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NOISE EMISSIONS AND BUILDING STRUCTURAL VIBRATION LEVELS FROM THE SUPERSONIC CONCORDE AND SUBSONIC TURBOJET AIRCRAFT

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16. Abstract

Noise emissions and building structural vibration levels were measured during landing and take off operations of the Anglo/French supersonic aircraft (Concorde) and from some conventional subsonic turbojet aircraft. Measurements were made at both the Fairbanks International Airport, Fairbanks, Alaska and at the Logan International Airport, Boston, Massachusetts.

This report contains graphic level time history recordings, tabulated peak RMS noise and vibration levels measured, EPNL/PNLT history data, and 1/3 octave frequency spectra of selected events.

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PREFACE

This report documents the results of noise and building structural vibration level measurements made during operation of the Anglo/French supersonic transport, Concorde F-WTSA and of some conventional subsonic turbojet aircraft.

Two measurement programs were conducted:

The first measurements were made during the period February 10-15, 1974 in and around the Fairbanks International Airport, Fairbanks, Alaska. A program of cold weather testing was being carried out on the Concorde by the French Government, thus providing an opportunity to measure noise and building structural vibration levels during landing and takeoff operations of the Concorde.

The second series of measurements were made during the period June 13-18, 1974 in and around Logan International Airport, Boston, Massachusetts. The Concorde had been invited to participate in the opening ceremonies of the new International Terminal at the Boston Airport, thus providing an additional opportunity to obtain data.

Appreciation is expressed to Dr. J. H. Wiggins and Mr. B. Kennedy of the J. H. Wiggins Co., Redondo Beach, California; to Mr. R. Wilson, Sector Director and members of the Federal Aviation Administration (FAA) office in Fairbanks; and to Mr. E. Sellman, FAA Washington for their assistance in the Alaska measurement program.

For the Boston measurement program appreciation is expressed to Mr. R. Skully, FAA Washington; to members of the FAA office in Boston and to the Massachusetts Port Authority for providing measurement locations and a portable field office building for use in this measurement program.

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1. INTRODUCTION

The U.S. Department of Transportation, Transportation Systems Center (TSC), Cambridge, Massachusetts, measured the noise and building structural vibration levels generated by landing and takeoff operations of the Anglo/French supersonic transport, Concorde F-WTSA and of some conventional turbojet aircraft.

Measurements were made during the period February 10-15, 1974, in and around the Fairbanks International Airport, Faribanks, Alaska and at Logan International Airport, Boston, Massachusetts during the period June 13-18, 1974.

At a number of selected locations in and around each airport, microphones were deployed on the inside and outside of a building. In addition, two vibration transducers were mounted in each of the buildings. The noise and vibration levels measured were simultaneously recorded on magnetic tape.

Tabulations of the peak RMS noise level (dBA re 20 μPa) and peak RMS acceleration level (dB re 10^{-6} g) for each event measured were prepared. Level time history graphic recordings and 1/3 octave spectral analyses of specific representative events are presented.

Appendixes A and B contain graphic level time histories and 1/3 octave frequency analyses of noise and vibration data measured in Fairbanks, Alaska.

Appendixes C and D contain level time histories and 1/3 octave frequency analyses of noise and vibration data measured in Boston, Massachusetts.

Appendixes E, F, G, and H contain:

(E) Measuring site locations and photographs

(F) Measuring and data reduction systems

(G) Meteorological data

(H) Description of the Concorde

Preliminary reductions of data measured during the Alaska measurements program were furnished to the J.H. Wiggins Co., Redondo Beach CA for use in a contract sponsored by the U.S. Department of Transportation, Office of Noise Abatement, Contract No. DOT-OS-40121. An assessment of the data was made and is contained in a technical report by Wiggins, J.H., Sound and Vibration Measurements for Concorde Supersonic Transport and Subsonic Jet Aircraft, Technical Report No. 74-1206-1, for the U.S. Dept. of Transportation, Office of Noise Abatement, by Wiggins Co., Redondo Beach CA, July 31, 1974 (Report DOT-TST-75-21).

2. MEASUREMENT PROGRAM

2.1 MEASUREMENTS ON CONCORDE F-WTSA AND BOEING 720 AND 707 AIRCRAFT, FAIRBANKS INTERNATIONAL AIRPORT, FAIRBANKS, ALASKA, FEBRUARY 10-15, 1974

Noise and building structural vibration level measurements were made in and around the Fairbanks International Airport, Fairbanks, Alaska during the period February 10-15, 1974 on the Anglo/French supersonic transport, Concorde F-WTSA and on other "targets of opportunity" Boeing 720 and 707 aircraft.

Four permanent buildings were selected to be instrumented (see Figure E-1):

1. Motel - Second floor room in northeast corner of motel building at north end of airport.
2. Flight Standards - Third floor office in southwest corner of FAA Flight Standards Operation centrally located to the east of the runway.
3. Security Tower - Single room second floor above fire station centrally located to the west of the runway.
4. Localizer - One room single story building housing airport localizer instrumentation located at the south end of the runway.

In each case two microphone systems were deployed, one inside the buildings and one at a convenient location outside. In addition (with the exception of the Security Tower) two vibration measuring systems were set up at each location to measure building structural vibration levels. See Figures E-2 to E-13 for photographs, exact locations of microphones and vibration transducers and building structural data.

Because of the extreme cold (down to -60°F) all instrumentation was set up and operated inside heated buildings. The outside microphones, acoustic calibrator, preamplifier and lead-in cable were the only items subjected to the outside cold. (See Appendix F for measurement procedures and practices.) All data measured were recorded on magnetic tape.

2.1.1 Operational Data, Fairbanks, Alaska

The main runway at the Fairbanks International Airport is 10,000 feet long (see Figure E-1). Runway 19 is instrumented with an ILS system with a three degree glide slope. Departures of commercial flights are made only on runway 19. Arrivals are accomodated on both runway 19 and runway 1.

Central point of control for the measurements program was the Flight Standards Location, which had both telephone and radio communications with the control tower. Information on arrivals and departures were relayed to the measurement areas from Flight Standards by a second radio link. This second radio link also provided time synchronization between recorders as follows: Instructions were transmitted to turn on data recorders prior to an event. When all areas acknowledged, a vocal time mark was transmitted. This was received by transceivers at each of the measurement areas, and the audio was picked up by the sensitive inside data microphone and recorded automatically on the data channel.

Summary operational data for each event measured are tabulated in Table 1. These data were obtained by an observer in the control tower and are estimated values.

2.1.2 Noise Data

Microphones were located at each of the four sites, as described below and in Appendix E:

1. Motel -	Outside Microphone	NE corner of building 2.5 ft above roof.
	Inside Microphone	Centered in 2nd floor room NE corner of building 5.5 ft above floor.
2. Security Tower -		
	Outside Microphone	5.5 ft above 1st floor roof
	Inside Microphone	2nd floor room, 5.5 ft above floor.

TABLE 1. SUMMARY, OPERATIONAL DATA, FAIRBANKS INTERNATIONAL AIRPORT, FAIRBANKS, ALSAKA

Event No.	Date	Time	Runway	A/C	Touchdown on Landing (ft)	Glide Slope (Deg)	Liftoff (ft)	Takeoff Angle (Deg)	Remarks
1	2/10/74	1353	19	707	1200	3			
2		1507	19	707			5800	5	
3	2/10/74	1732	19	720			3000	8	
4	2/11/74	1245	19	720	1800	3			
5		1307	19	707	3300	3			
6		1316	19	720			3000	8	
7		1419	19	707			5300	5	
8		1642	01	720	1600	3			
9	2/11/74	1725	19	720			3000	8	
10	2/12/74	1143	01	720	2300	3			
11		1225	19	737			7000	8	
12		1231	19	720			2800	8	
13		1259	01	707	1700	3			
14	2/12/74	1411	19	707			4600	5	
15	2/13/74	1220	19	720			2800	8	
16		1240	19	707	800	3			
17		1246	19	SST			3500	13	Light weight
18		1346	Fly-by	SST	Fly-by Runway 01, 700 feet, 300 mph				
19		1350	01	SST	2300	3			
20		1352	19	707			5400	5	
21		1615	19	SST			5600	6	Liftoff at 250 mph
22	2/13/74	1910	19	SST	2700	3			Heavy weight
23	2/15/74	0910	19	SST			4300	6	Touchdown @ 200 mph
24		1718	19	SST	2300	3			Heavy Weight

3. Flight Standards Building -

Outside Microphone	5.5 ft above 1st floor roof. (Line of sight to North end of runway obstructed by Upper Floors of building.)
Inside Microphone	Centered in 3rd floor office SW corner of building 5.5 ft above floor.

4. Localizer Building -

Outside Microphone	5.5 ft above ground.
Inside Microphone	5.5 ft above floor.

Photographs of the measurement areas are shown in Figures E-2, E-5, E-8 and E-10.

Table 2 contains a summary tabulation of the peak RMS noise level (dBA re 20 μPa) measured at the four measurement locations for both the inside and the outside microphone for twenty-four individual events measured including three take offs, three landings, and one low level fly-by by the Concorde. Data were obtained from graphic level history recordings made from the recordings. Levels tabulated in the case of landing operations are for maximum levels recorded prior to the reverse thrust braking of the aircraft.

Appendix A contains graphic level time history recordings, 1/3 octave spectral analyses and a computerized EPNL/PNLT history of selected representative events, including a fly-by over the airport by the Concorde.

The fly-by (Figure A-4) was at an altitude of 700 feet and at a speed of 300 mph in a south to north direction over runway 1 to approximately the middle of the runway. At this point a 180 degree turn to the east was executed around the Flight Standards Building.

The time history data presented (Figures A-1 to A-10) are for the outside microphones at each of the four measurement locations and are in time synchronism with one another. This was accomplished by a radio transmitted time mark simultaneously received and

TABLE 2. SUMMARY TABULATION, NOISE LEVELS DURING AIRCRAFT OPERATIONS AT FAIRBANKS INTERNATIONAL AIRPORT - FAIRBANKS, ALASKA

Event No.	Date	Time	A/C Type	Direction during		Peak RMS Noise Level - dBA re 20 μPa measured at								Summary Appendix A		
						Flight Stds		Localizer		Motel		Security Tower		Noise Level Time History Appendix No.	1/3 Octave Freq. Spectra Appendix No.	EPNL/PNLT History Appendix No.
				Ldg.	Tkoff	Outside	Inside	Outside	Inside	Outside	Inside	Outside	Inside			
1	2/10/74	1353	707	N-S		89.5	55.5	<83(1)	<69(1)	113.5	81.5	84.5	55			
2		1507	707		N-S	89	63	113.5	82	-	-	98.5	70.5			
3		1732	720		N-S	92.5	67	110.5	81	-	-	108	77.5			
4	2/11/74	1245	720	N-S		90.5	65	-	-	106	75	103.5	70	A-7	A-38 to A-41	A-64
5		1307	707	N-S		93.5	59.5	-	-	118	88.5	90	58.5	A-10	A-51 to A-56	A-67
6		1316	720		N-S	100	70.5	106.5	77	89	62.5	109.5	78.5			
7		1419	707		N-S	91.5	68.5	112	80.5	74	51	103	71.5			
8		1642	720	S-N		79	53	108	-	-	-	87.5	60			
9		1725	720		N-S	95	-	109	-	86.5	58.5	106.5	76.5			
10	2/12/74	1143	720	S-N		89	68	109	75.5	89.5	49	-	62	A-6	A-35 to A-37	A-63
11		1225	737		N-S	97	745	105.5	78.5	82	45.5	100.5	80			
12		1231	720		N-S	99	71.5	107.5	77.5	93	57	108.5	79	A-5	A-30 to A-34	A-62
13		1259	707	S-N		89.5	64.5	113	78.5	-	-	90.5	57.5	A-9	A-46 to A-50	A-66
14		1411	707		N-S	91.5	70.5	-	-	83	55.5	105.5	73			
15	2/13/74	1220	720		N-S	98	71	108	76.5	75.5	<43(1)	-	80			
16		1240	707	N-S		-	-	-	-	115	79.5	-	53.5			
17		1246	SST		N-S	102.5	79	113	87	79	<44(1)	-	91			A-68
18		1346	SST	Low Level Over-Flight	S-N	89	66.5	104	<75(1)	101	67	-	68	A-4	A-25 to A-29	A-60, A-61
19		1350	SST	S-N		74.5	54	117	85	<68(1)	47	-	70.5	A-3	A-21 to A-24	A-59
20		1352	707		N-S	92	74	109.5	80	<73(1)	<43(1)	-	74.5	A-8	A-42 to A-45	A-65
21		1615	SST		N-S	101.5	82.5	121.5	92.5	67	<43(1)	-	87			A-69
22		1910	SST	N-S		71	56	69.5	<70(1)	116	83	-	66.5			
23	2/15/74	0910	SST		N-S	103.5	80.5	121	92	-	-	113.5	90.5	A-1	A-11 to A-16	A-57
24		1718	SST	N-S		71.5	53	67.5(1)	70(1)	117.5	85	-	-	A-2	A-17 to A-20	A-58

(1) Levels noted affected by local short term intrusions or by local ambient levels.
- Indicate no data.

recorded at each measurement location. No time history data are presented for the inside noise levels.

The frequency spectra presented (Figures A-11 through A-56) are tabulations of the 1/3 octave frequency bands vs. noise level in 1/2 second averaging periods. The 1/2 second period of data averaged is the first 1/2 second of consecutive 2 second intervals. The actual start of each 1/2 second time period is noted and numbered on the individual outside noise level time histories (see Figures A-1 to A-10). Viewing the tabulated spectral data from left to right will show, by this series of 1/2 second snapshots of the noise data, the buildup and decay of the noise levels in each 1/3 octave frequency band. The tabulation is then essentially a time history of the event in each 1/3 octave frequency band. The tabulated frequency spectra is presented for both the outside and inside noise data for coincident 1/2 second averaging periods.

The EPNL/PNLT Histories presented in Figures A-57 to A-69 are computer plots of the tone corrected perceived noise level (PNLT) and the single number index EPNL (Effective perceived noise level) calculated per FAR 36 (uncorrected for distance and metrological conditions). In addition, Leq has been calculated for the event over the same time frame. The P-A curve is the difference, over the period of the event, of PNLT vs. the A weighted overall levels.

Included in Table 2 is a summary index to Appendix A showing those events selected for more detailed analysis and which figures in Appendix A contain the respective data. Note, for example, that for event No. 23 Figure A-1 contains coincident noise level time histories of the noise emissions recorded outside at the Flight Standards, Security Tower and Localizer locations.

Figures A-11 to A-16 contain the frequency spectra tabulations for event No. 23 at these three locations, with Figures A-11, A-13, and A-15 containing the spectra for the outside noise data at the above three locations, and Figures A-12, A-14, and A-16 containing the frequency spectra for the inside noise data.

Figure A-57 contains EPNL/PNLT history data for event 23 and shows a calculated EPNL value of 129.3 dB and an Leq value of 116.1 dBA.

2.1.3 Vibration Data

Vibration transducers were mounted at each site as described below and in Appendix E.

1.	Motel	1. Window Pane on North Wall 2. East Wall
2.	Security Tower	Not instrumented for vibration measurements
3.	Flight Standards	1. Window Pane on South Wall 2. West Wall
4.	Localizer	1. East Roof Panel 2. North Wall

Photographs of the measurement areas are shown in Figures E-2, E-5, and E-10.

Table 3 contains a summary tabulation of the peak RMS Acceleration Level (dB re 1 μg) measured at each location at the three measurement sites for the 24 individual events for which noise data was simultaneously recorded (see section 2.1.2). Vibration levels were obtained for this tabulation from graphic level time history recordings produced from the recorded data. Levels tabulated in the case of landing operations are the maximum levels recorded prior to the reverse thrust braking of the aircraft.

Appendix B contains vibration level time histories and 1/3 octave frequency data for those ten events selected for further analysis in section 2.1.2. A summary index of Appendix B is included in Table 3 for these events showing figure numbers of the respective history and spectral data.

Note, for example, that for event No. 23 Figure B-1 contains coincident time histories of the building structural vibration levels measured at the roof and wall locations in the Localizer Building during the takeoff on runway 19 on the Concorde F-WTSA.

TABLE 3. SUMMARY TABULATION, BUILDING STRUCTURAL VIBRATION LEVELS DURING AIRCRAFT OPERATIONS AT FAIRBANKS INTERNATIONAL AIRPORT - FAIRBANKS, ALASKA

Event No.	Date	Time	A/C Type	Direction during		Peak RMS Acceleration Level - dB re μg measured at[2]						Summary Appendix B	
						Flight Stds		Localizer		Hotel		Vibration Time History Appendix No.	1/3 Octave Frequency Spectra Appendix No.
				Ldg.	Tkoff	Window	Wall	Roof	Wall	Window	Wall		
1	2/10/74	1353	707	N-S		<76.5[1]	-	79[1]	81	96.5	83.5		
2		1507	707		N-S	91	-	101	89.5	-	-		
3		1732	720		N-S	94	<62[1]	101.5	86.5	-	-		
4	2/11/74	1245	720	N-S		<78[1]	<63[1]	-	-	98.5	87.5	B-12	B-29
5		1307	707	N-S		<77[1]	70	-	-	103.5	90	B-16	B-33
6		1316	720		N-S	92	79	95	85.5	89	84		
7		1419	707		N-S	93	77.5	99.5	88	<83.5[1]	85		
8		1642	720	S-N		<79[1]	<61.5[1]	86.5	85.5	-	-		
9		1725	720		N-S	97.5	80	99	86	87	82.5		
10	2/12/74	1143	720	S-N		<83[1]	<65.5[1]	87.5	85.5	84	<84.5[1]	B-11	B-28
11		1225	737		N-S	98.5	85	98.5	86	85	<82[1]		
12		1231	720		N-S	93	82	98.5	85	86.5	<81.5[1]	B-9, B-10	B-26, B-27
13		1259	707	S-N		<83.5[1]	<62.5[1]	87	85.5	-	-	B-15	B-32
14		1411	707		N-S	97	78.5	-	-	87	<83.5[1]		
15	2/13/74	1220	720		N-S	98	81	97	85	<76[1]	<78[1]		
16		1240	707	N-S		-	-	-	-	104.5	91.5		
17		1246	SST		N-S	107.5	85	105.5	96	86	86.5		
18		1346	SST	Low Level Over-Flight	S-N	<92.5[1]	88.5	94.5	88.5	111	98	B-7, B-8	B-24, B-25
19		1350	SST	S-N		89	70.5	99	99	<78[1]	<73[1]	B-5, B-6	B-22, B-23
20		1352	707		N-S	91.5	76	99	88	<77[1]	<75[1]	B-13, B-14	B-30, B-31
21		1615	SST		N-S	107.5	91.5	113.5	104	<78[1]	<78[1]		
22		1910	SST	N-S		<74.5[1]	84	75[1]	78[1]	114.5	106		
23	2/15/74	0910	SST		N-S	110.5	94	110.5	103	-	-	B-1, B-2	B-17, B-18, B-19
24		1718	SST	N-S		<68.5[1]	82.5	<75[1]	<78[1]	116	106.5	B-3, B-4	B-20, B-21

(1) Levels noted affected by local short term intrusions or by local ambient levels.
- Indicates no data.
(2) No vibration data at Security Tower.

Figure B-17 contains the 1/3 octave frequency spectra measured for a 4 second period during this event at both locations. The start of the 4 second periods is noted on the respective time histories.

2.2 MEASUREMENTS CONCORDE F-WTSA AND CONVENTIONAL SUBSONIC TURBOJET AIRCRAFT - LOGAN INTERNATIONAL AIRPORT, BOSTON, MASSACHUSETTS, JUNE 13-18, 1974

Noise and building structural vibration level measurements were made in and around Logan International Airport, Boston, Massachusetts during the period June 13-18, 1974 on the Anglo/ French Supersonic Transport, Concorde F-WTSA and on other "targets of opportunity" conventional subsonic turbojet aircraft.

Two buildings were selected to be instrumented, one permanent and one temporary (see map, Figure E-14).

1. Toolshed - Permanent one room single story building near the threshold of runway 33.
2. Field Office - Portable one room single story building directly under flight path runway 4R/22L on Castle Island, S. Boston, MA.

In each case two microphone systems were deployed, one inside the building and one outside. In addition, two vibration measuring systems were set up at each location to measure building structural vibration levels. See Figures E-14 to E-20 for photographs, exact locations of microphones and vibration transducers, and building structural data. Data measured were recorded on magnetic tape.

2.2.1 Operational Data, Boston MA

Since no suitable buildings were available in the immediate vicinity of the runway 4R/22L (one of the runways expected to be used by the Concorde at Logan), a portable field office was borrowed from the Massachusetts Port Authority ("Massport") and moved under the flight path of 4R/22L in a parking area on Massport property on Castle Island. The building was set on sandbags to simulate a solid foundation with an additional 200 lb of sand

placed inside at each corner and in the center of the building.

The two runways, 4R/22L and 15R/33L (expected to be used by the Concorde because of the seasonal prevailing winds) are 10,000 feet long. Runway 4R is effectively 7,494 feet long taking into account its displaced threshold.

Runways 4R and 33L, used by the Concorde for landing, are both instrumented with ILS systems with a 3 degree glide slope.

Summary operational data from each event measured are tabulated in Table 4. Data were obtained by an observer in the control tower and are estimated values.

2.2.2 Noise Data

Microphones were located at each location as described below and in Appendix E:

A. Toolshed -	Outside Microphone	5.5 ft above ground
	Inside Microphone	Centered in room 5.5 ft above ground
B. Field Office -	Outside Microphone	5.5 ft above ground
	Inside Microphone	Centered in room 5.5 ft above floor.

Photographs of the measurement areas are shown in Figures E-15 and E-18.

Table 5 contains a summary tabulation of the peak RMS noise level (dBA re 20 μPa) the two measurement sites for both the inside and outside microphones for the thirty-two individual events measured, including two landings and three takeoffs of the Concorde. A third landing of the Concorde on runway 22L on June 17, 1974 was not measured. Data were obtained from graphic level history recordings made from the recorded data. Levels tabulated in the case of landing operations are for maximum levels recorded prior to the reverse thrust braking of the aircraft.

TABLE 4. SUMMARY, OPERATIONAL DATA, LOGAN INTERNATIONAL AIRPORT, BOSTON, MASSACHUSETTS

Event No.	Date	Time	Runway	A/C	Touchdown on Landing (ft)	Glide Slope (Deg)	Liftoff (ft)	Takeoff Angle (Deg)	Remarks
1	6/13/74	0818	33L	DC-8	2750	3			
2		0834	33L	707	1000	3			
3		0841	33L	DC-8	1500	3			
4		0847	33L	707	1500	3			175 mph at threshold
5		0916	33L	SST	500	3			235,000 pounds
6		0950	33L	880	2000	3			
7		0954	4R	707	500(1)	3			
8		0957	4R	747	750(1)	3			
9	6/13/74	1010	4R	DC-8	750(1)	3			175 mph at threshold
10	6/14/74	1404	4R	SST	250(1)	3			235,000 pounds
11		0815	15R	707			5000	6	
12		0820	15R	DC-10			4000	6	
13		0855	15R	707			6000	6	Rotate at 290 mph
14		0904	15R	SST			7500	4	Liftoof at 320 mph
15	6/14/74	0940	15R	DC-8			5000	6	310,000 pounds
16	6/17/74	0801	15R	DC-10			4500	6	
17		0809	15R	707			3200	6	
18		0816	15R	707			4500	6	Rotate at 290 mph
19		0822	15R	SST			7300	4	Liftoff at 320 mph
20		0833	15R	707			3000	6	386,000 pounds
21		0835	15R	L1011			3000	6	
22	6/17/74	1537	15R	707			3000	6	
23	6/18/74	0827	15R	SST			7500	4	
24		1145	15R	747			7000	4	
25		1150	15R	DC-8			5000	6	
26		1404	15R	707			-	-	
27		1407	15R	DC-8			-	-	
28		1420	15R	707			-	-	
29		1519	15R	747			-	-	
30		1525	15R	707			-	-	
31		1548	15R	DC-8			-	-	
32	6/18/74	1551	15R	707			-	-	

(1) Distance from displaced threshold.

TABLE 5. SUMMARY TABULATION, NOISE AND STRUCTURAL VIBRATION LEVELS DURING AIRCRAFT OPERATIONS AT LOGAN INTERNATIONAL AIRPORT, BOSTON, MASS.

Event No.	Date	Time	A/C Type	Runway		Peak RMS Noise Level -dBA re 20uPa measured at				Peak RMS Acceleration Level -dB re 1 ug measured at				Appendix C			Appendix D	
						ALS Toolshed Threshold Rnwy 33		Portable Office Castle Island		ALS Toolshed Threshold Rnwy 33		Portable Office Castle Island		Noice Level Time History	1/3 Octave Freq Spectra	EPNL/PNLT History	Vibration Time History	1/3 Octave Freq. Spectra
				Ldg.	Tkoff	Outside	Inside	Outside	Inside	Roof	Wall	Window	Wall					
1	6/13/74	0818	DC-8	33L		985	-			79	88.5			-				
2		0834	707	33L		86.5	71.5			<70	<75			C-4	C-19,C-20			
3		0841	DC-8	33L		92.5	75.5			<75	81			C-5	C-21,C-22			
4		0847	707	33L		89	71.5			<75	81			-				
5		0916	SST	33L		93.5 (100 RT)	78			88 Reverse Thrust	90.5			C-1	C-13,C-14		D-1	D-11
6		0950	880	33L		97.5	81							-				
7	6/13/74	0954	707	4R				111	91.5			100	90	C-6	C-23,C-24	C-39	D-4	D-14
8		0957	747	4R				100	79			100.5	89.5	C-7	C-25,C-26	C-40	D-5	D-15
9		1010	DC-8	4R				111	87.5			102	90	C-8	C-27,C-28	C-41	D-6	D-16
10	6/14/74	1404	SST	4R		65 (77.5 RT)		100	79.5	67	72.5	104.5	93.0	C-2	C-15,C-16	C-37	D-2	D-12
11	6/14/74	0815	707		15R	106.5	90.5			93	94					C-48		
12		0820	DC-10		15R	92	-			82.5	84					C-49		
13		0855	707		15R	109	90.5			93	93					C-50		
14		0904	SST		15R	117.5	97			105	108					C-46		
15		0940	DC-8		15R	109	92.5			94	92							
16	6/17/74	0801	DC-10		15R	90	72.5			78	80			C-9	C-29,C-30	C-42	D-7	D-17
17		0809	707		15R	102	85.5			91.5	89.5					C-51		
18		0816	707		15R	109	91.5			93	92.5			C-12	C-35,C-36	C-45	D-10	D-20
19		0822	SST		15R	118.5	98.5			103	103			C-3	C-17,C-18	C-38	D-3	D-13
20		0833	707		15R	105.5	84.5			90	88					C-52		
21		0835	L1011		15R	104.5	84.5			86.5	86.5			C-10	C-31,C-32	C-43	D-8	D-18
22		1537	707		15R	100	81.5			90	87.5							
23	6/18/74	0827	SST		15R	117	97			103	104.5					C-47		
24		1145	747		15R	101.5	85			-	-					C-53		
25		1150	DC-8		15R	105.5	90			-	-					C-54		
26		1404	707		15R	107.5	87			92.5	89							
27		1407	DC-8		15R	103	87.5			90	88.5					C-55		
28		1420	707		15R	106	92			93	90.5							
29		1519	747		15R	96	78.5			85.5	86.5			C-11	C-33,C-34	C-44	D-9	D-19
30		1525	707		15R	107	87.5			94	90.5							
31		1548	DC-8		15R	101.5	84			92	87.5							
32		1551	707		15R	100	82.5			88	85.5							

(1) Levels noted affected by local short term intrusions or by local ambient levels.
- Indicates no data.

Appendix C contains graphic level time history recordings, 1/3 octave spectral analyses and computerized EPNL/PNLT histories of selected representative events.

The time history data presented in Figures C-1 to C-12 are for the data recorded at the outside microphone at the two measurement locations. No time history data are presented for the inside microphone.

The frequency spectra presented in Figures C-13 to C-36 are tabulations of the 1/3 octave frequency bands vs. noise level in 1/2 second averaging periods. The 1/2 second period of data averaged is the first 1/2 second time period of consecutive 2 second intervals. The actual start of each 1/2 second time period is noted and numbered on the individual noise level time histories (see Figures C-1 to C-12).

The frequency spectra is presented for both the outside and inside noise data for coincident 1/2 second averaging periods.

The EPNL/PNLT history presented in Figures C-37 to C-55 are computer plots of the tone corrected perceived noise level (PNLT) and the single number index EPNL (effective perceived noise level) calculated per FAR 36 (uncorrected for distance and meterological conditions). Leq has also been calculated for the event over the same time frame.

Included in Table 5 is a summary index to Appendix C showing those events selected for more detailed analysis and which Figures in Appendix C contain the respective data. Note, for example, that for event 19, the takeoff of the Concorde on June 19, 1974, Figure C-3 contains outside noise level time history data, while Figures C-17 and C-18 contain outside and inside frequency spectra tabulations respectively. Figure C-38 contains the EPNL history data and shows a calculated EPNL of 123.9 dB and a Leq of 114.4 dBA.

2.2.3 Vibration Data

Vibration transducers were mounted at each site as described below and in Appendix E:

1. Toolshed -	1.	North roof panel
	2.	West Wall
2. Field Office -	1.	South Wall
	2.	Window Pane on East Wall

Photographs of the measurement areas are shown in Figures E-15 and E-18.

Table 5, along with the noise data of section 2.2.2, contains a summary tabulation of the peak RMS Acceleration Levels (dB re 1 μg) measured at each location at the two measuring sites for the thirty-two events measured. Vibration data were obtained for the tabulation from graphic level time history recording made from the recorded data. Levels tabulated in the case of landing operations are the maximum levels recorded prior to the reverse thrust braking of the aircraft.

Appendix D contains vibration level time histories and 1/3 octave frequency data for the same events selected for detailed analysis in section 2.2.2. A summary index of Appendix D is included in Table 5 for these events showing figure numbers of the respective history and spectral data. Note, for example, that for event 19 Figure D-3 contains coincident time histories of the building structural levels measured at the two locations at the toolshed. Figure D-15 contains the 1/3 octave frequency spectra measured for a 4 second period during the event at both locations. The start of the 4 second period is noted on the respective time histories.

3. DISCUSSION

Since both the Concorde and 707 aircraft were measured in Fairbanks and Boston, a comparison of these data is included in Table 6. The levels tabulated have been scaled, for comparative purposes, to slant distances (line-of-site distance from aircraft to microphone) of 300 feet for landings and 700 feet for takeoffs. Note that for takeoff operations both the Concorde and the 707's measured 2.4 dBA higher in Fairbanks than in Boston. This difference is attributed to atmospheric absorption due to relative humidity and temperature differences between Fairbanks and Boston.

An estimate can be based on the experimental results of Harris and Tempest[1] which show that in a -20°C, low humidity environment (sumulating conditions in Fairbanks), negligible atmospheric sound absorption occurs for all frequencies and distances related to this measurement program. However, for a +20°C, high humidity environment (simulating conditions in Boston), sound absorption is of the order of 0.5 dB/100 feet distance times the frequency in kilohertz. Thus, the takeoff measurements scaled to 700 feet indicate that the 700 Hz frequency band would yield an atmospheric absorption on the order of the dB differences (2.4 dBA) measured on takeoff between the Fairbanks and Boston measurements for each type aircraft. This 700 Hz band is located within the peak spectral noise levels of both aircraft on takeoff; hence the measured differences on takeoff are realistic.

Also, the 707's landing at a representative slant distance of 300 feet indicates that the 2.5 kHz band would yield atmospheric absorption of the same order of the measured difference (3.8 dBA) between Fairbanks and Boston measurements. Again, the peak spectral noise level on landing for the 707 occurs in this frequency band.

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(1) Harris, C.M. and Tempest, W., Absorption of Sound in Air below 1000 cps. Journal of the Acoustical Society of American, Volume 26, Number 12, Dec. 1964, pp. 2390-2394.

TABLE 6. NOISE EMISSION LEVELS, CONCORDE F-WTSA - BOEING 707 AIRCRAFT FAIRBANKS ALASKA, FEB. 10-15, 1974 - BOSTON MASSACHUSETTS, JUNE 13-18, 1974

Takeoff	A/C	No. of Events	Ave. Noise Level (Scaled)[A] (dBA)	Differences (dBA)		
Fairbanks	Concorde	3	121.7	2.4	12.6	12.6
Boston	Concorde	3	119.3			
Fairbanks	707	3	109.1	2.4		
Boston	707	10	106.7			
Landing						
Fairbanks	Concorde	3	114.8	13.6	-0.5	-11.3
Boston	Concorde	1	101.2			
Fairbanks	707	4	115.3	3.8		
Boston	707	1	112.5			

A) Takeoff levels scaled to slant distance of 300 ft.
Landing levels scaled to slant distance of 300 ft.

Only approximately 2 dB of the 13.6 dBA difference measured for the Concorde landings can be attributed by this method to atmospheric absorption. Other explanations, such as alteration in the landing procedures between Fairbanks and Boston, are possible.

APPENDIX A

NOISE LEVEL DATA
MEASURED AT FOUR LOCATIONS
FAIRBANKS INTERNATIONAL AIRPORT
FAIRBANKS, ALASKA

a) No Data at Motel.

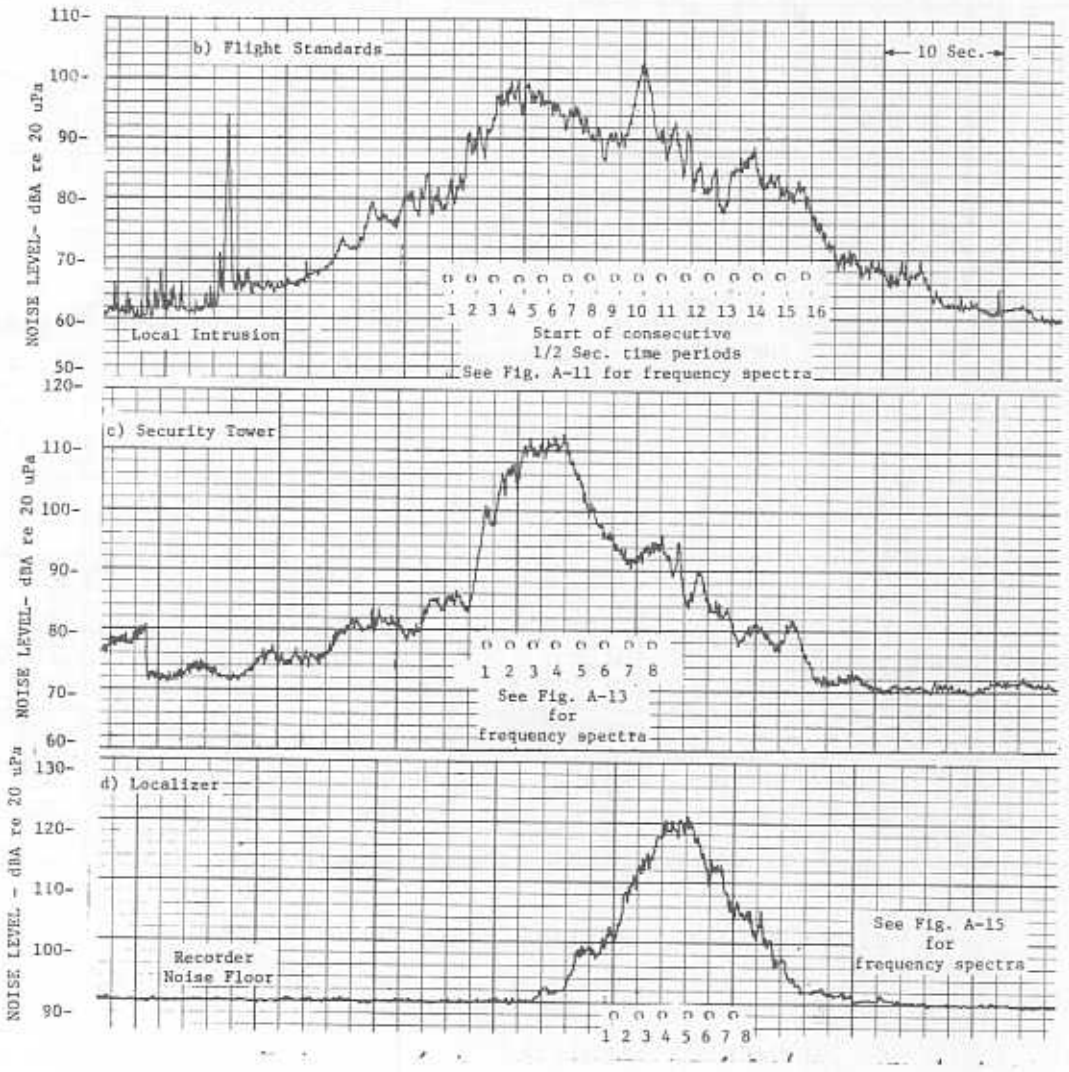
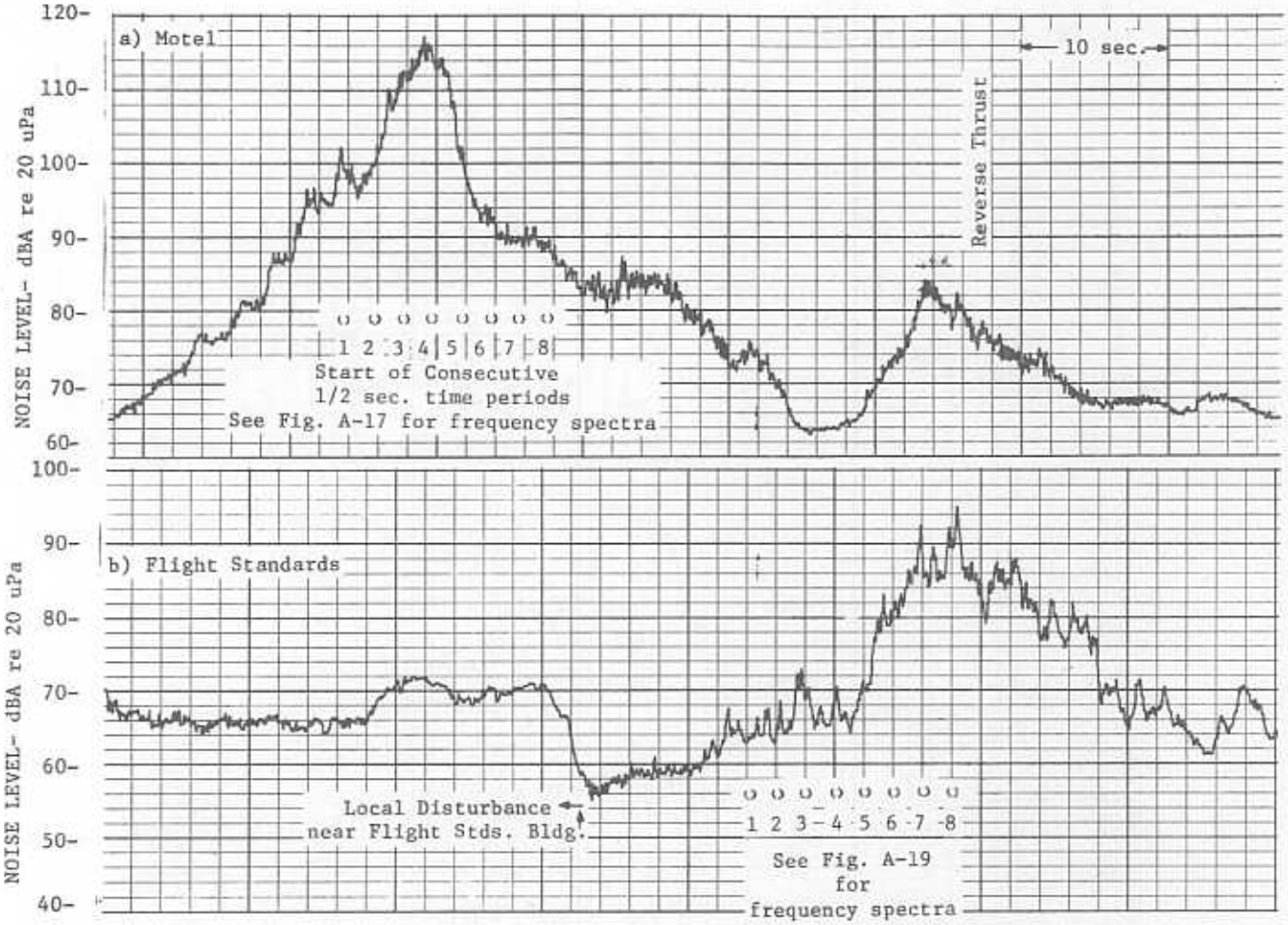


Figure A-1. Coincident Time Histories-Noise Level Data-Event No. 23. Takeoff of Concorde F-WTSA - Runway 19, Fairbanks Int. Airport, Fairbanks, Alaska. Feb. 15, 1974 - 0910 Hours.
b) Microphone on Roof of Flight Stds. Bldg.-Outside-at a Height of 5.5 ft.
c) Microphone on Roof of Security Tower Bldg.-Outside-at a Height of 5.5 ft.
d) Microphone Outside Localizer Shack at a Height of 5.5 ft.

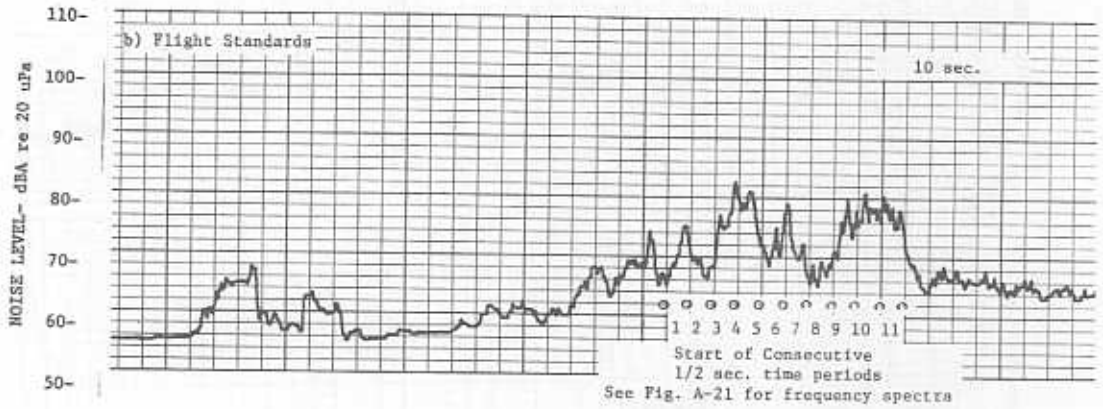


c) No Data at Security Tower

d) No Data at Localizer

Figure A-2. Coincident Time-Histories-Noise Level Data-Event No. 24. Landing of Concorde F-WTSA - Runway 19, Fairbanks Int. Airport, Fairbanks, Alaska. Feb 15, 1974 - 1718 Hours.
a) Microhpone of Roof of Motel Bldg.-Outside-at a Height of 2.5 ft.
b) Microphone on Roof of Flight Stds. Bldg.-Outside-at a Height of 5.5 ft.

a) No Data at Motel



c) No Data at Security Tower

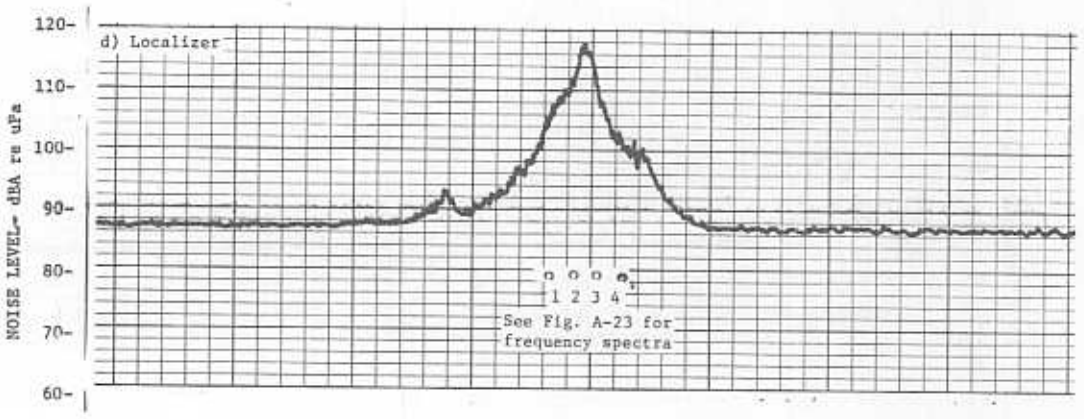
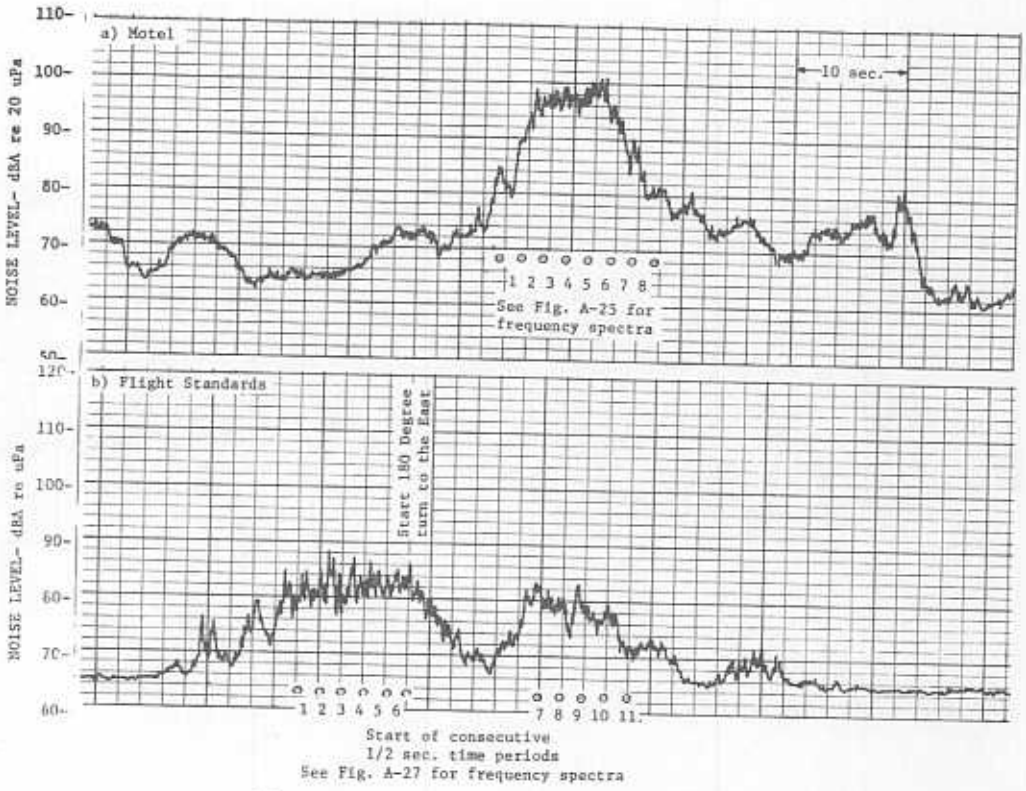


Figure A-3. Coincident Time Histories-Noise Level Data-Event No. 19. Landing of Concorde F-WTSA - Runway 01 - Fairbanks Int. Airport, Fairbanks, Alaska - Feb. 13, 1974 - 1350 Hours.
b) Microphone on Roof of Flight Stds. Bldg.-Outside-at a Height of 5.5 ft.
d) Microphone Outside Localizer Bldg. at a Height of 5.5 ft.



c) No Data at Security Tower

Figure A-4. Coincident Time Histories-Noise Level Data-Event No. 18. Level Flight Over Runway 01, 700 Ft Altitude, Speed 300 mph, (south to north) of the Concorde F-WTSA. Fairbanks Int. Airport, Fairbanks, Alaska.
Feb. 13, 1974 - 1346 Hours.

a) Microphone on Roof of Motel Bldg-Outside-at a Height of 2.5 ft.

b) Microphone on Roof of Flight Std. Bldg.-Outside-at a Height of 5.5 ft.

d) Microphone Outside Localizer Bldg. at a Height of 5.5 ft.

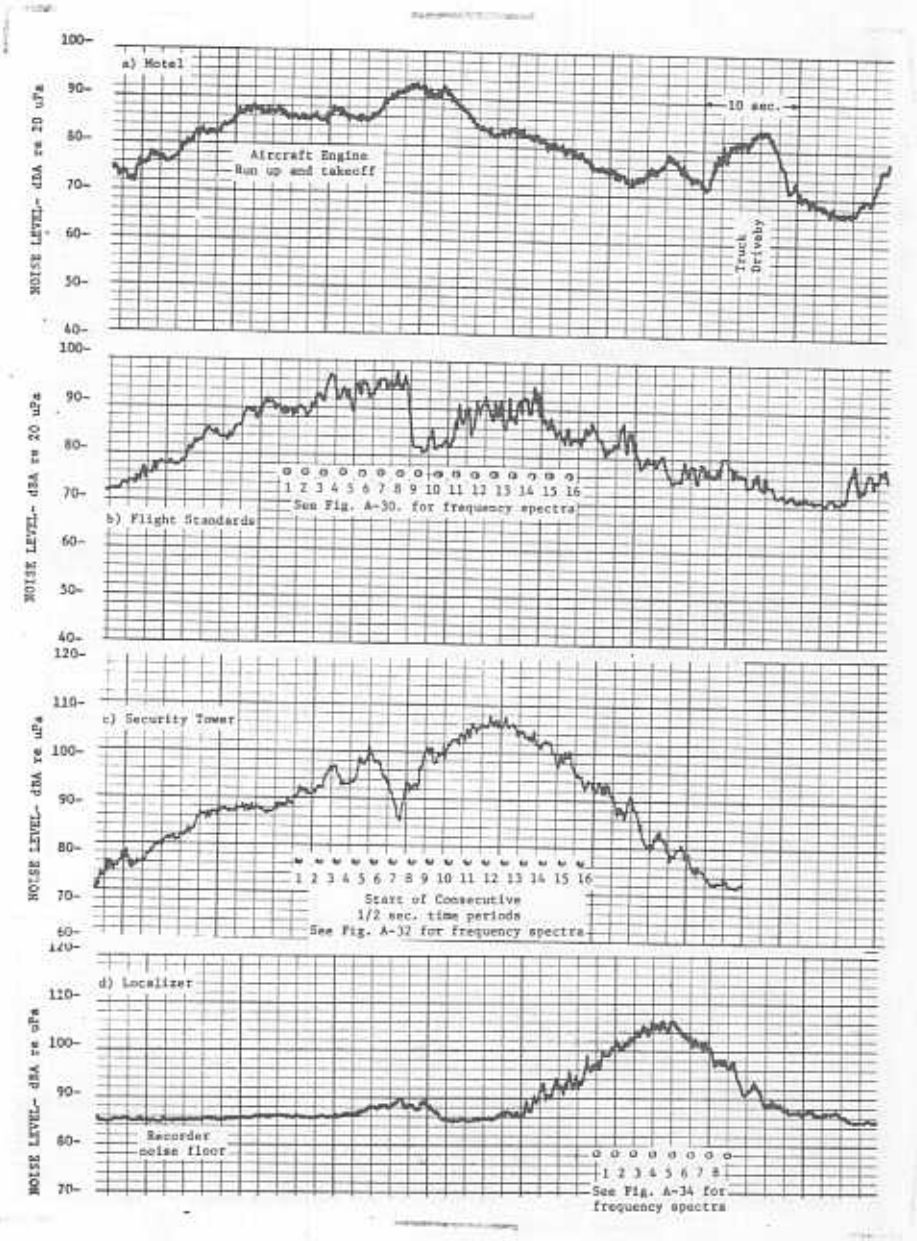


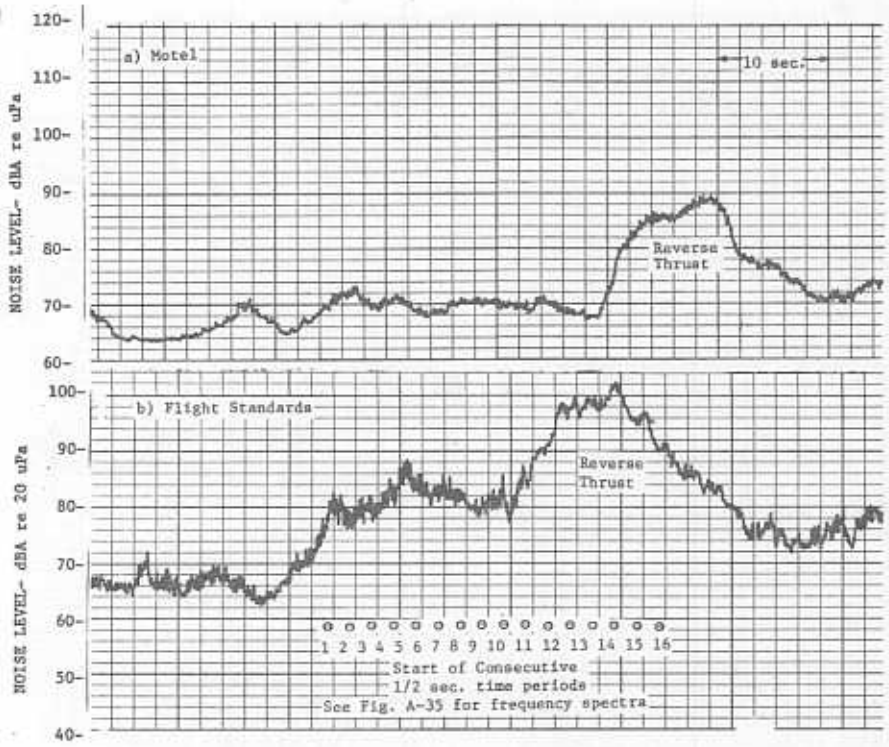
Figure A-5. Coincident Time Histories-Noise Level Data-Event No. 12. Takeoff of Boeing 720 - Runway 19, Fairbanks Int. Airport, Fairbanks, Alaska. Feb 12, 1974 - 1231 Hours.

a) Microphone on Roof of Motel Bldg.-Outside-at a Height of 2.5 ft.

b) Microphone on Roof of Flight Stds. Bldg.-Outside-at-a Height of 5.5 ft.

c) Microphone on Roof of Security Tower Bldg.-Outside-at a Height of 5.5 ft.

d) Microphone Outside Localizer Bldg. at a Height of 5.5 ft.



c) No Data at Security Tower

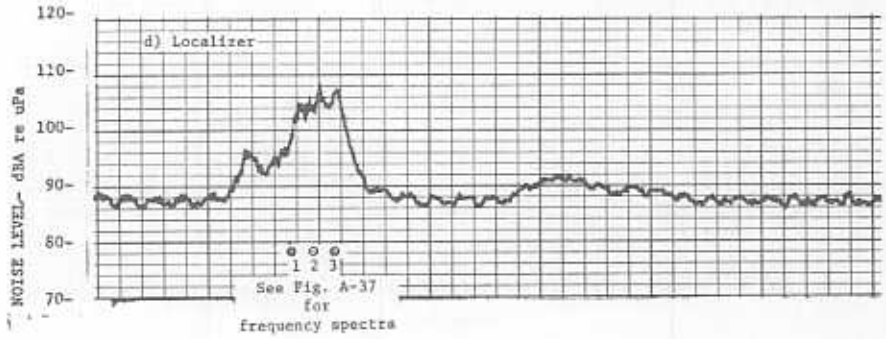
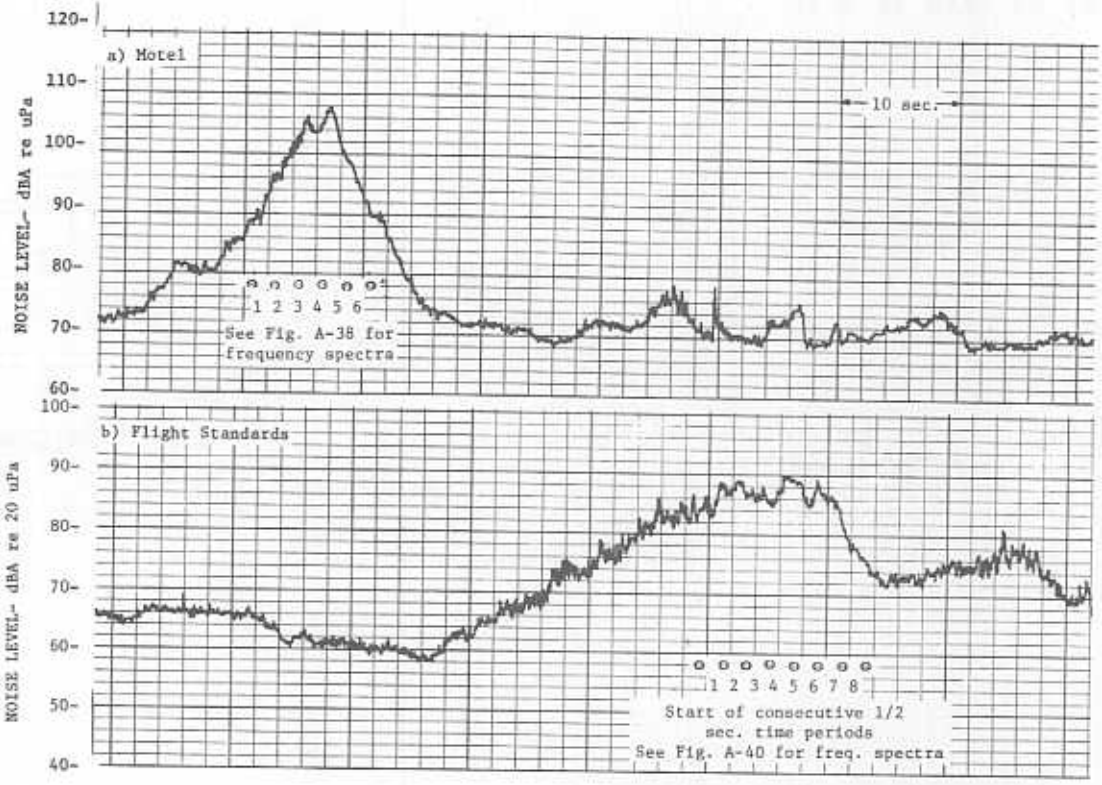


Figure A-6. Coincident Time Histories-Noise Level Data-Event No. 10. Landing of Boeing 720 - Runway 01, Fairbanks Int. Airport, Fairbanks, Alaska. Feb 12, 1974 - 1143 Hours.
a) Microphone on Roof of Motel Bldg.-Outside-at a Height of 2.5 ft.
b) Microphone on Roof of Flight Stds. Bldg.-Outside-at a Height of 5.5 ft.
d) Microphone Outside Localizer Bldg. at a Height of 5.5 ft.

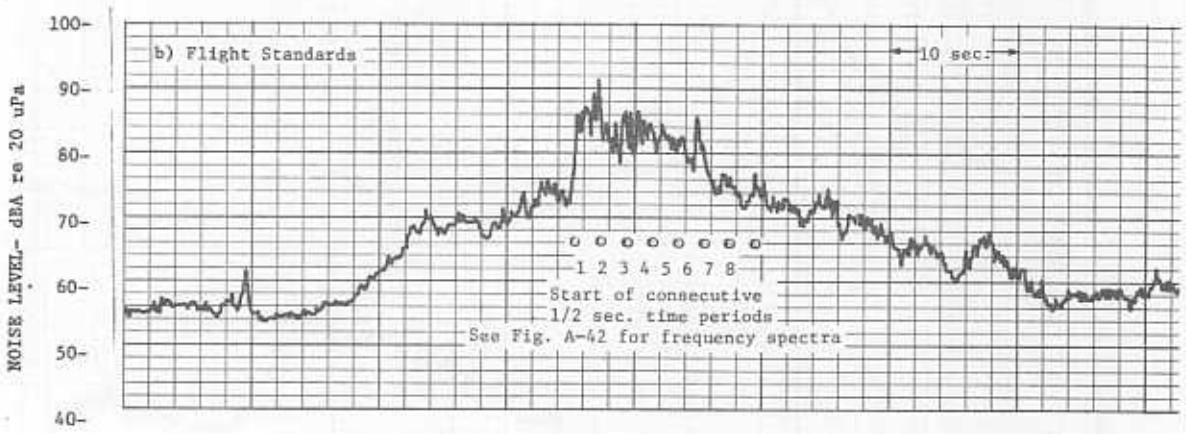


c) No Data at Security Tower

d) No Data at Localizer

Figure A-7. Coincident Time Histories-Noise Level Data-Event No. 4. Landing of Boeing 720 - Runway 19, Fairbanks Int. Airport, Fairbanks, Alaska. Feb. 11, 1974 - 1245 Hours.
a) Microphone on Roof of Motel Bldg.-Outside-at a Height of 2.5 ft.
b) Microhpone on Roof of Flight Stds. Bldg.-Outside-at a Height of 5.5 ft.

a) No Data at Motel



c) No data at Security Tower

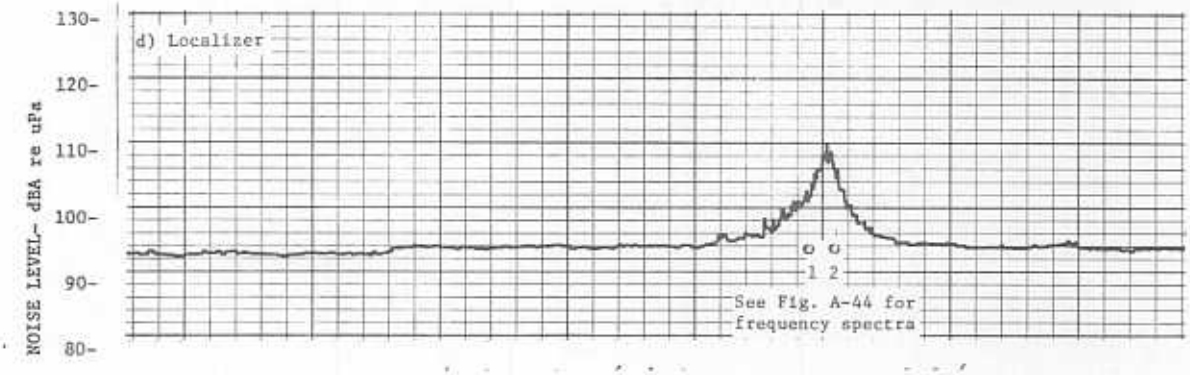


Figure A-8. Coincident Time Histories-Noise Level Data-Event No. 20. Takeoff of Boeing 707 - Runway 19, Fairbanks Int. Airport, Fairbanks, Alaska. Feb. 13, 1974 - 1352 Hours.
b) Microphone on Roof of Flight Stds. Bldg.-Outside- at a Height of 5.5 ft.
d) Microphone Outside Localizer Bldg. at a Height of 5.5 ft.

a) No Data at Motel

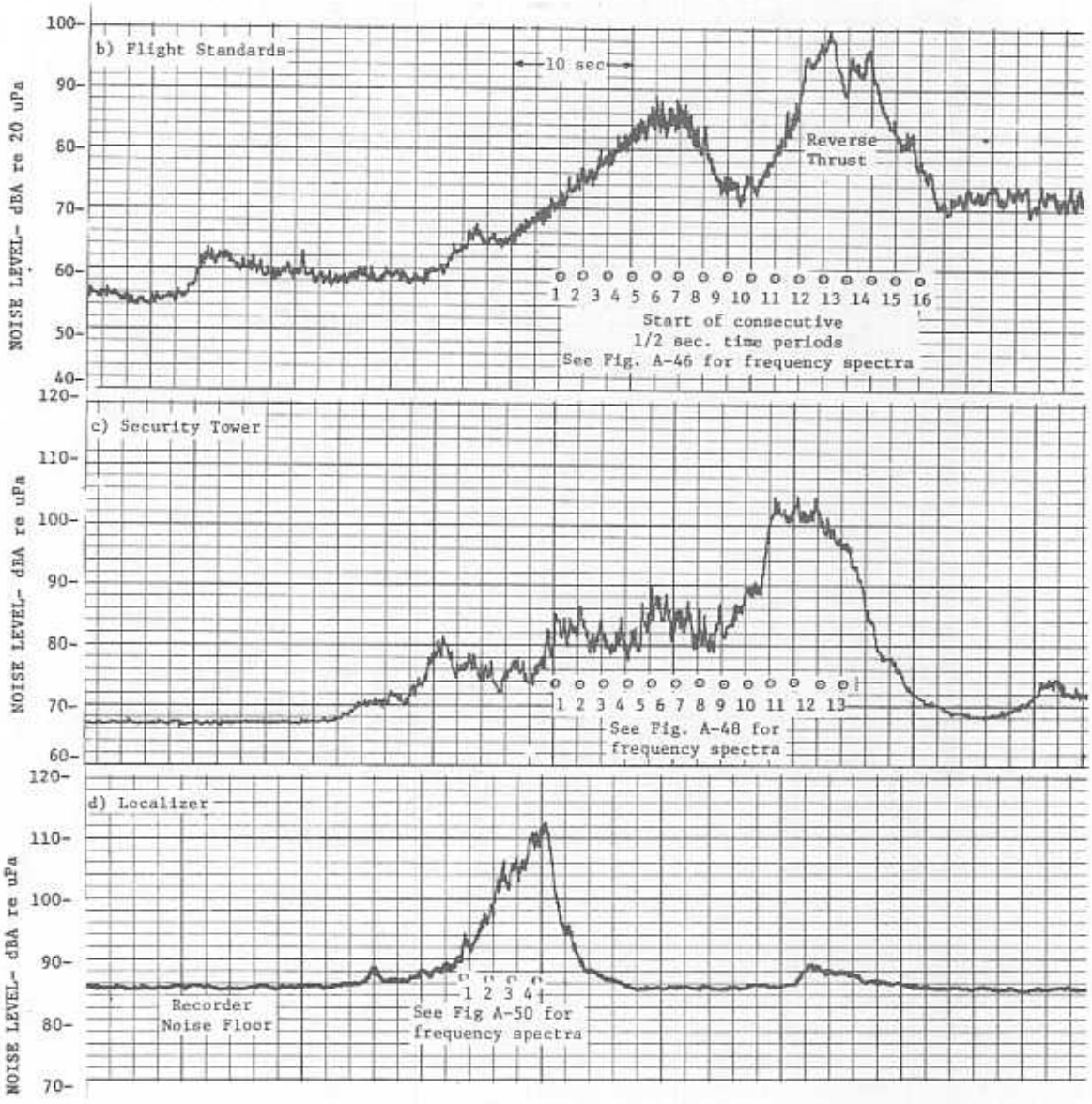
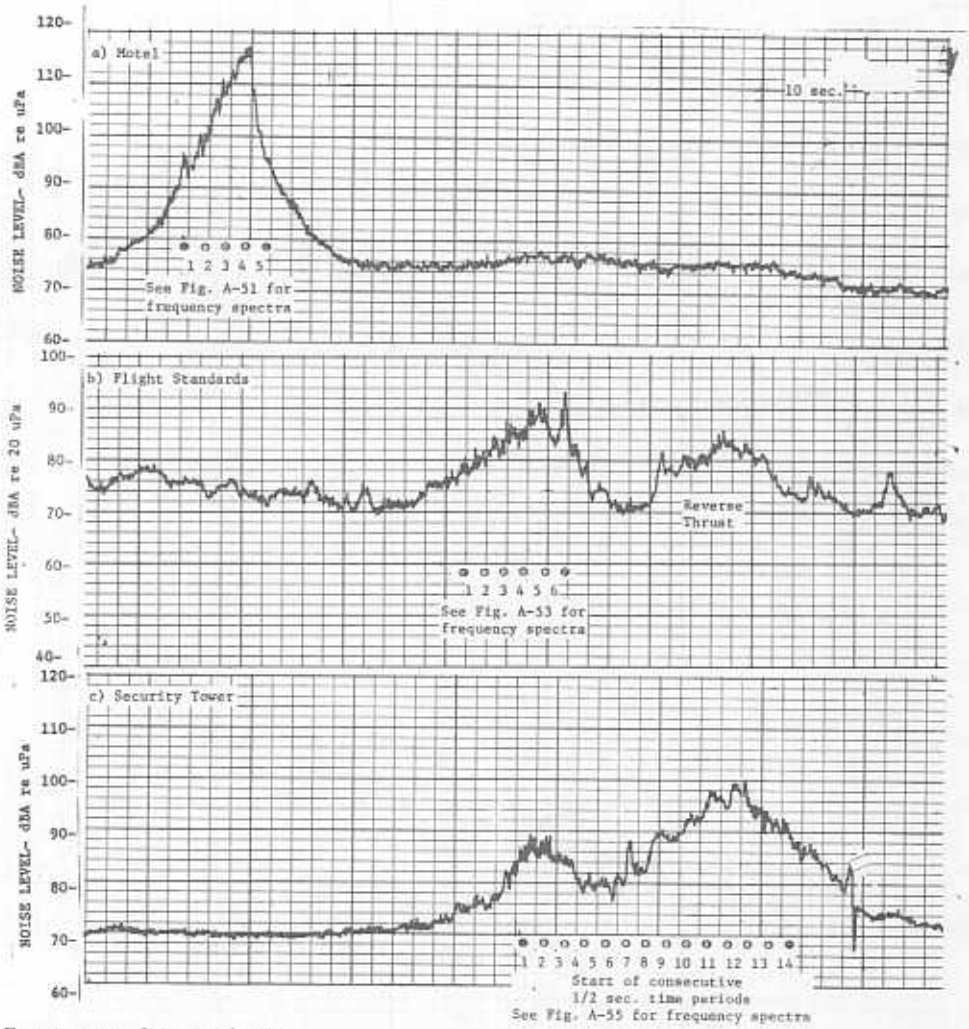


Figure A-9. Coincident Time Histories-Noise Level Data-Event No. 13. Landing of Boeing 707 - Runway 01, Fairbanks Int. Airport, Fairbanks, Alaska. Feb. 12, 1974 - 1259 Hours.
b) Microphone on Roof of Flight Stds. Bldg.-Outside- at a Height of 5.5 ft.
c) Microphone on Roof of Security Tower Bldg.-Outside- at a Height of 5.5 ft.
d) Microphone Outside Localizer Bldg. at a Height of 5.5 ft.



d) No Data at Localizer

Figure A-10. Coincident Time Histories-Noise Level Data-Event No. 5. Landing of Boeing 707 - Runway 19, Fairbanks Int. Airport, Fairbanks, Alaska. Feb. 11, 1974 - 1307 Hours.
a) Microphone on Roof of Motel Bldg.-Outside-at a Height of 2.5 ft.
b) Microphone on Roof of Flight Stds. Bldg.-Outside-at a Height of 5.5 ft.
c) Microphone on Roof of Security Tower Bldg.-Outside-at a Height of 5.5 ft.

