

Wilmette WSNRP Community Park Project  
Wilmette, Illinois

**VIBRATION  
MONITORING  
REPORT-6**

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

July 20, 2020

Cti



cti

Construction  
Testing &  
Instrumentation

4262 Old Grand Ave  
Suite 102  
Chicago, IL 60031

July 20, 2020

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

RE: **Report 6:** - *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 **July 6, 2020 through July 19, 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.

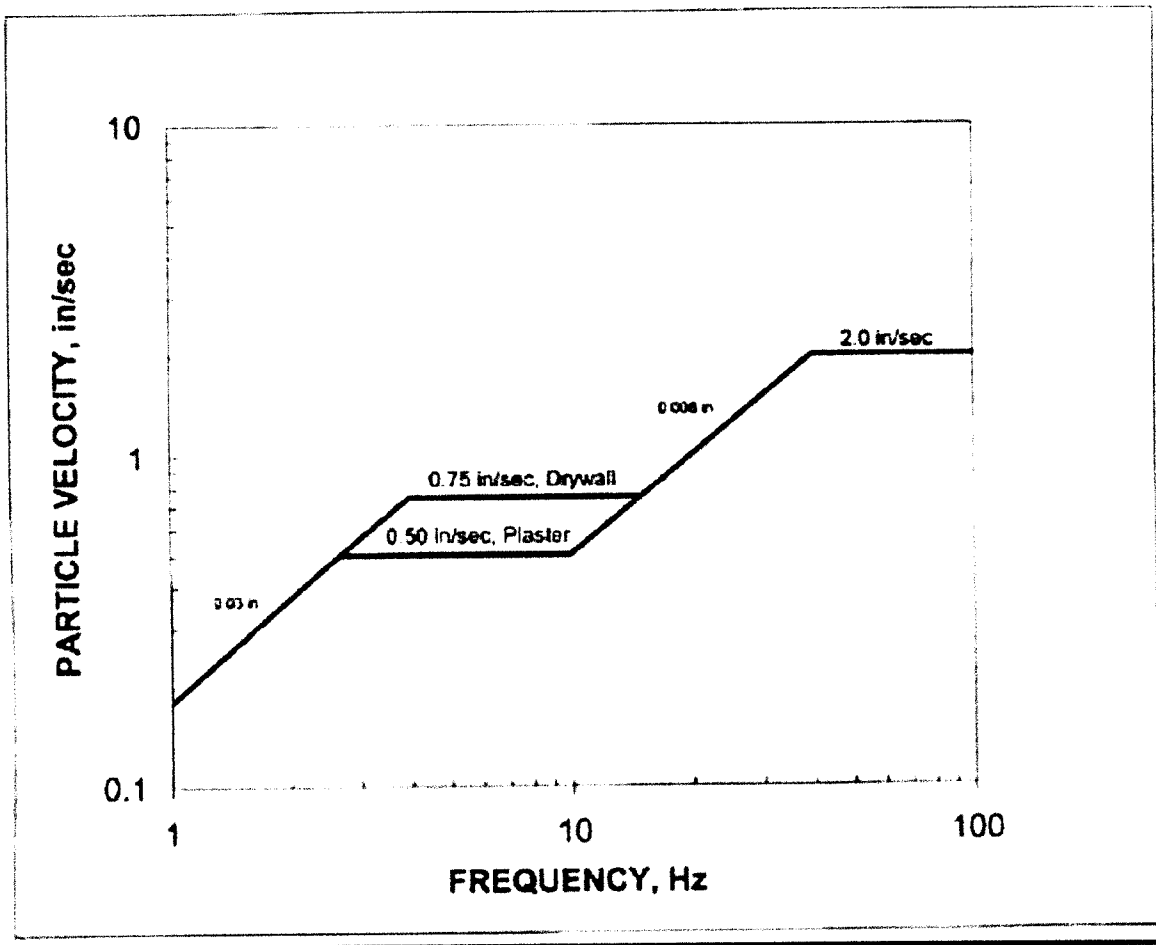
All vibration recordings during this report period have been below the 0.50-inch per second threshold limit. The maximum PPV for the monitoring period are below.

July 9, 2020	<b>Location #1</b>	Unit #8289	L	0.035 (in/s)
July 10, 2020	<b>Location #2</b>	Unit #3559	V	0.040 (in/s)
July 15, 2020	<b>Location #3</b>	Unit #3804	T	0.158 (in/s)
July 17, 2020	<b>Location #4</b>	Unit #5033	V	0.163 (in/s)
July 15, 2020	<b>Location #5</b>	Unit #3802	L	0.205 (in/s)
July 9, 2020	<b>Location #6</b>	Unit #3775	L	0.135 (in/s)
July 15, 2020	<b>Location #7</b>	Unit #3733	L	0.155 (in/s)
July 15, 2020	<b>Location #8</b>	Unit #8336	T	0.175 (in/s)
July 15, 2020	<b>Location #9</b>	Unit #5259	V	0.065 (in/s)

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

Sincerely,

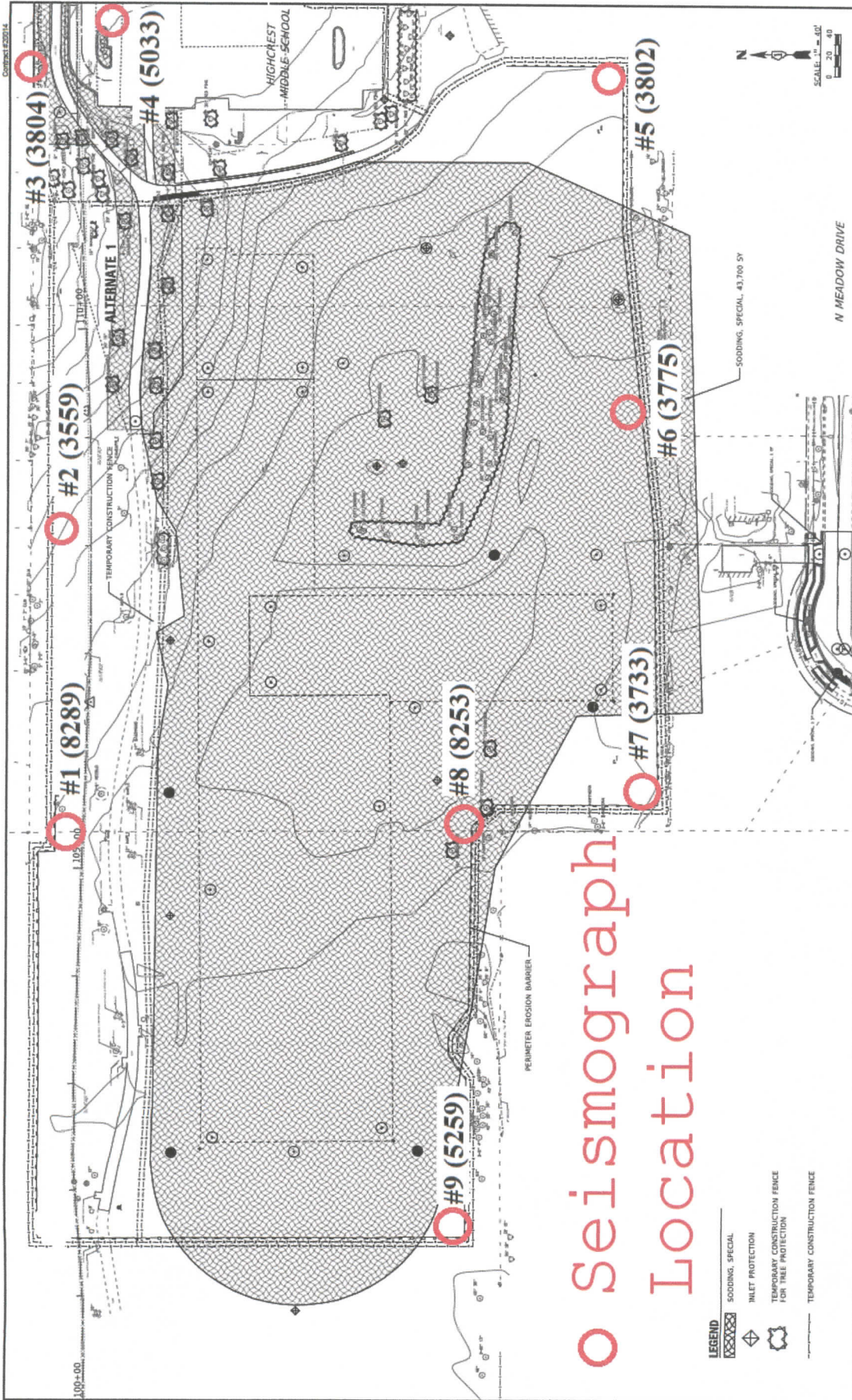
Daniel W. McCarthy  
Senior Instrumentation Engineer



### 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.<sup>1</sup> 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.<sup>2</sup> 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.

<sup>1</sup> 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. <sup>2</sup> Rosenthal, M. F. and Morlock, G. L. (1987). *Blasting Guidance Manual*, U.S. Department of the Interior, Office of Surface Mining Reclamation and Enforcement.



○ Seismograph Location

- LEGEND**
- ▣ SODDING, SPECIAL
  - ◊ INLET PROTECTION
  - ◌ TEMPORARY CONSTRUCTION FENCE FOR TREE PROTECTION
  - TEMPORARY CONSTRUCTION FENCE

<b>CHRYSTOPHER B. BURKE ENGINEERING, LTD.</b> 9575 W. Higgins Road, Suite 600 Rosemont, Illinois 60018 (847) 823-0500		<b>BAXTER &amp; WOODMAN</b> <small>INCORPORATED</small>	
VILLAGE OF WILMETTE 1200 WILMETTE AVENUE WILMETTE, IL 60091-0040		CLIENT:	
LOCAL DRAWN SCALE PLOT DATE EXCEL. MODIFICATION	STATE DATE SCALE PLOT DATE EXCEL. MODIFICATION	COUNTY DATE SCALE PLOT DATE EXCEL. MODIFICATION	CITY DATE SCALE PLOT DATE EXCEL. MODIFICATION
PROJECT NO. 18884 DATE: 01-29-2020 SHEET 68 OF 87 DRAWING NO. 89		TITLE: <b>WSNSP CONTRACT 1          COMMUNITY PARK          EROSION CONTROL PLAN</b>	

**SN:** 8289 v3.66  
**Date:** 07/06/2020 **Time:** 06:42:00  
**Event:** 17  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #1 WSNP  
**Distance:** 50.  
**Operator:** CTI INC  
**Comment:** NORTH UNIT

**Continuous Monitor Recording  
Summary Data**

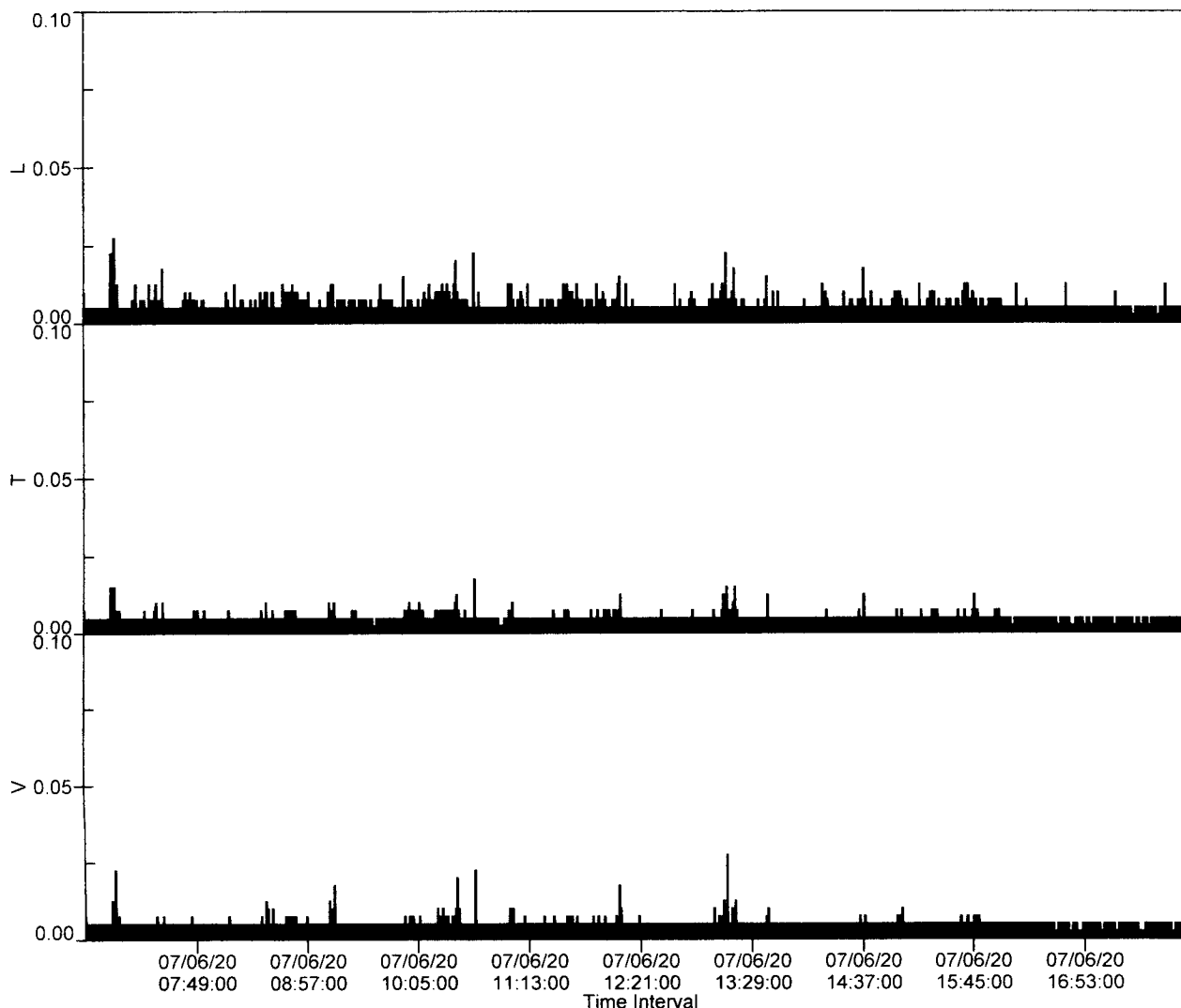
	L	T	V
<b>PPV (in/s)</b>	0.028	0.018	0.028
<b>FREQ (Hz)</b>	11.1	18.5	12.8
<b>Peak Air Pressure:</b>	94 db		
<b>Recording Time:</b>	677 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**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: 0.028 in/s Record Max DB: 94 db



**SN:** 8289 v3.66  
**Date:** 07/07/2020 **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**

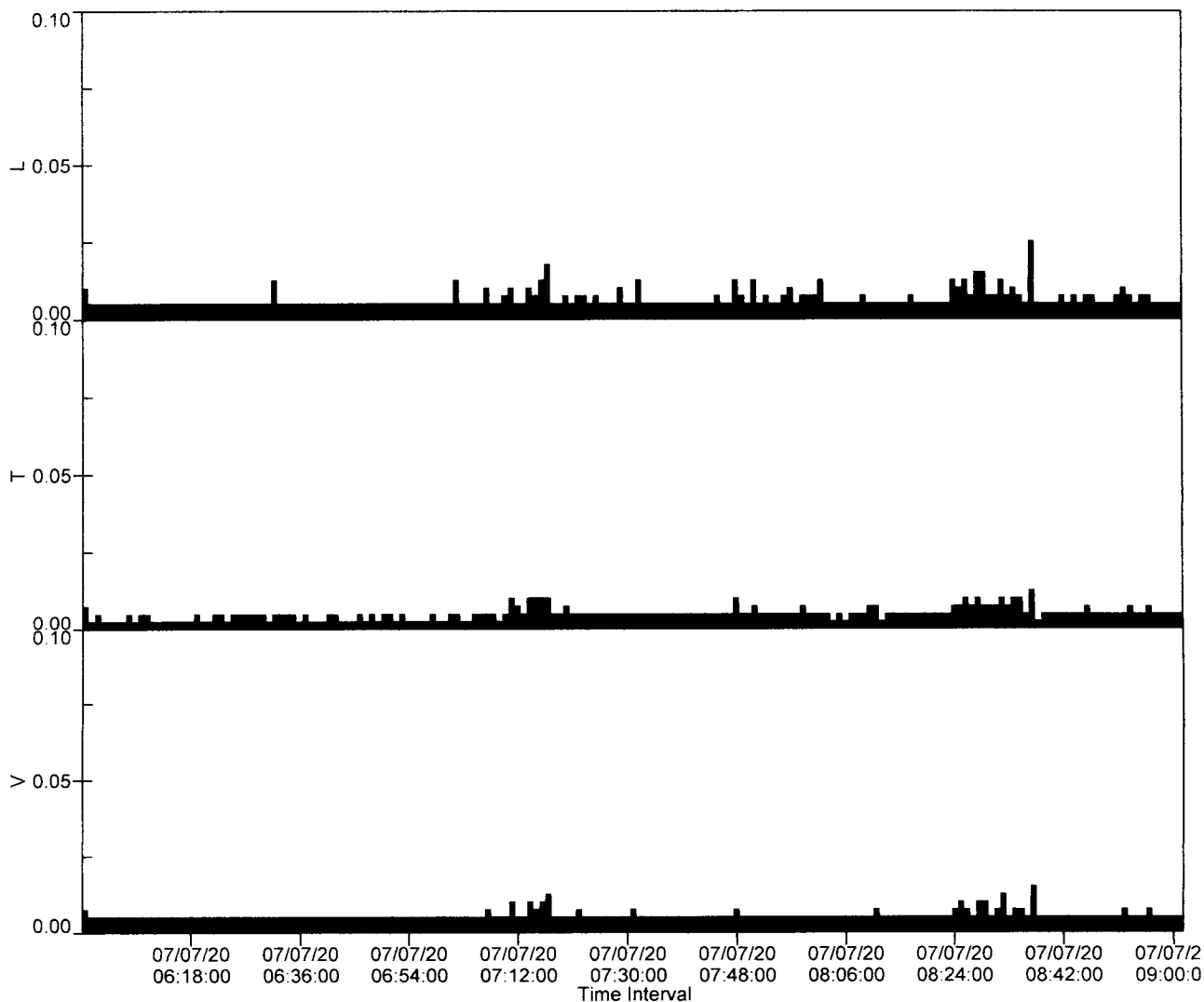
	L	T	V
<b>PPV (in/s)</b>	0.025	0.013	0.015
<b>FREQ (Hz)</b>	19.2	13.9	9.3
<b>Peak Air Pressure:</b>	102 db		
<b>Recording Time:</b>	181 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**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: 0.025 in/s Record Max DB: 102 db



**SN:** 8289 v3.66  
**Date:** 07/08/2020 **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
<b>PPV (in/s)</b>	0.015	0.013	0.010
<b>FREQ (Hz)</b>	250.0	12.2	15.6
<b>Peak Air Pressure:</b>	89 db		

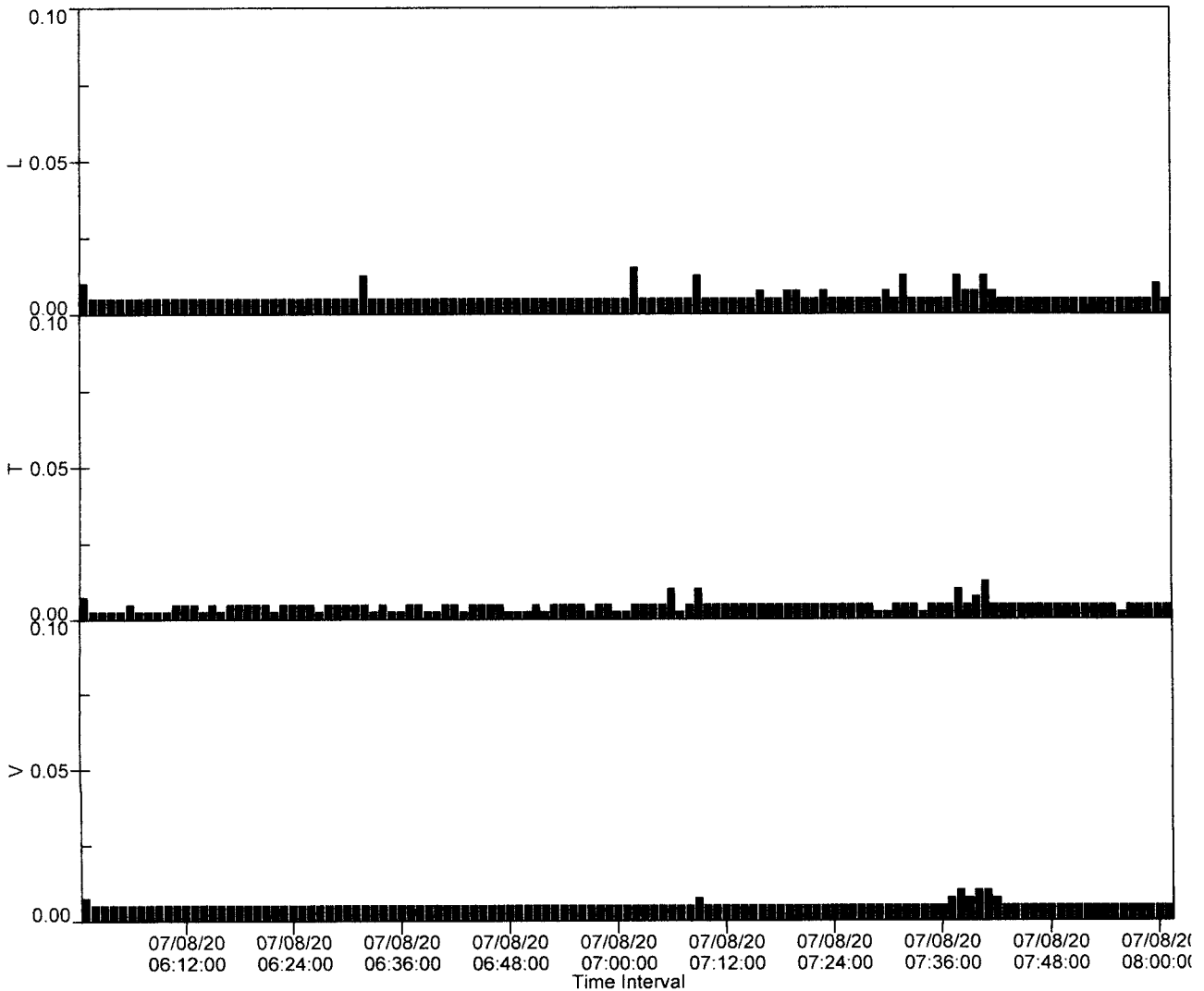
**Recording Time:** 121 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 0.015 in/s Record Max DB: 89 db



**SN:** 8289 v3.66  
**Date:** 07/09/2020 **Time:** 06:01:00  
**Event:** 20  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #1 WSNP  
**Distance:** 50.  
**Operator:** CTI INC  
**Comment:** NORTH UNIT

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.035	0.025	0.028
<b>FREQ (Hz)</b>	10.9	8.5	12.5
<b>Peak Air Pressure:</b>	95 db		

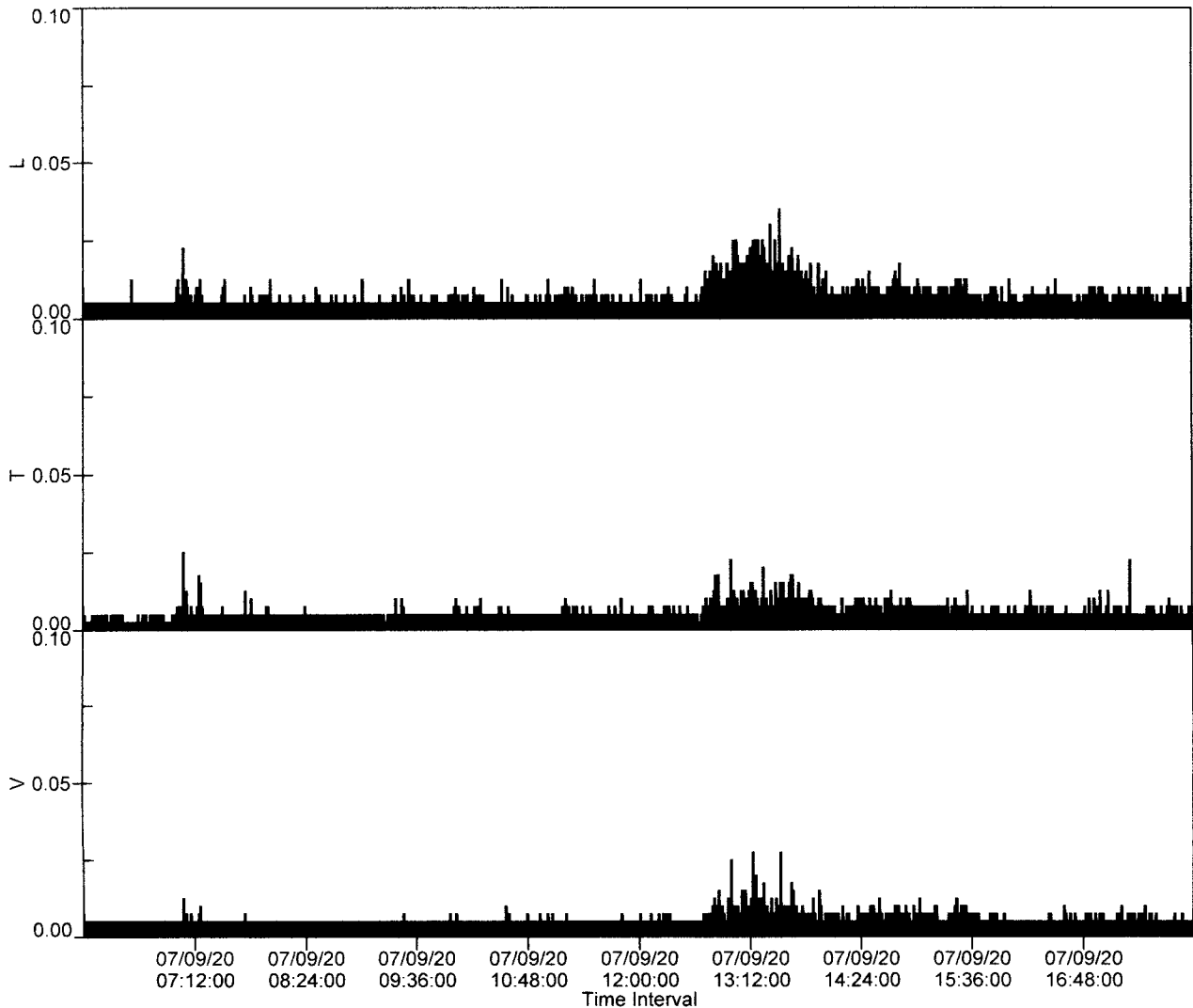
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 20

Record Max PPV: 0.035 in/s Record Max DB: 95 db





**SN:** 8289 v3.66  
**Date:** 07/10/2020 **Time:** 06:01:00  
**Event:** 21  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #1 WSNP  
**Distance:** 50.  
**Operator:** CTI INC  
**Comment:** NORTH UNIT

**Continuous Monitor Recording  
Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.018	0.018	0.013
<b>FREQ (Hz)</b>	13.9	8.6	11.6
<b>Peak Air Pressure:</b>	89 db		

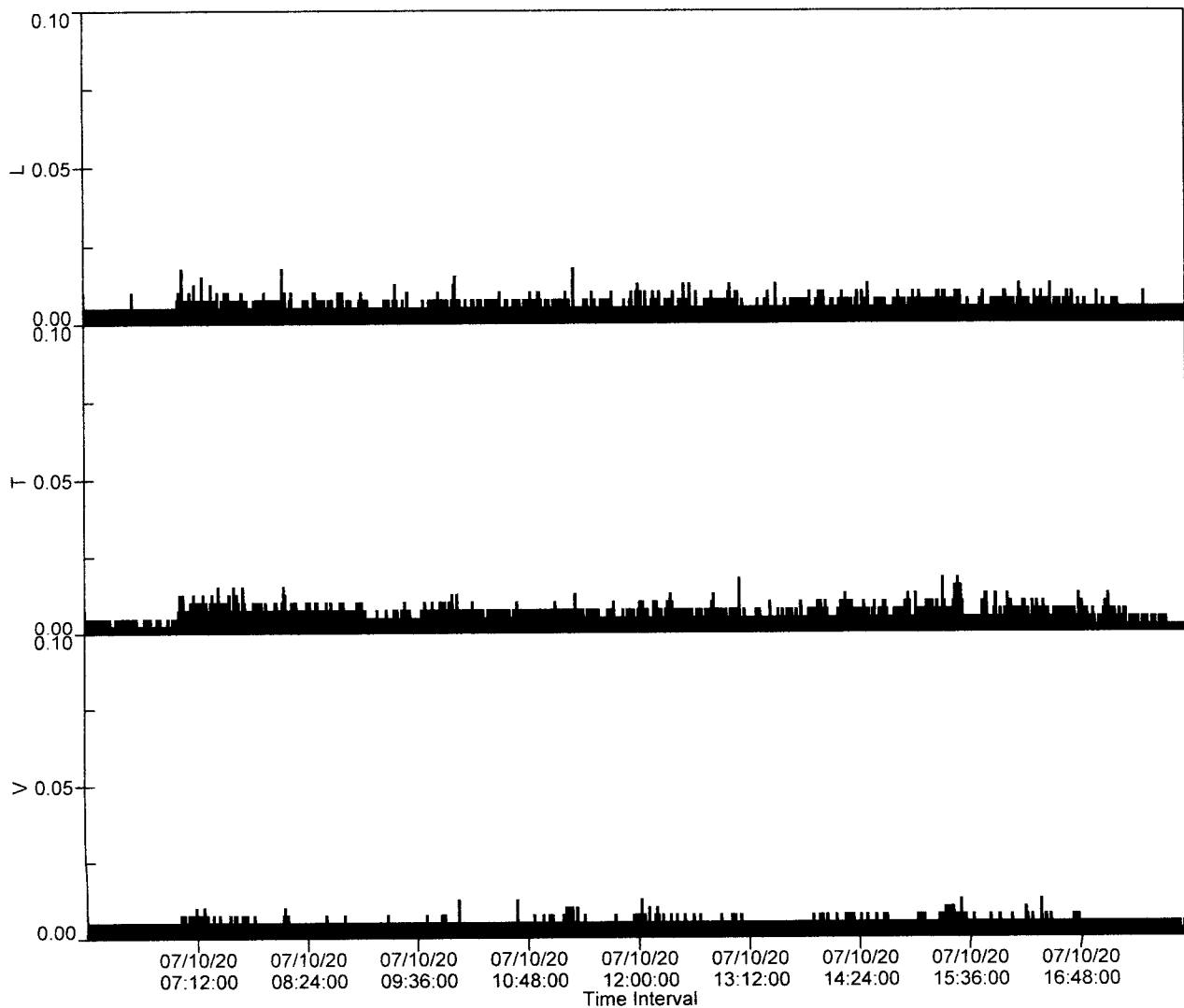
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 21

Record Max PPV: 0.018 in/s Record Max DB: 89 db



**SN:** 8289 v3.66  
**Date:** 07/11/2020 **Time:** 06:01:00  
**Event:** 22  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #1 WSNP  
**Distance:** 50.  
**Operator:** CTI INC  
**Comment:** NORTH UNIT

**Continuous Monitor Recording  
Summary Data**

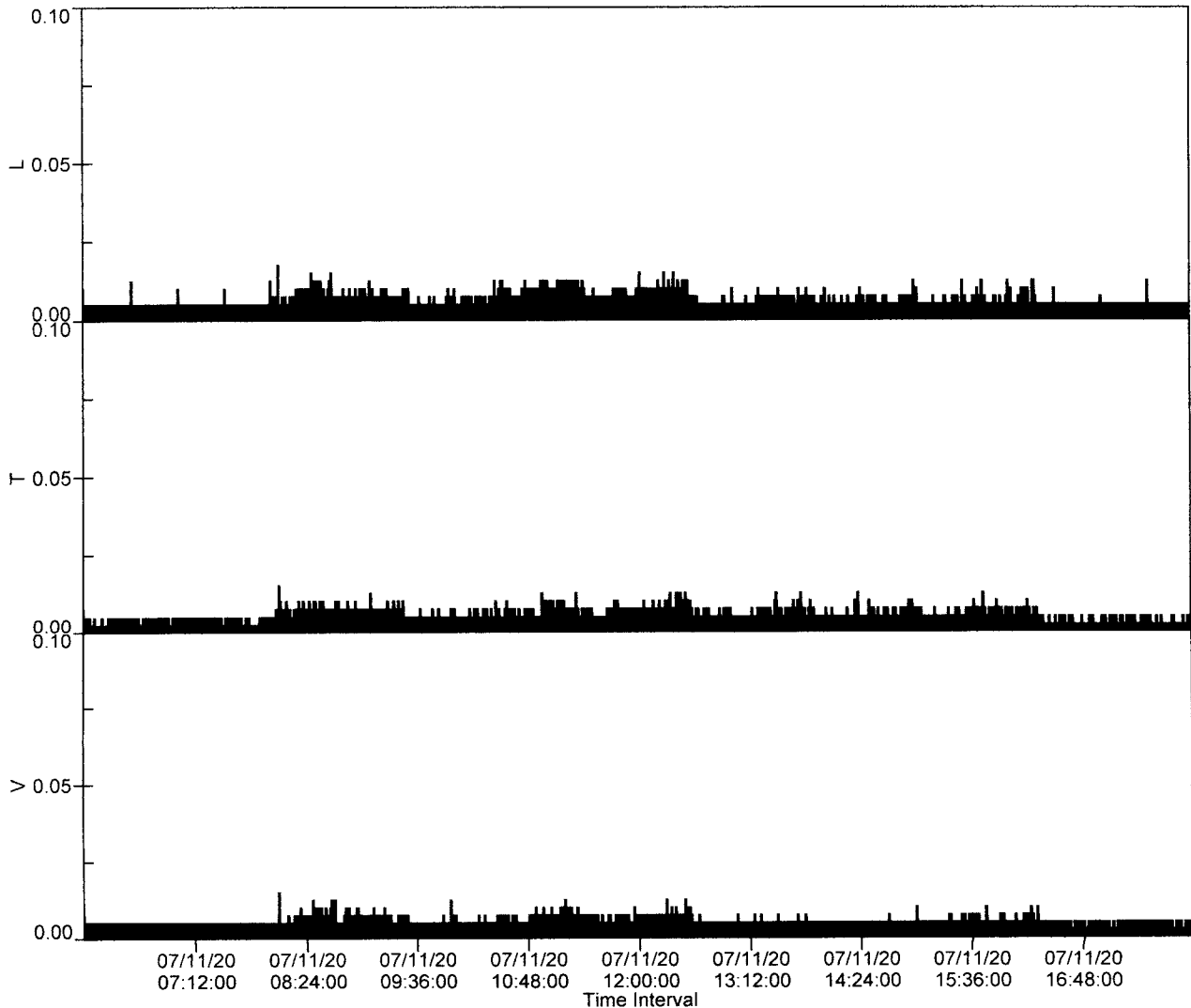
	L	T	V
<b>PPV (in/s)</b>	0.018	0.015	0.015
<b>FREQ (Hz)</b>	9.6	7.5	10.6
<b>Peak Air Pressure:</b>	89 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**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: 22

Record Max PPV: 0.018 in/s Record Max DB: 89 db



**SN:** 8289 v3.66  
**Date:** 07/12/2020 **Time:** 06:01:00  
**Event:** 23  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #1 WSNP  
**Distance:** 50.  
**Operator:** CTI INC  
**Comment:** NORTH UNIT

**Continuous Monitor Recording  
Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.013	0.008	0.008
<b>FREQ (Hz)</b>	125.0	3.2	.3
<b>Peak Air Pressure:</b>	89 db		

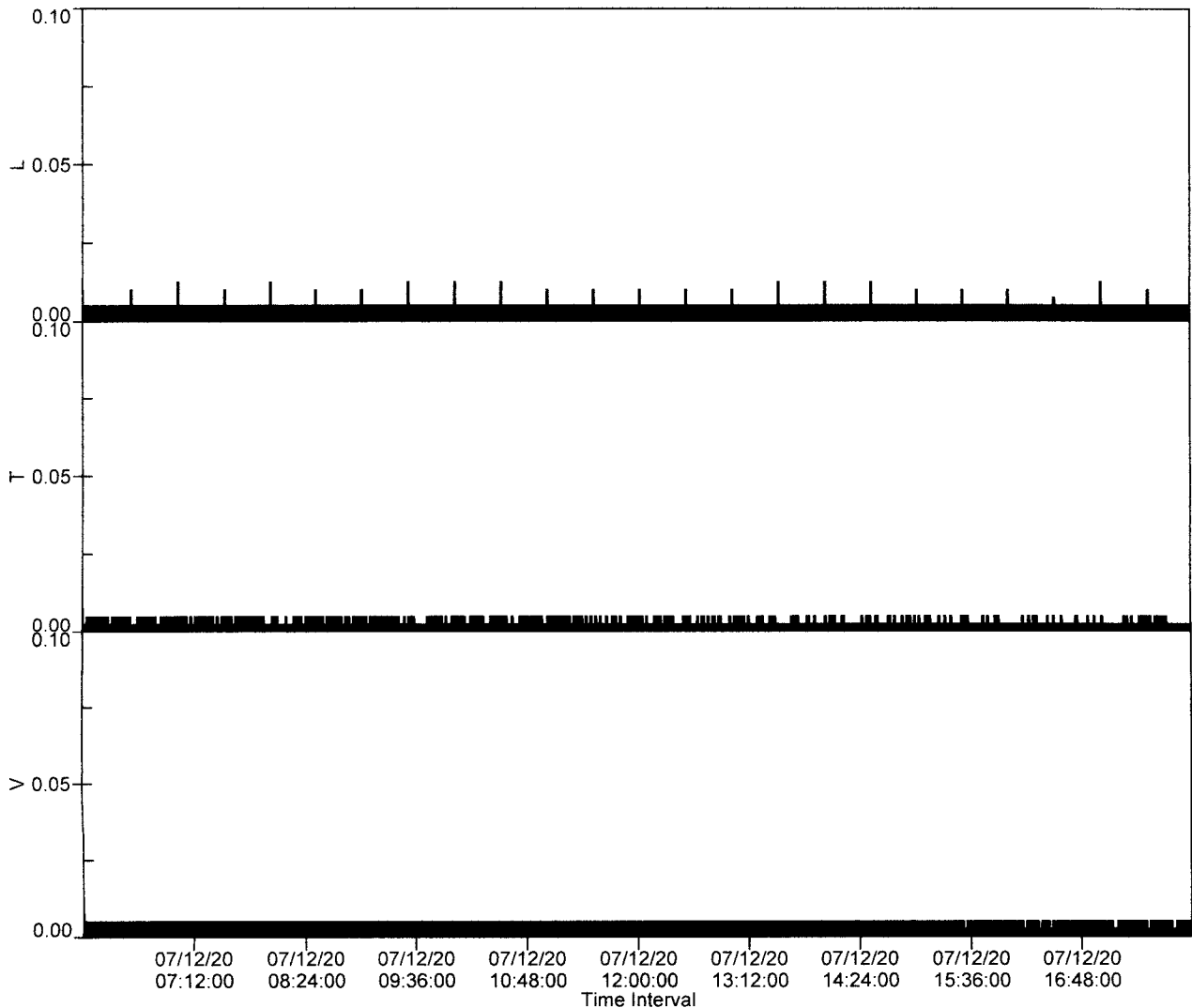
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 23

Record Max PPV: 0.013 in/s Record Max DB: 89 db



**SN:** 8289 v3.66  
**Date:** 07/13/2020 **Time:** 06:01:00  
**Event:** 24  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #1 WSNSP  
**Distance:** 50.  
**Operator:** CTI INC  
**Comment:** NORTH UNIT

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.013	0.013	0.010
<b>FREQ (Hz)</b>	166.7	7.5	11.6
<b>Peak Air Pressure:</b>	89 db		

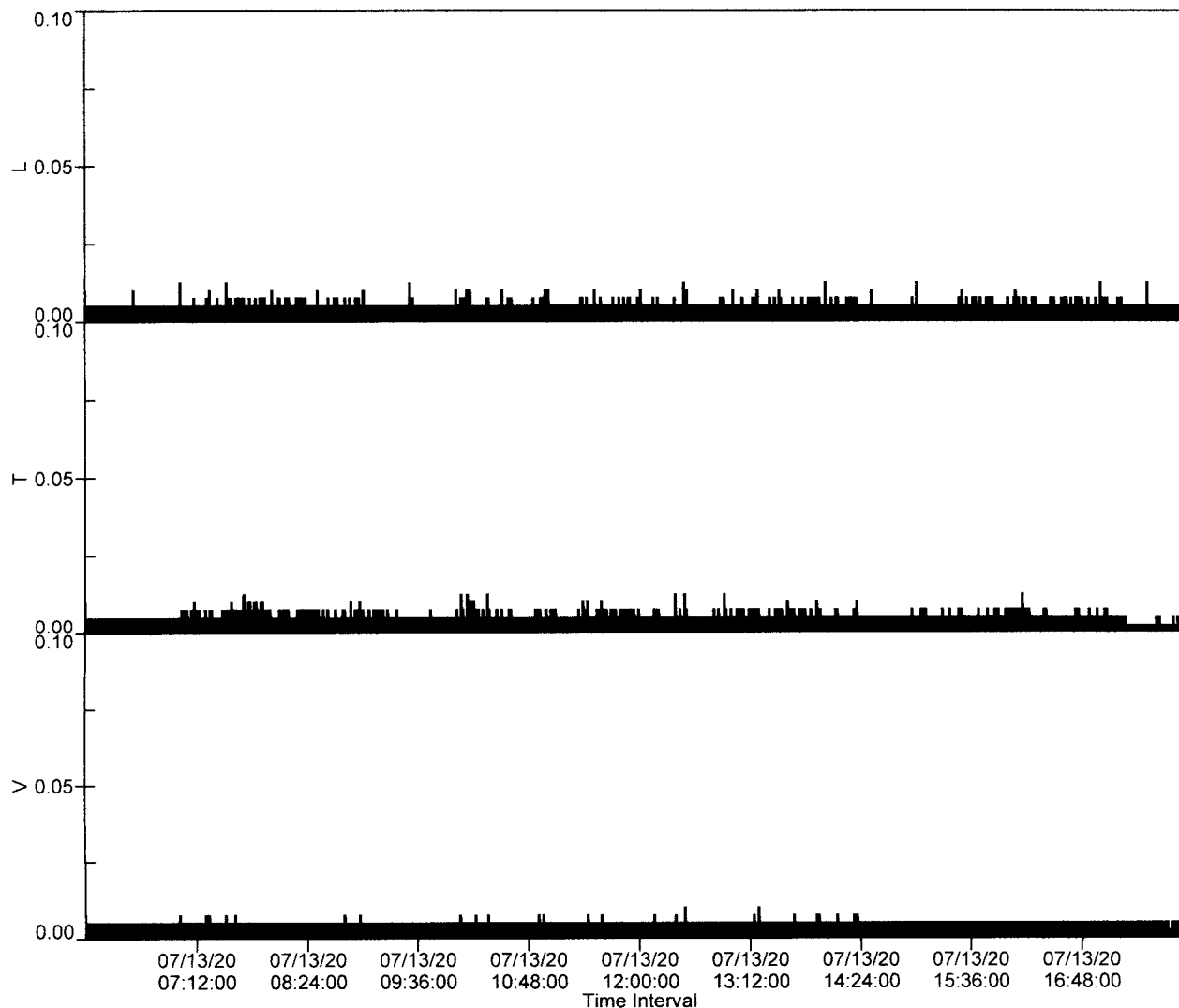
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 24

Record Max PPV: 0.013 in/s Record Max DB: 89 db



**SN:** 8289 v3.66  
**Date:** 07/14/2020 **Time:** 06:01:00  
**Event:** 25  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #1 WSNP  
**Distance:** 50.  
**Operator:** CTI INC  
**Comment:** NORTH UNIT

**Continuous Monitor Recording  
Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.015	0.015	0.010
<b>FREQ (Hz)</b>	12.8	9.1	13.5
<b>Peak Air Pressure:</b>	89 db		

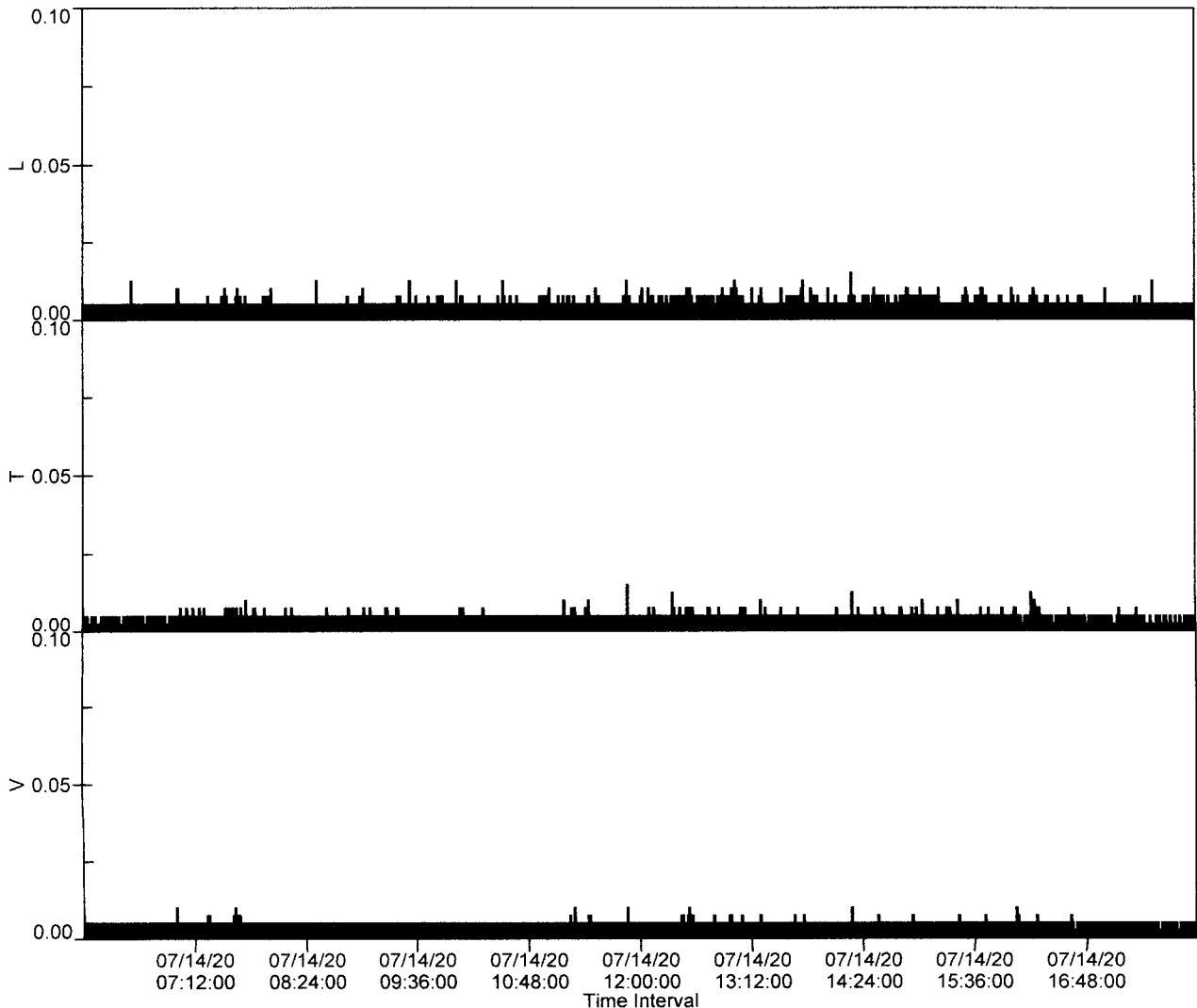
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 25

Record Max PPV: 0.015 in/s Record Max DB: 89 db



**SN:** 8289 v3.66  
**Date:** 07/15/2020 **Time:** 06:01:00  
**Event:** 26  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #1 WSNP  
**Distance:** 50.  
**Operator:** CTI INC  
**Comment:** NORTH UNIT

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.015	0.013	0.015
<b>FREQ (Hz)</b>	14.3	6.8	12.5
<b>Peak Air Pressure:</b>	87 db		

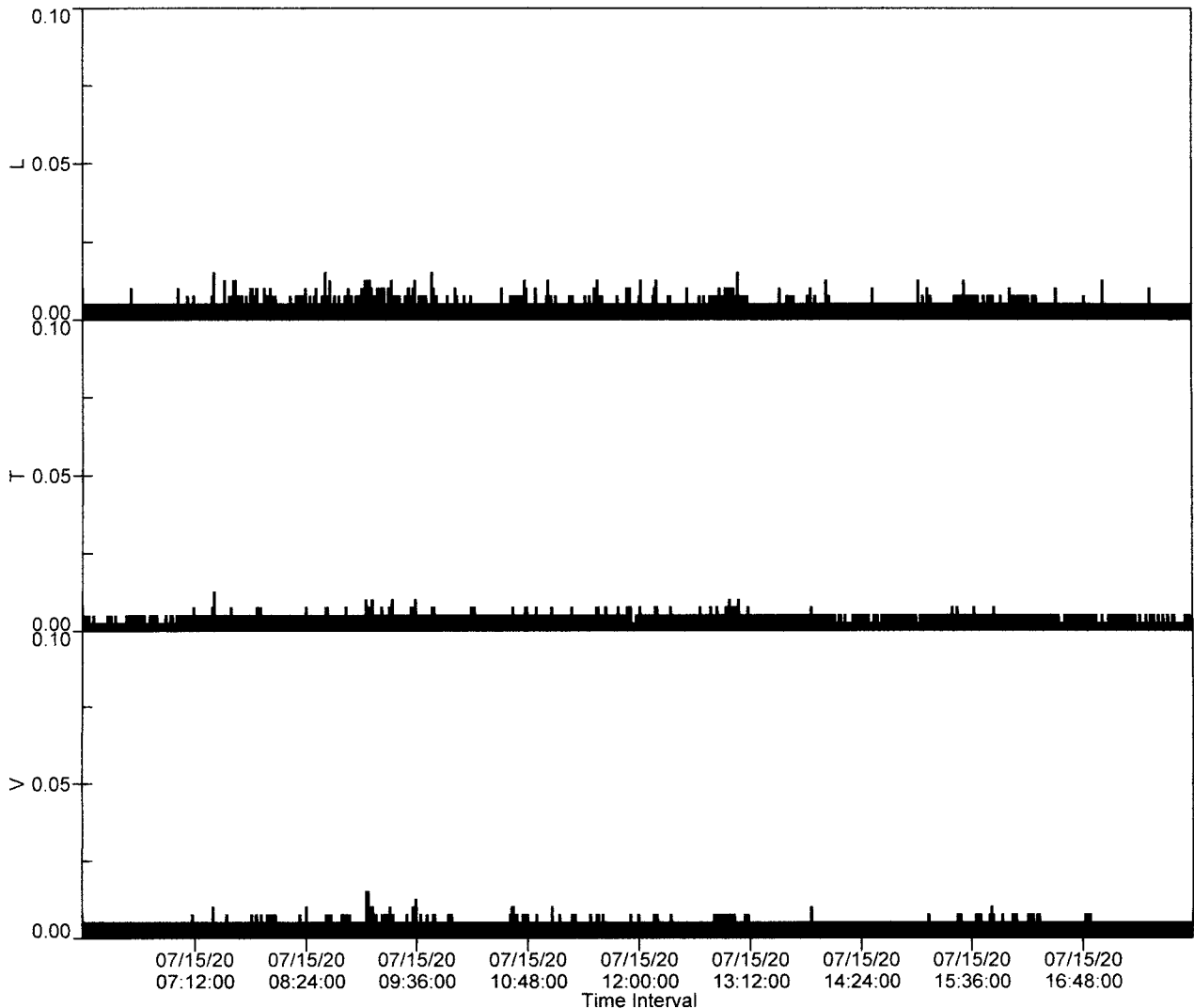
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 26

Record Max PPV: 0.015 in/s Record Max DB: 87 db



**SN:** 8289 v3.66  
**Date:** 07/16/2020 **Time:** 06:01:00  
**Event:** 27  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #1 WSNSP  
**Distance:** 50.  
**Operator:** CTI INC  
**Comment:** NORTH UNIT

**Continuous Monitor Recording  
Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.013	0.010	0.010
<b>FREQ (Hz)</b>	166.7	8.1	14.7
<b>Peak Air Pressure:</b>	94 db		

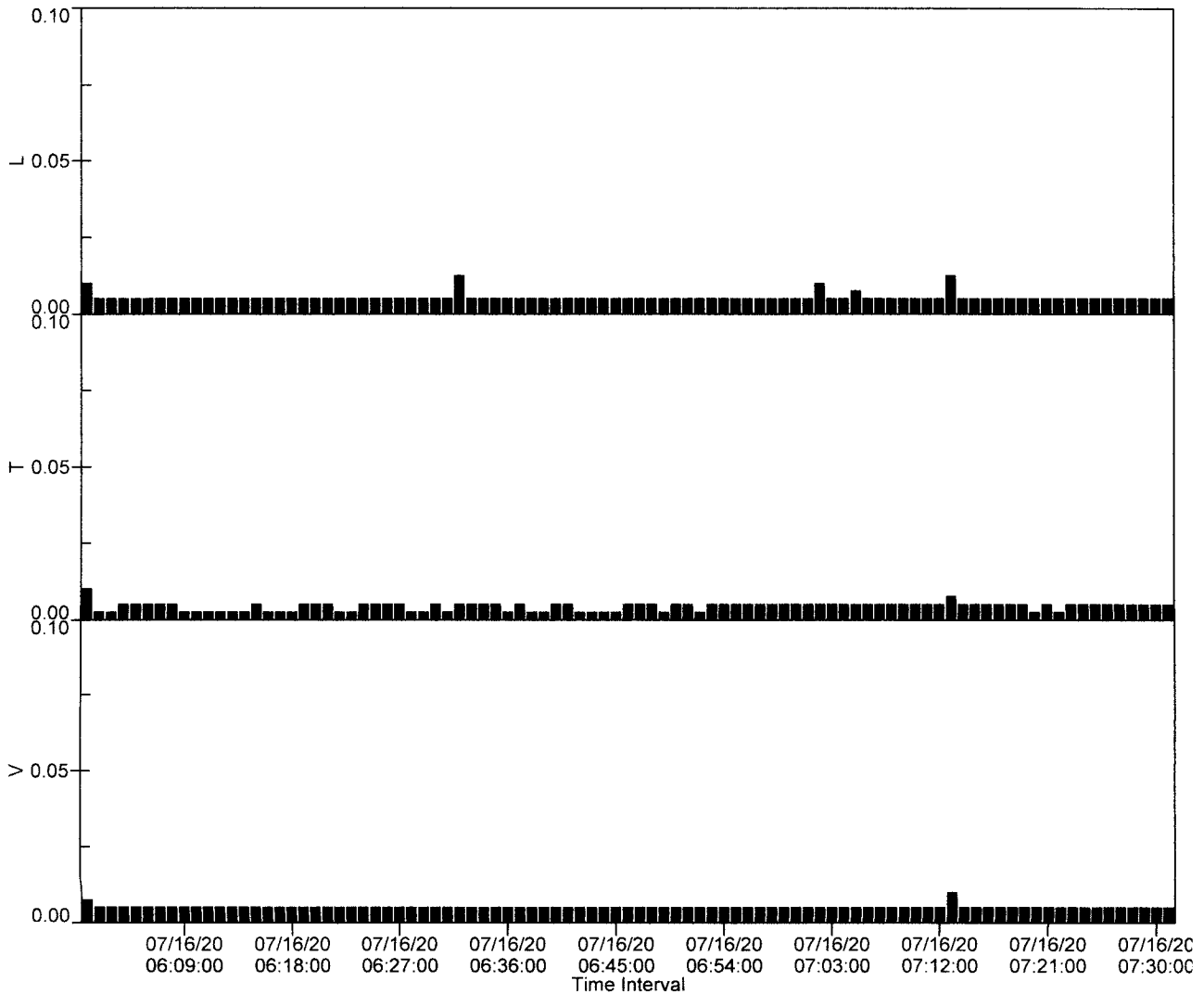
**Recording Time:** 91 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 27

Record Max PPV: 0.013 in/s Record Max DB: 94 db



**SN:** 8289 v3.66  
**Date:** 07/17/2020 **Time:** 06:01:00  
**Event:** 28  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #1 WSNP  
**Distance:** 50.  
**Operator:** CTI INC  
**Comment:** NORTH UNIT

**Continuous Monitor Recording  
Summary Data**

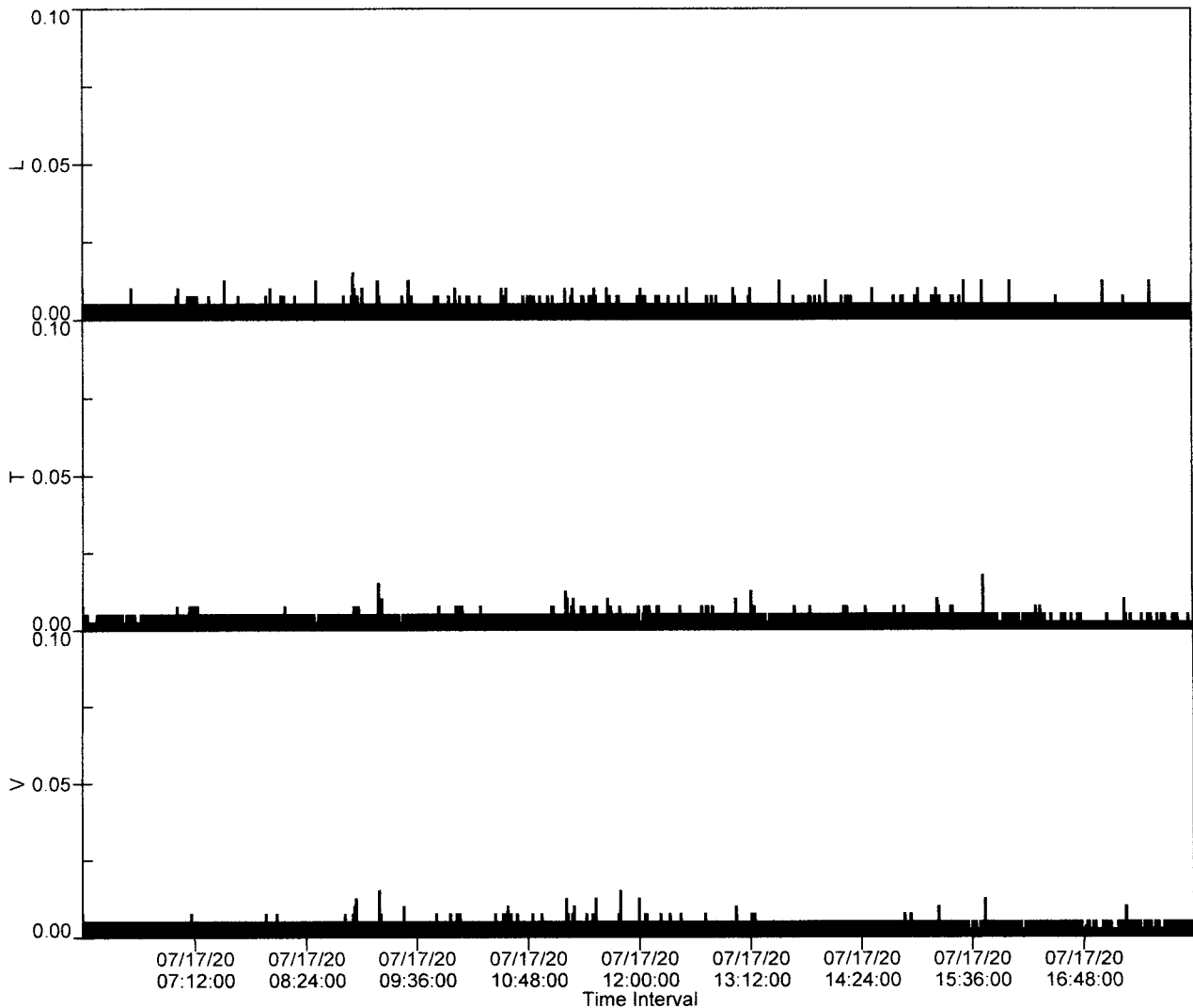
	L	T	V
<b>PPV (in/s)</b>	0.015	0.018	0.015
<b>FREQ (Hz)</b>	10.4	20.0	250.0
<b>Peak Air Pressure:</b>	92 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**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: 28

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





**SN:** 8289 v3.66  
**Date:** 07/18/2020 **Time:** 06:01:00  
**Event:** 29  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #1 WSNP  
**Distance:** 50.  
**Operator:** CTI INC  
**Comment:** NORTH UNIT

**Continuous Monitor Recording  
Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.018	0.020	0.025
<b>FREQ (Hz)</b>	14.3	13.2	12.2
<b>Peak Air Pressure:</b>	87 db		

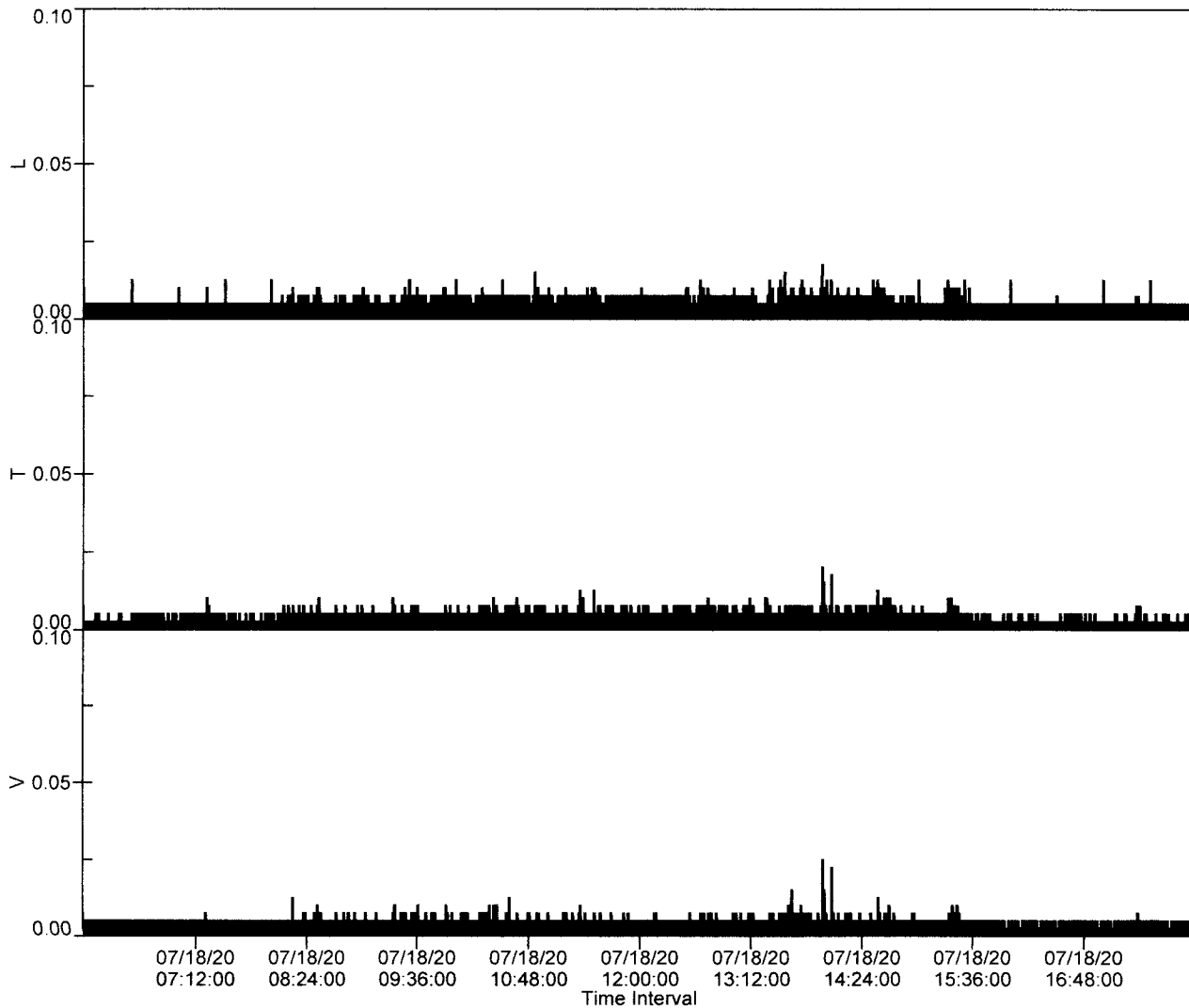
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 29

Record Max PPV: 0.025 in/s Record Max DB: 87 db



**SN:** 8289 v3.66  
**Date:** 07/19/2020 **Time:** 06:01:00  
**Event:** 30  
**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	0.008
FREQ (Hz)	.3	166.7	.3
Peak Air Pressure:	101 db		

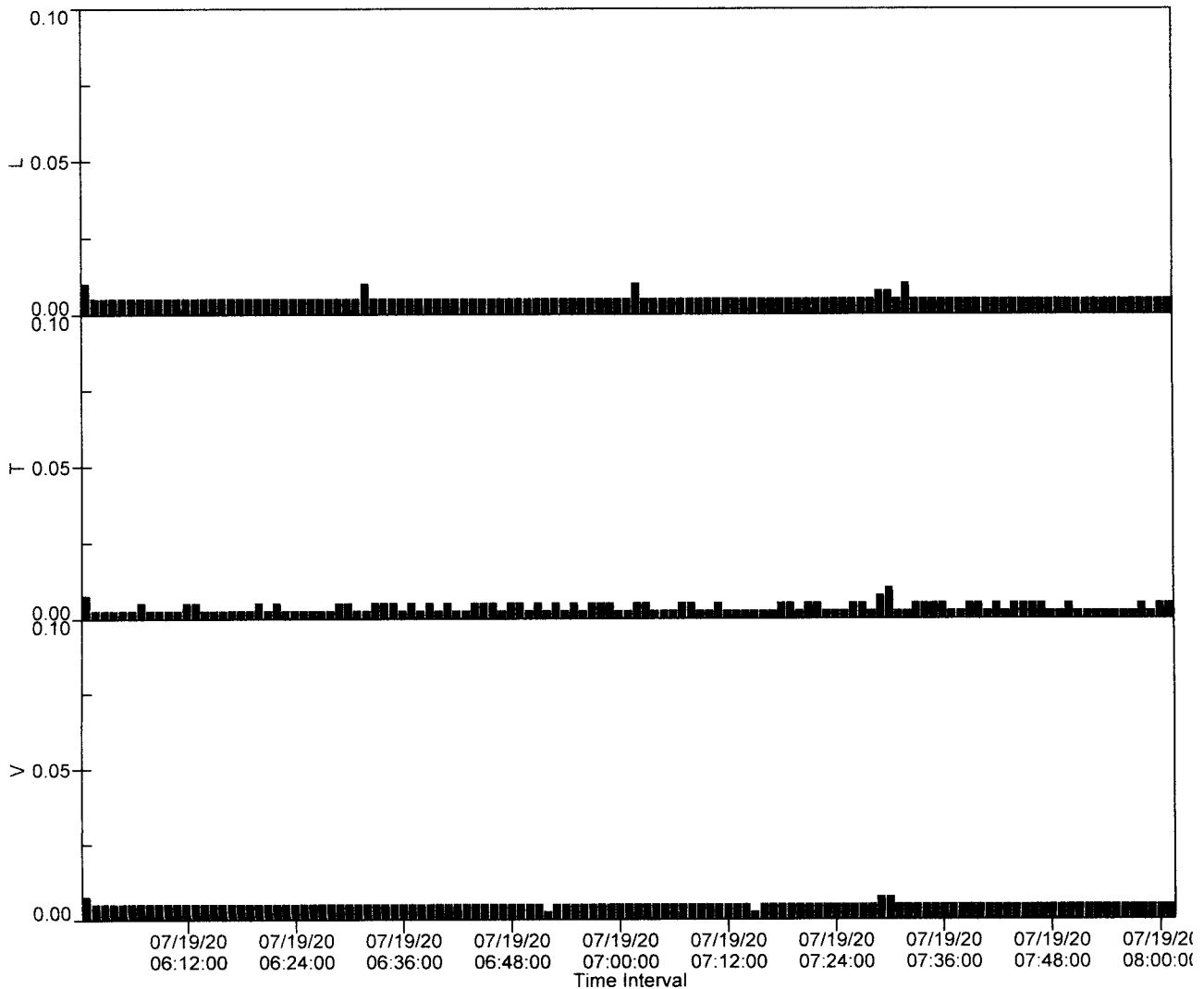
**Recording Time:** 121 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 30

