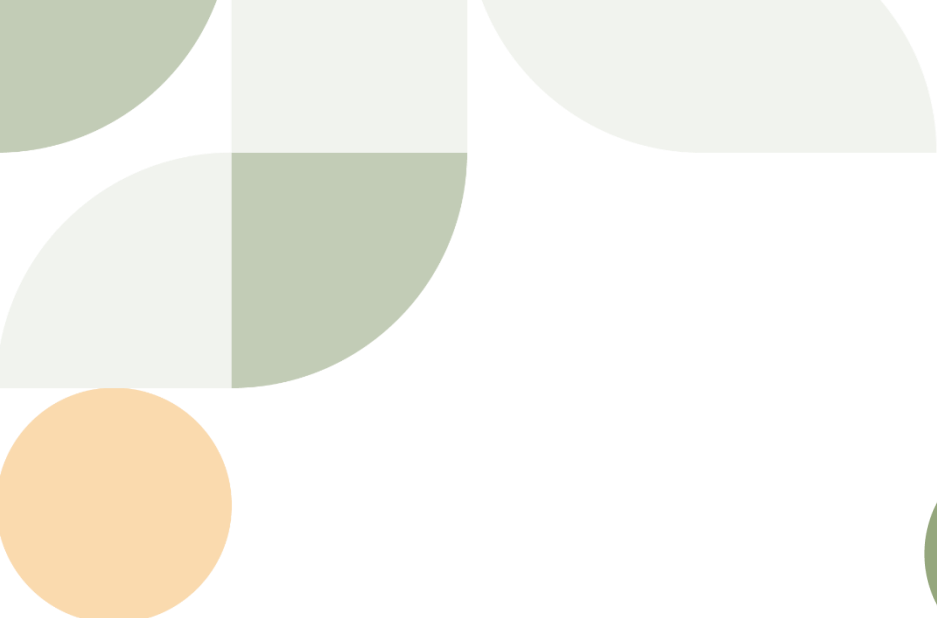




Lime Down

Solar Park

Environmental Statement

Volume 3, Appendix 14-3: Baseline Noise Survey (Clean)

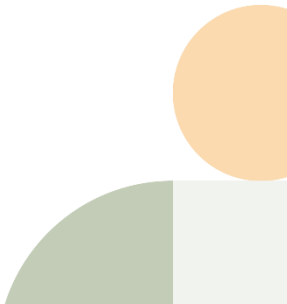
August 2026

Revision 2

Planning Inspectorate Reference: EN010168

Document Reference: APP/6.3

APFP Regulation 5(2)(a)



Schedule of Changes

Revision	Section Reference	Description of Changes	Reason for Revision
2	Table 1	Noise monitoring results for LT1 updated.	Correction to a typo for Daytime and Night-time LAeq,T values for LT1
	Section 1.5	New section created showing change in noise levels from inclusion of meteorological conditions	Updated for Deadline 6 to remove periods of adverse weather conditions at monitoring locations LT1, LT3, LT5 and LT6 for completeness in response to comments from SLD.
	Plate 1	LT1 Time History updated	
	Plate 3	LT3 Time History updated	
	Plate 5	LT5 Time History updated	
	Plate 6	LT6 Time History updated	
	Plate 29	LT1 Histograms updated	
	Plate 31	LT3 Histograms updated	
	Plate 33	LT5 Histograms updated	
	Plate 34	LT6 Histograms updated	

List of Contents

Appendix 14-3: Baseline Noise Survey Results	1
1.1 Introduction	1
1.2 Noise Monitoring Methodology.....	1
1.3 Meteorological Conditions	2
1.4 Survey Results	2
1.5 Analysis of Effects from Meteorological Data	4
1.6 References.....	62

List of Tables

Table 1: Noise monitoring results	2
Table 2 Comparison of Noise levels with Inclusion of Meteorological Data	4

List of Plates

Plate 1: LT1 Measurement Time History (Solar PV Sites).....	6
Plate 2: LT2 Measurement Time History (Solar PV Sites).....	7
Plate 3: LT3 Measurement Time History (Solar PV Sites).....	8
Plate 4: LT4 Measurement Time History (Solar PV Sites).....	9
Plate 5: LT5 Measurement Time History (Solar PV Sites).....	10
Plate 6: LT6 Measurement Time History (Solar PV Sites).....	11
Plate 7: LT7 Measurement Time History (Solar PV Sites).....	12
Plate 8: LT8 Measurement Time History (Solar PV Sites).....	13
Plate 9: LT9 Measurement Time History (Solar PV Sites).....	14
Plate 10: LT10 Measurement Time History (Solar PV Sites).....	15
Plate 11: LT11 Measurement Time History (Solar PV Sites)	16
Plate 12: LT12 Measurement Time History (Solar PV Sites).....	17
Plate 13: LT13 Measurement Time History (Solar PV Sites).....	18
Plate 14: LT15 Measurement Time History (Solar PV Sites).....	19
Plate 15: LT16 Measurement Time History (Solar PV Sites).....	20
Plate 16: LT17 Measurement Time History (Solar PV Sites).....	21
Plate 17: LT18 Measurement Time History (Cable Route Corridor)	22
Plate 18: LT19 Measurement Time History (Cable Route Corridor)	23
Plate 19: LT20 Measurement Time History (Cable Route Corridor)	24
Plate 20: LT21 Measurement Time History (Cable Route Corridor)	25
Plate 21: LT22 Measurement Time History (Cable Route Corridor)	26
Plate 22: LT23 Measurement Time History (Cable Route Corridor)	27
Plate 23: LT24 Measurement Time History (Cable Route Corridor)	28
Plate 24: LT25 Measurement Time History (Cable Route Corridor)	29
Plate 25: LT26 Measurement Time History (Cable Route Corridor)	30
Plate 26: LT27 Measurement Time History (Cable Route Corridor)	31

Plate 27: LT28 Measurement Time History (Cable Route Corridor)	32
Plate 28: LT29 Measurement Time History (Cable Route Corridor)	33
Plate 29: LT1 LA90 Histograms (Solar PV Sites)	34
Plate 30: LT2 LA90 Histograms (Solar PV Sites)	35
Plate 31: LT3 LA90 Histograms (Solar PV Sites)	36
Plate 32: LT4 LA90 Histograms (Solar PV Sites)	37
Plate 33: LT5 LA90 Histograms (Solar PV Sites)	38
Plate 34: LT6 LA90 Histograms (Solar PV Sites)	39
Plate 35: LT7 LA90 Histograms (Solar PV Sites)	40
Plate 36: LT8 LA90 Histograms (Solar PV Sites)	41
Plate 37: LT9 LA90 Histograms (Solar PV Sites)	42
Plate 38: LT10 LA90 Histograms (Solar PV Sites)	43
Plate 39: LT11 LA90 Histograms (Solar PV Sites)	44
Plate 40: LT12 LA90 Histograms (Solar PV Sites)	45
Plate 41: LT13 LA90 Histograms (Solar PV Sites)	46
Plate 42: LT15 LA90 Histograms (Solar PV Sites)	47
Plate 43: LT16 LA90 Histograms (Solar PV Sites)	48
Plate 44: LT17 LA90 Histograms (Solar PV Sites)	49
Plate 45: LT18 LA90 Histograms (Cable Route Corridor)	50
Plate 46: LT19 LA90 Histograms (Cable Route Corridor)	51
Plate 47: LT20 LA90 Histograms (Cable Route Corridor)	52
Plate 48: LT21 LA90 Histograms (Cable Route Corridor)	53
Plate 49: LT22 LA90 Histograms (Cable Route Corridor)	54
Plate 50: LT23 LA90 Histograms (Cable Route Corridor)	55
Plate 51: LT24 LA90 Histograms (Cable Route Corridor)	56
Plate 52: LT25 LA90 Histograms (Cable Route Corridor)	57
Plate 53: LT26 LA90 Histograms (Cable Route Corridor)	58
Plate 54: LT27 LA90 Histograms (Cable Route Corridor)	59
Plate 55: LT28 LA90 Histograms (Cable Route Corridor)	60
Plate 56: LT29 LA90 Histograms (Cable Route Corridor)	61

Appendix 14-3: Baseline Noise Survey Results

1.1 Introduction

1.1.1 This appendix presents the methodology and results of the baseline noise monitoring carried out to inform the construction/decommissioning and operational noise assessments. Noise monitoring locations were determined based on the Order Limits with respect to nearby noise-sensitive receptors.

1.1.2 Measurement and receptor locations can be seen in **ES Volume 2, Figure 14-1: Noise Monitoring and Sensitive Receptor Locations [EN010168/APP/6.2]**. A number of other factors were also taken into consideration when identifying these locations, including:

- Safety of the operators;
- Security of monitoring equipment; and
- Site accessibility.

1.2 Noise Monitoring Methodology

1.2.1 Baseline noise monitoring was carried out to establish the existing noise climate within and surrounding the Order Limits including the Solar PV Sites and Cable Route Corridor. The monitoring procedures followed guidance from British Standard (BS) 7445-1:2003 Description and measurement of environmental noise - Part 1: Guide to quantities and procedures (Ref 1) and BS 4142:2014+A1:2019 Methods for Rating and Assessing Industrial and Commercial Sound (BS 4142:2014) (Ref 2).

1.2.2 Acoustic field calibrators were applied to each instrument at the start and end of each measurement to check the calibration levels. Each unattended sound level meter was housed within a weatherproof box with batteries to power the instrument for the full measurement duration. Appropriate outdoor all-weather equipment was used on all microphones. All noise measurements included L_{Aeq} , L_{A90} , and L_{AFmax} sound level indicators over 15-minute contiguous periods.

1.2.3 The baseline noise survey for the Solar PV Sites was undertaken at 17 locations around the Solar PV Sites from October 2023 to January 2024, with additional measurements undertaken at LT8 in October 2024; these are referenced as LT1 to LT17.

1.2.4 The baseline noise survey for the Cable Route Corridor was undertaken at 12 locations around the Cable Route Corridor from March to April 2025 and are referenced as LT18 to LT29.

- 1.2.5 The noise results are presented as daytime (07:00 – 23:00) and nighttime (23:00 – 07:00) baseline noise monitoring results of unattended measurements at are presented in Table 1. Time-history plots of noise measurements at each location are presented in Plate 1 to Plate 28. The bar charts for each monitoring location daytime and night-time LA90 are presented in Plate 29 to Plate 56.
- 1.2.6 In line with BS 4142:2014 (Ref 2), The LA90 levels presented have been derived from the statistical analysis of the distribution of the background sound data. These distributions are presented in Plate 1 to Plate 28.

1.3 Meteorological Conditions

- 1.3.1 A weather station was set up to capture weather data during the monitoring period between the 27 March and 4 April 2025 along the Cable Route Corridor. During this period, there were no periods of weather that were not suitable for noise monitoring.
- 1.3.2 A weather station was set up to capture the weather data for the Solar PV Sites allowing for any periods of adverse weather conditions to be identified and omitted from further analysis.

1.4 Survey Results

- 1.4.1 The baseline noise monitoring results of unattended measurements at are presented in **Table 1** Error! Reference source not found.. Time-history plots of noise measurements at each location are presented in Plate 1 to Plate 28. The bar charts for each monitoring location daytime and night-time LA90 are presented in Plate 29 to Plate 56.

Table 1: Noise monitoring results

Location Reference	Monitoring Period	Daytime (07:00 – 23:00)		Night-time (23:00 – 07:00)	
		L _{Aeq,T} (dB)	L _{A90,T} (dB)	L _{Aeq,T} (dB)	L _{A90,T} (dB)
Solar PV Sites					
LT1	16/01/2024 - 22/01/2024	47	32	41	22
LT2	05/10/2023 - 11/10/2023	54	32	45	20
LT3	05/10/2023 - 11/10/2023	46	32	35	20
LT4	05/10/2023 - 11/10/2023	42	34	35	21
LT5	05/10/2023 - 12/10/2023	50	35	37	23
LT6	12/10/2023 - 18/10/2023	52	32	45	26
LT7	12/10/2023 - 13/10/2023	45	29	51	47
LT8	24/10/2023 - 31/10/2023	45	36	39	29
LT9	12/10/2023 - 17/10/2023	47	38	37	27

Location Reference	Monitoring Period	Daytime (07:00 – 23:00)		Night-time (23:00 – 07:00)	
		L _{Aeq,T} (dB)	L _{A90,T} (dB)	L _{Aeq,T} (dB)	L _{A90,T} (dB)
LT10	12/10/2023 - 16/10/2023	54	32	41	27
LT11	12/10/2023 - 18/10/2023	46	36	39	33
LT12	12/10/2023 - 18/10/2023	64	34	54	30
LT13	12/10/2023 - 17/10/2023	45	37	37	35
LT14*	31/10/2023 - 10/11/2023	57	40	44	31
LT15	31/10/2023 - 08/11/2023	56	42	45	31
LT16	18/10/2023 - 21/10/2023	50	39	44	36
LT17	31/10/2023 - 08/11/2023	50	45	48	39
Cable Route Corridor					
LT18	28/03/2025 - 04/04/2025	56	41	50	38
LT19	28/03/2025 - 04/04/2025	51	48	49	45
LT20	28/03/2025 - 04/04/2025	60	46	55	43
LT21	27/03/2025 - 03/04/2025	50	41	48	36
LT22	27/03/2025 - 03/04/2025	66	46	60	32
LT23	06/03/2025 - 12/03/2025	47	42	42	35
LT24	27/03-2025 - 31/03/2025	53	38	47	27
LT25	28/03/2025 - 03/04/2025	59	40	51	32
LT26	27/03/2025 - 01/04/2025	46	37	42	30
LT27	23/03/2025 – 03/04/2025	46	40	42	31
LT28	23/03/2025 – 03/04/2025	56	36	53	28
LT29	23/03/2025 – 03/04/2025	53	36	49	30

**Noise monitoring data for LT14 has been recorded as singular values for the monitoring period due to a meter fault. As such, time histories and histograms are not available.*

1.5 Analysis of Effects from Meteorological Data

- 1.5.1 Following review of the meteorological data for the Solar PV baseline noise survey, periods of noise monitoring affected by adverse weather were identified and omitted from the analysis. The affected monitoring locations are LT1, LT3, LT5 and LT6.
- 1.5.2 The resulting background sound levels were compared with the previously reported results to assess whether the exclusion of these periods resulted in any material difference in **Table 2**.

Table 2 Comparison of Noise levels with Inclusion of Meteorological Data

Location Reference	Monitoring Period	Without Meteorological Data				With Meteorological Data			
		Daytime (07:00 – 23:00)		Night-time (23:00 – 07:00)		Daytime (07:00 – 23:00)		Night-time (23:00 – 07:00)	
		L _{Aeq,T} (dB)	L _{A90,T} (dB)	L _{Aeq,T} (dB)	L _{A90,T} (dB)	L _{Aeq,T} (dB)	L _{A90,T} (dB)	L _{Aeq,T} (dB)	L _{A90,T} (dB)
Solar PV Sites									
LT1	16/01/2024 - 22/01/2024	47	32	41	22	46	32	41	22
LT3	05/10/2023 - 11/10/2023	46	32	35	20	44	32	34	20
LT5	05/10/2023 - 12/10/2023	50	35	37	23	49	35	38	23
LT6	12/10/2023 - 18/10/2023	52	32	45	26	51	32	42	26

- 1.5.3 At monitoring location LT1, the daytime L_{Aeq,T} noise levels decrease by 1 dB which is due from periods of heavy precipitation being omitted from the overall analysis. No changes to the L_{A90,T} are observed for either the daytime or night-time.
- 1.5.4 At LT3, the daytime and night-time L_{Aeq,T} noise levels decrease by 2 dB and 1 dB respectively. Updated analysis of the distribution of the background sound data shows no changes to the L_{A90} for either period.
- 1.5.5 At LT5, the daytime L_{Aeq,T} noise levels decrease by 1 dB whilst the night-time noise levels increase by 1 dB. These changes are from periods of heavy precipitation between 20:00 and 22:00 on 11/10/2023 being omitted from the overall analysis. However, no changes to the L_{A90} for either period are observed.

- 1.5.6 At LT6, the daytime and night-time $L_{Aeq,T}$ noise levels decrease by 1 dB and 3 dB respectively. Updated analysis of the distribution of the background sound data shows no changes to the L_{A90} for either period.

Plate 1: LT1 Measurement Time History (Solar PV Sites)

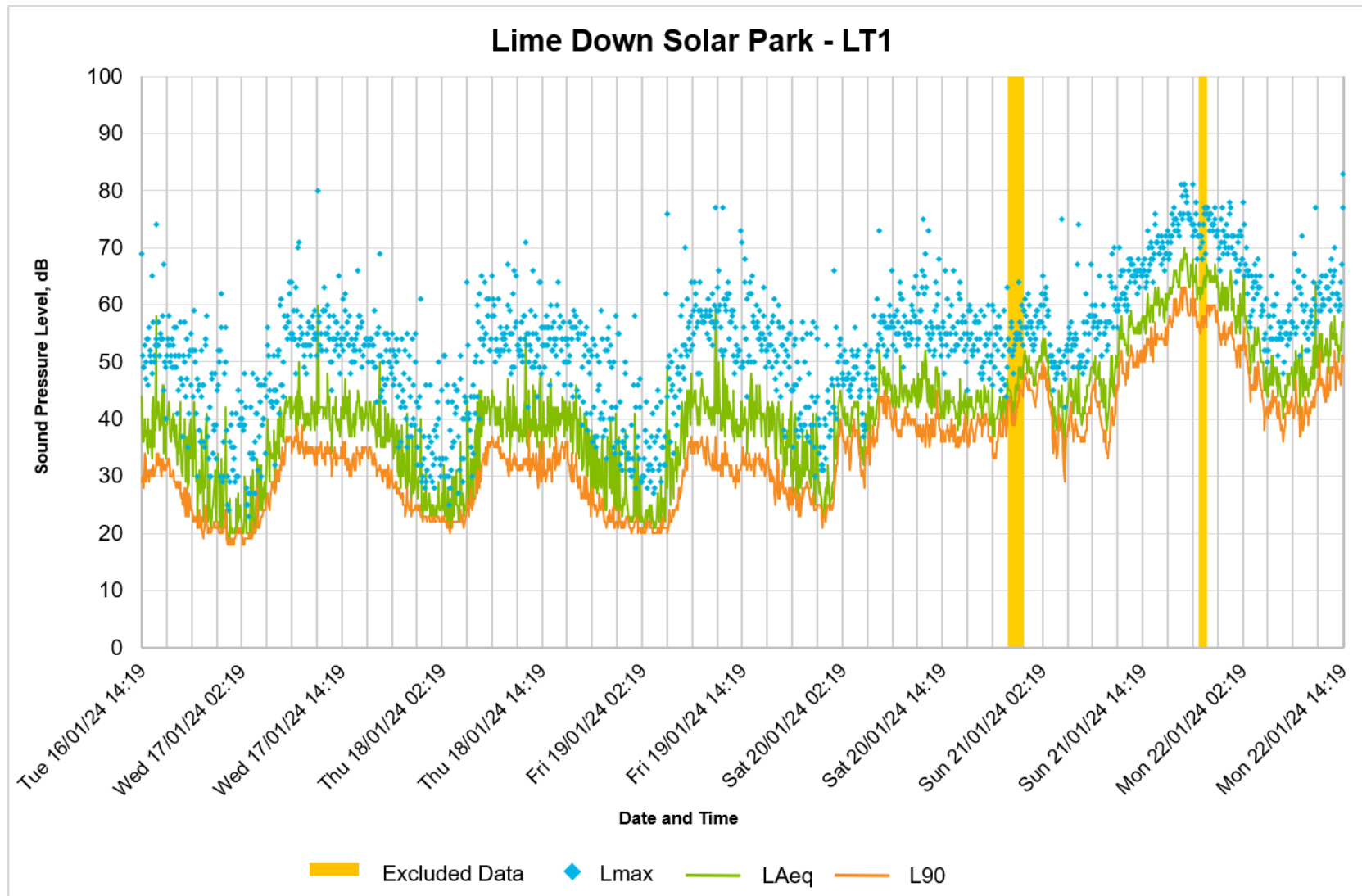


Plate 2: LT2 Measurement Time History (Solar PV Sites)

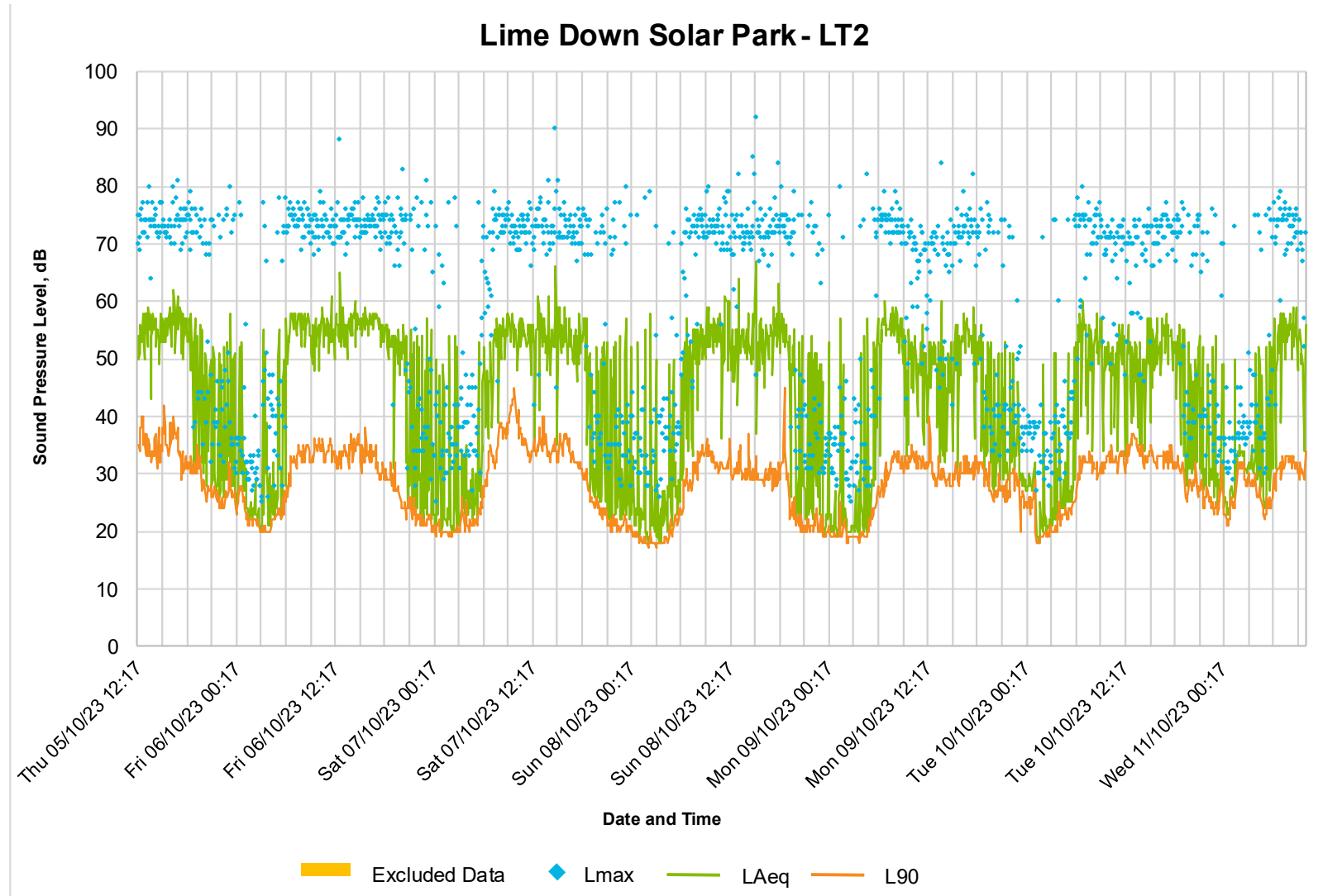


Plate 3: LT3 Measurement Time History (Solar PV Sites)

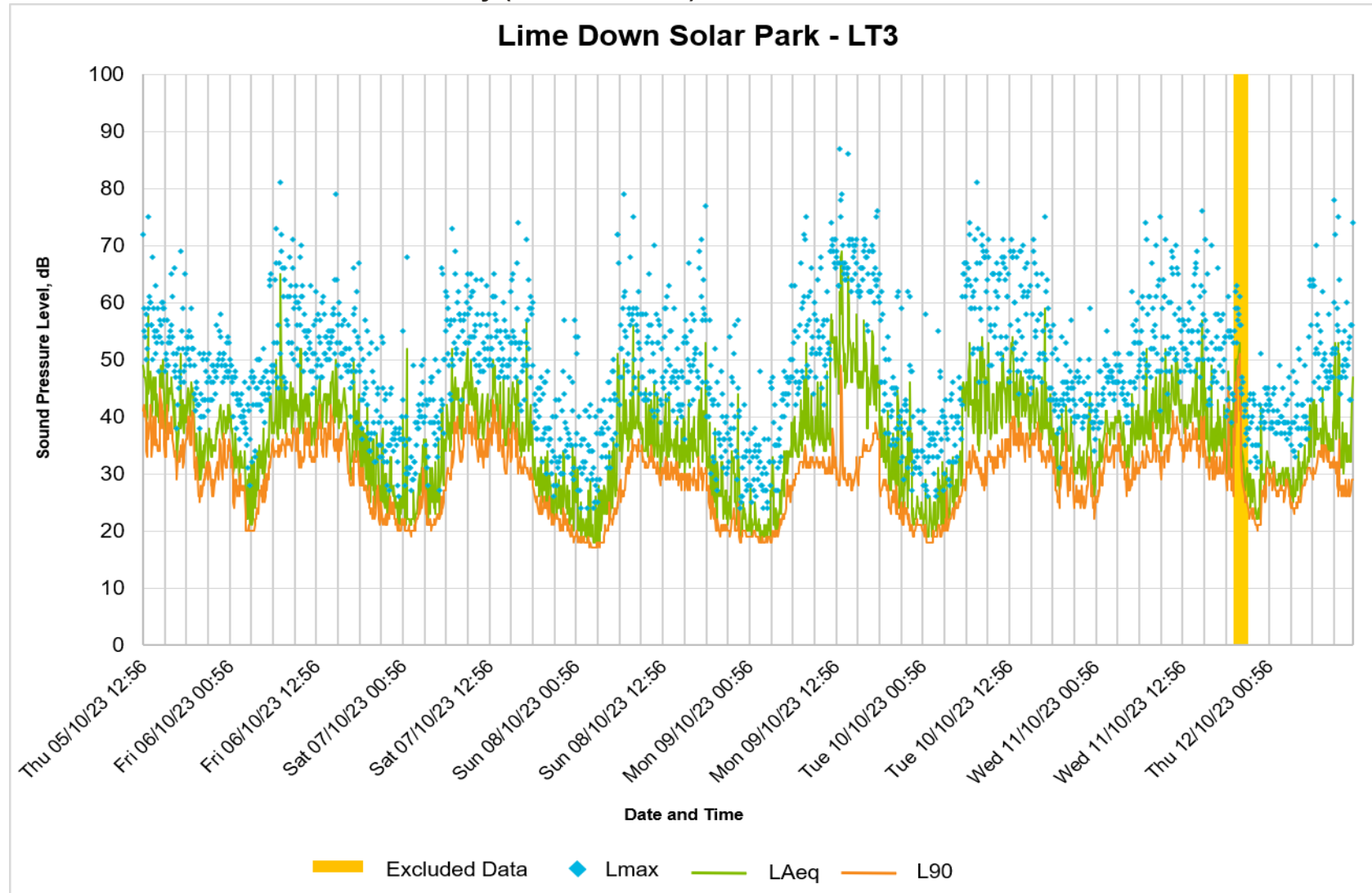


Plate 4: LT4 Measurement Time History (Solar PV Sites)