1/3 OCTAVE CENTER FREQ. HZ	OUTSIDE NOISE LEVEL - DB RE 20 MICRO PA 1/8 SECOND INTEGRATION PERIODS(1)															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
25 -	62.5.	67.3.	70.0.	61.8.	77.0.	77.8.	75.0.	80.8.	82.5.	89.0.	79.0.	77.3.	74.3.	72.0.	71.0.	67.8.
31.5 -	60.8.	68.5.	61.0.	73.8.	82.0.	85.5.	84.5.	84.5.	91.3.	88.3.	82.3.	74.0.	76.3.	73.5.	75.5.	75.5.
40 -	58.5.	70.5.	64.0.	73.8.	87.0.	85.3.	87.8.	85.5.	93.0.	85.3.	84.5.	81.0.	80.5.	81.0.	79.5.	77.8.
50 -	60.3.	69.0.	66.8.	77.0.	81.5.	81.5.	83.3.	78.5.	86.3.	80.5.	77.0.	72.0.	73.5.	74.0.	72.5.	73.0.
63 -	64.8.	67.8.	66.5.	76.0.	78.3.	80.8.	78.0.	77.3.	84.3.	78.5.	70.3.	69.0.	72.5.	72.8.	77.5.	76.0.
80 -	56.0.	66.5.	68.8.	74.3.	80.3.	80.0.	75.5.	78.5.	88.3.	82.0.	74.8.	73.5.	75.0.	76.8.	79.3.	74.0.
100 -	58.5.	59.8.	70.0.	79.0.	84.5.	81.5.	77.5.	80.8.	91.8.	87.5.	85.8.	80.0.	80.8.	83.8.	83.8.	83.8.
125 -	59.8.	64.0.	74.0.	81.0.	85.0.	83.0.	85.5.	85.0.	92.0.	89.0.	85.8.	82.5.	87.5.	89.8.	89.0.	85.8.
160 -	64.3.	63.8.	76.0.	82.5.	88.3.	88.3.	89.5.	90.5.	96.8.	92.3.	88.3.	81.5.	90.0.	89.0.	89.3.	83.3.
200 -	68.3.	66.8.	78.5.	85.5.	91.5.	91.3.	85.5.	83.8.	95.3.	86.0.	81.8.	72.0.	84.8.	80.8.	78.8.	78.5.
250 -	68.0.	67.5.	82.5.	88.5.	88.8.	87.3.	86.5.	84.5.	97.8.	84.0.	82.5.	73.5.	84.0.	79.8.	81.8.	79.3.
315 -	69.5.	68.3.	83.3.	87.5.	93.5.	91.5.	87.3.	84.8.	98.3.	82.8.	76.8.	74.0.	81.5.	78.3.	76.8.	74.8.
400 -	70.3.	72.8.	86.0.	91.0.	92.0.	89.5.	85.3.	84.5.	98.0.	85.8.	76.5.	78.8.	82.8.	73.8.	78.5.	69.5.
500 -	69.8.	77.3.	89.5.	88.5.	90.8.	89.3.	84.5.	84.3.	94.8.	83.0.	78.8.	78.3.	79.5.	77.0.	71.3.	69.8.
630 -	69.5.	78.5.	88.0.	90.0.	86.8.	87.5.	82.0.	81.8.	92.5.	81.0.	75.0.	75.3.	78.5.	72.0.	69.8.	66.5.
800 -	69.5.	79.8.	87.0.	88.3.	88.3.	86.5.	76.8.	79.3.	91.0.	80.3.	74.0.	74.8.	77.0.	72.3.	71.3.	63.5.
1.0 K -	71.5.	79.8.	88.5.	90.5.	87.5.	80.8.	81.0.	80.5.	91.5.	77.3.	73.5.	73.3.	74.8.	72.0.	69.8.	67.3.
1.25K -	70.8.	80.8.	87.0.	87.5.	86.3.	81.0.	80.8.	77.0.	91.0.	76.5.	72.5.	73.3.	71.3.	70.0.	68.5.	65.3.
1.6 K -	70.8.	81.5.	85.5.	85.5.	84.3.	85.8.	78.0.	77.5.	90.5.	75.8.	71.8.	72.8.	71.0.	69.5.	67.8.	61.5.
2.0 K -	71.5.	81.0.	87.0.	81.0.	83.8.	82.0.	78.5.	78.3.	90.0.	77.0.	72.5.	70.8.	70.3.	67.8.	64.3.	61.8.
2.5 K -	71.3.	80.5.	86.0.	82.5.	82.3.	82.5.	79.0.	75.5.	87.5.	74.8.	72.8.	70.0.	72.5.	65.8.	63.8.	61.8.
3.15K -	70.8.	79.0.	84.3.	83.0.	82.5.	80.5.	75.5.	76.3.	87.0.	74.3.	69.0.	67.8.	69.0.	64.3.	61.0.	59.3.
4.0 K -	68.8.	78.0.	82.3.	80.0.	79.8.	78.8.	72.8.	73.0.	85.0.	71.5.	65.5.	61.5.	65.3.	61.5.	57.8.	56.0.
5.0 K -	67.5.	76.3.	83.3.	79.5.	78.8.	76.8.	69.8.	71.3.	84.8.	70.0.	63.5.	61.5.	63.0.	58.3.	54.5.	52.5.
6.3 K -	64.8.	74.5.	82.8.	77.3.	77.0.	74.3.	67.3.	67.8.	83.0.	66.5.	59.5.	57.8.	57.3.	53.3.	51.5.	50.0.
8.0 K -	61.8.	71.8.	81.3.	75.0.	74.8.	70.5.	63.8.	64.3.	81.5.	60.8.	53.5.	53.3.	52.5.	50.3.	50.0.	50.0.
10.0K -	58.8.	69.5.	80.5.	74.3.	72.3.	68.3.	60.5.	60.5.	82.0.	55.5.	50.8.	51.3.	50.0.	50.0.	50.3.	50.8.
12.5K -	56.3.	63.5.	76.8.	71.8.	68.0.	63.8.	56.5.	56.5.	77.0.	53.5.	52.0.	52.0.	52.0.	51.8.	52.0.	52.3.
16.0K -	55.3.	59.3.	72.3.	68.5.	63.5.	57.5.	55.3.	54.5.	75.8.	53.5.	52.8.	52.5.	53.0.	53.5.	53.3.	52.8.
20.0K -	54.5.	56.0.	63.0.	59.8.	55.8.	55.0.	55.3.	54.8.	66.8.	53.3.	53.0.	53.0.	54.0.	53.5.	53.3.	53.5.
FLAT -	82.3.	90.3.	98.3.	99.0.	101.3.	99.3.	96.5.	96.0.	106.3.	98.3.	94.0.	90.3.	94.8.	93.8.	93.3.	90.0.
A-WEIGHT -	81.3.	89.8.	97.3.	96.8.	98.0.	95.0.	90.5.	89.5.	102.3.	89.3.	84.3.	83.5.	86.3.	83.0.	81.5.	78.0.

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-11. 1/3 Octave Frequency Spectra - Noise Level Data - Event No. 23. Concorde F-WTSA Takeoff Runway 19, Flight Stds. Bldg. - Outside - Fairbanks International Airport Fairbanks, Alaska. Feb. 15, 1974- 0910 Hours. See Fig. A-1b for Noise Level Time Histories. See Fig. A-12 for Frequency Spectra of Inside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ		INSIDE NOISE LEVEL - DB RE .20 MPA 1/2 SECOND INTEGRATION PERIODS(1)															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
25	-	65.5	66.8	65.8	60.0	81.8	82.5	76.3	82.0	89.5	89.3	84.3	80.8	74.0	74.0	74.0	71.0
31.5	-	60.5	66.0	61.8	74.0	84.0	85.8	83.3	86.8	92.8	90.0	84.0	77.5	77.8	76.0	77.5	75.0
40	-	57.8	62.5	58.8	72.0	82.5	81.8	82.8	81.0	90.0	79.0	80.0	76.8	76.0	73.8	75.3	74.5
50	-	57.3	67.0	57.5	69.8	74.5	72.5	73.0	70.8	78.0	72.8	68.3	65.5	65.3	66.0	65.3	68.3
63	-	58.0	72.0	63.5	75.5	78.8	80.5	77.3	76.5	89.5	87.0	82.3	76.0	76.5	76.3	83.0	74.8
80	-	53.5	65.3	63.5	74.0	75.8	75.5	74.5	79.0	90.5	88.0	84.5	82.8	83.5	83.5	85.5	81.8
100	-	54.3	57.3	61.3	71.8	81.8	76.3	75.5	76.5	87.0	81.5	79.3	74.0	75.5	78.3	82.0	78.3
125	-	57.5	60.3	66.5	79.8	85.3	82.8	84.8	87.3	91.8	89.0	85.8	78.0	81.3	81.8	81.8	81.3
160	-	59.5	53.5	69.0	76.5	81.3	83.0	85.5	85.5	89.8	78.0	73.5	69.0	74.3	71.5	70.3	68.0
200	-	58.8	59.8	70.8	75.5	79.5	80.5	80.0	79.3	84.5	68.5	65.5	58.0	67.5	64.3	65.0	62.5
250	-	60.3	60.3	73.0	78.5	80.3	75.3	78.5	75.8	82.0	70.3	72.0	61.5	72.5	66.3	67.5	63.0
315	-	64.8	69.5	80.5	79.3	84.5	79.3	75.5	74.8	87.0	73.3	71.5	66.8	73.5	62.3	63.0	62.5
400	-	66.0	71.3	79.8	84.0	81.0	80.3	71.0	69.8	86.3	72.5	69.5	66.3	70.3	60.0	57.8	55.0
500	-	67.0	73.3	79.3	84.0	78.8	74.8	66.3	69.8	81.5	69.8	68.5	66.3	68.5	59.3	57.0	53.0
630	-	62.0	67.5	74.0	76.0	72.0	65.3	64.5	65.3	74.8	62.5	58.5	59.3	57.8	51.5	53.0	48.3
800	-	60.0	65.8	69.5	71.5	68.5	65.5	62.3	64.8	75.0	61.3	57.3	57.3	54.8	49.0	50.3	48.0
1.0 K	-	63.8	65.5	73.3	68.3	67.8	66.3	61.5	62.5	72.5	59.0	55.5	59.8	54.0	49.3	49.3	47.5
1.25K	-	67.3	66.0	74.0	69.3	69.8	66.8	63.5	63.0	72.5	58.8	57.5	57.5	51.3	49.5	50.3	46.5
1.6 K	-	63.3	68.0	73.8	71.8	68.8	68.8	66.3	64.5	75.5	60.0	59.5	58.0	55.3	53.0	50.0	46.8
2.0 K	-	62.0	66.5	70.8	68.3	68.0	67.8	65.3	65.0	74.0	61.3	60.8	57.3	54.5	54.3	50.5	47.5
2.5 K	-	67.0	68.0	71.3	70.3	71.3	68.0	66.5	62.8	74.5	61.5	59.8	56.5	53.5	52.8	49.8	49.8
3.15K	-	63.3	70.5	72.3	69.5	69.5	66.8	66.8	65.0	75.0	61.0	58.5	56.5	53.3	51.8	48.8	47.3
4.0 K	-	57.0	67.0	69.5	67.0	68.0	66.5	65.8	63.8	74.3	59.0	55.8	52.5	49.5	47.8	45.8	44.3
5.0 K	-	52.5	66.8	71.8	70.5	68.0	65.0	63.8	59.5	70.3	54.8	52.0	49.3	46.0	44.5	42.8	41.0
6.3 K	-	43.5	54.8	60.3	58.8	57.8	54.5	52.8	48.8	60.3	46.0	43.3	40.0	40.0	40.0	40.0	40.0
8.0 K	-	40.0	45.0	50.3	48.8	47.0	44.0	44.5	41.5	50.5	41.3	40.0	40.0	40.0	40.0	40.0	40.0
10.0K	-	40.0	41.0	46.5	44.5	43.0	40.5	41.0	40.0	44.0	40.3	40.0	40.0	40.0	40.0	40.0	40.0
12.5K	-	41.8	42.3	43.0	42.3	42.0	42.0	42.5	41.8	43.3	42.0	41.8	41.3	41.3	41.0	42.0	41.8
16.0K	-	42.0	42.5	42.3	41.8	42.0	42.3	42.0	42.8	42.8	41.8	42.3	41.5	42.0	42.0	42.3	42.3
20.0K	-	42.8	42.3	42.5	42.5	42.0	42.8	42.3	42.5	42.8	42.3	42.5	41.8	41.5	42.0	42.0	42.3
FLAT	-	76.5	82.0	87.3	90.0	93.0	91.5	91.3	93.0	99.3	95.8	90.5	87.3	87.5	86.8	90.3	86.3
A-WEIGHT	-	74.5	78.3	84.5	85.3	83.8	81.8	79.0	79.0	88.3	76.8	74.0	70.5	73.0	69.0	70.5	68.0

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-12. 1/3 Octave Frequency Spectra - Noise Level Data - Event No. 23. Concorde F-WTSA Takeoff - Runway 19, Flight Standards Bldg. - Inside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 15, 1974 - 0910 Hours. See Fig. A-11 for Frequency Spectra of Outside Noise Data for Coincident 1/2 Second Time Periods.

1/3 OCTAVE CENTER FREQ. HZ		OUTSIDE NOISE LEVEL - DB RE 20 μPA 1/2 SECOND INTEGRATION PERIODS(1)							
		1	2	3	4	5	6	7	8
25	-	76.3,	76.3,	82.8,	87.5,	96.0,	88.0,	88.3,	89.3,
31.5	-	73.8,	76.5,	76.5,	93.3,	94.0,	94.8,	93.5,	90.3,
40	-	75.8,	77.3,	83.0,	93.5,	93.5,	92.0,	89.3,	91.3,
50	-	81.0,	83.5,	87.0,	92.5,	91.0,	83.5,	86.0,	85.0,
63	-	94.0,	92.8,	89.8,	100.0,	99.3,	87.5,	86.5,	86.5,
80	-	72.0,	85.0,	95.0,	102.5,	104.3,	95.8,	90.3,	92.5,
100	-	66.5,	85.8,	98.0,	105.3,	99.3,	93.0,	91.0,	89.8,
125	-	67.5,	89.0,	94.5,	103.8,	97.0,	89.8,	82.5,	83.3,
160	-	71.8,	92.5,	94.3,	107.5,	102.0,	93.3,	86.8,	86.8,
200	-	80.5,	98.3,	97.5,	102.5,	96.8,	92.5,	90.8,	90.8,
250	-	87.3,	103.5,	96.8,	105.0,	96.8,	88.5,	86.8,	88.5,
315	-	90.3,	104.3,	99.5,	107.3,	94.3,	88.0,	85.8,	89.5,
400	-	90.8,	98.3,	100.0,	104.5,	93.8,	89.8,	84.3,	86.0,
500	-	91.0,	97.5,	102.3,	104.5,	92.5,	88.5,	84.3,	86.8,
630	-	90.5,	96.3,	103.5,	103.3,	90.5,	88.3,	83.5,	84.3,
800	-	90.5,	98.3,	103.5,	103.0,	91.5,	87.0,	84.5,	87.5,
1.0 K	-	90.5,	96.3,	103.5,	103.8,	91.0,	87.8,	83.5,	86.5,
1.25K	-	87.3,	91.3,	99.5,	100.0,	88.5,	84.0,	79.8,	83.8,
1.6 K	-	80.8,	85.5,	94.5,	94.3,	83.5,	78.0,	73.8,	78.5,
2.0 K	-	76.3,	83.0,	88.5,	88.5,	74.3,	72.3,	67.0,	72.3,
2.5 K	-	79.3,	86.8,	89.8,	85.3,	76.0,	73.8,	70.5,	74.3,
3.15K	-	82.5,	86.3,	91.5,	93.8,	80.0,	72.8,	69.0,	71.8,
4.0 K	-	77.3,	81.3,	86.5,	91.5,	80.5,	73.8,	68.3,	69.0,
5.0 K	-	76.5,	83.8,	90.8,	85.0,	76.8,	74.3,	71.0,	71.8,
6.3 K	-	70.5,	81.0,	87.8,	84.5,	73.3,	69.3,	64.0,	64.5,
8.0 K	-	69.8,	81.8,	83.8,	83.3,	72.5,	68.8,	64.0,	64.3,
10.0K	-	66.5,	75.8,	81.5,	80.0,	70.0,	63.8,	62.0,	61.8,
12.5K	-	64.8,	73.3,	80.8,	79.0,	66.8,	62.0,	61.5,	61.0,
16.0K	-	61.8,	65.3,	78.0,	75.0,	62.5,	61.5,	62.0,	61.0,
20.0K	-	60.8,	61.8,	68.3,	65.8,	61.3,	61.3,	61.3,	60.8,
FLAT	-	99.8,	109.3,	111.3,	115.5,	109.0,	102.8,	100.0,	100.3,
A-WEIGHT	-	96.5,	104.5,	109.8,	110.3,	99.3,	94.5,	91.0,	93.3,

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-13. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 23. Concorde F-WTSA Takeoff - Runway 19, Security Tower Bldg. - Outside Fairbanks International Airport Fairbanks, Alaska. Feb. 15, 1974 - 0910 Hours. See Fig. A-1c for Frequency Spectra of Inside Noise Data for Coincident 1/2 Second Time Periods. See Fig. A-14 for Frequency Spectra of Inside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ		INSIDE NOISE LEVEL - DB RE 20μPA 1/2 SECOND INTEGRATION PERIODS(1)							
		1	2	3	4	5	6	7	8
25	-	67.3,	67.8,	75.3,	84.5,	87.5,	83.5,	87.0,	87.3,
31.5	-	65.5,	66.0,	63.8,	78.5,	85.0,	85.0,	83.0,	83.5,
40	-	60.3,	55.3,	67.3,	68.5,	76.0,	77.0,	74.5,	77.8,
50	-	56.8,	60.3,	69.0,	75.0,	71.5,	65.3,	67.8,	67.5,
63	-	74.0,	65.5,	73.3,	82.5,	85.3,	74.8,	75.5,	75.8,
80	-	66.3,	73.8,	85.0,	88.8,	90.8,	80.0,	77.0,	79.0,
100	-	54.3,	70.5,	90.8,	86.3,	82.0,	72.3,	72.3,	71.8,
125	-	51.0,	71.8,	79.0,	78.0,	81.3,	68.8,	63.0,	63.5,
160	-	47.8,	72.3,	74.3,	86.8,	80.3,	74.0,	69.0,	68.3,
200	-	56.5,	79.5,	77.0,	83.3,	72.0,	71.8,	70.0,	70.5,
250	-	63.8,	78.5,	77.0,	88.8,	79.0,	73.3,	71.8,	73.0,
315	-	66.3,	77.5,	74.0,	86.5,	74.5,	73.0,	69.3,	72.0,
400	-	69.8,	77.8,	79.5,	87.5,	72.3,	74.5,	72.0,	72.8,
500	-	68.5,	75.3,	79.8,	85.3,	72.5,	70.3,	66.0,	69.8,
630	-	68.8,	73.0,	76.0,	78.5,	68.8,	67.3,	67.8,	66.3,
800	-	68.8,	73.3,	76.0,	78.5,	70.5,	68.8,	68.3,	70.5,
1.0 K	-	68.5,	71.0,	75.8,	78.5,	70.3,	68.8,	66.5,	69.0,
1.25K	-	66.5,	70.3,	75.8,	76.5,	67.8,	65.8,	64.0,	66.5,
1.6 K	-	67.0,	71.3,	74.5,	75.0,	66.8,	64.0,	62.0,	63.8,
2.0 K	-	66.5,	69.8,	74.8,	73.3,	66.3,	64.0,	62.8,	64.0,
2.5 K	-	63.8,	69.0,	72.5,	73.3,	66.5,	62.5,	62.5,	66.3,
3.15K	-	61.8,	67.0,	71.0,	71.0,	64.3,	62.3,	62.0,	62.0,
4.0 K	-	59.8,	65.8,	69.0,	68.8,	61.8,	59.0,	57.3,	59.0,
5.0 K	-	59.5,	65.5,	68.5,	69.0,	60.3,	56.8,	55.3,	57.3,
6.3 K	-	56.8,	62.5,	66.8,	67.5,	59.5,	55.0,	52.5,	54.8,
8.0 K	-	55.8,	61.8,	66.0,	66.5,	57.3,	52.3,	49.8,	52.0,
10.0K	-	54.8,	61.3,	64.8,	65.0,	56.3,	49.3,	46.8,	48.5,
12.5K	-	52.0,	59.5,	62.5,	62.5,	52.5,	46.0,	44.3,	46.3,
16.0K	-	49.8,	56.3,	59.3,	59.8,	48.8,	44.0,	43.0,	44.0,
20.0K	-	45.3,	50.5,	53.0,	54.0,	44.3,	43.3,	43.3,	43.3,
FLAT	-	79.8,	86.8,	92.8,	96.5,	96.0,	90.8,	89.0,	91.8,
A-WEIGHT	-	76.0,	82.0,	85.8,	89.5,	80.0,	76.5,	75.8,	77.3,

(1) Integration periods are first 1/2 second at consecutive 2 second intervals.

Figure A-14. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 23. Concorde F-WTSA Takeoff - Runway 19, Security Tower - Inside, Fairbanks International Airport Fairbanks, Alaska. Feb. 15, 1974 - 0910 Hours. See Figure A-13 for Frequency Spectra of Outside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ		OUTSIDE NOISE LEVEL - DB RE 20 μPA 1/2 SECOND INTEGRATION PERIODS(1)							
		1	2	3	4	5	6	7	8
25	-	78.0,	87.8,	86.5,	95.8,	95.8,	95.0,		
31.5	-	78.3,	89.5,	90.3,	102.0,	101.0,	98.5,		
40	-	73.0,	87.8,	91.8,	101.3,	101.5,	99.8,		
50	-	76.0,	83.0,	91.8,	100.5,	100.5,	93.8,		
63	-	78.0,	84.5,	94.0,	99.3,	93.5,	93.8,		
80	-	82.5,	89.8,	99.8,	108.3,	99.5,	89.8,		
100	-	85.0,	91.8,	99.8,	115.5,	104.0,	97.8,		
125	-	87.8,	96.0,	103.3,	116.5,	106.8,	102.8,		
160	-	90.5,	95.0,	100.8,	110.3,	108.5,	104.0,		
200	-	92.8,	96.8,	105.3,	113.3,	104.0,	99.5,		
250	-	98.8,	101.8,	102.0,	113.8,	107.5,	96.5,		
315	-	97.0,	105.8,	106.8,	112.3,	105.8,	98.8,		
400	-	92.8,	106.0,	107.3,	110.8,	105.0,	97.3,		
500	-	96.0,	103.8,	108.0,	110.3,	105.3,	97.3,		
630	-	94.5,	104.0,	110.3,	108.5,	102.5,	95.5,		
800	-	92.0,	102.5,	108.0,	109.3,	100.5,	94.8,		
1.0 K	-	93.5,	102.3,	108.3,	107.0,	101.3,	94.5,		
1.25K	-	90.5,	101.5,	107.0,	105.8,	100.3,	94.8,		
1.6 K	-	90.8,	100.8,	106.8,	105.5,	98.8,	93.0,		
2.0 K	-	91.0,	101.0,	106.8,	104.8,	98.5,	93.0,		
2.5 K	-	91.0,	101.5,	107.3,	105.8,	98.8,	92.0,		
3.15K	-	91.5,	102.3,	107.5,	105.5,	99.8,	93.3,		
4.0 K	-	90.3,	101.0,	106.5,	104.3,	98.5,	90.5,		
5.0 K	-	84.5,	94.3,	101.0,	98.3,	92.5,	85.5,		
6.3 K	-	80.8,	83.5,	89.8,	86.8,	83.3,	80.8,		
8.0 K	-	80.0,	80.0,	80.5,	81.0,	80.0,	80.5,		
10.0K	-	82.0,	81.8,	83.3,	83.5,	83.0,	82.8,		
12.5K	-	80.0,	80.0,	83.0,	81.3,	80.0,	79.5,		
16.0K	-	80.0,	79.5,	82.5,	80.8,	80.0,	80.0,		
20.0K	-	79.0,	79.3,	79.8,	79.5,	79.8,	79.3,		
FLAT	-	106.3,	114.5,	119.0,	123.8,	116.8,	111.0,		
A-WEIGHT	-	102.3,	113.0,	117.8,	119.0,	111.3,	105.5,		

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-15. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 23. Concorde F-WTSA Takeoff - Runway 19, Localizer Bldgs. - Outside, Fairbanks International Airport, Fairbanks, Alaska. Feb 15, 1974 - 0910 Hours. See Fig. A-1d for Noise Level Time Histories. See Fig. A-16 for Frequency Spectra of Inside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ		INSIDE NOISE LEVEL - DB RE 20μPA 1/2 SECOND INTEGRATION PERIODS(1)							
		1	2	3	4	5	6	7	8
25	-	74.8,	82.8,	78.0,	78.0,	78.5,	82.3,		
31.5	-	66.5,	73.0,	81.5,	79.5,	87.0,	84.8,		
40	-	56.5,	76.0,	76.5,	78.0,	83.3,	79.0,		
50	-	56.0,	70.3,	71.3,	79.8,	79.0,	71.5,		
63	-	63.8,	70.3,	85.0,	90.5,	82.3,	78.5,		
80	-	71.8,	75.8,	83.5,	86.8,	85.5,	81.5,		
100	-	74.8,	78.5,	79.8,	99.0,	83.3,	86.3,		
125	-	72.8,	83.8,	82.8,	103.5,	89.5,	81.5,		
160	-	68.5,	75.5,	82.0,	92.5,	88.5,	76.5,		
200	-	73.0,	75.3,	82.8,	92.0,	84.0,	76.3,		
250	-	69.8,	77.5,	76.8,	88.3,	79.8,	70.8,		
315	-	72.0,	78.0,	78.0,	85.0,	77.3,	72.3,		
400	-	68.5,	81.5,	78.5,	82.3,	74.5,	71.8,		
500	-	67.3,	79.0,	82.5,	84.0,	78.8,	71.5,		
630	-	65.5,	75.0,	79.5,	78.8,	73.3,	66.5,		
800	-	66.5,	74.3,	80.5,	75.5,	70.8,	64.3,		
1.0 K	-	65.8,	74.0,	77.8,	73.5,	67.3,	62.5,		
1.25K	-	64.8,	70.8,	76.0,	69.5,	69.3,	61.3,		
1.6 K	-	65.8,	72.0,	76.0,	67.5,	68.8,	60.3,		
2.0 K	-	63.8,	72.3,	72.3,	66.3,	73.0,	60.5,		
2.5 K	-	60.8,	66.3,	72.3,	63.8,	62.3,	58.8,		
3.15K	-	60.8,	64.3,	72.0,	64.0,	62.5,	60.8,		
4.0 K	-	61.0,	63.5,	69.5,	63.0,	62.8,	60.0,		
5.0 K	-	61.5,	63.8,	69.0,	65.0,	62.0,	60.8,		
6.3 K	-	60.8,	62.0,	65.3,	63.0,	61.3,	60.8,		
8.0 K	-	60.0,	60.3,	61.5,	60.8,	60.5,	60.0,		
10.0K	-	62.3,	62.0,	62.8,	63.8,	62.8,	62.5,		
12.5K	-	59.8,	59.5,	60.0,	60.5,	59.5,	59.8,		
16.0K	-	60.0,	59.5,	59.5,	60.0,	59.3,	59.3,		
20.0K	-	59.5,	58.8,	59.0,	59.0,	58.5,	59.3,		
FLAT	-	86.5,	93.0,	94.3,	105.8,	96.3,	92.0,		
A-WEIGHT	-	77.8,	84.5,	87.0,	91.0,	84.0,	78.5,		

(1) Integration periods are first 1/2 second of consecutive 2 second intervals

Figure A-16. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 23. Concorde F-WTSA Takeoff - Runway 19, Localizer Bldg. - Inside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 15, 1974 - 0910 Hours. See Fig. A-15 for Frequency Spectra of Outside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	OUTSIDE NOISE LEVEL - DB RE 20 μPA 1/2 SECOND INTEGRATION PERIODS(1)							
	1	2	3	4	5	6	7	8
25 -	63.5,	68.3,	72.8,	81.3,	78.0,	80.0,	70.0,	68.3,
31.5 -	67.8,	72.0,	76.8,	88.5,	87.8,	78.5,	71.3,	69.0,
40 -	68.5,	72.8,	84.5,	97.8,	90.3,	83.0,	73.5,	70.5,
50 -	71.0,	79.0,	87.3,	92.3,	96.0,	80.5,	75.8,	76.3,
63 -	75.8,	77.0,	88.5,	96.3,	100.5,	85.0,	75.0,	77.8,
80 -	77.8,	82.3,	90.3,	105.3,	100.3,	87.3,	79.0,	75.5,
100 -	78.0,	84.0,	95.5,	104.5,	101.5,	92.8,	82.5,	76.3,
125 -	86.0,	83.8,	93.0,	106.8,	96.5,	92.3,	84.8,	85.0,
160 -	86.3,	85.3,	94.8,	106.8,	98.0,	85.5,	83.3,	85.5,
200 -	82.0,	89.5,	94.5,	108.3,	98.3,	85.5,	81.3,	83.8,
250 -	83.3,	89.8,	96.8,	108.0,	100.0,	88.5,	86.3,	83.3,
315 -	87.0,	90.0,	99.3,	107.5,	96.5,	88.5,	85.5,	84.3,
400 -	93.3,	95.3,	102.0,	108.0,	95.5,	87.3,	86.8,	88.3,
500 -	92.8,	96.5,	107.0,	107.0,	93.0,	87.5,	85.5,	86.3,
630 -	88.5,	94.8,	106.5,	107.0,	92.3,	86.8,	84.5,	81.5,
800 -	87.3,	91.0,	103.5,	105.8,	93.0,	85.8,	82.0,	80.5,
1.0 K -	86.0,	87.5,	102.3,	105.8,	91.8,	85.5,	80.8,	80.0,
1.25K -	86.5,	86.0,	101.0,	104.0,	90.5,	82.5,	78.0,	77.5,
1.6 K -	91.3,	88.5,	101.3,	104.0,	90.3,	81.0,	76.8,	76.0,
2.0 K -	90.8,	88.0,	100.0,	103.5,	89.8,	80.5,	75.5,	74.8,
2.5 K -	88.5,	85.0,	98.3,	103.0,	88.3,	79.3,	74.3,	72.3,
3.15K -	89.3,	87.3,	98.5,	102.3,	86.8,	77.8,	72.3,	70.5,
4.0 K -	90.5,	88.0,	98.0,	100.5,	84.8,	76.5,	72.0,	68.5,
5.0 K -	89.3,	87.8,	99.3,	100.8,	84.8,	76.3,	70.8,	67.5,
6.3 K -	88.3,	86.3,	98.3,	100.5,	84.0,	75.3,	69.3,	65.3,
8.0 K -	84.3,	83.5,	96.5,	99.8,	83.0,	73.8,	67.5,	63.5,
10.0K -	81.0,	81.5,	96.3,	99.8,	82.0,	72.0,	66.5,	61.8,
12.5K -	74.0,	77.3,	94.0,	98.5,	78.3,	67.3,	62.8,	62.3,
16.0K -	66.3,	70.8,	88.8,	94.8,	72.5,	63.0,	61.8,	61.8,
20.0K -	62.3,	63.5,	80.5,	86.5,	65.0,	61.8,	62.3,	62.3,
FLAT -	101.3,	103.0,	113.8,	119.0,	109.3,	99.8,	95.0,	94.5,
A-WEIGHT -	100.3,	100.0,	112.5,	115.5,	101.5,	93.8,	90.8,	90.3,

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-17. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 24. Concorde F-WTSA Landing - Runway 19, Motel Bldg. - Outside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 15, 1974 - 1718 Hours. See Fig. A-2a for Noise Level Time Histories. See Fig. A-18 for Frequency Spectra of Inside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	INSIDE NOISE LEVEL - DB RE 20 μPA 1/2 SECOND INTEGRATION PERIODS(1)							
	1	2	3	4	5	6	7	8
25 -	58.3,	35.0,	63.5,	65.0,	79.5,	69.3,	66.3,	60.5,
31.5 -	58.5,	58.8,	65.0,	76.3,	83.0,	73.0,	69.0,	60.5,
40 -	50.0,	52.5,	58.8,	72.0,	67.5,	59.8,	53.8,	50.5,
50 -	52.0,	58.0,	59.0,	72.8,	81.3,	71.5,	58.8,	57.5,
63 -	55.5,	61.8,	60.5,	78.3,	86.0,	75.5,	58.8,	58.5,
80 -	54.0,	63.3,	61.0,	72.3,	83.5,	70.0,	60.0,	57.3,
100 -	56.3,	65.8,	65.3,	76.0,	83.3,	68.3,	58.8,	52.5,
125 -	63.5,	69.5,	66.8,	74.3,	78.5,	69.0,	64.5,	58.5,
160 -	60.8,	68.5,	69.8,	77.3,	72.8,	62.3,	55.8,	53.3,
200 -	59.5,	67.0,	68.8,	76.5,	73.3,	56.0,	49.5,	52.0,
250 -	51.8,	61.5,	68.3,	76.0,	72.8,	57.0,	51.8,	50.0,
315 -	53.0,	64.0,	69.0,	78.0,	70.0,	54.8,	51.5,	50.3,
400 -	64.3,	74.3,	77.0,	83.5,	70.3,	56.5,	51.8,	49.8,
500 -	60.3,	69.5,	75.0,	81.3,	67.8,	54.3,	51.8,	48.3,
630 -	55.5,	67.0,	69.0,	75.0,	63.8,	49.8,	46.5,	43.5,
800 -	47.8,	60.8,	64.5,	74.8,	60.5,	44.8,	41.8,	39.5,
1.0 K -	44.5,	56.8,	63.5,	72.5,	56.0,	42.3,	40.0,	37.8,
1.25K -	43.0,	55.3,	63.3,	68.5,	55.3,	40.0,	37.8,	35.0,
1.6 K -	49.3,	58.0,	66.8,	67.5,	55.5,	40.0,	36.8,	35.5,
2.0 K -	50.5,	58.3,	65.5,	68.3,	52.0,	38.8,	35.8,	34.3,
2.5 K -	46.5,	56.8,	62.0,	68.8,	47.5,	36.3,	34.0,	31.5,
3.15K -	47.0,	58.0,	61.8,	65.0,	46.0,	35.3,	31.5,	30.0,
4.0 K -	47.0,	58.0,	59.5,	62.3,	44.8,	34.0,	30.5,	30.0,
5.0 K -	46.5,	56.8,	58.5,	61.8,	42.5,	33.3,	30.0,	30.0,
6.3 K -	46.5,	54.8,	56.0,	61.3,	40.3,	32.8,	31.0,	30.0,
8.0 K -	42.0,	51.8,	56.8,	56.8,	37.5,	32.3,	30.0,	30.0,
10.0K -	37.8,	47.8,	53.0,	54.0,	35.8,	31.0,	30.0,	30.3,
12.5K -	35.3,	43.5,	46.8,	47.3,	34.0,	31.3,	31.8,	32.0,
16.0K -	32.3,	35.3,	41.0,	42.3,	33.0,	31.8,	31.8,	32.0,
20.0K -	31.8,	32.3,	34.5,	36.3,	32.3,	32.5,	32.3,	32.0,
FLAT -	70.3,	78.5,	81.8,	89.0,	90.5,	79.5,	72.3,	67.0,
A-WEIGHT -	64.3,	73.5,	78.0,	83.8,	73.5,	60.3,	55.0,	52.5,

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-18. 1/2 Octave Frequency Spectra-Noise Level Data-Event No. 24. Concorde F-WTSA Landing - Runway 19, Motel Bldg. - Inside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 15, 1974 - 1718 Hours. See Fig. A-17 for Frequency Spectra of Outside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	OUTSIDE NOISE LEVEL - DB RE 20 μPA 1/2 SECOND INTEGRATION PERIODS(1)							
	1	2	3	4	5	6	7	8
25 -	42.0,	42.0,	45.3,	45.0,	50.5,	49.0,	48.5,	45.3,
31.5 -	47.0,	47.0,	48.3,	50.3,	51.0,	52.0,	50.5,	52.0,
40 -	51.5,	51.0,	55.5,	52.0,	54.3,	54.5,	56.0,	54.5,
50 -	50.0,	52.8,	53.0,	55.8,	51.8,	50.5,	50.8,	51.3,
63 -	54.8,	51.0,	53.0,	54.8,	52.5,	55.3,	53.0,	58.3,
80 -	52.8,	51.8,	53.0,	55.5,	53.5,	54.5,	55.5,	58.5,
100 -	63.5,	60.8,	62.0,	64.5,	63.3,	65.8,	64.8,	65.0,
125 -	53.0,	53.3,	52.5,	52.5,	52.3,	60.8,	62.3,	70.3,
160 -	48.8,	49.0,	48.3,	54.3,	56.0,	66.5,	67.8,	75.5,
200 -	52.3,	52.3,	50.0,	51.3,	61.0,	68.5,	72.5,	79.0,
250 -	55.5,	52.5,	53.8,	52.0,	63.0,	74.0,	75.5,	83.5,
315 -	55.0,	52.8,	52.3,	53.0,	63.5,	73.8,	78.3,	87.8,
400 -	55.0,	52.8,	52.8,	53.8,	65.8,	75.3,	83.5,	89.8,
500 -	54.3,	49.8,	48.5,	52.5,	67.3,	77.8,	85.3,	88.8,
630 -	53.5,	49.5,	48.3,	50.0,	65.3,	73.5,	83.0,	83.0,
800 -	53.5,	50.5,	48.0,	51.8,	66.0,	74.0,	77.3,	83.8,
1.0 K -	52.8,	50.0,	48.8,	53.0,	66.3,	72.8,	75.3,	81.8,
1.25K -	52.0,	51.8,	49.8,	56.8,	65.3,	71.8,	73.3,	79.8,
1.6 K -	56.8,	55.0,	49.3,	56.5,	63.8,	70.5,	72.8,	77.5,
2.0 K -	55.0,	53.3,	53.5,	54.5,	62.8,	70.0,	73.5,	76.3,
2.5 K -	53.3,	54.5,	56.0,	54.5,	63.3,	67.8,	71.8,	74.3,
3.15K -	55.0,	58.5,	62.3,	60.8,	66.3,	68.5,	70.8,	74.0,
4.0 K -	54.5,	56.0,	59.3,	58.3,	64.3,	67.3,	67.5,	72.3,
5.0 K -	52.8,	55.8,	56.0,	56.0,	60.5,	67.3,	67.5,	72.0,
6.3 K -	48.3,	51.0,	51.3,	51.5,	58.0,	63.5,	64.5,	69.3,
8.0 K -	43.8,	46.5,	46.8,	47.5,	53.0,	59.5,	60.0,	65.0,
10.0K -	42.8,	42.5,	44.5,	44.8,	48.3,	54.0,	56.0,	60.3,
12.5K -	44.0,	43.8,	44.0,	43.8,	43.3,	46.8,	47.8,	53.0,
16.0K -	44.3,	44.5,	44.8,	44.8,	44.5,	44.8,	44.8,	46.0,
20.0K -	44.5,	45.3,	44.8,	45.0,	44.5,	45.0,	44.5,	45.0,
FLAT -	68.5,	67.8,	68.5,	69.8,	76.3,	84.0,	89.5,	95.0,
A-WEIGHT -	64.8,	65.5,	66.8,	66.8,	74.8,	82.3,	87.5,	91.5,

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-19. 1/3 Octave Frequency Spectra-Noise Level Data- Event No. 24. Concorde F-WTSA Landing - Runway 19, Flight Standards Bldg. - Outside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 15, 1974 - 1718 Hours. See Fig. A-2b for Noise Level Time Histories. See Fig. A-20 for Frequency Spectra of Inside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	INSIDE NOISE LEVEL - DB RE 20 μPA 1/2 SECOND INTEGRATION PERIODS(1)							
	1	2	3	4	5	6	7	8
25 -	51.3,	48.8,	50.8,	50.3,	49.0,	49.0,	49.3,	47.5,
31.5 -	45.3,	43.3,	45.8,	42.8,	43.5,	40.3,	44.0,	44.5,
40 -	41.8,	35.5,	42.8,	40.5,	37.5,	39.5,	41.0,	38.8,
50 -	43.3,	47.5,	47.8,	47.0,	47.8,	45.0,	46.5,	47.0,
63 -	50.0,	48.8,	49.5,	49.8,	49.0,	50.8,	47.5,	51.5,
80 -	64.3,	59.5,	62.0,	60.0,	61.3,	60.8,	59.8,	61.8,
100 -	65.8,	60.8,	65.3,	62.8,	65.5,	63.3,	63.8,	62.3,
125 -	56.8,	52.5,	54.3,	54.8,	54.0,	55.0,	56.8,	56.3,
160 -	56.3,	54.8,	54.5,	55.3,	56.3,	55.5,	56.5,	57.8,
200 -	46.0,	45.5,	46.8,	46.3,	47.0,	46.8,	54.0,	59.8,
250 -	49.3,	50.3,	46.3,	51.0,	51.3,	51.8,	57.0,	57.0,
315 -	46.0,	45.8,	45.5,	47.0,	47.0,	48.0,	62.8,	64.0,
400 -	46.3,	47.8,	47.8,	48.3,	47.5,	47.8,	61.3,	62.8,
500 -	42.3,	44.3,	43.5,	43.5,	43.5,	50.3,	66.5,	61.5,
630 -	37.0,	35.3,	34.8,	35.0,	36.3,	44.8,	58.0,	49.8,
800 -	31.8,	32.0,	34.0,	30.8,	33.0,	41.5,	54.8,	46.5,
1.0 K -	30.0,	32.5,	34.3,	30.0,	31.8,	40.8,	46.0,	39.0,
1.25K -	30.3,	31.5,	35.5,	30.0,	30.8,	38.5,	43.0,	38.8,
1.6 K -	31.5,	34.8,	36.8,	30.0,	31.5,	39.3,	45.0,	40.0,
2.0 K -	31.5,	38.8,	41.8,	31.0,	32.0,	42.0,	49.0,	39.0,
2.5 K -	30.3,	39.0,	42.0,	30.3,	31.5,	41.8,	48.3,	38.0,
3.15K -	30.0,	45.3,	47.0,	32.0,	33.5,	46.0,	55.0,	39.3,
4.0 K -	31.5,	46.5,	52.3,	33.5,	35.8,	52.0,	59.0,	38.8,
5.0 K -	30.8,	45.3,	49.8,	30.3,	32.3,	46.0,	60.3,	35.5,
6.3 K -	30.0,	37.3,	42.3,	30.0,	30.0,	40.8,	51.8,	30.0,
8.0 K -	30.0,	31.3,	37.5,	30.0,	30.0,	36.5,	43.8,	30.0,
10.0K -	30.0,	31.8,	36.3,	30.0,	30.0,	34.0,	41.8,	30.0,
12.5K -	31.5,	32.5,	34.0,	31.3,	31.0,	33.8,	40.5,	31.5,
16.0K -	32.3,	32.3,	33.8,	31.8,	31.8,	33.8,	36.8,	32.0,
20.0K -	32.0,	32.0,	32.8,	32.0,	31.8,	32.3,	33.8,	32.0,
FLAT -	68.5,	64.3,	66.8,	65.3,	67.5,	67.3,	71.8,	69.8,
A-WEIGHT -	51.5,	53.5,	57.8,	50.3,	51.5,	57.0,	67.0,	62.8,

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-20. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 24. Concorde F-WTSA Landing - Runway 19, Flight Standards Bldg. - Inside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 15, 1974 - 1718 Hours. See Fig. A-19 for Frequency Spectra of Outside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	OUTSIDE NOISE LEVEL - DB RE 20 μPA 1/2 SECOND INTEGRATION PERIODS(1)										
	1	2	3	4	5	6	7	8	10	11	12
25 -	50.0,	50.0,	51.8,	51.0,	50.0,	50.0,	50.0,	51.5,	52.8,	50.5,	50.0,
31.5 -	56.0,	62.5,	56.0,	61.5,	59.5,	54.0,	51.5,	50.0,	56.3,	62.8,	56.8,
40 -	61.0,	60.0,	62.5,	62.0,	61.5,	59.0,	61.5,	61.8,	60.3,	60.3,	62.0,
50 -	56.8,	54.0,	54.0,	53.5,	54.0,	52.5,	55.3,	55.8,	55.3,	57.0,	57.3,
63 -	64.0,	63.8,	63.0,	63.0,	63.3,	63.8,	63.8,	63.3,	62.5,	63.8,	62.3,
80 -	50.0,	50.0,	50.0,	50.0,	50.0,	50.0,	50.0,	50.0,	50.0,	50.5,	50.0,
100 -	50.0,	50.0,	50.0,	50.0,	50.0,	50.0,	50.0,	50.0,	51.3,	53.3,	51.5,
125 -	55.3,	56.0,	60.0,	52.0,	51.3,	50.0,	50.3,	52.8,	53.8,	54.3,	53.5,
160 -	58.8,	58.8,	63.0,	54.0,	53.0,	51.0,	50.3,	51.8,	55.3,	55.8,	54.0,
200 -	59.8,	59.0,	62.3,	54.8,	53.0,	51.8,	52.0,	55.5,	62.3,	64.0,	56.0,
250 -	63.3,	61.8,	66.5,	55.0,	51.8,	50.0,	50.0,	54.5,	59.3,	66.3,	60.0,
315 -	61.3,	58.5,	65.0,	57.0,	55.5,	50.8,	50.3,	56.5,	55.8,	65.8,	56.8,
400 -	66.3,	66.0,	69.0,	66.0,	58.3,	50.0,	50.0,	55.3,	60.3,	69.5,	58.5,
500 -	63.5,	64.0,	66.5,	72.3,	60.8,	50.0,	52.5,	60.8,	62.8,	71.8,	59.5,
630 -	64.0,	61.3,	68.5,	74.3,	62.5,	50.0,	52.0,	60.3,	63.0,	71.3,	57.8,
800 -	58.0,	60.0,	66.5,	74.5,	63.3,	50.3,	52.8,	62.5,	64.3,	70.0,	58.5,
1.0 K -	58.0,	57.0,	66.0,	73.8,	62.3,	51.0,	54.0,	63.8,	66.0,	66.3,	59.0,
1.25K -	58.8,	56.8,	64.3,	70.8,	59.0,	54.8,	55.0,	65.0,	67.8,	65.8,	57.8,
1.6 K -	61.3,	59.5,	64.5,	71.0,	60.8,	54.5,	54.3,	65.8,	67.8,	65.8,	58.3,
2.0 K -	60.8,	58.8,	64.3,	70.8,	58.5,	57.3,	57.0,	65.3,	68.8,	65.5,	57.8,
2.5 K -	57.0,	55.8,	62.5,	67.5,	58.8,	59.8,	61.8,	65.0,	69.8,	66.3,	58.3,
3.15K -	58.0,	56.8,	63.3,	66.8,	62.8,	66.5,	61.8,	71.3,	70.0,	64.0,	56.3,
4.0 K -	57.3,	55.5,	62.3,	64.8,	61.3,	64.0,	60.3,	69.0,	68.0,	62.0,	54.8,
5.0 K -	54.5,	53.3,	60.3,	63.0,	61.5,	61.8,	55.3,	66.8,	66.3,	60.3,	54.0,
6.3 K -	50.3,	50.0,	55.0,	58.0,	56.0,	56.5,	53.0,	60.0,	62.0,	57.8,	52.8,
8.0 K -	50.0,	50.0,	50.0,	52.8,	51.8,	53.0,	51.0,	55.8,	57.3,	54.8,	51.3,
10.0K -	50.0,	50.5,	50.0,	50.8,	50.3,	50.0,	50.5,	51.8,	52.8,	51.5,	51.5,
12.5K -	51.5,	51.8,	50.8,	51.3,	51.8,	51.0,	51.5,	50.8,	51.8,	51.5,	51.8,
16.0K -	52.0,	52.0,	51.5,	51.5,	52.0,	51.8,	51.5,	51.5,	51.8,	51.8,	52.0,
20.0K -	51.3,	51.3,	50.8,	51.3,	51.3,	51.3,	51.0,	50.5,	51.3,	51.0,	51.3,
FLAT -	74.0,	73.8,	77.3,	81.8,	73.3,	71.5,	70.8,	77.3,	78.5,	79.3,	72.3,
A-WEIGHT -	70.3,	69.0,	75.3,	81.3,	71.5,	70.5,	68.8,	77.0,	78.5,	77.0,	68.3,

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-21. 1/3 Octave Frequency Spectra - Noise Level Data - Event No. 19. Landing Concorde F-WTSA - Runway 01, Flight Standards Bldg. - Outside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 13, 1974 - 1350 Hours. See Figure A-3b for Noise Level Time Histories

1/3 OCTAVE CENTER FREQ. HZ	INSIDE NOISE LEVEL - DB RE 20μPA 1/2 SECOND INTEGRATION PERIODS(1)											
	1	2	3	4	5	6	7	8	9	10	11	12
25 -				41.0,	40.5,	42.3,	41.5,	41.3,	43.3,	43.3,	41.3,	
31.5 -				44.0,	45.0,	45.0,	41.5,	41.5,	44.5,	42.3,	45.0,	
40 -				40.0,	41.3,	40.0,	42.5,	40.0,	41.8,	42.0,	42.3,	
50 -				40.3,	41.5,	40.3,	40.0,	40.3,	41.3,	40.5,	40.8,	
63 -				52.0,	52.0,	51.8,	50.3,	52.3,	51.0,	51.5,	51.0,	
80 -				41.3,	41.0,	43.0,	47.0,	44.0,	43.8,	41.0,	44.0,	
100 -				40.0,	40.0,	40.0,	40.8,	40.0,	40.3,	40.0,	40.0,	
125 -				41.8,	41.8,	40.0,	40.3,	40.0,	42.3,	43.5,	41.5,	
160 -				42.3,	40.5,	40.5,	40.0,	41.3,	43.3,	44.0,	40.3,	
200 -				42.3,	40.0,	41.8,	40.3,	42.3,	41.8,	45.5,	42.8,	
250 -				42.5,	41.3,	41.5,	42.5,	42.5,	44.0,	44.5,	41.5,	
315 -				43.5,	41.3,	40.0,	40.0,	41.3,	46.0,	45.0,	42.0,	
400 -				47.5,	44.3,	40.0,	40.0,	42.8,	45.8,	50.8,	41.5,	
500 -				48.0,	46.0,	40.0,	40.0,	46.5,	48.0,	51.5,	40.5,	
630 -				46.3,	40.3,	40.0,	40.0,	40.3,	45.3,	46.5,	40.0,	
800 -				45.0,	40.3,	40.0,	40.0,	40.0,	44.5,	46.3,	40.0,	
1.0 K -				42.0,	40.0,	40.0,	40.0,	40.0,	43.5,	44.5,	40.0,	
1.25K -				43.3,	40.0,	40.0,	40.0,	41.8,	46.0,	47.8,	40.0,	
1.6 K -				45.8,	42.5,	40.0,	40.5,	44.8,	48.8,	50.5,	40.0,	
2.0 K -				49.3,	42.3,	40.0,	42.3,	47.5,	52.0,	57.0,	40.8,	
2.5 K -				41.8,	40.8,	40.0,	43.3,	43.3,	46.5,	51.8,	40.0,	
3.15K -				40.5,	42.3,	42.8,	44.8,	47.0,	49.0,	52.8,	40.0,	
4.0 K -				43.5,	46.0,	46.3,	48.5,	49.5,	51.5,	55.5,	42.5,	
5.0 K -				40.3,	43.5,	42.5,	42.0,	47.0,	49.3,	51.8,	40.8,	
6.3 K -				40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	
8.0 K -				40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	
10.0K -				40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	
12.5K -				40.0,	40.5,	40.0,	40.0,	40.3,	40.5,	40.3,	40.5,	
16.0K -				40.3,	41.0,	40.3,	40.5,	40.5,	41.8,	40.8,	40.8,	
20.0K -				40.8,	40.5,	40.5,	41.0,	40.8,	41.0,	41.0,	41.0,	
FLAT -				58.5,	57.5,	55.5,	56.3,	58.8,	60.0,	63.8,	56.5,	
A-WEIGHT -				55.0,	52.5,	50.0,	52.3,	55.8,	58.8,	63.0,	49.0,	

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-22. 1/3 Octave Frequency Spectra - Noise Level Data - Event No. 19. Landing Concord F-WTSA - Runway 01, Flight Standards Bldg. - Inside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 13, 1974 - 1350 Hours. See Fig. A-21 for Frequency Spectra of Outside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ		OUTSIDE NOISE LEVEL - DB RE 20μPA 1/2 SECOND INTEGRATION PERIODS(1)							
		1	2	3	4	5	6	7	8
25	-	69.3,	89.8,	93.3,	93.8,				
31.5	-	71.3,	87.8,	95.8,	92.0,				
40	-	75.3,	87.3,	90.8,	85.0,				
50	-	77.0,	88.8,	88.0,	78.5,				
63	-	78.0,	89.5,	90.0,	68.8,				
80	-	78.5,	98.0,	91.5,	66.5,				
100	-	78.8,	100.3,	94.0,	73.8,				
125	-	83.3,	100.5,	97.5,	84.0,				
160	-	87.0,	102.0,	101.5,	89.0,				
200	-	89.5,	101.5,	102.3,	89.0,				
250	-	92.5,	104.3,	100.3,	90.3,				
315	-	96.5,	103.0,	98.5,	93.5,				
400	-	103.8,	107.8,	96.5,	97.0,				
500	-	101.0,	105.5,	94.3,	94.0,				
630	-	97.5,	107.8,	94.8,	92.5,				
800	-	97.5,	107.3,	95.0,	90.8,				
1.0 K	-	97.0,	106.3,	94.0,	88.5,				
1.25K	-	94.5,	105.8,	92.0,	87.5,				
1.6 K	-	97.3,	105.3,	90.8,	85.5,				
2.0 K	-	98.5,	104.0,	91.3,	84.8,				
2.5 K	-	94.5,	104.5,	90.3,	83.3,				
3.15K	-	95.5,	104.0,	89.3,	81.5,				
4.0 K	-	100.8,	109.0,	101.5,	95.3,				
5.0 K	-	95.5,	102.0,	87.3,	80.8,				
6.3 K	-	91.3,	98.3,	82.5,	76.5,				
8.0 K	-	85.8,	92.0,	78.0,	73.0,				
10.0K	-	79.0,	87.0,	74.8,	73.0,				
12.5K	-	78.0,	86.0,	74.3,	72.5,				
16.0K	-	74.5,	81.0,	73.0,	73.3,				
20.0K	-	72.0,	75.5,	71.8,	71.8,				
FLAT	-	110.0,	117.5,	110.0,	104.0,				
A-WEIGHT	-	108.5,	116.3,	103.8,	98.8,				

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-23. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 19. Landing Concorde F-WTSA - Runway 01, Localizer Bldg. - Outside, Fairbanks International Airport, Fairbanks, Alaksa. See Fig. A-3d for Noise Level Time Histories. See Fig. A-24 for Frequency Spectra Inside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ		INSIDE NOISE LEVEL - DB RE 20μPA 1/2 SECOND INTEGRATION PERIODS(1)							
		1	2	3	4	5	6	7	8
25	-	65.3,	74.8,	87.5,	93.0,				
31.5	-	68.0,	79.0,	85.3,	83.5,				
40	-	63.0,	78.8,	77.8,	72.8,				
50	-	64.3,	75.5,	72.3,	63.8,				
63	-	65.3,	80.5,	75.8,	60.8,				
80	-	70.8,	81.5,	83.0,	67.3,				
100	-	71.8,	84.5,	81.5,	68.5,				
125	-	74.3,	84.0,	79.8,	68.0,				
160	-	72.0,	78.5,	79.3,	66.3,				
200	-	68.8,	80.0,	82.3,	71.0,				
250	-	66.3,	77.0,	74.0,	67.5,				
315	-	71.0,	78.0,	71.5,	65.5,				
400	-	74.3,	75.5,	70.0,	66.3,				
500	-	76.5,	77.0,	72.8,	72.3,				
630	-	71.3,	72.5,	67.8,	66.8,				
800	-	69.3,	72.0,	66.8,	65.8,				
1.0 K	-	65.0,	70.3,	64.5,	60.8,				
1.25K	-	64.3,	69.3,	63.0,	60.8,				
1.6 K	-	62.3,	69.5,	67.0,	63.3,				
2.0 K	-	62.8,	68.8,	65.0,	65.3,				
2.5 K	-	58.8,	64.8,	59.8,	56.8,				
3.15K	-	58.5,	61.5,	58.8,	55.5,				
4.0 K	-	75.5,	85.8,	87.5,	89.0,				
5.0 K	-	61.5,	60.8,	58.5,	55.8,				
6.3 K	-	59.3,	55.5,	55.5,	53.3,				
8.0 K	-	55.5,	52.0,	52.0,	50.8,				
10.0K	-	53.8,	52.8,	52.5,	53.0,				
12.5K	-	52.0,	51.3,	51.3,	51.0,				
16.0K	-	50.8,	50.8,	51.3,	50.8,				
20.0K	-	49.3,	49.8,	50.0,	49.8,				
FLAT	-	84.0,	93.5,	95.3,	96.8,				
A-WEIGHT	-	78.3,	81.5,	78.5,	74.3,				

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-24. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 19. Landing Concorde F-WTSA - Runway 01, Localizer Bldg. - Inside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 13, 1974 - 1350 Hours. See Fig. A-23 for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ		OUTSIDE NOISE LEVEL - DB RE 20 μPA 1/2 SECOND INTEGRATION PERIODS(1)							
		1	2	3	4	5	6	7	8
25	-	50.0,	57.8,	50.3,	52.8,	56.5,	64.8,	62.3,	62.8,
31.5	-	57.8,	57.3,	60.5,	62.5,	65.0,	67.5,	62.5,	67.5,
40	-	59.0,	63.0,	67.8,	71.8,	72.0,	78.0,	69.3,	68.3,
50	-	59.3,	66.0,	66.5,	74.8,	76.5,	78.8,	74.8,	75.8,
63	-	65.3,	71.3,	71.5,	77.3,	82.3,	82.5,	80.3,	77.0,
80	-	69.3,	69.5,	74.3,	70.8,	78.3,	84.0,	80.8,	79.5,
100	-	65.0,	73.5,	74.3,	81.0,	85.5,	81.0,	78.3,	82.5,
125	-	64.3,	73.5,	76.3,	81.3,	87.5,	86.8,	78.5,	75.3,
160	-	69.0,	70.8,	78.8,	82.5,	88.8,	81.5,	77.0,	77.0,
200	-	67.0,	76.5,	79.5,	80.8,	90.0,	82.3,	77.3,	73.3,
250	-	72.5,	80.0,	81.5,	86.0,	91.0,	82.5,	76.5,	75.5,
315	-	74.3,	85.8,	82.3,	87.0,	91.3,	83.3,	76.8,	73.3,
400	-	81.0,	88.0,	85.8,	89.3,	90.5,	83.5,	76.8,	70.0,
500	-	78.8,	90.3,	91.3,	89.0,	92.0,	82.3,	75.3,	71.0,
630	-	76.0,	87.5,	89.8,	87.5,	89.0,	79.3,	71.8,	68.0,
800	-	74.5,	86.0,	86.5,	88.5,	90.5,	80.3,	68.0,	67.8,
1.0 K	-	72.5,	85.0,	86.8,	88.3,	89.3,	76.8,	68.3,	67.5,
1.25K	-	70.8,	84.0,	86.0,	86.8,	88.3,	77.3,	66.0,	66.3,
1.6 K	-	70.0,	84.8,	84.8,	86.5,	88.0,	76.5,	64.8,	64.8,
2.0 K	-	72.8,	83.3,	85.0,	86.0,	86.5,	76.0,	64.0,	62.8,
2.5 K	-	74.3,	86.3,	83.5,	84.8,	85.5,	74.3,	64.0,	61.5,
3.15K	-	70.0,	82.0,	80.5,	83.8,	84.0,	73.8,	63.0,	59.5,
4.0 K	-	67.0,	79.3,	79.0,	81.5,	82.3,	71.0,	62.3,	58.3,
5.0 K	-	67.0,	79.5,	78.3,	80.8,	80.8,	71.3,	62.0,	56.0,
6.3 K	-	62.3,	77.3,	76.5,	79.5,	79.5,	69.8,	59.8,	54.5,
8.0 K	-	57.8,	74.3,	73.0,	76.5,	78.0,	66.0,	56.8,	51.0,
10.0K	-	54.0,	71.0,	71.8,	75.8,	75.0,	61.3,	52.0,	50.0,
12.5K	-	50.0,	65.3,	65.8,	69.5,	71.5,	54.0,	50.0,	50.0,
16.0K	-	50.0,	59.3,	59.0,	64.0,	66.5,	50.0,	50.0,	50.0,
20.0K	-	50.0,	51.0,	50.3,	53.5,	56.3,	50.0,	50.0,	50.0,
FLAT	-	86.5,	96.5,	97.5,	98.8,	101.5,	94.3,	88.5,	88.3,
A-WEIGHT	-	84.3,	95.3,	96.0,	97.0,	98.3,	88.5,	79.8,	77.5,

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-25. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 18. Concorde F-WTSA - Level Flight Over Runway 01 (South to North), Motel Bldg. - Outside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 13, 1974 - 1346 Hours. See Fig. A-4a for Noise Level Time Histories. See Fig. A-2b for Frequency Spectra of Inside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ		INSIDE NOISE LEVEL - DB RE 20 μPA 1/2 SECOND INTEGRATION PERIODS(1)							
		1	2	3	4	5	6	7	8
25	-	51.0,	47.5,	54.5,	57.8,	55.0,	56.8,	59.5,	60.3,
31.5	-	51.3,	48.0,	59.3,	64.3,	59.5,	62.5,	69.5,	69.5,
40	-	41.0,	44.0,	41.8,	44.5,	54.8,	53.8,	56.8,	58.3,
50	-	48.3,	52.3,	56.8,	55.8,	56.3,	47.8,	49.5,	52.8,
63	-	51.8,	53.3,	61.0,	65.3,	59.0,	53.8,	54.8,	56.5,
80	-	49.3,	53.5,	60.8,	63.0,	63.8,	56.0,	50.8,	51.0,
100	-	49.5,	54.5,	59.3,	67.5,	66.5,	56.0,	54.5,	49.0,
125	-	51.3,	51.8,	58.3,	64.5,	64.8,	64.0,	64.0,	56.5,
160	-	49.5,	47.3,	54.8,	65.5,	63.5,	55.5,	56.3,	58.8,
200	-	45.5,	50.5,	58.3,	62.3,	60.5,	59.8,	56.0,	54.3,
250	-	50.8,	52.8,	56.8,	63.3,	58.5,	51.8,	49.0,	50.8,
315	-	49.3,	47.3,	58.8,	58.3,	55.0,	48.5,	49.8,	50.3,
400	-	57.5,	53.8,	56.8,	60.0,	57.3,	47.5,	46.5,	52.0,
500	-	54.5,	57.5,	56.0,	59.0,	56.3,	45.0,	41.5,	51.3,
630	-	50.8,	53.3,	53.5,	54.3,	47.8,	38.0,	34.5,	44.8,
800	-	46.3,	48.3,	51.3,	49.0,	44.8,	35.8,	32.5,	44.5,
1.0 K	-	43.8,	43.0,	49.0,	48.5,	40.8,	34.3,	31.0,	45.8,
1.25K	-	42.0,	41.5,	46.8,	43.8,	37.8,	32.0,	30.0,	43.5,
1.6 K	-	41.8,	39.5,	44.3,	45.5,	38.0,	32.0,	30.0,	42.5,
2.0 K	-	41.3,	39.8,	44.8,	44.3,	37.0,	32.3,	30.3,	38.5,
2.5 K	-	42.5,	37.3,	44.0,	44.0,	37.8,	31.8,	30.0,	35.0,
3.15K	-	37.0,	34.5,	41.5,	41.5,	34.8,	30.0,	30.0,	34.0,
4.0 K	-	37.3,	35.3,	40.8,	41.3,	34.0,	30.0,	30.0,	30.0,
5.0 K	-	34.8,	32.8,	41.3,	40.5,	34.3,	30.0,	30.0,	30.0,
6.3 K	-	30.8,	30.0,	35.3,	35.8,	31.3,	30.0,	30.0,	30.0,
8.0 K	-	30.0,	30.0,	32.3,	30.3,	30.0,	30.0,	30.0,	30.0,
10.0K	-	30.0,	30.0,	31.8,	30.0,	30.0,	30.0,	30.0,	30.0,
12.5K	-	30.0,	30.0,	30.3,	30.3,	30.0,	30.0,	30.0,	30.0,
16.0K	-	30.0,	30.5,	30.8,	30.5,	30.0,	30.5,	30.3,	30.5,
20.0K	-	30.3,	30.3,	30.8,	30.0,	30.0,	30.0,	30.0,	30.8,
FLAT	-	64.0,	64.8,	69.8,	74.5,	73.0,	69.8,	72.0,	71.3,
A-WEIGHT	-	57.5,	58.0,	60.8,	63.0,	60.0,	53.8,	53.0,	55.5,

