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ACOUSTIC TEST REPORT, WTG S37

Version 03

Amherst Island Wind Project

Amherst Island, ON

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VERSION CONTROL

Version	Date	Version Description
01	May 27, 2021	Original Report
02	May 28, 2021	Corrected typographical errors in Table 9
03	June 9, 2021	Updated analysis with corrected wind direction

Limitations

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EXECUTIVE SUMMARY

Howe Gastmeier Chapnik Limited ("HGC Engineering") was retained by Windlectric Inc. to complete an Acoustic Noise test in accordance with IEC 61400-11 of wind turbine generator S37 ("WTG S37"), part of the Amherst Island Wind Project, located on Amherst Island, Ontario. The measurements were completed on April 22, 2021.

HGC Engineering has assessed the acoustic emissions of WTG S37, a Siemens SWT-3.2-113 wind turbine, rated at 2942 kW, at three measurement locations in accordance with IEC 61400-11:2018-06. A summary of the acoustic results is provided in the following tables:

Downwind Location

Hub Height Wind Speed [m/s]	7.5	8	8.5	9	9.5	10	10.5	11*	11.5*	12*	12.5*	13*
Sound Power Level $L_{WA,k}$ in dB(A):	**100.0**	**102.2**	**103.2**	**103.5**	**103.2**	**103.0**	**102.8**	**102.7**	**102.9**	**102.8**	**[103.4]**	**[103.3]**
Tonal Audibility, ΔL_{ak} in dB:	<-3.0	<-3.0	-1.1	-0.5	-1.3	-2.7	<-3.0	-1.4	-0.2	-0.1	-0.9	-1.2
Total Uncertainty $u_{LWA,k}$ in dB:	0.8	0.8	0.7	0.8	0.8	0.7	0.8	0.8	0.9	0.9	0.9	1.0

* Above *allowed range* of power curve.
[ ] Includes assumed background data points.

Crosswind Location

Hub Height Wind Speed [m/s]	7.5	8	8.5	9	9.5	10	10.5	11*	11.5*	12*	12.5*	13*
Sound Power Level $L_{WA,k}$ in dB(A):	**99.2^**	**101.3**	**102.8**	**103.0**	**102.8**	**102.8**	**102.6**	**102.7**	**102.8**	**102.4^**	**102.1^**	**[102.9]**
Tonal Audibility, ΔL_{ak} in dB:	0.4	3.5	5.3	5.2	4.9	4.2	3.3	3.7	3.1	2.9	2.3	1.6
Total Uncertainty $u_{LWA,k}$ in dB:	1.0	1.0	0.8	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.1	1.1

* Above *allowed range* of power curve.
^ Total noise is within 6 dBA of background noise.
[ ] Includes assumed background data points.

Upwind Location

Hub Height Wind Speed [m/s]	7.5	8	8.5	9	9.5	10	10.5	11*	11.5*	12*	12.5*	13*
Sound Power Level $L_{WA,k}$ in dB(A):	**99.8^**	**101.4^**	**102.4^**	**103.0^**	**103.1^**	**102.3^**	**102.6^**	^^	^^	^^	^^	**[105.1]**
Tonal Audibility, ΔL_{ak} in dB:	-2.1	<-3.0	<-3.0	0	-3	<-3.0	<-3.0	-2.8	<-3.0	-2	-2.8	<-3.0
Total Uncertainty $u_{LWA,k}$ in dB:	1.3	1.2	1.1	1.1	1.1	1.2	1.2	1.4	1.3	1.6	1.7	2.0

* Above *allowed range* of power curve.
^ Total noise is within 6 dBA of background noise.
^^ Total noise is within 3 dBA of background noise.
[ ] Includes assumed background data points.

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1 INTRODUCTION

Howe Gastmeier Chapnik Limited ("HGC Engineering") was retained by Windlectric Inc. to complete sound level measurements (Emission Audit) of wind turbine generator S37 ("WTG S37") to determine the sound power level of the wind turbine measured from a downwind, crosswind, and upload location.

The turbine is part of the Amherst Island Wind Project which includes 26 Siemens wind turbines of various generation capacities, each with a hub height of 99.5 m, with an overall project nameplate capacity of 74.3 MW. Measurements were completed on April 22, 2021. Figure 1 shows the location of WTG S37.

This report summarizes measurements that were completed in accordance with IEC Standard 61400-11:2018-06 "Wind turbine generator systems – Part 11: Acoustic Noise Measurement Techniques" [1].

1.1 Deviations from IEC 61400-11

The minimum number of background data points in the 13 m/s wind speed bins in all wind directions and the 12.5 m/s wind speed bin in the downwind direction was not met with the available test data. However, the analysis presented herein conservatively assumes each missing data point has an overall sound pressure level of 30 dBA to fulfill the minimum number of required data points. The spectral characteristics for the assumed data points were determined by logarithmically averaging the spectral characteristics of the measured data points in the 12.5 m/s and 13 m/s wind speed bins. Lower background sound data results in a smaller correction to the measured total noise and therefore a higher turbine only sound level. The uncertainty and tonality were calculated based only on the measured data.

2 WIND TURBINE GENERATOR

The wind turbine generator is manufactured by Siemens and is the SWT-3.2-113 model, rated at 2942 kW, with a rotor diameter of 113 m and a hub height of 99.5 m. This turbine is an upwind, pitch controlled, horizontal axis wind turbine with three blades. Specific details of the wind turbine generator are included in Table 1.

Table 1 - Wind Turbine Generator Characteristics

Wind Turbine					
Manufacturer	Siemens				
Model Number	SWT 3.2-113				
Serial Number	5100229891				
Hub Height	99.5 m				
Tower Type (lattice or tube)	Tubular				
Horizontal Distance from Rotor Centre to Tower Axis	5.5 m				
Rotor Diameter	113 m				
Speed (constant or variable)	Variable				
	6 m/s	7 m/s	8 m/s	9 m/s	10 m/s
Pitch Angle	Confidential				
Rotational Speed	Confidential				
Rated Power Output	2942 kW				
Control Software Version	143.0.0.9				
Rotor Details					
Rotor Control Devices	Pitch Control				
Presence of Votex Generators, Stall Strips Trailing Edges	Vortex Generators				
Blade Type	Siemens B55				
Serial Number	Blade A: 550255701 Blade B: 550344201 Blade C: 550344801				
Gearbox					
Manufacturer	N/A – Direct Drive				
Model Number					
Serial Number					
Generator					
Manufacturer	Siemens				
Model Number	DD22_02				
Serial Number	51002229891				
UTM Coordinates					
Easting	365501				
Northing	4889854				

The electrical power curve used for the sound level measurements is shown in Figure 2. From the supplied power curve, 85% of maximum electrical power is reached at 2501 kW or at a hub height wind speed of 9.7 m/s. The required minimum wind speed range for reporting is from 0.8 to 1.3 times the wind speed at 85% electrical power which is 7.5 to 13 m/s for this wind turbine.

WTG S37 is outfitted with a retrofit blade ice protection system manufactured by Borealis Wind Inc. The system consists of a blade heater installed in each blade and a control cabinet installed in the nacelle. The ice protection system has two modes of operation: ON and OFF. De-icing refers to the operation of the ice protection system while the wind turbine is parked, and anti-icing refers to the operation of the ice protection system during normal turbine operation to prevent ice accumulation on the blades. For the duration of the testing period described in this report, the ice protection system was operating while WTG 37 was operational and was deactivated (off) while WTG S37 was parked.

3 TEST ENVIRONMENT

WTG S37 is part of the Amherst Island Wind Project located on Amherst Island, Ontario. Figure 1 shows the specific location of WTG S37. The surrounding land is used mainly for livestock grazing and includes gently rolling terrain. The area surrounding WTG S37 included agriculture fields with short grass. The sound level measurement locations were each in an area with short grass.

There are several wind turbine generators located in the vicinity of the test turbine. WTG S19 is located approximately 480 m to the west and WTG S27 is located approximately 510 m to the east. Additional turbines are located more than 1000 m away. WTG S19 and S27, part of the Amherst Island Wind Project, were parked during the testing of WTG S37.

The sound level measurement locations were established at 156 m from the base of the turbine, upwind, downwind, and crosswind of the prevailing wind direction. This distance was determined utilizing the reference distance calculation provided in IEC 61400; $R_0 = H + D/2 \pm 20\%$ where H is the hub height and D is the rotor diameter. An R_1 distance of 191.5 m was determined for this test using the equation:

$$R_1 = \sqrt{(D_1 + D_2 + D_3)^2 + H_{hub}{}^2}$$

Where D_1 is the distance from turbine base to the microphone (156 m), D_2 is the tower radius (2.15 m), D_3 is the distance from rotor to tower axis (5.5 m) and H_{hub} is the hub height (99.5 m). Based on measurements taken during the testing, the difference in elevation between the turbine base and the microphone locations was negligible.

Photos of the sound level measurement locations, the test turbine, and wind mast location are included under Appendix A.

4 INSTRUMENTATION AND SETUP

A Wolfel RoBin measurement system was utilized to complete the IEC measurements. Sound pressure level measurements and recordings were completed using 01 dB DUO Smart Noise Monitors for the downwind and crosswind locations, and a Svantek 977 Sound Level Meter for the upwind location. The microphones were each mounted on a one metre diameter board. A standard Bruel & Kjaer 3" wind screen (half) was used on each microphone. A secondary Bruel & Kjaer UA-2133 wind screen was used at the downwind and crosswind locations. The influence of the secondary windscreen is shown in Table 2. The acoustic influence of the secondary windscreen contributes approximately 0.2 dBA to the overall sound level and the sound levels have been corrected herein.

Table 2 - Frequency Dependent Influence for UA-2133 Windscreen

Frequency [Hz]	SPL Influence [dB]	Frequency [Hz]	SPL Influence [dB]
100	-0.07	1600	-0.3
125	0.06	2000	-0.03
160	0.01	2500	-0.12
200	0.18	3150	-0.25
250	-0.03	4000	-0.73
315	-0.25	5000	-0.5
400	-0.26	6300	-0.03
500	-0.18	8000	-0.99
630	0.04	10000	-0.77
800	-0.14	12500	-0.75
1000	-0.44	16000	-1.23
1250	-0.14	20000	-0.59

The RoBin, DUO, and Svantek systems were time synchronized prior to the start of the measurements (within 1 second).

The electrical power, rotor RPM, azimuth and hub height wind speeds were provided by the customer after the completion of the measurements.

Wind speed and direction at 10 m height were measured using a Vaisala ultrasonic anemometer. A Reinhardt DFT485 sensor was utilized to measure air pressure, temperature, and air humidity. Table 3 shows the weather conditions during the measurement period.

Table 3 - Weather Conditions

Meteorological Condition	April 22, 2021	
	Start of Test	End of Test
Air Temperature (°C)	2	7
Air Pressure (hPa)	998	998
Sky Condition	Partly Cloudy	
Range of Wind Direction (°)	305 to 335	
Range of Azimuth Angle (°)	293 to 323	

The measurement equipment and relevant calibration information are shown in Table 4.

Table 4 - Instrumentation

Instrumentation	Manufacturer / Model / Serial Number	Calibration	
		Completed	Due
Measurement System	Wolfel / RoBin / ROBIN.00.0003	NA	NA
Sound Level Meter (Downwind Location)	01 dB-Metravib / DUO / 10815	17/03/2021	17/03/2022
Microphone (Downwind Location)	GRAS / 40CD / 154426	15/03/2021	15/03/2022
Sound Level Meter (Crosswind Location)	01 dB-Metravib / DUO / 12023	18/03/2021	18/03/2022
Microphone (Crosswind Location)	GRAS / 40CD / 224382	15/03/2021	15/03/2022
Sound Level Meter (Upwind Location)	Svantek / 977 / 36428	23/12/2020	23/12/2021
Microphone (Upwind Location)	Bruel & Kjaer / 4188 / 2929211	23/12/2020	23/12/2021
Anemometer	Vaisala / WMT701 / J3920012	19/01/2021	19/01/2023
Air Pressure / Temperature and Humidity	Reinhardt / DFT485 / 1027951	21/01/2021	21/01/2023
Acoustic Calibrator	Bruel & Kjaer / 4231 / 3010241	15/03/2021	15/03/2022
Primary Wind Screen	Bruel & Kjaer	NA	NA
Secondary Wind Screen and Ground Board (Downwind and Crosswind)	Bruel & Kjaer / UA 2133	NA	NA
Noisy Software	Wolfel / Noisy Version 2021 v2 beta	NA	NA

Correct calibration of the acoustic instrumentation was verified using an acoustic calibrator manufactured by Brüel & Kjær. Verification of calibration status was carried out at the start and end of the measurement period and when the microphone was disconnected from the sound level meter. Calibration certificates for the test equipment are provided in Appendix B. The same equipment was utilized during the entire test period unless otherwise indicated.

During testing, the anemometer was located 130 m southeast of the turbine at 10 m above grade.

The standard roughness length applicable for this site is 0.05 given the surrounding farmland with some vegetation.

Sound level measurements were completed with the turbine operational and with the turbine parked. Significant interfering sound from road traffic, aircraft, bird calls, local agricultural activity, etc. was not included in the analyzed data for either the turbine on or off condition. The microphone position was maintained to be within +/- 15° of the downwind direction through visual inspection and the recording of the azimuth position.

4.1 Type B Uncertainties

The uncertainty components of Type B are provided in Table 5. Additional one-third octave Type B uncertainty components for the instrument and wind screen insertion loss can be provided upon request. These uncertainty components are provided by the instrument manufacturers.

Table 5 - Type B Uncertainty Components

Component	Value
Calibration, u_{B1}	0.2 dB
Instrument, u_{B2}	0.2 - 0.5 dB
Board, u_{B3}	0.3 dB
Wind screen insertion loss, u_{B4}	0.1 - 0.5 dB
Distance and Direction, u_{B5}	0.1 dB
Air Absorption, u_{B6}	0.2 dB
Weather Conditions, u_{B7}	0.5 dB
Wind Speed, Measured, u_{B8}	0.7 m/s
Wind Speed Derived, u_{B8}	0.3 m/s
Wind Speed, Power Curve, u_{B9}	0.2 m/s

The uncertainty associated with the electrical power transducer (derived wind speed, u_{B8}) has been increased to 0.3 m/s as the electrical power output was provided by the manufacturer. The manufacturer has indicated a measurement chain uncertainty of 1% on the measured electrical power, which corresponds to approximately 0.05 m/s. An increase of 0.1 m/s, over the typical standard uncertainty, has been included for the derived wind speed uncertainty.

5 MEASUREMENTS AND RESULTS

Sound level measurements were conducted of WTG S37 on April 22, 2021, between 11:00 and 16:00. Temperature and other weather characteristics are reported in Table 3 above.

The data points where the turbine was operating within the allowed power curve range are identified as the *allowed range* (intervals on the electrical power curve where no duplicated values exist and the slope of the power curve including the uncertainty is positive). In accordance with Equation (3) of Section 8.2.1.1 of IEC 61400-11, and using a typical tolerance on the power curve (P_{tol}) of 3%, the allowed range of the power curve was determined. The slope of the power curve was calculated to be positive at integer wind speeds between 4 and 10 m/s. The allowed range of the power curve was therefore determined to be between 171 kW and 2634 kW.

For data within the allowed range of the electrical power curve the wind speed ($V_{P,n}$) is determined. The average value of the ratio between the derived wind speed from the electrical power curve and the measured nacelle wind speed ($V_{nac,m}$), k_{nac} is determined. $k_{\mathrm{nac}} = \frac{V_{\mathrm{nac,n}}}{V_{\mathrm{nac,m}}}$. For the upwind and crosswind data sets, the k_{nac} value of 0.94 was applied to the measured nacelle wind speed to derive the normalized wind speed outside the allowed range. A k_{nac} value of 0.93 was used for the downwind data set.

For background noise measurements, the measured 10 m wind speed ($V_{Z,m}$) and the wind speed derived from the power curve $V_{P,n}$ are used to determine k_Z. $k_{\mathrm{Z}} = \frac{V_{\mathrm{P,n}}}{V_{\mathrm{Z,m}}}$. For the upwind and crosswind data sets the k_Z value of 1.14 was applied to the measured 10 m wind speed ($V_{Z,m}$) to derive the normalised wind speed at hub height ($V_{B,n}$) during background noise measurements. A k_Z value of 1.13 was used for the downwind data set.

Figures 3a through 3c show the sound pressure level at the measurement location versus the hub height wind speed. Blue circles represent sound level data points collected with the turbine operating in the allowed range, above this point the sound levels are shown as black squares. Magenta triangles indicate data points of the background sound level (turbine off).

Figures 4a through 4c show the measured total noise versus electrical power. Figures 5a through 5c plot the wind speed determined from the electrical power curve (V_p) relative to the measured nacelle wind speed ($V_{nac,m}$) and 10 m met mast wind speed ($V_{z,m}$).

5.1 Downwind Location

Table 6 summarizes the analysis of the measured results for the downwind measurement location.

Table 6 - Sound Level Results, Downwind Location

Hub Height Wind Speed [m/s]	7.5	8	8.5	9	9.5	10	10.5	11*	11.5*	12*	12.5*	13*
Collected Data Points, Total	10	13	20	27	27	25	52	68	38	38	20	24
Collected Data Points, Background	17	33	35	65	41	32	35	30	18	13	[10]	[10]
Average Wind Speed, V_K [m/s]	7.6	8.0	8.5	9.0	9.5	9.9	10.5	11.0	11.5	12.0	12.5	13.0
Total Noise, $L_{V,T,}$ [dB(A)]	50.0	51.9	52.9	53.2	53.0	52.8	52.6	52.7	53.0	52.8	53.0	52.9
Background Noise, $L_{V,B}$ [dB(A)]	41.7	41.7	42.1	42.3	43.0	42.4	43.1	44.1	44.6	44.5	[41.0]	[39.9]
Difference T-B [dB(A)]	8.3	10.2	10.8	10.9	10.0	10.3	9.5	8.6	8.3	8.2	12.0	13.0
Corrected L_{Aeq} [dB(A)]	49.4	51.6	52.5	52.8	52.6	52.4	52.2	52.1	52.3	52.1	52.7	52.7

* Above *allowed range* of power curve.
[ ] Includes assumed background data points.

Table 6 shows that at least 180 measurements were collected for both total noise and background noise and at least 10 data points are included in the analysis for each wind speed bin, as required by IEC 61400-11.

Table 7 shows the calculated sound level data, the resulting sound power levels, tonality, and measurement uncertainty at hub height, while Table 8 shows the apparent sound power levels at a reference height of 10 m. Figure 6a presents the apparent sound power level at hub height wind speeds.

Table 7 - Apparent Sound Power Level of WTG S37 at Hub Height, Downwind Location

Hub Height Wind Speed [m/s]	7.5	8	8.5	9	9.5	10	10.5	11*	11.5*	12*	12.5*	13*
Corrected L_{Aeq}, in dB(A)	49.4	51.6	52.5	52.8	52.6	52.4	52.2	52.1	52.3	52.1	52.7	52.7
Sound Power Level $L_{WA,K}$ in dB(A)	**100.0**	**102.2**	**103.2**	**103.5**	**103.2**	**103.0**	**102.8**	**102.7**	**102.9**	**102.8**	**[103.4]**	**[103.3]**
Theoretical Active Power in kW	1267	1519	1816	2113	2374	2634	2757	2879	2908	2936	2939	2942
Tonal Audibility, ΔL_{ak} in dB:	<-3.0	<-3.0	-1.1	-0.5	-1.3	-2.7	<-3.0	-1.4	-0.2	-0.1	-0.9	-1.2
Total Uncertainty $u_{LWA,k}$ in dB:	0.8	0.8	0.7	0.8	0.8	0.7	0.8	0.8	0.9	0.9	0.9	1.0

* Above *allowed range* of power curve.
[ ] Includes assumed background data points.

Table 8 - Apparent Sound Power Level at 10 m Height, Downwind Location

10 m Height Wind Speed [m/s]	6	7	8*
Sound Power Level $L_{WA,k}$ in dB(A):	103.6	103.1	102.9
Total Uncertainty $u_{LWA,k}$ in dB:	0.6	0.8	0.9

* Above *allowed range* of power curve.

A table and plot of the sound pressure spectrum in third octaves for each integer wind speed are included under Appendix C.

The tonality assessment indicates a maximum tonal audibility of 0 dB. A summary of the tonality assessment is shown in Table 9. The detailed results of the tonality assessment are included under Appendix D.

Table 9: Summary of Tonality Assessment, Downwind Location

Hub Height Wind Speed [m/s]	7.5	8	8.5	9	9.5	10	10.5	11*	11.5*	12*	12.5*	13*
Dominant Frequency [Hz]	66.3	70.4	71.8	71.6	72.1	71.3	71.1	71.7	72.8	72.6	73.8	72.8
Tonal Audibility, ΔL_{ak} in dB:	-7.2	-5.8	-1.1	-0.5	-1.3	-2.7	-3.5	-1.4	-0.2	-0.1	-0.9	-1.2
Total Assessed Data Points	10	13	20	27	27	25	52	68	38	38	20	24
Occurrence of the Dominant Tone [%]	50%	100%	100%	100%	100%	92%	92%	94%	95%	95%	100%	96%

* Above *allowed range* of power curve.

5.2 Crosswind Location

Table 10 summarizes the analysis of the measured results for the crosswind measurement location.

Table 10 - Sound Level Results, Crosswind Location

Hub Height Wind Speed [m/s]	7.5	8	8.5	9	9.5	10	10.5	11*	11.5*	12*	12.5*	13*
Collected Data Points, Total	10	13	19	26	27	25	50	63	38	33	21	23
Collected Data Points, Background	17	32	35	59	42	31	41	23	23	11	12	[10]
Average Wind Speed, V_K [m/s]	7.6	8.0	8.5	9.0	9.5	9.9	10.6	11.0	11.5	12.0	12.5	13.1
Total Noise, $L_{V,T,}$ [dB(A)]	49.7	51.6	52.8	53.0	52.9	53.1	52.9	53.2	53.2	52.9	52.8	52.5
Background Noise, $L_{V,B}$ [dB(A)]	44.0	44.7	44.4	45.0	45.0	46.2	46.3	47.1	47.1	47.2	48.8	[41.0]
Difference T-B [dB(A)]	5.7	6.9	8.3	8.0	7.9	6.9	6.6	6.1	6.1	5.7	4.0	11.5
Corrected L_{Aeq} [dB(A)]	48.6	50.7	52.2	52.3	52.2	52.2	51.9	52.1	52.1	51.8	51.4	52.2

* Above *allowed range* of power curve.
[ ] Includes assumed background data points.

Table 10 shows that at least 180 measurements were collected for both total noise and background noise and at least 10 data points are included in the analysis for each wind speed bin, as required by IEC 61400-11.

Table 11 shows the calculated sound level data, the resulting sound power levels, tonality, and measurement uncertainty at hub height, while Table 12 shows the apparent sound power levels at a reference height of 10 m. Figure 6b presents the apparent sound power level at hub height wind speeds.

Table 11 - Apparent Sound Power Level of WTG S37 at Hub Height, Crosswind Location

Hub Height Wind Speed [m/s]	7.5	8	8.5	9	9.5	10	10.5	11*	11.5*	12*	12.5*	13*
Corrected L_{Aeq}, in dB(A)	48.6	50.7	52.2	52.3	52.2	52.2	51.9	52.1	52.1	51.8	51.4	52.2
Sound Power Level $L_{WA,K}$ in dB(A)	**99.2^**	**101.3**	**102.8**	**103.0**	**102.8**	**102.8**	**102.6**	**102.7**	**102.8**	**102.4^**	**102.1^**	**[102.9]**
Theoretical Active Power in kW	1267	1519	1816	2113	2374	2634	2757	2879	2908	2936	2939	2942
Tonal Audibility, ΔL_{ak} in dB:	0.4	3.5	5.3	5.2	4.9	4.2	3.3	3.7	3.1	2.9	2.3	1.6
Total Uncertainty $u_{LWA,k}$ in dB:	1.0	1.0	0.8	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.1	1.1

* Above *allowed range* of power curve.
^ Total noise is within 6 dB of background noise.
[ ] Includes assumed background data points.

Table 12 - Apparent Sound Power Level at 10 m Height, Crosswind Location

10 m Height Wind Speed [m/s]	6	7	8*
Sound Power Level $L_{WA,k}$ in dB(A):	103.2	102.9	102.8
Total Uncertainty $u_{LWA,k}$ in dB:	0.8	0.9	1.1

* Above *allowed range* of power curve.

The tonality assessment indicates a maximum tonal audibility of 5.3 dB at lower hub height wind speeds where aerodynamic blade noise provides less masking. A summary of the tonality analysis is shown in Table 13.

Table 13: Summary of Tonality Assessment, Crosswind Location

Hub Height Wind Speed [m/s]	7.5	8	8.5	9	9.5	10	10.5	11*	11.5*	12*	12.5*	13*
Dominant Frequency [Hz]	65.6	70.1	73.5	73.5	73.4	72	71	71.8	73.5	74.3	74.8	74.4
Tonal Audibility, ΔL_{ak} in dB:	0.4	3.5	5.3	5.2	4.9	4.2	3.3	3.7	3.1	2.9	2.3	1.6
Total Assessed Data Points	10	13	19	26	27	25	50	63	38	33	21	23
Occurrence of the Dominant Tone [%]	100%	100%	100%	100%	100%	96%	92%	100%	97%	97%	100%	96%

* Above *allowed range* of power curve.

A table and plot of the sound pressure spectrum in third octaves for each integer wind speed and the detailed results of the tonality assessment are available upon request.

5.3 Upwind Location

Table 14 summarizes the analysis of the measured results for the downwind measurement location.

Table 14 - Sound Level Results, Upwind Location

Hub Height Wind Speed [m/s]	7.5	8	8.5	9	9.5	10	10.5	11*	11.5*	12*	12.5*	13*
Collected Data Points, Total	10	12	20	26	25	24	46	65	37	33	23	21
Collected Data Points, Background	16	34	32	55	40	29	40	24	28	11	10	[10]
Average Wind Speed, V_K [m/s]	7.6	8.0	8.5	9.0	9.5	9.9	10.5	11.0	11.5	12.0	12.5	13.0
Total Noise, $L_{V,T,}$ [dB(A)]	51.3	52.6	53.4	53.8	54.0	53.7	54.0	54.4	54.4	55.2	55.3	54.8
Background Noise, $L_{V,B}$ [dB(A)]	47.4	47.9	48.2	48.8	48.6	49.5	49.8	51.6	51.5	52.6	52.7	[43.7]
Difference T-B [dB(A)]	3.9	4.7	5.1	5.1	5.4	4.1	4.2	2.9	2.8	2.6	2.6	11.2
Corrected L_{Aeq} [dB(A)]	49.2	50.8	51.8	52.3	52.5	51.7	52.0	^^	^^	^^	^^	54.5

* Above *allowed range* of power curve.
^^ Total noise is within 3 dB of background noise.
[ ] Includes assumed background data points.

Table 14 shows that at least 180 measurements were collected for both total noise and background noise and at least 10 data points are included in the analysis for each wind speed bin, as required by IEC 61400-11.

Table 15 shows the calculated sound level data, the resulting sound power levels, tonality, and measurement uncertainty at hub height, while Table 16 shows the apparent sound power levels at a reference height of 10 m. Figure 6c presents the apparent sound power level at hub height wind speeds.

Table 15 - Apparent Sound Power Level of WTG S37 at Hub Height, Upwind Location

Hub Height Wind Speed [m/s]	7.5	8	8.5	9	9.5	10	10.5	11*	11.5*	12*	12.5*	13*
Corrected L_{Aeq}, in dB(A)	49.2	50.8	51.8	52.3	52.5	51.7	52.0	^^	^^	^^	^^	54.5
Sound Power Level $L_{WA,K}$ in dB(A)	**99.8^**	**101.4^**	**102.4^**	**103.0^**	**103.1^**	**102.3^**	**102.6^**	^^	^^	^^	^^	**[105.1]**
Theoretical Active Power in kW	1267	1519	1816	2113	2374	2634	2757	2879	2908	2936	2939	2942
Tonal Audibility, ΔL_{ak} in dB:	-2.1	<-3.0	<-3.0	0	-3	<-3.0	<-3.0	-2.8	<-3.0	-2	-2.8	<-3.0
Total Uncertainty $u_{LWA,k}$ in dB:	1.3	1.2	1.1	1.1	1.1	1.2	1.2	1.4	1.3	1.6	1.7	2.0

* Above *allowed range* of power curve.
^ Total noise is within 6 dB of background noise.
^^ Total noise is within 3 dB of background noise.
[ ] Includes assumed background data points.

Table 16 - Apparent Sound Power Level at 10 m Height, Upwind Location

10 m Height Wind Speed [m/s]	6	7	8*
Sound Power Level $L_{WA,k}$ in dB(A):	102.9^	102.4^	102.8^
Total Uncertainty $u_{LWA,k}$ in dB:	1.0	1.1	1.4

* Above *allowed range* of power curve.
^ Total noise is within 6 dB of background noise.

The tonality assessment indicates no tonal audibility greater than or equal to 0 dB. A summary of the tonality analysis is shown in Table 17.

Table 17: Summary of Tonality Assessment, Upwind Location

Hub Height Wind Speed [m/s]	7.5	8	8.5	9	9.5	10	10.5	11*	11.5*	12*	12.5*	13*
Dominant Frequency [Hz]	71.8	70.7	70.2	72.3	72	72.1	72.2	76.2	71.5	70.9	71.1	71.4
Tonal Audibility, ΔL_{ak} in dB:	-2.0	-3.7	-4.3	0.0	-3.0	-3.1	-4.3	-2.8	-3.4	-2.0	-2.8	-3.2
Total Assessed Data Points	10	12	20	26	25	24	46	65	37	33	23	21
Occurrence of the Dominant Tone [%]	70%	75%	75%	81%	84%	83%	78%	88%	86%	91%	87%	90%

* Above *allowed range* of power curve.

A table and plot of the sound pressure spectrum in third octaves for each integer wind speed and the detailed results of the tonality assessment are available upon request.

6 CONCLUSIONS & OPINIONS

The measurements and analysis, performed in accordance with the methods prescribed in IEC Standard 61400-11:2018-06 indicate that WTG S37, rated at 2942 kW and part of the Amherst Island Wind Project, has the following sound power levels:

Table 18 - Sound Power Level Summary, Downwind Location

Hub Height Wind Speed [m/s]	7.5	8	8.5	9	9.5	10	10.5	11*	11.5*	12*	12.5*	13*
Sound Power Level $L_{WA,k}$ in dB(A):	**100.0**	**102.2**	**103.2**	**103.5**	**103.2**	**103.0**	**102.8**	**102.7**	**102.9**	**102.8**	**[103.4]**	**[103.3]**
Tonal Audibility, ΔL_{ak} in dB:	<-3.0	<-3.0	-1.1	-0.5	-1.3	-2.7	<-3.0	-1.4	-0.2	-0.1	-0.9	-1.2
Total Uncertainty $u_{LWA,k}$ in dB:	0.8	0.8	0.7	0.8	0.8	0.7	0.8	0.8	0.9	0.9	0.9	1.0

* Above *allowed range* of power curve.
[ ] Includes assumed background data points.

Table 19 - Sound Power Level Summary, Crosswind Location

Hub Height Wind Speed [m/s]	7.5	8	8.5	9	9.5	10	10.5	11*	11.5*	12*	12.5*	13*
Sound Power Level $L_{WA,k}$ in dB(A):	**99.2^**	**101.3**	**102.8**	**103.0**	**102.8**	**102.8**	**102.6**	**102.7**	**102.8**	**102.4^**	**102.1^**	**[102.9]**
Tonal Audibility, ΔL_{ak} in dB:	0.4	3.5	5.3	5.2	4.9	4.2	3.3	3.7	3.1	2.9	2.3	1.6
Total Uncertainty $u_{LWA,k}$ in dB:	1.0	1.0	0.8	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.1	1.1

* Above *allowed range* of power curve.
^ Total noise is within 6 dBA of background noise.
[ ] Includes assumed background data points.

Table 20 - Sound Power Level Summary, Upwind Location

Hub Height Wind Speed [m/s]	7.5	8	8.5	9	9.5	10	10.5	11*	11.5*	12*	12.5*	13*
Sound Power Level $L_{WA,k}$ in dB(A):	**99.8^**	**101.4^**	**102.4^**	**103.0^**	**103.1^**	**102.3^**	**102.6^**	^^	^^	^^	^^	**[105.1]**
Tonal Audibility, ΔL_{ak} in dB:	-2.1	<-3.0	<-3.0	0	-3	<-3.0	<-3.0	-2.8	<-3.0	-2	-2.8	<-3.0
Total Uncertainty $u_{LWA,k}$ in dB:	1.3	1.2	1.1	1.1	1.1	1.2	1.2	1.4	1.3	1.6	1.7	2.0

* Above *allowed range* of power curve.
^ Total noise is within 6 dBA of background noise.
^^ Total noise is within 3 dBA of background noise.
[ ] Includes assumed background data points.

The sound levels presented above are relevant for Siemens SWT-3.2-113 turbine WTG S37 including the operation of a Borealis blade ice protection system, given the environmental conditions and the operating parameters of the turbine during the testing periods.

The results of the acoustic measurements and analysis indicate that, for all measured wind speeds, the wind turbine generator meets the specified sound power level of 105.0 dBA in Renewable

Energy Approval Number 7123-9W9NHS [3] when considering the allowable 0.5 dBA tolerance under the MECP's Compliance Protocol for Wind Turbine Noise [4]. The acoustic measurements and analysis indicate that the tonal audibility exceeds the maximum tonal audibility noted in the Noise Assessment Report [5] and the 4 dB limit in the MECP's Compliance Protocol for Wind Turbine Noise, and a detailed tonality assessment is required as part of the Immission Audit.

REFERENCES

1. International Electrotechnical Commission, 61400-11:2018-06 *Wind turbine generator systems – Part 11: Acoustic noise measurement techniques*.
2. Google Maps Aerial Imagery, Internet Application: *maps.google.com*
3. Ontario Ministry of the Environment Renewable Energy Approval Number 7123-9W9NH2, August 24, 2015.
4. Ontario Ministry of the Environment, Conservation, and Parks, *Compliance Protocol for Wind Turbine Noise*, April 2017.
5. Hatch, *Noise Assessment Report for Amherst Island Wind Project*, May 4, 2015.

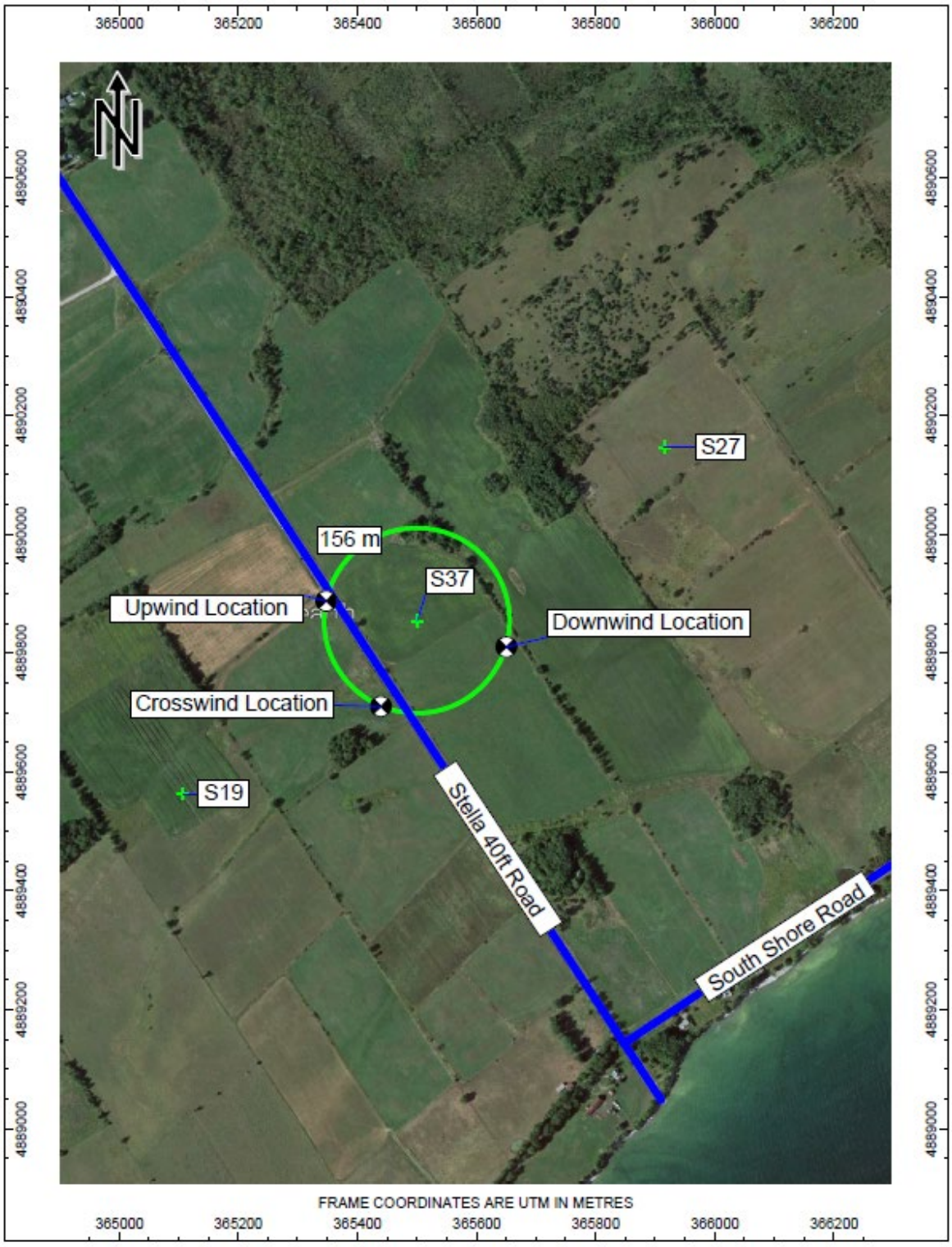


Figure 1 - Location of Test Turbine S37

Figure 2: Reference Electrical Power Curve, S37, 2942 kW
Amherst Island Wind Project

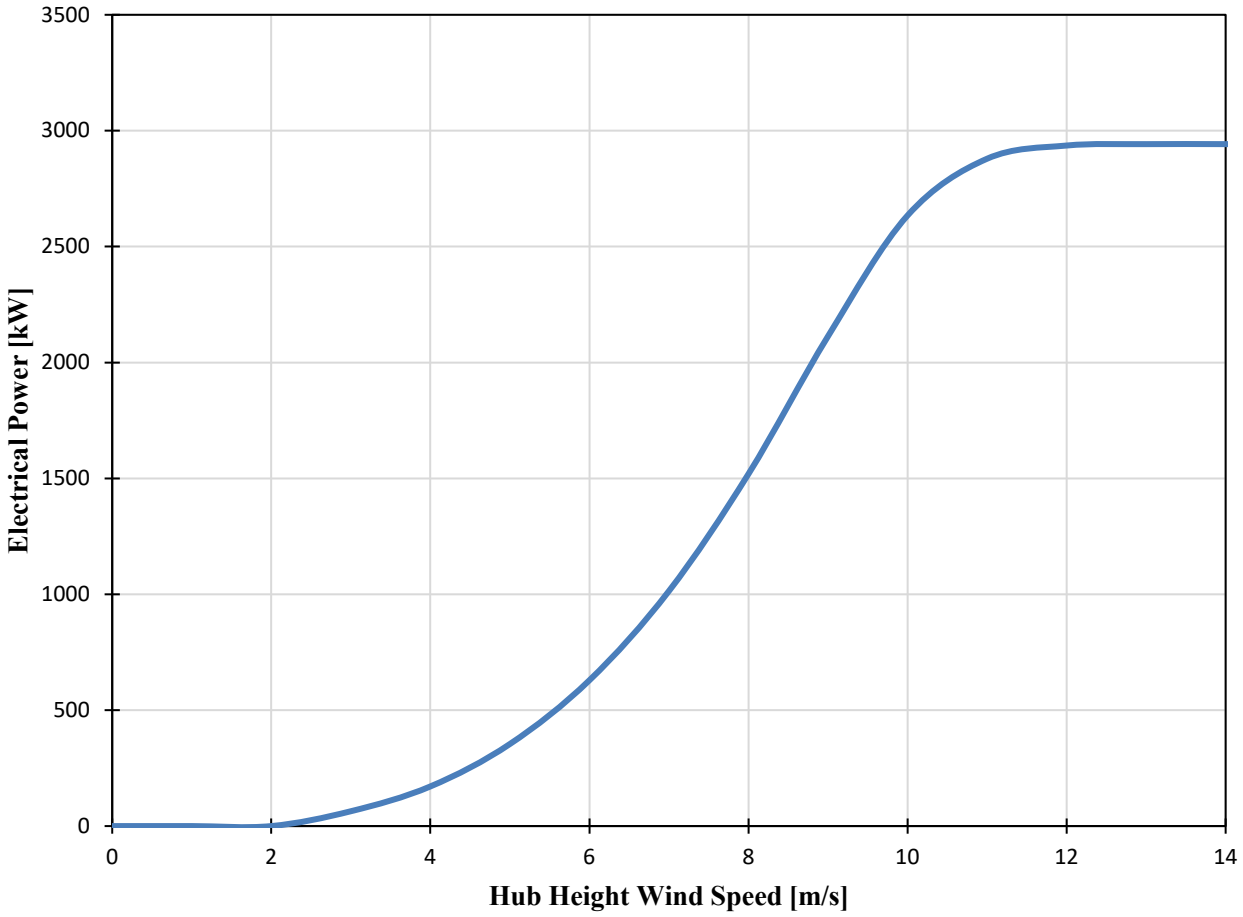


Figure 3a: Acoustic Noise Measurements of the Wind Turbine Generator WTG S37 Downwind Location, 2942 kW, Amherst Island Wind Project

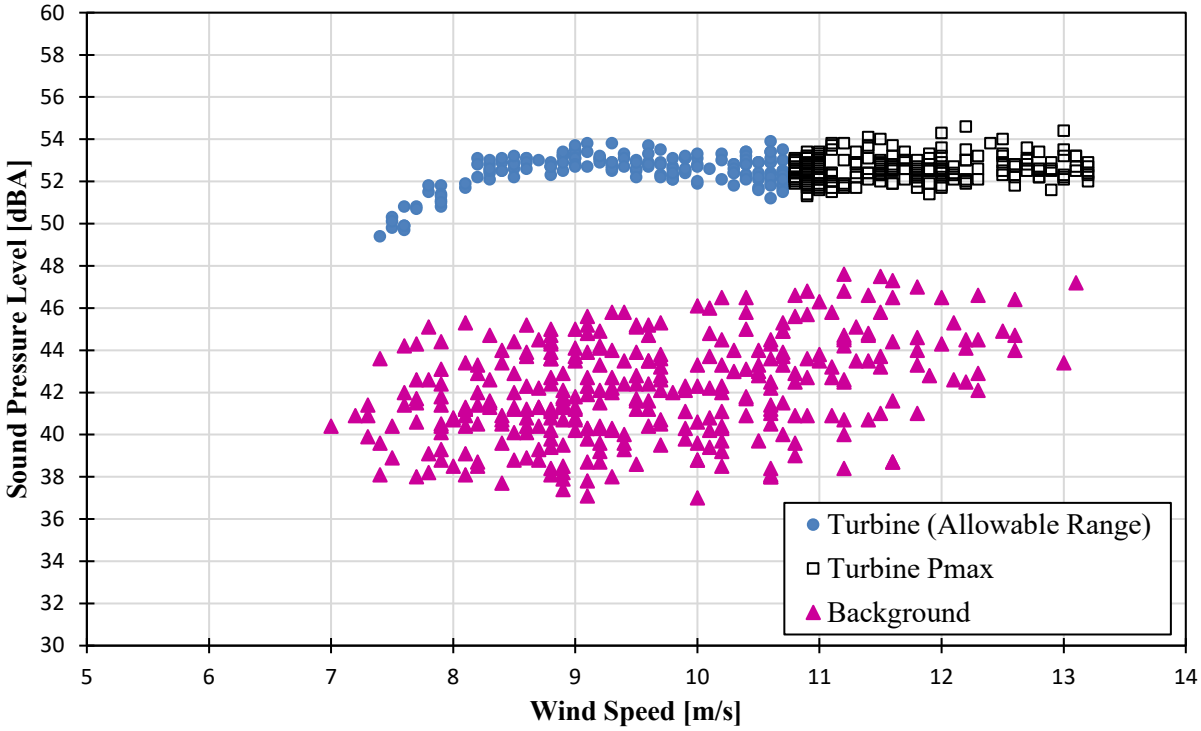


Figure 3b: Acoustic Noise Measurements of the Wind Turbine Generator WTG S37 Crosswind Location, 2942 kW, Amherst Island Wind Project

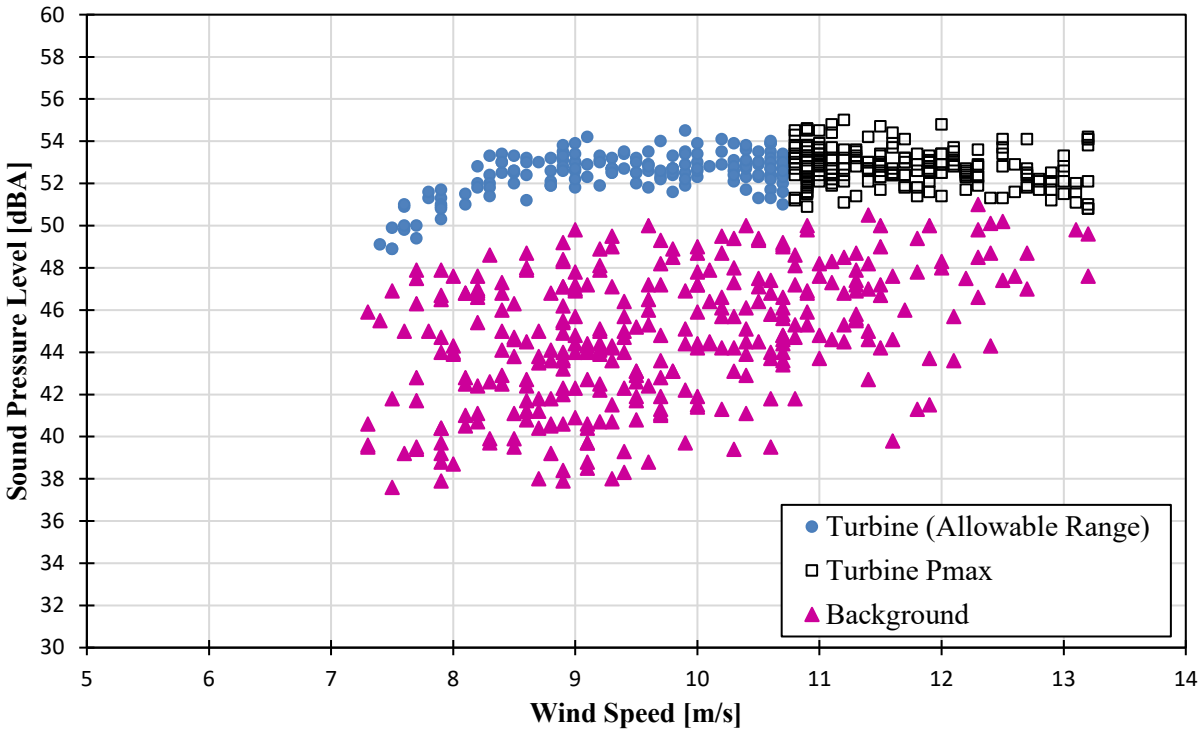


Figure 3c: Acoustic Noise Measurements of the Wind Turbine Generator
WTG S37 Upwind Location, 2942 kW, Amherst Island Wind Project

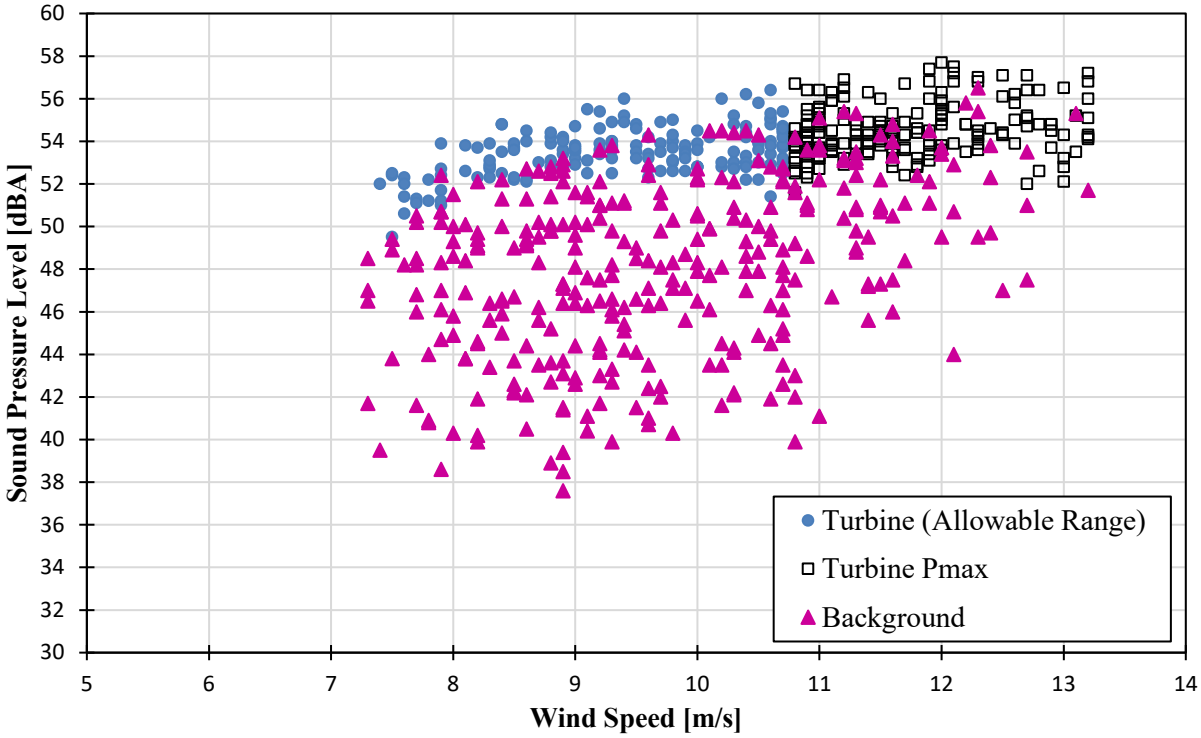


Figure 4a: Total Sound Level [dBA] vs Electrical Power [kW]
WTG S37 Downwind Location, 2942 kW, Amherst Island Wind Project