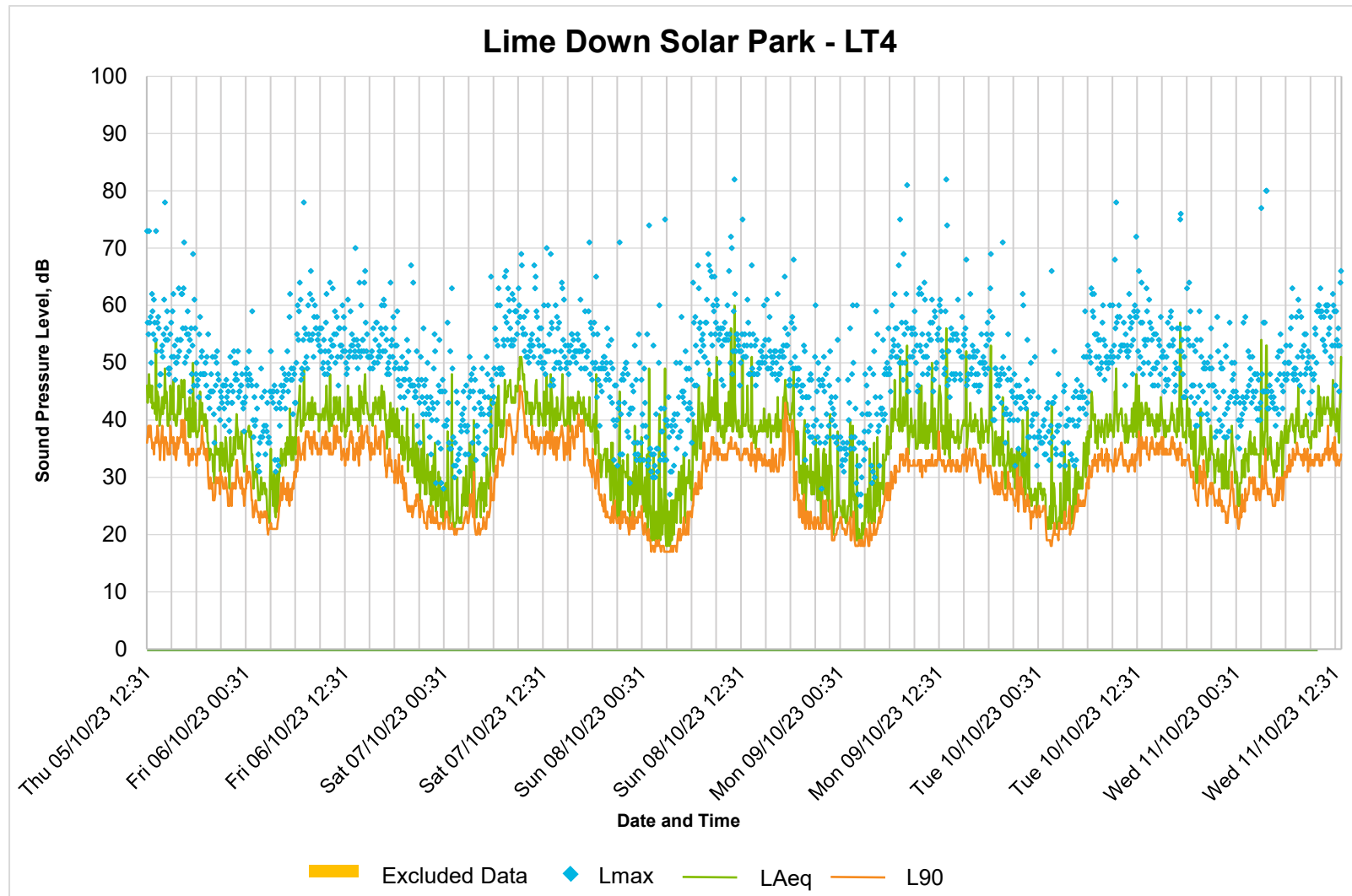


Plate 5: LT5 Measurement Time History (Solar PV Sites)

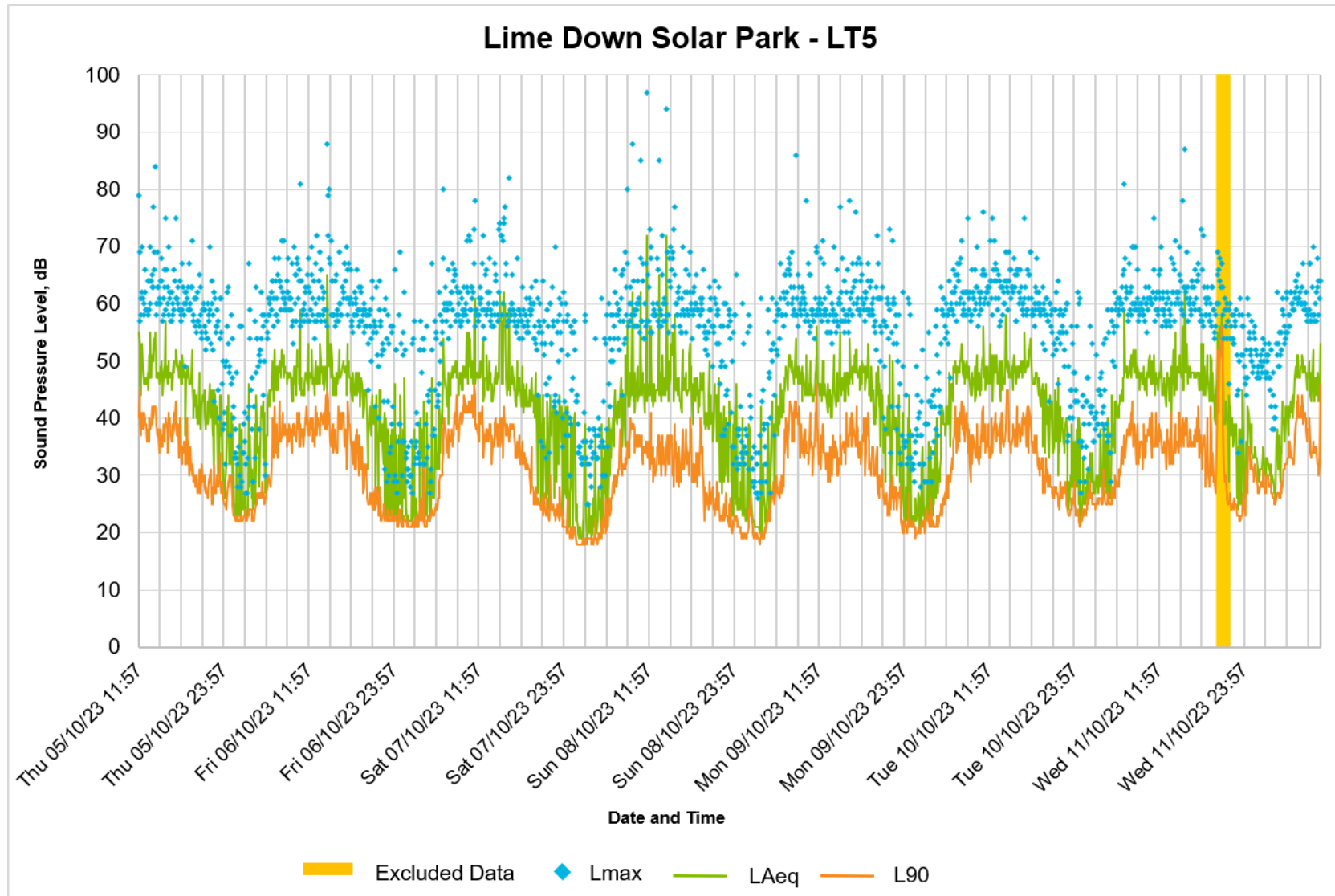


Plate 6: LT6 Measurement Time History (Solar PV Sites)

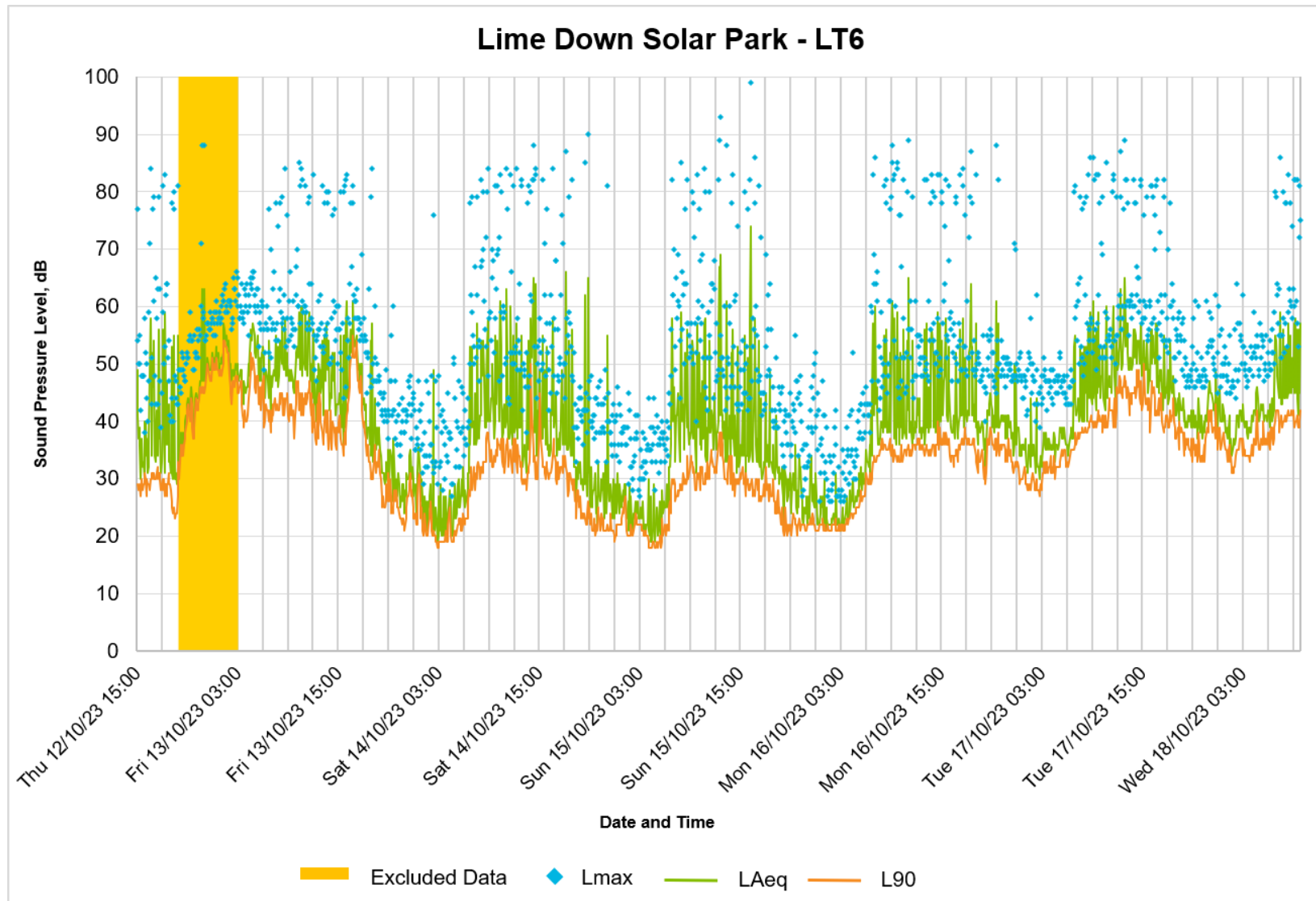


Plate 7: LT7 Measurement Time History (Solar PV Sites)

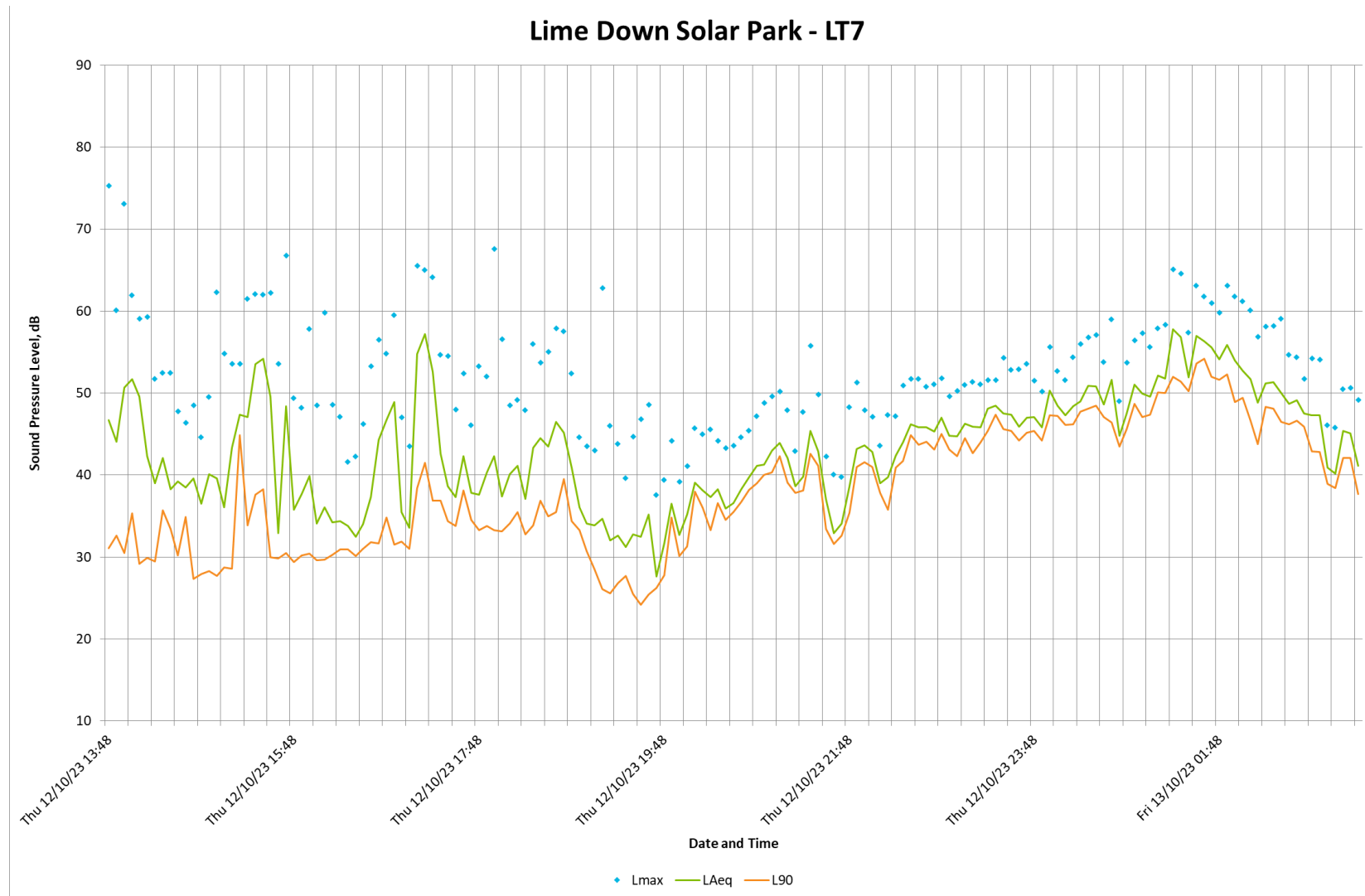


Plate 8: LT8 Measurement Time History (Solar PV Sites)

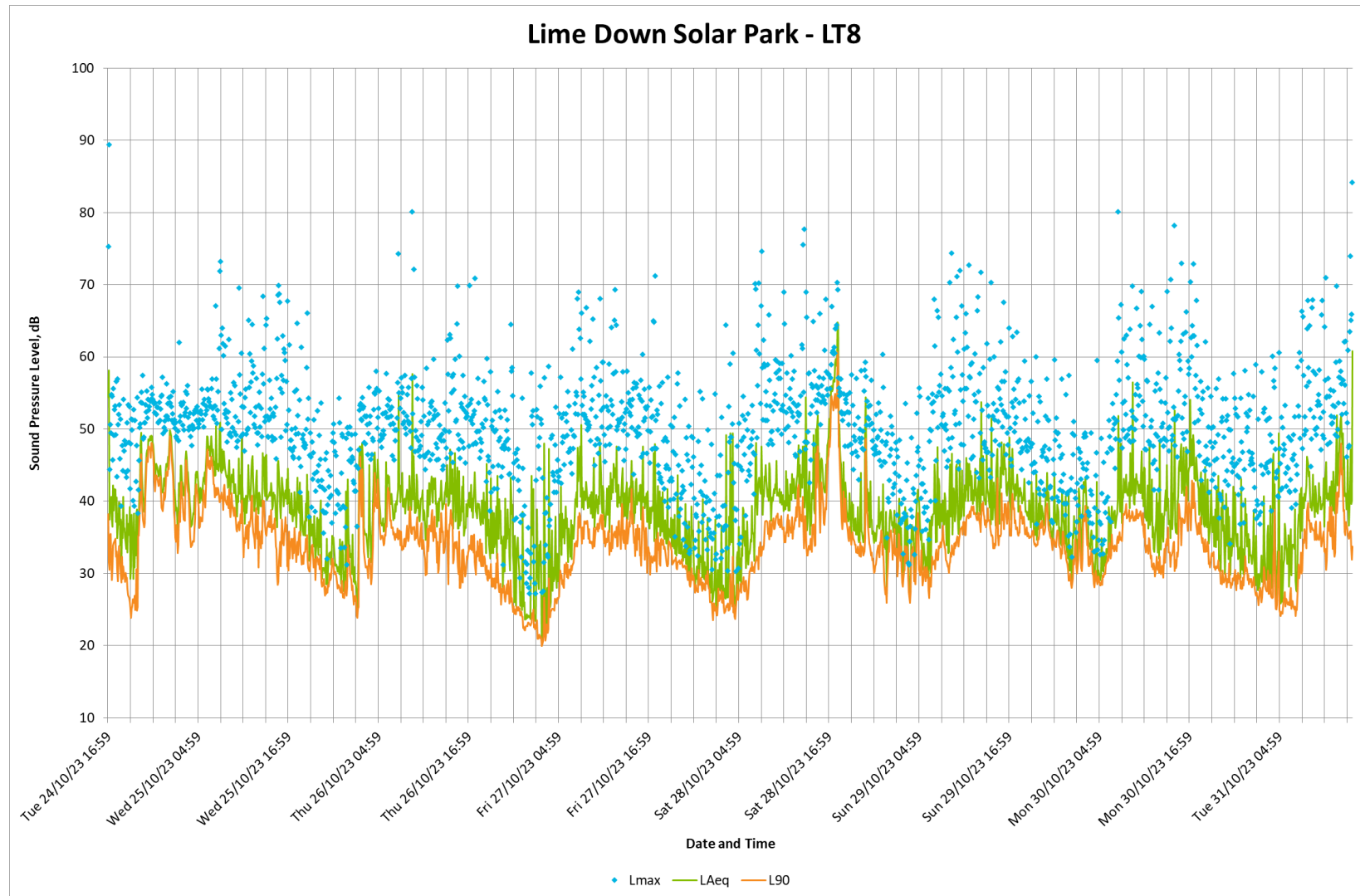


Plate 9: LT9 Measurement Time History (Solar PV Sites)

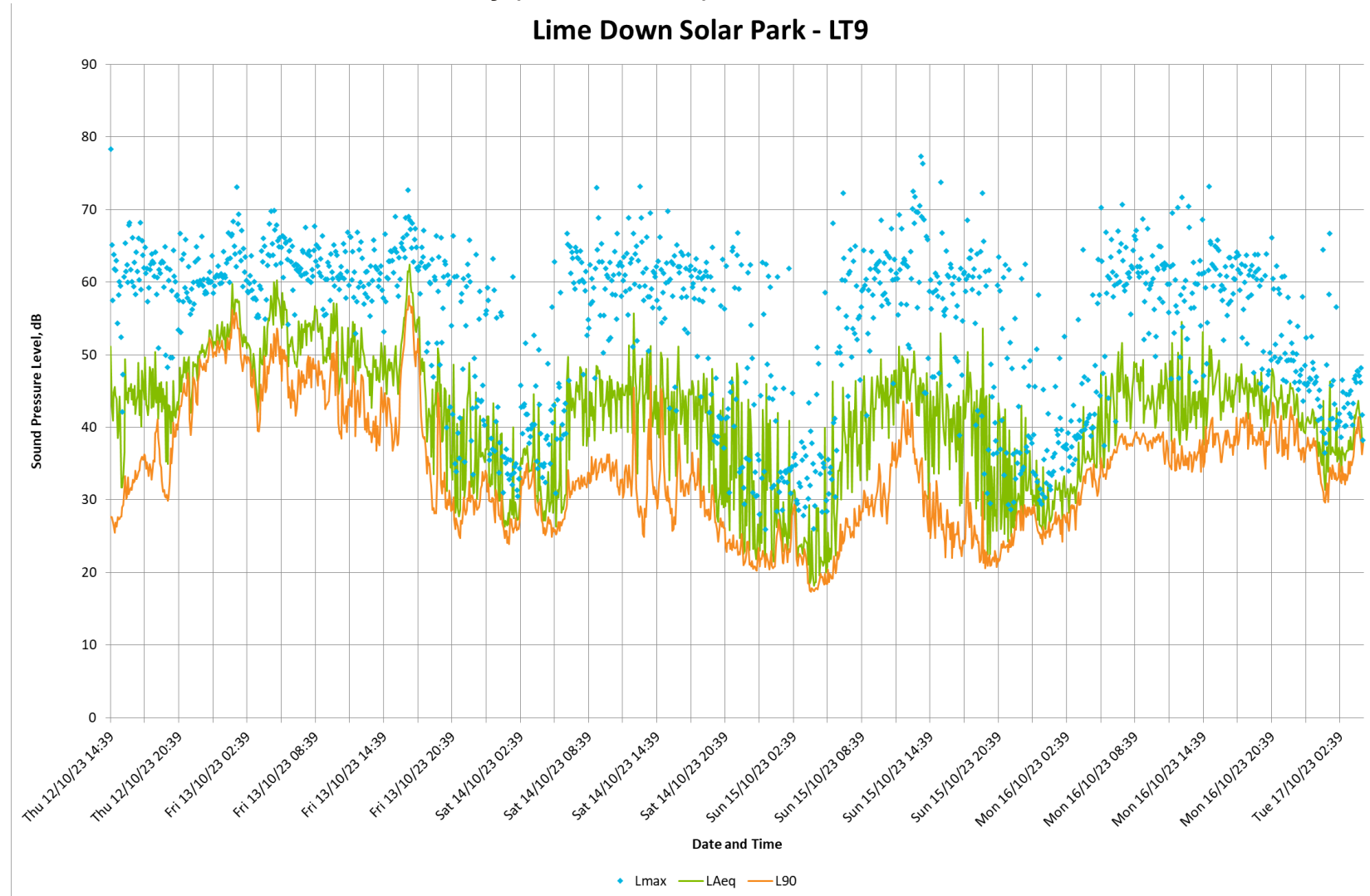


Plate 10: LT10 Measurement Time History (Solar PV Sites)

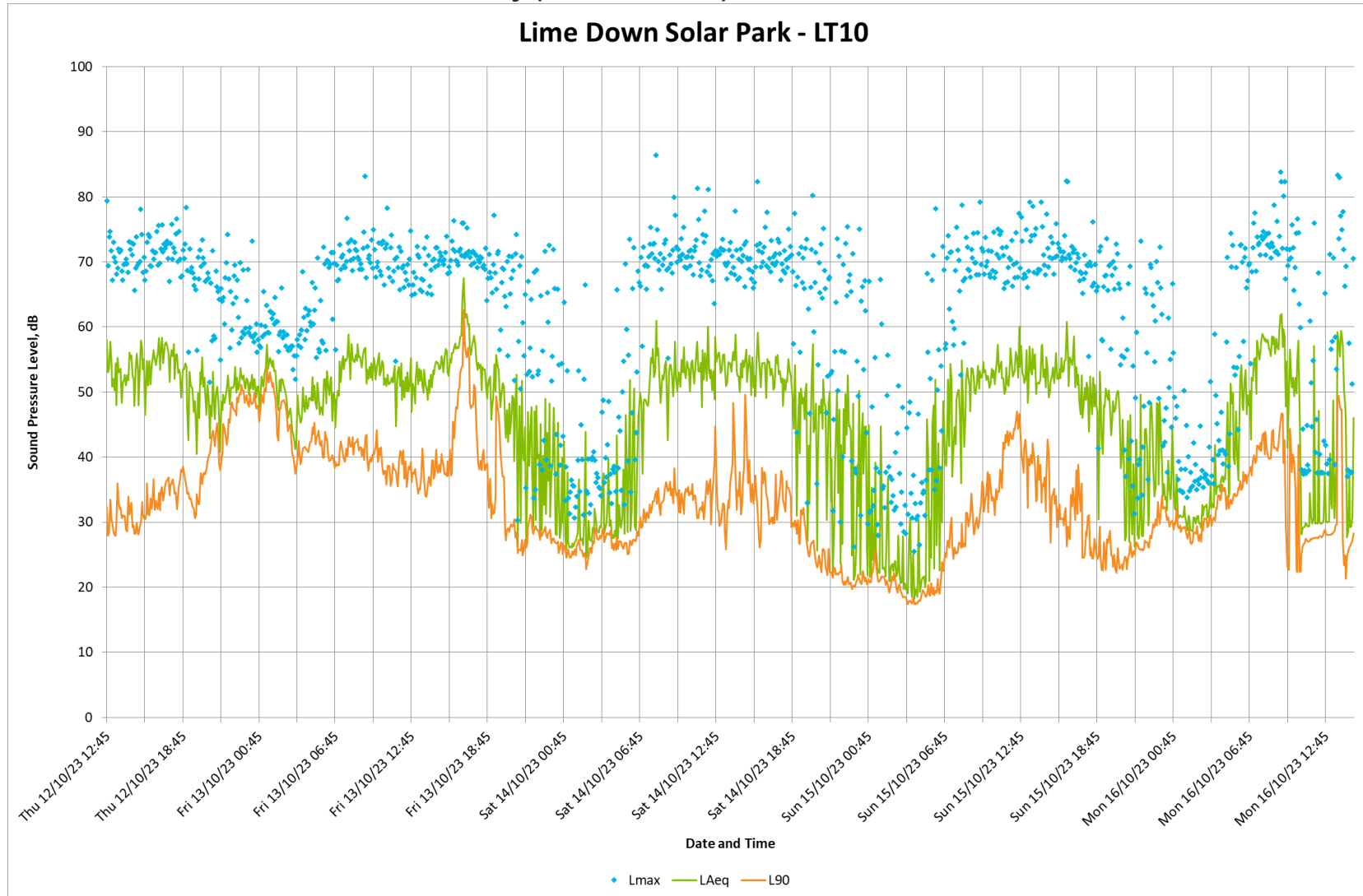


Plate 11: LT11 Measurement Time History (Solar PV Sites)

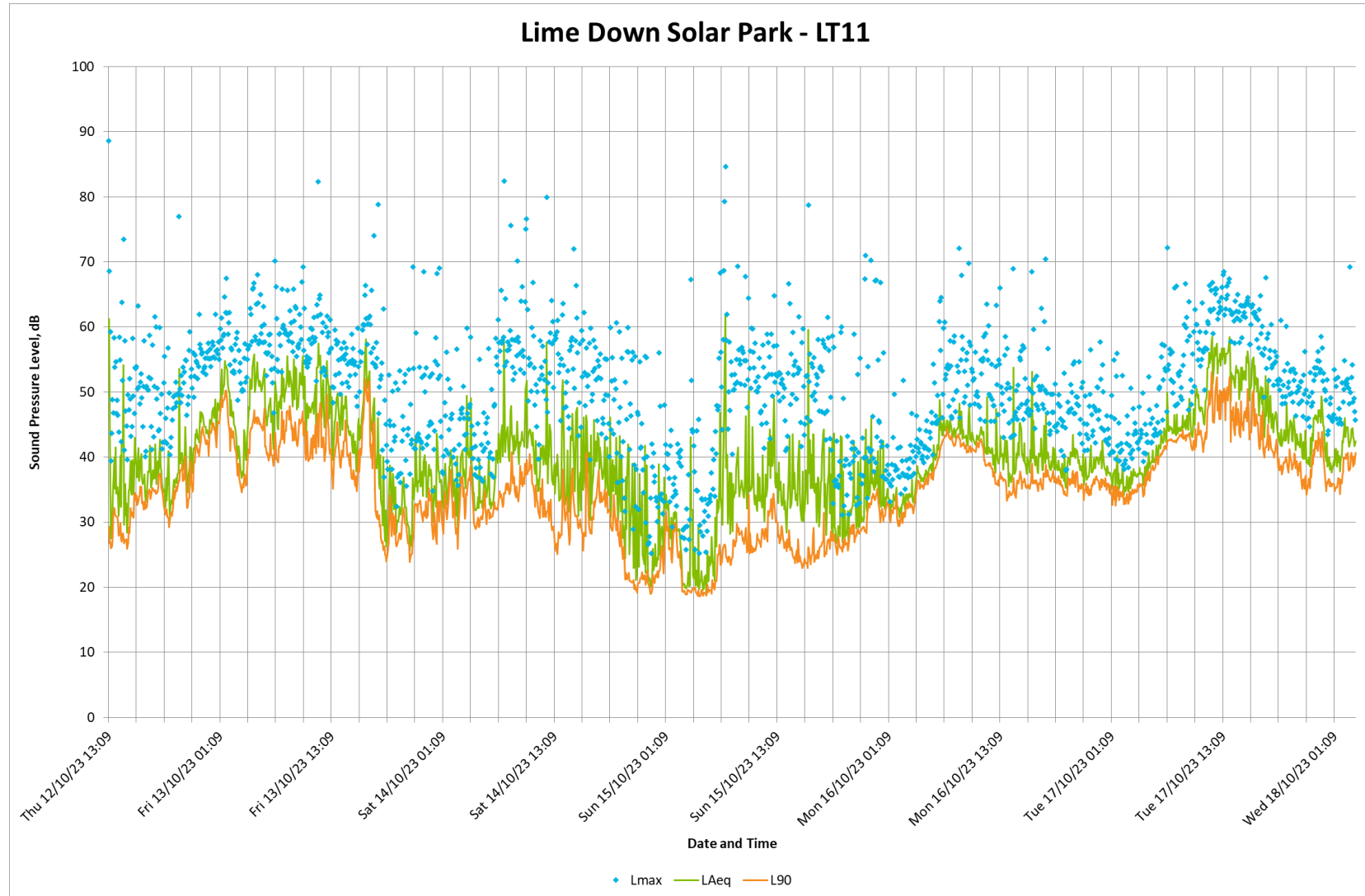


Plate 12: LT12 Measurement Time History (Solar PV Sites)

