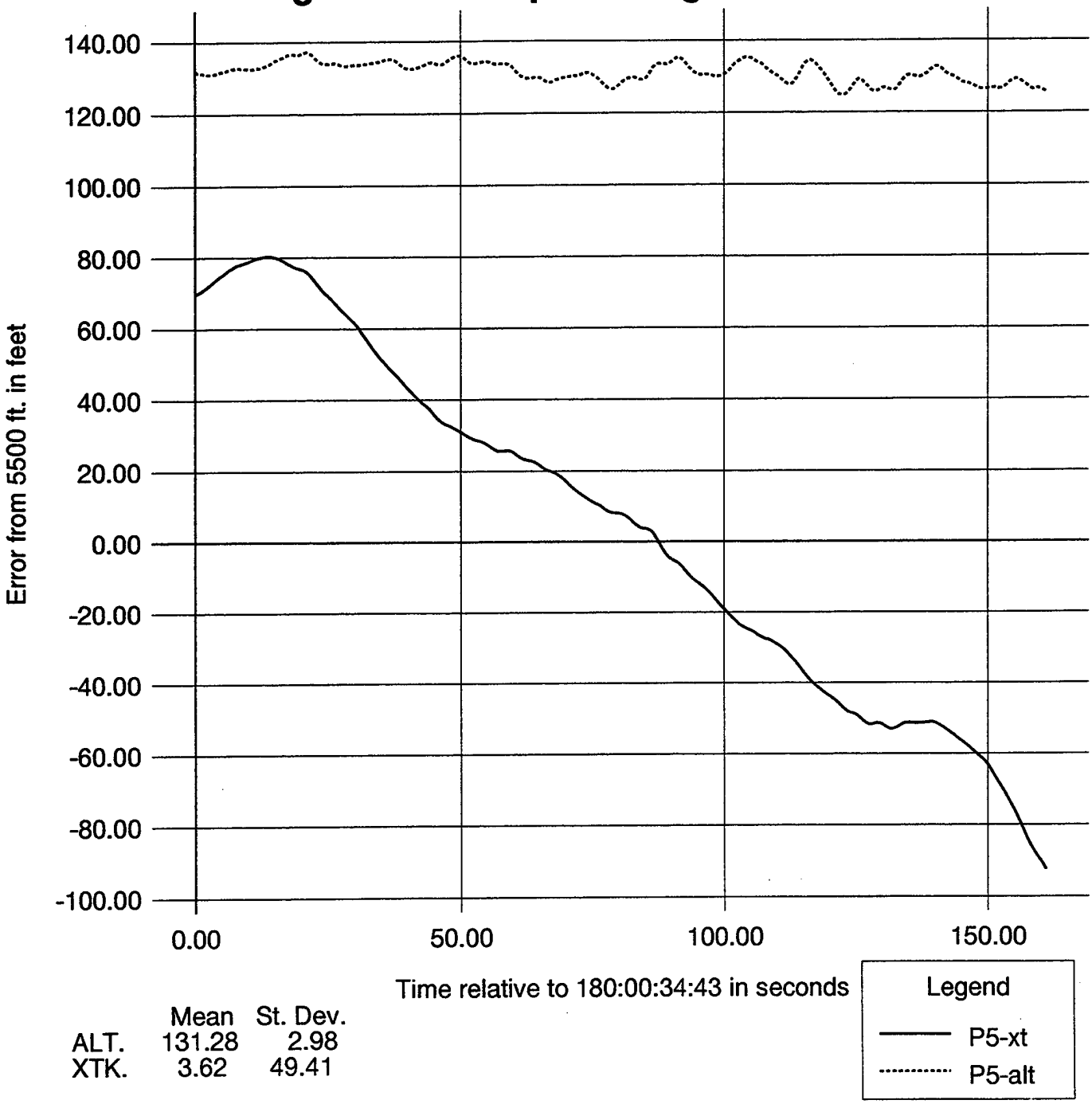
INS CROSS TRACK ERROR

MEAN= -.08125 STANDARD DEVIATION= .0390312

DATE: June 28, 1995 PASS 11



# Portage, ME - June 28, 1995 - Pass 11 - Xtk. and Alt. Errors
## Higher alt. and port are greater than zero




| | Mean | St. Dev. |
|---|---|---|
| ALT. | 131.28 | 2.98 |
| XTK. | 3.62 | 49.41 |

29 Jun 1995 | Post-line Data Sheet | Time: 180:00:24:01
Tape: E1417 | Line 39 | Pass 10
Mission: DAY 4 PORTAGE MAINE | Req.# 17

## AIRCRAFT & CHANNEL DATA

| | | | | CH 1 | CH 2 | CH 3 | CH 4 |
|---|---|---|---|---|---|---|---|
| Altitude | | | | | | | |
| Desired: | 5500 ft | | Wave/Pol.: | p-VV | p-VH | p-HV | p-HH |
| Baro: | 5424 ft | s.d.= 4 | Swath Ctr Ang: | 15.0° | 15.0° | 15.0° | 15.0° |
| Slt. rng: | 18275 ft | | Tgt Dep Ang: | 15.0° | 15.0° | 15.0° | 15.0° |
| Look: | Right | | St rng (ft): | 16740 | 16740 | 16740 | 16740 |
| Depr Ang: | 25.0° | | Near Rng Dep: | 18.9° | 18.9° | 18.9° | 18.9° |
| Des. trk: | 100.0° | | Far Rng Dep: | 9.5° | 9.5° | 9.5° | 9.5° |
| Start Sq: | 90.0° | | Atten (dB): | 50.0 | 62.0 | 49.0 | 62.0 |
| End Sq: | 90.0° | | RMS Video (%FS) | 23.3 | 18.8 | 17.6 | 19.6 |

## WAYPOINTS

| | Latitude | Longitude |
|---|---|---|
| Line_up: | N 46:49.57 | W 68:52.67 |
| Start: | N 46:47.52 | W 68:35.45 |
| End: | N 46:45.79 | W 68:21.14 |
| From: | N 47:05.43 | W 92:53.14 |
| To: | N 41:36.92 | W 46:20.70 |

Main Target: GW
Mocomp Point:
Lat: N 46:43.81
Long: W 68:29.03
Tgt Trk: 0.0 Tgt Vel: 0.0
Alt: 770.0 ft

## RADAR PARAMETERS - for UWB

RTP Channel: 1
Resolution: N/A
Swath width: Single
RMS Time Constant: 2^7
Position Reference: ON
Atten. Tracking: OFF
Range Gate Delta: 0.0 ft
Azimuth Presum Rate: Presum6
TX Chirp Filename: CTL_U2A

Filter damping is Hi -> 10 sec
PRF Factor is FAST (262.5 kts)
Ave Gndspd: Real -> 248.8 kts
Mocomp Off for Chnl 1, 2, 3, 4
GPS Vel/Pos Reference
Adj Gnd Scene: 5000.0 ft
Range Tracking is OFF
Clutterlock Reference: OFF
RX Chirp Filename: CRL1N0A

Ave Ref Vel -> -.9 fps (s.d.= 1.3)
Ave Fil Vel -> -.8 fps (s.d.= 1.1)

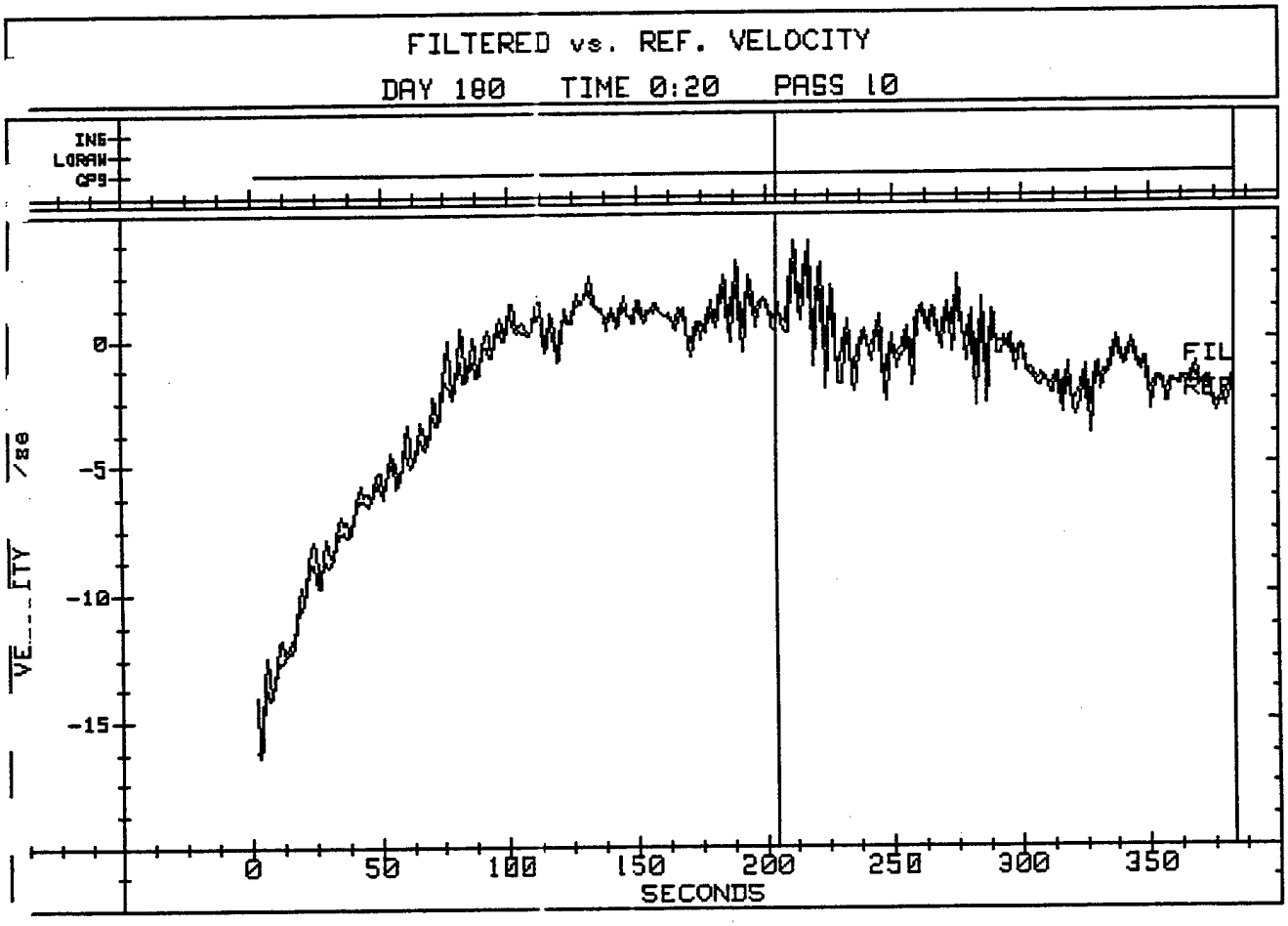
| NML XMIT PWR | ANT BIAS | | Tape Footage | | Drive no. |
|---|---|---|---|---|---|
| X: -70.0 | Elevation: | 0.0° | | | |
| L: -70.0 | Azimuth: | 0.0° | Starting: | 1468 ft | (2) |
| C: -70.0 | Pitch: | 0.0° | Ending: | 2737 ft | (2) |
| P: 39.4 | | | | | |

| Vel Bias | CAL Atten | LINE Map Time (UCT) |
|---|---|---|
| X: 2112.0 | X: 63.8 dB | Start: 00:24:01 |
| Y: 1874.0 | L: 63.8 dB | End: 00:26:44 |
| Z: 5343.0 | C: 63.8 dB | |

Mocomp Counters

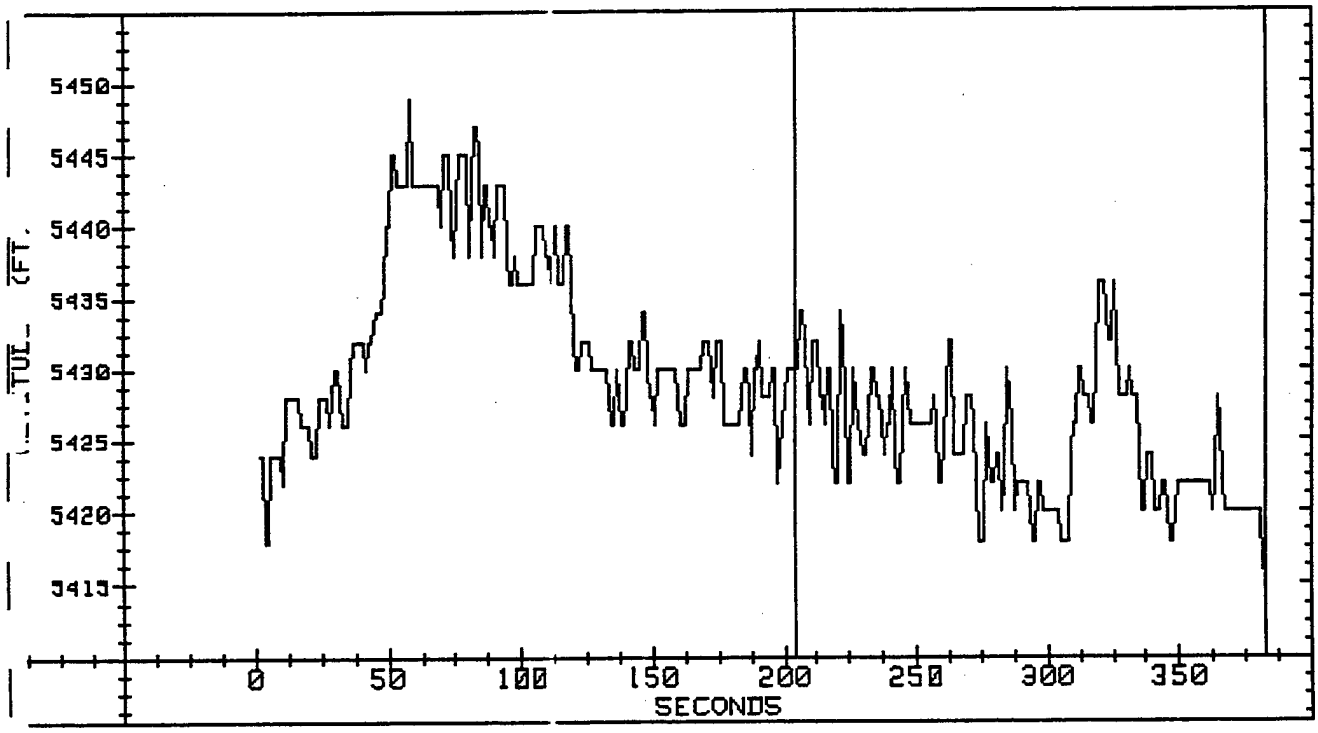
| | | |
|---|---|---|
| Start: | 499497 | 00079F29h |
| End: | 526833 | 000809F1h |

CPA (UCT): 00:00:00
Alt: 0 ft (GPS)
Lat: N 0:00: 0
Lon: E 0:00: 0


FILTERED vs. REF. VELOCITY
DAY 180 TIME 0:20 PASS 10
INS
LORAN
GPS
0
-5
-10
-15
VELOCITY
FIL
REF
0
50
100
150
200
250
300
350
SECONDS

