

GLAT 2513

Appendix D - Test Data Package Checklist

SIU/EPU/HIB 11/03/05 11/19/05 11/10/05 Spec Revised



GLAST LAT Project GASU/PDU Vibration Testing
Qualification/Acceptance Test Data Package Checklist
 (Items supplied by Wyle Labs at end of test)

Item	✓	Description / Location
1	✓ [Signature]	Calibrated Equipment List
2	✓ [Signature]	Vibration Test plots (Pre- and Post test signature overlays and random vibration test data for Z, X, and Y axes)
3	MA [Signature]	Electronic Data in UFF or equivalent format, if available
4	✓ [Signature]	Photographs of test setup
5	✓ [Signature]	Procedure data sheets (Appendices A, B, and C)
6	MA [Signature]	Visual Inspection Report
7	Available if needed [Signature]	Test Control System Software Setup Sheets

SN = GLAT 2513.

[LAT 03 CA] 11/03/05

Appendix A – Accelerometer Sensitivities

*SIU/EPU/HIB Spec Revised
2/11/05*



GLAST LAT Project GASU/PDU Vibration Testing

Accelerometer Sensitivities and Charge Amp Settings

Accel. #	Ch. #	S/N	Model	Sensitivity [pC/g]	F.S. Range [g]	Tape Gain [mV]	Sensitivity [mV/g]
CZ1	CONT	12355	2271AM20	11.5			
AZ1	2	B448	2220D	3.03			
AZ2	3	16139	2226C	3.027			
AZ3	5	AHKB2	2226C	3.038			
CX1	CONT	12355	2271AM20	11.5			
AX1	2	B448	2220D	3.03			
AX2	3	16139	2226C	3.027			
AX3	5	AHKB2	2226C	3.038			
CY1	CONT	12355	2271AM20	11.5			
AY1	2	B448	2220D	3.03			
AY2	3	16139	2226C	3.027			
AY3	5	AHKB2	2226C	3.038			

Appendix B - Test Log

SIU/EPU/HIB up for test OPC & Rev.



GLAST LAT Project GASU/PDU Vibration Testing
Test Log

Date	Time	Unit #	Axis	Sine or Random	Level [g]/[grms]	Frequency [Hz]	File Name	Remarks
<i>10/17</i>	<i>12:30</i>	<i>2513</i>	<i>Z</i>	<i>SIN</i>		<i>5-50</i>		
	<i>12:45</i>		<i>Z</i>	<i>SINPRE</i>	<i>0.15</i>	<i>5-2000</i>		
	<i>1:00</i>		<i>Z</i>	<i>Random</i>	<i>8.9</i>	<i>20-2000</i>		
	<i>1:20</i>		<i>Z</i>	<i>SIN POST</i>	<i>0.15</i>	<i>5-2000</i>		
	<i>2:25</i>		<i>Y</i>	<i>SIN</i>		<i>5-50</i>		
	<i>2:40</i>		<i>Y</i>	<i>SINPRE</i>	<i>0.15</i>	<i>5-2000</i>		
	<i>3:00</i>		<i>Y</i>	<i>Random</i>	<i>8.9</i>	<i>20-2000</i>		
	<i>3:20</i>		<i>Y</i>	<i>SIN POST</i>	<i>0.15</i>	<i>5-2000</i>		
	<i>3:50</i>		<i>X</i>	<i>SIN</i>		<i>5-50</i>		
	<i>4:00</i>		<i>X</i>	<i>SINPRE</i>	<i>0.15</i>	<i>5-2000</i>		
			<i>X</i>	<i>Random</i>	<i>8.9</i>	<i>20-2000</i>		
			<i>X</i>	<i>SIN POST</i>	<i>0.15</i>	<i>5-2000</i>		

Appendix C – Procedure Variation



		GUT		
10/27		2513	3 screws not used due to interference	DJ



SHIPPING MEMORANDUM

NUMBER

120729

S
H
I
P
T
O

STANFORD LINEAR ACCELERATOR CENTER
2575 SAND HILL ROAD
MENLO PARK, CALIFORNIA 94025

DATE
10/27/05

VIA
U.S. MAIL

ATTN: DAVID TARKINGTON

SHIP FROM
~~XXXX BROADWAY~~
~~NEW YORK NY 10004~~
~~650 989 3500~~
5452 BETSY ROSS DRIVE
SANTA CLARA, CA 95054
408/764-5500

CUSTOMER ORDER NO. SLAC-0000057722	JOB NUMBER 49995.52257	PARTIAL <input type="checkbox"/>	COMPLETE <input checked="" type="checkbox"/>	OUR P.O. NO.
---------------------------------------	---------------------------	----------------------------------	--	--------------

ITEM NO.	QUANTITY	DESCRIPTION
1	1 SET	<p>ORIGINAL TEST DATA ON AS FOLLOWS:</p> <p>1 EACH SIU (SEE INITIAL VISUAL)</p> <p>POST SINE AND RANDOM VIBRATION TESTING PER CUSTOMER INSTRUCTION</p> <p>S/N 2513</p>

CERTIFICATE OF CONFORMANCE

This is to certify that test data and/or certifications proving conformance to purchase order number N/A
are on file and available for examination at WYLE LABORATORIES, under Job number N/A.

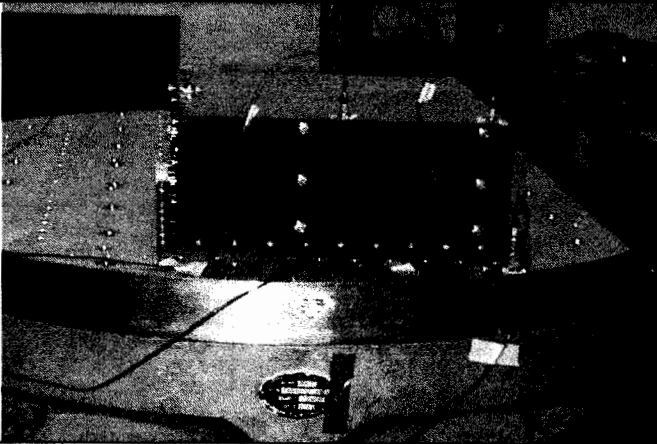

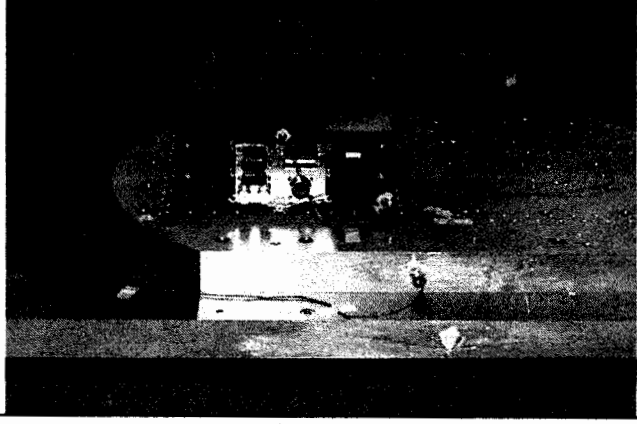
Quality Assurance Signature

RECEIVED BY mail	DATE 10/27/05	SHIPMENT AUTHORIZED BY: NAME T. KLAWITTER
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TEST DATA

DATE STARTED 10-17-05		CUSTOMER Stanford Linear Accelerator			TECHNICIAN (SIGNATURE) <i>D. Wiltshire</i> I-21
DATE COMPLETED 10-17-05		SPECIMEN DESCRIPTION SIU			ENGINEER (SIGNATURE) <i>D. Wiltshire</i>
TEMPERATURE 69°F		TYPE OF TEST VISUAL EXAMINATION - Initial			ENGINEER D. WILTSHIRE
HUMIDITY 37% R.H.		MANUFACTURER Stanford Linear Accelerator			JOB NUMBER 49995.52257
SPECIMEN NUMBER 1		TEST SPECIFICATION SOP 6-08, REV. L			
SPECIMEN NUMBER	SERIAL NUMBER	PART OR MODEL NUMBER	LOT NUMBER	DATE CODE	REMARKS
1	2513	-	-	-	Note: No discrepancies noted.

TEST DATA

DATE STARTED 10-17-05	CUSTOMER Stanford Linear Accelerator	TECHNICIAN (SIGNATURE) <i>D. Wiltshire</i> WSC
DATE COMPLETED 10-17-05	SPECIMEN DESCRIPTION SIU { See Initial Visual }	ENGINEER (SIGNATURE) <i>D. Wiltshire</i>
TEMPERATURE 69°F	TYPE OF TEST SET-UP - Detail	ENGINEER DWILTSHIRE
HUMIDITY 37%R.H.	MANUFACTURER Stanford Linear Accelerator	JOB NUMBER 49995.52257
SPECIMEN NUMBER 1	TEST SPECIFICATION See Vibration Data	
		
Z - Axis		X - Axis
		
Y - Axis		



TEST DATA

DATE STARTED 10-17-05		CUSTOMER Stanford Linear Accelerator				TECHNICIAN (SIGNATURE) <i>D. Wiltshire</i> T-21	
DATE COMPLETED 10-17-05		SPECIMEN DESCRIPTION SIU { See Initial Visual }				ENGINEER (SIGNATURE) <i>D. Wiltshire</i>	
TEMPERATURE 69°F		TYPE OF TEST VIBRATION - Sine and Random - Non-Op.				ENGINEER DWILTSHIRE	
HUMIDITY 37% R.H.		MANUFACTURER Stanford Linear Accelerator				JOB NUMBER 49995.52257	
SPECIMEN NUMBER 1		TEST SPECIFICATION Customer Instruction					
SPECIMEN NUMBER	DATE	AXIS	TIME START	TIME STOP	VIBRATION FREQUENCIES AND LEVELS	REMARKS	
1	10-17-05	Z	1247	+0:00:59	Sine Low Freq. Proto Y-axis 5 - 5.5Hz @ 1.2g's 5.5 - 15Hz @ 1.44g's 15 - 35Hz @ 0.5g's 35 - 50Hz @ 2.13g's 5 - 25hz @ 4 oct./ min. 25 - 35Hz @ 1.5 oct./ min. 35 - 50Hz @ 4 oct./ min. 1 sweep up / y-axis only Sine - Search 20 - 2000Hz @ 0.15g 2 octaves / minute 1 sweep up / axis Random - Proto 20Hz @ 0.01 G ² /Hz 80 - 500Hz @ 0.04 G ² /Hz 11.52 Grms overall 1 minute / axis	Sine low freq. Proto Z-axis <i>Acceptance</i>	
		Z	1259	+0:03:19		Sine Search	
		Z	1315	+0:01:01		Random Proto <i>Acceptance</i>	
		Z	1324	+0:03:19		Sine Search <i>D. Wiltshire</i>	
		Y	1429	+0:01:01		Sine low freq. Proto Y-axis	
		Y	1439	+0:03:19		Sine Search	
		Y	1501	+0:01:01		Random Proto <i>Acceptance</i>	
		Y	1511	+0:03:19		Sine Search	
		X	1547	+0:01:01		Sine low freq. Proto X-axis <i>Acceptance</i>	
		X	1556	+0:03:19		Sine Search	
		X	1609	+0:01:01		Random Proto <i>Acceptance</i>	
1	10-17-05	X	1620	+0:03:19		Sine Search	
						Note: Specimen was returned to customer for a post test evaluation.	



TEST DATA

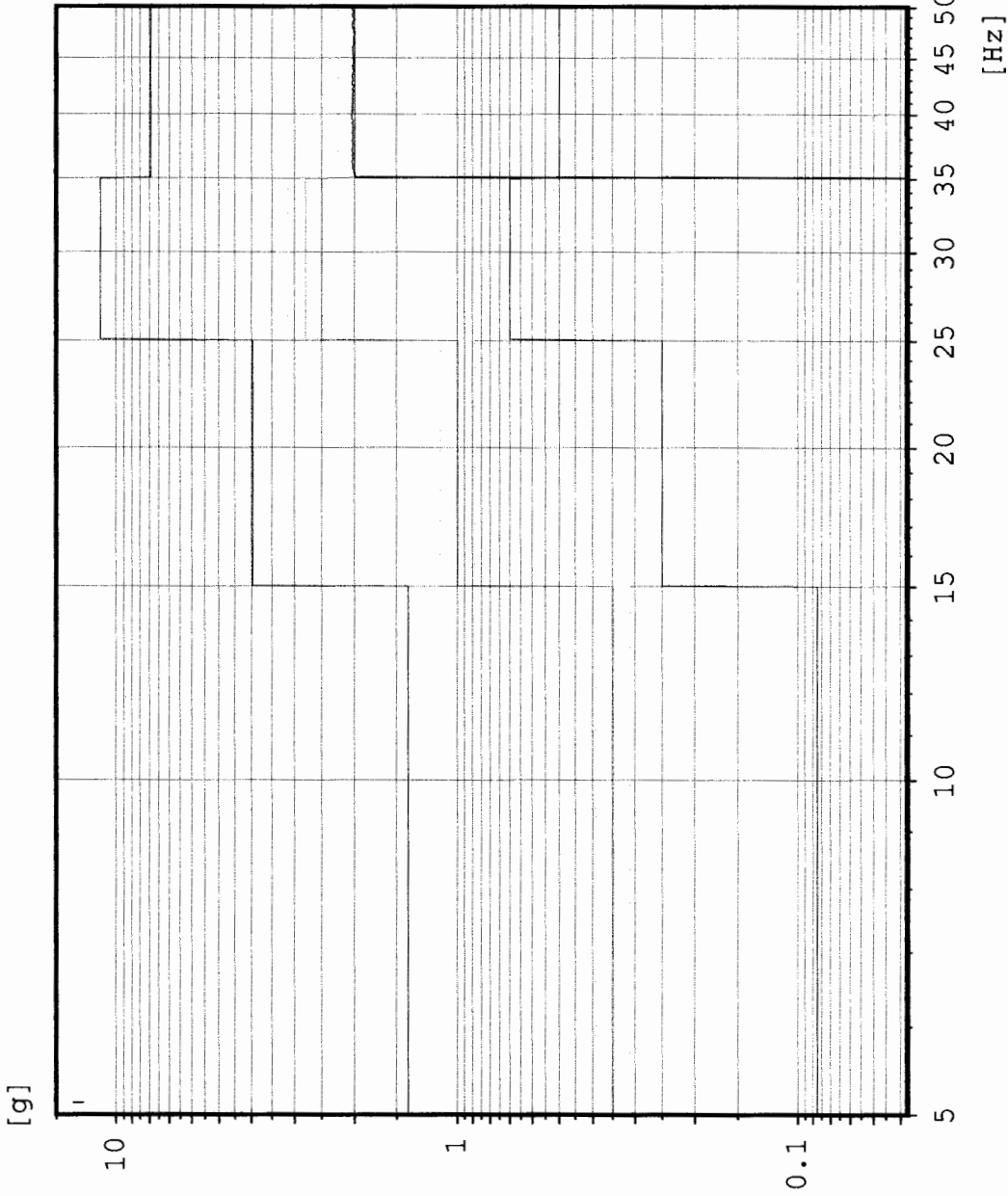
DATE STARTED 10-17-05	CUSTOMER Stanford Linear Accelerator				TECHNICIAN (SIGNATURE) <i>D. Wiltshire</i> [WSC 1-21]	
DATE COMPLETED 10-17-05	SPECIMEN DESCRIPTION SIU { See Initial Visual }				ENGINEER (SIGNATURE) <i>D. Wiltshire</i>	
TEMPERATURE 69°F	TYPE OF TEST VIBRATION - Sine and Random – Non-Op.				ENGINEER DWILTSHIRE	
HUMIDITY 37% R.H.	MANUFACTURER Stanford Linear Accelerator				JOB NUMBER 49995.52257	
SPECIMEN NUMBER 1	TEST SPECIFICATION Customer Instruction					
SPECIMEN NUMBER	DATE	AXIS	TIME START	TIME STOP	VIBRATION FREQUENCIES AND LEVELS	REMARKS
-	-	-	-	-	Sine Low Freq. Proto X-axis 5 – 5.5Hz @ 1.2g's 5.5 – 15Hz @ 1.5g's 15 – 25Hz @ 0.25g's 25 – 50Hz @ 0.5g's 5 – 25hz @ 4 oct./min. 25 – 35Hz @ 1.5 oct./ min. 35 – 50Hz @ 4 oct./ min. 1 sweep up / X-axis only	
					Sine Low Freq. Proto Z-axis 5 – 15Hz @ 0.41g's 15 – 25Hz @ 1.25g's 25 – 35Hz @ 3.75g's 35 – 50Hz @ 0.5g's 5 – 25hz @ 4 oct./min. 25 – 35Hz @ 1.5 oct./ min. 35 – 50Hz @ 4 oct./ min. 1 sweep up / Z-axis only	

Sine CZ1 Control channel

Stanford Linear Accelerator

J/N 49995.52257

SIU S/N 2513



Chan.no: 1 CW Filtered
Chan.type: CW Filtered
Sweep type: logarithmic
Sweeps done: 4
Sweeps req.: 1
Sweep direct.: up
Unit: g
Contr.strat.: Closed loop

-- Testing time --
elapsed: 000:00:59
remaining: 000:00:00

Date: 10-17-05
Time: 12:48:10

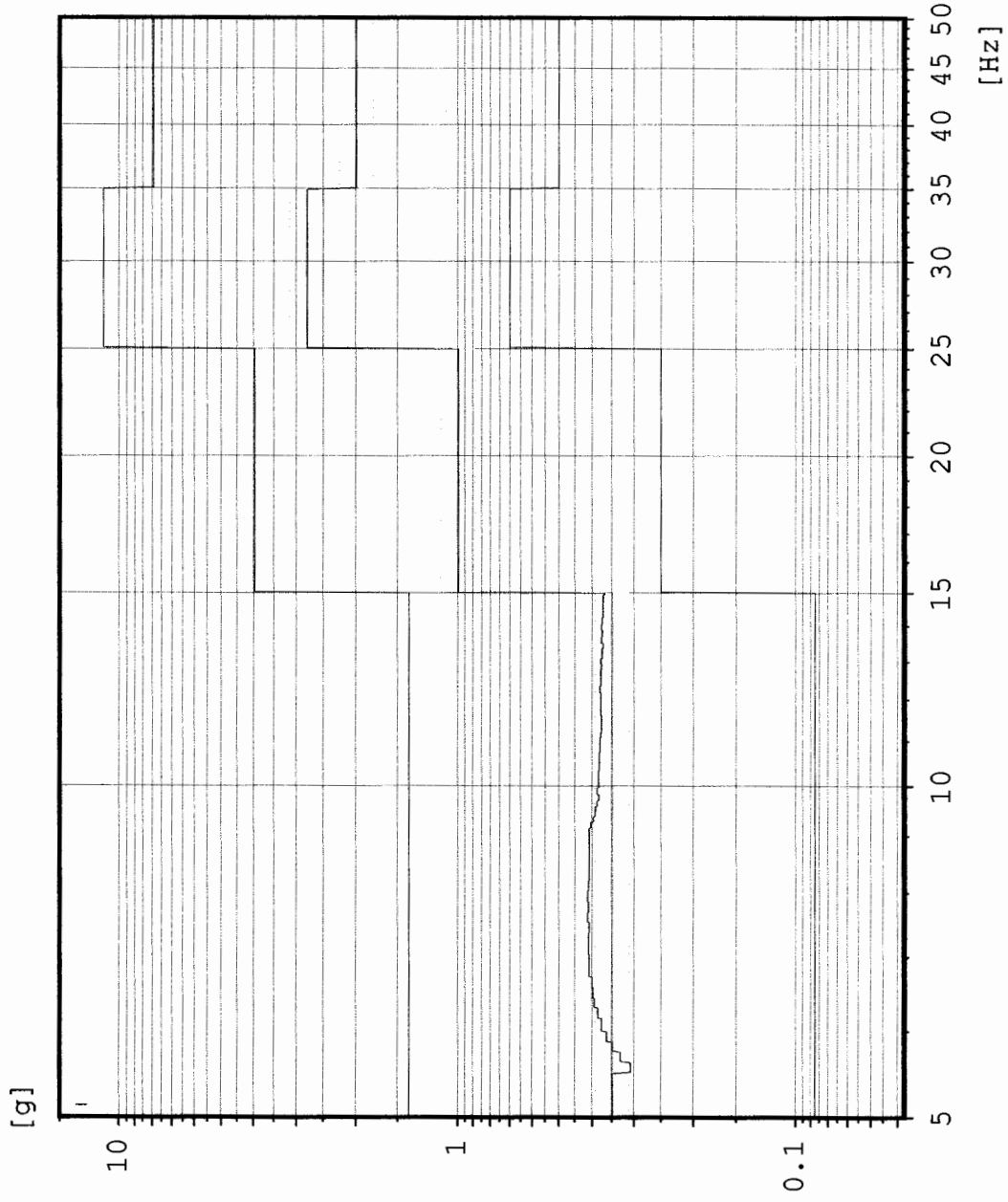
Z - axis
Proto Flight Unit
Acceptance

Sine CZ1 Control channel

Stanford Linear Accelerator

J/N 49995.52257

SIU S/N 2513



Chan.no: 1 CW Filtered
Chan.type: CW Filtered
Sweep type: logarithmic
Sweeps done: 1
Sweeps req.: 1
Sweep direct.: up
Unit: g
Contr.strat.: Closed loop

-- Testing time --
elapsed: 000:00:21
remaining: 000:02:05

Date: 10-17-05
Time: 12:47:14

Z - axis
Proto Flight Unit
Acceptance

AZ2 Side middle

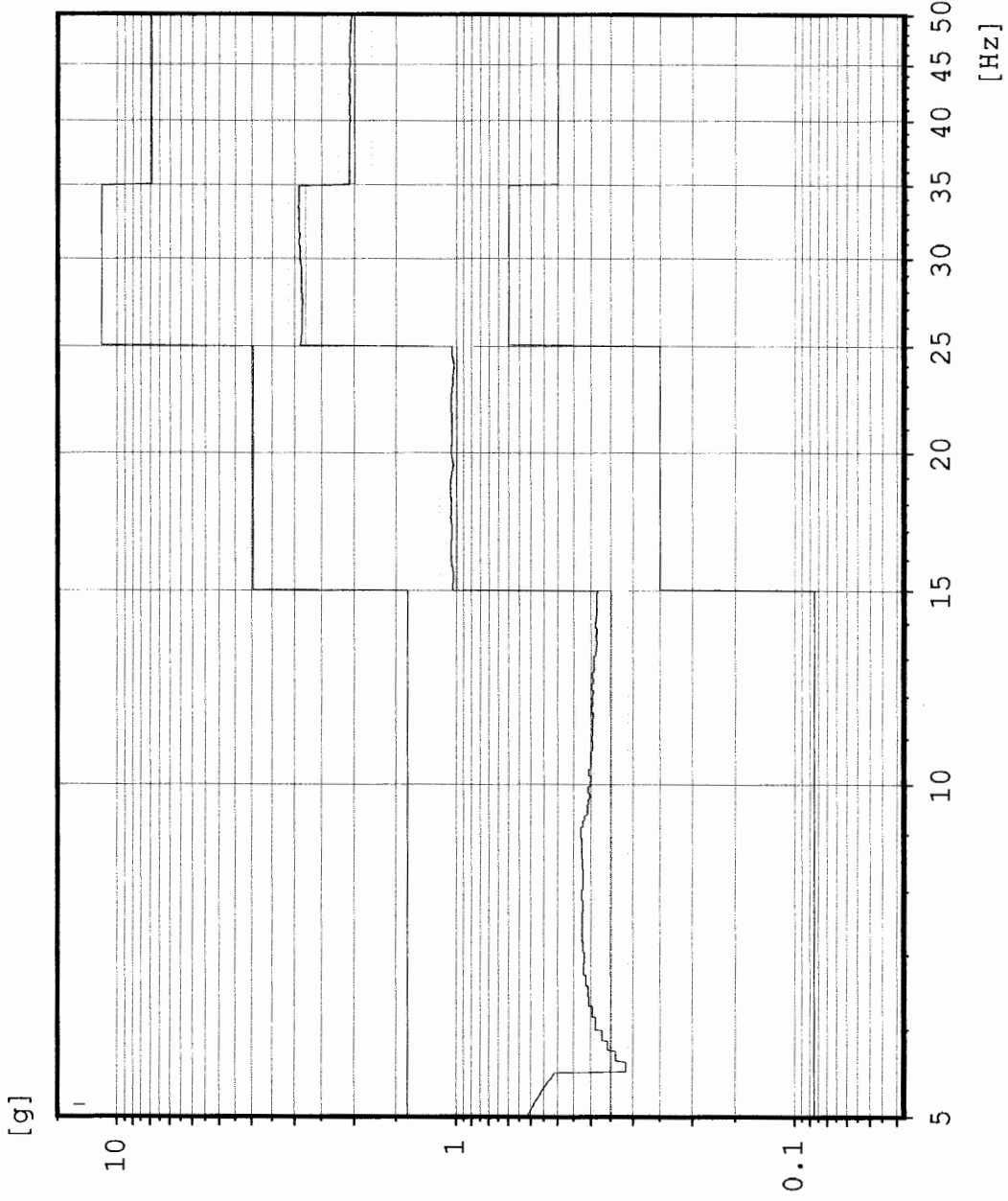
Sine
Stanford Linear Accelerator
J/N 49995.52157
SIU S/N 2513



Chan.no: 3 W Filtered
Sweep type: logarithmic
Sweeps done: 1
Sweeps req.: 1
Sweep direct.: up
Unit: g
Contr.strat.: Closed loop

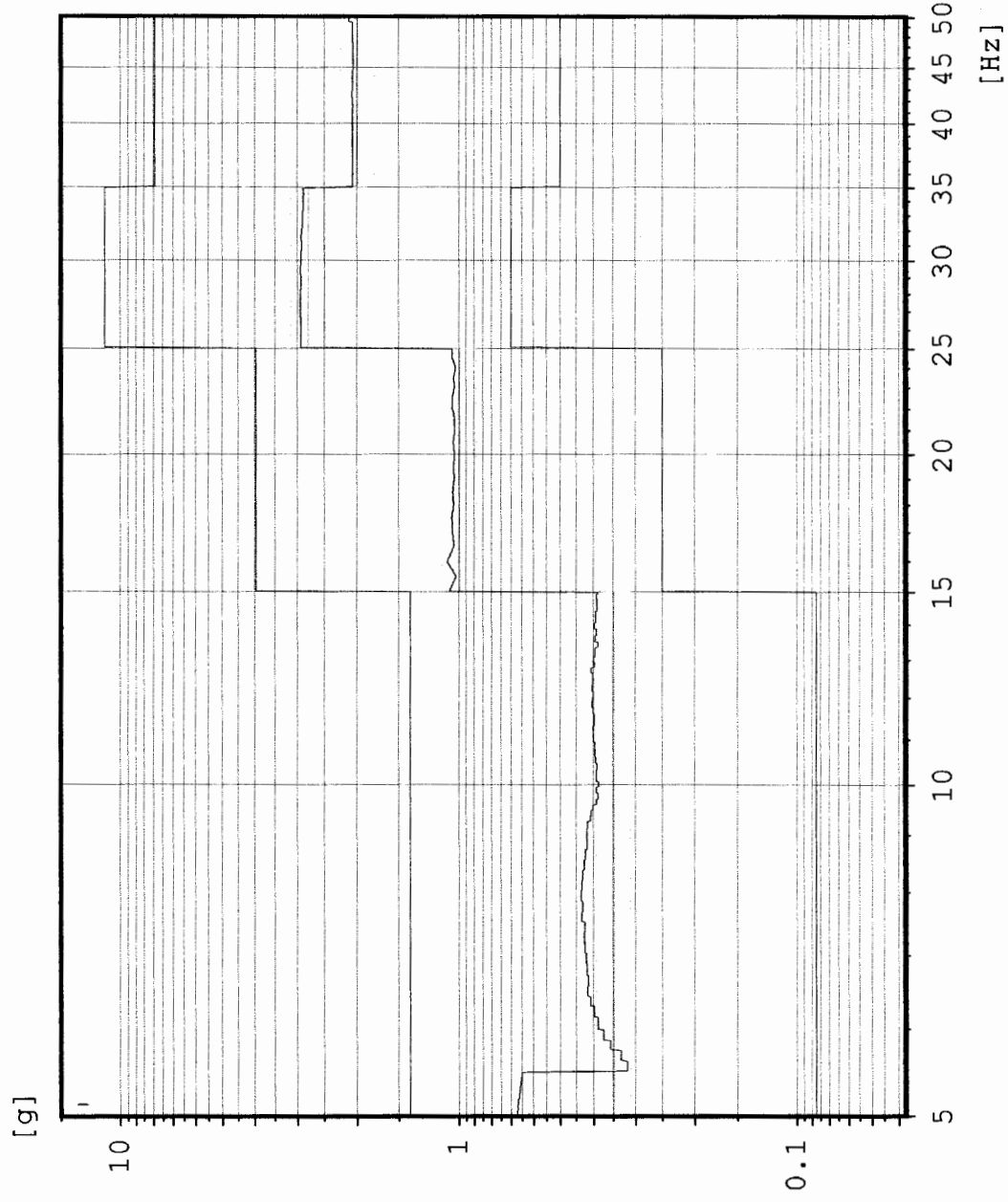
-- Testing time --
elapsed: 000:00:21
remaining: 000:02:05
Date: 10-17-05
Time: 12:47:14

