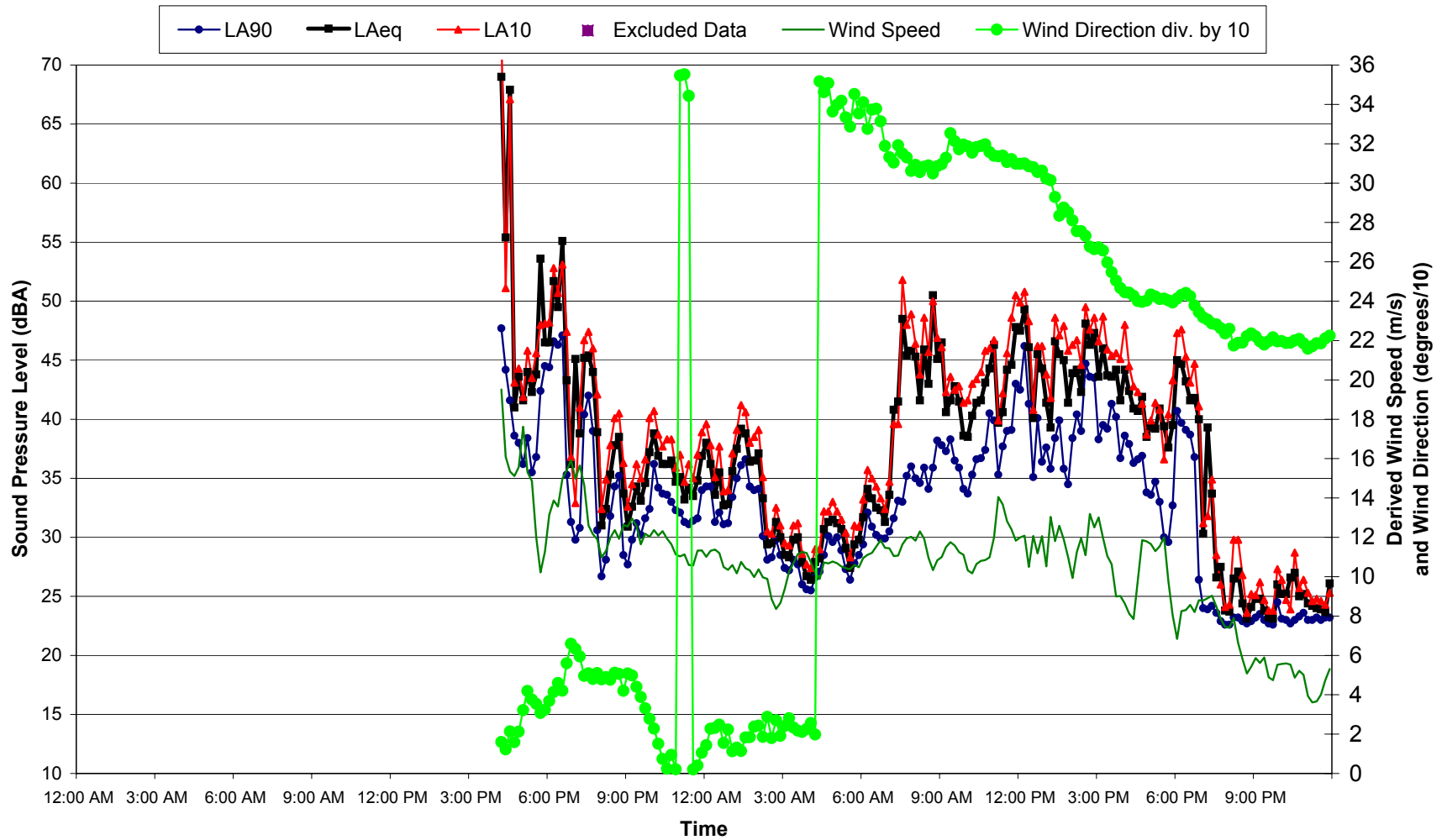
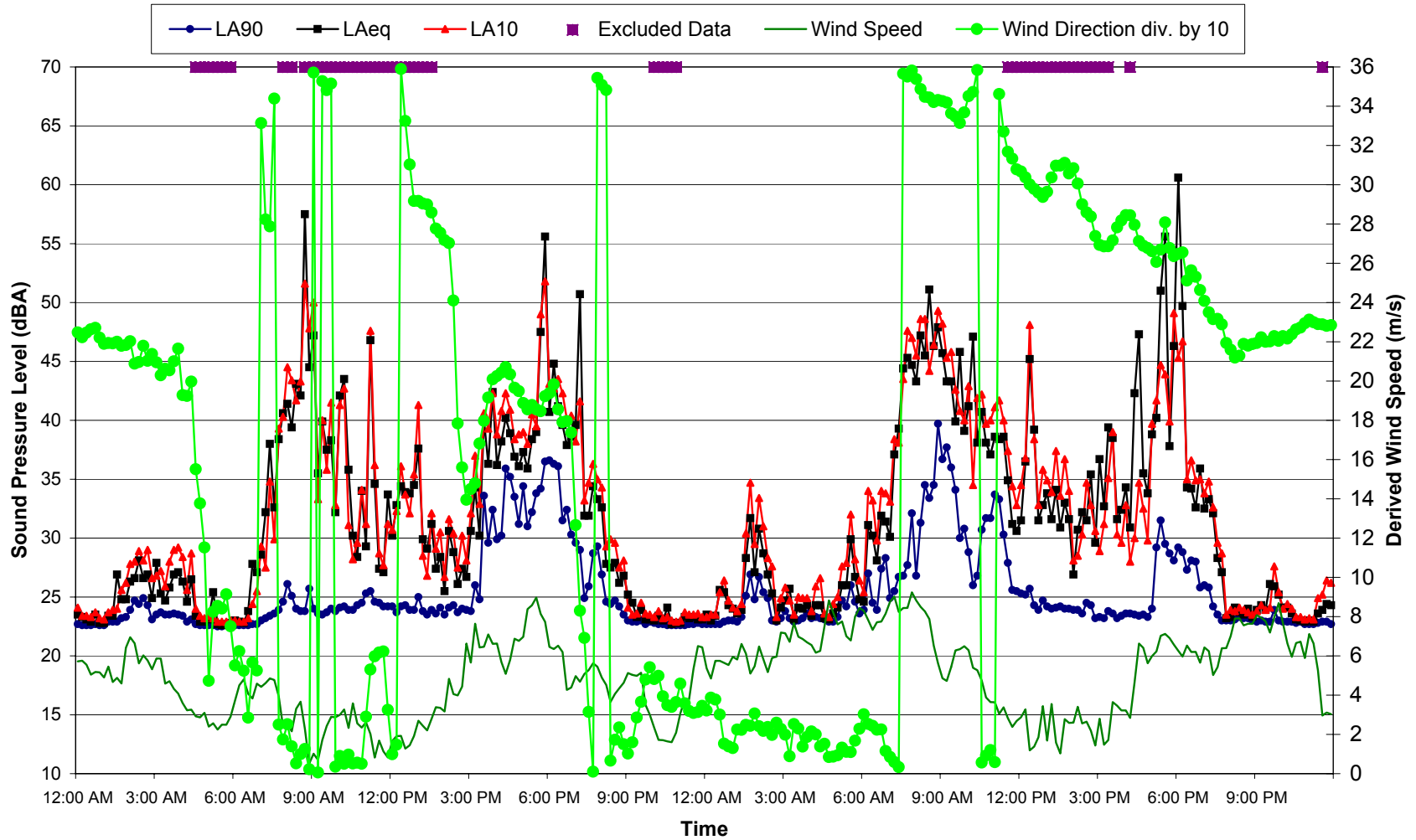


NOISE MONITORING DATA

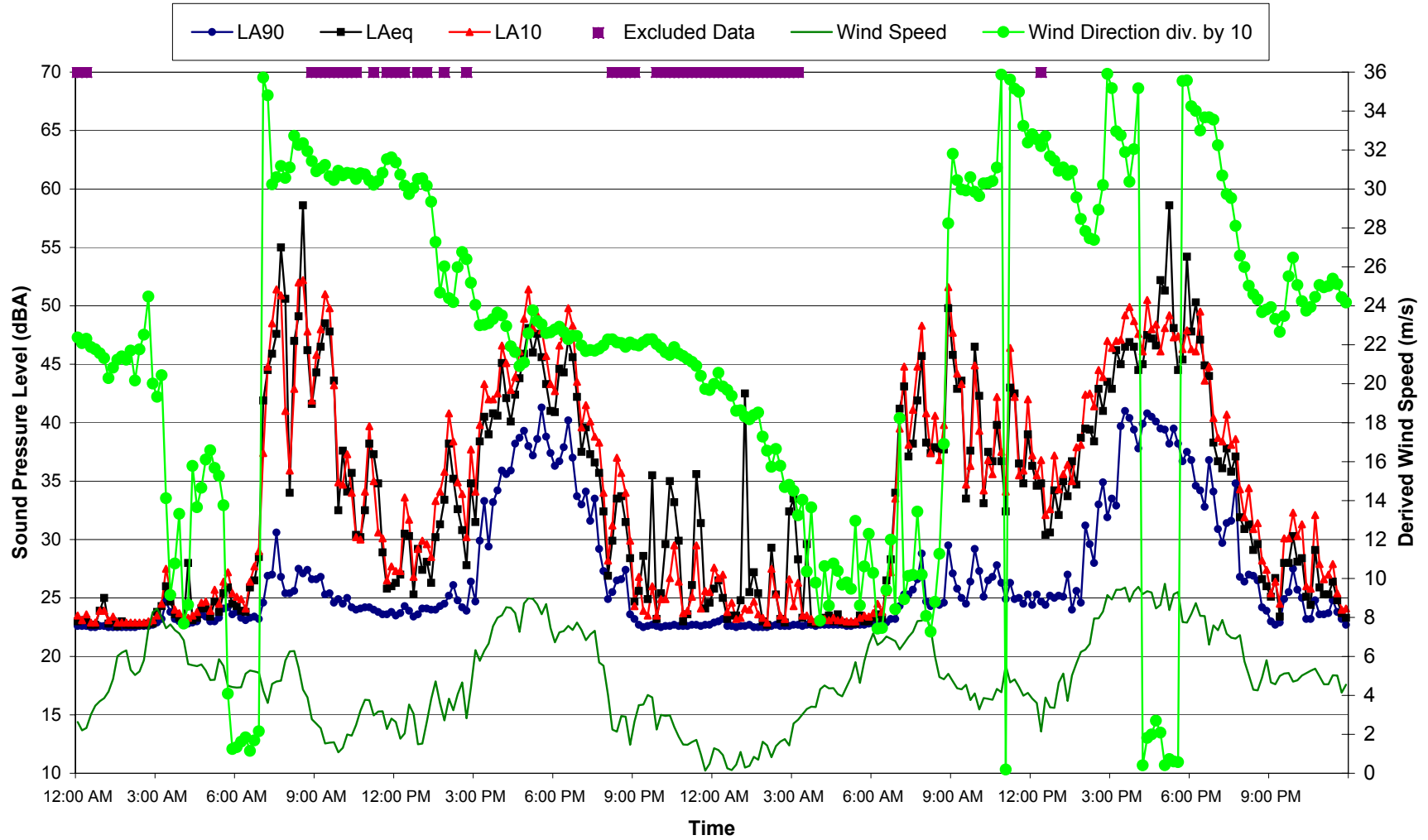
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Ambient Noise Data - 25 and 26 March 2009



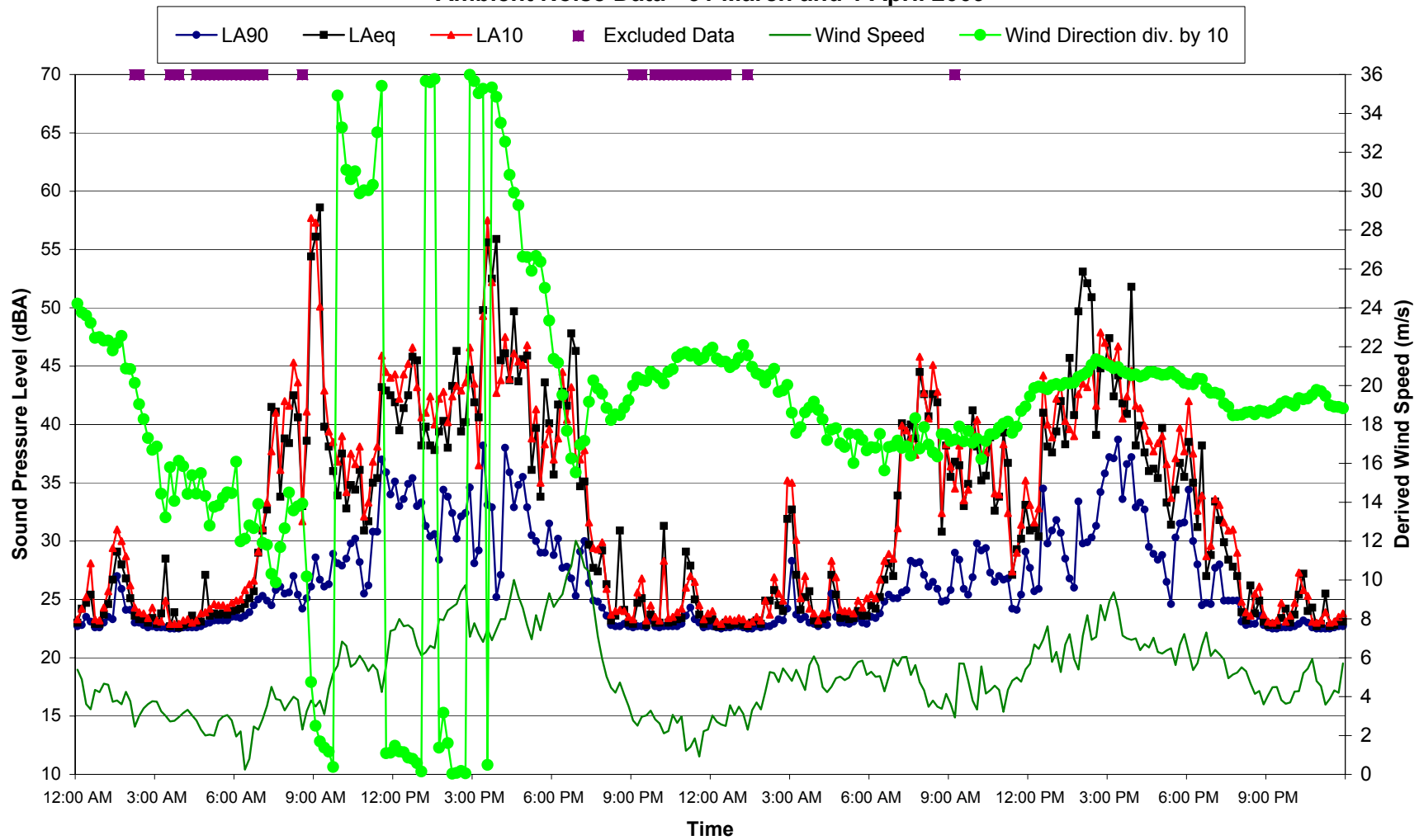
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Ambient Noise Data - 27 and 28 March 2009



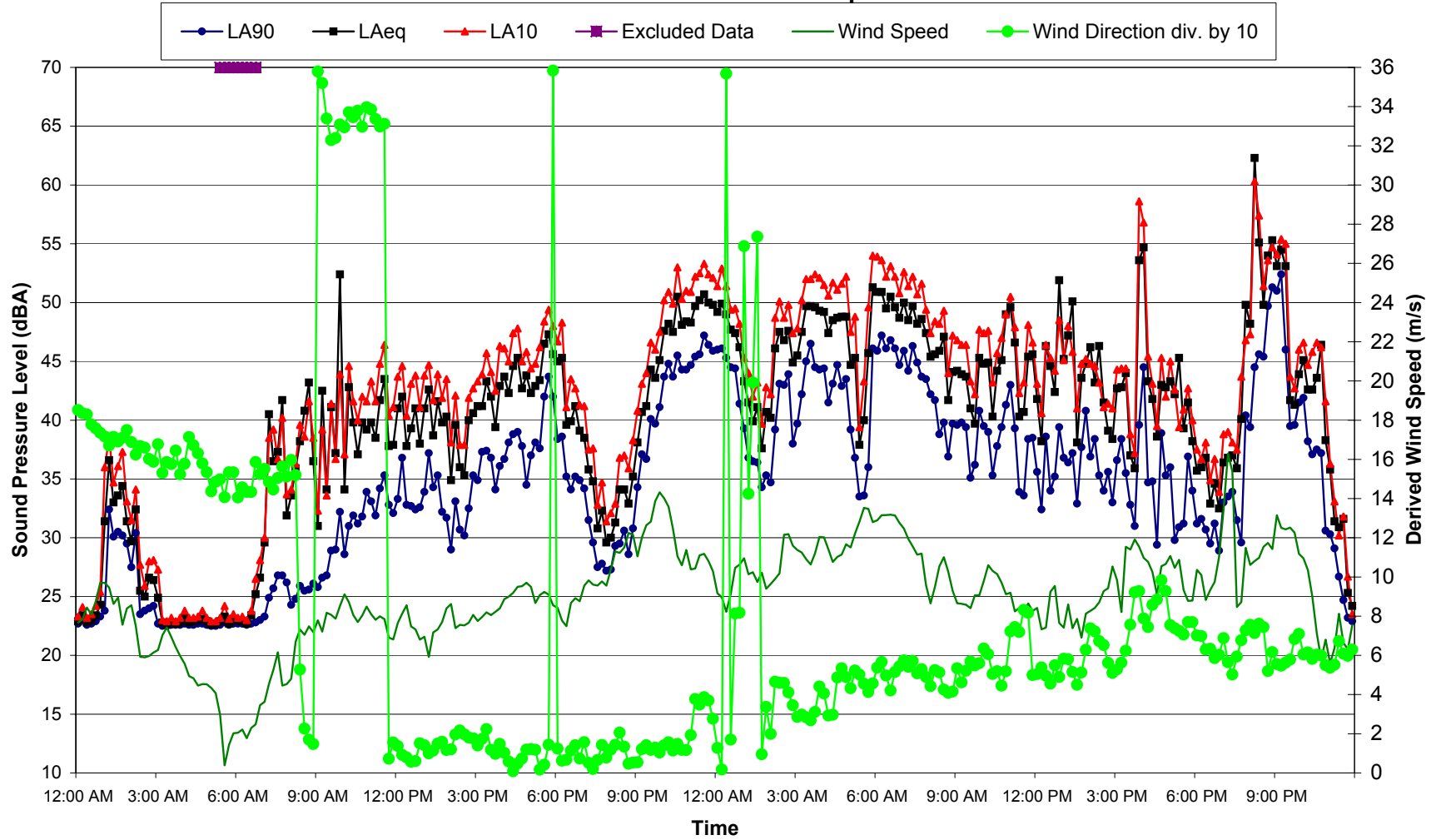
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Ambient Noise Data - 29 and 30 March 2009



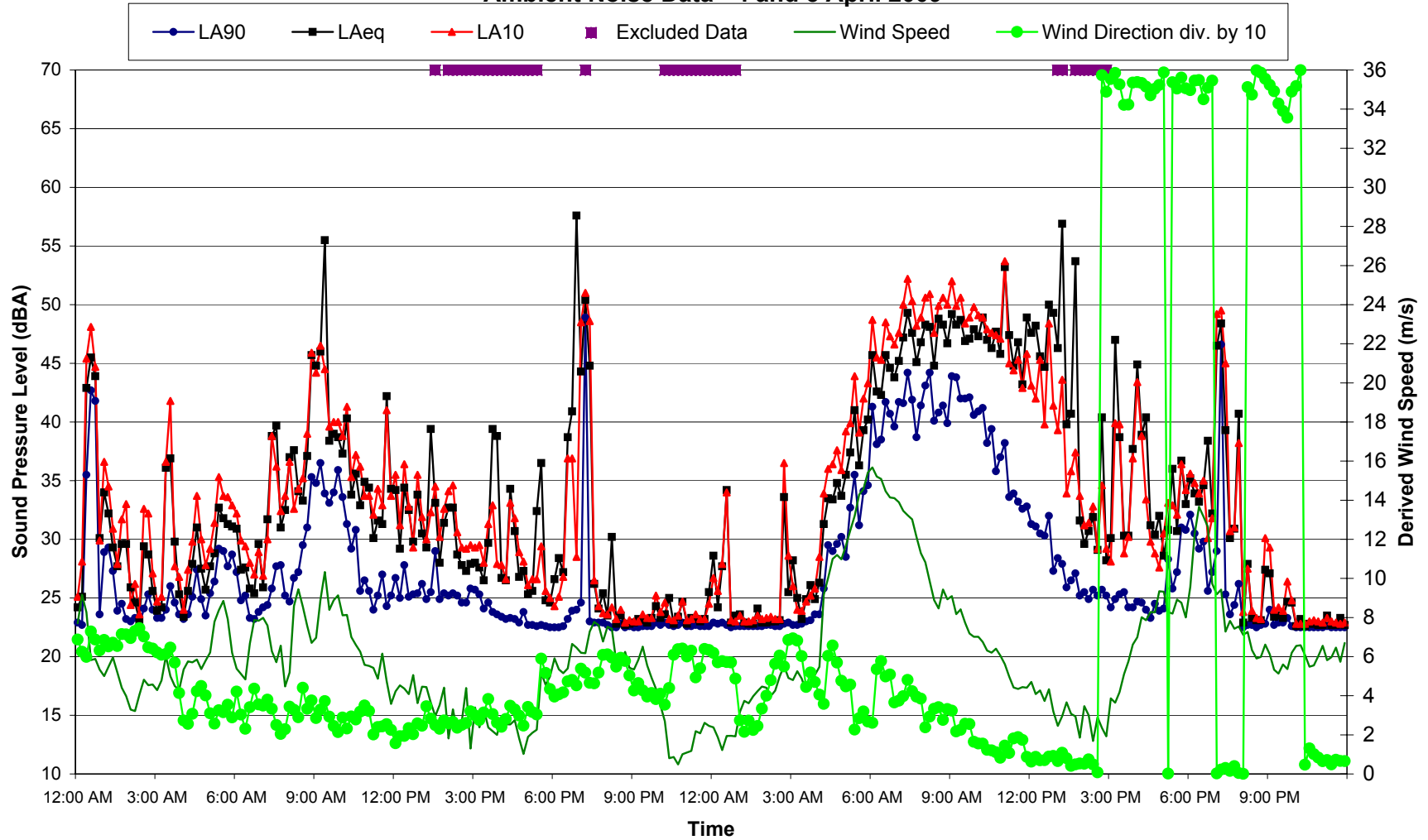
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Ambient Noise Data - 31 March and 1 April 2009



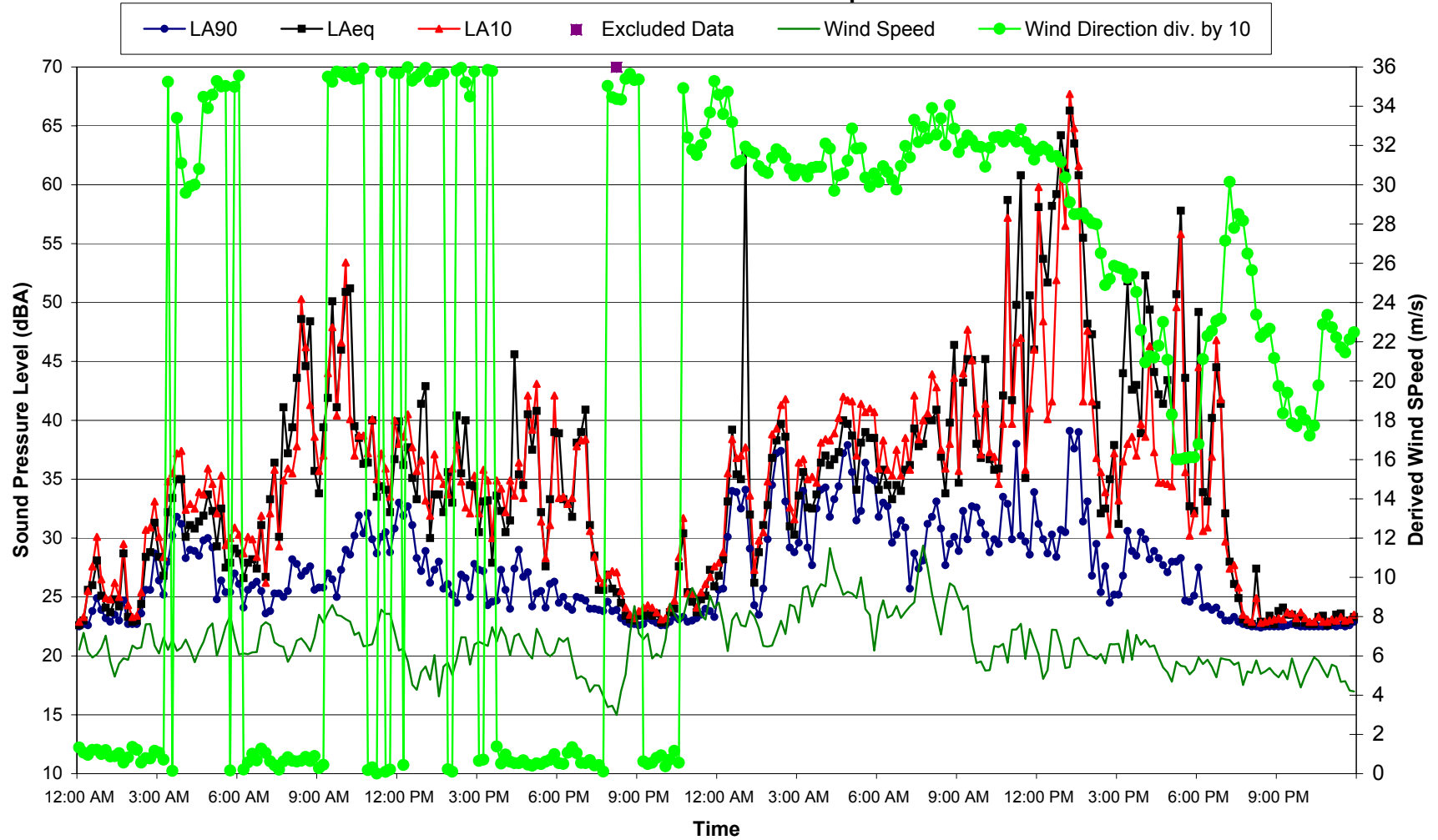
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Ambient Noise Data - 2 and 3 April 2009



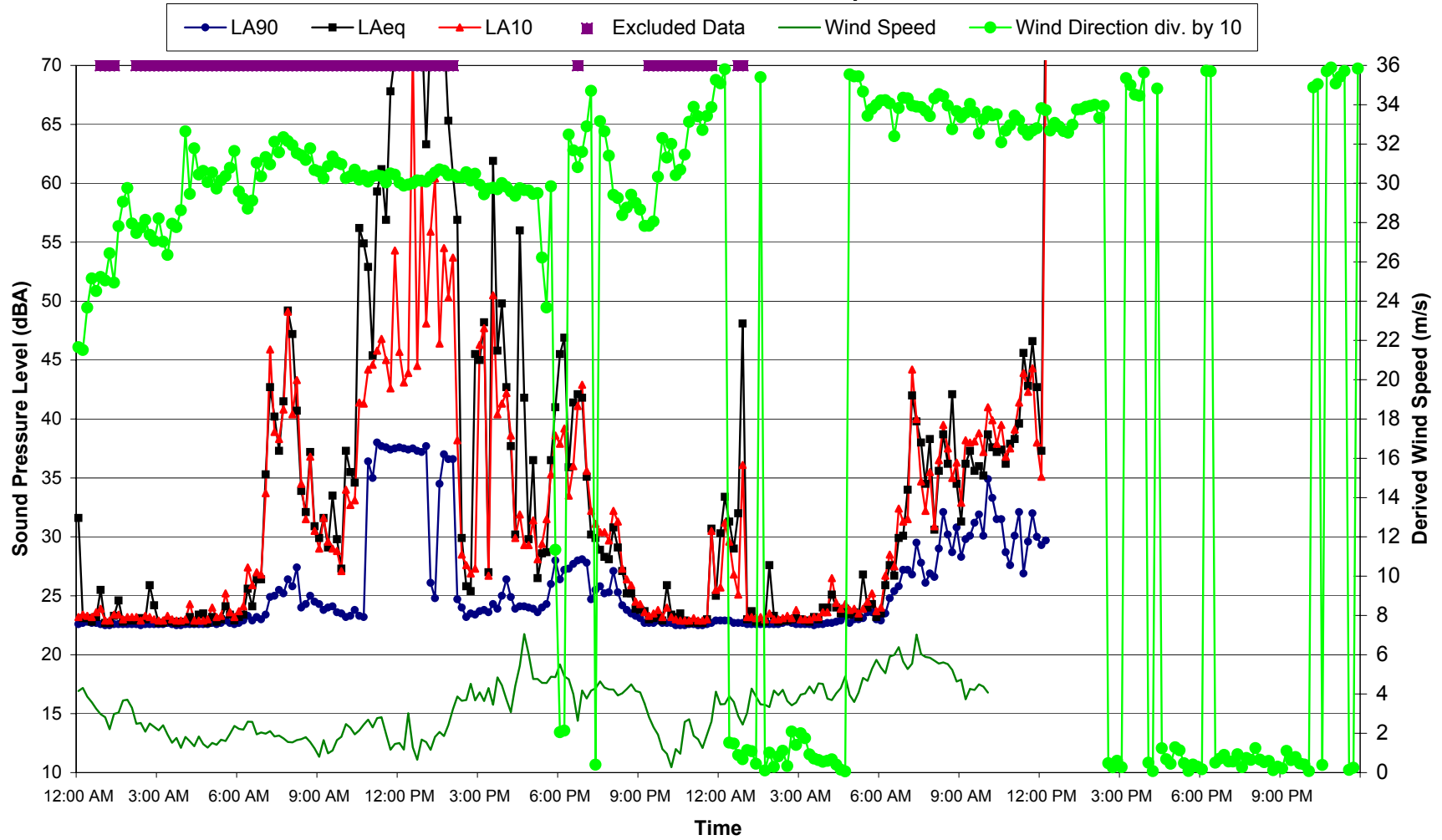
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Ambient Noise Data - 4 and 5 April 2009



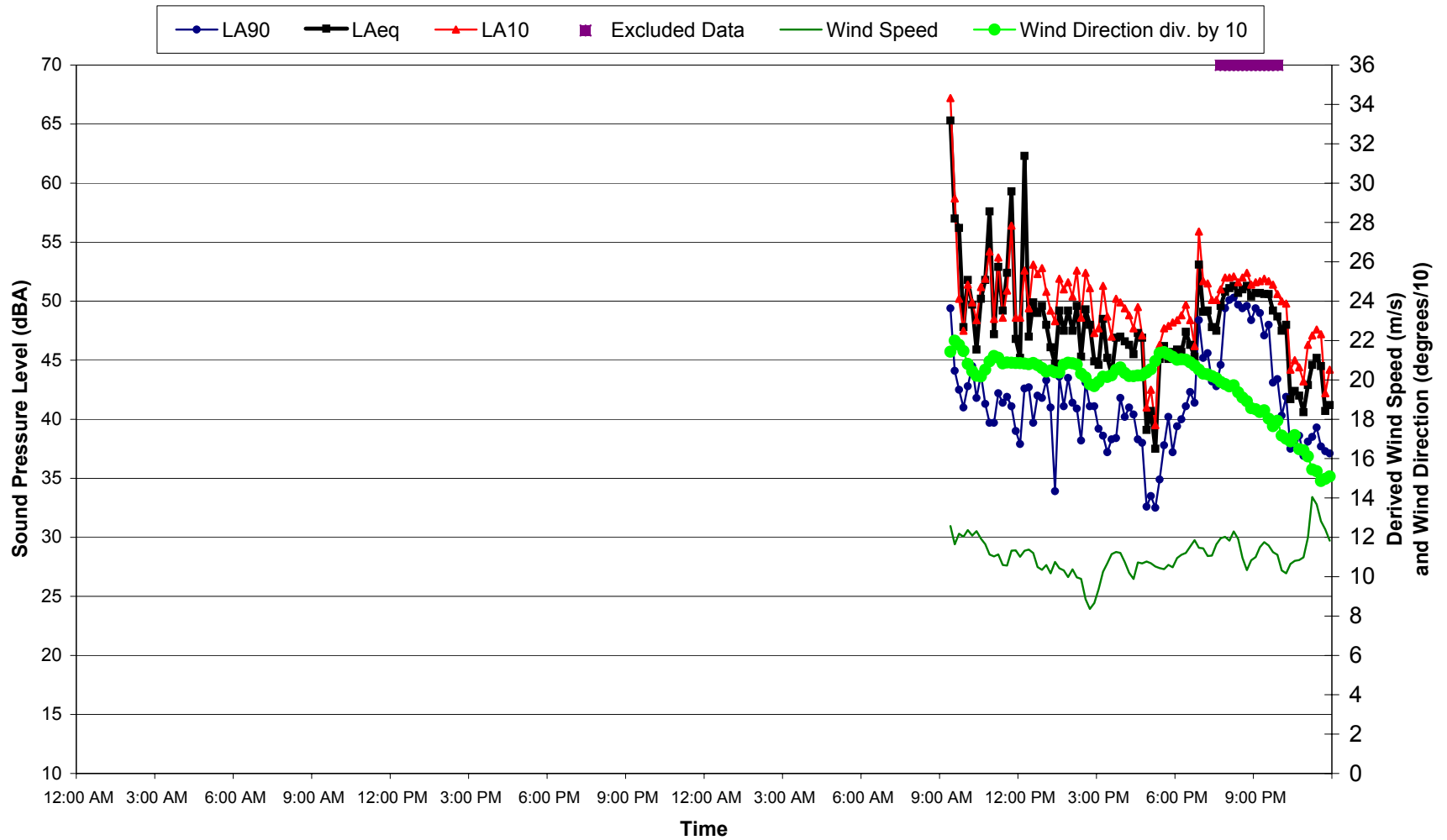
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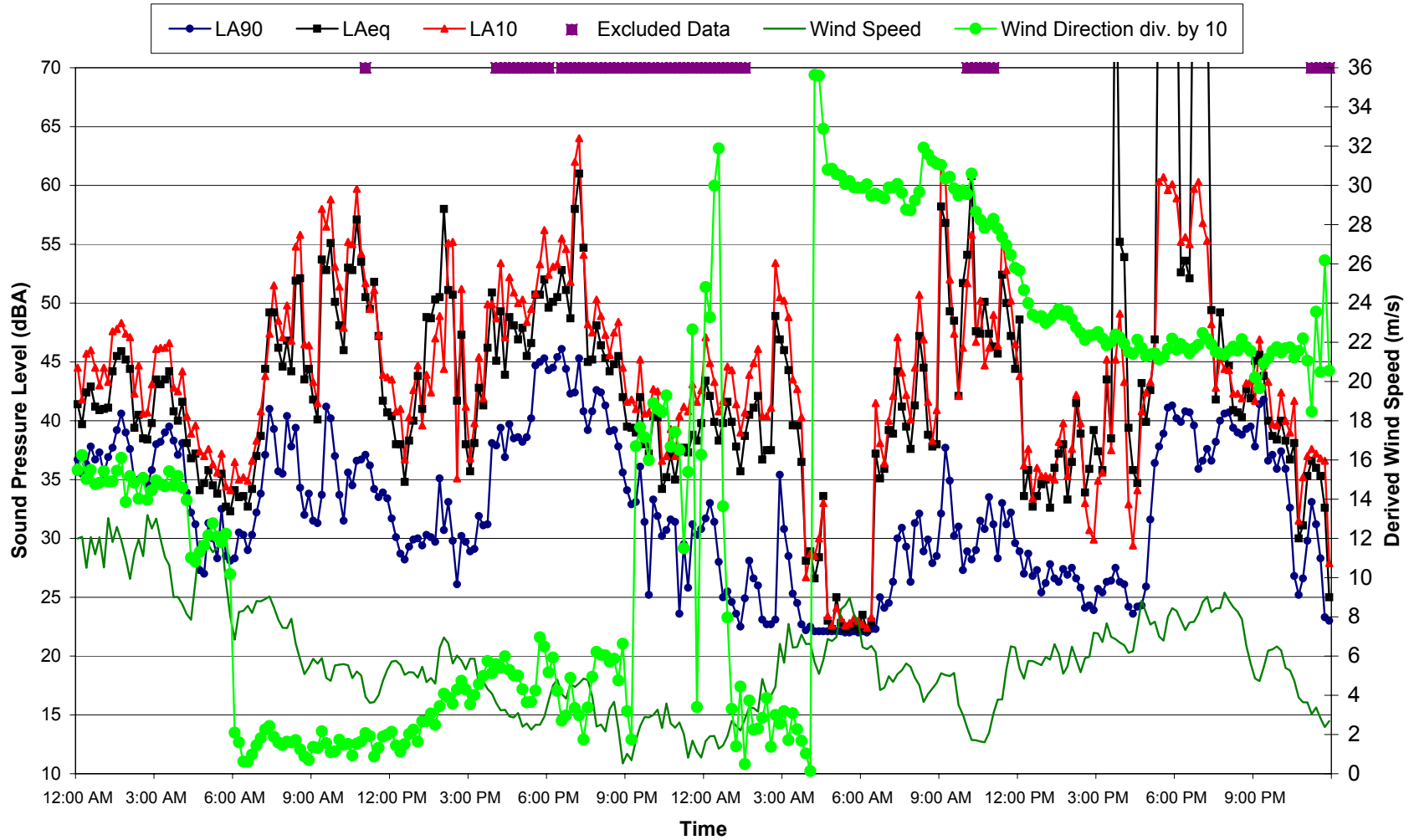
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Ambient Noise Data - 8 and 9 April 2009