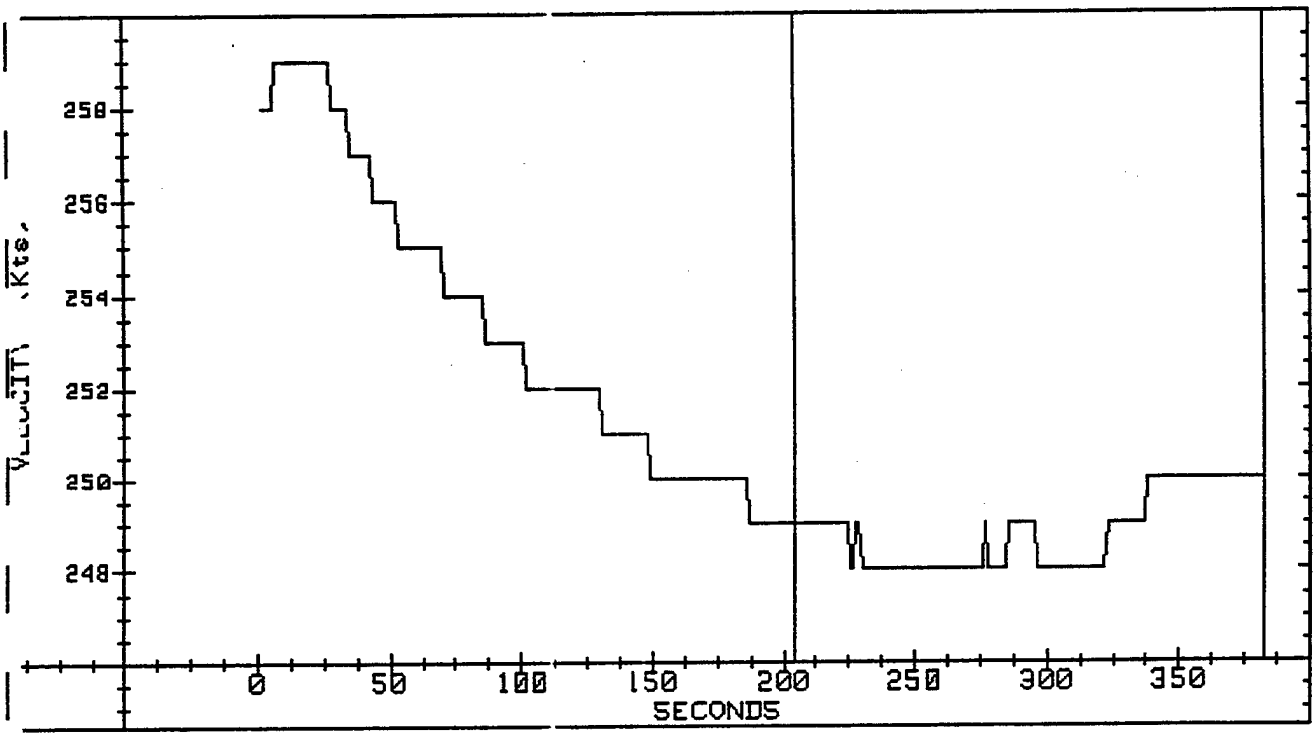
BARO ALTITUDE

DAY 180 TIME 0:20 PASS 10 m= 5424, sd= 4.31501



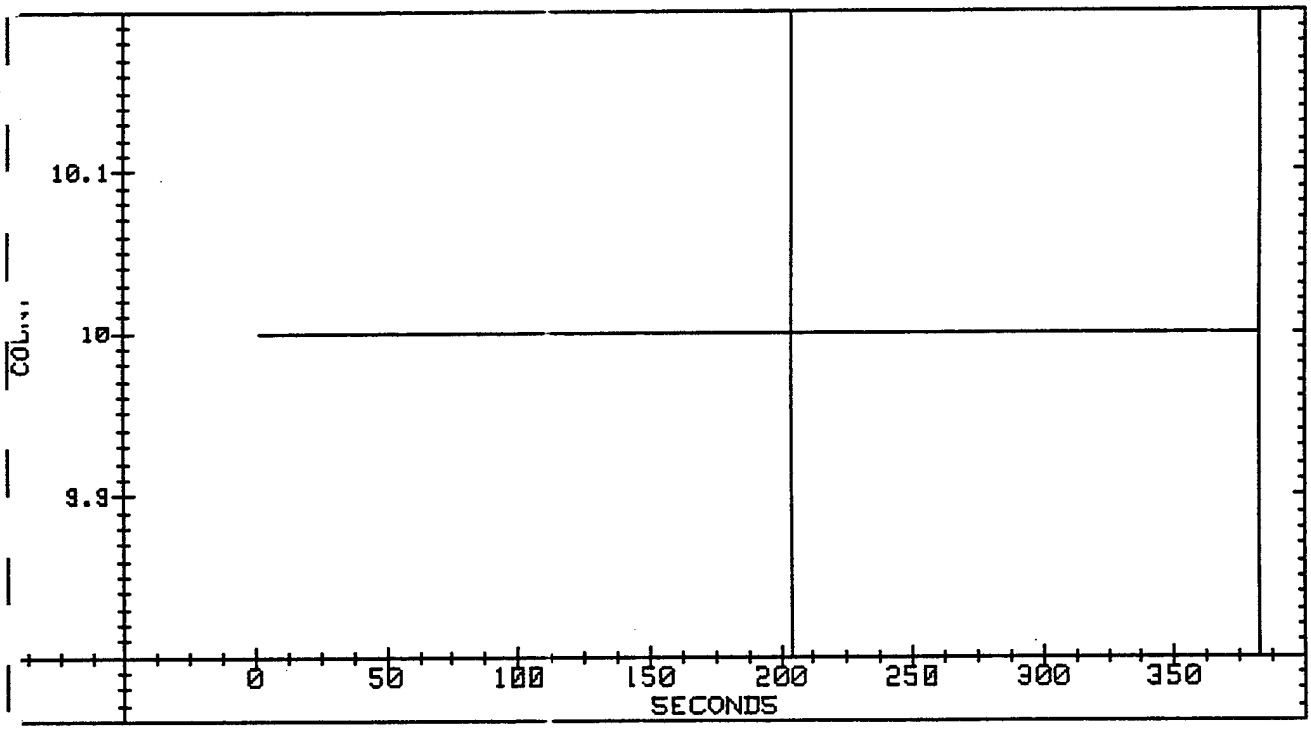
INS GROUND SPEED

DAY 180 TIME 0:20 PASS 10 m= 248.8, sd= .859648



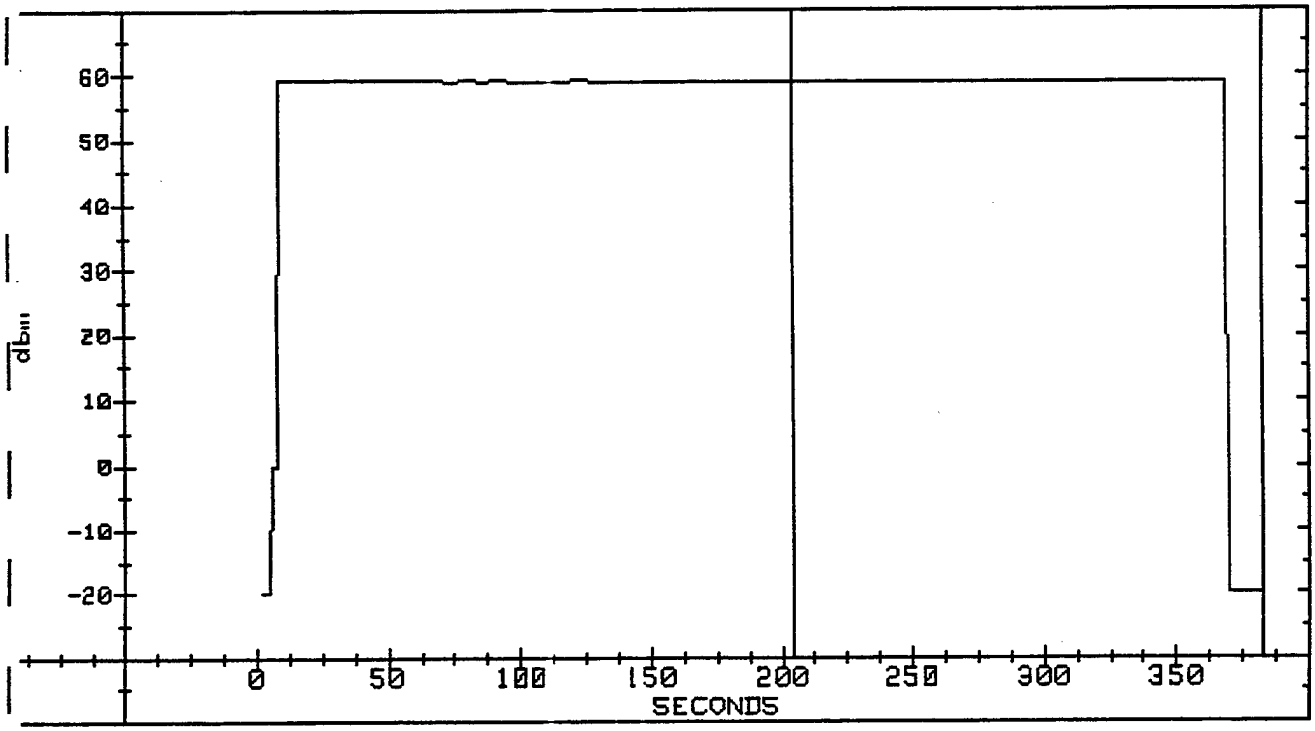
PASS NUMBER

DAY 180 TIME 0:20 PASS 10 m= 10. sd= 0



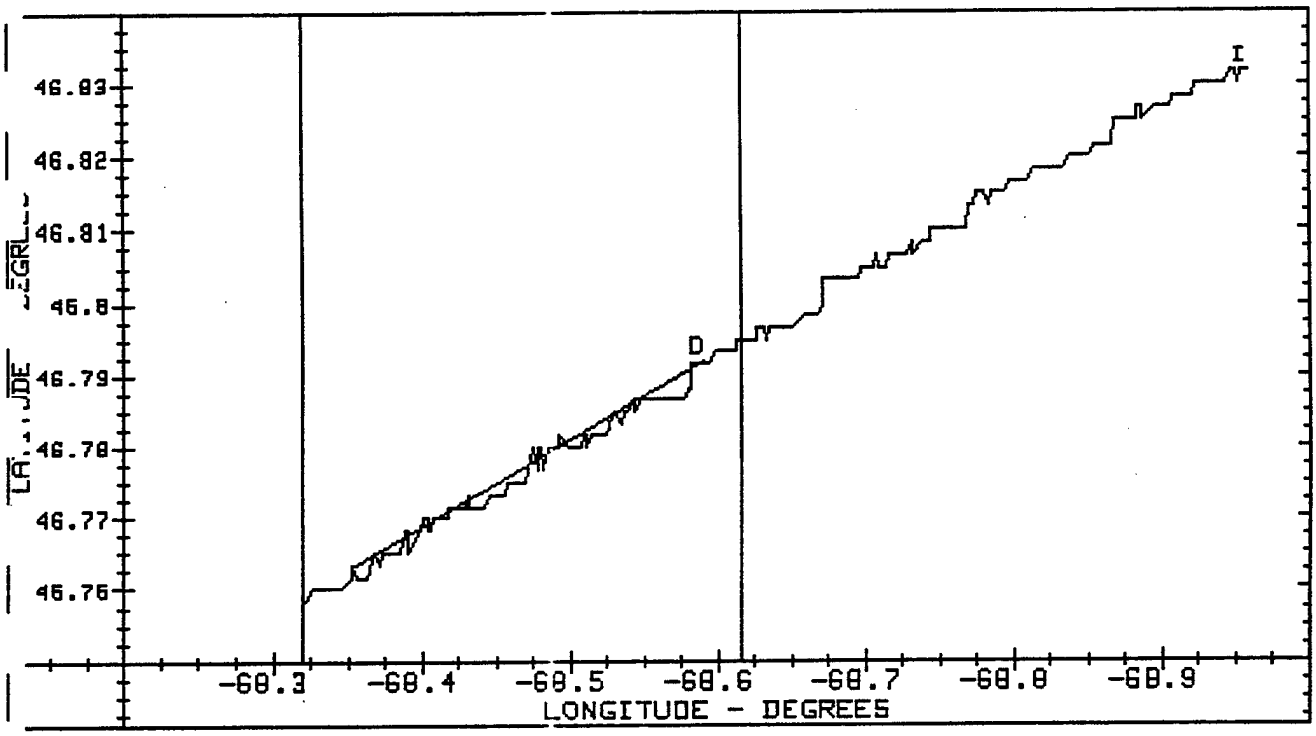
P Band Power

DAY 180 TIME 0:20 PASS 10 m= 52.2, sd= 22.0575



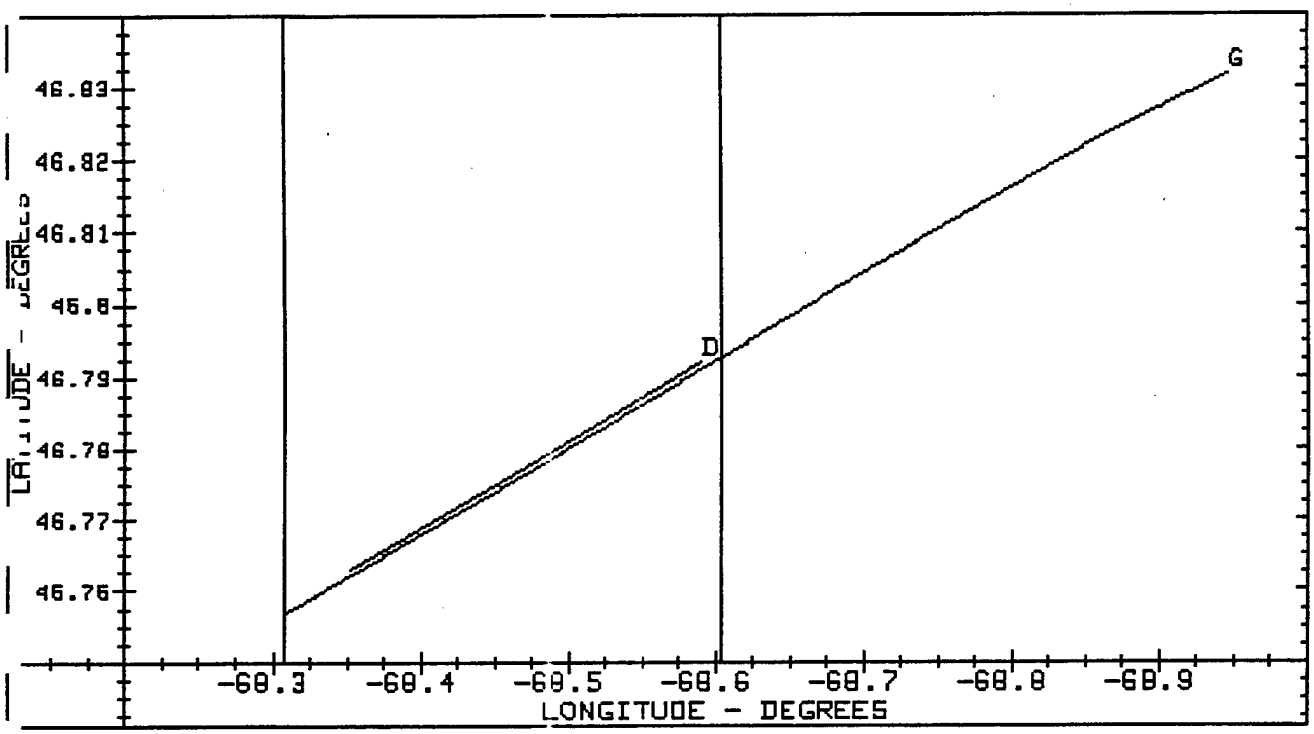
INS AIRCRAFT POSITION

DAY 180 TIME 0:20 PASS 10



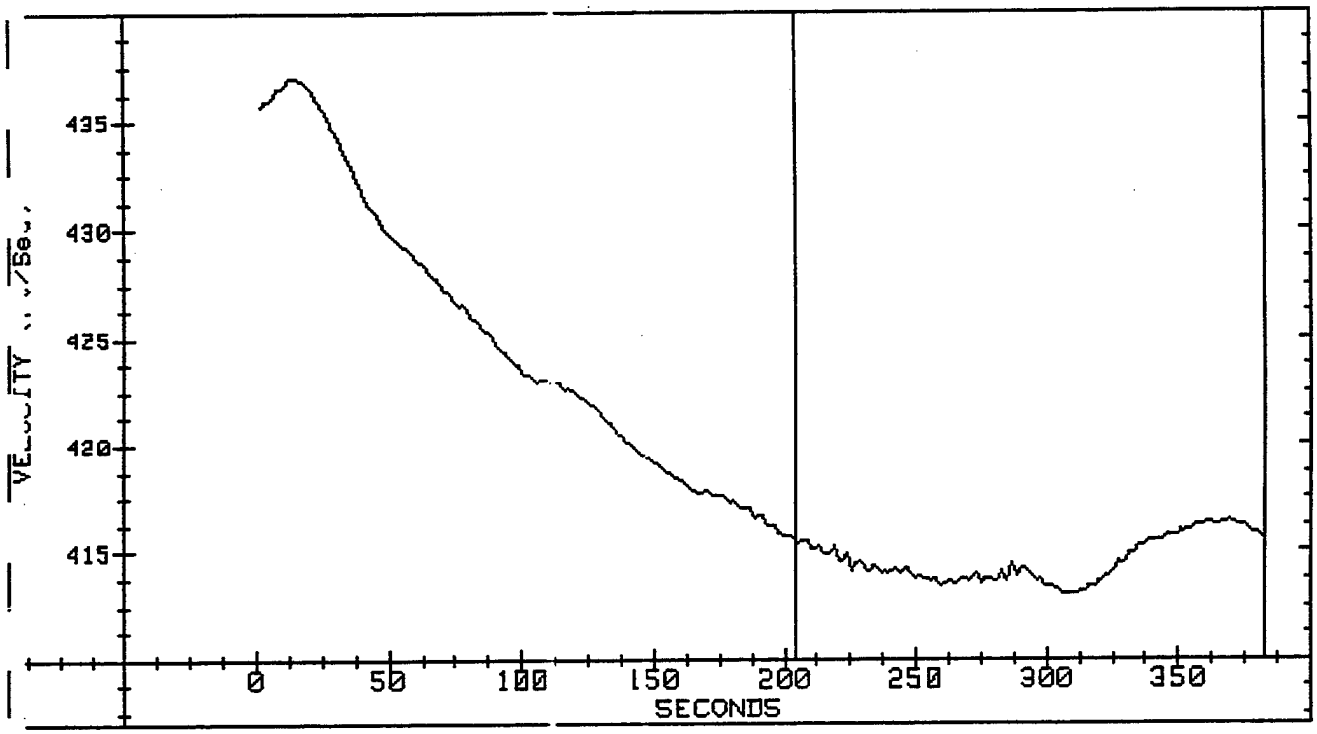
GPS AIRCRAFT POSITION

DAY 180 TIME 0:20 PASS 10



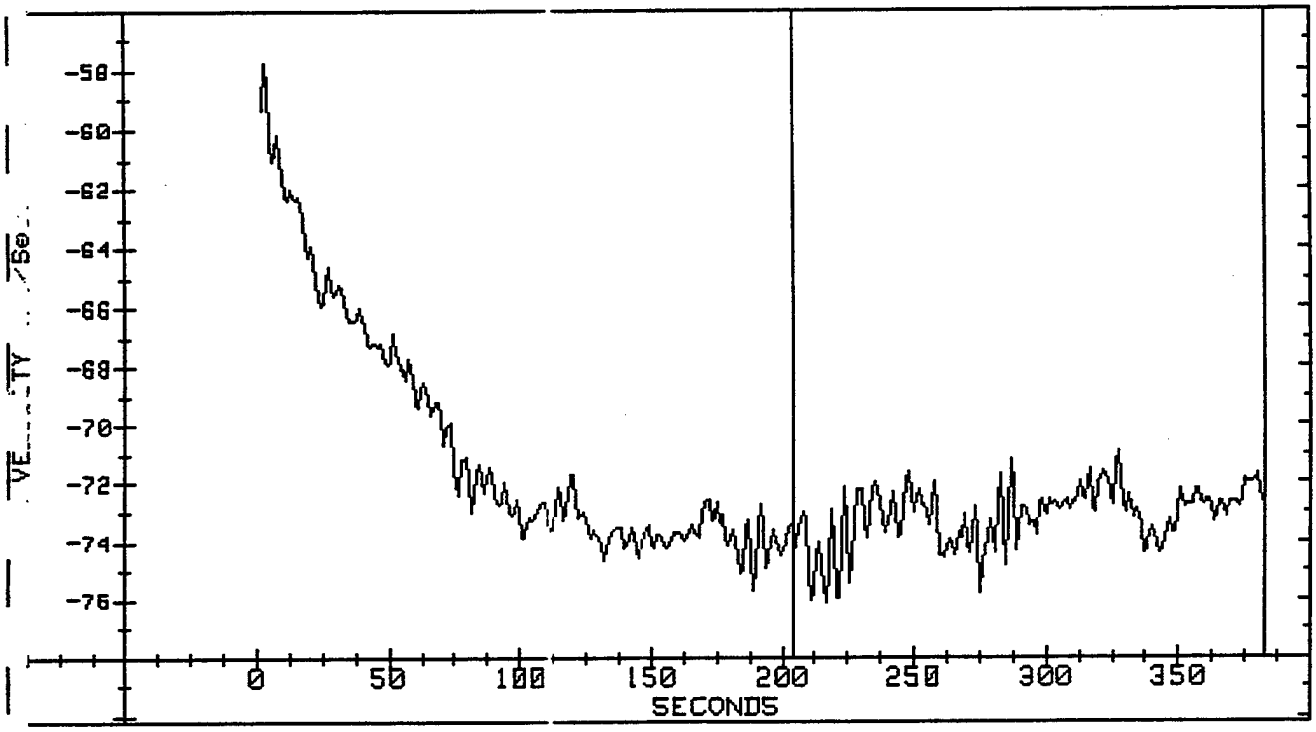
GPS Vc

DAY 180 TIME 0:20 PASS 10 m= 414.5, sd= 1.04239



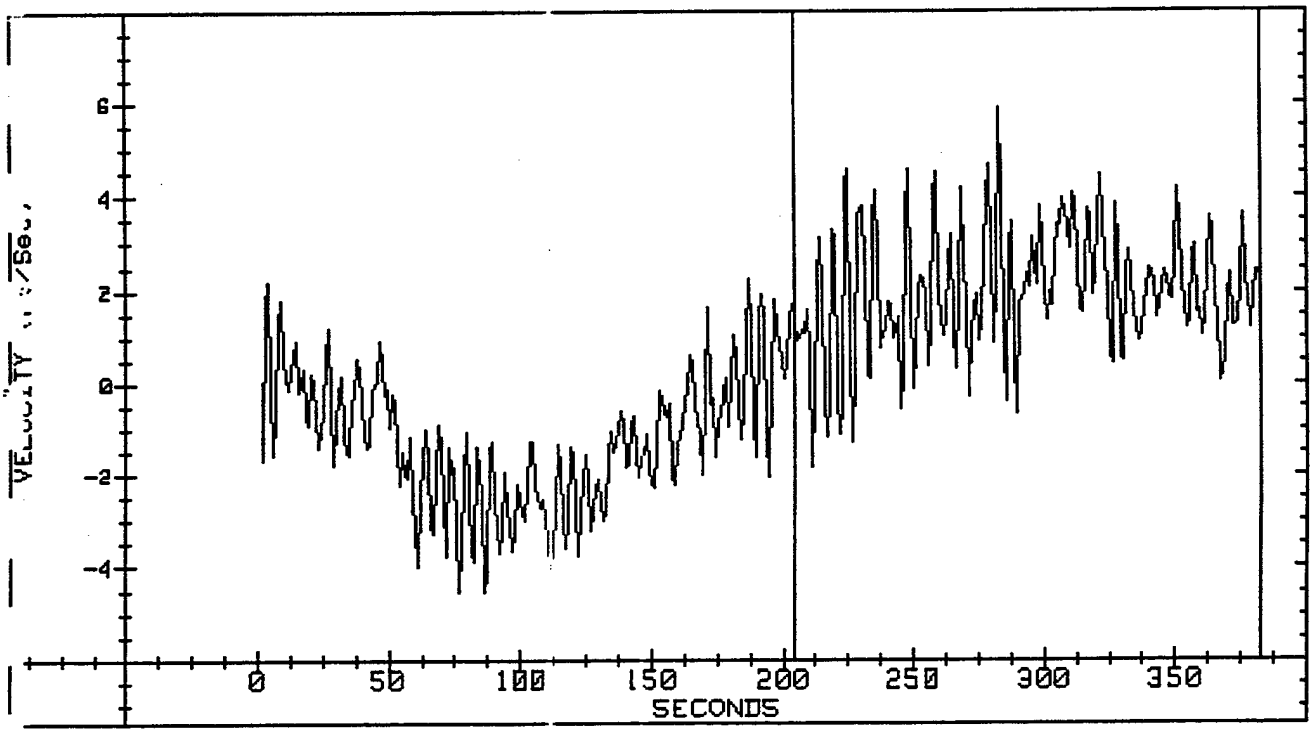
GPS Vn

DAY 180 TIME 0:20 PASS 10 m= -73.04, sd= .899798



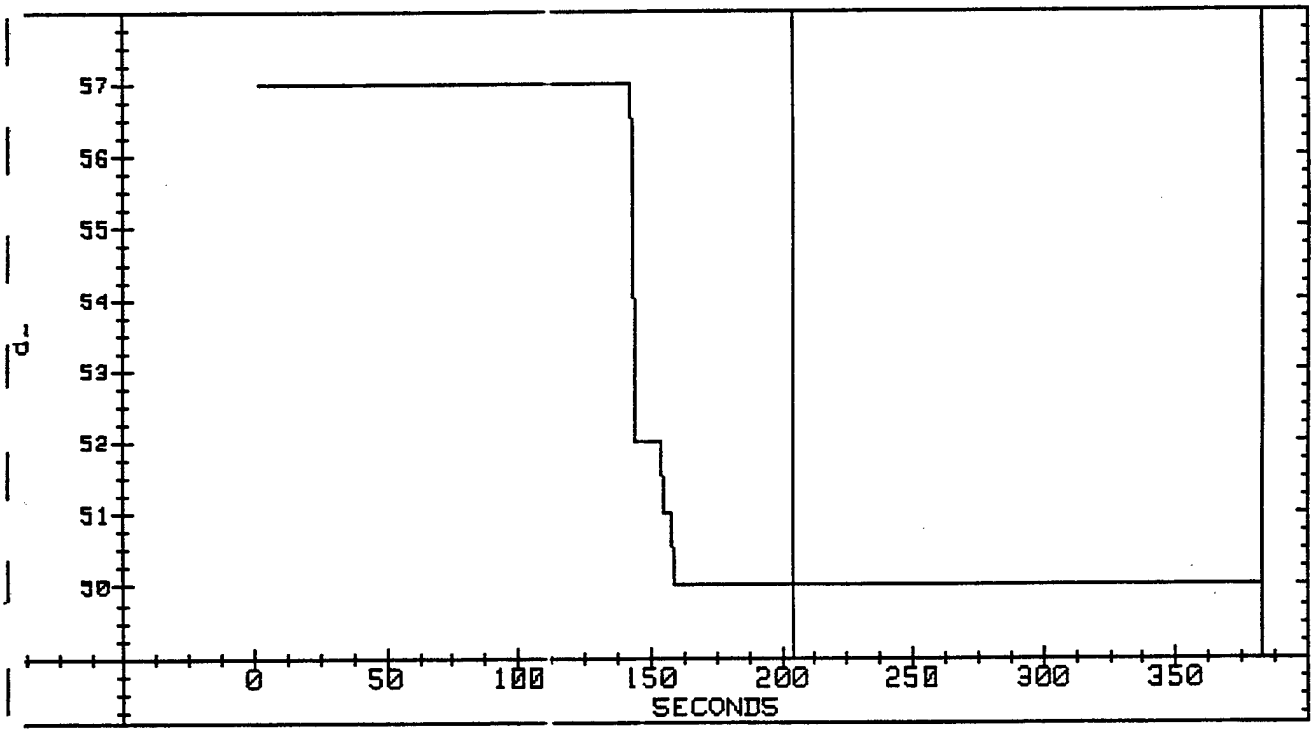
GPS Vv

DAY 180 TIME 0:20 PASS 10 m= 2.072, sd= 1.3107



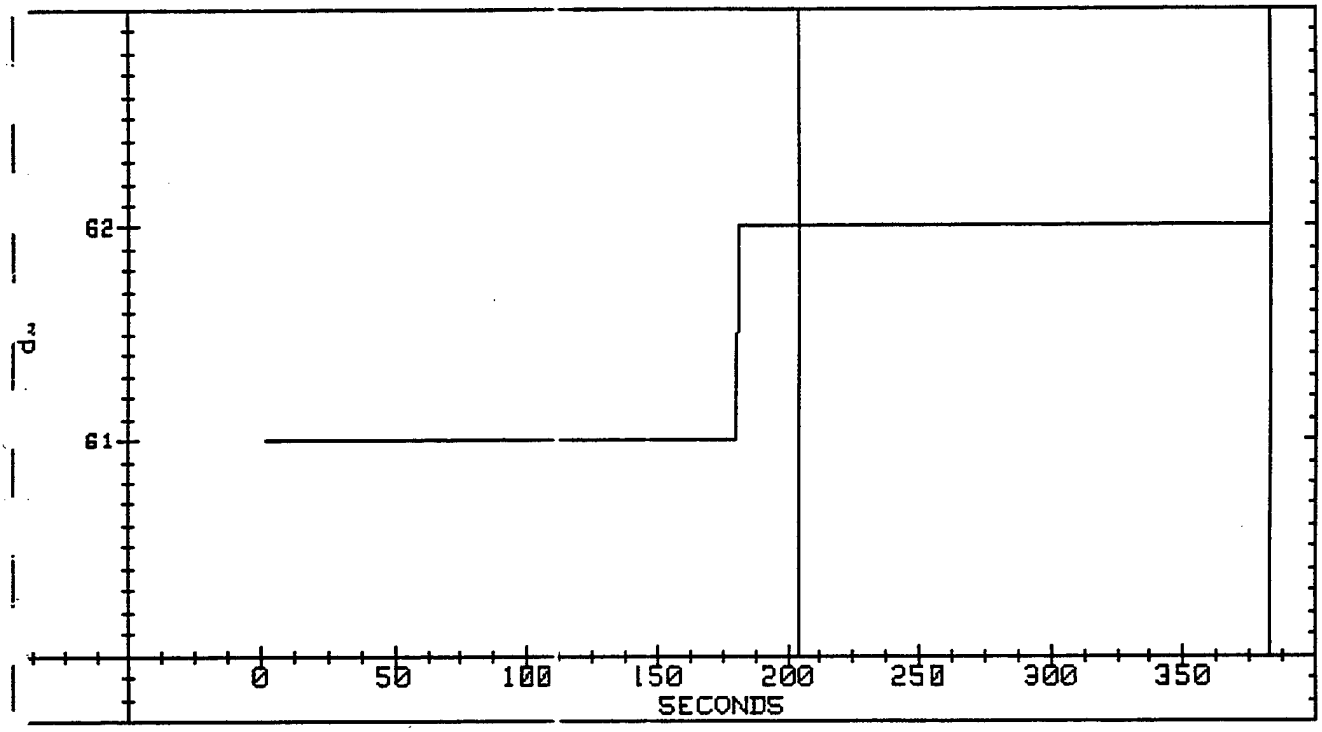
Ch1 RES Attenuation

DAY 180 TIME 0:20 PASS 10 m= 50, sd= 0



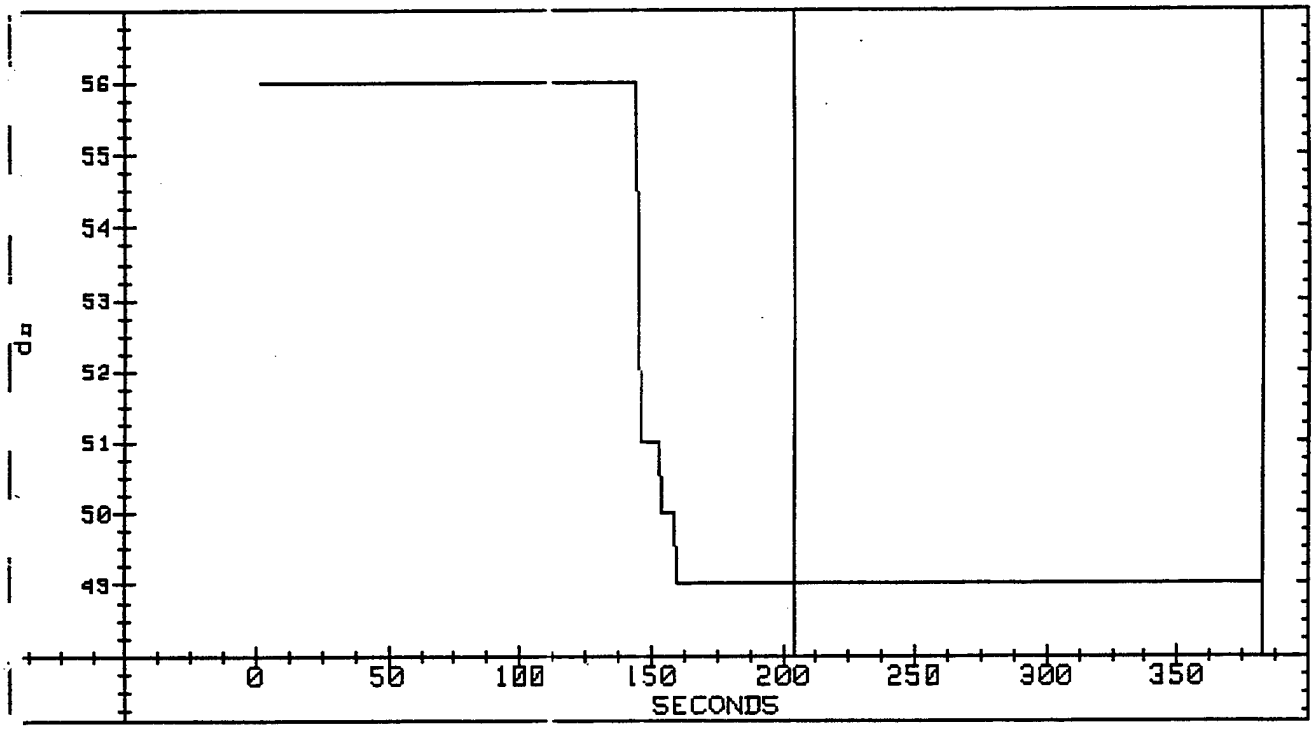
Ch2 RES Attenuation

DAY 180 TIME 0:20 PASS 10 m= 62, sd= 0



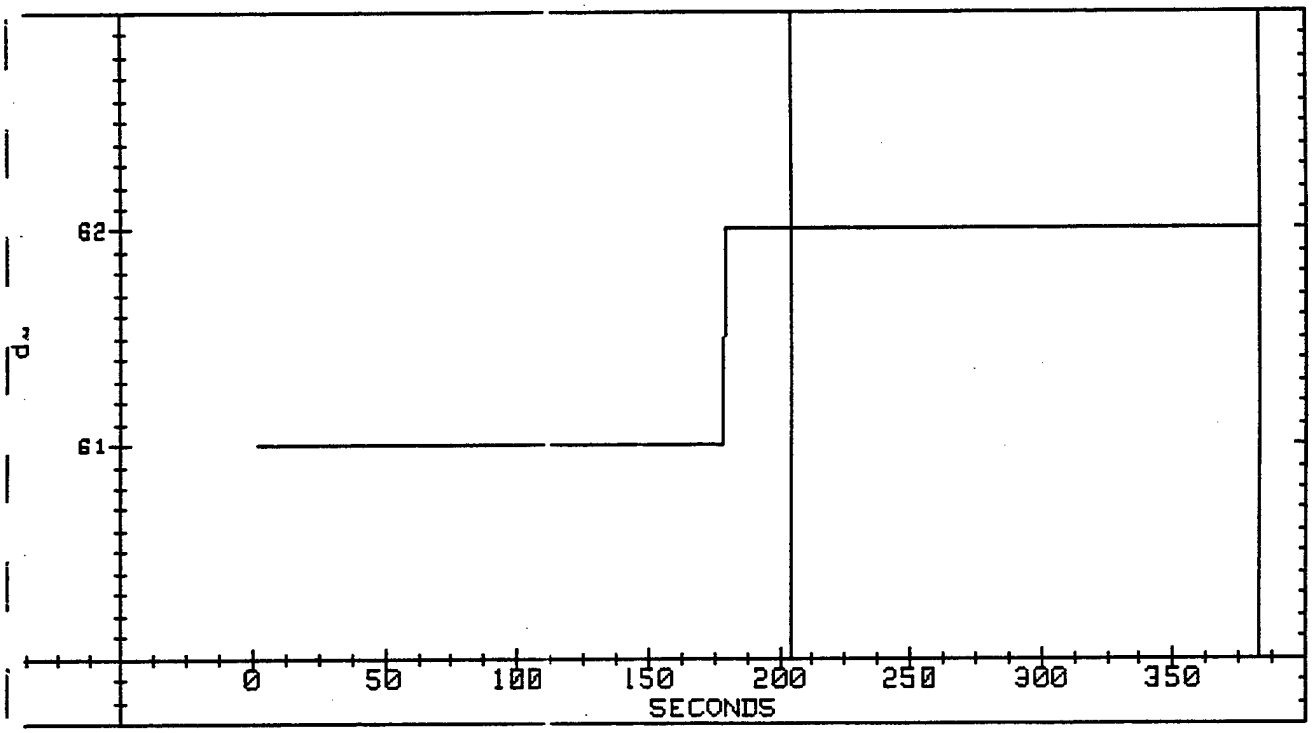
Ch3 RES Attenuation

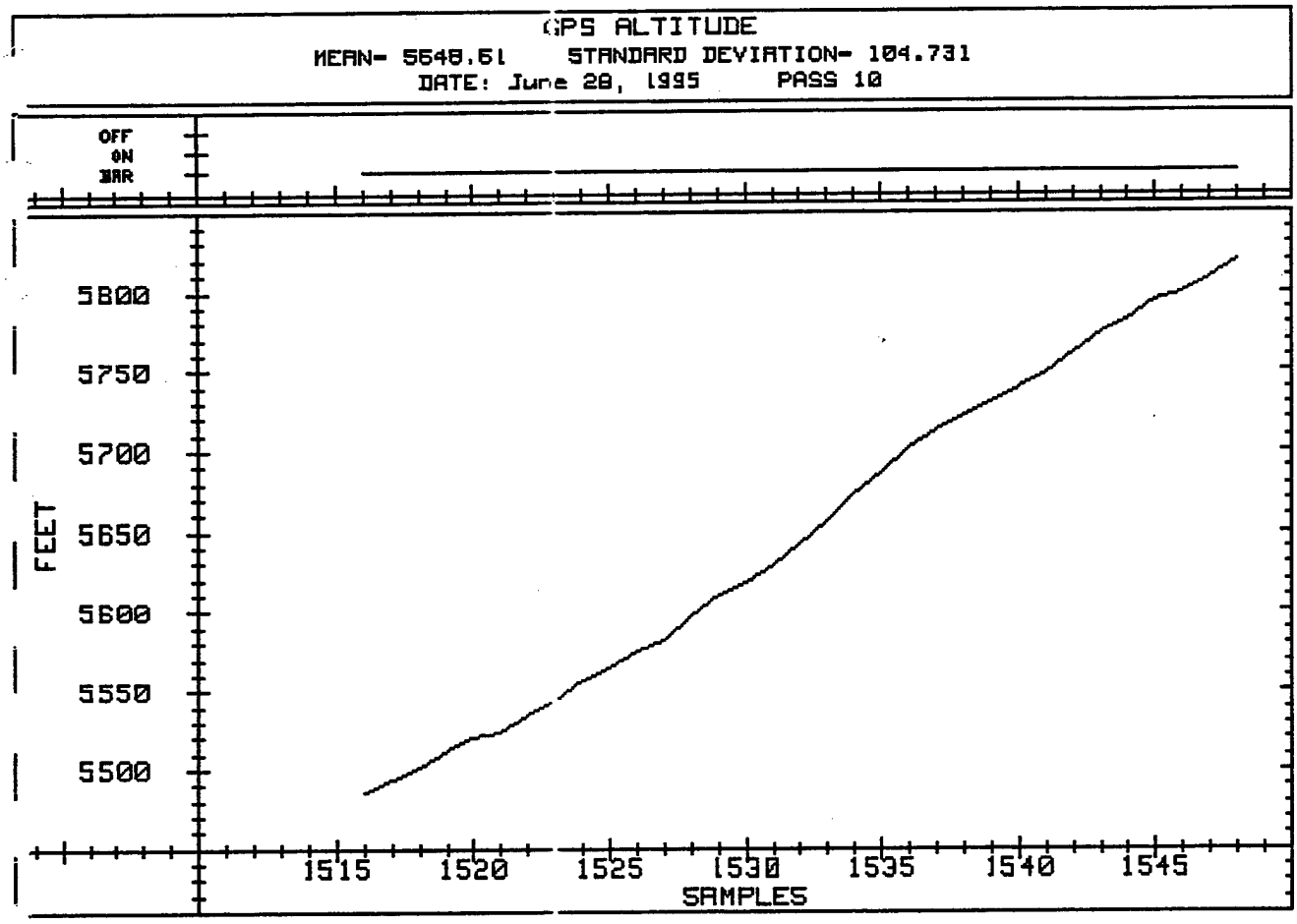
DAY 180 TIME 0:20 PASS 10 m= 49, sd= 0



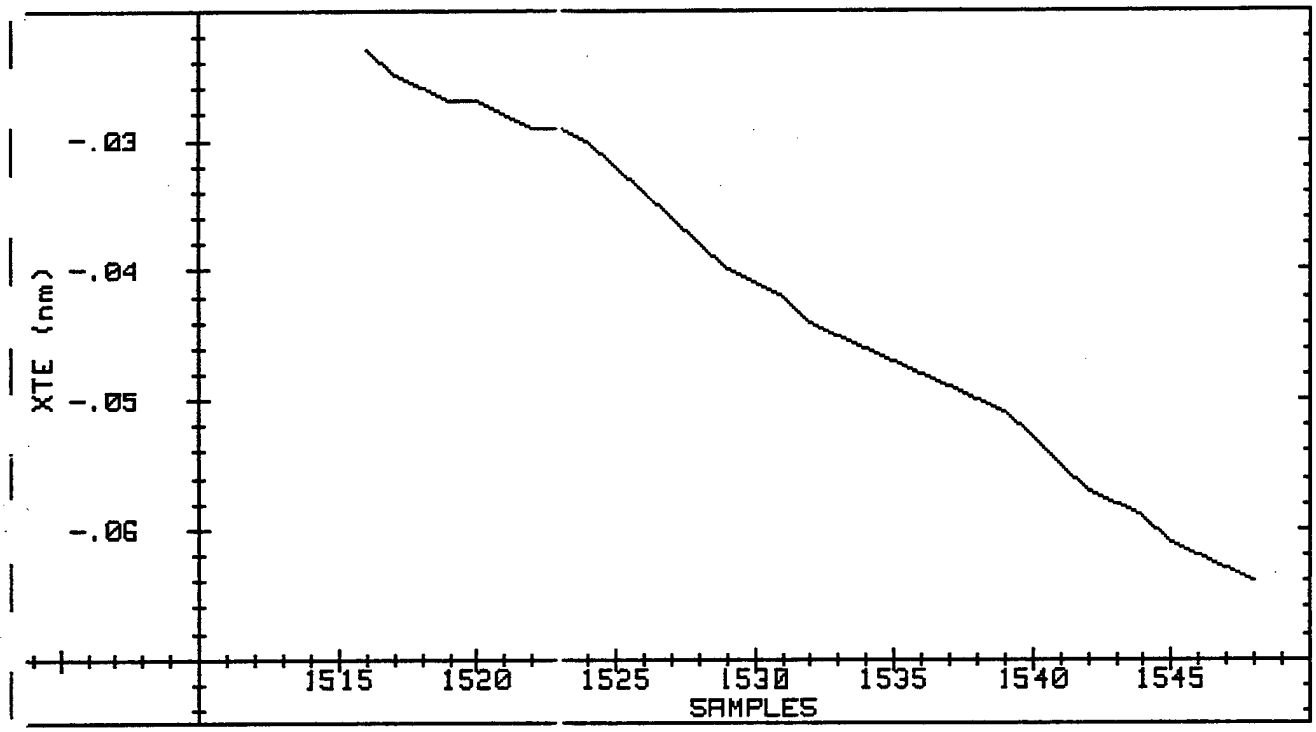
Ch4 RES Attenuation

DAY 180 TIME 0:20 PASS 10 m= 62, sd= 0

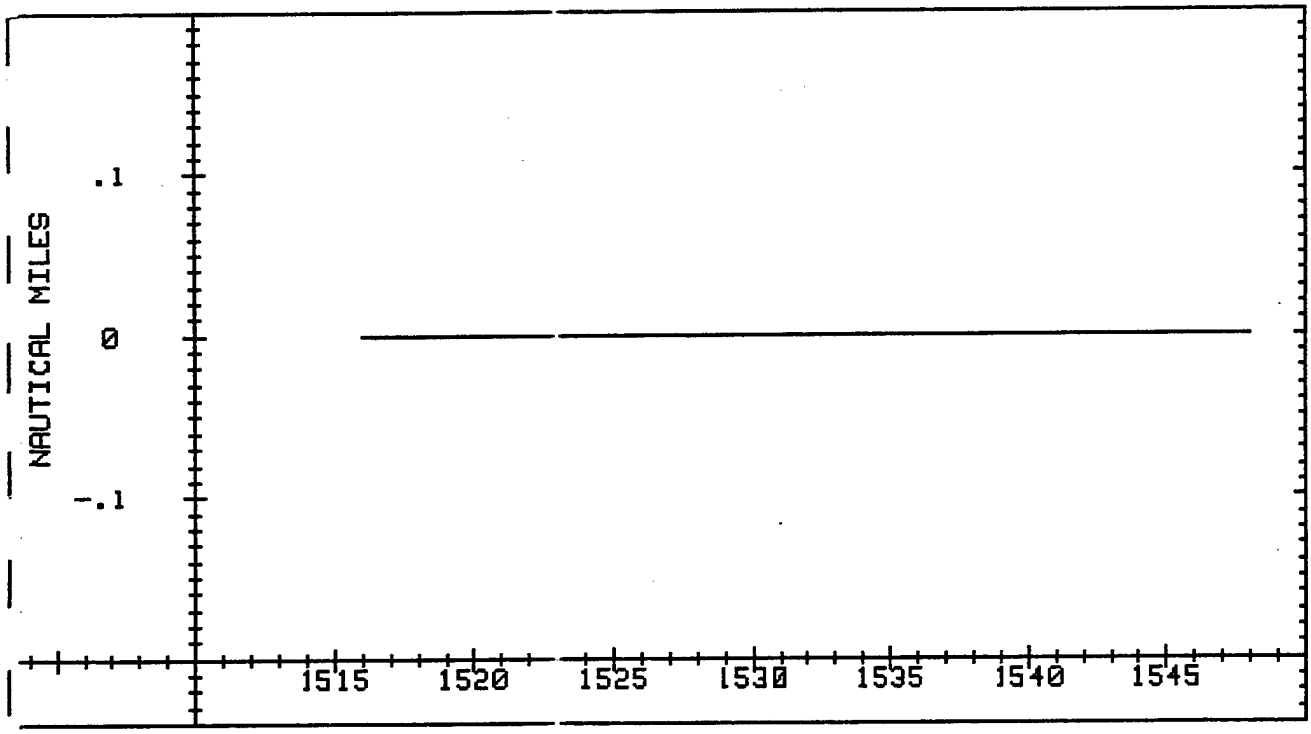



GPS ALTITUDE
MEAN= 5648.61 STANDARD DEVIATION= 104.731
DATE: June 28, 1995 PASS 10
OFF
ON
BAR
5800
5750
5700
5650
5600
5550
5500
FEET
1515
1520
1525
1530
1535
1540
1545
SAMPLES