Z - axis
Proto Flight Unit
Acceptance



AZ3 Side corner

Sine
Stanford Linear Accelerator
J/N 49995.52A57
SIU S/N 2513



Chan.no: 5 W Filtered
Chan.type: logarithmic
Sweep type: 1
Sweeps done: 1
Sweeps req.: 1
Sweep direct.: up
Unit: g
Contr.strat.: Closed loop

-- Testing time --
elapsed: 000:00:21
remaining: 000:02:05
Date: 10-17-05
Time: 12:47:14

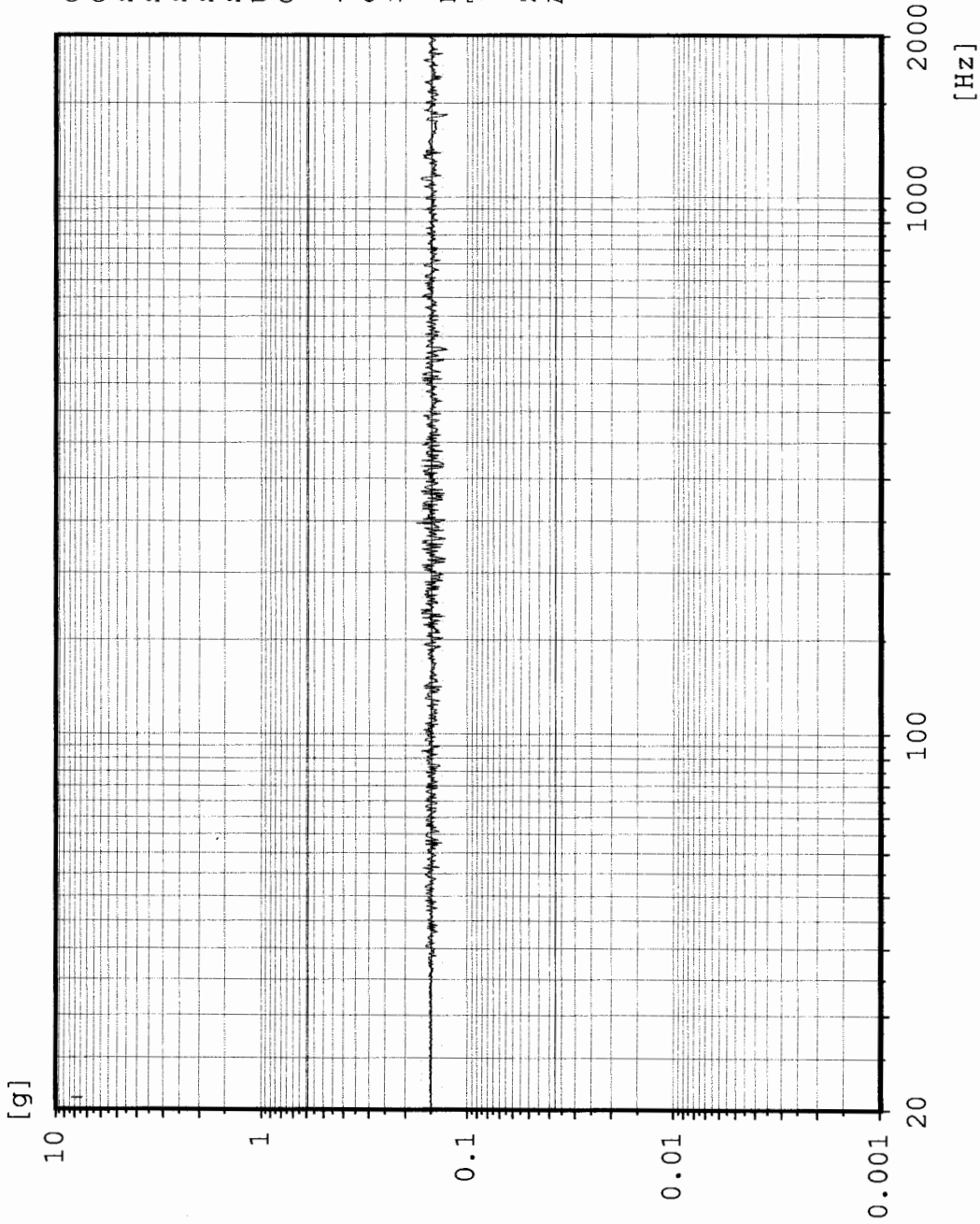
Z - axis
~~Proto Flight Unit~~
Acceptance

Sine CZ1 Control channel

Stanford Linear Accelerator

J/N 49995.52157

SIU S/N 2513



Chan.no: 1 CW Filtered
Chan.type: CW Filtered
Sweep type: logarithmic
Sweeps done: 1
Sweeps req.: 1
Sweep direct.: up
Sweep rate: 2.00 Oct/min
Unit: g
Contr.strat.: Closed loop

-- Testing time --
elapsed: 000:03:19
remaining: 000:00:00

Date: 10-17-05
Time: 13:02:29

Z - axis Pre Random
Acceptance Flight Unit

AZ1 Rear middle

Sine
Stanford Linear Accelerator
J/N 49995.52157
SIU S/N 2513

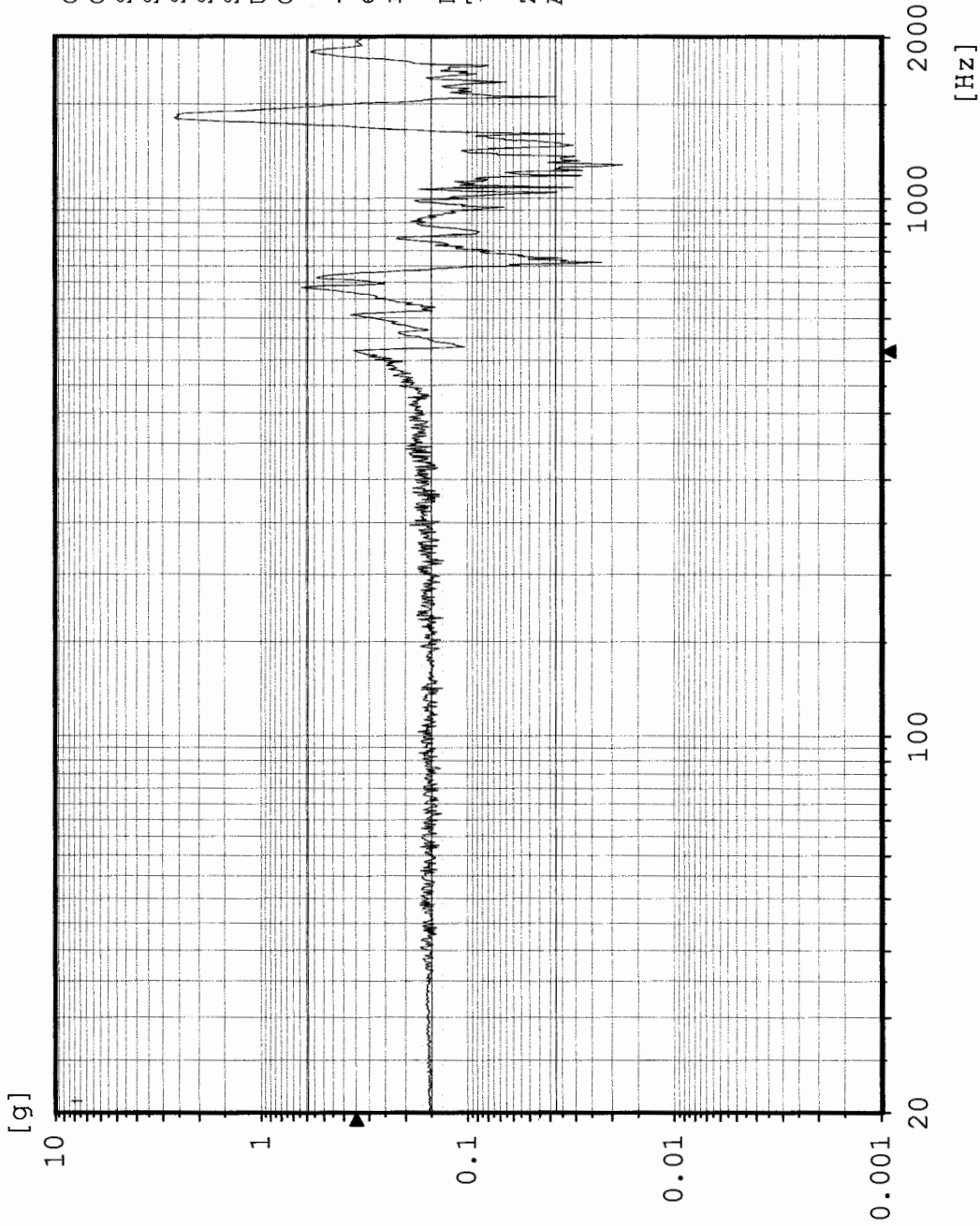


Chan.no: 2 M Filtered
Chan.type: logarithmic
Sweep type: 1
Sweeps done: 1
Sweeps req.: 1
Sweep direct.: up 2.00 Oct/min
Sweep rate: g
Unit: g
Contr.strat.: Closed loop

-- Testing time --
elapsed: 000:03:19
remaining: 000:00:00

Date: 10-17-05
Time: 13:02:29

Z - axis Pre Random
Acceptance Flight Unit



AZ2 Side middle

Sine
Stanford Linear Accelerator
J/N 49995.52157
SIU S/N 2513

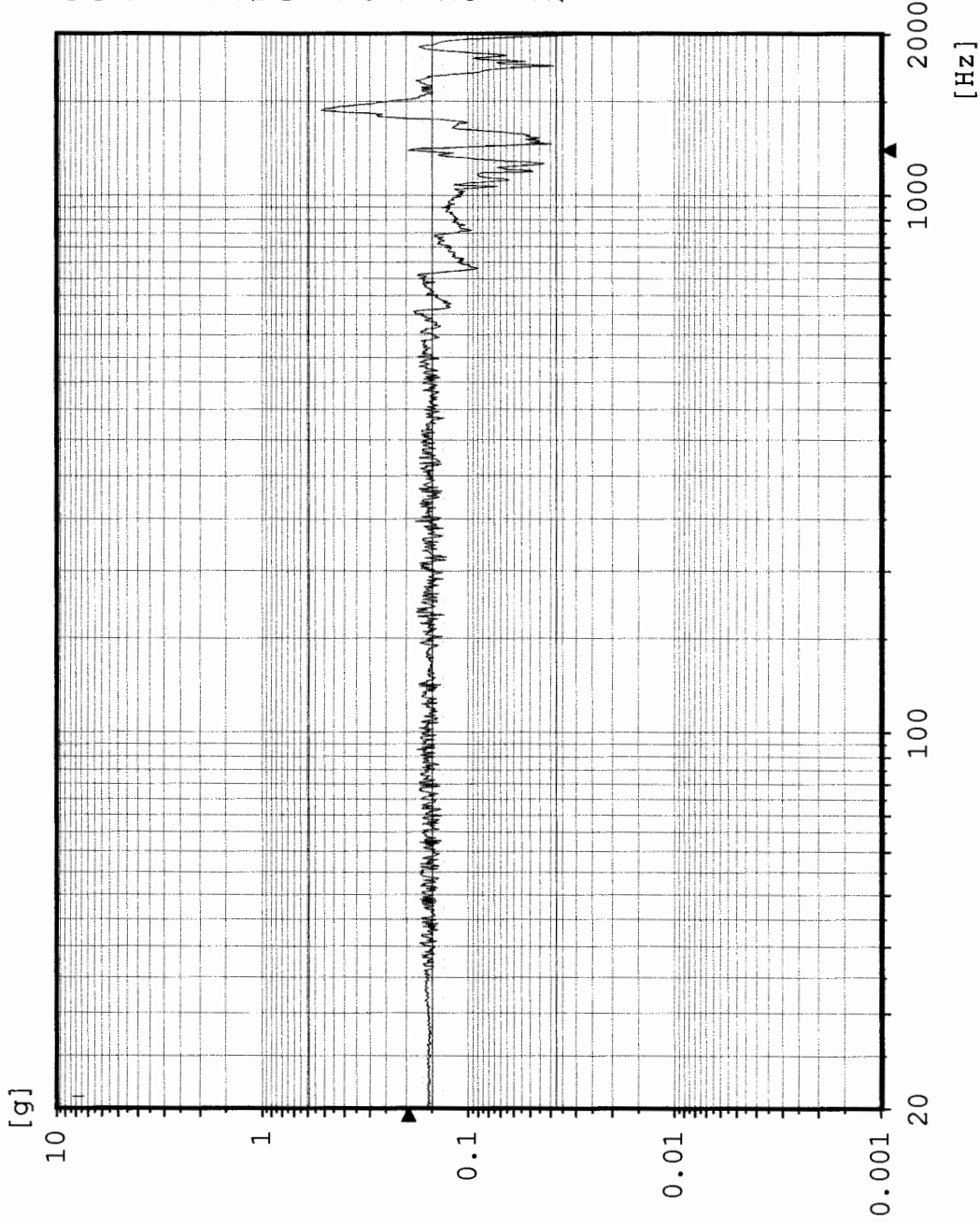


Chan.no: 3 M Filtered
Chan.type: logarithmic
Sweep type: 1
Sweeps done: 1
Sweeps req.: 1
Sweep direct.: up
Sweep rate: 2.00 Oct/min
Unit: g
Contr.strat.: Closed loop

-- Testing time --
elapsed: 000:03:19
remaining: 000:00:00

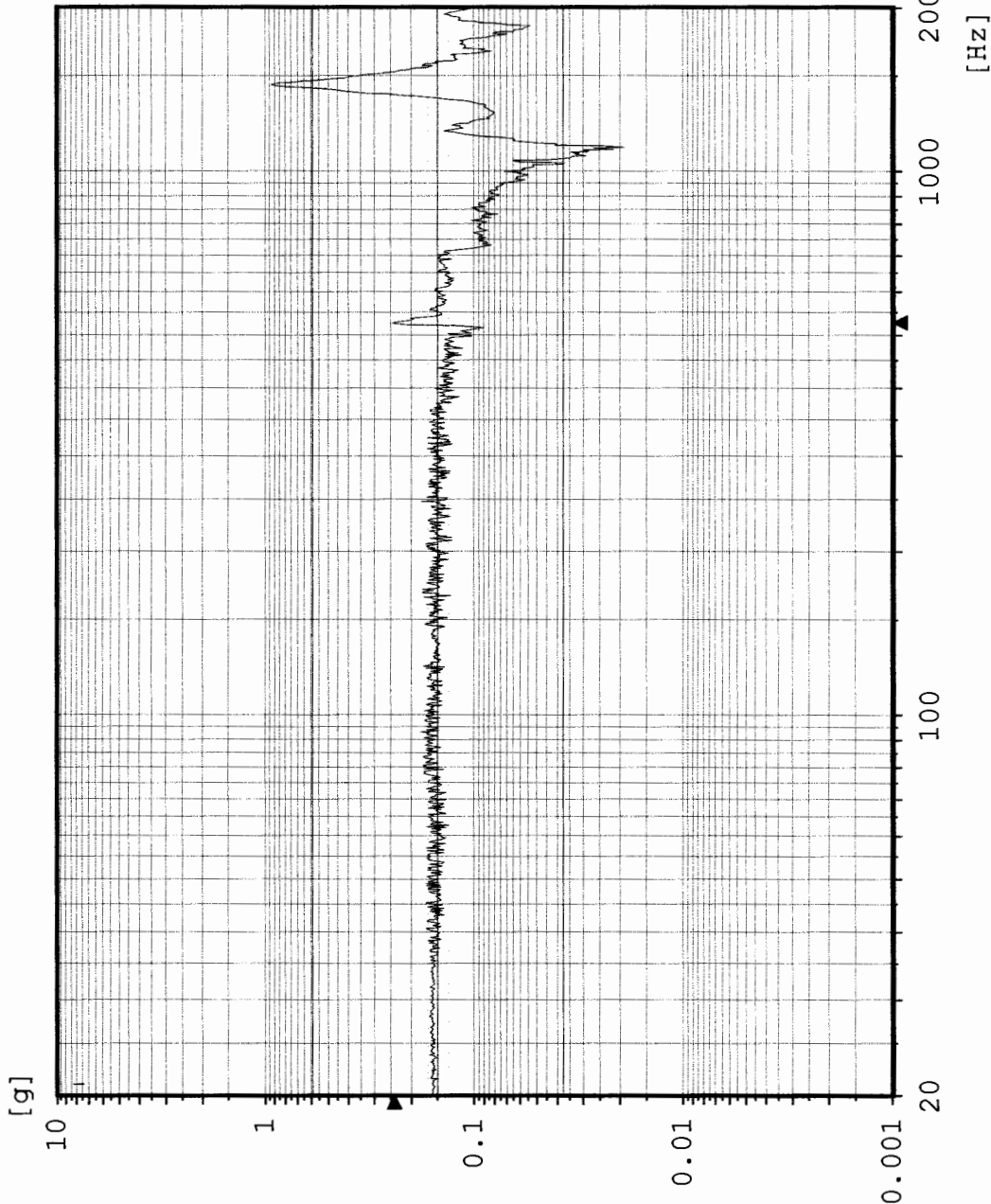
Date: 10-17-05
Time: 13:02:29

Z - axis Pre Random
Acceptance Flight Unit



Sine AZ3 Side corner

Stanford Linear Accelerator
J/N 49995.52 **157**
SIU S/N 2513



Chan.no: 5 M Filtered
Chan.type: logarithmic
Sweep type: 1
Sweeps done: 1
Sweeps req.: 1
Sweep direct.: up
Sweep rate: 2.00 Oct/min
Unit: g
Contr.strat.: Closed loop

-- Testing time --
elapsed: 000:03:19
remaining: 000:00:00

Date: 10-17-05
Time: 13:02:29

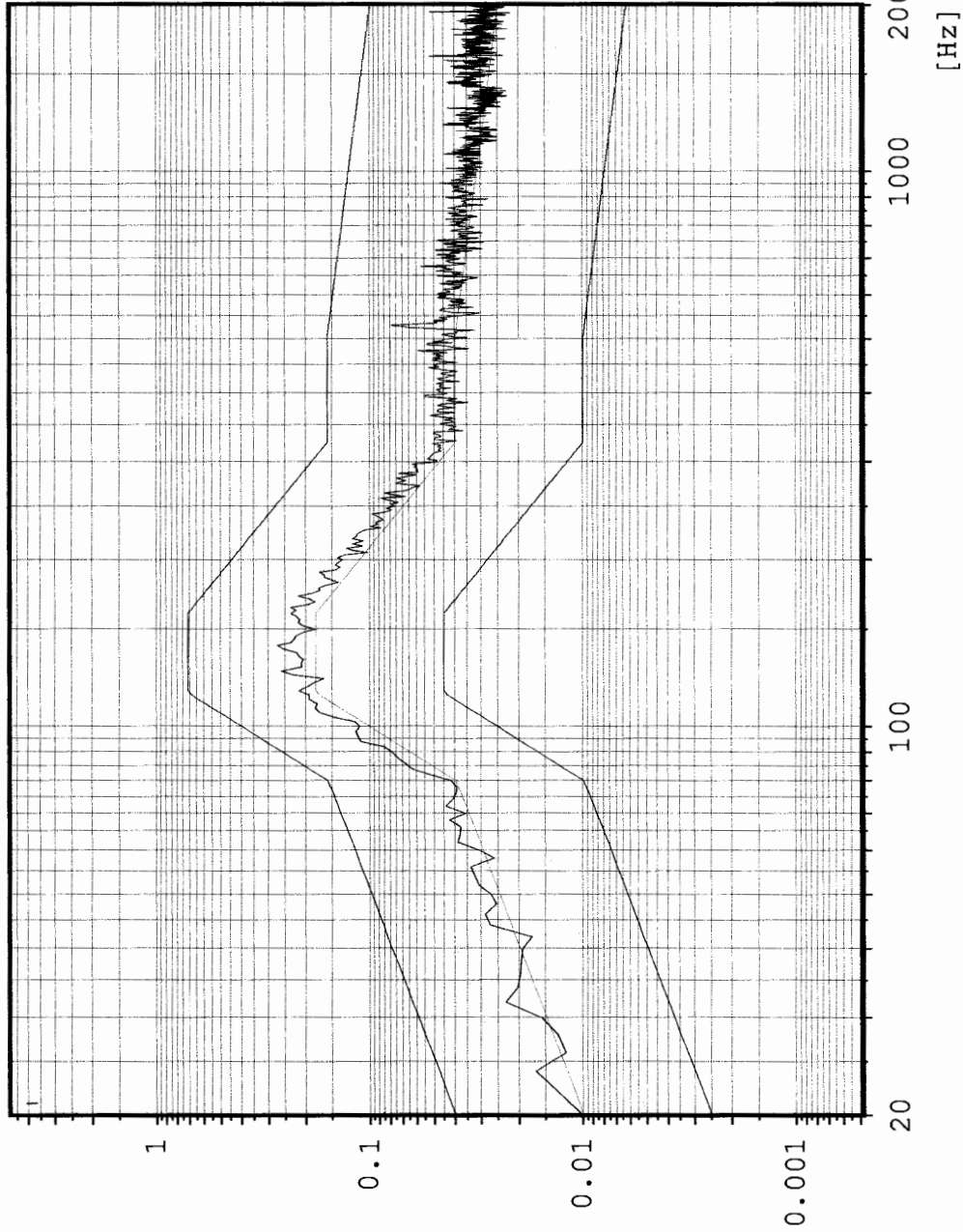
Z - axis Pre Random
Acceptance Flight Unit

Random CZ1 Control channel

Stanford Linear Accelerator
49995.52257
SIU S/N 2513



[g²/Hz]



Chan.no: 1
Chan.type: C
DOF: 126
Level: 0.0 dB
Resolution: 2 Hz
Unit: g²/Hz
RMS (act.): 9.586 g
RMS (req.): 8.916 g
Contr.strat.: Closed loop

-- Time on act. level --
elapsed: 000:01:01
remaining: 000:00:00

-- Time total --
elapsed: 000:01:36
remaining: 000:00:00

Date: 10-17-05
Time: 13:17:00

Z - axis
Acceptance Flight Unit

Cursor:

56 Hz 0.264 g²/Hz

AZ1 Rear middle

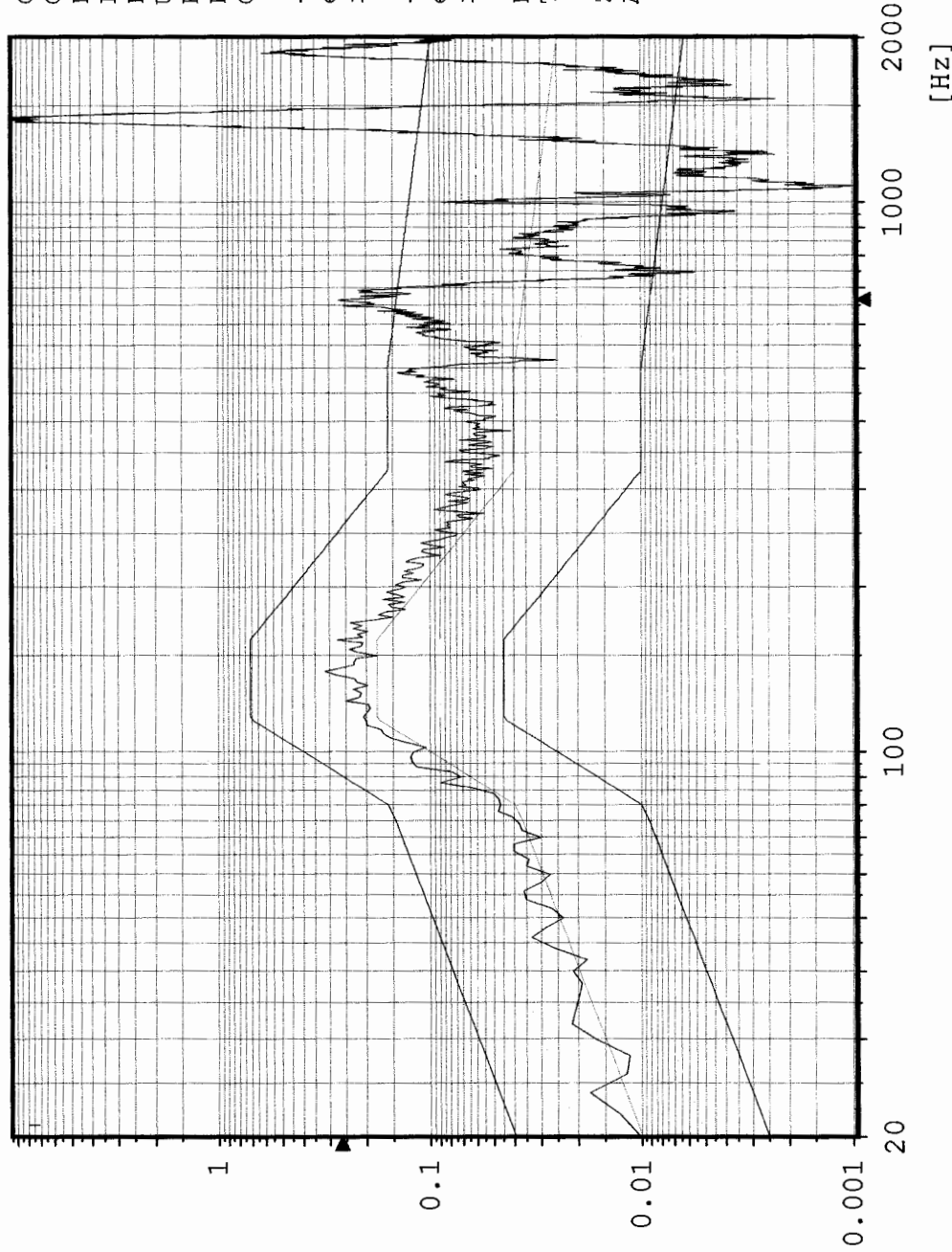
Random

Stanford Linear Accelerator

49995.52 **257**

SIU S/N 2513

[g²/Hz]



Chan.no: 2
 Chan.type: M
 DOF: 100
 Level: 0.0 dB
 Resolution: 2 Hz
 Unit: g²/Hz
 RMS (act.): 24.86 g
 RMS (req.): 8.916 g
 Contr.strat.: Closed loop