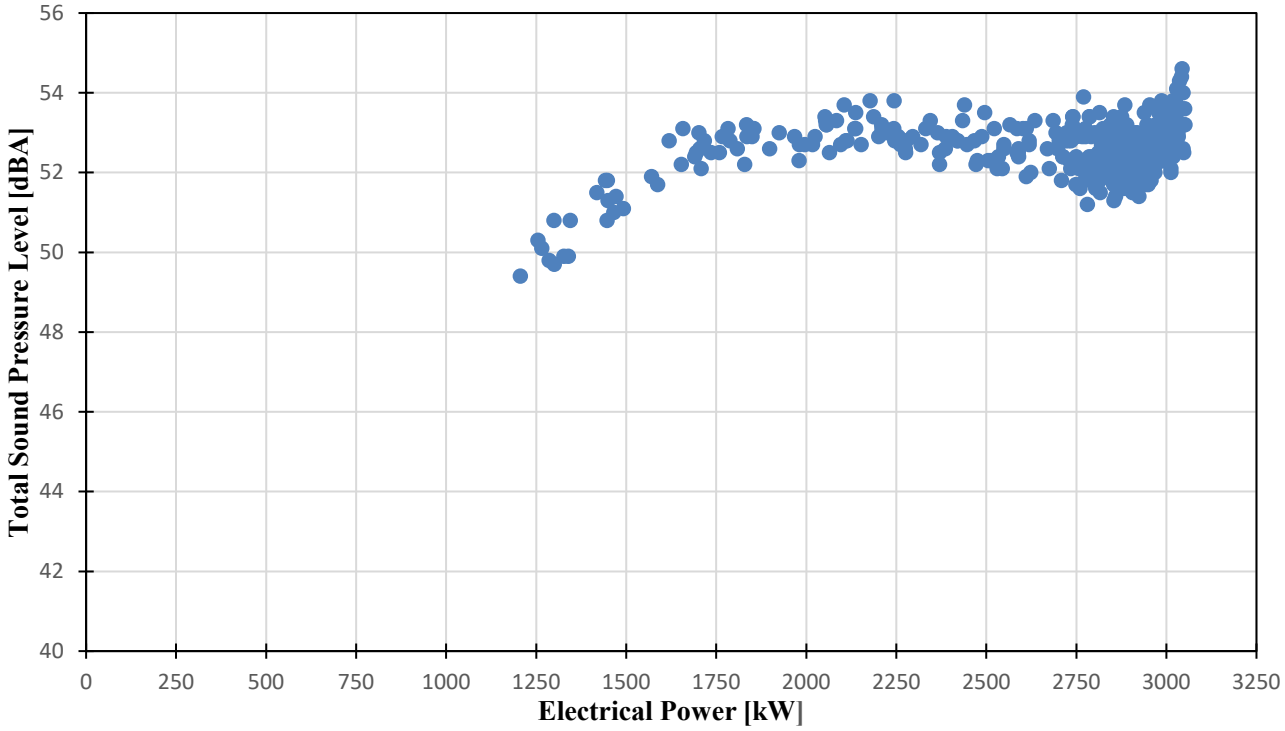


Figure 4b: Total Sound Level [dBA] vs Electrical Power [kW]
WTG S37 Crosswind Location, 2942 kW, Amherst Island Wind Project

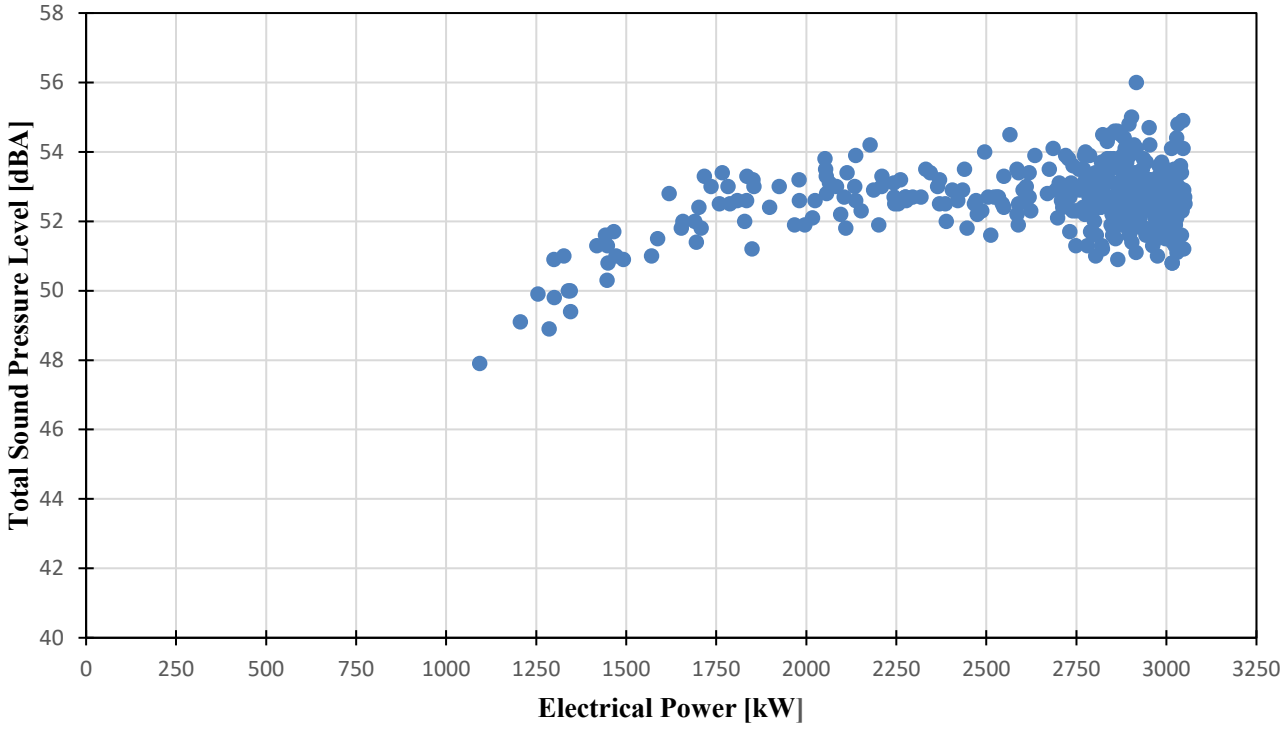


Figure 4c: Total Sound Level [dBA] vs Electrical Power [kW]
WTG S37 Upwind Location, 2942 kW, Amherst Island Wind Project

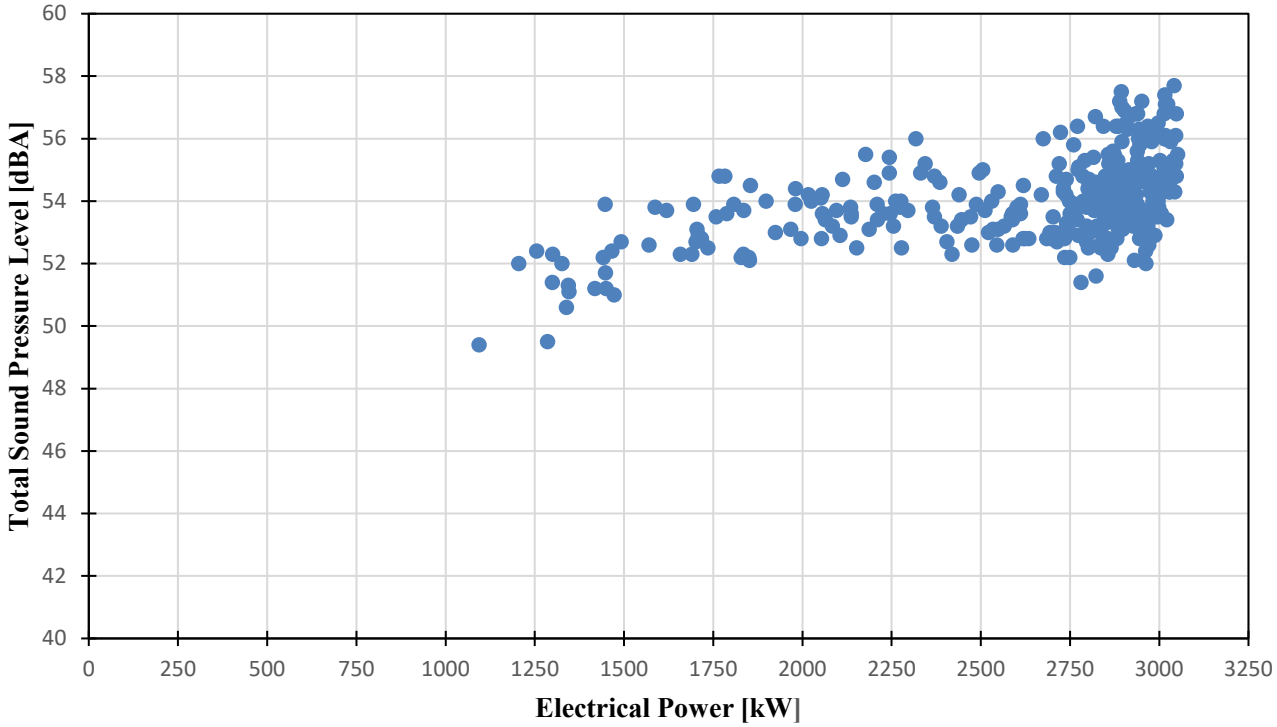


Figure 5a: Measured Wind Speed (HH and 10m) vs Derived Wind Speed, WTG S37 Downwind Location, 2942 kW, Amherst Island Wind Project

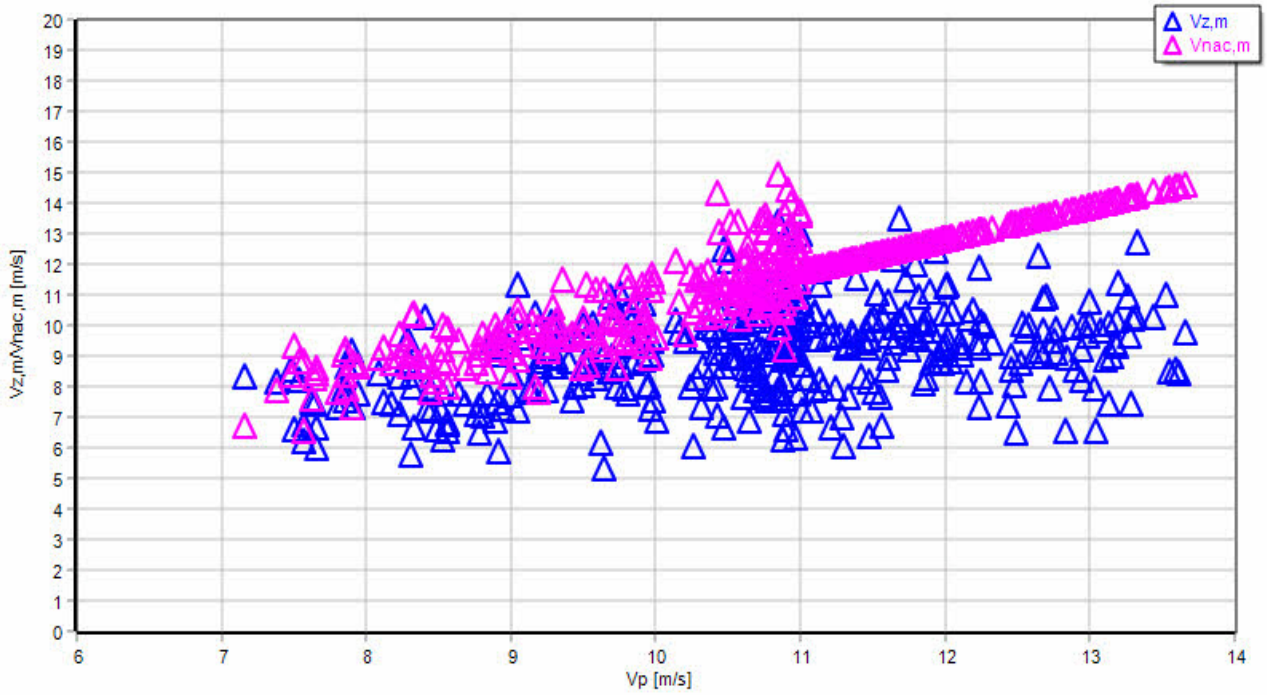


Figure 5b: Measured Wind Speed (HH and 10m) vs Derived Wind Speed, WTG S37 Crosswind Location, 2942 kW, Amherst Island Wind Project

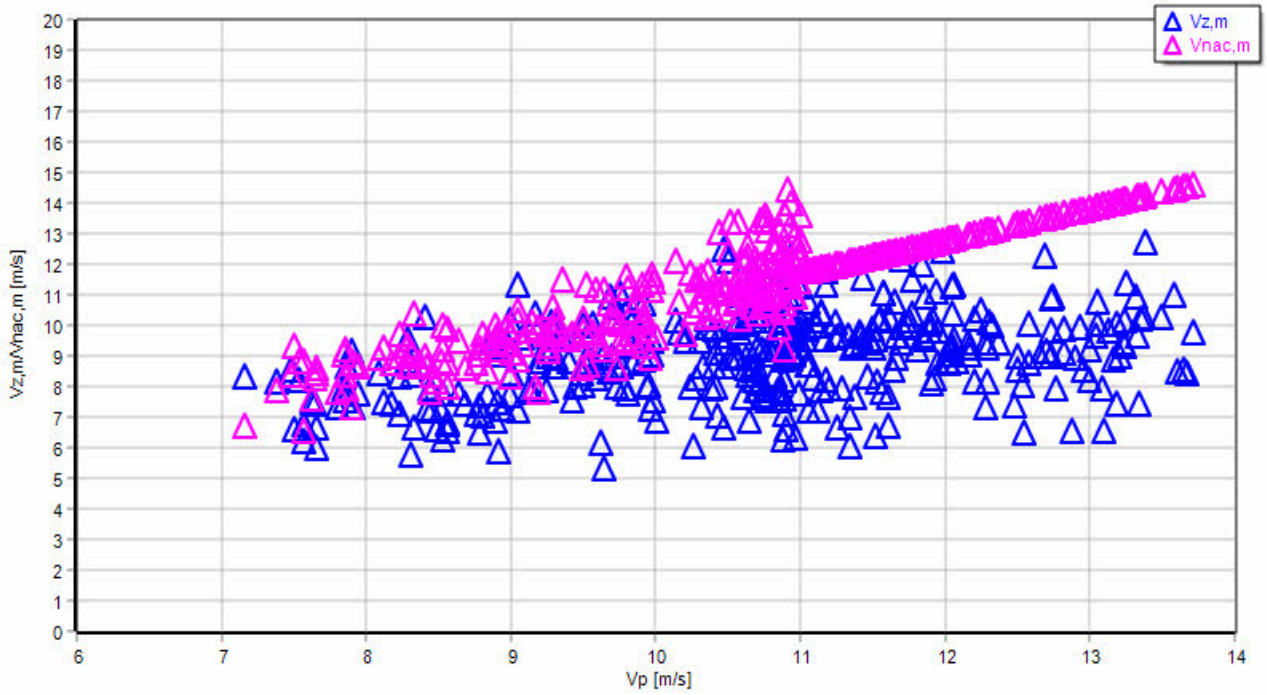


Figure 5c: Measured Wind Speed (HH and 10m) vs Derived Wind Speed, WTG S37 Upwind Location, 2942 kW, Amherst Island Wind Project

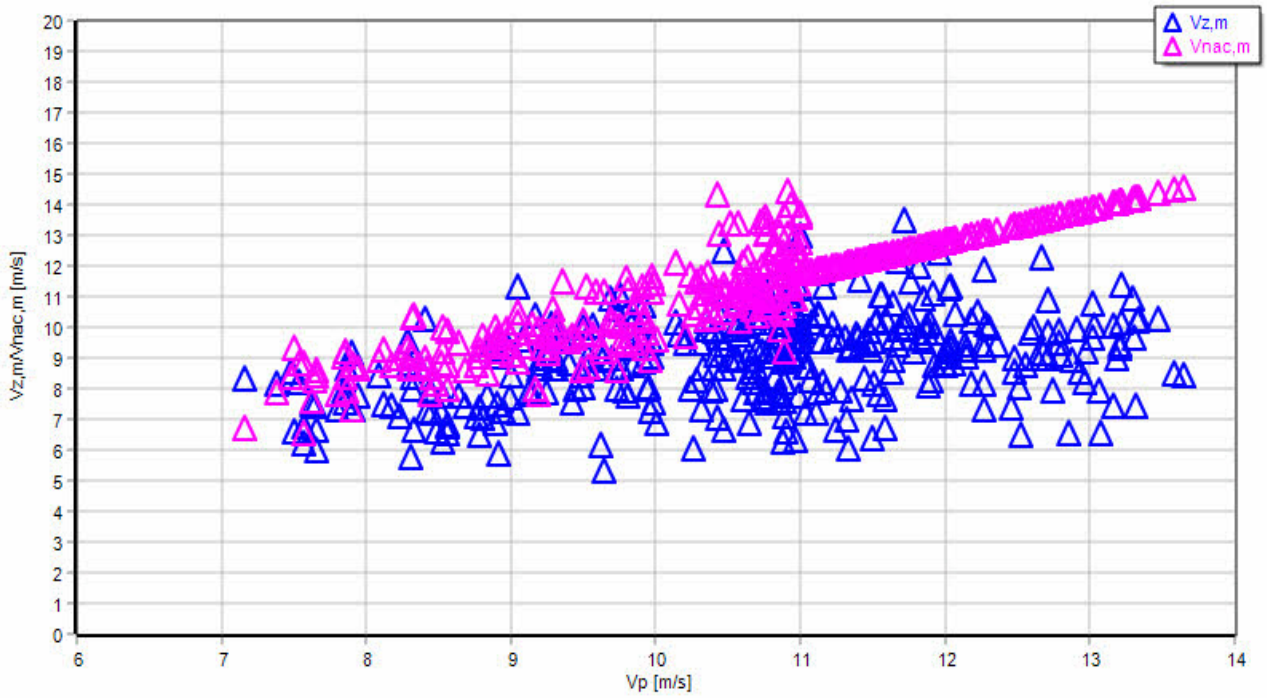


Figure 6a: Apparent Sound Power Level vs. Hub Height Wind Speed
WTG S37 Downwind Location, 2942 kW, Amherst Island Wind Project

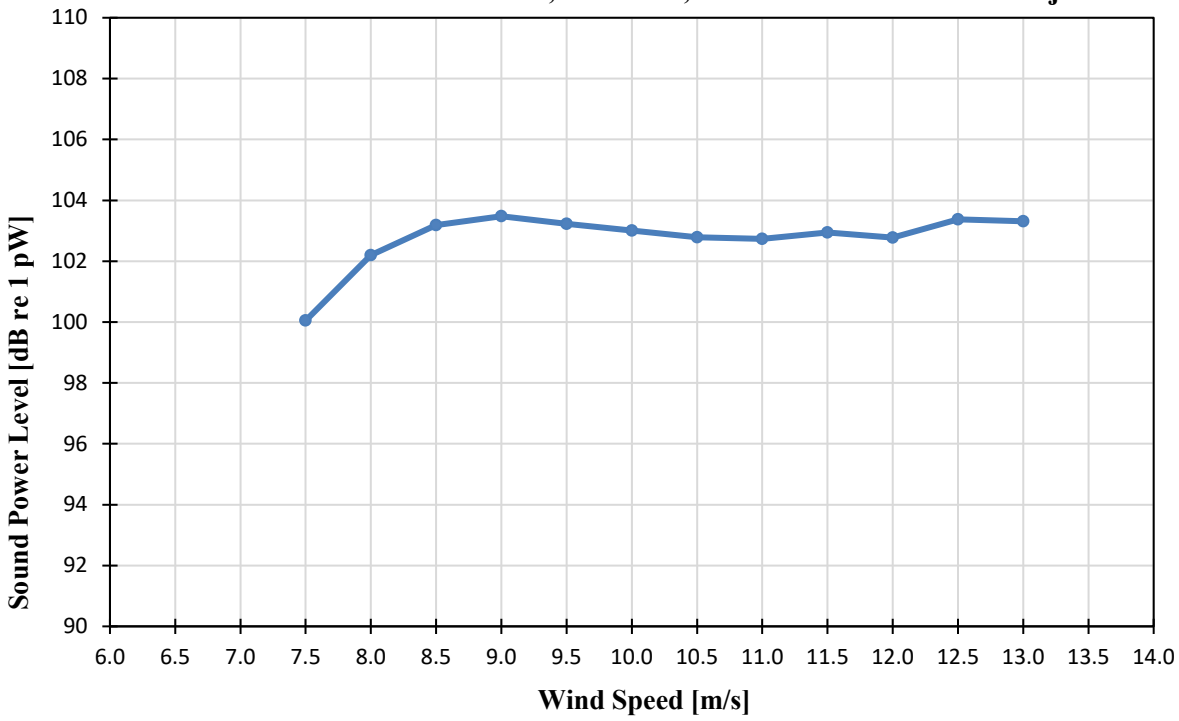


Figure 6b: Apparent Sound Power Level vs. Hub Height Wind Speed
WTG S37 Crosswind Location, 2942 kW, Amherst Island Wind Project

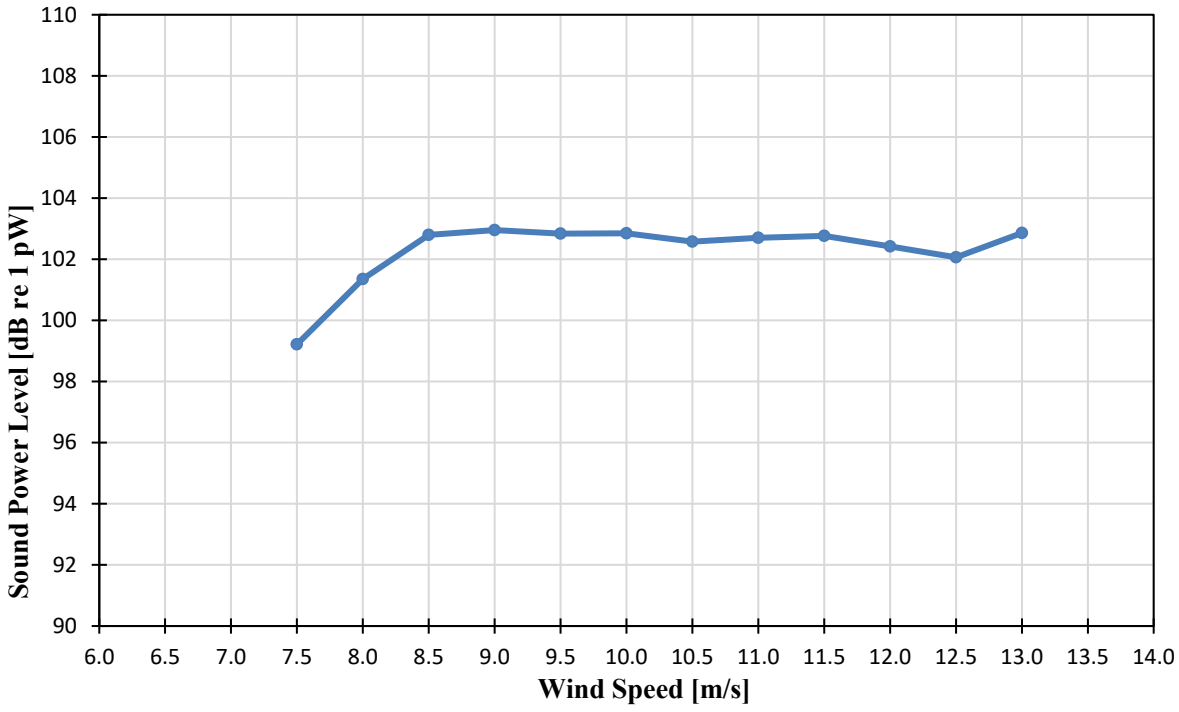
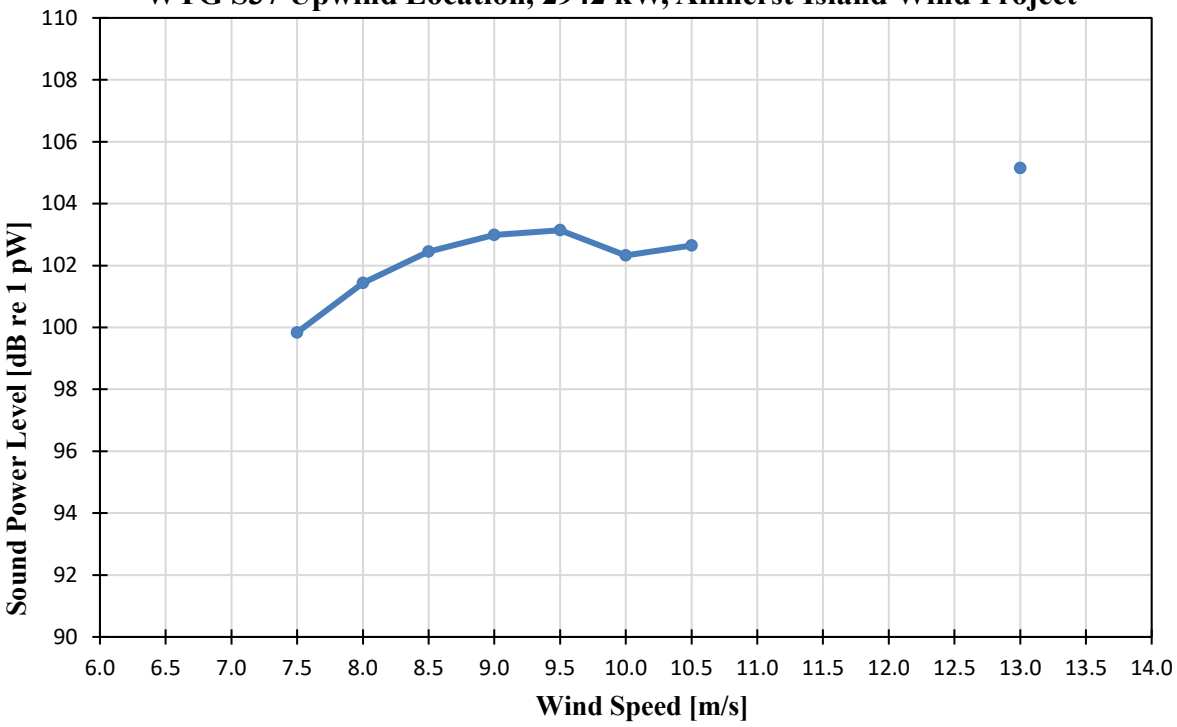


Figure 6c: Apparent Sound Power Level vs. Hub Height Wind Speed
WTG S37 Upwind Location, 2942 kW, Amherst Island Wind Project



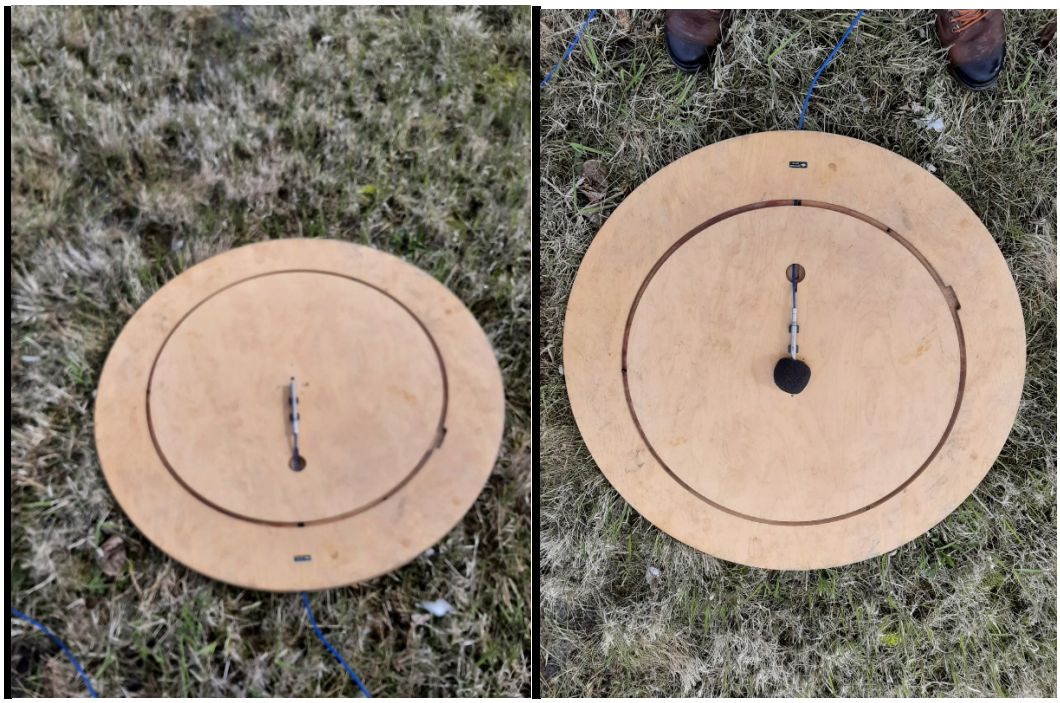
APPENDIX A:
LOCATION PHOTOS

Meteorological Tower Location – April 22, 2021

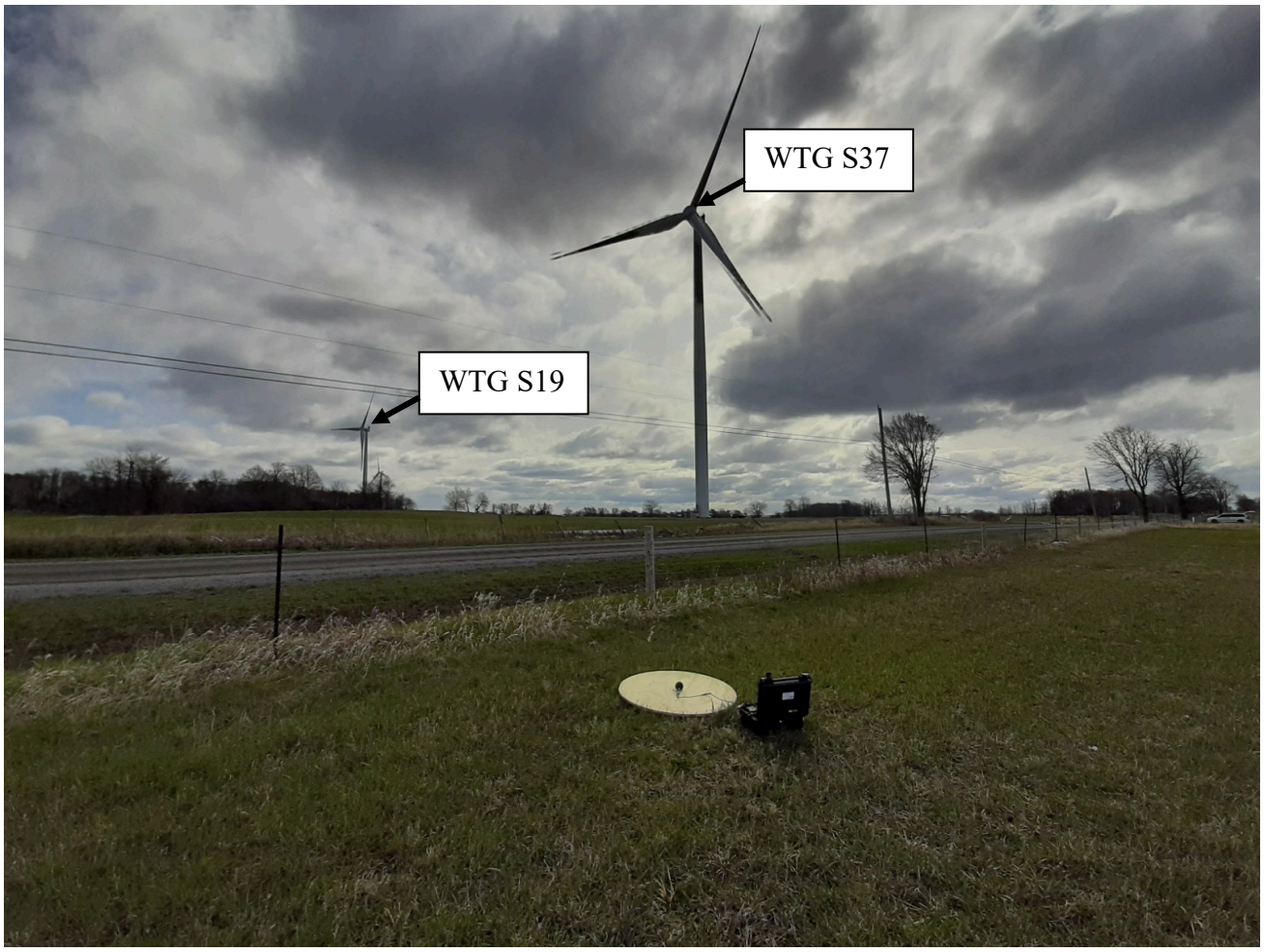
Sound Level Measurement Location, Downwind – April 22, 2021

Sound Level Microphone on Board, Downwind – April 22, 2021

Sound Level Measurement Location, Crosswind – April 22, 2021



Sound Level Microphone on Board, Crosswind – April 22, 2021



Sound Level Measurement Location, Upwind – April 22, 2021

Sound Level Microphone on Board, Upwind – April 22, 2021

Photos of Sound Level Meter and Meteorological Tower Taken from the Base of WTG S37 - April 22, 2021

APPENDIX B:

CALIBRATION CERTIFICATES

Scantek, Inc.
CALIBRATION LABORATORY

ISO 17025: 2005, ANSI/NCSL Z540:1994 Part 1
ACCREDITED by NVLAP (an ILAC MRA signatory)

NVLAP®
CALIBRATION
NVLAP Lab Code: 200625-0

Calibration Certificate No.46166

Instrument:	**Sound Level Meter**
Model:	**Duo**
Manufacturer:	**01dB**
Serial number:	**10815**
Tested with:	**Microphone 40CD s/n 154426** **Preamplifier PRE21 s/n 16453**
Type (class):	**1**
Customer:	**HGC Engineering**
Tel/Fax:	**905-826-4044 /**

Date Calibrated: **3/17/2021** *Cal Due:* **3/17/2022**

Status:	Received	Sent
In tolerance:	X	X
Out of tolerance:		
See comments:		

Contains non-accredited tests: __Yes X No
Calibration service: __ Basic X Standard
Address: **2000 Argentia Road, Plaza One, Suite 203 Mississauga, Ontario, Canada L5N 1P7**

Tested in accordance with the following procedures and standards:
Calibration of Sound Level Meters, Scantek Inc., Rev. 6/26/2015
SLM & Dosimeters – Acoustical Tests, Scantek Inc., Rev. 7/6/2011

NG 23 Mar 2021

Instrumentation used for calibration: Nor-1504 Norsonic Test System:

Instrument - Manufacturer	Description	S/N	Cal. Date	Traceability evidence Cal. Lab / Accreditation	Cal. Due
483B-Norsonic	SME Cal Unit	31052	Oct 31, 2020	Scantek, Inc./ NVLAP	Oct 31, 2021
DS-360-SRS	Function Generator	33584	Oct 23, 2019	ACR Env./ A2LA	Oct 23, 2021
34401A-Agilent Technologies	Digital Voltmeter	MY47011118	Feb 4, 2021	ACR Env. / A2LA	Feb 4, 2022
HM30-Thommen	Meteo Station	1040170/39633	Dec 7, 2020	ACR Env./ A2LA	Dec 7, 2021
PC Program 1019 Norsonic	Calibration software	v.6.1T	Validated Nov 2014	Scantek, Inc.	-
1251-Norsonic	Calibrator	30878	Oct 26, 2020	Scantek, Inc./ NVLAP	Oct 26, 2021

Instrumentation and test results are traceable to SI (International System of Units) through standards maintained by NIST (USA) and NPL (UK).

Environmental conditions:

Temperature (°C)	Barometric pressure (kPa)	Relative Humidity (%)
21.5	100.43	55.8

Calibrated by:	Lydon Dawkins	**Authorized signatory:**	William D. Gallegher
Signature	Lydon Dawkins	Signature	William D. Gallegher
Date	3/17/2021	Date	3/18/2021

Scantek, Inc.
CALIBRATION LABORATORY

ISO 17025: 2005, ANSI/NCSL Z540:1994 Part 1
ACCREDITED by NVLAP (an ILAC MRA signatory)

NVLAP®
CALIBRATION
NVLAP Lab Code: 200625-0

Calibration Certificate No.46167

Instrument: **Microphone**
Model: **40CD**
Manufacturer: **GRAS**
Serial number: **154426**
Composed of:

Date Calibrated: **3/15/2021** *Cal Due:* **3/15/2022**

Status:	**Received**	**Sent**
In tolerance:	**X**	**X**
Out of tolerance:		
See comments:		

Contains non-accredited tests: **__Yes _X_ No**

Customer: **HGC Engineering**
Tel/Fax: **905-826-4044/**

Address: **2000 Argentia Road, Plaza One, Suite 203 Mississauga, Ontario, Canada L5N 1P7**

Tested in accordance with the following procedures and standards:
Calibration of Measurement Microphones, Scantek, Inc., Rev. 2/25/2015

Instrumentation used for calibration: N-1504 Norsonic Test System:

Instrument - Manufacturer	Description	S/N	Cal. Date	Traceability evidence Cal. Lab / Accreditation	Cal. Due
483B-Norsonic	SME Cal Unit	31052	Oct 31, 2020	Scantek, Inc./ NVLAP	Oct 31, 2021
DS-360-SRS	Function Generator	33584	Oct 23, 2019	ACR Env./ A2LA	Oct 23, 2021
34401A-Agilent Technologies	Digital Voltmeter	MY47011118	Feb 4, 2021	ACR Env. / A2LA	Feb 4, 2022
HM30-Thommen	Meteo Station	1040170/39633	Dec 7, 2020	ACR Env./ A2LA	Dec 7, 2021
PC Program 1017 Norsonic	Calibration software	v.6.1T	Validated Nov 2014	Scantek, Inc.	-
1253-Norsonic	Calibrator	28326	Oct 26, 2020	Scantek, Inc./ NVLAP	Oct 26, 2021
1203-Norsonic	Preamplifier	14059	March 3, 2021	Scantek, Inc./ NVLAP	March 3, 2022
4180-Brüel&Kjær	Microphone	2246115	Oct 1, 2019	DPLA / DANAK	Oct 1, 2021

Instrumentation and test results are traceable to SI - BIPM through standards maintained by NPL (UK) and NIST (USA)

Calibrated by:	Lydon Dawkins	**Authorized signatory:**	William D. Gallagher
Signature	Lydon Dawkins	Signature	William D. Gallagher
Date	3/15/2021	Date	3/18/2021

Scantek, Inc.
CALIBRATION LABORATORY

ISO 17025: 2005, ANSI/NCSL Z540:1994 Part 1
ACCREDITED by NVLAP (an ILAC MRA signatory)

NVLAP®
CALIBRATION
NVLAP Lab Code: 200625-0

Calibration Certificate No.46169

Instrument: **Microphone**
Model: **40CD**
Manufacturer: **GRAS**
Serial number: **224382**
Composed of:

Date Calibrated: **3/15/2021** *Cal Due:* **3/15/2022**

Status:	**Received**	**Sent**
In tolerance:	X	X
Out of tolerance:		
See comments:		

Contains non-accredited tests: __**Yes** _X_ **No**

Customer: **HGC Engineering**

Tel/Fax: **905-826-4044/**

Address: **2000 Argentia Road, Plaza One, Suite 203 Mississauga, Ontario, Canada L5N 1P7**

NG 23 Mar 2021

Tested in accordance with the following procedures and standards:
Calibration of Measurement Microphones, Scantek, Inc., Rev. 2/25/2015

Instrumentation used for calibration: N-1504 Norsonic Test System:

Instrument - Manufacturer	Description	S/N	Cal. Date	Traceability evidence Cal. Lab / Accreditation	Cal. Due
483B-Norsonic	SME Cal Unit	31052	Oct 31, 2020	Scantek, Inc./ NVLAP	Oct 31, 2021
DS-360-SRS	Function Generator	33584	Oct 23, 2019	ACR Env./ A2LA	Oct 23, 2021
34401A-Agilent Technologies	Digital Voltmeter	MY47011118	Feb 4, 2021	ACR Env. / A2LA	Feb 4, 2022
HM30-Thommen	Meteo Station	1040170/39633	Dec 7, 2020	ACR Env./ A2LA	Dec 7, 2021
PC Program 1017 Norsonic	Calibration software	v.6.1T	Validated Nov 2014	Scantek, Inc.	-
1253-Norsonic	Calibrator	28326	Oct 26, 2020	Scantek, Inc./ NVLAP	Oct 26, 2021
1203-Norsonic	Preamplifier	14059	March 3, 2021	Scantek, Inc./ NVLAP	March 3, 2022
4180-Brüel&Kjær	Microphone	2246115	Oct 1, 2019	DPLA / DANAK	Oct 1, 2021

Instrumentation and test results are traceable to SI - BIPM through standards maintained by NPL (UK) and NIST (USA)

Calibrated by:	Lydon Dawkins	**Authorized signatory:**	William D. Gallagher
Signature	Lydon Dawkins	Signature	William D Gallagher
Date	3/15/2021	Date	3/18/2021

Document stored as: Y:\Calibration Lab\Mic 2021\GRAS40CD_224382_M1.doc

Scantek, Inc.
CALIBRATION LABORATORY

ISO 17025: 2005, ANSI/NCSL Z540:1994 Part 1
ACCREDITED by NVLAP (an ILAC MRA signatory)

NVLAP®
CALIBRATION
NVLAP Lab Code: 200625-0

Calibration Certificate No.46168

Instrument:	**Sound Level Meter**
Model:	**Duo**
Manufacturer:	**01dB**
Serial number:	**12023**
Tested with:	**Microphone 40CD s/n 224382** **Preamplifier PRE21 s/n 16862**
Type (class):	**1**
Customer:	**HGC Engineering**
Tel/Fax:	**905-826-4044 /**

Date Calibrated: **3/18/2021** *Cal Due:* **3/18/2022**

Status:	**Received**	**Sent**
In tolerance:	X	X
Out of tolerance:		
See comments:		

Contains non-accredited tests: __Yes X No
Calibration service: __ Basic X Standard
Address: **2000 Argentia Road, Plaza One, Suite 203 Mississauga, Ontario, Canada L5N 1P7**

Tested in accordance with the following procedures and standards:
Calibration of Sound Level Meters, Scantek Inc., Rev. 6/26/2015
SLM & Dosimeters – Acoustical Tests, Scantek Inc., Rev. 7/6/2011

MG 23 Mar 2021

Instrumentation used for calibration: Nor-1504 Norsonic Test System:

Instrument - Manufacturer	Description	S/N	Cal. Date	Traceability evidence Cal. Lab / Accreditation	Cal. Due
483B-Norsonic	SME Cal Unit	31052	Oct 31, 2020	Scantek, Inc./ NVLAP	Oct 31, 2021
DS-360-SRS	Function Generator	33584	Oct 23, 2019	ACR Env./ A2LA	Oct 23, 2021
34401A-Agilent Technologies	Digital Voltmeter	MY47011118	Feb 4, 2021	ACR Env. / A2LA	Feb 4, 2022
HM30-Thommen	Meteo Station	1040170/39633	Dec 7, 2020	ACR Env./ A2LA	Dec 7, 2021
PC Program 1019 Norsonic	Calibration software	v.6.1T	Validated Nov 2014	Scantek, Inc.	-
1251-Norsonic	Calibrator	30878	Oct 26, 2020	Scantek, Inc./ NVLAP	Oct 26, 2021

Instrumentation and test results are traceable to SI (International System of Units) through standards maintained by NIST (USA) and NPL (UK).

Environmental conditions:

Temperature (°C)	Barometric pressure (kPa)	Relative Humidity (%)
23.5	99.55	44.0

Calibrated by:	Lydon Dawkins	**Authorized signatory:**	William D. Gallagher
Signature	Lydon Dawkins	Signature	William D Gallagher
Date	3/18/2021	Date	3/18/2021

CERTIFICATE of CALIBRATION

Make :	Svantek	Reference # :	164213
Model :	SVAN977	Customer :	HGC Engineering Mississauga, ON
Descr. :	Sound Level Meter Type 1		
Serial # :	36428	P. Order :	Sean Richardson
Asset # :	SV977-03		

Cal. status : Received in spec's, no adjustment made.

Navair Technologies certifies that the above listed instrument was calibrated on date noted and was released from this laboratory performing in accordance with the specifications set forth by the manufacturer.

Unless otherwise noted in the calibration report a 4:1 accuracy ratio was maintained for this calibration.

Our calibration system complies with the requirements of ISO-9001-2015 and is registered under certificate CA96/269, working standards used for calibration are certified by or traceable to the National Research Council of Canada or the National Institute of Standards and Technology.

Calibrated : Dec 23, 2020 By : T. Beilin

Cal. Due : Dec 23, 2021

Temperature : 23 °C ± 2 °C Relative Humidity : 30% to 70%

Standards used : J-216 J-303 J-512

Navair Technologies

REPAIR AND CALIBRATION TRACEABLE TO NRC AND NIST

6375 Dixie Rd. Mississauga, ON, L5T 2E7
Phone : 800-668-7440 Fax: 905 565 8325
http: // www.navair.com
e-Mail: service @ navair.com

REINHARDT
System- und Messelectronic GmbH

Kalibrierzertifikat Calibration Certificate

Typ/Gegenstand
Type/Object
DFT-485 (RS-422)

Hersteller
Manufacturer
REINHARDT System- und Messelectronic GmbH

Seriennummer
Serial Number
1027951

Inventarnummer
Inventory Number
- - -

Auftraggeber
Customer
HGC Engineering
2000 Argentia Road, Plaza 1, Suite 203
Mississauga, ON L5N 1P7 - CANADA

Dieser Kalibrierschein dokumentiert die Rückführung auf nationale Normale zur Darstellung der Einheiten in Übereinstimmung mit dem Internationalen Einheitensystem (SI).
Sie wurde in Übereinstimmung mit den Normen DIN EN ISO 9000ff und DIN ISO 10012 durchgeführt.
Für die Einhaltung einer angemessenen Frist zur Wiederholung der Kalibrierung ist der Benutzer verantwortlich.

This calibration certficate documents the traceability to national standards which realize the units of measurement according to the International System of Units (SI).
The calibration is performed according to the standards DIN EN ISO 9000ff and DIN ISO 10012.
The user is obliged to have the object recalibrated at appropriate intervals.

Kalibrierdatum
Date of Calibration
21/01/2021

Nächste Kalibrierung in 24 Monaten
Recalibration in *months*

Prüfer
person in charge
Harald Stiegelmayer

OK
MG.

Unterschrift
.....

Messeinrichtungen
measuring equipment

Referenz Reference	Bezeichnung Name	Rückführung Traceability	Zertifikat-Nr. Certificate No.	Rekalibrierung Recalibration	Seriennummer Serial Number
Klimakammer/ Climatic Chamber	Weiss SB111 Typ 1005				95032
Multimeter/ Multimeter Temperaturreferenz/ Temperature Reference	Keysight HP 3458A PT100 Typ W60/1, 1/10 DIN	Keysight	1-104849309331	20/10/2020	MY45051675
Feuchtereferenz/ Humidity Reference	DFT 485	REINHARDT	F55728/F55907	16/09/2022	1028316
Druck/ Pressure Transmitter	Digiquarz 1030A	TESTO	D43406	14/09/2022	30840
Windgeschwindigkeit/ Wind Speed Sensor	WDS 55	REINHARDT	S19592	30/08/2022	1034340
Pyranometer/ Pyranometer	Kipp & Zonen CM11	Kipp & Zonen	2850071	28/08/2022	112383

Scantek, Inc.
CALIBRATION LABORATORY

ISO 17025: 2005, ANSI/NCSL Z540:1994 Part 1
ACCREDITED by NVLAP (an ILAC MRA signatory)

NVLAP®
CALIBRATION
NVLAP Lab Code: 200625-0

Calibration Certificate No.46170

Instrument:	**Acoustical Calibrator**
Model:	**4231**
Manufacturer:	**Brüel and Kjær**
Serial number:	**3010241**
Class (IEC 60942):	**1**
Barometer type:	
Barometer s/n:	
Customer:	**HGC Engineering**
Tel/Fax:	**905-826-4044 /**

Date Calibrated: **3/15/2021** *Cal Due:* **3/15/2022**

Status:	**Received**	**Sent**
In tolerance:	X	X
Out of tolerance:		
See comments:		

Contains non-accredited tests: __Yes _X_ No

Address: **2000 Argentia Road, Plaza One, Suite 203 Mississauga, Ontario, Canada L5N 1P7**

NG 23/Mar 2021

Tested in accordance with the following procedures and standards:
Calibration of Acoustical Calibrators, Scantek Inc., Rev. 10/1/2010

Instrumentation used for calibration: Nor-1504 Norsonic Test System:

Instrument - Manufacturer	Description	S/N	Cal. Date	Traceability evidence Cal. Lab / Accreditation	Cal. Due
483B-Norsonic	SME Cal Unit	31052	Oct 31, 2020	Scantek, Inc./ NVLAP	Oct 31, 2021
DS-360-SRS	Function Generator	33584	Oct 23, 2019	ACR Env./ A2LA	Oct 23, 2021
34401A-Agilent Technologies	Digital Voltmeter	MY47011118	Feb 4, 2021	ACR Env. / A2LA	Feb 4, 2022
HM30-Thommen	Meteo Station	1040170/39633	Dec 7, 2020	ACR Env./ A2LA	Dec 7, 2021
140-Norsonic	Real Time Analyzer	1406423	Nov 3, 2020	Scantek / NVLAP	Nov 3, 2021
PC Program 1018 Norsonic	Calibration software	v.6.1T	Validated Nov 2014	Scantek, Inc.	-
4134-Brüel&Kjær	Microphone	173368	Oct 26, 2020	Scantek, Inc. / NVLAP	Oct 26, 2021
1203-Norsonic	Preamplifier	14059	March 3, 2021	Scantek, Inc./ NVLAP	March 3, 2022

Instrumentation and test results are traceable to SI (International System of Units) through standards maintained by NIST (USA) and NPL (UK)

Calibrated by:	Lydon Dawkins	**Authorized signatory:**	William D. Gallagher
Signature	Lydon Dawkins	Signature	Wille D Gallagh
Date	3/15/2021	Date	3/18/2021

Certificate of Calibration

This certifies that the TruPulse® product listed below has been thoroughly tested and meets or exceeds all manufacture's specifications.