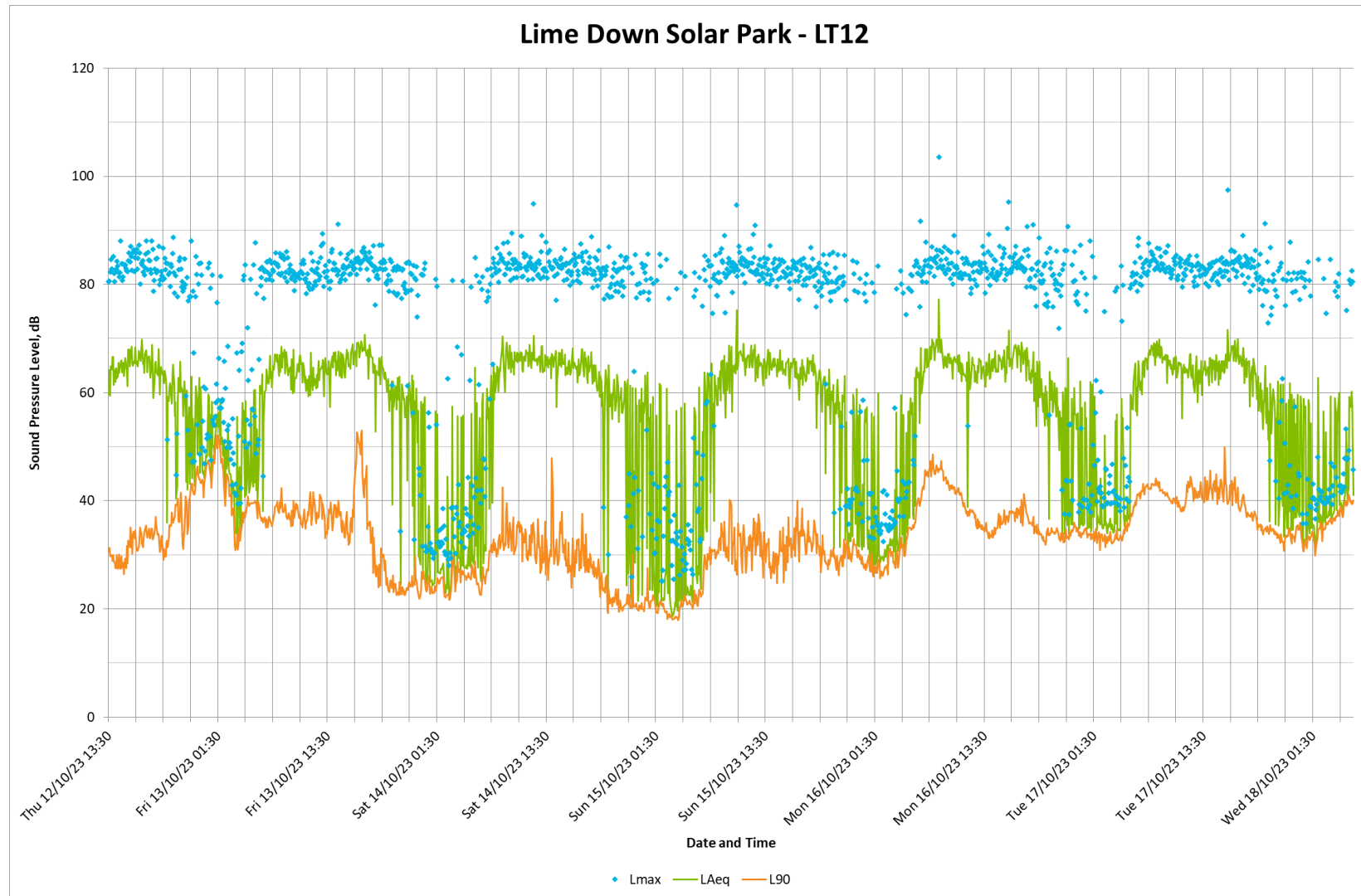


Plate 13: LT13 Measurement Time History (Solar PV Sites)

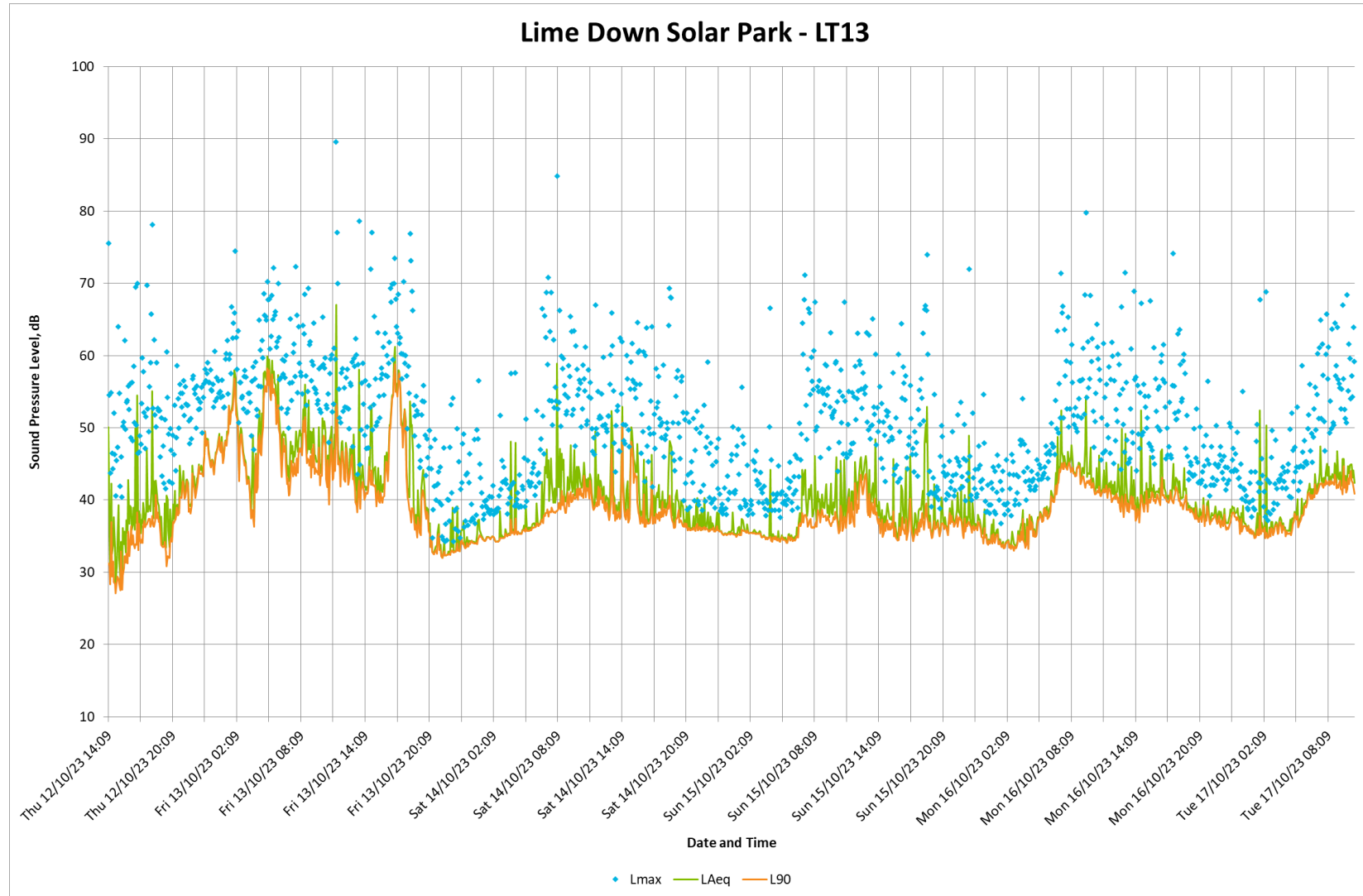


Plate 14: LT15 Measurement Time History (Solar PV Sites)

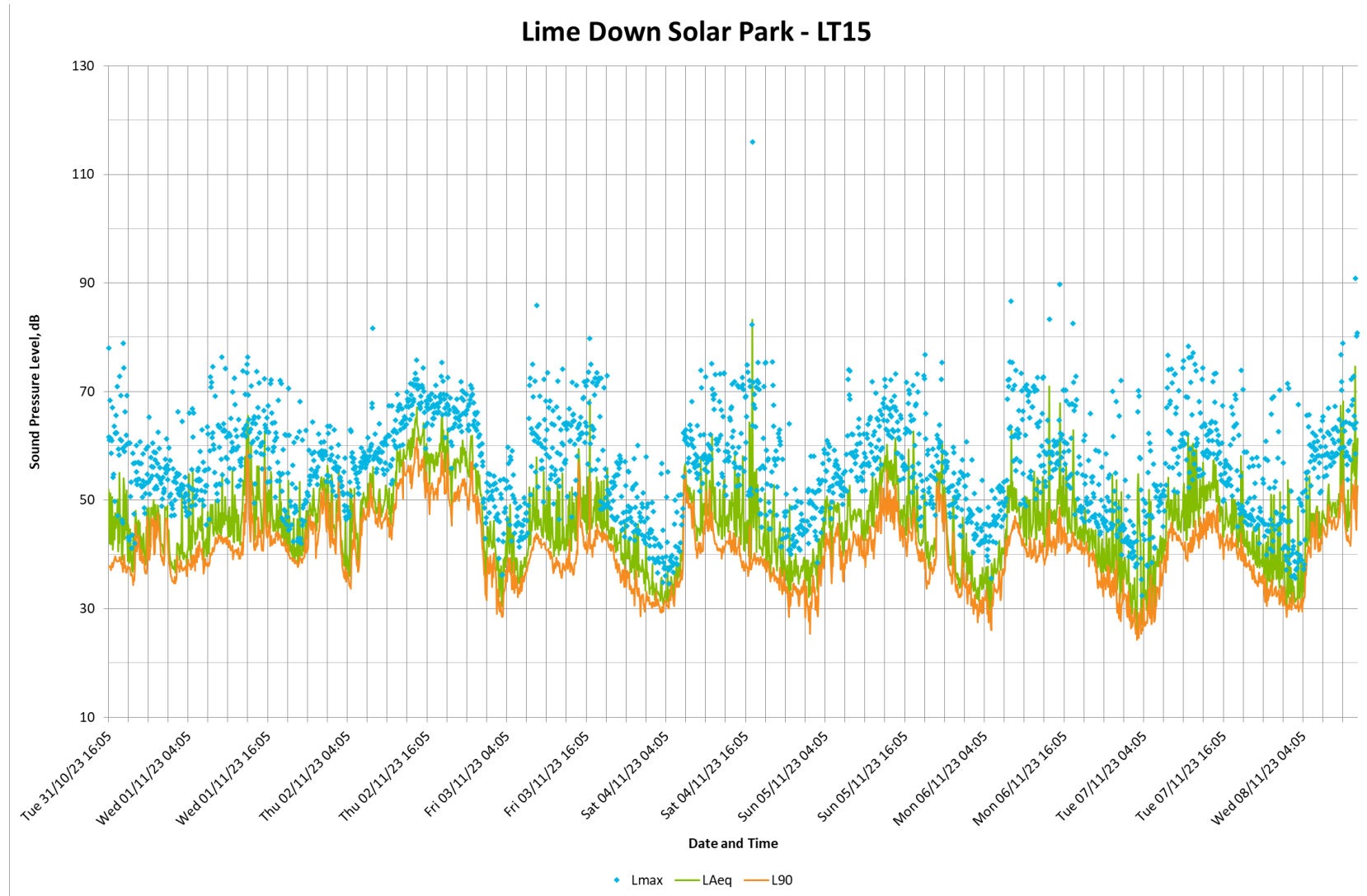


Plate 15: LT16 Measurement Time History (Solar PV Sites)

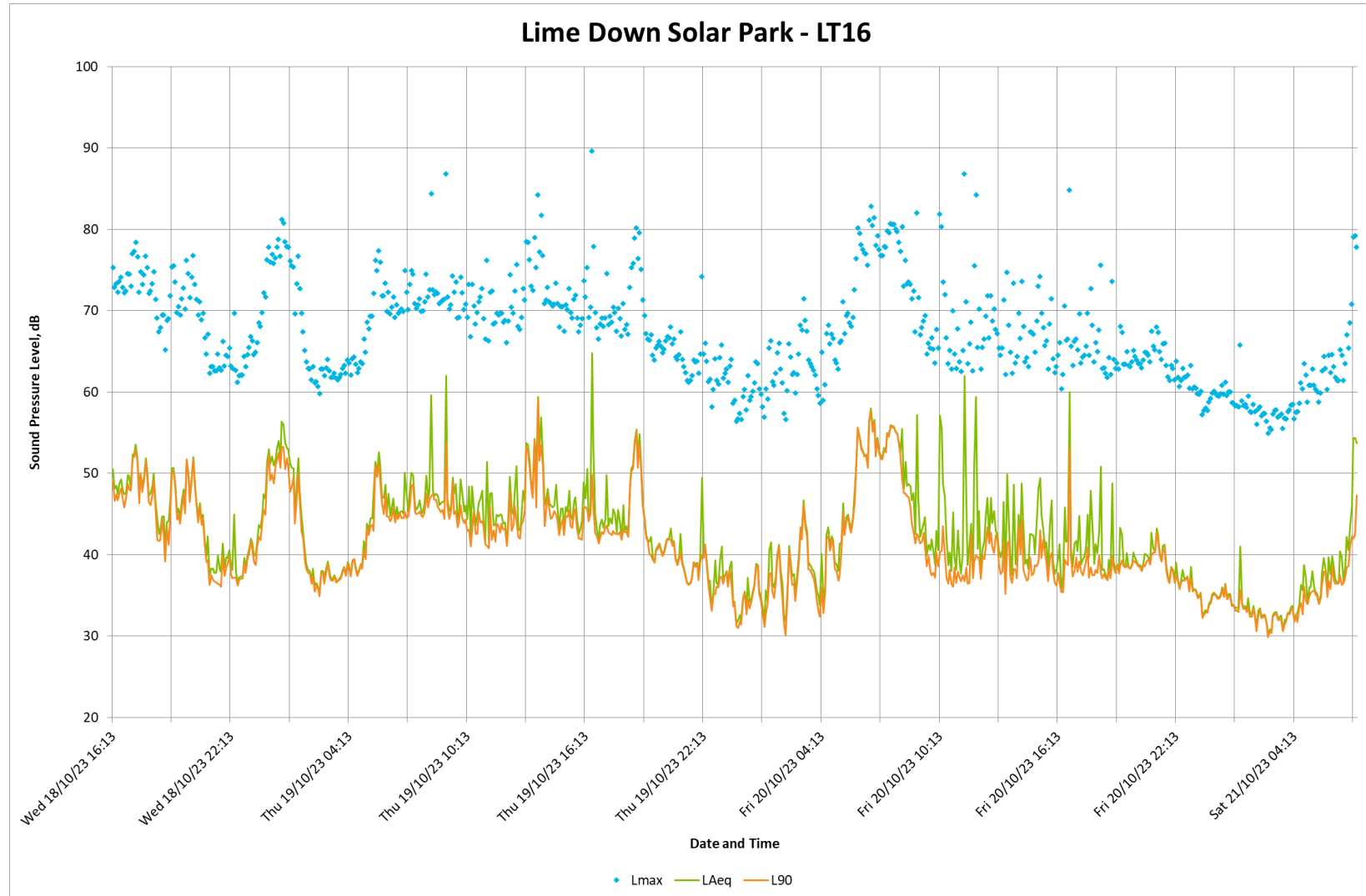


Plate 16: LT17 Measurement Time History (Solar PV Sites)

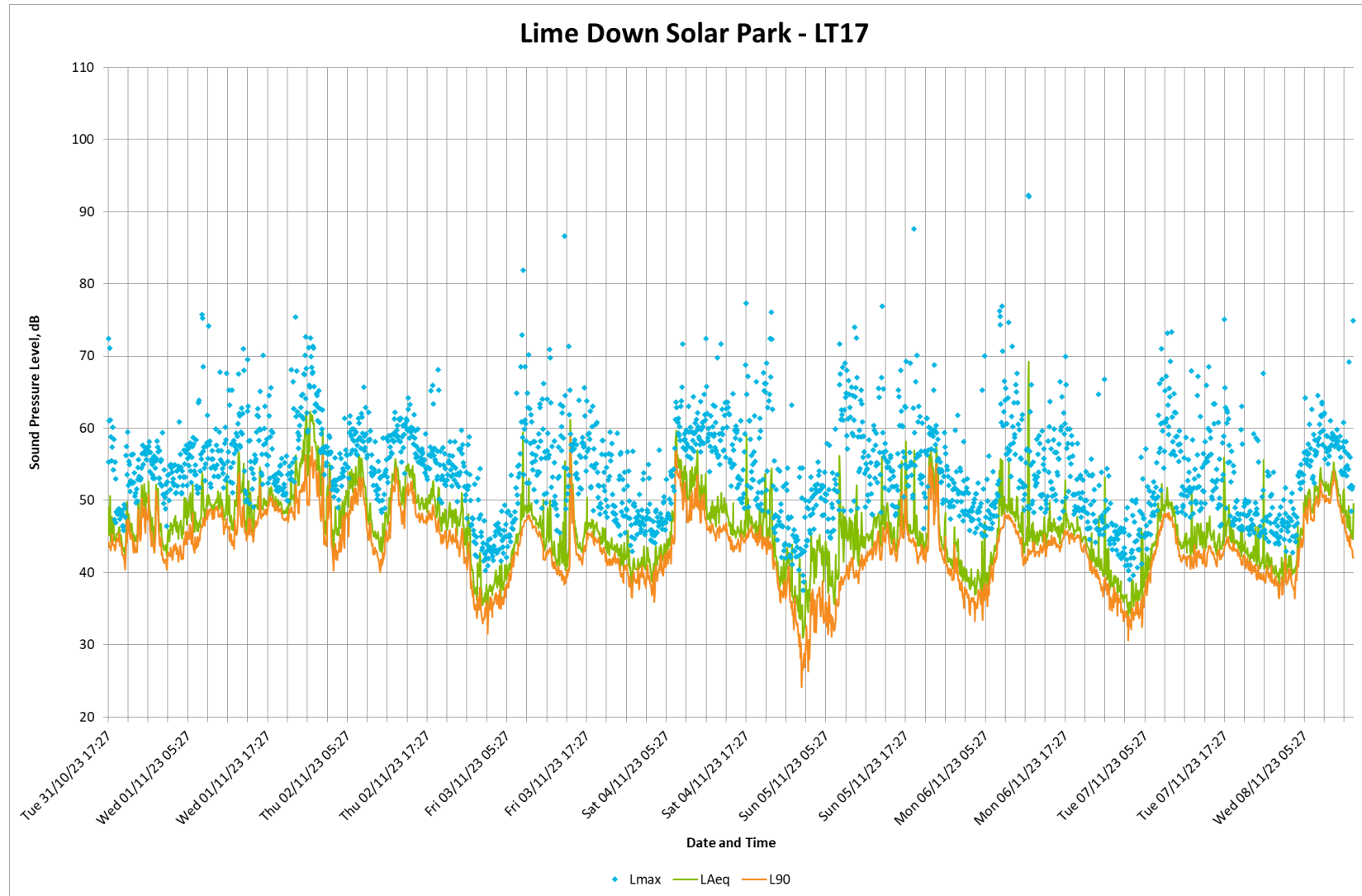


Plate 17: LT18 Measurement Time History (Cable Route Corridor)

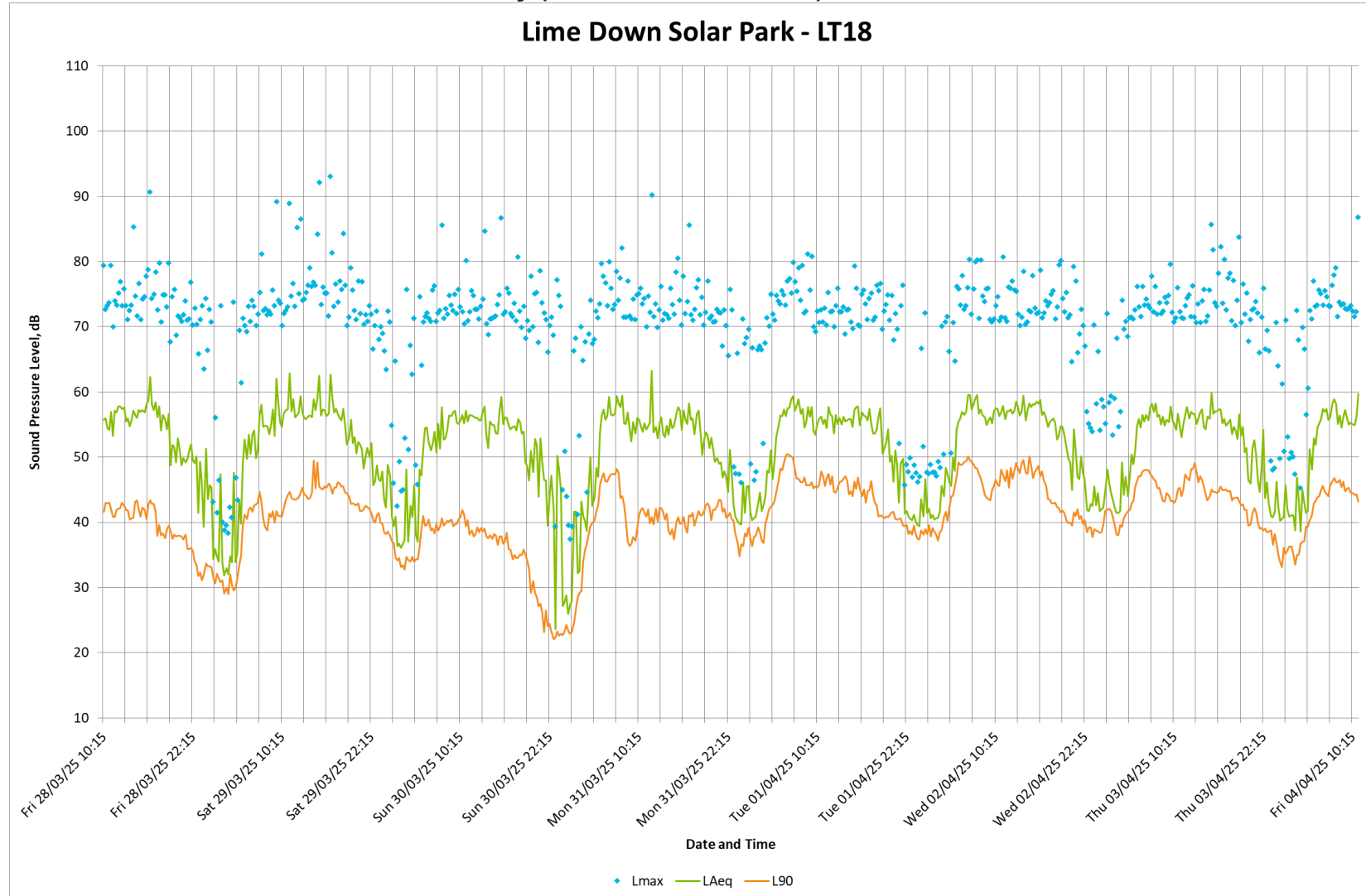


Plate 18: LT19 Measurement Time History (Cable Route Corridor)

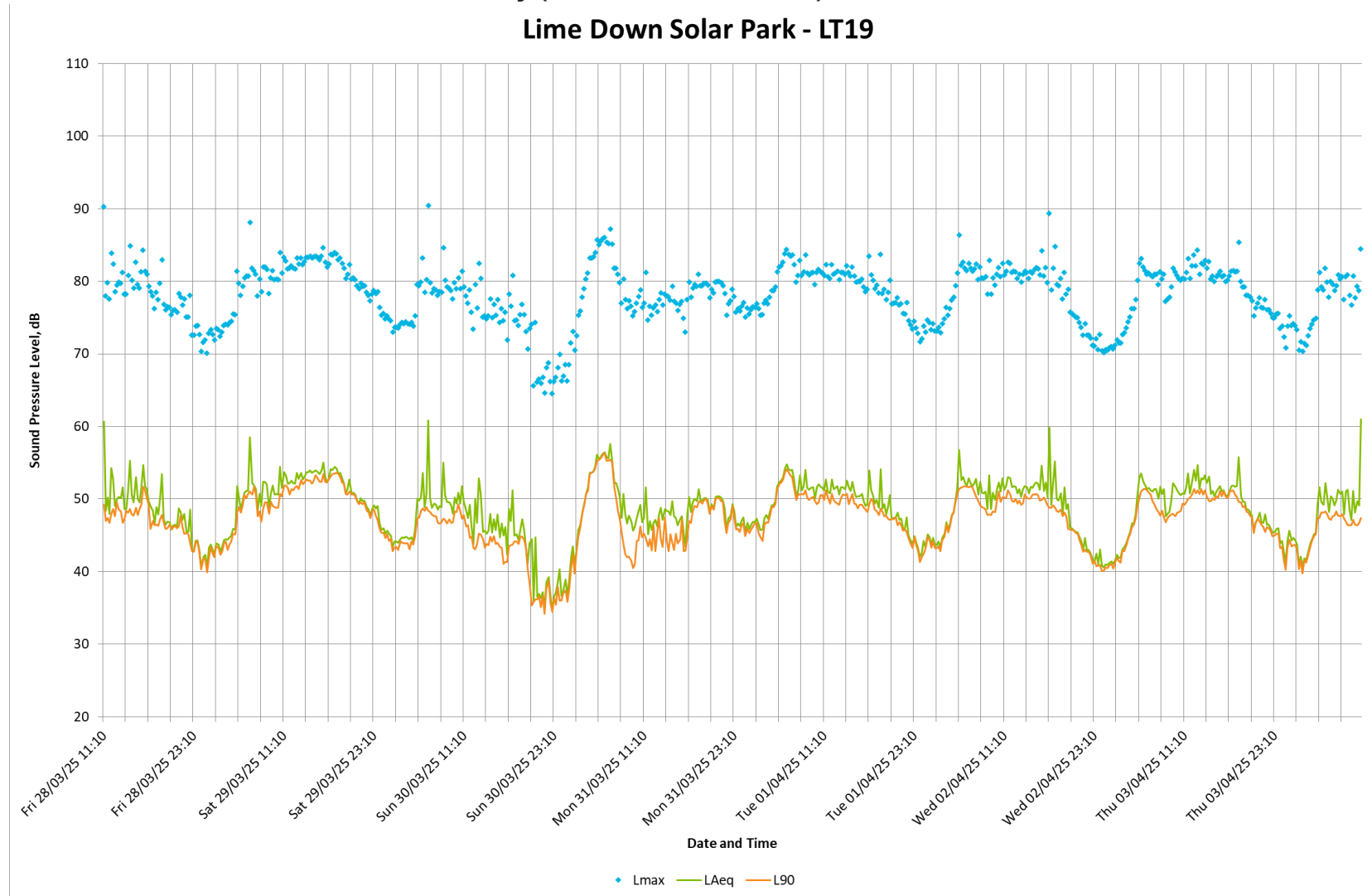


Plate 19: LT20 Measurement Time History (Cable Route Corridor)