-- Time on act. level --
 elapsed: 000:01:01
 remaining: 000:00:00

-- Time total --
 elapsed: 000:01:36
 remaining: 000:00:00

Date: 10-17-05
 Time: 13:17:00

Z - axis
 Acceptance Flight Unit

Cursor: 1.52 Hz 0.1824 g²/Hz

AZ2 Side middle

Random

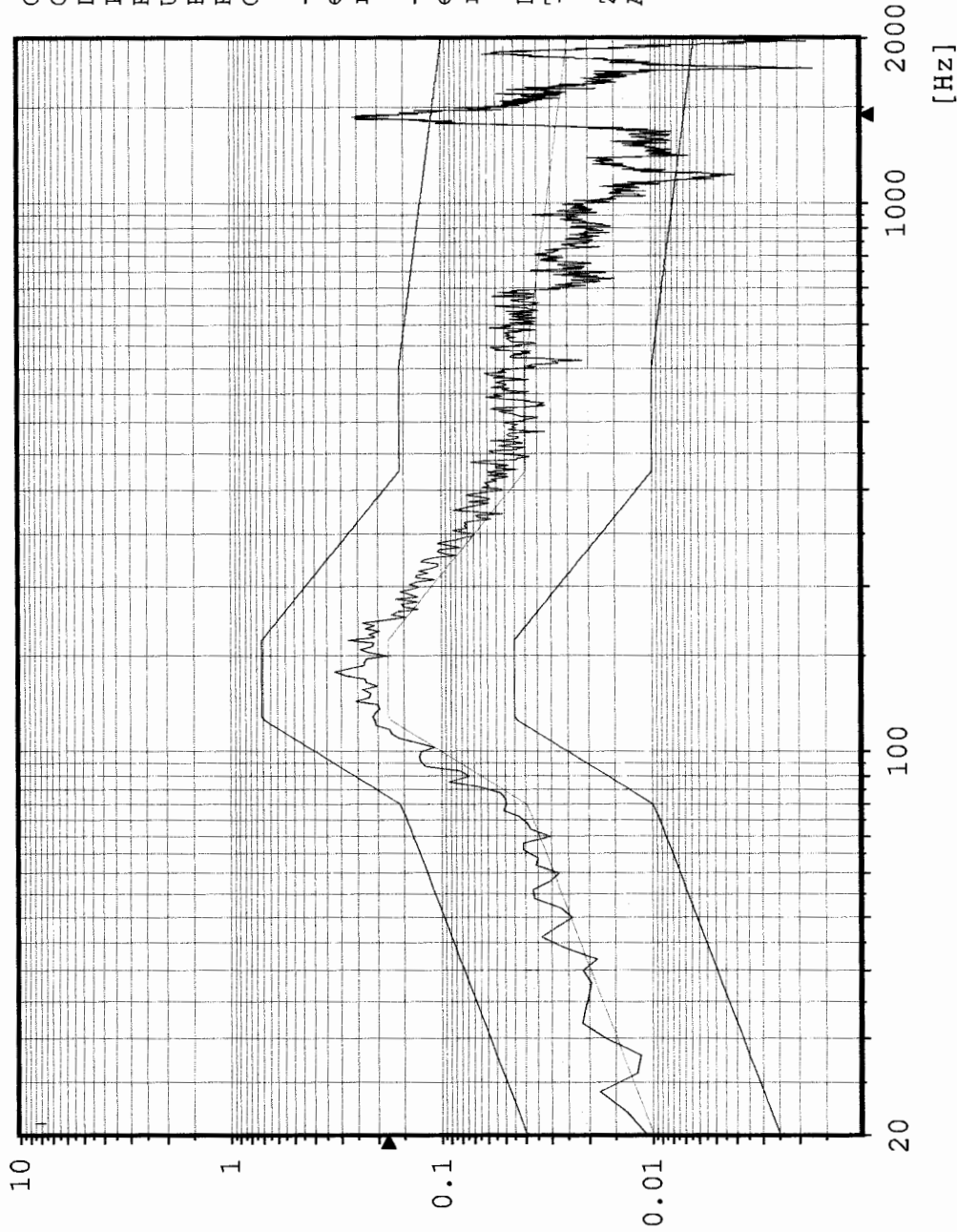
Stanford Linear Accelerator

49995.52457

SIU S/N 2513



[g²/Hz]



Chan.no: 3
Chan.type: M
DOF: 100
Level: 0.0 dB
Resolution: 2 Hz
Unit: g²/Hz
RMS (act.): 9.372 g
RMS (reg.): 8.916 g
Contr.strat.: Closed loop

-- Time on act. level --
elapsed: 000:01:01
remaining: 000:00:00

-- Time total --
elapsed: 000:01:36
remaining: 000:00:00

Date: 10-17-05
Time: 13:17:00

Z - axis
Acceptance Flight Unit

Cursor: 1.34 Hz 1.003 g²/Hz

AZ3 Side corner

Random
Stanford Linear Accelerator
49995.52257
SIU S/N 2513



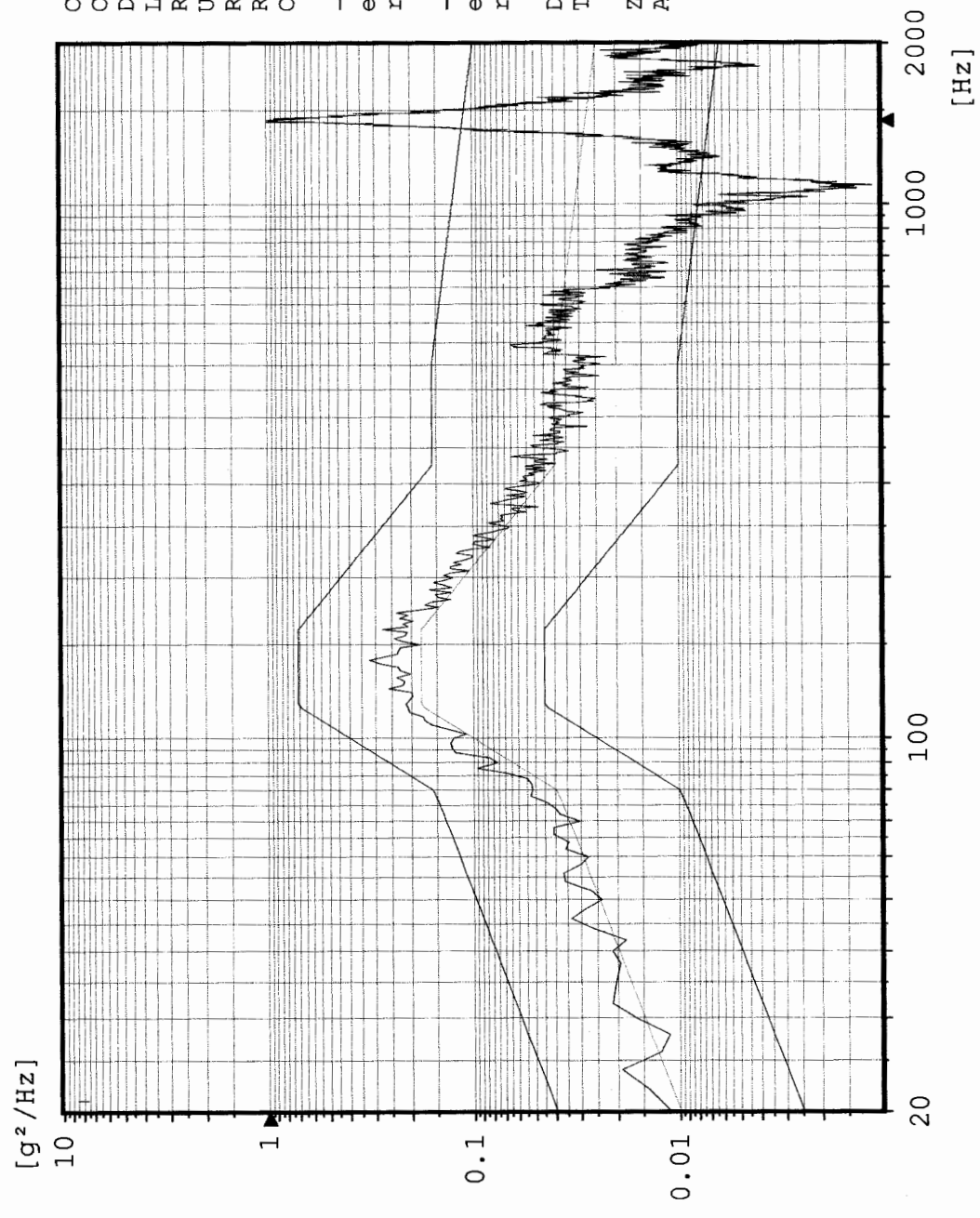
Chan.no: 5
Chan.type: M
DOF: 100
Level: 0.0 dB
Resolution: 2 Hz
Unit: g²/Hz
RMS (act.): 10.78 g
RMS (req.): 8.916 g
Contr.strat.: Closed loop

-- Time on act. level --
elapsed: 000:01:01
remaining: 000:00:00

-- Time total --
elapsed: 000:01:36
remaining: 000:00:00

Date: 10-17-05
Time: 13:17:00

Z - axis
Acceptance Flight Unit



Sine CZ1 Control channel

Stanford Linear Accelerator
J/N 49995.52357
SIU S/N 2513

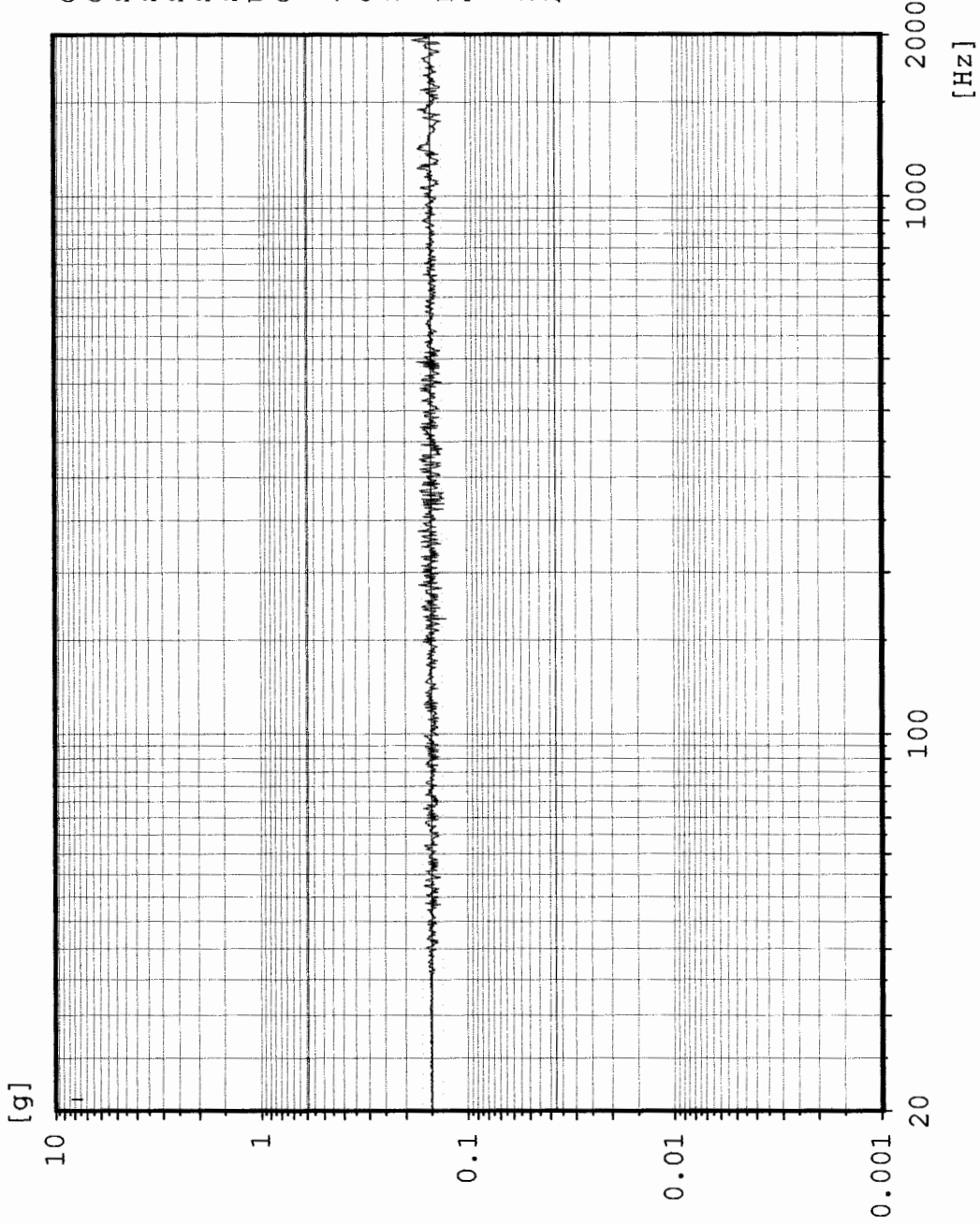


Chan.no: 1
Chan.type: CW Filtered
Sweep type: logarithmic
Sweeps done: 1
Sweeps req.: 1
Sweep direct.: up 2.00 Oct/min
Unit: g
Contr.strat.: Closed loop

-- Testing time --
elapsed: 000:03:19
remaining: 000:00:00

Date: 10-17-05
Time: 13:28:01

Z - axis Post Random
Acceptance Flight Unit



AZ1 Rear middle

Sine
Stanford Linear Accelerator
J/N 49995.52 **257**
SIU S/N 2513

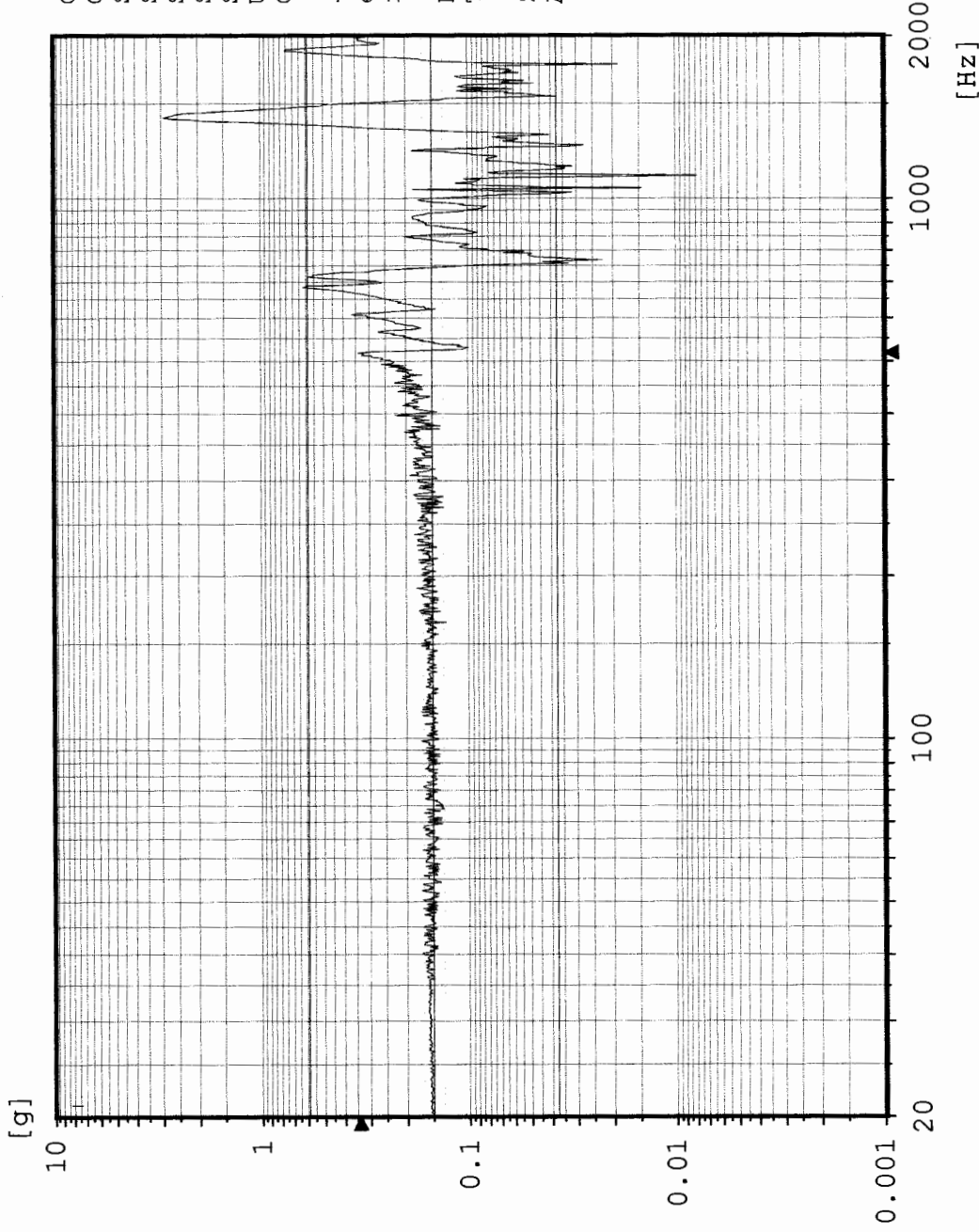


Chan.no: 2 M Filtered
Chan.type: logarithmic
Sweep type: 1
Sweeps done: 1
Sweeps req.: 1
Sweep direct.: up 2.00 Oct/min
Sweep rate: g
Unit: g
Contr.strat.: Closed loop

-- Testing time --
elapsed: 000:03:19
remaining: 000:00:00

Date: 10-17-05
Time: 13:28:01

Z - axis Post Random
Acceptance Flight Unit



AZ2 Side middle

Sine
Stanford Linear Accelerator
J/N 49995.52257
SIU S/N 2513

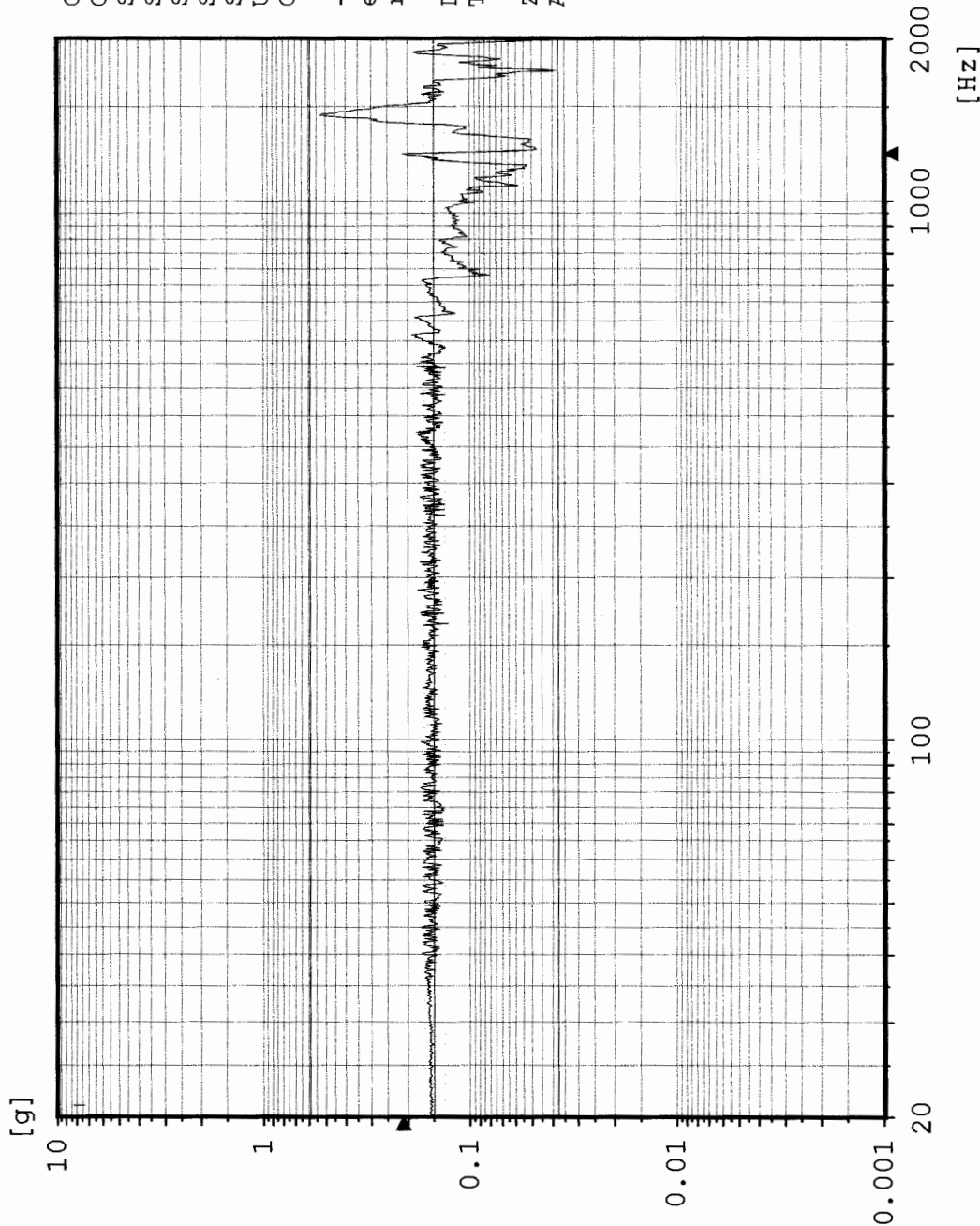


Chan.no: 3
Chan.type: M Filtered
Sweep type: logarithmic
Sweeps done: 1
Sweeps req.: 1
Sweep direct.: up
Sweep rate: 2.00 Oct/min
Unit: g
Contr.strat.: Closed loop

-- Testing time --
elapsed: 000:03:19
remaining: 000:00:00

Date: 10-17-05
Time: 13:28:01

Z - axis Post Random
Acceptance Flight Unit



Cursor: 520.6 Hz 0 1912 g

AZ3 Side corner

Sine
Stanford Linear Accelerator
J/N 49995.52157
SIU S/N 2513

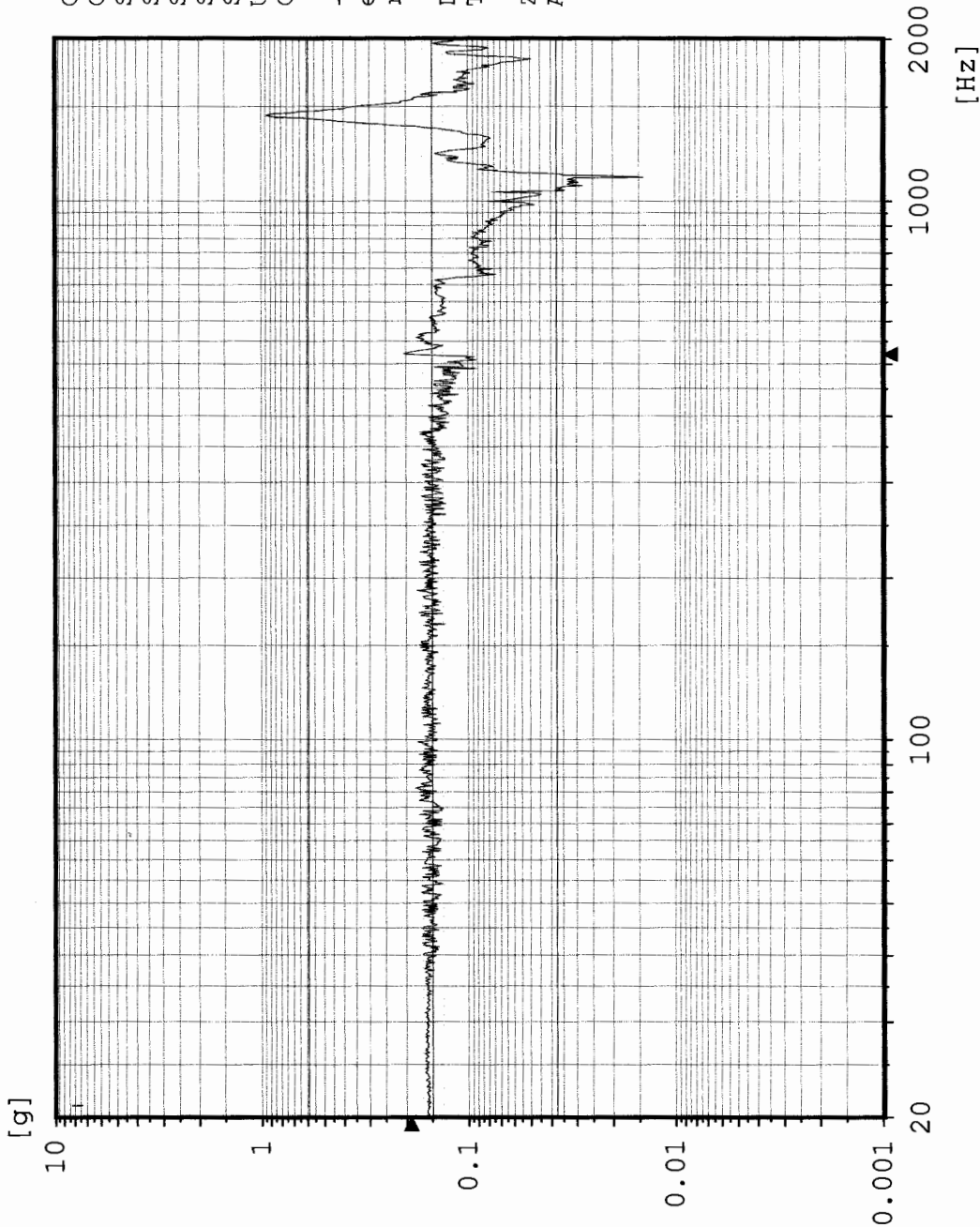


Chan.no: 5 M Filtered
Chan.type: logarithmic
Sweep type: 1
Sweeps done: 1
Sweeps req.: 1
Sweep direct.: up
Sweep rate: 2.00 Oct/min
Unit: g
Contr.strat.: Closed loop

-- Testing time --
elapsed: 000:03:19
remaining: 000:00:00

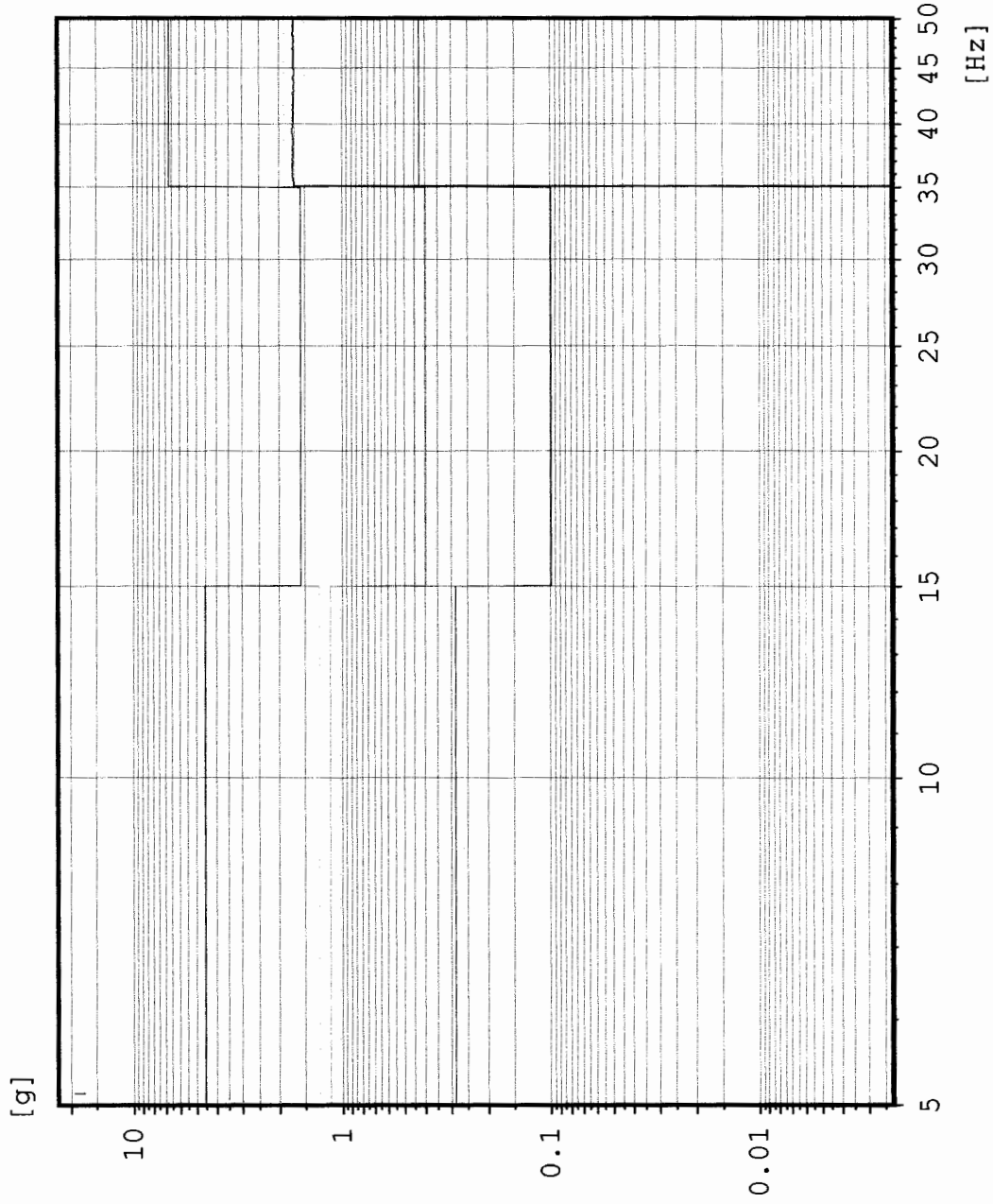
Date: 10-17-05
Time: 13:28:01

Z - axis Post Random
Acceptance Flight Unit



Sine CY1 Control channel

Stanford Linear Accelerator
J/N 49995.52257
SIU S/N 2513



Chan.no: 1
Chan.type: CW Filtered
Sweep type: logarithmic
Sweeps done: 4
Sweeps req.: 1
Sweep direct.: up
Unit: g
Contr.strat.: Closed loop

