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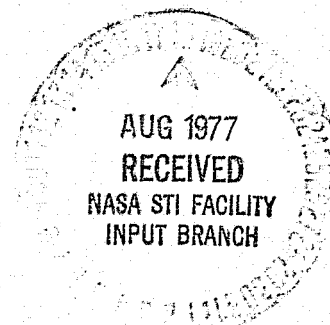
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A COMPILATION OF SPACECRAFT LOADS DATA
FROM
FOUR TITAN CENTAUR LAUNCH VEHICLE FLIGHTS
VOLUME IV
TITAN STAGE I & CENTAUR FIRST BURN OSCILLATIONS

Compiled by George Kachadourian

(NASA-CR-144947-Pt-3) A COMPILATION OF
SPACECRAFT LOADS DATA FROM FOUR TITAN
CENTAUR LAUNCH VEHICLE FLIGHTS. VOLUME 4,
PART 3: TITAN STAGE 1 AND CENTAUR FIRST
BURN OSCILLATIONS (General Electric Co.)

N77-28192
HC A07/MF A01
Unclas
G3/15 42486



Prepared under Contract No. NAS1-9100 by
GENERAL ELECTRIC COMPANY
Viking Project Support Services
Hampton, Virginia

for

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

VOLUME IV

TITAN STAGE 1 AND CENTAUR FIRST BURN OSCILLATIONS

Section 3

TC-3/VIKING MISSION B

Launch Date September 9, 1975

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Contents Description - Section 3 - TC-3 Data

This section presents Power Spectral Density (PSD) plots of the eight parameters listed below for significant time periods during Titan Stage 1 Burn and Centaur First Burn. The Stage 1 Burn analyses are of four second samples. All data was digitized at 1024 sps.

The objective of the PSD analyses was to show the variation of frequency content of the major oscillations during both burn periods. Four second samples were used in the Centaur Burn case to obtain a finer frequency resolution.

The parameters for which PSD analyses were performed are described below and a summary matrix of analyses performed is shown in Table 3.1. A measurements list is contained in Table 3.2; measurement locations in Figure 3.1.

Parameters for Which PSD Analysis is Presented

Parameter	Description
CY1820 CY1830 CY1840 CY1850	Vibration measurements on the Viking Orbiter Buss. CY1830 is trasverse, all others are longitudinal
XDDL YDDL ZDDL OXDDL OYDDL	Accelerations of the Viking Lander Capsule (VLC) C.G. obtained through transformation of Viking Lander Capsule Adapter (VLCA) Strain gages assuming a rigid VLC.
ZDDB	Average of longitudinal vibration measurements

Table 3.1 Data Analysis Matrix - TC-3 Data

Event Time	IRIG No. Sensor No.	#18 CY1820	#17 CY1830	#16 CY1840	#15 CY1850	$\ddot{x}_L$	$\ddot{y}_L$	$\ddot{z}_L$	$\ddot{\theta}_{x_L}$	$\ddot{\theta}_{y_L}$	$\ddot{z}_B$
FLMN-1 67298-67300	(T ₀ +158-162)										
FLMN-2 67313-67315	(T ₀ +173-177)										
FLMN-3 67336-67338	(T ₀ +196-200)										
FLMN-4 67380-67382	(T ₀ + 240-244)										
Cent Burn (Pre Steer) 67627-67631											
Cent Burn - 1 67634-67638											
Cent. Burn -2 67642-67646											
Cent Burn - 3 67652-67656											

PSD & Time
History on All
-1024 SPS

Table 3.2 FM/FM TELEMETRY INSTRUMENTATION, 2208.5 MHz LINK (TC-3)

MEAS. NO.	DESCRIPTION	JPL DESIGNATION	RANGE		U N I T S	A C C U R A C Y	FM/FM CHANNEL	FILTER CUT OFF FREQUENCY - Hz	
			LOW	HIGH				A 1024 SPS	B 4096 SPS
CA886Y	Fwd.Equip.Comp.Amb.	-	120	150	db	5%	19	—	2800
CY182Ø	Longit.Vib; Foot H	2001AC1	-30	30	G	5%	18	133	2100
CY183Ø	Radial Vib.; Bay 7/8	2001AC2	-12	+12	G	5%	17	134	1580
CY184Ø	Longit. Vib., Foot C	2001AC3	- 5	+ 5	G	5%	16	135	1200
CY185Ø	Longit. Vib., Foot R	2001AC4	- 5	+ 5	G	5%	15	137	900
CY186S	VLCA #750 Strain 1	2001SG1	10000C	8000T	Lbs	5%	14	140	—
CY187S	VLCA #751 Strain 2	2001SG2	10000C	8000T	Lbs	5%	13	145	—
CY188S	VLCA #752 Strain 3	2001SG3	10000C	8000T	Lbs	5%	12	153	—
CY189S	VLCA #753 Strain 4	2001SG4	10000C	8000T	Lbs	5%	11	160	—
CY190S	VLCA #754 Strain 5	2001SG5	10000C	8000T	Lbs.	5%	10	180	—
CY191S	VLCA #755 Strain 6	2001SG6	10000C	8000T	Lbs.	5%	9	200	—
CY192P	VLC Bioshield DP		-0.25	0.75	PSID	5%	4	—	—
CY193P	VLC Bioshield Press.		0	16	PSIA	5%	3	—	—

① Range shown is max limit. Each gage will have a different range dependent on its calibration value.

A. This is a special set of filters which, in conjunction with discriminator characteristics, results in phase errors of less than 1° between VCO 9 through 18 below 40 Hz

B. These are twice the standard IRIG filter.

Table 3.3 - TIME OF FLIGHT EVENTS: TC-3 - Viking B Spacecraft

(9/9/75 Launch)

FLIGHT EVENT	Predicted Sec from LO	Actual Hrs Min Sec	Actual Seconds	From LO Seconds	From Stg I Ign. Seconds	
1 STG O IGN. /LO	0	18:39:00	67140	0		
2 MACH 1/MAX Q	50	18:39:42 ± 5	67182 ± 5	42 ± 5		
3 FBR RELEASE	100	18:40:40	67240	100		
4 STG O BO		18:40:44.5	67244.5	104.5		
5 STG I IGN	110	18:40:51.6	67251.6	111.6	0	
6 JETT SRM	122	18:41:02.95	67262.95	122.95	11.35	
7 STG I BO	259	18:43:20.85	67400.85	260.85	149.25	
8 STG II IGN	259.7	18:43:21.6	67401.6	261.6		
9 JETT SHROUD	270	18:43:31.6	67411.6	271.6		
10 STG II BO	468	18:46:48.3	67608.3	468.3		
11 JETT STG II	474	18:46:53.25	67613.25	473.25		
12 MES-1	485	18:47:04.8	67624.8	484.8		
13 MECO-1	613	18:49:13.1	67753.1	613.1		
14 MES-2	1699	19:07:26.8	68846.8	1706.8		
15 MECO-2	2005	19:12:27.7	69147.7	2002.7		
16 S/C SEP.	2225	19:16:07.7	69367.7	2227.7		

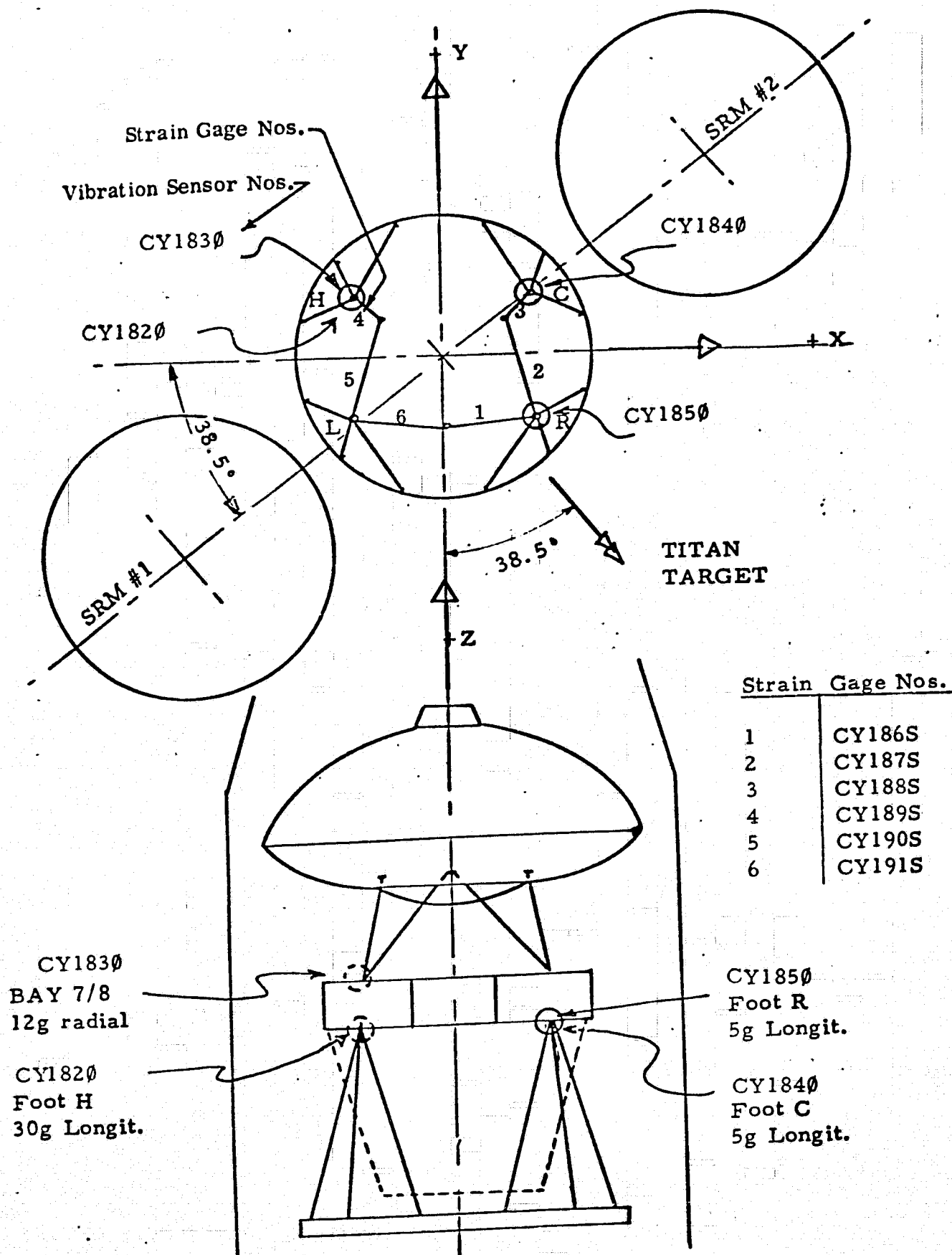
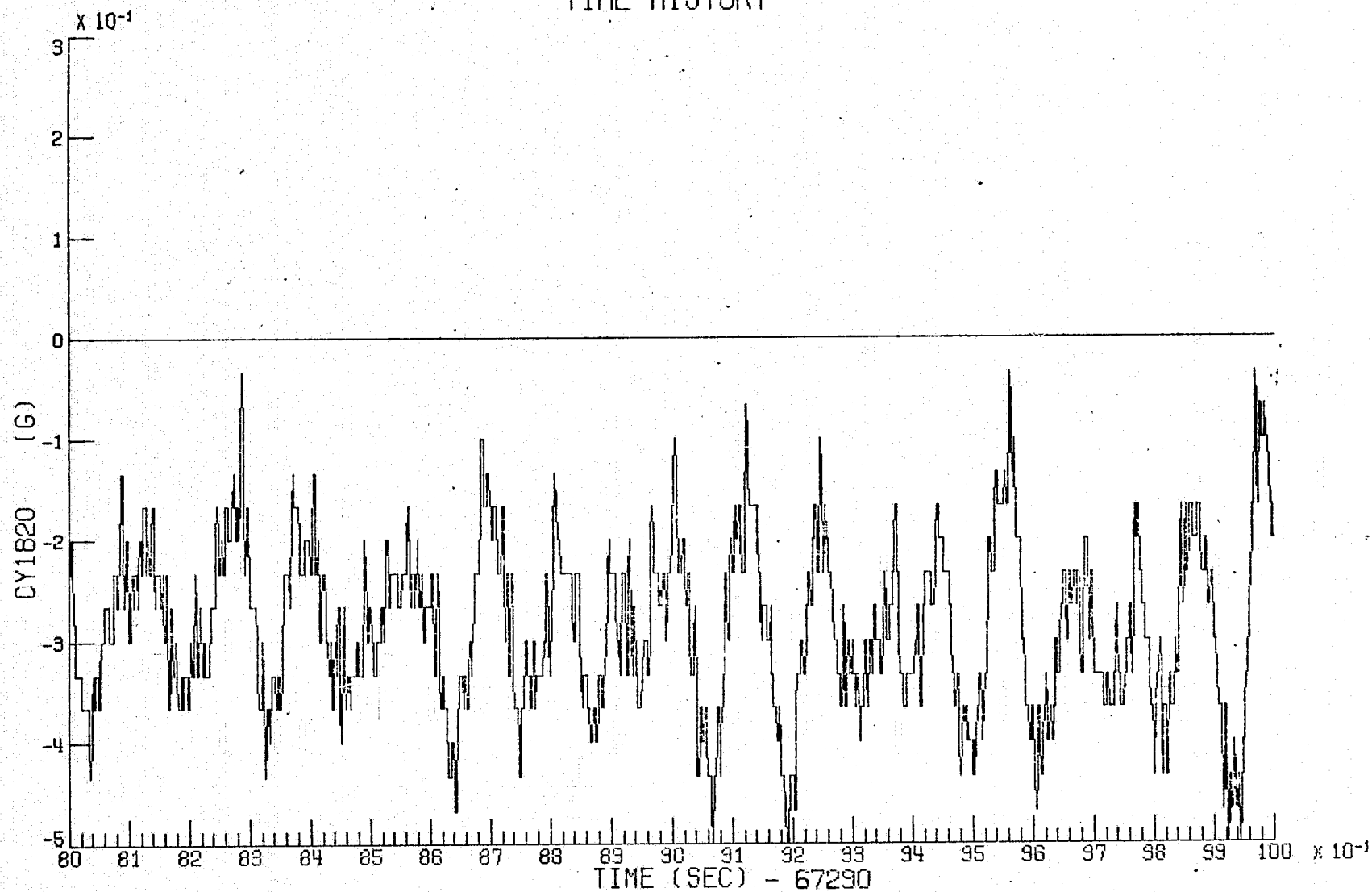


FIGURE 3.1 VIKING SPACECRAFT INSTRUMENT LOCATIONS

TIME HISTORY



MAX = -.033

MIN = -.500

VIKING B FLT (CIF)

POGO - 1

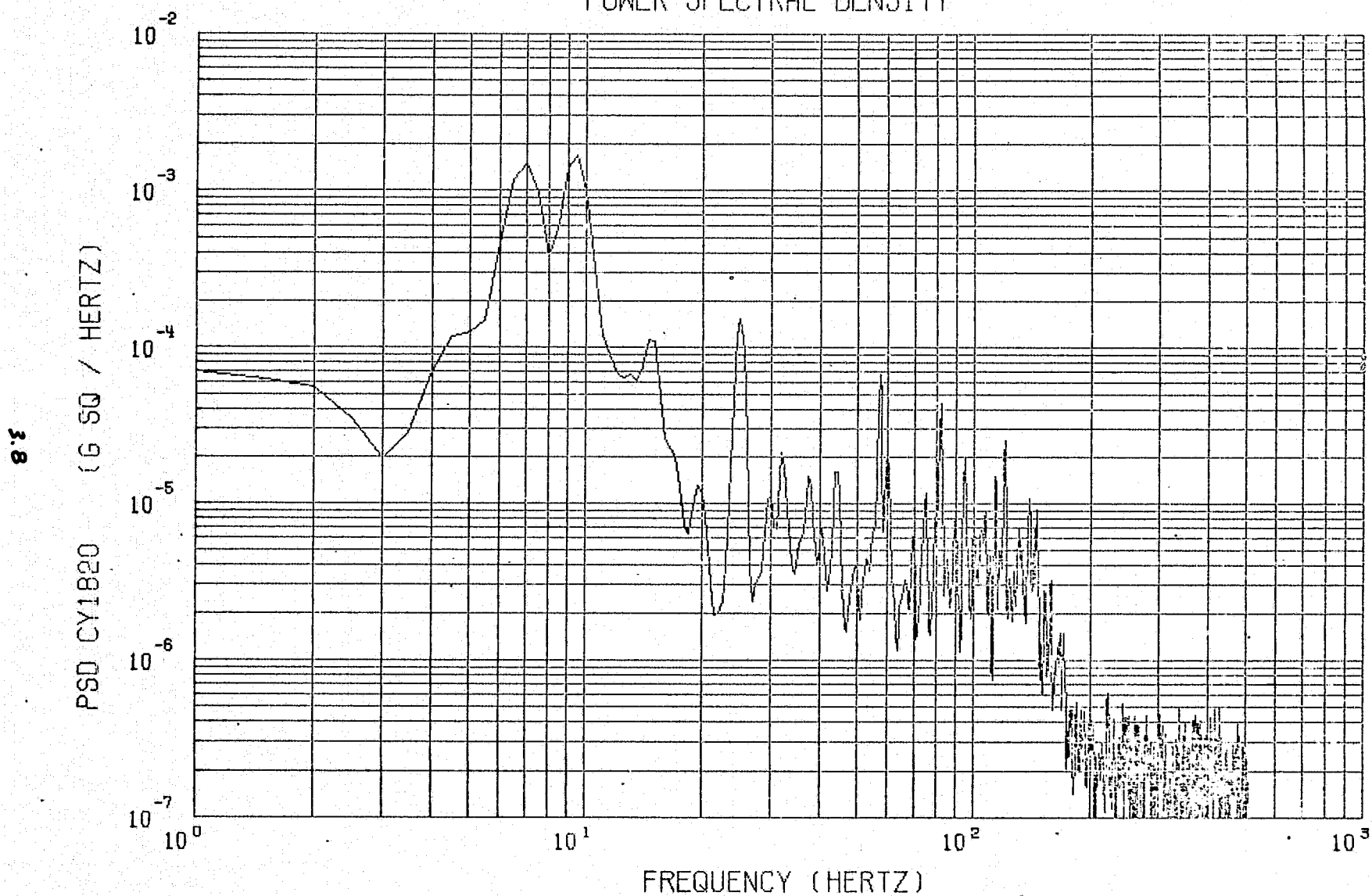
CY1820

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 03/22/75

1024 SPS

FIGURE 3.2a

POWER SPECTRAL DENSITY



$\Delta F = .500$

START = 67298.000 SEC

STOP = 67300.000 SEC

MEAN = -28571×10^{-5}

$\sigma^2 = 67865 \times 10^{-7}$

$\sigma = 8238 \times 10^{-5}$

$3\sigma = 24714 \times 10^{-5}$

VIKING B FLT (CIF)

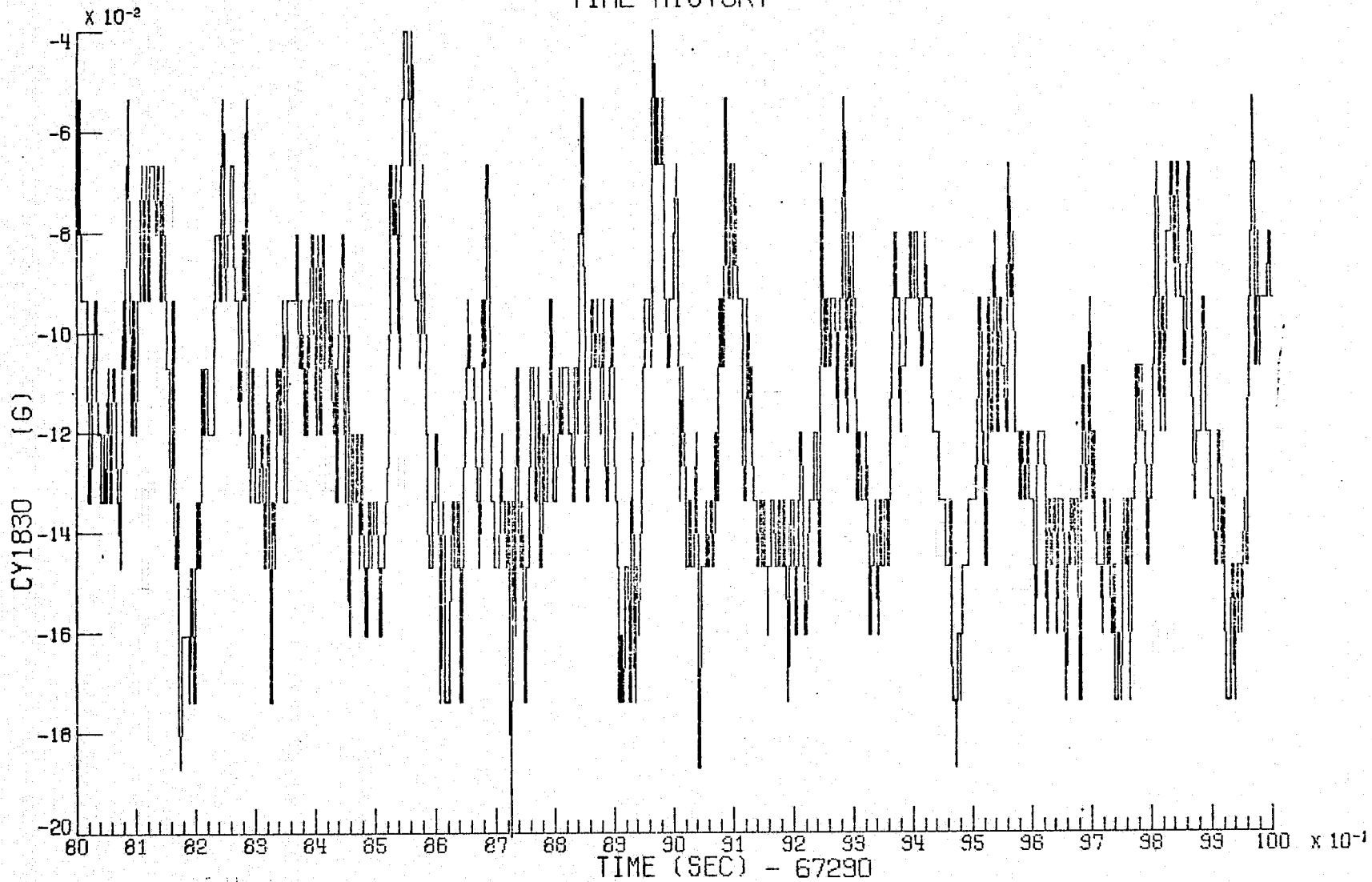
POGO - 1

CY1820

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 09/22/75

1024 SPS
FIGURE 3.2b

TIME HISTORY



MAX = -.040

MIN = -.200

VIKING B FLT (CIF)

POGO - 1

CY1830

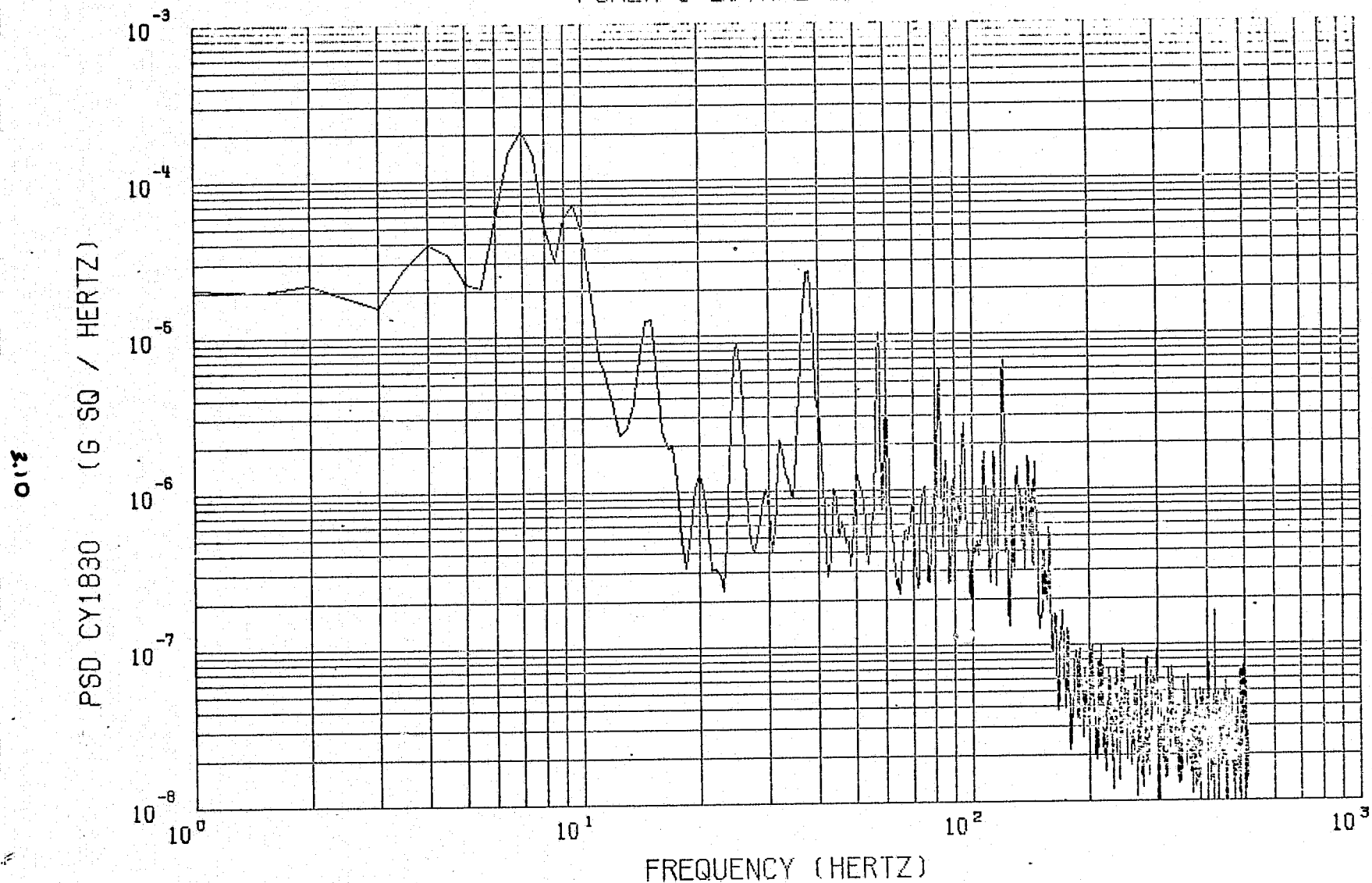
NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 09/22/75

1024 SPS

FIGURE 3.3a

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POWER SPECTRAL DENSITY



$\Delta F = .500$

START = 67298.000 SEC

STOP = 67300.000 SEC

MEAN = -11861×10^{-5}

$\sigma^2 = 8052 \times 10^{-7}$

$\sigma = 28376 \times 10^{-5}$

$3\sigma = 85128 \times 10^{-5}$

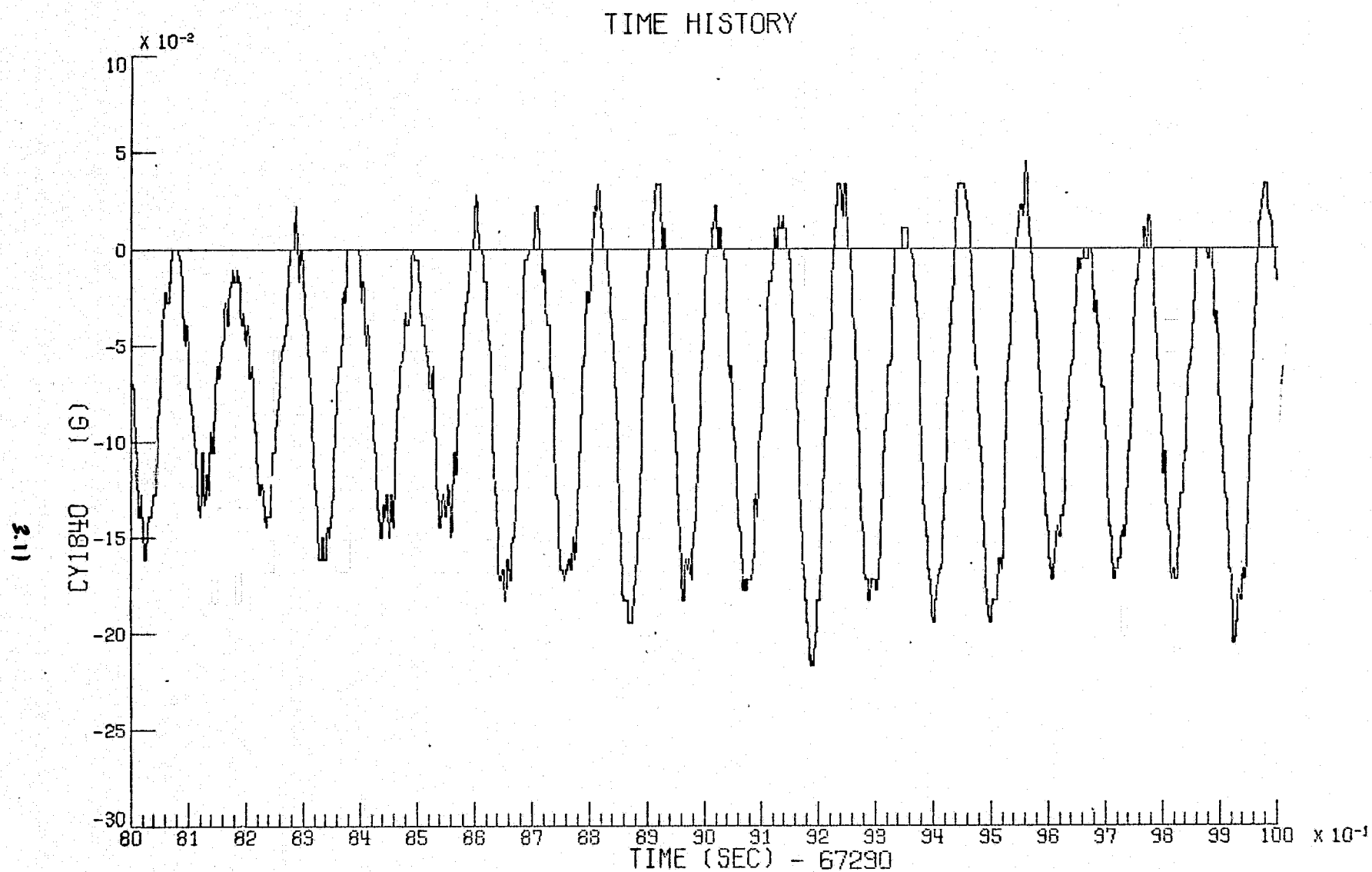
VIKING B FLT (CIF)

POGO - 1

CY1830

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 09/22/75

1024 SPS
FIGURE 3.3b



MAX = .044

MIN = -.216

VIKING B FLT (CIF)

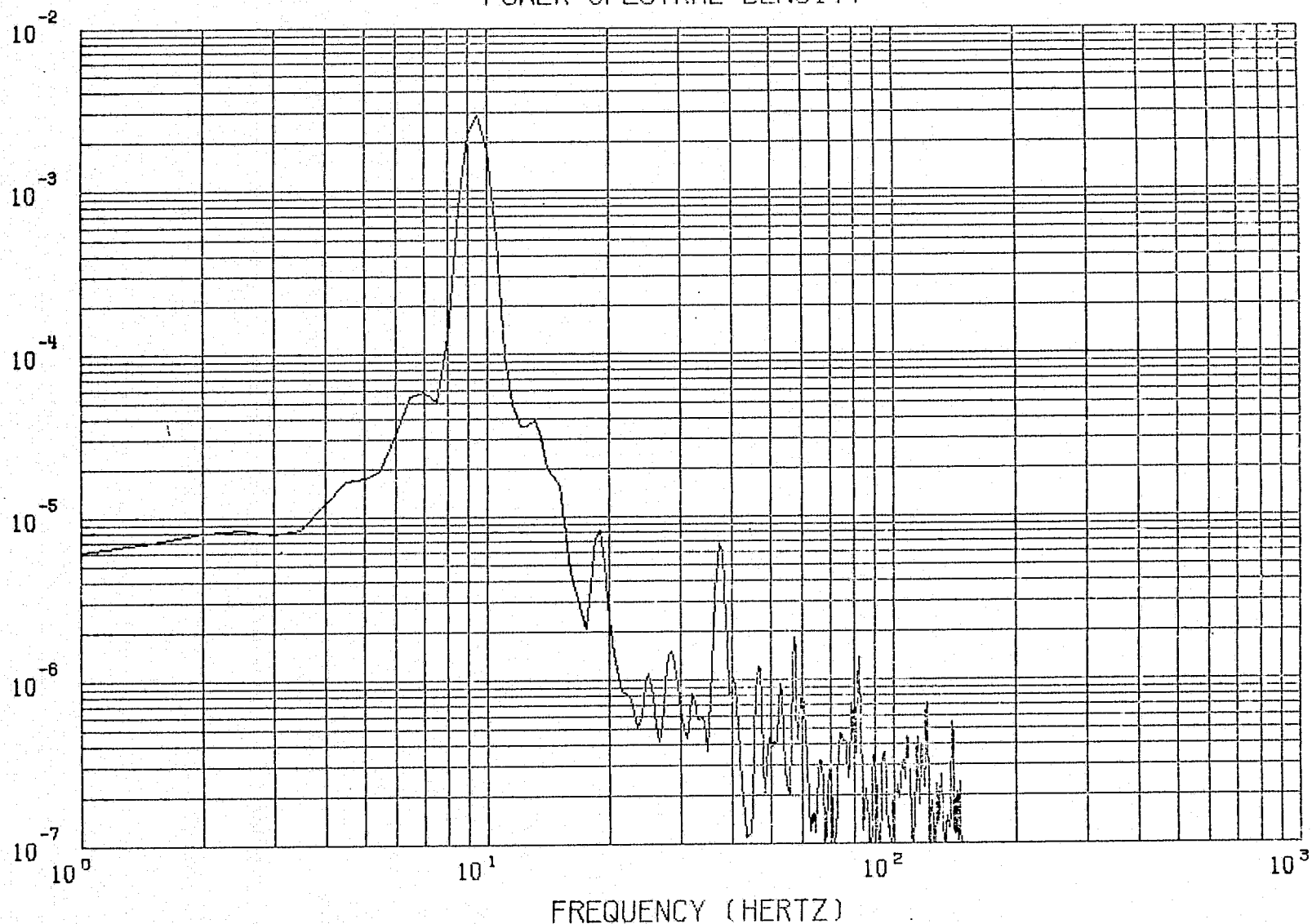
POGO - 1

CY1840

3.12

PSD CY1840 (G SQ / HERTZ)

POWER SPECTRAL DENSITY

 $\Delta F = .500$

START = 67298.000 SEC

STOP = 67300.000 SEC

MEAN = -74804×10^{-5} $\sigma^2 = 45604 \times 10^{-7}$ $\sigma = 6753 \times 10^{-5}$ $3\sigma = 20259 \times 10^{-5}$

VIKING B FLT (CIF)

POGO - 1

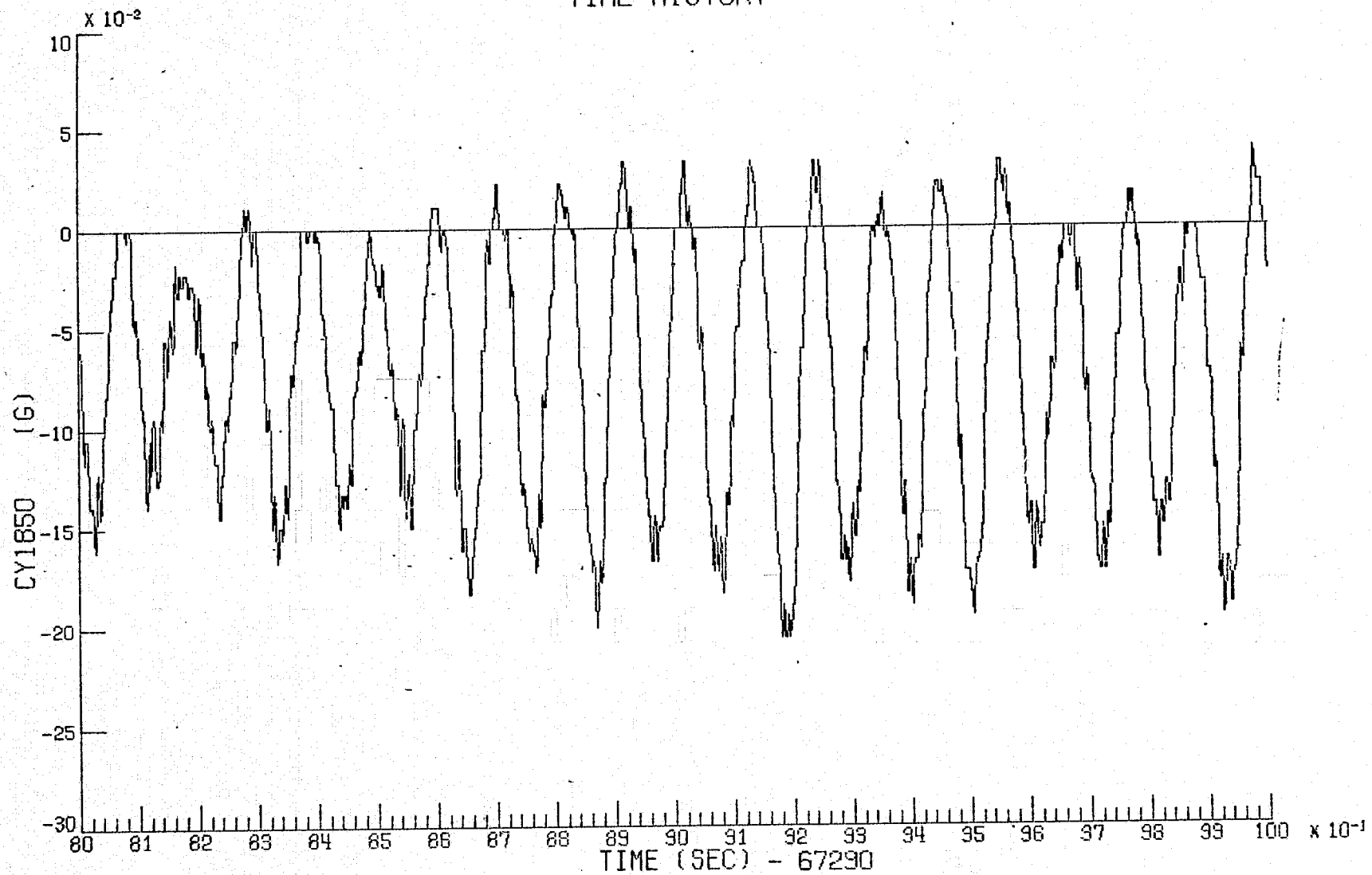
CY1840

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 09/22/75

1024 SPS

FIGURE 3.4b

TIME HISTORY



MAX = .038

MIN = -.205

VIKING B FLT (CIF)

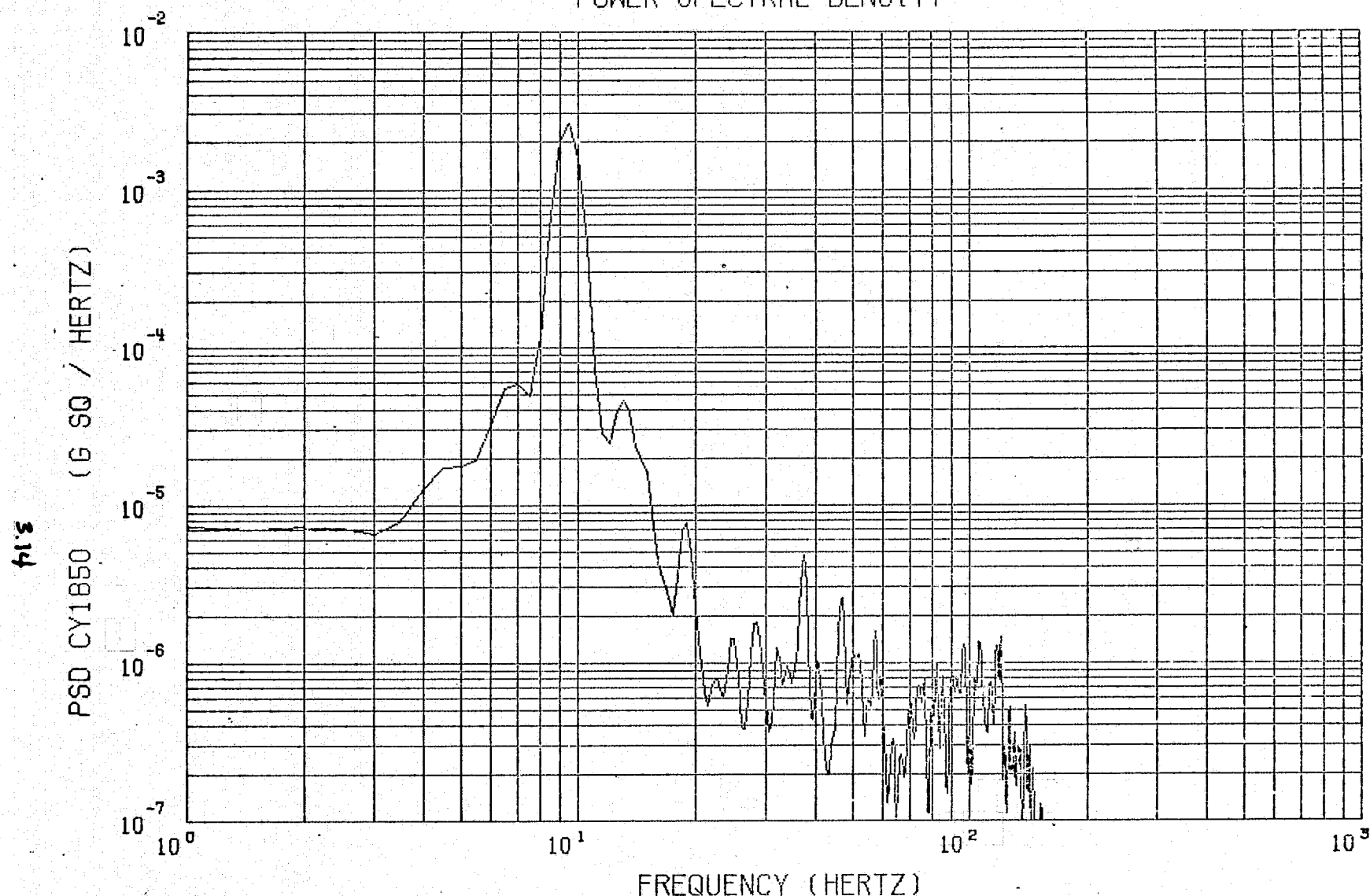
POGO - 1

CY1850

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 09/22/75

1024 SPS
FIGURE 3.5a

POWER SPECTRAL DENSITY



$\Delta F = .500$

START = 67298.000 SEC

STOP = 67300.000 SEC

MEAN = -71595×10^{-6}

$\sigma^2 = 41433 \times 10^{-7}$

$\sigma = 64368 \times 10^{-6}$

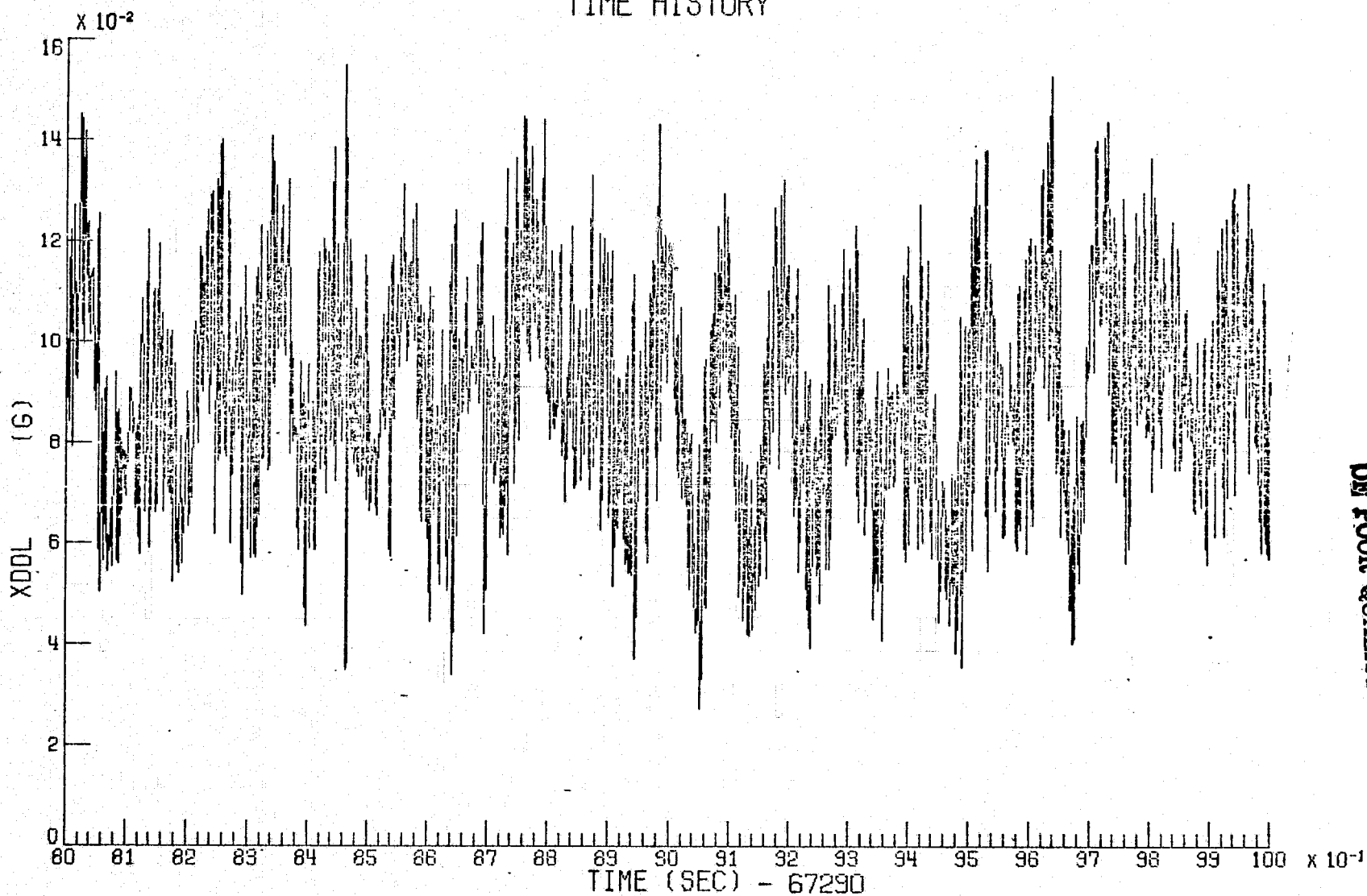
$3\sigma = 1931 \times 10^{-4}$

VIKING B FLT (CIF)

POGO - 1

CY1850

TIME HISTORY



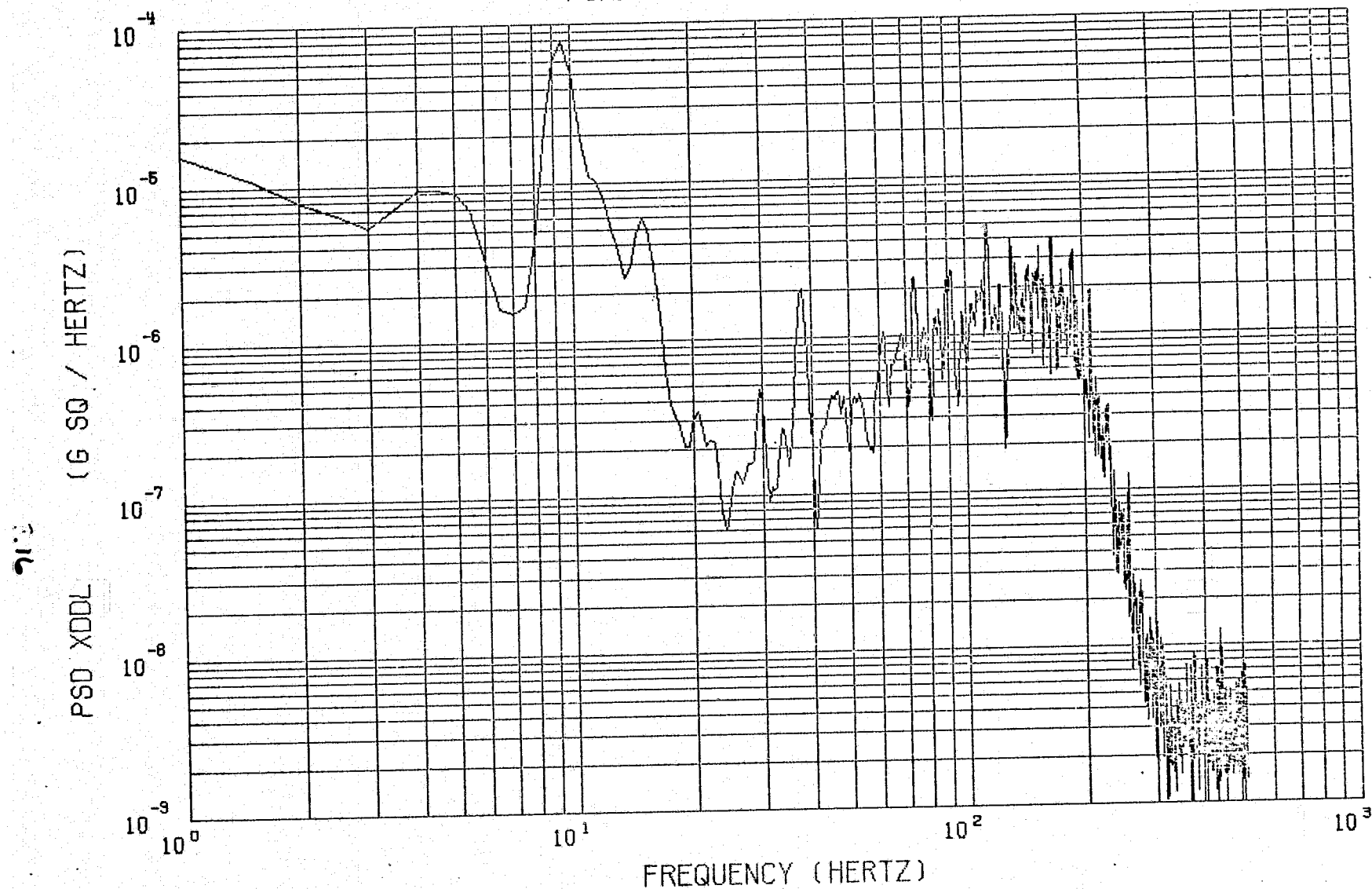
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VIKING B FLT (CIF)

POGO - 1

XDDL

POWER SPECTRAL DENSITY



$\Delta F = .500$

START = 67298.000 SEC

STOP = 67300.000 SEC

MEAN = 8964×10^{-5}

$\sigma^2 = 43644 \times 10^{-6}$

$\sigma = 20891 \times 10^{-6}$

$3\sigma = 62673 \times 10^{-6}$

VIKING B FLT (CIF)

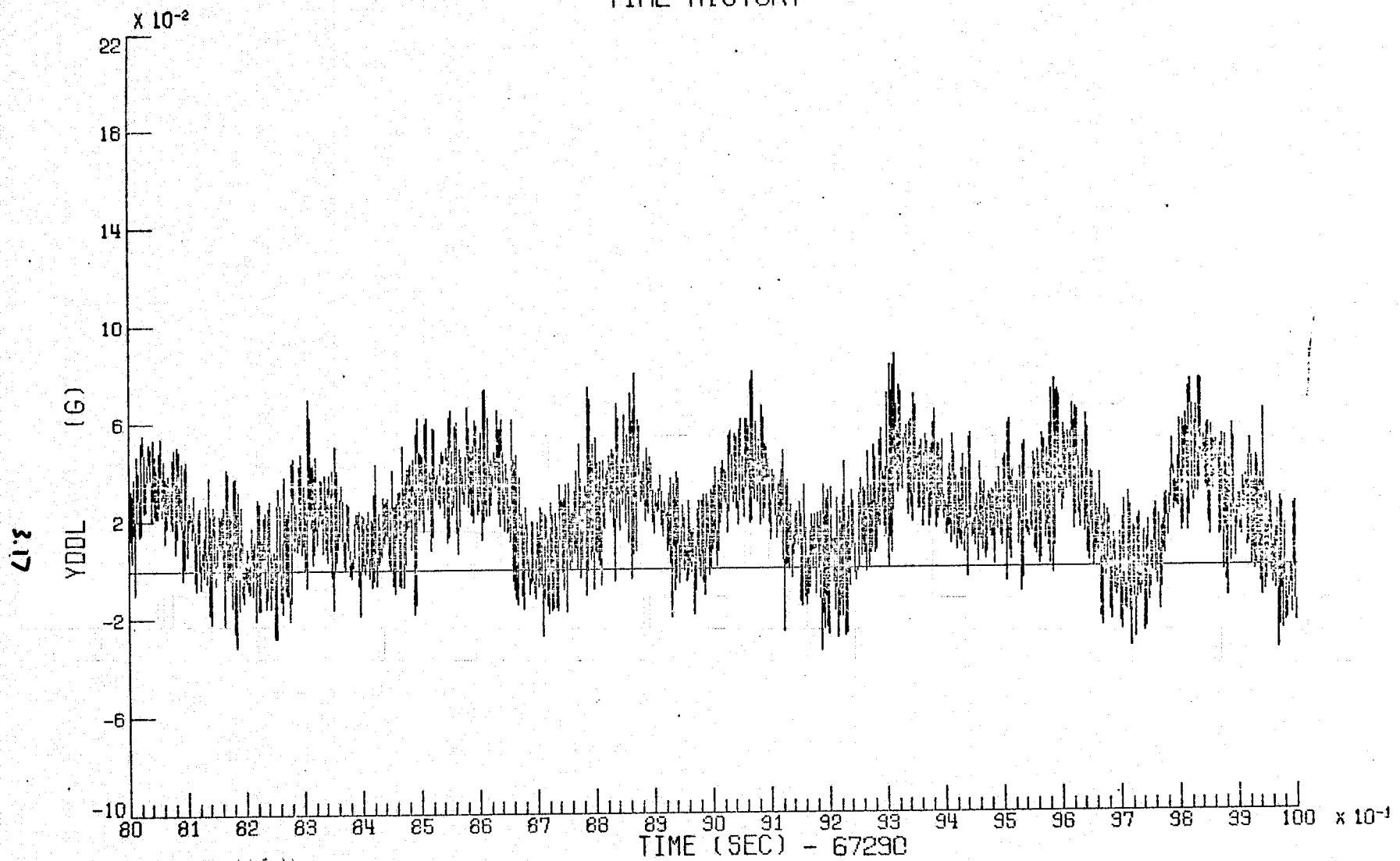
POGO - 1

XDDL

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FIGURE 3.6b

TIME HISTORY



MAX = .086

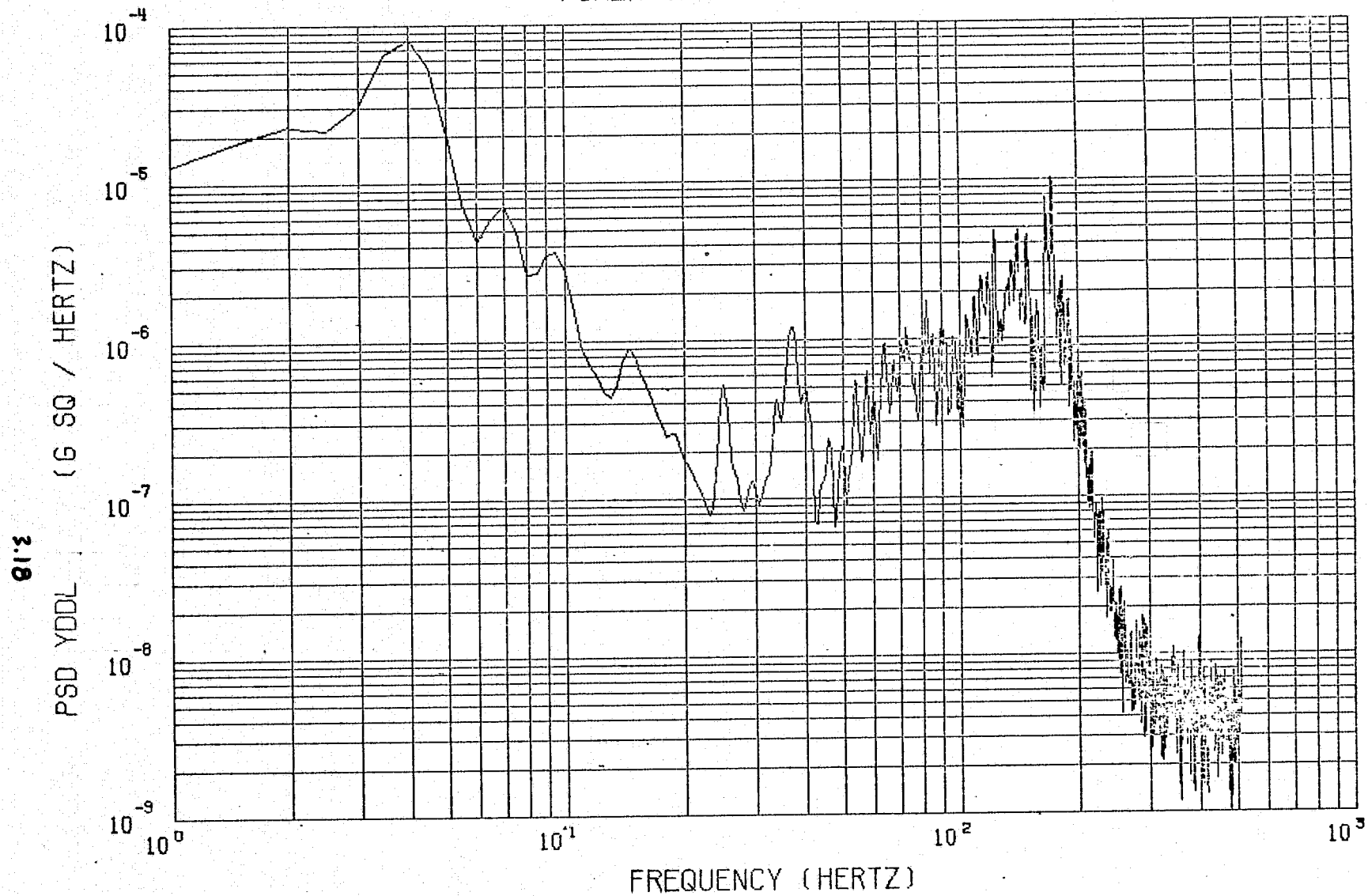
MIN = -.034

VIKING B FLT (CIF)

POGO - 1

YDDL

POWER SPECTRAL DENSITY



$\Delta F = .500$

START = 67298.000 SEC

STOP = 67300.000 SEC

MEAN = 21991×10^{-6}

$\sigma^2 = 42428 \times 10^{-6}$

$\sigma = 20598 \times 10^{-6}$

$3\sigma = 61794 \times 10^{-6}$

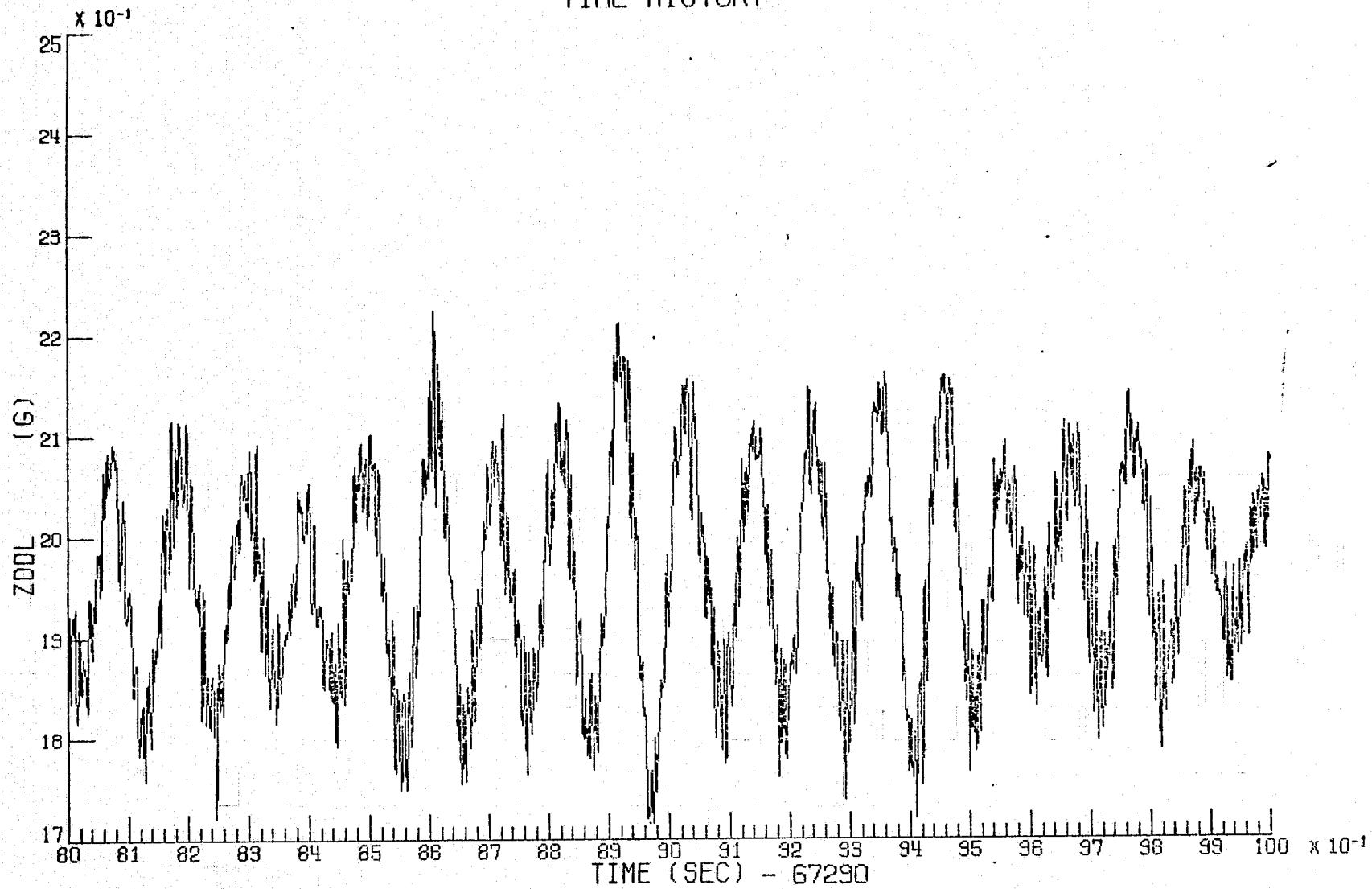
VIKING B FLT (CIF)