Record Max PPV: 0.010 in/s Record Max DB: 101 db





**SN:** 3559 v2.75  
**Date:** 07/06/2020 **Time:** 06:58:00  
**Event:** 67  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #2 WSNP  
**Distance:** 50.  
**Operator:** CTI INC  
**Comment:** NORTH MIDDLE UNIT

**Continuous Monitor Recording  
Summary Data**

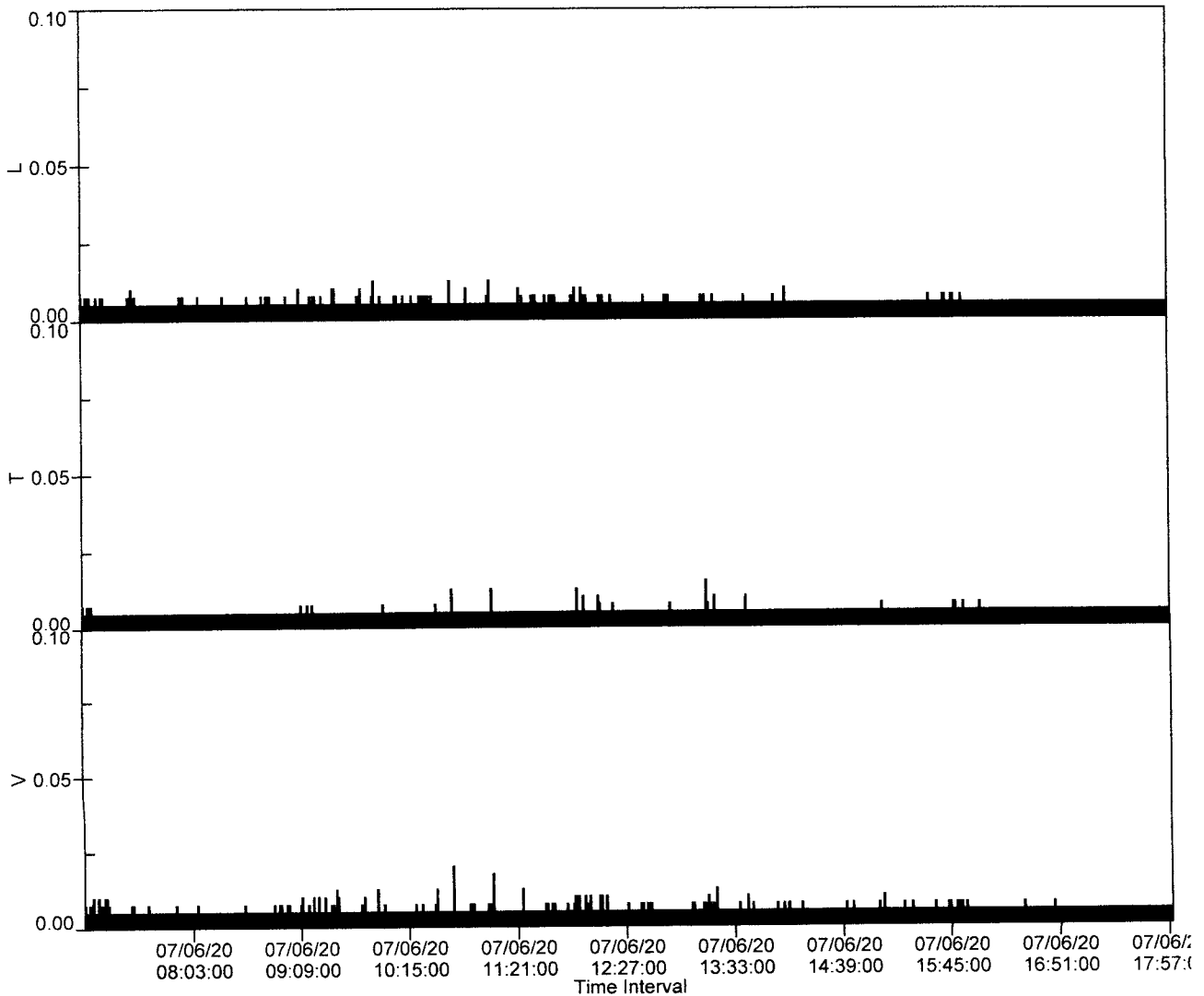
	L	T	V
<b>PPV (in/s)</b>	0.013	0.015	0.020
<b>FREQ (Hz)</b>	19.2	13.5	14.3
<b>Peak Air Pressure:</b>	78 db		
<b>Recording Time:</b>	661 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**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: 67

Record Max PPV: 0.020 in/s Record Max DB: 78 db



**SN:** 3559 v2.75  
**Date:** 07/07/2020 **Time:** 06:01:00  
**Event:** 68  
**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
<b>PPV (in/s)</b>	0.015	0.020	0.028
<b>FREQ (Hz)</b>	16.7	15.6	14.7
<b>Peak Air Pressure:</b>	79 db		

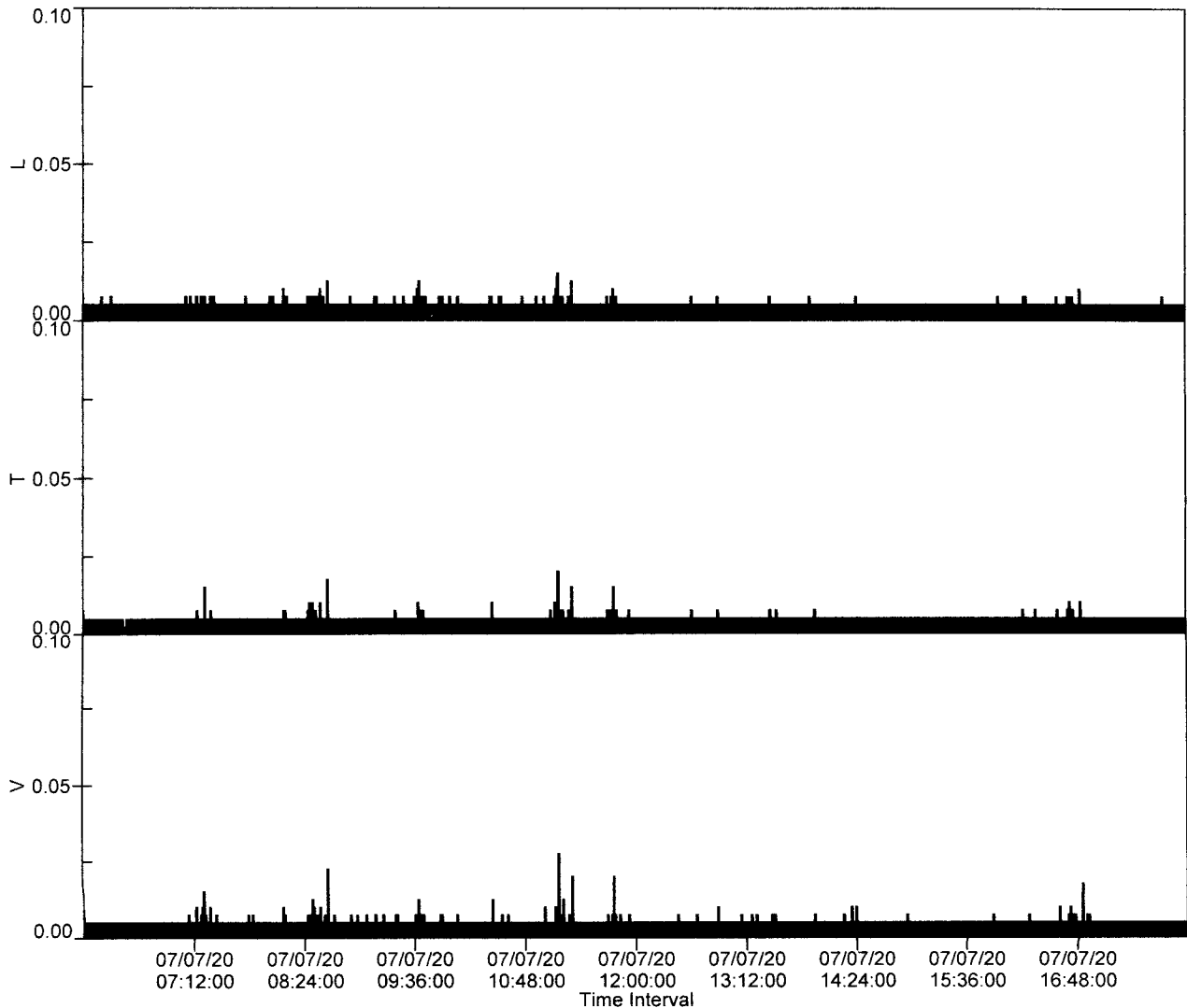
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 68

Record Max PPV: 0.028 in/s Record Max DB: 79 db



**SN:** 3559 v2.75  
**Date:** 07/08/2020 **Time:** 06:01:00  
**Event:** 69  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #2 WSNSP  
**Distance:** 50.  
**Operator:** CTI INC  
**Comment:** NORTH MIDDLE UNIT

**Continuous Monitor Recording  
Summary Data**

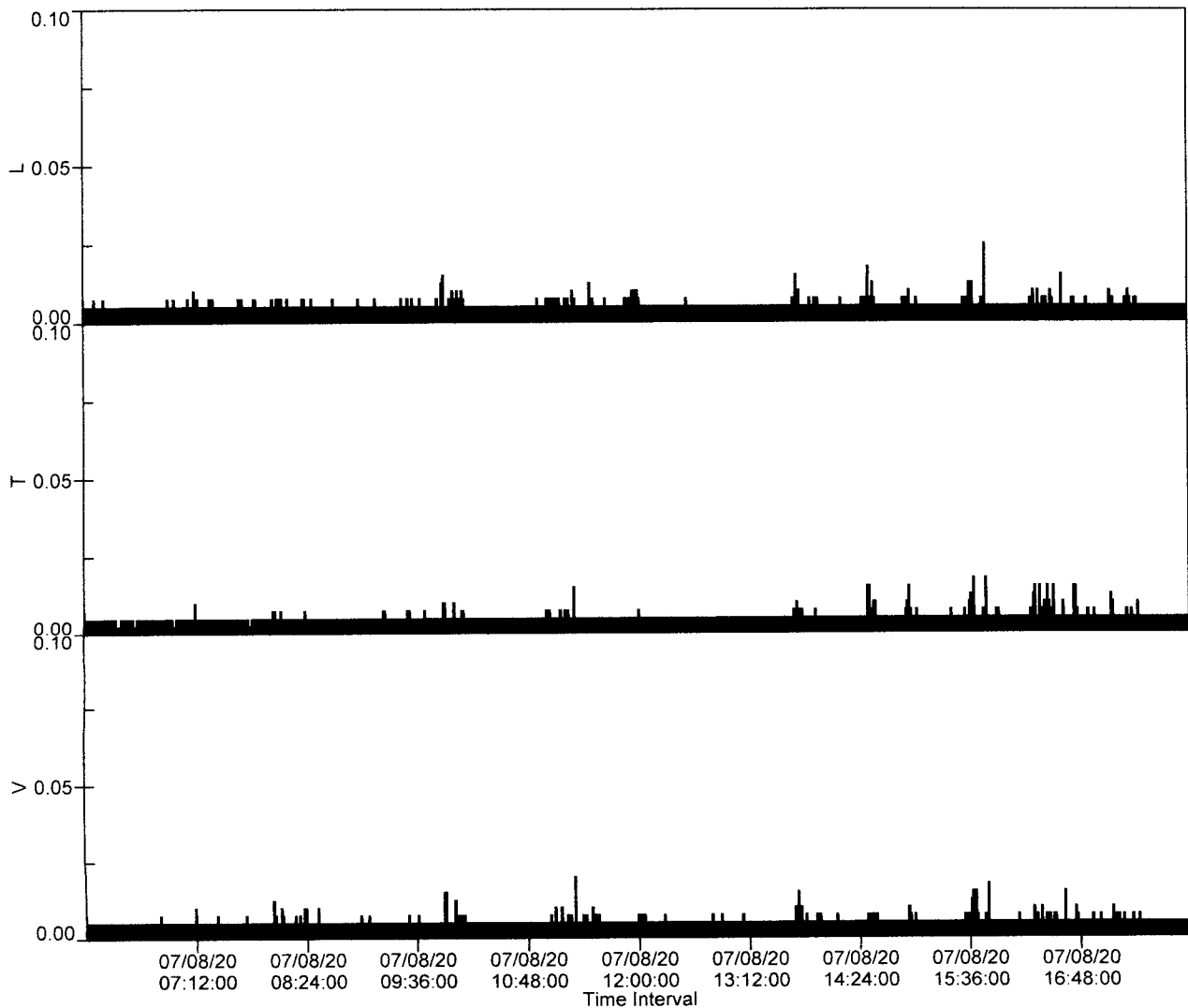
	L	T	V
<b>PPV (in/s)</b>	0.025	0.018	0.020
<b>FREQ (Hz)</b>	15.6	15.6	15.6
<b>Peak Air Pressure:</b>	76 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**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: 69

Record Max PPV: 0.025 in/s Record Max DB: 76 db



**SN:** 3559 v2.75  
**Date:** 07/09/2020 **Time:** 06:01:00  
**Event:** 70  
**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
<b>PPV (in/s)</b>	0.023	0.038	0.025
<b>FREQ (Hz)</b>	12.5	11.1	11.1
<b>Peak Air Pressure:</b>	76 db		

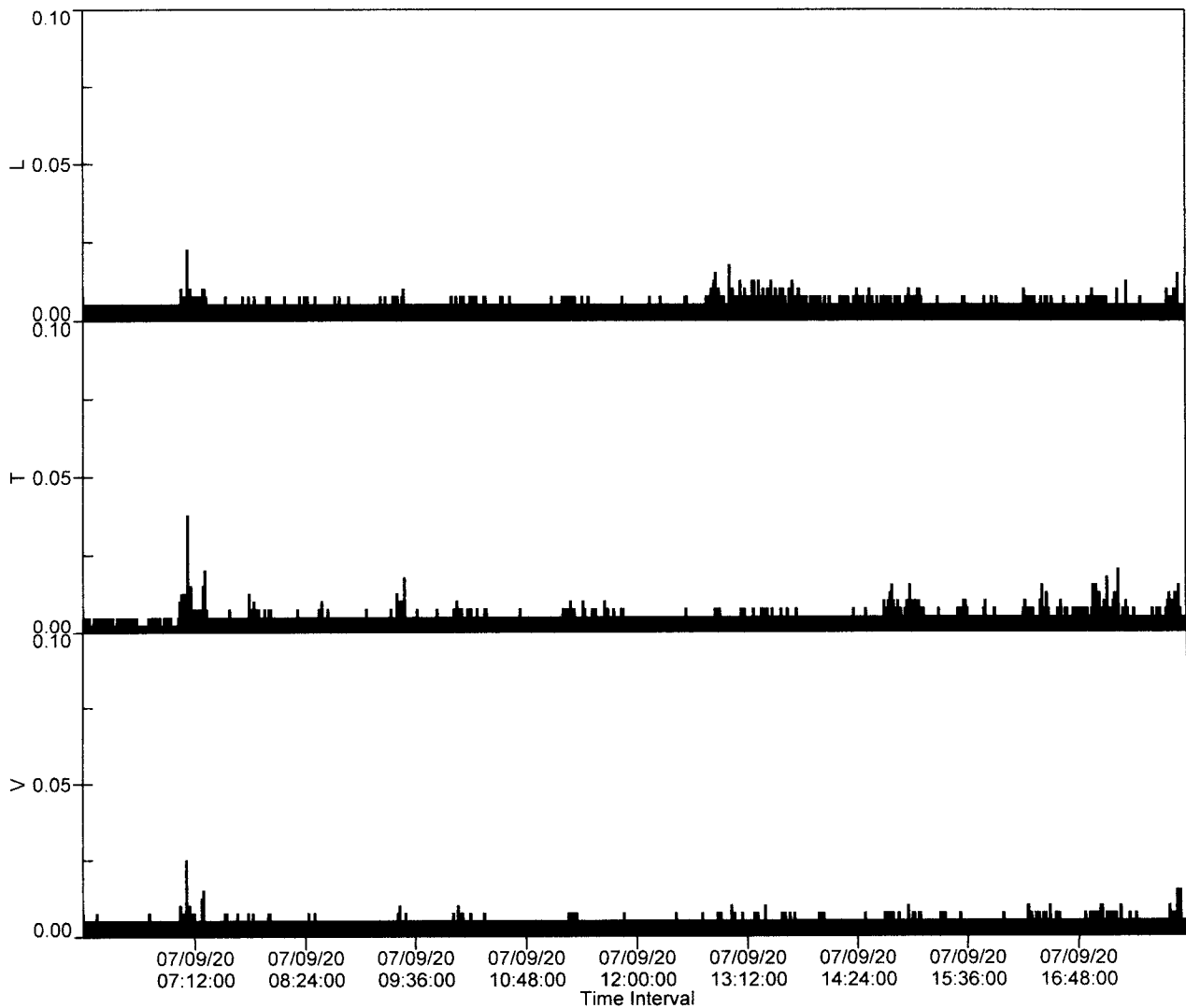
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 70

Record Max PPV: 0.038 in/s Record Max DB: 76 db



**SN:** 3559 v2.75  
**Date:** 07/10/2020 **Time:** 06:01:00  
**Event:** 71  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #2 WSNP  
**Distance:** 50.  
**Operator:** CTI INC  
**Comment:** NORTH MIDDLE UNIT

**Continuous Monitor Recording  
Summary Data**

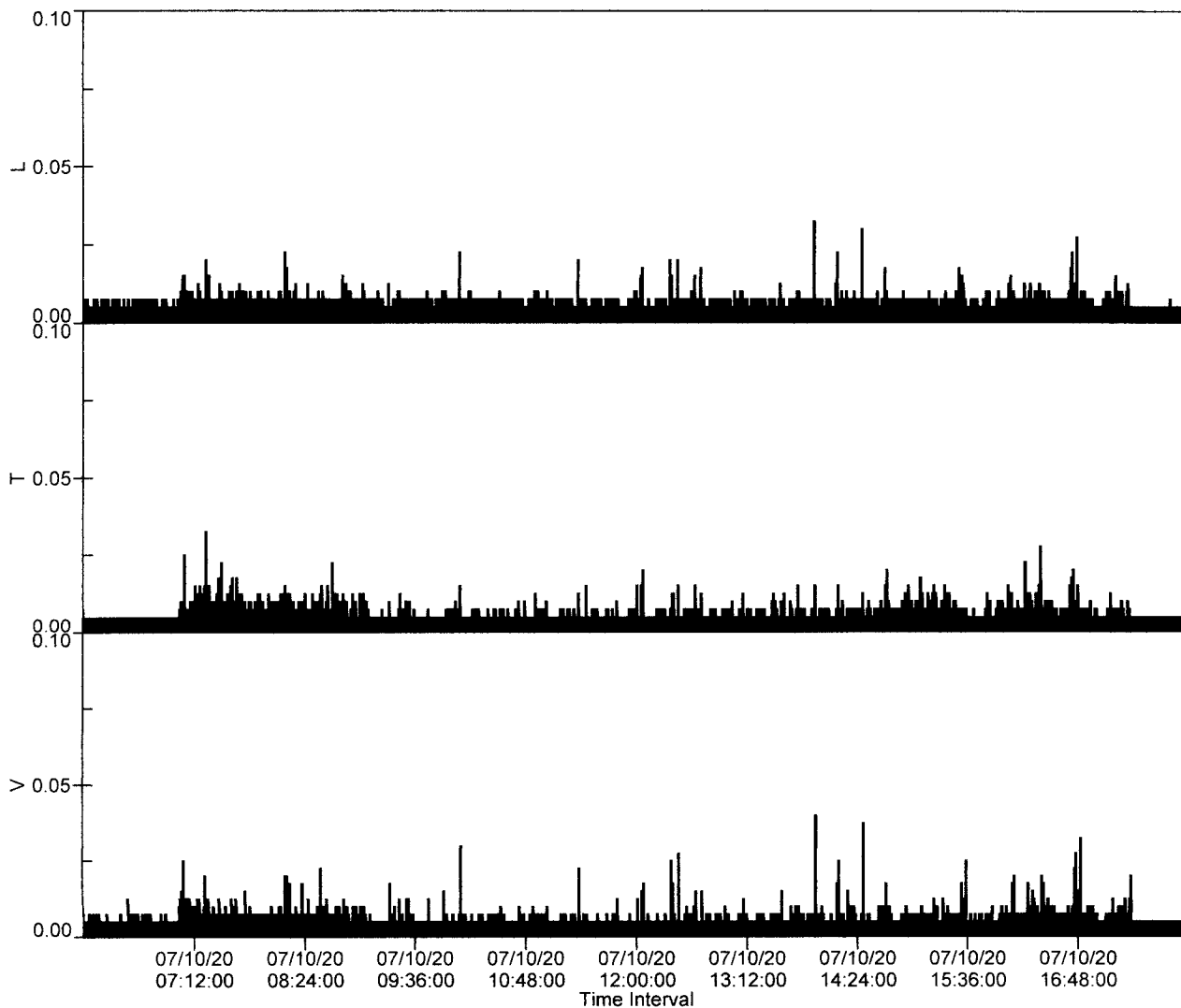
	L	T	V
<b>PPV (in/s)</b>	0.033	0.033	0.040
<b>FREQ (Hz)</b>	17.9	9.8	17.9
<b>Peak Air Pressure:</b>	81 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**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: 71

Record Max PPV: 0.040 in/s Record Max DB: 81 db





**SN:** 3559 v2.75  
**Date:** 07/11/2020 **Time:** 06:01:00  
**Event:** 72  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #2 WSNSP  
**Distance:** 50.  
**Operator:** CTI INC  
**Comment:** NORTH MIDDLE UNIT

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.023	0.025	0.030
<b>FREQ (Hz)</b>	10.6	11.6	10.9
<b>Peak Air Pressure:</b>	76 db		

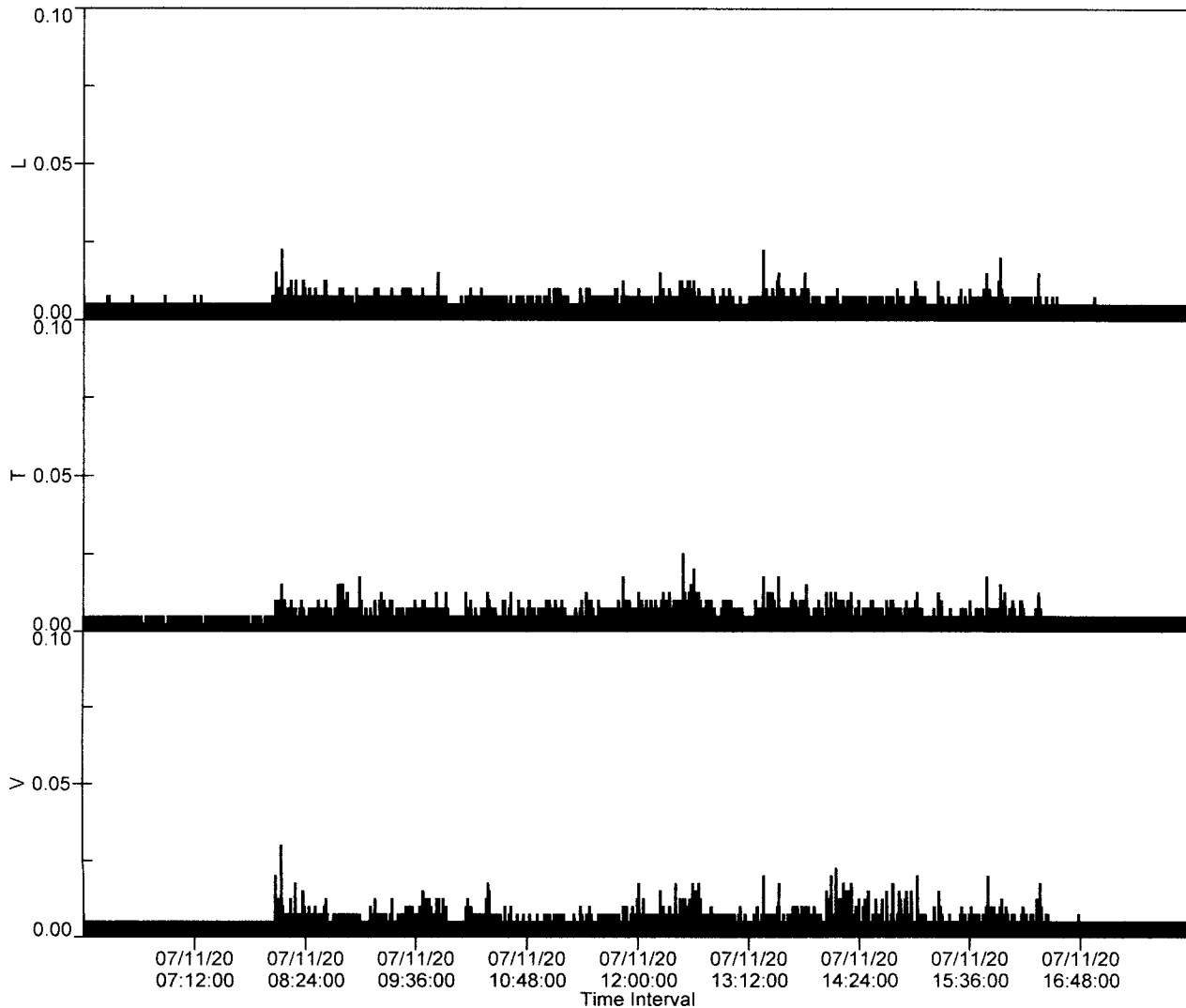
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 72

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



**SN:** 3559 v2.75  
**Date:** 07/12/2020 **Time:** 06:01:00  
**Event:** 73  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #2 WSNSP  
**Distance:** 50.  
**Operator:** CTI INC  
**Comment:** NORTH MIDDLE UNIT

**Continuous Monitor Recording  
Summary Data**

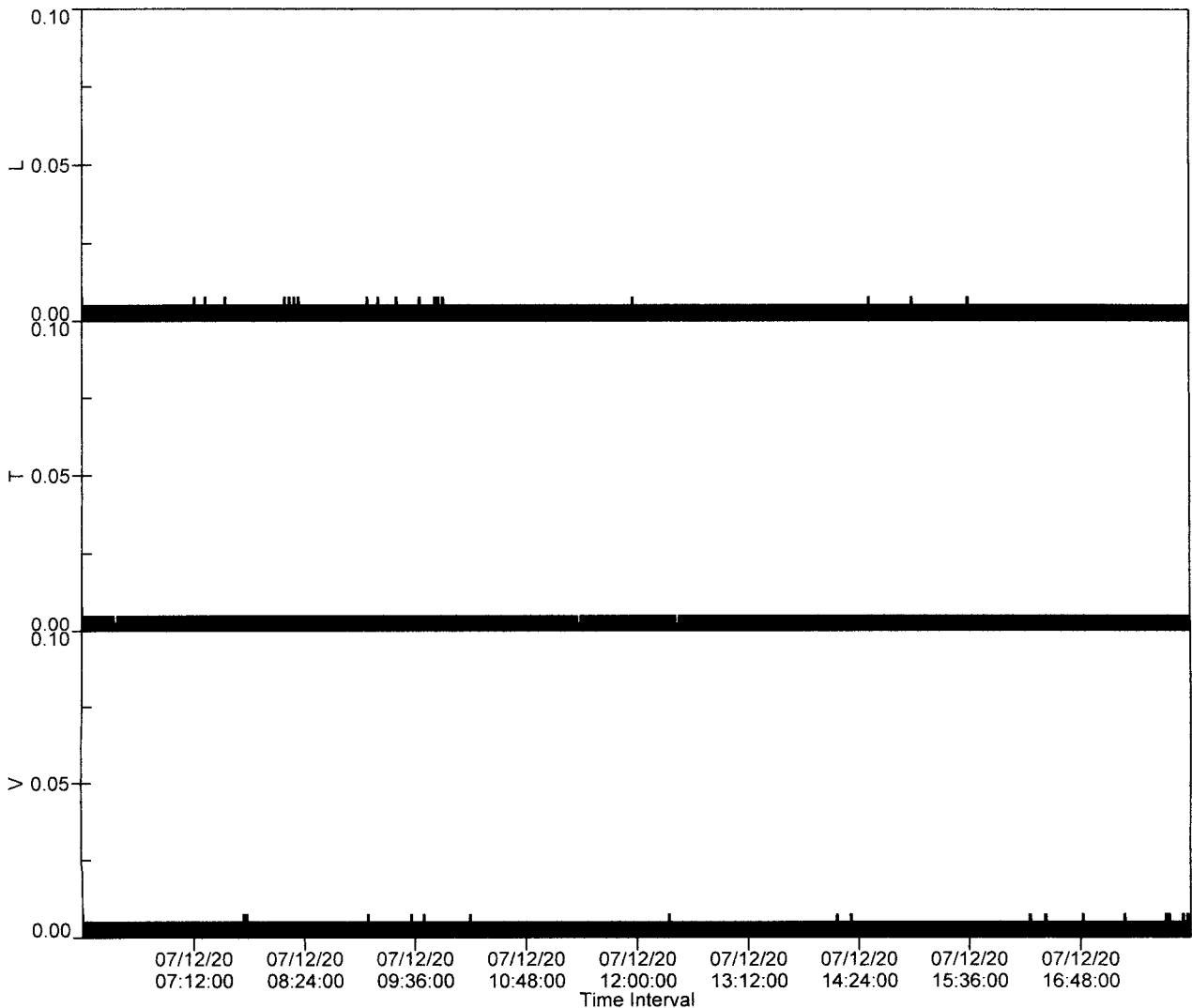
	L	T	V
<b>PPV (in/s)</b>	0.008	0.008	0.008
<b>FREQ (Hz)</b>	9.4	16.1	1.8
<b>Peak Air Pressure:</b>	76 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**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: 73

Record Max PPV: 0.008 in/s Record Max DB: 76 db



**SN:** 3559 v2.75  
**Date:** 07/13/2020 **Time:** 06:01:00  
**Event:** 74  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #2 WSNP  
**Distance:** 50.  
**Operator:** CTI INC  
**Comment:** NORTH MIDDLE UNIT

**Continuous Monitor Recording  
Summary Data**

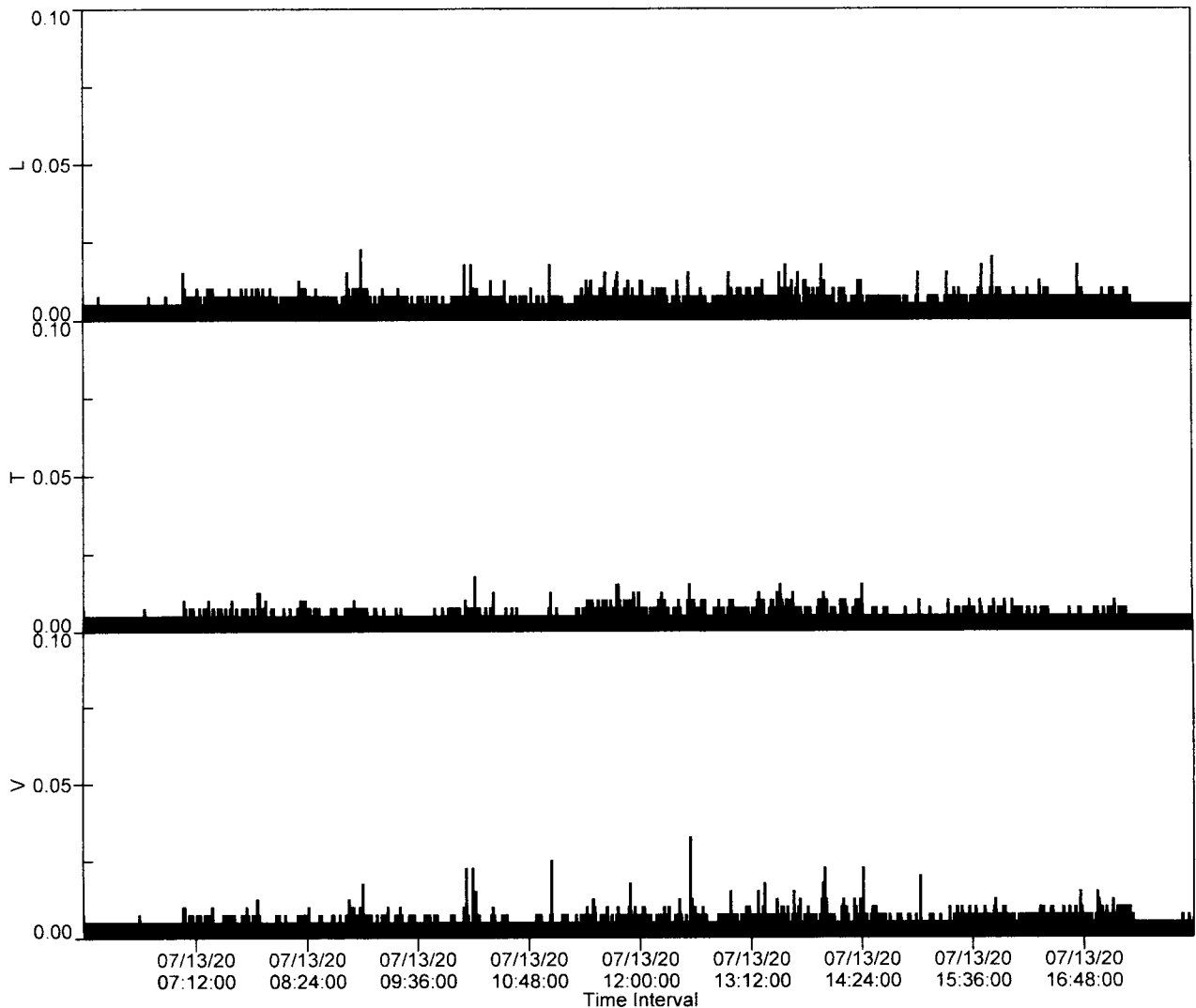
	L	T	V
<b>PPV (in/s)</b>	0.023	0.018	0.033
<b>FREQ (Hz)</b>	12.8	9.8	11.4
<b>Peak Air Pressure:</b>	76 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**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: 74

Record Max PPV: 0.033 in/s Record Max DB: 76 db



**SN:** 3559 v2.75  
**Date:** 07/14/2020 **Time:** 06:01:00  
**Event:** 75  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #2 WSNSP  
**Distance:** 50.  
**Operator:** CTI INC  
**Comment:** NORTH MIDDLE UNIT

**Continuous Monitor Recording  
Summary Data**

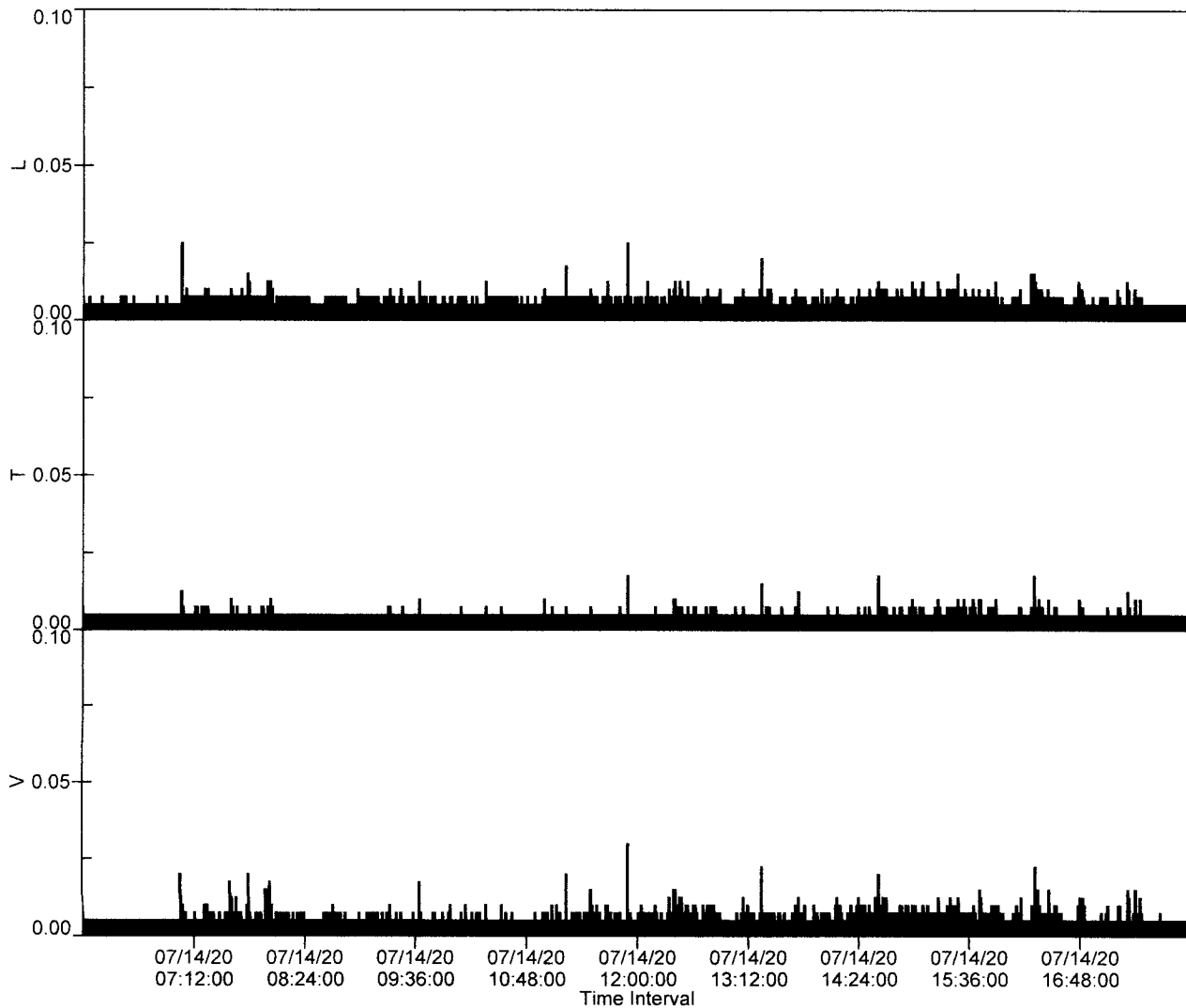
	L	T	V
<b>PPV (in/s)</b>	0.025	0.018	0.030
<b>FREQ (Hz)</b>	14.7	11.1	9.4
<b>Peak Air Pressure:</b>	76 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**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: 75

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



**SN:** 3559 v2.75  
**Date:** 07/15/2020 **Time:** 06:01:00  
**Event:** 76  
**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
<b>PPV (in/s)</b>	0.023	0.015	0.033
<b>FREQ (Hz)</b>	16.1	10.4	18.5
<b>Peak Air Pressure:</b>	76 db		

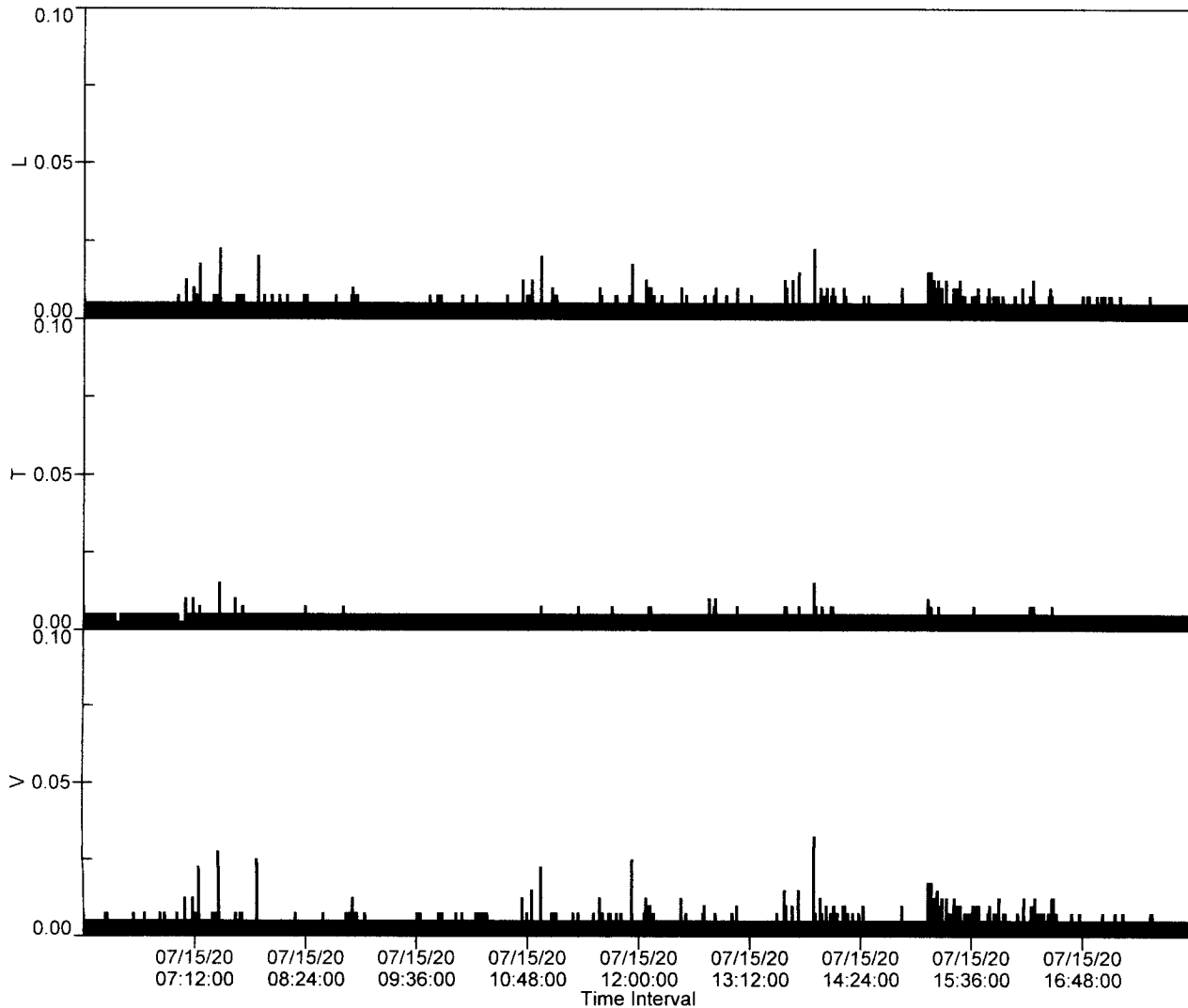
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 76

Record Max PPV: 0.033 in/s Record Max DB: 76 db



**SN:** 3559 v2.75  
**Date:** 07/16/2020 **Time:** 06:01:00  
**Event:** 77  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #2 WSNSP  
**Distance:** 50.  
**Operator:** CTI INC  
**Comment:** NORTH MIDDLE UNIT

**Continuous Monitor Recording  
Summary Data**

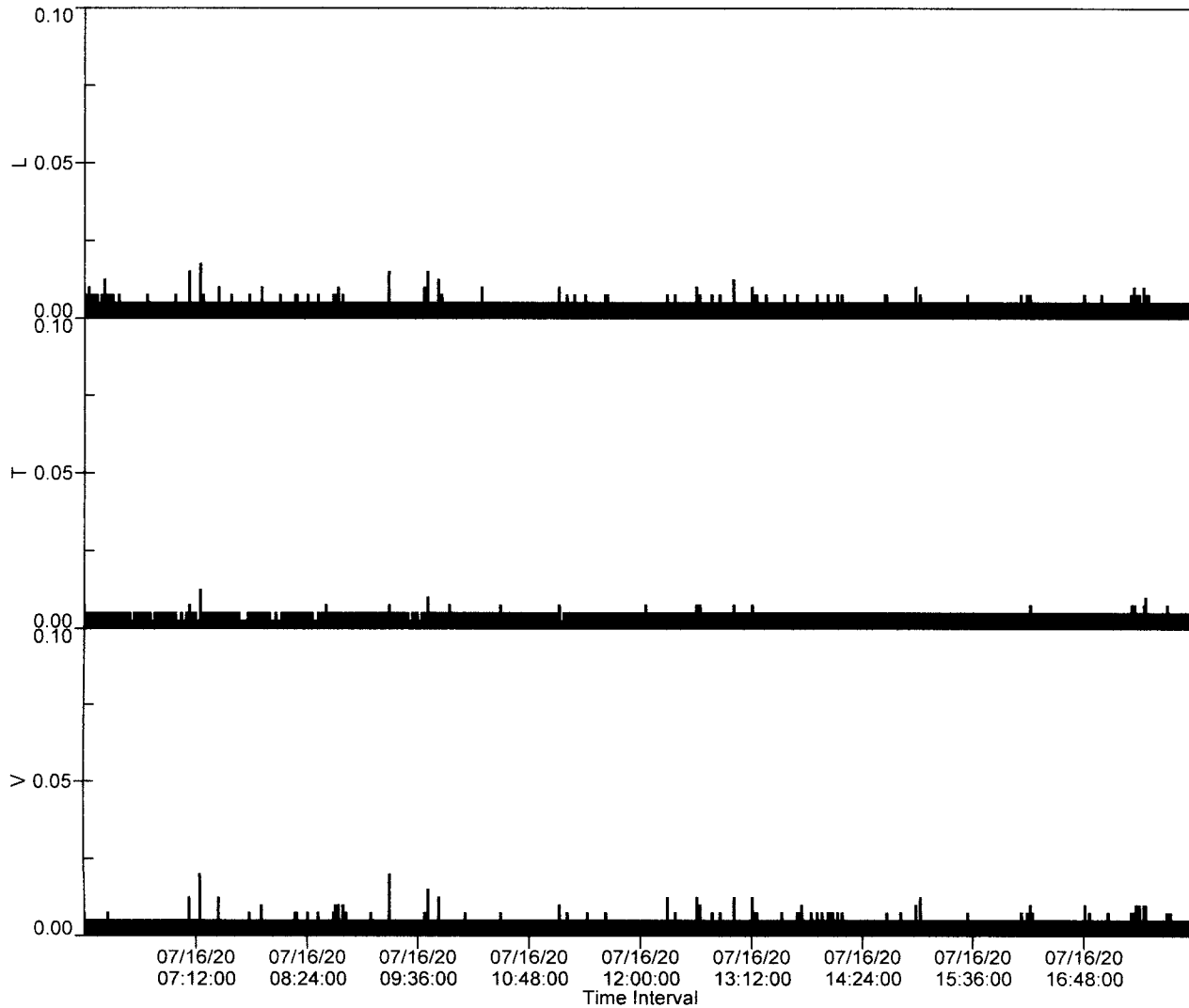
	L	T	V
<b>PPV (in/s)</b>	0.018	0.013	0.020
<b>FREQ (Hz)</b>	16.7	20.8	16.7
<b>Peak Air Pressure:</b>	78 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**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: 77

Record Max PPV: 0.020 in/s Record Max DB: 78 db



**SN:** 3559 v2.75  
**Date:** 07/17/2020 **Time:** 06:01:00  
**Event:** 78  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #2 WSNP  
**Distance:** 50.  
**Operator:** CTI INC  
**Comment:** NORTH MIDDLE UNIT

**Continuous Monitor Recording  
Summary Data**

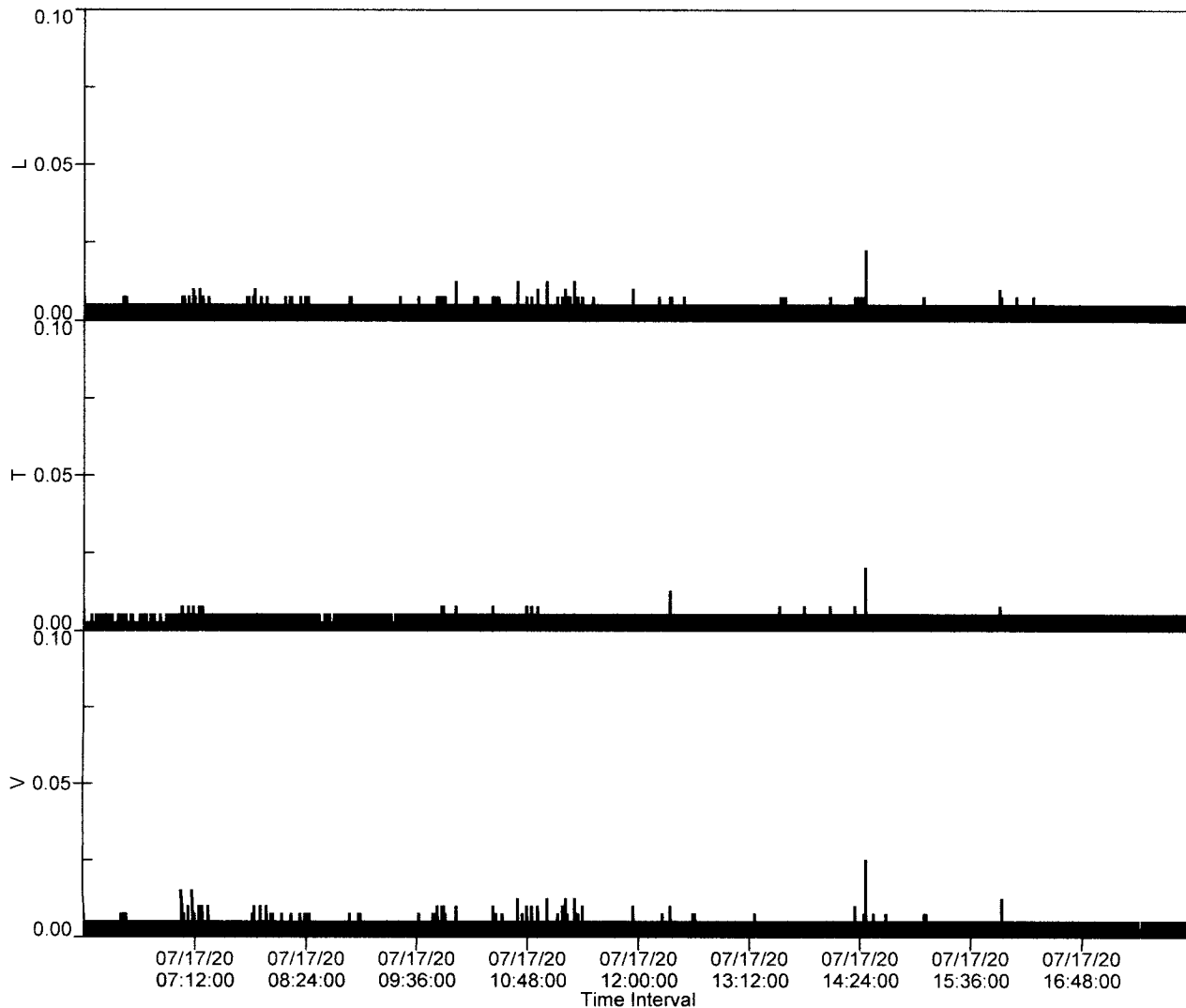
	L	T	V
<b>PPV (in/s)</b>	0.023	0.020	0.025
<b>FREQ (Hz)</b>	250.0	250.0	250.0
<b>Peak Air Pressure:</b>	101 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**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: 78

Record Max PPV: 0.025 in/s Record Max DB: 101 db



**SN:** 3559 v2.75  
**Date:** 07/18/2020 **Time:** 06:01:00  
**Event:** 79  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #2 WSNSP  
**Distance:** 50.  
**Operator:** CTI INC  
**Comment:** NORTH MIDDLE UNIT

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.013	0.013	0.023
<b>FREQ (Hz)</b>	9.4	13.2	10.9
<b>Peak Air Pressure:</b>	82 db		

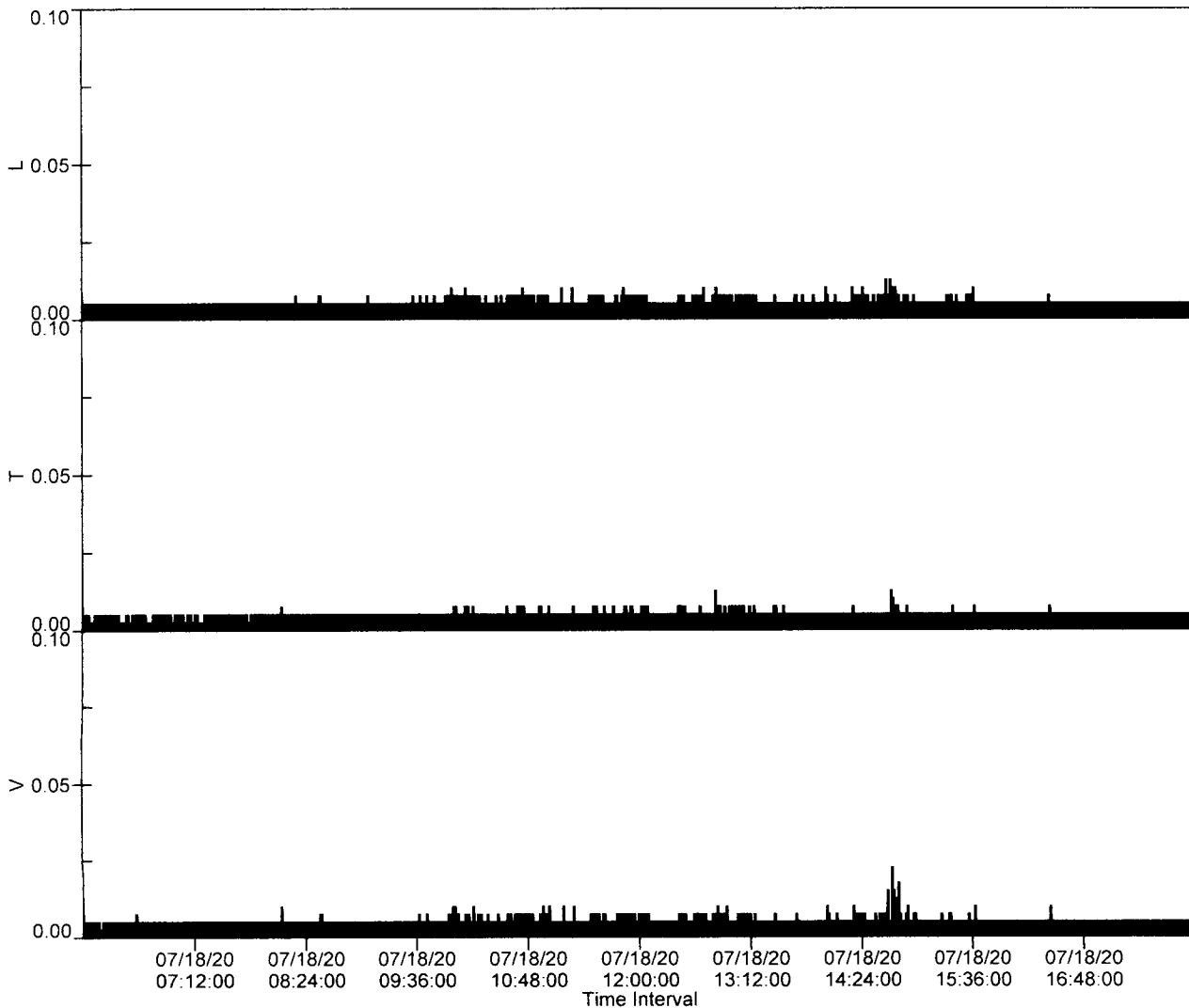
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 79

Record Max PPV: 0.023 in/s Record Max DB: 82 db





**SN:** 3559 v2.75  
**Date:** 07/19/2020 **Time:** 06:01:00  
**Event:** 80  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #2 WSNSP  
**Distance:** 50.  
**Operator:** CTI INC  
**Comment:** NORTH MIDDLE UNIT

**Continuous Monitor Recording  
Summary Data**

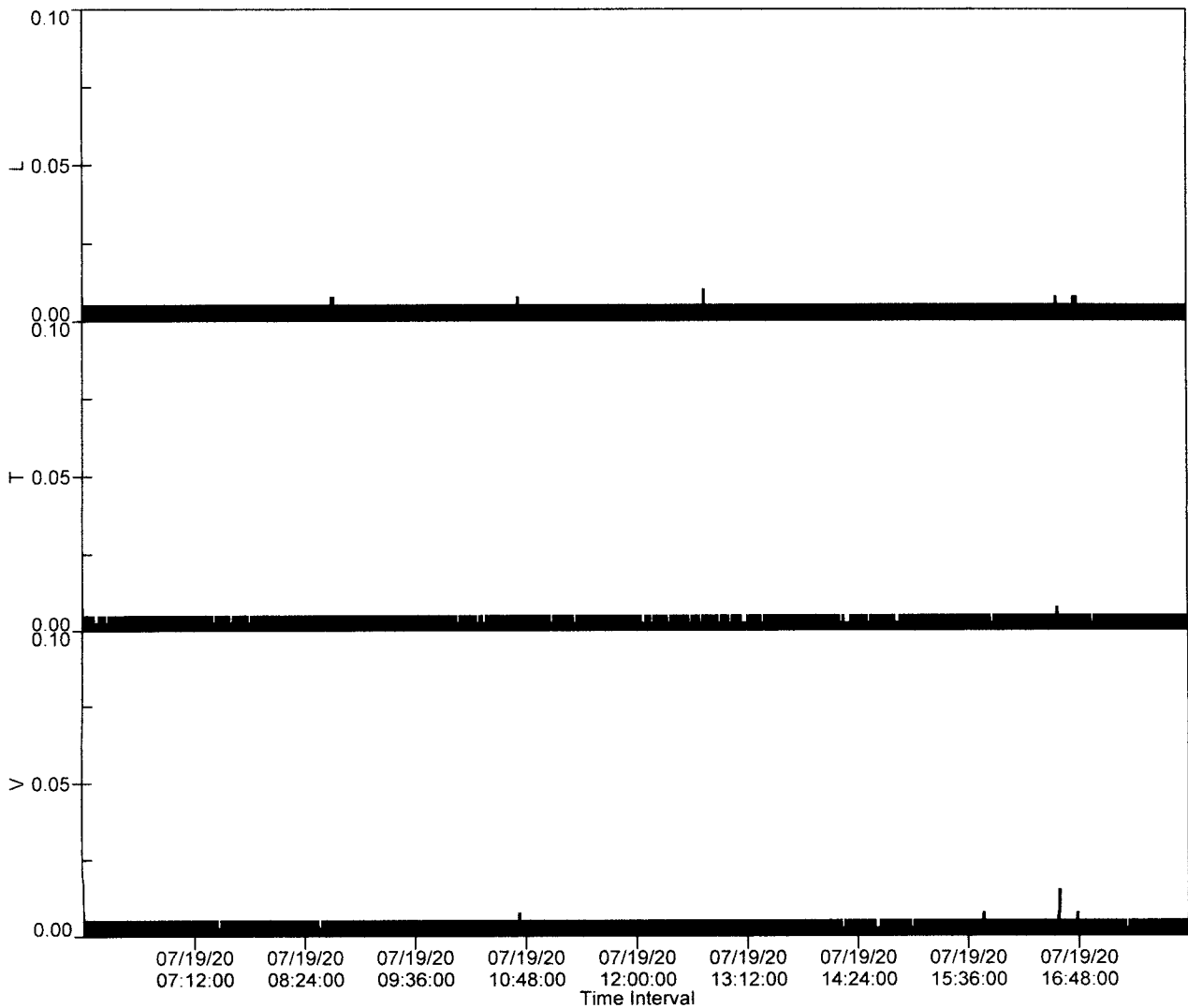
	L	T	V
<b>PPV (in/s)</b>	0.010	0.008	0.015
<b>FREQ (Hz)</b>	2.4	8.8	1.8
<b>Peak Air Pressure:</b>	79 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**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: 80

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





**SN:** 3804 v3.22  
**Date:** 07/06/2020 **Time:** 07:34:00  
**Event:** 65  
**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
<b>PPV (in/s)</b>	0.083	0.065	0.070
<b>FREQ (Hz)</b>	33.3	29.4	33.3
<b>Peak Air Pressure:</b>	76 db		

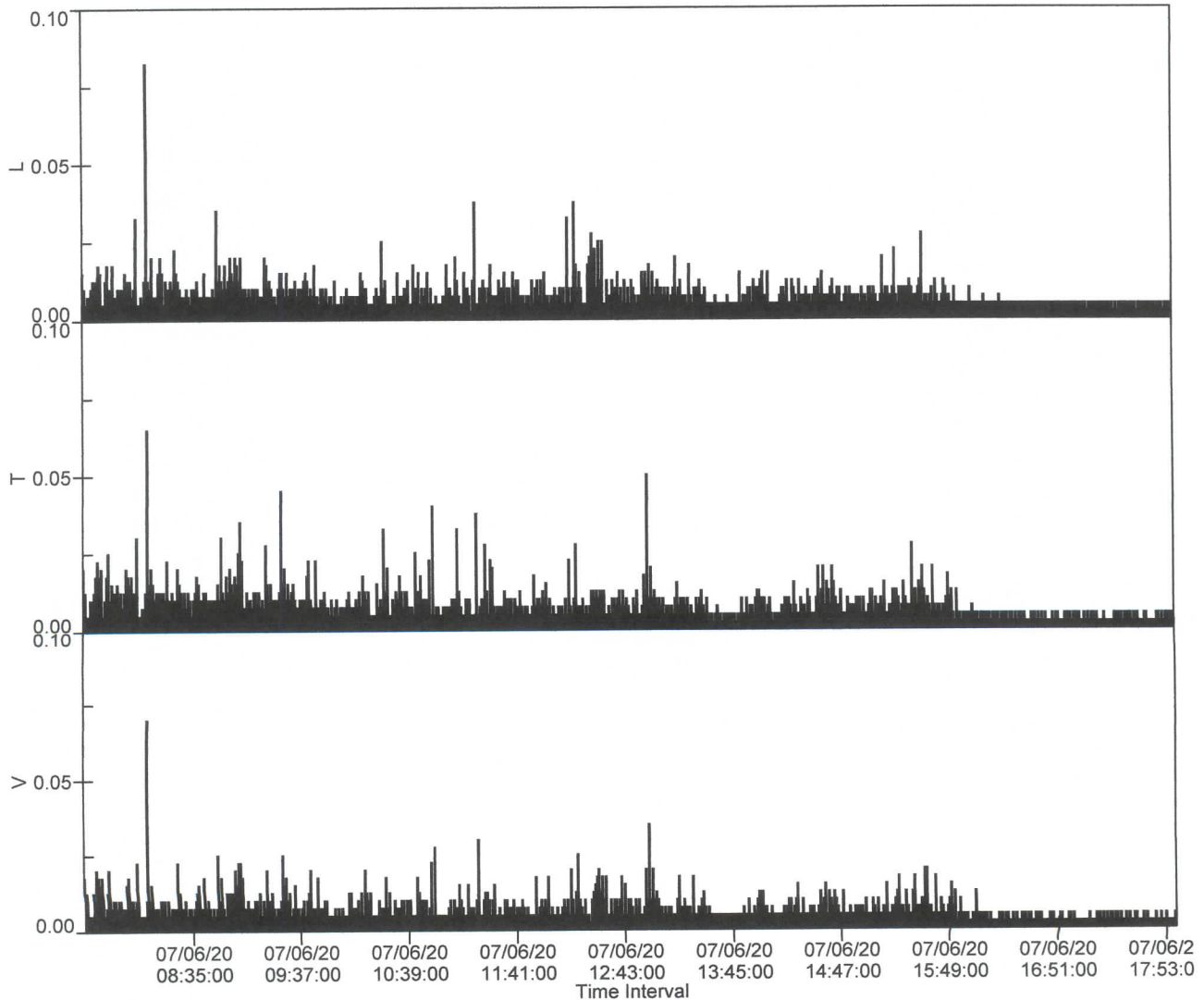
**Recording Time:** 625 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 65

Record Max PPV: 0.083 in/s Record Max DB: 76 db



**SN:** 3804 v3.22  
**Date:** 07/07/2020 **Time:** 06:01:00  
**Event:** 66  
**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
<b>PPV (in/s)</b>	0.038	0.040	0.033
<b>FREQ (Hz)</b>	20.0	10.6	23.8
<b>Peak Air Pressure:</b>	78 db		

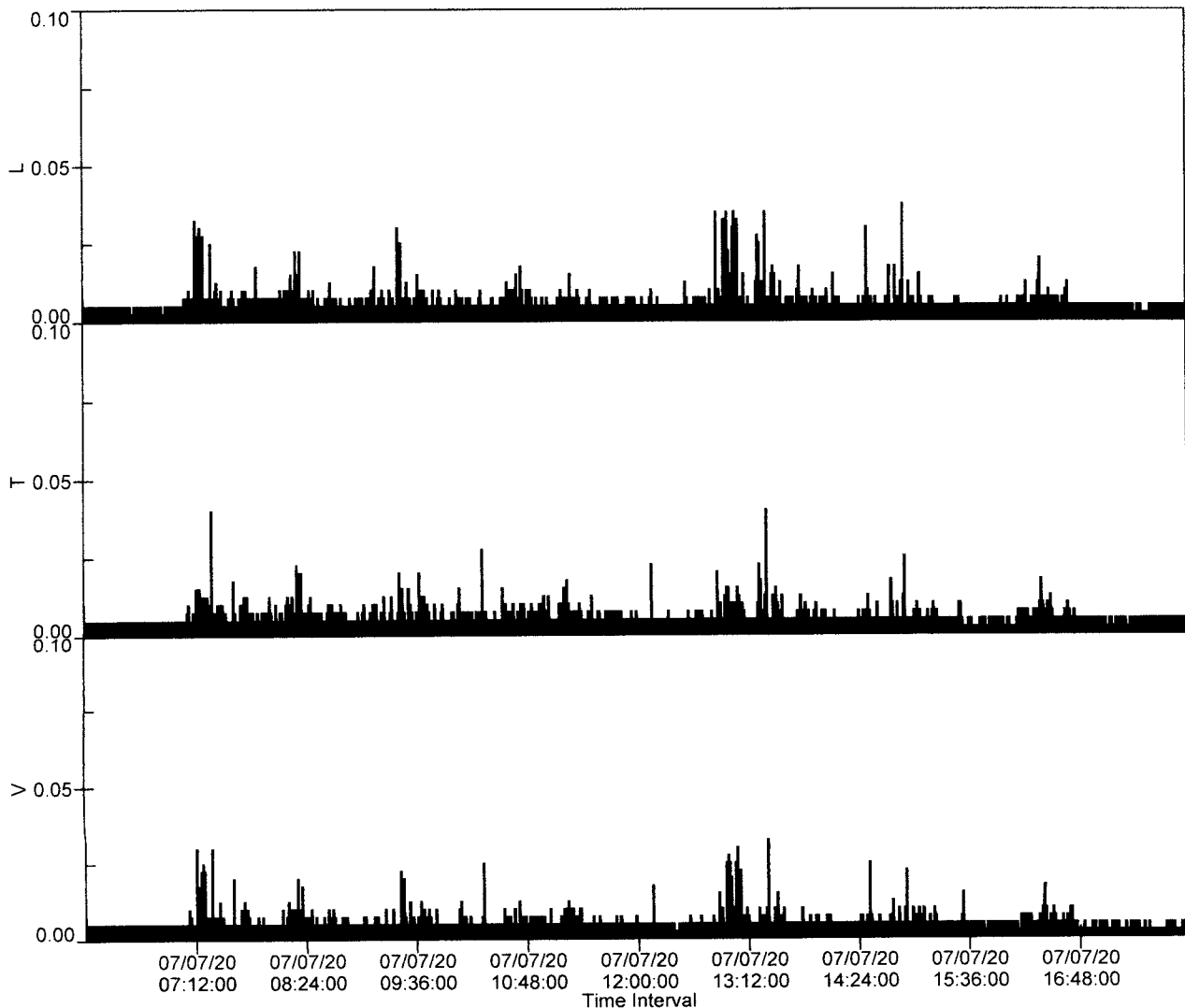
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 66

Record Max PPV: 0.040 in/s Record Max DB: 78 db



**SN:** 3804 v3.22  
**Date:** 07/08/2020 **Time:** 06:01:00  
**Event:** 67  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #3 WSNP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** NE CORNER OF SITE