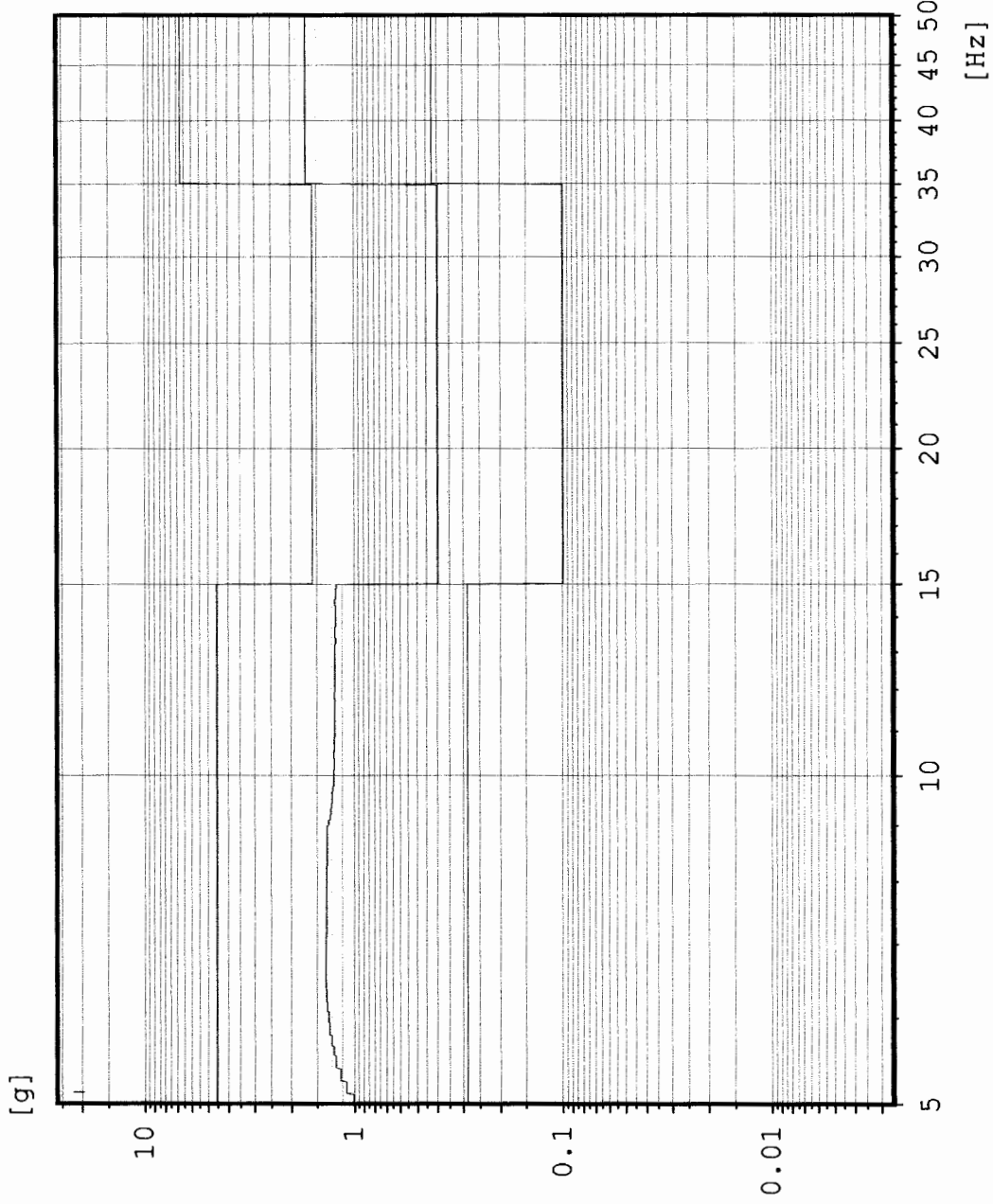
-- Testing time --
elapsed: 000:01:01
remaining: 000:00:00

Date: 10-17-05
Time: 14:30:47

Y - axis
Acceptance Flight Unit

Sine CY1 Control channel

Stanford Linear Accelerator
J/N 49995.52257
SIU S/N 2513



Chan.no: 1
Chan.type: CW Filtered
Sweep type: logarithmic
Sweeps done: 1
Sweeps req.: 1
Sweep direct.: up
Unit: g
Contr.strat.: Closed loop

-- Testing time --
elapsed: 000:00:23
remaining: 000:02:05

Date: 10-17-05
Time: 14:29:52

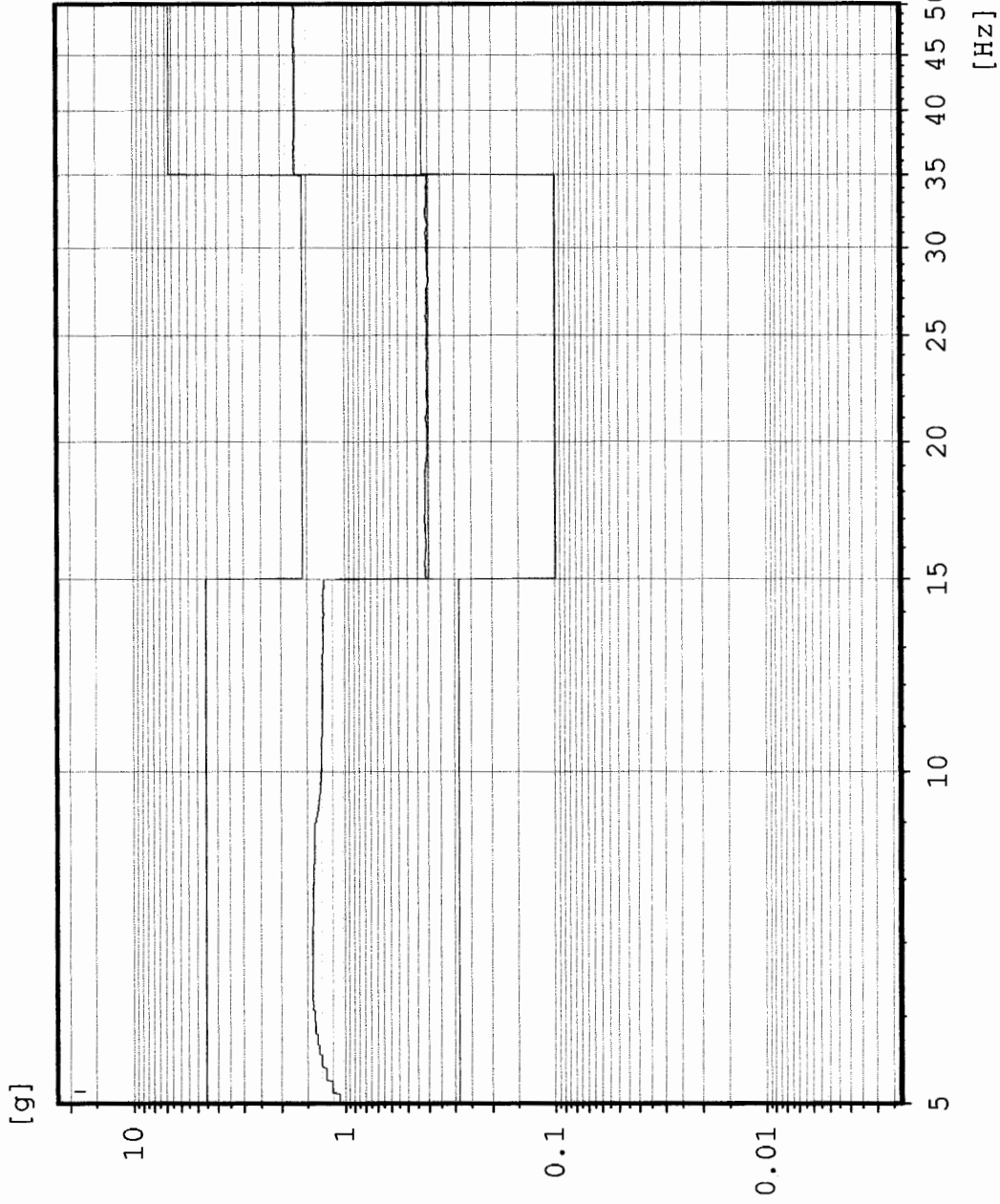
Y - axis
Acceptance Flight Unit

Sine AY1 Side lower center

Stanford Linear Accelerator

J/N 49995.52257

SIU S/N 2513



Chan.no: 2 W Filtered
Chan.type: logarithmic
Sweep type: logarithmic
Sweeps done: 1
Sweeps req.: 1
Sweep direct.: up
Unit: g
Contr.strat.: Closed loop

-- Testing time --
elapsed: 000:00:23
remaining: 000:02:05

Date: 10-17-05
Time: 14:29:52

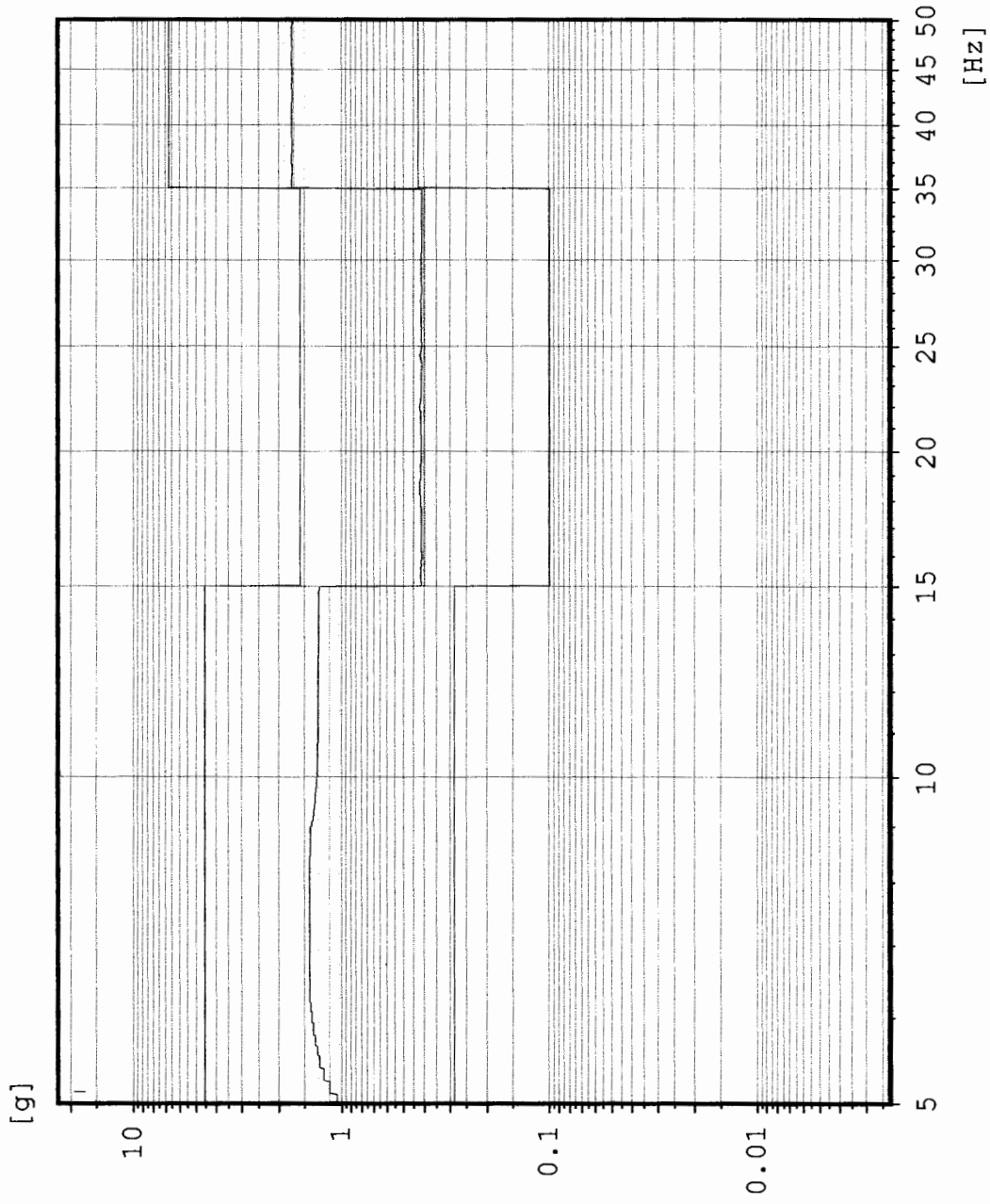
Y - axis
Acceptance Flight Unit

Sine AY2 Side upper center

Stanford Linear Accelerator

J/N 49995.52257

SIU S/N 2513



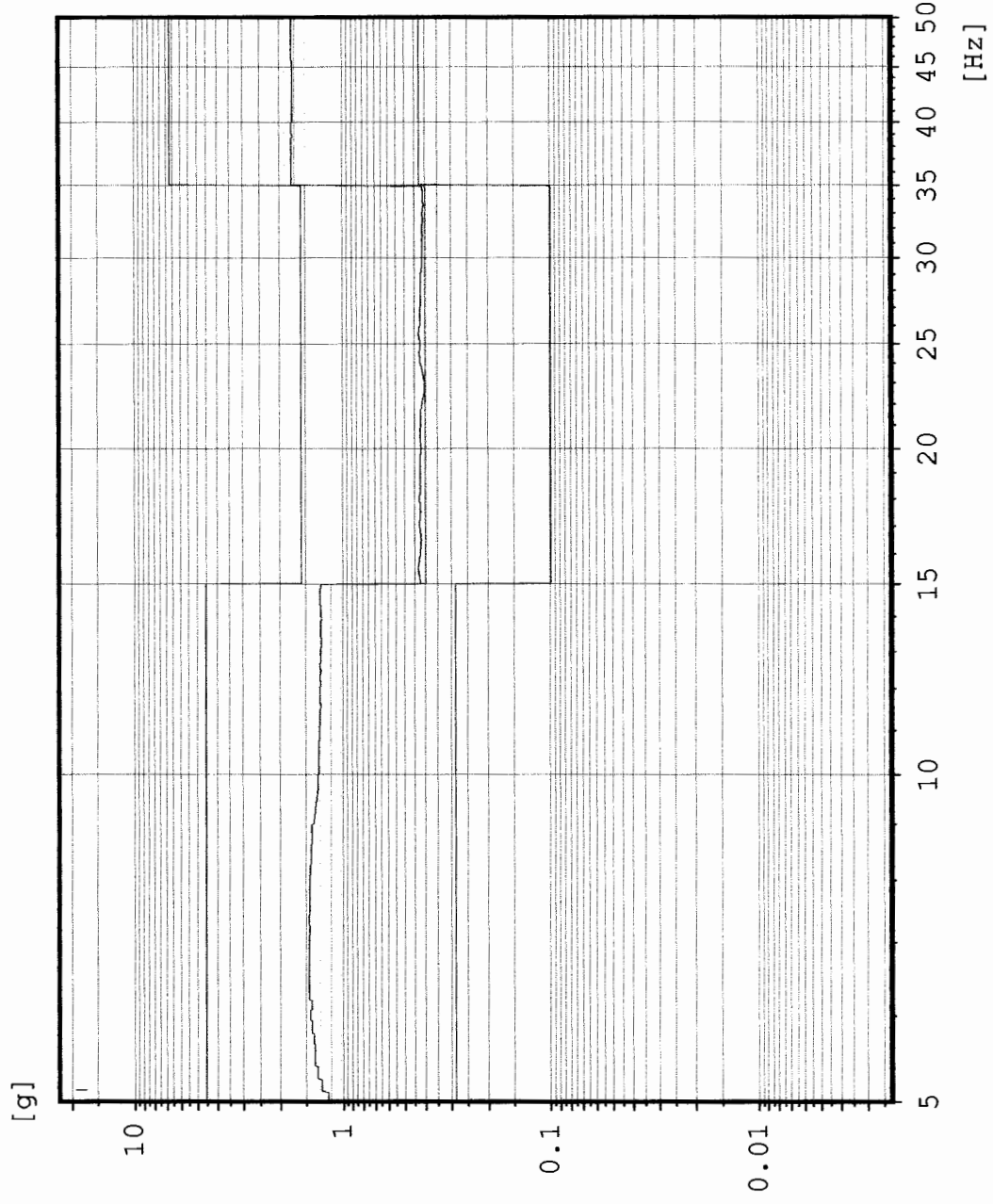
Chan.no: 3 W Filtered
Chan.type: logarithmic
Sweep type: 1
Sweeps done: 1
Sweeps req.: 1
Sweep direct.: up
Unit: g
Contr.strat.: Closed loop

-- Testing time --
elapsed: 000:00:23
remaining: 000:02:05

Date: 10-17-05
Time: 14:29:52

Sine **AY3 Side upper corner**

Stanford Linear Accelerator
J/N 49995.52**57**
SIU S/N 2513



Chan.no: 5 W Filtered
Chan.type: logarithmic
Sweep type: 1
Sweeps done: 1
Sweeps req.: 1
Sweep direct.: up
Unit: g
Contr.strat.: Closed loop

-- Testing time --
elapsed: 000:00:23
remaining: 000:02:05

Date: 10-17-05
Time: 14:29:52

Y - axis
Acceptance Flight Unit

Sine CZ1 Control channel

Stanford Linear Accelerator

J/N 49995.52457

SIU S/N 2513

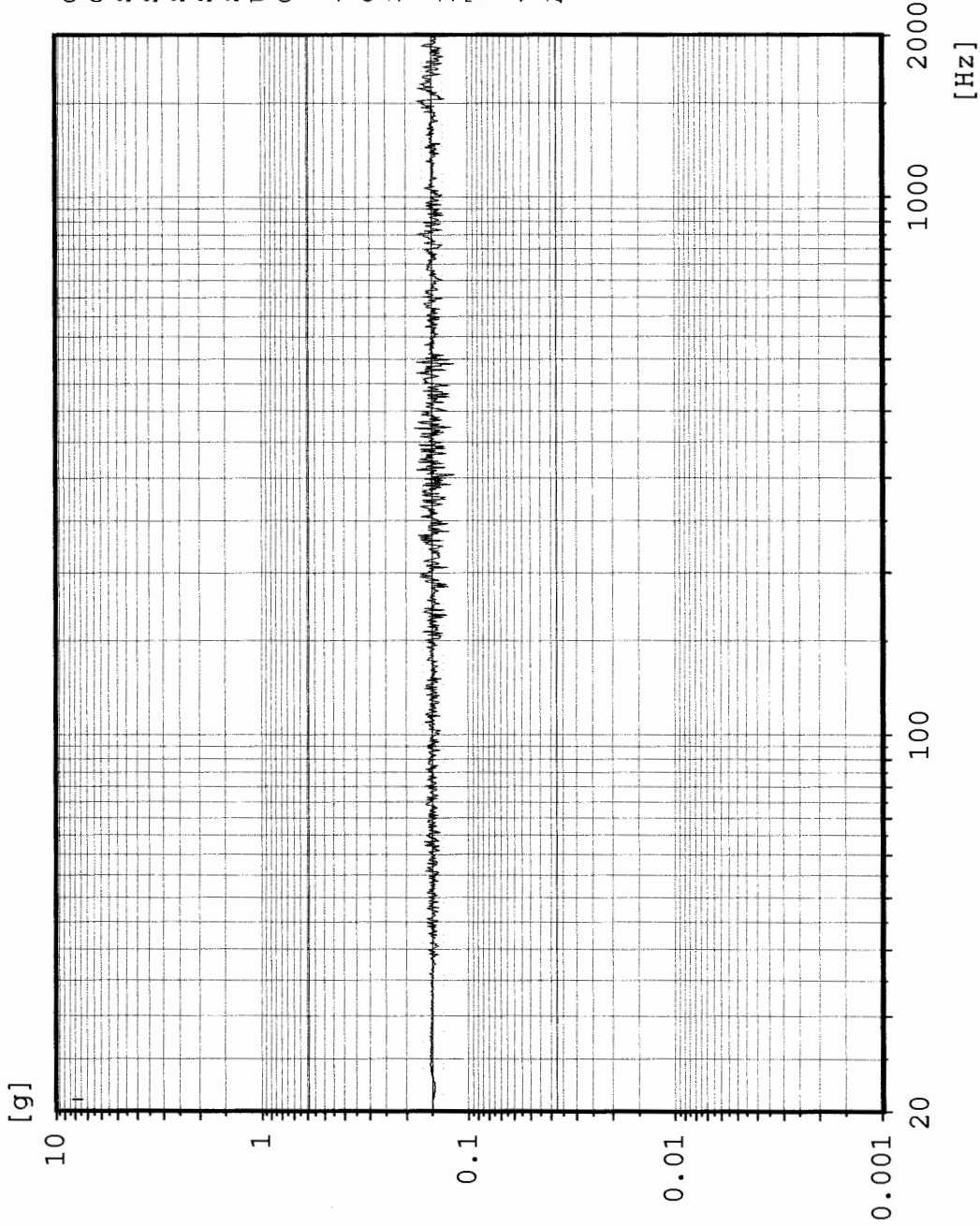


Chan.no: 1
Chan.type: CW Filtered
Sweep type: logarithmic
Sweeps done: 1
Sweeps req.: 1
Sweep direct.: up
Sweep rate: 2.00 Oct/min
Unit: g
Contr.strat.: Closed loop

-- Testing time --
elapsed: 000:03:19
remaining: 000:00:00

Date: 10-17-05
Time: 14:42:48

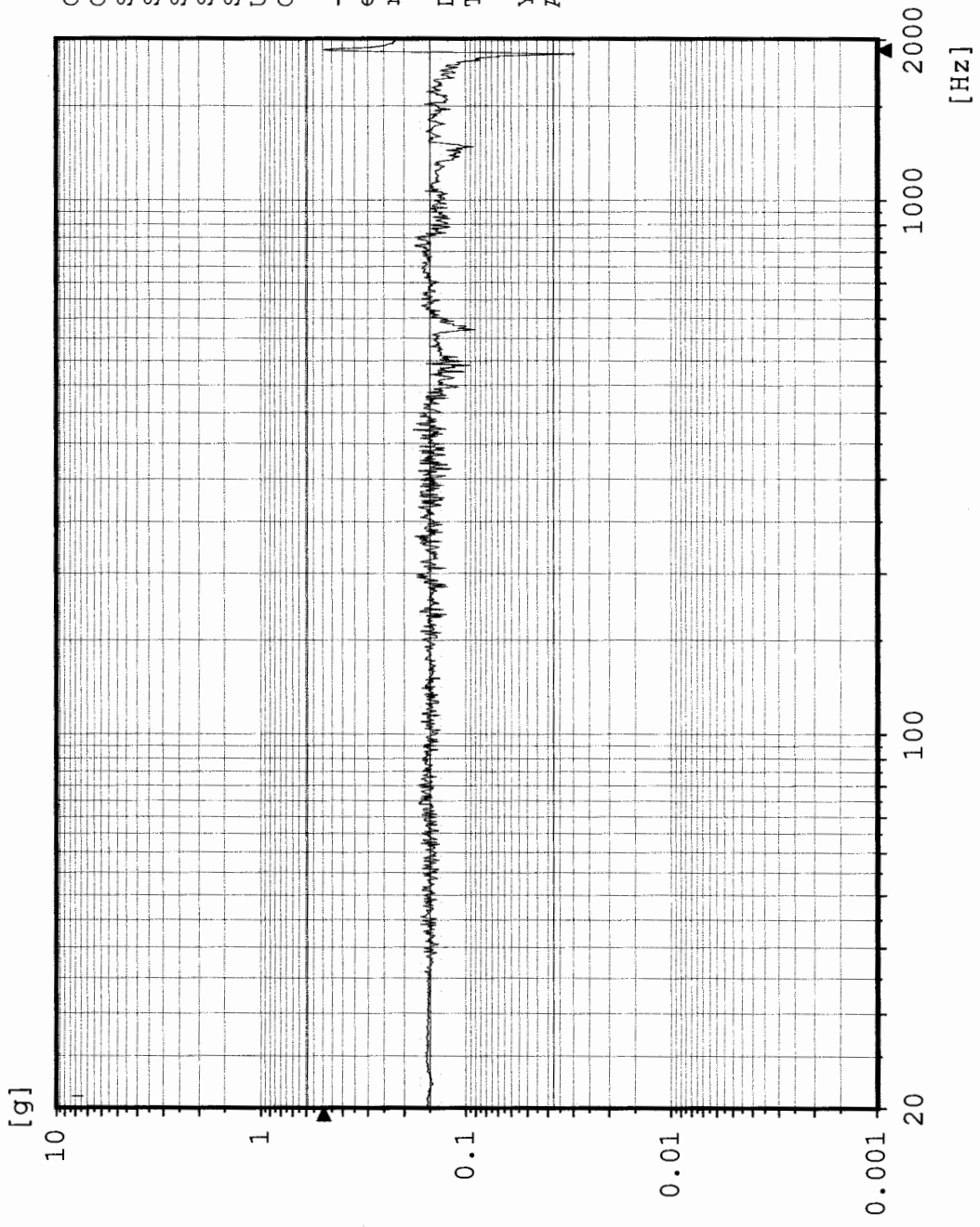
Y - axis Pre Random
Acceptance Flight Unit



Max: 1912 Hz 0.4059 g

AZ1 Rear middle ^{Low}_{dw}

Sine
Stanford Linear Accelerator
J/N 49995.52257
SIU S/N 2513

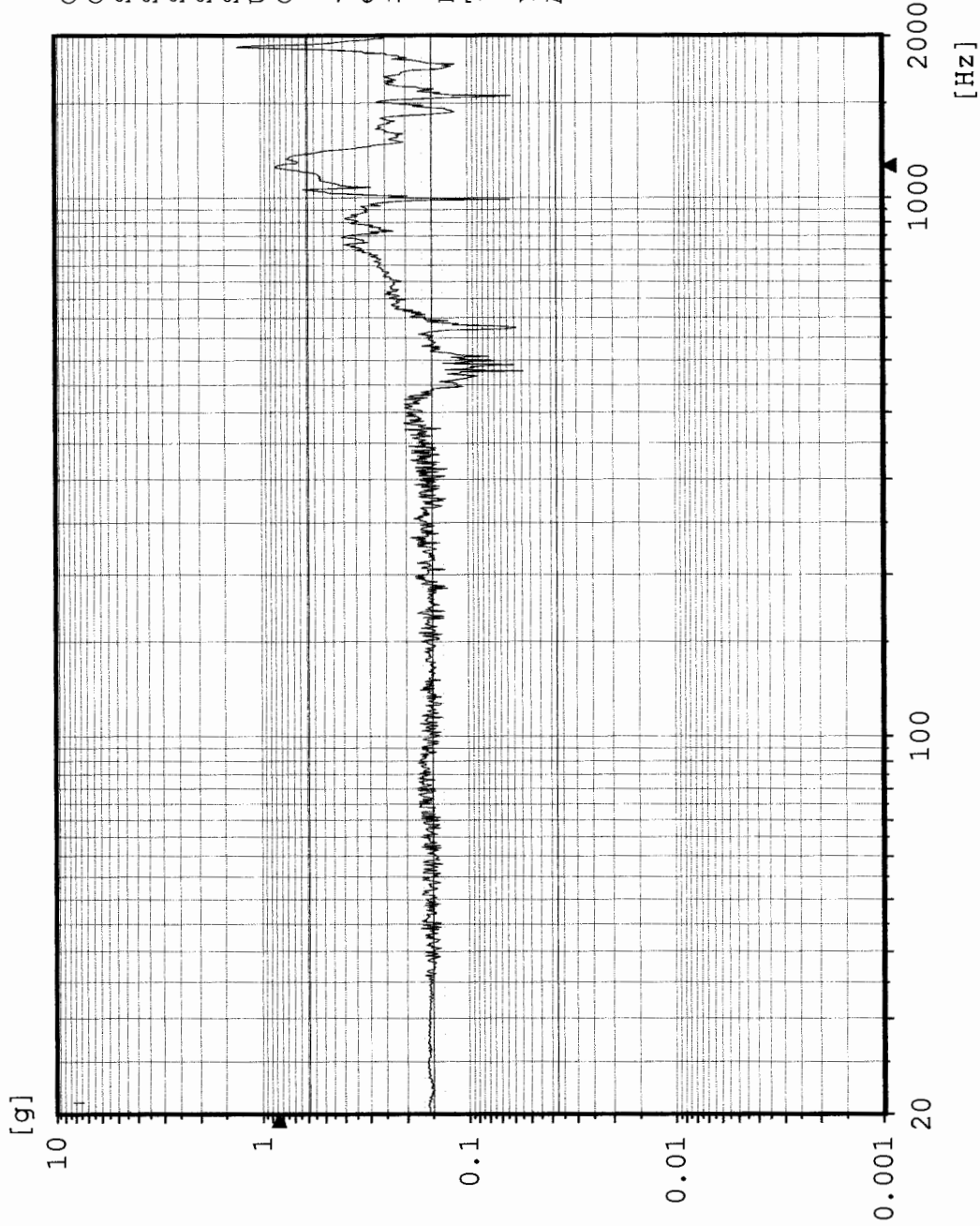


Chan.no: 2
Chan.type: M Filtered
Sweep type: logarithmic
Sweeps done: 1
Sweeps req.: 1
Sweep direct.: up
Sweep rate: 2.00 Oct/min
Unit: g
Contr.strat.: Closed loop