POGO - 1

YDDL

TIME HISTORY

3.19



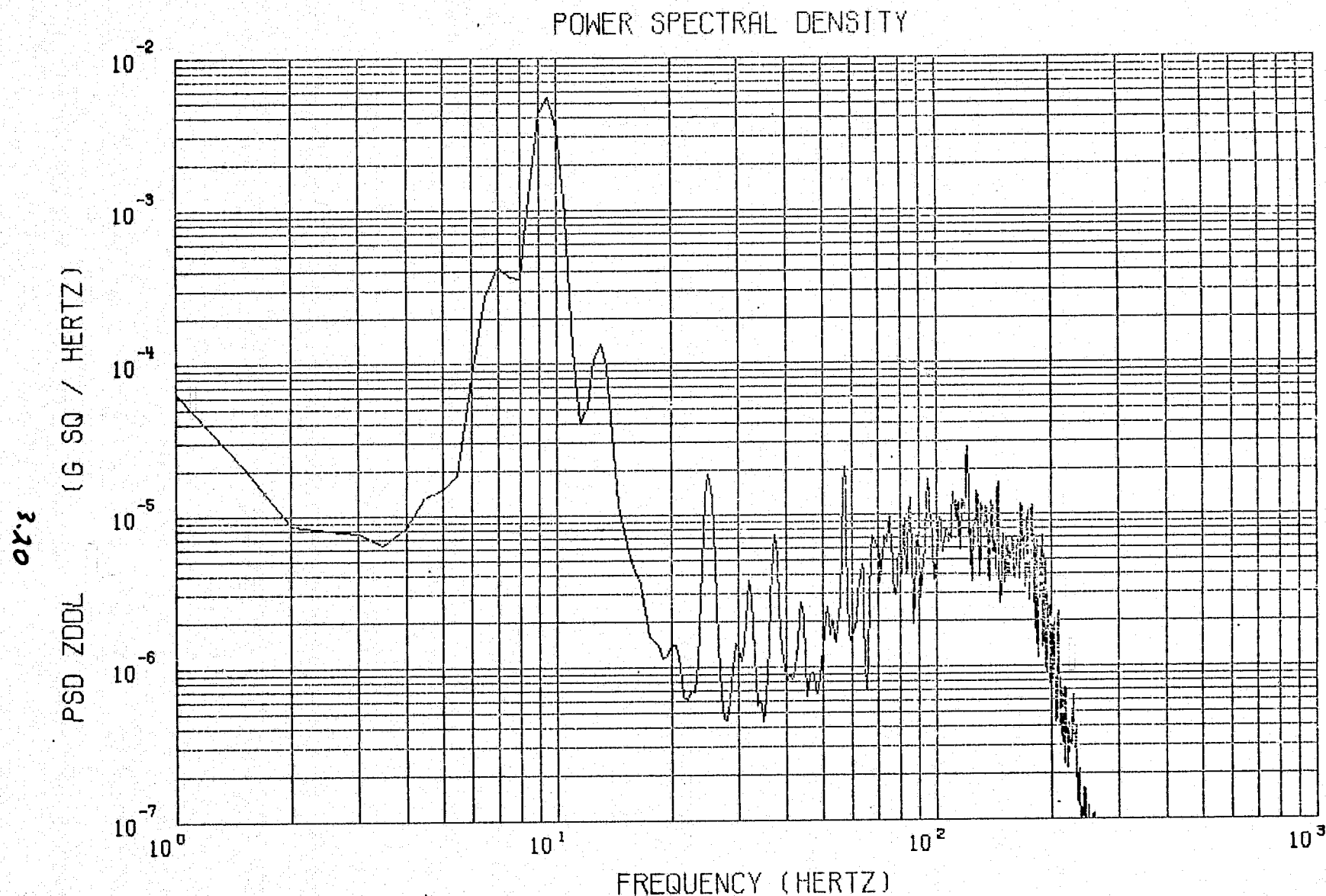
MAX = 2.224

MIN = 1.714

VIKING B FLT (CIF)

POGO - 1

ZDDL



$\Delta F = .500$

START = 67298.000 SEC

STOP = 67300.000 SEC

MEAN = 19594×10^{-9}

$\sigma^2 = 10131 \times 10^{-5}$

$\sigma = 10065 \times 10^{-5}$

$3\sigma = 30195 \times 10^{-5}$

VIKING B FLT (CIF)

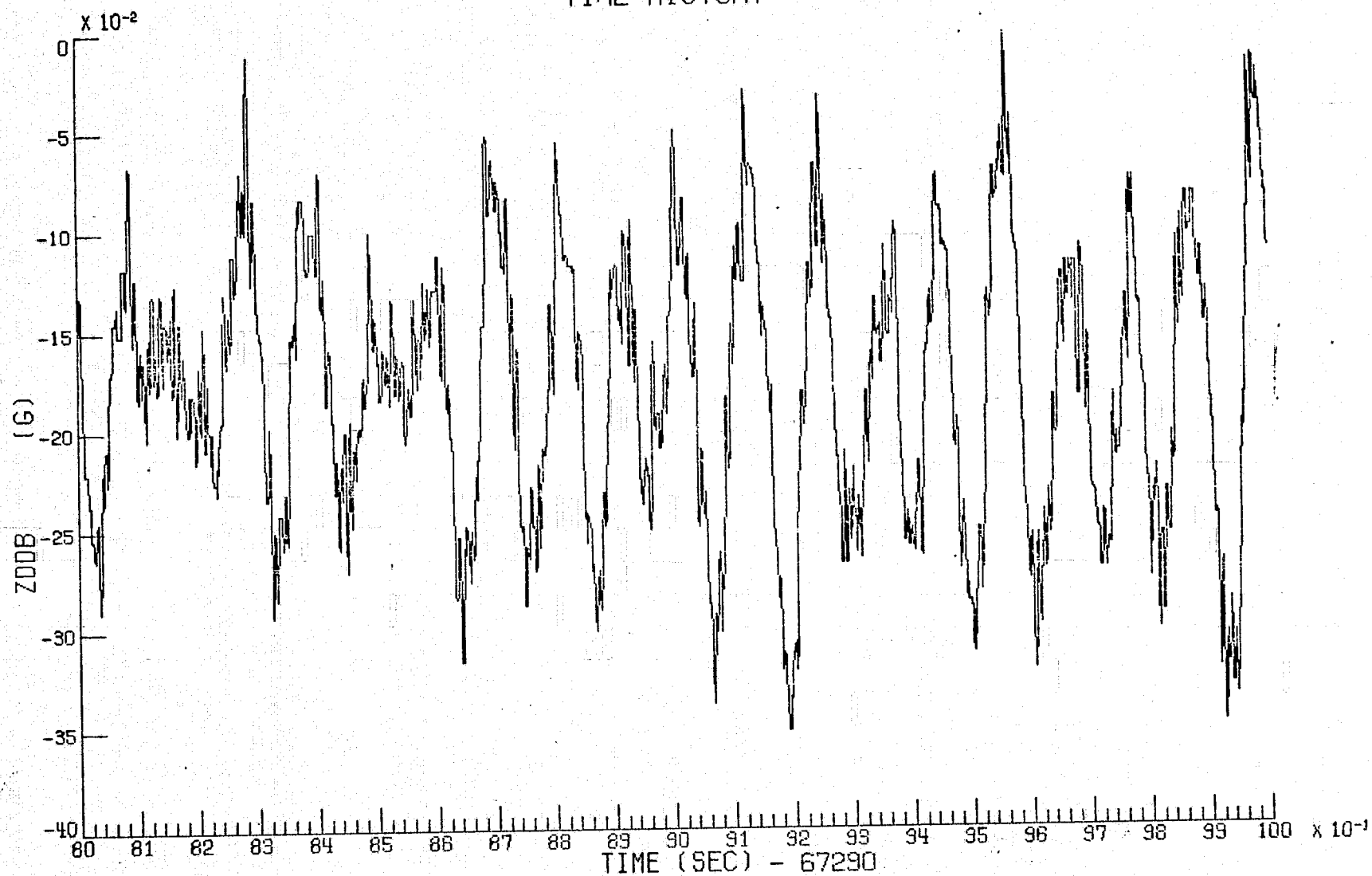
POGO - 1

ZDDL

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 09/23/75

FIGURE 3.8b

TIME HISTORY



MAX = -.003

MIN = -.351

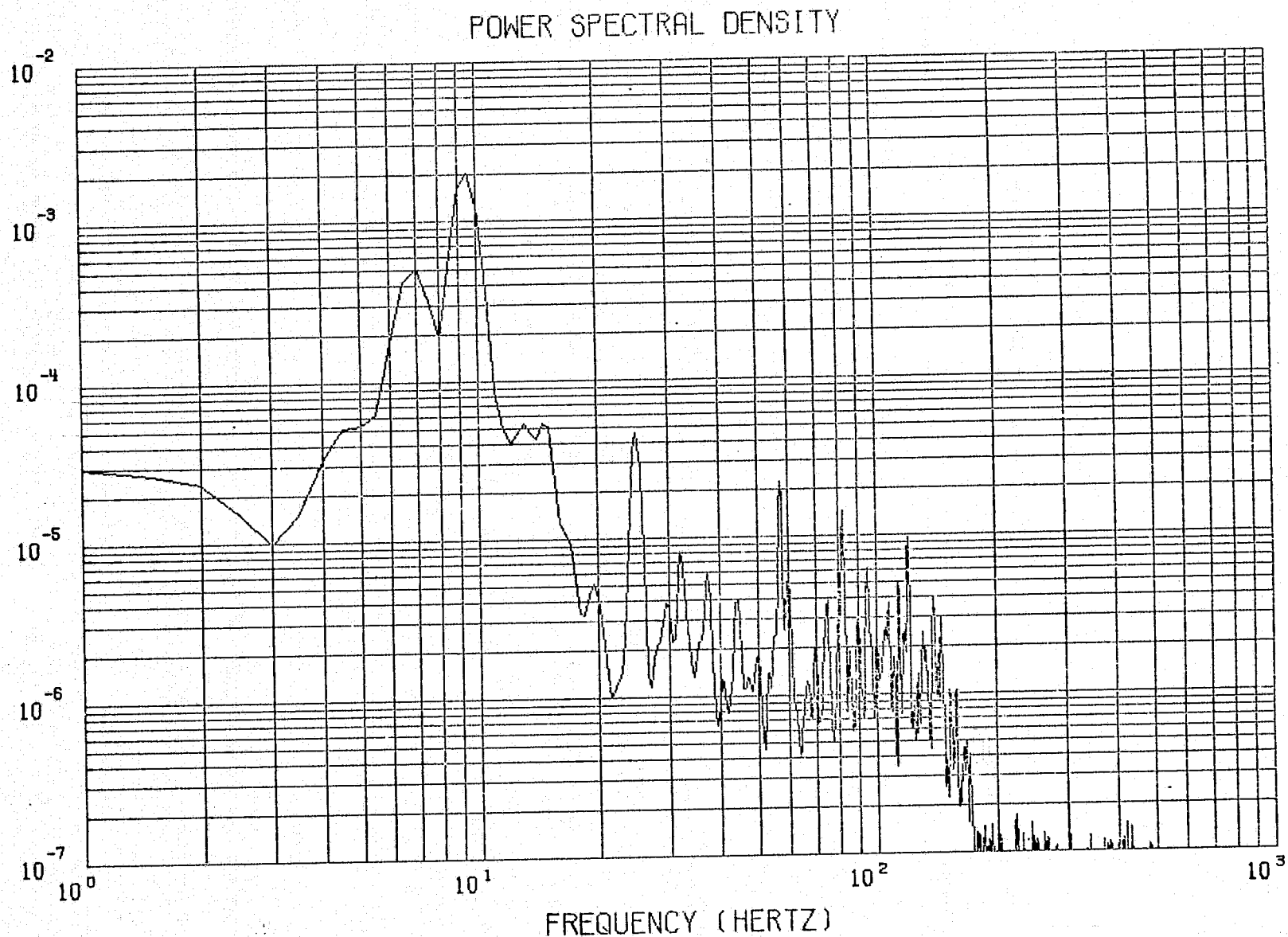
VIKING B FLT (CIF)

POGO - 1

Z00B

3.22

PSD ZODB (G SQ / HERTZ)



$\Delta F = .500$

START = 67298.000 SEC

STOP = 67300.000 SEC

MEAN = -17953×10^{-5}

$\sigma^2 = 45878 \times 10^{-7}$

$\sigma = 67733 \times 10^{-5}$

$3\sigma = 2032 \times 10^{-4}$

VIKING B FLT (CIF)

POGO - 1

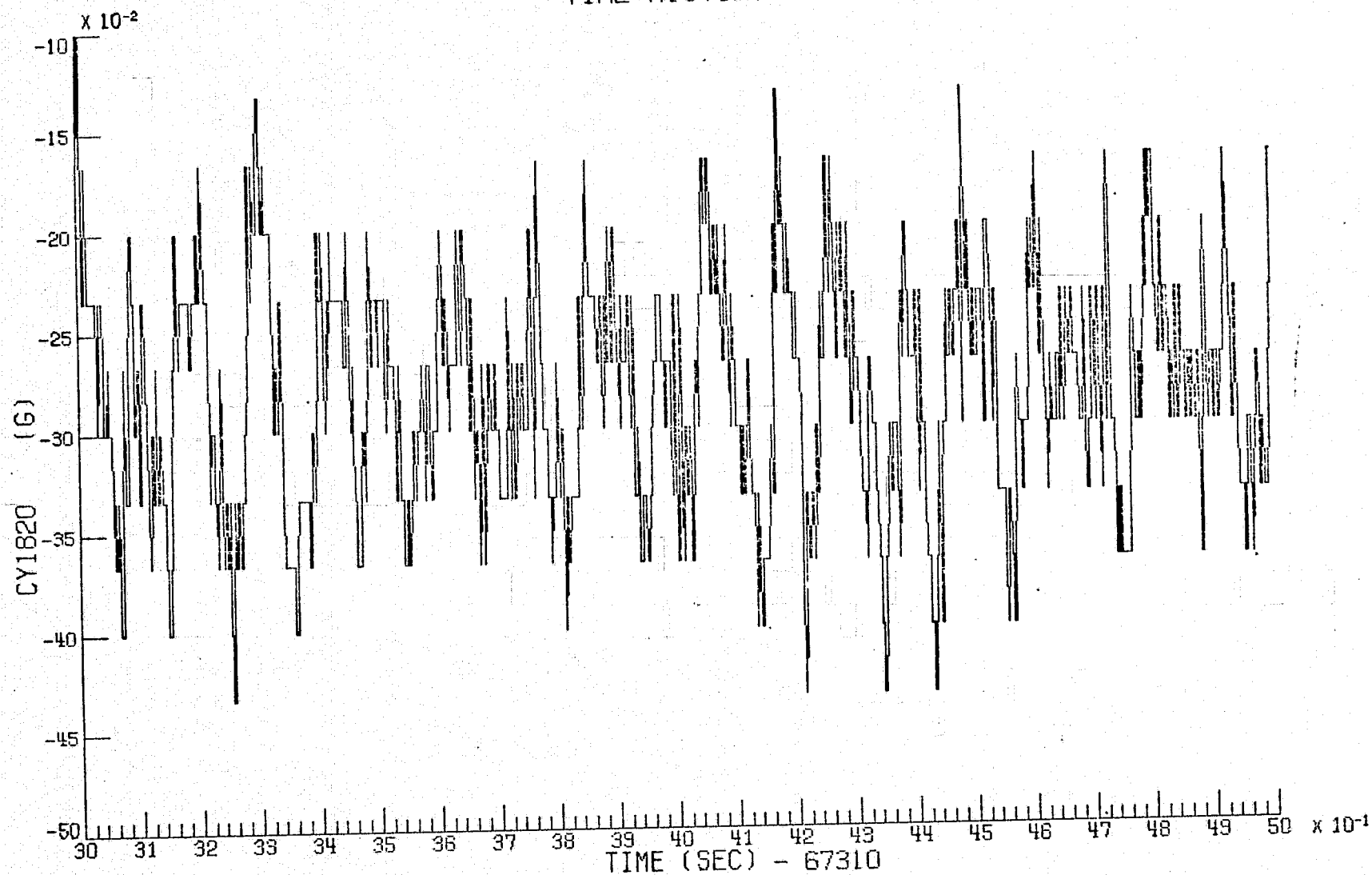
ZODB

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FIGURE 3.9b

TIME HISTORY

3.23



MAX = -.100

MIN = -.433

VIKING B FLT (CIF)

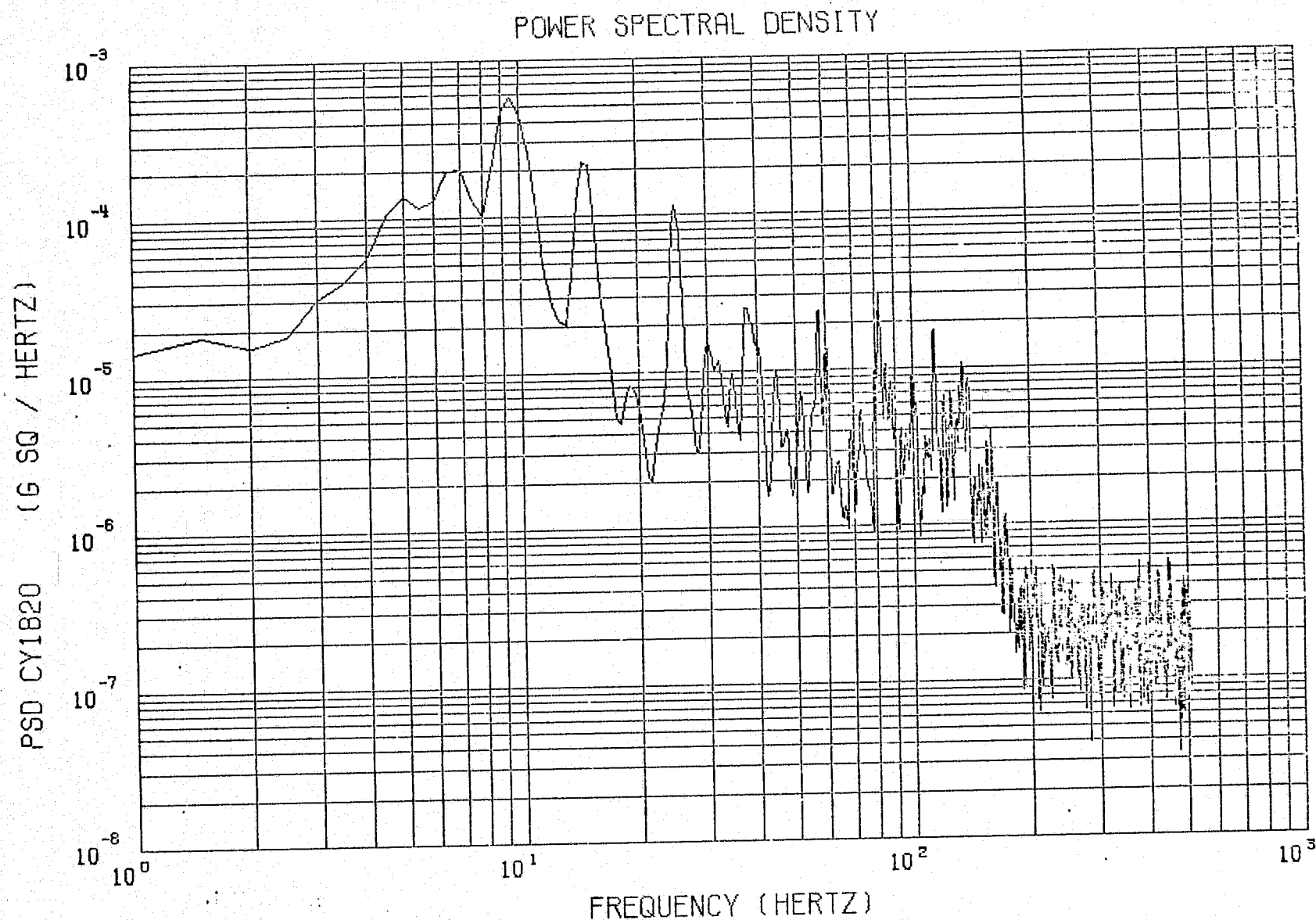
POGO - 2

CY1820

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1024 SPS

FIGURE 3.10 a



$\Delta F = .500$

START = 67313.000 SEC

STOP = 67315.000 SEC

MEAN = -28174×10^{-5}

$\sigma^2 = 31033 \times 10^{-7}$

$\sigma = 55708 \times 10^{-6}$

$3\sigma = 16712 \times 10^{-5}$

VIKING B FLT (CIF)

POGO - 2

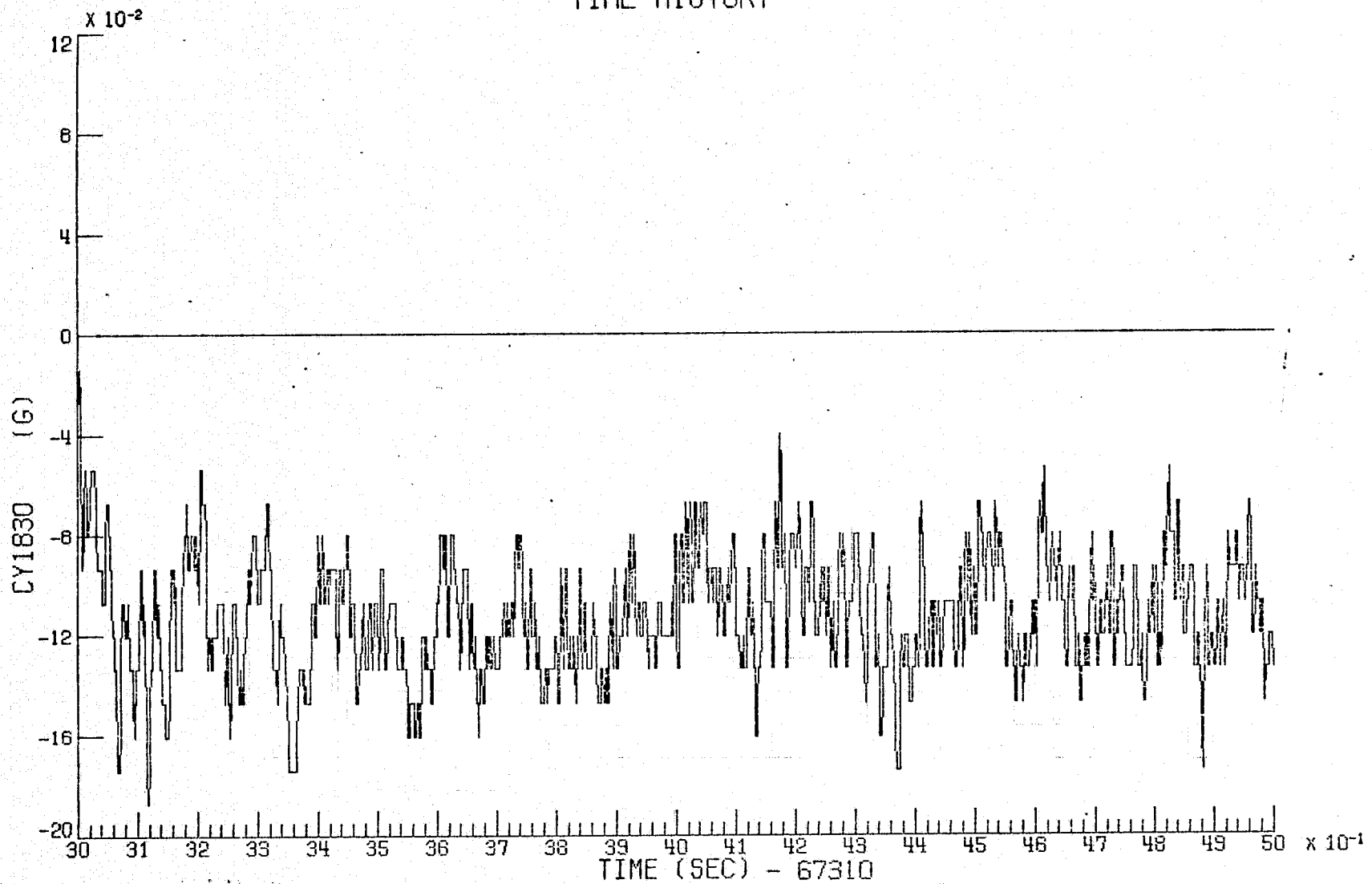
CY1820

1024 SPS

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FIGURE 3.10b

TIME HISTORY



MAX = -.013

MIN = -.187

VIKING B FLT (CIF)

POGO - 2

CY1830

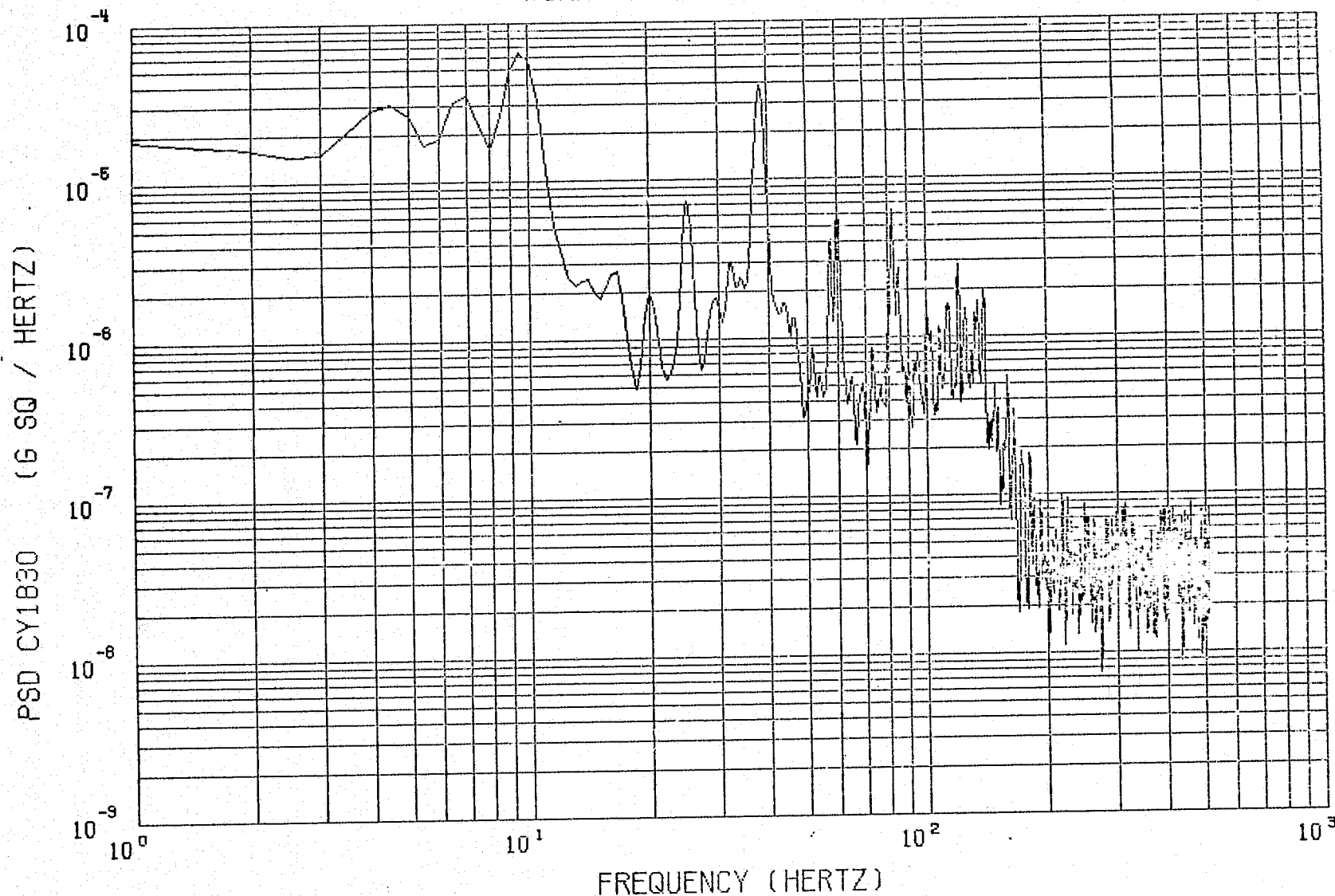
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1024 SPS

FIGURE 3.11a

328

POWER SPECTRAL DENSITY



$\Delta F = .500$

START = 67313.000 SEC

STOP = 67315.000 SEC

MEAN = -11265×10^{-5}

$\sigma^2 = 55325 \times 10^{-6}$

$\sigma = 23521 \times 10^{-6}$

$3\sigma = 70584 \times 10^{-6}$

VIKING B FLT (CIF)

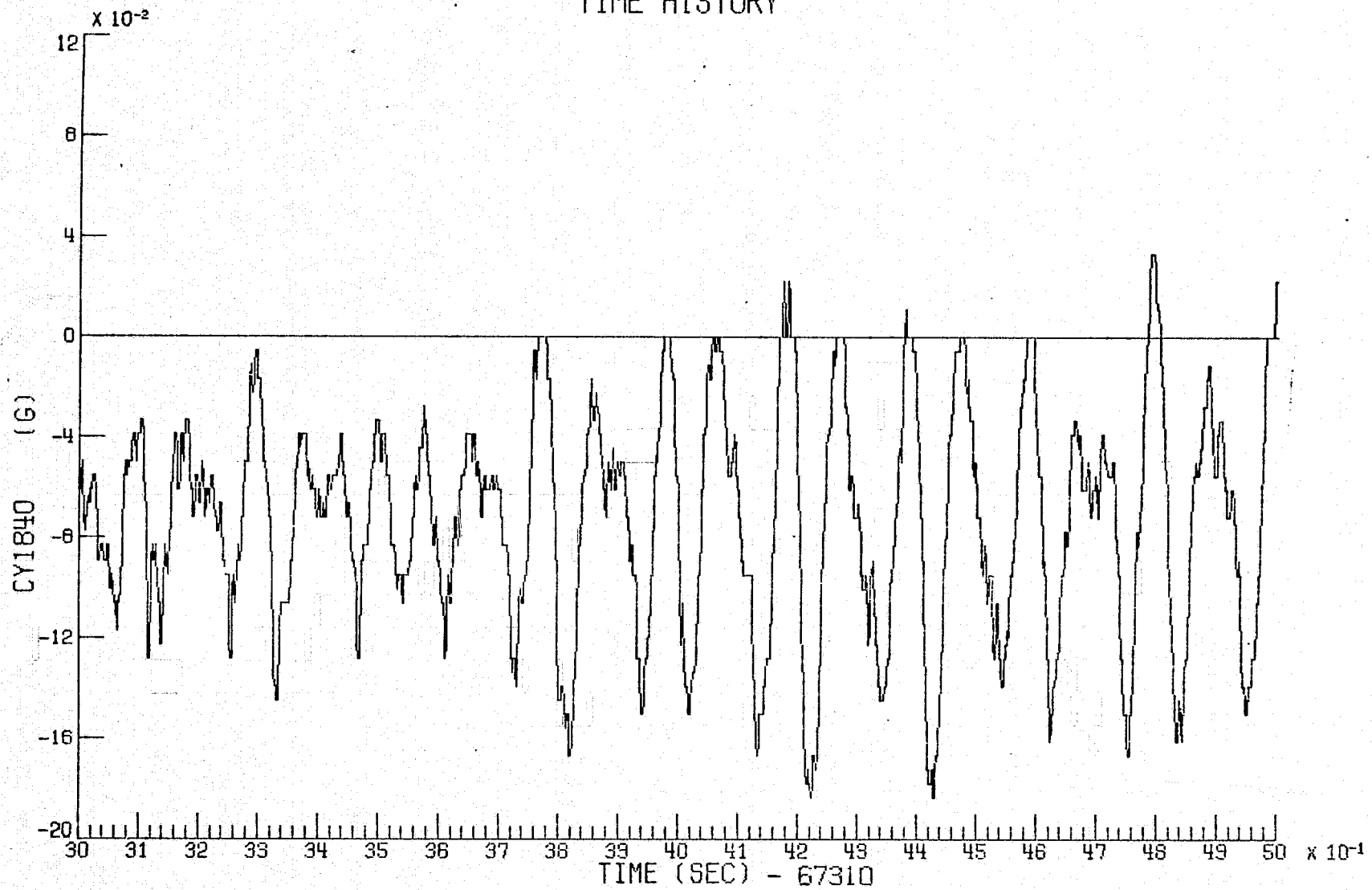
POGO - 2

CY1830

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 09/22/75

1024 SPS
FIGURE 3.11 b

TIME HISTORY



MAX = .033

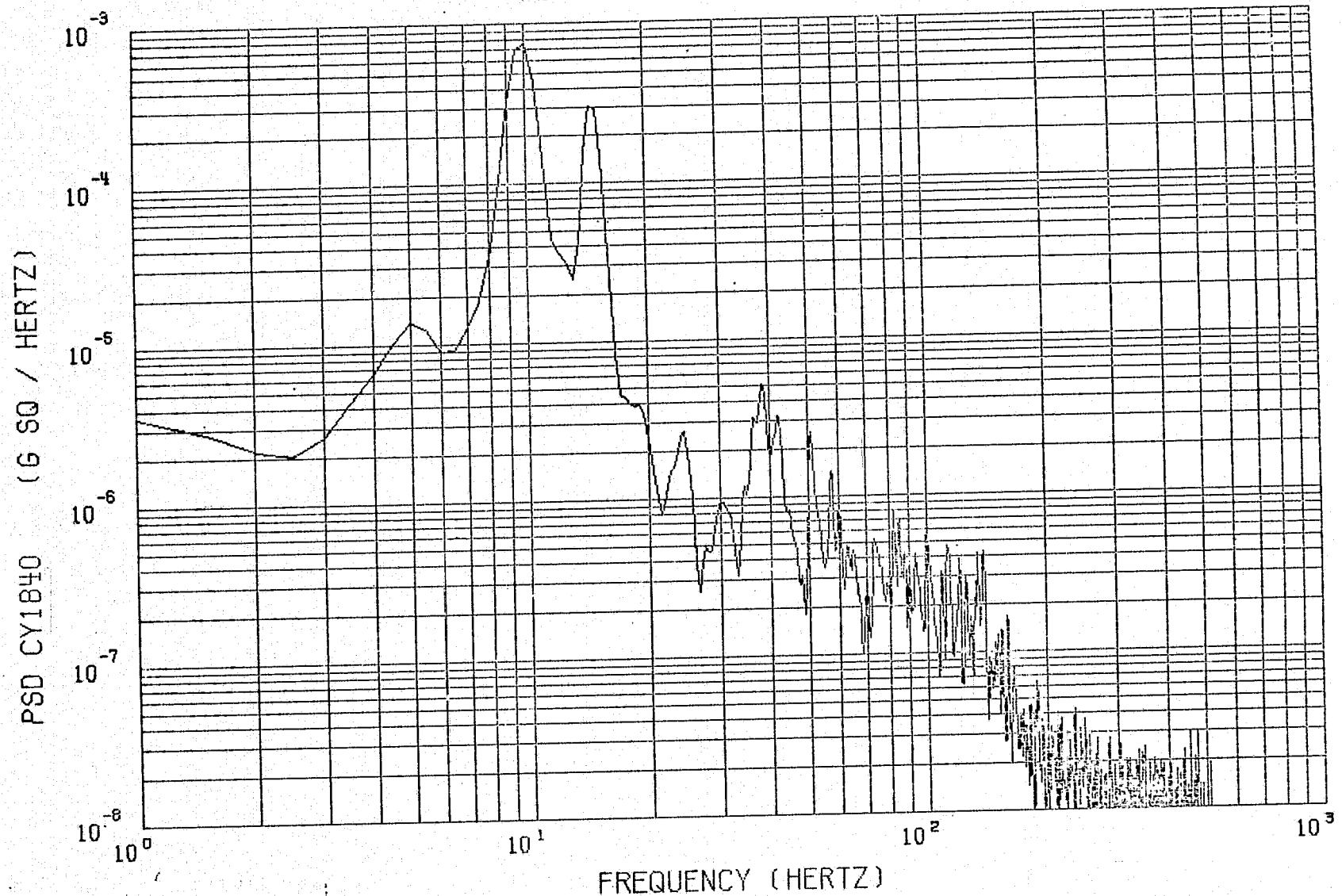
MIN = -.183

VIKING B FLT (CIF)

POGO - 2

CY1840

POWER SPECTRAL DENSITY



$\Delta F = .500$

START = 67313.000 SEC

STOP = 67315.000 SEC

MEAN = -71814×10^{-5}

$\sigma^2 = 19705 \times 10^{-7}$

$\sigma = 4439 \times 10^{-5}$

$3\sigma = 13317 \times 10^{-5}$

VIKING B FLT (CIF)

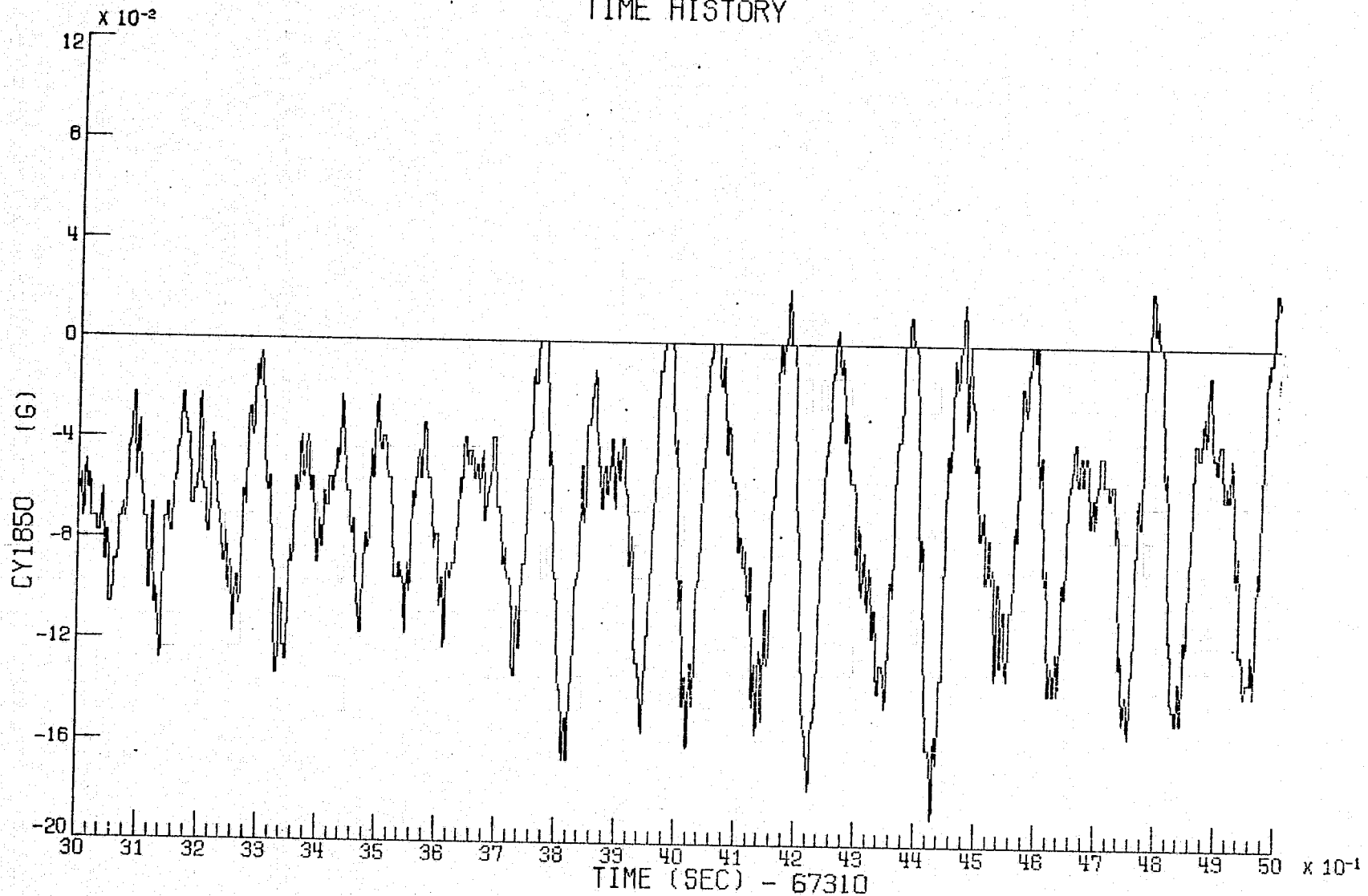
POGO - 2

CY1840

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM · 09/22/75

1026 SPS
FIGURE 3.12b

TIME HISTORY



MAX = .022

MIN = -.188

VIKING B FLT (CIF)

POGO - 2

CY1850

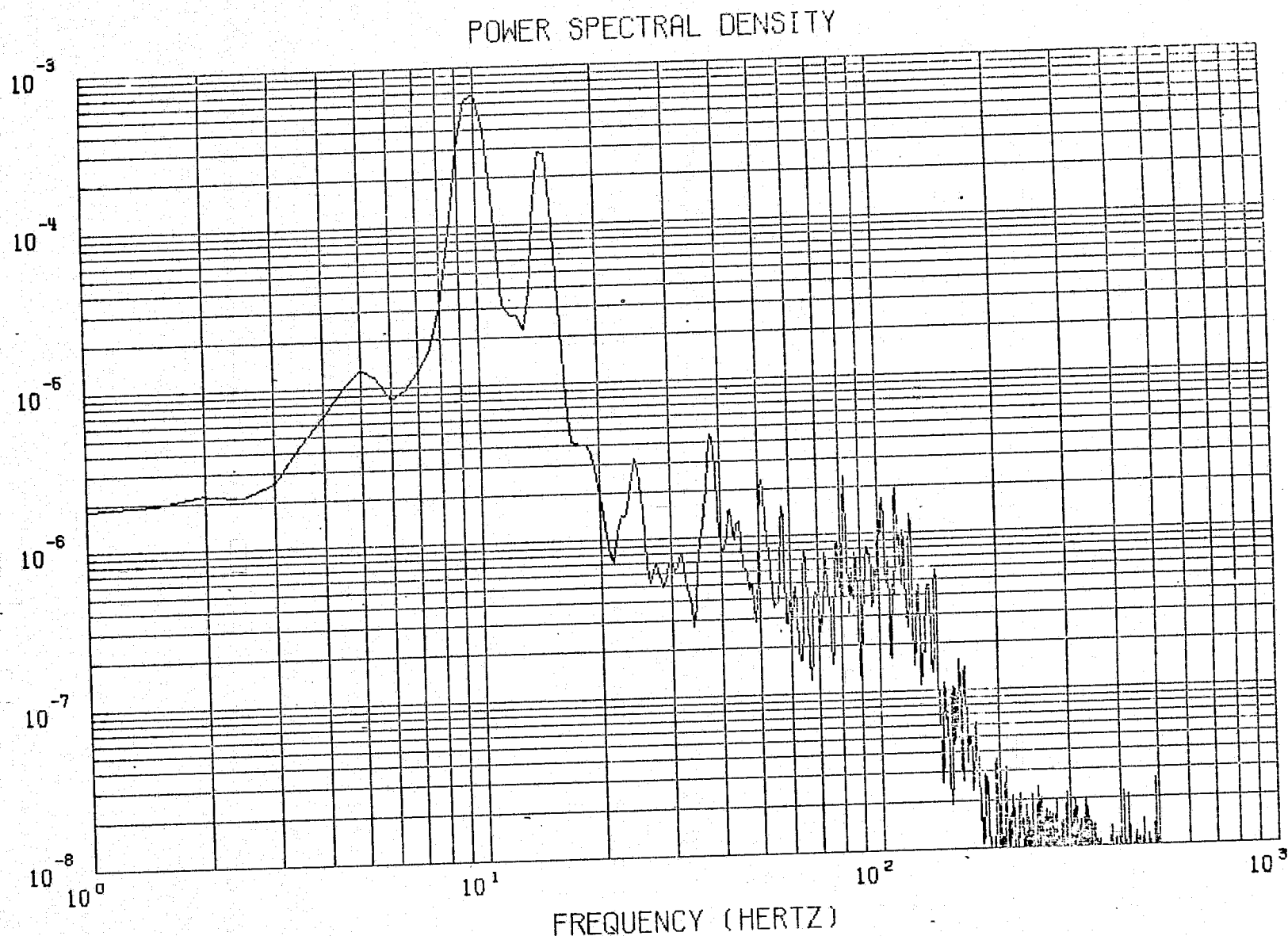
NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 09/22/75

1024 SPS

FIGURE 3.13a

033

PSD CY1850 (G SQ / HERTZ)



$\Delta F = .500$

START = 67313.000 SEC

STOP = 67315.000 SEC

MEAN = -63451×10^{-8}

$\sigma^2 = 17982 \times 10^{-7}$

$\sigma = 42406 \times 10^{-6}$

$3\sigma = 12721 \times 10^{-5}$

VIKING B FLT (CIF)

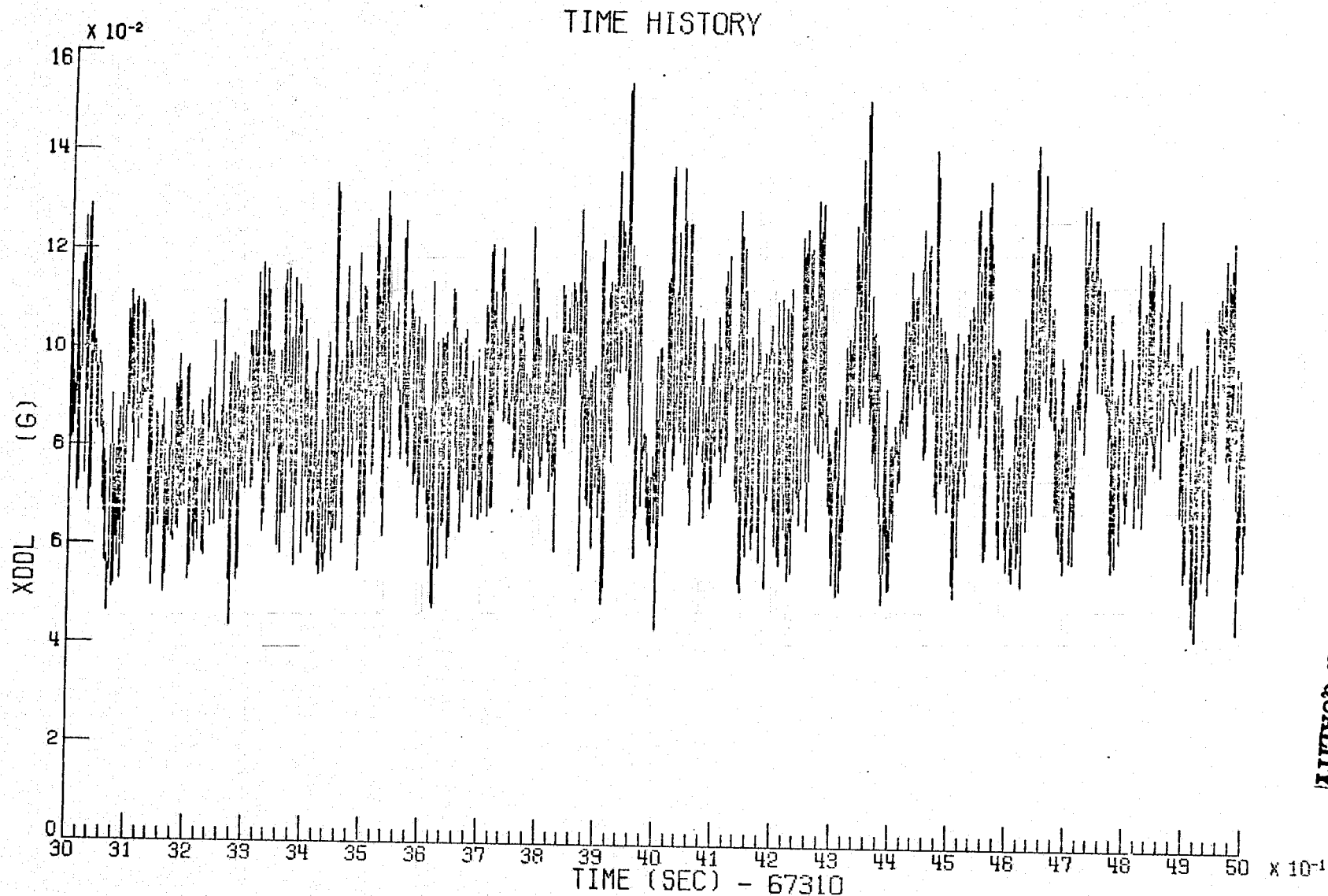
POGO - 2

CY1850

1024 SPS

FIGURE 3.13b

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 09/22/75



MAX = .155

MIN = .042

VIKING B FLT (CIF)

POGO - 2

XDDL .

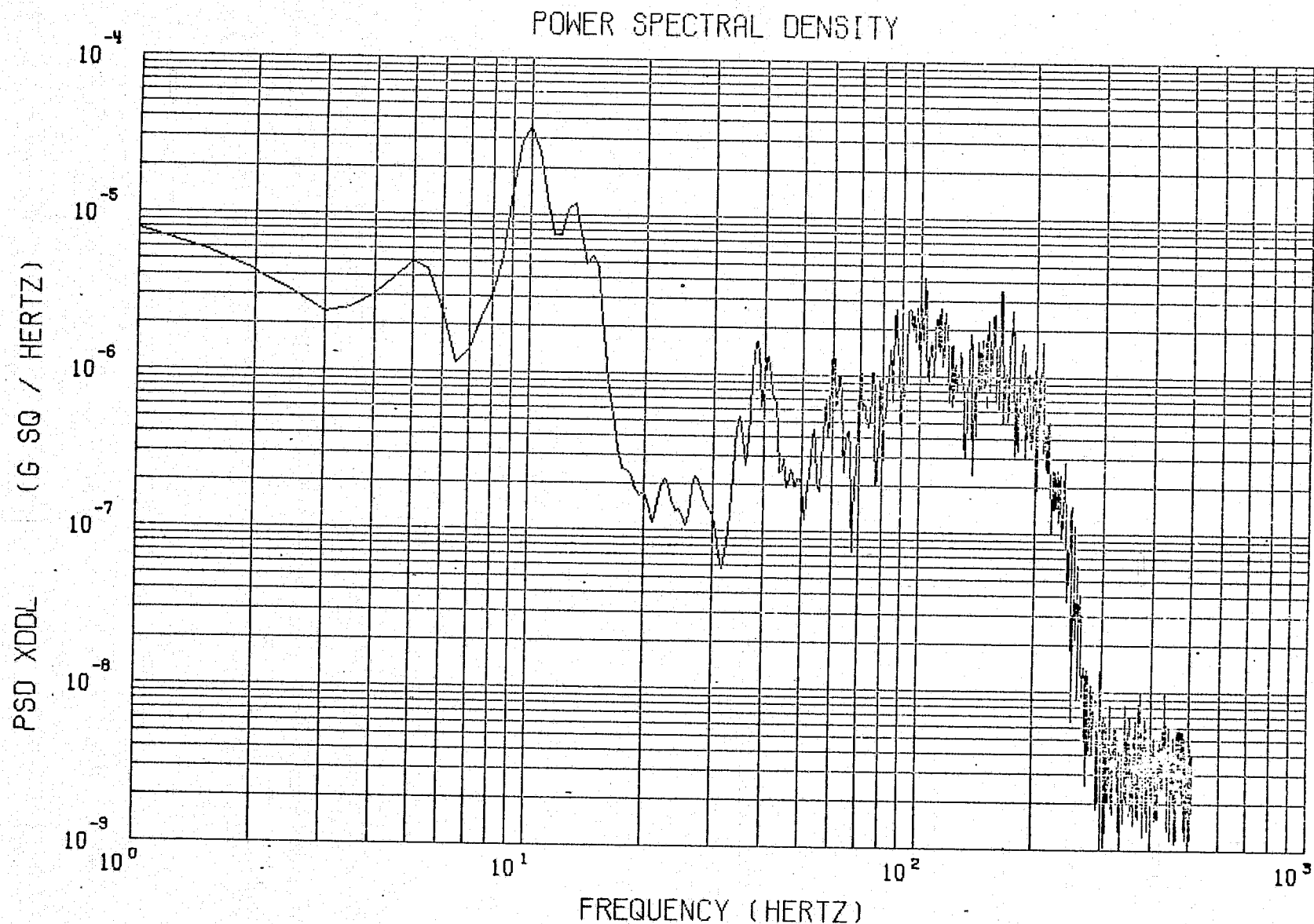
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FIGURE 3.14 a

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3.31

332



$\Delta F = .500$

START = 67313.000 SEC

STOP = 67315.000 SEC

MEAN = 89046×10^{-6}

$\sigma^2 = 32112 \times 10^{-6}$

$\sigma = 17919 \times 10^{-6}$

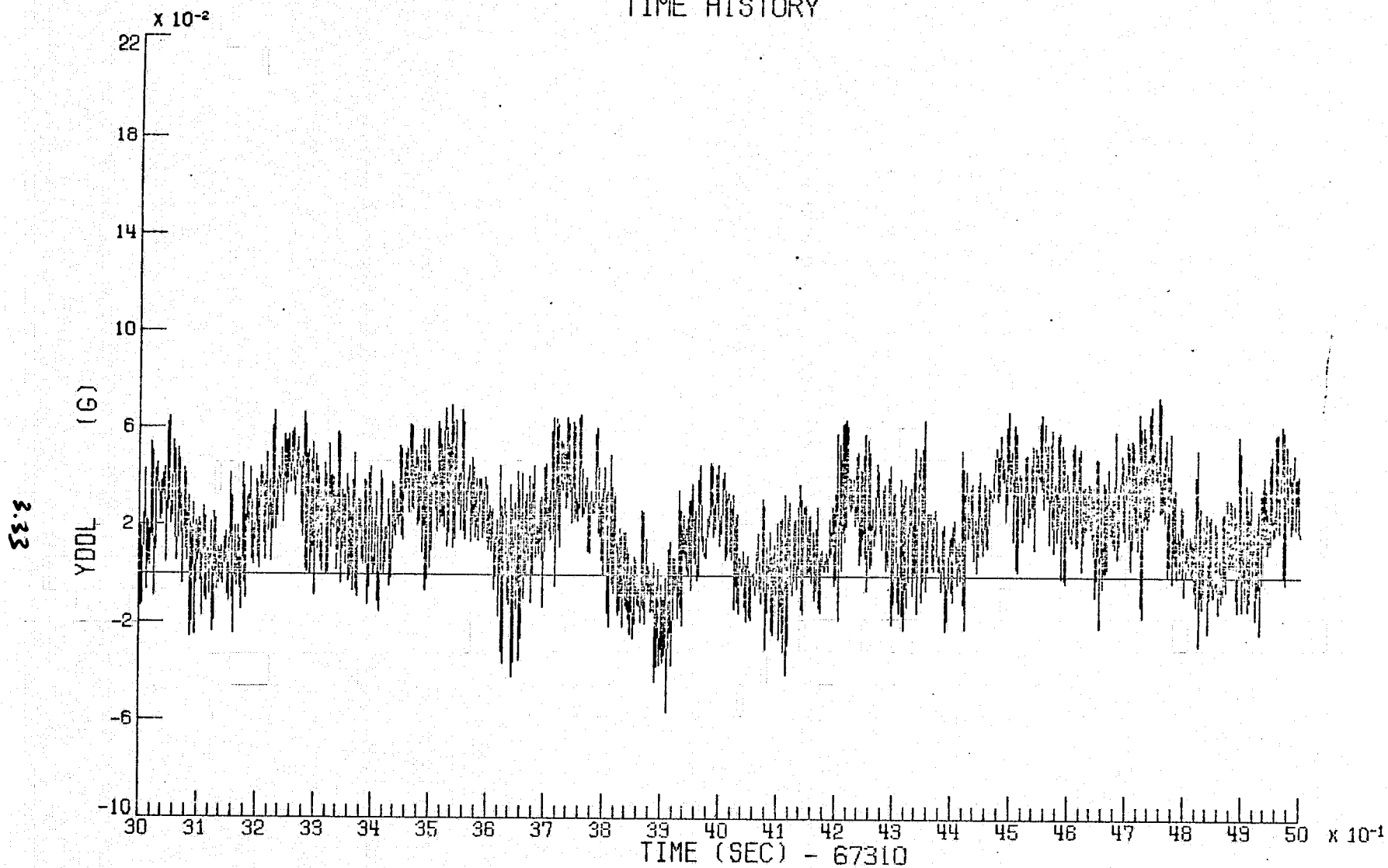
$3\sigma = 53759 \times 10^{-6}$

VIKING 6 FLT (CIF)

POGO - 2

XDDL

TIME HISTORY



MAX = .073

MIN = -.056

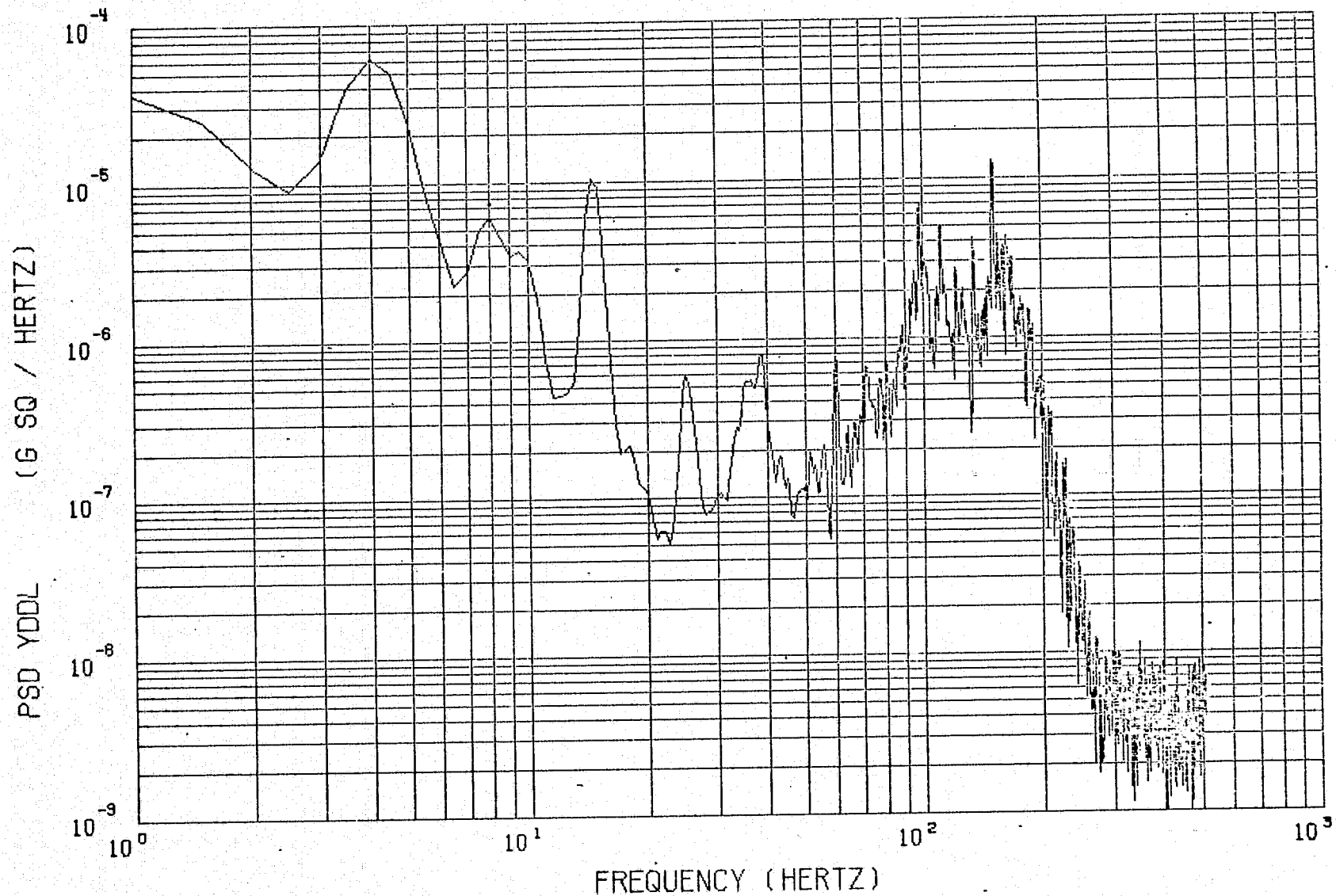
VIKING B FLT (CIF)

POGO - 2

YDDL

POWER SPECTRAL DENSITY

3.34



$\Delta F = .500$

START = 67313.000 SEC

STOP = 67315.000 SEC

MEAN = 20409×10^{-6}

$\sigma^2 = 42785 \times 10^{-6}$

$\sigma = 20684 \times 10^{-6}$

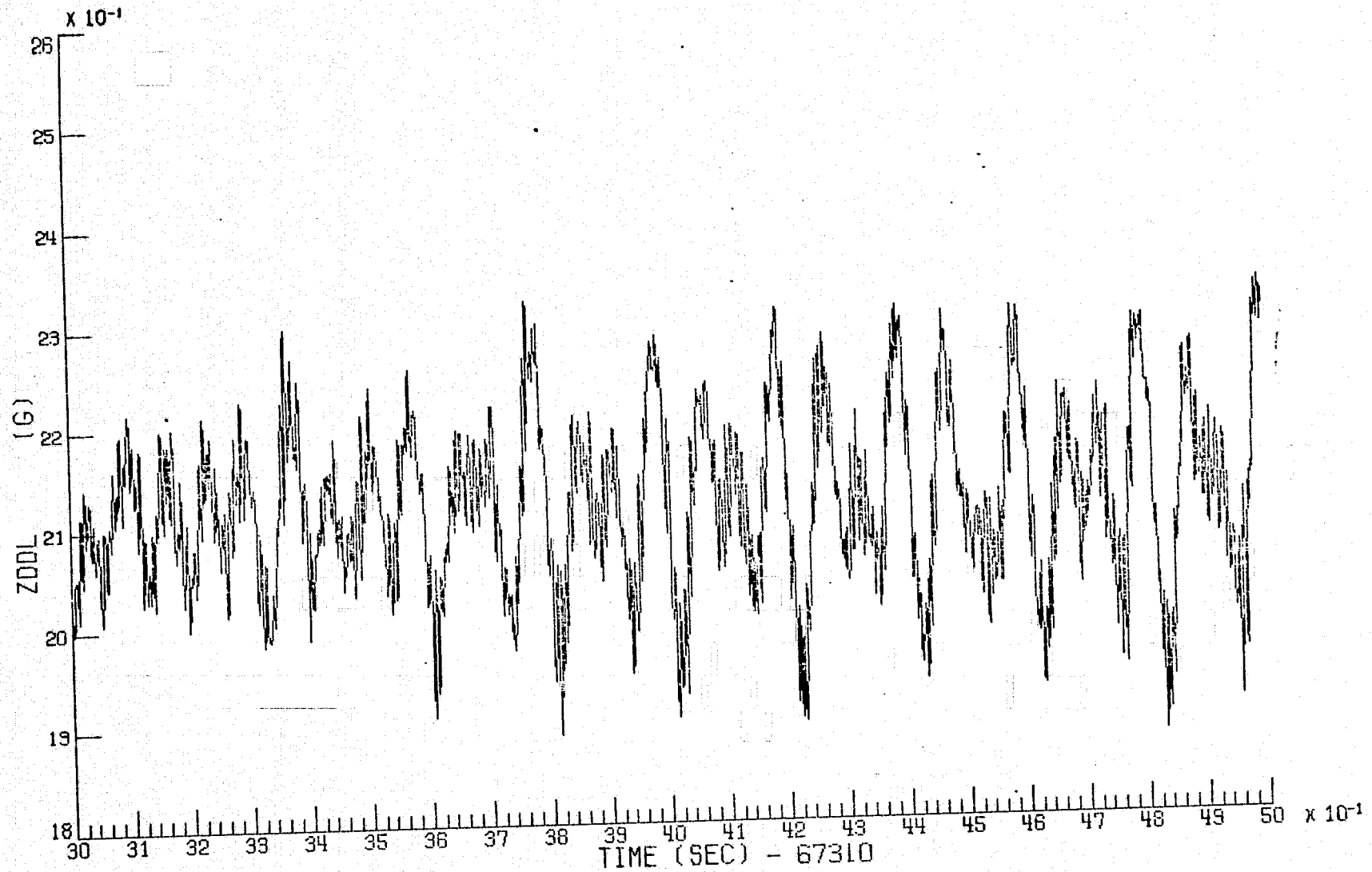
$3\sigma = 62053 \times 10^{-6}$

VIKING B FLT (CIF)