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-26. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 18. Concorde F-WTSA - Level Flight over Runway 01 (South to North), Motel Bldg. - Inside, Fairbanks Internationsl Airport, Fairbanks, Alaska. Feb. 13, 1974 - 1346 Hours. See Fig. A-25 for Frequency Spectra of Outside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	OUTSIDE NOISE LEVEL - DB RE 20 MPA 1/2 SECOND INTEGRATION PERIODS(1)										
	1	2	3	4	5	6	7	8	9	10	11
25 -	60.0,	60.0,	60.0,	60.3,	60.0,	63.3,	70.0,	71.3,	62.3,	61.8,	60.0,
31.5 -	64.3,	64.8,	64.0,	63.8,	65.8,	60.0,	72.5,	70.5,	71.5,	68.0,	64.0,
40 -	62.8,	66.0,	62.8,	63.8,	66.0,	62.8,	76.8,	74.5,	72.8,	69.8,	67.8,
50 -	63.8,	64.3,	62.8,	64.0,	61.8,	65.5,	75.0,	71.0,	74.5,	70.0,	67.8,
63 -	74.0,	73.0,	73.3,	74.3,	74.3,	73.5,	77.3,	77.0,	73.8,	74.5,	74.8,
80 -	60.0,	60.0,	69.3,	71.8,	73.0,	63.0,	78.0,	76.8,	73.0,	74.5,	65.5,
100 -	63.3,	66.8,	73.5,	76.5,	74.5,	75.0,	78.8,	79.5,	82.5,	77.3,	72.0,
125 -	67.3,	69.5,	74.8,	74.0,	75.5,	78.8,	81.3,	78.0,	81.8,	83.0,	74.5,
160 -	73.0,	72.5,	71.5,	69.8,	72.3,	76.8,	84.8,	77.8,	84.0,	81.0,	73.0,
200 -	73.8,	71.8,	72.0,	73.5,	71.5,	70.8,	84.0,	78.8,	79.0,	82.5,	72.3,
250 -	69.0,	70.3,	77.8,	78.0,	75.3,	74.3,	83.5,	76.0,	76.0,	75.5,	67.8,
315 -	72.0,	77.0,	72.8,	78.5,	78.3,	75.0,	76.5,	71.8,	73.5,	73.3,	66.8,
400 -	76.0,	73.0,	75.8,	77.8,	80.5,	75.3,	72.5,	67.0,	71.3,	72.0,	66.5,
500 -	73.8,	75.3,	74.5,	79.3,	76.3,	74.8,	68.0,	65.0,	69.0,	69.5,	63.3,
630 -	73.5,	72.5,	73.5,	75.3,	74.3,	72.0,	68.3,	64.5,	66.3,	63.8,	60.0,
800 -	72.3,	73.8,	73.8,	75.8,	75.3,	72.8,	67.0,	63.5,	65.0,	63.0,	60.3,
1.0 K -	71.5,	71.5,	70.3,	73.5,	73.8,	71.8,	67.3,	63.8,	67.0,	64.3,	62.8,
1.25K -	68.5,	70.8,	71.0,	71.3,	73.0,	70.3,	64.5,	63.0,	64.5,	61.5,	60.0,
1.6 K -	70.8,	71.8,	72.0,	72.5,	72.3,	70.8,	64.0,	61.3,	63.0,	61.5,	60.0,
2.0 K -	73.0,	77.5,	75.5,	72.8,	70.0,	71.0,	61.8,	60.5,	61.3,	60.0,	60.0,
2.5 K -	76.5,	78.3,	72.8,	72.0,	68.8,	70.3,	60.0,	60.0,	60.0,	60.0,	60.0,
3.15K -	69.0,	71.0,	70.0,	71.0,	66.3,	68.5,	60.0,	60.0,	60.0,	60.0,	60.0,
4.0 K -	67.0,	70.8,	69.8,	69.8,	64.8,	67.8,	60.0,	60.0,	60.0,	60.0,	60.0,
5.0 K -	68.0,	69.3,	67.8,	69.8,	65.5,	67.0,	60.0,	60.0,	60.0,	60.0,	60.0,
6.3 K -	64.3,	65.8,	67.0,	67.8,	64.0,	65.0,	60.0,	60.0,	60.0,	60.0,	60.0,
8.0 K -	61.3,	62.5,	63.3,	66.0,	61.8,	63.8,	60.0,	60.0,	60.0,	60.0,	60.0,
10.0K -	60.0,	60.8,	61.0,	62.8,	60.5,	61.5,	60.0,	60.0,	60.0,	60.0,	60.0,
12.5K -	61.5,	61.0,	61.8,	61.3,	61.5,	61.3,	60.8,	61.5,	61.3,	61.3,	61.5,
16.0K -	61.0,	61.0,	61.5,	61.8,	61.5,	61.3,	60.5,	62.0,	61.5,	61.8,	62.0,
20.0K -	60.5,	61.0,	61.0,	61.0,	61.3,	61.0,	60.5,	61.0,	61.0,	61.0,	61.0,
FLAT -	85.5,	86.8,	86.5,	87.8,	87.5,	86.8,	91.5,	87.8,	89.5,	89.3,	82.3,
A-WEIGHT -	82.8,	85.5,	83.0,	85.0,	83.3,	82.3,	80.5,	75.5,	77.5,	78.0,	71.3,

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-27. 1/3 Octave Frequency Spectra - Noise Level Data - Event No. 18. Concorde F-WTSA - Level Flight over Runway 01, 700 ft altitude, 270 Knots (S to N), Flight Standards Bldg. - Outside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 13, 1974 - 1346 Hours. See Fig. A-4b for Noise Level Time Histories. See Fig. A-28 for Frequency Spectra of Inside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	INSIDE NOISE LEVEL - DB RE 20 μPA 1/2 SECOND INTEGRATION PERIODS(1)										
	1	2	3	4	5	6	7	8	9	10	11
25 -	43.8,	45.0,	48.0,	41.3,	46.3,	48.5,	62.0,	63.5,	60.3,	57.3,	47.3,
31.5 -	47.5,	50.5,	51.0,	40.5,	43.8,	41.8,	53.5,	53.0,	55.3,	53.5,	42.0,
40 -	41.8,	49.8,	43.8,	46.5,	46.3,	45.3,	57.0,	53.5,	54.0,	53.5,	50.5,
50 -	44.5,	44.3,	45.8,	45.8,	49.3,	50.8,	54.0,	51.0,	54.8,	54.3,	50.0,
63 -	54.0,	53.8,	56.0,	55.3,	59.3,	55.5,	61.5,	64.5,	62.8,	60.3,	58.0,
80 -	47.5,	49.8,	52.5,	53.3,	56.3,	51.5,	68.3,	69.3,	65.8,	65.8,	61.8,
100 -	49.0,	53.0,	54.0,	54.3,	55.3,	59.8,	69.5,	69.5,	69.5,	67.5,	60.0,
125 -	56.5,	55.0,	55.3,	51.8,	56.8,	61.8,	70.8,	70.3,	66.5,	69.3,	60.5,
160 -	53.0,	49.0,	51.3,	51.8,	52.5,	52.3,	67.3,	60.3,	65.3,	63.0,	53.5,
200 -	48.8,	53.0,	48.5,	54.8,	48.0,	52.0,	51.5,	51.0,	55.0,	58.5,	49.0,
250 -	48.8,	51.3,	51.3,	49.5,	50.8,	50.8,	53.5,	49.0,	52.5,	51.8,	48.5,
315 -	51.8,	51.8,	53.5,	59.0,	55.8,	55.5,	58.0,	51.8,	53.0,	51.8,	47.0,
400 -	52.8,	51.3,	53.8,	58.0,	56.8,	53.5,	56.3,	50.3,	52.8,	47.5,	44.0,
500 -	51.3,	48.3,	52.8,	54.3,	55.3,	50.5,	47.3,	43.0,	50.5,	47.0,	42.0,
630 -	45.3,	44.8,	47.0,	46.8,	46.5,	44.8,	43.5,	40.0,	44.0,	40.0,	40.0,
800 -	42.8,	44.0,	46.3,	42.8,	43.3,	41.8,	41.5,	40.3,	42.5,	40.0,	40.0,
1.0 K -	43.0,	42.8,	42.3,	42.0,	41.0,	40.0,	40.0,	40.0,	41.3,	40.0,	40.0,
1.25K -	42.8,	41.5,	43.8,	41.5,	42.3,	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,
1.6 K -	48.3,	46.0,	47.3,	43.8,	40.8,	41.3,	40.0,	40.0,	40.8,	40.0,	40.0,
2.0 K -	53.3,	50.5,	52.0,	46.0,	42.8,	43.8,	40.3,	40.0,	41.0,	40.0,	40.0,
2.5 K -	50.8,	49.0,	46.8,	44.0,	41.3,	42.8,	40.0,	40.0,	40.0,	40.0,	40.0,
3.15K -	54.8,	45.0,	44.8,	43.8,	40.0,	46.0,	40.0,	40.0,	40.0,	40.0,	40.0,
4.0 K -	60.5,	48.5,	46.5,	47.8,	40.0,	50.5,	40.0,	40.0,	40.0,	40.0,	40.0,
5.0 K -	58.8,	47.3,	45.3,	46.5,	40.0,	47.5,	40.0,	40.0,	40.0,	40.0,	40.0,
6.3 K -	50.3,	40.0,	40.0,	40.0,	40.0,	41.8,	40.0,	40.0,	40.0,	40.0,	40.0,
8.0 K -	44.3,	40.0,	40.0,	40.0,	40.0,	40.3,	40.0,	40.0,	40.0,	40.0,	40.0,
10.0K -	44.5,	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,
12.5K -	42.3,	40.5,	40.5,	41.0,	40.3,	41.0,	40.5,	40.5,	40.0,	40.0,	40.3,
16.0K -	41.8,	41.0,	41.3,	41.3,	41.3,	41.5,	41.3,	41.0,	40.8,	40.5,	41.0,
20.0K -	40.5,	41.0,	40.8,	41.0,	41.5,	41.5,	40.8,	41.0,	40.8,	41.0,	40.8,
FLAT -	65.8,	64.5,	65.0,	66.0,	66.5,	67.8,	76.0,	76.3,	74.3,	74.0,	67.5,
A-WEIGHT -	63.5,	58.0,	58.5,	59.0,	57.3,	58.0,	60.8,	59.0,	58.5,	58.3,	51.0,

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-28. 1/3 Octave Frequency Spectra - Noise Level Data - Event No. 18. Concorde F-WTSA - Level Flight over Runway 01, (South to North), Flight Standards Bldg. - Inside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 13, 1974 - 1346 Hours. See Fig. A-27 for Frequency Spectra of Outside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	OUTSIDE NOISE LEVEL - DB RE 20 μPA 1/2 SECOND INTEGRATION PERIODS(1)							
	1	2	3	4	5	6	7	8
25 -	61.5,	70.0,	74.5,					
31.5 -	69.0,	78.5,	74.3,					
40 -	71.5,	75.3,	75.3,					
50 -	73.8,	74.5,	78.0,					
63 -	67.5,	80.3,	84.8,					
80 -	67.8,	83.8,	88.0,					
100 -	72.3,	86.5,	90.3,					
125 -	76.8,	87.8,	89.5,					
160 -	82.0,	84.3,	86.0,					
200 -	80.0,	91.0,	85.0,					
250 -	80.5,	91.3,	87.8,					
315 -	86.0,	98.3,	88.0,					
400 -	89.8,	95.3,	87.5,					
500 -	91.0,	92.5,	86.3,					
630 -	87.0,	92.0,	83.5,					
800 -	87.5,	90.8,	82.3,					
1.0 K -	86.5,	90.3,	80.8,					
1.25K -	83.3,	89.3,	79.3,					
1.6 K -	82.5,	89.5,	79.0,					
2.0 K -	84.3,	89.0,	79.3,					
2.5 K -	87.5,	89.5,	79.3,					
3.15K -	82.5,	88.8,	79.3,					
4.0 K -	91.3,	96.8,	91.8,					
5.0 K -	83.8,	90.5,	79.5,					
6.3 K -	82.3,	88.5,	79.0,					
8.0 K -	75.0,	83.0,	75.0,					
10.0K -	74.3,	78.8,	73.8,					
12.5K -	74.0,	78.0,	73.5,					
16.0K -	73.5,	74.8,	72.3,					
20.0K -	71.5,	72.5,	71.3,					
FLAT -	99.5,	105.0,	99.8,					
A-WEIGHT -	97.3,	101.8,	93.3,					

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-29. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 18. Concorde F-WTSA - Level Flight over Runway 01, (South to North), Localizer Bldg. - Outside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 13, 1974 - 1346 Hours. See Fig. A-4d for Noise Level Time Histories.
Note: No Inside Frequency Spectra Data

1/3 OCTAVE CENTER FREQ. HZ		OUTSIDE NOISE LEVEL - DB RE 20 MICROPA 1/2 SECOND INTEGRATION PERIODS(1)															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
25	-	71.3,	70.5,	71.3,	69.3,	72.0,	71.3,	70.5,	72.3,	71.0,	69.8,	70.8,	74.3,	72.3,	73.0,	73.5,	73.0,
31.5	-	67.5,	68.0,	68.8,	68.3,	72.5,	71.8,	71.5,	71.3,	70.5,	69.5,	72.3,	74.3,	74.5,	75.0,	74.5,	77.0,
40	-	70.5,	70.8,	70.8,	71.5,	72.5,	70.8,	70.0,	69.0,	68.8,	72.8,	73.0,	74.5,	74.0,	80.0,	73.5,	75.8,
50	-	76.0,	77.0,	76.3,	77.5,	77.0,	75.3,	75.8,	76.8,	76.5,	76.5,	76.0,	76.8,	77.8,	78.3,	78.0,	77.3,
63	-	75.5,	76.5,	77.5,	77.0,	76.5,	77.3,	77.5,	77.5,	77.5,	77.8,	77.8,	79.5,	79.5,	79.3,	77.0,	77.0,
80	-	67.5,	66.8,	68.5,	70.3,	70.5,	74.3,	68.5,	68.8,	68.5,	69.5,	71.5,	75.0,	79.0,	75.5,	74.5,	72.8,
100	-	78.5,	76.5,	78.5,	77.5,	78.3,	78.8,	75.3,	77.0,	77.0,	77.3,	78.8,	80.5,	82.0,	82.5,	81.8,	80.0,
125	-	74.3,	74.8,	76.0,	78.5,	78.5,	80.0,	76.3,	75.3,	76.3,	79.3,	80.3,	82.5,	82.3,	83.5,	83.3,	81.0,
160	-	71.0,	76.8,	75.5,	75.5,	81.0,	80.0,	68.5,	68.3,	74.5,	76.5,	80.0,	84.8,	84.8,	85.3,	84.0,	83.5,
200	-	75.3,	81.0,	78.0,	78.5,	80.3,	80.0,	69.8,	69.3,	70.8,	75.5,	80.3,	82.0,	82.5,	79.5,	76.5,	76.3,
250	-	74.8,	79.0,	78.5,	79.8,	81.0,	80.3,	73.0,	72.0,	75.5,	73.5,	75.5,	79.8,	79.0,	79.0,	74.8,	79.5,
315	-	75.5,	79.0,	76.5,	78.0,	77.5,	82.0,	73.5,	72.5,	76.8,	77.5,	79.3,	82.3,	86.3,	84.0,	77.8,	78.5,
400	-	75.3,	77.8,	76.8,	77.0,	80.3,	84.8,	73.5,	71.0,	74.3,	76.0,	78.5,	81.3,	82.0,	78.8,	75.5,	76.3,
500	-	73.8,	79.0,	78.8,	79.0,	81.3,	84.0,	72.3,	71.5,	77.3,	77.0,	76.5,	80.5,	82.5,	80.0,	76.0,	77.8,
630	-	74.8,	84.3,	81.3,	81.0,	82.0,	83.0,	70.8,	71.5,	75.0,	78.3,	78.3,	76.3,	76.8,	78.0,	75.0,	73.8,
800	-	83.0,	84.0,	84.8,	83.8,	86.0,	84.8,	72.5,	71.5,	73.3,	77.5,	81.5,	79.8,	79.5,	76.0,	75.5,	73.3,
1.0 K	-	82.5,	82.5,	86.5,	84.3,	87.3,	87.3,	73.5,	72.5,	74.3,	77.5,	82.3,	81.0,	83.0,	77.5,	74.3,	76.8,
1.25K	-	78.0,	80.0,	84.0,	82.3,	85.3,	87.8,	73.8,	71.5,	75.8,	76.5,	78.8,	81.3,	82.5,	76.3,	75.0,	75.5,
1.6 K	-	80.0,	81.8,	84.0,	83.3,	85.0,	86.0,	72.5,	74.3,	76.0,	76.3,	79.5,	79.3,	78.5,	78.5,	75.5,	74.5,
2.0 K	-	79.0,	83.3,	83.8,	84.0,	86.5,	86.5,	72.0,	73.3,	76.0,	74.5,	76.0,	80.0,	78.8,	75.5,	76.0,	77.5,
2.5 K	-	79.0,	81.8,	84.0,	85.5,	85.3,	85.5,	71.5,	72.5,	75.3,	74.5,	77.5,	79.0,	77.0,	74.8,	72.5,	74.3,
3.15K	-	76.8,	80.0,	82.0,	85.8,	86.0,	87.0,	71.0,	70.8,	74.5,	73.3,	75.3,	80.0,	76.3,	74.0,	71.5,	72.8,
4.0 K	-	75.8,	78.5,	79.3,	83.5,	83.0,	84.8,	69.3,	68.5,	72.3,	71.5,	74.3,	79.0,	73.8,	71.8,	68.5,	68.8,
5.0 K	-	73.8,	76.8,	77.5,	81.5,	81.8,	84.3,	67.5,	65.8,	70.3,	70.5,	71.0,	76.8,	71.5,	69.0,	67.5,	66.8,
6.3 K	-	70.3,	72.3,	73.8,	79.0,	78.0,	80.5,	64.5,	64.3,	68.5,	66.5,	68.5,	75.0,	68.0,	66.8,	62.5,	63.0,
8.0 K	-	64.0,	66.3,	68.3,	74.0,	73.3,	76.0,	60.5,	60.0,	65.5,	62.5,	64.5,	72.0,	62.8,	62.3,	59.0,	58.5,
10.0K	-	57.0,	59.0,	61.3,	68.8,	68.0,	71.3,	54.5,	54.3,	60.8,	56.5,	61.3,	66.3,	57.8,	56.3,	54.0,	52.0,
12.5K	-	48.5,	49.3,	50.5,	59.3,	59.8,	63.8,	45.3,	47.3,	51.5,	48.0,	55.0,	60.8,	49.3,	49.0,	46.8,	44.8,
16.0K	-	41.3,	42.0,	41.8,	51.0,	49.0,	59.5,	40.8,	41.5,	43.8,	42.3,	45.0,	49.3,	43.5,	42.3,	41.3,	40.8,
20.0K	-	40.0,	40.0,	40.3,	42.0,	41.0,	58.5,	40.0,	40.0,	40.3,	40.3,	40.0,	40.5,	40.0,	40.3,	40.3,	40.0,
FLAT	-	91.0,	93.3,	94.5,	94.8,	96.3,	97.5,	87.3,	86.8,	89.0,	89.8,	98.3,	94.3,	94.5,	93.5,	91.8,	91.3,
A-WEIGHT	-	69.8,	91.8,	93.8,	94.8,	95.5,	96.5,	82.8,	82.5,	85.5,	86.5,	89.5,	91.5,	90.8,	88.0,	84.8,	85.5,

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-30. 1/3 Octave Frequency Spectra - Noise Level Data - Event No. 12. Takeoff Boeing 720 - Runway 19, Flight Standards Bldg. - Outside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 12, 1974 - 1231 Hours. See Fig. A-5b for Noise Level Time Histories. See Fig. A-31 for Frequency Spectra of Inside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	INSIDE NOISE LEVEL ✓ DB RE 20 MPA 1/2 SECOND INTEGRATION PERIODS(1)															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
25 -	53.0,	54.0,	52.8,	56.0,	54.8,	55.3,	55.8,	54.8,	54.0,	56.8,	55.8,	60.3,	65.0,	63.8,	60.8,	62.8,
31.5 -	47.8,	50.8,	50.5,	55.8,	52.0,	52.0,	53.8,	52.8,	52.5,	57.3,	57.0,	58.5,	60.8,	61.8,	60.3,	61.3,
40 -	43.8,	44.0,	44.0,	44.3,	49.8,	49.3,	45.0,	43.0,	42.5,	46.0,	48.0,	48.5,	52.5,	60.3,	55.0,	57.8,
50 -	49.0,	52.3,	46.3,	50.0,	53.0,	49.5,	51.0,	46.5,	49.5,	45.8,	45.8,	49.8,	54.5,	53.3,	49.5,	49.0,
63 -	48.0,	50.3,	49.0,	55.8,	56.8,	58.8,	61.0,	54.0,	60.8,	59.8,	63.3,	62.8,	67.5,	66.3,	65.3,	62.0,
80 -	46.5,	49.5,	49.8,	55.8,	55.3,	51.8,	50.5,	47.0,	53.0,	56.8,	61.0,	60.5,	69.0,	65.0,	68.5,	65.5,
100 -	56.0,	55.5,	56.3,	61.3,	60.8,	59.8,	55.0,	53.0,	54.5,	56.3,	57.8,	63.5,	68.8,	70.0,	68.3,	66.5,
125 -	57.5,	58.5,	59.0,	65.0,	62.5,	64.8,	59.5,	57.3,	58.3,	59.5,	64.8,	63.3,	64.8,	69.8,	70.5,	65.0,
160 -	48.3,	52.8,	52.8,	53.5,	61.0,	62.0,	52.0,	47.5,	51.3,	54.0,	51.5,	57.5,	61.0,	59.8,	59.8,	58.5,
200 -	50.8,	58.0,	56.3,	56.5,	60.5,	60.3,	50.3,	47.8,	49.0,	55.8,	53.8,	56.0,	56.3,	58.0,	55.0,	55.0,
250 -	49.0,	53.5,	52.8,	52.8,	58.5,	58.0,	46.5,	47.5,	47.0,	51.3,	53.5,	60.5,	57.3,	57.5,	53.3,	54.5,
315 -	50.8,	54.0,	54.0,	54.8,	58.3,	62.3,	51.5,	50.0,	55.0,	54.8,	58.5,	61.0,	59.5,	62.5,	58.8,	58.0,
400 -	49.0,	56.5,	56.0,	57.8,	56.0,	64.5,	51.5,	51.5,	52.0,	54.8,	57.0,	60.5,	60.3,	57.5,	55.3,	52.3,
500 -	49.0,	53.0,	54.0,	55.8,	58.5,	65.5,	50.8,	52.3,	49.3,	54.5,	59.3,	57.0,	58.8,	53.3,	54.8,	58.5,
630 -	52.0,	54.3,	50.8,	57.0,	60.8,	58.0,	44.3,	47.8,	44.5,	48.3,	53.0,	53.3,	52.3,	47.5,	46.8,	47.0,
800 -	58.3,	53.8,	49.8,	57.3,	61.0,	53.8,	39.3,	40.5,	43.3,	47.3,	52.5,	51.3,	50.3,	46.8,	46.8,	42.3,
1.0 K -	48.3,	48.8,	49.5,	56.3,	55.0,	49.0,	38.8,	38.0,	42.8,	45.5,	52.3,	48.8,	49.3,	46.5,	49.3,	42.0,
1.25K -	45.3,	48.0,	47.0,	48.5,	50.8,	51.8,	39.5,	38.3,	42.3,	45.0,	50.5,	51.3,	48.5,	46.8,	48.0,	44.0,
1.6 K -	45.8,	46.8,	46.8,	49.3,	51.3,	51.8,	41.5,	42.3,	46.0,	48.8,	55.0,	57.8,	51.3,	50.5,	51.3,	49.5,
2.0 K -	45.0,	47.5,	47.3,	49.5,	50.3,	50.8,	41.8,	41.3,	48.8,	49.8,	54.3,	56.3,	52.8,	50.5,	48.8,	48.8,
2.5 K -	45.0,	46.0,	48.3,	52.0,	52.5,	53.3,	42.5,	40.3,	44.8,	47.8,	50.5,	53.5,	50.0,	47.0,	44.3,	45.5,
3.15K -	47.3,	49.0,	50.8,	54.3,	53.0,	55.3,	44.5,	42.3,	48.3,	50.5,	52.0,	54.0,	49.0,	45.8,	44.3,	47.3,
4.0 K -	46.5,	50.0,	49.0,	53.5,	51.0,	52.5,	45.0,	41.8,	49.3,	49.8,	53.0,	55.0,	50.8,	47.5,	44.8,	44.5,
5.0 K -	43.0,	44.3,	45.0,	49.0,	46.8,	47.8,	41.0,	37.8,	47.0,	47.8,	51.8,	52.3,	48.3,	44.8,	41.3,	40.5,
6.3 K -	33.5,	33.0,	32.3,	35.0,	34.5,	35.8,	30.0,	30.0,	38.0,	32.8,	38.3,	40.0,	36.3,	32.8,	30.5,	30.8,
8.0 K -	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,
10.0K -	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,
12.5K -	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.3,	30.0,	30.0,	30.0,	30.0,
16.0K -	30.0,	30.3,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.5,	30.5,	30.0,	30.3,	30.0,	30.0,	30.5,	30.0,
20.0K -	30.0,	30.0,	30.0,	30.3,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.3,	30.5,	30.0,	30.3,	30.0,
FLAT -	64.3,	67.0,	66.0,	70.3,	71.5,	73.0,	66.3,	63.5,	66.3,	67.8,	71.5,	72.5,	75.8,	76.0,	76.0,	73.0,
A-WEIGHT -	58.5,	61.3,	60.5,	64.5,	66.5,	66.8,	56.0,	55.5,	58.0,	61.0,	64.5,	65.5,	63.3,	62.5,	61.8,	60.8,

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-31. 1/3 Octave Frequency Spectra - Noise Level Data - Event No. 12. Takeoff Boeing 720 - Runway 19, Flight Standards Bldg. - Inside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 12, 1974 - 1231 Hours. See Fig. A-30 for Frequency Spectra of Outside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ		OUTSIDE NOISE LEVEL - DB RE 20_MPA 1/2 SECOND INTEGRATION PERIODS(1)															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
25	-	60.0,	60.8,	60.0,	61.8,	62.5,	64.5,	61.8,	61.0,	67.3,	63.5,	72.8,	69.0,	68.5,	72.3,	76.5,	74.3,
31.5	-	66.5,	62.5,	64.0,	65.5,	67.8,	64.3,	68.8,	65.0,	64.5,	76.5,	79.5,	84.0,	87.3,	80.5,	75.8,	70.3,
40	-	68.5,	65.5,	67.3,	66.0,	69.0,	64.5,	67.8,	66.8,	75.3,	85.0,	87.5,	87.0,	91.0,	86.0,	86.0,	84.0,
50	-	64.0,	64.3,	64.3,	63.5,	68.3,	63.0,	66.5,	75.0,	81.5,	81.5,	82.8,	93.3,	91.3,	93.8,	92.3,	89.5,
63	-	75.8,	75.3,	76.0,	75.0,	76.5,	76.3,	76.3,	80.0,	82.8,	80.3,	86.8,	88.5,	90.5,	90.8,	93.0,	91.3,
80	-	71.8,	63.5,	63.0,	61.5,	69.5,	67.8,	72.3,	77.5,	75.3,	84.8,	93.0,	97.8,	91.5,	83.8,	85.5,	88.5,
100	-	71.5,	67.5,	63.8,	65.5,	68.8,	69.0,	72.3,	73.8,	86.5,	87.8,	90.5,	98.0,	97.0,	93.5,	89.8,	83.3,
125	-	75.5,	73.5,	70.8,	70.8,	71.8,	66.3,	69.5,	78.3,	87.5,	89.0,	96.8,	98.5,	94.5,	89.5,	90.8,	86.8,
160	-	75.5,	76.0,	71.8,	76.5,	73.0,	68.3,	78.0,	80.3,	86.8,	89.5,	93.3,	98.0,	98.0,	94.5,	92.8,	86.8,
200	-	75.3,	77.8,	76.5,	78.8,	78.0,	71.3,	79.3,	80.5,	84.0,	89.3,	91.5,	96.5,	96.0,	92.3,	90.3,	88.8,
250	-	80.3,	80.8,	76.0,	80.5,	80.5,	72.0,	81.0,	81.8,	87.3,	92.0,	94.3,	96.3,	96.5,	92.3,	90.3,	85.8,
315	-	78.8,	80.8,	78.5,	83.3,	81.3,	70.5,	77.5,	82.0,	87.5,	94.3,	95.5,	95.5,	96.3,	89.5,	88.8,	85.8,
400	-	79.5,	81.0,	81.3,	85.0,	79.0,	72.3,	78.0,	84.3,	89.0,	94.0,	96.3,	94.8,	94.5,	91.0,	87.3,	83.3,
500	-	80.8,	84.0,	83.5,	86.8,	80.3,	74.3,	80.5,	85.3,	89.3,	94.0,	97.0,	94.5,	92.3,	91.0,	85.0,	81.8,
630	-	84.3,	88.8,	85.5,	89.3,	86.0,	75.3,	81.0,	84.5,	88.0,	93.0,	96.3,	94.3,	90.3,	89.3,	85.0,	83.3,
800	-	85.5,	88.8,	84.0,	91.0,	88.3,	79.0,	86.8,	87.8,	89.8,	94.0,	96.8,	94.5,	91.5,	89.3,	87.0,	85.5,
1.0 K	-	82.3,	86.0,	82.8,	91.5,	85.0,	78.8,	87.5,	89.0,	92.5,	94.8,	97.0,	95.5,	91.8,	88.5,	86.8,	84.8,
1.25K	-	80.8,	86.0,	83.0,	90.5,	83.3,	79.8,	87.5,	87.0,	92.5,	95.0,	96.3,	95.3,	92.0,	88.0,	86.8,	83.5,
1.6 K	-	80.8,	86.8,	83.3,	90.5,	84.0,	83.3,	88.5,	88.5,	91.3,	95.8,	96.3,	93.8,	92.0,	89.0,	86.8,	83.0,
2.0 K	-	80.0,	87.0,	83.3,	89.5,	83.8,	82.8,	89.5,	89.8,	92.5,	95.5,	94.8,	93.0,	90.0,	87.8,	85.0,	81.8,
2.5 K	-	78.8,	85.8,	83.3,	88.0,	83.0,	82.5,	90.3,	90.3,	94.0,	94.5,	93.8,	91.5,	89.0,	86.0,	84.3,	80.5,
3.15K	-	79.0,	85.8,	84.3,	88.8,	83.3,	87.0,	92.3,	91.5,	93.5,	94.8,	93.5,	91.0,	88.8,	84.8,	83.0,	79.8,
4.0 K	-	74.8,	82.0,	79.3,	85.5,	79.0,	80.5,	87.3,	88.0,	93.3,	94.0,	92.0,	89.5,	86.5,	83.8,	80.5,	78.5,
5.0 K	-	71.8,	78.5,	76.0,	82.8,	77.8,	78.3,	86.8,	87.8,	94.0,	94.8,	93.5,	89.5,	86.5,	83.0,	80.0,	77.5,
6.3 K	-	68.3,	75.8,	73.0,	80.8,	75.8,	78.0,	86.5,	87.0,	93.3,	94.0,	93.0,	89.5,	85.8,	81.3,	78.8,	76.0,
8.0 K	-	63.3,	70.0,	67.8,	76.0,	71.0,	72.8,	83.0,	86.0,	92.3,	92.5,	90.5,	87.8,	83.8,	80.0,	76.3,	73.8,
10.0K	-	61.3,	64.5,	63.3,	71.8,	66.8,	68.8,	79.8,	84.3,	91.3,	92.8,	90.5,	85.8,	81.3,	77.0,	74.3,	70.0,
12.5K	-	61.8,	62.5,	62.5,	66.5,	63.5,	63.5,	73.3,	79.3,	87.0,	88.0,	86.8,	83.0,	76.8,	72.3,	69.0,	65.5,
16.0K	-	63.0,	62.5,	62.5,	63.0,	62.5,	63.3,	66.5,	72.3,	81.3,	81.3,	80.5,	76.0,	70.8,	66.5,	64.0,	62.5,
20.0K	-	62.3,	61.8,	62.0,	62.0,	62.0,	62.5,	62.3,	64.3,	70.0,	70.3,	70.0,	65.8,	62.8,	62.5,	62.3,	62.0,
FLAT	-	92.5,	96.8,	94.0,	99.8,	95.0,	92.5,	99.0,	99.5,	104.0,	107.0,	108.0,	108.5,	107.0,	103.5,	102.0,	98.8,
A-WEIGHT	-	92.0,	96.3,	93.3,	99.5,	94.5,	92.5,	99.3,	99.3,	103.5,	105.8,	105.8,	104.0,	102.0,	98.8,	96.5,	93.5,

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-32. 1/3 Octave Frequency Spectra - Noise Level Data - Event No. 12. Takeoff Boeing 720 - Runway 19, Security Tower Bldg. - Outside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 12, 1974 - 1231 Hours. See Fig. A-5c for Noise Level Time Histories. See Fig. A-33 for Frequency Spectra of Inside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	INSIDE NOISE LEVEL - DB RE 20 μPA 1/2 SECOND INTEGRATION PERIODS(1)															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
25 -	53.3,	54.3,	48.3,	56.0,	53.0,	55.3,	52.0,	56.0,	60.3,	53.5,	55.5,	56.3,	62.0,	68.0,	68.0,	67.5,
31.5 -	56.0,	54.3,	49.0,	47.5,	55.3,	51.5,	58.0,	51.0,	52.8,	59.0,	59.8,	64.5,	69.5,	66.3,	62.8,	58.3,
40 -	45.5,	45.3,	44.8,	43.3,	50.3,	43.3,	50.5,	51.8,	62.0,	68.3,	67.3,	64.8,	66.3,	59.0,	58.5,	59.3,
50 -	46.8,	46.3,	45.5,	47.3,	51.3,	42.8,	50.5,	60.3,	66.0,	60.3,	61.5,	69.0,	72.3,	70.3,	70.0,	65.8,
63 -	59.5,	56.8,	58.5,	58.5,	57.8,	56.0,	60.3,	64.5,	66.0,	62.0,	69.3,	79.3,	80.0,	76.0,	75.3,	72.8,
80 -	66.8,	56.8,	59.3,	56.5,	64.8,	60.8,	66.0,	67.0,	64.8,	70.0,	69.0,	78.5,	76.8,	69.3,	74.3,	73.3,
100 -	58.5,	53.5,	50.8,	51.3,	53.5,	52.0,	54.8,	56.0,	67.3,	68.5,	76.3,	82.0,	72.0,	69.3,	68.0,	62.0,
125 -	63.8,	59.3,	54.8,	57.8,	55.8,	50.5,	52.3,	59.5,	62.3,	69.5,	74.8,	77.8,	75.5,	71.0,	69.3,	67.0,
160 -	59.5,	59.5,	57.8,	59.3,	53.3,	45.8,	53.0,	59.0,	66.8,	73.3,	74.0,	78.0,	76.5,	72.8,	74.0,	69.3,
200 -	54.5,	55.5,	58.3,	56.5,	54.3,	49.3,	54.5,	67.0,	65.5,	70.0,	71.0,	74.3,	72.0,	71.5,	70.8,	68.0,
250 -	57.5,	56.8,	55.3,	61.8,	55.8,	49.8,	56.0,	57.8,	64.0,	67.5,	73.0,	74.8,	74.8,	70.3,	72.5,	66.3,
315 -	52.0,	51.0,	51.3,	53.5,	51.5,	50.3,	56.5,	59.8,	60.8,	67.8,	68.3,	70.5,	70.0,	67.0,	64.0,	62.3,
400 -	52.5,	53.8,	54.5,	58.8,	53.0,	50.0,	54.5,	61.3,	63.5,	68.0,	72.5,	68.0,	68.0,	68.0,	66.5,	60.8,
500 -	55.3,	56.0,	56.3,	59.3,	52.8,	52.0,	56.3,	59.3,	63.0,	66.8,	72.8,	69.8,	66.0,	65.0,	59.8,	57.3,
630 -	53.0,	54.8,	52.3,	60.8,	54.3,	49.5,	53.0,	55.8,	59.3,	65.0,	69.8,	65.8,	63.8,	65.5,	59.0,	57.0,
800 -	51.5,	54.8,	52.3,	58.3,	53.5,	50.0,	52.5,	55.5,	58.0,	60.8,	67.8,	66.5,	62.0,	60.3,	58.5,	52.8,
1.0 K -	47.3,	53.3,	51.0,	56.8,	51.8,	48.3,	52.8,	56.5,	58.8,	60.5,	65.8,	63.8,	62.0,	61.0,	58.8,	53.0,
1.25K -	49.0,	53.8,	50.5,	55.8,	51.0,	46.0,	53.5,	55.0,	59.3,	62.3,	65.3,	62.5,	60.8,	60.0,	55.3,	52.5,
1.6 K -	50.0,	53.5,	52.8,	58.0,	53.3,	49.0,	54.0,	56.0,	58.5,	61.3,	64.5,	61.3,	59.8,	57.8,	55.0,	51.8,
2.0 K -	48.8,	52.5,	53.5,	56.8,	54.3,	49.5,	57.8,	56.8,	57.8,	61.0,	62.8,	61.3,	60.5,	57.8,	53.0,	49.3,
2.5 K -	48.0,	50.8,	51.5,	55.5,	53.8,	49.5,	58.0,	60.5,	58.8,	59.5,	61.0,	60.8,	59.3,	55.8,	50.0,	48.8,
3.15K -	48.3,	50.3,	51.0,	55.8,	54.0,	50.0,	56.5,	59.8,	59.5,	57.8,	57.5,	58.3,	55.3,	53.0,	47.3,	45.8,
4.0 K -	42.5,	45.5,	45.5,	51.0,	48.0,	44.5,	51.8,	54.5,	56.8,	55.3,	55.8,	53.5,	52.0,	49.5,	43.8,	43.3,
5.0 K -	41.8,	45.0,	45.0,	50.0,	47.3,	44.0,	51.8,	54.0,	55.8,	54.5,	53.8,	53.0,	50.5,	47.8,	43.8,	41.5,
6.3 K -	41.0,	42.3,	43.3,	47.5,	45.3,	42.8,	50.8,	52.8,	53.5,	54.0,	51.3,	50.3,	47.5,	45.3,	41.5,	40.5,
8.0 K -	41.8,	41.8,	42.5,	46.0,	43.5,	41.8,	47.3,	51.0,	50.8,	50.0,	47.5,	47.8,	45.5,	42.8,	42.3,	40.8,
10.0K -	41.3,	41.5,	42.5,	43.8,	42.0,	42.0,	45.8,	50.0,	48.5,	47.0,	46.0,	45.8,	44.3,	42.8,	41.5,	42.0,
12.5K -	43.3,	43.0,	44.3,	43.8,	43.8,	42.8,	44.5,	47.0,	45.5,	46.0,	46.0,	44.8,	44.5,	43.3,	43.8,	43.3,
16.0K -	43.3,	43.3,	44.3,	44.0,	43.8,	43.8,	44.5,	44.8,	44.8,	44.3,	45.0,	44.5,	44.0,	44.3,	43.5,	43.3,
20.0K -	43.3,	43.5,	43.8,	44.0,	43.0,	43.8,	43.5,	44.0,	43.5,	43.5,	43.8,	43.5,	43.5,	43.8,	43.8,	43.0,
FLAT -	71.3,	69.3,	67.8,	70.5,	69.0,	66.3,	70.5,	74.3,	77.0,	80.3,	83.8,	88.0,	85.8,	82.3,	82.5,	79.5,
A-WEIGHT -	61.0,	63.8,	63.0,	67.5,	64.0,	59.0,	66.5,	68.3,	69.8,	73.3,	76.0,	76.0,	74.0,	72.3,	70.5,	66.3,

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-33. 1/3 Octave Frequency Spectra - Noise Level Data - Event No. 12. Takeoff Boeing 720 - Runway 19, Security Tower Bldg. - Inside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 12, 1974 - 1231 Hours. See Fig. A-32 for Frequency Spectra of Outside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	OUTSIDE NOISE LEVEL - DB RE 20 μPA 1/2 SECOND INTEGRATION PERIODS(1)							
	1	2	3	4	5	6	7	8
25 -	60.0,	60.0,	62.5,	67.0,	77.5,	78.3,	69.3,	71.5,
31.5 -	66.8,	63.3,	67.0,	73.0,	80.3,	80.0,	80.0,	78.0,
40 -	60.0,	63.0,	71.0,	80.0,	82.5,	86.3,	86.0,	83.8,
50 -	64.0,	71.0,	71.8,	82.0,	86.8,	84.5,	87.0,	87.0,
63 -	71.8,	71.8,	77.0,	79.0,	86.0,	85.8,	85.5,	86.3,
80 -	72.8,	75.0,	85.3,	85.8,	88.5,	83.8,	81.3,	85.8,
100 -	72.8,	82.0,	86.5,	94.3,	95.5,	92.8,	84.8,	82.5,
125 -	76.0,	82.8,	85.0,	94.0,	97.0,	97.3,	91.0,	87.5,
160 -	78.5,	81.0,	83.0,	91.3,	97.3,	98.5,	91.0,	91.5,
200 -	78.3,	83.0,	88.3,	94.8,	90.8,	93.0,	90.3,	87.5,
250 -	84.8,	83.3,	87.5,	94.3,	94.8,	92.8,	89.0,	87.3,
315 -	83.3,	85.8,	90.3,	95.3,	94.0,	95.0,	91.5,	85.0,
400 -	84.3,	87.5,	90.0,	95.0,	96.3,	90.8,	90.0,	86.8,
500 -	84.5,	87.3,	91.3,	95.5,	95.3,	90.3,	90.3,	84.0,
630 -	85.0,	86.5,	92.0,	96.8,	94.3,	91.3,	88.8,	85.5,
800 -	88.0,	88.0,	92.5,	96.0,	95.0,	91.3,	88.3,	84.5,
1.0 K -	89.5,	89.5,	94.5,	98.3,	94.8,	91.5,	86.8,	84.0,
1.25K -	87.5,	90.3,	93.3,	95.5,	94.0,	91.5,	87.5,	84.0,
1.6 K -	88.3,	90.3,	94.5,	95.8,	94.0,	91.8,	88.0,	84.5,
2.0 K -	89.5,	90.8,	95.0,	96.3,	93.8,	92.0,	88.3,	83.8,
2.5 K -	89.5,	92.0,	95.8,	95.3,	94.0,	90.3,	86.5,	82.3,
3.15K -	91.0,	93.0,	95.5,	94.3,	92.5,	89.8,	85.0,	82.0,
4.0 K -	92.0,	93.8,	97.5,	100.0,	99.5,	98.3,	94.0,	92.0,
5.0 K -	86.5,	91.0,	94.5,	93.3,	89.8,	86.5,	80.8,	78.0,
6.3 K -	84.3,	87.8,	90.5,	89.5,	85.5,	84.0,	76.8,	75.5,
8.0 K -	75.8,	80.5,	84.5,	82.0,	79.3,	76.8,	71.8,	70.5,
10.0K -	73.0,	76.0,	79.0,	77.0,	74.8,	73.5,	71.5,	71.5,
12.5K -	71.8,	74.5,	78.0,	75.8,	73.5,	72.5,	70.8,	71.0,
16.0K -	71.8,	72.5,	74.8,	73.5,	72.3,	72.0,	71.8,	71.5,
20.0K -	69.8,	69.5,	71.0,	70.3,	70.5,	69.8,	70.0,	69.8,
FLAT -	100.0,	102.5,	105.5,	107.8,	107.5,	106.0,	102.0,	100.3,
A-WEIGHT -	99.5,	101.8,	105.0,	107.0,	104.5,	101.0,	98.0,	95.0,

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-34. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 12. Takeoff of Boeing 720 - Runway 19, Localizer Bldg. - Outside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 12, 1974 - 1231 Hours. See Figure A-5d for Noise level Time Histories.
Note: No Inside Frequency Spectra Data

1/3 OCTAVE CENTER FREQ. HZ	OUTSIDE NOISE LEVEL - DB RE 20_{μ}PA 1/2 SECOND INTEGRATION PERIODS(1)															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
25 -	52.3,	56.3,	47.8,	43.8,	43.8,	50.0,	47.3,	51.5,	50.0,	57.5,	60.8,	62.5,	65.3,	61.0,	62.3,	54.8,
31.5 -	55.8,	55.3,	54.0,	54.3,	53.0,	53.0,	51.3,	55.3,	55.5,	67.0,	67.8,	69.3,	68.8,	65.3,	65.5,	57.3,
40 -	58.8,	53.3,	61.3,	56.5,	61.0,	59.5,	59.0,	57.5,	66.0,	66.5,	70.0,	70.5,	69.8,	66.5,	65.8,	59.8,
50 -	56.5,	54.5,	55.3,	57.0,	58.5,	56.0,	55.8,	56.8,	60.3,	67.5,	69.5,	68.3,	65.0,	64.5,	63.8,	60.0,
63 -	57.5,	55.0,	55.0,	55.0,	58.5,	57.8,	56.0,	57.3,	61.3,	69.3,	71.5,	67.8,	66.5,	65.0,	64.5,	61.8,
80 -	57.0,	60.3,	58.0,	60.0,	59.8,	60.0,	56.5,	59.3,	63.3,	71.0,	72.8,	74.5,	76.8,	77.0,	70.8,	68.8,
100 -	58.0,	56.0,	60.0,	60.0,	55.5,	58.3,	56.0,	53.0,	59.3,	65.8,	77.8,	78.5,	81.0,	88.0,	78.8,	73.5,
125 -	57.0,	57.5,	57.5,	57.8,	55.3,	54.5,	56.5,	51.8,	64.8,	77.0,	81.0,	80.0,	85.5,	88.5,	77.3,	78.8,
160 -	59.0,	59.5,	60.5,	56.5,	58.3,	56.3,	56.5,	54.8,	69.0,	85.0,	88.8,	87.8,	92.5,	85.3,	80.5,	77.3,
200 -	55.5,	55.8,	58.8,	55.3,	57.5,	55.8,	54.0,	54.3,	64.3,	85.5,	90.0,	87.5,	93.5,	84.0,	80.0,	77.5,
250 -	58.8,	57.8,	60.0,	59.8,	56.8,	60.5,	55.5,	56.3,	64.0,	82.5,	85.5,	88.5,	92.8,	84.5,	85.3,	80.5,
315 -	58.0,	57.5,	57.3,	58.8,	58.8,	60.3,	59.0,	59.8,	71.5,	82.0,	91.0,	94.3,	92.3,	88.8,	85.0,	81.3,
400 -	59.8,	61.3,	58.5,	60.3,	60.8,	61.5,	61.3,	61.0,	72.5,	76.5,	90.8,	92.0,	92.5,	85.8,	86.3,	79.8,
500 -	59.5,	60.3,	59.8,	60.0,	62.3,	62.0,	62.3,	60.3,	71.5,	76.8,	94.3,	89.8,	98.8,	85.3,	82.3,	75.8,
630 -	59.5,	58.3,	56.0,	61.3,	63.0,	62.5,	61.0,	61.3,	72.8,	80.0,	89.3,	90.8,	91.5,	84.0,	82.3,	78.8,
800 -	60.5,	60.8,	60.8,	64.3,	62.5,	63.0,	60.8,	62.0,	72.8,	81.3,	88.3,	89.3,	90.5,	84.5,	81.0,	76.8,
1.0 K -	61.0,	61.5,	63.0,	66.8,	65.3,	64.0,	64.5,	62.5,	70.3,	79.0,	88.0,	91.5,	90.3,	84.8,	80.8,	76.8,
1.25K -	62.0,	62.0,	62.0,	66.3,	64.0,	66.8,	63.5,	67.5,	71.8,	79.3,	85.0,	87.0,	89.0,	85.3,	80.5,	75.3,
1.6 K -	61.0,	61.8,	62.5,	66.5,	64.5,	68.0,	72.8,	75.8,	82.5,	79.5,	84.8,	86.8,	89.3,	85.0,	81.3,	77.5,
2.0 K -	64.8,	62.5,	64.8,	70.5,	67.8,	76.0,	72.8,	72.8,	78.5,	80.0,	84.3,	86.3,	87.5,	84.5,	81.5,	81.0,
2.5 K -	77.3,	77.5,	79.3,	84.5,	80.0,	79.3,	72.0,	69.0,	71.0,	82.5,	84.3,	86.0,	89.3,	86.0,	81.5,	73.3,
3.15K -	67.0,	68.0,	69.0,	70.5,	69.3,	69.8,	68.3,	70.3,	73.8,	76.8,	82.0,	83.8,	87.0,	84.0,	78.0,	73.0,
4.0 K -	57.3,	59.5,	61.3,	64.0,	62.5,	65.3,	68.5,	64.0,	69.5,	75.0,	78.5,	81.3,	84.5,	81.0,	78.0,	75.3,
5.0 K -	56.3,	58.5,	62.0,	68.5,	67.8,	69.0,	63.3,	65.0,	71.0,	75.8,	77.3,	80.0,	83.3,	80.3,	77.0,	71.5,
6.3 K -	48.3,	50.8,	52.3,	57.5,	55.8,	58.0,	57.5,	57.0,	62.0,	68.5,	72.8,	74.8,	79.5,	77.0,	71.8,	70.0,
8.0 K -	41.0,	42.0,	43.8,	50.0,	49.5,	52.0,	49.8,	47.8,	54.0,	62.0,	67.3,	70.3,	74.5,	70.5,	67.3,	64.3,
10.0K -	40.0,	40.0,	40.0,	40.5,	41.3,	42.3,	41.0,	40.8,	50.0,	54.5,	61.3,	64.3,	68.5,	65.3,	60.0,	57.0,
12.5K -	40.0,	40.0,	40.0,	40.3,	40.0,	40.3,	40.0,	40.0,	50.0,	50.0,	51.5,	54.3,	60.8,	55.8,	51.0,	50.0,
16.0K -	40.0,	40.3,	40.5,	40.8,	40.3,	40.3,	40.8,	40.3,	50.0,	50.0,	50.0,	50.0,	51.8,	50.0,	50.0,	50.0,
20.0K -	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	40.3,	40.0,	50.0,	50.0,	50.0,	50.0,	50.0,	50.0,	50.0,	50.0,
FLAT -	78.8,	78.8,	80.8,	85.0,	81.3,	81.8,	79.3,	79.8,	85.8,	93.0,	100.0,	101.0,	103.0,	98.0,	94.0,	90.3,
A-WEIGHT -	79.5,	79.5,	81.5,	86.0,	82.0,	82.8,	80.0,	80.5,	85.5,	90.5,	97.3,	98.3,	100.0,	95.8,	91.5,	88.0,

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-35. 1/3 Octave Frequency Spectra - Noise Level Data - Event No. 10. Landing Boeing 720 - Runway 01, Flight Standards Bldg. - Outside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 12, 1974. . - 1143 Hours. See Fig. A-6b for Noise Level Time Histories. See Fig. A-36 for Frequency Spectra of Inside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	INSIDE NOISE LEVEL - DB RE 20 MPA 1/2 SECOND INTEGRATION PERIODS(1)															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
25 -			50.8,	51.8,	48.0,	51.5,	54.5,	48.3,	50.8,	54.8,	58.3,	54.8,	55.0,	54.5,	51.5,	46.3,
31.5 -			46.3,	42.0,	42.3,	46.0,	44.8,	45.3,	46.5,	52.0,	53.8,	57.0,	58.3,	54.5,	52.8,	48.0,
40 -			47.0,	42.5,	44.3,	42.0,	44.5,	43.3,	44.3,	54.8,	56.3,	54.3,	52.5,	49.3,	47.5,	46.3,
50 -			46.3,	48.8,	46.0,	47.8,	47.3,	46.5,	45.5,	53.8,	48.0,	54.3,	54.5,	52.3,	52.5,	48.5,
63 -			50.0,	48.5,	49.8,	48.5,	47.5,	48.5,	48.0,	53.8,	58.5,	61.3,	63.3,	65.3,	65.5,	54.8,
80 -			57.5,	56.3,	62.0,	62.0,	63.0,	60.5,	60.5,	59.5,	63.8,	66.0,	67.8,	68.3,	63.3,	64.5,
100 -			61.3,	64.3,	64.0,	61.5,	63.3,	60.0,	58.0,	60.5,	66.0,	69.3,	69.0,	69.5,	65.5,	60.5,
125 -			54.8,	54.8,	54.3,	54.0,	53.5,	52.0,	55.3,	64.5,	68.8,	63.8,	65.8,	70.8,	70.0,	61.5,
160 -			52.0,	51.8,	53.0,	53.3,	54.0,	53.5,	52.8,	64.3,	67.0,	62.5,	62.5,	62.8,	61.8,	58.3,
200 -			46.8,	46.8,	47.3,	44.3,	45.5,	45.3,	46.0,	56.5,	62.8,	61.5,	62.8,	62.5,	61.5,	56.5,
250 -			47.0,	45.0,	43.0,	46.0,	45.3,	48.5,	45.0,	55.3,	67.3,	60.3,	67.0,	64.0,	59.8,	53.0,
315 -			47.3,	45.0,	46.5,	47.3,	47.8,	47.0,	50.3,	58.0,	71.3,	66.5,	71.5,	71.0,	64.3,	57.0,
400 -			46.5,	46.5,	46.8,	49.3,	49.0,	45.3,	48.8,	54.5,	66.0,	70.0,	70.0,	66.5,	62.8,	57.5,
500 -			43.3,	43.3,	43.5,	44.0,	44.8,	42.5,	48.8,	58.5,	63.8,	72.3,	72.0,	66.0,	65.5,	54.5,
630 -			36.5,	37.5,	38.5,	39.0,	38.8,	35.5,	41.0,	52.5,	58.8,	63.5,	62.5,	63.3,	59.0,	50.8,
800 -			34.3,	36.5,	38.0,	38.3,	38.0,	35.3,	41.3,	50.5,	57.3,	59.0,	62.3,	61.3,	57.0,	48.8,
1.0 K -			35.5,	37.8,	40.3,	37.5,	39.3,	37.0,	39.5,	50.8,	55.5,	61.5,	61.0,	61.5,	57.0,	46.0,
1.25K -			35.8,	37.5,	39.0,	39.0,	39.8,	46.8,	44.3,	51.0,	57.3,	59.5,	59.0,	59.8,	56.5,	46.8,
1.6 K -			40.8,	44.0,	43.5,	47.0,	54.0,	55.5,	53.3,	56.8,	63.3,	64.0,	63.5,	66.3,	61.0,	53.0,
2.0 K -			44.5,	49.0,	47.5,	55.8,	53.8,	50.8,	48.8,	58.5,	62.5,	63.8,	65.0,	66.3,	63.0,	60.3,
2.5 K -			54.0,	60.3,	57.3,	57.5,	46.8,	42.8,	44.5,	56.0,	59.8,	61.3,	61.8,	63.3,	60.8,	49.5,
3.15K -			45.0,	47.0,	45.5,	45.3,	47.0,	45.3,	50.0,	54.0,	59.0,	59.8,	61.8,	62.5,	58.8,	52.0,
4.0 K -			42.5,	44.8,	45.8,	49.5,	50.3,	47.8,	49.0,	59.0,	61.5,	61.8,	64.5,	64.0,	61.5,	58.5,
5.0 K -			42.8,	46.5,	49.3,	52.0,	44.0,	44.8,	50.0,	57.0,	58.0,	59.3,	61.8,	61.8,	61.0,	53.5,
6.3 K -			30.0,	31.5,	32.5,	33.8,	33.0,	30.5,	33.8,	40.0,	44.5,	45.3,	48.8,	49.0,	44.5,	38.8,
8.0 K -			30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.3,	33.5,	35.5,	35.3,	35.3,	31.8,	30.0,
10.0K -			30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,
12.5K -			30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,
16.0K -			30.0,	30.5,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.5,	30.5,	30.0,	30.0,	30.3,
20.0K -			30.5,	30.0,	30.0,	30.5,	30.3,	30.0,	30.3,	30.0,	30.8,	30.0,	30.0,	30.5,	30.0,	30.3,
FLAT -			65.3,	67.0,	68.5,	67.8,	68.3,	66.0,	65.5,	71.5,	77.8,	78.3,	79.0,	79.5,	76.0,	70.5,
A-WEIGHT -			57.0,	62.0,	60.3,	62.3,	59.8,	59.3,	59.8,	67.0,	72.3,	74.8,	75.3,	75.0,	71.5,	65.3,

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-36. 1/3 Octave Frequency Spectra - Noise Level Data - Event No. 10. Landing Boeing 720 - Runway 01, Flight Standards Bldg. - Inside, Fairbanks International Airport Fairbanks, Alaska. Feb. 12, 1974 - 1143 Hours. See Fig. A-35 for Frequency Spectra of Outside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ		OUTSIDE NOISE LEVEL - DB RE 20_{μ}PA 1/2 SECOND INTEGRATION PERIODS(1)							
		1	2	3	4	5	6	7	8
25	-	67.8,	74.5,	76.5,					
31.5	-	65.8,	72.5,	73.8,					
40	-	71.3,	70.3,	79.0,					
50	-	66.0,	75.8,	74.3,					
63	-	71.3,	76.8,	73.3,					
80	-	71.0,	81.3,	78.5,					
100	-	68.5,	83.3,	81.8,					
125	-	69.5,	86.0,	85.8,					
160	-	76.0,	83.3,	88.5,					
200	-	77.0,	85.0,	87.8,					
250	-	79.3,	87.0,	86.8,					
315	-	80.8,	87.8,	83.3,					
400	-	81.8,	89.8,	83.3,					
500	-	79.8,	89.8,	87.8,					
630	-	79.3,	90.3,	87.5,					
800	-	83.8,	91.8,	86.0,					
1.0 K	-	85.8,	91.5,	85.8,					
1.25K	-	82.8,	91.8,	84.0,					
1.6 K	-	86.3,	92.3,	84.5,					
2.0 K	-	87.8,	94.0,	84.5,					
2.5 K	-	101.8,	94.8,	83.3,					
3.15K	-	94.3,	92.3,	84.0,					
4.0 K	-	88.5,	93.0,	81.8,					
5.0 K	-	93.0,	94.8,	82.3,					
6.3 K	-	90.0,	95.3,	85.8,					
8.0 K	-	89.8,	96.3,	81.5,					
10.0K	-	87.8,	92.5,	84.3,					
12.5K	-	84.0,	89.3,	80.8,					
16.0K	-	83.3,	88.5,	83.3,					
20.0K	-	85.5,	86.5,	84.8,					
FLAT	-	104.0,	105.5,	99.3,					
A-WEIGHT	-	104.5,	104.5,	96.3,					

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-37. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 10. Landing Boeing 720 - Runway 01, Localizer Bldg. - Outside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 12, 1974 - 1143 Hours. See Fig. A-6c for Noise Level Time Histories.
Note: No Inside Frequency Spectra Data

1/3 OCTAVE CENTER FREQ. HZ		OUTSIDE NOISE LEVEL - DB RE 20 μPA 1/2 SECOND INTEGRATION PERIODS(1)							
		1	2	3	4	5	6	7	8
25	-	60.0,	61.5,	65.5,	66.8,	61.3,	60.5,		
31.5	-	61.0,	61.0,	74.0,	72.5,	67.3,	64.8,		
40	-	61.5,	67.8,	77.3,	78.5,	74.5,	68.8,		
50	-	65.3,	69.8,	71.5,	82.0,	75.8,	68.0,		
63	-	74.3,	73.5,	76.8,	80.5,	78.5,	76.8,		
80	-	66.3,	70.5,	76.8,	79.8,	80.5,	75.8,		
100	-	66.5,	72.5,	79.5,	86.5,	85.0,	75.3,		
125	-	66.3,	76.0,	81.3,	84.5,	78.5,	74.0,		
160	-	71.8,	74.0,	81.5,	84.0,	79.8,	71.0,		
200	-	70.5,	75.3,	81.8,	85.5,	76.0,	70.0,		
250	-	71.8,	75.5,	84.5,	89.3,	81.0,	71.3,		
315	-	70.8,	80.0,	85.0,	88.0,	79.8,	71.0,		
400	-	75.0,	80.3,	86.0,	89.3,	79.5,	71.3,		
500	-	73.3,	79.5,	87.3,	90.3,	80.8,	72.5,		
630	-	74.8,	79.8,	87.3,	89.0,	79.8,	72.0,		
800	-	74.8,	81.0,	88.0,	89.0,	79.8,	73.5,		
1.0 K	-	74.5,	81.5,	88.3,	88.5,	80.5,	73.5,		
1.25K	-	74.8,	81.5,	88.8,	88.0,	80.5,	72.3,		
1.6 K	-	76.8,	83.3,	89.3,	87.5,	80.8,	73.8,		
2.0 K	-	78.3,	85.3,	91.0,	87.8,	80.0,	74.5,		
2.5 K	-	91.0,	97.5,	92.3,	87.0,	81.5,	76.5,		
3.15K	-	83.8,	86.5,	90.3,	86.8,	80.3,	75.3,		
4.0 K	-	81.0,	84.8,	91.8,	85.3,	78.8,	73.0,		
5.0 K	-	87.3,	91.3,	93.5,	85.0,	79.5,	73.8,		
6.3 K	-	81.5,	86.5,	96.0,	91.0,	81.3,	74.8,		
8.0 K	-	81.5,	88.3,	97.0,	88.0,	76.5,	70.0,		
10.0K	-	78.5,	85.0,	92.3,	84.0,	73.5,	67.0,		
12.5K	-	73.5,	80.8,	90.3,	82.3,	70.5,	64.5,		
16.0K	-	67.5,	75.3,	87.0,	78.0,	65.5,	61.3,		
20.0K	-	61.0,	66.8,	77.5,	69.0,	60.0,	60.0,		
FLAT	-	94.3,	99.5,	103.5,	100.5,	93.5,	87.5,		
A-WEIGHT	-	94.8,	100.0,	103.3,	99.0,	91.3,	85.3,		

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-38. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 4. Landing Boeing 720 - Runway 19, Motel Bldg. - Outside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 11, 1974 - 1245 Hours. See Fig. A-7a for Noise Level Time Histories. See Fig. A-39 for Frequency Spectra of Inside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ		INSIDE NOISE LEVEL - DB RE 20 μPA 1/2 SECOND INTEGRATION PERIODS(1)							
		1	2	3	4	5	6	7	8
25	-	50.8,	54.3,	55.0,	60.3,	60.8,			
31.5	-	50.0,	53.8,	60.3,	64.0,	58.3,			
40	-	45.0,	50.0,	61.3,	53.0,	50.5,			
50	-	48.0,	57.0,	54.0,	69.5,	57.5,			
63	-	50.0,	54.5,	58.0,	69.5,	64.0,			
80	-	41.8,	50.8,	57.5,	58.0,	57.3,			
100	-	47.0,	51.0,	56.3,	62.5,	60.5,			
125	-	47.5,	52.5,	58.5,	63.3,	58.5,			
160	-	54.5,	60.0,	57.0,	56.5,	50.3,			
200	-	48.8,	54.8,	56.0,	59.8,	47.8,			
250	-	44.5,	52.5,	59.3,	58.5,	49.5,			
315	-	43.0,	51.5,	59.0,	57.5,	44.5,			
400	-	49.8,	58.0,	64.3,	57.0,	49.0,			
500	-	47.0,	55.0,	62.5,	59.0,	48.0,			
630	-	43.0,	49.8,	59.0,	53.8,	46.5,			
800	-	42.8,	48.8,	58.8,	50.0,	41.3,			
1.0 K	-	43.3,	48.5,	57.0,	47.3,	40.8,			
1.25K	-	42.5,	47.8,	56.0,	46.5,	37.3,			
1.6 K	-	46.3,	51.0,	55.5,	46.8,	40.0,			
2.0 K	-	51.3,	55.5,	59.8,	45.8,	38.3,			
2.5 K	-	63.8,	68.8,	58.8,	45.3,	37.0,			
3.15K	-	54.0,	57.5,	56.3,	43.0,	36.0,			
4.0 K	-	52.0,	55.5,	56.8,	42.0,	36.8,			
5.0 K	-	56.5,	62.5,	57.0,	41.5,	34.5,			
6.3 K	-	46.8,	51.8,	57.5,	41.8,	33.3,			
8.0 K	-	47.3,	55.3,	57.8,	38.8,	31.8,			
10.0K	-	42.3,	50.8,	49.0,	34.5,	31.3,			
12.5K	-	36.3,	42.5,	45.5,	33.5,	31.0,			
16.0K	-	33.0,	35.8,	41.3,	32.5,	31.8,			
20.0K	-	31.8,	32.0,	32.8,	31.5,	32.0,			
FLAT	-	66.3,	71.5,	72.5,	75.5,	69.3,			
A-WEIGHT	-	66.0,	71.5,	69.0,	61.3,	53.5,			

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-39. 1/3 Octave Frequency Spectra-Noise Level Data-Event. No. 4. Landing Boeing 720 - Runway 19, Motel Bldg. - Inside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 11, 1974 - 1245 Hours. See Fig. A-38 for Frequency Spectra of Outside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	OUTSIDE NOISE LEVEL - DB RE 20 μPA 1/2 SECOND INTEGRATION PERIODS(1)							
	1	2	3	4	5	6	7	8
25 -	51.5,	56.8,	54.3,	51.5,	48.8,	46.8,	49.0,	48.3,
31.5 -	54.5,	54.5,	57.5,	59.0,	54.5,	56.5,	57.5,	58.3,
40 -	55.8,	55.8,	55.0,	59.5,	57.0,	52.8,	54.3,	53.8,
50 -	53.3,	59.8,	59.3,	61.3,	58.5,	50.8,	52.5,	49.0,
63 -	57.5,	61.5,	62.0,	60.8,	59.5,	60.3,	60.0,	61.8,
80 -	63.0,	65.8,	62.5,	67.5,	63.5,	59.0,	56.8,	56.8,
100 -	70.5,	74.3,	70.8,	66.5,	68.3,	63.5,	59.3,	55.8,
125 -	68.0,	74.5,	66.5,	71.3,	71.0,	67.5,	62.5,	61.0,
160 -	71.5,	73.3,	68.3,	75.5,	73.3,	70.3,	64.0,	59.8,
200 -	75.0,	78.5,	72.8,	76.8,	75.5,	72.0,	63.8,	59.5,
250 -	74.0,	82.0,	84.8,	83.0,	79.8,	77.5,	66.3,	62.0,
315 -	77.5,	77.5,	79.3,	85.0,	80.5,	77.8,	68.8,	61.8,
400 -	75.0,	80.0,	74.0,	86.5,	83.0,	83.0,	71.0,	61.0,
500 -	77.3,	81.5,	75.8,	81.5,	80.0,	80.3,	68.8,	62.3,
630 -	76.0,	78.5,	78.3,	81.8,	74.3,	72.8,	64.8,	61.8,
800 -	75.8,	75.8,	81.8,	81.8,	74.5,	73.0,	64.5,	61.0,
1.0 K -	77.0,	77.5,	77.5,	83.3,	77.0,	74.8,	64.8,	61.0,
1.25K -	76.3,	79.5,	73.8,	78.8,	74.0,	75.3,	67.3,	67.3,
1.6 K -	81.3,	79.5,	75.0,	77.8,	75.0,	75.8,	69.0,	59.8,
2.0 K -	75.5,	79.8,	76.8,	77.5,	76.3,	74.0,	64.8,	60.8,
2.5 K -	72.0,	77.0,	75.5,	73.8,	71.8,	71.5,	65.0,	62.3,
3.15K -	74.0,	76.0,	74.3,	72.3,	70.5,	73.8,	68.5,	60.0,
4.0 K -	73.3,	75.5,	74.5,	74.5,	73.3,	76.0,	65.8,	59.5,
5.0 K -	72.0,	74.5,	72.8,	71.8,	68.3,	69.8,	64.3,	56.8,
6.3 K -	65.5,	69.5,	68.3,	67.5,	65.8,	66.3,	59.0,	51.0,
8.0 K -	57.8,	65.0,	62.3,	61.5,	59.0,	63.5,	54.0,	48.3,
10.0K -	50.0,	57.3,	56.0,	55.5,	53.3,	57.8,	48.0,	43.5,
12.5K -	42.0,	46.0,	44.3,	46.0,	43.5,	46.3,	40.8,	41.0,
16.0K -	40.0,	40.5,	40.8,	40.5,	40.3,	41.0,	40.0,	40.5,
20.0K -	40.3,	40.0,	40.3,	40.0,	40.0,	40.3,	40.0,	40.3,
FLAT -	87.8,	91.3,	89.8,	92.5,	89.0,	88.0,	78.5,	74.5,
A-WEIGHT -	86.3,	89.0,	87.3,	90.0,	85.8,	85.5,	77.3,	72.8,

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-40. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 4. Landing Boeing 720 - Runway 19, Flight Standards Bldg. - Outside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 11, 1974 - 1245 Hours. See Fig. A-7b for Noise Level Time Histories. See Fig. A-41 for Frequency Spectra of Inside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	INSIDE NOISE LEVEL - DB RE 20 μPA 1/2 SECOND INTEGRATION PERIODS(1)							
	1	2	3	4	5	6	7	8
25 -	50.8,	47.8,	49.3,	47.3,	59.5,	43.0,	51.0,	54.3,
31.5 -	46.3,	46.0,	48.8,	47.8,	49.0,	45.5,	53.8,	54.0,
40 -	45.3,	45.3,	47.8,	44.8,	44.8,	43.8,	49.5,	46.3,
50 -	41.8,	45.8,	51.5,	47.0,	48.0,	48.0,	46.0,	44.8,
63 -	54.0,	56.5,	54.5,	55.8,	54.8,	52.8,	52.5,	53.0,
80 -	54.5,	61.0,	57.5,	57.0,	55.5,	50.8,	55.0,	48.5,
100 -	55.0,	64.0,	56.5,	52.0,	53.5,	50.0,	47.8,	44.5,
125 -	55.5,	62.0,	52.0,	56.3,	59.0,	57.0,	51.8,	49.0,
160 -	50.0,	51.3,	47.0,	58.0,	59.3,	52.0,	50.3,	42.0,
200 -	56.0,	57.8,	53.3,	59.8,	62.3,	56.8,	48.0,	40.8,
250 -	51.5,	57.0,	58.3,	57.0,	57.8,	54.0,	46.0,	43.0,
315 -	53.3,	59.5,	54.5,	60.5,	63.3,	59.8,	50.0,	45.5,
400 -	51.0,	58.0,	54.3,	57.0,	61.5,	59.8,	50.0,	45.5,
500 -	45.5,	57.8,	55.8,	56.8,	56.8,	59.0,	49.5,	44.3,
630 -	43.5,	50.0,	51.8,	54.0,	50.5,	51.5,	44.0,	40.0,
800 -	43.5,	50.3,	49.5,	51.3,	47.8,	48.3,	41.8,	35.5,
1.0 K -	41.3,	49.3,	44.5,	45.3,	44.8,	41.8,	38.8,	33.5,
1.25K -	41.0,	45.8,	42.0,	43.5,	44.5,	44.5,	41.0,	41.0,
1.6 K -	45.8,	45.0,	42.5,	43.5,	44.8,	45.0,	40.5,	37.5,
2.0 K -	38.8,	45.8,	44.5,	45.5,	46.0,	46.0,	40.3,	39.8,
2.5 K -	38.3,	44.8,	42.0,	43.5,	43.0,	44.3,	40.5,	36.8,
3.15K -	42.3,	45.5,	43.0,	44.5,	44.3,	44.5,	44.5,	38.0,
4.0 K -	41.8,	49.3,	44.5,	47.3,	48.8,	49.8,	42.0,	40.5,
5.0 K -	39.3,	44.0,	42.0,	43.0,	43.3,	41.8,	39.5,	37.3,
6.3 K -	30.0,	31.3,	30.0,	30.0,	31.0,	31.5,	30.0,	30.0,
8.0 K -	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,
10.0K -	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,
12.5K -	30.5,	30.8,	30.8,	31.0,	31.3,	30.8,	30.0,	31.5,
16.0K -	31.5,	31.8,	31.5,	31.5,	32.3,	31.8,	31.0,	31.8,
20.0K -	31.3,	32.5,	31.5,	32.0,	32.5,	32.3,	31.8,	32.0,
FLAT -	64.8,	70.3,	66.0,	68.5,	70.0,	67.0,	64.5,	61.5,
A-WEIGHT -	55.5,	61.5,	59.0,	61.5,	63.0,	61.3,	54.3,	50.5,