-- Testing time --
elapsed: 000:03:19
remaining: 000:00:00
Date: 10-17-05
Time: 14:42:48
Y - axis Pre Random
Acceptance Flight Unit

Top
AZ2 Side middle

Sine
Stanford Linear Accelerator
J/N 49995.52257
SIU S/N 2513



Chan.no: 3 M Filtered
 Chan.type: logarithmic
 Sweep type: logarithmic
 Sweeps done: 1
 Sweeps req.: 1
 Sweep direct.: up
 Sweep rate: 2.00 Oct/min
 Unit: g
 Contr.strat.: Closed loop

-- Testing time --
 elapsed: 000:03:19
 remaining: 000:00:00

Date: 10-17-05
 Time: 14:42:48

Y - axis Pre Random
 Acceptance Flight Unit

*Bottom
Top*
AZ3 Side_w corner

Sine
Stanford Linear Accelerator
J/N 49995.52a57
SIU S/N 2513

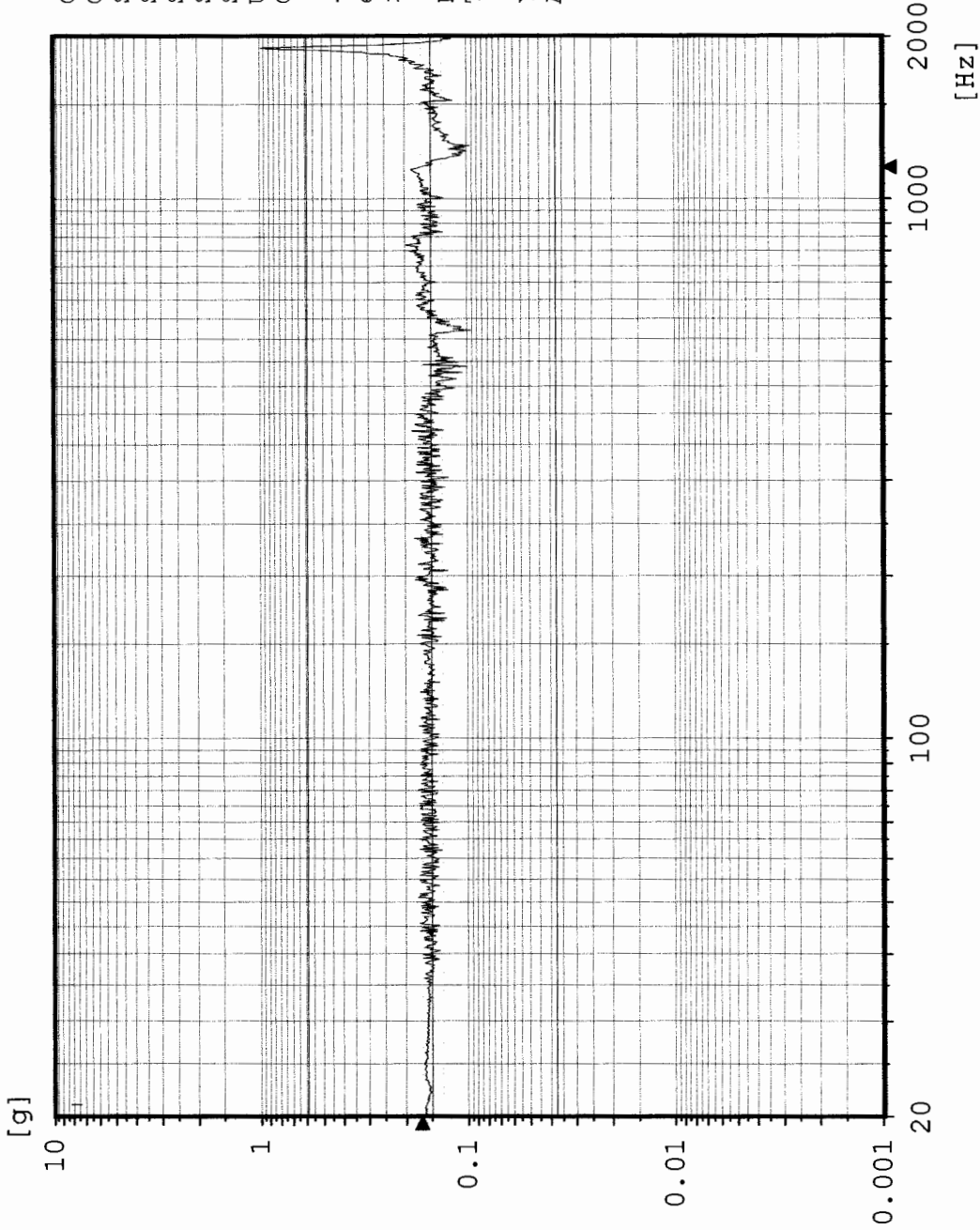


Chan.no: 5 M Filtered
Chan.type: logarithmic
Sweep type: logarithmic
Sweeps done: 1
Sweeps req.: 1
Sweep direct.: up
Sweep rate: 2.00 Oct/min
Unit: g
Contr.strat.: Closed loop

-- Testing time --
elapsed: 000:03:19
remaining: 000:00:00

Date: 10-17-05
Time: 14:42:48

Y - axis Pre Random
Acceptance Flight Unit

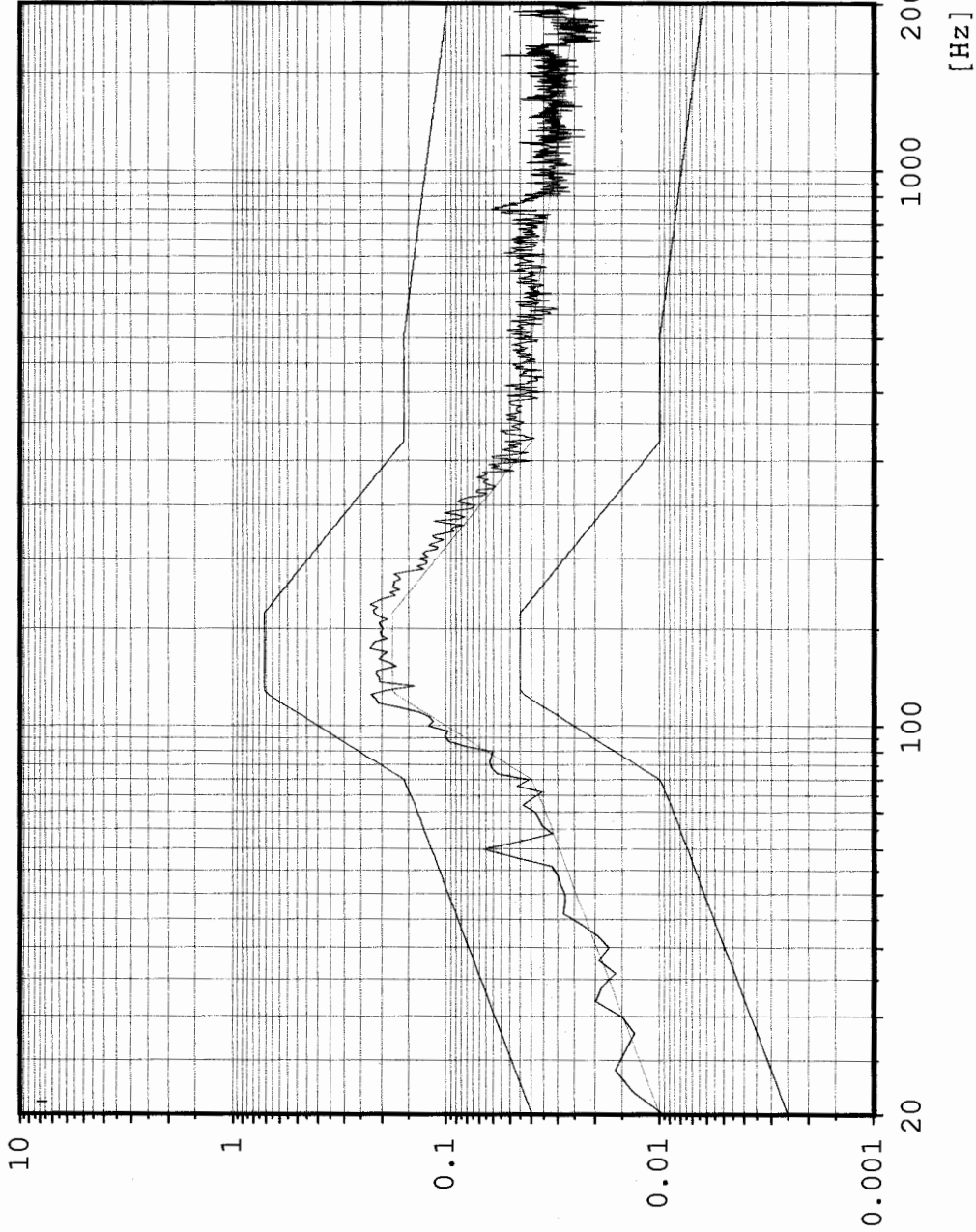


Random CY1 Control channel

Stanford Linear Accelerator
49995.52257
SIU S/N 2513



[g²/Hz]



Chan.no: 1
Chan.type: C
DOF: 126
Level: 0.0 dB
Resolution: 2 Hz
Unit: g²/Hz
RMS (act.): 9.53 g
RMS (req.): 8.916 g
Contr.strat.: Closed loop

-- Time on act. level --
elapsed: 000:01:01
remaining: 000:00:00

-- Time total --
elapsed: 000:01:36
remaining: 000:00:00

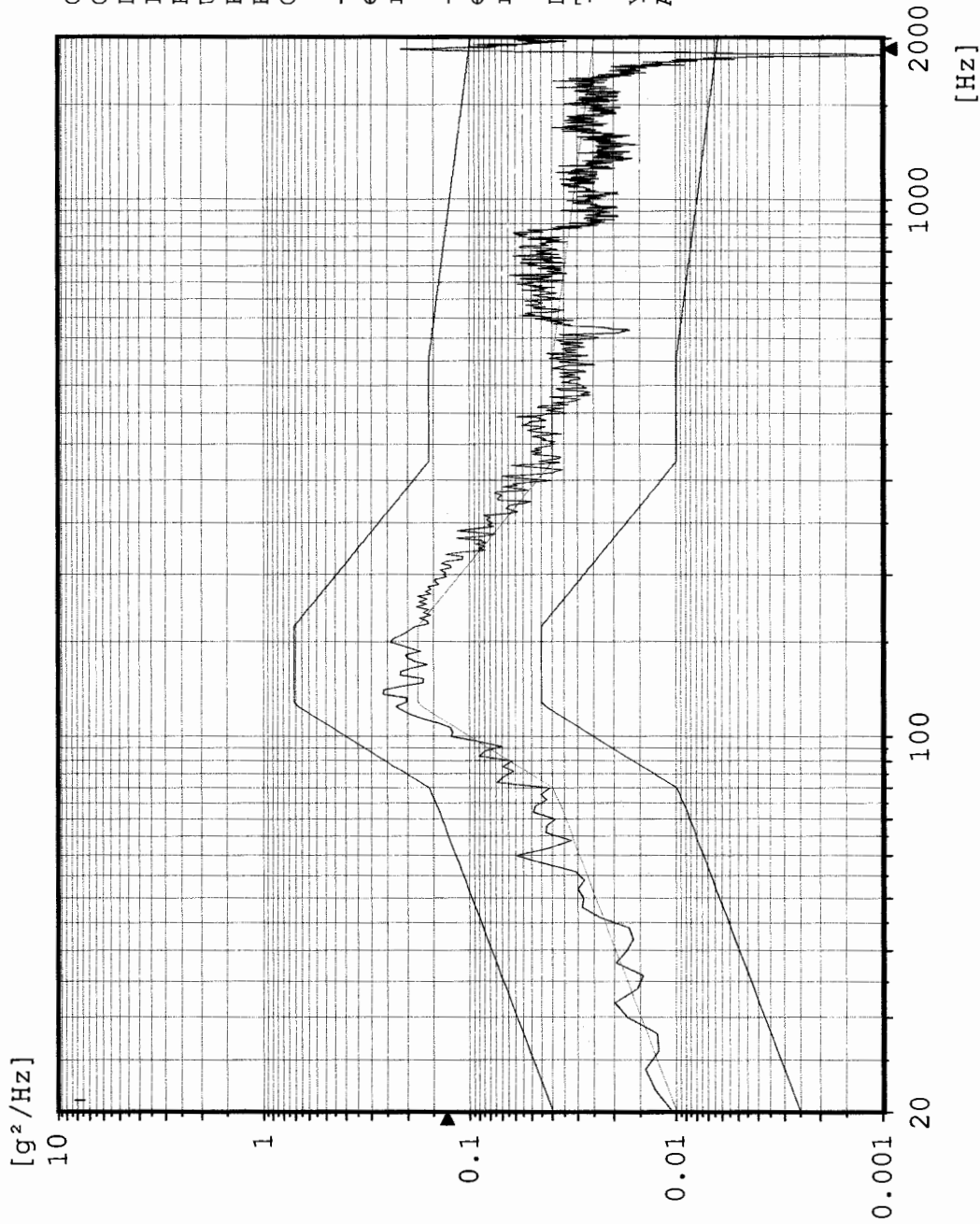
Date: 10-17-05
Time: 15:02:43

Y - axis
Acceptance Flight Unit

Cursor: 10.14 Hz 0.1299 g²/Hz

Random AY1 Low middle

Stanford Linear Accelerator
49995.52157
SIU S/N 2513



Chan.no: 2
Chan.type: M
DOF: 100
Level: 0.0 dB
Resolution: 2 Hz
Unit: g²/Hz
RMS (act.): 9.36 g
RMS (req.): 8.916 g
Contr.strat.: Closed loop

-- Time on act. level --
elapsed: 000:01:01
remaining: 000:00:00

-- Time total --
elapsed: 000:01:36
remaining: 000:00:00

Date: 10-17-05
Time: 15:02:43

Y - axis
Acceptance Flight Unit

Cursor: 14 Hz 0.3304 g²/Hz

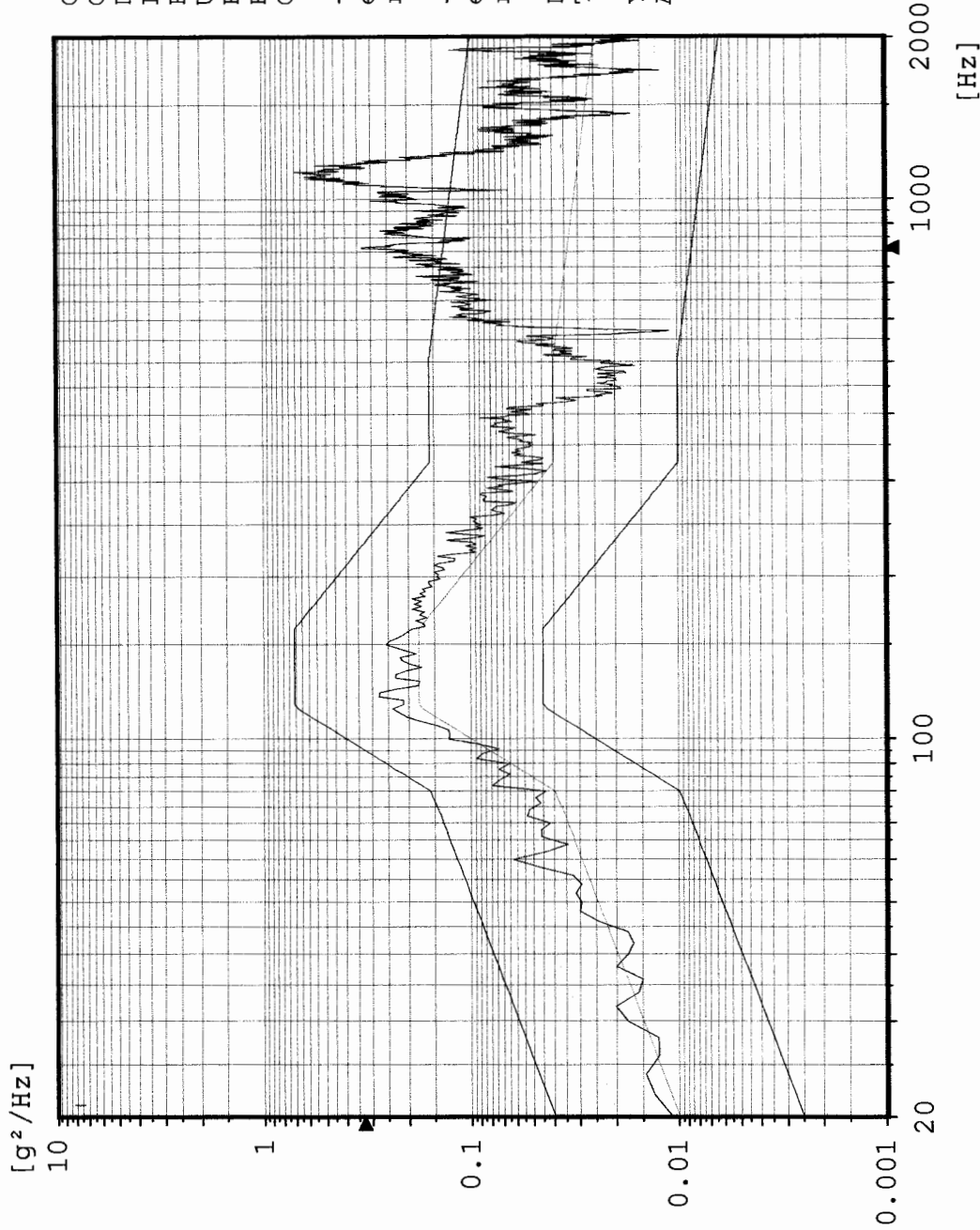
AY2 Top middle

Random

Stanford Linear Accelerator

49995.52257

SIU S/N 2513



Chan.no: 3
Chan.type: M
DOF: 100
Level: 0.0 dB
Resolution: 2 Hz
Unit: g²/Hz
RMS (act.): 14.73 g
RMS (req.): 8.916 g
Contr.strat.: Closed loop

-- Time on act. level --
elapsed: 000:01:01
remaining: 000:00:00

-- Time total --
elapsed: 000:01:36
remaining: 000:00:00

Date: 10-17-05
Time: 15:02:43

Y - axis
Acceptance Flight Unit

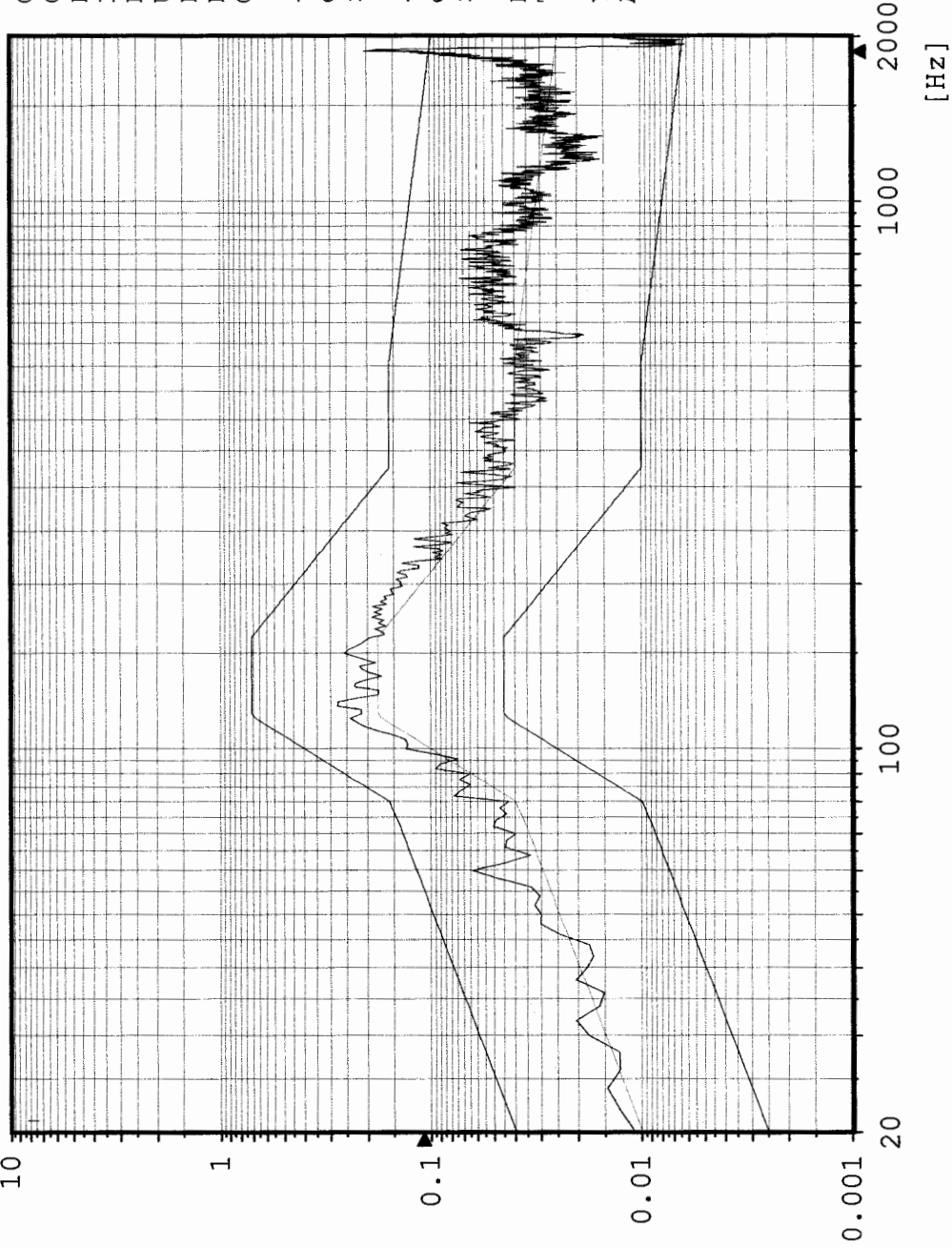
Cursor: 1.178 Hz 0.1093 g²/Hz

Random AY3 Top corner

Stanford Linear Accelerator
49995.52357
SIU S/N 2513



[g²/Hz]



Chan.no: 5
 Chan.type: M
 DOF: 100
 Level: 0.0 dB
 Resolution: 2 Hz
 Unit: g²/Hz
 RMS (act.): 9.87 g
 RMS (req.): 8.916 g
 Contr.strat.: Closed loop

-- Time on act. level --
 elapsed: 000:01:01
 remaining: 000:00:00

-- Time total --
 elapsed: 000:01:36
 remaining: 000:00:00

Date: 10-17-05
 Time: 15:02:43

Y - axis
 Acceptance Flight Unit

Sine CY1 Control channel

Stanford Linear Accelerator
J/N 49995.52157
SIU S/N 2513

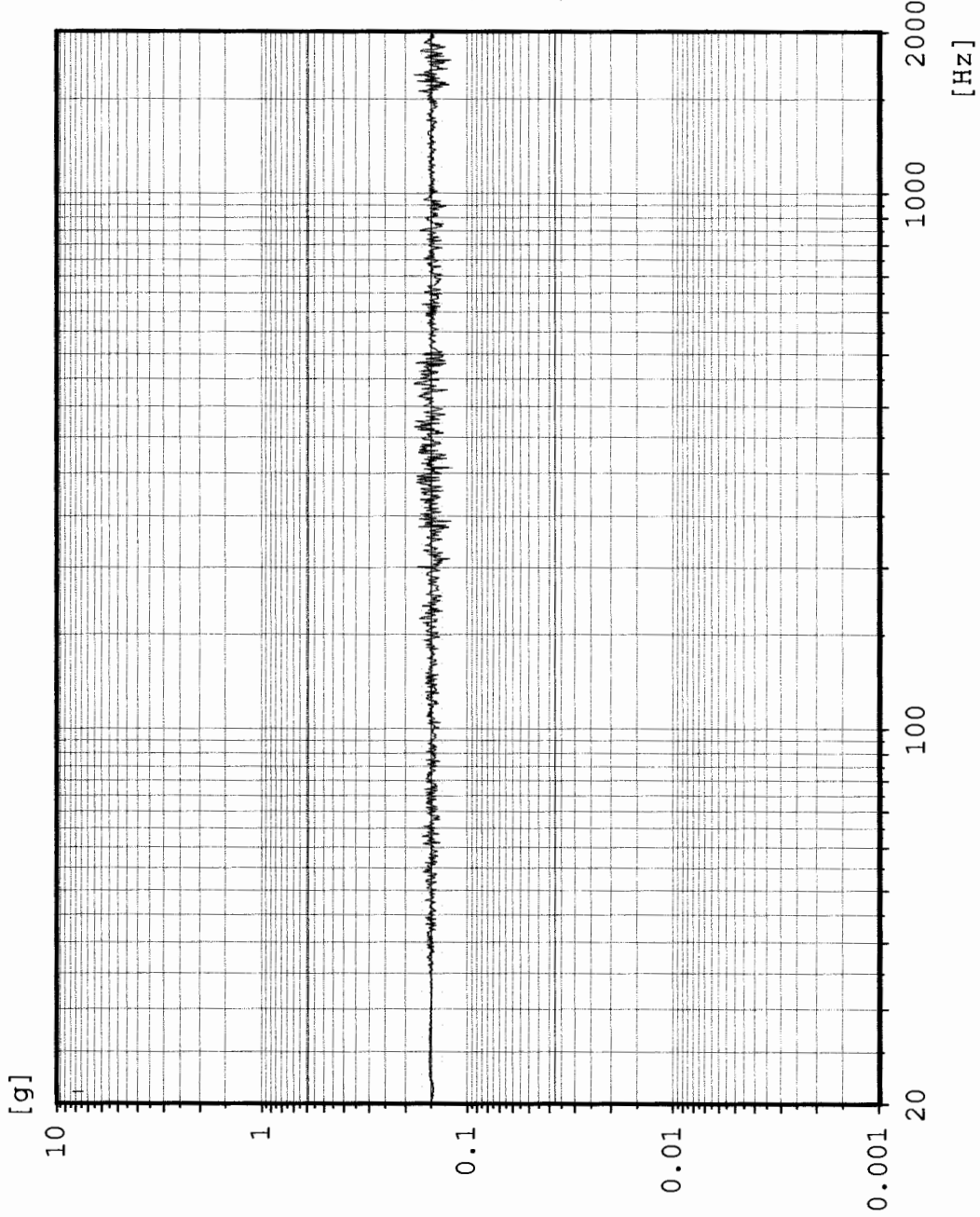


Chan.no: 1
Chan.type: CW Filtered
Sweep type: logarithmic
Sweeps done: 1
Sweeps req.: 1
Sweep direct.: up
Sweep rate: 2.00 Oct/min
Unit: g
Contr.strat.: Closed loop

-- Testing time --
elapsed: 000:03:19
remaining: 000:00:00

Date: 10-17-05
Time: 15:15:02

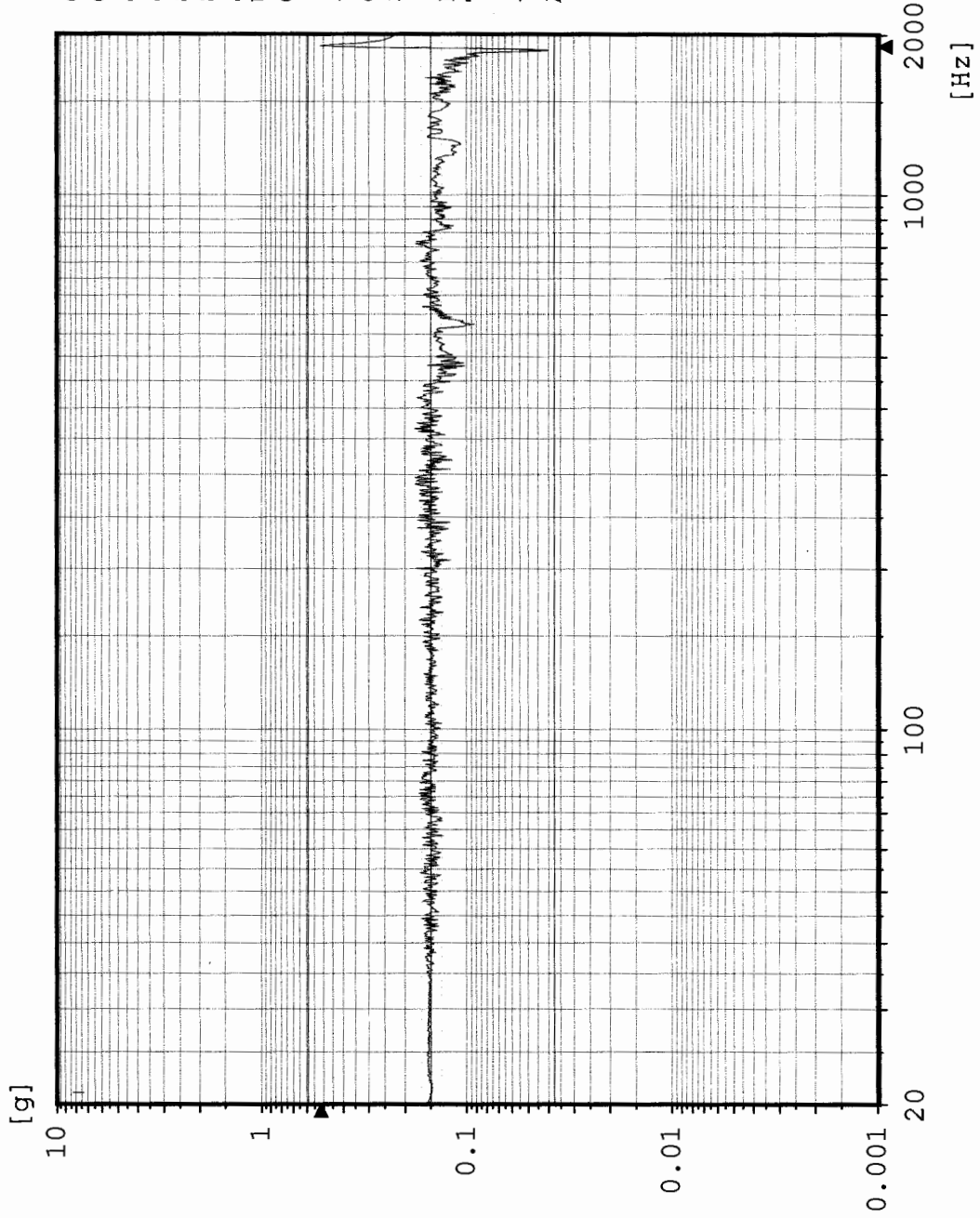
Y - axis Post Random
Acceptance Flight Unit