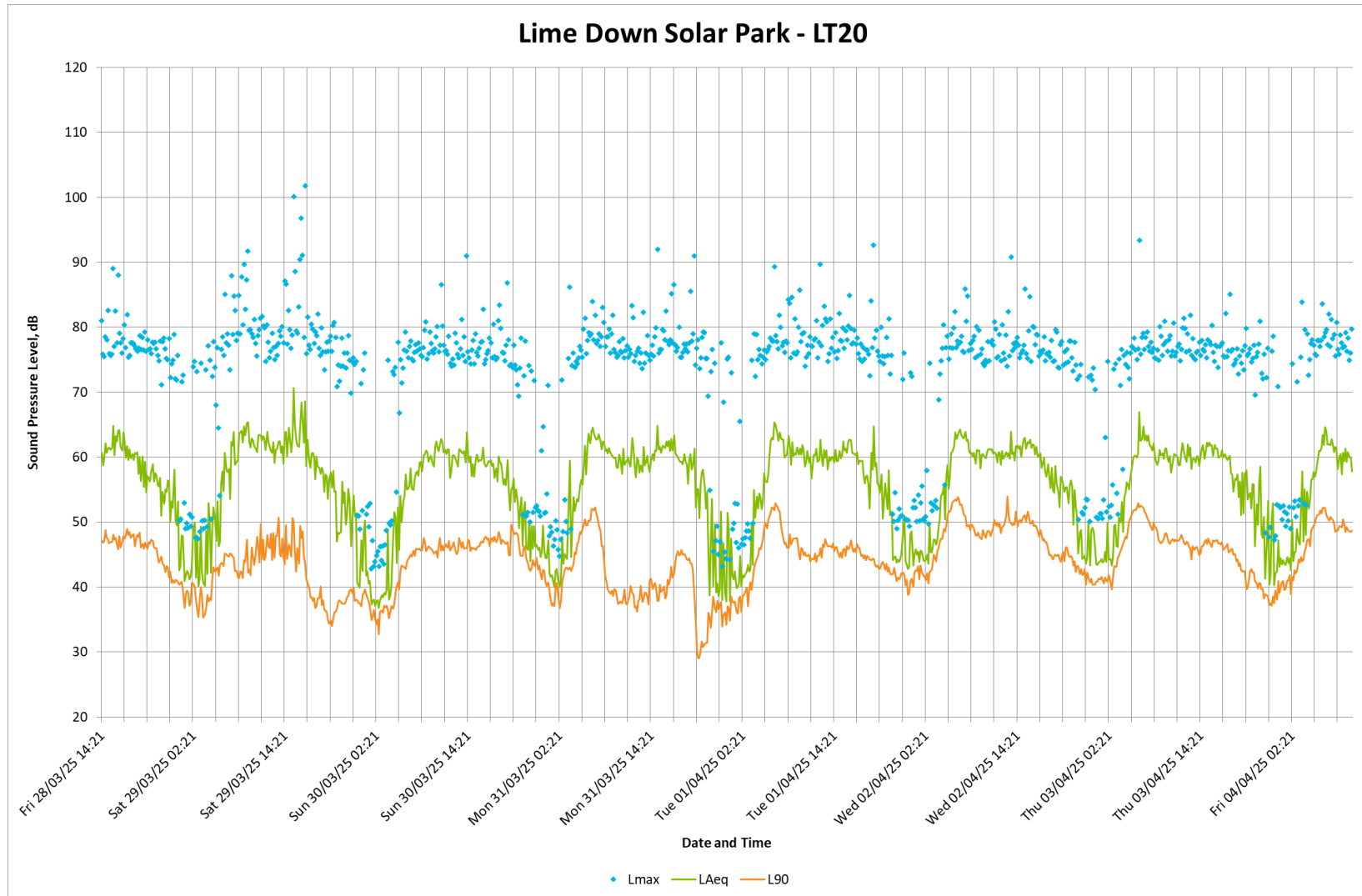


Plate 20: LT21 Measurement Time History (Cable Route Corridor)

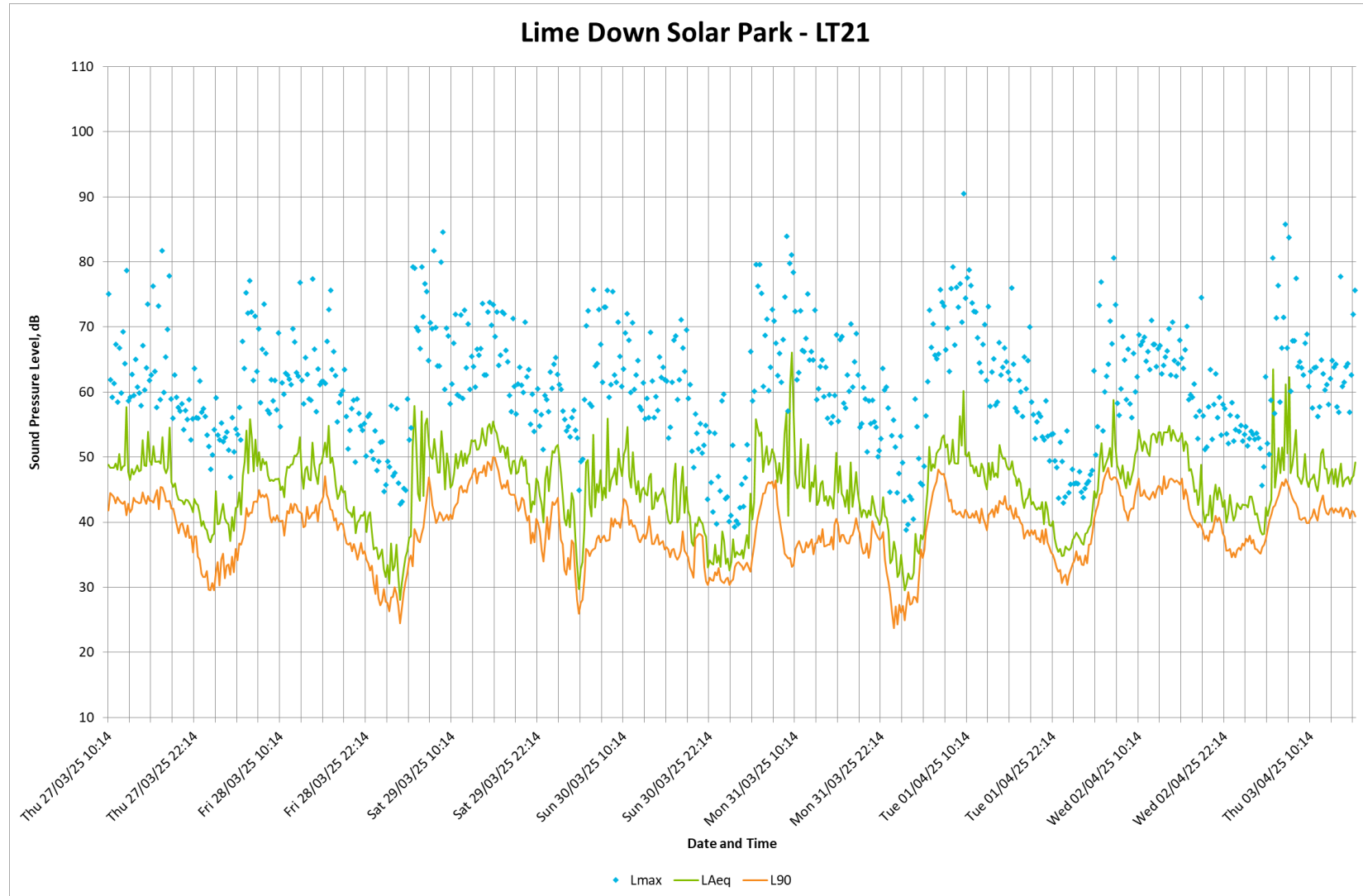


Plate 21: LT22 Measurement Time History (Cable Route Corridor)

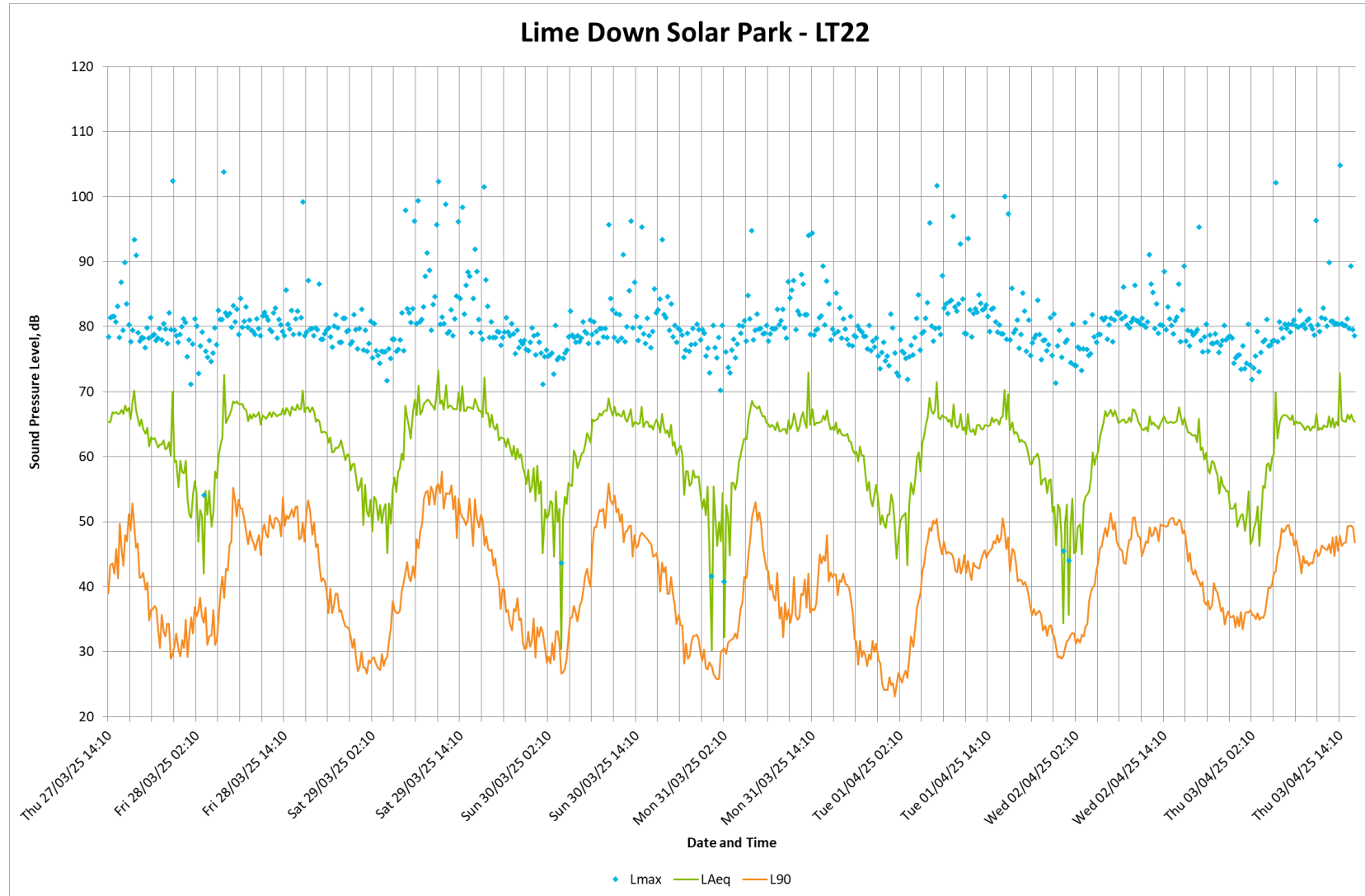


Plate 22: LT23 Measurement Time History (Cable Route Corridor)

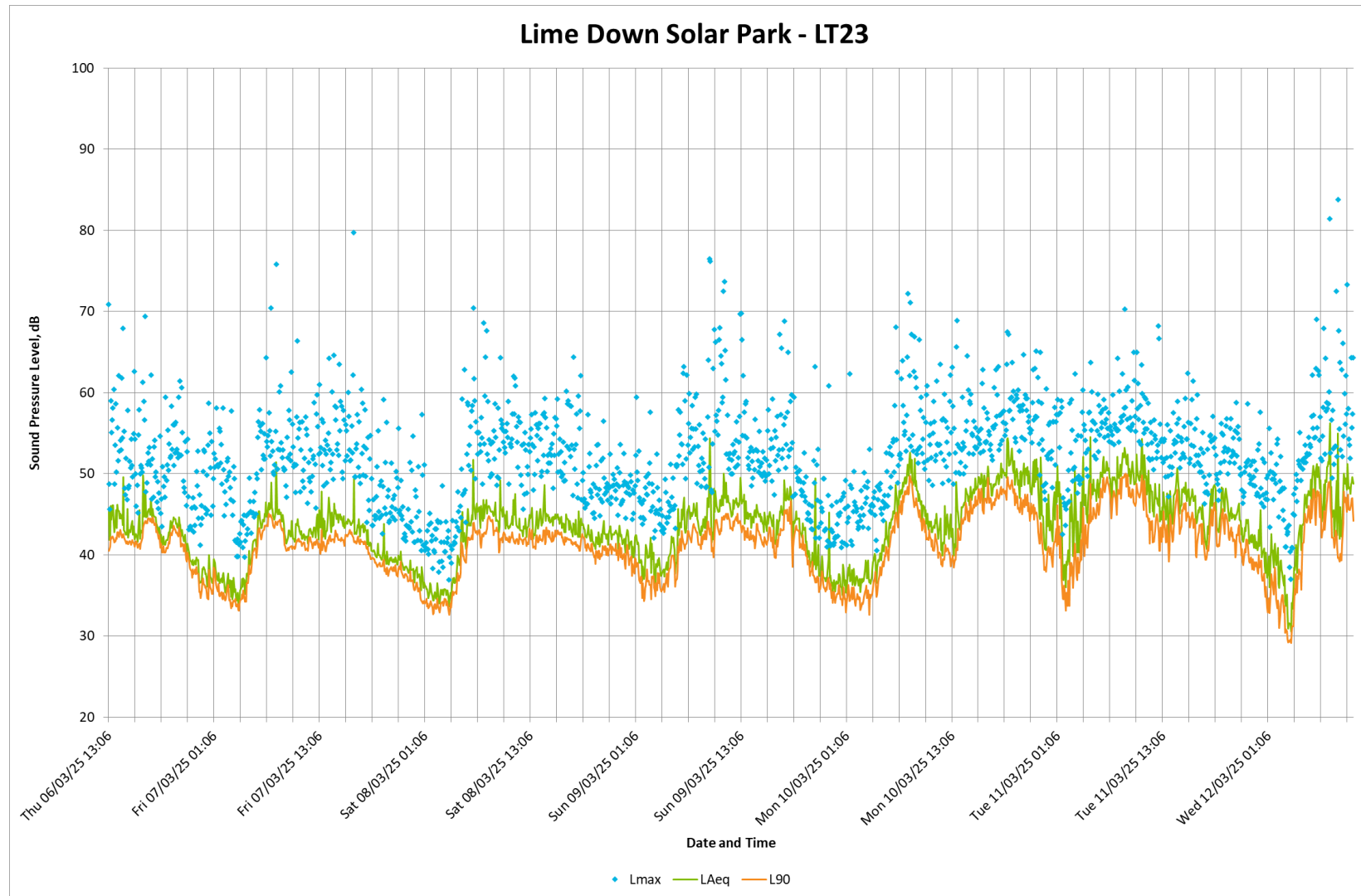


Plate 23: LT24 Measurement Time History (Cable Route Corridor)

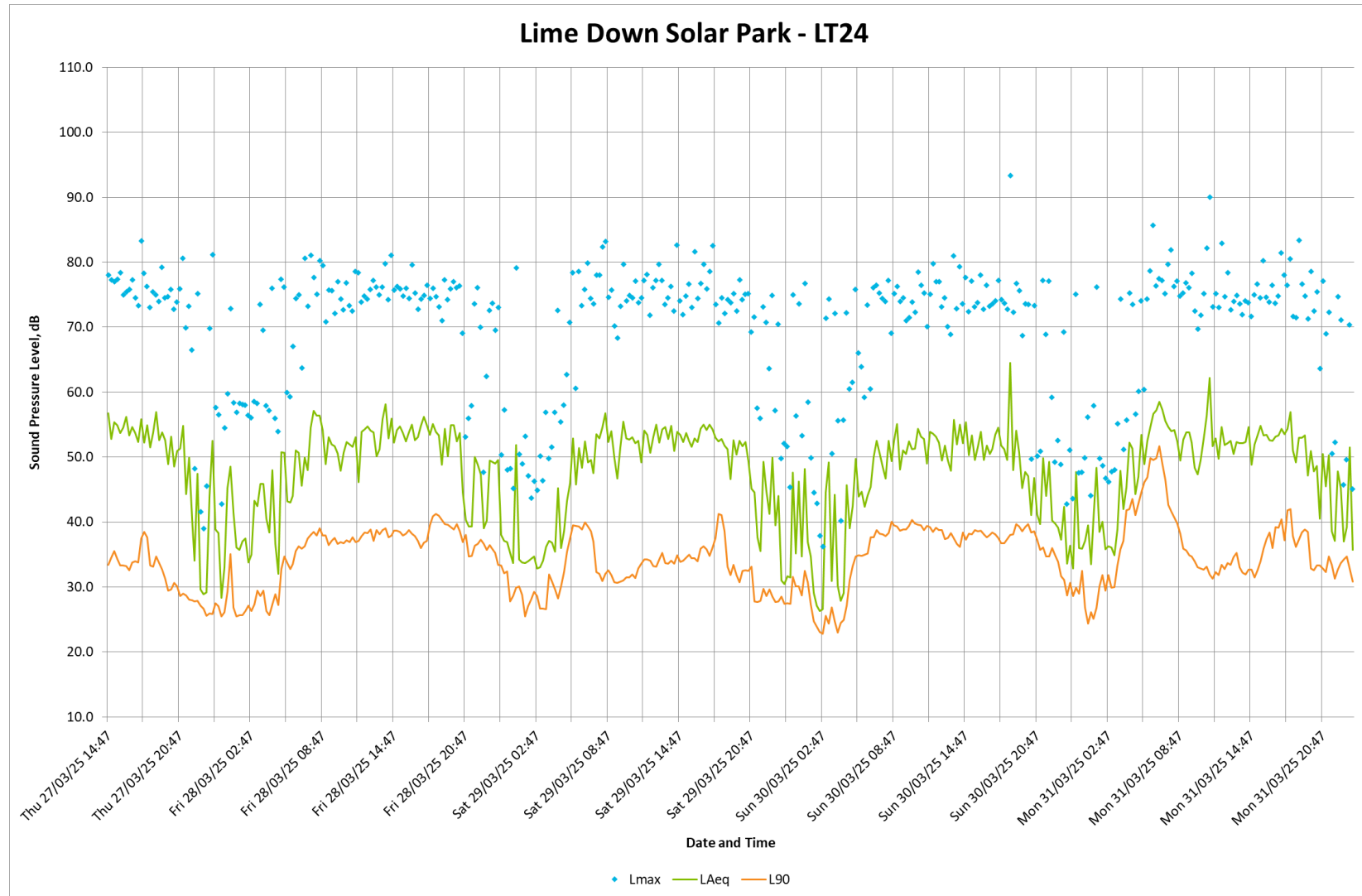


Plate 24: LT25 Measurement Time History (Cable Route Corridor)

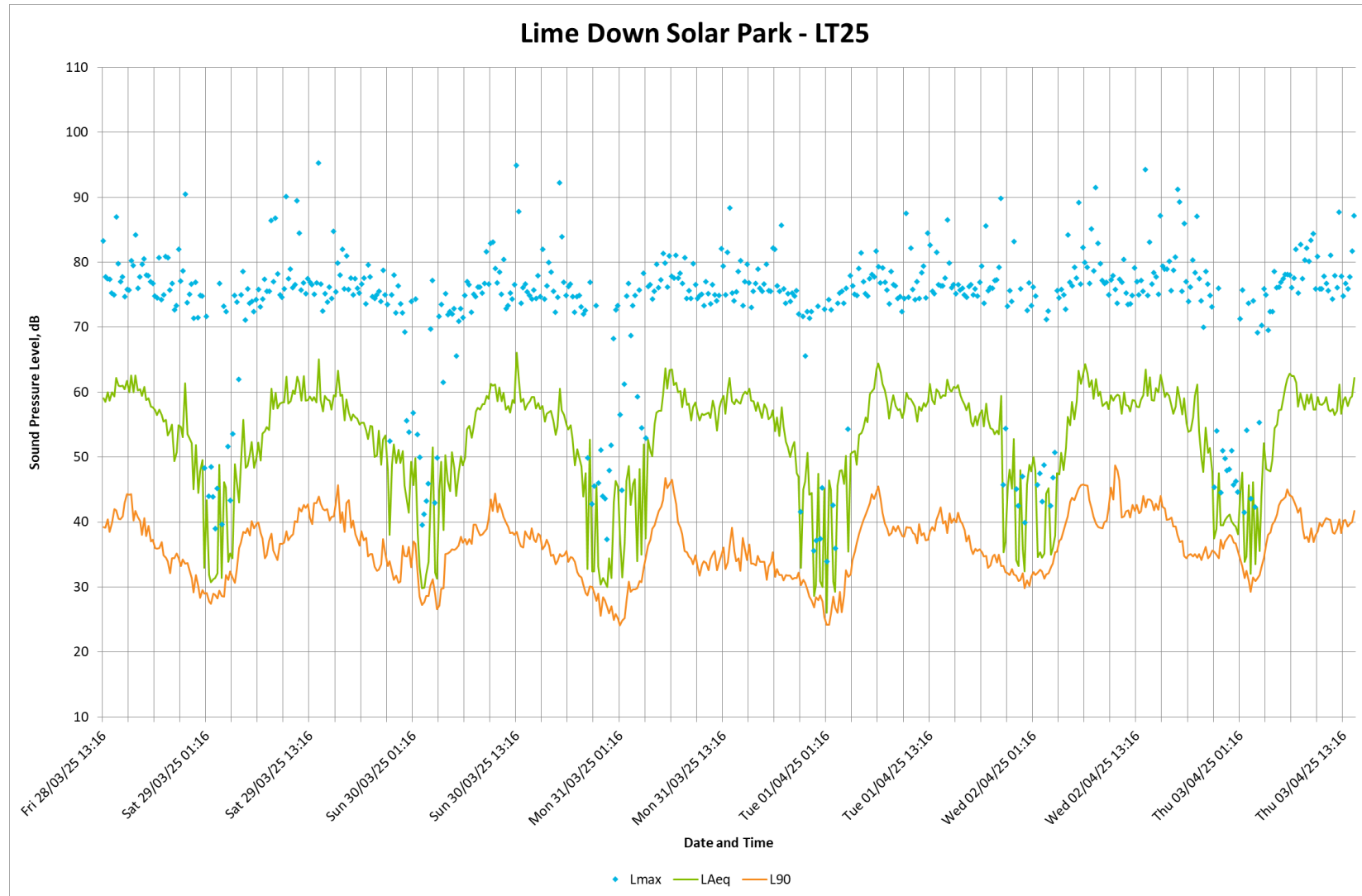


Plate 25: LT26 Measurement Time History (Cable Route Corridor)

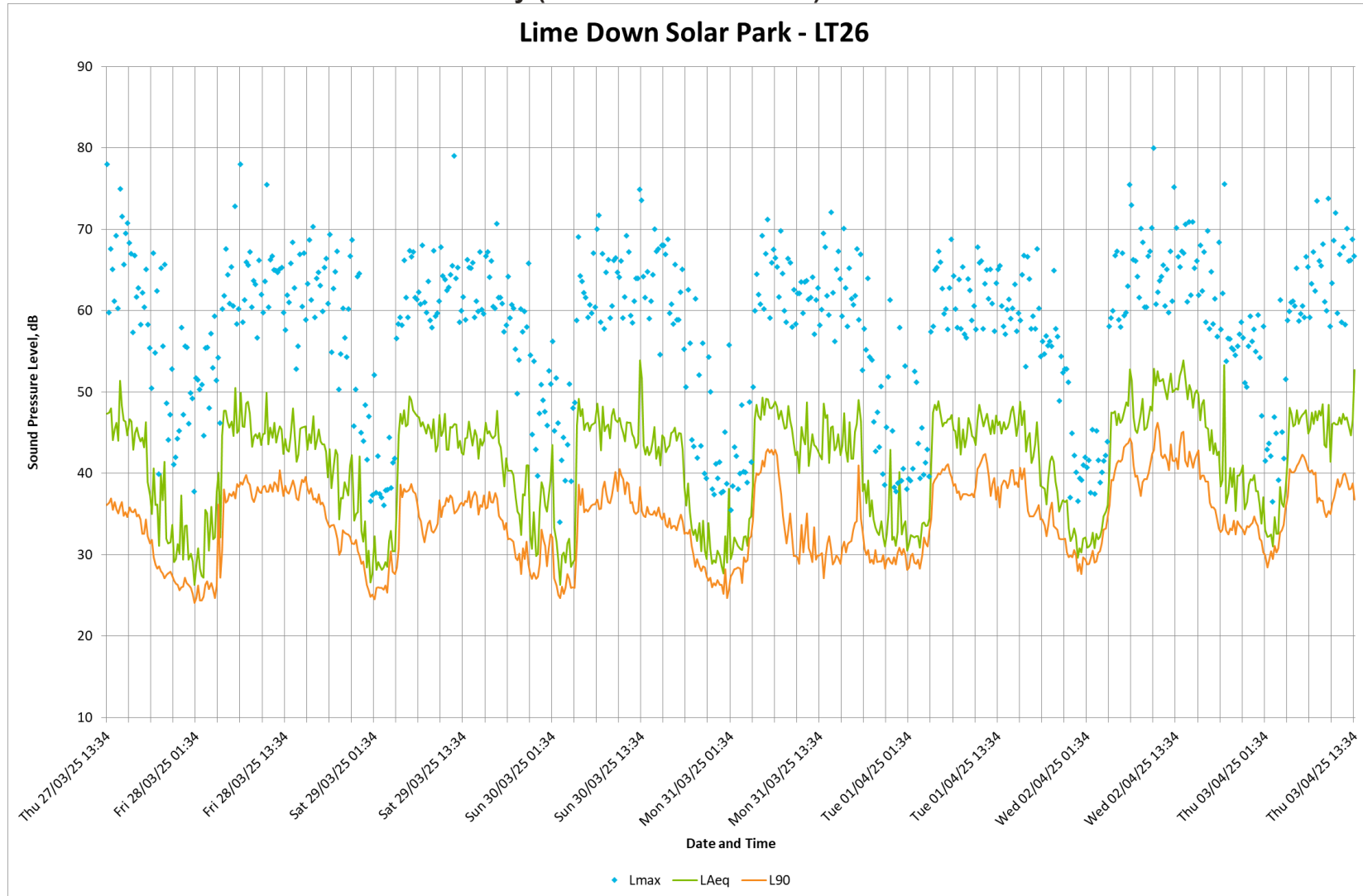


Plate 26: LT27 Measurement Time History (Cable Route Corridor)

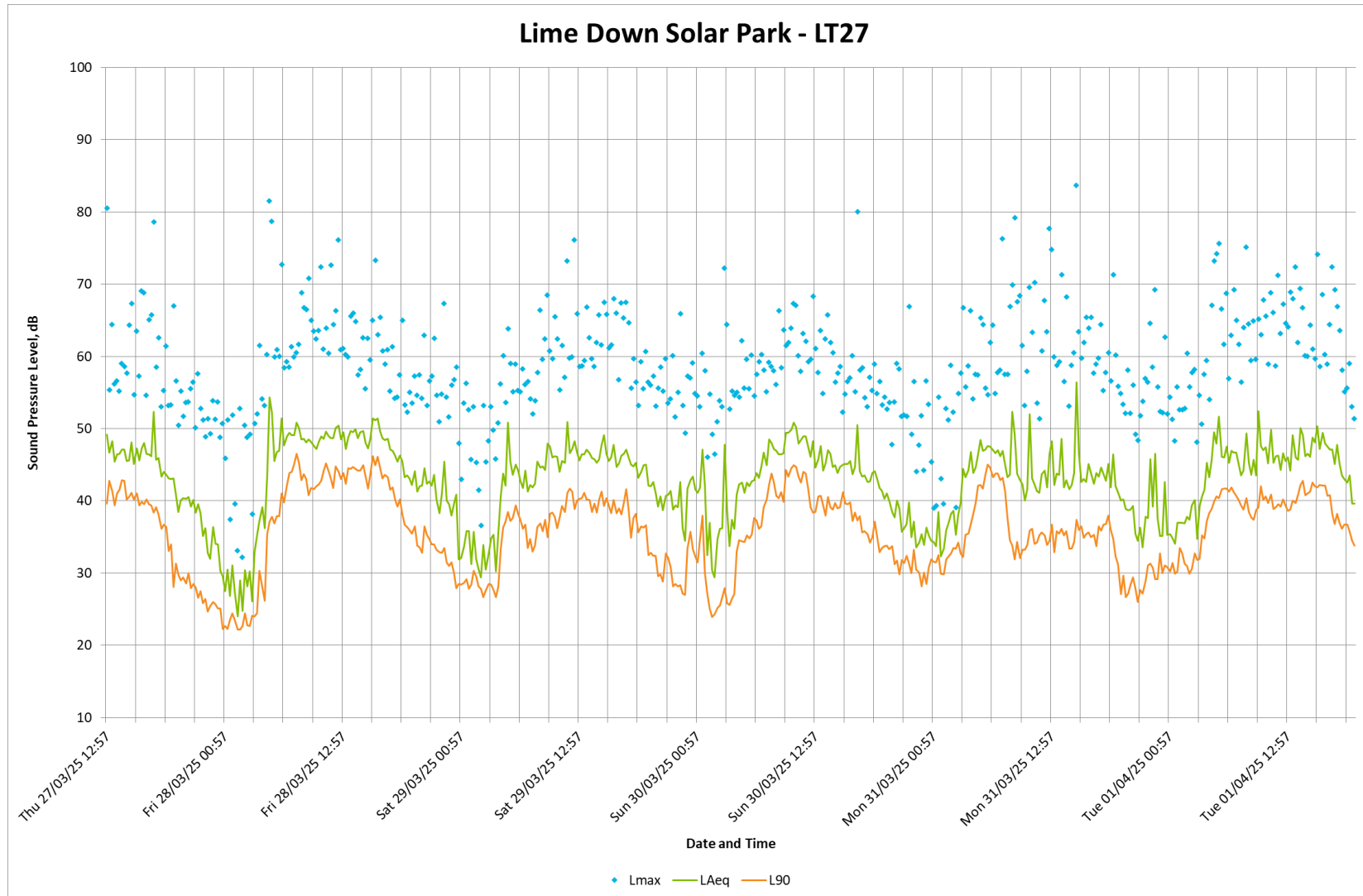


Plate 27: LT28 Measurement Time History (Cable Route Corridor)