**Continuous Monitor Recording  
Summary Data**

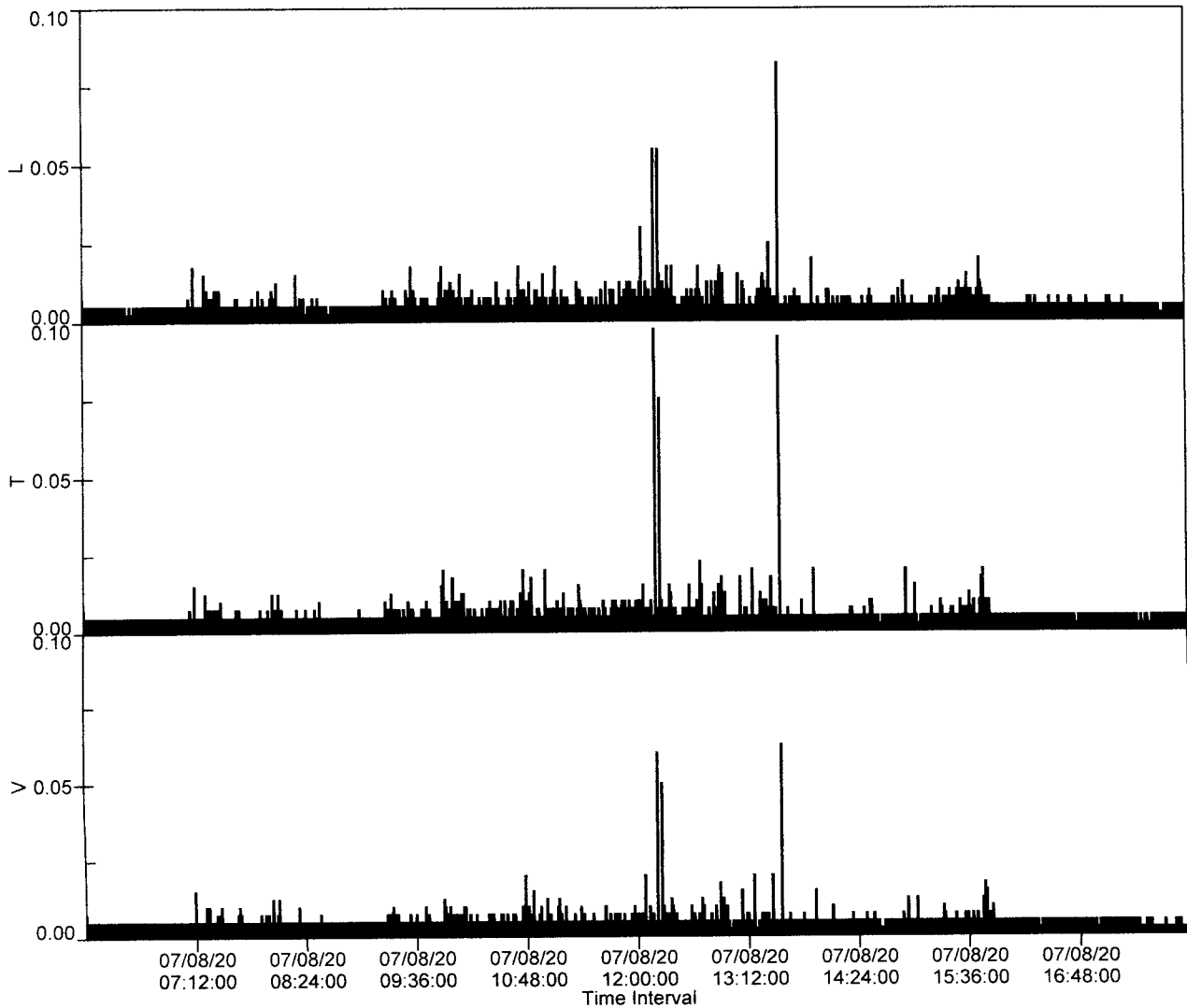
	L	T	V
<b>PPV (in/s)</b>	0.083	0.098	0.063
<b>FREQ (Hz)</b>	26.3	21.7	27.8
<b>Peak Air Pressure:</b>	76 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**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: 67

Record Max PPV: 0.098 in/s Record Max DB: 76 db



**SN:** 3804 v3.22  
**Date:** 07/09/2020 **Time:** 06:01:00  
**Event:** 68  
**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
<b>PPV (in/s)</b>	0.045	0.070	0.033
<b>FREQ (Hz)</b>	17.9	29.4	26.3
<b>Peak Air Pressure:</b>	76 db		

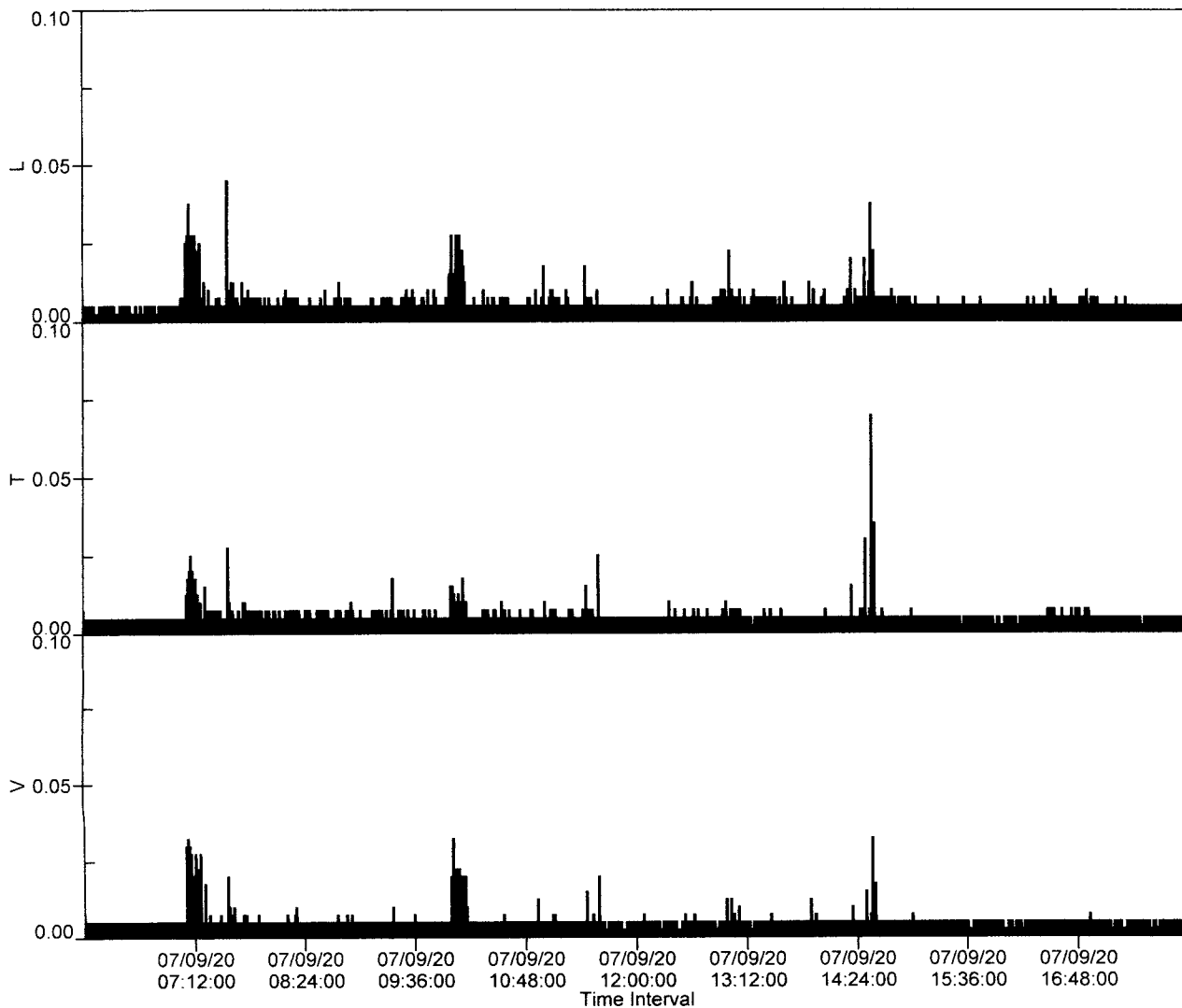
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 68

Record Max PPV: 0.070 in/s Record Max DB: 76 db



**SN:** 3804 v3.22  
**Date:** 07/10/2020 **Time:** 06:01:00  
**Event:** 69  
**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
<b>PPV (in/s)</b>	0.040	0.023	0.028
<b>FREQ (Hz)</b>	22.7	23.8	31.3
<b>Peak Air Pressure:</b>	76 db		

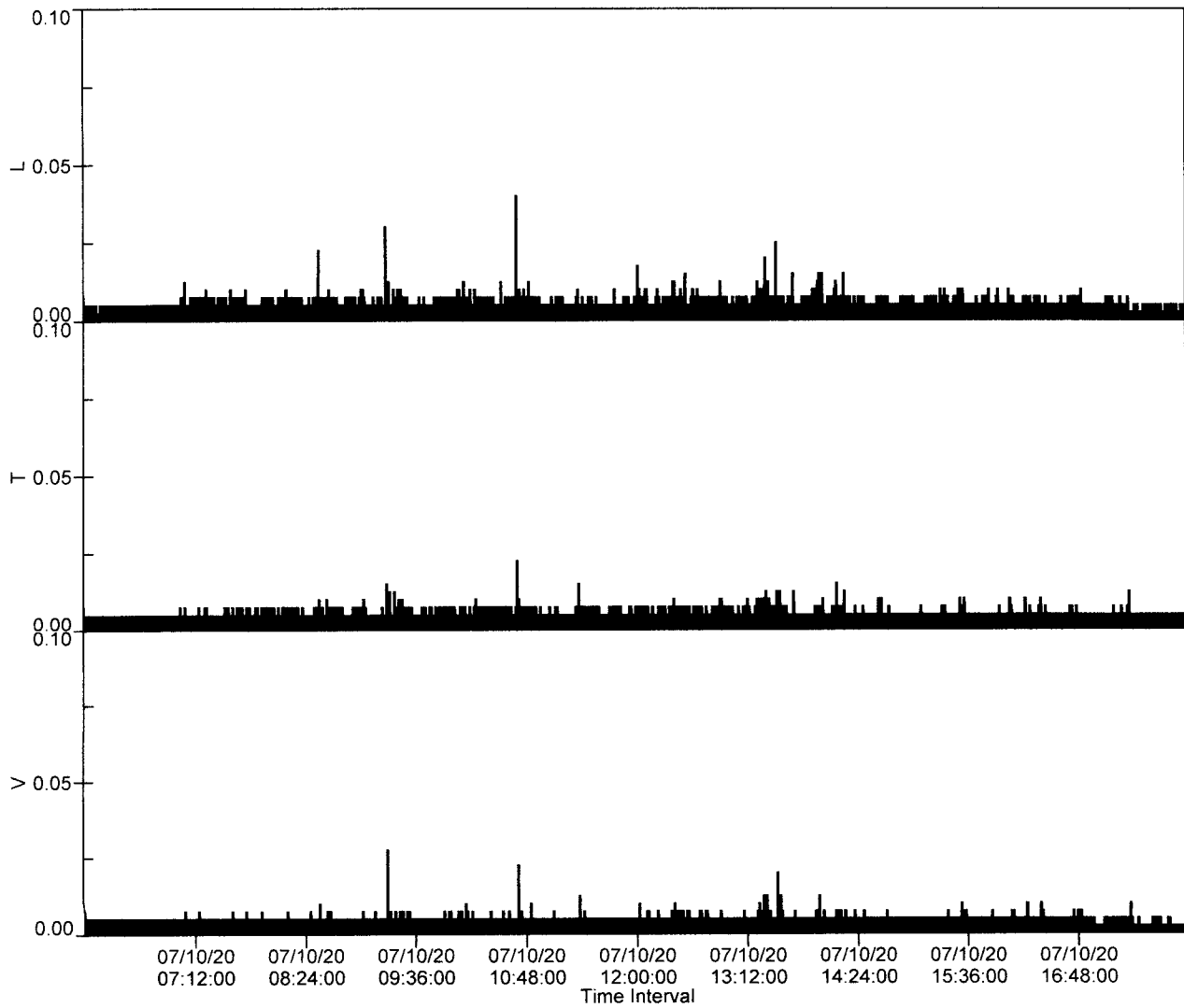
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 69

Record Max PPV: 0.040 in/s Record Max DB: 76 db



**SN:** 3804 v3.22  
**Date:** 07/11/2020 **Time:** 06:01:00  
**Event:** 70  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #3 WSNP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** NE CORNER OF SITE

**Continuous Monitor Recording  
Summary Data**

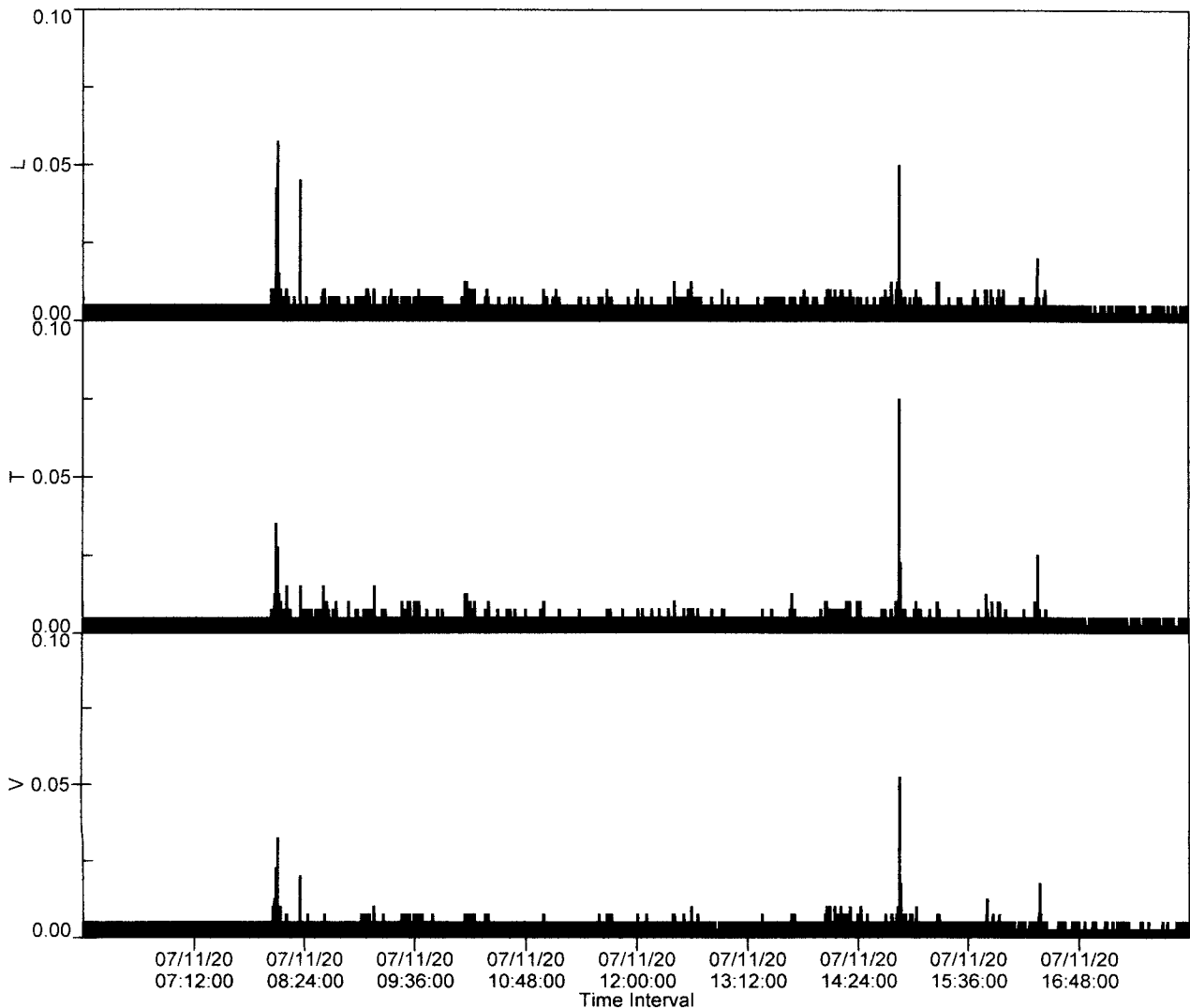
	L	T	V
<b>PPV (in/s)</b>	0.058	0.075	0.053
<b>FREQ (Hz)</b>	14.7	15.6	15.6
<b>Peak Air Pressure:</b>	76 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**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: 70

Record Max PPV: 0.075 in/s Record Max DB: 76 db





**SN:** 3804 v3.22  
**Date:** 07/12/2020 **Time:** 06:01:00  
**Event:** 71  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #3 WSNSP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** NE CORNER OF SITE

**Continuous Monitor Recording  
Summary Data**

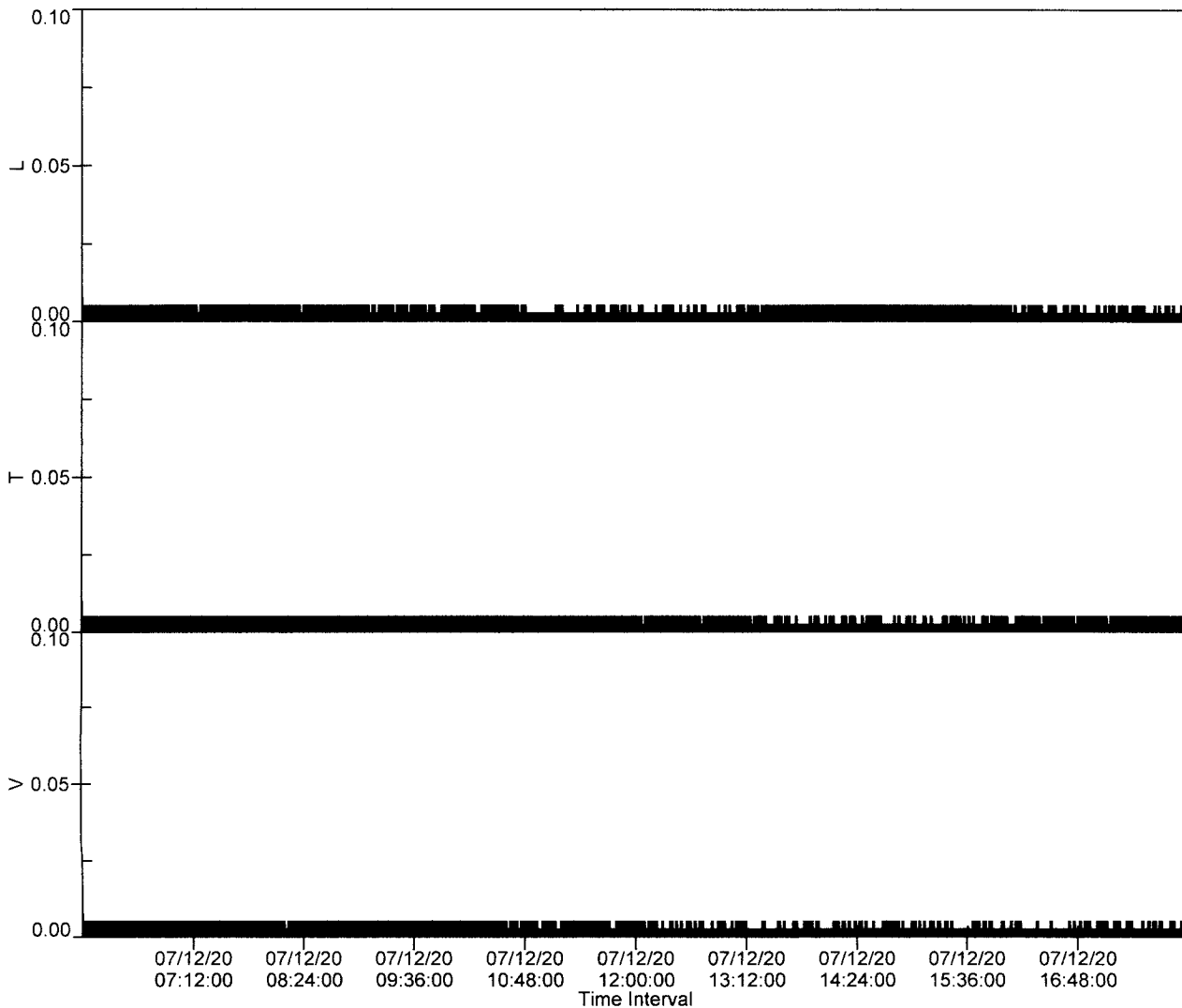
	L	T	V
<b>PPV (in/s)</b>	0.008	0.010	0.008
<b>FREQ (Hz)</b>	.3	2.2	.3
<b>Peak Air Pressure:</b>	76 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**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: 71

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



**SN:** 3804 v3.22  
**Date:** 07/13/2020 **Time:** 06:01:00  
**Event:** 72  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #3 WSNP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** NE CORNER OF SITE

**Continuous Monitor Recording**

**Summary Data**

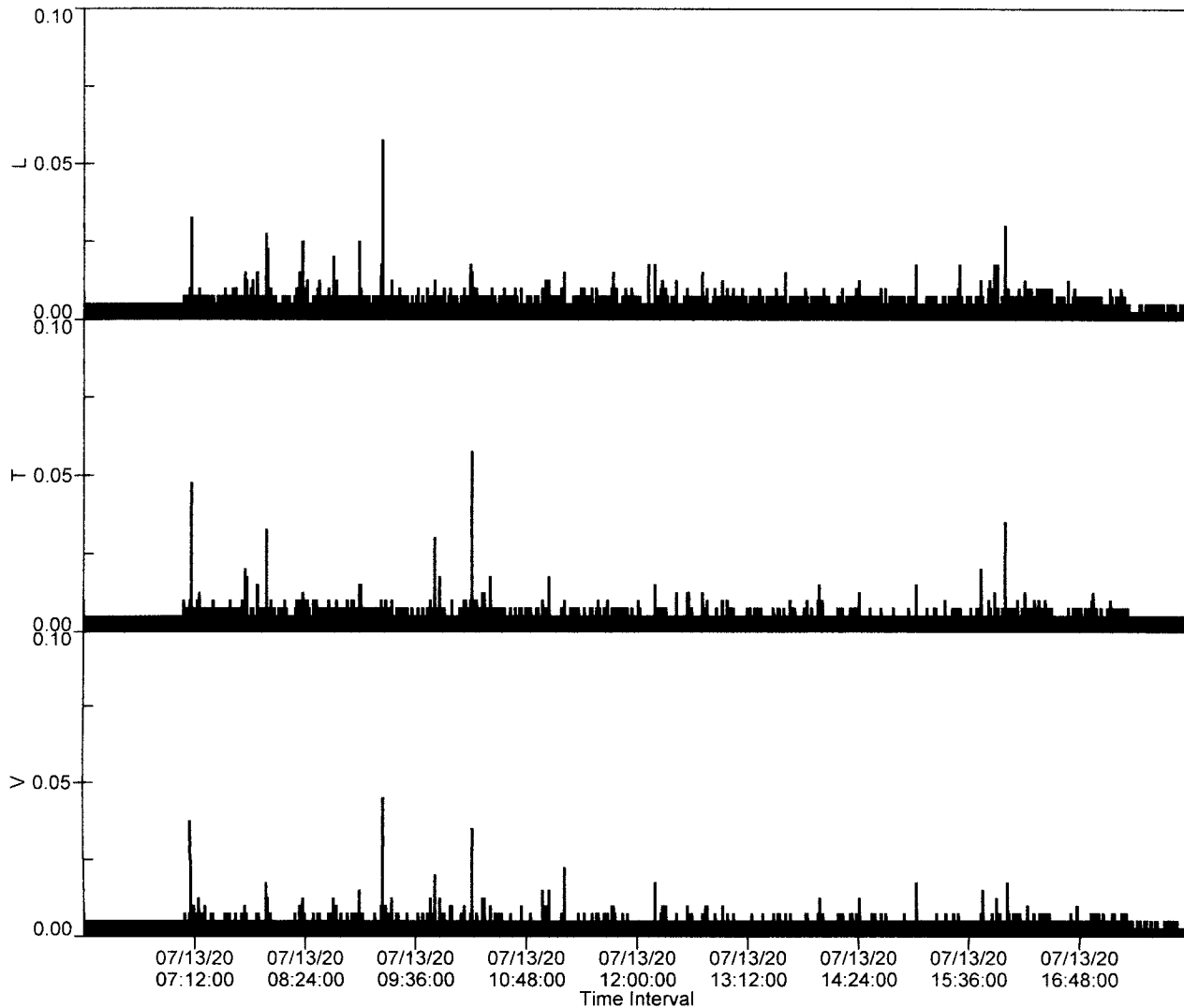
	L	T	V
<b>PPV (in/s)</b>	0.058	0.058	0.045
<b>FREQ (Hz)</b>	17.2	25.0	20.0
<b>Peak Air Pressure:</b>	76 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**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: 72

Record Max PPV: 0.058 in/s Record Max DB: 76 db



**SN:** 3804 v3.22  
**Date:** 07/14/2020 **Time:** 06:01:00  
**Event:** 73  
**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
<b>PPV (in/s)</b>	0.050	0.030	0.033
<b>FREQ (Hz)</b>	13.5	14.7	16.7
<b>Peak Air Pressure:</b>	76 db		

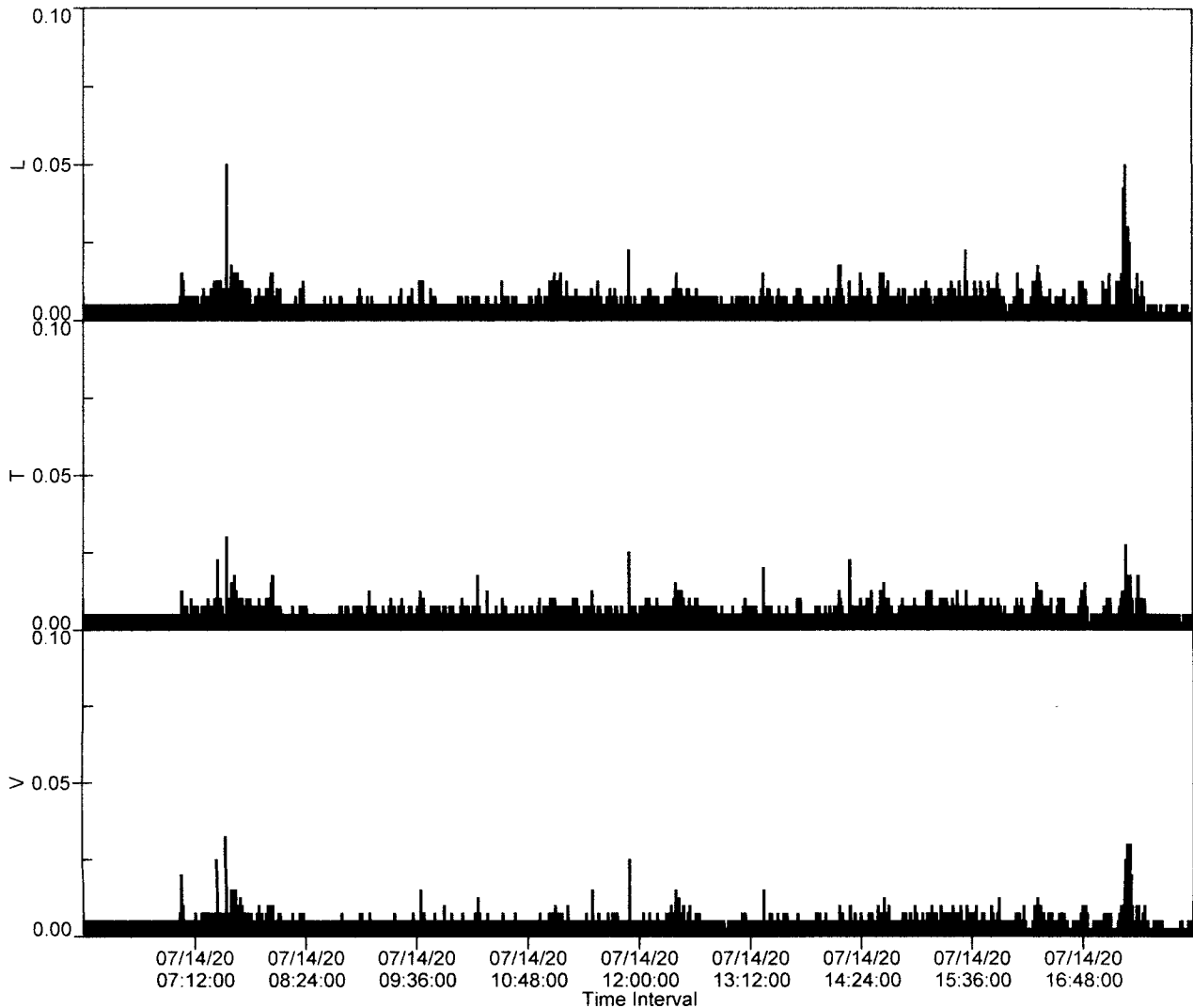
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 73

Record Max PPV: 0.050 in/s Record Max DB: 76 db



**SN:** 3804 v3.22  
**Date:** 07/15/2020 **Time:** 06:01:00  
**Event:** 74  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #3 WSNP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** NE CORNER OF SITE

**Continuous Monitor Recording  
Summary Data**

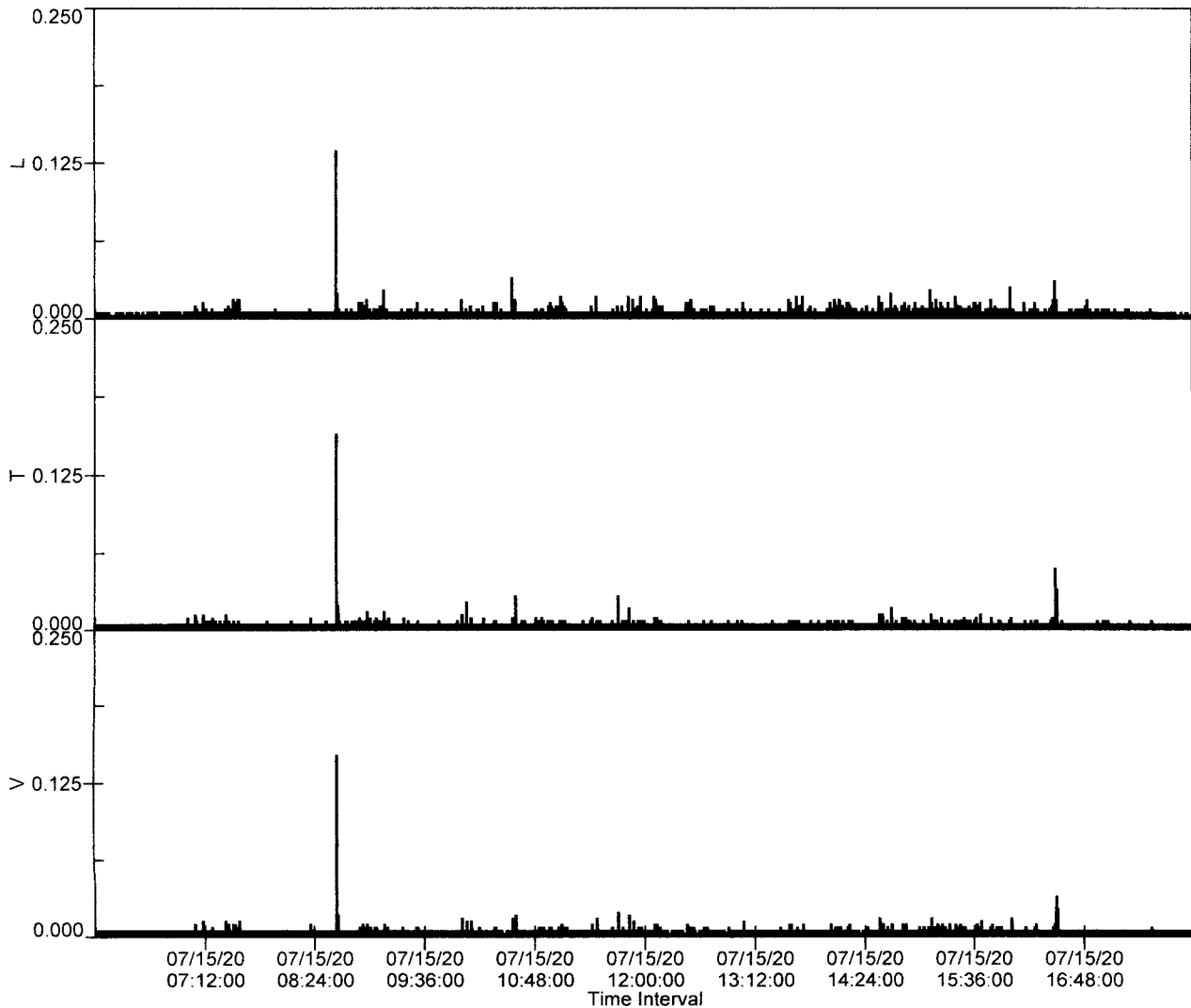
	L	T	V
<b>PPV (in/s)</b>	0.135	0.158	0.148
<b>FREQ (Hz)</b>	35.7	29.4	35.7
<b>Peak Air Pressure:</b>	76 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**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: 74

Record Max PPV: 0.158 in/s Record Max DB: 76 db



**SN:** 3804 v3.22  
**Date:** 07/16/2020 **Time:** 06:01:00  
**Event:** 75  
**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
<b>PPV (in/s)</b>	0.093	0.100	0.080
<b>FREQ (Hz)</b>	20.0	18.5	20.0
<b>Peak Air Pressure:</b>	76 db		

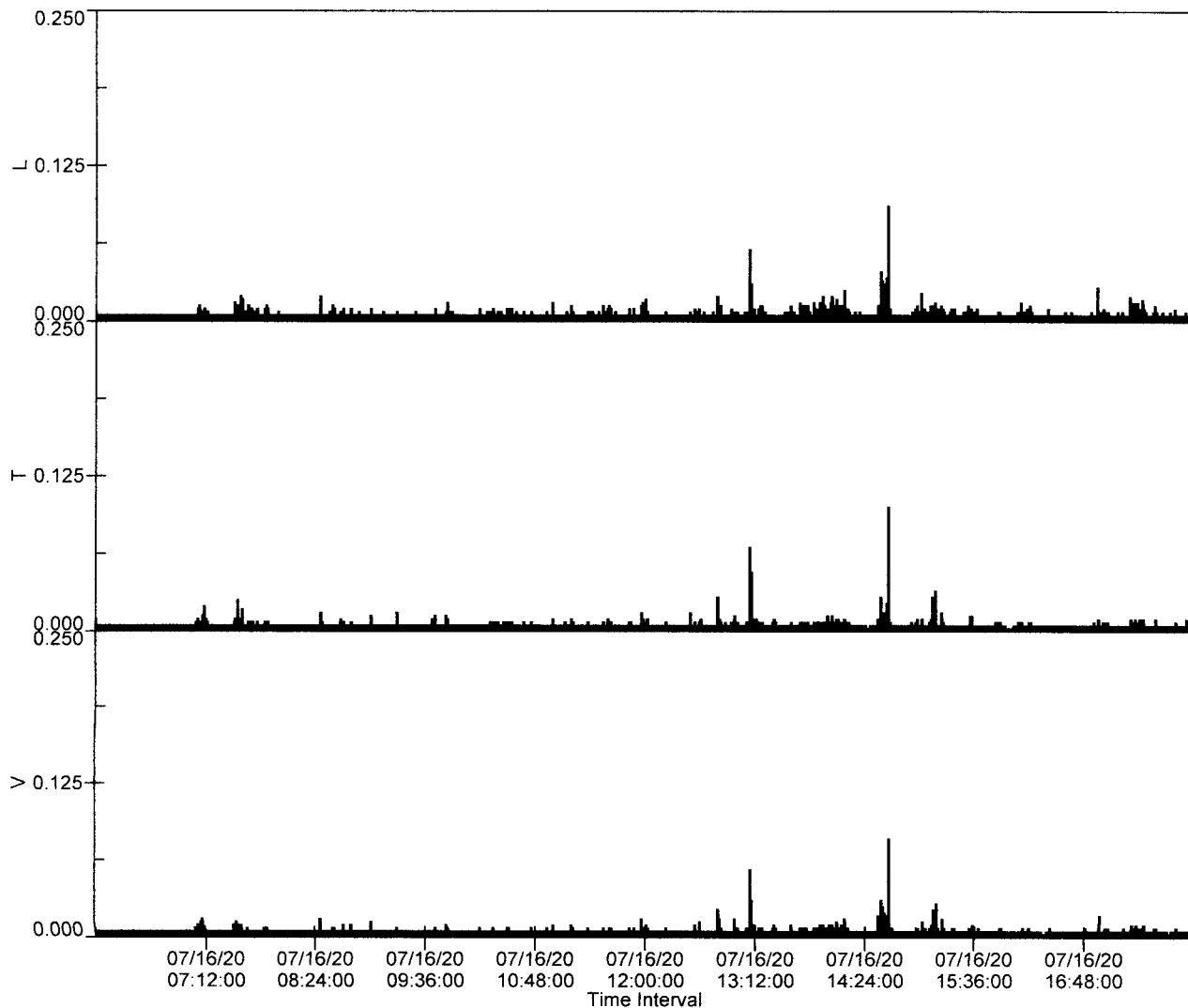
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 75

Record Max PPV: 0.100 in/s Record Max DB: 76 db



**SN:** 3804 v3.22  
**Date:** 07/17/2020 **Time:** 06:01:00  
**Event:** 76  
**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
<b>PPV (in/s)</b>	0.068	0.035	0.033
<b>FREQ (Hz)</b>	15.6	19.2	11.6
<b>Peak Air Pressure:</b>	76 db		

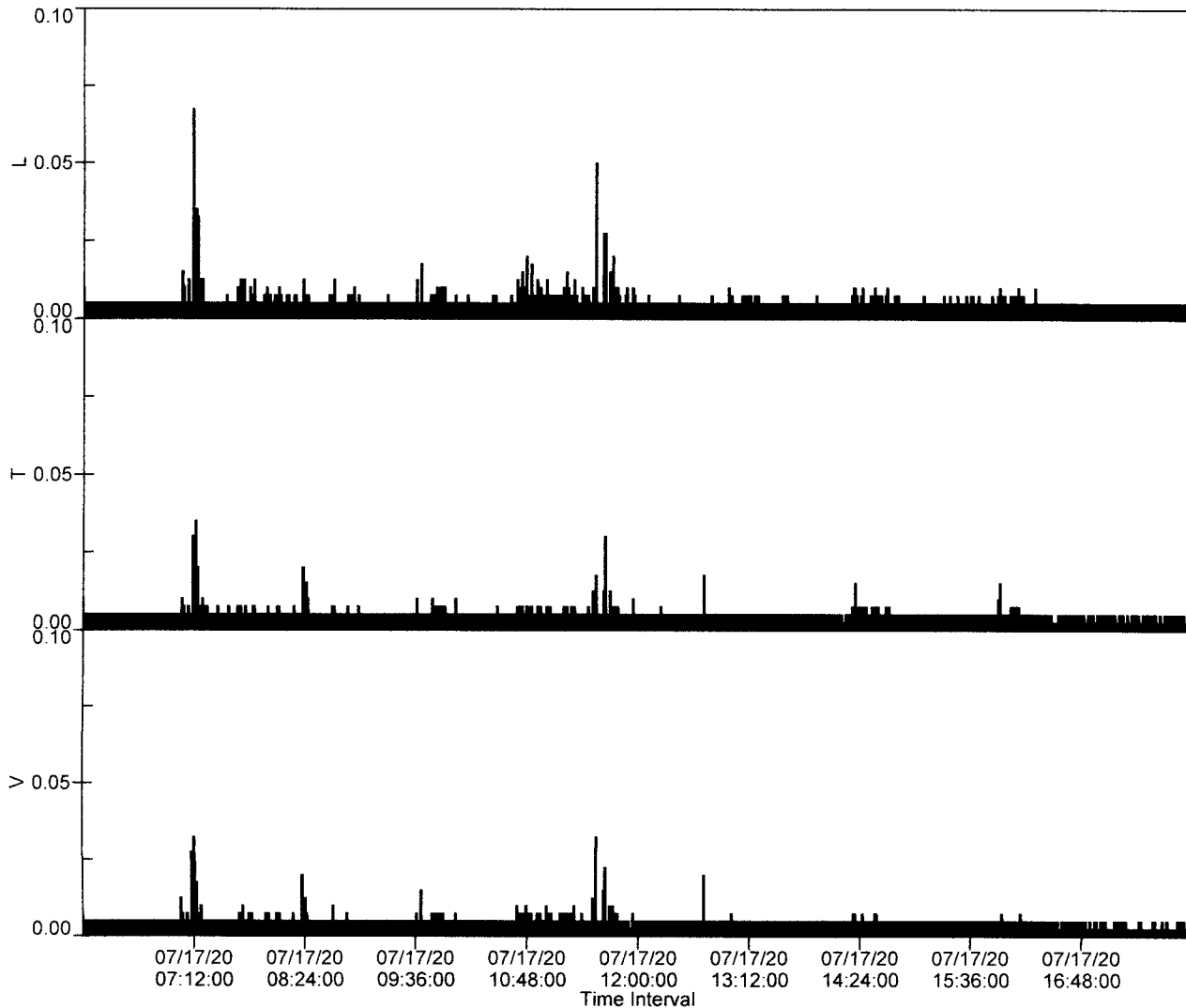
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 76

Record Max PPV: 0.068 in/s Record Max DB: 76 db



**SN:** 3804 v3.22  
**Date:** 07/18/2020 **Time:** 06:01:00  
**Event:** 77  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #3 WSNP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** NE CORNER OF SITE

**Continuous Monitor Recording  
Summary Data**

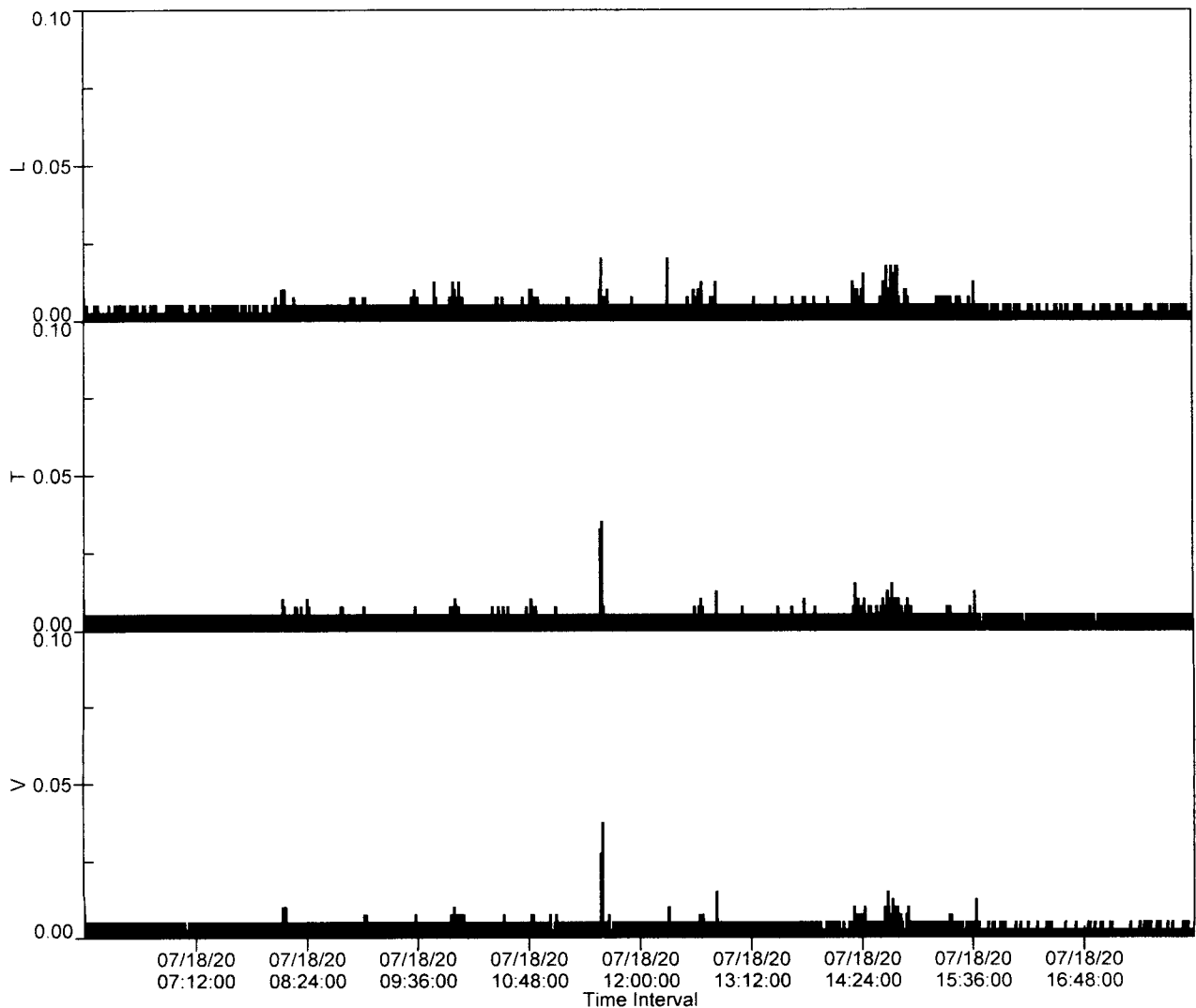
	L	T	V
<b>PPV (in/s)</b>	0.020	0.035	0.038
<b>FREQ (Hz)</b>	22.7	17.2	31.3
<b>Peak Air Pressure:</b>	76 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**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: 77

Record Max PPV: 0.038 in/s Record Max DB: 76 db



**SN:** 3804 v3.22  
**Date:** 07/19/2020 **Time:** 06:01:00  
**Event:** 78  
**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
<b>PPV (in/s)</b>	0.008	0.008	0.008
<b>FREQ (Hz)</b>	.3	15.2	.3
<b>Peak Air Pressure:</b>	76 db		

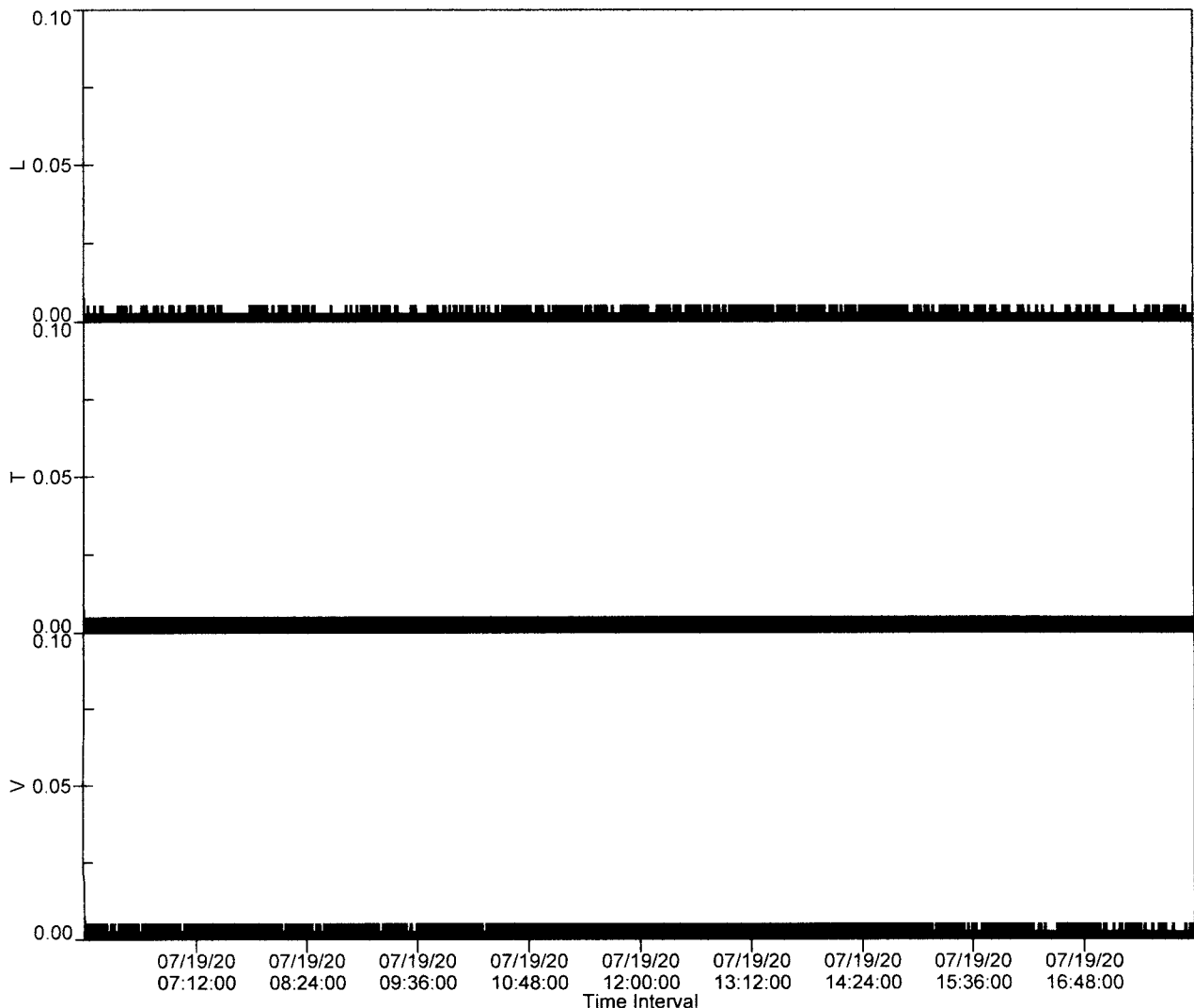
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 78

Record Max PPV: 0.008 in/s Record Max DB: 76 db







**SN:** 5033 v3.66  
**Date:** 07/06/2020 **Time:** 07:08:00  
**Event:** 82  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #4 WSNP  
**Distance:** 50.  
**Operator:** CTI INC  
**Comment:** HIGHCREST SCHOOL

**Continuous Monitor Recording  
Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.015	0.013	0.033
<b>FREQ (Hz)</b>	7.6	50.0	10.6
<b>Peak Air Pressure:</b>	90 db		

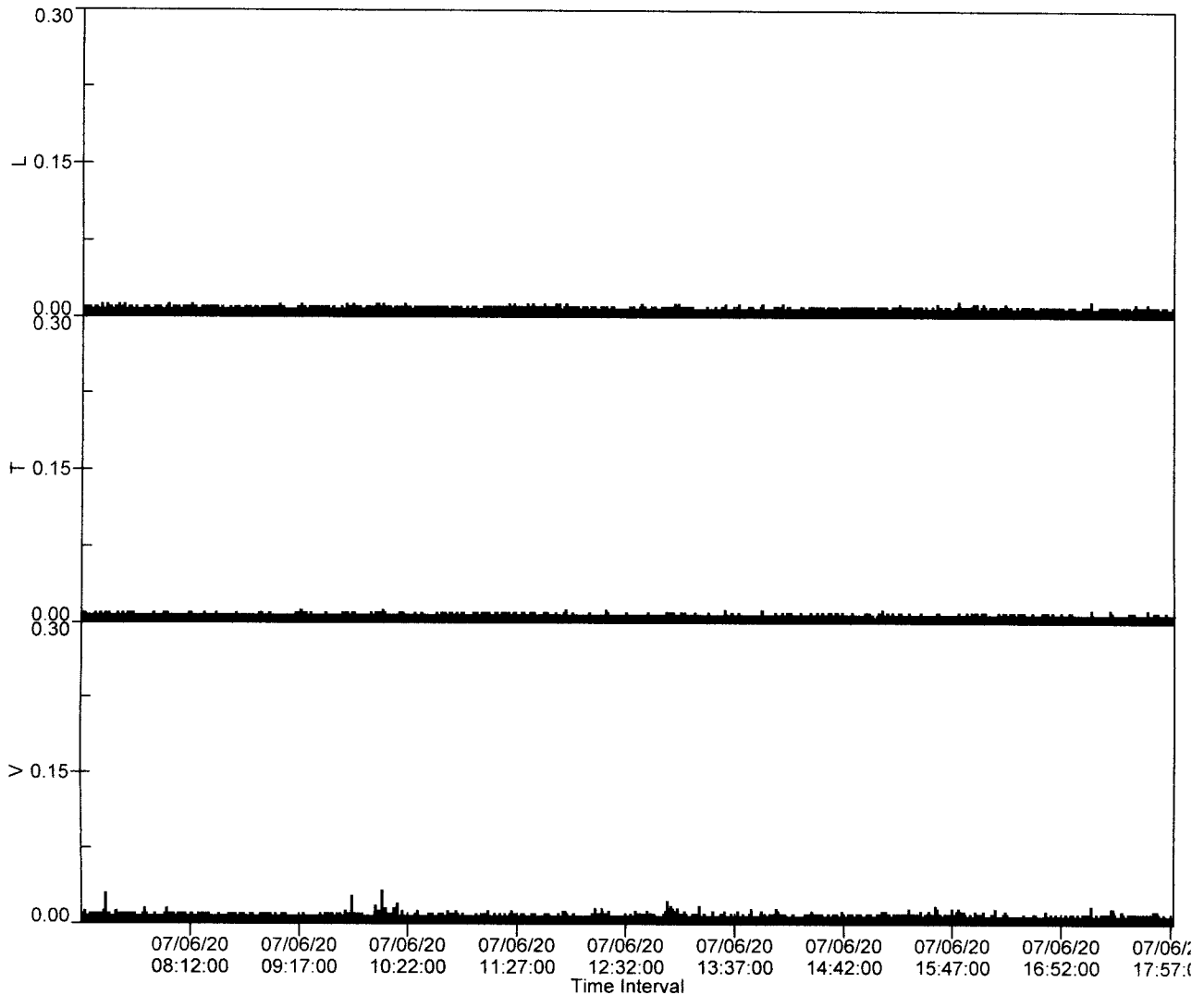
**Recording Time:** 651 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 82

Record Max PPV: 0.033 in/s Record Max DB: 90 db



**SN:** 5033 v3.66  
**Date:** 07/07/2020 **Time:** 06:01:00  
**Event:** 83  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #4 WSNP  
**Distance:** 50.  
**Operator:** CTI INC  
**Comment:** HIGHCREST SCHOOL

**Continuous Monitor Recording  
Summary Data**

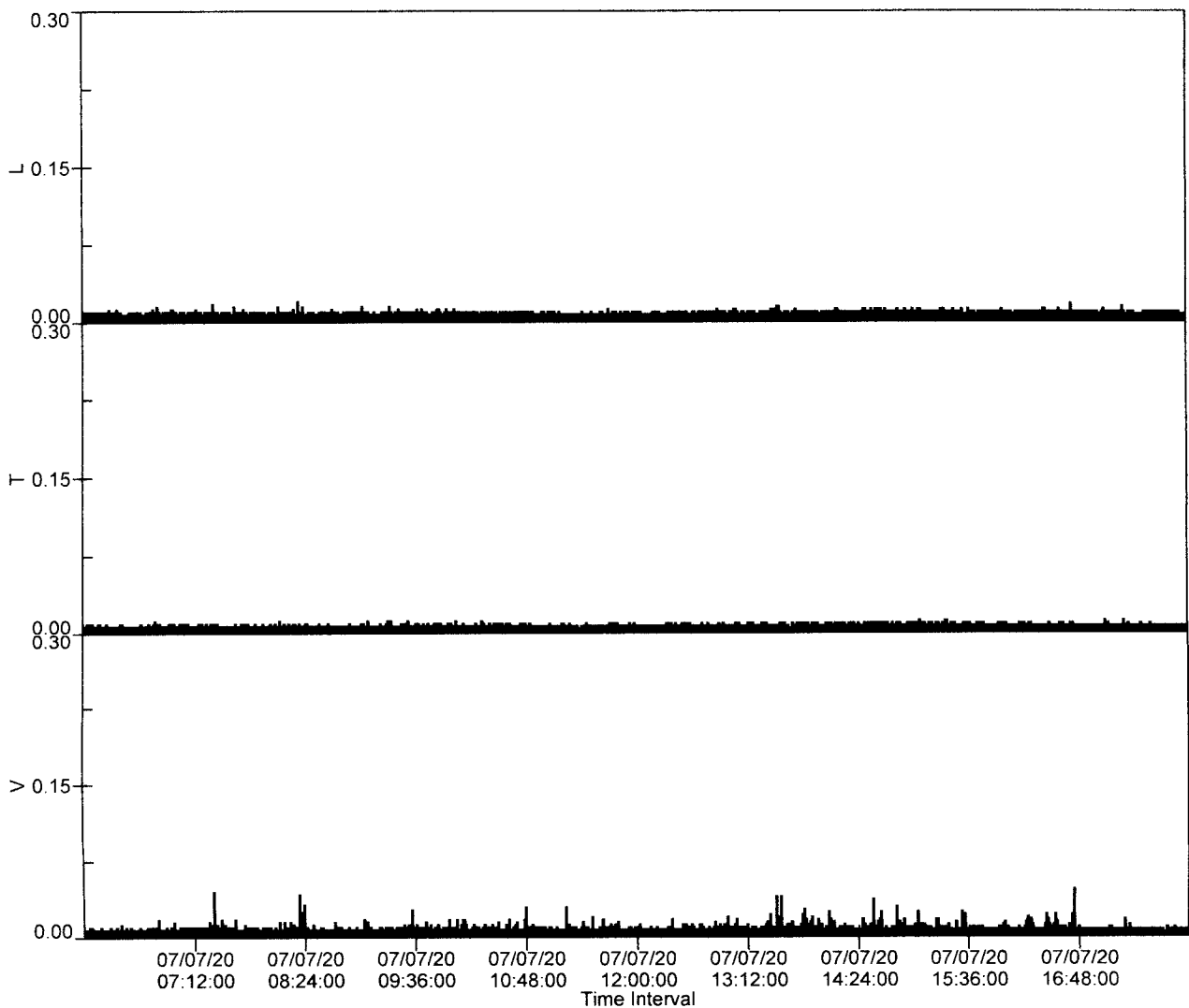
	L	T	V
<b>PPV (in/s)</b>	0.020	0.013	0.048
<b>FREQ (Hz)</b>	23.8	55.6	17.9
<b>Peak Air Pressure:</b>	87 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**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: 83

Record Max PPV: 0.048 in/s Record Max DB: 87 db



**SN:** 5033 v3.66  
**Date:** 07/08/2020 **Time:** 06:01:00  
**Event:** 84  
**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)	0.023	0.023	0.073
FREQ (Hz)	19.2	20.0	20.0
Peak Air Pressure:	90 db		

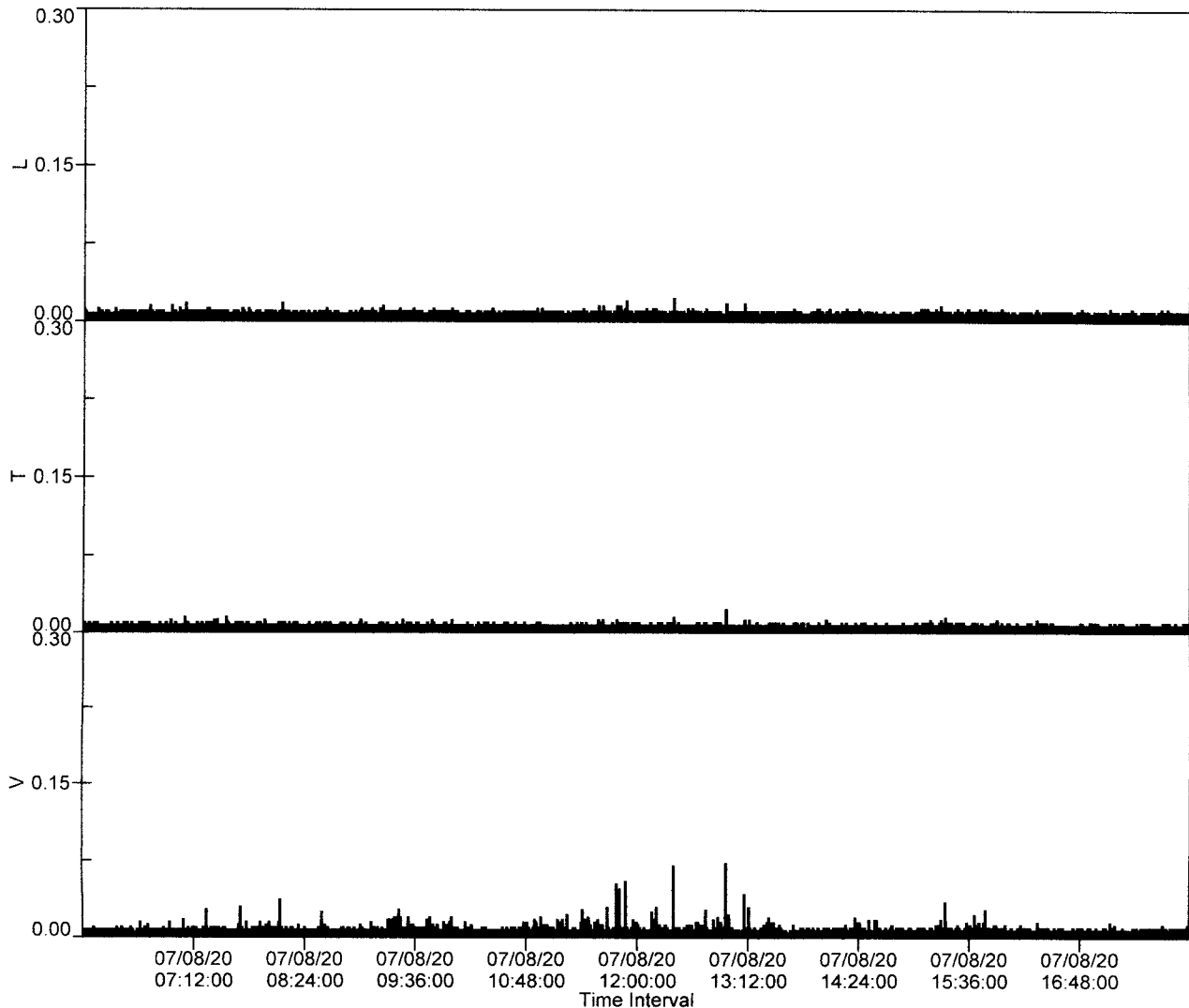
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 5033 Event: 84

Record Max PPV: 0.073 in/s Record Max DB: 90 db



**SN:** 5033 v3.66  
**Date:** 07/09/2020 **Time:** 06:01:00  
**Event:** 85  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #4 WSNSP  
**Distance:** 50.  
**Operator:** CTI INC  
**Comment:** HIGHCREST SCHOOL

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.018	0.015	0.033
<b>FREQ (Hz)</b>	45.5	166.7	16.1
<b>Peak Air Pressure:</b>	90 db		

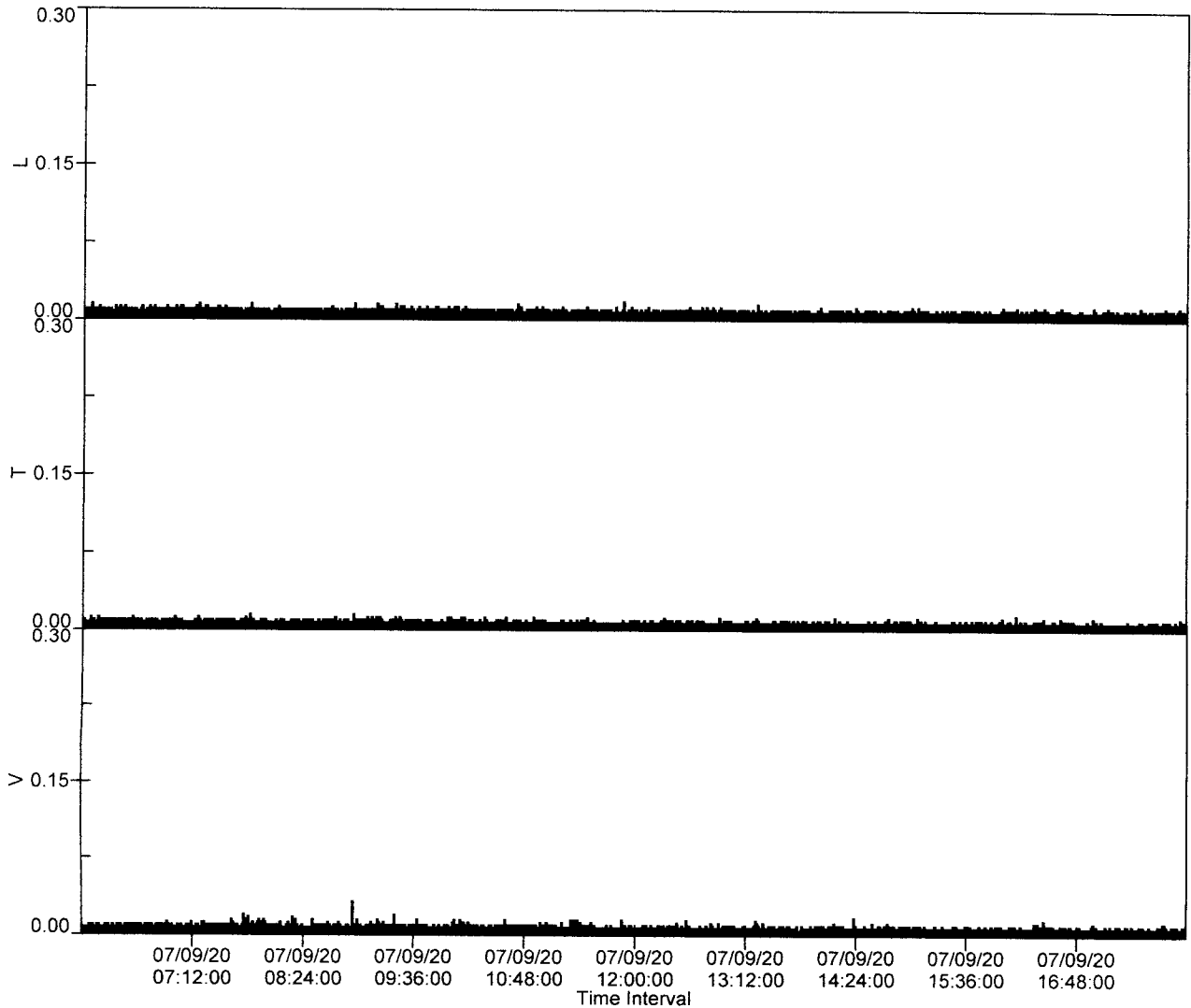
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 5033 Event: 85

Record Max PPV: 0.033 in/s Record Max DB: 90 db



**SN:** 5033 v3.66  
**Date:** 07/10/2020 **Time:** 06:01:00  
**Event:** 86  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #4 WSNP  
**Distance:** 50.  
**Operator:** CTI INC  
**Comment:** HIGHCREST SCHOOL