POGO - 2

YDDL

TIME HISTORY



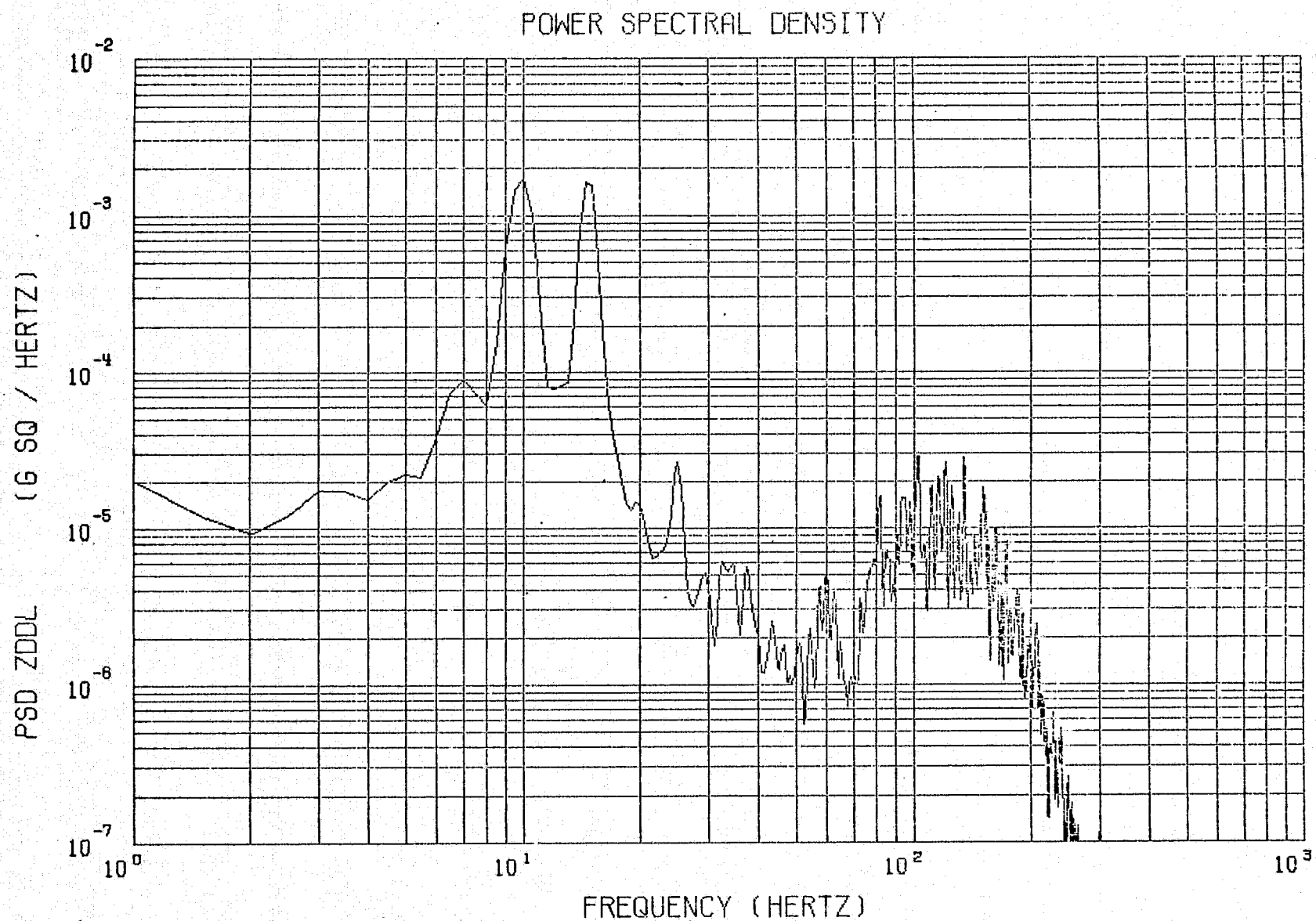
MAX = 2.331

MIN = 1.881

VIKING B FLT (CIF)

POGO - 2

ZDDL

 $\Delta F = .500$

START = 67313.000 SEC

STOP = 67315.000 SEC

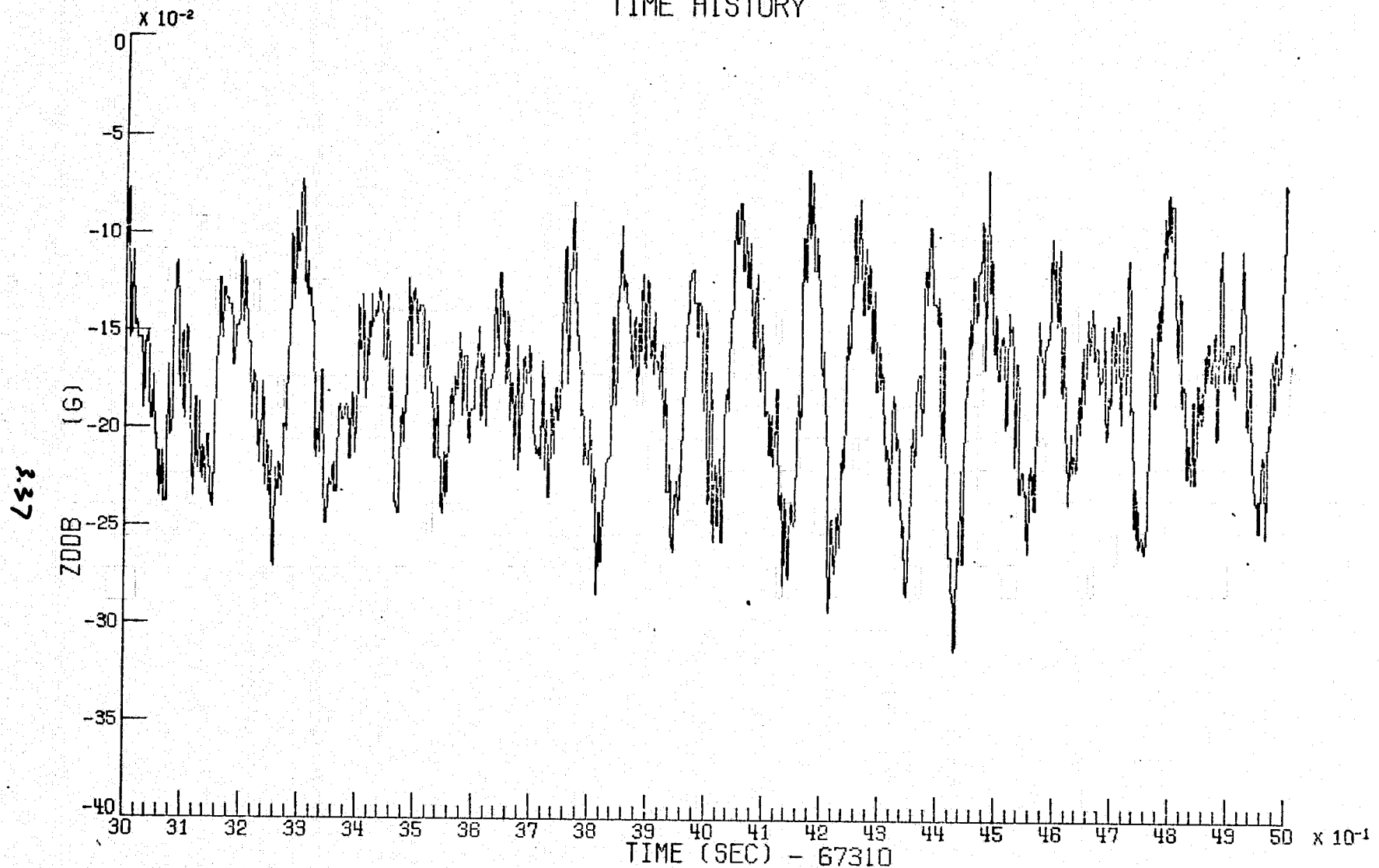
MEAN = 21193×10^{-9} $\sigma^2 = 68224 \times 10^{-7}$ $\sigma = 82598 \times 10^{-9}$ $3\sigma = 24779 \times 10^{-9}$

VIKING B FLT (CIF)

POGO - 2

ZDDL

TIME HISTORY



MAX = -.067

MIN = -.312

VIKING B FLT (CIF)

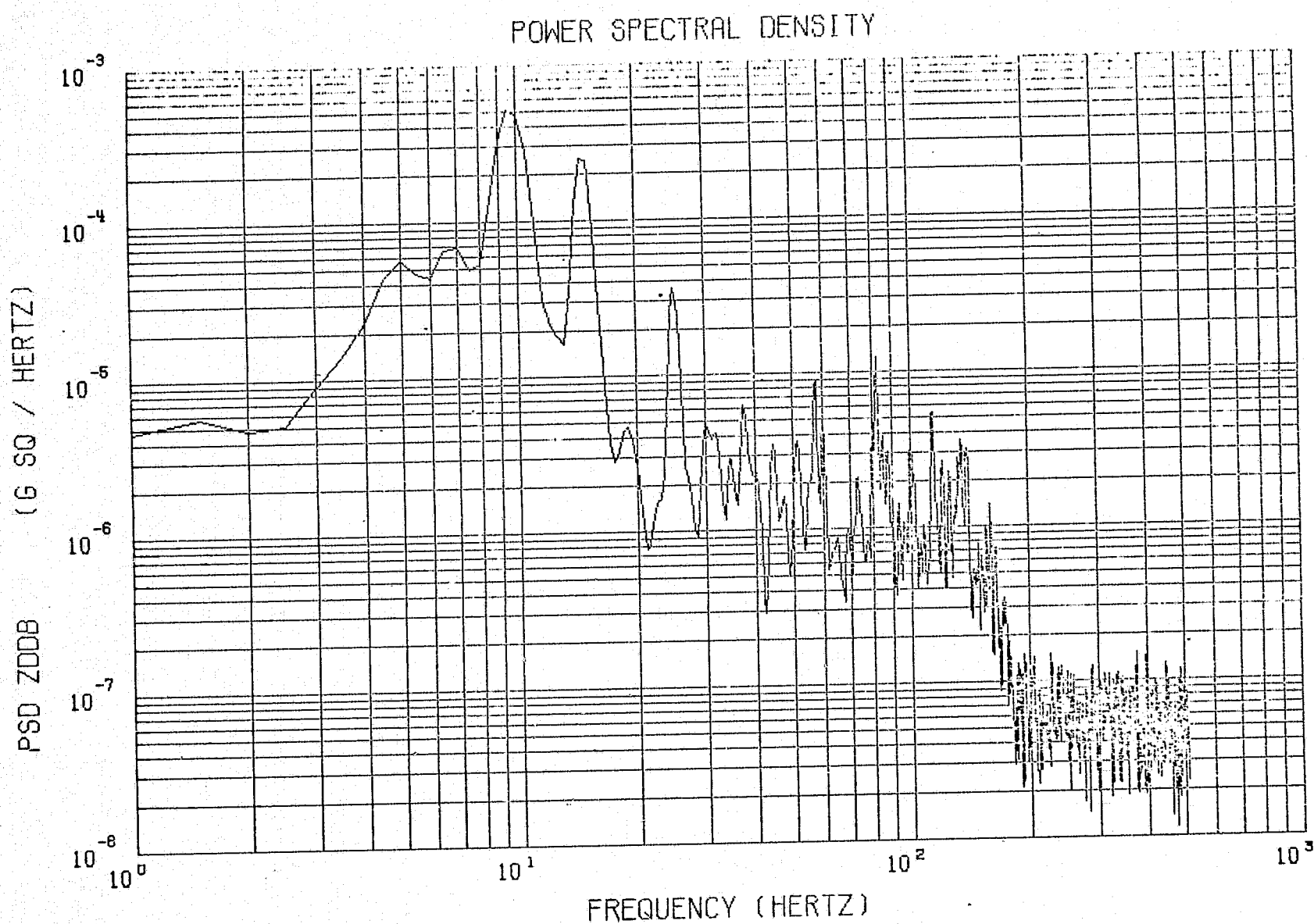
POGO - 2

ZODB

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 09/23/75

FIGURE 3.17a

833

 $\Delta F = .500$

START = 67313.000 SEC

STOP = 67315.000 SEC

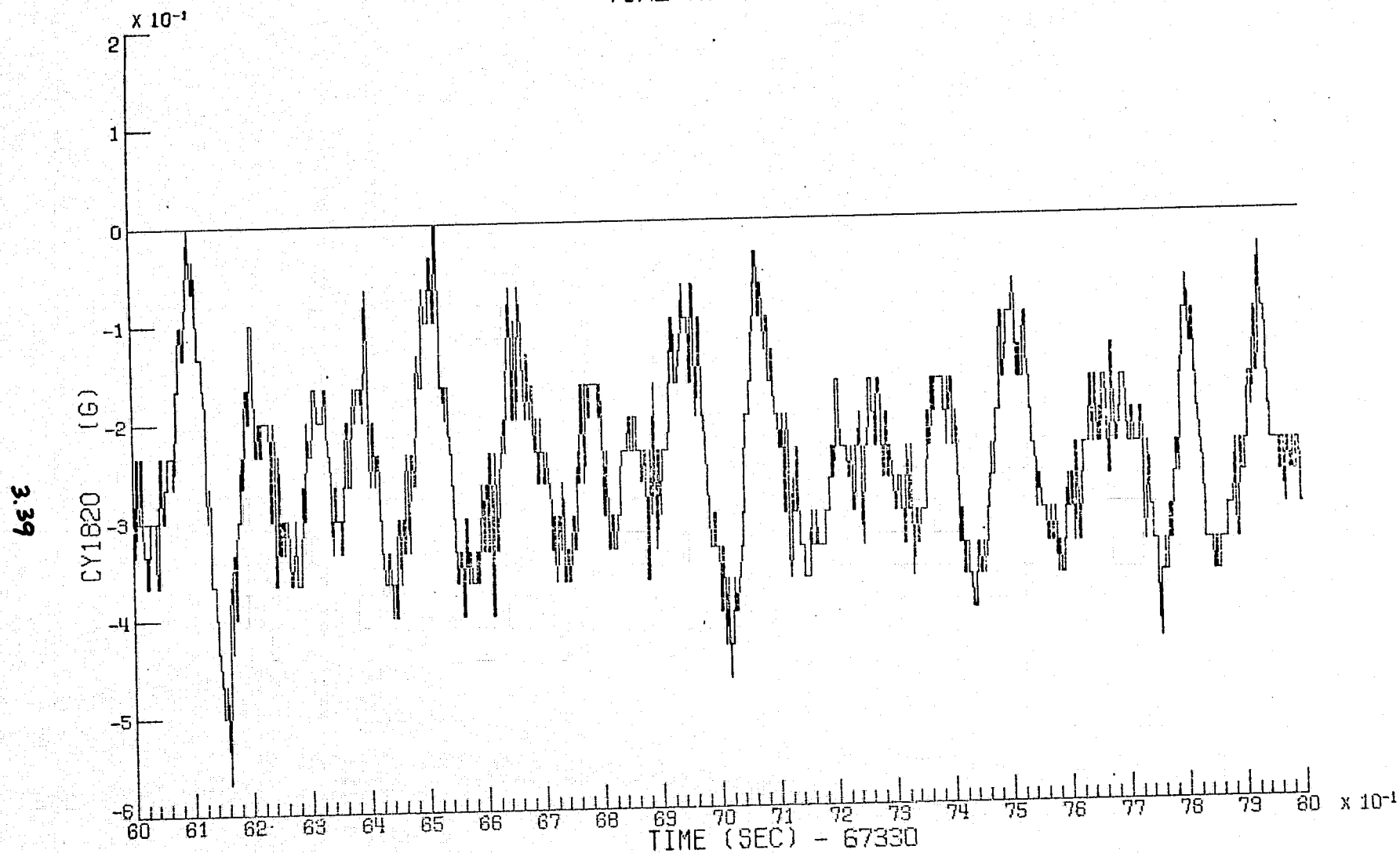
MEAN = -17846×10^{-5} $\sigma^2 = 19329 \times 10^{-7}$ $\sigma = 43965 \times 10^{-5}$ $3\sigma = 13189 \times 10^{-5}$

VIKING B FLT (CIF)

POGO - 2

ZODB

TIME HISTORY



MAX = .000

MIN = -.566

VIKING B FLT (CIF)

POGO - 3

CY1820

1024 SPS

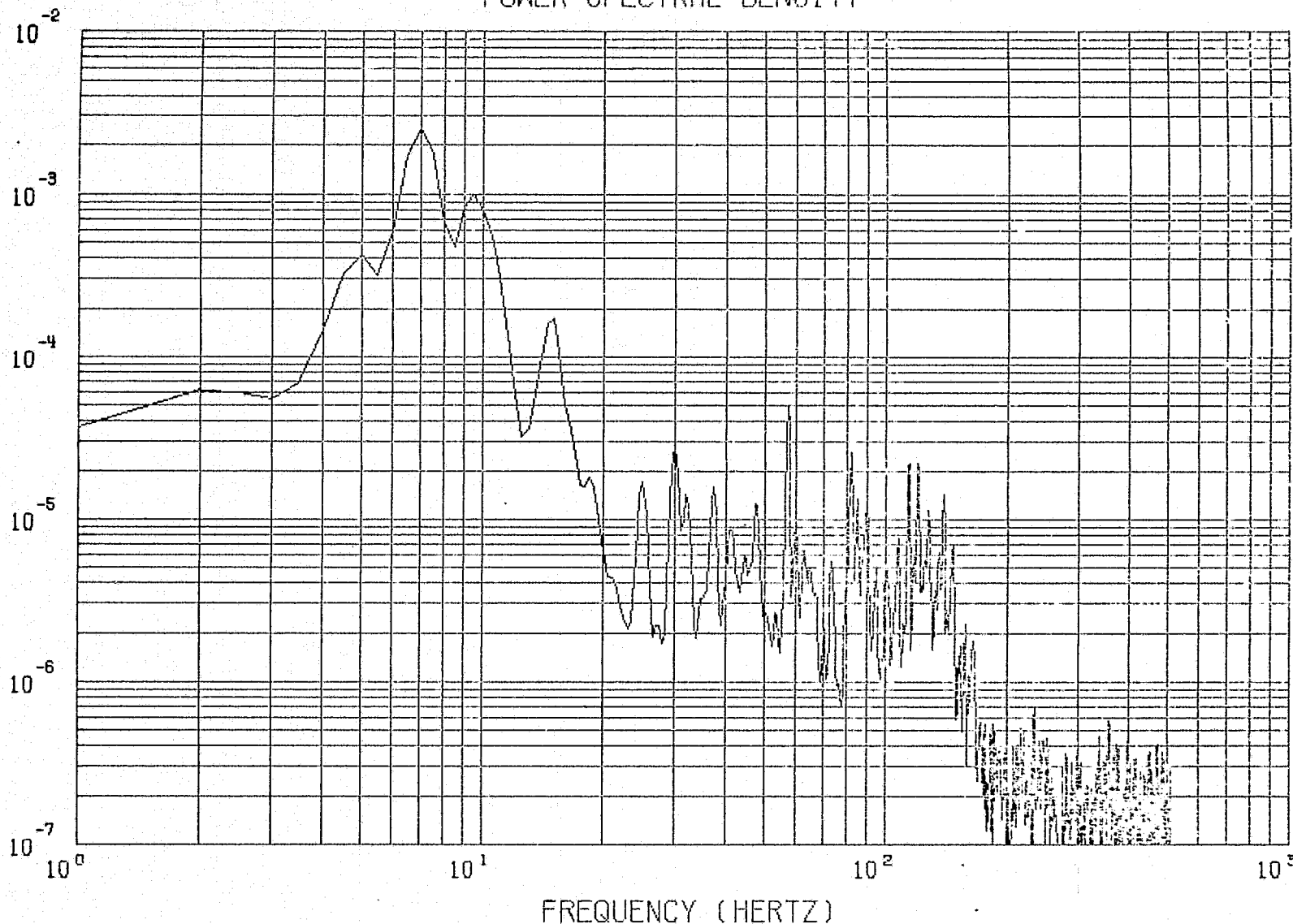
NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 09/22/75

FIGURE 3.18 a

30

PSD CY1820 (G SQ / HERTZ)

POWER SPECTRAL DENSITY



$\Delta F = .500$

START = 67336.000 SEC

STOP = 67338.000 SEC

MEAN = -24804×10^{-6}

$\sigma^2 = 77023 \times 10^{-7}$

$\sigma = 87763 \times 10^{-6}$

$3\sigma = 26328 \times 10^{-5}$

VIKING B FLT (CIF)

POGO - 3

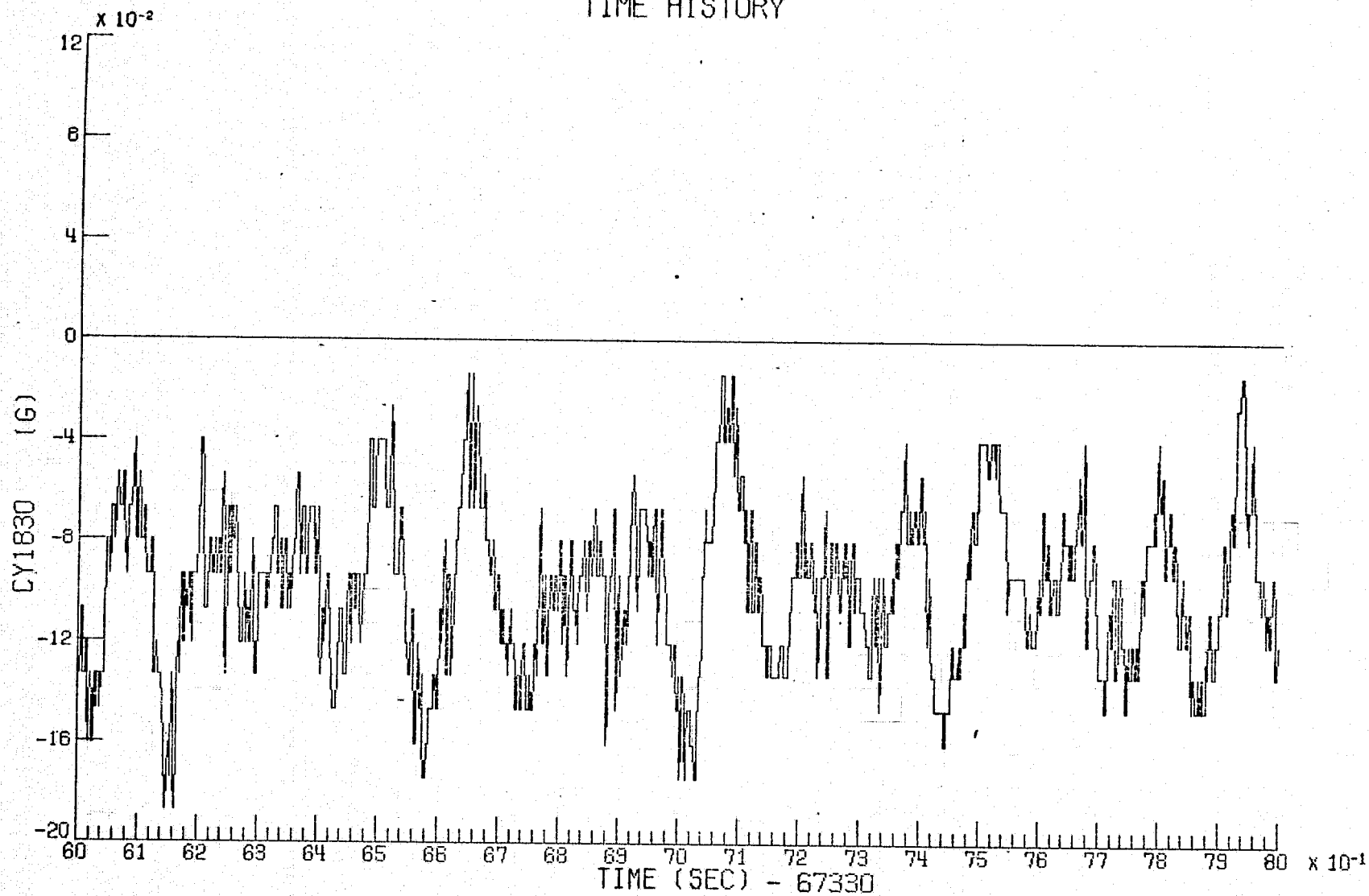
CY1820

1024 SPS

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 09/22/75

FIGURE 3.18b

TIME HISTORY



MAX = -.013

MIN = -.187

VIKING B FLT (CIF)

POGO - 3

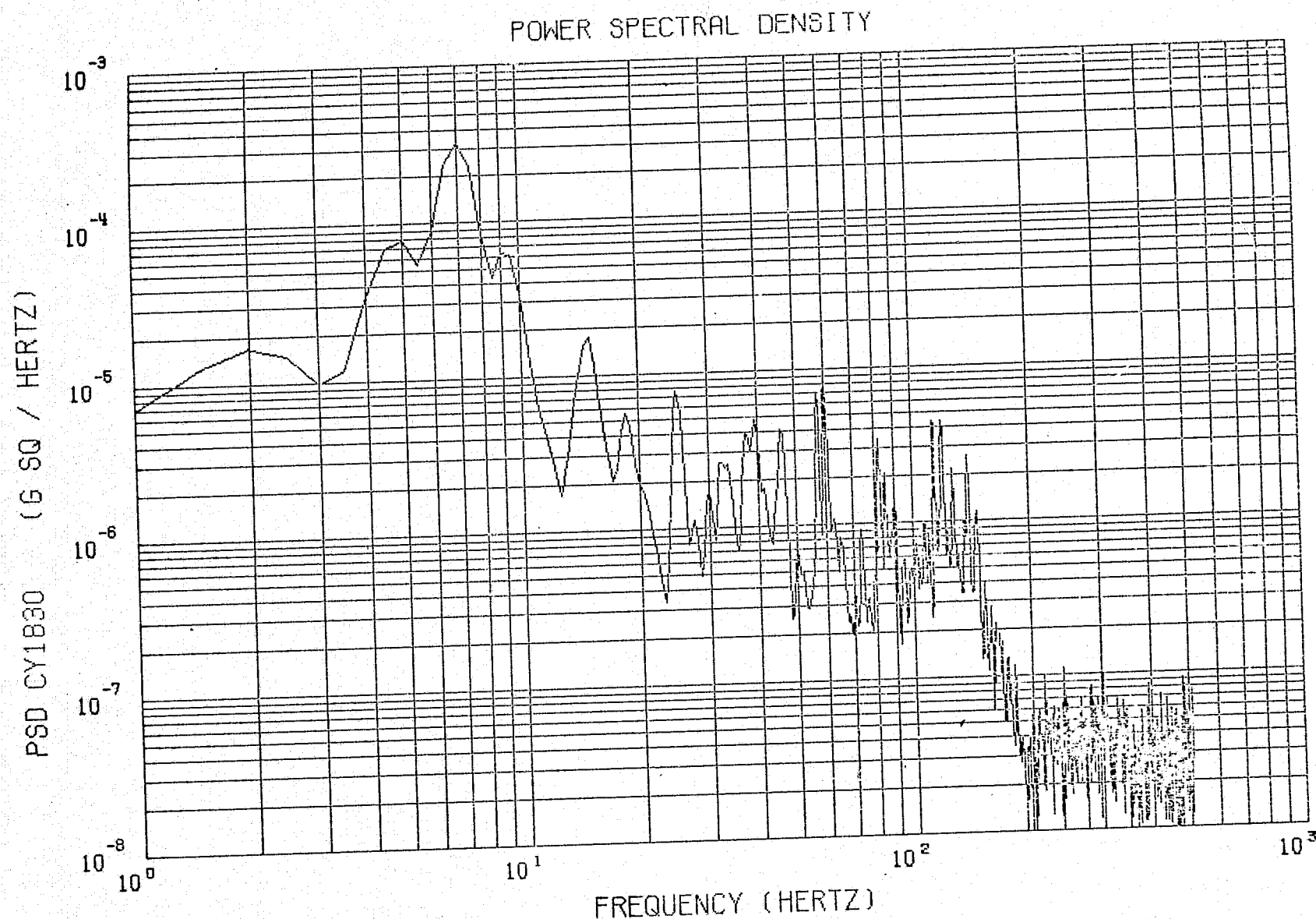
CY1830

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 09/22/75

1024 SPS

FIGURE 3.19a

242



$\Delta F = .500$ START = 67336.000 SEC STOP = 67338.000 SEC
 MEAN = -98065×10^{-6} $\sigma^2 = 97856 \times 10^{-6}$ $\sigma = 31282 \times 10^{-6}$ $3\sigma = 93846 \times 10^{-6}$

VIKING B FLT (CIF)

POGO - 3

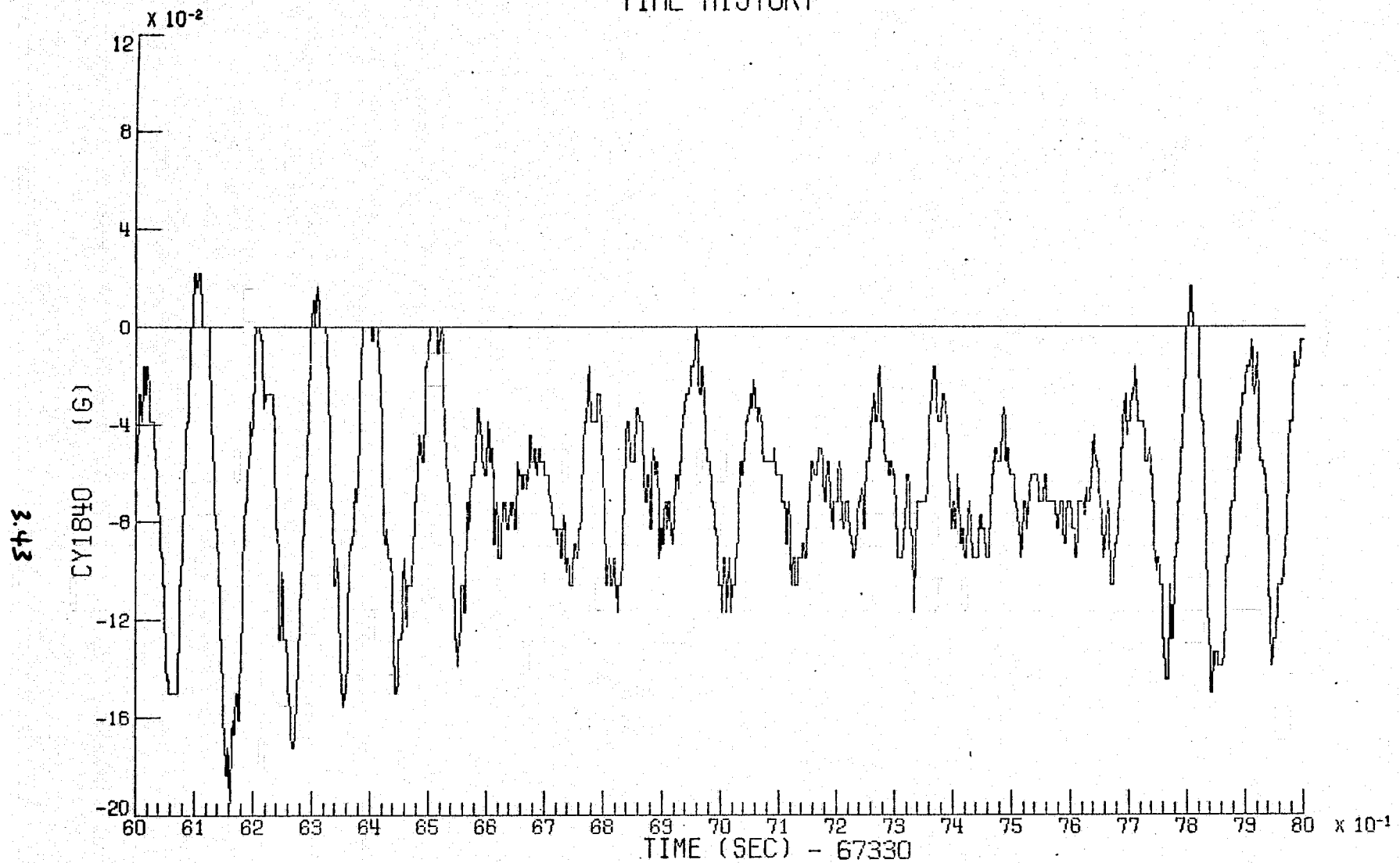
CY1830

1024 SPS

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 03/22/75

FIGURE 3.19b

TIME HISTORY



MAX = .022

MIN = -.194

VIKING B FLT (CIF)

POGO - 3

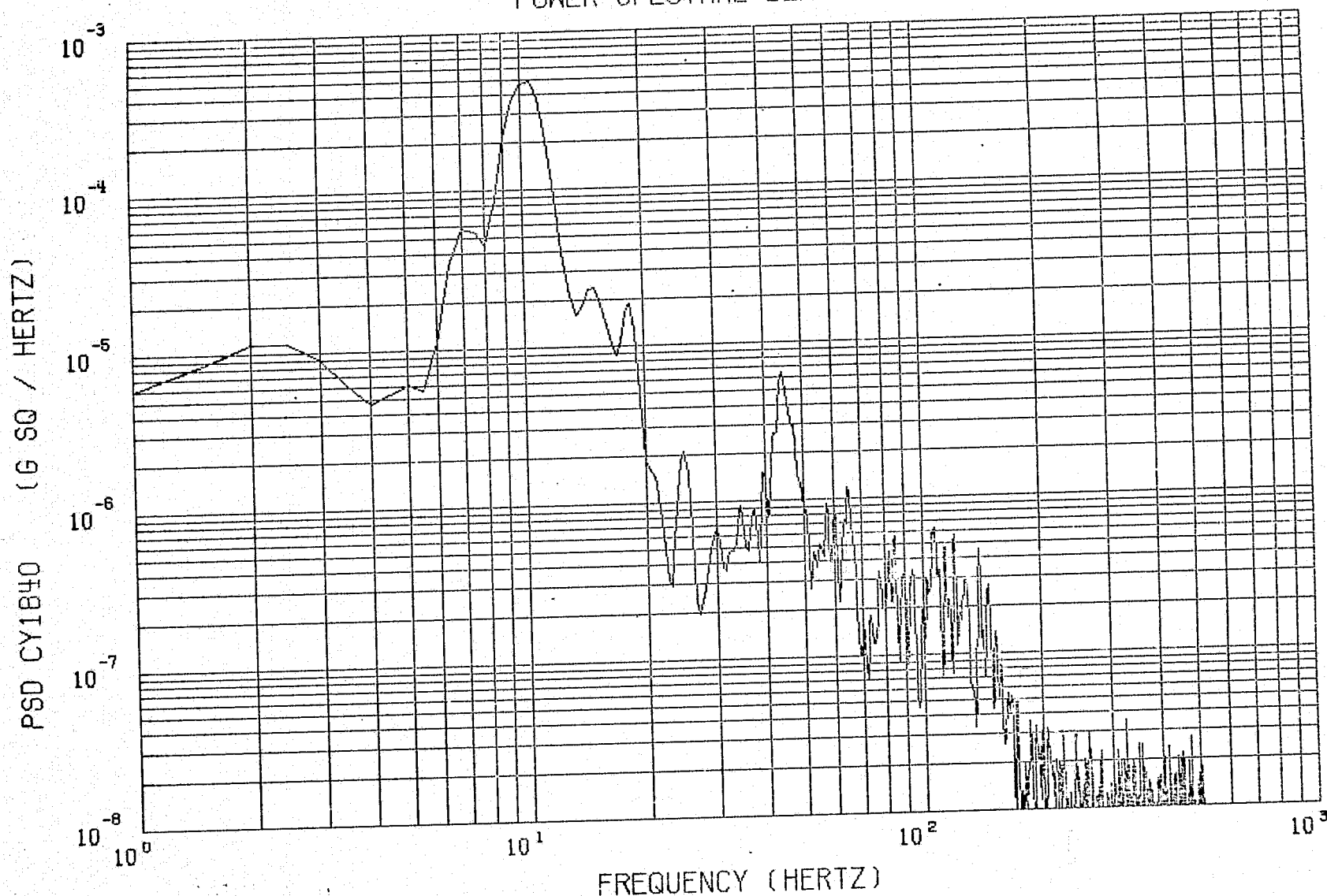
CY1840

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 09/22/75

1024 SPS

FIGURE 3.20 a

POWER SPECTRAL DENSITY



$\Delta F = .500$

START = 67336.000 SEC

STOP = 67338.000 SEC

MEAN = -67783×10^{-6}

$\sigma^2 = 14975 \times 10^{-7}$

$\sigma = 38697 \times 10^{-6}$

$3\sigma = 11609 \times 10^{-5}$

VIKING B FLT (CIF)

POGO - 3

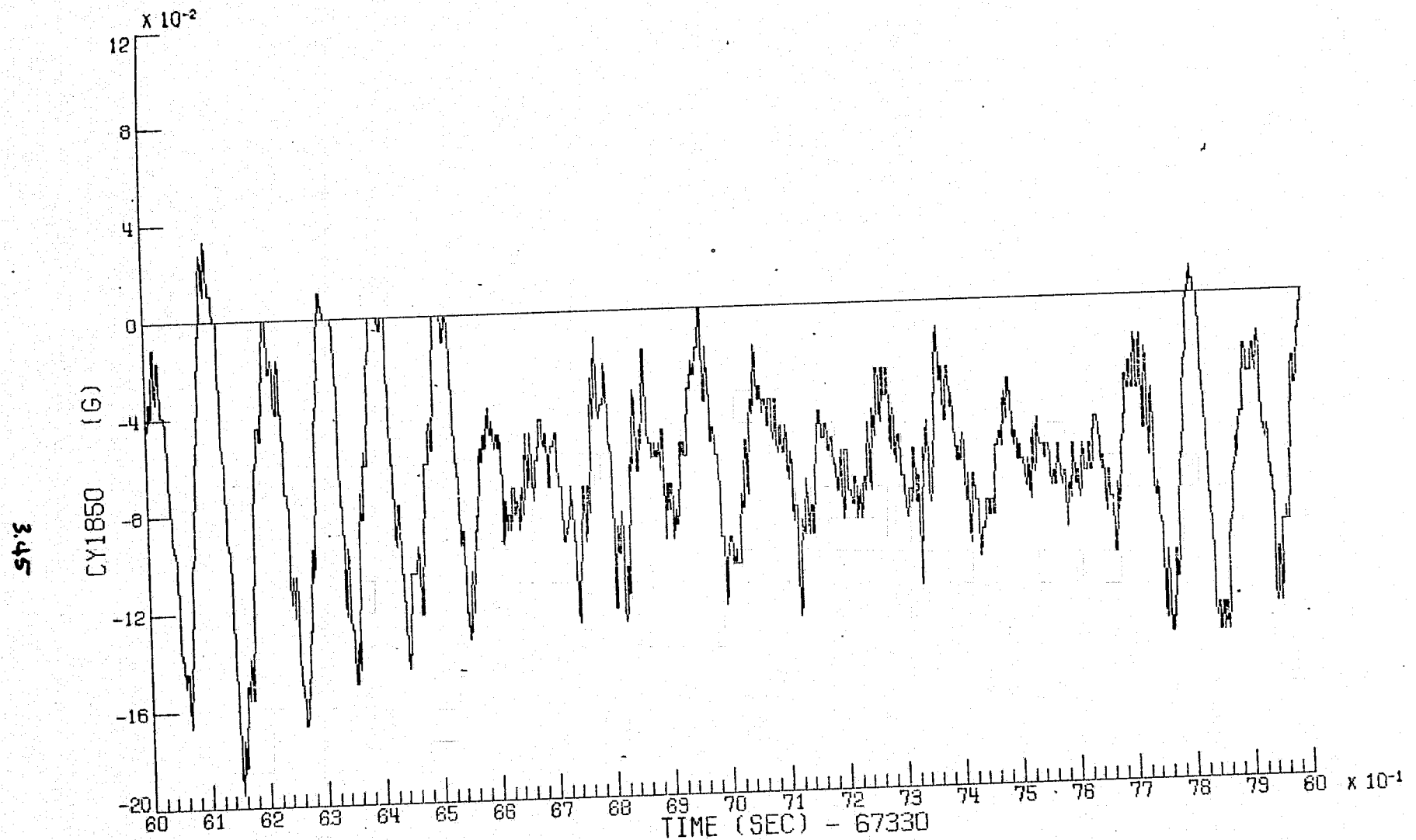
CY1840

1024 SPS

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 09/22/75

FIGURE 3.20b

TIME HISTORY



MAX = .033

MIN = -.194

VIKING B FLT (CIF)

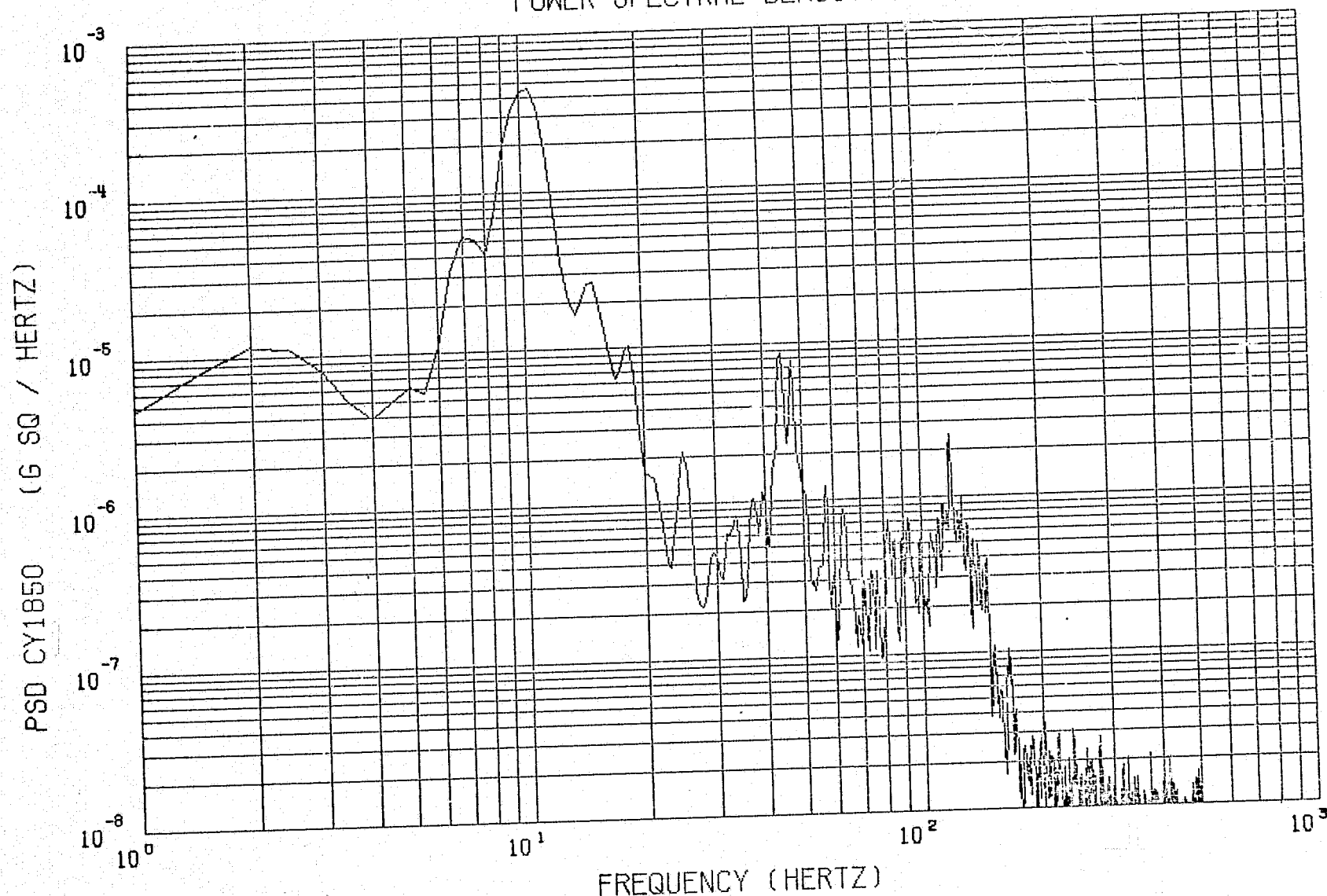
POGO - 3
1024 SPS

CY1850

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 09/22/75

FIGURE 3.21 a

POWER SPECTRAL DENSITY



$\Delta F = .500$

START = 67336.000 SEC

STOP = 67338.000 SEC

MEAN = -8602×10^{-5}

$\sigma^2 = 14004 \times 10^{-7}$

$\sigma = 37422 \times 10^{-5}$

$3\sigma = 11226 \times 10^{-5}$

VIKING B FLT (CIF)

POGO - 3

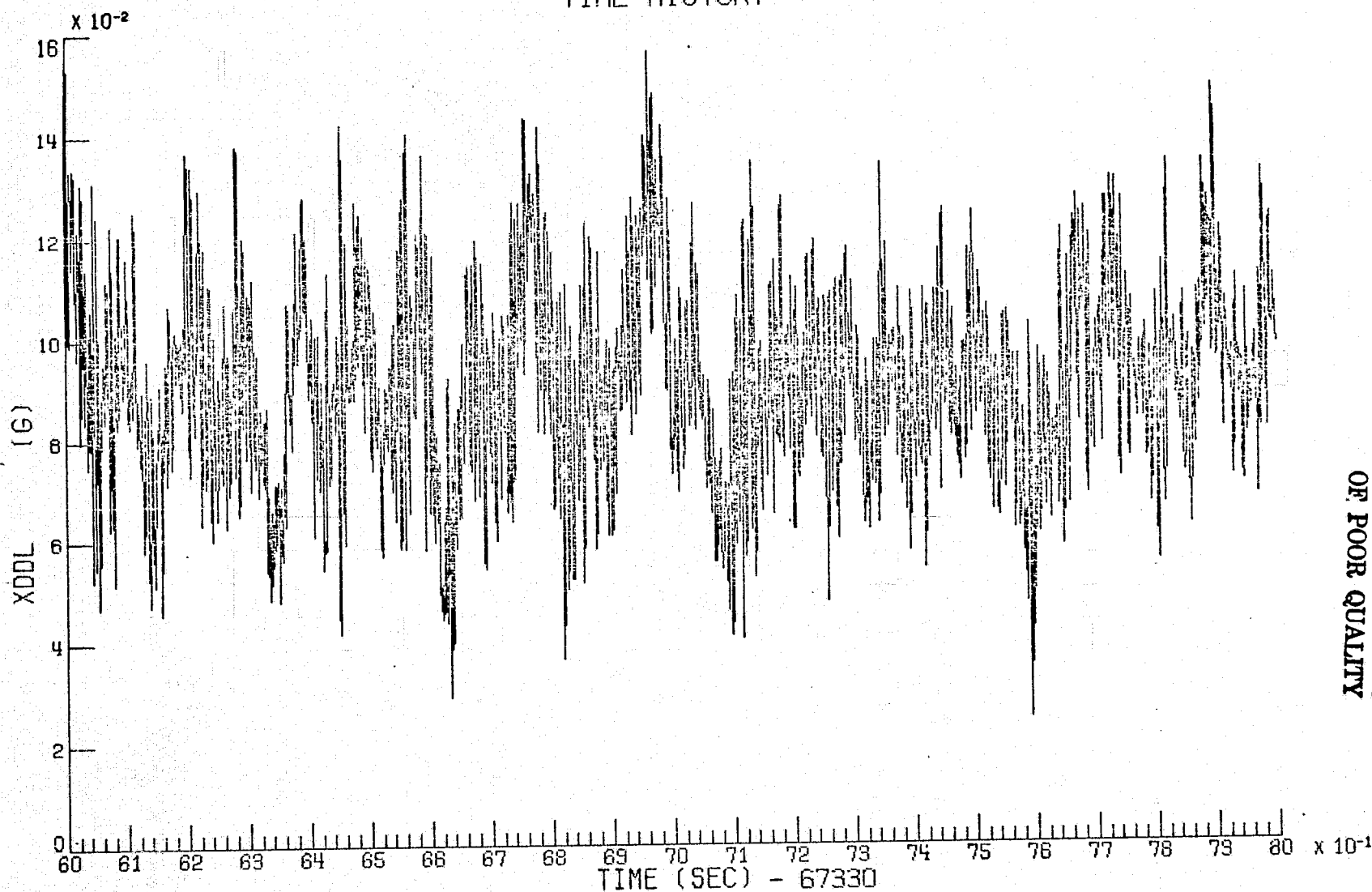
CY1850

1024 SPS

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 09/22/75

FIGURE 3.21 b

TIME HISTORY



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MAX = .156

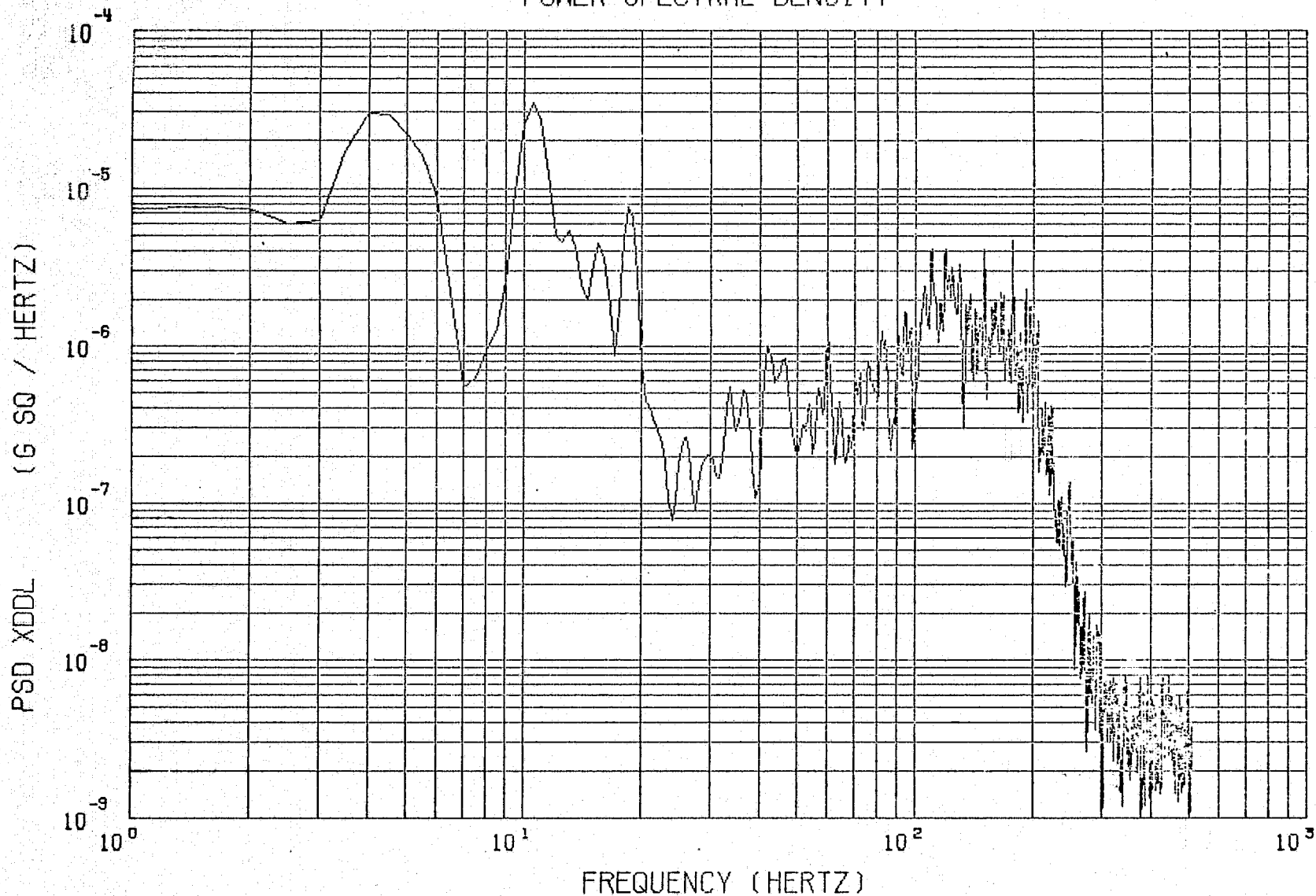
MIN = .024

VIKING B FLT (CIF)

POGO - 3

XDDL

POWER SPECTRAL DENSITY



$\Delta F = .500$

START = 67336.000 SEC

STOP = 67338.000 SEC

MEAN = 91041×10^{-6}

$\sigma^2 = 37142 \times 10^{-6}$

$\sigma = 19272 \times 10^{-6}$

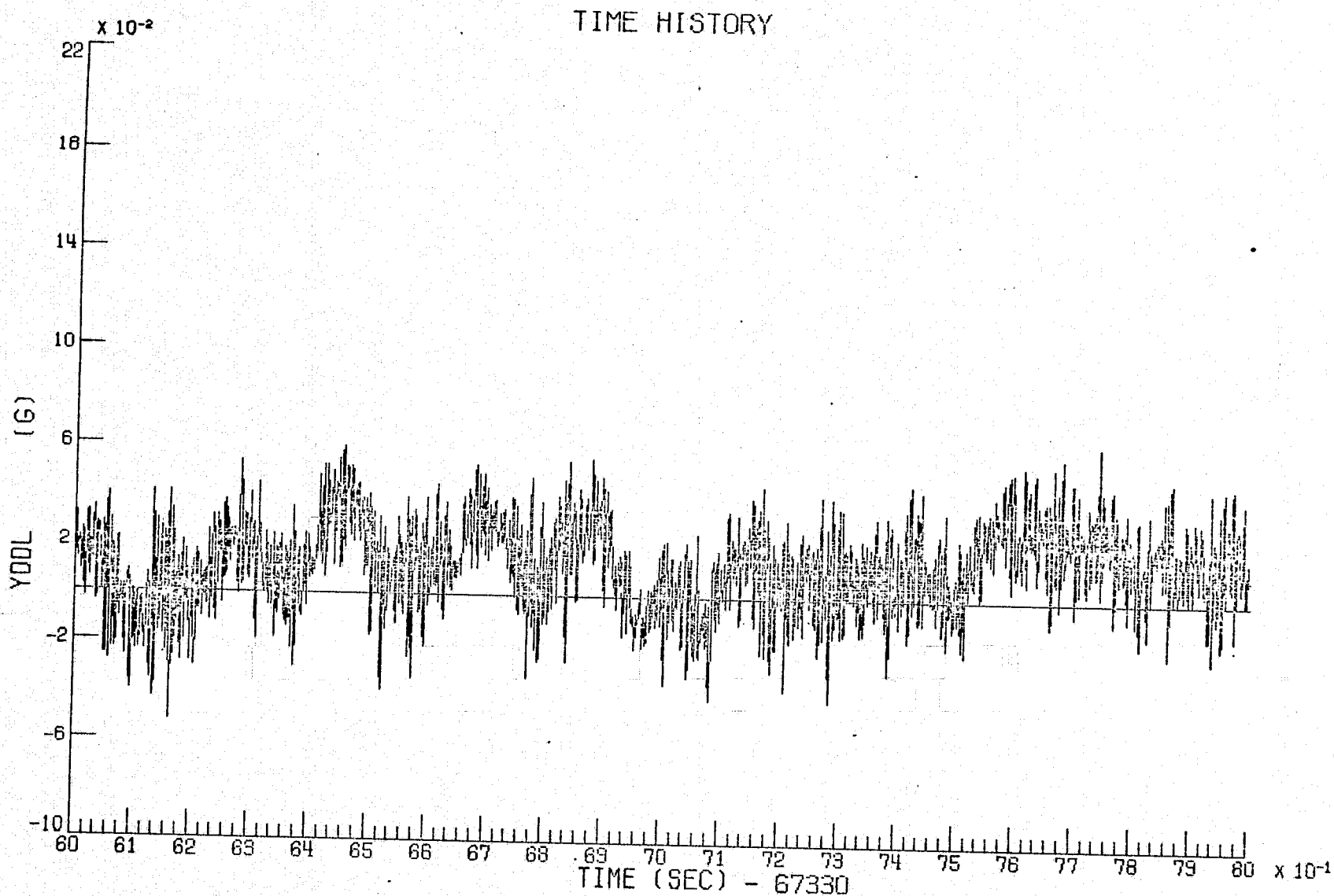
$3\sigma = 57817 \times 10^{-6}$

VIKING B FLT (CIF)

POGO - 3

XDDL

649



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VIKING B FLT (CIF)

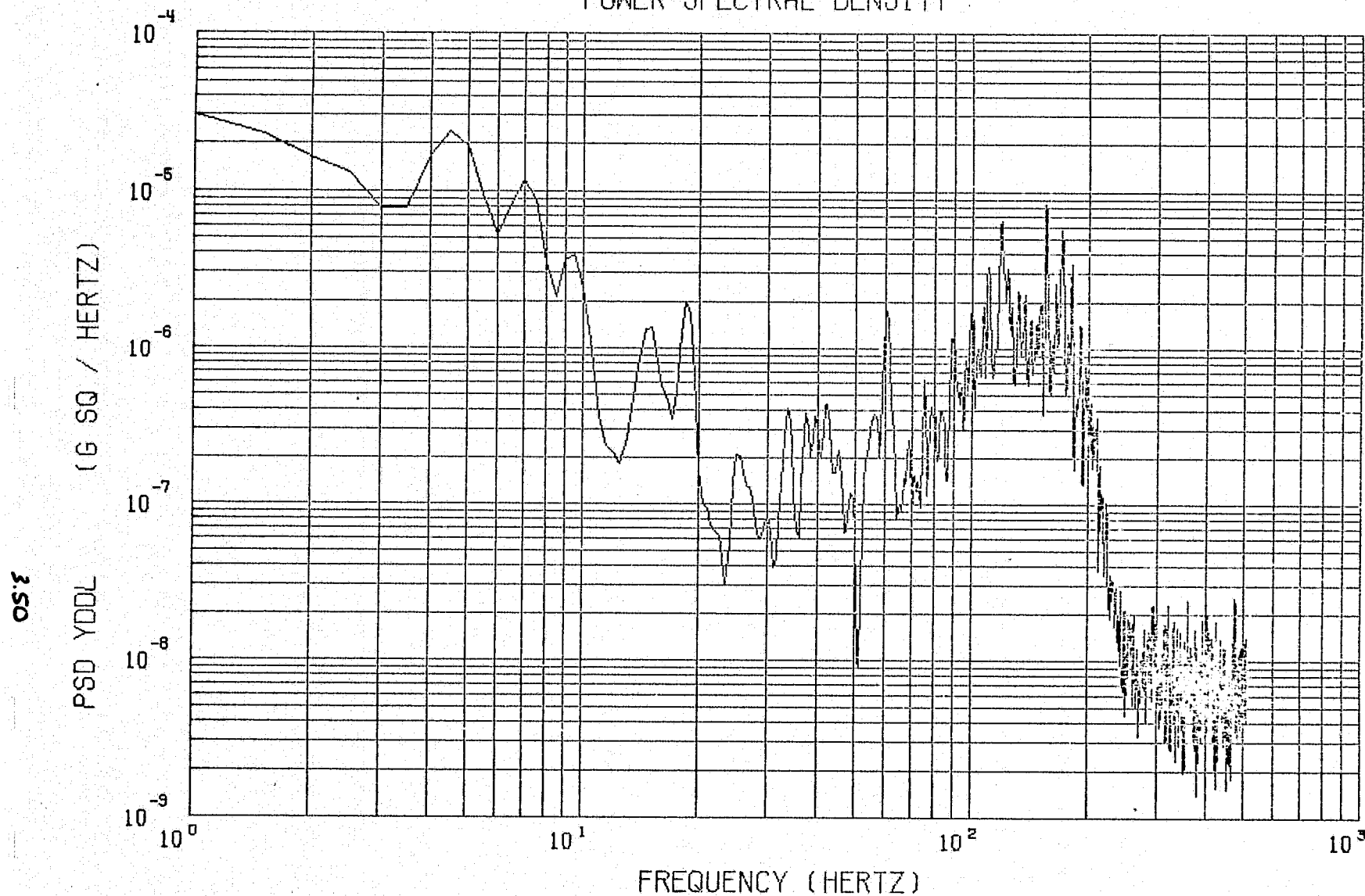
POGO - 3

YDDL

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 09/23/75

FIGURE 3.23 a

POWER SPECTRAL DENSITY



$\Delta F = .500$

START = 67336.000 SEC

STOP = 67338.000 SEC

MEAN = 12609×10^{-6}

$\sigma^2 = 31606 \times 10^{-6}$

$\sigma = 17778 \times 10^{-6}$

$3\sigma = 53334 \times 10^{-6}$

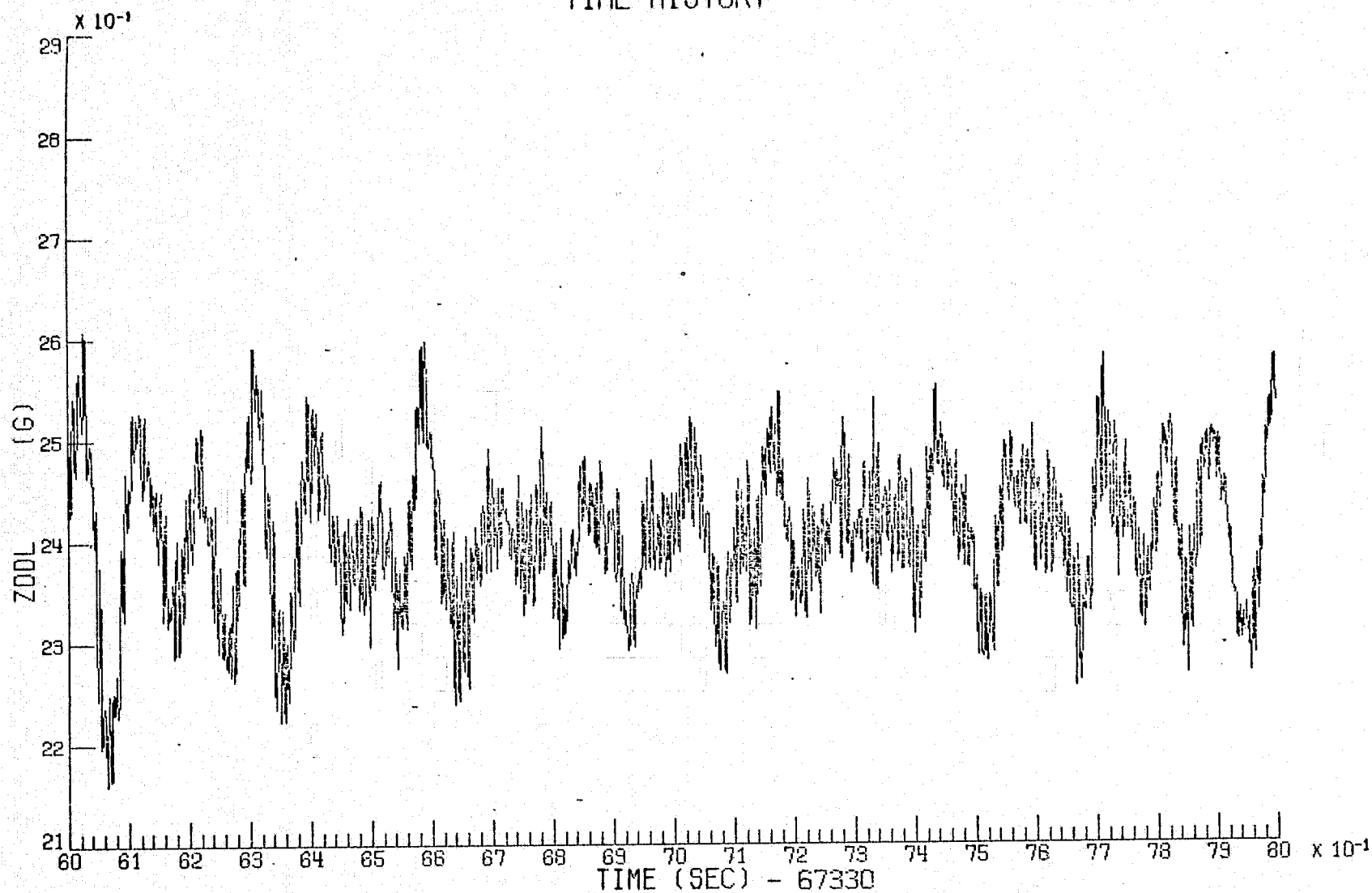
VIKING B FLT (CIF)