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-41. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 4. Landing Boeing 720 - Runway 19, Flight Standards Bldg. - Inside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 11, 1974 - 1245 Hours. See Fig. A-40 for Frequency Spectra of Outside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	OUTSIDE NOISE LEVEL - DB RE 20 MPA 1/2 SECOND INTEGRATION PERIODS(1)							
	1	2	3	4	5	6	7	8
25 -	54.5,	50.8,	54.8,	46.3,	51.8,	58.3,	62.8,	62.8,
31.5 -	53.8,	51.0,	53.3,	56.0,	64.0,	65.3,	69.8,	70.5,
40 -	54.0,	51.8,	54.3,	64.8,	67.8,	72.3,	70.3,	74.8,
50 -	51.8,	51.5,	58.0,	58.8,	67.8,	70.5,	72.8,	67.0,
63 -	54.0,	55.3,	57.0,	60.5,	65.5,	66.8,	73.5,	69.5,
80 -	50.0,	55.0,	56.0,	61.3,	70.0,	65.5,	71.8,	68.3,
100 -	52.5,	55.3,	62.0,	65.8,	68.5,	65.8,	68.0,	67.0,
125 -	55.0,	53.5,	60.5,	68.8,	70.8,	70.3,	71.0,	74.0,
160 -	56.3,	56.5,	66.3,	70.5,	72.8,	72.0,	74.3,	74.5,
200 -	56.3,	60.5,	68.5,	73.8,	70.0,	71.5,	72.5,	73.0,
250 -	62.0,	63.0,	65.5,	70.3,	65.8,	69.0,	66.8,	70.3,
315 -	61.8,	61.0,	64.5,	73.8,	71.5,	72.5,	68.0,	70.8,
400 -	64.5,	62.5,	68.5,	72.8,	68.8,	68.3,	66.0,	64.0,
500 -	69.5,	63.0,	69.5,	74.8,	71.0,	68.5,	62.0,	60.3,
630 -	73.0,	66.3,	69.3,	73.3,	69.0,	64.0,	58.0,	57.8,
800 -	74.5,	68.0,	71.5,	73.3,	67.3,	64.3,	60.8,	57.8,
1.0 K -	73.5,	67.0,	72.0,	72.3,	66.5,	61.8,	58.8,	56.8,
1.25K -	73.0,	68.3,	72.8,	72.3,	64.5,	62.0,	59.0,	56.5,
1.6 K -	73.3,	68.3,	71.8,	73.0,	65.0,	59.5,	58.3,	57.0,
2.0 K -	73.5,	68.8,	72.3,	72.0,	65.0,	61.0,	58.0,	57.8,
2.5 K -	72.3,	69.8,	74.5,	71.0,	69.0,	62.5,	60.3,	61.0,
3.15K -	81.3,	79.0,	80.3,	73.5,	72.3,	64.8,	62.8,	62.3,
4.0 K -	74.8,	71.0,	72.5,	68.5,	64.3,	57.0,	56.5,	56.3,
5.0 K -	71.5,	67.3,	69.0,	67.5,	63.3,	55.0,	54.8,	55.5,
6.3 K -	72.0,	69.8,	70.5,	68.8,	62.8,	55.5,	55.0,	53.8,
8.0 K -	65.8,	61.8,	62.8,	60.3,	55.0,	48.8,	48.5,	49.0,
10.0K -	64.3,	58.8,	59.3,	55.5,	50.8,	44.3,	43.0,	42.5,
12.5K -	55.8,	49.5,	49.3,	46.8,	43.0,	41.8,	41.5,	42.3,
16.0K -	46.0,	42.5,	43.0,	41.5,	41.5,	41.3,	41.5,	42.0,
20.0K -	42.0,	40.5,	42.0,	41.3,	41.3,	41.3,	40.8,	41.8,
FLAT -	85.5,	82.0,	84.8,	85.3,	82.0,	81.8,	82.8,	83.0,
A-WEIGHT -	85.8,	82.5,	84.5,	83.0,	79.0,	74.5,	72.3,	72.3,

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-42. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 20. Takeoff Boeing 707 - Runway 19, Flight Standards Bldg. - Outside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 13, 1974 - 1352 Hours. See Fig. A-8a for Noise Level Time Histories. See Fig. A-43 for Frequency Spectra of Inside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ		INSIDE NOISE LEVEL - DB RE 20μPA 1/2 SECOND INTEGRATION PERIODS(1)							
		1	2	3	4	5	6	7	8
25	-	45.5,	45.5,	48.0,	40.0,	43.3,	48.5,	55.0,	53.0,
31.5	-	38.0,	36.5,	46.0,	43.0,	53.3,	57.3,	59.3,	58.5,
40	-	34.8,	35.3,	42.5,	46.3,	51.3,	54.3,	56.0,	59.5,
50	-	36.5,	37.8,	41.0,	39.3,	43.8,	48.5,	48.3,	48.5,
63	-	43.0,	45.5,	49.0,	50.3,	52.3,	51.3,	58.5,	55.5,
80	-	41.3,	42.5,	45.0,	52.5,	55.8,	51.0,	61.8,	56.5,
100	-	36.3,	37.8,	43.8,	51.8,	57.0,	52.5,	57.5,	56.5,
125	-	41.5,	38.8,	50.5,	54.0,	57.8,	56.8,	61.5,	64.8,
160	-	38.8,	38.0,	47.3,	50.0,	58.0,	56.3,	56.8,	57.0,
200	-	40.0,	41.5,	45.8,	49.3,	52.0,	50.3,	51.3,	52.8,
250	-	42.0,	43.8,	49.3,	50.8,	46.8,	51.8,	47.5,	46.8,
315	-	48.8,	44.8,	52.5,	55.8,	50.3,	51.5,	45.3,	47.5,
400	-	51.5,	46.0,	51.8,	53.8,	52.3,	47.3,	42.0,	43.0,
500	-	52.0,	46.8,	52.8,	54.0,	51.0,	43.0,	46.3,	42.3,
630	-	45.8,	43.8,	47.3,	46.8,	41.8,	37.8,	34.0,	35.8,
800	-	43.5,	41.0,	46.0,	43.8,	38.3,	37.8,	33.3,	33.0,
1.0 K	-	44.3,	42.0,	46.0,	41.3,	36.0,	34.3,	33.0,	32.3,
1.25K	-	46.0,	43.8,	49.5,	42.3,	38.0,	34.5,	34.3,	32.8,
1.6 K	-	47.3,	46.0,	50.8,	45.3,	44.0,	36.3,	39.5,	34.5,
2.0 K	-	50.0,	51.8,	54.0,	47.3,	46.0,	39.8,	41.8,	36.0,
2.5 K	-	46.8,	50.0,	52.5,	46.5,	45.0,	39.8,	39.3,	34.8,
3.15K	-	58.8,	61.8,	58.3,	50.3,	49.5,	43.3,	41.8,	36.5,
4.0 K	-	53.8,	59.0,	55.3,	51.3,	45.0,	42.5,	40.0,	35.8,
5.0 K	-	49.0,	54.3,	53.8,	48.0,	40.5,	42.0,	36.5,	33.5,
6.3 K	-	36.0,	39.3,	41.3,	39.8,	33.5,	35.5,	30.0,	30.0,
8.0 K	-	30.0,	30.0,	31.3,	30.0,	30.0,	31.8,	30.0,	30.0,
10.0K	-	30.0,	30.0,	30.0,	30.0,	30.0,	30.3,	30.0,	30.0,
12.5K	-	30.8,	30.0,	30.0,	30.0,	30.0,	30.0,	30.3,	30.0,
16.0K	-	30.5,	30.8,	30.8,	30.5,	31.0,	31.0,	31.5,	30.5,
20.0K	-	30.5,	30.3,	31.0,	30.8,	30.8,	30.5,	30.5,	30.8,
FLAT	-	62.5,	64.3,	65.3,	63.8,	65.8,	65.0,	68.8,	68.8,
A-WEIGHT	-	62.3,	64.8,	64.5,	59.5,	57.0,	53.5,	53.8,	53.5,

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-43. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 20. Takeoff Boeing 707 - Runway 19, Flight Standards Bldg. - Inside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 13, 1974 - 1352 Hours. See Fig. A-42 for Frequency Spectra of Outside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ		OUTSIDE NOISE LEVEL - DB RE 20_{μ}PA 1/2 SECOND INTEGRATION PERIODS(1)							
		1	2	3	4	5	6	7	8
25	-	70.0,	80.5,						
31.5	-	70.0,	80.5,						
40	-	70.5,	82.5,						
50	-	76.8,	85.8,						
63	-	75.8,	85.5,						
80	-	83.3,	88.3,						
100	-	87.8,	98.0,						
125	-	88.3,	97.8,						
160	-	86.0	97.5,						
200	-	87.8,	92.5,						
250	-	88.0,	95.0,						
315	-	90.0,	92.0,						
400	-	89.0	92.3,						
500	-	89.3,	90.0,						
630	-	88.5,	88.5,						
800	-	90.3,	86.8,						
1.0 K	-	90.3,	85.8,						
1.25K	-	89.5,	85.0,						
1.6 K	-	89.5,	84.5,						
2.0 K	-	90.3,	84.0,						
2.5 K	-	91.8,	87.3,						
3.15K	-	100.5,	91.5,						
4.0 K	-	98.5,	99.3,						
5.0 K	-	92.3,	86.3,						
6.3 K	-	92.5,	85.5,						
8.0 K	-	87.3,	82.3,						
10.0K	-	85.0,	82.3,						
12.5K	-	84.3,	81.5,						
16.0K	-	82.5,	81.5,						
20.0K	-	80.5,	80.0,						
FLAT	-	107.3,	107.0,						
A-WEIGHT	-	105.5,	100.5,						

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-44. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 20. Takeoff Boeing 707 - Runway 19, Localizer Bldg. - Outside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 13, 1974 - 1352 Hours. See Fig. A-8d for Noise Level Time Histories. See Fig. A-45 for Frequency Spectra of Inside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	INSIDE NOISE LEVEL - DB RE 20μPA 1/2 SECOND INTEGRATION PERIODS(1)							
	1	2	3	4	5	6	7	8
25 -	69.8,	67.5,						
31.5 -	67.3,	73.5,						
40 -	64.0,	69.3,						
50 -	62.5,	66.5,						
63 -	72.0,	75.5,						
80 -	71.3,	90.3,						
100 -	73.0,	84.0,						
125 -	73.3,	87.5,						
160 -	71.5,	83.0,						
200 -	67.3,	75.0,						
250 -	66.8,	76.8,						
315 -	70.3,	71.3,						
400 -	69.3,	69.5,						
500 -	72.8,	73.3,						
630 -	65.5,	66.3,						
800 -	65.3,	61.5,						
1.0 K -	63.5,	60.5,						
1.25K -	61.8,	60.0,						
1.6 K -	61.3,	58.5,						
2.0 K -	60.5,	56.8,						
2.5 K -	59.0,	55.3,						
3.15K -	65.0,	56.5,						
4.0 K -	75.5,	85.8,						
5.0 K -	57.0,	55.0,						
6.3 K -	55.5,	53.3,						
8.0 K -	52.0,	51.3,						
10.0K -	52.5,	52.0,						
12.5K -	50.0,	50.0,						
16.0K -	50.3,	50.3,						
20.0K -	50.0,	50.0,						
FLAT -	83.5,	94.0,						
A-WEIGHT -	75.3,	78.5,						

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-45. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 20. Takeoff Boeing 707 - Runway 19, Localizer Bldg. - Inside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 13, 1974 - 1352 Hours. See Fig. A-44 for Frequency Spectra of Outside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	OUTSIDE NOISE LEVEL - DB RE 20 MPA 1/2 SECOND INTEGRATION PERIODS(1)															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
25 -	51.8,	48.8,	46.5,	46.0,	42.5,	45.3,	42.3,	46.8,	47.8,	51.5,	65.0,	71.0,	65.0,	60.0,	52.0,	49.5,
31.5 -	57.8,	53.5,	55.0,	54.5,	51.8,	54.8,	48.0,	50.3,	51.3,	56.5,	69.8,	68.0,	65.5,	54.8,	51.0,	51.5,
40 -	58.3,	58.5,	60.0,	55.5,	58.0,	52.8,	50.8,	54.3,	55.8,	59.0,	71.8,	69.5,	61.3,	49.5,	53.0,	54.3,
50 -	50.8,	57.5,	55.5,	58.8,	53.5,	50.5,	52.0,	47.8,	56.0,	60.8,	69.0,	68.0,	64.5,	56.8,	56.0,	52.8,
63 -	53.8,	58.0,	59.5,	58.8,	57.8,	55.5,	52.3,	52.3,	53.0,	56.5,	70.8,	69.5,	61.3,	55.8,	55.8,	54.3,
80 -	54.8,	57.3,	55.8,	55.5,	54.5,	51.8,	54.0,	53.0,	55.3,	53.0,	69.3,	74.0,	68.5,	59.0,	53.8,	51.8,
100 -	55.0,	57.8,	58.3,	59.5,	56.5,	53.5,	52.3,	49.5,	54.8,	59.0,	75.5,	80.0,	75.8,	65.8,	62.0,	57.0,
125 -	58.0,	59.5,	55.3,	55.0,	58.5,	56.8,	54.3,	52.5,	58.8,	62.5,	79.5,	83.0,	77.3,	68.5,	59.0,	56.0,
160 -	65.0,	64.0,	61.3,	60.5,	65.5,	60.8,	63.8,	57.0,	64.3,	72.5,	84.3,	86.5,	78.0,	69.8,	62.5,	56.5,
200 -	62.3,	61.5,	60.0,	60.8,	63.5,	59.8,	63.8,	52.5,	62.0,	69.3,	86.5,	87.8,	82.5,	69.5,	63.0,	56.0,
250 -	64.0,	63.3,	61.0,	60.3,	61.0,	60.0,	62.0,	48.8,	56.3,	68.0,	84.8,	84.8,	84.0,	68.8,	62.0,	58.5,
315 -	58.3,	61.3,	60.3,	60.3,	59.5,	60.5,	61.0,	54.5,	59.0,	67.3,	82.8,	85.0,	78.5,	71.0,	65.3,	59.8,
400 -	58.3,	59.8,	58.3,	60.3,	60.3,	59.8,	58.0,	53.3,	57.3,	70.0,	84.8,	90.3,	84.8,	74.0,	66.3,	61.0,
500 -	58.5,	58.8,	59.3,	61.3,	61.0,	62.8,	56.0,	53.3,	56.8,	73.3,	83.3,	83.8,	80.5,	73.0,	69.3,	63.0,
630 -	57.8,	58.0,	57.8,	63.0,	63.8,	62.5,	53.0,	51.3,	59.0,	68.8,	84.0,	86.0,	80.8,	70.0,	66.8,	61.5,
800 -	57.5,	58.0,	60.0,	60.8,	62.5,	59.8,	56.0,	56.3,	59.8,	70.3,	81.8,	83.8,	81.0,	73.3,	70.3,	62.5,
1.0 K -	58.3,	58.3,	62.8,	64.0,	63.8,	64.5,	61.3,	57.3,	61.3,	72.3,	83.8,	84.8,	81.5,	73.0,	68.0,	61.0,
1.25K -	61.8,	62.3,	65.8,	70.8,	66.5,	68.0,	59.8,	56.3,	61.0,	70.8,	83.3,	83.5,	81.3,	71.5,	68.3,	61.3,
1.6 K -	60.8,	63.8,	67.8,	71.0,	69.8,	68.0,	63.5,	62.3,	65.5,	70.3,	85.8,	83.5,	82.8,	72.8,	73.0,	68.3,
2.0 K -	61.5,	64.0,	66.3,	69.3,	69.3,	71.8,	68.8,	60.5,	63.8,	78.8,	84.5,	83.5,	80.3,	74.5,	75.0,	64.0,
2.5 K -	61.5,	64.0,	66.0,	69.5,	76.0,	80.3,	63.0,	61.0,	66.8,	74.8,	84.5,	82.3,	82.8,	82.0,	69.0,	63.3,
3.15K -	69.0,	72.3,	77.0,	80.8,	83.0,	77.0,	68.5,	69.0,	72.8,	70.5,	83.0,	81.5,	85.8,	74.5,	72.3,	66.3,
4.0 K -	66.0,	70.5,	73.5,	74.5,	69.8,	68.5,	70.5,	59.8,	63.5,	72.8,	82.3,	80.5,	80.0,	73.3,	72.0,	59.8,
5.0 K -	52.5,	55.0,	59.5,	63.8,	66.3,	70.3,	62.3,	57.5,	60.8,	68.5,	79.5,	79.0,	78.0,	74.0,	67.5,	61.0,
6.3 K -	47.8,	51.0,	56.5,	61.5,	67.5,	64.3,	59.0,	52.0,	56.5,	65.5,	75.5,	75.3,	76.5,	70.3,	64.3,	56.0,
8.0 K -	42.8,	45.8,	49.5,	53.5,	55.8,	56.5,	51.0,	45.0,	48.0,	58.3,	71.3,	70.3,	71.5,	67.0,	58.8,	50.3,
10.0K -	40.0,	40.0,	40.3,	42.5,	48.0,	46.5,	42.5,	40.0,	41.8,	50.5,	65.0,	64.8,	65.5,	59.0,	52.3,	44.3,
12.5K -	40.0,	40.3,	40.0,	40.5,	40.5,	40.3,	40.3,	40.3,	40.3,	41.8,	55.3,	55.3,	56.0,	48.3,	43.5,	41.3,
16.0K -	40.3,	40.8,	40.5,	40.8,	40.5,	40.5,	40.5,	40.5,	40.0,	40.5,	44.5,	45.3,	45.0,	41.5,	40.5,	40.5,
20.0K -	40.0,	40.8,	40.5,	40.3,	40.3,	40.0,	40.0,	40.0,	40.0,	40.0,	40.5,	40.5,	40.0,	40.3,	40.3,	40.3,
FLAT -	74.8,	77.0,	80.0,	83.3,	85.0,	83.5,	76.3,	72.5,	76.3,	84.0,	96.0,	97.0,	94.0,	85.8,	82.0,	75.0,
A-WEIGHT -	73.3,	76.8,	80.8,	84.0,	85.5,	84.5,	75.8,	72.3,	76.0,	83.8,	94.0,	94.5,	92.8,	85.8,	82.0,	74.8,

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-46. 1/3 Octave Frequency Spectra - Noise Level Data - Event No. 13. Landing Boeing 707 - Runway 01, Flight Standards Bldg. - Outside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 12, 1974 - 1259 Hours. See Fig. A-9b for Noise Level Time Histories. See Fig. A-47 for Frequency Spectra of Inside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	INSIDE NOISE LEVEL - DB RE 20_{μ}PA 1/2 SECOND INTEGRATION PERIODS(1)															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
25 -		39.3,	43.5,	49.5,	37.5,	46.8,	39.8,	52.3,	55.0,	57.3,	56.5,	61.3,	54.0,	52.0,	44.3,	
31.5 -		44.8,	45.3,	43.0,	40.0,	43.8,	40.5,	49.8,	53.5,	52.0,	57.5,	57.3,	52.0,	46.3,	43.3,	
40 -		44.3,	45.5,	38.8,	39.5,	39.5,	33.8,	43.0,	40.8,	45.0,	54.5,	46.3,	45.0,	41.0,	36.8,	
50 -		38.8,	40.0,	34.8,	38.8,	35.0,	35.8,	40.0,	39.0,	42.0,	49.5,	46.8,	45.0,	39.0,	35.0,	
63 -		46.8,	43.0,	46.0,	44.5,	48.0,	44.5,	43.0,	44.8,	46.5,	63.8,	63.0,	58.5,	51.3,	46.0,	
80 -		55.3,	46.8,	50.3,	49.5,	44.3,	45.0,	43.8,	44.3,	43.8,	60.3,	62.5,	54.3,	48.3,	46.5,	
100 -		45.8,	45.8,	45.3,	45.5,	42.8,	42.5,	42.3,	45.3,	48.0,	63.5,	61.3,	56.8,	44.0,	40.8,	
125 -		49.8,	44.3,	51.0,	47.8,	46.8,	50.8,	44.0,	46.3,	48.3,	63.3,	68.5,	60.8,	50.8,	43.8,	
160 -		42.0,	39.8,	40.0,	43.0,	43.0,	45.0,	40.5,	45.0,	49.8,	58.0,	61.8,	57.3,	47.5,	39.8,	
200 -		41.0,	39.5,	41.8,	42.0,	42.3,	41.3,	35.5,	41.8,	41.8,	61.0,	58.0,	60.3,	44.3,	41.3,	
250 -		44.3,	43.0,	42.8,	41.0,	41.0,	41.5,	39.5,	43.3,	44.3,	62.5,	61.3,	58.3,	48.5,	42.3,	
315 -		43.0,	42.8,	43.8,	44.0,	40.3,	39.0,	35.8,	39.8,	47.8,	63.5,	67.8,	61.5,	48.0,	43.5,	
400 -		40.8,	40.5,	42.0,	41.5,	41.3,	38.3,	33.8,	40.0,	47.3,	64.8,	64.0,	63.0,	48.8,	46.0,	
500 -		39.0,	39.3,	40.3,	40.8,	37.5,	38.0,	33.5,	37.3,	49.3,	62.5,	60.5,	60.8,	46.3,	43.5,	
630 -		34.8,	32.8,	36.3,	35.3,	33.3,	31.5,	30.8,	33.5,	42.0,	59.0,	57.0,	56.5,	40.8,	39.3,	
800 -		32.0,	31.3,	37.5,	34.5,	32.5,	31.5,	31.3,	35.0,	41.8,	58.0,	55.5,	55.8,	40.8,	36.3,	
1.0 K -		31.8,	32.3,	35.5,	34.5,	34.5,	34.0,	31.8,	33.5,	44.8,	56.8,	57.3,	55.5,	40.3,	37.5,	
1.25K -		34.8,	34.8,	37.3,	36.3,	38.8,	33.8,	32.5,	35.3,	43.3,	58.0,	56.3,	53.3,	41.3,	35.8,	
1.6 K -		38.3,	39.8,	44.0,	44.3,	43.5,	41.8,	39.5,	44.5,	49.3,	62.0,	60.3,	58.0,	42.8,	42.8,	
2.0 K -		41.5,	40.8,	44.0,	43.0,	44.8,	46.0,	37.5,	42.3,	55.0,	62.5,	62.0,	55.3,	48.3,	46.5,	
2.5 K -		38.0,	39.3,	41.5,	49.0,	52.0,	38.8,	37.5,	41.0,	46.5,	58.8,	59.5,	56.0,	52.5,	39.5,	
3.15K -		46.5,	51.5,	54.8,	58.5,	52.0,	44.3,	44.0,	46.3,	47.3,	59.5,	62.0,	62.0,	48.5,	45.3,	
4.0 K -		45.0,	47.0,	49.5,	46.8,	47.8,	50.5,	39.5,	44.0,	53.3,	62.5,	66.3,	57.8,	50.3,	48.0,	
5.0 K -		34.8,	36.8,	40.8,	43.0,	48.3,	40.3,	37.0,	40.3,	48.3,	59.3,	61.8,	56.0,	51.0,	44.0,	
6.3 K -		30.0,	30.0,	30.0,	35.3,	35.8,	31.0,	30.0,	30.0,	36.3,	46.3,	48.0,	42.5,	34.5,	30.3,	
8.0 K -		30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	34.5,	34.0,	30.0,	30.0,	30.0,	
10.0K -		30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	
12.5K -		30.0,	30.0,	30.0,	30.3,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,	
16.0K -		30.0,	30.0,	30.0,	30.8,	30.3,	30.3,	30.5,	30.0,	30.3,	30.5,	30.0,	30.0,	30.5,	30.3,	
20.0K -		30.0,	30.0,	30.0,	30.3,	30.0,	30.0,	30.0,	30.0,	30.0,	30.5,	30.0,	30.0,	30.0,	30.0,	
FLAT -		59.3,	57.8,	60.0,	60.8,	59.3,	57.3,	58.3,	60.3,	62.5,	74.8,	76.0,	71.5,	62.3,	57.0,	
A-WEIGHT -		52.3,	55.3,	58.0,	60.3,	58.3,	54.5,	49.0,	52.3,	60.3,	71.5,	72.5,	68.3,	59.0,	54.5,	

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-47. 1/3 Octave Frequency Spectra - Noise Level Data - Event No. 13. Landing Boeing 707 - Runway 01, Flight Standards Bldg. - Inside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 12, 1974 - 1259 Hours. See Fig. A-46 for Frequency Spectra of Outside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	OUTSIDE NOISE LEVEL - DB RE 20 μPA 1/2 SECOND INTEGRATION PERIODS(1)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
25 -	61.0,	60.0,	60.0,	60.0,	61.3,	60.0,	60.0,	63.3,	76.3,	75.8,	73.5,	71.8,	62.0,
31.5 -	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	65.8,	72.5,	79.8,	73.5,	69.0,	64.5,
40 -	67.5,	68.3,	67.0,	66.5,	67.8,	67.8,	68.0,	67.8,	75.8,	79.0,	75.0,	68.3,	66.3,
50 -	64.5,	64.3,	64.8,	64.3,	64.0,	64.0,	65.3,	63.5,	75.3,	80.0,	71.0,	65.0,	63.5,
63 -	75.5,	75.3,	75.3,	75.0,	75.5,	75.3,	75.3,	75.3,	77.0,	77.0,	76.8,	75.3,	75.5,
80 -	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	75.0,	74.8,	70.0,	64.8,	60.0,
100 -	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	72.0,	77.3,	72.3,	65.5,	60.0,
125 -	64.3,	63.0,	62.0,	60.0,	61.0,	62.3,	63.0,	62.0,	74.5,	78.5,	74.3,	67.5,	63.5,
160 -	63.3,	63.0,	62.8,	63.0,	62.8,	62.8,	62.8,	64.3,	78.8,	80.0,	77.5,	71.3,	64.0,
200 -	65.0,	64.8,	65.3,	65.3,	64.8,	65.0,	64.8,	66.3,	78.8,	82.0,	80.8,	73.0,	66.5,
250 -	64.5,	62.8,	62.3,	60.5,	60.3,	60.3,	61.5,	63.8,	82.5,	85.0,	86.5,	77.5,	66.5,
315 -	67.0,	63.5,	63.8,	62.8,	61.5,	61.8,	62.3,	67.0,	82.5,	88.8,	89.5,	77.8,	68.0,
400 -	65.8,	64.0,	62.3,	60.0,	61.0,	60.0,	60.3,	66.8,	83.0,	88.8,	90.0,	78.3,	66.8,
500 -	64.8,	65.8,	63.3,	61.0,	62.5,	60.0,	60.8,	67.5,	84.0,	89.0,	90.8,	81.0,	68.5,
630 -	63.0,	64.5,	64.8,	61.3,	62.8,	60.0,	61.0,	68.0,	83.5,	89.0,	90.5,	80.0,	70.8,
800 -	63.8,	63.5,	65.0,	61.8,	65.0,	61.5,	66.5,	69.8,	83.0,	89.8,	92.0,	82.8,	72.3,
1.0 K -	64.0,	62.5,	64.0,	64.8,	69.3,	64.5,	66.5,	72.0,	84.0,	91.8,	90.8,	83.8,	73.0,
1.25K -	68.8,	69.0,	68.8,	68.3,	75.5,	65.0,	67.0,	71.8,	83.5,	90.8,	90.8,	84.0,	75.5,
1.6 K -	73.3,	71.0,	71.8,	72.3,	72.5,	67.8,	71.0,	79.5,	82.8,	91.0,	92.8,	85.0,	76.0,
2.0 K -	70.8,	70.5,	71.3,	71.8,	75.0,	70.0,	73.0,	75.3,	84.8,	90.0,	92.0,	86.3,	80.5,
2.5 K -	71.5,	71.3,	71.0,	76.0,	76.0,	71.8,	74.5,	74.0,	86.0,	89.8,	91.5,	91.3,	85.5,
3.15K -	75.5,	75.8,	77.0,	79.8,	73.3,	77.3,	81.0,	80.0,	83.5,	90.3,	92.5,	88.8,	78.8,
4.0 K -	76.3,	75.5,	72.5,	70.8,	76.3,	71.3,	70.0,	76.0,	82.0,	89.5,	90.8,	85.5,	77.8,
5.0 K -	67.8,	67.0,	67.8,	71.8,	76.0,	72.0,	70.5,	76.5,	83.3,	88.0,	90.5,	87.3,	82.0,
6.3 K -	66.0,	67.3,	68.8,	72.3,	73.5,	69.0,	69.8,	74.8,	84.3,	88.8,	91.0,	86.5,	79.0,
8.0 K -	63.0,	64.0,	64.5,	67.3,	68.8,	65.0,	65.8,	71.3,	83.0,	87.8,	87.5,	83.3,	77.8,
10.0K -	61.0,	61.5,	62.5,	64.3,	65.5,	63.3,	64.5,	69.5,	81.8,	85.8,	86.8,	82.5,	75.3,
12.5K -	62.5,	62.0,	62.8,	62.3,	63.0,	63.0,	63.3,	65.0,	75.8,	81.3,	81.8,	76.8,	69.3,
16.0K -	62.8,	62.3,	62.5,	62.5,	62.8,	63.0,	63.3,	63.0,	68.5,	73.8,	74.0,	68.0,	64.3,
20.0K -	62.3,	62.5,	62.5,	62.5,	62.3,	62.3,	63.0,	62.3,	63.3,	65.0,	64.8,	62.3,	62.8,
FLAT -	83.5,	83.0,	83.5,	84.3,	85.3,	82.5,	85.3,	87.5,	96.3,	101.5,	102.8,	97.0,	90.8,
A-WEIGHT -	82.8,	82.3,	82.5,	83.8,	85.3,	81.3,	84.5,	87.0,	95.3,	100.5,	102.5,	97.3,	91.0,

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-48. 1/3 Octave Frequency Spectra - Noise Level Data - Event No. 13. Landing Boeing 707 - Runway 01, Security Tower Bldg. - Outside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 12, 1974 - 1259 Hours. See Fig. A-9c for Noise Level Time Histories. See Fig. A-49 for Frequency Spectra of Inside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	INSIDE NOISE LEVEL - DB RE 20 μPA 1/2 SECOND INTEGRATION PERIODS(1)						
	1	2	9	10	11	12	13
25 -				65.8,	63.0,	58.8,	54.5,
31.5 -				64.5,	59.0,	57.3,	54.5,
40 -				58.8,	54.0,	48.3,	42.8,
50 -				59.0,	51.3,	47.8,	40.8,
63 -				56.0,	56.0,	55.0,	54.5,
80 -				62.8,	57.0,	49.0,	48.5,
100 -				66.8,	62.0,	48.5,	41.5,
125 -				62.5,	57.3,	48.3,	43.3,
160 -				61.5,	56.8,	51.5,	44.5,
200 -				60.8,	58.0,	51.8,	47.3,
250 -				59.5,	62.8,	49.5,	43.5,
315 -				62.0,	62.8,	53.5,	44.0,
400 -				61.8,	67.3,	54.5,	46.8,
500 -				64.0,	70.8,	55.3,	44.8,
630 -				60.5,	61.5,	51.3,	43.0,
800 -				55.8,	62.0,	46.0,	44.5,
1.0 K -				57.5,	61.3,	49.3,	44.8,
1.25K -				57.5,	60.5,	49.3,	44.8,
1.6 K -				58.3,	60.5,	52.8,	47.8,
2.0 K -				55.5,	59.3,	53.0,	51.3,
2.5 K -				55.3,	59.0,	58.0,	59.0,
3.15K -				57.5,	60.3,	56.0,	51.8,
4.0 K -				55.3,	58.0,	51.5,	48.0,
5.0 K -				54.3,	57.5,	51.5,	50.0,
6.3 K -				52.5,	58.5,	52.3,	49.3,
8.0 K -				50.5,	57.8,	52.5,	48.3,
10.0K -				49.3,	55.8,	51.3,	47.0,
12.5K -				47.0,	52.0,	47.0,	45.8,
16.0K -				44.8,	48.0,	44.8,	44.5,
20.0K -				43.5,	44.5,	43.5,	43.5,
FLAT -				76.8,	76.0,	68.0,	63.5,
A-WEIGHT -				69.3,	73.0,	64.8,	62.5,

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-49. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 13. Landing Boeing 707 - Runway 01, Security Tower Bldg. - Inside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 12, 1974 - 1259 Hours. See Fig. A-48 for Frequency Spectra of Outside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ		OUTSIDE NOISE LEVEL - DB RE 20 μPA 1/2 SECOND INTEGRATION PERIODS(1)							
		1	2	3	4	5	6	7	8
25	-	60.0,	60.3,	79.3,	79.8,				
31.5	-	60.0,	60.5,	78.8,	82.8,				
40	-	60.8,	70.3,	77.5,	83.3,				
50	-	63.0,	67.8,	76.0,	80.0,				
63	-	63.8,	70.5,	79.3,	77.5,				
80	-	66.5,	72.8,	80.3,	81.8,				
100	-	65.5,	72.3,	80.5,	90.8,				
125	-	67.0,	72.3,	81.8,	88.3,				
160	-	70.0,	76.0,	82.8,	92.3,				
200	-	72.8,	79.0,	85.5,	88.5,				
250	-	74.5,	82.0,	85.3,	83.8,				
315	-	75.3,	81.0,	84.3,	89.0,				
400	-	75.3,	80.8,	82.8,	85.8,				
500	-	74.8,	79.5,	85.8,	88.0,				
630	-	72.5,	79.5,	86.3,	83.8,				
800	-	74.3,	78.0,	84.3,	83.5,				
1.0 K	-	74.3,	78.8,	85.5,	84.0,				
1.25K	-	78.3,	87.5,	89.8,	83.3,				
1.6 K	-	84.0,	89.0,	91.5,	83.3,				
2.0 K	-	82.3,	91.0,	89.3,	91.5,				
2.5 K	-	82.8,	88.8,	95.5,	93.5,				
3.15K	-	91.0,	97.0,	108.5,	87.5,				
4.0 K	-	89.0,	93.8,	101.5,	94.8,				
5.0 K	-	82.0,	88.5,	95.0,	92.8,				
6.3 K	-	80.8,	88.5,	98.3,	88.8,				
8.0 K	-	75.5,	81.3,	87.5,	83.5,				
10.0K	-	72.3,	76.0,	85.5,	78.0,				
12.5K	-	71.0,	73.5,	83.0,	76.8,				
16.0K	-	71.8,	71.5,	77.8,	73.3,				
20.0K	-	70.0,	69.8,	72.3,	70.3,				
FLAT	-	97.0,	102.5,	109.8,	102.8,				
A-WEIGHT	-	96.3,	102.5,	110.3,	101.0,				

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-50. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 13. Landing Boeing 707 - Runway 01, Localizer Bldg. - Outside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 12, 1974 - 1259 Hours. See Fig. A-9d for Noise Level Time Histories.
Note: No Inside Frequency Spectra Data

1/3 OCTAVE CENTER FREQ. HZ		OUTSIDE NOISE LEVEL - DB RE 20μPA 1/2 SECOND INTEGRATION PERIODS(1)							
		1	2	3	4	5	6	7	8
25	-	60.0,	66.3,	84.5,	76.0,	70.5,			
31.5	-	68.8,	69.8,	83.8,	89.3,	66.8,			
40	-	70.0,	76.3,	84.3,	86.3,	84.8,			
50	-	74.5,	83.3,	85.8,	82.5,	85.0,			
63	-	77.0,	87.3,	89.8,	91.5,	88.3,			
80	-	79.0,	84.8,	89.8,	91.3,	88.3,			
100	-	77.5,	83.8,	90.3,	91.5,	85.8,			
125	-	78.3,	84.8,	92.5,	91.0,	83.5,			
160	-	79.0,	85.8,	91.8,	90.5,	82.5,			
200	-	79.5,	84.8,	91.3,	88.5,	81.3,			
250	-	79.5,	85.5,	92.8,	88.3,	82.0,			
315	-	78.8,	86.3,	91.5,	85.8,	80.8,			
400	-	78.3,	84.3,	93.3,	86.0,	78.0,			
500	-	75.5,	83.8,	93.3,	85.3,	77.3,			
630	-	75.5,	82.5,	90.8,	84.0,	77.0,			
800	-	75.8,	83.0,	91.5,	84.0,	75.8,			
1.0 K	-	77.5,	86.0,	94.0,	84.8,	77.0,			
1.25K	-	78.3,	88.0,	97.0,	83.8,	75.3,			
1.6 K	-	79.8,	92.0,	98.3,	83.0,	74.0,			
2.0 K	-	85.8,	92.5,	96.5,	90.3,	83.8,			
2.5 K	-	86.8,	91.8,	106.5,	95.0,	85.8,			
3.15K	-	92.8,	102.3,	111.0,	88.3,	78.3,			
4.0 K	-	92.0,	100.5,	99.0,	88.0,	79.0,			
5.0 K	-	85.0,	92.3,	102.5,	94.8,	82.0,			
6.3 K	-	86.5,	96.3,	105.3,	92.0,	80.3,			
8.0 K	-	84.3,	94.8,	103.8,	93.3,	79.8,			
10.0K	-	81.3,	94.5,	104.0,	93.3,	78.3,			
12.5K	-	76.8,	90.3,	103.0,	89.8,	73.8,			
16.0K	-	70.3,	86.0,	98.3,	86.5,	68.3,			
20.0K	-	62.8,	77.0,	90.8,	76.8,	62.3,			
FLAT	-	98.3,	107.5,	114.8,	104.0,	96.3,			
A-WEIGHT	-	98.5,	107.3,	115.0,	101.5,	92.0,			

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-51. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 5. Landing Boeing 707 - Runway 19, Motel Bldg. - Outside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 11, 1974 - 1307 Hours. See Fig. A-10a for Noise Level Time Histories. See Fig. A-52 for Frequency Spectra of Inside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ		INSIDE NOISE LEVEL - DB RE 20 μPA 1/2 SECOND INTEGRATION PERIODS(1)							
		1	2	3	4	5	6	7	8
25	-	47.3,	47.0,	56.3,	57.8,	71.0,			
31.5	-	51.0,	49.8,	59.0,	66.8,	77.5,			
40	-	44.3,	48.5,	54.8,	65.3,	71.0,			
50	-	54.5,	58.5,	62.5,	71.5,	70.5,			
63	-	63.0,	61.3,	62.8,	73.3,	74.3,			
80	-	53.3,	57.3,	60.8,	64.8,	71.3,			
100	-	54.3,	57.8,	64.0,	68.5,	73.0,			
125	-	57.5,	58.3,	60.3,	67.3,	73.5,			
160	-	52.3,	56.5,	64.8,	75.3,	70.0,			
200	-	56.3,	62.8,	68.0,	74.0,	69.0,			
250	-	58.5,	62.5,	63.8,	73.0,	67.3,			
315	-	50.5,	58.0,	64.0,	71.3,	66.5,			
400	-	50.0,	58.8,	64.5,	72.0,	68.5,			
500	-	49.0,	57.8,	62.8,	68.5,	66.8,			
630	-	48.5,	53.3,	60.3,	65.5,	62.5,			
800	-	47.0,	54.0,	61.5,	65.0,	62.5,			
1.0 K	-	47.0,	56.5,	61.3,	64.0,	65.5,			
1.25K	-	51.3,	59.0,	62.5,	71.0,	63.3,			
1.6 K	-	54.0,	60.8,	66.3,	69.3,	62.0,			
2.0 K	-	56.0,	62.8,	68.3,	69.5,	69.5,			
2.5 K	-	54.8,	63.5,	67.0,	70.8,	83.5,			
3.15K	-	59.3,	66.8,	74.3,	80.5,	67.8,			
4.0 K	-	56.0,	64.5,	72.8,	69.5,	62.5,			
5.0 K	-	52.0,	58.8,	63.0,	68.0,	71.0,			
6.3 K	-	52.0,	59.8,	67.0,	70.3,	63.0,			
8.0 K	-	48.5,	57.8,	65.3,	66.3,	64.8,			
10.0K	-	42.5,	51.5,	61.3,	65.0,	62.5,			
12.5K	-	36.0,	46.3,	56.3,	60.5,	59.0,			
16.0K	-	33.3,	39.8,	52.3,	55.5,	55.5,			
20.0K	-	32.8,	33.5,	43.8,	46.3,	47.0,			
FLAT	-	69.3,	74.5,	80.8,	85.5,	85.8,			
A-WEIGHT	-	65.5,	72.8,	79.8,	84.0,	84.3,			

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-52. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 5. Landing Boeing 707 - Runway 19, Motel Bldg. - Inside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 11, 1974 - 1307 Hours. See Fig. A-51 for Frequency Spectra of Outside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ		OUTSIDE NOISE LEVEL - DB RE 20μPA 1/2 SECOND INTEGRATION PERIODS(1)							
		1	2	3	4	5	6	7	8
25	-	51.8,	49.0,	52.8,	49.8,	53.5,	52.0,		
31.5	-	60.3,	56.0,	59.3,	60.0,	61.3,	54.0,		
40	-	58.0,	59.0,	59.0,	62.0,	62.8,	57.8,		
50	-	64.5,	62.5,	65.8,	62.5,	60.3,	56.5,		
63	-	64.3,	66.8,	66.8,	59.0,	58.8,	55.5,		
80	-	59.5,	60.5,	59.5,	60.0,	59.0,	62.8,		
100	-	61.5,	61.8,	63.0,	62.8,	65.8,	62.3,		
125	-	63.3,	63.0,	65.5,	66.5,	66.0,	62.0,		
160	-	64.8,	67.3,	64.5,	68.0,	66.5,	67.3,		
200	-	61.8,	64.3,	67.5,	66.5,	67.0,	65.0,		
250	-	63.5,	64.3,	65.8,	68.0,	71.0,	66.0,		
315	-	63.0,	65.5,	65.5,	64.0,	69.5,	63.3,		
400	-	65.5,	64.8,	66.3,	67.5,	67.0,	62.5,		
500	-	65.5,	65.5,	76.5,	76.5,	65.5,	63.0,		
630	-	65.3,	65.0,	70.8,	69.0,	66.8,	62.0,		
800	-	64.0,	64.3,	65.5,	66.5,	65.0,	63.0,		
1.0 K	-	65.8,	66.5,	65.8,	70.5,	70.3,	69.8,		
1.25K	-	67.8,	69.8,	71.8,	75.5,	70.5,	65.3,		
1.6 K	-	70.5,	72.8,	72.5,	76.3,	71.3,	66.3,		
2.0 K	-	67.0,	70.3,	71.0,	74.3,	78.3,	77.5,		
2.5 K	-	65.8,	72.3,	76.8,	82.5,	78.5,	69.0,		
3.15K	-	77.0,	80.8,	81.3,	83.3,	76.3,	71.0,		
4.0 K	-	68.3,	71.0,	72.0,	76.0,	73.0,	73.0,		
5.0 K	-	62.5,	65.0,	70.5,	74.3,	70.8,	67.0,		
6.3 K	-	57.5,	63.8,	67.8,	73.5,	66.5,	64.5,		
8.0 K	-	49.8,	54.5,	59.0,	65.0,	60.5,	58.8,		
10.0K	-	41.0,	46.5,	51.5,	57.5,	53.0,	51.0,		
12.5K	-	40.0,	40.0,	40.8,	44.3,	41.3,	41.0,		
16.0K	-	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,		
20.0K	-	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,		
FLAT	-	80.3,	84.0,	85.0,	88.3,	85.0,	81.5,		
A-WEIGHT	-	80.3,	83.8,	85.3,	88.5,	85.3,	81.3,		

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-53. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 5. Landing Boeing 707 - Runway 19, Flight Standards Bldg. - Outside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 11, 1974 - 1307 Hours. See Fig. A10b for Noise Level Time Histories. See Fig. A-54 for Frequency Spectra of Inside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ		INSIDE NOISE LEVEL - DB RE 20 μPA 1/2 SECOND INTEGRATION PERIODS(1)							
		1	2	3	4	5	6	7	8
25	-	43.5,	55.0,	47.3,	50.5,	51.5,	57.5,		
31.5	-	39.0,	50.8,	46.0,	47.5,	44.5,	45.8,		
40	-	43.0,	50.3,	40.8,	45.3,	46.5,	44.0,		
50	-	53.5,	51.3,	51.3,	44.5,	45.0,	45.0,		
63	-	52.3,	54.5,	55.0,	48.5,	46.0,	48.0,		
80	-	54.3,	48.8,	48.8,	51.5,	54.3,	50.3,		
100	-	54.5,	53.3,	51.5,	53.0,	53.5,	49.0,		
125	-	54.8,	54.3,	55.0,	56.5,	52.0,	49.8,		
160	-	47.8,	47.5,	45.5,	46.5,	47.0,	48.3,		
200	-	41.0,	41.5,	43.8,	43.3,	47.5,	45.8,		
250	-	45.8,	45.0,	45.5,	45.3,	49.8,	43.8,		
315	-	43.8,	47.5,	45.8,	45.3,	46.0,	44.0,		
400	-	42.8,	46.0,	46.5,	48.3,	45.0,	43.5,		
500	-	45.3,	45.8,	46.5,	50.0,	43.5,	41.5,		
630	-	36.0,	38.5,	40.5,	41.8,	37.0,	36.0,		
800	-	35.3,	37.3,	36.3,	41.3,	36.5,	36.3,		
1.0 K	-	33.0,	34.0,	35.0,	36.3,	37.3,	37.8,		
1.25K	-	36.8,	39.5,	42.0,	42.5,	38.0,	32.5,		
1.6 K	-	42.8,	45.5,	45.3,	45.3,	38.5,	35.5,		
2.0 K	-	37.8,	41.5,	39.0,	39.8,	47.0,	45.3,		
2.5 K	-	40.8,	42.0,	47.3,	47.8,	51.0,	39.3,		
3.15K	-	53.3,	54.8,	50.5,	53.3,	47.8,	42.0,		
4.0 K	-	44.5,	45.8,	43.0,	46.5,	46.3,	45.0,		
5.0 K	-	41.5,	43.0,	40.5,	40.8,	41.8,	38.0,		
6.3 K	-	31.5,	34.5,	33.8,	33.3,	30.0,	30.0,		
8.0 K	-	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,		
10.0K	-	30.0,	30.0,	30.0,	30.0,	30.0,	30.0,		
12.5K	-	30.0,	30.0,	30.0,	30.3,	30.0,	30.0,		
16.0K	-	30.0,	30.0,	30.3,	30.0,	31.0,	30.5,		
20.0K	-	30.5,	30.0,	30.0,	30.3,	30.5,	30.8,		
FLAT	-	62.3,	63.0,	62.5,	63.0,	62.3,	59.8,		
A-WEIGHT	-	55.5,	57.5,	56.3,	57.8,	56.5,	52.3,		

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-54. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 5. Landing Boeing 707 - Runway 19, Flight Standards Bldg. - Inside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 11, 1974 - 1307 Hours. See Fig. A-53 for Frequency Spectra of Outside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	OUTSIDE NOISE LEVEL - DB RE 20_{μ}PA 1/2 SECOND INTEGRATION PERIODS(1)													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
25 -	60.0,	60.0,	61.0,	60.3,	60.0,	60.8,	66.5,	70.0,	67.3,	75.0,	69.8,	62.5,	61.3,	60.0,
31.5 -	61.3,	65.5,	64.0,	64.0,	65.3,	67.8,	66.5,	72.3,	71.5,	68.0,	68.3,	66.3,	65.5,	63.3,
40 -	70.0,	69.3,	70.0,	68.3,	71.8,	68.5,	73.5,	71.3,	73.0,	73.3,	73.5,	70.8,	70.0,	71.3,
50 -	73.0,	73.8,	73.8,	72.8,	72.8,	72.3,	73.0,	72.5,	73.0,	73.8,	73.5,	73.3,	72.8,	73.3,
63 -	75.3,	74.3,	75.5,	75.5,	71.0,	73.0,	76.0,	73.0,	76.8,	72.8,	75.5,	74.8,	75.8,	76.0,
80 -	64.3,	64.0,	64.5,	62.8,	62.8,	62.8,	68.5,	66.0,	72.5,	67.0,	68.0,	64.3,	62.8,	61.5,
100 -	63.5,	65.5,	61.8,	62.0,	63.0,	64.0,	66.8,	73.0,	70.8,	69.0,	69.5,	64.0,	63.0,	62.0,
125 -	63.3,	63.3,	60.0,	60.5,	60.5,	60.0,	74.5,	74.0,	72.0,	70.8,	71.3,	63.0,	60.5,	60.0,
160 -	66.8,	63.0,	62.8,	60.3,	61.3,	61.8,	79.8,	75.0,	75.0,	71.5,	73.5,	63.3,	60.3,	62.5,
200 -	66.0,	63.5,	65.0,	60.8,	63.8,	64.3,	79.8,	77.3,	75.0,	75.8,	72.3,	63.3,	62.3,	63.0,
250 -	66.0,	63.8,	61.5,	60.0,	61.3,	64.0,	77.5,	81.0,	80.8,	78.0,	75.0,	66.0,	61.8,	63.3,
315 -	67.8,	66.0,	63.3,	62.8,	63.3,	64.8,	78.0,	78.8,	79.0,	80.3,	73.8,	66.3,	64.0,	64.8,
400 -	64.5,	67.0,	61.8,	60.0,	61.3,	60.8,	80.0,	75.3,	74.5,	80.3,	74.3,	66.8,	65.0,	64.3,
500 -	67.0,	69.3,	62.5,	61.3,	61.3,	62.5,	79.0,	70.0,	77.8,	79.8,	75.8,	68.5,	65.0,	65.5,
630 -	68.5,	66.3,	62.8,	62.3,	60.5,	62.8,	73.8,	71.8,	76.0,	81.3,	76.0,	68.5,	67.5,	65.5,
800 -	66.0,	64.0,	63.0,	61.8,	64.0,	63.5,	76.0,	73.0,	73.0,	81.3,	79.0,	71.8,	73.3,	70.8,
1.0 K -	67.8,	65.0,	64.3,	67.0,	64.8,	70.0,	74.8,	72.8,	77.0,	83.8,	79.8,	77.0,	73.0,	67.8,
1.25K -	68.3,	68.0,	72.0,	65.5,	63.8,	70.8,	74.3,	73.5,	78.8,	84.3,	83.8,	78.3,	71.5,	69.0,
1.6 K -	73.5,	72.8,	72.5,	65.3,	65.3,	70.5,	75.8,	76.0,	80.8,	87.8,	85.3,	77.5,	81.3,	78.0,
2.0 K -	73.3,	72.0,	71.0,	68.0,	65.0,	74.3,	78.3,	81.0,	83.0,	87.5,	86.8,	86.8,	76.5,	70.8,
2.5 K -	73.0,	73.0,	76.3,	67.0,	69.8,	70.3,	76.3,	78.3,	80.8,	83.0,	85.5,	85.0,	73.8,	71.8,
3.15K -	83.3,	82.8,	70.3,	71.8,	68.8,	74.5,	79.0,	77.3,	80.5,	82.8,	90.0,	78.3,	83.5,	78.3,
4.0 K -	70.5,	69.3,	70.5,	70.0,	63.3,	79.8,	77.3,	77.8,	82.3,	82.8,	85.3,	79.3,	76.8,	71.8,
5.0 K -	66.8,	67.5,	72.0,	64.8,	62.3,	70.5,	74.0,	74.3,	78.5,	81.3,	83.8,	82.0,	79.5,	75.5,
6.3 K -	67.3,	66.3,	65.8,	62.3,	60.3,	71.0,	73.3,	74.8,	77.8,	79.8,	85.0,	81.8,	77.3,	72.3,
8.0 K -	60.0,	60.5,	61.0,	60.0,	60.0,	65.8,	69.5,	70.5,	73.8,	77.0,	80.0,	78.0,	73.0,	70.0,
10.0K -	60.0,	60.0,	60.0,	60.0,	60.0,	61.3,	66.0,	66.3,	69.8,	74.3,	79.0,	74.3,	70.5,	66.8,
12.5K -	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	61.8,	61.5,	64.3,	68.5,	73.8,	69.3,	64.3,	61.5,
16.0K -	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	61.5,	64.3,	61.5,	60.3,	60.0,
20.0K -	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,
FLAT -	86.5,	85.5,	83.8,	81.3,	81.0,	85.0,	89.8,	89.8,	91.8,	95.0,	95.8,	92.0,	88.8,	85.8,
A-WEIGHT -	85.5,	85.0,	81.8,	77.8,	77.0,	84.0,	87.8,	88.3,	91.0,	95.0,	95.8,	92.0,	88.0,	84.8,

(1) integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-55. 1/3 Octave Frequency Spectra - Noise Level Data - Event No. 5. Landing Boeing 707 - Runway 19, Security Tower Bldg. - Outside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 11, 1974 - 1307 Hours. See Fig. A-10c for Noise Level Time Histories. See Fig. A-56 for Frequency Spectra of Inside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	INSIDE NOISE LEVEL - DB RE 20μPA 1/2 SECOND INTEGRATION PERIODS(1)						
	1 // 8	9	10	11	12	13	14
25 -	66.3,	63.5,	64.8,	73.8,	65.3,	50.0,	
31.5 -	64.5,	60.3,	64.5,	73.8,	63.3,	51.5,	
40 -	57.0,	54.0,	57.3,	63.8,	54.8,	48.8,	
50 -	54.8,	57.3,	53.8,	57.0,	50.0,	49.8,	
63 -	56.8,	57.5,	56.8,	59.8,	59.0,	56.8,	
80 -	58.3,	56.3,	61.8,	59.0,	51.0,	50.0,	
100 -	54.0,	59.3,	53.5,	54.3,	46.3,	47.3,	
125 -	53.8,	50.0,	49.8,	50.8,	46.0,	44.3,	
160 -	51.0,	48.5,	46.5,	50.3,	43.0,	55.5,	
200 -	55.3,	54.8,	55.8,	54.8,	46.5,	50.3,	
250 -	61.5,	59.5,	59.8,	54.3,	44.3,	57.3,	
315 -	56.8,	55.3,	57.3,	53.5,	46.0,	57.8,	
400 -	53.3,	49.3,	60.8,	58.5,	46.8,	57.8,	
500 -	53.0,	51.0,	57.3,	56.5,	47.3,	63.8,	
630 -	50.3,	46.3,	55.5,	50.5,	48.0,	51.3,	
800 -	48.5,	46.5,	54.5,	49.3,	50.0,	47.0,	
1.0 K -	47.5,	48.3,	53.8,	52.0,	49.8,	45.0,	
1.25K -	44.8,	48.8,	55.8,	53.0,	47.8,	48.0,	
1.6 K -	49.0,	53.5,	57.0,	57.8,	50.5,	51.8,	
2.0 K -	51.0,	55.8,	59.5,	55.8,	51.3,	53.0,	
2.5 K -	50.3,	52.0,	59.0,	57.5,	59.8,	55.3,	
3.15K -	47.5,	49.5,	52.8,	55.5,	50.8,	53.5,	
4.0 K -	46.0,	52.3,	54.8,	52.5,	47.0,	50.5,	
5.0 K -	45.3,	48.0,	51.3,	51.8,	50.0,	47.3,	
6.3 K -	42.5,	48.0,	50.8,	51.5,	49.0,	46.0,	
8.0 K -	41.3,	44.0,	47.0,	47.8,	49.8,	45.3,	
10.0K -	40.3,	42.3,	46.0,	49.3,	48.8,	43.0,	
12.5K -	40.5,	41.3,	43.3,	45.3,	44.0,	40.8,	
16.0K -	41.8,	42.0,	41.5,	43.3,	42.0,	42.3,	
20.0K -	41.5,	41.5,	40.8,	41.0,	41.0,	42.0,	
FLAT -	72.0,	71.0,	73.3,	80.3,	69.8,	68.0,	
A-WEIGHT -	61.3,	63.0,	68.3,	65.5,	64.0,	65.0,	

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure A-56. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 5. Landing Boeing 707 - Runway 19, Security Tower Bldg. - Inside, Fairbanks International Airport, Fairbanks, Alaska. Feb. 11, 1974 - 1307 Hours. See Fig. A-55 for Frequency Spectra of Outside Noise Data for Coincident 1/2 Second Time Periods

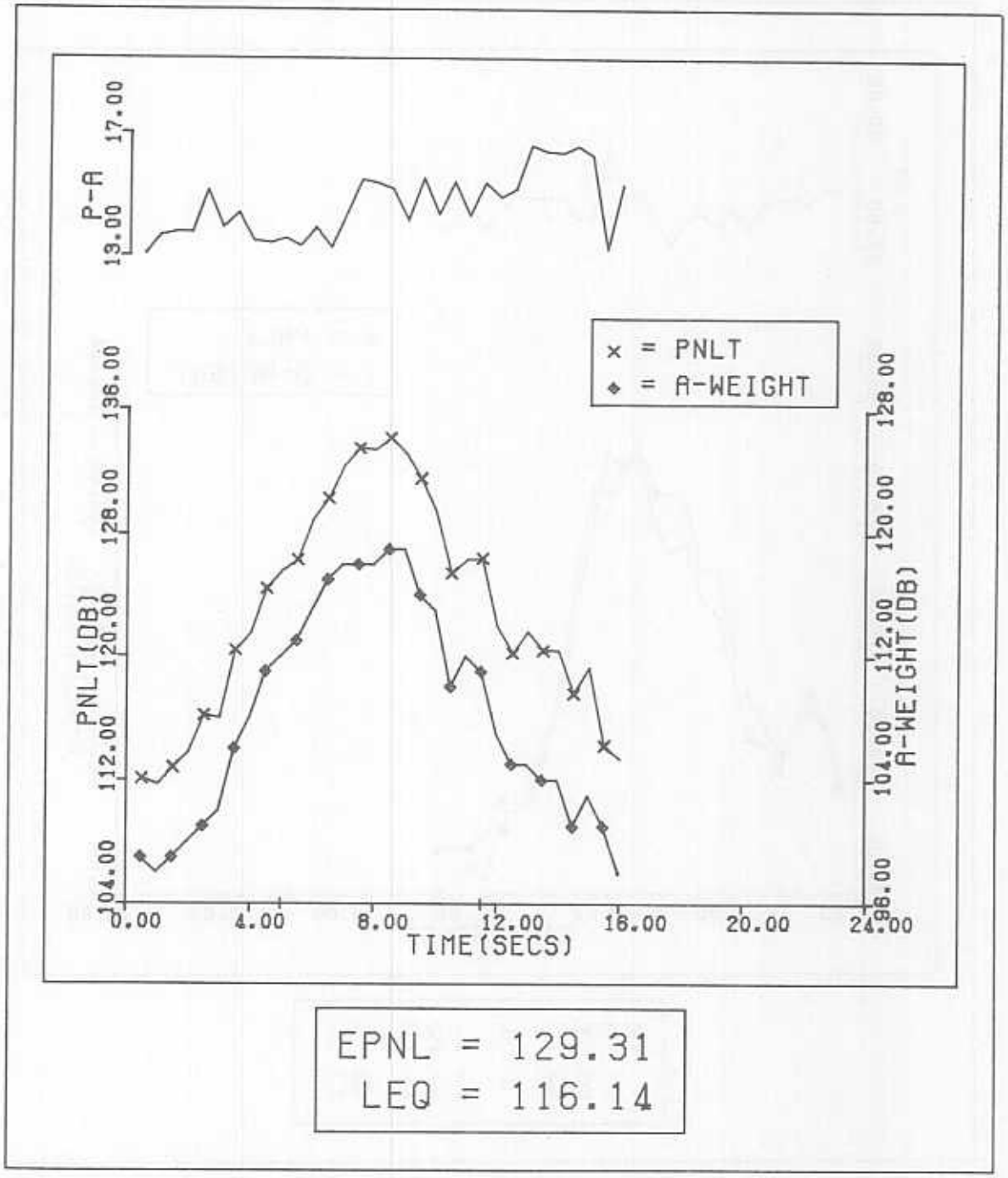


Figure A-57. EPNL/PNLT History - Event 23
Takeoff Concorde F-WTSA - Runway 19, Localizer Outside, Fairbanks International Airport, Fairbanks, Alaska

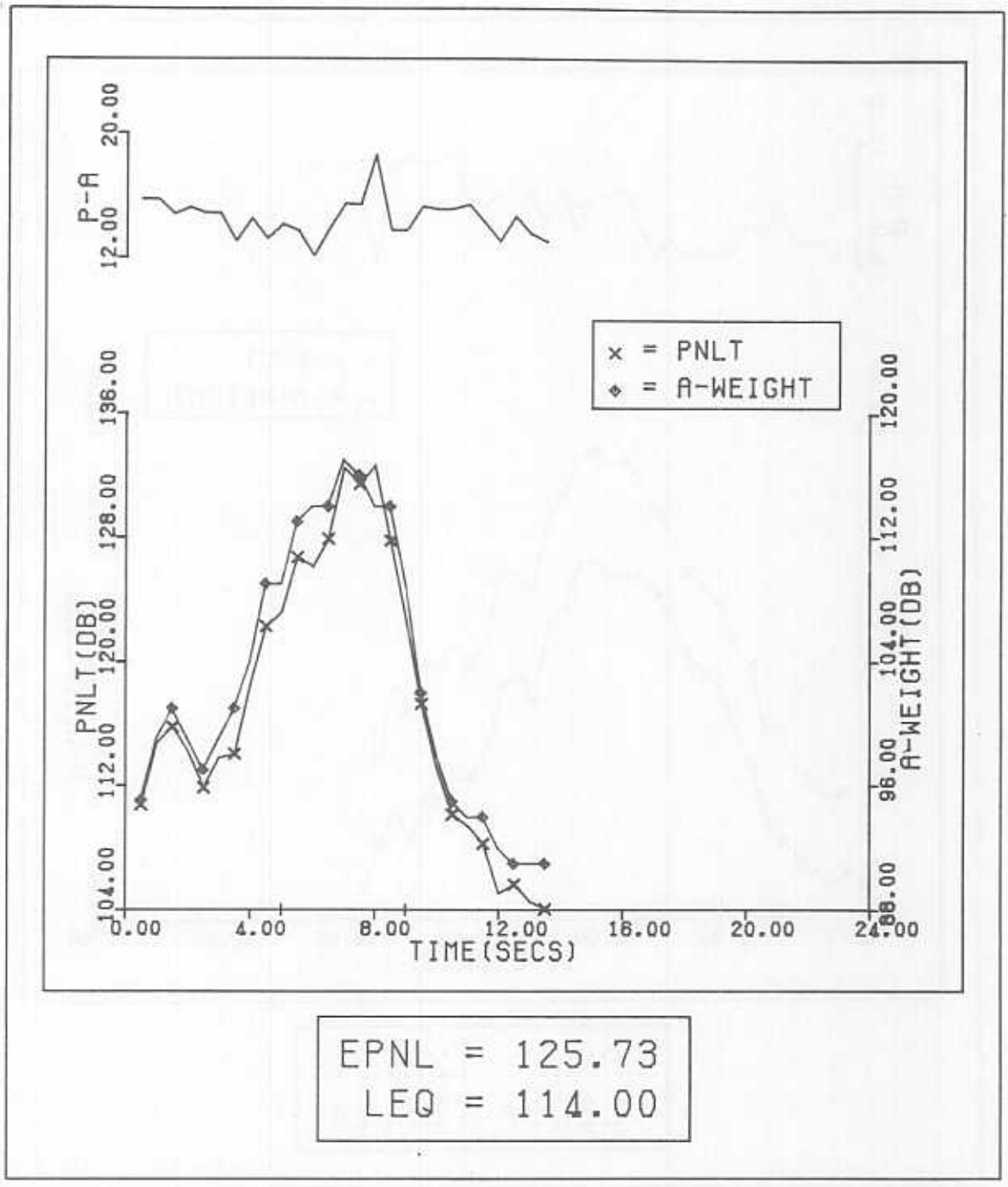


Figure A-58. EPNL/PNLT History - Event 24.
Landing Concorde F-WTSA - Runway 19, Motel - Outside, Fairbanks International Airport, Fairbanks, Alaska

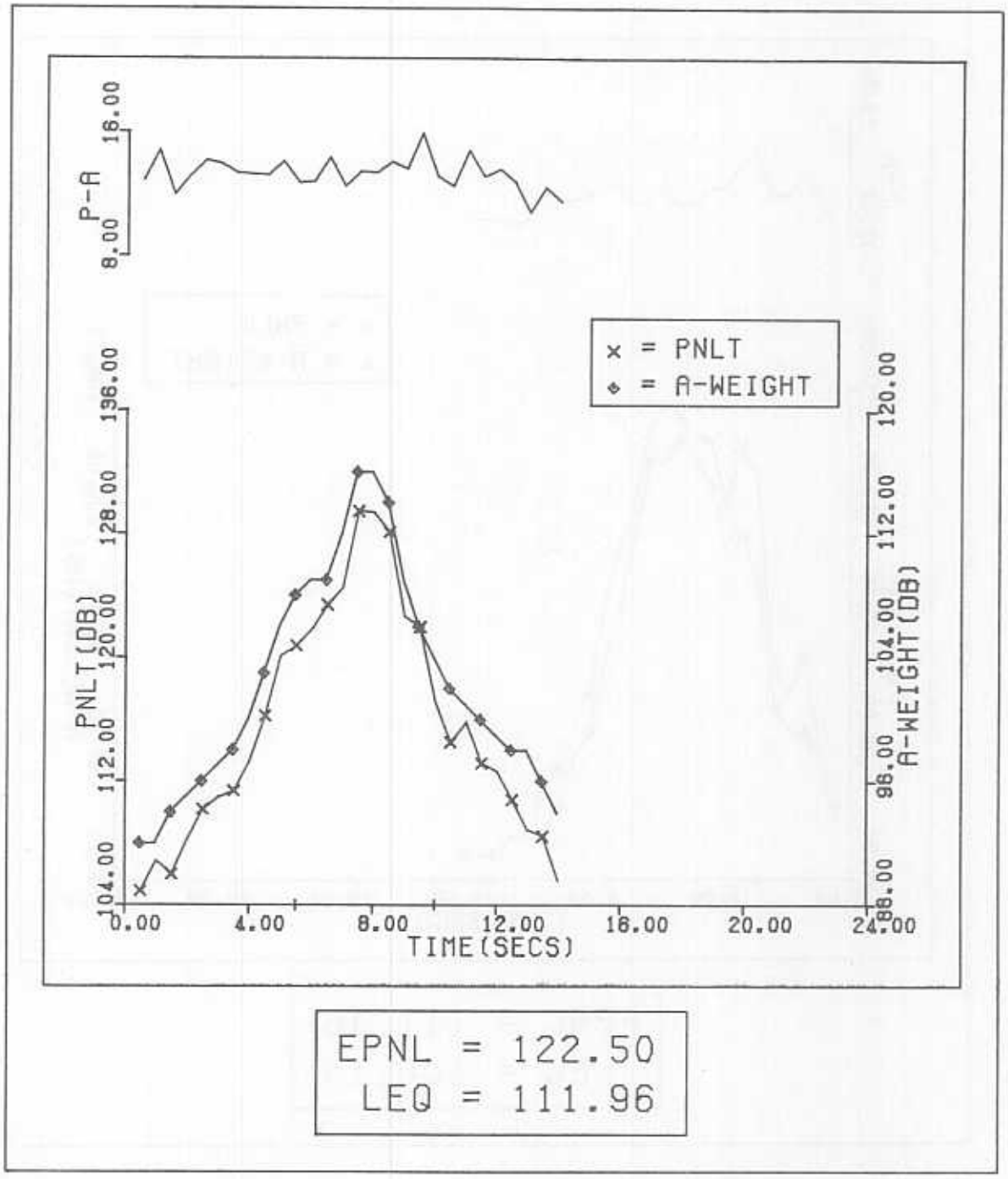


Figure A-59. EPNL/PNLT History - Event 19.
Landing Concorde F-WTSA - Runway 01,
Localizer - Outside, Fairbanks International
Airport, Fairbanks, Alaska