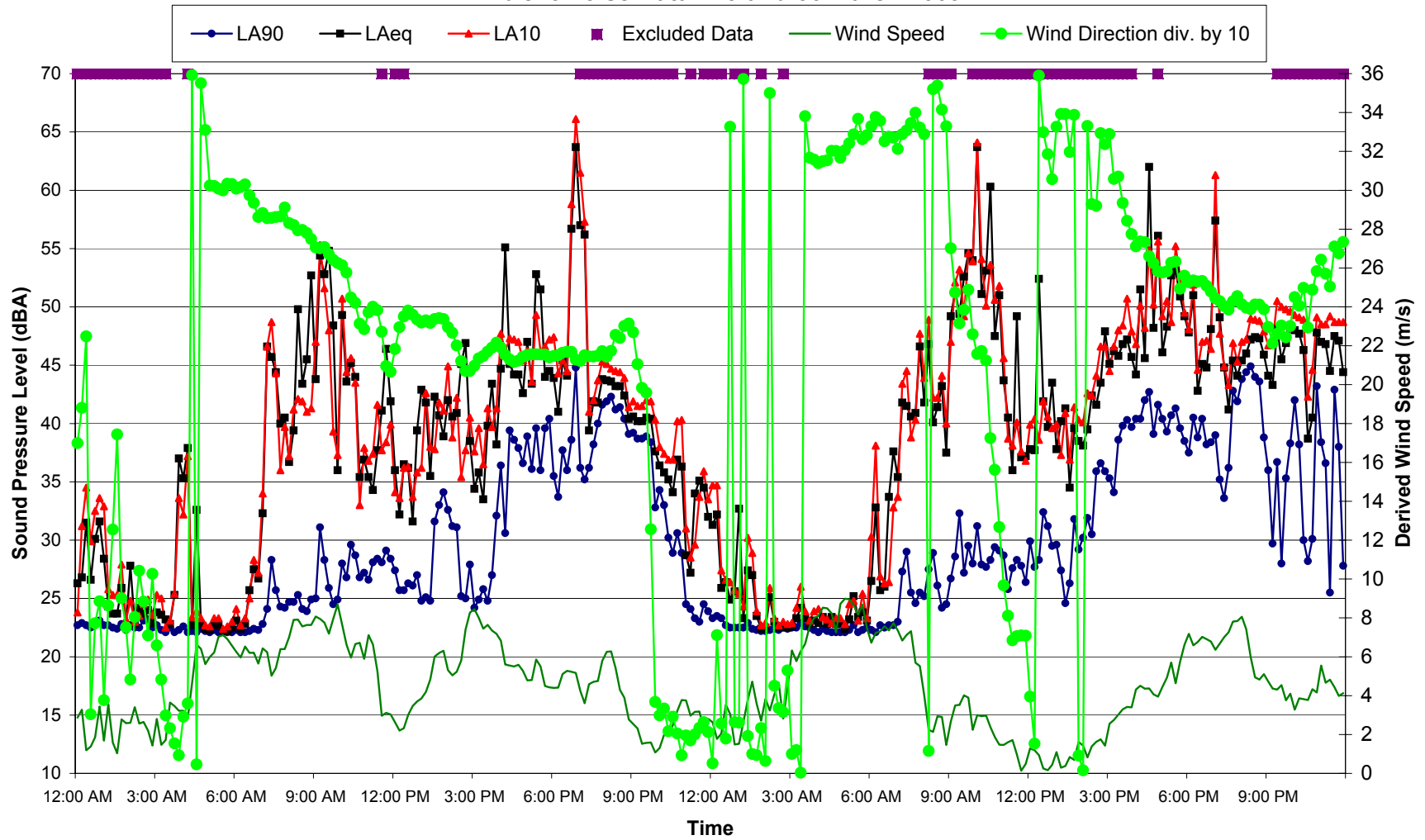
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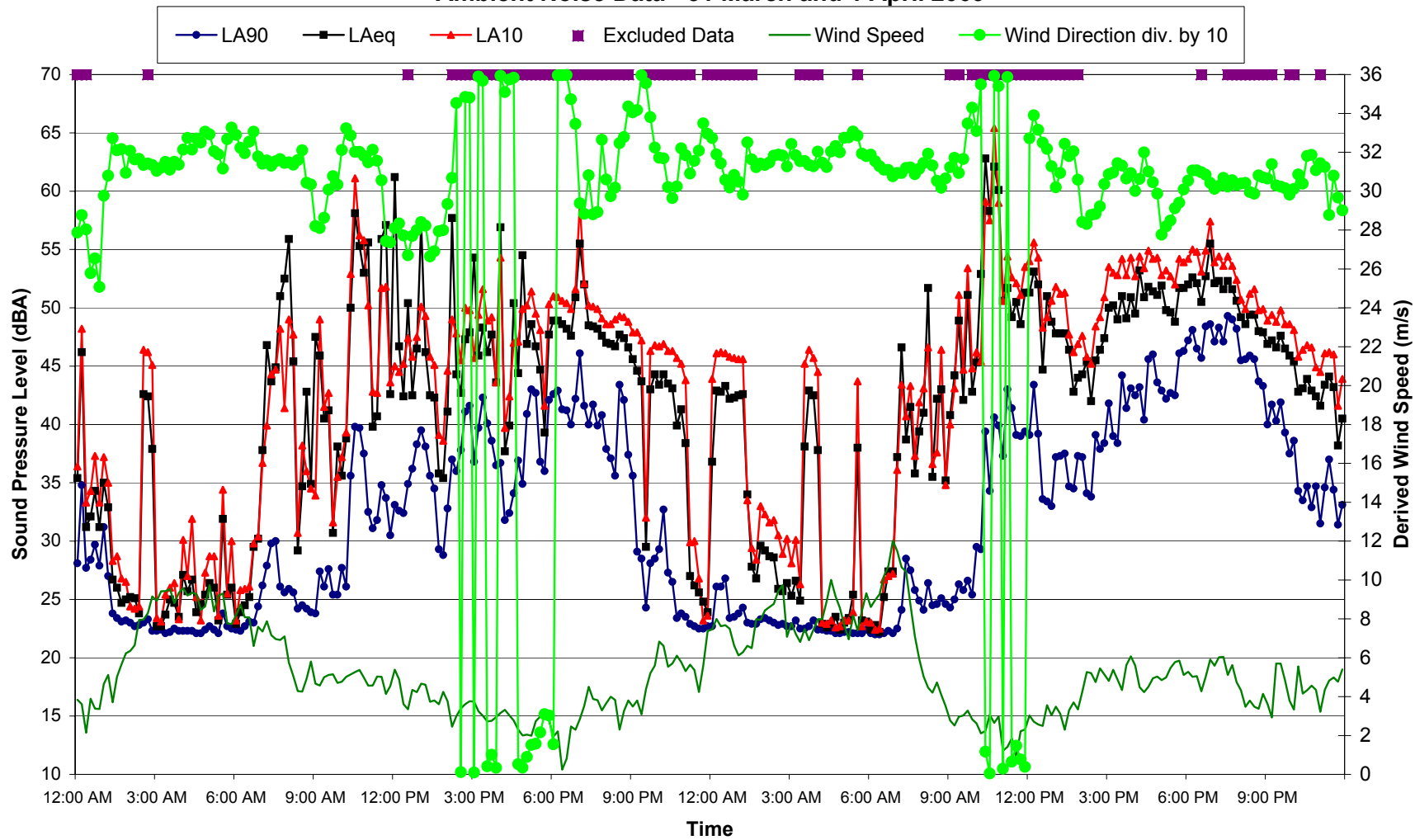
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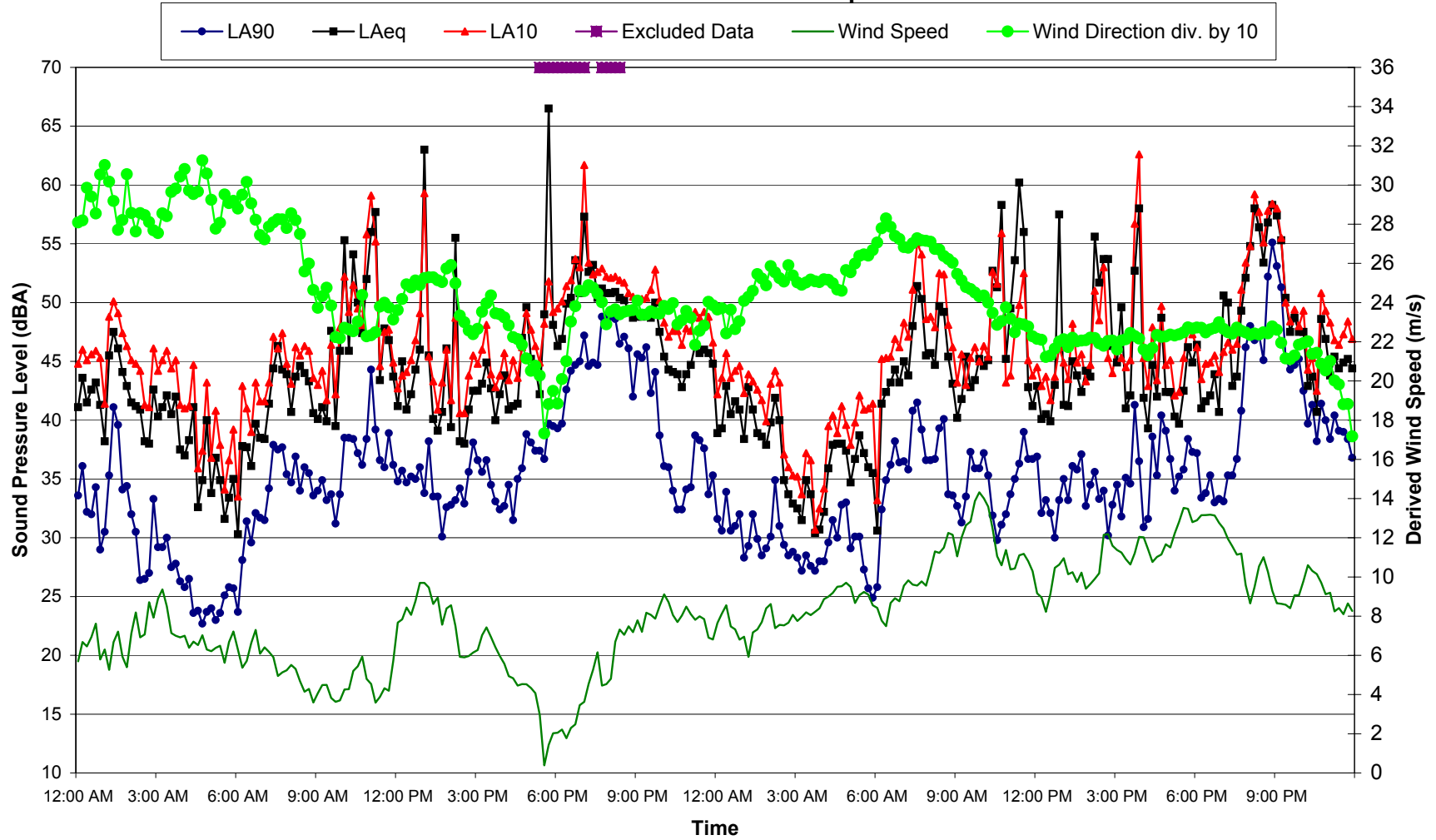
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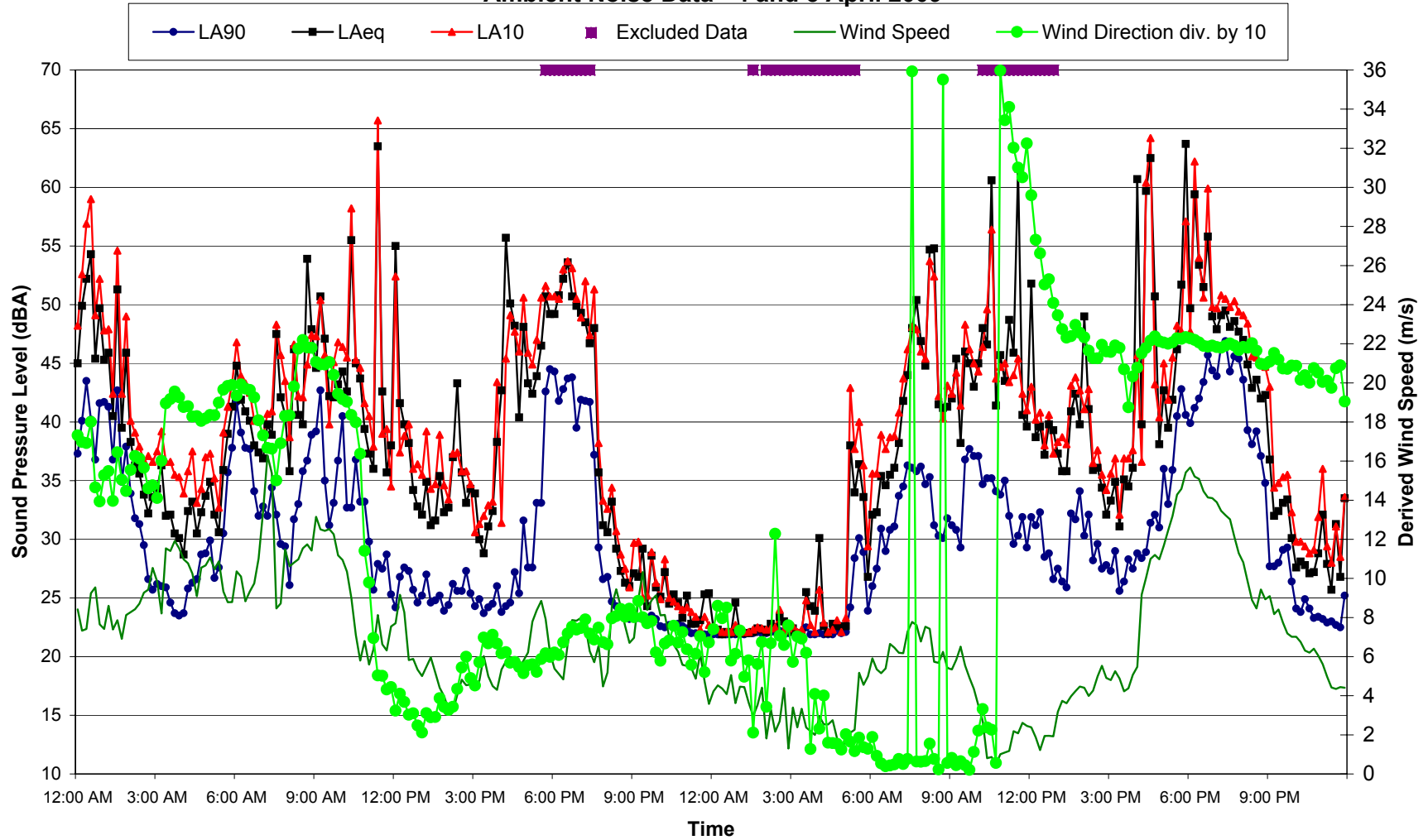
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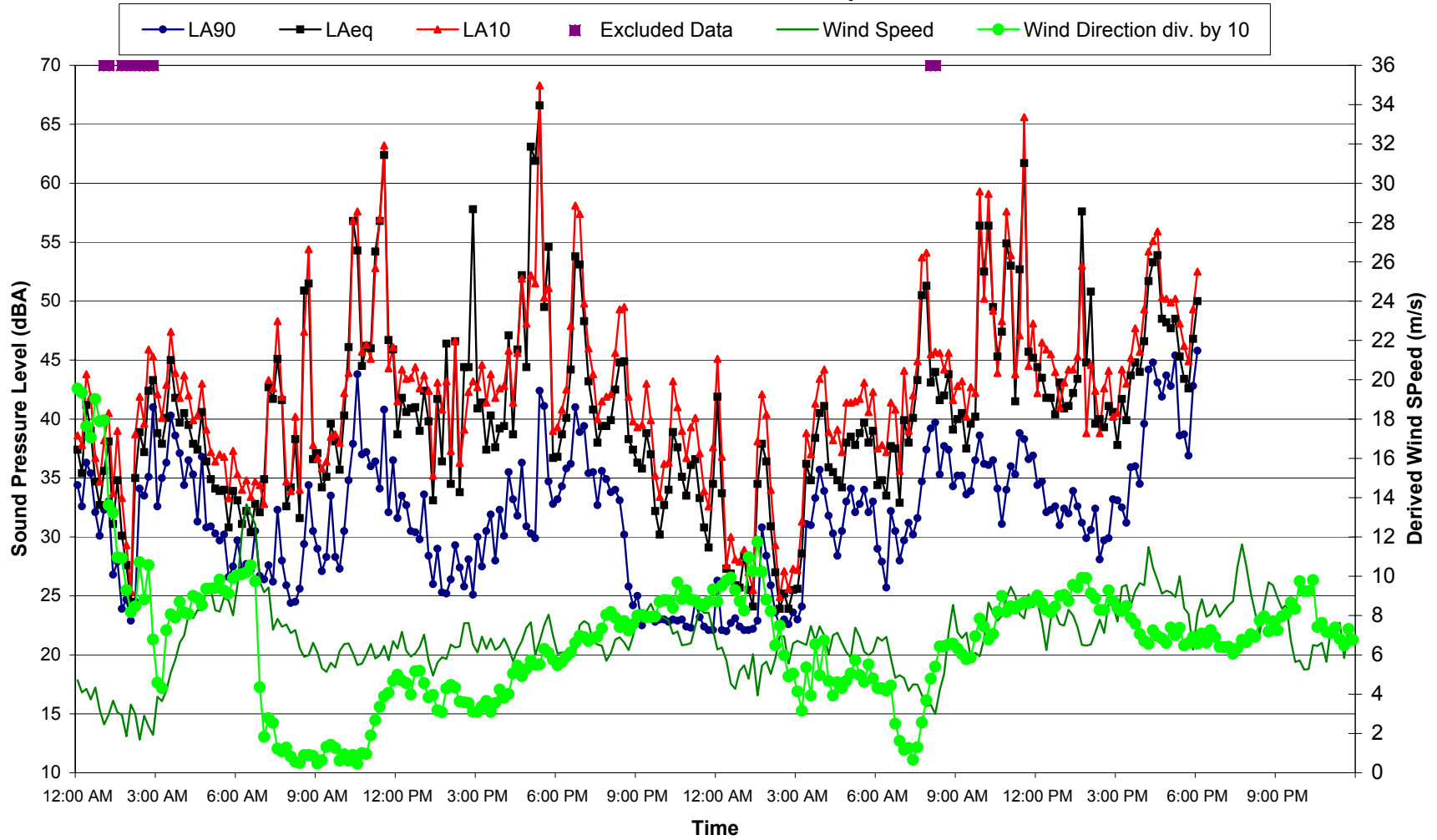
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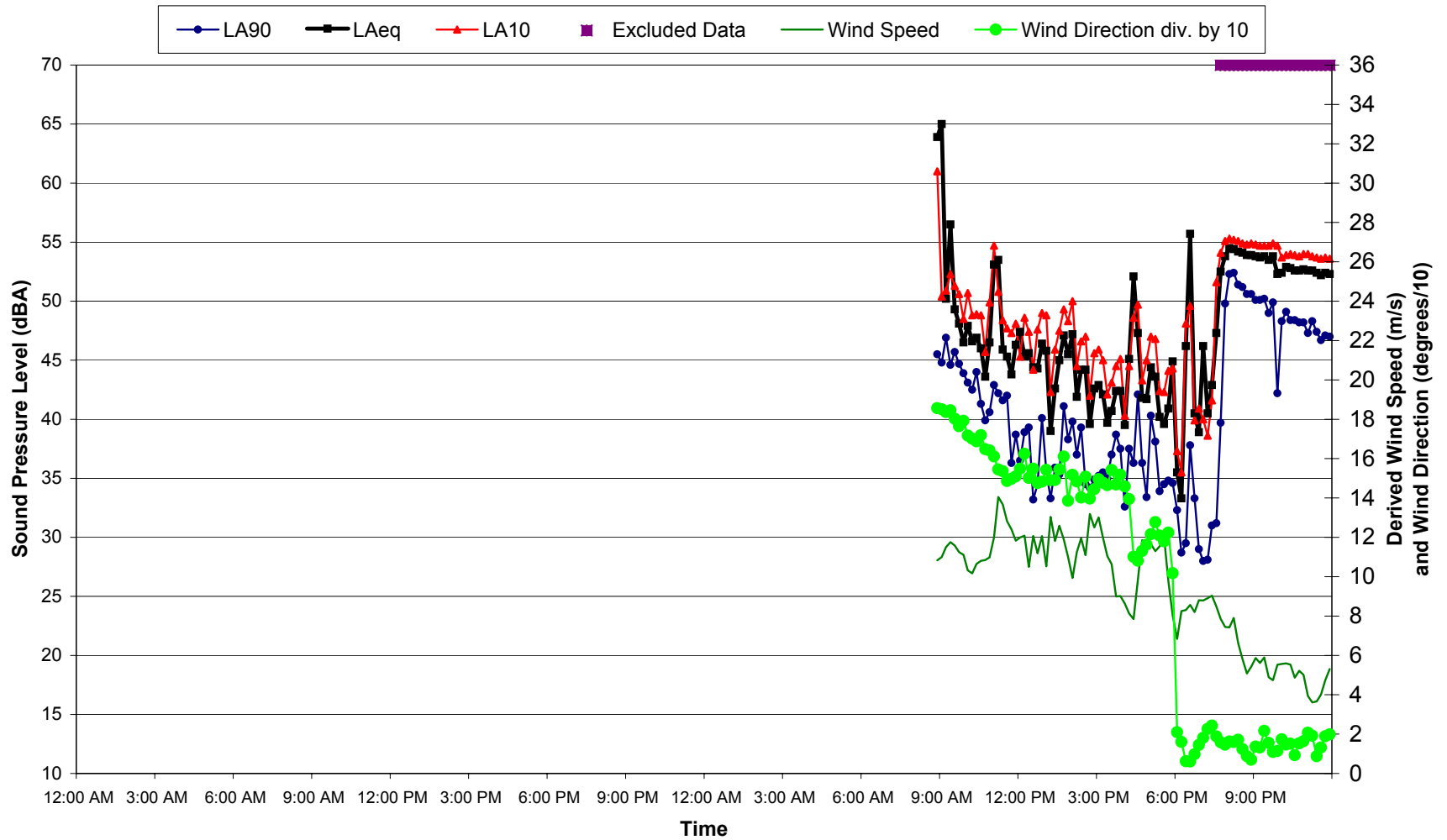
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Ambient Noise Data - 4 and 5 April 2009



Location Boco - Boco Rock
Ambient Noise Data - 6 and 7 April 2009



Location Brooklyn - Boco Rock
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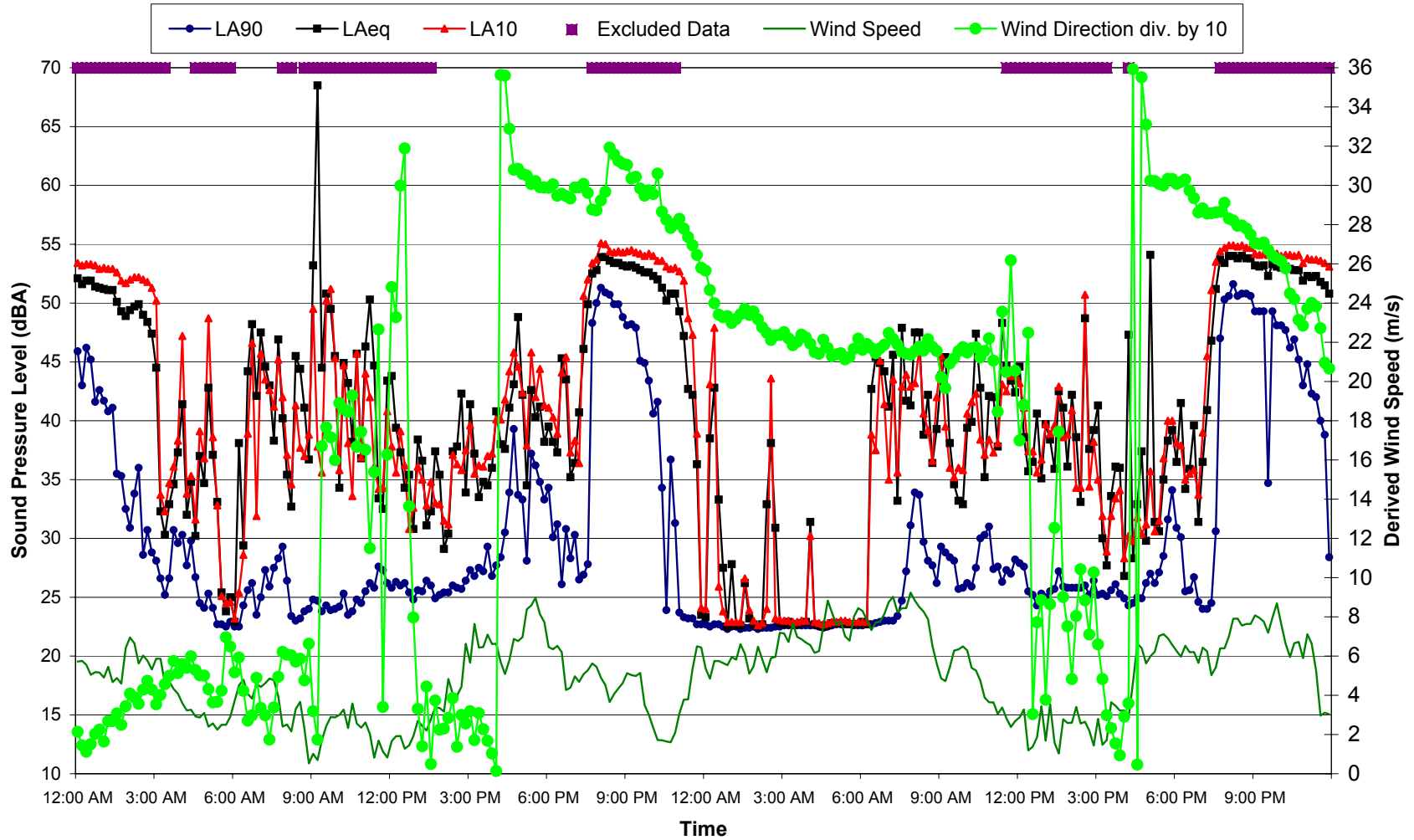


Appendix C3

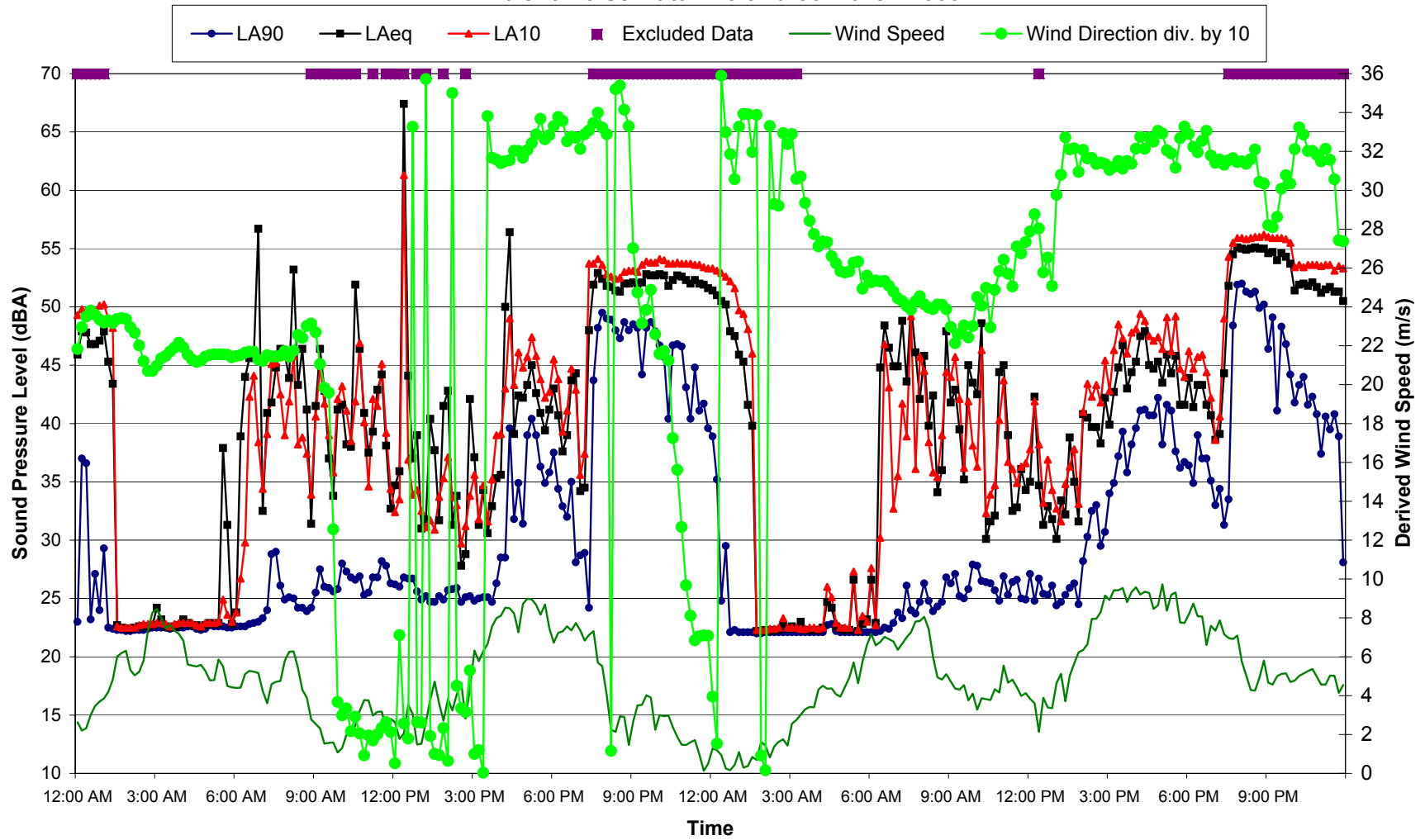
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Level Wind vs Time

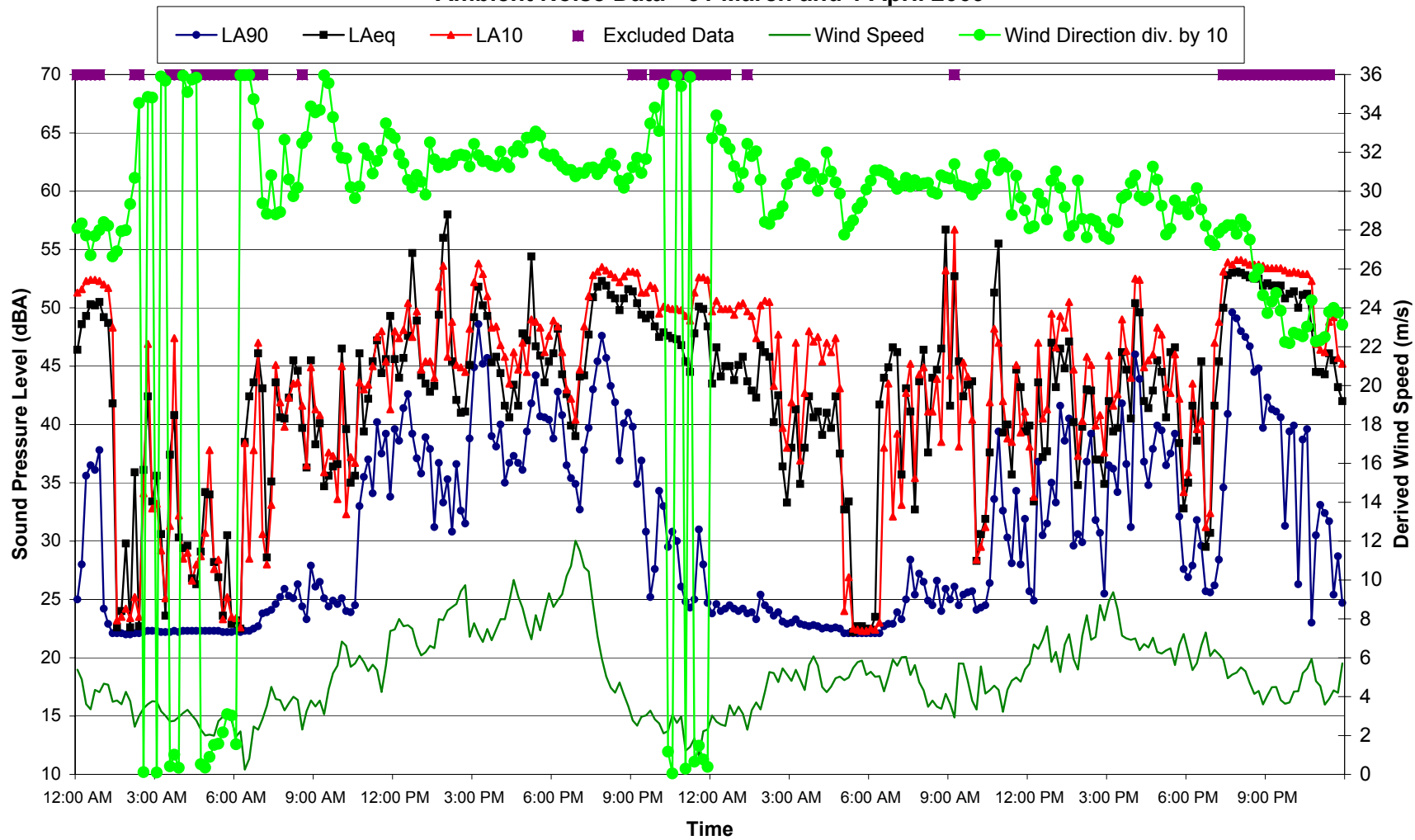
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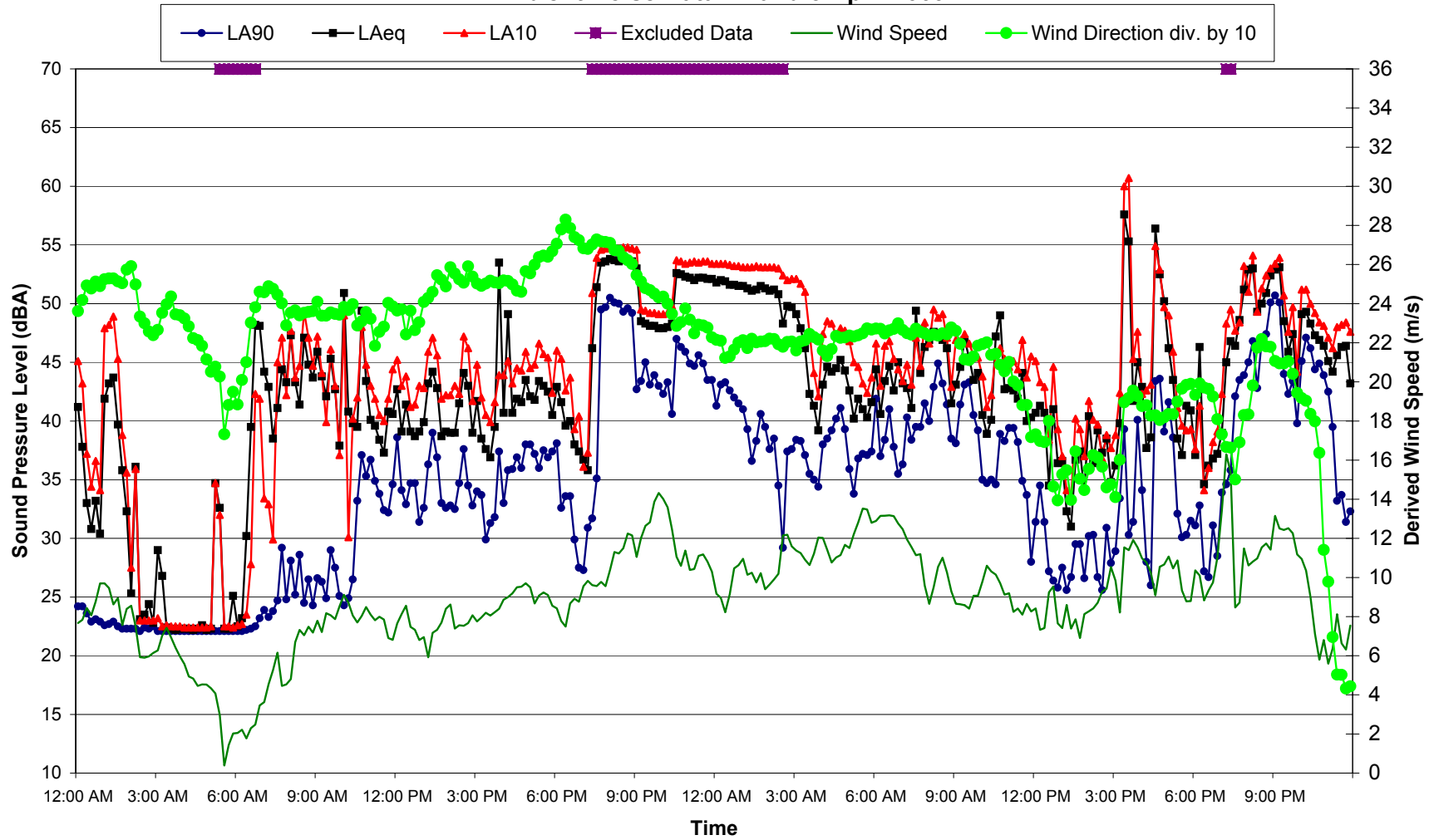
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Ambient Noise Data - 29 and 30 March 2009**



