

Wilmette WSNP Community Park Project
Wilmette, Illinois

VIBRATION MONITORING REPORT-2

Woodward D. Schultz
Berger
1205 Garland Rd
Wauconda, IL 60084

May 26, 2020

Cti



4262 Old Grand Ave
Suite 102
Chicago, IL 60031

May 26, 2020

Woodward D. Schultz
Berger
1205 Garland Rd
Wauconda, IL 60084

RE: **Report 2:** - *Ground Vibration Monitoring for the Wilmette WSNRP Community Park Project located in Wilmette, Illinois.*

Mr. Schultz,

Construction Testing and Instrumentation, Inc. (CTI) have prepared this vibration monitoring report to evaluate vibrations during all construction activities. This report summarizes the results of ground vibration monitoring for nine seismographs, all located around the surrounding project site (see attached location diagram). This summary report covers the monitoring period from **May 11, 2020 through May 24, 2020.**

The vibration equipment at the site are Geosonic WR3000LC seismographs that have the capacity to record peak particle velocity (PPV) and frequency (Hertz). The maximum allowable peak particle velocity is 0.50 inches per second (IPS), which is based upon the specifications established by the U.S Bureau of Mines (USBM) and a typical threshold for construction vibration monitoring. The seismographs are set to trigger whenever vibration levels exceed 0.003 in/s lowest (PPV) and continuously monitor vibrations during all construction activities.

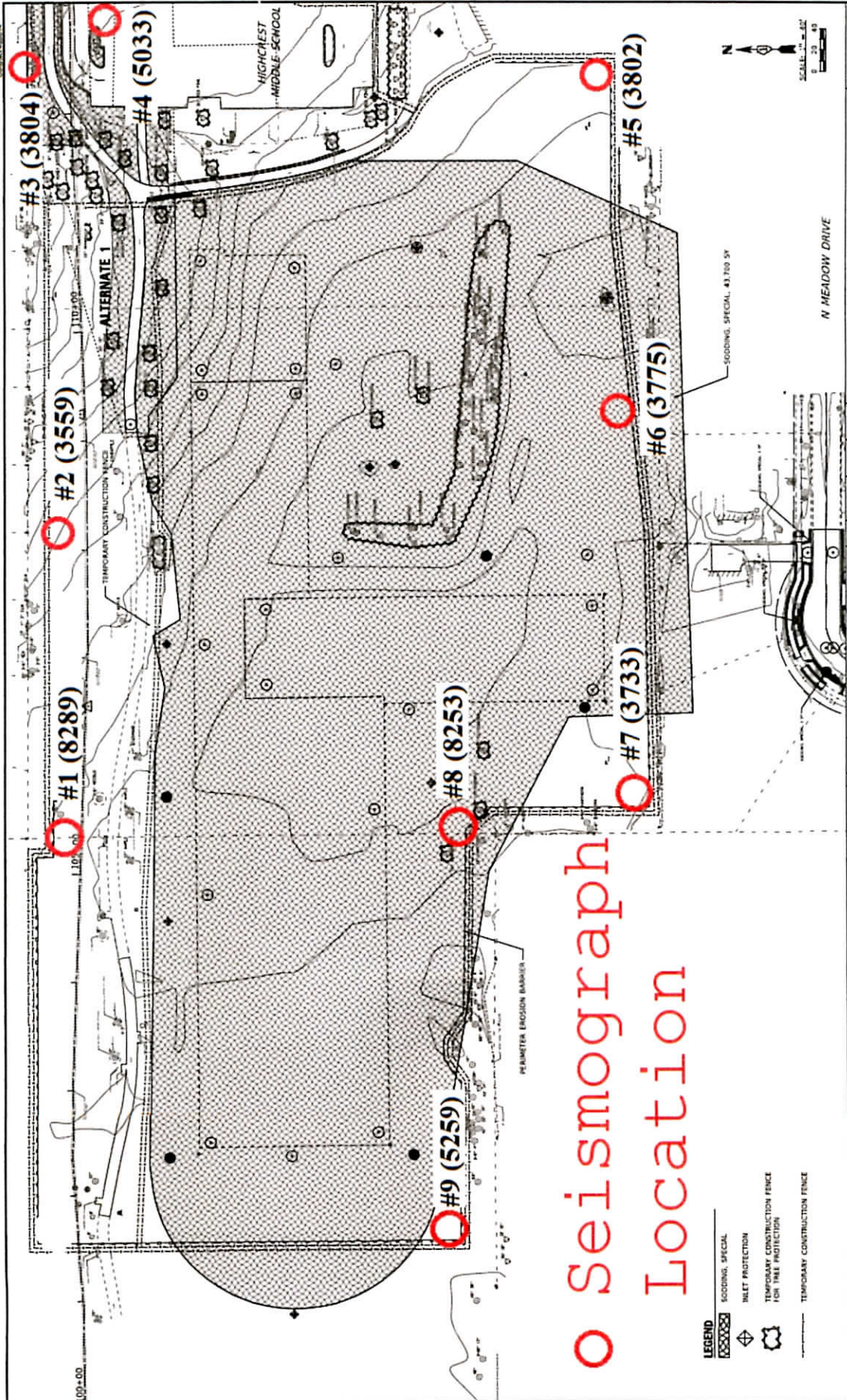
All vibration recordings during this report period have been below the 0.50-inch per second threshold limit. The maximum PPV for the monitoring period are below.

May 24, 2020	Location #1	Unit #8289	V	0.093 (in/s)
May 19, 2020	Location #2	Unit #3559	L	0.130 (in/s)
May 18, 2020	Location #3	Unit #3804	L	0.030 (in/s)
May 15, 2020	Location #4	Unit #5033	T	0.118 (in/s)
May 14, 2020	Location #5	Unit #3802	L	0.038 (in/s)
May 24, 2020	Location #6	Unit #3775	L	0.045 (in/s)
May 19, 2020	Location #7	Unit #3733	T	0.095 (in/s)
May 15, 2020	Location #8	Unit #8253	L	0.253 (in/s)
May 14, 2020	Location #9	Unit #5259	L	0.093 (in/s)

V- Vertical Vibration
T- Transversal Vibration
L- Longitudinal Vibration

Sincerely,

Daniel W. McCarthy
Senior Instrumentation Engineer



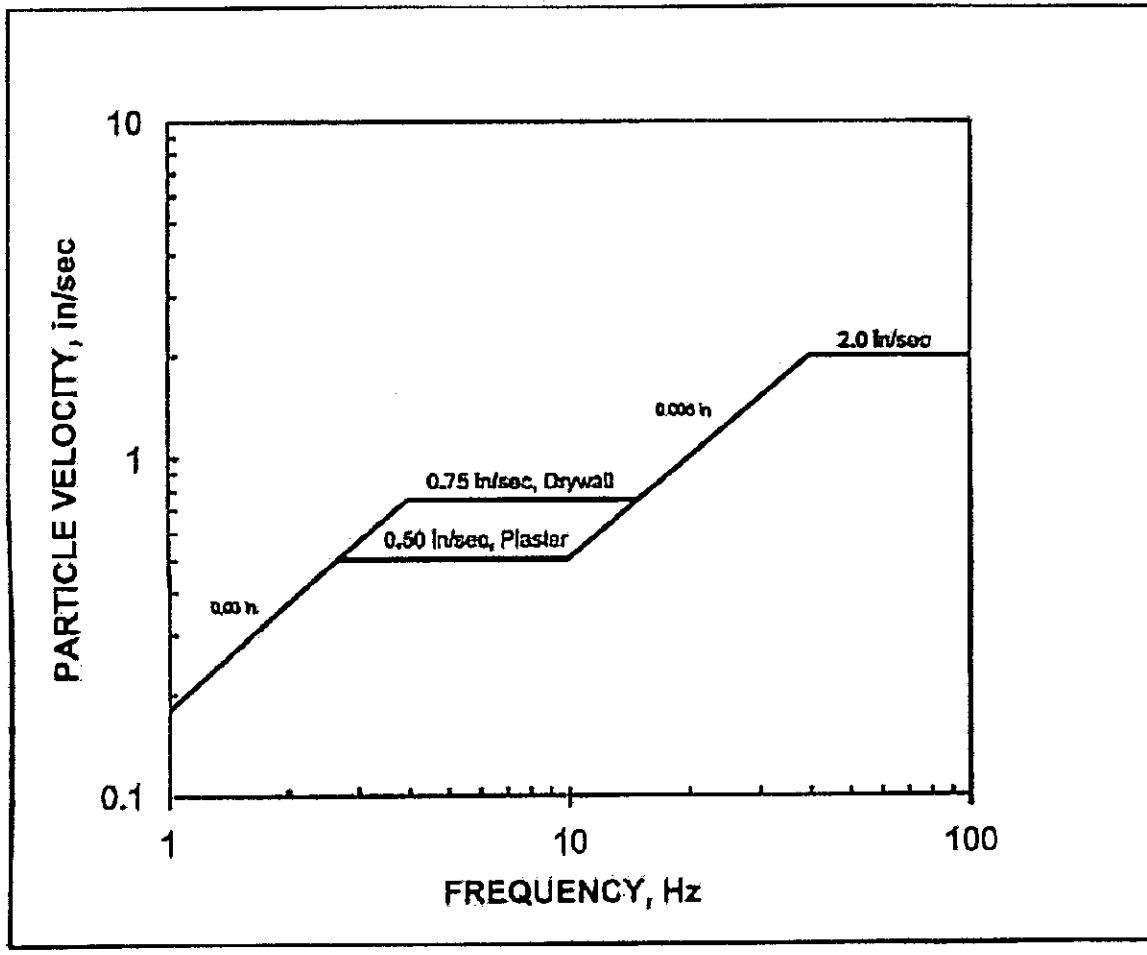
○ Seismograph Location

- LEGEND**
- SOODING SPECIAL
 - INLET PROTECTION
 - TEMPORARY CONSTRUCTION FENCE FOR TREE PROTECTION
 - TEMPORARY CONSTRUCTION FENCE

CLIENT: Village of Wilmette 1200 WILMETTE AVENUE WILMETTE, IL 60091-0040		TITLE: WSNSP CONTRACT 1 COMMUNITY PARK EROSION CONTROL PLAN	
DESIGN: DATE: 01-29-2020 SHEET NO. OF 87 DRAWING NO. 69	SCALE: 1" = 20'-0"	DATE: 01-29-2020	SCALE: 1" = 20'-0"
DESIGNER: NAME: CHRISTOPHER B. BURKE TITLE: ENGINEER	SCALE: 1" = 20'-0"	DATE: 01-29-2020	SCALE: 1" = 20'-0"
CLIENT: NAME: VILLAGE OF WILMETTE ADDRESS: 1200 WILMETTE AVENUE, WILMETTE, IL 60091-0040	SCALE: 1" = 20'-0"	DATE: 01-29-2020	SCALE: 1" = 20'-0"

CHRISTOPHER B. BURKE ENGINEERING, LTD.
 9875 W. Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

BAXTER & WOODMAN
 ENGINEERS & ARCHITECTS



INDUSTRY STANDARD ACCEPTABLE PPV LEVELS

The most influential research on the effects of ground-borne vibrations was conducted by Siskind et al. (1980) of the U.S. Bureau of Mines.¹ Based on the results of an extensive experimental study, the authors recommended acceptable vibration levels for residential structures at which there is a sufficiently low probability of damage initiation. They suggested a minimum peak particle velocity at frequencies below 40 Hz of 0.75 in/sec for homes with gypsum wallboard construction and 0.5 in/sec for homes with plaster and lath construction. An acceptable peak particle velocity of 2.0 in/sec was recommended for all homes at frequencies greater than 40 Hz. These values were based on a 5% probability of occurrence of threshold (cosmetic) damage. The authors also developed a more detailed functional relationship between acceptable PPV levels and vibration frequency. A similar functional relationship was adopted by the Office of Surface Mining Reclamation and Enforcement.² The USBM and OSMRE curves are shown in Figure 2. These recommended acceptable PPV levels have been successfully applied to other activities that induce ground-borne vibrations and they have been widely used by the construction industry.

¹ Siskind, D. E., Stagg, M. S., Kopp, J. W., and Dowding, C. H. (1980). "Structure Response and Damage Produced by Ground Vibration from Surface Blasting," *Report of Investigations 8507*, U.S. Bureau of Mines. ² Rosenthal, M. F. and Morlock, G. L. (1987). *Blasting Guidance Manual*, U.S. Department of the Interior, Office of Surface Mining Reclamation and Enforcement.

SN: 8289 v3.66
 Date: 05/11/2020 Time: 06:01:00
 Event: 5
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #1 WSNP
 Distance: 50.
 Operator: CTI INC
 Comment: NORTH UNIT

Continuous Monitor Recording
Summary Data

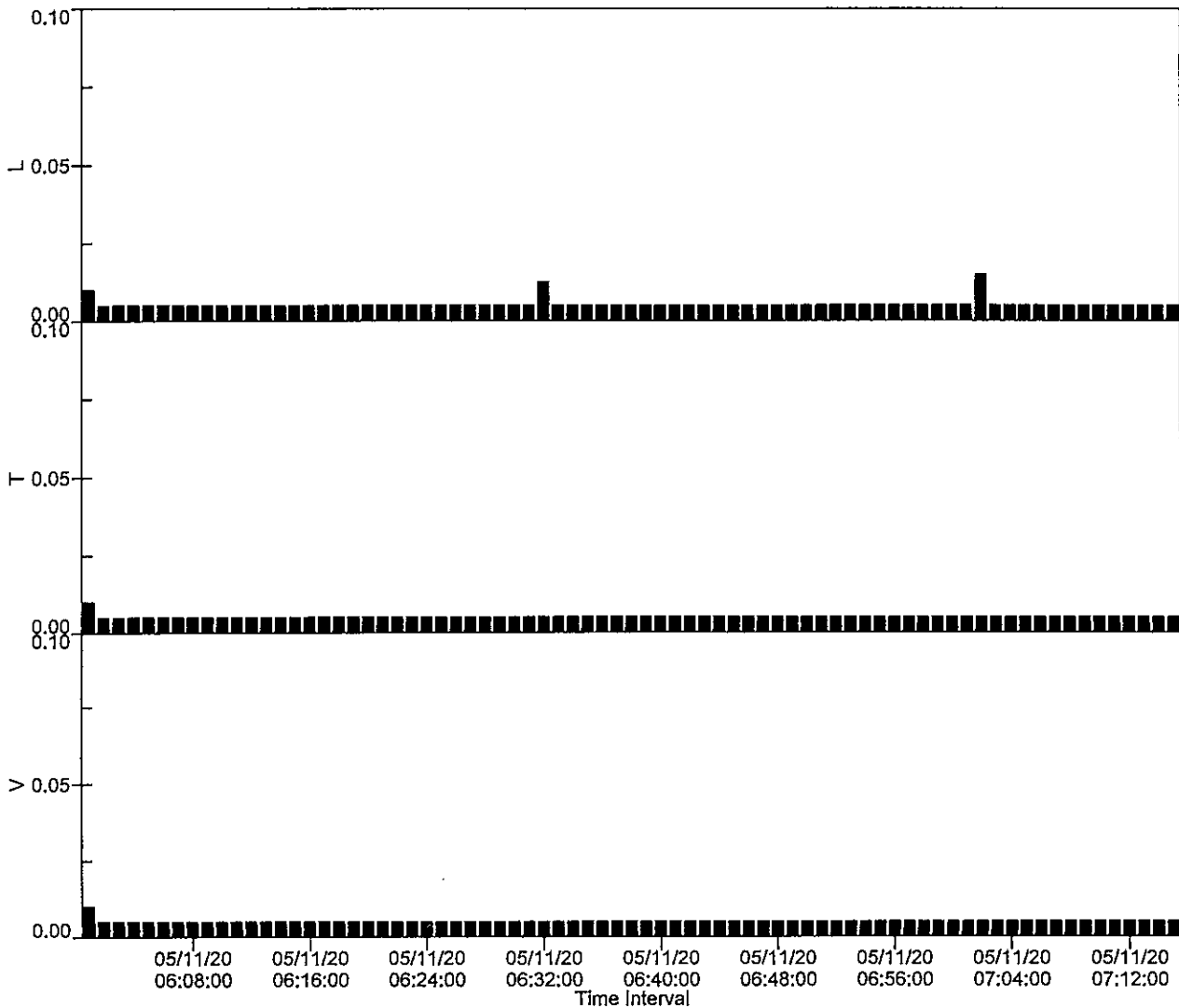
	L	T	V
PPV (in/s)	0.015	0.010	0.010
FREQ (Hz)	100.0	3.4	.3
Peak Air Pressure:	103 db		
Recording Time:	75 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 04/06/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 8289 Event: 5

Record Max PPV: 0.015 in/s Record Max DB: 103 db



SN: 8289 v3.66
Date: 05/11/2020 **Time:** 07:20:00
Event: 6
Client: BERGER CONST
Operation: EXCAVATION
Location: #1 WSNP
Distance: 50.
Operator: CTI INC
Comment: NORTH UNIT

**Continuous Monitor Recording
Summary Data**

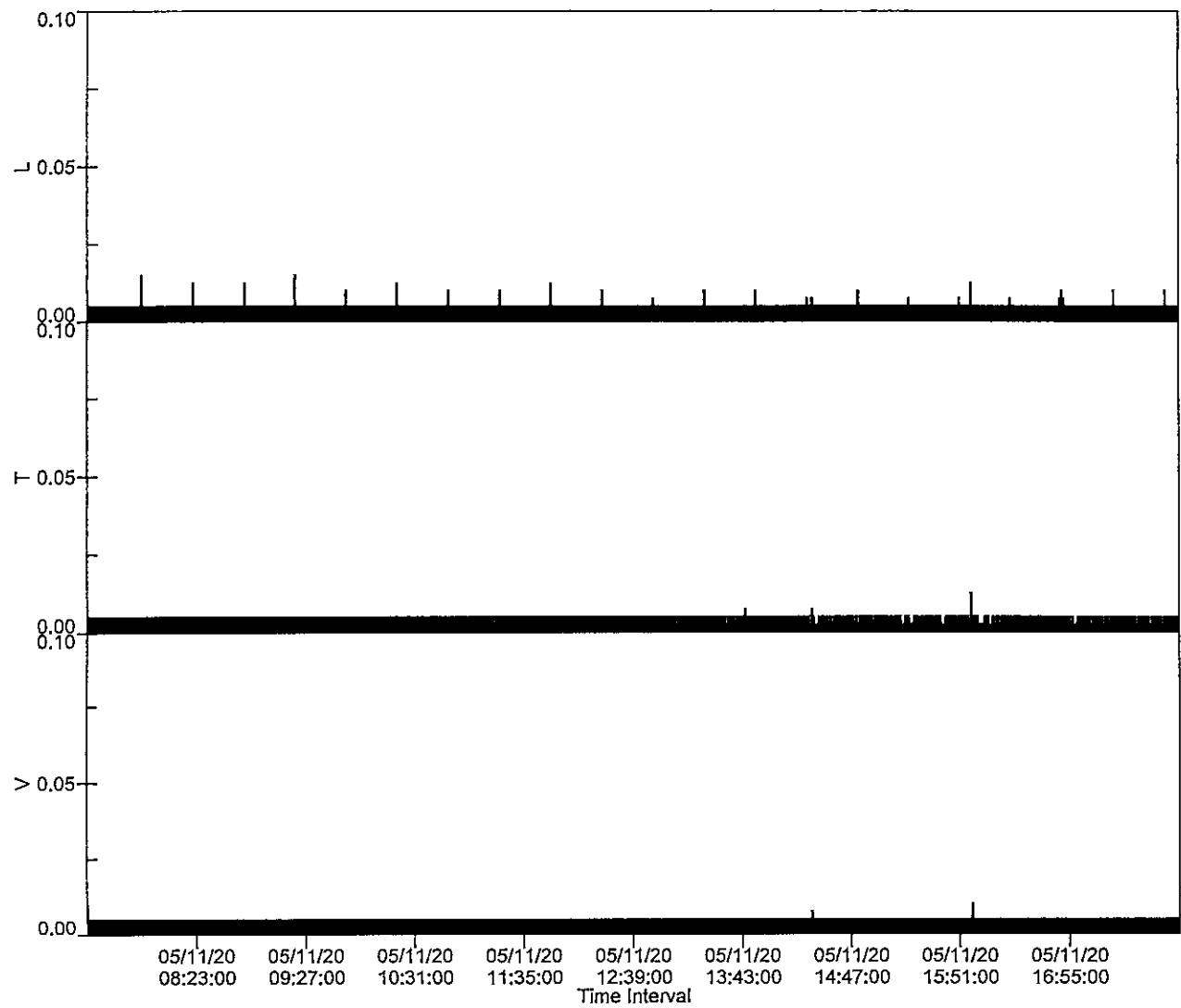
	L	T	V
PPV (in/s)	0.015	0.013	0.010
FREQ (Hz)	83.3	62.5	.3
Peak Air Pressure:	103 db		
Recording Time:	639 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 04/06/2020
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 8289 Event: 6

Record Max PPV: 0.015 in/s Record Max DB: 103 db



SN: 8289 v3.66
Date: 05/12/2020 **Time:** 06:01:00
Event: 7
Client: BERGER CONST
Operation: EXCAVATION
Location: #1 WSNP
Distance: 50.
Operator: CTI INC
Comment: NORTH UNIT

**Continuous Monitor Recording
Summary Data**

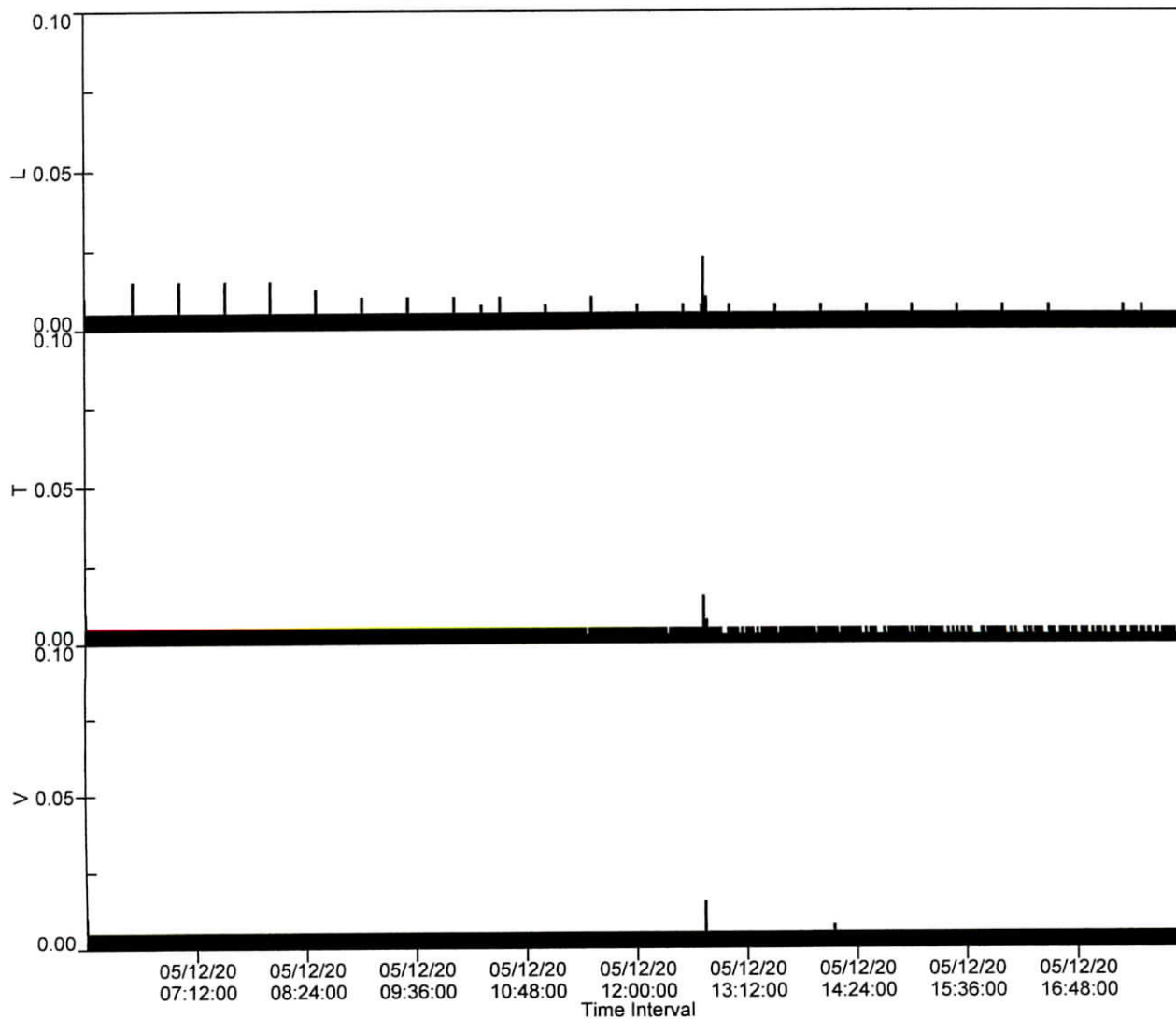
	L	T	V
PPV (in/s)	0.023	0.015	0.015
FREQ (Hz)	62.5	71.4	55.6
Peak Air Pressure:	104 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 04/06/2020
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 8289 Event: 7

Record Max PPV: 0.023 in/s Record Max DB: 104 db



SN: 8289 v3.66
Date: 05/13/2020 Time: 06:01:00
Event: 8
Client: BERGER CONST
Operation: EXCAVATION
Location: #1 WSNP
Distance: 50.
Operator: CTI INC
Comment: NORTH UNIT

**Continuous Monitor Recording
Summary Data**

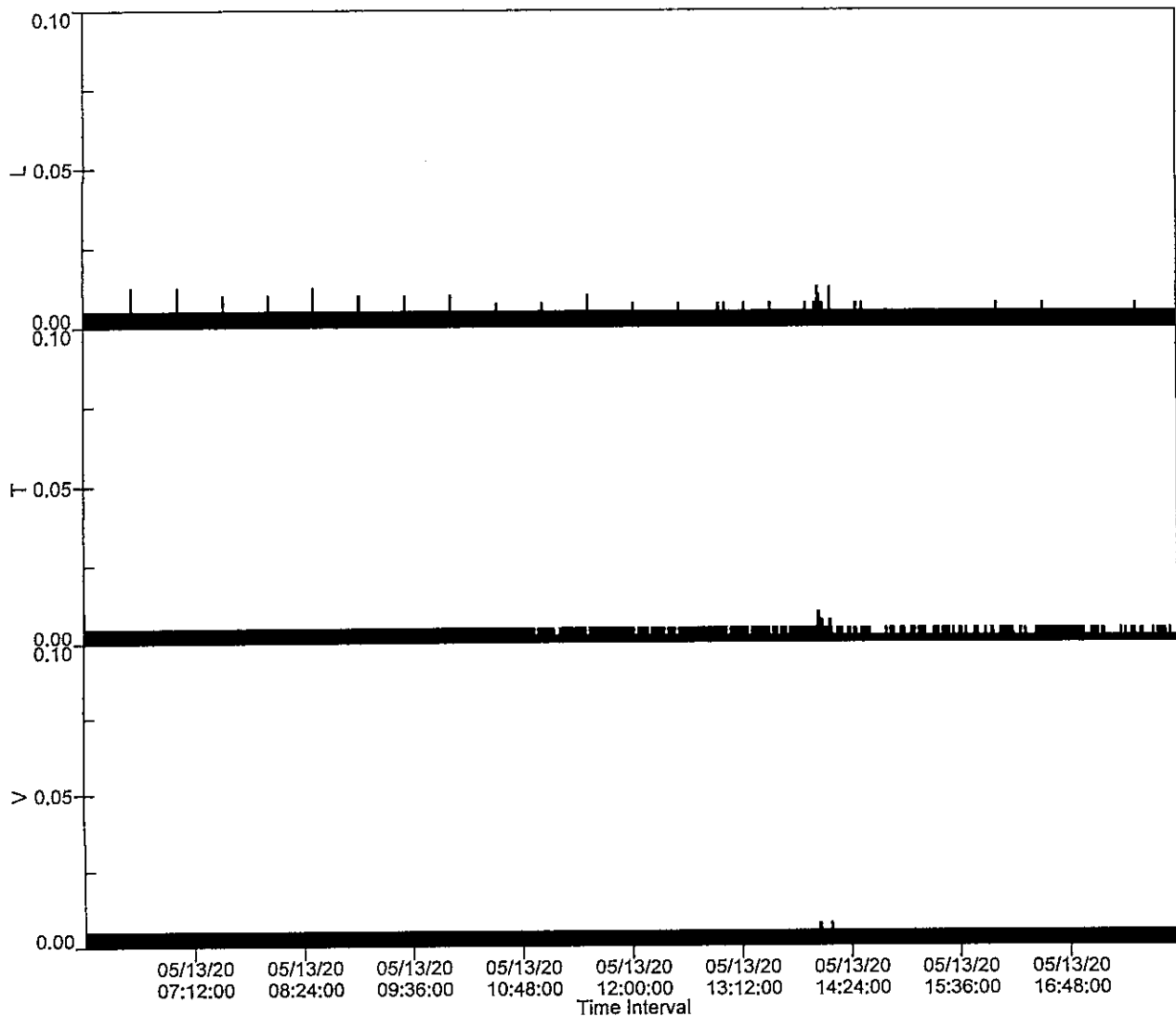
	L	T	V
PPV (in/s)	0.013	0.010	0.010
FREQ (Hz)	166.7	3.7	.3
Peak Air Pressure:	102 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 04/06/2020
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 8289 Event: 8

Record Max PPV: 0.013 in/s Record Max DB: 102 db



SN: 8289 v3.66
Date: 05/14/2020 **Time:** 06:01:00
Event: 9
Client: BERGER CONST
Operation: EXCAVATION
Location: #1 WSNP
Distance: 50.
Operator: CTI INC
Comment: NORTH UNIT

**Continuous Monitor Recording
Summary Data**

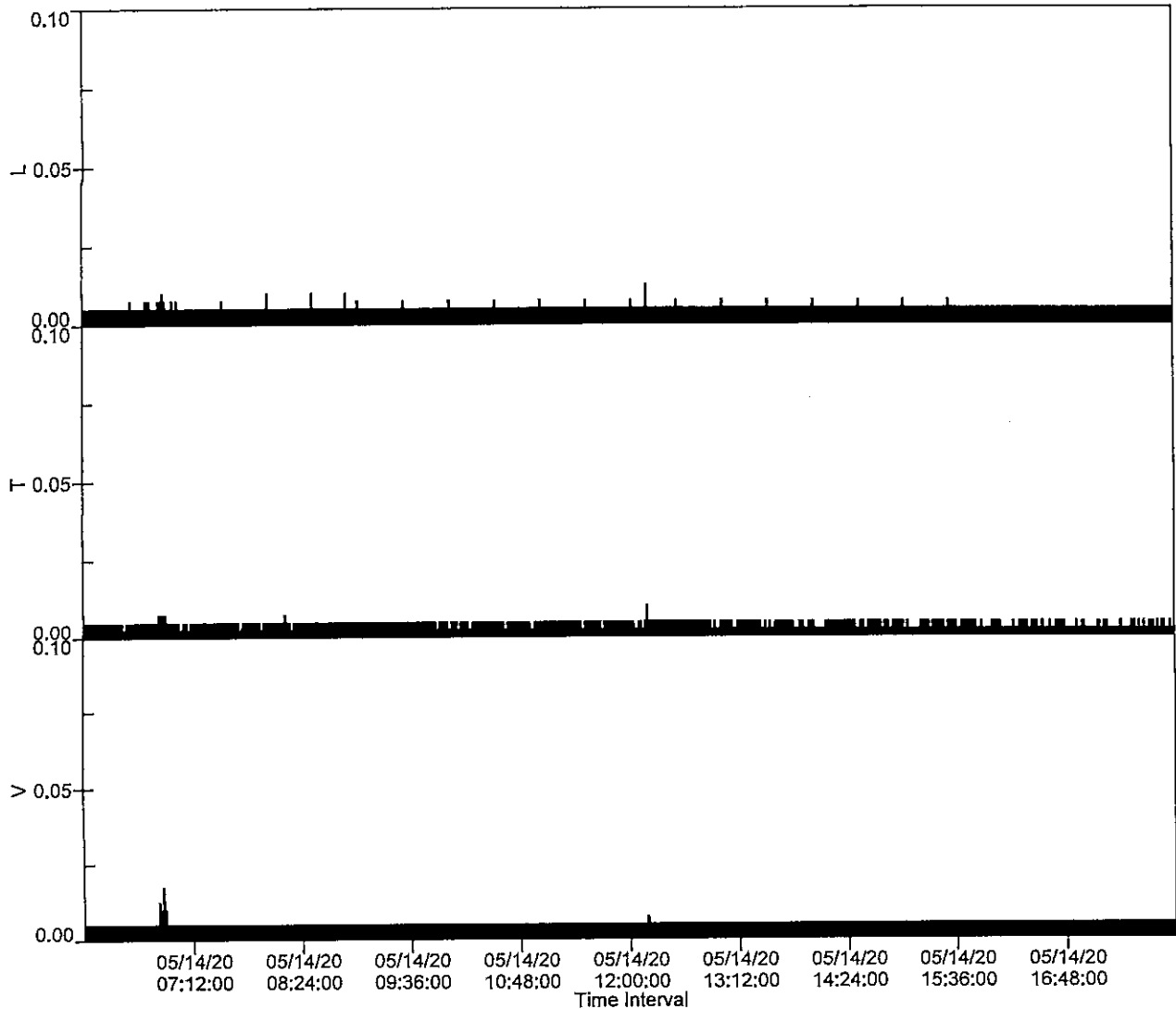
	L	T	V
PPV (in/s)	0.013	0.010	0.018
FREQ (Hz)	35.7	38.5	125.0
Peak Air Pressure:	92 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 04/06/2020
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 8289 Event: 9