MG
15 Feb 2021

Model: TruPulse 200

Serial Number: 075117

	As Received / As Returned			
Tx Power @ 166uW:	**PASS**	/	**PASS**	**Spec: ±15%**
Range Accy @ 146.0623m:	**PASS**	/	**PASS**	**Spec: ±30cm, 2σ***
Tilt Accy @ 30.0 Deg:	**PASS**	/	**PASS**	**Spec: ±0.25 Deg, 2σ***

Quality Assurance Tech

Jan-27-2021
Certification Date

* Nominal Calibration Distance (Reflective Target) or Angle
Tolerance is 95% level of Confidence under normal test conditions
at a Temperature of 23°C and a Barometric Pressure of 101kPa

LASER TECHNOLOGY
Measurably Superior™
6912 South Quentin Street
Centennial, CO 80112 USA
Phone: 1-303-649-1000
Fax: 1-303-649-9710
Web Site: www.lasertech.com

Part Number: 0114640 Revsion 1

SOH Wind Engineering LLC
141 Leroy Road · Williston, VT 05495 · USA
Tel 802.316.4368 · Fax 802.735.9106 · www.sohwind.com

776
28 Jan 2021

CERTIFICATE FOR CALIBRATION OF SONIC ANEMOMETER

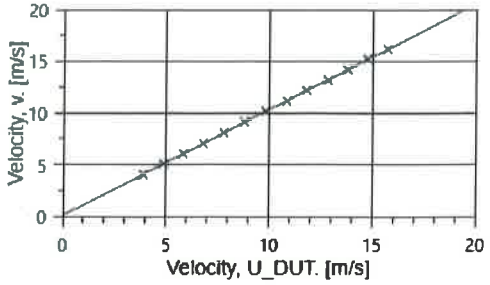
Certificate number: 21.US2.00518 **Date of issue:** January 19, 2021
Type: Vaisala WMT700 with ROBIN Transmitter **Serial number:** J3920012
Manufacturer: Vaisala, Oyj, Pl 26, FIN-00421 Helsinki, Finland
Client: HGC Engineering, 2000 Argentia Road, Plaza One, Suite 203, Mississauga, ON L5N 1P7, Canada
Anemometer received: January 14, 2021 **Anemometer calibrated:** January 19, 2021
Calibrated by: MEJ **Procedure:** MEASNET, IEC 61400-12-1:2017 Annex F
Certificate prepared by: EJF **Approved by:** Calibration engineer, EJF

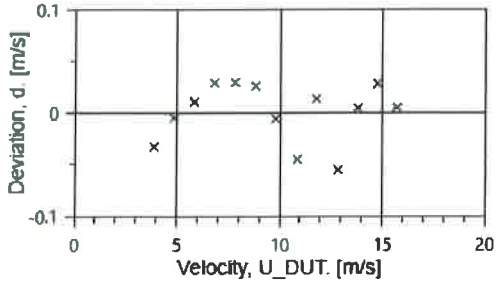
Eric Jeffrey

Calibration equation obtained: v [m/s] = 1.02453 · f [m/s] + 0.11348

Standard uncertainty, slope: 0.00217 **Standard uncertainty, offset:** 0.20531
Covariance: -0.0000484 (m/s)²/m/s **Coefficient of correlation:** $\rho = 0.999974$
Absolute maximum deviation: -0.055 m/s at 13.204 m/s
Barometric pressure: 1000.9 hPa **Relative humidity:** 18.7% **Avg. Direction Output:** 1.0

Succession	Velocity pressure, q. [Pa]	Temperature in wind tunnel [°C]	Temperature in d.p. box [°C]	Wind velocity, v. [m/s]	Anemometer Output, f. [m/s]	Deviation, d. [m/s]	Uncertainty u_c (k=2) [m/s]
1-first	9.69	22.4	26.7	4.056	3.8807	-0.033	0.023
13-last	15.22	22.5	26.7	5.085	4.8573	-0.005	0.027
2	21.87	22.4	26.7	6.094	5.8270	0.011	0.031
12	29.69	22.6	26.7	7.102	6.7930	0.029	0.035
3	38.96	22.4	26.7	8.133	7.7990	0.029	0.039
11	49.24	22.6	26.7	9.148	8.7927	0.026	0.044
4	60.77	22.4	26.7	10.159	9.8110	-0.006	0.048
10	73.51	22.7	26.7	11.178	10.8433	-0.045	0.052
5	87.80	22.4	26.7	12.212	11.7960	0.013	0.057
9	102.54	22.7	26.7	13.204	12.8310	-0.055	0.061
6	119.40	22.5	26.7	14.243	13.7873	0.004	0.066
8	136.86	22.6	26.7	15.254	14.7510	0.028	0.070
7	154.78	22.6	26.7	16.221	15.7170	0.005	0.074

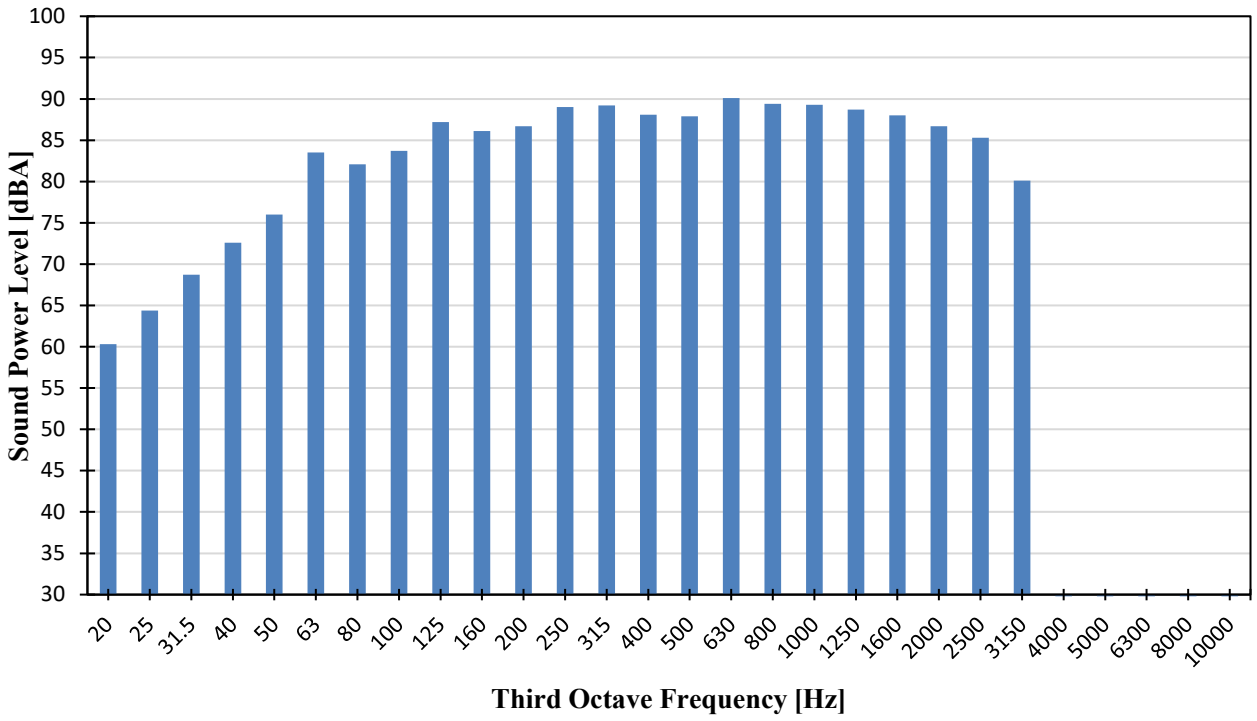




AC-1746

APPENDIX C:
OCTAVE BAND SOUND LEVEL RESULTS, DOWNWIND LOCATION

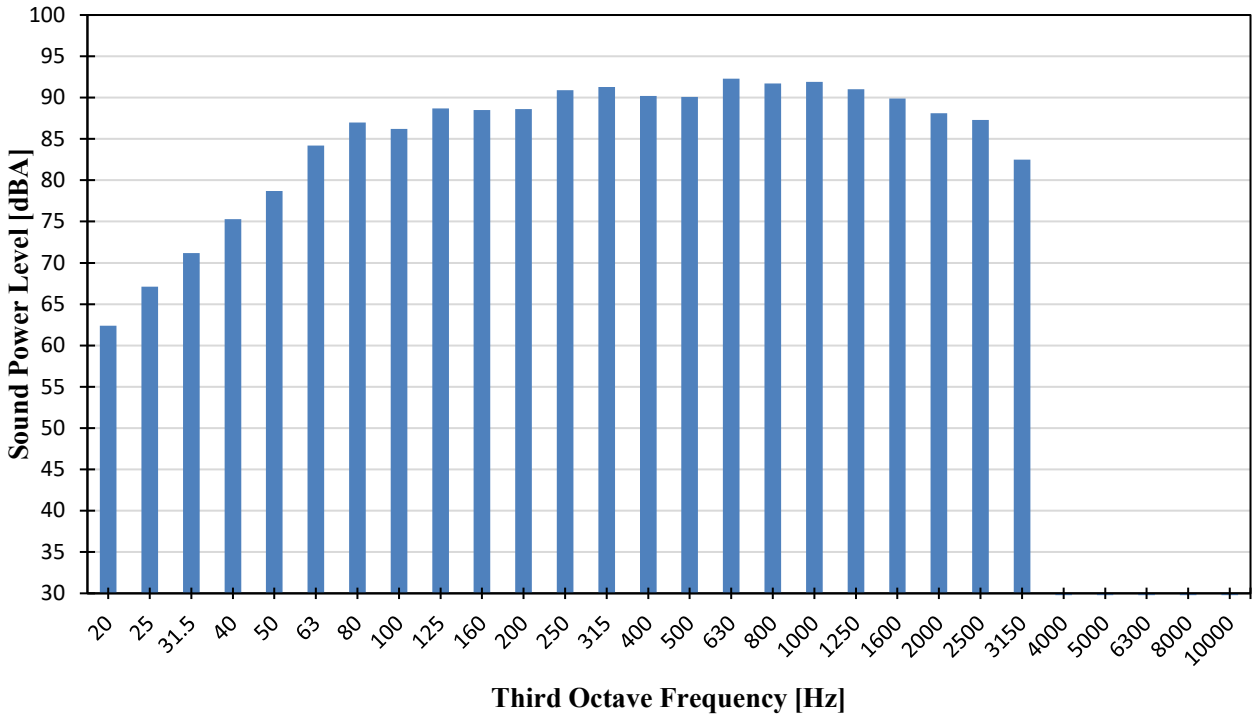
Bin 7.5: 1/3 Spectra Sound Power in dB(A)



Bin 7.5: 1/3 Spectra Sound Power in dB(A)														
Frequency[Hz]	20	25	31.5	40	50	63	80	100	125	160	200	250	315	400
Laeq	60.3	64.4	68.7	72.6	76.0	83.5	82.1	83.7	87.2	86.1	86.7	89.0	89.2	88.1
U_C	0.9	1.0	1.0	0.9	0.9	0.8	0.9	0.8	0.8	0.8	0.9	0.8	0.8	0.7
Frequency[Hz]	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
Laeq	87.9	90.1	89.4	89.3	88.7	88.0	86.7	85.3	80.1	[75.7]	[72.8]	[72]	[72.3]	[72.3]
U_C	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.8	1.0	1.8	2.2	2.5	2.7	2.8

[ ] Total Noise less than 3 dB greater than background (3 dB correction applied).

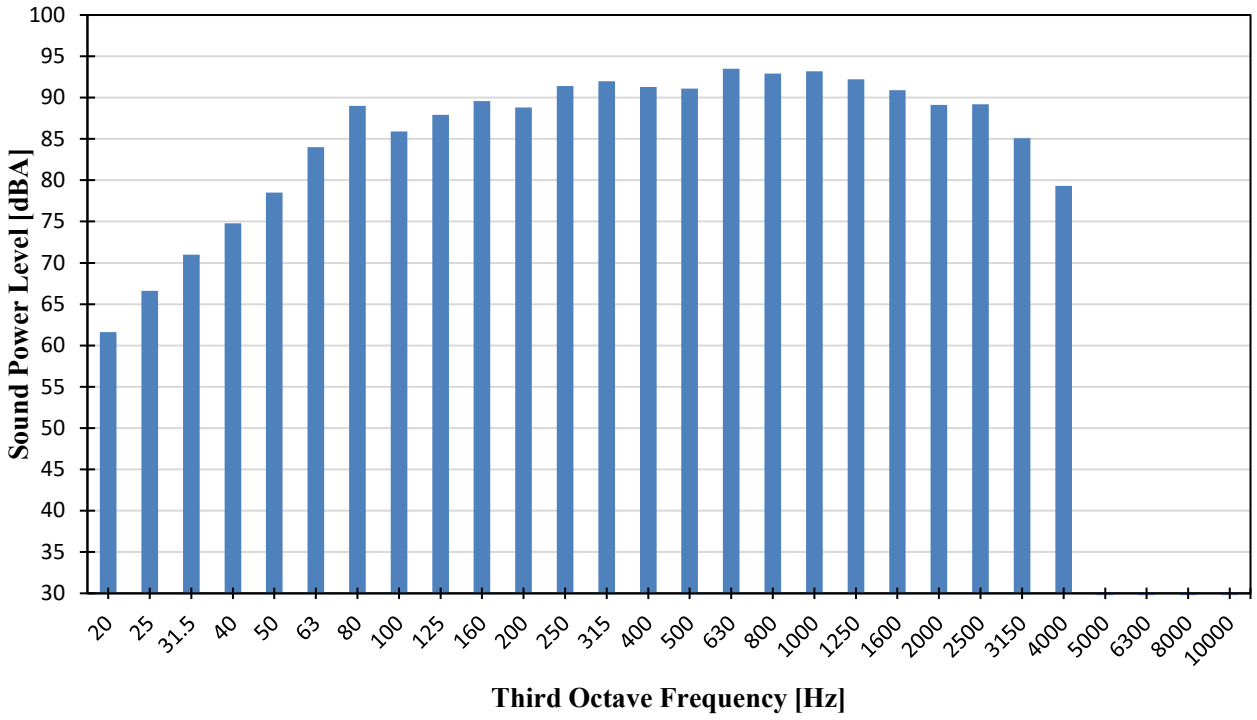
Bin 8: 1/3 Spectra Sound Power in dB(A)



Bin 8: 1/3 Spectra Sound Power in dB(A)														
Frequency[Hz]	20	25	31.5	40	50	63	80	100	125	160	200	250	315	400
Laeq	62.4	67.1	71.2	75.3	78.7	84.2	87.0	86.2	88.7	88.5	88.6	90.9	91.3	90.2
U_C	1.0	1.0	1.0	1.0	1.0	0.9	1.0	0.9	0.8	0.9	0.9	0.8	0.8	0.8
Frequency[Hz]	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
Laeq	90.1	92.3	91.7	91.9	91.0	89.9	88.1	87.3	82.5	[76.6]	[73.4]	[72.3]	[72.5]	[72.5]
U_C	0.8	0.8	0.7	0.7	0.7	0.7	0.8	0.8	0.9	1.8	2.2	2.5	2.6	2.6

[ ] Total Noise less than 3 dB greater than background (3 dB correction applied).

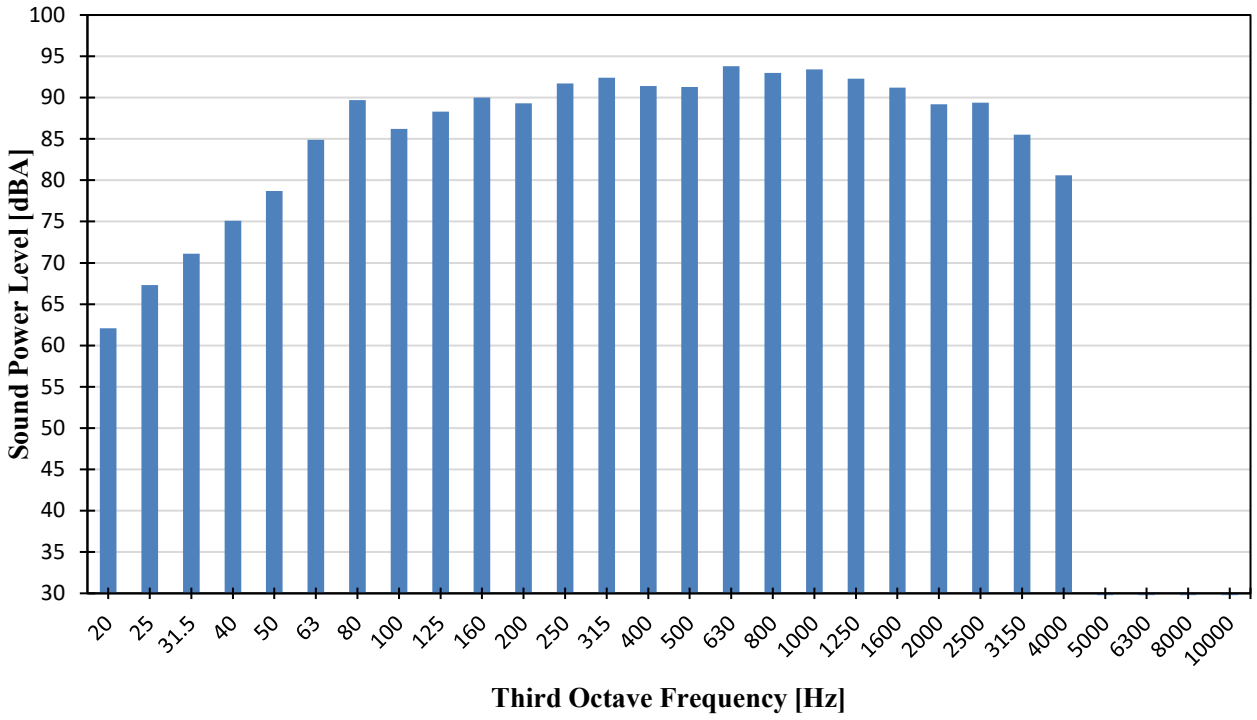
Bin 8.5: 1/3 Spectra Sound Power in dB(A)



Bin 8.5: 1/3 Spectra Sound Power in dB(A)														
Frequency[Hz]	20	25	31.5	40	50	63	80	100	125	160	200	250	315	400
Laeq	61.6	66.6	71.0	74.8	78.5	84.0	89.0	85.9	87.9	89.6	88.8	91.4	92.0	91.3
U_C	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.7	0.8	0.7	0.7	0.7
Frequency[Hz]	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
Laeq	91.1	93.5	92.9	93.2	92.2	90.9	89.1	89.2	85.1	79.3	[75.7]	[75]	[75.4]	[75.5]
U_C	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	1.3	2.2	2.5	2.6	2.6

[ ] Total Noise less than 3 dB greater than background (3 dB correction applied).

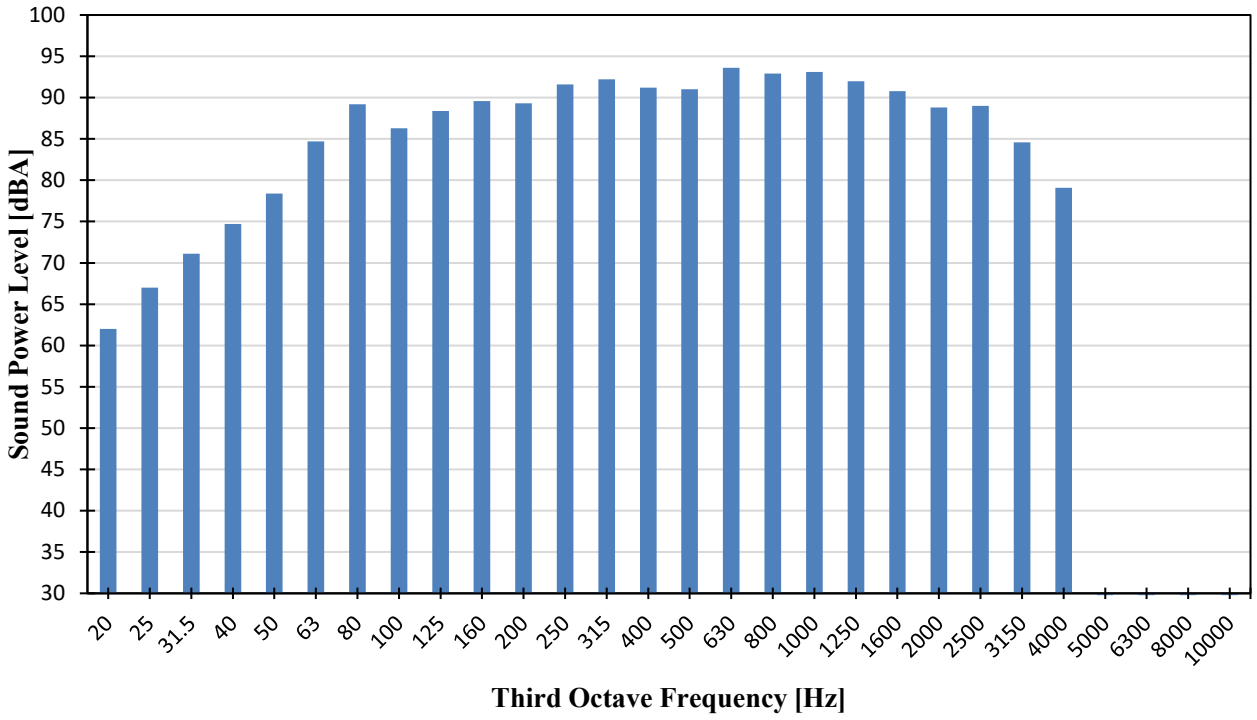
Bin 9: 1/3 Spectra Sound Power in dB(A)



Bin 9: 1/3 Spectra Sound Power in dB(A)														
Frequency[Hz]	20	25	31.5	40	50	63	80	100	125	160	200	250	315	400
Laeq	62.1	67.3	71.1	75.1	78.7	84.9	89.7	86.2	88.3	90.0	89.3	91.7	92.4	91.4
U_C	1.0	0.9	0.9	0.9	1.0	0.9	0.9	0.8	0.8	0.8	0.9	0.8	0.8	0.7
Frequency[Hz]	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
Laeq	91.3	93.8	93.0	93.4	92.3	91.2	89.2	89.4	85.5	80.6	[77.5]	[77.4]	[78]	[78.3]
U_C	0.8	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	1.3	2.4	2.8	2.9	3.0

[ ] Total Noise less than 3 dB greater than background (3 dB correction applied).

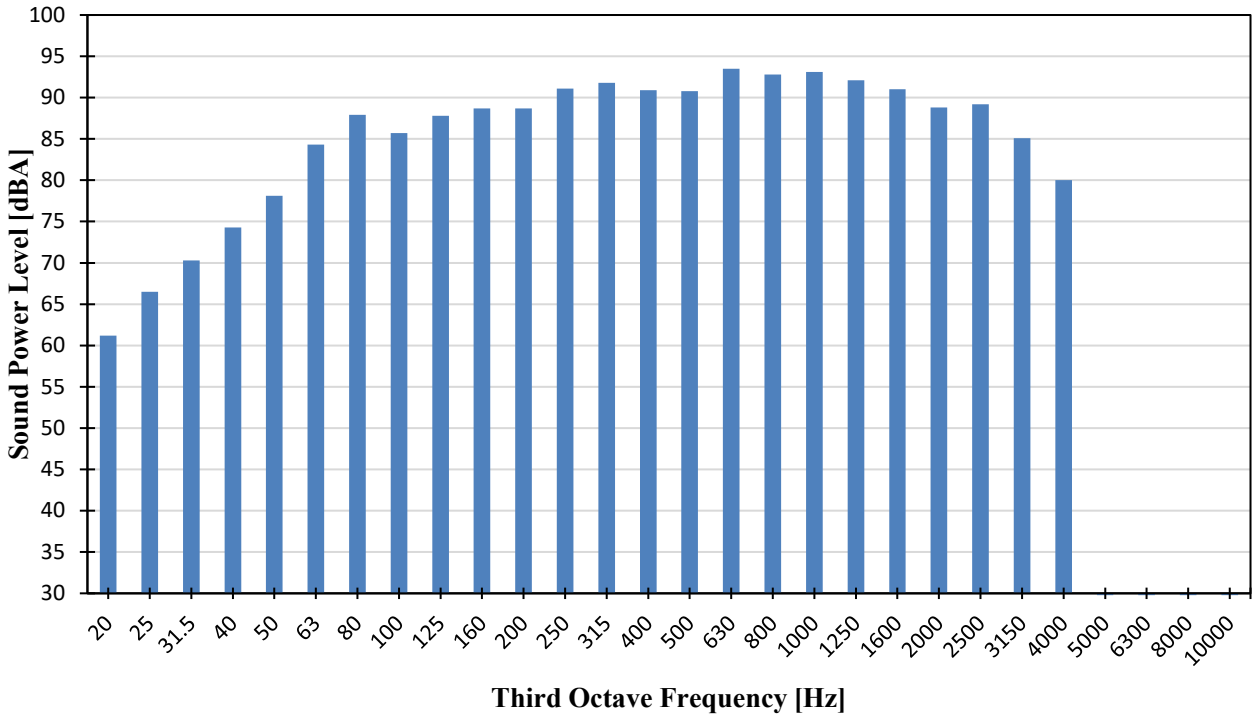
Bin 9.5: 1/3 Spectra Sound Power in dB(A)



Bin 9.5: 1/3 Spectra Sound Power in dB(A)														
Frequency[Hz]	20	25	31.5	40	50	63	80	100	125	160	200	250	315	400
Laeq	62.0	67.0	71.1	74.7	78.4	84.7	89.2	86.3	88.4	89.6	89.3	91.6	92.2	91.2
U_C	1.0	0.9	1.0	1.0	1.0	0.9	0.9	0.8	0.8	0.8	0.9	0.8	0.8	0.8
Frequency[Hz]	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
Laeq	91.0	93.6	92.9	93.1	92.0	90.8	88.8	89.0	84.6	79.1	[77]	[76.6]	[77.1]	[77.3]
U_C	0.8	0.8	0.7	0.7	0.7	0.7	0.8	0.8	0.9	1.7	2.3	2.5	2.5	2.4

[ ] Total Noise less than 3 dB greater than background (3 dB correction applied).

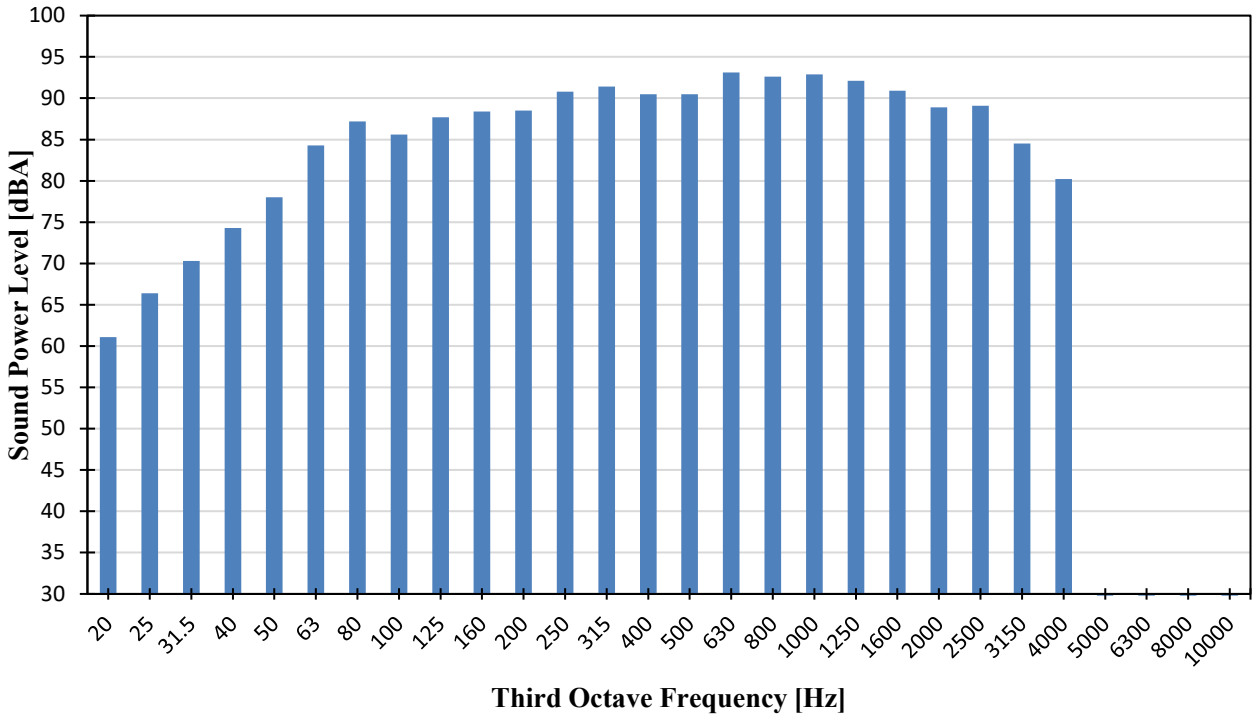
Bin 10: 1/3 Spectra Sound Power in dB(A)



Bin 10: 1/3 Spectra Sound Power in dB(A)														
Frequency[Hz]	20	25	31.5	40	50	63	80	100	125	160	200	250	315	400
Laeq	61.2	66.5	70.3	74.3	78.1	84.3	87.9	85.7	87.8	88.7	88.7	91.1	91.8	90.9
U_C	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7
Frequency[Hz]	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
Laeq	90.8	93.5	92.8	93.1	92.1	91.0	88.8	89.2	85.1	80.0	[77.3]	[77.1]	[77.5]	[77.7]
U_C	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	1.3	2.1	2.2	2.2	2.1

[ ] Total Noise less than 3 dB greater than background (3 dB correction applied).

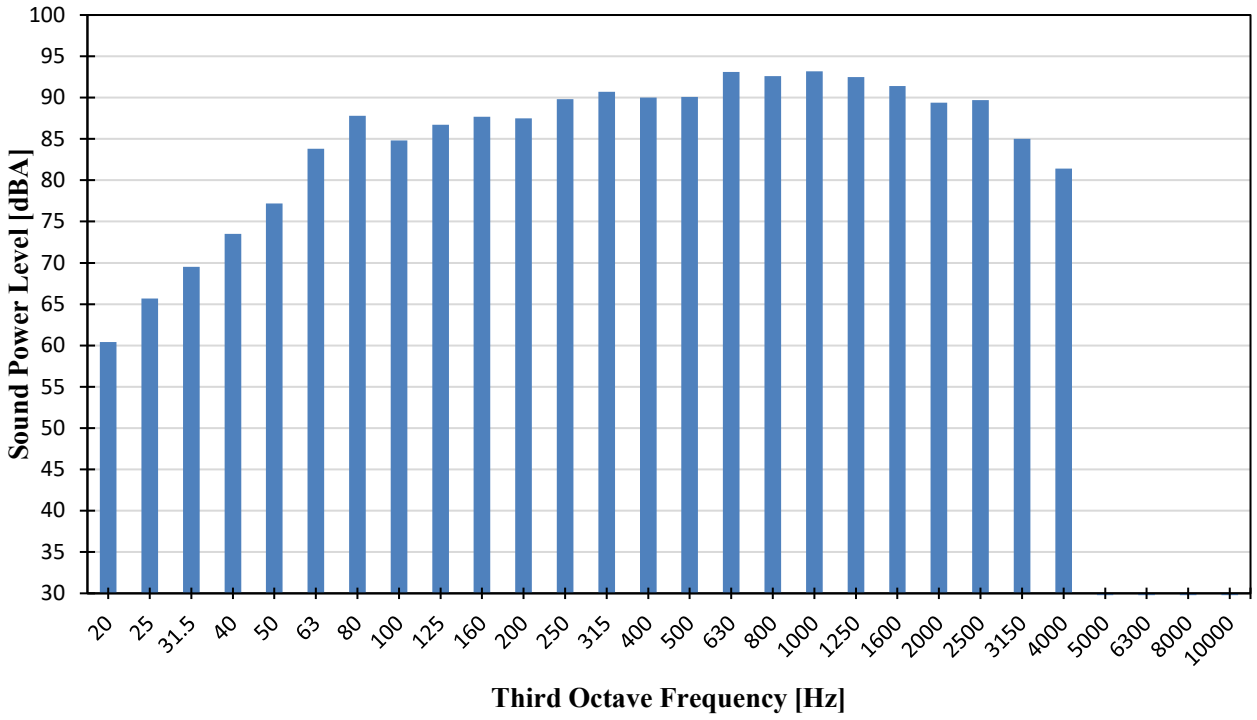
Bin 10.5: 1/3 Spectra Sound Power in dB(A)



Bin 10.5: 1/3 Spectra Sound Power in dB(A)														
Frequency[Hz]	20	25	31.5	40	50	63	80	100	125	160	200	250	315	400
Laeq	61.1	66.4	70.3	74.3	78.0	84.3	87.2	85.6	87.7	88.4	88.5	90.8	91.4	90.5
Uc	0.9	1.0	0.9	0.9	1.0	0.8	0.9	0.8	0.8	0.8	0.9	0.8	0.8	0.7
Frequency[Hz]	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
Laeq	90.5	93.1	92.6	92.9	92.1	90.9	88.9	89.1	84.5	80.2	[78.3]	[78.2]	[78.8]	[79]
Uc	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.9	1.5	2.1	2.2	2.1	2.0

[ ] Total Noise less than 3 dB greater than background (3 dB correction applied).

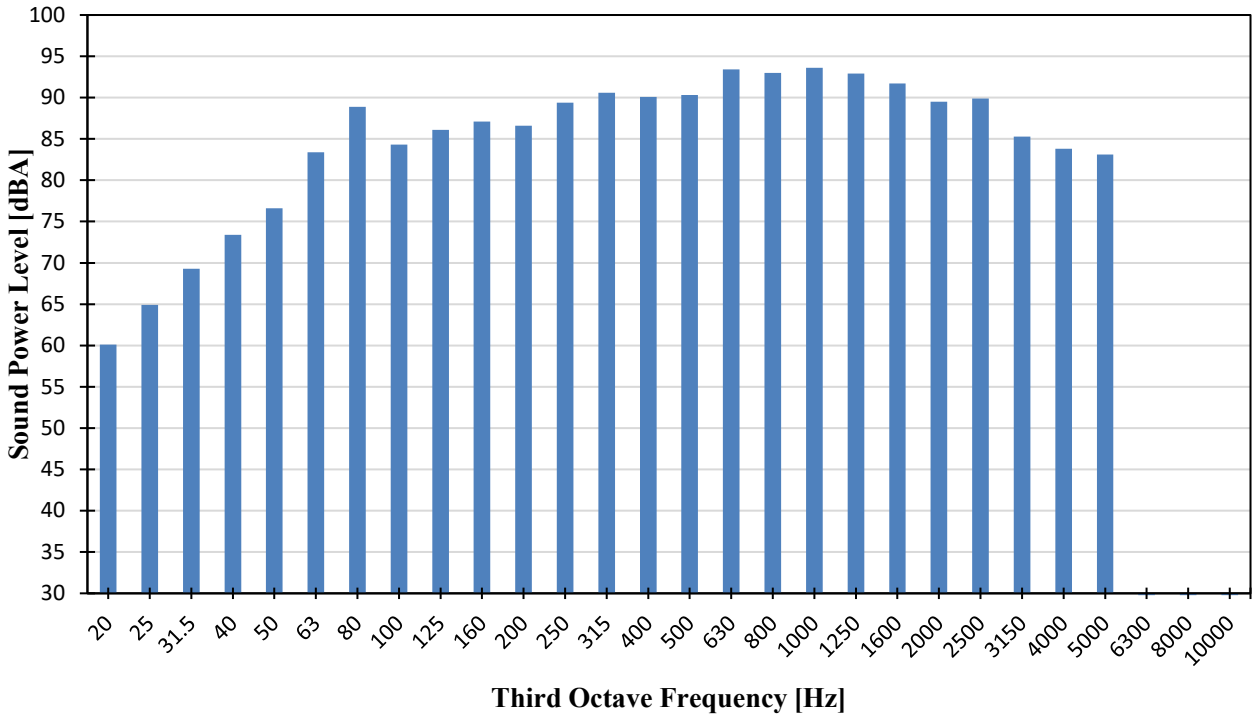
Bin 11: 1/3 Spectra Sound Power in dB(A)



Bin 11: 1/3 Spectra Sound Power in dB(A)														
Frequency[Hz]	20	25	31.5	40	50	63	80	100	125	160	200	250	315	400
Laeq	60.4	65.7	69.5	73.5	77.2	83.8	87.8	84.8	86.7	87.7	87.5	89.8	90.7	90.0
U_C	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.0	0.9	0.8	0.8
Frequency[Hz]	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
Laeq	90.1	93.1	92.6	93.2	92.5	91.4	89.4	89.7	85.0	81.4	[79.5]	[79.5]	[79.9]	[80.2]
U_C	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.9	1.4	2.2	2.2	2.1	2.0

[ ] Total Noise less than 3 dB greater than background (3 dB correction applied).

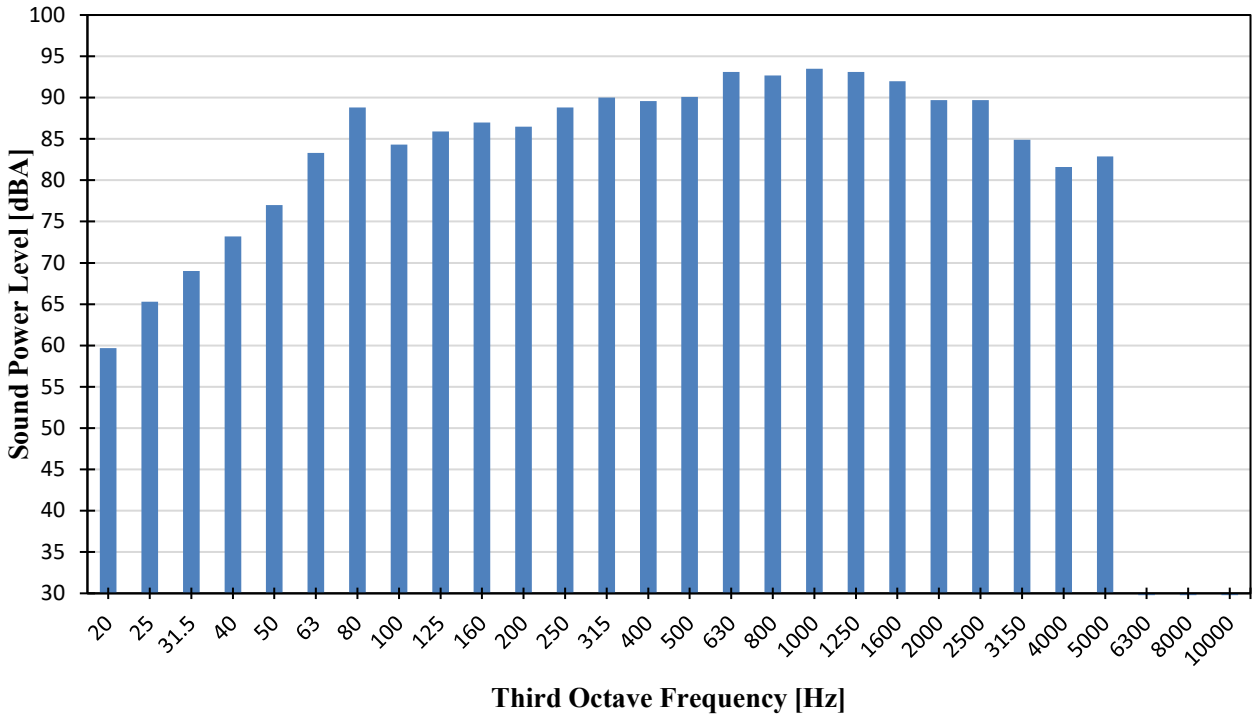
Bin 11.5: 1/3 Spectra Sound Power in dB(A)



Bin 11.5: 1/3 Spectra Sound Power in dB(A)														
Frequency[Hz]	20	25	31.5	40	50	63	80	100	125	160	200	250	315	400
Laeq	60.1	64.9	69.3	73.4	76.6	83.4	88.9	84.3	86.1	87.1	86.6	89.4	90.6	90.1
U_C	1.1	1.3	1.1	1.1	1.3	1.0	0.9	1.1	1.1	1.1	1.3	1.0	0.9	0.9
Frequency[Hz]	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
Laeq	90.3	93.4	93.0	93.6	92.9	91.7	89.5	89.9	85.3	83.8	83.1	[80.7]	[79.8]	[80]
U_C	0.9	0.8	0.8	0.7	0.7	0.8	0.8	0.8	0.9	1.4	2.0	2.6	2.4	2.3

[ ] Total Noise less than 3 dB greater than background (3 dB correction applied).

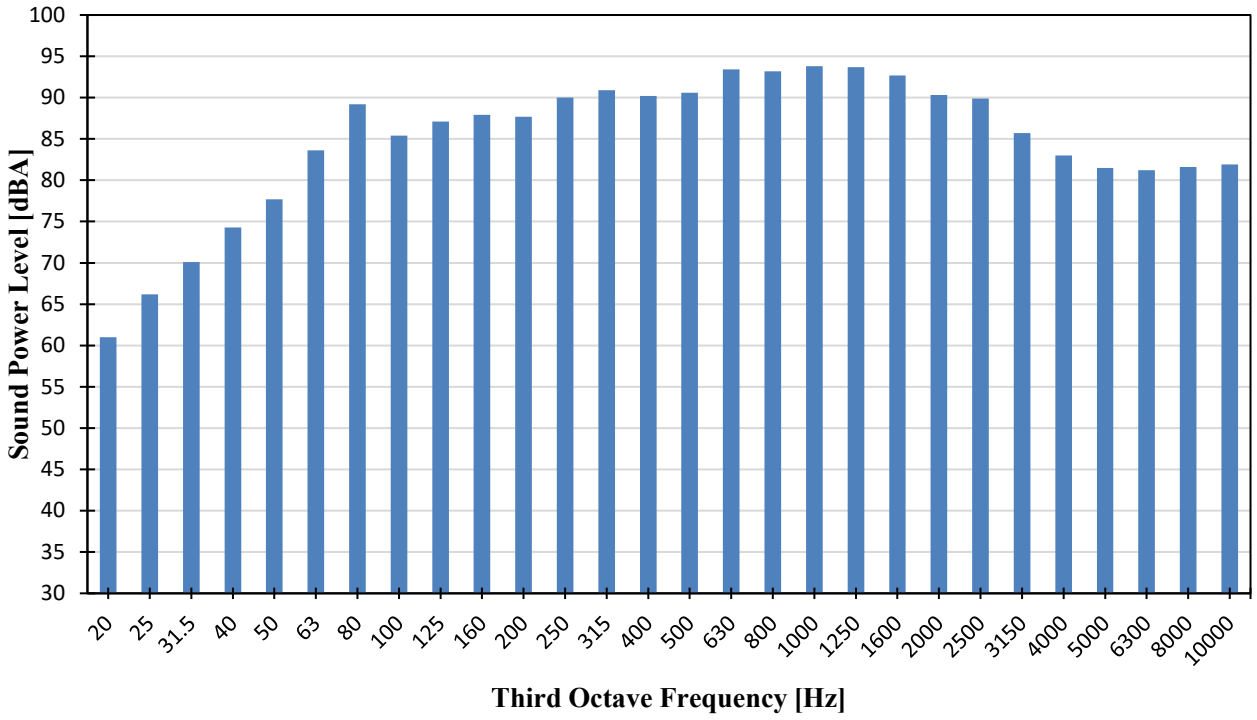
Bin 12: 1/3 Spectra Sound Power in dB(A)



Bin 12: 1/3 Spectra Sound Power in dB(A)														
Frequency[Hz]	20	25	31.5	40	50	63	80	100	125	160	200	250	315	400
Laeq	59.7	65.3	69.0	73.2	77.0	83.3	88.8	84.3	85.9	87.0	86.5	88.8	90.0	89.6
U_C	1.1	1.0	1.0	1.0	1.1	0.9	0.9	1.0	1.1	1.0	1.2	1.0	0.9	0.9
Frequency[Hz]	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
Laeq	90.1	93.1	92.7	93.5	93.1	92.0	89.7	89.7	84.9	81.6	82.9	[80.1]	[79.6]	[79.8]
U_C	0.9	0.8	0.8	0.7	0.7	0.7	0.8	0.8	0.9	1.5	2.0	2.4	2.2	2.1

[ ] Total Noise less than 3 dB greater than background (3 dB correction applied).

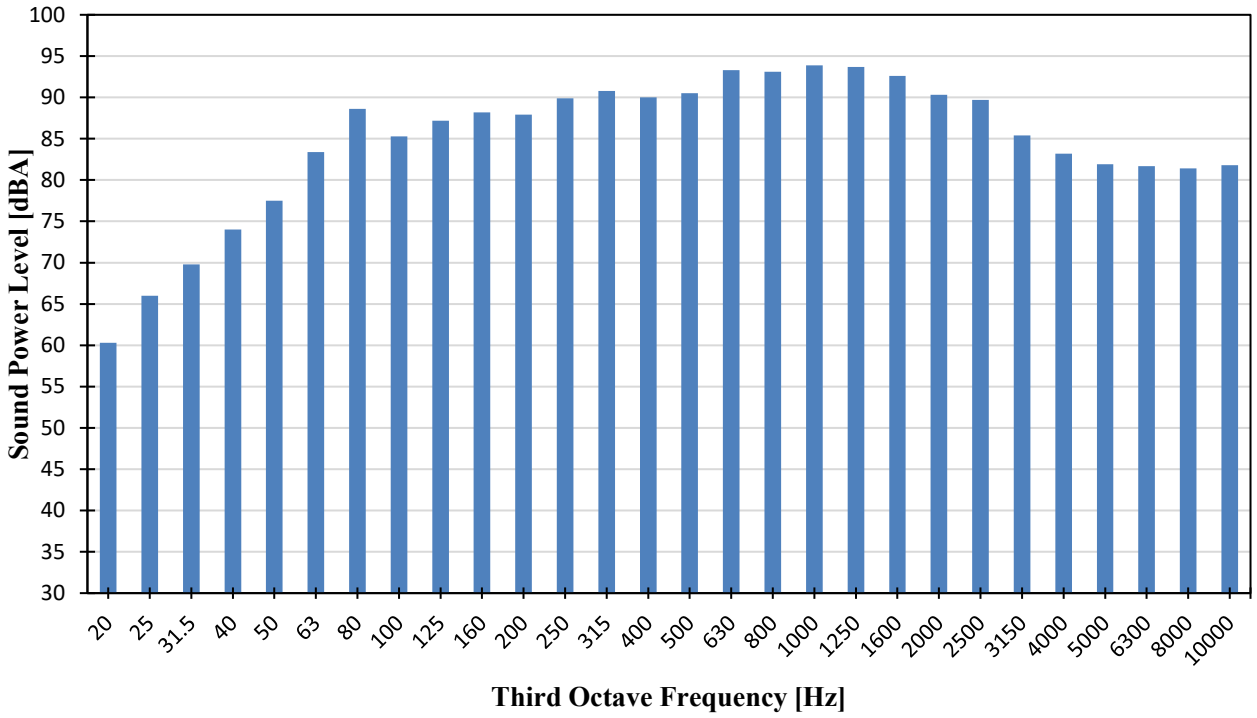
Bin 12.5: 1/3 Spectra Sound Power in dB(A)



Bin 12.5: 1/3 Spectra Sound Power in dB(A)														
Frequency[Hz]	20	25	31.5	40	50	63	80	100	125	160	200	250	315	400
Laeq	61.0	66.2	70.1	74.3	77.7	83.6	89.2	85.4	87.1	87.9	87.7	90.0	90.9	90.2
U_C	1.0	1.0	1.0	1.0	1.1	1.0	0.9	1.0	1.1	1.1	1.4	1.1	1.0	0.9
Frequency[Hz]	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
Laeq	90.6	93.4	93.2	93.8	93.7	92.7	90.3	89.9	85.7	83.0	81.5	81.2	81.6	81.9
U_C	0.9	0.8	0.7	0.7	0.7	0.7	0.8	0.8	0.9	1.7	2.3	2.6	2.6	2.5

[ ] Total Noise less than 3 dB greater than background (3 dB correction applied).