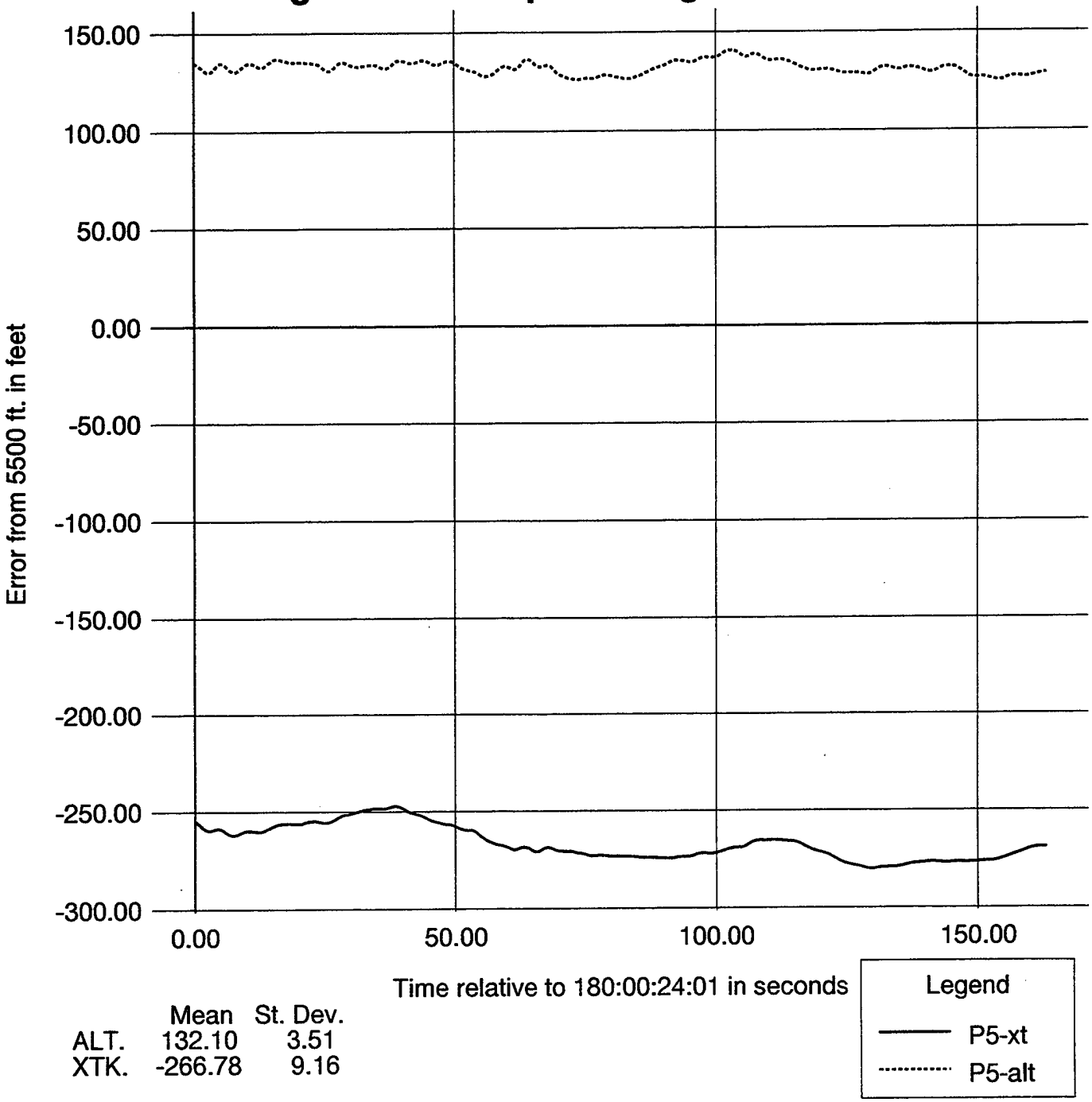
GPS Cross Track Error
MEAN= -.043 STANDARD DEVIATION= .0126155
DATE: June 28, 1995 PASS 10



INS CROSS TRACK ERROR
MEAN= 0 STANDARD DEVIATION= 0
DATE: June 28, 1995 PASS 10



# Portage, ME - June 28, 1995 - Pass 10 - Xtk. and Alt. Errors
## Higher alt. and port are greater than zero




| | Mean | St. Dev. |
|---|---|---|
| ALT. | 132.10 | 3.51 |
| XTK. | -266.78 | 9.16 |

29 Jun 1995 Post-line Data Sheet Time: 180:00:46:01
Tape: E1417 Line 35 Pass 12
Mission: DAY 4 PORTAGE MAINE Req.# 15

## AIRCRAFT & CHANNEL DATA

| | | | | CH 1 | CH 2 | CH 3 | CH 4 |
|---|---|---|---|---|---|---|---|
| Altitude | | | | | | | |
| Desired: | 5500 ft | | Wave/Pol.: | p-VV | p-VH | p-HV | p-HH |
| Baro: | 5422 ft | s.d.= 4 | Swath Ctr Ang: | 15.0° | 15.0° | 15.0° | 15.0° |
| Slt. rng: | 18275 ft | | Tgt Dep Ang: | 15.0° | 15.0° | 15.0° | 15.0° |
| Look: | Right | | St rng (ft): | 16740 | 16740 | 16740 | 16740 |
| Depr Ang: | 25.0° | | Near Rng Dep: | 18.9° | 18.9° | 18.9° | 18.9° |
| Des. trk: | 130.0° | | Far Rng Dep: | 9.5° | 9.5° | 9.5° | 9.5° |
| Start Sq: | 90.0° | | Atten (dB): | 51.0 | 54.0 | 47.0 | 50.0 |
| End Sq: | 90.0° | | RMS Video (%FS) | 20.0 | 17.0 | 20.4 | 26.5 |

## WAYPOINTS

| | Latitude | Longitude |
|---|---|---|
| Line_up: | N 46:56.92 | W 68:45.32 |
| Start: | N 46:49.23 | W 68:31.90 |
| End: | N 46:42.81 | W 68:20.76 |
| From: | N 55:31.17 | W 91:09.37 |
| To: | N 34:51.60 | W 52:56.88 |

Main Target: GW
Mocomp Point:
Lat: N 46:43.81
Long: W 68:29.03
Tgt Trk: 0.0 Tgt Vel: 0.0
Alt: 770.0 ft

## RADAR PARAMETERS - for UWB

RTP Channel: 1
Resolution: N/A
Swath width: Single
RMS Time Constant: 2^7
Position Reference: ON
Atten. Tracking: OFF
Range Gate Delta: 0.0 ft
Azimuth Presum Rate: Presum6
TX Chirp Filename: CTL1U2A

Filter damping is Hi -> 10 sec
PRF Factor is FAST (262.5 kts)
Ave Gndspd: Real -> 249.6 kts
Mocomp Off for Chnl 1, 2, 3, 4
GPS Vel/Pos Reference
Adj Gnd Scene: 5000.0 ft
Range Tracking is OFF
Clutterlock Reference: OFF
RX Chirp Filename: CRL1N0A

Ave Ref Vel -> -2.1 fps (s.d.= 1.8)
Ave Fil Vel -> -2.1 fps (s.d.= 1.6)

| NML XMIT PWR | ANT BIAS | | Tape Footage | | Drive no. |
|---|---|---|---|---|---|
| X: -70.0 | Elevation: | 0.0° | | | |
| L: -70.0 | Azimuth: | 0.0° | Starting: | 4016 ft | (2) |
| C: -70.0 | Pitch: | 0.0° | Ending: | 5254 ft | (2) |
| P: 39.9 | | | | | |

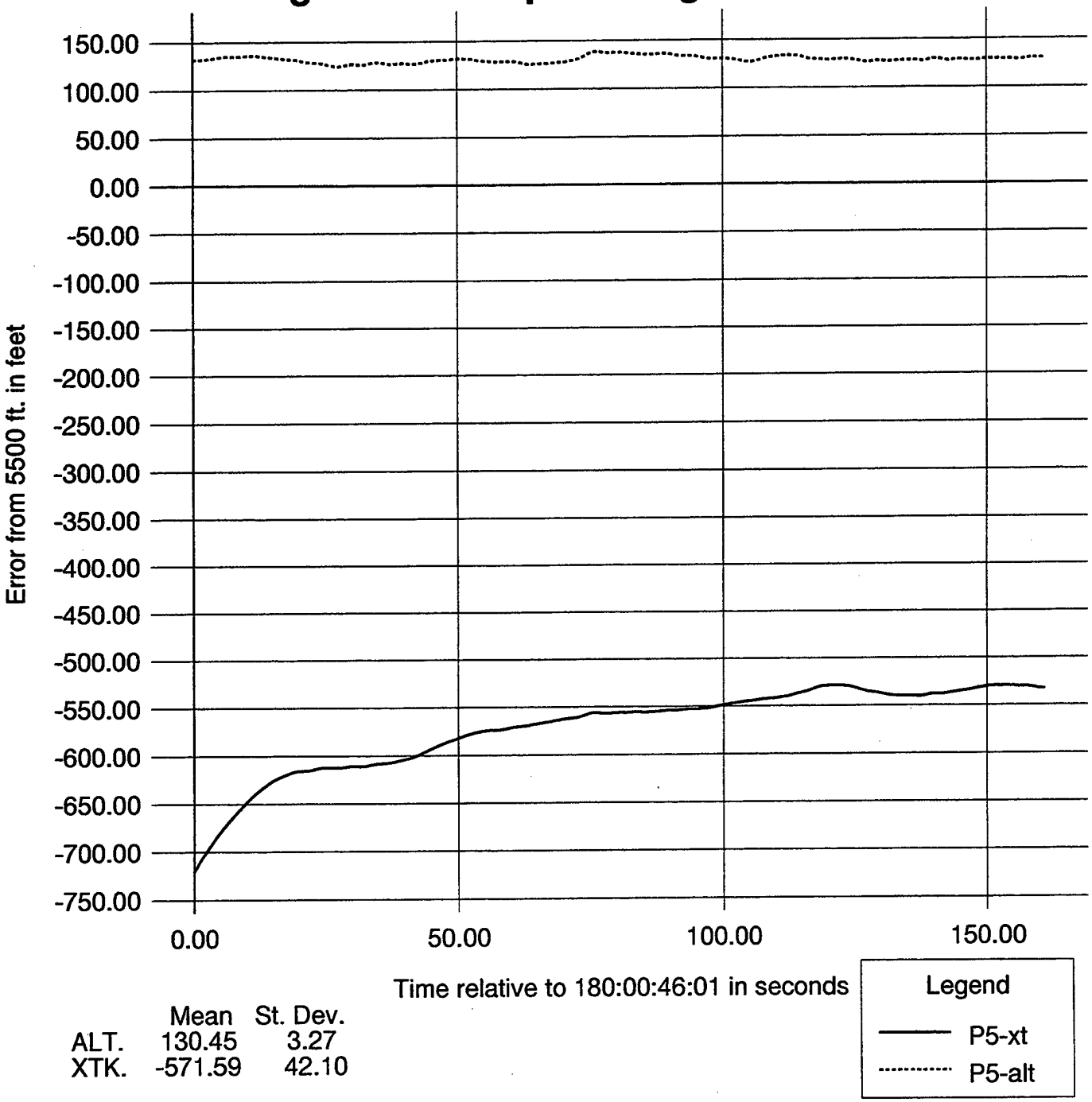
| Vel Bias | CAL Atten | LINE Map Time (UCT) |
|---|---|---|
| X: 2112.0 | X: 63.8 dB | Start: 00:46:01 |
| Y: 1874.0 | L: 63.8 dB | End: 00:48:42 |
| Z: 5343.0 | C: 63.8 dB | |

Mocomp Counters

| | | |
|---|---|---|
| Start: | 603360 | 000934E0h |
| End: | 630370 | 00099E62h |

CPA (UCT): 00:00:00
Alt: 0 ft (GPS)
Lat: N 0:00: 0
Lon: E 0:00: 0

# Portage, ME - June 28, 1995 - Pass 12 - Xtk. and Alt. Errors
## Higher alt. and port are greater than zero

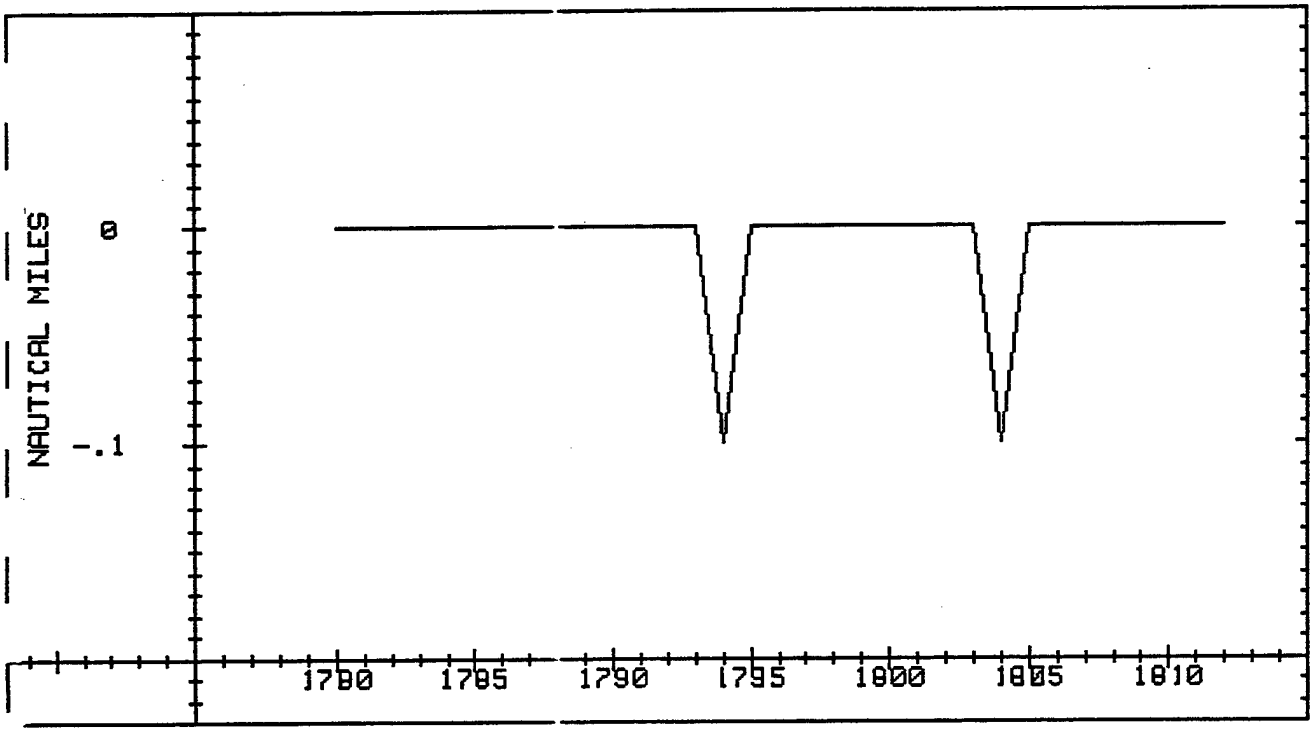



| | Mean | St. Dev. |
|---|---|---|
| ALT. | 130.45 | 3.27 |
| XTK. | -571.59 | 42.10 |

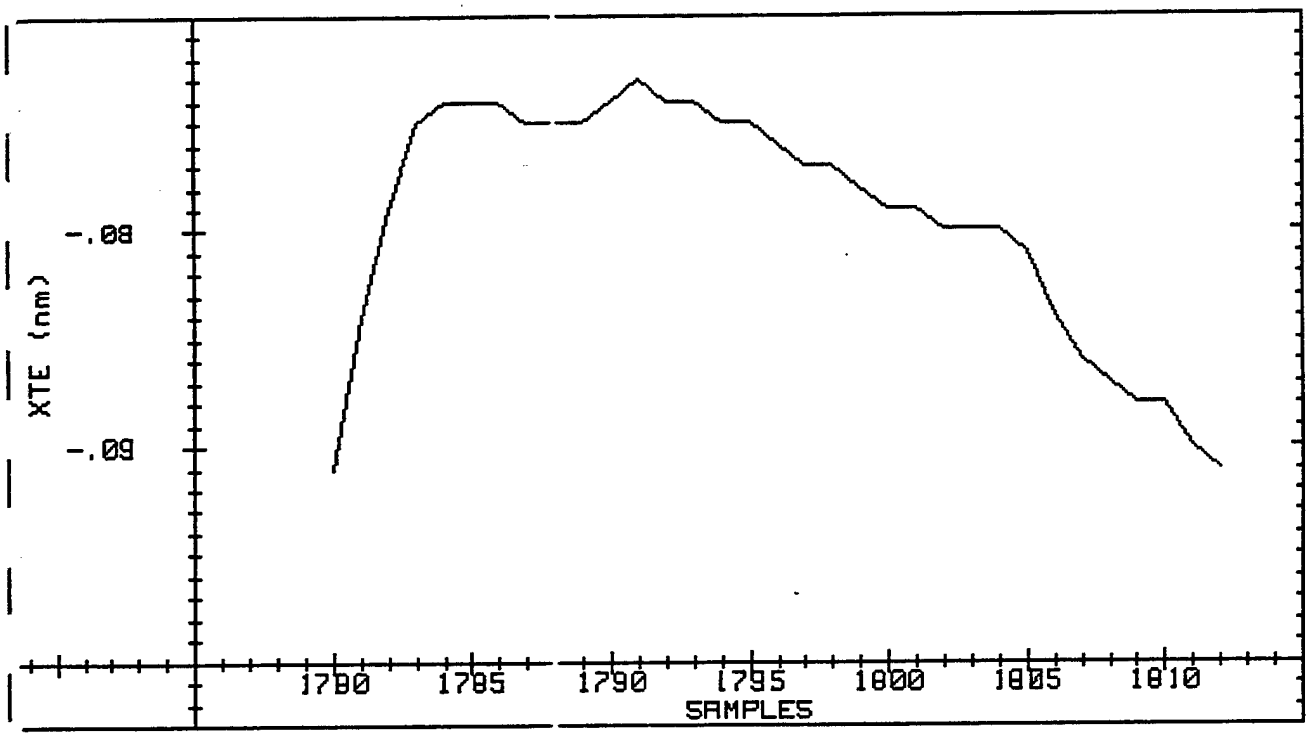
INS CROSS TRACK ERROR

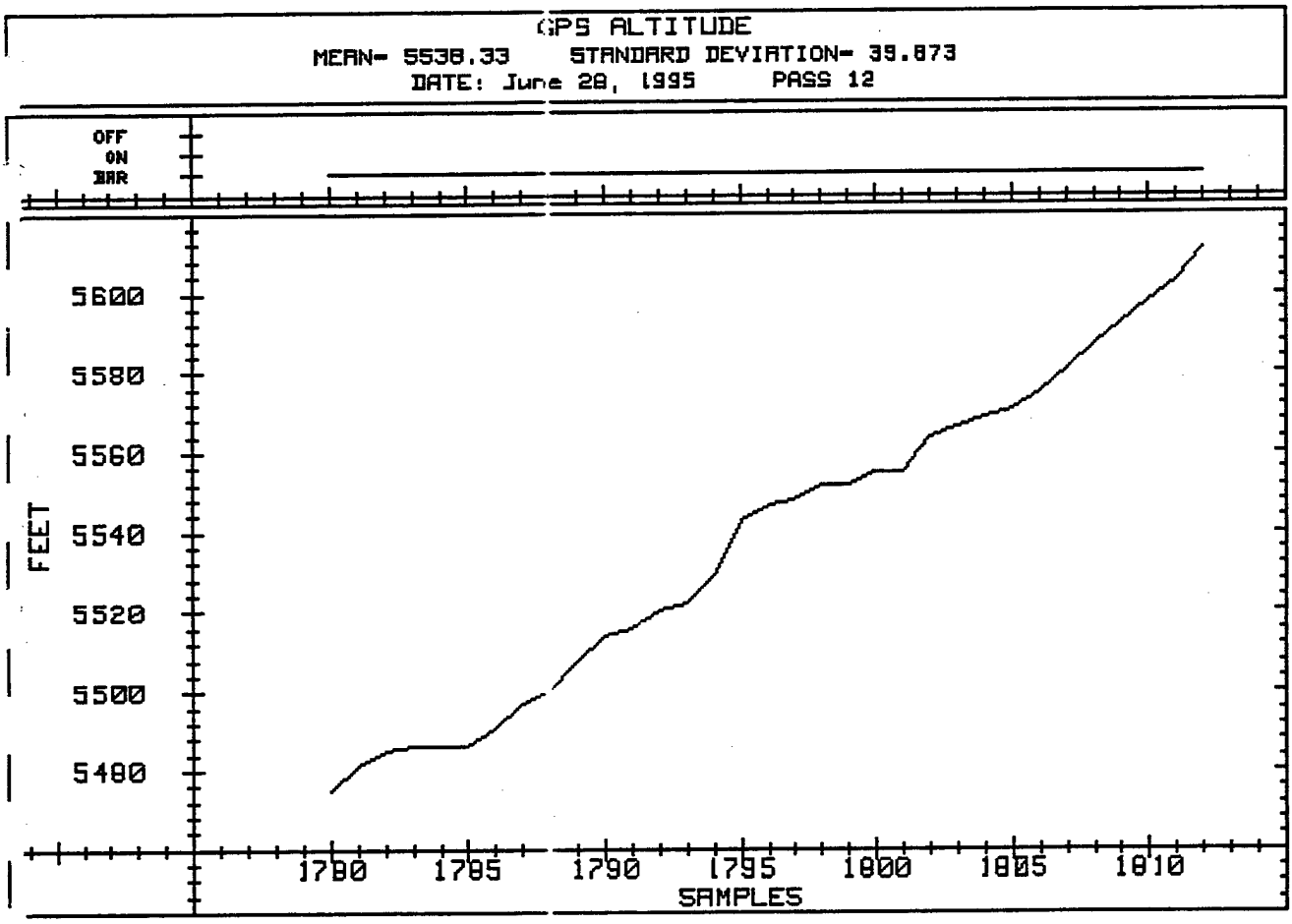
MEAN= -.00606061 STANDARD DEVIATION= .0238606

DATE: June 28, 1995 PASS 12



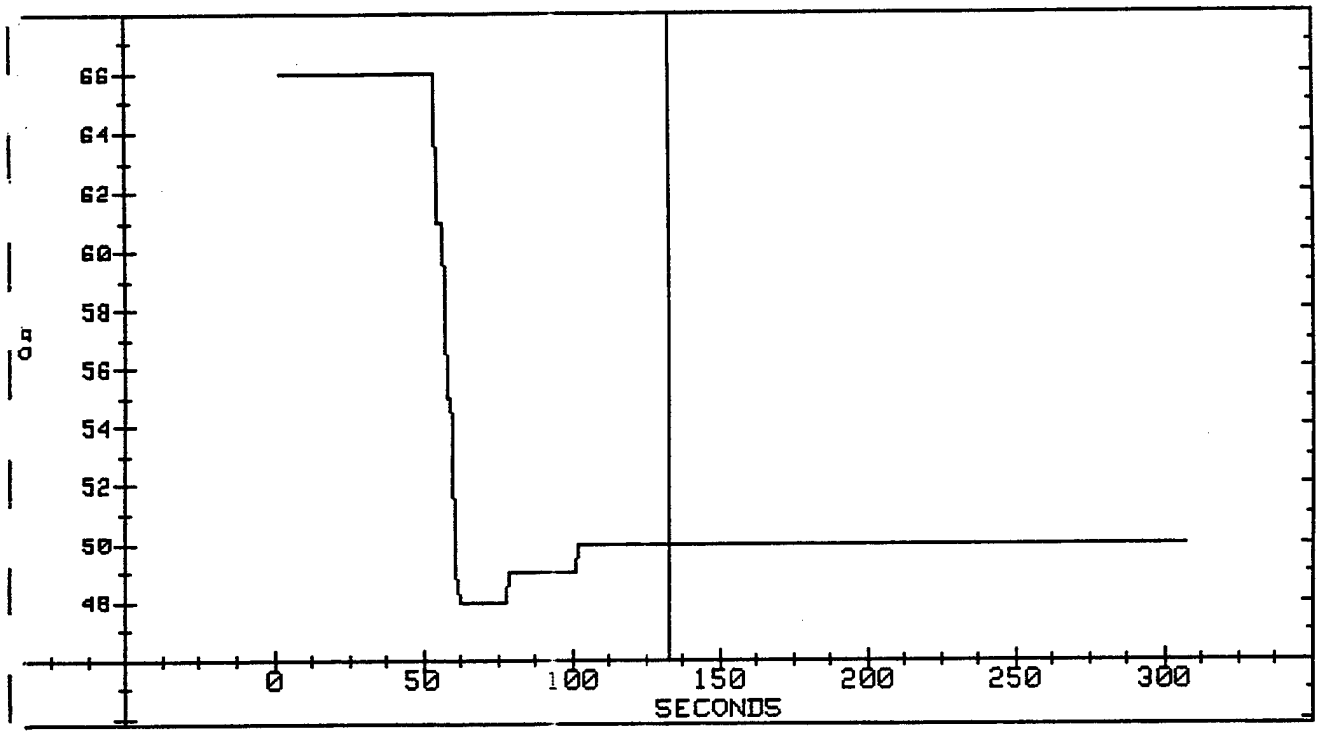
GPS Cross Track Error
MEAN= -.0794545 STANDARD DEVIATION= .0055981
DATE: June 28, 1995 PASS 12




GPS ALTITUDE
MEAN= 5538.33 STANDARD DEVIATION= 39.873
DATE: June 28, 1995 PASS 12
OFF
ON
BAR
5600
5580
5560
5540
5520
5500
5480
FEET
1780
1785
1790
1795
1800
1805
1810
SAMPLES