Record Max PPV: 0.018 in/s Record Max DB: 92 db



SN: 8289 v3.66
 Date: 05/15/2020 Time: 06:01:00
 Event: 10
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #1 WSNP
 Distance: 50.
 Operator: CTI INC
 Comment: NORTH UNIT

Continuous Monitor Recording
Summary Data

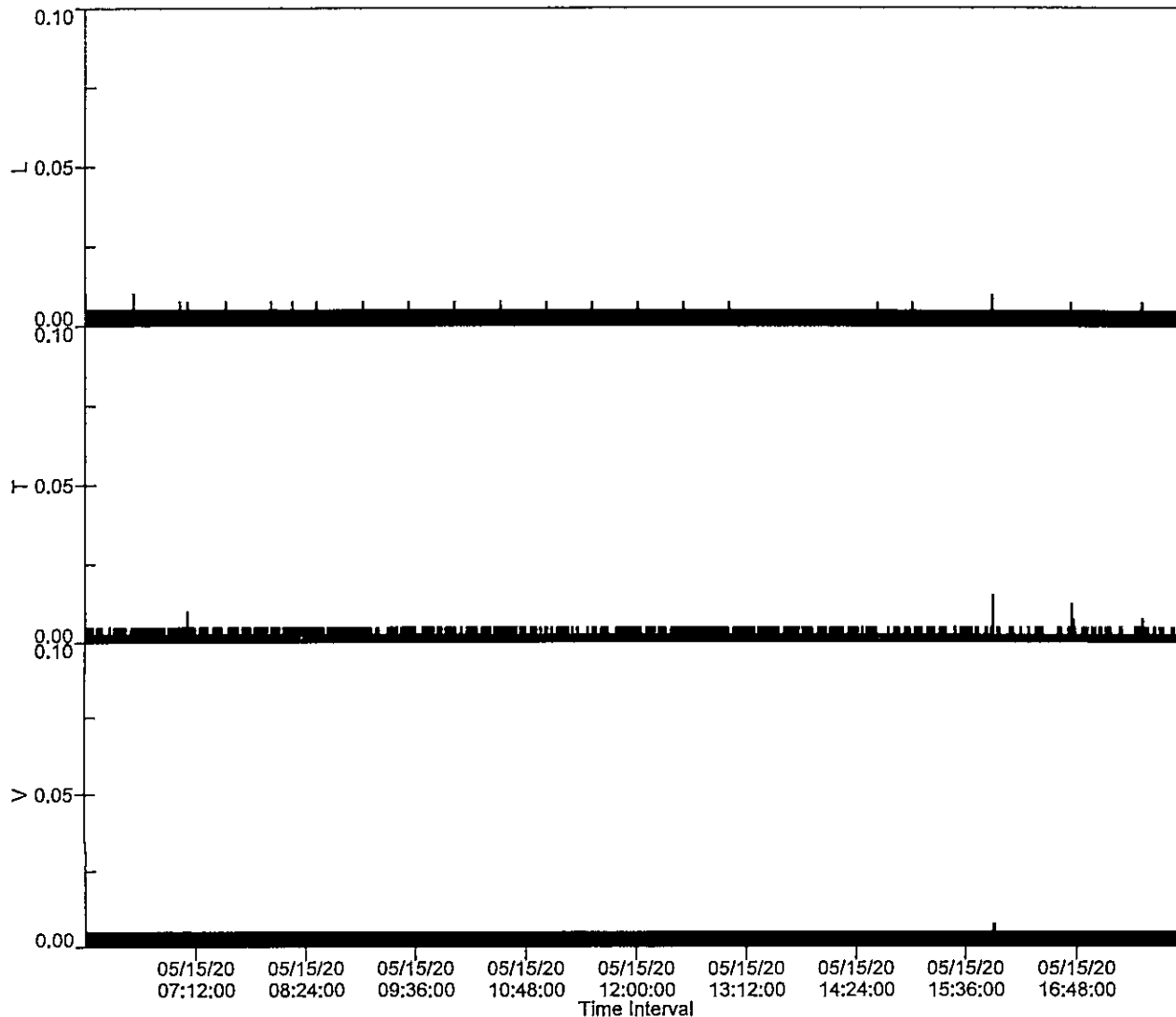
	L	T	V
PPV (in/s)	0.010	0.015	0.008
FREQ (Hz)	.2	41.7	.3
Peak Air Pressure:	92 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 04/06/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 8289 Event: 10

Record Max PPV: 0.015 in/s Record Max DB: 92 db



SN: 8289 v3.66
Date: 05/16/2020 Time: 06:01:00
Event: 11
Client: BERGER CONST
Operation: EXCAVATION
Location: #1 WSNP
Distance: 50.
Operator: CTI INC
Comment: NORTH UNIT

**Continuous Monitor Recording
Summary Data**

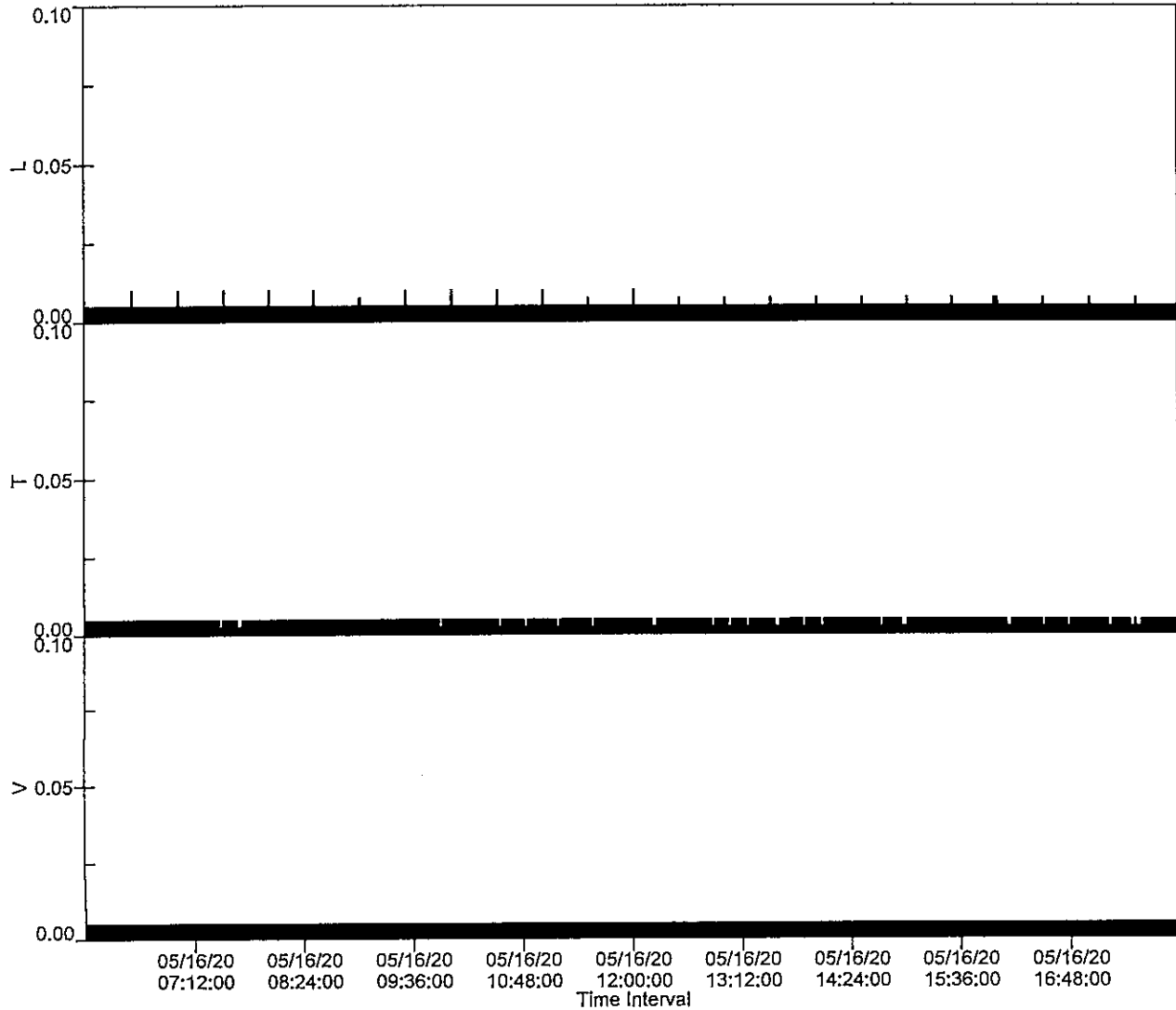
	L	T	V
PPV (in/s)	0.010	0.010	0.010
FREQ (Hz)	.2	3.8	.2
Peak Air Pressure:	95 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 04/06/2020
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 8289 Event: 11

Record Max PPV: 0.010 in/s Record Max DB: 95 db



SN: 8289 v3.66
 Date: 05/17/2020 Time: 06:01:00
 Event: 12
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #1 WSNP
 Distance: 50.
 Operator: CTI INC
 Comment: NORTH UNIT

Continuous Monitor Recording

Summary Data

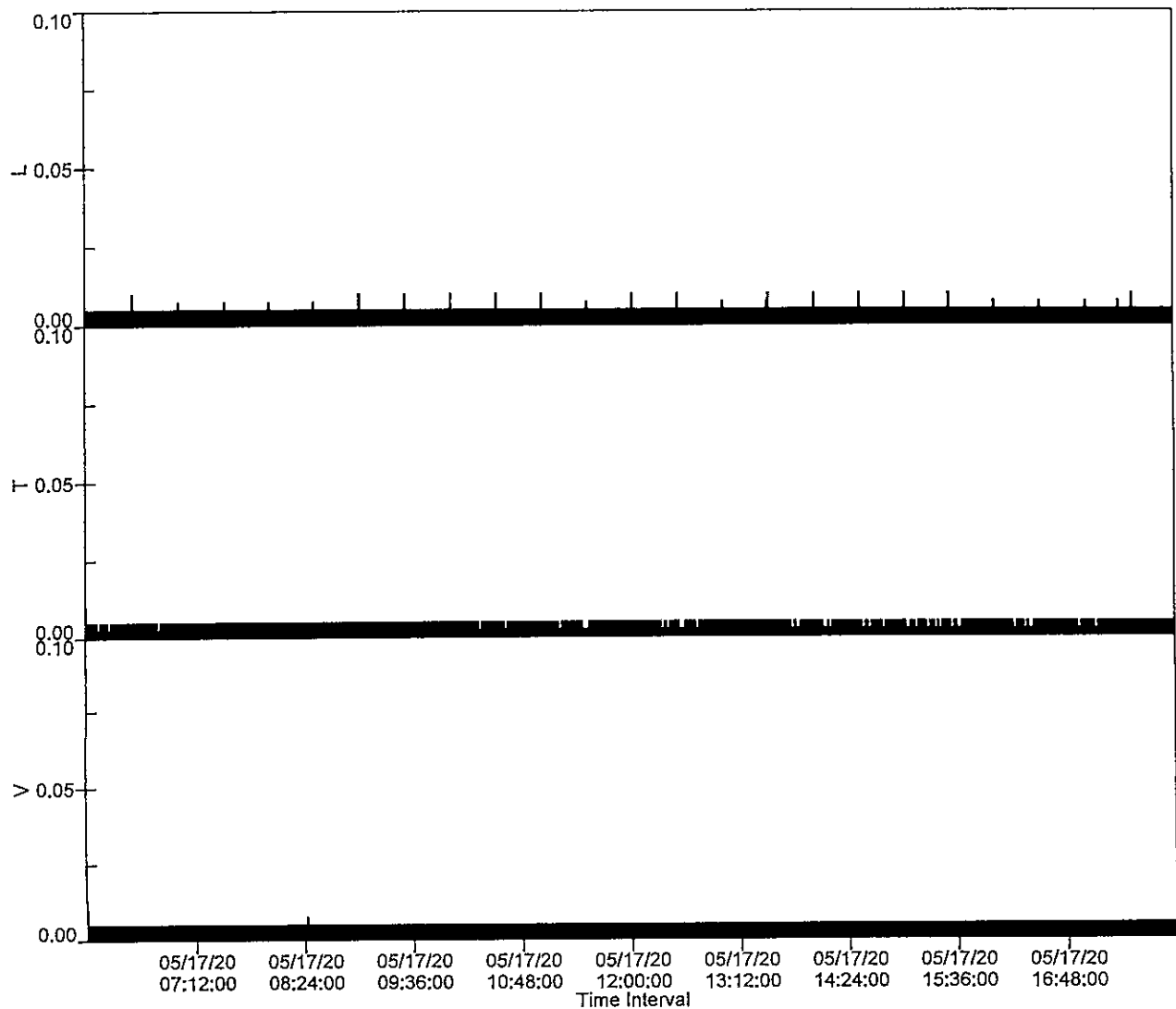
	L	T	V
PPV (in/s)	0.010	0.010	0.010
FREQ (Hz)	.2	50.0	.3
Peak Air Pressure:	95 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 04/06/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 8289 Event: 12

Record Max PPV: 0.010 in/s Record Max DB: 95 db



SN: 8289 v3.66
 Date: 05/18/2020 Time: 06:01:00
 Event: 13
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #1 WSNP
 Distance: 50.
 Operator: CTI INC
 Comment: NORTH UNIT

Continuous Monitor Recording
Summary Data

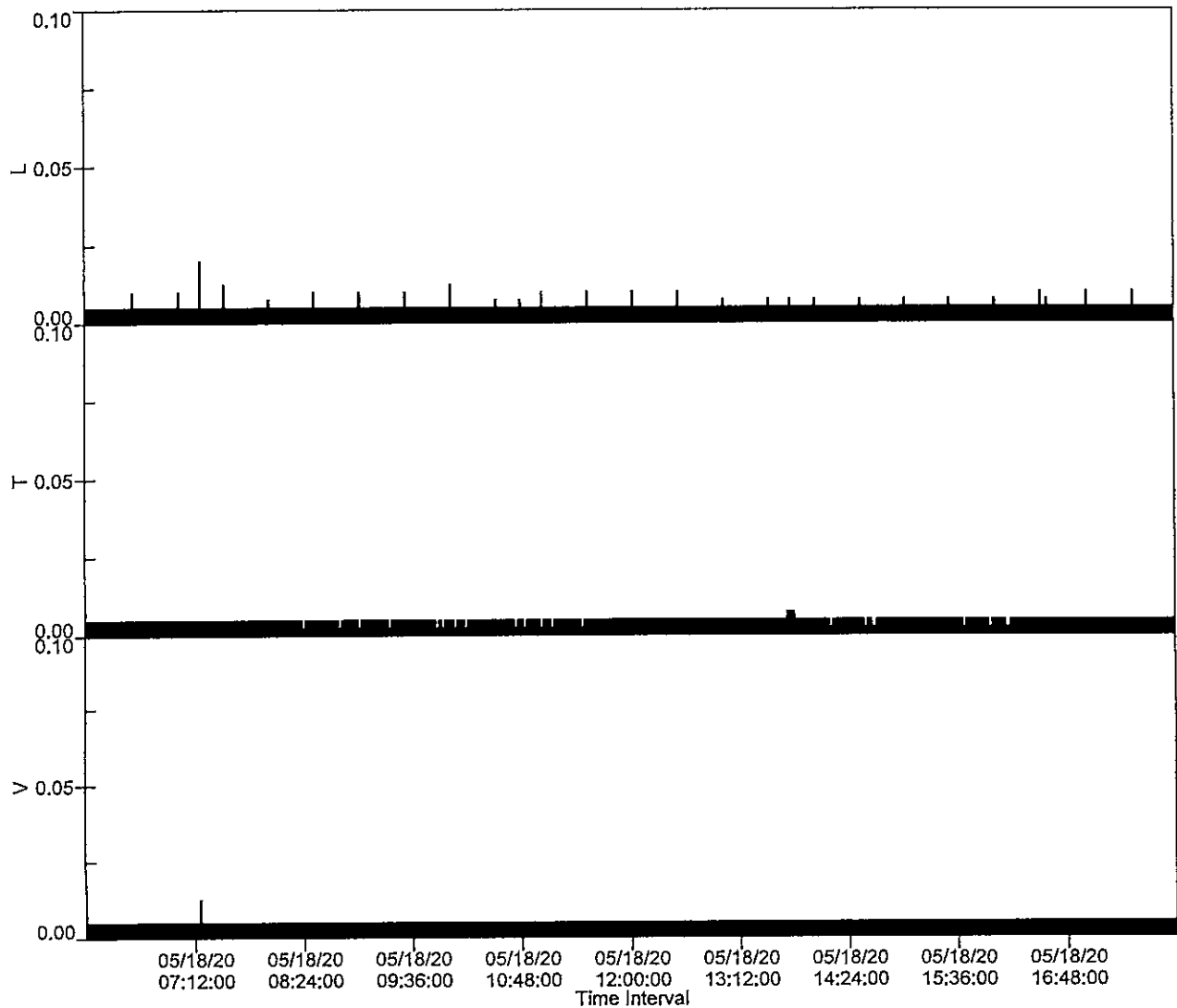
	L	T	V
PPV (in/s)	0.020	0.008	0.013
FREQ (Hz)	83.3	4.0	83.3
Peak Air Pressure:	89 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 04/06/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 8289 Event: 13

Record Max PPV: 0.020 in/s Record Max DB: 89 db



SN: 8289 v3.66
 Date: 05/19/2020 Time: 06:01:00
 Event: 14
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #1 WSNP
 Distance: 50.
 Operator: CTI INC
 Comment: NORTH UNIT

Continuous Monitor Recording
Summary Data

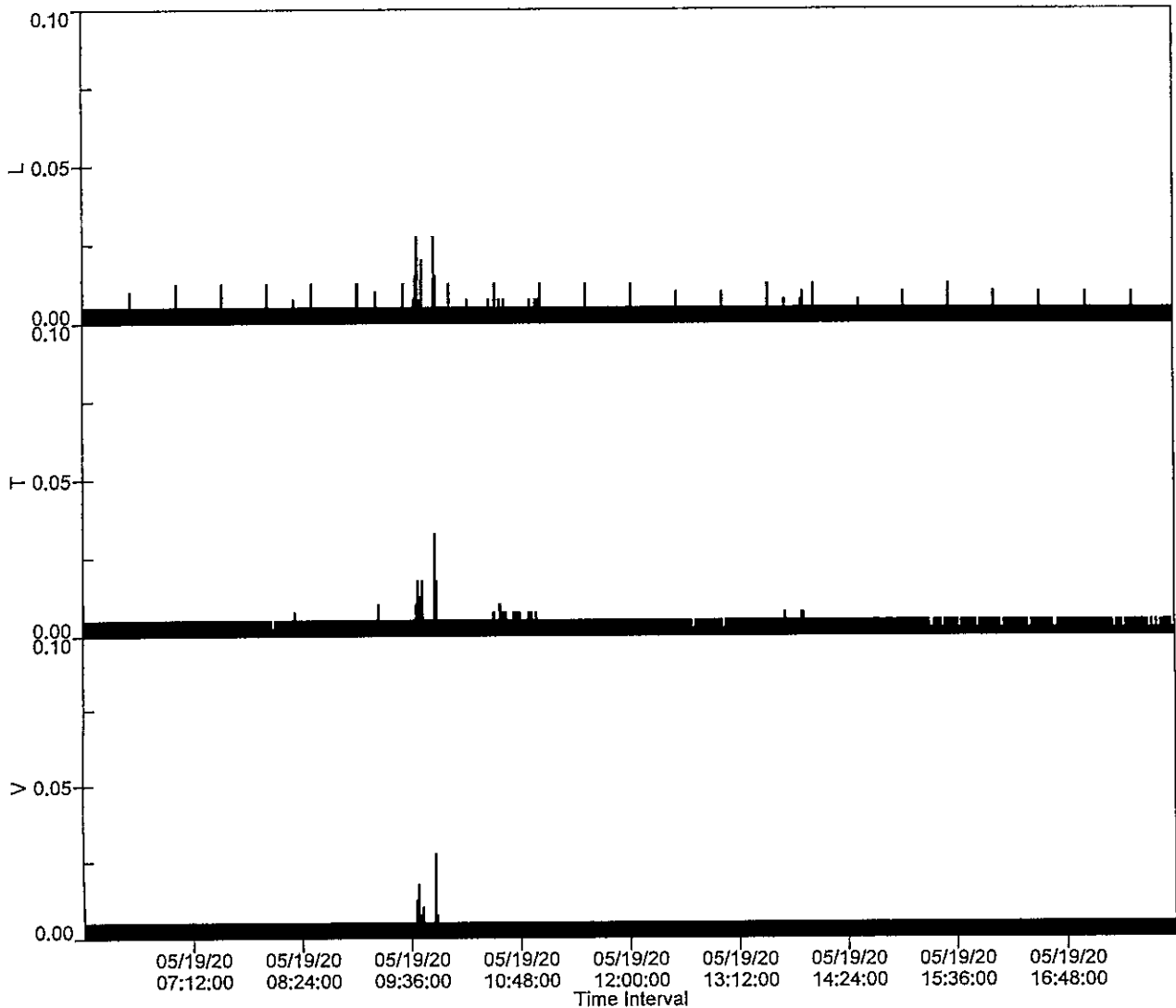
	L	T	V
PPV (in/s)	0.028	0.033	0.028
FREQ (Hz)	38.5	35.7	41.7
Peak Air Pressure:	92 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 04/06/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 8289 Event: 14

Record Max PPV: 0.033 in/s Record Max DB: 92 db



SN: 8289 v3.66
 Date: 05/20/2020 Time: 06:01:00
 Event: 15
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #1 WSNP
 Distance: 50.
 Operator: CTI INC
 Comment: NORTH UNIT

Continuous Monitor Recording
Summary Data

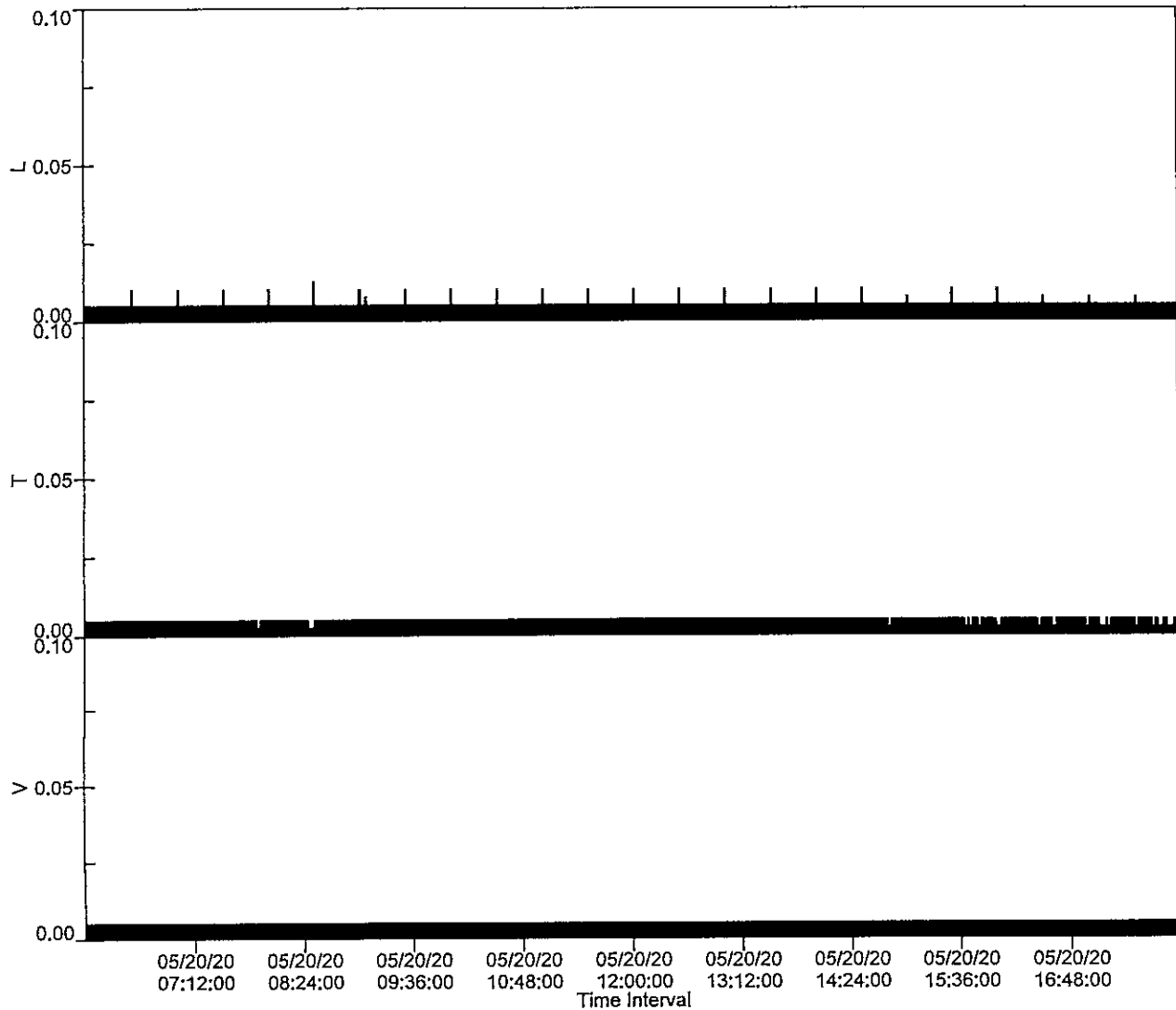
	L	T	V
PPV (in/s)	0.013	0.010	0.008
FREQ (Hz)	166.7	2.0	.3
Peak Air Pressure:	82 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 04/06/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 8289 Event: 15

Record Max PPV: 0.013 in/s Record Max DB: 82 db



SN: 8289 v3.66
 Date: 05/21/2020 Time: 06:01:00
 Event: 16
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #1 WSNP
 Distance: 50.
 Operator: CTI INC
 Comment: NORTH UNIT

Continuous Monitor Recording
Summary Data

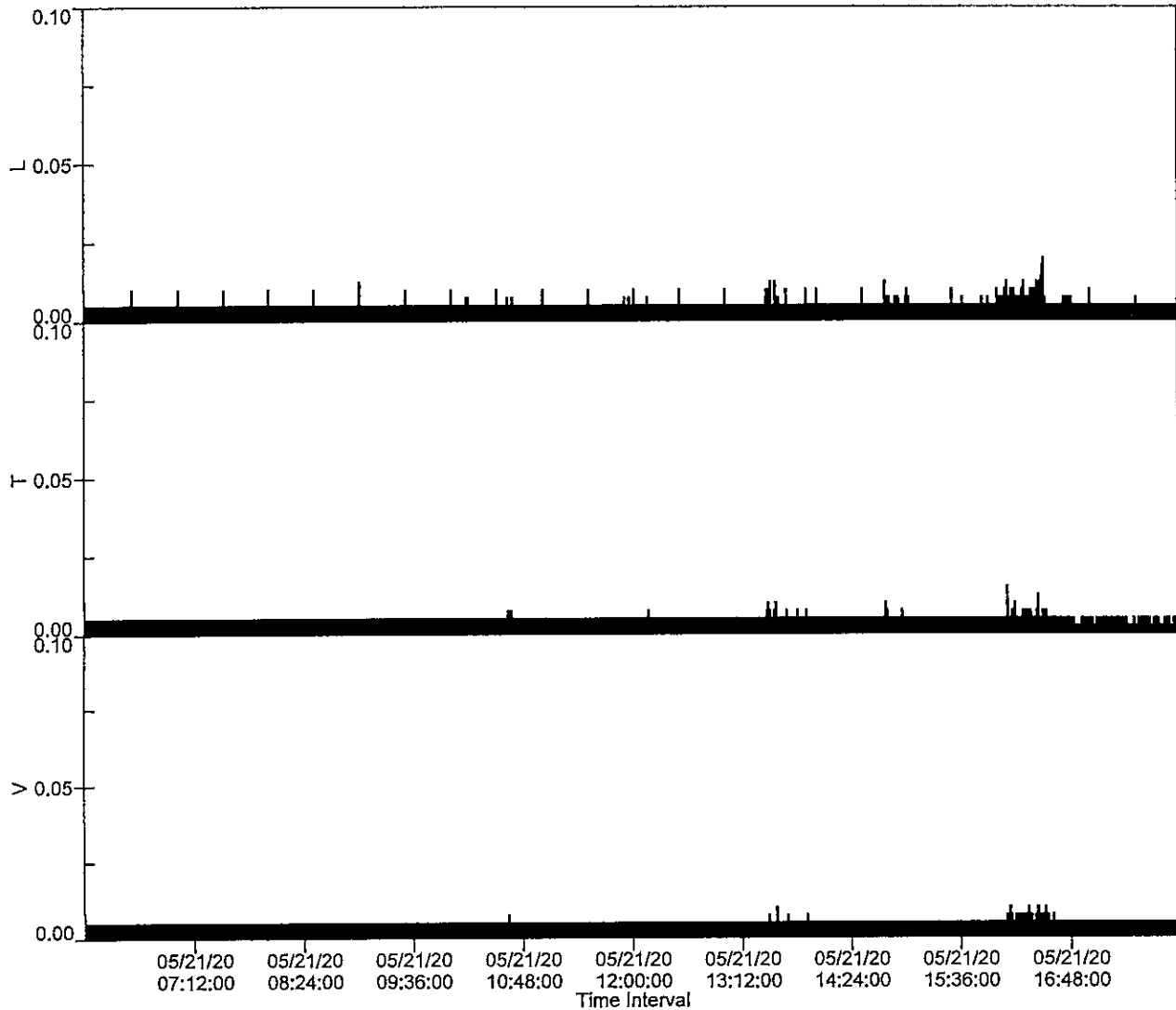
	L	T	V
PPV (in/s)	0.020	0.015	0.010
FREQ (Hz)	7.1	18.5	10.2
Peak Air Pressure:	86 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 04/06/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 8289 Event: 16

Record Max PPV: 0.020 in/s Record Max DB: 86 db



SN: 8289 v3.66
 Date: 05/22/2020 Time: 06:01:00
 Event: 17
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #1 WSNP
 Distance: 50.
 Operator: CTI INC
 Comment: NORTH UNIT

Continuous Monitor Recording
Summary Data

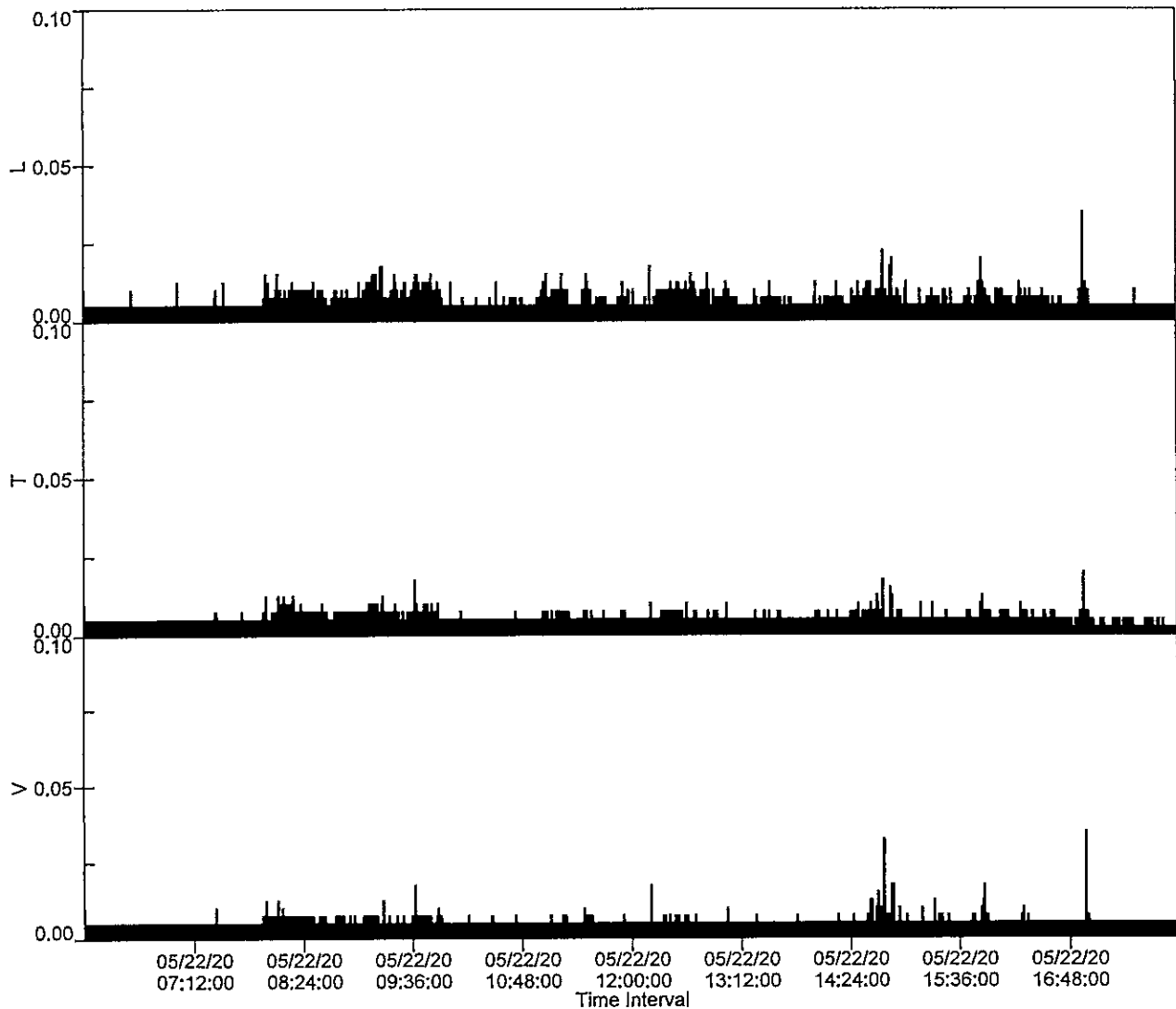
	L	T	V
PPV (in/s)	0.035	0.020	0.035
FREQ (Hz)	11.9	14.3	11.1
Peak Air Pressure: 90 db			
Recording Time: 718 minutes			
Sample Size: 1440			
Interval Size: 60 seconds			