POGO - 3

YDDL

TIME HISTORY

3.51



MAX = 2.606

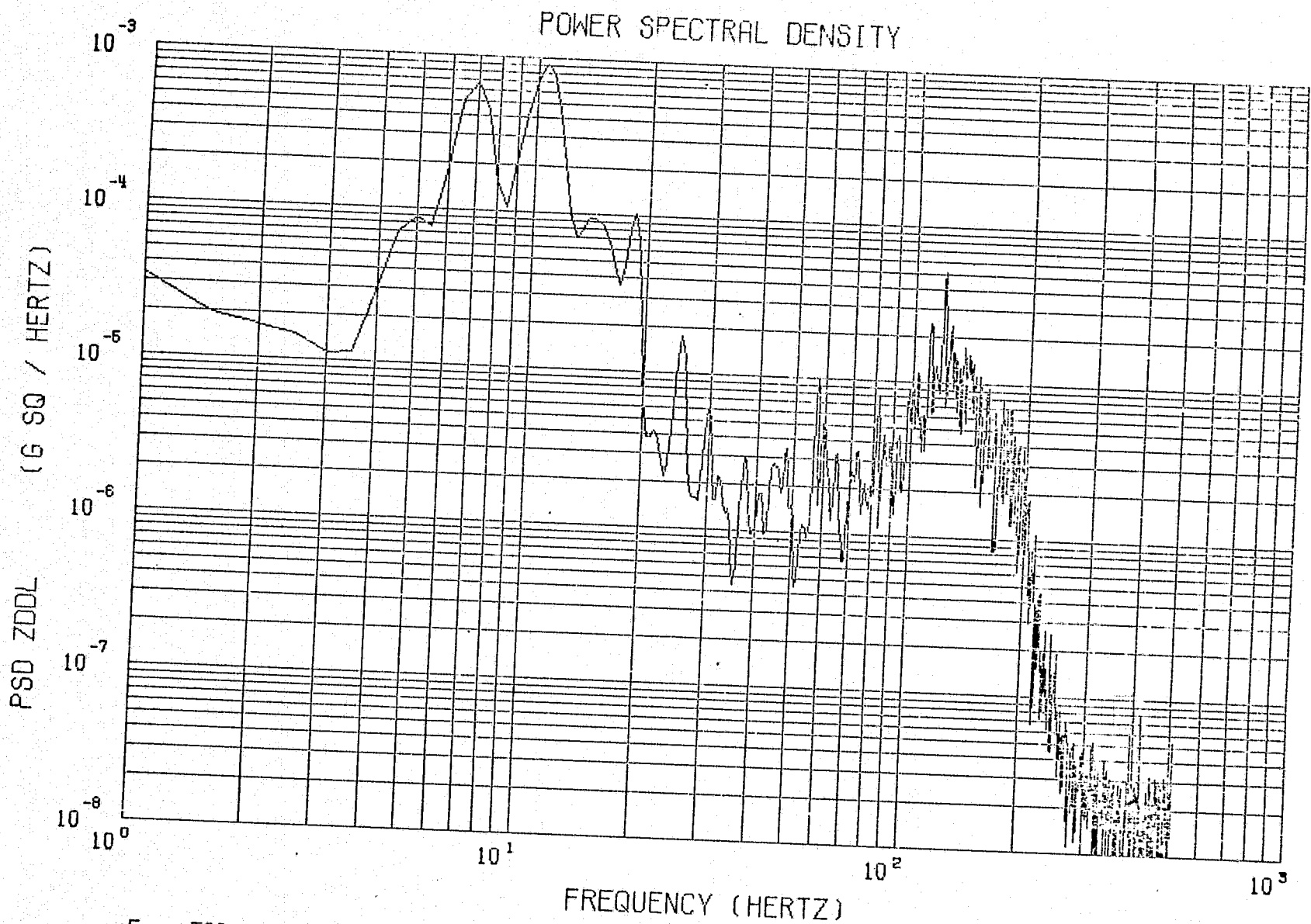
MIN = 2.160

VIKING B FLT (CIF)

POGO - 3

ZDDL

352



$\Delta F = .500$

START = 67336.000 SEC

STOP = 67338.000 SEC

MEAN = 24067×10^{-4}

$\sigma^2 = 46625 \times 10^{-7}$

$\sigma = 68282 \times 10^{-5}$

$3\sigma = 20484 \times 10^{-5}$

VIKING B FLT (CIF)

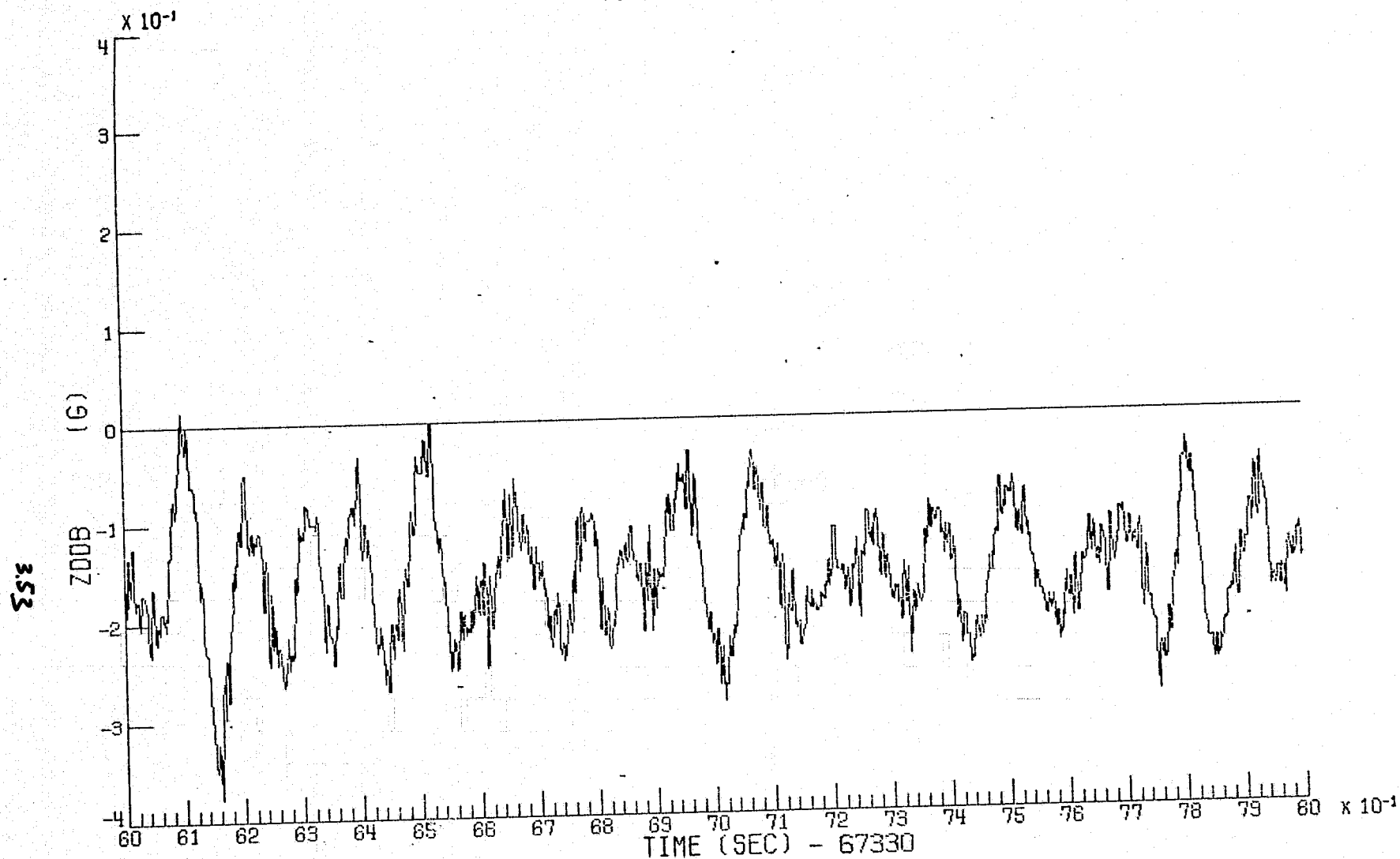
POGO - 3

ZDDL

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 09/23/75

FIGURE 3.24b

TIME HISTORY



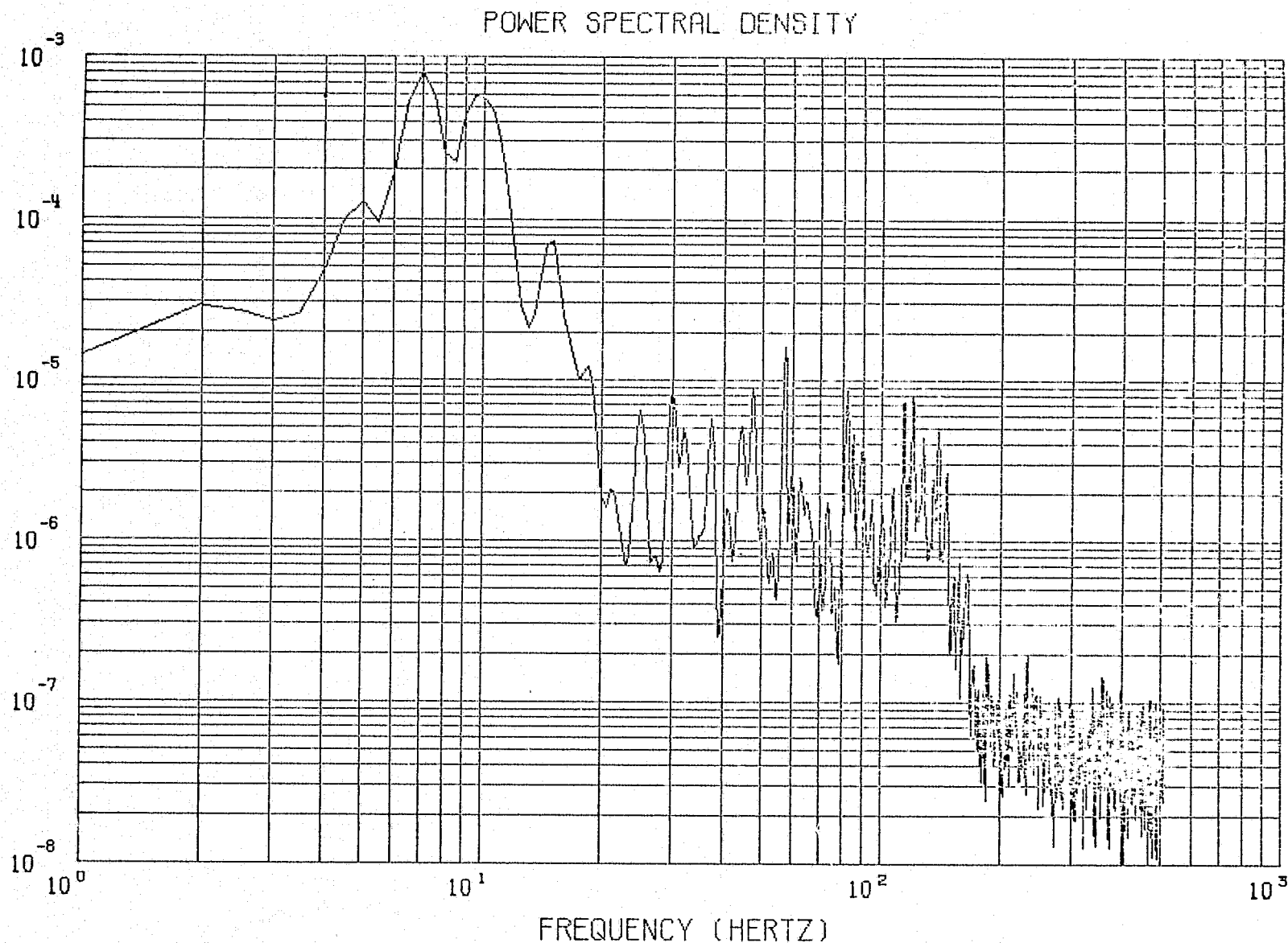
VIKING B FLT (CIF)

POGO - 3

ZODB

3.54

PSD ZDDB (G SQ / HERTZ)

 $\Delta F = .500$

START = 67336.000 SEC

STOP = 67338.000 SEC

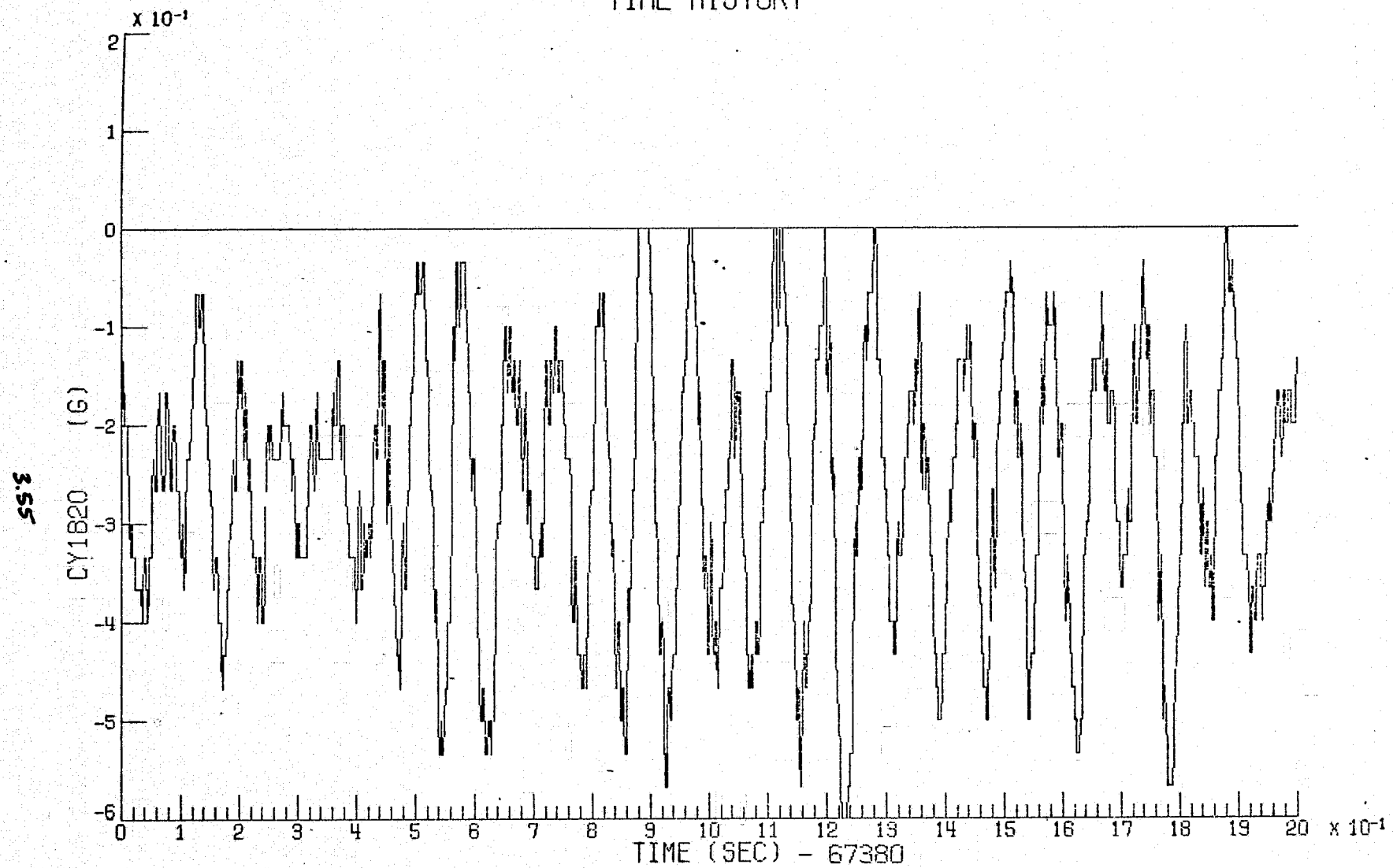
MEAN = -15778×10^{-5} $\sigma^2 = 33626 \times 10^{-7}$ $\sigma = 57988 \times 10^{-6}$ $3\sigma = 17396 \times 10^{-5}$

VIKING B FLT (CIF)

POGO - 3

ZDDB

TIME HISTORY



MAX = .000

MIN = -.600

VIKING B FLT (CIF)

POGO - 4

CY1820

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 09/22/75

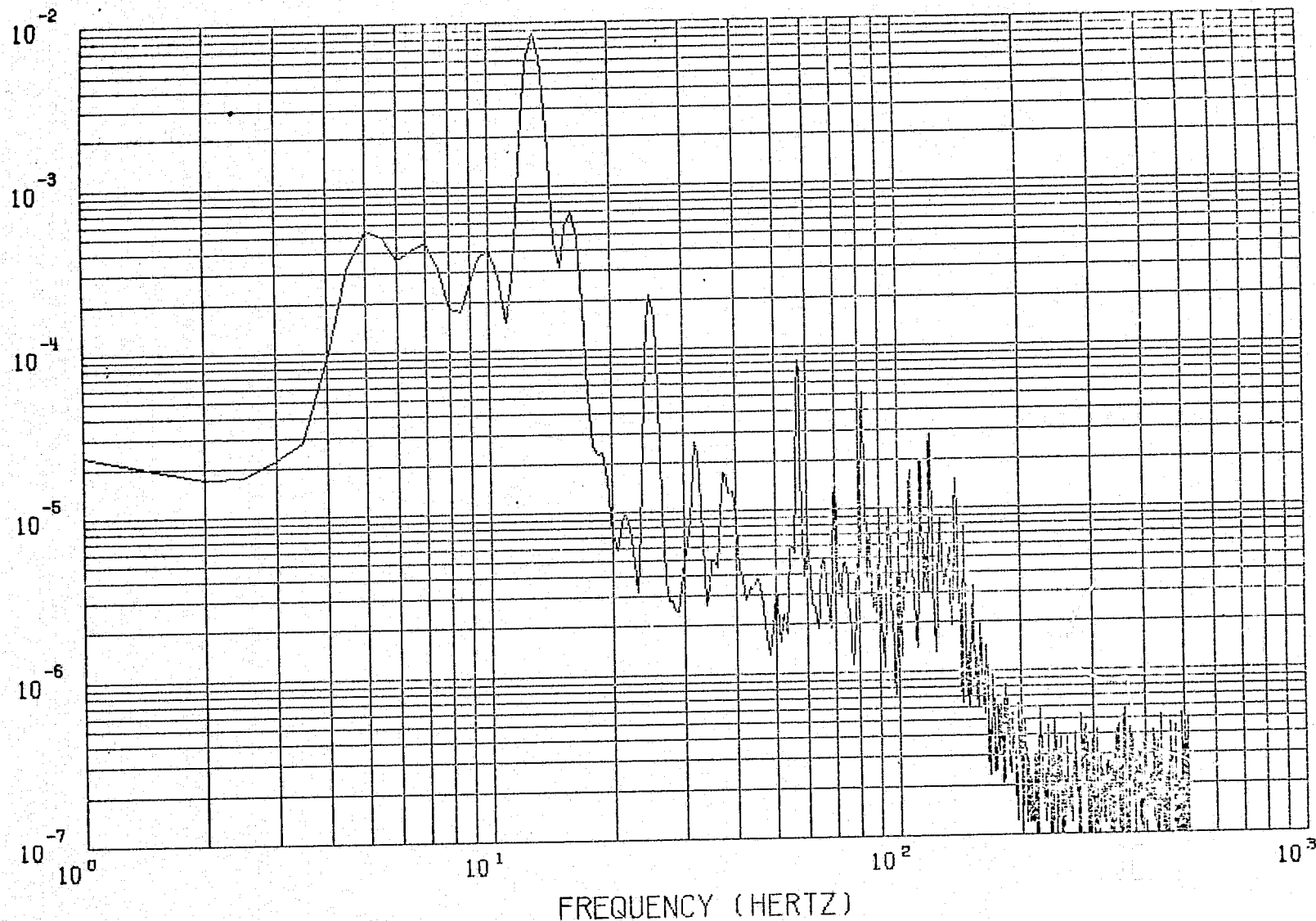
1024 SPS

FIGURE 3.26 a

95%

PSD CY1820 (G SQ / HERTZ)

POWER SPECTRAL DENSITY



$\Delta F = .500$

START = 67380.000 SEC

STOP = 67382.000 SEC

MEAN = -26507×10^{-5}

$\sigma^2 = 17764 \times 10^{-5}$

$\sigma = 13328 \times 10^{-5}$

$3\sigma = 39985 \times 10^{-5}$

VIKING B FLT (CIF)

POGO - 4

CY1820

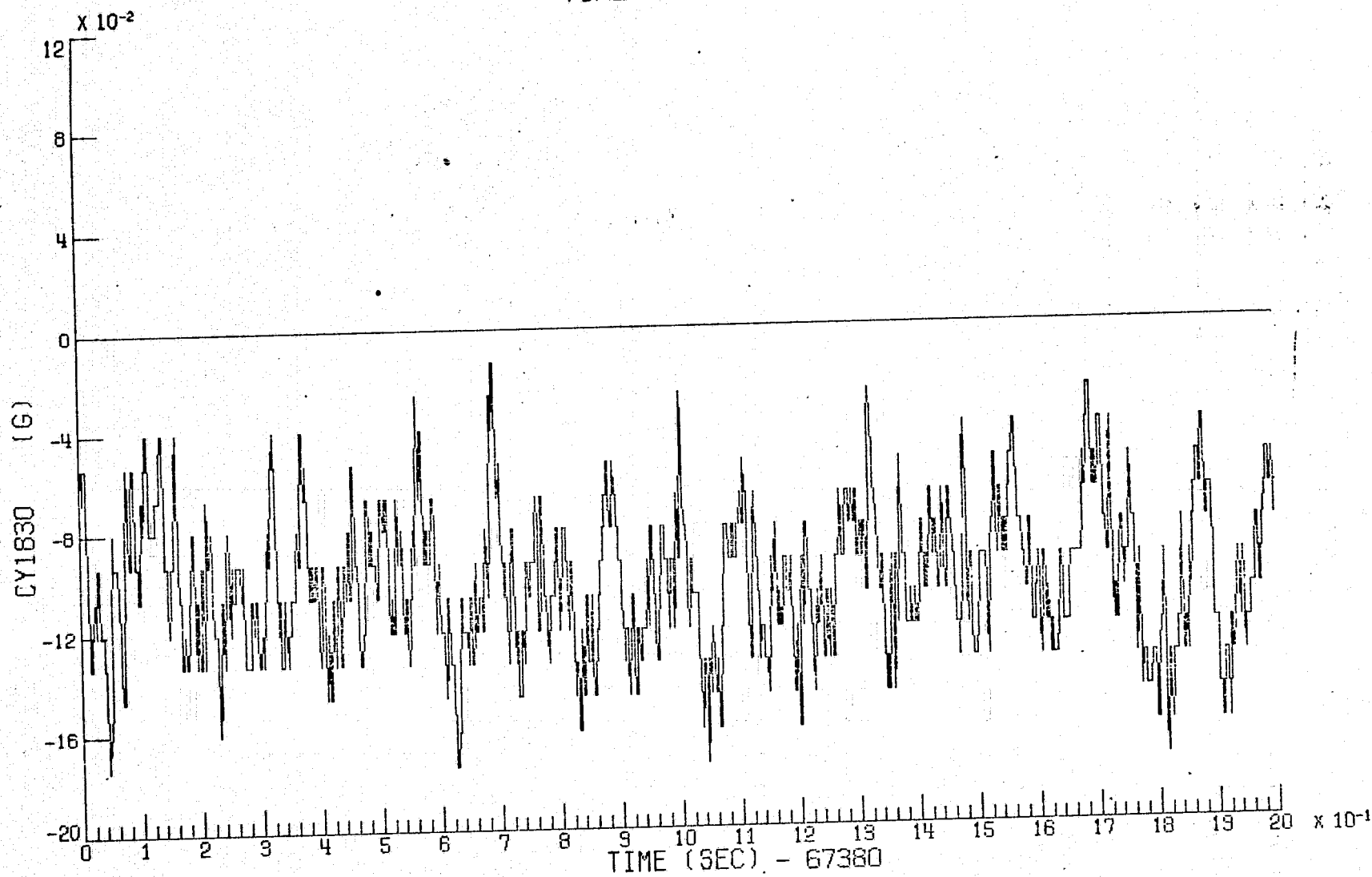
1024 SPS

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 09/22/75

FIGURE 3.26b

TIME HISTORY

LS4



MAX = -.013

MIN = -.173 $\rightarrow$ $\pm .08$

VIKING B FLT (CIF)

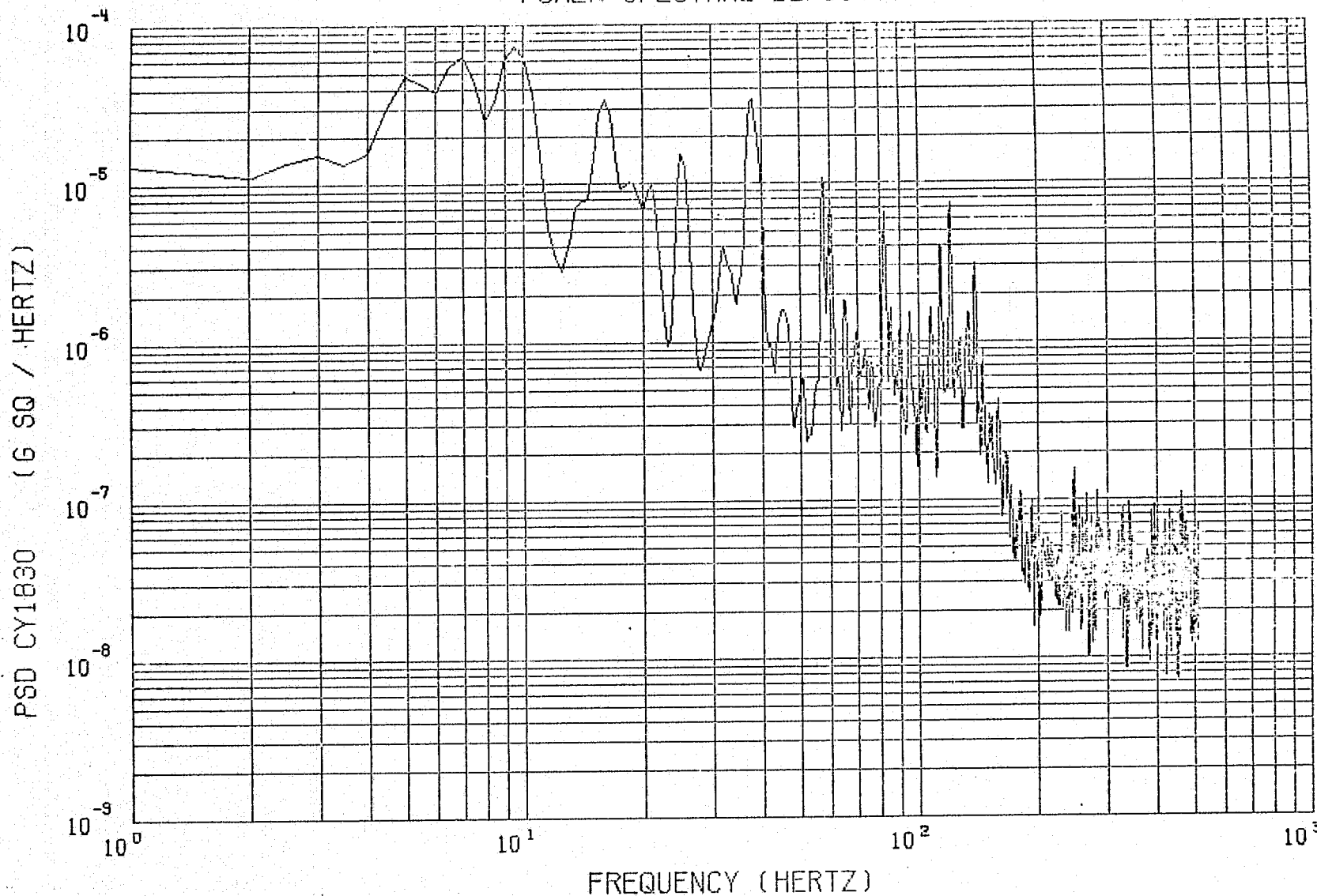
POGO - 4

CY1830

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 09/22/75

1024 SPS
FIGURE 3.27 a

POWER SPECTRAL DENSITY



$\Delta F = .500$

START = 67380.000 SEC

STOP = 67382.000 SEC

MEAN = -10158×10^{-5}

$\sigma^2 = 76649 \times 10^{-8}$

$\sigma = 27685 \times 10^{-6}$

$3\sigma = 83056 \times 10^{-6}$

VIKING B FLT (CIF)

POGO - 4

CY1830

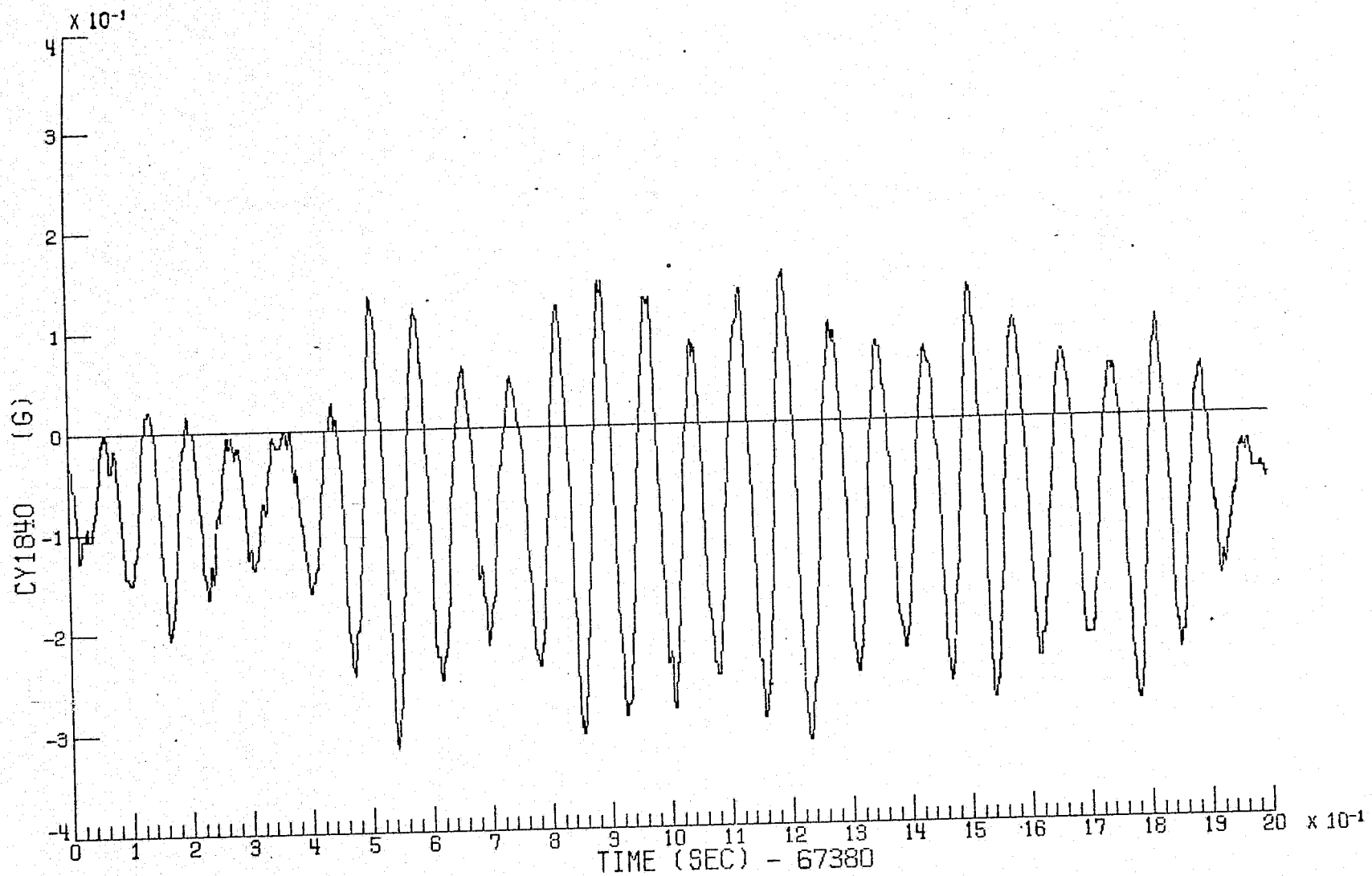
NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 09/22/75

1024 SPS

FIGURE 3.27 b

TIME HISTORY

653



MAX = .150

MIN = -.316

VIKING B FLT (CIF)

POGO - 4

CY1840

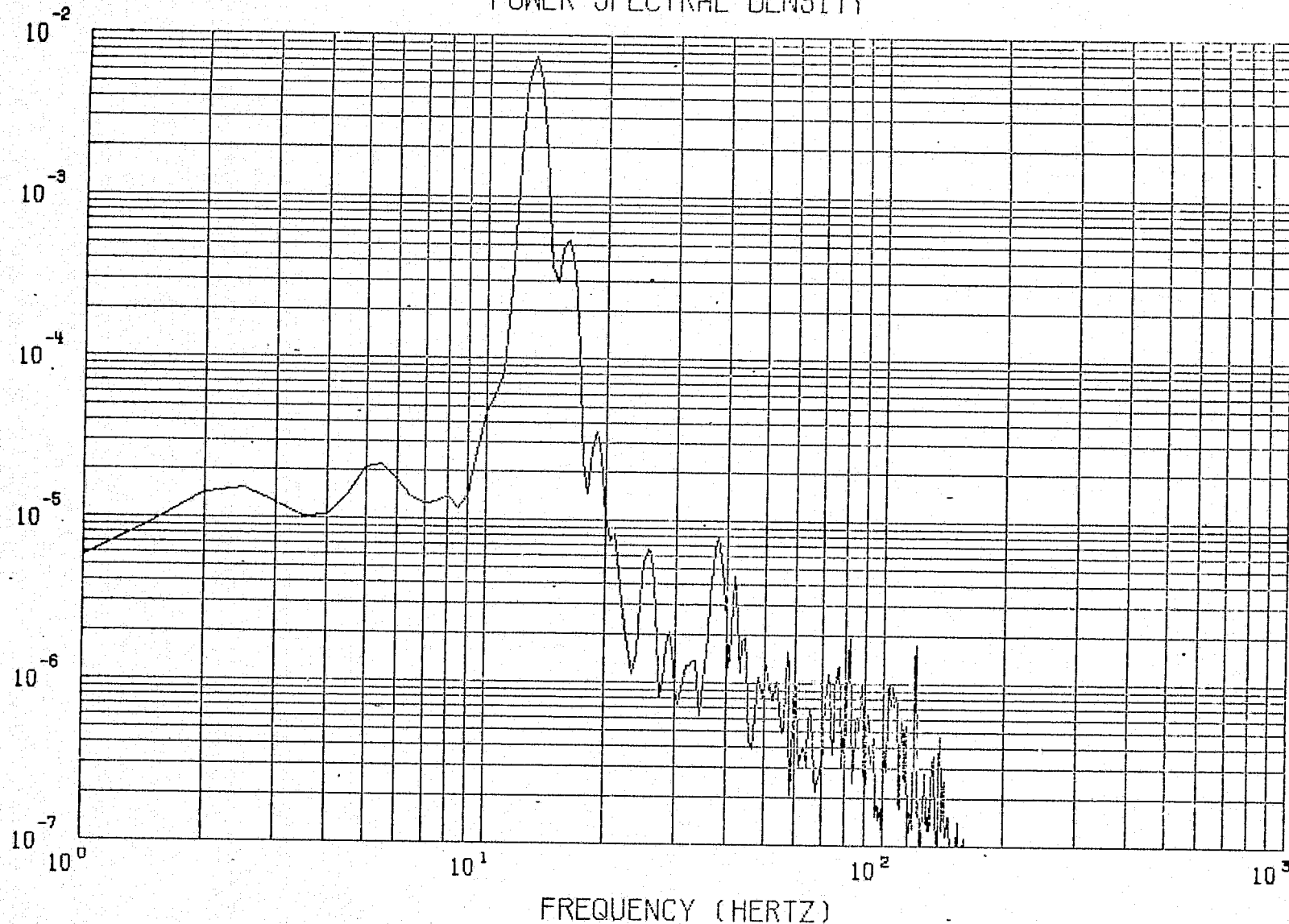
1024 SPS

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 09/22/75

FIGURE 3.28 a

POWER SPECTRAL DENSITY

30
PSD CY1840 (G SQ / HERTZ)



$\Delta F = .500$

START = 67380.000 SEC

STOP = 67382.000 SEC

MEAN = -75151×10^{-6}

$\sigma^2 = 12261 \times 10^{-6}$

$\sigma = 11072 \times 10^{-5}$

$3\sigma = 33218 \times 10^{-5}$

VIKING B FLT (CIF)

POGO - 4

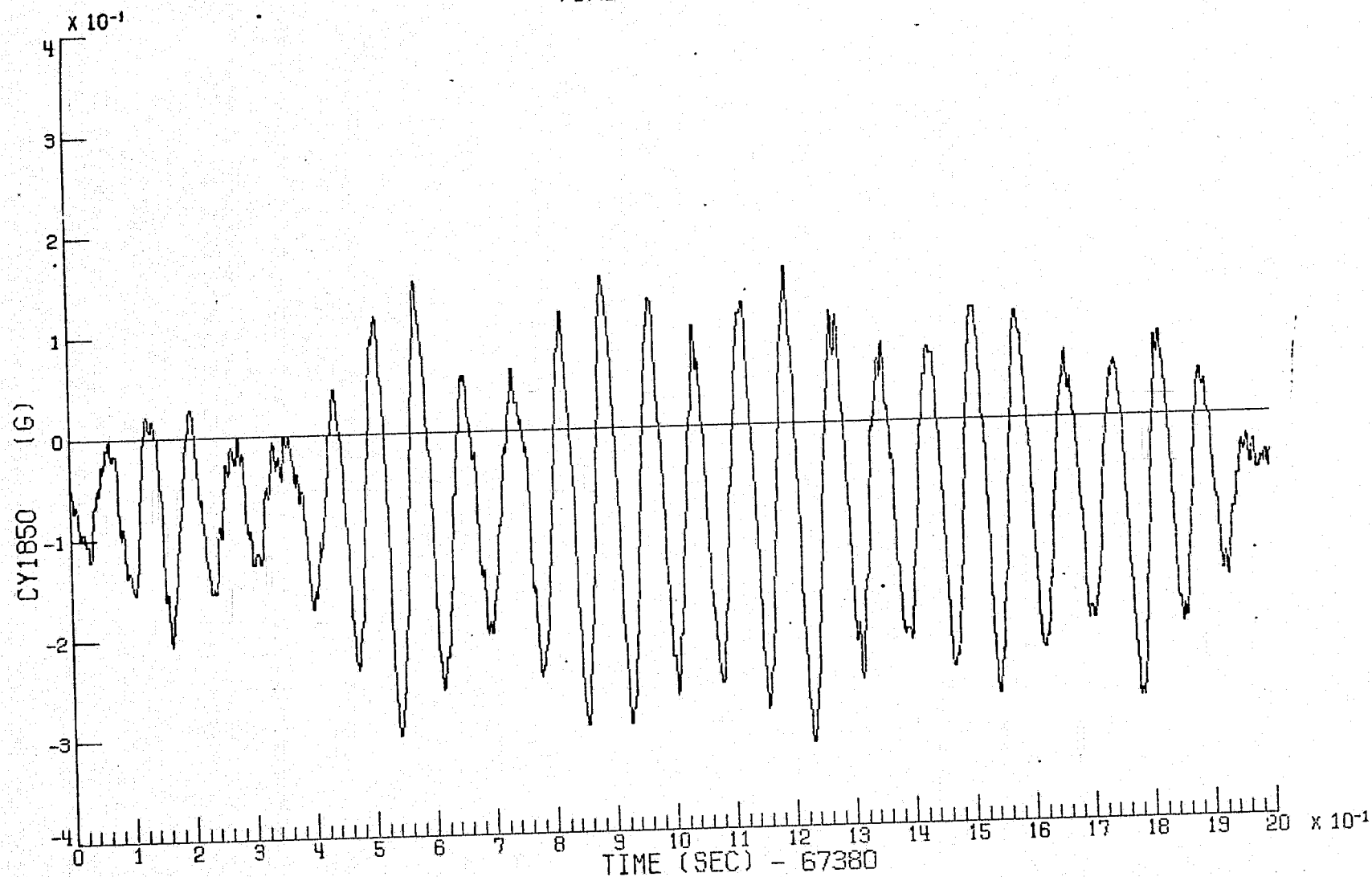
CY1840

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 09/22/75

1024 STS

FIGURE 3.28 b

TIME HISTORY



MAX = .155

MIN = -.316

VIKING B FLT (CIF)

POGO - 4

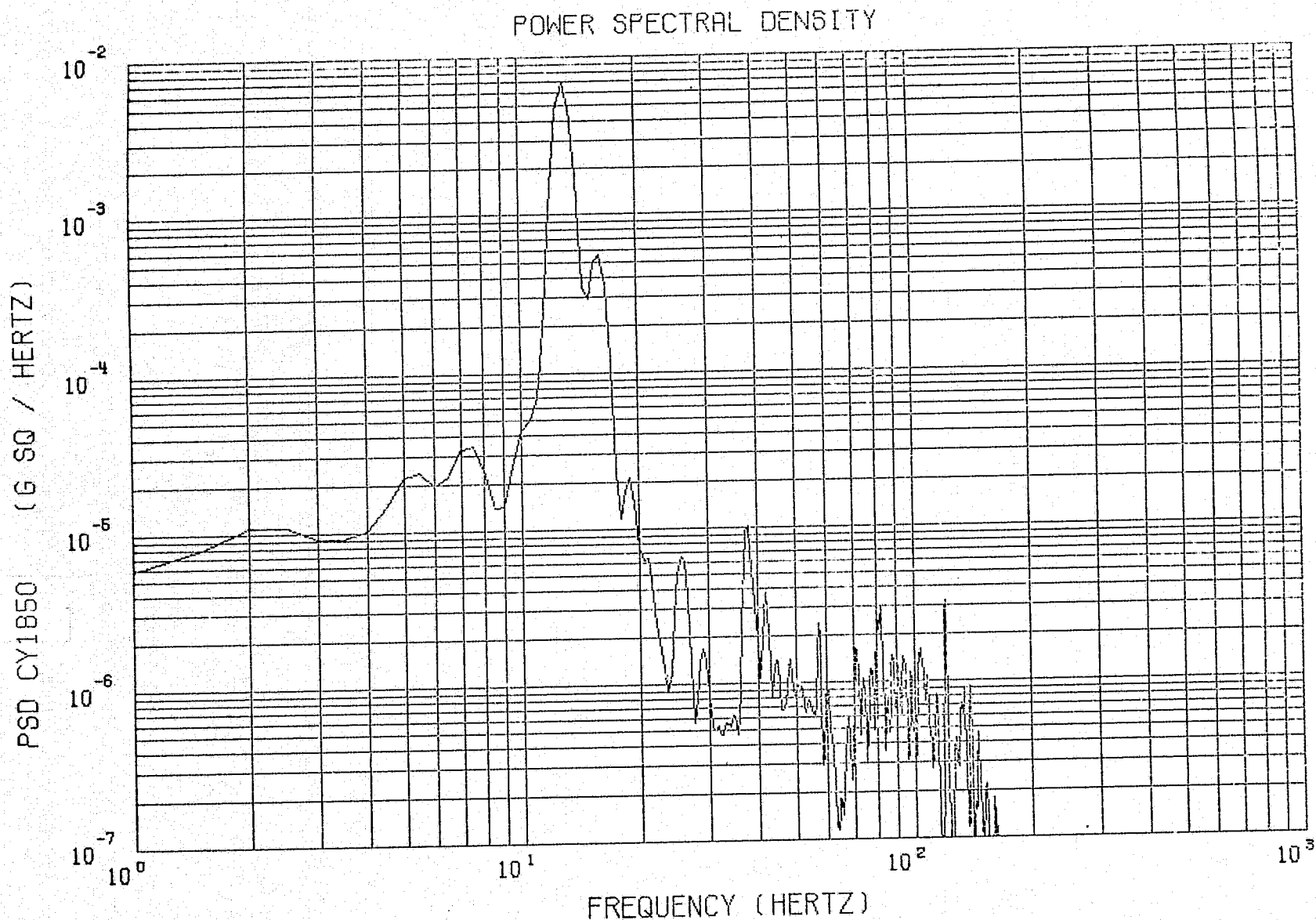
CY1850

1024 SPS

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 09/22/75

FIGURE 3.29a

293



$\Delta F = .500$

START = 67380.000 SEC

STOP = 67382.000 SEC

MEAN = -73149×10^{-6}

$\sigma^2 = 11538 \times 10^{-6}$

$\sigma = 10741 \times 10^{-6}$

$3\sigma = 32225 \times 10^{-6}$

VIKING B FLT (CIF)

POGO - 4

CY1850

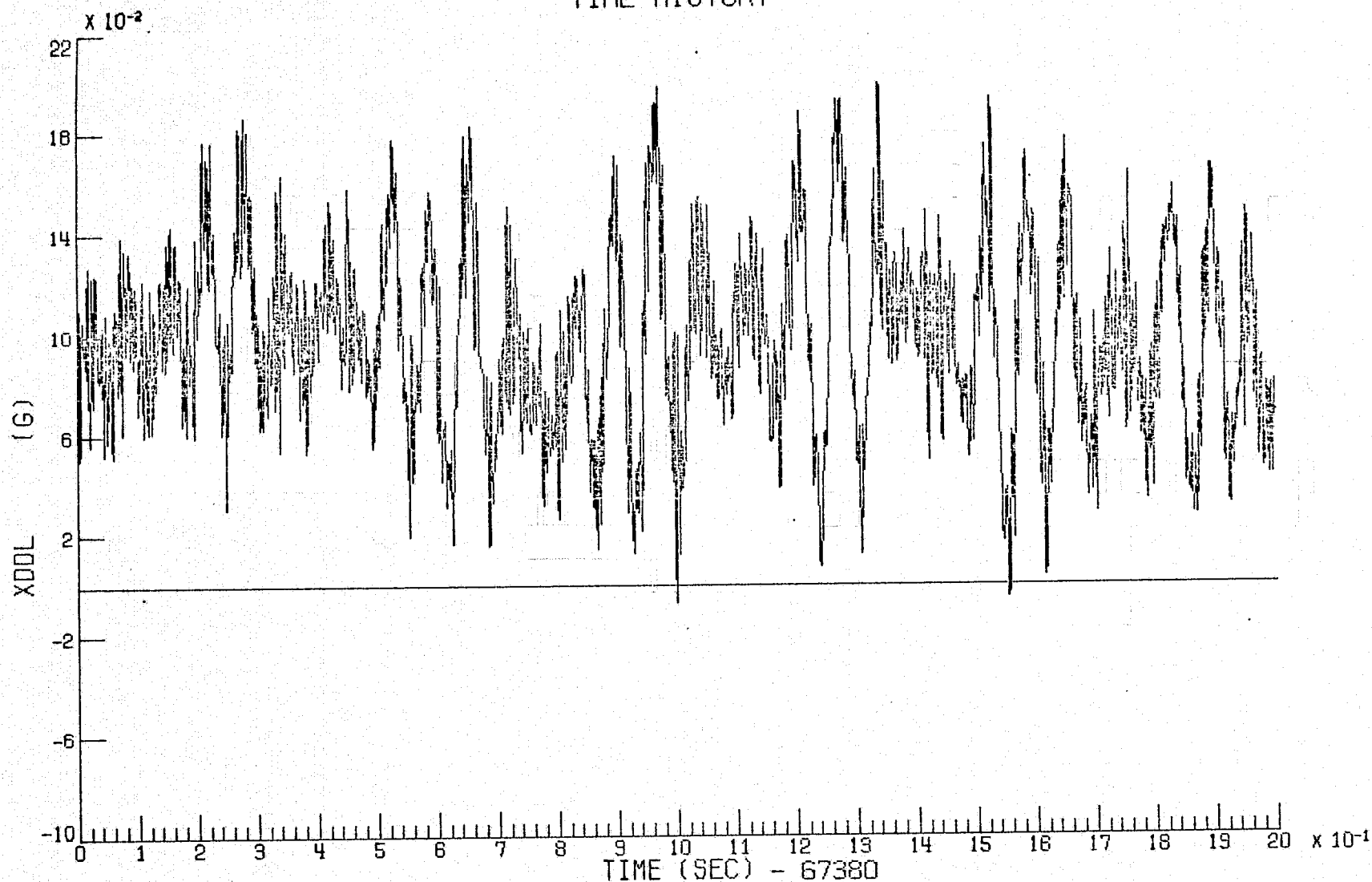
1024 SPS

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 09/22/75

FIGURE 3.29b

3.63

TIME HISTORY



MAX = .199

MIN = -.006

→ f.1038

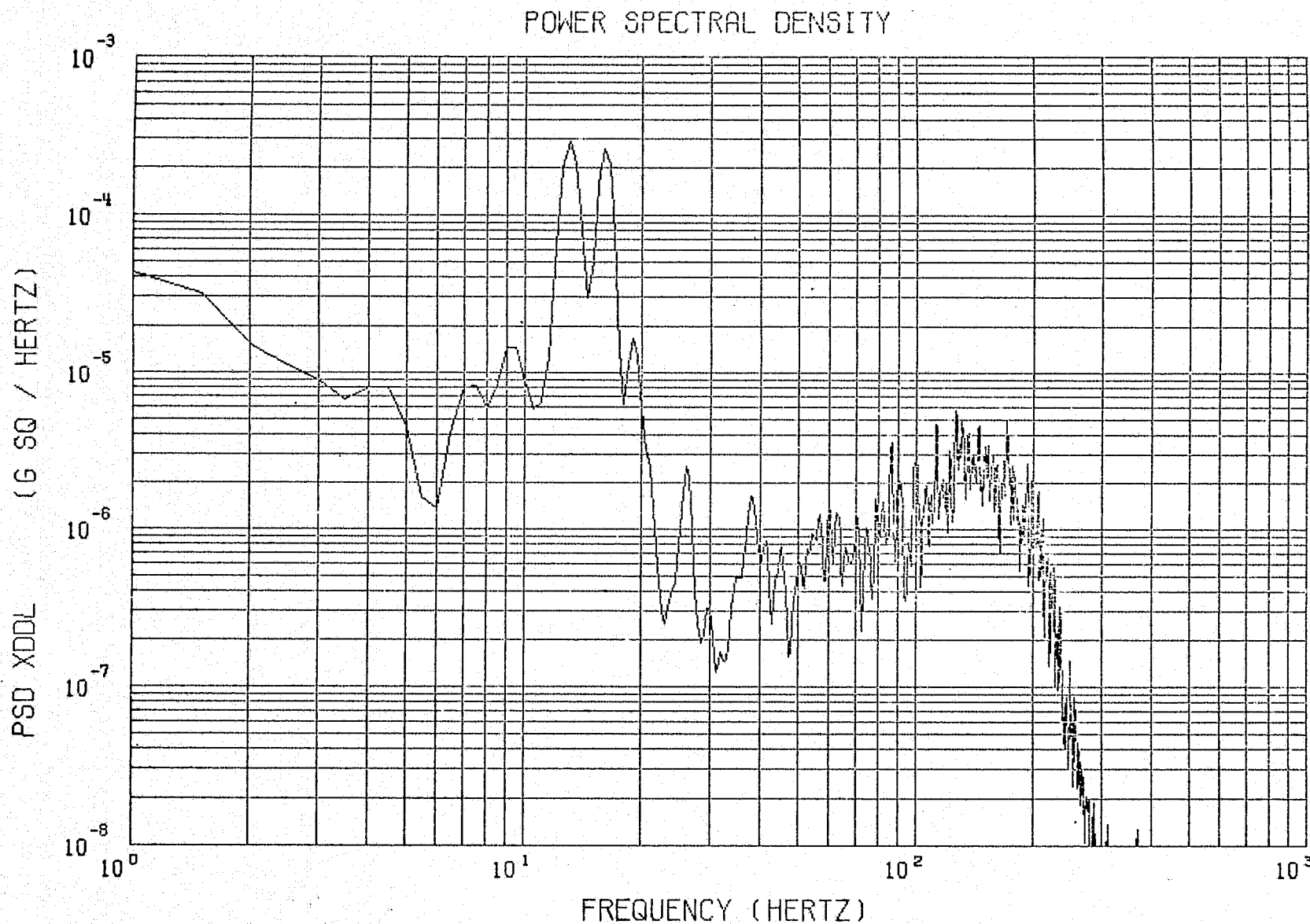
VIKING B FLT (CIF)

POGO - 4

XDDL

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49.3



$\Delta F = .500$

START = 67380.000 SEC

STOP = 67382.000 SEC

MEAN = 98457×10^{-6}

$\sigma^2 = 12885 \times 10^{-7}$

$\sigma = 35896 \times 10^{-6}$

$3\sigma = 10769 \times 10^{-5}$

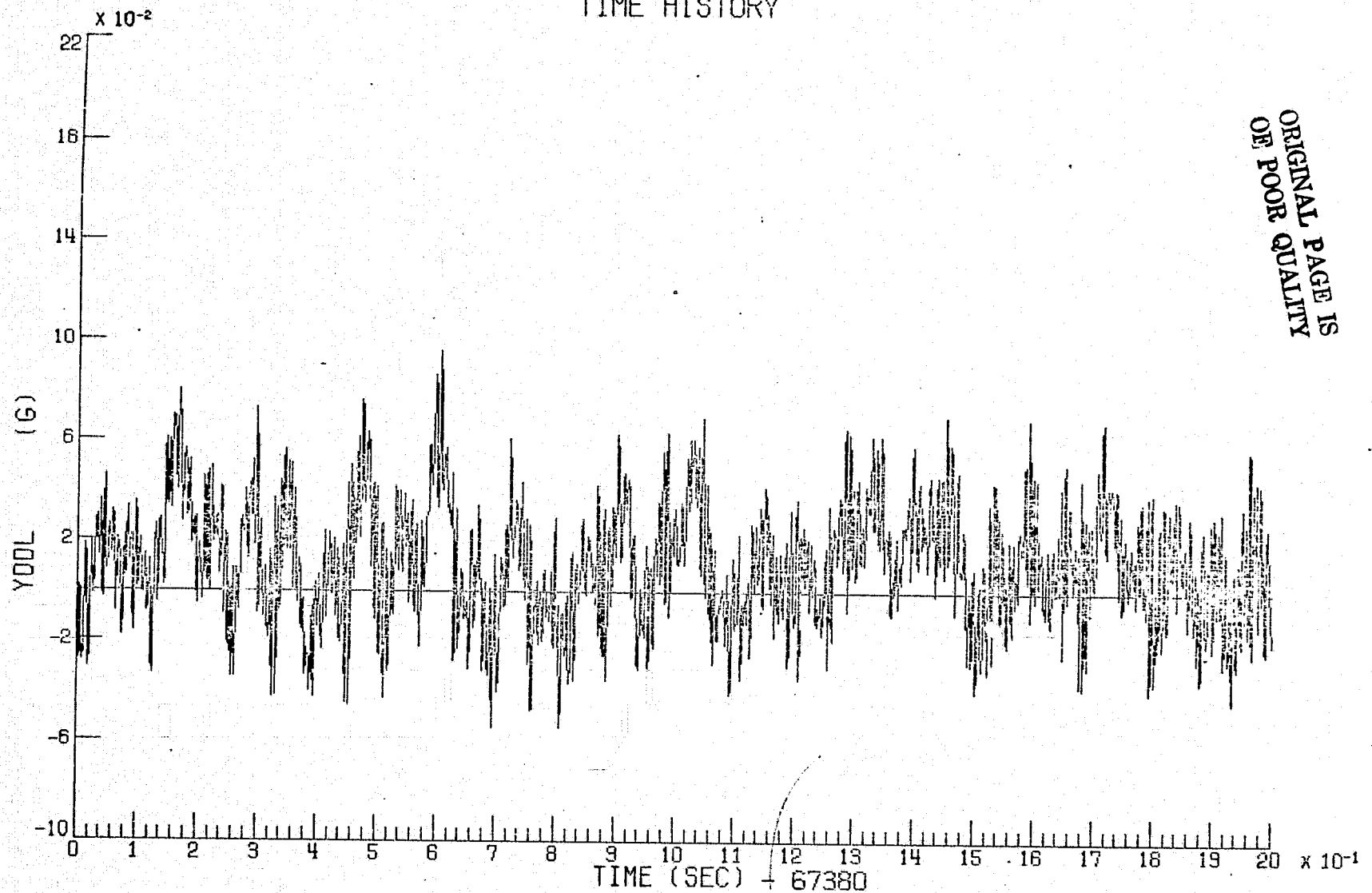
VIKING B FLT (CIF)

POGO - 4

XDDL

TIME HISTORY

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MAX = .095

MIN = -.054

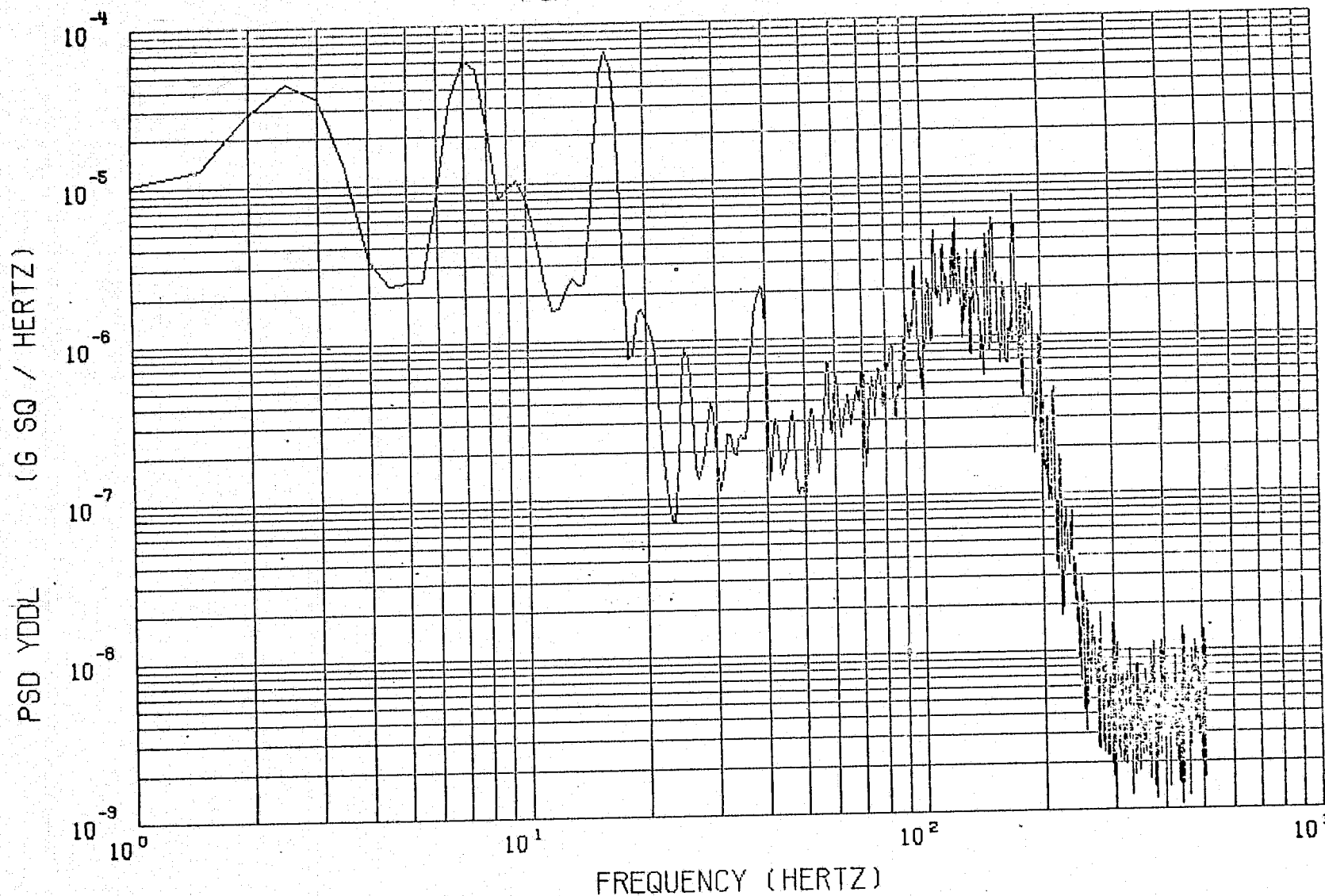
→ ± .075

VIKING B FLT (CIF)

POGO - 4

YDDL

POWER SPECTRAL DENSITY



$\Delta F = .500$

START = 67380.000 SEC

STOP = 67382.000 SEC

MEAN = 11356×10^{-6}

$\sigma^2 = 54236 \times 10^{-8}$

$\sigma = 23288 \times 10^{-6}$

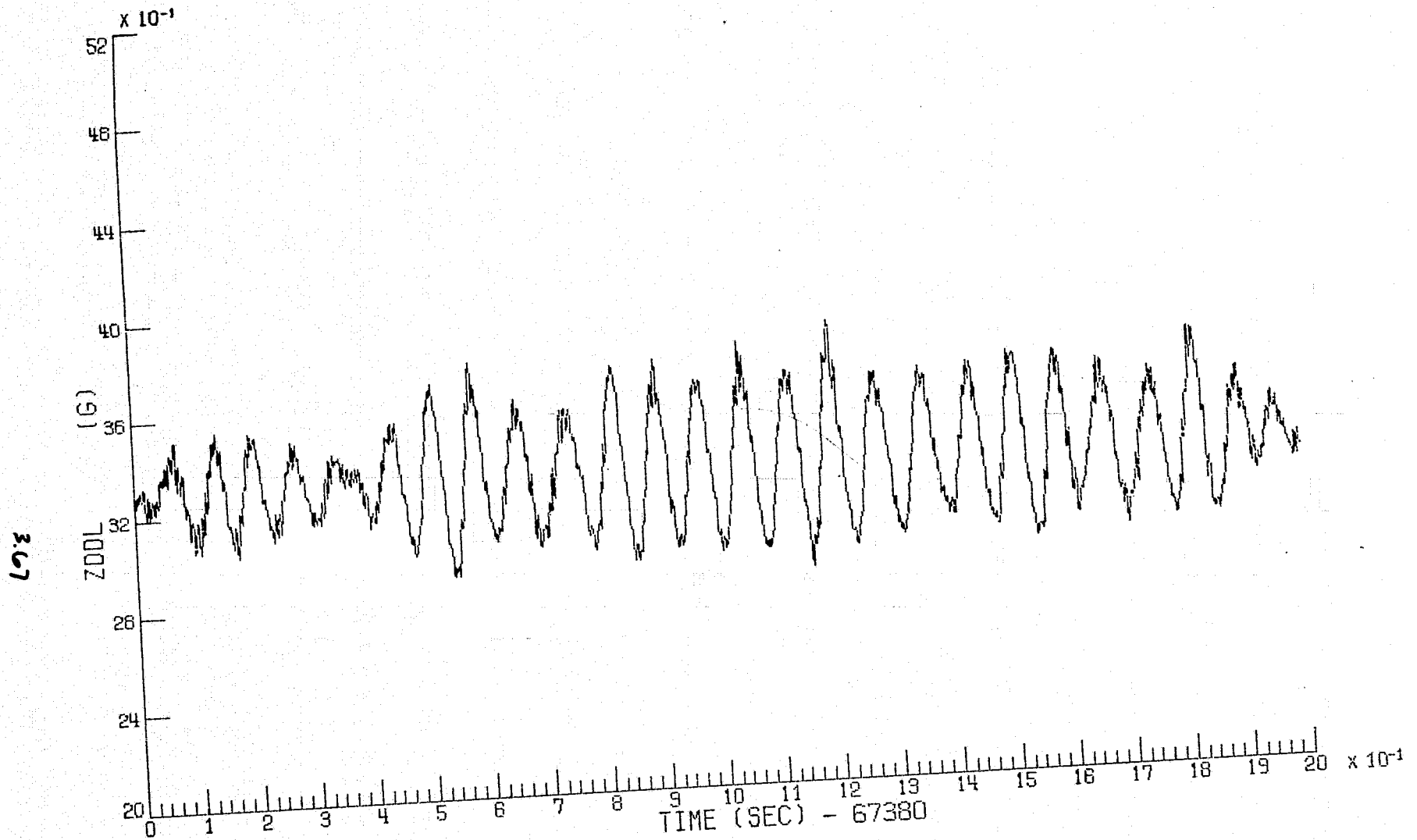
$3\sigma = 69865 \times 10^{-6}$

VIKING B FLT (CIF)