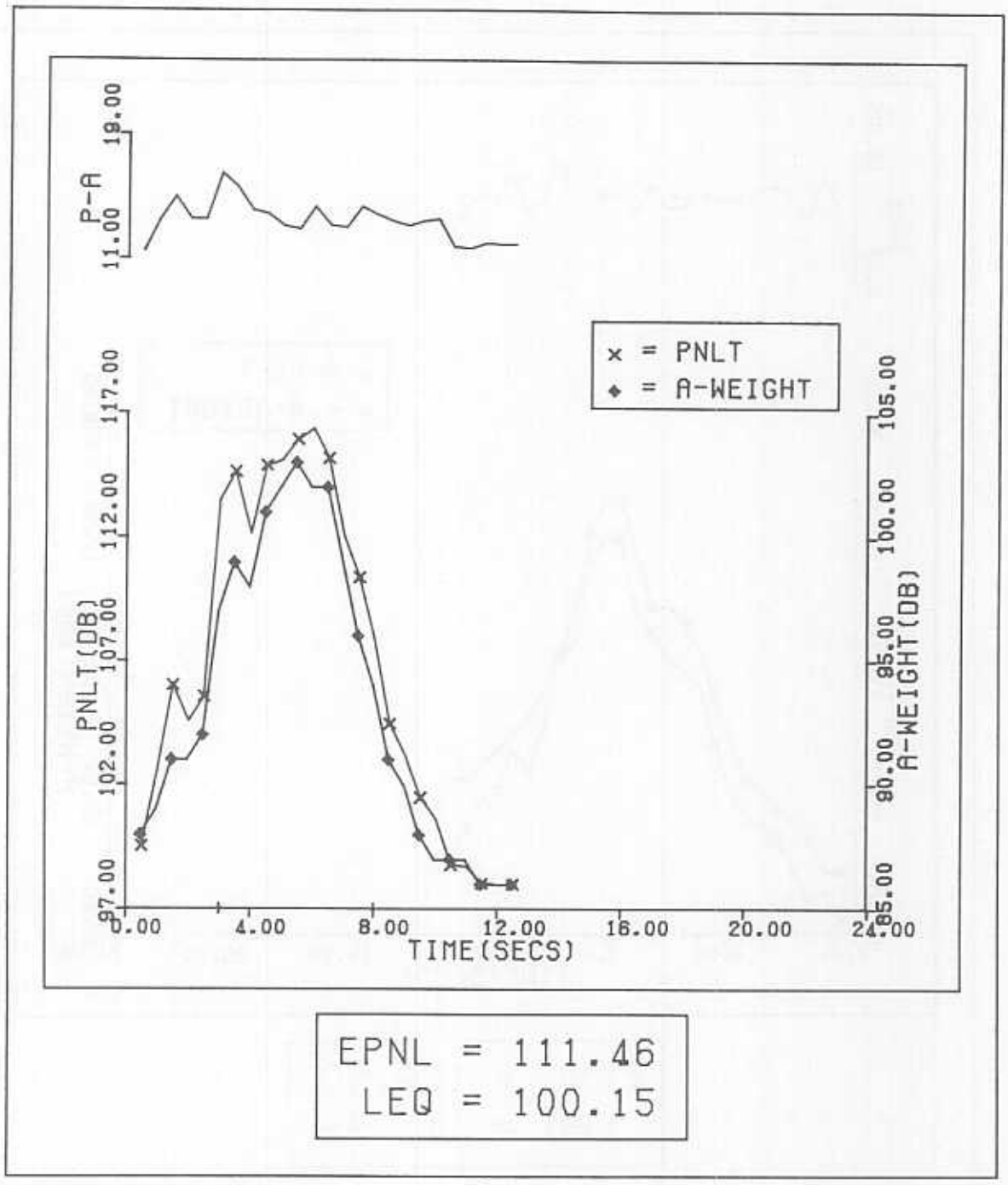


Figure A-60. EPNL/PNLT History - Event 18.
Concorde Fly-by - Runway 01, 700 Ft, 300 MPH,
Localizer - Outside, Fairbanks International
Airport, Fairbanks, Alaska

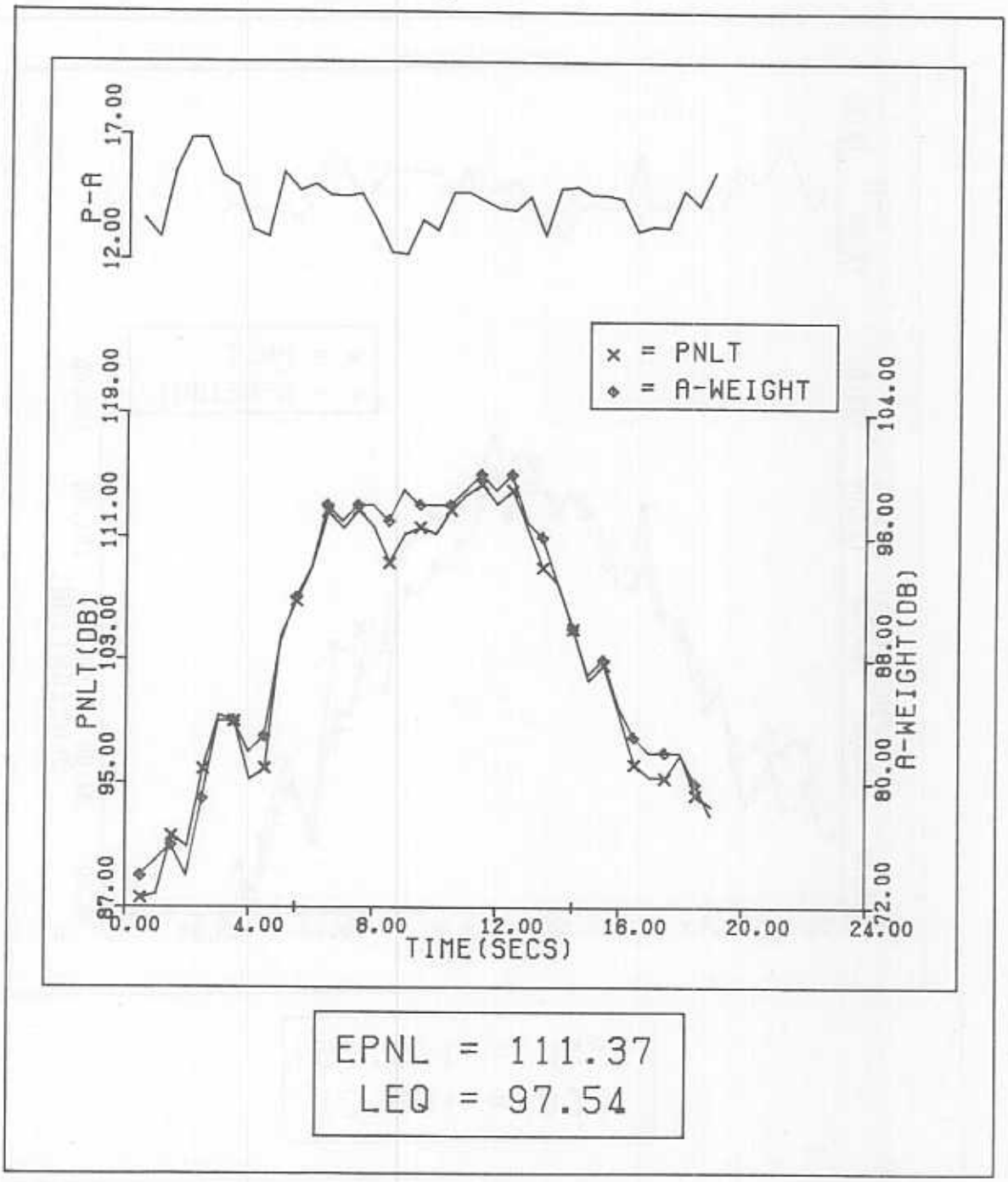


Figure A-61. EPNL/PNLT History - Event 18.
Concorde Fly-by - Runway 01, 700 Ft, 300 MPH,
Motel - Outside, Fairbanks International
Airport, Fairbanks, Alaska

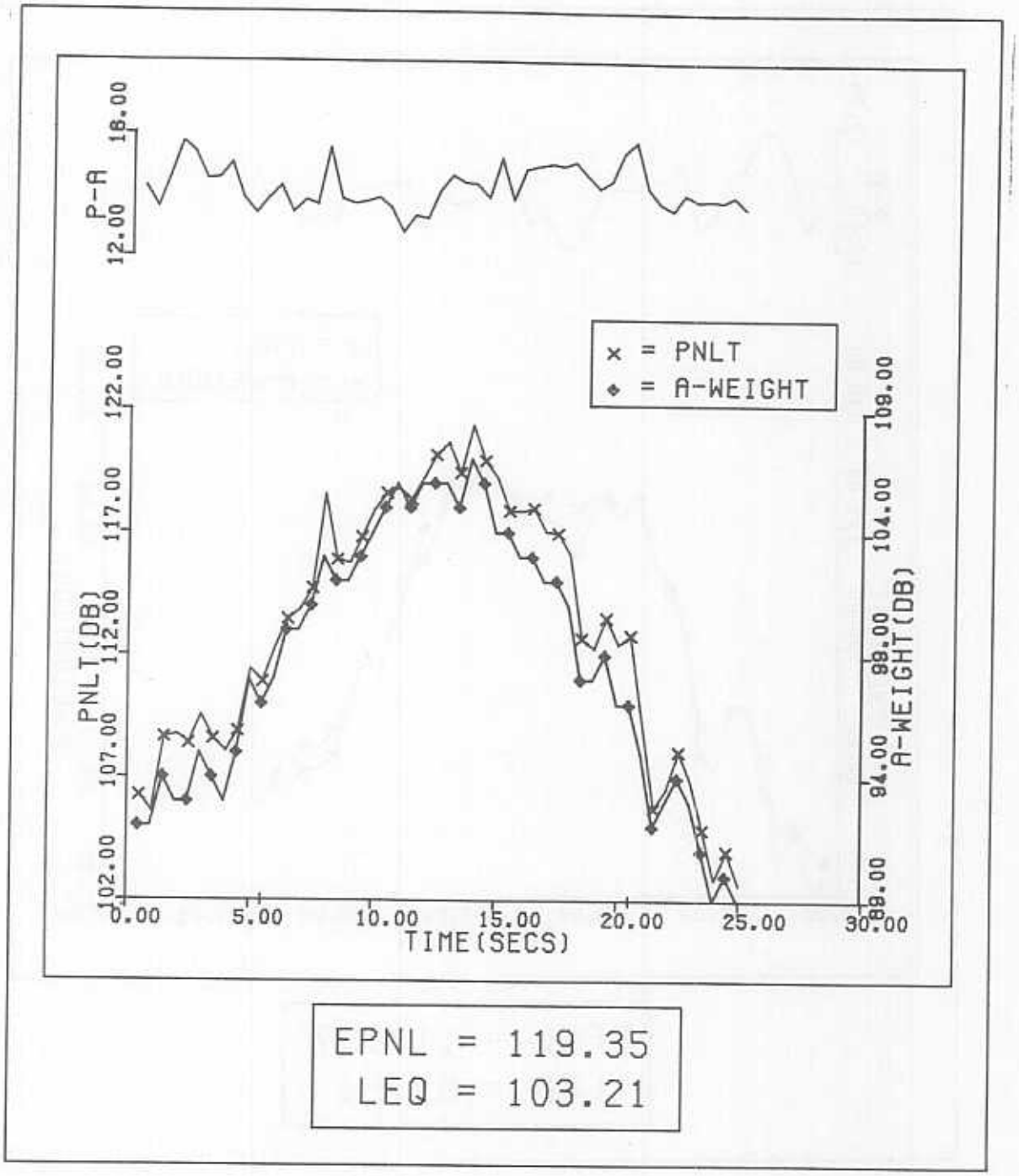


Figure A-62. EPNL/PNLT History - Event 12.
Takeoff Boeing 720 - Runway 19, Localizer - Outside, Fairbanks International Airport, Fairbanks, Alaska

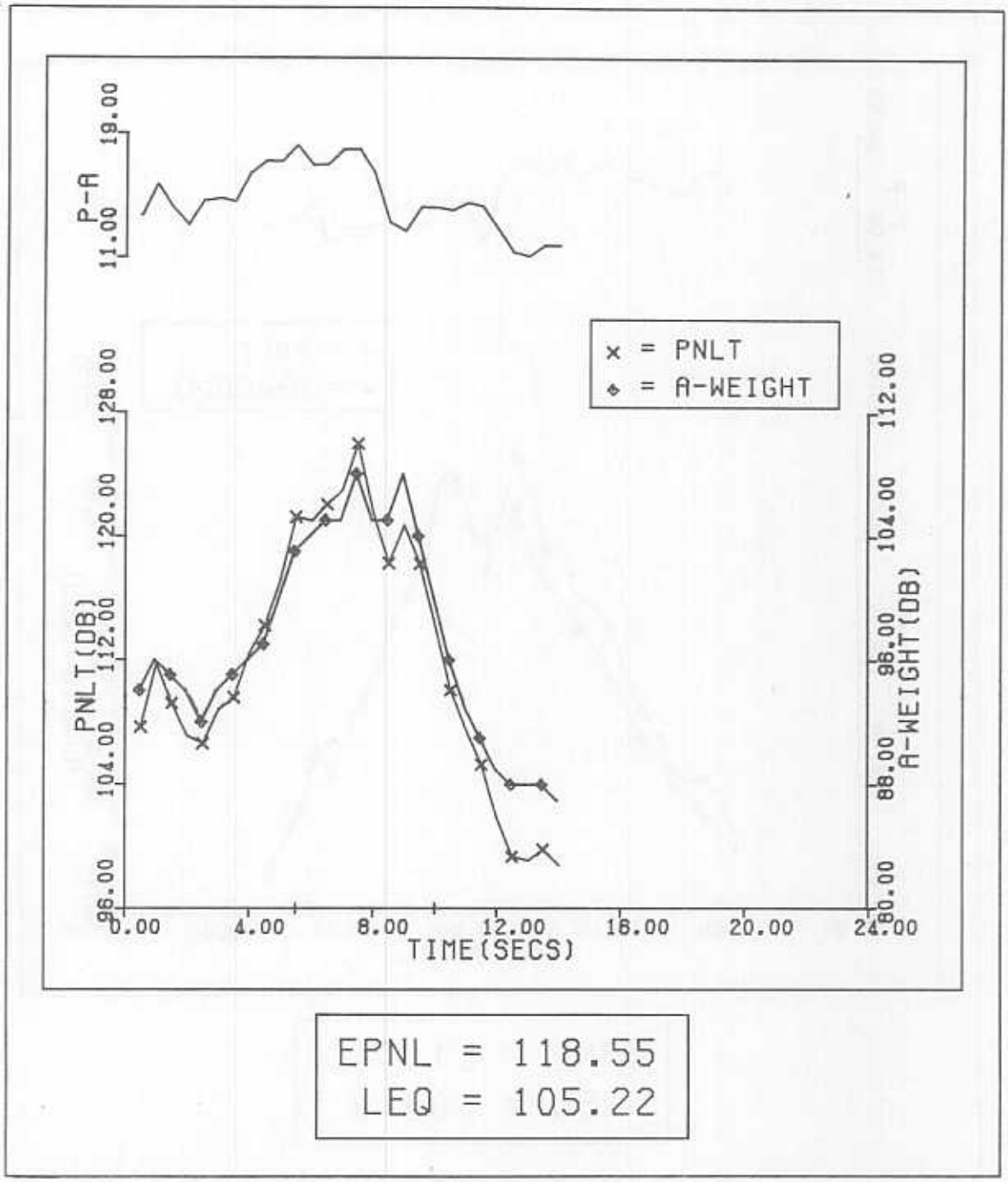


Figure A-63. EPNL/PNLT History - Event 10.
Landing, Beoing 720 - Runway 01, Localizer - Outside, Fairbanks International Airport, Fairbanks, Alaska

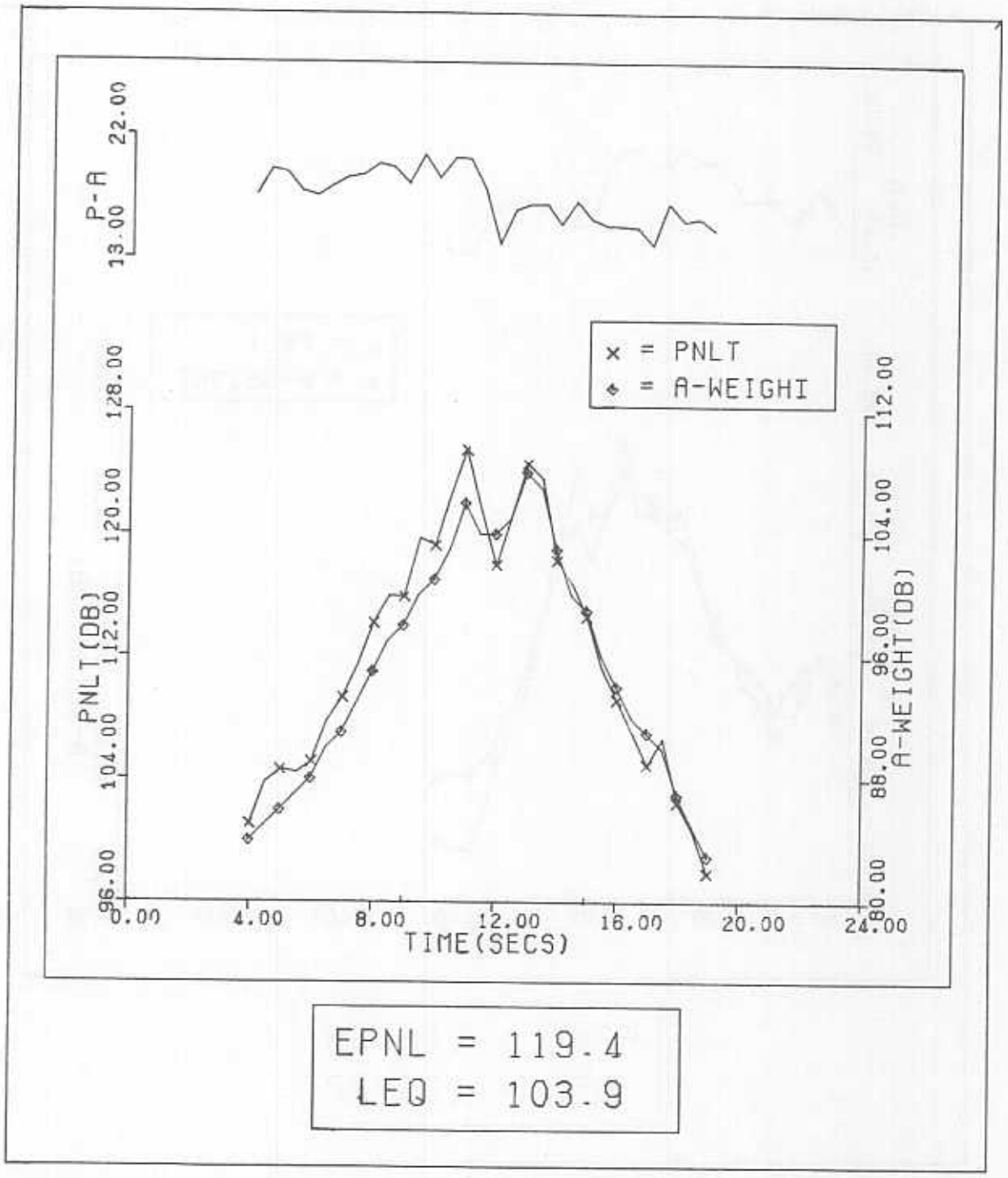


Figure A-64. EPNL/PNLT History - Event 4.
Landing Boeing 720 - Runway 19, Motel - Outside, Fairbanks International Airport, Fairbanks, Alaska

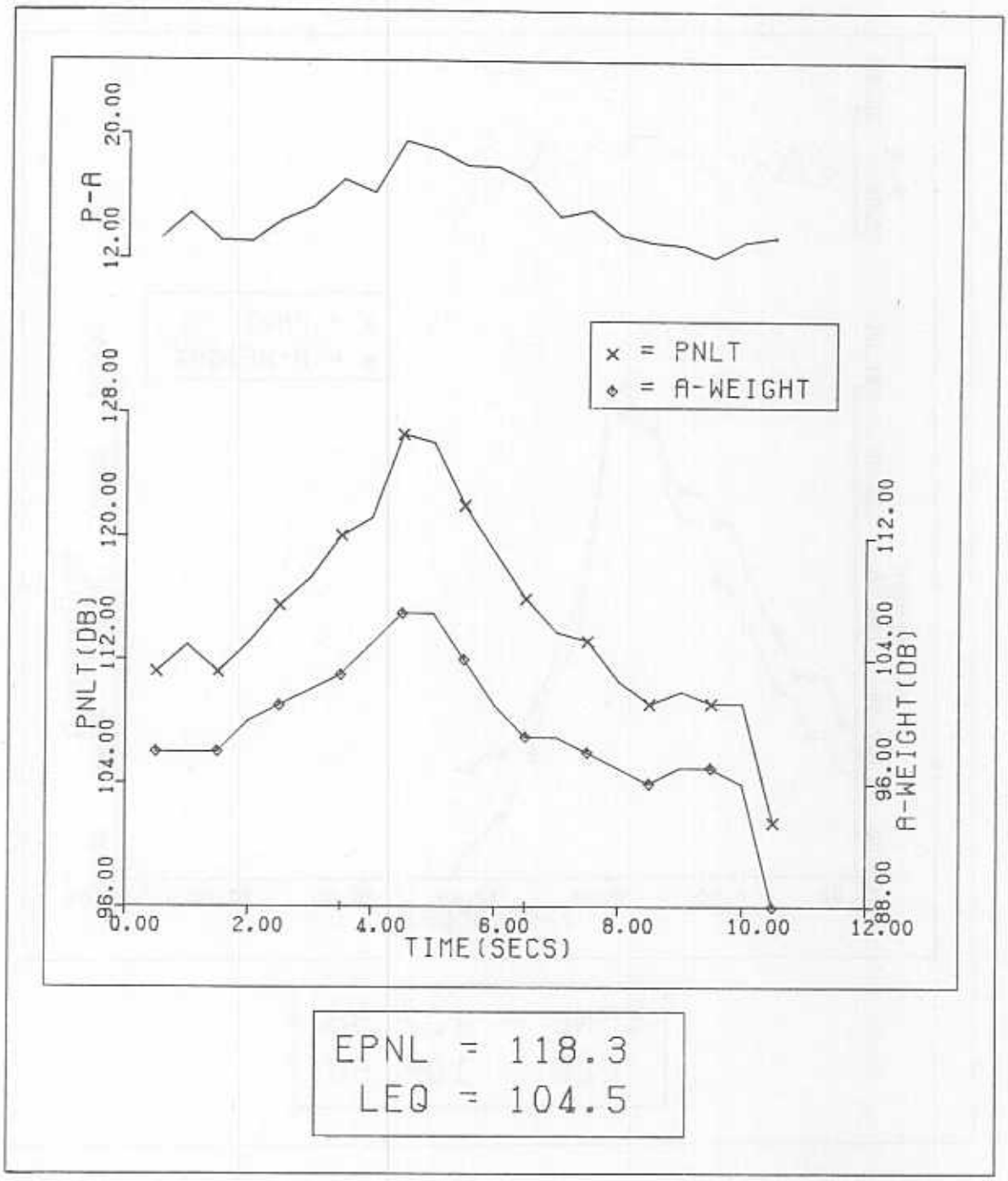


Figure A-65. EPNL/PNLT History - Event 20.
Takeoff Boeing 707 - Runway 19, Localizer - Outside, Fairbanks International Airport, Fairbanks, Alaska

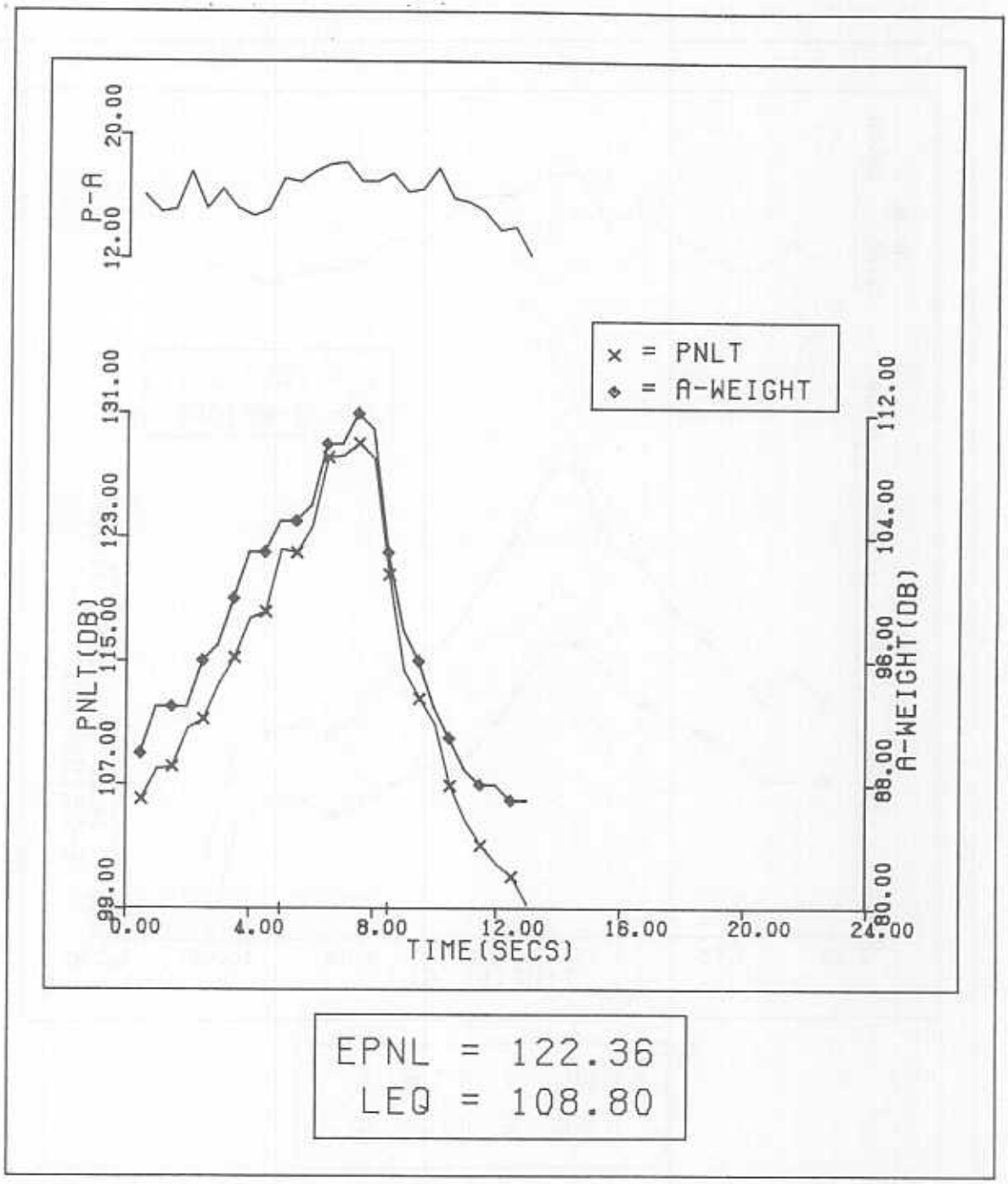


Figure A-66. EPNL/PNLT History - Event 13.
Landing Boeing 707 - Runway 01, Localizer - Outside, Fairbanks International Airport, Fairbanks, Alaska

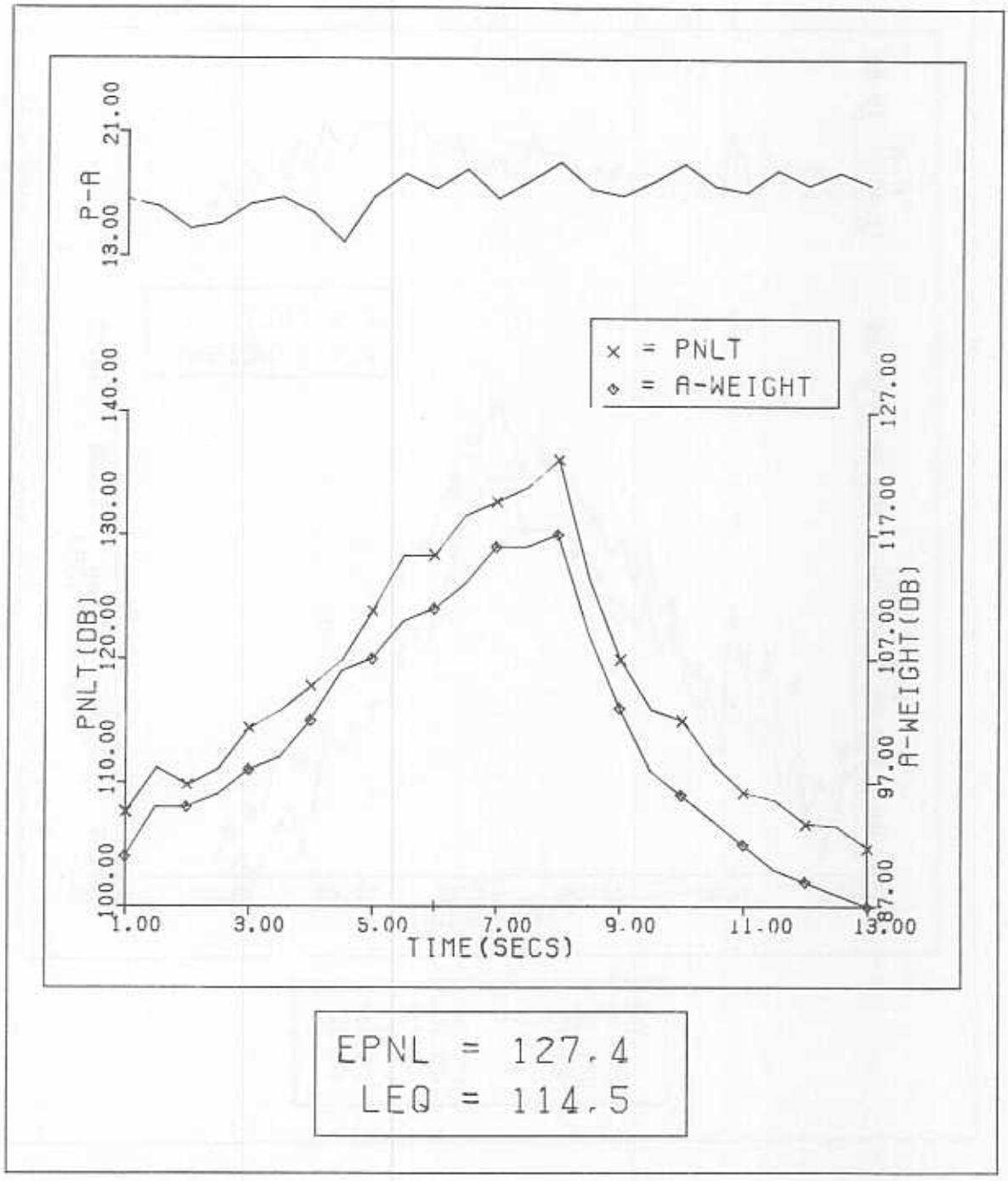


Figure A-67. EPNL/PNLT History - Event 5.
Landing Boeing 707 - Runway 19, Motel - Outside,
Fairbanks International Airport, Fairbanks,
Alaska

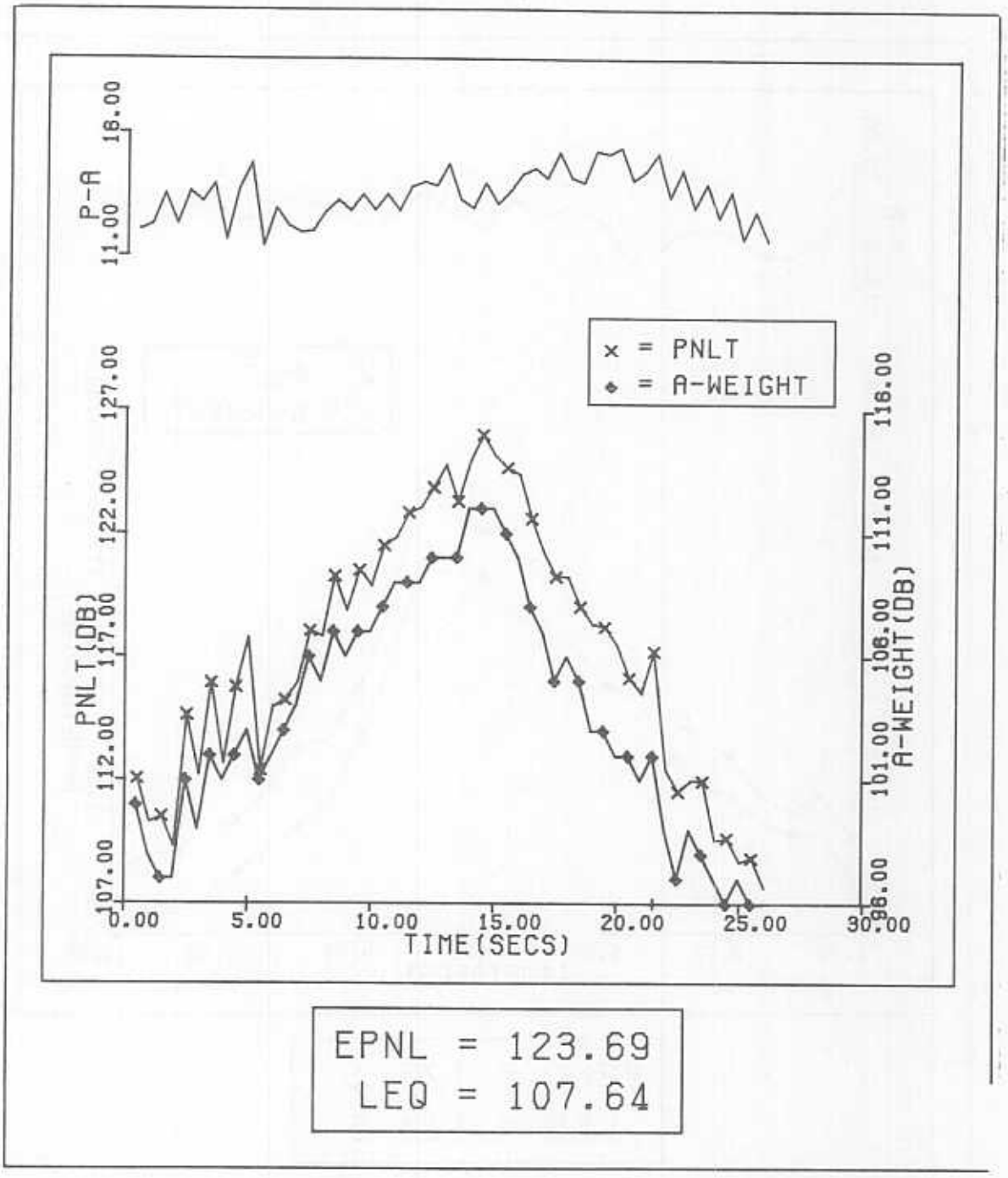


Figure A-68. EPNL/PNLT History - Event 17.
Takeoff Concorde F-WTSA - Runway 19, Localizer - Outside, Fairbanks International Airport, Fairbanks, Alaska

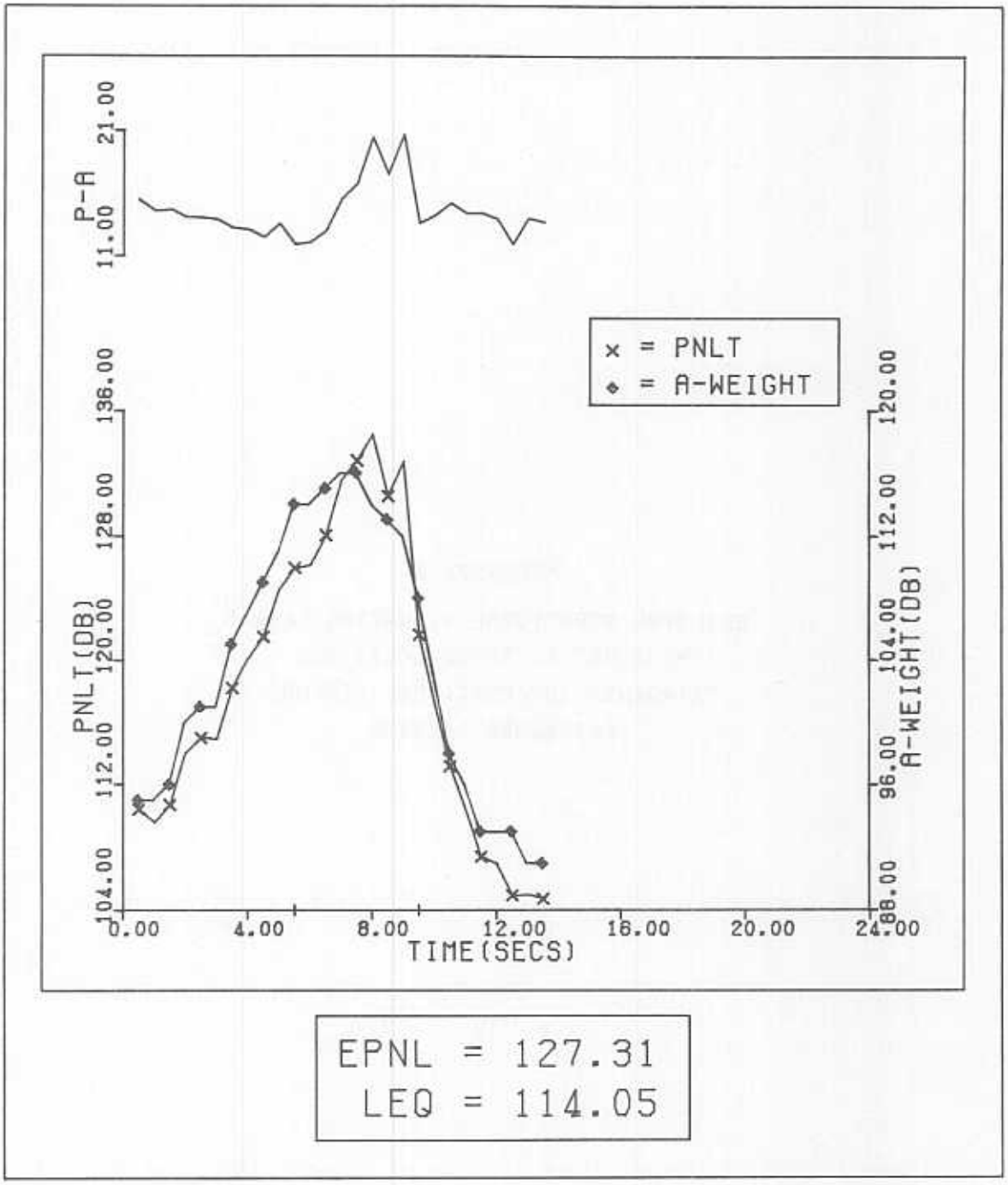


Figure A-69. EPNL/PNLT History - Event 22.
Landing Concorde F-WTSA - Runway 19, Motel - Outside, Fairbanks International Airport, Fairbanks, Alaska

APPENDIX B

BUILDING STRUCTURAL VIBRATION LEVELS MEASURED AT THREE LOCATIONS FAIRBANKS INTERNATIONAL AIRPORT FAIRBANKS, ALASKA

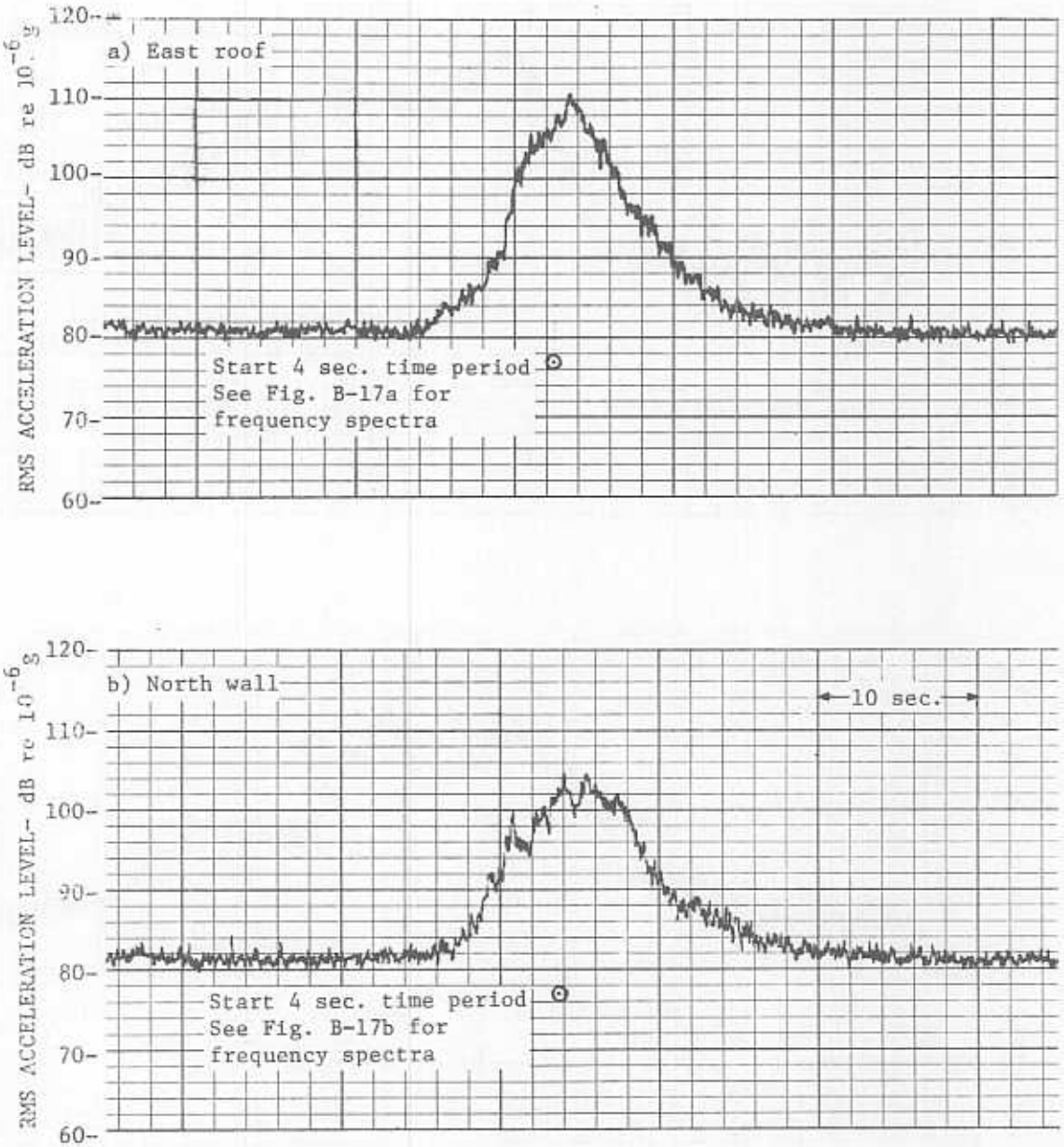


Figure B-1. Coincident Time Histories - Event No. 23.
Building Structural Vibration Levels
Localizer - Single Room Building
Takeoff - Concorde F-WTSA - Runway 19
Fairbanks International Airport, Fairbanks, Alaska
Feb. 15, 1974 - 0910 Hours

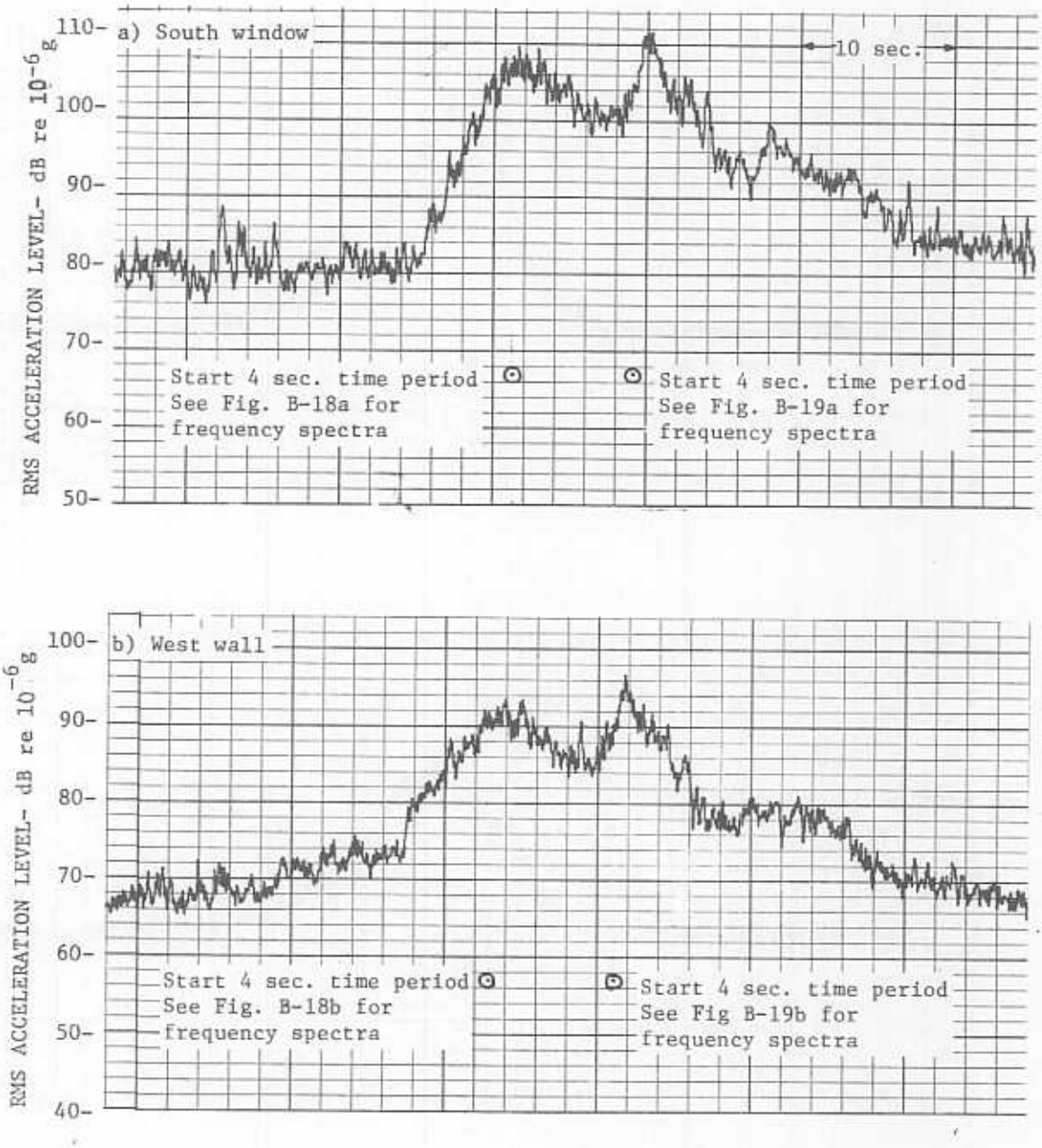


Figure B-2. Coincident Time Histories - Event No. 23.
Building Structural Vibration Levels
Flight Standards - SW Corner - 3rd Floor Office
Takeoff - Concorde F-WTSA - Runway 19
Fairbanks International Airport, Fairbanks, Alaska
Feb. 15, 1974 - 0910 Hours

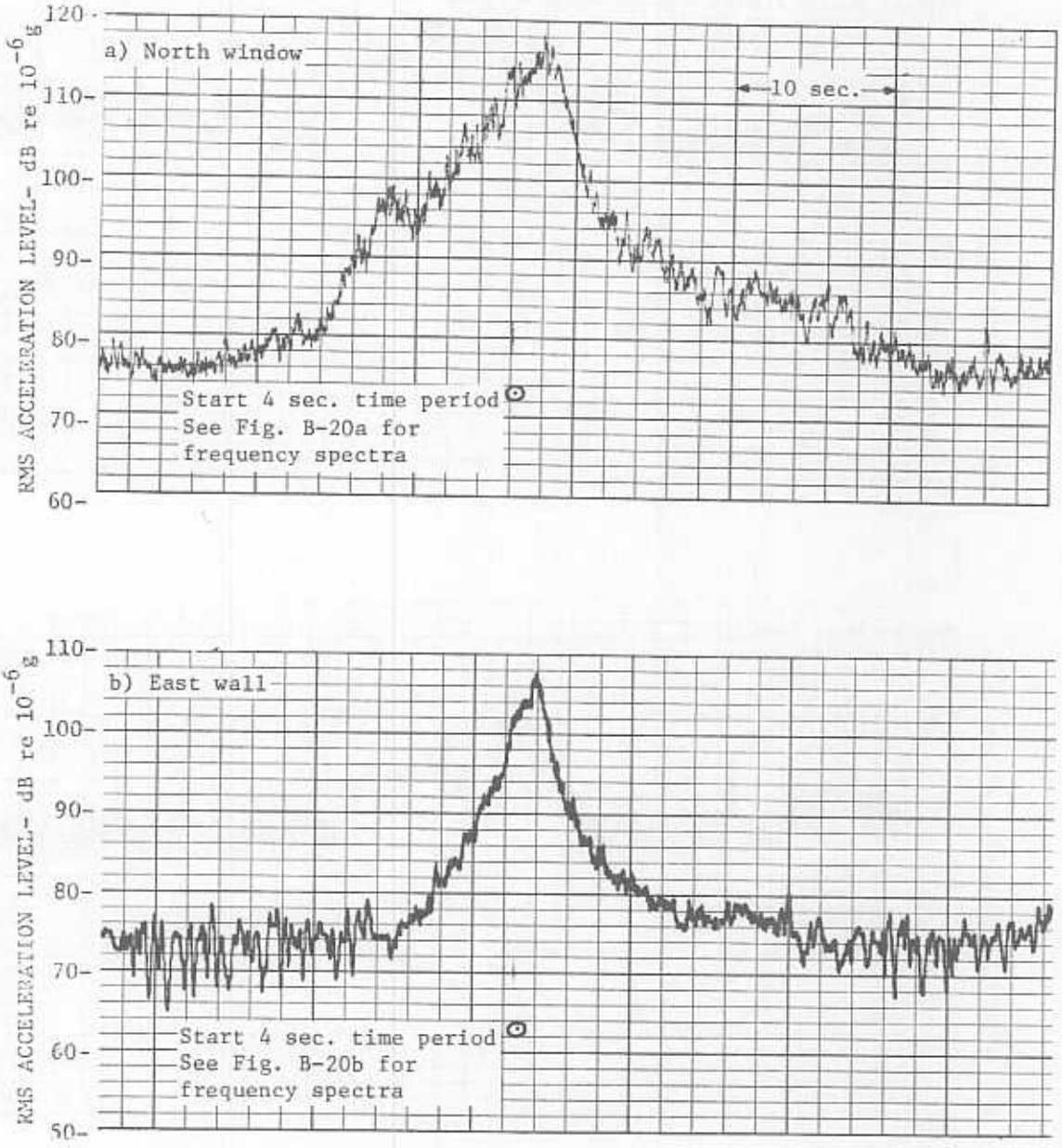


Figure B-3. Coincident Time Histories - Event No. 24.
Building Structural Vibration Levels
Motel - NE Corner - 2nd Floor Room
Landing Concorde F-WTSA - Runway 19
Fairbanks International Airport, Fairbanks, Alaska
Feb. 15, 1974 - 1718 Hours

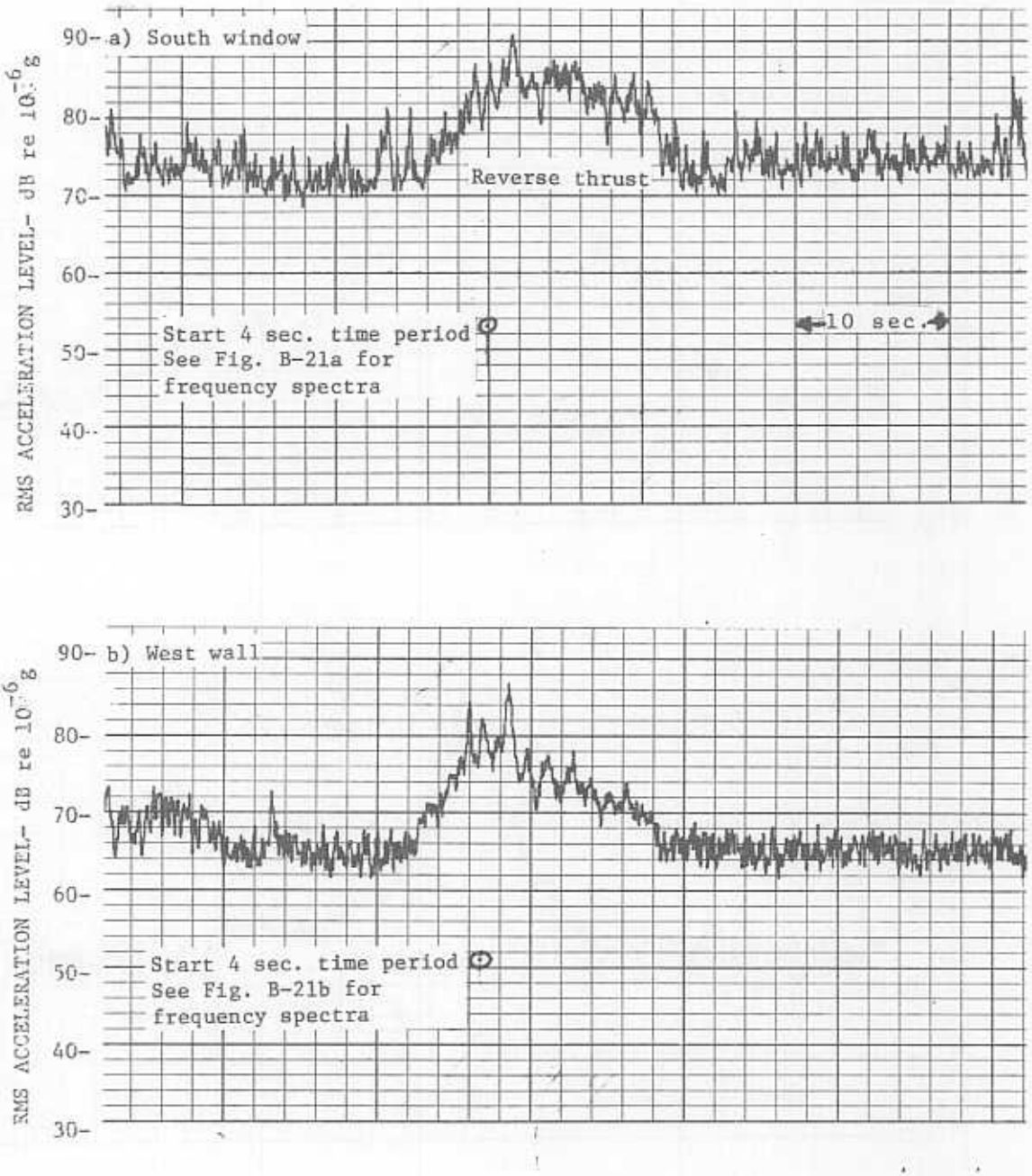


Figure B-4. Coincident Time Histories - Event No. 24.
Building Structural Vibration Levels
Flight Standards - SW Corner - 3rd Floor Office
Landing Concorde F-WTSA - Runway 19
Fairbanks International Airport, Fairbanks, Alaska
Feb. 15, 1974 - 1718 Hours

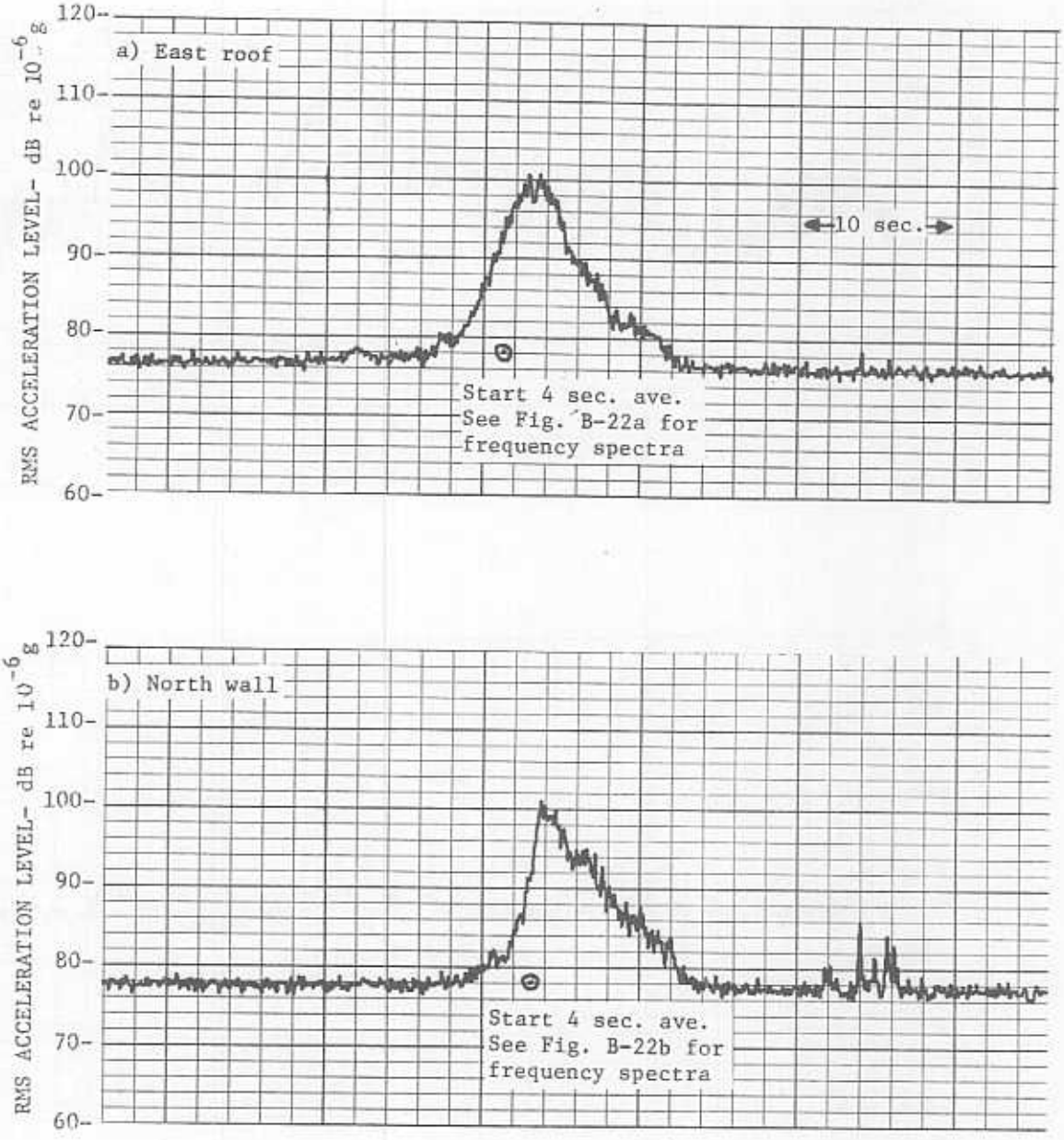


Figure B-5. Coincident Time Histories - Event No. 19.
Building Structural Vibration Levels
Localizer - Single Room Building
Landing Concorde F-WTSA - Runway 01
Fairbanks International Airport, Fairbanks, Alaska
Feb. 13, 1974 - 1350 Hours

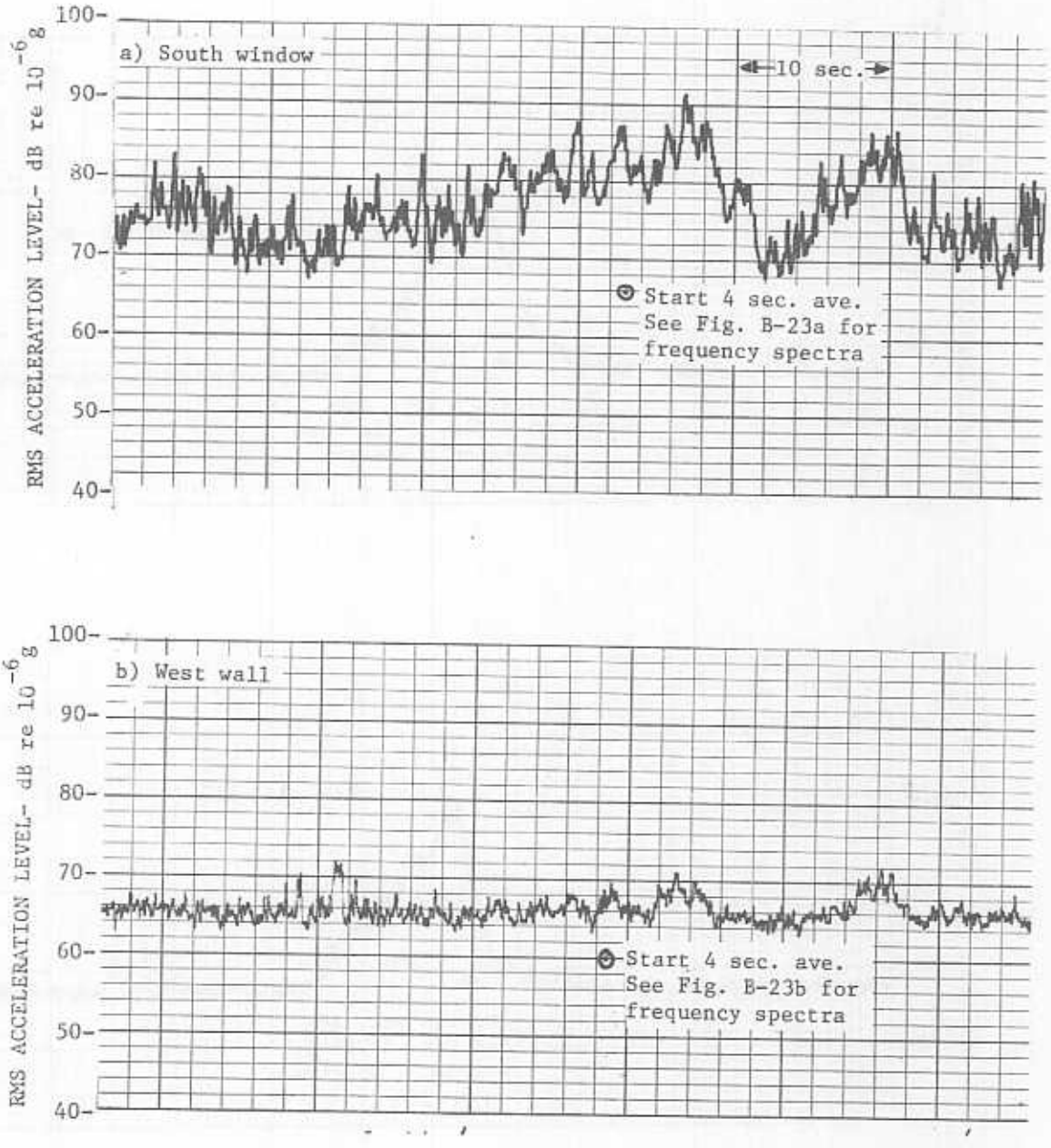


Figure B-6. Coincident Time Histories - Event No. 19.
Building Structural Vibration Levels
Flight Standards - SW Corner - 3rd Floor Office
Landing Concorde F-WTSA - Runway 01
Fairbanks International Airport, Fairbanks, Alaska
Feb. 13, 1974 - 1350 Hours

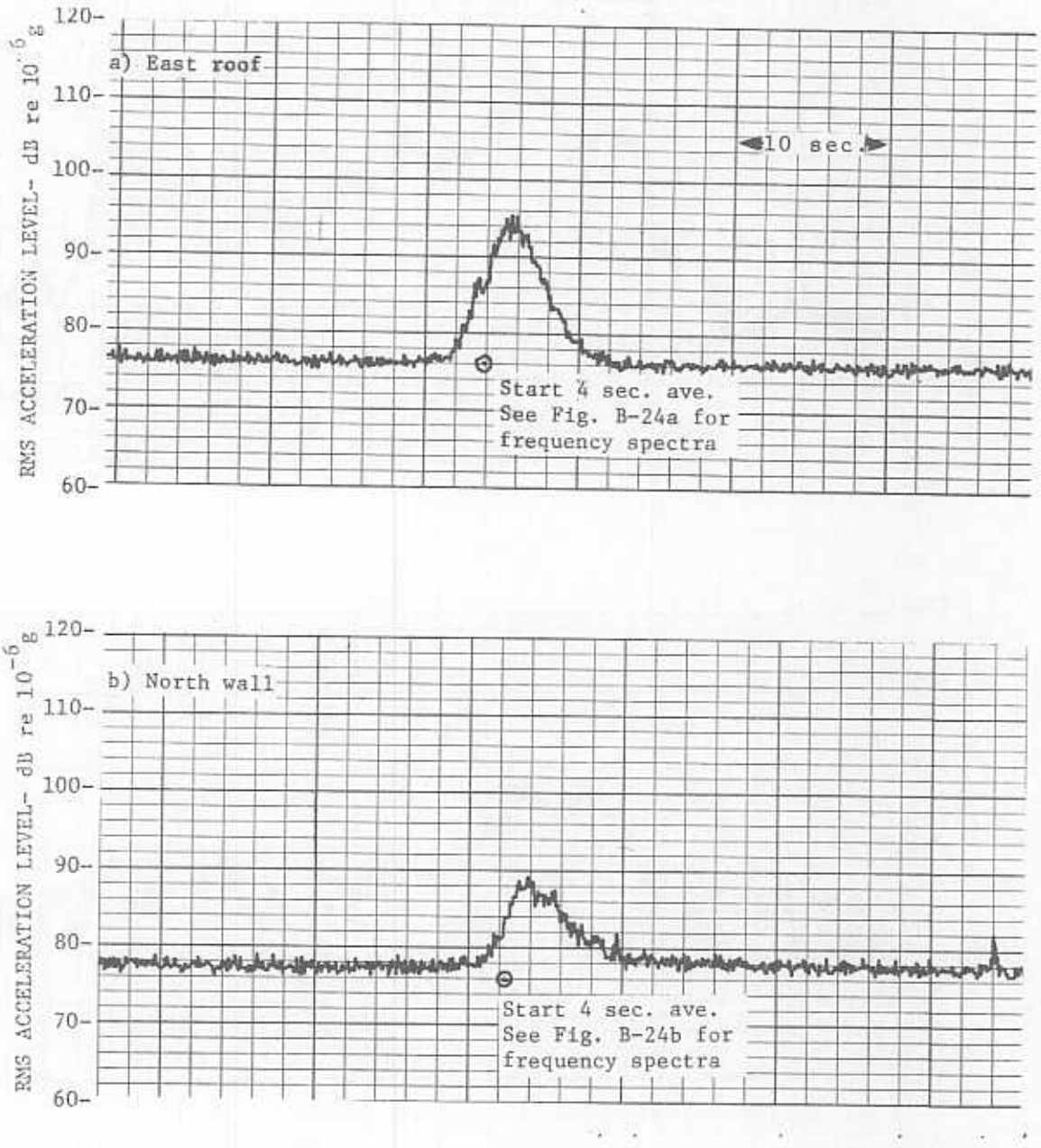


Figure B-7. Coincident Time Histories - Event No. 18.
Building Structural Vibration Levels
Localizer Bldg. - Single Room Building
Concorde F-WTSA Fly-over - Runway 01 - 700 Ft. 300 MPH
Fairbanks International Airport, Fairbanks, Alaska
Feb. 13, 1974 - 1346 Hours