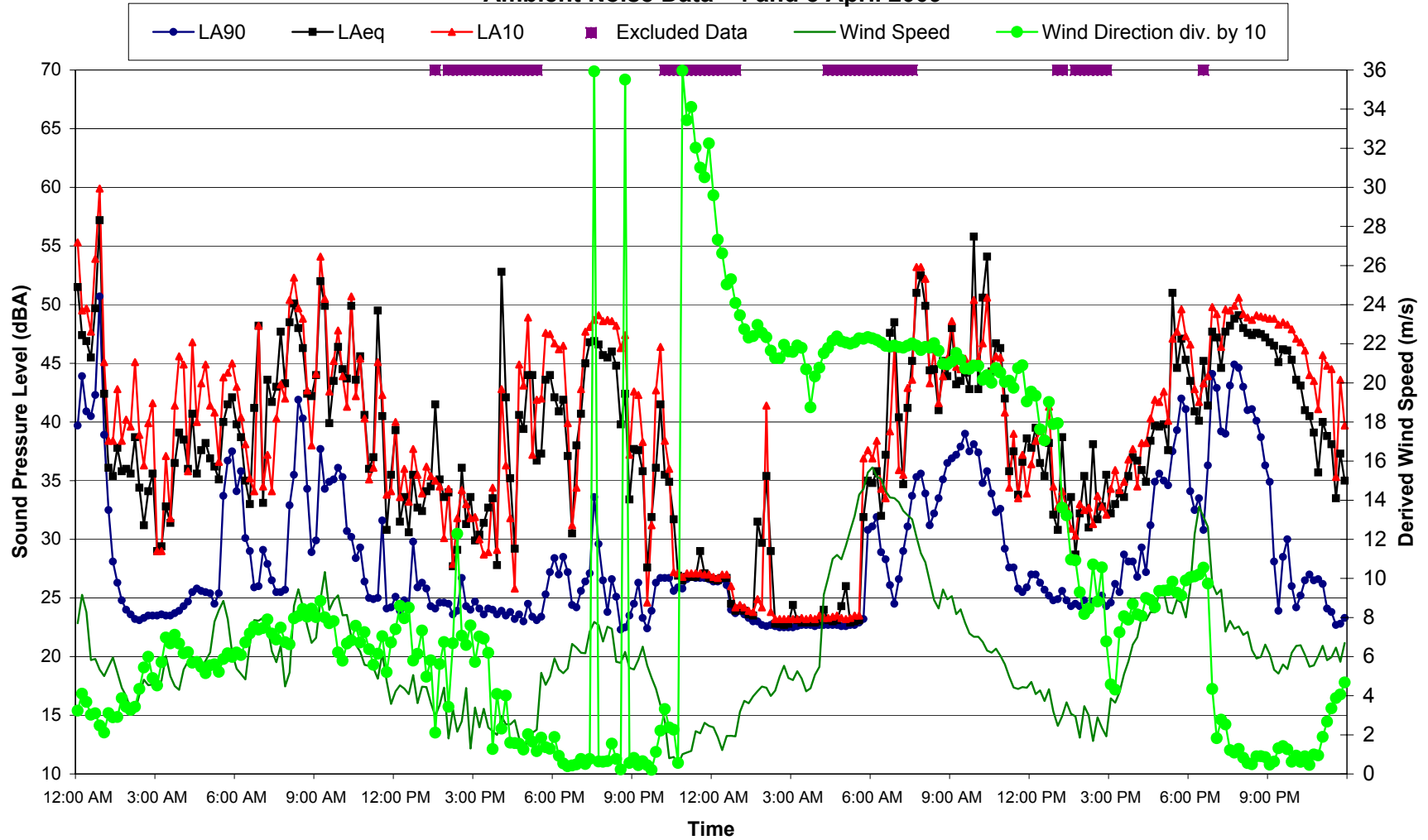
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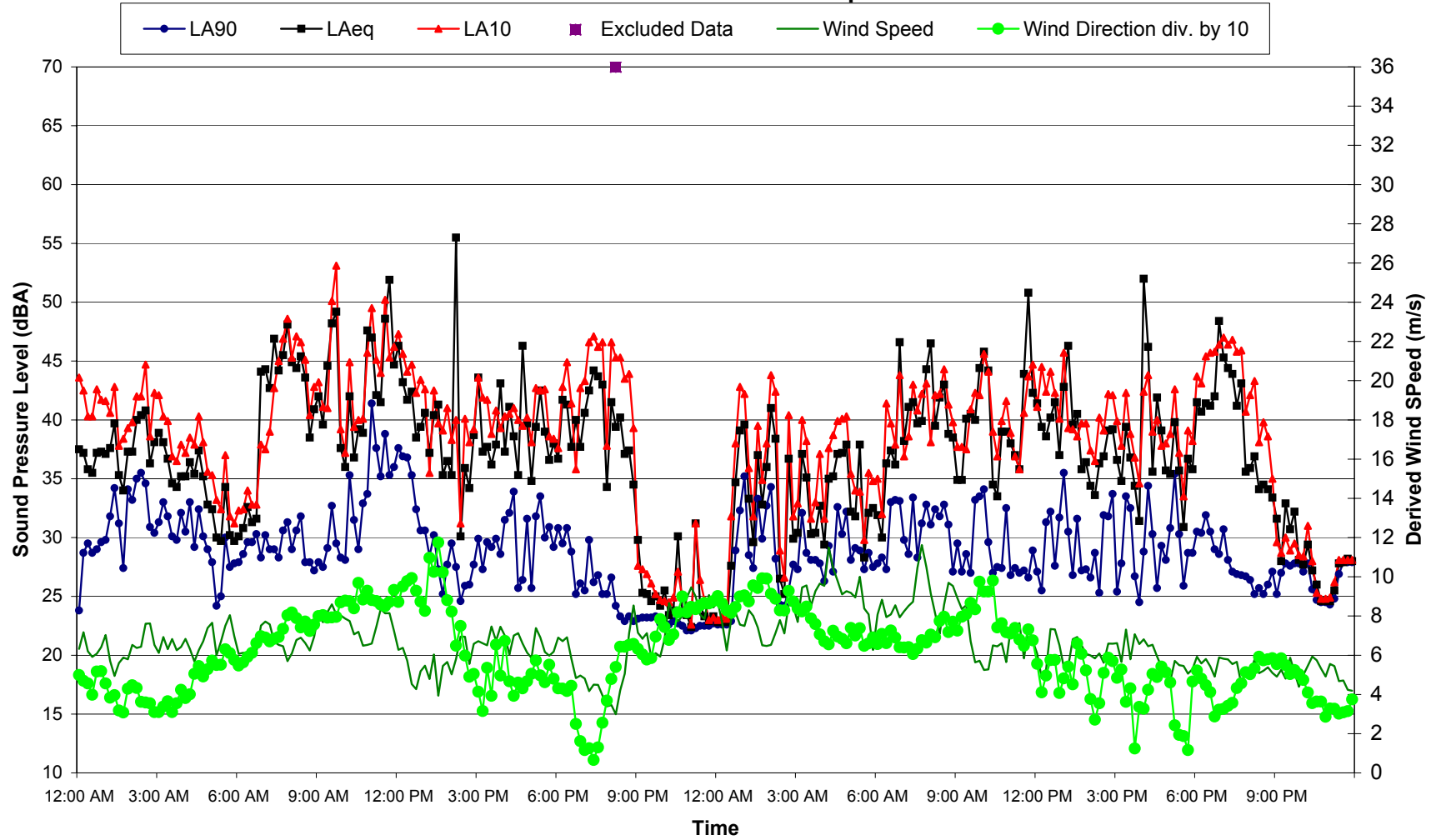
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Ambient Noise Data - 2 and 3 April 2009



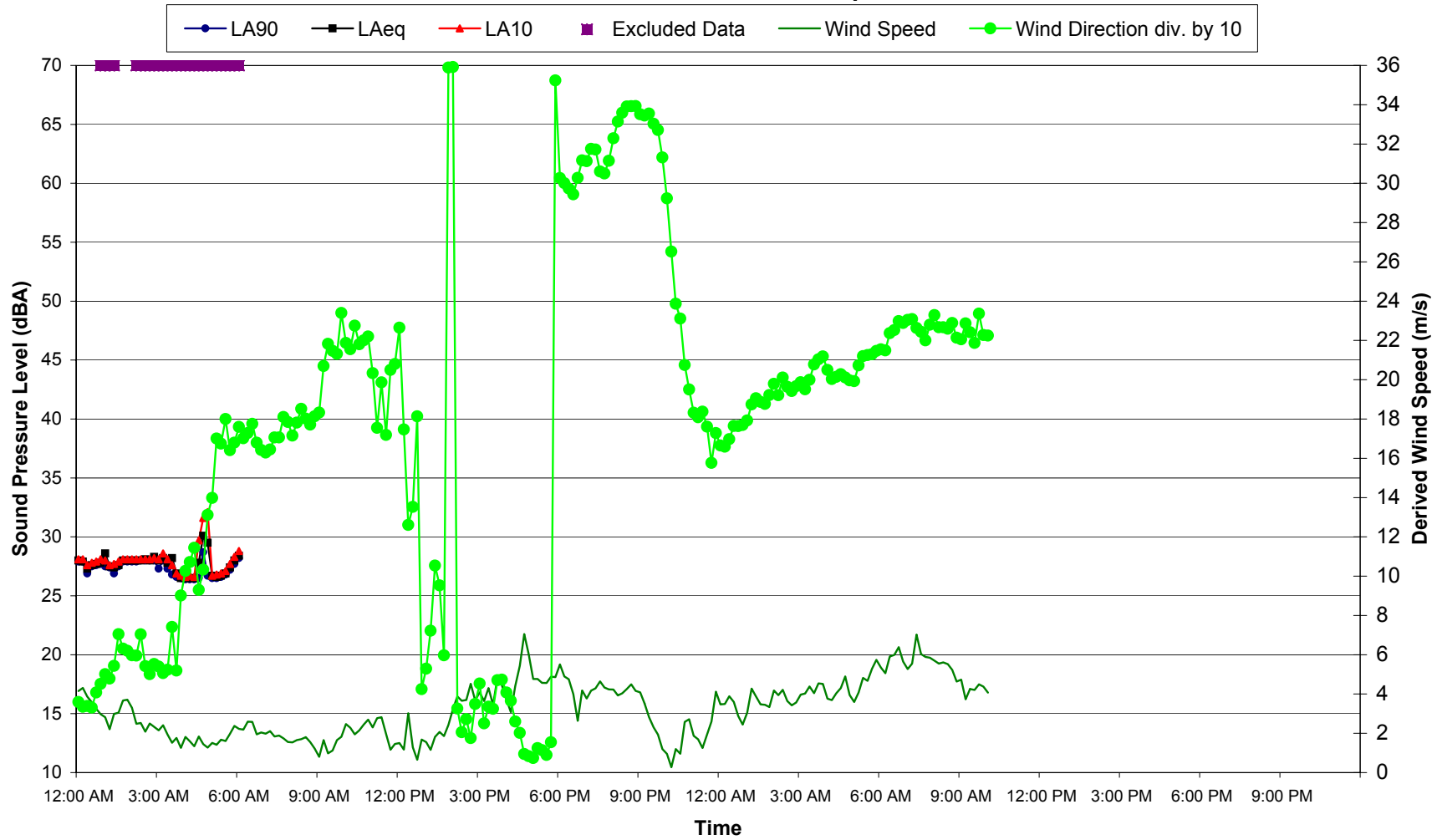
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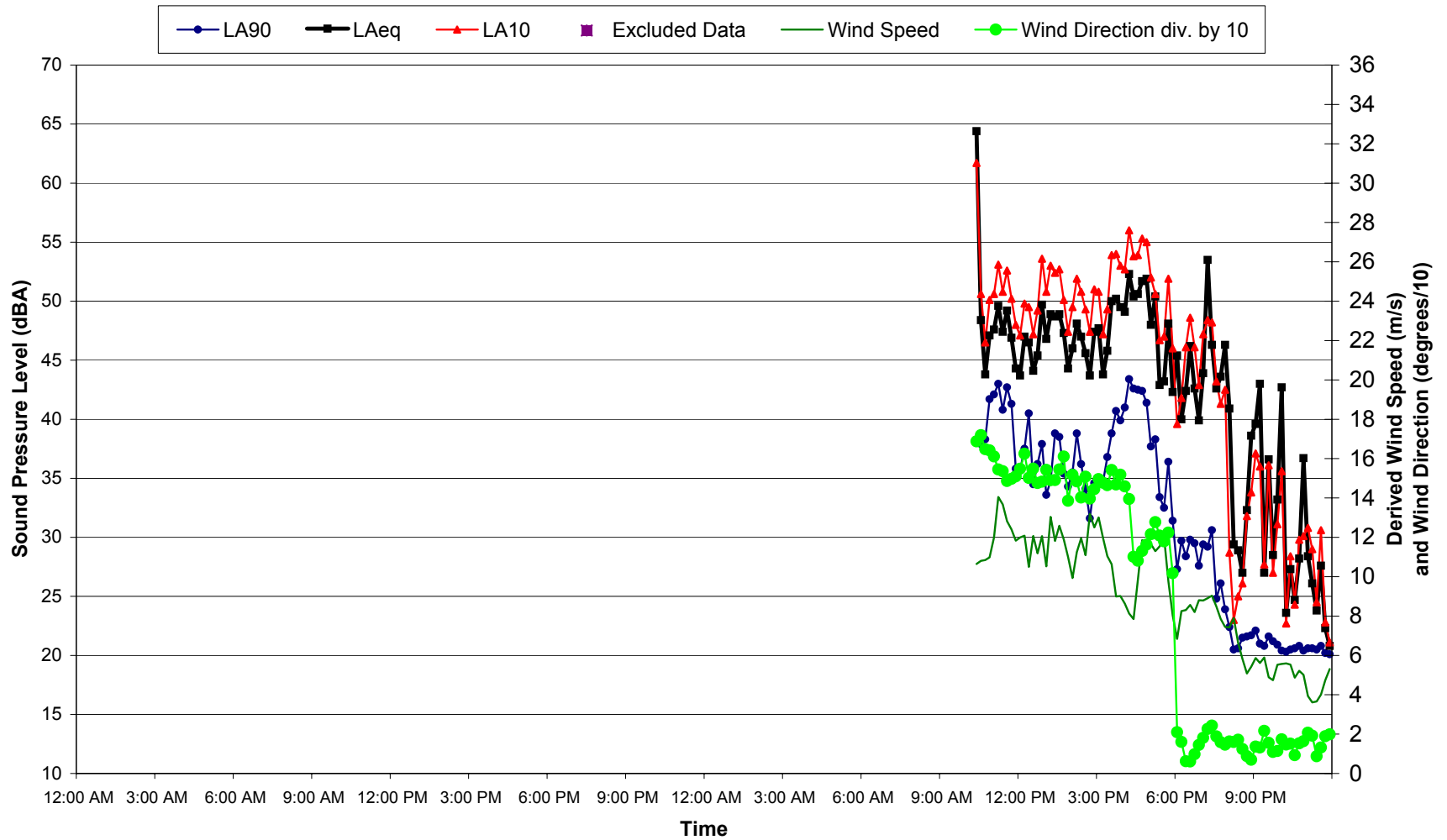
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Ambient Noise Data - 6 and 7 April 2009



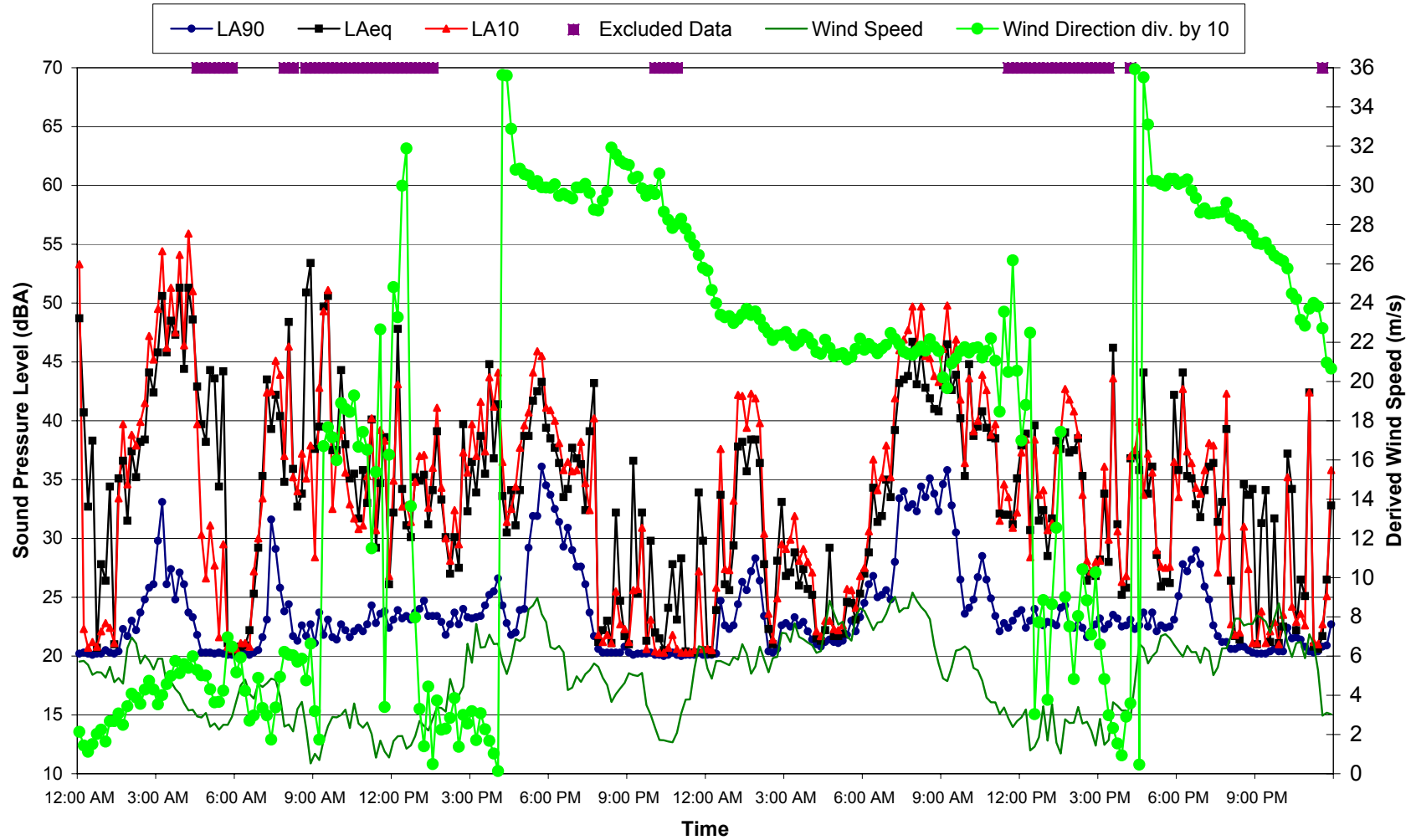
**Location Brooklyn - Boco Rock
Ambient Noise Data - 8 and 9 April 2009**



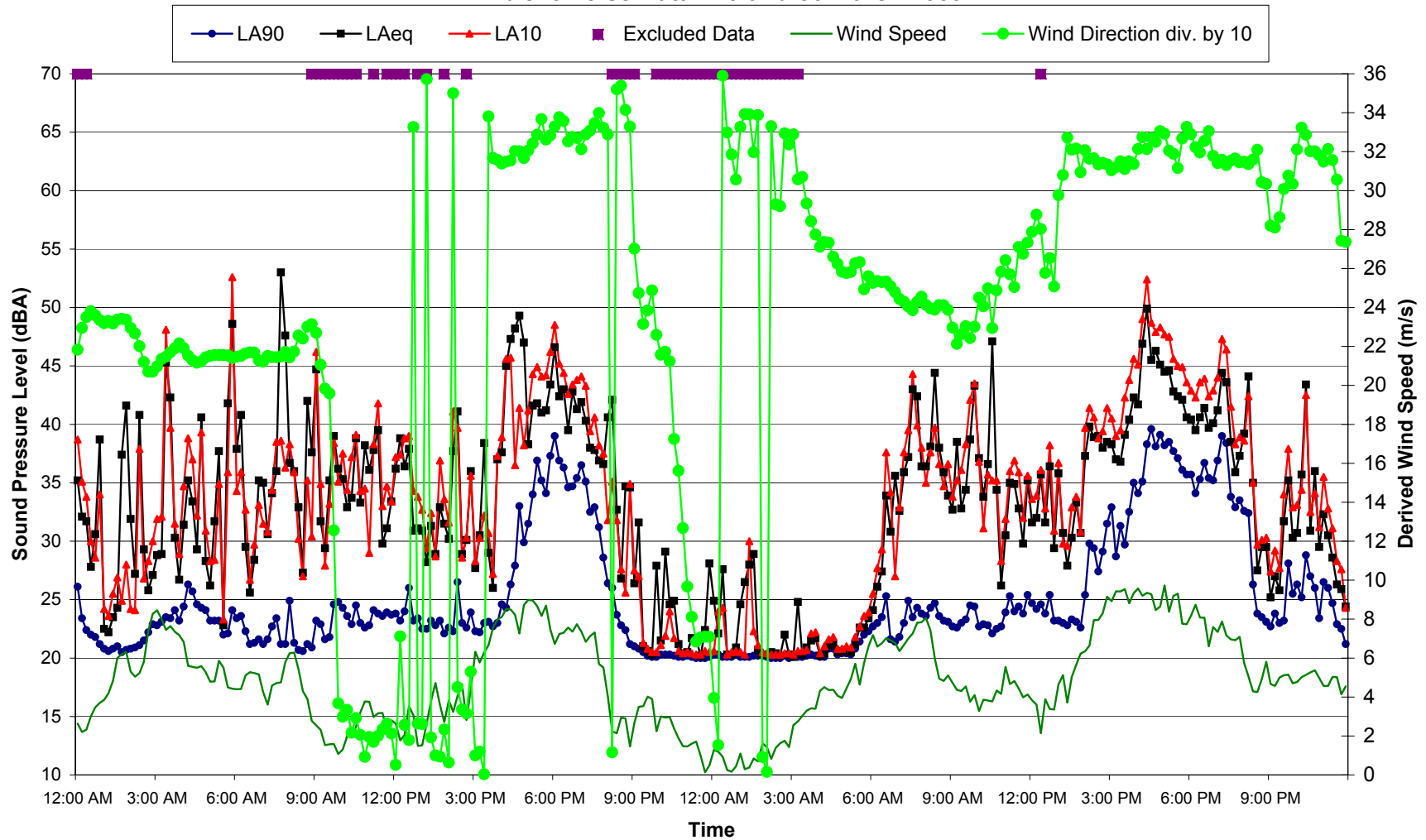
**Location Coopers Hill - Boco Rock
Ambient Noise Data - 25 and 26 March 2009**



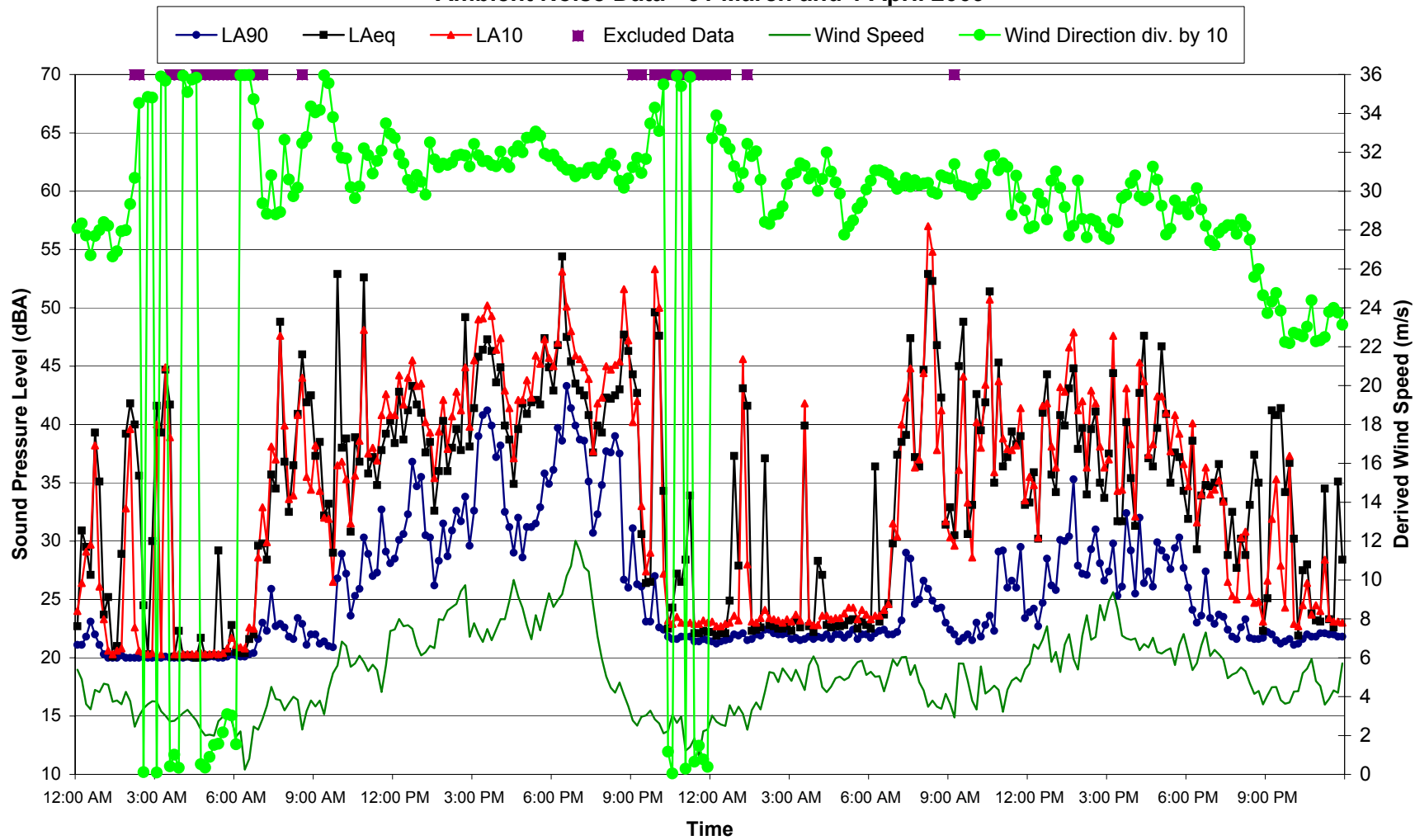
**Location Coopers Hill - Boco Rock
Ambient Noise Data - 27 and 28 March 2009**



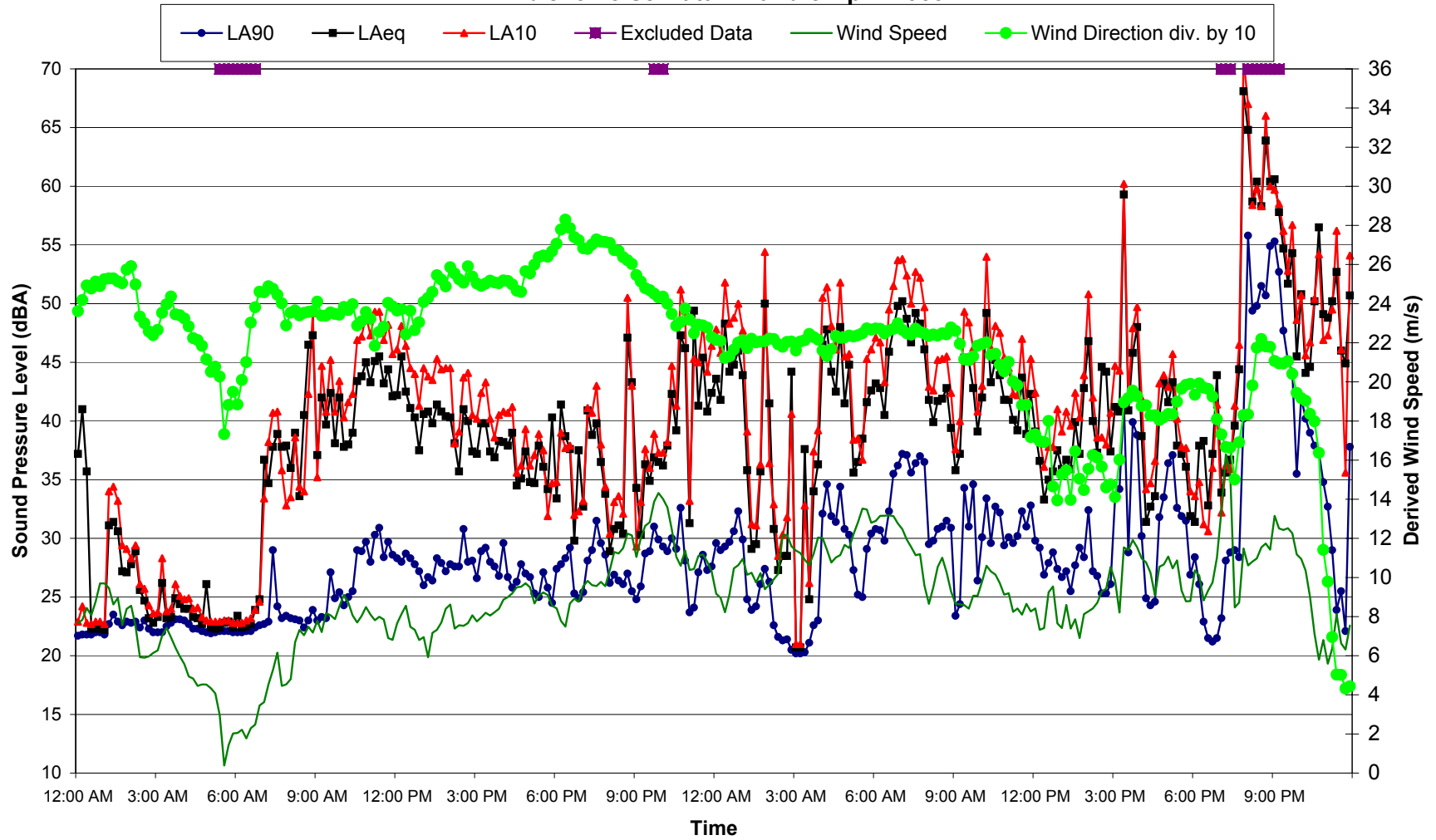
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Ambient Noise Data - 29 and 30 March 2009



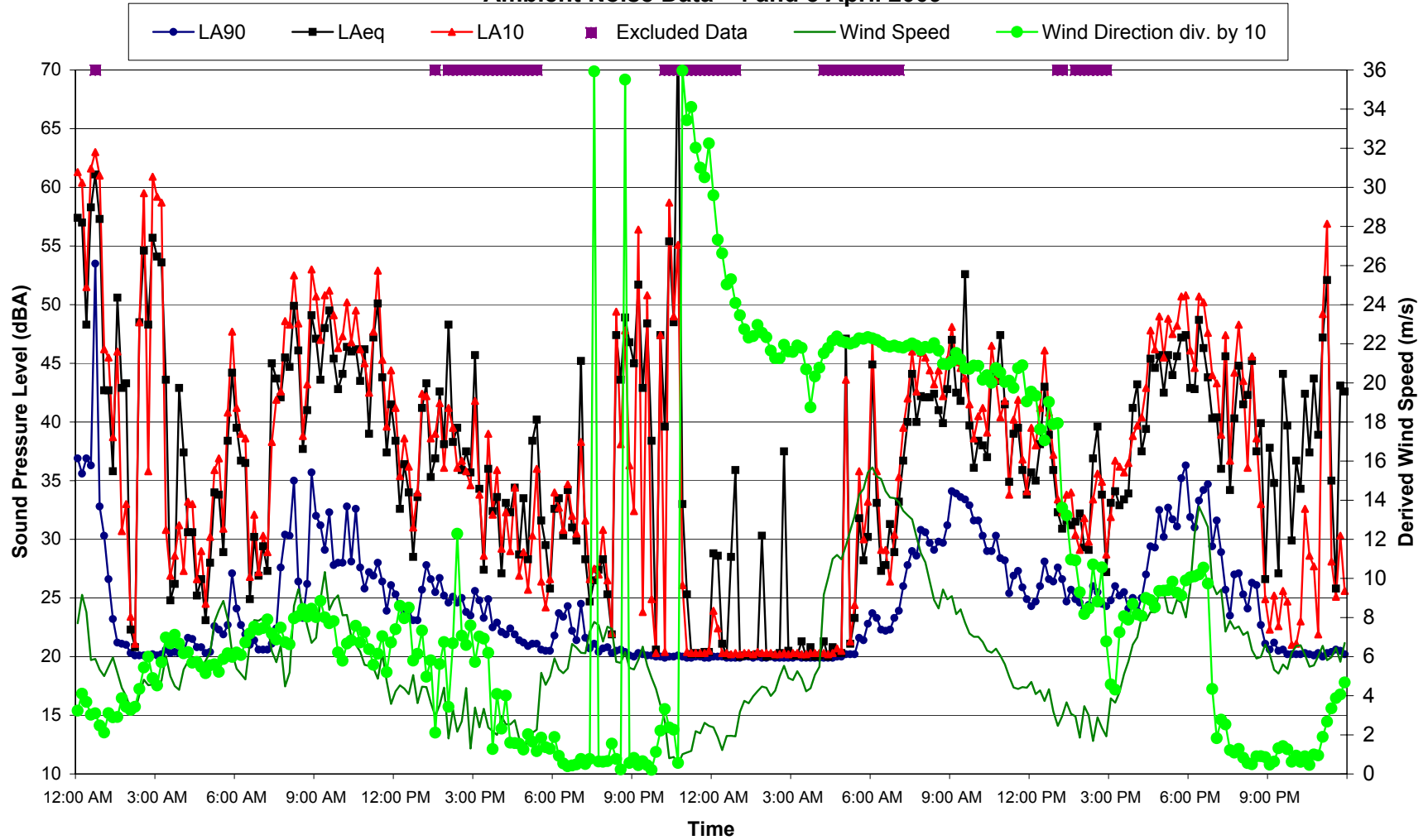
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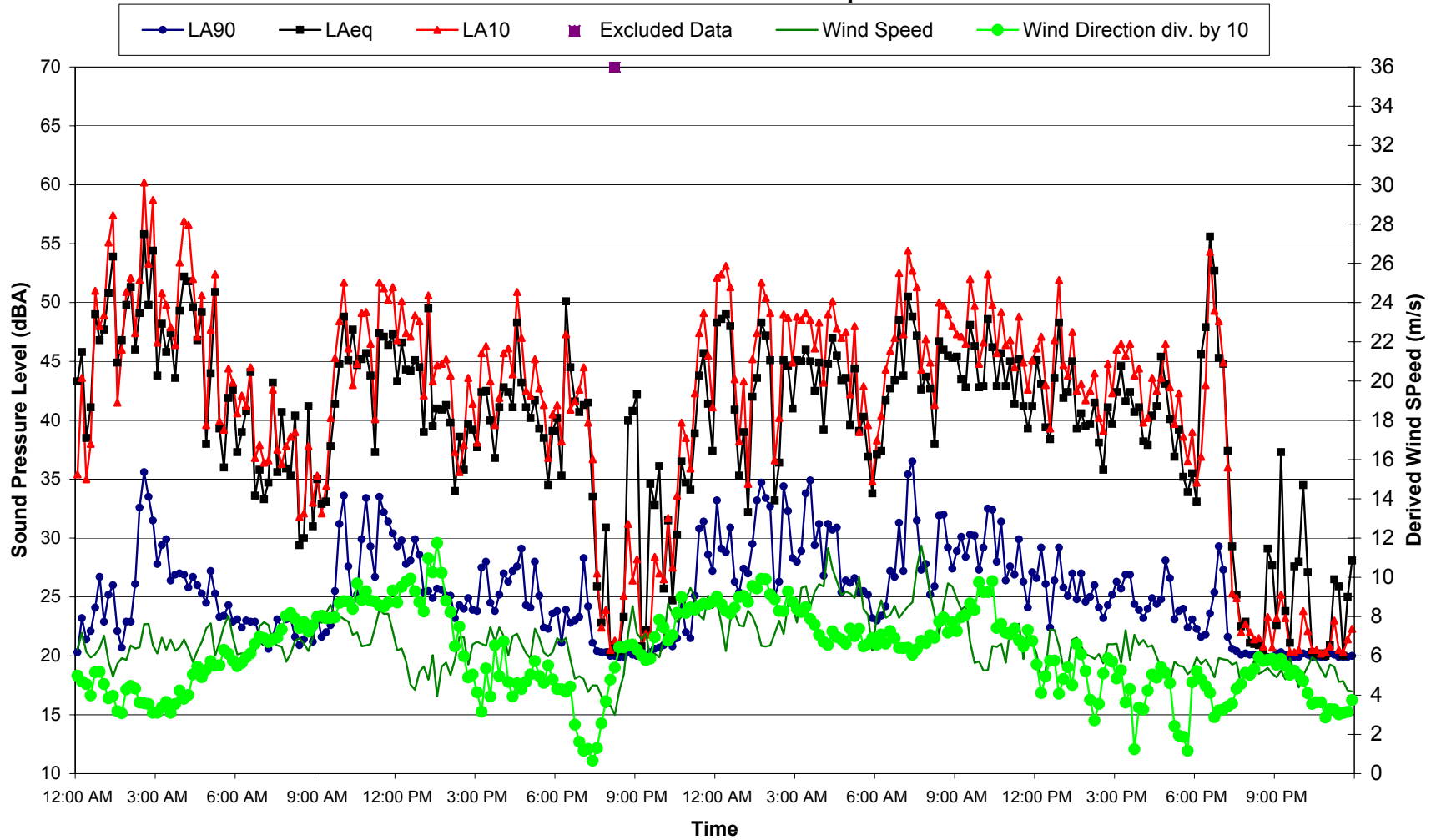
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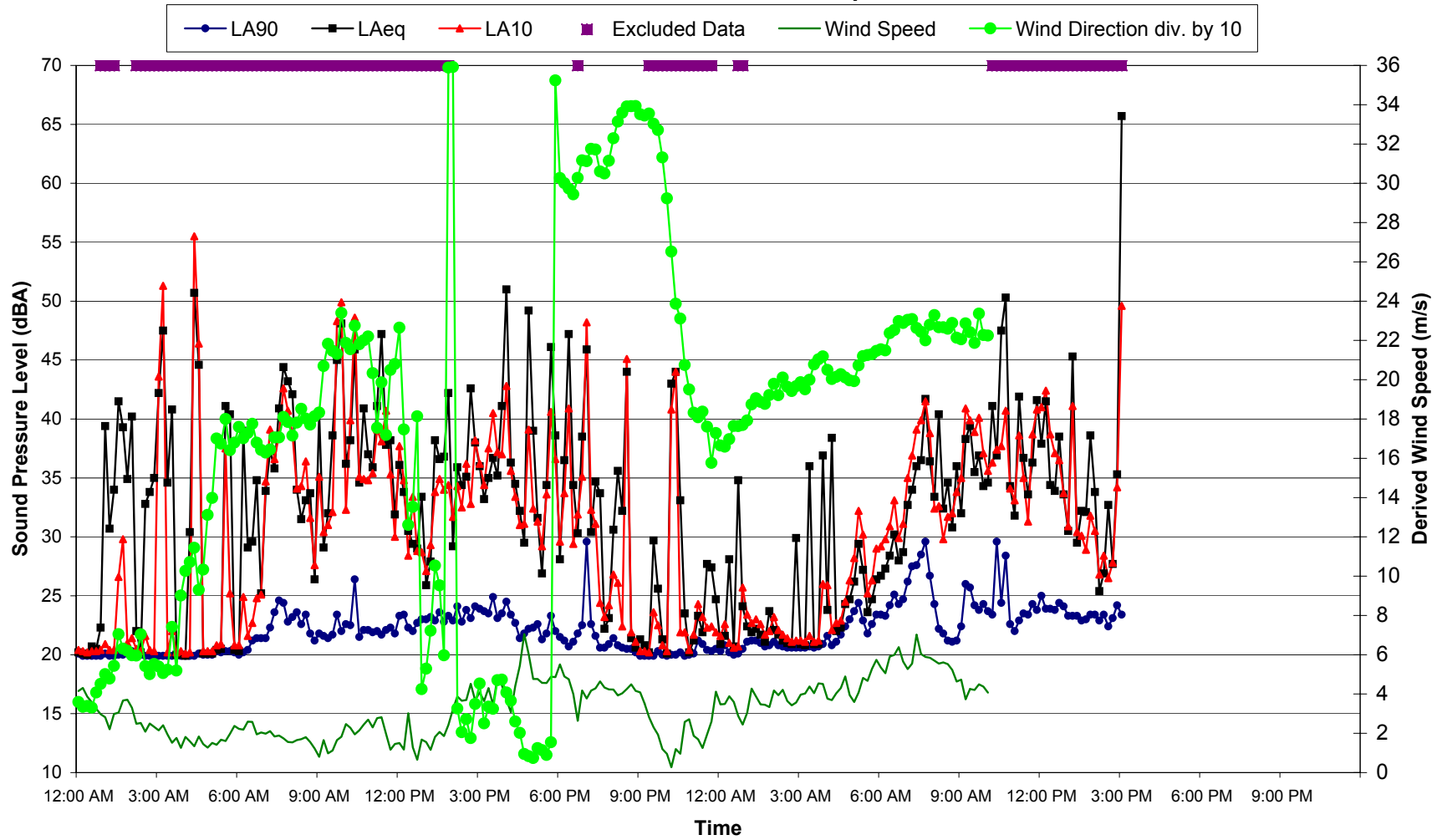
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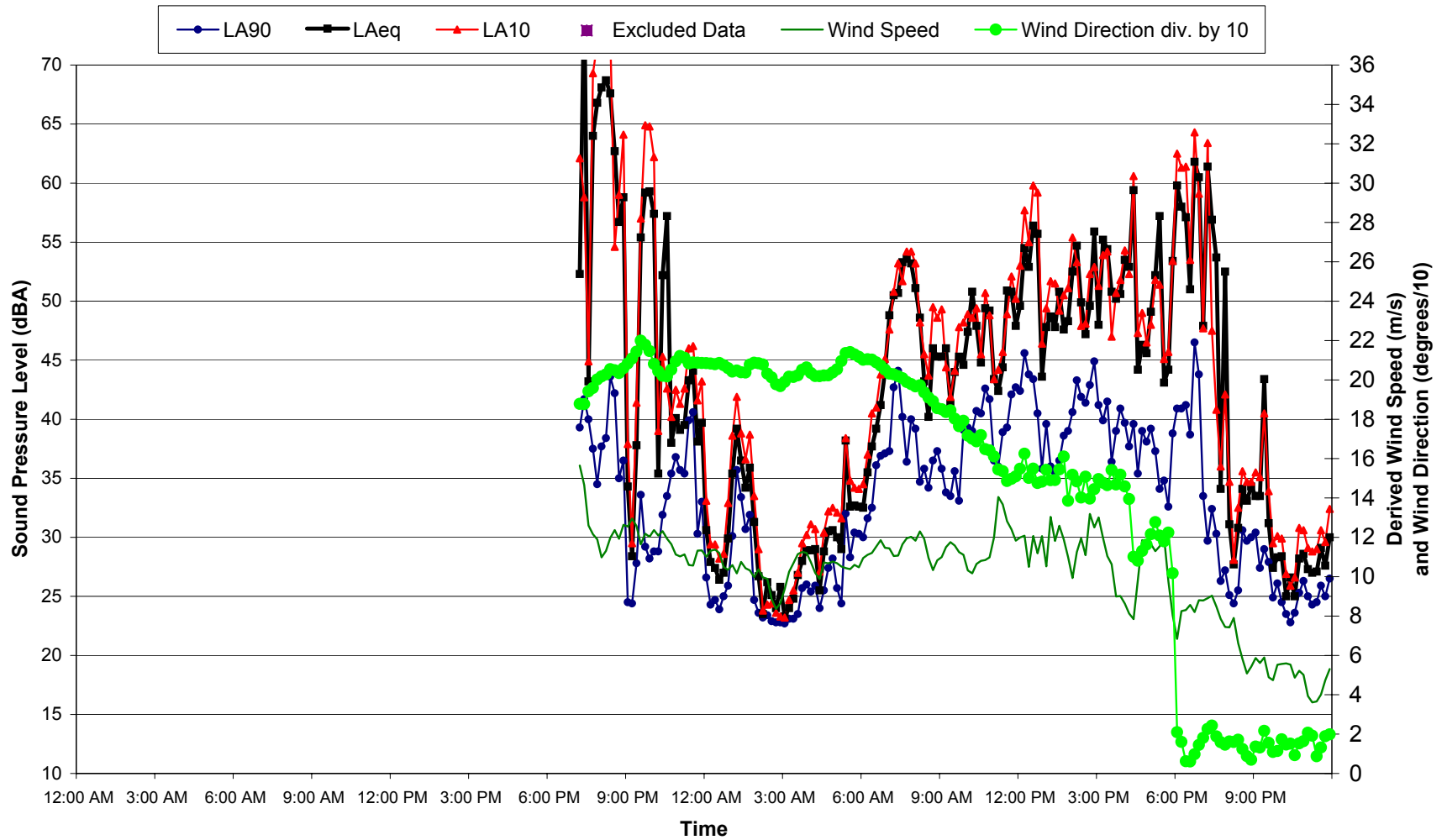
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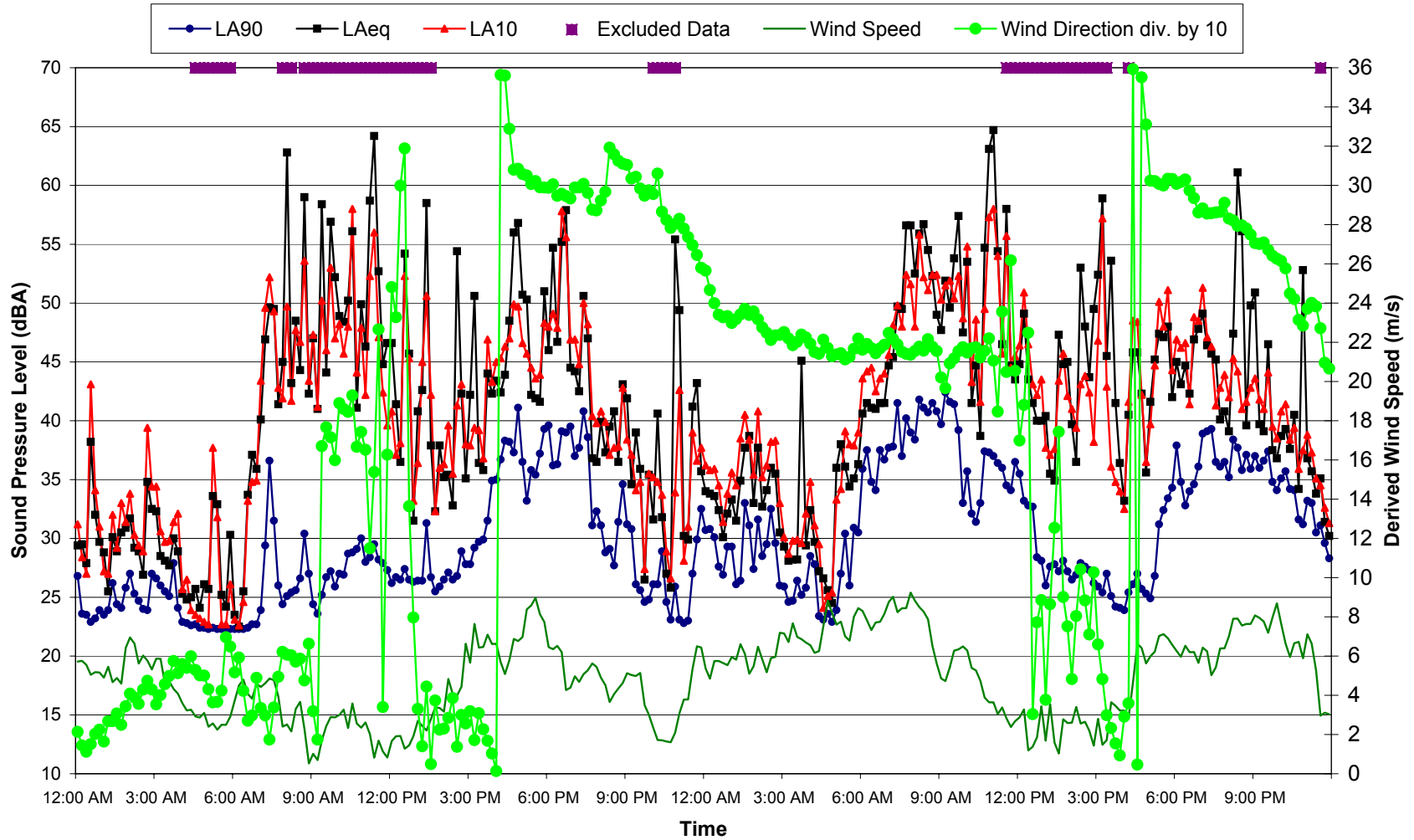
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Ambient Noise Data - 8 and 9 April 2009