POGO - 4

YDDL

TIME HISTORY



MAX = 3.882

MIN = 2.881

VIKING B FLT (CIF)

POGO - 4

ZDOL

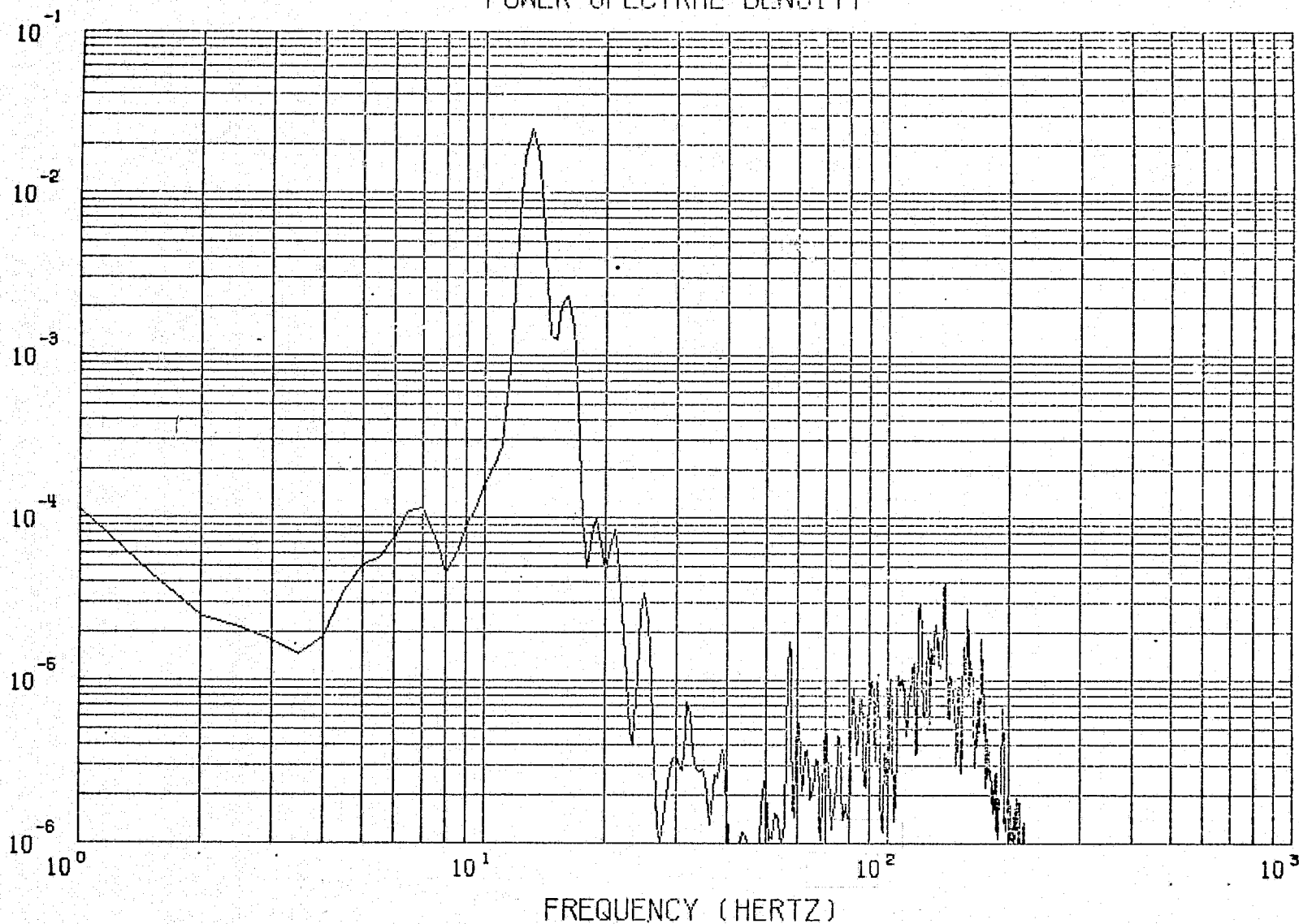
NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 09/23/75

FIGURE 3.32 a

893

PSD ZDDL (G SQ / HERTZ)

POWER SPECTRAL DENSITY

 $\Delta F = .500$

START = 67380.000 SEC

STOP = 67382.000 SEC

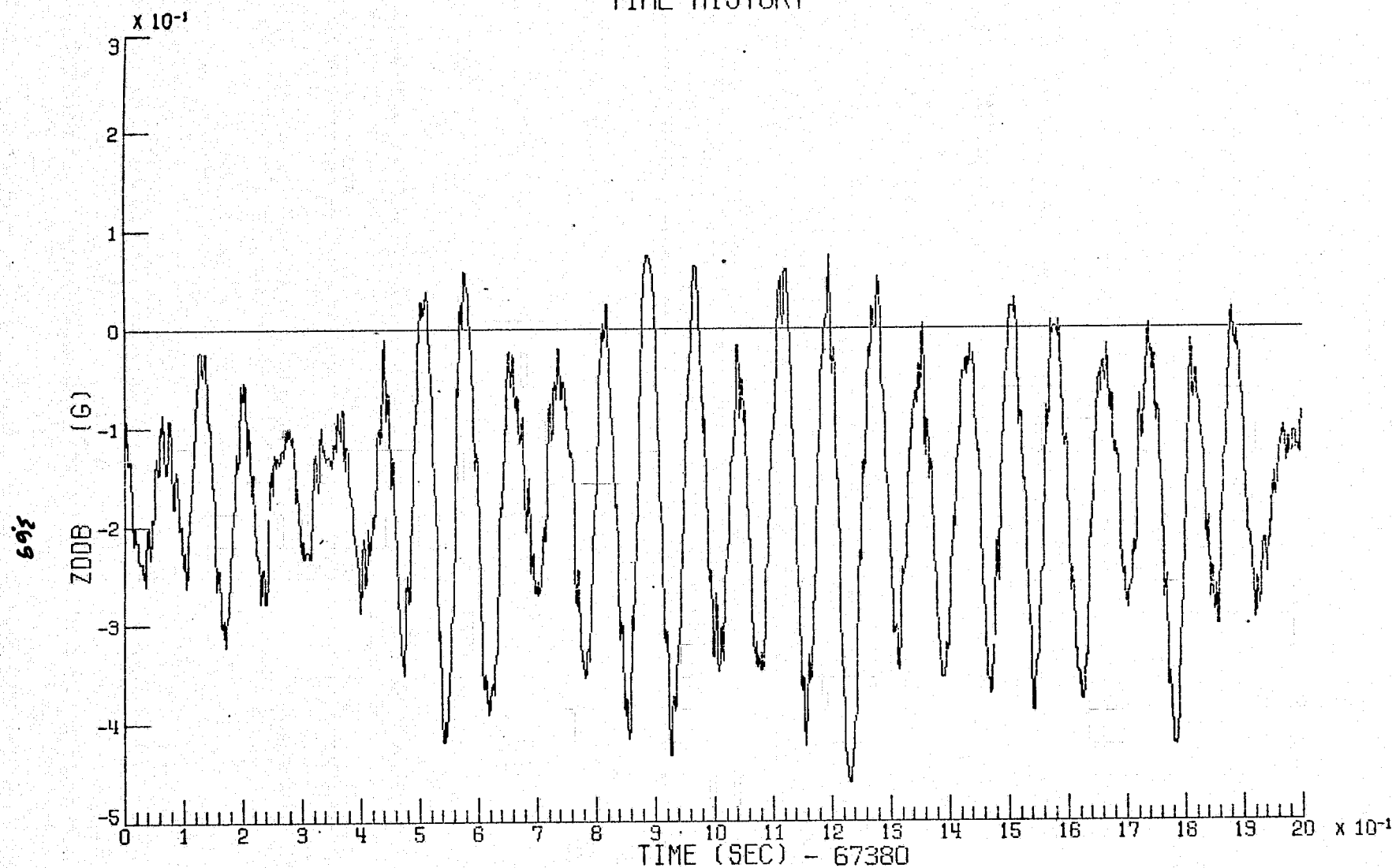
MEAN = 33244×10^{-4} $\sigma^2 = 42777 \times 10^{-6}$ $\sigma = 20682 \times 10^{-5}$ $3\sigma = 62048 \times 10^{-5}$

VIKING B FLT (CIF)

POGO - 4

ZDDL

TIME HISTORY



MAX = .074

MIN = -.459

VIKING B FLT (CIF)

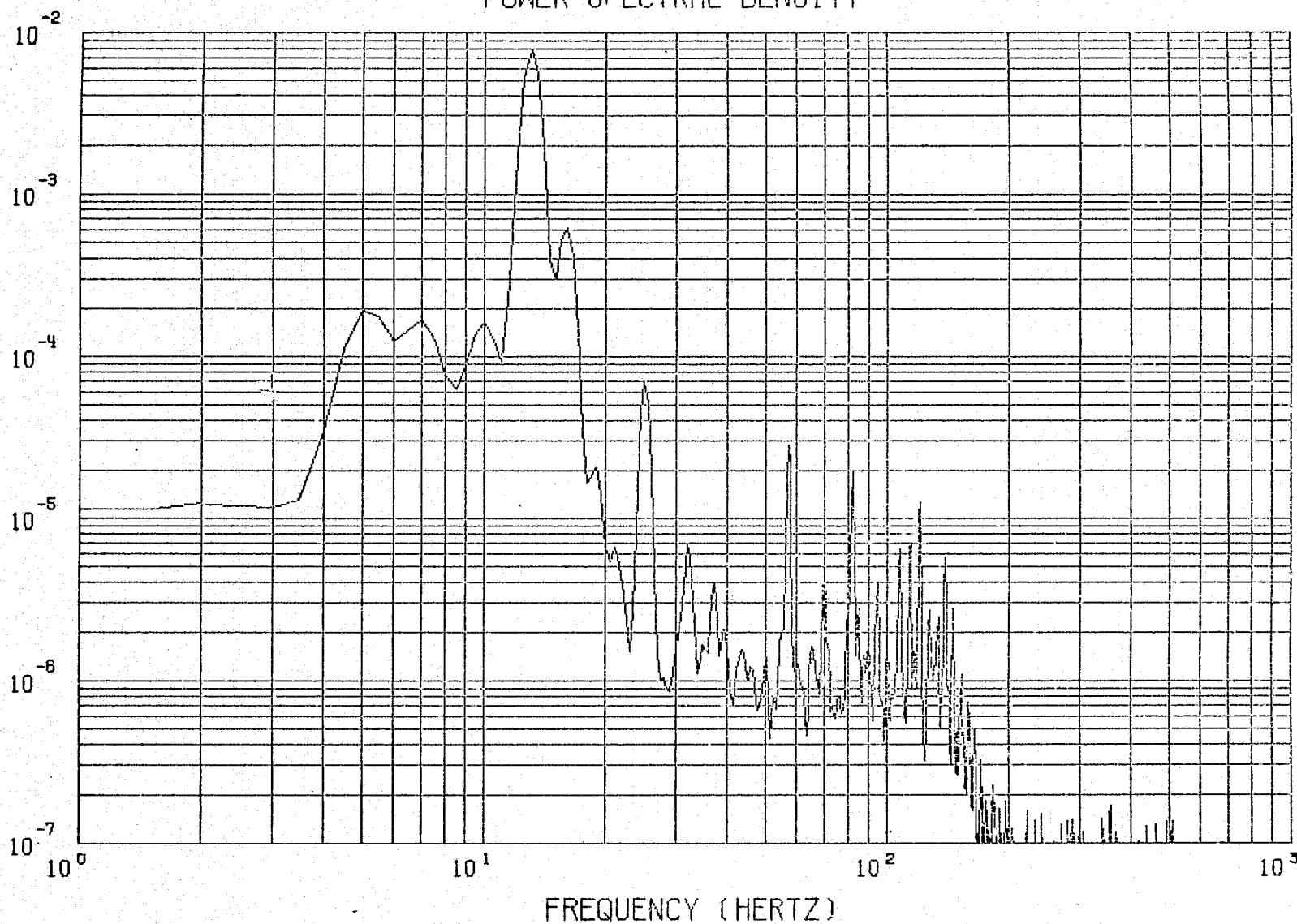
POGO - 4

ZDOB

3.70

PSD ZDOB (G SQ / HERTZ)

POWER SPECTRAL DENSITY

 $\Delta F = .500$

START = 67380.000 SEC

STOP = 67382.000 SEC

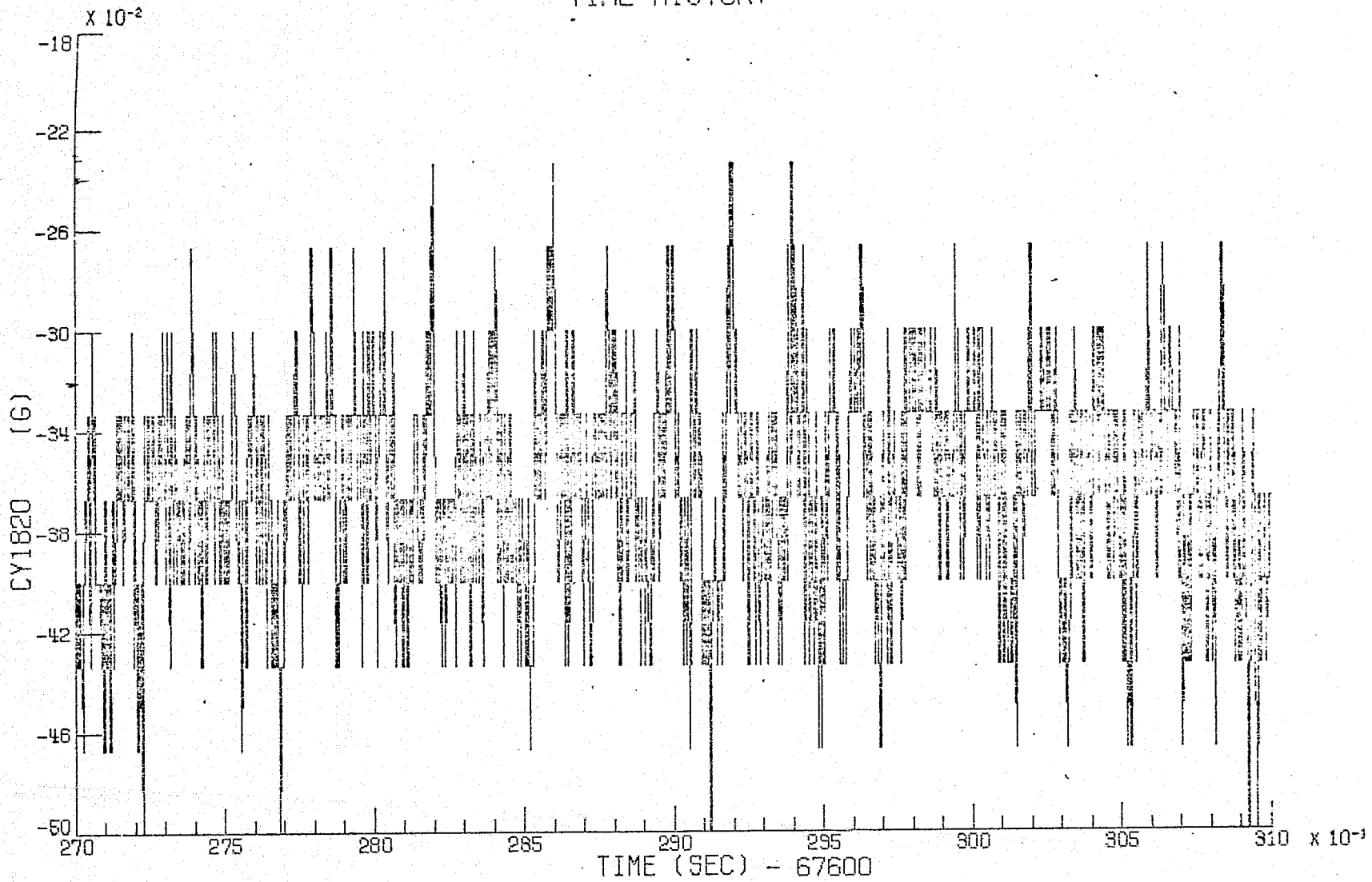
MEAN = -1699×10^{-4} $\sigma^2 = 13921 \times 10^{-5}$ $\sigma = 11798 \times 10^{-5}$ $3\sigma = 35396 \times 10^{-5}$

VIKING B FLT (CIF)

POGO - 4

ZDOB

TIME HISTORY



MAX = -.233

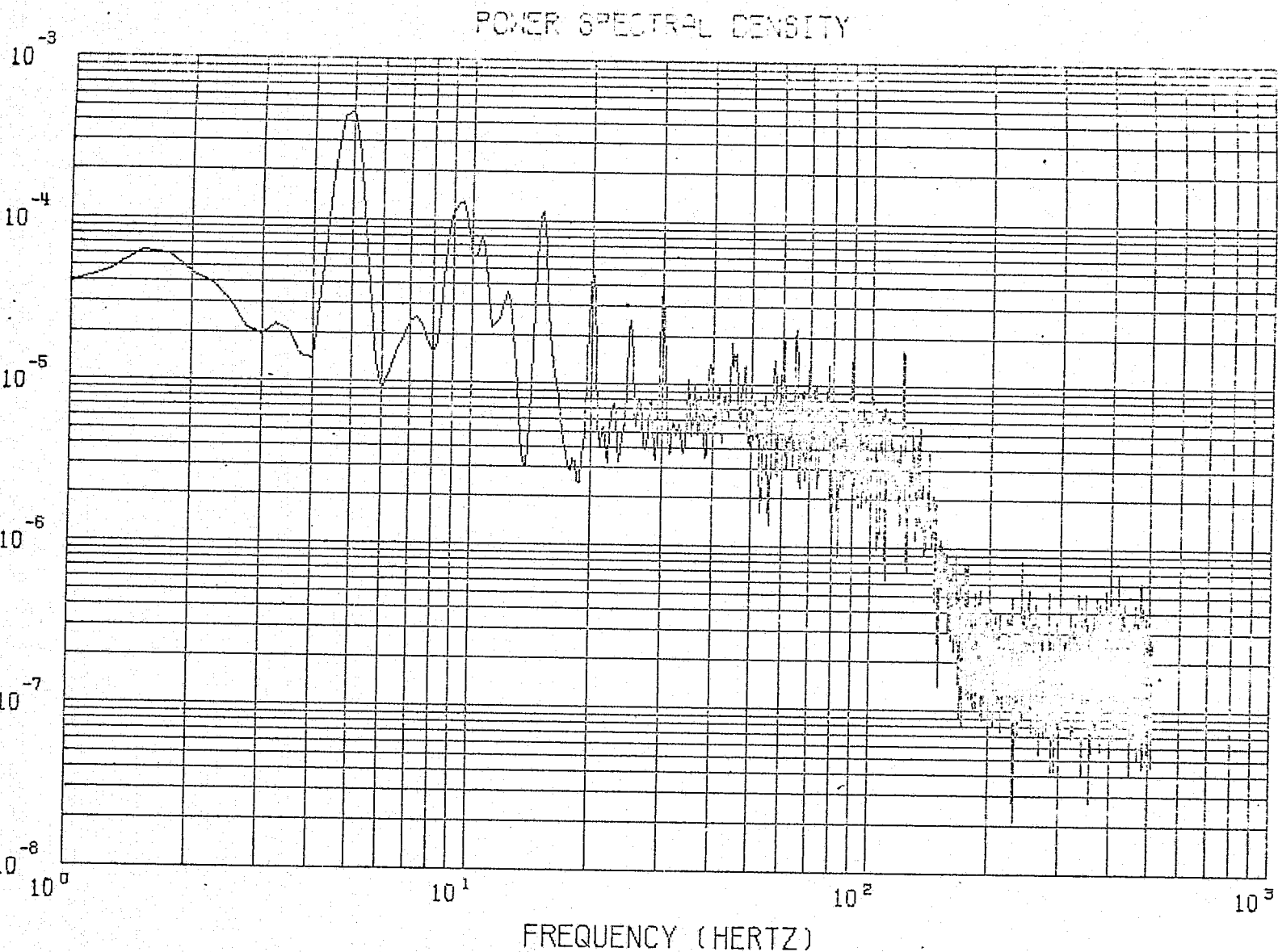
MIN = -.500

→ ± .13g

VIKING B FLT (GBI)

CEN BRN PRE-STEER

CY1820



$\Delta F = .250$

START = 67627.000 SEC

STOP = 67631.000 SEC

MEAN = -36421×10^{-5}

$\sigma^2 = 17669 \times 10^{-7}$

$\sigma = 42035 \times 10^{-5}$

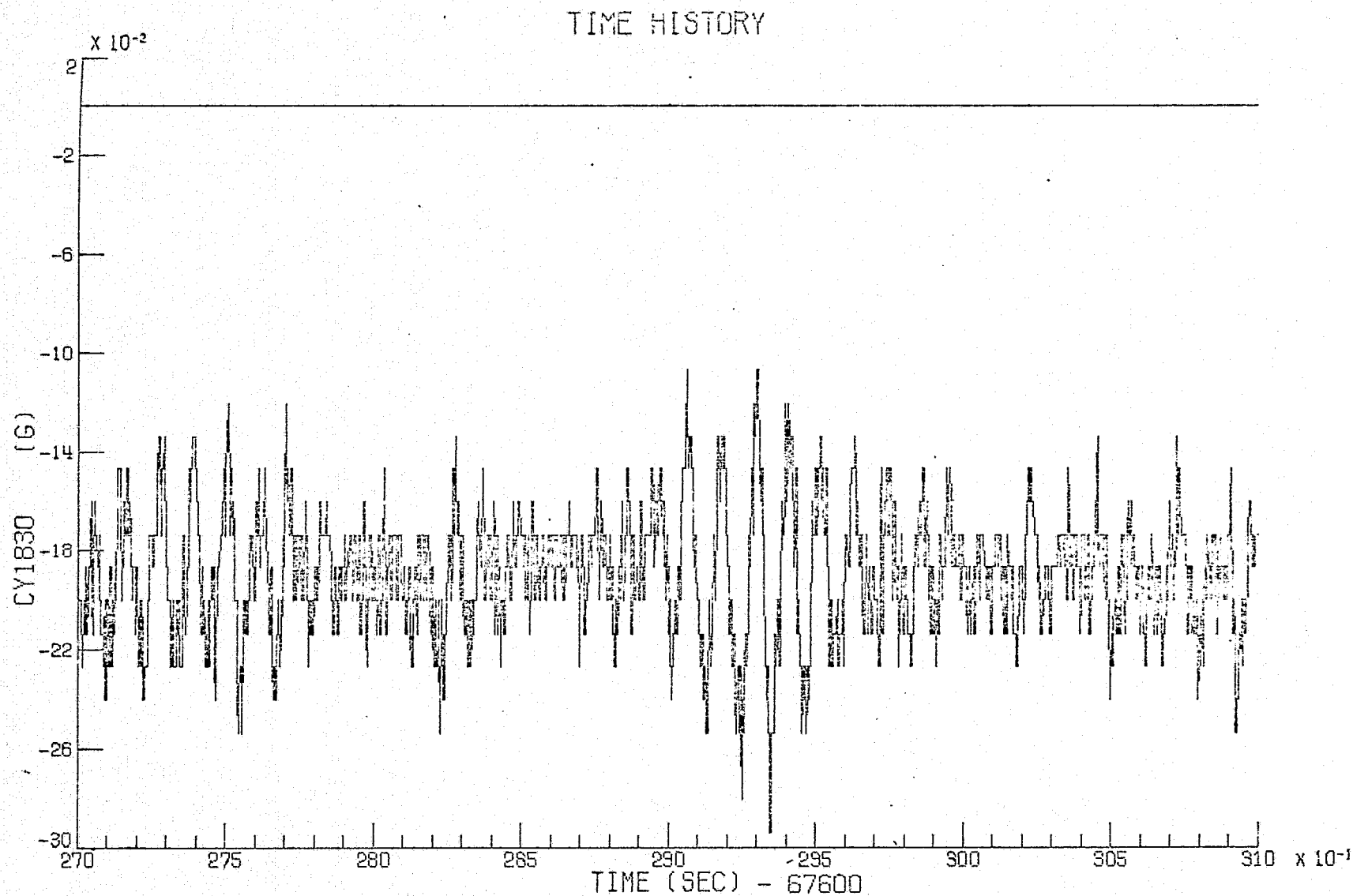
$3\sigma = 1261 \times 10^{-4}$

VIKING B FLT (GBI)

CEN BRN PRE-STEER

CY1820

373



MAX = -.106

MIN = -.293

→ ±.094 g

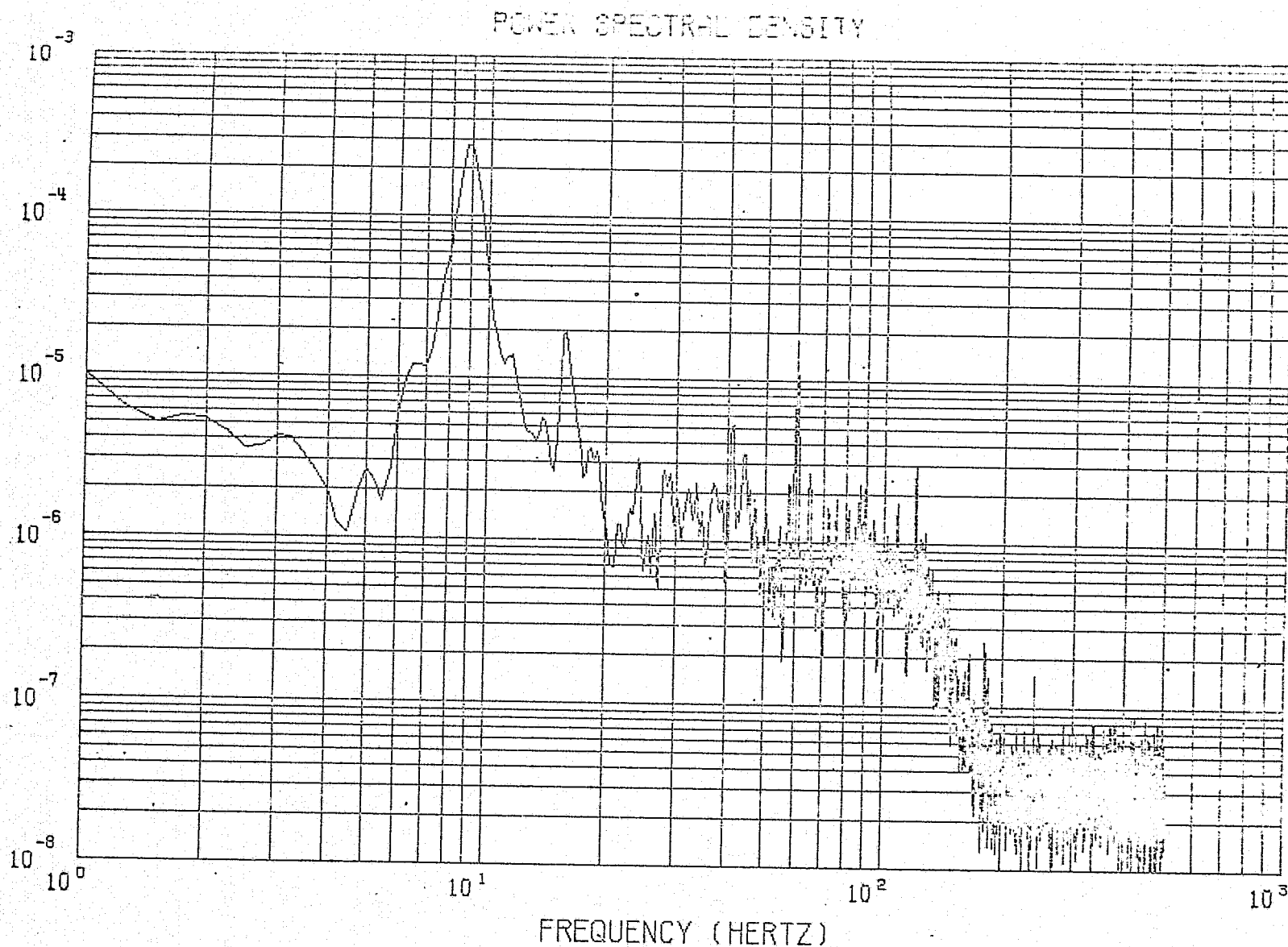
VIKING B FLT (GBI)

CEN BRN PRE-STEER

CY1830

3.74

PSD CY1830 (G SQ / HERTZ)

 $\Delta F = .250$

START = 67627.000 SEC

STOP = 67691.000 SEC

MEAN = -18896×10^{-5} $\sigma^2 = 6102 \times 10^{-7}$ $\sigma = 24702 \times 10^{-6}$ $3\sigma = 74107 \times 10^{-6}$

VIKING B FLT (GBI)

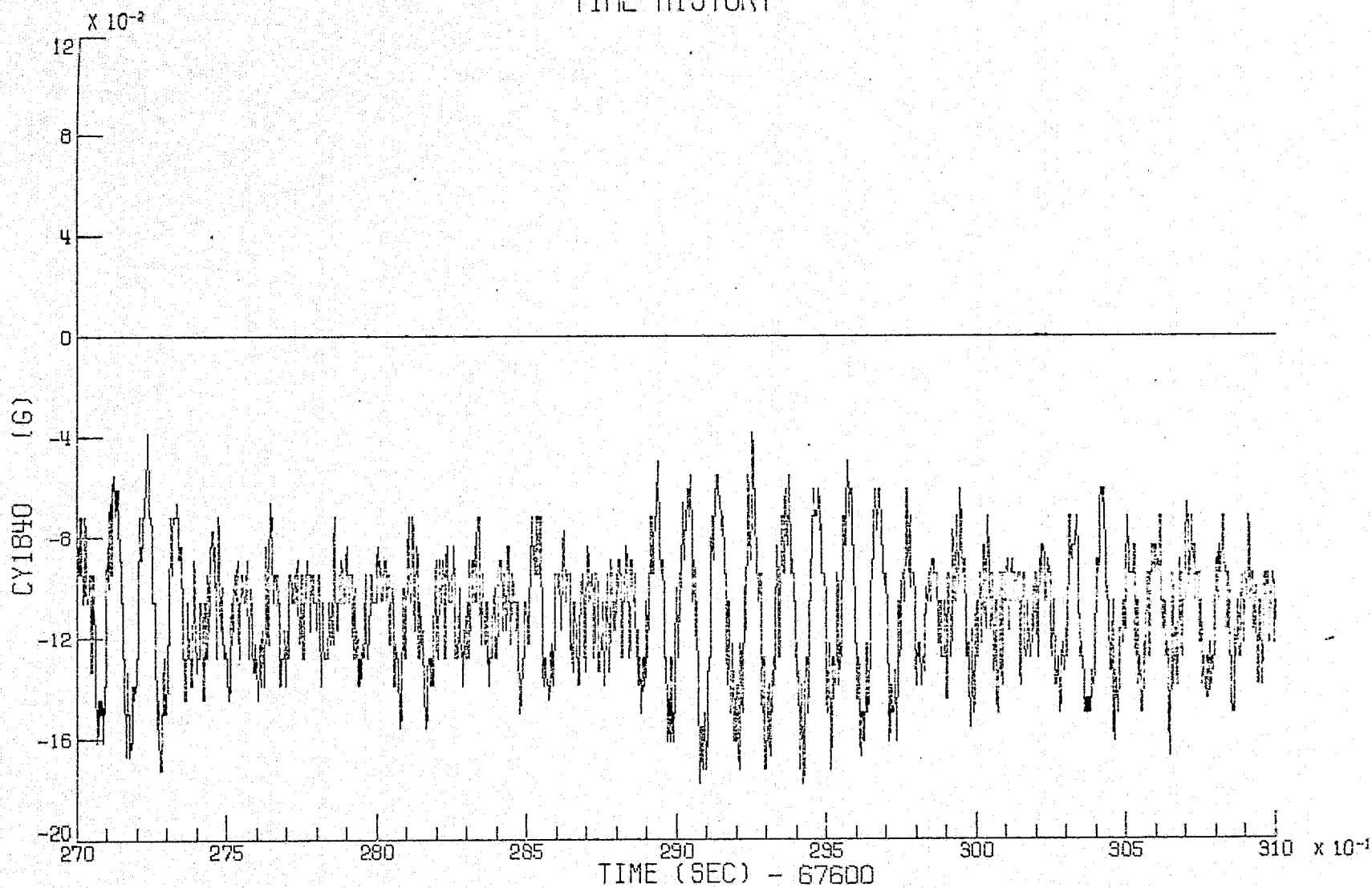
CEN BRN PRE-STEER

CY1830

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TIME HISTORY

3.75



MAX = -.038

MIN = -.177

→ ± .07 g

VIKING B FLT (GBI)

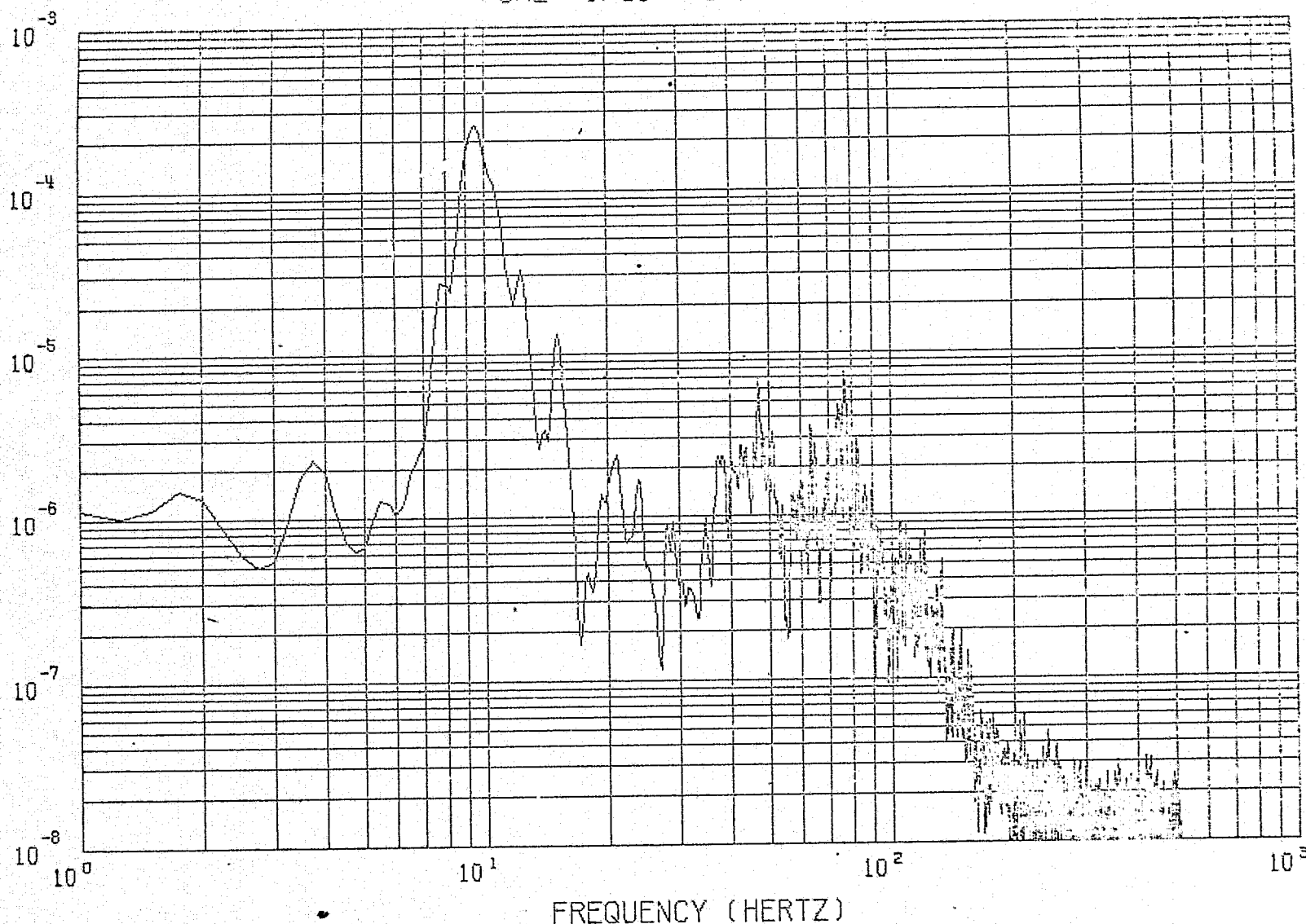
CEN BRN PRE-STEER

CY1840

376

PSD CY1840 (G SQ / HERTZ)

POWER SPECTRAL DENSITY

 $\Delta F = .250$

START = 67627.000 SEC

STOP = 67631.000 SEC

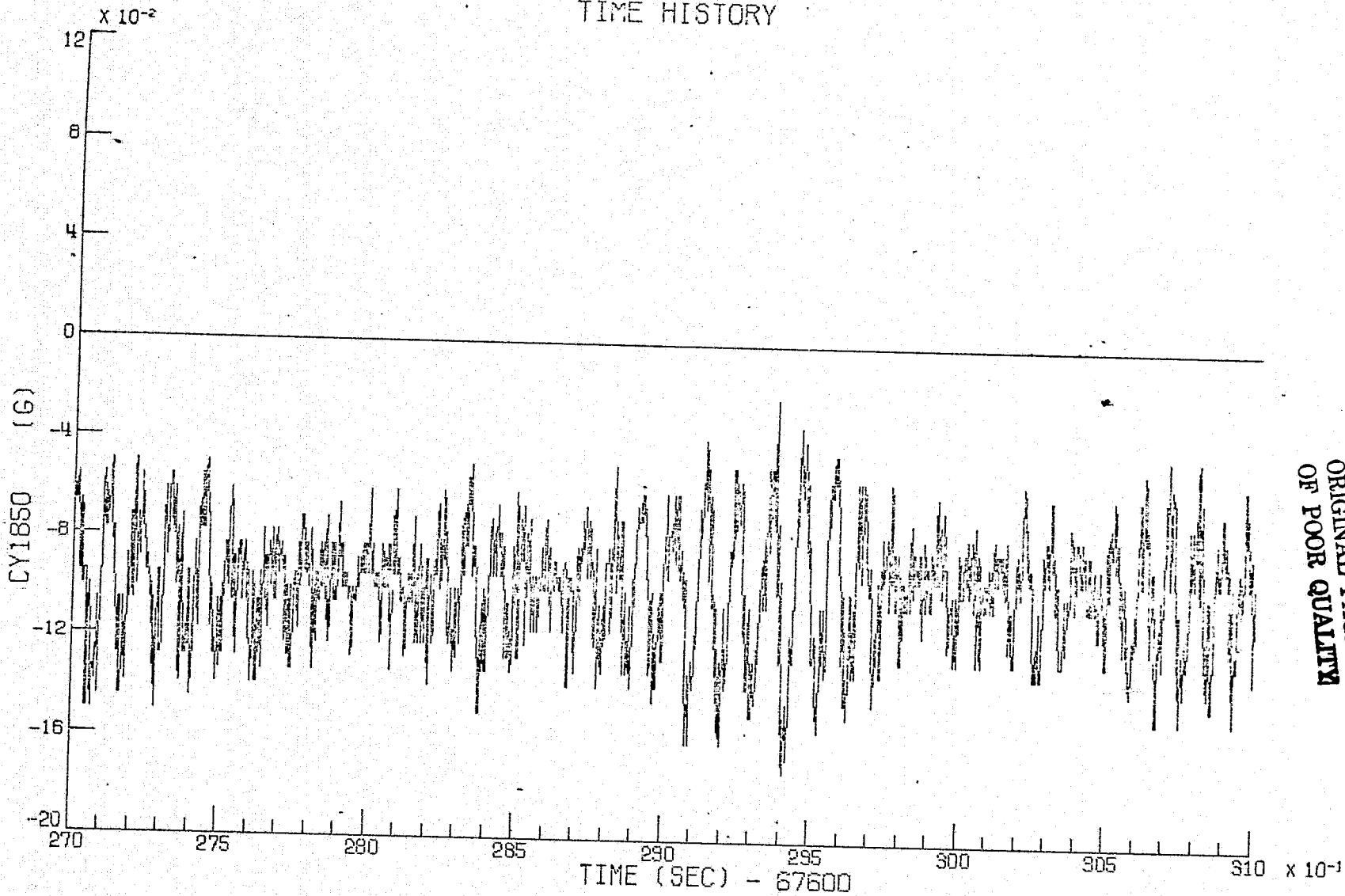
MEAN = -10997×10^{-6} $\sigma^2 = 60349 \times 10^{-8}$ $\sigma = 24566 \times 10^{-6}$ $3\sigma = 73698 \times 10^{-6}$

VIKING B FLT' (GBI)

CEN BRN PRE-STEER

CY1840

TIME HISTORY



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MAX = -.022

MIN = -.172 → ±.075

VIKING B FLT (GBI)

CEN BRN PRE-STEER

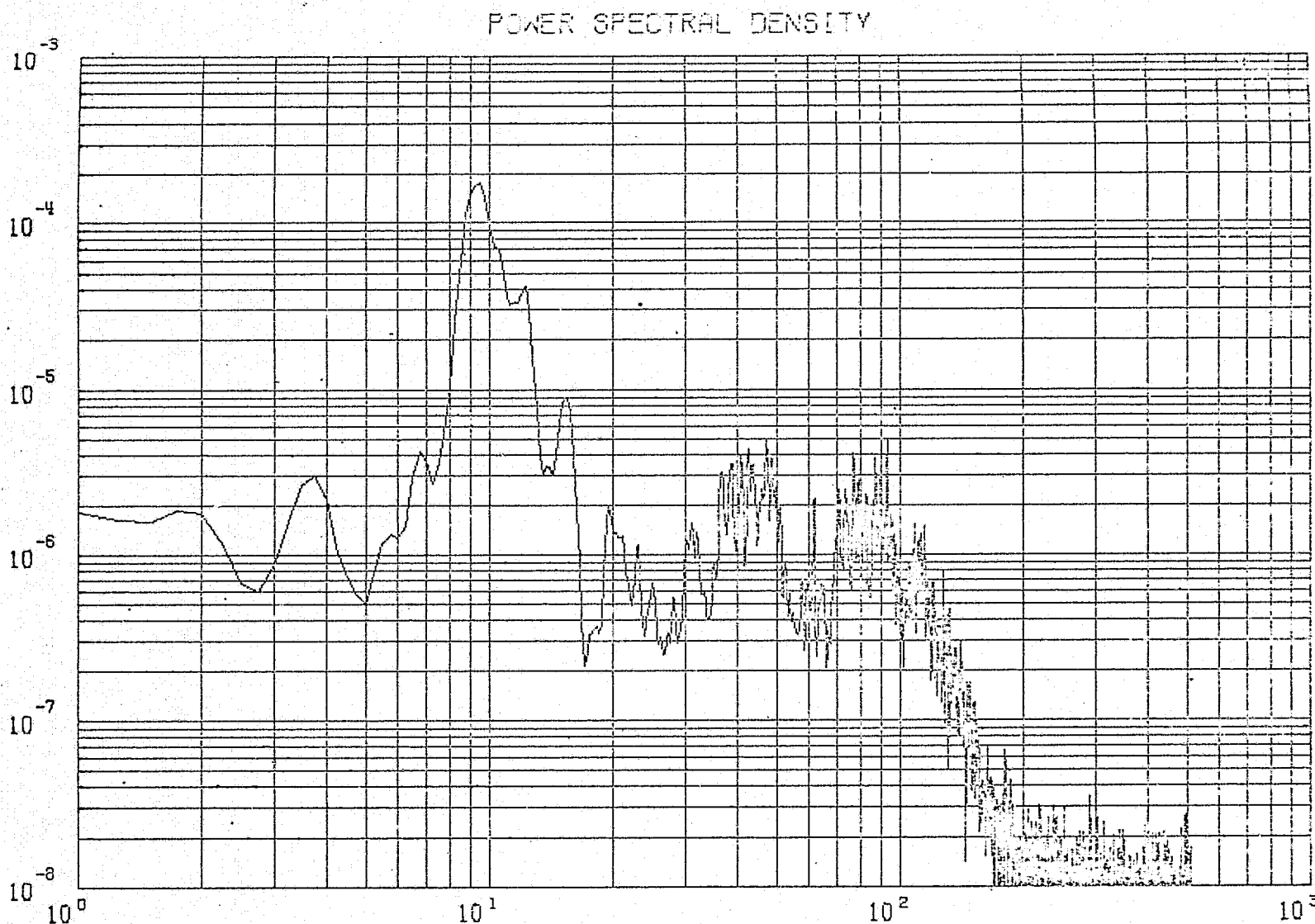
CY1850

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FIGURE 3.37 a

378

PSD CY1850 (G SQ / HERTZ)



FREQUENCY (HERTZ)

$\Delta F = .250$

START = 67627.000 SEC

STOP = 67631.000 SEC

MEAN = -97796×10^{-6}

$\sigma^2 = 51093 \times 10^{-6}$

$\sigma = 22603 \times 10^{-6}$

$3\sigma = 67811 \times 10^{-6}$

VIKING B FLT (GBI)

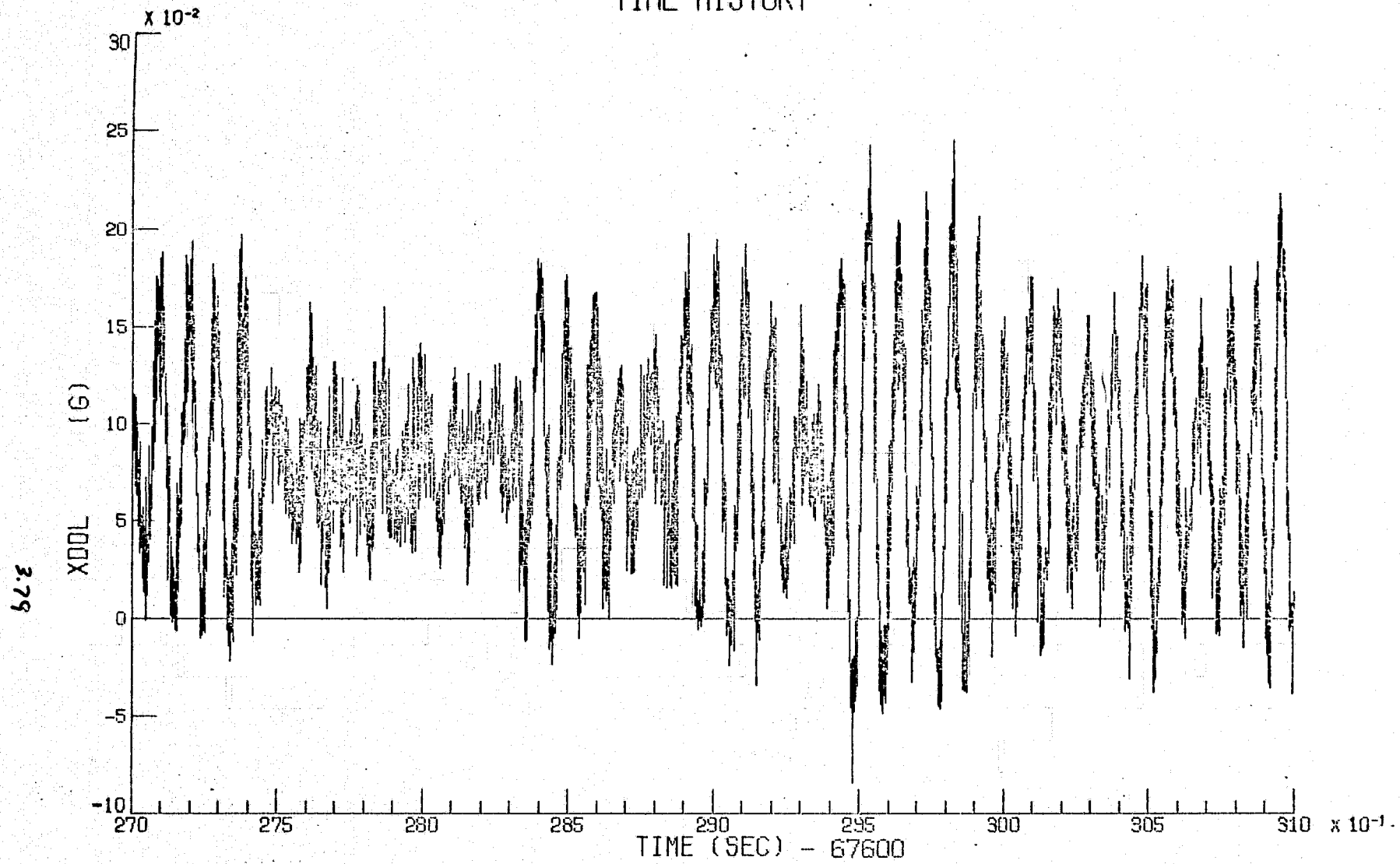
CEN BRN PRE-STEER

CY1850

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 10/01/75

FIGURE 3.37 b

TIME HISTORY



MAX = .244

MIN = -.084

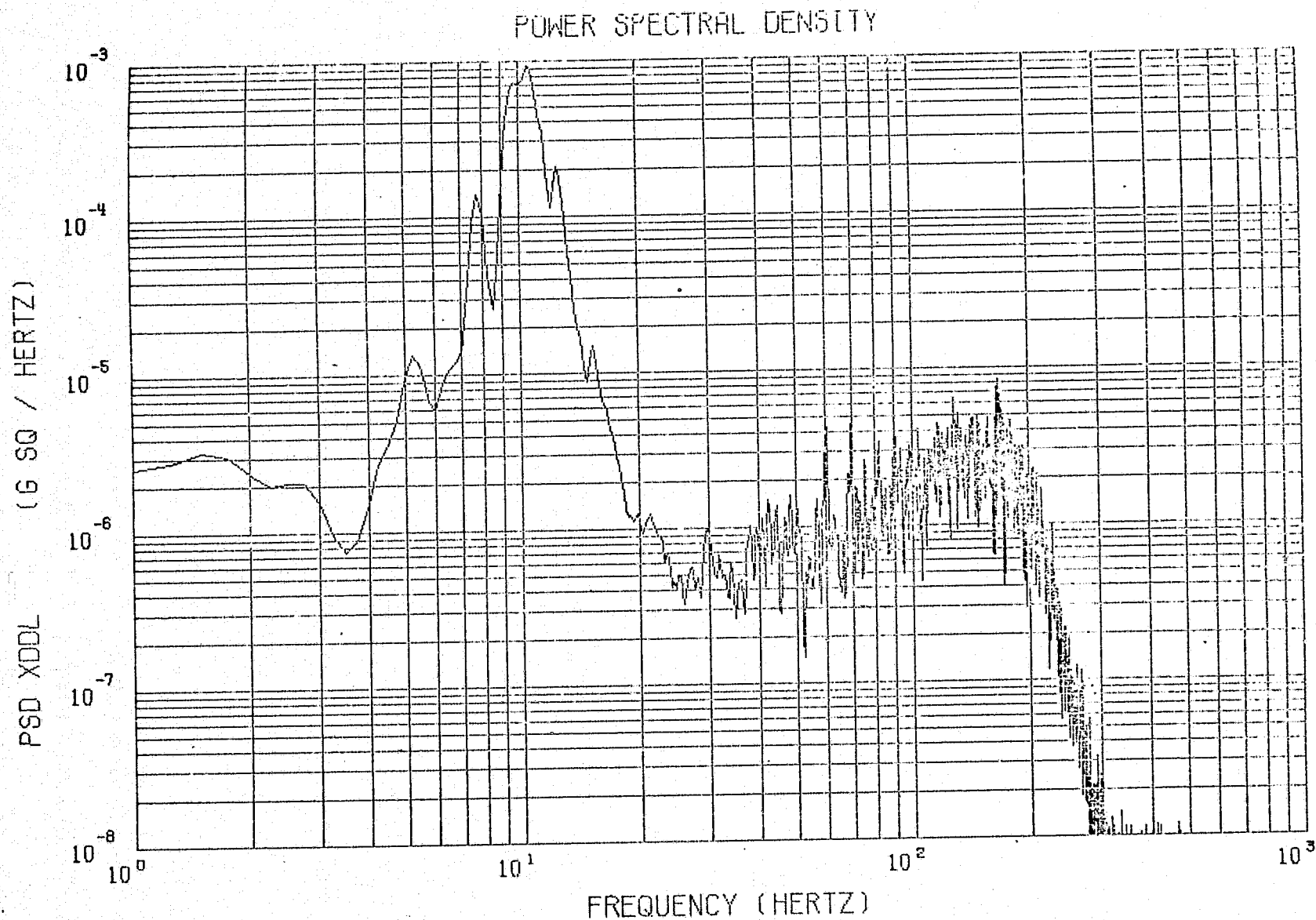
→ ± .139

VIKING B FLT (GBI)

CEN BRN PRE-STEER

XDDL

3.88

 $\Delta F = .250$

START = 67627.000 SEC

STOP = 67631.000 SEC

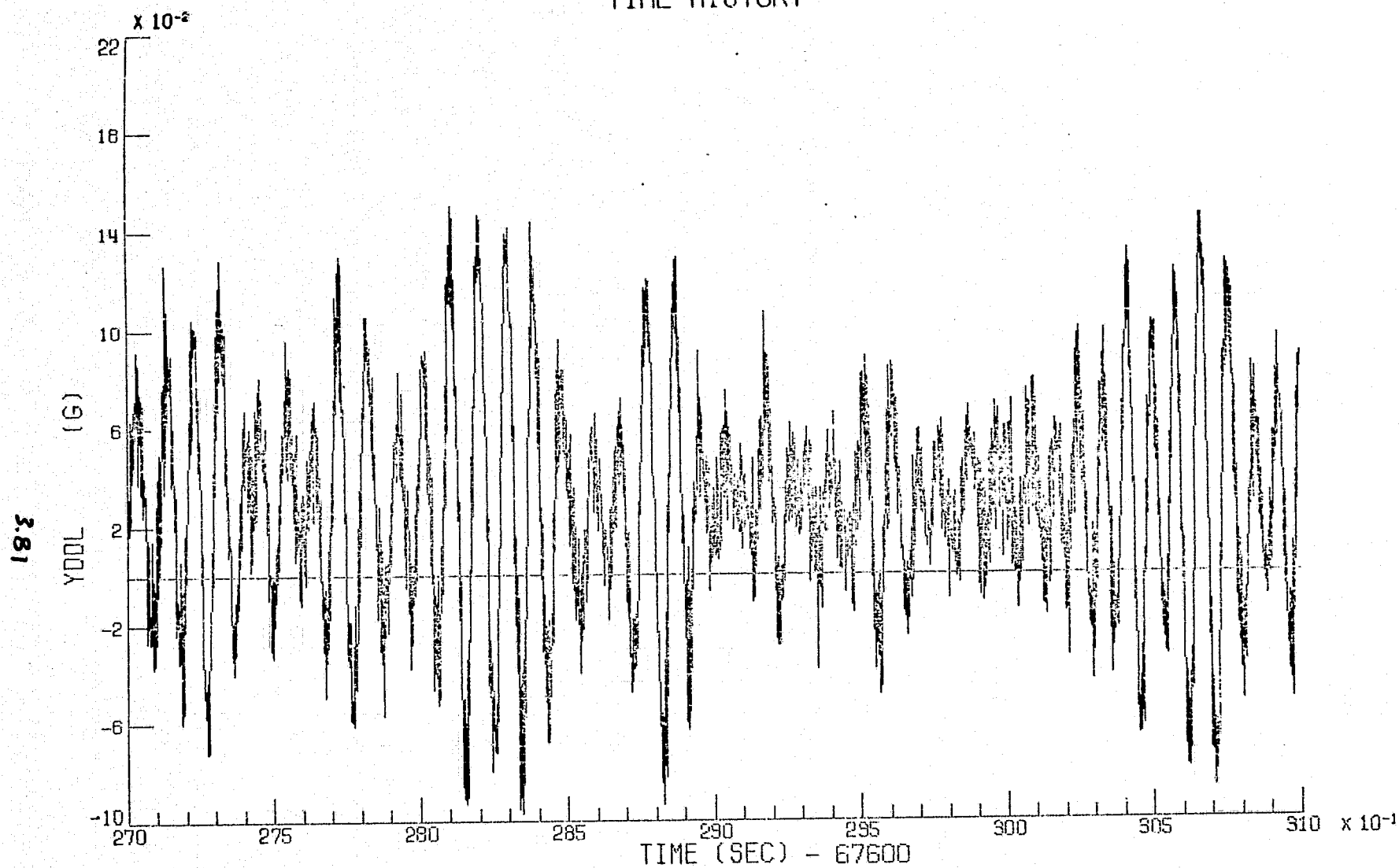
MEAN = 80229×10^{-6} $\sigma^2 = 24963 \times 10^{-7}$ $\sigma = 49963 \times 10^{-6}$ $3\sigma = 14988 \times 10^{-5}$

VIKING B FLT (GBI)

CEN BRN PRE-STEER

XDDL

TIME HISTORY



MAX = .150

MIN = -.096

→ ± .123

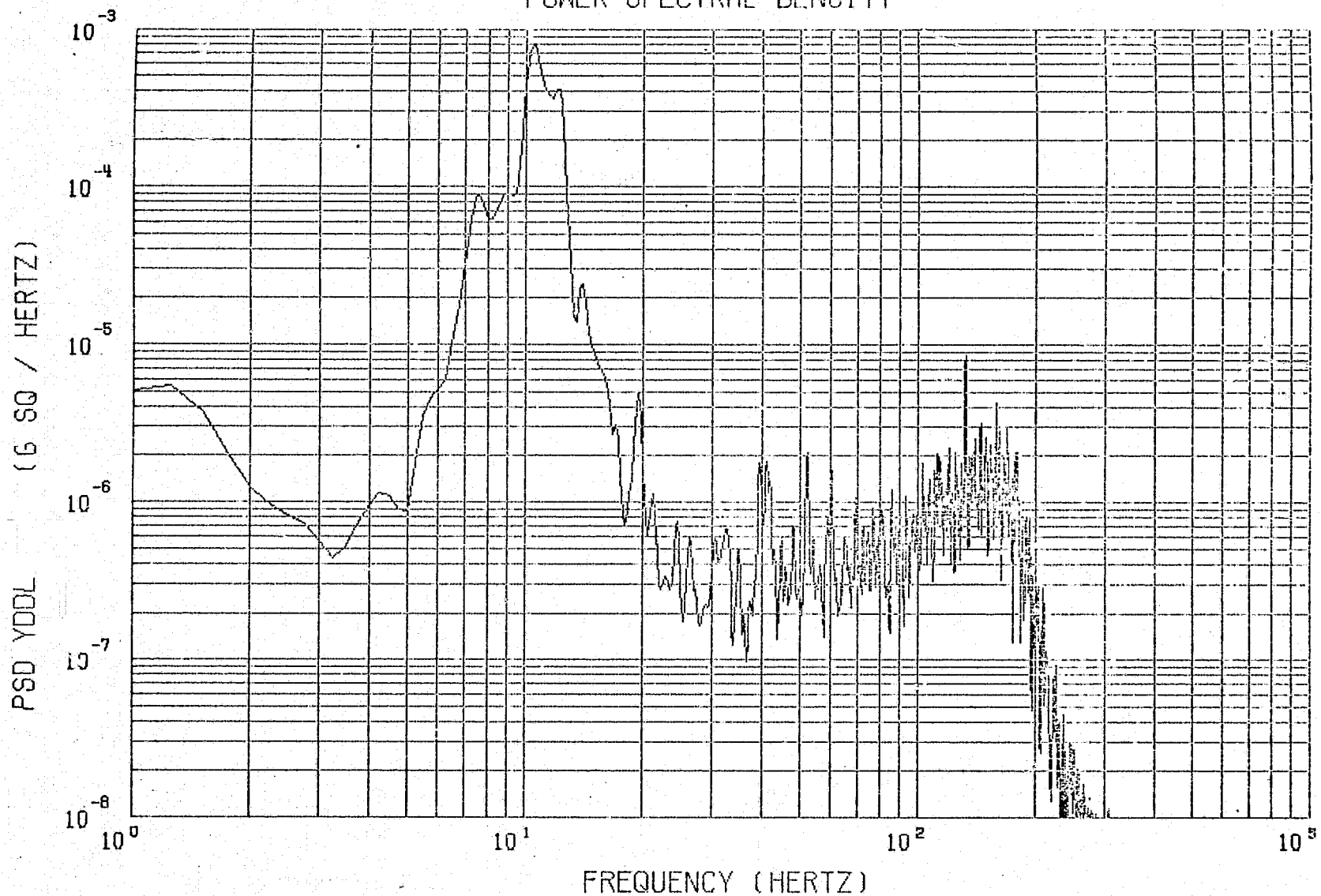
VIKING B FLT (GBI)

CEN BRN PRE-STEER

YDDL

POWER SPECTRAL DENSITY

3.82



$\Delta F = .25$

START = 67627.000 SEC

STOP = 67631.000 SEC

MEAN = 28826×10^{-6}

$\sigma^2 = 18304 \times 10^{-7}$

$\sigma = 42784 \times 10^{-6}$

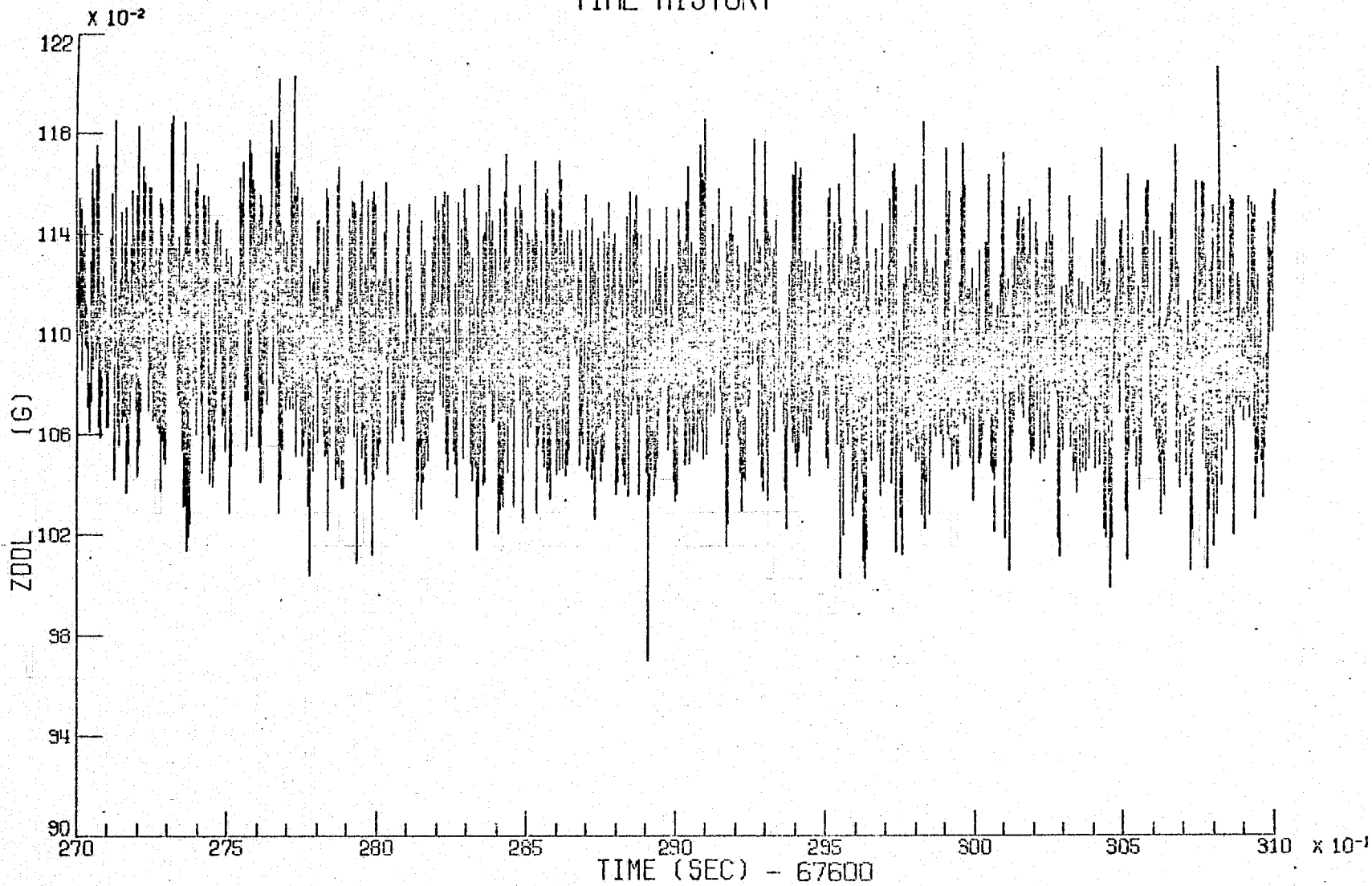
$3\sigma = 12835 \times 10^{-5}$

VIKING B FLT (GBI)