Bin 13: 1/3 Spectra Sound Power in dB(A)



Bin 13: 1/3 Spectra Sound Power in dB(A)														
Frequency[Hz]	20	25	31.5	40	50	63	80	100	125	160	200	250	315	400
Laeq	60.3	66.0	69.8	74.0	77.5	83.4	88.6	85.3	87.2	88.2	87.9	89.9	90.8	90.0
Uc	1.4	1.3	1.1	1.2	1.4	1.4	1.9	1.2	1.2	1.1	1.5	1.3	1.1	1.0
Frequency[Hz]	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
Laeq	90.5	93.3	93.1	93.9	93.7	92.6	90.3	89.7	85.4	83.2	81.9	81.7	81.4	81.8
Uc	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.0	1.9	2.5	2.7	2.6	2.5

APPENDIX D:

TONALITY ASSESSMENT, DOWNWIND LOCATION

BIN 7.5: Tonal components determined								
	Frequency	delta f	$L_{pn,avg,j,k}$	$L_{pt,j,k}$	$L_{pn,j,k}$	$dL_{tn,j,k}$	L_a	$dL_{a,j,k}$
	[Hz]	[Hz]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
$dL_{t1,1,7.5}$:	67.2	1.56	24.3	36.3	40.5	-4.2	-2.0	-2.2
$dL_{t1,2,7.5}$:	65.6	1.56	24.9	34.4	41.2	-6.8	-2.0	-4.8
$dL_{t1,3,7.5}$:	62.5	1.56	23.5	31.9	39.7	-7.9	-2.0	-5.9
$dL_{t1,8,7.5}$:	65.6	1.56	22.8	30.7	39.1	-8.4	-2.0	-6.4
$dL_{t1,9,7.5}$:	65.6	1.56	23.3	31.9	39.6	-7.7	-2.0	-5.7
$dL_{t2,5,7.5}$:	132.8	1.56	27.9	33.9	44.2	-10.3	-2.0	-8.3
$dL_{t2,8,7.5}$:	128.1	1.56	25.8	34.3	42.1	-7.8	-2.0	-5.8
$dL_{t2,9,7.5}$:	129.7	1.56	25.9	34.6	42.2	-7.6	-2.0	-5.6
$dL_{t2,10,7.5}$:	128.1	1.56	26.5	35.1	42.8	-7.7	-2.0	-5.7

BIN 7.5: Tonal components determined - Compact												
Spectrum	f_T	$dL_{tn,j,k}$	f_T	$dL_{tn,j,k}$								
##	[Hz]	[dB]	[Hz]	[dB]								
1	67.2	-4.2	---	---								
2	65.6	-6.8	---	---								
3	62.5	-7.9	---	---								
4	---	---	---	---								
5	---	---	132.8	-10.3								
6	---	---	---	---								
7	---	---	---	---								
8	65.6	-8.4	128.1	-7.8								
9	65.6	-7.7	129.7	-7.6								
10	---	---	128.1	-7.7								
f_t[Hz] | dL_k[dB]	66.3	-9.3	131.6	-11.3								
L_a[dB]		-2.0		-2.0								
$dL_{a,k}$[dB]		-7.2		-9.3								

BIN 8: Tonal components determined								
	Frequency	delta f	$L_{pn,avg,j,k}$	$L_{pt,j,k}$	$L_{pn,j,k}$	$dL_{tn,j,k}$	L_a	$dL_{a,j,k}$
	[Hz]	[Hz]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
$dL_{t1,4,8}$:	70.3	1.56	28.1	34.4	44.4	-10.0	-2.0	-8.0
$dL_{t1,6,8}$:	70.3	1.56	26.2	35.7	42.5	-6.7	-2.0	-4.7
$dL_{t1,7,8}$:	70.3	1.56	23.4	36.7	39.7	-2.9	-2.0	-0.9
$dL_{t1,9,8}$:	70.3	1.56	24.6	37.0	40.9	-3.9	-2.0	-1.9
$dL_{t1,10,8}$:	70.3	1.56	25.6	36.9	41.9	-5.1	-2.0	-3.1
$dL_{t1,11,8}$:	68.8	1.56	24.7	33.1	40.9	-7.8	-2.0	-5.8
$dL_{t1,13,8}$:	73.4	1.56	27.9	39.4	44.2	-4.8	-2.0	-2.8
$dL_{t2,5,8}$:	135.9	1.56	28.1	35.7	44.4	-8.7	-2.0	-6.7
$dL_{t2,10,8}$:	139.1	1.56	27.8	34.3	44.1	-9.9	-2.0	-7.8
$dL_{t2,11,8}$:	137.5	1.56	27.3	33.8	43.6	-9.8	-2.0	-7.8

BIN 8: Tonal components determined - Compact												
Spectrum	f_T	$dL_{tn,j,k}$	f_T	$dL_{tn,j,k}$								
##	[Hz]	[dB]	[Hz]	[dB]								
1	---	---	---	---								
2	---	---	---	---								
3	---	---	---	---								
4	70.3	-10.0	---	---								
5	---	---	135.9	-8.7								
6	70.3	-6.7	---	---								
7	70.3	-2.9	---	---								

BIN 8: Tonal components determined - Compact												
Spectrum	f_T	$dL_{tn,j,k}$	f_T	$dL_{tn,j,k}$								
##	[Hz]	[dB]	[Hz]	[dB]								
8	---	---	---	---								
9	70.3	-3.9	---	---								
10	70.3	-5.1	139.1	-9.9								
11	68.8	-7.8	137.5	-9.8								
12	---	---	---	---								
13	73.4	-4.8	---	---								
f_t[Hz] | dL_k[dB]	70.4	-7.8	136.3	-13.5								
L_a[dB]		-2.0		-2.0								
$dL_{a,k}$[dB]		-5.8		-11.5								

BIN 8.5: Tonal components determined								
	Frequency	delta f	$L_{pn,avg,j,k}$	$L_{pt,j,k}$	$L_{pn,j,k}$	$dL_{tn,j,k}$	L_a	$dL_{a,j,k}$
	[Hz]	[Hz]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
$dL_{t1,1,8.5}$:	70.3	1.56	25.8	39.4	42.1	-2.6	-2.0	-0.6
$dL_{t1,2,8.5}$:	71.9	1.56	24.8	38.9	41.1	-2.2	-2.0	-0.2
$dL_{t1,3,8.5}$:	71.9	1.56	25.2	37.8	41.5	-3.7	-2.0	-1.7
$dL_{t1,4,8.5}$:	71.9	1.56	24.1	38.6	40.4	-1.8	-2.0	0.2
$dL_{t1,5,8.5}$:	71.9	1.56	26.3	38.6	42.6	-4.0	-2.0	-2.0
$dL_{t1,6,8.5}$:	71.9	1.56	26.8	39.2	43.1	-3.8	-2.0	-1.8
$dL_{t1,7,8.5}$:	71.9	1.56	27.3	37.0	43.6	-6.6	-2.0	-4.6
$dL_{t1,8,8.5}$:	70.3	1.56	26.6	39.1	42.9	-3.8	-2.0	-1.8
$dL_{t1,9,8.5}$:	71.9	1.56	25.6	39.3	41.9	-2.6	-2.0	-0.6
$dL_{t1,10,8.5}$:	71.9	1.56	24.7	37.6	41.0	-3.4	-2.0	-1.4
$dL_{t1,11,8.5}$:	71.9	1.56	26.1	39.0	42.4	-3.4	-2.0	-1.4
$dL_{t1,12,8.5}$:	71.9	1.56	27.7	35.5	44.0	-8.5	-2.0	-6.5
$dL_{t1,13,8.5}$:	71.9	1.56	27.0	36.6	43.3	-6.7	-2.0	-4.7
$dL_{t1,14,8.5}$:	73.4	1.56	25.5	40.1	41.8	-1.7	-2.0	0.3
$dL_{t1,15,8.5}$:	73.4	1.56	24.4	40.4	40.7	-0.3	-2.0	1.7
$dL_{t1,16,8.5}$:	71.9	1.56	24.4	38.2	40.7	-2.5	-2.0	-0.5
$dL_{t1,17,8.5}$:	71.9	1.56	23.7	38.8	40.0	-1.2	-2.0	0.8
$dL_{t1,18,8.5}$:	71.9	1.56	25.4	39.3	41.7	-2.4	-2.0	-0.4
$dL_{t1,19,8.5}$:	70.3	1.56	26.7	39.6	43.0	-3.3	-2.0	-1.3
$dL_{t1,20,8.5}$:	71.9	1.56	27.8	38.4	44.1	-5.7	-2.0	-3.7
$dL_{t2,1,8.5}$:	142.2	1.56	28.3	36.1	44.6	-8.6	-2.0	-6.6
$dL_{t2,2,8.5}$:	143.8	1.56	27.6	37.0	43.9	-6.9	-2.0	-4.9
$dL_{t2,3,8.5}$:	143.8	1.56	27.6	37.8	43.9	-6.1	-2.0	-4.1
$dL_{t2,4,8.5}$:	143.8	1.56	27.2	37.3	43.5	-6.2	-2.0	-4.2
$dL_{t2,6,8.5}$:	143.8	1.56	28.6	37.4	44.9	-7.5	-2.0	-5.5
$dL_{t2,12,8.5}$:	143.8	1.56	29.6	37.5	46.0	-8.4	-2.0	-6.4
$dL_{t2,13,8.5}$:	143.8	1.56	29.1	37.1	45.4	-8.4	-2.0	-6.4
$dL_{t2,15,8.5}$:	142.2	1.56	27.4	34.3	43.7	-9.4	-2.0	-7.4
$dL_{t2,16,8.5}$:	143.8	1.56	27.2	37.8	43.5	-5.7	-2.0	-3.6
$dL_{t2,17,8.5}$:	143.8	1.56	26.8	35.0	43.1	-8.1	-2.0	-6.1

BIN 8.5: Tonal components determined - Compact												
Spectrum	f_T	$dL_{tn,j,k}$	f_T	$dL_{tn,j,k}$								
##	[Hz]	[dB]	[Hz]	[dB]								
1	70.3	-2.6	142.2	-8.6								
2	71.9	-2.2	143.8	-6.9								
3	71.9	-3.7	143.8	-6.1								
4	71.9	-1.8	143.8	-6.2								
5	71.9	-4.0	---	---								

BIN 8.5: Tonal components determined - Compact												
Spectrum	**f_T**	**$dL_{tn,j,k}$**	**f_T**	**$dL_{tn,j,k}$**								
##	**[Hz]**	**[dB]**	**[Hz]**	**[dB]**								
6	71.9	-3.8	143.8	-7.5								
7	71.9	-6.6	---	---								
8	70.3	-3.8	---	---								
9	71.9	-2.6	---	---								
10	71.9	-3.4	---	---								
11	71.9	-3.4	---	---								
12	71.9	-8.5	143.8	-8.4								
13	71.9	-6.7	143.8	-8.4								
14	73.4	-1.7	---	---								
15	73.4	-0.3	142.2	-9.4								
16	71.9	-2.5	143.8	-5.7								
17	71.9	-1.2	143.8	-8.1								
18	71.9	-2.4	---	---								
19	70.3	-3.3	---	---								
20	71.9	-5.7	---	---								
f_t[Hz] | dL_k[dB]	71.8	-3.1	142.8	-9.9								
L_a[dB]		-2.0		-2.0								
$dL_{a,k}$[dB]		-1.1		-7.8								

BIN 9: Tonal components determined								
	Frequency	**delta f**	**$L_{pn,avg,j,k}$**	**$L_{pt,j,k}$**	**$L_{pn,j,k}$**	**$dL_{tn,j,k}$**	**L_a**	**$dL_{a,j,k}$**
	[Hz]	**[Hz]**	**[dB]**	**[dB]**	**[dB]**	**[dB]**	**[dB]**	**[dB]**
$dL_{t1,1,9}$:	70.3	1.56	25.6	37.8	41.9	-4.1	-2.0	-2.1
$dL_{t1,2,9}$:	70.3	1.56	24.0	41.3	40.3	1.0	-2.0	3.0
$dL_{t1,3,9}$:	71.9	1.56	23.4	41.3	39.7	1.6	-2.0	3.6
$dL_{t1,4,9}$:	71.9	1.56	23.9	40.2	40.2	0.1	-2.0	2.1
$dL_{t1,5,9}$:	73.4	1.56	25.7	39.6	42.0	-2.3	-2.0	-0.3
$dL_{t1,6,9}$:	71.9	1.56	25.3	40.6	41.6	-0.9	-2.0	1.1
$dL_{t1,7,9}$:	71.9	1.56	24.3	39.7	40.6	-1.0	-2.0	1.0
$dL_{t1,8,9}$:	71.9	1.56	25.7	40.0	42.0	-2.1	-2.0	-0.1
$dL_{t1,9,9}$:	71.9	1.56	28.1	38.1	44.4	-6.2	-2.0	-4.2
$dL_{t1,10,9}$:	71.9	1.56	25.5	39.5	41.8	-2.3	-2.0	-0.3
$dL_{t1,11,9}$:	71.9	1.56	26.9	39.7	43.2	-3.5	-2.0	-1.5
$dL_{t1,12,9}$:	71.9	1.56	26.6	38.9	42.9	-4.0	-2.0	-2.0
$dL_{t1,13,9}$:	71.9	1.56	27.1	39.5	43.4	-3.9	-2.0	-1.9
$dL_{t1,14,9}$:	73.4	1.56	26.4	40.3	42.7	-2.3	-2.0	-0.3
$dL_{t1,15,9}$:	73.4	1.56	27.2	35.7	43.5	-7.7	-2.0	-5.7
$dL_{t1,16,9}$:	71.9	1.56	25.7	39.0	42.0	-3.0	-2.0	-1.0
$dL_{t1,17,9}$:	71.9	1.56	26.6	39.5	42.9	-3.4	-2.0	-1.4
$dL_{t1,18,9}$:	71.9	1.56	26.3	40.5	42.6	-2.1	-2.0	-0.1
$dL_{t1,19,9}$:	71.9	1.56	26.0	40.8	42.3	-1.6	-2.0	0.4
$dL_{t1,20,9}$:	70.3	1.56	26.3	37.0	42.6	-5.6	-2.0	-3.6
$dL_{t1,21,9}$:	70.3	1.56	28.2	39.2	44.5	-5.2	-2.0	-3.2
$dL_{t1,22,9}$:	73.4	1.56	27.1	40.1	43.4	-3.2	-2.0	-1.2
$dL_{t1,23,9}$:	71.9	1.56	27.3	39.3	43.6	-4.3	-2.0	-2.3
$dL_{t1,24,9}$:	71.9	1.56	27.2	37.3	43.5	-6.1	-2.0	-4.1
$dL_{t1,25,9}$:	70.3	1.56	28.2	39.6	44.5	-4.9	-2.0	-2.9
$dL_{t1,26,9}$:	65.6	1.56	27.6	41.2	43.8	-2.6	-2.0	-0.6
$dL_{t1,27,9}$:	73.4	1.56	26.4	39.8	42.7	-2.8	-2.0	-0.8
$dL_{t2,1,9}$:	139.1	1.56	27.8	34.9	44.1	-9.3	-2.0	-7.2
$dL_{t2,3,9}$:	143.8	1.56	26.5	33.1	42.8	-9.7	-2.0	-7.7
$dL_{t2,4,9}$:	143.8	1.56	27.0	34.6	43.3	-8.7	-2.0	-6.6

BIN 9: Tonal components determined								
	Frequency	delta f	$L_{pn,avg,j,k}$	$L_{pt,j,k}$	$L_{pn,j,k}$	$dL_{tn,j,k}$	L_a	$dL_{a,j,k}$
	[Hz]	[Hz]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
$dL_{t2,6,9}$:	145.3	1.56	27.7	37.2	44.0	-6.7	-2.0	-4.7
$dL_{t2,7,9}$:	143.8	1.56	27.3	37.5	43.6	-6.1	-2.0	-4.1
$dL_{t2,8,9}$:	145.3	1.56	27.8	35.9	44.1	-8.2	-2.0	-6.2
$dL_{t2,9,9}$:	143.8	1.56	29.9	37.1	46.2	-9.1	-2.0	-7.1
$dL_{t2,10,9}$:	143.8	1.56	27.8	35.9	44.1	-8.2	-2.0	-6.2
$dL_{t2,11,9}$:	143.8	1.56	28.6	35.0	44.9	-9.9	-2.0	-7.9
$dL_{t2,12,9}$:	143.8	1.56	28.6	37.6	44.9	-7.3	-2.0	-5.3
$dL_{t2,13,9}$:	143.8	1.56	28.8	37.4	45.1	-7.7	-2.0	-5.7
$dL_{t2,16,9}$:	143.8	1.56	28.1	35.1	44.4	-9.3	-2.0	-7.3
$dL_{t2,17,9}$:	143.8	1.56	28.7	35.3	45.0	-9.7	-2.0	-7.6
$dL_{t2,18,9}$:	145.3	1.56	28.7	38.2	45.0	-6.8	-2.0	-4.8
$dL_{t2,19,9}$:	145.3	1.56	28.9	35.7	45.2	-9.4	-2.0	-7.4
$dL_{t2,23,9}$:	143.8	1.56	29.6	36.2	45.9	-9.8	-2.0	-7.7
$dL_{t2,24,9}$:	143.8	1.56	29.1	35.7	45.4	-9.7	-2.0	-7.7
$dL_{t2,25,9}$:	145.3	1.56	29.8	36.8	46.1	-9.3	-2.0	-7.3

BIN 9: Tonal components determined - Compact												
Spectrum	f_T	$dL_{tn,j,k}$	f_T	$dL_{tn,j,k}$								
##	[Hz]	[dB]	[Hz]	[dB]								
1	70.3	-4.1	139.1	-9.3								
2	70.3	1.0	---	---								
3	71.9	1.6	143.8	-9.7								
4	71.9	0.1	143.8	-8.7								
5	73.4	-2.3	---	---								
6	71.9	-0.9	145.3	-6.7								
7	71.9	-1.0	143.8	-6.1								
8	71.9	-2.1	145.3	-8.2								
9	71.9	-6.2	143.8	-9.1								
10	71.9	-2.3	143.8	-8.2								
11	71.9	-3.5	143.8	-9.9								
12	71.9	-4.0	143.8	-7.3								
13	71.9	-3.9	143.8	-7.7								
14	73.4	-2.3	---	---								
15	73.4	-7.7	---	---								
16	71.9	-3.0	143.8	-9.3								
17	71.9	-3.4	143.8	-9.7								
18	71.9	-2.1	145.3	-6.8								
19	71.9	-1.6	145.3	-9.4								
20	70.3	-5.6	---	---								
21	70.3	-5.2	---	---								
22	73.4	-3.2	---	---								
23	71.9	-4.3	143.8	-9.8								
24	71.9	-6.1	143.8	-9.7								
25	70.3	-4.9	145.3	-9.3								
26	65.6	-2.6	---	---								
27	73.4	-2.8	---	---								
f_t[Hz] | dL_k[dB]	71.6	-2.5	142.3	-9.9								
L_a[dB]		-2.0		-2.0								
$dL_{a,k}$[dB]		-0.5		-7.8								

BIN 9.5: Tonal components determined								
	Frequency	delta f	$L_{pn,avg,j,k}$	$L_{pt,j,k}$	$L_{pn,j,k}$	$dL_{tn,j,k}$	L_a	$dL_{a,j,k}$
	[Hz]	[Hz]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
$dL_{t1,1,9.5}$:	70.3	1.56	25.9	39.4	42.2	-2.8	-2.0	-0.8
$dL_{t1,2,9.5}$:	71.9	1.56	24.4	39.2	40.7	-1.5	-2.0	0.5
$dL_{t1,3,9.5}$:	70.3	1.56	24.7	38.7	41.0	-2.3	-2.0	-0.3
$dL_{t1,4,9.5}$:	71.9	1.56	27.6	37.6	43.9	-6.3	-2.0	-4.3
$dL_{t1,5,9.5}$:	71.9	1.56	27.0	38.7	43.3	-4.6	-2.0	-2.6
$dL_{t1,6,9.5}$:	73.4	1.56	26.6	39.4	42.9	-3.5	-2.0	-1.5
$dL_{t1,7,9.5}$:	73.4	1.56	28.5	40.6	44.8	-4.3	-2.0	-2.3
$dL_{t1,8,9.5}$:	71.9	1.56	28.7	36.8	45.0	-8.2	-2.0	-6.2
$dL_{t1,9,9.5}$:	71.9	1.56	27.9	37.6	44.2	-6.6	-2.0	-4.6
$dL_{t1,10,9.5}$:	73.4	1.56	26.1	40.5	42.4	-1.9	-2.0	0.1
$dL_{t1,11,9.5}$:	70.3	1.56	27.0	39.1	43.3	-4.2	-2.0	-2.2
$dL_{t1,12,9.5}$:	73.4	1.56	25.5	39.5	41.8	-2.2	-2.0	-0.2
$dL_{t1,13,9.5}$:	73.4	1.56	27.4	37.5	43.7	-6.2	-2.0	-4.2
$dL_{t1,14,9.5}$:	73.4	1.56	26.9	37.6	43.2	-5.6	-2.0	-3.6
$dL_{t1,15,9.5}$:	70.3	1.56	26.0	38.6	42.3	-3.7	-2.0	-1.7
$dL_{t1,16,9.5}$:	71.9	1.56	26.9	36.8	43.2	-6.5	-2.0	-4.5
$dL_{t1,17,9.5}$:	73.4	1.56	25.2	38.8	41.5	-2.7	-2.0	-0.7
$dL_{t1,18,9.5}$:	70.3	1.56	25.7	38.9	42.0	-3.1	-2.0	-1.1
$dL_{t1,19,9.5}$:	70.3	1.56	25.0	39.0	41.3	-2.3	-2.0	-0.3
$dL_{t1,20,9.5}$:	71.9	1.56	26.8	38.9	43.1	-4.3	-2.0	-2.3
$dL_{t1,21,9.5}$:	73.4	1.56	25.5	39.2	41.8	-2.6	-2.0	-0.6
$dL_{t1,22,9.5}$:	70.3	1.56	25.5	40.4	41.8	-1.4	-2.0	0.6
$dL_{t1,23,9.5}$:	71.9	1.56	23.8	39.1	40.1	-0.9	-2.0	1.1
$dL_{t1,24,9.5}$:	75.0	1.56	24.7	38.5	41.0	-2.5	-2.0	-0.5
$dL_{t1,25,9.5}$:	73.4	1.56	25.7	39.0	42.0	-3.0	-2.0	-1.0
$dL_{t1,26,9.5}$:	71.9	1.56	25.0	39.5	41.3	-1.8	-2.0	0.2
$dL_{t1,27,9.5}$:	71.9	1.56	27.1	39.4	43.4	-4.0	-2.0	-2.0
$dL_{t2,2,9.5}$:	143.8	1.56	27.0	38.6	43.4	-4.7	-2.0	-2.7
$dL_{t2,3,9.5}$:	143.8	1.56	28.2	34.4	44.5	-10.2	-2.0	-8.2
$dL_{t2,5,9.5}$:	143.8	1.56	29.3	37.8	45.6	-7.8	-2.0	-5.8
$dL_{t2,12,9.5}$:	142.2	1.56	28.1	34.5	44.4	-9.9	-2.0	-7.9
$dL_{t2,14,9.5}$:	143.8	1.56	29.2	35.5	45.5	-9.9	-2.0	-7.9
$dL_{t2,18,9.5}$:	143.8	1.56	28.1	36.1	44.4	-8.3	-2.0	-6.3
$dL_{t2,19,9.5}$:	143.8	1.56	27.9	37.5	44.2	-6.7	-2.0	-4.7
$dL_{t2,21,9.5}$:	140.6	1.56	27.2	34.8	43.5	-8.7	-2.0	-6.7
$dL_{t2,22,9.5}$:	142.2	1.56	27.6	35.6	43.9	-8.3	-2.0	-6.3
$dL_{t2,23,9.5}$:	143.8	1.56	26.3	37.7	42.6	-4.9	-2.0	-2.9
$dL_{t2,24,9.5}$:	143.8	1.56	27.4	35.1	43.7	-8.6	-2.0	-6.5
$dL_{t2,26,9.5}$:	142.2	1.56	27.2	35.1	43.5	-8.5	-2.0	-6.5
$dL_{t2,27,9.5}$:	142.2	1.56	29.0	35.2	45.3	-10.1	-2.0	-8.1

BIN 9.5: Tonal components determined - Compact												
Spectrum	f_T	$dL_{tn,j,k}$	f_T	$dL_{tn,j,k}$								
##	[Hz]	[dB]	[Hz]	[dB]								
1	70.3	-2.8	---	---								
2	71.9	-1.5	143.8	-4.7								
3	70.3	-2.3	143.8	-10.2								
4	71.9	-6.3	---	---								
5	71.9	-4.6	143.8	-7.8								
6	73.4	-3.5	---	---								
7	73.4	-4.3	---	---								
8	71.9	-8.2	---	---								

BIN 9.5: Tonal components determined - Compact												
Spectrum	f_T	$dL_{tn,j,k}$	f_T	$dL_{tn,j,k}$								
##	[Hz]	[dB]	[Hz]	[dB]								
9	71.9	-6.6	---	---								
10	73.4	-1.9	---	---								
11	70.3	-4.2	---	---								
12	73.4	-2.2	142.2	-9.9								
13	73.4	-6.2	---	---								
14	73.4	-5.6	143.8	-9.9								
15	70.3	-3.7	---	---								
16	71.9	-6.5	---	---								
17	73.4	-2.7	---	---								
18	70.3	-3.1	143.8	-8.3								
19	70.3	-2.3	143.8	-6.7								
20	71.9	-4.3	---	---								
21	73.4	-2.6	140.6	-8.7								
22	70.3	-1.4	142.2	-8.3								
23	71.9	-0.9	143.8	-4.9								
24	75.0	-2.5	143.8	-8.6								
25	73.4	-3.0	---	---								
26	71.9	-1.8	142.2	-8.5								
27	71.9	-4.0	142.2	-10.1								
f_t[Hz] | dL_k[dB]	72.1	-3.3	143.4	-10.4								
L_a[dB]		-2.0		-2.0								
$dL_{a,k}$[dB]		-1.3		-8.4								

BIN 10: Tonal components determined								
	Frequency	delta f	$L_{pn,avg,j,k}$	$L_{pt,j,k}$	$L_{pn,j,k}$	$dL_{tn,j,k}$	L_a	$dL_{a,j,k}$
	[Hz]	[Hz]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
$dL_{t1,2,10}$:	70.3	1.56	24.3	38.4	40.6	-2.2	-2.0	-0.2
$dL_{t1,3,10}$:	70.3	1.56	25.9	36.2	42.2	-6.0	-2.0	-4.0
$dL_{t1,4,10}$:	70.3	1.56	23.7	34.9	40.0	-5.1	-2.0	-3.1
$dL_{t1,5,10}$:	71.9	1.56	25.7	39.5	42.0	-2.5	-2.0	-0.5
$dL_{t1,6,10}$:	70.3	1.56	24.8	36.2	41.1	-4.8	-2.0	-2.8
$dL_{t1,7,10}$:	71.9	1.56	25.5	35.9	41.8	-5.9	-2.0	-3.9
$dL_{t1,8,10}$:	71.9	1.56	24.6	37.8	40.9	-3.1	-2.0	-1.1
$dL_{t1,9,10}$:	71.9	1.56	27.3	34.1	43.6	-9.5	-2.0	-7.5
$dL_{t1,10,10}$:	70.3	1.56	26.0	37.4	42.3	-4.9	-2.0	-2.9
$dL_{t1,11,10}$:	71.9	1.56	25.4	39.0	41.7	-2.7	-2.0	-0.7
$dL_{t1,12,10}$:	71.9	1.56	25.5	39.3	41.8	-2.6	-2.0	-0.6
$dL_{t1,14,10}$:	70.3	1.56	26.3	34.9	42.6	-7.8	-2.0	-5.8
$dL_{t1,15,10}$:	70.3	1.56	26.7	35.9	43.0	-7.1	-2.0	-5.1
$dL_{t1,16,10}$:	70.3	1.56	24.9	34.3	41.2	-6.9	-2.0	-4.9
$dL_{t1,17,10}$:	71.9	1.56	26.2	37.2	42.5	-5.3	-2.0	-3.3
$dL_{t1,18,10}$:	71.9	1.56	25.7	34.6	42.0	-7.4	-2.0	-5.4
$dL_{t1,19,10}$:	71.9	1.56	26.4	37.2	42.7	-5.5	-2.0	-3.5
$dL_{t1,20,10}$:	73.4	1.56	23.0	38.1	39.4	-1.2	-2.0	0.8
$dL_{t1,21,10}$:	73.4	1.56	25.1	35.1	41.4	-6.3	-2.0	-4.3
$dL_{t1,22,10}$:	70.3	1.56	25.6	38.8	41.9	-3.1	-2.0	-1.1
$dL_{t1,23,10}$:	71.9	1.56	24.9	39.4	41.2	-1.8	-2.0	0.2
$dL_{t1,24,10}$:	71.9	1.56	27.0	38.7	43.3	-4.6	-2.0	-2.6
$dL_{t1,25,10}$:	71.9	1.56	27.3	38.1	43.6	-5.5	-2.0	-3.5
$dL_{t2,4,10}$:	139.1	1.56	26.6	33.0	42.9	-9.9	-2.0	-7.9
$dL_{t2,5,10}$:	143.8	1.56	27.9	34.2	44.2	-10.0	-2.0	-8.0
$dL_{t2,8,10}$:	143.8	1.56	27.1	36.9	43.4	-6.5	-2.0	-4.5

BIN 10: Tonal components determined								
	Frequency	delta f	$L_{pn,avg,j,k}$	$L_{pt,j,k}$	$L_{pn,j,k}$	$dL_{tn,j,k}$	L_a	$dL_{a,j,k}$
	[Hz]	[Hz]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
$dL_{t2,12,10}$:	145.3	1.56	27.7	37.2	44.0	-6.8	-2.0	-4.8
$dL_{t2,18,10}$:	143.8	1.56	28.2	34.5	44.5	-10.0	-2.0	-8.0
$dL_{t2,24,10}$:	142.2	1.56	29.2	37.3	45.5	-8.2	-2.0	-6.2
$dL_{t2,25,10}$:	142.2	1.56	29.0	35.4	45.3	-9.8	-2.0	-7.8

BIN 10: Tonal components determined - Compact												
Spectrum	f_T	$dL_{tn,j,k}$	f_T	$dL_{tn,j,k}$								
##	[Hz]	[dB]	[Hz]	[dB]								
1	---	---	---	---								
2	70.3	-2.2	---	---								
3	70.3	-6.0	---	---								
4	70.3	-5.1	139.1	-9.9								
5	71.9	-2.5	143.8	-10.0								
6	70.3	-4.8	---	---								
7	71.9	-5.9	---	---								
8	71.9	-3.1	143.8	-6.5								
9	71.9	-9.5	---	---								
10	70.3	-4.9	---	---								
11	71.9	-2.7	---	---								
12	71.9	-2.6	145.3	-6.8								
13	---	---	---	---								
14	70.3	-7.8	---	---								
15	70.3	-7.1	---	---								
16	70.3	-6.9	---	---								
17	71.9	-5.3	---	---								
18	71.9	-7.4	143.8	-10.0								
19	71.9	-5.5	---	---								
20	73.4	-1.2	---	---								
21	73.4	-6.3	---	---								
22	70.3	-3.1	---	---								
23	71.9	-1.8	---	---								
24	71.9	-4.6	142.2	-8.2								
25	71.9	-5.5	142.2	-9.8								
f_t[Hz] | dL_k[dB]	71.3	-4.7	140.1	-12.5								
L_a[dB]		-2.0		-2.0								
$dL_{a,k}$[dB]		-2.7		-10.5								

BIN 10.5: Tonal components determined								
	Frequency	delta f	$L_{pn,avg,j,k}$	$L_{pt,j,k}$	$L_{pn,j,k}$	$dL_{tn,j,k}$	L_a	$dL_{a,j,k}$
	[Hz]	[Hz]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
$dL_{t1,1,10.5}$:	71.9	1.56	26.0	32.9	42.3	-9.4	-2.0	-7.4
$dL_{t1,2,10.5}$:	70.3	1.56	23.9	35.4	40.2	-4.8	-2.0	-2.8
$dL_{t1,3,10.5}$:	70.3	1.56	24.8	33.4	41.1	-7.7	-2.0	-5.7
$dL_{t1,4,10.5}$:	71.9	1.56	25.6	38.9	41.9	-3.0	-2.0	-1.0
$dL_{t1,5,10.5}$:	70.3	1.56	23.9	38.5	40.2	-1.7	-2.0	0.3
$dL_{t1,6,10.5}$:	71.9	1.56	25.9	39.0	42.2	-3.2	-2.0	-1.2
$dL_{t1,7,10.5}$:	71.9	1.56	26.9	36.7	43.2	-6.4	-2.0	-4.4
$dL_{t1,8,10.5}$:	71.9	1.56	27.9	37.6	44.2	-6.6	-2.0	-4.6
$dL_{t1,9,10.5}$:	70.3	1.56	25.6	34.4	41.9	-7.5	-2.0	-5.5
$dL_{t1,10,10.5}$:	70.3	1.56	26.4	34.5	42.7	-8.3	-2.0	-6.3
$dL_{t1,11,10.5}$:	71.9	1.56	25.4	38.4	41.7	-3.3	-2.0	-1.3
$dL_{t1,12,10.5}$:	71.9	1.56	26.1	37.5	42.4	-4.9	-2.0	-2.9

BIN 10.5: Tonal components determined								
	Frequency	delta f	$L_{pn,avg,j,k}$	$L_{pt,j,k}$	$L_{pn,j,k}$	$dL_{tn,j,k}$	L_a	$dL_{a,j,k}$
	[Hz]	[Hz]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
$dL_{t1,13,10.5}$:	70.3	1.56	26.9	35.4	43.2	-7.9	-2.0	-5.9
$dL_{t1,14,10.5}$:	71.9	1.56	26.6	36.4	42.9	-6.5	-2.0	-4.5
$dL_{t1,17,10.5}$:	70.3	1.56	28.7	35.0	45.0	-10.0	-2.0	-8.0
$dL_{t1,19,10.5}$:	70.3	1.56	26.6	35.7	42.9	-7.2	-2.0	-5.2
$dL_{t1,20,10.5}$:	70.3	1.56	25.5	34.2	41.8	-7.6	-2.0	-5.6
$dL_{t1,21,10.5}$:	70.3	1.56	25.1	31.2	41.4	-10.2	-2.0	-8.2
$dL_{t1,22,10.5}$:	70.3	1.56	24.7	32.9	41.0	-8.1	-2.0	-6.1
$dL_{t1,23,10.5}$:	70.3	1.56	24.6	33.7	40.9	-7.2	-2.0	-5.2
$dL_{t1,25,10.5}$:	70.3	1.56	27.9	34.5	44.2	-9.7	-2.0	-7.7
$dL_{t1,26,10.5}$:	70.3	1.56	23.9	35.1	40.2	-5.2	-2.0	-3.2
$dL_{t1,28,10.5}$:	70.3	1.56	22.8	34.7	39.1	-4.4	-2.0	-2.4
$dL_{t1,29,10.5}$:	70.3	1.56	23.5	35.3	39.8	-4.5	-2.0	-2.5
$dL_{t1,30,10.5}$:	70.3	1.56	24.4	34.0	40.7	-6.8	-2.0	-4.8
$dL_{t1,31,10.5}$:	68.8	1.56	24.0	32.8	40.2	-7.5	-2.0	-5.5
$dL_{t1,32,10.5}$:	70.3	1.56	26.0	36.1	42.3	-6.3	-2.0	-4.3
$dL_{t1,33,10.5}$:	70.3	1.56	25.0	36.5	41.3	-4.8	-2.0	-2.8
$dL_{t1,34,10.5}$:	70.3	1.56	24.1	36.3	40.4	-4.1	-2.0	-2.1
$dL_{t1,35,10.5}$:	71.9	1.56	24.3	35.0	40.6	-5.6	-2.0	-3.6
$dL_{t1,36,10.5}$:	71.9	1.56	25.5	35.2	41.8	-6.6	-2.0	-4.6
$dL_{t1,37,10.5}$:	71.9	1.56	25.0	35.1	41.3	-6.2	-2.0	-4.2
$dL_{t1,38,10.5}$:	71.9	1.56	24.9	36.7	41.2	-4.5	-2.0	-2.5
$dL_{t1,39,10.5}$:	71.9	1.56	26.4	35.1	42.7	-7.6	-2.0	-5.6
$dL_{t1,40,10.5}$:	76.6	1.56	23.0	38.5	39.3	-0.9	-2.0	1.2
$dL_{t1,41,10.5}$:	71.9	1.56	25.7	35.5	42.0	-6.6	-2.0	-4.6
$dL_{t1,42,10.5}$:	70.3	1.56	24.1	34.4	40.4	-6.1	-2.0	-4.0
$dL_{t1,43,10.5}$:	70.3	1.56	26.1	32.2	42.4	-10.2	-2.0	-8.2
$dL_{t1,44,10.5}$:	70.3	1.56	25.7	37.4	42.0	-4.6	-2.0	-2.6
$dL_{t1,45,10.5}$:	73.4	1.56	26.8	38.9	43.1	-4.2	-2.0	-2.2
$dL_{t1,46,10.5}$:	68.8	1.56	21.1	35.6	37.3	-1.8	-2.0	0.2
$dL_{t1,47,10.5}$:	70.3	1.56	22.6	37.6	38.9	-1.2	-2.0	0.8
$dL_{t1,48,10.5}$:	71.9	1.56	22.7	38.4	39.0	-0.6	-2.0	1.4
$dL_{t1,49,10.5}$:	70.3	1.56	26.1	38.6	42.4	-3.8	-2.0	-1.8
$dL_{t1,50,10.5}$:	71.9	1.56	27.2	38.5	43.5	-5.0	-2.0	-3.0
$dL_{t1,51,10.5}$:	71.9	1.56	27.7	37.5	44.0	-6.5	-2.0	-4.5
$dL_{t1,52,10.5}$:	71.9	1.56	28.1	39.7	44.4	-4.7	-2.0	-2.7
$dL_{t2,2,10.5}$:	140.6	1.56	26.6	33.7	42.9	-9.2	-2.0	-7.2
$dL_{t2,5,10.5}$:	140.6	1.56	26.1	36.5	42.4	-5.9	-2.0	-3.9
$dL_{t2,6,10.5}$:	143.8	1.56	28.0	37.4	44.3	-6.9	-2.0	-4.9
$dL_{t2,11,10.5}$:	143.8	1.56	27.8	36.2	44.1	-7.8	-2.0	-5.8
$dL_{t2,19,10.5}$:	140.6	1.56	29.1	35.4	45.4	-9.9	-2.0	-7.9
$dL_{t2,23,10.5}$:	139.1	1.56	27.5	34.0	43.8	-9.8	-2.0	-7.8
$dL_{t2,26,10.5}$:	140.6	1.56	26.3	33.7	42.6	-8.9	-2.0	-6.9
$dL_{t2,34,10.5}$:	142.2	1.56	27.1	35.3	43.4	-8.1	-2.0	-6.1
$dL_{t2,35,10.5}$:	142.2	1.56	26.8	33.2	43.1	-9.9	-2.0	-7.9
$dL_{t2,42,10.5}$:	139.1	1.56	26.6	33.4	42.9	-9.6	-2.0	-7.5
$dL_{t2,46,10.5}$:	139.1	1.56	25.7	33.4	42.0	-8.5	-2.0	-6.5
$dL_{t2,48,10.5}$:	142.2	1.56	26.2	35.7	42.5	-6.7	-2.0	-4.7
$dL_{t2,51,10.5}$:	142.2	1.56	29.7	35.8	46.0	-10.2	-2.0	-8.2
$dL_{t3,24,10.5}$:	3878.4	1.56	8.4	15.9	32.9	-17.0	-4.2	-12.8

BIN 10.5: Tonal components determined - Compact												
Spectrum	f_T	$dL_{tn,j,k}$	f_T	$dL_{tn,j,k}$	f_T	$dL_{tn,j,k}$						
##	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]						
1	71.9	-9.4	---	---	---	---						
2	70.3	-4.8	140.6	-9.2	---	---						
3	70.3	-7.7	---	---	---	---						
4	71.9	-3.0	---	---	---	---						
5	70.3	-1.7	140.6	-5.9	---	---						
6	71.9	-3.2	143.8	-6.9	---	---						
7	71.9	-6.4	---	---	---	---						
8	71.9	-6.6	---	---	---	---						
9	70.3	-7.5	---	---	---	---						
10	70.3	-8.3	---	---	---	---						
11	71.9	-3.3	143.8	-7.8	---	---						
12	71.9	-4.9	---	---	---	---						
13	70.3	-7.9	---	---	---	---						
14	71.9	-6.5	---	---	---	---						
15	---	---	---	---	---	---						
16	---	---	---	---	---	---						
17	70.3	-10.0	---	---	---	---						
18	---	---	---	---	---	---						
19	70.3	-7.2	140.6	-9.9	---	---						
20	70.3	-7.6	---	---	---	---						
21	70.3	-10.2	---	---	---	---						
22	70.3	-8.1	---	---	---	---						
23	70.3	-7.2	139.1	-9.8	---	---						
24	---	---	---	---	3878.4	-17.0						
25	70.3	-9.7	---	---	---	---						
26	70.3	-5.2	140.6	-8.9	---	---						
27	---	---	---	---	---	---						
28	70.3	-4.4	---	---	---	---						
29	70.3	-4.5	---	---	---	---						
30	70.3	-6.8	---	---	---	---						
31	68.8	-7.5	---	---	---	---						
32	70.3	-6.3	---	---	---	---						
33	70.3	-4.8	---	---	---	---						
34	70.3	-4.1	142.2	-8.1	---	---						
35	71.9	-5.6	142.2	-9.9	---	---						
36	71.9	-6.6	---	---	---	---						
37	71.9	-6.2	---	---	---	---						
38	71.9	-4.5	---	---	---	---						
39	71.9	-7.6	---	---	---	---						
40	76.6	-0.9	---	---	---	---						
41	71.9	-6.6	---	---	---	---						
42	70.3	-6.1	139.1	-9.6	---	---						
43	70.3	-10.2	---	---	---	---						
44	70.3	-4.6	---	---	---	---						
45	73.4	-4.2	---	---	---	---						
46	68.8	-1.8	139.1	-8.5	---	---						
47	70.3	-1.2	---	---	---	---						
48	71.9	-0.6	142.2	-6.7	---	---						
49	70.3	-3.8	---	---	---	---						
50	71.9	-5.0	---	---	---	---						
51	71.9	-6.5	142.2	-10.2	---	---						
52	71.9	-4.7	---	---	---	---						
f_t[Hz] | dL_k[dB]	71.1	-5.5	140.8	-12.7	3878.4	-24.1						

BIN 10.5: Tonal components determined - Compact												
Spectrum	f_T	$dL_{tn,j,k}$	f_T	$dL_{tn,j,k}$	f_T	$dL_{tn,j,k}$						
##	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]						
L_a[dB]		-2.0		-2.0		-4.2						
$dL_{a,k}$[dB]		-3.5		-10.7		-19.9						

BIN 11: Tonal components determined								
	Frequency	delta f	$L_{pn,avg,j,k}$	$L_{pt,j,k}$	$L_{pn,j,k}$	$dL_{tn,j,k}$	L_a	$dL_{a,j,k}$
	[Hz]	[Hz]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
$dL_{t1,1,11}$:	73.4	1.56	24.6	36.4	40.9	-4.5	-2.0	-2.5
$dL_{t1,2,11}$:	71.9	1.56	22.7	35.9	39.0	-3.0	-2.0	-1.0
$dL_{t1,3,11}$:	70.3	1.56	24.0	36.2	40.3	-4.1	-2.0	-2.1
$dL_{t1,4,11}$:	71.9	1.56	24.4	37.2	40.7	-3.5	-2.0	-1.5
$dL_{t1,5,11}$:	70.3	1.56	25.2	35.7	41.6	-5.8	-2.0	-3.8
$dL_{t1,6,11}$:	70.3	1.56	25.2	35.3	41.5	-6.2	-2.0	-4.2
$dL_{t1,7,11}$:	70.3	1.56	25.2	37.4	41.5	-4.2	-2.0	-2.2
$dL_{t1,8,11}$:	71.9	1.56	25.6	37.8	41.9	-4.1	-2.0	-2.1
$dL_{t1,9,11}$:	71.9	1.56	22.3	39.3	38.6	0.8	-2.0	2.8
$dL_{t1,10,11}$:	71.9	1.56	26.9	38.4	43.2	-4.7	-2.0	-2.7
$dL_{t1,11,11}$:	71.9	1.56	25.7	34.6	42.0	-7.3	-2.0	-5.3
$dL_{t1,12,11}$:	70.3	1.56	23.5	39.7	39.8	-0.1	-2.0	1.9
$dL_{t1,13,11}$:	70.3	1.56	23.3	38.8	39.6	-0.7	-2.0	1.3
$dL_{t1,14,11}$:	71.9	1.56	25.9	38.3	42.2	-3.9	-2.0	-1.9
$dL_{t1,15,11}$:	70.3	1.56	23.5	37.6	39.8	-2.1	-2.0	-0.1
$dL_{t1,16,11}$:	73.4	1.56	27.5	35.7	43.8	-8.1	-2.0	-6.1
$dL_{t1,17,11}$:	71.9	1.56	22.4	40.8	38.7	2.1	-2.0	4.1
$dL_{t1,18,11}$:	71.9	1.56	22.2	38.2	38.5	-0.3	-2.0	1.7
$dL_{t1,19,11}$:	70.3	1.56	23.6	36.1	39.9	-3.8	-2.0	-1.8
$dL_{t1,20,11}$:	70.3	1.56	24.3	37.6	40.6	-3.1	-2.0	-1.0
$dL_{t1,21,11}$:	70.3	1.56	23.6	39.3	39.9	-0.6	-2.0	1.4
$dL_{t1,22,11}$:	70.3	1.56	25.4	36.2	41.7	-5.5	-2.0	-3.5
$dL_{t1,23,11}$:	70.3	1.56	24.9	38.0	41.2	-3.2	-2.0	-1.2
$dL_{t1,24,11}$:	70.3	1.56	25.5	38.5	41.8	-3.3	-2.0	-1.3
$dL_{t1,26,11}$:	71.9	1.56	27.9	39.9	44.2	-4.4	-2.0	-2.3
$dL_{t1,27,11}$:	71.9	1.56	27.3	35.7	43.6	-7.9	-2.0	-5.9
$dL_{t1,28,11}$:	71.9	1.56	24.4	36.0	40.7	-4.7	-2.0	-2.7
$dL_{t1,29,11}$:	71.9	1.56	24.2	36.6	40.5	-3.8	-2.0	-1.8
$dL_{t1,31,11}$:	71.9	1.56	28.5	34.9	44.8	-9.9	-2.0	-7.9
$dL_{t1,32,11}$:	79.7	1.56	28.7	35.1	45.0	-9.9	-2.0	-7.9
$dL_{t1,33,11}$:	71.9	1.56	26.3	34.3	42.6	-8.3	-2.0	-6.3
$dL_{t1,35,11}$:	70.3	1.56	25.1	36.2	41.4	-5.3	-2.0	-3.3
$dL_{t1,36,11}$:	70.3	1.56	25.4	37.0	41.7	-4.7	-2.0	-2.7
$dL_{t1,37,11}$:	71.9	1.56	24.9	36.5	41.2	-4.7	-2.0	-2.7
$dL_{t1,38,11}$:	73.4	1.56	27.9	38.0	44.2	-6.1	-2.0	-4.1
$dL_{t1,39,11}$:	71.9	1.56	26.8	36.4	43.1	-6.7	-2.0	-4.7
$dL_{t1,40,11}$:	73.4	1.56	26.4	36.6	42.7	-6.1	-2.0	-4.1
$dL_{t1,42,11}$:	70.3	1.56	25.0	36.0	41.3	-5.3	-2.0	-3.3
$dL_{t1,43,11}$:	70.3	1.56	25.2	34.6	41.5	-6.9	-2.0	-4.9
$dL_{t1,44,11}$:	70.3	1.56	22.6	35.9	38.9	-3.1	-2.0	-1.1
$dL_{t1,45,11}$:	70.3	1.56	24.9	37.1	41.2	-4.1	-2.0	-2.1
$dL_{t1,46,11}$:	70.3	1.56	24.0	35.4	40.3	-4.9	-2.0	-2.9
$dL_{t1,47,11}$:	70.3	1.56	23.5	36.7	39.8	-3.1	-2.0	-1.1
$dL_{t1,48,11}$:	70.3	1.56	25.8	37.2	42.1	-4.9	-2.0	-2.9
$dL_{t1,49,11}$:	70.3	1.56	21.4	37.2	37.8	-0.5	-2.0	1.5
$dL_{t1,50,11}$:	70.3	1.56	20.6	38.3	36.9	1.4	-2.0	3.4

BIN 11: Tonal components determined								
	Frequency	delta f	$L_{pn,avg,j,k}$	$L_{pt,j,k}$	$L_{pn,j,k}$	$dL_{tn,j,k}$	L_a	$dL_{a,j,k}$
	[Hz]	[Hz]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
$dL_{t1,51,11}$:	70.3	1.56	21.5	37.7	37.8	-0.1	-2.0	1.9
$dL_{t1,52,11}$:	70.3	1.56	22.5	36.3	38.8	-2.6	-2.0	-0.6
$dL_{t1,53,11}$:	71.9	1.56	24.3	38.2	40.6	-2.4	-2.0	-0.4
$dL_{t1,54,11}$:	73.4	1.56	24.6	37.8	40.9	-3.1	-2.0	-1.1
$dL_{t1,55,11}$:	71.9	1.56	24.5	37.5	40.8	-3.3	-2.0	-1.3
$dL_{t1,56,11}$:	78.1	1.56	22.5	40.3	38.8	1.5	-2.0	3.5
$dL_{t1,57,11}$:	71.9	1.56	23.0	38.6	39.3	-0.8	-2.0	1.3
$dL_{t1,58,11}$:	75.0	1.56	27.0	35.1	43.3	-8.2	-2.0	-6.2
$dL_{t1,59,11}$:	76.6	1.56	29.4	35.4	45.7	-10.3	-2.0	-8.3
$dL_{t1,60,11}$:	70.3	1.56	24.9	35.3	41.2	-5.9	-2.0	-3.9
$dL_{t1,61,11}$:	71.9	1.56	26.6	37.5	42.9	-5.4	-2.0	-3.4
$dL_{t1,62,11}$:	70.3	1.56	22.9	35.4	39.2	-3.8	-2.0	-1.8
$dL_{t1,63,11}$:	70.3	1.56	23.4	36.1	39.7	-3.6	-2.0	-1.6
$dL_{t1,64,11}$:	71.9	1.56	24.1	38.1	40.4	-2.3	-2.0	-0.3
$dL_{t1,65,11}$:	70.3	1.56	23.2	36.6	39.5	-2.9	-2.0	-0.8
$dL_{t1,66,11}$:	71.9	1.56	24.5	39.1	40.8	-1.6	-2.0	0.4
$dL_{t1,67,11}$:	70.3	1.56	23.8	36.3	40.1	-3.8	-2.0	-1.8
$dL_{t1,68,11}$:	73.4	1.56	28.0	37.6	44.3	-6.6	-2.0	-4.6
$dL_{t2,4,11}$:	142.2	1.56	27.1	33.5	43.4	-9.9	-2.0	-7.8
$dL_{t2,7,11}$:	139.1	1.56	27.7	33.8	44.0	-10.2	-2.0	-8.1
$dL_{t2,12,11}$:	140.6	1.56	26.1	34.6	42.4	-7.8	-2.0	-5.8
$dL_{t2,13,11}$:	140.6	1.56	25.7	36.1	42.0	-5.9	-2.0	-3.9
$dL_{t2,15,11}$:	139.1	1.56	25.8	34.1	42.1	-8.0	-2.0	-6.0
$dL_{t2,17,11}$:	143.8	1.56	24.6	31.1	40.9	-9.8	-2.0	-7.8
$dL_{t2,18,11}$:	142.2	1.56	24.4	31.9	40.7	-8.8	-2.0	-6.8
$dL_{t2,19,11}$:	139.1	1.56	25.8	34.6	42.1	-7.5	-2.0	-5.5
$dL_{t2,20,11}$:	140.6	1.56	27.0	33.6	43.3	-9.7	-2.0	-7.7
$dL_{t2,23,11}$:	142.2	1.56	27.4	36.2	43.7	-7.5	-2.0	-5.5
$dL_{t2,24,11}$:	140.6	1.56	28.0	35.8	44.3	-8.5	-2.0	-6.5
$dL_{t2,30,11}$:	139.1	1.56	28.3	34.3	44.6	-10.3	-2.0	-8.3
$dL_{t2,42,11}$:	139.1	1.56	27.1	35.3	43.4	-8.1	-2.0	-6.1
$dL_{t2,43,11}$:	139.1	1.56	27.7	35.8	44.0	-8.2	-2.0	-6.2
$dL_{t2,44,11}$:	140.6	1.56	25.9	32.5	42.2	-9.6	-2.0	-7.6
$dL_{t2,45,11}$:	139.1	1.56	26.9	33.6	43.2	-9.6	-2.0	-7.5
$dL_{t2,46,11}$:	139.1	1.56	26.4	33.0	42.7	-9.7	-2.0	-7.7
$dL_{t2,47,11}$:	140.6	1.56	25.6	32.9	41.9	-9.0	-2.0	-6.9
$dL_{t2,49,11}$:	140.6	1.56	25.1	32.6	41.4	-8.7	-2.0	-6.7
$dL_{t2,50,11}$:	140.6	1.56	24.5	32.5	40.8	-8.3	-2.0	-6.3
$dL_{t2,51,11}$:	140.6	1.56	25.1	34.5	41.4	-7.0	-2.0	-4.9
$dL_{t2,53,11}$:	143.8	1.56	26.3	35.2	42.6	-7.4	-2.0	-5.4
$dL_{t2,54,11}$:	142.2	1.56	26.1	35.4	42.4	-7.1	-2.0	-5.0
$dL_{t2,55,11}$:	143.8	1.56	27.6	36.1	43.9	-7.8	-2.0	-5.8
$dL_{t2,56,11}$:	143.8	1.56	27.1	34.8	43.4	-8.7	-2.0	-6.6
$dL_{t2,57,11}$:	143.8	1.56	27.1	35.5	43.4	-7.8	-2.0	-5.8
$dL_{t2,63,11}$:	140.6	1.56	25.9	34.0	42.2	-8.1	-2.0	-6.1
$dL_{t2,65,11}$:	140.6	1.56	26.3	34.1	42.6	-8.5	-2.0	-6.5
$dL_{t2,67,11}$:	140.6	1.56	27.4	33.5	43.7	-10.2	-2.0	-8.2
$dL_{t3,53,11}$:	215.6	1.56	26.7	33.1	43.1	-10.0	-2.0	-8.0