Additional Info:

Shaketable Calibrated: 04/06/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 8289 Event: 17

Record Max PPV: 0.035 in/s Record Max DB: 90 db



SN: 8289 v3.66
Date: 05/23/2020 **Time:** 06:01:00
Event: 18
Client: BERGER CONST
Operation: EXCAVATION
Location: #1 WSNP
Distance: 50.
Operator: CTI INC
Comment: NORTH UNIT

**Continuous Monitor Recording
Summary Data**

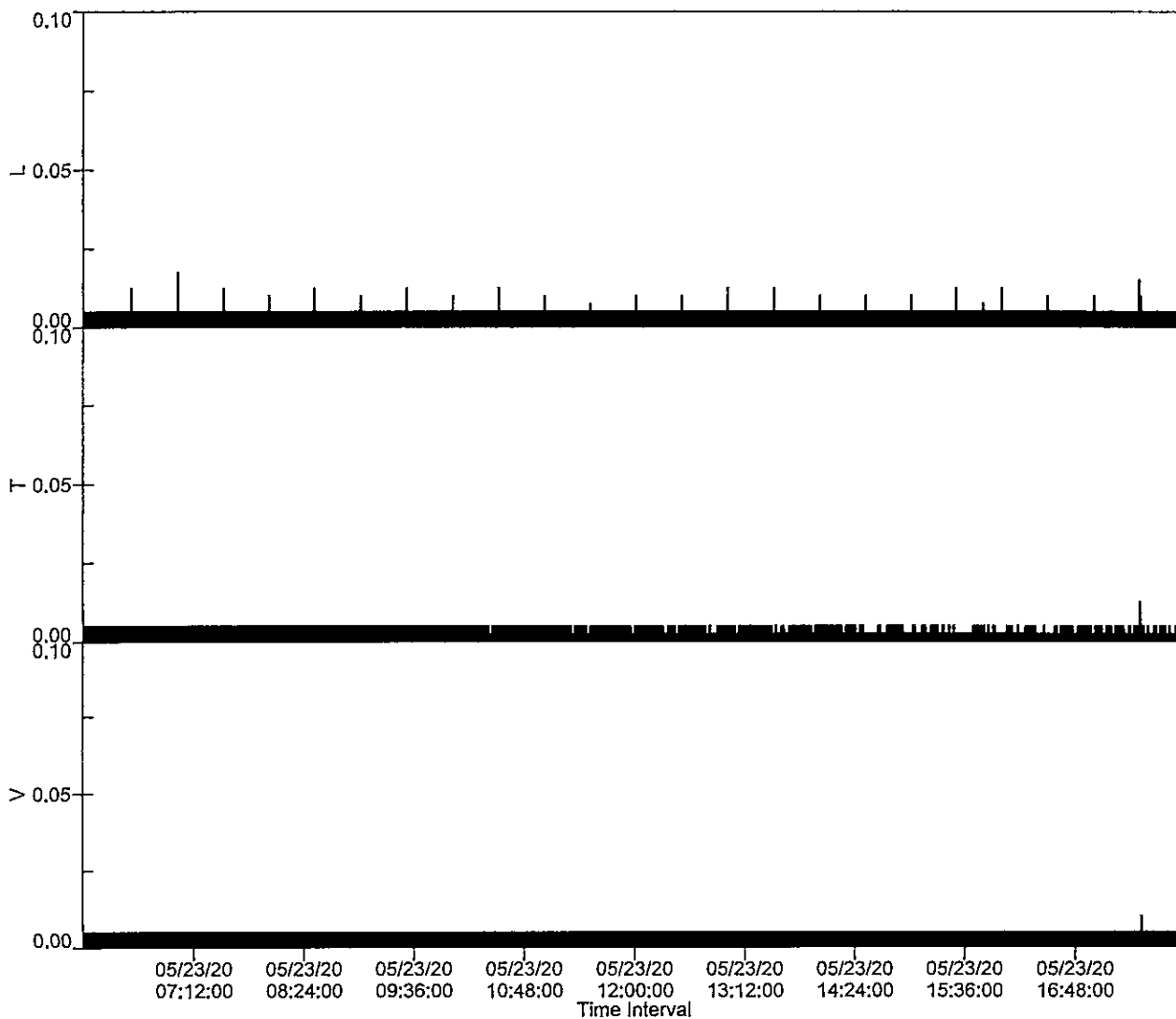
	L	T	V
PPV (in/s)	0.018	0.013	0.010
FREQ (Hz)	166.7	45.5	41.7
Peak Air Pressure:	94 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 04/06/2020
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 8289 Event: 18

Record Max PPV: 0.018 in/s Record Max DB: 94 db



SN: 8289 v3.66
Date: 05/24/2020 **Time:** 06:01:00
Event: 19
Client: BERGER CONST
Operation: EXCAVATION
Location: #1 WSNP
Distance: 50.
Operator: CTI INC
Comment: NORTH UNIT

**Continuous Monitor Recording
Summary Data**

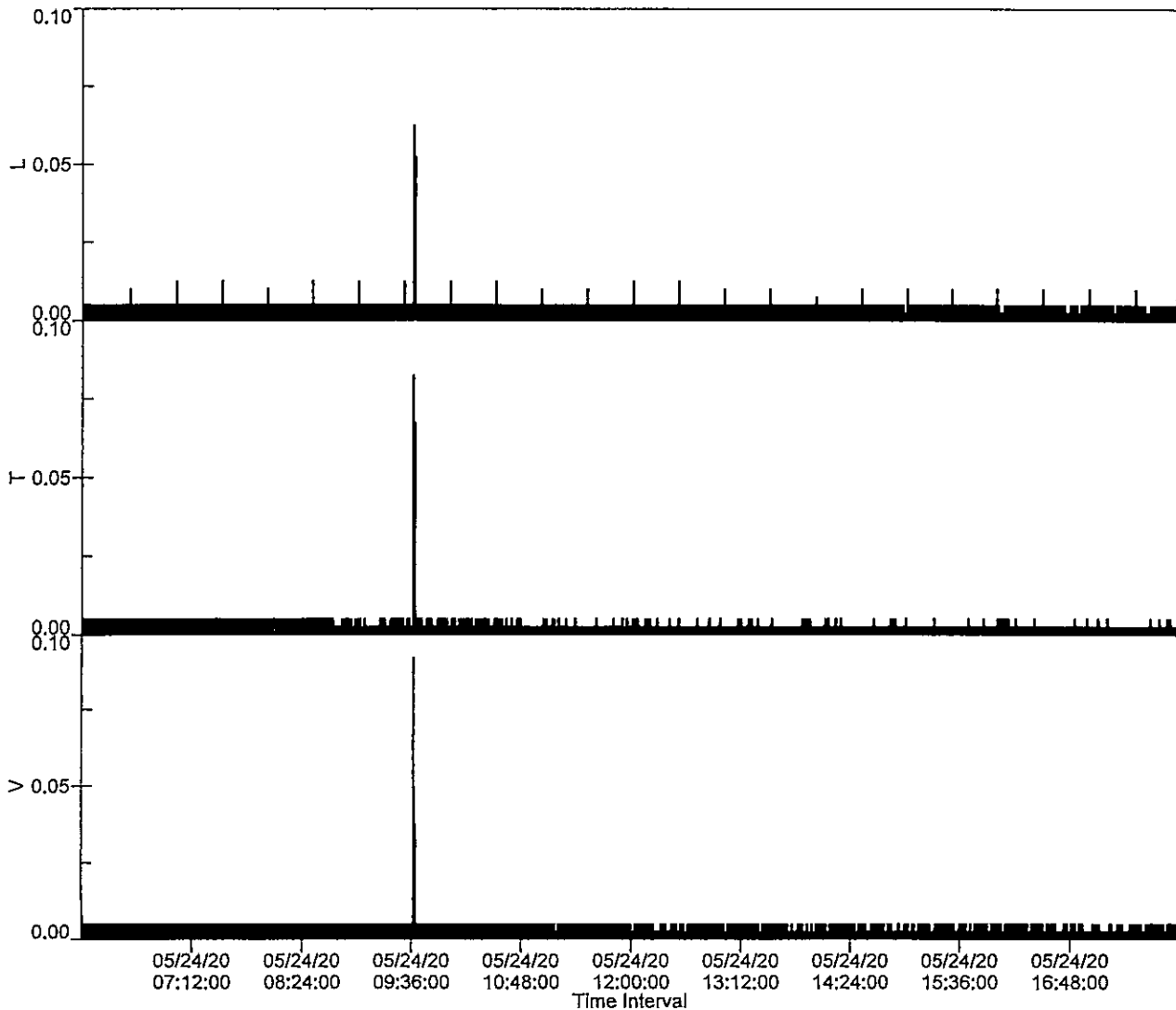
	L	T	V
PPV (in/s)	0.063	0.083	0.093
FREQ (Hz)	41.7	45.5	41.7
Peak Air Pressure: 94 db			
Recording Time: 718 minutes			
Sample Size: 1440			
Interval Size: 60 seconds			

Additional Info:

Shaketable Calibrated: 04/06/2020
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 8289 Event: 19

Record Max PPV: 0.093 in/s Record Max DB: 94 db



SN: 3559 v2.75
Date: 05/11/2020 **Time:** 06:01:00
Event: 5
Client: BERGER CONST
Operation: EXCAVATION
Location: #2 WSNP
Distance: 50.
Operator: CTI INC
Comment: NORTH MIDDLE UNIT

**Continuous Monitor Recording
Summary Data**

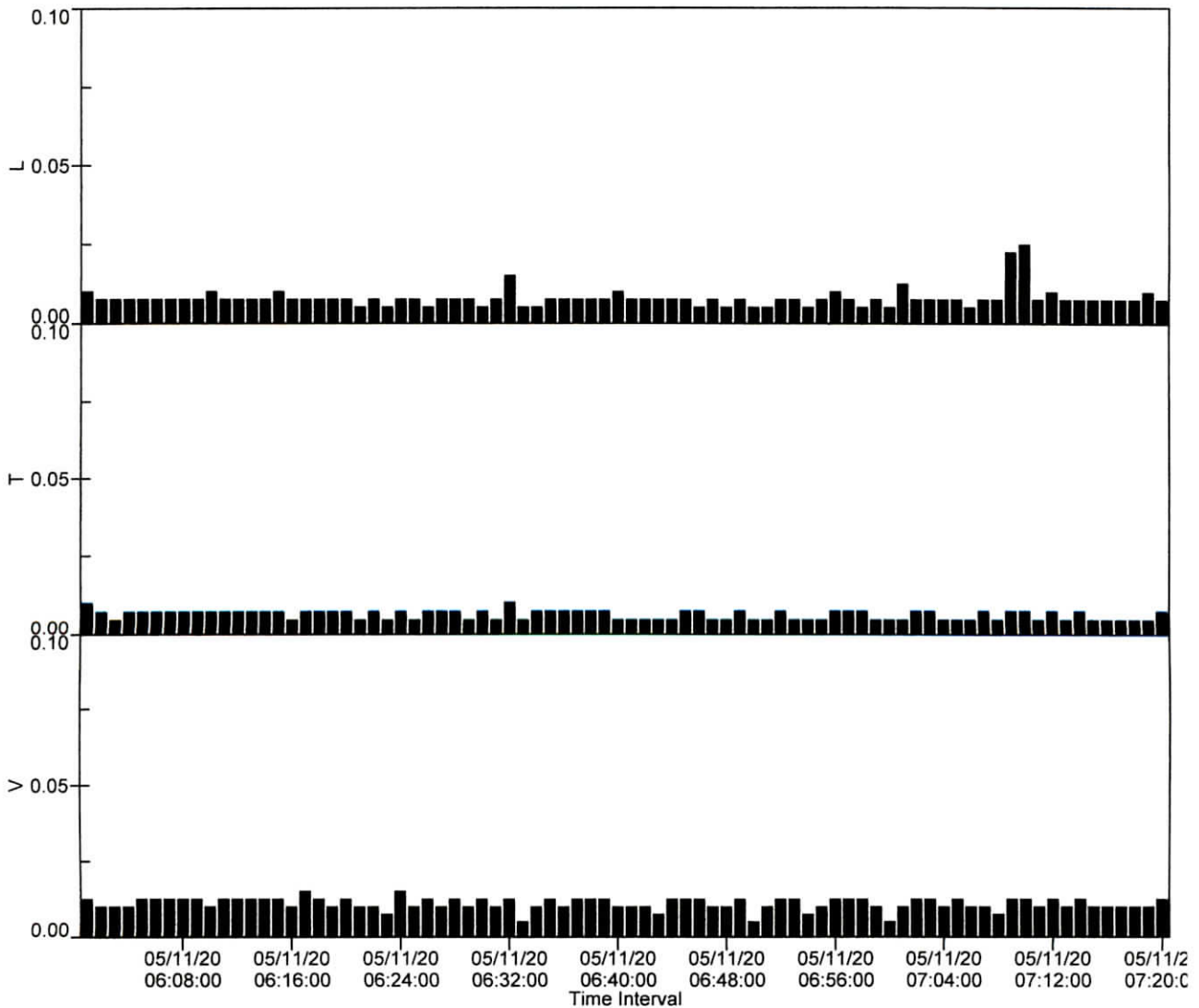
	L	T	V
PPV (in/s)	0.025	0.010	0.015
FREQ (Hz)	1.1	2.5	41.7
Peak Air Pressure:	100 db		
Recording Time:	80 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 03/27/2020
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3559 Event: 5

Record Max PPV: 0.025 in/s Record Max DB: 100 db



SN: 3559 v2.75
 Date: 05/11/2020 Time: 07:25:00
 Event: 6
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #2 WSNP
 Distance: 50.
 Operator: CTI INC
 Comment: NORTH MIDDLE UNIT

Continuous Monitor Recording
Summary Data

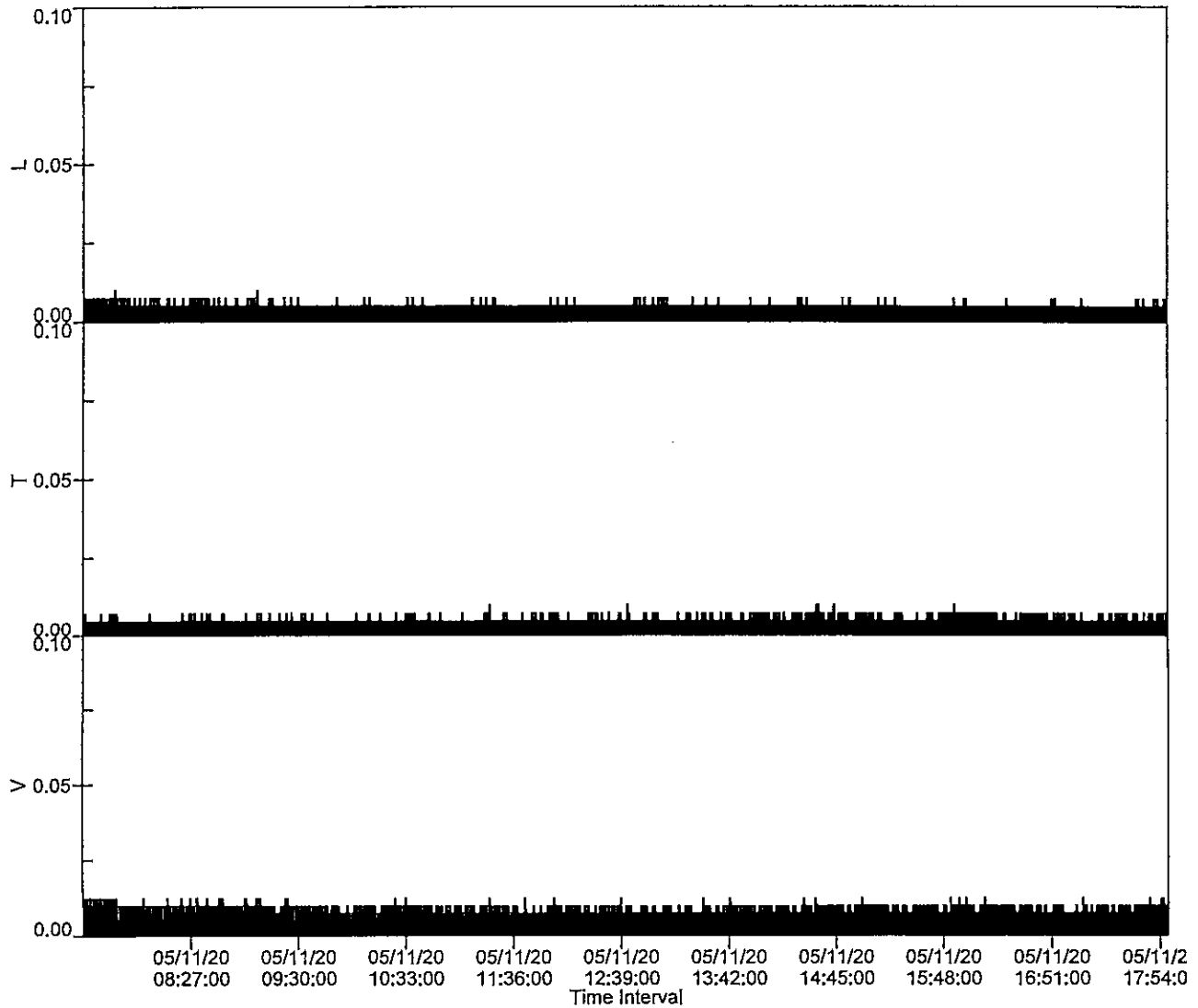
	L	T	V
PPV (in/s)	0.010	0.010	0.013
FREQ (Hz)	3.2	38.5	62.5
Peak Air Pressure:	79 db		
Recording Time:	634 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 03/27/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3559 Event: 6

Record Max PPV: 0.013 in/s Record Max DB: 79 db



SN: 3559 v2.75
Date: 05/12/2020 **Time:** 06:01:00
Event: 7
Client: BERGER CONST
Operation: EXCAVATION
Location: #2 WSNP
Distance: 50.
Operator: CTI INC
Comment: NORTH MIDDLE UNIT

**Continuous Monitor Recording
Summary Data**

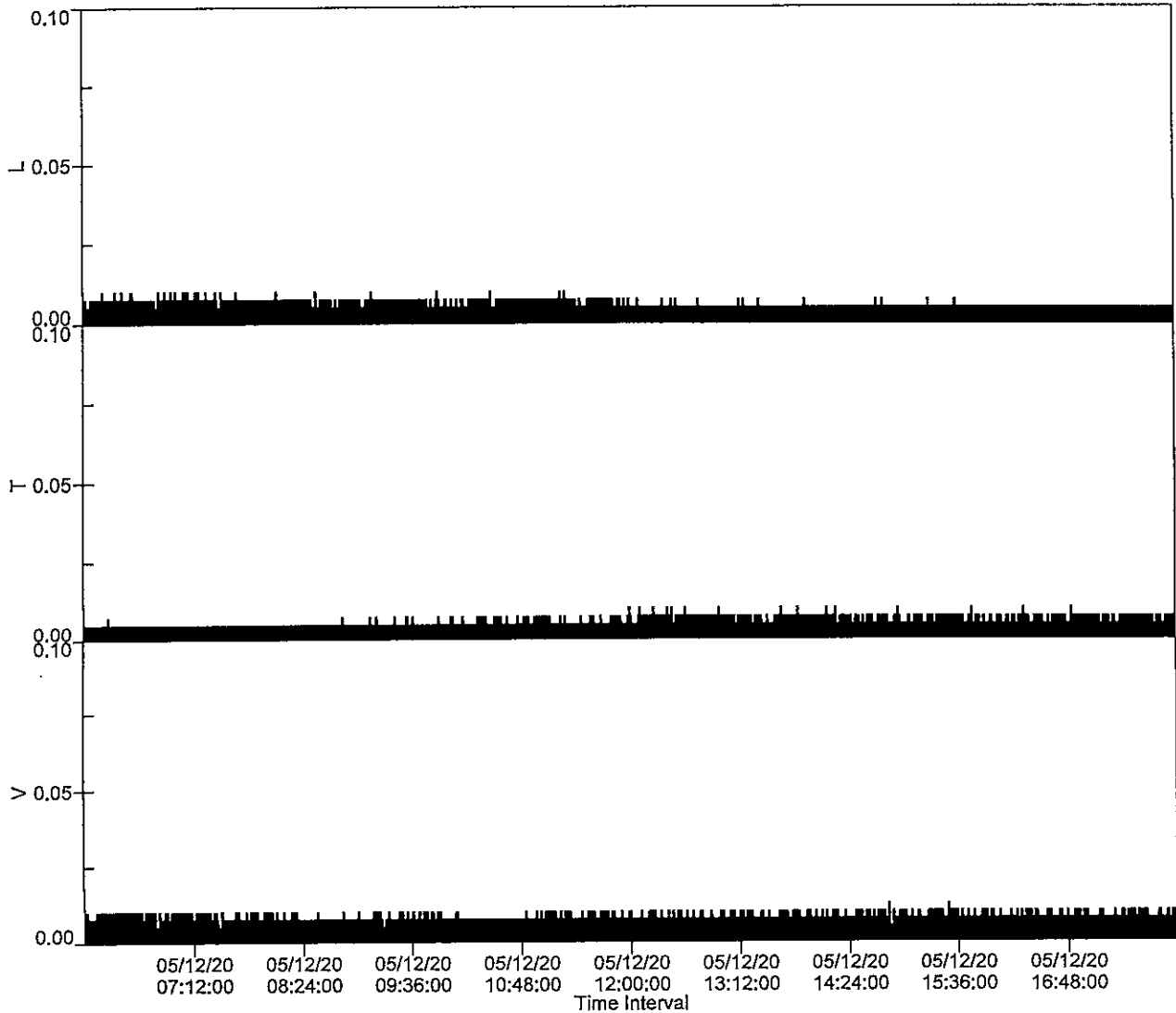
	L	T	V
PPV (in/s)	0.010	0.010	0.013
FREQ (Hz)	100.0	3.4	62.5
Peak Air Pressure:	81 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 03/27/2020
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3559 Event: 7

Record Max PPV: 0.013 in/s Record Max DB: 81 db



SN: 3559 v2.75
 Date: 05/13/2020 Time: 06:01:00
 Event: 8
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #2 WSNP
 Distance: 50.
 Operator: CTI INC
 Comment: NORTH MIDDLE UNIT

Continuous Monitor Recording
Summary Data

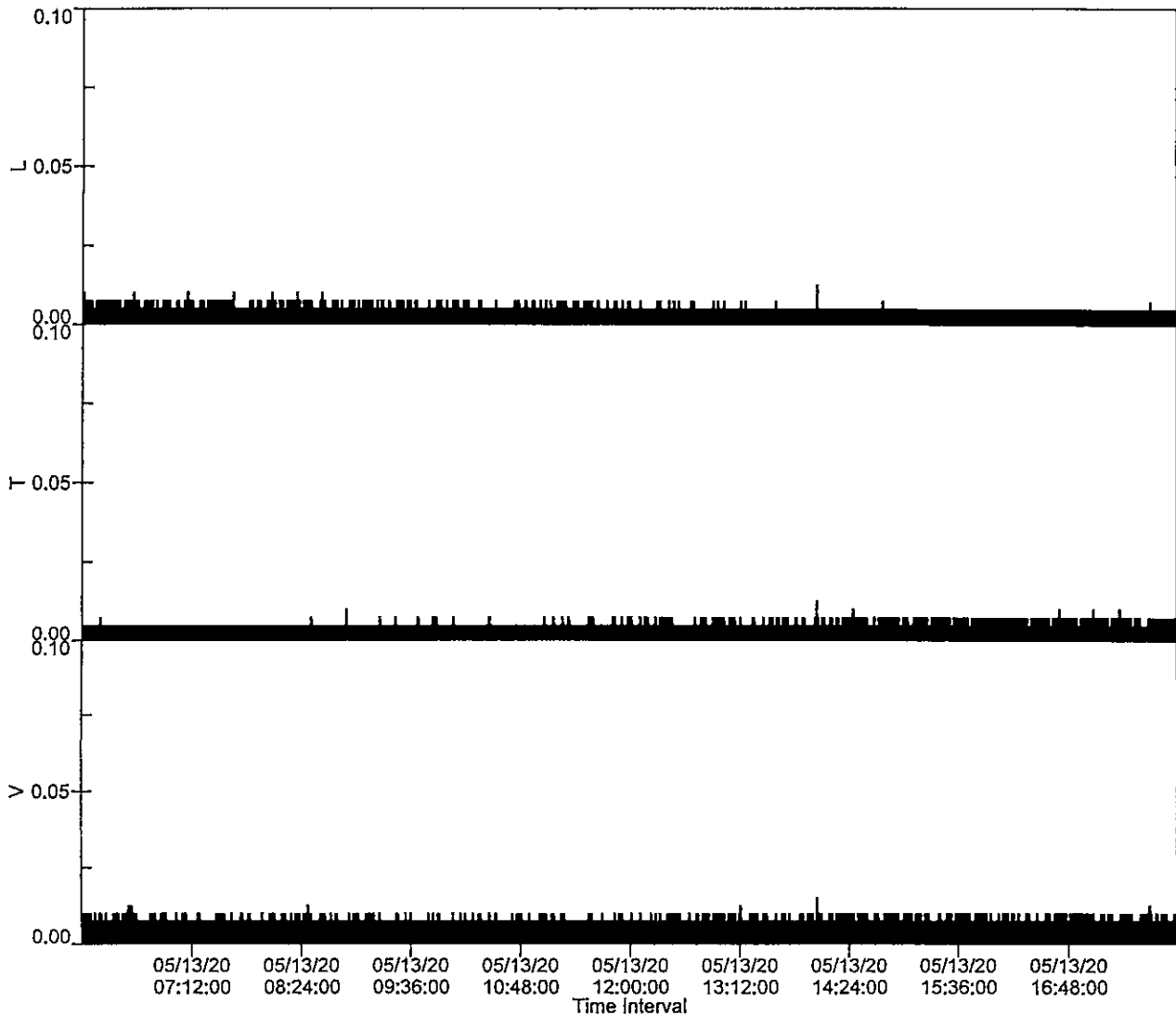
	L	T	V
PPV (in/s)	0.013	0.013	0.015
FREQ (Hz)	55.6	55.6	83.3
Peak Air Pressure:	79 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 03/27/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3559 Event: 8

Record Max PPV: 0.015 in/s Record Max DB: 79 db



SN: 3559 v2.75
 Date: 05/14/2020 Time: 06:01:00
 Event: 9
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #2 WSNP
 Distance: 50.
 Operator: CTI INC
 Comment: NORTH MIDDLE UNIT

Continuous Monitor Recording
Summary Data

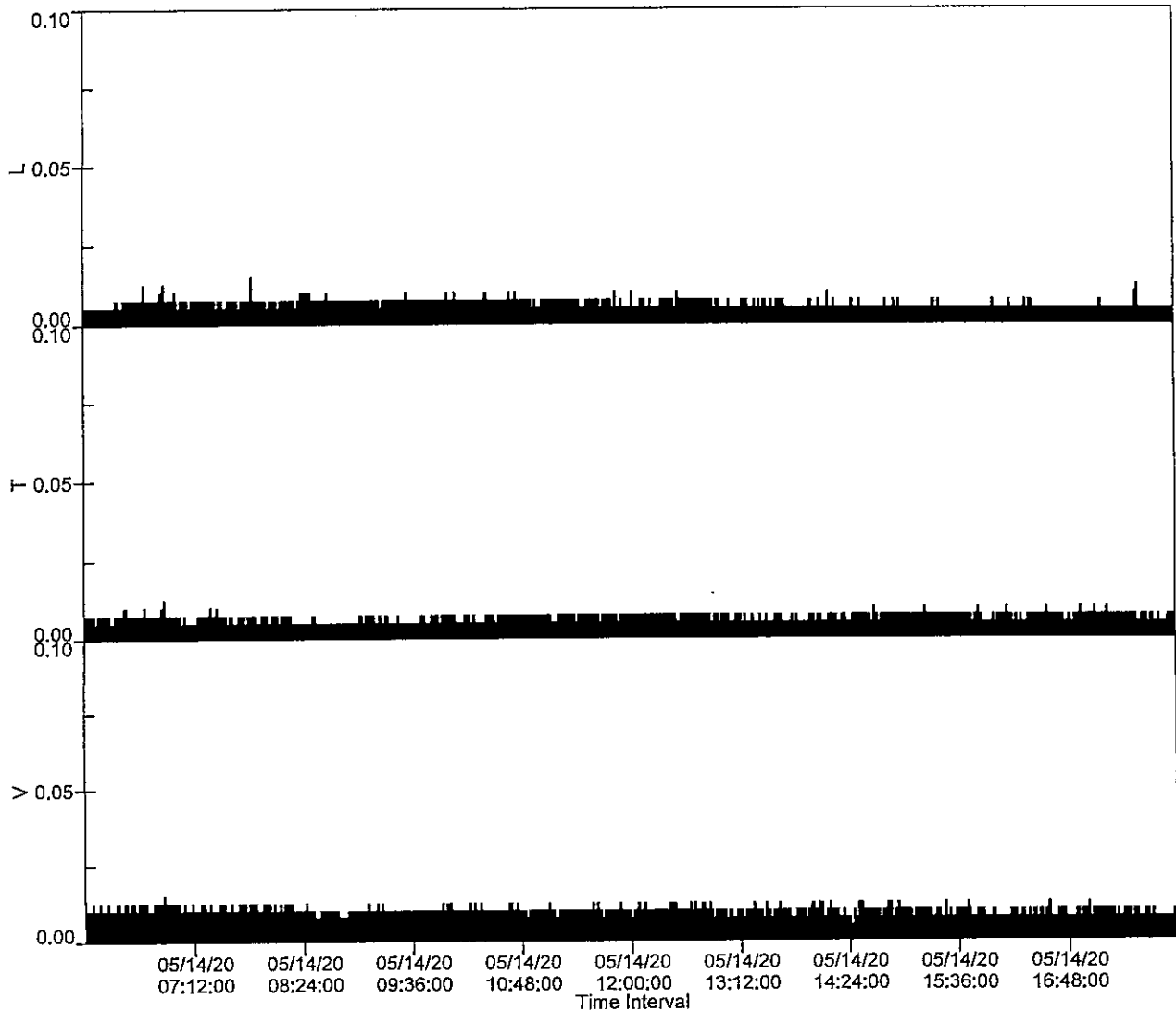
	L	T	V
PPV (in/s)	0.015	0.013	0.015
FREQ (Hz)	2.3	71.4	166.7
Peak Air Pressure:	79 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 03/27/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3559 Event: 9

Record Max PPV: 0.015 in/s Record Max DB: 79 db



SN: 3559 v2.75
 Date: 05/15/2020 Time: 06:01:00
 Event: 10
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #2 WSNP
 Distance: 50.
 Operator: CTI INC
 Comment: NORTH MIDDLE UNIT