CEN BRN PRE-STEER

YDDL

TIME HISTORY



MAX = 1.206

MIN = .970

→ ± .128 g

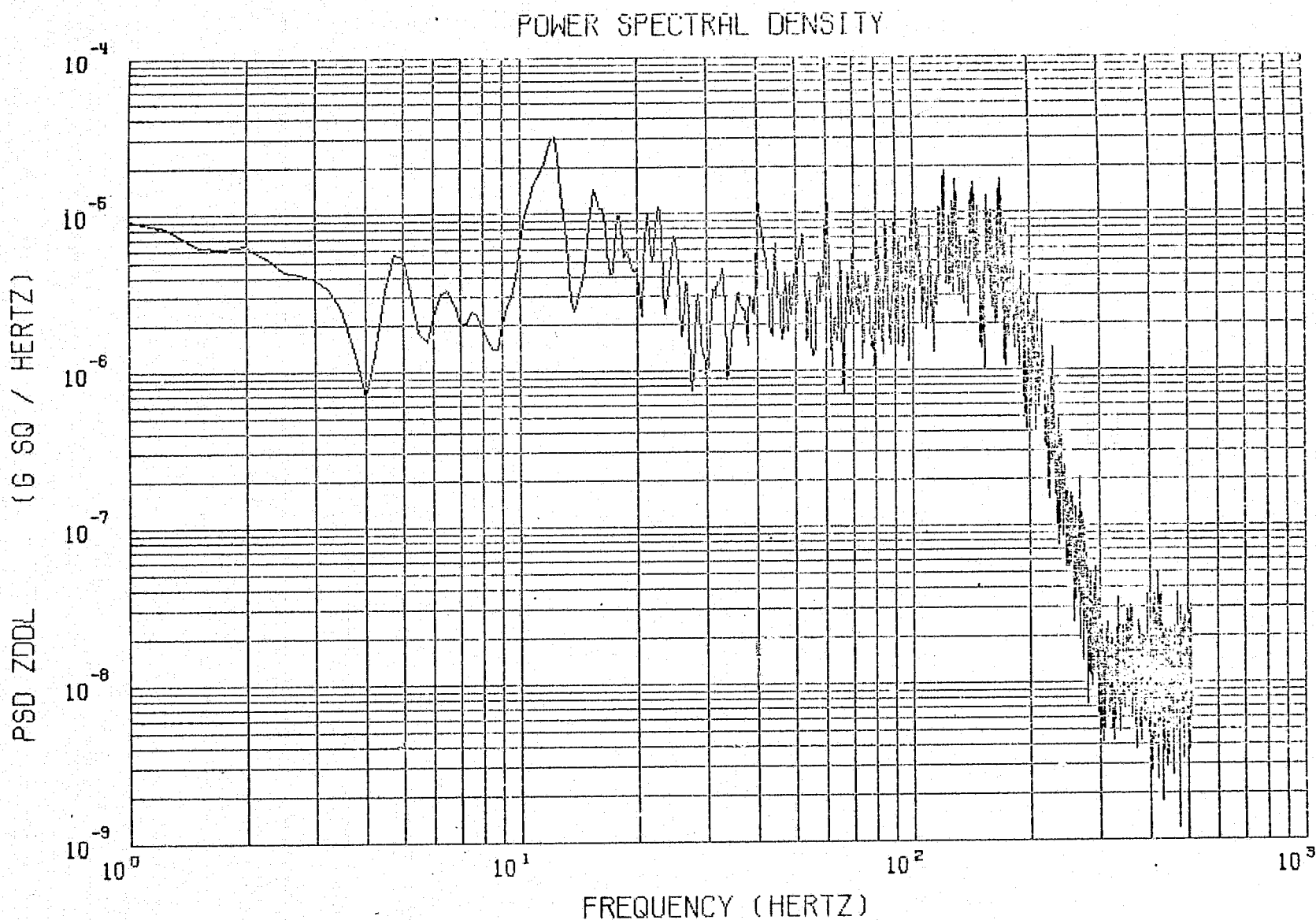
VIKING B FLT (GBI)

CEN BRN PRE-STEER

ZDOL

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3.84



$\Delta F = .250$

START = 67627.000 SEC

STOP = 67631.000 SEC

MEAN = 10365×10^{-4}

$\sigma^2 = 9684 \times 10^{-7}$

$\sigma = 31119 \times 10^{-6}$

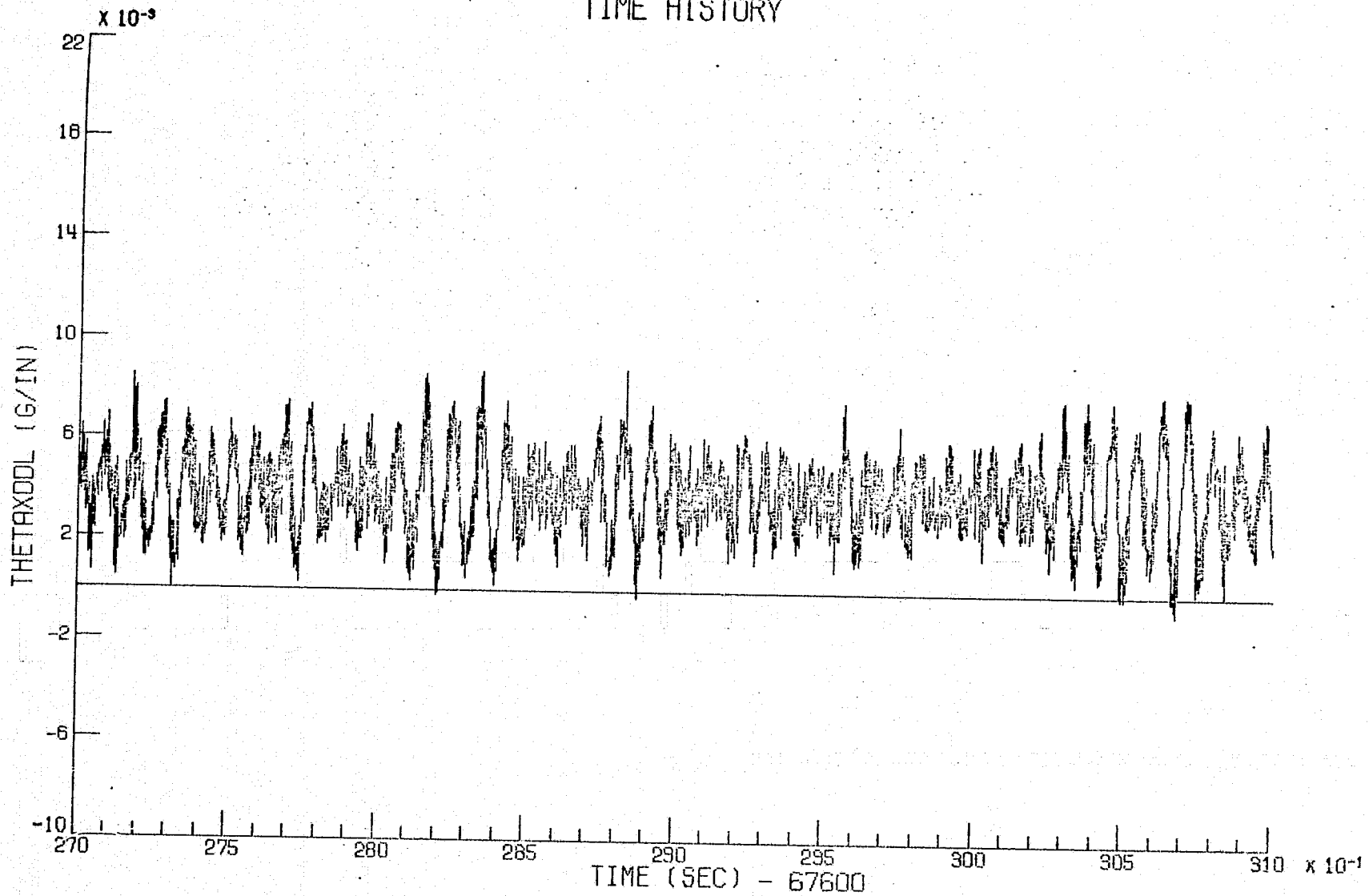
$3\sigma = 93357 \times 10^{-6}$

VIKING B FLT (GBI)

CEN BRN PRE-STEER

ZDDL

TIME HISTORY



MAX = .008

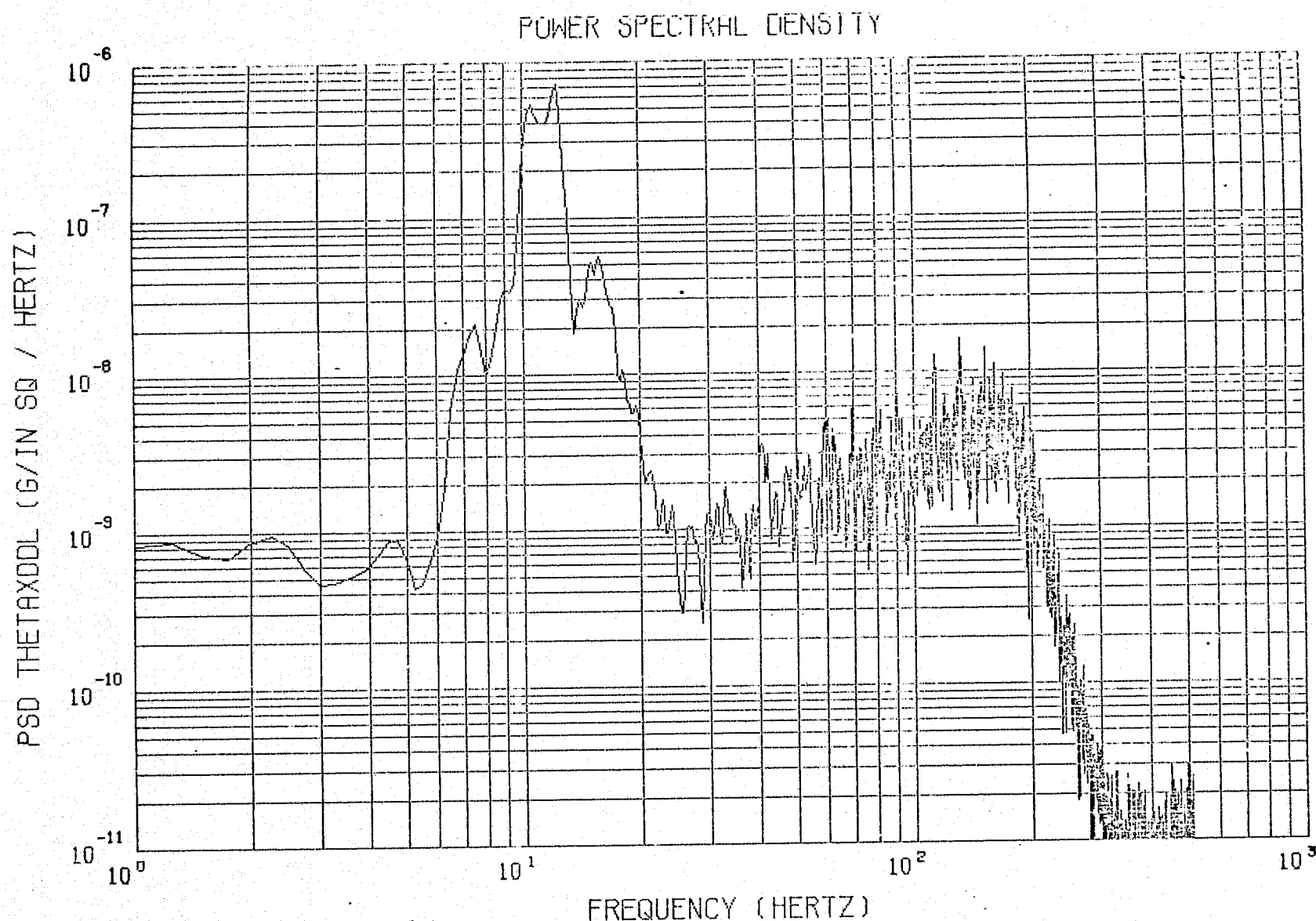
MIN = -.000

VIKING B FLT (GBI)

CEN BRN PRE-STEER

THETA XDDL

3.8%

 $\Delta F = .250$

START = 67627.000 SEC

STOP = 67631.000 SEC

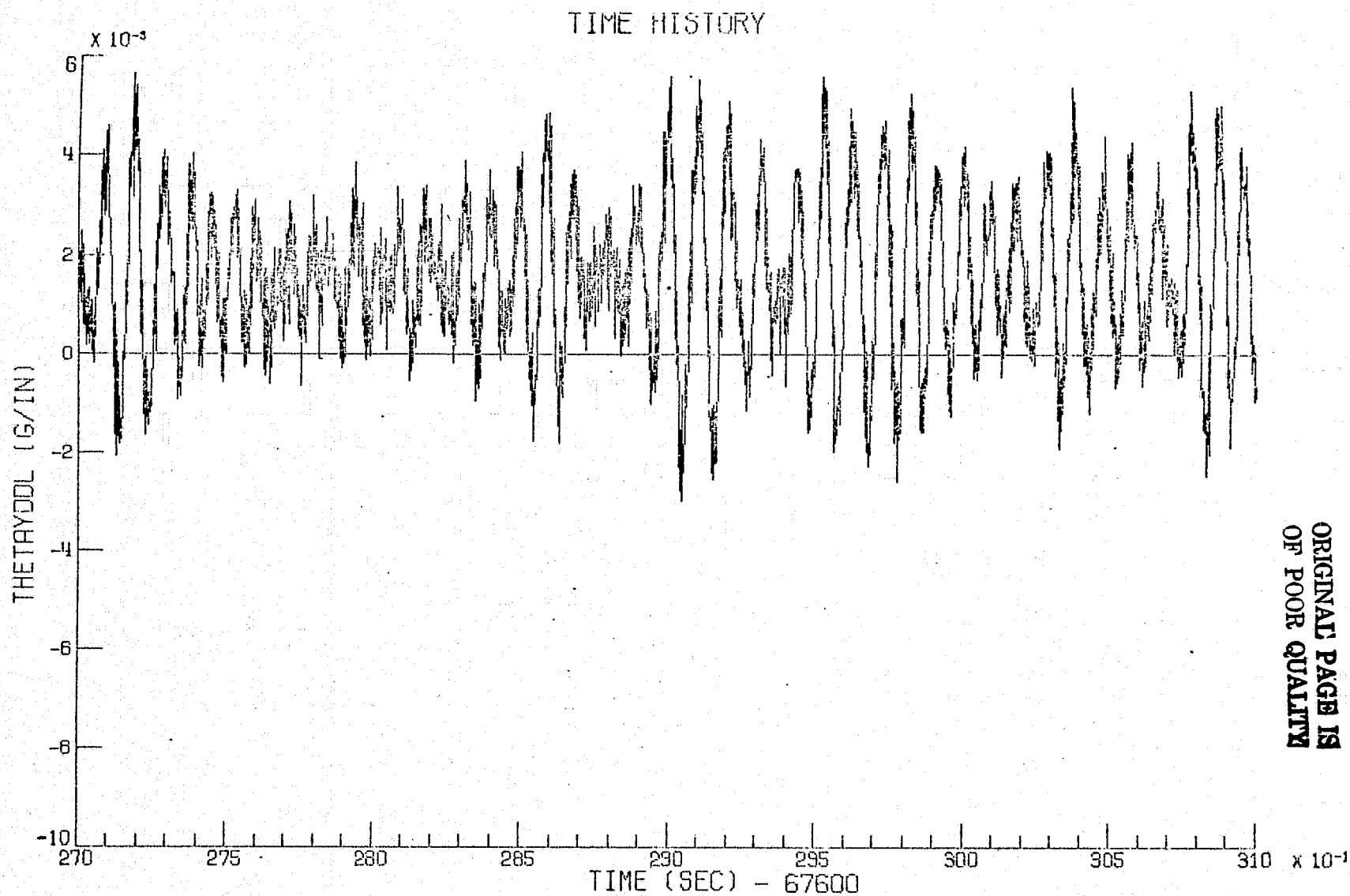
MEAN = 38901×10^{-7} $\sigma^2 = 22634 \times 10^{-10}$ $\sigma = 15044 \times 10^{-7}$ $3\sigma = 45133 \times 10^{-7}$

VIKING B FLT (GBI)

CEN BRN PRE-STEER

THETAXDDL

3.87



ORIGINAL PAGE IS
OF POOR QUALITY

MAX = .005

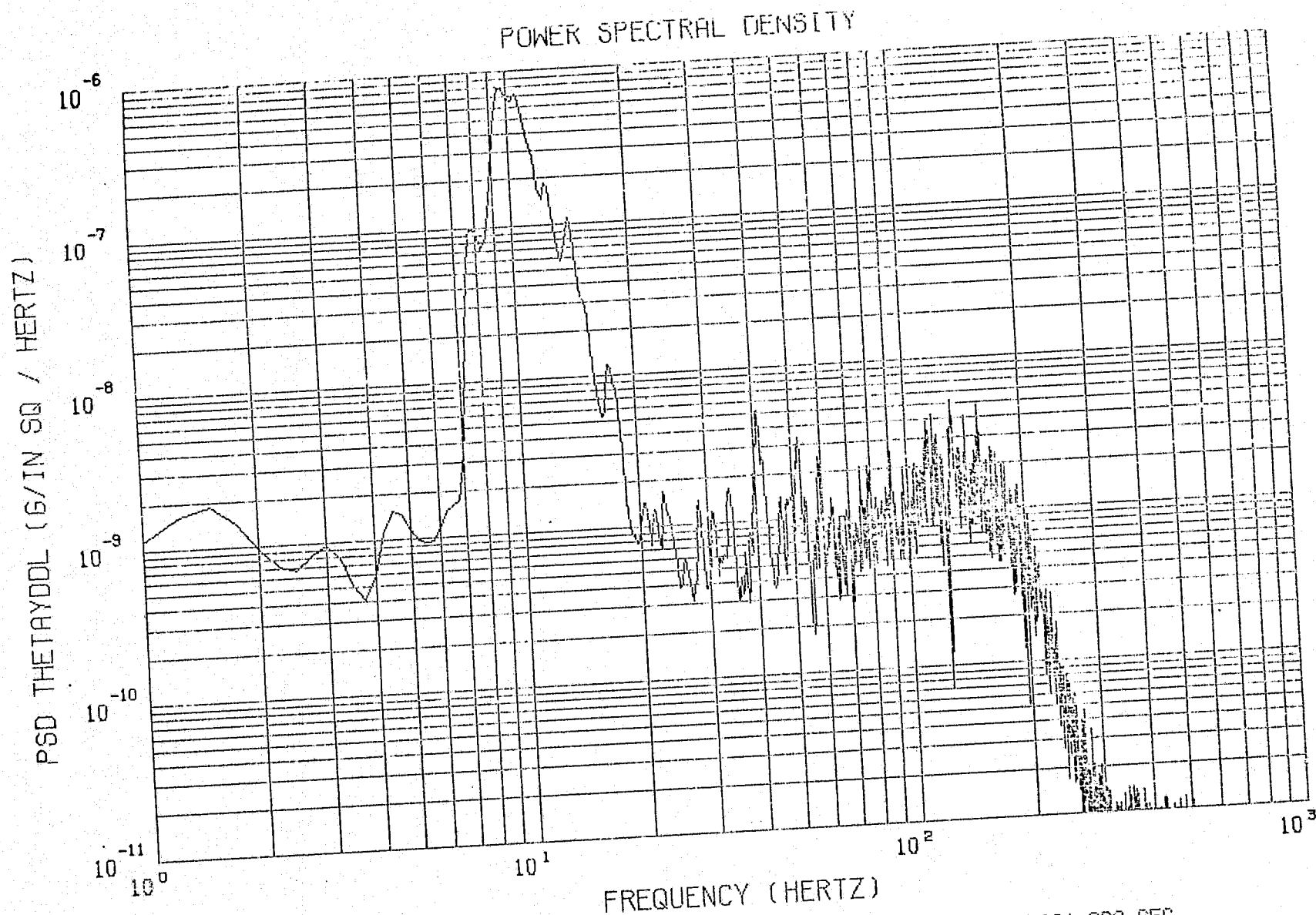
MIN = -.002

VIKING B FLT (GBI)

CEN BRN PRE-STEER

THETAYDDL

3.88



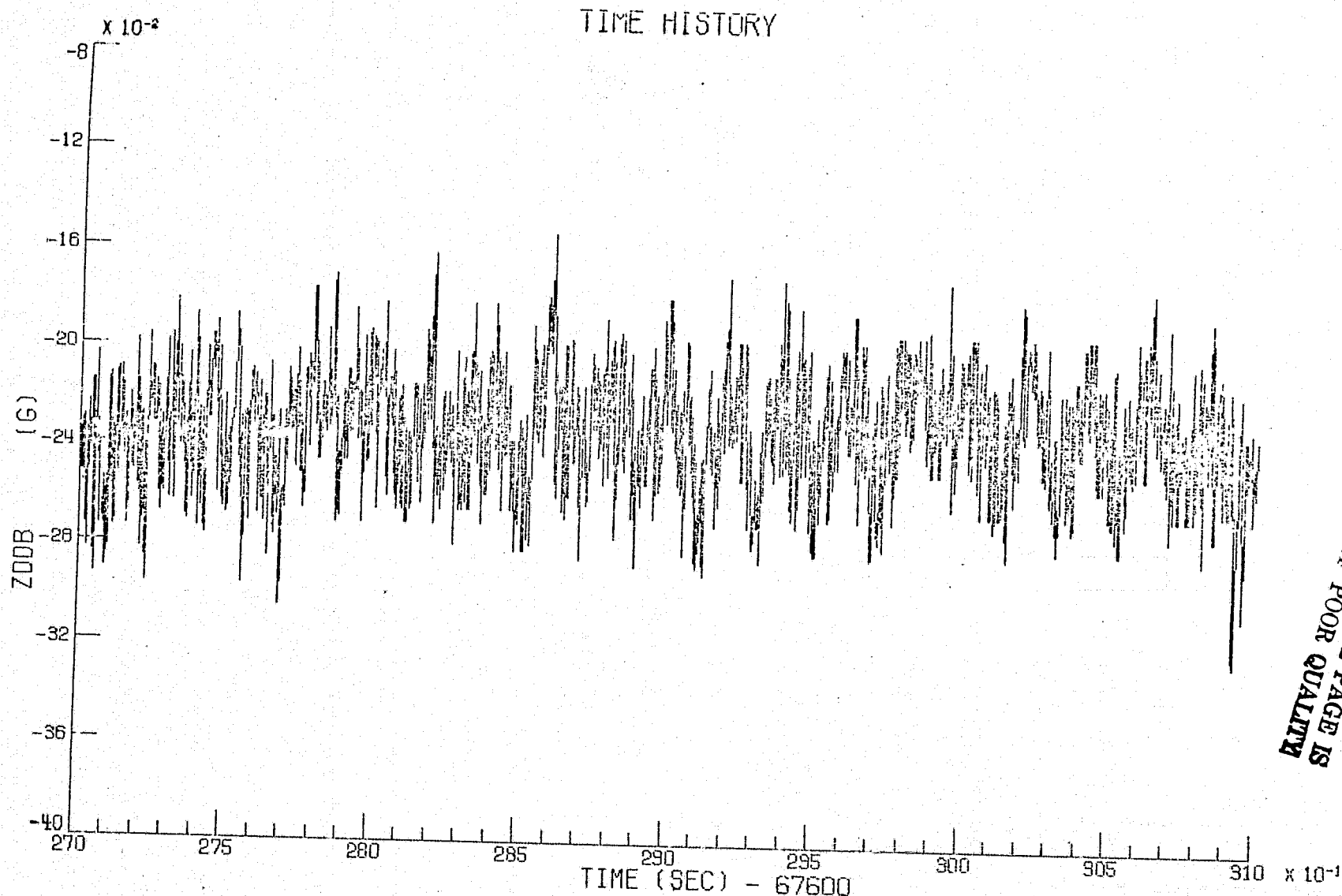
$\Delta F = .250$ START = 67627.000 SEC STOP = 67631.000 SEC
 MEAN = 15715×10^{-7} $\sigma^2 = 22986 \times 10^{-10}$ $\sigma = 15161 \times 10^{-7}$ $3\sigma = 45484 \times 10^{-7}$

VIKING B FLT (GBI)

CEN BRN PRE-STEER

THETAYDOL

5.89



ORIGINAL PAGE IS
OF POOR QUALITY

MAX = -.153

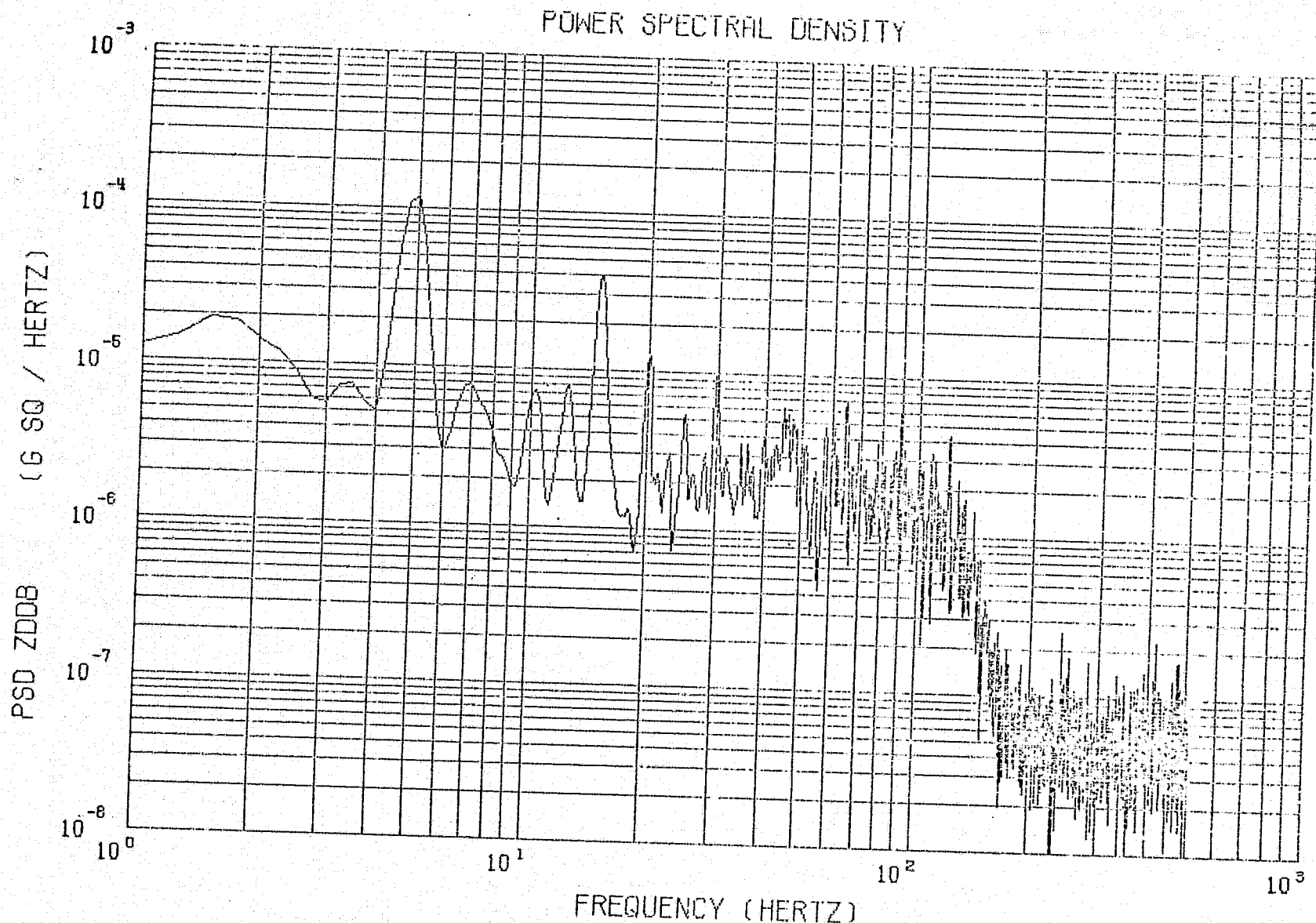
MIN = -.323 $\rightarrow \pm .025 g$

VIKING B FLT (GBI)

CEN BRN PRE-STEER

ZODB

06.5



$\Delta F = .250$

START = 67627.000 SEC

STOP = 67631.000 SEC

MEAN = -2321×10^{-4}

$\sigma^2 = 48687 \times 10^{-6}$

$\sigma = 22065 \times 10^{-6}$

$3\sigma = 66195 \times 10^{-6}$

VIKING B FLT (GBI)

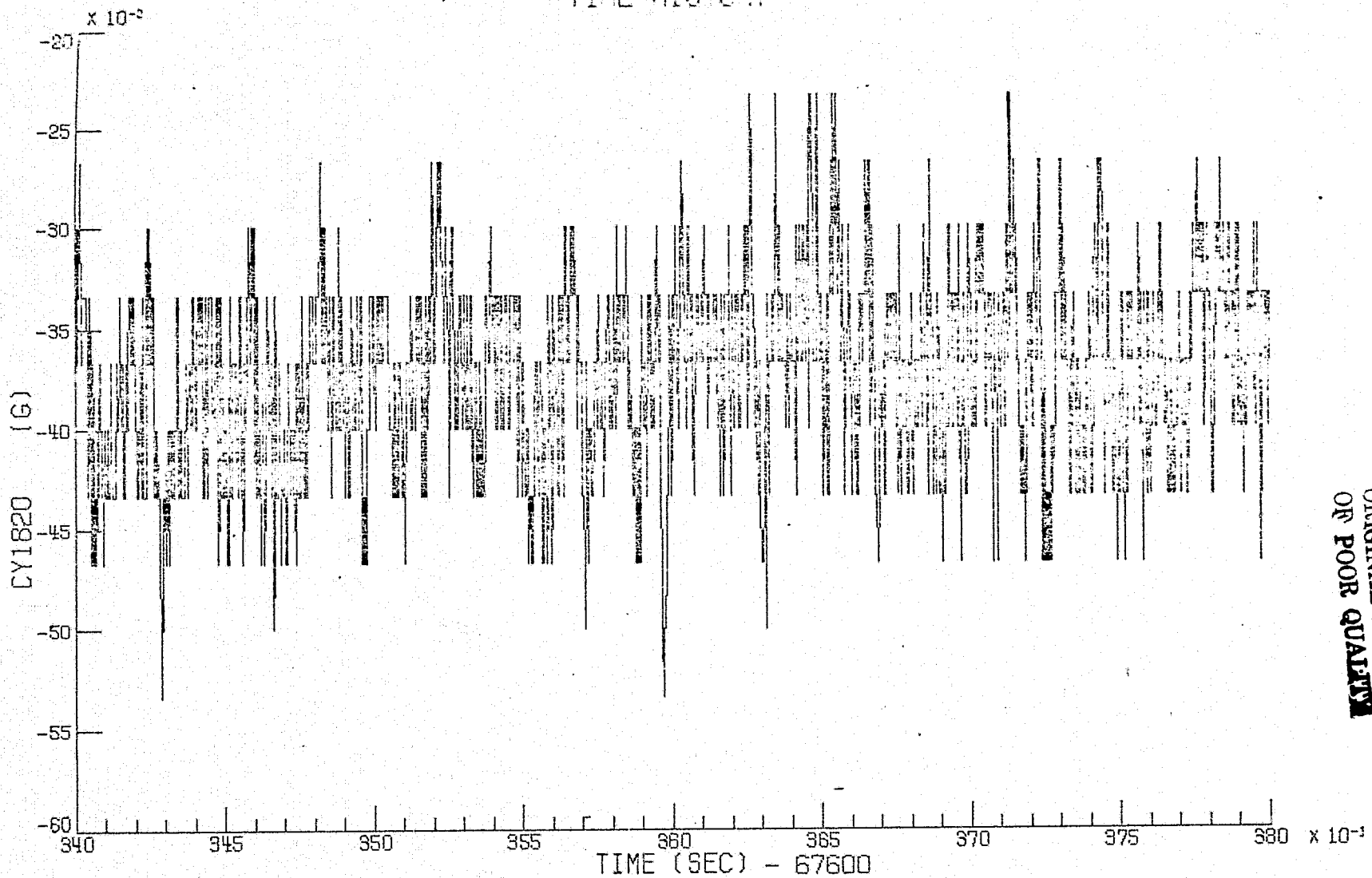
CEN BRN PRE-STEER

ZODB

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 10/01/75

FIGURE 3.43b

TIME HISTORY



MAX = -.233

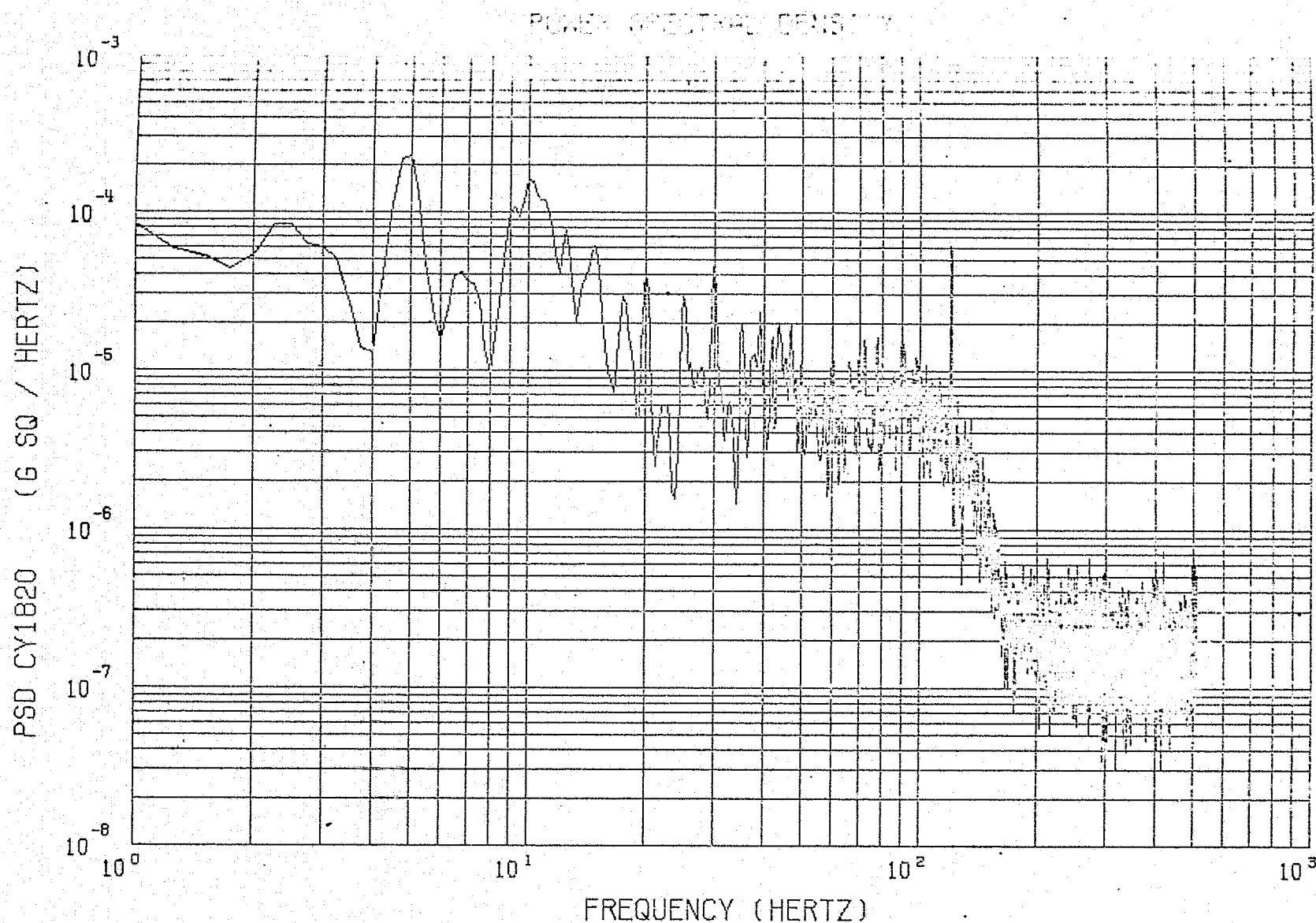
MIN = -.533 $\rightarrow \pm .158$

VIKING B FLT (GBI)

CEN BRN STEER - 1

CY1820

3.92



$\Delta F = .250$

START = 67634.000 SEC

STOP = 67638.000 SEC

MEAN = -37252×10^{-5}

$\sigma^2 = 20754 \times 10^{-7}$

$\sigma = 45557 \times 10^{-5}$

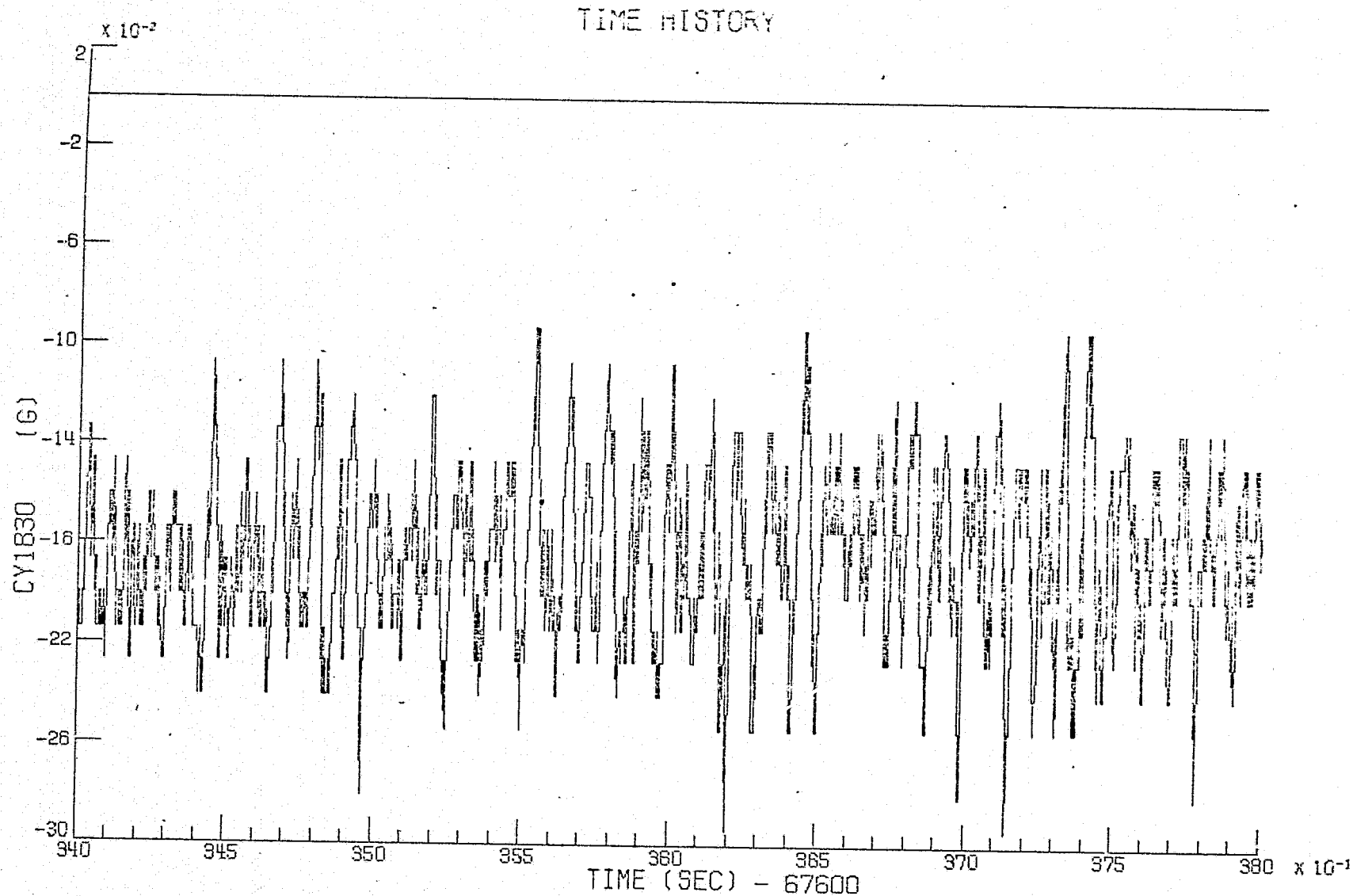
$3\sigma = 13667 \times 10^{-5}$

VIKING B FLT (GBI)

CEN BRN STEER - 1

CY1820

393



MAX = -.093

MIN = -.293

→ ± .102 g

VIKING B FLT (GBI)

CEN BRN STEER - 1

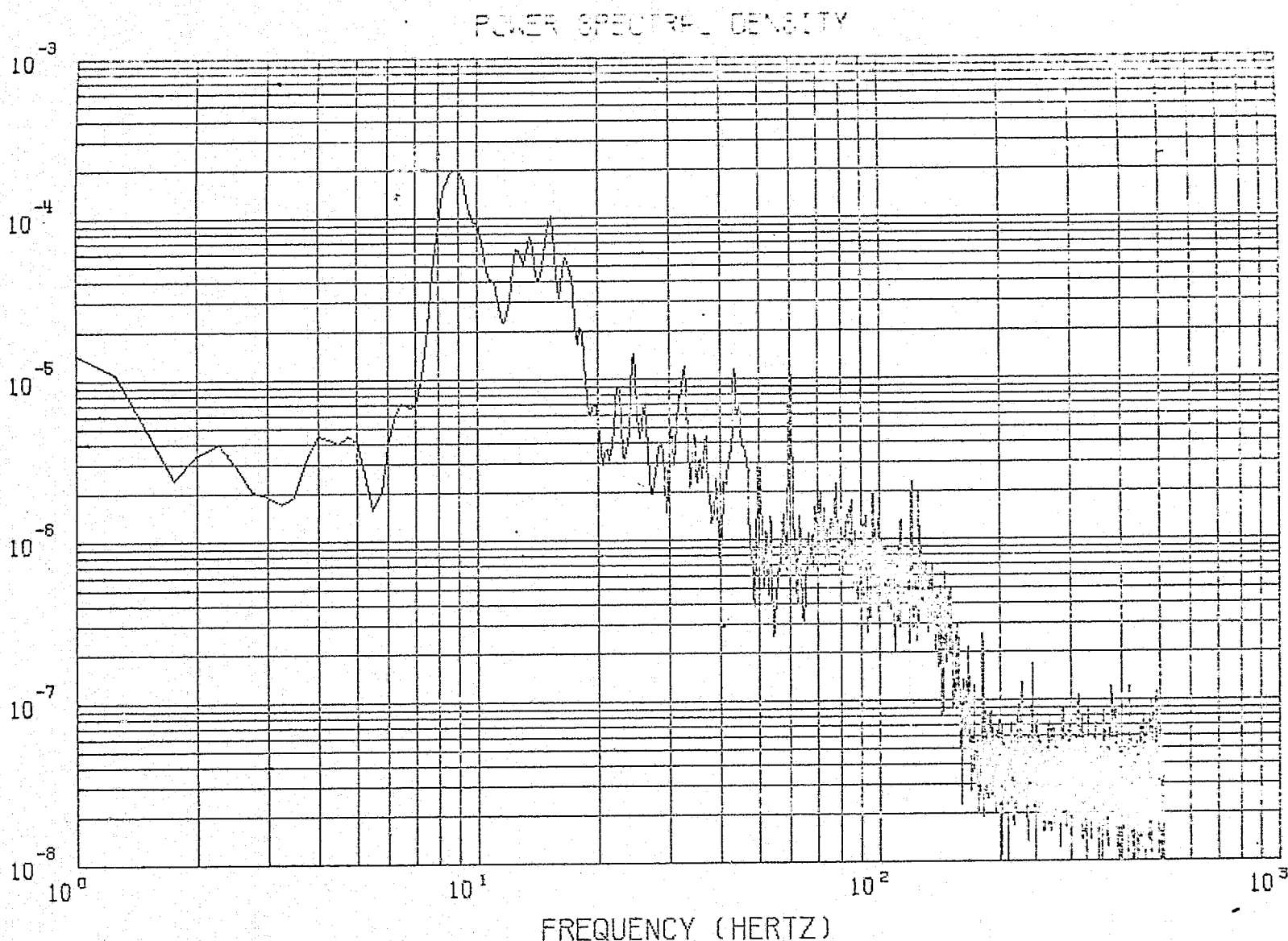
CY1830

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 10/01/75

FIGURE 3.45 a

763

PSD CY1830 (G SQ / HERTZ)



$\Delta F = .250$

START = 67634.000 SEC

STOP = 67638.000 SEC

MEAN = -18327×10^{-5}

$\sigma^2 = 10168 \times 10^{-7}$

$\sigma = 31887 \times 10^{-5}$

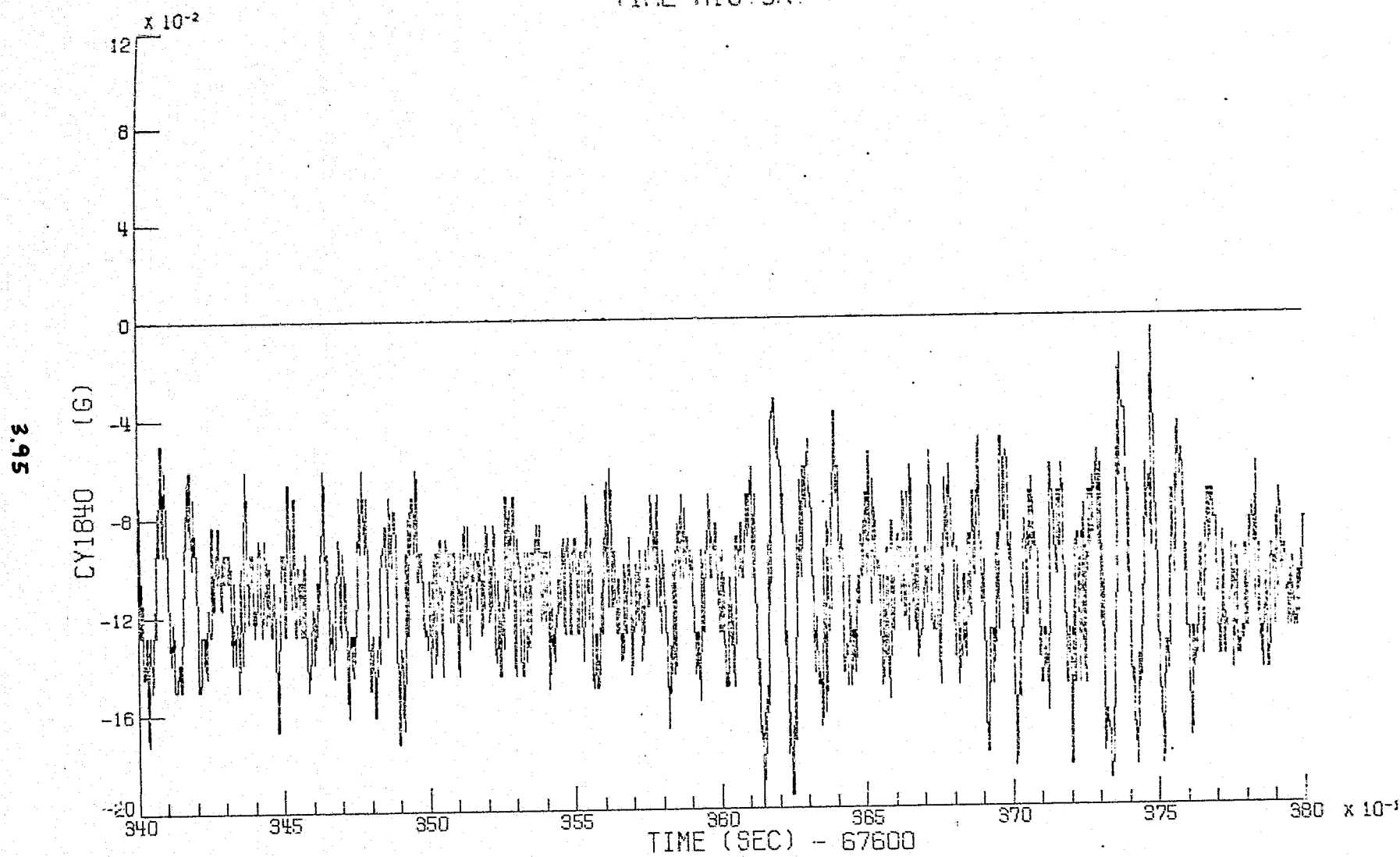
$3\sigma = 95663 \times 10^{-5}$

VIKING B FLT (GBI)

CEN BRN STEER - 1

CY1830

TIME HISTORY



MAX = -.005

MIN = -.200

→ $\pm .098 g$

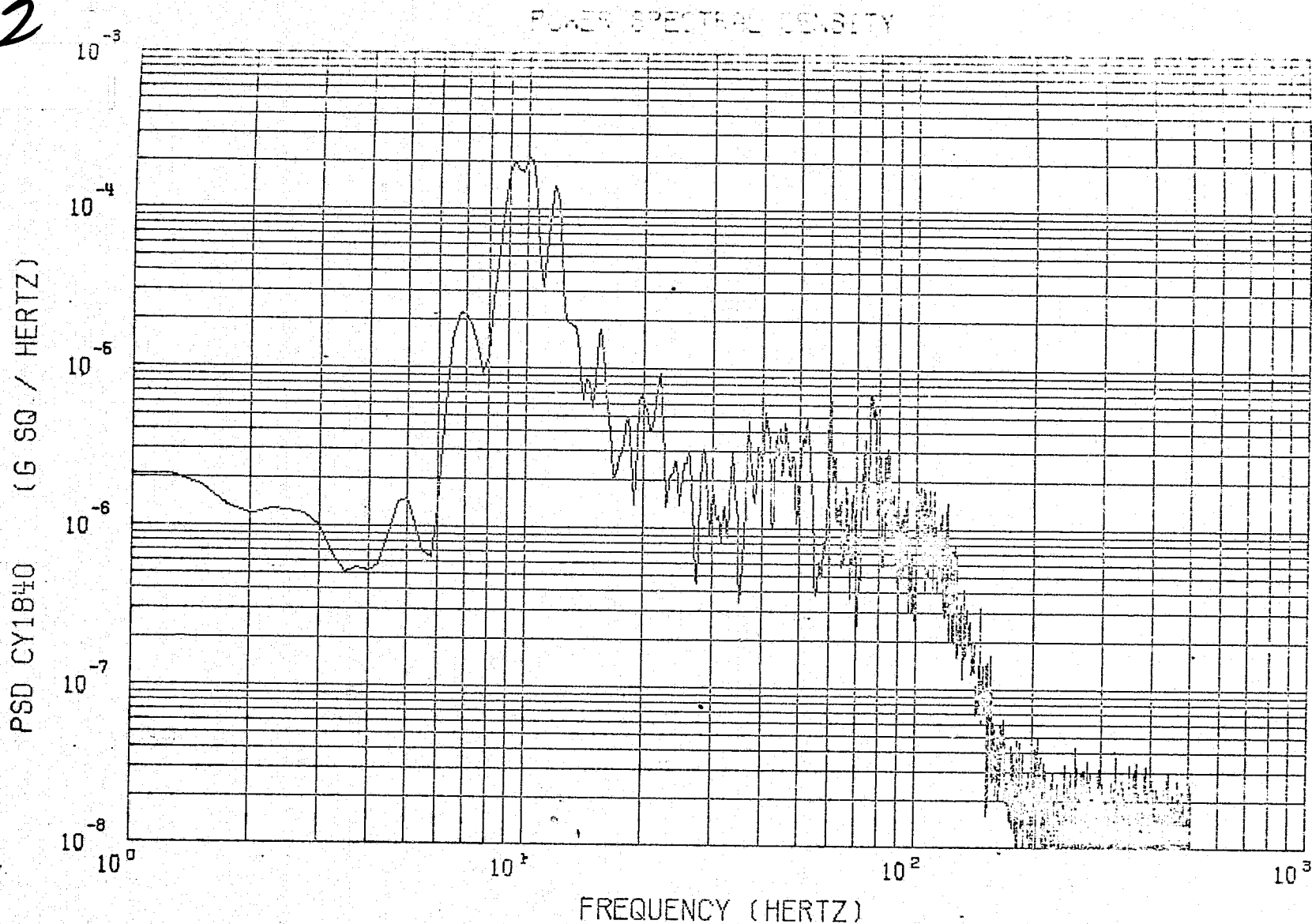
VIKING B FLT (GBI)

CEN BRN STEER - 1

CY1840

C-2

3.96



$\Delta F = .250$

START = 67634.000 SEC

STOP = 67638.000 SEC

MEAN = -11005×10^{-5}

$\sigma^2 = 78703 \times 10^{-5}$

$\sigma = 28054 \times 10^{-5}$

$3\sigma = 84162 \times 10^{-5}$

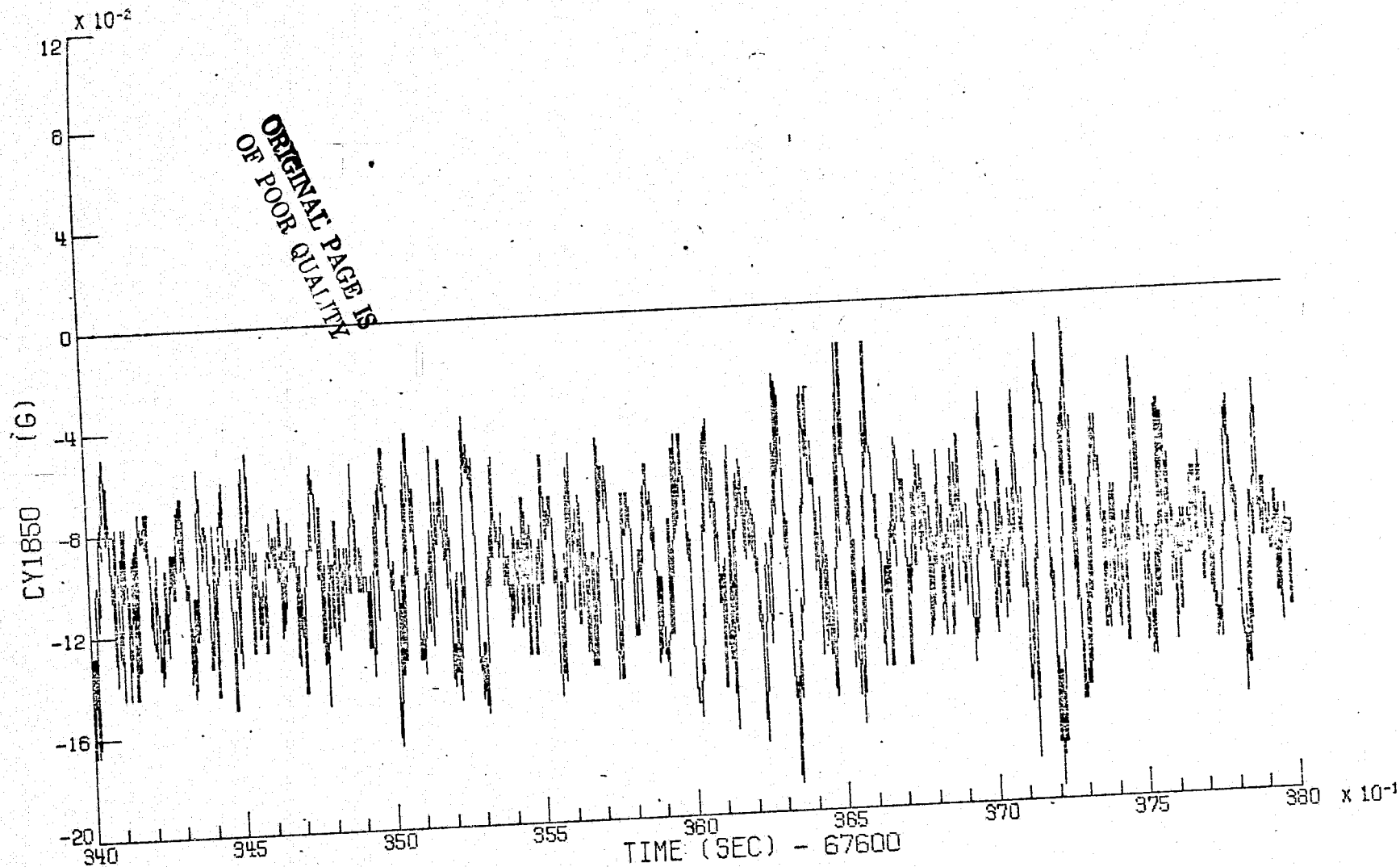
VIKING B FLT (GBI)

CEN BRN STEER - 1

CY1840

TIME HISTORY

3.97



MAX = -.011

MIN = -.194

→ ±.092 g

VIKING B FLT (GBI)

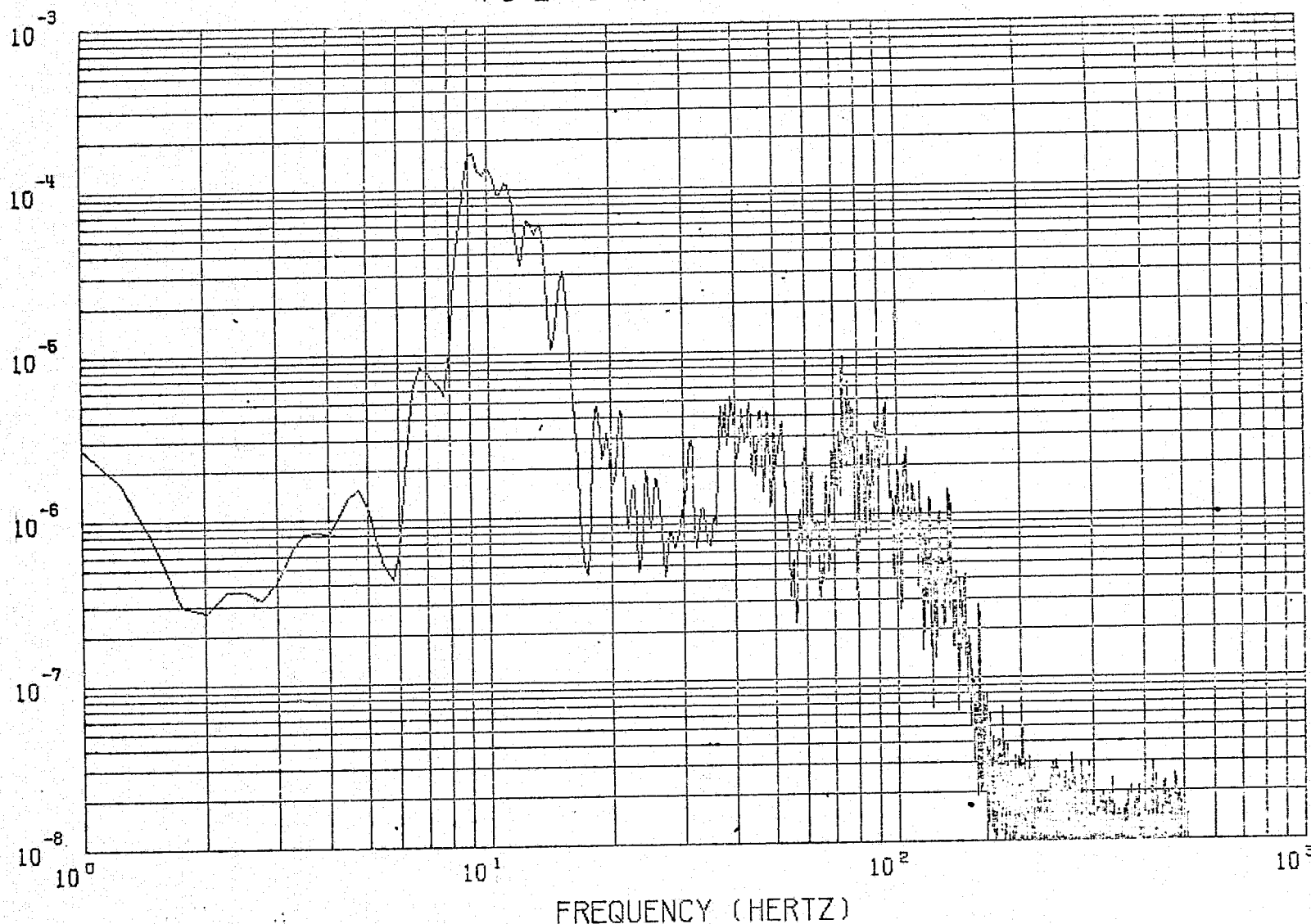
CEN BRN STEER - 1

CY1850

86.3

PSD CY1850 (G SQ / HERTZ)

POWER SPECTRAL DENSITY

 $\Delta F = .250$

START = 67634.000 SEC

STOP = 67638.000 SEC

MEAN = -98336×10^{-6} $\sigma^2 = 75817 \times 10^{-6}$ $\sigma = 27534 \times 10^{-6}$ $3\sigma = 82604 \times 10^{-6}$