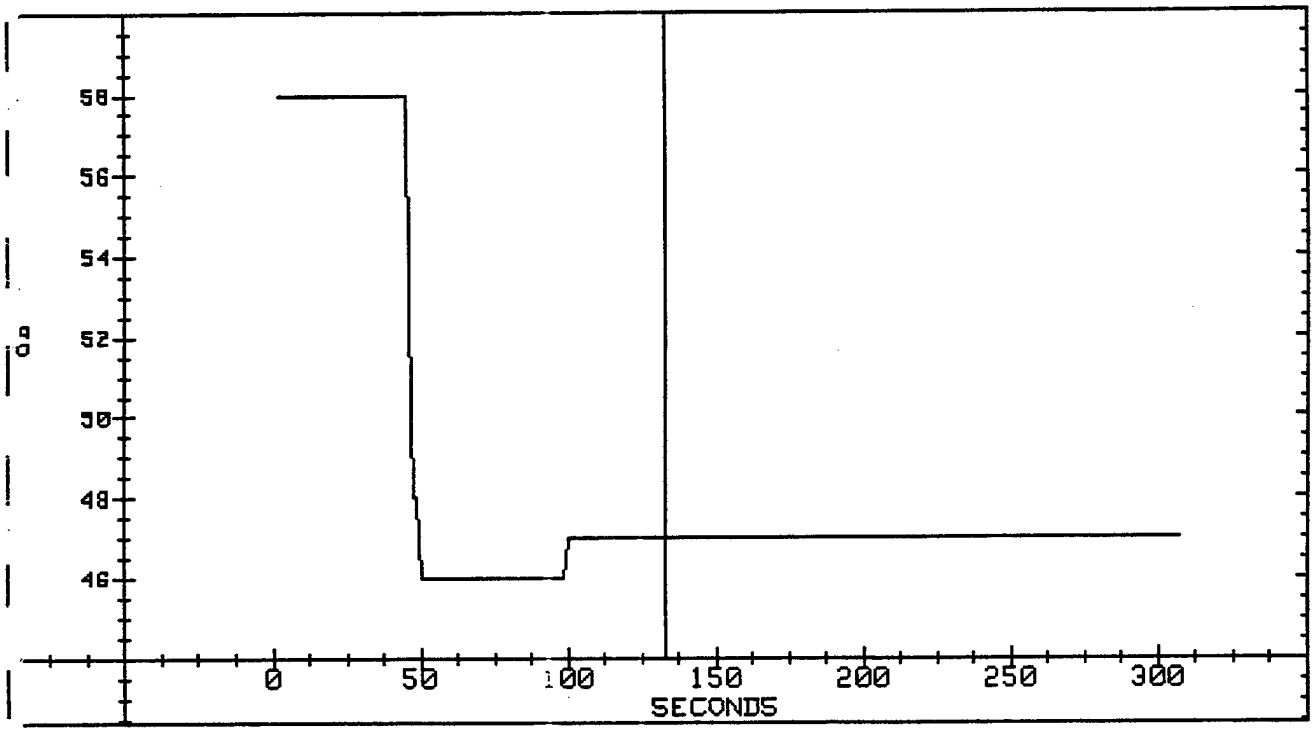
Ch4 RES Attenuation

DAY 180 TIME 0:43 PASS 12 m= 50, sd= 0



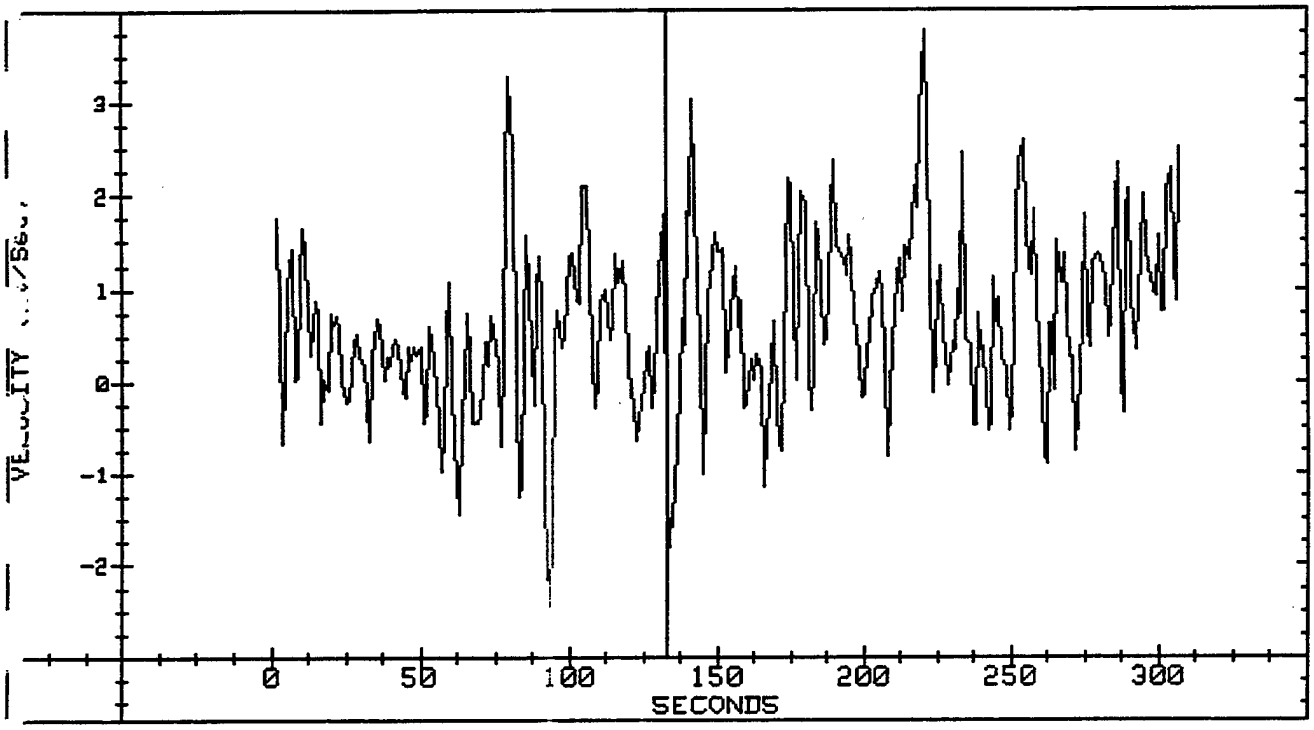
Ch3 RES Attenuation

DAY 180 TIME 0:43 PASS 12 m= 47, sd= 0



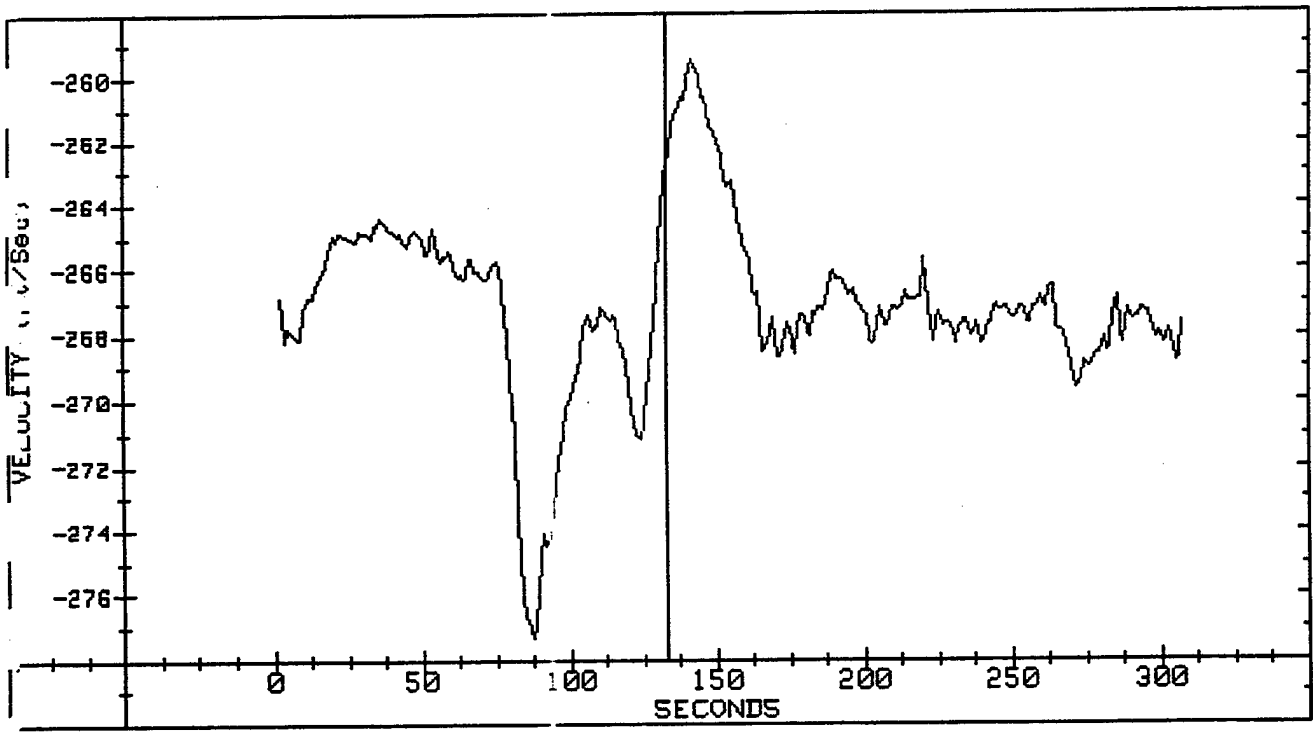
GPS Vv

DAY 180 TIME 0:43 PASS 12 m= .8519, sd= .08134



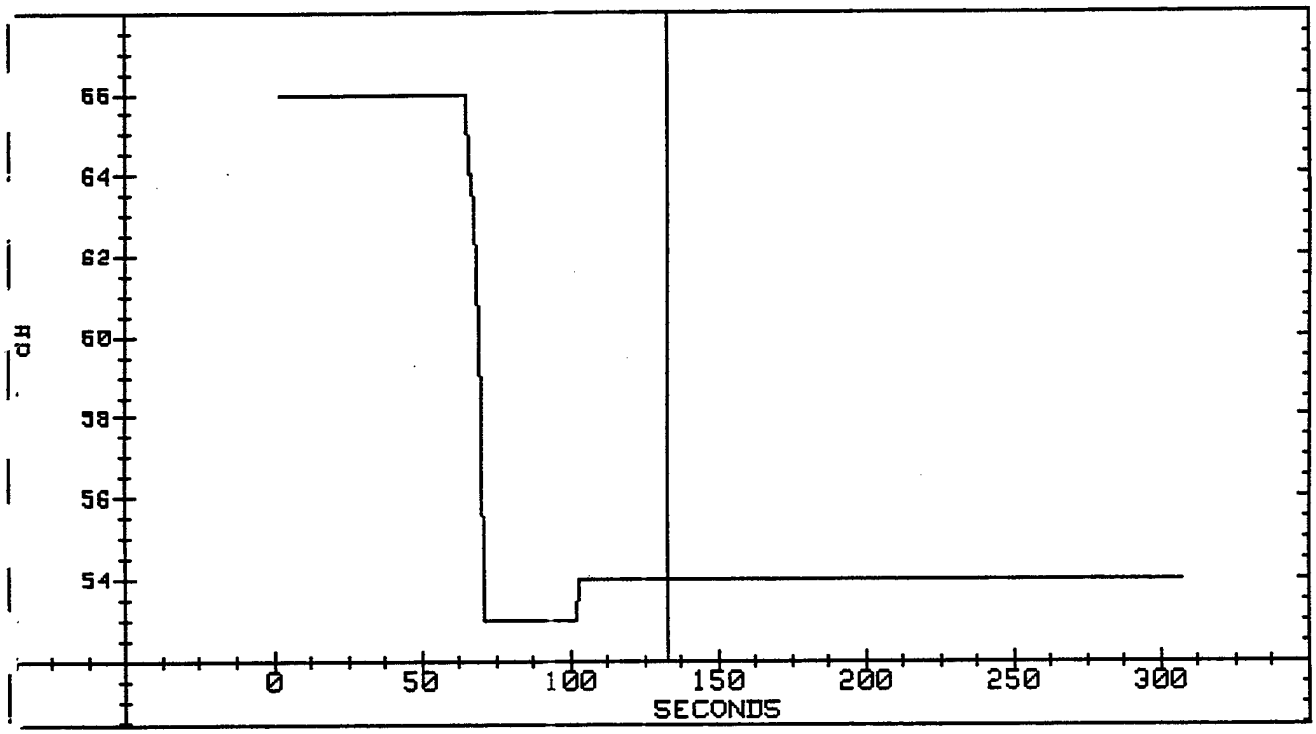
GPS Vn

DAY 180 TIME 0:43 PASS 12 m= -267.2, sd= 1.55594



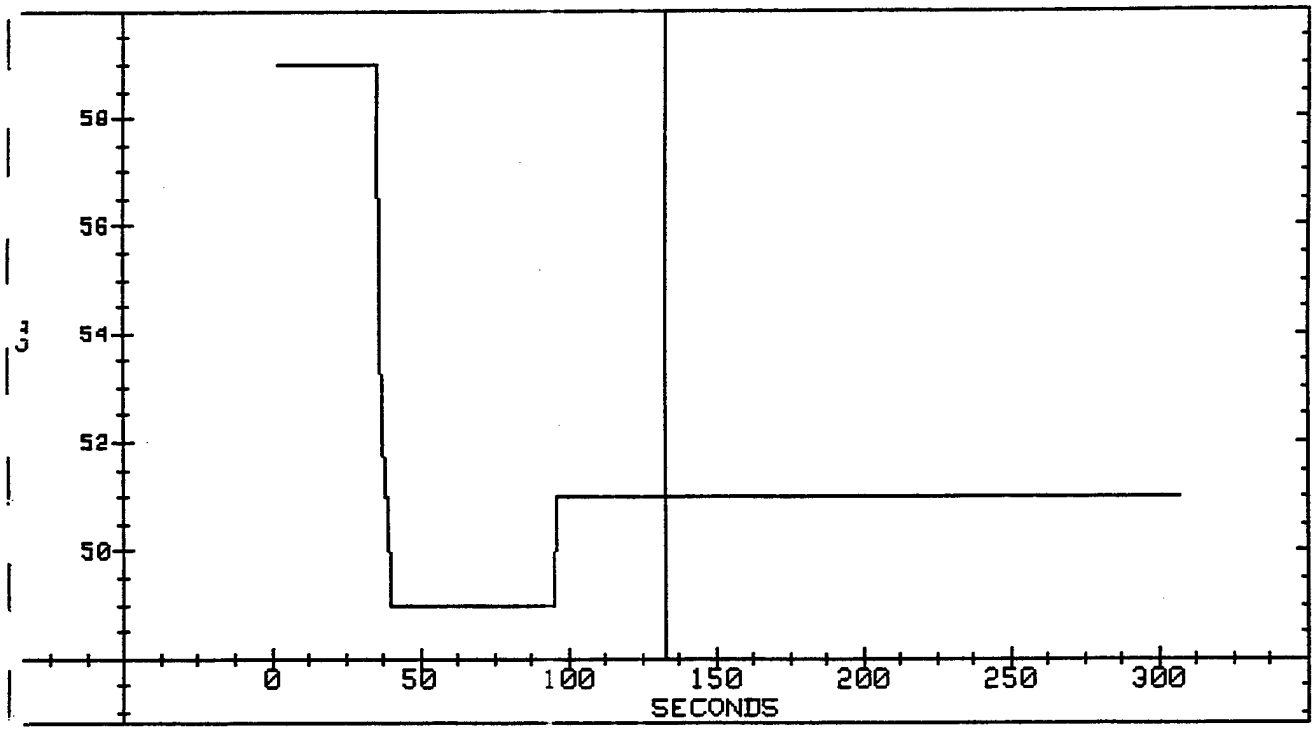
Ch2 RES Attenuation

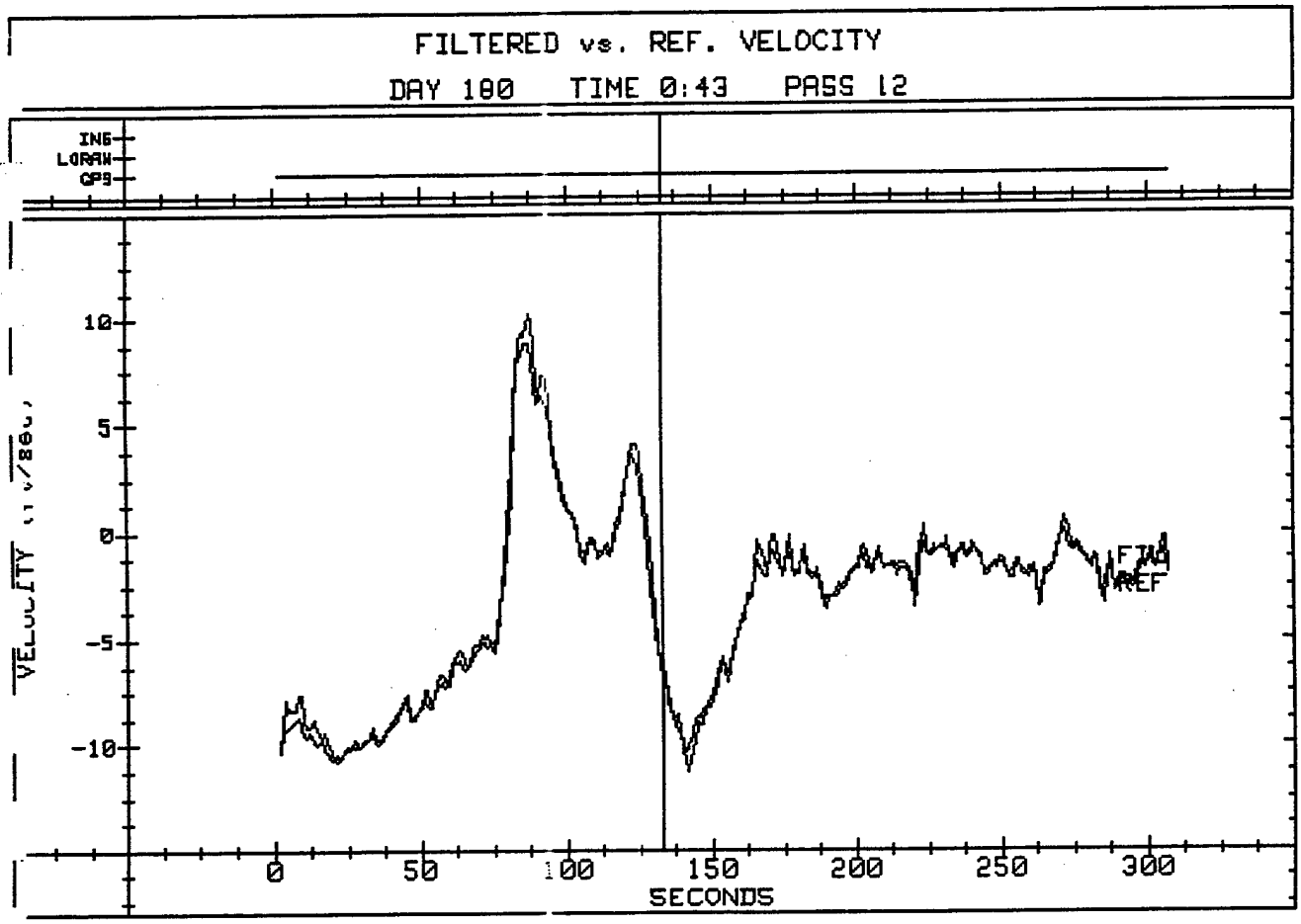
DAY 180 TIME 0:43 PASS 12 m= 54, sd= 0



Ch1 RES Attenuation

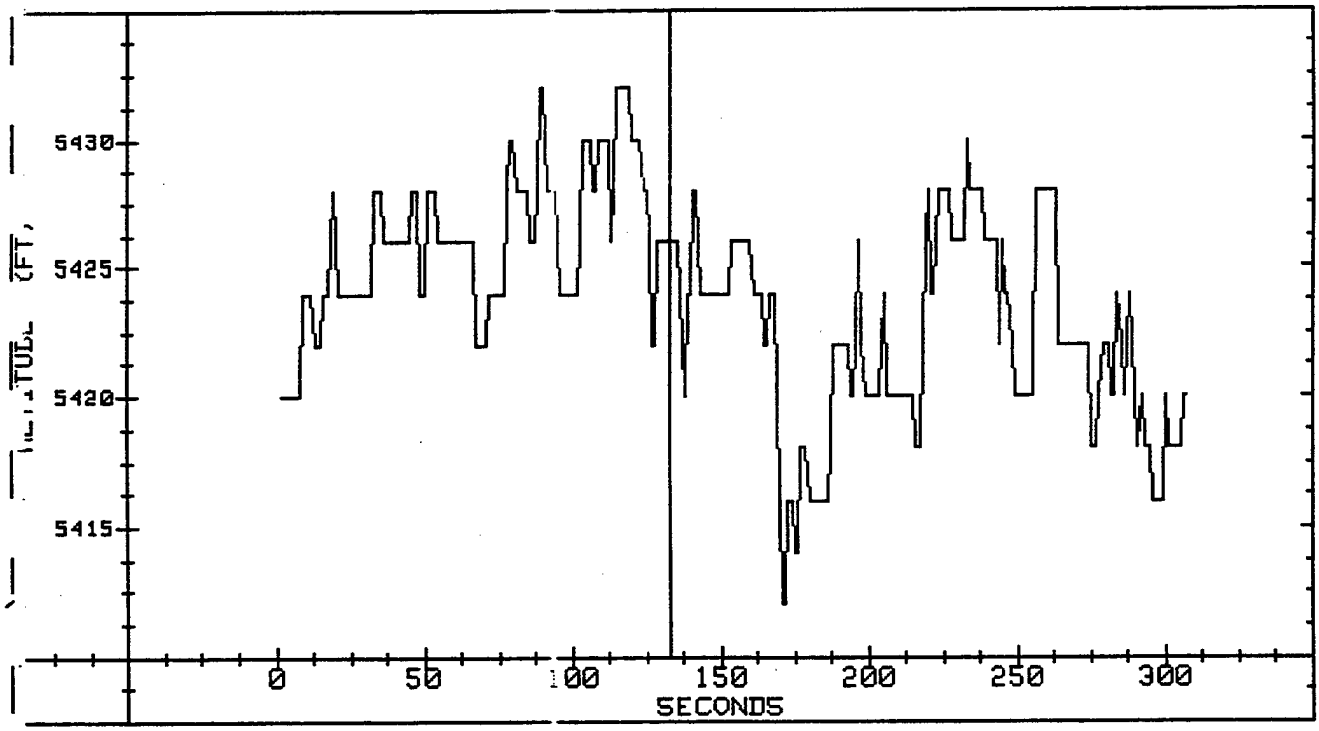
DAY 180 TIME 0:43 PASS 12 m= 51. sd= 0




FILTERED vs. REF. VELOCITY
DAY 180 TIME 0:43 PASS 12
INS
LORAN
GPS
10
5
0
-5
-10
0
50
100
150
200
250
300
SECONDS
FILT
REF

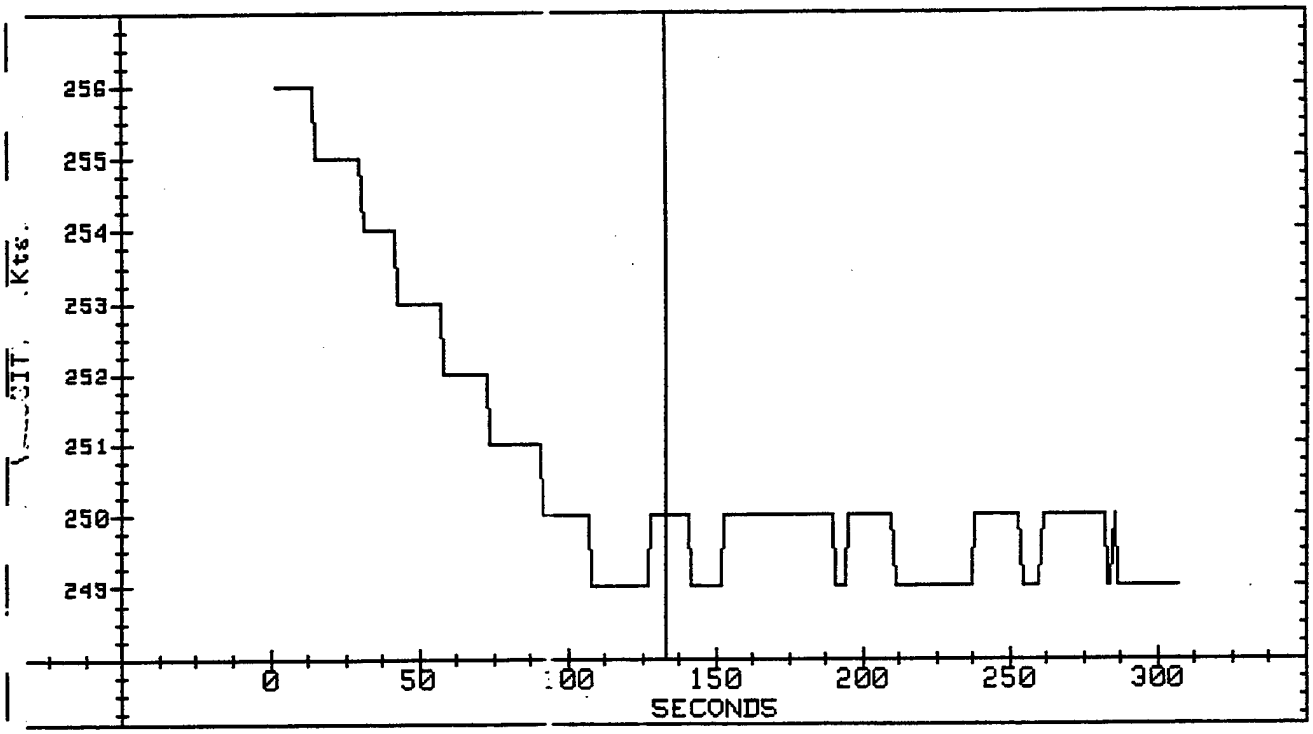
BARO ALTITUDE

DAY 180 TIME 0:43 PASS 12 m= 5422. sd= 3.85701



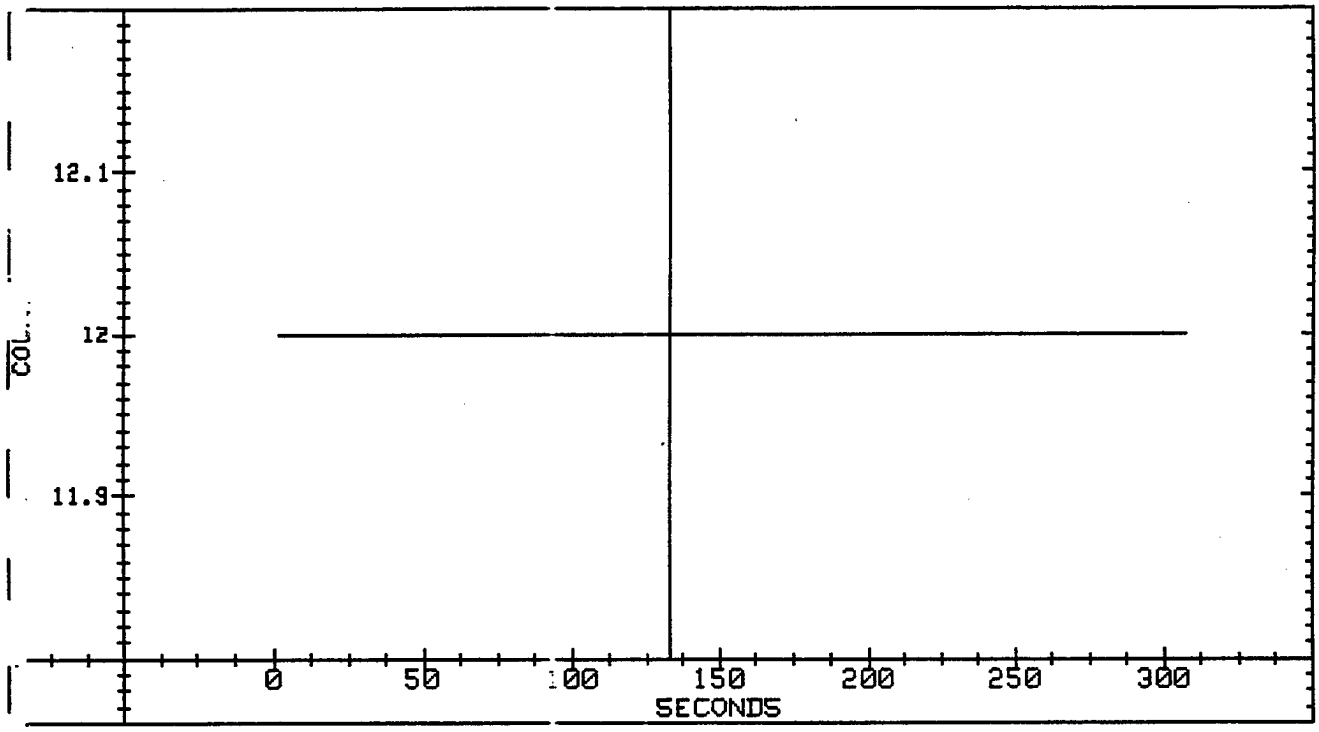
INS GROUND SPEED

DAY 100 TIME 0:43 PASS 12 m= 249.6, sd= .494403



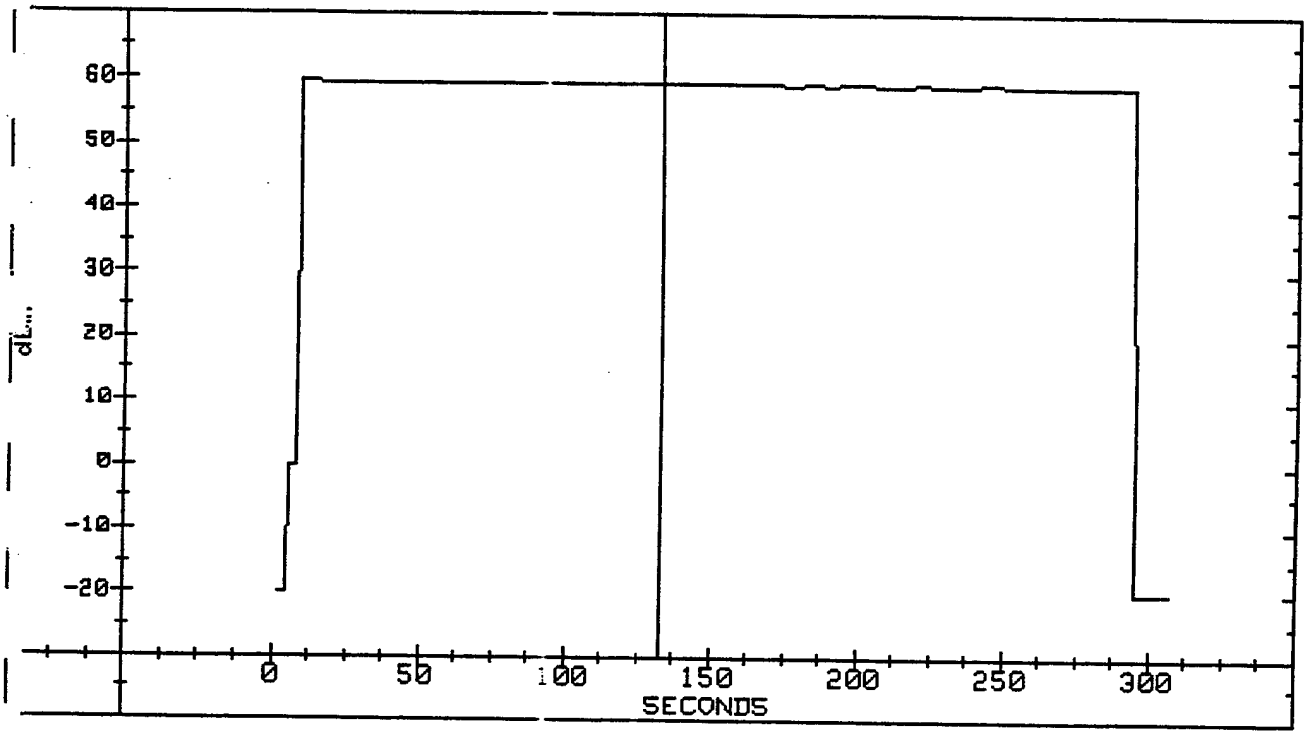
PASS NUMBER

DAY 180 TIME 0:43 PASS 12 m= 12, sd= 0



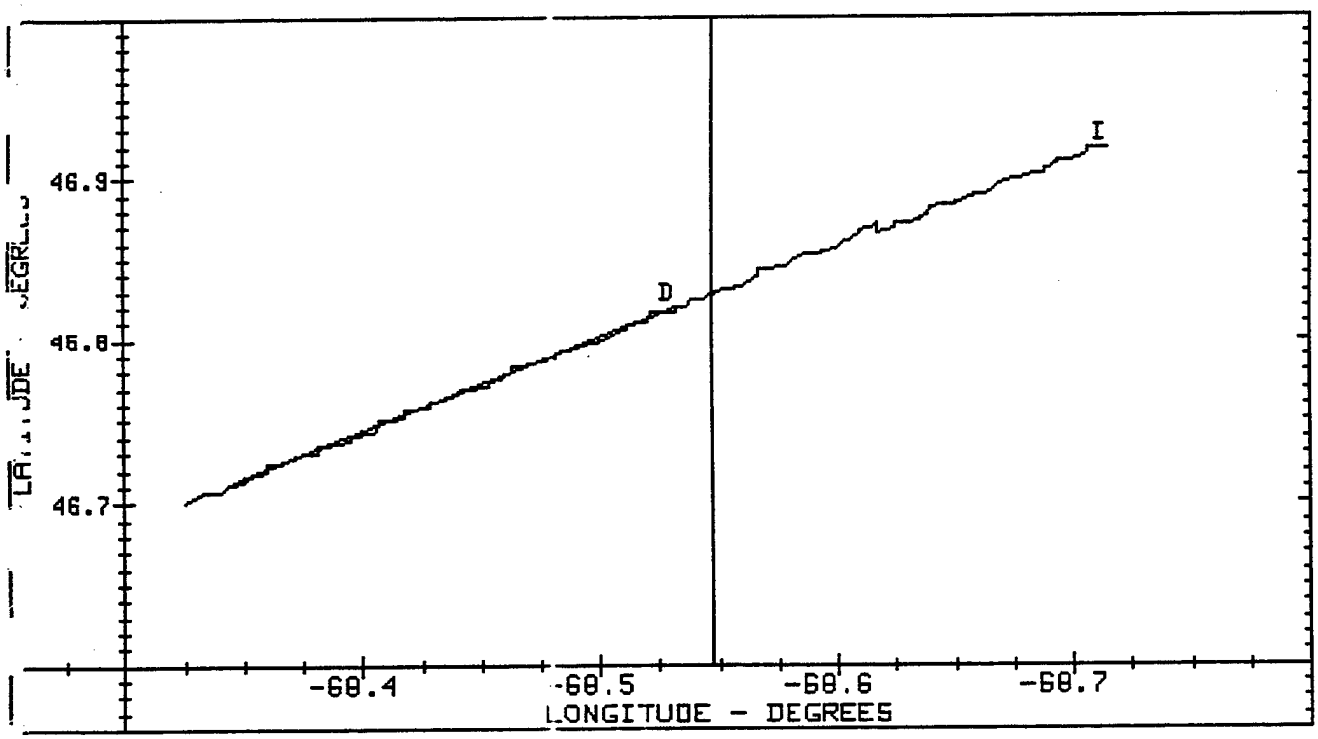
P Band Power

DAY 180 TIME 0:43 PASS 12 m= 52.7, sd= 21.4731



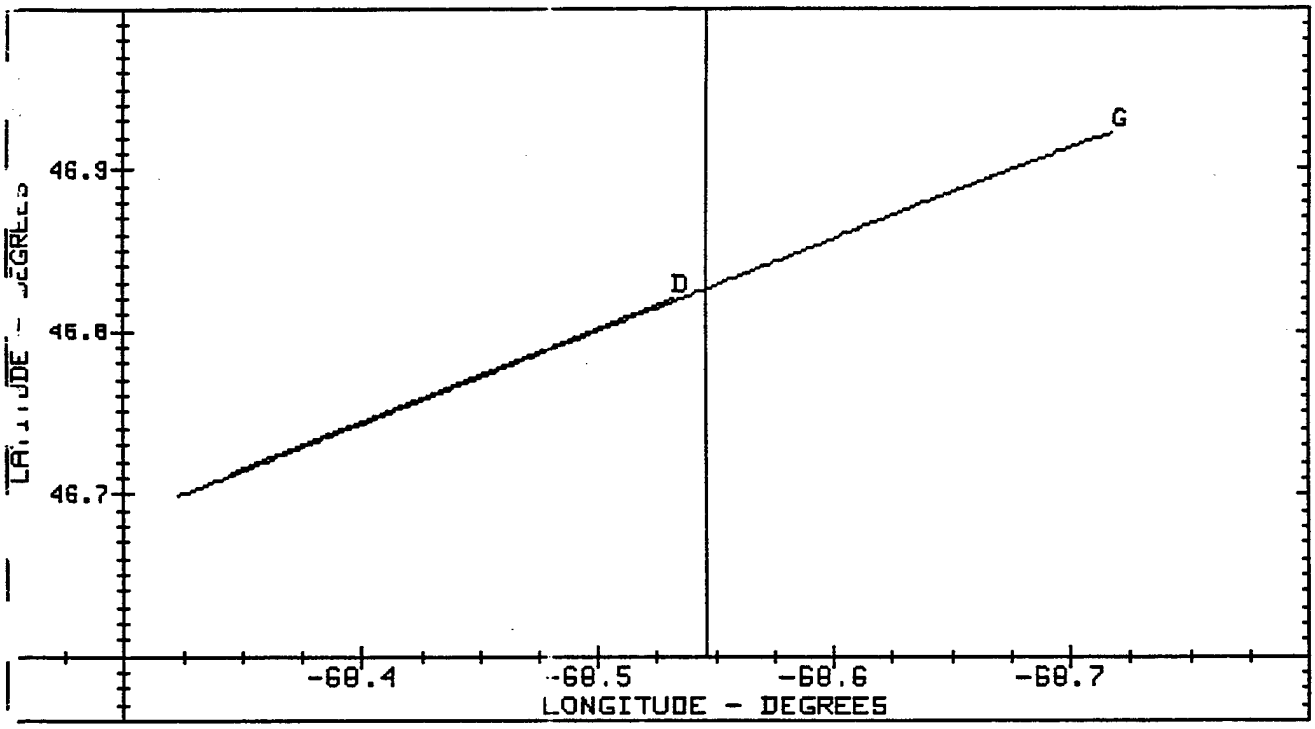
INS AIRCRAFT POSITION

DAY 180 TIME 0:43 PASS 12



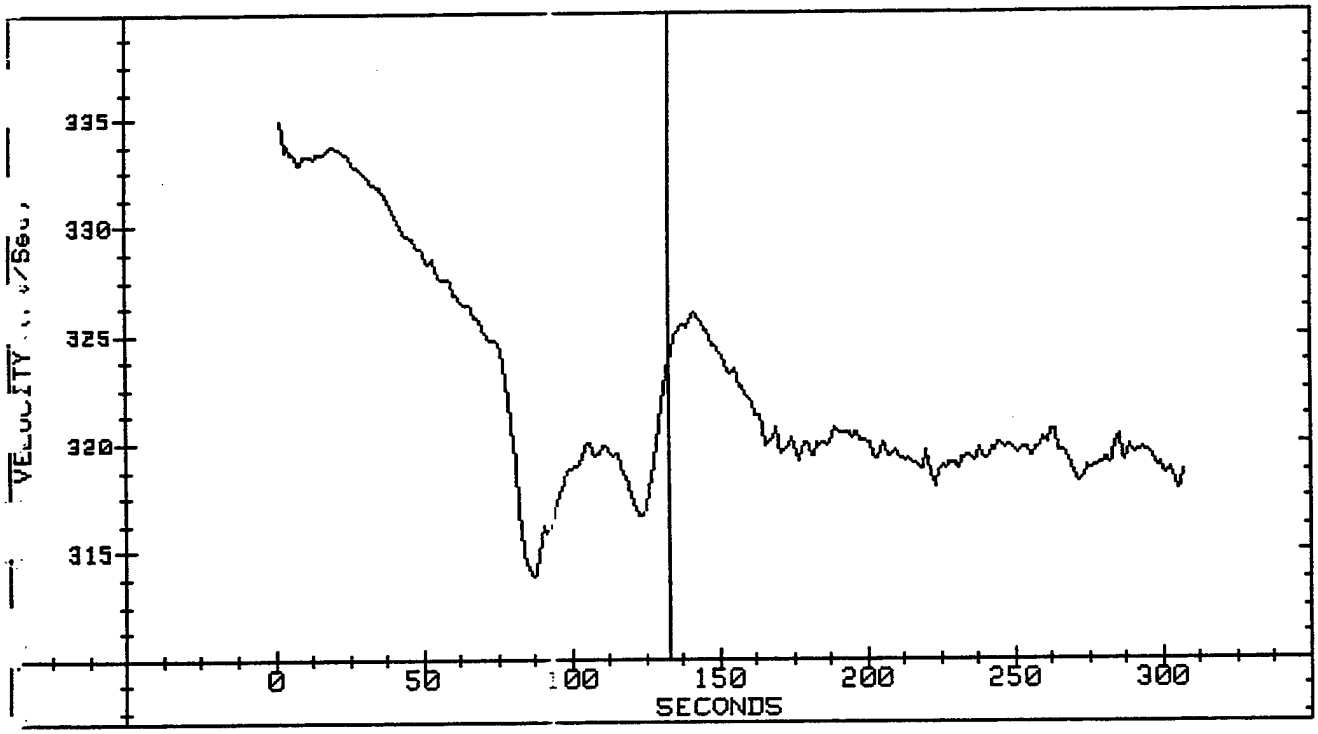
GPS AIRCRAFT POSITION

DAY 100 TIME 0:43 PASS 12



GPS Ve

DAY 180 TIME 0:43 PASS 12 m= 319.9, sd= 1.35274



29 Jun 1995 | Post-line Data Sheet | Time: 180:00:57:38
Tape: E1417 | Line 33 | Pass 13
Mission: DAY 4 PORTAGE MAINE | Req.# 14