Continuous Monitor Recording
Summary Data

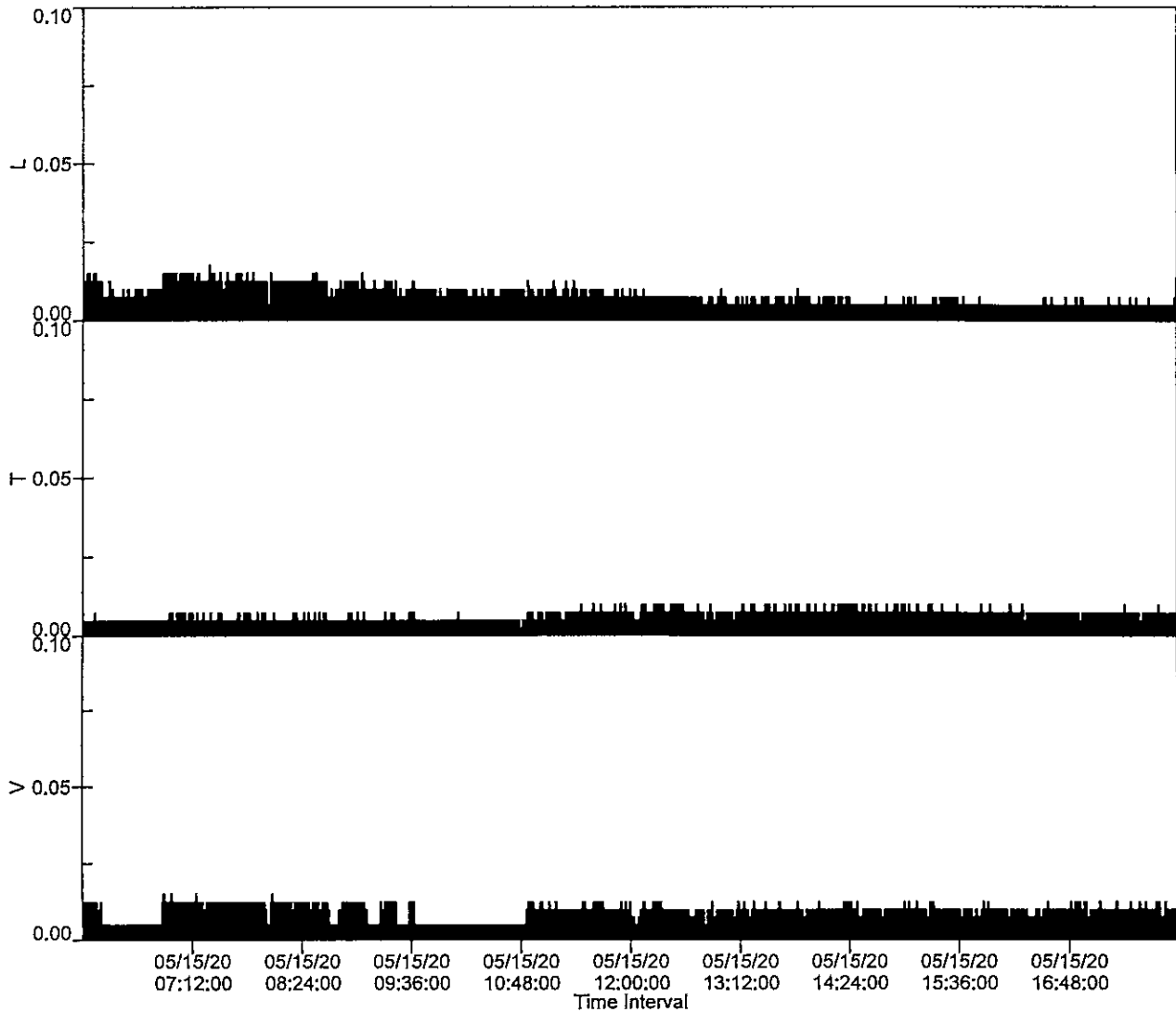
	L	T	V
PPV (in/s)	0.018	0.010	0.015
FREQ (Hz)	83.3	41.7	45.5
Peak Air Pressure:	81 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 03/27/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3559 Event: 10

Record Max PPV: 0.018 in/s Record Max DB: 81 db



SN: 3559 v2.75
 Date: 05/16/2020 Time: 06:01:00
 Event: 11
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #2 WSNP
 Distance: 50.
 Operator: CTI INC
 Comment: NORTH MIDDLE UNIT

Continuous Monitor Recording
Summary Data

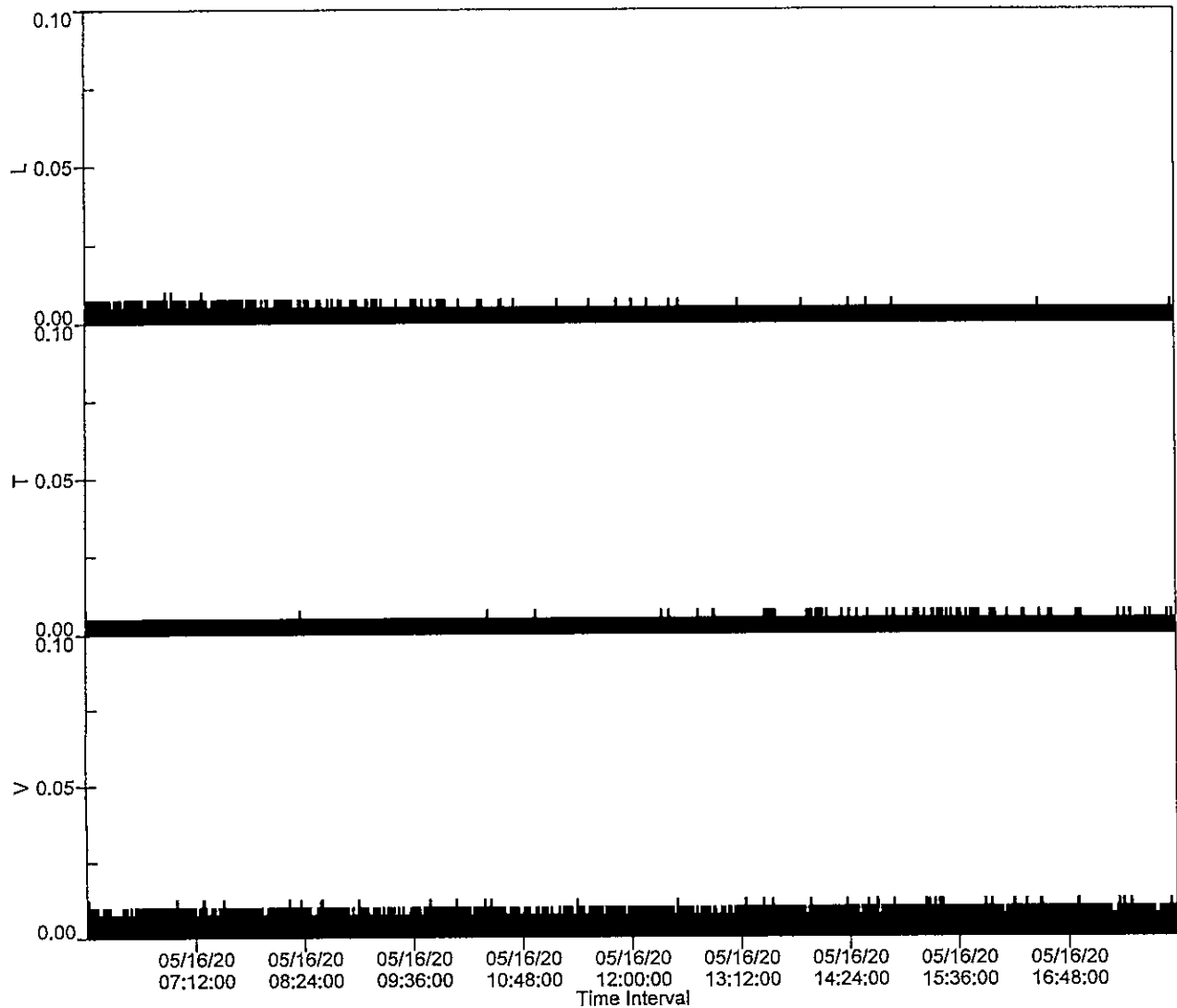
	L	T	V
PPV (in/s)	0.010	0.008	0.013
FREQ (Hz)	500.0	2.6	41.7
Peak Air Pressure:	78 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 03/27/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3559 Event: 11

Record Max PPV: 0.013 in/s Record Max DB: 78 db



SN: 3559 v2.75
 Date: 05/17/2020 Time: 06:01:00
 Event: 12
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #2 WSNP
 Distance: 50.
 Operator: CTI INC
 Comment: NORTH MIDDLE UNIT

Continuous Monitor Recording
Summary Data

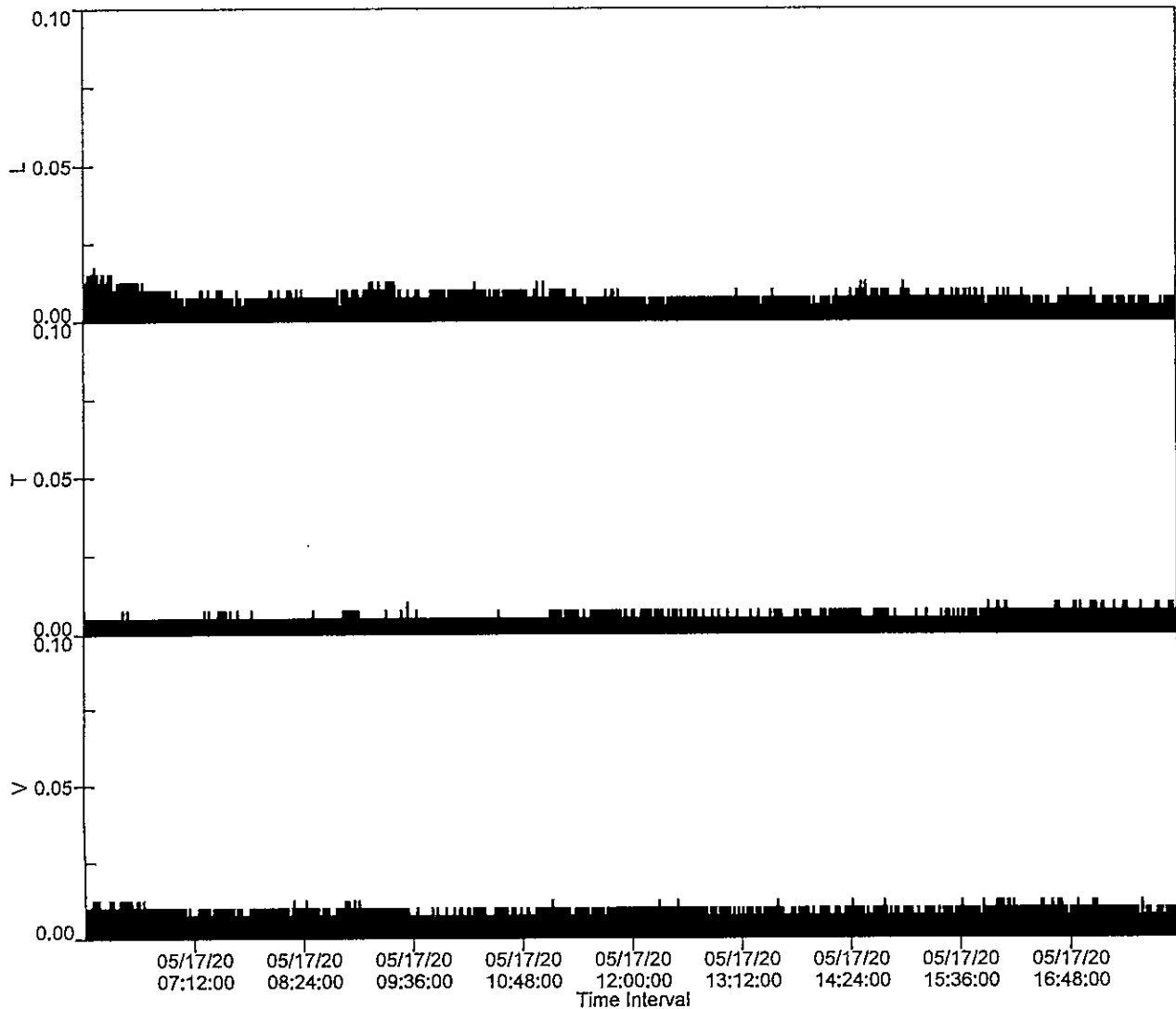
	L	T	V
PPV (in/s)	0.018	0.010	0.013
FREQ (Hz)	38.5	62.5	50.0
Peak Air Pressure:	79 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 03/27/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3559 Event: 12

Record Max PPV: 0.018 in/s Record Max DB: 79 db



SN: 3559 v2.75
 Date: 05/18/2020 Time: 06:01:00
 Event: 13
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #2 WSNP
 Distance: 50.
 Operator: CTI INC
 Comment: NORTH MIDDLE UNIT

Continuous Monitor Recording

Summary Data

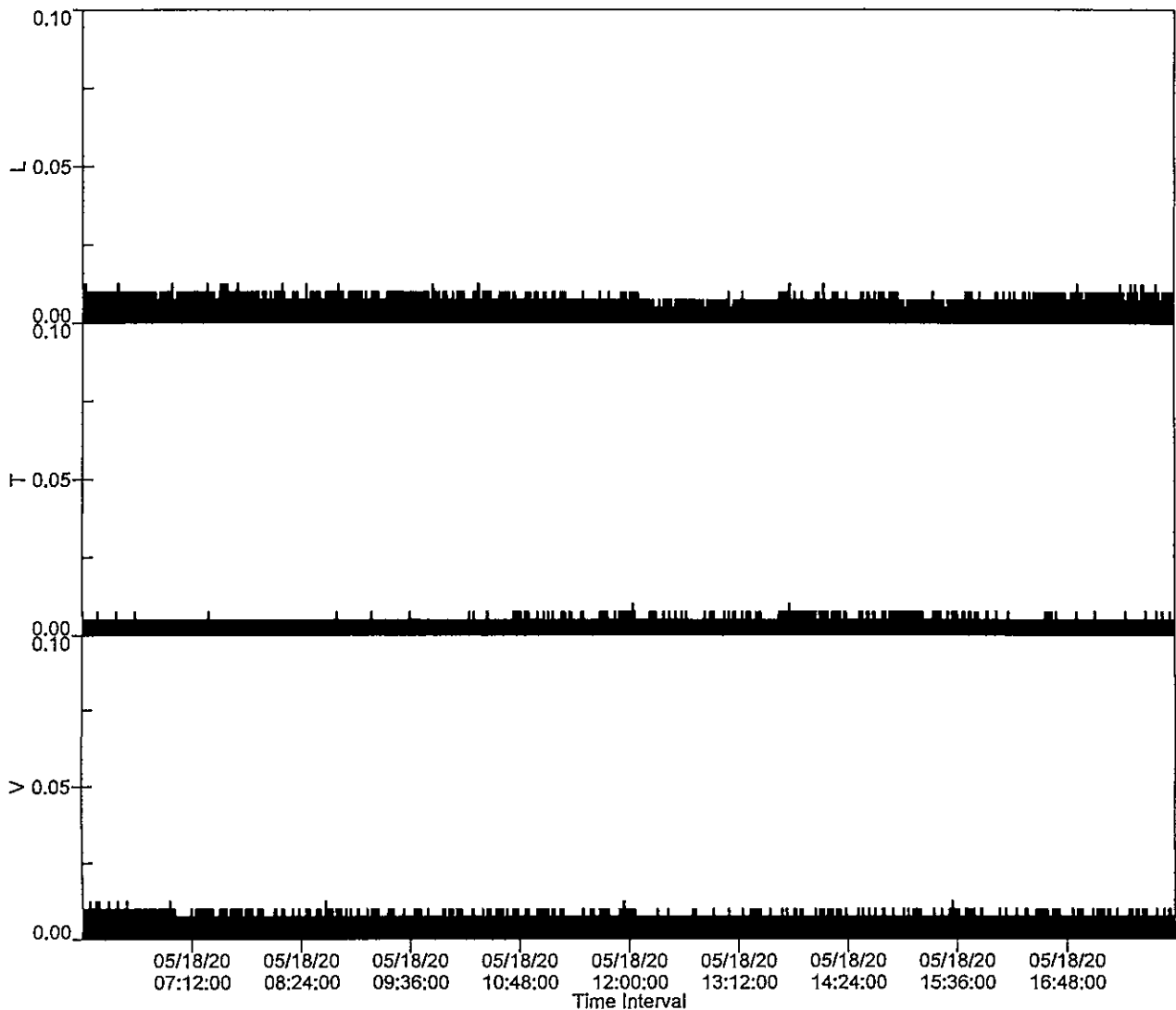
	L	T	V
PPV (in/s)	0.013	0.010	0.013
FREQ (Hz)	31.3	62.5	62.5
Peak Air Pressure:	79 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 03/27/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3559 Event: 13

Record Max PPV: 0.013 in/s Record Max DB: 79 db



SN: 3559 v2.75
 Date: 05/19/2020 Time: 06:01:00
 Event: 14
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #2 WSNP
 Distance: 50.
 Operator: CTI INC
 Comment: NORTH MIDDLE UNIT

Continuous Monitor Recording
Summary Data

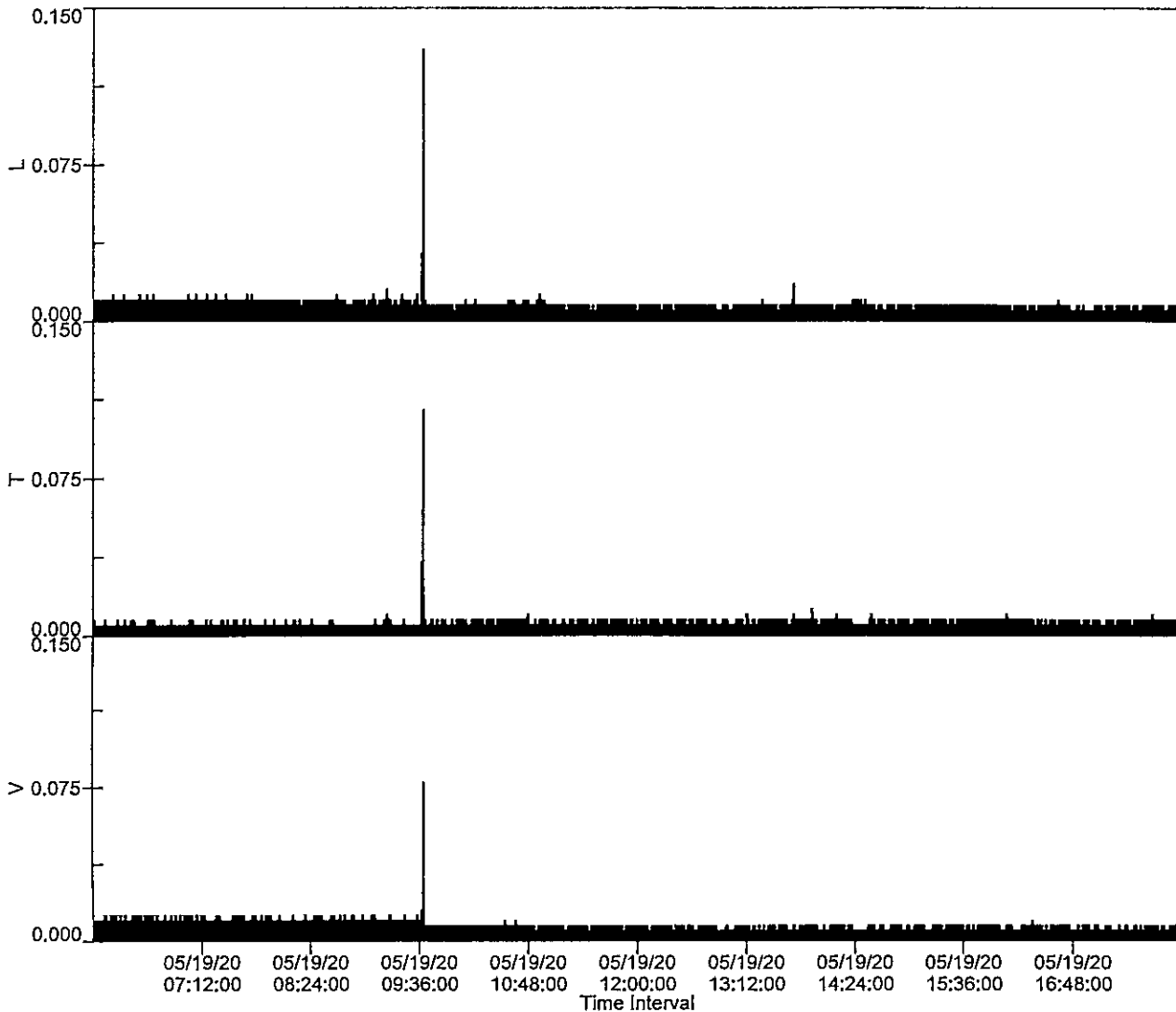
	L	T	V
PPV (in/s)	0.130	0.108	0.078
FREQ (Hz)	38.5	41.7	100.0
Peak Air Pressure:	79 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 03/27/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3559 Event: 14

Record Max PPV: 0.130 in/s Record Max DB: 79 db



SN: 3559 v2.75
 Date: 05/20/2020 Time: 06:01:00
 Event: 15
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #2 WSNP
 Distance: 50.
 Operator: CTI INC
 Comment: NORTH MIDDLE UNIT

Continuous Monitor Recording
Summary Data

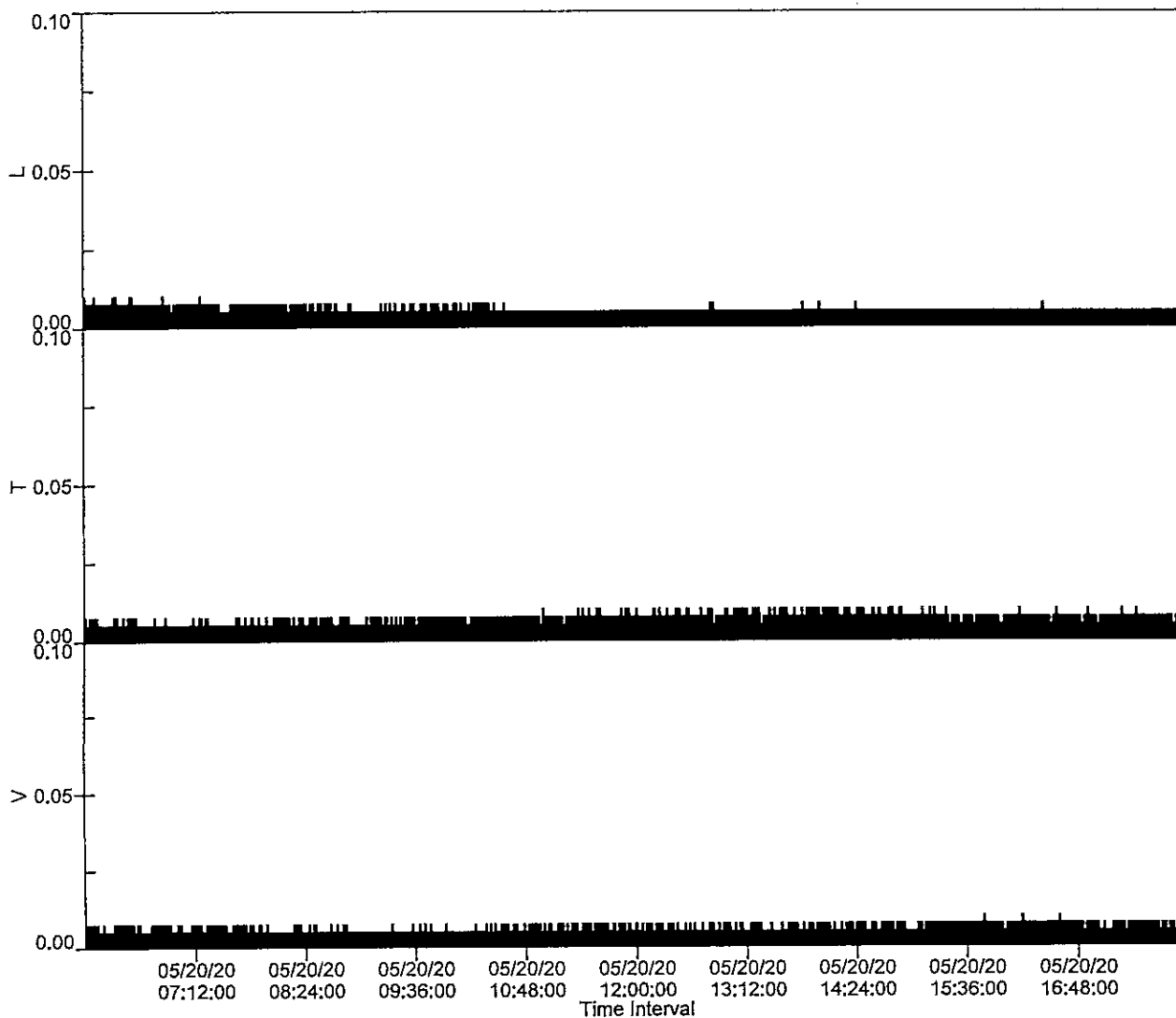
	L	T	V
PPV (in/s)	0.010	0.010	0.010
FREQ (Hz)	500.0	55.6	55.6
Peak Air Pressure:	78 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 03/27/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3559 Event: 15

Record Max PPV: 0.010 in/s Record Max DB: 78 db



SN: 3559 v2.75
 Date: 05/21/2020 Time: 06:01:00
 Event: 16
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #2 WSNP
 Distance: 50.
 Operator: CTI INC
 Comment: NORTH MIDDLE UNIT

Continuous Monitor Recording
Summary Data

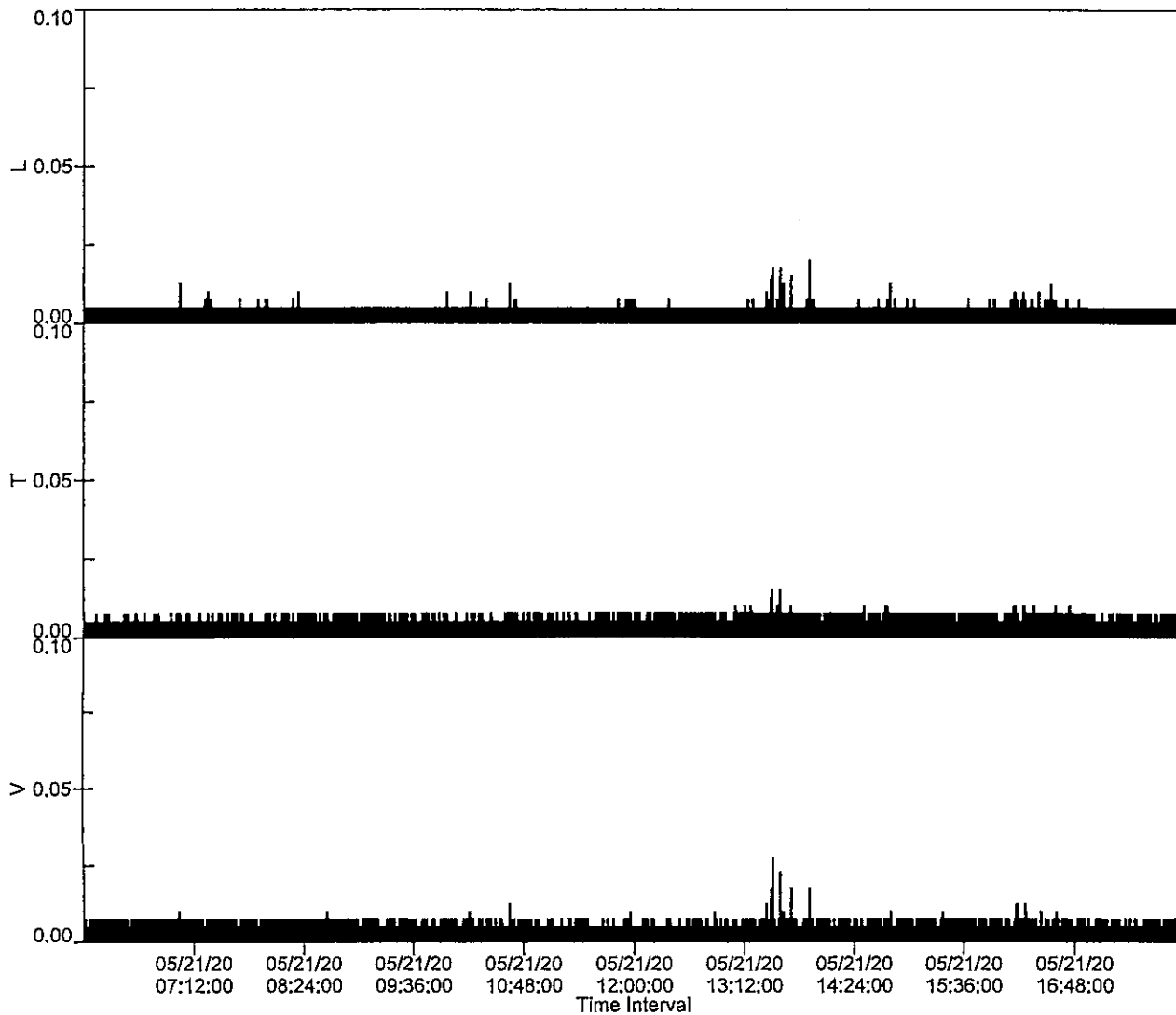
	L	T	V
PPV (in/s)	0.020	0.015	0.028
FREQ (Hz)	16.1	9.8	14.7
Peak Air Pressure:	78 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 03/27/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3559 Event: 16

Record Max PPV: 0.028 in/s Record Max DB: 78 db



SN: 3559 v2.75
 Date: 05/22/2020 Time: 06:01:00
 Event: 17
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #2 WSNP
 Distance: 50.
 Operator: CTI INC
 Comment: NORTH MIDDLE UNIT

Continuous Monitor Recording
Summary Data

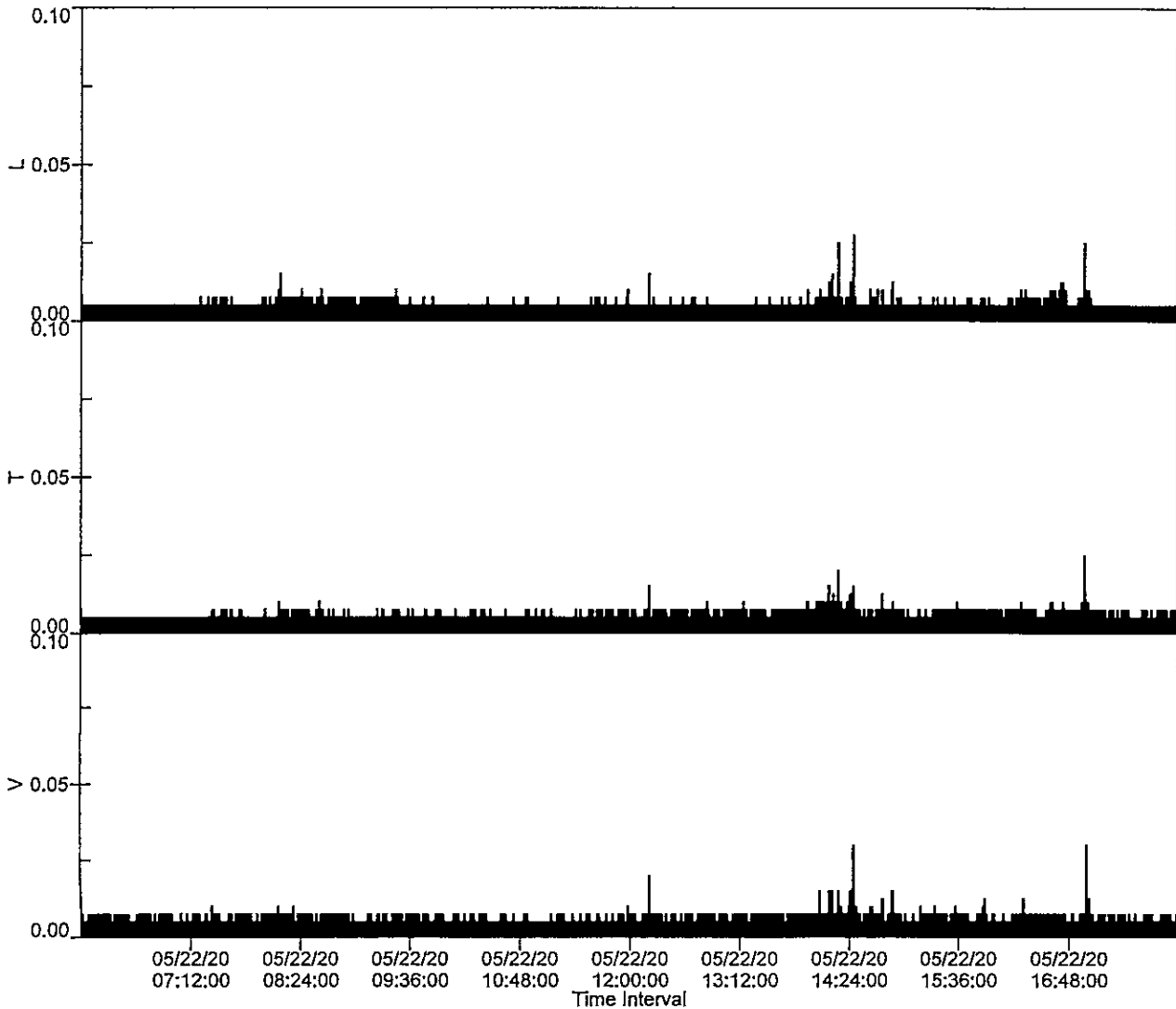
	L	T	V
PPV (in/s)	0.028	0.025	0.030
FREQ (Hz)	12.8	12.8	13.5
Peak Air Pressure:	78 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 03/27/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3559 Event: 17

Record Max PPV: 0.030 in/s Record Max DB: 78 db



SN: 3559 v2.75
Date: 05/23/2020 **Time:** 06:01:00
Event: 18
Client: BERGER CONST
Operation: EXCAVATION
Location: #2 WSNP
Distance: 50.
Operator: CTI INC
Comment: NORTH MIDDLE UNIT