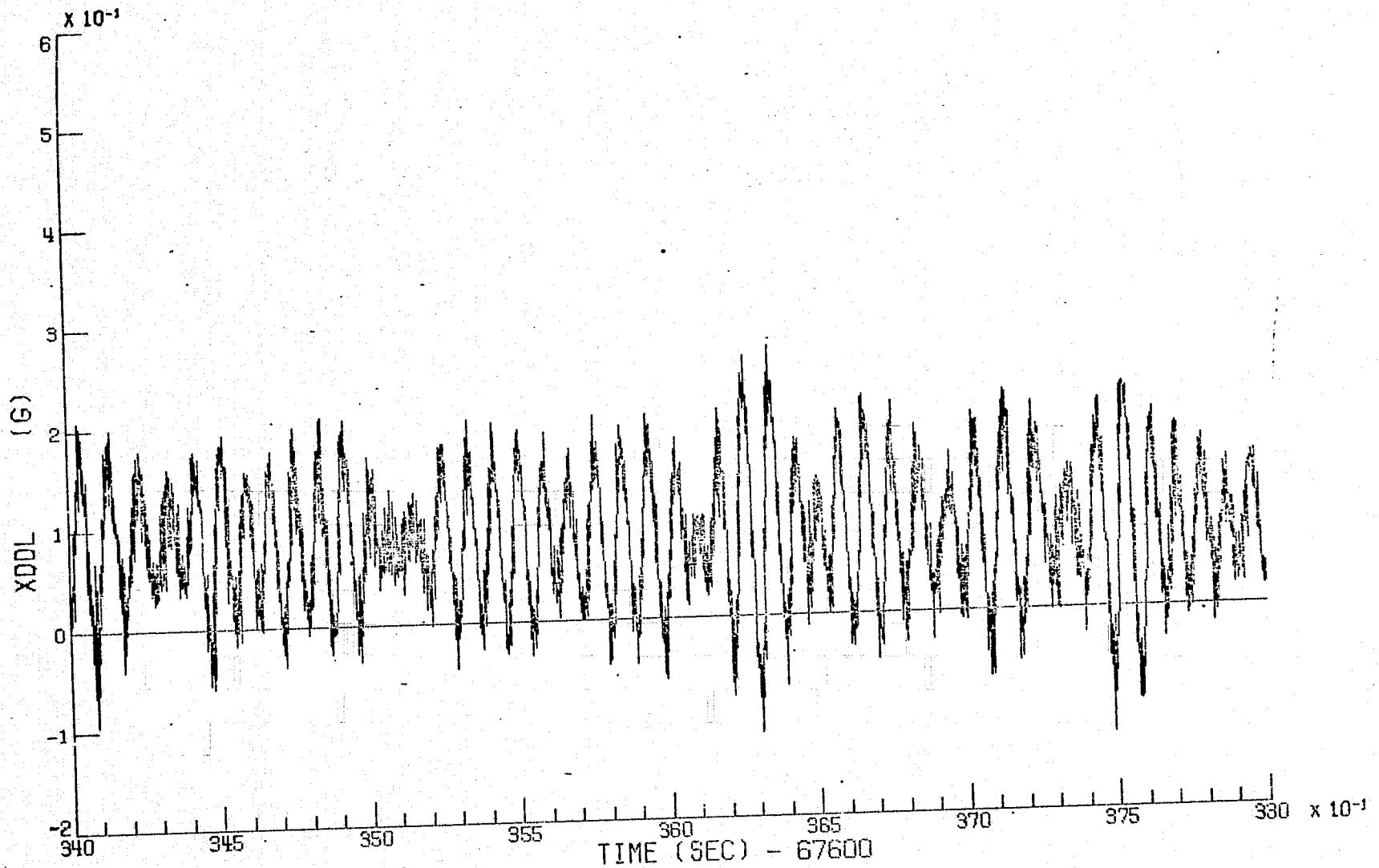
VIKING B FLT (GBI)

CEN BRN STEER - 1

CY1850

TIME HISTORY

3.99



MAX = .266

MIN = -.124

→ ± .195

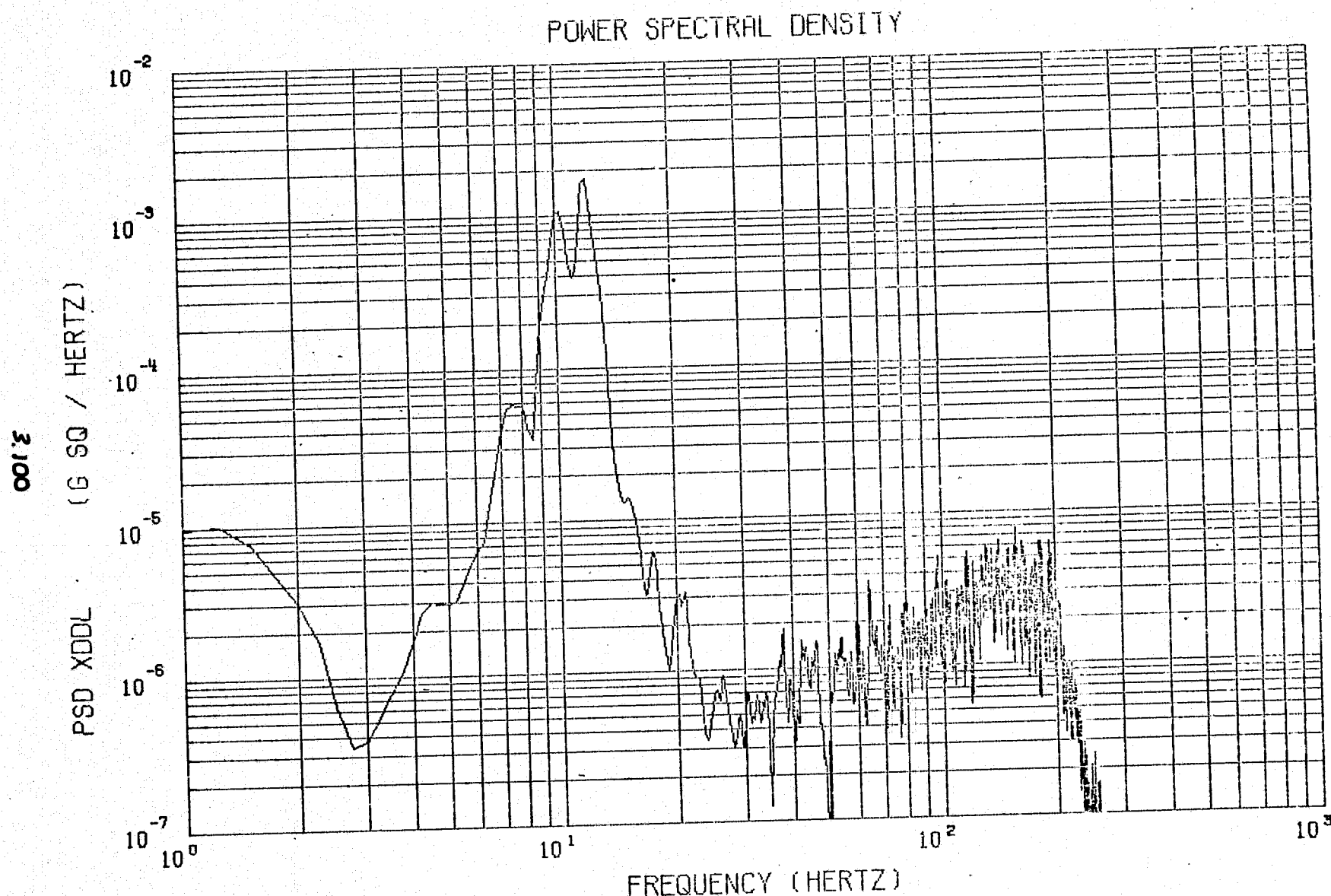
VIKING B FLT (GBI)

CEN BRN STEER - 1

XDDL

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 10/01/75

FIGURE 3.48 a



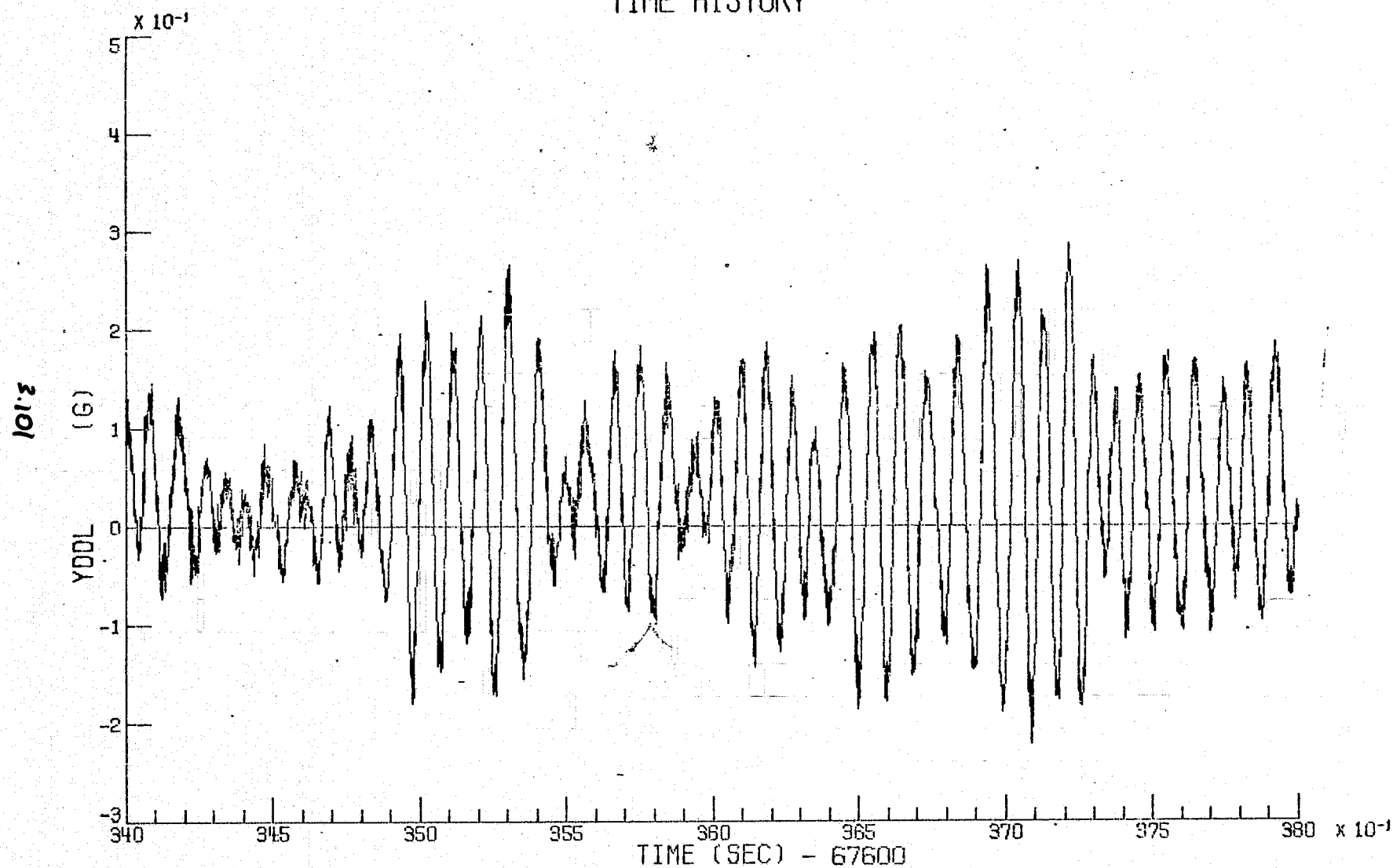
$\Delta F = .250$ START = 67634.000 SEC STOP = 67638.000 SEC
 MEAN = 8117×10^{-5} $\sigma^2 = 38582 \times 10^{-7}$ $\sigma = 62115 \times 10^{-5}$ $3\sigma = 18634 \times 10^{-5}$

VIKING B FLT (GBI)

CEN BRN STEER - 1

XDDL

TIME HISTORY



MAX = .285

MIN = -.220

→ ± .253

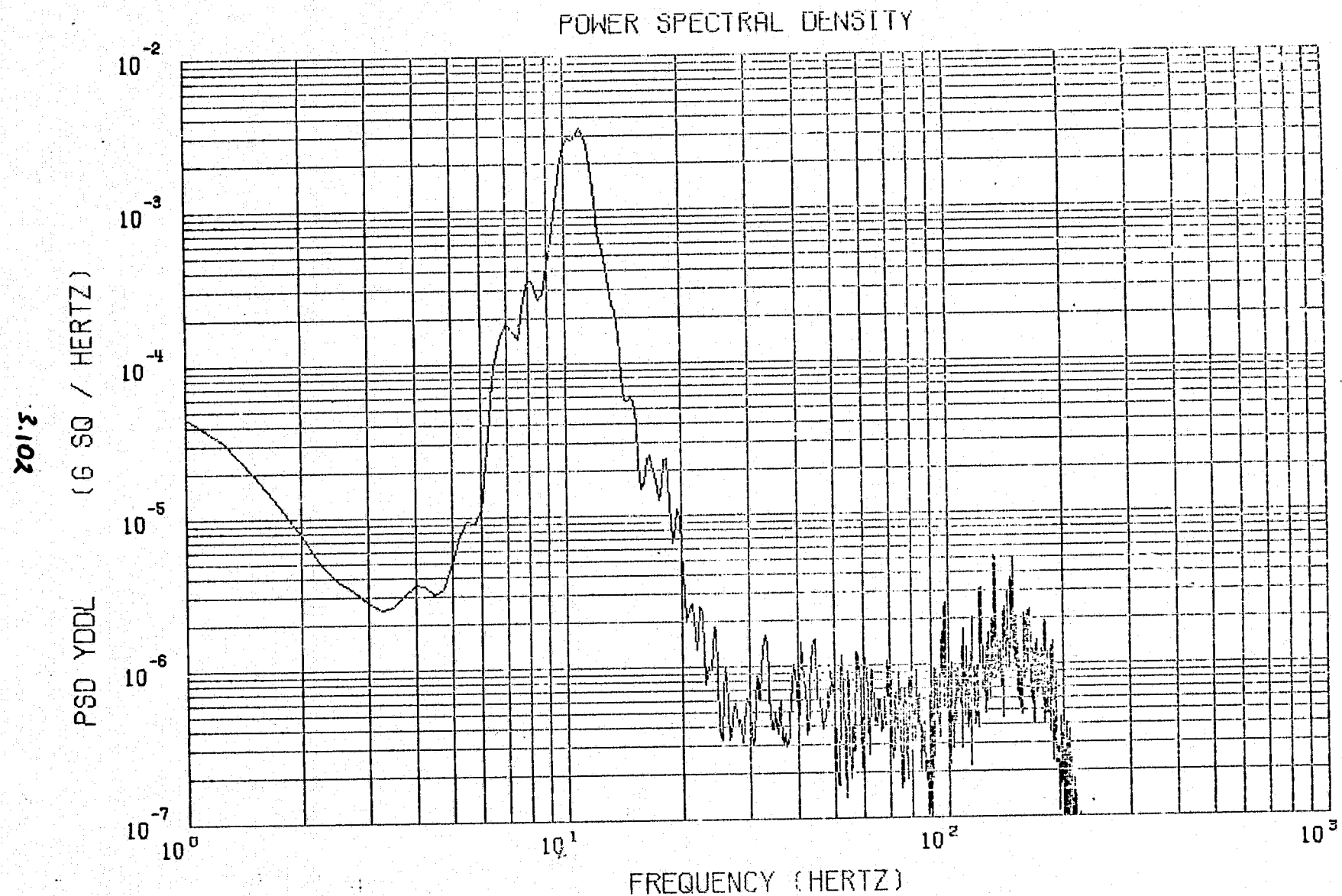
VIKING B FLT (GBI)

CEN BRN STEER - 1

YDDL

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 10/01/75

FIGURE 3.49a



$\Delta F = .250$

START = 67634.000 SEC

STOP = 67638.000 SEC

MEAN = 28757×10^{-6}

$\sigma^2 = 85461 \times 10^{-7}$

$\sigma = 92445 \times 10^{-6}$

$3\sigma = 27733 \times 10^{-6}$

VIKING B FLT (GBI)

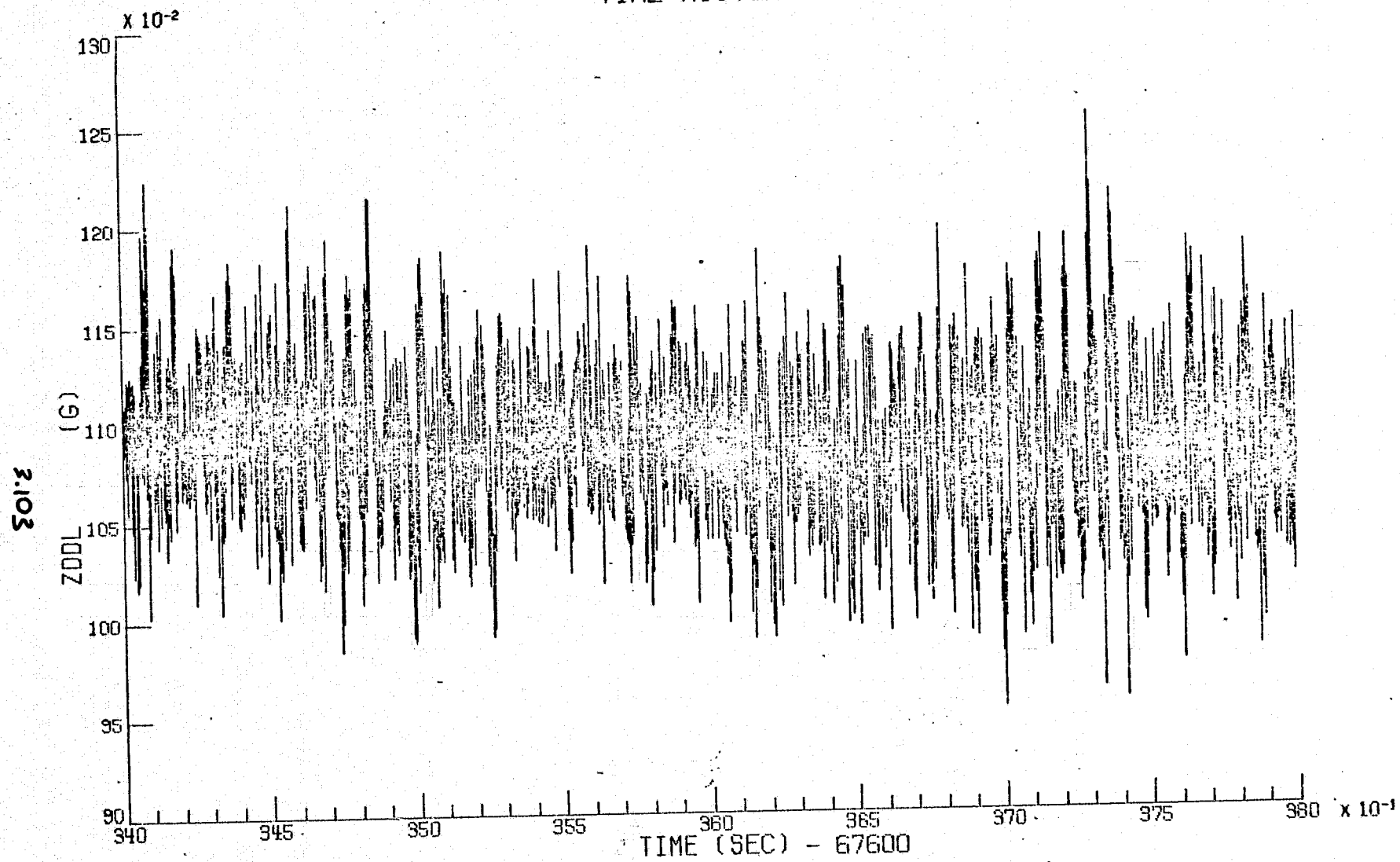
CEN BRN STEER - 1

YDDL

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 10/01/75

FIGURE 3.49b

TIME HISTORY



VIKING B FLT (GBI)

CEN BRN STEER - 1

ZDDL

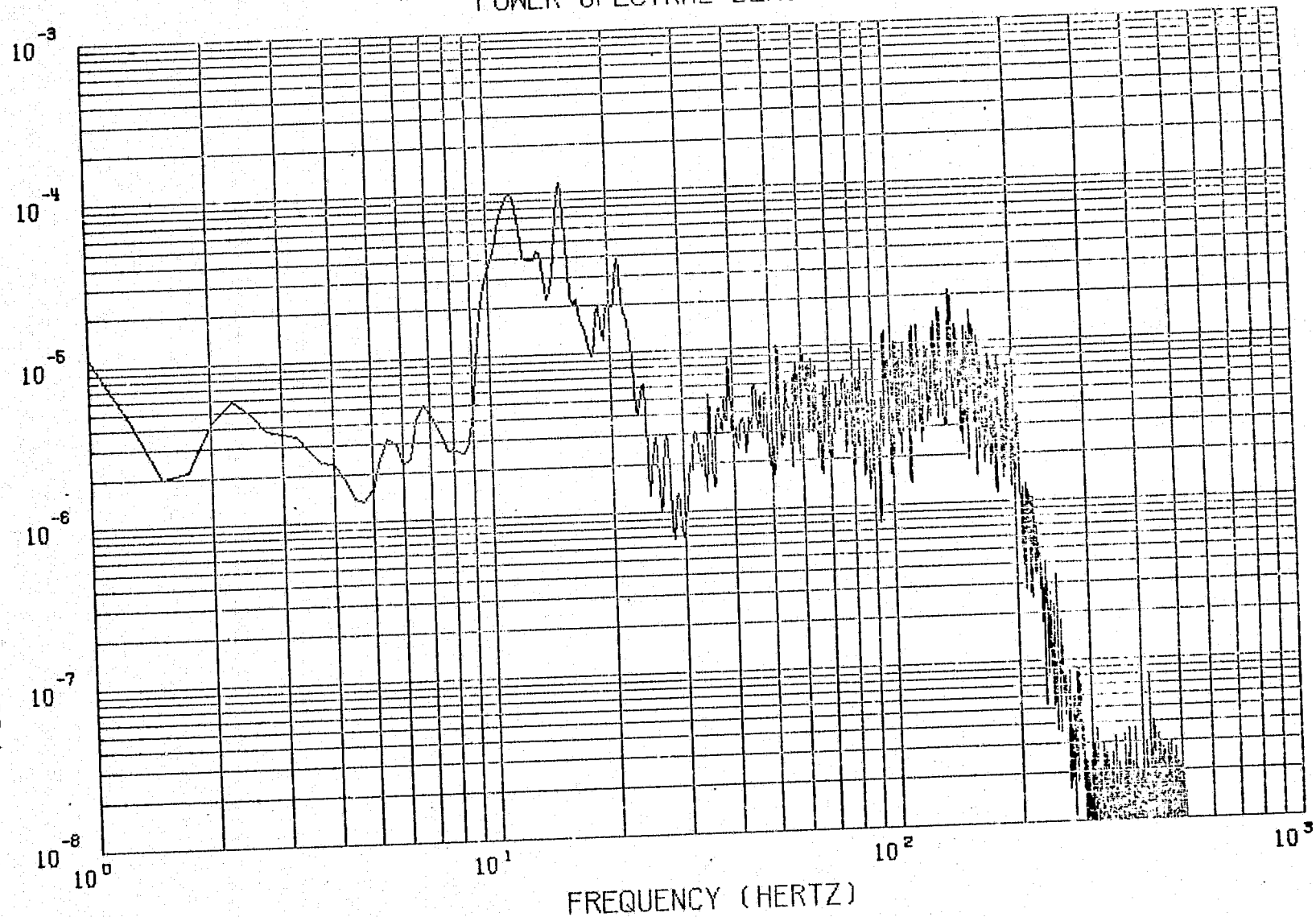
NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 10/01/75

FIGURE 3.50 a

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POWER SPECTRAL DENSITY

PSD ZDDL
(G SQ / HERTZ)



$\Delta F = .250$

START = 67634.000 SEC

STOP = 67638.000 SEC

MEAN = 10876×10^{-4}

$\sigma^2 = 14269 \times 10^{-7}$

$\sigma = 37775 \times 10^{-5}$

$3\sigma = 11332 \times 10^{-5}$

VIKING B FLT (GBI)

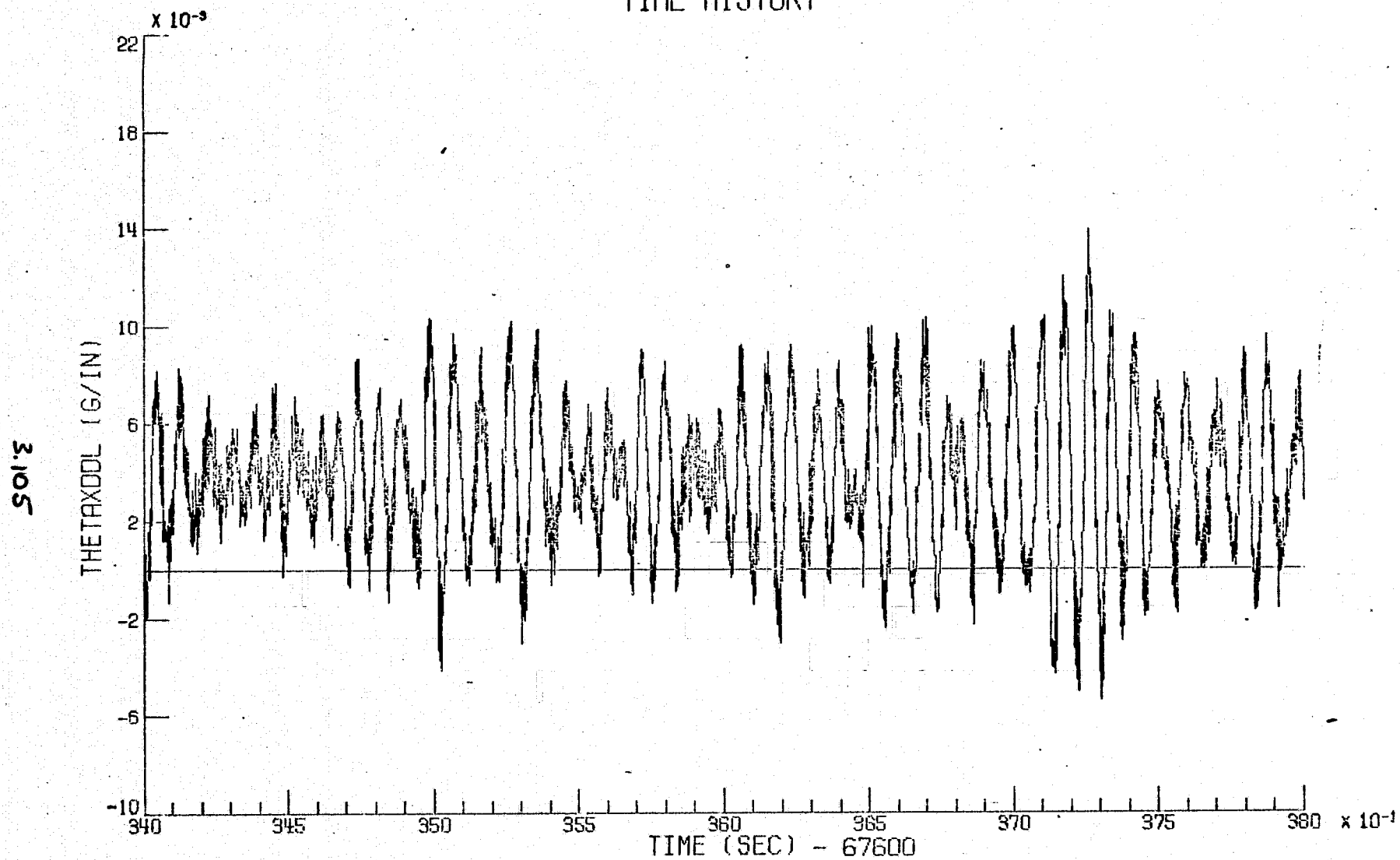
CEN BRN STEER - 1

ZDDL

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 10/01/75

FIGURE 3.50 b

TIME HISTORY



MAX = .013

MIN = -.005

VIKING B FLT (GBI)

CEN BRN STEER - 1

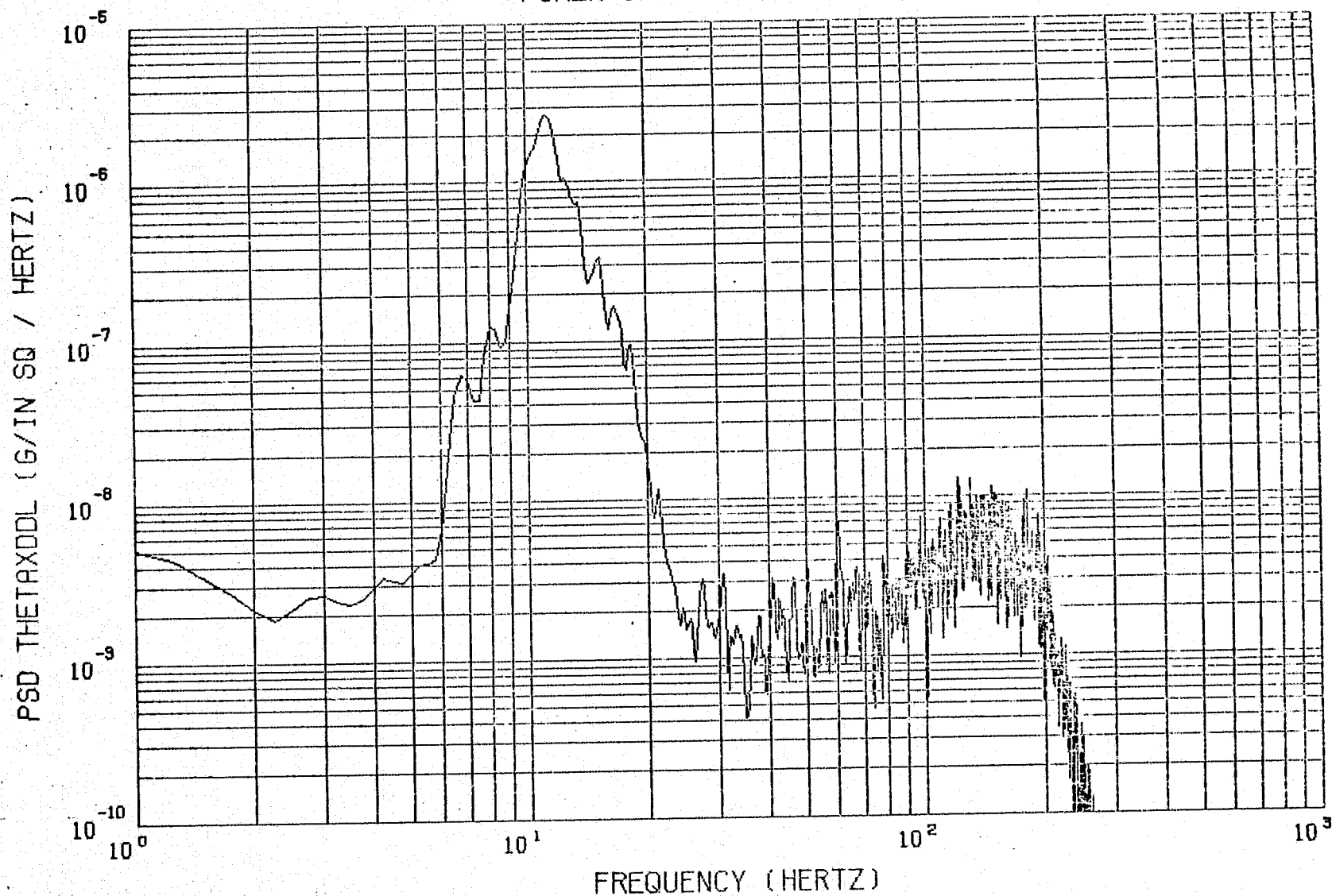
THETA X DDL

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 10/01/75

FIGURE 3.51 a

3.106

POWER SPECTRAL DENSITY



$\Delta F = .250$

START = 67634.000 SEC

STOP = 67638.000 SEC

MEAN = 37618×10^{-7}

$\sigma^2 = 80716 \times 10^{-10}$

$\sigma = 2841 \times 10^{-5}$

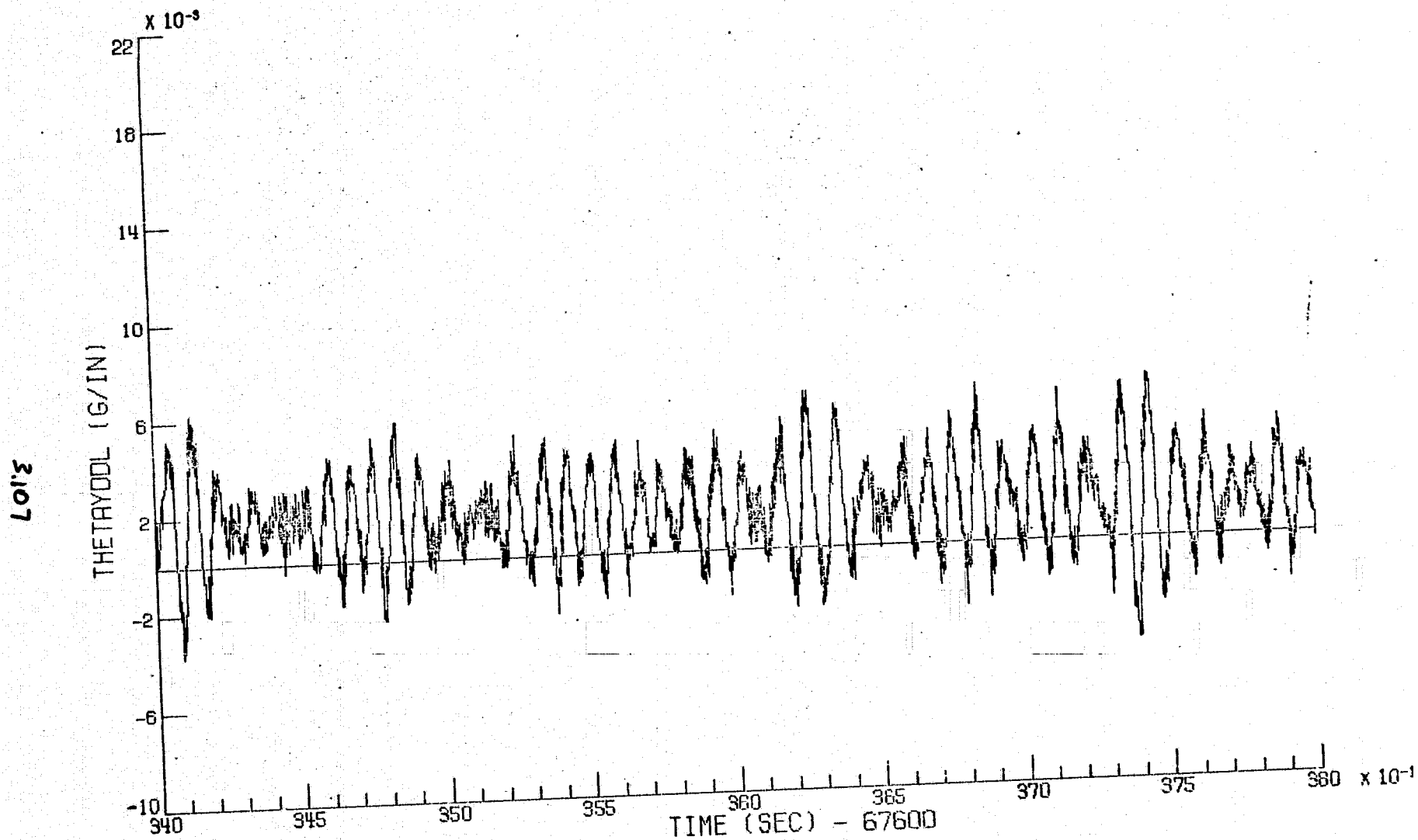
$3\sigma = 85231 \times 10^{-7}$

VIKING B FLT (GBI)

CEN BRN STEER - 1

THETA XDDL

TIME HISTORY



MAX = .006

MIN = -.004

VIKING B FLT (GBI)

CEN BRN STEER - 1

THETAYDDL

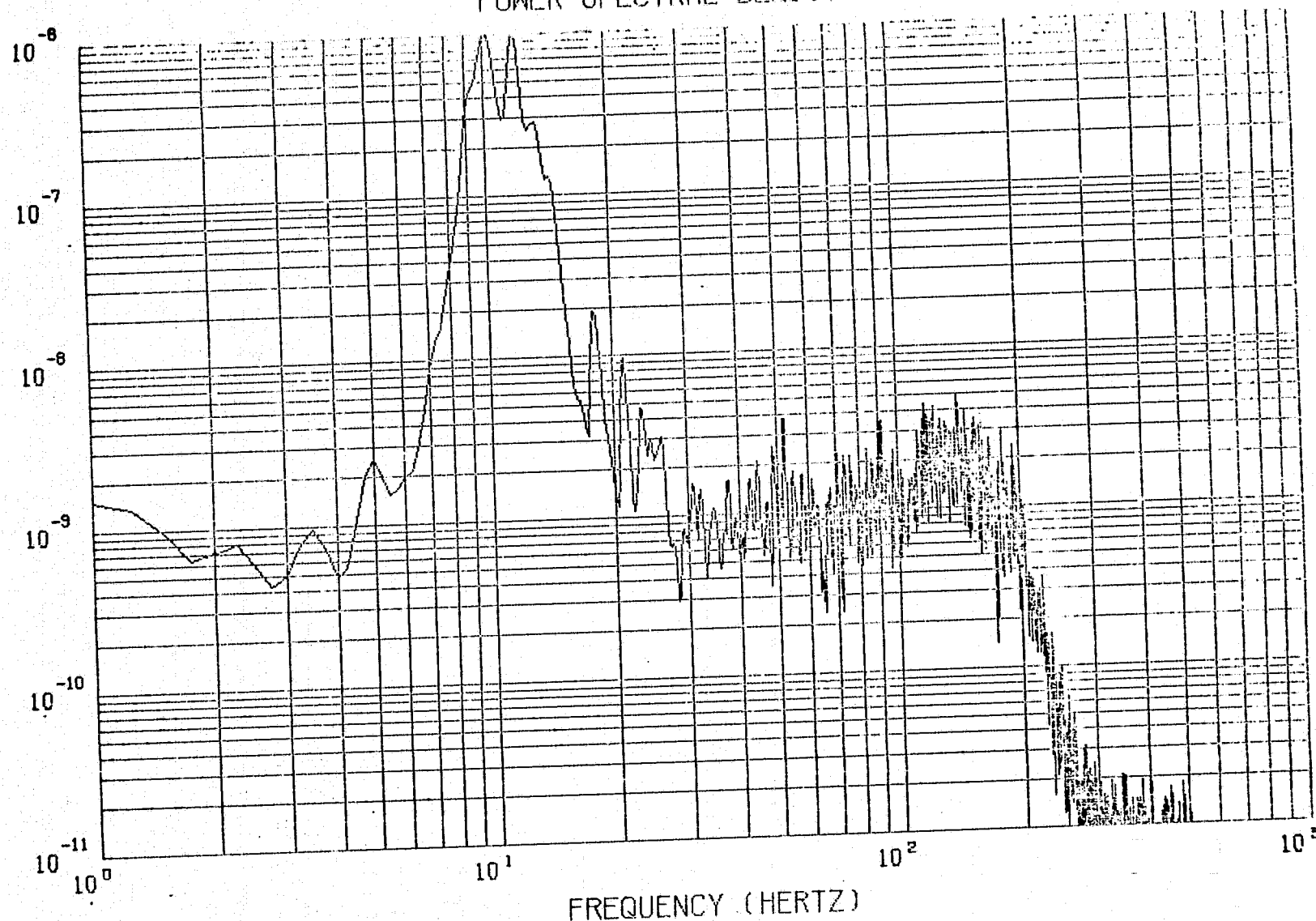
NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 10/01/75

FIGURE 3.52 a

8013

POWER SPECTRAL DENSITY

PSD THETAYDDL (G/IN SQ / HERTZ)



$\Delta F = .250$ START = 67634.000 SEC STOP = 67638.000 SEC
 MEAN = 17038×10^{-7} $\sigma^2 = 31146 \times 10^{-10}$ $\sigma = 17647 \times 10^{-7}$ $3\sigma = 52943 \times 10^{-7}$

VIKING B FLT (GBI)

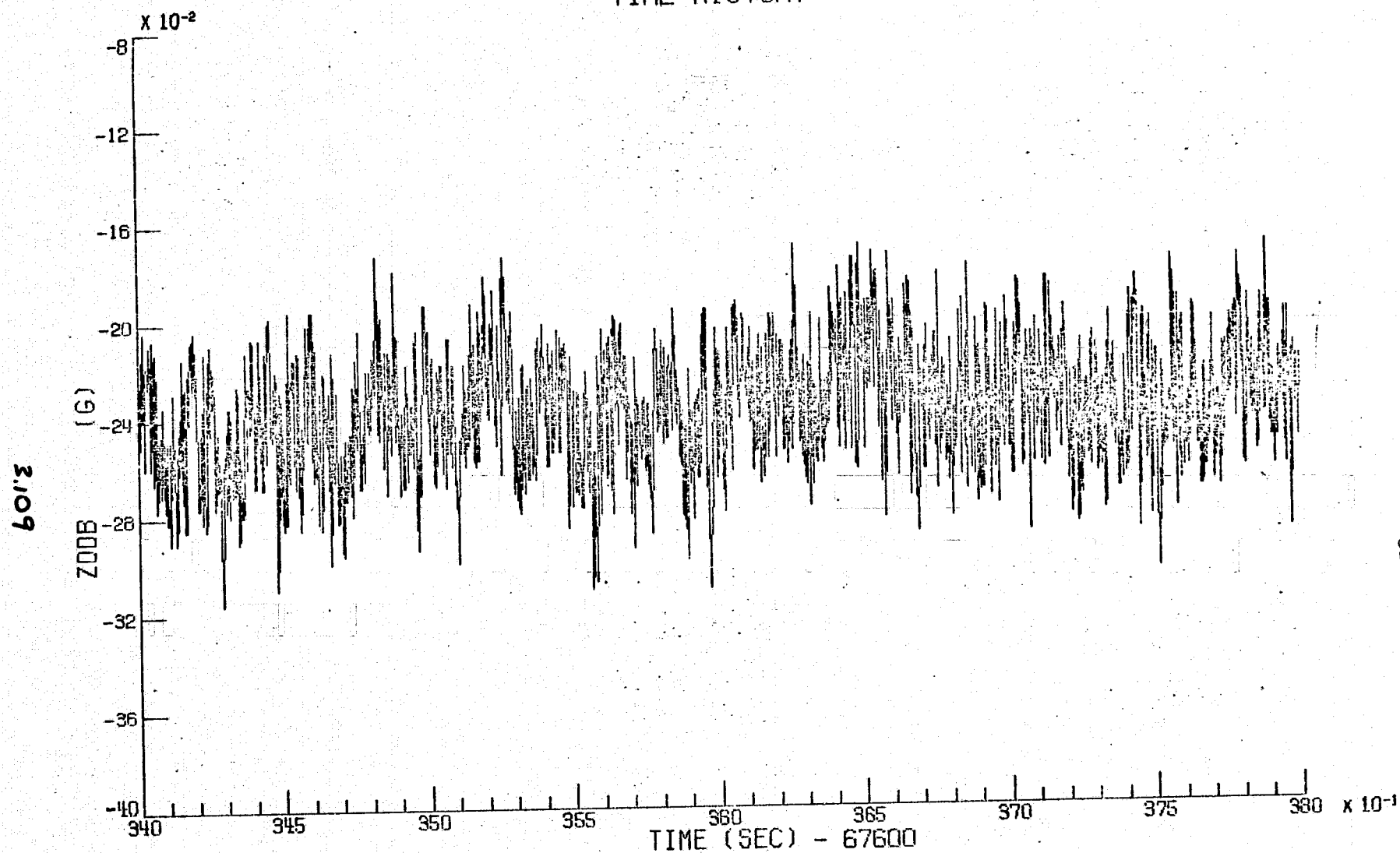
CEN BRN STEER - 1

THETAYDDL

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 10/01/75

FIGURE 3.52 b

TIME HISTORY



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MAX = -.170

MIN = -.315

→ ± .073 g

VIKING B FLT (GBI)

CEN BRN STEER - 1

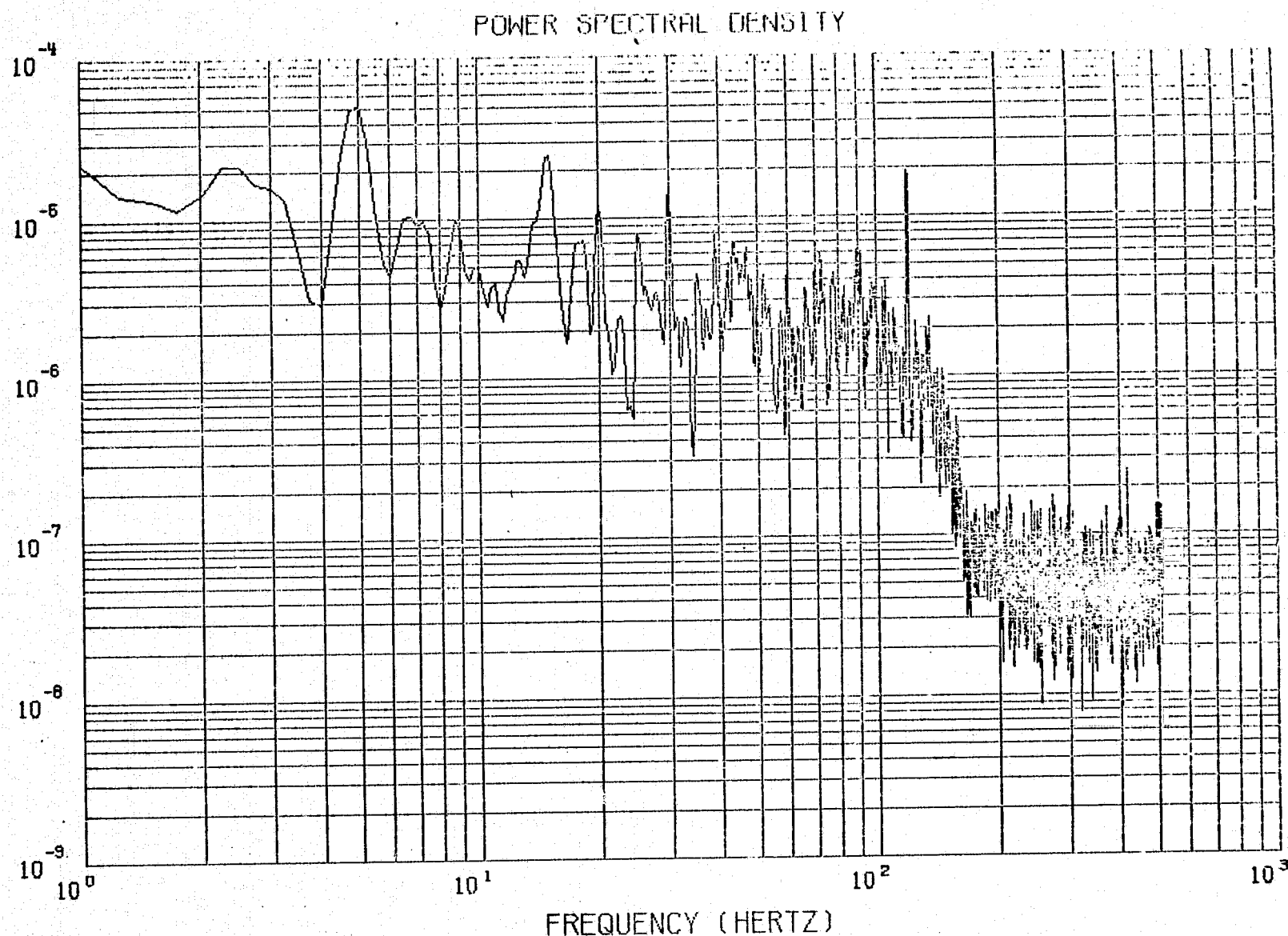
ZOOB

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 10/01/75

FIGURE 3.53 a

3.10

PSD ZDOB (G SQ / HERTZ)



$\Delta F = .250$

START = 67634.000 SEC

STOP = 67638.000 SEC

MEAN = -23655×10^{-5}

$\sigma^2 = 53855 \times 10^{-8}$

$\sigma = 23206 \times 10^{-6}$

$3\sigma = 6962 \times 10^{-5}$

VIKING B FLT (GBI)

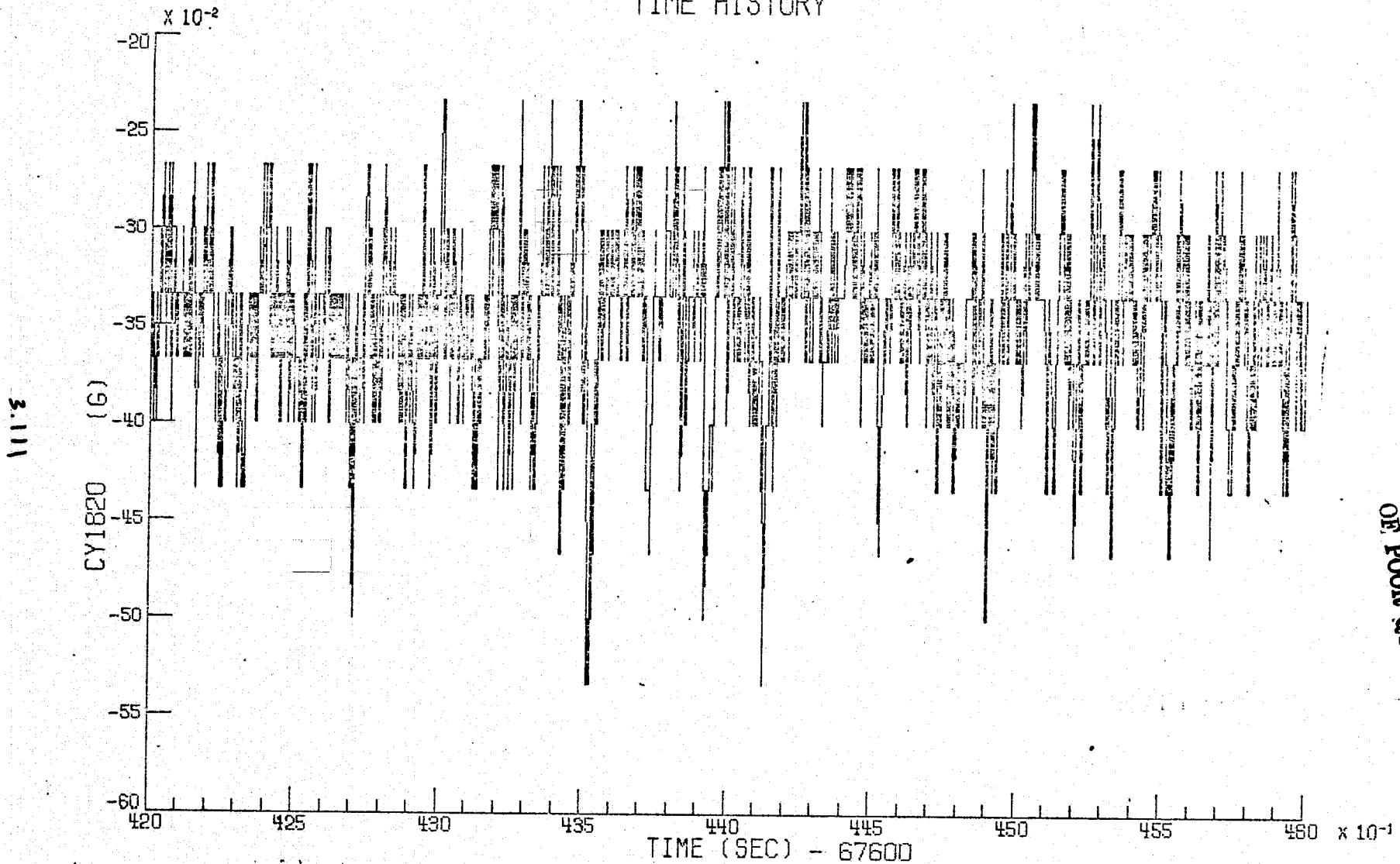
CEN BRN STEER - 1

ZDOB

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 10/01/75

FIGURE 3.53 b

TIME HISTORY



MAX = -.233

MIN = -.533

→ $\pm .15 g$

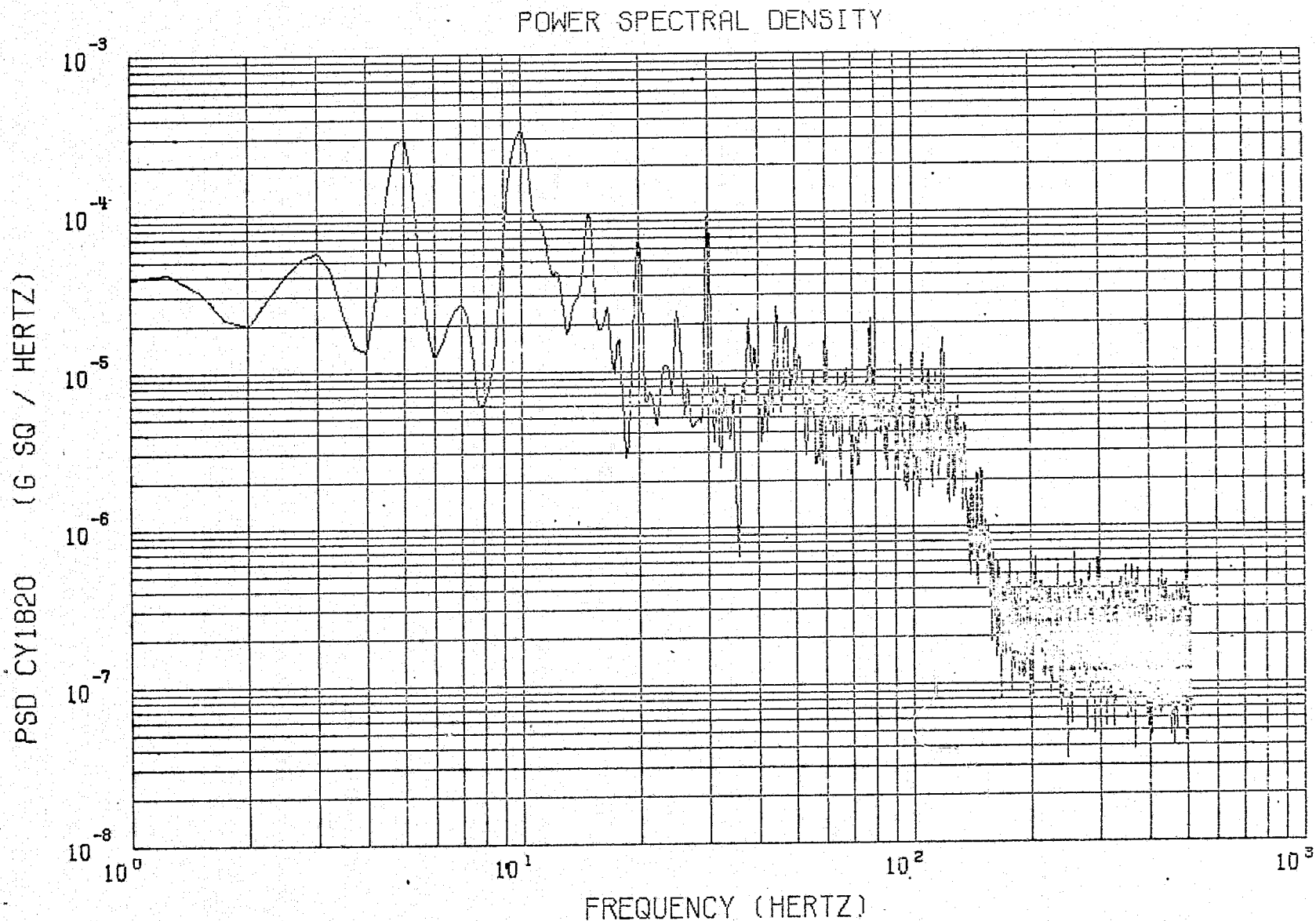
VIKING B FLT (GBI)

CEN BRN STEER - 2

CY1820

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OF POOR QUALITY

3112



$\Delta F = .250$

START = 67642.000 SEC

STOP = 67646.000 SEC

MEAN = -34554×10^{-5}

$\sigma^2 = 20478 \times 10^{-7}$

$\sigma = 45252 \times 10^{-5}$

$3\sigma = 13575 \times 10^{-5}$

VIKING B'FLT (GBI)

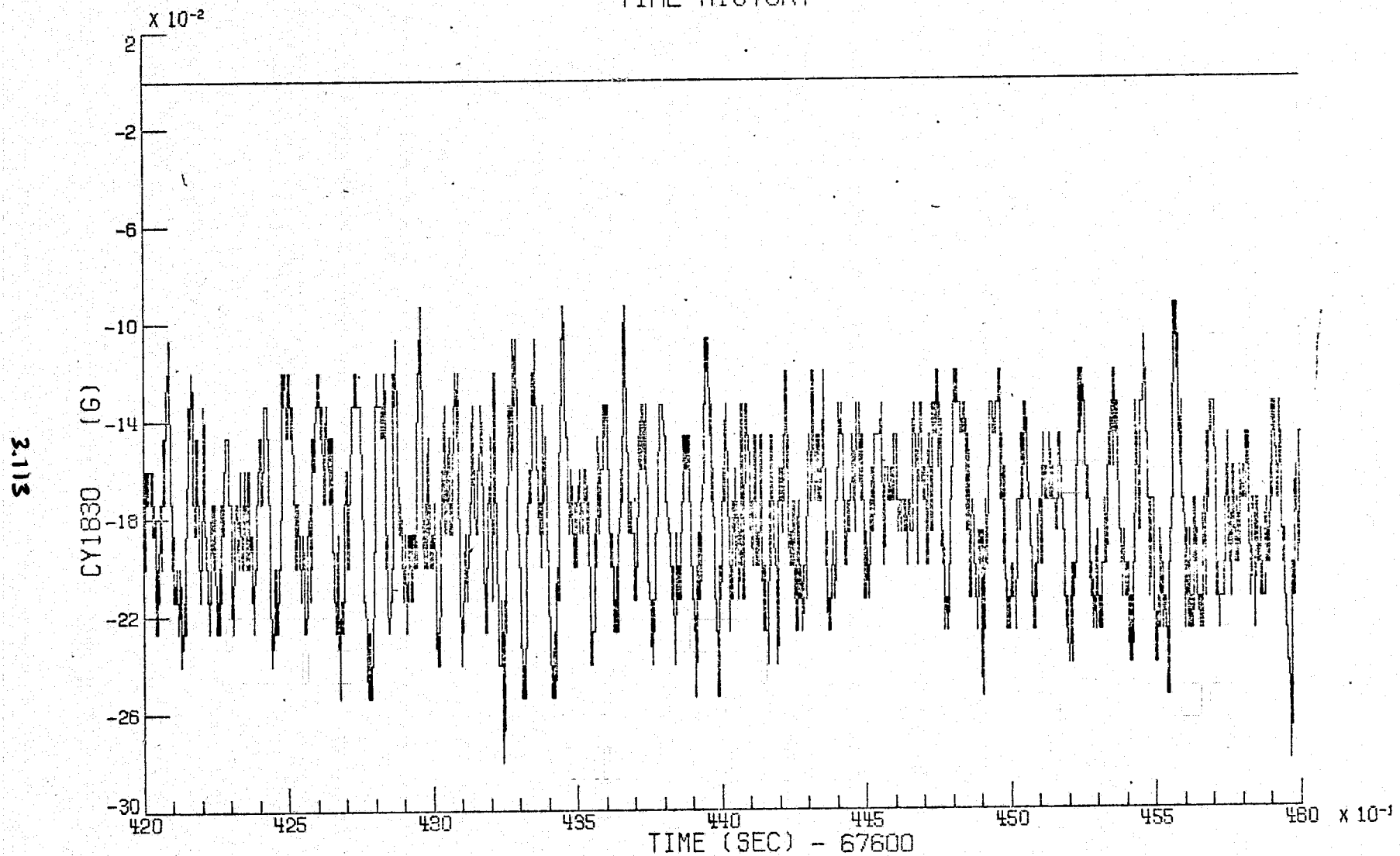
CEN BRN STEER -.2

CY1820

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 10/01/75

FIGURE 3.54b

TIME HISTORY



MAX = -.093

MIN = -.280

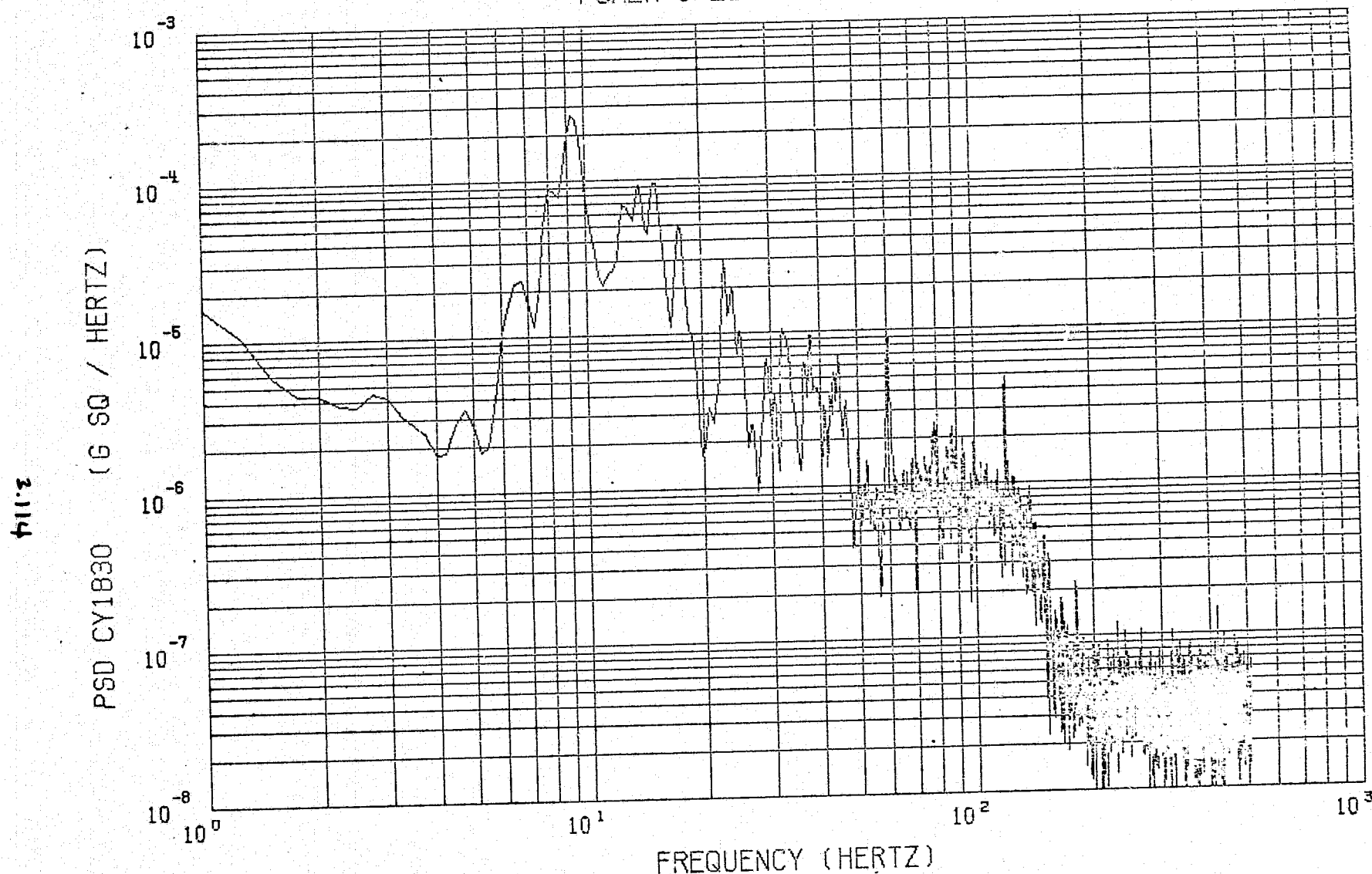
→ ± .094 g

VIKING B FLT (GBI)