BIN 11: Tonal components determined - Compact												
Spectrum	f_T	$dL_{tn,j,k}$	f_T	$dL_{tn,j,k}$	f_T	$dL_{tn,j,k}$						
##	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]						
1	73.4	-4.5	---	---	---	---						
2	71.9	-3.0	---	---	---	---						
3	70.3	-4.1	---	---	---	---						
4	71.9	-3.5	142.2	-9.9	---	---						
5	70.3	-5.8	---	---	---	---						
6	70.3	-6.2	---	---	---	---						
7	70.3	-4.2	139.1	-10.2	---	---						
8	71.9	-4.1	---	---	---	---						
9	71.9	0.8	---	---	---	---						
10	71.9	-4.7	---	---	---	---						
11	71.9	-7.3	---	---	---	---						
12	70.3	-0.1	140.6	-7.8	---	---						
13	70.3	-0.7	140.6	-5.9	---	---						
14	71.9	-3.9	---	---	---	---						
15	70.3	-2.1	139.1	-8.0	---	---						
16	73.4	-8.1	---	---	---	---						
17	71.9	2.1	143.8	-9.8	---	---						
18	71.9	-0.3	142.2	-8.8	---	---						
19	70.3	-3.8	139.1	-7.5	---	---						
20	70.3	-3.1	140.6	-9.7	---	---						
21	70.3	-0.6	---	---	---	---						
22	70.3	-5.5	---	---	---	---						
23	70.3	-3.2	142.2	-7.5	---	---						
24	70.3	-3.3	140.6	-8.5	---	---						
25	---	---	---	---	---	---						
26	71.9	-4.4	---	---	---	---						
27	71.9	-7.9	---	---	---	---						
28	71.9	-4.7	---	---	---	---						
29	71.9	-3.8	---	---	---	---						
30	---	---	139.1	-10.3	---	---						
31	71.9	-9.9	---	---	---	---						
32	79.7	-9.9	---	---	---	---						
33	71.9	-8.3	---	---	---	---						
34	---	---	---	---	---	---						
35	70.3	-5.3	---	---	---	---						
36	70.3	-4.7	---	---	---	---						
37	71.9	-4.7	---	---	---	---						
38	73.4	-6.1	---	---	---	---						
39	71.9	-6.7	---	---	---	---						
40	73.4	-6.1	---	---	---	---						
41	---	---	---	---	---	---						
42	70.3	-5.3	139.1	-8.1	---	---						
43	70.3	-6.9	139.1	-8.2	---	---						
44	70.3	-3.1	140.6	-9.6	---	---						
45	70.3	-4.1	139.1	-9.6	---	---						
46	70.3	-4.9	139.1	-9.7	---	---						
47	70.3	-3.1	140.6	-9.0	---	---						
48	70.3	-4.9	---	---	---	---						
49	70.3	-0.5	140.6	-8.7	---	---						
50	70.3	1.4	140.6	-8.3	---	---						
51	70.3	-0.1	140.6	-7.0	---	---						
52	70.3	-2.6	---	---	---	---						
53	71.9	-2.4	143.8	-7.4	215.6	-10.0						

BIN 11: Tonal components determined - Compact												
Spectrum	f_T	$dL_{tn,j,k}$	f_T	$dL_{tn,j,k}$	f_T	$dL_{tn,j,k}$						
##	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]						
54	73.4	-3.1	142.2	-7.1	---	---						
55	71.9	-3.3	143.8	-7.8	---	---						
56	78.1	1.5	143.8	-8.7	---	---						
57	71.9	-0.8	143.8	-7.8	---	---						
58	75.0	-8.2	---	---	---	---						
59	76.6	-10.3	---	---	---	---						
60	70.3	-5.9	---	---	---	---						
61	71.9	-5.4	---	---	---	---						
62	70.3	-3.8	---	---	---	---						
63	70.3	-3.6	140.6	-8.1	---	---						
64	71.9	-2.3	---	---	---	---						
65	70.3	-2.9	140.6	-8.5	---	---						
66	71.9	-1.6	---	---	---	---						
67	70.3	-3.8	140.6	-10.2	---	---						
68	73.4	-6.6	---	---	---	---						
f_t[Hz] | dL_k[dB]	71.7	-3.4	141.7	-11.3	215.6	-16.2						
L_a[dB]		-2.0		-2.0		-2.0						
$dL_{a,k}$[dB]		-1.4		-9.2		-14.2						

BIN 11.5: Tonal components determined								
	Frequency	delta f	$L_{pn,avg,j,k}$	$L_{pt,j,k}$	$L_{pn,j,k}$	$dL_{tn,j,k}$	L_a	$dL_{a,j,k}$
	[Hz]	[Hz]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
$dL_{t1,1,11.5}$:	75.0	1.56	25.0	39.0	41.3	-2.3	-2.0	-0.3
$dL_{t1,2,11.5}$:	71.9	1.56	23.0	38.2	39.3	-1.2	-2.0	0.8
$dL_{t1,3,11.5}$:	70.3	1.56	22.2	36.7	38.5	-1.8	-2.0	0.2
$dL_{t1,4,11.5}$:	71.9	1.56	25.0	37.3	41.3	-3.9	-2.0	-1.9
$dL_{t1,5,11.5}$:	70.3	1.56	25.0	35.8	41.3	-5.5	-2.0	-3.5
$dL_{t1,6,11.5}$:	71.9	1.56	25.5	41.0	41.8	-0.8	-2.0	1.2
$dL_{t1,7,11.5}$:	73.4	1.56	22.4	38.0	38.7	-0.8	-2.0	1.2
$dL_{t1,8,11.5}$:	71.9	1.56	25.3	39.9	41.6	-1.7	-2.0	0.3
$dL_{t1,9,11.5}$:	71.9	1.56	22.4	39.5	38.7	0.8	-2.0	2.8
$dL_{t1,10,11.5}$:	71.9	1.56	23.1	41.0	39.4	1.7	-2.0	3.7
$dL_{t1,11,11.5}$:	71.9	1.56	23.2	40.8	39.5	1.3	-2.0	3.3
$dL_{t1,12,11.5}$:	71.9	1.56	21.5	39.4	37.8	1.7	-2.0	3.7
$dL_{t1,13,11.5}$:	71.9	1.56	23.2	40.0	39.5	0.5	-2.0	2.5
$dL_{t1,14,11.5}$:	71.9	1.56	24.5	40.7	40.8	-0.2	-2.0	1.8
$dL_{t1,15,11.5}$:	76.6	1.56	22.9	38.3	39.2	-0.9	-2.0	1.1
$dL_{t1,16,11.5}$:	75.0	1.56	27.1	33.4	43.4	-10.0	-2.0	-8.0
$dL_{t1,17,11.5}$:	71.9	1.56	24.4	35.7	40.7	-5.0	-2.0	-3.0
$dL_{t1,19,11.5}$:	71.9	1.56	25.4	37.2	41.7	-4.5	-2.0	-2.5
$dL_{t1,20,11.5}$:	70.3	1.56	27.3	35.5	43.6	-8.1	-2.0	-6.1
$dL_{t1,22,11.5}$:	70.3	1.56	25.1	34.6	41.4	-6.8	-2.0	-4.8
$dL_{t1,23,11.5}$:	70.3	1.56	20.7	37.9	37.0	0.9	-2.0	2.9
$dL_{t1,24,11.5}$:	73.4	1.56	25.5	35.7	41.8	-6.1	-2.0	-4.1
$dL_{t1,25,11.5}$:	71.9	1.56	22.7	38.2	39.0	-0.8	-2.0	1.2
$dL_{t1,26,11.5}$:	71.9	1.56	22.6	38.5	38.9	-0.4	-2.0	1.6
$dL_{t1,27,11.5}$:	71.9	1.56	26.5	37.7	42.8	-5.2	-2.0	-3.2
$dL_{t1,28,11.5}$:	71.9	1.56	25.5	38.5	41.8	-3.3	-2.0	-1.3
$dL_{t1,29,11.5}$:	71.9	1.56	26.1	39.7	42.4	-2.7	-2.0	-0.7
$dL_{t1,30,11.5}$:	71.9	1.56	27.1	39.4	43.4	-4.0	-2.0	-2.0
$dL_{t1,31,11.5}$:	76.6	1.56	26.7	33.0	43.0	-9.9	-2.0	-7.9
$dL_{t1,32,11.5}$:	79.7	1.56	28.1	36.9	44.4	-7.5	-2.0	-5.5

BIN 11.5: Tonal components determined								
	Frequency	delta f	$L_{pn,avg,j,k}$	$L_{pt,j,k}$	$L_{pn,j,k}$	$dL_{tn,j,k}$	L_a	$dL_{a,j,k}$
	[Hz]	[Hz]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
$dL_{t1,33,11.5}$:	71.9	1.56	22.6	38.5	38.9	-0.3	-2.0	1.7
$dL_{t1,34,11.5}$:	71.9	1.56	23.8	36.3	40.1	-3.7	-2.0	-1.7
$dL_{t1,35,11.5}$:	71.9	1.56	25.2	38.8	41.5	-2.7	-2.0	-0.7
$dL_{t1,36,11.5}$:	71.9	1.56	24.6	38.4	40.9	-2.5	-2.0	-0.5
$dL_{t1,37,11.5}$:	75.0	1.56	25.6	39.5	41.9	-2.4	-2.0	-0.4
$dL_{t1,38,11.5}$:	78.1	1.56	26.9	35.4	43.2	-7.8	-2.0	-5.8
$dL_{t2,3,11.5}$:	142.2	1.56	25.7	33.6	42.0	-8.5	-2.0	-6.5
$dL_{t2,4,11.5}$:	143.8	1.56	27.3	33.3	43.6	-10.3	-2.0	-8.2
$dL_{t2,5,11.5}$:	140.6	1.56	27.4	33.7	43.7	-10.0	-2.0	-8.0
$dL_{t2,6,11.5}$:	143.8	1.56	27.4	33.5	43.7	-10.2	-2.0	-8.2
$dL_{t2,9,11.5}$:	142.2	1.56	25.5	31.8	41.8	-10.0	-2.0	-8.0
$dL_{t2,12,11.5}$:	146.9	1.56	24.9	32.8	41.2	-8.5	-2.0	-6.4
$dL_{t2,23,11.5}$:	142.2	1.56	23.7	33.3	40.0	-6.7	-2.0	-4.7
$dL_{t2,25,11.5}$:	142.2	1.56	26.2	32.3	42.5	-10.2	-2.0	-8.2
$dL_{t2,26,11.5}$:	142.2	1.56	25.9	33.1	42.2	-9.1	-2.0	-7.1
$dL_{t2,27,11.5}$:	143.8	1.56	28.7	37.3	45.0	-7.7	-2.0	-5.7
$dL_{t2,33,11.5}$:	143.8	1.56	25.2	31.5	41.5	-10.0	-2.0	-8.0
$dL_{t2,36,11.5}$:	146.9	1.56	26.8	33.9	43.1	-9.2	-2.0	-7.1
$dL_{t3,1,11.5}$:	228.1	1.56	27.4	33.7	43.8	-10.2	-2.1	-8.1
$dL_{t4,19,11.5}$:	3853.4	1.56	10.1	25.2	34.5	-9.3	-4.2	-5.1

BIN 11.5: Tonal components determined - Compact												
Spectrum	f_T	$dL_{tn,j,k}$	f_T	$dL_{tn,j,k}$	f_T	$dL_{tn,j,k}$	f_T	$dL_{tn,j,k}$				
##	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]				
1	75.0	-2.3	---	---	228.1	-10.2	---	---				
2	71.9	-1.2	---	---	---	---	---	---				
3	70.3	-1.8	142.2	-8.5	---	---	---	---				
4	71.9	-3.9	143.8	-10.3	---	---	---	---				
5	70.3	-5.5	140.6	-10.0	---	---	---	---				
6	71.9	-0.8	143.8	-10.2	---	---	---	---				
7	73.4	-0.8	---	---	---	---	---	---				
8	71.9	-1.7	---	---	---	---	---	---				
9	71.9	0.8	142.2	-10.0	---	---	---	---				
10	71.9	1.7	---	---	---	---	---	---				
11	71.9	1.3	---	---	---	---	---	---				
12	71.9	1.7	146.9	-8.5	---	---	---	---				
13	71.9	0.5	---	---	---	---	---	---				
14	71.9	-0.2	---	---	---	---	---	---				
15	76.6	-0.9	---	---	---	---	---	---				
16	75.0	-10.0	---	---	---	---	---	---				
17	71.9	-5.0	---	---	---	---	---	---				
18	---	---	---	---	---	---	---	---				
19	71.9	-4.5	---	---	---	---	3853.4	-9.3				
20	70.3	-8.1	---	---	---	---	---	---				
21	---	---	---	---	---	---	---	---				
22	70.3	-6.8	---	---	---	---	---	---				
23	70.3	0.9	142.2	-6.7	---	---	---	---				
24	73.4	-6.1	---	---	---	---	---	---				
25	71.9	-0.8	142.2	-10.2	---	---	---	---				
26	71.9	-0.4	142.2	-9.1	---	---	---	---				
27	71.9	-5.2	143.8	-7.7	---	---	---	---				
28	71.9	-3.3	---	---	---	---	---	---				

BIN 11.5: Tonal components determined - Compact												
Spectrum	f_T	$dL_{tn,j,k}$	f_T	$dL_{tn,j,k}$	f_T	$dL_{tn,j,k}$	f_T	$dL_{tn,j,k}$				
##	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]				
29	71.9	-2.7	---	---	---	---	---	---				
30	71.9	-4.0	---	---	---	---	---	---				
31	76.6	-9.9	---	---	---	---	---	---				
32	79.7	-7.5	---	---	---	---	---	---				
33	71.9	-0.3	143.8	-10.0	---	---	---	---				
34	71.9	-3.7	---	---	---	---	---	---				
35	71.9	-2.7	---	---	---	---	---	---				
36	71.9	-2.5	146.9	-9.2	---	---	---	---				
37	75.0	-2.4	---	---	---	---	---	---				
38	78.1	-7.8	---	---	---	---	---	---				
f_t[Hz] | dL_k[dB]	72.8	-2.2	142.6	-12.6	228.1	-16.1	3853.4	-21.8				
L_a[dB]		-2.0		-2.0		-2.1		-4.2				
$dL_{a,k}$[dB]		-0.2		-10.6		-14.0		-17.6				

BIN 12: Tonal components determined								
	Frequency	delta f	$L_{pn,avg,j,k}$	$L_{pt,j,k}$	$L_{pn,j,k}$	$dL_{tn,j,k}$	L_a	$dL_{a,j,k}$
	[Hz]	[Hz]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
$dL_{t1,1,12}$:	71.9	1.56	24.5	37.4	40.8	-3.4	-2.0	-1.4
$dL_{t1,2,12}$:	75.0	1.56	25.4	37.8	41.7	-3.9	-2.0	-1.9
$dL_{t1,3,12}$:	71.9	1.56	25.6	36.5	41.9	-5.4	-2.0	-3.4
$dL_{t1,4,12}$:	71.9	1.56	23.5	37.0	39.8	-2.8	-2.0	-0.8
$dL_{t1,5,12}$:	71.9	1.56	24.1	37.9	40.4	-2.6	-2.0	-0.6
$dL_{t1,6,12}$:	71.9	1.56	24.3	37.4	40.6	-3.2	-2.0	-1.2
$dL_{t1,7,12}$:	71.9	1.56	24.1	39.8	40.4	-0.6	-2.0	1.4
$dL_{t1,8,12}$:	76.6	1.56	26.7	35.8	43.0	-7.1	-2.0	-5.1
$dL_{t1,9,12}$:	71.9	1.56	26.4	40.7	42.7	-2.0	-2.0	0.0
$dL_{t1,10,12}$:	71.9	1.56	22.1	39.6	38.4	1.2	-2.0	3.2
$dL_{t1,11,12}$:	71.9	1.56	23.2	39.3	39.5	-0.2	-2.0	1.8
$dL_{t1,12,12}$:	71.9	1.56	21.4	41.7	37.7	4.0	-2.0	6.0
$dL_{t1,13,12}$:	76.6	1.56	24.3	39.9	40.6	-0.7	-2.0	1.3
$dL_{t1,14,12}$:	75.0	1.56	26.3	38.5	42.6	-4.1	-2.0	-2.1
$dL_{t1,15,12}$:	76.6	1.56	24.5	37.5	40.8	-3.3	-2.0	-1.3
$dL_{t1,16,12}$:	71.9	1.56	23.2	40.5	39.5	1.0	-2.0	3.0
$dL_{t1,17,12}$:	71.9	1.56	24.1	38.5	40.4	-1.8	-2.0	0.2
$dL_{t1,19,12}$:	71.9	1.56	25.5	37.2	41.8	-4.6	-2.0	-2.6
$dL_{t1,20,12}$:	71.9	1.56	25.9	36.6	42.3	-5.6	-2.0	-3.6
$dL_{t1,21,12}$:	71.9	1.56	25.9	33.7	42.2	-8.5	-2.0	-6.5
$dL_{t1,22,12}$:	70.3	1.56	26.2	34.9	42.5	-7.6	-2.0	-5.6
$dL_{t1,23,12}$:	70.3	1.56	25.1	35.7	41.4	-5.7	-2.0	-3.7
$dL_{t1,24,12}$:	75.0	1.56	24.1	36.8	40.4	-3.5	-2.0	-1.5
$dL_{t1,26,12}$:	71.9	1.56	24.4	40.3	40.7	-0.4	-2.0	1.7
$dL_{t1,27,12}$:	71.9	1.56	21.2	37.5	37.5	0.0	-2.0	2.0
$dL_{t1,28,12}$:	71.9	1.56	21.4	38.3	37.7	0.6	-2.0	2.6
$dL_{t1,29,12}$:	71.9	1.56	25.3	37.5	41.6	-4.1	-2.0	-2.1
$dL_{t1,30,12}$:	73.4	1.56	24.9	37.9	41.2	-3.3	-2.0	-1.3
$dL_{t1,31,12}$:	76.6	1.56	24.8	38.8	41.1	-2.3	-2.0	-0.2
$dL_{t1,32,12}$:	71.9	1.56	25.5	37.9	41.8	-3.9	-2.0	-1.9
$dL_{t1,33,12}$:	73.4	1.56	25.8	38.2	42.1	-3.9	-2.0	-1.9
$dL_{t1,34,12}$:	71.9	1.56	22.9	38.0	39.2	-1.2	-2.0	0.8
$dL_{t1,35,12}$:	71.9	1.56	23.6	39.4	39.9	-0.6	-2.0	1.4
$dL_{t1,36,12}$:	71.9	1.56	24.3	39.0	40.6	-1.6	-2.0	0.4
$dL_{t1,37,12}$:	71.9	1.56	23.6	37.1	39.9	-2.8	-2.0	-0.8

BIN 12: Tonal components determined								
	Frequency	delta f	$L_{pn,avg,j,k}$	$L_{pt,j,k}$	$L_{pn,j,k}$	$dL_{tn,j,k}$	L_a	$dL_{a,j,k}$
	[Hz]	[Hz]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
$dL_{t1,38,12}$:	71.9	1.56	24.8	39.8	41.1	-1.3	-2.0	0.7
$dL_{t2,4,12}$:	146.9	1.56	26.6	36.4	42.9	-6.5	-2.0	-4.4
$dL_{t2,7,12}$:	145.3	1.56	26.2	34.2	42.5	-8.3	-2.0	-6.3
$dL_{t2,10,12}$:	140.6	1.56	24.9	34.8	41.2	-6.4	-2.0	-4.4
$dL_{t2,17,12}$:	142.2	1.56	26.1	32.6	42.4	-9.8	-2.0	-7.8
$dL_{t2,27,12}$:	143.8	1.56	23.9	32.6	40.2	-7.6	-2.0	-5.5
$dL_{t2,28,12}$:	143.8	1.56	24.1	33.5	40.4	-6.9	-2.0	-4.9
$dL_{t2,38,12}$:	146.9	1.56	26.7	33.3	43.0	-9.7	-2.0	-7.7
$dL_{t3,28,12}$:	214.1	1.56	25.2	32.9	41.6	-8.8	-2.0	-6.7
$dL_{t4,22,12}$:	3879.9	1.56	8.3	14.5	32.8	-18.3	-4.2	-14.1
$dL_{t4,23,12}$:	3853.4	1.56	10.3	22.3	34.7	-12.5	-4.2	-8.2
$dL_{t5,13,12}$:	4947.2	1.56	14.9	21.0	40.7	-19.8	-4.5	-15.3

BIN 12: Tonal components determined - Compact												
Spectrum	f_T	$dL_{tn,j,k}$	f_T	$dL_{tn,j,k}$	f_T	$dL_{tn,j,k}$	f_T	$dL_{tn,j,k}$	f_T	$dL_{tn,j,k}$		
##	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]		
1	71.9	-3.4	---	---	---	---	---	---	---	---		
2	75.0	-3.9	---	---	---	---	---	---	---	---		
3	71.9	-5.4	---	---	---	---	---	---	---	---		
4	71.9	-2.8	146.9	-6.5	---	---	---	---	---	---		
5	71.9	-2.6	---	---	---	---	---	---	---	---		
6	71.9	-3.2	---	---	---	---	---	---	---	---		
7	71.9	-0.6	145.3	-8.3	---	---	---	---	---	---		
8	76.6	-7.1	---	---	---	---	---	---	---	---		
9	71.9	-2.0	---	---	---	---	---	---	---	---		
10	71.9	1.2	140.6	-6.4	---	---	---	---	---	---		
11	71.9	-0.2	---	---	---	---	---	---	---	---		
12	71.9	4.0	---	---	---	---	---	---	---	---		
13	76.6	-0.7	---	---	---	---	---	---	4947.2	-19.8		
14	75.0	-4.1	---	---	---	---	---	---	---	---		
15	76.6	-3.3	---	---	---	---	---	---	---	---		
16	71.9	1.0	---	---	---	---	---	---	---	---		
17	71.9	-1.8	142.2	-9.8	---	---	---	---	---	---		
18	---	---	---	---	---	---	---	---	---	---		
19	71.9	-4.6	---	---	---	---	---	---	---	---		
20	71.9	-5.6	---	---	---	---	---	---	---	---		
21	71.9	-8.5	---	---	---	---	---	---	---	---		
22	70.3	-7.6	---	---	---	---	3879.9	-18.3	---	---		
23	70.3	-5.7	---	---	---	---	3853.4	-12.5	---	---		
24	75.0	-3.5	---	---	---	---	---	---	---	---		
25	---	---	---	---	---	---	---	---	---	---		
26	71.9	-0.4	---	---	---	---	---	---	---	---		
27	71.9	0.0	143.8	-7.6	---	---	---	---	---	---		
28	71.9	0.6	143.8	-6.9	214.1	-8.8	---	---	---	---		
29	71.9	-4.1	---	---	---	---	---	---	---	---		
30	73.4	-3.3	---	---	---	---	---	---	---	---		
31	76.6	-2.3	---	---	---	---	---	---	---	---		
32	71.9	-3.9	---	---	---	---	---	---	---	---		
33	73.4	-3.9	---	---	---	---	---	---	---	---		
34	71.9	-1.2	---	---	---	---	---	---	---	---		
35	71.9	-0.6	---	---	---	---	---	---	---	---		
36	71.9	-1.6	---	---	---	---	---	---	---	---		

BIN 12: Tonal components determined - Compact												
Spectrum	f_T	$dL_{tn,j,k}$	f_T	$dL_{tn,j,k}$	f_T	$dL_{tn,j,k}$	f_T	$dL_{tn,j,k}$	f_T	$dL_{tn,j,k}$		
##	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]		
37	71.9	-2.8	---	---	---	---	---	---	---	---		
38	71.9	-1.3	146.9	-9.7	---	---	---	---	---	---		
f_t[Hz] | dL_k[dB]	72.6	-2.1	146.4	-13.0	214.1	-15.9	3879.2	-22.8	4947.2	-25.5		
L_a[dB]		-2.0		-2.0		-2.0		-4.2		-4.5		
$dL_{a,k}$[dB]		-0.1		-11.0		-13.9		-18.6		-21.0		

BIN 12.5: Tonal components determined								
	Frequency	delta f	$L_{pn,avg,j,k}$	$L_{pt,j,k}$	$L_{pn,j,k}$	$dL_{tn,j,k}$	L_a	$dL_{a,j,k}$
	[Hz]	[Hz]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
$dL_{t1,1,12.5}$:	76.6	1.56	26.3	36.8	42.6	-5.8	-2.0	-3.8
$dL_{t1,2,12.5}$:	71.9	1.56	25.1	37.3	41.4	-4.1	-2.0	-2.1
$dL_{t1,3,12.5}$:	71.9	1.56	22.5	39.7	38.8	0.9	-2.0	2.9
$dL_{t1,4,12.5}$:	76.6	1.56	26.8	34.8	43.1	-8.3	-2.0	-6.3
$dL_{t1,5,12.5}$:	79.7	1.56	24.9	38.2	41.2	-3.0	-2.0	-1.0
$dL_{t1,6,12.5}$:	76.6	1.56	27.2	36.9	43.5	-6.5	-2.0	-4.5
$dL_{t1,7,12.5}$:	71.9	1.56	24.2	44.1	40.5	3.5	-2.0	5.6
$dL_{t1,8,12.5}$:	71.9	1.56	27.6	34.9	43.9	-8.9	-2.0	-6.9
$dL_{t1,9,12.5}$:	75.0	1.56	26.1	35.7	42.4	-6.7	-2.0	-4.7
$dL_{t1,10,12.5}$:	75.0	1.56	26.0	36.5	42.3	-5.8	-2.0	-3.8
$dL_{t1,11,12.5}$:	71.9	1.56	26.0	35.5	42.3	-6.8	-2.0	-4.8
$dL_{t1,12,12.5}$:	71.9	1.56	23.2	37.0	39.5	-2.5	-2.0	-0.5
$dL_{t1,13,12.5}$:	70.3	1.56	28.2	34.4	44.5	-10.1	-2.0	-8.0
$dL_{t1,14,12.5}$:	76.6	1.56	28.3	36.3	44.6	-8.3	-2.0	-6.3
$dL_{t1,15,12.5}$:	76.6	1.56	27.0	37.6	43.3	-5.7	-2.0	-3.7
$dL_{t1,16,12.5}$:	73.4	1.56	25.8	38.8	42.1	-3.3	-2.0	-1.2
$dL_{t1,17,12.5}$:	71.9	1.56	23.2	38.0	39.5	-1.4	-2.0	0.6
$dL_{t1,18,12.5}$:	71.9	1.56	22.5	38.6	38.8	-0.2	-2.0	1.8
$dL_{t1,19,12.5}$:	71.9	1.56	23.7	39.2	40.0	-0.7	-2.0	1.3
$dL_{t1,20,12.5}$:	71.9	1.56	25.0	36.8	41.3	-4.5	-2.0	-2.5
$dL_{t2,2,12.5}$:	143.8	1.56	26.8	35.9	43.1	-7.1	-2.0	-5.1
$dL_{t2,3,12.5}$:	140.6	1.56	25.4	35.5	41.7	-6.1	-2.0	-4.1
$dL_{t2,18,12.5}$:	143.8	1.56	25.3	31.8	41.6	-9.9	-2.0	-7.9

BIN 12.5: Tonal components determined - Compact												
Spectrum	f_T	$dL_{tn,j,k}$	f_T	$dL_{tn,j,k}$								
##	[Hz]	[dB]	[Hz]	[dB]								
1	76.6	-5.8	---	---								
2	71.9	-4.1	143.8	-7.1								
3	71.9	0.9	140.6	-6.1								
4	76.6	-8.3	---	---								
5	79.7	-3.0	---	---								
6	76.6	-6.5	---	---								
7	71.9	3.5	---	---								
8	71.9	-8.9	---	---								
9	75.0	-6.7	---	---								
10	75.0	-5.8	---	---								
11	71.9	-6.8	---	---								
12	71.9	-2.5	---	---								
13	70.3	-10.1	---	---								
14	76.6	-8.3	---	---								
15	76.6	-5.7	---	---								
16	73.4	-3.3	---	---								

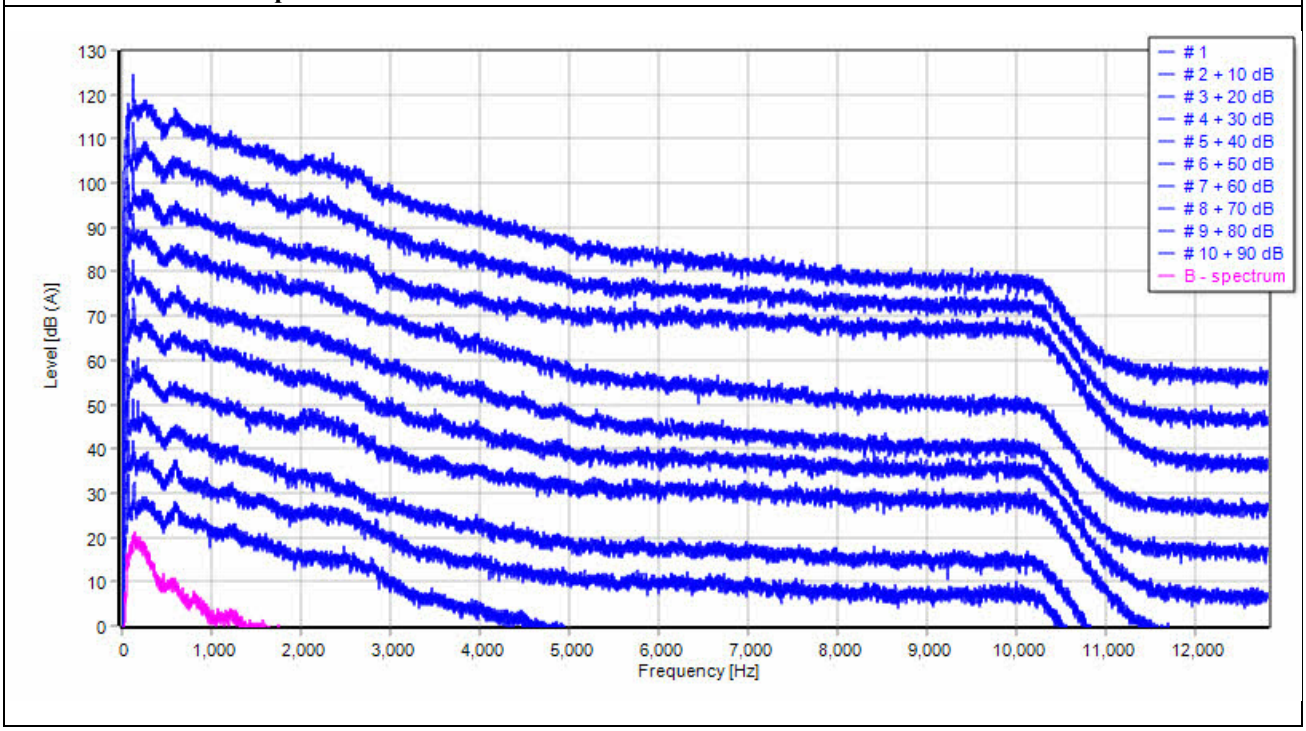
BIN 12.5: Tonal components determined - Compact												
Spectrum	f_T	$dL_{tn,j,k}$	f_T	$dL_{tn,j,k}$								
##	[Hz]	[dB]	[Hz]	[dB]								
17	71.9	-1.4	---	---								
18	71.9	-0.2	143.8	-9.9								
19	71.9	-0.7	---	---								
20	71.9	-4.5	---	---								
f_t[Hz] | dL_k[dB]	73.8	-2.9	143.6	-13.3								
L_a[dB]		-2.0		-2.0								
$dL_{a,k}$[dB]		-0.9		-11.3								

BIN 13: Tonal components determined								
	Frequency	delta f	$L_{pn,avg,j,k}$	$L_{pt,j,k}$	$L_{pn,j,k}$	$dL_{tn,j,k}$	L_a	$dL_{a,j,k}$
	[Hz]	[Hz]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
$dL_{t1,1,13}$:	71.9	1.56	26.1	39.3	42.4	-3.2	-2.0	-1.2
$dL_{t1,2,13}$:	71.9	1.56	25.8	38.1	42.1	-3.9	-2.0	-1.9
$dL_{t1,3,13}$:	76.6	1.56	26.0	38.9	42.3	-3.4	-2.0	-1.4
$dL_{t1,4,13}$:	71.9	1.56	23.7	38.8	40.0	-1.2	-2.0	0.8
$dL_{t1,5,13}$:	71.9	1.56	24.2	38.9	40.5	-1.6	-2.0	0.4
$dL_{t1,6,13}$:	71.9	1.56	22.8	39.7	39.1	0.6	-2.0	2.6
$dL_{t1,7,13}$:	70.3	1.56	23.8	38.8	40.1	-1.3	-2.0	0.7
$dL_{t1,9,13}$:	76.6	1.56	25.9	38.2	42.2	-4.0	-2.0	-2.0
$dL_{t1,10,13}$:	75.0	1.56	26.8	34.6	43.1	-8.5	-2.0	-6.5
$dL_{t1,11,13}$:	71.9	1.56	26.6	33.0	42.9	-10.0	-2.0	-7.9
$dL_{t1,12,13}$:	75.0	1.56	27.5	38.1	43.8	-5.8	-2.0	-3.8
$dL_{t1,13,13}$:	73.4	1.56	24.8	35.6	41.1	-5.5	-2.0	-3.5
$dL_{t1,14,13}$:	71.9	1.56	26.8	37.3	43.1	-5.8	-2.0	-3.8
$dL_{t1,15,13}$:	75.0	1.56	27.8	38.1	44.1	-6.0	-2.0	-4.0
$dL_{t1,16,13}$:	71.9	1.56	22.4	36.4	38.7	-2.3	-2.0	-0.3
$dL_{t1,17,13}$:	71.9	1.56	23.8	36.3	40.1	-3.8	-2.0	-1.8
$dL_{t1,18,13}$:	71.9	1.56	23.8	39.8	40.1	-0.3	-2.0	1.7
$dL_{t1,19,13}$:	75.0	1.56	24.9	37.2	41.2	-4.0	-2.0	-2.0
$dL_{t1,20,13}$:	71.9	1.56	25.1	39.2	41.4	-2.2	-2.0	-0.2
$dL_{t1,21,13}$:	71.9	1.56	23.8	37.7	40.1	-2.4	-2.0	-0.4
$dL_{t1,22,13}$:	71.9	1.56	24.7	37.2	41.0	-3.8	-2.0	-1.8
$dL_{t1,23,13}$:	71.9	1.56	23.4	36.6	39.7	-3.1	-2.0	-1.1
$dL_{t1,24,13}$:	71.9	1.56	23.2	38.0	39.5	-1.5	-2.0	0.5
$dL_{t2,4,13}$:	146.9	1.56	26.1	33.1	42.4	-9.3	-2.0	-7.2
$dL_{t2,13,13}$:	148.4	1.56	26.9	34.4	43.2	-8.7	-2.0	-6.7
$dL_{t2,16,13}$:	142.2	1.56	24.7	32.0	41.0	-9.0	-2.0	-7.0

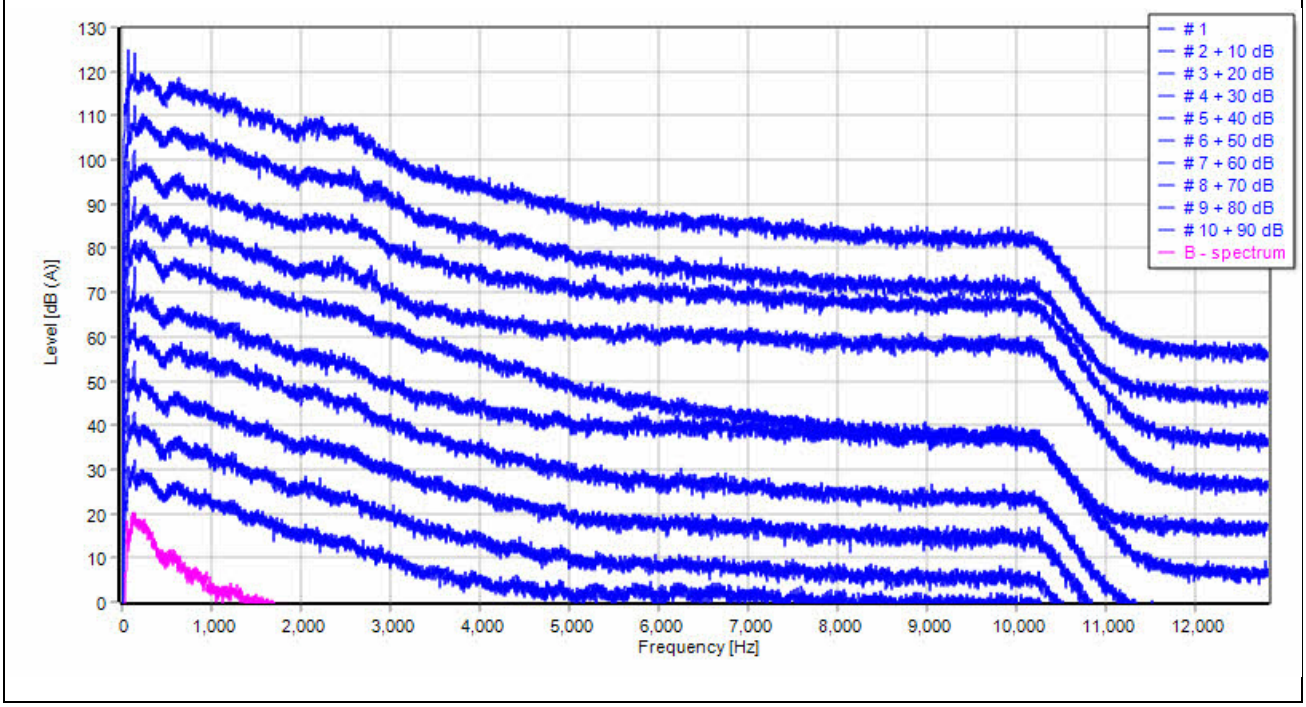
BIN 13: Tonal components determined - Compact												
Spectrum	f_T	$dL_{tn,j,k}$	f_T	$dL_{tn,j,k}$								
##	[Hz]	[dB]	[Hz]	[dB]								
1	71.9	-3.2	---	---								
2	71.9	-3.9	---	---								
3	76.6	-3.4	---	---								
4	71.9	-1.2	146.9	-9.3								
5	71.9	-1.6	---	---								
6	71.9	0.6	---	---								
7	70.3	-1.3	---	---								
8	---	---	---	---								
9	76.6	-4.0	---	---								
10	75.0	-8.5	---	---								
11	71.9	-10.0	---	---								

BIN 13: Tonal components determined - Compact												
Spectrum	**f_T**	**$dL_{tn,j,k}$**	**f_T**	**$dL_{tn,j,k}$**								
##	**[Hz]**	**[dB]**	**[Hz]**	**[dB]**								
12	75.0	-5.8	---	---								
13	73.4	-5.5	148.4	-8.7								
14	71.9	-5.8	---	---								
15	75.0	-6.0	---	---								
16	71.9	-2.3	142.2	-9.0								
17	71.9	-3.8	---	---								
18	71.9	-0.3	---	---								
19	75.0	-4.0	---	---								
20	71.9	-2.2	---	---								
21	71.9	-2.4	---	---								
22	71.9	-3.8	---	---								
23	71.9	-3.1	---	---								
24	71.9	-1.5	---	---								
f_t[Hz] | dL_k[dB]	72.8	-3.2	146.8	-14.4								
L_a[dB]		-2.0		-2.0								
$dL_{a,k}$[dB]		-1.2		-12.4								