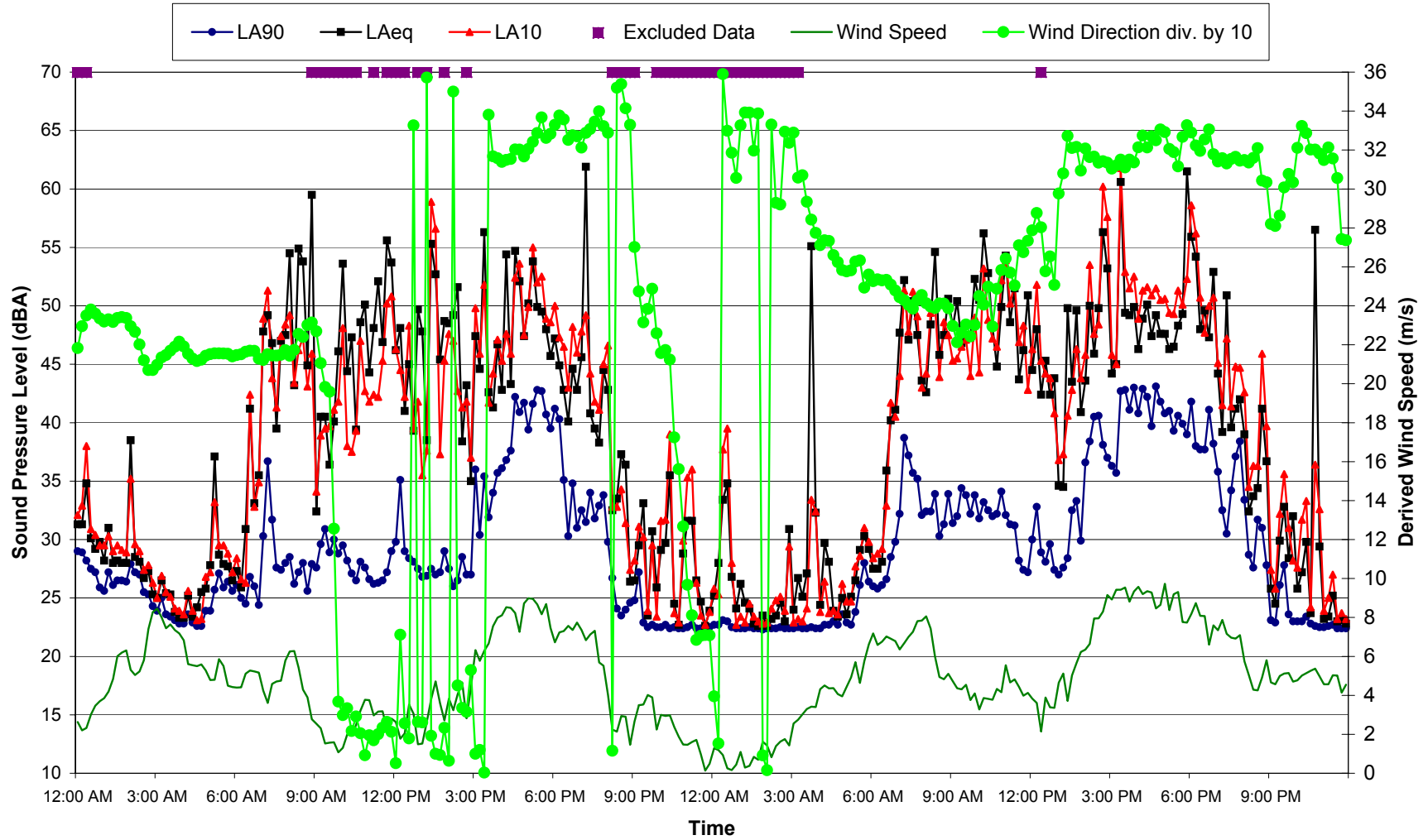
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Ambient Noise Data - 25 and 26 March 2009**



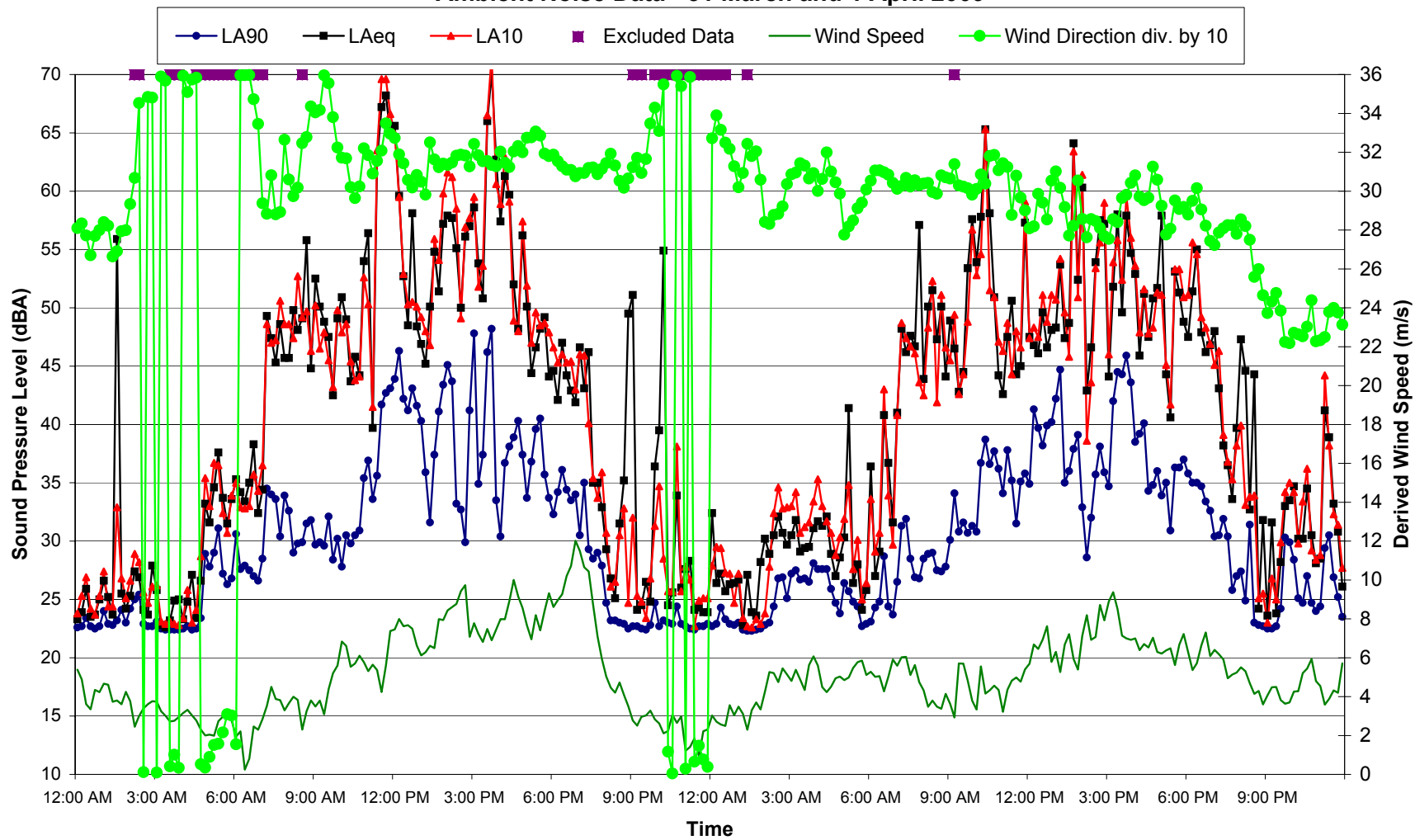
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Ambient Noise Data - 27 and 28 March 2009**



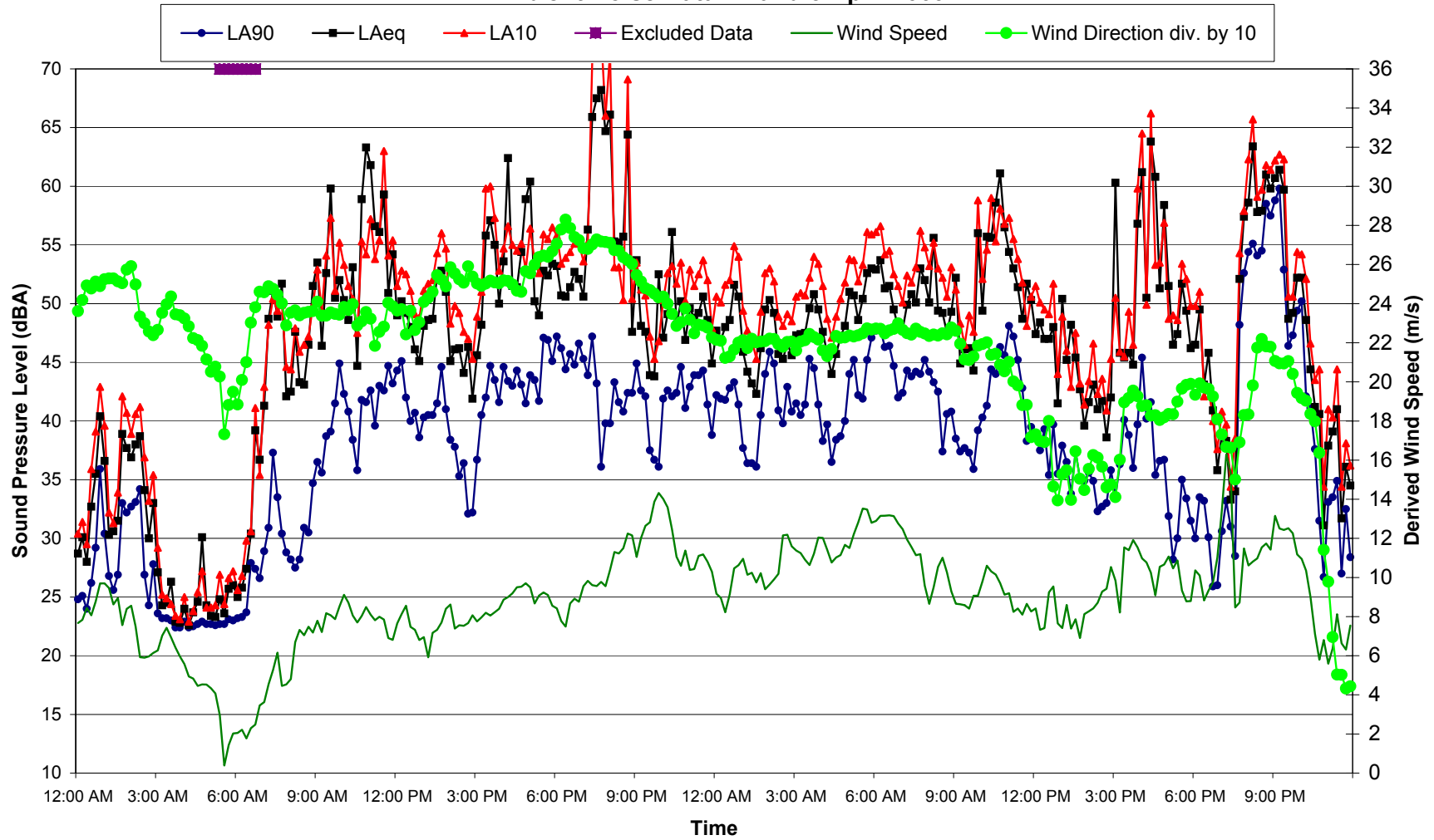
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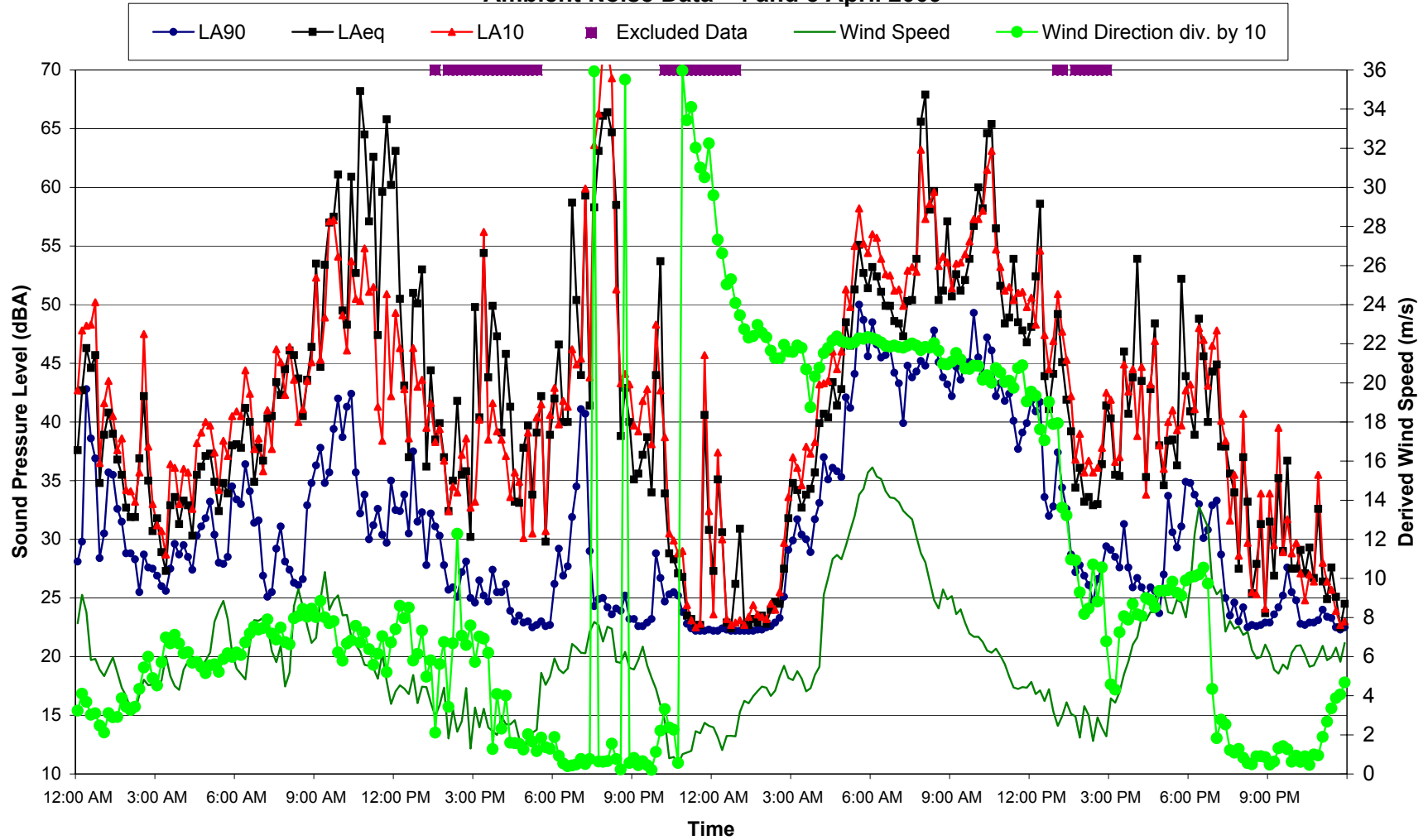
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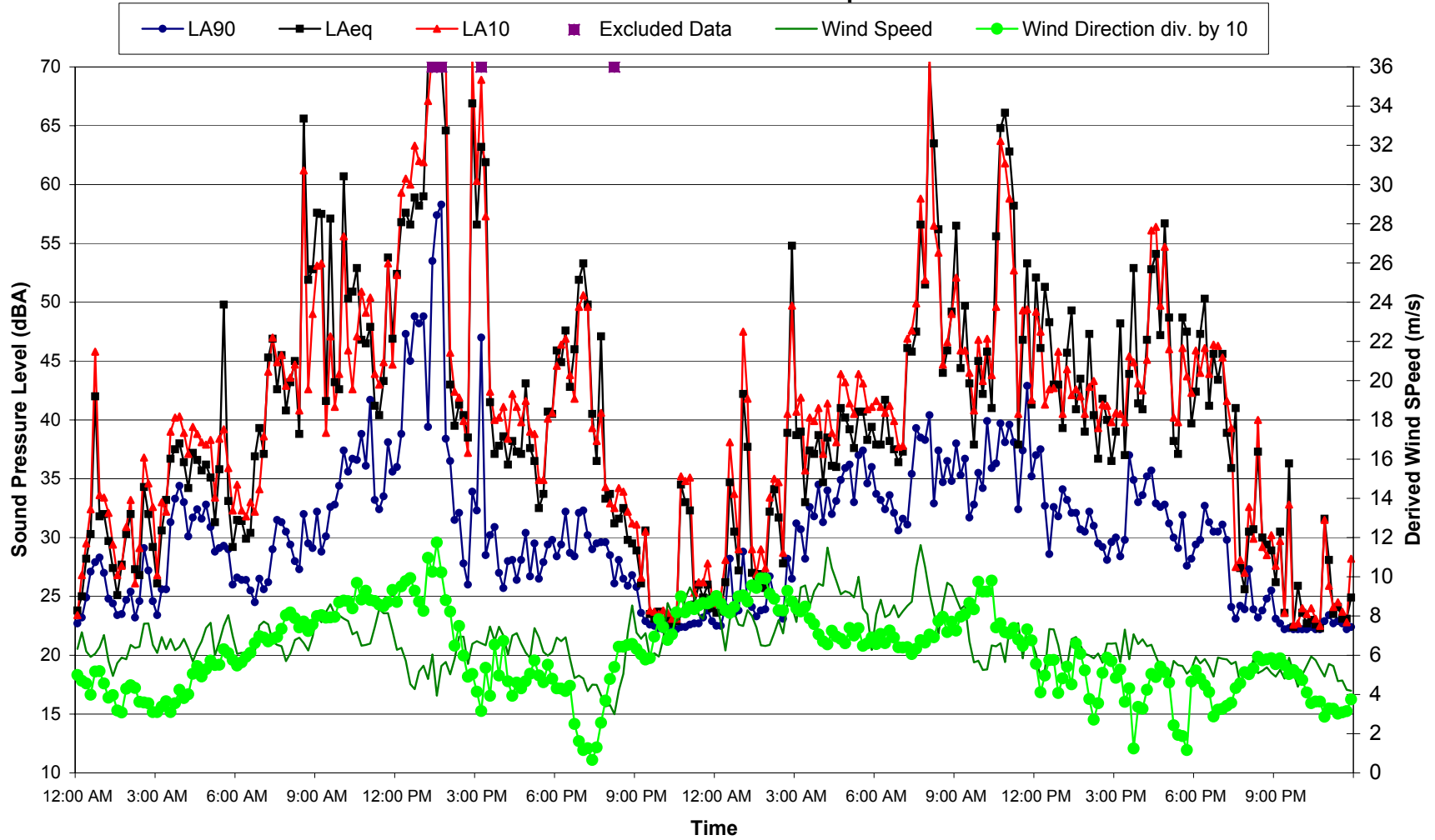
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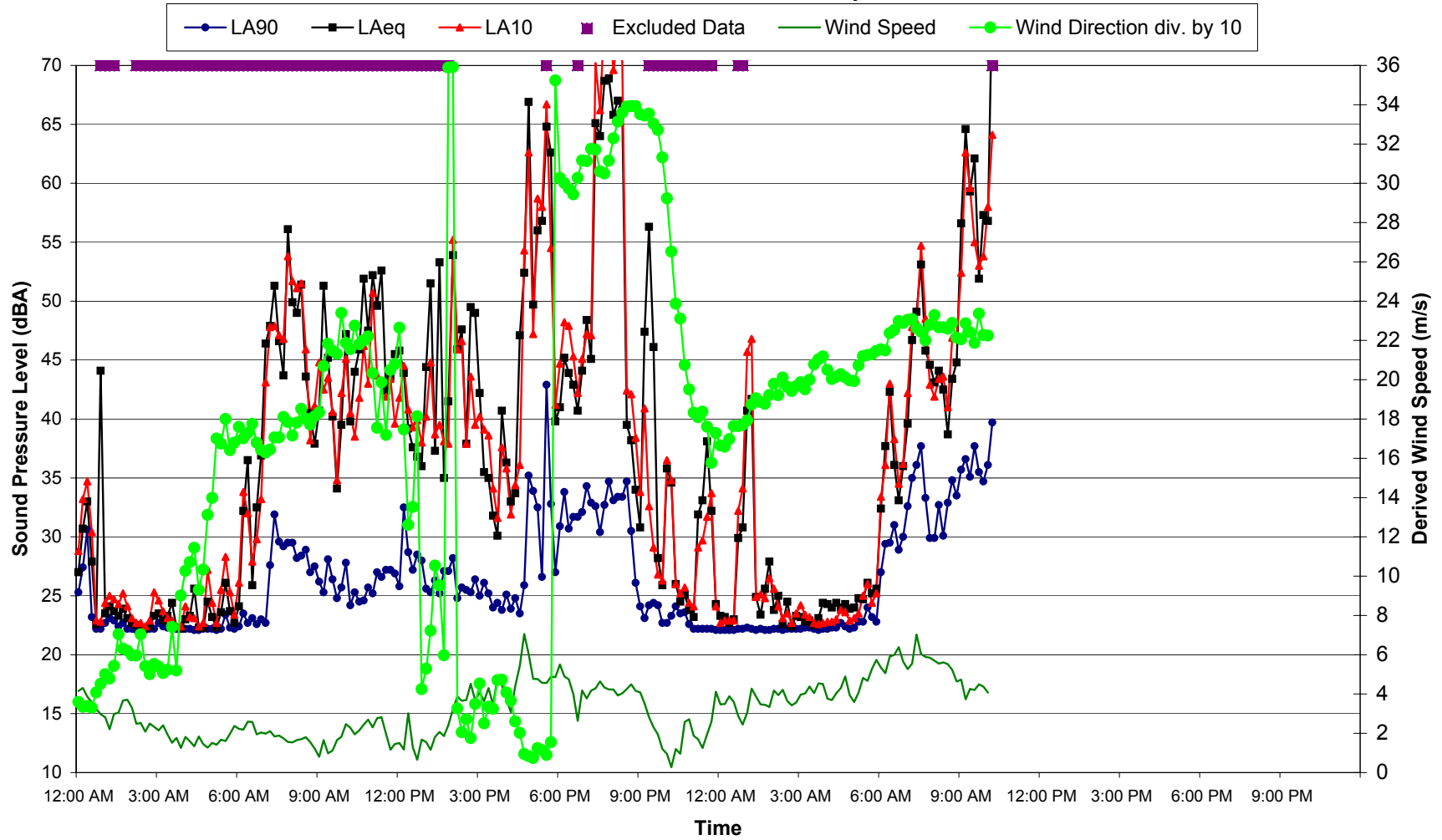
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Ambient Noise Data - 4 and 5 April 2009



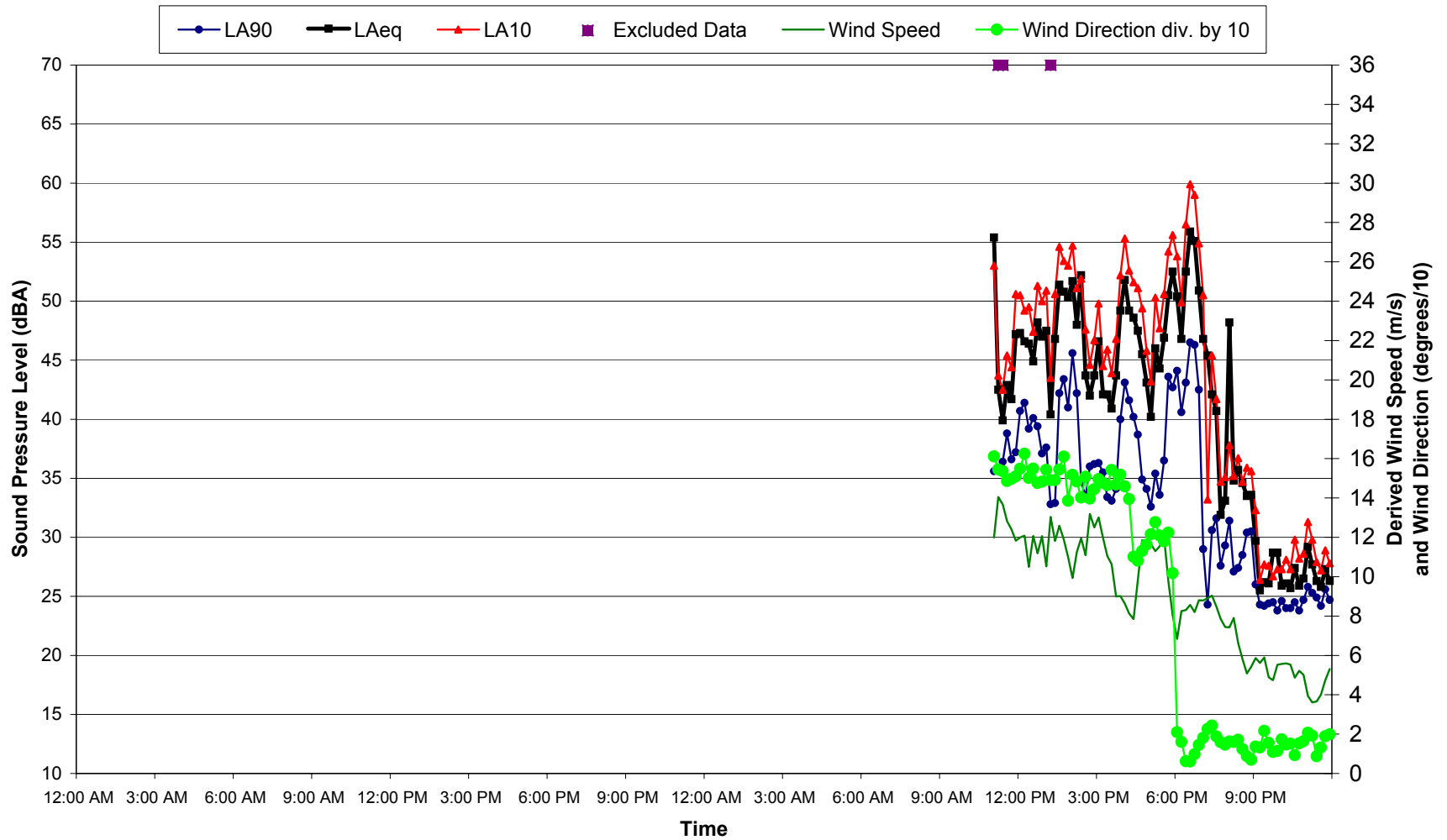
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Ambient Noise Data - 6 and 7 April 2009



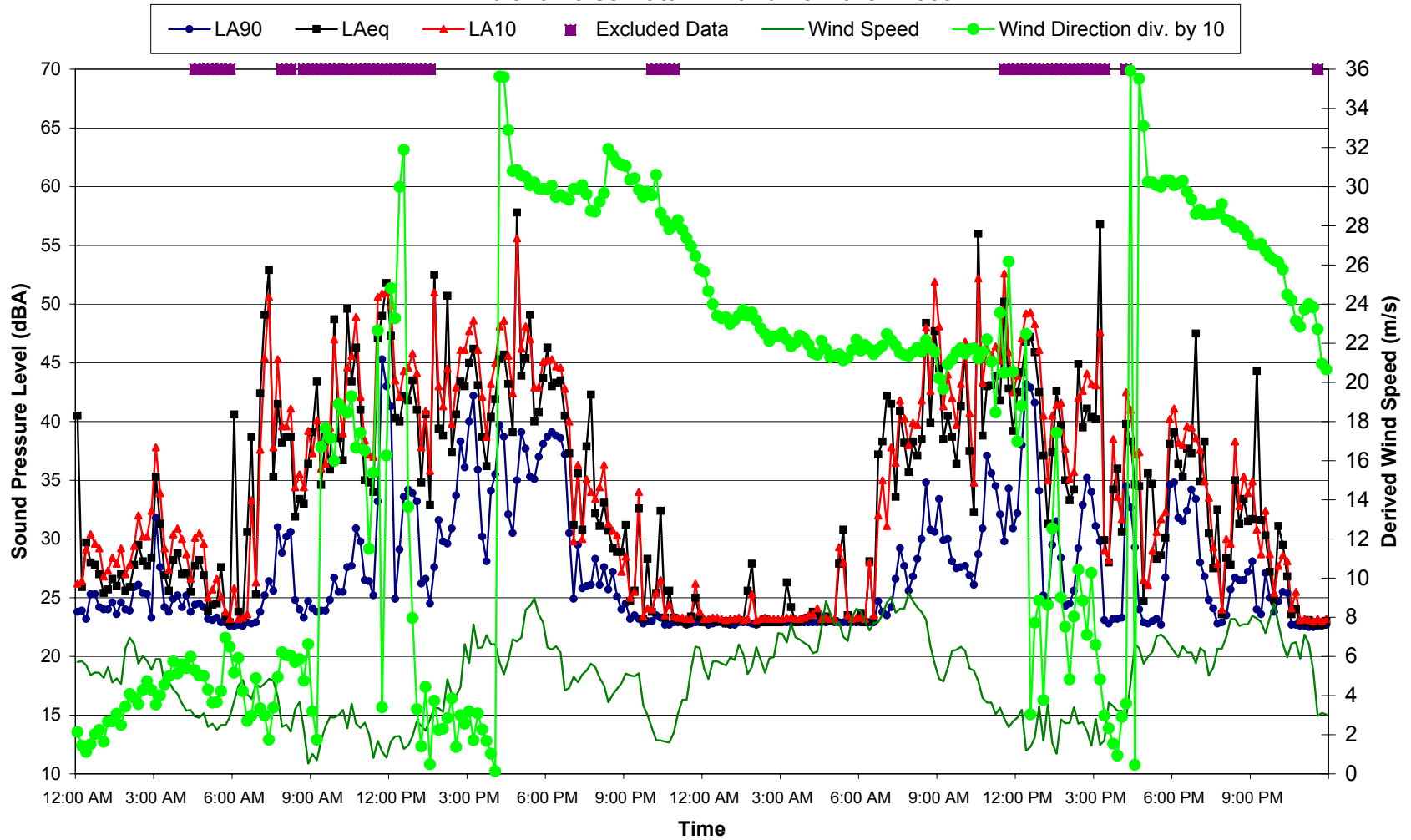
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Ambient Noise Data - 8 and 9 April 2009



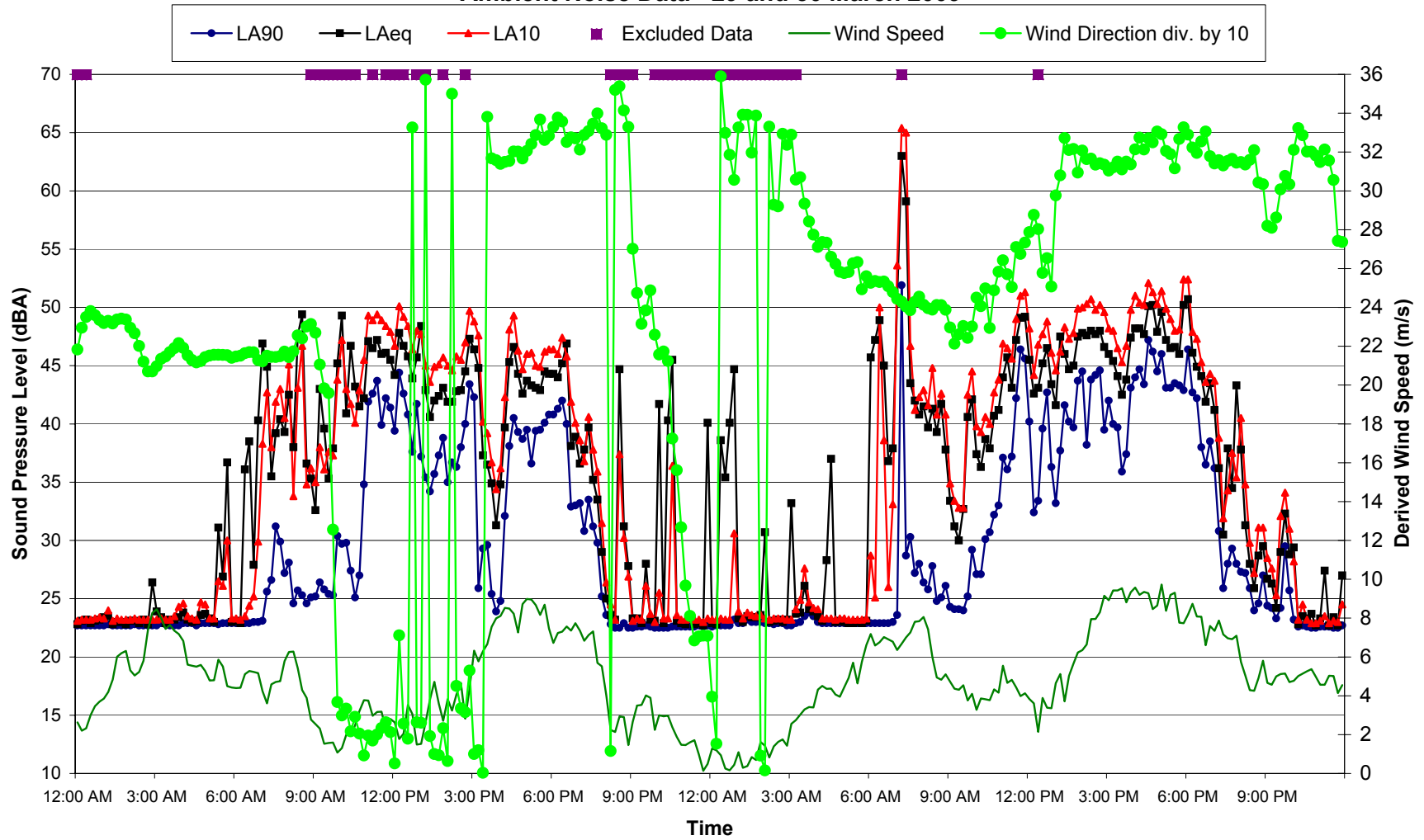
**Location Old Springfield - Boco Rock
Ambient Noise Data - 25 and 26 March 2009**