**Continuous Monitor Recording
Summary Data**

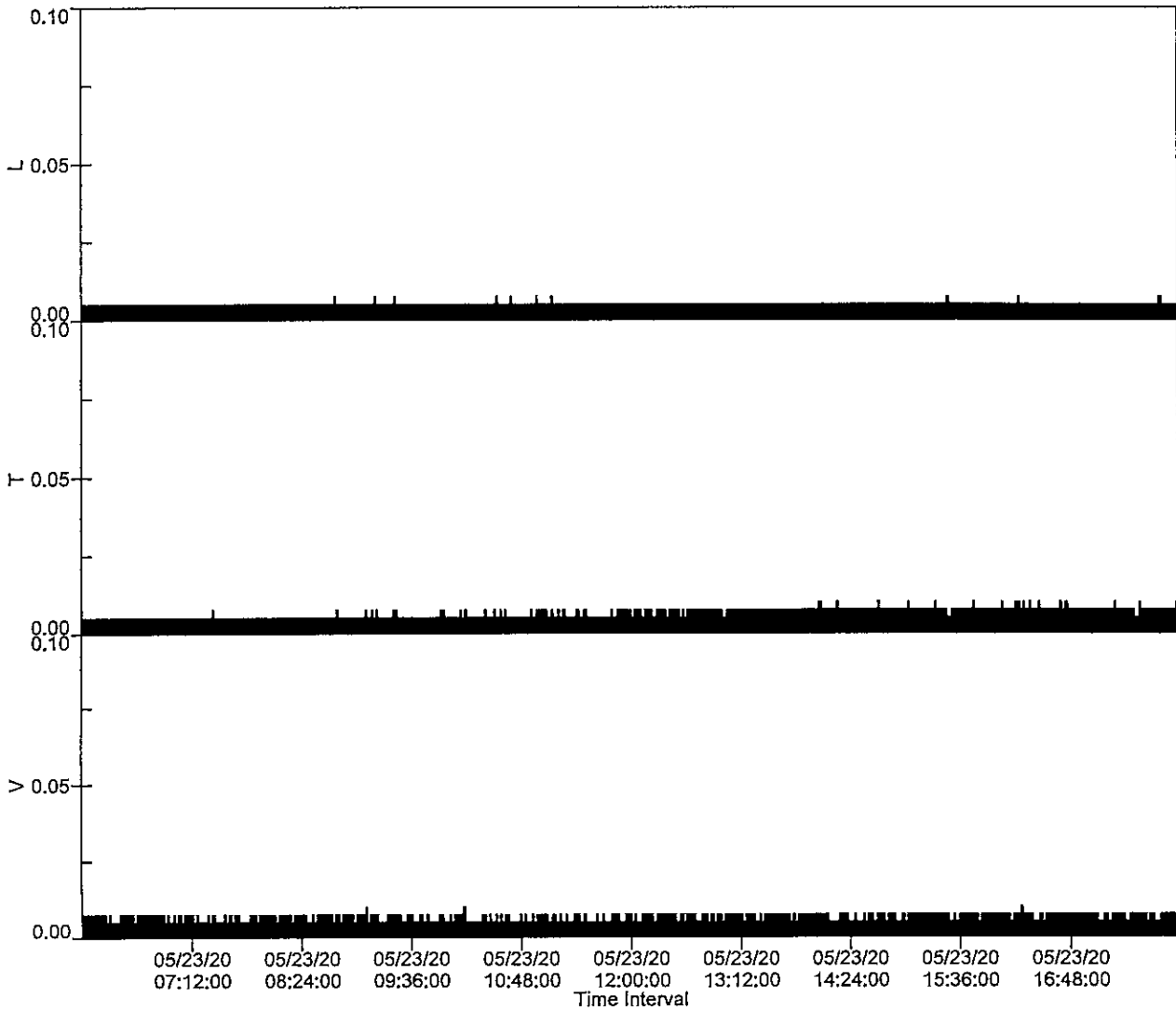
	L	T	V
PPV (in/s)	0.008	0.010	0.010
FREQ (Hz)	.3	41.7	250.0
Peak Air Pressure:	82 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 03/27/2020
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3559 Event: 18

Record Max PPV: 0.010 in/s Record Max DB: 82 db



SN: 3559 v2.75
 Date: 05/24/2020 Time: 06:01:00
 Event: 19
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #2 WSNP
 Distance: 50.
 Operator: CTI INC
 Comment: NORTH MIDDLE UNIT

Continuous Monitor Recording
Summary Data

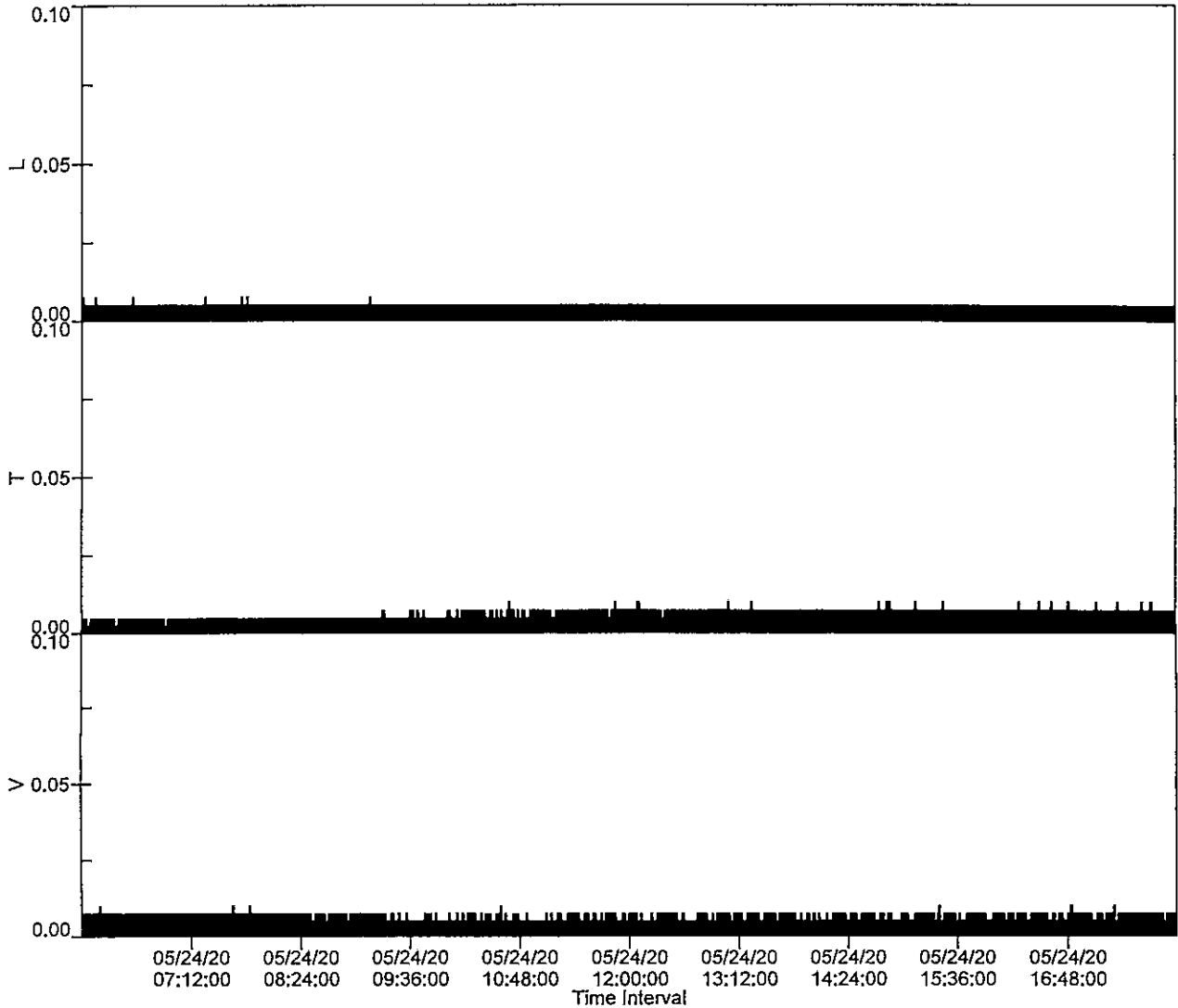
	L	T	V
PPV (in/s)	0.008	0.010	0.010
FREQ (Hz)	1.7	45.5	41.7
Peak Air Pressure:	78 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 03/27/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3559 Event: 19

Record Max PPV: 0.010 in/s Record Max DB: 78 db



SN: 3804 v3.22
 Date: 05/11/2020 Time: 06:01:00
 Event: 5
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #3 WSNP
 Distance: 25.
 Operator: CTI INC
 Comment: NE CORNER OF SITE

Continuous Monitor Recording
Summary Data

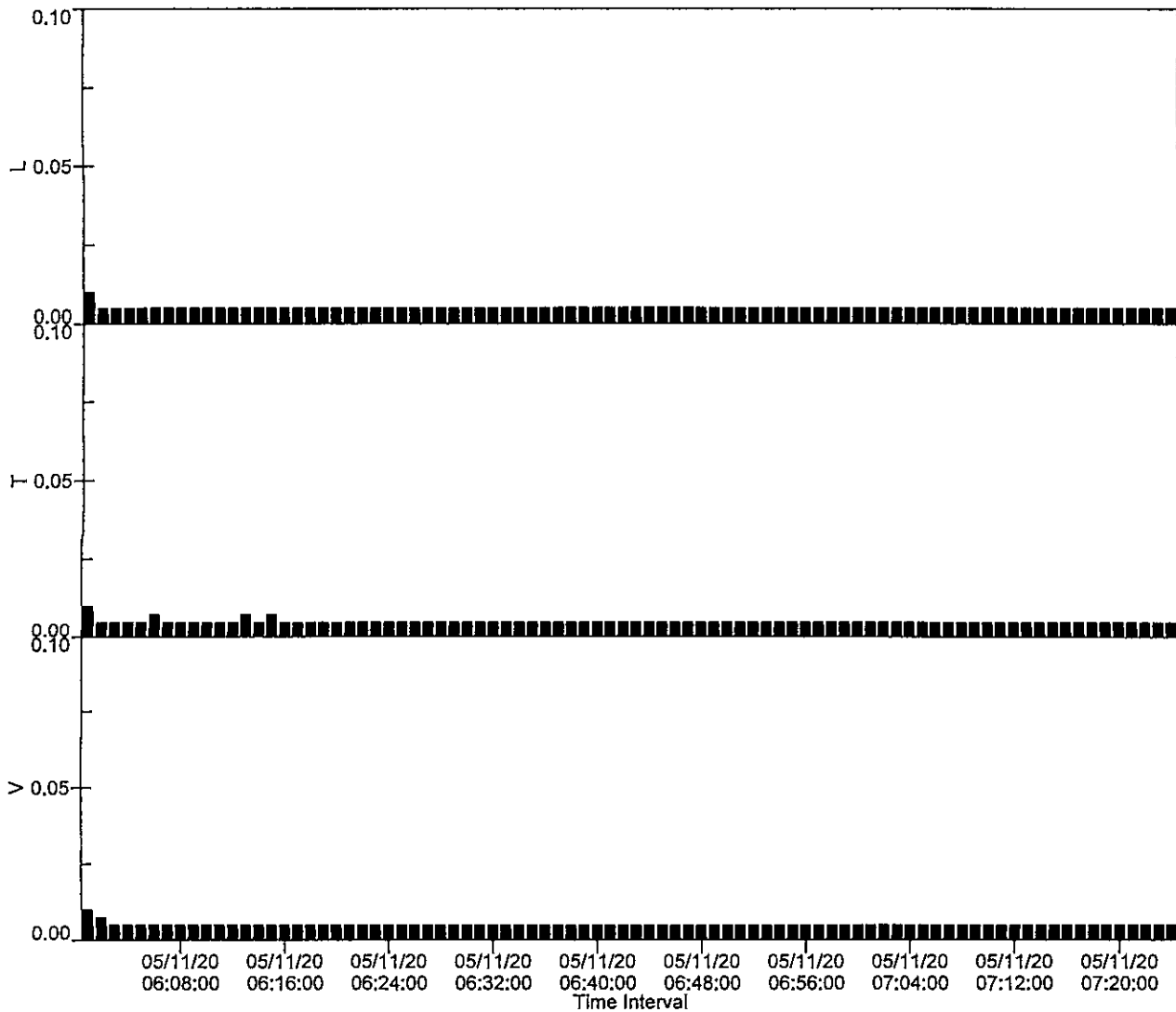
	L	T	V
PPV (in/s)	0.010	0.010	0.010
FREQ (Hz)	.3	2.1	.3
Peak Air Pressure: 97 db			
Recording Time: 84 minutes			
Sample Size: 1440			
Interval Size: 60 seconds			

Additional Info:

Shaketable Calibrated: 03/26/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3804 Event: 5

Record Max PPV: 0.010 in/s Record Max DB: 97 db



SN: 3804 v3.22
 Date: 05/11/2020 Time: 07:28:00
 Event: 6
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #3 WSNP
 Distance: 25.
 Operator: CTI INC
 Comment: NE CORNER OF SITE

Continuous Monitor Recording
Summary Data

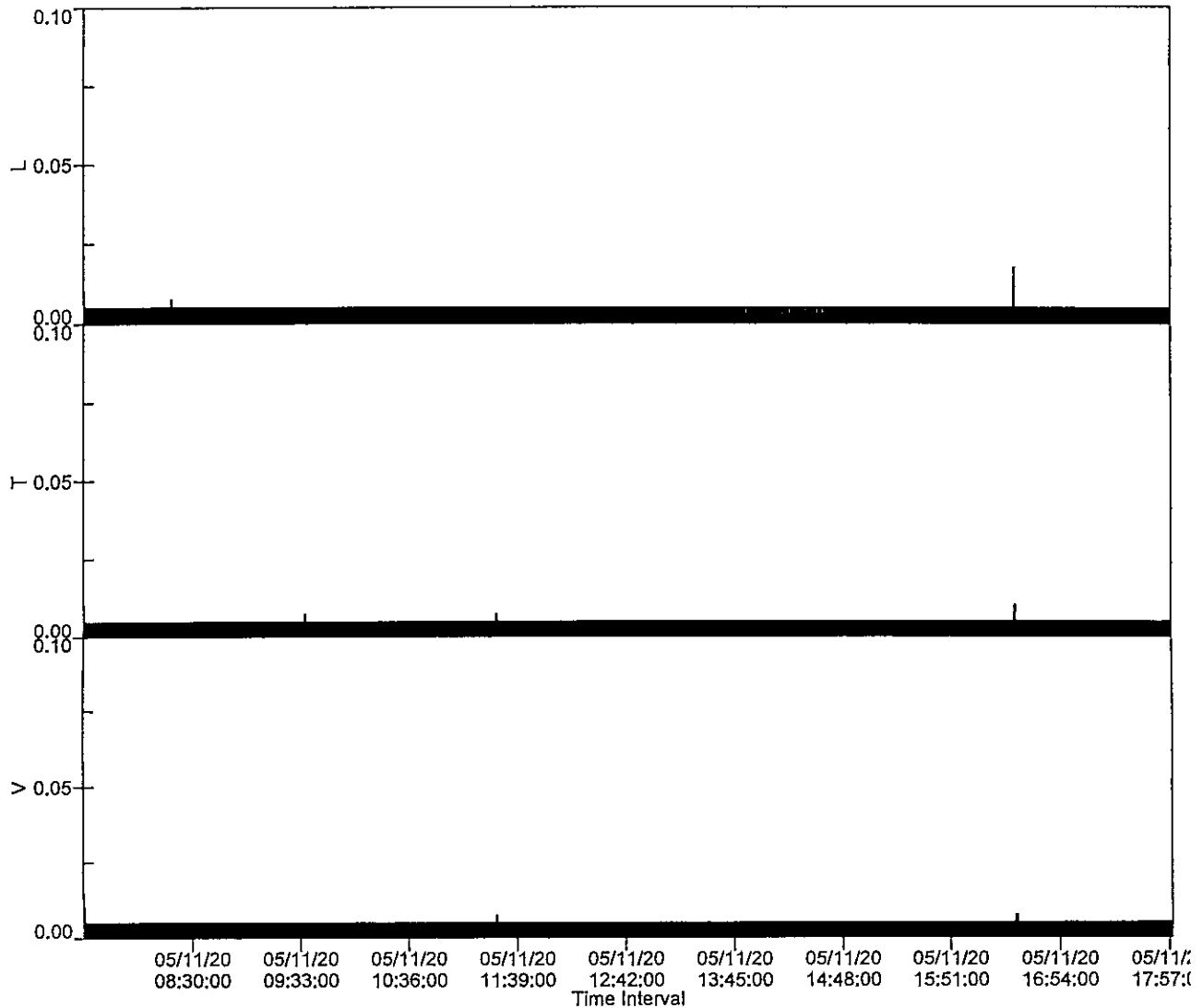
	L	T	V
PPV (in/s)	0.018	0.010	0.010
FREQ (Hz)	55.6	2.3	.2
Peak Air Pressure:	78 db		
Recording Time:	631 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 03/26/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3804 Event: 6

Record Max PPV: 0.018 in/s Record Max DB: 78 db



SN: 3804 v3.22
 Date: 05/12/2020 Time: 06:01:00
 Event: 7
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #3 WSNP
 Distance: 25.
 Operator: CTI INC
 Comment: NE CORNER OF SITE

Continuous Monitor Recording
Summary Data

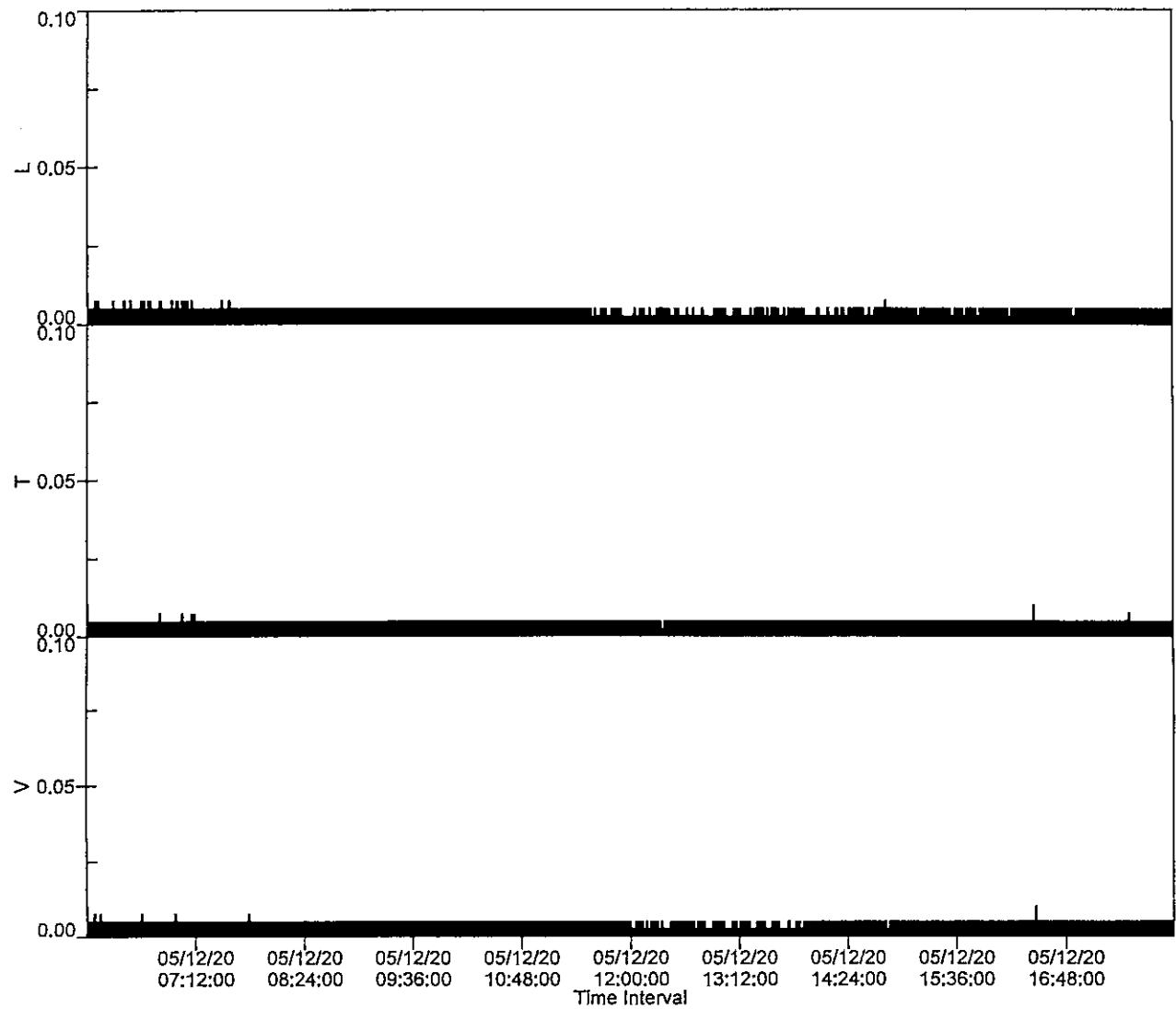
	L	T	V
PPV (in/s)	0.010	0.010	0.010
FREQ (Hz)	.3	17.2	.2
Peak Air Pressure:	78 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 03/26/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3804 Event: 7

Record Max PPV: 0.010 in/s Record Max DB: 78 db



SN: 3804 v3.22
 Date: 05/13/2020 Time: 06:01:00
 Event: 8
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #3 WSNSP
 Distance: 25.
 Operator: CTI INC
 Comment: NE CORNER OF SITE

Continuous Monitor Recording

Summary Data

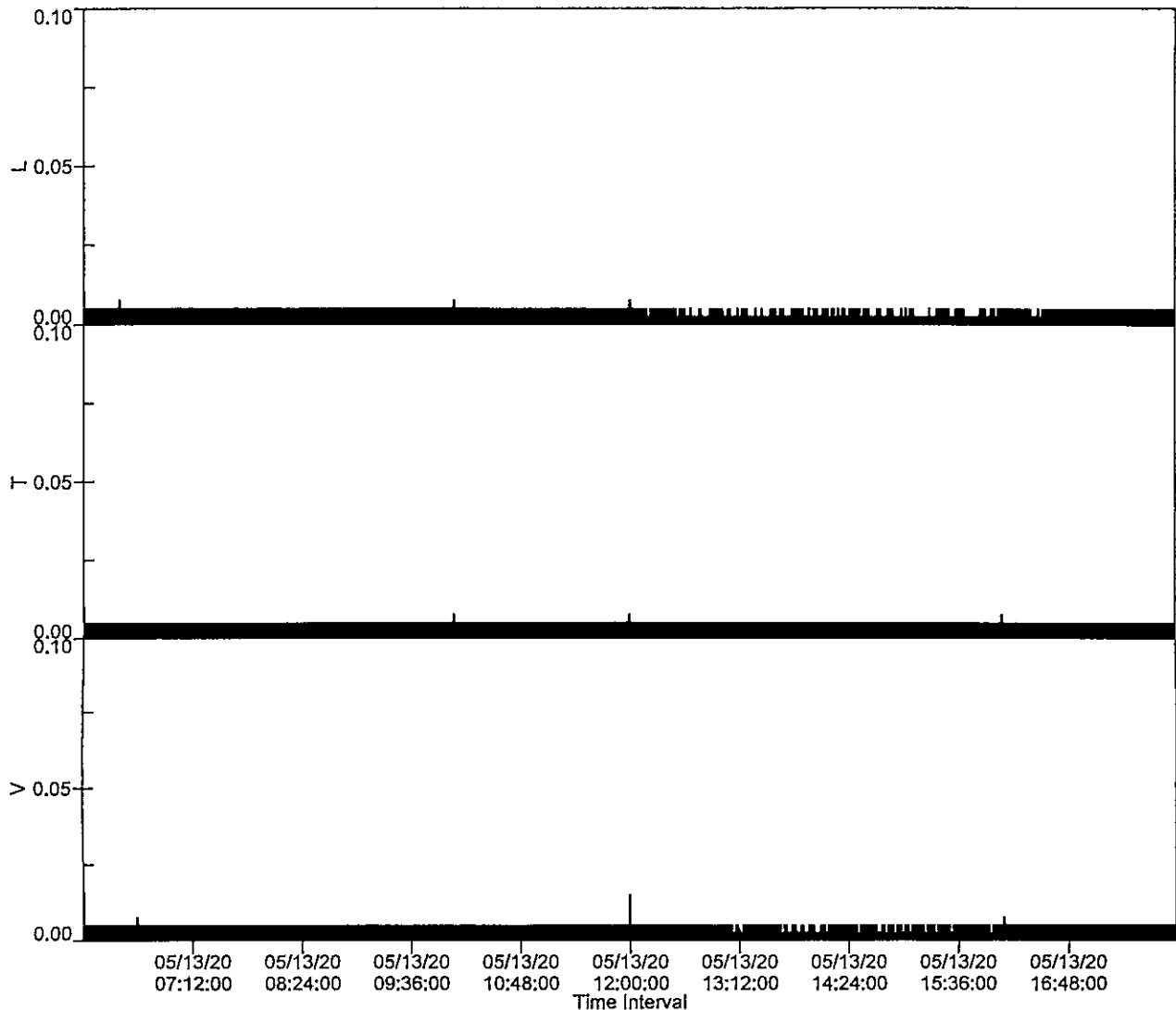
	L	T	V
PPV (in/s)	0.010	0.010	0.015
FREQ (Hz)	.3	2.4	71.4
Peak Air Pressure:	78 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 03/26/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3804 Event: 8

Record Max PPV: 0.015 in/s Record Max DB: 78 db



SN: 3804 v3.22
 Date: 05/14/2020 Time: 06:01:00
 Event: 9
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #3 WSNP
 Distance: 25.
 Operator: CTI INC
 Comment: NE CORNER OF SITE

Continuous Monitor Recording
Summary Data

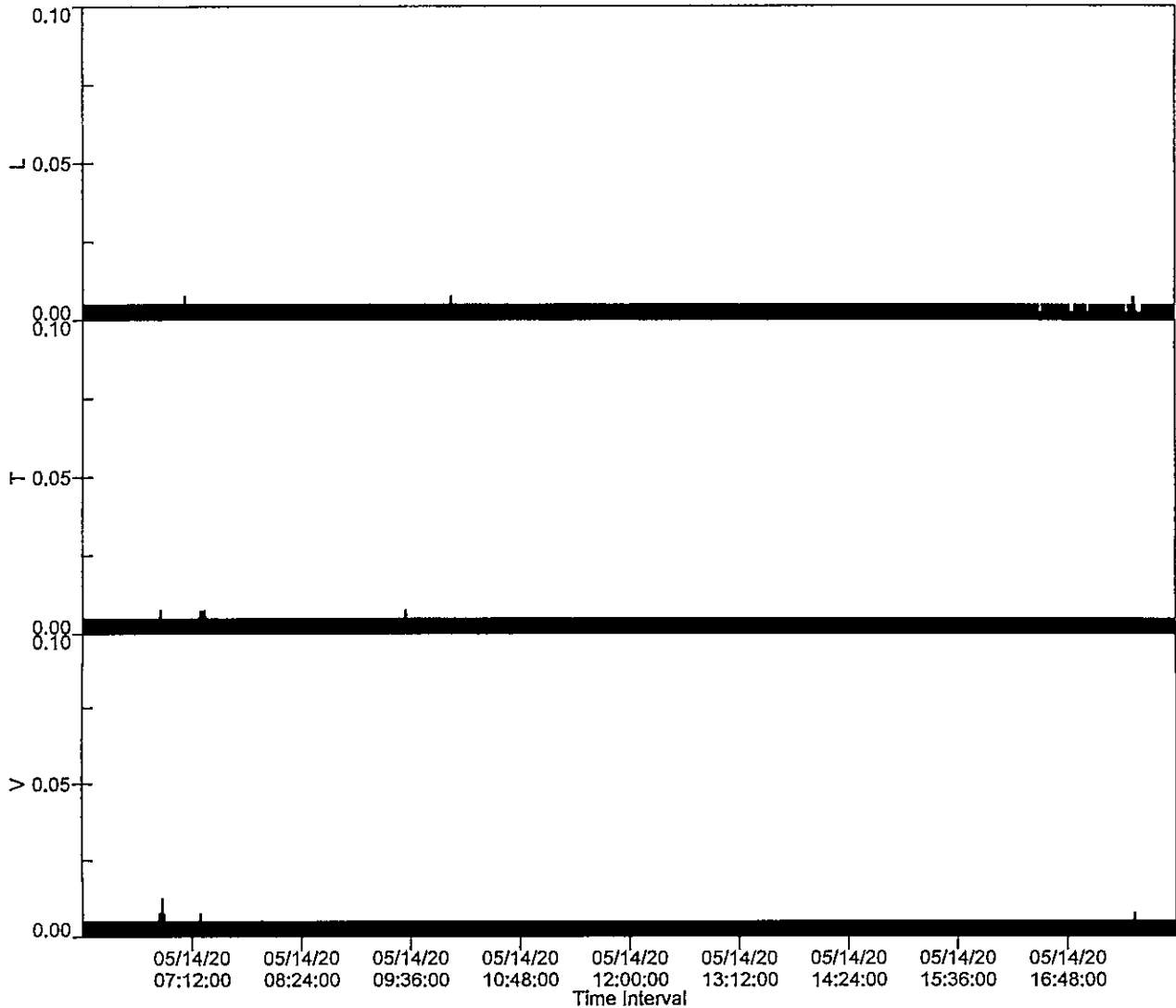
	L	T	V
PPV (in/s)	0.010	0.010	0.013
FREQ (Hz)	.3	2.1	100.0
Peak Air Pressure:	86 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 03/26/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3804 Event: 9

Record Max PPV: 0.013 in/s Record Max DB: 86 db



SN: 3804 v3.22
 Date: 05/15/2020 Time: 06:01:00
 Event: 10
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #3 WSNP
 Distance: 25.
 Operator: CTI INC
 Comment: NE CORNER OF SITE

Continuous Monitor Recording

Summary Data

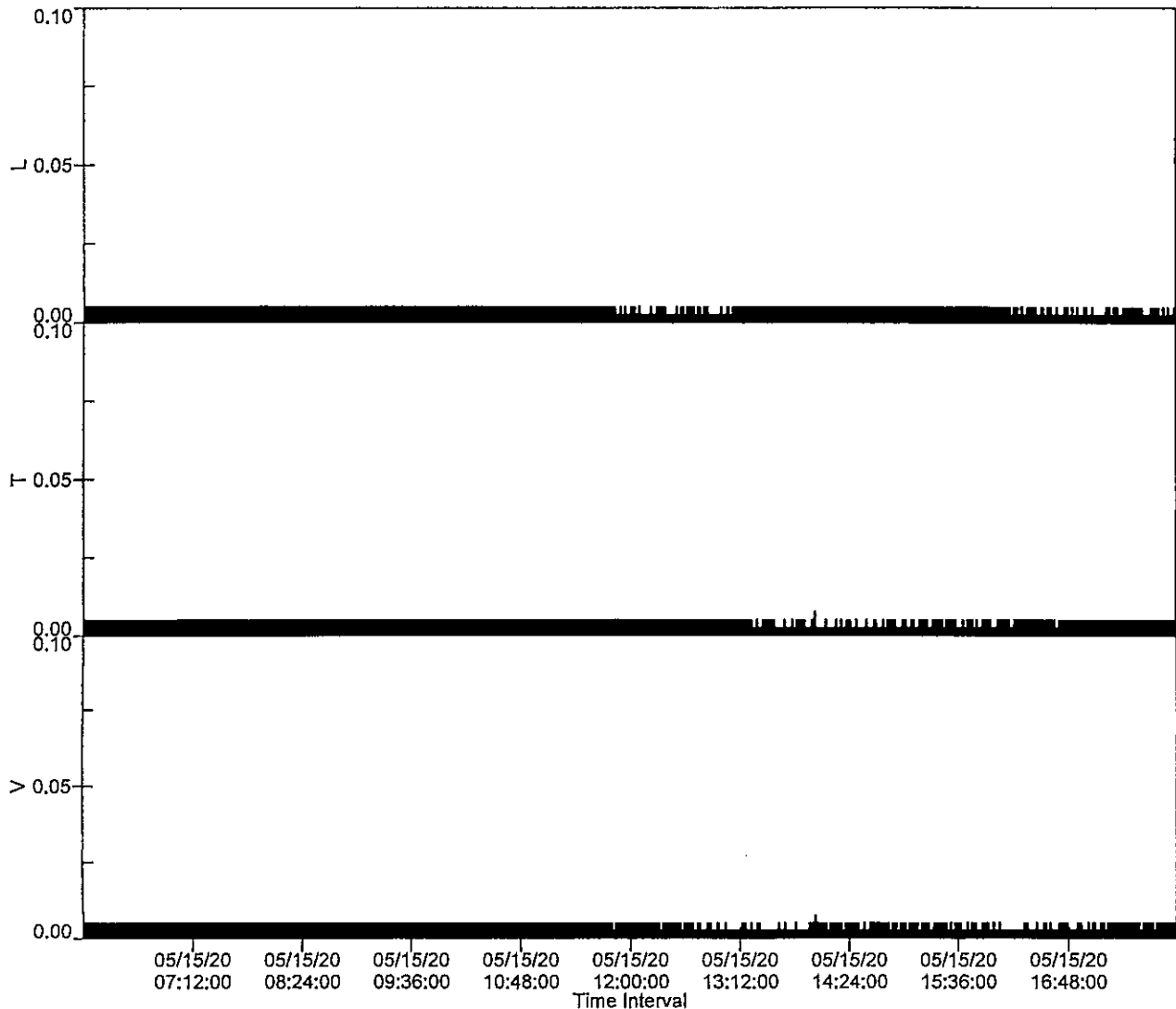
	L	T	V
PPV (in/s)	0.010	0.010	0.008
FREQ (Hz)	.3	5.6	.3
Peak Air Pressure: 76 db			
Recording Time: 718 minutes			
Sample Size: 1440			
Interval Size: 60 seconds			