## AIRCRAFT & CHANNEL DATA

| | | | | CH 1 | CH 2 | CH 3 | CH 4 |
|---|---|---|---|---|---|---|---|
| Altitude | | | | | | | |
| Desired: | 5500 ft | Wave/Pol.: | | p-VV | p-VH | p-HV | p-HH |
| Baro: | 5436 ft s.d.= | 3 | Swath Ctr Ang: | 15.0° | 15.0° | 15.0° | 15.0° |
| Slt. rng: | 18159 ft | | Tgt Dep Ang: | 15.0° | 15.0° | 15.0° | 15.0° |
| Look: | Right | | St rng (ft): | 16624 | 16624 | 16624 | 16624 |
| Depr Ang: | 25.0° | | Near Rng Dep: | 19.1° | 19.1° | 19.1° | 19.1° |
| Des. trk: | 276.0° | | Far Rng Dep: | 9.6° | 9.6° | 9.6° | 9.6° |
| Start Sq: | 90.0° | | Atten (dB): | 59.0 | 67.0 | 59.0 | 60.0 |
| End Sq: | 90.0° | | RMS Video (%FS) | 8.7 | 7.5 | 6.8 | 11.3 |

## WAYPOINTS

| | Latitude | Longitude |
|---|---|---|
| Line_up: | N 46:39.60 | W 68:04.86 |
| Start: | N 46:40.89 | W 68:22.19 |
| End: | N 46:41.94 | W 68:36.65 |
| From: | N 42:35.32 | W 45:46.24 |
| To: | N 45:52.60 | W 92:35.18 |

Main Target: CALCS
Mocomp Point:
Lat: N 46:44.29
Long: W 68:28.98
Tgt Trk: 0.0 Tgt Vel: 0.0
Alt: 800.0 ft

## RADAR PARAMETERS - for UWB

RTP Channel: 1
Resolution: N/A
Swath width: Single
RMS Time Constant: 2^7
Position Reference: ON
Atten. Tracking: OFF
Range Gate Delta: 0.0 ft
Azimuth Presum Rate: Presum6
TX Chirp Filename: CTL1U2A

Filter damping is Hi -> 10 sec
PRF Factor is FAST (262.5 kts)
Ave Gndspd: Real -> 251.5 kts
Mocomp Off for Chnl 1, 2, 3, 4
GPS Vel/Pos Reference
Adj Gnd Scene: 5000.0 ft
Range Tracking is OFF
Clutterlock Reference: OFF
RX Chirp Filename: CRL1N0A

Ave Ref Vel -> 4.1 fps (s.d.= .7)
Ave Fil Vel -> 3.6 fps (s.d.= .6)

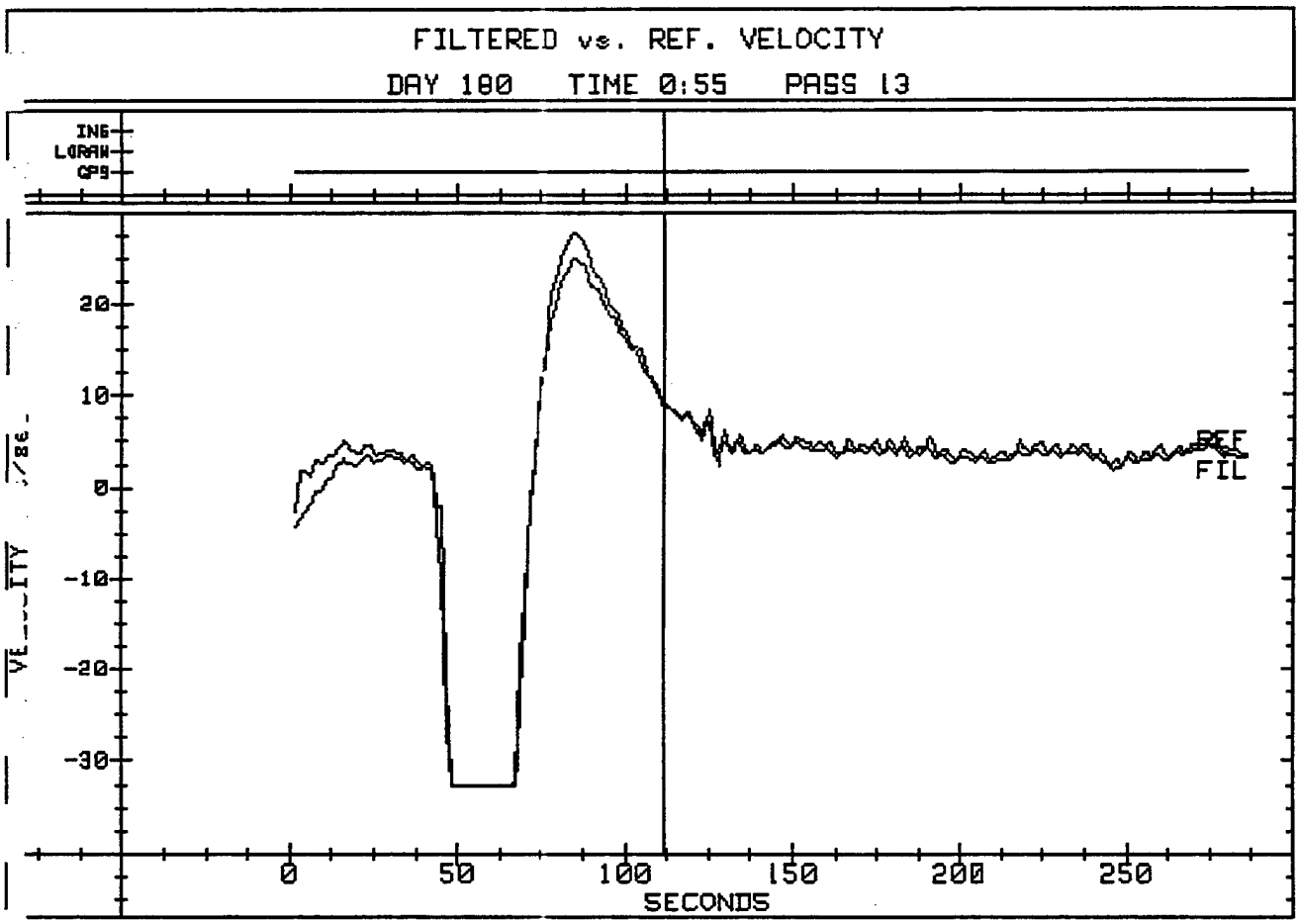
| NML XMIT PWR | ANT BIAS | | Tape Footage | | Drive no. |
|---|---|---|---|---|---|
| X: -70.0 | Elevation: | 0.0° | | | |
| L: -70.0 | Azimuth: | 0.0° | Starting: | 5267 ft | (2) |
| C: -70.0 | Pitch: | 0.0° | Ending: | 4009 ft | (2) |
| P: 39.8 | | | | | |

| Vel Bias | CAL Atten | LINE Map Time (UCT) |
|---|---|---|
| X: 2112.0 | X: 63.8 dB | Start: 00:57:38 |
| Y: 1874.0 | L: 63.8 dB | End: 01:00:17 |
| Z: 5343.0 | C: 63.8 dB | |

Mocomp Counters

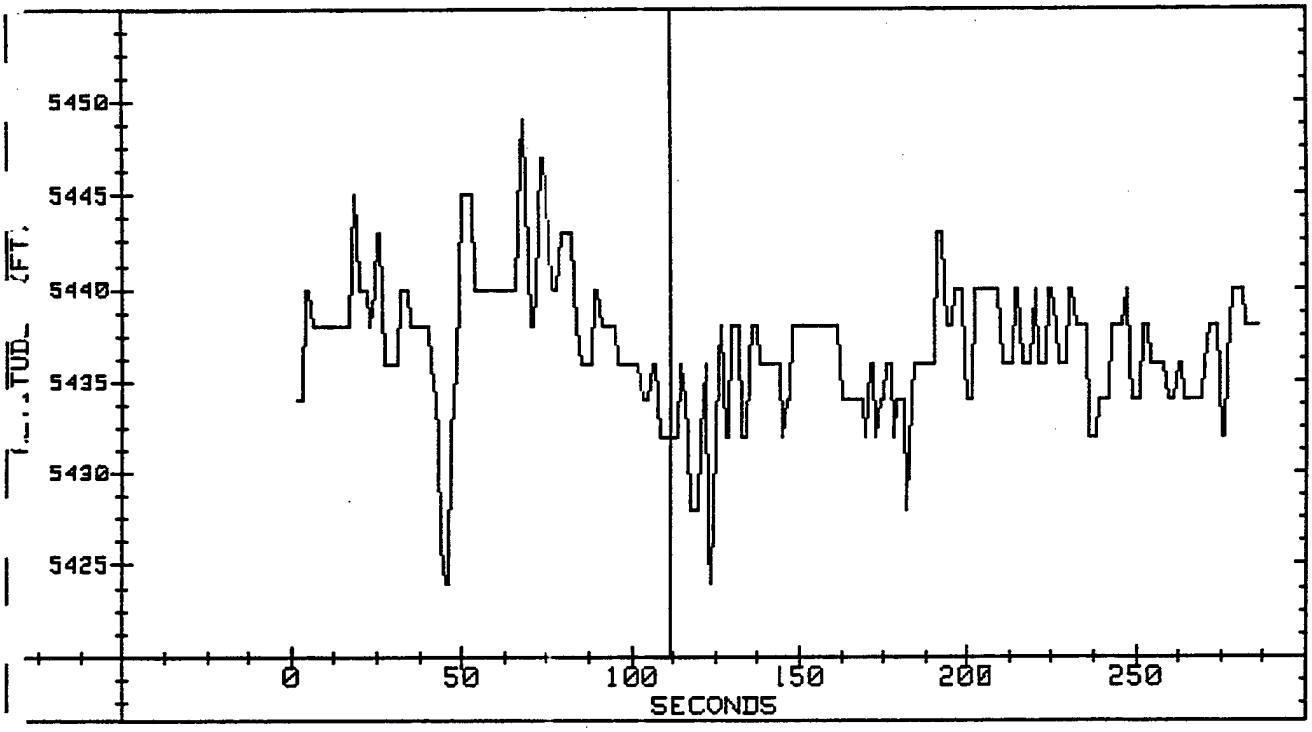
| | | |
|---|---|---|
| Start: | 651741 | 0009F1DDh |
| End: | 678382 | 000A59EEh |

CPA (UCT): 00:00:00
Alt: 0 ft (GPS)
Lat: N 0:00: 0
Lon: E 0:00: 0


FILTERED vs. REF. VELOCITY
DAY 180 TIME 0:55 PASS 13
ING
LORAN
GPS
20
10
0
-10
-20
-30
REF
FIL
0
50
100
150
200
250
SECONDS