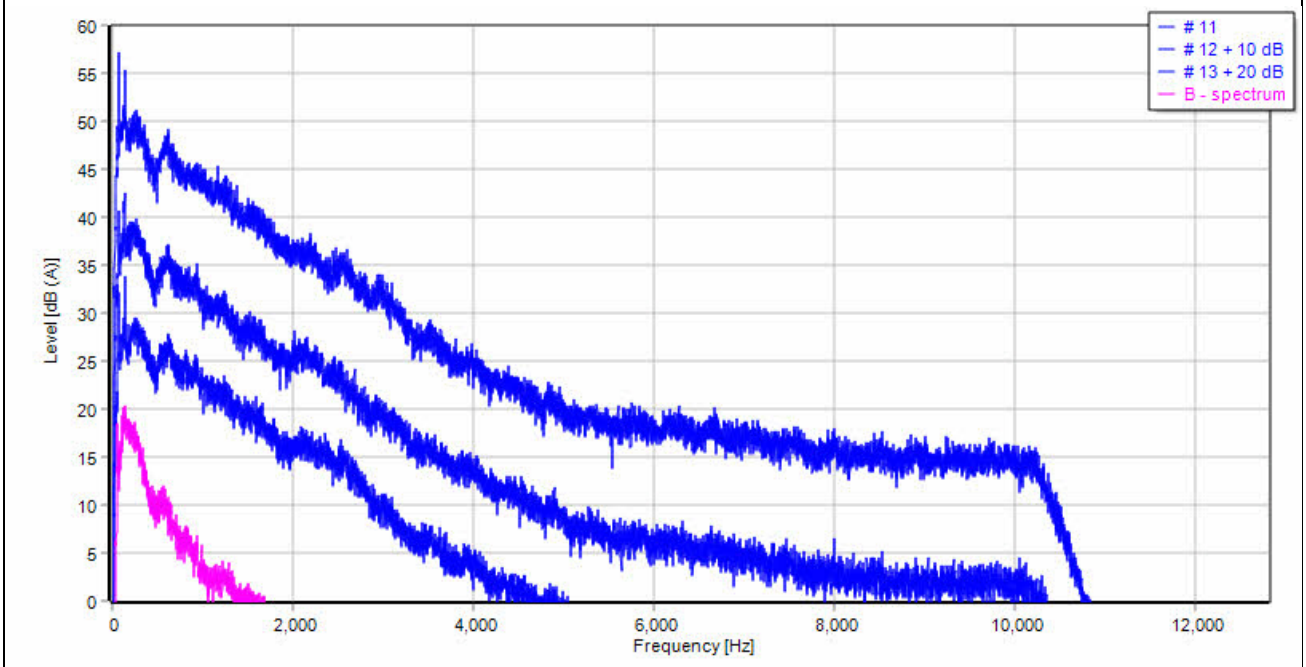
BIN 7.5: Narrowband spectrum



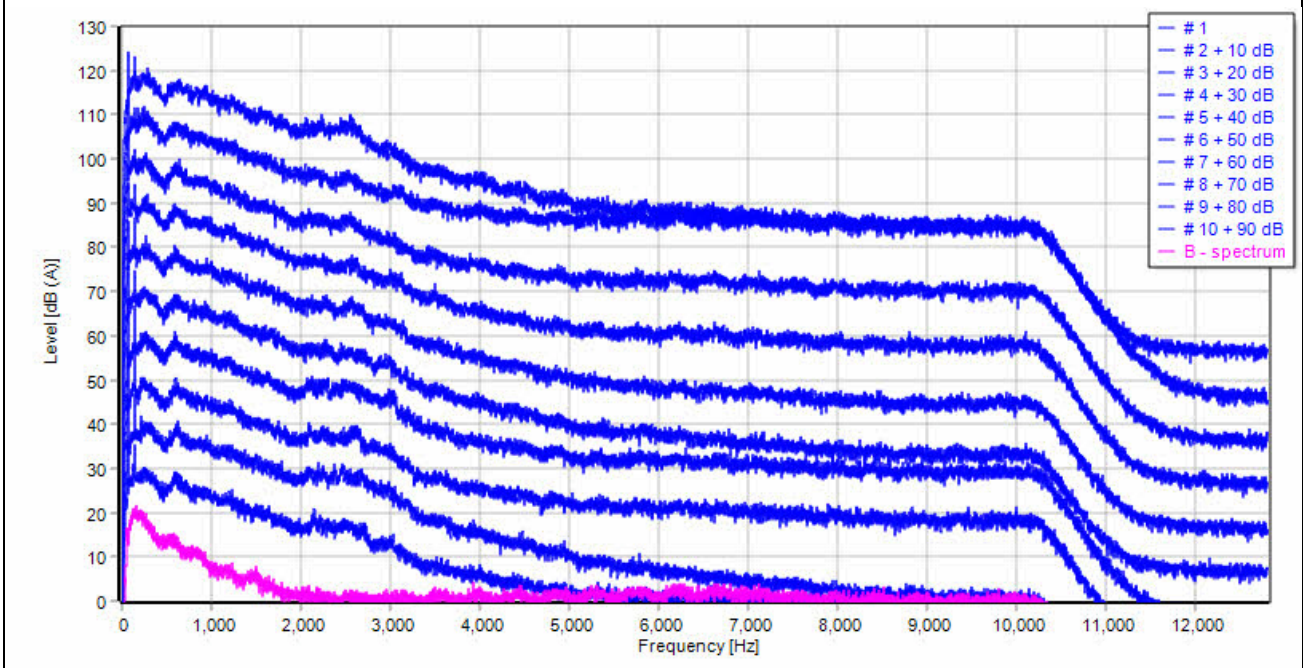
BIN 8: Narrowband spectrum



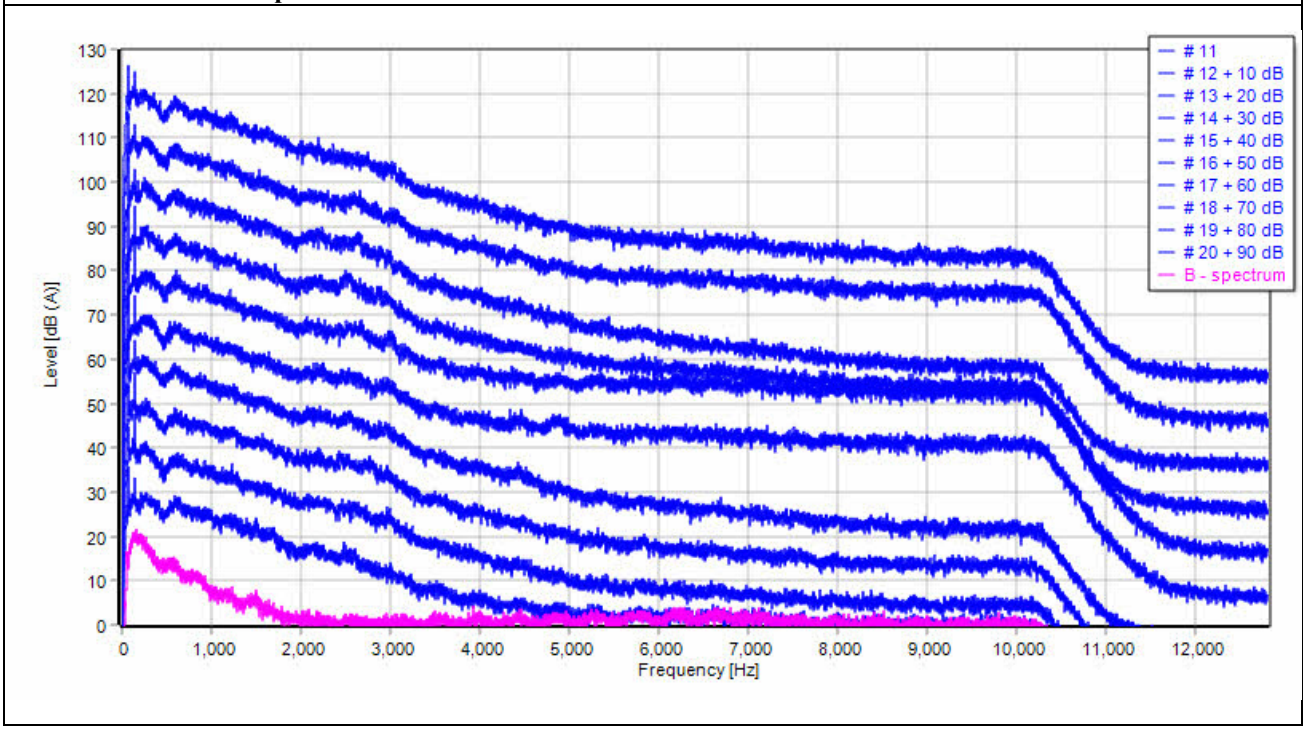
BIN 8: Narrowband spectrum



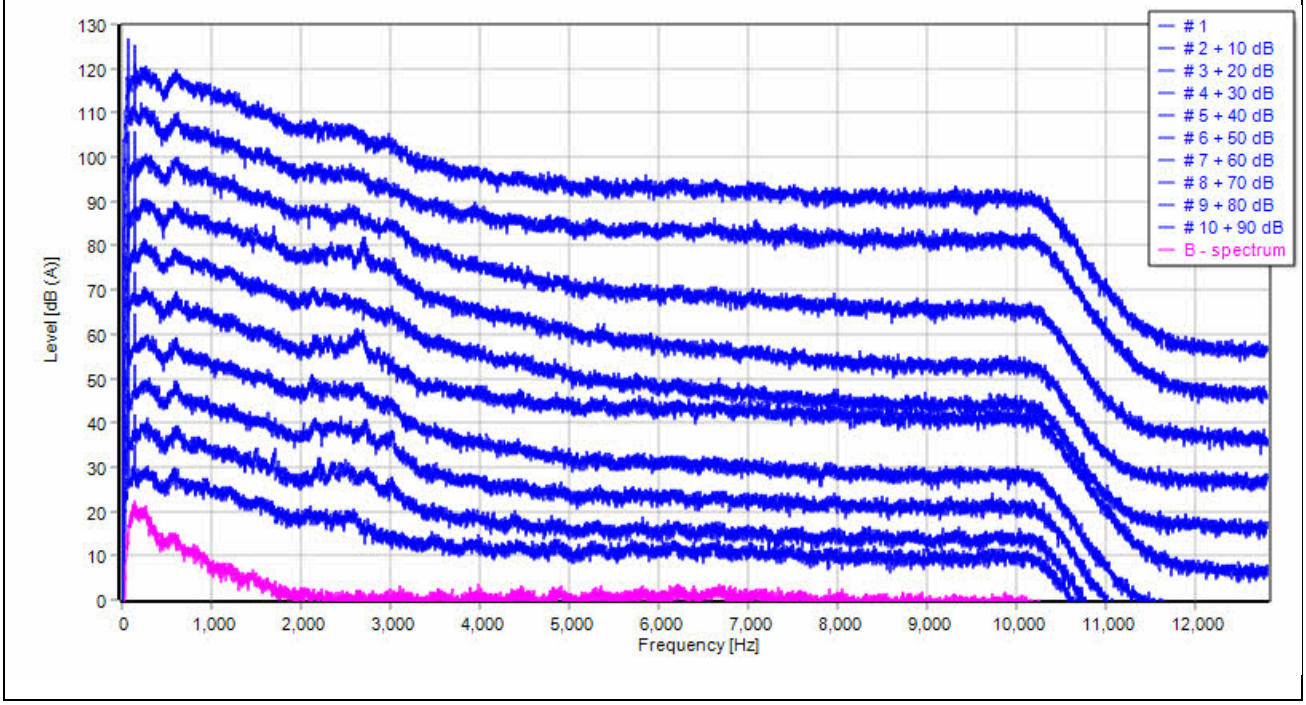
BIN 8.5: Narrowband spectrum



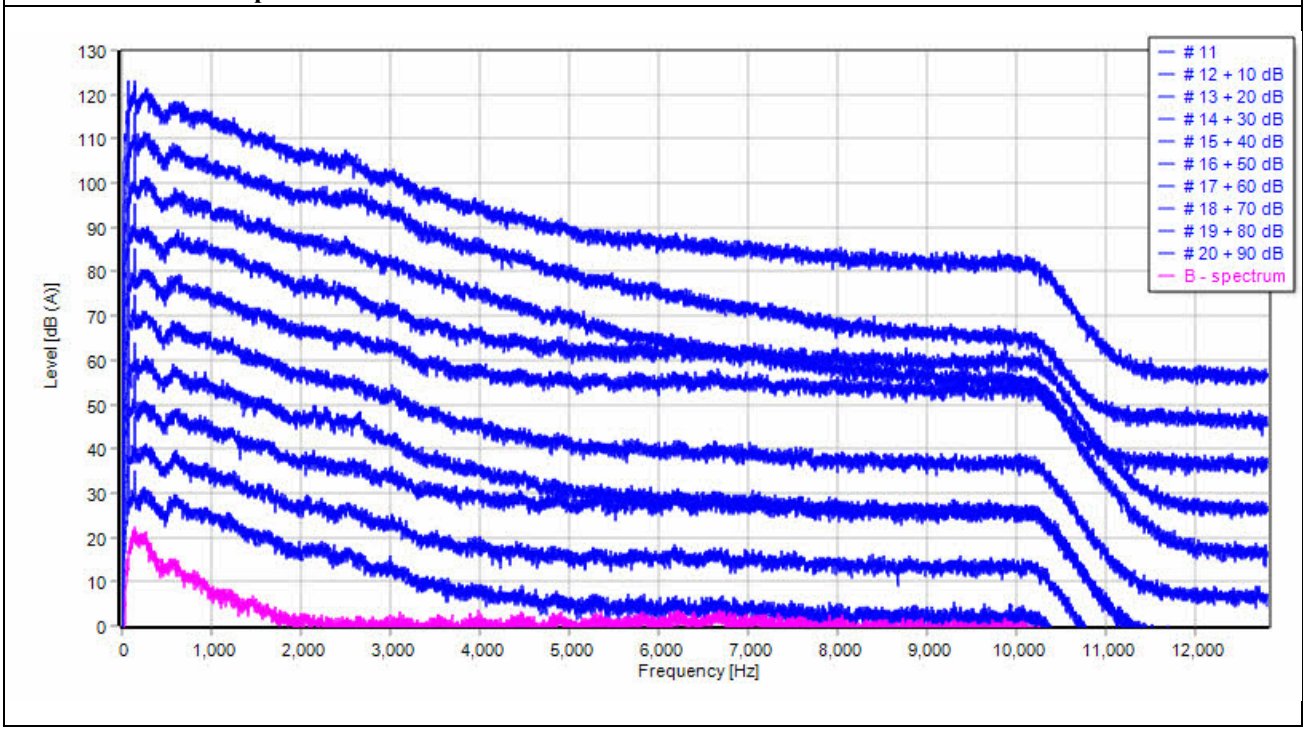
BIN 8.5: Narrowband spectrum



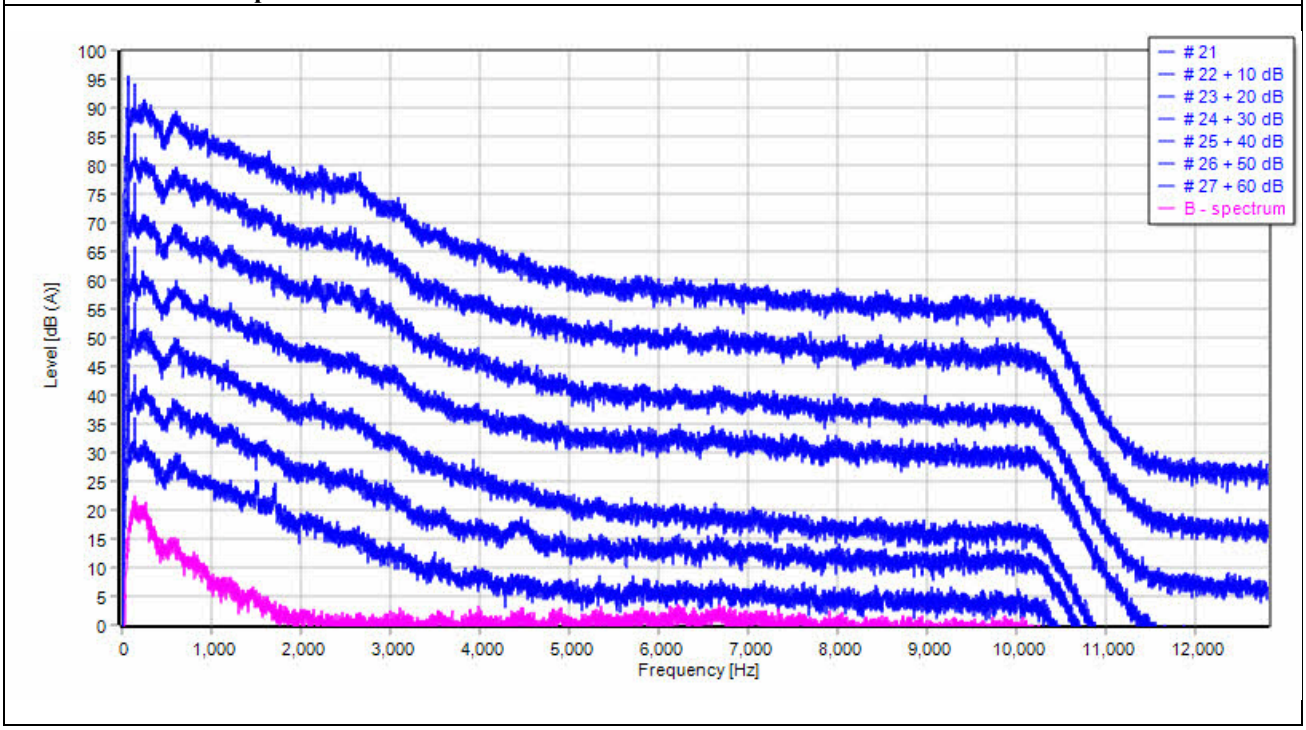
BIN 9: Narrowband spectrum



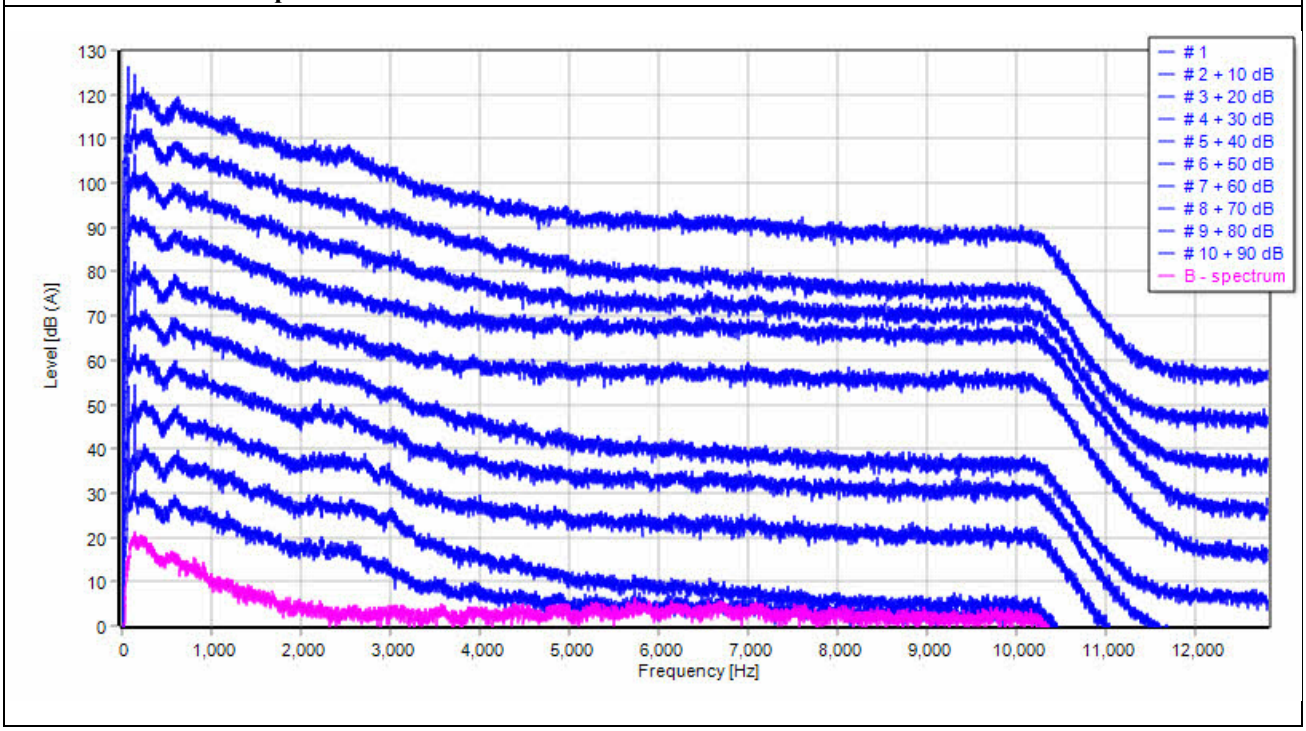
BIN 9: Narrowband spectrum



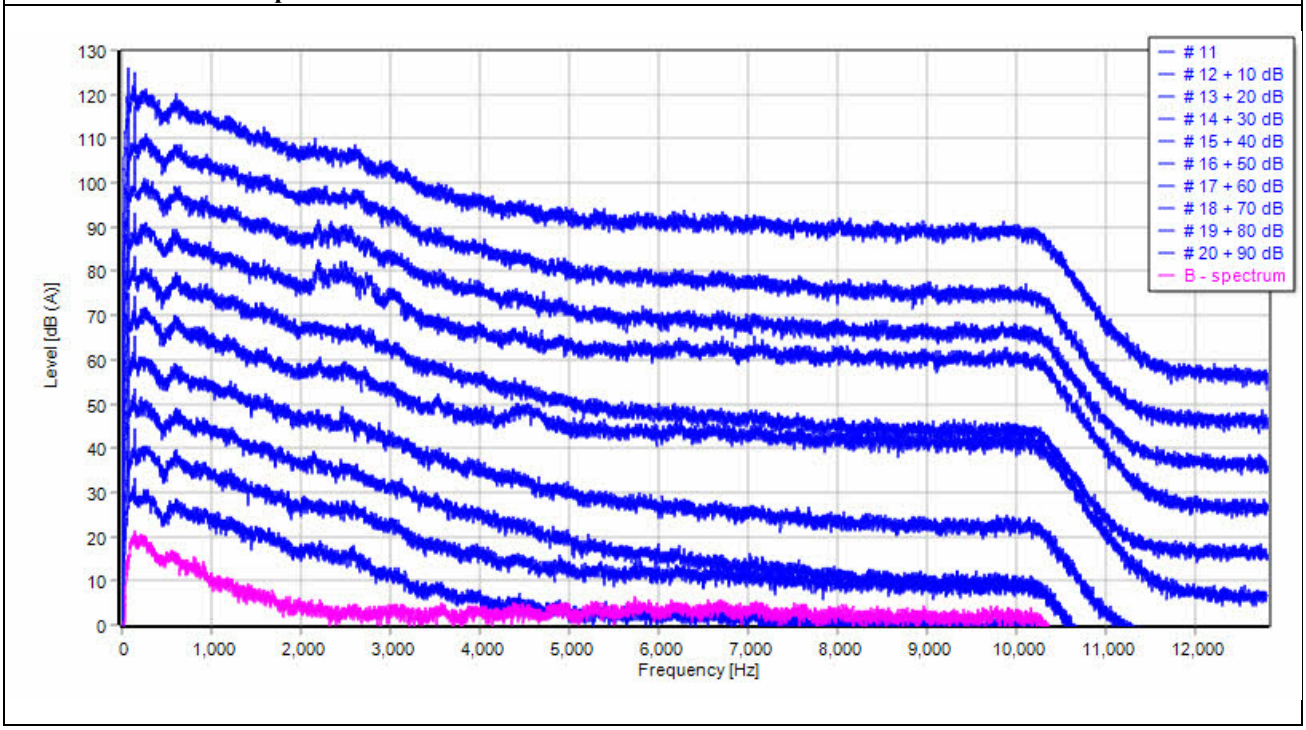
BIN 9: Narrowband spectrum



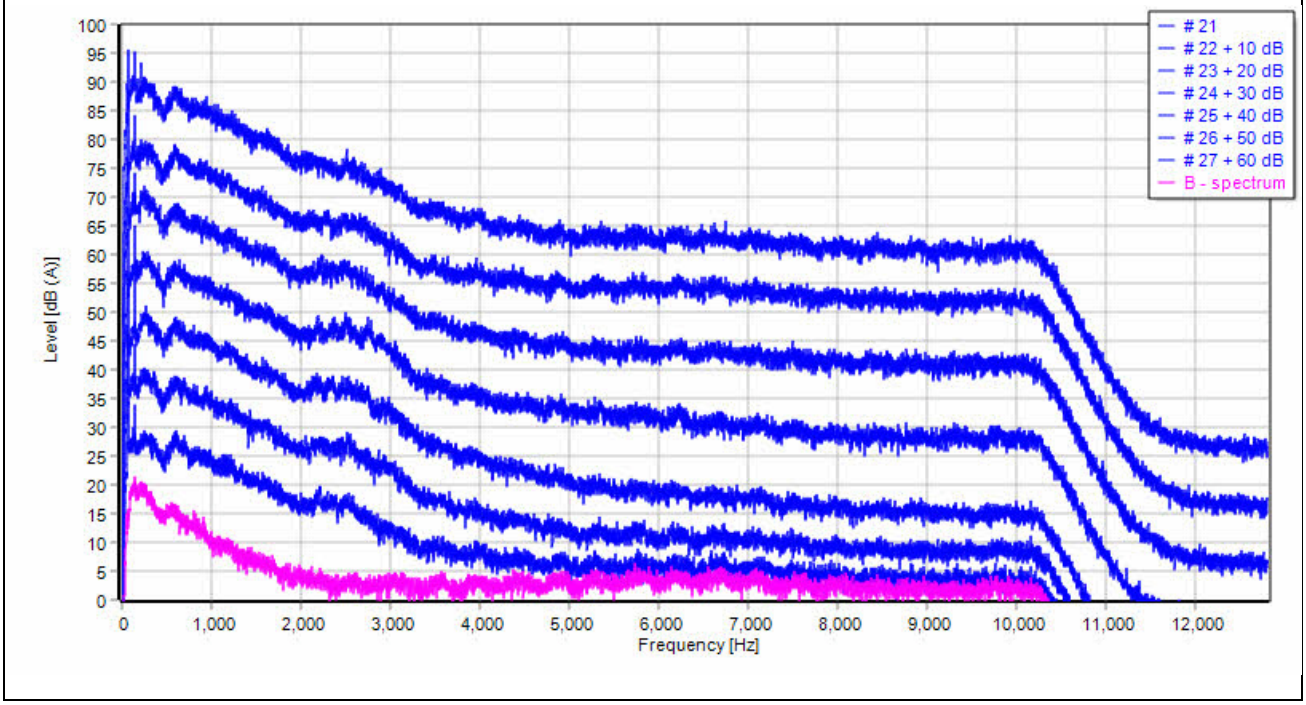
BIN 9.5: Narrowband spectrum



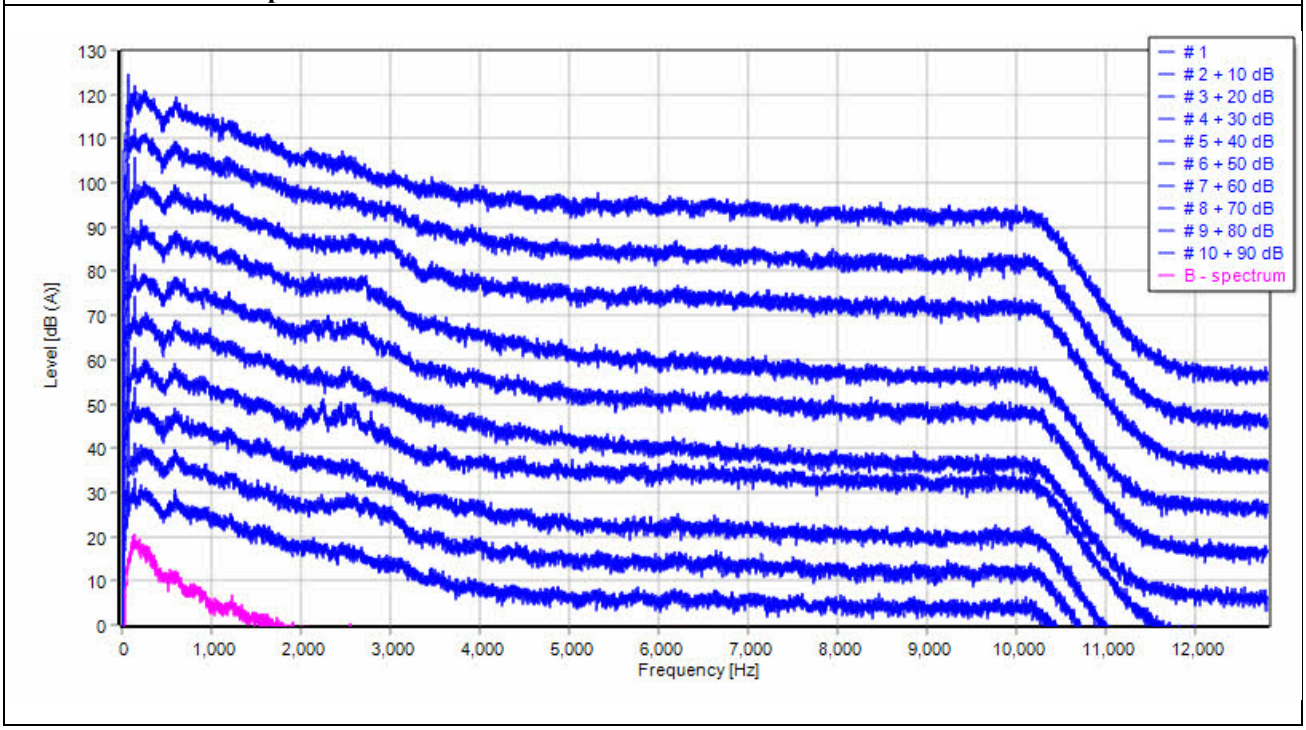
BIN 9.5: Narrowband spectrum



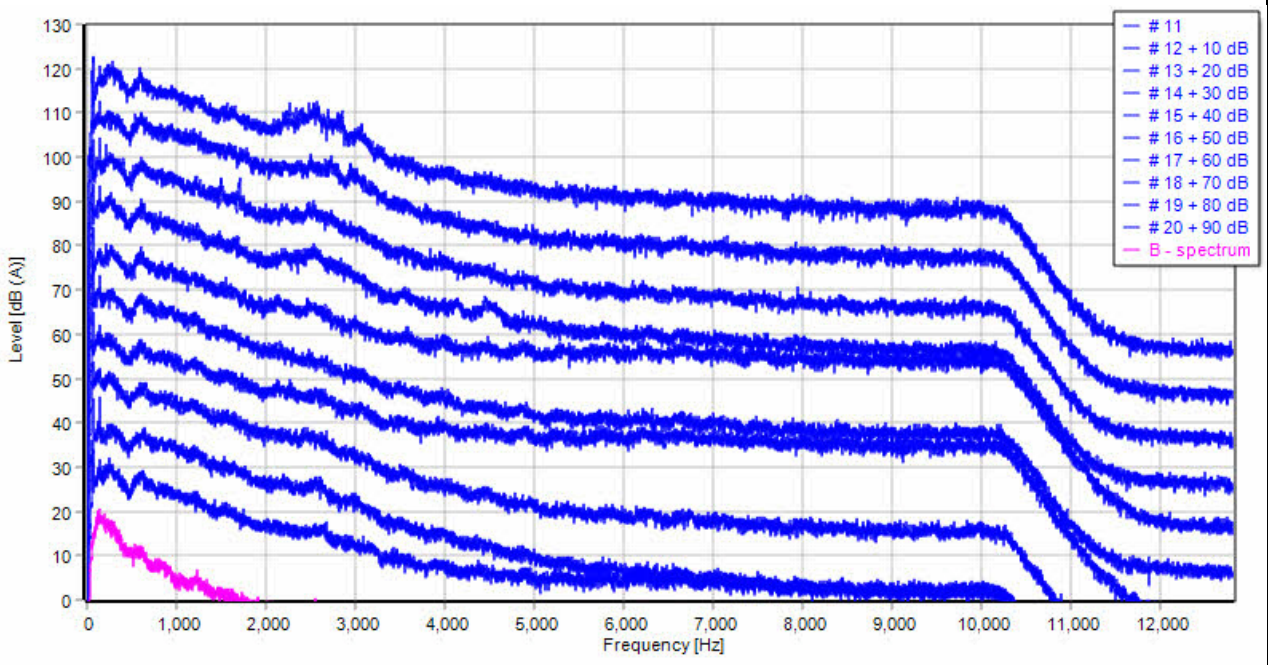
BIN 9.5: Narrowband spectrum



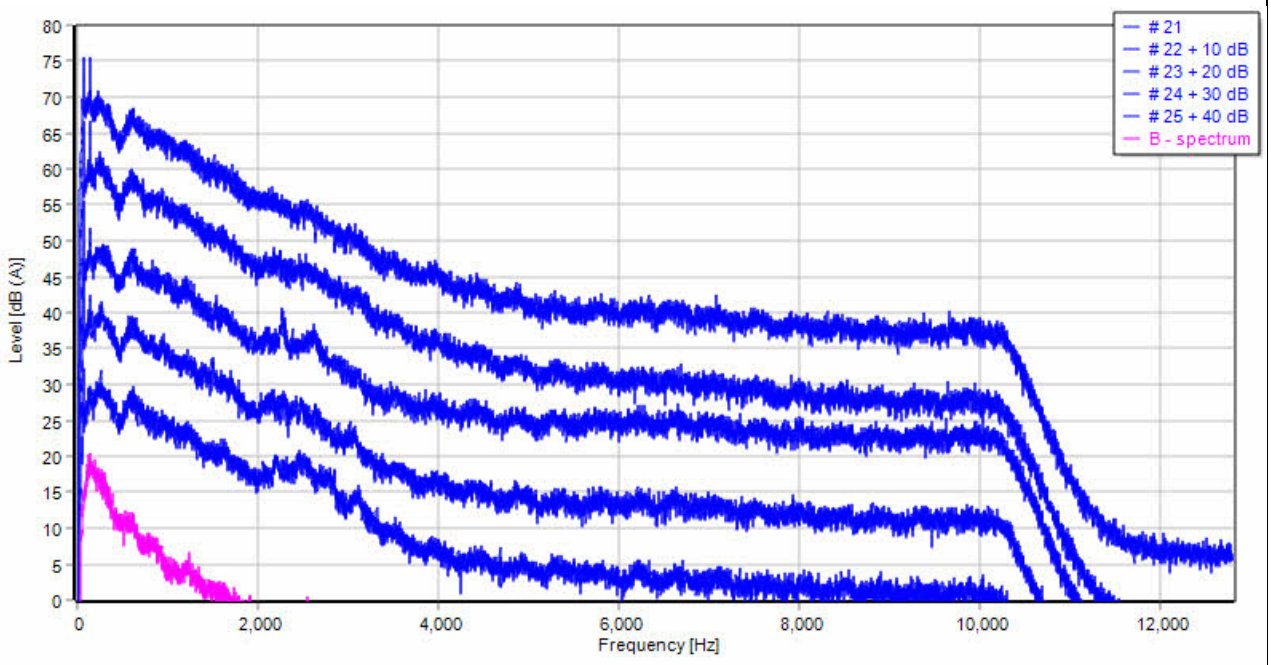
BIN 10: Narrowband spectrum



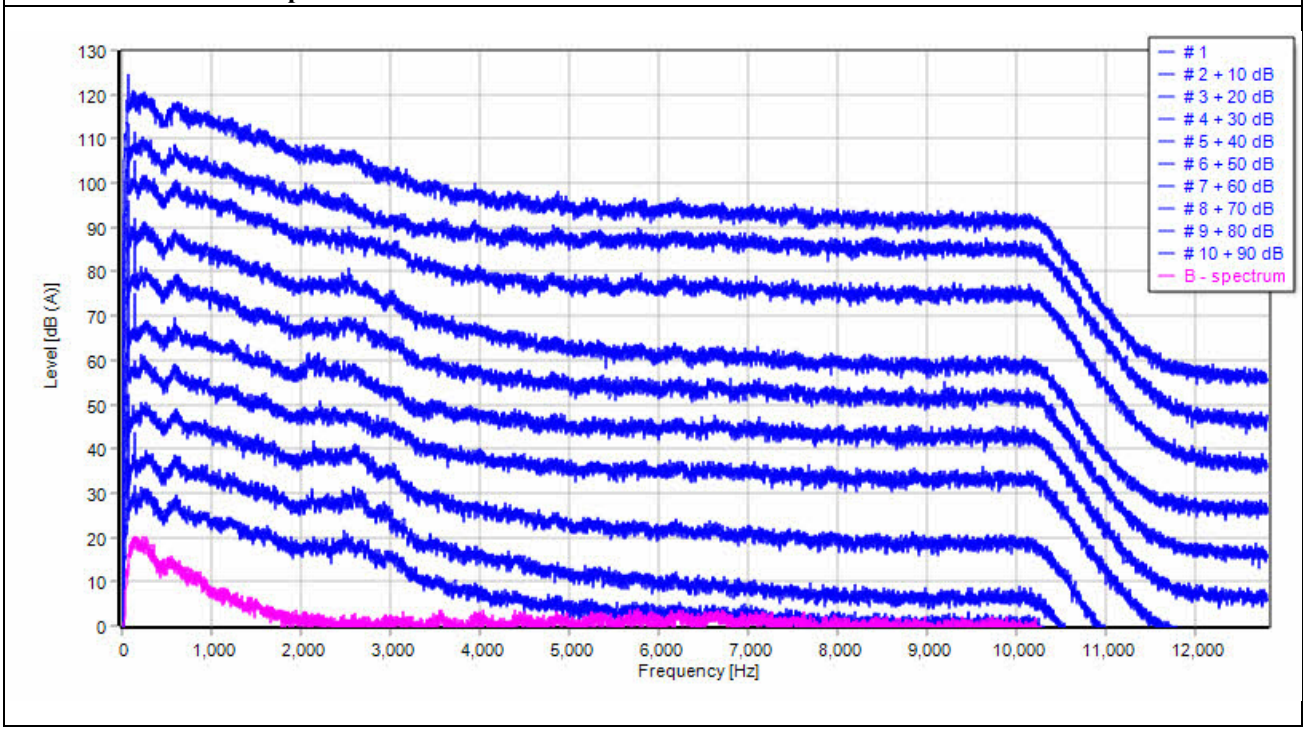
BIN 10: Narrowband spectrum



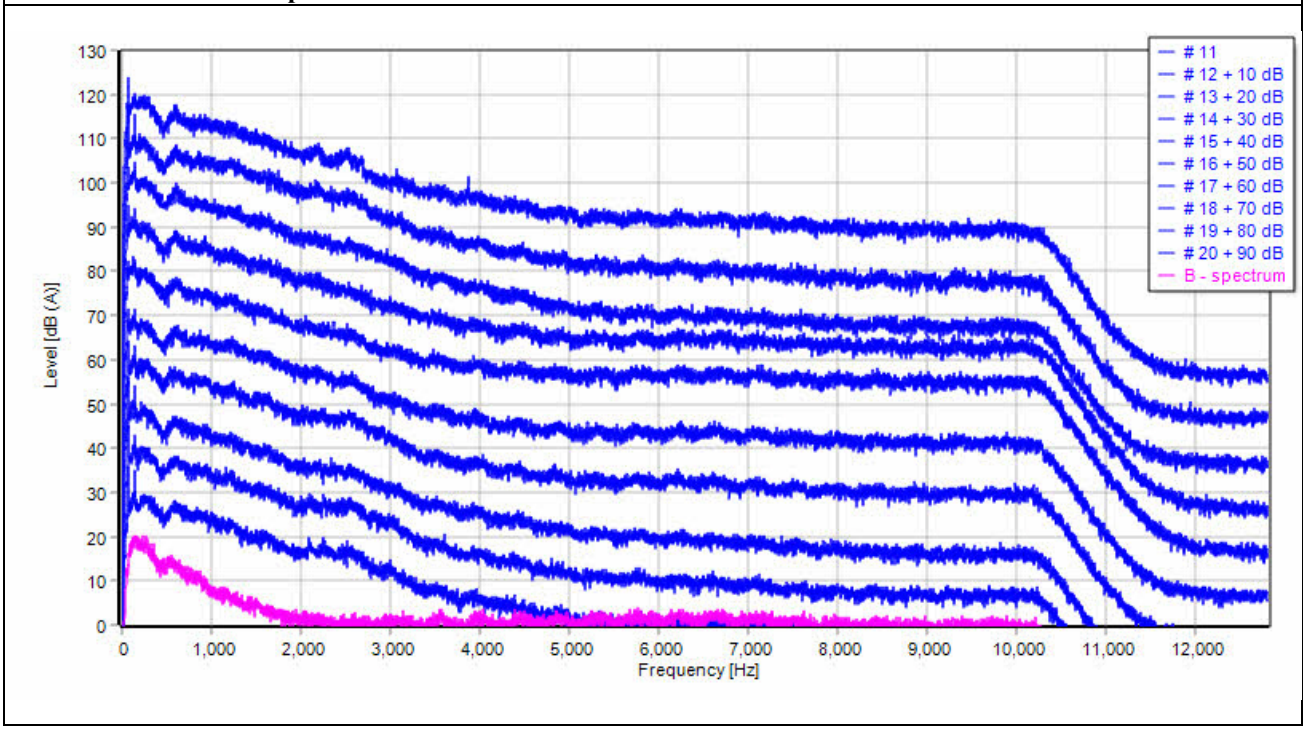
BIN 10: Narrowband spectrum



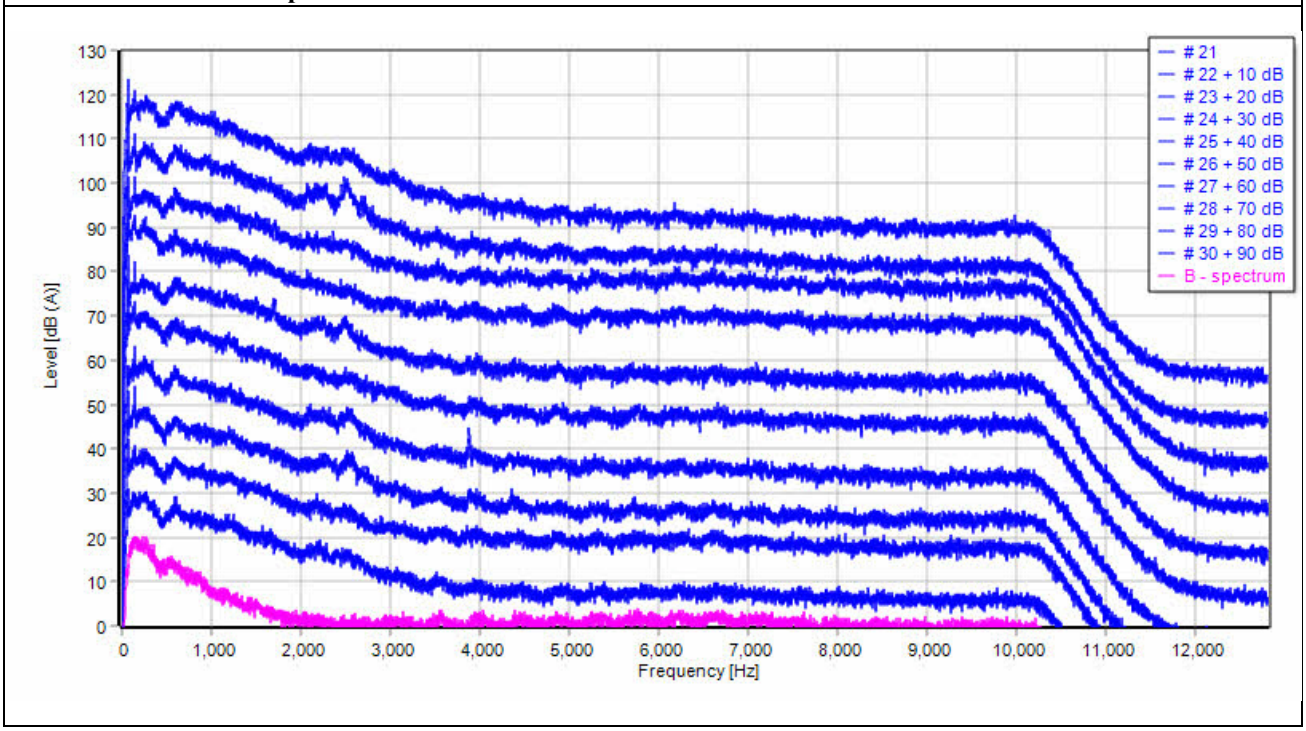
BIN 10.5: Narrowband spectrum



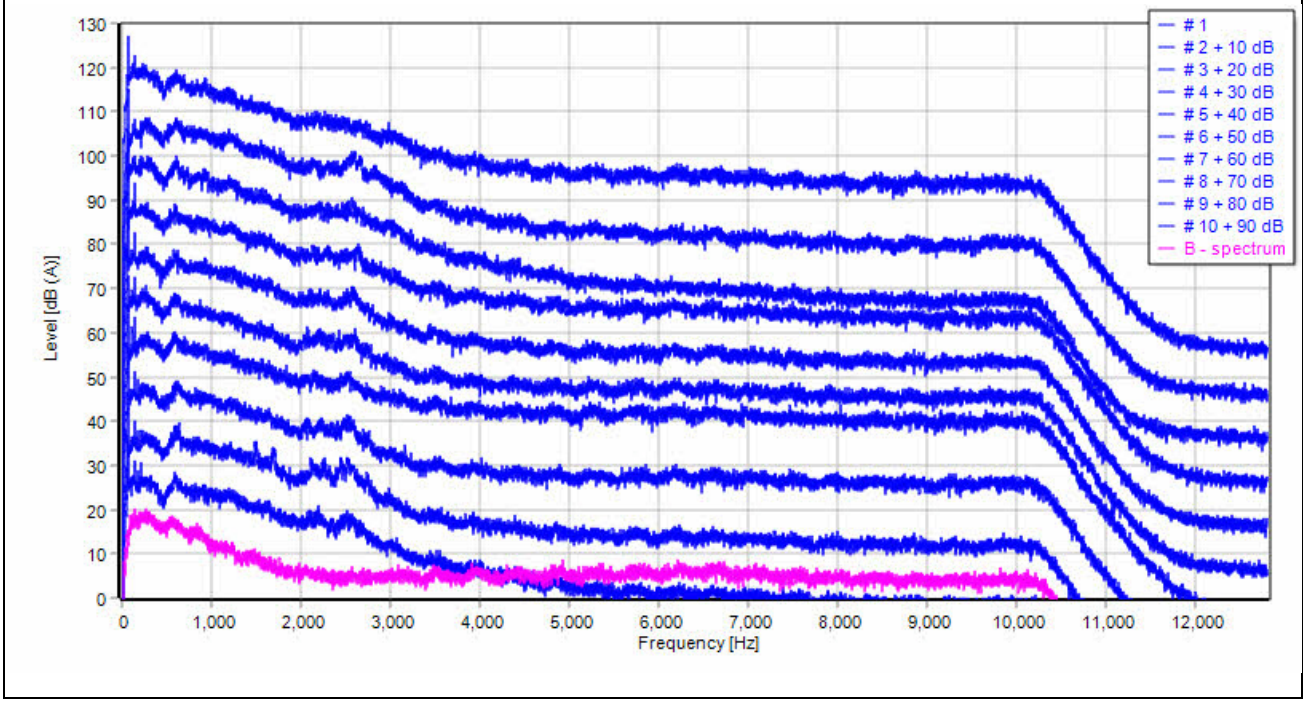
BIN 10.5: Narrowband spectrum



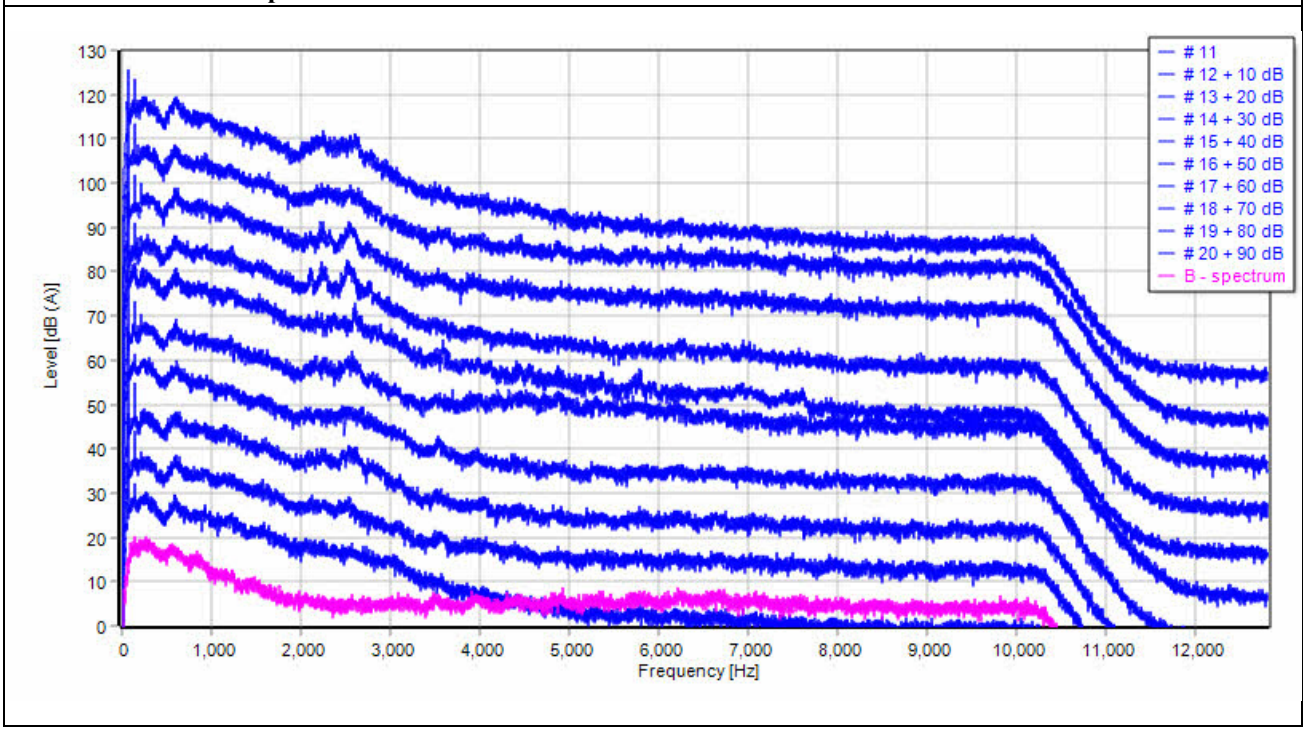
BIN 10.5: Narrowband spectrum



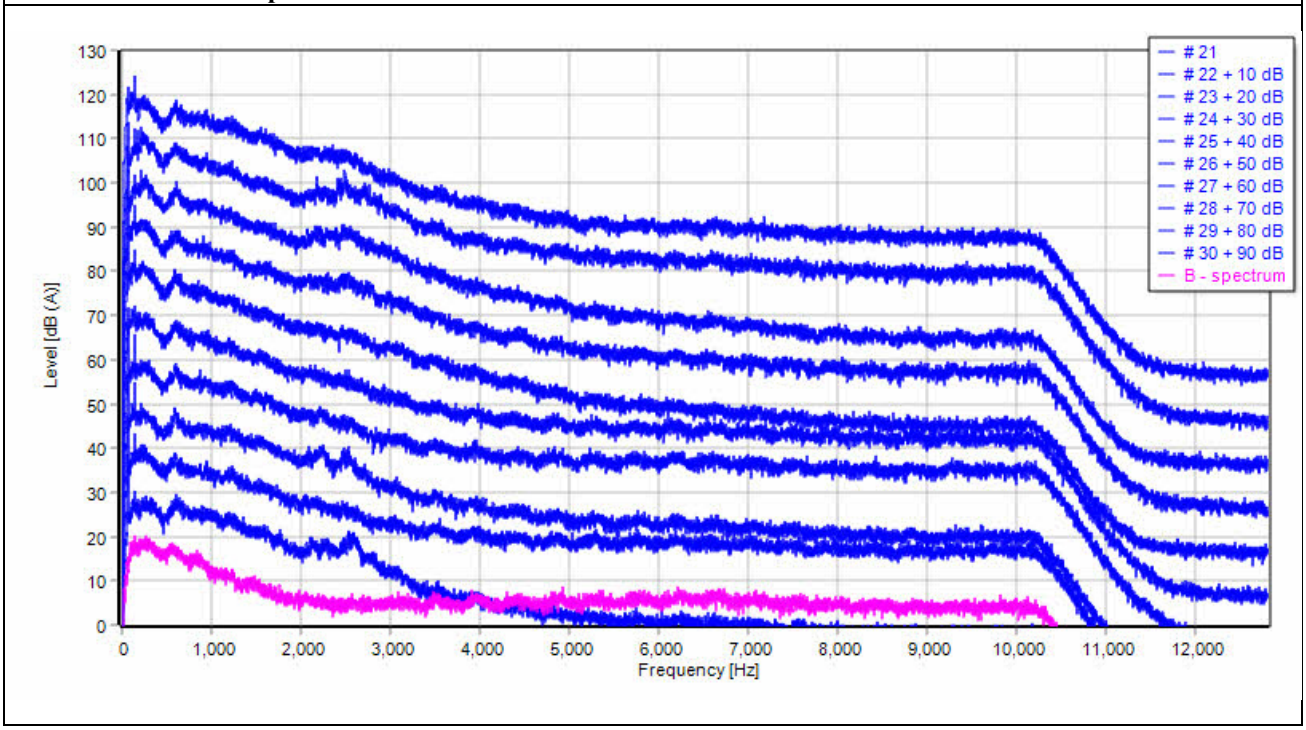
BIN 11: Narrowband spectrum



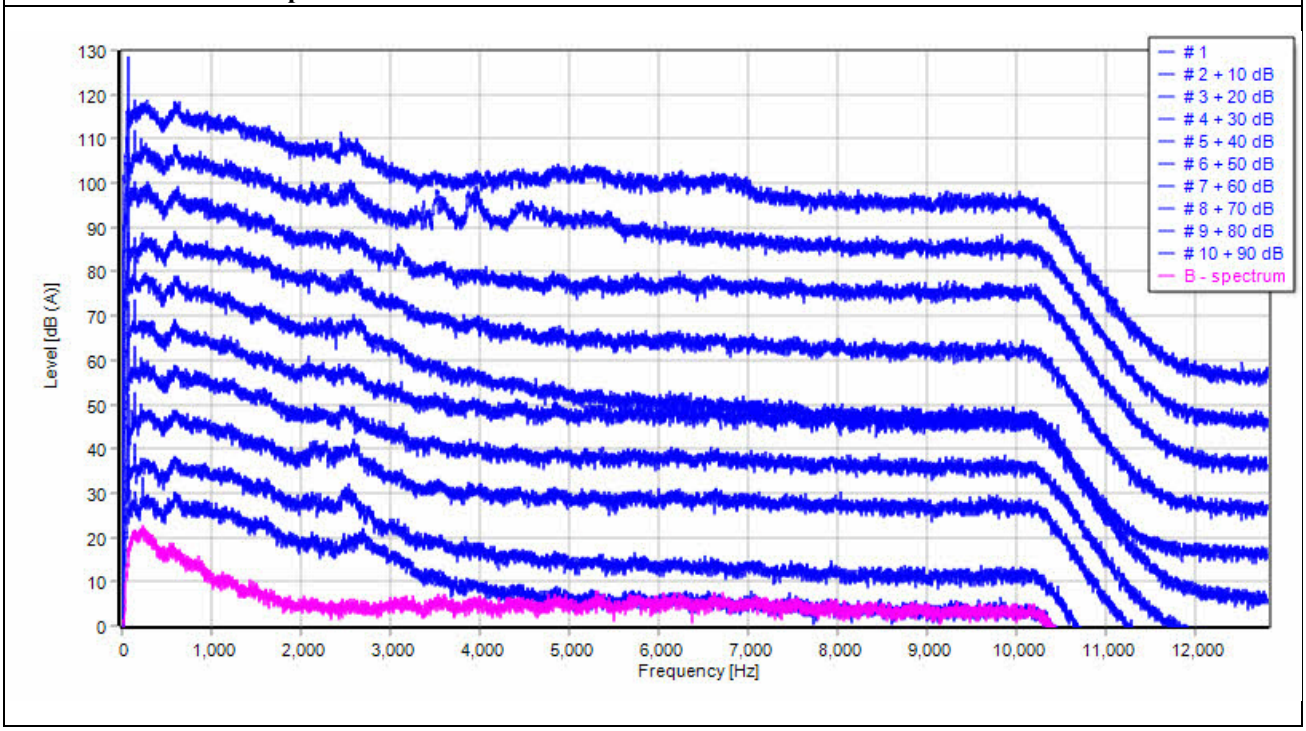
BIN 11: Narrowband spectrum



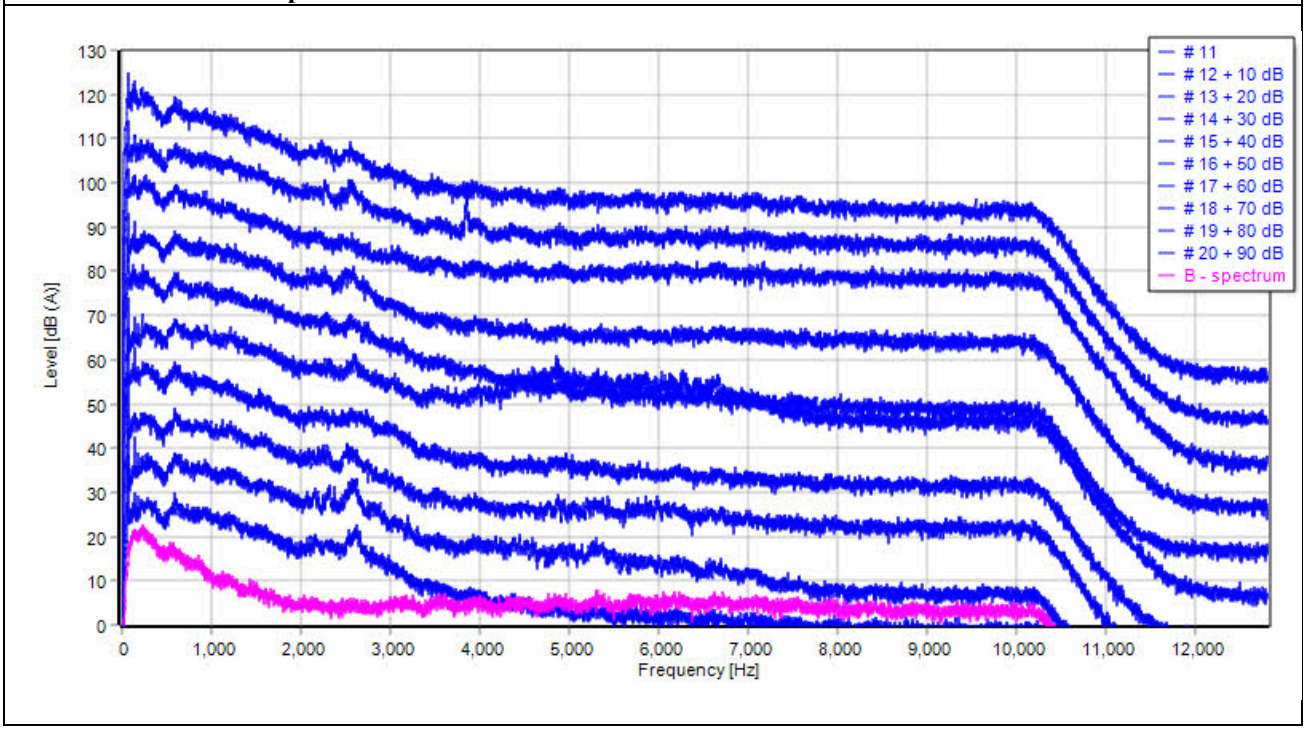
BIN 11: Narrowband spectrum



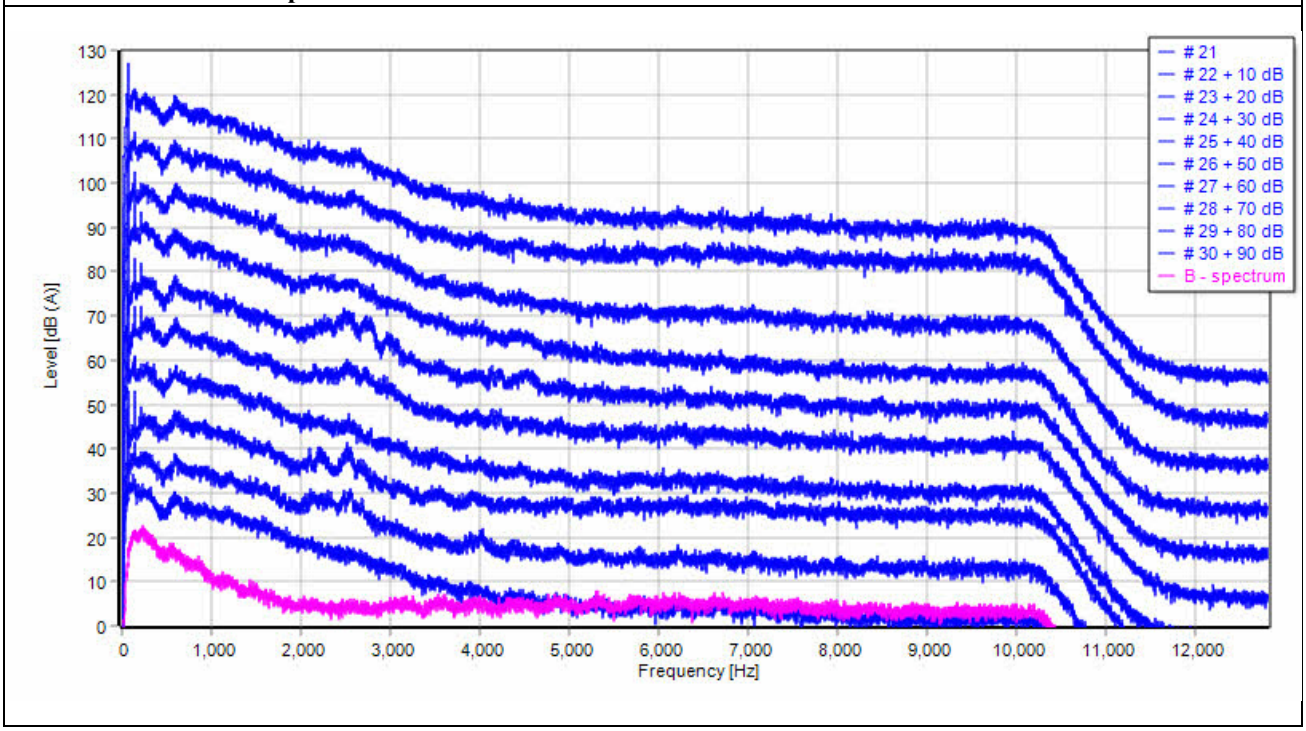
BIN 11.5: Narrowband spectrum



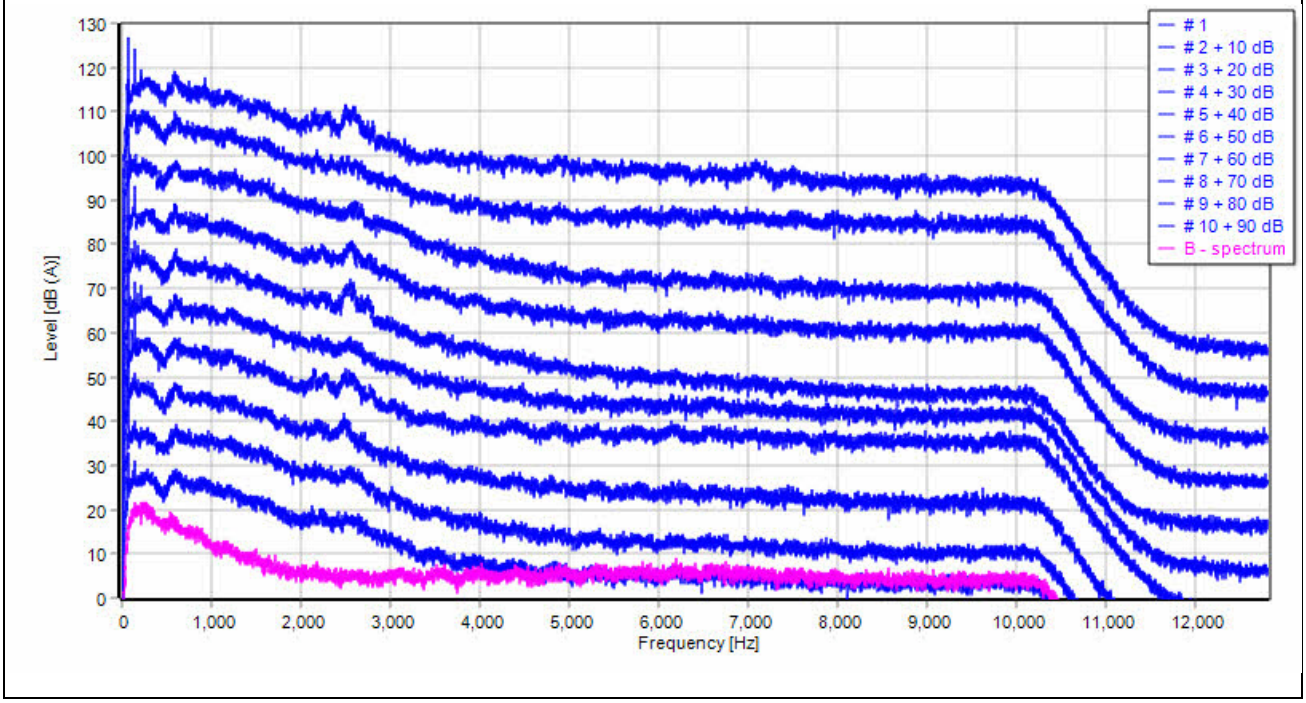
BIN 11.5: Narrowband spectrum



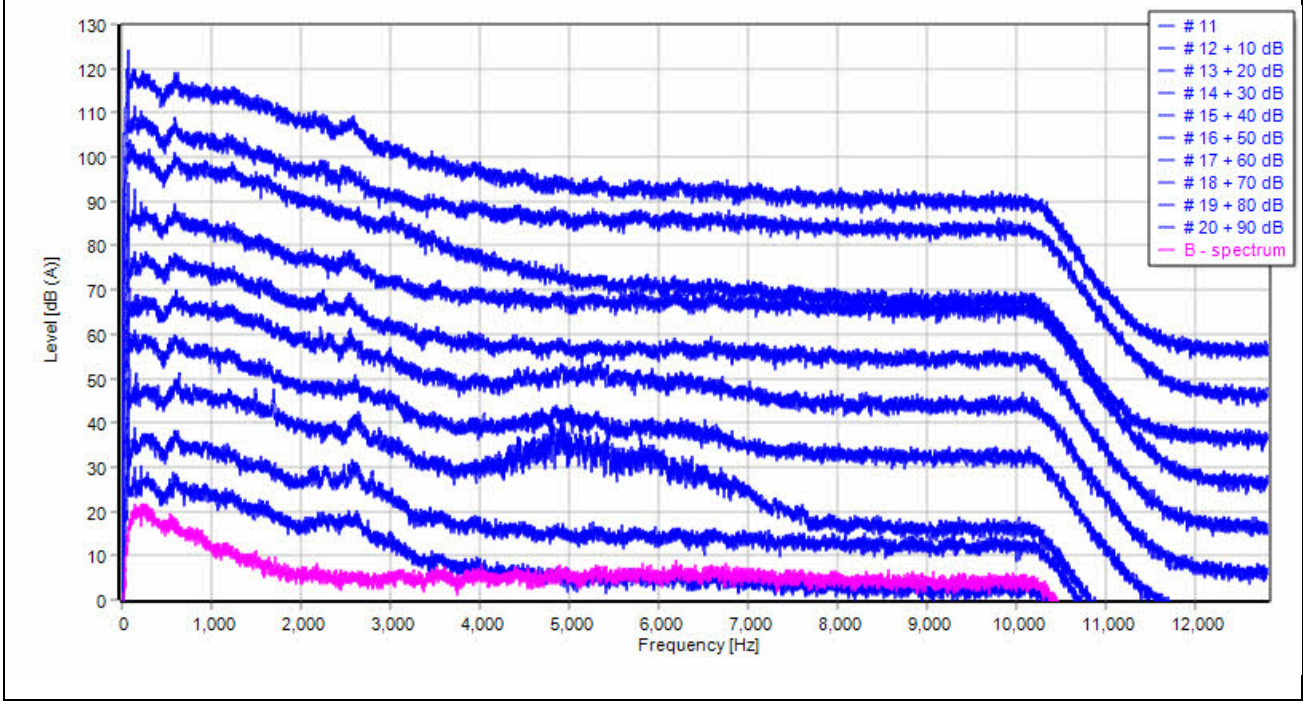
BIN 11.5: Narrowband spectrum



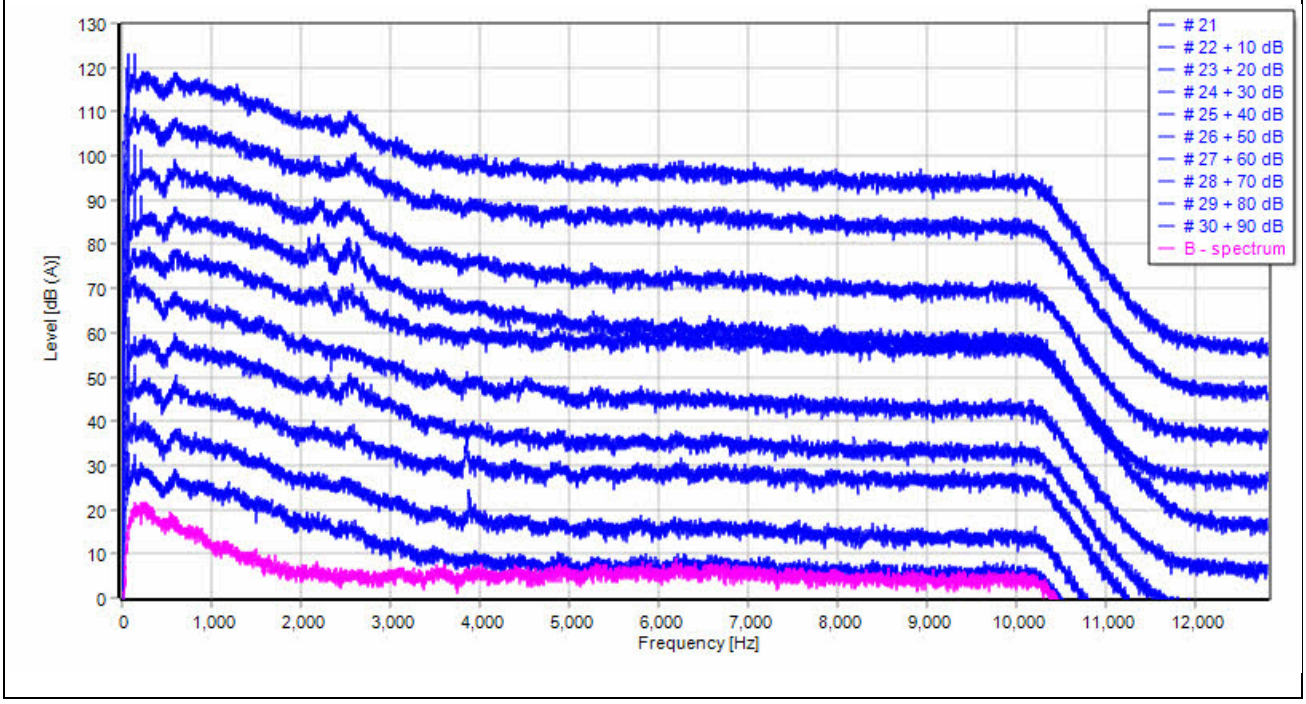
BIN 12: Narrowband spectrum



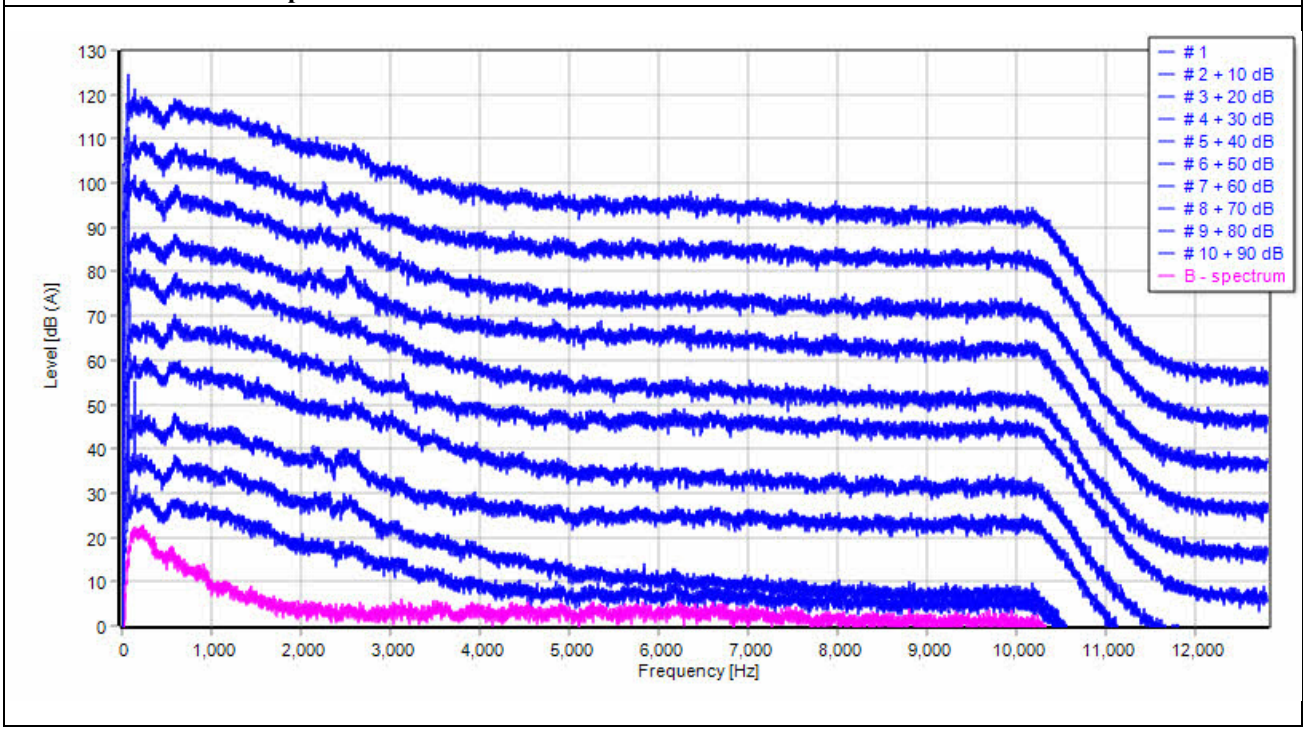
BIN 12: Narrowband spectrum



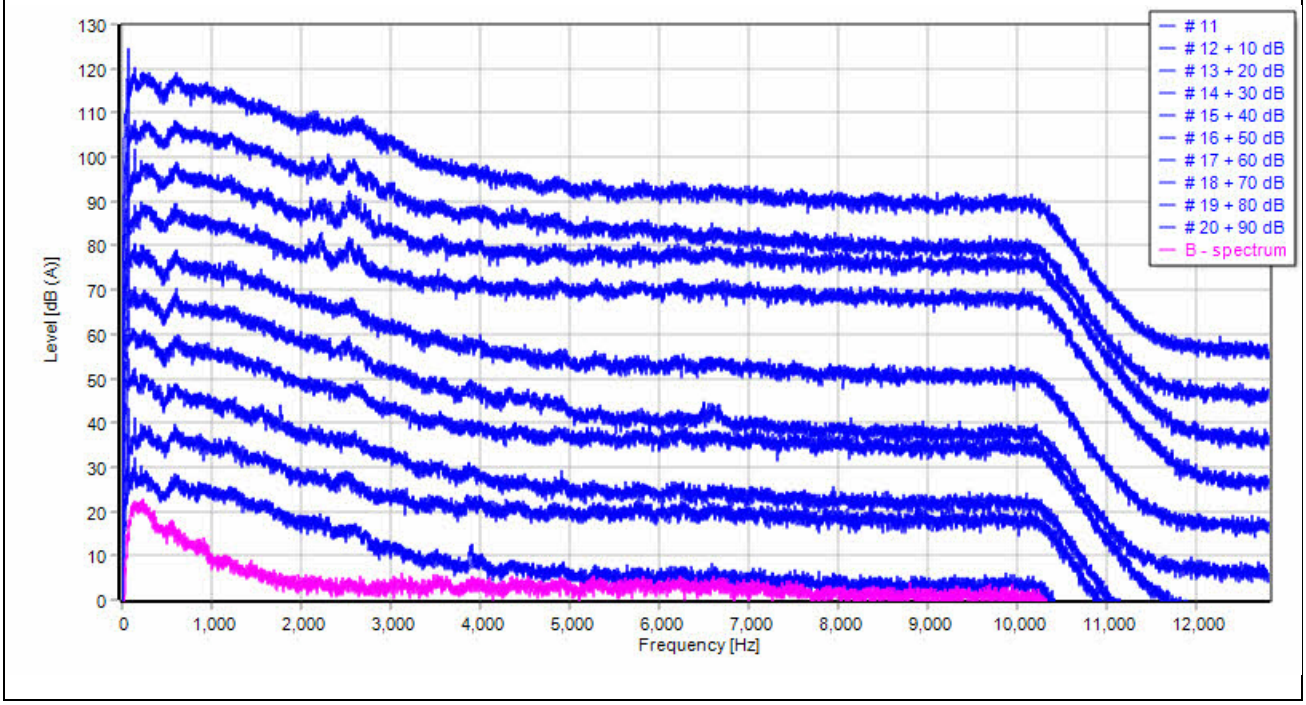
BIN 12: Narrowband spectrum



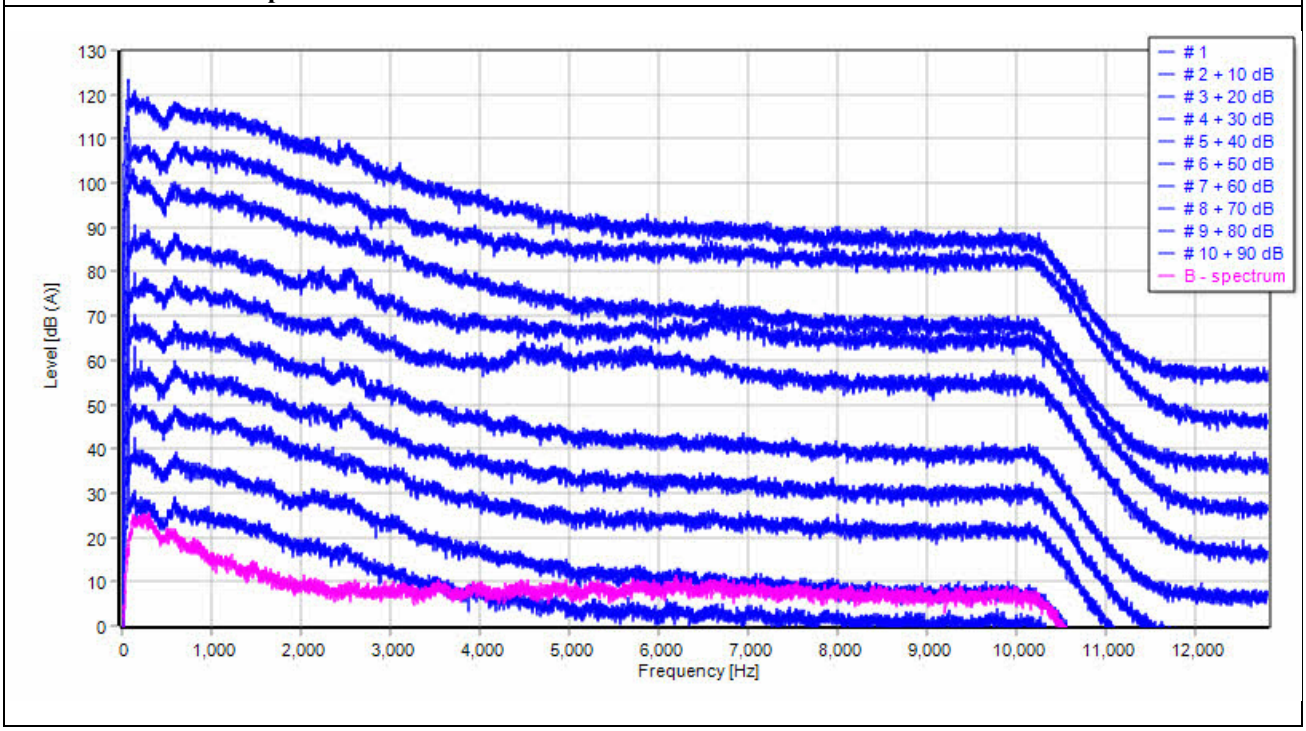
BIN 12.5: Narrowband spectrum



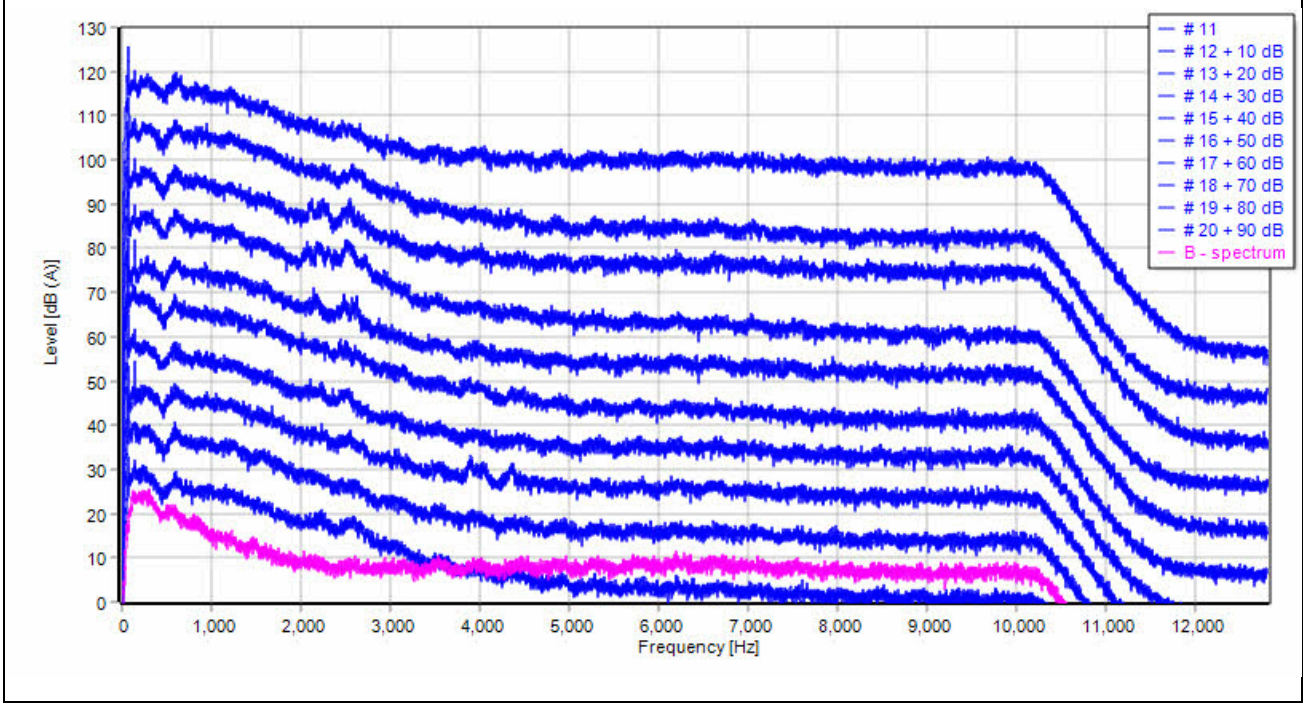
BIN 12.5: Narrowband spectrum



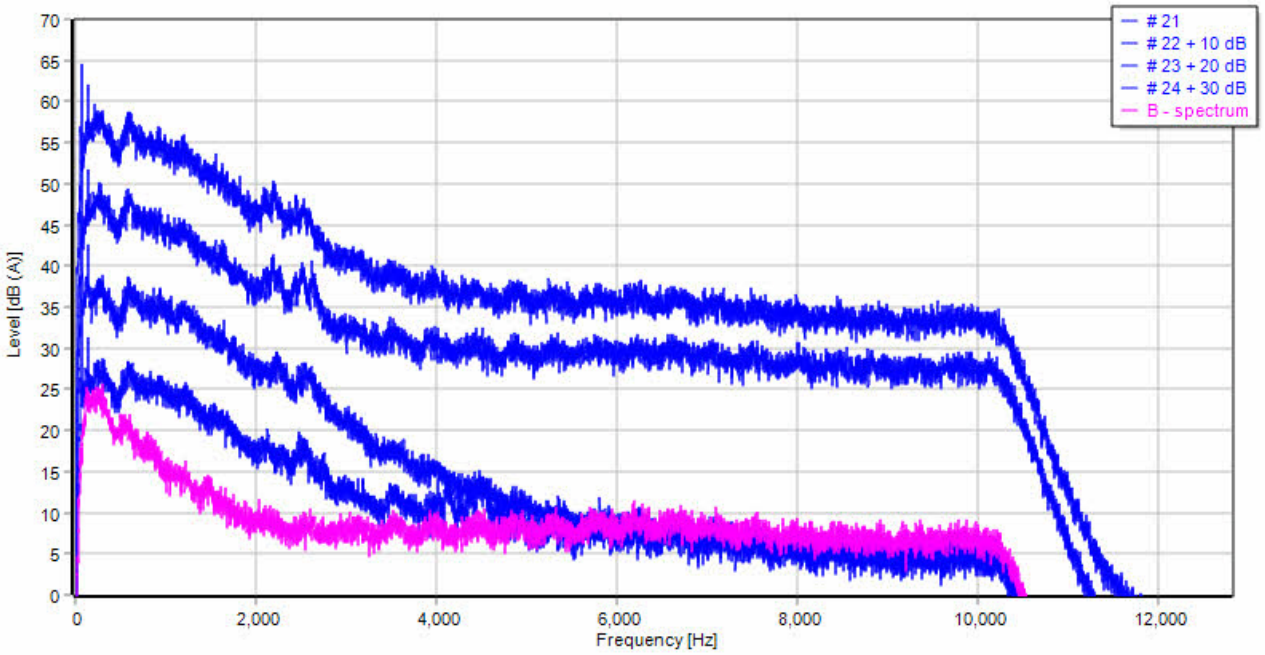
BIN 13: Narrowband spectrum



BIN 13: Narrowband spectrum



BIN 13: Narrowband spectrum



APPENDIX E:

WIND BIN LIST, DOWNWIND LOCATION

Wind bin list - total noise:									
No.	Wind	Vs	Time	LAeq	Windd.	Winds.	T	Pressure	Power
	Bin	[m/s]		[dB(A)]	[°]	[m/s]	[°C]	[hPa]	[kW]
*2	7.5	7.6	11:33:11 AM	50.8	332.3	6.8	2.8	998.5	1298.8
*3	7.5	7.5	11:33:21 AM	50.3	332.6	8.6	2.8	998.3	1255
*4	7.5	7.4	12:04:41 PM	49.4	311.3	8.2	3.2	998.2	1205.3
*5	7.5	7.5	12:05:01 PM	49.8	309.9	8.2	3.2	998.2	1285.3
*6	7.5	7.7	12:06:51 PM	50.8	325.7	6	3.4	998.3	1344.3
*7	7.5	7.5	12:07:01 PM	50.1	323	6.6	3.5	998.3	1265
*8	7.5	7.7	12:07:11 PM	50.7	317.8	6.7	3.5	998.3	1345.5
*9	7.5	7.6	12:08:41 PM	49.7	330.7	6.2	3.7	998.3	1299.7
*10	7.5	7.6	12:09:41 PM	49.9	326.6	7.4	3.7	998.2	1338.8
*11	7.5	7.6	12:09:51 PM	49.9	325.9	7.5	3.7	998.2	1326.3
*12	8	7.8	12:04:31 PM	51.5	325.4	7.3	3.2	998.3	1418
*13	8	7.8	12:05:41 PM	51.8	312.1	7.9	3.3	998.3	1441.8
*14	8	7.9	12:05:51 PM	51.8	312.6	7.6	3.3	998.3	1447.5
*15	8	8.2	12:06:31 PM	53.1	314.8	7.1	3.4	998.3	1657.6
*16	8	7.9	12:06:41 PM	51.4	322	7.4	3.4	998.3	1471.8
*17	8	8.2	12:07:21 PM	52.2	325.5	8.4	3.5	898.4	1653.1
*18	8	7.9	12:08:31 PM	51.1	325.6	7.8	3.7	998.2	1491.9
*19	8	7.9	12:08:51 PM	50.8	314.6	7.9	3.7	998.1	1446.6
*20	8	8.1	12:09:01 PM	51.7	316.7	7.5	3.7	998.2	1586.6
*21	8	8.1	12:09:21 PM	51.9	326.2	8.5	3.7	998.1	1570.3
*22	8	7.9	12:09:31 PM	51.3	323	8.7	3.7	998.2	1449.5
*23	8	7.9	12:10:01 PM	51	306.3	9.1	3.7	998	1465.5
*24	8	8.2	2:03:31 PM	52.8	312.1	7.5	5.6	997.7	1619.3
*25	8.5	8.4	11:54:01 AM	52.5	311.8	8.8	3.3	998.3	1735.2
*26	8.5	8.7	11:54:31 AM	53	316.5	7.4	3.4	998.4	1924.4
*27	8.5	8.3	11:54:41 AM	52.8	326.1	6.7	3.4	998.3	1716.6
*28	8.5	8.6	11:54:51 AM	53.1	326.5	6.5	3.4	998.3	1851.6
*29	8.5	8.5	11:55:01 AM	52.9	321.2	6.3	3.4	998.4	1834.9
*30	8.5	8.6	11:55:11 AM	53.1	323	6.8	3.4	998.4	1854.1
*31	8.5	8.4	11:55:21 AM	52.9	318.9	7.3	3.4	998.4	1766.4
*32	8.5	8.5	11:57:31 AM	52.6	318.9	6.6	3.6	998.3	1807.9
*33	8.5	8.5	12:04:21 PM	52.8	324.6	7.2	3.2	998.3	1787.9
*34	8.5	8.5	12:05:11 PM	52.2	312.9	7.2	3.3	998.3	1828.3
*35	8.5	8.3	12:05:31 PM	53	316.1	5.8	3.3	998.4	1702
*36	8.5	8.5	12:06:11 PM	53.2	312.4	7.8	3.4	998.3	1834.3
*37	8.5	8.6	12:06:21 PM	52.9	321.3	6.8	3.4	998.3	1849.3
*38	8.5	8.4	12:07:51 PM	52.5	324.7	10.3	3.6	998.1	1758.1
*39	8.5	8.3	12:08:01 PM	52.4	326	9.6	3.6	998.1	1689.6
*40	8.5	8.6	12:08:11 PM	52.6	318.4	7.8	3.6	998.3	1897.9
*41	8.5	8.3	12:08:21 PM	52.1	326.4	8.4	3.7	998.2	1708.1
*42	8.5	8.3	12:09:11 PM	52.5	318.6	8.8	3.7	998.1	1694.7
*43	8.5	8.3	2:03:21 PM	52.6	309.6	8	5.6	997.6	1704.4
*44	8.5	8.4	2:03:41 PM	53.1	308.3	7.9	5.6	997.6	1782.6
*45	9	9	11:09:21 AM	53.5	332.9	11.4	2.6	998.3	2136.9
*46	9	9.2	11:39:21 AM	53	329.6	8.6	3.2	998.4	2225.1
*47	9	8.9	11:39:31 AM	52.5	328.3	5.9	3.2	998.4	2063.9
*48	9	8.8	11:39:41 AM	52.3	332.9	6.5	3.2	998.5	1979.6
*49	9	9.1	11:53:51 AM	52.7	316	9.6	3.3	998.3	2151.8
*50	9	9	11:54:11 AM	53.3	315.4	7.3	3.3	998.4	2083.7
*51	9	8.9	11:54:21 AM	53.3	315.4	7.5	3.3	998.4	2053.1

Wind bin list - total noise:									
No.	Wind	Vs	Time	LAeq	Windd.	Winds.	T	Pressure	Power
	Bin	[m/s]		[dB(A)]	[°]	[m/s]	[°C]	[hPa]	[kW]
*52	9	9.2	11:55:31 AM	53.1	318.7	7.9	3.5	998.4	2243
*53	9	9	11:57:21 AM	53.1	316.4	7.3	3.6	998.3	2134.6
*54	9	9	11:57:41 AM	52.8	314.3	8.4	3.6	998.3	2112.6
*55	9	8.9	11:57:51 AM	53.2	314.7	9.2	3.6	998.2	2055
*56	9	9	11:58:01 AM	53.1	314.1	8.9	3.6	998.2	2136.9
*57	9	9.2	11:58:11 AM	53.1	319.5	8.7	3.6	998.2	2210
*58	9	8.8	12:03:51 PM	52.7	311.9	7.8	3.3	998.3	2016.7
*59	9	8.8	12:04:01 PM	52.9	309.8	7.1	3.3	998.3	1967.5
*60	9	8.8	12:04:11 PM	52.7	326	7.4	3.3	998.3	1980.7
*61	9	8.8	12:05:21 PM	52.7	308.9	7.1	3.3	998.3	1995.5
*62	9	9	12:07:31 PM	52.8	313.5	10.1	3.6	998.1	2109.2
*63	9	9.2	12:07:41 PM	52.9	315.8	10.4	3.6	998.1	2200.8
*64	9	9	12:10:11 PM	52.7	307.9	9.4	3.7	998	2095.3
*65	9	9.1	1:27:41 PM	53.8	305.1	7.9	4.9	997.8	2176.9
*66	9	8.9	1:51:11 PM	53.2	318.5	9.1	4.8	997.7	2056.2
*67	9	9.2	1:51:21 PM	53.2	313.8	8.9	4.8	997.6	2209.4
*68	9	8.9	2:02:51 PM	53.4	309.4	6.9	5.6	997.5	2051.5
*69	9	9	2:03:51 PM	53.7	314.3	7.7	5.6	997.6	2105.1
*70	9	9.1	2:04:01 PM	53.4	308.4	7.8	5.6	997.6	2186.6
*71	9	8.9	2:06:21 PM	52.9	317.6	9.3	5.8	997.6	2024.4
*72	9.5	9.6	11:47:31 AM	52.8	327	8.3	3.3	998.4	2420.4
*73	9.5	9.5	11:55:41 AM	52.5	323.7	8	3.5	998.3	2369.8
*74	9.5	9.6	11:56:31 AM	52.9	333.8	10.1	3.5	998.3	2405
*75	9.5	9.4	11:57:01 AM	53.3	329.1	8	3.5	998.3	2343.9
*76	9.5	9.4	11:57:11 AM	53.1	325.9	7.6	3.5	998.3	2331.6
*77	9.5	9.7	12:01:51 PM	52.9	329.2	10.6	3.5	998.3	2487.3
*78	9.5	9.3	12:02:01 PM	53.8	322.4	9	3.4	998.3	2243.4
*79	9.5	9.6	12:02:11 PM	53.7	305.9	9	3.4	998.3	2438.8
*80	9.5	9.7	12:02:21 PM	53.5	307.3	8	3.4	798.6	2495.4
*81	9.5	9.3	12:03:41 PM	52.5	317.2	8.6	3.3	998.3	2276
*82	9.5	9.6	12:11:21 PM	52.7	331.5	5.3	3.8	998.3	2446.4
*83	9.5	9.3	1:51:01 PM	52.8	315.2	9	4.8	997.7	2277.5