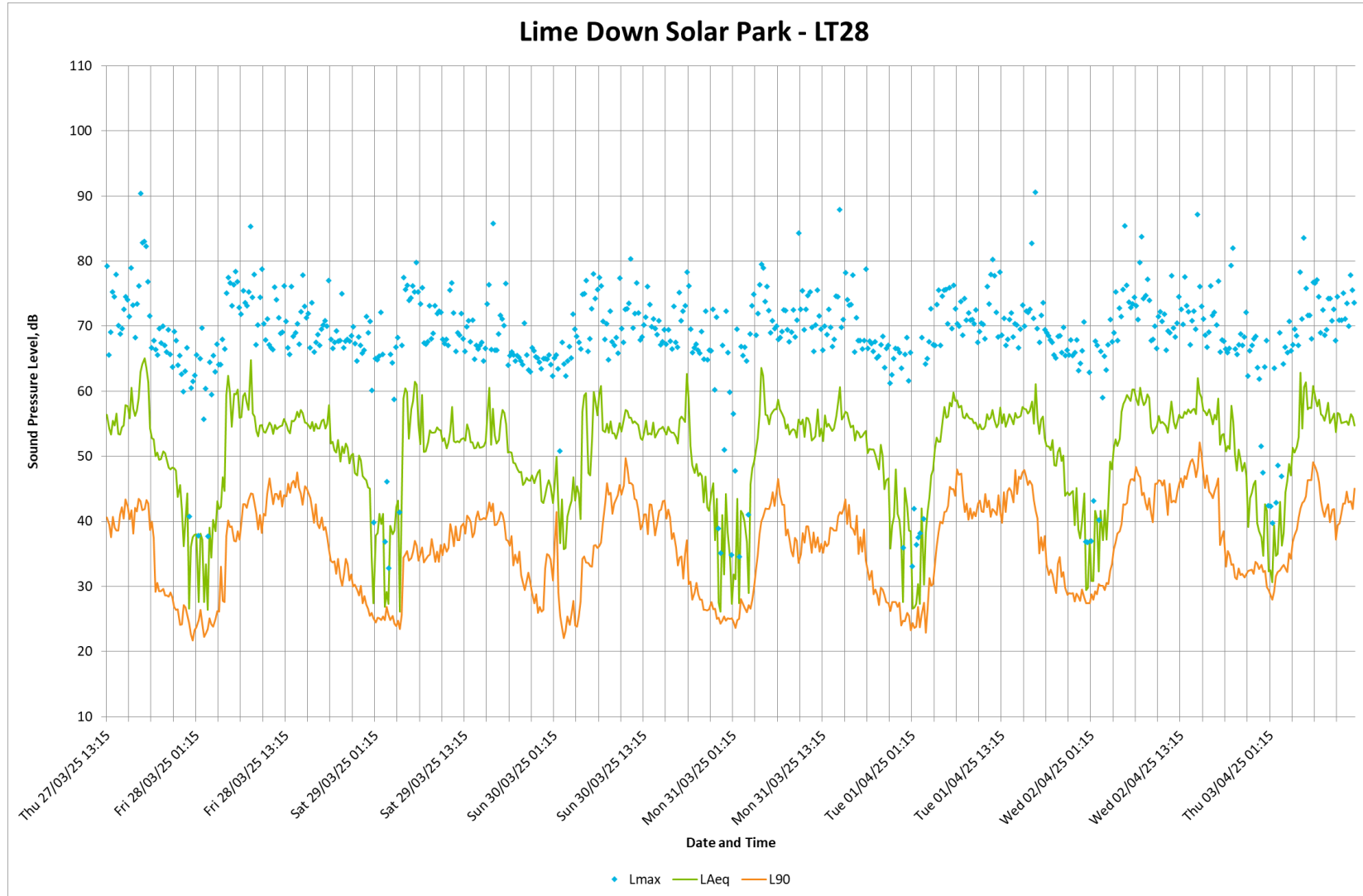


Plate 28: LT29 Measurement Time History (Cable Route Corridor)

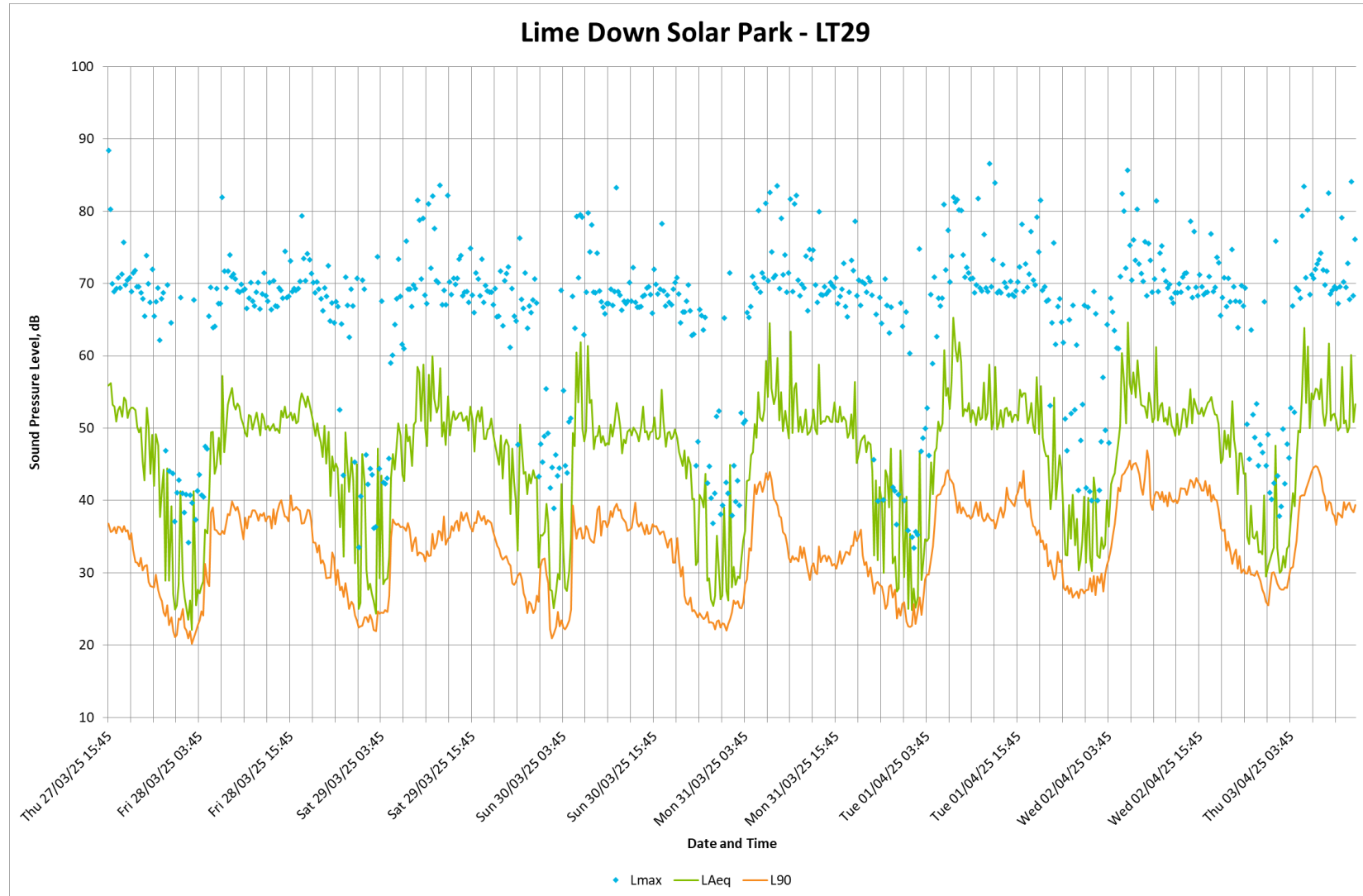


Plate 29: LT1 LA90 Histograms (Solar PV Sites)

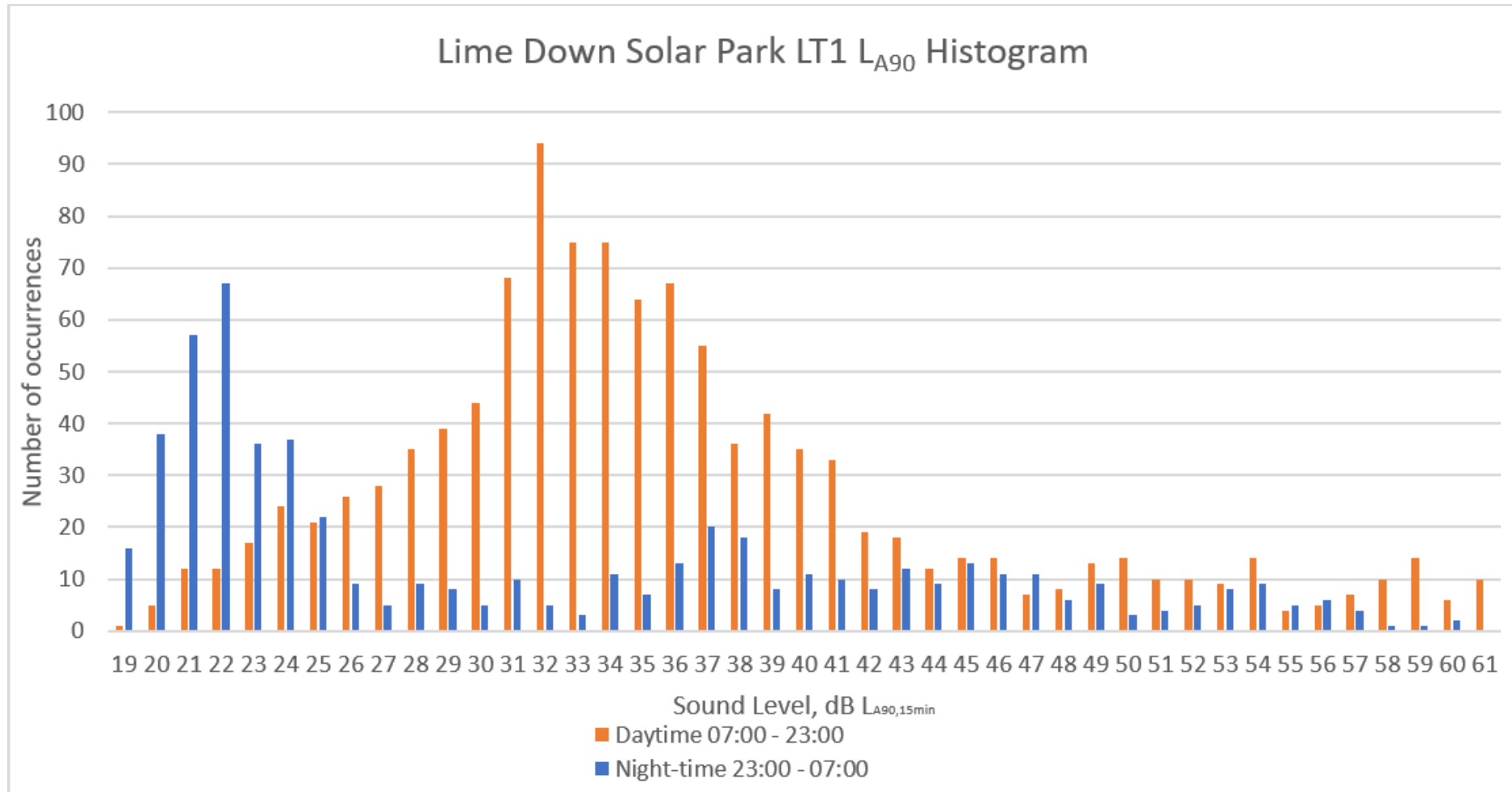


Plate 30: LT2 LA90 Histograms (Solar PV Sites)

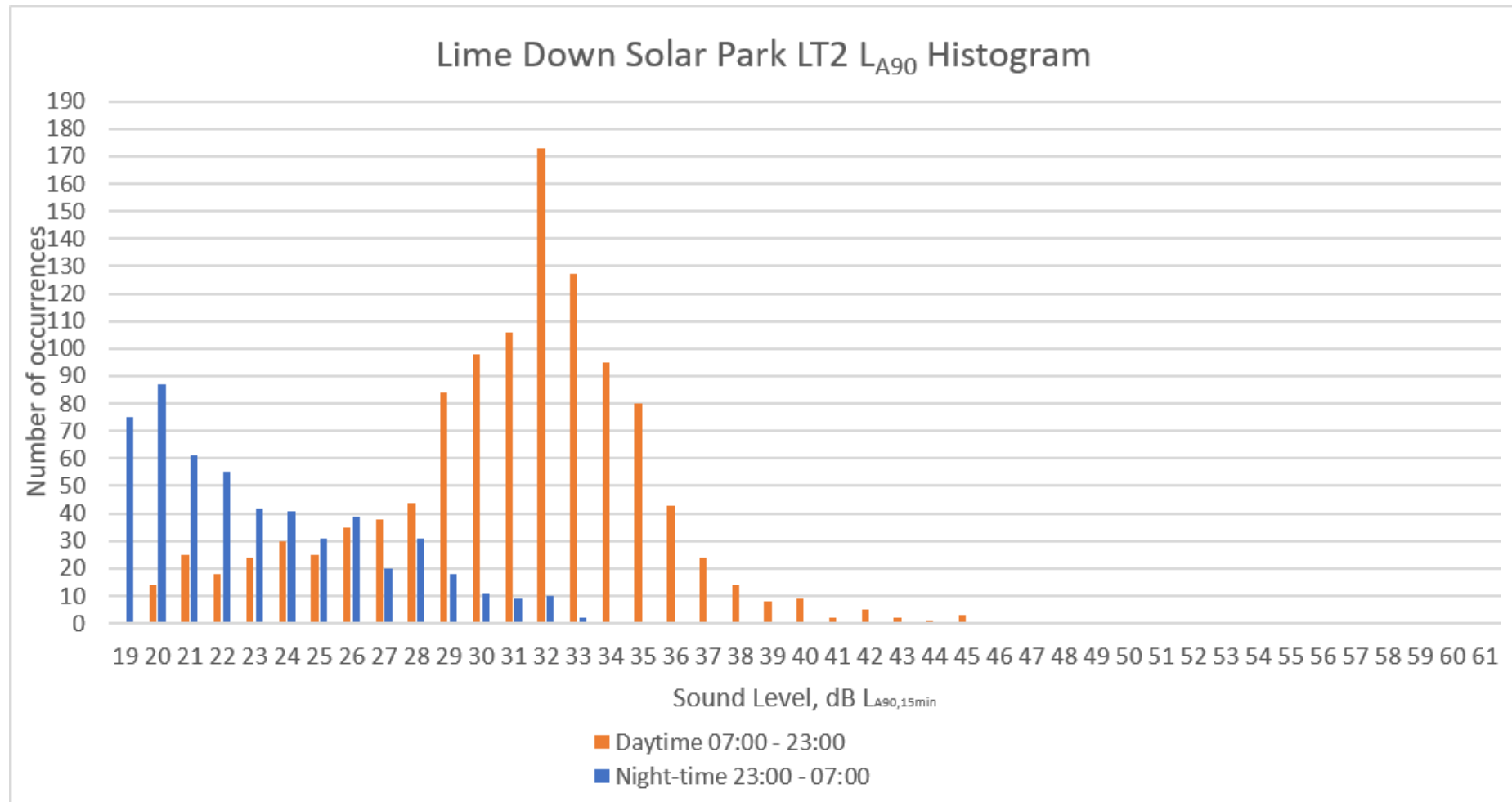


Plate 31: LT3 LA90 Histograms (Solar PV Sites)

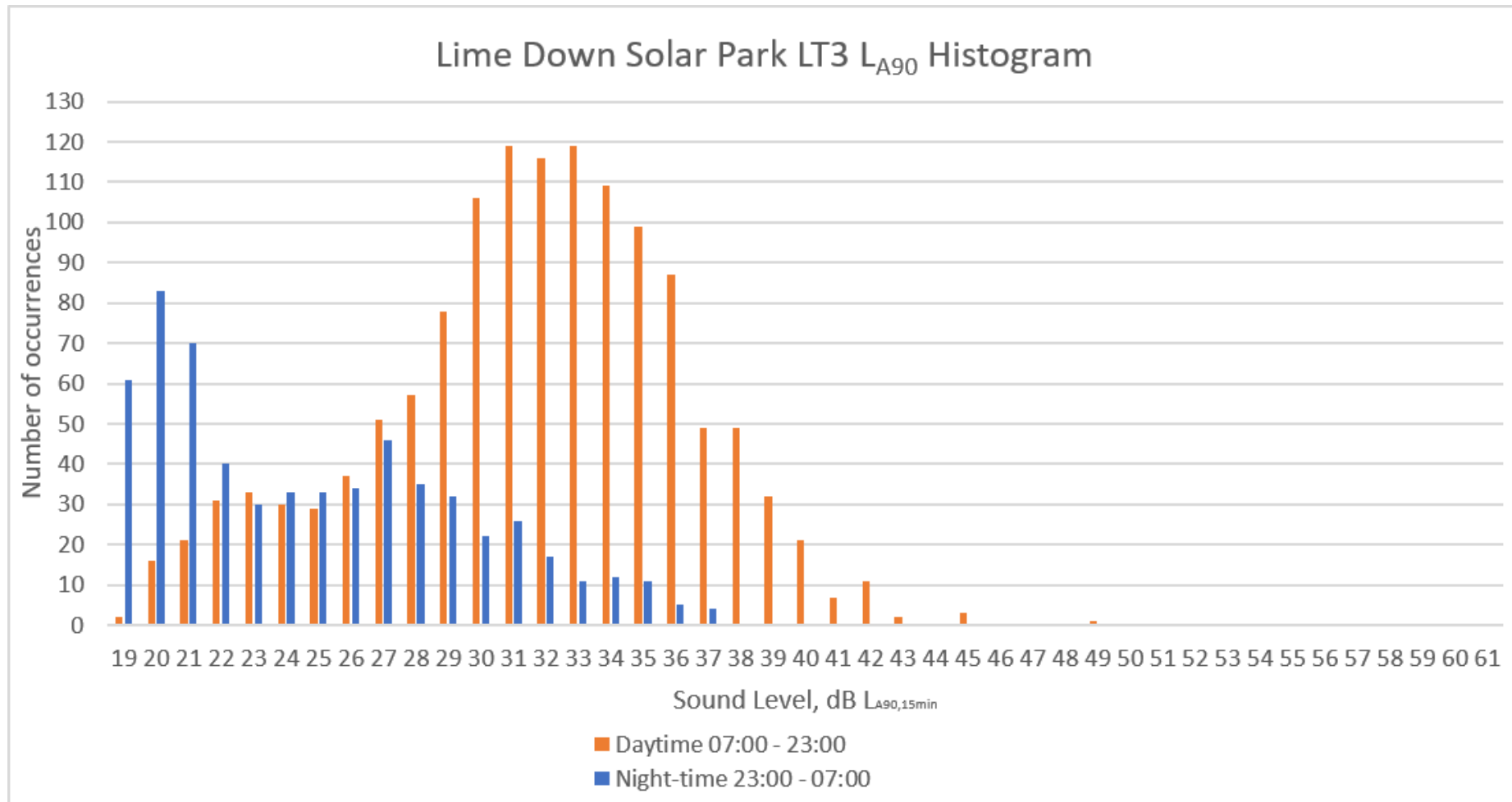


Plate 32: LT4 LA90 Histograms (Solar PV Sites)

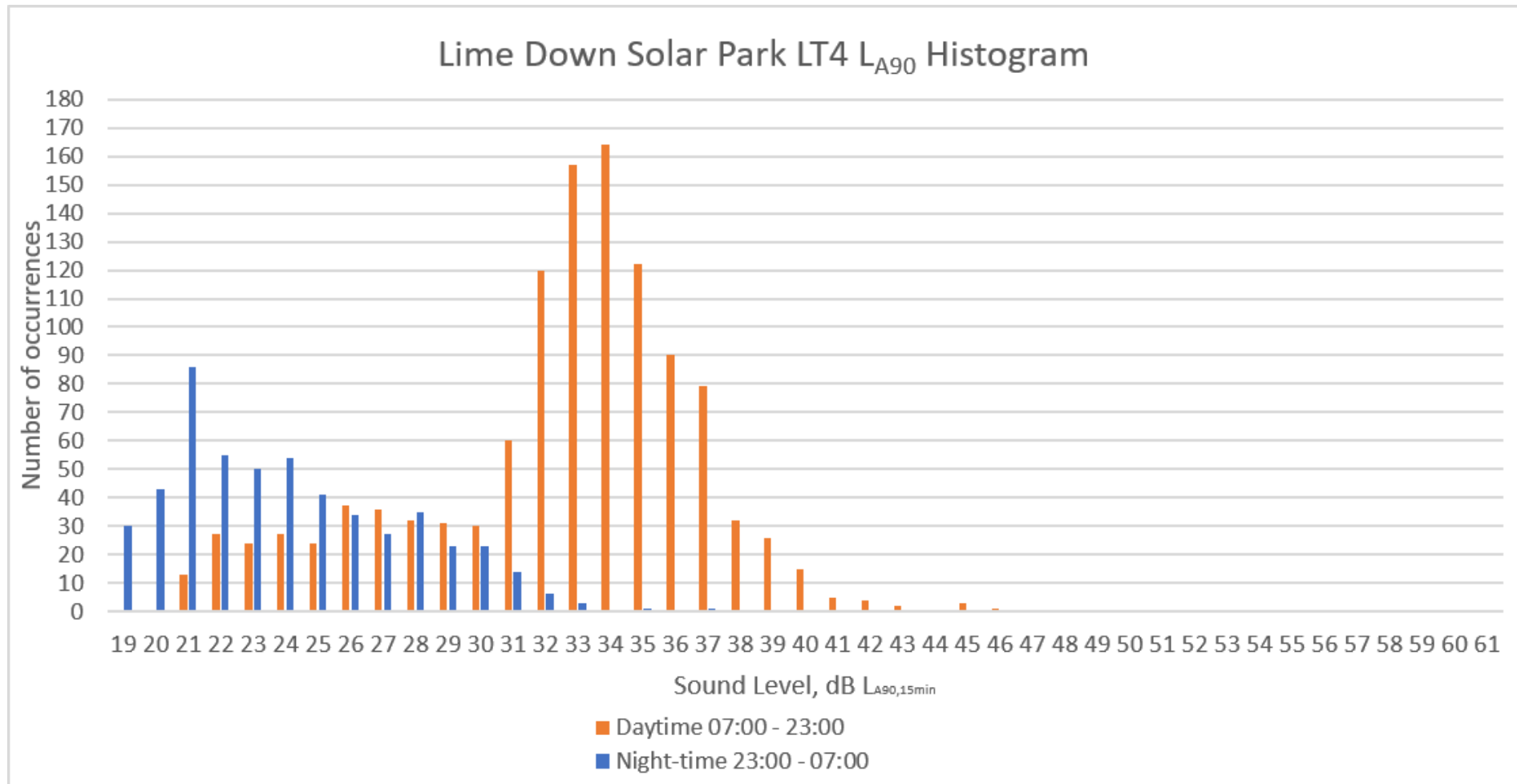


Plate 33: LT5 LA90 Histograms (Solar PV Sites)

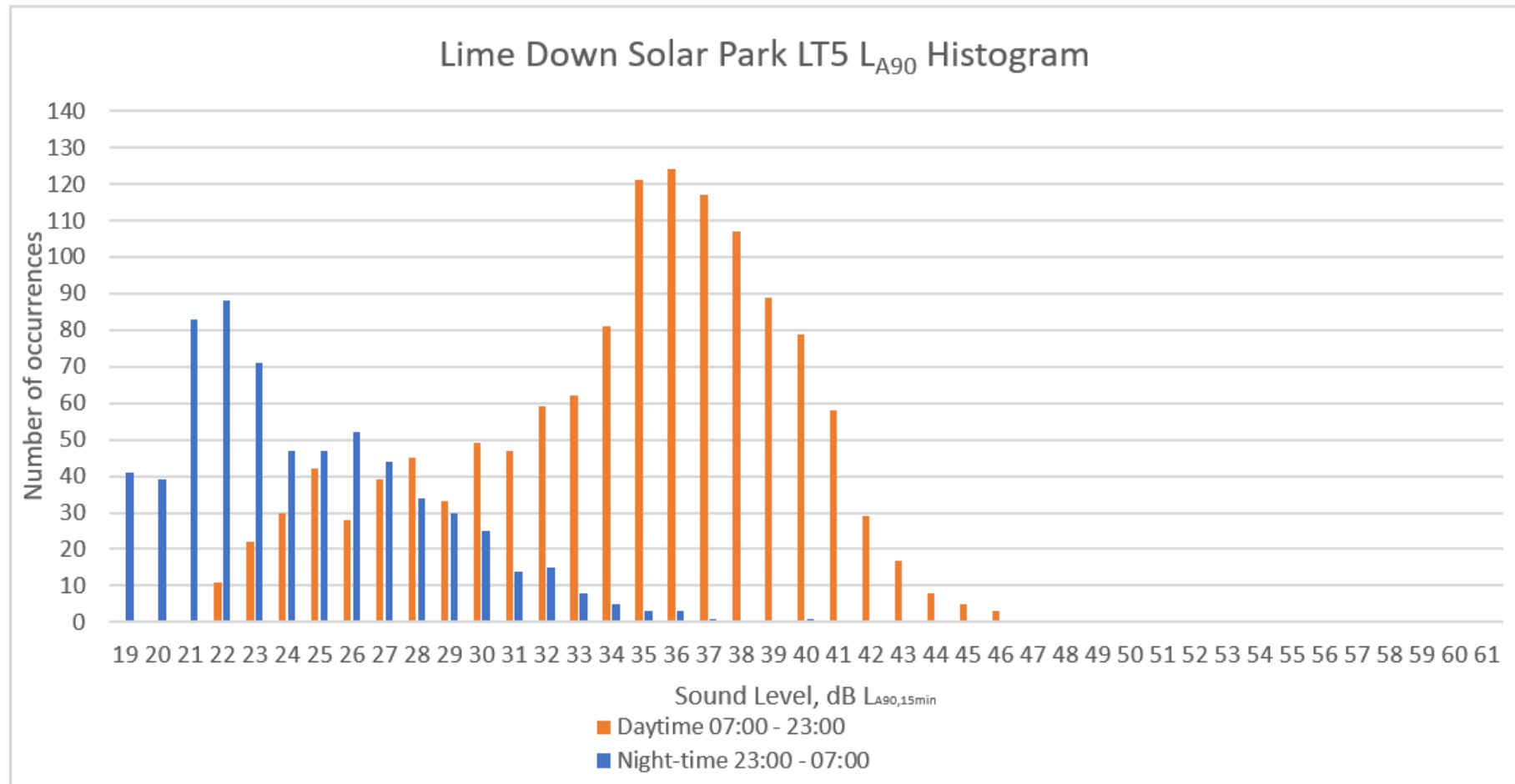


Plate 34: LT6 LA90 Histograms (Solar PV Sites)

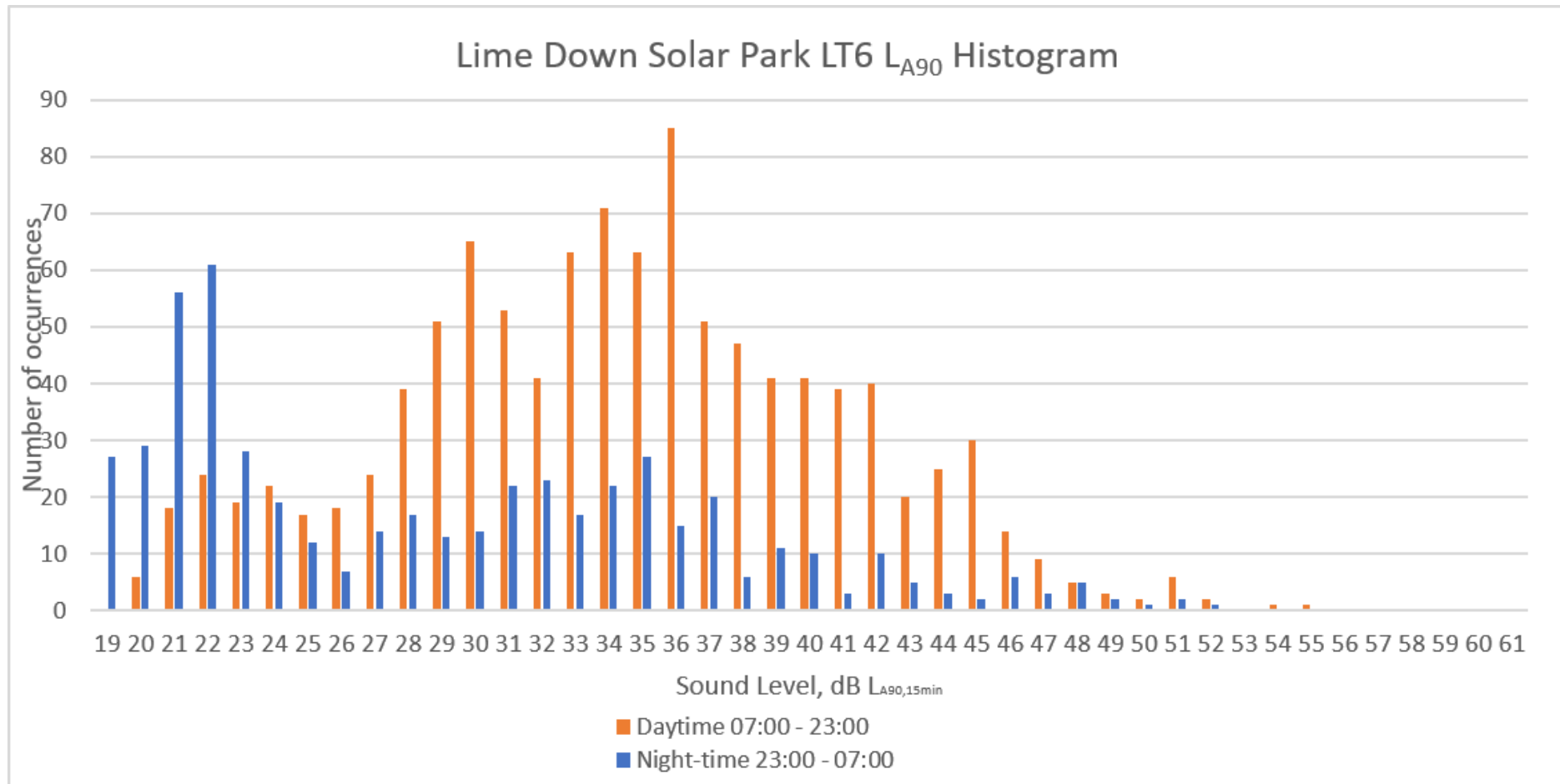


Plate 35: LT7 LA90 Histograms (Solar PV Sites)