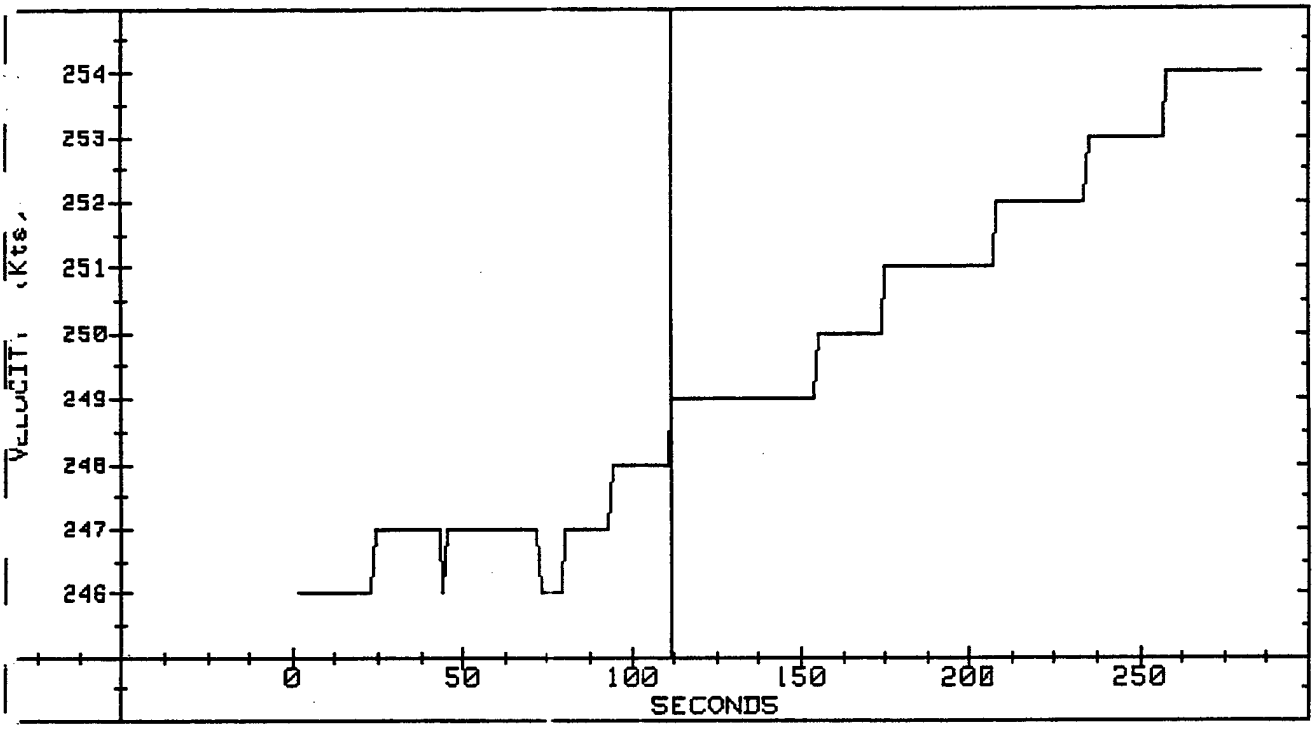
BARO ALTITUDE

DAY 180 TIME 0:55 PASS 13 m= 5436. sd= 2.53118



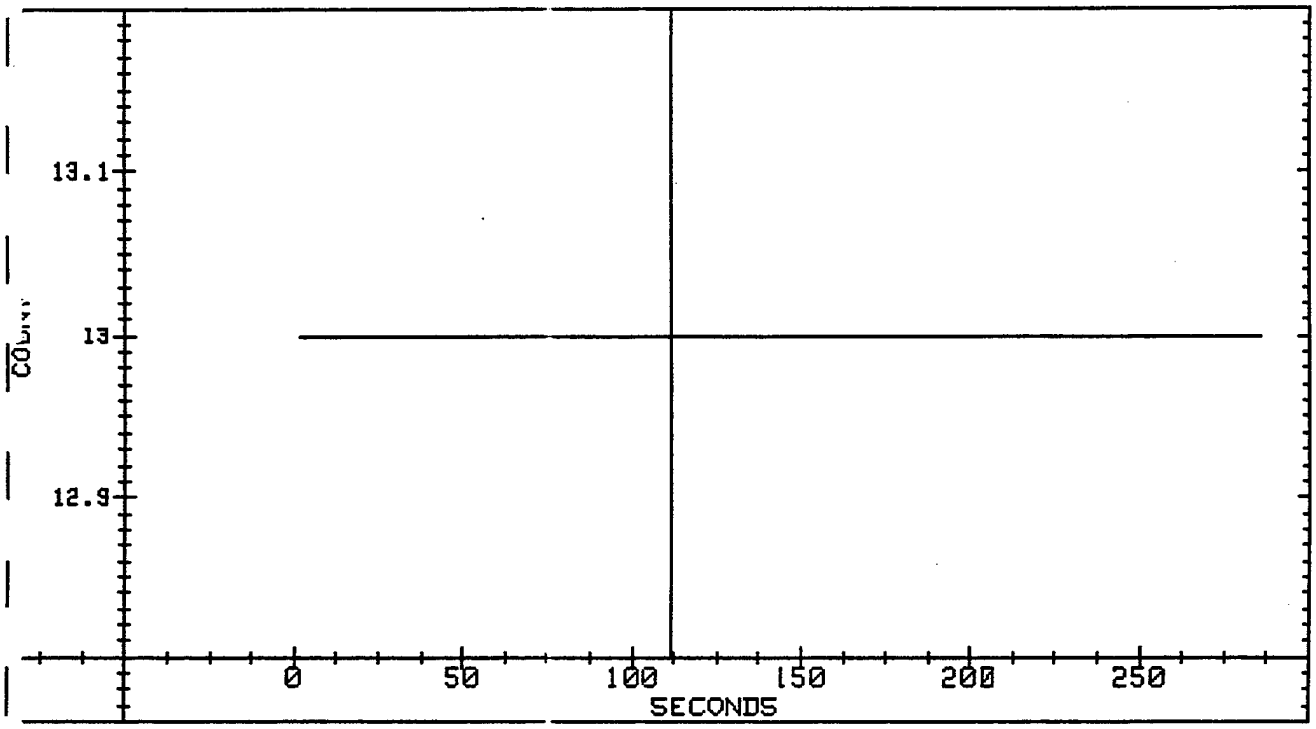
INS GROUND SPEED

DAY 180 TIME 0:55 PASS 13 m- 251.5, sd- 1.71000



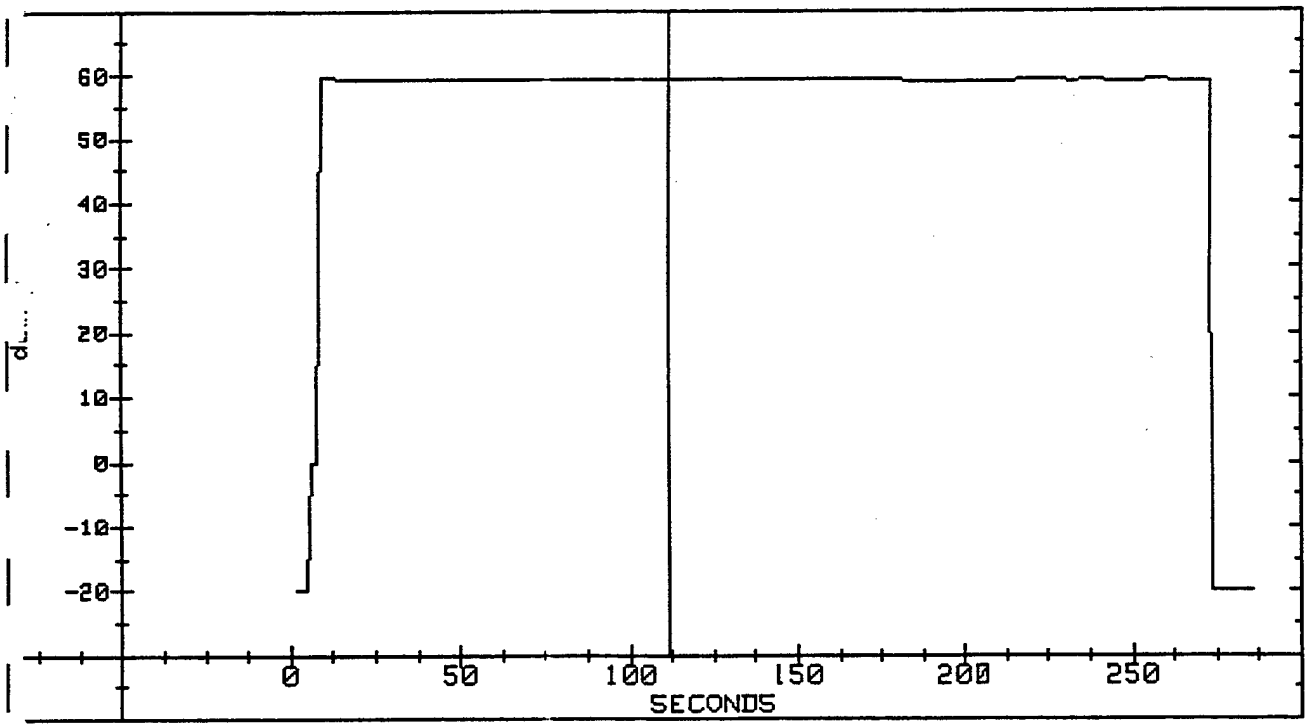
PASS NUMBER

DAY 180 TIME 0:55 PASS 13 m= 13, sd= 0



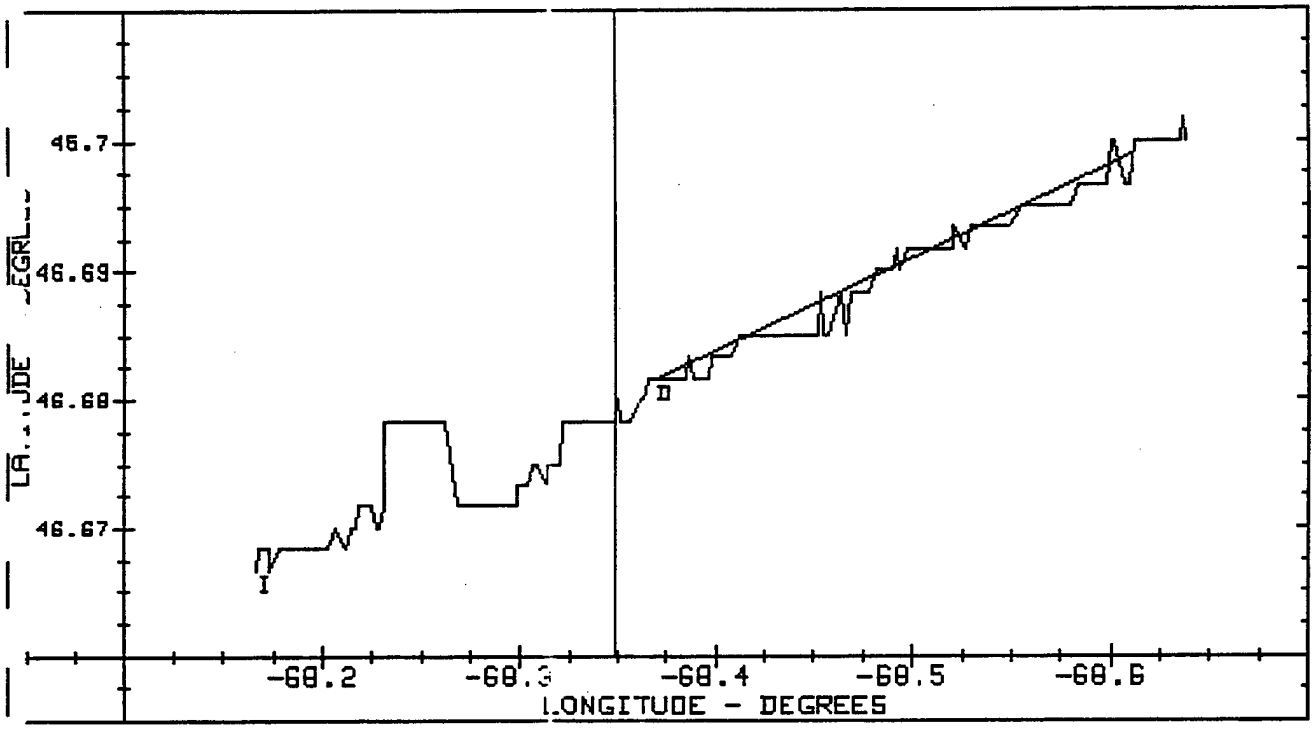
P Band Power

DAY 180 TIME 0:55 PASS 13 m= 52.63, sd= 21.5999



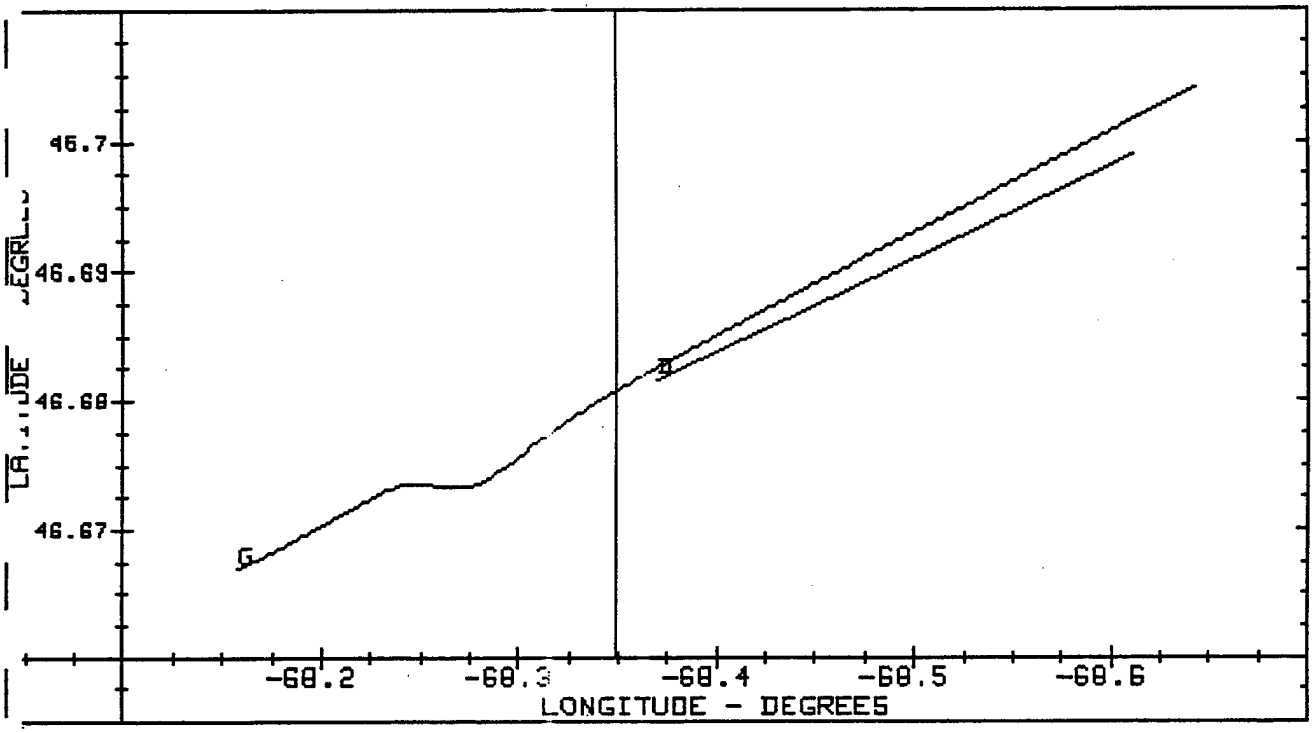
INS AIRCRAFT POSITION

DAY 180 TIME 0:55 PASS 13



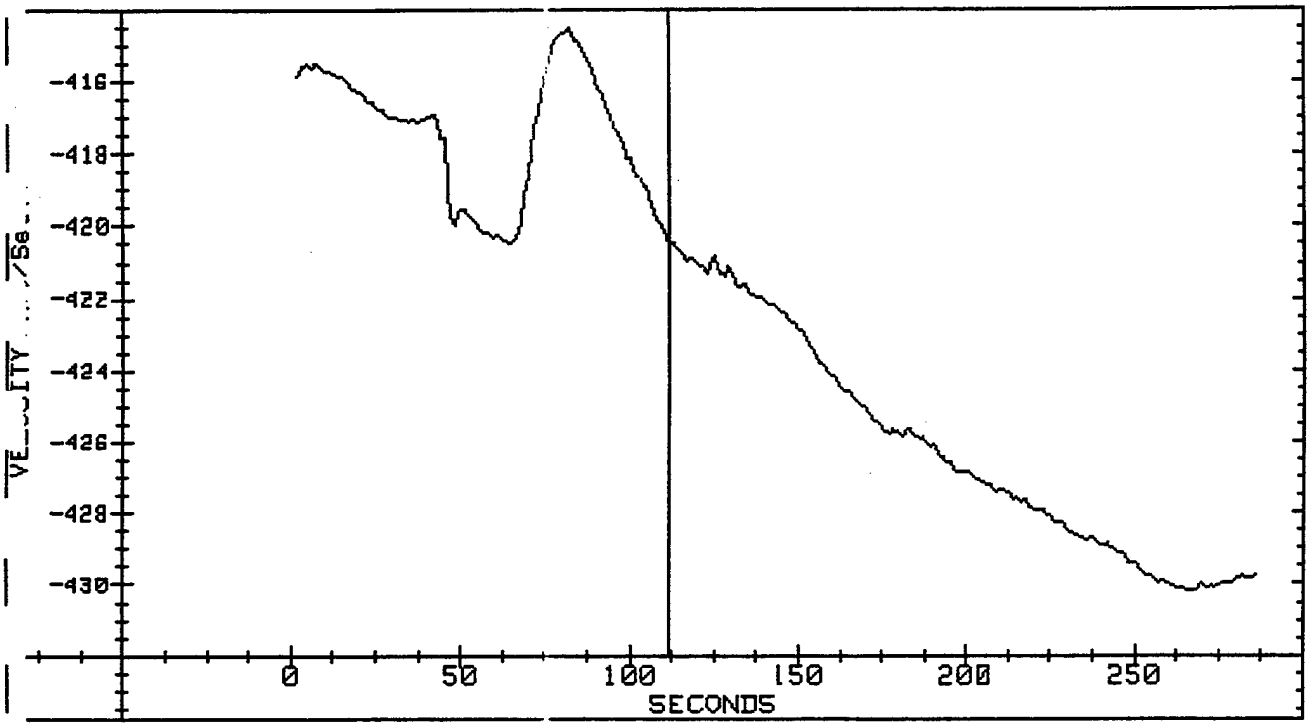
GPS AIRCRAFT POSITION

DAY 180 TIME 0:55 PASS 13



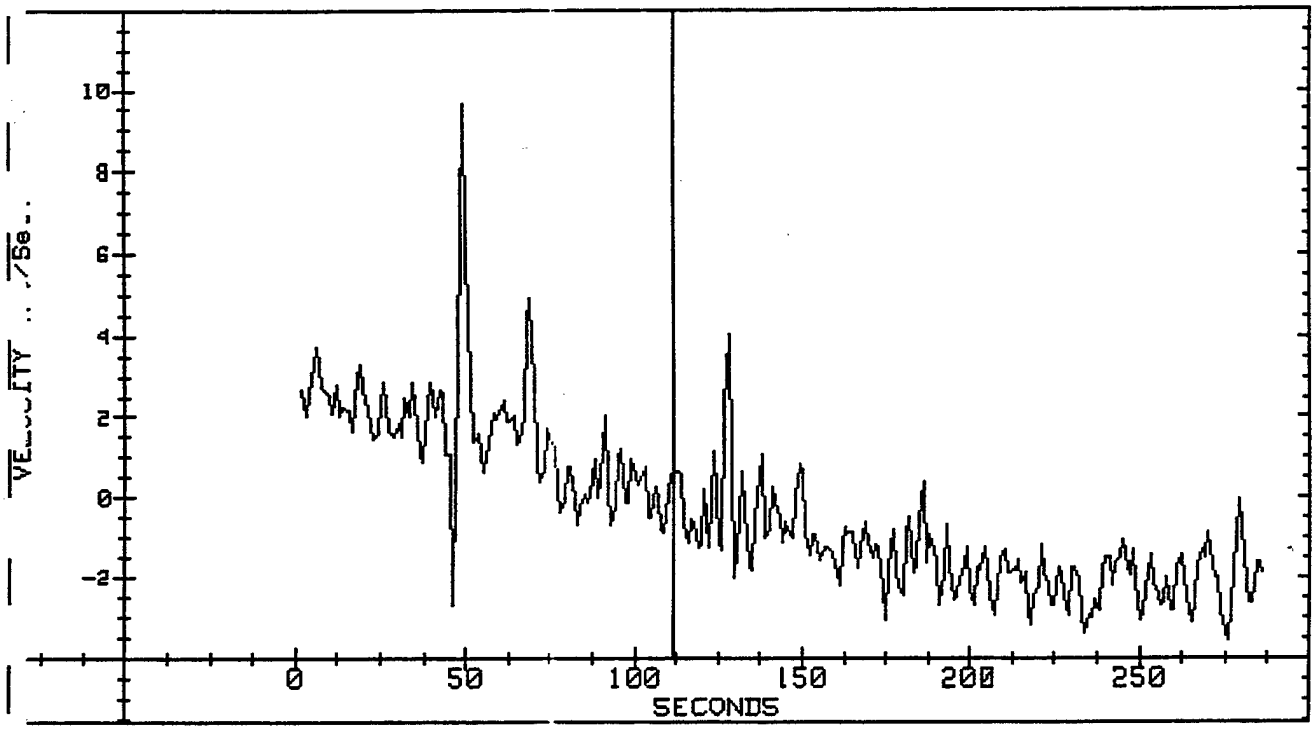
GPS Ve

DAY 180 TIME 0:55 PASS 13 m= -426.7, sd= 2.7521



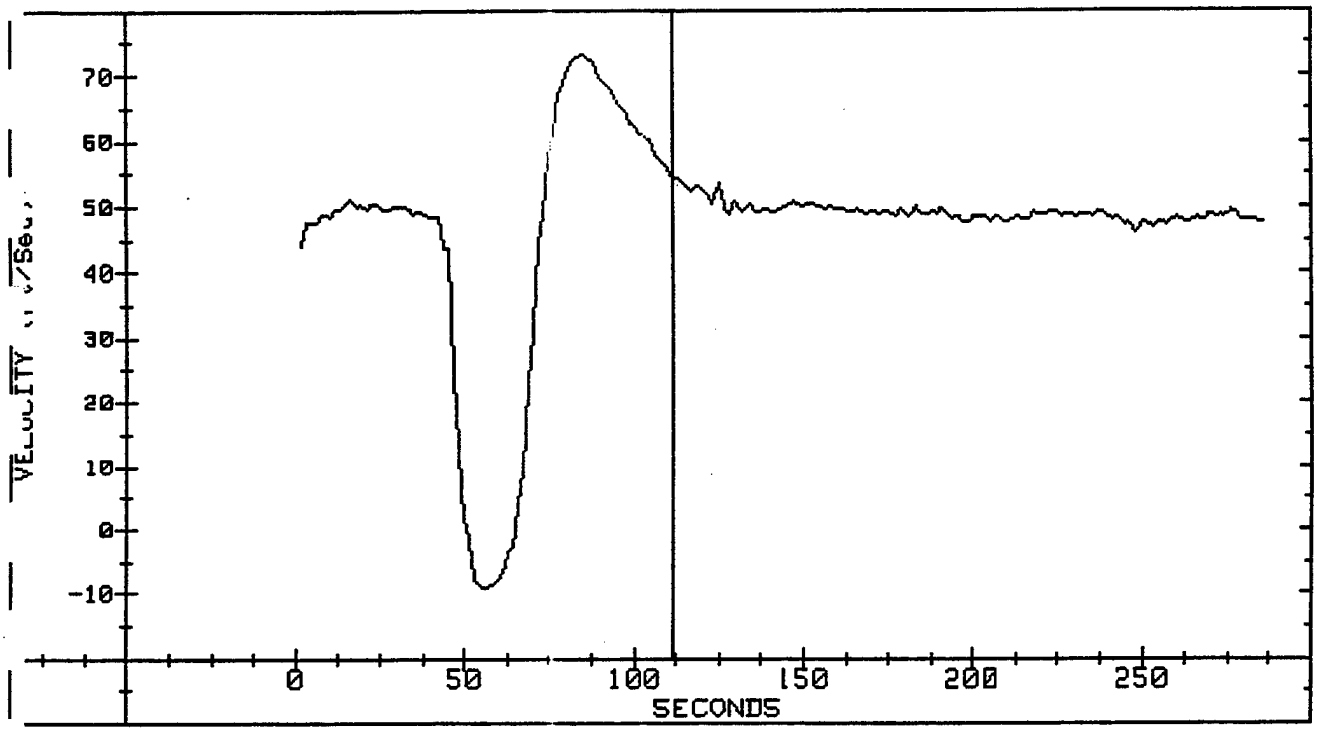
GPS Vv

DAY 100 TIME 0:55 PASS 13 m= -1.594, sd= 1.06659



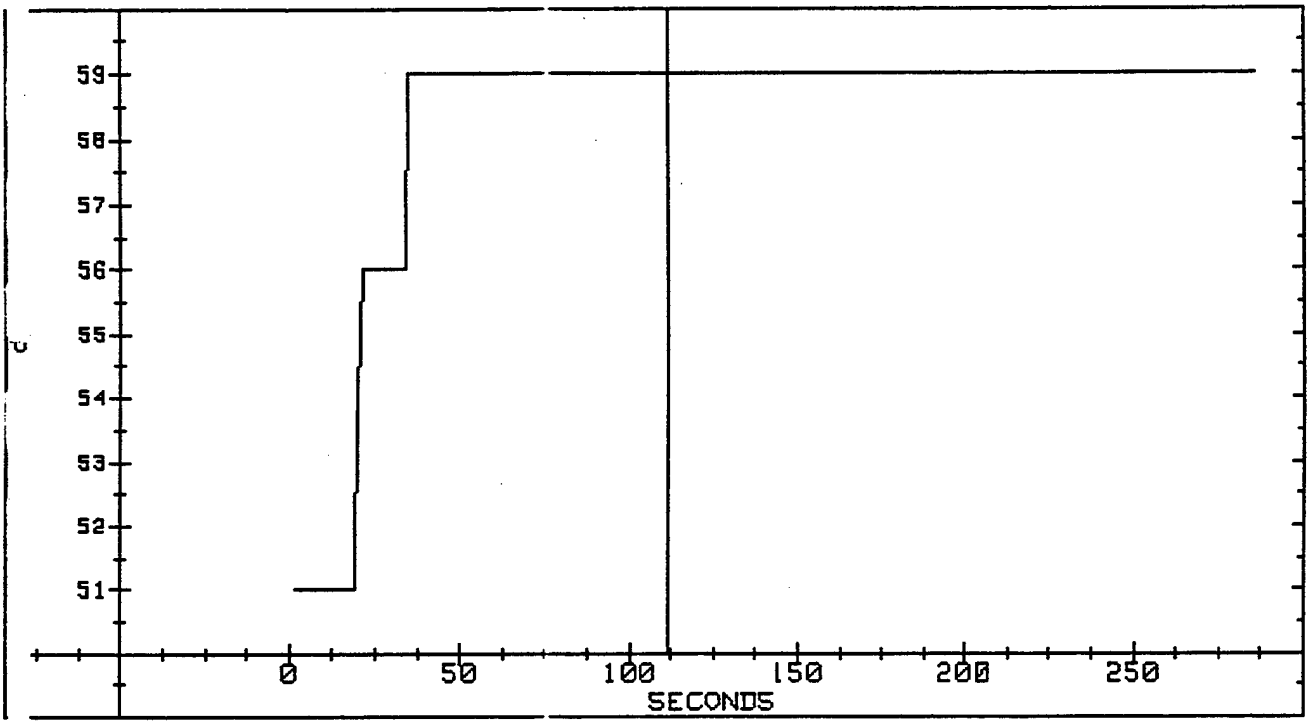
GPS Vn

DAY 180 TIME 0:55 PASS 13 m= 48.72, sd= .088421



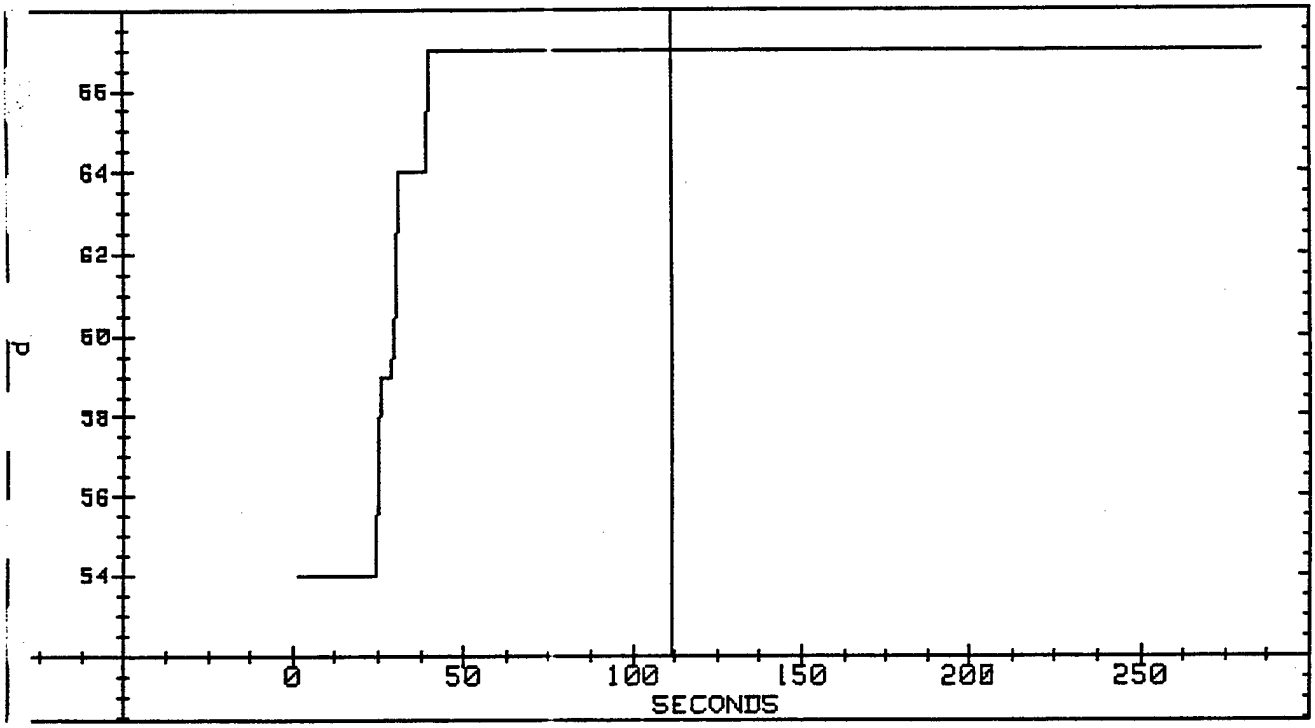
Ch1 RES Attenuation

DAY 180 TIME 0:55 PASS 13 m= 59, sd= 0



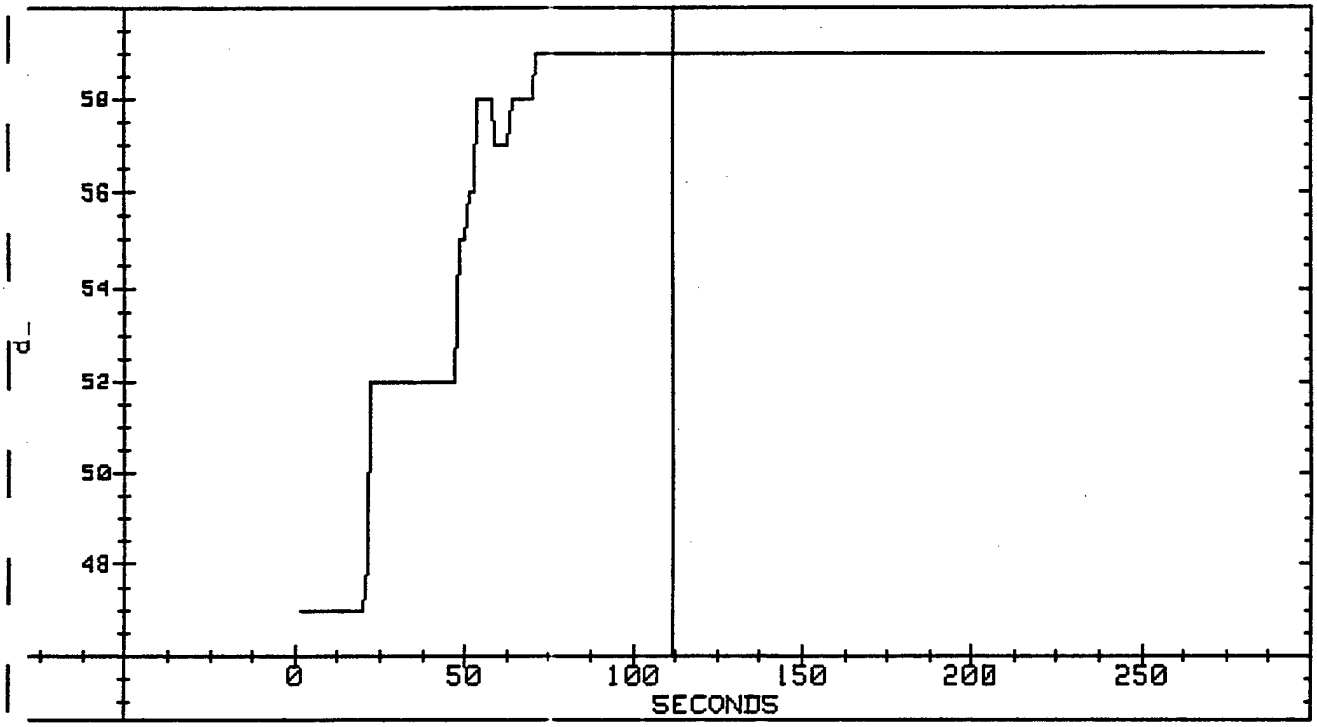
Ch2 RES Attenuation

DAY 180 TIME 0:55 PASS 13 m= 67, sd= 0



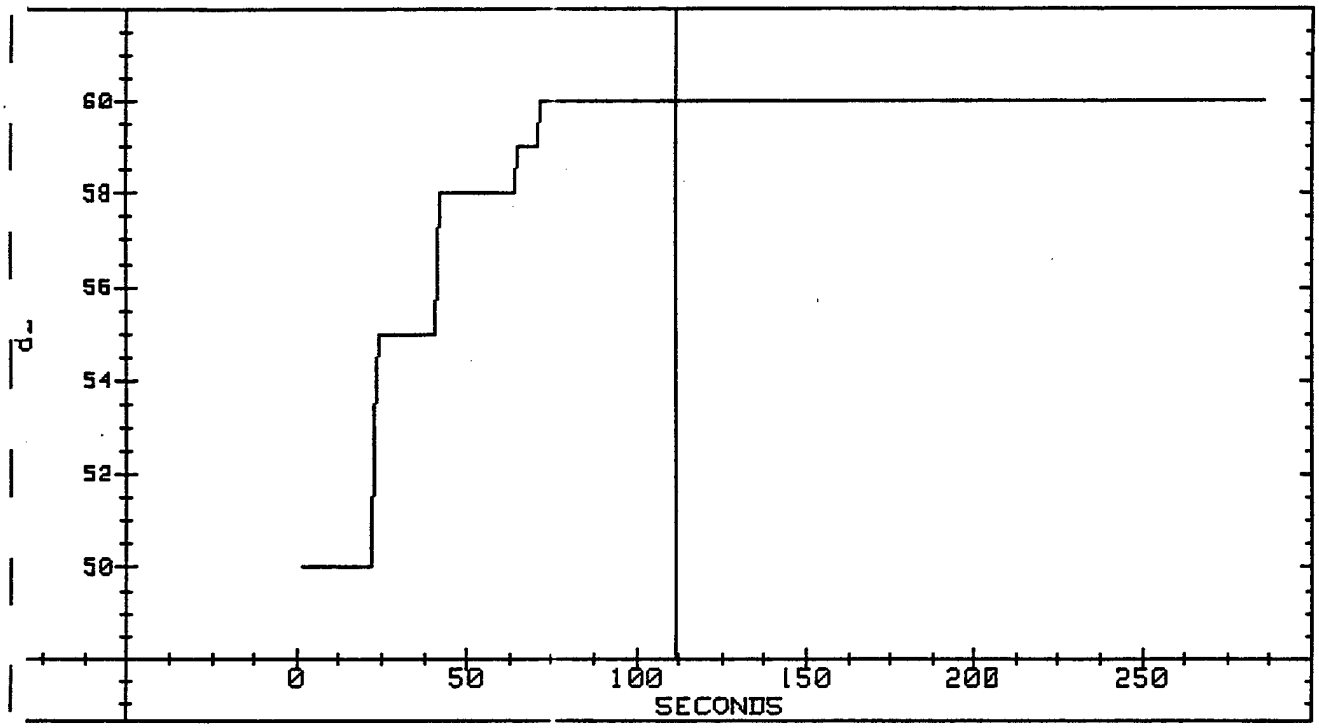
Ch3 RES Attenuation

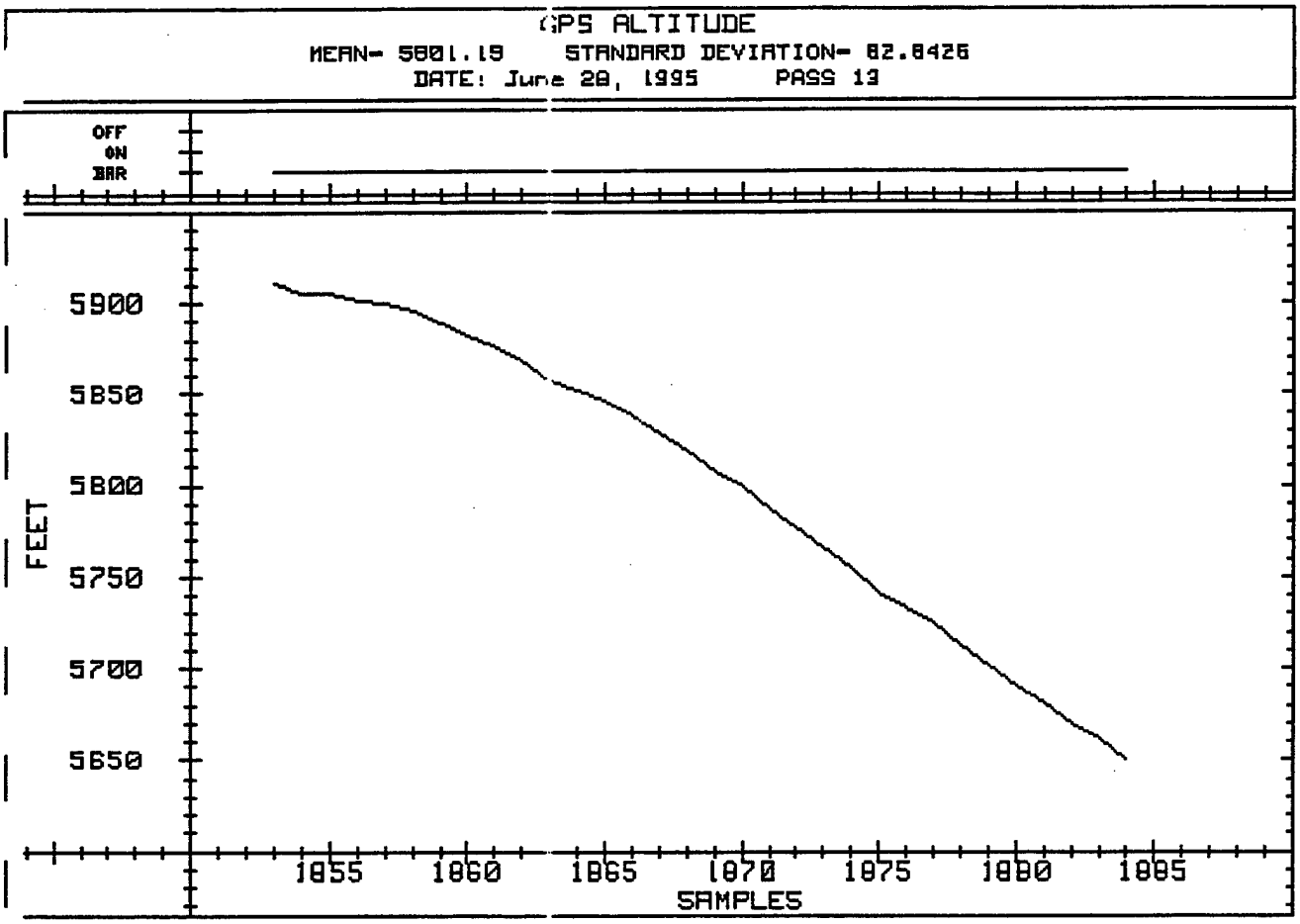
DAY 180 TIME 0:55 PASS 13 m= 59, sd= 0



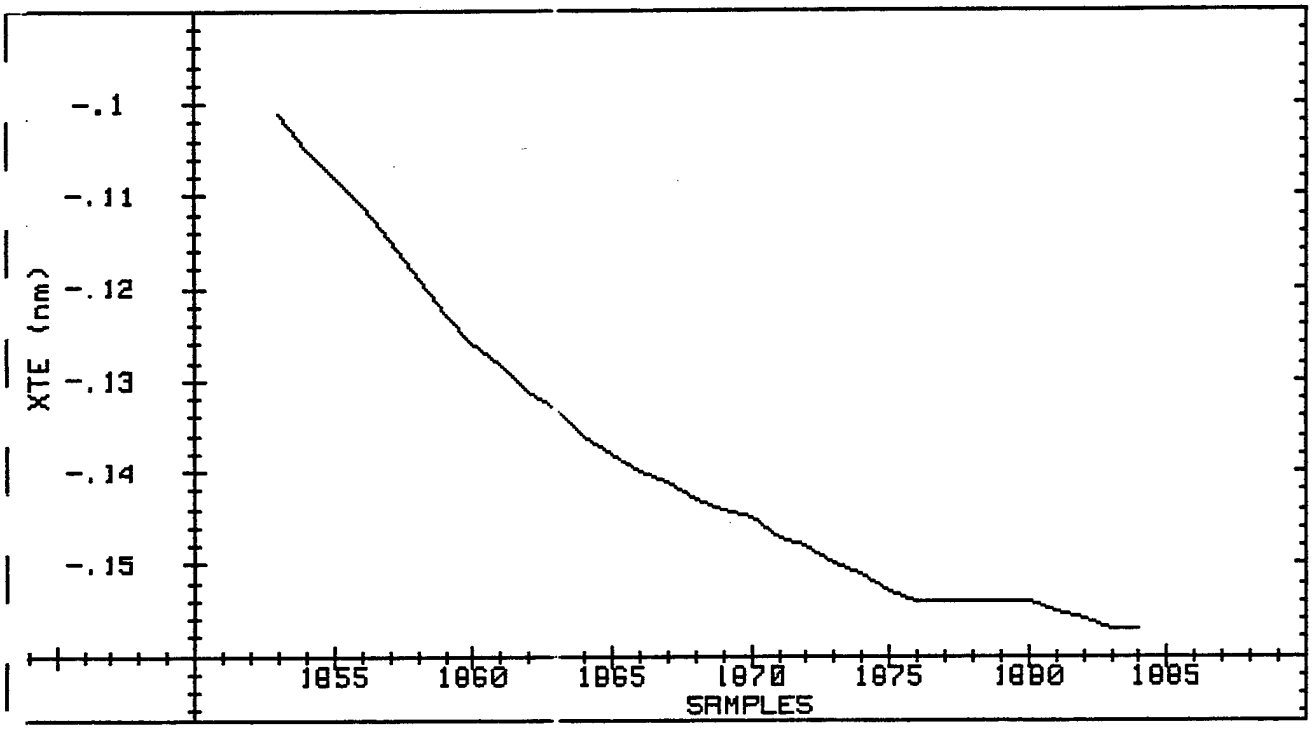
Ch4 RES Attenuation

DAY 180 TIME 0:55 PASS 13 m= 60, sd= 0

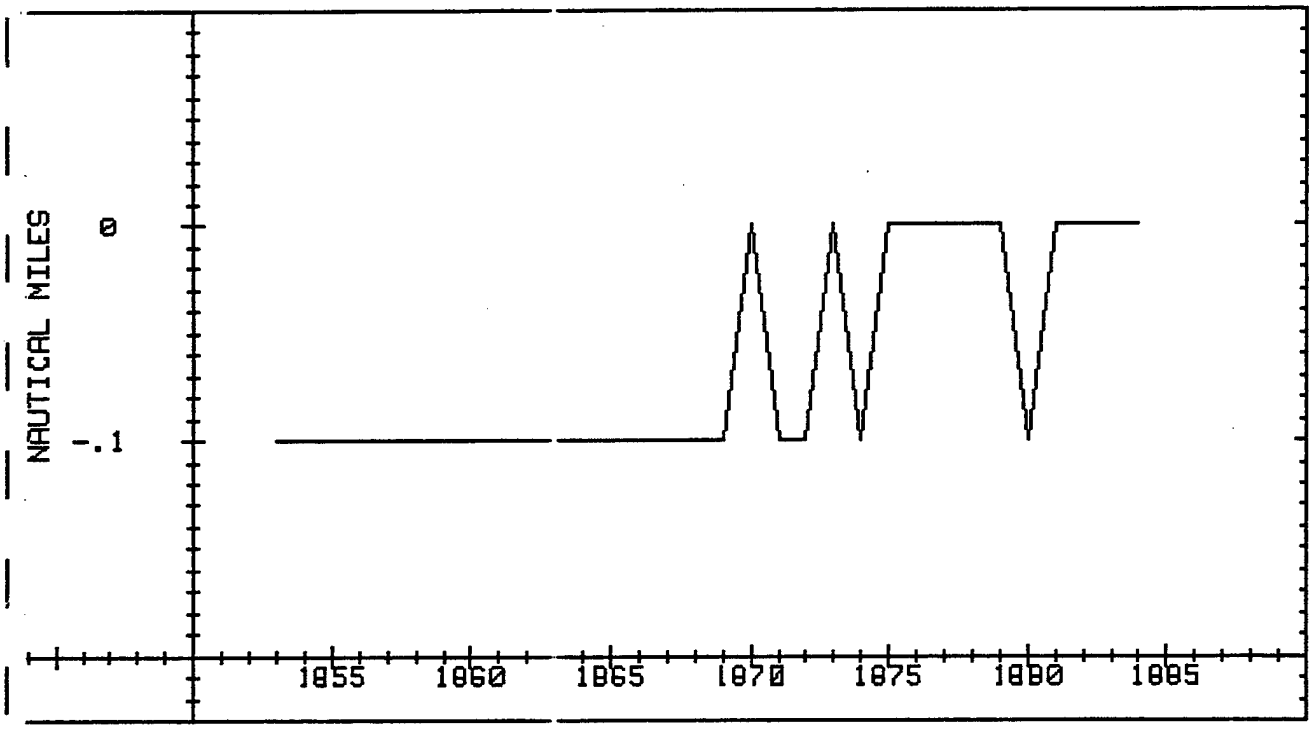



GPS ALTITUDE
MEAN= 5801.19 STANDARD DEVIATION= 82.8426
DATE: June 28, 1995 PASS 13
OFF
ON
BAR
5900
5850
5800
5750
5700
5650
FEET
1055
1060
1065
1070
1075
1080
1085
SAMPLES

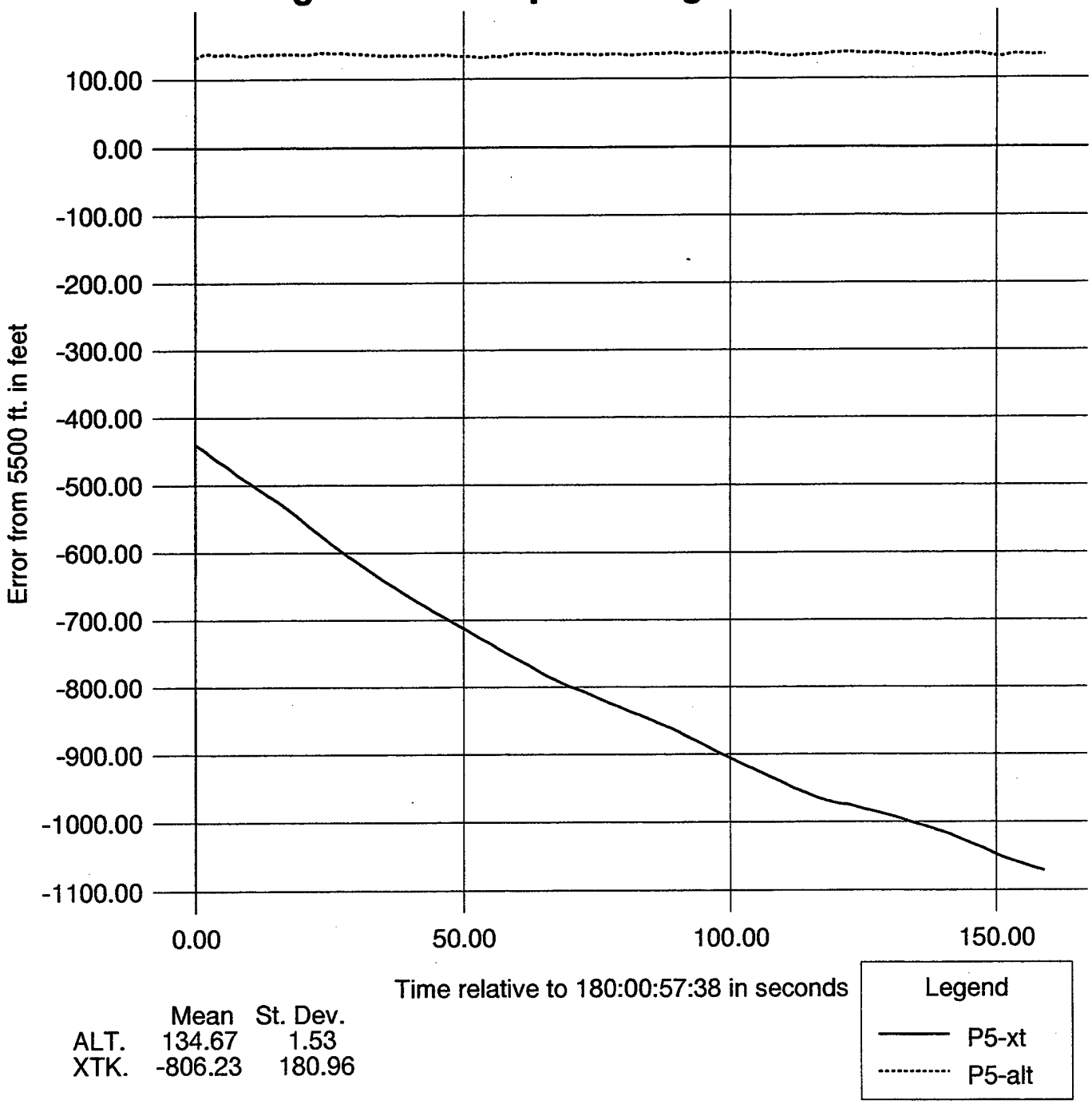
GPS Cross Track Error
MEAN= -.138469 STANDARD DEVIATION= .0167462
DATE: June 28, 1995 PASS 13



INS CROSS TRACK ERROR
MEAN= -.065625 STANDARD DEVIATION= .0474959
DATE: June 28, 1995 PASS 13



# Portage, ME - June 28, 1995 - Pass 13 - Xtk. and Alt. Errors
## Higher alt. and port are greater than zero




| | Mean | St. Dev. |
|---|---|---|
| ALT. | 134.67 | 1.53 |
| XTK. | -806.23 | 180.96 |

29 Jun 1995 | Post-line Data Sheet | Time: 180:01:12:57
Tape: E1418 | Line 31 | Pass 15
Mission: DAY 4 PORTAGE MAINE | Req.# 122

## AIRCRAFT & CHANNEL DATA

| | | | | CH 1 | CH 2 | CH 3 | CH 4 |
|---|---|---|---|---|---|---|---|
| Altitude | | | | | | | |
| Desired: | 5500 ft | | Wave/Pol.: | p-VV | p-VH | p-HV | p-HH |
| Baro: | 5442 ft s.d.= | 3 | Swath Ctr Ang: | 15.0° | 15.0° | 15.0° | 15.0° |
| Slt. rng: | 18700 ft | | Tgt Dep Ang: | 15.0° | 15.0° | 15.0° | 15.0° |
| Look: | Right | | St rng (ft): | 17165 | 17165 | 17165 | 17165 |
| Depr Ang: | 25.0° | | Near Rng Dep: | 18.5° | 18.5° | 18.5° | 18.5° |
| Des. trk: | 276.0° | | Far Rng Dep: | 9.4° | 9.4° | 9.4° | 9.4° |
| Start Sq: | 90.0° | | Atten (dB): | 58.0 | 65.0 | 59.0 | 65.0 |
| End Sq: | 90.0° | | RMS Video (%FS) | 10.6 | 8.8 | 7.9 | 9.2 |