*84	9.5	9.4	1:51:31 PM	52.7	318	8.8	4.8	997.7	2318
*85	9.5	9.7	1:51:41 PM	52.8	318.7	8.5	4.8	997.7	2466.3
*86	9.5	9.6	1:52:51 PM	53.3	314.7	6.2	4.9	997.7	2434.1
*87	9.5	9.6	2:03:11 PM	52.8	310.9	8.6	5.6	997.6	2419.1
*88	9.5	9.3	2:05:51 PM	52.9	326.5	9.6	5.8	997.5	2295.3
*89	9.5	9.3	2:06:01 PM	52.7	323.1	8.6	5.8	997.5	2261.2
*90	9.5	9.3	2:06:11 PM	52.8	322.6	9.6	5.8	997.5	2245.6
*91	9.5	9.5	2:06:31 PM	53	324.3	8.4	5.8	997.6	2364.8
*92	9.5	9.5	2:09:21 PM	52.6	312.3	8.6	6.2	997.7	2385.4
*93	9.5	9.3	2:09:31 PM	52.6	309.1	10.1	6.2	997.6	2274.6
*94	9.5	9.5	2:09:41 PM	52.2	311.8	10	6.2	997.6	2369.9
*95	9.5	9.7	2:09:51 PM	52.3	314.3	9	6.2	997.6	2474.4
*96	9.5	9.5	2:10:01 PM	52.9	320.6	9.1	6.2	997.6	2388.9
*97	9.5	9.7	2:14:01 PM	52.2	308	10.9	5.9	997.5	2471.5
*98	9.5	9.3	2:14:11 PM	52.9	312.1	10.1	5.9	997.5	2254.9
*99	10	9.9	11:21:01 AM	53.1	331.7	10.2	2.2	998.4	2585.1
*100	10	9.8	11:30:01 AM	52.7	331	10.2	2.6	998.3	2548.4
*101	10	10.2	11:41:21 AM	52.1	332.1	9.8	3.3	998.4	2674.4

Wind bin list - total noise:									
No.	Wind	Vs	Time	LAeq	Windd.	Winds.	T	Pressure	Power
	Bin	[m/s]		[dB(A)]	[°]	[m/s]	[°C]	[hPa]	[kW]
*102	10	10	11:47:21 AM	51.9	333.1	8	3.3	998.4	2611
*103	10	9.9	11:50:41 AM	52.5	318.4	8.9	3.3	998.4	2588.5
*104	10	9.8	11:53:31 AM	52.1	318.6	10.4	3.3	998.2	2529.9
*105	10	9.9	11:53:41 AM	52.4	316.6	10.2	3.3	998.3	2589.2
*106	10	10	11:55:51 AM	52.8	323.9	9.5	3.5	998.3	2618.4
*107	10	9.9	11:58:31 AM	53.1	318.9	8	3.6	998.3	2601.4
*108	10	9.8	12:01:41 PM	52.3	323.1	11	3.5	998.3	2505.2
*109	10	9.8	12:03:31 PM	52.6	316.3	8.8	3.3	998.3	2548.2
*110	10	9.8	12:10:21 PM	52.3	327.5	8.6	3.7	998.2	2511.6
*111	10	10.2	1:27:31 PM	53.3	316.3	9.5	4.8	997.9	2685
*112	10	10.1	1:34:11 PM	52.6	319.1	10.2	5.5	997.7	2669.1
*113	10	9.9	1:44:31 PM	52.5	313.4	9.6	4.9	997.7	2585.2
*114	10	10	1:50:21 PM	52	319.1	7.5	4.7	997.8	2623.4
*115	10	10	1:53:01 PM	53.1	325.5	7.3	4.9	997.7	2611
*116	10	10.2	1:53:11 PM	53	325.9	8	4.9	997.7	2693.2
*117	10	10	2:03:01 PM	53.3	313.8	6.9	5.6	997.6	2634.3
*118	10	9.9	2:05:11 PM	52.6	331.9	10.7	5.7	997.6	2588.9
*119	10	10	2:05:41 PM	52.7	329	9.1	5.8	997.6	2619
*120	10	9.8	2:10:11 PM	53.1	321.1	7.9	6.2	897.9	2521.5
*121	10	9.8	2:13:51 PM	52.1	308.5	9.3	5.9	997.6	2544.4
*122	10	9.9	2:14:31 PM	53.2	307.4	9.9	5.9	997.5	2565.2
*123	10	9.8	2:20:51 PM	52.4	311.9	7.8	5.7	997.6	2533.7
*124	10.5	10.3	11:07:51 AM	52.8	319.6	10.2	2.7	998.3	2719.7
*125	10.5	10.7	11:20:11 AM	52.1	333.2	10.8	2.3	998.4	2817.1
*126	10.5	10.7	11:20:21 AM	52.5	334.5	10.9	2.3	998.4	2815.6
*127	10.5	10.7	11:29:51 AM	52.4	326.5	11	2.6	998.3	2795.4
*128	10.5	10.6	11:43:01 AM	52.1	333.5	8.9	3.3	998.3	2772.3
*129	10.5	10.7	11:56:41 AM	53	328	8.2	3.5	998.3	2801
*130	10.5	10.3	11:56:51 AM	52.8	329.9	8.3	3.5	998.3	2702.2
*131	10.5	10.6	11:58:21 AM	53.9	318	10.1	3.6	998.2	2769.6
*132	10.5	10.5	12:01:11 PM	52.1	320.8	12.1	3.5	998.1	2757.1
*133	10.5	10.6	12:01:31 PM	52.4	316.8	10.1	3.5	998.3	2785.7
*134	10.5	10.4	12:10:31 PM	52.3	325.9	8.7	3.7	998.2	2731.6
*135	10.5	10.5	12:10:41 PM	52.4	328.1	8.7	3.7	998.2	2749.3
*136	10.5	10.5	12:11:11 PM	51.7	334	6.7	3.8	998.2	2748.8
*137	10.5	10.3	12:11:31 PM	52.6	328.3	6.1	3.8	998.3	2697.4
*138	10.5	10.6	1:26:21 PM	51.9	329.4	8.4	4.7	997.8	2789.2
*139	10.5	10.5	1:27:01 PM	52.9	322.3	12.5	4.8	997.8	2748
*140	10.5	10.4	1:27:11 PM	53.4	328.5	9.6	4.8	997.8	2740.2
*141	10.5	10.6	1:27:21 PM	53.4	320.8	8.9	4.8	997.8	2787
*142	10.5	10.7	1:29:31 PM	52.5	320.8	8.1	5.2	997.8	2811.9
*143	10.5	10.5	1:30:21 PM	51.6	321.3	8.9	5.4	997.8	2759.7
*144	10.5	10.7	1:30:31 PM	52.1	317.8	10.1	5.4	997.7	2810.8
*145	10.5	10.6	1:33:31 PM	52.3	307.1	10.3	5.6	997.8	2788.9
*146	10.5	10.7	1:33:41 PM	51.8	307.7	11	5.6	997.7	2804.3
*147	10.5	10.6	1:33:51 PM	52.2	313.5	9.9	5.5	997.6	2770.8
*148	10.5	10.4	1:35:11 PM	53.4	328.5	7.1	5.4	997.8	2739.2
*149	10.5	10.7	1:36:01 PM	52.4	310.5	10.4	5.4	997.7	2800.3
*150	10.5	10.4	1:37:41 PM	53.2	333	10.6	5.4	997.6	2738.3
*151	10.5	10.6	1:41:11 PM	51.8	315.6	11	5.1	997.8	2773.7

Wind bin list - total noise:									
No.	Wind	Vs	Time	LAeq	Windd.	Winds.	T	Pressure	Power
	Bin	[m/s]		[dB(A)]	[°]	[m/s]	[°C]	[hPa]	[kW]
*152	10.5	10.7	1:42:31 PM	51.8	308.2	10.9	5	997.7	2813.7
*153	10.5	10.3	1:42:41 PM	51.8	309.9	9.5	5	997.8	2708.2
*154	10.5	10.7	1:43:41 PM	51.6	315.5	8.7	4.9	997.8	2803.3
*155	10.5	10.7	1:44:21 PM	52.3	317.6	9.3	4.9	997.7	2805.6
*156	10.5	10.7	1:45:41 PM	51.7	306.4	7.9	4.8	997.8	2803
*157	10.5	10.5	1:50:31 PM	52.2	321.9	9	4.7	997.7	2768.7
*158	10.5	10.7	1:50:41 PM	52.1	321	9	4.7	997.7	2797
*159	10.5	10.3	1:50:51 PM	52.4	318	8.6	4.8	997.7	2713.2
*160	10.5	10.6	1:52:01 PM	52.9	319.1	10.2	4.8	997.7	2774.6
*161	10.5	10.5	1:52:31 PM	52.9	308.2	8.9	4.8	997.8	2765.8
*162	10.5	10.4	1:52:41 PM	52.8	310.4	7.9	4.8	997.7	2728
*163	10.5	10.6	2:05:01 PM	52.9	322.1	6.9	5.7	997.7	2791.2
*164	10.5	10.4	2:05:31 PM	53	330.3	9.9	5.7	997.5	2723
*165	10.5	10.7	2:07:51 PM	51.5	325.4	7.6	6	997.6	2816.1
*166	10.5	10.4	2:08:01 PM	52.3	325.2	9.9	6	997.6	2731.6
*167	10.5	10.5	2:08:11 PM	52.9	317	9.4	6.1	997.5	2750.3
*168	10.5	10.6	2:14:21 PM	53.1	308.5	9.8	5.9	997.6	2775.4
*169	10.5	10.6	2:19:31 PM	51.2	306.5	7.6	5.6	997.7	2780.6
*170	10.5	10.3	2:19:51 PM	52.4	312	7.3	5.6	997.6	2711.5
*171	10.5	10.4	2:20:01 PM	52.1	321	8	5.6	997.6	2734.5
*172	10.5	10.7	2:20:41 PM	52.1	316.5	8.5	5.7	997.5	2796.3
*173	10.5	10.4	2:21:11 PM	52.8	313	9.1	5.7	997.5	2735
*174	10.5	10.7	2:21:31 PM	53.5	310	9.3	5.7	997.5	2814.5
*175	10.5	10.6	2:21:41 PM	53.4	309.2	8.6	5.7	997.6	2786
*176	11	11	11:12:21 AM	51.7	313.2	9.9	2.4	998.4	2877.8
*177	11	11.1	11:12:41 AM	52	308.9	8.3	2.3	998.4	2890.5
*178	11	10.9	11:13:01 AM	52.4	305.3	6.3	2.3	998.5	2849.1
*179	11	11.1	11:14:11 AM	53.7	308.1	11.3	2.4	998.3	2884.1
*180	11	11	11:15:11 AM	52.7	314.5	7.8	2.4	998.5	2877.1
*181	11	10.8	11:16:41 AM	52.2	319.2	10.9	2.5	998.4	2825.4
*182	11	10.8	11:16:51 AM	52.4	312.6	9.3	2.5	998.5	2835.7
*183	11	11	11:19:21 AM	52.4	332.2	10.2	2.4	998.4	2926.8
*184	11	11.1	11:19:51 AM	52.3	328.9	9.6	2.3	998.4	2984.6
*185	11	10.8	11:22:21 AM	53.1	329	9.3	2.3	998.4	2823.7
*186	11	11.1	11:41:31 AM	52.4	330.5	11.8	3.3	998.3	2902.6
*187	11	11	11:42:41 AM	51.9	332.4	11.4	3.3	998.3	2873.4
*188	11	11.1	11:42:51 AM	52	334.2	10.4	3.3	998.3	2895.6
*189	11	10.8	11:43:31 AM	52.9	330.9	9.1	3.4	998.4	2821.2
*190	11	10.9	11:46:21 AM	52.4	323.3	9.7	3.4	998.4	2843.7
*191	11	11.1	11:47:41 AM	53.5	329.2	7.2	3.3	998.4	2978.3
*192	11	11.2	11:48:11 AM	51.7	325.6	9.7	3.3	998.4	2949.4
*193	11	11.1	11:48:21 AM	51.5	327.3	7.9	3.3	998.4	2906
*194	11	11.1	11:52:11 AM	51.7	324.8	10	3.3	998.4	2882.7
*195	11	10.8	11:52:31 AM	52	313.4	9.9	3.3	998.2	2823
*196	11	10.9	11:53:21 AM	52.1	314.4	9.1	3.3	998.3	2863
*197	11	10.8	12:00:31 PM	52.6	334.8	13.4	3.6	998.1	2841.3
*198	11	11	12:00:51 PM	52.1	329.8	13	3.6	998.1	2878.9
*199	11	10.9	12:01:01 PM	52.4	329.6	12.3	3.5	998.2	2863.5
*200	11	10.9	12:01:21 PM	52.4	323.2	11.8	3.5	998.2	2850
*201	11	10.9	12:02:31 PM	53.4	305.9	7.6	3.4	998.3	2852.9