Additional Info:

Shaketable Calibrated: 03/26/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3804 Event: 10

Record Max PPV: 0.010 in/s Record Max DB: 76 db



SN: 3804 v3.22
Date: 05/16/2020 **Time:** 06:01:00
Event: 11
Client: BERGER CONST
Operation: EXCAVATION
Location: #3 WSNP
Distance: 25.
Operator: CTI INC
Comment: NE CORNER OF SITE

**Continuous Monitor Recording
Summary Data**

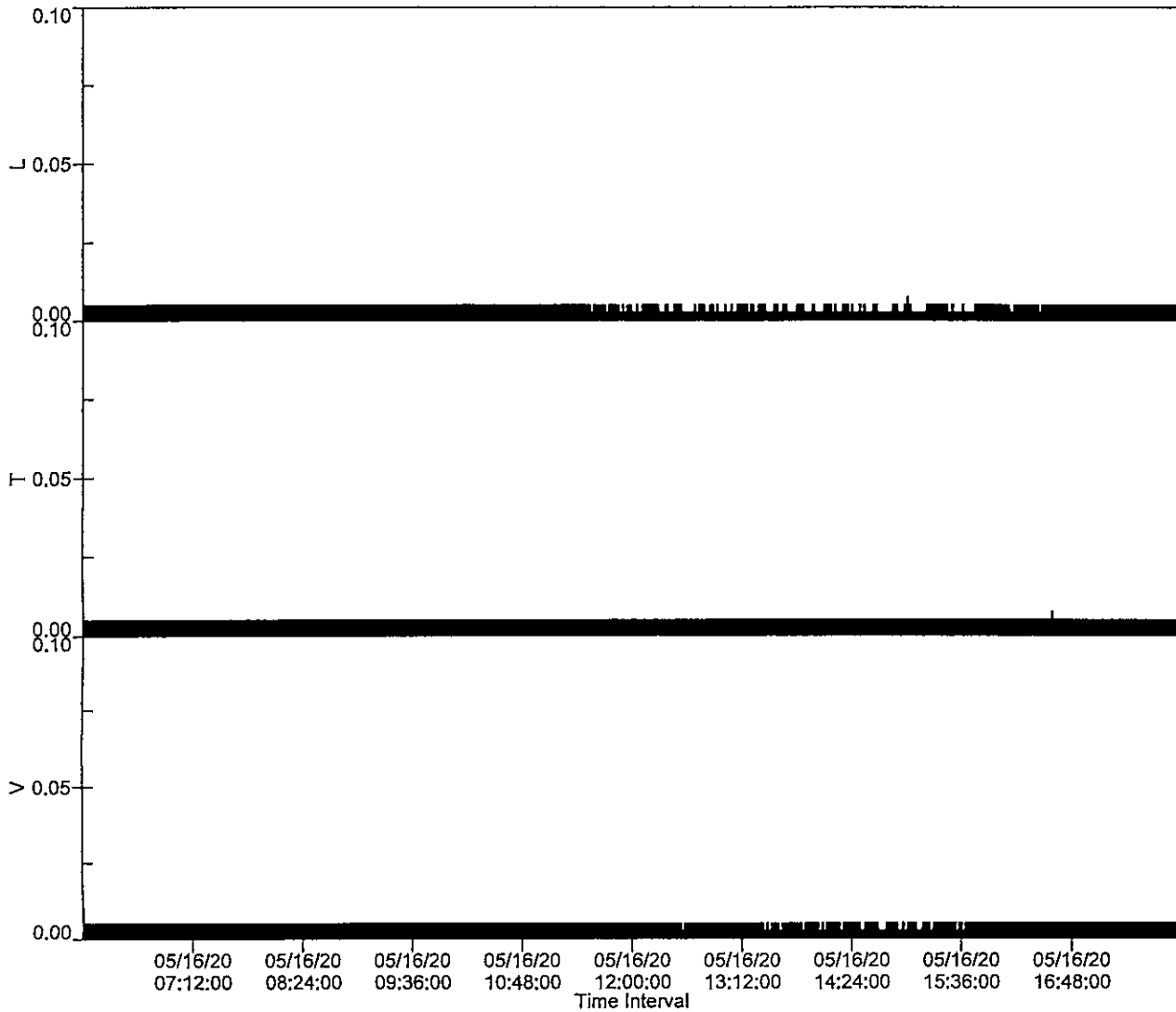
	L	T	V
PPV (in/s)	0.010	0.010	0.010
FREQ (Hz)	.3	2.7	.2
Peak Air Pressure:	78 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 03/26/2020
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3804 Event: 11

Record Max PPV: 0.010 in/s Record Max DB: 78 db



SN: 3804 v3.22
 Date: 05/17/2020 Time: 06:01:00
 Event: 12
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #3 WSNSP
 Distance: 25.
 Operator: CTI INC
 Comment: NE CORNER OF SITE

Continuous Monitor Recording
Summary Data

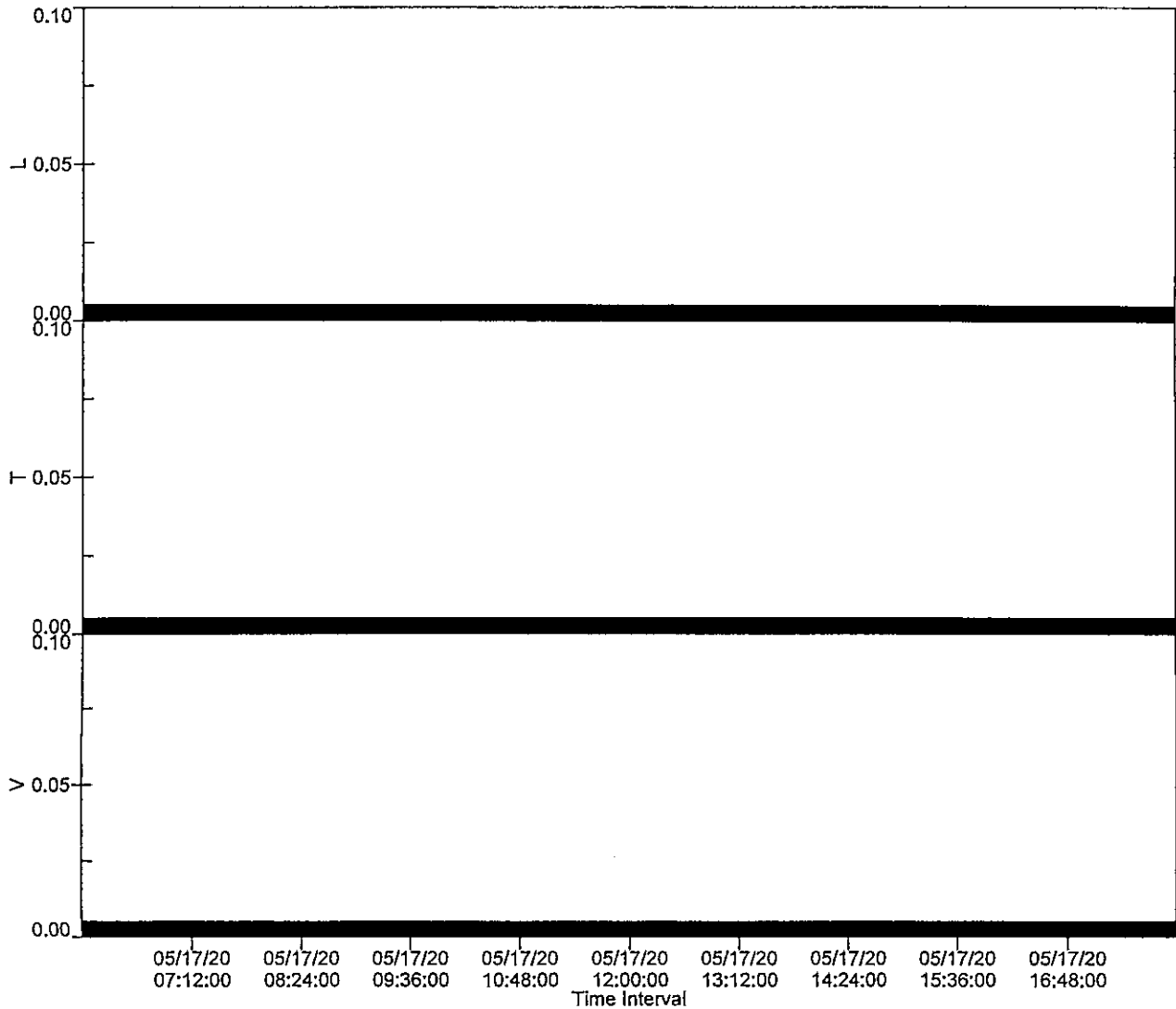
	L	T	V
PPV (in/s)	0.010	0.010	0.008
FREQ (Hz)	.3	3.6	.2
Peak Air Pressure:	78 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 03/26/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3804 Event: 12

Record Max PPV: 0.010 in/s Record Max DB: 78 db



SN: 3804 v3.22
Date: 05/18/2020 **Time:** 06:01:00
Event: 13
Client: BERGER CONST
Operation: EXCAVATION
Location: #3 WSNP
Distance: 25.
Operator: CTI INC
Comment: NE CORNER OF SITE

**Continuous Monitor Recording
Summary Data**

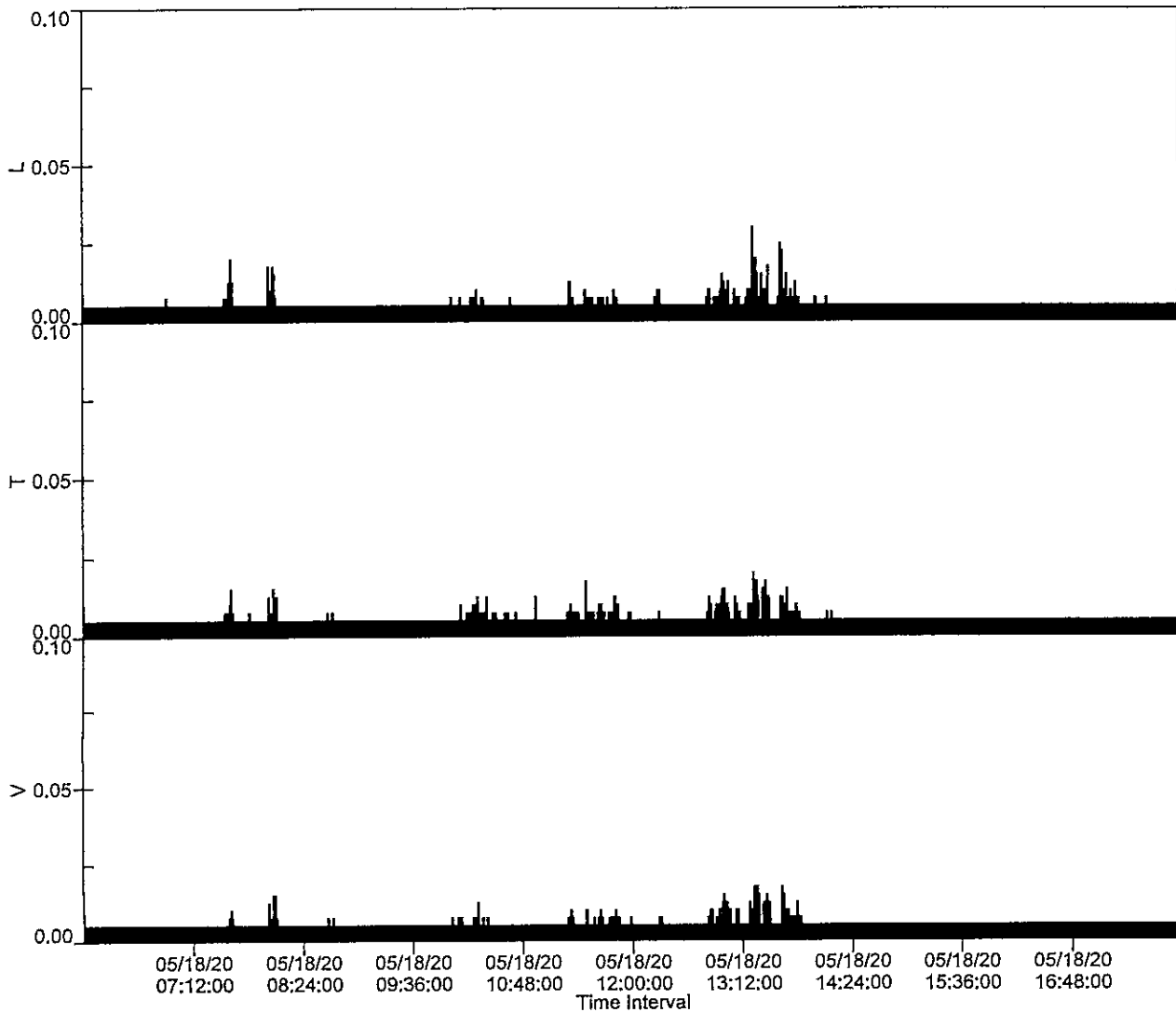
	L	T	V
PPV (in/s)	0.030	0.020	0.018
FREQ (Hz)	23.8	23.8	21.7
Peak Air Pressure:	76 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 03/26/2020
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3804 Event: 13

Record Max PPV: 0.030 in/s Record Max DB: 76 db



SN: 3804 v3.22
 Date: 05/19/2020 Time: 06:01:00
 Event: 14
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #3 WSNP
 Distance: 25.
 Operator: CTI INC
 Comment: NE CORNER OF SITE

Continuous Monitor Recording
Summary Data

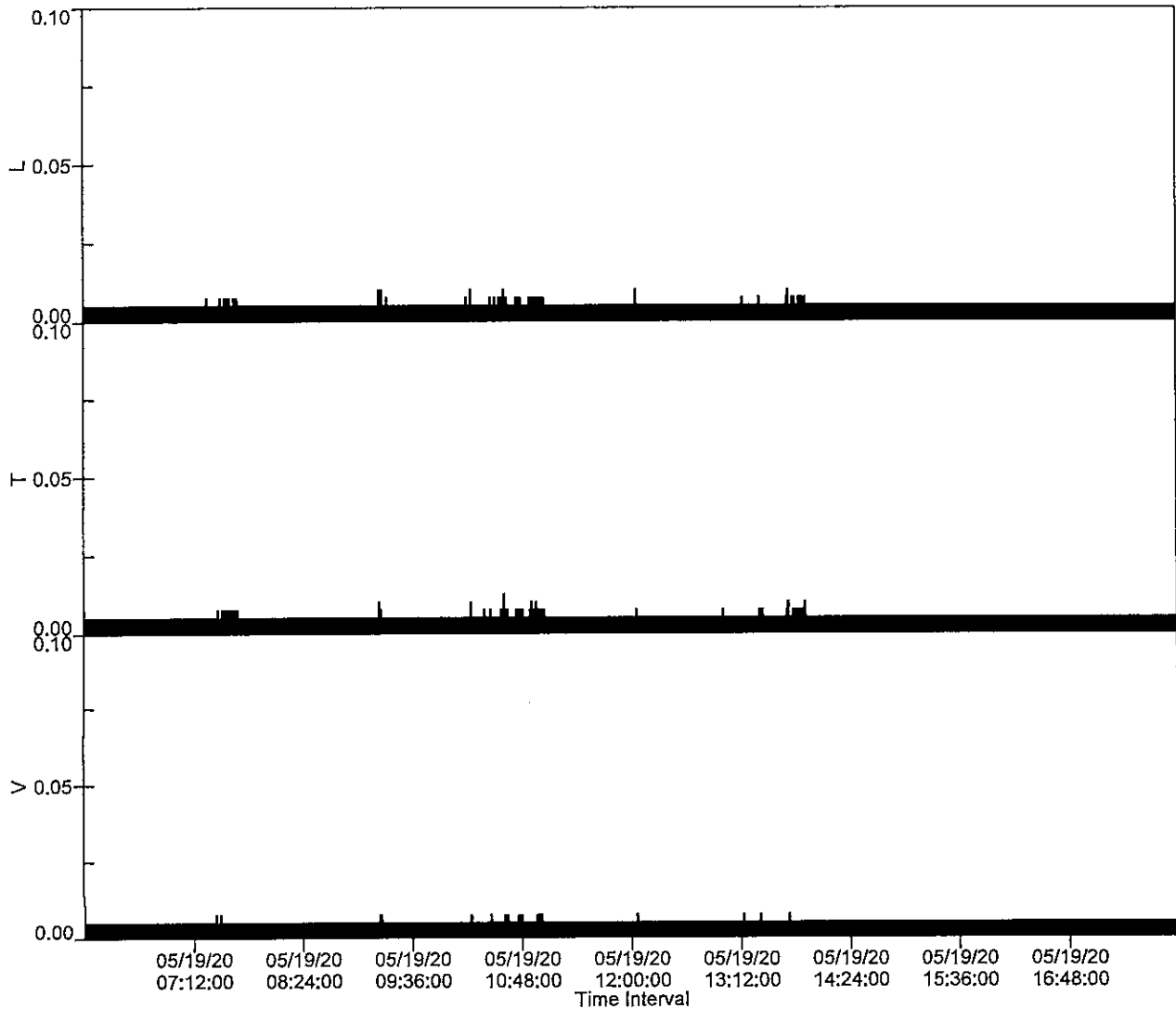
	L	T	V
PPV (in/s)	0.010	0.013	0.010
FREQ (Hz)	.3	4.0	.2
Peak Air Pressure:	78 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 03/26/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3804 Event: 14

Record Max PPV: 0.013 in/s Record Max DB: 78 db



SN: 3804 v3.22
Date: 05/20/2020 **Time:** 06:01:00
Event: 15
Client: BERGER CONST
Operation: EXCAVATION
Location: #3 WSNP
Distance: 25.
Operator: CTI INC
Comment: NE CORNER OF SITE

**Continuous Monitor Recording
Summary Data**

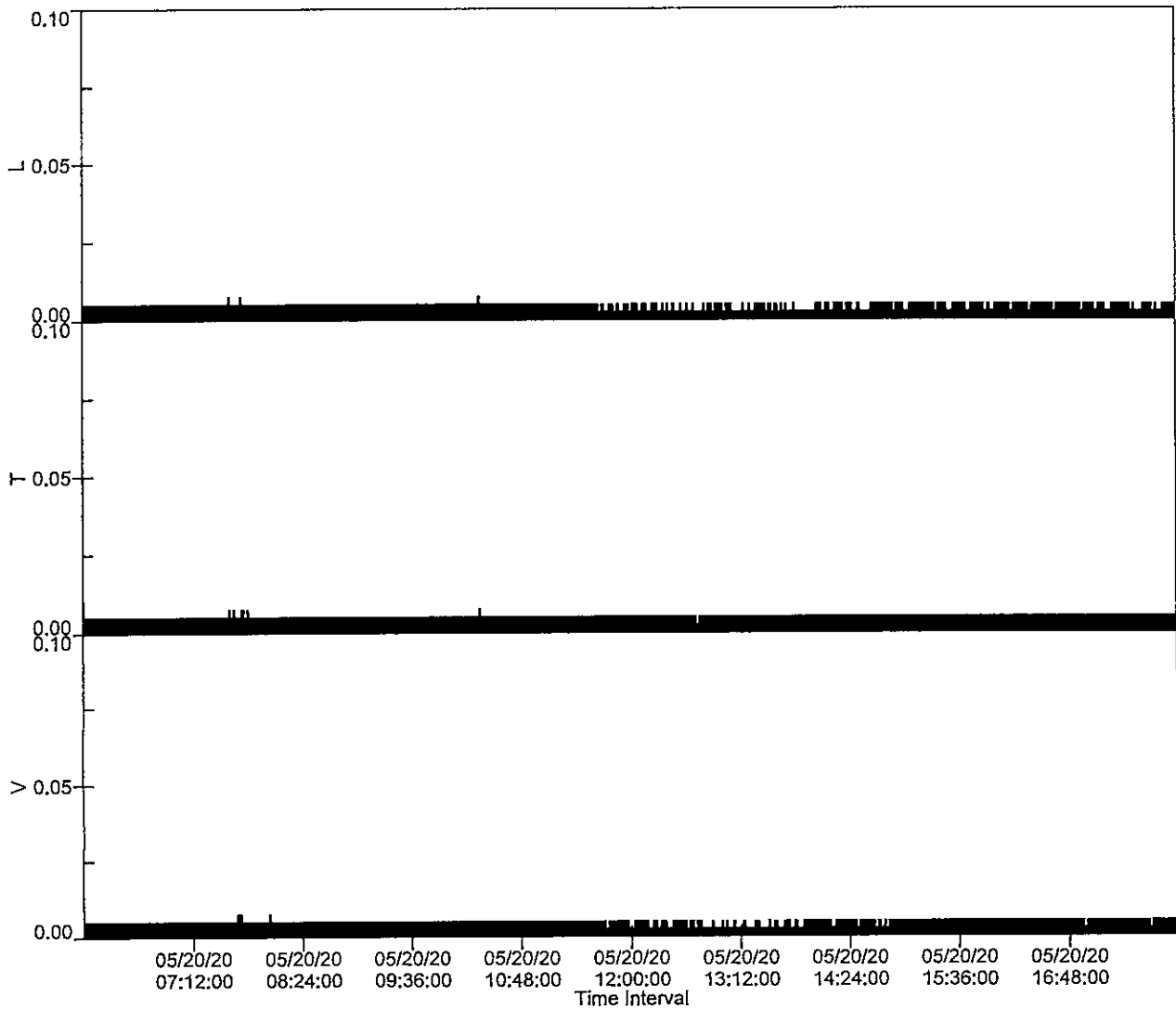
	L	T	V
PPV (in/s)	0.010	0.010	0.008
FREQ (Hz)	.3	2.0	.3
Peak Air Pressure:	76 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 03/26/2020
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3804 Event: 15

Record Max PPV: 0.010 in/s Record Max DB: 76 db



SN: 3804 v3.22
 Date: 05/21/2020 Time: 06:01:00
 Event: 16
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #3 WSNP
 Distance: 25.
 Operator: CTI INC
 Comment: NE CORNER OF SITE

Continuous Monitor Recording

Summary Data

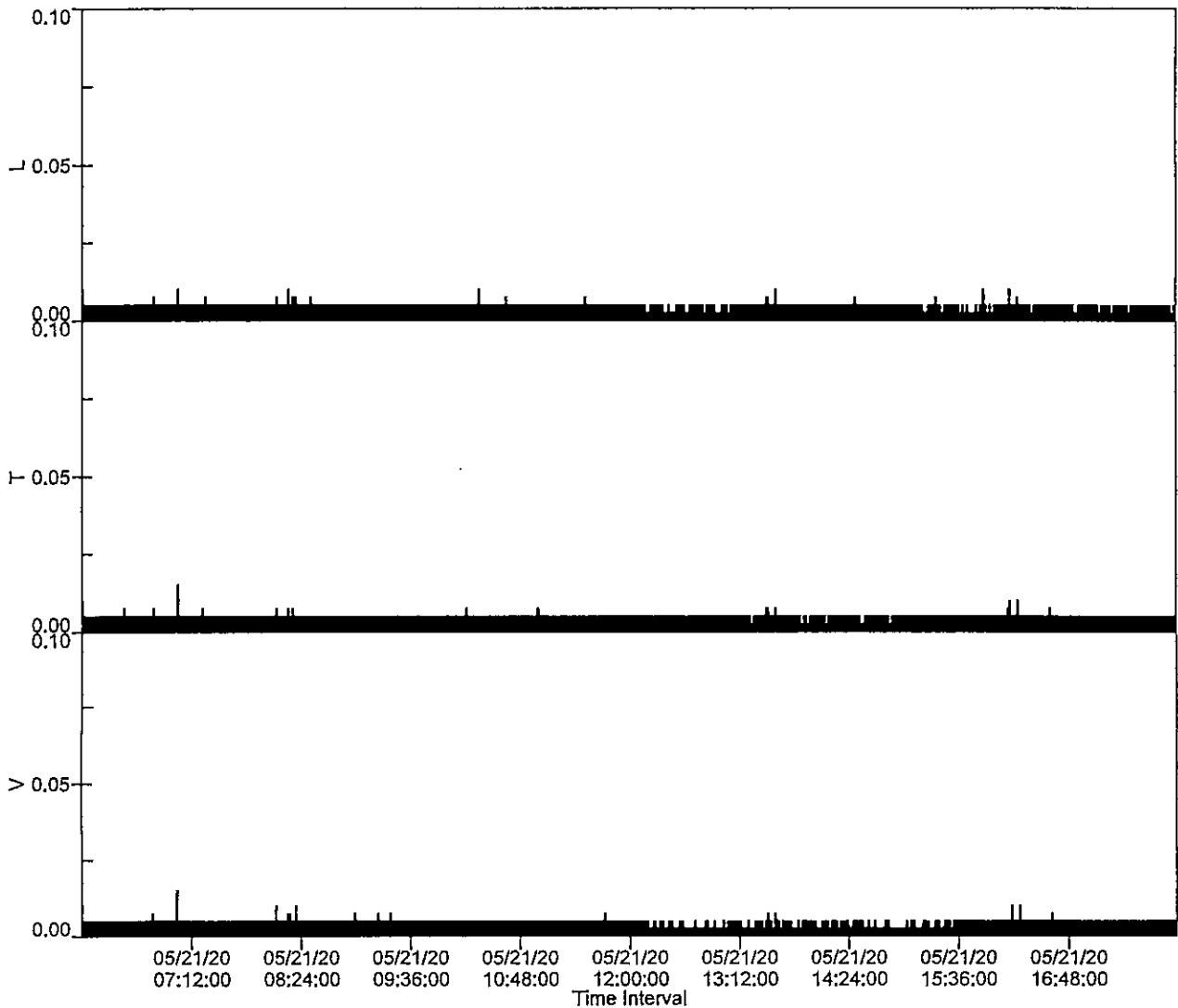
	L	T	V
PPV (in/s)	0.010	0.015	0.015
FREQ (Hz)	.3	11.9	13.9
Peak Air Pressure:	76 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 03/26/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3804 Event: 16

Record Max PPV: 0.015 in/s Record Max DB: 76 db



SN: 3804 v3.22
 Date: 05/22/2020 Time: 06:01:00
 Event: 17
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #3 WSNP
 Distance: 25.
 Operator: CTI INC
 Comment: NE CORNER OF SITE

Continuous Monitor Recording
Summary Data

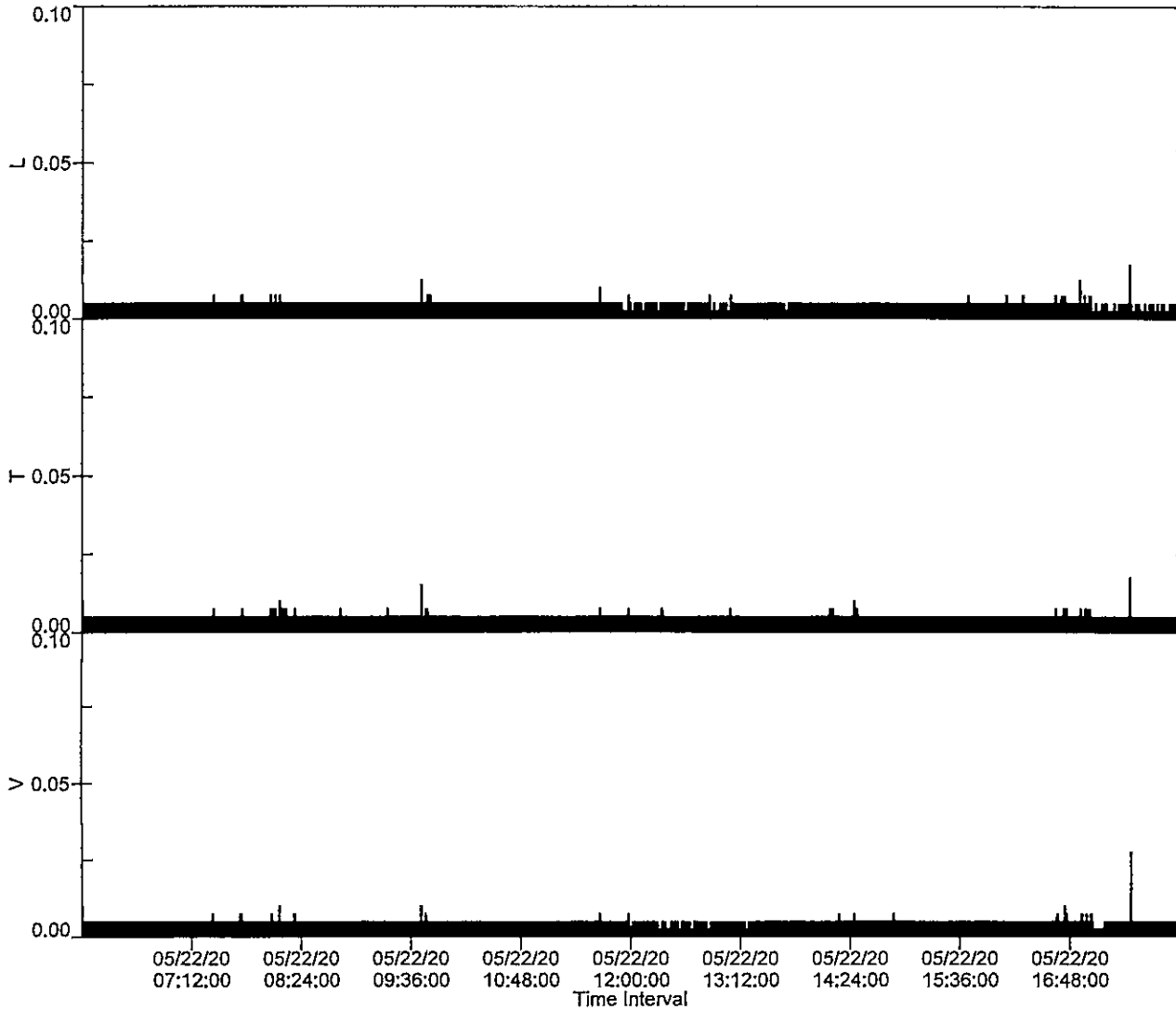
	L	T	V
PPV (in/s)	0.018	0.018	0.028
FREQ (Hz)	71.4	55.6	41.7
Peak Air Pressure:	76 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 03/26/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3804 Event: 17

Record Max PPV: 0.028 in/s Record Max DB: 76 db



SN: 3804 v3.22
 Date: 05/23/2020 Time: 06:01:00
 Event: 18
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #3 WSNP
 Distance: 25.
 Operator: CTI INC
 Comment: NE CORNER OF SITE

Continuous Monitor Recording
Summary Data

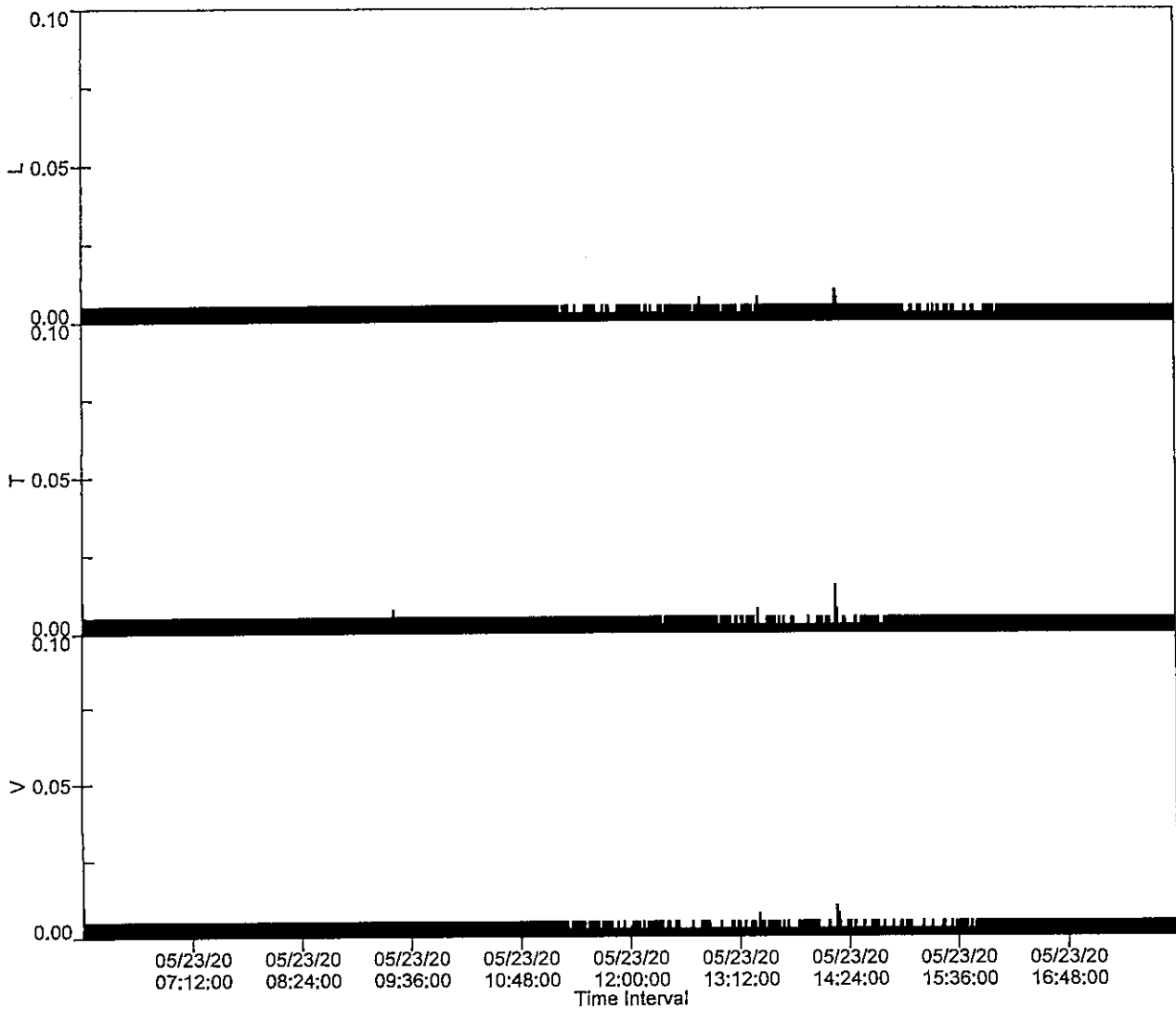
	L	T	V
PPV (in/s)	0.010	0.015	0.010
FREQ (Hz)	.3	41.7	.2
Peak Air Pressure:	82 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 03/26/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3804 Event: 18