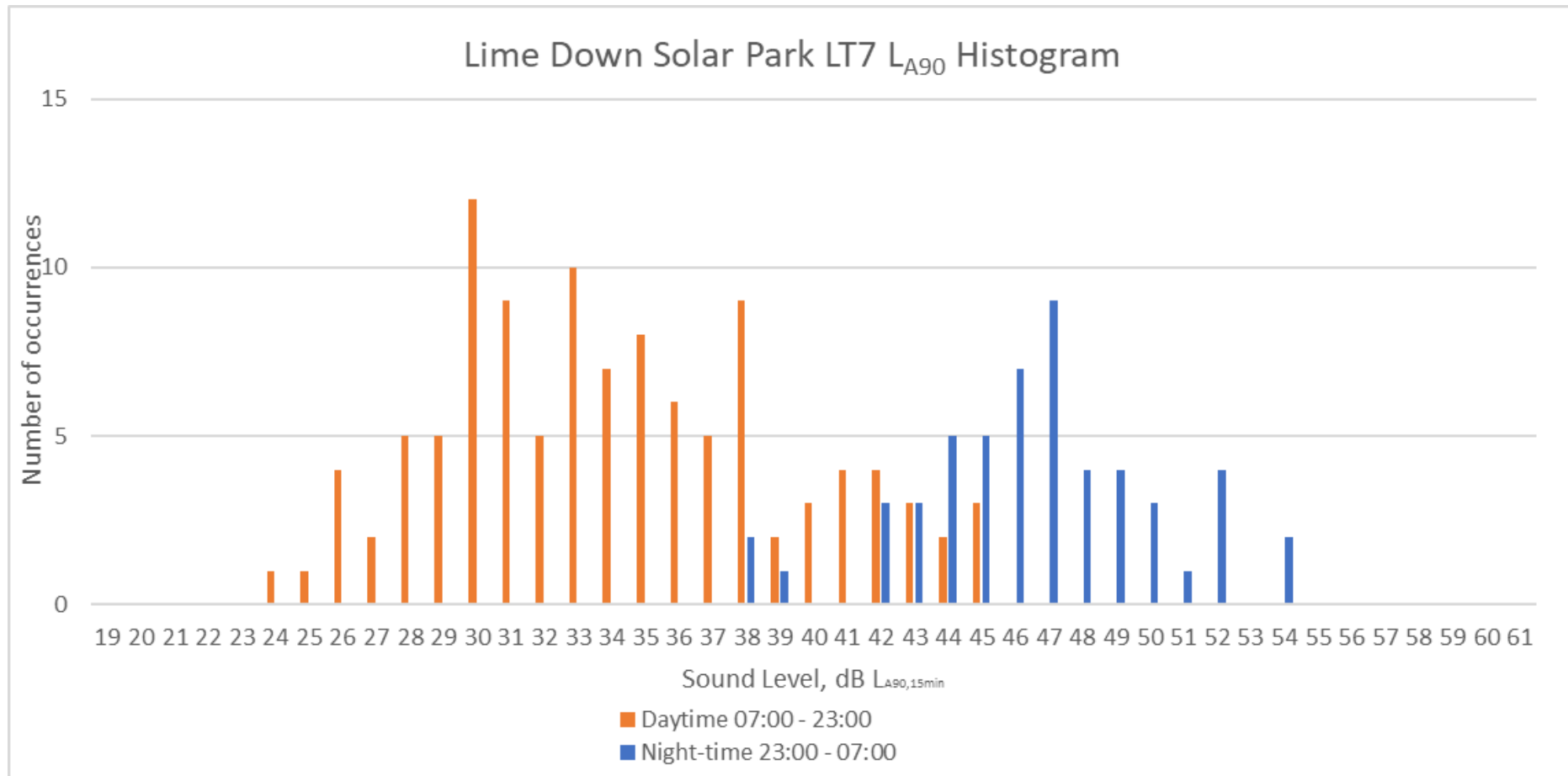


Plate 36: LT8 LA90 Histograms (Solar PV Sites)

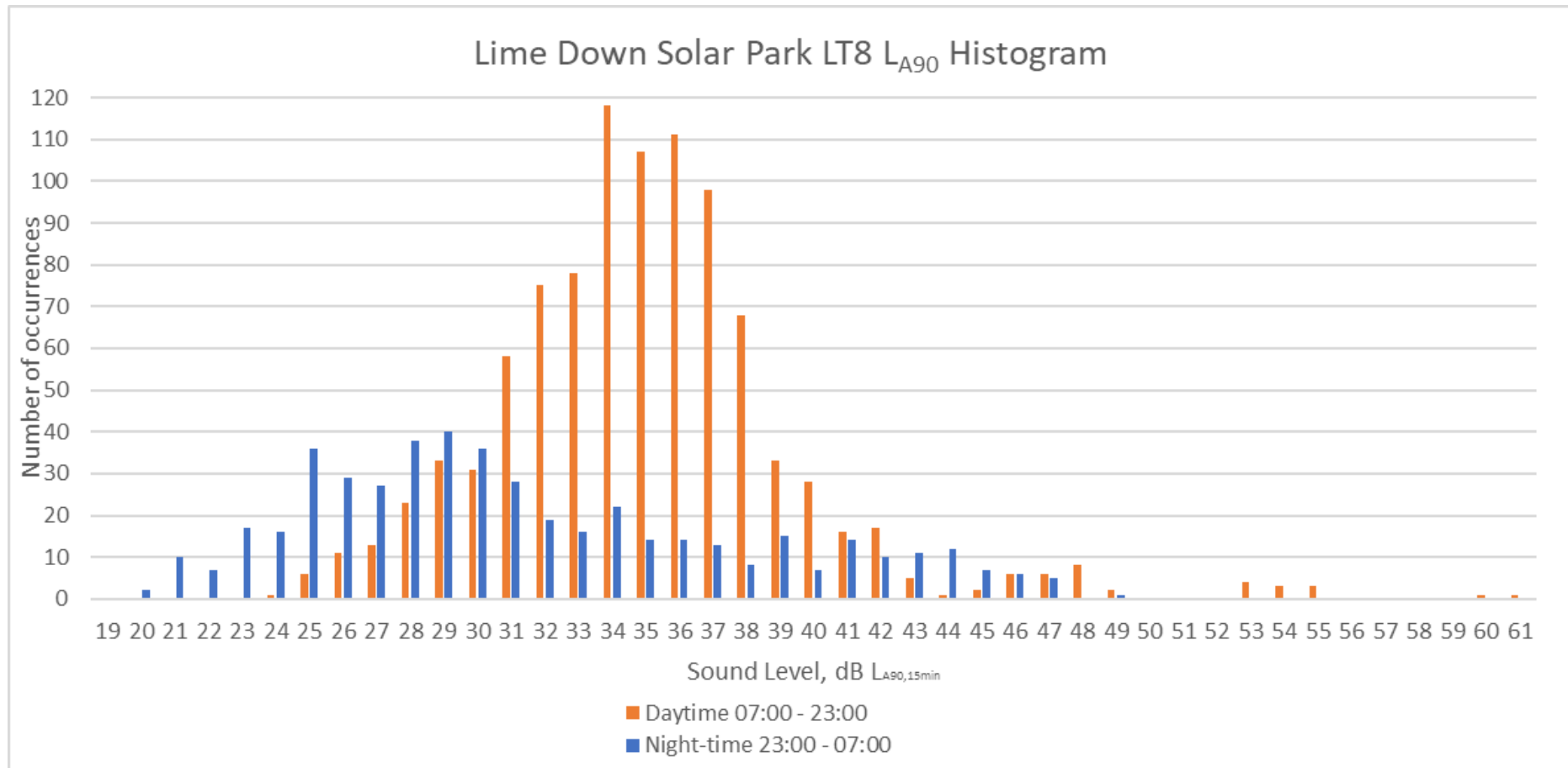


Plate 37: LT9 LA90 Histograms (Solar PV Sites)

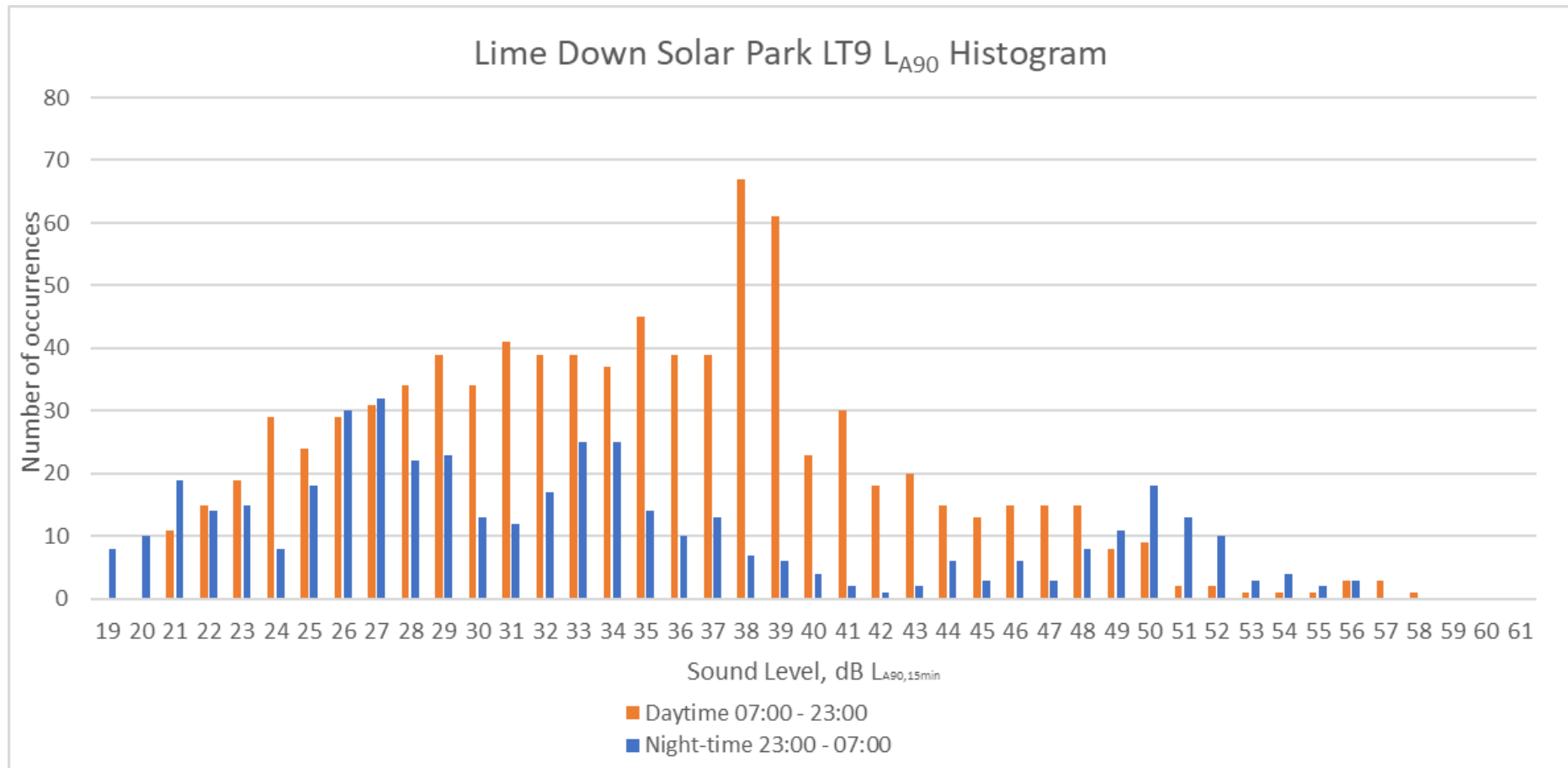


Plate 38: LT10 LA90 Histograms (Solar PV Sites)

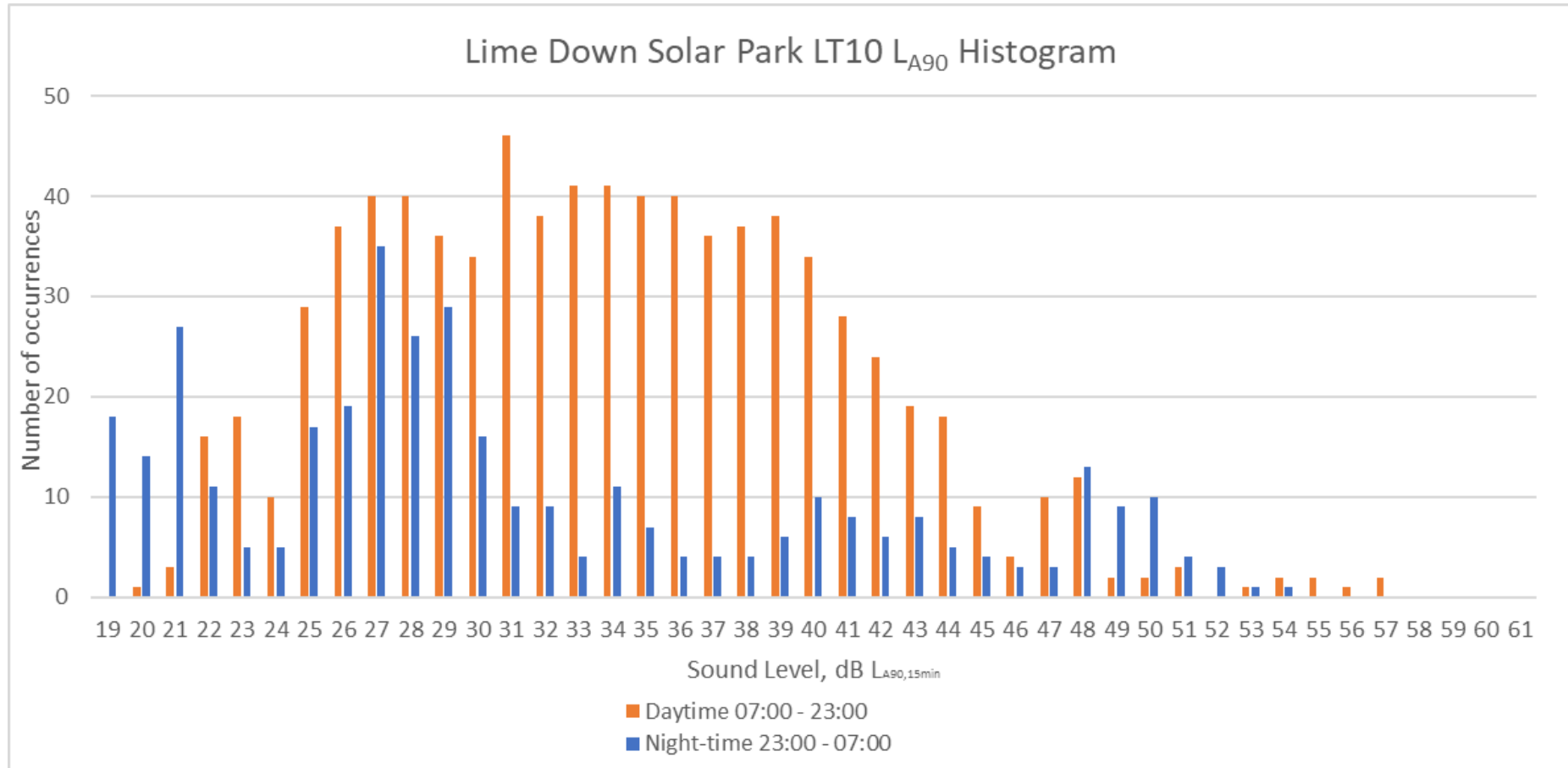


Plate 39: LT11 LA90 Histograms (Solar PV Sites)

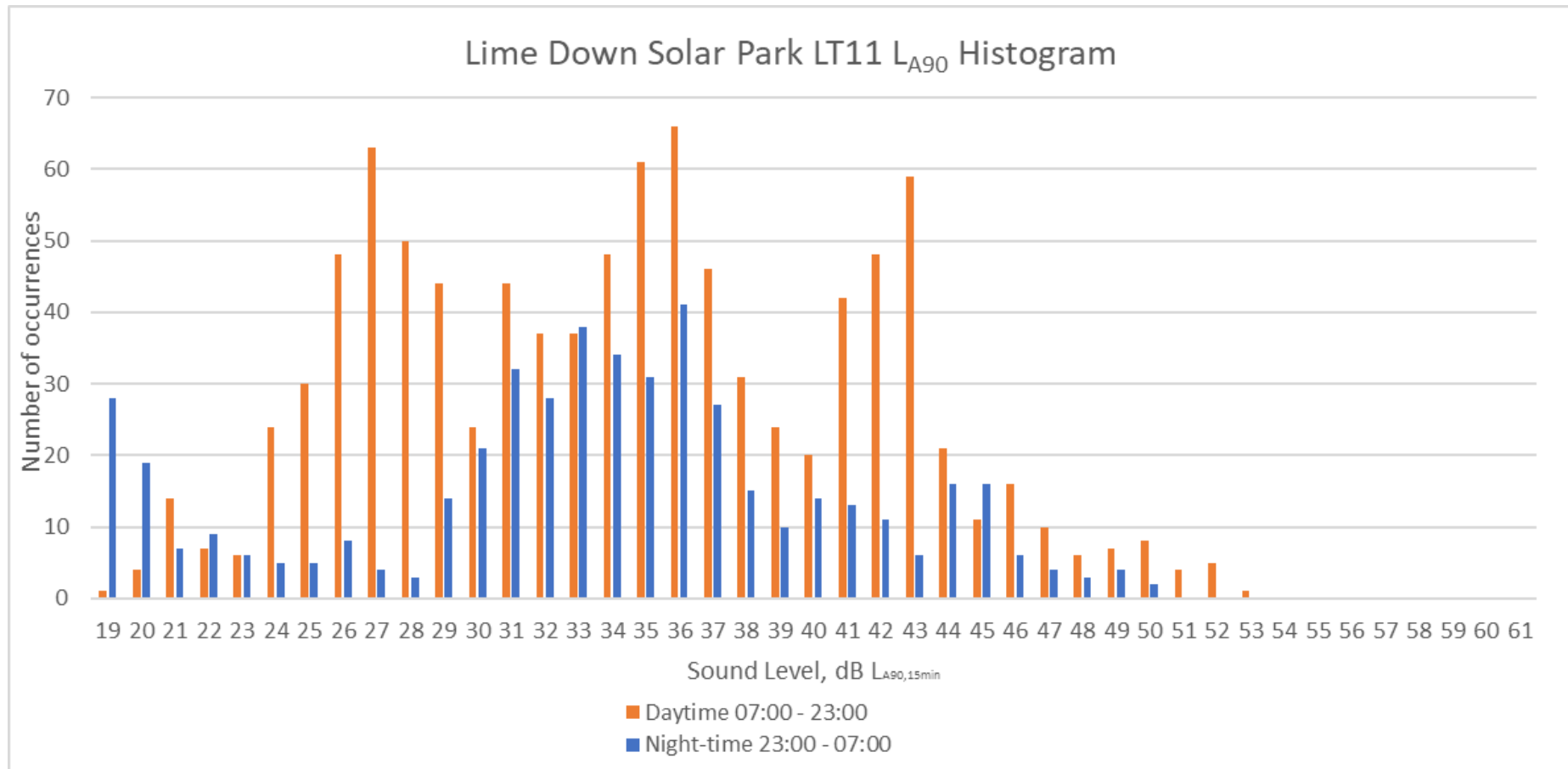


Plate 40: LT12 LA90 Histograms (Solar PV Sites)

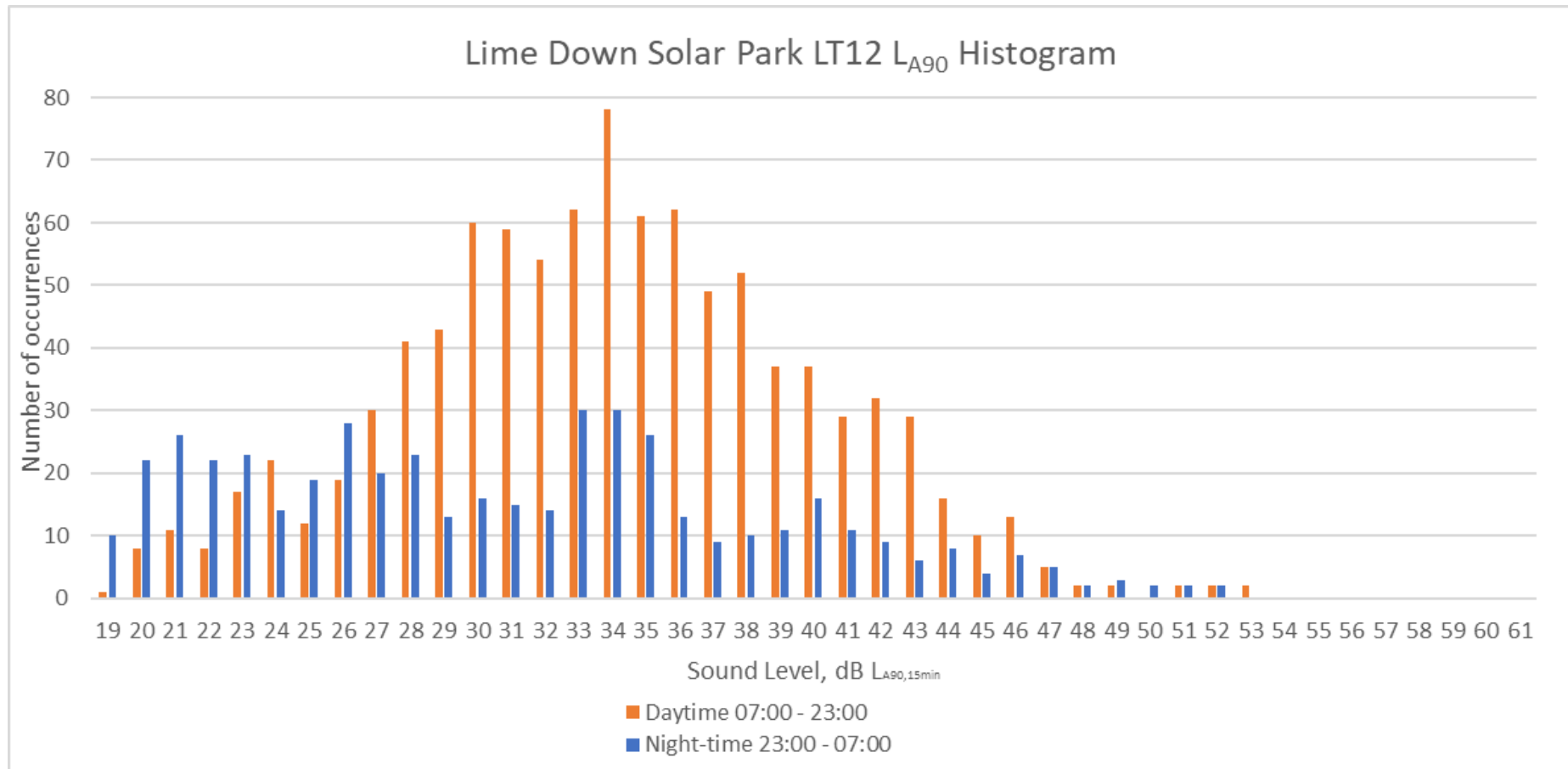


Plate 41: LT13 LA90 Histograms (Solar PV Sites)

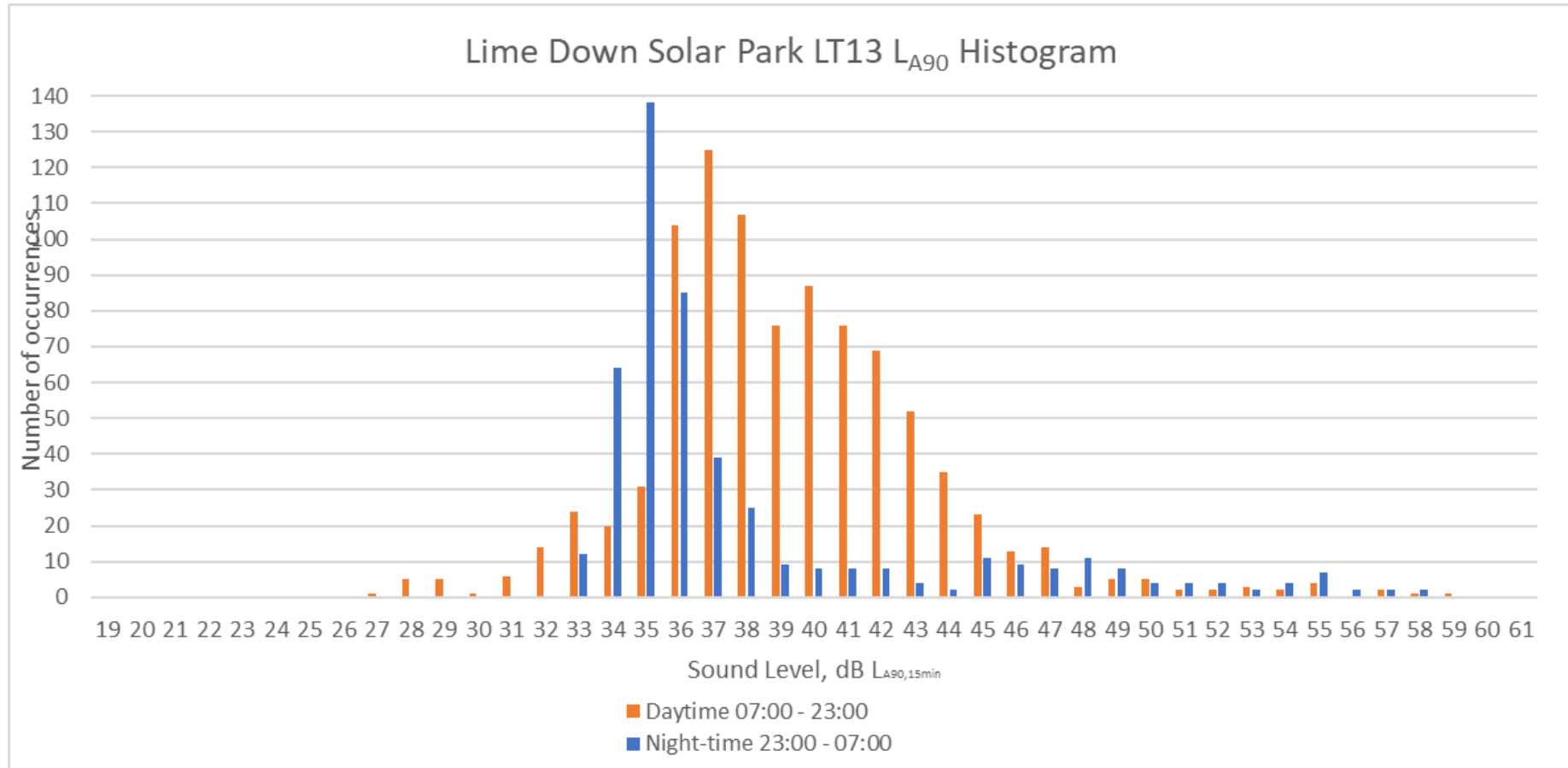


Plate 42: LT15 LA90 Histograms (Solar PV Sites)