**Continuous Monitor Recording  
Summary Data**

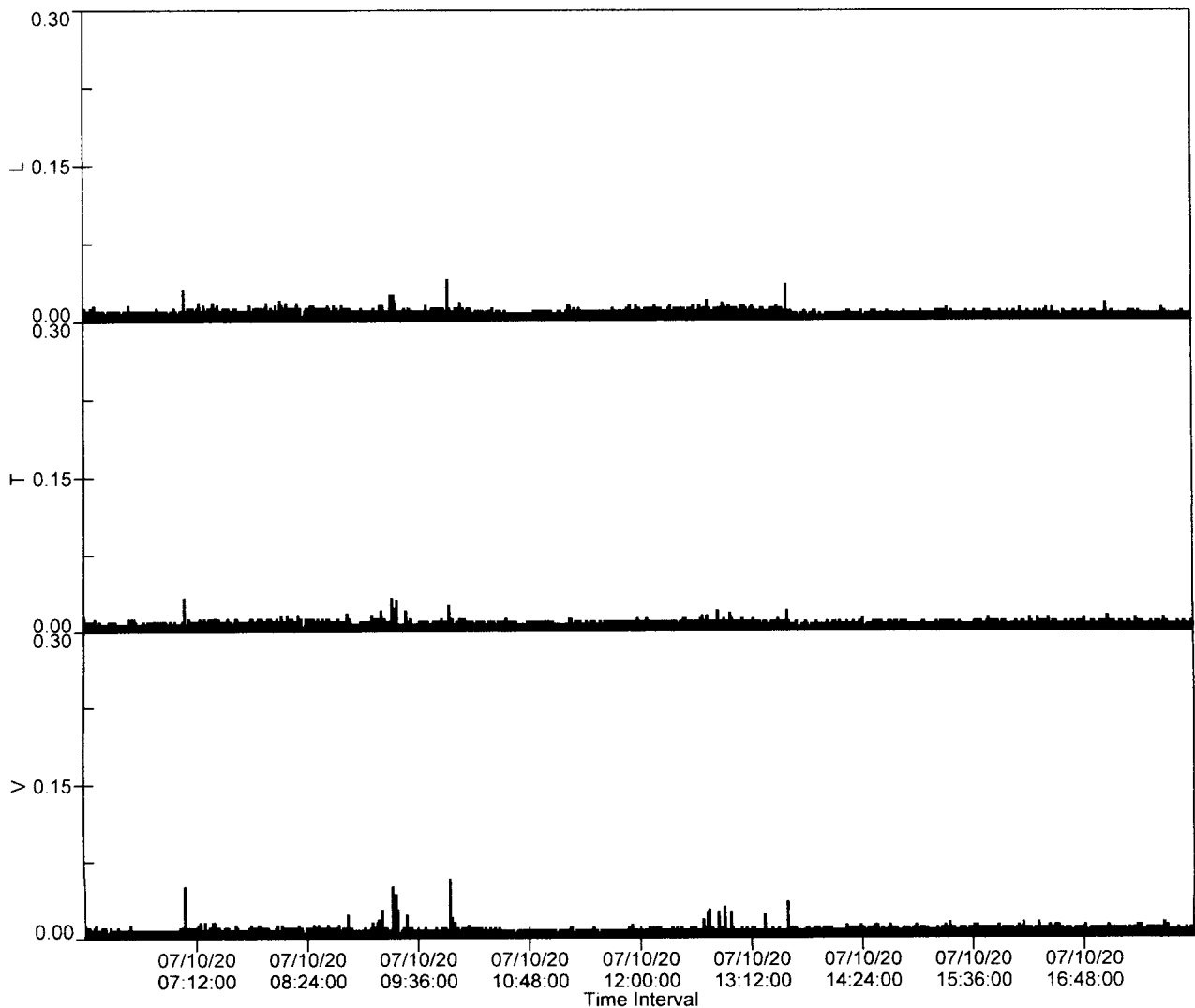
	<b>L</b>	<b>T</b>	<b>V</b>
<b>PPV (in/s)</b>	0.040	0.033	0.058
<b>FREQ (Hz)</b>	100.0	62.5	83.3
<b>Peak Air Pressure:</b>	94 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**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: 86

Record Max PPV: 0.058 in/s Record Max DB: 94 db



**SN:** 5033 v3.66  
**Date:** 07/11/2020 **Time:** 06:01:00  
**Event:** 87  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #4 WSNSP  
**Distance:** 50.  
**Operator:** CTI INC  
**Comment:** HIGHCREST SCHOOL

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.025	0.023	0.038
<b>FREQ (Hz)</b>	100.0	62.5	100.0
<b>Peak Air Pressure:</b>	92 db		

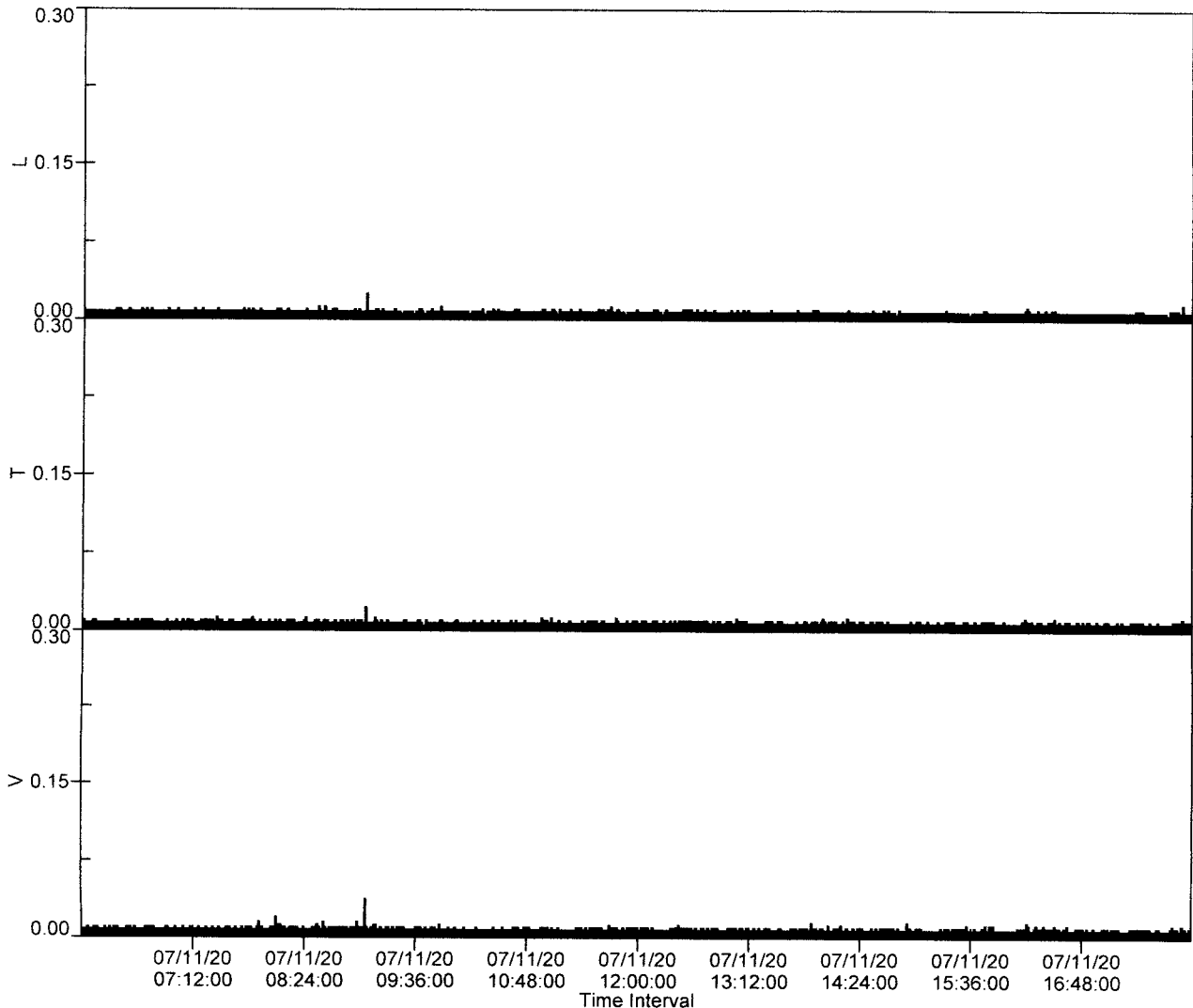
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 5033 Event: 87

Record Max PPV: 0.038 in/s Record Max DB: 92 db



**SN:** 5033 v3.66  
**Date:** 07/12/2020 **Time:** 06:01:00  
**Event:** 88  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #4 WSNP  
**Distance:** 50.  
**Operator:** CTI INC  
**Comment:** HIGHCREST SCHOOL

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.018	0.015	0.018
<b>FREQ (Hz)</b>	6.0	500.0	10.6
<b>Peak Air Pressure:</b>	95 db		

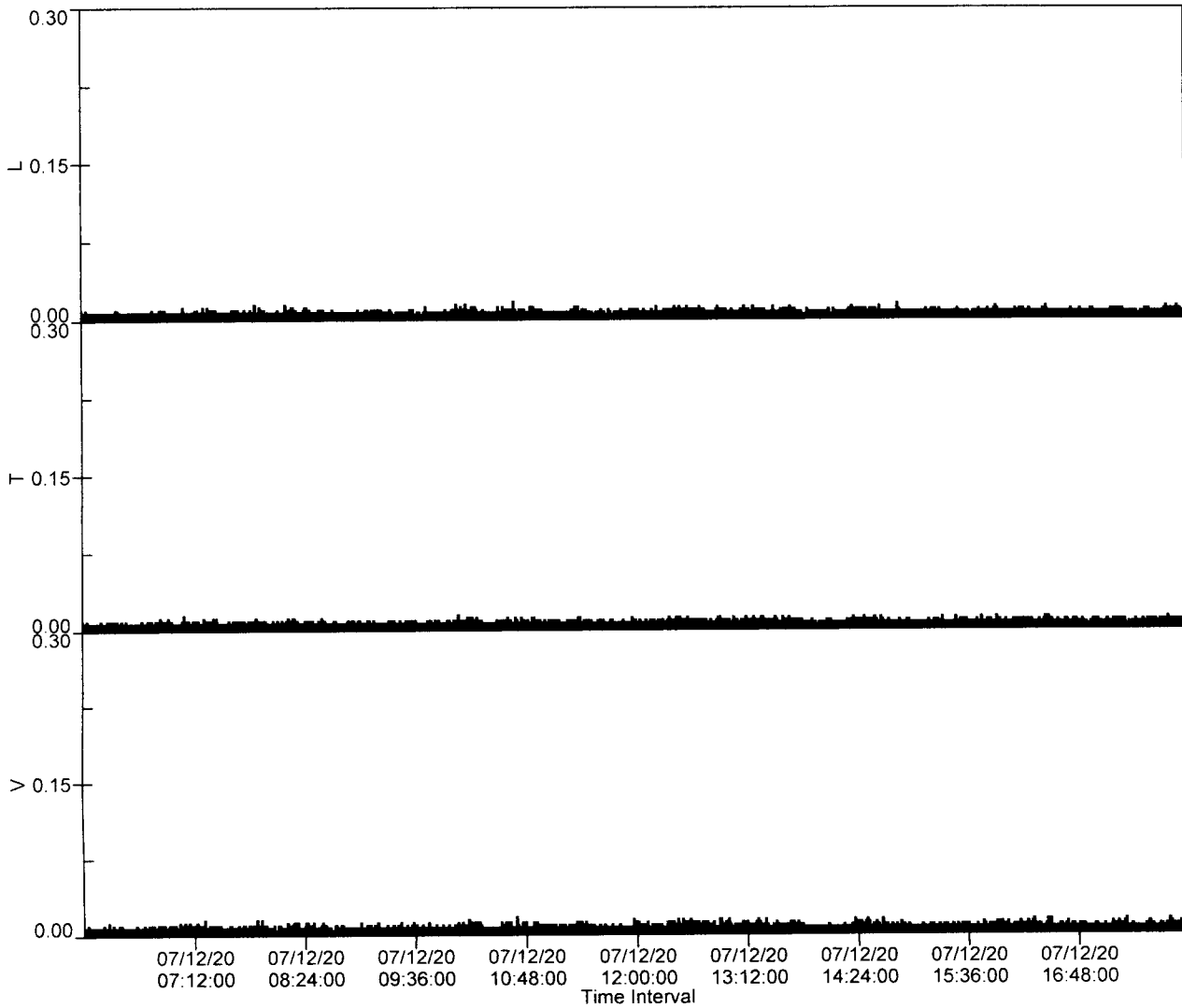
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 5033 Event: 88

Record Max PPV: 0.018 in/s Record Max DB: 95 db





**SN:** 5033 v3.66  
**Date:** 07/13/2020 **Time:** 06:01:00  
**Event:** 89  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #4 WSNSP  
**Distance:** 50.  
**Operator:** CTI INC  
**Comment:** HIGHCREST SCHOOL

**Continuous Monitor Recording  
Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.080	0.020	0.040
<b>FREQ (Hz)</b>	8.8	83.3	83.3
<b>Peak Air Pressure:</b>	94 db		

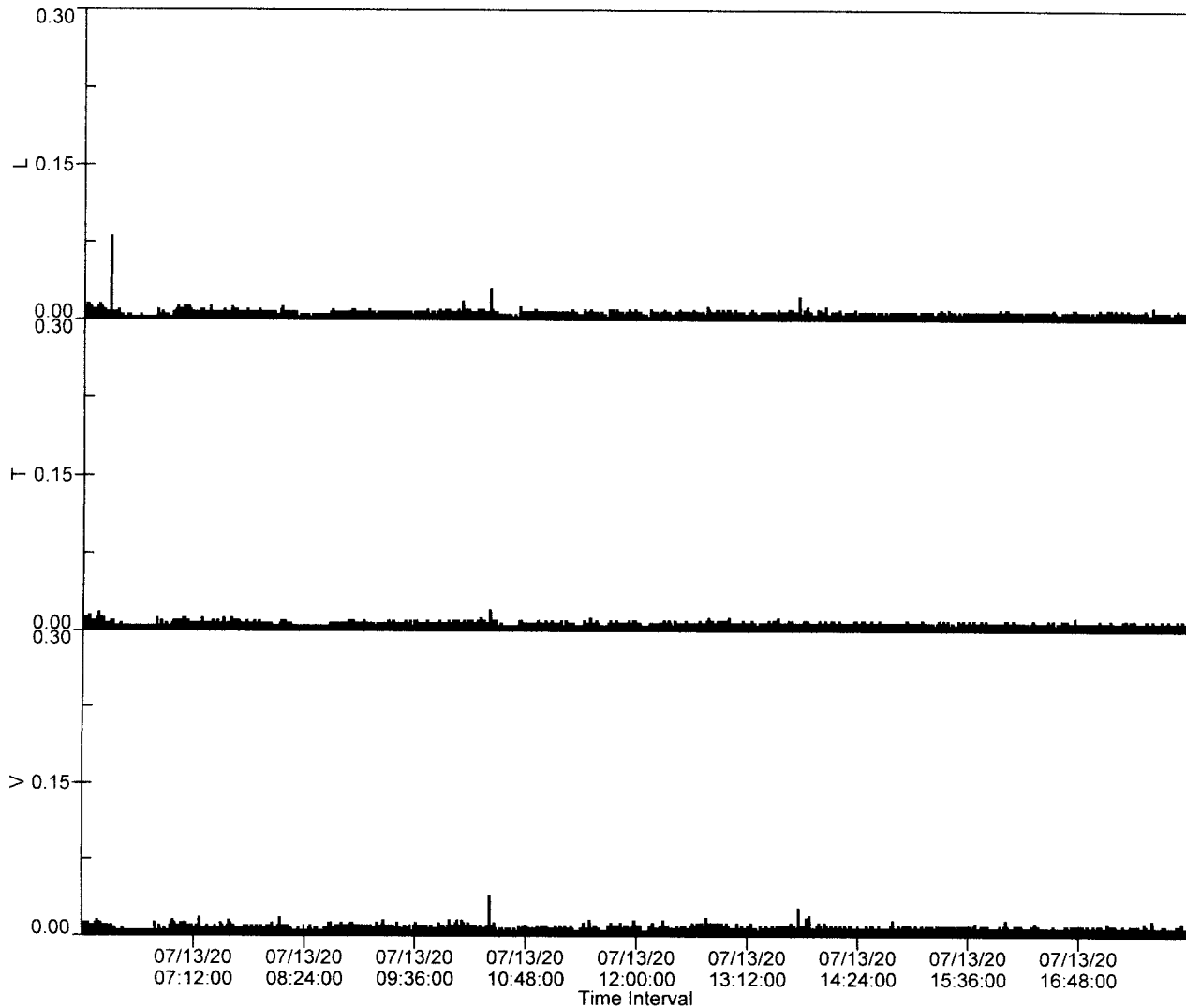
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 5033 Event: 89

Record Max PPV: 0.080 in/s Record Max DB: 94 db



SN: 5033 v3.66  
Date: 07/14/2020 Time: 06:01:00  
Event: 90  
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)	0.120	0.113	0.153
FREQ (Hz)	100.0	45.5	50.0
Peak Air Pressure:	97 db		

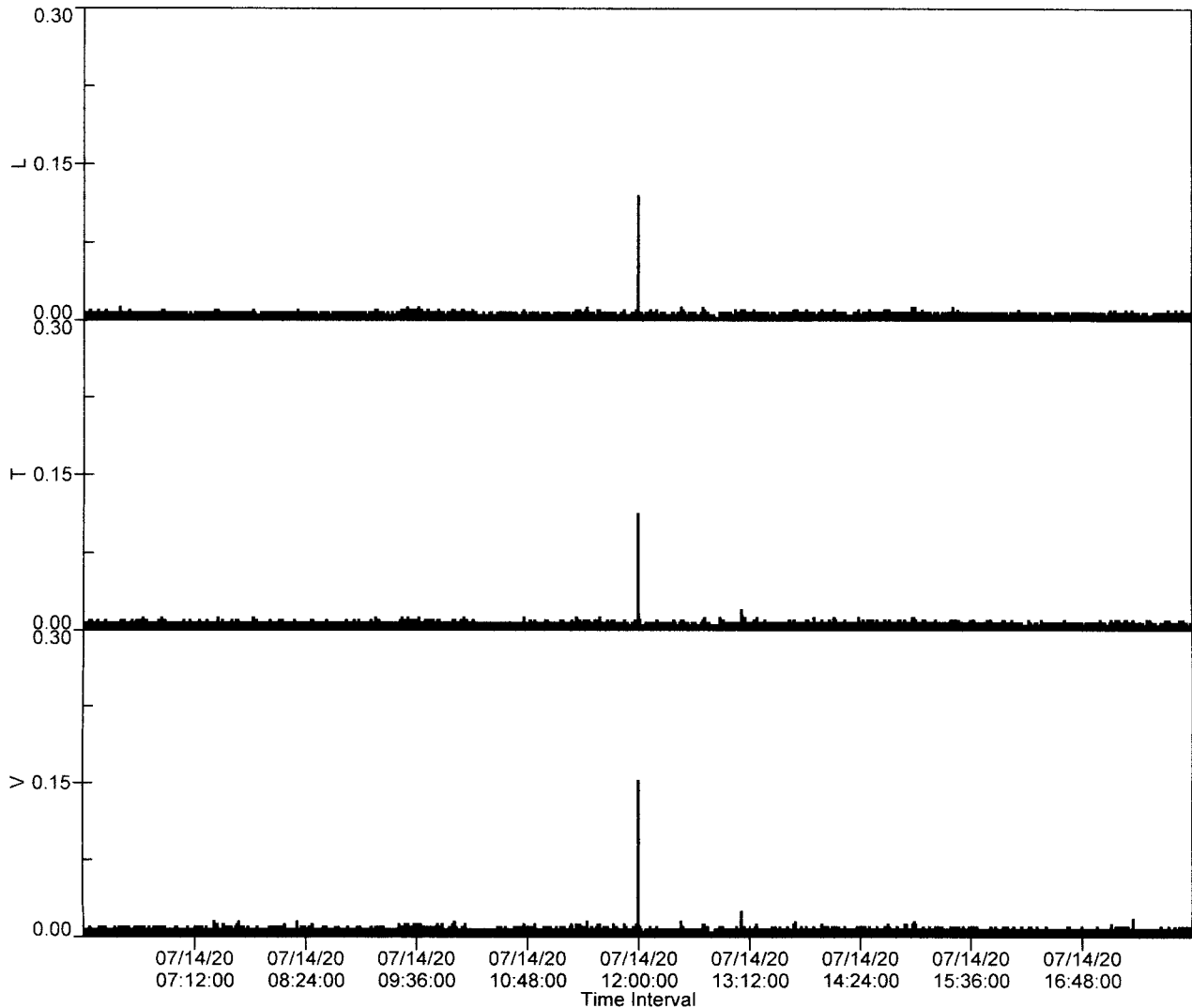
Recording Time: 718 minutes  
Sample Size: 1440  
Interval Size: 60 seconds

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: 90

Record Max PPV: 0.153 in/s Record Max DB: 97 db



**SN:** 5033 v3.66  
**Date:** 07/15/2020 **Time:** 06:01:00  
**Event:** 91  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #4 WSNSP  
**Distance:** 50.  
**Operator:** CTI INC  
**Comment:** HIGHCREST SCHOOL

**Continuous Monitor Recording**

**Summary Data**

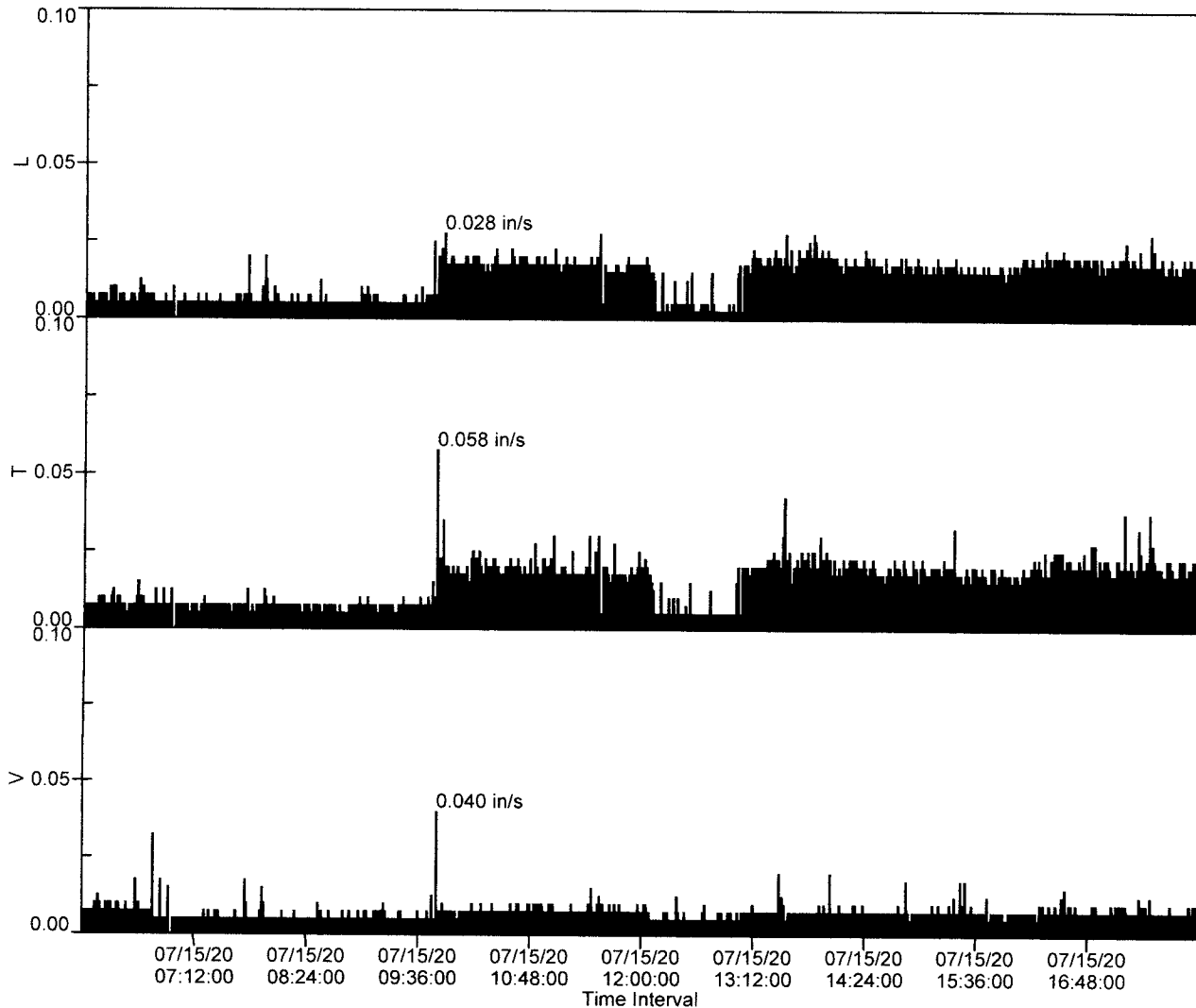
	L	T	V
<b>PPV (in/s)</b>	0.028	0.058	0.040
<b>FREQ (Hz)</b>	100.0	15.2	100.0
<b>Peak Air Pressure:</b>	89 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**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: 91

Record Max PPV: 0.058 in/s Record Max DB: 89 db



**SN:** 5033 v3.66  
**Date:** 07/16/2020 **Time:** 06:01:00  
**Event:** 92  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #4 WSNP  
**Distance:** 50.  
**Operator:** CTI INC  
**Comment:** HIGHCREST SCHOOL

**Continuous Monitor Recording  
Summary Data**

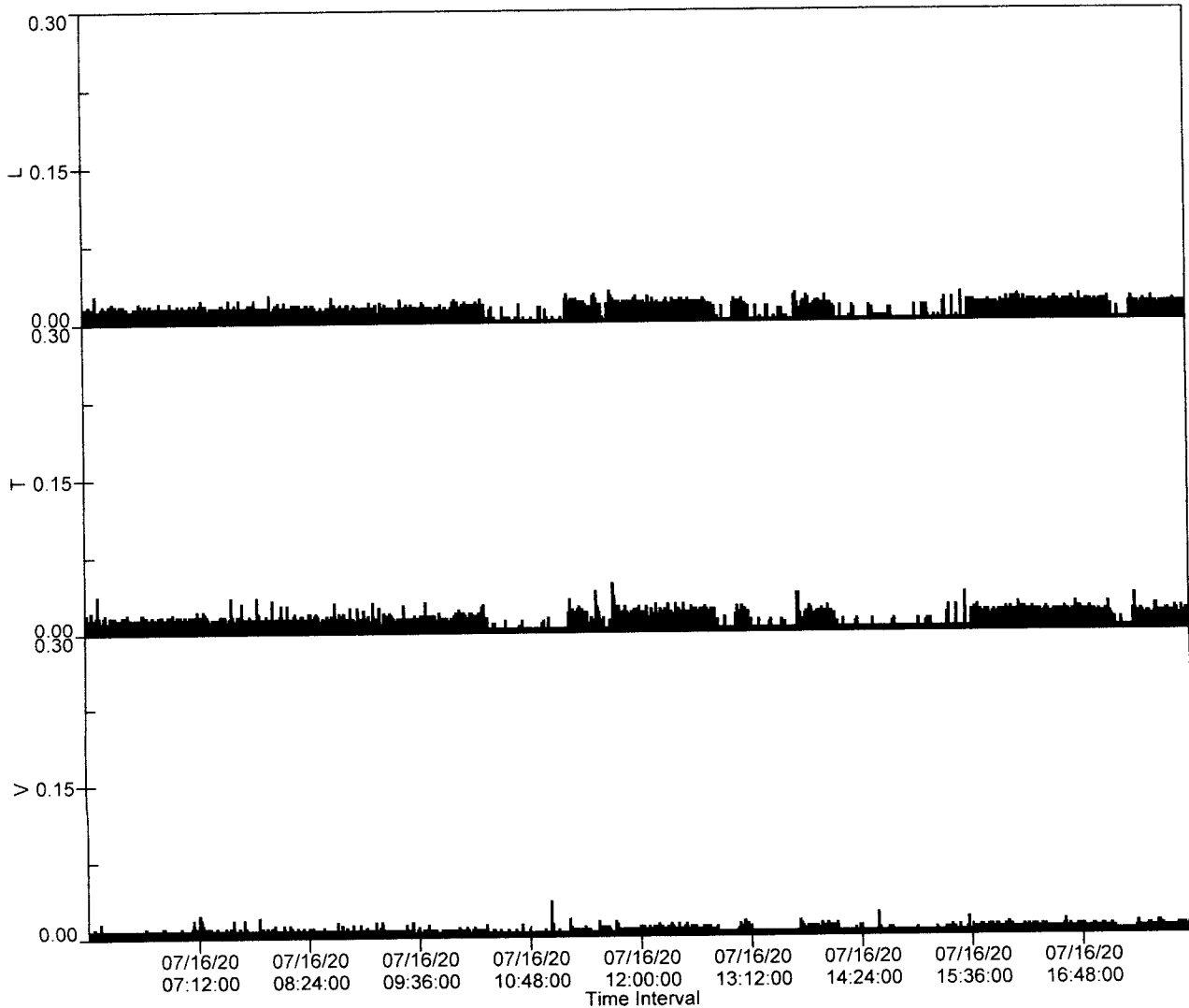
	L	T	V
<b>PPV (in/s)</b>	0.030	0.048	0.035
<b>FREQ (Hz)</b>	1.2	2.4	22.7
<b>Peak Air Pressure:</b>	90 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**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: 92

Record Max PPV: 0.048 in/s Record Max DB: 90 db



**SN:** 5033 v3.66  
**Date:** 07/17/2020 **Time:** 06:01:00  
**Event:** 93  
**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)	0.133	0.125	0.163
FREQ (Hz)	19.2	62.5	41.7
Peak Air Pressure:	106 db		

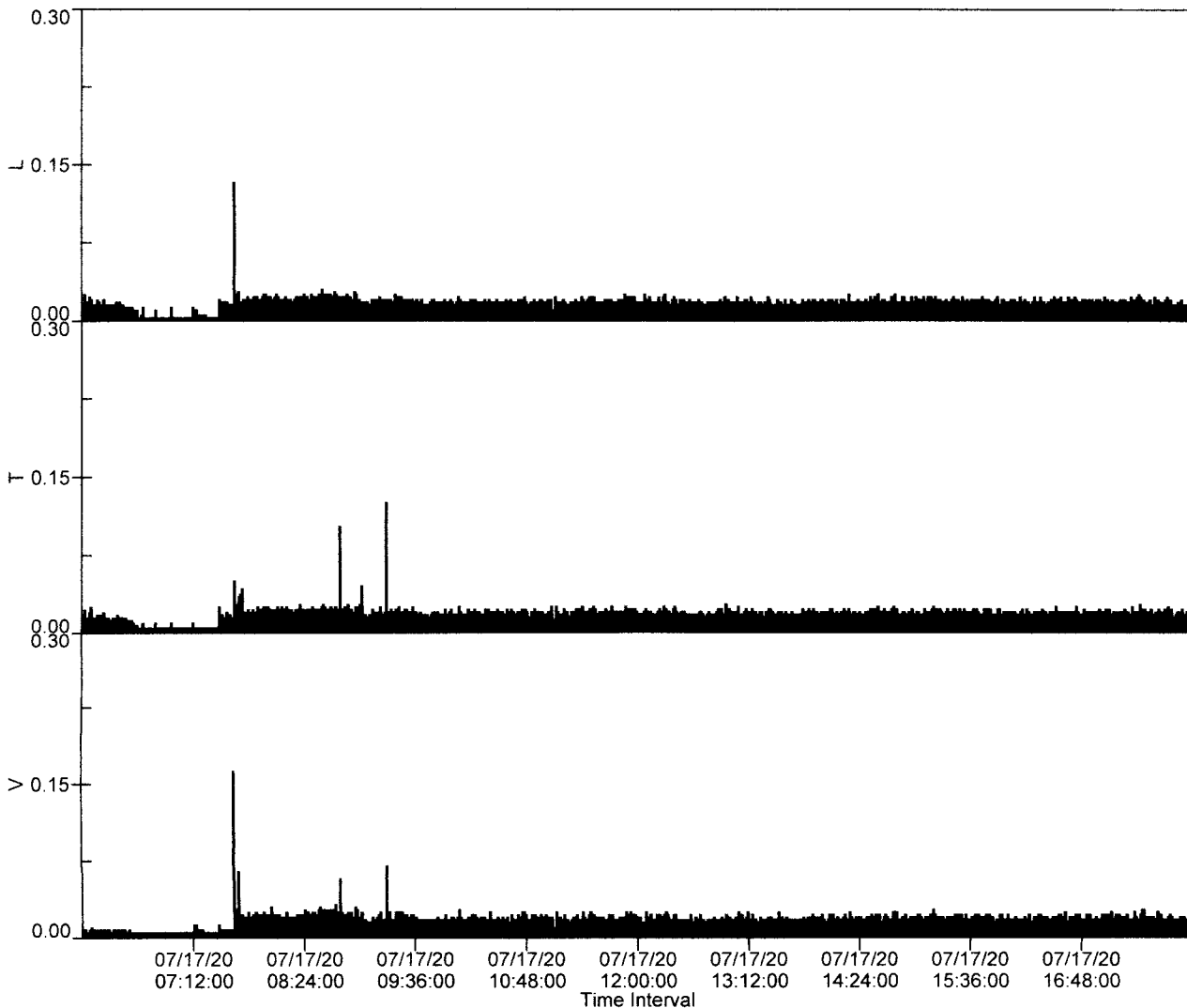
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 93

Record Max PPV: 0.163 in/s Record Max DB: 106 db



**SN:** 5033 v3.66  
**Date:** 07/18/2020 **Time:** 06:01:00  
**Event:** 94  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #4 WSNP  
**Distance:** 50.  
**Operator:** CTI INC  
**Comment:** HIGHCREST SCHOOL

**Continuous Monitor Recording  
Summary Data**

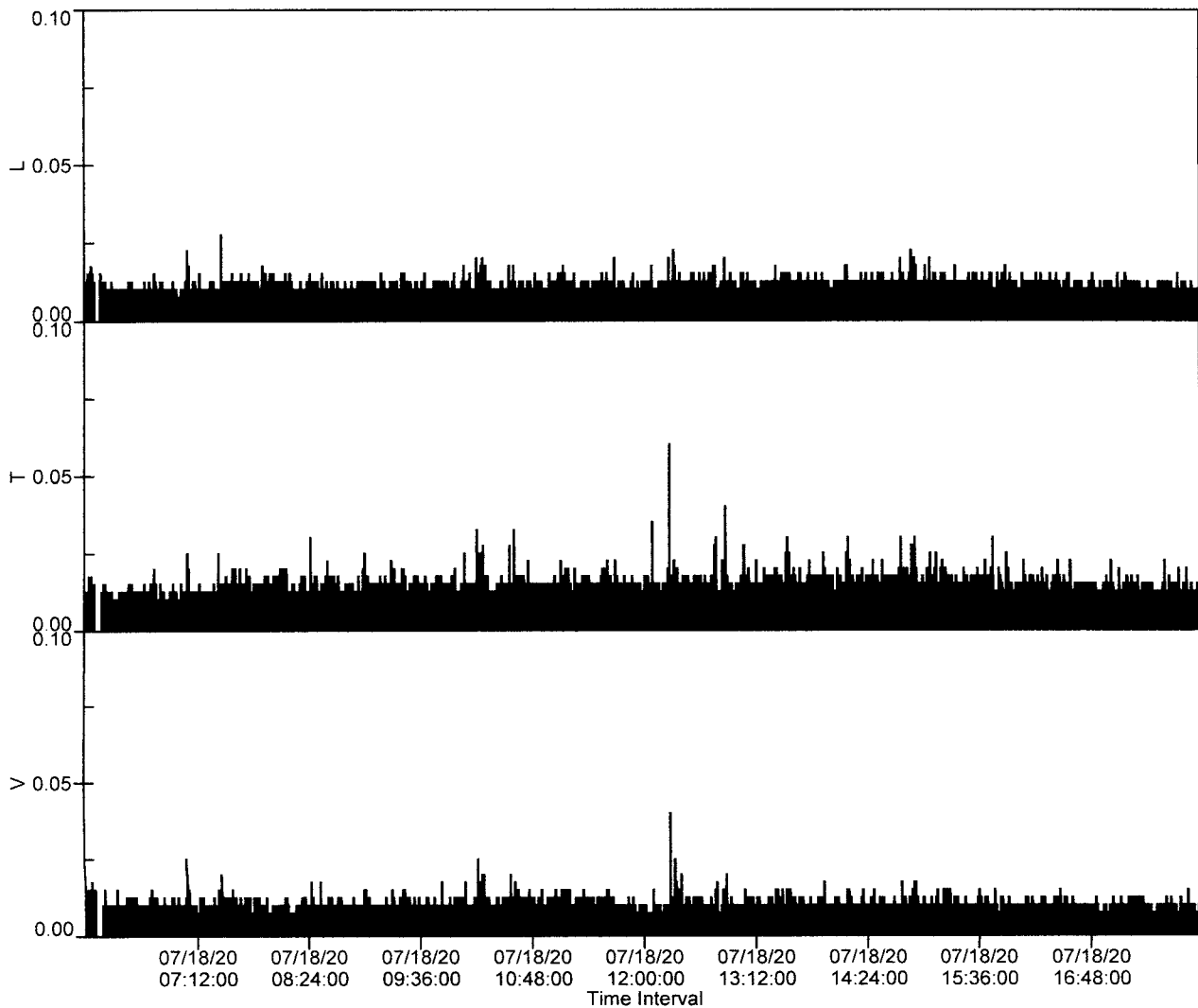
	L	T	V
<b>PPV (in/s)</b>	0.028	0.060	0.040
<b>FREQ (Hz)</b>	100.0	5.3	83.3
<b>Peak Air Pressure:</b>	104 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**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: 94

Record Max PPV: 0.060 in/s Record Max DB: 104 db



**SN:** 5033 v3.66  
**Date:** 07/19/2020 **Time:** 06:01:00  
**Event:** 95  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #4 WSNP  
**Distance:** 50.  
**Operator:** CTI INC  
**Comment:** HIGHCREST SCHOOL

**Continuous Monitor Recording**

**Summary Data**

	<b>L</b>	<b>T</b>	<b>V</b>
<b>PPV (in/s)</b>	0.020	0.040	0.018
<b>FREQ (Hz)</b>	83.3	4.8	83.3
<b>Peak Air Pressure:</b>	98 db		

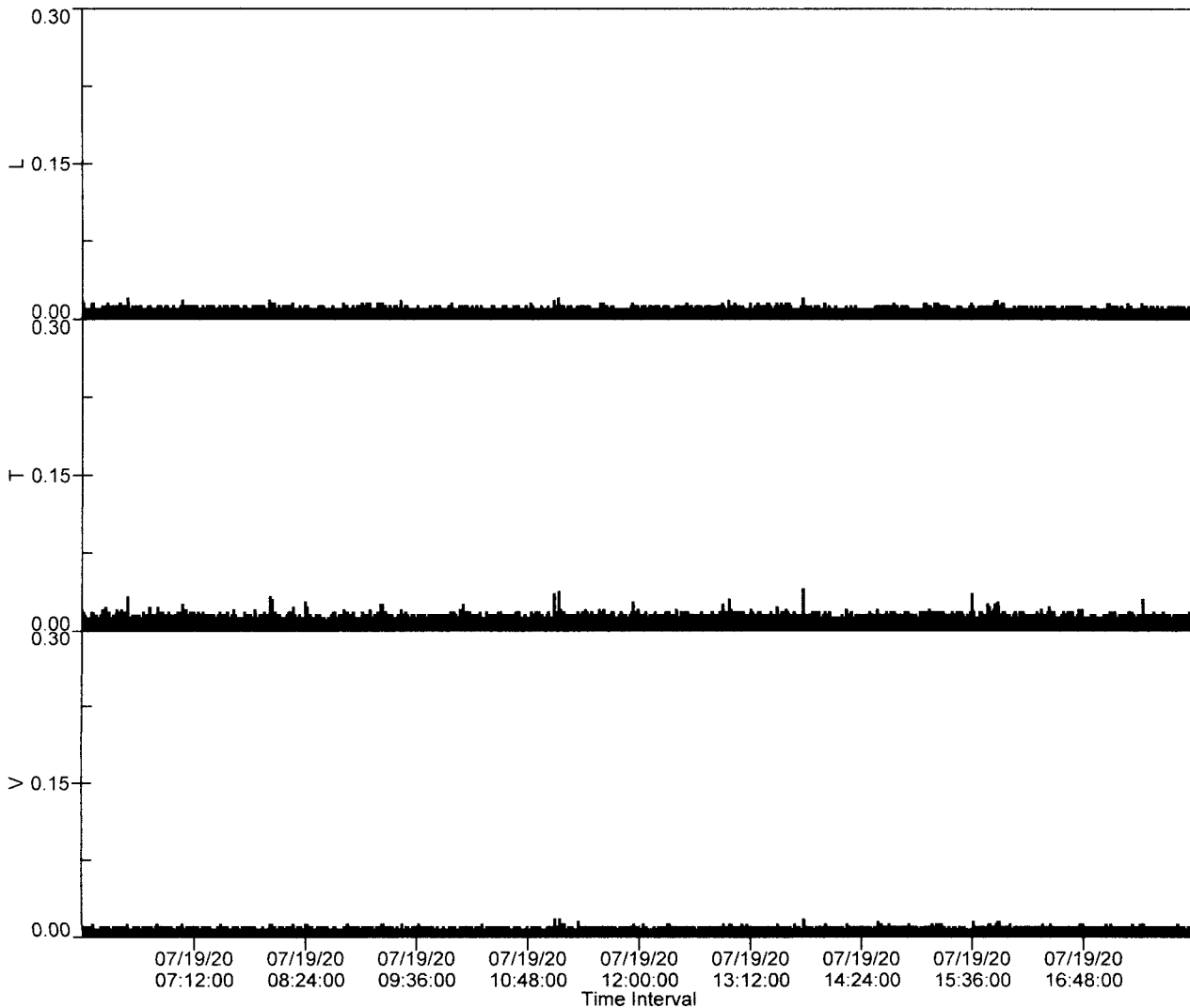
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 95

Record Max PPV: 0.040 in/s Record Max DB: 98 db







**SN:** 3802 v3.22  
**Date:** 07/06/2020 **Time:** 08:41:00  
**Event:** 1  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #5 WSNP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** SE CORNER UNIT

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.015	0.013	0.010
<b>FREQ (Hz)</b>	20.8	26.3	20.0
<b>Peak Air Pressure:</b>	78 db		

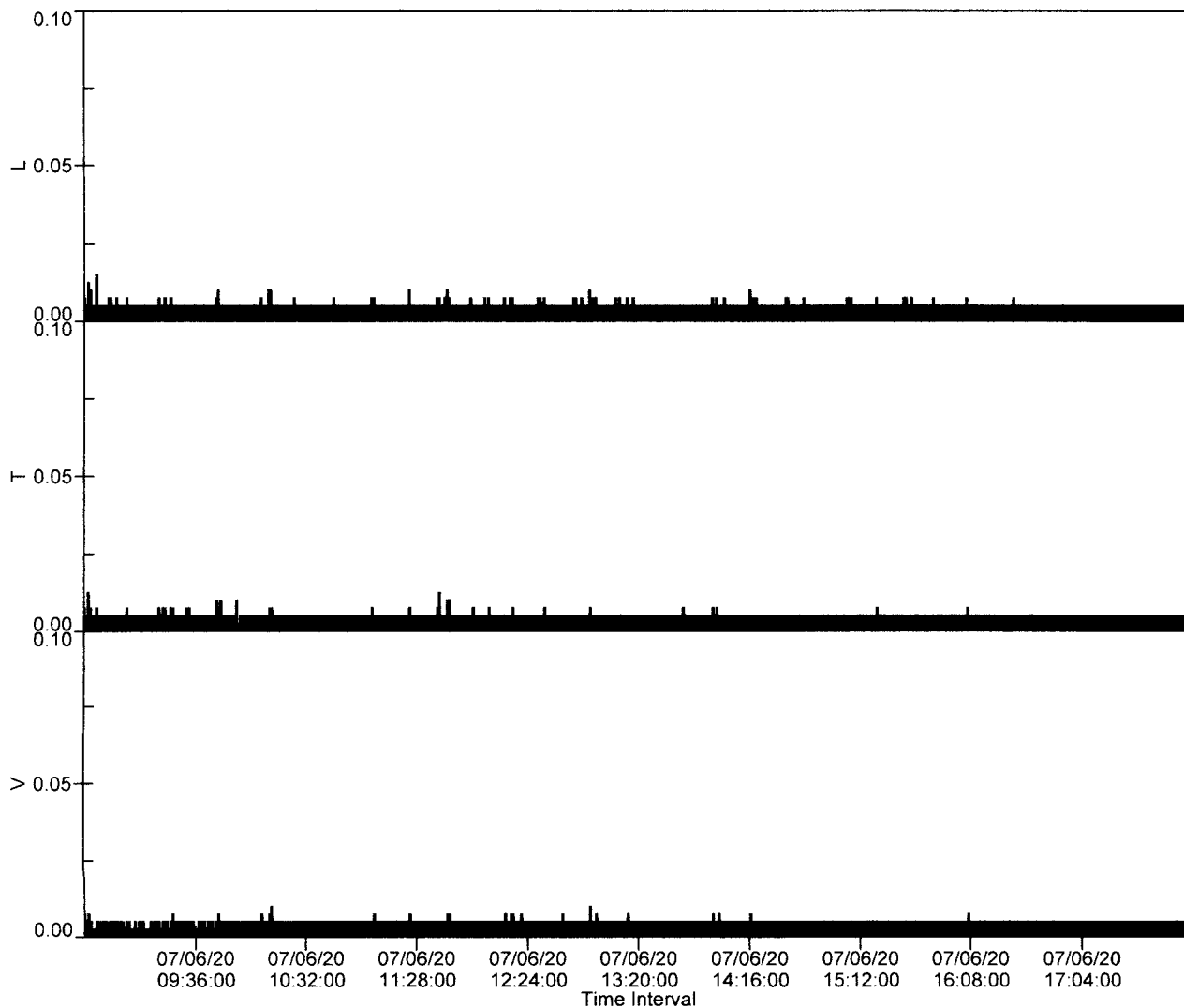
**Recording Time:** 558 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 04/07/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3802 Event: 1

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



**SN:** 3802 v3.22  
**Date:** 07/07/2020 **Time:** 06:01:00  
**Event:** 2  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #5 WSNP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** SE CORNER UNIT

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
PPV (in/s)	0.015	0.023	0.015
FREQ (Hz)	20.0	17.2	16.1
Peak Air Pressure:	78 db		

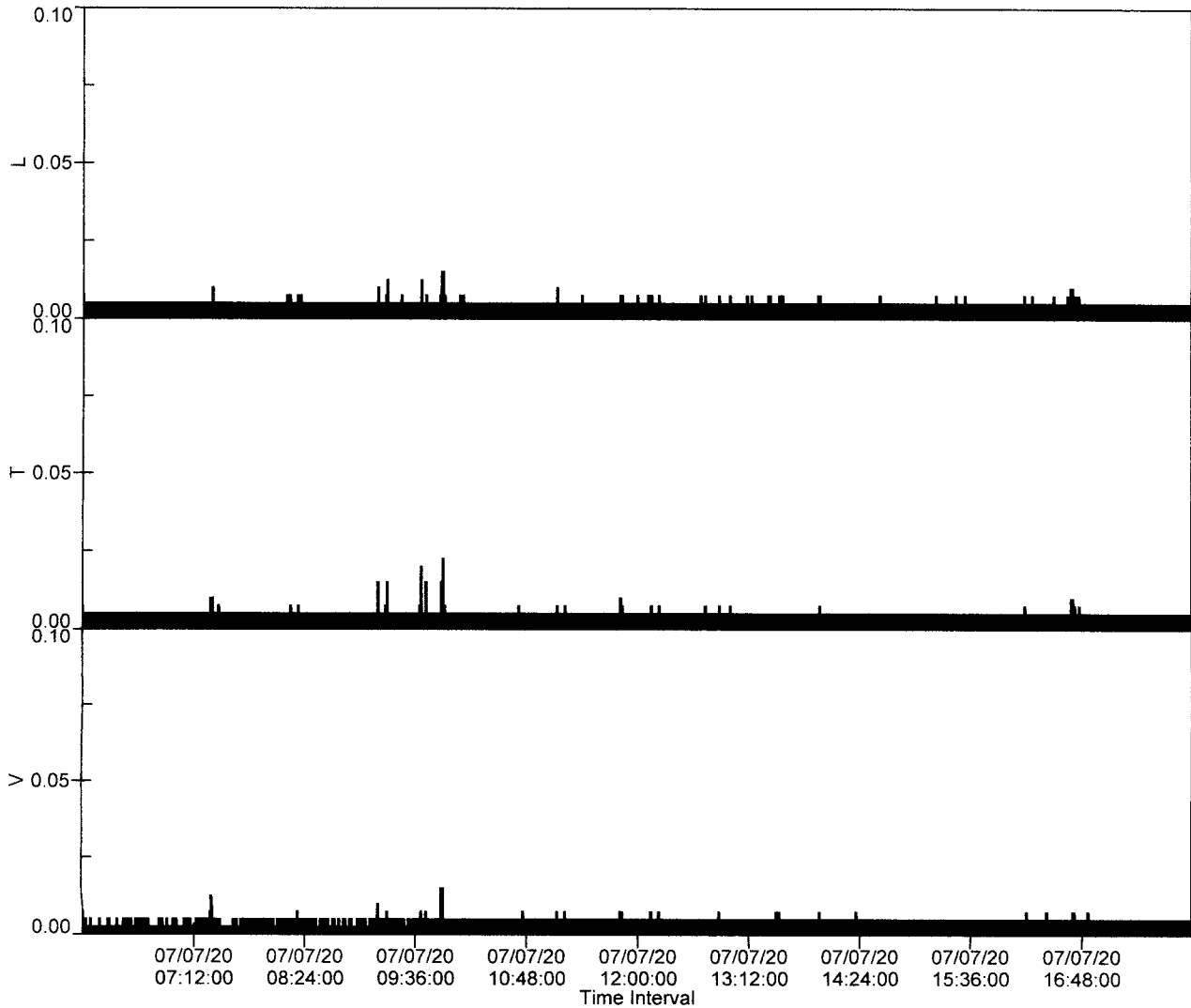
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 04/07/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3802 Event: 2

Record Max PPV: 0.023 in/s Record Max DB: 78 db



**SN:** 3802 v3.22  
**Date:** 07/08/2020 **Time:** 06:01:00  
**Event:** 3  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #5 WSNP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** SE CORNER UNIT

**Continuous Monitor Recording  
Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.028	0.018	0.018
<b>FREQ (Hz)</b>	166.7	31.3	26.3
<b>Peak Air Pressure:</b>	78 db		

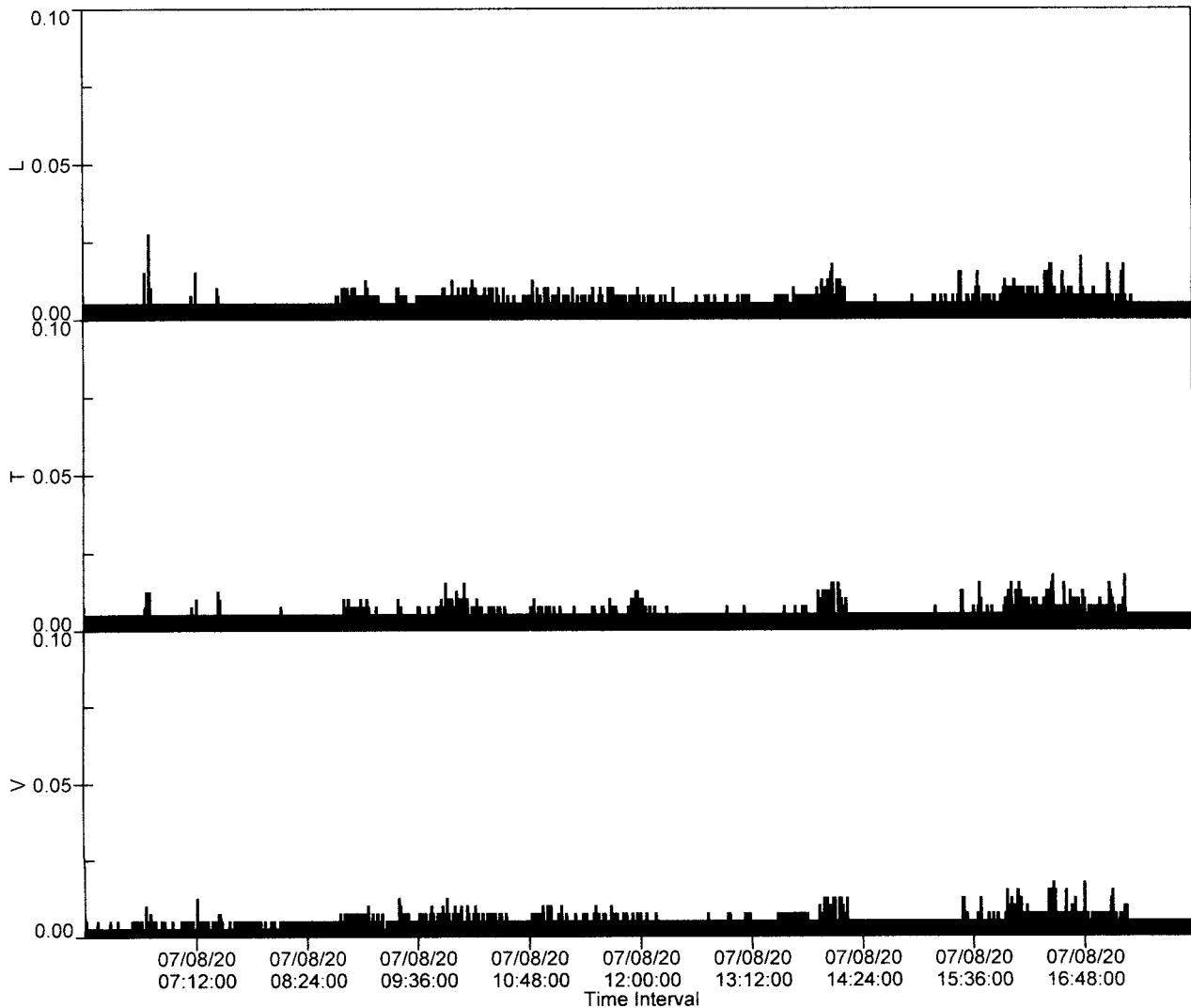
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 04/07/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3802 Event: 3

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



**SN:** 3802 v3.22  
**Date:** 07/09/2020 **Time:** 06:01:00  
**Event:** 4  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #5 WSNP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** SE CORNER UNIT

**Continuous Monitor Recording  
Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.028	0.030	0.023
<b>FREQ (Hz)</b>	16.7	20.8	17.9
<b>Peak Air Pressure:</b>	78 db		

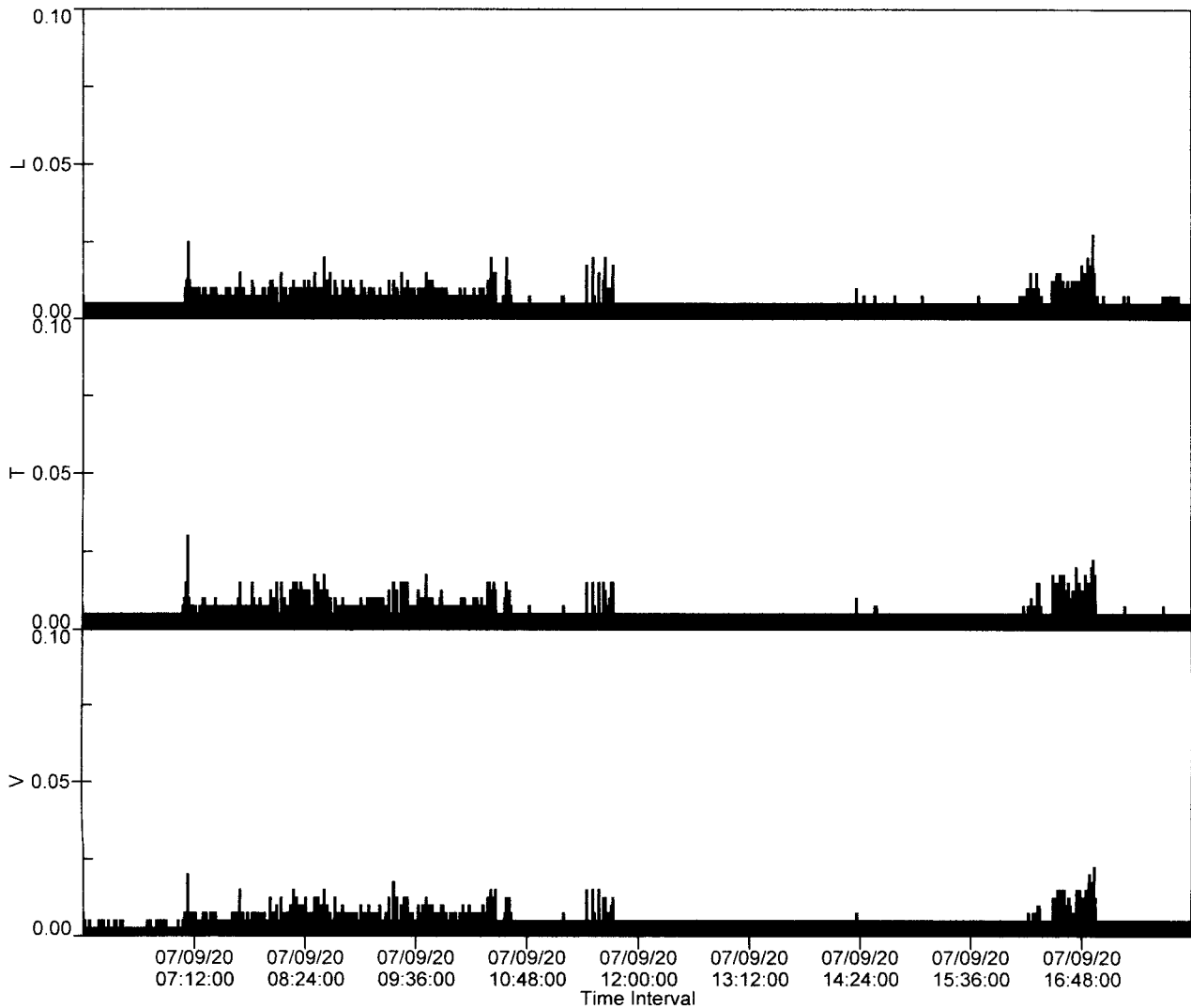
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 04/07/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3802 Event: 4

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



**SN:** 3802 v3.22  
**Date:** 07/10/2020 **Time:** 06:01:00  
**Event:** 5  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #5 WSNP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** SE CORNER UNIT

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.043	0.048	0.053
<b>FREQ (Hz)</b>	20.0	20.8	20.0
<b>Peak Air Pressure:</b>	78 db		

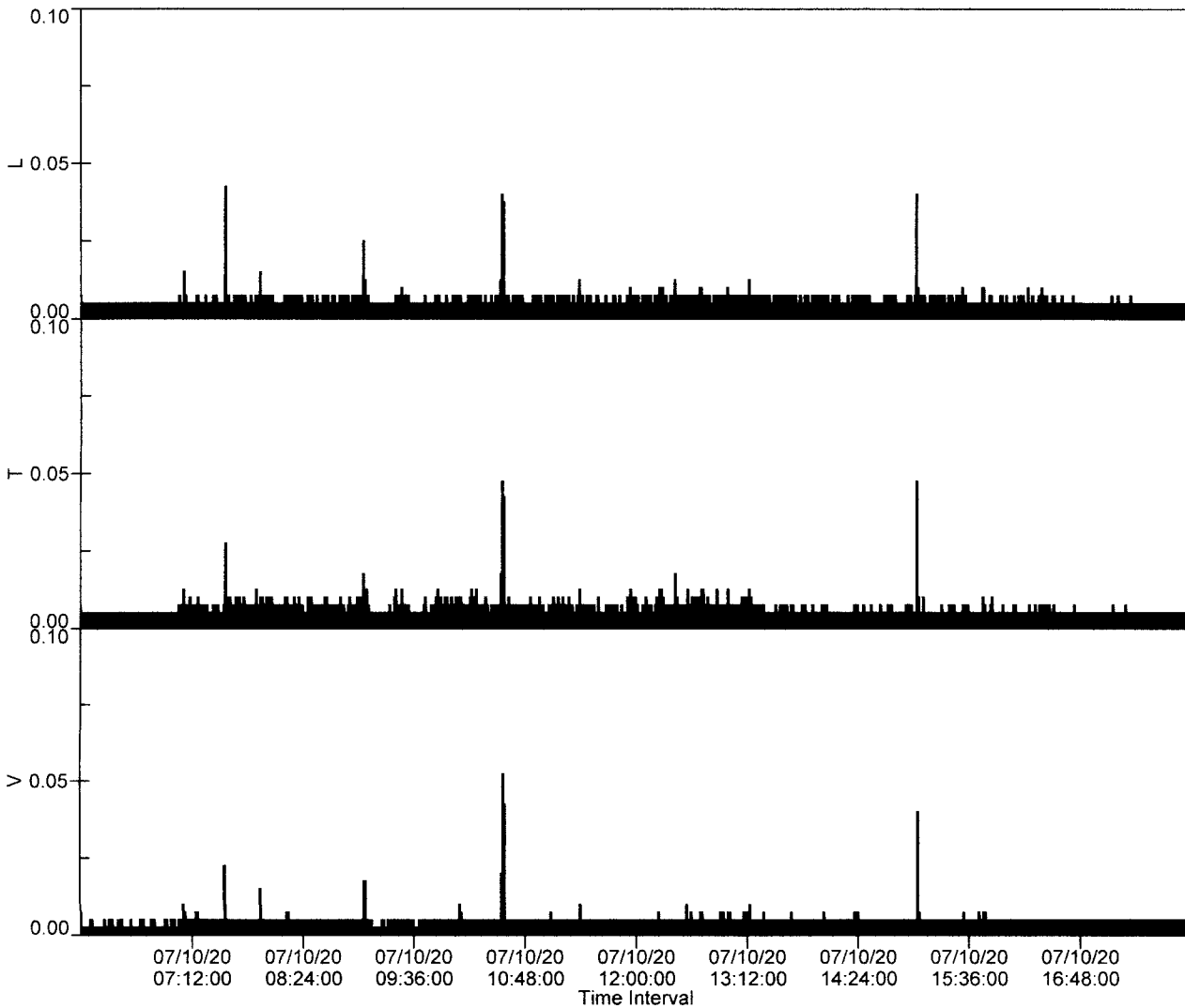
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 04/07/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3802 Event: 5

Record Max PPV: 0.053 in/s Record Max DB: 78 db



**SN:** 3802 v3.22  
**Date:** 07/11/2020 **Time:** 06:01:00  
**Event:** 6  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #5 WSNP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** SE CORNER UNIT

**Continuous Monitor Recording  
Summary Data**

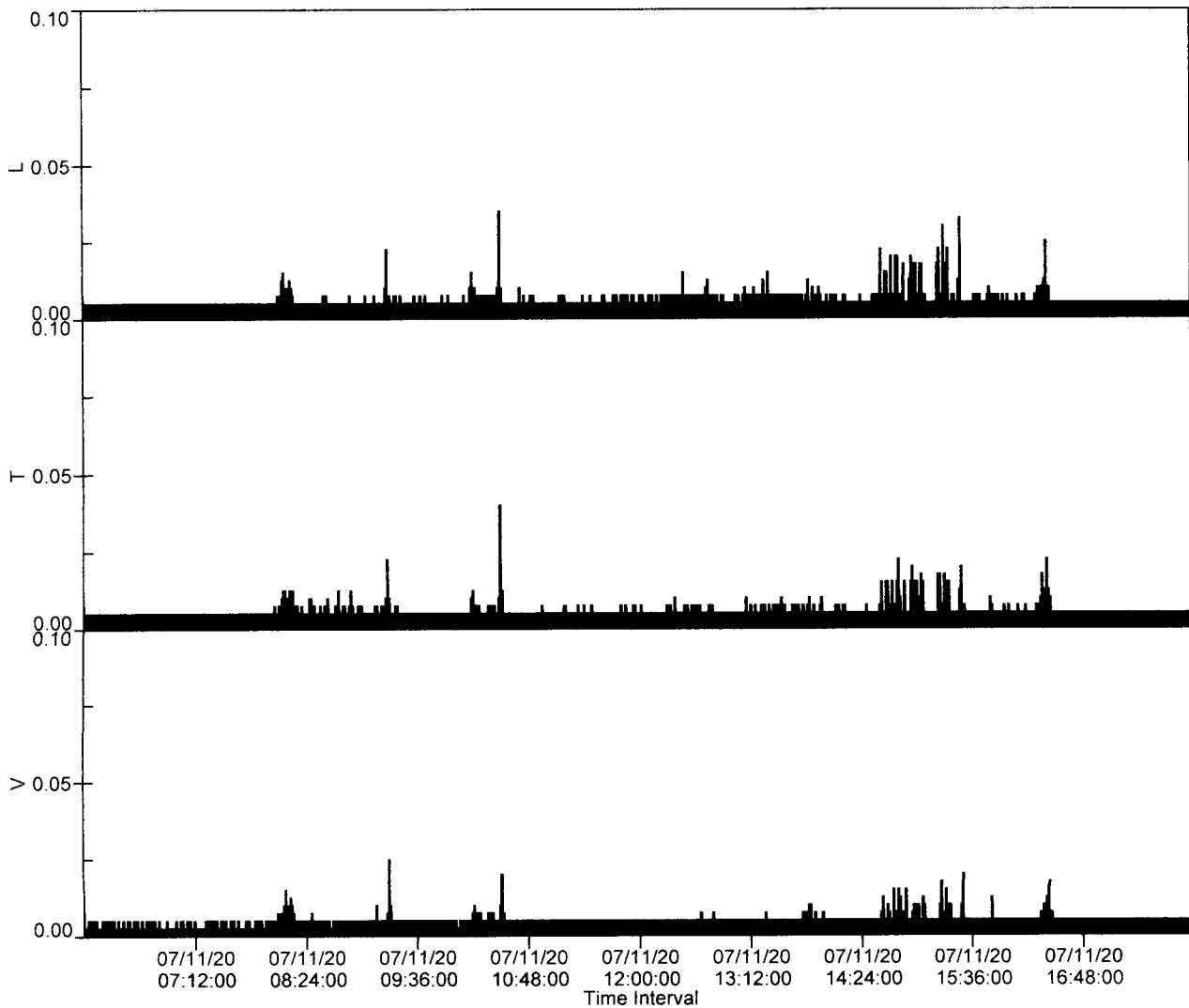
	L	T	V
<b>PPV (in/s)</b>	0.035	0.040	0.025
<b>FREQ (Hz)</b>	22.7	19.2	15.2
<b>Peak Air Pressure:</b>	78 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**Additional Info:**

**Shaketable Calibrated:** 04/07/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3802 Event: 6

Record Max PPV: 0.040 in/s Record Max DB: 78 db



**SN:** 3802 v3.22  
**Date:** 07/12/2020 **Time:** 06:01:00  
**Event:** 7  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #5 WSNSP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** SE CORNER UNIT

**Continuous Monitor Recording  
Summary Data**

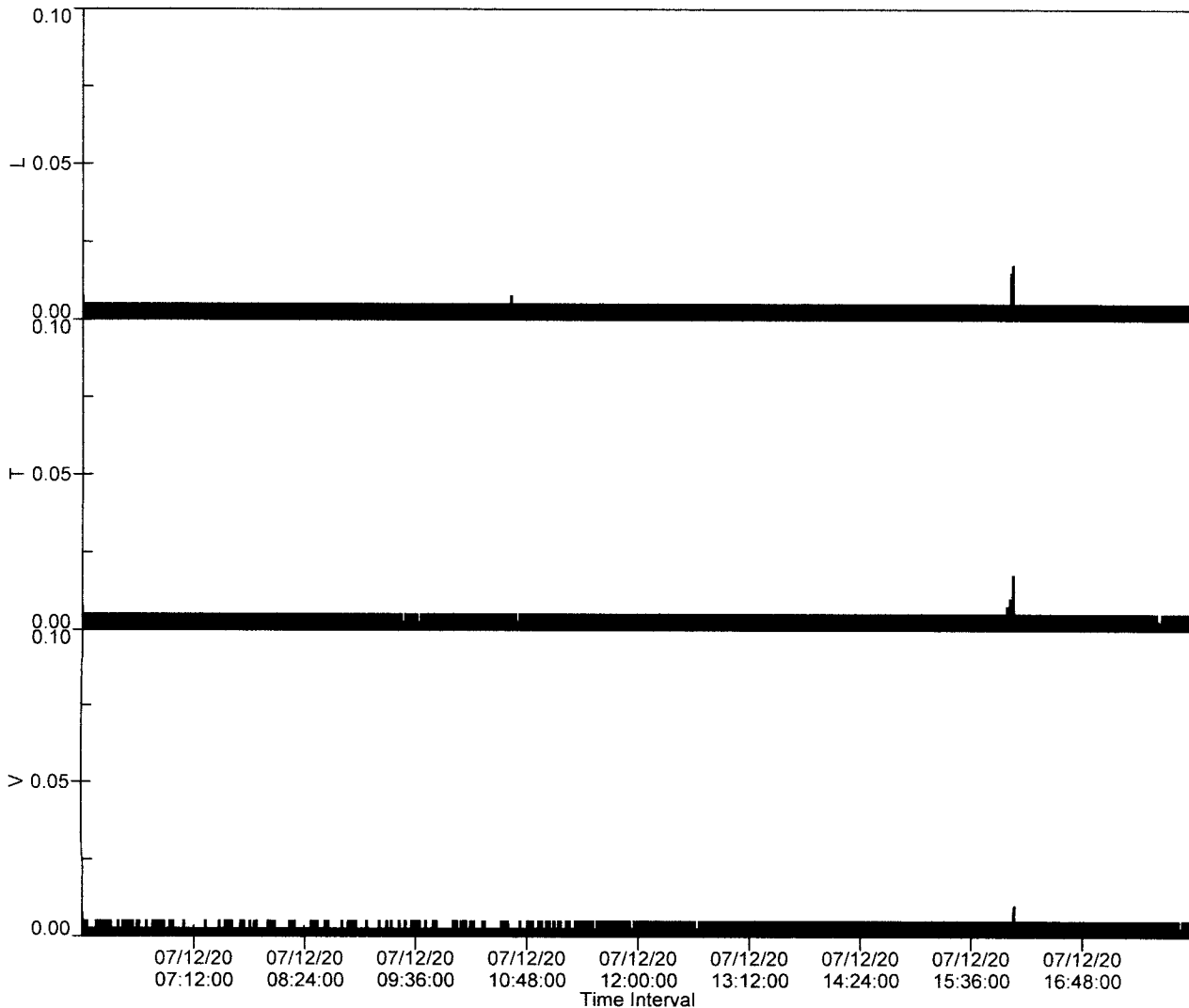
	L	T	V
<b>PPV (in/s)</b>	0.018	0.018	0.010
<b>FREQ (Hz)</b>	50.0	35.7	71.4
<b>Peak Air Pressure:</b>	78 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**Additional Info:**