Wind bin list - total noise:									
No.	Wind	Vs	Time	LAeq	Windd.	Winds.	T	Pressure	Power
	Bin	[m/s]		[dB(A)]	[°]	[m/s]	[°C]	[hPa]	[kW]
*202	11	10.9	12:02:41 PM	53.2	307.3	7.6	3.4	998.3	2844.6
*203	11	10.9	12:03:11 PM	52.8	314.6	10.1	3.3	998.3	2845.5
*204	11	11	12:03:21 PM	52.8	316.9	9.7	3.3	998.3	2868.9
*205	11	10.8	1:26:41 PM	51.9	324.4	7.7	4.8	997.9	2819.2
*206	11	11	1:26:51 PM	53.4	315.2	11.3	4.8	997.9	2875.5
*207	11	11.1	1:28:01 PM	53.8	306.5	10.5	4.9	997.7	2986.5
*208	11	10.9	1:28:41 PM	52.5	312.7	11	5	997.8	2856.3
*209	11	11	1:28:51 PM	52.7	312.3	9.5	5	997.7	2877.2
*210	11	10.8	1:30:51 PM	52.7	313.7	11.3	5.5	997.7	2819.3
*211	11	10.9	1:31:01 PM	52.2	313.1	11.2	5.5	997.7	2857
*212	11	11	1:33:21 PM	53.1	313.8	10.2	5.6	997.8	2878.9
*213	11	11	1:34:51 PM	53.2	325.1	8.3	5.5	997.8	2991.1
*214	11	10.9	1:35:01 PM	52.7	328.2	7.1	5.4	997.7	2850.8
*215	11	11	1:35:21 PM	53.3	321.4	7.2	5.4	997.7	3009.8
*216	11	10.9	1:37:51 PM	53.1	325.6	10.3	5.4	997.7	2852.9
*217	11	10.8	1:38:41 PM	52.2	324.2	7.6	5.3	997.8	2822.2
*218	11	10.8	1:38:51 PM	53	320.4	7.9	5.3	997.8	2820.5
*219	11	10.9	1:40:11 PM	52.8	314.5	9.3	5.2	997.8	2863.1
*220	11	10.9	1:43:31 PM	52	308.4	9.5	4.9	997.7	2865
*221	11	10.9	1:44:11 PM	51.9	315.8	8.2	4.9	997.8	2850.7
*222	11	10.9	1:45:31 PM	51.3	305.7	9	4.8	997.8	2854.5
*223	11	11.1	1:45:51 PM	52.4	313.8	8	4.8	997.9	2907
*224	11	10.8	1:48:01 PM	52.1	330	9.1	4.7	997.7	2832.5
*225	11	11	1:48:11 PM	51.8	313.3	9.1	4.7	997.7	2867.9
*226	11	10.9	1:48:21 PM	51.8	325.3	8.2	4.7	997.8	2851.6
*227	11	10.8	1:48:31 PM	52.2	329.9	7.9	4.7	997.8	2841.4
*228	11	11	1:49:41 PM	52.2	320.5	10.8	4.7	997.7	2940.3
*229	11	11.2	1:50:11 PM	51.8	318.3	9.6	4.7	997.7	2883.3
*230	11	10.9	1:51:51 PM	52.5	327.6	8.9	4.8	997.6	2847.9
*231	11	11	2:04:51 PM	53	316.5	6.4	5.7	997.6	2870.5
*232	11	10.8	2:05:21 PM	53	334.4	10.2	5.7	997.5	2835.7
*233	11	11	2:06:51 PM	52.9	317.6	8.7	5.9	997.6	3032.6
*234	11	11.2	2:07:31 PM	53.8	320.1	6.6	5.9	997.7	3017.3
*235	11	10.9	2:07:41 PM	51.7	323.5	6.6	6	997.7	2853.5
*236	11	10.9	2:09:11 PM	53.1	309	7.8	6.2	997.6	2846
*237	11	10.9	2:11:31 PM	51.4	311.2	10.4	6.1	997.7	2858.5
*238	11	11	2:11:41 PM	51.6	313.5	8.7	6.1	997.7	2880.4
*239	11	11.2	2:11:51 PM	51.9	315.3	10.1	6.1	997.5	2915
*240	11	11	2:13:01 PM	52.2	310.6	10	6	997.6	2868.7
*241	11	10.8	2:13:21 PM	52.4	310.2	8.4	6	997.6	2836.2
*242	11	10.9	2:18:11 PM	53.2	314.5	10.6	5.7	997.6	2856.2
*243	11	11.2	2:21:21 PM	53	311.6	7.9	5.7	997.5	2987.7
*244	11.5	11.7	11:08:41 AM	53.4	333.6	10.4	2.7	998.4	3001.9
*245	11.5	11.5	11:12:51 AM	52	319.2	7.8	2.3	998.4	2942.2
*246	11.5	11.3	11:14:21 AM	52.9	307.8	9.6	2.4	998.4	2883.2
*247	11.5	11.5	11:14:51 AM	52.7	318.4	9.6	2.4	998.4	2918.8
*248	11.5	11.6	11:15:01 AM	52.5	324	8.9	2.4	998.5	2880
*249	11.5	11.7	11:19:11 AM	52.6	328.4	10	2.4	998.5	2953.3
*250	11.5	11.7	11:23:51 AM	52.1	333.1	11.5	2.4	998.4	3012.5
*251	11.5	11.7	11:44:21 AM	52.6	333.2	10.2	3.4	998.3	2916.2

Wind bin list - total noise:									
No.	Wind	Vs	Time	LAeq	Windd.	Winds.	T	Pressure	Power
	Bin	[m/s]		[dB(A)]	[°]	[m/s]	[°C]	[hPa]	[kW]
*252	11.5	11.7	11:45:11 AM	53	333.8	13.5	3.4	998.2	2917.8
*253	11.5	11.5	11:45:41 AM	52.6	332.5	11	3.4	998.3	2897.3
*254	11.5	11.5	11:46:51 AM	52.3	327.6	10.1	3.4	998.3	2986.4
*255	11.5	11.4	11:47:01 AM	52.4	326.5	9.9	3.4	998.4	3018.9
*256	11.5	11.4	11:48:01 AM	52.4	326.5	9.4	3.3	998.4	2998.3
*257	11.5	11.6	11:49:41 AM	52.6	326.8	9.4	3.3	998.5	3004.6
*258	11.5	11.5	11:51:41 AM	54	331	11.1	3.3	998.3	3038.7
*259	11.5	11.4	1:26:01 PM	53.1	311.8	9.7	4.7	997.7	2981.9
*260	11.5	11.6	1:28:21 PM	52.6	307.5	12.2	4.9	997.7	2962.1
*261	11.5	11.4	1:31:11 PM	53.7	310.5	11.5	5.5	997.7	2953.6
*262	11.5	11.5	1:31:51 PM	52.8	305.5	12.3	5.6	997.6	2951.8
*263	11.5	11.7	1:34:01 PM	53	320.5	10	5.5	997.7	2913.8
*264	11.5	11.4	1:34:41 PM	54.1	322.5	9.4	5.5	997.8	3028.1
*265	11.5	11.5	1:36:11 PM	52.3	306.3	10.3	5.4	997.7	2895.6
*266	11.5	11.3	1:42:11 PM	51.7	317.3	9.4	5	997.8	2911.4
*267	11.5	11.6	1:47:01 PM	51.9	322	10.8	4.8	997.8	2892.2
*268	11.5	11.3	1:48:41 PM	52.4	319.5	9.3	4.7	997.7	2930.3
*269	11.5	11.3	1:48:51 PM	52.2	317.8	7.6	4.7	997.8	2937.4
*270	11.5	11.6	1:53:31 PM	53.2	317.7	6.7	4.9	997.8	2945.6
*271	11.5	11.3	1:54:01 PM	52.8	314.8	6.1	5	997.7	2923.7
*272	11.5	11.6	2:07:01 PM	52.8	314.5	8.6	5.9	997.6	2986.5
*273	11.5	11.5	2:07:21 PM	52.9	330.1	6.4	5.9	997.7	2996.8
*274	11.5	11.3	2:10:21 PM	53.4	323.5	7	6.1	997.7	3020.9
*275	11.5	11.4	2:10:31 PM	53.6	324.8	8.3	6.1	997.7	3036.9
*276	11.5	11.6	2:11:01 PM	51.9	317.4	10.2	6.1	997.6	2944.3
*277	11.5	11.4	2:12:01 PM	52.1	310.4	9.8	6	997.6	2955.2
*278	11.5	11.6	2:12:11 PM	52.7	308.6	9.7	6	997.6	2978
*279	11.5	11.5	2:12:41 PM	52.4	307.4	8.2	6	997.7	3012.7
*280	11.5	11.5	2:13:41 PM	53	313.1	9.3	5.9	997.6	3031.6
*281	11.5	11.6	2:14:51 PM	53.7	305.5	7.7	5.8	997.6	3028.3
*282	12	12.1	11:13:11 AM	52.7	318.6	8.2	2.3	998.4	2979.5
*283	12	12.2	11:13:21 AM	53	310.9	8.1	2.3	998.4	3002.9
*284	12	11.9	11:13:31 AM	52.5	310.1	8.1	2.3	998.5	2885.6
*285	12	12	11:14:41 AM	52.9	307.5	9.3	2.4	998.4	3002.1
*286	12	12.1	11:16:11 AM	52.3	320.3	9.1	2.4	898.6	2938.5
*287	12	12.2	11:16:31 AM	52	317.4	10.2	2.4	998.4	2896.4
*288	12	12	11:17:21 AM	52.4	318.7	9.6	2.4	998.4	2978.5
*289	12	11.9	11:41:41 AM	53.1	332.5	12.4	3.3	998.2	3031.9
*290	12	11.9	11:44:31 AM	53.3	331.9	9.8	3.4	998.3	3015.7
*291	12	12	11:45:21 AM	52.2	333.2	11.3	3.4	998.4	2943.6
*292	12	12	11:46:31 AM	51.7	325.7	8.8	3.4	998.4	2933.5
*293	12	11.8	11:46:41 AM	52	326.1	9.5	3.4	998.4	2968.3
*294	12	12	11:47:51 AM	54.3	317.6	8.8	3.3	998.3	3035.9
*295	12	12	11:51:21 AM	53.6	321.2	8.8	3.3	998.3	3041.5
*296	12	12	11:51:31 AM	53.2	326.2	9.2	3.3	998.4	3051.4
*297	12	12.2	11:51:51 AM	51.9	321.1	10.5	3.3	998.3	2951.2
*298	12	11.9	11:52:01 AM	51.9	322.8	8.8	3.3	998.4	2895
*299	12	12.2	11:58:51 AM	54.6	323.9	7.3	3.6	998.3	3043.4
*300	12	12.2	12:00:41 PM	52.1	332.6	11.9	3.6	998.1	2895.7
*301	12	12	1:26:11 PM	52.5	320.2	9.3	4.7	997.8	2904.3

Wind bin list - total noise:									
No.	Wind	Vs	Time	LAeq	Windd.	Winds.	T	Pressure	Power
	Bin	[m/s]		[dB(A)]	[°]	[m/s]	[°C]	[hPa]	[kW]
*302	12	12	1:30:41 PM	52.6	309.9	10.4	5.4	997.8	2893.6
*303	12	11.8	1:31:41 PM	52.3	314.7	9.6	5.6	997.7	2902.6
*304	12	11.8	1:32:01 PM	52.7	312.9	12	5.6	997.7	2888.5
*305	12	11.9	1:32:11 PM	52.6	320	11.1	5.6	997.8	3015.7
*306	12	12.2	1:34:31 PM	53.5	319.3	9.4	5.5	997.7	2938.7
*307	12	12.2	1:41:41 PM	53	313.9	9.3	5.1	997.8	2974.2
*308	12	11.8	1:41:51 PM	51.7	315.1	9.3	5.1	997.8	2939.6
*309	12	11.9	1:42:01 PM	51.4	314.6	8.3	5	997.8	2923.1
*310	12	12.1	1:43:51 PM	52.4	314.4	9.3	4.9	997.8	2982.6
*311	12	11.8	1:44:01 PM	52.6	309.1	9.7	4.9	997.8	2964.5
*312	12	12	1:46:31 PM	52.6	317	11.3	4.8	997.6	3045.9
*313	12	11.8	1:46:41 PM	52.4	324.3	9.9	4.8	997.8	2987.4
*314	12	11.8	1:46:51 PM	52.2	323.1	10.1	4.8	997.7	2939.7
*315	12	11.9	1:47:11 PM	52.5	317.8	10.1	4.8	997.7	2988.6
*316	12	11.8	1:47:31 PM	53	320.4	10.9	4.7	997.7	2987.4
*317	12	12.1	2:10:51 PM	52.1	313.5	9.4	6.1	997.6	2950.8
*318	12	12	2:11:11 PM	51.8	322.4	10.4	6.1	997.6	2957.3
*319	12	12	2:20:31 PM	52.5	312.5	9.1	5.7	997.5	3005.6
*320	12.5	12.5	11:15:31 AM	53.3	305.1	6.5	2.4	998.4	3028.8
*321	12.5	12.6	11:16:21 AM	52.3	320.4	9.2	2.4	998.4	2928.5
*322	12.5	12.6	11:42:11 AM	51.8	334.3	12.3	3.3	998.2	2884.9
*323	12.5	12.5	11:43:41 AM	54	333.5	8	3.4	998.4	3045.7
*324	12.5	12.3	11:43:51 AM	53.2	327	10.1	3.4	998.4	3047.8
*325	12.5	12.7	11:44:41 AM	53.6	334.6	11	3.4	998.3	3050.4
*326	12.5	12.6	11:46:01 AM	52.7	333.8	9.8	3.4	998.4	2970.7
*327	12.5	12.5	1:29:01 PM	52.9	313.7	8.8	5.1	997.8	2945.7
*328	12.5	12.3	1:31:21 PM	52.6	312.8	10	5.5	997.7	2989
*329	12.5	12.7	1:32:21 PM	52.8	326.8	10.9	5.6	997.8	3025.1
*330	12.5	12.5	1:32:41 PM	52.3	328.9	10.1	5.6	997.7	2942.8
*331	12.5	12.6	1:33:01 PM	52.8	327.4	10	5.6	997.7	2929
*332	12.5	12.5	1:34:21 PM	53.2	312.6	8.6	5.5	997.8	2889.6
*333	12.5	12.4	1:35:31 PM	53.8	317.8	7.4	5.4	997.8	3023.5
*334	12.5	12.7	1:35:41 PM	53	331.3	7.9	5.4	997.7	3017.3
*335	12.5	12.6	1:36:41 PM	52.2	312.4	9	5.4	997.7	2932.9
*336	12.5	12.7	1:40:31 PM	53.1	313.7	9.8	5.2	997.8	2970.8
*337	12.5	12.7	1:47:21 PM	52.5	319.3	9	4.7	997.8	2962.9
*338	12.5	12.3	1:47:41 PM	52.1	318.1	9.5	4.7	997.8	2961.6
*339	12.5	12.5	1:49:51 PM	52.5	318.5	9	4.7	997.8	3000.1
*340	13	13.2	11:12:11 AM	52.4	318.1	9.4	2.4	998.4	2936
*341	13	12.8	11:13:51 AM	52.6	310.9	9.5	2.3	998.4	2971.9
*342	13	12.8	11:15:41 AM	53.4	311.5	6.5	2.4	998.5	3018.7
*343	13	13	11:15:51 AM	52.3	317.1	7.9	2.4	998.5	2994.5
*344	13	12.8	11:16:01 AM	52.2	319.6	9.9	2.4	998.4	2968.3
*345	13	13.1	11:45:31 AM	52.5	333.9	10	3.4	998.4	3013.8
*346	13	13.2	11:45:51 AM	52.3	334	9.3	3.4	998.4	2909.9
*347	13	13	11:59:01 AM	54.4	331.3	6.5	3.6	998.3	3041.7
*348	13	13.1	11:59:11 AM	53.2	329.2	7.4	3.6	998.4	3015.7
*349	13	12.9	1:29:21 PM	52.9	313.8	8.2	5.1	997.8	2922
*350	13	13	1:29:41 PM	53.2	322	10	5.2	997.7	2970.5
*351	13	13	1:32:31 PM	53.5	328	10.8	5.6	997.7	2996.9

Wind bin list - total noise:									
No.	Wind	Vs	Time	LAeq	Windd.	Winds.	T	Pressure	Power
	Bin	[m/s]		[dB(A)]	[°]	[m/s]	[°C]	[hPa]	[kW]
*352	13	13.1	1:32:51 PM	52.7	327.5	8.9	5.6	997.8	3015.5
*353	13	12.9	1:35:51 PM	52.5	327.5	8.6	5.4	997.7	2900.4
*354	13	13.1	1:36:31 PM	53.2	313.2	9.8	5.4	997.7	3029.5
*355	13	12.9	1:41:01 PM	51.6	314.3	10	5.1	997.7	2891.7
*356	13	13	1:41:21 PM	52.2	315.1	10.1	5.1	997.9	2929.9
*357	13	12.8	1:41:31 PM	52.2	313.3	9.1	5.1	997.8	2970.3
*358	13	12.8	1:43:11 PM	52.5	316.1	9	4.9	997.7	3048.1
*359	13	13.2	1:43:21 PM	52.9	317.9	9	4.9	997.7	2974.6
*360	13	12.9	1:47:51 PM	52.6	325.4	9.2	4.7	997.8	2926.5
*361	13	13.2	2:11:21 PM	52	316.1	11.4	6.1	997.6	3012.6
*362	13	13.2	2:18:41 PM	52.7	307.3	10.1	5.6	997.6	2888.9
*363	13	13	2:19:11 PM	52.1	310.6	9.6	5.6	997.7	2880.8
* Wind bin for tonality analysed									

Wind bin list - background noise:								
No.	Wind Bin	Vs [m/s]	Time	LAeq [dB(A)]	Windd. [°]	Winds. [m/s]	T [°C]	Pressure [hPa]
*19	7.5	7.4	12:19:41 PM	38.1	315.2	6.5	3.8	998.3
20	7.5	7.7	12:24:31 PM	38	309.6	6.8	4.3	998.1
21	7.5	7.5	12:26:11 PM	38.9	332.1	6.6	4.5	998.1
22	7.5	7.3	12:27:11 PM	39.9	323.9	6.4	4.6	998.1
23	7.5	7.7	12:29:41 PM	41.7	319.7	6.8	4.9	998.1
24	7.5	7.3	12:30:41 PM	40.9	319.5	6.4	5	998
25	7.5	7.3	12:50:21 PM	41.4	312.3	6.4	4.9	998.1
26	7.5	7.4	12:51:41 PM	43.6	308.8	6.6	4.9	998.1
27	7.5	7.6	1:04:21 PM	42	305.8	6.7	5	998
28	7.5	7.7	1:08:51 PM	44.3	306.8	6.8	4.9	998
29	7.5	7.4	2:31:21 PM	39.6	314.1	6.6	5.7	997.5
30	7.5	7.6	2:36:01 PM	41.4	307.6	6.7	5.6	997.5
31	7.5	7.7	2:37:01 PM	42.6	316.2	6.8	5.7	997.5
32	7.5	7.7	2:37:51 PM	40.6	314.9	6.8	5.7	997.6
33	7.5	7.5	2:40:21 PM	40.4	313	6.6	5.9	997.6
34	7.5	7.7	2:52:41 PM	41.5	314.5	6.8	6.3	997.5
35	7.5	7.6	3:23:31 PM	44.2	307.2	6.7	6.5	997.3
*36	8	8.1	12:20:31 PM	38.1	312.1	7.1	3.9	998.2
37	8	8.1	12:23:31 PM	39.1	315.8	7.1	4.2	998.2
38	8	7.9	12:24:01 PM	39.3	307	6.9	4.2	998.1
39	8	8.2	12:27:01 PM	38.7	309.7	7.3	4.6	998
40	8	8.1	12:30:21 PM	40.4	318	7.2	4.9	998.1
41	8	7.9	12:31:11 PM	44.4	317.6	7	5	898.3
42	8	8.1	12:31:51 PM	43.4	325.1	7.2	5	998.1
43	8	7.8	12:43:31 PM	42.6	327.8	6.9	5.5	998.2
44	8	8.1	12:43:41 PM	41.3	326.8	7.2	5.5	998.2
45	8	8.2	12:47:21 PM	40.5	312.1	7.2	5.2	998
46	8	8	12:49:01 PM	40.7	306.5	7	5.1	998
47	8	8.2	12:49:41 PM	38.5	322.8	7.3	5	998
48	8	8	12:50:11 PM	38.5	314.9	7.1	4.9	998.1
49	8	8.1	12:51:01 PM	40.9	315.1	7.2	4.9	998
50	8	7.8	12:51:51 PM	45.1	320	6.9	4.9	998.1
51	8	7.9	1:04:11 PM	43.1	308.2	7	5	998
52	8	8.2	1:08:41 PM	42.9	306.9	7.2	4.9	997.9
53	8	8	1:09:11 PM	40.8	306.8	7.1	4.9	997.9
54	8	8.2	1:13:51 PM	43.3	317.2	7.2	4.6	997.9
55	8	7.9	2:31:11 PM	40.1	311.7	7	5.8	997.6
56	8	7.9	2:32:21 PM	41.4	316	7	5.7	997.5
57	8	8.1	2:32:41 PM	41.2	319.6	7.1	5.7	997.6
58	8	7.9	2:32:51 PM	38.8	321.4	7	5.7	997.5
59	8	8.1	2:36:11 PM	41.2	309.3	7.2	5.6	997.5
60	8	7.9	2:38:41 PM	40.5	315.5	6.9	5.8	997.5
61	8	8.2	2:39:31 PM	42	305.9	7.2	5.8	997.5
62	8	7.9	2:40:31 PM	40.4	319.9	6.9	5.9	997.5
63	8	7.9	2:42:01 PM	42.4	309.1	6.9	6.1	997.5
64	8	7.8	2:50:51 PM	39.1	306.8	6.9	6.3	997.4
65	8	7.8	2:52:51 PM	38.2	306.3	6.9	6.3	997.5
66	8	8.2	2:55:01 PM	41.4	308.3	7.3	6.3	997.4
67	8	8.1	3:24:01 PM	45.3	309.9	7.1	6.5	997.2
68	8	7.9	3:31:01 PM	41.8	309.5	6.9	6.3	997.2

Wind bin list - background noise:								
No.	Wind	Vs	Time	LAeq	Windd.	Winds.	T	Pressure
	Bin	[m/s]		[dB(A)]	[°]	[m/s]	[°C]	[hPa]
*69	8.5	8.6	12:20:21 PM	41.2	307	7.6	3.9	998.2
70	8.5	8.3	12:20:51 PM	41.5	310.4	7.3	3.9	998.2
71	8.5	8.6	12:22:31 PM	45.2	316.6	7.6	4.1	998.2
72	8.5	8.5	12:23:01 PM	42	329.7	7.5	4.2	998.2
73	8.5	8.4	12:25:41 PM	40.7	334.6	7.4	4.4	998.1
74	8.5	8.6	12:26:01 PM	40.4	333.6	7.6	4.4	998.1
75	8.5	8.6	12:28:21 PM	38.9	310.4	7.6	4.8	998.1
76	8.5	8.6	12:30:01 PM	40.8	310.8	7.6	4.9	998.1
77	8.5	8.7	12:40:01 PM	44.5	320.3	7.7	5.1	998.1
78	8.5	8.5	12:48:51 PM	41.3	313.2	7.5	5.1	998
79	8.5	8.5	12:49:31 PM	40.1	317.1	7.5	5	998.1
80	8.5	8.4	12:55:11 PM	43.4	319.6	7.4	4.6	998.1
81	8.5	8.7	12:55:51 PM	41.3	313.2	7.7	4.5	998.1
82	8.5	8.6	12:57:11 PM	40.1	311.3	7.6	4.5	998.1
83	8.5	8.5	12:57:21 PM	41.2	316.9	7.5	4.5	998.1
84	8.5	8.7	12:57:31 PM	41.3	317.2	7.7	4.5	998.1
85	8.5	8.6	1:01:11 PM	42.3	307	7.6	4.7	998
86	8.5	8.5	1:02:11 PM	42.9	310.7	7.5	4.8	998
87	8.5	8.5	1:04:31 PM	44.4	310.4	7.5	5.1	998
88	8.5	8.4	1:07:51 PM	37.7	306	7.4	4.9	998
89	8.5	8.3	1:14:01 PM	42.6	315.4	7.3	4.6	997.9
90	8.5	8.3	2:30:11 PM	41.6	312.3	7.3	5.8	997.5
91	8.5	8.4	2:34:31 PM	39.6	317.7	7.4	5.6	997.5
92	8.5	8.7	2:35:21 PM	42.2	312.5	7.7	5.6	997.6
93	8.5	8.4	2:36:41 PM	40.5	310.6	7.4	5.7	997.5
94	8.5	8.6	2:38:11 PM	43.9	316.8	7.6	5.7	997.5
95	8.5	8.7	2:40:11 PM	39.3	307.2	7.7	5.9	897.8
96	8.5	8.6	2:41:11 PM	43.7	313.5	7.6	6	997.5
97	8.5	8.4	2:44:51 PM	40.9	314.9	7.4	6.2	997.5
98	8.5	8.5	2:45:41 PM	38.8	305.8	7.5	6.2	997.6
99	8.5	8.7	2:45:51 PM	38.8	313.3	7.7	6.2	997.5
100	8.5	8.3	2:49:11 PM	44.7	308.5	7.3	6.3	997.5
101	8.5	8.4	3:14:01 PM	44	305.1	7.4	6.3	997.4
102	8.5	8.3	3:23:11 PM	41.3	307	7.3	6.4	997.4
103	8.5	8.7	3:29:21 PM	40.4	306.4	7.7	6.4	997.2
*104	9	8.8	12:20:41 PM	41.2	310.7	7.8	3.9	998.2
105	9	9	12:21:41 PM	40.7	333.9	7.9	4	998.2
106	9	9	12:22:41 PM	44.1	327.9	7.9	4.1	998.2
107	9	9.2	12:22:51 PM	42.1	332.2	8.1	4.2	998.1
108	9	9.2	12:23:41 PM	41.5	308	8.1	4.2	998.1
109	9	9.2	12:24:21 PM	38.7	319.8	8.1	4.3	998.1
110	9	8.9	12:24:41 PM	39.5	310.4	7.8	4.3	998
111	9	8.9	12:26:21 PM	38.5	334.5	7.8	4.5	998.1
112	9	8.8	12:26:41 PM	39.4	327.8	7.7	4.5	998.1
113	9	8.9	12:28:01 PM	41.7	322	7.8	4.7	998.1
114	9	8.8	12:28:11 PM	38.4	324.3	7.8	4.7	998.1
115	9	8.8	12:29:31 PM	42.7	315.6	7.8	4.9	998
116	9	8.9	12:32:01 PM	42.9	325.4	7.9	5	998
117	9	9.1	12:37:31 PM	43.9	309.9	8	4.8	998.2
118	9	9.1	12:37:41 PM	45.6	314.1	8.1	4.8	998.1

Wind bin list - background noise:								
No.	Wind	Vs	Time	LAeq	Windd.	Winds.	T	Pressure
	Bin	[m/s]		[dB(A)]	[°]	[m/s]	[°C]	[hPa]
119	9	9.1	12:39:01 PM	45.2	312.4	8.1	4.9	998
120	9	8.8	12:40:11 PM	45	306.4	7.8	5.1	998.1
121	9	8.8	12:40:41 PM	43.6	308.6	7.8	5.2	998.2
122	9	8.9	12:41:41 PM	41.8	317.2	7.8	5.3	998.1
123	9	8.8	12:43:01 PM	44.4	325.9	7.8	5.5	998.1
124	9	8.9	12:43:11 PM	41.3	318.9	7.9	5.5	998.1
125	9	8.8	12:43:21 PM	43.6	324.4	7.8	5.5	998.1
126	9	9	12:43:51 PM	41.3	325	7.9	5.5	998.1
127	9	9	12:44:31 PM	41.2	323	7.9	5.5	998
128	9	9.1	12:48:01 PM	42.3	307.8	8	5.2	998.1
129	9	8.9	12:50:01 PM	38.2	311.9	7.9	4.9	998.1
130	9	9.1	12:54:01 PM	44.8	324.3	8	4.7	998
131	9	9	12:54:11 PM	43.7	318.7	8	4.7	998
132	9	9.2	12:54:21 PM	43.3	311	8.1	4.7	998
133	9	8.8	12:54:31 PM	44.7	315.9	7.8	4.7	998
134	9	8.8	12:56:31 PM	43.9	324.6	7.8	4.5	998
135	9	9	12:57:01 PM	40.2	309.5	7.9	4.5	998
136	9	8.9	1:01:51 PM	42.1	306.5	7.8	4.8	998
137	9	9.2	1:06:01 PM	44.9	305.1	8.1	5	998.1
138	9	8.9	1:06:31 PM	40.7	313.1	7.9	5	998
139	9	8.9	1:08:11 PM	37.4	306.4	7.8	4.9	998
140	9	9.1	1:08:31 PM	38.7	307	8.1	4.9	997.9
141	9	9.2	1:09:21 PM	40.4	305.3	8.1	4.9	998
142	9	8.8	1:14:41 PM	41.1	323.4	7.8	4.7	998
143	9	8.8	1:15:01 PM	39.8	327.7	7.7	4.8	997.9
144	9	9	2:28:01 PM	45	310.3	7.9	5.9	997.5
145	9	8.9	2:30:31 PM	41.5	309.8	7.8	5.8	997.5
146	9	9.1	2:32:01 PM	39.8	319.2	8	5.7	997.5
147	9	9.1	2:32:11 PM	40.3	322.5	8	5.7	997.5
148	9	9.1	2:33:01 PM	37.1	320.7	8.1	5.7	997.5
149	9	9.1	2:34:21 PM	37.8	311.5	8	5.6	997.5
150	9	9.2	2:34:41 PM	44.2	319.4	8.1	5.6	997.5
151	9	9	2:35:31 PM	43.5	315	8	5.6	997.5
152	9	8.8	2:35:51 PM	40.2	318.3	7.7	5.6	997.5
153	9	8.9	2:36:31 PM	37.9	312.4	7.8	5.7	997.5
154	9	9.2	2:36:51 PM	39.2	311.2	8.1	5.7	997.5
155	9	8.8	2:37:21 PM	38.1	312.4	7.8	5.7	997.5
156	9	9	2:37:41 PM	41.8	309.5	8	5.7	997.6
157	9	9.1	2:38:31 PM	41.9	305.4	8	5.7	997.5
158	9	9.1	2:39:51 PM	42.7	311.8	8.1	5.9	997.5
159	9	9.1	2:40:01 PM	40.3	318.8	8	5.9	997.5
160	9	8.8	2:40:51 PM	44.3	314.8	7.8	6	997.5
161	9	9.2	2:41:01 PM	44.1	313.3	8.1	6	997.5
162	9	8.8	2:41:21 PM	40.8	315	7.7	6	997.5
163	9	9.2	2:41:31 PM	39.6	323.3	8.1	6	997.5
164	9	8.9	2:44:41 PM	41.3	306.9	7.9	6.2	997.5
165	9	8.8	2:49:01 PM	42.4	305.8	7.7	6.3	997.5
166	9	9	2:53:31 PM	40.8	310.9	8	6.3	997.5
167	9	9.2	2:54:51 PM	40.3	308.6	8.1	6.3	997.4
168	9	8.9	3:15:51 PM	41.4	313.8	7.9	6.3	997.3

Wind bin list - background noise:								
No.	Wind	Vs	Time	LAeq	Windd.	Winds.	T	Pressure
	Bin	[m/s]		[dB(A)]	[°]	[m/s]	[°C]	[hPa]
*169	9.5	9.4	12:21:01 PM	42.4	314.9	8.3	4	998.2
170	9.5	9.7	12:23:51 PM	42.8	316.2	8.6	4.2	998.1
171	9.5	9.3	12:24:11 PM	38	311.7	8.2	4.3	998.1
172	9.5	9.3	12:25:01 PM	44	320.9	8.2	4.4	998.1
173	9.5	9.7	12:30:11 PM	40.7	306.2	8.6	4.9	998
174	9.5	9.6	12:35:21 PM	44.7	308.4	8.4	4.7	998
175	9.5	9.4	12:35:31 PM	45.8	323.9	8.3	4.7	998.1
176	9.5	9.6	12:36:01 PM	42.4	306.8	8.4	4.7	998.1
177	9.5	9.7	12:39:31 PM	42.6	310.9	8.5	5	998
178	9.5	9.6	12:40:51 PM	43.5	307.3	8.5	5.2	998.1
179	9.5	9.3	12:42:11 PM	42.7	322.9	8.2	5.4	998.1
180	9.5	9.4	12:44:01 PM	43.5	333.3	8.3	5.5	998.1
181	9.5	9.4	12:47:31 PM	39.3	306.9	8.3	5.2	998
182	9.5	9.5	12:48:11 PM	38.6	309.8	8.4	5.2	998
183	9.5	9.7	12:48:41 PM	39.5	314.9	8.5	5.1	998.1
184	9.5	9.6	12:51:21 PM	43.5	306.6	8.4	4.9	898.3
185	9.5	9.7	12:55:31 PM	43.8	308.8	8.5	4.5	998
186	9.5	9.3	12:55:41 PM	42	316.3	8.2	4.5	998.1
187	9.5	9.7	12:56:11 PM	43.2	309.1	8.6	4.5	998
188	9.5	9.5	12:56:21 PM	41.6	315.6	8.4	4.5	998.1
189	9.5	9.5	12:58:51 PM	41.2	310.8	8.4	4.6	998
190	9.5	9.5	1:00:41 PM	45.1	311	8.4	4.7	998
191	9.5	9.7	1:02:51 PM	43.6	305.8	8.5	4.9	998
192	9.5	9.5	1:06:21 PM	43.9	317.4	8.4	5	998
193	9.5	9.6	1:06:41 PM	41.6	314.8	8.5	4.9	998
194	9.5	9.3	1:14:21 PM	45.8	321.5	8.2	4.7	997.9
195	9.5	9.6	2:27:31 PM	40.4	316.5	8.5	5.9	997.5
196	9.5	9.6	2:30:21 PM	45.2	312.3	8.5	5.8	997.5
197	9.5	9.4	2:31:01 PM	40	315.5	8.3	5.8	997.4
198	9.5	9.4	2:31:31 PM	39.6	323	8.3	5.7	997.5
199	9.5	9.3	2:31:51 PM	40.3	313.6	8.2	5.7	997.5
200	9.5	9.7	2:35:11 PM	40.5	322.1	8.6	5.6	997.5
201	9.5	9.3	2:35:41 PM	42.2	322.5	8.2	5.6	997.6
202	9.5	9.3	2:37:31 PM	40.2	312.9	8.2	5.7	997.6
203	9.5	9.5	2:38:21 PM	41.7	311.4	8.4	5.7	997.4
204	9.5	9.7	2:39:41 PM	42.1	308.8	8.6	5.9	997.5
205	9.5	9.6	2:41:41 PM	41.2	325.3	8.4	6	997.5
206	9.5	9.5	3:13:41 PM	42.4	309.5	8.4	6.4	997.3
207	9.5	9.5	3:21:51 PM	45.2	311.2	8.3	6.4	997.3
208	9.5	9.5	3:23:01 PM	42.8	305.6	8.4	6.4	997.3
209	9.5	9.7	3:27:51 PM	45.3	305.5	8.6	6.5	997.2
*210	10	10	12:21:31 PM	38.8	333.3	8.8	4	998.1
211	10	9.9	12:29:21 PM	42.1	326.4	8.7	4.9	998
212	10	10	12:31:41 PM	42.3	326.8	8.8	5	998
213	10	10.2	12:34:21 PM	42.3	310	9	4.8	998.1
214	10	10.1	12:34:51 PM	43.7	310.6	8.9	4.8	998.1
215	10	10.2	12:38:01 PM	46.5	323.8	9	4.8	998.1
216	10	9.9	12:39:21 PM	41.1	306.6	8.8	4.9	998
217	10	10.2	12:41:31 PM	41.1	316.7	9	5.3	998
218	10	10	12:41:51 PM	43.3	311.2	8.8	5.4	998

Wind bin list - background noise:								
No.	Wind	Vs	Time	LAeq	Windd.	Winds.	T	Pressure
	Bin	[m/s]		[dB(A)]	[°]	[m/s]	[°C]	[hPa]
219	10	10	12:42:21 PM	46.1	330.3	8.8	5.4	998.1
220	10	10.2	12:44:21 PM	38.5	326.8	9	5.5	998.1
221	10	10.2	12:49:11 PM	40.4	322.4	9	5.1	998
222	10	10.2	12:49:21 PM	39.7	318.5	9	5	998
223	10	10	12:49:51 PM	38.8	317.8	8.8	5	998
224	10	10.1	12:54:51 PM	44.8	312.2	8.9	4.6	998
225	10	10.2	12:57:51 PM	39.2	323.7	9	4.5	998
226	10	9.9	12:59:01 PM	39.8	309.3	8.7	4.6	998
227	10	10.1	1:00:51 PM	46	310.9	8.9	4.7	998
228	10	10.1	1:02:31 PM	40.2	306.7	8.9	4.9	997.9
229	10	10.2	1:05:11 PM	42	317.8	9	5	997.9
230	10	10.1	1:05:31 PM	42.2	316	8.9	5	997.9
231	10	10	1:05:41 PM	40.6	306.7	8.8	5	998
232	10	10.2	1:14:31 PM	43.3	316.5	9	4.7	997.9
233	10	9.8	1:14:51 PM	42	329.3	8.6	4.7	997.9
234	10	10.1	1:15:11 PM	40.8	316.5	8.9	4.8	898.1
235	10	10	2:30:51 PM	39.6	311	8.8	5.8	997.5
236	10	10.1	2:33:31 PM	39.4	312.1	8.9	5.7	997.5
237	10	10	2:34:11 PM	37	306.7	8.8	5.6	997.5
238	10	9.9	2:34:51 PM	42.3	315.4	8.7	5.6	997.5
239	10	10.2	2:41:51 PM	40.3	329.2	9	6.1	997.5
240	10	9.9	2:53:21 PM	40.3	315.3	8.7	6.3	997.4
241	10	10.2	3:12:11 PM	44.5	308.2	9	6.4	997.4
*242	10.5	10.6	12:21:11 PM	41	320.4	9.4	4	998.1
243	10.5	10.6	12:21:21 PM	38	323.2	9.3	4	998.1
244	10.5	10.7	12:23:21 PM	40	320.1	9.4	4.2	998
245	10.5	10.6	12:25:11 PM	42.2	325	9.4	4.4	998.1
246	10.5	10.3	12:31:31 PM	43	326.9	9.1	5	998.1
247	10.5	10.5	12:34:31 PM	43	312.7	9.2	4.8	998.2
248	10.5	10.6	12:35:01 PM	44.5	309.1	9.4	4.8	998
249	10.5	10.5	12:36:51 PM	43.3	315.5	9.3	4.8	998
250	10.5	10.6	12:37:21 PM	44.3	318.2	9.3	4.8	998.1
251	10.5	10.7	12:44:11 PM	43.3	332.4	9.4	5.5	998.1
252	10.5	10.4	12:45:11 PM	41.7	332.9	9.2	5.5	998.1
253	10.5	10.4	12:45:21 PM	41.8	333.8	9.1	5.5	998.1
254	10.5	10.6	12:45:31 PM	41.2	331.5	9.4	5.5	997.9
255	10.5	10.6	12:48:21 PM	38	312.2	9.3	5.1	998
256	10.5	10.6	12:48:31 PM	38.1	311.1	9.3	5.1	998
257	10.5	10.4	12:52:41 PM	45.8	311.5	9.2	4.9	998
258	10.5	10.5	12:52:51 PM	44	318.6	9.3	4.9	998
259	10.5	10.3	12:55:01 PM	44	305.9	9.1	4.6	998
260	10.5	10.6	12:58:21 PM	41.4	322.9	9.3	4.6	998
261	10.5	10.4	12:58:31 PM	40.9	317.9	9.1	4.6	998
262	10.5	10.4	1:01:01 PM	46.5	308.7	9.1	4.7	998
263	10.5	10.6	1:01:21 PM	42.5	308	9.4	4.7	997.9
264	10.5	10.7	1:06:11 PM	44.9	312.3	9.4	5	998
265	10.5	10.4	1:10:11 PM	43.1	321	9.1	4.9	997.9
266	10.5	10.7	1:10:31 PM	43.7	316.3	9.4	4.9	997.9
267	10.5	10.4	1:10:41 PM	45	316	9.2	4.8	998
268	10.5	10.7	1:11:41 PM	45.3	311.7	9.5	4.8	997.9

Wind bin list - background noise:								
No.	Wind	Vs	Time	LAeq	Windd.	Winds.	T	Pressure
	Bin	[m/s]		[dB(A)]	[°]	[m/s]	[°C]	[hPa]
269	10.5	10.6	2:28:11 PM	43.6	320	9.3	5.9	997.6
270	10.5	10.6	2:30:41 PM	40.5	313	9.4	5.8	997.5
271	10.5	10.5	2:31:41 PM	42.8	319	9.3	5.7	997.5
272	10.5	10.6	2:33:51 PM	38.4	305.3	9.4	5.6	997.5
273	10.5	10.7	2:54:31 PM	41.5	313.6	9.4	6.3	997.4
274	10.5	10.7	3:27:21 PM	43.9	306.3	9.4	6.5	997.2
275	10.5	10.7	3:28:21 PM	44.9	307.6	9.4	6.4	997.1
276	10.5	10.5	3:30:01 PM	39.7	308.3	9.2	6.3	997.1
*277	11	10.9	12:24:51 PM	43.6	320.3	9.6	4.3	998
278	11	10.9	12:33:21 PM	46.8	331.5	9.6	5	998.1
279	11	11.2	12:35:11 PM	47.6	309.1	9.9	4.7	998
280	11	11.2	12:35:51 PM	44.7	317.2	9.9	4.7	997.9
281	11	10.8	12:37:11 PM	46.6	317.8	9.6	4.8	998.1
282	11	11.2	12:37:51 PM	44.5	317	9.9	4.8	998
283	11	11.2	12:38:11 PM	46.8	319.6	9.9	4.9	998
284	11	11.2	12:41:01 PM	44.2	312.8	9.9	5.2	998.1
285	11	11.2	12:41:11 PM	42.6	315.7	9.9	5.3	998.1
286	11	10.8	12:41:21 PM	42.9	320.2	9.6	5.3	998.1
287	11	10.8	12:42:01 PM	42.5	322.3	9.5	5.4	998.2
288	11	11.1	12:42:51 PM	45.8	318.4	9.8	5.5	998.1
289	11	10.8	12:45:41 PM	39.6	329	9.5	5.4	997.9
290	11	11.2	12:45:51 PM	40	329.1	9.9	5.4	998
291	11	11.2	12:54:41 PM	44.6	313.7	9.9	4.6	998
292	11	11	12:55:21 PM	43.5	313.6	9.7	4.6	998
293	11	11.2	12:58:01 PM	42.5	325.2	9.9	4.6	998
294	11	11.1	12:59:21 PM	42.7	316.8	9.8	4.6	997.9
295	11	11.1	12:59:41 PM	43.2	317.3	9.8	4.6	998
296	11	11	1:02:41 PM	43.8	309.6	9.7	4.9	997.9
297	11	11.2	1:04:51 PM	40.7	315.3	9.9	5.1	997.9
298	11	10.9	1:11:51 PM	45.7	319.6	9.6	4.7	997.9
299	11	11.1	2:27:21 PM	40.9	308.6	9.8	5.9	997.4
300	11	10.9	2:28:21 PM	40.9	311.4	9.6	5.9	997.5
301	11	10.8	2:33:11 PM	39	316.4	9.5	5.7	997.4
302	11	11.2	2:33:21 PM	38.4	308.9	9.9	5.7	997.5
303	11	10.8	2:54:41 PM	40.9	316.2	9.5	6.3	997.4
304	11	10.9	3:13:51 PM	42.7	310.3	9.6	6.4	997.3
305	11	10.8	3:28:01 PM	45.6	306.8	9.5	6.4	997.3
306	11	11	3:28:11 PM	46.3	312.3	9.7	6.4	997.1
*307	11.5	11.4	12:22:01 PM	43.5	329.5	10.1	4.1	998.1
308	11.5	11.4	12:22:21 PM	44.8	313.2	10	4.1	998.1
309	11.5	11.3	12:31:21 PM	43.5	327.5	10	5	998
310	11.5	11.5	12:34:41 PM	45.8	313	10.1	4.8	998.1
311	11.5	11.4	12:38:31 PM	46.6	313.8	10	4.9	998.1
312	11.5	11.4	12:42:31 PM	44.7	329	10.1	5.5	998.1
313	11.5	11.5	12:42:41 PM	43.2	327.6	10.1	5.5	998.1
314	11.5	11.6	12:52:21 PM	47.3	320	10.2	4.9	998
315	11.5	11.6	12:53:21 PM	46.5	318.7	10.3	4.8	998
316	11.5	11.5	12:57:41 PM	43.7	324	10.1	4.5	998
317	11.5	11.3	1:00:01 PM	45.1	323.3	9.9	4.6	997.9
318	11.5	11.6	1:01:31 PM	41.6	311.4	10.2	4.7	998

Wind bin list - background noise:								
No.	Wind Bin	Vs [m/s]	Time	LAeq [dB(A)]	Windd. [°]	Winds. [m/s]	T [°C]	Pressure [hPa]
319	11.5	11.4	1:05:21 PM	40.7	318	10	5	997.9
320	11.5	11.5	1:11:01 PM	47.5	318.6	10.1	4.8	998
321	11.5	11.6	1:11:31 PM	44.4	318.3	10.2	4.8	997.8
322	11.5	11.5	1:15:31 PM	41	306.6	10.2	4.8	997.8
323	11.5	11.6	2:33:41 PM	38.7	306.6	10.2	5.7	997.5
324	11.5	11.6	2:35:01 PM	38.7	311.5	10.2	5.6	997.5
*325	12	11.8	12:21:51 PM	44	331.2	10.4	4.1	998.1
326	12	11.8	12:32:41 PM	47	329.3	10.4	5	997.9
327	12	12.2	12:36:41 PM	44.1	307.4	10.8	4.8	997.9
328	12	12.1	12:37:01 PM	45.3	317.3	10.7	4.8	998
329	12	12	12:38:51 PM	46.5	316.6	10.6	4.9	998
330	12	11.8	12:58:11 PM	41	314.2	10.4	4.6	998
331	12	11.8	12:58:41 PM	43.3	316.5	10.4	4.6	997.9
332	12	12.2	12:59:51 PM	44.5	322.6	10.8	4.6	997.9
333	12	12.2	1:01:41 PM	42.5	309.5	10.8	4.7	998
334	12	12	1:04:41 PM	44.3	313.7	10.6	5.1	997.9
335	12	12.1	1:05:01 PM	42.6	316.8	10.6	5	997.9
336	12	11.8	1:10:51 PM	44.6	317.3	10.4	4.8	997.9
337	12	11.9	2:28:31 PM	42.8	307.3	10.5	5.9	997.5
*338	12.5	12.3	12:22:11 PM	42.9	322.5	10.9	4.1	998.1
339	12.5	12.6	12:32:51 PM	46.4	331	11.1	5	997.9
340	12.5	12.3	12:34:11 PM	44.5	310.8	10.8	4.9	998
341	12.5	12.3	12:38:21 PM	46.6	318.6	10.8	4.9	998.1
342	12.5	12.6	12:53:01 PM	44	316.9	11.1	4.9	998
343	12.5	12.6	12:53:11 PM	44.7	319	11.1	4.8	998
344	12.5	12.5	1:03:31 PM	44.9	310.2	11	5	998
345	12.5	12.3	1:10:21 PM	42.1	323.5	10.9	4.9	997.8
*346	13	13.1	12:33:51 PM	47.2	321.8	11.6	4.9	998
347	13	13	12:59:31 PM	43.4	319.3	11.5	4.6	997.9
348	13	13.2	1:12:21 PM	46.3	321.8	11.6	4.7	997.9
349	13	13.2	1:12:31 PM	46.5	318.2	11.7	4.7	997.8
350	13	13.1	1:21:41 PM	44.8	323	11.6	4.7	997.8
* Wind bin for tonality analysed								

APPENDIX F:

REPORT CHECKLIST

Report Checklist		
Items 1 to 26; IEC61400-11, Section 10.2, Characterization of the wind turbine		
1. manufacturer	Section 2	✔
2. model number	Section 2	✔
3. serial number/turbine ID	Section 2	✔
Operating details:		
4. vertical or horizontal axis wind turbine	Section 2	✔
5. upwind or downwind rotor	Section 2	✔
6. hub height	Section 2	✔
7. horizontal distance from rotor centre to tower axis	Section 2	✔
8. diameter of rotor	Section 2	✔
9. tower type (lattice or tube)	Section 2	✔
10. passive stall, active stall, or pitch controlled turbine	Section 2	✔
11. constant or variable speed	Section 2	✔
12. power curve (if required for wind speed determination)	Section 2	✔
13. rotational speed at each integer wind bin	Section 2	✔
14. rated power output	Section 2	✔
15. control software version	Section 2	✔
Rotor details:		
16. rotor control devices	Section 2	✔
17. presence of vortex generators, stall strips, serrated trailing edges	Section 2	✔
18. blade type	Section 2	✔
19. serial number	Section 2	✔
20. number of blades	Section 2	✔
Gearbox details:		✔
21. manufacturer	Section 2	✔
22. model number	Section 2	✔
23. serial number	Section 2	✔
Generator details:		
24. manufacturer	Section 2	✔
25. model number	Section 2	✔
26. serial number	Section 2	✔

Report Checklist		
Items 27 to 33; IEC61400-11, Section 10.3, Physical Environment		
27. details of the site including location, site map and other relevant information;	Section 3 and Figure 1	✔
28. type of topography/terrain (hilly, flat, cliffs, mountains, etc.) in surrounding area (nearest 1 km);	Section 3	✔
29. surface characteristics (such as grass, sand, trees, bushes, water surfaces);	Section 3	✔
30. nearby reflecting structures such as buildings or other structures, cliffs, trees, water surfaces;	Section 3	✔
31. other nearby sound sources possibly affecting background noise level, such as other wind turbines, highways, industrial complexes, airports;	Section 3	✔
32. two photos, one taken in the direction of the turbine from the reference microphone position, and one taken from the wind mast toward the turbine;	Appendix A	✔
33. a photo of the microphone on the measurement board positioned on the ground and immediate surroundings;	Appendix A	✔
Items 34 to 39; IEC61400-11, Section 10.4, Instrumentation		
34. the manufacturer(s);	Section 4	✔
35. the instrument name and type;	Section 4	✔
36. serial number(s);	Section 4	✔
37. other relevant information (such as last calibration date, calibration certificate(s));	Section 4	✔
38. met mast anemometer position and height for each measurement series;	Section 4	✔
39. influence of secondary wind screen, if used.	Section 4	✔
Items 40 to 52; IEC61400-11, Section 10.5, Acoustic Data		
40. the measured position of each microphone for each measurement series;	Section 3	✔
41. LWA,k, where LWA,k is the apparent sound power level, at bin centre wind speeds at hub height;	Section 5	✔
42. LWA,k, where LWA,k is the apparent sound power level, at wind speeds at 10 m height;	Section 5	✔
43. a plot showing all measured data pairs at position 1 of the wind turbine sound and background noise (with different symbols);	Figure 3	✔
44. a plot showing all measured total noise versus electrical power data;	Figure 4	✔
45. table and plot of sound power spectrum in third octaves for each relevant wind speed;	Appendix C	✔
46. table showing total noise and background noise;	Section 5	✔
For each relevant wind speed (k):		✔
47. $\Delta L_{tn,j,k}$ (for j = 1, 2, 3,…12) for each identified tone;	Appendix D	✔
48. ΔL_k for each identified tone, where Lk is the sound pressure level;	Appendix D	✔
49. $\Delta L_{a,k}$ for each identified tone, where La,k is the tonal audibility;	Appendix D	✔
50. frequency of the tone(s);	Appendix D	✔
51. narrowband spectra of total and background noise as an overlay plot per bin;	Appendix D	✔
52. time and date of each measurement series.	Section 5	✔

END OF DOCUMENT