Max: 1903 Hz 0.51^9 g

Sine ^{Low} AY1 Rear middle

Stanford Linear Accelerator
J/N 49995.52 **157**
SIU S/N 2513



Chan.no: 2
 Chan.type: M Filtered
 Sweep type: logarithmic
 Sweeps done: 1
 Sweeps req.: 1
 Sweep direct.: up
 Sweep rate: 2.00 Oct/min
 Unit: g
 Contr.strat.: Closed loop

-- Testing time --
 elapsed: 000:03:19
 remaining: 000:00:00

Date: 10-17-05
 Time: 15:15:02

Y - axis Post Random
 Acceptance Flight Unit

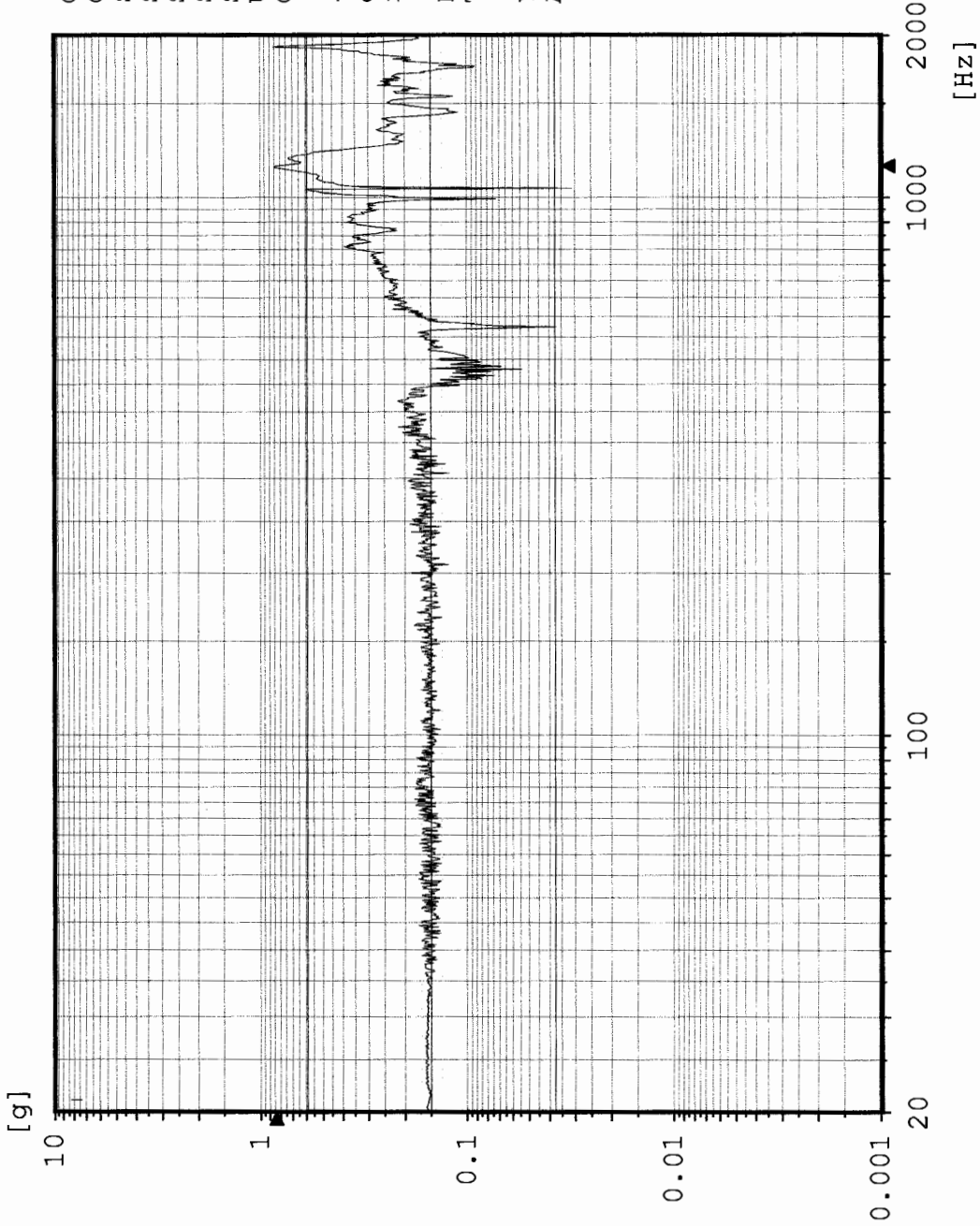
AY2 Top Side middle

Sine

Stanford Linear Accelerator

J/N 49995.52257

SIU S/N 2513



Chan.no: 3 M Filtered
 Chan.type: logarithmic
 Sweep type: logarithmic
 Sweeps done: 1
 Sweeps req.: 1
 Sweep direct.: up
 Sweep rate: 2.00 Oct/min
 Unit: g
 Contr.strat.: Closed loop

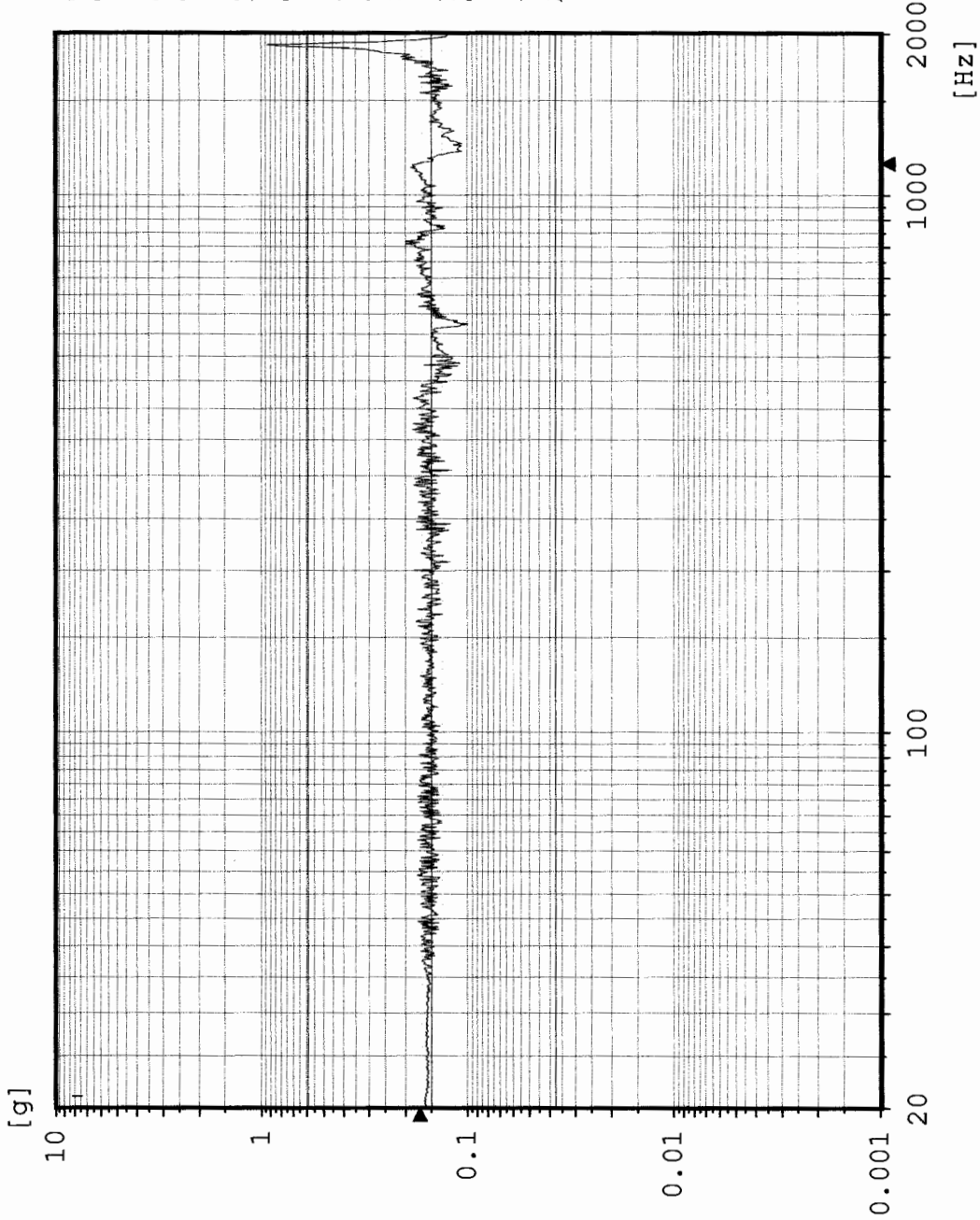
-- Testing time --
 elapsed: 000:03:19
 remaining: 000:00:00

Date: 10-17-05
 Time: 15:15:02

Y - axis Post Random
 Acceptance Flight Unit

Sine **AY3** **Bottom** **Side** **corner**
by

Stanford Linear Accelerator
J/N 49995.52157
SIU S/N 2513



Chan.no: 5 M Filtered
 Chan.type: logarithmic
 Sweep type: logarithmic
 Sweeps done: 1
 Sweeps req.: 1
 Sweep direct.: up
 Sweep rate: 2.00 Oct/min
 Unit: g
 Contr.strat.: Closed loop

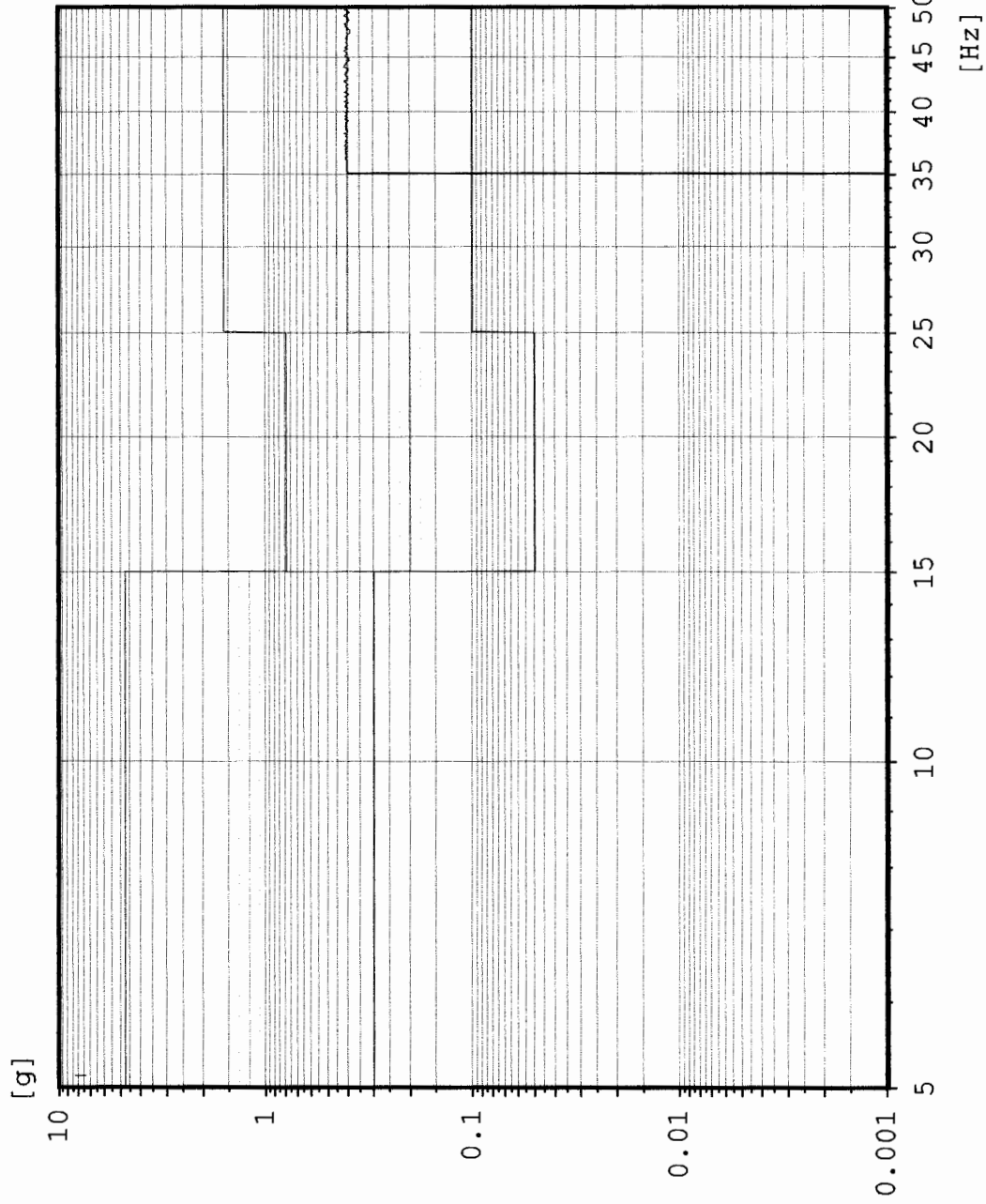
-- Testing time --
 elapsed: 000:03:19
 remaining: 000:00:00

Date: 10-17-05
 Time: 15:15:02

Y - axis Post Random
 Acceptance Flight Unit

Sine CX1 Control channel

Stanford Linear Accelerator
J/N 49995.52257
SIU S/N 2513



Chan.no: 1 CW Filtered
Chan.type: CW Filtered
Sweep type: logarithmic
Sweeps done: 4
Sweeps req.: 1
Sweep direct.: up
Unit: g
Contr.strat.: Closed loop

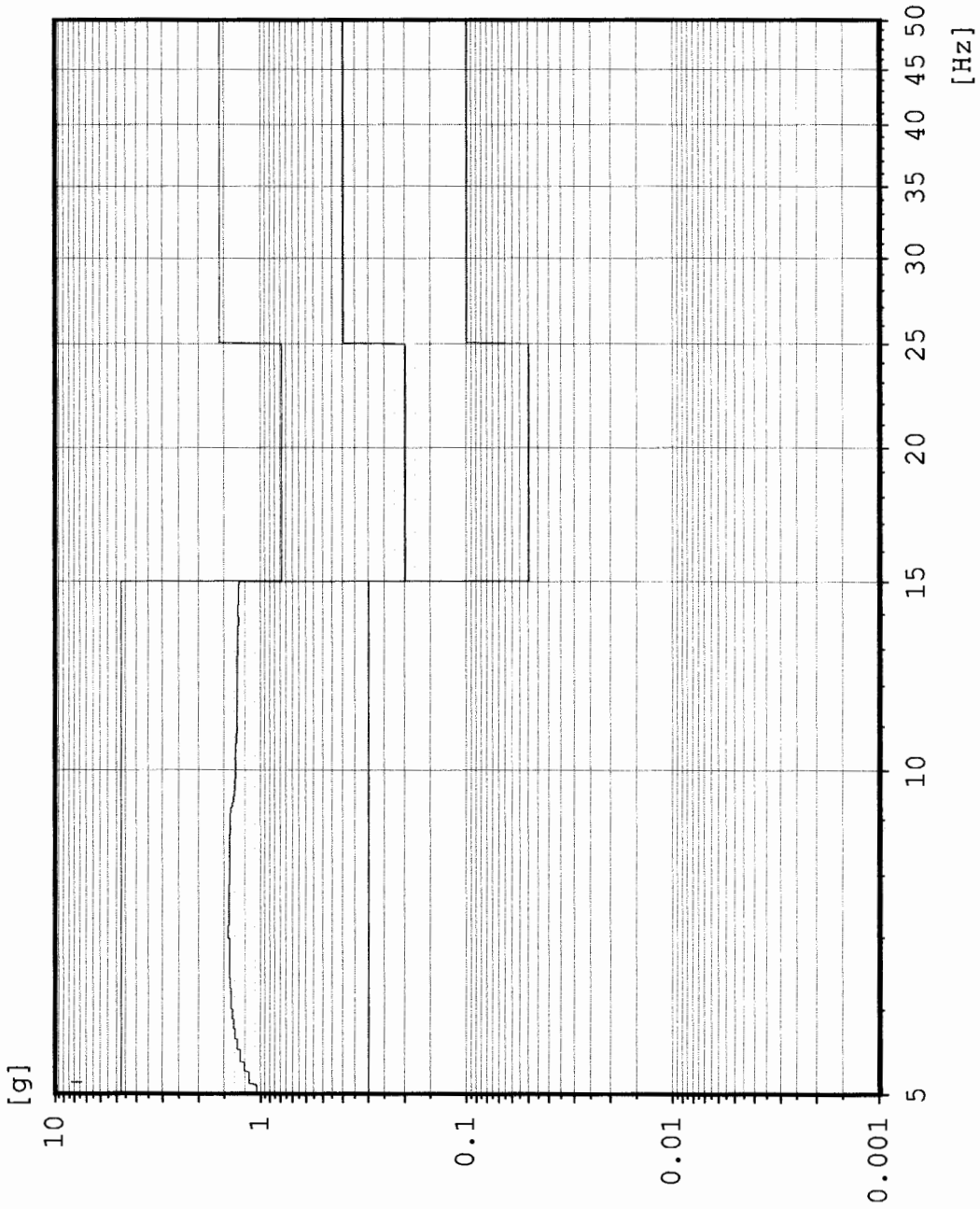
-- Testing time --
elapsed: 000:01:01
remaining: 000:00:00

Date: 10-17-05
Time: 15:49:00

X - axis
Acceptance Flight Unit

Sine CX1 Control channel

Stanford Linear Accelerator
J/N 49995.52257
SIU S/N 2513



Chan.no: 1 CW Filtered
Chan.type: logarithmic
Sweep type: logarithmic
Sweeps done: 1
Sweeps req.: 1
Sweep direct.: up
Unit: g
Contr.strat.: Closed loop

-- Testing time --
elapsed: 000:00:23
remaining: 000:02:05

Date: 10-17-05
Time: 15:48:07

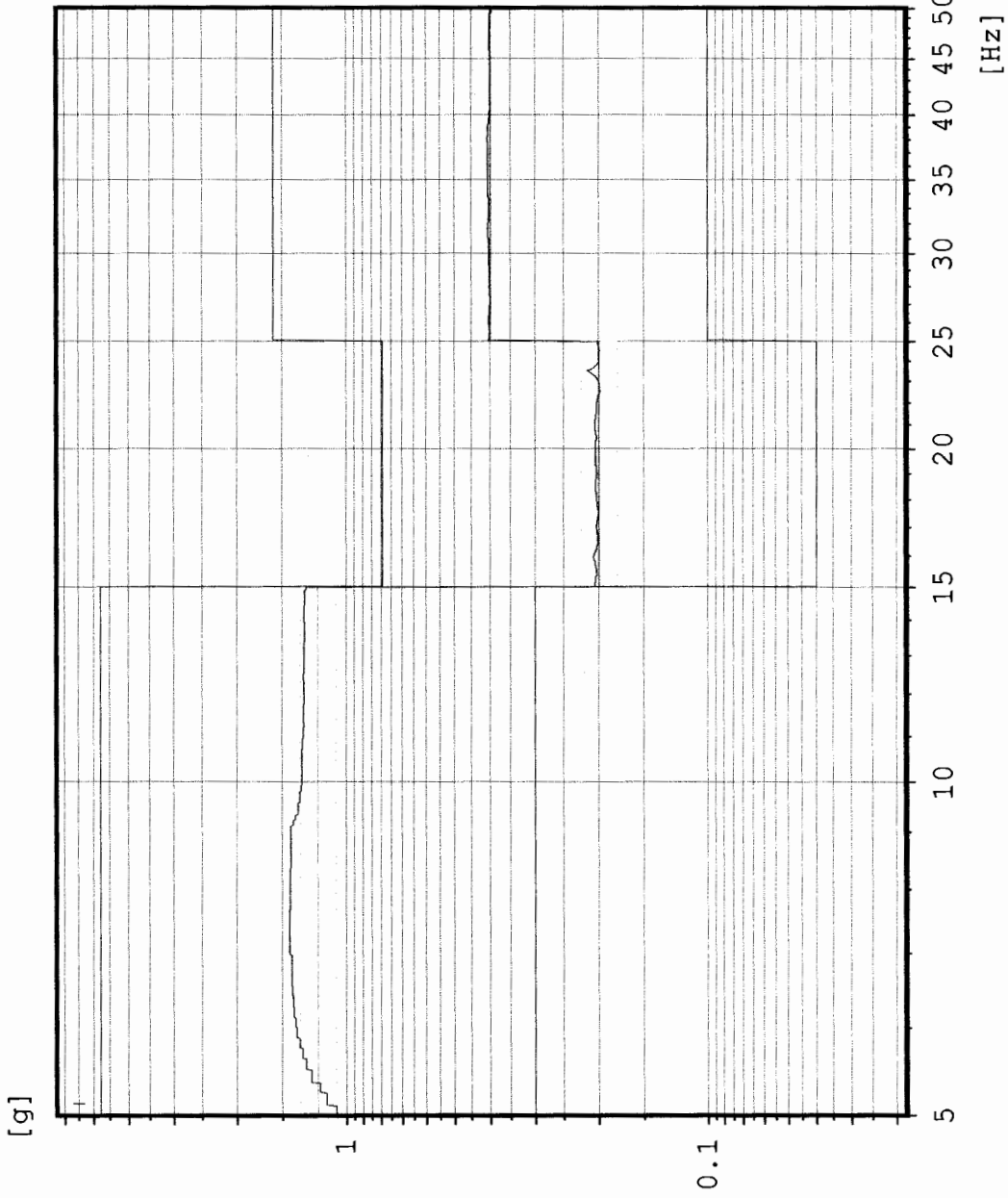
X - axis
Acceptance Flight Unit

Sine AX1 lower center

Stanford Linear Accelerator

J/N 49995.52157

SIU S/N 2513



Chan.no: 2 W Filtered
Chan.type: logarithmic
Sweep type: 1
Sweeps done: 1
Sweeps req.: 1
Sweep direct.: up
Unit: g
Contr.strat.: Closed loop

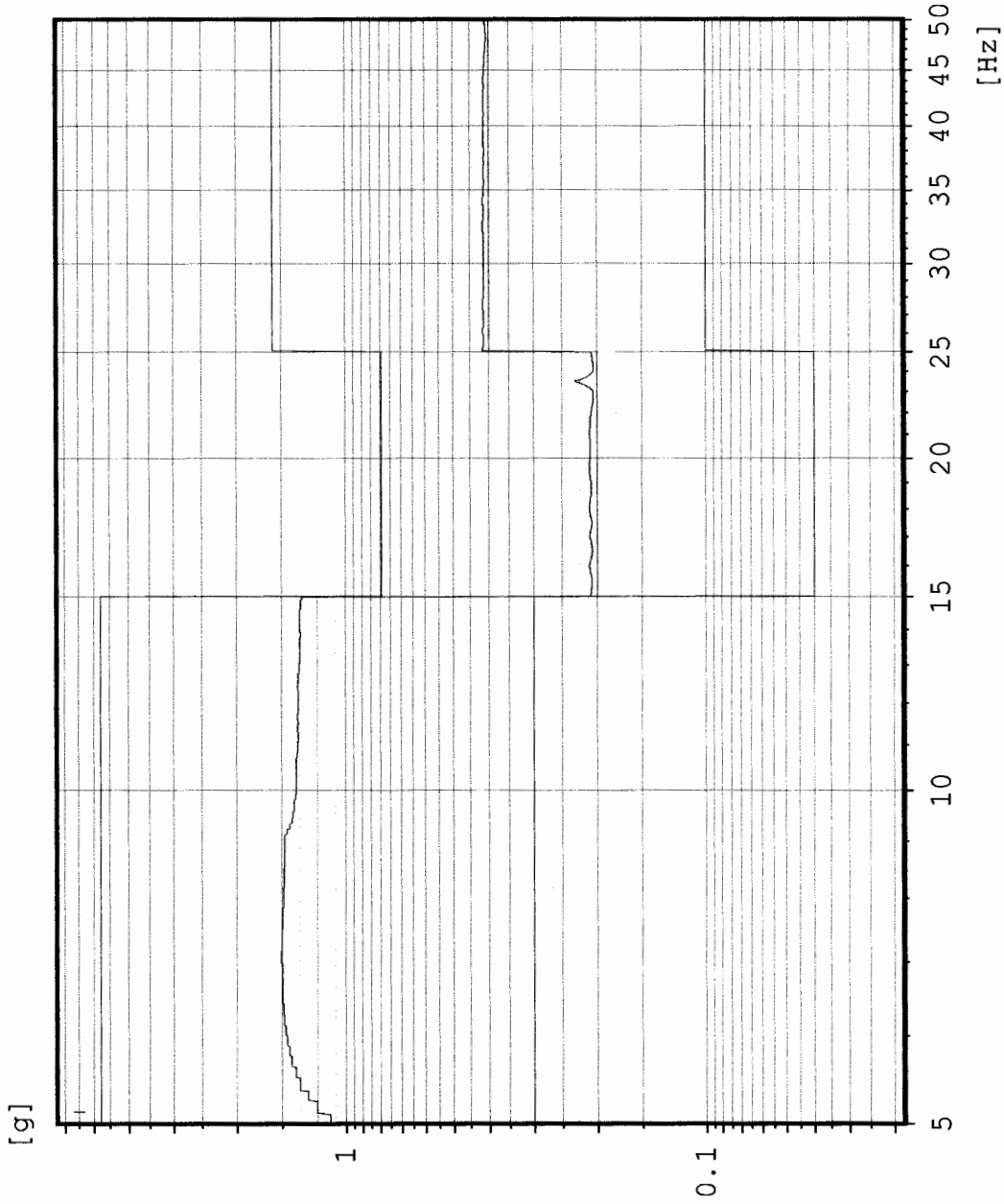
-- Testing time --
elapsed: 000:00:23
remaining: 000:02:05

Date: 10-17-05
Time: 15:48:07

X - axis
Acceptance Flight Unit

Sine AX2 upper center

Stanford Linear Accelerator
J/N 49995.52157
SIU S/N 2513



Chan.no: 3 W Filtered
Chan.type: logarithmic
Sweep type: 1
Sweeps done: 1
Sweeps req.: 1
Sweep direct.: up
Unit: g
Contr.strat.: Closed loop