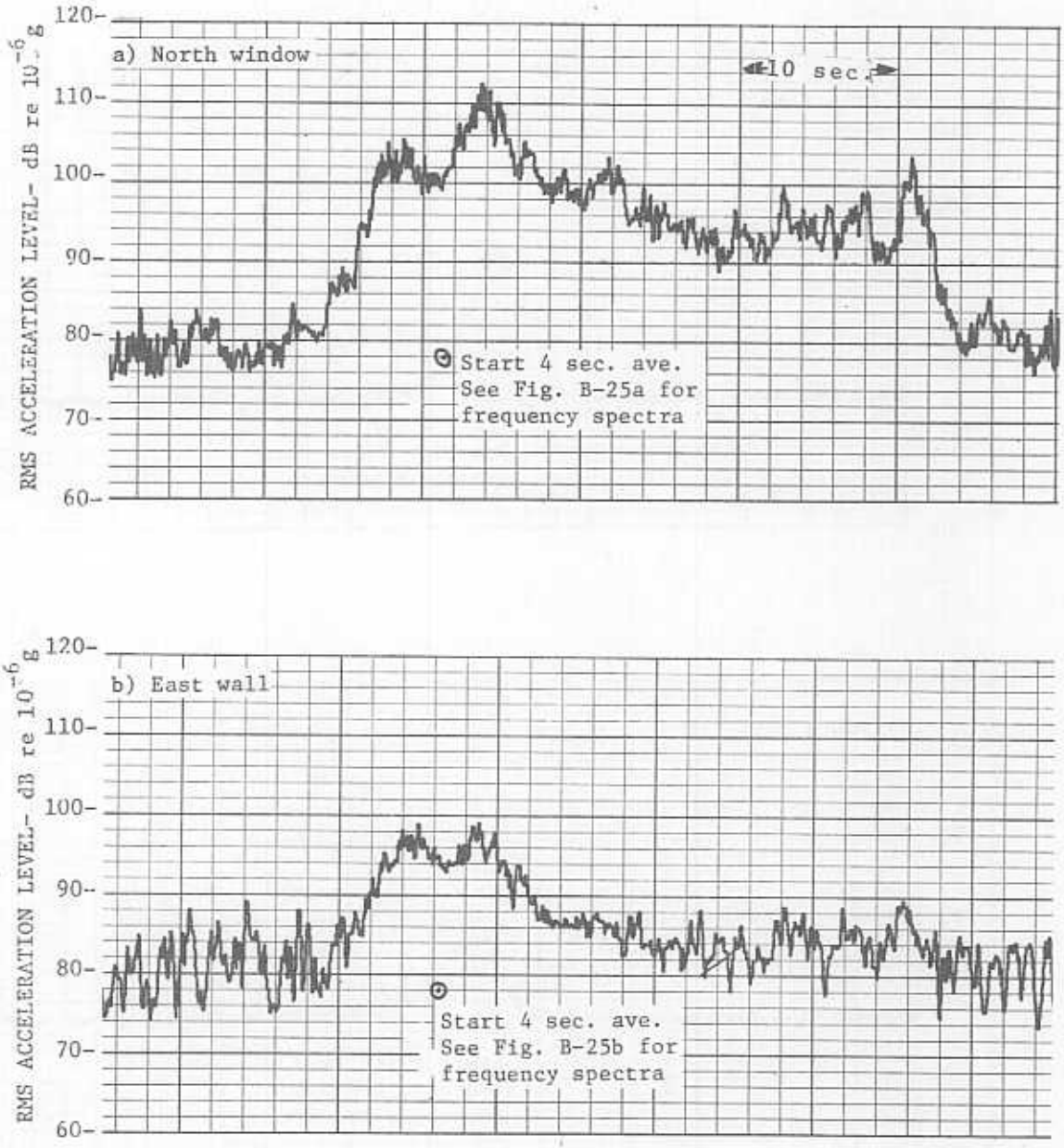
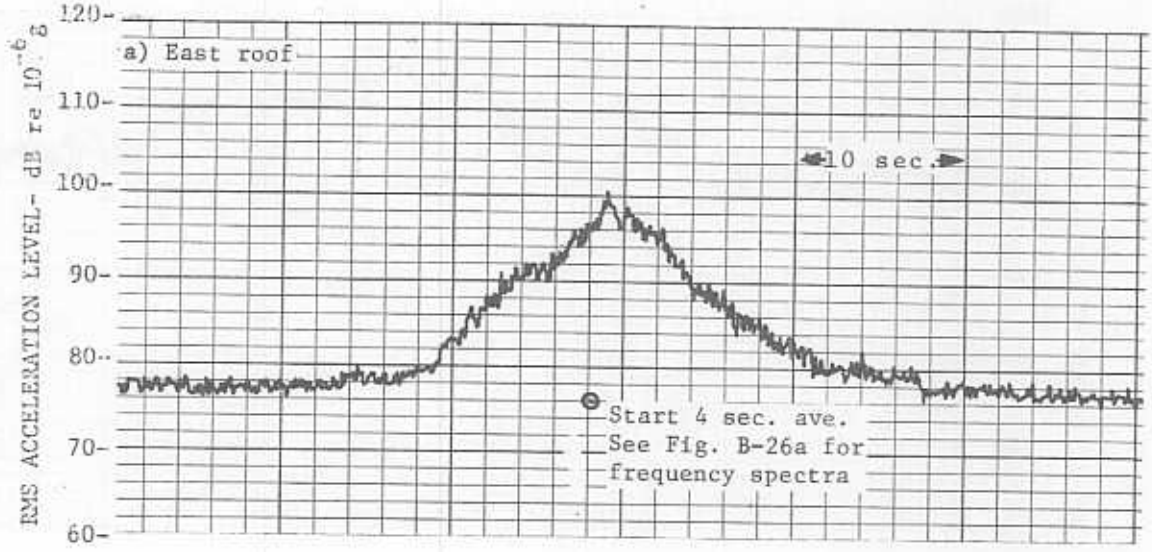


Figure B-8. Coincident Time Histories - Event No. 18.
Building Structural Vibration Levels
Motel - NE Corner - 2nd Floor Room
Concorde F-WTSA Fly-over - Runway 01, 700 Ft.,
Altitude, 300 MPH
Fairbanks International Airport, Fairbanks, Alaska
Feb. 13, 1974 - 1346 Hours



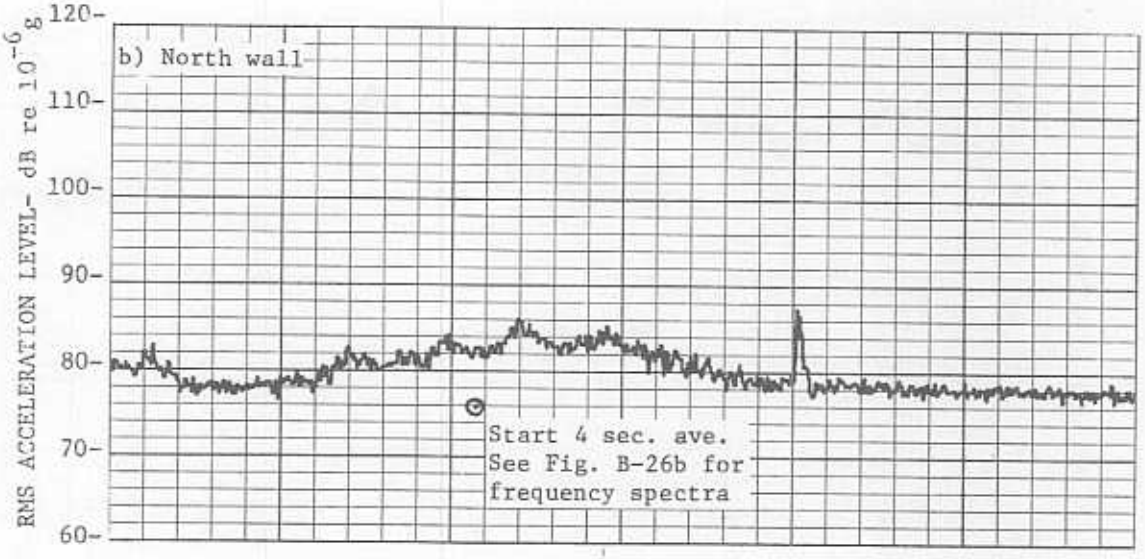


Figure B-9. Coincident Time Histories - Event No. 12.
Building Structural Vibration Levels
Localizer - Single Room Building
Takeoff Boeing 720 - Runway 19
Fairbanks International Airport, Fairbanks, Alaska
Feb. 12, 1974 - 1231 Hours

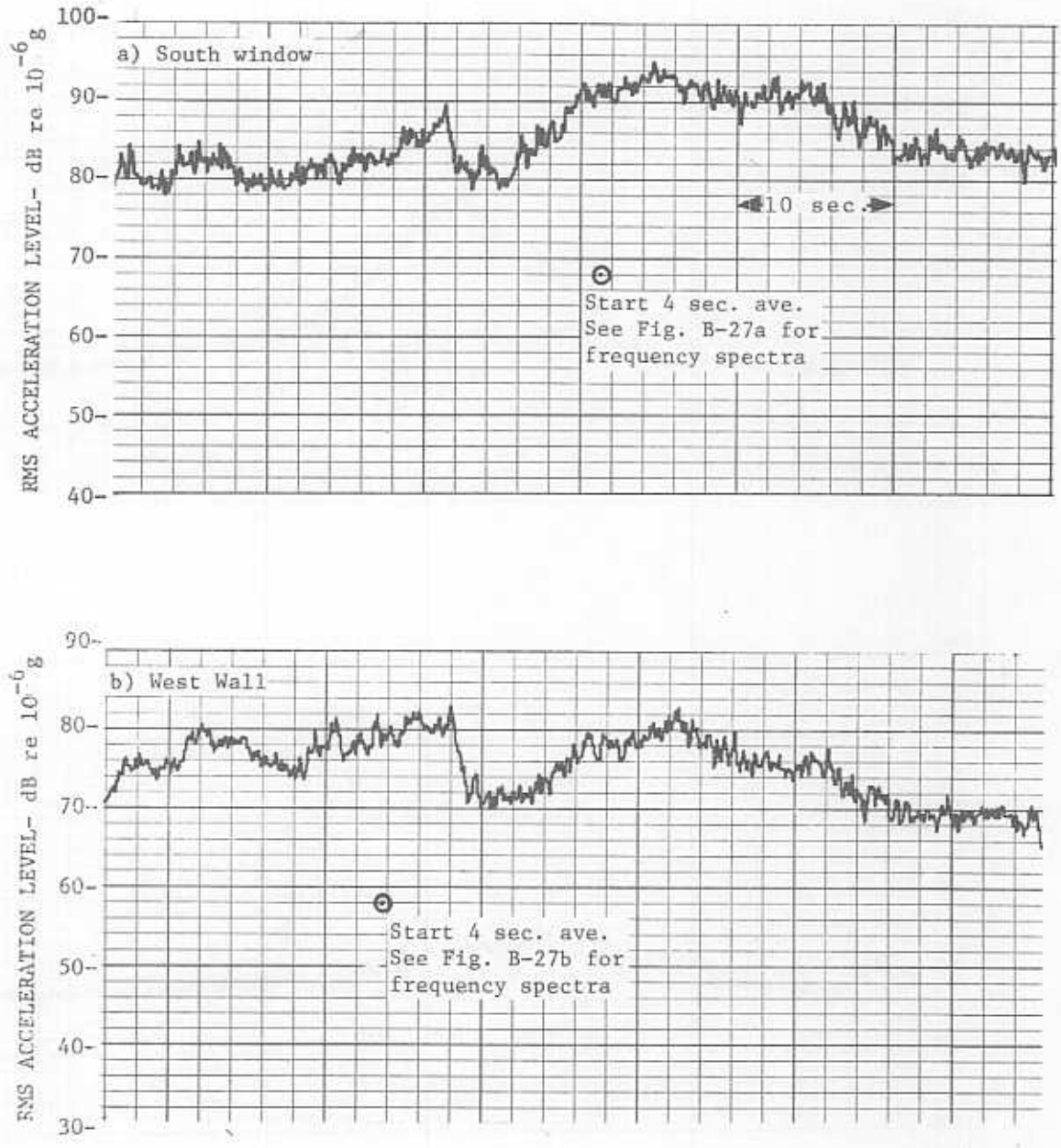


Figure B-10. Coincident Time Histories - Event No. 12.
Building Structural Vibration Levels
Flight Standards- SW Corner - 3rd Floor Office
Takeoff Boeing 720 - Runway 19
Fairbanks International Airport, Fairbanks, Alaska
Feb. 12, 1974 - 1231 Hours

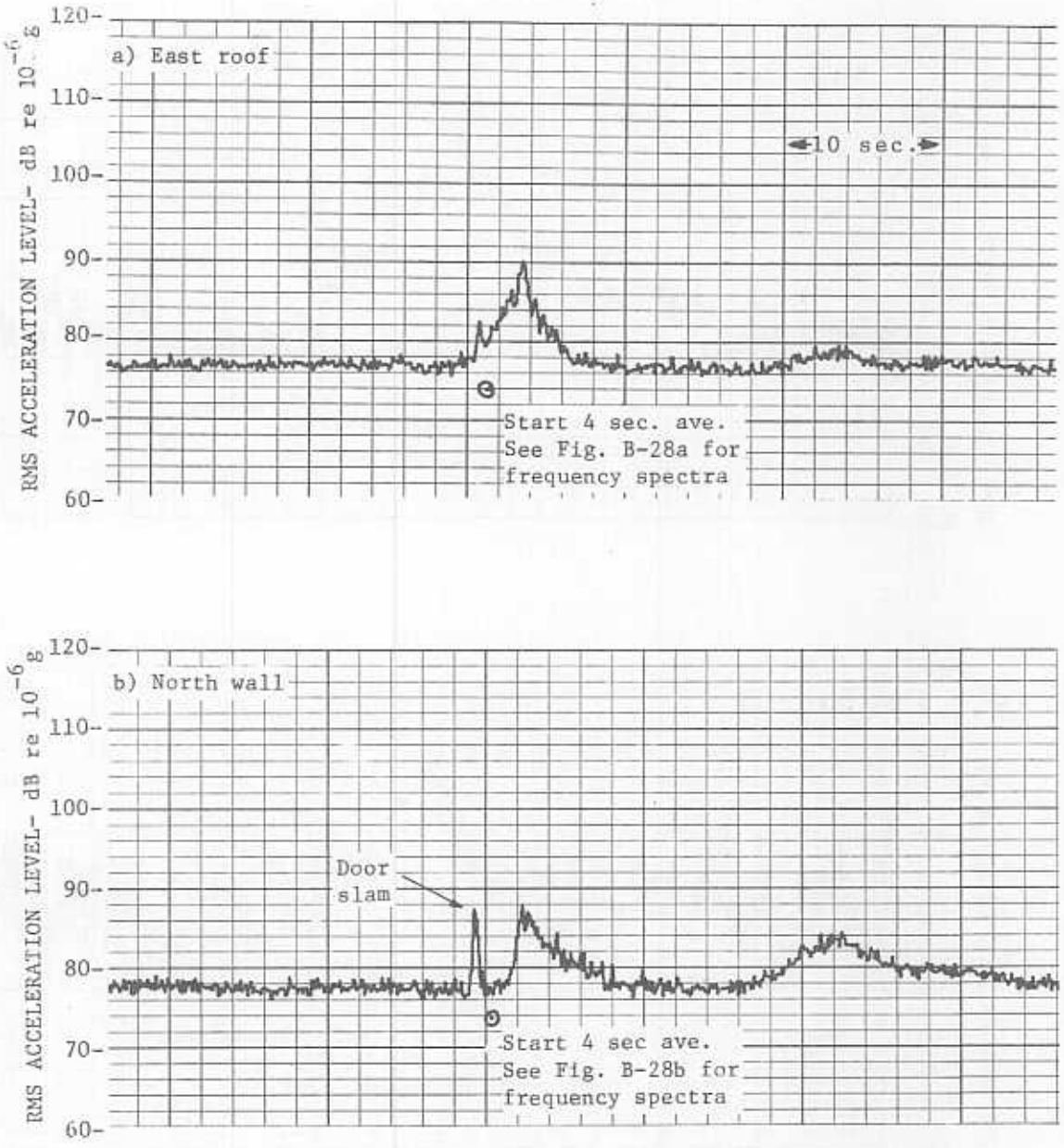


Figure B-11. Coincident Time Histories - Event No. 10.
Building Structural Vibration Levels
Localizer - Single Room Building
Landing Boeing 720 - Runway 01
Fairbanks International Airport, Fairbanks, Alaska
Feb. 12, 1974 - 1143 Hours

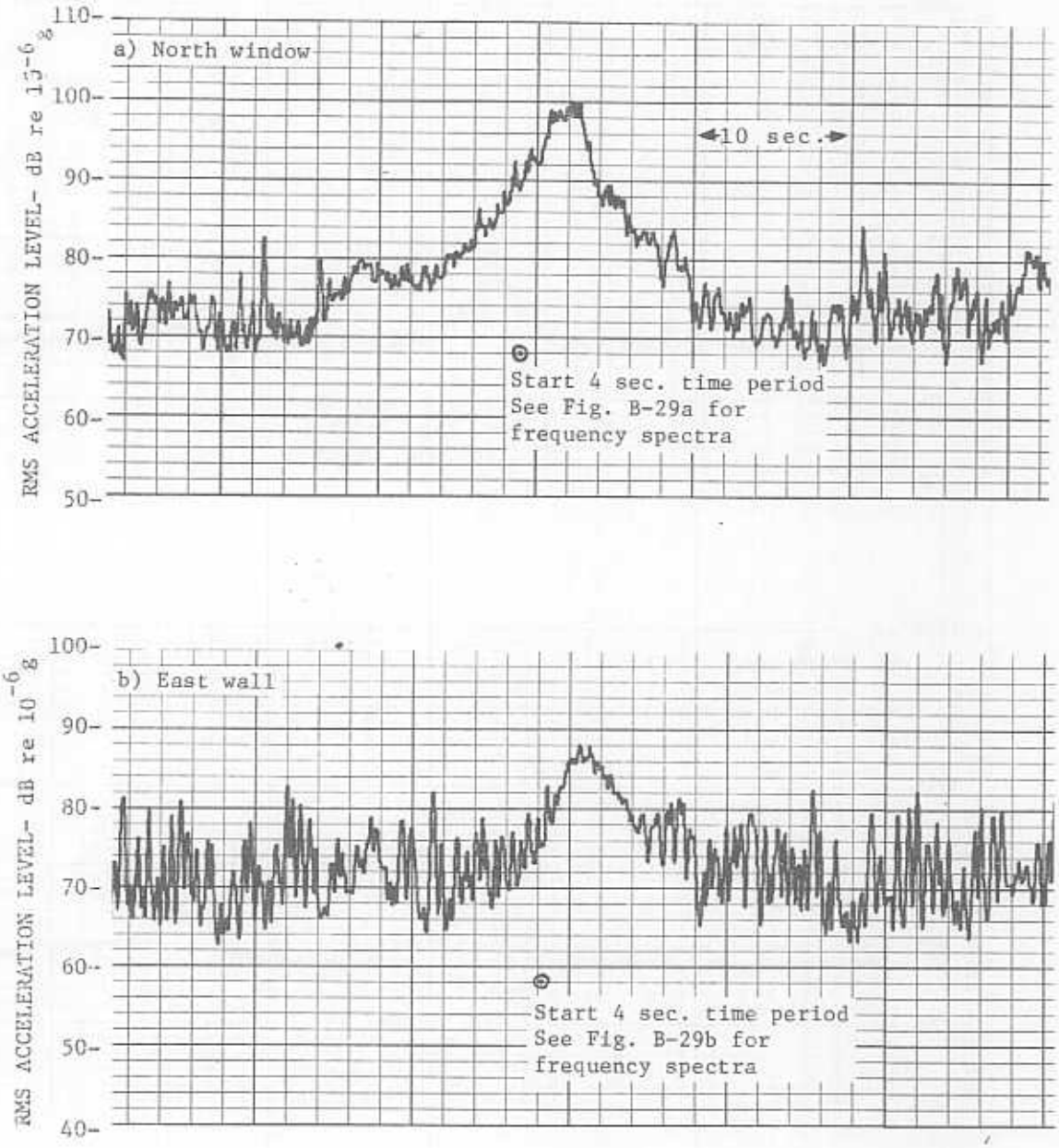


Figure B-12. Coincident Time Histories - Event No. 4.
Building Structural Vibration Levels
Motel - NE Corner - 2nd Floor Room
Landing Boeing 720 - Runway 19
Fairbanks International Airport, Fairbanks, Alaska
Feb. 11, 1974 - 1245 Hours

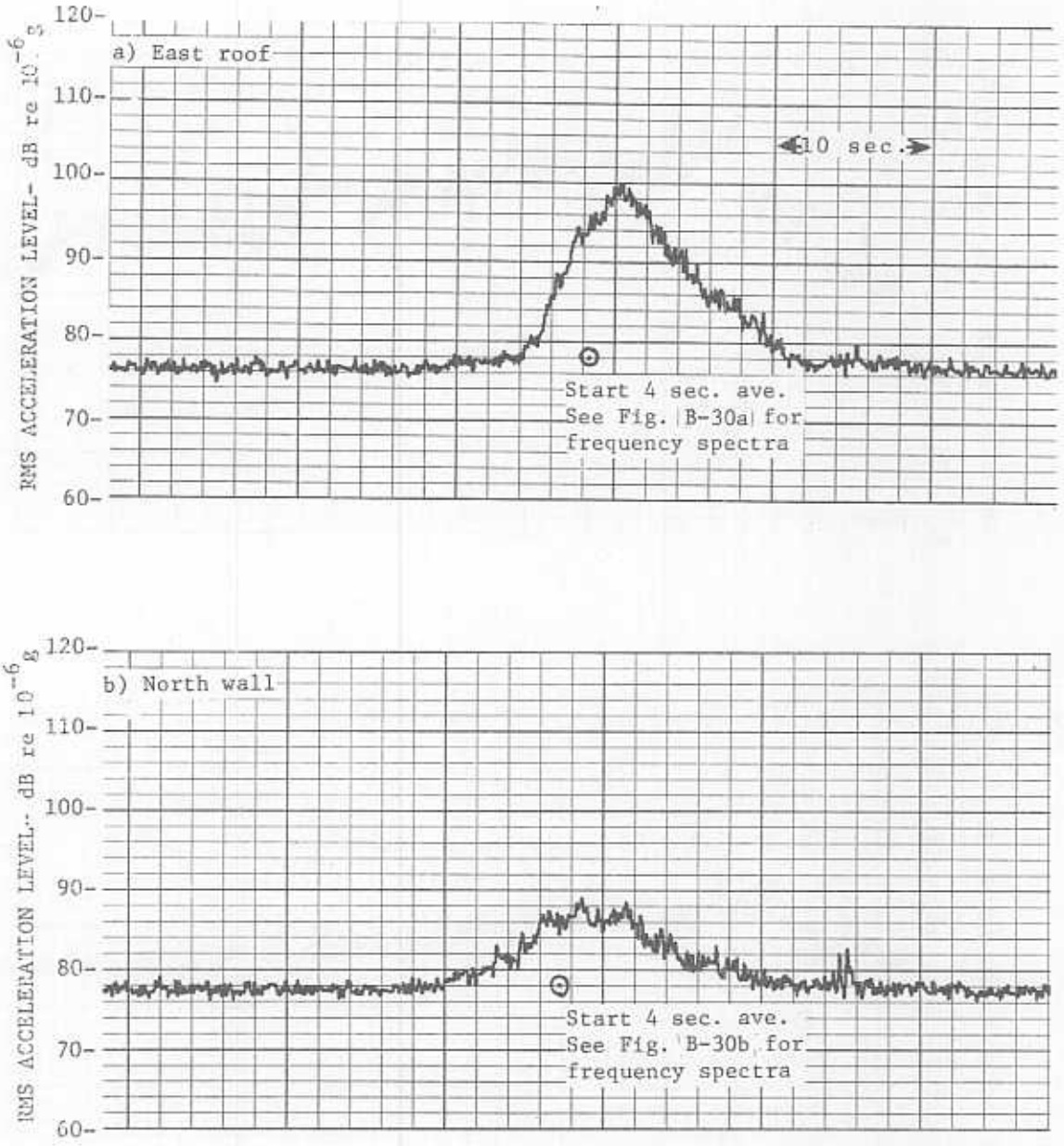


Figure B-13. Coincident Time Histories - Event No. 20.
Building Structural Vibration Levels
Localizer - Single Room Building
Takeoff Boeing 707 - Runway 19
Fairbanks International Airport, Fairbanks, Alaska
Feb. 13, 1974 - 1352 Hours

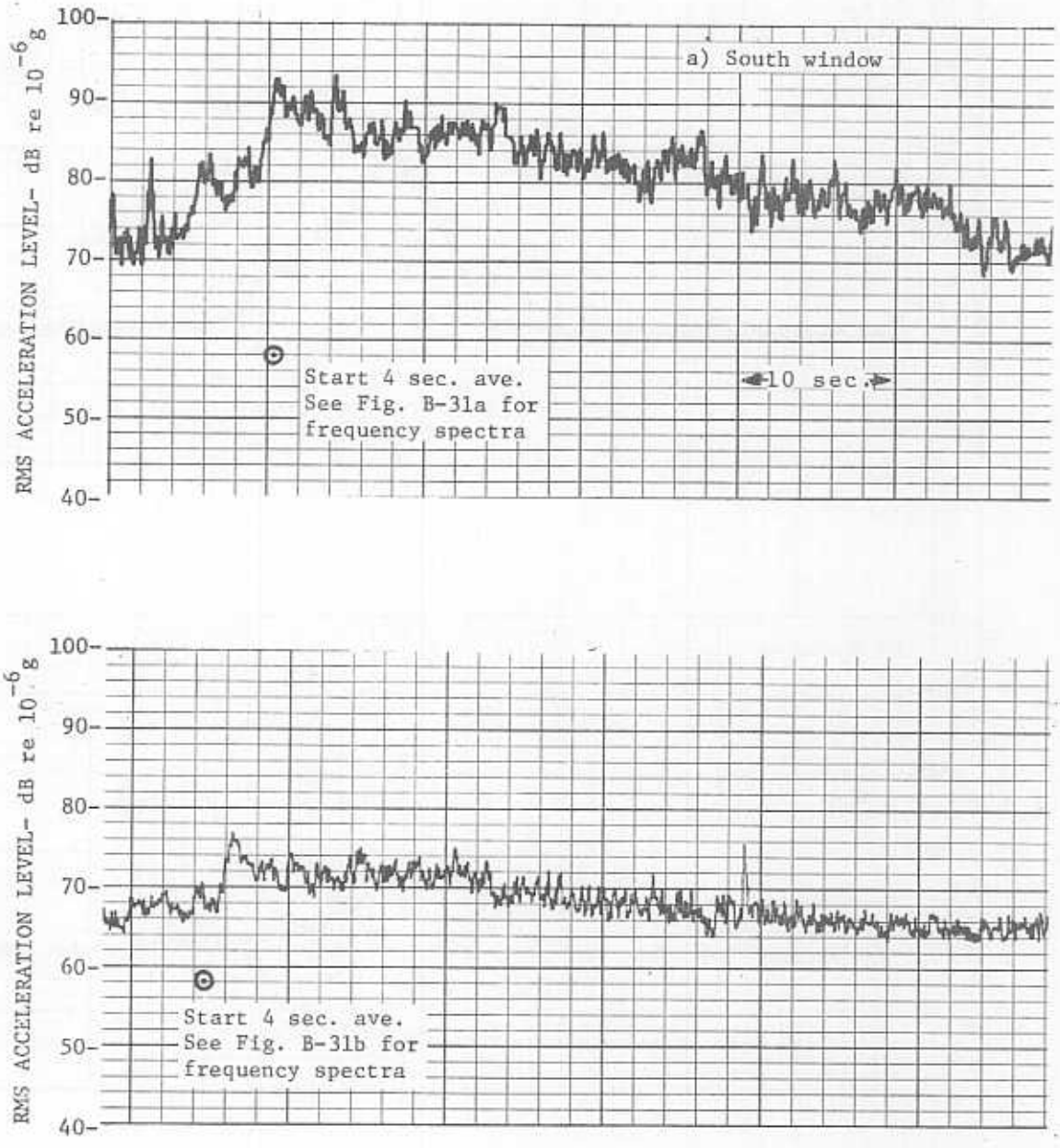


Figure B-14. Coincident Time Histories - Event No. 20.
Building Structural Vibration Levels
Flight Standards - SW Corner - 3rd Floor Office
Takeoff Boeing 707 - Runway 19
Fairbanks International Airport, Fairbanks, Alaska
Feb. 13, 1974 - 1352 Hours

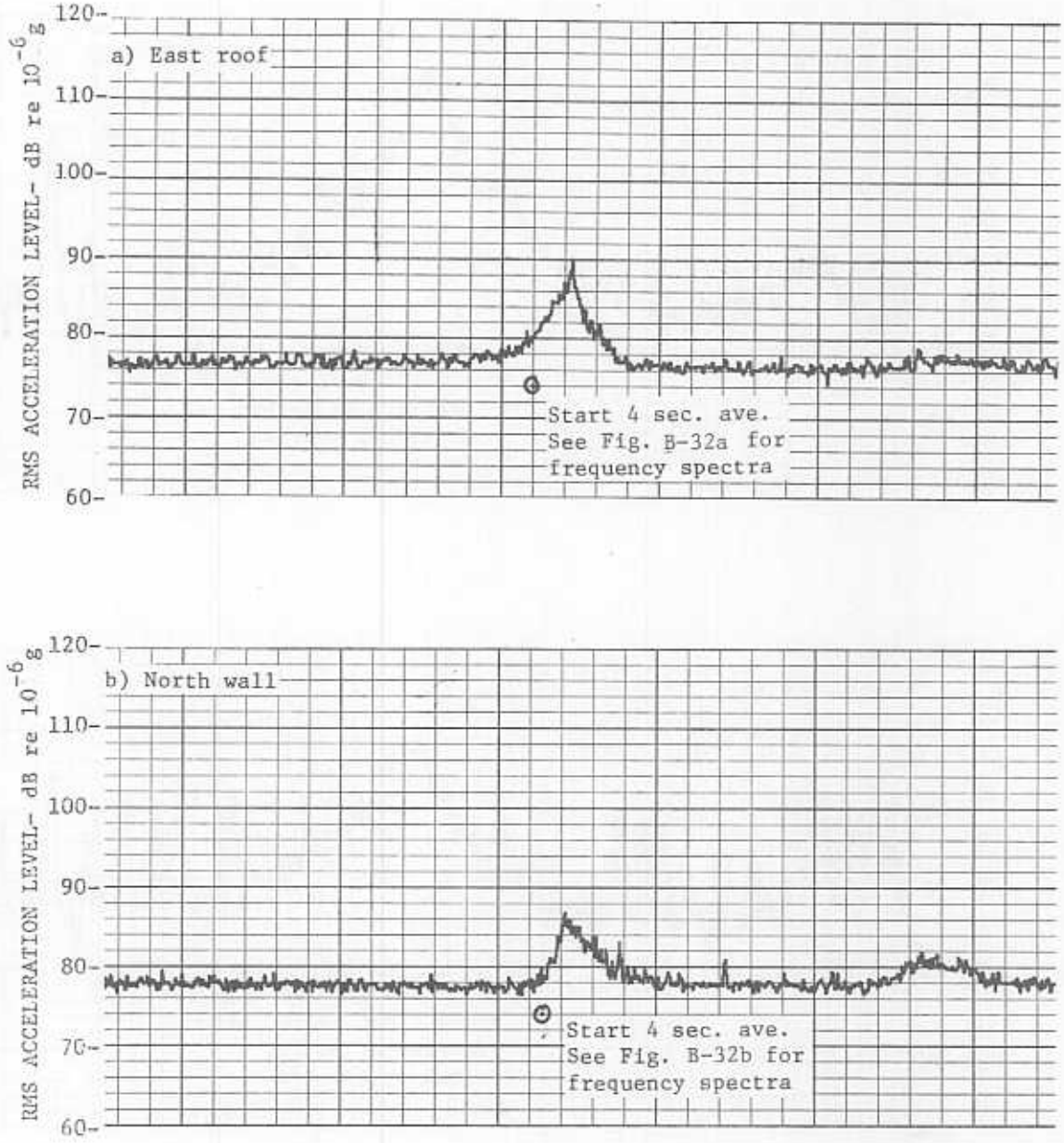


Figure B-15. Coincident Time Histories - Event No. 13.
Building Structural Vibration Levels
Localizer - Single Room Building
Landing Boeing 707 - Runway 01
Fairbanks International Airport, Fairbanks, Alaska
Feb. 12, 1974 - 1259 Hours

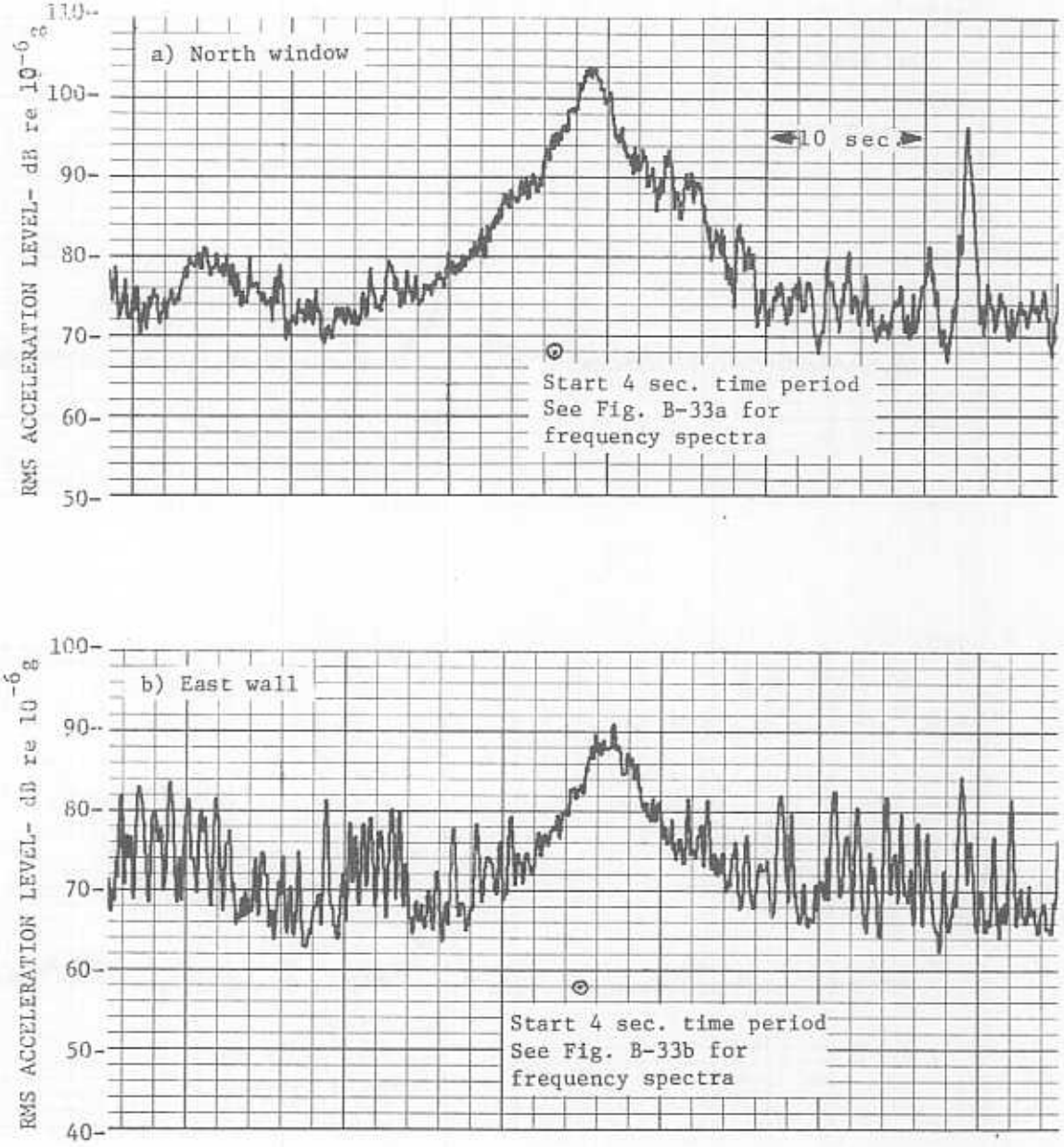


Figure B-16. Coincident Time Histories - Event No. 5.
Building Structural Vibration Levels
Motel - NE Corner - 2nd Floor Room
Landing Boeing 707 - Runway 19
Fairbanks International Airport, Fairbanks, Alaska
Feb. 11, 1974 - 1307 Hours

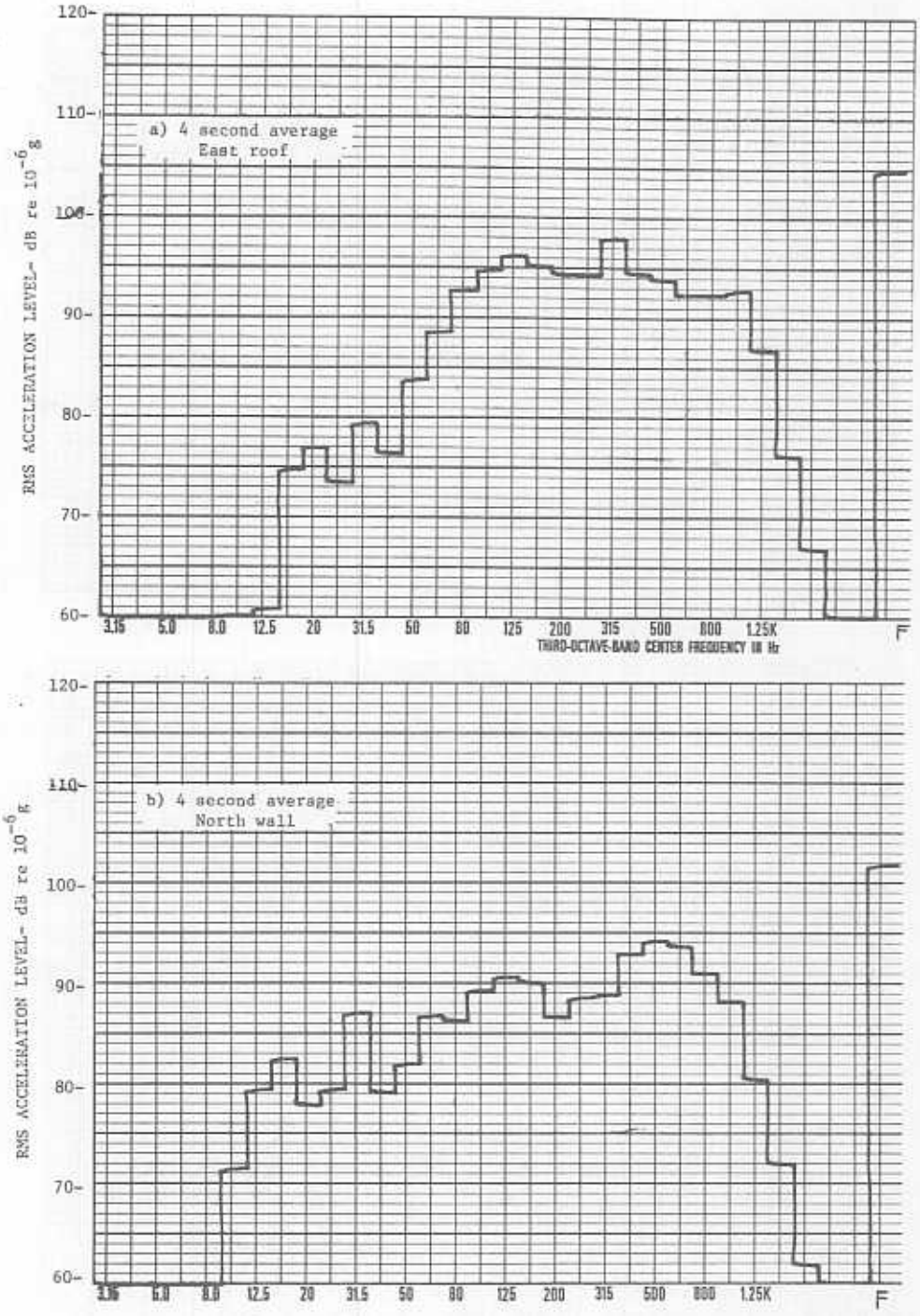


Figure B-17. 1/3 Octave Frequency Spectra - Event No. 23.
Building Structural Vibration Levels
Localizer - Single Room Building
Takeoff Concorde F-WTSA - Runway 19
Fairbanks International Airport, Fairbanks, Alaska
Feb. 15, 1974 - 0910 Hours
See Fig. B-1 for Time History of Vibration Levels

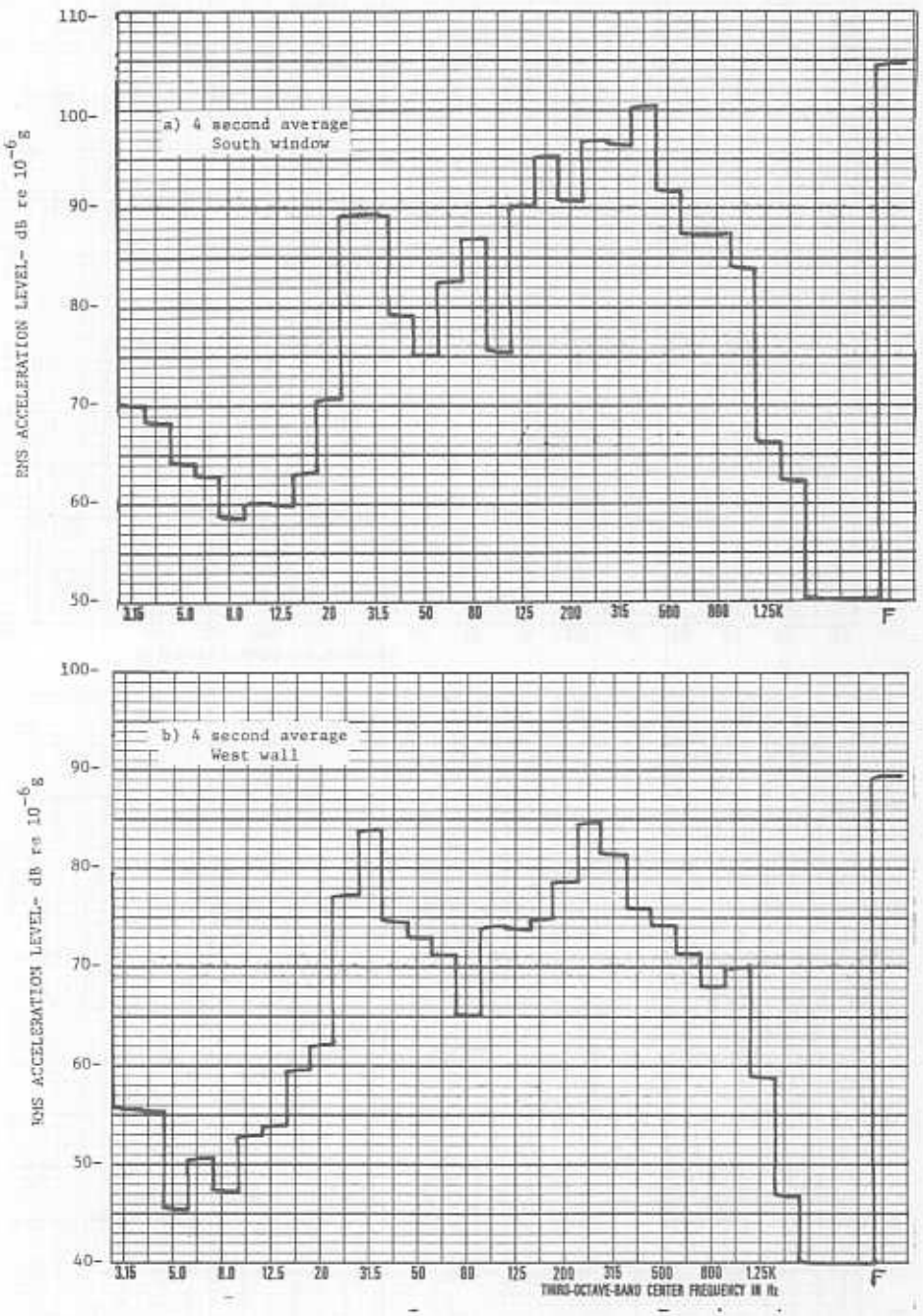


Figure B-18. 1/3 Octave Frequency Spectra - Event No. 23.
Building Structural Vibration Levels
Flight Standards - SW Corner - 2nd Floor Office
Takeoff Concorde F-WTSA - Runway 19
Fairbanks International Airport, Fairbanks, Alaska
Feb. 15, 1974 - 0710 Hours
See Fig. B-2 for Time History of Vibration Levels

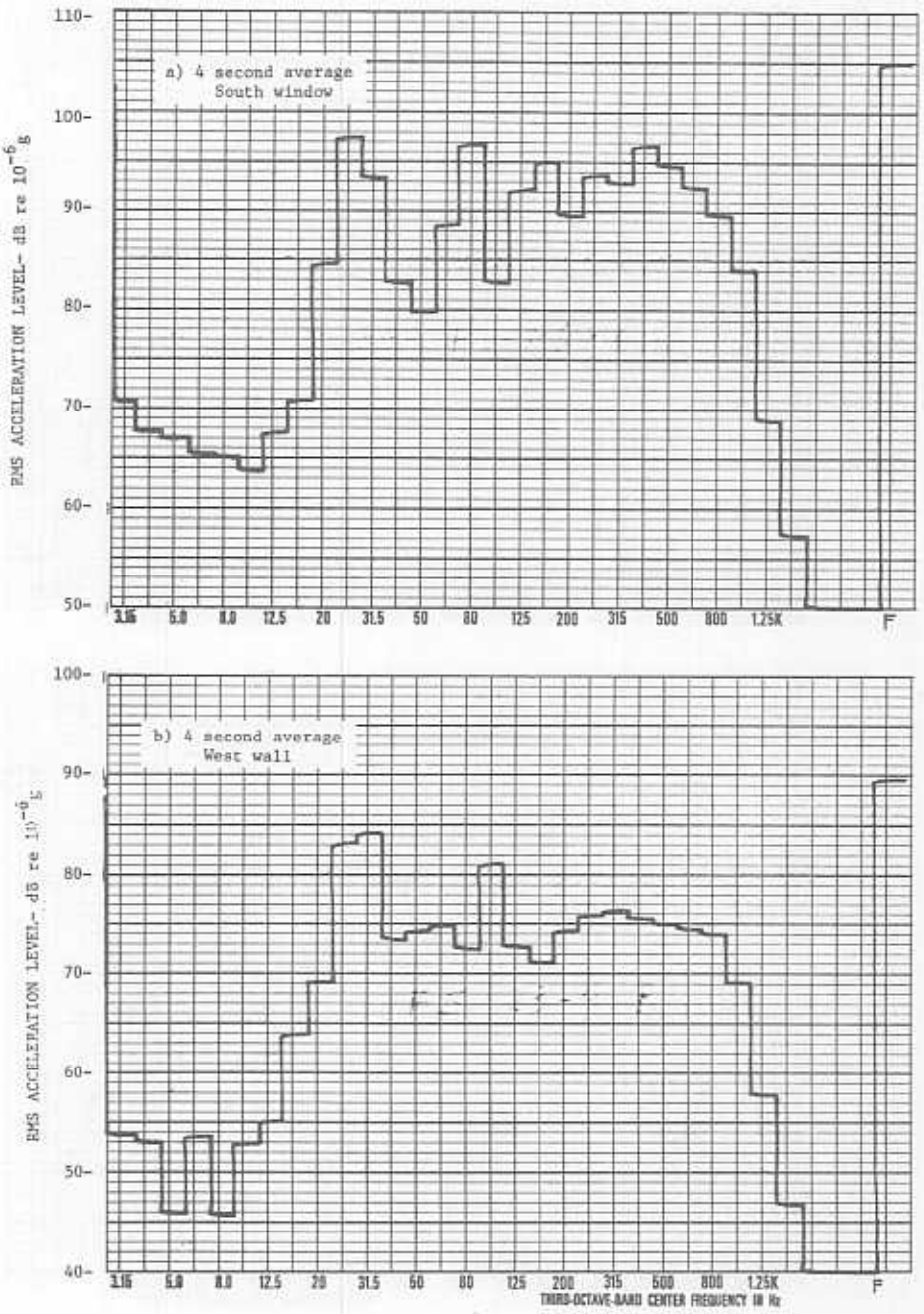


Figure B-19. 1/3 Octave Frequency Spectra - Event No. 23.
Building Structural Vibration Levels
Flight Standards - SW Corner - 2nd Floor Office
Takeoff Concorde F-WTSA - Runway 19
Fairbanks International Airport, Fairbanks, Alaska
Feb. 15, 1974 - 0910 Hours
See Fig. B-2 for Time History of Vibration Levels

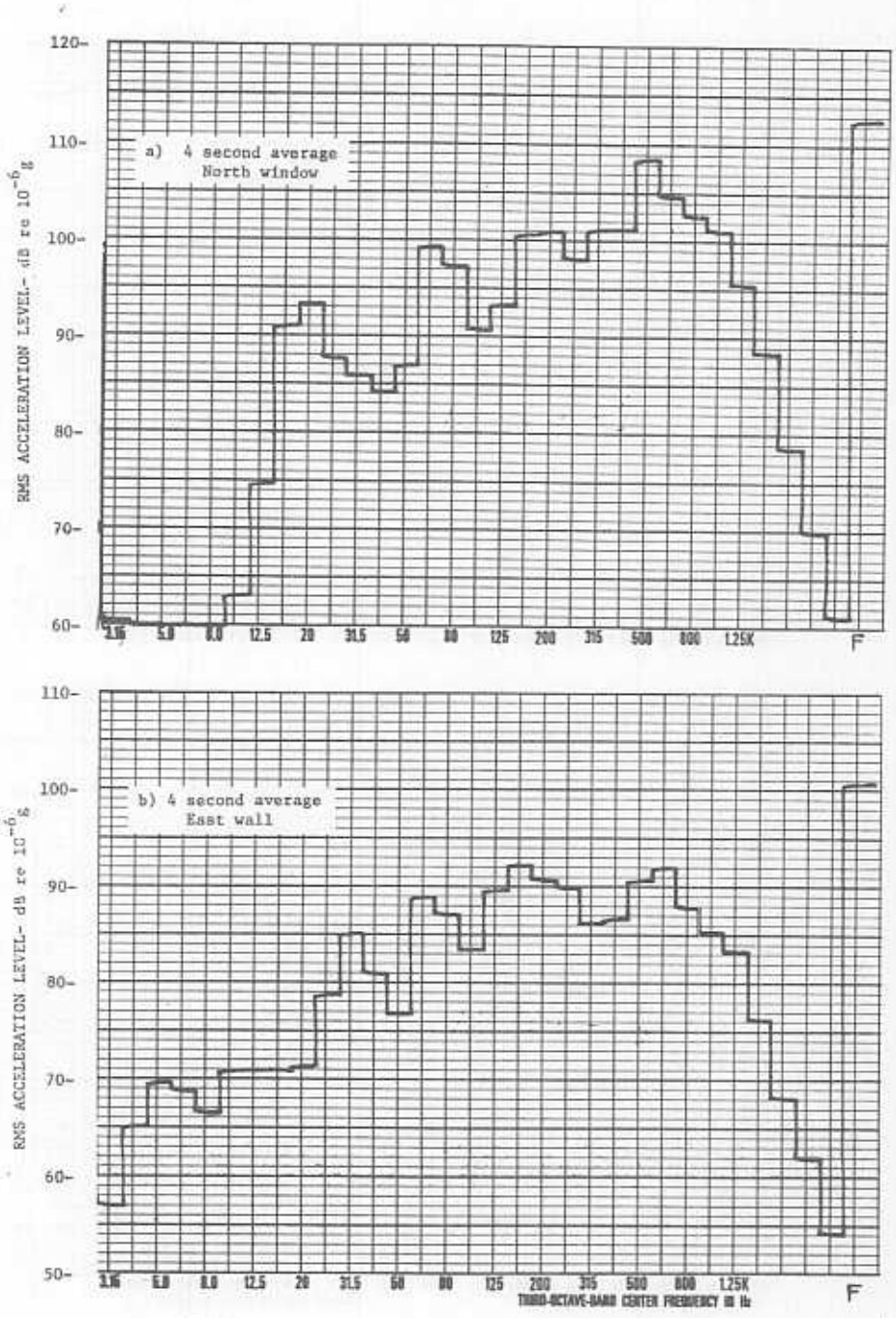


Figure B-20. 1/3 Octave Frequency Spectra - Event No. 24.
Building Structural Vibration Levels
Motel - NE Corner - 2nd Floor Room
Landing Concorde F-WTSA - Runway 19
Fairbanks International Airport, Fairbanks, Alaska
Feb. 15, 1974 - 1718 Hours
See Fig. B-3 for Time History of Vibration Levels

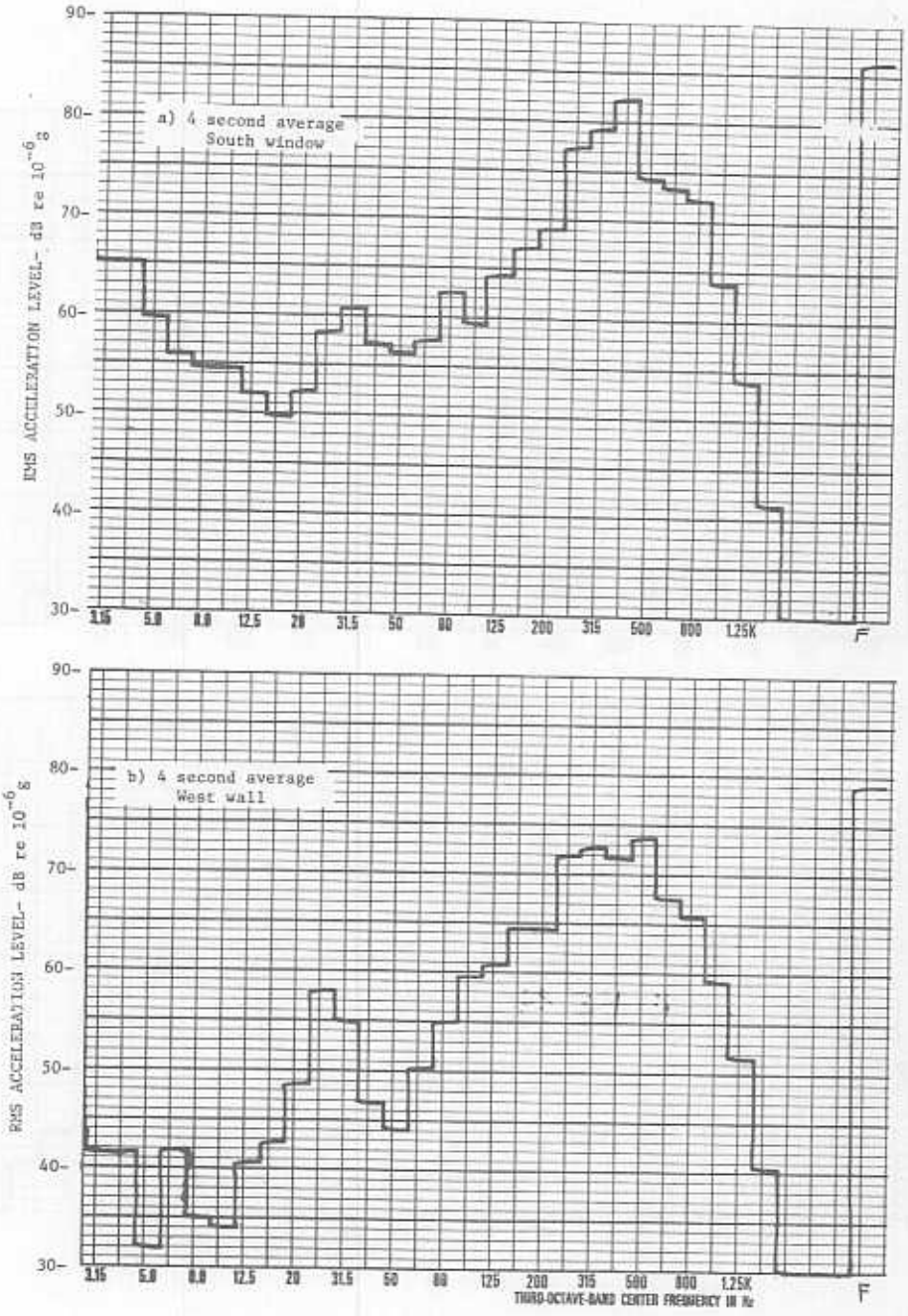


Figure B-21. 1/3 Octave Frequency Spectra - Event No. 24.
Building Structural Vibration Levels
Flight Standards - SW Corner - 3rd Floor Office
Landing Concorde F-WTSA - Runway 19
Fairbanks International Airport, Fairbanks, Alaska
Feb. 15, 1974 - 1718 Hours
See Fig. B-4 for Time History of Vibration Levels

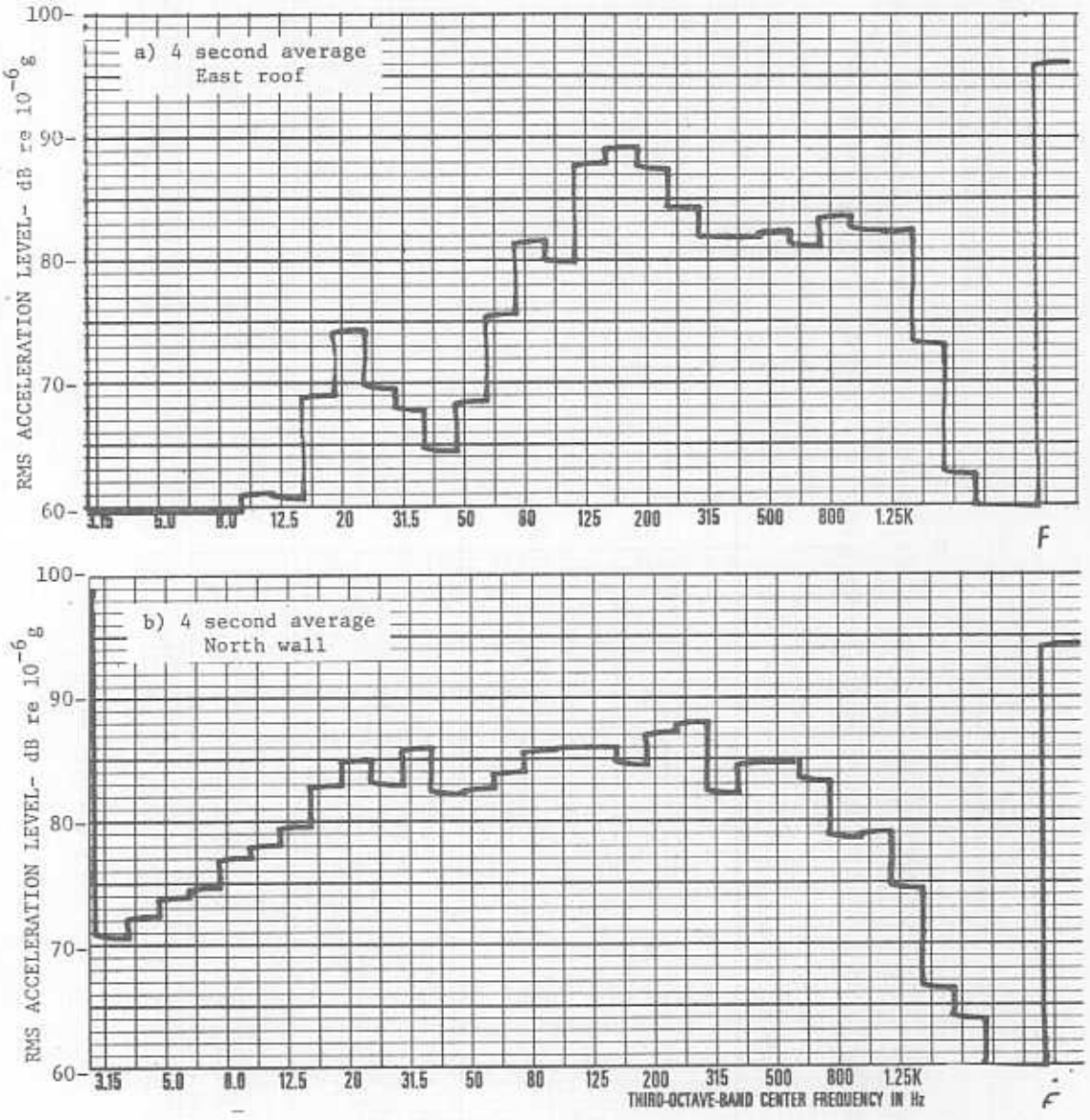


Figure B-22. 1/3 Octave Frequency Spectra - Event No. 19.
Building Structural Vibration Levels
Localizer - Single Room Building
Landing Concorde F-WTSA - Runway 01
Fairbanks International Airport, Fairbanks, Alaska
Feb. 13, 1974 - 1350 Hours
See Fig. B-5 for Time Histories of Vibration Levels

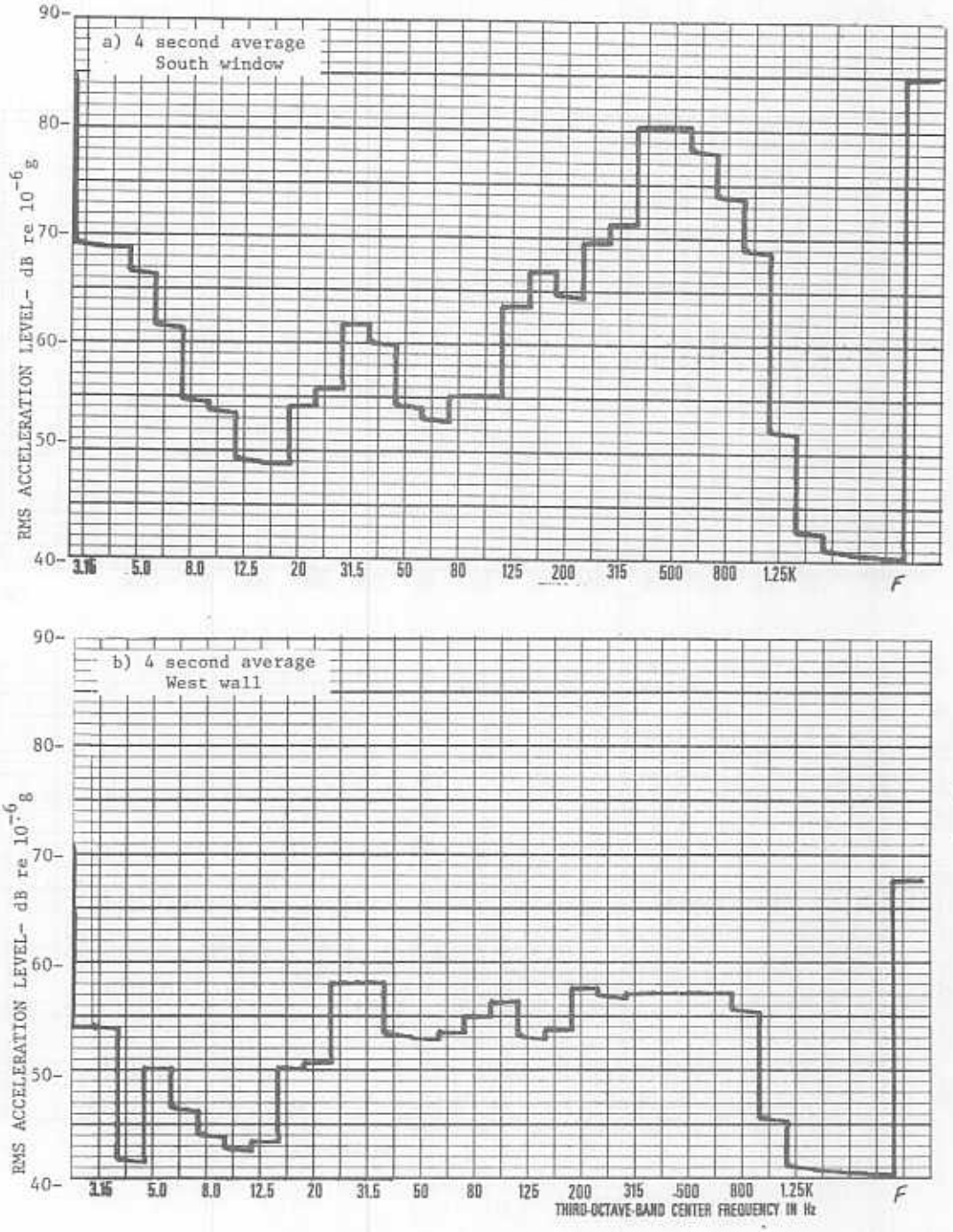


Figure B-23. 1/3 Octave Frequency Spectra - Event No. 19.
Building Structural Vibration Levels
Flight Standards - SW Corner - 3rd Floor Office
Landing Concorde F-WTSA - Runway 01
Fairbanks International Airport, Fairbanks, Alaska
Feb. 13, 1974 - 1350 Hours
See Fig. B-6 for Time Histories of Vibration Levels

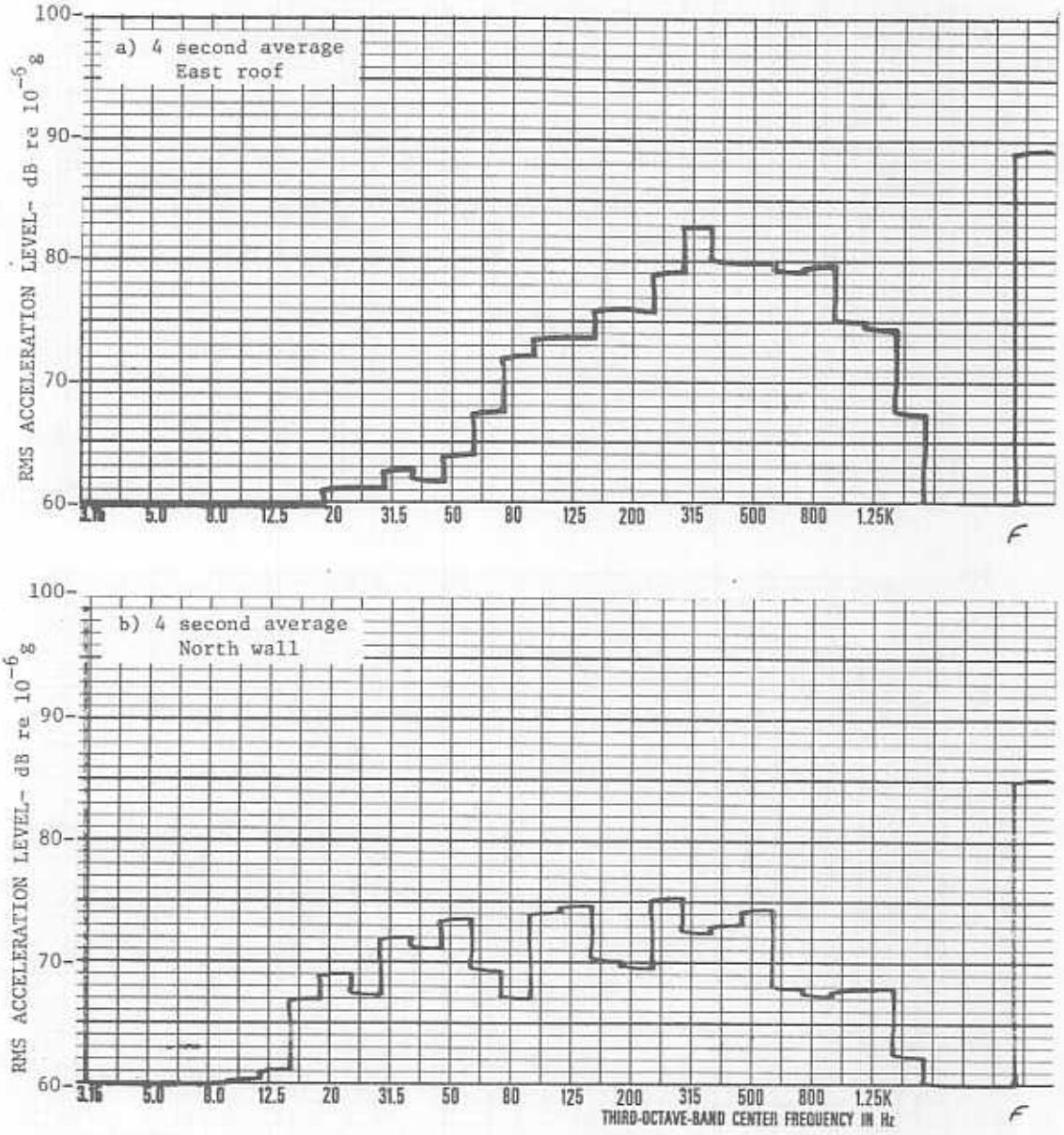


Figure B-24. 1/3 Octave Frequency Spectra - Event No. 18.
Building Structural Vibration Levels
Localizer - Single Room Building
Concorde F-WTSA Fly-over - Runway 01, 700 Ft, 300 MPH
Fairbanks International Airport, Fairbanks, Alaska
Feb. 13, 1974 - 1346 Hours
See Fig. B-7 for Time Histories of Vibration Levels