**Shaketable Calibrated:** 04/07/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3802 Event: 7

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



**SN:** 3802 v3.22  
**Date:** 07/13/2020 **Time:** 06:01:00  
**Event:** 8  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #5 WSNP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** SE CORNER UNIT

**Continuous Monitor Recording  
Summary Data**

	L	T	V
PPV (in/s)	0.150	0.048	0.065
FREQ (Hz)	18.5	18.5	26.3
Peak Air Pressure:	79 db		

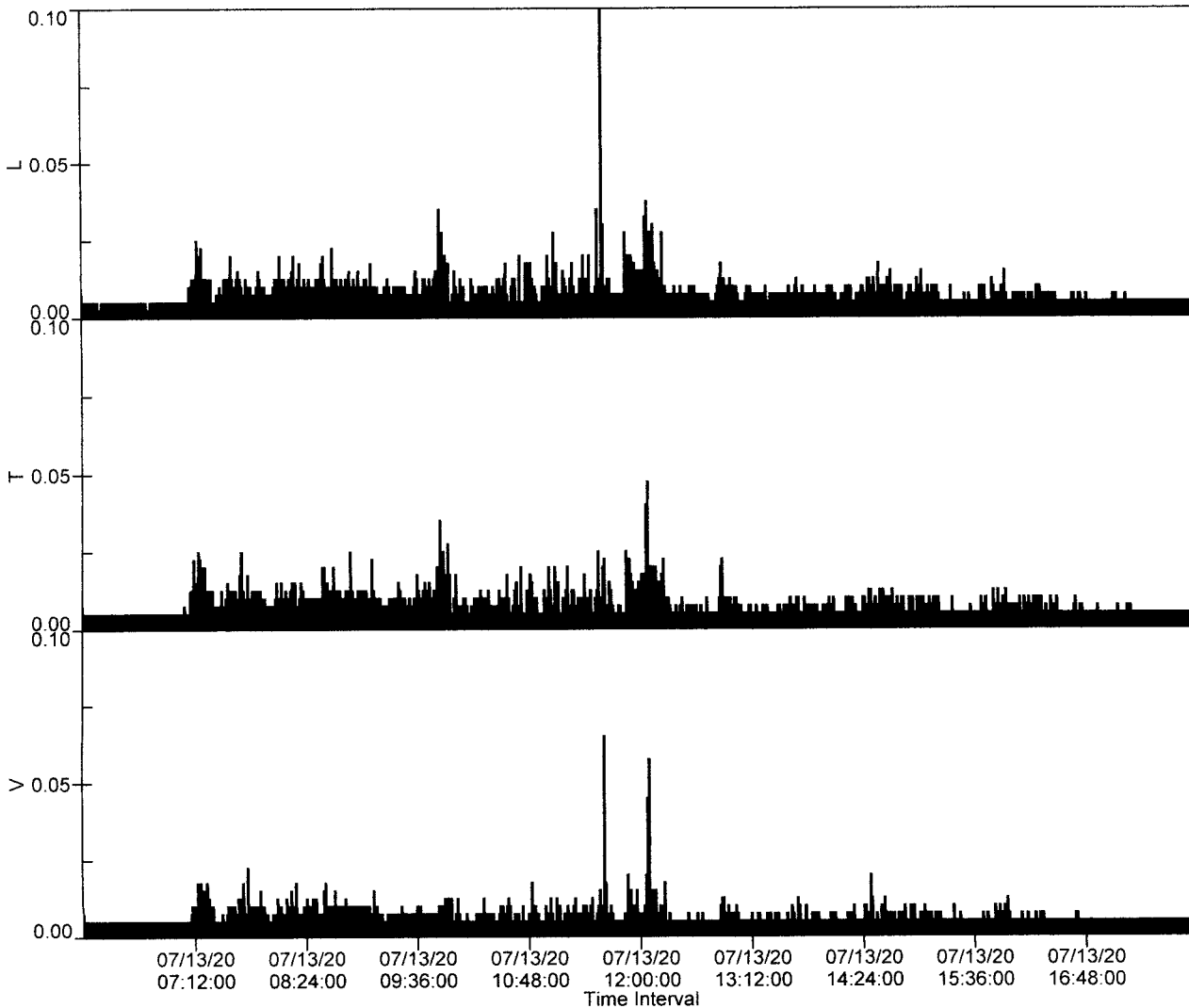
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 04/07/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3802 Event: 8

Record Max PPV: 0.150 in/s Record Max DB: 79 db





**SN:** 3802 v3.22  
**Date:** 07/14/2020 **Time:** 06:01:00  
**Event:** 9  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #5 WSNSP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** SE CORNER UNIT

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.020	0.025	0.015
<b>FREQ (Hz)</b>	23.8	18.5	20.0
<b>Peak Air Pressure:</b>	78 db		

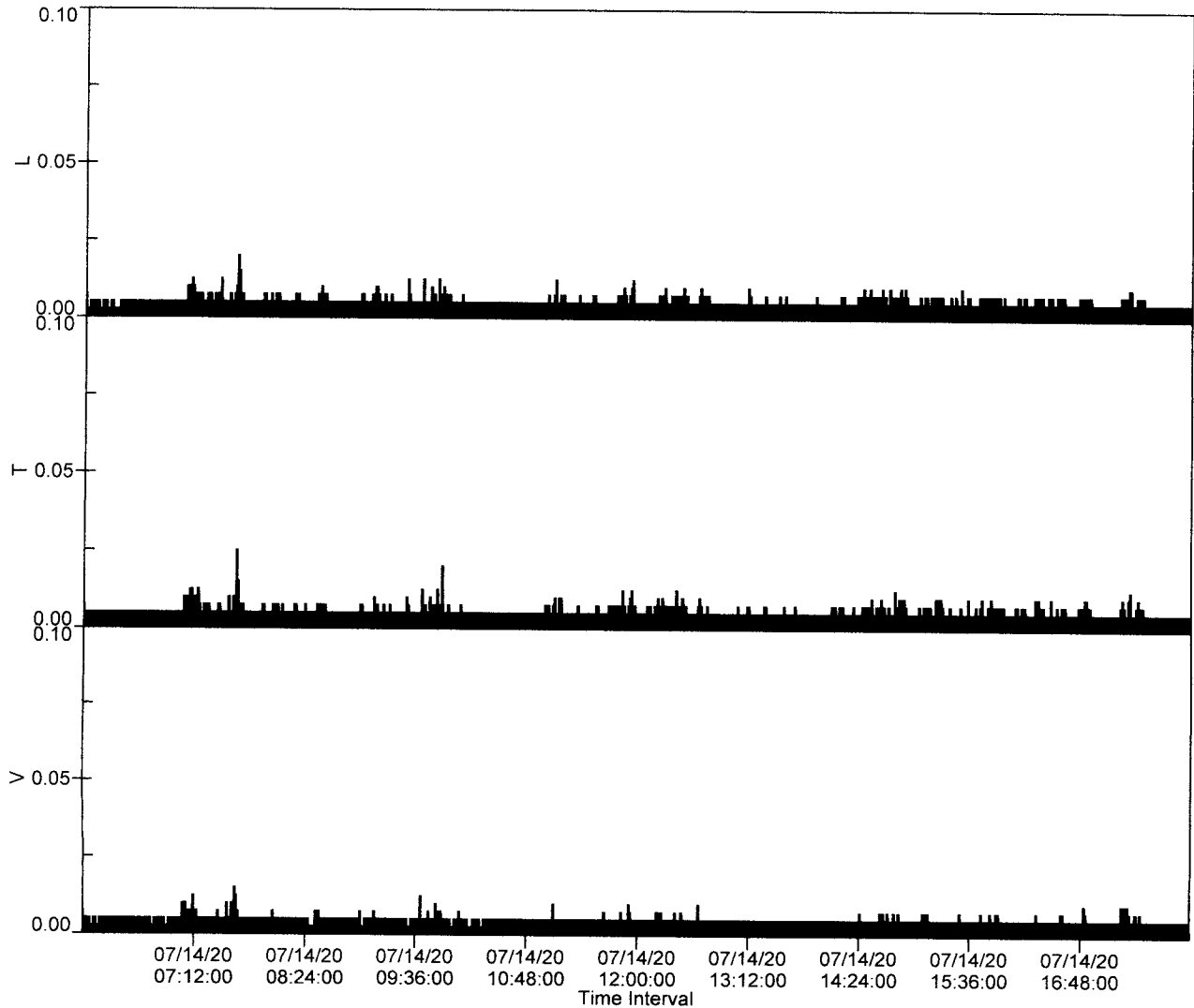
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 04/07/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3802 Event: 9

Record Max PPV: 0.025 in/s Record Max DB: 78 db



**SN:** 3802 v3.22  
**Date:** 07/15/2020 **Time:** 06:01:00  
**Event:** 10  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #5 WSNP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** SE CORNER UNIT

**Continuous Monitor Recording  
Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.205	0.113	0.140
<b>FREQ (Hz)</b>	21.7	25.0	23.8
<b>Peak Air Pressure:</b>	78 db		

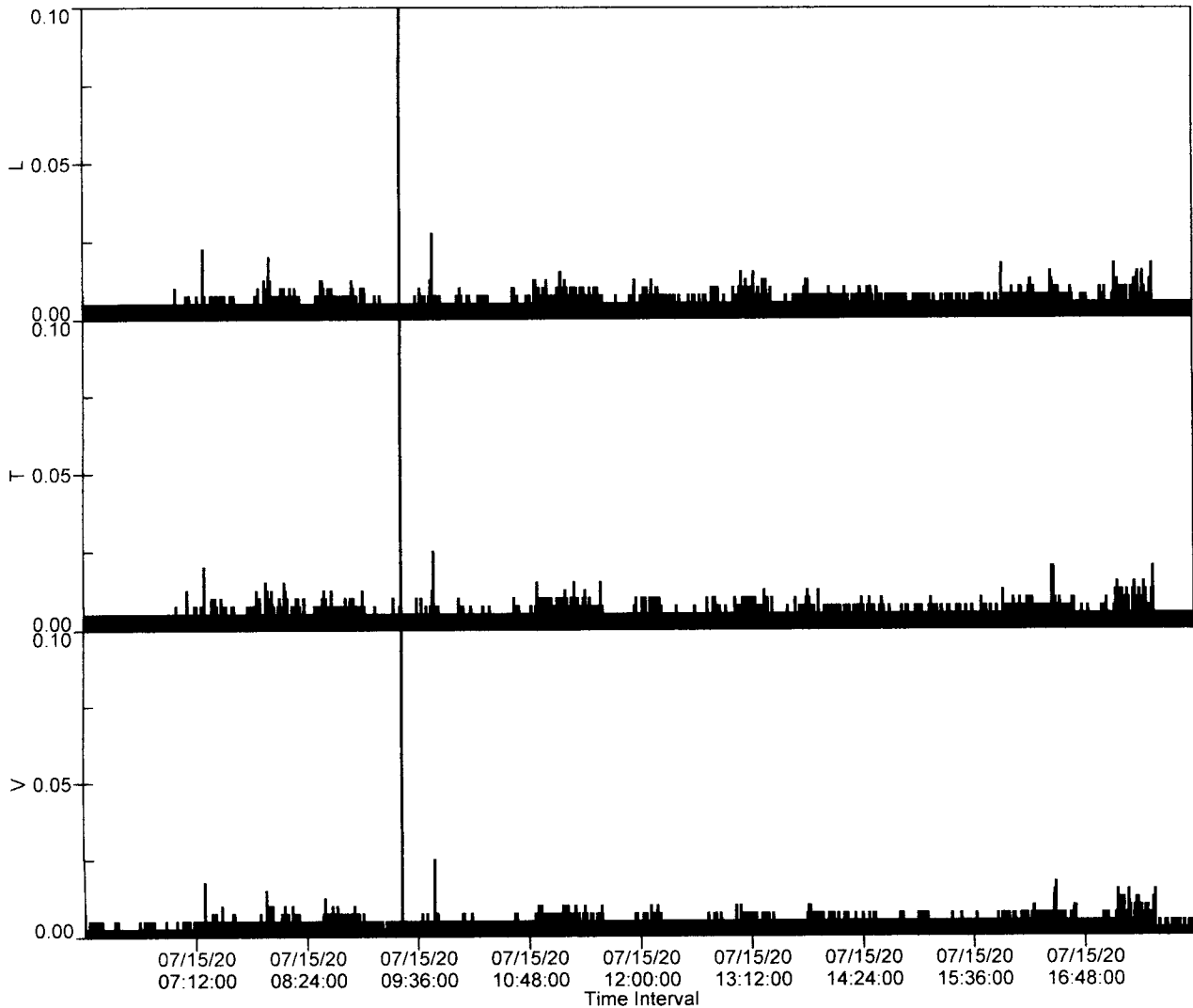
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 04/07/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3802 Event: 10

Record Max PPV: 0.205 in/s Record Max DB: 78 db



**SN:** 3802 v3.22  
**Date:** 07/16/2020 **Time:** 06:01:00  
**Event:** 11  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #5 WSNP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** SE CORNER UNIT

**Continuous Monitor Recording  
Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.040	0.050	0.035
<b>FREQ (Hz)</b>	29.4	20.0	21.7
<b>Peak Air Pressure:</b>	78 db		

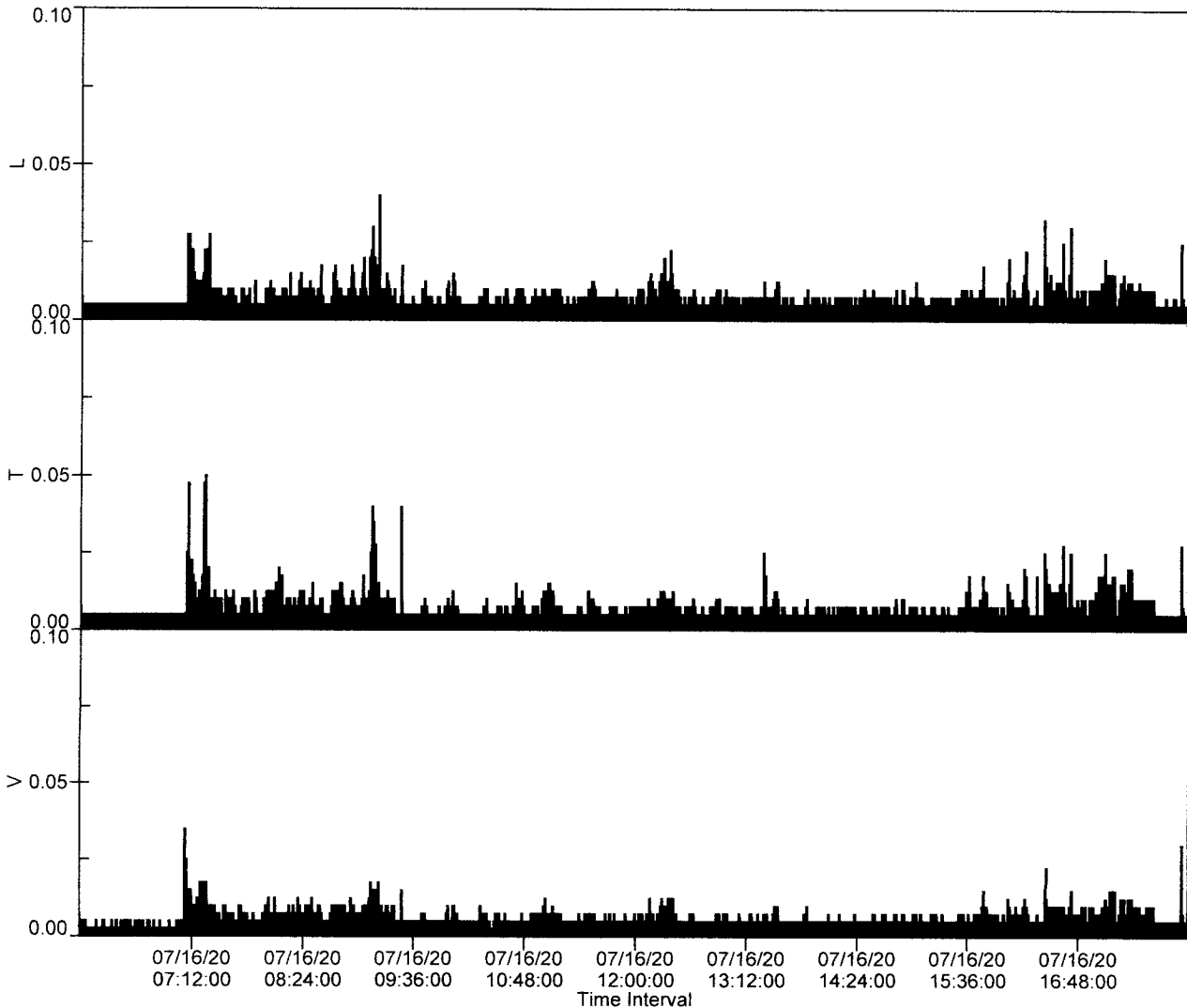
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 04/07/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3802 Event: 11

Record Max PPV: 0.050 in/s Record Max DB: 78 db



**SN:** 3802 v3.22  
**Date:** 07/17/2020 **Time:** 06:01:00  
**Event:** 12  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #5 WSNP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** SE CORNER UNIT

**Continuous Monitor Recording  
Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.040	0.028	0.023
<b>FREQ (Hz)</b>	20.8	15.2	15.6
<b>Peak Air Pressure:</b>	78 db		

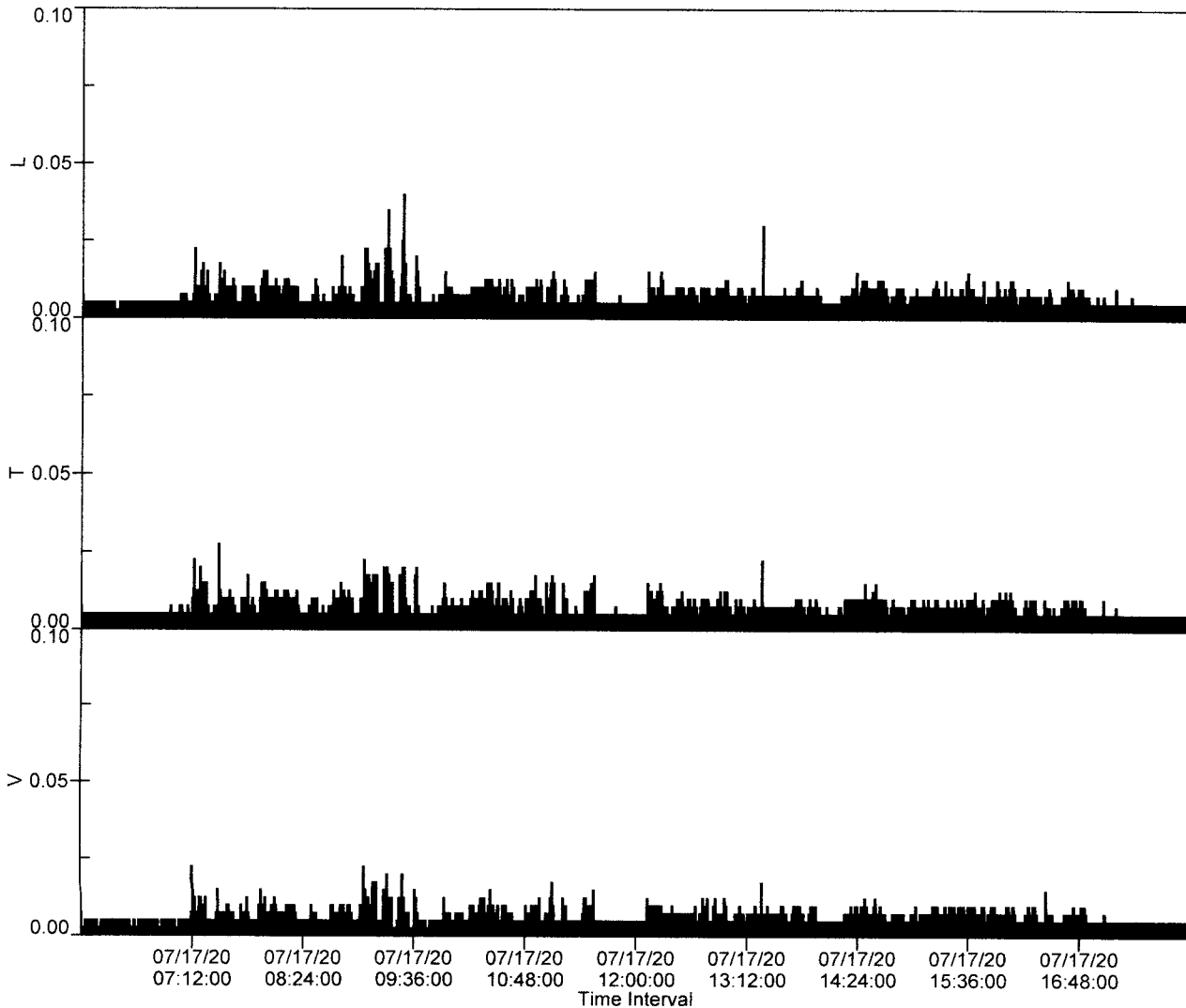
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 04/07/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3802 Event: 12

Record Max PPV: 0.040 in/s Record Max DB: 78 db



**SN:** 3802 v3.22  
**Date:** 07/18/2020 **Time:** 06:01:00  
**Event:** 13  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #5 WSNP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** SE CORNER UNIT

**Continuous Monitor Recording  
Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.028	0.030	0.030
<b>FREQ (Hz)</b>	13.2	11.4	11.6
<b>Peak Air Pressure:</b>	78 db		

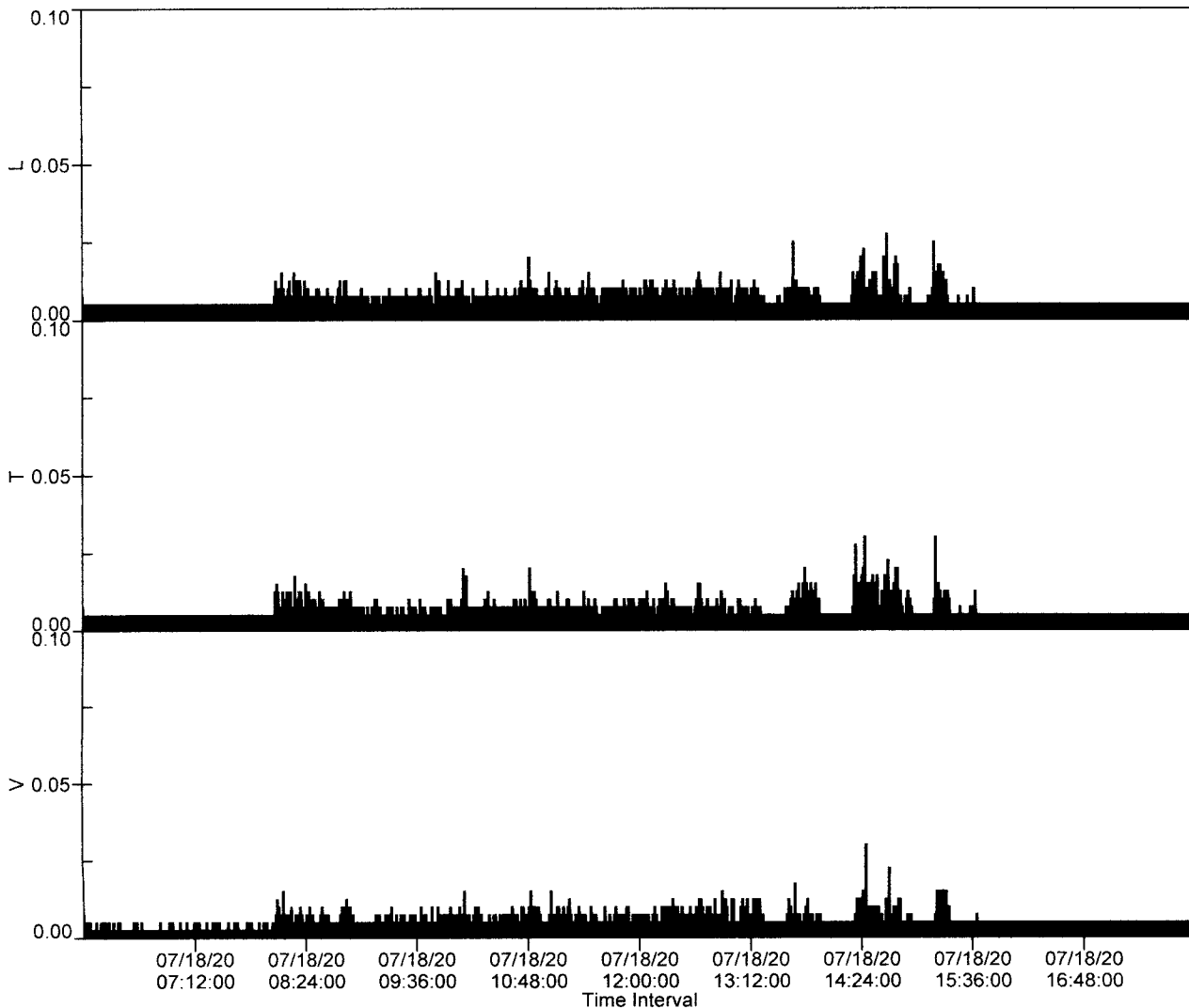
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 04/07/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3802 Event: 13

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



**SN:** 3802 v3.22  
**Date:** 07/19/2020 **Time:** 06:01:00  
**Event:** 14  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #5 WSNP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** SE CORNER UNIT

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.005	0.008	0.008
<b>FREQ (Hz)</b>	125.0	2.3	.4
<b>Peak Air Pressure:</b>	78 db		

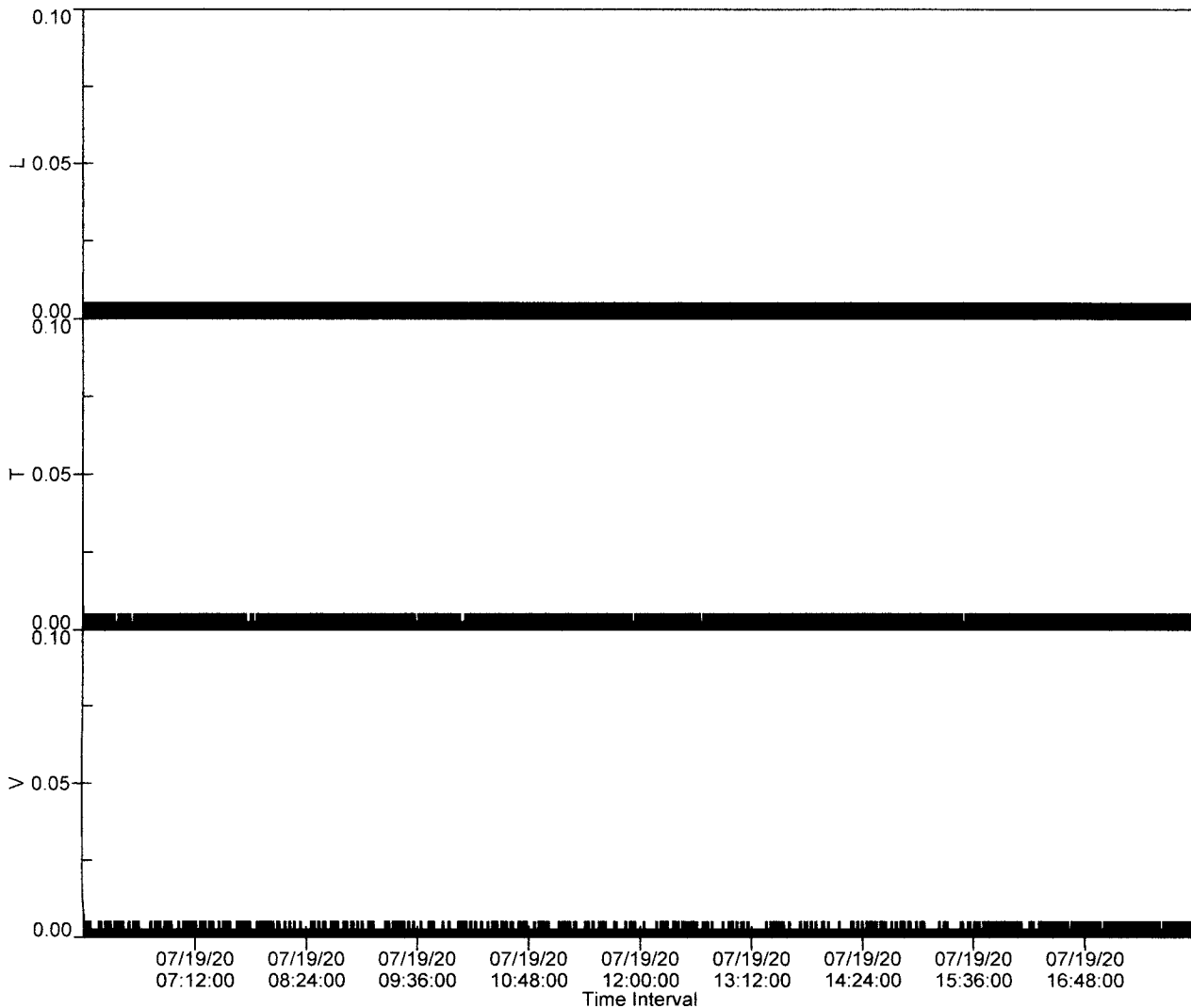
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 04/07/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3802 Event: 14

Record Max PPV: 0.008 in/s Record Max DB: 78 db





**SN:** 3775 v3.22  
**Date:** 07/06/2020 **Time:** 07:13:00  
**Event:** 65  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #6 WSNSP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** 2412 MEADOW DRIVE

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.015	0.013	0.013
<b>FREQ (Hz)</b>	500.0	16.1	11.6
<b>Peak Air Pressure:</b>	79 db		

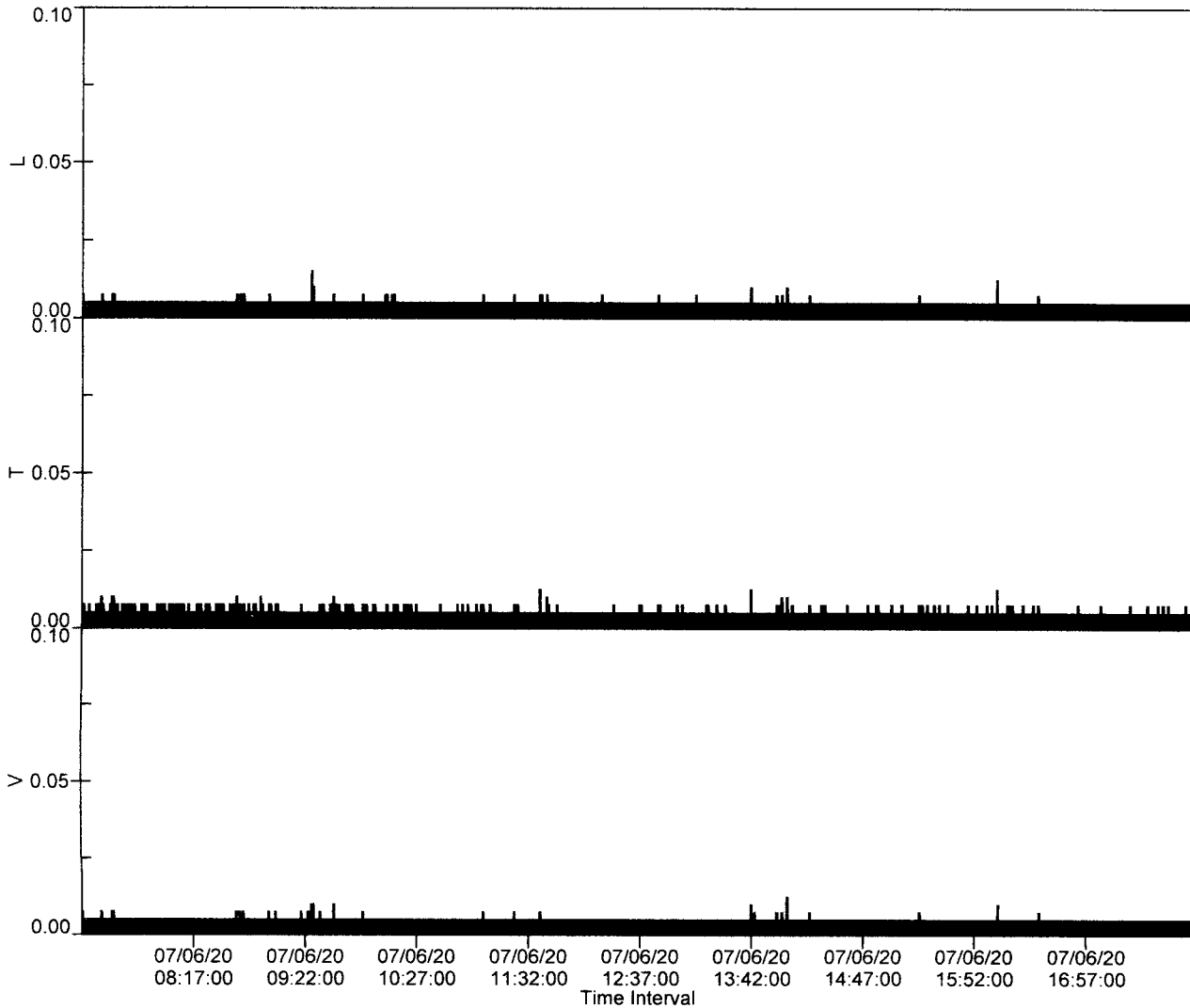
**Recording Time:** 646 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 04/07/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3775 Event: 65

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





**SN:** 3775 v3.22  
**Date:** 07/07/2020 **Time:** 06:01:00  
**Event:** 66  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #6 WSNSP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** 2412 MEADOW DRIVE

**Continuous Monitor Recording  
Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.028	0.030	0.030
<b>FREQ (Hz)</b>	18.5	19.2	20.8
<b>Peak Air Pressure:</b>	84 db		

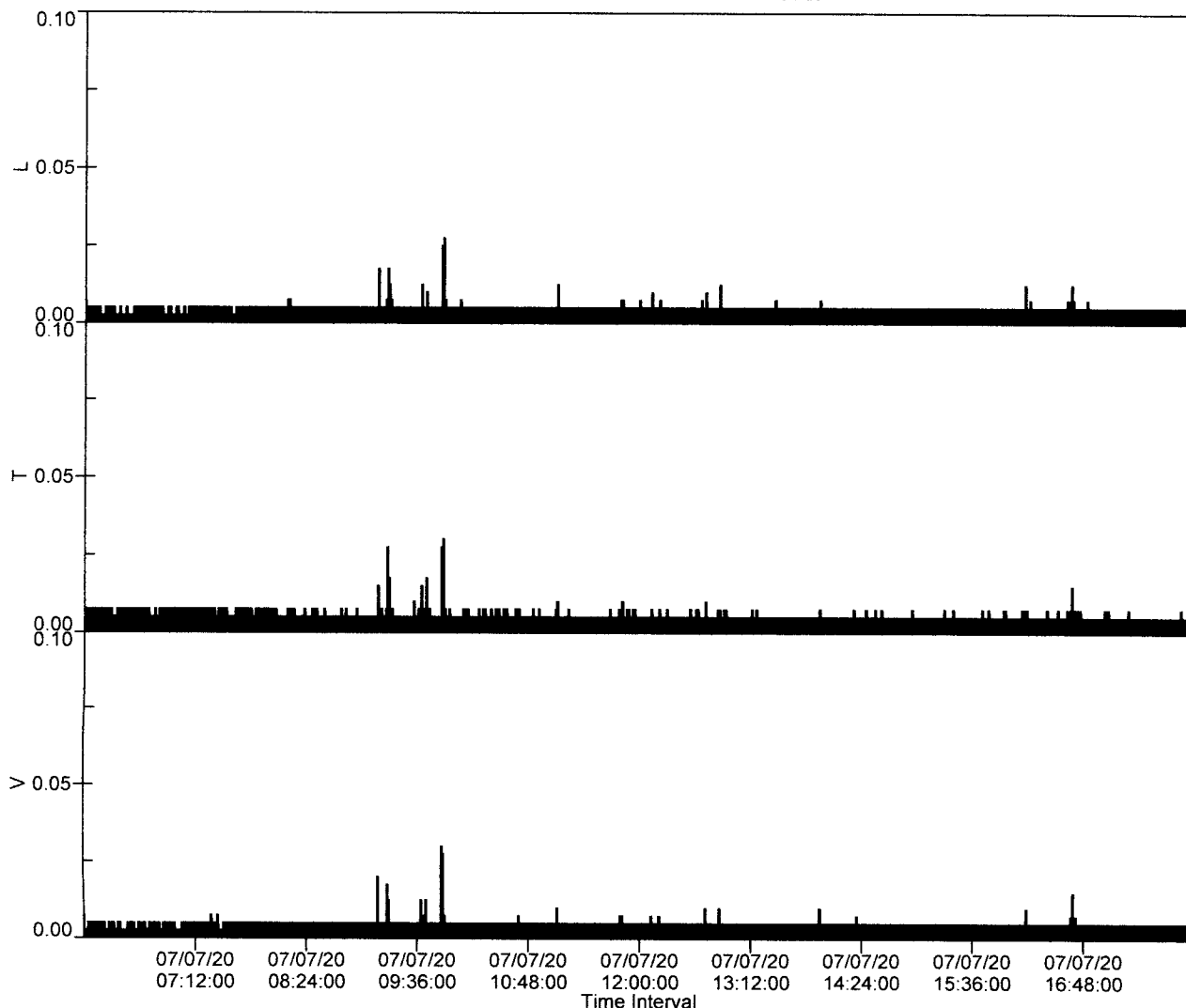
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 04/07/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3775 Event: 66

Record Max PPV: 0.030 in/s Record Max DB: 84 db



**SN:** 3775 v3.22  
**Date:** 07/08/2020 **Time:** 06:01:00  
**Event:** 67  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #6 WSNRP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** 2412 MEADOW DRIVE

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.040	0.050	0.038
<b>FREQ (Hz)</b>	15.2	26.3	22.7
<b>Peak Air Pressure:</b>	78 db		

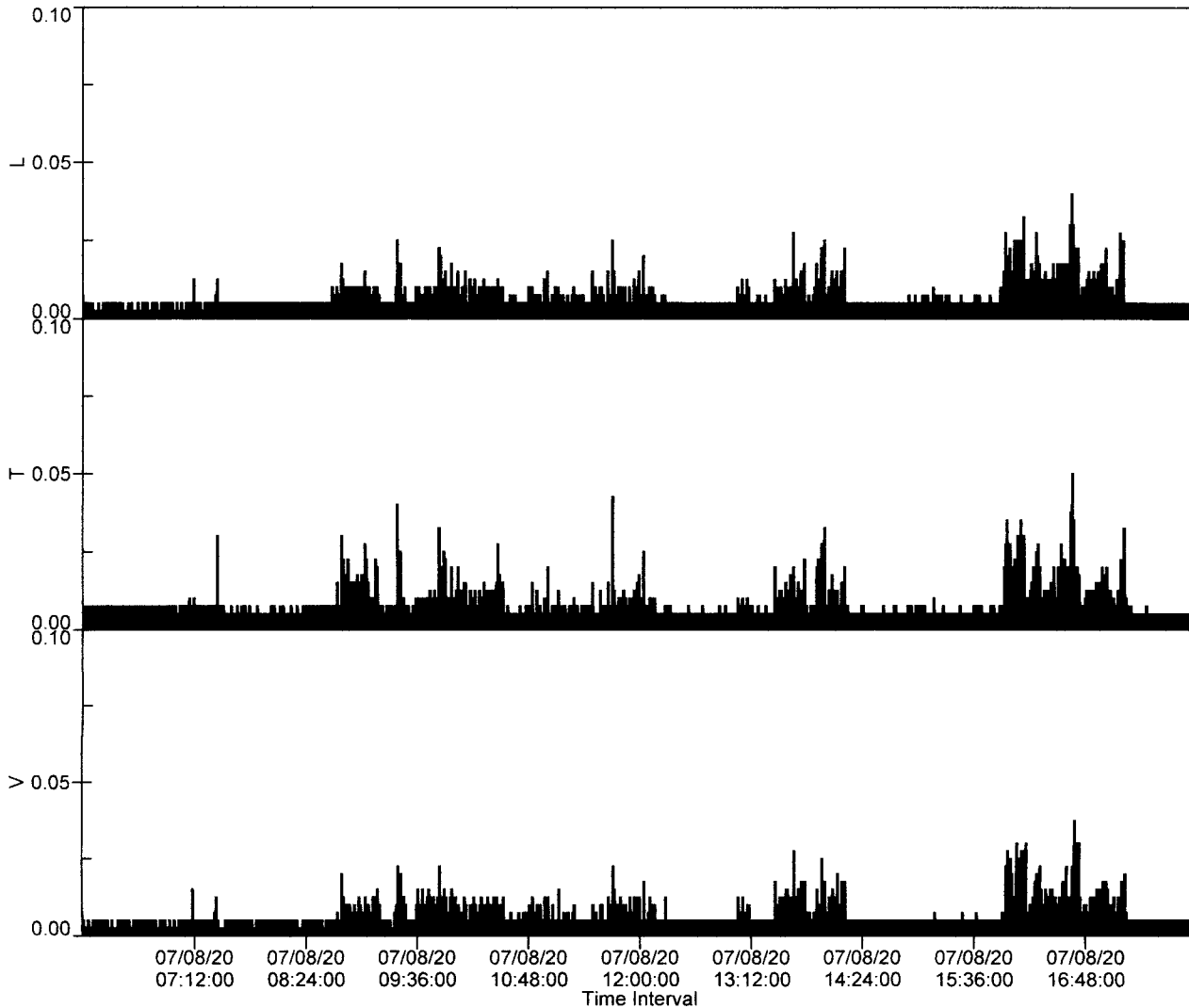
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 04/07/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3775 Event: 67

Record Max PPV: 0.050 in/s Record Max DB: 78 db



**SN:** 3775 v3.22  
**Date:** 07/09/2020 **Time:** 06:01:00  
**Event:** 68  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #6 WSNP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** 2412 MEADOW DRIVE

**Continuous Monitor Recording  
Summary Data**

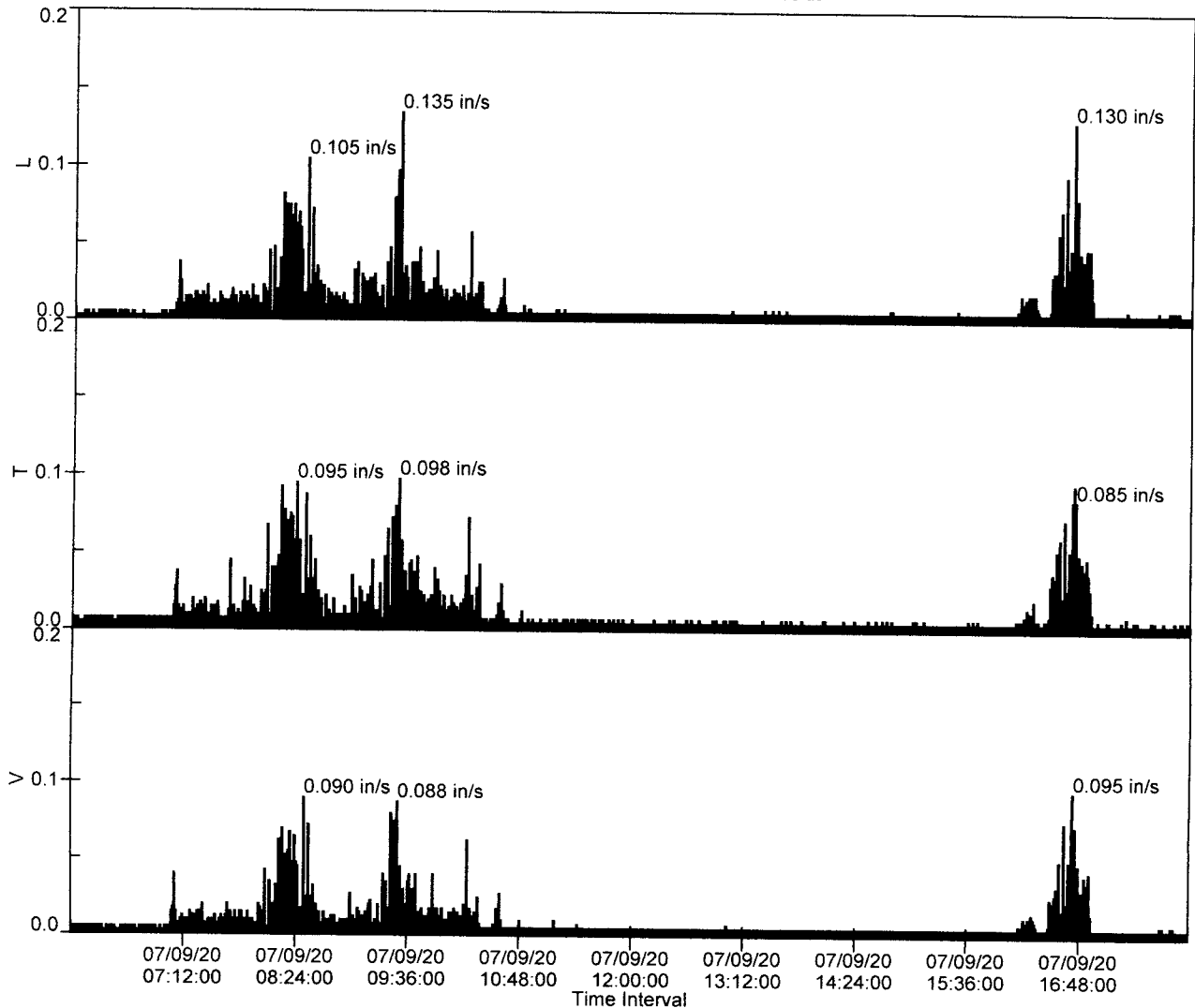
	L	T	V
<b>PPV (in/s)</b>	0.135	0.098	0.095
<b>FREQ (Hz)</b>	29.4	35.7	29.4
<b>Peak Air Pressure:</b>	78 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**Additional Info:**

**Shaketable Calibrated:** 04/07/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3775 Event: 68

Record Max PPV: 0.135 in/s Record Max DB: 78 db



**SN:** 3775 v3.22  
**Date:** 07/10/2020 **Time:** 06:01:00  
**Event:** 69  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #6 WSNSP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** 2412 MEADOW DRIVE

**Continuous Monitor Recording  
Summary Data**

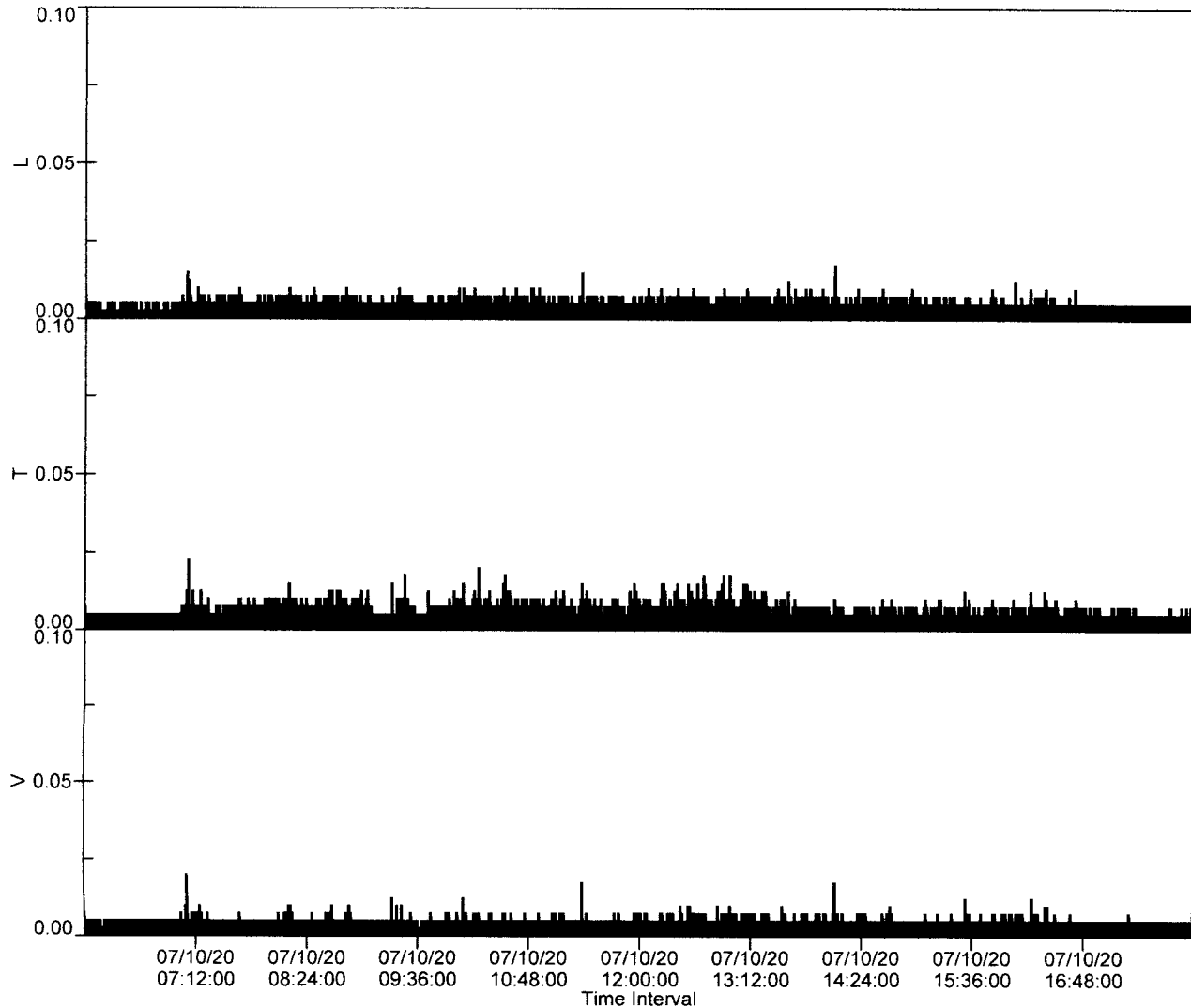
	L	T	V
<b>PPV (in/s)</b>	0.018	0.023	0.020
<b>FREQ (Hz)</b>	50.0	15.2	27.8
<b>Peak Air Pressure:</b>	78 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**Additional Info:**

**Shaketable Calibrated:** 04/07/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3775 Event: 69

Record Max PPV: 0.023 in/s Record Max DB: 78 db



**SN:** 3775 v3.22  
**Date:** 07/11/2020 **Time:** 06:01:00  
**Event:** 70  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #6 WSNP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** 2412 MEADOW DRIVE

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.023	0.033	0.025
<b>FREQ (Hz)</b>	25.0	20.8	19.2
<b>Peak Air Pressure:</b>	78 db		

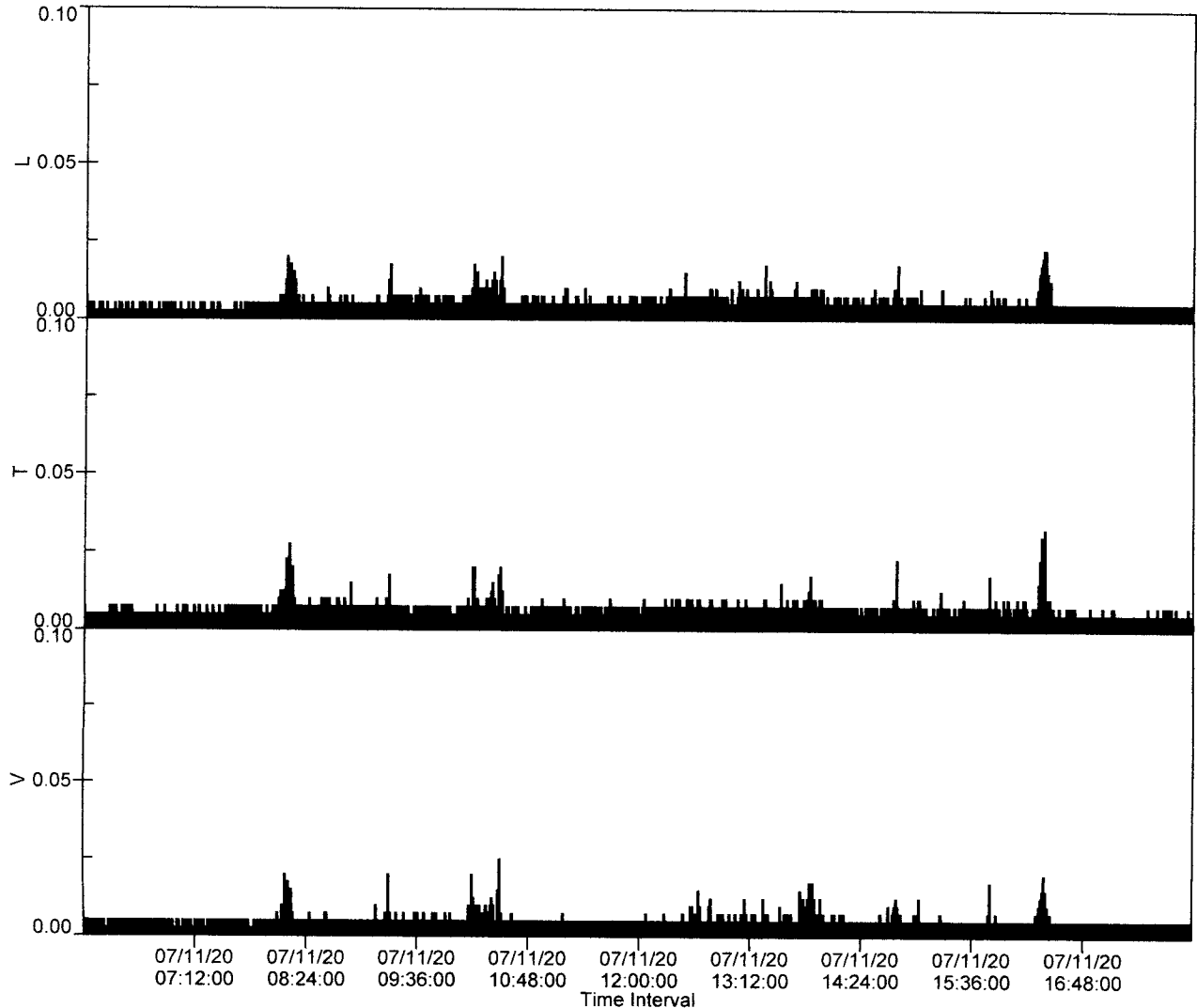
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 04/07/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3775 Event: 70

Record Max PPV: 0.033 in/s Record Max DB: 78 db



**SN:** 3775 v3.22  
**Date:** 07/12/2020 **Time:** 06:01:00  
**Event:** 71  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #6 WSNP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** 2412 MEADOW DRIVE

**Continuous Monitor Recording  
Summary Data**

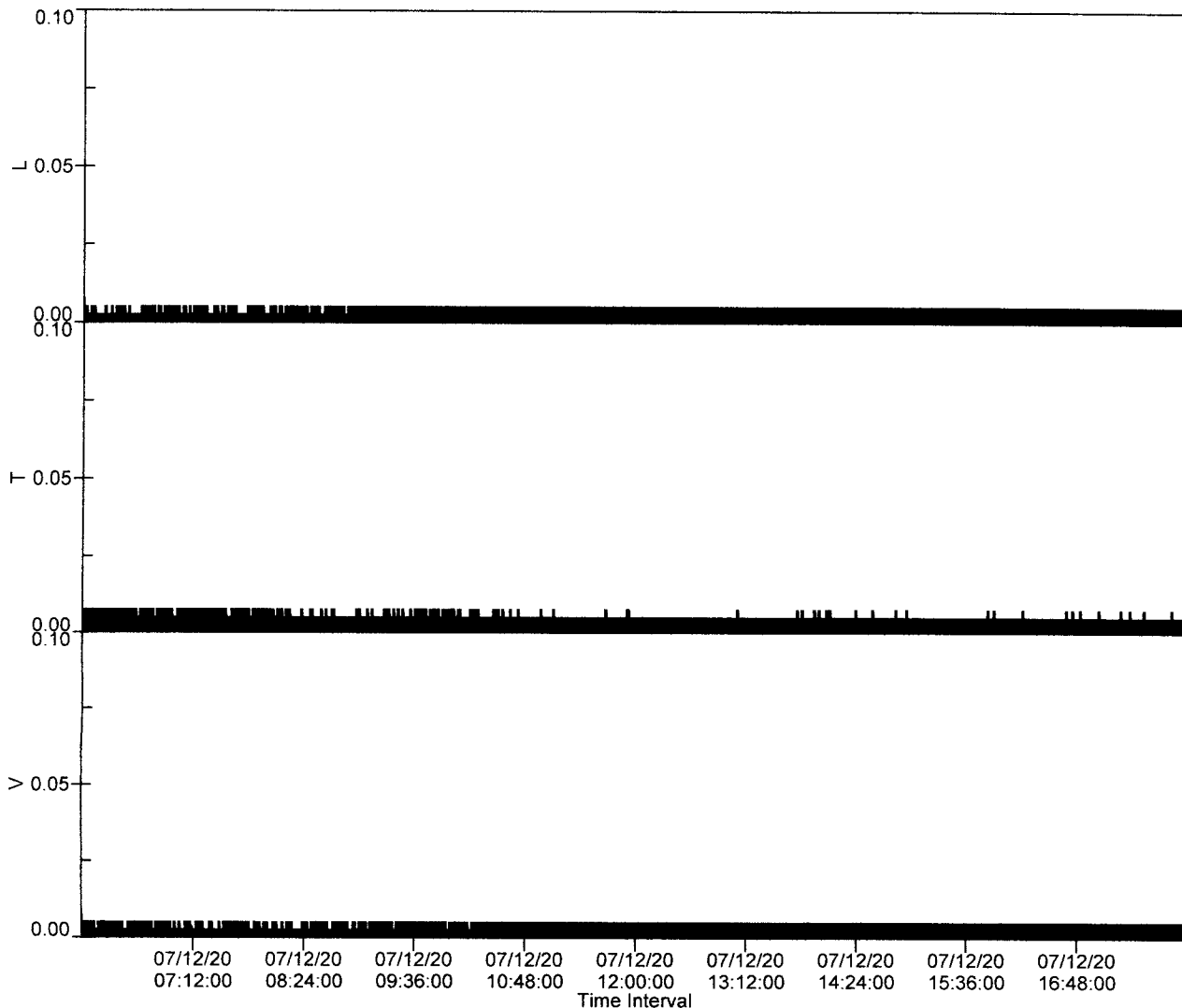
	L	T	V
<b>PPV (in/s)</b>	0.008	0.008	0.008
<b>FREQ (Hz)</b>	.4	41.7	.4
<b>Peak Air Pressure:</b>	78 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**Additional Info:**

**Shaketable Calibrated:** 04/07/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3775 Event: 71

Record Max PPV: 0.008 in/s Record Max DB: 78 db



**SN:** 3775 v3.22  
**Date:** 07/13/2020 **Time:** 06:01:00  
**Event:** 72  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #6 WSNP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** 2412 MEADOW DRIVE

**Continuous Monitor Recording  
Summary Data**

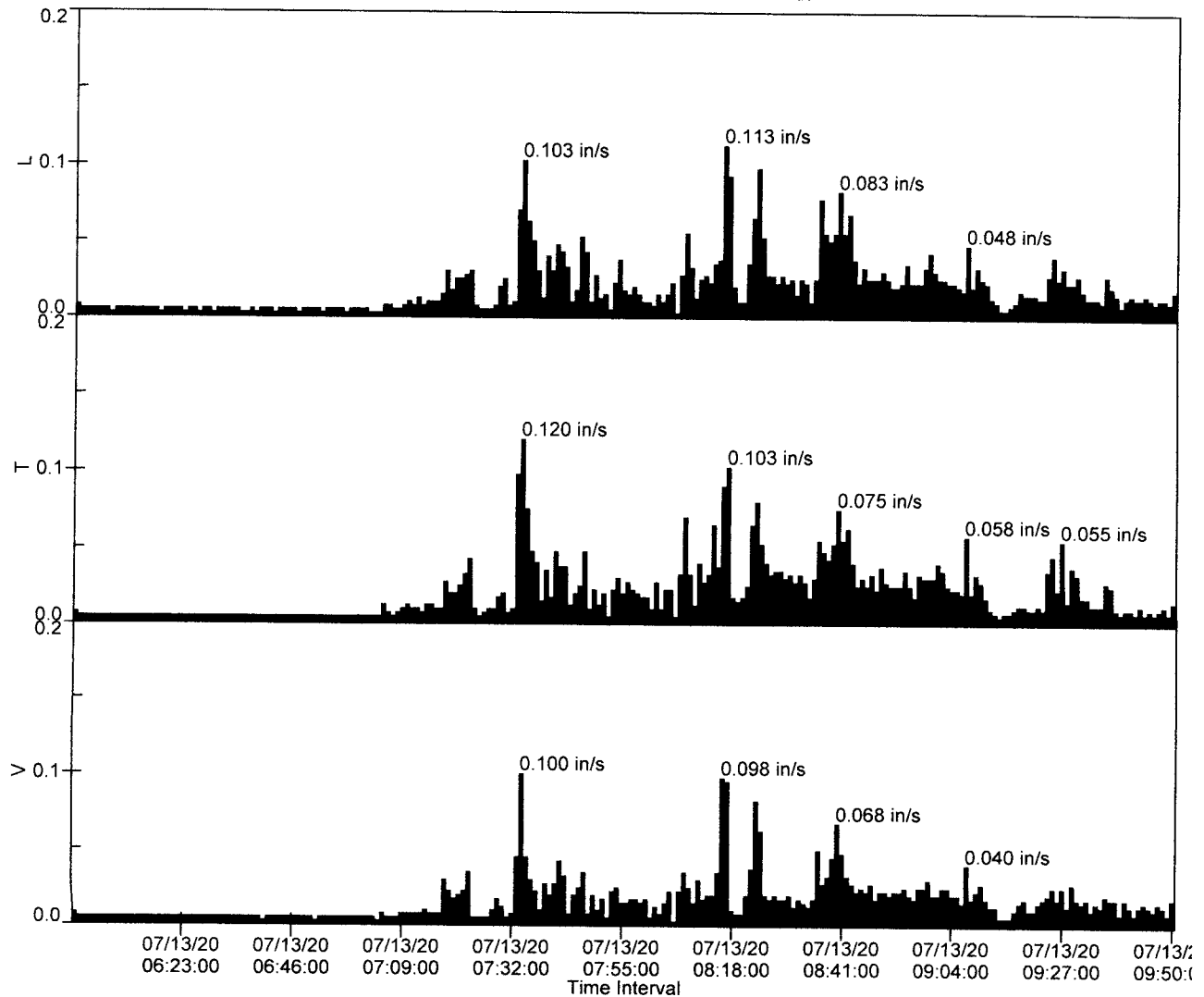
	L	T	V
PPV (in/s)	0.113	0.120	0.100
FREQ (Hz)	27.8	26.3	17.2
Peak Air Pressure:	82 db		
Recording Time:	230 minutes		
Sample Size:	1440		
Interval Size:	60 seconds		

**Additional Info:**

**Shaketable Calibrated:** 04/07/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3775 Event: 72

Record Max PPV: 0.120 in/s Record Max DB: 82 db



**SN:** 3775 v3.22  
**Date:** 07/13/2020 **Time:** 09:56:00  
**Event:** 73  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #6 WSNRP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** 2412 MEADOW DRIVE

**Continuous Monitor Recording  
Summary Data**

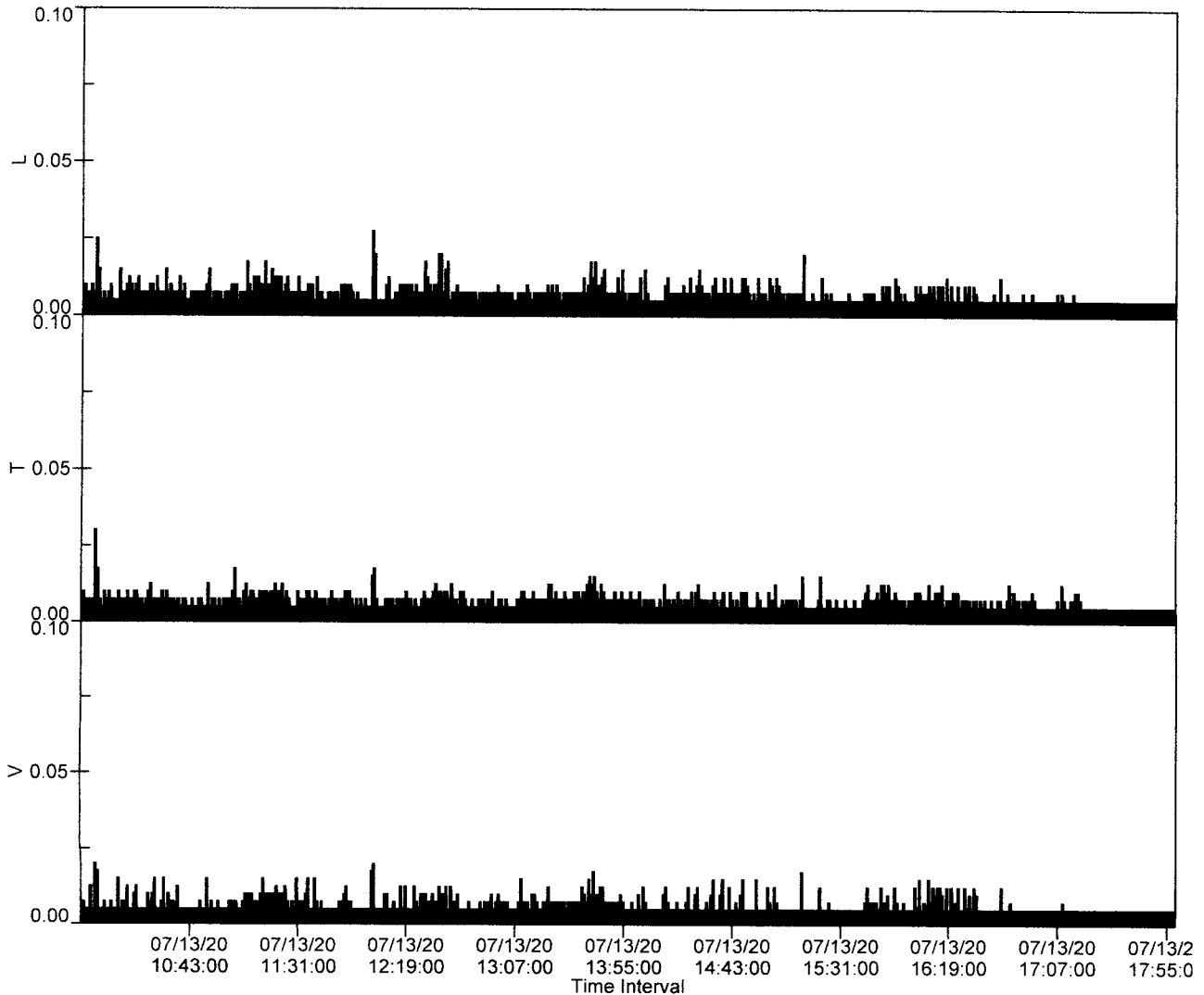
	L	T	V
<b>PPV (in/s)</b>	0.028	0.030	0.020
<b>FREQ (Hz)</b>	12.8	22.7	31.3
<b>Peak Air Pressure:</b>	78 db		
<b>Recording Time:</b>	483 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**Additional Info:**