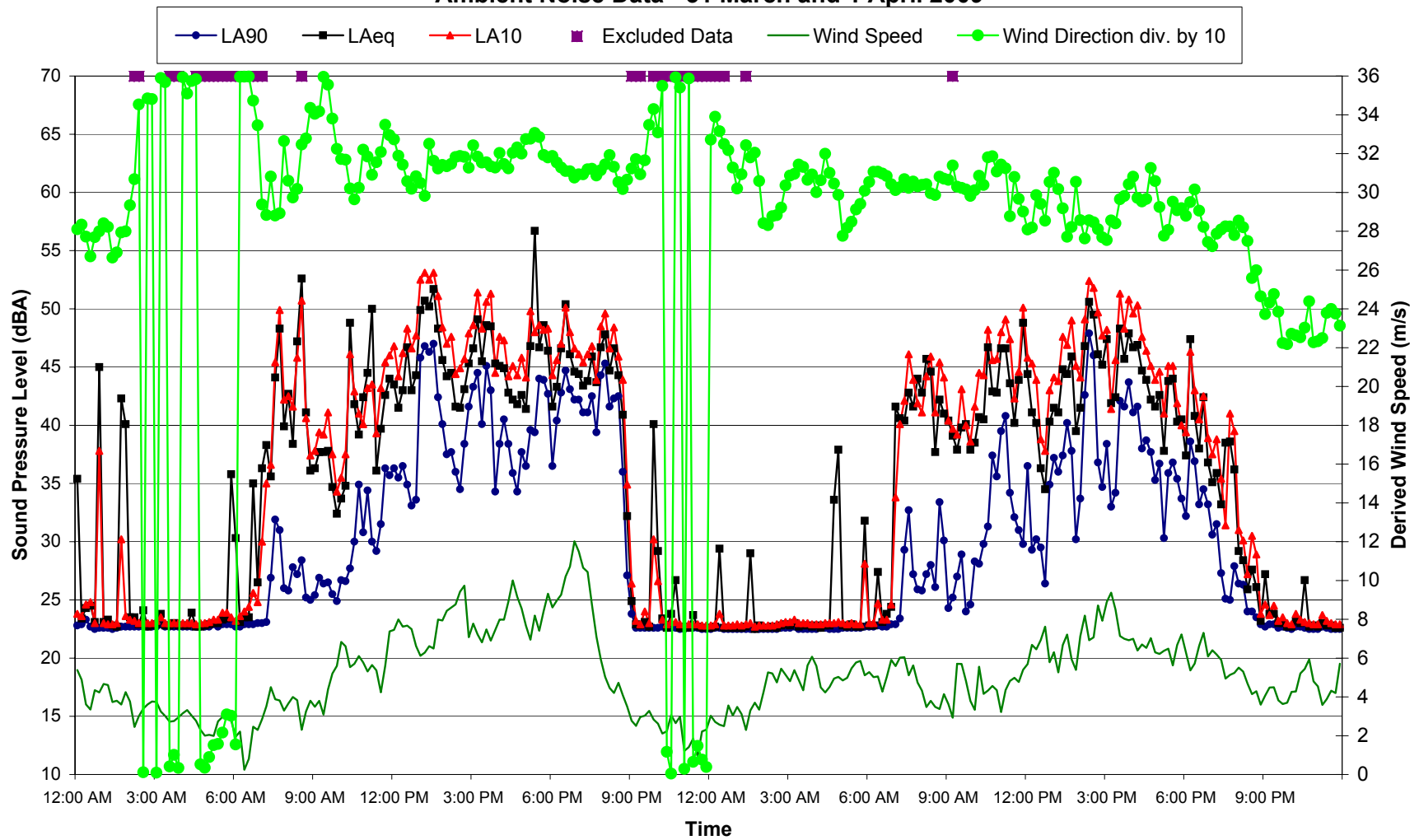
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Ambient Noise Data - 27 and 28 March 2009**



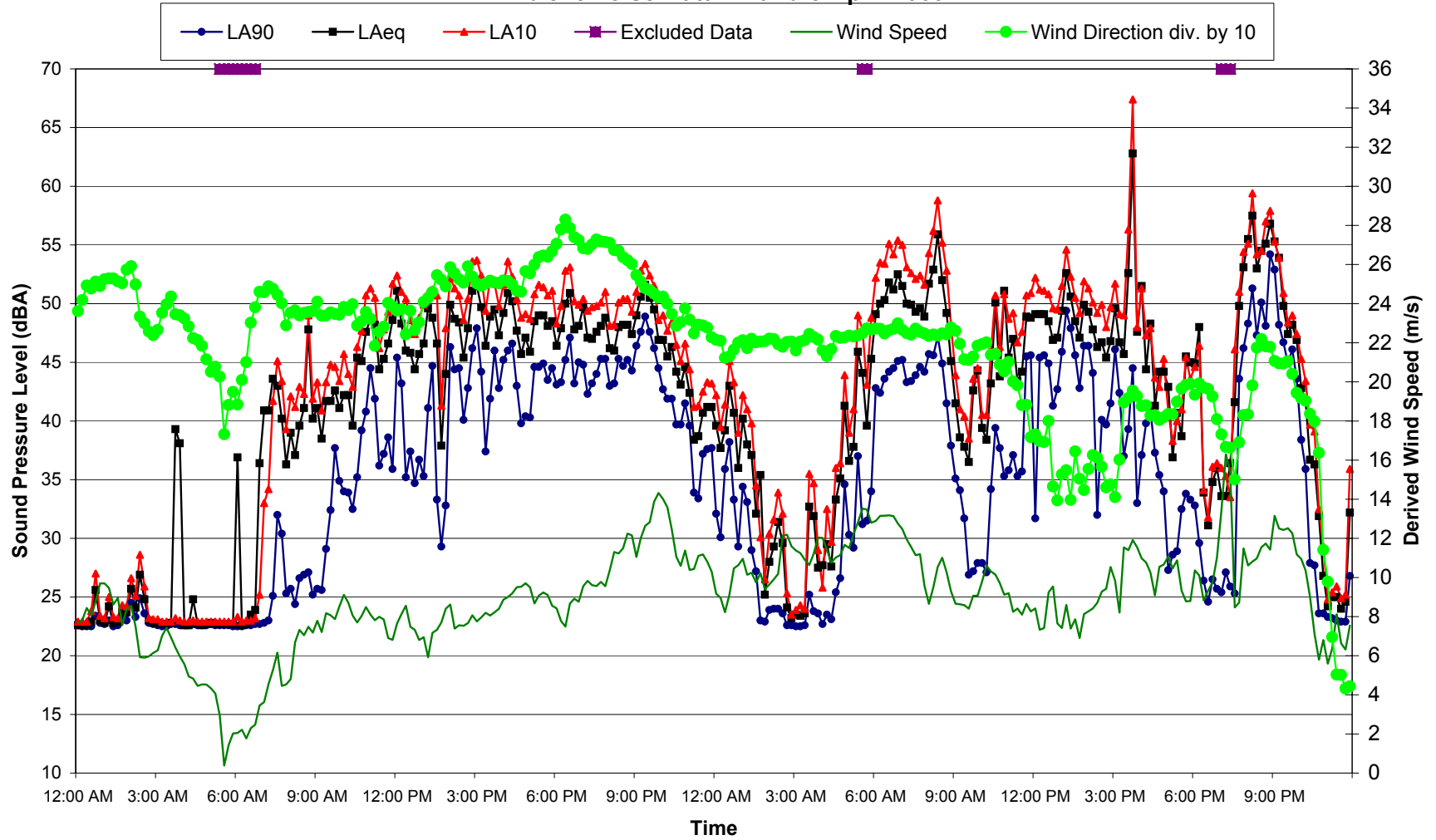
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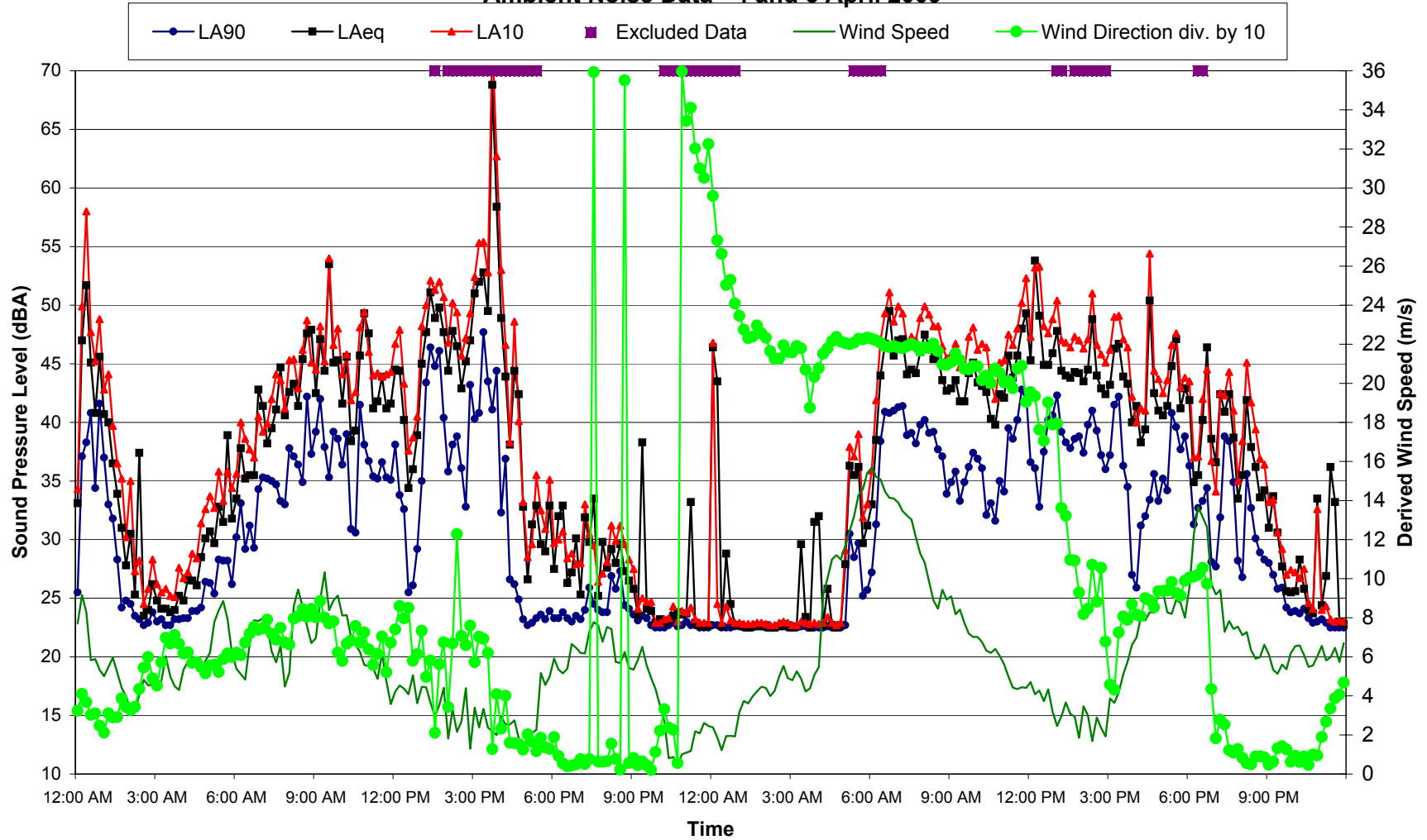
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Ambient Noise Data - 31 March and 1 April 2009



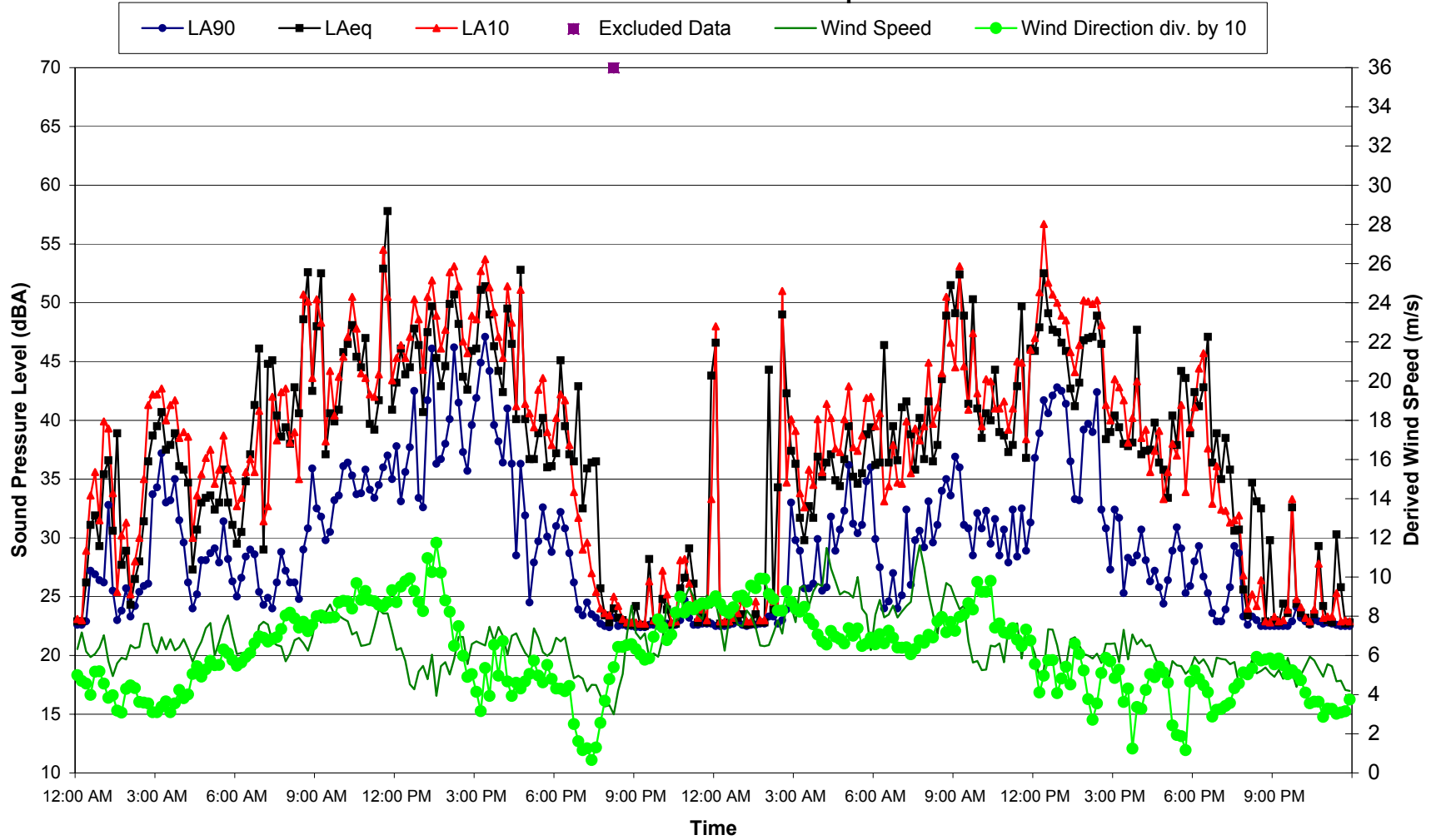
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Ambient Noise Data - 2 and 3 April 2009**



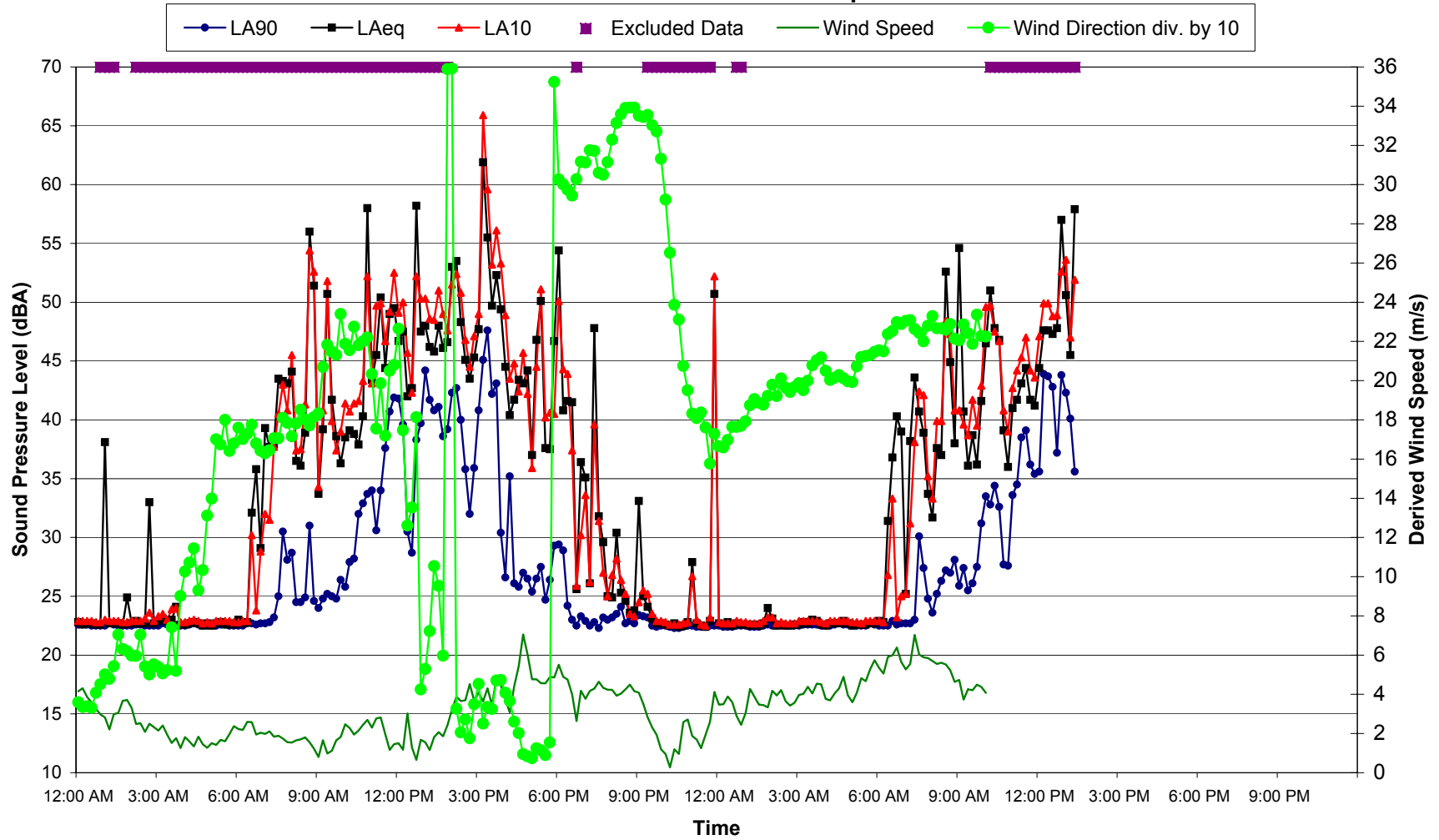
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Ambient Noise Data - 4 and 5 April 2009**



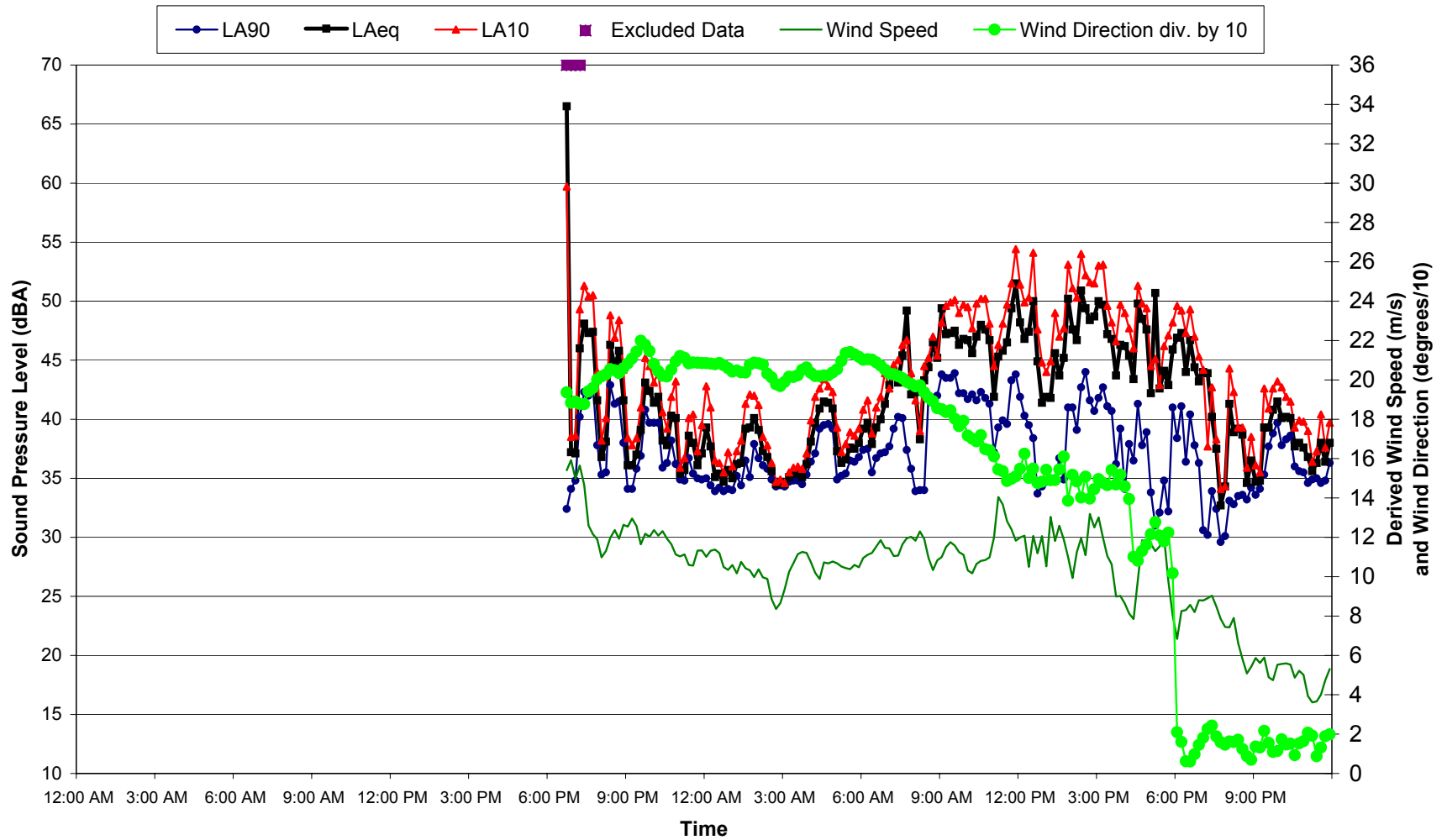
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Ambient Noise Data - 6 and 7 April 2009**



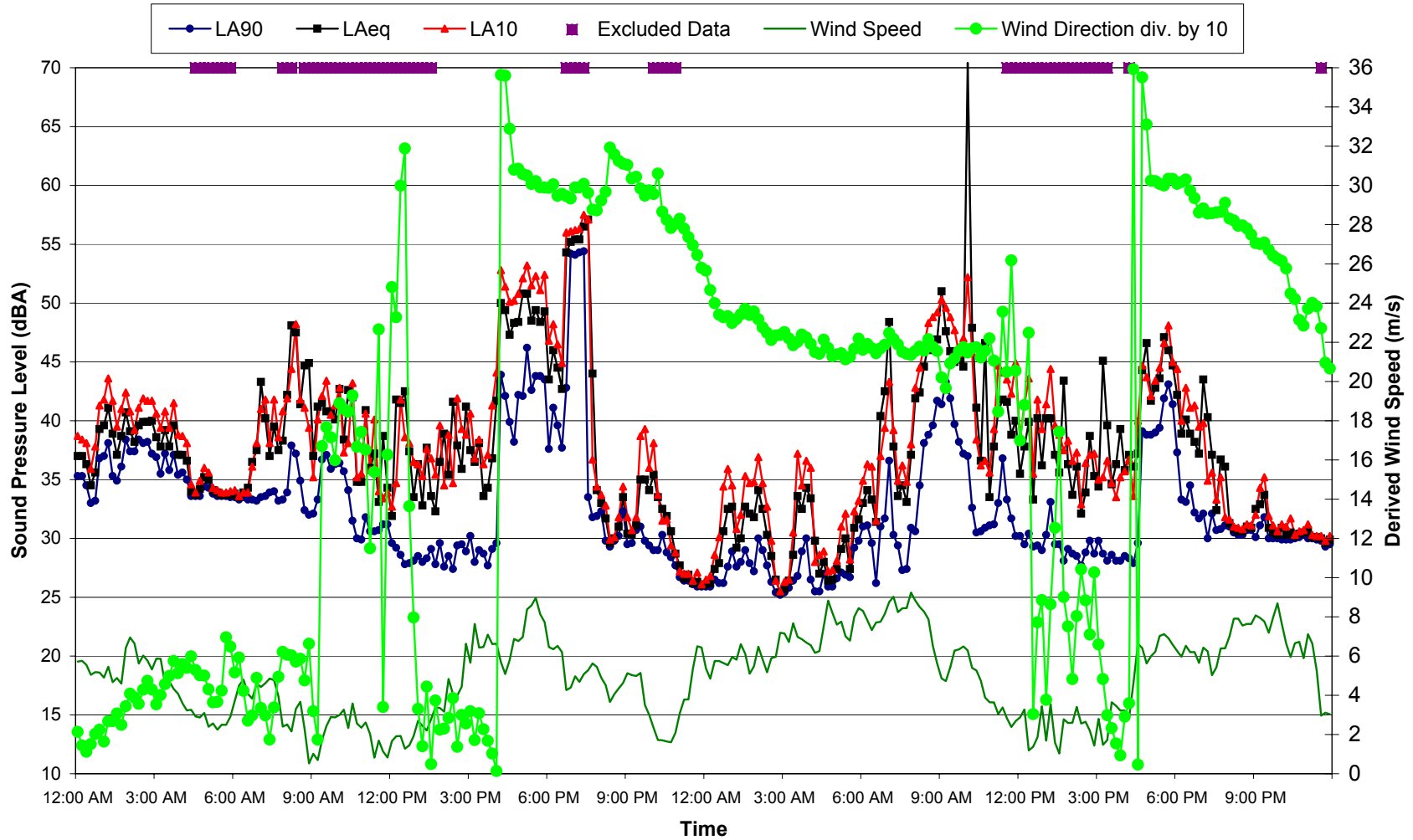
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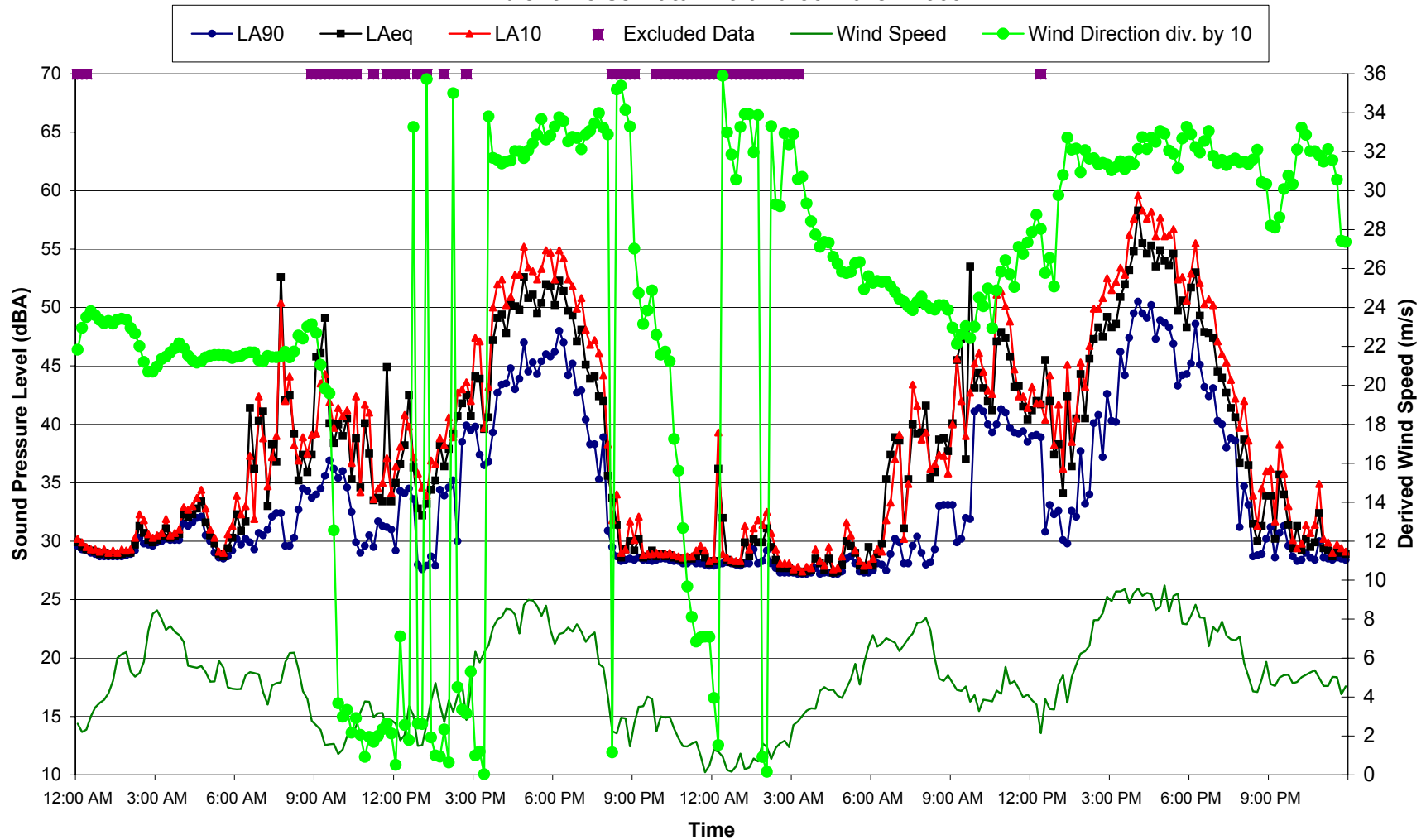
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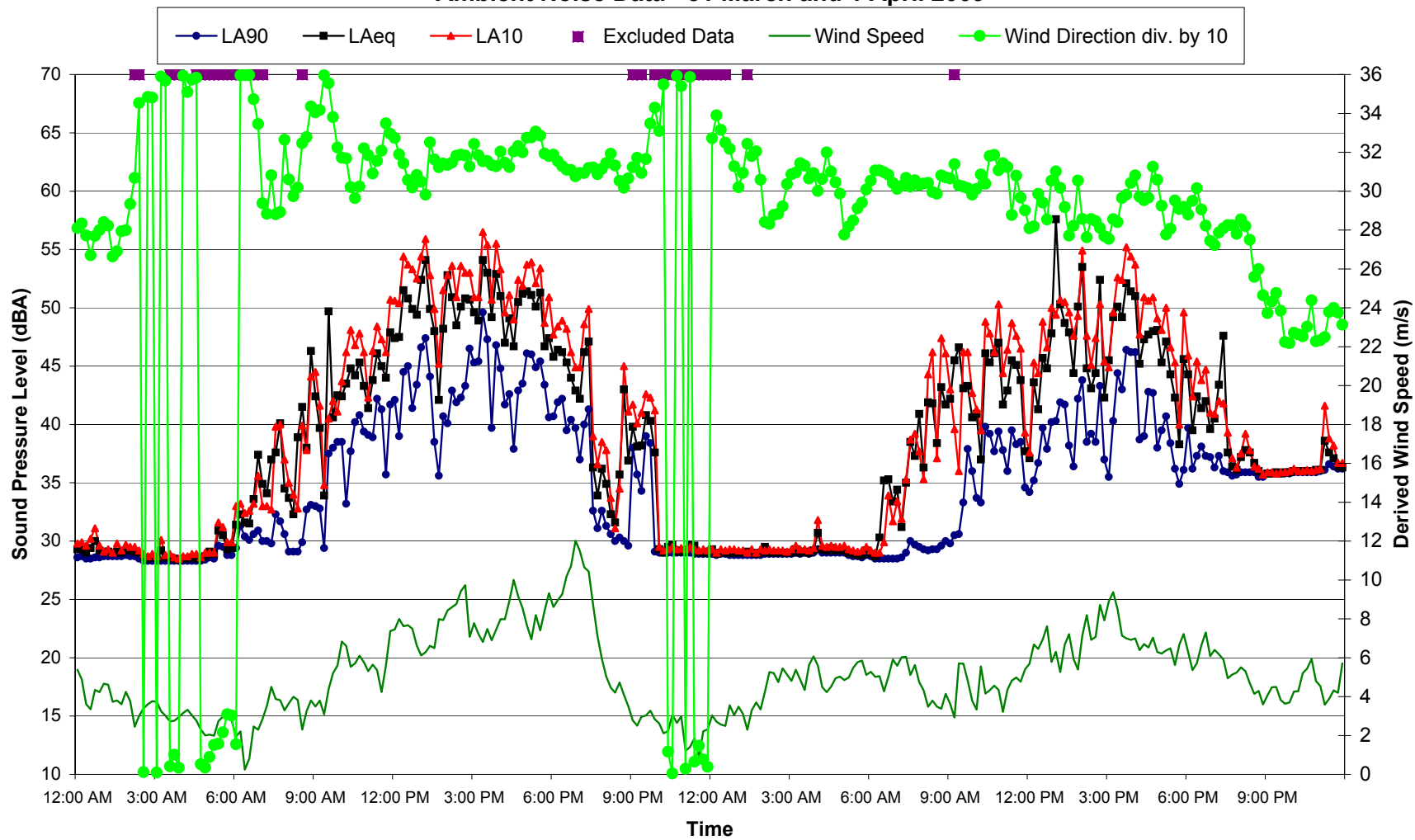
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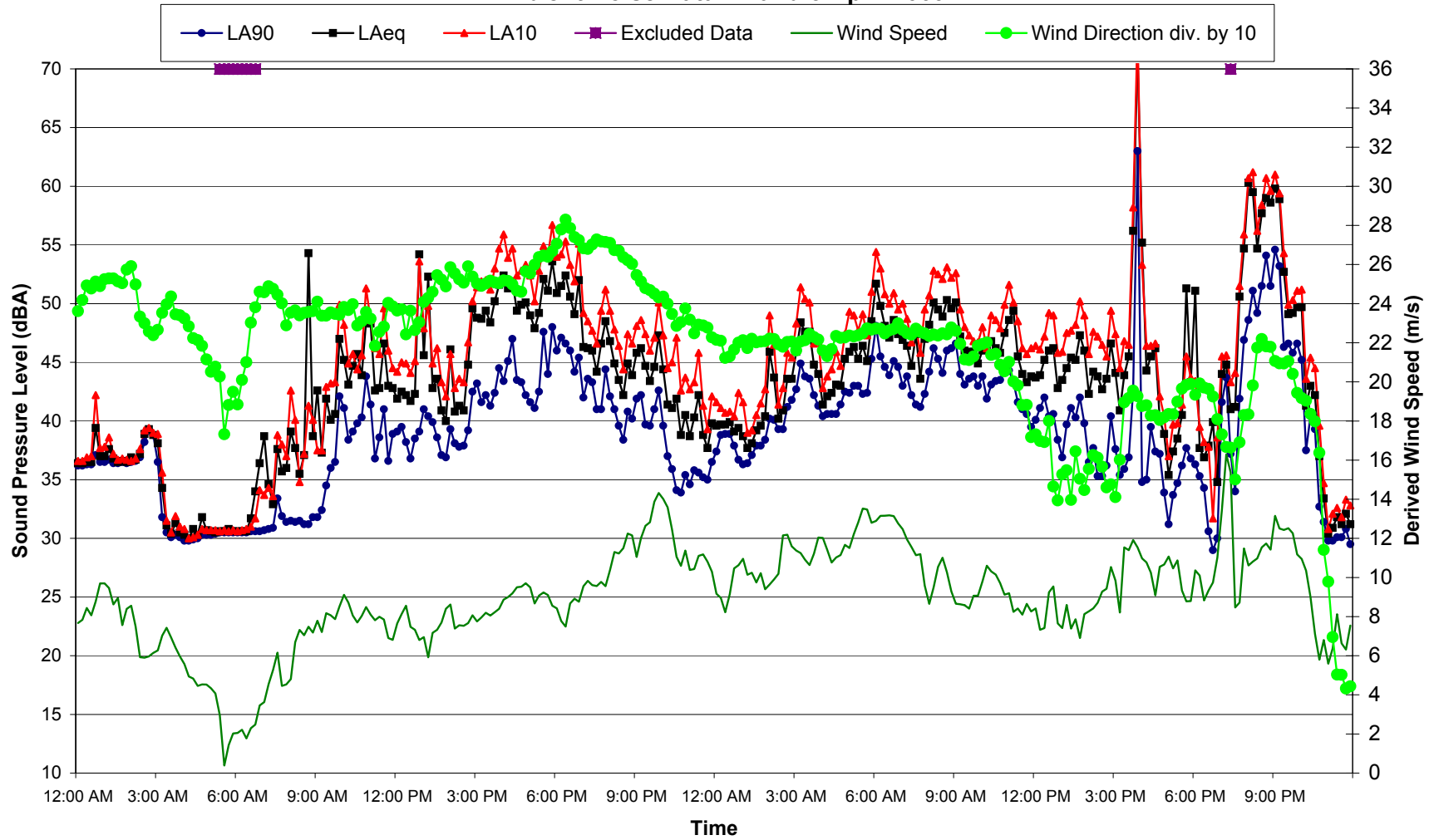
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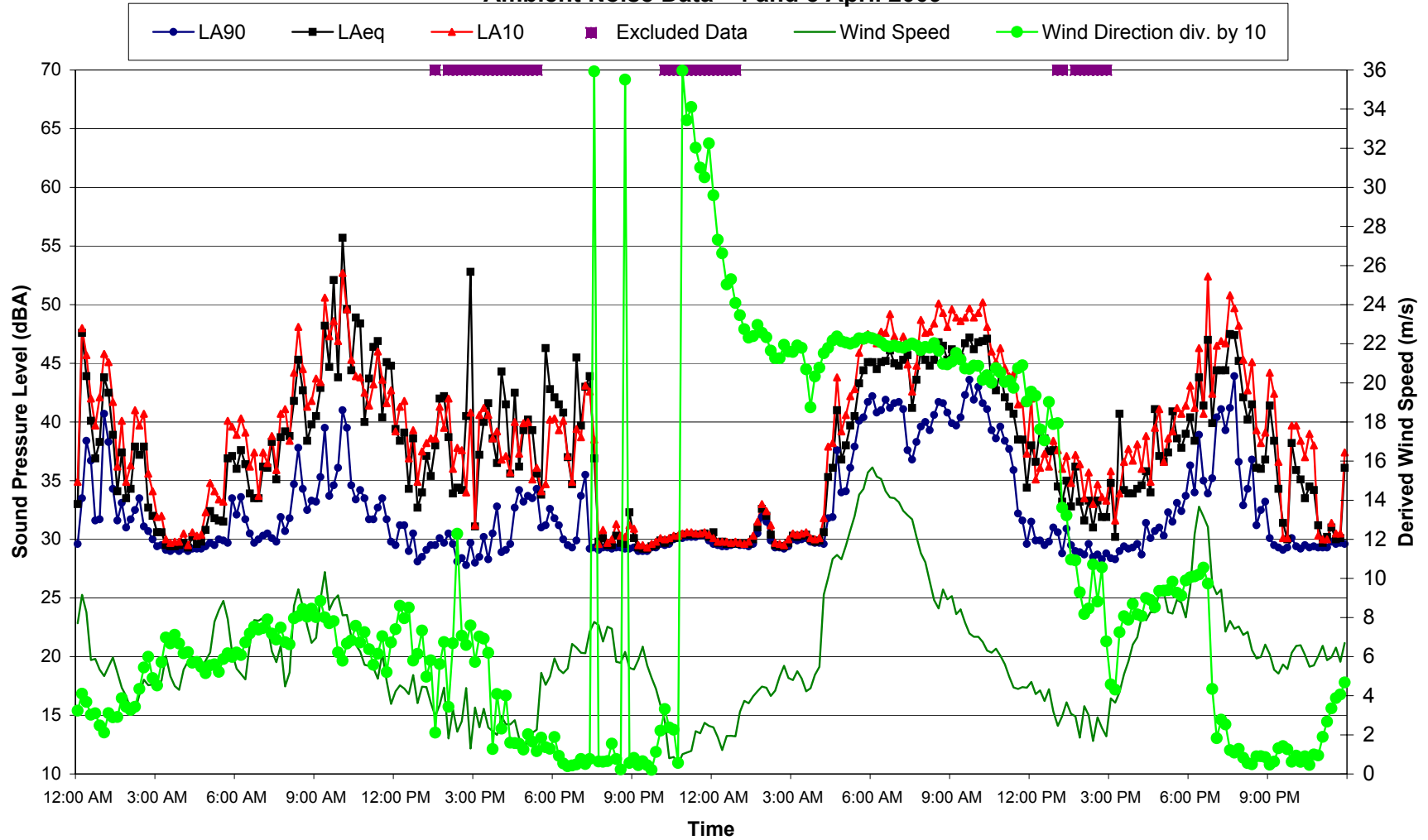
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Ambient Noise Data - 31 March and 1 April 2009