## WAYPOINTS

| | Latitude | | Longitude |
|---|---|---|---|
| Line_up: | N 46:40.19 | W | 68:06.19 |
| Start: | N 46:41.49 | W | 68:23.52 |
| End: | N 46:42.53 | W | 68:37.98 |
| From: | N 42:35.87 | W | 45:47.36 |
| To: | N 45:53.14 | W | 92:36.76 |

Main Target: SIG
Mocomp Point:
Lat: N 46:44.97
Long: W 68:30.30
Tgt Trk: 0.0 Tgt Vel: 0.0
Alt: 660.0 ft

## RADAR PARAMETERS - for UWB

RTP Channel: 1
Resolution: N/A
Swath width: Single
RMS Time Constant: 2^7
Position Reference: ON
Atten. Tracking: OFF
Range Gate Delta: 0.0 ft
Azimuth Presum Rate: Presum6
TX Chirp Filename: CTL1U2A

Filter damping is Hi -> 10 sec
PRF Factor is FAST (262.5 kts)
Ave Gndspd: Real -> 256.3 kts
Mocomp Off for Chnl 1, 2, 3, 4
GPS Vel/Pos Reference
Adj Gnd Scene: 5000.0 ft
Range Tracking is OFF
Clutterlock Reference: OFF
RX Chirp Filename: CRL1N0A

Ave Ref Vel -> -9.8 fps (s.d.= 5.3)
Ave Fil Vel ->-10.3 fps (s.d.= 5.0)

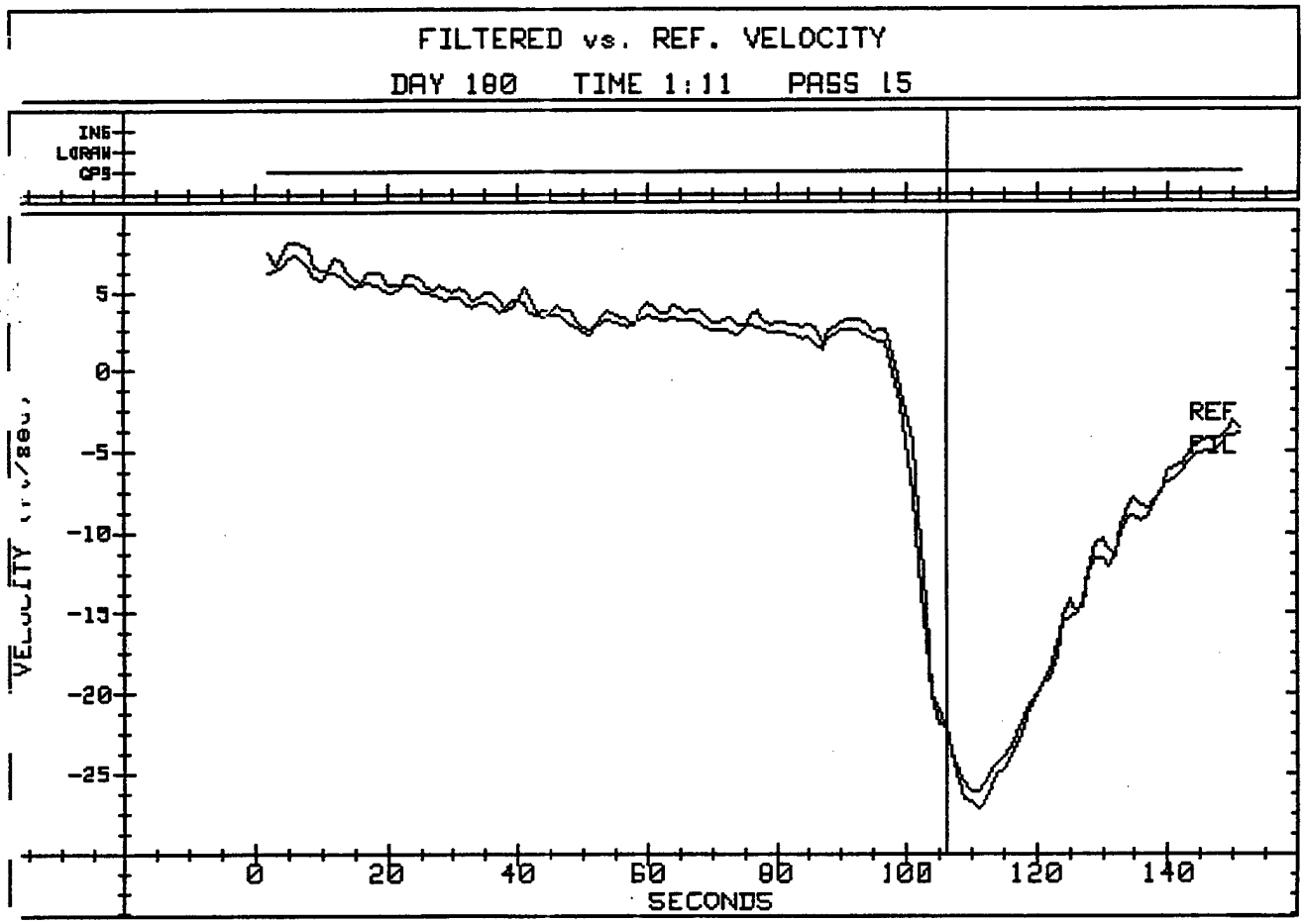
| NML XMIT PWR | ANT BIAS | | Tape Footage | | Drive no. |
|---|---|---|---|---|---|
| X: -70.0 | Elevation: | 0.0° | | | |
| L: -70.0 | Azimuth: | 0.0° | Starting: | 1541 ft | (1) |
| C: -70.0 | Pitch: | 0.0° | Ending: | 0 ft | (1) |
| P: 46.2 | | | | | |

| Vel Bias | CAL Atten | LINE Map Time (UCT) |
|---|---|---|
| X: 2112.0 | X: 63.8 dB | Start: 01:12:57 |
| Y: 1874.0 | L: 63.8 dB | End: 01:13:29 |
| Z: 5343.0 | C: 63.8 dB | |

Mocomp Counters

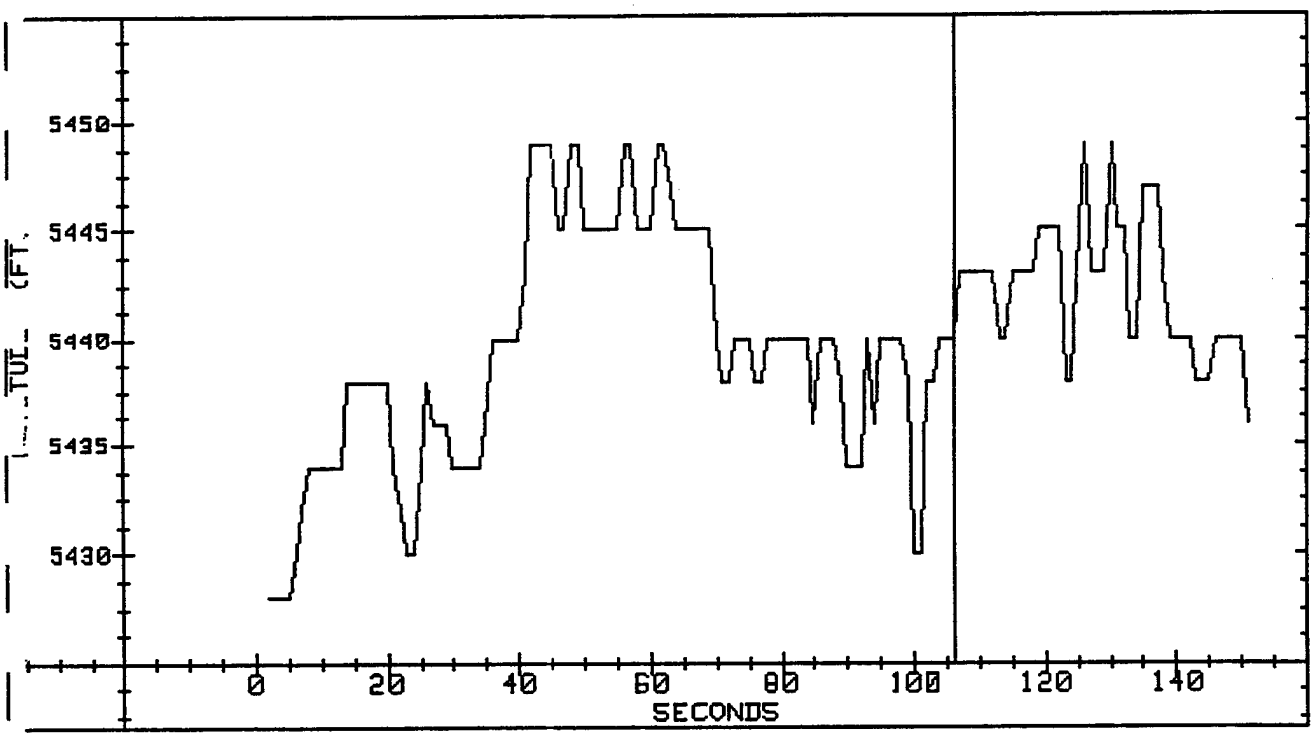
| | | |
|---|---|---|
| Start: | 723775 | 000B0B3Fh |
| End: | 703729 | 000ABCF1h |

CPA (UCT): 00:00:00
Alt: 0 ft (GPS)
Lat: N 0:00: 0
Lon: E 0:00: 0


FILTERED vs. REF. VELOCITY
DAY 180 TIME 1:11 PASS 15
INS
LORAN
GPS
5
0
-5
-10
-15
-20
-25
REF
FIL
0
20
40
60
80
100
120
140
SECONDS