**Shaketable Calibrated:** 04/07/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3775 Event: 73

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





**SN:** 3775 v3.22  
**Date:** 07/14/2020 **Time:** 06:01:00  
**Event:** 74  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #6 WSNSP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** 2412 MEADOW DRIVE

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
PPV (in/s)	0.043	0.043	0.028
FREQ (Hz)	20.8	17.2	31.3
Peak Air Pressure:	78 db		

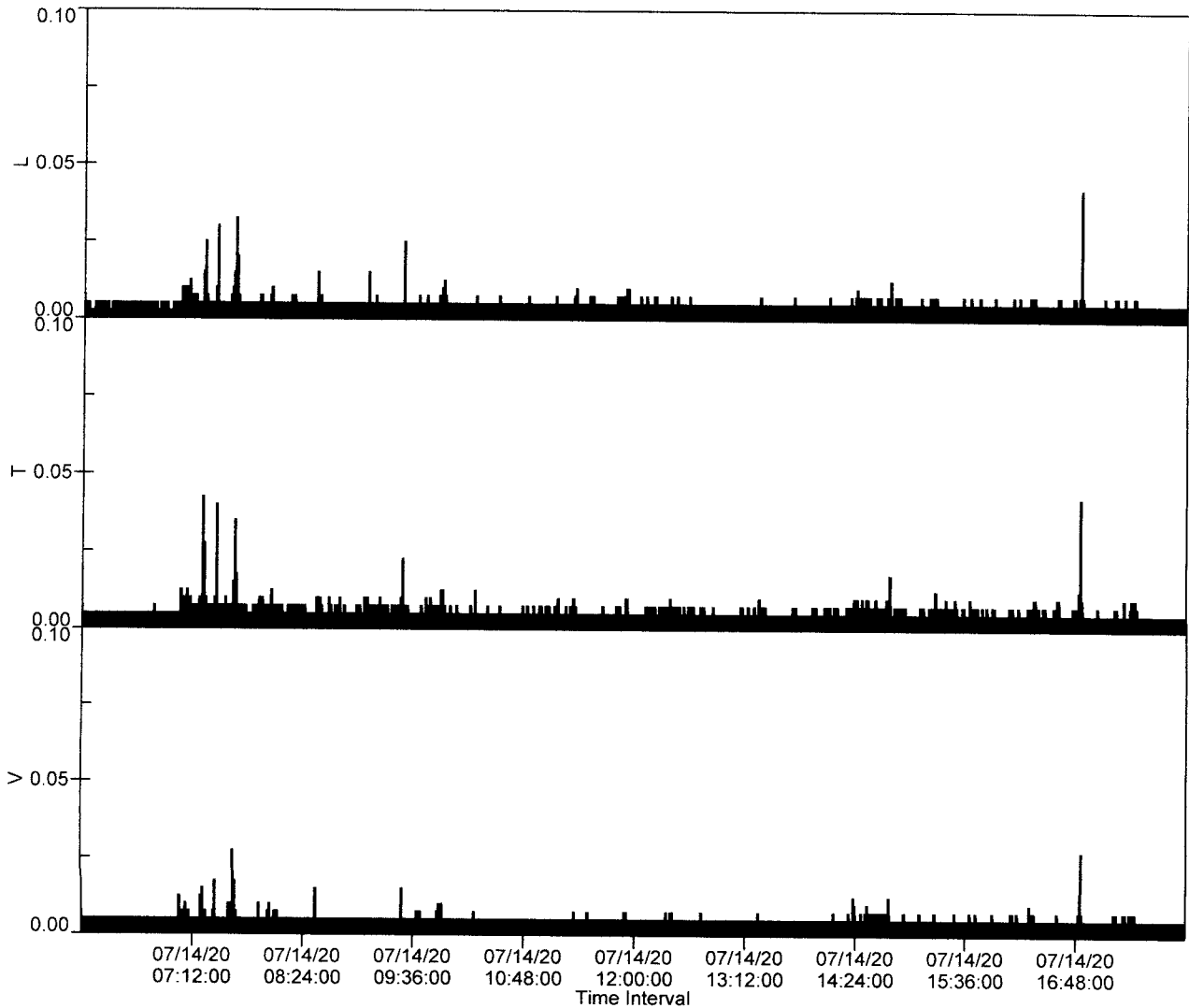
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 04/07/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3775 Event: 74

Record Max PPV: 0.043 in/s Record Max DB: 78 db



**SN:** 3775 v3.22  
**Date:** 07/15/2020 **Time:** 06:01:00  
**Event:** 75  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #6 WSNSP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** 2412 MEADOW DRIVE

**Continuous Monitor Recording  
Summary Data**

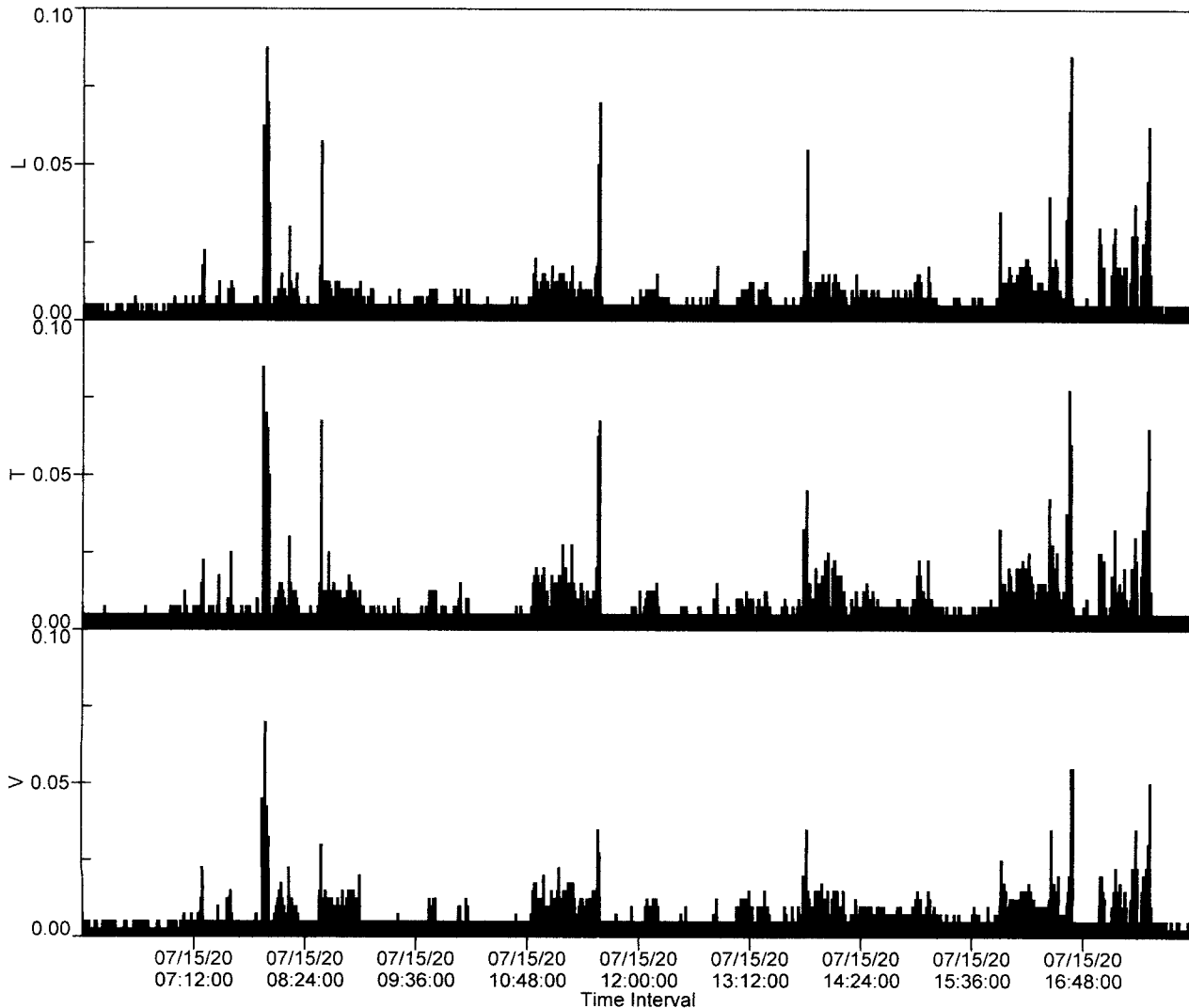
	L	T	V
<b>PPV (in/s)</b>	0.088	0.085	0.070
<b>FREQ (Hz)</b>	23.8	21.7	27.8
<b>Peak Air Pressure:</b>	78 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**Additional Info:**

**Shaketable Calibrated:** 04/07/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3775 Event: 75

Record Max PPV: 0.088 in/s Record Max DB: 78 db



**SN:** 3775 v3.22  
**Date:** 07/16/2020 **Time:** 06:01:00  
**Event:** 76  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #6 WSNSP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** 2412 MEADOW DRIVE

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.080	0.070	0.083
<b>FREQ (Hz)</b>	41.7	33.3	13.9
<b>Peak Air Pressure: 81 db</b>			

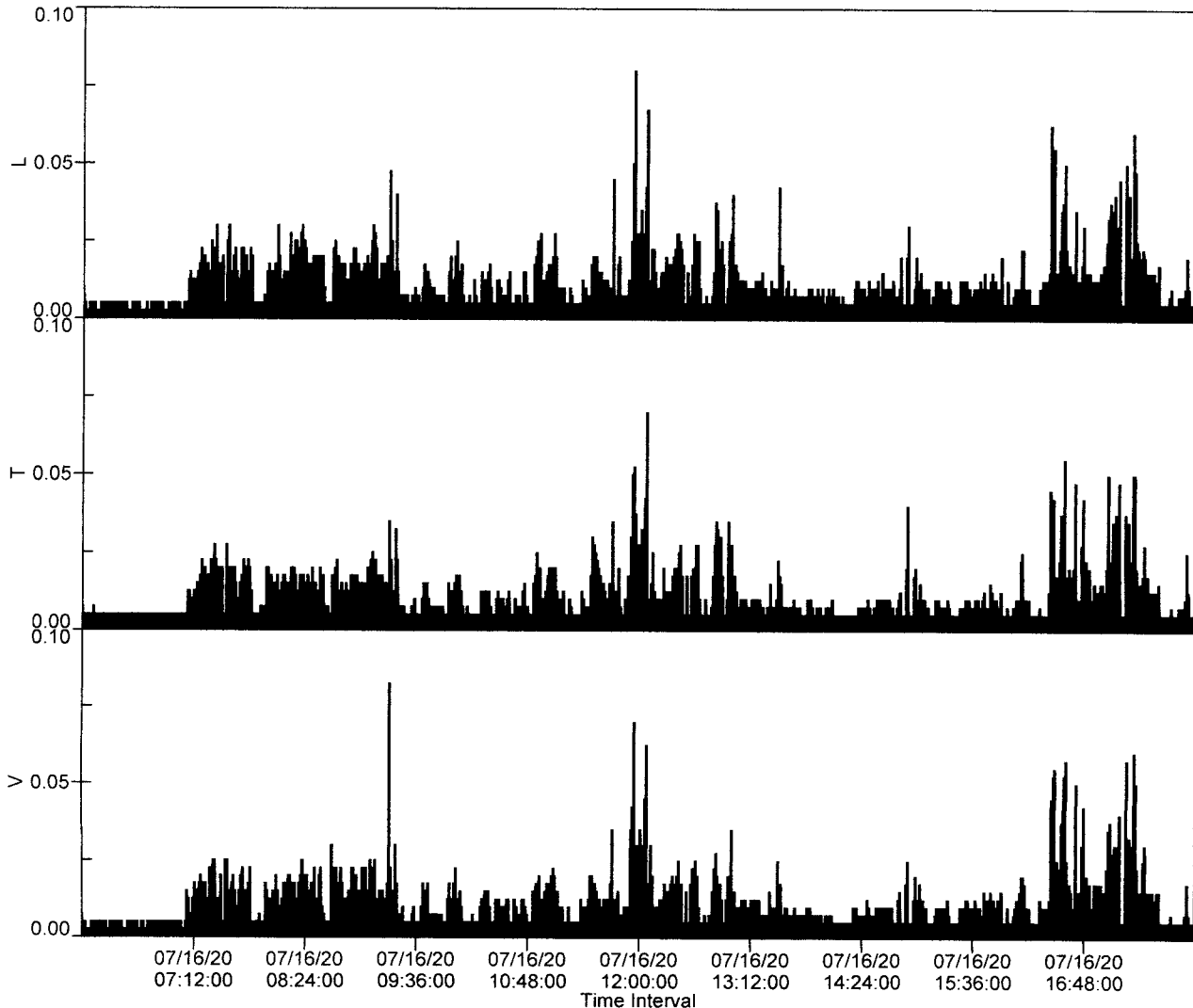
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 04/07/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3775 Event: 76

Record Max PPV: 0.083 in/s Record Max DB: 81 db



**SN:** 3775 v3.22  
**Date:** 07/17/2020 **Time:** 06:01:00  
**Event:** 77  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #6 WSNSP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** 2412 MEADOW DRIVE

**Continuous Monitor Recording**

**Summary Data**

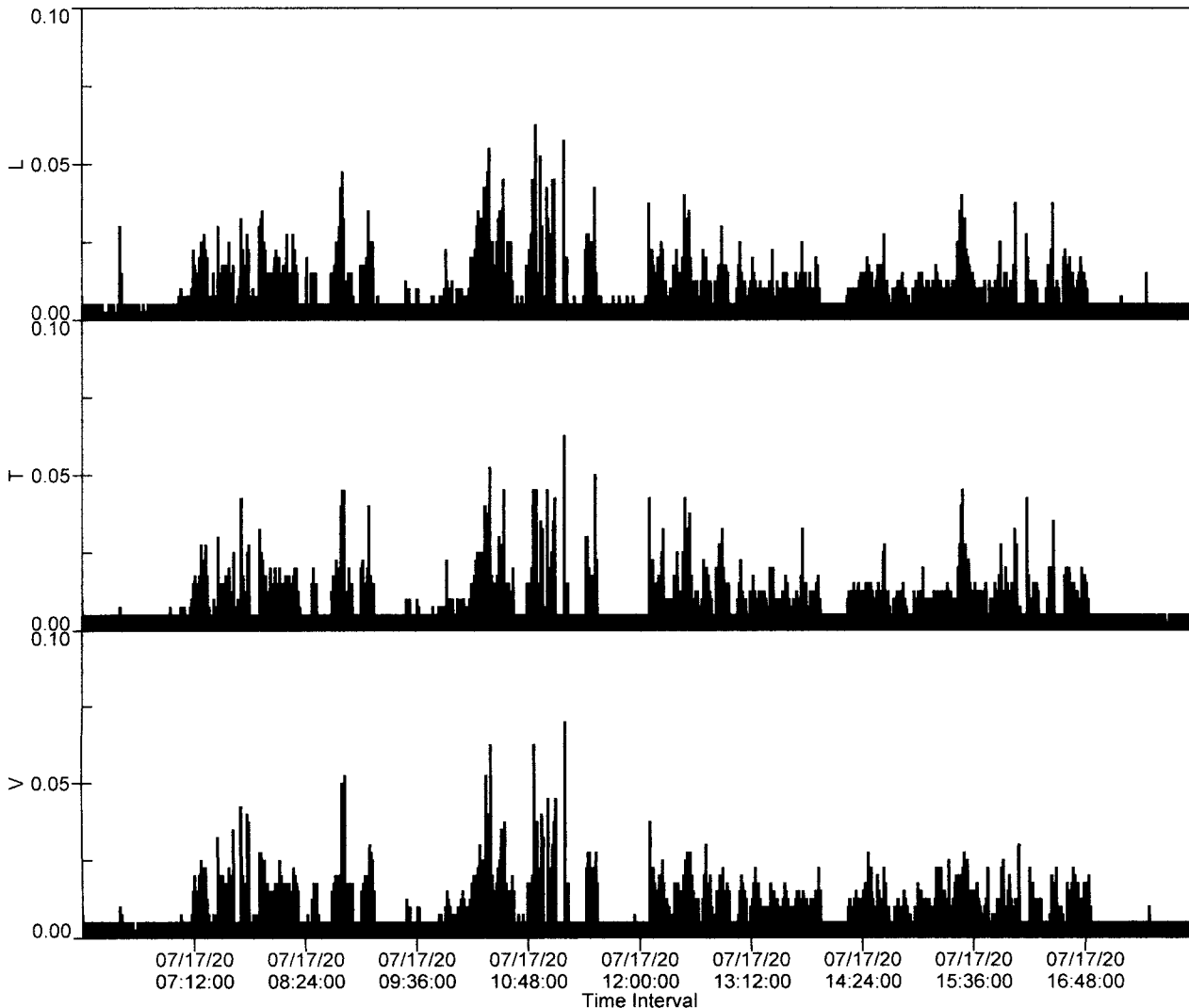
	L	T	V
<b>PPV (in/s)</b>	0.063	0.063	0.070
<b>FREQ (Hz)</b>	18.5	13.5	20.0
<b>Peak Air Pressure:</b>	81 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**Additional Info:**

**Shaketable Calibrated:** 04/07/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3775 Event: 77

Record Max PPV: 0.070 in/s Record Max DB: 81 db



**SN:** 3775 v3.22  
**Date:** 07/18/2020 **Time:** 06:01:00  
**Event:** 78  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #6 WSNP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** 2412 MEADOW DRIVE

**Continuous Monitor Recording  
Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.050	0.048	0.035
<b>FREQ (Hz)</b>	22.7	20.0	14.3
<b>Peak Air Pressure:</b>	82 db		

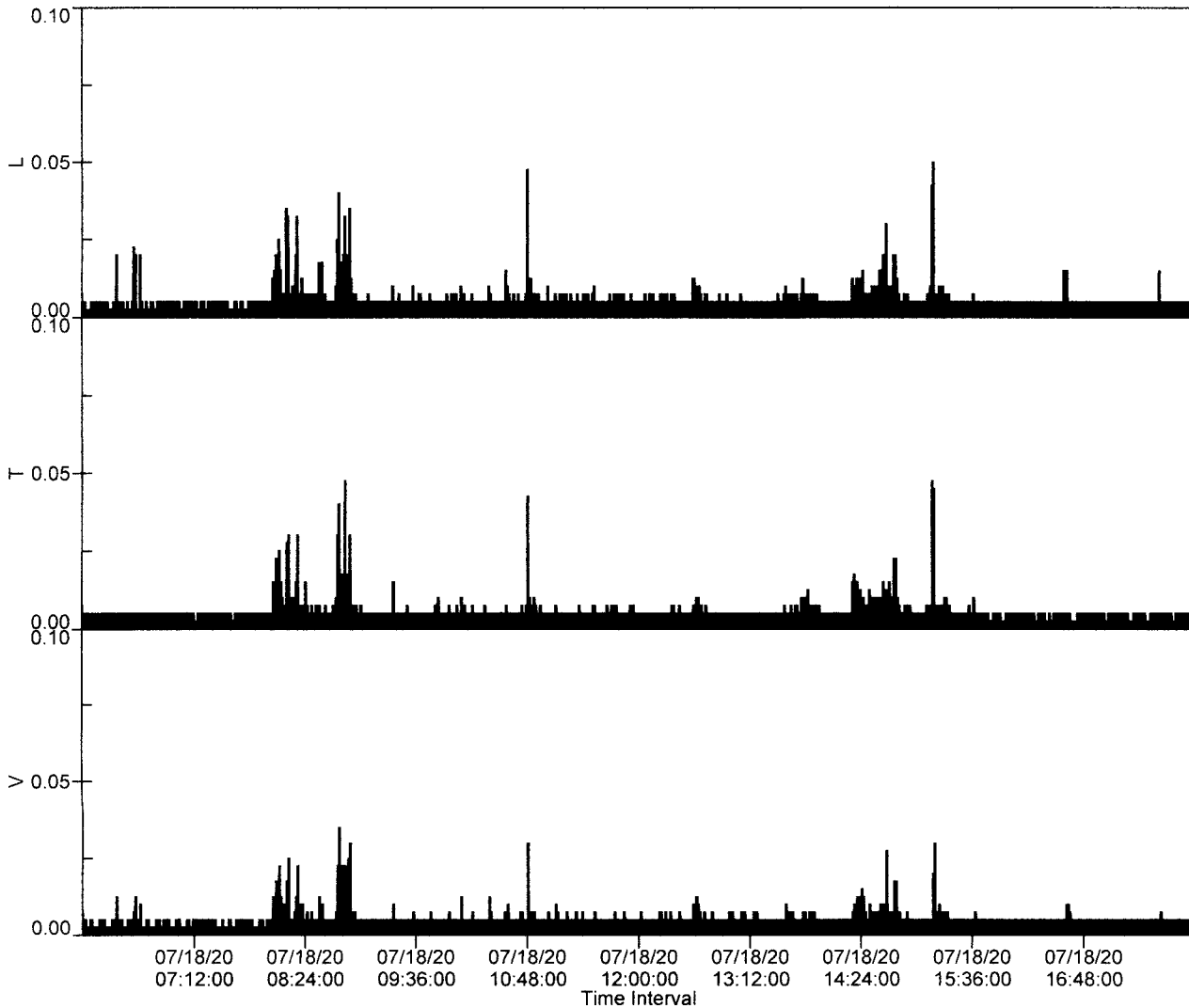
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 04/07/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3775 Event: 78

Record Max PPV: 0.050 in/s Record Max DB: 82 db



**SN:** 3775 v3.22  
**Date:** 07/19/2020 **Time:** 06:01:00  
**Event:** 79  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #6 WSNP  
**Distance:** 25.  
**Operator:** CTI INC  
**Comment:** 2412 MEADOW DRIVE

**Continuous Monitor Recording  
Summary Data**

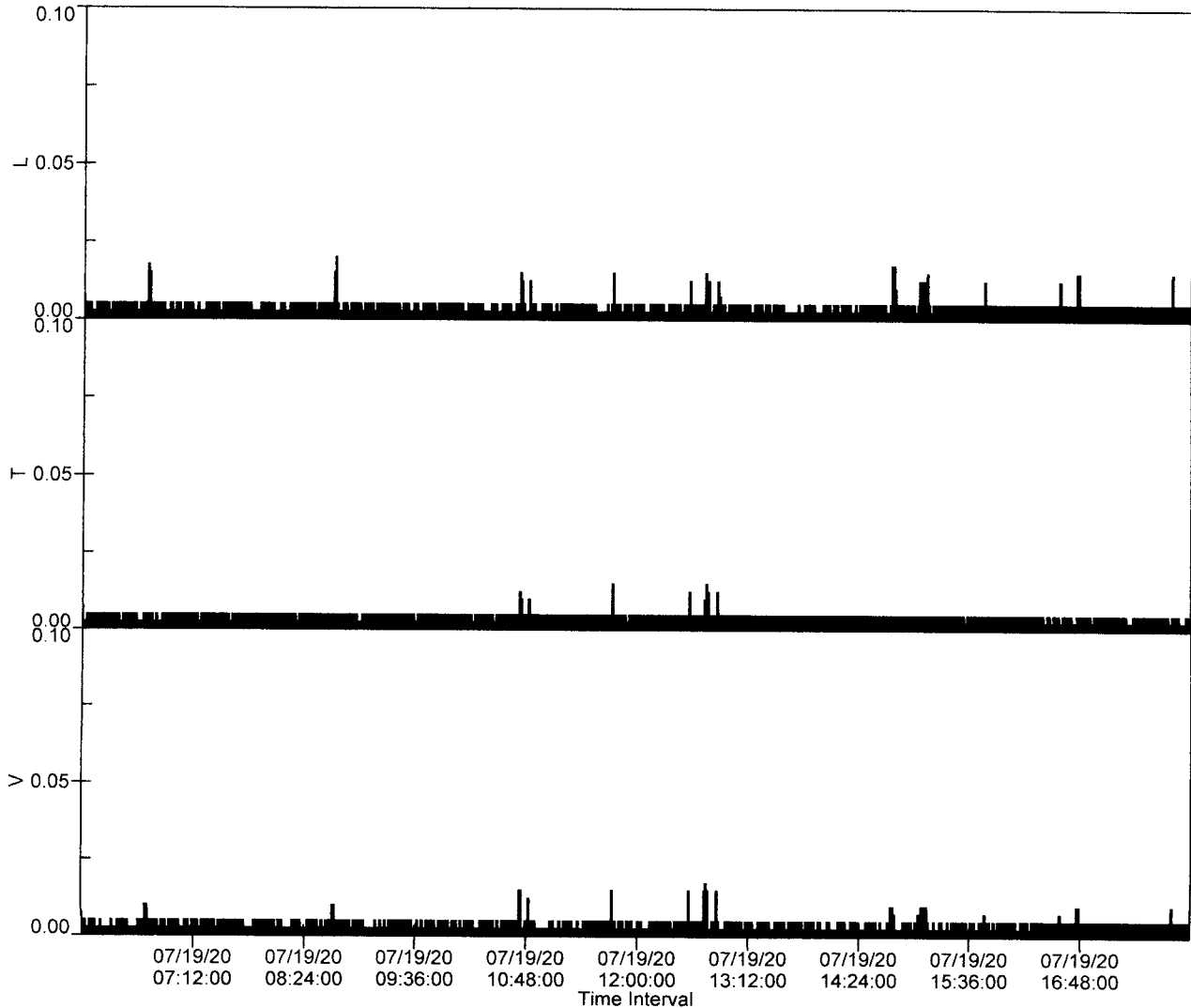
	L	T	V
<b>PPV (in/s)</b>	0.020	0.015	0.018
<b>FREQ (Hz)</b>	500.0	500.0	250.0
<b>Peak Air Pressure:</b>	100 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**Additional Info:**

**Shaketable Calibrated:** 04/07/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 3775 Event: 79

Record Max PPV: 0.020 in/s Record Max DB: 100 db





**SN:** 3733 v3.22  
**Date:** 07/06/2020 **Time:** 07:20:00  
**Event:** 65  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #7 WSNRP  
**Distance:** 10.  
**Operator:** CTI INC  
**Comment:** SW CORNER BEND

**Continuous Monitor Recording  
Summary Data**

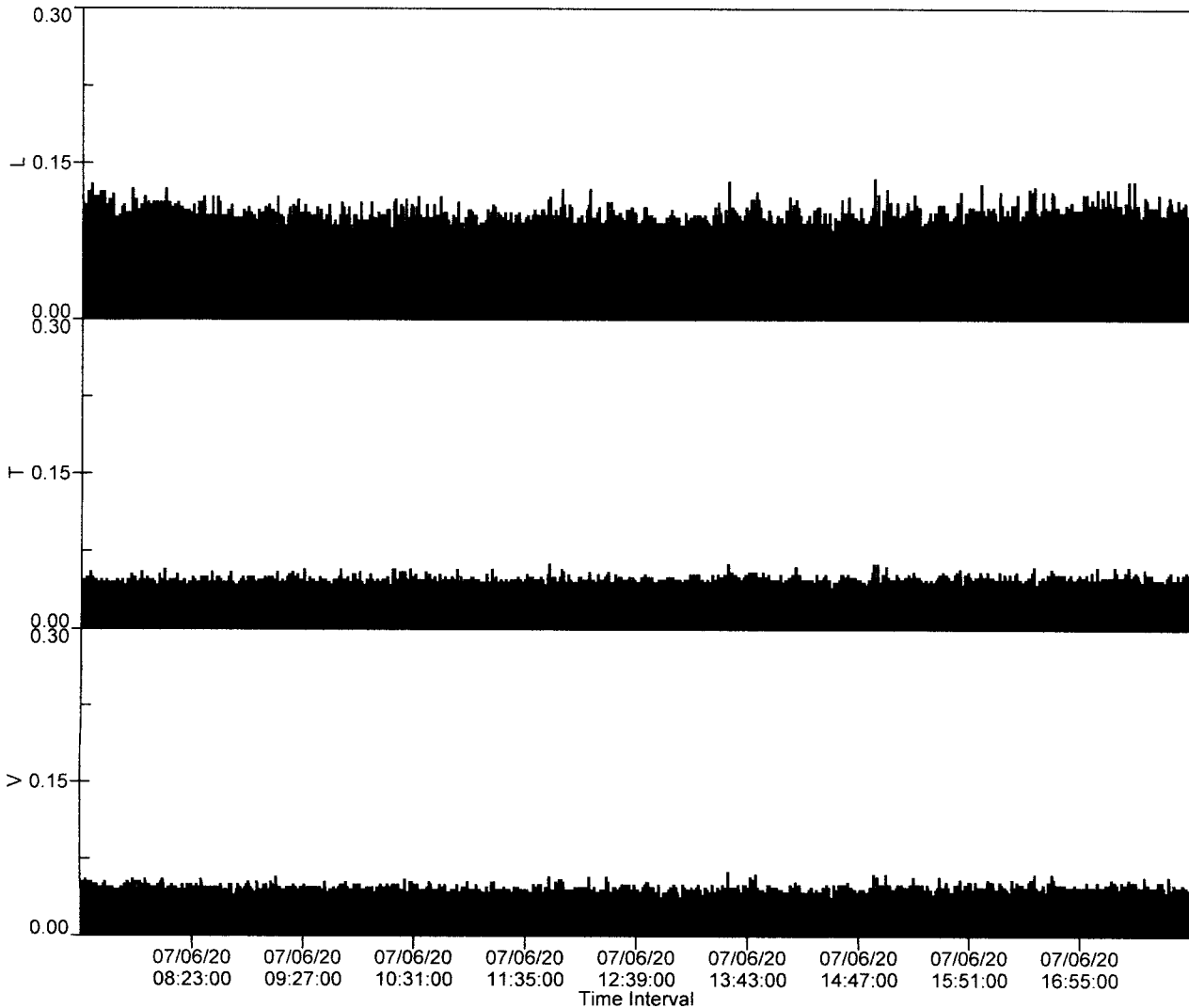
	L	T	V
<b>PPV (in/s)</b>	0.135	0.063	0.063
<b>FREQ (Hz)</b>	26.3	250.0	100.0
<b>Peak Air Pressure: 116 db</b>			
<b>Recording Time:</b>	639 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**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: 3733 Event: 65

Record Max PPV: 0.135 in/s Record Max DB: 116 db





**SN:** 3733 v3.22  
**Date:** 07/07/2020 **Time:** 06:01:00  
**Event:** 66  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #7 WSNP  
**Distance:** 10.  
**Operator:** CTI INC  
**Comment:** SW CORNER BEND

**Continuous Monitor Recording  
Summary Data**

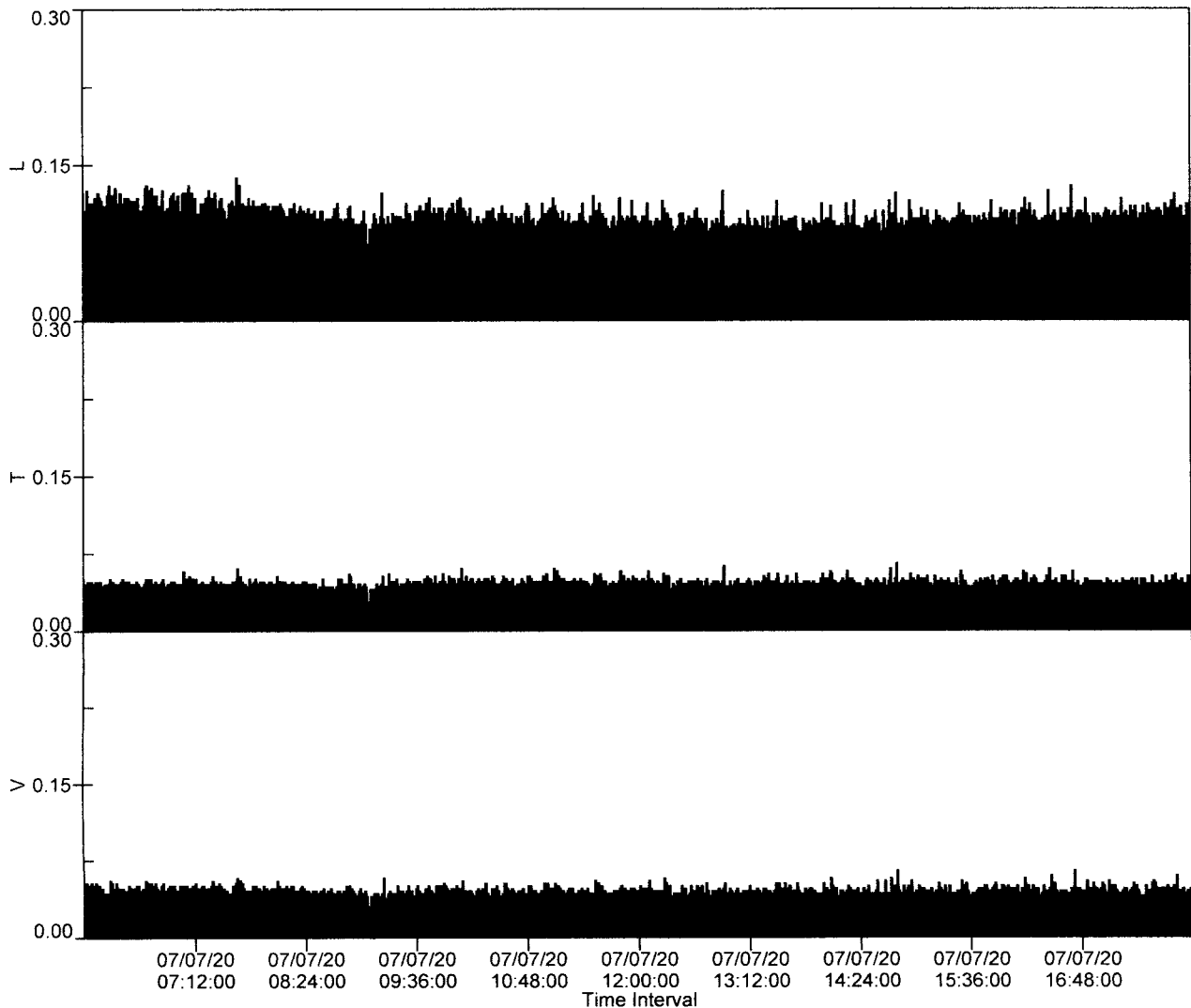
	L	T	V
<b>PPV (in/s)</b>	0.138	0.065	0.065
<b>FREQ (Hz)</b>	45.5	500.0	250.0
<b>Peak Air Pressure:</b>	115 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**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: 3733 Event: 66

Record Max PPV: 0.138 in/s Record Max DB: 115 db



**SN:** 3733 v3.22  
**Date:** 07/08/2020 **Time:** 06:01:00  
**Event:** 67  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #7 WSNP  
**Distance:** 10.  
**Operator:** CTI INC  
**Comment:** SW CORNER BEND

**Continuous Monitor Recording  
Summary Data**

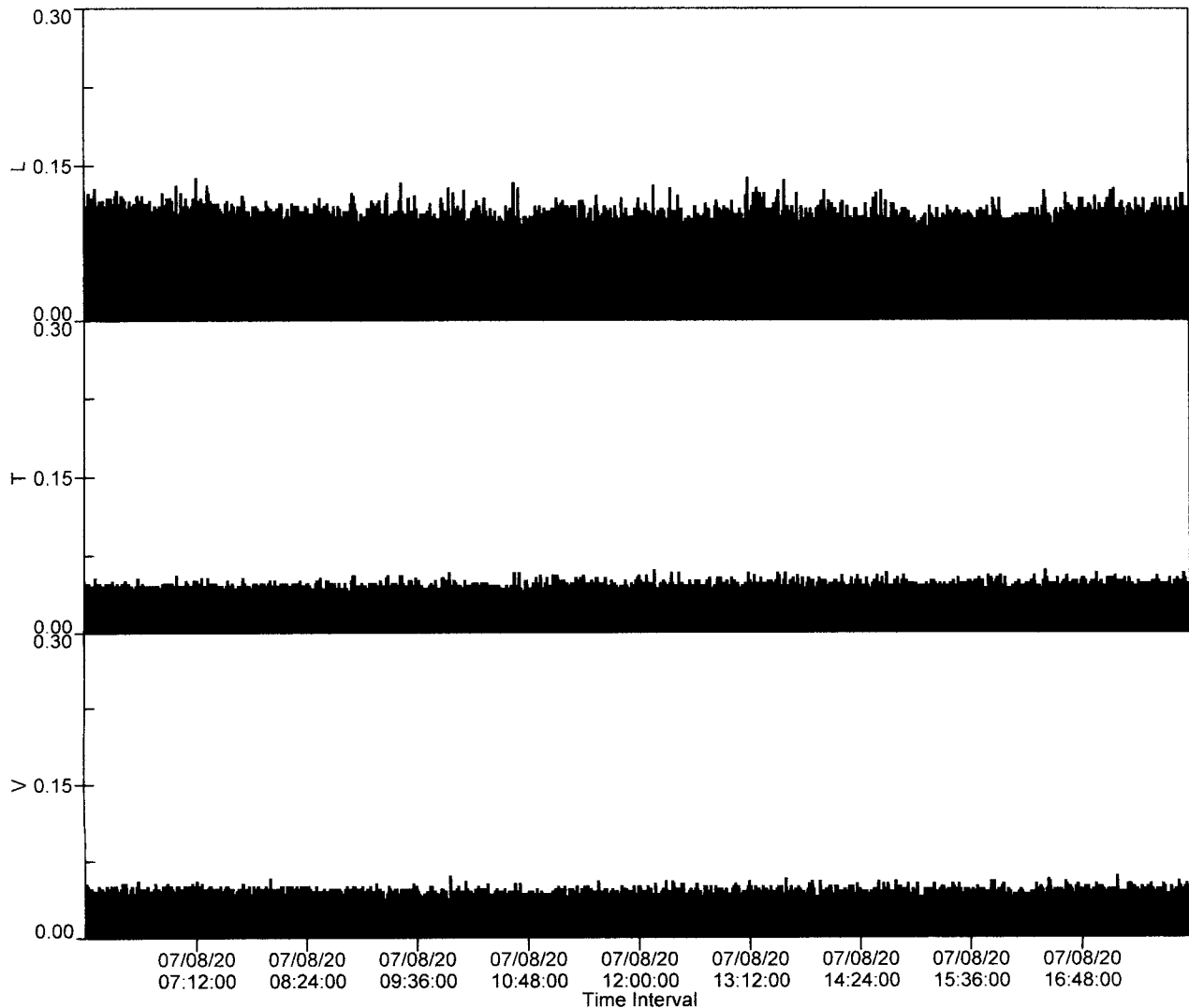
	L	T	V
<b>PPV (in/s)</b>	0.138	0.060	0.060
<b>FREQ (Hz)</b>	166.7	125.0	250.0
<b>Peak Air Pressure:</b>	116 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**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: 3733 Event: 67

Record Max PPV: 0.138 in/s Record Max DB: 116 db



**SN:** 3733 v3.22  
**Date:** 07/09/2020 **Time:** 06:01:00  
**Event:** 68  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #7 WSNP  
**Distance:** 10.  
**Operator:** CTI INC  
**Comment:** SW CORNER BEND

**Continuous Monitor Recording  
Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.138	0.073	0.070
<b>FREQ (Hz)</b>	125.0	250.0	100.0
<b>Peak Air Pressure:</b>	116 db		

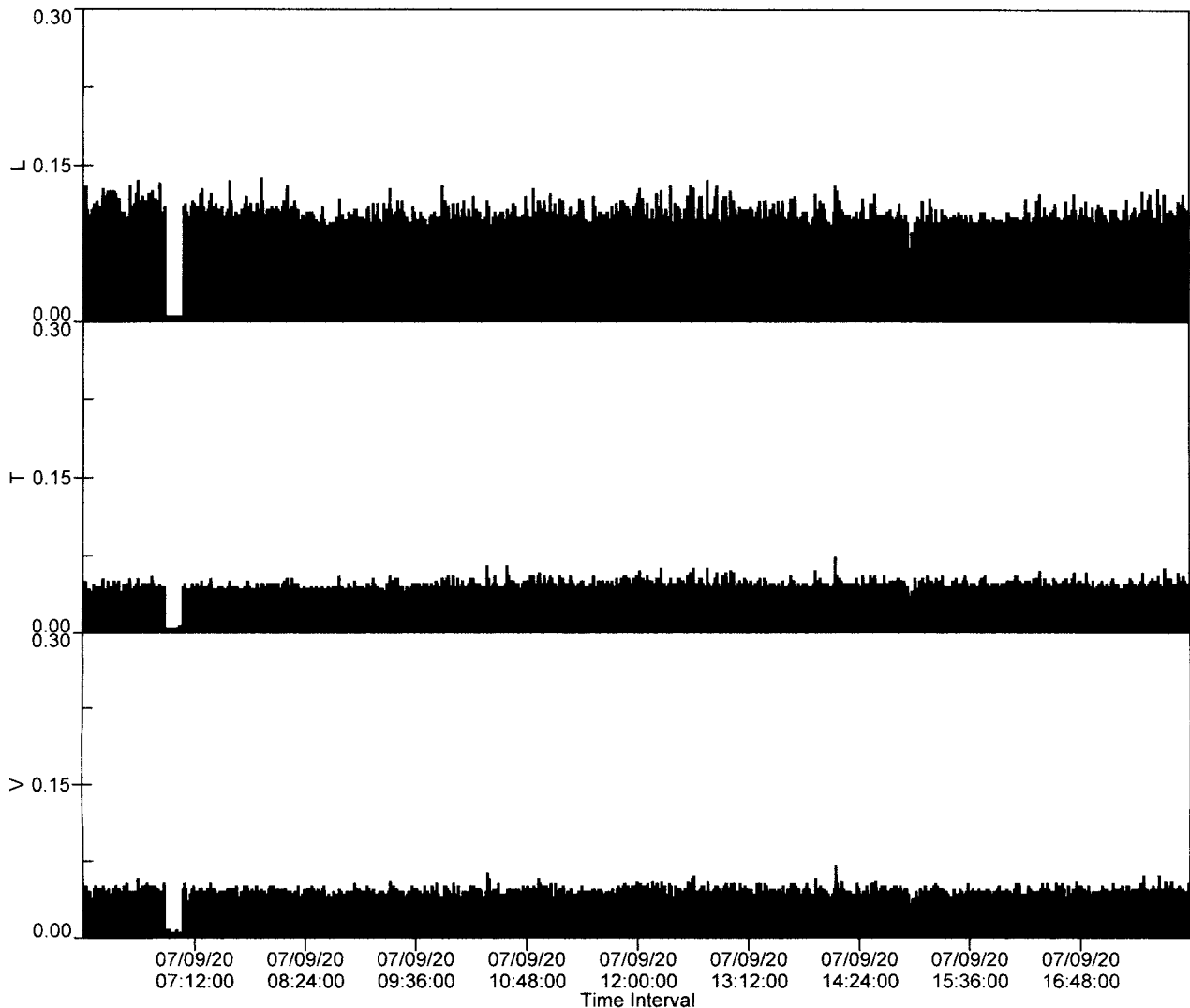
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 3733 Event: 68

Record Max PPV: 0.138 in/s Record Max DB: 116 db



**SN:** 3733 v3.22  
**Date:** 07/10/2020 **Time:** 06:01:00  
**Event:** 69  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #7 WSNRP  
**Distance:** 10.  
**Operator:** CTI INC  
**Comment:** SW CORNER BEND

**Continuous Monitor Recording  
Summary Data**

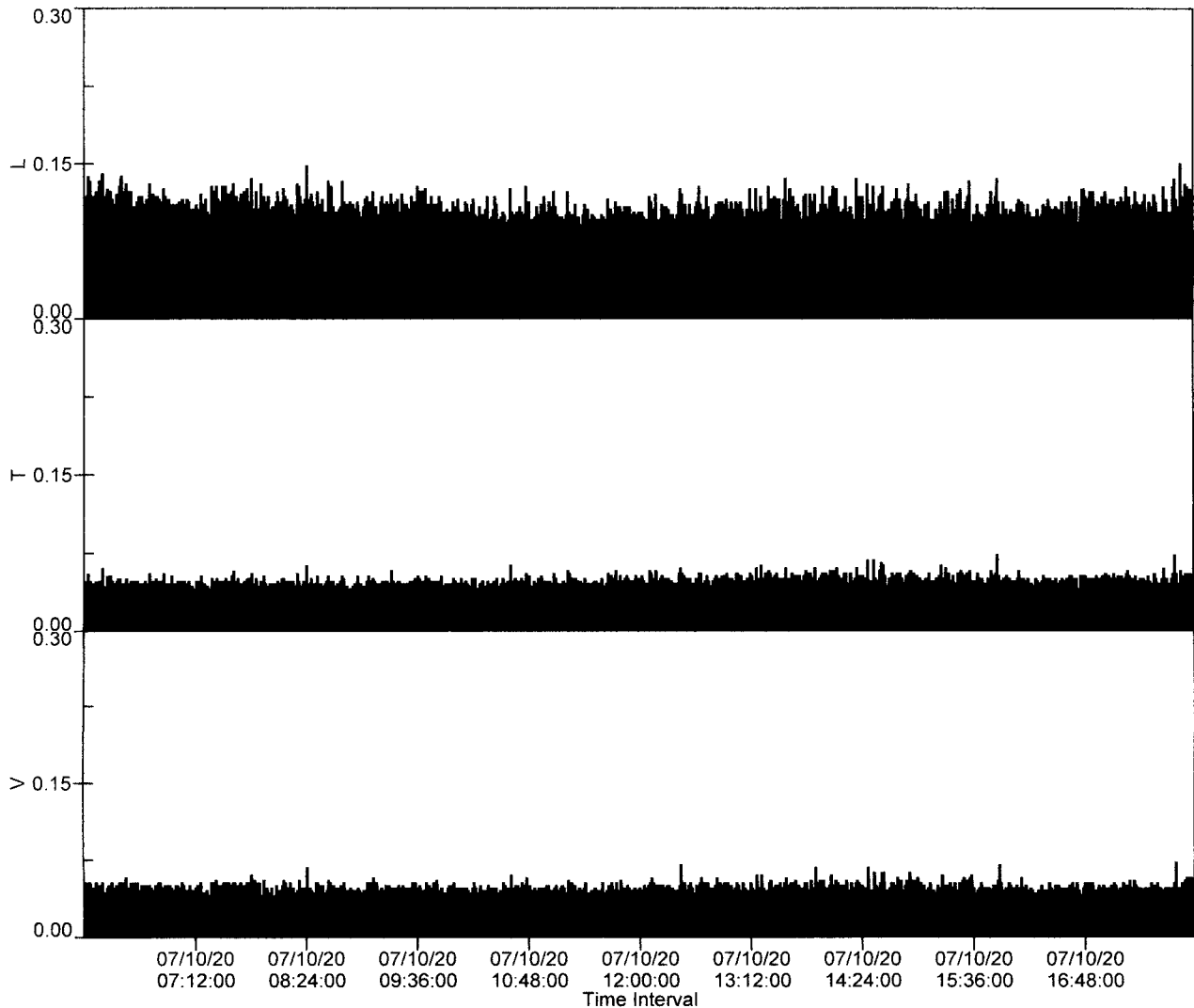
	L	T	V
<b>PPV (in/s)</b>	0.150	0.073	0.073
<b>FREQ (Hz)</b>	100.0	250.0	83.3
<b>Peak Air Pressure:</b> 116 db			
<b>Recording Time:</b> 718 minutes			
<b>Sample Size:</b> 1440			
<b>Interval Size:</b> 60 seconds			

**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: 3733 Event: 69

Record Max PPV: 0.150 in/s Record Max DB: 116 db



**SN:** 3733 v3.22  
**Date:** 07/11/2020 **Time:** 06:01:00  
**Event:** 70  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #7 WSNP  
**Distance:** 10.  
**Operator:** CTI INC  
**Comment:** SW CORNER BEND

**Continuous Monitor Recording  
Summary Data**

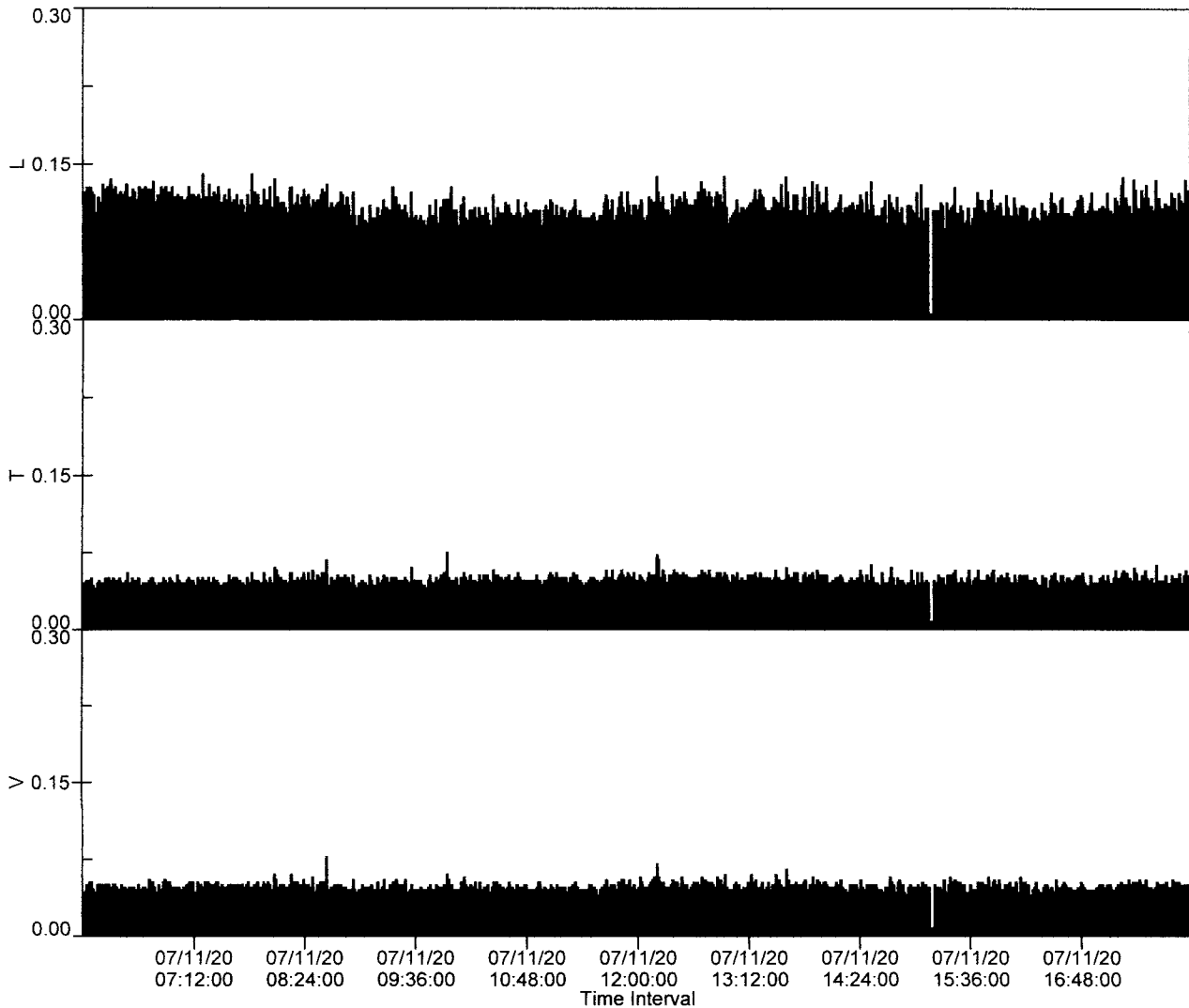
	L	T	V
<b>PPV (in/s)</b>	0.140	0.075	0.078
<b>FREQ (Hz)</b>	166.7	100.0	29.4
<b>Peak Air Pressure:</b>	116 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**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: 3733 Event: 70

Record Max PPV: 0.140 in/s Record Max DB: 116 db



**SN:** 3733 v3.22  
**Date:** 07/12/2020 **Time:** 06:01:00  
**Event:** 71  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #7 WSNP  
**Distance:** 10.  
**Operator:** CTI INC  
**Comment:** SW CORNER BEND

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
PPV (in/s)	0.145	0.075	0.073
FREQ (Hz)	100.0	500.0	250.0
Peak Air Pressure:	116 db		

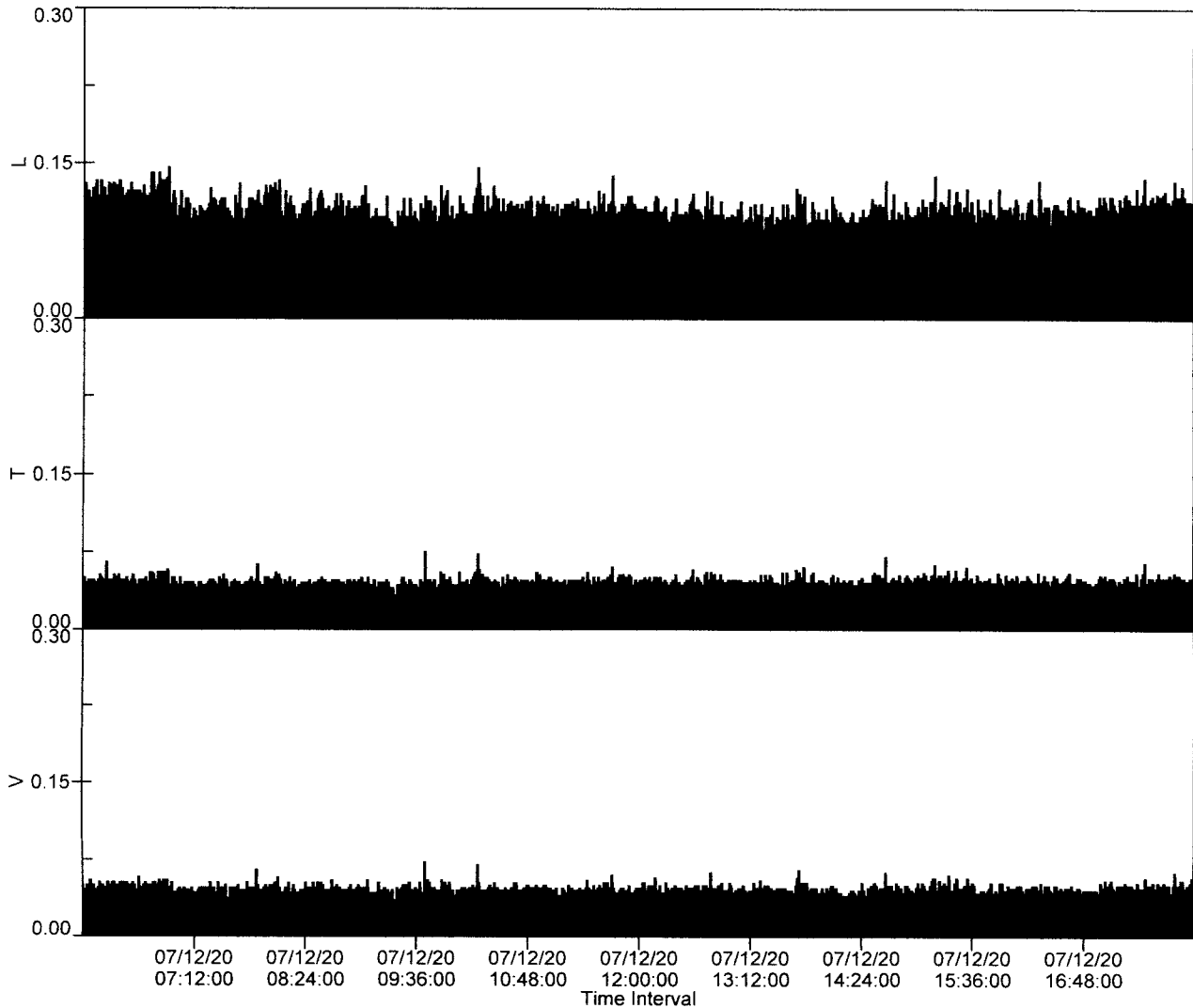
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 3733 Event: 71

Record Max PPV: 0.145 in/s Record Max DB: 116 db



**SN:** 3733 v3.22  
**Date:** 07/13/2020 **Time:** 06:01:00  
**Event:** 72  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #7 WSNP  
**Distance:** 10.  
**Operator:** CTI INC  
**Comment:** SW CORNER BEND

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.148	0.063	0.063
<b>FREQ (Hz)</b>	100.0	500.0	250.0
<b>Peak Air Pressure:</b>	116 db		

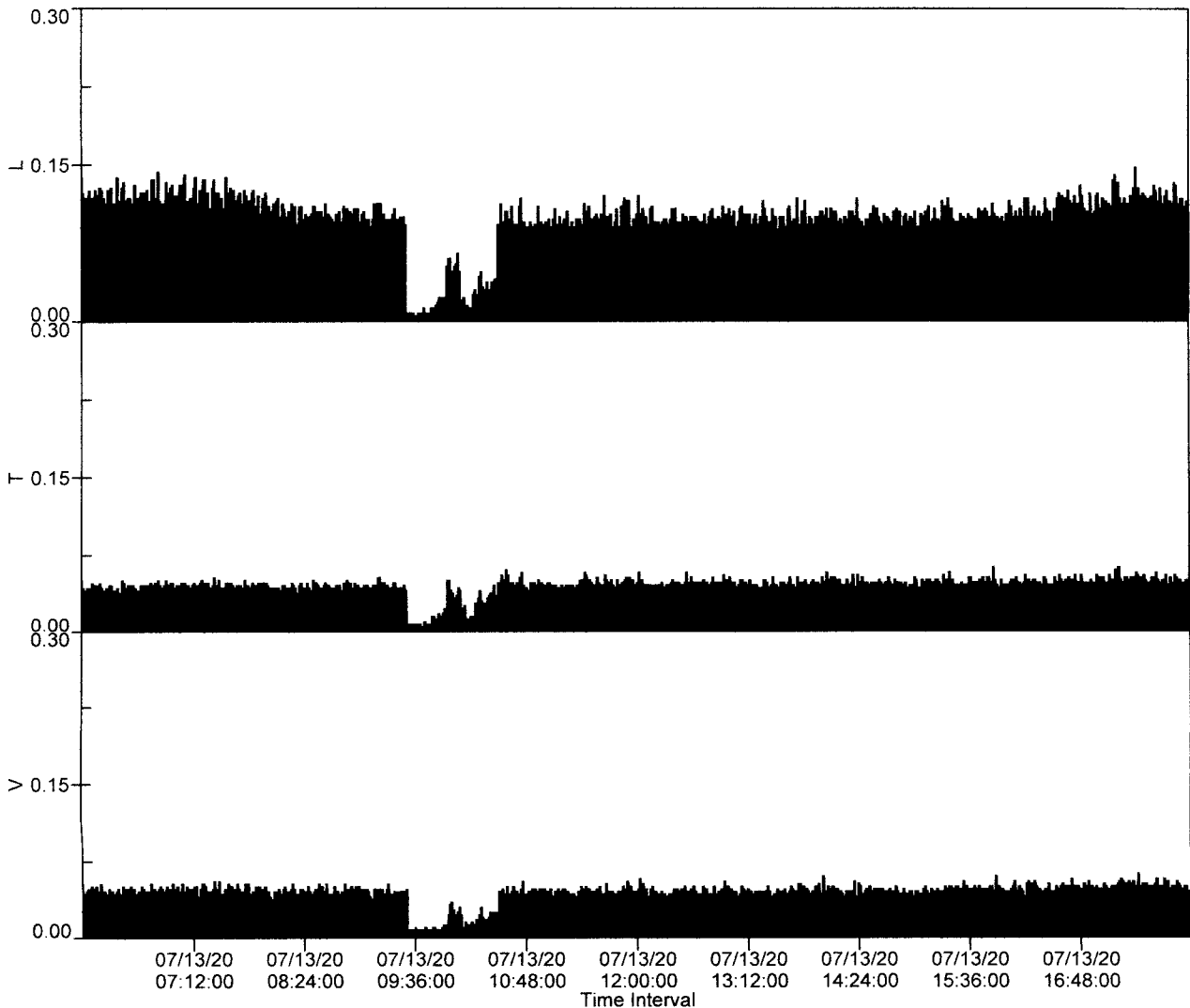
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 3733 Event: 72

Record Max PPV: 0.148 in/s Record Max DB: 116 db



**SN:** 3733 v3.22  
**Date:** 07/14/2020 **Time:** 06:01:00  
**Event:** 73  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #7 WSNP  
**Distance:** 10.  
**Operator:** CTI INC  
**Comment:** SW CORNER BEND

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
PPV (in/s)	0.145	0.073	0.065
FREQ (Hz)	166.7	250.0	125.0
Peak Air Pressure:	116 db		

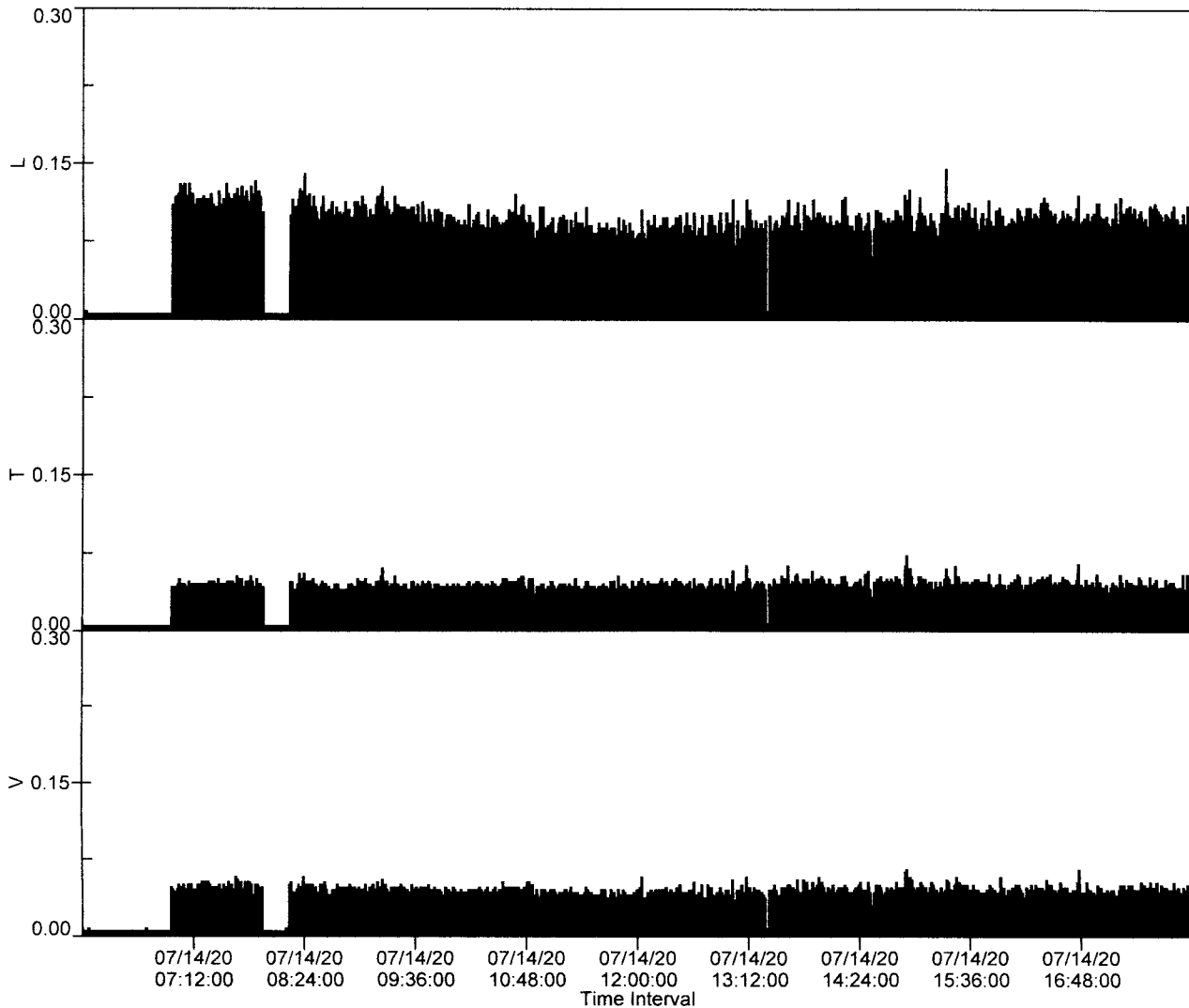
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 3733 Event: 73

Record Max PPV: 0.145 in/s Record Max DB: 116 db





**SN:** 3733 v3.22  
**Date:** 07/15/2020 **Time:** 06:01:00  
**Event:** 74  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #7 WSNSP  
**Distance:** 10.  
**Operator:** CTI INC  
**Comment:** SW CORNER BEND

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.155	0.123	0.078
<b>FREQ (Hz)</b>	19.2	20.0	20.8
<b>Peak Air Pressure: 115 db</b>			

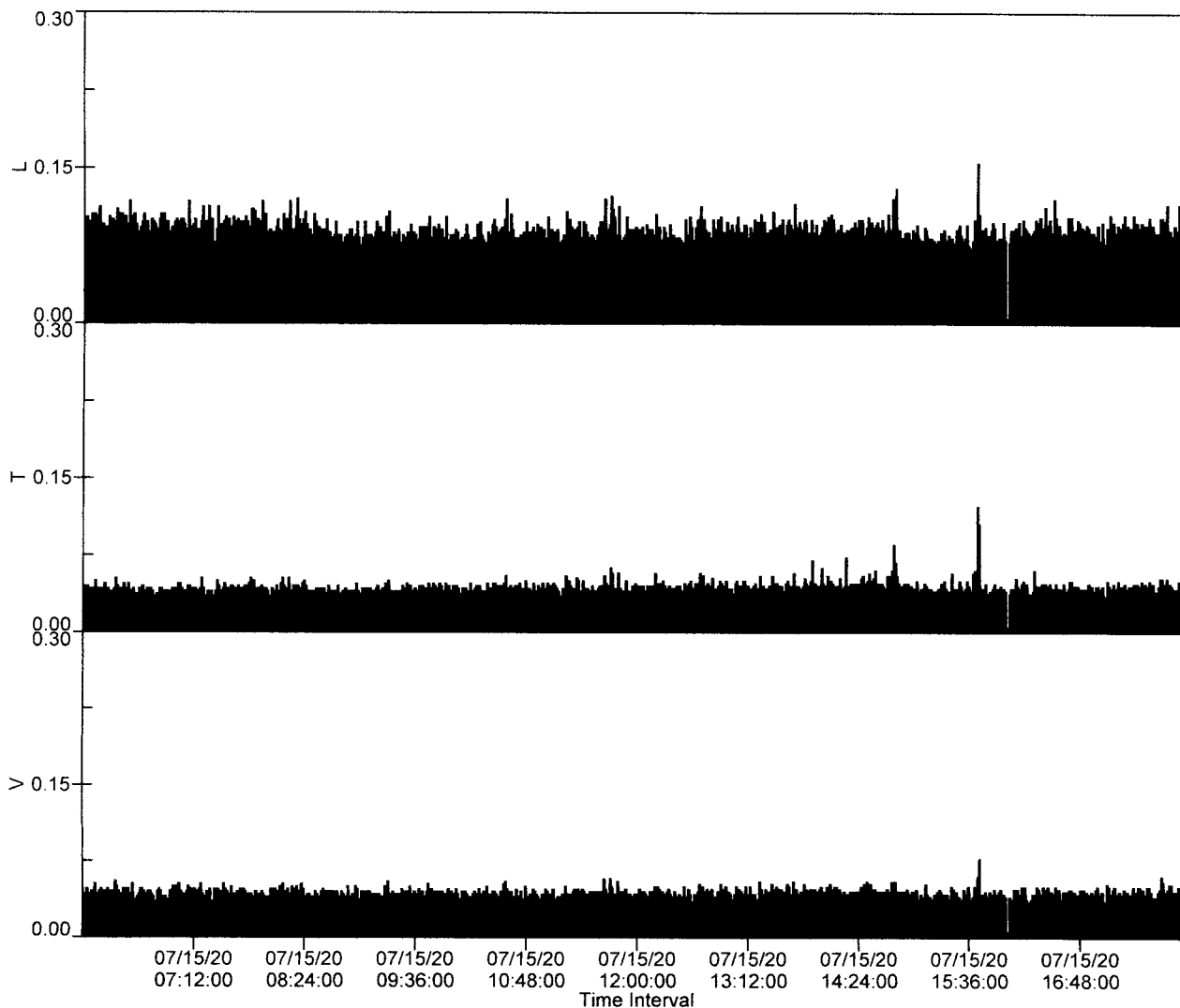
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 3733 Event: 74