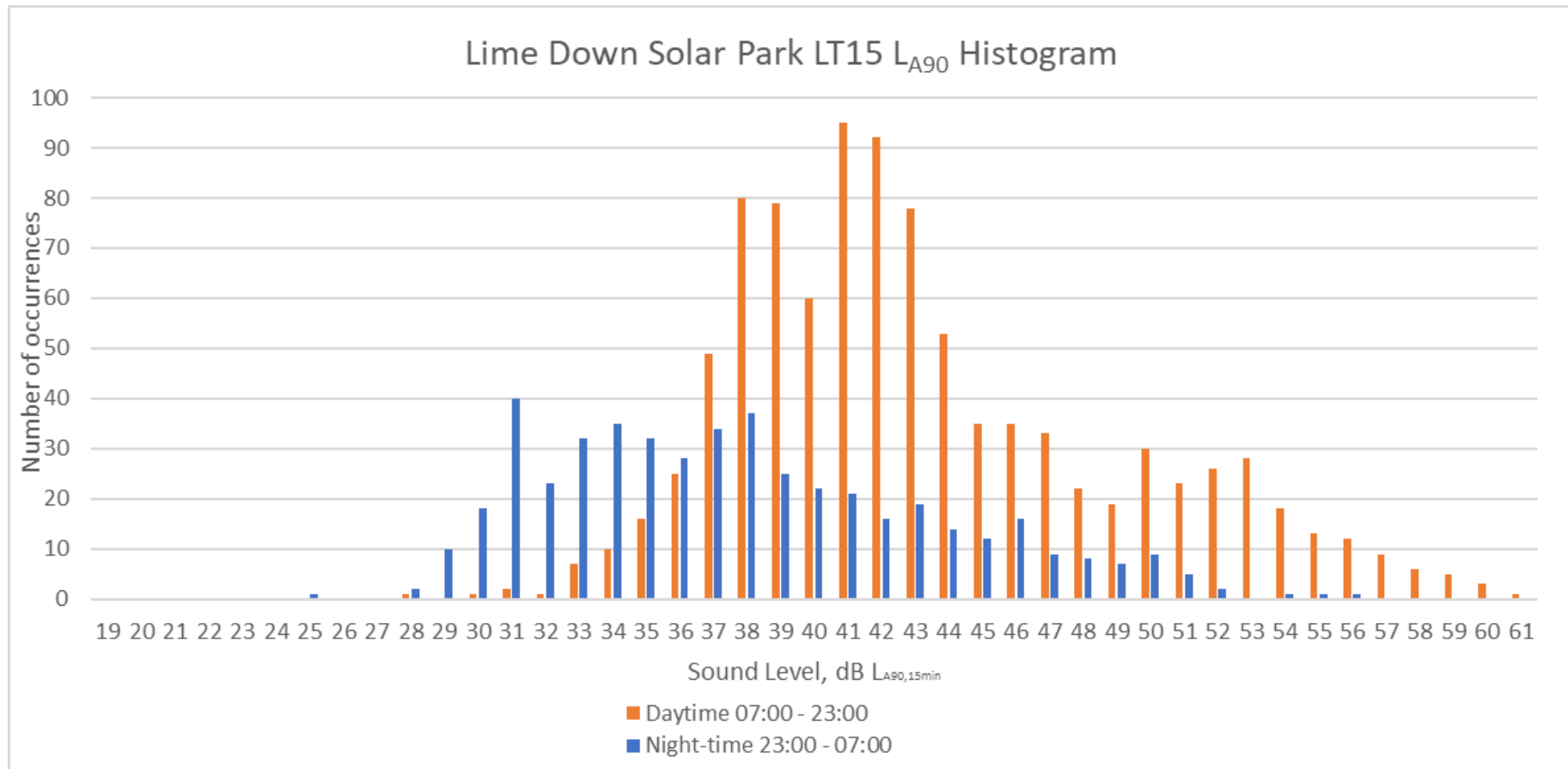


Plate 43: LT16 LA90 Histograms (Solar PV Sites)

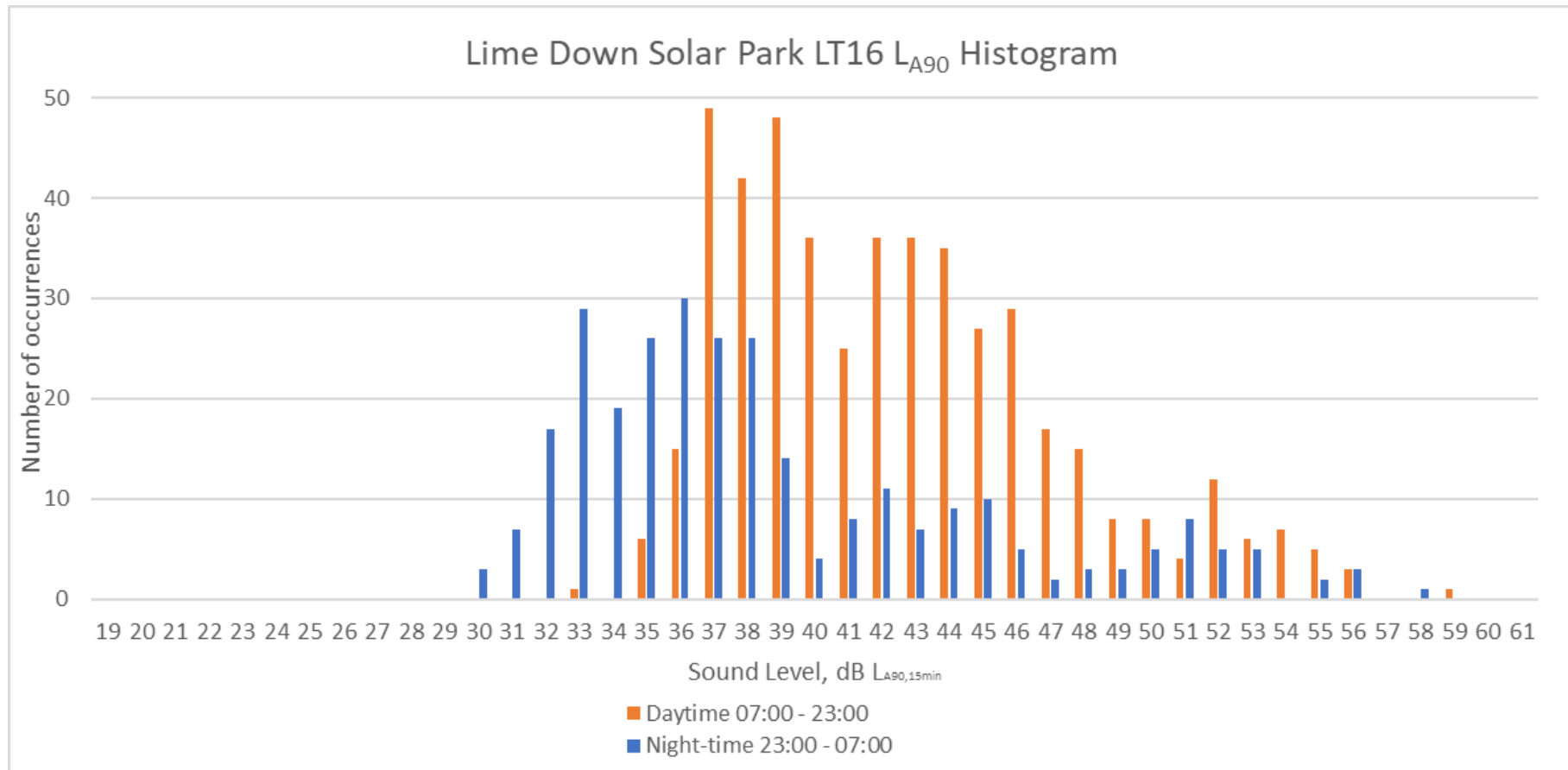


Plate 44: LT17 LA90 Histograms (Solar PV Sites)

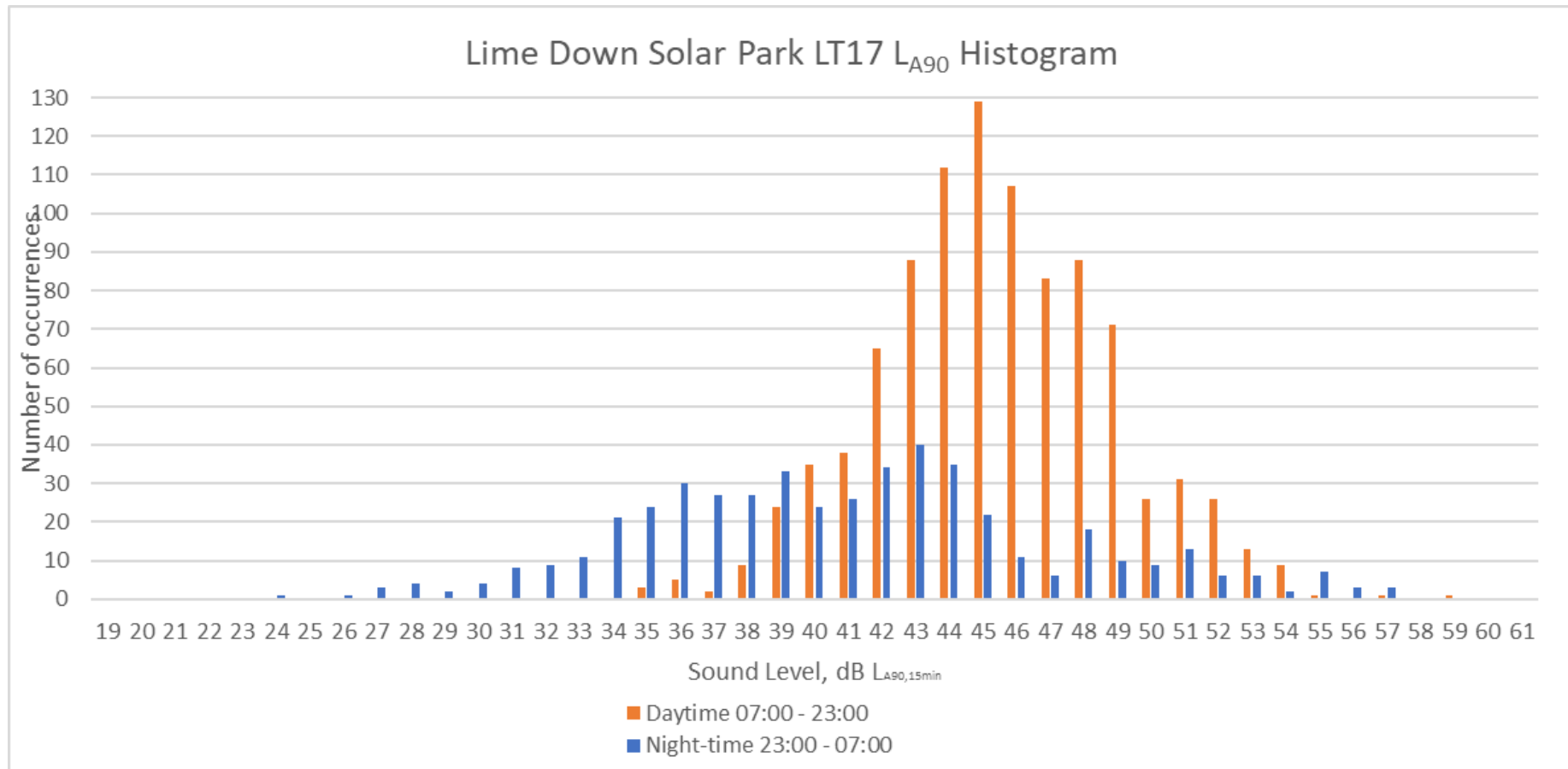


Plate 45: LT18 LA90 Histograms (Cable Route Corridor)

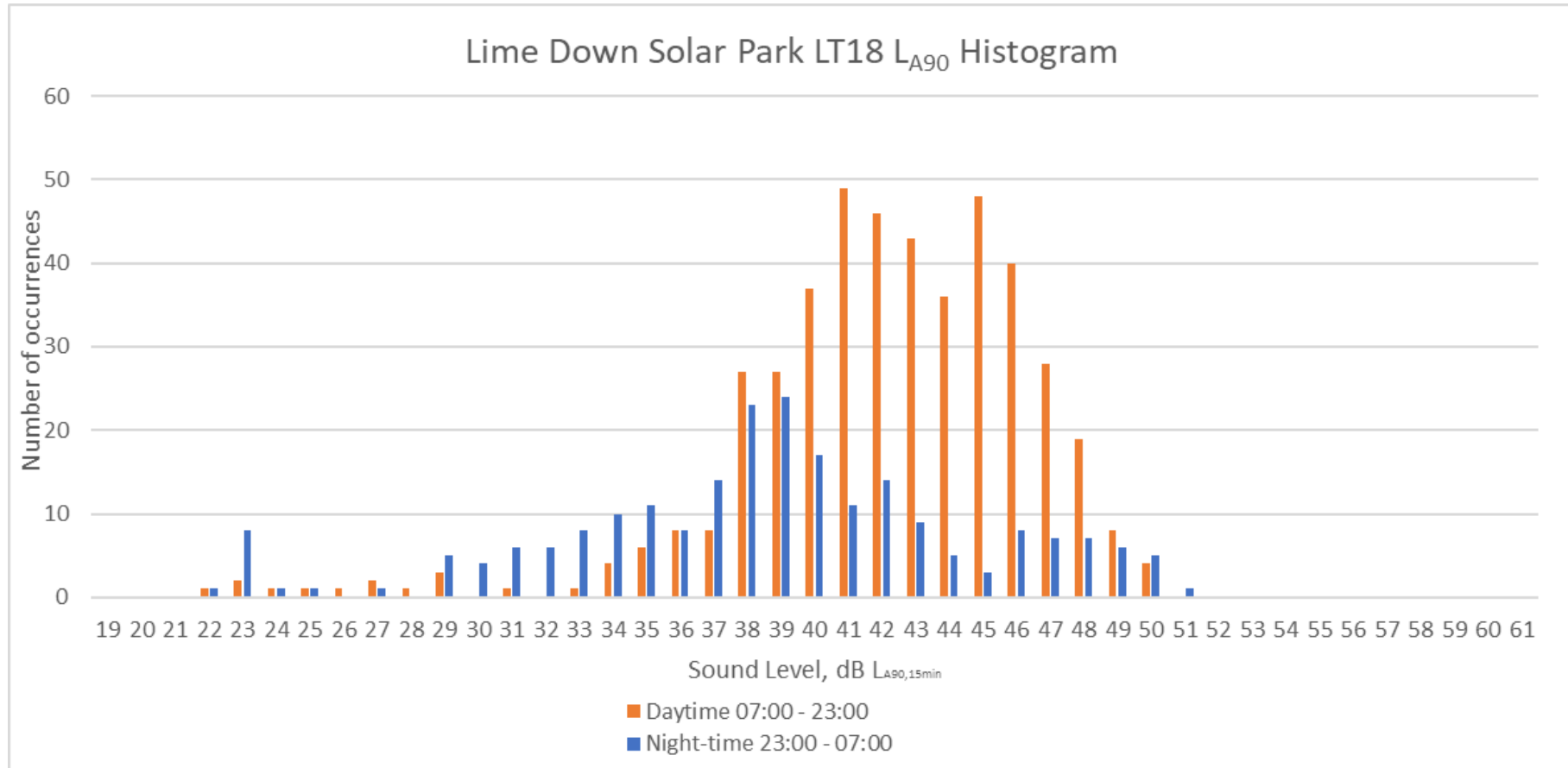


Plate 46: LT19 LA90 Histograms (Cable Route Corridor)

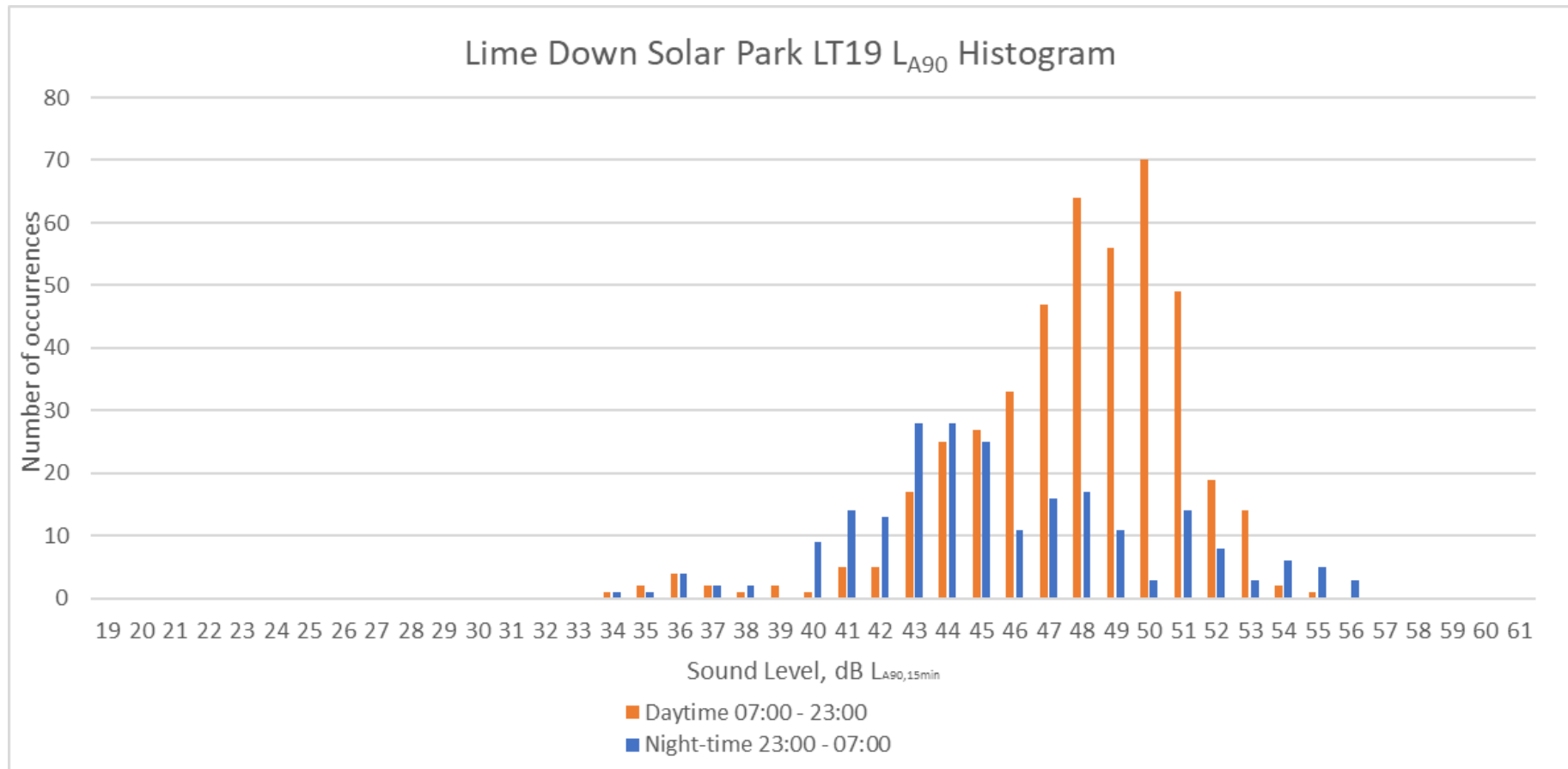


Plate 47: LT20 LA90 Histograms (Cable Route Corridor)

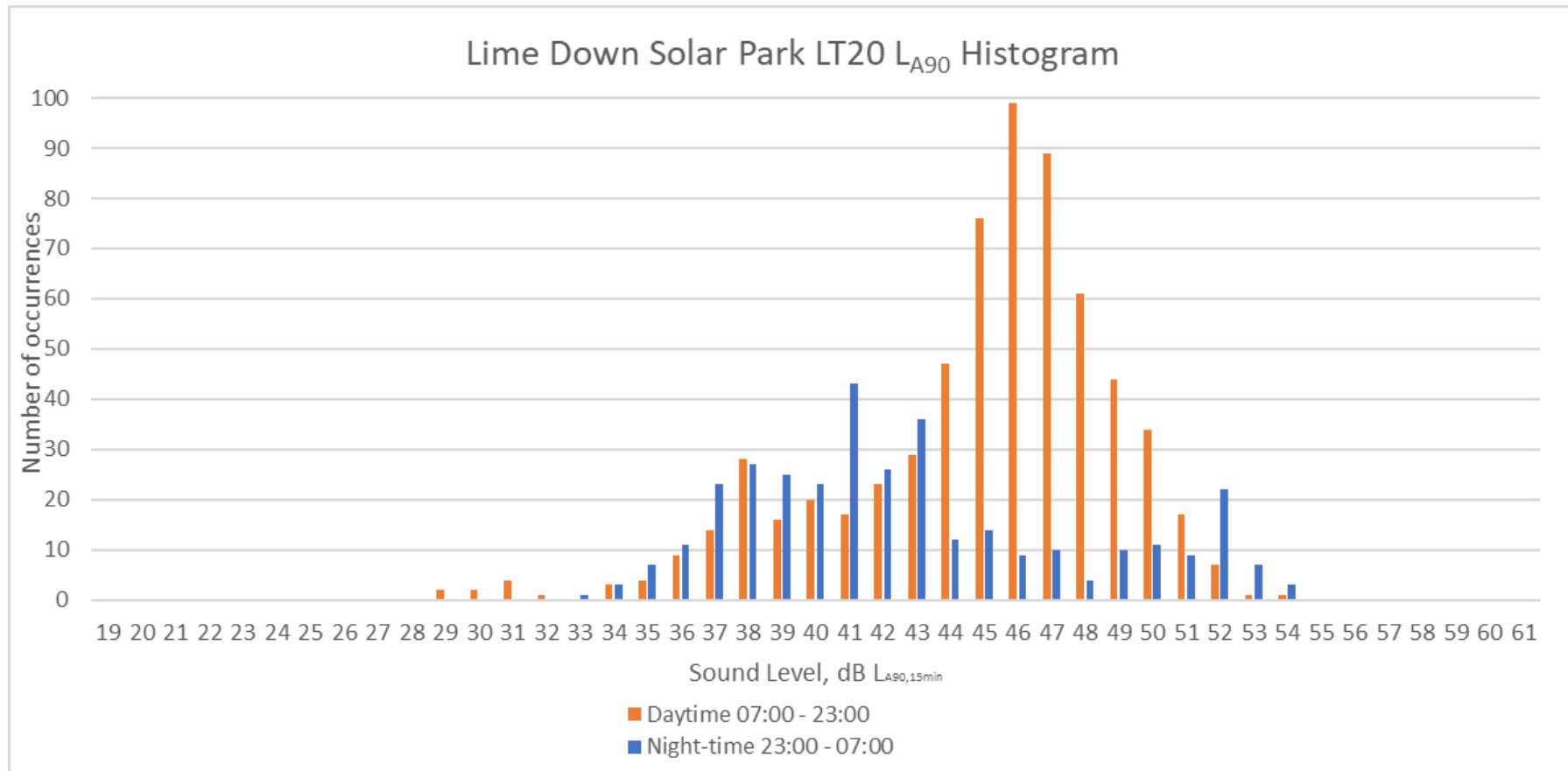


Plate 48: LT21 LA90 Histograms (Cable Route Corridor)

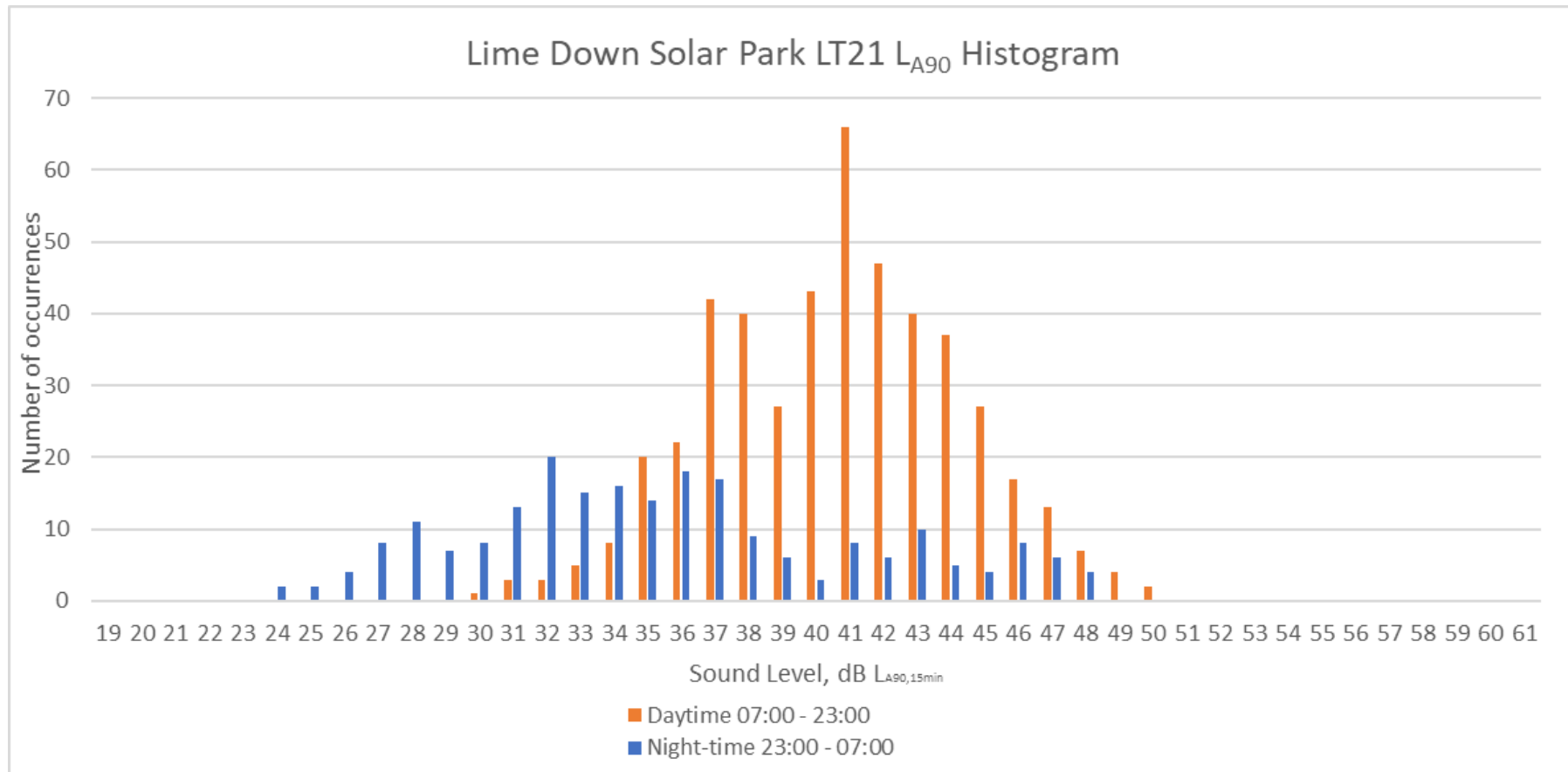


Plate 49: LT22 LA90 Histograms (Cable Route Corridor)

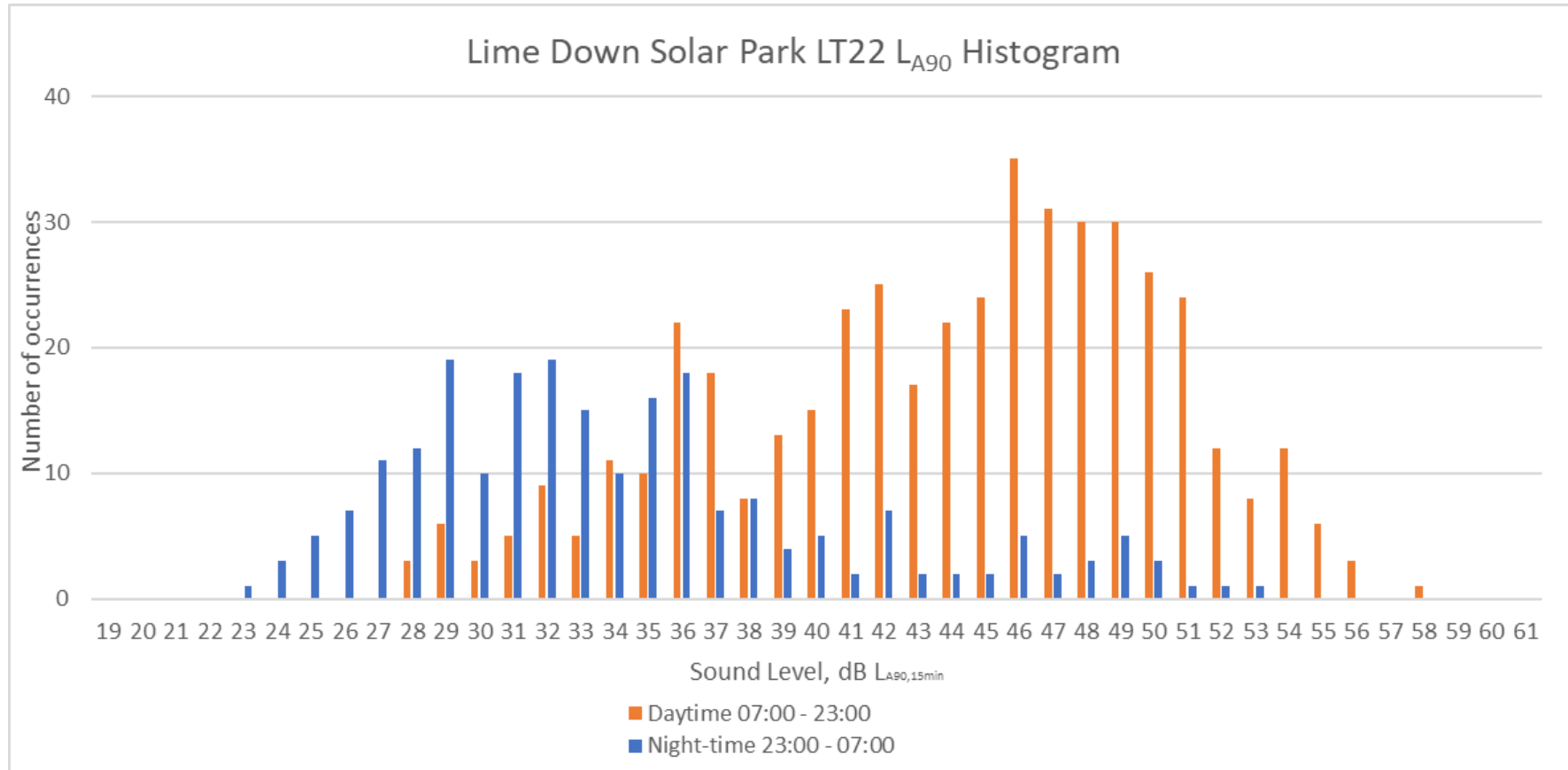


Plate 50: LT23 LA90 Histograms (Cable Route Corridor)