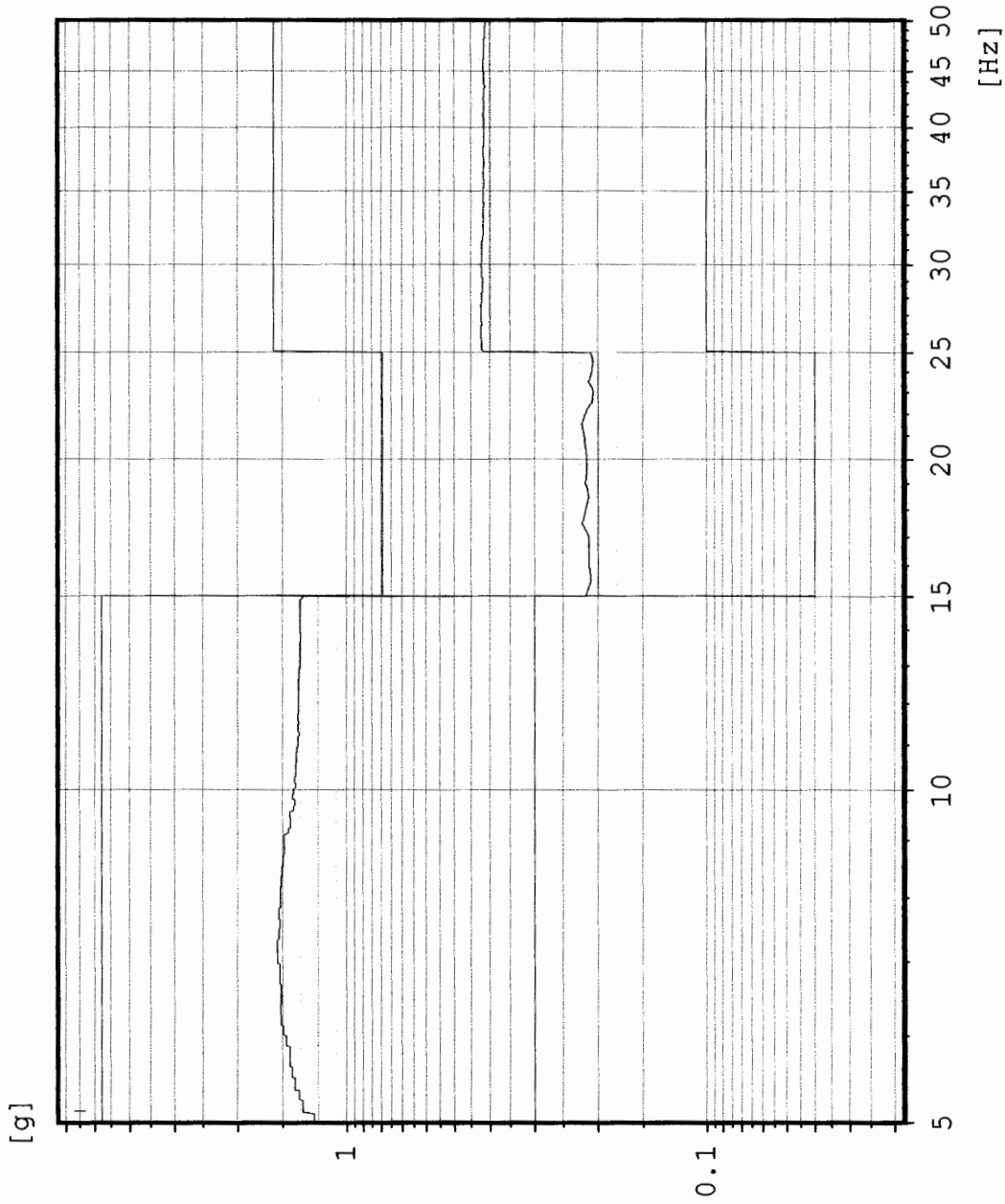
-- Testing time --
elapsed: 000:00:23
remaining: 000:02:05

Date: 10-17-05
Time: 15:48:07

X - axis
Acceptance Flight Unit

Sine AX3 lower corner

Stanford Linear Accelerator
J/N 49995.52257
SIU S/N 2513



Chan.no: 5 W Filtered
Chan.type: logarithmic
Sweep type: 1
Sweeps done: 1
Sweeps req.: 1
Sweep direct.: up
Unit: g
Contr.strat.: Closed loop

-- Testing time --
elapsed: 000:00:23
remaining: 000:02:05

Date: 10-17-05
Time: 15:48:07

X - axis
Acceptance Flight Unit

Sine CX1 Control channel

Stanford Linear Accelerator
J/N 49995.52357
SIU S/N 2513

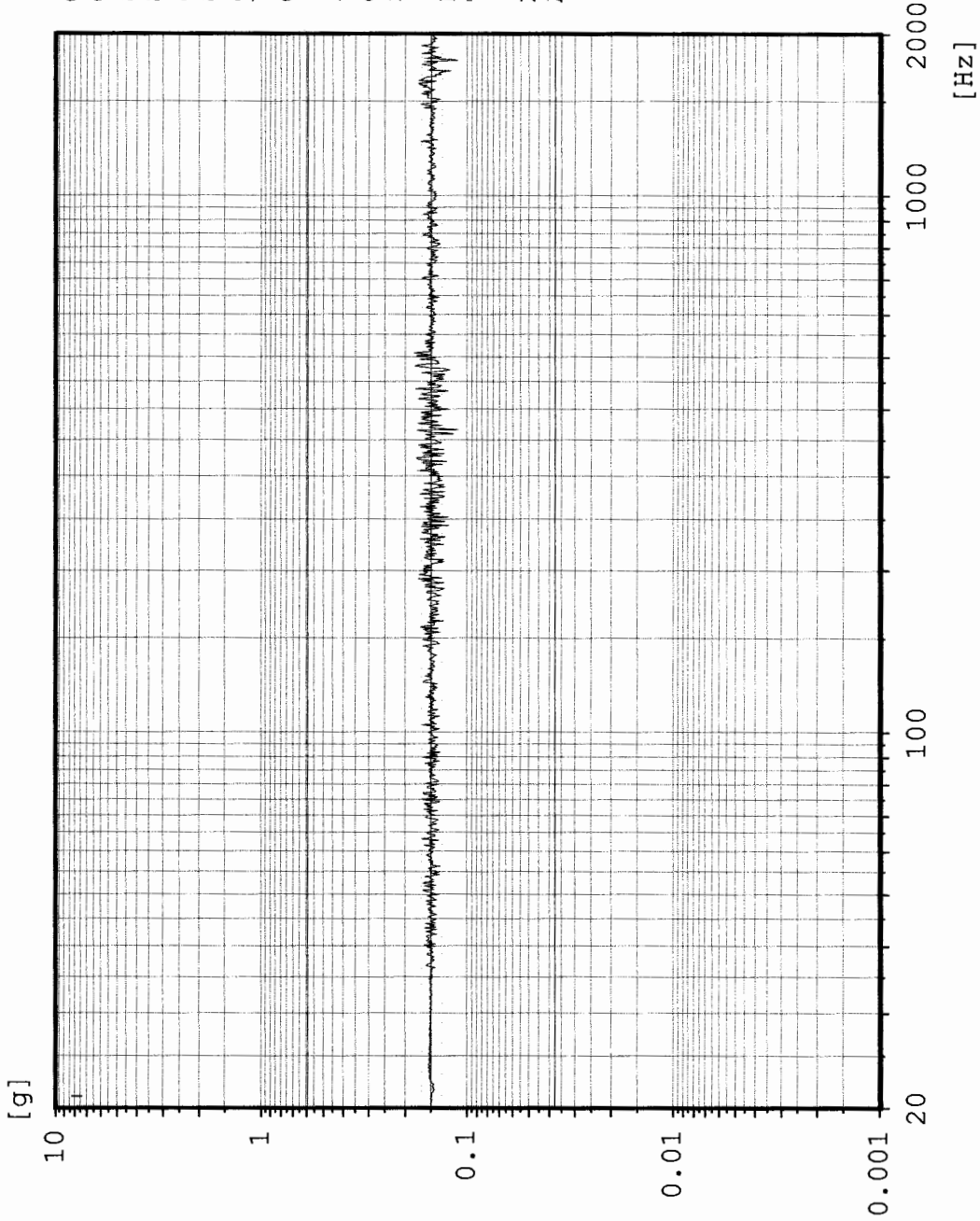


Chan.no: 1
Chan.type: CW Filtered
Sweep type: logarithmic
Sweeps done: 1
Sweeps req.: 1
Sweep direct.: up
Sweep rate: 2.00 Oct/min
Unit: g
Contr.strat.: Closed loop

-- Testing time --
elapsed: 000:03:19
remaining: 000:00:00

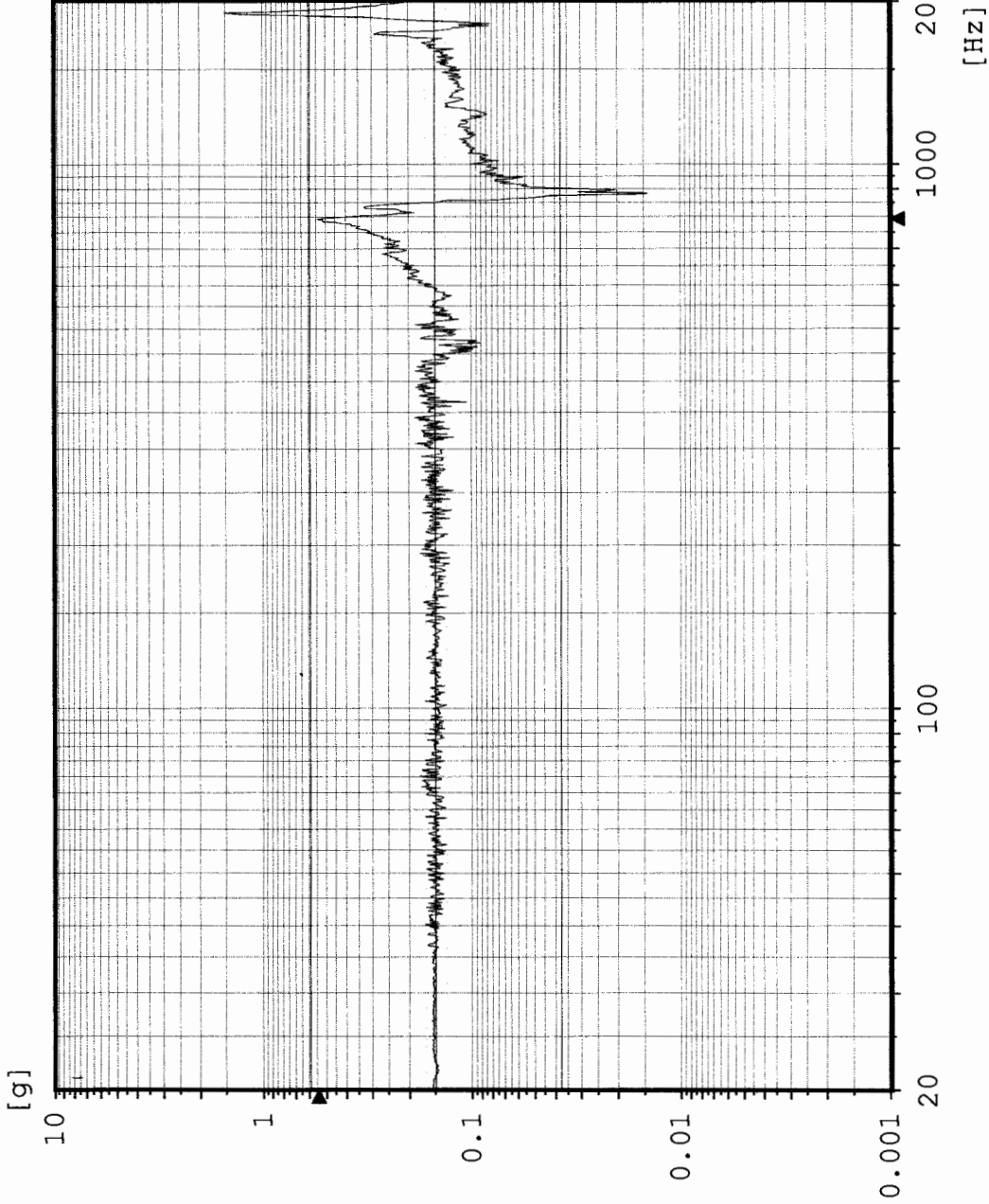
Date: 10-17-05
Time: 15:59:40

X - axis Pre Random
Acceptance Flight Unit



AX1 Low middle

Sine
Stanford Linear Accelerator
J/N 49995.52257
SIU S/N 2513



Chan.no: 2
Chan.type: M Filtered
Sweep type: logarithmic
Sweeps done: 1
Sweeps req.: 1
Sweep direct.: up
Sweep rate: 2.00 Oct/min
Unit: g
Contr.strat.: Closed loop

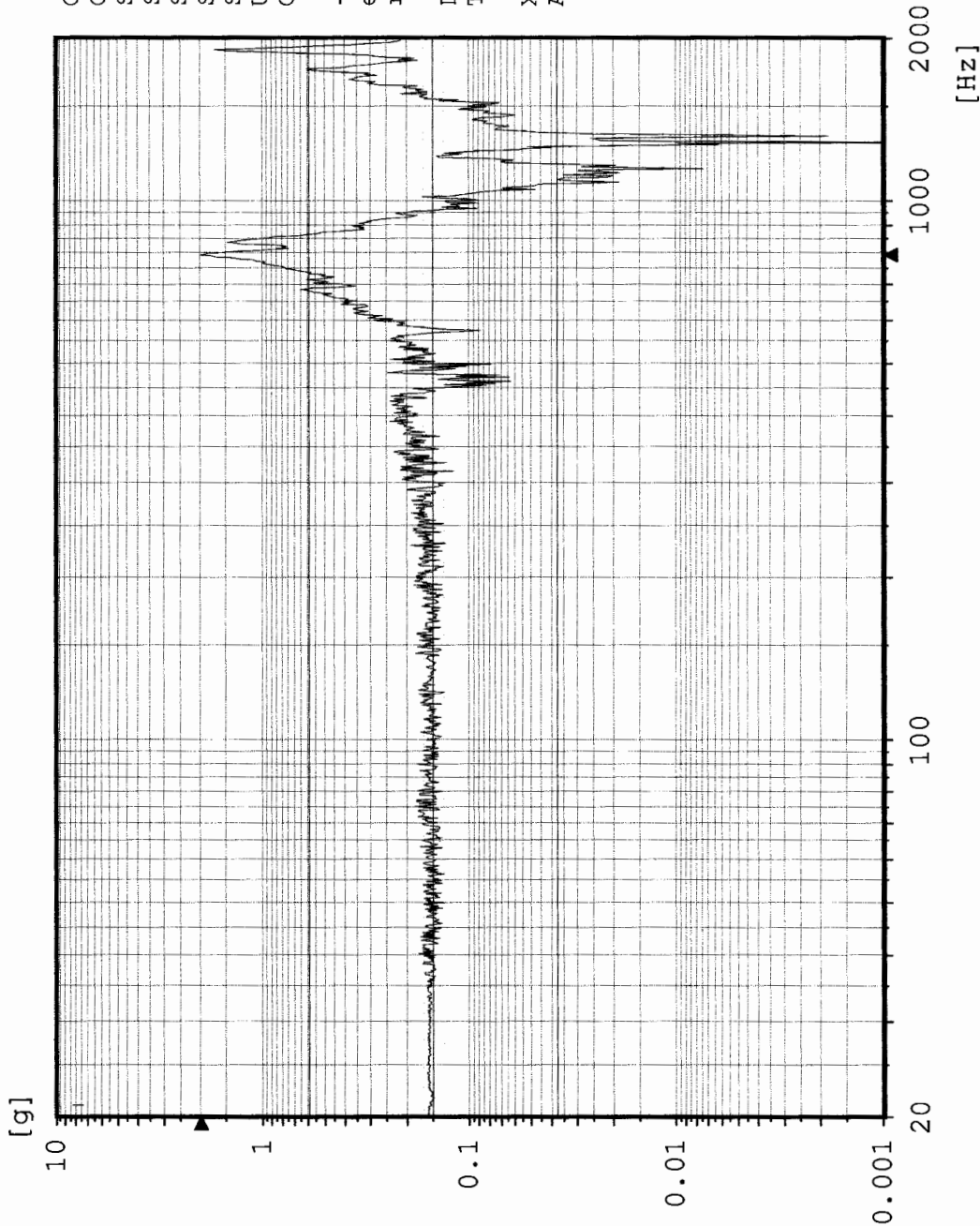
-- Testing time --
elapsed: 000:03:19
remaining: 000:00:00

Date: 10-17-05
Time: 15:59:40

X - axis Pre Random
Acceptance Flight Unit

AX2 Top middle

Sine
Stanford Linear Accelerator
J/N 49995.52257
SIU S/N 2513



Chan.no: 3
 Chan.type: M Filtered
 Sweep type: logarithmic
 Sweeps done: 1
 Sweeps req.: 1
 Sweep direct.: up
 Sweep rate: 2.00 Oct/min
 Unit: g
 Contr.strat.: Closed loop

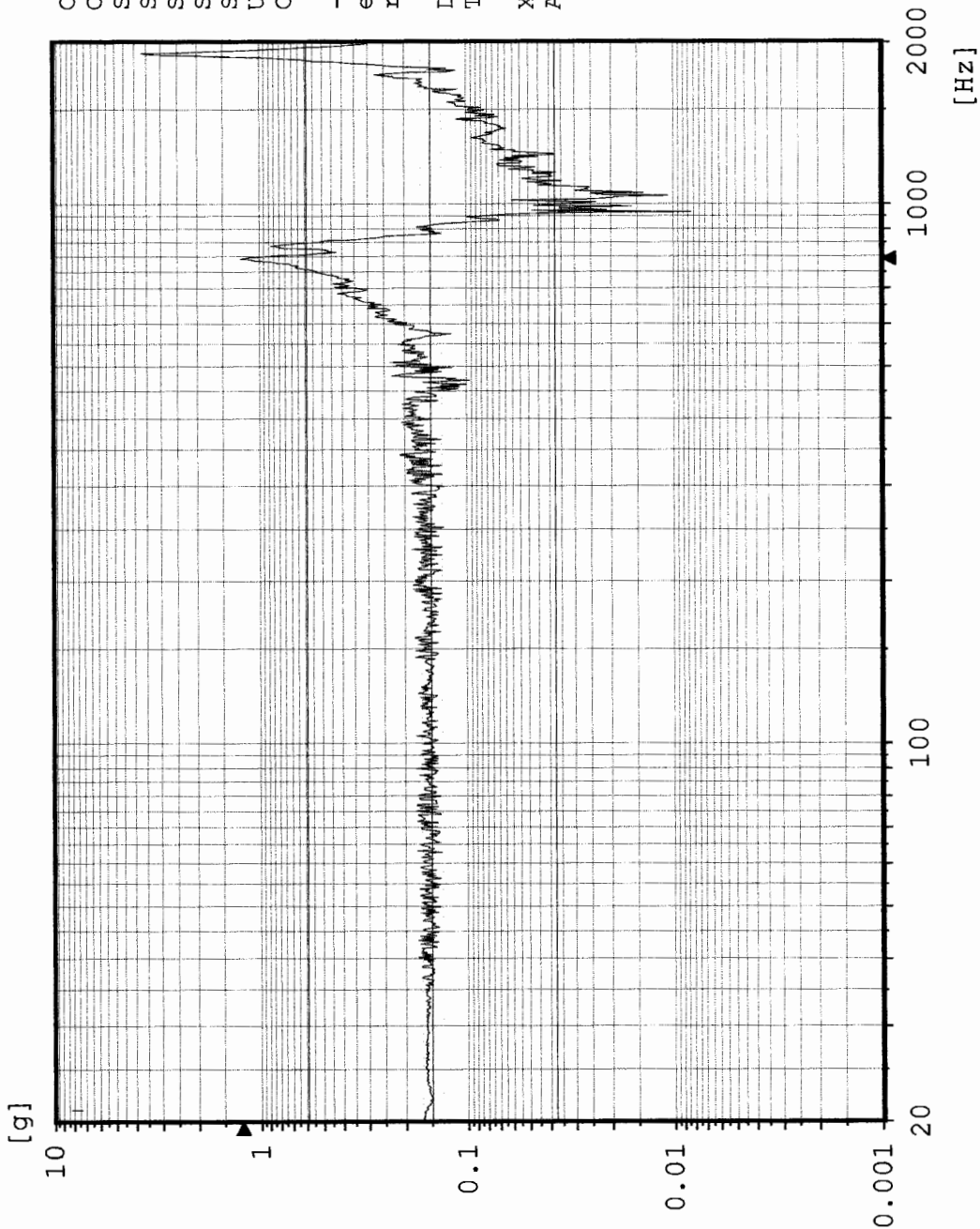
-- Testing time --
 elapsed: 000:03:19
 remaining: 000:00:00

Date: 10-17-05
 Time: 15:59:40

X - axis Pre Random
 Acceptance Flight Unit

Sine AX3 Bottom corner

Stanford Linear Accelerator
J/N 49995.52157
SIU S/N 2513



Chan.no: 5
 Chan.type: M Filtered
 Sweep type: logarithmic
 Sweeps done: 1
 Sweeps req.: 1
 Sweep direct.: up
 Sweep rate: 2.00 Oct/min
 Unit: g
 Contr.strat.: Closed loop

-- Testing time --
 elapsed: 000:03:19
 remaining: 000:00:00

Date: 10-17-05
 Time: 15:59:40

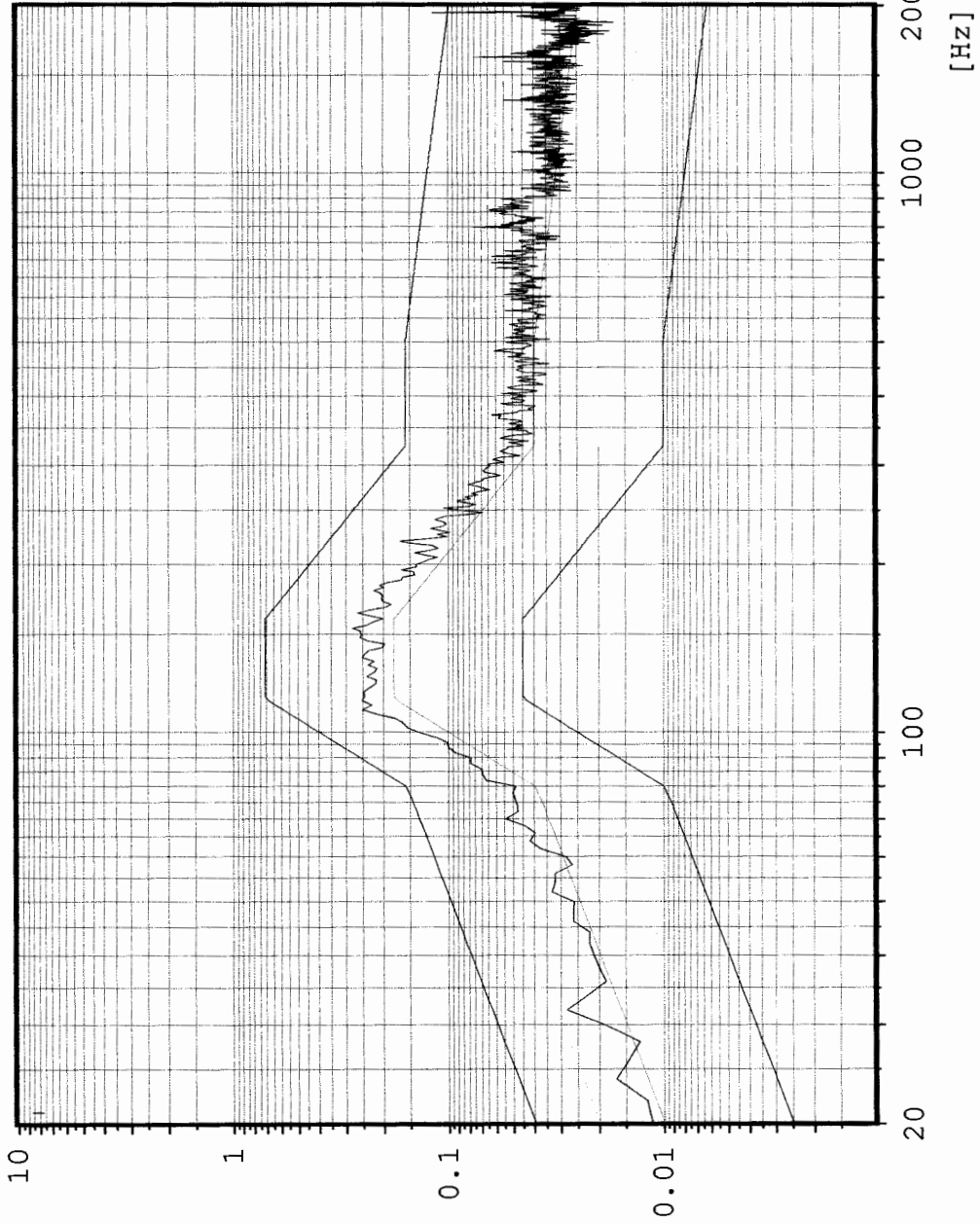
X - axis Pre Random
 Acceptance Flight Unit

Random CX1 Control channel

Random
Stanford Linear Accelerator
49995.52257
SIU S/N 2513



[g²/Hz]



Chan.no: 1
Chan.type: C
DOF: 126
Level: 0.0 dB
Resolution: 2 Hz
Unit: g²/Hz
RMS (act.): 9.919 g
RMS (req.): 8.916 g
Contr.strat.: Closed loop

-- Time on act. level --
elapsed: 000:01:01
remaining: 000:00:00

-- Time total --
elapsed: 000:01:36
remaining: 000:00:00

Date: 10-17-05
Time: 16:10:26

X - axis
Acceptance Flight Unit

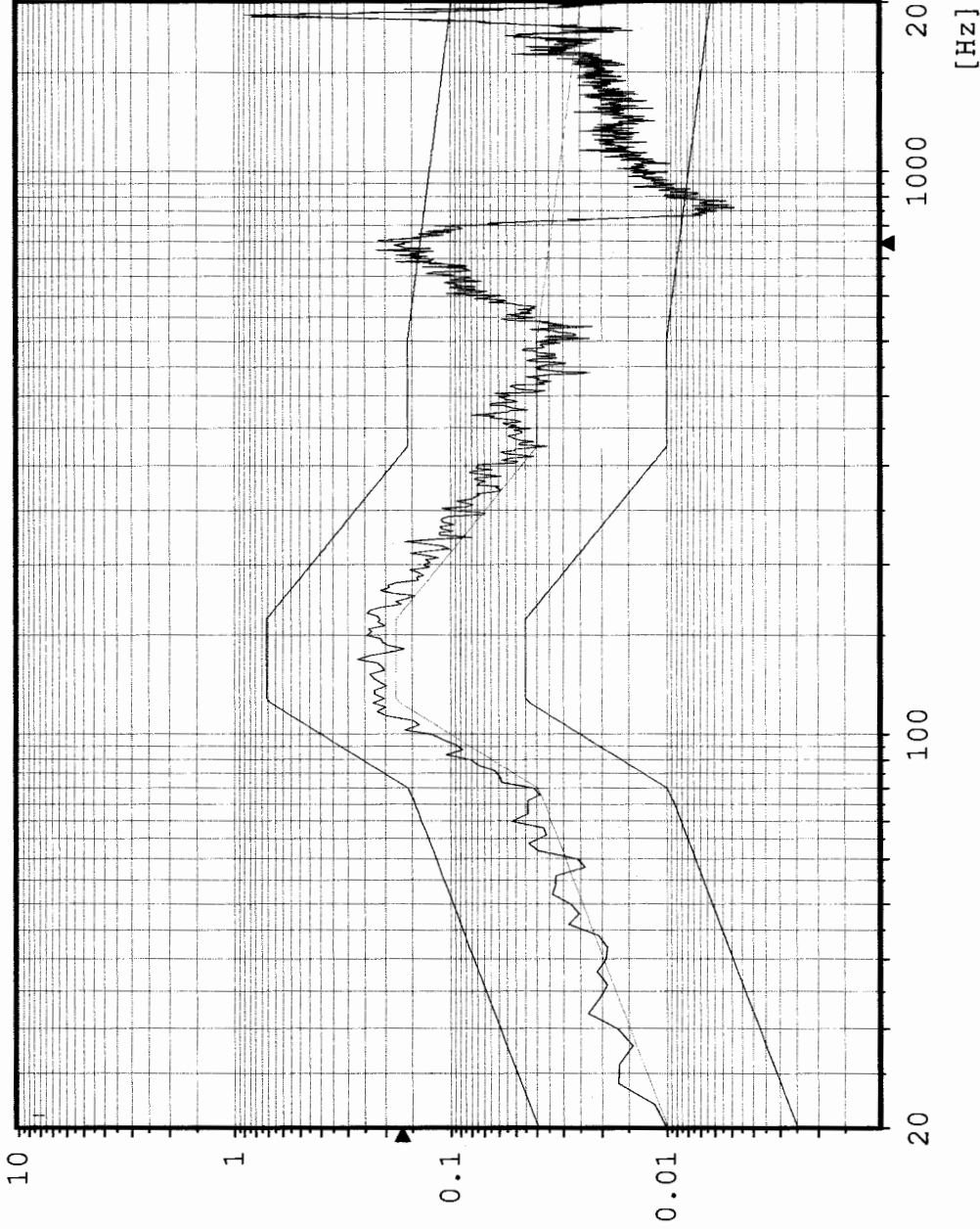
Cursor: 16 Hz 0.1697 g²/Hz

Random AX1 Low middle

Stanford Linear Accelerator
49995.52257
SIU S/N 2513



[g²/Hz]