Record Max PPV: 0.155 in/s Record Max DB: 115 db



**SN:** 3733 v3.22  
**Date:** 07/16/2020 **Time:** 06:01:00  
**Event:** 75  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #7 WSNP  
**Distance:** 10.  
**Operator:** CTI INC  
**Comment:** SW CORNER BEND

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.118	0.060	0.055
<b>FREQ (Hz)</b>	41.7	250.0	250.0

**Peak Air Pressure:** 115 db

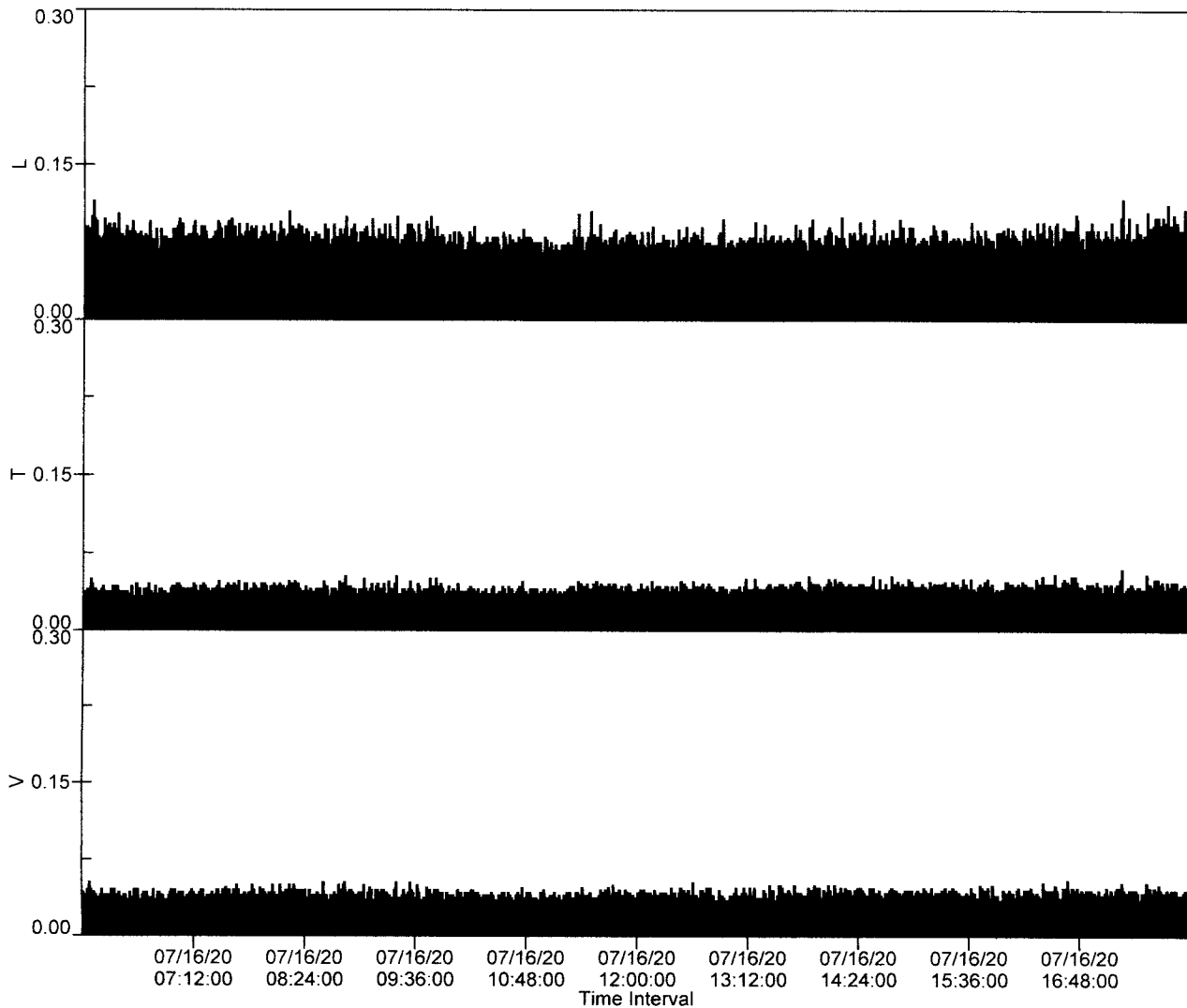
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 3733 Event: 75

Record Max PPV: 0.118 in/s Record Max DB: 115 db



**SN:** 3733 v3.22  
**Date:** 07/17/2020 **Time:** 06:01:00  
**Event:** 76  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #7 WSNP  
**Distance:** 10.  
**Operator:** CTI INC  
**Comment:** SW CORNER BEND

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.113	0.063	0.060
<b>FREQ (Hz)</b>	125.0	250.0	83.3
<b>Peak Air Pressure: 115 db</b>			

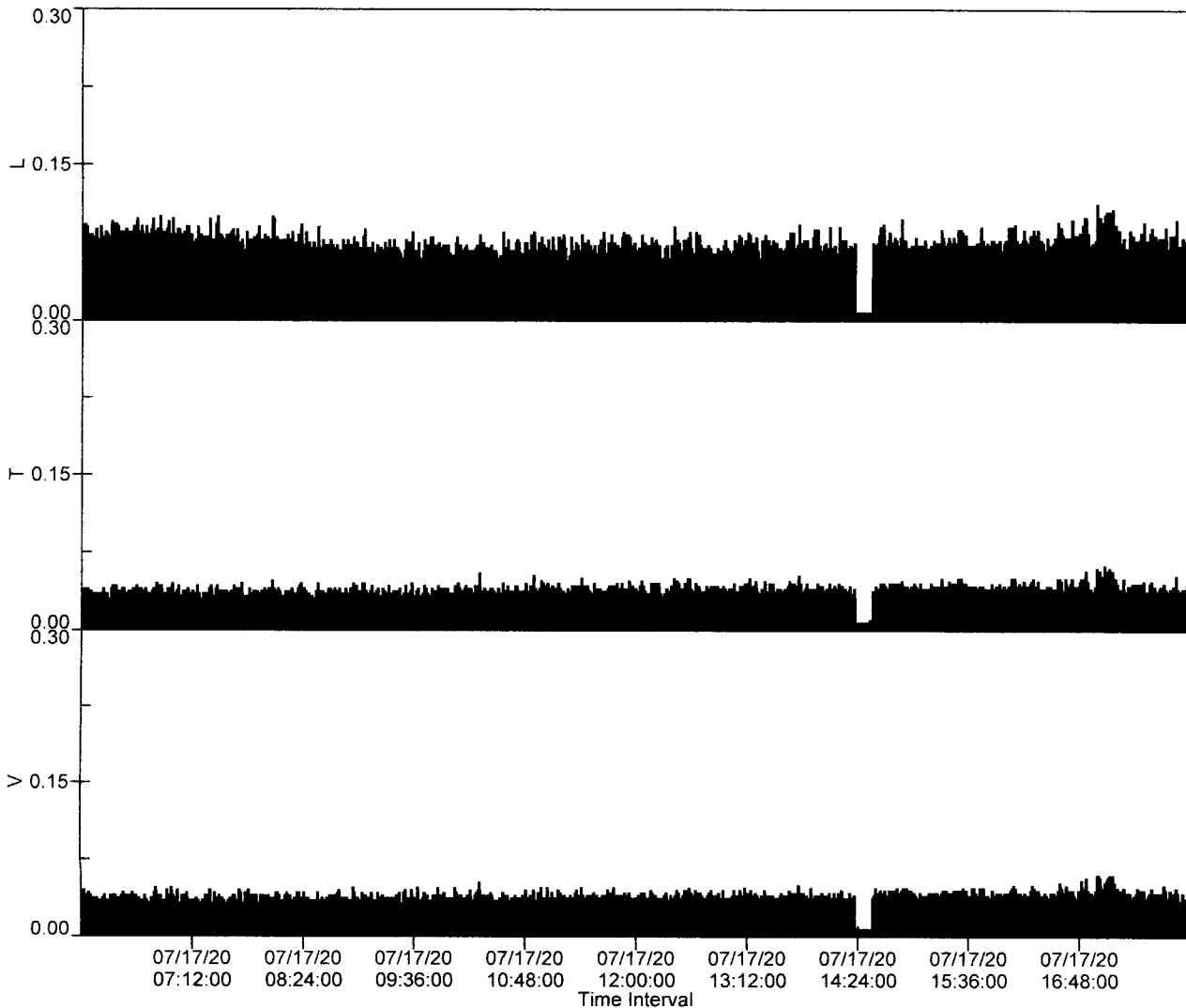
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 3733 Event: 76

Record Max PPV: 0.113 in/s Record Max DB: 115 db



**SN:** 3733 v3.22  
**Date:** 07/18/2020 **Time:** 06:01:00  
**Event:** 77  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #7 WSNP  
**Distance:** 10.  
**Operator:** CTI INC  
**Comment:** SW CORNER BEND

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.103	0.065	0.055
<b>FREQ (Hz)</b>	250.0	45.5	250.0
<b>Peak Air Pressure:</b>	114 db		

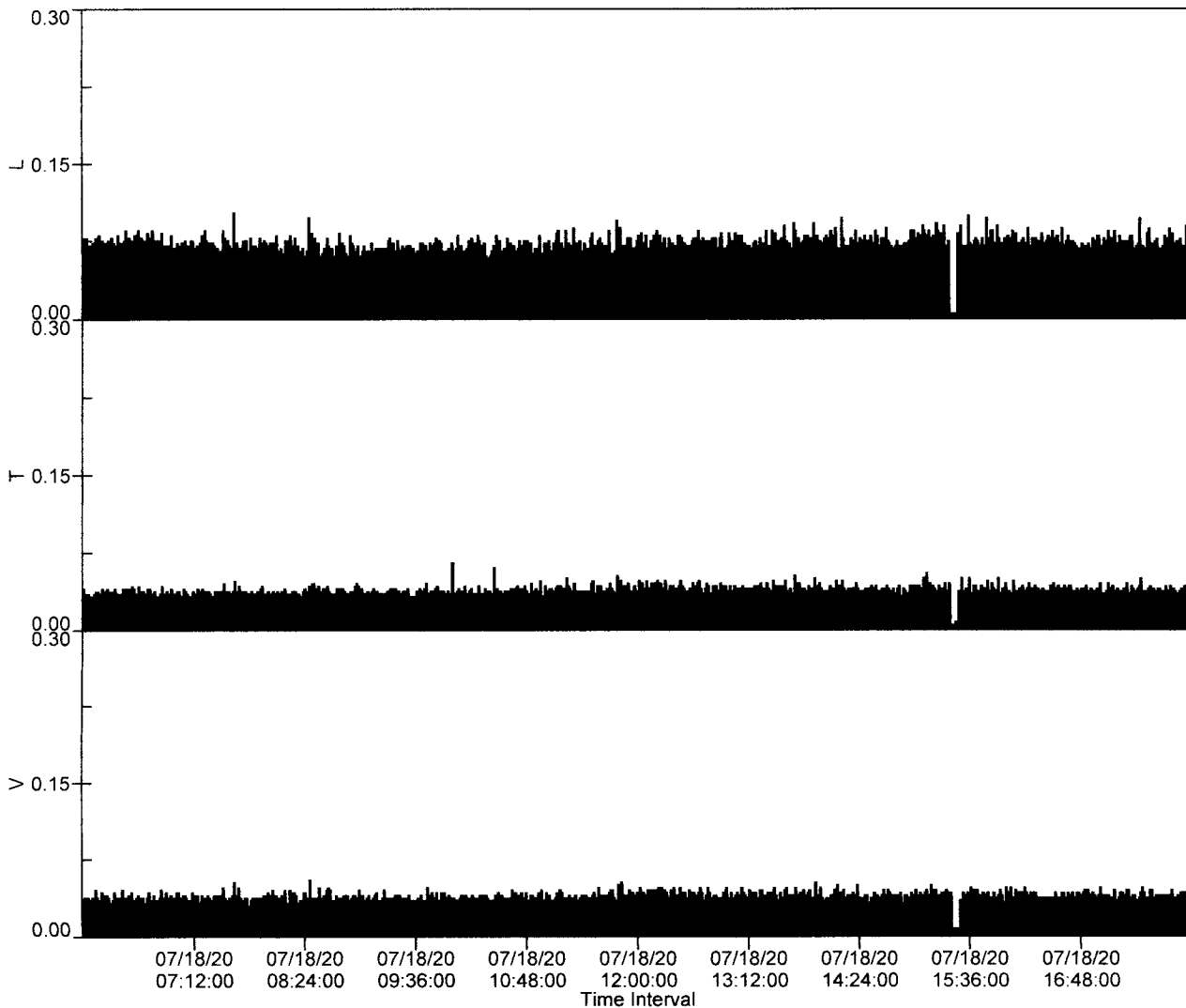
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**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: 3733 Event: 77

Record Max PPV: 0.103 in/s Record Max DB: 114 db



**SN:** 3733 v3.22  
**Date:** 07/19/2020 **Time:** 06:01:00  
**Event:** 78  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #7 WSNP  
**Distance:** 10.  
**Operator:** CTI INC  
**Comment:** SW CORNER BEND

**Continuous Monitor Recording  
Summary Data**

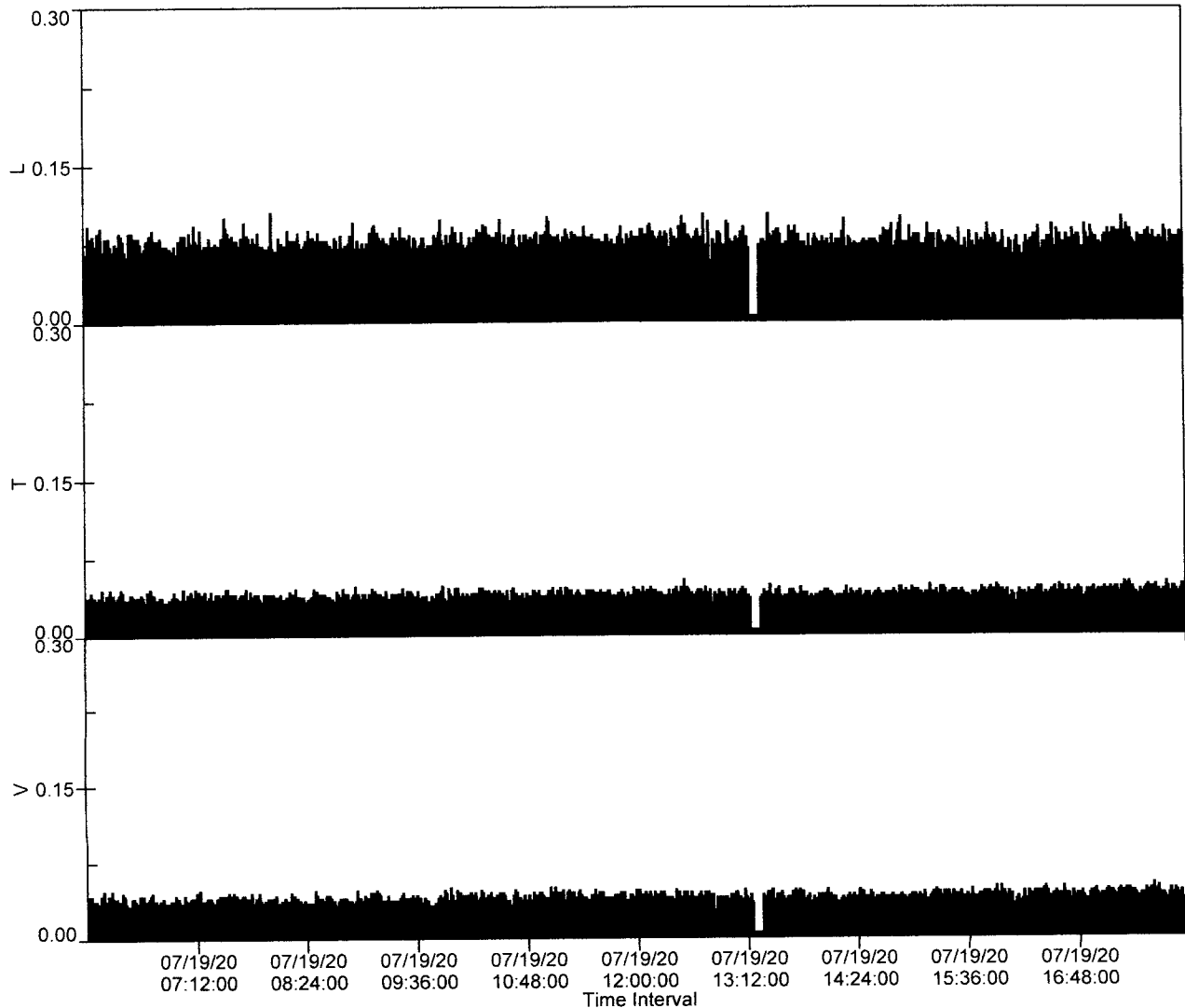
	L	T	V
<b>PPV (in/s)</b>	0.105	0.053	0.053
<b>FREQ (Hz)</b>	500.0	500.0	250.0
<b>Peak Air Pressure:</b>	115 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**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: 3733 Event: 78

Record Max PPV: 0.105 in/s Record Max DB: 115 db





**SN:** 8336 v3.66  
**Date:** 07/06/2020 **Time:** 08:28:00  
**Event:** 27  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #8 WSNP  
**Distance:** 10.  
**Operator:** CTI INC  
**Comment:** SW UNIT

**Continuous Monitor Recording  
Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.065	0.020	0.028
<b>FREQ (Hz)</b>	166.7	12.2	31.3
<b>Peak Air Pressure:</b>	82 db		

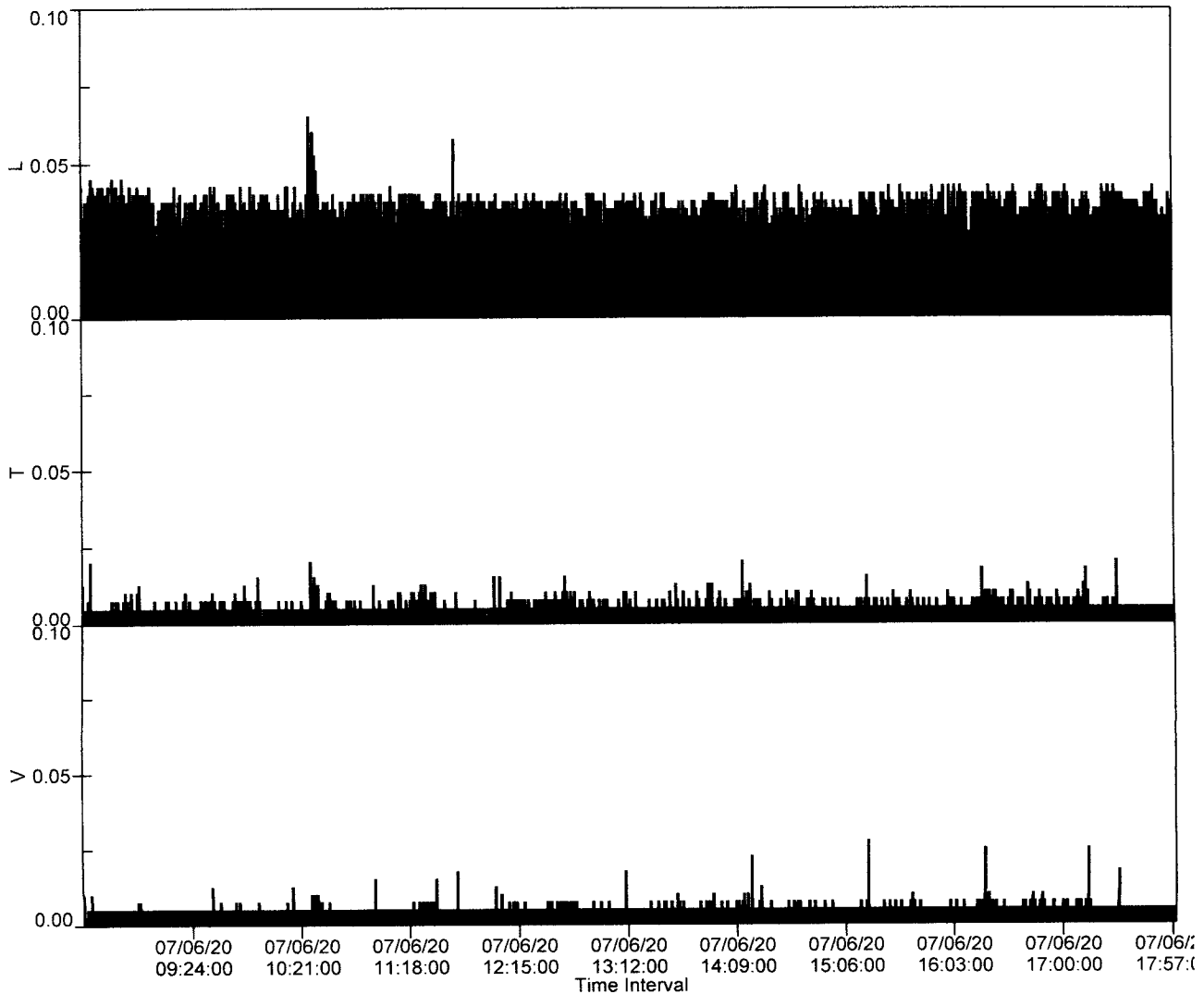
**Recording Time:** 571 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 05/09/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 8336 Event: 27

Record Max PPV: 0.065 in/s Record Max DB: 82 db



SN: 8336 v3.66  
Date: 07/07/2020 Time: 06:01:00  
Event: 28  
Client: BERGER CONST  
Operation: EXCAVATION  
Location: #8 WSNP  
Distance: 10.  
Operator: CTI INC  
Comment: SW UNIT

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
PPV (in/s)	0.088	0.060	0.070
FREQ (Hz)	25.0	23.8	33.3
Peak Air Pressure:	82 db		

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

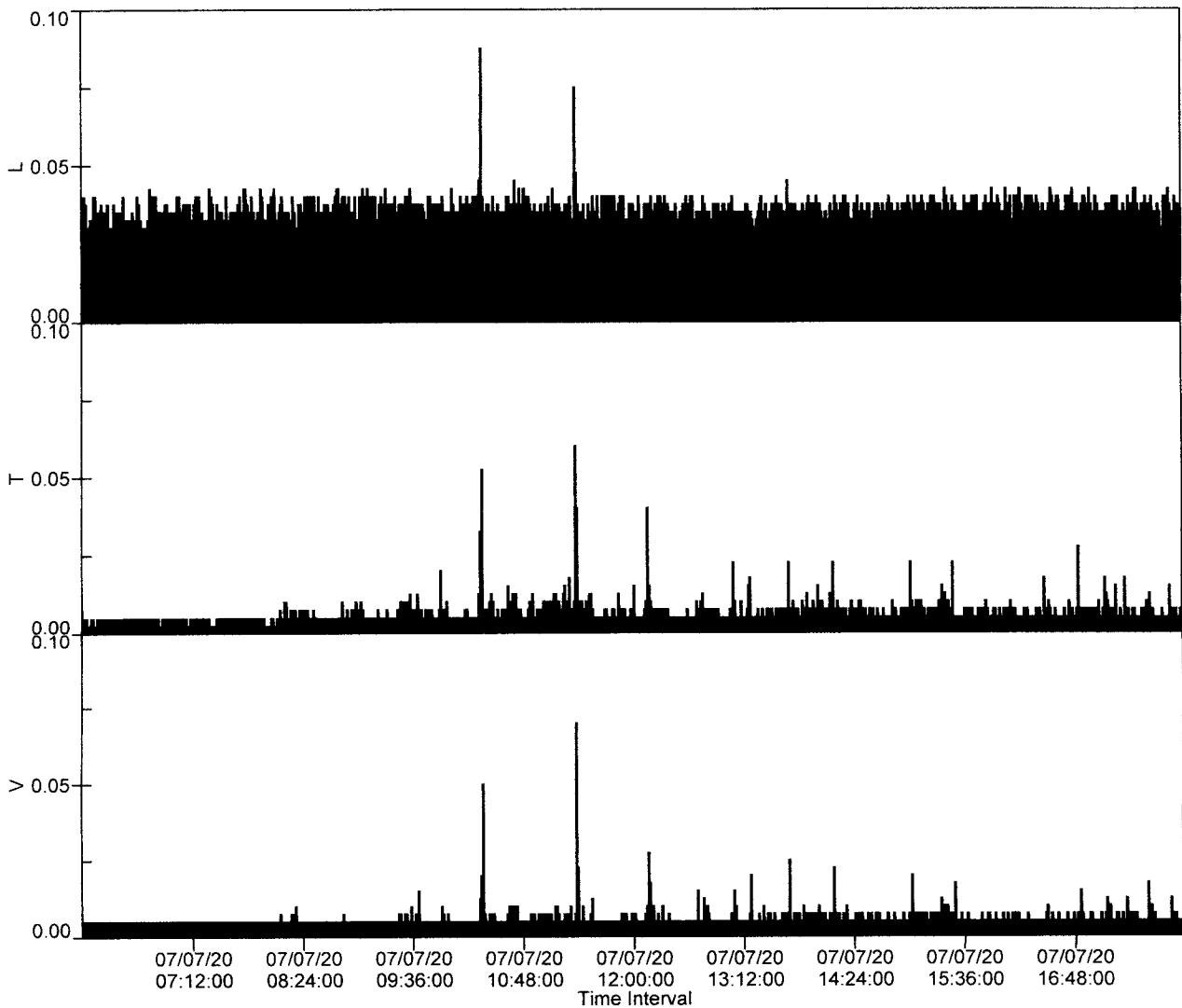
**Additional Info:**

Shaketable Calibrated: 05/09/2020

By: GeoSonics Inc.  
359 Northgate Drive  
Warrendale, PA 15086 U.S.A.  
TEL: 724.934.2900 FAX: 724.934.2999

SN: 8336 Event: 28

Record Max PPV: 0.088 in/s Record Max DB: 82 db





**SN:** 8336 v3.66  
**Date:** 07/08/2020 **Time:** 06:01:00  
**Event:** 29  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #8 WSNSP  
**Distance:** 10.  
**Operator:** CTI INC  
**Comment:** SW UNIT

**Continuous Monitor Recording  
Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.093	0.070	0.070
<b>FREQ (Hz)</b>	55.6	25.0	62.5
<b>Peak Air Pressure:</b>	87 db		

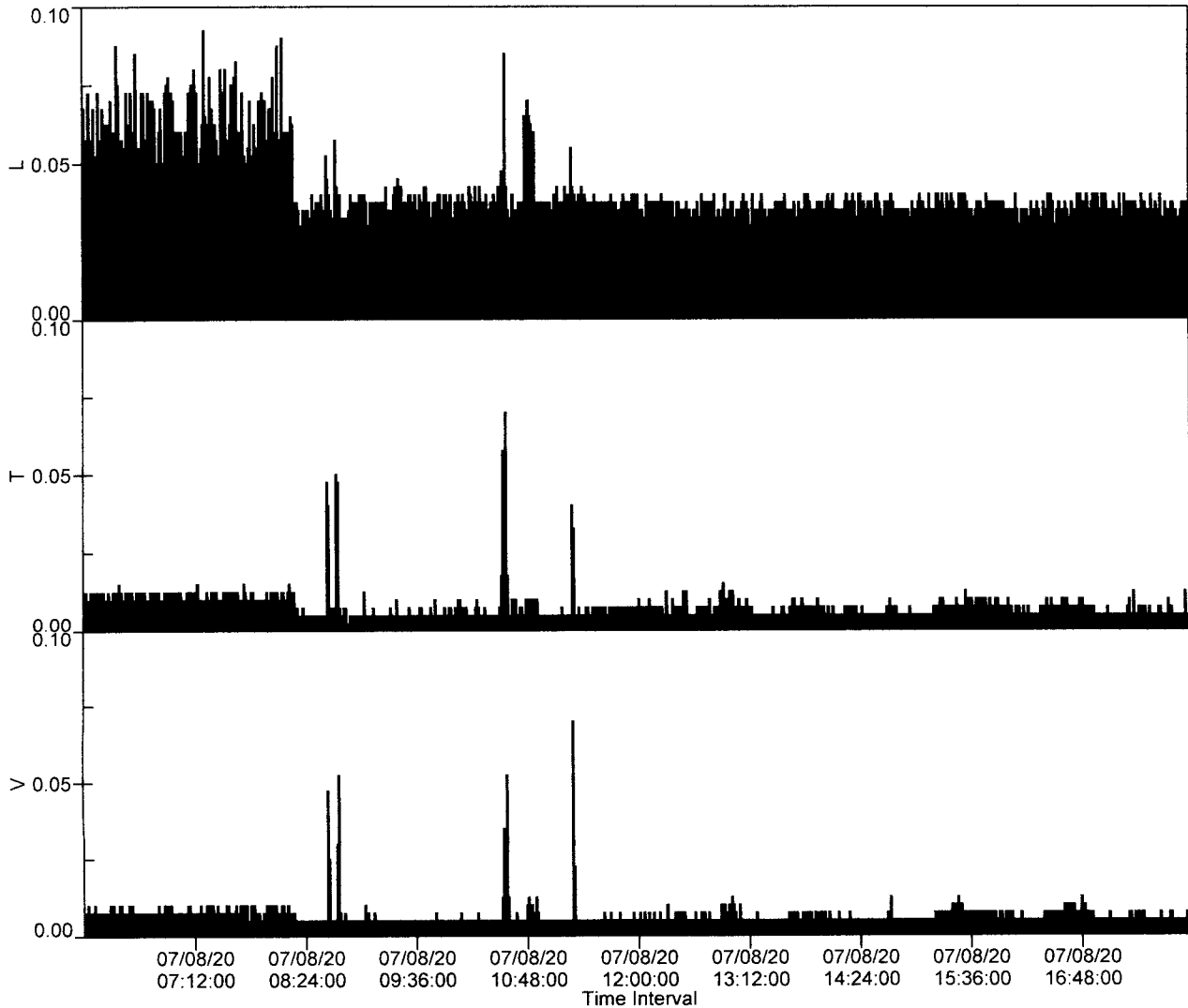
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 05/09/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 8336 Event: 29

Record Max PPV: 0.093 in/s Record Max DB: 87 db



**SN:** 8336 v3.66  
**Date:** 07/09/2020 **Time:** 06:01:00  
**Event:** 30  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #8 WSNSP  
**Distance:** 10.  
**Operator:** CTI INC  
**Comment:** SW UNIT

**Continuous Monitor Recording  
Summary Data**

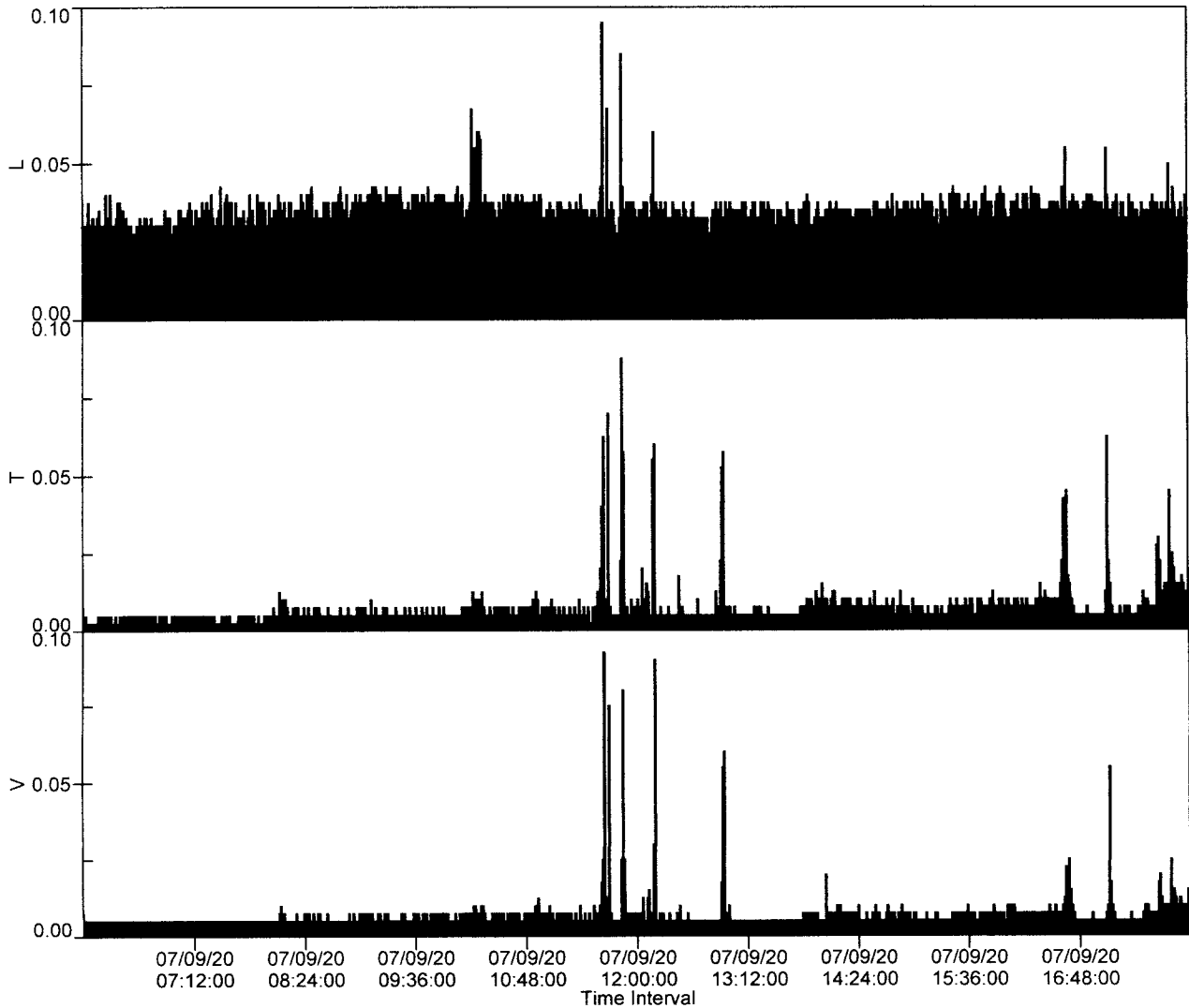
	L	T	V
<b>PPV (in/s)</b>	0.095	0.088	0.093
<b>FREQ (Hz)</b>	33.3	31.3	25.0
<b>Peak Air Pressure:</b>	82 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**Additional Info:**

**Shaketable Calibrated:** 05/09/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 8336 Event: 30

Record Max PPV: 0.095 in/s Record Max DB: 82 db



**SN:** 8336 v3.66  
**Date:** 07/10/2020 **Time:** 06:01:00  
**Event:** 31  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #8 WSNP  
**Distance:** 10.  
**Operator:** CTI INC  
**Comment:** SW UNIT

**Continuous Monitor Recording  
Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.100	0.068	0.100
<b>FREQ (Hz)</b>	55.6	19.2	38.5
<b>Peak Air Pressure:</b>	90 db		

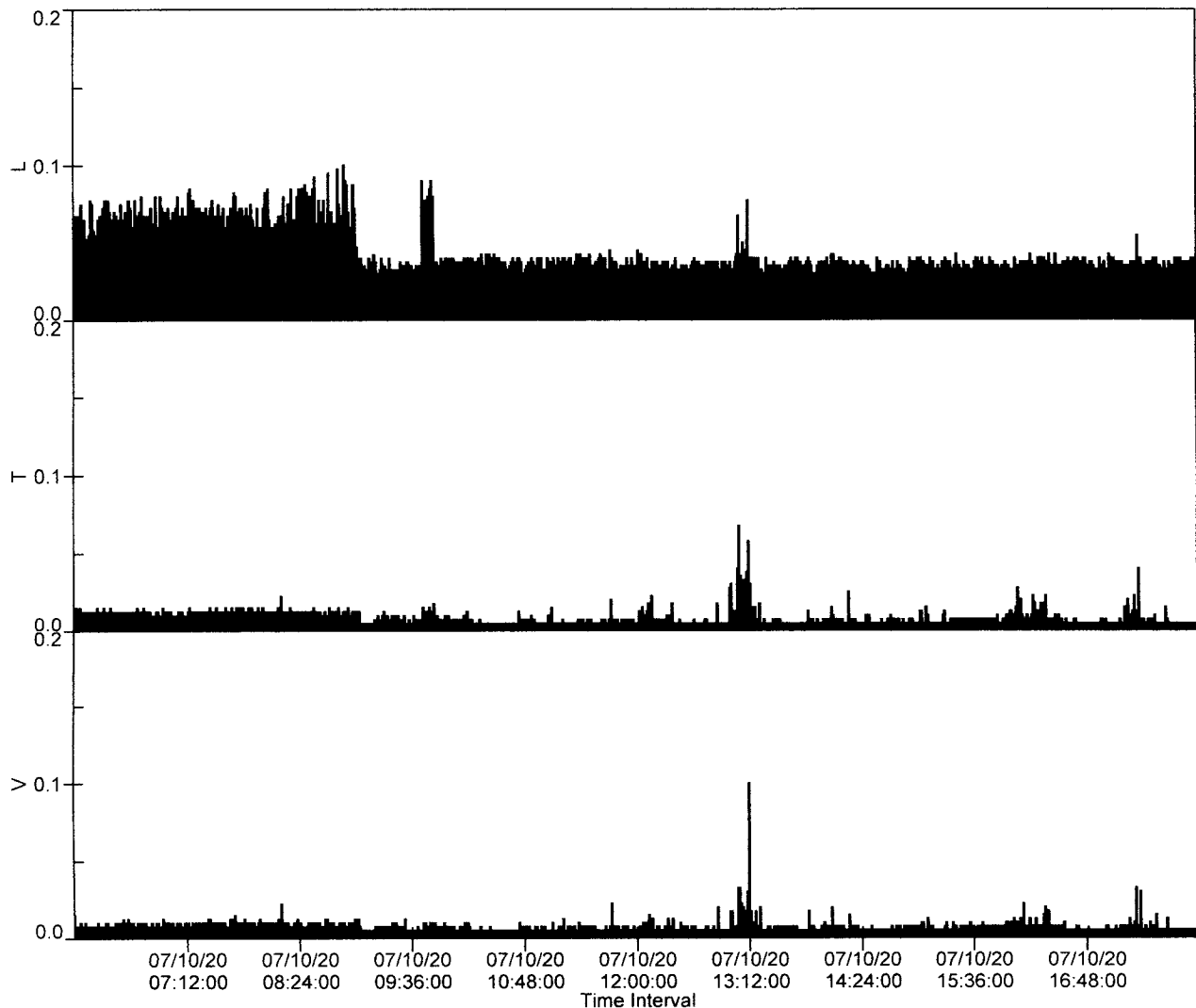
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 05/09/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 8336 Event: 31

Record Max PPV: 0.100 in/s Record Max DB: 90 db



**SN:** 8336 v3.66  
**Date:** 07/11/2020 **Time:** 06:01:00  
**Event:** 32  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #8 WSNP  
**Distance:** 10.  
**Operator:** CTI INC  
**Comment:** SW UNIT

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.075	0.075	0.090
<b>FREQ (Hz)</b>	31.3	29.4	45.5
<b>Peak Air Pressure:</b>	81 db		

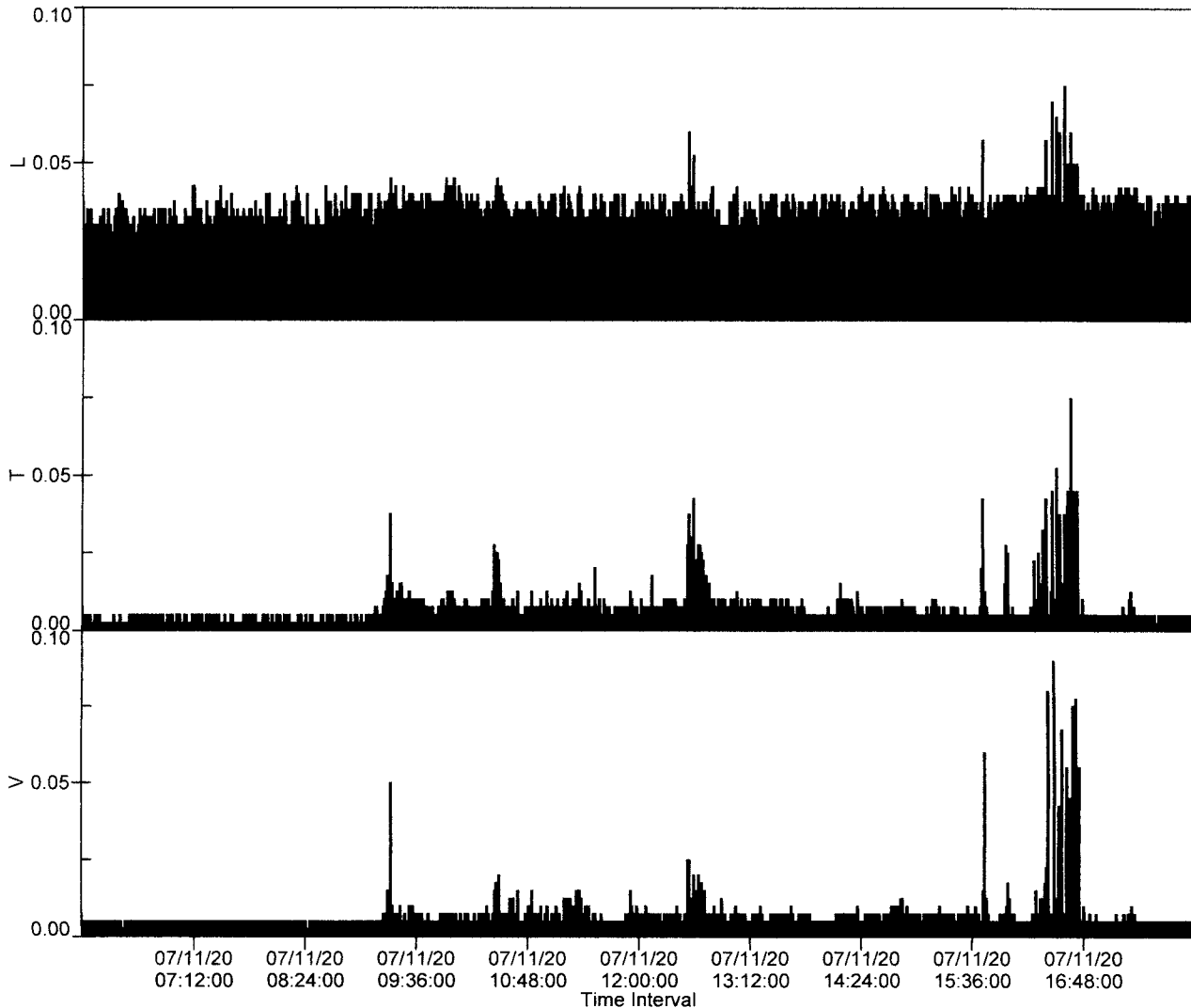
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 05/09/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 8336 Event: 32

Record Max PPV: 0.090 in/s Record Max DB: 81 db



**SN:** 8336 v3.66  
**Date:** 07/12/2020 **Time:** 06:01:00  
**Event:** 33  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #8 WSNSP  
**Distance:** 10.  
**Operator:** CTI INC  
**Comment:** SW UNIT

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
PPV (in/s)	0.045	0.008	0.008
FREQ (Hz)	62.5	5.8	.5
Peak Air Pressure:	79 db		

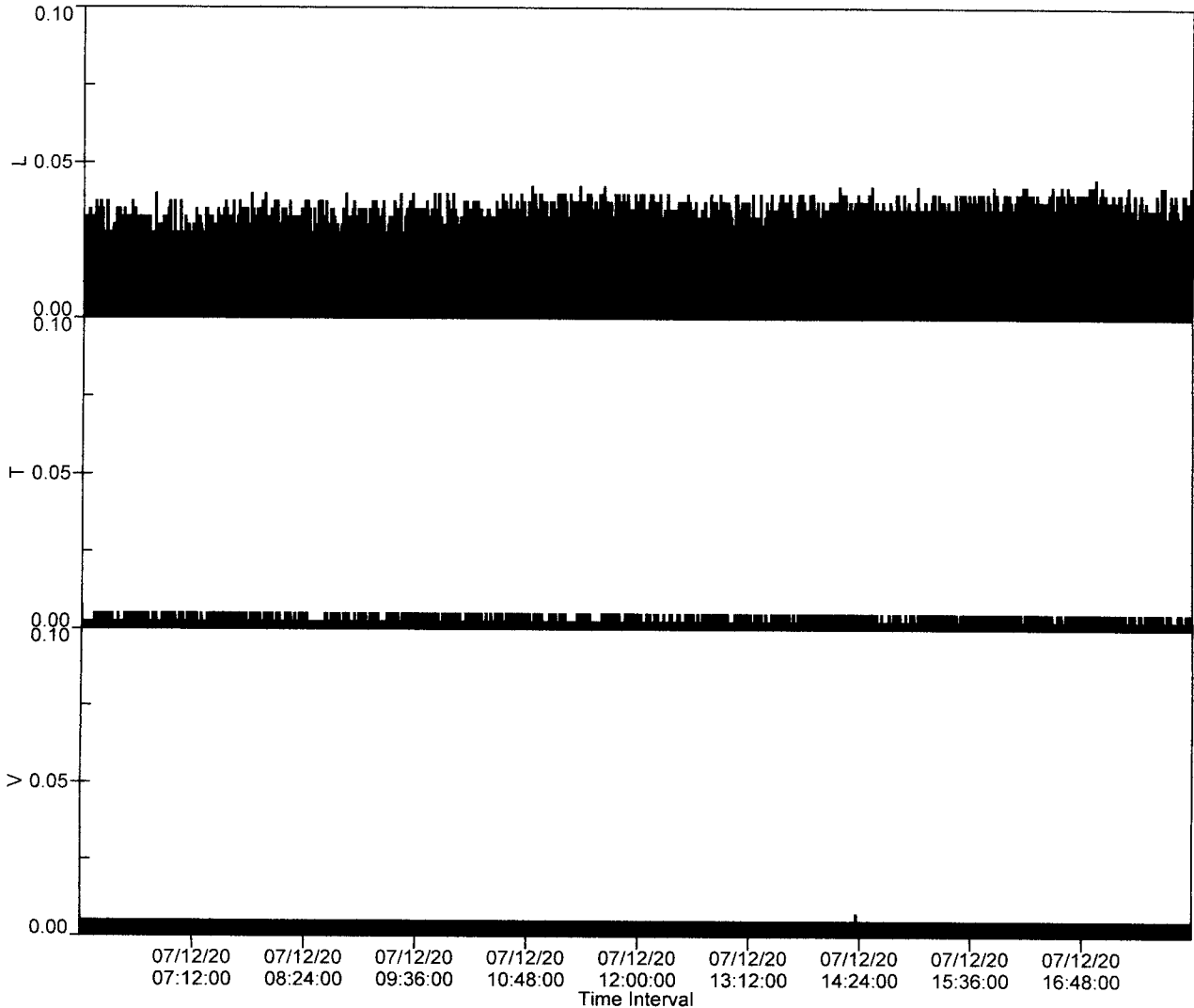
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 05/09/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 8336 Event: 33

Record Max PPV: 0.045 in/s Record Max DB: 79 db



**SN:** 8336 v3.66  
**Date:** 07/13/2020 **Time:** 06:01:00  
**Event:** 34  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #8 WSNP  
**Distance:** 10.  
**Operator:** CTI INC  
**Comment:** SW UNIT

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.073	0.058	0.043
<b>FREQ (Hz)</b>	71.4	62.5	55.6
<b>Peak Air Pressure:</b>	94 db		

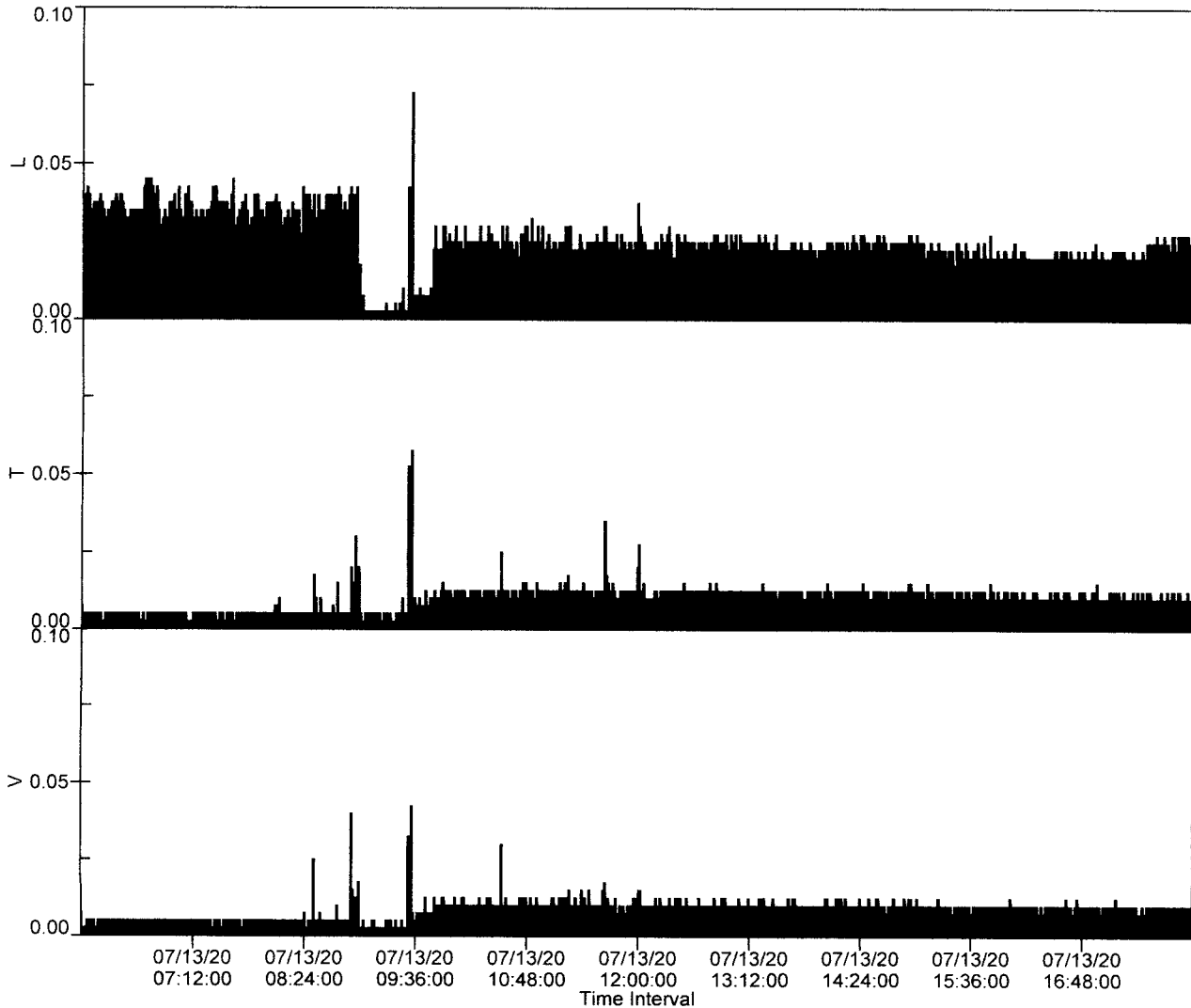
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 05/09/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 8336 Event: 34

Record Max PPV: 0.073 in/s Record Max DB: 94 db



**SN:** 8336 v3.66  
**Date:** 07/14/2020 **Time:** 06:01:00  
**Event:** 35  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #8 WSNP  
**Distance:** 10.  
**Operator:** CTI INC  
**Comment:** SW UNIT

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.148	0.168	0.138
<b>FREQ (Hz)</b>	62.5	55.6	100.0
<b>Peak Air Pressure:</b>	81 db		

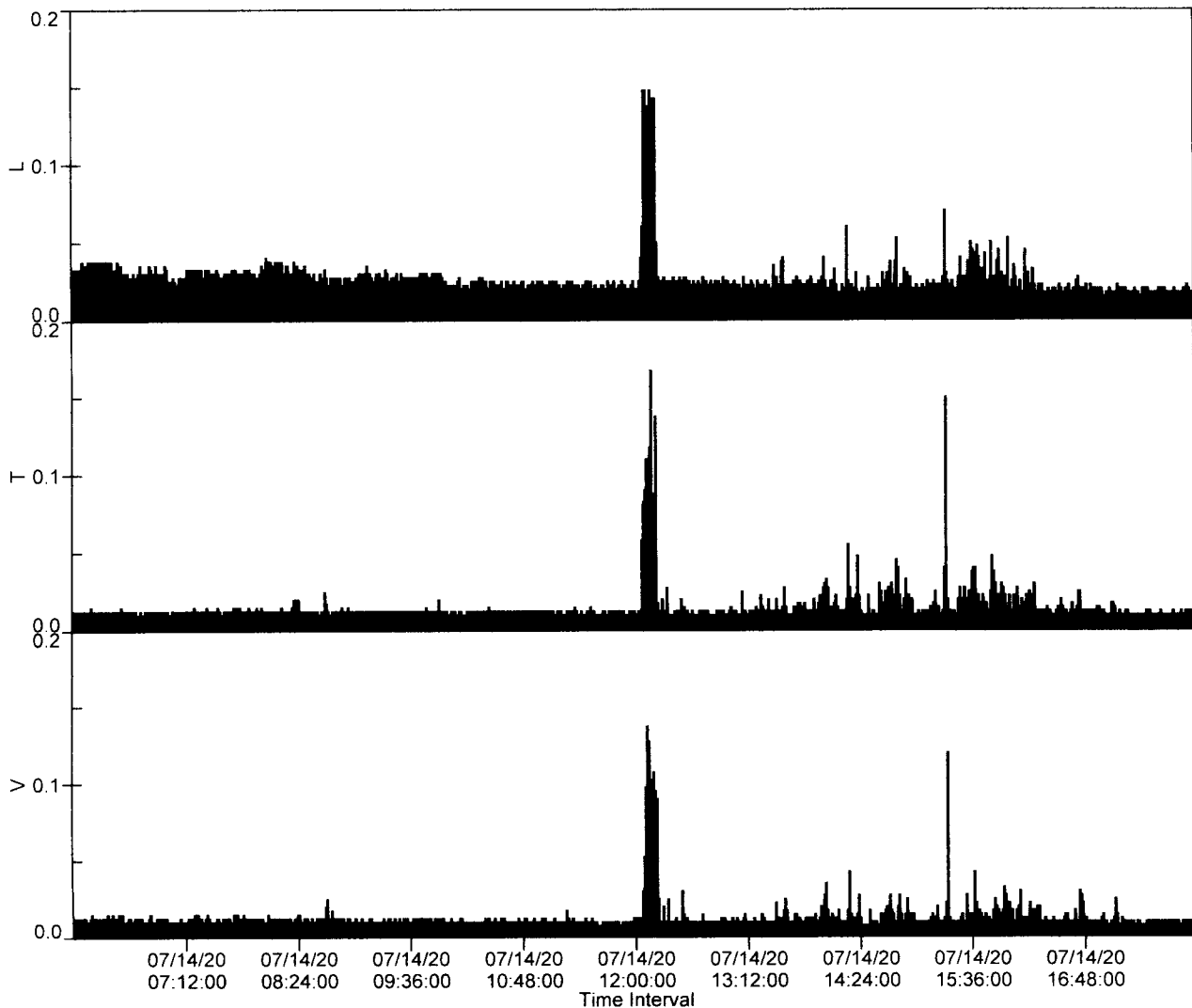
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 05/09/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 8336 Event: 35

Record Max PPV: 0.168 in/s Record Max DB: 81 db



**SN:** 8336 v3.66  
**Date:** 07/15/2020 **Time:** 06:01:00  
**Event:** 36  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #8 WSNP  
**Distance:** 10.  
**Operator:** CTI INC  
**Comment:** SW UNIT

**Continuous Monitor Recording  
Summary Data**

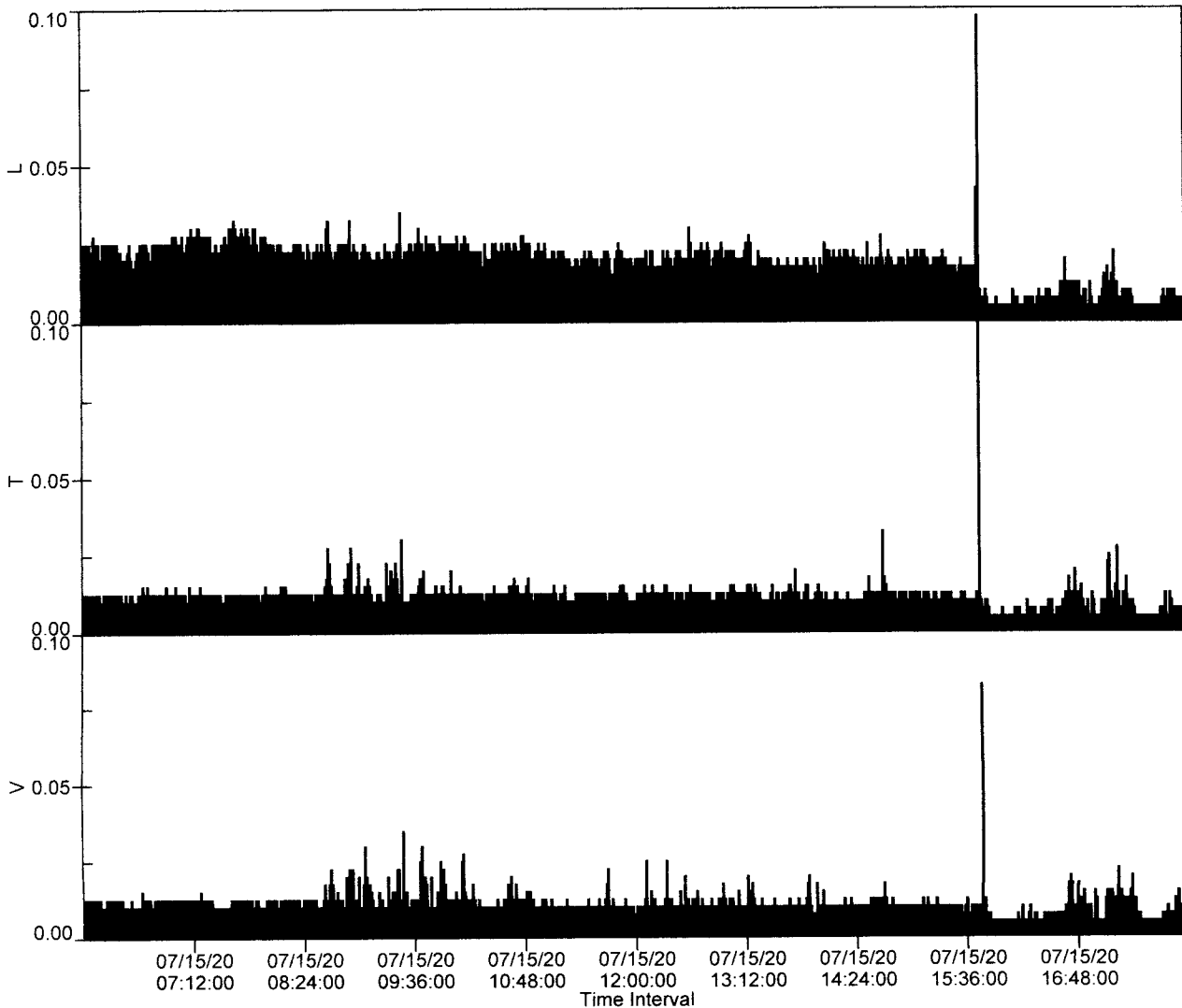
	<b>L</b>	<b>T</b>	<b>V</b>
<b>PPV (in/s)</b>	0.098	0.175	0.083
<b>FREQ (Hz)</b>	83.3	71.4	62.5
<b>Peak Air Pressure:</b>	81 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**Additional Info:**

**Shaketable Calibrated:** 05/09/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 8336 Event: 36

Record Max PPV: 0.175 in/s Record Max DB: 81 db





**SN:** 8336 v3.66  
**Date:** 07/16/2020 **Time:** 06:01:00  
**Event:** 37  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #8 WSNP  
**Distance:** 10.  
**Operator:** CTI INC  
**Comment:** SW UNIT

**Continuous Monitor Recording**

**Summary Data**

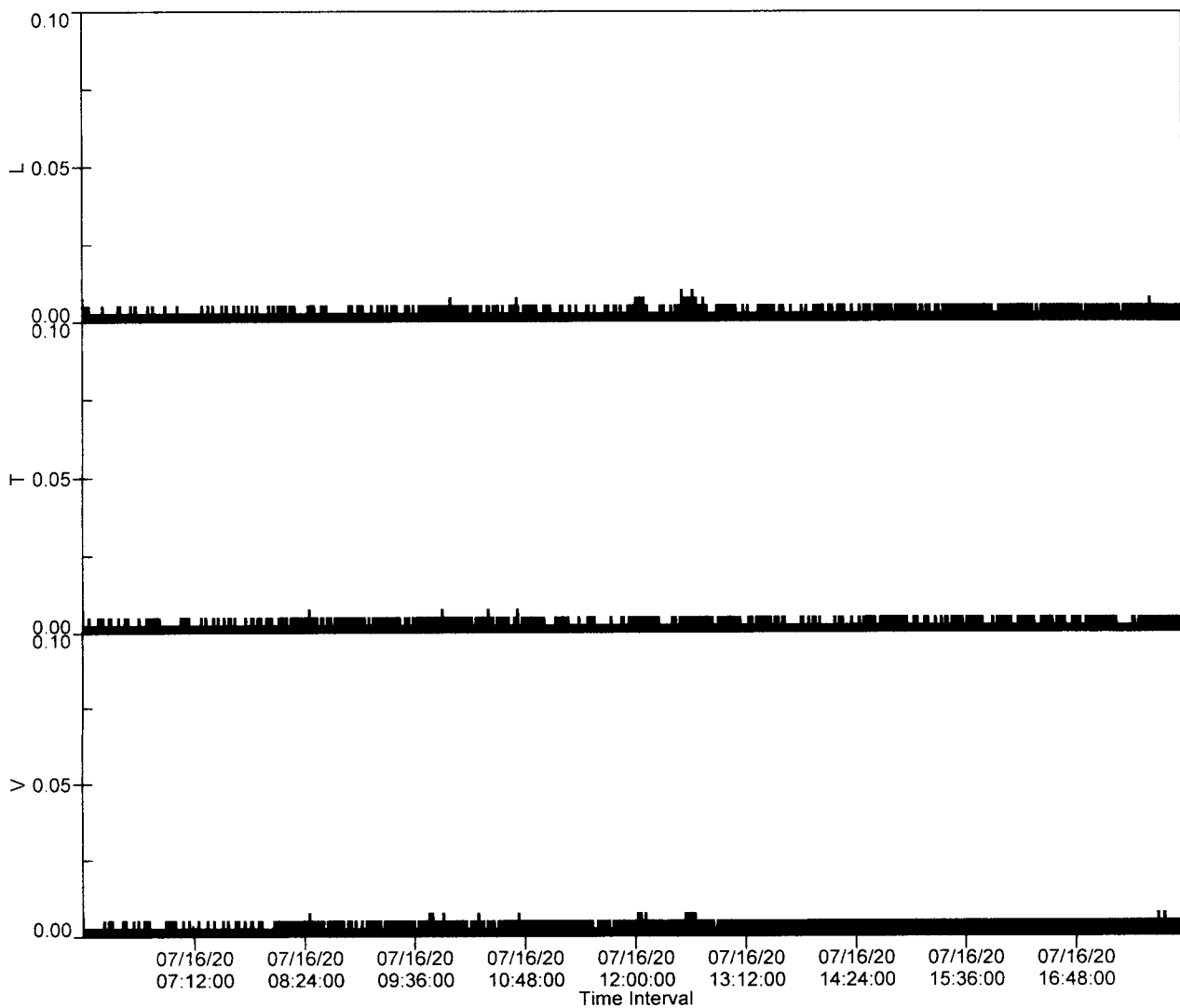
	L	T	V
<b>PPV (in/s)</b>	0.010	0.008	0.008
<b>FREQ (Hz)</b>	21.7	2.1	.4
<b>Peak Air Pressure:</b>	78 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**Additional Info:**

**Shaketable Calibrated:** 05/09/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 8336 Event: 37

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



**SN:** 8336 v3.66  
**Date:** 07/17/2020 **Time:** 06:01:00  
**Event:** 38  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #8 WSNSP  
**Distance:** 10.  
**Operator:** CTI INC  
**Comment:** SW UNIT

**Continuous Monitor Recording  
Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.030	0.020	0.040
<b>FREQ (Hz)</b>	14.3	12.2	13.2
<b>Peak Air Pressure:</b>	78 db		

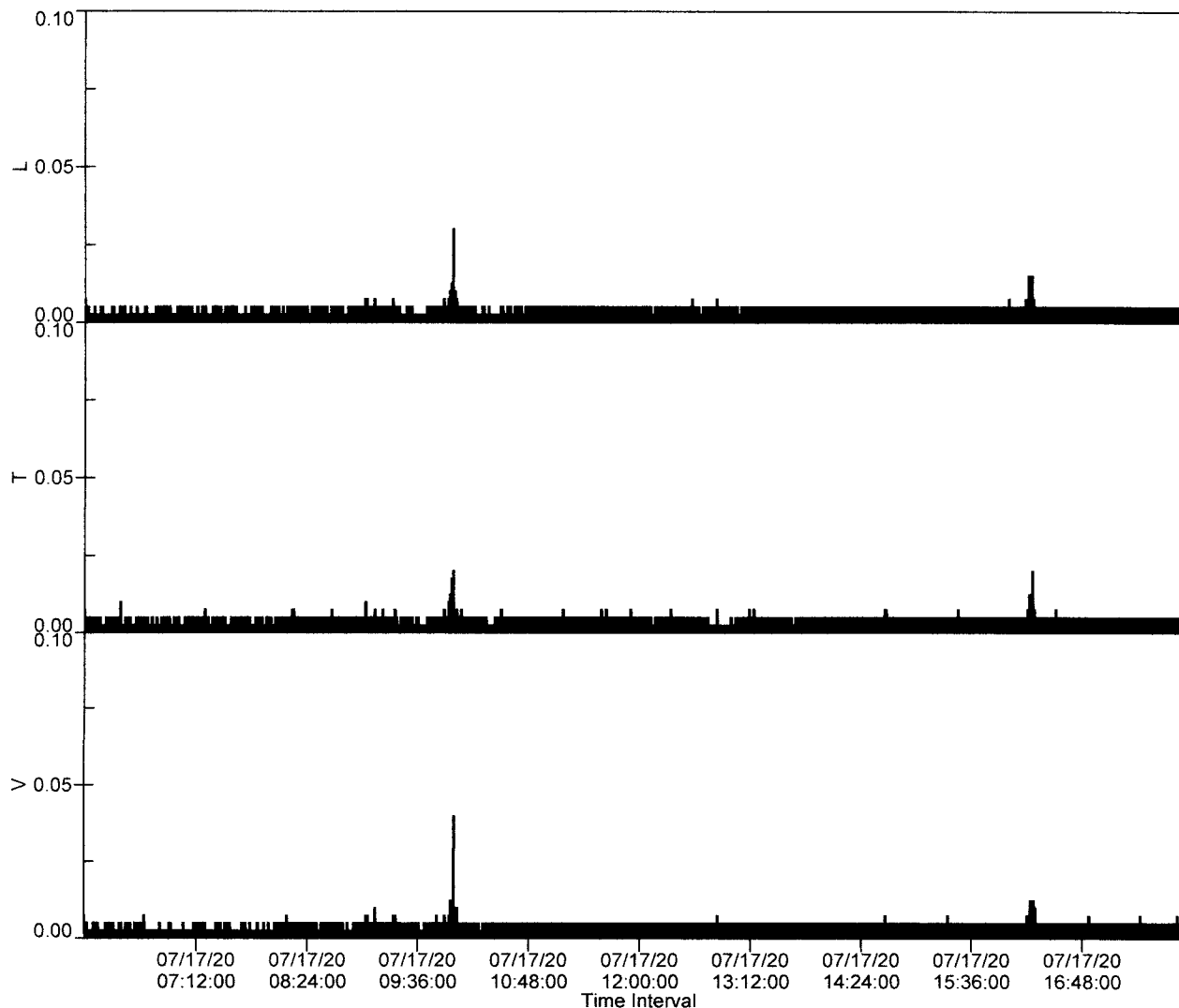
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 05/09/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 8336 Event: 38

Record Max PPV: 0.040 in/s Record Max DB: 78 db



**SN:** 8336 v3.66  
**Date:** 07/18/2020 **Time:** 06:01:00  
**Event:** 39  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #8 WSNP  
**Distance:** 10.  
**Operator:** CTI INC  
**Comment:** SW UNIT