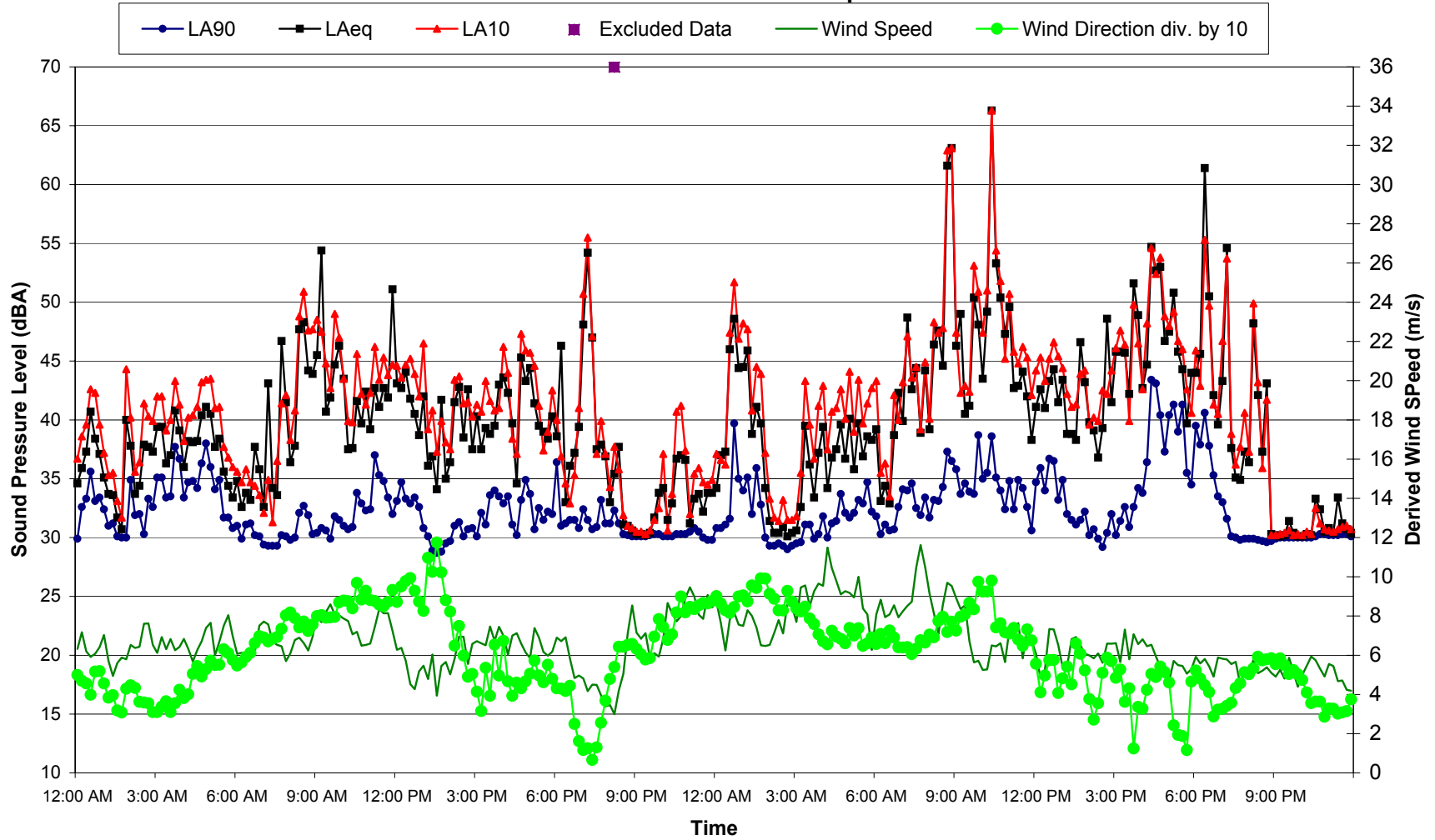
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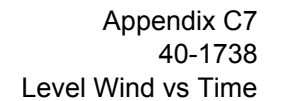
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Ambient Noise Data - 4 and 5 April 2009



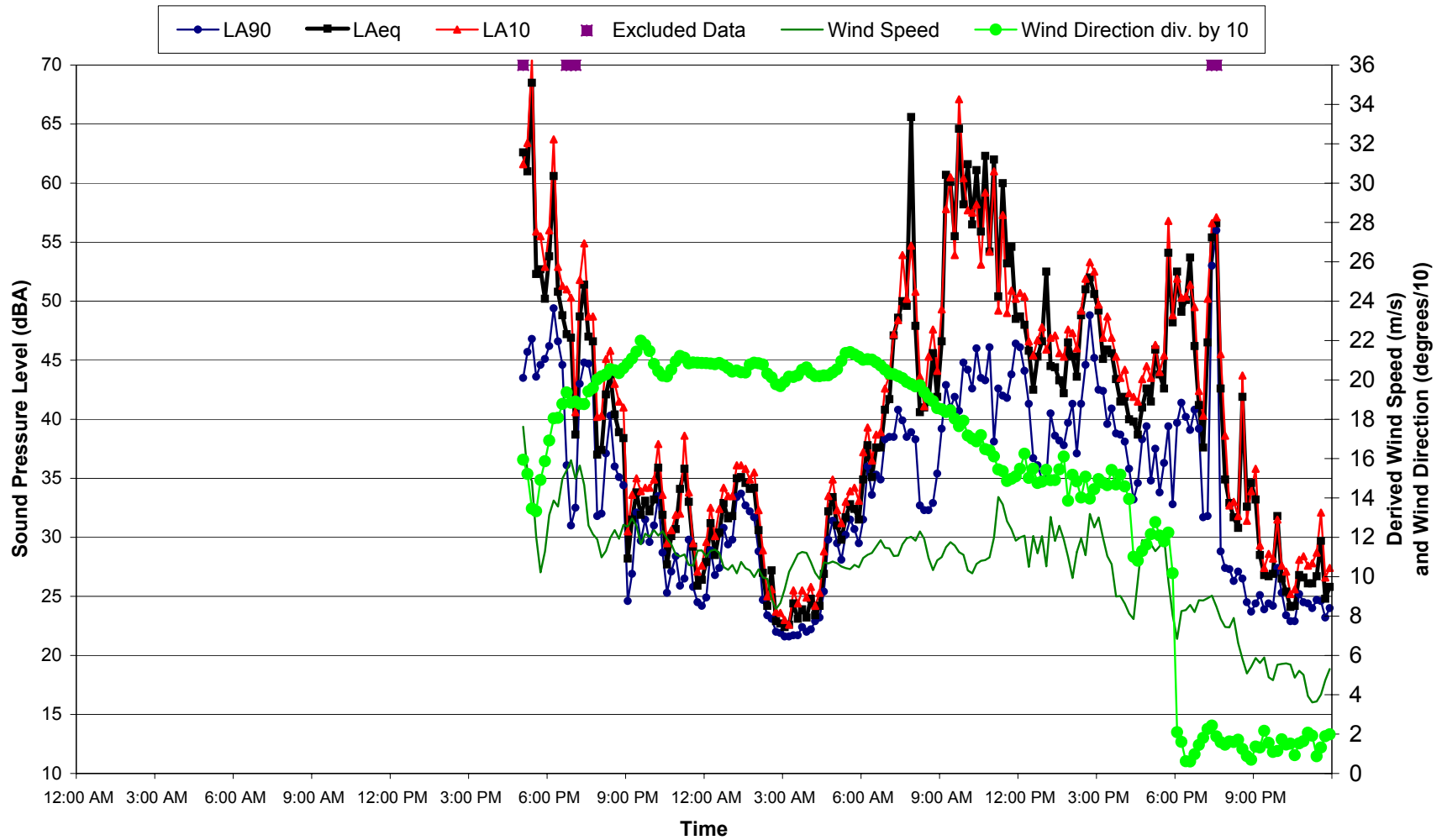
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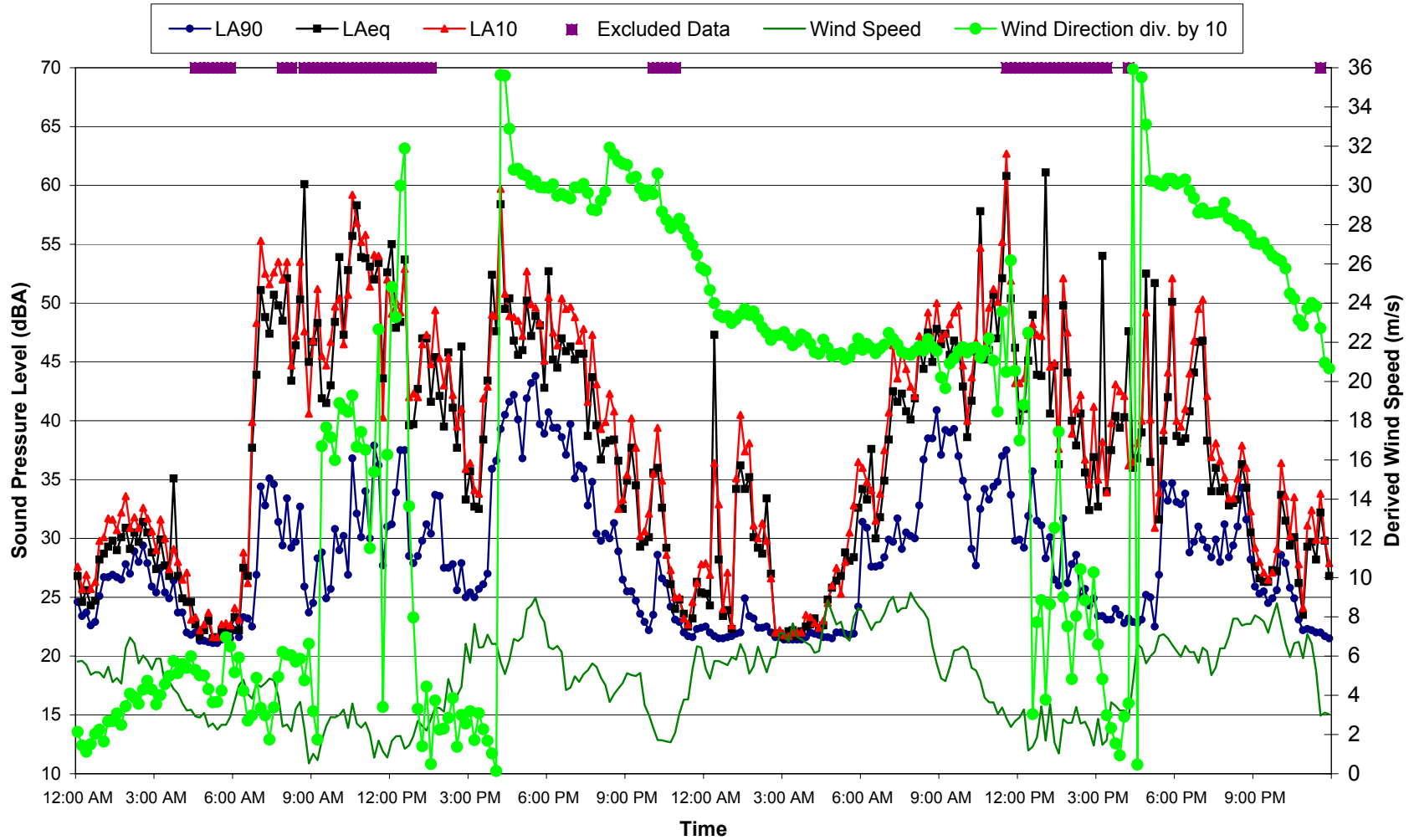
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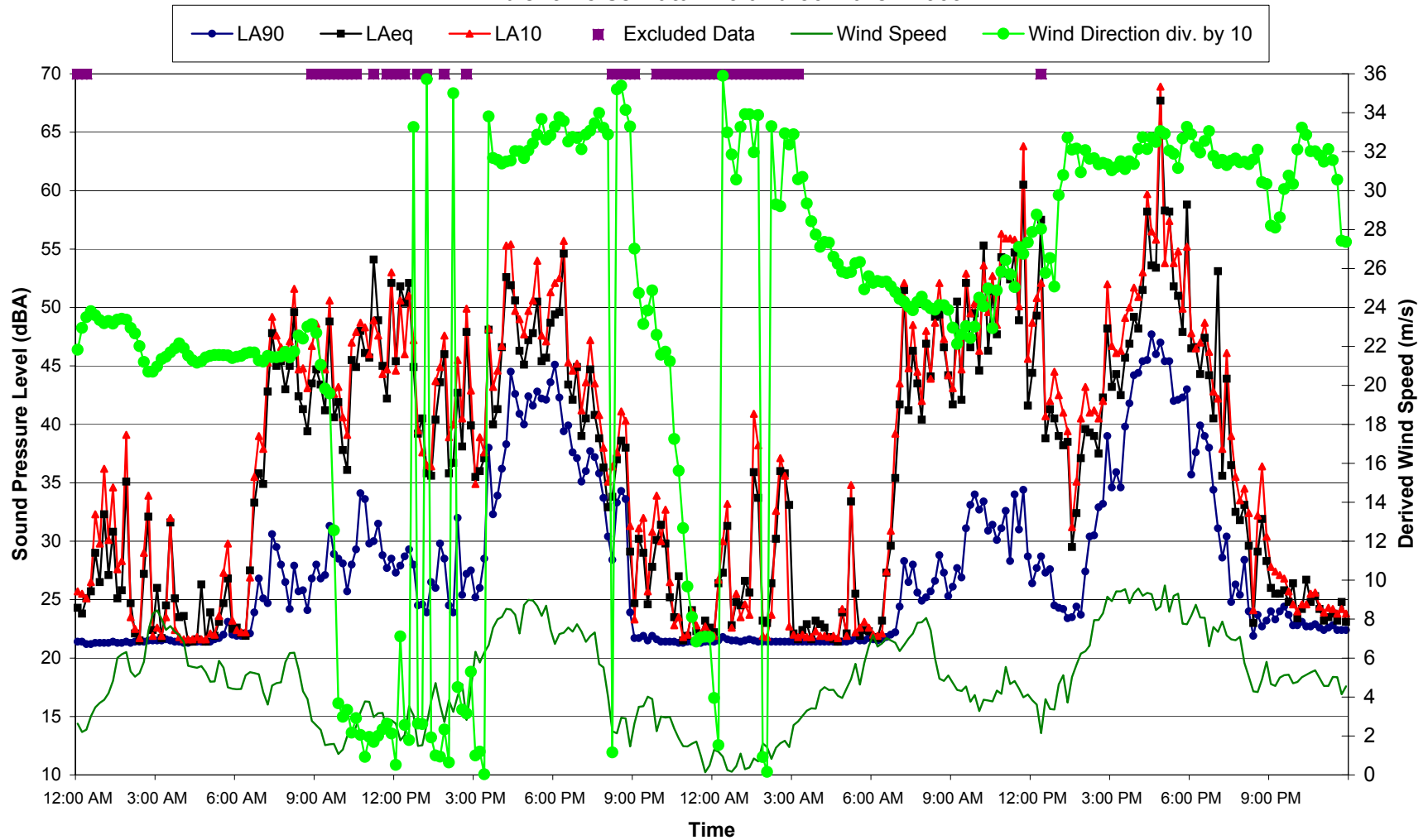
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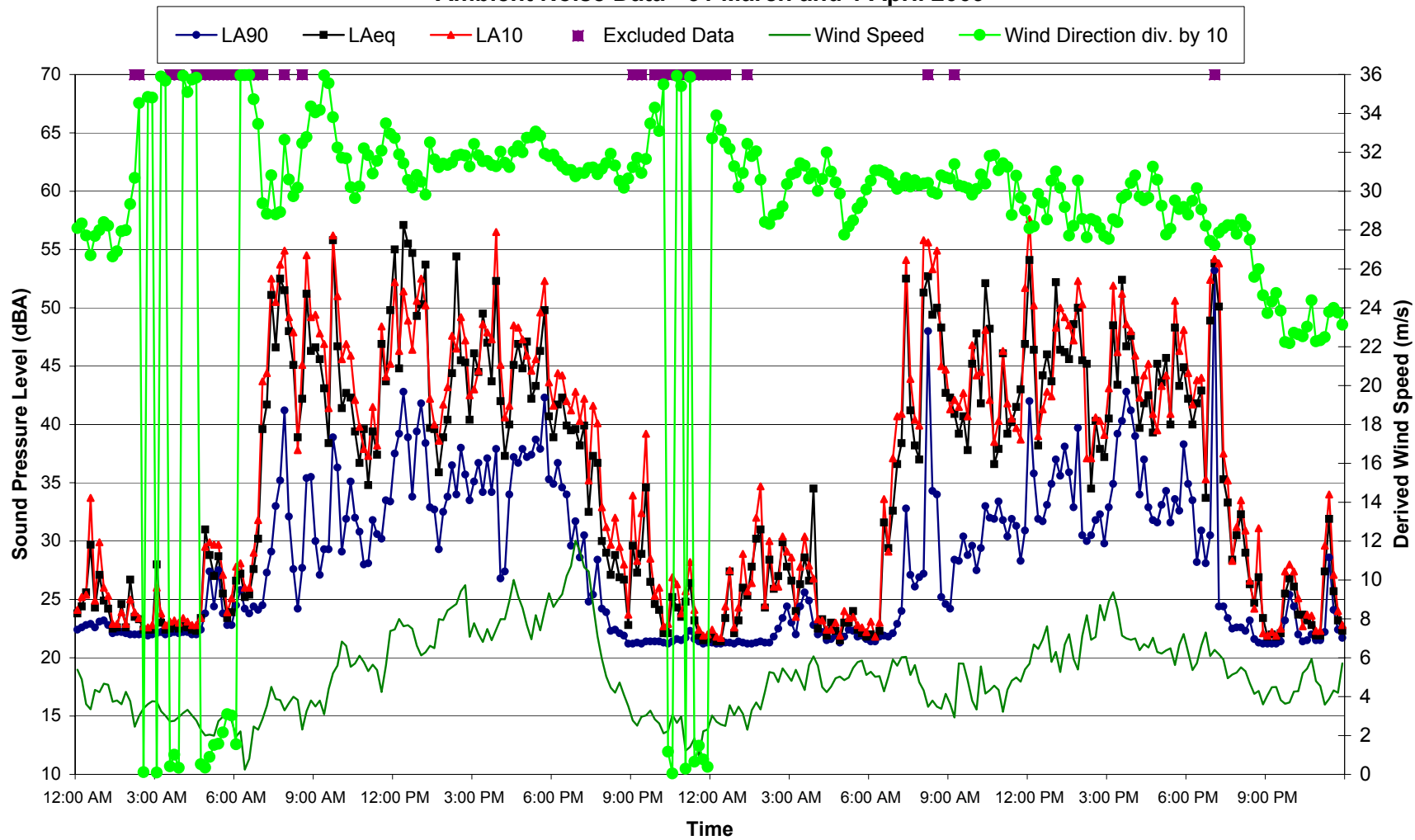
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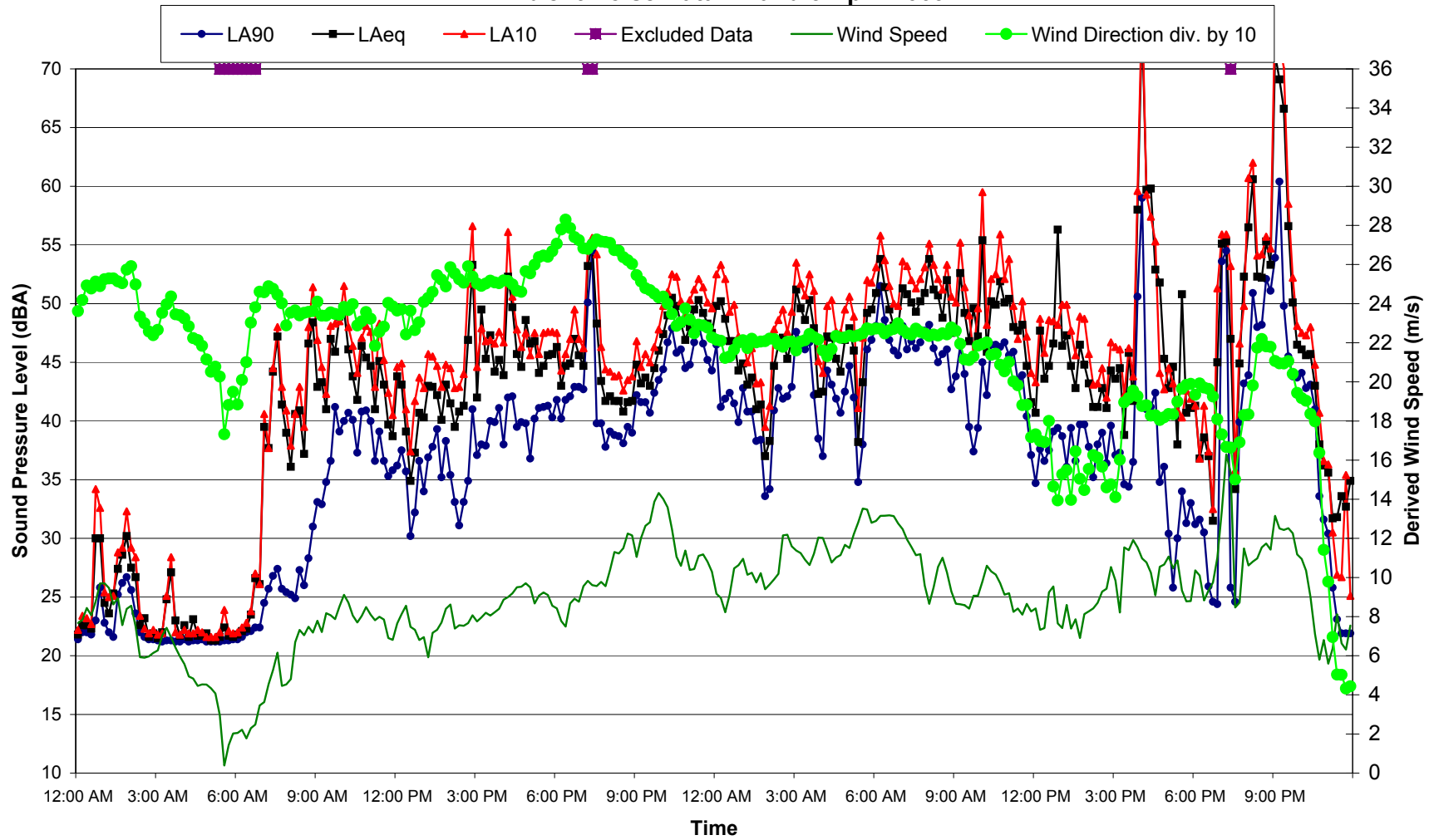
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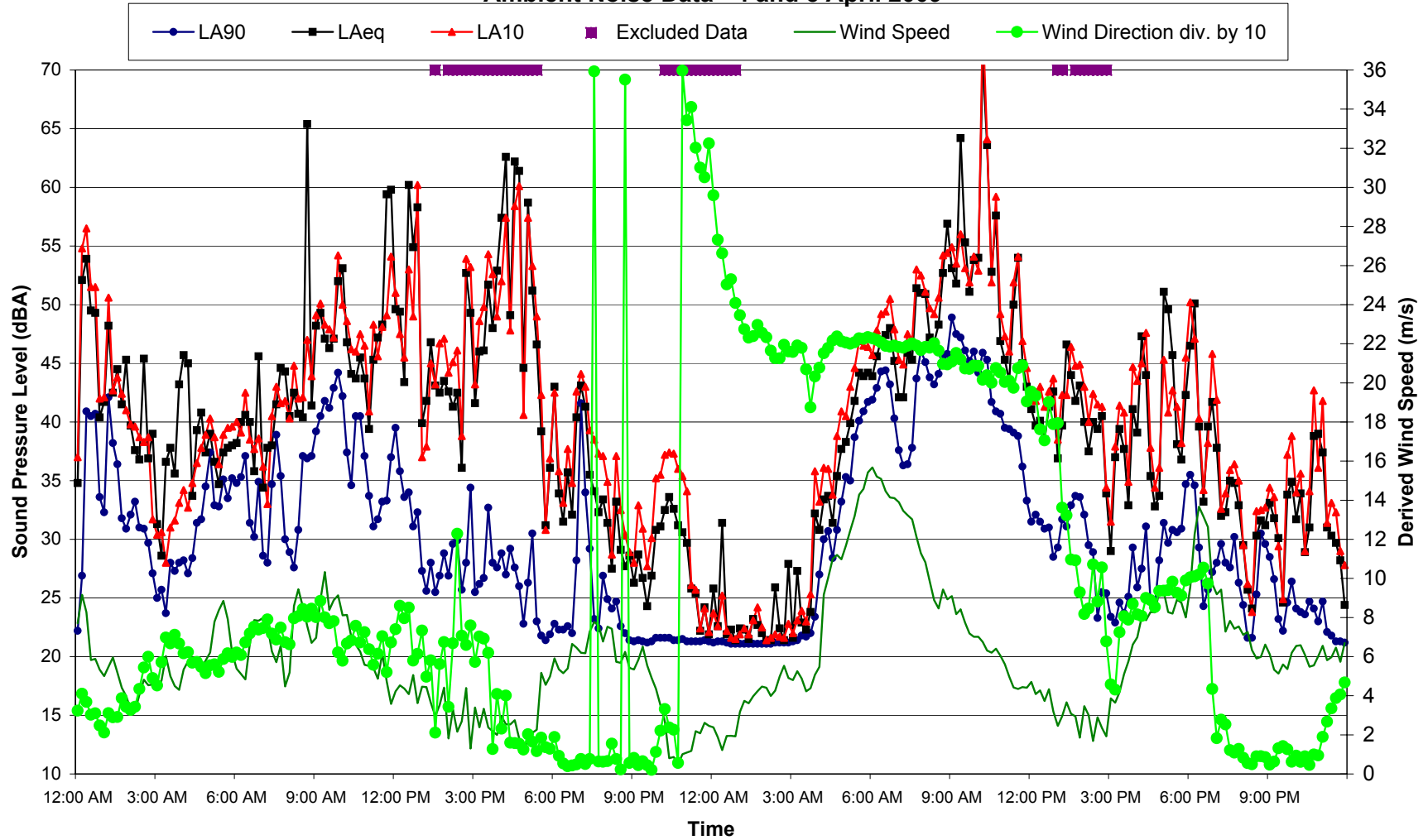
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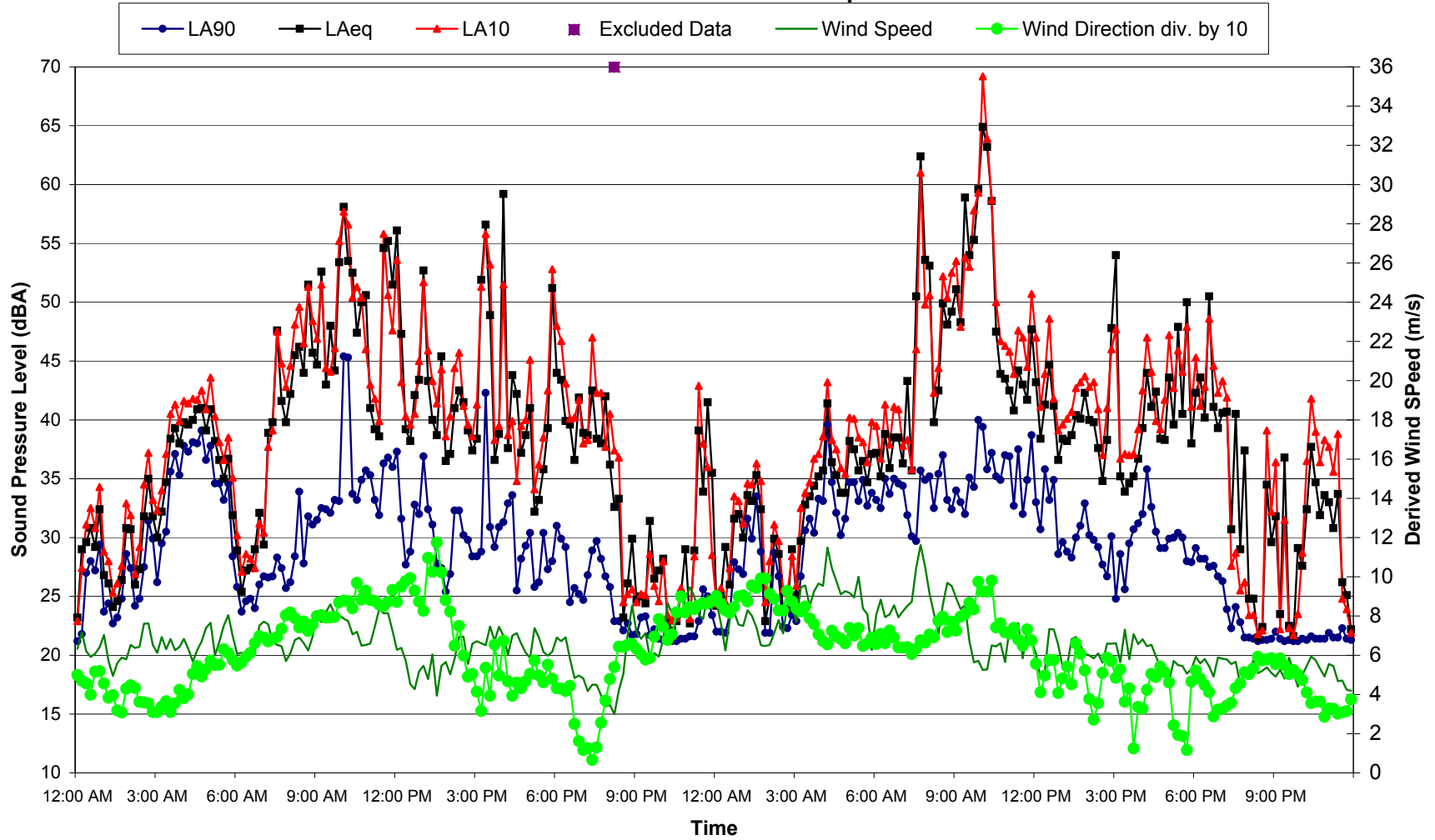
**Location Yandra - Boco Rock
Ambient Noise Data - 2 and 3 April 2009**



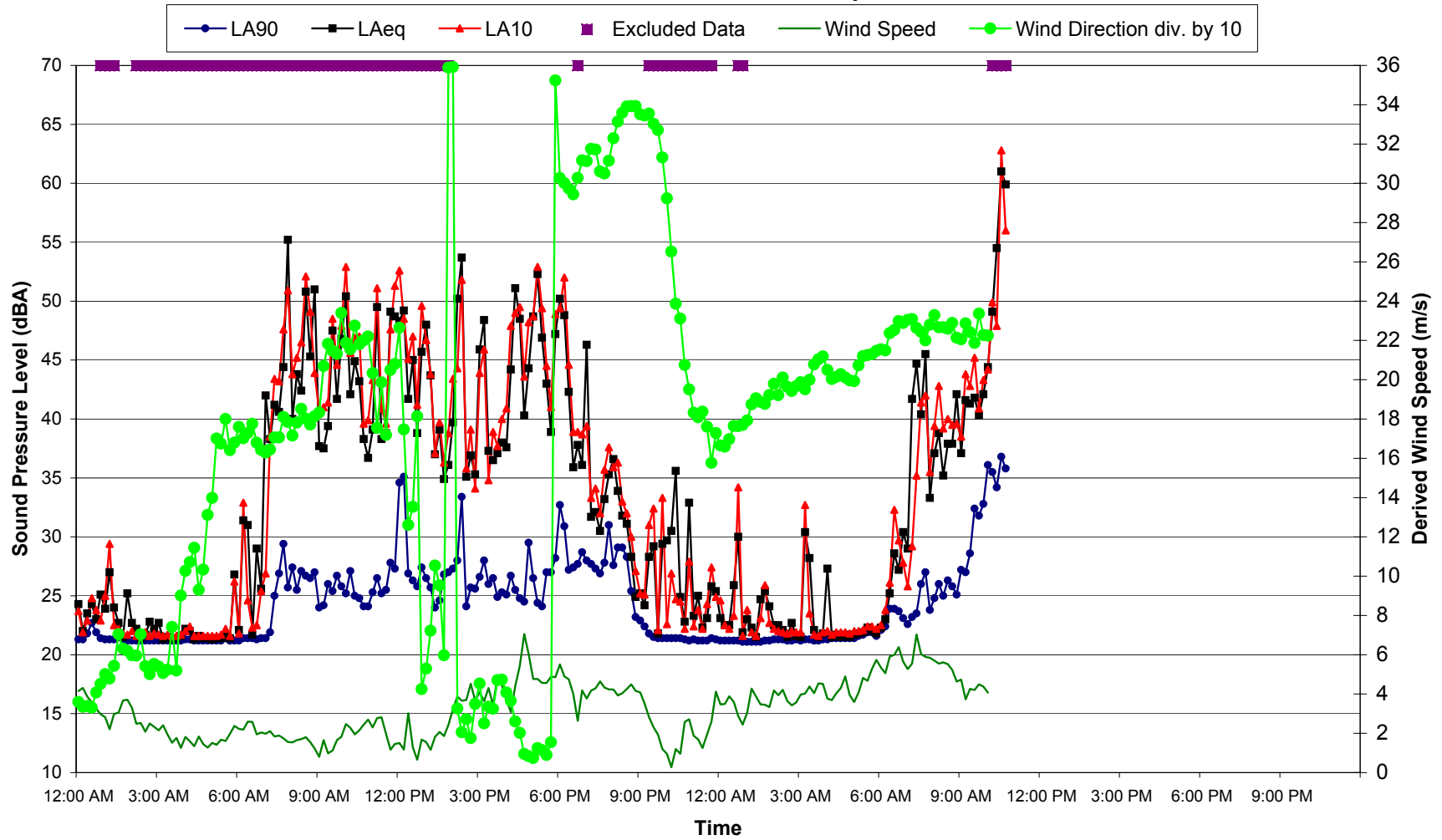
Location Yandra - Boco Rock
Ambient Noise Data - 4 and 5 April 2009



Location Yandra - Boco Rock
Ambient Noise Data - 6 and 7 April 2009



**Location Yandra - Boco Rock
Ambient Noise Data - 8 and 9 April 2009**



NOISE FUNDAMENTALS

Noise

Hearing is a fundamental human sense and is used constantly for communication and awareness of the environment.

Noise is generally described as being 'unwanted' or 'unfavourable' sound and, to some extent, is an individual or subjective response as what may be sound to one person, may be regarded as noise by another.

The measurement and assessment of sound has been developed steadily over the last century, taking into account human response measures such as hearing damage and other potential health affects such as stress. Complex sound measurement and analytical devices have also been developed.

A-weighting and 'dBA'

The overall level of a sound is usually expressed in terms of dBA, which is measured using the 'A-weighting' filter incorporated in sound level meters. These filters have a frequency response corresponding approximately to that of human hearing. People's hearing is most sensitive to sounds at mid frequencies (typically 500 Hz to 4,000 Hz) and less sensitive at lower and higher frequencies. The level of a sound in dBA is a considered a good measure of the loudness of that sound. Different sources having the same dBA level generally sound about equally as loud, although the perceived loudness can also be affected by the character of the sound (e.g. the loudness of human speech and a distant motorbike may be perceived differently, although they can be of the same dBA level).

A change of up to 3 dBA in the level of a sound is difficult for most people to detect, whilst a 3 dBA to 5 dBA change corresponds to a small but noticeable change in loudness. A 10 dBA change corresponds to an approximate doubling or halving in loudness.

Table 22 below presents examples of typical noise levels.