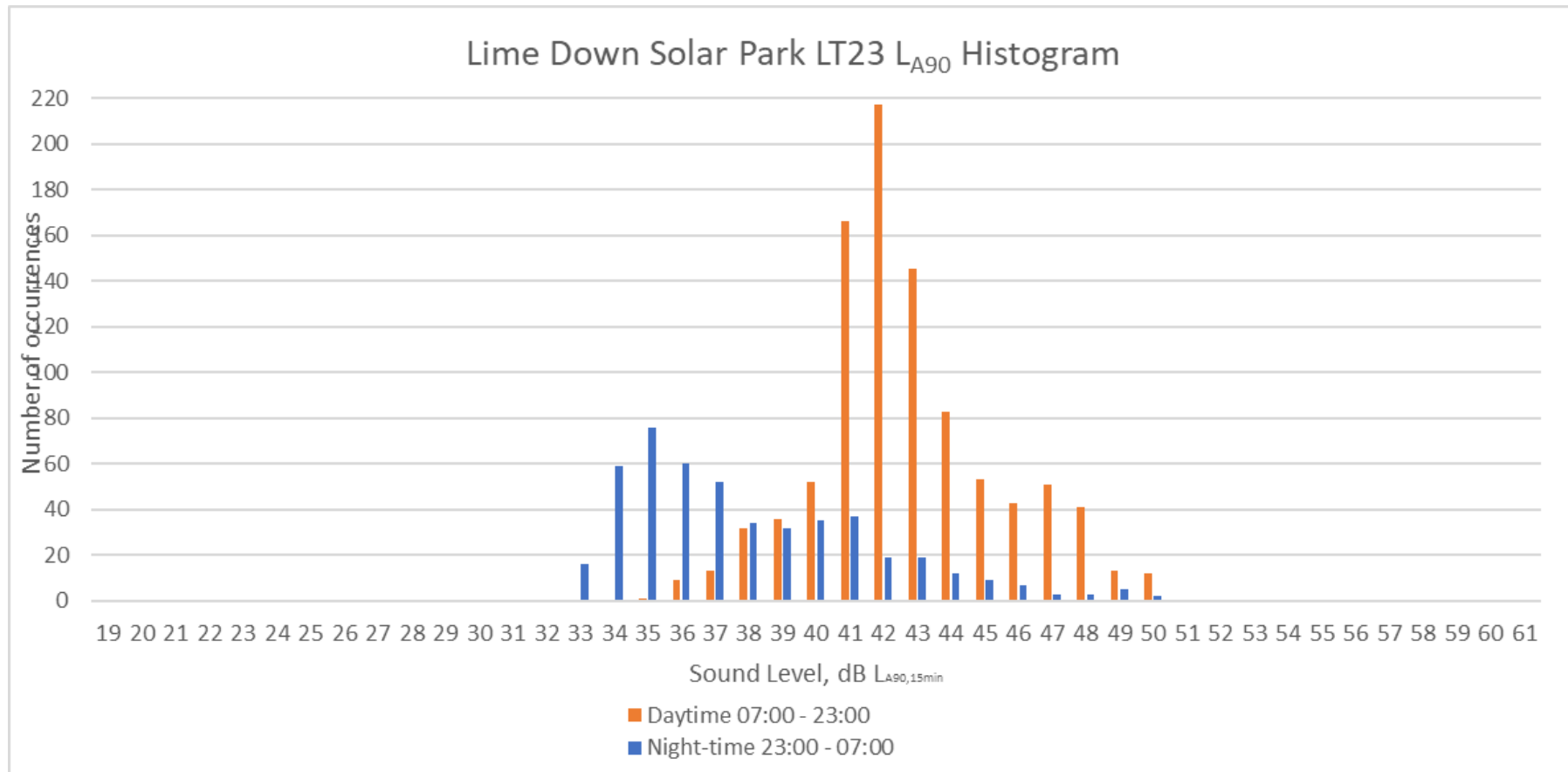


Plate 51: LT24 LA90 Histograms (Cable Route Corridor)

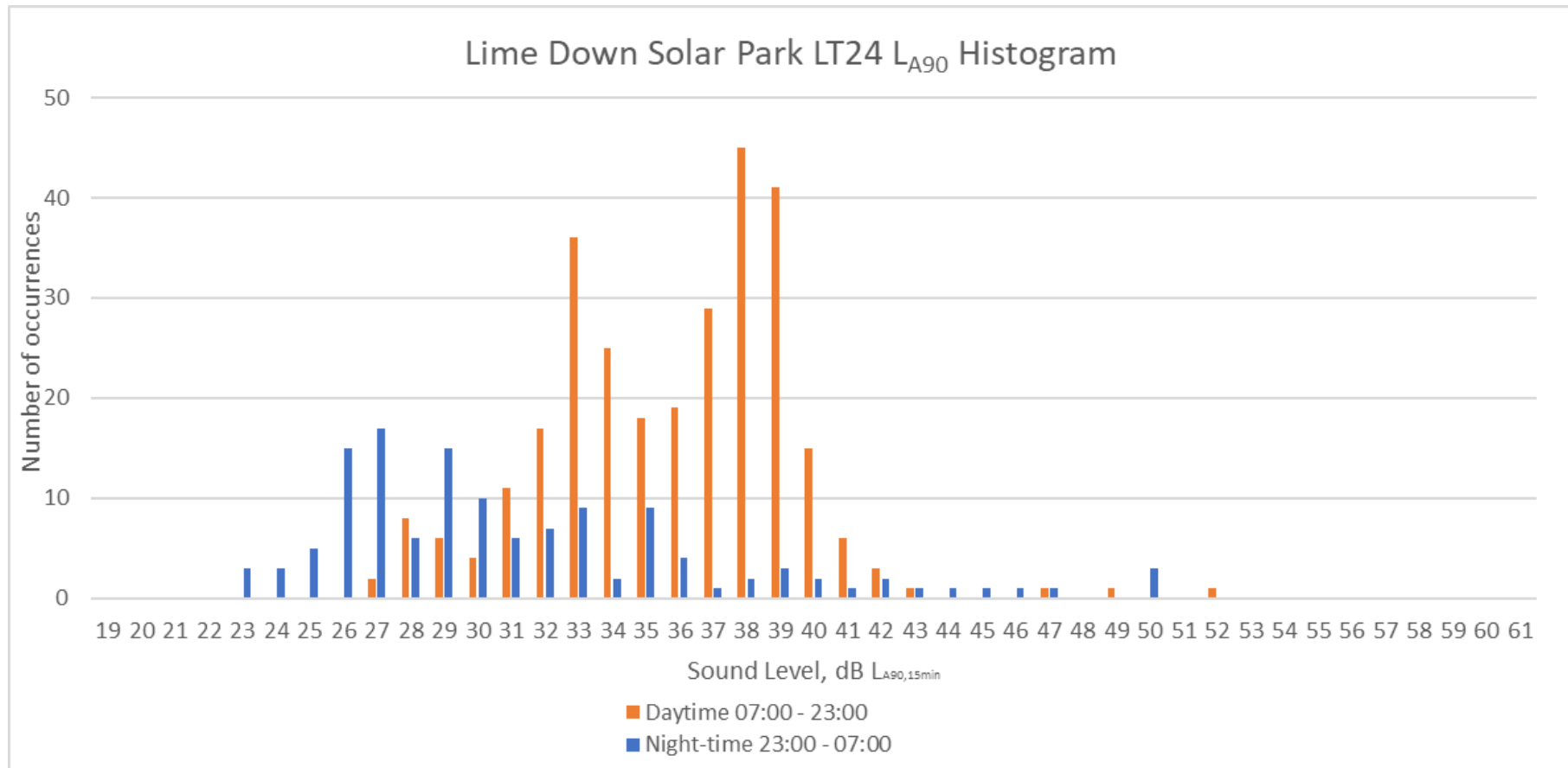


Plate 52: LT25 LA90 Histograms (Cable Route Corridor)

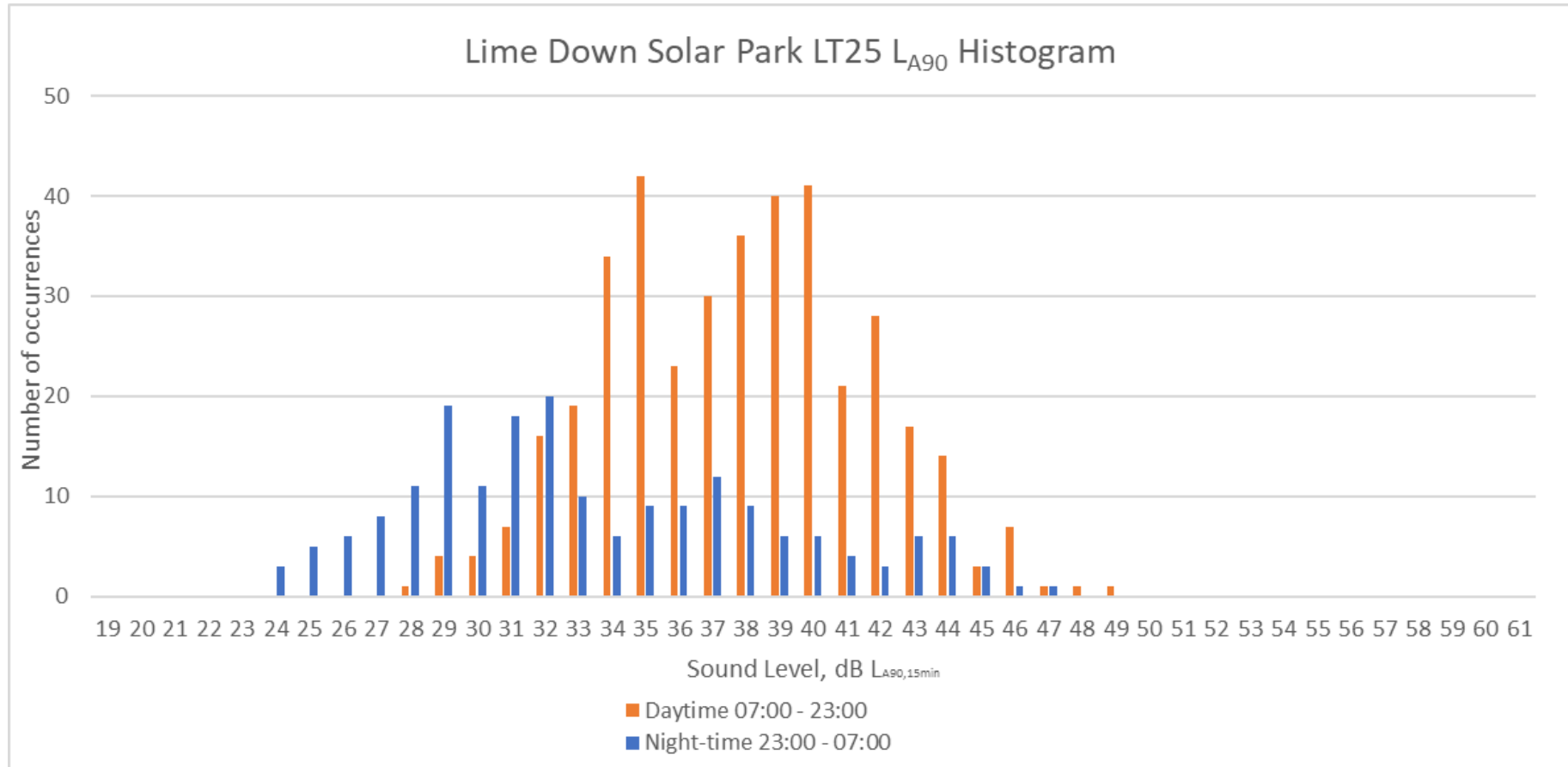


Plate 53: LT26 LA90 Histograms (Cable Route Corridor)

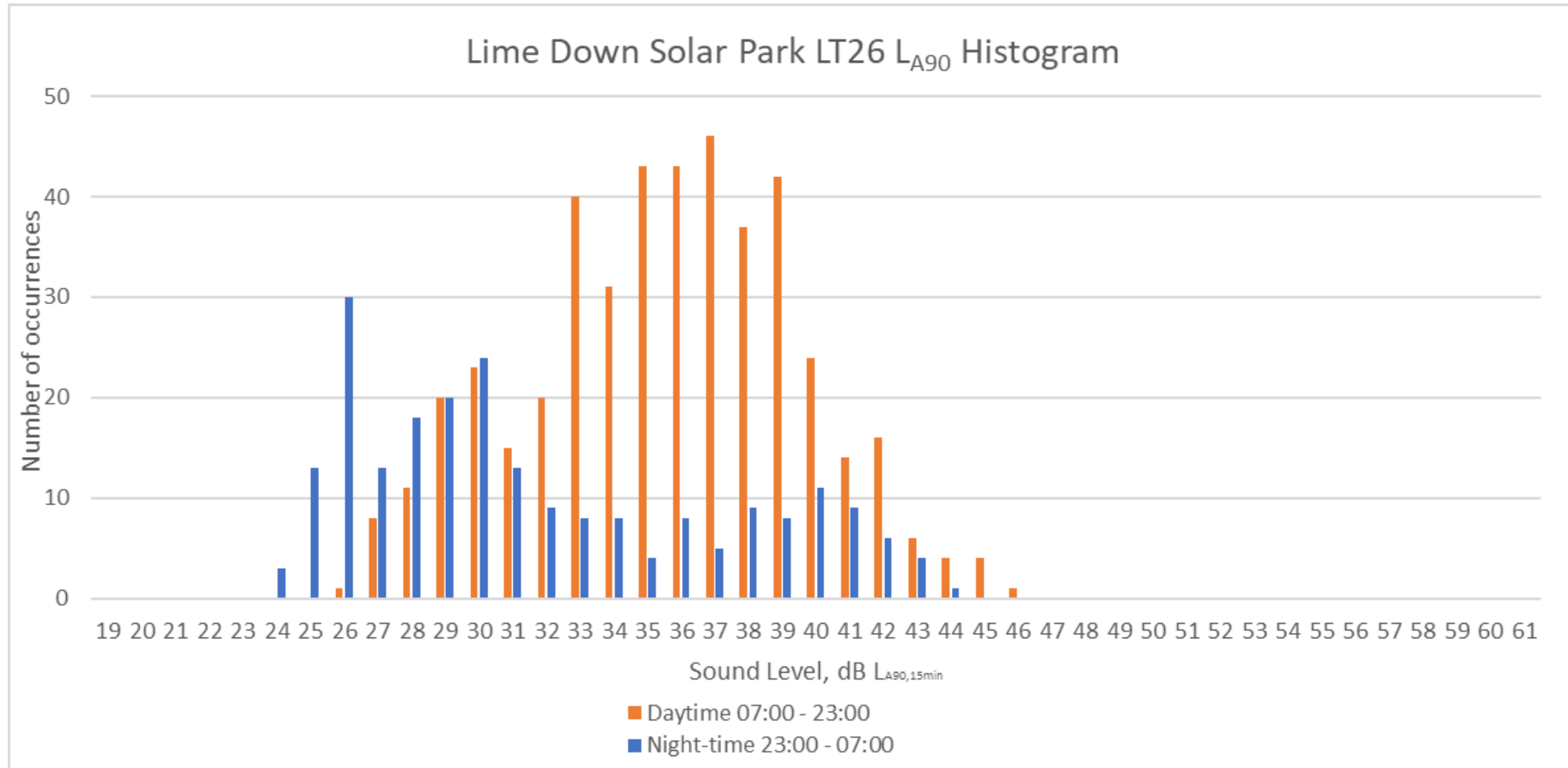


Plate 54: LT27 LA90 Histograms (Cable Route Corridor)

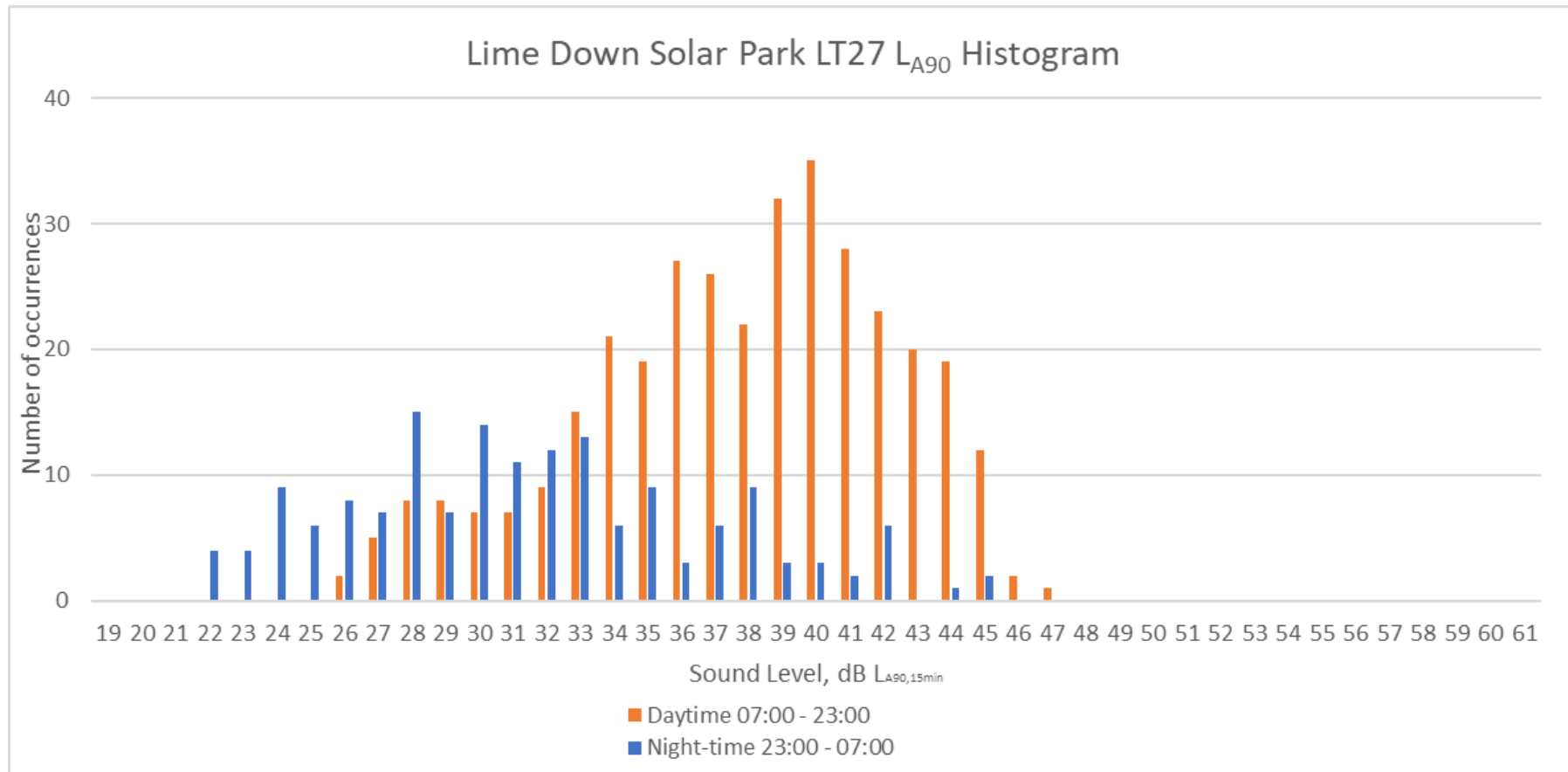


Plate 55: LT28 LA90 Histograms (Cable Route Corridor)

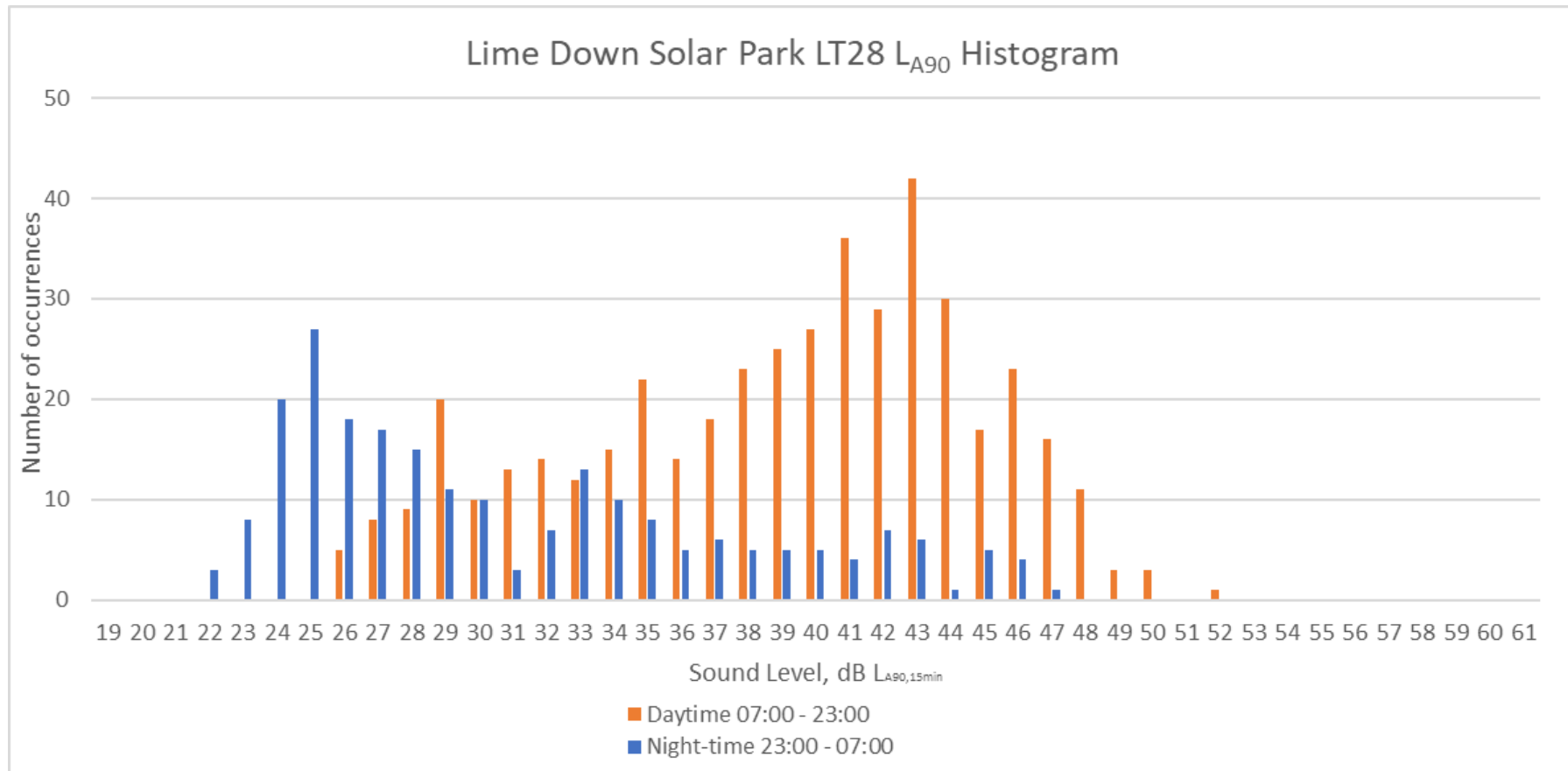
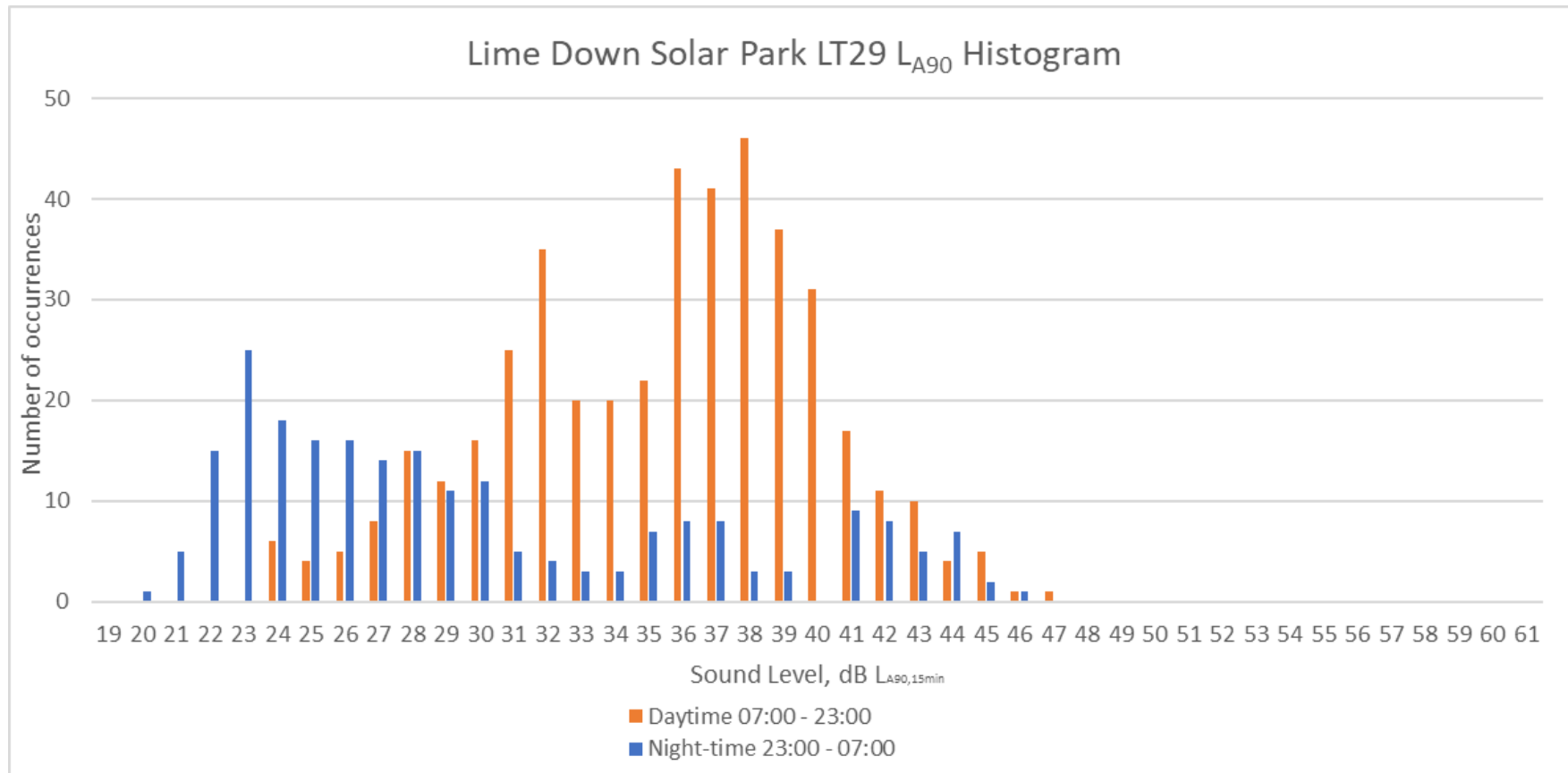


Plate 56: LT29 LA90 Histograms (Cable Route Corridor)



1.6 References

- Ref 1 British Standards Institute (2003) BS 7445 – Description and environment of environmental noise – Part 1: Guide to quantities and procedures. London: BSI.
- Ref 2 British Standards Institute (BSI) (2019) BS 4142:2014+A1:2019. 'Method for Rating Industrial and Commercial Sound' 2014.