Record Max PPV: 0.015 in/s Record Max DB: 82 db



SN: 3804 v3.22
 Date: 05/24/2020 Time: 06:01:00
 Event: 19
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #3 WSNP
 Distance: 25.
 Operator: CTI INC
 Comment: NE CORNER OF SITE

Continuous Monitor Recording
Summary Data

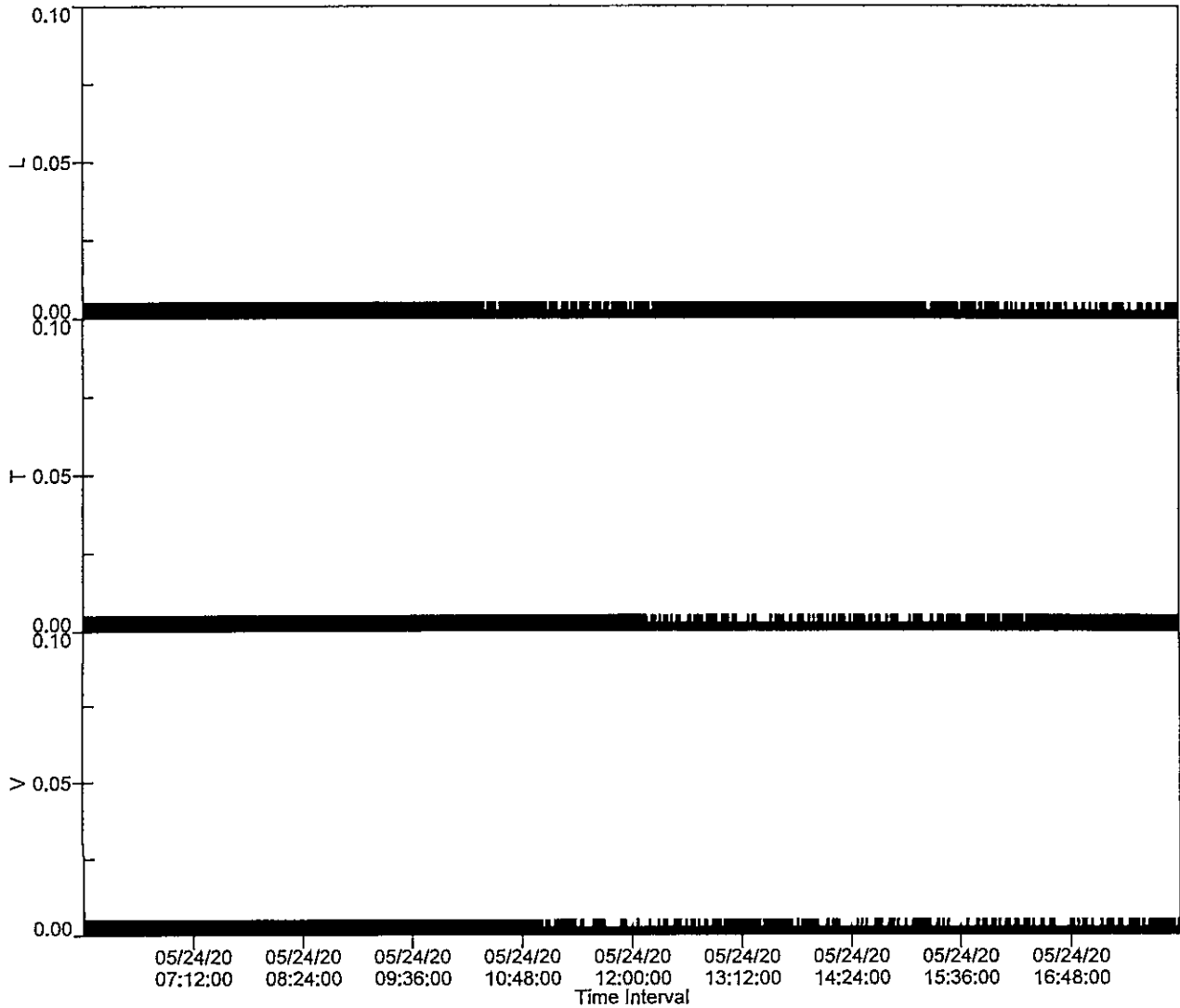
	L	T	V
PPV (in/s)	0.010	0.010	0.008
FREQ (Hz)	.3	2.0	.3
Peak Air Pressure: 76 db			
Recording Time: 718 minutes			
Sample Size: 1440			
Interval Size: 60 seconds			

Additional Info:

Shaketable Calibrated: 03/26/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3804 Event: 19

Record Max PPV: 0.010 in/s Record Max DB: 76 db



SN: 5033 v3.66
Date: 05/11/2020 Time: 06:01:00
Event: 22
Client: BERGER CONST
Operation: EXCAVATION
Location: #4 WSNP
Distance: 50.
Operator: CTI INC
Comment: HIGHCREST SCHOOL

**Continuous Monitor Recording
Summary Data**

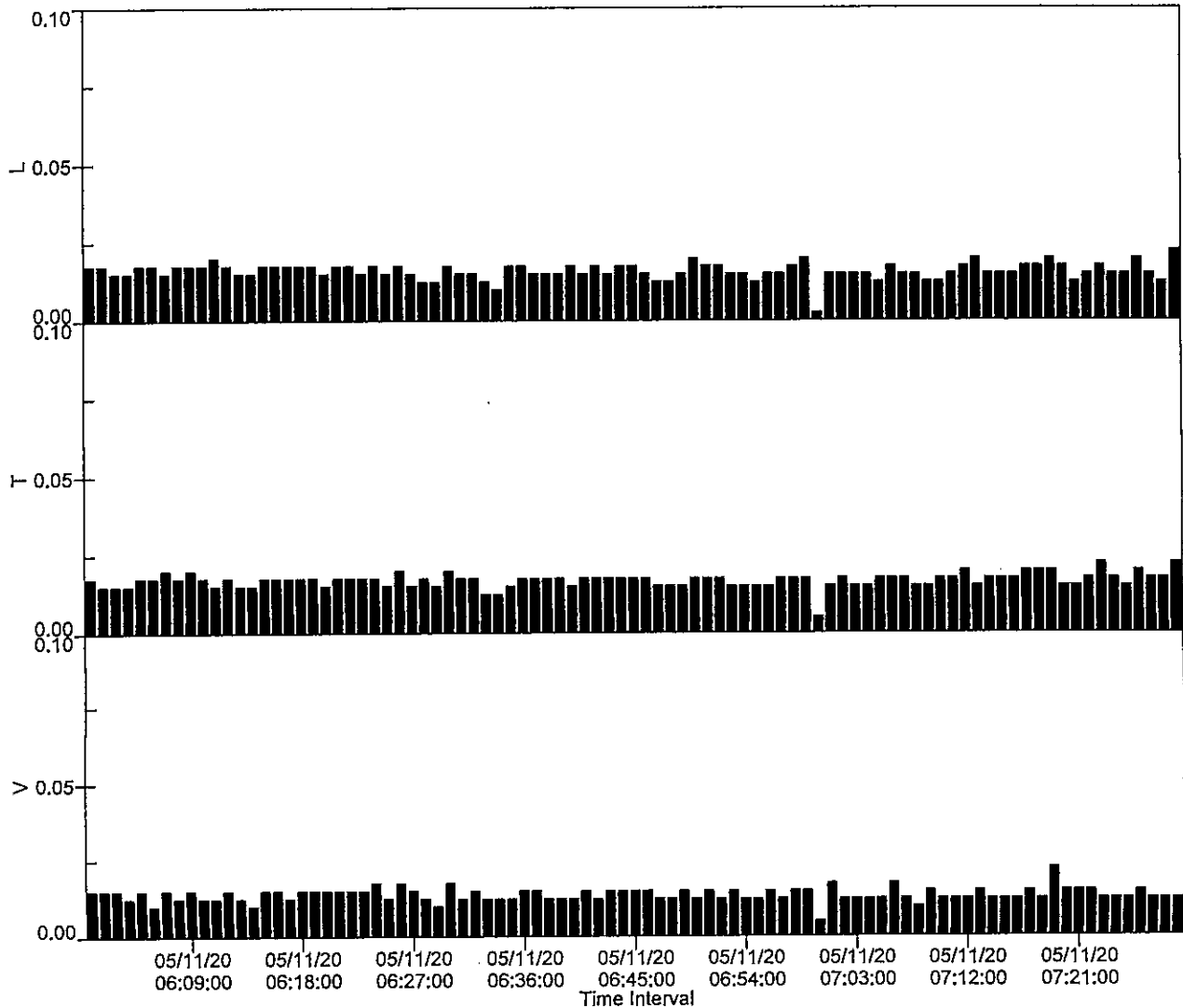
	L	T	V
PPV (in/s)	0.023	0.023	0.023
FREQ (Hz)	3.2	83.3	250.0
Peak Air Pressure:	103 db		
Recording Time:	89 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 04/06/2020
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 5033 Event: 22

Record Max PPV: 0.023 in/s Record Max DB: 103 db



SN: 5033 v3.66
 Date: 05/11/2020 Time: 07:34:00
 Event: 23
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #4 WSNSP
 Distance: 50.
 Operator: CTI INC
 Comment: HIGHCREST SCHOOL

Continuous Monitor Recording

Summary Data

	L	T	V
PPV (in/s)	0.028	0.025	0.023
FREQ (Hz)	500.0	6.0	5.7
Peak Air Pressure:	103 db		

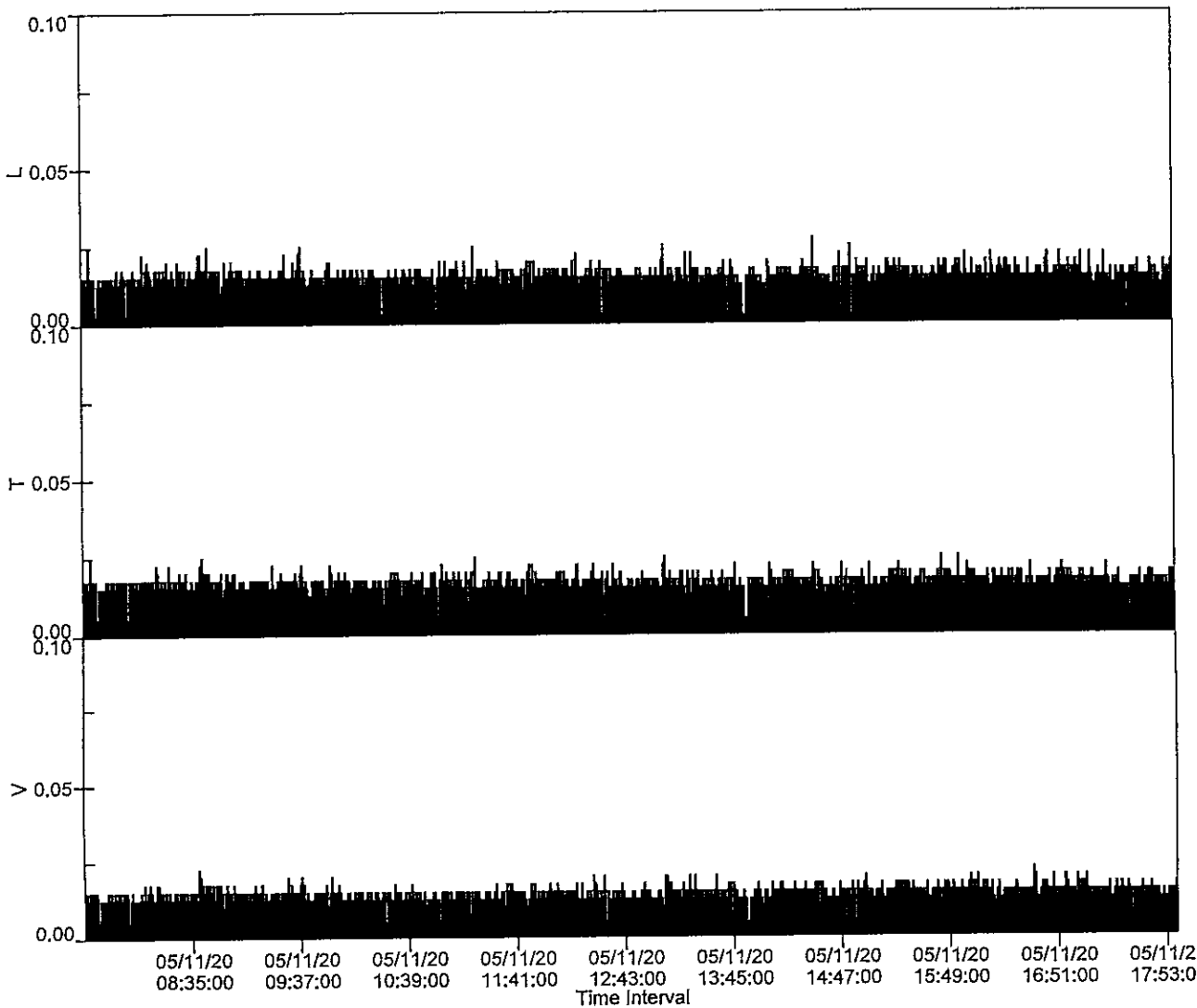
Recording Time: 625 minutes
 Sample Size: 1440
 Interval Size: 60 seconds

Additional Info:

Shaketable Calibrated: 04/06/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 5033 Event: 23

Record Max PPV: 0.028 in/s Record Max DB: 103 db



SN: 5033 v3.66
 Date: 05/12/2020 Time: 06:01:00
 Event: 24
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #4 WSNP
 Distance: 50.
 Operator: CTI INC
 Comment: HIGHCREST SCHOOL

Continuous Monitor Recording
Summary Data

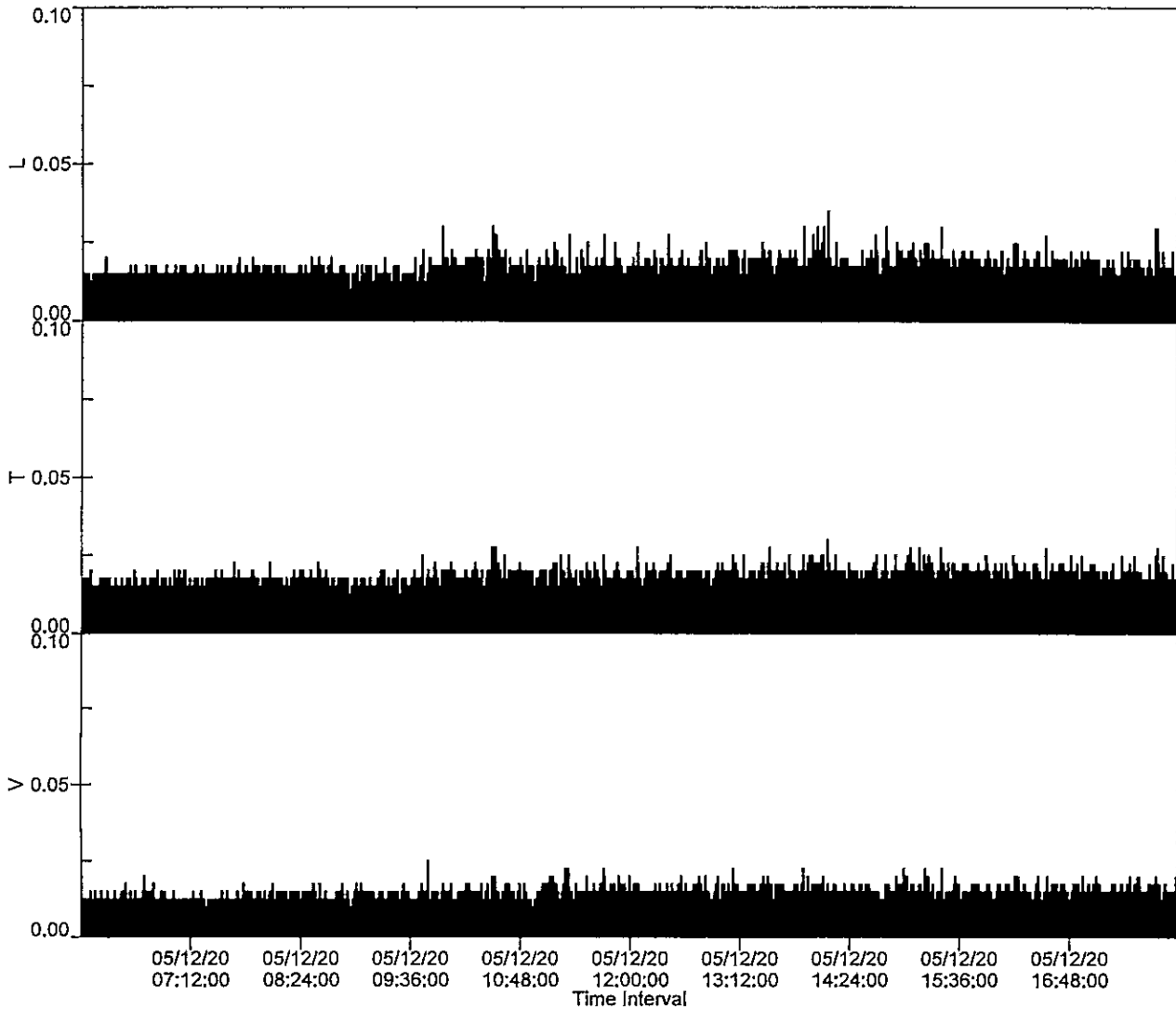
	L	T	V
PPV (in/s)	0.035	0.030	0.025
FREQ (Hz)	2.3	500.0	125.0
Peak Air Pressure:	104 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 04/06/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 5033 Event: 24

Record Max PPV: 0.035 in/s Record Max DB: 104 db



SN: 5033 v3.66
 Date: 05/13/2020 Time: 06:01:00
 Event: 25
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #4 WSNP
 Distance: 50.
 Operator: CTI INC
 Comment: HIGHCREST SCHOOL

Continuous Monitor Recording
Summary Data

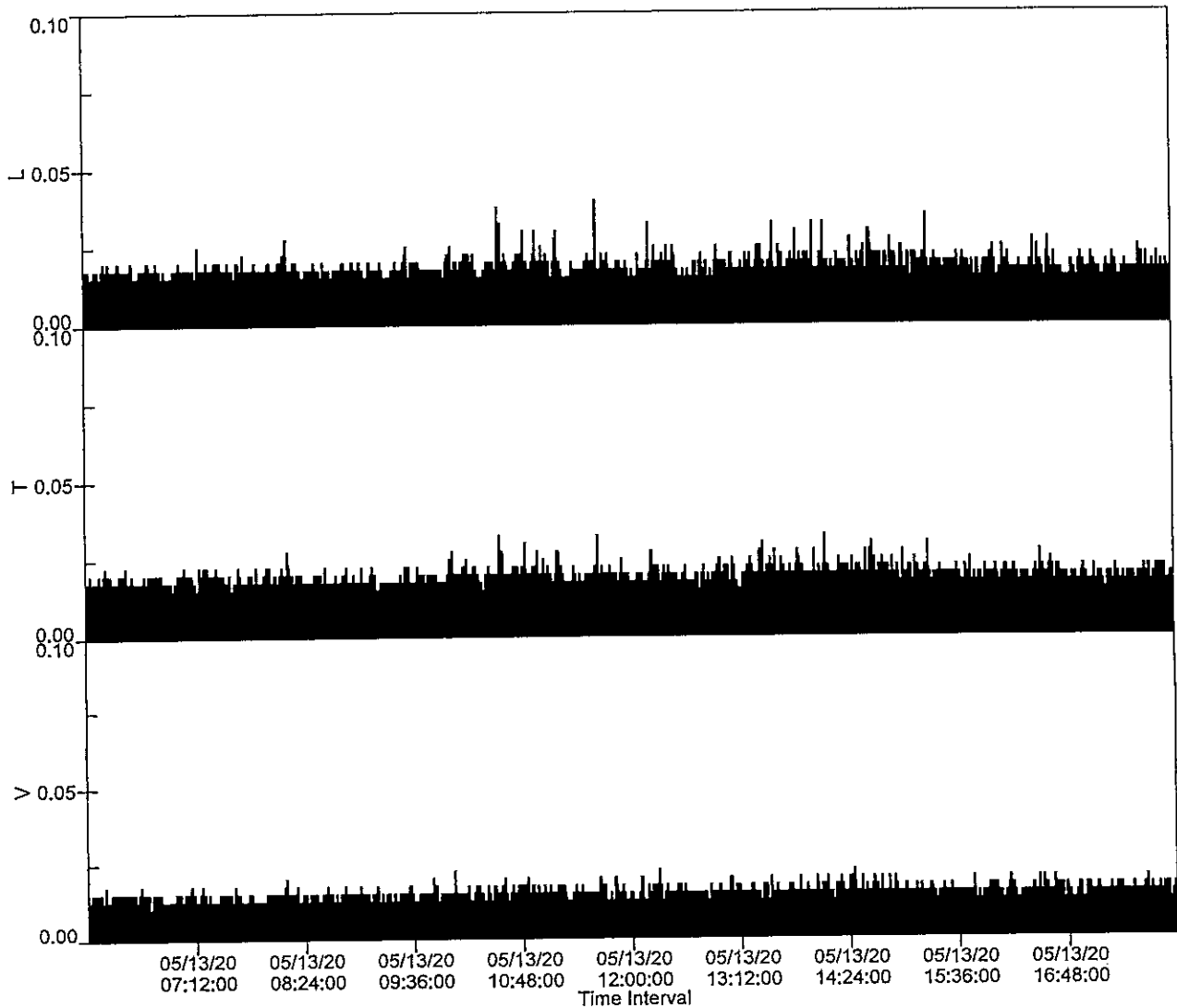
	L	T	V
PPV (in/s)	0.040	0.033	0.023
FREQ (Hz)	500.0	2.4	500.0
Peak Air Pressure:	103 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 04/06/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 5033 Event: 25

Record Max PPV: 0.040 in/s Record Max DB: 103 db



SN: 5033 v3.66
 Date: 05/14/2020 Time: 06:01:00
 Event: 26
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #4 WSNP
 Distance: 50.
 Operator: CTI INC
 Comment: HIGHCREST SCHOOL

Continuous Monitor Recording

Summary Data

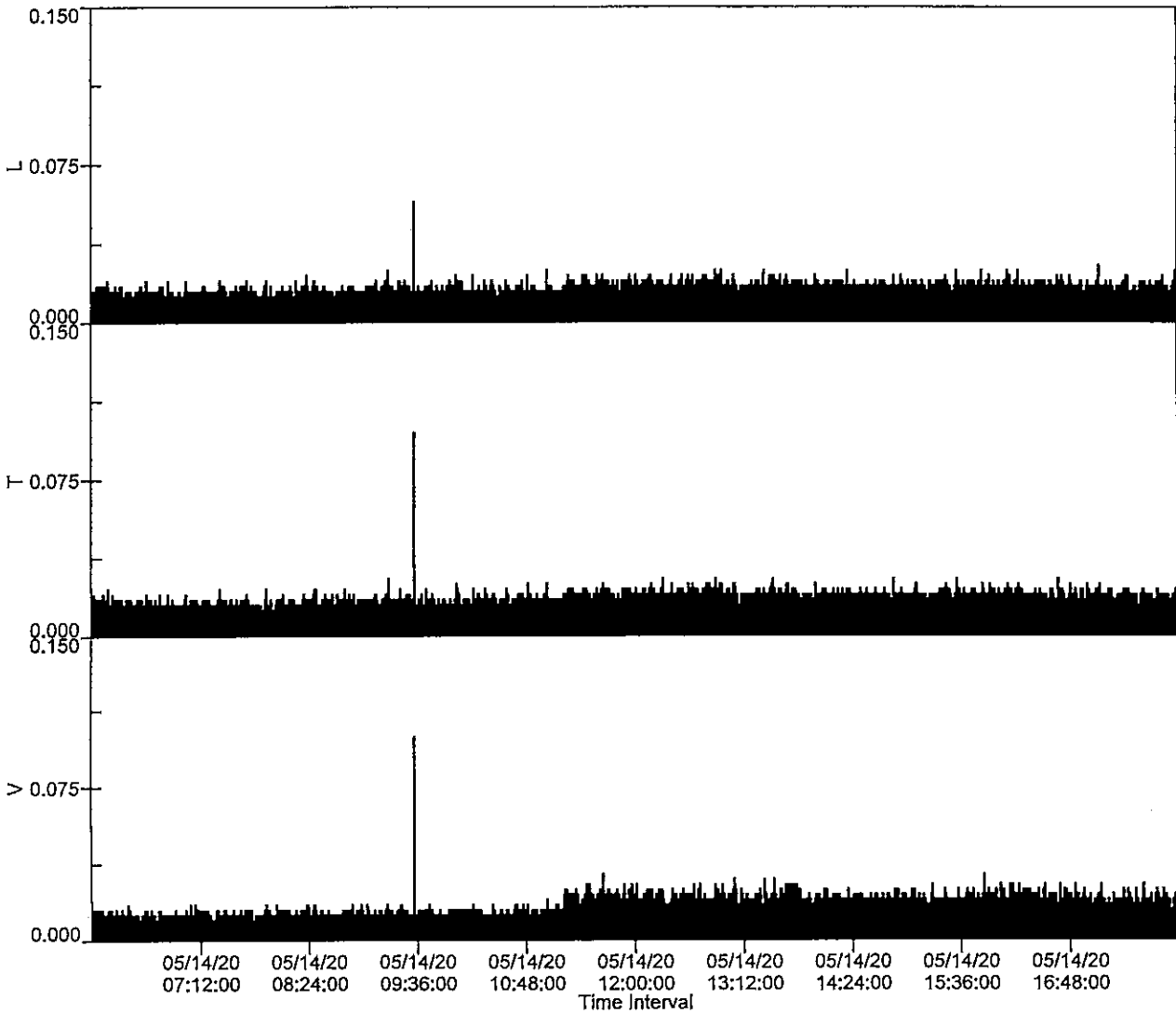
	L	T	V
PPV (in/s)	0.058	0.098	0.100
FREQ (Hz)	38.5	2.1	50.0
Peak Air Pressure:	106 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 04/06/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 5033 Event: 26

Record Max PPV: 0.100 in/s Record Max DB: 106 db



SN: 5033 v3.66
 Date: 05/15/2020 Time: 06:01:00
 Event: 27
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #4 WSNP
 Distance: 50.
 Operator: CTI INC
 Comment: HIGHCREST SCHOOL

Continuous Monitor Recording
Summary Data

	L	T	V
PPV (in/s)	0.078	0.118	0.083
FREQ (Hz)	166.7	2.7	100.0
Peak Air Pressure:	109 db		

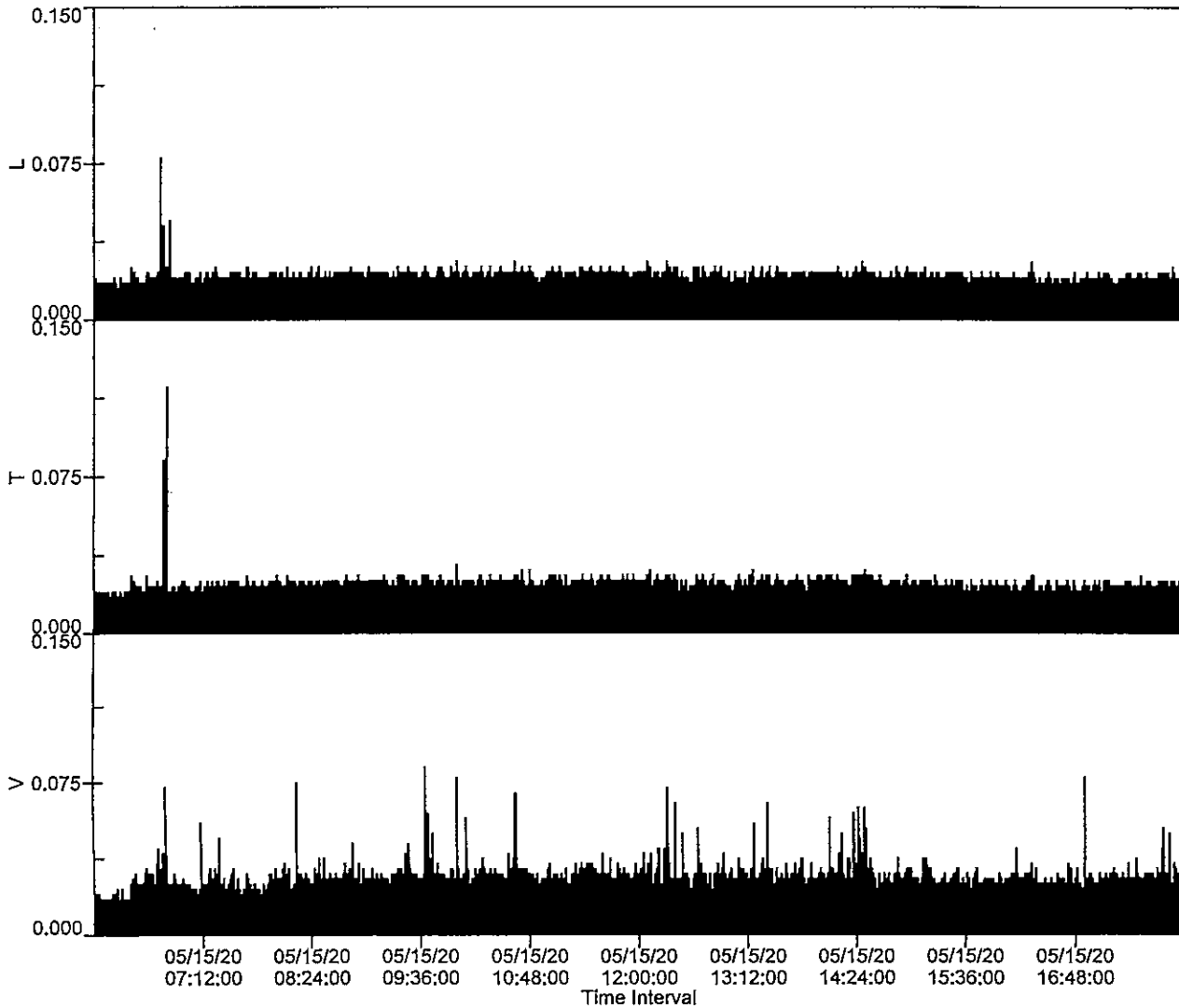
Recording Time: 718 minutes
 Sample Size: 1440
 Interval Size: 60 seconds

Additional Info:

Shaketable Calibrated: 04/06/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 5033 Event: 27

Record Max PPV: 0.118 in/s Record Max DB: 109 db



SN: 5033 v3.66
 Date: 05/16/2020 Time: 06:01:00
 Event: 28
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #4 WSNP
 Distance: 50.
 Operator: CTI INC
 Comment: HIGHCREST SCHOOL