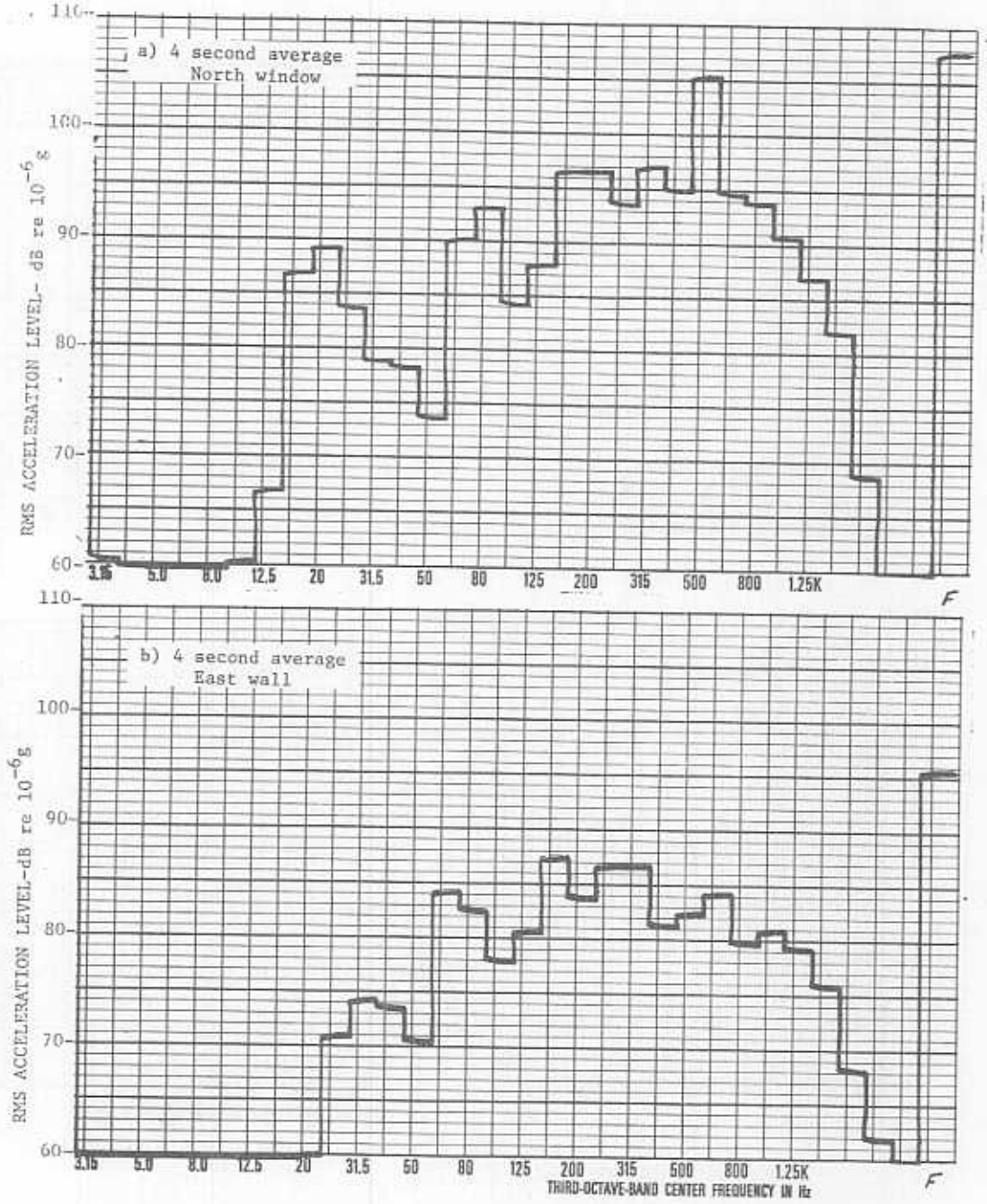


Figure B-25. 1/3 Octave Frequency Spectra - Event No. 18.
Building Structural Vibration Levels
Motel - NE Corner - 2nd Floor Room
Concorde F-WTSA Fly-over - Runway 01, 700 Ft,
300 MPH
Fairbanks International Airport, Fairbanks, Alaska
Feb. 13, 1974 - 1346 Hours
See Fig. B-8 for Time History of Vibration Levels

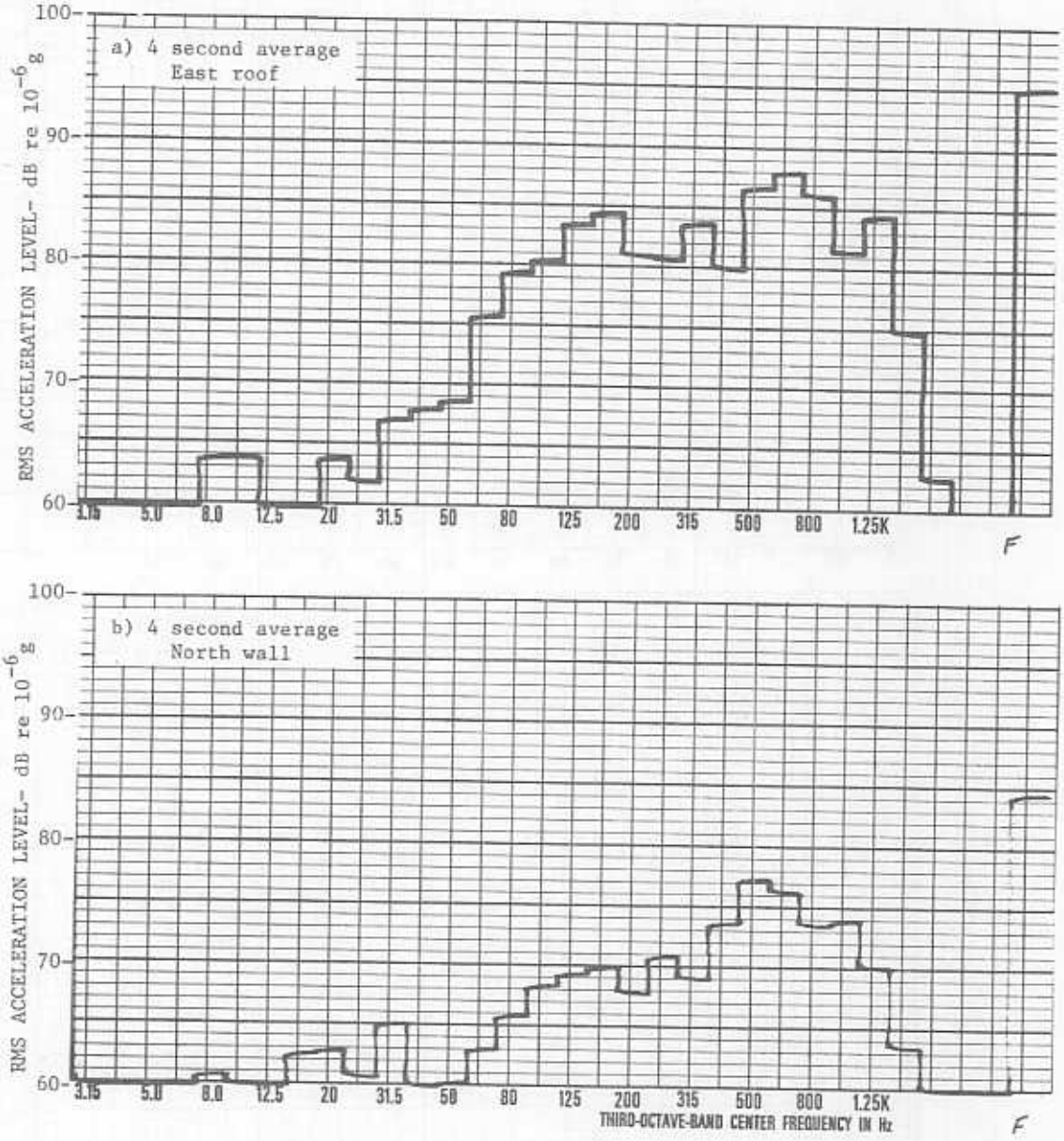


Figure B-26. 1/3 Octave Frequency Spectra - Event No. 12.
Building Structural Vibration Levels
Localizer - Single Room Building
Takeoff Boeing 720 - Runway 19
Fairbanks International Airport, Fairbanks, Alaska
Feb. 12, 1974 - 1231 Hours
See Fig. B-9 for Time Histories of Vibration Levels

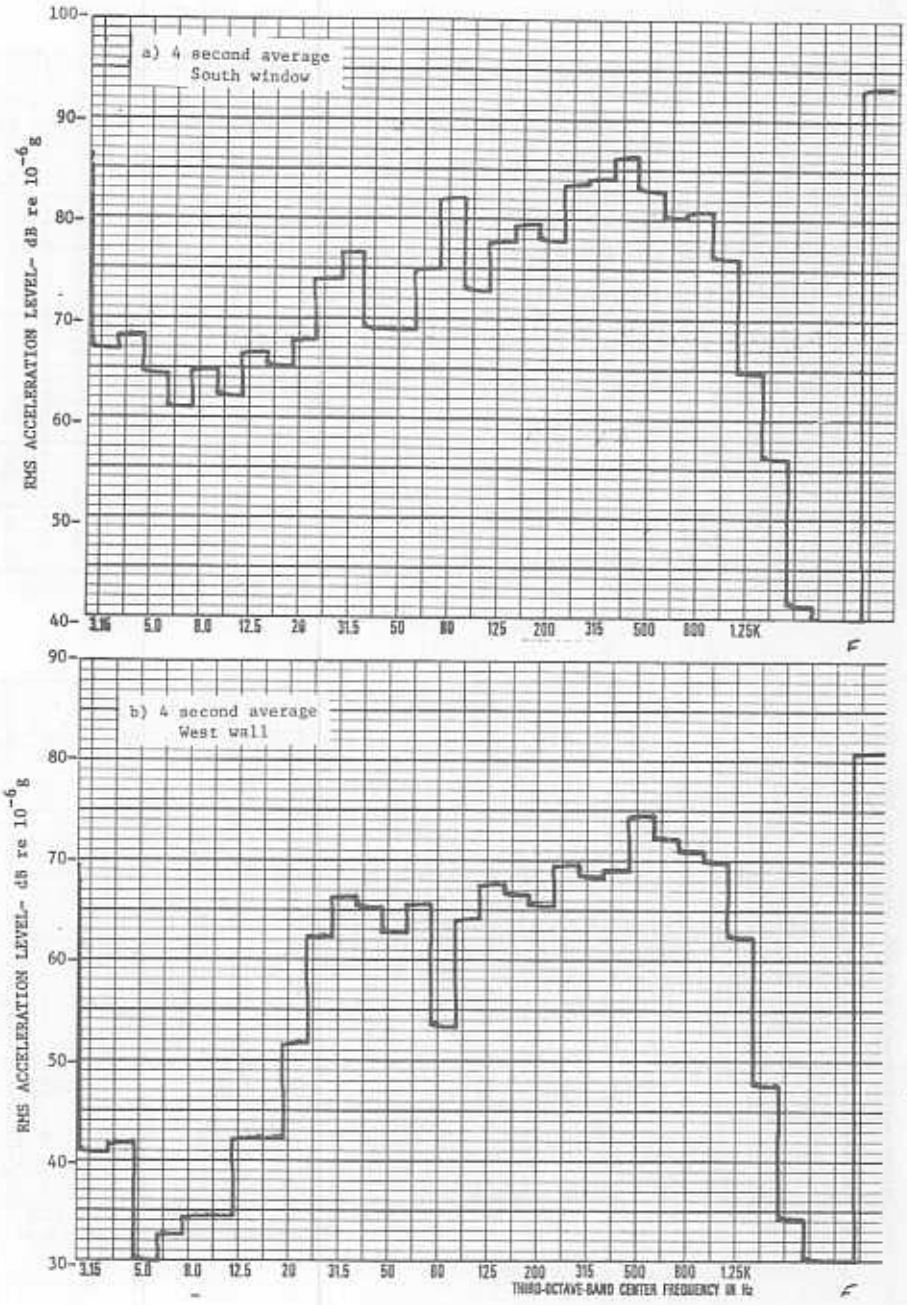


Figure B-27. 1/3 Octave Frequency Spectra - Event No. 12.
Building Structural Vibration Levels
Flight Standards - SW Corner - 3rd Floor Office
Takeoff Boeing 720 - Runway 19
Fairbanks International Airport, Fairbanks, Alaska
Feb. 12. 1974 - 1231 Hours
See Fig. B-10. for Time Histories of Vibration Levels

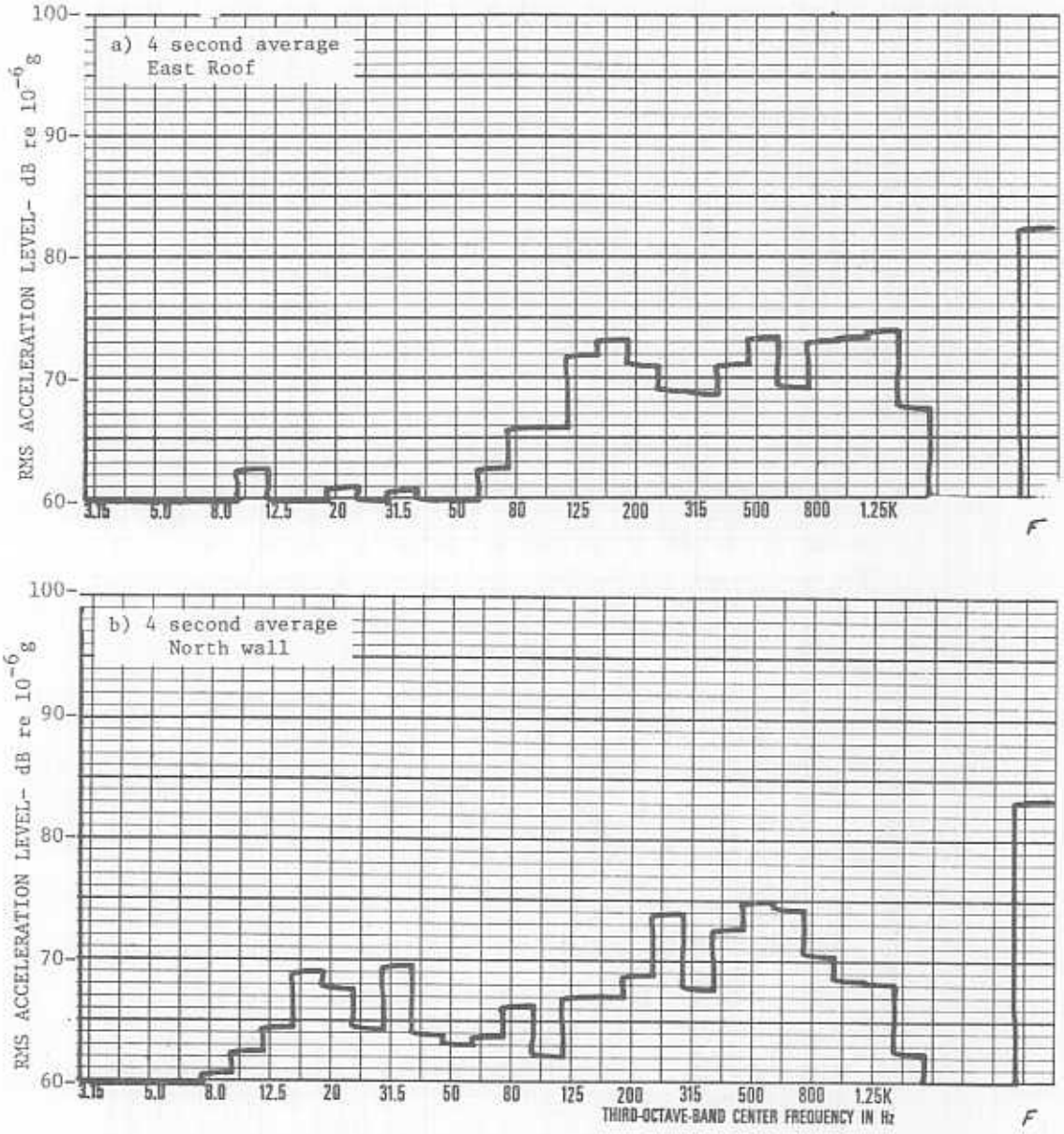


Figure B-28. 1/3 Octave Frequency Spectra - Event No. 10.
Building Structural Vibration Levels
Localizer - Single Room Building
Landing Boeing 720 - Runway 01
Fairbanks International Airport, Fairbanks, Alaska
Feb. 12, 1974 - 1143 Hours
See Fig. B-11 for Time Histories of Vibration Levels

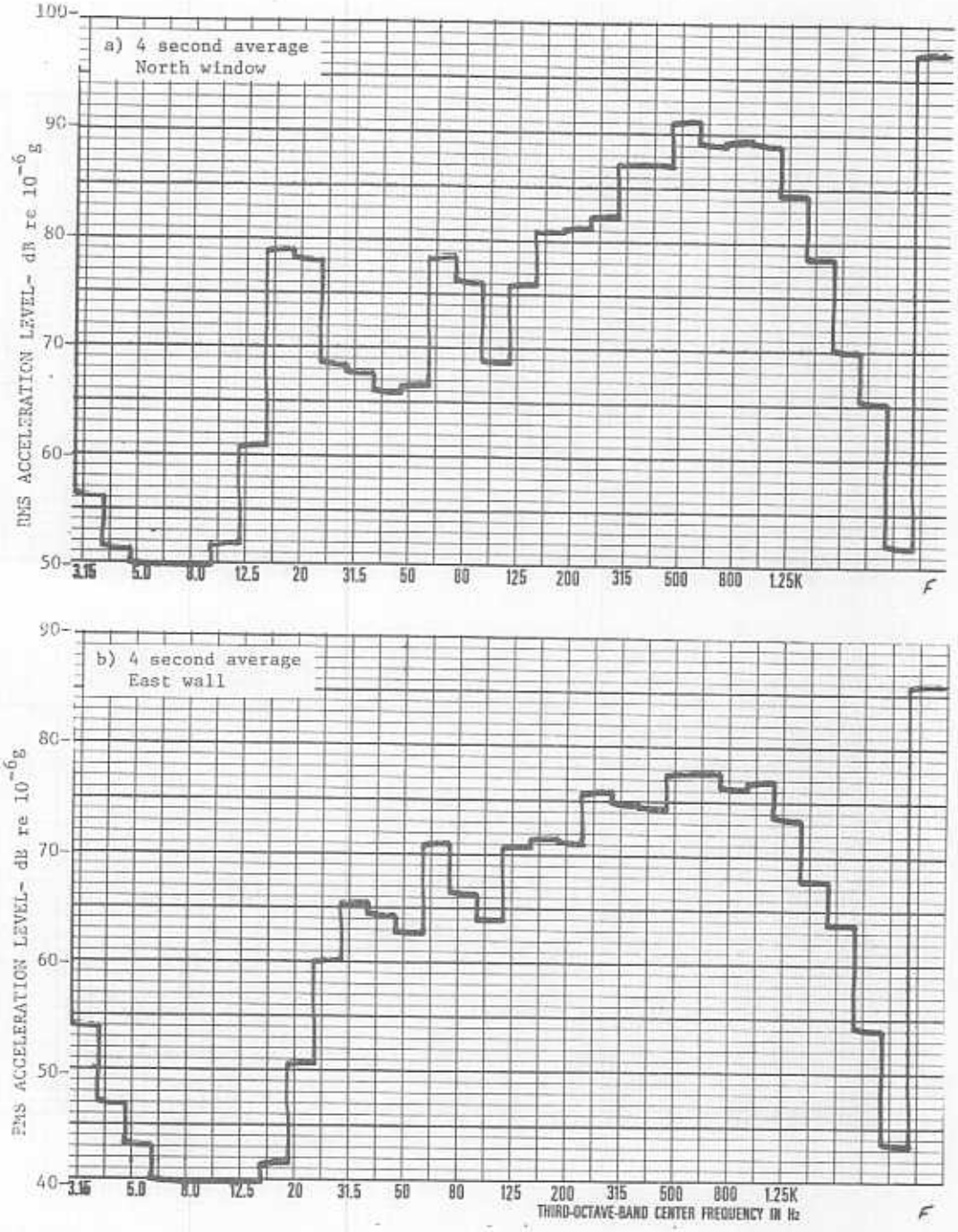


Figure B-29. 1/3 Octave Frequency Spectra - Event No. 4.
Building Structural Vibration Levels
Motel - NE Corner - 2nd Floor Room
Landing Boeing 720 - Runway 19
Fairbanks International Airport, Fairbanks, Alaska
Feb. 11, 1974 - 1245 Hours
See Fig. B-12 for Time Histories of Vibration Levels

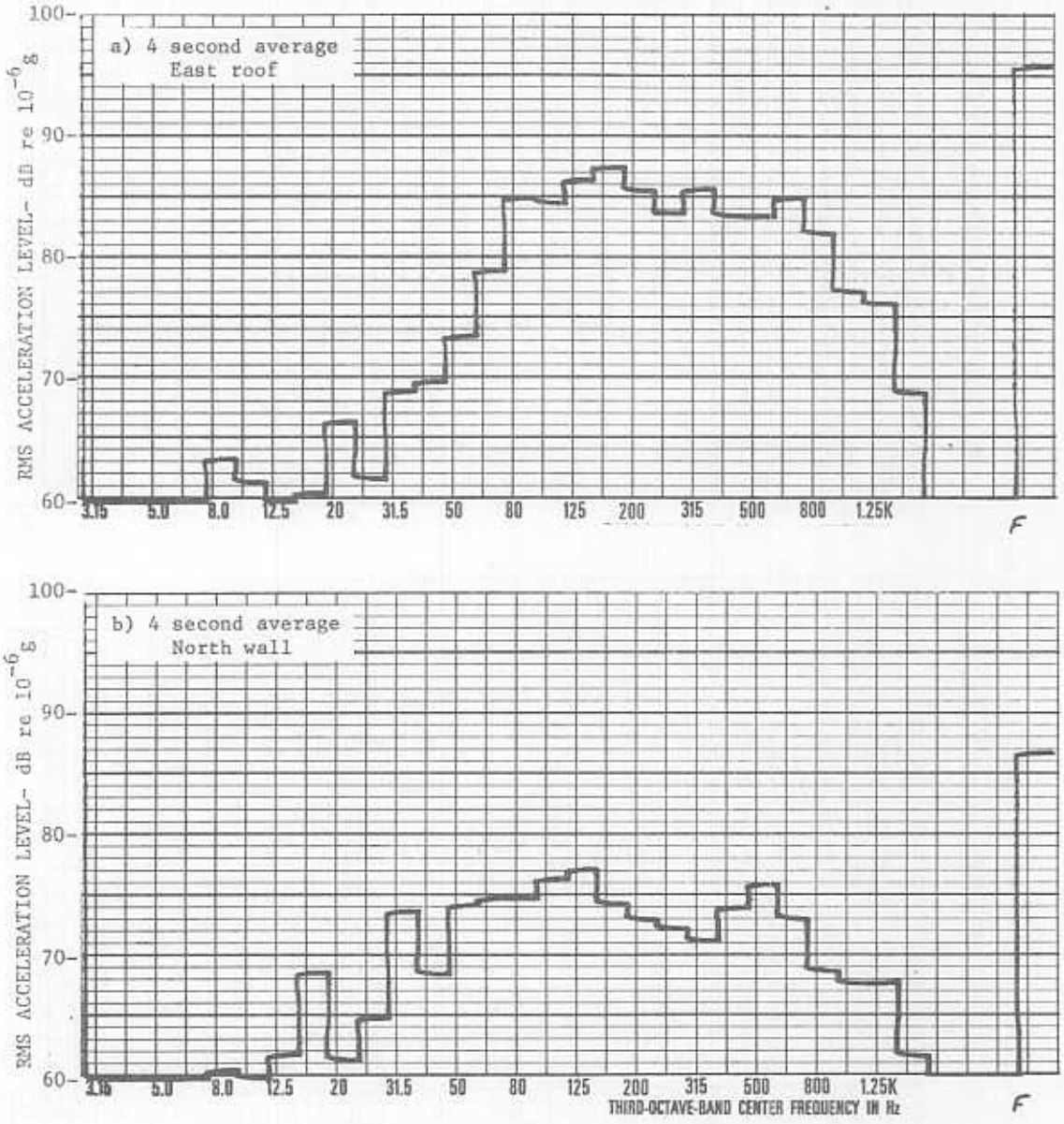


Figure B-30. 1/3 Octave Frequency Spectra - Event No. 20.
Building Structural Vibration Levels
Localizer - Single Room Building
Takeoff Boeing 707 - Runway 19
Fairbanks International Airport, Fairbanks, Alaska
Feb. 13, 1974 - 1352 Hours
See Fig. B-13 for Time Histories of Vibration Levels

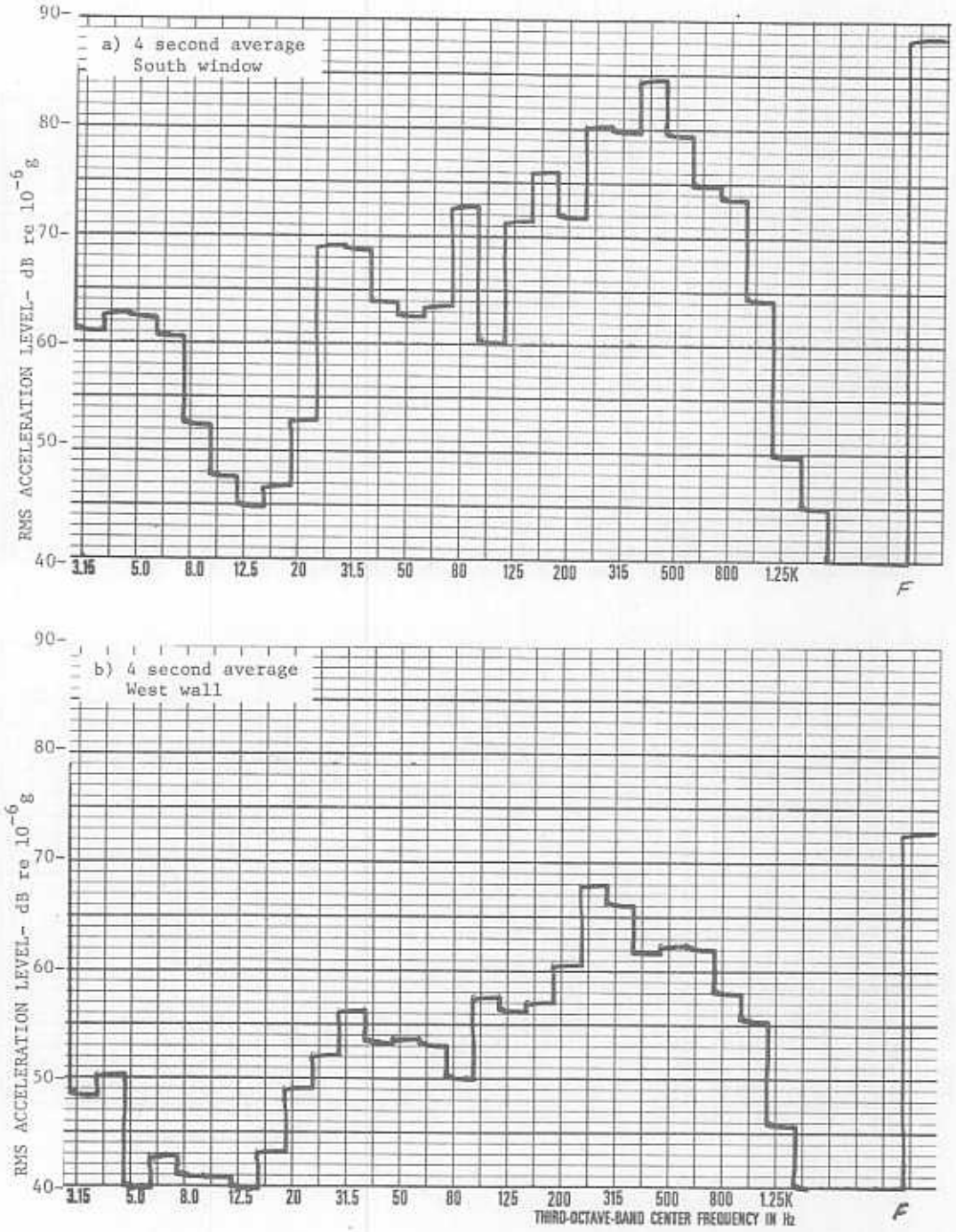


Figure B-31. 1/3 Octave Frequency Spectra - Event No. 20.
Building Structural Vibration Levels
Flight Standards-SW Corner-3rd Floor Office
Takeoff Boeing 707 - Runway 19
Fairbanks International Airport, Fairbanks, Alaska
Feb. 13, 1974 - 1352 Hours
See Fig. B-14 for Time Histories of Vibration Levels

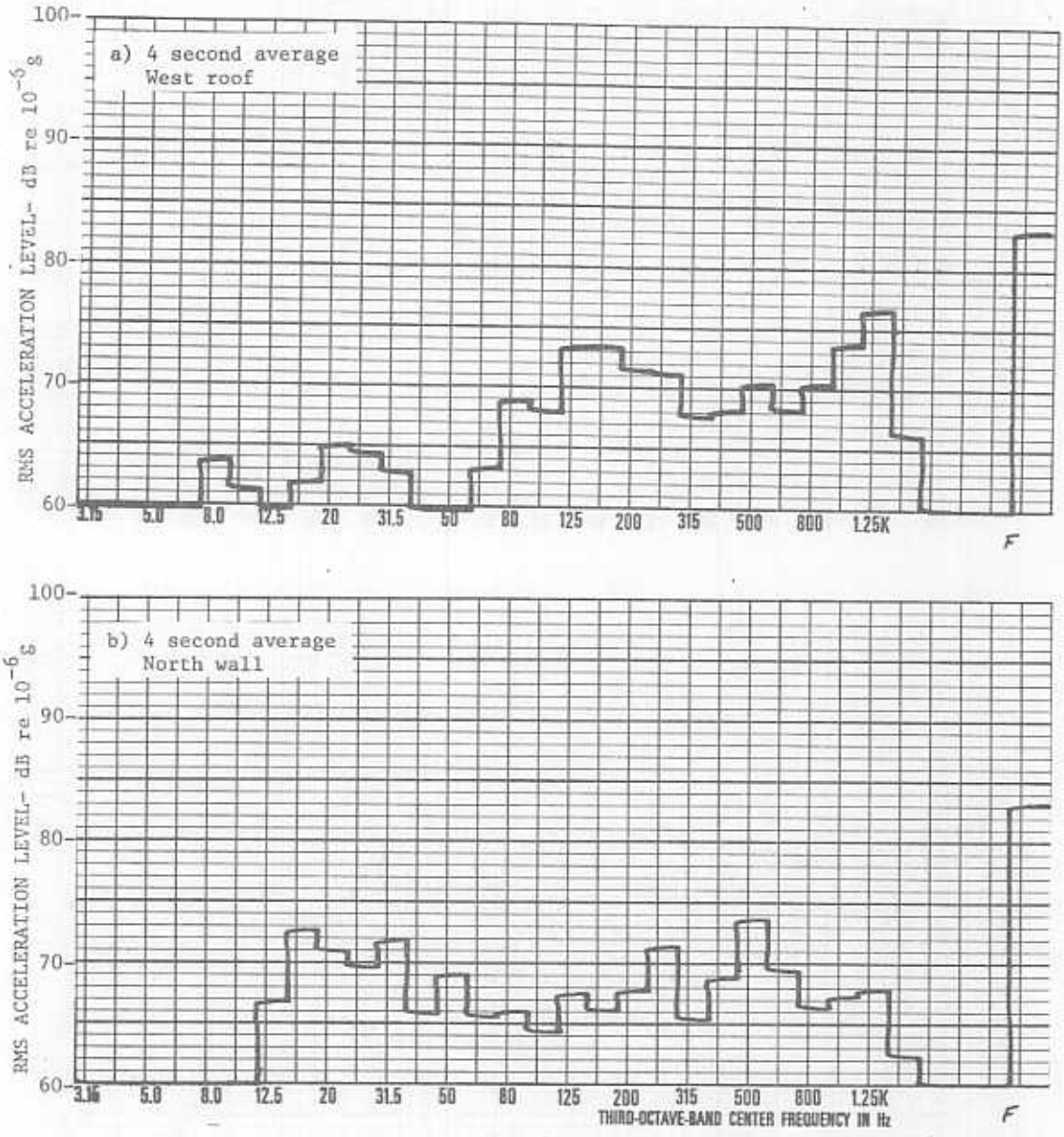


Figure B-32. 1/3 Octave Frequency Spectra - Event No. 13.
Building Structural Vibration Levels
Localizer - Single Room Building
Landing Boeing 707 - Runway 01
Fairbanks International Airport, Fairbanks, Alaska
Feb. 12, 1974 - 1259 Hours
See Fig. B-15 for Time Histories of Vibration Levels

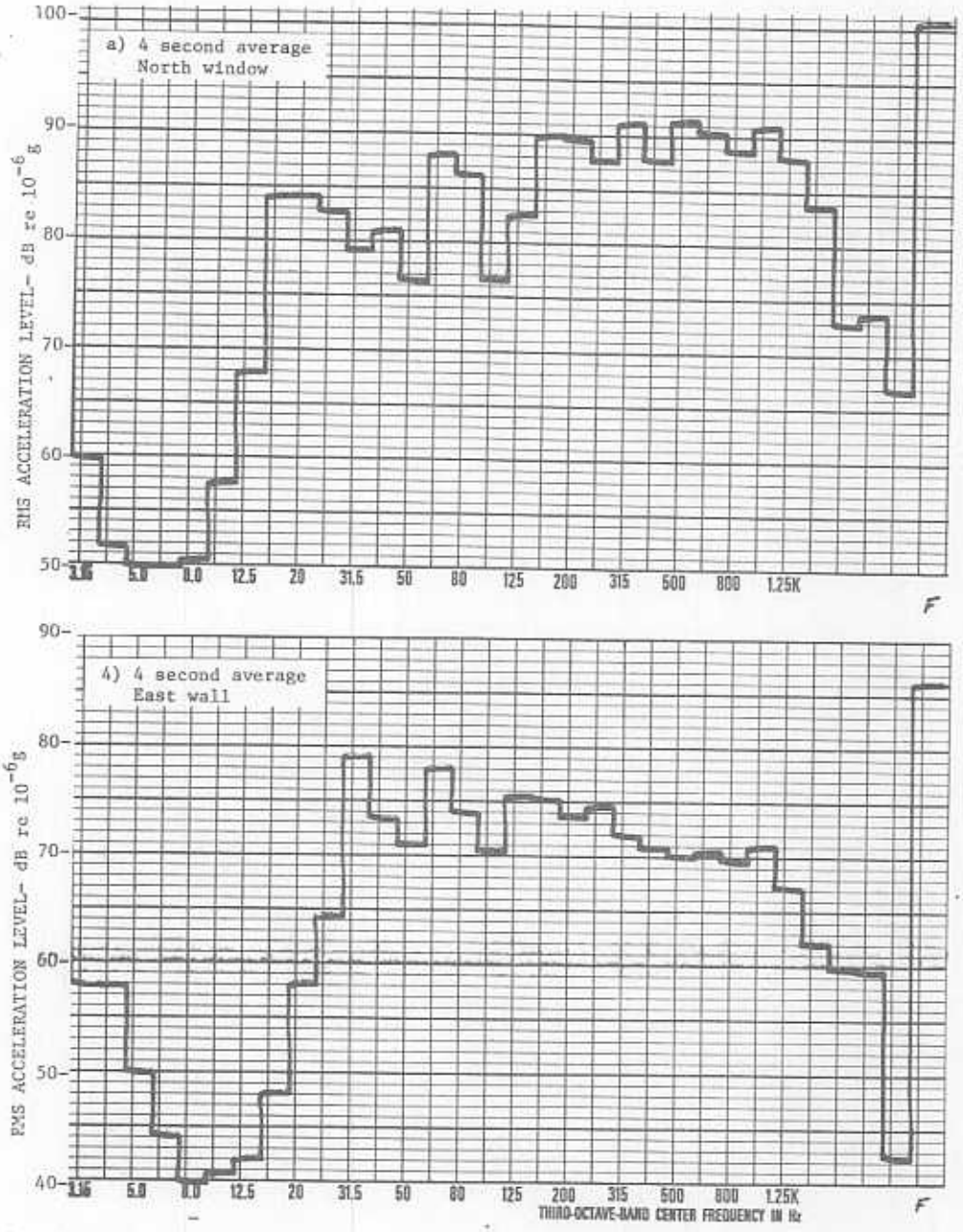


Figure B-33. 1/3 Octave Frequency Spectra - Event No. 5.
Building Structural Vibration Levels
Motel - NE Corner - 2nd Floor Room
Landing Boeing 707 - Runway 19
Fairbanks International Airport, Fairbanks, Alaska
Feb. 11, 1974 - 1307 Hours
See. Fig. B-16 for Time Histories of Vibration Levels

APPENDIX C
NOISE LEVEL DATA
MEASURED AT TWO LOCATIONS
LOGAN INTERNATIONAL AIRPORT
BOSTON, MASSACHUSETTS

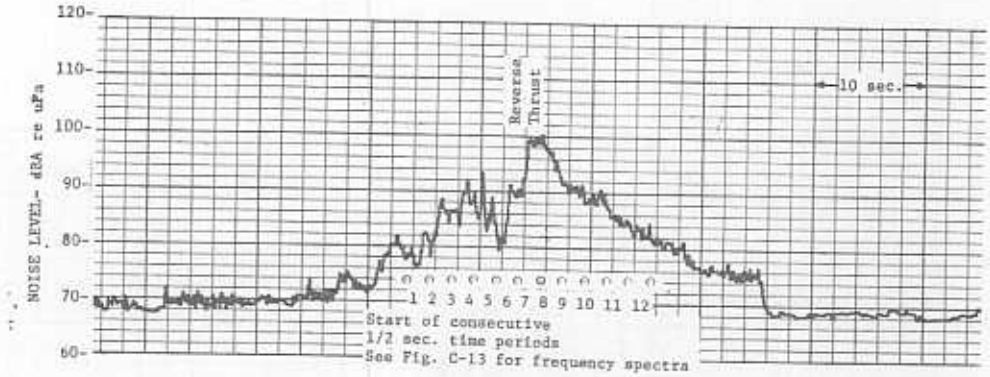


Figure C-1. Noise Level Time History - Event No. 5.
Landing Concorde F-WTSA - Runway 33L
Toolshed - Outside
Logan International Airport, Boston MA
June 17, 1974 - 0911 Hours

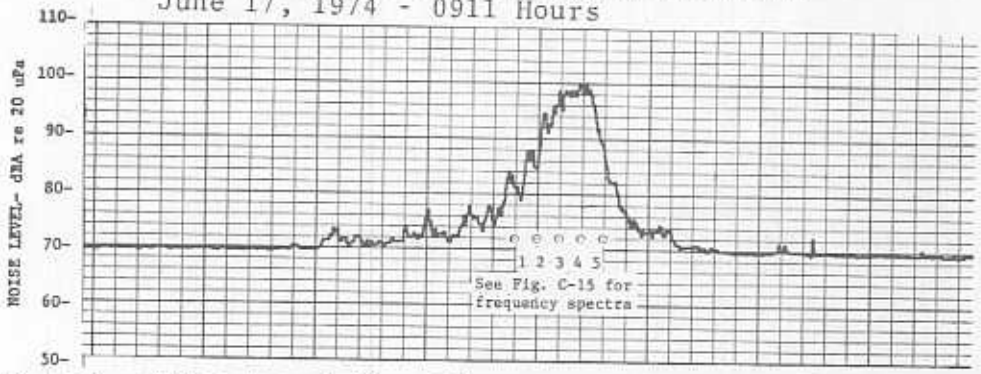


Figure C-2. Noise Level Time History - Event No. 10.
Landing Concorde F-WTSA - Runway 4R
Field Office - Outside
Logan International Airport, Boston MA
June 14, 1974 - 1404 Hours

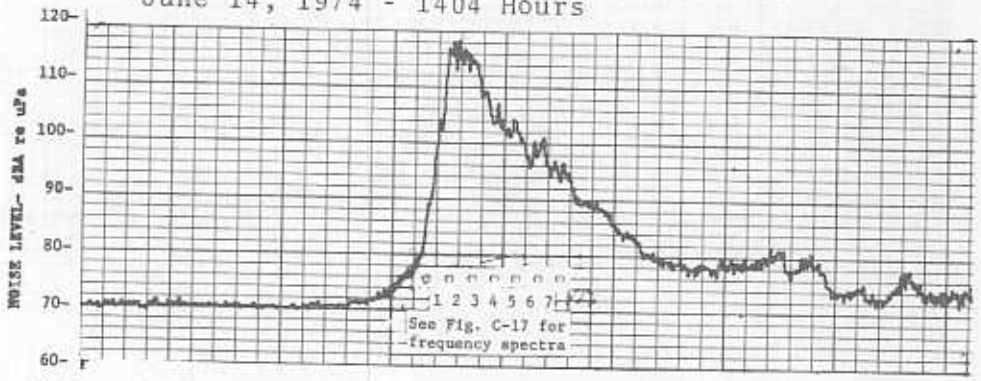


Figure C-3. Noise Level Time History - Event No. 19.
Takeoff Concorde F-WTSA - Runway 15R
Toolshed - Outside
Logan International Airport, Boston MA
June 17, 1974 - 0822 Hours

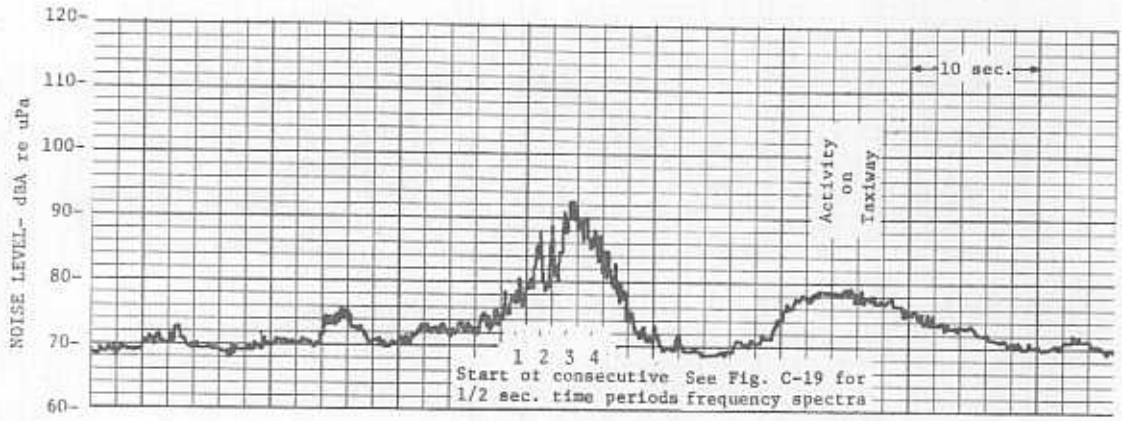


Figure C-4. Noise Level Time History - Event No. 2.
Landing Boeing 707 - Runway 33L
Toolshed - Outside
Logan International Airport, Boston MA
June 13, 1974 - 0834 Hours

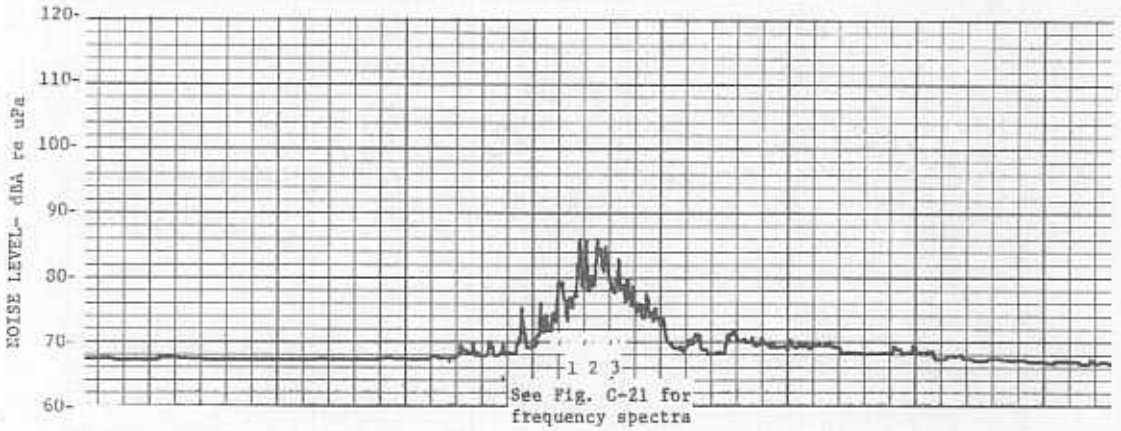


Figure C-5. Noise Level Time History - Event No. 3.
Landing Douglas DC-8 - Runway 33L
Toolshed - Outside
Logan International Airport, Boston MA
June 13, 1974 - 0841 Hours

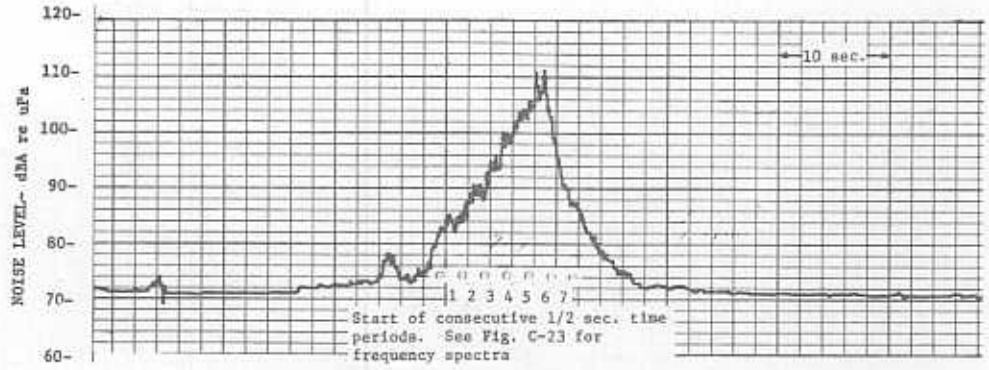


Figure C-6. Noise Level Time History - Event No. 7.
Landing Boeing 707 - Runway 4R
Field Office - Outside
Logan International Airport, Boston MA
June 13, 1974 - 0954 Hours

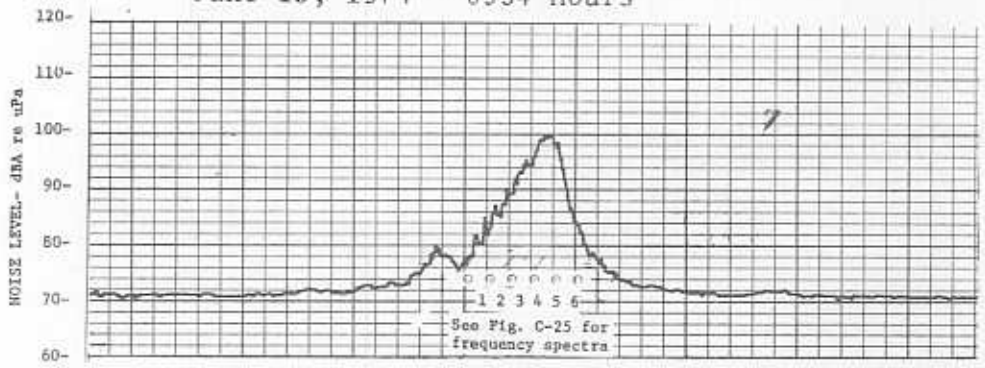


Figure C-7. Noise Level Time History - Event No. 8.
Landing Boeing 747 - Runway 4R
Field Office - Outside
Logan International Airport, Boston MA
June 13, 1974 - 0957 Hours

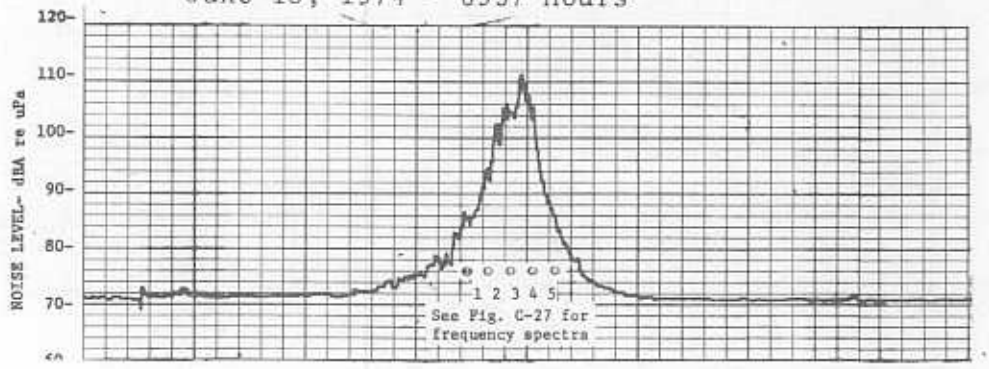


Figure C-8. Noise Level Time History - Event No. 9.
Landing Douglas DC-8 - Runway 4R
Field Office - Outside
Logan International Airport, Boston MA
June 13, 1974 - 1010 Hours

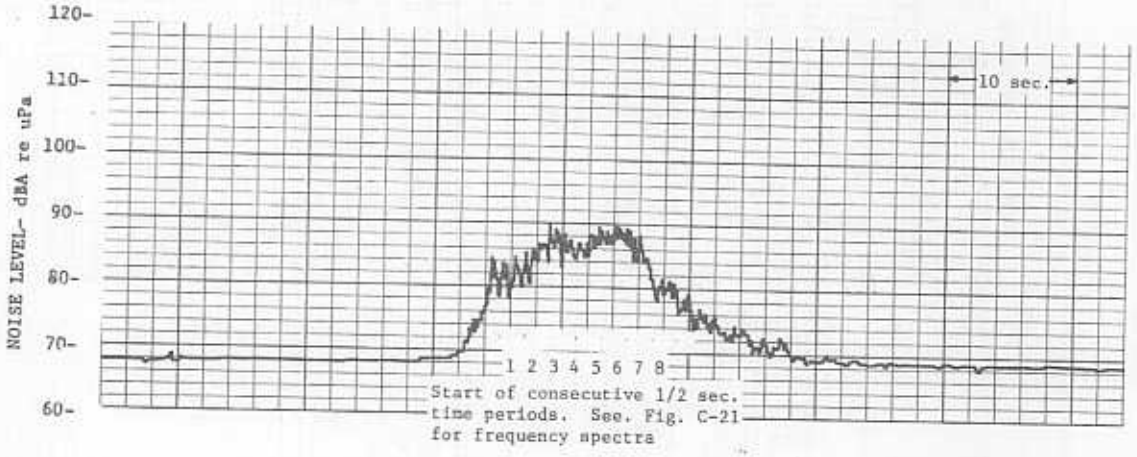


Figure C-9. Noise Level Time History - Event No. 16.
Takeoff Douglas DC-10 - Runway 15R
Toolshed - Outside
Logan International Airport, Boston MA
June 17, 1974 - 0801 Hours

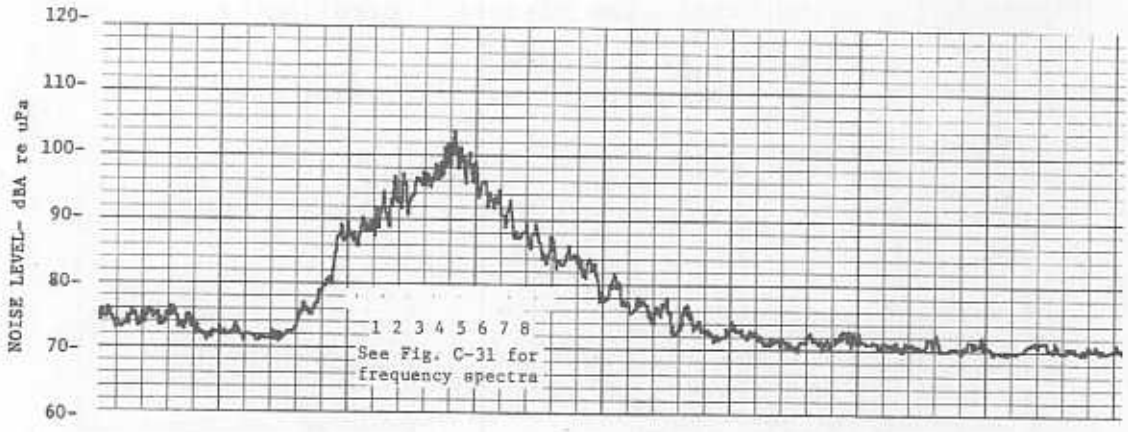


Figure C-10. Noise Level Time History - Event No. 21.
Takeoff Lockheed L-1011 - Runway 15R
Toolshed - Outside
Logan International Airport, Boston MA
June 17, 1974 - 0835 Hours

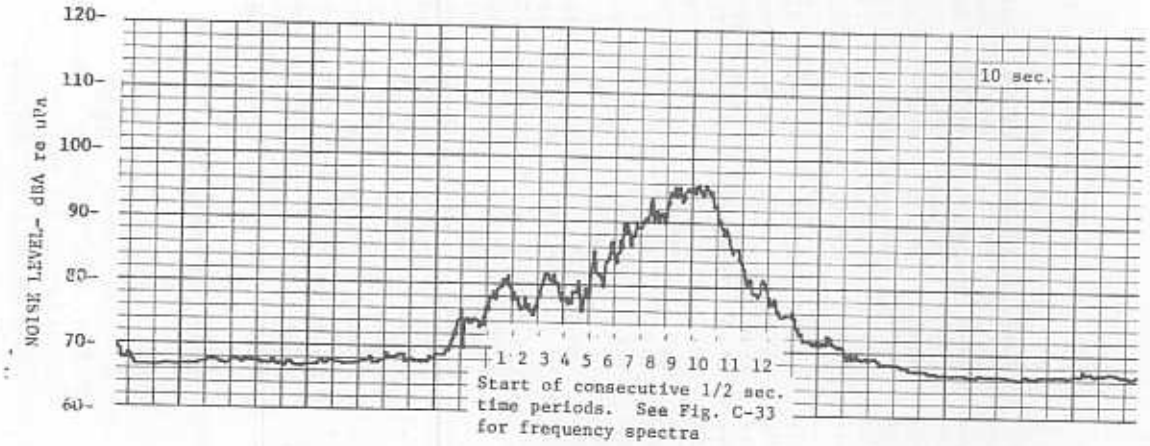


Figure C-11. Noise Level Time History - Event No. 29.
Takeoff Boeing 747 - Runway 15R
Toolshed - Outside
Logan International Airport, Boston MA
June 18, 1974 - 1519 Hours

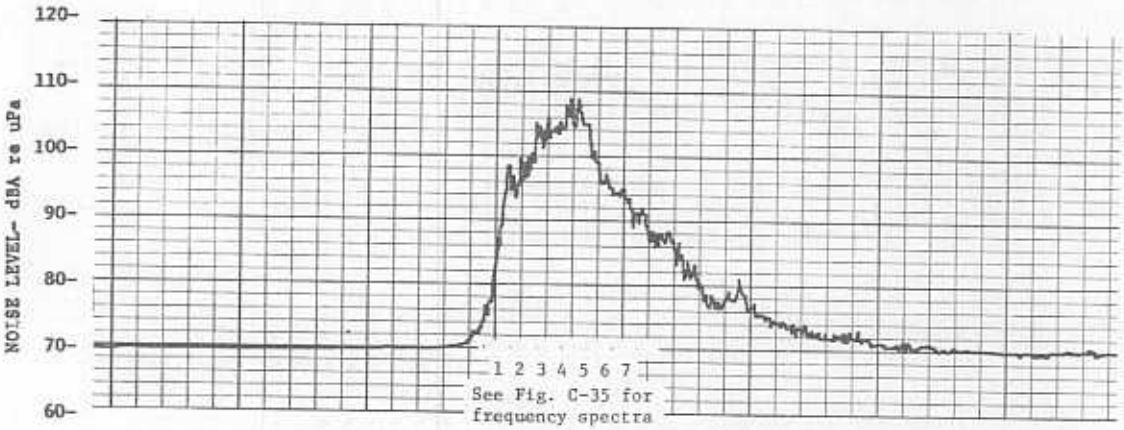


Figure C-12. Noise Level Time History - Event No. 18.
Takeoff Boeing 707 - Runway 15R
Toolshed - Outside
Logan International Airport, Boston MA
June 17, 1974 - 0816 Hours

1/3 OCTAVE CENTER FREQ. HZ	OUTSIDE NOISE LEVEL - DB RE 20 μPA 1/2 SECOND INTEGRATION PERIODS(1)											
	1	2	3	4	5	6	7	8	9	10	11	12
25 -	65.8,	65.3,	75.5,	76.5,	71.5,	67.5,	65.0,	64.5,	63.5,	60.0,	62.8,	60.0,
31.5 -	66.5,	67.5,	75.0,	79.5,	80.3,	71.8,	76.0,	69.8,	64.5,	66.3,	64.8,	64.3,
40 -	72.8,	71.8,	77.0,	80.8,	80.8,	77.0,	77.5,	78.0,	73.8,	66.3,	71.8,	66.5,
50 -	75.5,	77.0,	80.0,	79.8,	80.8,	82.8,	80.3,	77.8,	75.0,	75.0,	76.3,	76.0,
63 -	87.5,	88.8,	88.5,	88.8,	89.5,	89.5,	89.8,	88.0,	86.8,	87.3,	88.3,	88.3,
80 -	72.3,	74.8,	82.5,	83.5,	88.0,	85.5,	83.3,	85.8,	76.5,	77.8,	80.8,	77.8,
100 -	71.8,	80.3,	82.3,	82.8,	89.3,	91.0,	86.5,	83.5,	80.3,	80.3,	80.0,	77.3,
125 -	73.0,	83.0,	83.0,	83.3,	88.8,	92.0,	86.0,	86.3,	82.3,	79.0,	79.5,	76.8,
160 -	72.5,	80.5,	84.3,	80.3,	87.3,	89.0,	85.8,	82.5,	83.5,	79.8,	78.3,	76.3,
200 -	74.3,	80.3,	84.0,	80.8,	86.8,	88.5,	84.0,	83.0,	84.5,	81.3,	79.5,	75.5,
250 -	75.8,	82.0,	83.3,	81.0,	85.8,	87.3,	83.3,	83.8,	82.5,	80.0,	76.8,	76.5,
315 -	74.8,	80.8,	85.3,	78.0,	82.3,	89.5,	85.3,	85.5,	85.0,	83.0,	76.0,	75.8,
400 -	77.3,	82.8,	85.0,	75.8,	84.8,	91.8,	87.3,	87.5,	88.0,	79.8,	77.5,	76.0,
500 -	78.3,	83.3,	83.8,	73.8,	82.5,	92.8,	90.3,	86.5,	88.3,	81.3,	79.0,	78.5,
630 -	75.0,	79.0,	81.5,	72.0,	81.3,	92.3,	88.5,	86.3,	85.5,	78.8,	76.0,	76.8,
800 -	71.3,	76.0,	79.0,	70.5,	79.3,	92.0,	88.3,	83.5,	80.5,	76.8,	74.8,	74.0,
1.0 K -	69.8,	74.3,	78.3,	70.5,	80.0,	90.3,	87.0,	80.0,	80.3,	73.8,	73.8,	70.5,
1.25K -	68.8,	72.8,	77.3,	75.0,	79.3,	90.3,	86.3,	78.5,	77.3,	71.8,	71.5,	67.8,
1.6 K -	72.5,	77.0,	81.0,	73.0,	79.3,	89.5,	82.5,	77.0,	74.8,	70.0,	68.8,	65.0,
2.0 K -	67.3,	71.5,	78.0,	73.3,	79.0,	88.0,	80.5,	74.5,	72.5,	67.0,	66.0,	62.8,
2.5 K -	62.8,	68.5,	77.3,	76.0,	79.0,	86.3,	78.3,	71.0,	69.5,	62.3,	62.3,	60.0,
3.15K -	62.5,	69.5,	80.5,	81.3,	77.0,	83.5,	74.3,	66.8,	65.0,	60.0,	60.0,	60.0,
4.0 K -	60.0,	66.3,	79.3,	77.8,	74.0,	79.0,	68.3,	60.0,	60.0,	60.0,	60.0,	60.0,
5.0 K -	60.0,	60.0,	74.3,	73.0,	69.5,	72.3,	60.3,	60.0,	60.0,	60.0,	60.0,	60.0,
6.3 K -	60.0,	60.0,	66.3,	65.0,	62.8,	63.8,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,
8.0 K -	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,
10.0K -	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,
12.5K -	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,
16.0K -	60.3,	61.5,	60.5,	60.5,	61.5,	61.8,	61.0,	60.5,	61.5,	60.8,	61.0,	61.0,
20.0K -	61.5,	61.5,	61.5,	61.0,	61.5,	61.5,	61.3,	62.0,	61.8,	61.8,	61.8,	61.8,
FLAT -	89.8,	93.0,	95.5,	93.8,	97.5,	102.3,	98.5,	96.3,	95.3,	92.5,	91.5,	90.8,
A-WEIGHT -	81.8,	87.3,	90.5,	86.5,	90.5,	100.0,	95.3,	91.3,	90.8,	85.3,	83.0,	82.0,

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure C-13. 1/3 Octave Frequency Spectra - Noise Level Data - Event No. 5. Landing Concorde F-WTSA - Runway 33L, Toolshed - Outside, Logan International Airport Boston MA. June 13, 1974 - 0916 Hours. See Figure C-1 for Noise Level Time Histories. See Fig. C-14 for Frequency Spectra of Inside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	INSIDE NOISE LEVEL - DB RE 20 μPA 1/2 SECOND INTEGRATION PERIODS(1)											
	1	2	3	4	5	6	7	8	9	10	11	12
25 -	58.3,	61.0,	67.8,	66.8,	62.0,	66.0,	60.8,	54.8,	53.8,	52.0,	52.8,	54.8,
31.5 -	60.3,	64.0,	67.0,	68.0,	70.0,	65.3,	65.0,	61.5,	59.0,	51.8,	55.0,	51.8,
40 -	64.0,	62.0,	66.0,	66.3,	65.3,	59.0,	56.3,	55.8,	50.5,	47.5,	47.3,	51.3,
50 -	59.3,	60.0,	63.3,	60.3,	61.5,	68.0,	65.3,	63.8,	56.5,	62.8,	62.0,	59.0,
63 -	48.8,	53.3,	59.8,	59.8,	63.0,	67.3,	64.8,	62.5,	60.3,	61.0,	60.0,	60.3,
80 -	57.0,	59.8,	61.8,	62.0,	71.3,	70.3,	67.8,	71.0,	62.5,	66.5,	61.8,	66.5,
100 -	48.3,	61.3,	60.8,	69.3,	72.0,	67.8,	64.8,	66.5,	58.3,	62.8,	58.5,	59.8,
125 -	56.0,	63.0,	66.3,	70.5,	72.0,	72.3,	65.5,	64.3,	59.5,	57.8,	54.3,	53.3,
160 -	57.8,	64.5,	69.3,	64.3,	66.3,	70.5,	64.0,	64.3,	60.3,	59.0,	56.0,	51.3,
200 -	47.8,	58.5,	64.8,	57.0,	59.0,	67.3,	60.3,	58.8,	57.3,	53.5,	49.5,	47.0,
250 -	52.3,	57.3,	66.0,	57.3,	63.3,	67.3,	64.3,	63.3,	60.5,	60.3,	52.5,	52.0,
315 -	48.3,	54.8,	61.0,	53.5,	59.8,	64.3,	59.8,	59.5,	57.3,	59.3,	52.0,	53.0,
400 -	48.0,	55.0,	56.5,	52.0,	54.3,	63.5,	62.0,	62.8,	59.5,	55.0,	51.0,	52.8,
500 -	47.5,	52.5,	53.3,	46.3,	53.8,	66.0,	65.5,	65.5,	61.5,	56.5,	52.3,	53.3,
630 -	46.3,	47.5,	50.8,	44.3,	51.5,	67.0,	64.8,	61.3,	58.0,	56.0,	51.3,	50.0,
800 -	47.5,	47.0,	53.0,	46.5,	53.5,	67.0,	65.0,	65.8,	57.3,	54.8,	50.5,	51.5,
1.0 K -	44.5,	45.3,	51.0,	46.8,	53.5,	65.8,	62.0,	60.8,	57.8,	55.8,	50.8,	50.5,
1.25K -	48.5,	46.3,	53.0,	53.3,	54.5,	66.0,	61.3,	59.8,	58.3,	54.5,	50.5,	50.0,
1.6 K -	54.3,	53.8,	58.8,	53.3,	57.3,	67.5,	62.8,	60.8,	56.5,	55.5,	51.8,	52.5,
2.0 K -	48.8,	52.0,	57.0,	55.0,	58.8,	67.5,	61.0,	59.0,	53.8,	53.5,	48.3,	49.3,
2.5 K -	50.0,	53.0,	64.0,	60.5,	62.5,	68.0,	59.5,	58.3,	51.5,	51.5,	46.0,	46.0,
3.15K -	49.3,	52.3,	64.3,	62.8,	57.5,	64.0,	54.5,	52.3,	44.5,	41.8,	40.0,	40.0,
4.0 K -	44.3,	50.5,	62.8,	59.8,	51.5,	58.8,	47.5,	43.8,	40.0,	40.0,	40.0,	40.0,
5.0 K -	40.0,	41.8,	56.8,	53.0,	46.5,	52.0,	41.0,	40.0,	40.0,	40.0,	40.0,	40.0,
6.3 K -	40.0,	40.3,	47.8,	45.0,	42.8,	43.8,	40.0,	40.0,	40.3,	40.0,	40.0,	40.0,
8.0 K -	42.0,	42.8,	41.5,	42.8,	42.3,	42.0,	41.0,	42.0,	42.0,	41.5,	41.5,	42.3,
10.0K -	40.0,	40.3,	40.0,	40.8,	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,
12.5K -	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,
16.0K -	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,
20.0K -	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,	40.0,
FLAT -	69.0,	72.5,	76.8,	76.3,	78.5,	80.3,	76.5,	76.5,	71.5,	72.0,	69.0,	70.0,
A-WEIGHT -	59.8,	63.5,	71.0,	68.5,	68.5,	76.3,	72.5,	71.0,	66.8,	65.0,	61.0,	60.8,

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure C-14. 1/3 Octave Frequency Spectra - Noise Level Data - Event No. 5. Landing Concorde F-WTSA - Runway 33L, Toolshed - Inside, Logan International Airport, Boston MA. June 13, 1974 - 0916 Hours. See Fig. C-13 for Frequency Spectra of Outside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ		OUTSIDE NOISE LEVEL - DB RE 20 μPA 1/2 SECOND INTEGRATION PERIODS(1)							
		1	2	3	4	5	6	7	8
25	-	59.3,	62.5,	69.8,	69.3,	66.0,			
31.5	-	65.0,	72.3,	79.3,	77.5,	71.5,			
40	-	71.5,	76.3,	83.8,	81.0,	76.8,			
50	-	72.0,	77.3,	82.0,	80.5,	80.5,			
63	-	73.0,	82.3,	78.8,	80.5,	76.8,			
80	-	75.3,	81.5,	83.3,	79.8,	75.0,			
100	-	73.5,	81.0,	88.3,	83.8,	75.5,			
125	-	72.8,	76.8,	91.3,	88.3,	69.0,			
160	-	77.5,	74.0,	91.3,	92.8,	71.5,			
200	-	77.8,	82.3,	92.3,	88.5,	74.3,			
250	-	74.3,	85.8,	95.3,	91.3,	76.8,			
315	-	73.8,	89.0,	92.5,	89.3,	76.3,			
400	-	76.0,	84.8,	94.8,	91.0,	73.8,			
500	-	78.3,	83.3,	92.5,	88.3,	73.8,			
630	-	83.3,	88.3,	90.0,	86.0,	74.5,			
800	-	77.3,	82.8,	88.5,	84.3,	72.5,			
1.0 K	-	78.0,	82.0,	86.5,	82.0,	70.5,			
1.25K	-	73.5,	80.5,	85.8,	80.5,	69.0,			
1.6 K	-	77.3,	84.5,	84.5,	80.8,	67.8,			
2.0 K	-	77.3,	82.8,	83.5,	80.8,	68.0,			
2.5 K	-	74.0,	82.0,	83.8,	80.5,	68.0,			
3.15K	-	72.5,	82.0,	86.0,	79.5,	65.0,			
4.0 K	-	67.5,	82.3,	87.3,	80.3,	66.0,			
5.0 K	-	60.0,	74.5,	83.8,	81.0,	60.0,			
6.3 K	-	59.8,	64.5,	78.8,	74.8,	60.8,			
8.0 K	-	60.8,	61.8,	71.3,	73.3,	61.0,			
10.0K	-	63.0,	63.5,	66.0,	68.8,	63.3,			
12.5K	-	66.8,	66.5,	66.3,	66.8,	66.0,			
16.0K	-	68.0,	68.0,	67.8,	67.8,	68.0,			
20.0K	-	66.5,	66.8,	66.5,	66.0,	66.8,			
FLAT	-	89.8,	96.3,	103.3,	100.0,	87.0,			
A-WEIGHT	-	87.0,	94.3,	99.0,	94.5,	81.3,			

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure C-15. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 10. Landing Concorde F-WTSA - Runway 4R, Field Office - Outside, Logan International Airport, Boston MA. June 14, 1974 - 1404 Hours. See Fig. C-2 for Noise Level Time Histories. See Fig. C-16 for Frequency Spectra of Inside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	INSIDE NOISE LEVEL - DB RE 20μPA 1/2 SECOND INTEGRATION PERIODS(1)							
	1	2	3	4	5	6	7	8
25 -	52.0,	62.3,	67.0,	59.0,				
31.5 -	64.5,	58.0,	72.5,	68.5,				
40 -	58.8,	65.3,	62.8,	68.0,				
50 -	57.3,	62.8,	62.8,	61.0,				
63 -	57.5,	61.3,	64.8,	58.8,				
80 -	61.3,	72.5,	82.8,	72.3,				
100 -	63.3,	68.8,	75.5,	69.0,				
125 -	61.0,	68.5,	74.0,	67.5,				
160 -	59.3,	68.3,	78.3,	70.5,				
200 -	57.5,	65.8,	79.8,	68.8,				
250 -	64.0,	63.3,	76.8,	67.8,				
315 -	62.8,	69.3,	72.8,	66.0,				
400 -	54.0,	64.3,	72.5,	64.5,				
500 -	51.5,	59.0,	67.3,	64.8,				
630 -	57.3,	63.0,	68.8,	59.5,				
800 -	50.0,	60.0,	64.3,	57.0,				
1.0 K -	50.0,	57.0,	64.3,	55.3,				
1.25K -	46.3,	53.3,	60.0,	53.0,				
1.6 K -	47.0,	56.0,	60.0,	53.5,				
2.0 K -	46.8,	53.5,	61.0,	53.3,				
2.5 K -	43.3,	53.0,	58.8,	55.8,				
3.15K -	42.3,	54.0,	56.8,	55.0,				
4.0 K -	40.0,	53.5,	54.5,	55.3,				
5.0 K -	40.0,	44.8,	56.3,	51.8,				
6.3 K -	40.5,	41.5,	48.0,	44.0,				
8.0 K -	40.0,	40.0,	43.3,	42.0,				
10.0K -	40.0,	40.5,	41.8,	40.3,				
12.5K -	42.3,	43.0,	43.0,	43.0,				
16.0K -	43.8,	44.3,	43.8,	43.5,				
20.0K -	43.5,	43.3,	43.5,	43.5,				
FLAT -	71.5,	78.8,	87.3,	78.5,				
A-WEIGHT -	62.8,	69.3,	77.0,	68.8,				

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure C-16. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 10. Landing Concorde F-WTSA - Runway 4R, Field Office - Inside, Logan International Airport, Boston MA. June 14, 1974 - 1404 Hours. See Fig. C-15 for Frequency Spectra of Outside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	OUTSIDE NOISE LEVEL - DB RE 20μPA 1/2 SECOND INTEGRATION PERIODS(1)							
	1	2	3	4	5	6	7	8
25 -	79.5,	90.3,	95.5,	98.5,	90.3,	92.5,	85.3,	
31.5 -	87.3,	93.0,	101.5,	105.0,	91.0,	95.8,	87.8,	
40 -	87.8,	97.3,	105.3,	104.5,	93.5,	87.3,	86.0,	
50 -	90.5,	96.5,	104.3,	98.8,	96.3,	89.0,	89.3,	
63 -	92.0,	97.5,	107.8,	99.5,	95.5,	93.5,	91.0,	
80 -	94.3,	100.8,	108.0,	100.3,	91.5,	93.3,	86.0,	
100 -	92.0,	104.5,	107.0,	103.3,	94.0,	93.8,	88.8,	
125 -	92.3,	105.3,	108.3,	100.0,	99.5,	93.8,	90.8,	
160 -	91.0,	107.0,	107.3,	97.5,	96.5,	93.3,	91.0,	
200 -	89.0,	105.0,	105.8,	97.8,	91.0,	93.3,	86.5,	
250 -	87.5,	103.0,	100.8,	94.5,	89.3,	88.5,	86.8,	
315 -	91.8,	100.0,	97.0,	91.0,	87.8,	87.8,	81.5,	
400 -	99.3,	97.5,	97.5,	93.8,	89.5,	88.5,	86.0,	
500 -	98.5,	98.8,	102.0,	97.8,	93.3,	92.0,	89.3,	
630 -	96.0,	104.5,	102.0,	95.3,	93.3,	90.3,	89.3,	
800 -	93.8,	107.3,	101.5,	93.5,	89.5,	87.8,	85.0,	
1.0 K -	93.3,	108.3,	96.8,	91.3,	88.5,	86.0,	83.5,	
1.25K -	93.0,	105.0,	97.8,	92.5,	88.5,	86.8,	84.0,	
1.6 K -	90.5,	106.0,	97.0,	90.8,	86.8,	82.3,	80.0,	
2.0 K -	88.8,	103.8,	97.0,	89.3,	85.0,	81.8,	78.0,	
2.5 K -	88.5,	103.0,	96.3,	89.5,	84.5,	79.5,	76.3,	
3.15K -	87.0,	102.3,	94.8,	87.8,	81.5,	77.8,	72.3,	
4.0 K -	83.8,	100.5,	92.5,	85.0,	77.0,	72.8,	66.3,	
5.0 K -	80.8,	98.3,	90.3,	81.5,	73.5,	67.8,	60.8,	
6.3 K -	78.0,	97.0,	88.8,	76.3,	66.5,	61.0,	60.0,	
8.0 K -	71.8,	93.8,	85.5,	69.3,	60.0,	60.0,	60.0,	
10.0K -	66.3,	90.8,	81.3,	62.8,	60.0,	60.0,	60.0,	
12.5K -	62.5,	84.0,	73.5,	60.3,	60.0,	60.3,	60.3,	
16.0K -	61.8,	77.5,	70.3,	61.5,	61.5,	61.0,	61.5,	
20.0K -	62.3,	66.5,	64.3,	62.8,	62.8,	62.8,	62.8,	
FLAT -	105.8,	117.0,	116.8,	111.8,	106.0,	103.8,	100.0,	
A-WEIGHT -	102.8,	115.0,	109.0,	102.5,	98.3,	96.3,	93.5,	

(1) integration periods are first 1/2 second of consecutive 2 second intervals.