CEN BRN STEER - 2

CY1830

POWER SPECTRAL DENSITY



$\Delta F = .250$

START = 67642.000 SEC

STOP = 67646.000 SEC

MEAN = -17918×10^{-5}

$\sigma^2 = 10464 \times 10^{-7}$

$\sigma = 32348 \times 10^{-6}$

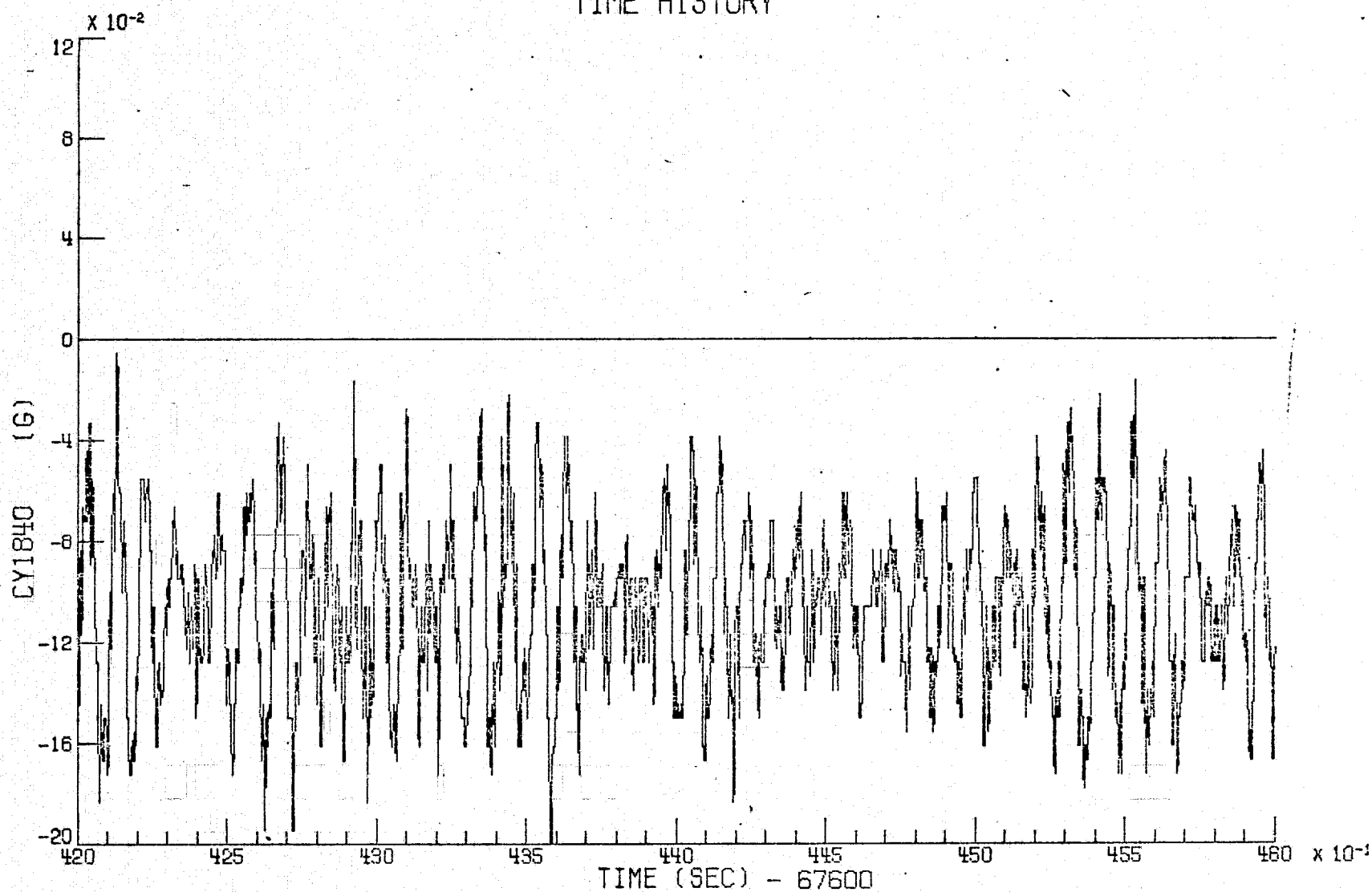
$3\sigma = 97045 \times 10^{-6}$

VIKING B FLT (GBI)

CEN BRN STEER - 2

CY1830

TIME HISTORY



MAX = -.005

MIN = -.200

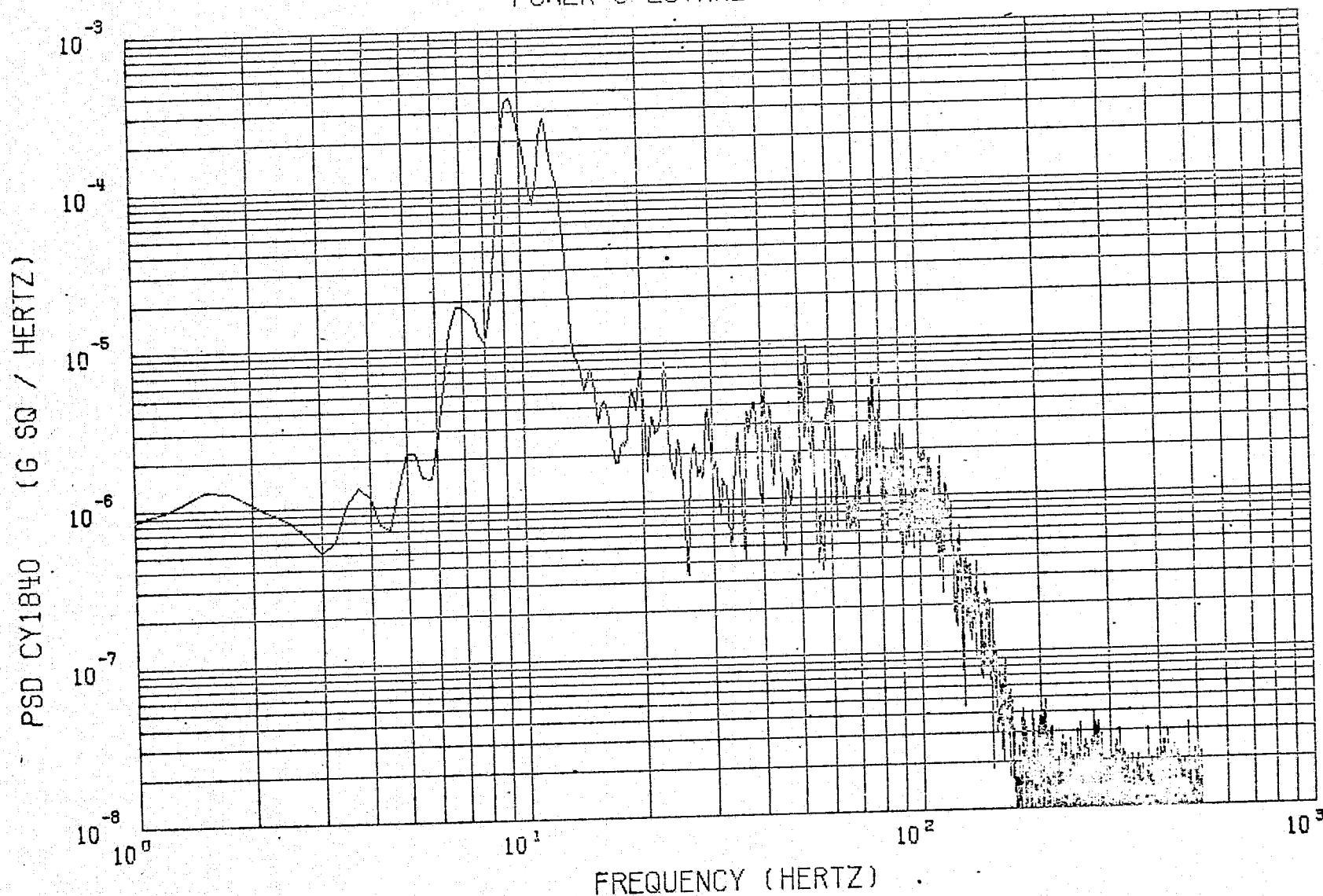
→ ±.098 g

VIKING B FLT (GBI)

CEN BRN STEER - 2

CY1840

POWER SPECTRAL DENSITY



$\Delta F = .250$

START = 67642.000 SEC

STOP = 67646.000 SEC

MEAN = -10581×10^{-5}

$\sigma^2 = 1044 \times 10^{-5}$

$\sigma = 32311 \times 10^{-5}$

$3\sigma = 96933 \times 10^{-5}$

VIKING B FLT (GBI)

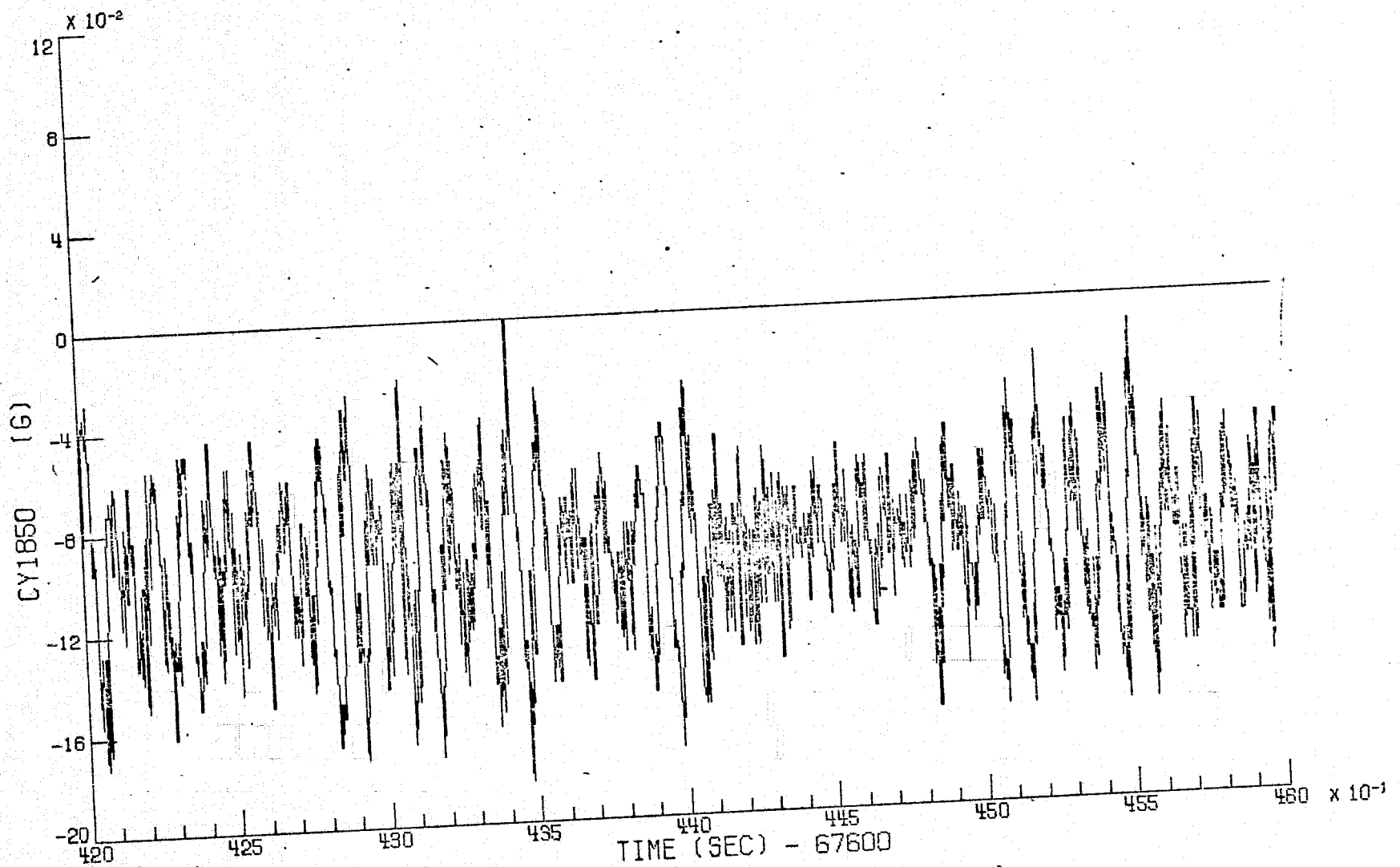
CEN BRN STEER - 2

CY1840

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 10/01/75

FIGURE 3.56 b

TIME HISTORY



MAX = .000

MIN = -.183

→ ±.092 g

VIKING B FLT (GBI)

CEN BRN STEER - 2

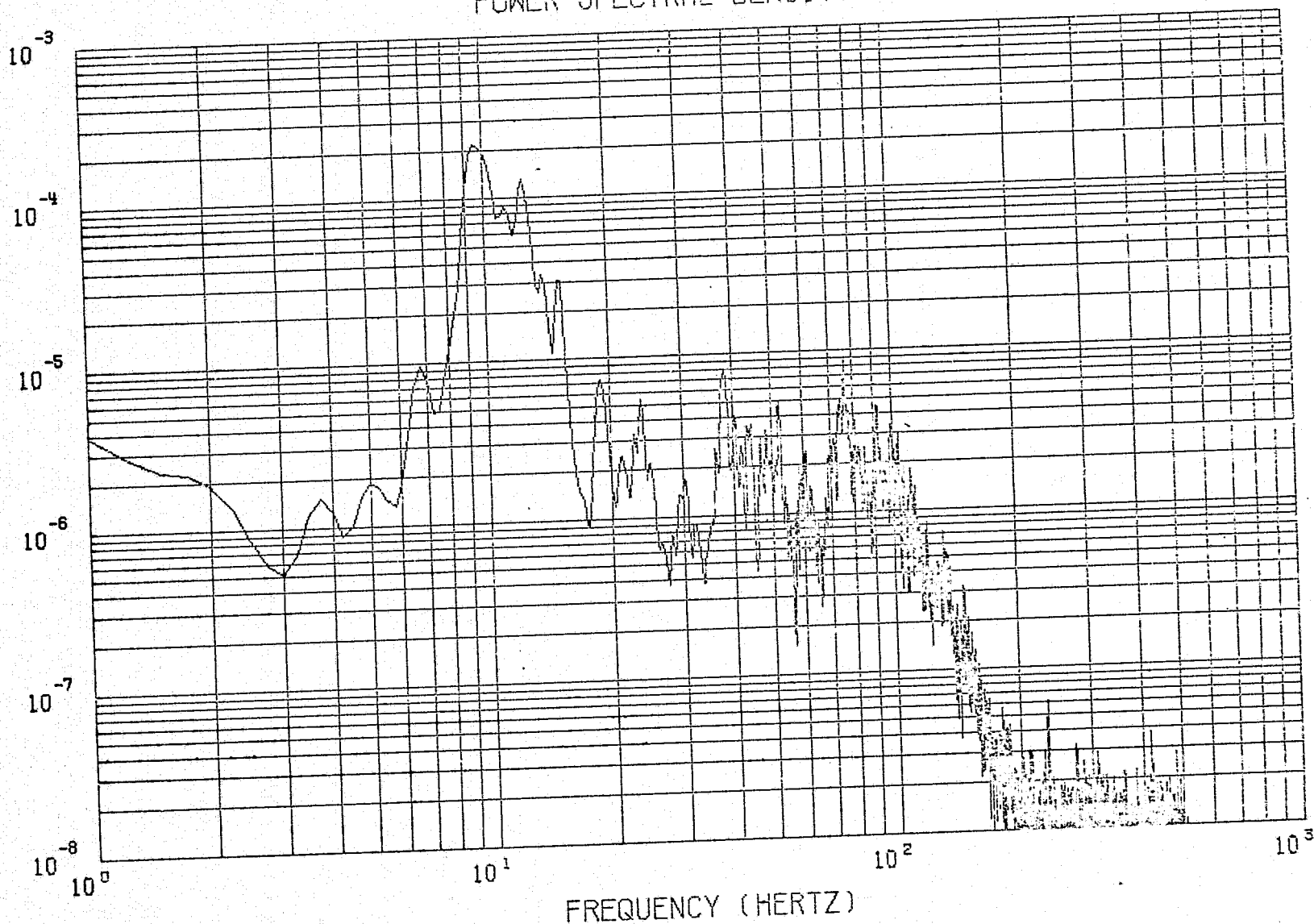
CY1850

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 10/01/75

FIGURE 3.57 a

POWER SPECTRAL DENSITY

3.118
PSD CY1850 (G SQ / HERTZ)



$\Delta F = .250$

START = 67642.000 SEC

STOP = 67646.000 SEC

MEAN = -95023×10^{-6}

$\sigma^2 = 83018 \times 10^{-6}$

$\sigma = 28813 \times 10^{-6}$

$3\sigma = 86439 \times 10^{-6}$

VIKING B FLT (GBI)

CEN BRN STEER - 2

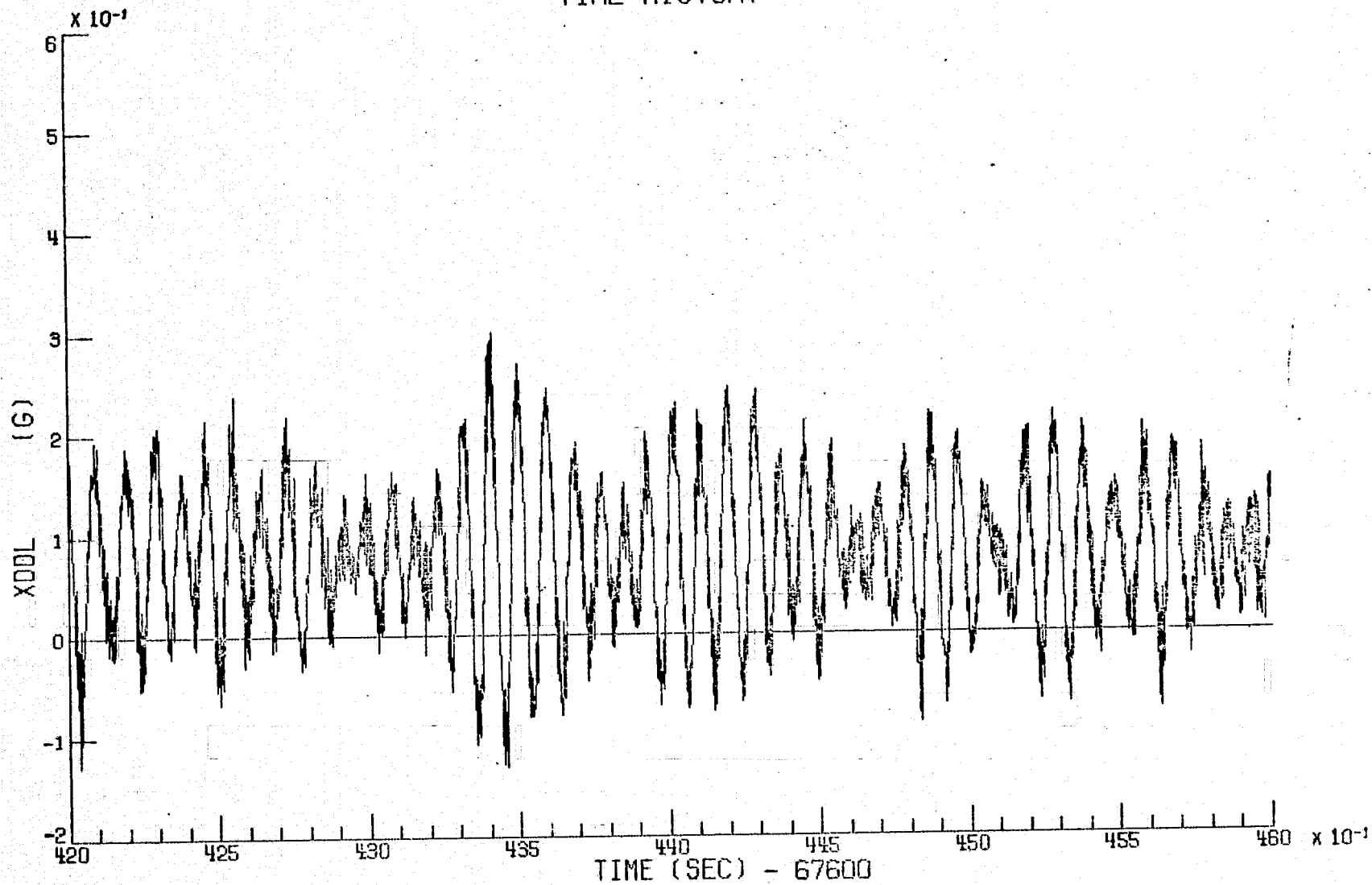
CY1850

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 10/01/75

FIGURE 3.57 b

TIME HISTORY

6119



MAX = .300

MIN = -.130

→ ±.215

VIKING B FLT (GBI)

CEN BRN STEER - 2

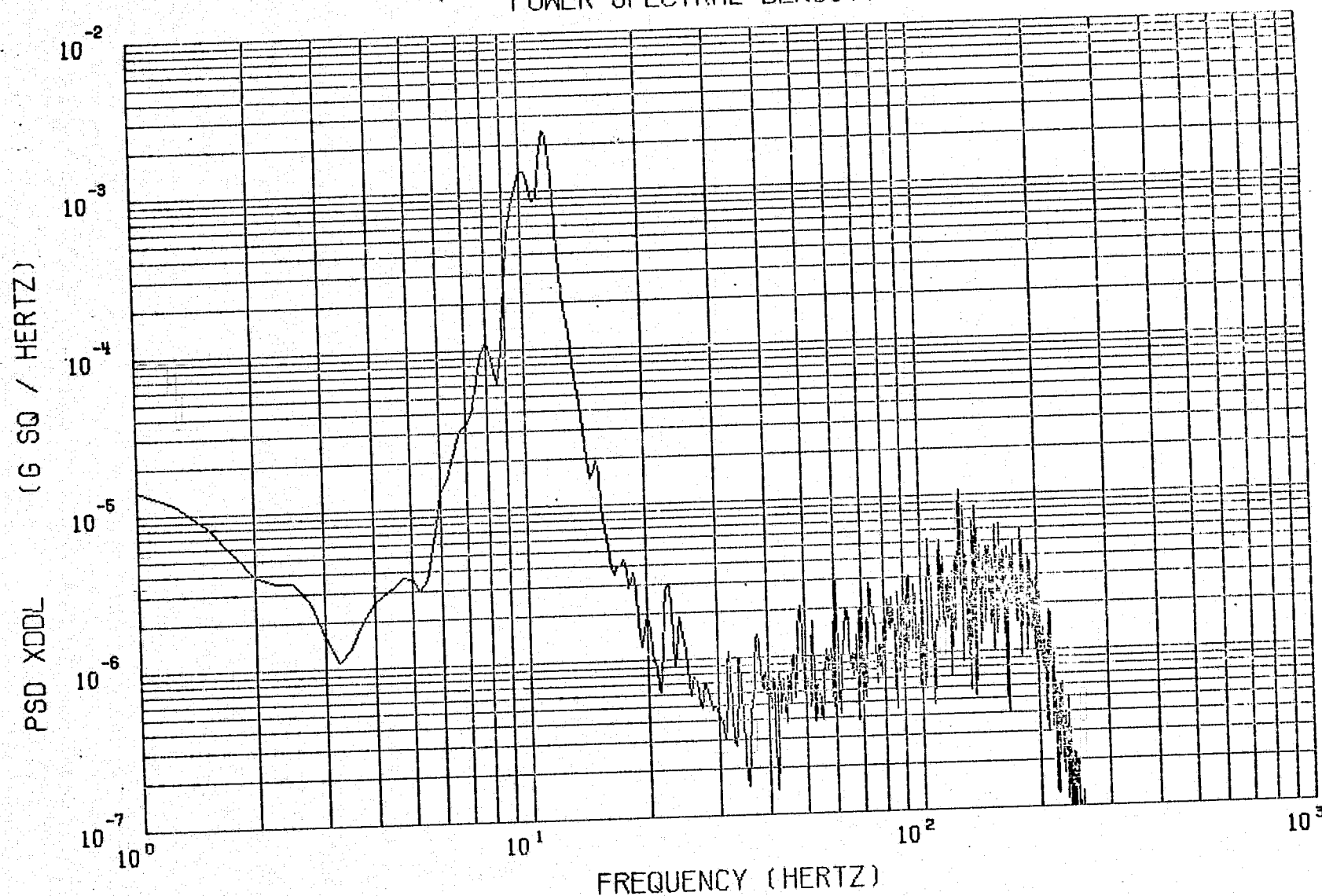
XDDL

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 10/01/75

FIGURE 3.58 a

3.120

POWER SPECTRAL DENSITY



$\Delta F = .250$

START = 67642.000 SEC

STOP = 67646.000 SEC

MEAN = 79028×10^{-6}

$\sigma^2 = 48667 \times 10^{-7}$

$\sigma = 69782 \times 10^{-5}$

$3\sigma = 20928 \times 10^{-5}$

VIKING B FLT (GBI)

CEN BRN STEER - 2

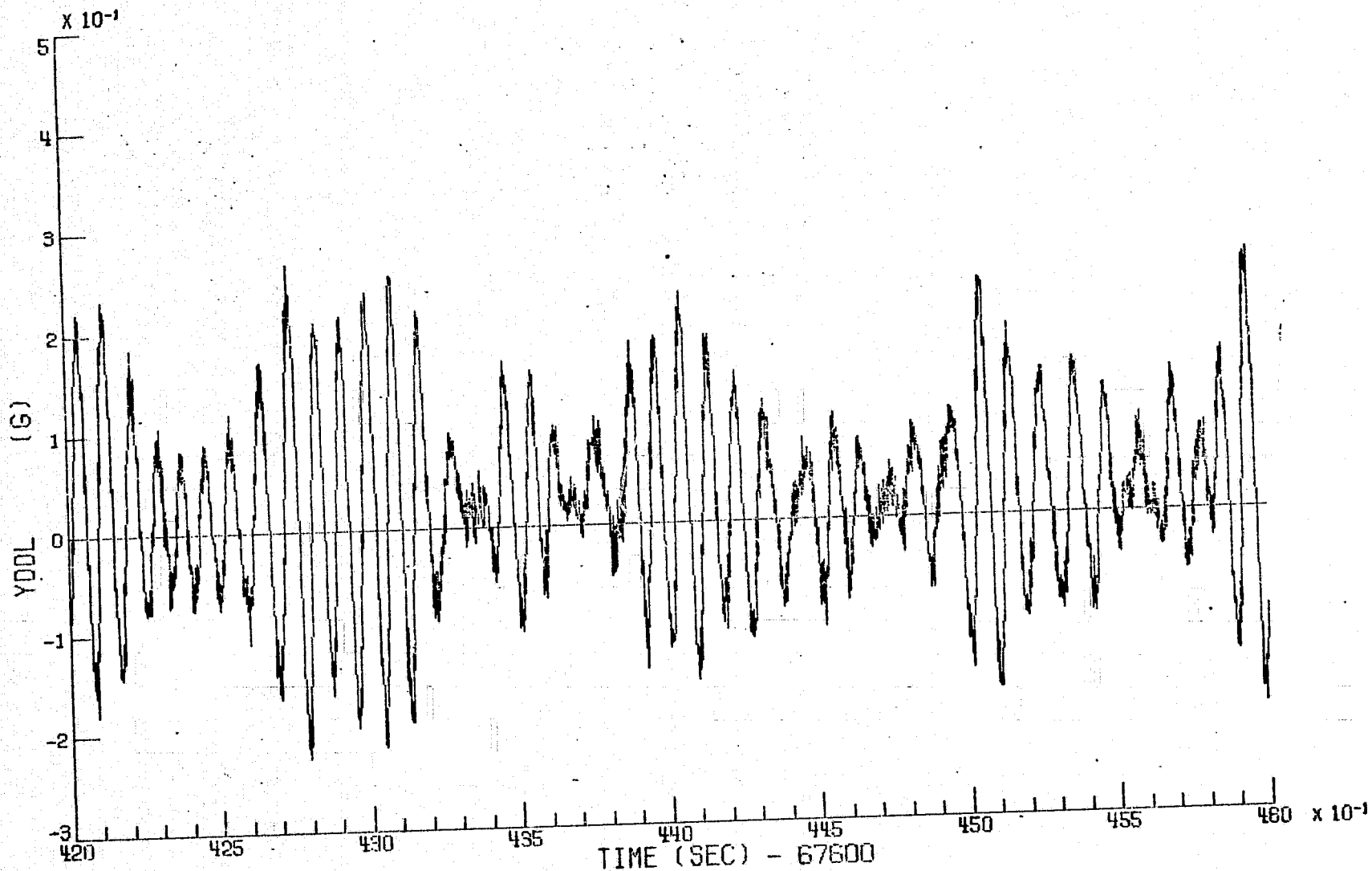
XDDL

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 10/01/75

FIGURE 3.58b

TIME HISTORY

3.121



MAX = .265

MIN = -.226

→ ± .246 g

VIKING B FLT (GBI)

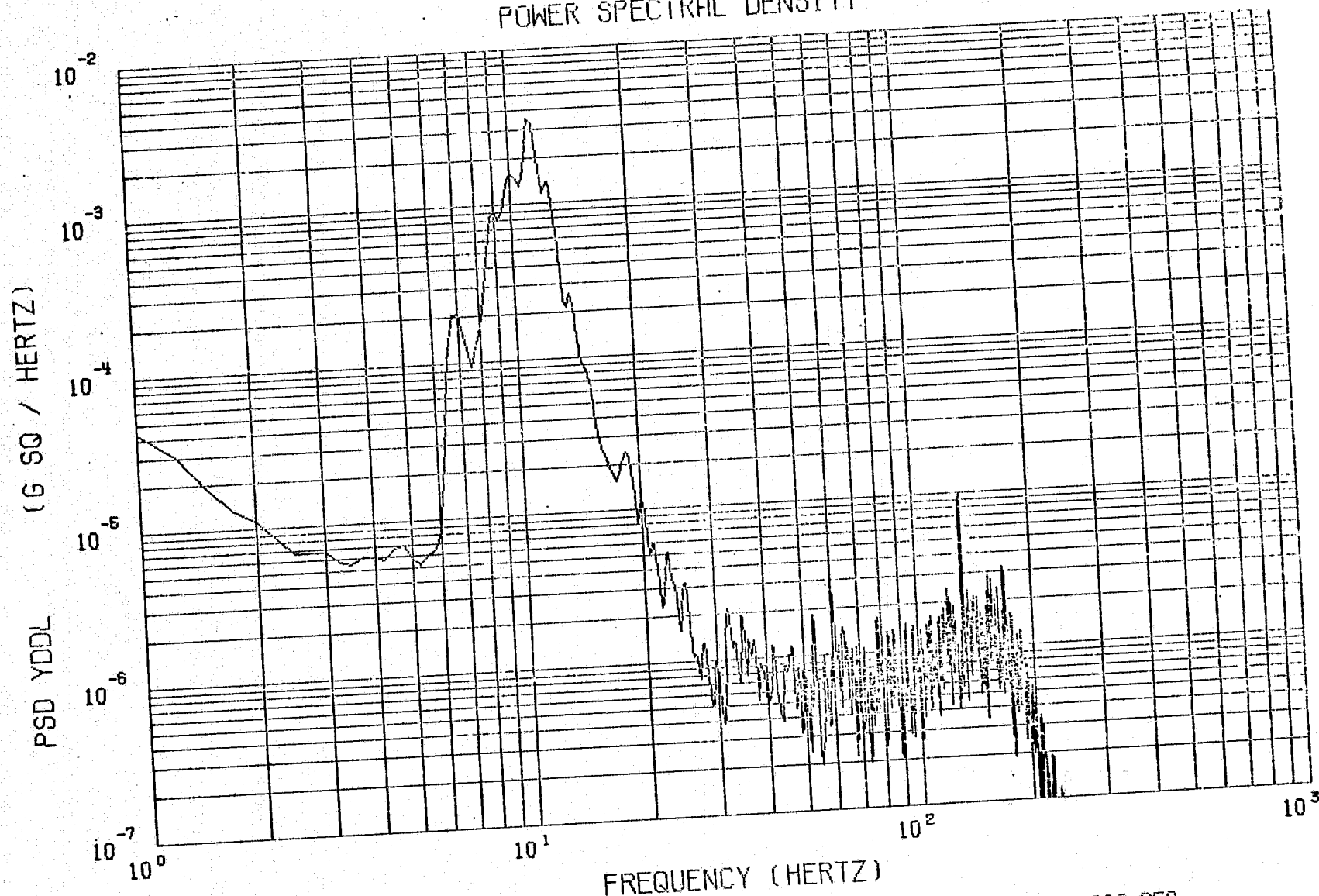
CEN BRN STEER - 2

YDDL

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 10/01/75

FIGURE 3.59a

POWER SPECTRAL DENSITY



$\Delta F = .250$

MEAN = 22492×10^{-6}

$\sigma^2 = 80136 \times 10^{-7}$

$\sigma = 89519 \times 10^{-6}$

$3\sigma = 26855 \times 10^{-5}$

START = 67642.000 SEC

STOP = 67646.000 SEC

VIKING B FLT (GBI)

CEN BRN STEER - 2

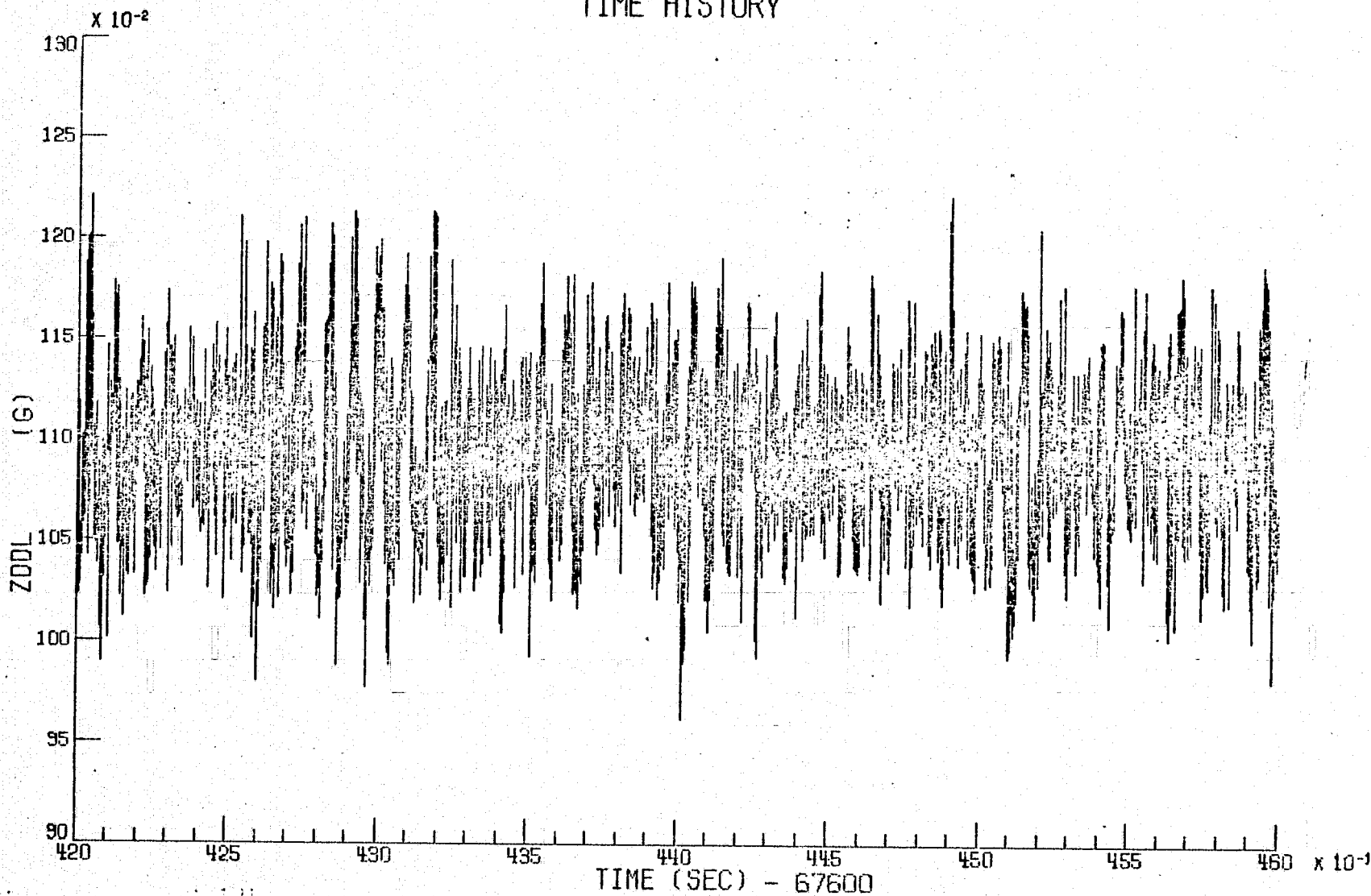
YDDL

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 10/01/75

FIGURE 3.59b

TIME HISTORY

ORIGINAL PAGE IS
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MAX = 1.221

MIN = .961

→ ± .13g

VIKING B FLT (GBI)

CEN BRN STEER - 2

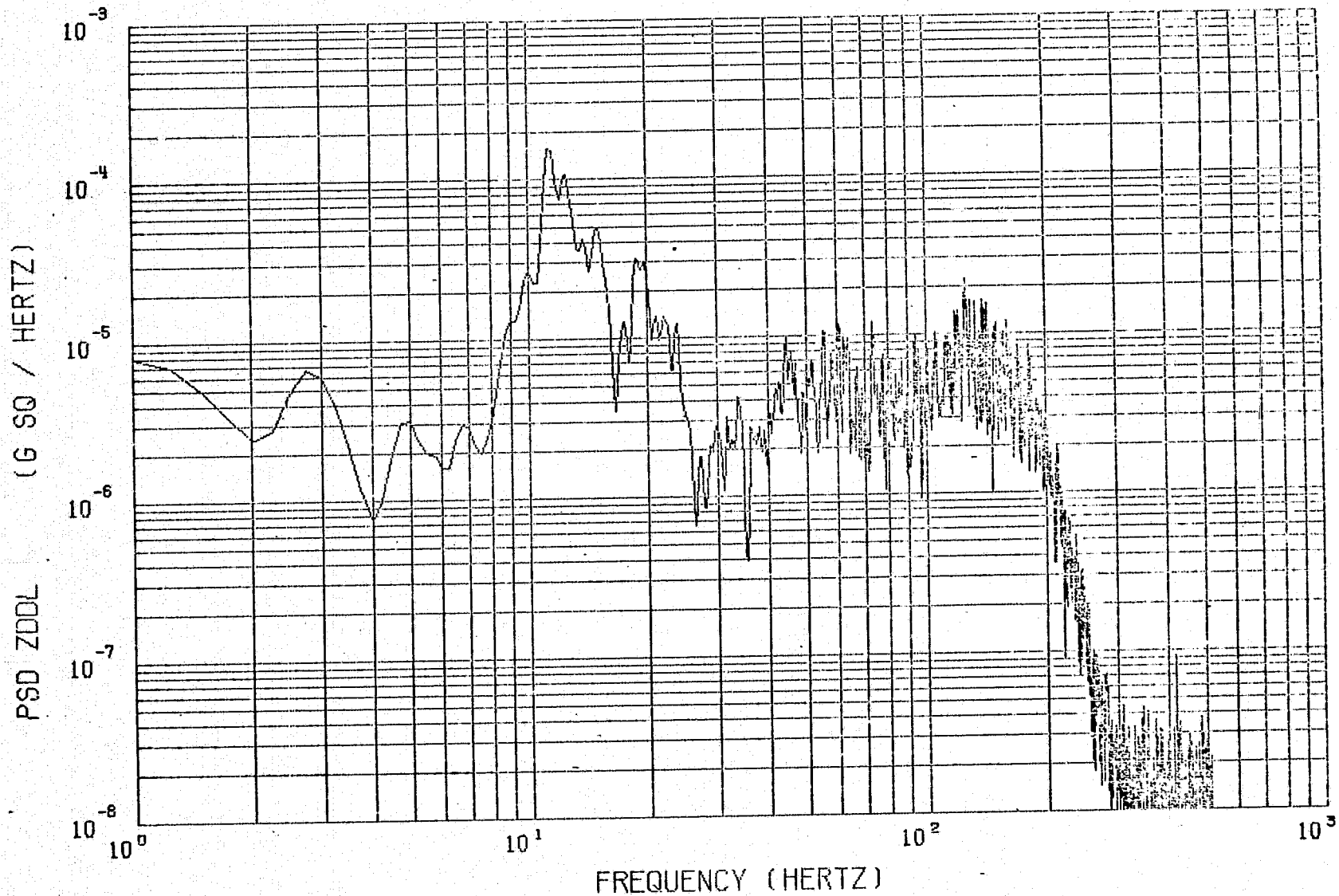
ZDDL

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FIGURE 3.60 a

3.123

POWER SPECTRAL DENSITY



$\Delta F = .250$

START = 67642.000 SEC

STOP = 67646.000 SEC

MEAN = 10948×10^{-4}

$\sigma^2 = 13995 \times 10^{-7}$

$\sigma = 3741 \times 10^{-5}$

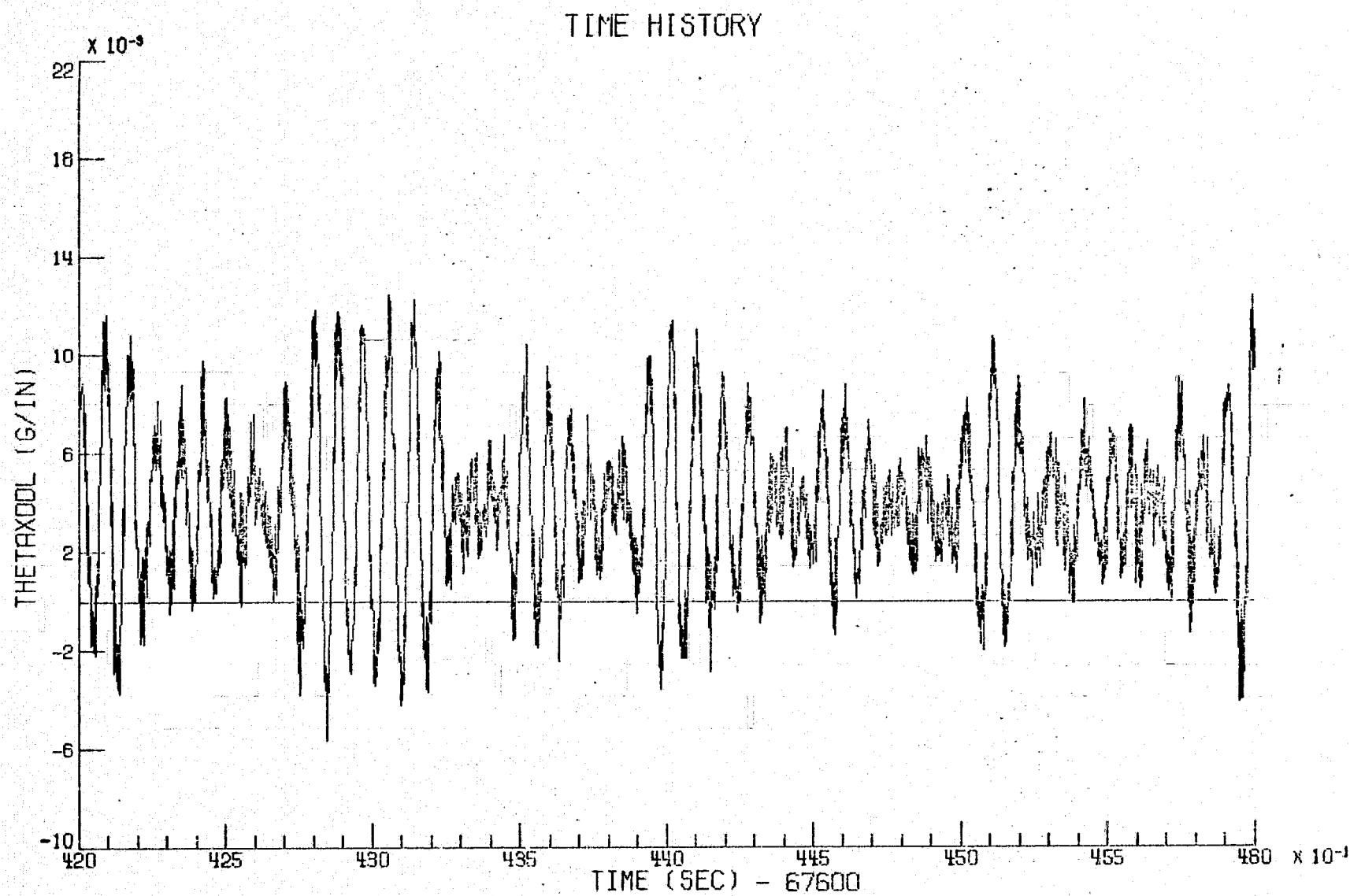
$3\sigma = 11223 \times 10^{-5}$

VIKING B FLT (GBI)

CEN BRN STEER - 2

ZDDL

3.125



MAX = .012

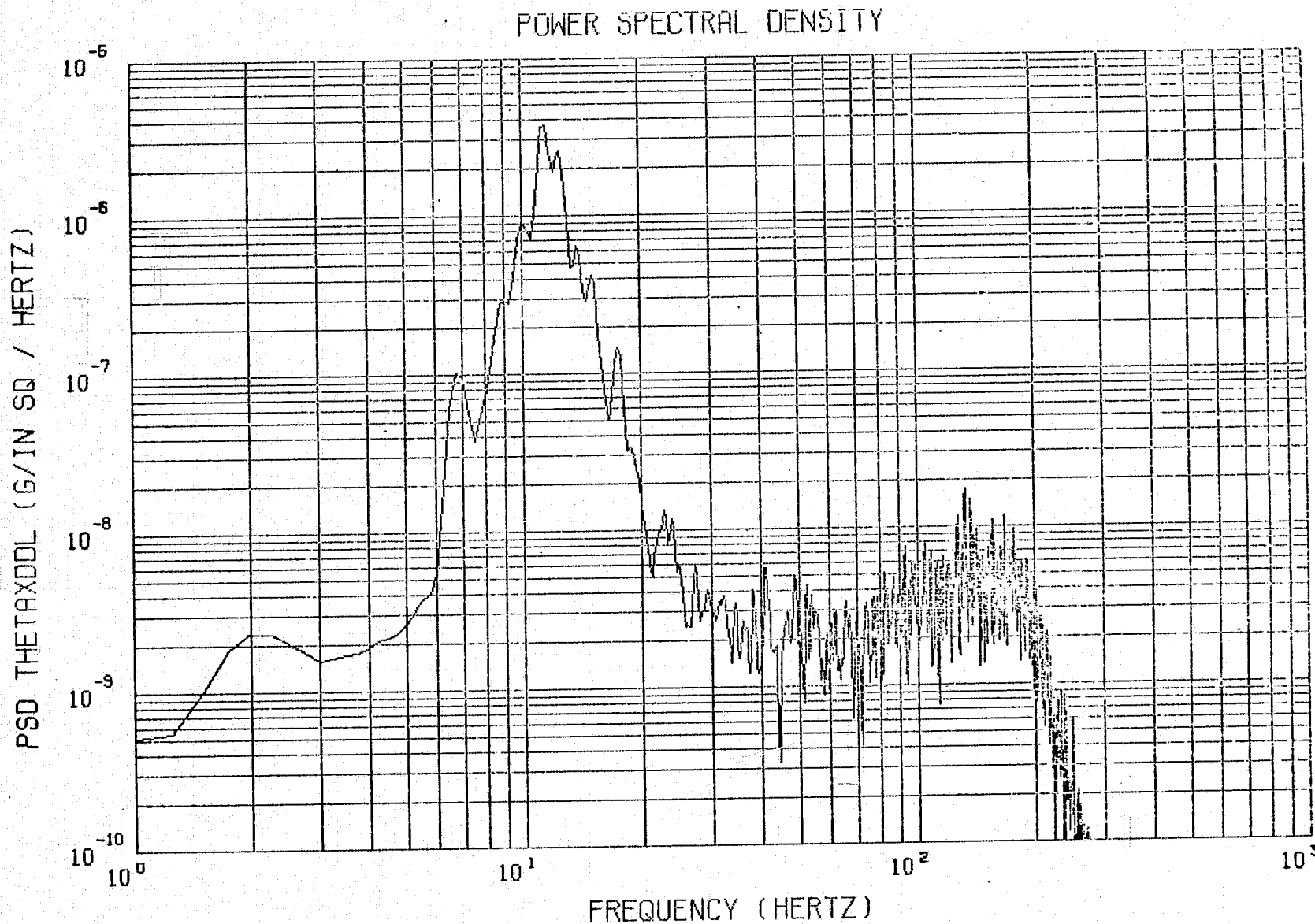
MIN = -.005

VIKING B FLT (GBI)

CEN BRN STEER - 2

THETAXDOL

2126



$\Delta F = .250$

START = 67642.000 SEC

STOP = 67646.000 SEC

MEAN = 38258×10^{-7}

$\sigma^2 = 90225 \times 10^{-10}$

$\sigma = 30037 \times 10^{-7}$

$3\sigma = 90112 \times 10^{-7}$

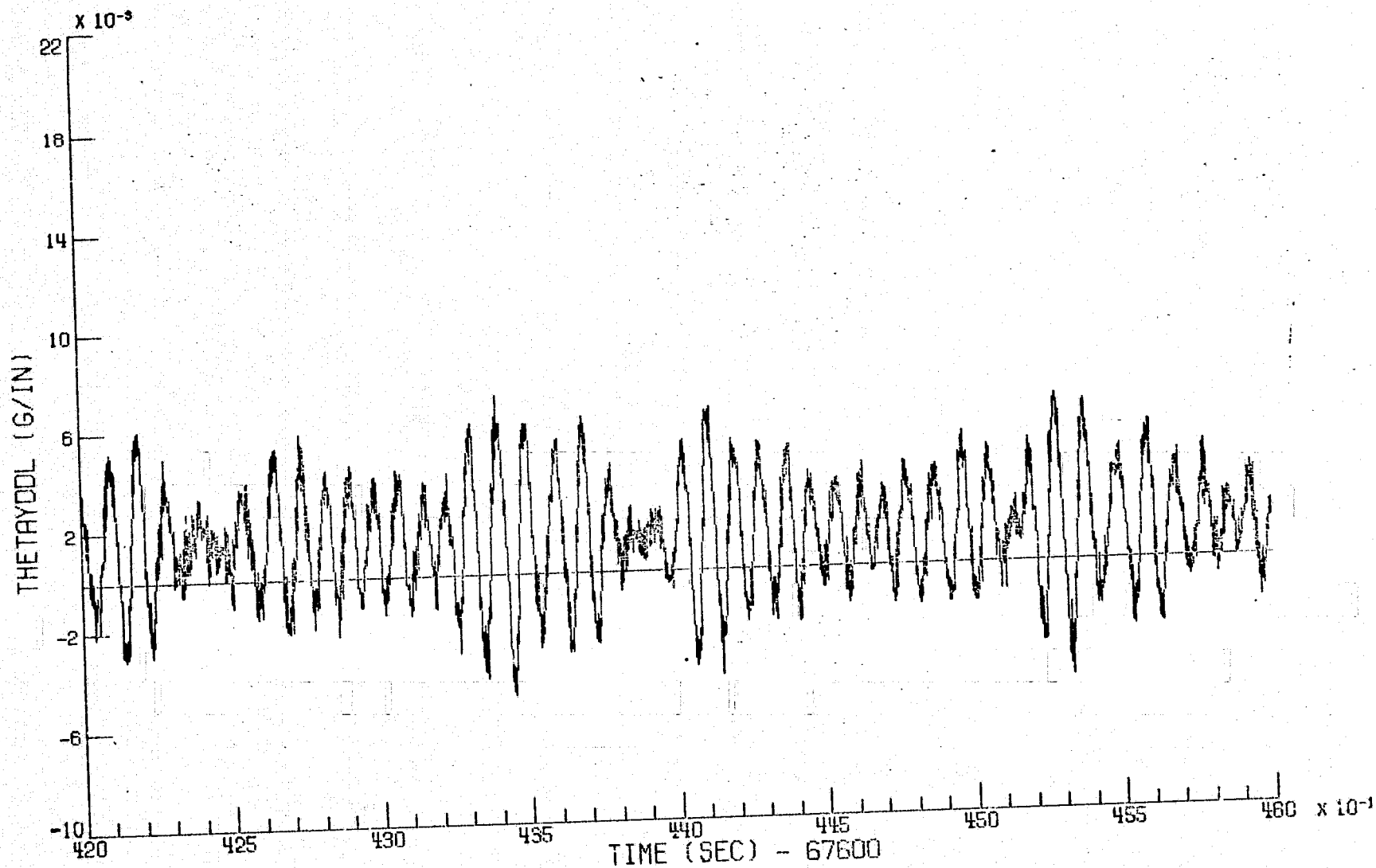
VIKING B FLT (GBI)

CEN BRN STEER - 2

THETAXDDL

TIME HISTORY

3.127



MAX = .007

MIN = -.004

VIKING B FLT (GBI)

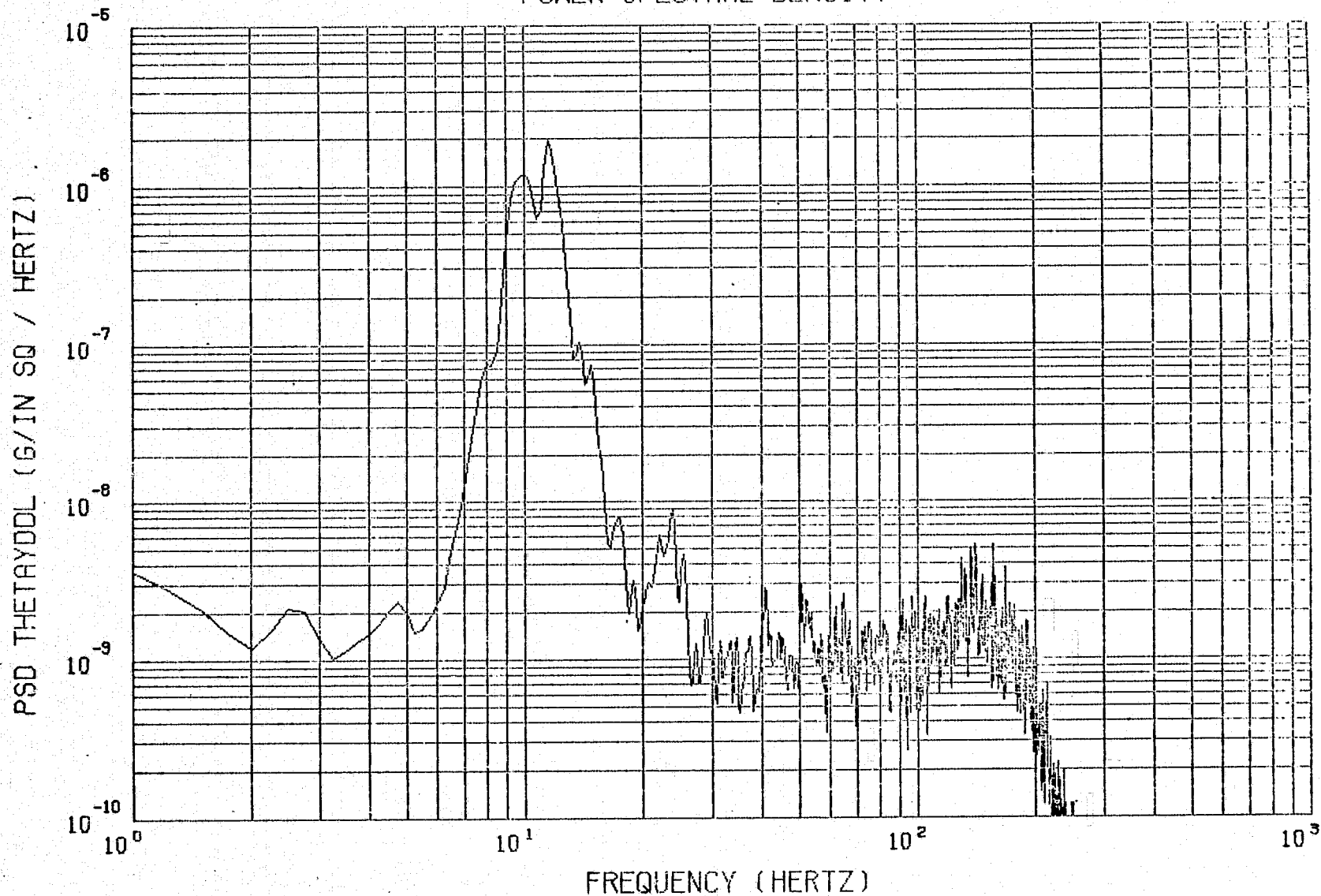
CEN BRN STEER - 2

THETAYDDL

NASA-LANGLEY SIGNAL ANALYSIS PROGRAM 10/01/75

FIGURE 3.62 a

POWER SPECTRAL DENSITY



$\Delta F = .250$

START = 67642.000 SEC

STOP = 67646.000 SEC

MEAN = 14103×10^{-7}

$\sigma^2 = 46427 \times 10^{-10}$

$\sigma = 21313 \times 10^{-7}$

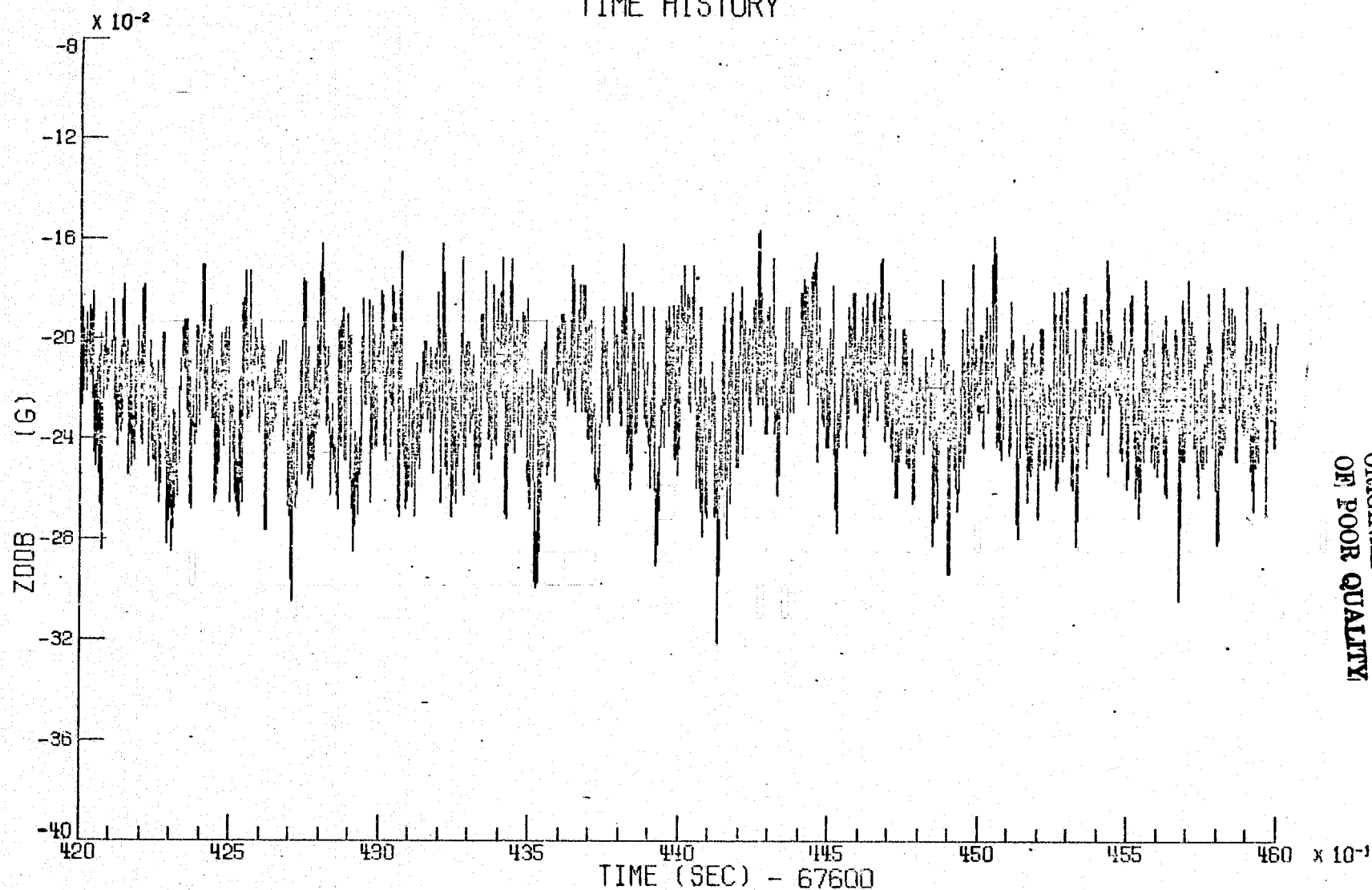
$3\sigma = 6394 \times 10^{-5}$

VIKING B FLT (GBI)

CEN BRN STEER - 2

THETAYDDL

TIME HISTORY



MAX = -.156

MIN = -.321

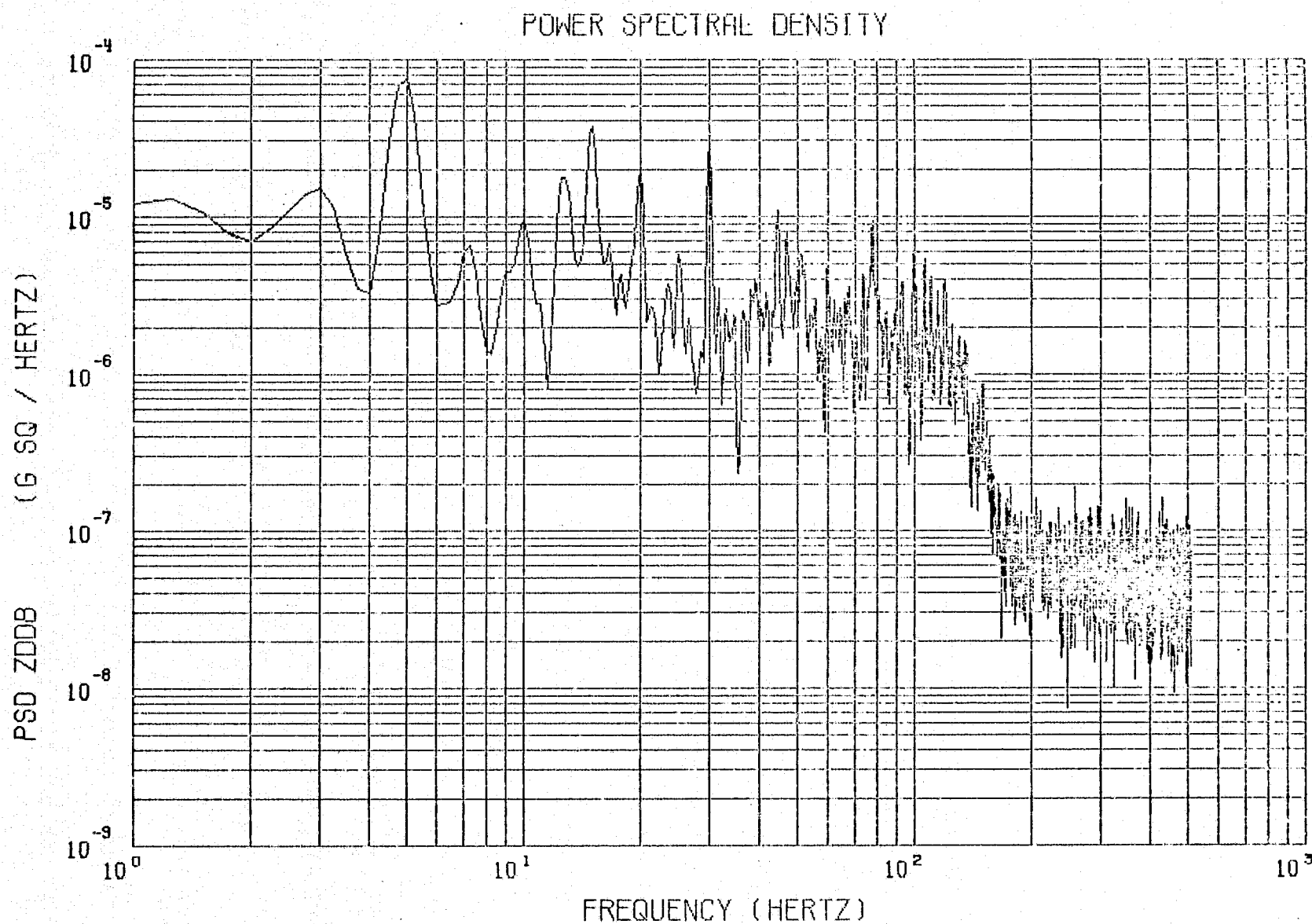
→ .083 g

VIKING B FLT (GBI)

CEN BRN STEER - 2

ZODB

3.130



$\Delta F = .250$

START = 67642.000 SEC

STOP = 67646.000 SEC

MEAN = -22131×10^{-5}

$\sigma^2 = 50891 \times 10^{-5}$

$\sigma = 22559 \times 10^{-5}$

$3\sigma = 67677 \times 10^{-5}$

VIKING B FLT (GBI)

CEN BRN STEER - 2

ZDOB

ORIGINAL PAGE IS
OF POOR QUALITY