Continuous Monitor Recording

Summary Data

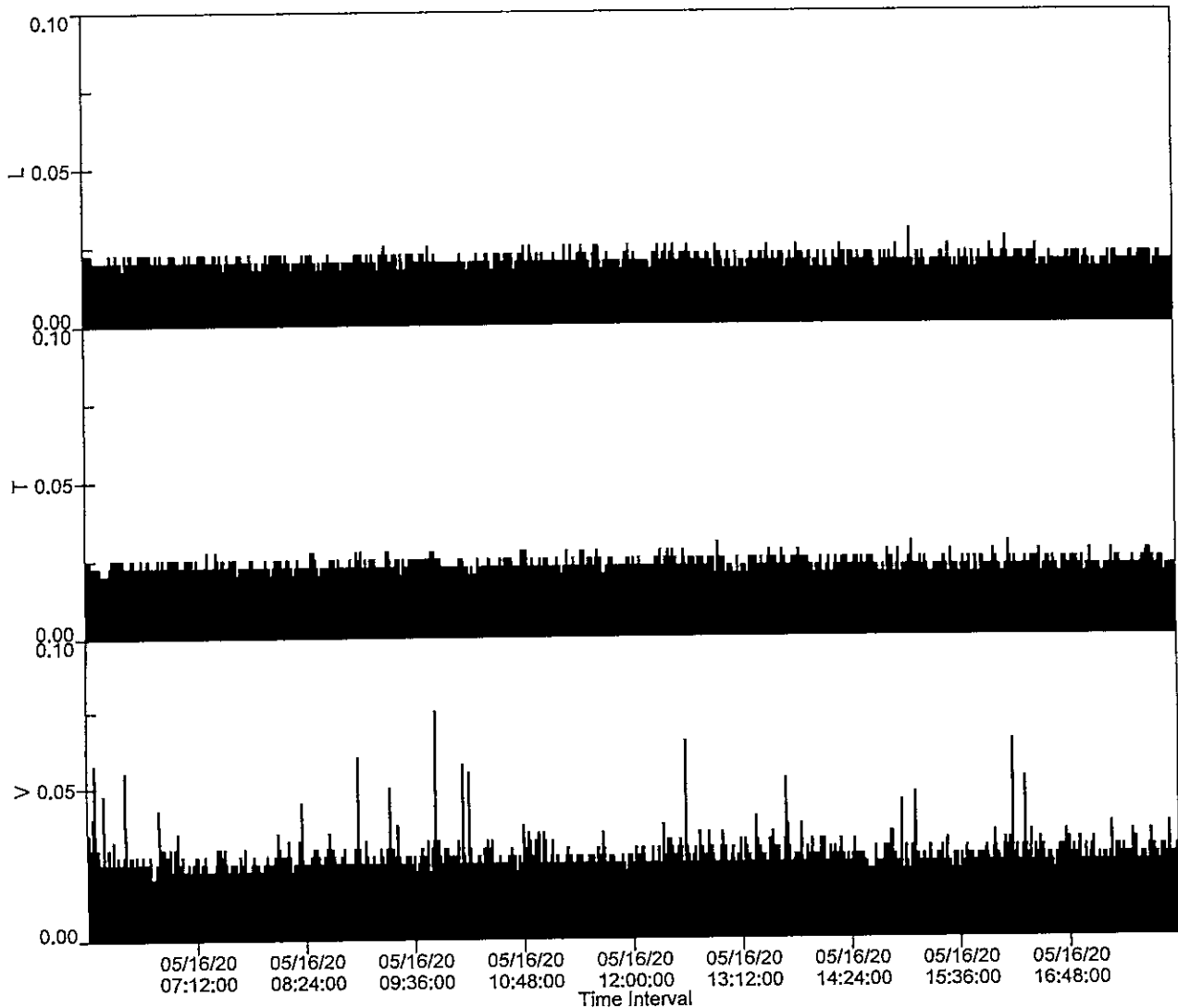
	L	T	V
PPV (in/s)	0.030	0.030	0.075
FREQ (Hz)	125.0	500.0	1.7
Peak Air Pressure:	106 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 04/06/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 5033 Event: 28

Record Max PPV: 0.075 in/s Record Max DB: 106 db



SN: 5033 v3.66
 Date: 05/17/2020 Time: 06:01:00
 Event: 29
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #4 WSNP
 Distance: 50.
 Operator: CTI INC
 Comment: HIGHCREST SCHOOL

Continuous Monitor Recording

Summary Data

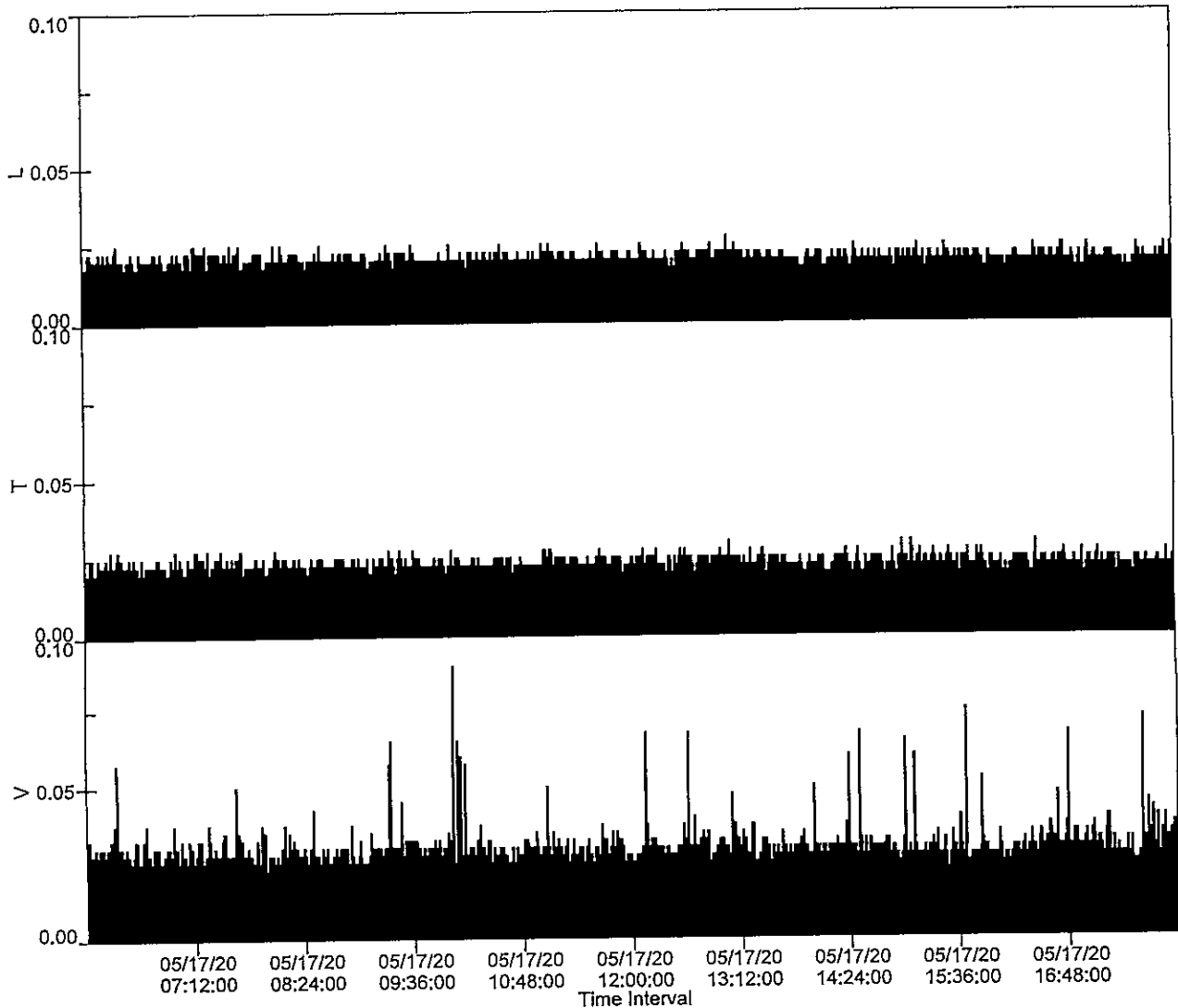
	L	T	V
PPV (in/s)	0.028	0.030	0.090
FREQ (Hz)	500.0	500.0	1.8
Peak Air Pressure:	108 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 04/06/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 5033 Event: 29

Record Max PPV: 0.090 in/s Record Max DB: 108 db



SN: 5033 v3.66
 Date: 05/18/2020 Time: 06:01:00
 Event: 30
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #4 WSNP
 Distance: 50.
 Operator: CTI INC
 Comment: HIGHCREST SCHOOL

Continuous Monitor Recording

Summary Data

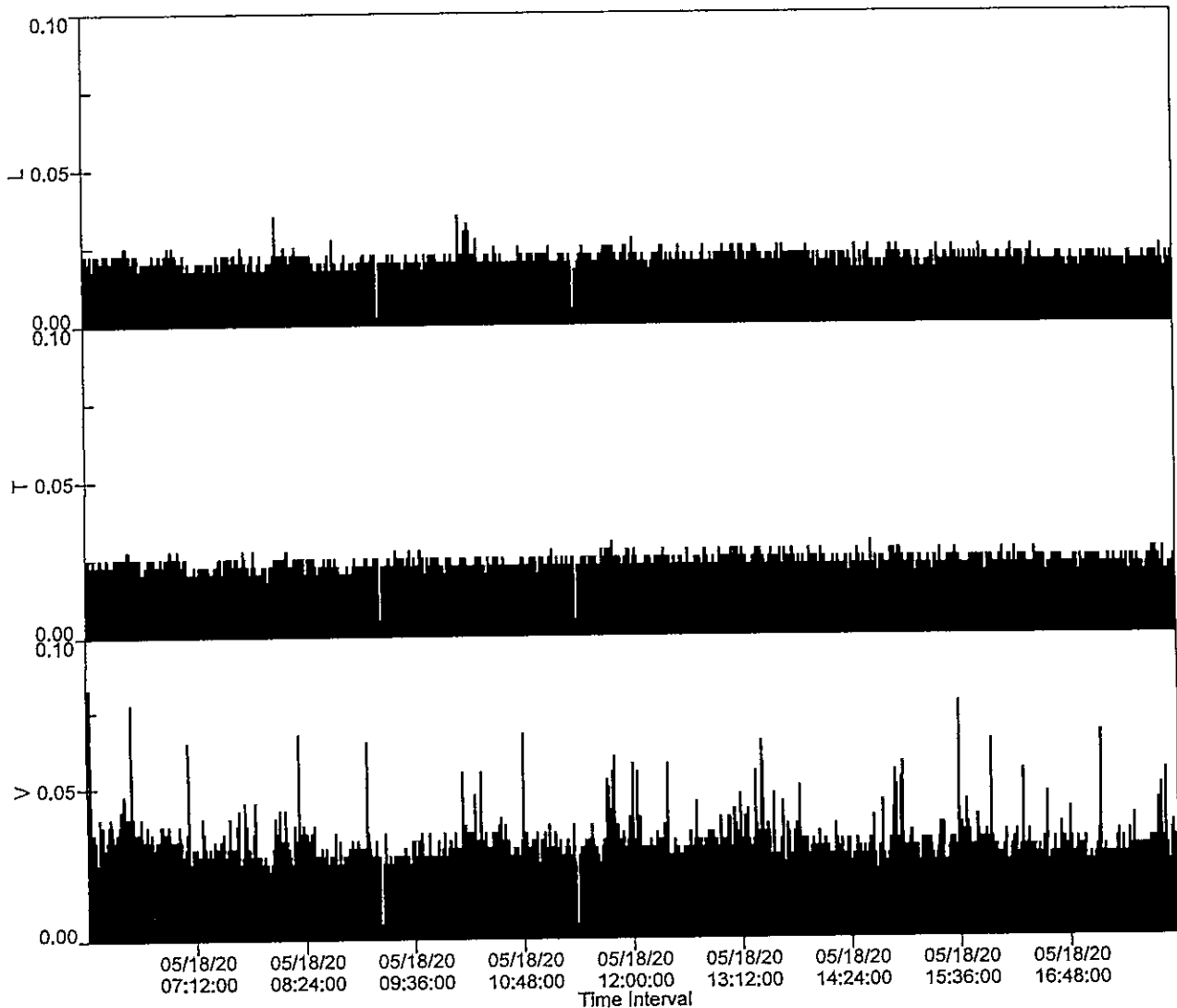
	L	T	V
PPV (in/s)	0.035	0.030	0.083
FREQ (Hz)	20.0	500.0	1.8
Peak Air Pressure:	108 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 04/06/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 5033 Event: 30

Record Max PPV: 0.083 in/s Record Max DB: 108 db



SN: 5033 v3.66
 Date: 05/19/2020 Time: 06:01:00
 Event: 31
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #4 WSNP
 Distance: 50.
 Operator: CTI INC
 Comment: HIGHCREST SCHOOL

Continuous Monitor Recording

Summary Data

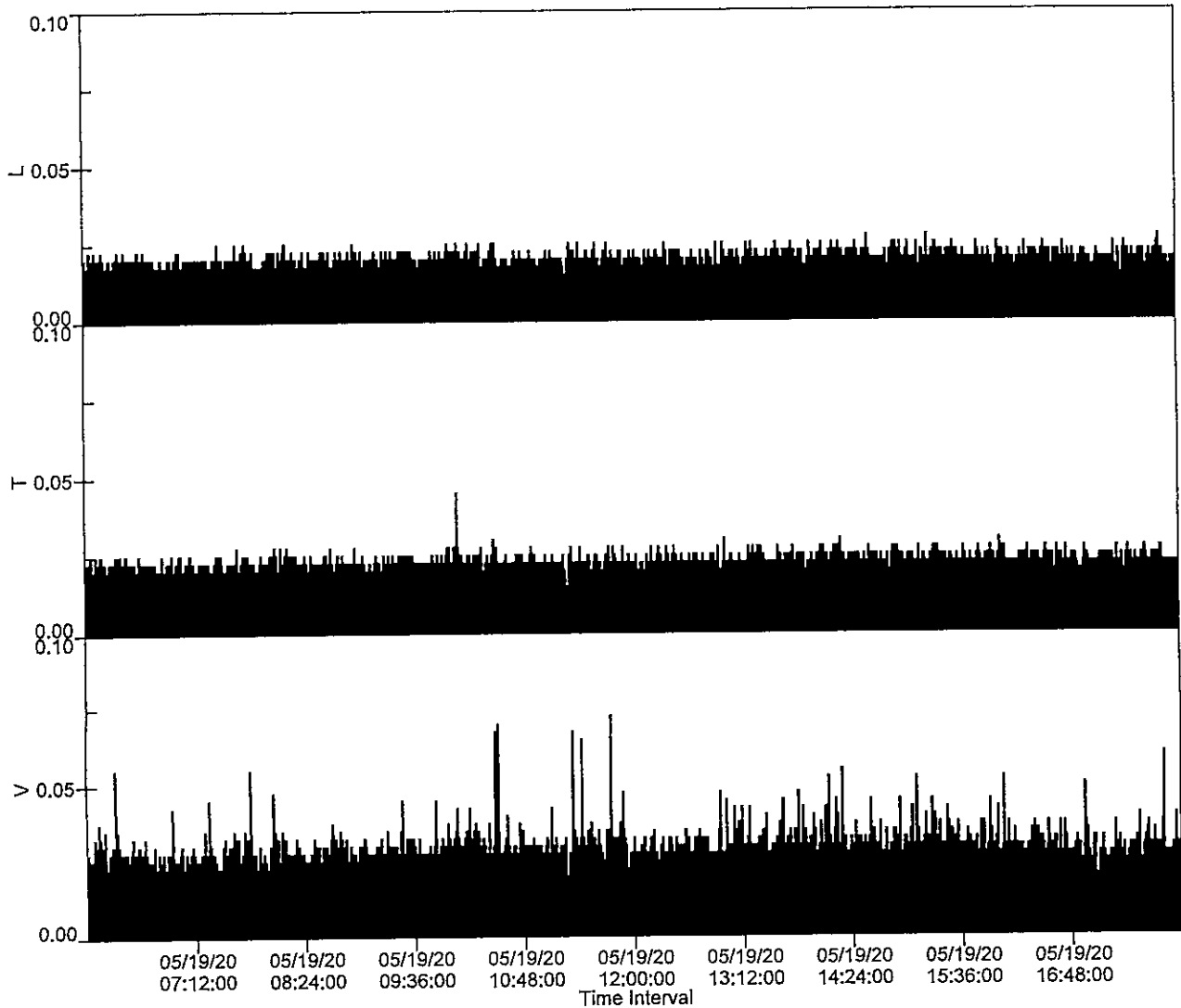
	L	T	V
PPV (in/s)	0.028	0.045	0.073
FREQ (Hz)	250.0	83.3	1.1
Peak Air Pressure:	107 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 04/06/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 5033 Event: 31

Record Max PPV: 0.073 in/s Record Max DB: 107 db



SN: 5033 v3.66
 Date: 05/20/2020 Time: 06:01:00
 Event: 32
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #4 WSNP
 Distance: 50.
 Operator: CTI INC
 Comment: HIGHCREST SCHOOL

Continuous Monitor Recording
Summary Data

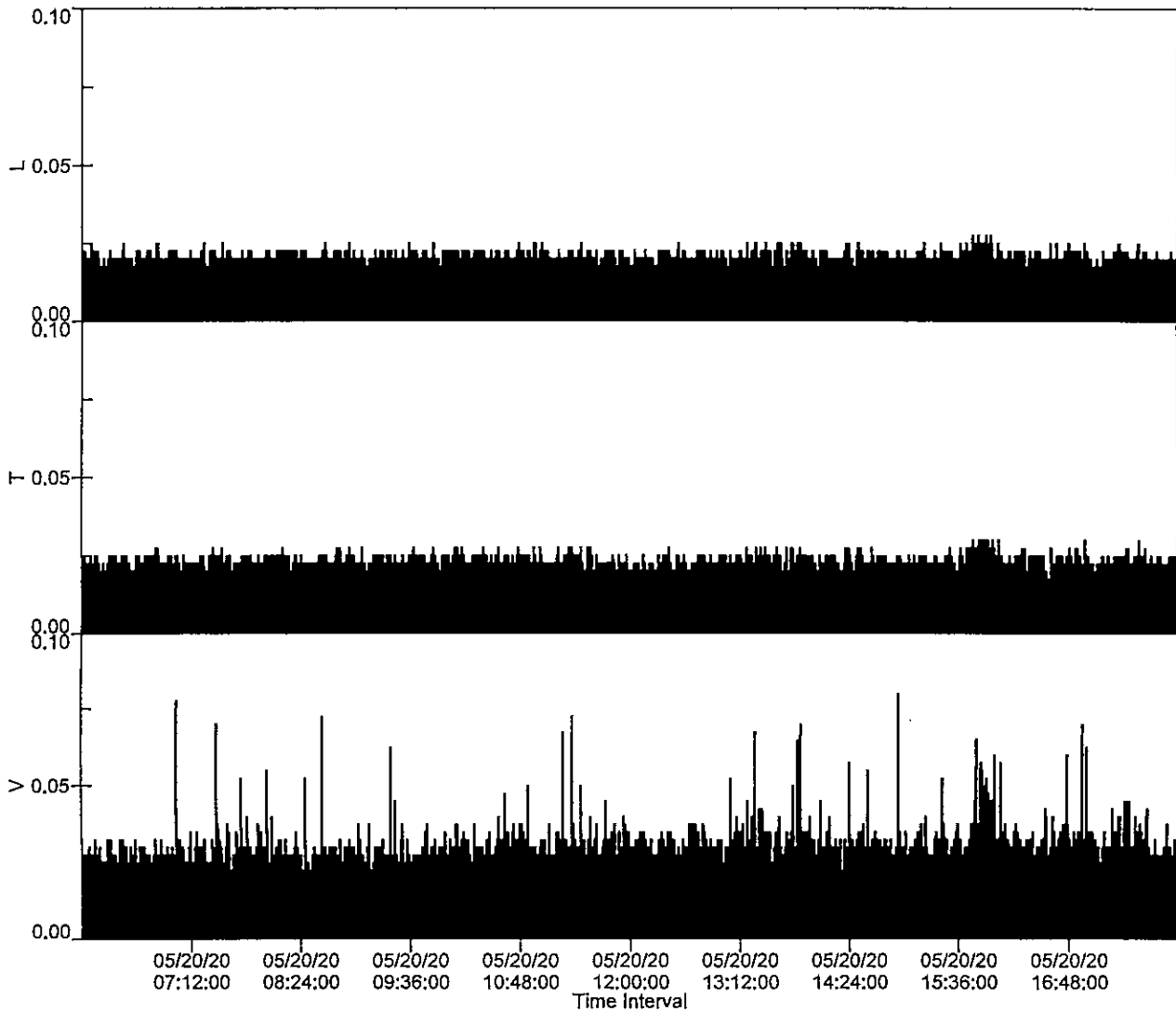
	L	T	V
PPV (in/s)	0.028	0.030	0.080
FREQ (Hz)	500.0	500.0	1.7
Peak Air Pressure:	109 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 04/06/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 5033 Event: 32

Record Max PPV: 0.080 in/s Record Max DB: 109 db



SN: 5033 v3.66
 Date: 05/21/2020 Time: 06:01:00
 Event: 33
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #4 WSNP
 Distance: 50.
 Operator: CTI INC
 Comment: HIGHCREST SCHOOL

Continuous Monitor Recording
Summary Data

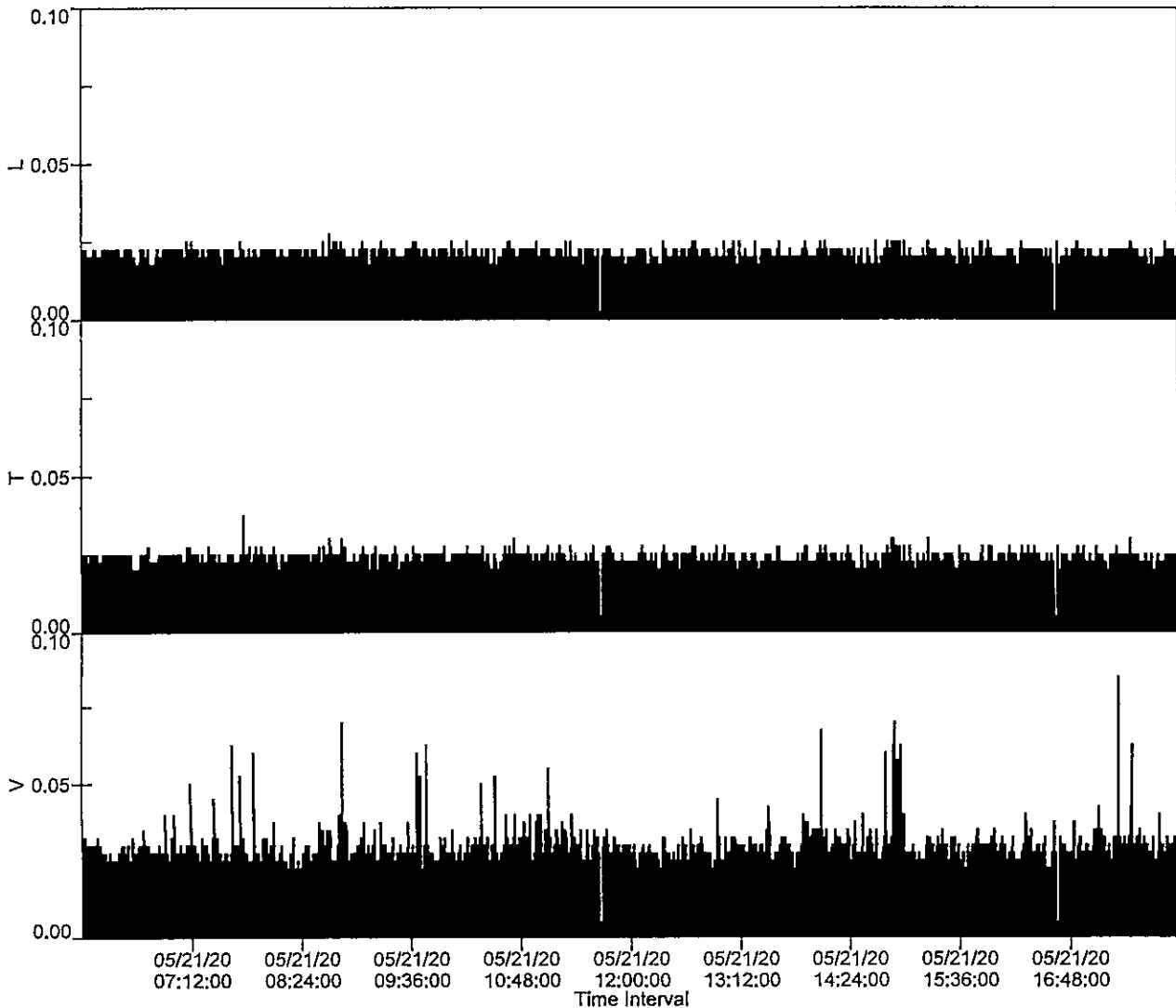
	L	T	V
PPV (in/s)	0.028	0.038	0.085
FREQ (Hz)	500.0	100.0	1.4
Peak Air Pressure:	109 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 04/06/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 5033 Event: 33

Record Max PPV: 0.085 in/s Record Max DB: 109 db



SN: 5033 v3.66
Date: 05/22/2020 **Time:** 06:01:00
Event: 34
Client: BERGER CONST
Operation: EXCAVATION
Location: #4 WSNP
Distance: 50.
Operator: CTI INC
Comment: HIGHCREST SCHOOL

**Continuous Monitor Recording
Summary Data**

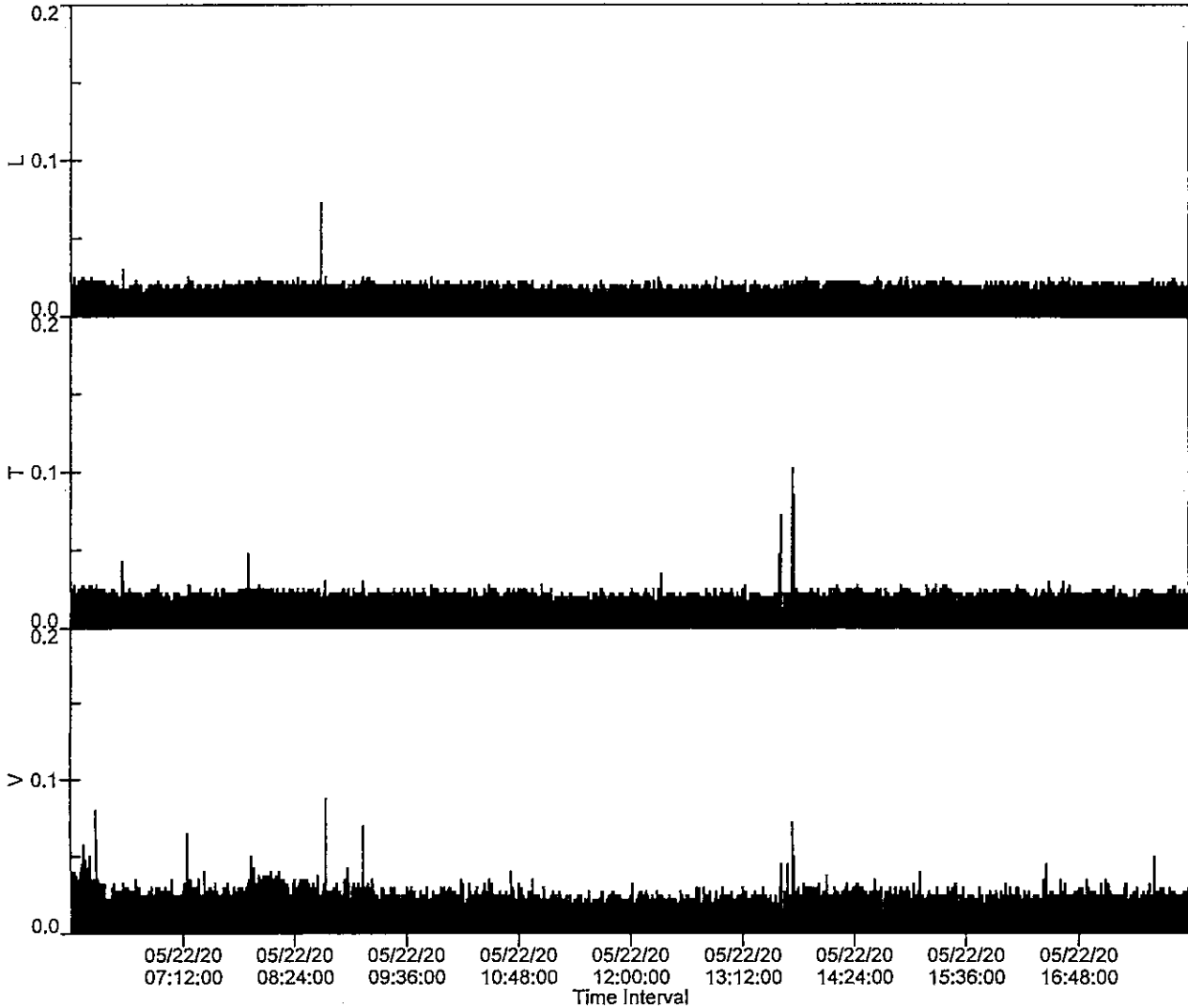
	L	T	V
PPV (in/s)	0.073	0.103	0.088
FREQ (Hz)	100.0	62.5	71.4
Peak Air Pressure:	107 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 04/06/2020
By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 5033 Event: 34

Record Max PPV: 0.103 in/s Record Max DB: 107 db



SN: 5033 v3.66
 Date: 05/23/2020 Time: 06:01:00
 Event: 35
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #4 WSNP
 Distance: 50.
 Operator: CTI INC
 Comment: HIGHCREST SCHOOL

Continuous Monitor Recording
Summary Data

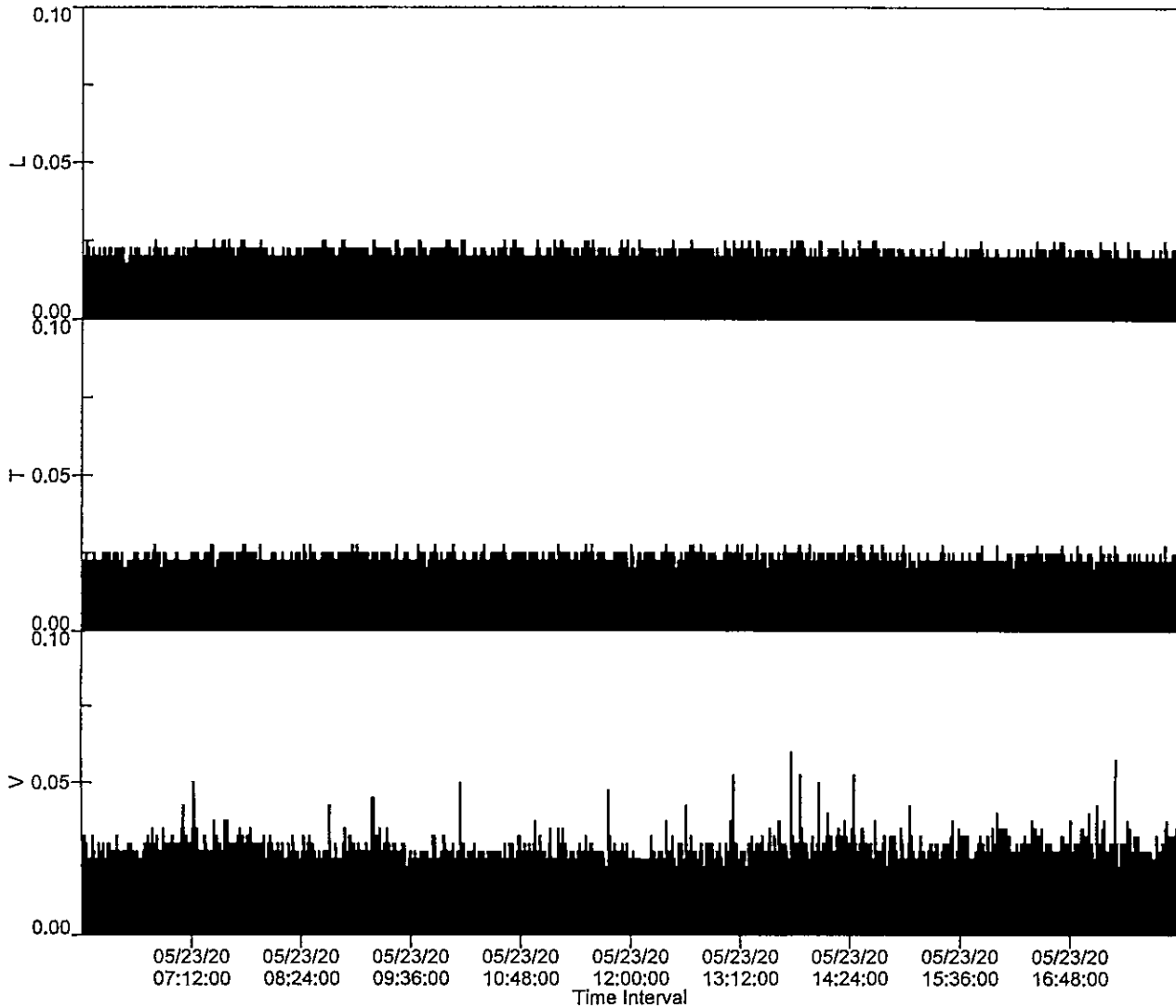
	L	T	V
PPV (in/s)	0.025	0.028	0.060
FREQ (Hz)	250.0	250.0	1.1
Peak Air Pressure:	107 db		
Recording Time:	718 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

Additional Info:

Shaketable Calibrated: 04/06/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 5033 Event: 35

Record Max PPV: 0.060 in/s Record Max DB: 107 db



SN: 5033 v3.66
 Date: 05/24/2020 Time: 06:01:00
 Event: 36
 Client: BERGER CONST
 Operation: EXCAVATION
 Location: #4 WSNP
 Distance: 50.
 Operator: CTI INC
 Comment: HIGHCREST SCHOOL

Continuous Monitor Recording

Summary Data

	L	T	V
PPV (in/s)	0.025	0.030	0.055
FREQ (Hz)	125.0	500.0	2.2
Peak Air Pressure:	106 db		

Recording Time: 718 minutes
 Sample Size: 1440
 Interval Size: 60 seconds

Additional Info:

Shaketable Calibrated: 04/06/2020
 By: GeoSonics Inc.
 359 Northgate Drive
 Warrendale, PA 15086 U.S.A.
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 5033 Event: 36

Record Max PPV: 0.055 in/s Record Max DB: 106 db