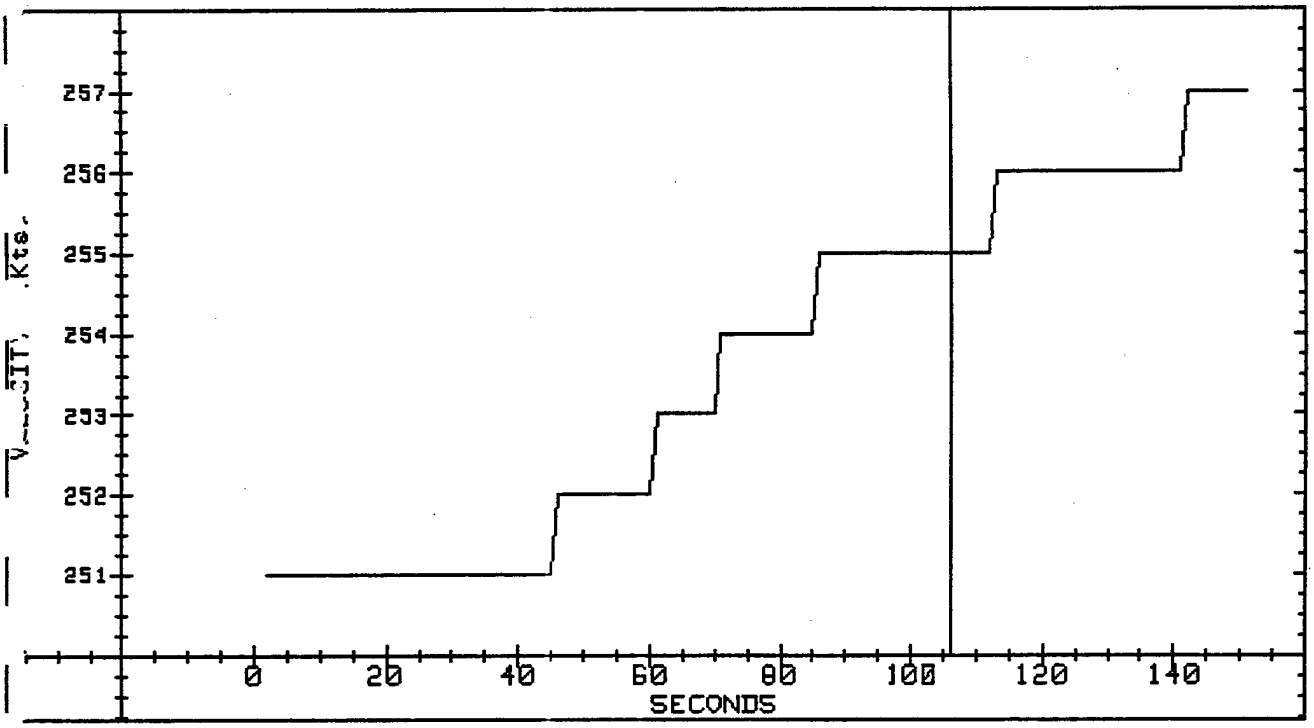
BARO ALTITUDE

DAY 180 TIME 1:11 PASS 15 m= 5442. sd= 3.4768



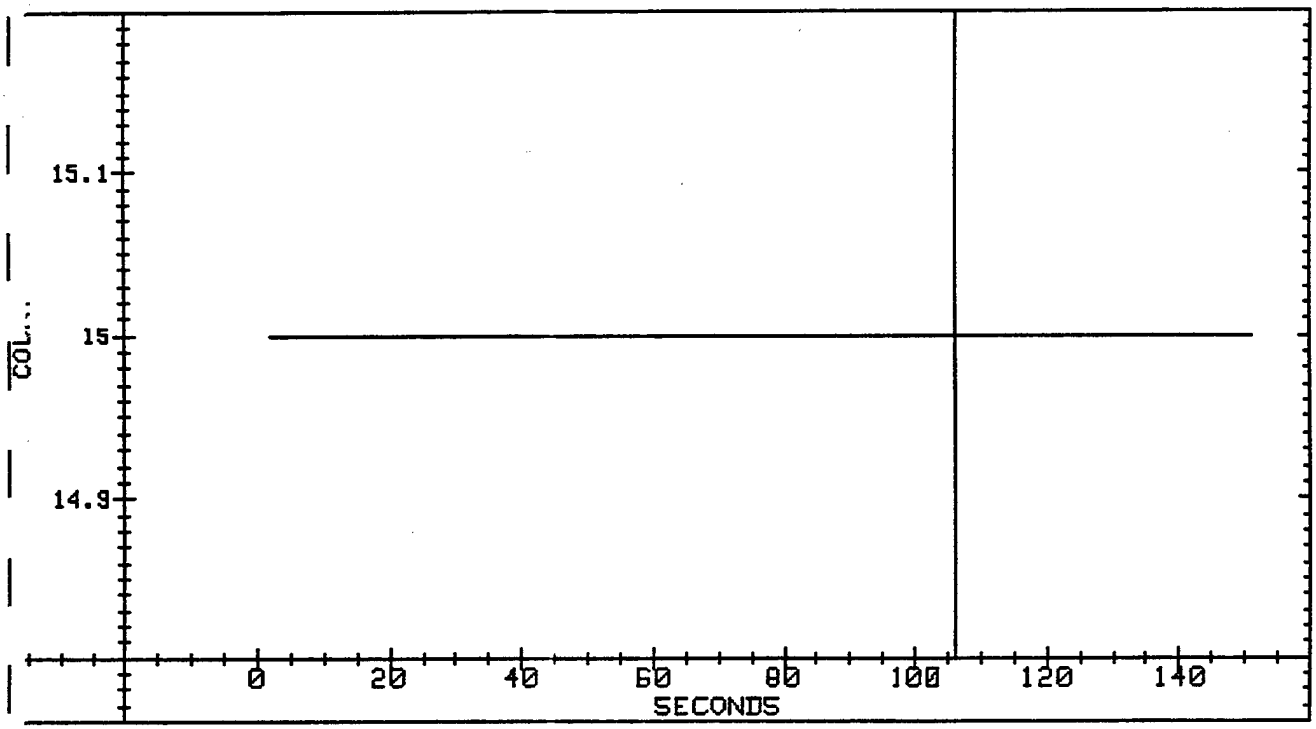
INS GROUND SPEED

DAY 180 TIME 1:11 PASS 15 m= 256.3, sd= .459568



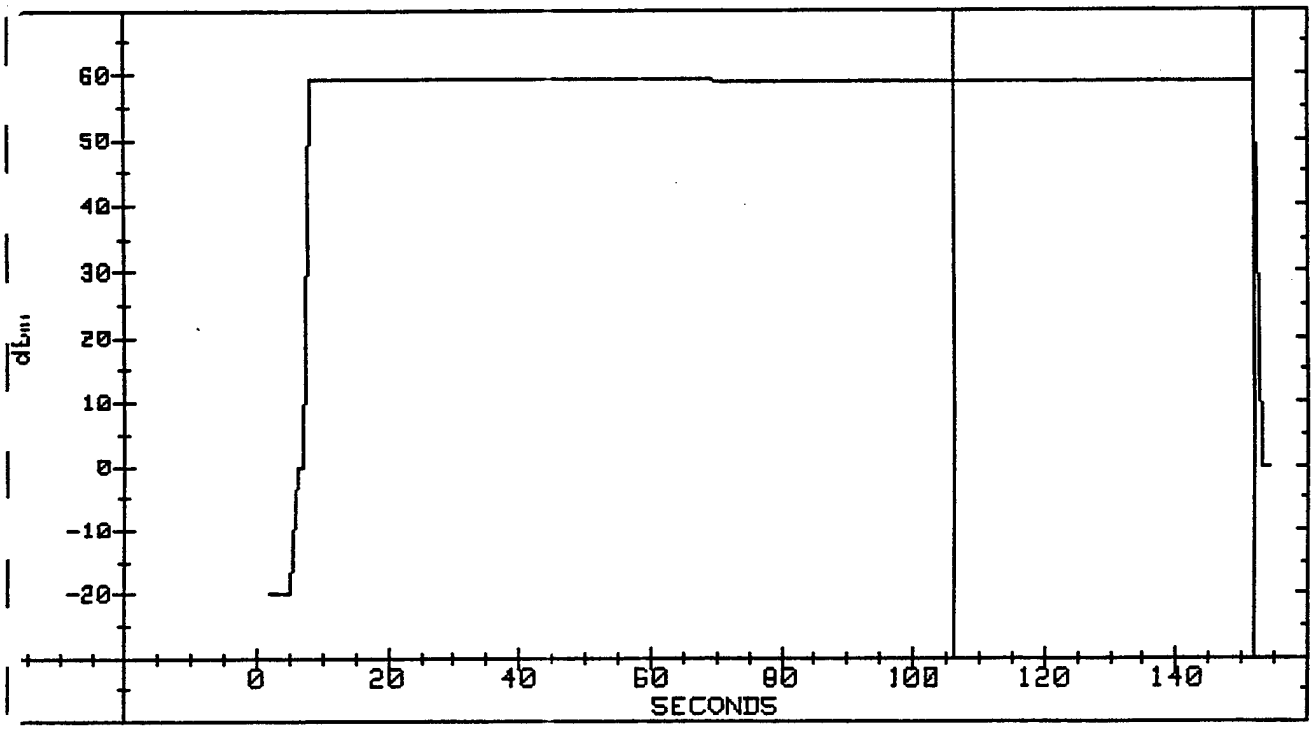
PASS NUMBER

DAY 180 TIME 1:11 PASS 15 m= 15, sd= 0



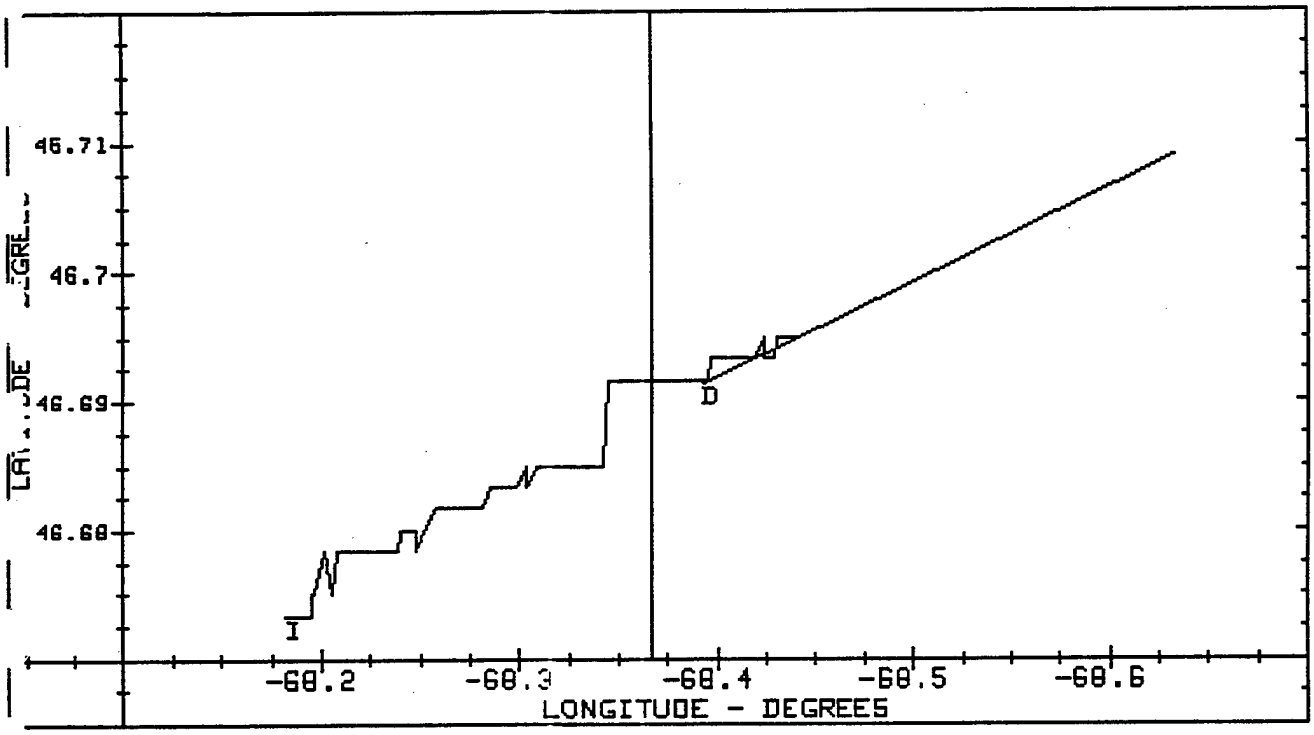
P Band Power

DAY 180 TIME 1:11 PASS 15 m= 58.96, sd= .0485962



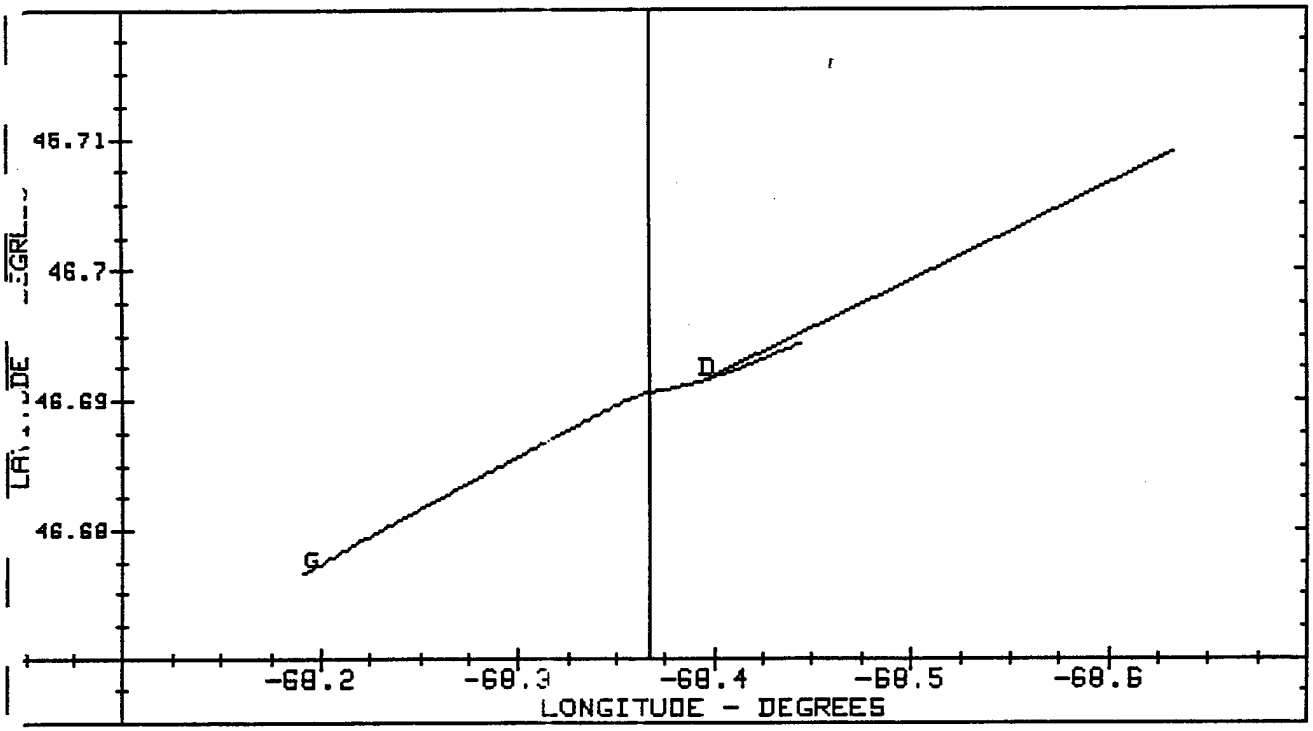
INS AIRCRAFT POSITION

DAY 180 TIME 1:11 PASS 15



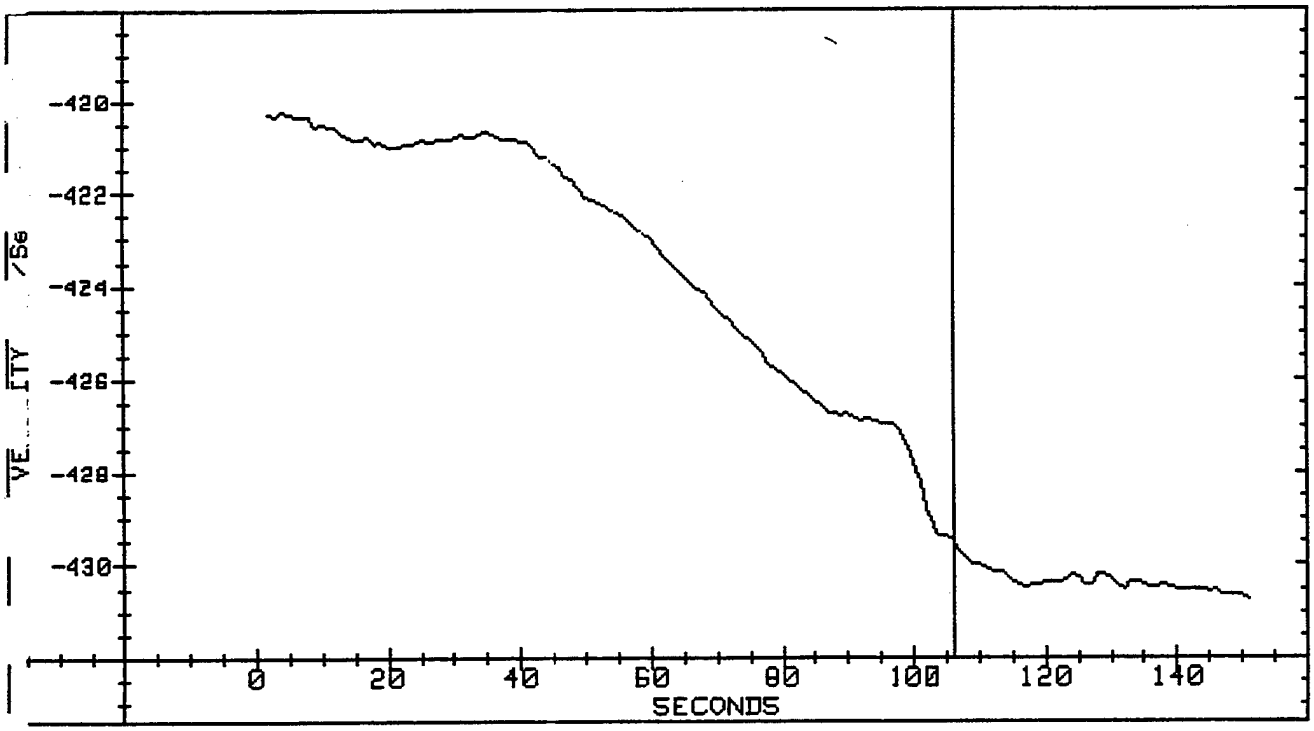
GPS AIRCRAFT POSITION

DAY 180 TIME 1:11 PASS 15



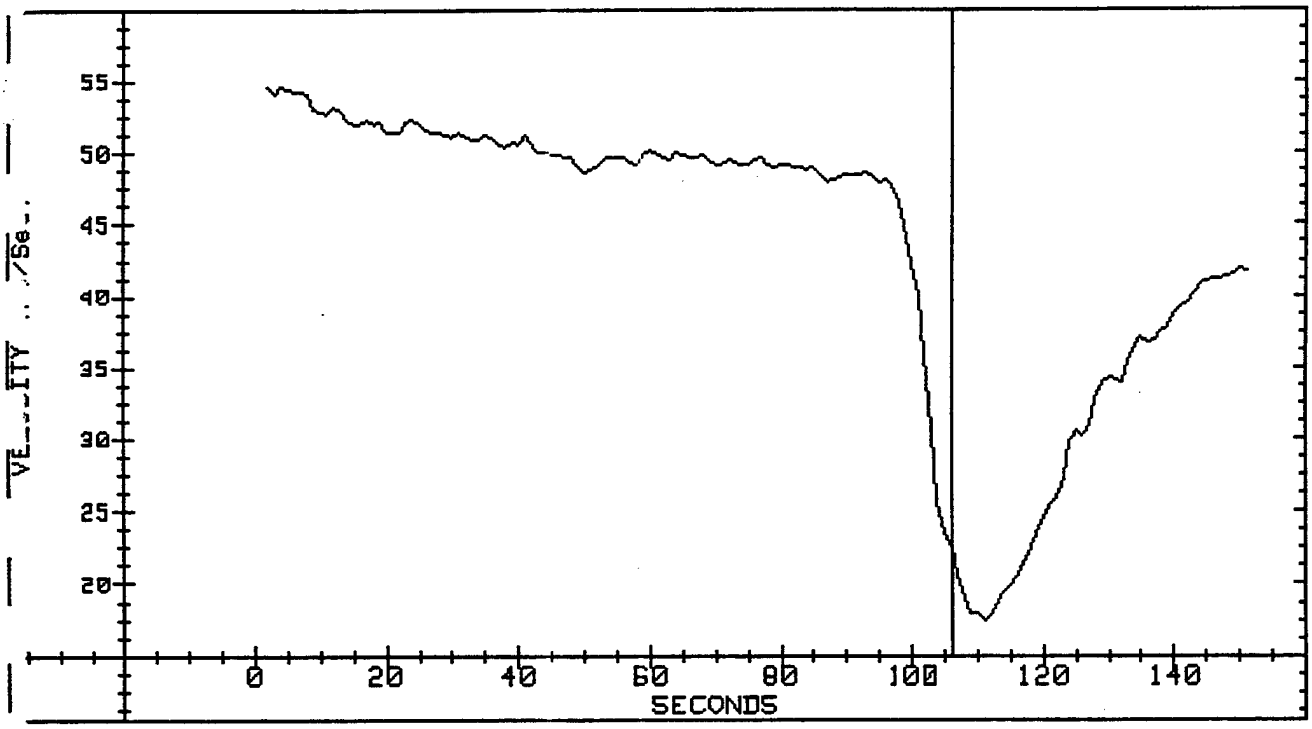
GPS Ve

DAY 180 TIME 1:11 PASS 15 m= -430.4, sd= .134563



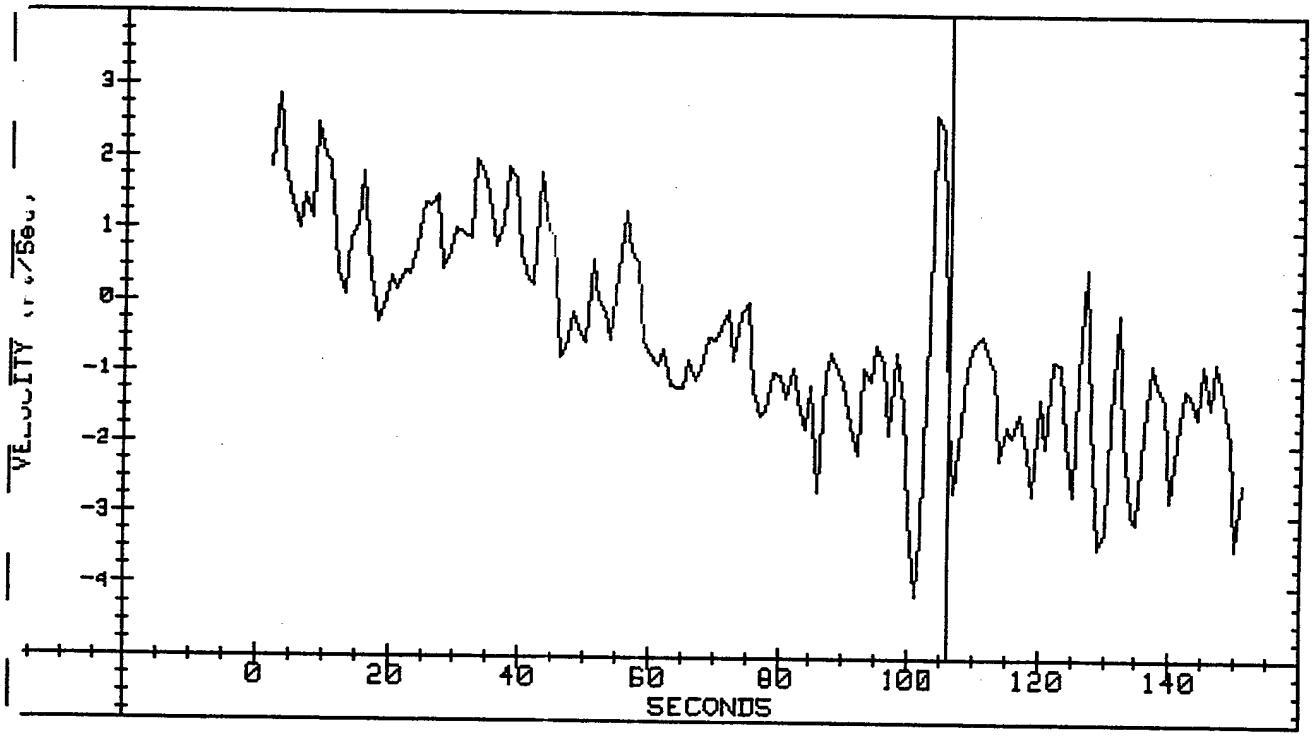
GPS Vn

DAY 180 TIME 1:11 PASS 15 m= 35.26, sd= 5.48159



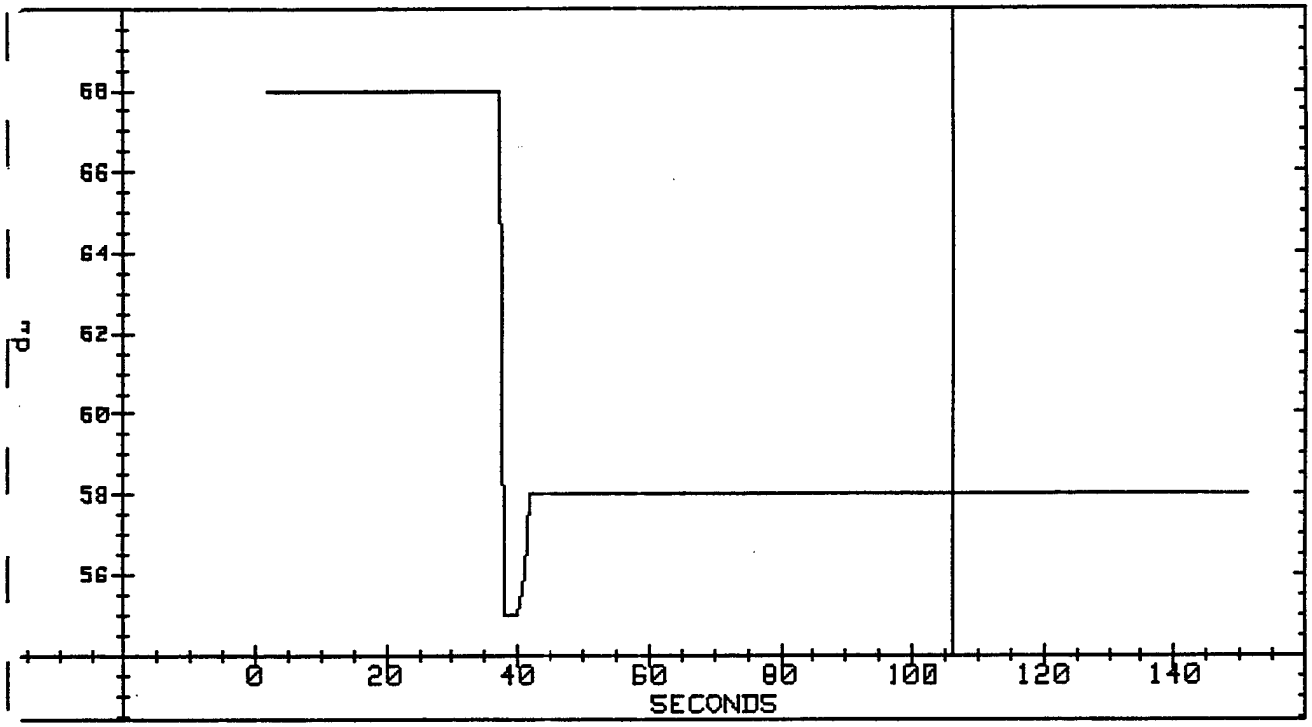
GPS Vv

DAY 180 TIME 1:11 PASS 15 m= -1.741, sd= .924828



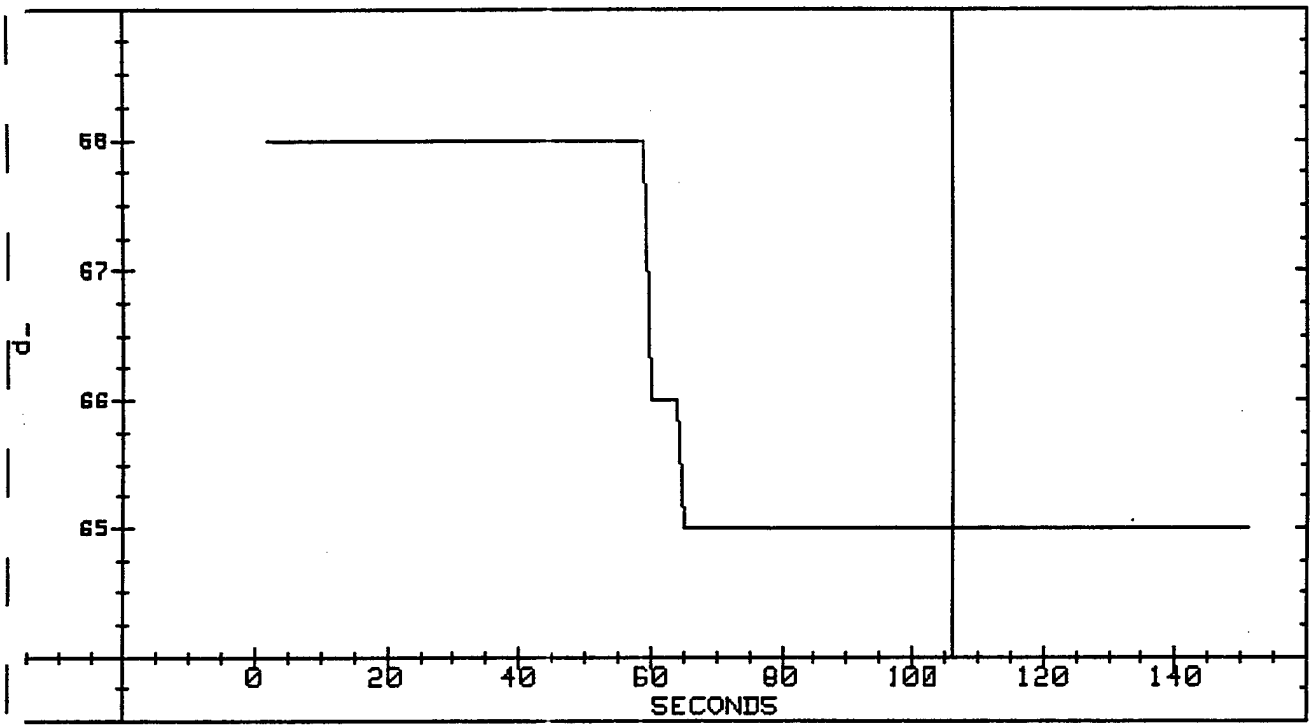
Ch1 RES Attenuation

DAY 180 TIME 1:11 PASS 15 m= 58, sd= 0



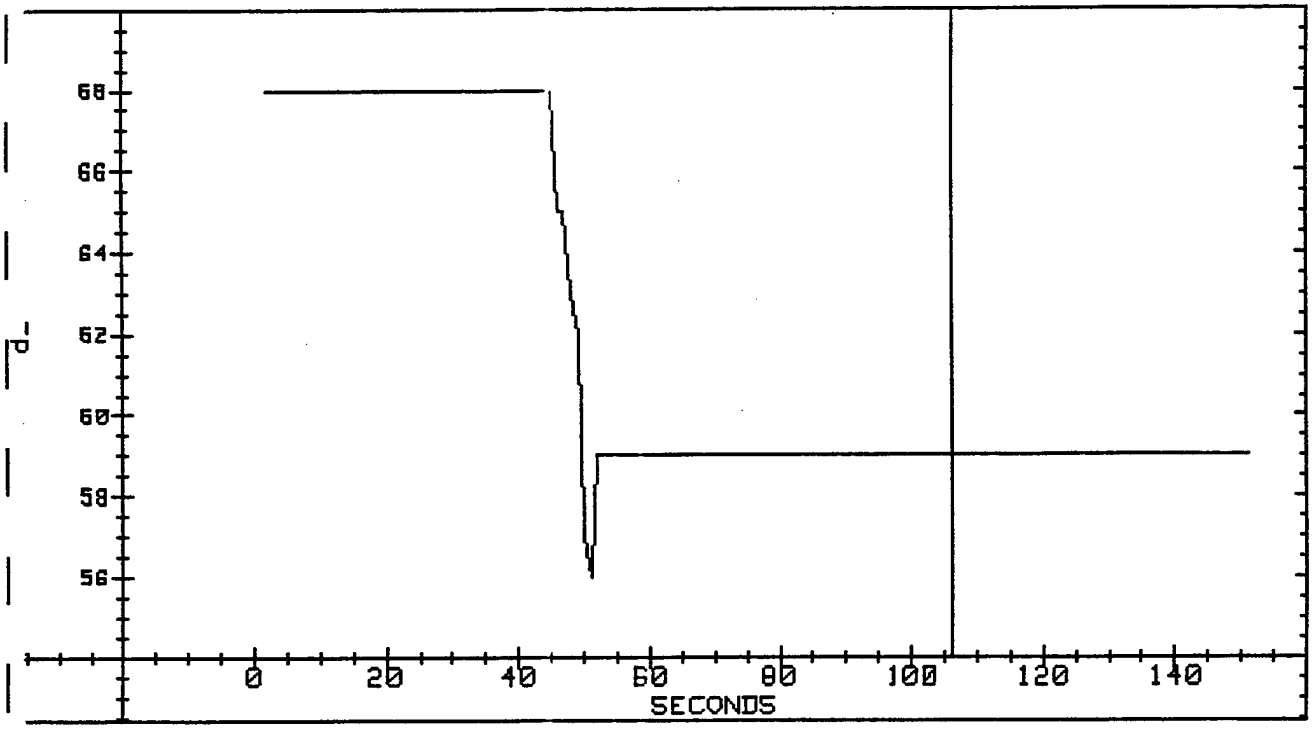
Ch2 RES Attenuation

DAY 180 TIME 1:11 PASS 15 m= 65, sd= 0



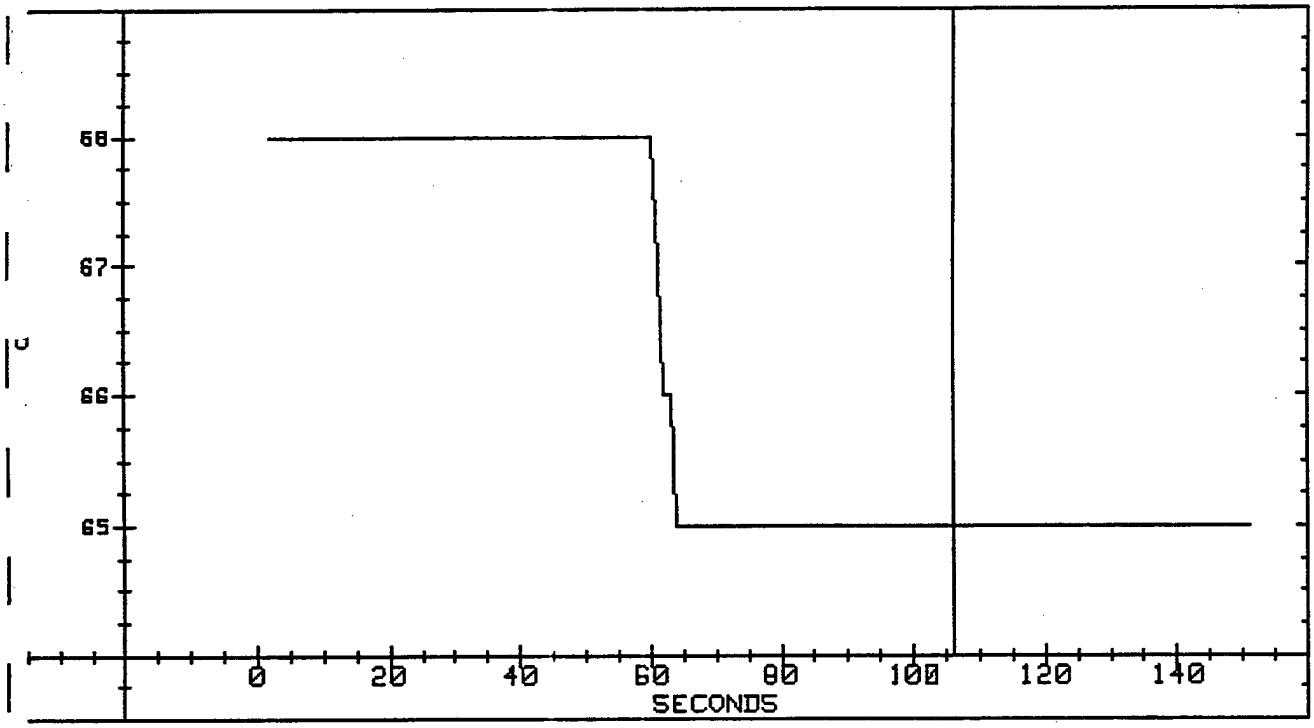
Ch3 RES Attenuation

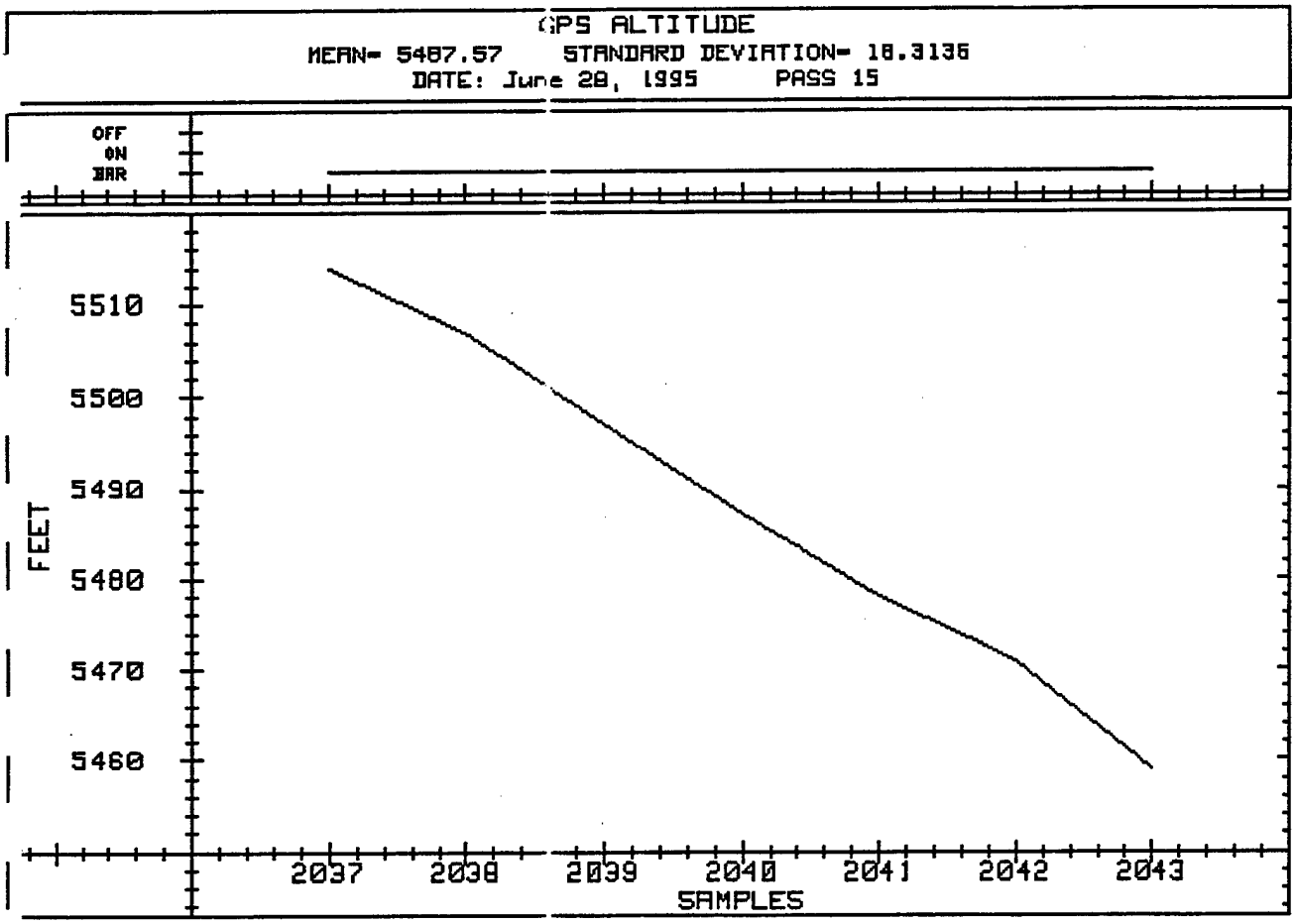
DAY 180 TIME 1:11 PASS 15 m= 59, sd= 0



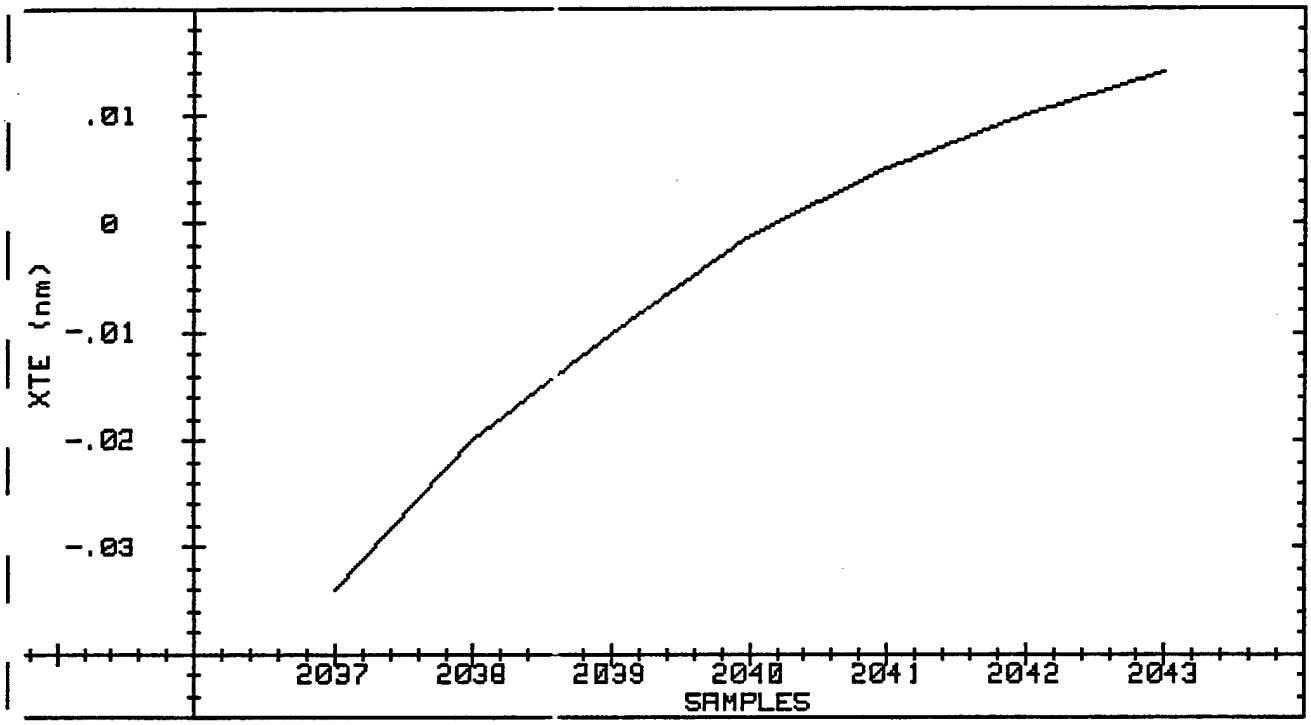
Ch4 RES Attenuation

DAY 180 TIME 1:11 PASS 15 m= 65, sd= 0




GPS ALTITUDE
MEAN= 5487.57 STANDARD DEVIATION= 18.3136
DATE: June 28, 1995 PASS 15
OFF
ON
BAR
5510
5500
5490
5480
5470
5460
FEET
2037
2038
2039
2040
2041
2042
2043
SAMPLES

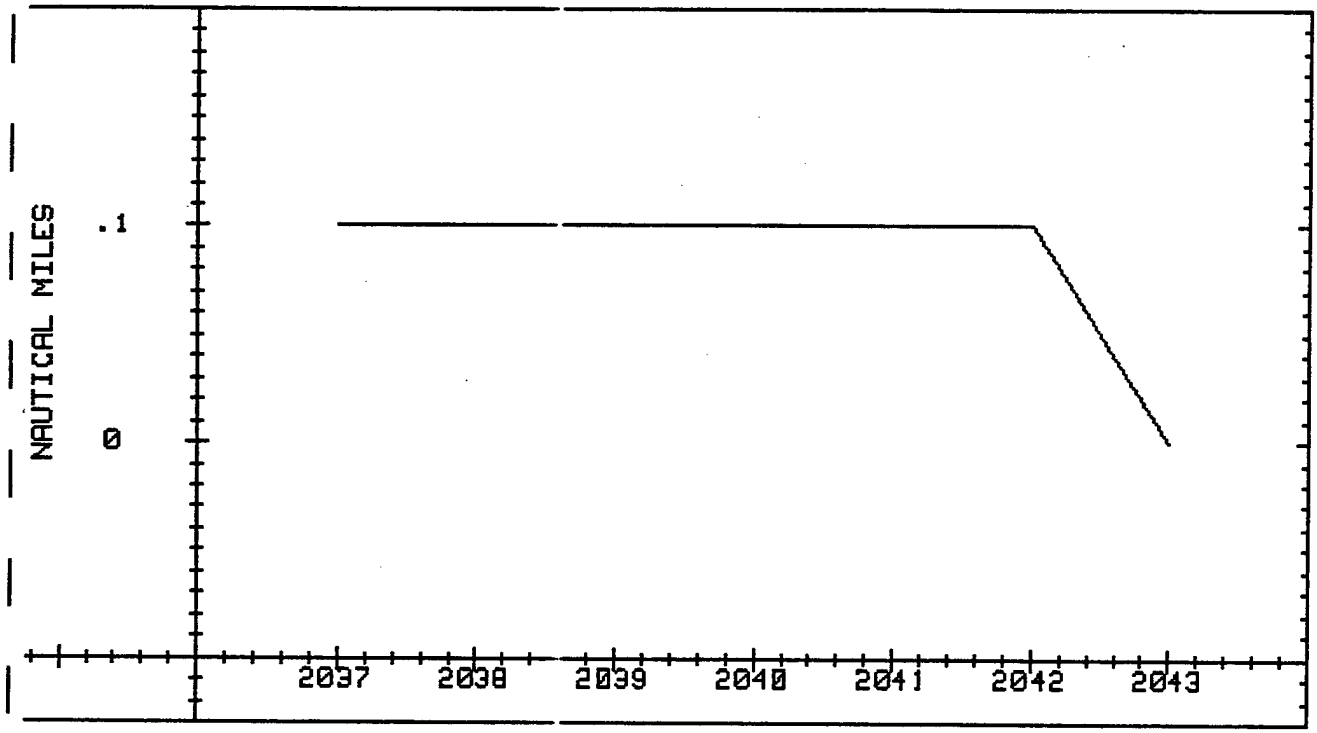
GPS Cross Track Error
MEAN= -.00514286 STANDARD DEVIATION= .0160038
DATE: June 28, 1995 PASS 15



INS CROSS TRACK ERROR

MEAN= .0857143 STANDARD DEVIATION= .0349927

DATE: June 28, 1995 PASS 15



29 Jun 1995
Tape: E1418

**Post-line Data Sheet**
Line 31
Mission: DAY 4 PORTAGE MAINE
UWB Synthetic Target

Time: 180:01:22:41
Pass 16
Req.# 122

## AIRCRAFT & CHANNEL DATA

| Altitude | |
|---|---|
| Desired: | 5500 ft |
| Baro: | 5500 ft |
| Slt. rng: | 18700 ft |
| Look: | Right |
| Depr Ang: | 25.0° |
| Des. trk: | 276.0° |
| Start Sq: | 90.0° |
| End Sq: | 90.0° |

| | CH 1 | CH 2 | CH 3 | CH 4 |
|---|---|---|---|---|
| Wave/Pol.: | p-VV | p-VH | p-HV | p-HH |
| Swath Ctr Ang: | 15.0° | 15.0° | 15.0° | 15.0° |
| Tgt Dep Ang: | 15.0° | 15.0° | 15.0° | 15.0° |
| St rng (ft): | 17165 | 17165 | 17165 | 17165 |
| Near Rng Dep: | 18.7° | 18.7° | 18.7° | 18.7° |
| Far Rng Dep: | 9.5° | 9.5° | 9.5° | 9.5° |
| Atten (dB): | 68.0 | 68.0 | 68.0 | 68.0 |

## WAYPOINTS

| | Latitude | Longitude |
|---|---|---|
| Line_up: | N 46:40.19 | W 68:06.19 |
| Start: | N 46:41.49 | W 68:23.52 |
| End: | N 46:42.53 | W 68:37.98 |
| From: | N 42:35.87 | W 45:47.36 |
| To: | N 45:53.14 | W 92:36.76 |

Main Target: SIG
Mocomp Point:
Lat: N 46:44.97
Long: W 68:30.30
Tgt Trk: 0.0 Tgt Vel: 0.0
Alt: 660.0 ft

## RADAR PARAMETERS - for UWB

RTP Channel: 2
Resolution: N/A
Swath width: Single
RMS Time Constant: 2^7
Position Reference: ON
Atten. Tracking: OFF
Range Gate Delta: 0.0 ft
Azimuth Presum Rate: Presum6
TX Chirp Filename: CTL1U2A

Filter damping is Hi -> 10 sec
PRF Factor is SLOW (350.0 kts)
Groundspeed: Real -> 350.0 kts
Mocomp Off for Chnl 1, 2, 3, 4
INS Vel/Pos Reference
Adj Gnd Scene: 5000.0 ft
Range Tracking is OFF
Clutterlock Reference: OFF
RX Chirp Filename: CRL1N0A

| CAL POWER | |
|---|---|
| X: | 0.0 |
| L: | 0.0 |
| C: | 0.0 |
| P: | 46.2 |

| ANT BIAS | |
|---|---|
| Elevation: | 0.0° |
| Azimuth: | 0.0° |
| Pitch: | 0.0° |

| Tape Footage | | Drive no. |
|---|---|---|
| Starting: | 2395 ft | (1) |
| Ending: | 2627 ft | (1) |

| Vel Bias | |
|---|---|
| X: | 2112.0 |
| Y: | 1874.0 |
| Z: | 5343.0 |

| CAL Atten | |
|---|---|
| X: | 63.8 dB |
| L: | 63.8 dB |
| C: | 63.8 dB |

LINE Map Time (UCT)
Start: 01:22:41
End: 01:22:42

CPA (UCT): 00:00:00
Alt: 0 ft (GPS)

Mocomp Counters

| | Start | | End | |
|---|---|---|---|---|
| Ch 1: | 736172 | 000B3BACh | 739013 | 000B46C5h |
| Ch 2: | 736172 | 000B3BACh | 739013 | 000B46C5h |
| Ch 3: | 736172 | 000B3BACh | 739013 | 000B46C5h |
| Ch 4: | 736172 | 000B3BACh | 739013 | 000B46C5h |

29 Jun 1995
Tape: E1418

**Post-line Data Sheet**
Line 53
Mission: DAY 4 PORTAGE MAINE
UWB Synthetic Target

Time: 180:01:25:26
Pass 17
Req.# 0

## AIRCRAFT & CHANNEL DATA

| Altitude | |
|---|---|
| Desired: | 4000 ft |
| Baro: | 4001 ft |
| Slt. rng: | 19234 ft |
| Look: | Right |
| Depr Ang: | 25.0° |
| Des. trk: | 276.0° |
| Start Sq: | 90.0° |
| End Sq: | 90.0° |

| | CH 1 | CH 2 | CH 3 | CH 4 |
|---|---|---|---|---|
| Wave/Pol.: | p-VV | p-VH | p-HV | p-HH |
| Swath Ctr Ang: | 10.0° | 10.0° | 10.0° | 10.0° |
| Tgt Dep Ang: | 10.0° | 10.0° | 10.0° | 10.0° |
| St rng (ft): | 17700 | 17700 | 17700 | 17700 |
| Near Rng Dep: | 13.1° | 13.1° | 13.1° | 13.1° |
| Far Rng Dep: | 6.8° | 6.8° | 6.8° | 6.8° |
| Atten (dB): | 58.0 | 58.0 | 58.0 | 58.0 |

## WAYPOINTS

| | Latitude | Longitude |
|---|---|---|
| Line_up: | N 46:40.05 | W 68:06.22 |
| Start: | N 46:41.34 | W 68:23.54 |
| End: | N 46:42.39 | W 68:38.00 |
| From: | N 42:35.75 | W 45:47.43 |
| To: | N 45:53.01 | W 92:36.72 |

Main Target: SIG
Mocomp Point:
Lat: N 46:44.97
Long: W 68:30.30
Tgt Trk: 0.0 Tgt Vel: 0.0
Alt: 660.0 ft

## RADAR PARAMETERS - for UWB

RTP Channel: 2
Resolution: N/A
Swath width: Single
RMS Time Constant: 2^7
Position Reference: ON
Atten. Tracking: OFF
Range Gate Delta: 0.0 ft
Azimuth Presum Rate: Presum6
TX Chirp Filename: CTL1U2A

Filter damping is Hi -> 10 sec
PRF Factor is FAST (262.5 kts)
Groundspeed: Real -> 262.0 kts
Mocomp Off for Chnl 1, 2, 3, 4
INS Vel/Pos Reference
Adj Gnd Scene: 5000.0 ft
Range Tracking is OFF
Clutterlock Reference: OFF
RX Chirp Filename: CRL1N0A

| CAL POWER | |
|---|---|
| X: | 0.0 |
| L: | 0.0 |
| C: | 0.0 |
| P: | -12.8 |

| ANT BIAS | |
|---|---|
| Elevation: | 0.0° |
| Azimuth: | 0.0° |
| Pitch: | 0.0° |

| Tape Footage | | Drive no. |
|---|---|---|
| Starting: | 2643 ft | (1) |
| Ending: | 2807 ft | (1) |

| Vel Bias | |
|---|---|
| X: | 2112.0 |
| Y: | 1874.0 |
| Z: | 5343.0 |

| CAL Atten | |
|---|---|
| X: | 63.8 dB |
| L: | 63.8 dB |
| C: | 63.8 dB |

LINE Map Time (UCT)
Start: 01:25:26
End: 01:25:27

CPA (UCT): 00:00:00
Alt: 0 ft (GPS)

Mocomp Counters

| | Start | | End | |
|---|---|---|---|---|
| Ch 1: | 746864 | 000B6570h | 748367 | 000B6B4Fh |
| Ch 2: | 746864 | 000B6570h | 748367 | 000B6B4Fh |
| Ch 3: | 746864 | 000B6570h | 748367 | 000B6B4Fh |
| Ch 4: | 746864 | 000B6570h | 748367 | 000B6B4Fh |