**Continuous Monitor Recording  
Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.033	0.028	0.018
<b>FREQ (Hz)</b>	83.3	15.6	100.0
<b>Peak Air Pressure:</b>	78 db		

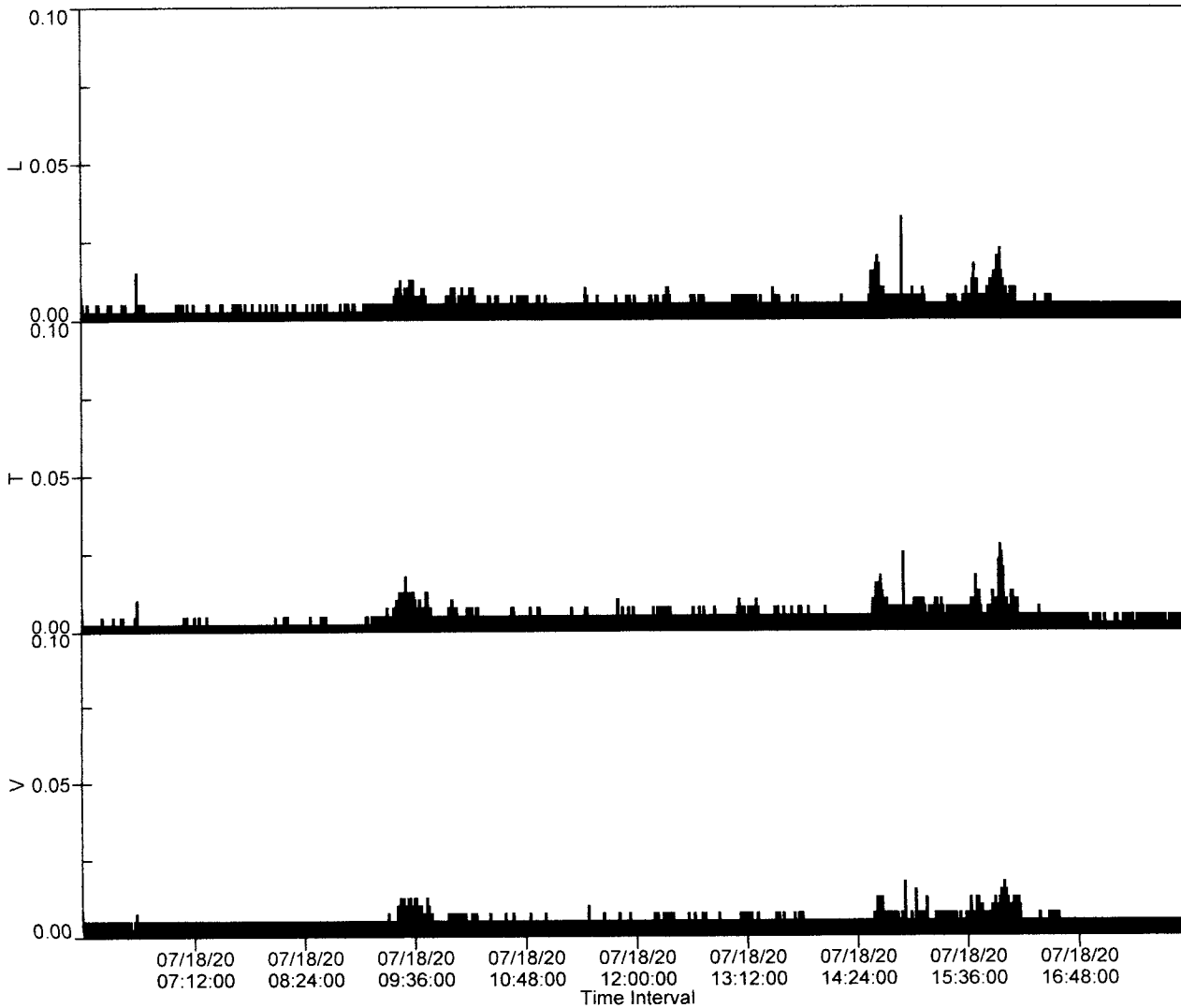
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 05/09/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 8336 Event: 39

Record Max PPV: 0.033 in/s Record Max DB: 78 db



**SN:** 8336 v3.66  
**Date:** 07/19/2020 **Time:** 06:01:00  
**Event:** 40  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #8 WSNP  
**Distance:** 10.  
**Operator:** CTI INC  
**Comment:** SW UNIT

**Continuous Monitor Recording  
Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.005	0.008	0.008
<b>FREQ (Hz)</b>	166.7	2.5	1.2
<b>Peak Air Pressure:</b>	78 db		

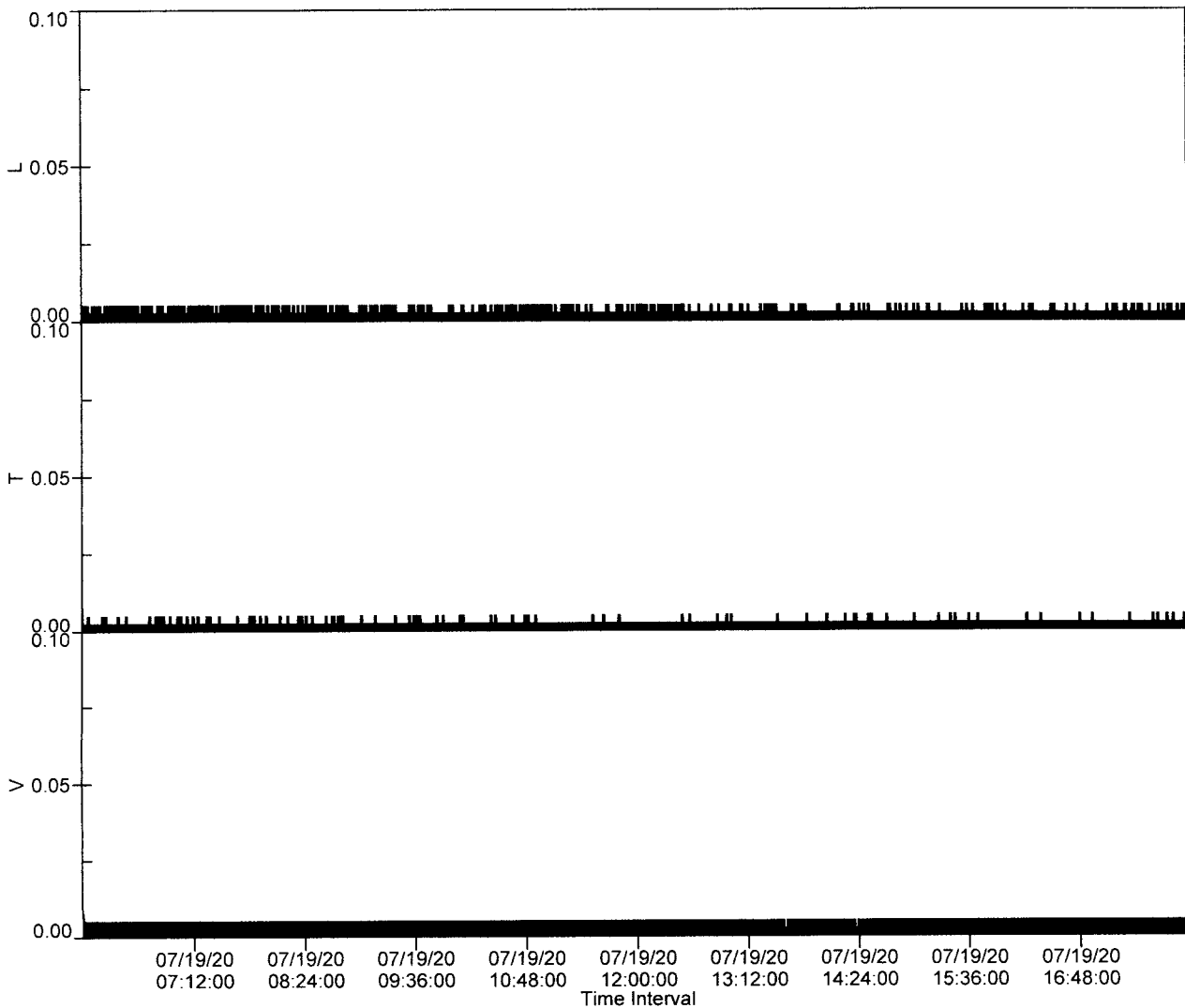
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

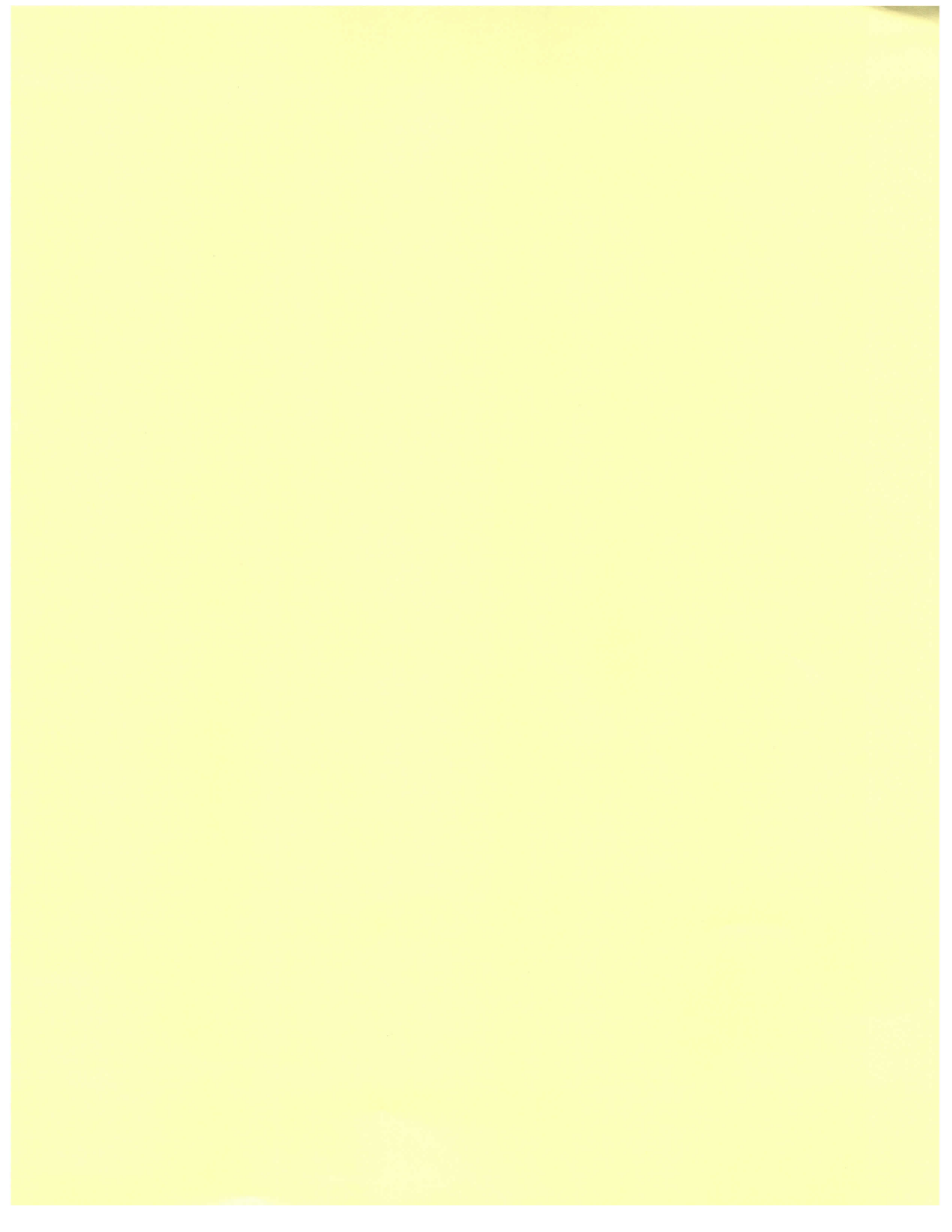
**Additional Info:**

**Shaketable Calibrated:** 05/09/2020  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 8336 Event: 40

Record Max PPV: 0.008 in/s Record Max DB: 78 db





**SN:** 5259 v3.67  
**Date:** 07/06/2020 **Time:** 08:25:00  
**Event:** 1  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #9 WSNP  
**Distance:** 15.  
**Operator:** CTI INC  
**Comment:** SW CORNER

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.010	0.010	0.008
<b>FREQ (Hz)</b>	.3	3.4	.3
<b>Peak Air Pressure:</b>	78 db		

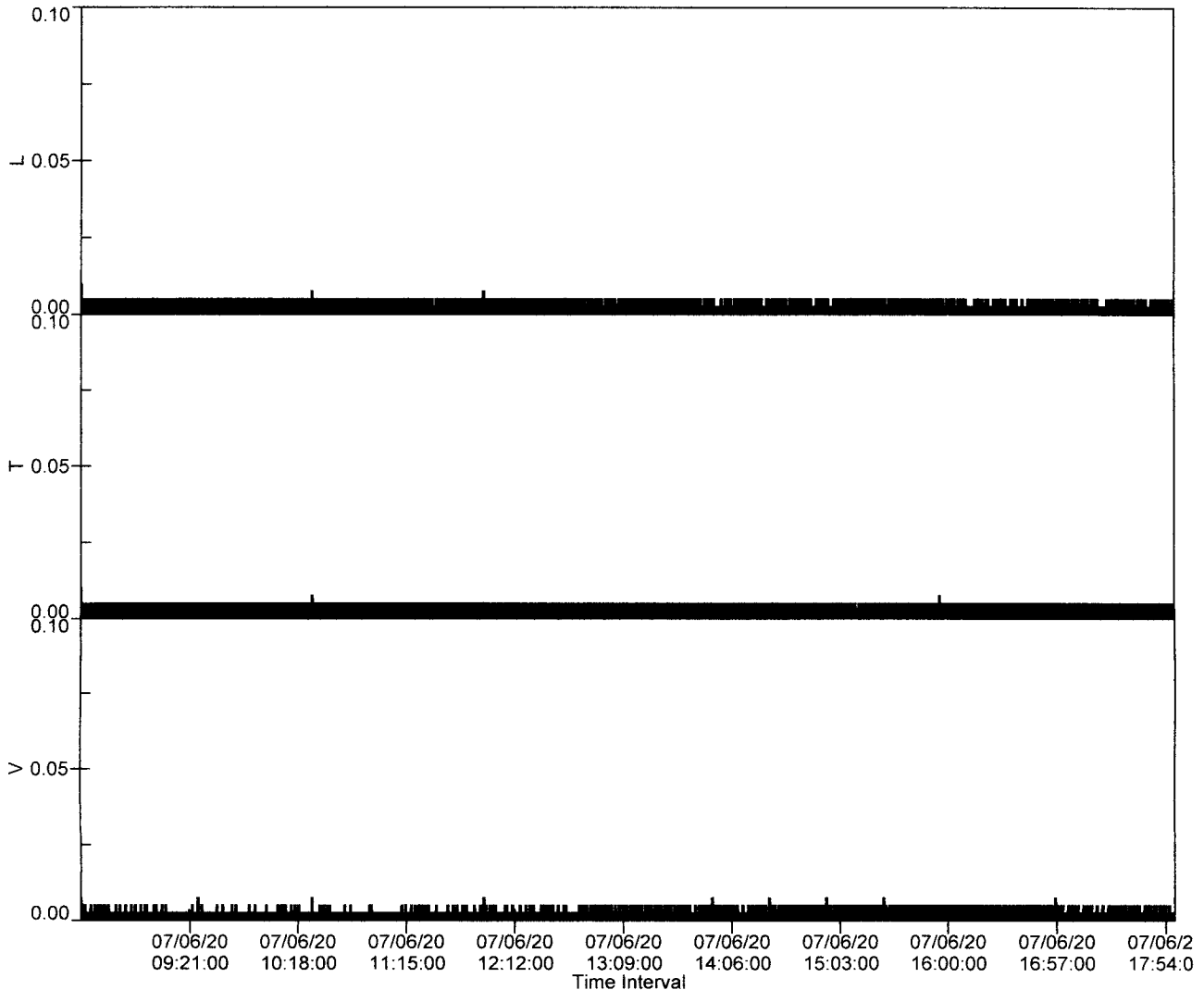
**Recording Time:** 574 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 01/23/2019  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 5259 Event: 1

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



**SN:** 5259 v3.67  
**Date:** 07/07/2020 **Time:** 06:01:00  
**Event:** 2  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #9 WSNSP  
**Distance:** 15.  
**Operator:** CTI INC  
**Comment:** SW CORNER

**Continuous Monitor Recording  
Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.018	0.025	0.013
<b>FREQ (Hz)</b>	23.8	19.2	31.3
<b>Peak Air Pressure:</b>	78 db		

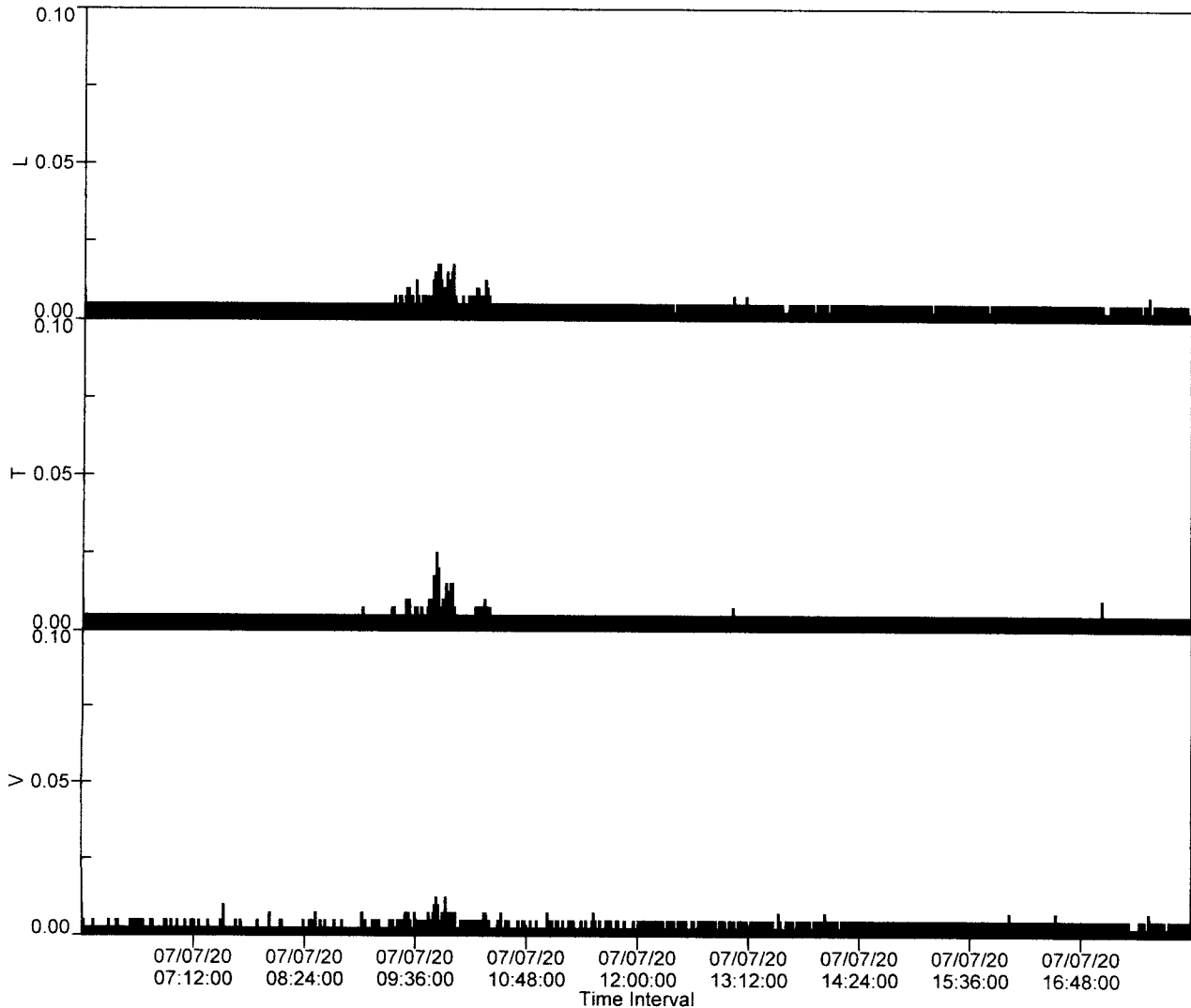
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 01/23/2019  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 5259 Event: 2

Record Max PPV: 0.025 in/s Record Max DB: 78 db



**SN:** 5259 v3.67  
**Date:** 07/08/2020 **Time:** 06:01:00  
**Event:** 3  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #9 WSNSP  
**Distance:** 15.  
**Operator:** CTI INC  
**Comment:** SW CORNER

**Continuous Monitor Recording  
Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.010	0.010	0.008
<b>FREQ (Hz)</b>	.3	1.9	.3
<b>Peak Air Pressure:</b>	78 db		

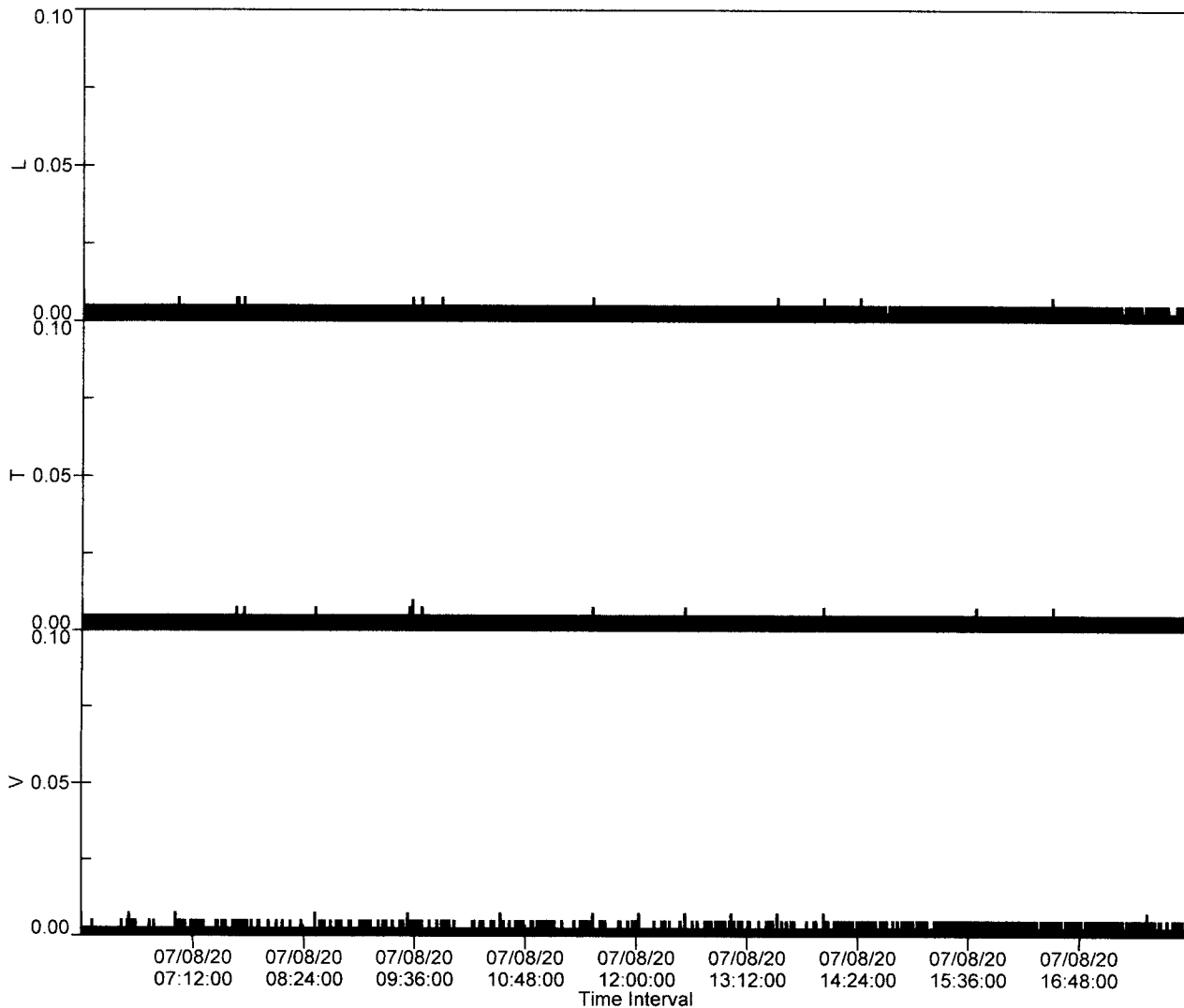
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 01/23/2019  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 5259 Event: 3

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





**SN:** 5259 v3.67  
**Date:** 07/09/2020 **Time:** 06:01:00  
**Event:** 4  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #9 WSNP  
**Distance:** 15.  
**Operator:** CTI INC  
**Comment:** SW CORNER

**Continuous Monitor Recording  
Summary Data**

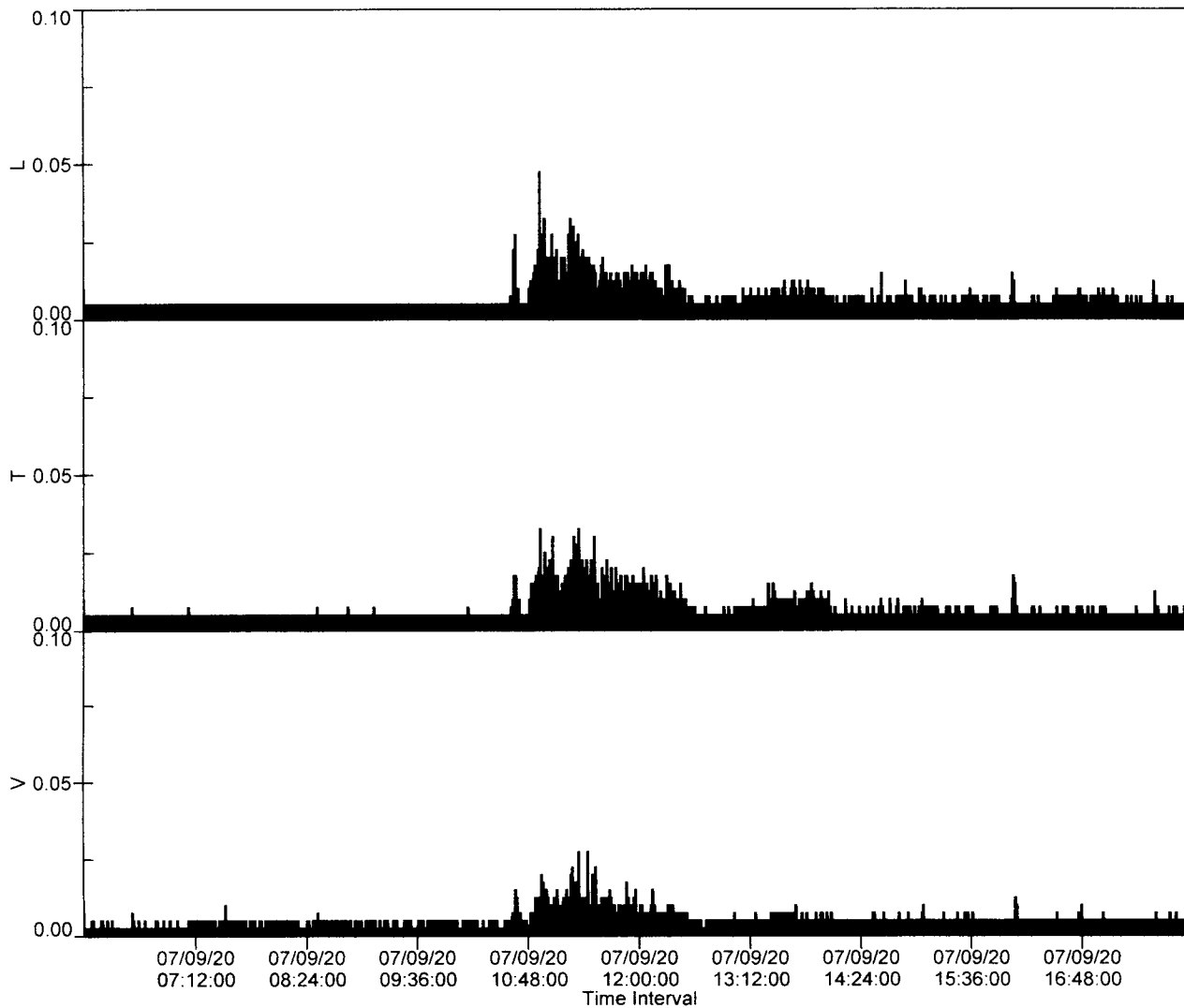
	L	T	V
<b>PPV (in/s)</b>	0.048	0.033	0.028
<b>FREQ (Hz)</b>	14.7	17.2	12.5
<b>Peak Air Pressure:</b>	78 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**Additional Info:**

**Shaketable Calibrated:** 01/23/2019  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 5259 Event: 4

Record Max PPV: 0.048 in/s Record Max DB: 78 db



**SN:** 5259 v3.67  
**Date:** 07/10/2020 **Time:** 06:01:00  
**Event:** 5  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #9 WSNP  
**Distance:** 15.  
**Operator:** CTI INC  
**Comment:** SW CORNER

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.015	0.028	0.018
<b>FREQ (Hz)</b>	13.5	16.1	17.9
<b>Peak Air Pressure:</b>	78 db		

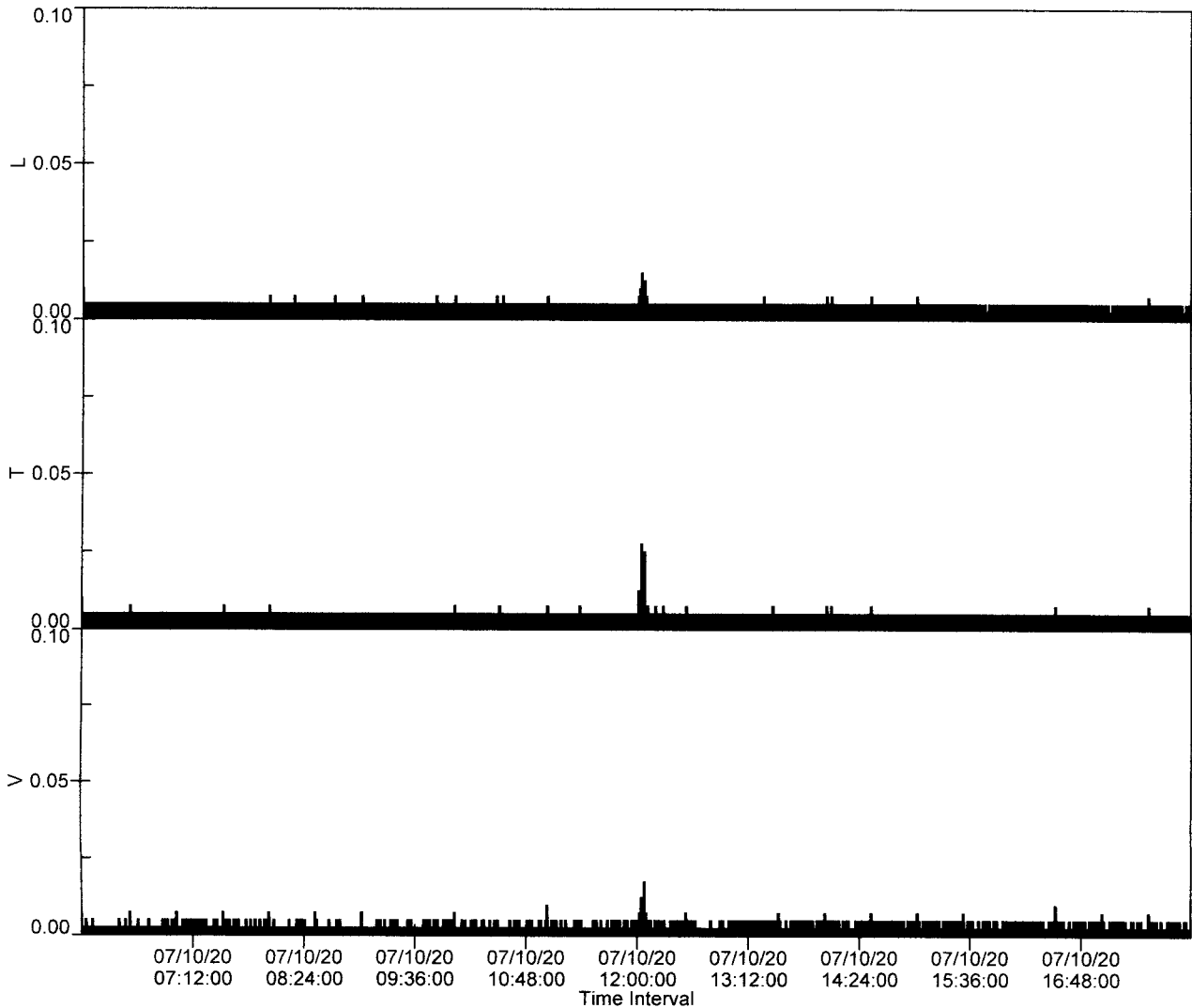
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 01/23/2019  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 5259 Event: 5

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



**SN:** 5259 v3.67  
**Date:** 07/11/2020 **Time:** 06:01:00  
**Event:** 6  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #9 WSNP  
**Distance:** 15.  
**Operator:** CTI INC  
**Comment:** SW CORNER

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.058	0.045	0.030
<b>FREQ (Hz)</b>	18.5	14.7	13.9
<b>Peak Air Pressure:</b>	78 db		

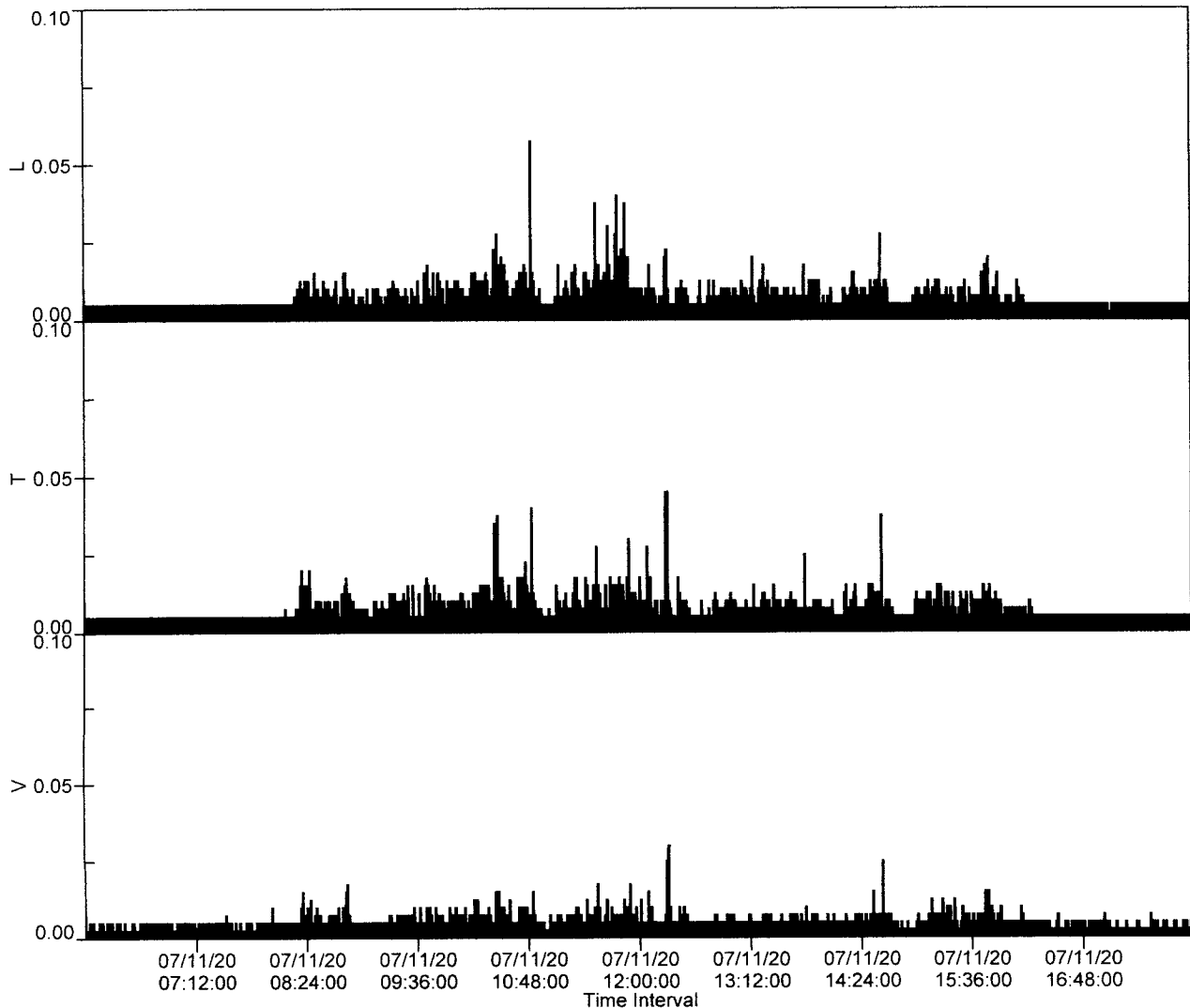
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 01/23/2019  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 5259 Event: 6

Record Max PPV: 0.058 in/s Record Max DB: 78 db



**SN:** 5259 v3.67  
**Date:** 07/12/2020 **Time:** 06:01:00  
**Event:** 7  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #9 WSNP  
**Distance:** 15.  
**Operator:** CTI INC  
**Comment:** SW CORNER

**Continuous Monitor Recording  
Summary Data**

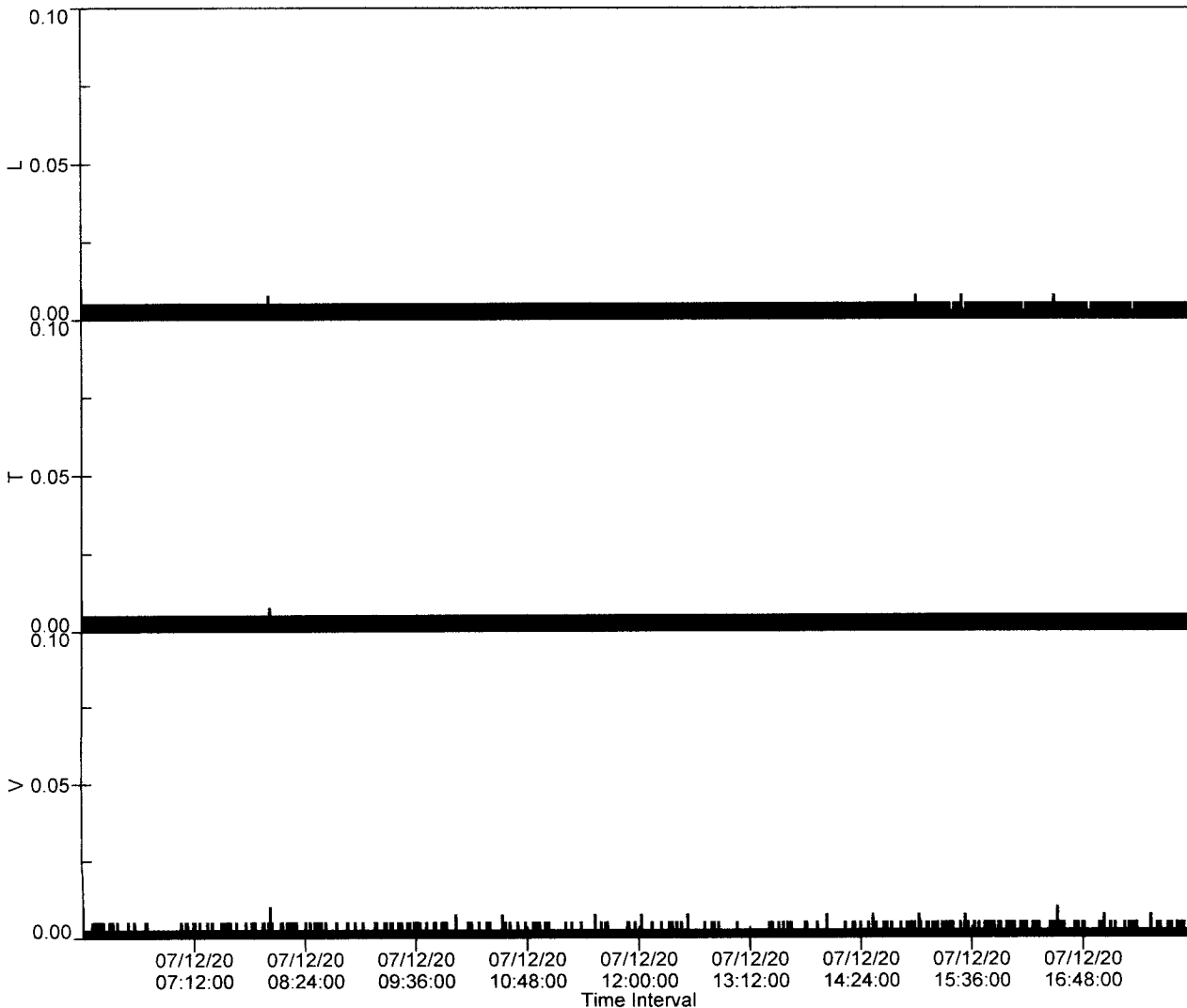
	L	T	V
<b>PPV (in/s)</b>	0.010	0.010	0.010
<b>FREQ (Hz)</b>	.3	13.9	.3
<b>Peak Air Pressure: 78 db</b>			
<b>Recording Time: 718 minutes</b>			
<b>Sample Size: 1440</b>			
<b>Interval Size: 60 seconds</b>			

**Additional Info:**

**Shaketable Calibrated:** 01/23/2019  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 5259 Event: 7

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



**SN:** 5259 v3.67  
**Date:** 07/13/2020 **Time:** 06:01:00  
**Event:** 8  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #9 WSNP  
**Distance:** 15.  
**Operator:** CTI INC  
**Comment:** SW CORNER

**Continuous Monitor Recording  
Summary Data**

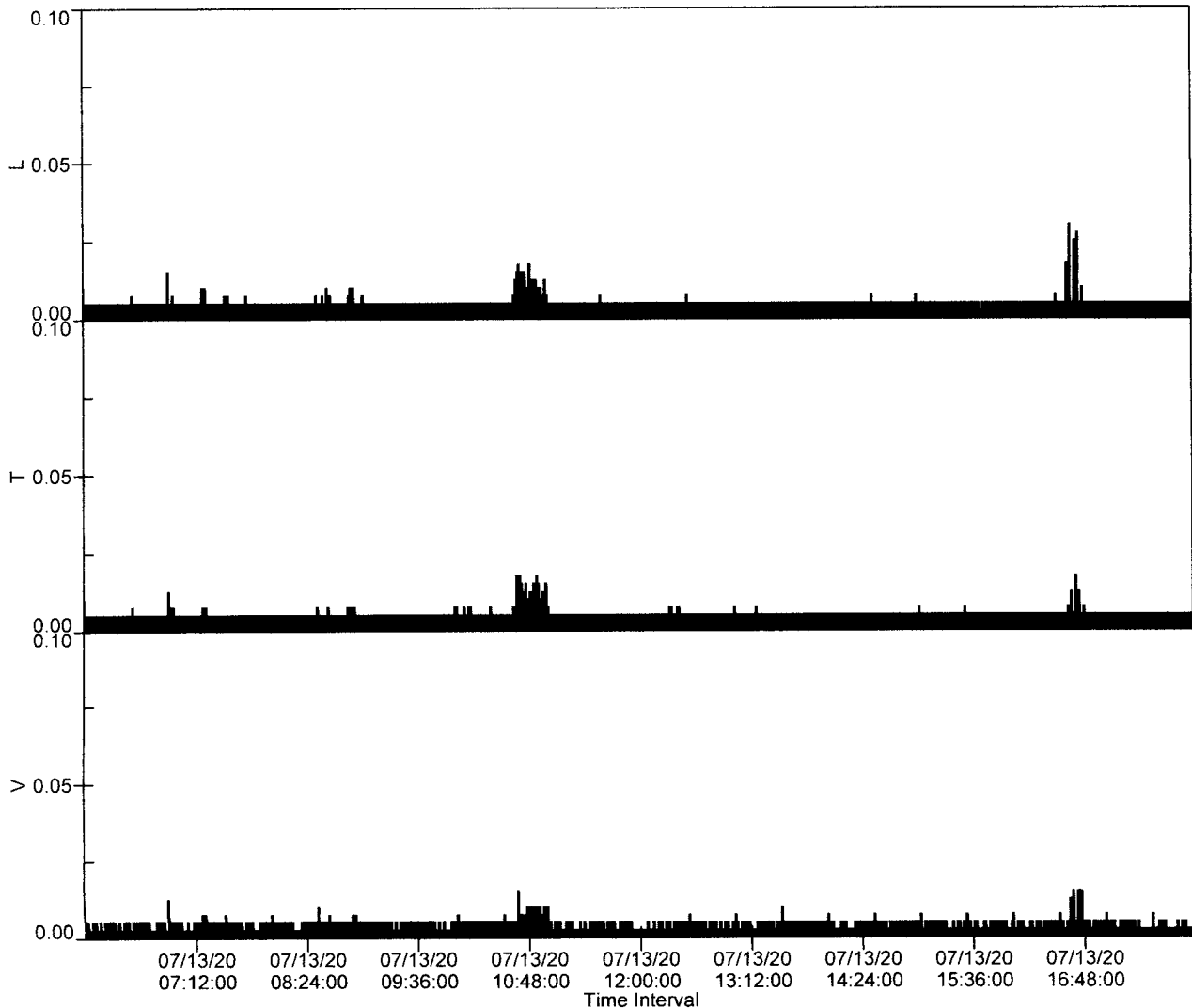
	L	T	V
<b>PPV (in/s)</b>	0.030	0.018	0.015
<b>FREQ (Hz)</b>	50.0	22.7	15.6
<b>Peak Air Pressure:</b>	78 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**Additional Info:**

**Shaketable Calibrated:** 01/23/2019  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 5259 Event: 8

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



**SN:** 5259 v3.67  
**Date:** 07/14/2020 **Time:** 06:01:00  
**Event:** 9  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #9 WSNP  
**Distance:** 15.  
**Operator:** CTI INC  
**Comment:** SW CORNER

**Continuous Monitor Recording  
Summary Data**

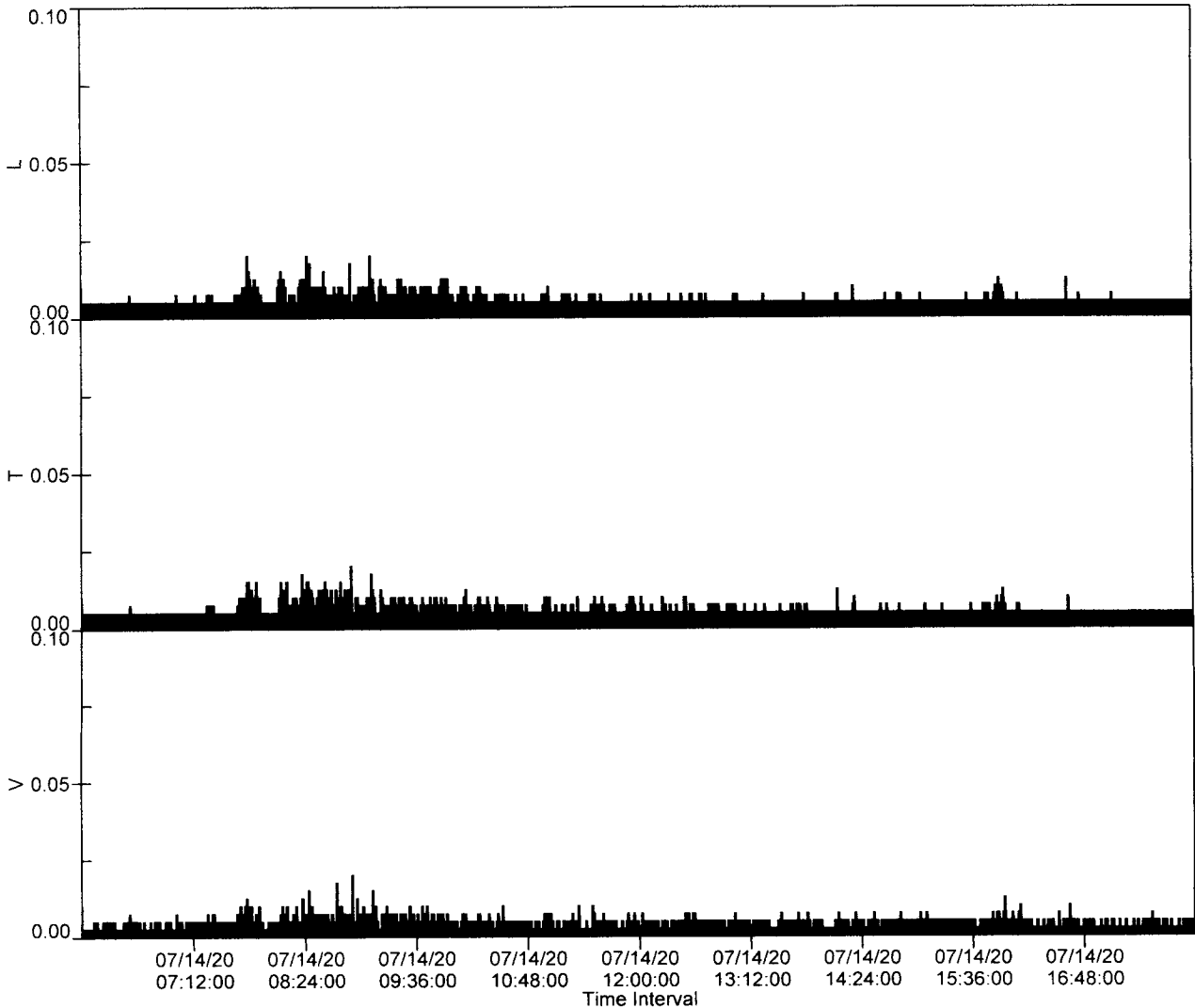
	L	T	V
<b>PPV (in/s)</b>	0.020	0.020	0.020
<b>FREQ (Hz)</b>	17.2	12.8	16.7
<b>Peak Air Pressure:</b>	78 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**Additional Info:**

**Shaketable Calibrated:** 01/23/2019  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 5259 Event: 9

Record Max PPV: 0.020 in/s Record Max DB: 78 db



**SN:** 5259 v3.67  
**Date:** 07/15/2020 **Time:** 06:01:00  
**Event:** 10  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #9 WSNP  
**Distance:** 15.  
**Operator:** CTI INC  
**Comment:** SW CORNER

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.060	0.048	0.065
<b>FREQ (Hz)</b>	26.3	26.3	15.6
<b>Peak Air Pressure:</b>	78 db		

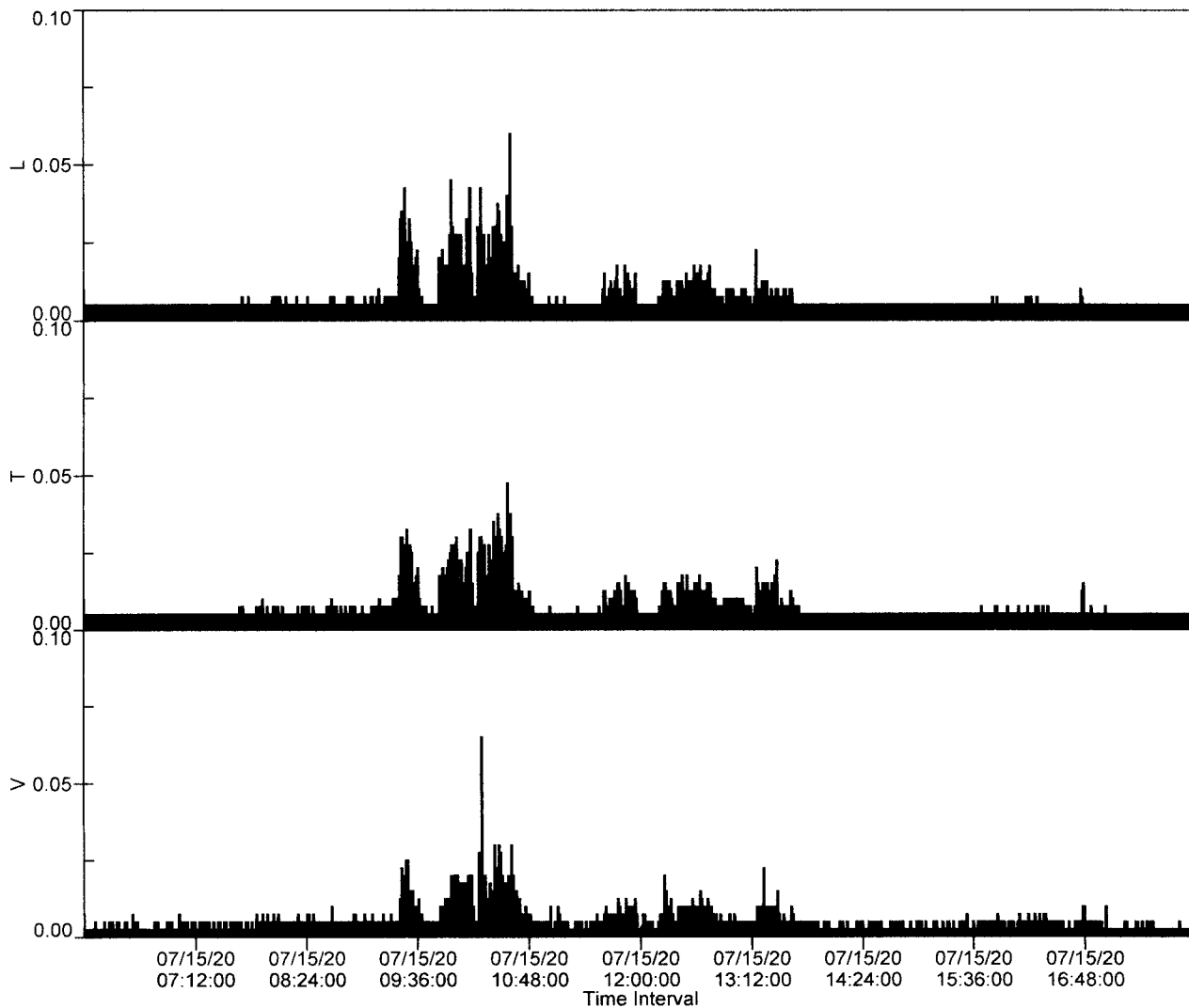
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 01/23/2019  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 5259 Event: 10

Record Max PPV: 0.065 in/s Record Max DB: 78 db



**SN:** 5259 v3.67  
**Date:** 07/16/2020 **Time:** 06:01:00  
**Event:** 11  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #9 WSNP  
**Distance:** 15.  
**Operator:** CTI INC  
**Comment:** SW CORNER

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
PPV (in/s)	0.010	0.010	0.010
FREQ (Hz)	.2	3.8	.3
Peak Air Pressure:	78 db		

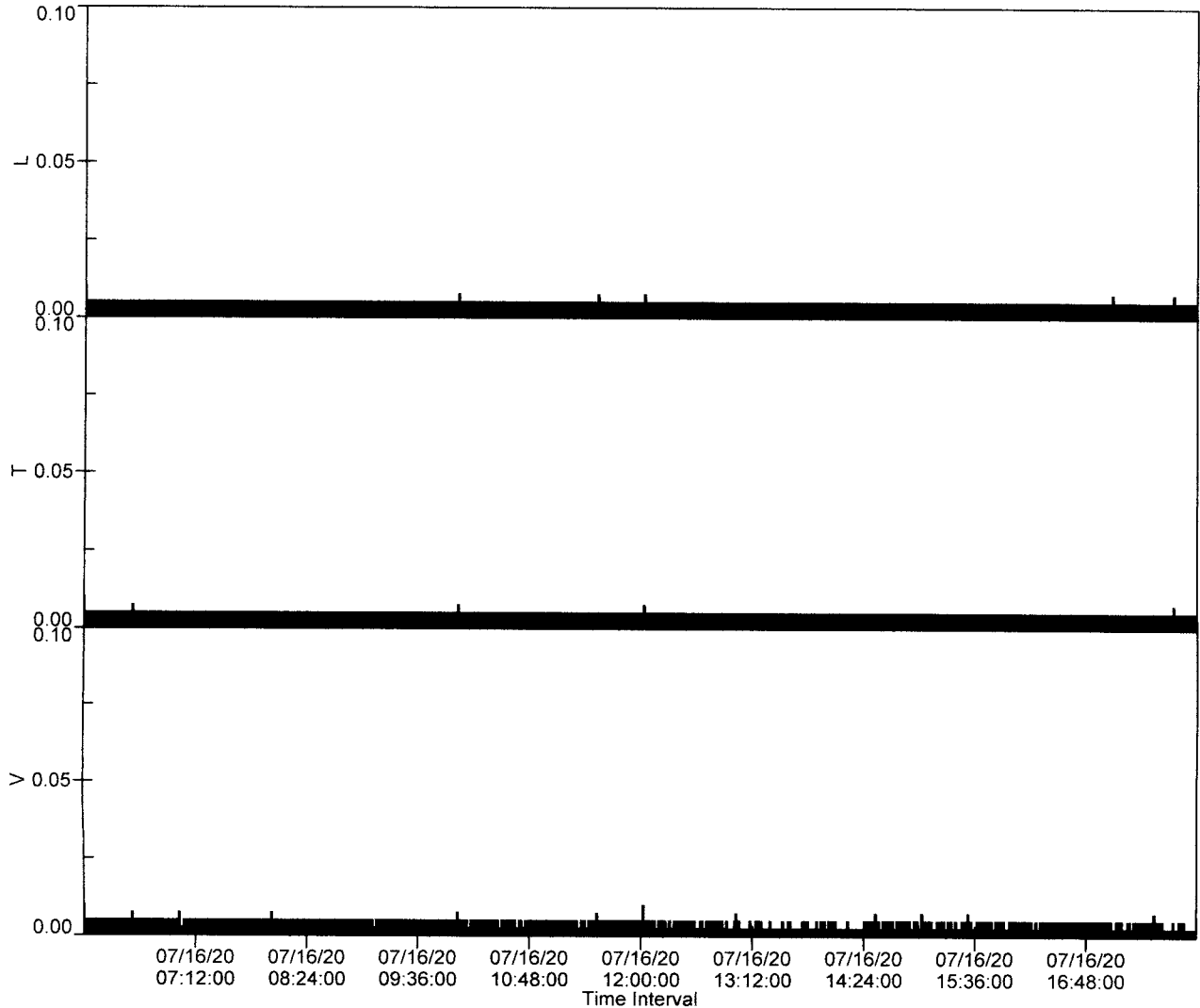
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 01/23/2019  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 5259 Event: 11

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





**SN:** 5259 v3.67  
**Date:** 07/17/2020 **Time:** 06:01:00  
**Event:** 12  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #9 WSNP  
**Distance:** 15.  
**Operator:** CTI INC  
**Comment:** SW CORNER

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.023	0.028	0.025
<b>FREQ (Hz)</b>	13.5	13.9	14.7
<b>Peak Air Pressure:</b>	78 db		

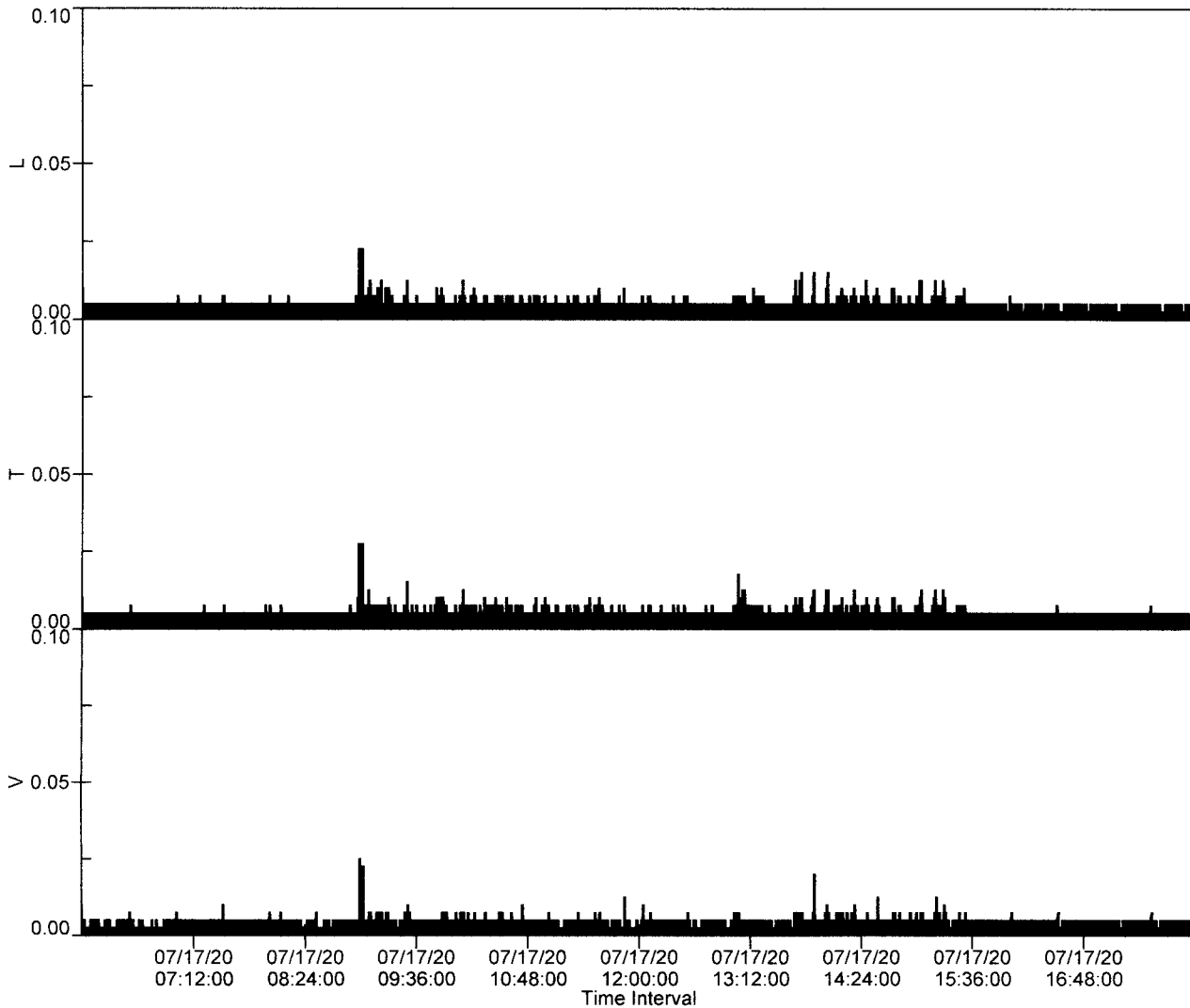
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 01/23/2019  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 5259 Event: 12

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



**SN:** 5259 v3.67  
**Date:** 07/18/2020 **Time:** 06:01:00  
**Event:** 13  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #9 WSNP  
**Distance:** 15.  
**Operator:** CTI INC  
**Comment:** SW CORNER

**Continuous Monitor Recording**

**Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.018	0.025	0.013
<b>FREQ (Hz)</b>	21.7	20.8	19.2
<b>Peak Air Pressure:</b>	78 db		

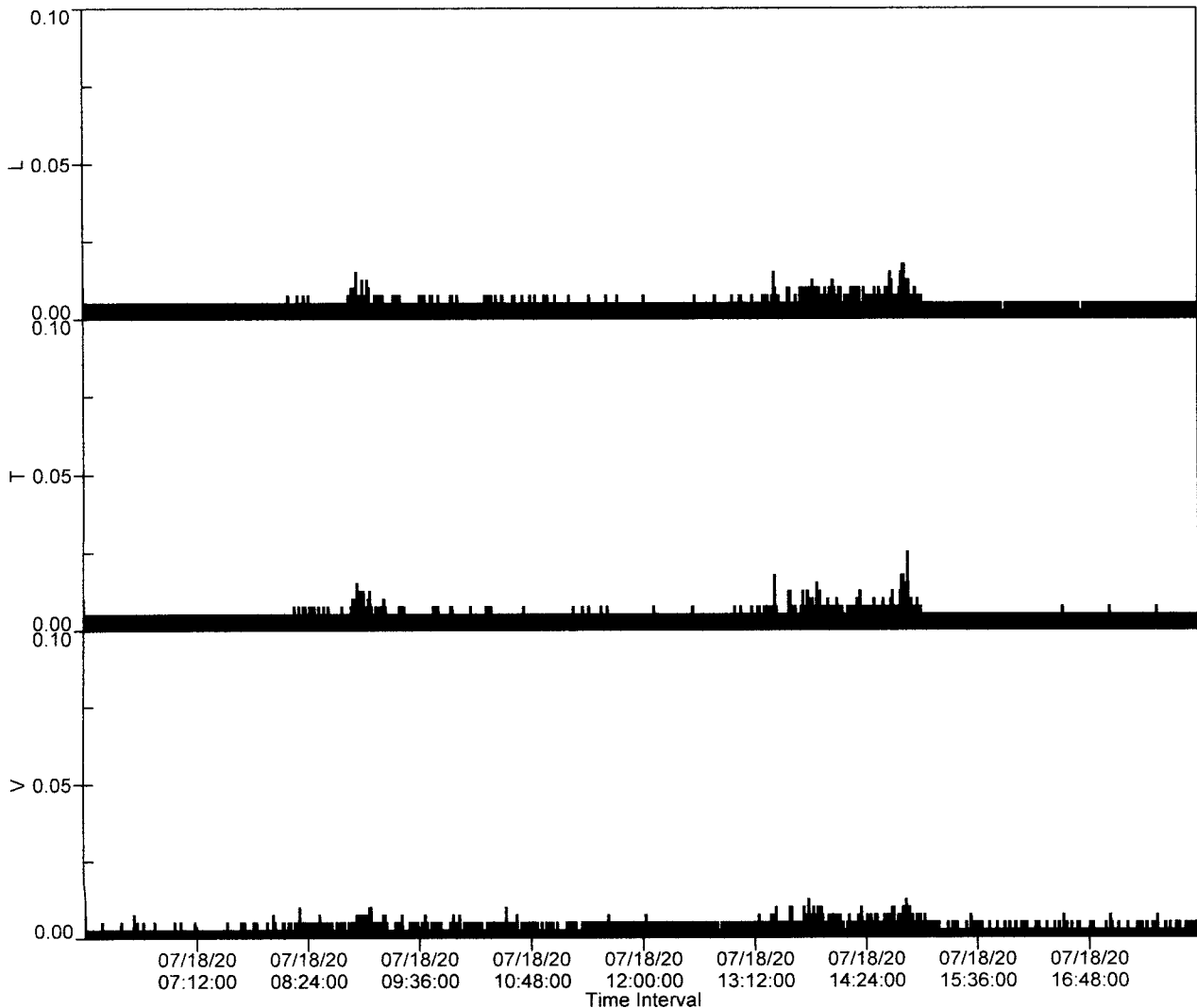
**Recording Time:** 718 minutes  
**Sample Size:** 1440  
**Interval Size:** 60 seconds

**Additional Info:**

**Shaketable Calibrated:** 01/23/2019  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 5259 Event: 13

Record Max PPV: 0.025 in/s Record Max DB: 78 db



**SN:** 5259 v3.67  
**Date:** 07/19/2020 **Time:** 06:01:00  
**Event:** 14  
**Client:** BERGER CONST  
**Operation:** EXCAVATION  
**Location:** #9 WSNP  
**Distance:** 15.  
**Operator:** CTI INC  
**Comment:** SW CORNER

**Continuous Monitor Recording  
Summary Data**

	L	T	V
<b>PPV (in/s)</b>	0.010	0.010	0.010
<b>FREQ (Hz)</b>	.3	38.5	250.0
<b>Peak Air Pressure:</b>	78 db		
<b>Recording Time:</b>	718 minutes		
<b>Sample Size:</b>	1440		
<b>Interval Size:</b>	60 seconds		

**Additional Info:**

**Shaketable Calibrated:** 01/23/2019  
**By:** GeoSonics Inc.  
 359 Northgate Drive  
 Warrendale, PA 15086 U.S.A.  
 TEL: 724.934.2900 FAX: 724.934.2999

SN: 5259 Event: 14

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