Table 22 Typical Noise Levels

Sound Pressure Level (dBA)	Typical Source	Subjective Evaluation
130	Threshold of pain	Intolerable
120 110	Heavy rock concert Grinding on steel	Extremely noisy
100 90	Loud car horn at 3 m Construction site with pneumatic hammering	Very noisy
80 70	Kerbside of busy street Loud radio or television	Loud
60 50	Department store General Office	Moderate to quiet
40 30	Inside private office Inside bedroom	Quiet to very quiet
20	Unoccupied recording studio	Almost silent

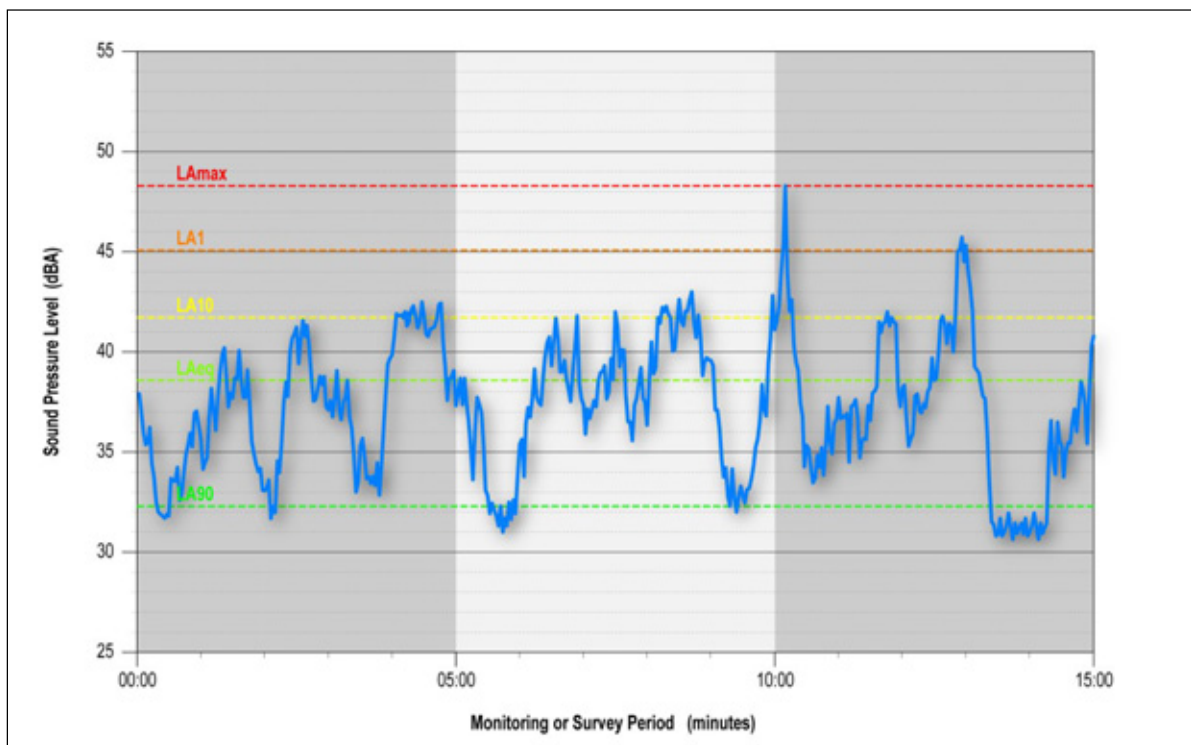
Statistical Noise Level Descriptors

As environmental noise usually varies in level over time, it is common to present the results of environmental noise testing in the form of statistical descriptors.

An explanation of noise level descriptors typically used for assessing the noise environment are illustrated in **Figure 21** and described below.

L _{Amax}	The maximum A-weighted noise level associated with a noise measurement interval.
L _{A1}	The noise level exceeded for 1% of a given measurement period. This parameter is often used to represent the <u>typical</u> maximum noise level in a given interval.
L _{A10}	The A-weighted sound pressure level exceeded 10% of a given measurement interval and is utilised normally to characterise <u>average maximum</u> noise levels.
L _{Aeq}	The A-weighted equivalent continuous sound level. It is defined as the steady sound level that contains the same amount of acoustical energy as a given time-varying sound over the same measurement interval. Can be loosely thought of as the 'average'.
L _{A90}	The A-weighted sound pressure level exceeded 90% of a given measurement interval and is representative of the <u>average minimum</u> sound level. Often used to describe the 'background' level.

Figure 21 Graphical Display of Typical Noise Descriptors



Character

The A-weighted noise level alone is a simplistic parameter and may not be sufficient in providing a thorough assessment of noise. The subjective character of a sound is also a significant parameter that needs to be considered.

Some basic characteristics of sound which can make a sound more or less intrusive include:

- The frequency content of a sound – i.e. low frequency sound such as exhaust noise or high frequency sound such as birds or insects,
- the ‘tonality’ of a sound – i.e. sound contains one or more prominent tones such as a horn or a whistle,
- the ‘impulsiveness’ of a sound – i.e. hammering, dog barking or a intermittently operating power saw.

The above parameters can usually be indicatively subjectively assessed, but more thorough assessment can be made with advanced sound measuring devices (i.e. narrow band or one-third octave analysis). Many noise policies provide an assessment method which applies penalties to sounds that exhibit particular characteristics such as the above.

Frequency Analysis

Frequency analysis is the process used to examine the tones (or frequency components) which make up the overall noise or vibration signal. This analysis was traditionally carried out using analogue electronic filters, but is now normally carried out using Fast Fourier Transform (FFT) analysers.

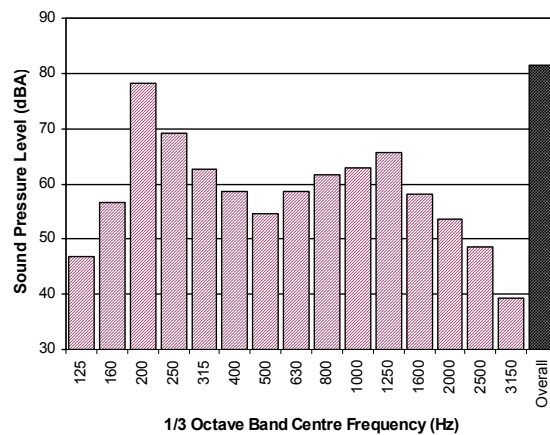
The units for frequency are Hertz (Hz), which represent the number of cycles per second.

Frequency analysis can be in:

- Octave bands (where the centre frequency and width of each band is double the previous band)
- 1/3 octave bands (3 bands in each octave band)
- Narrow band (where the spectrum is divided into 400 or more bands of equal width)

Figure 22 shows a 1/3 octave band frequency analysis where the noise is dominated by the 200 Hz band. Note that the indicated level of each individual band is less than the overall level, which is the logarithmic sum of the bands.

Figure 22 Representative 1/3 Octave Band Analysis



Vibration

Vibration may be defined as cyclic or transient motion. This motion can be measured in terms of its displacement, velocity or acceleration. Most assessments of human response to vibration or the risk of damage to buildings use measurements of vibration velocity. These may be expressed in terms of “peak” velocity or “rms” velocity.

The former is the maximum instantaneous velocity, without any averaging, and is sometimes referred to as “peak particle velocity”, or PPV. The latter incorporates “root mean squared” averaging over some defined time period.

Vibration measurements may be carried out in a single axis or alternatively as triaxial measurements. Where triaxial measurements are used, the axes are commonly designated vertical, longitudinal (aligned toward the source) and transverse.

The common units for velocity are millimetres per second (mm/s). As with noise, decibel units can also be used, in which case the reference level should always be stated. A vibration level V , expressed in mm/s can be converted to decibels by the formula $20 \log (V/V_0)$, where V_0 is the reference level (1E-6 mm/s). Care is required in this regard, as other reference levels are used by some organizations.

Human Perception of Vibration

People are able to “feel” vibration at levels lower than those required to cause even superficial damage to the most susceptible classes of building (even though they may not be disturbed by the motion). An individual's perception of motion or response to vibration depends very strongly on previous experience and expectations, and on other connotations associated with the perceived source of the vibration. For example, the vibration that a person responds to as “normal” in a car, bus or train is considerably higher than what is perceived as “normal” in a shop, office or dwelling.

Over-Pressure

The term “over-pressure” is used to describe the air pressure pulse emitted during blasting or similar events. The peak level of an event is normally measured using a microphone in the same manner as linear noise (ie unweighted), at frequencies both in and below the audible range.

Appendix E

Horizontal distance from receptor to WTG

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HORIZONTAL DISTANCE FROM RECEPTOR TO WTG

Receiver	Benbulbin	Coopers Hill	Glenfinnan	Yandra	Nestlebrae	Rockybah	Avonlake	Roselea	Woodbine	Boco	Wyuna	Kelton Plain	Sherwood	Telenbugm	Mia Mia	Riverside	Brooklyn	Old Springfield	Bungee	Coombala	Curry Flat	Old Curry Flat	Mountain View	Springfield	Timbry Lodge	Windella	h1	Lyndarra	Xennor	Kenilworth	Edendale	Belmore	Peters Park	Rosemount	Wodburn	Mohawke	Hyland Grange	Roslyn	h3	Lofty Vale	Kanoute	Kangaroo Camp Retreat	monastery	h2	Clifton
Dist. (km) to closest WTG	0.85	0.86	0.86	0.90	0.91	0.93	0.94	1.34	1.55	1.59	1.81	1.86	2.08	2.12	2.37	2.49	2.67	3.04	3.08	3.20	3.26	3.45	3.54	3.88	3.97	4.24	4.28	4.51	4.53	4.58	4.63	4.65	4.75	4.86	4.93	5.07	5.17	5.30	5.31	5.63	5.72	5.74	5.86	5.89	5.98
Number of WTG's<6km	43	19	27	56	49	63	35	38	26	65	37	28	41	17	19	51	27	33	22	11	13	21	23	25	20	22	17	11	7	20	9	12	11	8	16	5	6	6	5	3	1	1	1	1	1
WTG no:																																													
1	4.49	14.28	8.34	6.75	9.38	7.57	12.16	9.57	8.99	5.79	9.20	13.86	8.76	12.23	9.34	6.82	10.06	12.06	10.32	15.35	10.76	10.24	14.66	12.90	14.80	9.06	16.95	13.95	17.20	13.64	15.45	17.55	17.90	4.86	17.30	7.29	9.29	18.78	7.70	14.52	9.84	13.86	18.42	14.73	9.32
2	11.68	9.70	12.51	9.70	1.74	6.92	3.55	6.99	13.42	3.88	10.31	7.24	4.53	10.02	14.46	3.92	7.32	3.72	8.27	12.52	14.33	11.98	5.36	4.36	5.27	8.06	10.10	7.60	13.81	5.14	5.82	10.79	11.40	10.07	10.09	15.89	16.62	13.11	16.17	9.91	10.86	13.87	15.11	14.30	17.10
3	10.52	9.90	11.79	8.98	2.40	6.52	4.36	7.04	12.70	2.38	9.95	7.47	3.68	9.34	13.67	2.49	6.54	5.01	7.44	12.06	13.77	11.61	6.59	5.73	6.65	7.02	10.51	8.58	13.50	6.52	7.33	11.20	11.75	8.56	10.61	14.64	15.57	13.29	14.95	10.61	9.72	12.87	14.82	13.49	15.99
4	13.08	8.69	13.98	11.17	3.06	8.37	2.12	8.33	14.89	4.99	11.75	6.00	4.35	9.42	15.93	4.49	6.90	4.19	7.86	11.67	15.78	13.41	3.97	4.62	4.03	7.88	8.74	8.30	12.84	5.31	4.85	9.43	10.06	10.67	8.69	17.25	18.05	11.84	17.54	10.82	10.74	13.28	14.12	13.76	18.52
5	16.83	1.58	19.16	16.45	9.86	14.36	5.62	14.94	20.04	8.82	17.76	2.37	4.66	3.18	20.87	6.92	3.05	11.36	3.32	4.52	21.34	19.40	7.31	11.69	8.34	4.53	4.40	15.48	5.67	12.29	9.88	4.86	5.05	9.90	4.99	20.25	21.98	5.85	20.66	17.99	6.44	7.02	6.97	7.23	22.16
6	17.03	1.33	19.39	16.68	10.12	14.60	5.86	15.19	20.27	9.05	18.00	2.51	4.89	3.06	21.09	7.14	3.17	11.61	3.37	4.28	21.57	19.64	7.51	11.94	8.54	4.61	4.35	15.74	5.41	12.54	10.09	4.78	4.94	10.00	4.96	20.43	22.18	5.66	20.83	18.25	6.42	6.86	6.71	7.04	22.34
7	16.63	1.83	18.93	16.21	9.61	14.11	5.38	14.69	19.82	8.60	17.51	2.26	4.43	3.30	20.65	6.69	2.94	11.11	3.29	4.77	21.11	19.16	7.12	11.45	8.14	4.46	4.47	15.23	5.92	12.05	9.67	4.95	5.18	9.80	5.03	20.08	21.79	6.04	20.48	17.74	6.47	7.19	7.22	7.41	21.97
8	16.08	2.69	18.25	15.51	8.73	13.32	4.49	13.84	19.14	7.91	16.74	1.86	3.80	3.98	20.00	6.05	2.93	10.21	3.52	5.67	20.39	18.39	6.34	10.54	7.33	4.52	4.62	14.33	6.81	11.15	8.86	5.19	5.52	9.70	5.08	19.64	21.25	6.64	20.03	16.84	6.83	7.93	8.11	8.21	21.47
9	16.20	2.39	18.44	15.71	9.03	13.57	4.85	14.12	19.33	8.10	16.98	2.06	3.95	3.65	20.17	6.21	2.80	10.55	3.31	5.32	20.60	18.62	6.69	10.89	7.69	4.37	4.64	14.67	6.49	11.50	9.21	5.18	5.47	9.62	5.15	19.71	21.37	6.48	20.11	17.17	6.59	7.59	7.79	7.86	21.57
10	15.88	2.98	18.00	15.26	8.44	13.05	4.23	13.56	18.89	7.67	16.47	1.86	3.58	4.19	19.76	5.82	2.94	9.92	3.59	5.95	20.13	18.12	6.14	10.26	7.11	4.52	4.75	14.04	7.10	10.87	8.63	5.34	5.70	9.63	5.18	19.47	21.05	6.87	19.85	16.55	6.92	8.15	8.40	8.45	21.27
11	4.36	14.06	7.93	6.13	8.60	6.76	11.56	8.76	8.62	5.12	8.54	13.46	8.35	12.17	9.07	6.31	9.86	11.25	10.20	15.30	10.35	9.65	14.02	12.10	14.13	8.97	16.57	13.12	17.13	12.83	14.73	17.19	5.22	16.89	7.61	9.37	18.53	7.99	13.70	10.00	14.02	18.38	14.88	9.48	
12	13.26	7.63	14.48	11.66	3.90	9.02	1.61	9.16	15.39	4.91	12.43	5.07	3.40	8.32	16.39	3.99	5.83	5.29	6.80	10.58	16.38	14.10	4.07	5.72	4.41	6.89	7.96	9.39	11.78	6.40	5.49	8.64	9.24	10.04	7.97	17.33	18.32	10.94	17.65	11.88	9.75	12.20	13.06	12.67	18.73
13	10.85	9.82	11.85	9.04	1.76	6.40	4.17	6.71	12.76	2.99	9.82	7.59	4.23	9.86	13.78	3.23	7.09	4.27	8.01	12.50	13.75	11.49	6.18	4.99	6.14	7.66	10.56	7.92	13.88	5.78	6.72	11.25	11.83	9.29	10.60	15.04	15.83	13.45	15.33	10.04	10.40	13.47	15.20	14.07	16.29
14	6.09	12.37	8.41	5.90	5.74	5.10	8.91	6.82	9.26	2.41	7.83	11.26	6.27	11.03	10.02	4.03	8.39	8.44	8.96	14.13	10.72	9.28	11.26	9.28	11.31	7.92	14.40	10.68	15.87	10.03	11.87	15.05	15.50	6.09	14.64	10.03	11.25	16.69	10.36	11.64	9.71	13.60	17.17	14.40	11.56
15	14.34	5.76	15.94	13.14	5.73	10.66	1.71	10.95	16.85	5.88	14.09	3.31	2.80	6.66	17.80	4.40	4.44	7.11	5.38	8.75	14.74	15.76	4.27	7.47	5.01	5.76	6.34	11.22	9.91	8.10	6.39	7.02	7.57	9.79	6.47	18.24	19.47	9.16	18.59	13.75	8.57	10.61	11.19	11.02	19.81
16	11.20	10.19	11.95	9.14	1.24	6.35	4.12	6.44	12.86	3.63	9.74	7.79	4.83	10.40	13.91	3.95	7.68	3.56	8.60	12.96	13.76	11.41	5.87	4.27	5.71	8.31	10.67	7.28	14.29	5.06	6.17	11.36	11.96	10.10	10.66	15.44	16.11	13.66	15.71	9.50	11.07	15.59	14.65	16.80	
17	10.15	10.40	11.12	8.31	1.61	5.70	4.90	6.12	12.03	2.57	9.13	8.27	4.61	10.27	13.05	3.25	7.47	4.37	8.36	12.99	13.03	10.80	6.88	5.15	6.79	7.91	11.27	7.74	14.42	5.94	7.29	11.95	12.52	9.09	11.32	14.36	15.11	14.12	14.64	9.70	10.57	13.79	15.74	14.41	15.58
18	12.60	7.45	14.05	11.24	3.98	7.86	2.38	9.11	14.96	4.16	12.19	8.22	2.56	7.78	15.92	3.07	5.16	5.81	6.13	10.24	16.03	13.85	4.97	6.33	6.36	6.09	8.25	9.82	11.54	7.05	6.43	8.93	9.48	9.09	8.35	16.60	17.70	11.06	16.93	12.19	8.95	11.58	12.85	12.10	18.08
19	17.42	0.86	19.83	17.13	10.61	15.08	6.32	15.68	20.71	9.51	18.47	2.82	5.34	2.91	21.53	7.59	3.45	12.10	3.53	3.82	22.03	20.11	7.90	12.42	8.94	4.81	4.28	16.22	4.92	13.01	10.49	4.65	4.75	10.22	4.94	20.77	22.56	5.30	21.18	18.74	6.42	6.57	6.22	6.70	22.72
20	14.56	6.28	15.97	13.15	5.44	10.56	0.94	10.71	16.88	6.12	13.98	3.54	3.46	7.38	17.86	4.83	5.22	6.55	6.15	9.36	17.90	15.64	3.54	6.86	4.24	6.52	6.41	10.68	10.43	7.46	5.61	7.09	7.69	10.44	6.44	18.55	19.67	9.40	18.88	13.27	9.34	11.34	11.69	11.73	20.05
21	14.67	4.88	16.48	13.70	6.56	11.34	2.53	11.73	17.38	6.26	14.76	2.71	2.63	5.77	18.30	4.60	3.68	8.03	4.59	7.83	18.54	16.42	4.89	3.39	5.73	5.10	5.84	12.14	9.01	9.03	7.16	6.50	7.00	9.50	6.06	18.46	19.83	8.47	18.83	14.64	7.85	9.72	10.30	10.11	20.13
22	10.77	10.59	11.47	8.66	0.91	5.87	4.61	5.99	12.37	3.43	9.26	8.25	5.08	10.70	13.43	3.99	7.94	3.54	8.86	13.32	13.27	10.92	6.33	4.30	4.14	8.51	11.15	7.07	14.67	5.09	6.52	11.83	12.43	9.93	11.14	15.02	15.65	14.11	15.29	9.19	11.23	14.32	15.98	14.92	16.16
23	3.60	14.66	6.85	4.98	8.17	5.75	11.61	7.77	7.58	5.11	7.38	13.82	8.75	12.94	8.10	6.58	10.52	10.71	10.93	16.08	9.27	8.50	13.96	11.55	13.97	9.75	16.96	12.28	17.88	12.26	14.46	17.59	18.00	6.34	17.23	7.33	8.75	19.08	7.67	12.71	10.97	14.99	19.15	15.84	8.97
24	4.24	14.21	6.72	4.45	6.97	4.64	10.66	6.63	7.54	4.22	6.68	13.13	8.14	12.74	8.23	5.90	10.17	9.47	10.68	15.86	9.10	7.96	12.92	10.31	12.88	9.58	16.27	11.05	17.62	11.01	13.31	16.92	17.37	6.86	16.50	8.30	9.39	18.55	8.60	11.57	11.11	15.08	18.92	15.91	9.72
25	4.91	13.56	7.29	4.90	6.45	4.66	10.01	6.58	8.12	3.55	7.01	12.46	7.47	12.15	8.85	5.23	9.55	9.02	10.08	15.26	9.64	8.37	12.29	9.86	12.28	9.00	15.60	10.81	17.01	10.58	12.74	16.25	16.70	6.59	15.83	8.93	10.06	17.89	9.24	11.50	10.03	14.58	18.31	15.40	10.39
26	5.30	13.04	7.89	5.53	6.50	5.21	9.75	7.07	8.72	3.26	7.64	12.04	7.01	11.56	9.41	4.80	8.99																												

Receiver	Benbulbin	Coopers Hill	Glenfinnan	Yandra	Nestlebrae	Rockybah	Avonlake	Roselea	Woodbine	Boco	Wyuna	Kelton Plain	Sherwood	Telenbugm	Mia Mia	Riverside	Brooklyn	Old Springfield	Bungee	Coombala	Curry Flat	Old Curry Flat	Mountain View	Springfield	Timbry Lodge	Windella	h1	Lyndarra	Xenmor	Kenilworth	Edendale	Belmore	Peters Park	Rosemount	Wodburn	Mohawke	Hyland Grange	Roslyn	h3	Lofty Vale	Kanoute	Kangaroo Camp Retreat	monastery	h2	Clifton
Dist. (km) to closest WTG	0.85	0.86	0.86	0.90	0.91	0.93	0.94	1.34	1.55	1.59	1.81	1.86	2.08	2.12	2.37	2.49	2.67	3.04	3.08	3.20	3.26	3.45	3.54	3.88	3.97	4.24	4.28	4.51	4.53	4.58	4.63	4.65	4.75	4.86	4.93	5.07	5.17	5.30	5.31	5.63	5.72	5.74	5.86	5.89	5.98
Number of WTG's<6km	43	19	27	56	49	63	35	38	26	65	37	28	41	17	19	51	27	33	22	11	13	21	23	25	20	22	17	11	7	20	9	12	11	8	16	5	6	6	5	3	1	1	1	1	
WTG no:																																													
49	3.47	16.02	4.70	2.30	7.38	3.34	11.78	5.38	5.56	5.71	4.61	14.66	9.84	14.74	6.38	7.58	12.10	9.45	12.67	17.85	7.01	5.82	13.78	10.25	13.58	11.62	17.78	10.19	19.57	10.86	13.77	18.45	18.94	8.97	17.95	7.81	8.19	20.25	8.01	10.22	13.25	17.21	20.88	18.03	8.71
50	2.27	16.19	5.08	3.42	8.59	4.99	12.60	7.03	5.81	6.22	5.91	15.14	10.14	14.61	6.37	7.91	12.11	10.86	12.57	17.74	7.50	6.87	14.78	11.68	14.67	11.43	18.28	11.82	19.53	12.32	14.99	18.93	19.38	8.08	18.51	6.50	7.38	20.55	6.75	11.86	12.73	16.75	20.81	17.59	7.74
51	1.93	16.70	4.55	3.05	8.85	4.93	12.99	6.95	5.27	6.66	5.55	15.61	10.63	15.15	5.83	8.39	12.63	11.03	13.11	18.28	6.97	6.43	15.12	11.84	14.98	11.96	18.75	11.80	20.06	12.47	15.26	19.40	19.85	8.60	18.96	6.24	6.95	21.05	6.47	11.71	13.28	17.29	21.34	18.14	7.35
52	2.71	16.90	3.90	1.93	8.29	3.91	12.73	5.88	4.73	6.64	4.42	15.59	10.74	15.54	5.48	8.48	12.94	10.29	13.48	18.66	6.28	5.40	14.72	11.07	14.51	12.40	18.72	10.78	20.40	11.66	14.67	19.38	19.87	9.44	18.89	7.01	7.25	21.16	7.18	10.58	13.91	17.90	21.70	18.73	7.79
53	2.91	17.34	3.39	1.38	8.43	3.75	13.01	5.64	4.24	7.03	3.88	15.96	11.17	16.04	5.06	8.91	13.41	10.30	13.98	19.15	5.74	4.83	14.93	11.07	14.67	12.91	19.08	10.57	20.89	11.63	14.78	19.75	20.25	10.02	19.23	7.11	7.10	21.57	7.24	10.23	14.46	18.44	22.19	19.27	7.70
54	2.56	18.33	2.51	1.57	9.41	4.52	14.03	6.26	3.30	8.04	3.85	16.98	12.16	16.97	4.06	9.90	14.37	11.19	14.91	20.09	4.92	4.45	15.93	11.94	15.65	13.82	20.10	11.21	21.84	12.48	15.73	20.77	21.26	10.68	20.26	6.44	6.16	22.58	6.52	10.63	15.27	19.27	23.13	20.11	6.80
55	3.29	18.39	2.30	0.90	9.09	4.01	13.84	5.64	3.18	8.04	3.12	16.92	12.20	17.15	4.11	9.94	14.50	10.73	15.08	20.25	4.61	3.81	15.65	11.47	15.33	14.03	20.03	10.57	21.98	11.97	15.34	20.70	21.21	11.13	20.16	7.11	6.61	22.58	7.17	9.92	15.60	19.58	23.28	20.40	7.32
56	2.96	18.02	2.69	1.11	8.94	4.01	13.60	5.76	3.55	7.70	3.52	16.61	11.84	16.74	4.40	9.58	14.11	10.69	14.67	19.85	5.05	4.28	15.47	11.44	15.18	13.60	19.73	10.71	21.58	11.97	15.24	20.40	20.90	10.65	19.87	6.94	6.65	22.24	7.02	10.18	15.14	19.13	22.88	19.96	7.31
57	2.47	19.14	1.94	2.20	10.27	5.29	14.90	6.93	2.62	8.88	4.12	17.83	12.99	17.73	3.25	10.73	15.15	12.00	15.67	20.85	4.35	4.38	16.79	12.74	16.51	14.56	20.96	11.85	22.61	13.26	16.57	21.62	22.12	11.22	21.12	5.88	5.34	23.41	5.91	11.11	15.98	19.24	23.90	20.79	6.03
58	2.76	19.40	1.62	2.20	10.40	5.34	15.08	6.91	2.30	9.12	3.94	18.06	13.24	18.01	2.98	10.98	15.43	12.07	15.95	21.13	4.03	4.11	16.94	12.80	16.64	14.85	21.18	11.80	22.89	13.30	16.67	21.84	22.34	11.54	21.33	6.01	5.29	23.66	6.01	10.98	16.24	20.25	24.18	21.10	6.02
59	3.25	19.67	1.16	2.13	10.44	5.27	15.21	6.73	1.93	9.35	3.58	18.26	13.49	18.34	2.76	11.23	15.73	12.01	16.28	21.46	3.59	3.64	17.01	12.73	16.68	15.19	21.37	11.59	23.20	13.20	16.66	22.04	22.55	11.98	21.51	6.36	5.42	23.90	6.34	10.66	16.63	20.64	24.50	21.48	6.21
60	3.82	14.47	7.22	5.41	8.37	6.14	11.64	8.16	7.94	5.14	7.82	13.73	8.63	12.69	8.43	6.51	10.31	10.95	16.09	15.82	9.65	8.92	14.02	11.79	14.07	9.49	16.86	12.62	17.64	12.51	14.61	17.48	17.88	5.93	17.15	7.36	8.92	18.92	7.72	13.10	10.63	14.66	18.90	15.51	9.09
61	4.06	14.22	6.99	4.90	7.55	5.33	11.01	7.33	7.76	4.52	7.23	13.30	8.25	12.61	8.36	6.05	10.12	10.10	10.58	15.74	9.39	8.43	13.34	10.94	13.35	9.43	16.44	11.75	17.53	11.65	13.83	17.08	17.50	6.35	16.70	7.92	9.23	18.62	8.25	12.27	10.79	14.80	18.81	15.63	9.49
62	7.56	15.19	8.90	4.25	4.37	1.11	9.50	1.71	7.78	5.41	4.36	13.09	9.16	14.74	8.92	7.21	11.92	5.64	12.72	17.63	8.46	6.03	10.90	6.36	10.45	11.99	16.04	6.07	19.15	6.89	10.31	16.73	17.32	11.20	16.04	11.85	11.71	18.95	12.00	6.56	14.29	17.93	20.47	18.64	12.39
63	7.53	15.67	6.60	4.04	4.78	0.93	9.94	1.34	7.47	5.87	3.94	13.56	9.65	15.23	8.62	7.68	11.24	5.88	13.20	18.11	8.08	5.59	11.28	6.58	10.80	12.47	16.49	5.98	19.63	7.06	10.61	17.18	17.78	11.58	16.49	11.79	11.51	19.42	11.92	6.27	14.70	18.40	20.96	19.11	12.23
64	2.46	16.65	4.28	2.44	8.37	4.26	12.62	5.66	5.07	6.47	4.93	15.43	10.53	15.22	5.75	8.27	12.65	10.47	13.17	18.34	6.68	5.90	14.73	11.27	14.58	12.67	18.57	11.13	20.10	11.88	14.78	19.23	19.70	8.97	18.76	6.79	7.25	20.95	6.99	11.02	13.70	17.50	21.40	18.34	7.73
65	0.90	17.94	3.79	3.19	10.03	5.73	14.27	7.64	4.38	7.95	5.58	16.89	11.90	16.32	4.75	9.67	13.85	12.11	14.30	19.46	6.17	6.13	16.37	12.90	16.21	13.13	20.03	12.58	21.26	13.50	16.43	20.68	21.14	9.47	20.25	5.17	5.66	22.31	5.35	12.22	14.31	18.34	22.53	19.90	6.69
66	1.17	17.11	4.77	3.78	9.72	5.88	13.71	7.88	5.38	7.29	6.26	16.18	11.14	15.41	5.74	8.93	12.99	11.96	13.40	18.55	7.17	6.98	15.91	12.77	15.81	12.32	19.32	12.58	21.36	13.40	16.12	19.96	20.39	8.47	19.56	5.36	6.34	21.52	5.62	12.62	13.34	17.36	21.62	18.22	6.65
67	2.37	18.63	2.33	1.89	9.80	4.90	14.40	6.82	3.07	8.37	4.05	17.32	12.48	17.24	3.75	10.22	14.65	11.58	15.18	20.36	4.75	4.51	16.31	12.33	16.04	14.07	20.45	11.55	22.12	12.86	16.11	21.11	21.60	10.82	20.61	6.11	5.77	22.90	6.17	10.92	15.48	19.49	23.41	20.33	6.42
68	5.96	17.53	4.26	1.97	7.07	1.68	12.16	2.81	5.11	7.31	1.81	25.63	11.37	16.77	6.27	9.23	13.98	8.23	14.70	19.76	5.74	3.45	13.63	8.90	13.17	13.82	18.63	7.71	21.37	9.33	12.98	19.32	19.89	12.01	18.67	9.97	9.35	21.45	10.03	7.15	15.82	19.66	22.69	20.42	10.12
69	4.88	17.20	3.86	1.12	7.27	2.02	12.20	3.71	4.76	6.86	2.46	15.49	11.01	16.26	5.85	8.80	13.51	8.76	14.18	19.30	5.74	3.90	13.85	9.49	13.48	13.23	18.55	8.65	20.95	9.98	13.42	19.23	19.77	11.09	18.62	8.99	8.60	21.25	9.08	8.26	15.10	18.99	22.27	19.78	9.31
70	5.53	17.48	3.99	1.56	7.21	1.82	12.24	3.18	4.87	7.20	1.93	15.65	11.30	16.64	6.01	9.14	13.87	8.49	14.57	19.66	5.63	3.50	13.79	9.18	13.36	13.66	18.68	8.11	21.29	9.64	13.22	19.36	19.93	11.71	18.73	9.56	8.99	21.45	9.62	7.59	15.61	19.47	22.61	20.25	9.79
71	4.81	16.91	4.07	1.28	7.07	1.93	11.96	3.73	4.98	6.57	2.76	15.22	10.72	15.95	6.04	8.51	13.21	8.64	13.88	19.00	6.01	4.20	13.65	9.38	13.29	12.93	18.28	8.67	20.66	9.89	13.26	18.96	19.51	10.80	18.37	8.98	8.70	20.97	9.09	8.38	14.80	18.69	21.98	19.48	9.39
72	4.10	16.93	3.83	1.07	7.46	2.56	12.22	4.44	4.74	6.56	3.19	15.36	10.72	15.83	5.73	8.49	13.13	9.19	13.76	18.91	5.96	4.47	14.01	9.94	13.70	12.76	18.45	9.37	20.60	10.48	13.74	19.12	19.65	10.36	18.56	8.31	8.16	21.06	8.43	10.10	14.52	18.45	21.91	19.25	8.81
73	15.03	4.02	17.04	14.28	7.40	12.03	3.41	12.52	17.93	6.73	15.45	2.37	2.75	4.87	18.82	4.93	3.00	8.94	3.84	6.92	19.14	17.10	5.61	9.32	6.51	4.52	5.47	13.05	8.13	9.95	7.98	6.10	6.54	9.27	5.80	18.71	20.20	7.84	19.09	15.54	7.16	8.84	9.43	9.21	20.46
74	11.13	9.50	12.19</																																										

Receiver	Benbulbin	Coopers Hill	Glenfinnan	Yandra	Nestlebrae	Rockybah	Avonlake	Roselea	Woodbine	Boco	Wyuna	Keilton Plain	Sherwood	Telenbugrm	Mia Mia	Riverside	Brooklyn	Old Springfield	Bungee	Coombala	Curry Flat	Old Curry Flat	Mountain View	Springfield	Timbory Lodge	Windella	H1	Lyndarra	Xennor	Kenilworth	Edendale	Belmore	Peters Park	Rosemount	Wodburn	Mohawke	Hyland Grange	Roslyn	H3	Lofty Vale	Kanoute	Kangaroo Camp Retreat	monastery	H2	Clifton
Dist. (km) to closest WTG	0.85	0.86	0.86	0.90	0.91	0.93	0.94	1.34	1.55	1.59	1.81	1.86	2.08	2.12	2.37	2.49	2.67	3.04	3.08	3.20	3.26	3.45	3.54	3.88	3.97	4.24	4.28	4.51	4.53	4.58	4.63	4.65	4.75	4.86	4.93	5.07	5.17	5.30	5.31	5.63	5.72	5.74	5.86	5.89	5.98
Number of WTG's <6km	43	19	27	56	49	63	35	38	26	65	37	28	41	17	19	51	27	33	22	11	13	21	23	25	20	22	17	11	7	20	9	12	11	8	16	5	6	6	5	3	1	1	1	1	1
WTG no:																																													
97	4.60	13.68	7.46	5.27	7.20	5.40	10.52	7.35	8.25	4.02	7.52	12.76	7.70	12.09	8.88	5.52	9.58	9.81	10.05	15.22	9.85	8.79	12.87	10.65	12.91	8.91	15.90	11.63	17.00	11.37	13.43	16.54	16.96	6.03	16.17	8.43	9.77	18.07	8.76	12.28	10.34	14.33	18.28	15.16	10.03
98	5.04	13.22	8.13	6.00	7.45	6.08	10.42	7.99	8.90	3.95	8.26	12.45	7.35	11.51	9.49	5.24	9.08	10.13	9.49	14.65	10.53	9.53	12.85	10.97	12.95	8.32	15.58	12.16	16.45	11.71	13.56	16.20	16.61	5.29	15.87	8.63	10.18	17.65	8.99	12.91	9.65	13.65	17.72	14.49	10.37
99	4.67	13.61	7.91	5.89	7.83	6.19	10.86	8.15	8.66	4.39	8.21	12.88	7.78	11.85	9.20	5.67	9.45	10.49	9.84	14.98	10.32	9.42	13.29	11.33	13.38	8.65	16.00	12.41	16.79	12.06	13.97	16.62	17.02	5.37	16.30	8.20	9.79	18.05	8.57	13.09	9.89	13.90	18.06	14.75	9.96
100	5.72	12.64	8.26	5.84	6.24	5.32	9.37	7.13	9.09	2.87	7.89	11.63	6.59	11.18	9.80	4.38	8.60	8.94	9.12	14.30	10.60	9.29	11.74	9.78	11.80	8.04	14.77	11.08	16.05	10.52	12.37	15.41	15.84	5.84	15.02	9.59	10.89	16.99	9.92	11.99	9.69	13.63	17.35	14.44	11.17
101	4.08	16.26	4.46	1.76	7.05	2.56	11.68	4.57	5.35	5.89	3.85	14.74	10.06	15.13	6.29	7.81	12.44	8.94	13.06	18.21	6.64	5.17	13.56	9.72	13.29	12.06	17.84	9.44	19.91	10.29	13.39	18.52	19.03	9.70	17.97	8.38	8.49	20.42	8.54	9.37	13.82	17.74	21.22	18.54	9.08
102	4.60	15.83	4.94	2.17	6.48	2.14	11.14	4.19	5.85	5.46	3.98	14.25	9.62	14.78	6.81	7.39	12.06	8.38	12.70	17.84	7.06	5.41	13.00	9.17	12.72	11.74	17.34	8.99	19.52	9.75	12.82	18.02	18.54	9.62	17.46	8.91	9.05	19.95	9.08	9.07	13.58	17.47	20.83	18.27	9.64
103	6.17	12.99	7.72	5.01	4.83	3.71	8.73	5.38	8.61	2.62	6.67	11.54	6.78	11.94	9.49	4.54	9.20	7.36	9.86	14.99	9.91	8.20	10.87	8.21	10.78	8.93	14.66	9.29	16.66	8.92	11.17	15.32	15.82	7.53	14.83	10.37	11.19	17.16	10.64	10.20	10.93	14.74	17.98	15.52	11.62
104	5.70	13.50	7.19	4.50	5.18	3.42	9.23	5.21	8.08	3.15	6.23	12.06	7.31	12.42	8.96	5.06	9.70	7.63	10.34	15.48	9.40	7.74	11.33	8.46	11.22	9.39	15.18	9.33	17.16	9.16	11.56	15.85	16.35	7.75	15.35	9.94	10.70	17.69	10.21	10.09	11.33	15.17	18.48	15.95	11.14
105	5.23	13.60	7.11	4.54	5.80	3.92	9.64	5.79	7.98	3.34	6.48	12.31	7.43	12.36	8.79	5.17	9.69	8.29	10.28	15.45	9.39	7.92	11.82	9.13	11.75	9.27	15.44	10.00	17.16	9.84	12.15	16.10	16.58	7.26	15.64	9.40	10.31	17.85	9.68	10.71	11.06	14.97	18.47	15.76	10.70
106	13.39	6.76	14.88	12.07	4.67	9.57	1.79	9.87	15.79	4.94	13.00	4.40	2.61	7.36	16.75	3.67	4.88	6.24	5.85	9.65	16.86	14.66	4.48	6.68	5.00	5.99	7.42	10.32	10.89	7.36	6.22	8.10	8.66	9.46	7.51	17.36	18.51	10.26	17.70	12.78	8.85	11.24	12.18	11.70	18.87
107	5.67	13.01	7.72	5.15	5.62	4.37	9.21	6.16	8.58	2.81	7.06	11.77	6.86	11.75	9.38	4.60	9.08	8.22	9.67	14.84	10.00	8.52	11.46	9.07	11.44	8.66	14.91	10.18	16.56	9.79	11.90	15.56	16.03	6.79	15.12	9.76	10.79	17.28	10.06	11.03	10.48	14.37	17.86	15.16	11.15