Chan.no: 2
Chan.type: M
DOF: 100
Level: 0.0 dB
Resolution: 2 Hz
Unit: g²/Hz
RMS (act.): 11.18 g
RMS (req.): 8.916 g
Contr.strat.: Closed loop

-- Time on act. level --
elapsed: 000:01:01
remaining: 000:00:00

-- Time total --
elapsed: 000:01:36
remaining: 000:00:00

Date: 10-17-05
Time: 16:10:26

X - axis
Acceptance Flight Unit

Cursor:

56 Hz 1.653 g²/Hz

AX2 Top middle

Random

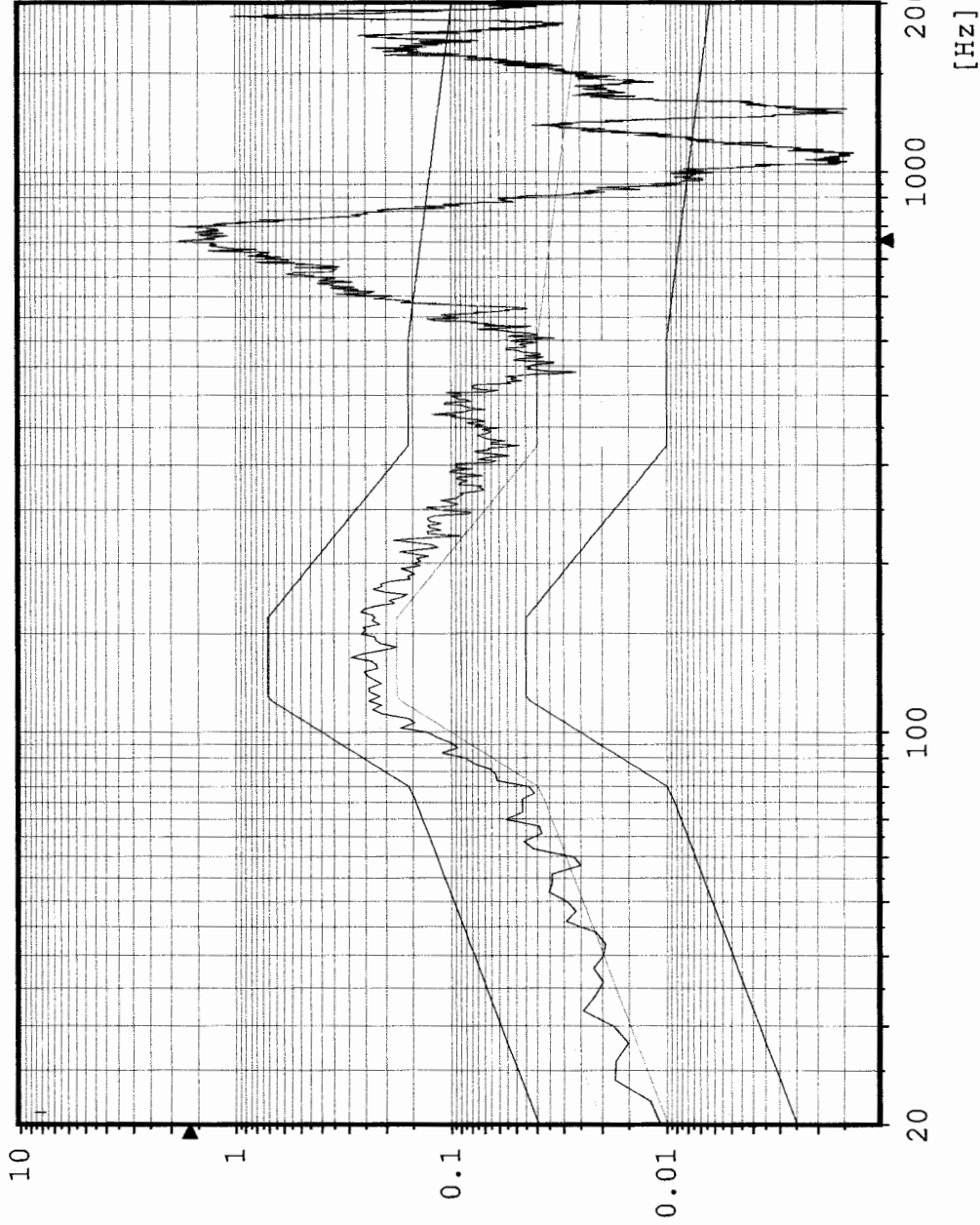
Stanford Linear Accelerator

49995.52 **257**

SIU S/N 2513



[g²/Hz]



Chan.no: 3
 Chan.type: M
 DOF: 100
 Level: 0.0 dB
 Resolution: 2 Hz
 Unit: g²/Hz
 RMS (act.): 18.3 g
 RMS (req.): 8.916 g
 Contr.strat.: Closed loop

-- Time on act. level --
 elapsed: 000:01:01
 remaining: 000:00:00

-- Time total --
 elapsed: 000:01:36
 remaining: 000:00:00

Date: 10-17-05
 Time: 16:10:26

X - axis
 Acceptance Flight Unit

Cursor:

6 Hz 0.8769 g²/Hz

Random AX3 Bottom corner

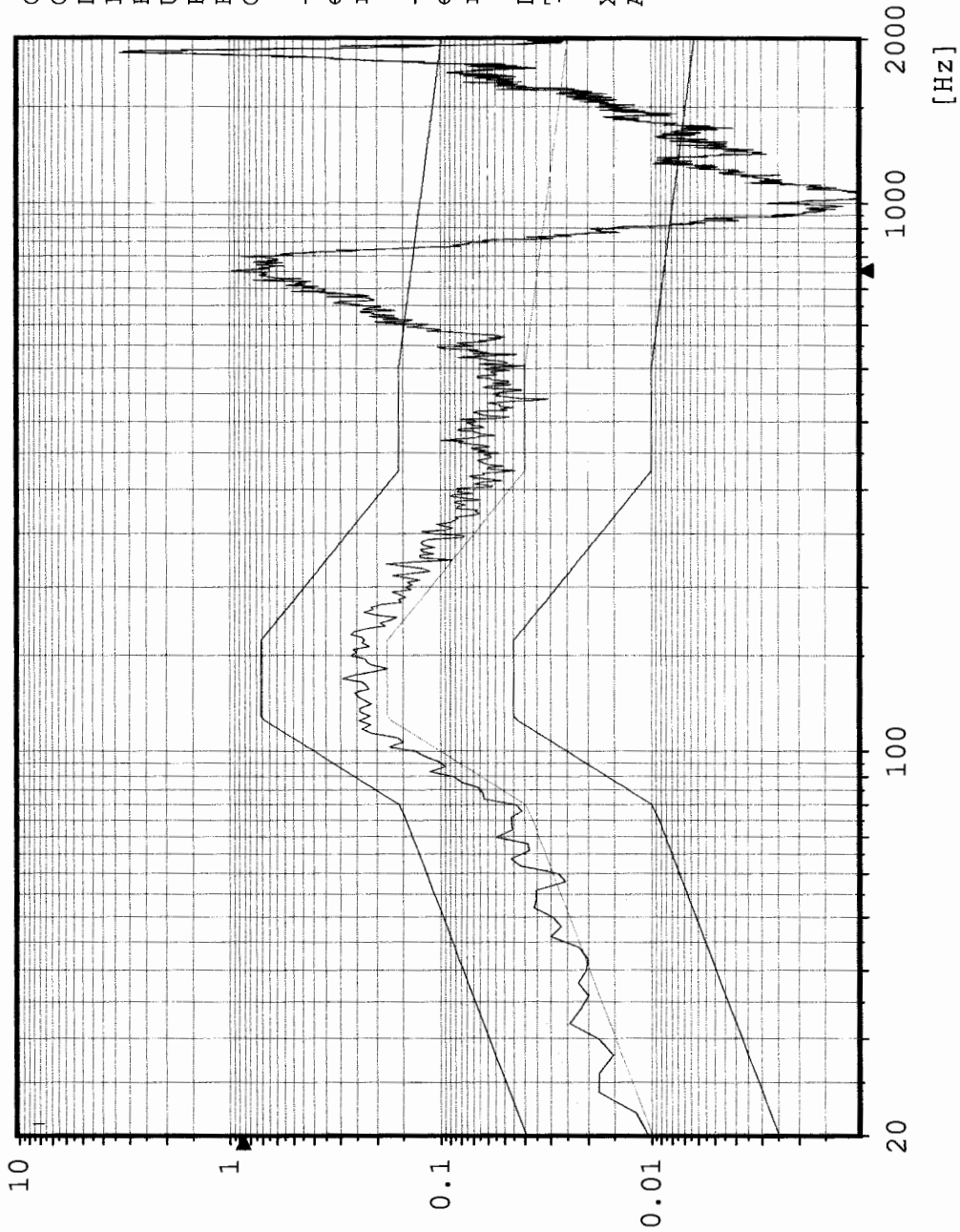
Stanford Linear Accelerator

49995.52157

SIU S/N 2513



[g²/Hz]



Chan.no: 5
 Chan.type: M
 DOF: 100
 Level: 0.0 dB
 Resolution: 2 Hz
 Unit: g²/Hz
 RMS (act.): 17.3 g
 RMS (req.): 8.916 g
 Contr.strat.: Closed loop

-- Time on act. level --
 elapsed: 000:01:01
 remaining: 000:00:00

-- Time total --
 elapsed: 000:01:36
 remaining: 000:00:00

Date: 10-17-05
 Time: 16:10:26

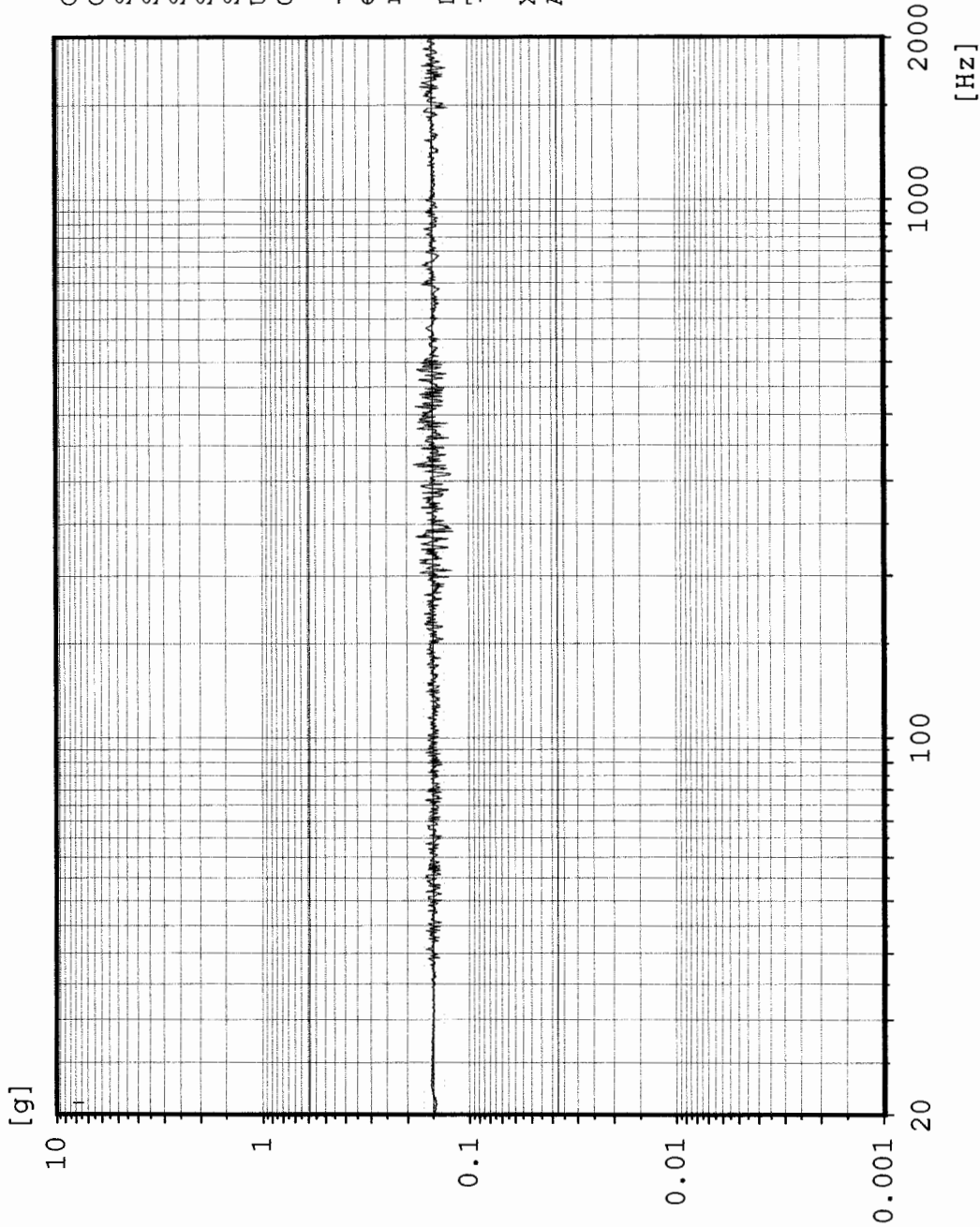
X - axis
 Acceptance Flight Unit

Sine CX1 Control channel

Stanford Linear Accelerator

J/N 49995.52157

SIU S/N 2513



Chan.no: 1 CW Filtered
Chan.type: logarithmic
Sweep type: logarithmic
Sweeps done: 1
Sweeps req.: 1
Sweep direct.: up 2.00 Oct/min
Sweep rate: 2.00 Oct/min
Unit: g
Contr.strat.: Closed loop

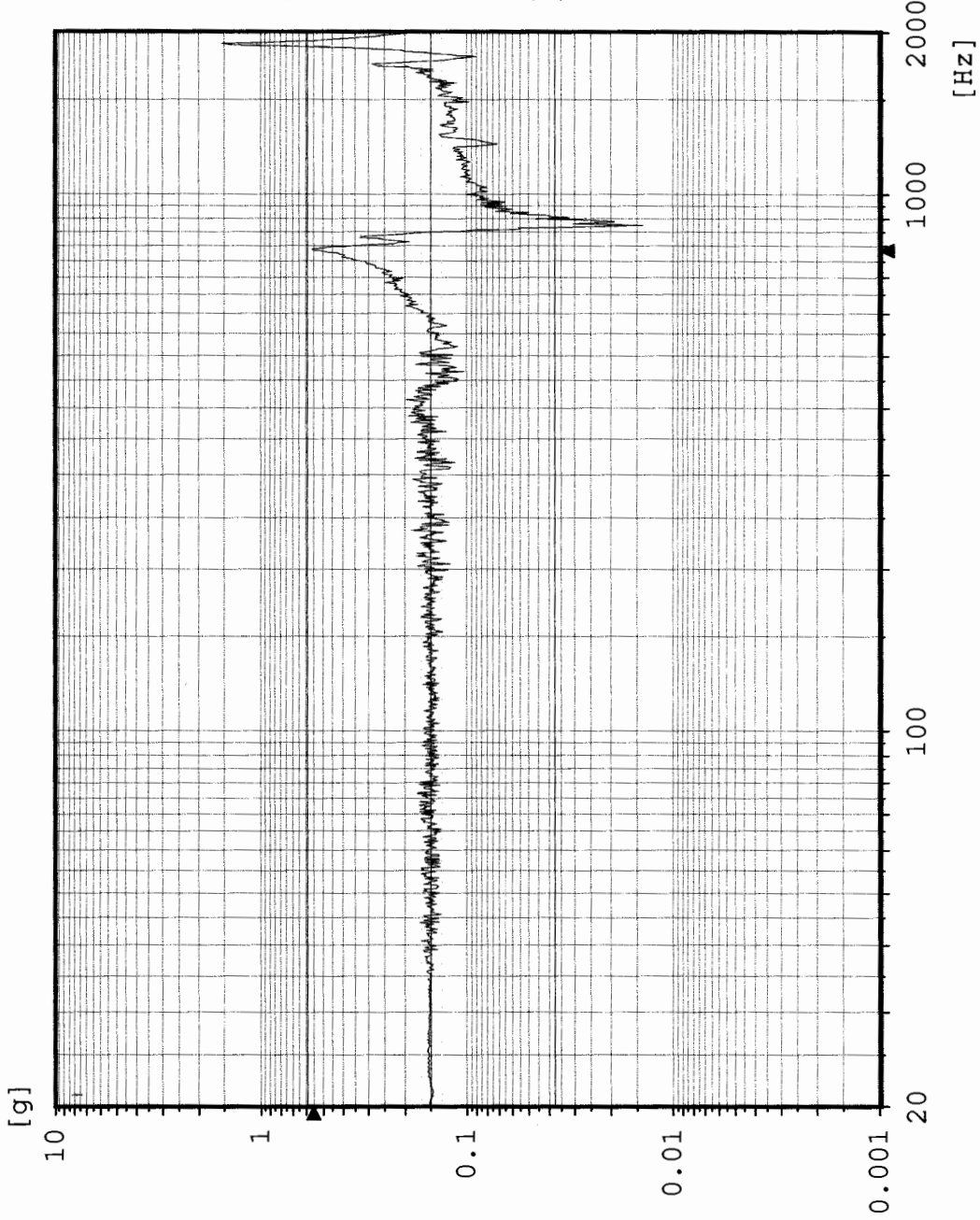
-- Testing time --
elapsed: 000:03:19
remaining: 000:00:00

Date: 10-17-05
Time: 16:23:41

X - axis Post Random
Acceptance Flight Unit

AX1 Low middle

Sine
Stanford Linear Accelerator
J/N 49995.52357
SIU S/N 2513



Chan.no: 2 M Filtered
 Chan.type: logarithmic
 Sweep type: logarithmic
 Sweeps done: 1
 Sweeps req.: 1
 Sweep direct.: up
 Sweep rate: 2.00 Oct/min
 Unit: g
 Contr.strat.: Closed loop

-- Testing time --
 elapsed: 000:03:19
 remaining: 000:00:00

Date: 10-17-05
 Time: 16:23:41

X - axis Post Random
 Acceptance Flight Unit

AX2 Top middle

Sine
Stanford Linear Accelerator
J/N 49995.52257
SIU S/N 2513

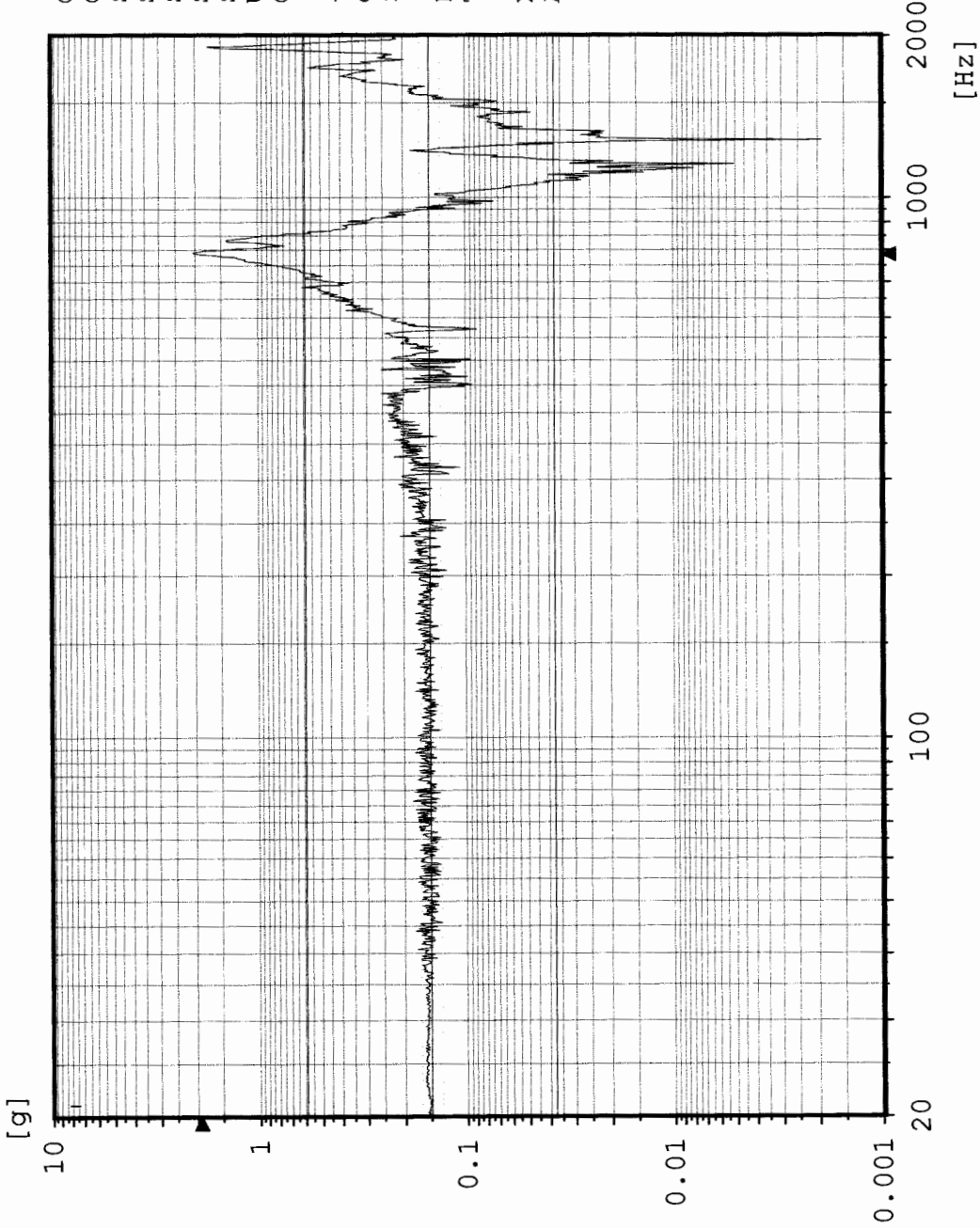


Chan.no: 3
Chan.type: M Filtered
Sweep type: logarithmic
Sweeps done: 1
Sweeps req.: 1
Sweep direct.: up
Sweep rate: 2.00 Oct/min
Unit: g
Contr.strat.: Closed loop

-- Testing time --
elapsed: 000:03:19
remaining: 000:00:00

Date: 10-17-05
Time: 16:23:41

X - axis Post Random
Acceptance Flight Unit

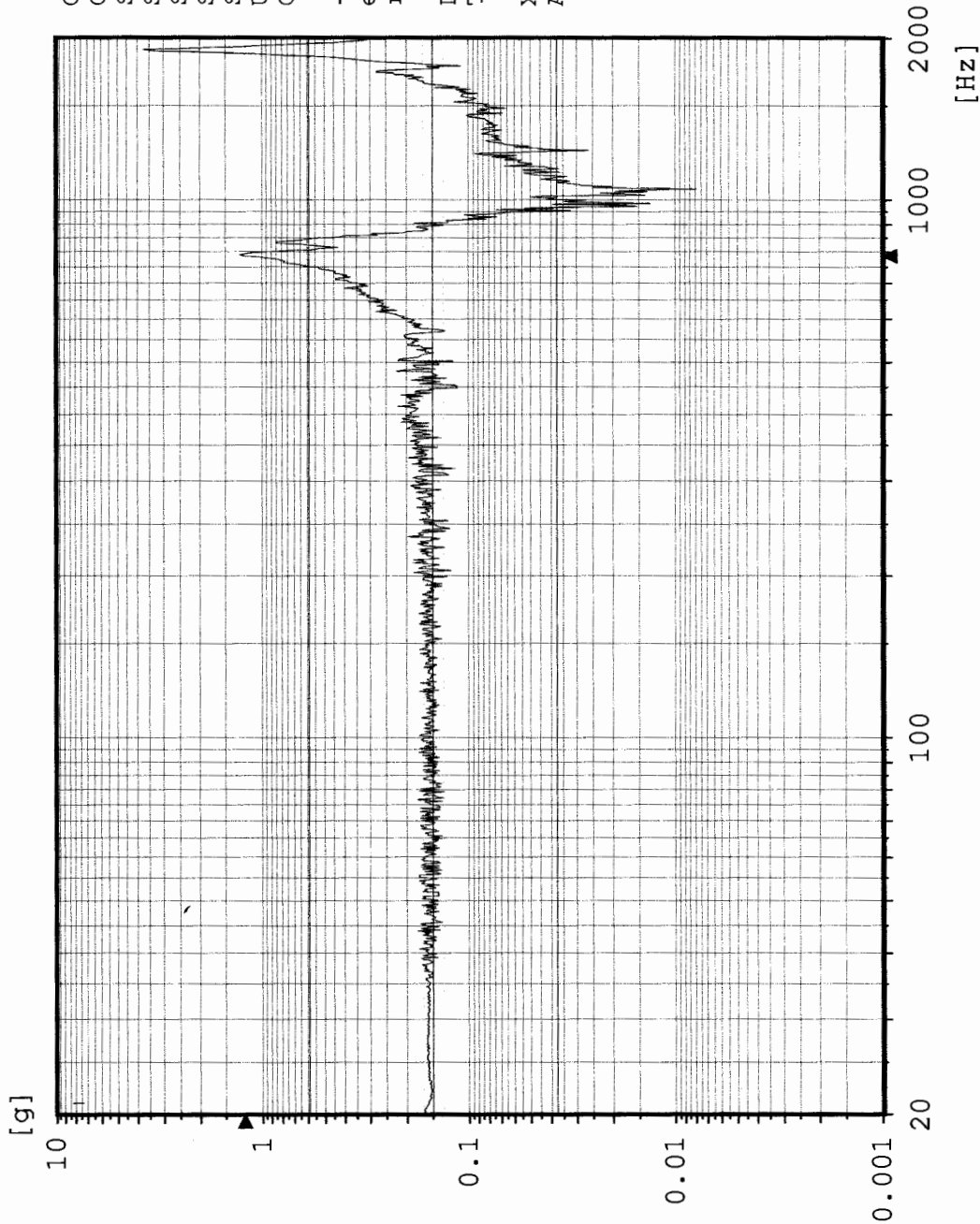


Sine AX3 Bottom corner

Stanford Linear Accelerator

J/N 49995.52a57

SIU S/N 2513



Chan.no: 5
 Chan.type: M Filtered
 Sweep type: logarithmic
 Sweeps done: 1
 Sweeps req.: 1
 Sweep direct.: up
 Sweep rate: 2.00 Oct/min
 Unit: g
 Contr.strat.: Closed loop

-- Testing time --
 elapsed: 000:03:19
 remaining: 000:00:00

Date: 10-17-05
 Time: 16:23:41

X - axis Post Random
 Acceptance Flight Unit



EQUIPMENT LIST

JOB NUMBER 49995.52257

TEST DESCRIPTION Random & Sine Vibration

EQUIPMENT DESCRIPTION	MANUFACTURER	MODEL NUMBER	ASSET NUMBER	RANGE	ACCURACY	CALIBRATION DATE	CALIBRATION PERIOD
Vibration System	Unholtz-Dickie	T1000	4-6242	17,500 Force Lbs: 2Hz -3KHz	± 10%	10-17-05	T.O.T
Accelerometer	Endevco Corp.	2271A	4-64073	1,000 g's Max: 2Hz - 5.5KHz	± 5%	09-13-05	1 Yr.
	Endevco Corp.	2222C	4-42144	1,000 g's Max: 5Hz - 8KHz	± 5%	09-13-05	1 Yr.
	Endevco Corp.	2226C	4-64096	1,000 g's Max: 3Hz - 6KHz	± 5%	04-14-05	1 Yr.
	Endevco Corp.	2220D	4-64033	1,000 g's Max: 2Hz - 10KHz	± 5%	06-23-05	1 Yr.
Charge Amp.	Unholtz-Dickie	D22-8	4-6458	Freq. Response: 5Hz - 5KHz	± 2%	07-14-05	6 Mo.
	Unholtz-Dickie	D22-8	4-6538	Freq. Response: 5Hz - 5KHz	± 2%	07-14-05	6 Mo.
	Unholtz-Dickie	D22-8	4-6537	Freq. Response: 5Hz - 5KHz	± 2%	07-05-05	6 Mo.
	Unholtz-Dickie	D22-8	4-6551	Freq. Response: 5Hz - 5KHz	± 2%	09-06-05	6 Mo.
Digital Vibration Control System	M + P International / Agilent	VXI E8408A	4-62092	Freq. Range: 23KHz Sample Rate: 51.2KSa/sec. Dynamic Range: 90dB Voltage: 10v Pk Resolution: 20 Bit / 3200 lines Channels: 16; COLA; 1v Pk.	± 1%	03-14-05	2 Yr.