Receiver	Yandra	Nestlebrae	Rockybah	Benbulbin	Coopers Hill	Glenfinnan	Avonlake	Roselea	Woodbine	Boco	Wyuna	Kelton Plain	Sherwood	Telenbugrm	Mia Mia	Riverside	Brooklyn	Old Springfield	Bungee	Coombala	Curry Flat	Old Curry Flat	Mountain View	Springfield	Timbry Lodge	Windella	h1	Lyndarra	Xennor	Kenilworth	Edendale	Belmore	Peters Park	Rosemount	Wodburn	Mohawke	Hyland Grange	h3	Roslyn	Lofty Vale	Kanoute	Kangaroo Camp Retreat	monastery	h2	Clifton	
Dist. (km) to closest WTG	0.73	0.82	0.85	0.85	0.86	0.86	0.94	1.34	1.55	1.59	1.81	1.84	2.08	2.12	2.37	2.49	2.66	3.04	3.08	3.20	3.26	3.45	3.54	3.88	3.97	4.22	4.28	4.51	4.53	4.58	4.63	4.65	4.75	4.86	4.94	5.07	5.17	5.23	5.30	5.63	5.72	5.74	5.86	5.89	5.89	
Number of WTG's<6km	52	54	61	40	18	29	40	37	28	65	41	30	45	16	22	52	27	42	21	10	15	23	26	32	23	21	16	11	6	24	12	12	10	7	15	6	8	6	3	1	1	1	1	2		
WTG no:																																														
1	6.75	9.38	7.57	4.49	14.28	8.34	12.16	9.57	8.99	5.79	9.20	13.86	8.76	12.23	9.34	6.82	10.06	12.06	10.32	15.35	10.76	10.24	14.66	12.90	14.80	9.06	16.95	13.95	17.20	13.64	15.45	17.55	17.90	4.86	17.30	7.29	9.29	7.70	18.78	14.52	9.84	13.86	18.42	14.73	9.32	
2	9.57	1.67	6.81	11.55	9.75	12.38	3.67	6.90	13.29	3.76	10.20	7.33	4.52	10.04	13.67	2.49	6.54	5.01	7.44	12.56	14.21	11.87	5.49	4.41	5.40	8.04	10.21	7.60	13.86	5.19	5.95	10.89	11.50	9.98	10.20	15.76	16.49	16.04	13.20	9.88	10.31	13.75	15.16	14.31	16.97	
3	8.98	2.40	6.52	10.52	9.50	11.79	4.36	7.04	12.70	2.38	9.95	7.47	3.68	9.34	13.67	2.49	6.54	5.01	7.44	12.06	13.77	11.61	6.59	5.73	6.65	7.02	10.51	8.58	13.50	6.52	7.33	11.20	11.75	8.56	10.61	14.64	15.57	14.95	13.29	10.61	9.72	12.87	14.62	13.49	15.99	
4	11.17	3.06	8.37	13.08	8.69	13.98	2.12	8.33	14.89	4.99	11.75	6.00	4.35	9.42	15.93	4.49	6.90	4.19	7.86	11.67	15.78	13.41	3.97	4.62	4.03	7.88	8.74	8.30	12.84	5.31	4.85	9.43	10.06	10.67	8.69	17.25	18.05	17.54	11.84	10.82	10.74	13.28	14.12	13.76	18.52	
5	13.25	5.95	10.82	14.36	5.51	16.04	2.00	11.15	16.95	5.91	14.25	3.16	2.64	6.37	17.89	4.37	4.16	7.39	5.10	8.47	18.07	15.91	4.51	7.75	5.27	5.49	6.24	11.50	9.65	8.40	6.67	6.91	7.45	9.63	6.40	18.23	19.51	18.58	8.99	14.01	8.30	10.31	10.93	10.72	19.84	
6	16.50	9.92	14.41	16.87	1.53	19.21	5.67	14.99	20.09	8.87	17.81	2.40	4.71	3.15	20.92	6.97	3.07	11.42	3.33	4.47	21.39	19.45	7.35	11.74	8.38	4.54	4.39	15.54	5.61	12.35	9.92	4.84	5.03	9.92	4.98	20.29	22.02	20.70	5.81	18.05	6.44	6.99	6.91	7.19	22.20	
7	16.71	10.14	14.63	17.06	1.30	19.42	5.88	15.22	20.30	9.08	18.03	2.51	4.92	3.07	21.12	7.17	3.20	11.64	3.40	4.26	21.60	19.67	7.52	11.96	8.55	4.63	4.33	15.76	5.39	12.56	10.10	4.76	4.92	10.03	4.94	20.46	22.21	20.86	5.63	18.27	6.44	6.86	6.69	7.03	22.38	
8	16.30	9.69	14.20	16.71	1.75	19.02	5.45	14.77	19.90	8.68	17.60	2.27	4.52	3.28	20.74	6.78	3.00	11.19	3.32	4.70	21.19	19.24	7.16	11.52	8.19	4.50	4.42	15.31	5.84	12.12	9.72	4.90	5.12	9.86	4.99	20.15	21.86	20.56	5.96	17.82	6.49	7.15	7.14	7.37	22.05	
9	15.45	8.66	13.26	16.04	2.76	18.19	4.42	13.77	19.08	7.86	16.67	1.84	3.75	4.04	19.95	6.00	2.86	10.13	3.55	5.74	20.33	18.32	6.28	10.47	7.27	4.53	4.64	14.25	6.89	11.08	8.79	5.22	5.56	9.69	5.09	19.61	21.21	20.00	6.69	16.77	6.87	8.00	8.18	8.28	21.43	
10	16.06	9.45	13.95	16.48	1.99	18.78	5.25	14.52	19.66	8.44	17.35	2.23	4.28	3.36	20.50	6.54	2.86	10.96	3.24	4.91	20.95	18.99	7.02	11.30	8.04	4.38	4.55	15.08	6.08	11.91	9.57	5.05	5.29	9.71	5.10	19.95	21.64	20.35	6.19	17.59	6.46	7.26	7.38	7.51	21.83	
11	15.65	8.94	13.50	16.18	2.49	18.38	4.73	14.04	19.27	8.05	16.91	1.97	3.91	3.77	20.13	6.17	2.86	10.43	3.39	5.44	20.54	18.55	6.56	10.77	7.56	4.44	4.62	14.55	6.00	11.38	9.09	5.16	5.47	9.67	5.10	19.71	21.34	20.10	6.52	17.06	6.69	7.72	7.90	7.99	21.55	
12	15.20	8.39	13.00	15.83	3.03	17.95	4.18	13.00	18.84	7.62	16.41	1.88	3.53	4.22	19.71	5.77	2.93	9.87	3.59	6.00	20.08	18.06	6.11	10.21	7.08	4.51	4.79	13.99	7.16	10.82	8.60	5.38	5.75	9.60	5.21	19.42	21.00	19.81	6.93	15.06	6.93	8.18	8.45	8.48	21.23	
13	14.90	8.15	12.72	15.52	3.28	17.65	4.08	13.24	18.54	7.31	16.13	2.13	3.22	4.24	19.41	5.46	2.74	9.69	3.46	6.16	19.78	17.78	6.12	10.05	7.07	4.31	5.09	13.81	7.38	10.68	8.57	5.69	6.06	9.34	5.50	19.11	20.69	19.50	7.23	16.29	6.80	8.21	8.68	8.54	20.92	
14	6.13	8.60	6.76	4.36	14.06	7.93	11.56	8.76	8.62	5.12	8.54	13.46	8.35	12.17	9.07	6.31	9.86	11.25	10.20	15.30	10.35	9.65	14.02	12.10	14.13	8.97	16.57	13.12	17.13	12.83	14.73	17.19	17.56	5.22	16.89	7.61	9.37	7.99	18.53	10.70	10.00	14.02	18.38	14.88	9.48	
15	11.66	3.90	9.02	13.26	7.63	14.48	1.61	9.16	15.39	4.91	12.43	5.07	3.40	8.32	16.39	3.99	5.83	5.29	6.80	10.58	16.38	14.10	4.07	5.72	4.41	6.89	7.96	9.39	17.18	6.40	5.49	8.64	9.24	10.04	7.97	17.33	18.32	17.65	10.94	11.88	9.75	12.20	13.06	12.67	18.73	
16	11.51	4.18	9.01	12.86	7.24	14.32	2.15	9.34	15.23	4.43	12.43	4.96	2.58	7.67	16.19	3.28	5.10	5.91	6.06	10.07	16.30	14.11	4.77	6.40	5.19	6.09	7.98	9.95	11.35	7.11	6.31	8.66	9.22	9.24	8.07	16.86	17.97	19.11	10.81	12.35	8.95	11.50	12.65	12.00	18.35	
17	9.04	1.76	6.40	10.85	9.82	11.85	4.17	6.71	12.76	2.99	9.82	7.59	4.23	9.86	13.78	3.23	7.09	4.27	8.01	12.50	13.75	11.49	6.18	4.99	6.14	7.66	10.58	7.92	13.88	5.78	6.72	11.25	11.83	9.29	10.60	15.04	15.83	15.33	13.45	10.40	10.40	13.47	15.20	14.07	16.29	
18	5.92	5.65	5.07	6.16	12.32	8.45	8.82	6.78	9.30	2.33	7.83	11.20	6.21	11.00	10.07	3.97	8.35	8.36	8.92	14.10	12.50	13.75	11.49	6.18	4.99	6.14	7.66	10.58	7.92	13.88	5.78	6.72	11.25	11.83	9.29	10.60	15.04	15.83	15.33	13.45	10.40	10.40	13.47	15.20	14.07	16.29
19	13.14	5.73	10.66	14.34	5.76	15.94	1.71	10.95	16.85	5.88	14.09	3.31	2.80	6.66	17.80	4.40	4.44	7.11	5.38	8.75	17.94	15.76	4.27	7.47	5.01	5.76	6.34	11.22	9.91	8.10	6.39	7.02	7.57	9.79	6.47	18.24	19.47	18.59	9.16	13.75	8.57	10.61	11.19	11.02	19.81	
20	9.16	1.36	6.40	11.16	10.07	11.97	4.08	6.63	12.88	3.52	9.80	7.71	4.68	10.26	13.92	3.79	7.52	3.71	8.45	12.83	13.79	11.46	5.89	4.42	5.77	8.16	10.60	7.43	14.17	5.21	6.25	11.29	11.89	9.87	10.60	15.39	16.09	15.66	13.57	9.63	10.91	13.62	15.48	14.50	16.57	
21	8.31	1.61	5.70	10.15	10.40	11.12	4.90	6.12	12.03	2.57	9.13	8.27	4.61	10.27	13.05	3.25	7.47	4.37	8.36	12.99	13.03	10.80	6.88	5.15	6.79	7.91	11.27	7.74	14.42	5.94	7.29	11.95	12.52	9.09	11.32	14.36	15.11	14.64	14.12	9.70	10.57	13.79	15.74	14.41	15.58	
22	11.24	3.98	8.76	12.60	7.45	14.05	2.38	9.11	14.96	4.16	12.19	5.22	2.55	7.78	15.92	3.07	5.16	5.81	6.13	10.24	16.03	13.85	4.97	6.33	5.36	6.09	8.25	9.82	11.54	7.05	6.43	8.93	9.48	9.09	8.35	16.60	17.70	16.93	11.06	12.19	8.95	11.58	12.85	12.10	18.08	
23	17.13	10.61	15.08	17.42	0.86	19.83	6.32	15.68	20.71	9.51	18.47	2.82	5.34	2.91	21.53	7.59	3.45	12.10	3.53	3.82	22.03	20.11	7.90	12.42	8.94	4.81	4.28	16.22	4.92	13.01	10.49	4.65	4.75	10.22	4.94	20.77	22.56	21.18	5.30	18.74	6.42	6.57	6.22	6.70	22.72	
24	13.15	5.44	10.56	14.56	6.28	15.97	0.94	10.71	16.88	6.12	13.98	3.54	3.46	7.38	17.86	4.83	5.22	6.55	6.15	9.36	17.90	15.64	3.54	6.86	4.24	6.52	6.41	10.68	10.43	7.46	5.61	7.09	7.69	10.44	6.44	18.55	19.67	18.88	9.40	13.27	9.34	11.34	11.69	11.73	20.05	
25	13.70	6.56	11.34	14.67	4.88	16.48	2.53	11.73	17.38	6.26	14.76	2.71	2.63	5.77	18.30	4.60	3.68	8.03	4.59	7.83	15.54	16.42	4.89	3.39	5.73	5.10	5.84	12.14	9.01	9.03	7.16	6.50	7.00	9.50	6.06	18.46	19.83	18.83	8.47	14.64	7.85	9.72	10.30	10.11	20.13	
26	8.63	0.82	5.82	10.78	10.67	11.44	4.65	5.92	12.34	3.50	9.21	8.31	5.17	10.79	13.40	4.08	8.03</																													

Receiver	Yandra	Nestlebrae	Rockybah	Benbulbin	Coopers Hill	Glenfinnan	Avonlake	Roselea	Woodbine	Boco	Wyuna	Kelton Plain	Sherwood	Telenbugm	Mia Mia	Riverside	Brooklyn	Old Springfield	Bungee	Coombala	Curry Flat	Old Curry Flat	Mountain View	Springfield	Tinberry Lodge	Windella	h1	Lyndarra	Xenmor	Kenilworth	Edendale	Belmore	Peters Park	Rosemount	Wodburn	Mohawke	Hyland Grange	h3	Roslyn	Lofty Vale	Kanoute	Kangaroo Camp Retreat	monastery	h2	Clifton
Dist. (km) to closest WTG	0.73	0.82	0.85	0.85	0.86	0.86	0.94	1.34	1.55	1.59	1.81	1.84	2.08	2.12	2.37	2.49	2.66	3.04	3.08	3.20	3.26	3.45	3.54	3.88	3.97	4.22	4.28	4.51	4.53	4.58	4.63	4.65	4.75	4.86	4.94	5.07	5.17	5.23	5.30	5.63	5.72	5.74	5.86	5.89	5.89
Number of WTG's<6km	52	54	61	40	18	29	40	37	28	65	41	30	45	16	22	52	27	42	21	10	15	23	26	32	23	21	16	11	6	24	12	12	10	7	15	6	8	6	6	3	1	1	1	1	2
WTG no:																																													
49	5.54	3.21	2.41	8.71	14.36	8.20	8.38	2.16	9.07	5.11	5.55	12.10	8.50	14.15	10.21	6.73	11.32	4.35	12.17	16.94	9.70	7.19	9.66	5.10	9.18	11.56	14.98	5.29	18.39	5.65	9.02	15.67	16.28	11.37	14.95	13.03	12.99	13.19	17.97	6.33	14.00	17.50	19.71	18.17	13.65
50	4.98	4.00	1.85	8.38	15.13	7.55	9.18	1.41	8.41	5.69	4.79	12.90	9.22	14.86	9.57	7.38	12.03	4.93	12.86	17.68	8.97	6.42	10.41	5.63	9.90	12.21	15.78	5.27	19.14	6.12	9.68	16.46	17.08	11.75	15.74	12.66	12.47	12.80	18.76	5.94	14.60	18.15	20.47	18.84	13.16
51	4.30	4.29	1.17	7.58	15.10	6.96	9.41	1.78	8.84	5.32	4.45	13.01	9.08	14.66	8.98	7.12	11.83	5.59	12.63	17.54	8.54	6.11	10.83	6.32	10.38	11.91	15.96	6.08	19.06	6.85	10.25	16.64	17.24	11.14	15.96	11.87	11.76	12.02	18.86	6.61	14.21	17.84	20.39	18.56	12.43
52	3.95	4.41	1.47	6.67	14.51	6.76	9.28	3.01	7.66	4.39	4.82	12.64	8.37	13.84	8.72	6.28	11.03	6.27	11.79	16.80	8.61	6.46	10.98	7.06	10.65	10.98	15.67	7.28	18.38	7.67	10.71	16.35	16.92	9.90	15.73	11.00	11.17	11.19	18.44	7.89	13.16	16.88	19.71	17.62	11.77
53	4.08	4.33	1.74	6.62	14.28	6.89	9.13	3.29	7.80	4.12	5.06	12.44	8.13	13.57	8.84	6.02	10.77	6.30	11.52	16.54	8.80	6.69	10.88	7.11	10.58	10.70	15.48	7.47	18.13	7.74	10.67	16.17	16.72	9.63	15.56	10.96	11.21	11.16	18.23	8.15	12.87	16.60	19.45	17.34	11.79
54	5.09	3.28	2.16	7.90	13.93	7.85	8.32	2.79	8.75	4.26	5.56	11.85	7.91	13.51	9.84	5.99	10.68	5.03	11.50	16.38	9.57	7.23	9.86	5.82	9.49	10.80	14.82	6.33	17.89	6.44	9.49	15.51	16.09	10.36	14.84	12.24	12.39	12.43	17.70	7.32	13.17	16.75	19.21	17.45	13.01
55	5.58	2.90	2.98	7.90	12.97	8.39	7.63	3.85	9.30	3.20	6.40	11.01	6.90	12.47	10.34	4.94	9.65	5.16	10.45	15.37	10.27	8.06	9.39	5.99	9.12	9.75	14.03	7.09	16.90	6.69	9.29	14.71	15.28	9.42	14.08	12.22	12.64	12.45	16.83	8.29	12.11	15.69	18.22	16.39	13.18
56	5.72	2.92	3.25	7.86	12.69	8.54	7.48	4.20	9.45	2.84	6.66	10.78	6.59	12.14	10.47	4.60	9.32	5.32	10.12	15.05	10.46	8.31	9.32	6.16	9.09	9.40	13.82	7.40	16.60	6.87	9.33	14.50	15.06	9.08	13.89	12.16	12.67	12.40	16.59	8.65	11.75	15.34	17.92	16.05	13.19
57	6.07	2.64	3.57	8.15	12.37	8.89	7.13	4.44	9.80	2.65	6.99	10.44	6.29	11.87	10.82	4.34	9.04	5.14	9.85	14.75	10.81	8.65	8.99	5.98	8.78	9.16	13.47	7.41	16.29	6.71	9.05	14.15	14.71	9.02	13.54	12.44	12.99	12.69	16.25	8.77	11.55	15.10	17.61	15.80	13.50
58	2.87	8.45	4.57	2.32	16.44	4.63	12.63	6.59	5.39	6.34	5.36	15.30	10.34	14.95	6.01	8.10	12.40	10.63	12.90	18.07	7.04	6.33	14.74	11.44	14.60	11.77	18.43	11.43	19.84	12.07	14.86	19.09	19.55	8.57	18.64	6.64	7.30	6.87	20.77	11.39	13.16	17.16	21.13	18.01	7.72
59	2.30	7.38	3.34	3.47	16.02	4.70	11.78	5.38	5.56	5.71	4.61	14.66	9.84	14.74	6.38	7.58	12.10	9.45	12.67	17.85	7.01	5.82	13.78	10.25	13.58	11.62	17.78	10.19	19.57	10.86	13.77	18.45	18.94	8.97	17.95	7.81	8.19	8.01	20.25	10.22	13.25	17.21	20.88	18.03	8.71
60	3.42	8.59	4.99	2.27	16.19	5.08	12.60	7.03	5.81	6.22	5.91	15.14	10.14	14.61	6.37	7.91	12.11	10.86	12.57	17.74	7.50	6.87	14.78	11.68	14.67	11.43	18.28	11.82	19.53	12.32	14.99	18.93	19.38	8.08	18.51	6.50	7.38	6.75	20.55	11.86	12.73	16.75	20.81	17.59	7.74
61	5.39	2.98	2.66	7.91	13.33	8.19	7.87	3.44	9.10	3.61	6.08	11.32	7.28	12.87	10.16	5.34	10.04	5.06	10.85	15.75	10.01	7.75	9.54	5.89	9.23	10.15	14.31	6.77	17.27	6.56	9.33	15.00	15.57	9.79	14.35	12.24	12.55	12.45	17.15	7.91	12.52	16.09	18.59	16.80	13.13
62	3.05	8.85	4.93	1.93	16.70	4.55	12.99	6.95	5.27	6.66	5.55	15.61	10.63	15.15	5.83	8.39	12.63	11.03	13.11	18.28	6.97	6.43	15.12	11.84	14.98	11.96	18.75	11.80	20.06	12.47	15.26	19.40	19.86	8.60	18.96	6.24	6.95	6.47	21.05	11.71	13.28	17.29	21.34	18.14	7.35
63	2.07	8.33	4.02	2.61	16.85	3.99	12.74	6.00	4.80	6.61	4.56	15.57	10.70	15.47	5.53	8.44	12.87	10.36	13.41	18.59	6.37	5.54	14.75	11.15	14.54	12.32	18.70	10.89	20.34	11.74	14.72	19.36	19.85	9.32	18.88	6.92	7.23	7.10	21.12	10.71	13.81	17.80	21.64	18.63	7.75
64	1.72	8.34	3.84	2.77	17.06	3.71	12.83	5.78	4.55	6.78	4.22	15.73	10.90	15.73	5.33	8.63	13.11	10.29	13.66	18.84	6.08	5.19	14.80	11.07	14.57	12.58	18.85	10.70	20.58	11.65	14.71	19.52	20.01	9.65	19.02	7.04	7.19	7.19	21.31	10.45	14.11	18.10	21.88	19.83	7.75
65	1.38	8.43	3.75	2.91	17.34	3.91	13.03	5.64	4.24	7.03	3.88	15.96	11.17	16.04	5.06	8.90	13.41	10.30	13.98	19.15	5.74	4.83	14.93	11.07	14.67	12.91	19.08	10.57	20.89	11.63	14.78	19.75	20.25	10.02	19.23	7.11	7.10	7.24	21.57	10.23	14.46	18.44	22.19	19.27	7.70
66	1.57	9.41	4.52	2.56	18.33	2.51	14.03	6.26	3.30	8.04	3.85	18.98	12.16	16.97	4.06	9.91	14.37	11.19	14.91	20.09	4.92	4.45	15.93	11.94	15.65	13.82	20.10	11.21	21.84	12.48	15.73	20.77	21.26	10.68	20.26	6.44	6.16	6.52	22.58	10.63	16.27	19.27	23.13	20.11	6.80
67	0.90	9.09	4.01	3.29	18.39	2.30	13.84	5.64	3.18	8.04	3.12	16.92	12.20	17.15	4.11	9.94	14.50	10.73	15.08	20.25	4.61	3.81	15.65	11.47	15.33	14.03	20.03	10.57	21.98	11.97	15.34	20.70	21.21	11.13	20.16	7.11	6.81	7.17	22.58	9.92	15.60	19.58	23.26	20.40	7.32
68	1.11	8.94	4.01	2.96	18.02	2.69	13.60	5.76	3.55	7.70	3.52	16.61	11.84	16.74	4.40	9.58	14.11	10.69	14.67	19.85	5.05	4.28	15.47	11.44	15.18	13.60	19.73	10.71	21.58	11.97	15.24	20.40	20.90	10.65	19.87	6.94	6.65	7.02	22.24	10.18	15.14	19.13	22.88	19.96	7.31
69	2.17	10.27	5.28	2.53	19.17	1.89	14.91	6.91	2.57	8.91	4.07	17.86	13.02	17.77	3.21	10.76	15.19	11.99	15.71	20.89	4.30	4.32	16.80	12.73	16.52	14.60	20.98	11.82	22.65	13.24	16.57	21.65	22.14	11.27	21.14	5.92	5.35	5.95	23.44	11.07	15.98	19.99	23.94	20.83	6.04
70	2.20	10.40	5.34	2.76	19.40	1.62	15.08	6.91	2.30	9.12	3.94	18.06	13.24	18.01	2.98	10.98	15.43	12.07	15.95	21.13	4.03	4.11	16.94	12.80	16.64	14.85	21.18	11.80	22.89	13.30	16.67	21.84	22.34	11.54	21.33	6.01	5.29	6.01	23.66	10.98	16.24	20.25	24.18	21.10	6.02
71	2.13	10.44	5.27	3.25	19.67	1.16	15.21	6.73	1.93	9.35	3.58	18.26	13.49	18.34	2.76	11.23	15.73	12.01	16.28	21.46	3.59	3.64	17.01	12.73	16.68	15.19	21.37	11.59	23.20	13.20	16.66	22.04	22.55	11.98	21.51	6.36	5.42	6.34	23.90	10.66	16.63	20.64	24.50	21.48	6.21
72	5.41	8.37	6.14	3.82	14.47	7.22	11.64	8.16	7.94	5.14	7.82	13.73	8.63	12.69	8.43	6.51	10.31	10.95	16.09	15.82	9.65	8.92	14.02	11.79	14.07	9.49	16.86	12.62	17.64	12.51	14.61	17.48	17.88	5.93	17.15	7.36	8.92	7.72	18.92	13.10	10.63	14.66	18.90	15.51	9.09
73	5.89	7.83	6.19	4.67	13.61	7.91	10.86	8.15	8.66	4.39	8.21	12.88	7.78	11.85	9.20	5.67	9.45	10.49	9.84	14.98	10.32	9.42	13.29	11.33	13.38	8.65	16.00	12.41	16.79	12.06	13.97	16.63	17.02	5.37	16.30	8.20	9.79	8.57	18.05	13.09	9.89	13.90	18.06	14.75	9.96
74	3.99	4.60	0.85	7.32																																									

Receiver	Yandra	Nestlebrae	Rockybah	Benbulbin	Coopers Hill	Glenfinnan	Avonlake	Roselea	Woodbine	Boco	Wyuna	Keilton Plain	Sherwood	Telenbugm	Mia Mia	Riverside	Brooklyn	Old Springfield	Bungee	Coombala	Curry Flat	Old Curry Flat	Mountain View	Springfield	Timbery Lodge	Windella	h1	Lymdarra	Xenmor	Kenilworth	Edendale	Belmore	Peters Park	Rosemount	Wodburn	Mohawke	Hyland Grange	h3	Roslyn	Lofty Vale	Kanoute	Kangaroo Camp Retreat	monastery	h2	Clifton
Dist. (km) to closest WTG	0.73	0.82	0.85	0.85	0.86	0.86	0.94	1.34	1.55	1.59	1.81	1.84	2.08	2.12	2.37	2.49	2.66	3.04	3.08	3.20	3.26	3.45	3.54	3.88	3.97	4.22	4.28	4.51	4.53	4.58	4.63	4.65	4.75	4.86	4.94	5.07	5.17	5.23	5.30	5.63	5.72	5.74	5.86	5.89	5.89
Number of WTG's<6km	52	54	61	40	18	29	40	37	28	65	41	30	45	16	22	52	27	42	21	10	15	23	26	32	23	21	16	11	6	24	12	12	10	7	15	6	8	6	6	3	1	1	1	1	2
WTG no:																																													
97	4.54	3.97	1.45	7.69	14.76	7.24	9.08	2.03	8.13	5.03	4.78	12.67	8.75	14.33	9.25	6.80	11.51	5.37	12.32	17.21	8.85	6.44	10.52	6.12	10.09	11.60	15.62	6.09	18.73	6.68	9.99	16.30	16.90	10.94	15.62	12.01	11.97	12.17	18.52	6.77	13.92	17.54	20.05	18.25	12.63
98	4.95	3.44	2.31	7.46	13.63	7.75	8.29	3.35	8.66	3.72	5.73	11.68	7.53	13.08	9.72	5.53	10.26	5.49	11.05	15.99	9.60	7.39	9.99	6.30	9.69	10.30	14.70	7.01	17.54	6.96	9.79	15.38	15.95	9.69	14.75	11.80	12.10	12.00	17.50	7.98	12.60	16.24	18.86	16.95	12.67
99	4.76	3.66	1.75	7.75	14.38	7.49	8.74	2.39	8.39	4.65	5.13	12.30	8.35	13.94	9.50	6.42	11.12	5.23	11.93	16.82	9.16	6.80	10.23	6.00	9.83	11.22	15.26	6.22	18.34	6.59	9.78	15.94	16.53	10.64	15.27	12.08	12.13	12.25	18.15	7.04	13.56	17.16	19.66	17.87	12.77
100	14.62	7.89	12.44	15.25	3.55	17.36	3.93	12.97	18.26	7.03	15.85	2.32	2.95	4.36	19.13	5.19	2.66	9.47	3.44	6.39	19.50	17.50	6.06	9.85	6.98	4.22	5.33	13.58	7.63	10.49	8.47	5.93	6.32	9.17	5.72	18.86	20.42	19.25	7.51	16.05	6.78	8.33	8.94	8.68	20.65
101	5.45	5.50	4.57	5.93	12.71	8.02	8.96	6.31	8.88	2.53	7.33	11.48	6.56	11.45	9.68	4.30	8.78	8.14	9.38	14.54	10.30	8.80	11.24	8.99	11.24	8.37	14.62	10.22	16.26	9.72	11.73	15.28	15.74	6.61	14.84	9.98	11.06	10.29	16.98	11.15	10.21	14.09	17.56	14.88	11.41
102	2.82	6.26	2.61	4.57	15.20	5.51	10.73	4.65	6.40	4.83	4.73	13.71	9.00	14.08	7.31	6.75	11.38	8.36	12.01	17.16	7.71	6.15	12.68	9.17	12.47	11.02	16.82	9.31	18.85	9.80	12.66	17.49	18.00	8.88	16.96	8.90	9.30	9.11	19.37	9.58	12.83	16.74	20.16	17.53	9.82
103	2.02	10.02	5.08	2.42	18.88	2.13	14.64	6.76	2.84	8.62	4.07	17.57	12.73	17.48	3.50	10.47	14.90	11.78	15.42	20.60	4.55	4.43	16.54	12.52	16.27	14.31	20.69	11.69	22.36	13.04	16.33	21.36	21.85	11.02	20.86	6.00	5.56	6.05	23.15	11.00	15.70	19.71	23.65	20.56	6.23
104	13.90	6.86	11.58	14.78	4.57	16.67	2.85	12.01	17.57	6.41	15.00	2.56	2.63	5.44	18.48	4.69	3.41	8.36	4.30	7.50	18.75	16.66	5.15	8.73	6.01	4.86	5.70	12.47	8.69	9.37	7.47	6.35	6.83	9.40	5.96	18.54	19.95	18.91	8.24	14.97	7.59	9.40	9.99	9.78	20.23
105	14.41	7.62	12.20	15.09	3.81	17.16	3.68	12.72	18.05	6.84	15.61	2.38	2.79	4.60	18.93	5.01	2.79	9.20	3.61	6.66	19.28	17.26	5.85	9.58	6.76	4.33	5.44	13.31	7.90	10.22	8.24	6.06	6.47	9.17	5.80	18.74	20.26	19.12	7.71	15.78	6.94	8.57	9.21	8.94	20.51
106	3.85	10.01	6.08	0.85	17.42	4.64	14.03	8.07	5.21	7.61	6.30	16.49	11.45	15.70	5.52	9.24	13.29	12.23	13.69	18.83	7.02	6.95	16.22	13.04	16.11	12.50	19.63	12.96	20.64	13.67	16.42	20.27	20.71	8.68	19.88	5.07	6.02	5.31	21.82	12.76	13.58	17.61	21.91	18.47	6.33
107	11.26	3.39	8.56	12.98	8.16	14.08	1.95	8.66	14.99	4.73	11.97	5.59	3.72	8.80	16.00	4.02	6.26	4.79	7.23	11.10	15.95	13.63	4.17	5.24	4.38	7.25	8.44	8.87	12.30	5.94	5.34	9.12	9.73	10.16	8.43	17.10	18.01	17.40	11.45	11.35	10.11	12.65	13.59	13.14	18.44
108	11.61	4.54	9.21	12.80	6.90	14.41	2.45	9.63	15.31	4.34	12.64	4.79	2.08	7.20	16.26	3.01	4.60	6.39	5.56	9.66	16.43	14.30	5.12	6.89	5.61	5.58	7.87	10.41	10.98	7.61	6.78	8.55	9.08	8.83	8.01	16.74	17.94	17.09	10.60	12.77	8.44	11.01	12.29	11.52	18.29
109	13.41	6.20	11.01	14.46	5.25	16.20	2.24	11.38	17.10	6.02	14.44	2.99	2.58	6.10	18.03	4.42	3.93	7.66	4.86	8.20	18.24	16.10	4.69	8.03	5.48	5.29	6.10	11.77	9.38	8.67	6.90	6.76	7.28	9.53	6.28	18.29	19.61	18.65	8.79	14.27	8.08	10.05	10.67	10.45	19.92
110	15.82	9.19	13.70	16.29	2.25	18.55	5.01	14.27	19.44	8.21	17.11	2.14	4.06	3.52	20.28	6.32	2.79	10.71	3.25	5.16	20.71	18.75	6.83	11.05	7.83	4.34	4.63	14.83	6.34	11.66	9.36	5.15	5.43	9.63	5.15	19.78	21.45	20.18	6.39	17.32	6.51	7.45	7.64	7.71	21.65
111	16.92	10.38	14.86	17.23	1.08	19.62	6.11	15.45	20.50	9.29	18.25	2.67	5.13	2.97	21.32	7.38	3.31	11.87	3.45	4.03	21.81	19.89	7.71	12.19	8.76	4.71	4.31	16.00	5.15	12.79	10.30	4.71	4.83	10.12	4.95	20.61	22.38	21.02	5.47	18.51	6.42	6.70	6.45	6.86	22.54
112	12.76	5.08	10.17	14.18	6.54	15.57	1.04	10.34	16.48	5.74	13.59	3.89	3.27	7.50	17.46	4.50	5.22	6.30	6.17	9.57	17.51	15.26	3.73	6.64	4.35	6.46	6.79	10.42	10.69	7.27	5.66	7.48	8.07	10.21	6.84	18.18	19.29	18.51	9.76	12.98	9.30	11.44	11.96	11.85	19.66
113	0.73	7.70	2.66	4.13	17.27	3.52	12.51	4.44	4.43	6.90	2.90	15.68	11.06	16.19	5.45	8.83	13.48	9.35	14.11	19.26	5.62	4.13	14.27	10.09	13.94	13.11	18.76	9.39	20.95	10.62	13.94	19.44	19.97	10.69	18.87	8.26	7.98	8.36	21.39	9.00	14.87	18.80	22.26	19.60	8.66
114	14.08	7.12	11.80	14.91	4.30	16.85	3.11	12.25	17.75	6.57	15.22	2.44	2.68	5.17	18.65	4.81	3.22	8.64	4.09	7.22	18.94	16.88	5.35	9.00	6.24	4.71	5.58	12.75	8.43	9.64	7.70	6.22	6.68	9.35	5.87	18.63	20.08	19.00	8.04	15.24	7.39	9.14	9.72	9.52	20.35
115	4.90	7.55	5.33	4.06	14.22	6.99	11.01	7.33	7.76	4.52	7.23	13.30	8.25	12.61	8.36	6.05	10.12	10.10	10.58	15.74	9.39	8.43	13.34	10.94	13.35	9.43	16.44	11.75	17.53	11.65	13.83	17.08	17.50	6.35	16.70	7.92	9.23	8.25	18.62	12.27	10.79	14.80	18.81	15.63	9.49
116	5.36	6.90	5.30	4.90	13.41	7.63	10.19	7.22	8.44	3.69	7.56	12.46	7.40	11.86	9.10	5.21	9.33	9.52	9.81	14.99	10.01	8.87	12.55	10.37	12.58	8.69	15.59	11.42	16.76	11.10	13.11	16.23	16.66	6.00	15.85	8.75	10.07	9.09	17.79	12.14	10.19	14.16	18.05	14.99	10.34
117	6.00	7.45	6.08	5.04	13.22	8.13	10.42	7.99	8.90	3.95	8.26	12.45	7.35	11.51	9.49	5.24	9.08	10.13	9.49	14.65	10.53	9.53	12.85	10.97	12.95	8.32	15.58	12.16	16.45	11.71	13.56	16.20	16.61	5.29	15.87	8.63	10.18	8.99	17.65	12.91	9.65	13.65	17.72	14.49	10.37
118	5.36	7.44	5.60	4.49	13.77	7.48	10.71	7.57	8.26	4.21	7.65	12.90	7.83	12.12	8.86	5.66	9.65	10.05	10.09	15.26	9.88	8.89	13.08	10.90	13.13	8.94	16.04	11.87	17.05	11.62	13.66	16.67	17.09	5.90	16.31	8.25	9.66	8.59	18.18	12.51	10.30	14.30	18.33	15.14	9.89
119	5.84	6.24	5.32	5.72	12.64	8.26	9.37	7.13	9.09	2.87	7.89	11.63	6.59	11.18	9.80	4.38	8.60	8.94	9.12	14.30	10.60	9.29	11.74	9.78	11.80	8.04	14.77	11.08	16.05	10.52	12.37	15.41	15.84	5.84	15.02	9.59	10.89	9.92	16.99	11.99	9.69	13.63	17.35	14.44	11.17
120	1.76	7.05	2.56	4.08	16.26	4.46	11.68	4.57	5.35	5.89	3.85	14.74	10.06	15.14	6.29	7.81	12.44	8.94	13.06	18.21	6.64	5.17	13.56	9.72	13.29	12.06	17.84	9.44	19.91	10.29	13.39	18.52	19.03	9.70	17.97	8.38	8.49	8.54	20.42	9.37	13.82	17.74	21.22	18.54	9.08
121	2.17	6.48	2.14	4.60	15.83	4.94	11.14	4.19	5.85	5.46	3.98	14.25	9.62	14.78	6.81	7.39	12.06	8.38	12.70	17.84	7.06	5.41	13.00	9.17	12.72	11.74	17.34	8.99	19.52	9.75	12.82	18.02	18.54	9.62	17.46	8.91	9.05	9.08	19.95	9.07	13.58	17.47	20.83	18.27	9.64
122	5.01	4.83	3.71	6.17	12.99	7.72	8.73																																						

ISO 9613-2 MODEL DISCUSSION

It is worth noting that wind enhanced noise propagation is not caused directly by the wind (or wind speed) but rather by the vertical wind gradient (shear profile), the greater the wind gradient the greater the extent of refraction or bending of sound waves. Furthermore, the vertical wind gradient is generally always greatest at and close to the ground level, and hence ground level based noise sources are those most affected by wind enhanced propagation effects.

Most noise prediction algorithms are empirically derived from measurement of noise from 'close to ground' based noise sources, where these effects are greatest. Wind shear at higher altitudes where WTG's operate (80-100m) is not as pronounced as at ground level, which results in wind enhanced noise propagation not being as significant an effect compared to ground based noise sources.

A study by Bass, Bullmore and Sloth¹ conducted comprehensive noise propagation measurements from an elevated noise source to varying distances over various terrain types. Noise levels at all of the monitoring locations around all of the sites were calculated using various selected calculation procedures including IEA, ISO9613-2, ENM and CONCAWE. The study found that for flat, rolling and complex terrain sites ISO9613 had impressive accuracy, predicting noise levels to within 1.5 dBA of levels measured under conditions of an 8 m/s positive wind vector. Furthermore, they noted that the output of ISO9613 was not unduly sensitive to meteorological input parameters when compared to ENM.

Some exceptions to the prediction accuracy were discussed with recommendations for modifications to improve possible shortcomings. These include the case of marginal or partial screening, with a maximum barrier effect limit of 3 dBA. In the case of elevated WTG noise sources no acoustic shielding is provided by topography to the nearest dominant turbines and therefore this exception will not have a significant effect on predicted noise levels and no additional correction is therefore justified.

A further study conducted by Plovsing and Kragh² of Delta Acoustics in Denmark for the EU Commission, developed heuristic noise prediction algorithms that would more specifically model noise propagation from wind farms. The developed model, WiTuProp, was comprehensively tested against measured levels for a range of conditions and showed excellent agreement, particularly under downwind conditions. The algorithms of WiTuProp were later adopted in a more advanced prediction model, Nord 2000.

A conference paper presented at Auswind 2004 by Sloth³ presented some comparisons for WiTuProp/Nord2000 and ISO9613-2. One summary given was that if Nord2000 were not able to be used then the best alternative model was ISO9613-2 with a hard ground assumption.

A conference paper presented at Acoustics 2004 by Tickell, Ellis and Bastasch⁴ compared the predicted noise levels from a variety of models including WiTuProp, CONCAWE (ENM), CadnaA (ISO9613-2), NPL and DR04173. The results of the comparison show ISO9613-2 to be more conservative than WiTuProp for all distances and all ground hardness assumptions.

On the basis of the above presentations, comparisons and verifications the implementation of ISO9613-2, with 100% hard ground assumption has been chosen as an appropriate and conservative approach for noise prediction for WTG's in this project.

[1] JH Bass, AJ Bullmore and E Sloth, "Development of a wind farm noise propagation model" Contract JOR3-CT95-0051 Jan 96 - May 98

[2] Birger Plovsing and Jorgen Kragh, "Wind Turbine Noise Propagation Model" Contract JOR3-CT95-0065 - 6 March 1998

Appendix F

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[3] Erik Sloth, *"Problems related to the use of the existing noise measurement standards when predicting noise from wind turbines and wind farms"* AUSWIND 2004, Launceston

[4] Tickell, Ellis and Bastasch, *"Wind Turbine Generator Noise Prediction - Comparison of Computer Models"* ACOUSTICS 2004, Gold Coast