Figure C-17. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 19. Takeoff Concorde F-WTSA - Runway 15R, Toolshed - Outside, Logan International Airport, Boston MA. June 17, 1974 - 0822 Hours. See Fig. C-3 for Noise Level Time Histories. See Figure C-18 for Frequency Spectra of Inside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ		INSIDE NOISE LEVEL - DB RE 20μPA 1/2 SECOND INTEGRATION PERIODS(1)							
		1	2	3	4	5	6	7	8
25	-	76.3,	82.5,	87.0,	95.3,	84.3,	87.8,	82.5,	
31.5	-	79.5,	85.0,	93.5,	96.3,	86.0,	90.8,	78.3,	
40	-	72.0,	84.8,	93.0,	93.5,	85.3,	76.5,	76.8,	
50	-	78.0,	76.8,	91.8,	87.3,	83.5,	80.0,	78.3,	
63	-	71.0,	78.0,	91.0,	83.3,	75.3,	73.0,	69.8,	
80	-	76.5,	86.8,	90.5,	84.8,	73.0,	77.0,	68.0,	
100	-	70.5,	89.5,	90.3,	76.3,	74.0,	70.8,	66.3,	
125	-	69.3,	90.3,	92.0,	82.0,	81.8,	76.8,	70.0,	
160	-	72.5,	83.3,	91.5,	83.5,	77.8,	74.5,	73.0,	
200	-	71.8,	82.0,	88.5,	79.3,	74.0,	68.3,	63.3,	
250	-	77.3,	83.3,	88.0,	77.5,	72.8,	69.5,	62.0,	
315	-	67.5,	83.3,	84.0,	74.5,	68.5,	67.8,	61.8,	
400	-	67.8,	82.5,	78.3,	75.0,	72.8,	70.8,	62.0,	
500	-	66.8,	82.3,	84.5,	73.8,	68.0,	65.5,	60.0,	
630	-	62.5,	83.5,	81.0,	74.0,	68.0,	63.0,	60.0,	
800	-	60.3,	83.0,	78.3,	74.0,	69.5,	64.5,	60.0,	
1.0 K	-	60.0,	83.0,	80.3,	73.3,	71.0,	65.8,	60.0,	
1.25K	-	60.0,	81.8,	81.0,	70.3,	66.0,	64.0,	60.0,	
1.6 K	-	61.8,	85.0,	80.5,	71.8,	66.0,	64.8,	60.0,	
2.0 K	-	63.5,	86.8,	82.3,	75.5,	69.5,	66.0,	60.0,	
2.5 K	-	67.0,	87.5,	83.8,	77.8,	71.8,	67.3,	60.0,	
3.15K	-	64.3,	83.5,	82.0,	73.3,	65.5,	62.0,	60.0,	
4.0 K	-	60.5,	79.5,	77.8,	67.5,	60.0,	60.0,	60.0,	
5.0 K	-	60.0,	79.8,	76.8,	65.3,	60.0,	60.0,	60.0,	
6.3 K	-	60.0,	78.0,	73.8,	60.5,	60.0,	60.0,	60.0,	
8.0 K	-	60.0,	74.8,	67.3,	60.0,	60.0,	60.0,	60.0,	
10.0K	-	60.0,	72.5,	64.5,	60.0,	60.0,	60.0,	60.0,	
12.5K	-	60.0,	67.8,	60.3,	60.0,	60.0,	60.0,	60.0,	
16.0K	-	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	
20.0K	-	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	
FLAT	-	87.0,	98.3,	101.8,	100.0,	93.3,	93.8,	85.5,	
A-WEIGHT	-	76.0,	95.5,	92.8,	85.5,	80.0,	76.5,	70.5,	

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure C-18. 1/3 Octave Frequency Spectra-Noise Level Data-Event No.19 Takeoff Concorde F-WTSA - Runway 15R, Toolshed - Inside, Logan International Airport, Boston MA. June 17, 1974 - 0822 Hours. See Figure C-17 for Frequency Spectra of Outside Noise Data for Coincident 1/2 second Time Periods

1/3 OCTAVE CENTER FREQ. HZ		OUTSIDE NOISE LEVEL - DB RE 20μPA 1/2 SECOND INTEGRATION PERIODS(1)							
		1	2	3	4	5	6	7	8
25	-	64.3,	60.0,	60.0,					
31.5	-	68.3,	64.8,	60.0,					
40	-	68.5,	66.8,	63.8,					
50	-	75.3,	75.0,	75.5,					
63	-	88.8,	88.8,	88.0,					
80	-	72.3,	70.8,	68.3,					
100	-	72.0,	67.8,	63.3,					
125	-	70.5,	69.8,	65.5,					
160	-	71.0,	72.5,	62.3,					
200	-	67.8,	65.8,	60.0,					
250	-	67.8,	63.8,	60.0,					
315	-	68.3,	60.8,	60.0,					
400	-	69.0,	60.3,	60.0,					
500	-	69.0,	63.3,	60.0,					
630	-	67.0,	62.0,	60.0,					
800	-	69.0,	64.8,	61.8,					
1.0 K	-	68.3,	69.3,	61.0,					
1.25K	-	72.3,	70.3,	60.0,					
1.6 K	-	71.3,	72.0,	65.8,					
2.0 K	-	71.3,	71.5,	67.5,					
2.5 K	-	72.5,	74.5,	66.0,					
3.15K	-	77.0,	76.3,	71.8,					
4.0 K	-	76.0,	71.5,	68.0,					
5.0 K	-	70.3,	71.5,	64.0,					
6.3 K	-	62.0,	65.5,	60.0,					
8.0 K	-	60.0,	60.0,	60.0,					
10.0K	-	60.0,	60.0,	60.0,					
12.5K	-	60.0,	60.0,	60.0,					
16.0K	-	60.8,	61.0,	61.3,					
20.0K	-	61.3,	62.3,	62.0,					
FLAT	-	89.8,	89.5,	88.5,					
A-WEIGHT	-	83.8,	82.8,	77.8,					

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure C-19. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 2. Landing Boeing 707 - Runway 33L, Toolshed - Outside, Logan International Airport, Boston MA. June 13, 1974 - 0834 Hours. See Fig. C-4 for Noise Level Time Histories. See Fig. C-20 for Frequency Spectra of Inside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ		INSIDE NOISE LEVEL - DB RE 20μPA 1/2 SECOND INTEGRATION PERIODS(1)							
		1	2	3	4	5	6	7	8
25	-	51.3,	56.3,	51.3,					
31.5	-	59.3,	56.5,	48.3,					
40	-	58.5,	54.5,	45.0,					
50	-	56.0,	55.0,	55.8,					
63	-	58.0,	55.8,	55.5,					
80	-	55.0,	55.3,	51.5,					
100	-	51.3,	56.8,	47.0,					
125	-	54.5,	58.0,	51.3,					
160	-	52.8,	54.5,	42.8,					
200	-	48.8,	46.5,	40.0,					
250	-	46.0,	43.5,	40.3,					
315	-	49.0,	44.5,	45.3,					
400	-	46.8,	43.0,	43.3,					
500	-	44.5,	41.0,	41.5,					
630	-	40.0,	40.0,	40.0,					
800	-	42.3,	41.0,	40.5,					
1.0 K	-	40.8,	43.0,	40.0,					
1.25K	-	46.3,	49.5,	45.8,					
1.6 K	-	49.0,	53.0,	48.5,					
2.0 K	-	46.8,	52.8,	48.0,					
2.5 K	-	51.3,	57.0,	50.0,					
3.15K	-	52.0,	57.8,	49.8,					
4.0 K	-	47.3,	54.8,	46.8,					
5.0 K	-	42.5,	50.5,	43.5,					
6.3 K	-	41.0,	45.0,	40.3,					
8.0 K	-	41.8,	43.3,	42.5,					
10.0K	-	40.3,	40.8,	40.5,					
12.5K	-	40.0,	40.0,	40.0,					
16.0K	-	40.0,	40.0,	40.0,					
20.0K	-	40.0,	40.0,	40.0,					
FLAT	-	66.3,	68.0,	63.5,					
A-WEIGHT	-	59.8,	65.0,	58.0,					

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure C-20. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 2. Landing Boeing 707 - Runway 33L, Toolshed - Inside, Logan International Airport, Boston MA. June 13, 1974 - 0834 Hours. See Fig. C-19 for Frequency Spectra of Outside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ		OUTSIDE NOISE LEVEL - DB RE 20μPA 1/2 SECOND INTEGRATION PERIODS(1)							
		1	2	3	4	5	6	7	8
25	-	67.0,	63.5,	65.8,	60.0,				
31.5	-	71.5,	69.5,	71.0,	70.0,				
40	-	75.3,	73.0,	71.3,	68.0,				
50	-	78.8,	77.8,	77.5,	75.3,				
63	-	90.3,	90.3,	90.3,	89.5,				
80	-	76.0,	76.8,	73.0,	73.3,				
100	-	75.5,	76.5,	73.8,	74.8,				
125	-	77.3,	76.5,	71.0,	68.8,				
160	-	73.3,	75.3,	69.8,	66.0,				
200	-	70.8,	73.3,	67.5,	63.5,				
250	-	67.8,	68.8,	61.8,	60.0,				
315	-	67.3,	68.5,	63.3,	60.0,				
400	-	68.5,	73.8,	67.0,	60.0,				
500	-	68.5,	70.8,	69.8,	62.3,				
630	-	65.3,	71.3,	72.0,	64.8,				
800	-	64.0,	73.8,	73.3,	67.8,				
1.0 K	-	64.3,	74.3,	75.0,	68.5,				
1.25K	-	69.0,	74.5,	77.0,	69.3,				
1.6 K	-	70.5,	73.8,	79.3,	67.8,				
2.0 K	-	66.8,	77.0,	76.3,	72.5,				
2.5 K	-	73.5,	77.8,	82.0,	76.3,				
3.15K	-	80.5,	75.3,	83.5,	66.3,				
4.0 K	-	66.3,	74.8,	74.5,	63.8,				
5.0 K	-	62.0,	72.8,	74.8,	60.0,				
6.3 K	-	60.5,	64.5,	62.8,	60.0,				
8.0 K	-	60.0,	60.0,	60.0,	60.0,				
10.0K	-	60.0,	60.0,	60.0,	60.0,				
12.5K	-	60.3,	60.0,	60.3,	60.0,				
16.0K	-	61.3,	60.8,	60.5,	61.5,				
20.0K	-	61.8,	61.8,	61.0,	61.8,				
FLAT	-	91.3,	92.0,	92.5,	89.8,				
A-WEIGHT	-	84.0,	86.3,	89.3,	81.3,				

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure C-21. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 3. Landing Douglas DC-8 - Runway 33L, Toolshed - Outside, Logan International Airport, Boston MA. June 13, 1974 - 0841 Hours. See Fig. C-5 for Noise Level Time Histories. See Fig. C-22 for Frequency Spectra of Inside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	INSIDE NOISE LEVEL - DB RE 20μPA 1/2 SECOND INTEGRATION PERIODS(1)							
	1	2	3	4	5	6	7	8
25 -	61.0,	58.3,	52.8,	56.3,				
31.5 -	64.5,	62.3,	54.0,	58.0,				
40 -	65.8,	61.3,	53.5,	54.0,				
50 -	67.0,	62.3,	56.0,	57.8,				
63 -	56.5,	55.8,	56.5,	53.5,				
80 -	57.5,	58.5,	60.0,	55.0,				
100 -	53.8,	63.0,	57.0,	52.8,				
125 -	56.8,	62.0,	57.8,	53.0,				
160 -	55.5,	57.0,	51.5,	48.8,				
200 -	53.3,	50.8,	42.8,	42.0,				
250 -	51.0,	48.8,	47.0,	43.5,				
315 -	49.5,	44.8,	45.8,	44.5,				
400 -	45.5,	48.0,	45.8,	44.8,				
500 -	42.5,	45.5,	46.0,	42.0,				
630 -	40.0,	45.8,	45.3,	40.8,				
800 -	40.3,	51.5,	47.5,	42.5,				
1.0 K -	40.0,	52.3,	51.3,	44.0,				
1.25K -	47.3,	53.3,	52.3,	50.0,				
1.6 K -	47.0,	57.0,	57.3,	50.5,				
2.0 K -	46.3,	63.5,	57.8,	52.5,				
2.5 K -	57.0,	64.5,	67.3,	56.8,				
3.15K -	60.3,	61.3,	66.3,	49.3,				
4.0 K -	44.8,	60.3,	54.5,	45.3,				
5.0 K -	41.8,	53.5,	53.5,	40.8,				
6.3 K -	42.0,	47.0,	44.8,	40.8,				
8.0 K -	43.3,	44.0,	44.0,	43.3,				
10.0K -	41.0,	40.5,	41.0,	40.0,				
12.5K -	40.0,	40.0,	40.0,	40.0,				
16.0K -	40.0,	40.0,	40.0,	40.0,				
20.0K -	40.0,	40.0,	40.0,	40.0,				
FLAT -	72.5,	72.5,	71.8,	65.5,				
A-WEIGHT -	63.8,	70.3,	71.0,	61.5,				

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure C-22. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 3. Landing Douglas DC-8 - Runway 33L, Toolshed - Inside, Logan International Airport, Boston MA. June 13, 1974 - 0841 Hours. See Fig. C-21 for Frequency Spectra of Outside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	OUTSIDE NOISE LEVEL - DB RE 20μPA 1/2 SECOND INTEGRATION PERIODS(1)							
	1	2	3	4	5	6	7	8
25 -	63.0,	60.0,	64.8,	73.3,	68.3,	69.5,	66.8,	
31.5 -	68.0,	62.8,	69.0,	82.3,	78.3,	76.8,	78.5,	
40 -	72.0,	70.5,	79.3,	84.0,	77.8,	86.0,	83.0,	
50 -	74.8,	79.5,	79.3,	79.5,	73.8,	84.5,	84.5,	
63 -	77.0,	79.5,	85.0,	80.0,	80.8,	81.0,	86.8,	
80 -	75.5,	78.0,	81.5,	78.0,	89.5,	81.3,	85.0,	
100 -	76.0,	75.5,	75.8,	84.8,	89.8,	79.3,	82.0,	
125 -	76.5,	75.8,	76.8,	90.0,	89.5,	84.8,	72.5,	
160 -	73.3,	69.8,	77.0,	89.3,	82.8,	85.8,	71.3,	
200 -	73.0,	74.8,	85.5,	83.5,	88.8,	83.0,	74.3,	
250 -	69.8,	77.0,	85.8,	88.8,	86.3,	78.8,	77.0,	
315 -	72.8,	79.0,	80.8,	86.5,	88.5,	81.0,	75.5,	
400 -	76.5,	77.8,	80.0,	89.0,	87.5,	80.3,	73.0,	
500 -	73.8,	73.0,	81.3,	86.3,	88.3,	79.5,	72.8,	
630 -	67.3,	78.8,	78.0,	87.3,	85.5,	77.8,	72.3,	
800 -	70.0,	74.0,	78.5,	85.8,	84.8,	77.8,	71.5,	
1.0 K -	70.5,	76.3,	78.8,	86.5,	88.8,	78.8,	71.3,	
1.25K -	72.3,	76.0,	81.5,	90.5,	93.5,	80.0,	71.8,	
1.6 K -	78.5,	79.3,	86.5,	93.0,	89.5,	77.3,	69.5,	
2.0 K -	74.5,	80.5,	83.0,	88.8,	90.5,	81.0,	74.8,	
2.5 K -	70.5,	76.8,	81.0,	90.8,	106.3,	86.8,	77.8,	
3.15K -	70.5,	84.3,	86.3,	99.8,	101.0,	79.0,	68.5,	
4.0 K -	62.3,	82.0,	87.5,	93.0,	91.0,	73.8,	64.5,	
5.0 K -	61.3,	64.5,	71.3,	84.5,	96.0,	74.8,	63.8,	
6.3 K -	63.8,	63.8,	66.5,	82.3,	90.3,	68.0,	63.5,	
8.0 K -	63.5,	63.8,	64.8,	74.8,	86.8,	65.3,	63.8,	
10.0K -	65.0,	65.0,	64.8,	67.8,	79.5,	64.5,	64.8,	
12.5K -	68.3,	67.8,	67.8,	67.8,	72.8,	67.5,	67.8,	
16.0K -	68.5,	68.5,	69.0,	68.3,	69.3,	68.5,	68.5,	
20.0K -	68.5,	68.5,	69.0,	68.3,	68.5,	68.3,	68.3,	
FLAT -	87.0,	91.3,	95.5,	103.5,	108.3,	94.5,	92.5,	
A-WEIGHT -	84.0,	90.3,	93.8,	103.3,	109.0,	91.5,	83.8,	

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure C-23. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 7. Landing Boeing 707 - Runway 4R, Field Office - Outside, Logan International Airport, Boston MA. June 13, 1974 - 0954 Hours. See Fig. C-6 for Noise Level Time Histories. See Fig. C-24 for Frequency Spectra of Inside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ		INSIDE NOISE LEVEL - DB RE 20-PA 1/2 SECOND INTEGRATION PERIODS(1)							
		1	2	3	4	5	6	7	8
25	-	54.5,	58.5,	66.0,	61.0,	62.5,	57.5,		
31.5	-	65.5,	70.3,	74.5,	70.8,	71.5,	64.5,		
40	-	64.8,	68.8,	69.3,	68.0,	71.0,	62.3,		
50	-	68.5,	66.0,	63.5,	59.8,	58.3,	62.3,		
63	-	61.8,	63.8,	61.8,	61.8,	65.5,	61.3,		
80	-	69.8,	72.5,	77.5,	73.8,	77.0,	72.3,		
100	-	66.0,	68.0,	73.3,	72.8,	69.0,	66.8,		
125	-	64.3,	65.3,	70.8,	69.3,	68.0,	63.8,		
160	-	64.8,	71.0,	77.5,	72.0,	67.0,	61.0,		
200	-	60.0,	65.0,	68.5,	69.0,	60.8,	55.5,		
250	-	61.3,	62.0,	68.8,	67.5,	59.5,	55.0,		
315	-	56.0,	65.0,	70.5,	69.0,	58.3,	55.3,		
400	-	55.8,	60.8,	67.0,	69.5,	62.0,	55.0,		
500	-	55.0,	59.0,	65.5,	67.0,	57.3,	52.8,		
630	-	52.0,	59.5,	63.0,	65.8,	55.5,	50.3,		
800	-	51.0,	56.5,	62.3,	63.0,	53.8,	49.8,		
1.0 K	-	52.0,	55.8,	62.3,	68.3,	56.0,	51.5,		
1.25K	-	51.0,	56.3,	63.3,	69.3,	55.3,	48.3,		
1.6 K	-	53.5,	62.0,	65.0,	65.5,	52.0,	45.3,		
2.0 K	-	52.5,	57.5,	62.0,	70.0,	58.0,	52.8,		
2.5 K	-	48.0,	56.0,	63.3,	82.0,	64.0,	57.0,		
3.15K	-	48.8,	60.3,	69.5,	73.3,	56.8,	47.8,		
4.0 K	-	47.8,	60.8,	58.3,	67.3,	50.8,	42.5,		
5.0 K	-	40.0,	44.3,	52.3,	67.5,	48.8,	40.3,		
6.3 K	-	42.5,	43.8,	53.0,	59.0,	43.8,	42.5,		
8.0 K	-	40.8,	41.0,	43.5,	53.0,	41.3,	40.5,		
10.0K	-	41.3,	41.0,	42.0,	44.8,	41.5,	41.0,		
12.5K	-	44.3,	44.5,	44.5,	44.3,	43.8,	44.3,		
16.0K	-	44.8,	44.8,	45.3,	45.3,	44.5,	45.3,		
20.0K	-	45.3,	44.8,	44.8,	45.0,	44.8,	45.0,		
FLAT	-	75.6,	78.5,	84.0,	85.3,	80.3,	75.3,		
A-WEIGHT	-	63.0,	70.3,	75.8,	84.8,	69.0,	63.0,		

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure C-24. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 7. Landing Boeing 707 - Runway 4R, Field Office - Inside, Logan International Airport, Boston MA. June 13, 1974 - 0954 Hours. See Fig. C-23 for Frequency Spectra of Outside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	OUTSIDE NOISE LEVEL - DB RE 20 μPA 1/2 SECOND INTEGRATION PERIODS(1)							
	1	2	3	4	5	6	7	8
25	62.0,	61.0,	70.8,	70.0,	68.8,	60.0,		
31.5	63.5,	69.0,	77.5,	76.3,	76.5,	76.5,		
40	70.0,	75.0,	78.3,	78.5,	82.0,	82.8,		
50	75.3,	77.3,	78.5,	78.0,	81.0,	77.8,		
63	78.8,	82.8,	80.3,	82.8,	82.8,	78.8,		
80	77.0,	74.8,	73.8,	90.3,	81.3,	78.3,		
100	72.5,	70.3,	76.0,	89.3,	73.5,	78.0,		
125	73.8,	73.0,	83.3,	90.8,	82.5,	73.8,		
160	69.3,	67.8,	84.8,	84.0,	85.3,	67.5,		
200	67.8,	75.5,	83.5,	93.0,	85.5,	69.8,		
250	69.5,	79.8,	79.8,	92.5,	80.3,	74.3,		
315	75.3,	77.5,	85.8,	90.0,	79.0,	73.8,		
400	76.0,	72.0,	83.0,	88.5,	81.3,	70.5,		
500	70.5,	77.5,	84.3,	88.8,	79.0,	69.3,		
630	69.3,	76.5,	80.8,	87.3,	78.0,	71.5,		
800	73.5,	76.3,	82.0,	86.5,	78.8,	68.3,		
1.0 K	68.8,	75.0,	81.8,	86.8,	79.3,	69.5,		
1.25K	71.0,	76.0,	82.0,	87.3,	78.3,	68.8,		
1.6 K	72.5,	76.5,	83.0,	89.3,	80.0,	68.5,		
2.0 K	71.3,	76.8,	84.0,	87.8,	80.5,	68.0,		
2.5 K	67.5,	74.8,	81.8,	90.8,	82.0,	68.8,		
3.15K	66.8,	73.5,	85.3,	91.5,	85.5,	70.0,		
4.0 K	68.0,	73.5,	86.8,	88.8,	78.8,	64.3,		
5.0 K	60.3,	66.0,	79.5,	85.5,	72.5,	60.5,		
6.3 K	64.0,	64.0,	76.5,	80.8,	68.5,	63.5,		
8.0 K	63.3,	63.3,	69.5,	74.8,	64.3,	63.3,		
10.0K	65.5,	65.0,	66.0,	69.3,	65.5,	65.5,		
12.5K	68.3,	67.8,	68.3,	68.3,	67.8,	68.3,		
16.0K	68.5,	68.5,	68.8,	68.8,	68.5,	68.5,		
20.0K	68.5,	69.0,	68.8,	69.0,	68.5,	69.0,		
FLAT	86.5,	89.8,	95.5,	102.5,	94.5,	88.0,		
A-WEIGHT	81.3,	86.5,	94.0,	99.8,	91.5,	79.5,		

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure C-25. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 8. Landing Boeing 747 - Runway 4R, Field Office - Outside, Logan International Airport, Boston MA. June 13, 1974 - 0957 Hours. See Fig. C-7 for Noise Level Time Histories. See Fig. C-26 for Frequency Spectra of Inside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ		INSIDE NOISE LEVEL - DB RE 20 μPA 1/2 SECOND INTEGRATION PERIODS(1)							
		1	2	3	4	5	6	7	8
25	-	56.8,	59.8,	69.5,	65.5,	63.0,			
31.5	-	67.0,	69.3,	71.5,	69.0,	64.8,			
40	-	60.3,	66.5,	66.0,	62.8,	61.0,			
50	-	62.5,	63.5,	62.0,	62.0,	57.0,			
63	-	55.0,	63.5,	63.8,	57.8,	60.0,			
80	-	66.0,	70.0,	77.0,	70.5,	68.3,			
100	-	62.5,	62.5,	73.5,	72.0,	66.5,			
125	-	59.8,	64.5,	69.5,	68.0,	60.5,			
160	-	61.5,	69.5,	72.8,	69.5,	56.8,			
200	-	57.0,	62.0,	72.3,	68.0,	60.0,			
250	-	58.0,	58.8,	71.3,	71.3,	56.8,			
315	-	54.3,	62.0,	69.5,	67.0,	56.0,			
400	-	52.8,	59.8,	67.8,	66.8,	53.3,			
500	-	53.8,	56.5,	62.5,	66.3,	52.8,			
630	-	52.0,	54.8,	61.0,	61.3,	51.3,			
800	-	49.5,	54.3,	62.0,	59.3,	51.8,			
1.0 K	-	49.5,	52.8,	62.5,	60.3,	50.5,			
1.25K	-	47.0,	51.5,	60.3,	59.3,	48.0,			
1.6 K	-	47.8,	52.0,	64.0,	61.5,	49.0,			
2.0 K	-	47.0,	52.0,	61.0,	63.3,	49.5,			
2.5 K	-	42.5,	49.3,	60.5,	67.0,	51.8,			
3.15K	-	42.0,	50.5,	59.0,	72.0,	55.5,			
4.0 K	-	43.5,	48.3,	56.0,	64.3,	48.3,			
5.0 K	-	40.0,	41.3,	53.0,	56.5,	40.3,			
6.3 K	-	42.3,	42.8,	47.3,	51.3,	42.0,			
8.0 K	-	40.0,	40.0,	42.0,	42.5,	40.0,			
10.0K	-	42.3,	41.8,	41.5,	41.5,	41.0,			
12.5K	-	43.8,	43.8,	43.5,	44.0,	43.8,			
16.0K	-	45.0,	44.5,	44.8,	45.0,	44.8,			
20.0K	-	44.3,	44.3,	44.8,	45.3,	44.3,			
FLAT	-	72.8,	76.3,	82.5,	80.5,	73.0,			
A-WEIGHT	-	59.5,	65.0,	73.8,	76.3,	62.3,			

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure C-26. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 8. Landing Boeing 747 - Runway 4R, Field Office - Inside, Logan International Airport, Boston MA. June 13, 1974 - 0957 Hours. See Fig. C-25 for Frequency Spectra of Outside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ		OUTSIDE NOISE LEVEL - DB RE 20μPA 1/2 SECOND INTEGRATION PERIODS(1)							
		1	2	3	4	5	6	7	8
25	-	60.0,	60.0,	68.0,	76.3,	72.0,	65.0,		
31.5	-	62.8,	68.0,	78.5,	80.3,	81.3,	75.3,		
40	-	69.0,	76.5,	80.5,	83.5,	81.8,	75.5,		
50	-	74.3,	77.3,	81.0,	78.3,	83.3,	77.5,		
63	-	70.5,	82.5,	84.0,	83.0,	89.5,	80.8,		
80	-	71.5,	80.0,	78.3,	89.5,	83.8,	79.0,		
100	-	73.3,	76.5,	76.0,	95.5,	78.8,	78.8,		
125	-	76.5,	76.0,	74.5,	93.3,	78.3,	79.5,		
160	-	72.8,	73.0,	76.8,	88.5,	80.8,	74.3,		
200	-	72.5,	72.0,	82.0,	89.5,	84.8,	70.0,		
250	-	72.0,	70.8,	83.0,	89.8,	85.0,	66.5,		
315	-	70.5,	72.5,	76.8,	90.5,	77.0,	69.8,		
400	-	69.3,	75.8,	80.8,	89.3,	79.8,	72.8,		
500	-	69.0,	76.5,	81.8,	89.0,	79.8,	72.8,		
630	-	71.8,	71.3,	78.0,	86.8,	77.5,	67.8,		
800	-	71.0,	73.0,	79.3,	87.8,	76.5,	68.3,		
1.0 K	-	68.5,	75.3,	80.8,	89.0,	77.0,	69.3,		
1.25K	-	70.0,	73.8,	82.5,	88.8,	78.5,	68.8,		
1.6 K	-	76.0,	80.3,	89.5,	91.0,	77.3,	67.0,		
2.0 K	-	72.3,	78.8,	85.5,	96.0,	88.3,	76.0,		
2.5 K	-	70.8,	77.0,	89.8,	108.3,	82.3,	71.8,		
3.15K	-	72.5,	80.5,	98.0,	95.3,	77.0,	65.0,		
4.0 K	-	62.0,	69.3,	84.3,	94.3,	82.0,	66.3,		
5.0 K	-	60.5,	64.3,	80.8,	99.3,	77.0,	62.3,		
6.3 K	-	64.3,	64.5,	79.8,	92.8,	73.0,	63.8,		
8.0 K	-	63.0,	63.3,	69.8,	91.5,	67.0,	64.0,		
10.0K	-	65.5,	65.5,	66.3,	85.5,	65.5,	66.0,		
12.5K	-	68.0,	68.0,	68.0,	76.5,	68.8,	68.5,		
16.0K	-	69.0,	68.3,	69.3,	70.5,	68.5,	68.8,		
20.0K	-	69.5,	69.0,	68.8,	69.5,	69.0,	69.0,		
FLAT	-	85.8,	89.8,	99.8,	110.0,	96.0,	88.5,		
A-WEIGHT	-	82.0,	87.0,	100.3,	110.3,	92.5,	81.0,		

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure C-27. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 9. Landing Douglas DC-8 - Runway 4R, Field Office - Outside, Logan International Airport, Boston MA. June 13, 1974. June 13, 1974 - 1010 Hours
See Fig. C-8 for Noise Level Time Histories. See Fig. C-28 for Frequency Spectra of Inside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ		INSIDE NOISE LEVEL - DB RE 20μPA 1/2 SECOND INTEGRATION PERIODS(1)							
		1	2	3	4	5	6	7	8
25	-	56.0,	61.8,	69.8,	62.3,	56.3,			
31.5	-	63.3,	68.5,	73.3,	69.0,	63.5,			
40	-	66.3,	68.3,	66.8,	68.0,	59.5,			
50	-	64.0,	66.8,	63.8,	64.3,	55.0,			
63	-	56.0,	63.5,	65.0,	64.3,	60.5,			
80	-	67.3,	71.5,	76.3,	74.0,	71.0,			
100	-	65.5,	68.0,	77.0,	70.3,	68.5,			
125	-	60.8,	70.3,	71.8,	67.0,	62.0,			
160	-	56.8,	71.0,	76.8,	64.8,	58.5,			
200	-	57.8,	66.5,	75.0,	68.8,	53.0,			
250	-	56.3,	59.8,	69.8,	63.0,	51.8,			
315	-	55.8,	58.5,	69.3,	62.8,	53.0,			
400	-	53.0,	57.8,	71.3,	63.8,	54.8,			
500	-	53.5,	57.0,	65.8,	59.3,	51.8,			
630	-	52.5,	54.5,	64.0,	56.3,	48.0,			
800	-	49.0,	53.5,	63.5,	56.0,	48.0,			
1.0 K	-	50.0,	53.0,	65.3,	55.5,	48.3,			
1.25K	-	50.0,	55.3,	63.5,	56.0,	48.5,			
1.6 K	-	56.0,	60.5,	67.3,	56.5,	46.3,			
2.0 K	-	51.3,	56.3,	72.5,	67.3,	55.8,			
2.5 K	-	49.0,	60.8,	83.3,	63.8,	51.3,			
3.15K	-	52.5,	69.0,	69.8,	60.0,	46.0,			
4.0 K	-	42.3,	53.0,	67.0,	65.0,	45.5,			
5.0 K	-	40.0,	47.5,	71.3,	57.5,	40.5,			
6.3 K	-	42.5,	47.0,	63.0,	51.8,	41.8,			
8.0 K	-	40.0,	40.8,	59.5,	44.3,	40.3,			
10.0K	-	41.3,	41.8,	50.5,	42.3,	41.0,			
12.5K	-	44.0,	43.8,	46.8,	43.8,	43.8,			
16.0K	-	45.0,	45.3,	45.5,	44.3,	44.5,			
20.0K	-	44.5,	44.3,	44.8,	45.0,	44.5,			
FLAT	-	73.8,	79.0,	87.0,	79.3,	73.8,			
A-WEIGHT	-	62.5,	72.0,	85.3,	73.0,	61.0,			

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure C-28. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 9. Landing Douglas DC-8 - Runway 4R, Field Office - Inside, Logan International Airport, Boston MA. June 13, 1974 - 1010 Hours. See Fig. C-27 for Frequency Spectra of Outside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	OUTSIDE NOISE LEVEL - DB RE 20 μPA 1/2 SECOND INTEGRATION PERIODS(1)							
	1	2	3	4	5	6	7	8
25 -	63.3,	65.5,	73.8,	69.0,	73.8,	72.0,	76.3,	
31.5 -	75.0,	72.0,	71.5,	74.3,	74.8,	77.8,	78.8,	
40 -	74.8,	74.8,	76.3,	75.3,	73.3,	79.8,	78.8,	
50 -	76.5,	79.5,	83.0,	75.3,	78.3,	80.8,	80.0,	
63 -	88.0,	89.3,	90.0,	89.0,	88.5,	89.0,	89.0,	
80 -	71.8,	75.0,	68.5,	69.8,	72.3,	72.0,	70.8,	
100 -	72.5,	70.8,	67.8,	79.0,	82.0,	79.0,	73.8,	
125 -	73.5,	64.8,	74.3,	83.5,	85.8,	82.5,	79.3,	
160 -	73.0,	69.0,	78.3,	83.0,	85.5,	83.3,	81.0,	
200 -	75.5,	74.0,	79.8,	77.3,	74.0,	77.3,	80.3,	
250 -	64.5,	76.5,	75.5,	79.5,	79.0,	76.0,	69.0,	
315 -	67.3,	78.3,	75.3,	79.5,	80.3,	78.5,	75.5,	
400 -	70.0,	71.5,	78.0,	78.5,	82.3,	75.3,	72.0,	
500 -	73.8,	77.3,	79.5,	79.0,	78.0,	74.5,	72.0,	
630 -	74.3,	80.0,	77.5,	76.5,	77.0,	71.8,	69.0,	
800 -	67.0,	75.5,	75.5,	76.0,	76.8,	72.5,	69.3,	
1.0 K -	72.0,	74.8,	76.8,	75.0,	76.5,	72.0,	68.0,	
1.25K -	70.0,	76.3,	76.5,	73.5,	74.5,	69.5,	64.8,	
1.6 K -	71.3,	74.0,	73.0,	73.0,	74.0,	69.3,	66.5,	
2.0 K -	71.5,	73.3,	74.3,	75.0,	76.0,	70.0,	65.5,	
2.5 K -	74.8,	79.5,	76.5,	73.5,	74.8,	70.0,	65.0,	
3.15K -	68.0,	71.0,	74.8,	74.0,	76.0,	73.5,	66.5,	
4.0 K -	64.0,	67.3,	73.0,	75.8,	77.8,	74.8,	67.8,	
5.0 K -	61.5,	66.0,	71.3,	77.8,	79.3,	75.8,	66.3,	
6.3 K -	60.0,	61.5,	68.5,	74.8,	78.0,	69.8,	61.5,	
8.0 K -	60.0,	60.0,	61.8,	67.8,	68.3,	61.8,	60.0,	
10.0K -	60.0,	60.0,	60.3,	60.5,	60.3,	60.0,	60.0,	
12.5K -	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	
16.0K -	61.3,	61.0,	61.3,	61.0,	60.0,	61.3,	61.5,	
20.0K -	62.3,	62.0,	62.0,	61.8,	61.5,	62.8,	62.3,	
FLAT -	89.8,	91.8,	93.0,	93.0,	94.0,	92.8,	91.8,	
A-WEIGHT -	81.8,	86.3,	87.0,	87.3,	88.8,	84.3,	80.0,	

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure C-29. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 16. Takeoff Douglas DC-10 - Runway 15R, Toolshed - Outside, Logan International Airport, Boston MA. June 17, 1974 - 0801 Hours. See Fig. C-9 for Noise Level Time Histories. See Fig. C-30 for Frequency Spectra of Inside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ		INSIDE NOISE LEVEL - DB RE 20μPA 1/2 SECOND INTEGRATION PERIODS(1)							
		1	2	3	4	5	6	7	8
25	-	69.3,	76.3,	75.5,	71.0,	69.3,	78.8,	69.0,	
31.5	-	64.5,	70.8,	73.5,	66.5,	72.0,	71.8,	74.0,	
40	-	67.5,	70.8,	70.3,	67.8,	70.3,	74.8,	71.8,	
50	-	63.8,	66.8,	67.0,	63.8,	67.5,	70.0,	67.8,	
63	-	63.3,	65.8,	67.0,	62.0,	65.8,	64.8,	68.8,	
80	-	60.0,	62.3,	60.3,	61.0,	60.0,	61.0,	68.0,	
100	-	60.0,	60.0,	60.0,	64.0,	60.0,	61.5,	63.3,	
125	-	60.0,	60.0,	67.3,	69.5,	67.5,	61.3,	63.0,	
160	-	60.0,	60.0,	61.0,	63.5,	63.0,	62.8,	62.0,	
200	-	60.0,	60.3,	63.5,	62.8,	61.8,	62.8,	60.3,	
250	-	60.0,	60.0,	60.5,	63.0,	60.0,	60.8,	60.3,	
315	-	60.0,	60.0,	60.0,	60.0,	60.0,	60.5,	60.0,	
400	-	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	
500	-	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	
630	-	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	
800	-	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	
1.0 K	-	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	
1.25K	-	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	
1.6 K	-	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	
2.0 K	-	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	
2.5 K	-	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	
3.15K	-	60.0,	60.0,	60.0,	60.0,	61.0,	61.3,	60.0,	
4.0 K	-	60.0,	60.0,	60.0,	60.0,	60.0,	61.5,	60.0,	
5.0 K	-	60.0,	60.0,	60.0,	60.0,	63.5,	60.3,	60.0,	
6.3 K	-	60.0,	60.0,	60.0,	60.0,	61.5,	60.0,	60.0,	
8.0 K	-	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	
10.0K	-	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	
12.5K	-	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	
16.0K	-	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	
20.0K	-	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	
FLAT	-	75.0,	80.3,	81.0,	79.8,	79.0,	82.8,	79.8,	
A-WEIGHT	-	62.5,	66.0,	64.3,	67.0,	70.3,	69.5,	63.5,	

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure C-30. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 16. Takeoff Douglas DC-10 - Runway 15R, Toolshed - Inside, Logan International Airport, Boston MA. June 17, 1974 - 0801 Hours. See Fig. C-29 for Frequency Spectra of Outside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	OUTSIDE NOISE LEVEL - DB RE 20 μPA 1/2 SECOND INTEGRATION PERIODS(1)							
	1	2	3	4	5	6	7	8
25 -	70.3,	72.5,	75.0,	69.0,	74.3,	76.0,	74.0,	76.5,
31.5 -	69.8,	78.0,	73.0,	75.0,	77.8,	76.0,	79.5,	79.5,
40 -	79.3,	76.0,	74.8,	74.0,	74.3,	83.0,	85.8,	84.3,
50 -	76.8,	76.5,	77.3,	75.5,	76.5,	81.0,	83.5,	83.3,
63 -	87.3,	86.0,	87.3,	86.8,	85.0,	88.3,	84.3,	85.3,
80 -	76.0,	72.0,	79.3,	79.3,	81.0,	76.5,	78.5,	75.0,
100 -	75.3,	72.5,	82.5,	86.3,	88.8,	88.0,	86.5,	81.5,
125 -	72.3,	80.8,	86.8,	89.8,	89.8,	94.0,	92.8,	89.0,
160 -	70.8,	82.8,	87.8,	88.5,	92.0,	94.5,	92.0,	90.3,
200 -	76.5,	86.5,	80.0,	84.5,	85.0,	88.8,	89.0,	89.8,
250 -	80.5,	82.5,	86.5,	89.3,	92.3,	88.8,	81.8,	79.3,
315 -	82.3,	83.3,	84.0,	84.5,	89.3,	90.0,	86.0,	83.3,
400 -	78.0,	85.5,	87.0,	89.0,	89.3,	85.0,	80.0,	81.5,
500 -	78.8,	82.0,	86.0,	88.0,	86.8,	84.5,	82.8,	79.5,
630 -	79.0,	81.5,	84.5,	87.0,	86.0,	82.8,	79.0,	75.8,
800 -	76.0,	82.3,	84.5,	86.0,	85.5,	81.8,	78.0,	74.0,
1.0 K -	76.0,	81.5,	83.8,	85.8,	85.8,	80.8,	76.5,	74.0,
1.25K -	77.0,	81.3,	83.5,	86.0,	84.8,	80.5,	75.5,	71.3,
1.6 K -	77.8,	83.8,	84.0,	85.0,	84.0,	80.5,	74.5,	71.8,
2.0 K -	81.5,	84.0,	83.3,	84.5,	84.0,	78.5,	73.8,	70.5,
2.5 K -	78.8,	82.0,	83.5,	87.3,	87.3,	79.8,	73.8,	72.0,
3.15K -	76.0,	80.8,	88.5,	97.0,	93.5,	85.0,	76.5,	73.3,
4.0 K -	76.0,	85.8,	89.8,	88.3,	82.5,	76.3,	67.0,	64.0,
5.0 K -	73.0,	75.8,	79.5,	82.0,	78.0,	69.8,	61.3,	60.0,
6.3 K -	61.8,	69.8,	75.8,	83.0,	79.8,	67.8,	60.3,	60.0,
8.0 K -	60.0,	64.0,	72.0,	74.5,	67.5,	60.0,	60.0,	60.0,
10.0K -	60.0,	60.0,	62.3,	68.3,	63.0,	60.0,	60.0,	60.0,
12.5K -	60.3,	60.0,	60.3,	61.0,	60.0,	60.0,	60.5,	60.0,
16.0K -	60.5,	61.0,	61.3,	61.0,	61.3,	61.5,	61.3,	61.3,
20.0K -	62.8,	62.0,	62.5,	62.0,	62.3,	62.5,	62.0,	62.3,
FLAT -	93.0,	95.5,	98.8,	101.5,	101.0,	100.5,	98.0,	96.8,
A-WEIGHT -	89.0,	93.5,	97.0,	100.0,	98.0,	93.0,	89.3,	87.0,

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure C-31. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 21. Takeoff Lockheed L-1011 - Runway 15R, Toolshed - Outside, Logan International Airport, Boston MA. June 17, 1974 - 0835 Hours. See Fig. C-10 for Noise Level Time Histories. See Fig. C-32 for Frequency Spectra of Inside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	INSIDE NOISE LEVEL - DB RE 20uPA 1/2 SECOND INTEGRATION PERIODS(1)							
	1	2	3	4	5	6	7	8
25 -	73.3,	74.8,	76.0,	70.8,	77.5,	77.8,	77.0,	76.3,
31.5 -	73.5,	75.5,	71.5,	73.3,	80.5,	75.8,	71.0,	76.5,
40 -	70.3,	74.5,	72.5,	75.0,	71.5,	77.5,	76.3,	75.3,
50 -	68.8,	71.5,	74.0,	71.0,	72.3,	77.8,	74.5,	74.0,
63 -	68.3,	71.8,	71.0,	67.8,	72.8,	72.8,	75.0,	65.0,
80 -	65.8,	69.3,	65.5,	69.5,	67.0,	69.0,	72.5,	70.3,
100 -	63.3,	64.0,	66.5,	73.3,	67.3,	74.8,	75.5,	77.8,
125 -	64.3,	67.8,	71.8,	74.5,	70.0,	73.8,	76.0,	75.3,
160 -	61.0,	63.8,	68.0,	69.3,	68.0,	71.0,	72.8,	74.8,
200 -	63.5,	67.0,	70.0,	70.5,	74.8,	72.0,	70.3,	69.0,
250 -	60.5,	66.8,	65.3,	66.8,	70.5,	68.8,	68.8,	65.0,
315 -	60.0,	60.0,	64.8,	62.8,	67.5,	66.3,	62.3,	60.3,
400 -	60.0,	62.8,	63.8,	65.5,	69.0,	60.8,	60.0,	60.0,
500 -	60.0,	65.3,	62.3,	67.5,	67.8,	63.3,	60.0,	60.0,
630 -	60.0,	60.8,	62.5,	62.5,	65.0,	60.0,	60.0,	60.0,
800 -	60.0,	60.0,	61.0,	61.3,	65.0,	60.0,	60.0,	60.0,
1.0 K -	60.0,	60.0,	62.0,	60.3,	64.0,	60.0,	60.0,	60.0,
1.25K -	60.0,	60.0,	60.0,	61.5,	60.3,	60.0,	60.0,	60.0,
1.6 K -	60.0,	61.0,	60.0,	63.5,	61.0,	60.0,	60.0,	60.0,
2.0 K -	60.0,	62.0,	62.3,	63.0,	64.0,	60.0,	60.0,	60.0,
2.5 K -	60.3,	61.8,	64.3,	67.0,	69.8,	60.3,	60.8,	60.0,
3.15K -	60.0,	61.5,	71.0,	76.5,	79.5,	65.8,	65.5,	60.0,
4.0 K -	60.0,	64.0,	69.5,	67.5,	66.3,	60.0,	60.0,	60.0,
5.0 K -	60.0,	60.0,	60.0,	60.5,	61.5,	60.0,	60.0,	60.0,
6.3 K -	60.0,	60.0,	60.0,	61.0,	63.8,	60.0,	60.0,	60.0,
8.0 K -	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,
10.0K -	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,
12.5K -	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,
16.0K -	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,
20.0K -	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,
FLAT -	80.0,	82.8,	83.0,	84.0,	86.3,	85.3,	85.0,	84.8,
A-WEIGHT -	67.8,	73.0,	76.8,	79.8,	82.0,	73.0,	71.8,	68.5,

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure C-32. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 21. Takeoff Lockheed L1011 - Runway 15R, Toolshed - Inside, Logan International Airport, Boston MA. June 17, 1974 - 0835 Hours. See Fig. C.31 for Frequency Spectra of Outside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	OUTSIDE NOISE LEVEL - DB RE 20μPA 1/2 SECOND INTEGRATION PERIODS(1)											
	1	2	3	4	5	6	7	8	9	10	11	12
25 -	60.0,	60.0,	60.3,	60.0,	60.0,	63.0,	65.8,	66.0,	74.5,	71.8,	67.3,	69.8,
31.5 -	60.5,	60.0,	60.0,	62.3,	61.5,	66.5,	66.5,	69.3,	68.5,	73.3,	73.0,	71.3,
40 -	61.0,	66.5,	60.5,	62.3,	68.5,	73.3,	67.5,	70.0,	69.5,	77.8,	72.8,	73.5,
50 -	67.8,	61.8,	67.0,	63.3,	66.0,	69.3,	69.3,	69.8,	76.5,	76.5,	77.8,	75.5,
63 -	71.8,	69.5,	71.3,	71.5,	70.5,	73.5,	71.5,	70.8,	71.5,	75.8,	77.3,	75.5,
80 -	72.3,	67.3,	71.5,	70.5,	75.3,	74.0,	71.3,	66.5,	67.3,	70.8,	74.3,	74.5,
100 -	73.5,	67.5,	74.8,	70.0,	73.8,	73.3,	67.3,	79.0,	80.3,	75.0,	68.3,	68.3,
125 -	74.0,	70.5,	78.5,	72.5,	74.8,	67.5,	76.0,	84.5,	88.3,	83.8,	74.0,	64.5,
160 -	73.5,	71.8,	78.3,	72.5,	72.3,	71.0,	83.3,	90.3,	91.0,	88.5,	76.8,	71.3,
200 -	77.8,	73.8,	76.5,	68.5,	66.0,	80.0,	86.8,	88.0,	91.0,	87.5,	79.5,	77.0,
250 -	75.8,	73.0,	77.0,	66.8,	68.5,	84.3,	83.5,	85.0,	87.5,	80.5,	77.8,	74.8,
315 -	74.8,	70.0,	71.5,	61.8,	76.3,	84.0,	81.0,	92.0,	92.3,	83.0,	70.5,	70.0,
400 -	81.5,	71.8,	78.3,	68.8,	78.0,	78.5,	87.0,	85.8,	88.5,	82.0,	76.3,	65.5,
500 -	77.0,	68.8,	76.5,	72.8,	77.3,	79.8,	81.8,	87.5,	88.5,	77.3,	71.0,	71.5,
630 -	73.3,	66.5,	74.3,	73.5,	73.0,	79.0,	83.3,	84.8,	85.5,	77.3,	71.8,	65.0,
800 -	68.5,	65.5,	72.0,	66.5,	74.8,	78.5,	83.0,	85.0,	84.8,	75.8,	69.3,	65.3,
1.0 K -	66.8,	63.3,	68.8,	63.3,	73.0,	76.0,	80.8,	84.0,	85.0,	74.3,	68.5,	63.8,
1.25K -	67.0,	64.8,	69.5,	68.0,	77.0,	78.0,	82.8,	83.5,	82.5,	73.5,	66.8,	63.5,
1.6 K -	65.3,	64.0,	67.5,	64.0,	74.5,	78.5,	80.0,	83.0,	82.5,	74.0,	65.8,	62.0,
2.0 K -	62.5,	62.8,	65.8,	63.0,	72.0,	76.5,	79.0,	81.8,	84.5,	74.8,	66.5,	61.8,
2.5 K -	60.0,	61.8,	63.5,	63.8,	71.5,	76.3,	81.5,	87.5,	87.3,	73.0,	62.3,	60.0,
3.15K -	60.0,	60.8,	63.0,	64.0,	72.8,	74.3,	77.8,	79.0,	81.5,	68.5,	60.0,	60.0,
4.0 K -	60.0,	60.0,	60.0,	60.0,	60.3,	64.5,	71.3,	76.8,	81.3,	71.0,	60.0,	60.0,
5.0 K -	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	66.8,	75.5,	79.3,	67.5,	60.0,	60.0,
6.3 K -	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	61.0,	65.3,	65.8,	60.0,	60.0,	60.0,
8.0 K -	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,
10.0K -	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,
12.5K -	60.0,	60.3,	60.0,	60.0,	60.5,	60.0,	60.3,	60.3,	60.0,	60.0,	60.3,	60.0,
16.0K -	61.3,	61.8,	61.0,	62.0,	62.0,	62.0,	61.8,	61.8,	61.8,	62.0,	61.3,	62.0,
20.0K -	61.8,	62.5,	62.8,	62.3,	62.8,	63.0,	62.5,	62.5,	62.8,	62.8,	62.3,	63.0,
FLAT -	87.0,	82.3,	86.5,	83.3,	87.5,	91.5,	94.8,	98.5,	99.5,	94.0,	87.5,	84.5,
A-WEIGHT -	81.5,	76.3,	80.8,	77.5,	84.8,	88.3,	92.0,	94.8,	95.5,	86.8,	79.5,	76.3,

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure C-33. 1/3 Octave Frequency Spectra - Noise Level Data - Event No. 29. Takeoff Boeing 747 - Runway 15R, Toolshed - Outside, Logan International Airport, Boston MA. June 18, 1974 - 1519 Hours. See Fig. C-11 for Noise Level Time Histories. See Fig. C-34 for Frequency Spectra of Inside Noise Data for Coincident 1/2 second Time Periods

1/3 OCTAVE CENTER FREQ HZ	INSIDE NOISE LEVEL - DB RE 20 μPA 1/2 SECOND INTEGRATION PERIODS(1)											
	1	2	3	4	5	6	7	8	9	10	11	12
25 -	59.3,	62.0,	55.3,	59.8,	63.0,	65.5,	69.5,	66.5,	69.0,	73.5,	66.0,	73.3,
31.5 -	62.0,	63.0,	57.8,	61.5,	65.3,	69.0,	76.3,	73.0,	73.3,	74.0,	73.8,	75.3,
40 -	53.8,	60.0,	55.0,	53.5,	59.5,	61.0,	68.5,	72.8,	72.0,	77.5,	74.5,	74.5,
50 -	68.5,	66.8,	68.3,	66.5,	69.5,	65.5,	66.3,	66.8,	74.5,	76.0,	73.5,	75.0,
63 -	78.0,	78.0,	78.0,	77.8,	78.3,	76.8,	78.3,	77.8,	78.0,	78.5,	79.0,	78.5,
80 -	65.0,	64.5,	64.5,	68.8,	67.3,	65.5,	66.3,	65.8,	65.8,	68.3,	70.8,	71.5,
100 -	63.0,	61.0,	59.8,	56.3,	60.0,	59.5,	59.8,	70.8,	67.5,	68.8,	69.3,	64.0,
125 -	60.5,	54.5,	54.5,	53.5,	60.3,	66.5,	73.3,	75.0,	72.0,	72.5,	68.0,	64.0,
160 -	57.8,	53.0,	54.0,	52.8,	56.5,	60.3,	69.0,	73.0,	75.0,	75.3,	67.8,	64.5,
200 -	51.8,	48.8,	49.0,	50.5,	59.3,	66.3,	68.5,	71.0,	77.0,	70.3,	62.3,	61.3,
250 -	56.3,	54.8,	56.0,	54.3,	63.3,	63.0,	74.5,	65.8,	72.0,	68.3,	60.8,	53.8,
315 -	55.3,	53.8,	52.3,	51.3,	58.8,	59.0,	64.5,	69.0,	70.8,	61.0,	55.5,	51.8,
400 -	55.0,	55.0,	54.0,	54.8,	58.0,	62.5,	68.8,	67.5,	64.8,	59.5,	53.3,	49.5,
500 -	55.0,	53.0,	53.8,	53.8,	57.5,	62.3,	63.0,	64.8,	68.0,	56.3,	50.3,	49.8,
630 -	48.0,	46.8,	47.8,	46.8,	55.5,	56.8,	61.3,	64.5,	65.8,	57.0,	51.3,	48.3,
800 -	43.3,	43.3,	49.0,	45.0,	54.5,	55.0,	60.5,	61.5,	62.5,	53.5,	50.5,	46.8,
1.0 K -	42.5,	44.0,	47.8,	46.0,	52.0,	55.3,	57.8,	58.0,	63.0,	53.8,	48.3,	47.0,
1.25K -	45.8,	46.8,	49.8,	50.3,	55.0,	55.0,	60.5,	59.5,	59.5,	53.3,	48.5,	48.5,
1.6 K -	49.0,	49.3,	51.3,	50.0,	56.8,	54.5,	59.0,	59.0,	60.8,	52.3,	49.0,	49.0,
2.0 K -	44.0,	45.5,	49.3,	48.8,	54.3,	55.0,	60.3,	61.3,	64.3,	56.0,	48.3,	46.5,
2.5 K -	43.8,	46.0,	49.3,	50.0,	55.0,	56.5,	64.5,	68.0,	66.8,	55.0,	48.8,	46.3,
3.15K -	40.5,	44.3,	47.8,	47.8,	54.3,	58.0,	62.0,	63.3,	65.5,	54.5,	47.8,	43.5,
4.0 K -	40.0,	40.0,	40.0,	40.0,	42.5,	46.3,	57.5,	58.0,	64.0,	54.3,	46.8,	43.3,
5.0 K -	40.0,	40.0,	40.0,	40.0,	40.0,	42.5,	58.0,	56.5,	61.3,	52.0,	42.0,	40.3,
6.3 K -	41.0,	42.0,	42.3,	41.8,	42.3,	42.8,	47.0,	50.0,	52.8,	44.0,	42.0,	41.5,
8.0 K -	43.0,	45.0,	44.5,	44.3,	44.8,	44.5,	45.0,	46.0,	46.8,	45.0,	44.3,	44.5,
10.0K -	41.0,	42.8,	43.0,	43.5,	43.8,	42.5,	43.0,	43.0,	43.5,	44.0,	43.0,	42.5,
12.5K -	40.0,	41.0,	40.8,	41.3,	41.0,	40.8,	41.8,	40.5,	41.0,	41.0,	41.0,	41.5,
16.0K -	41.3,	40.8,	41.5,	41.0,	40.8,	41.8,	41.0,	42.0,	41.5,	41.0,	41.5,	41.0,
20.0K -	41.5,	41.3,	42.0,	41.0,	41.0,	41.5,	41.3,	41.0,	41.3,	41.3,	42.0,	42.0,
FLAT -	78.8,	78.5,	78.3,	78.5,	79.5,	79.5,	82.8,	83.0,	84.5,	84.3,	83.0,	82.8,
A-WEIGHT -	60.0,	59.8,	61.0,	61.0,	66.0,	68.0,	73.3,	74.3,	76.0,	69.0,	63.5,	61.3,

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure C-34. 1/3 Octave Frequency Spectra - Noise Level Data - Event No. 29. Takeoff Boeing 747 - Runway 15R, Toolshed - Inside, Logan International Airport, Boston MA. June 18, 1974 - 1519 Hours. See Fig. C-33 for Frequency Spectra of Outside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	OUTSIDE NOISE LEVEL - DB RE 20μPA 1/2 SECOND INTEGRATION PERIODS(1)							
	1	2	3	4	5	6	7	8
25 -	60.3,	65.8,	76.3,	75.0,	83.8,	83.8,	79.5,	
31.5 -	70.3,	79.5,	80.3,	80.8,	86.0,	86.3,	83.5,	
40 -	75.0,	79.8,	85.3,	84.8,	87.0,	93.3,	88.0,	
50 -	78.3,	82.0,	83.0,	82.3,	93.5,	93.3,	91.0,	
63 -	87.3,	89.5,	86.3,	91.0,	94.0,	95.3,	90.3,	
80 -	81.5,	80.8,	85.0,	85.5,	92.0,	97.0,	90.5,	
100 -	79.8,	82.0,	79.3,	85.5,	85.5,	89.0,	88.5,	
125 -	82.3,	84.3,	89.3,	96.0,	93.5,	85.3,	85.3,	
160 -	83.5,	81.8,	91.8,	99.0,	97.8,	93.0,	84.5,	
200 -	83.3,	78.5,	95.3,	99.3,	100.0,	96.5,	91.0,	
250 -	81.3,	78.3,	92.0,	93.3,	95.8,	93.8,	90.5,	
315 -	83.0,	83.3,	92.3,	94.3,	85.8,	88.3,	86.8,	
400 -	82.8,	90.5,	95.0,	97.5,	90.8,	80.3,	78.0,	
500 -	83.0,	88.5,	92.5,	96.3,	87.3,	83.8,	75.8,	
630 -	81.8,	83.0,	93.0,	95.5,	87.0,	77.5,	77.0,	
800 -	82.3,	87.5,	95.0,	94.3,	83.8,	79.0,	73.3,	
1.0 K -	81.3,	88.8,	92.5,	94.3,	83.8,	76.8,	72.8,	
1.25K -	82.8,	88.8,	93.3,	93.8,	82.5,	75.5,	73.5,	
1.6 K -	86.8,	91.3,	94.0,	93.0,	82.5,	75.0,	71.0,	
2.0 K -	87.0,	90.8,	92.5,	93.5,	80.8,	73.3,	69.0,	
2.5 K -	88.3,	89.5,	92.3,	94.8,	81.3,	72.8,	69.0,	
3.15K -	83.3,	88.8,	95.3,	99.5,	84.5,	76.0,	71.8,	
4.0 K -	80.8,	86.8,	97.0,	93.3,	79.5,	70.8,	64.0,	
5.0 K -	81.8,	86.0,	90.3,	88.5,	74.5,	65.5,	60.0,	
6.3 K -	72.0,	80.3,	87.5,	90.0,	73.5,	63.3,	60.0,	
8.0 K -	64.3,	73.5,	85.8,	83.5,	65.8,	60.0,	60.0,	
10.0K -	60.3,	67.8,	77.8,	78.5,	61.3,	60.0,	60.0,	
12.5K -	60.0,	60.8,	69.0,	68.0,	60.5,	60.0,	60.0,	
16.0K -	61.3,	61.0,	62.8,	62.8,	61.3,	61.5,	61.0,	
20.0K -	63.0,	62.5,	62.3,	62.3,	62.5,	62.3,	63.0,	
FLAT -	97.0,	100.5,	105.3,	107.8,	105.0,	103.5,	99.0,	
A-WEIGHT -	95.8,	99.3,	104.5,	105.8,	96.3,	91.8,	87.5,	

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure C-35. 1/3 Octave Frequency Spectra-Noise Level Data- Event No. 18. Takeoff Boeing 707 - Runway 15R, Toolshed - Outside, Logan International Airport, Boston MA. June 17, 1974 - 0816 Hours. See Fig. C-12 for Noise Level Time Histories. See Fig. C-36 for Frequency Spectra of Inside Noise Data for Coincident 1/2 Second Time Periods

1/3 OCTAVE CENTER FREQ. HZ	INSIDE NOISE LEVEL - DB RE 20μPA 1/2 SECOND INTEGRATION PERIODS(1)							
	1	2	3	4	5	6	7	8
25 -	74.3,	73.3,	66.8,	74.8,	76.0,	77.8,	78.8,	
31.5 -	68.5,	70.3,	74.5,	76.0,	79.5,	78.8,	77.0,	
40 -	67.0,	66.8,	71.0,	76.5,	77.0,	80.5,	78.8,	
50 -	67.0,	67.8,	65.8,	76.5,	80.3,	81.3,	76.0,	
63 -	69.8,	68.8,	65.0,	76.3,	78.0,	76.8,	72.8,	
80 -	66.0,	72.0,	73.8,	69.5,	79.8,	81.0,	76.3,	
100 -	66.0,	66.3,	74.3,	73.8,	80.3,	78.5,	72.8,	
125 -	67.8,	63.0,	77.0,	77.0,	83.5,	78.5,	72.3,	
160 -	64.5,	66.3,	75.3,	84.0,	82.5,	76.0,	73.0,	
200 -	64.0,	67.5,	77.0,	78.5,	77.0,	76.0,	68.8,	
250 -	64.5,	66.0,	73.5,	77.3,	72.0,	68.5,	71.5,	
315 -	60.0,	65.5,	71.0,	72.8,	68.8,	62.5,	60.5,	
400 -	60.0,	69.5,	75.8,	69.5,	67.0,	62.5,	60.0,	
500 -	60.0,	64.5,	74.8,	72.0,	64.5,	60.0,	60.0,	
630 -	60.0,	65.5,	71.8,	72.0,	61.8,	60.0,	60.0,	
800 -	60.0,	64.8,	70.3,	69.0,	61.8,	60.0,	60.0,	
1.0 K -	60.0,	63.3,	68.0,	69.0,	60.8,	60.0,	60.0,	
1.25K -	60.5,	66.8,	71.0,	67.0,	60.3,	60.0,	60.0,	
1.6 K -	66.8,	69.8,	71.5,	68.0,	60.3,	60.0,	60.0,	
2.0 K -	70.5,	71.0,	72.8,	72.8,	61.0,	60.0,	60.0,	
2.5 K -	69.0,	71.0,	74.0,	73.8,	63.3,	60.0,	60.0,	
3.15K -	64.3,	69.3,	80.8,	83.3,	66.8,	61.0,	60.0,	
4.0 K -	60.5,	72.0,	80.5,	73.8,	60.5,	60.0,	60.0,	
5.0 K -	61.0,	67.3,	69.3,	67.8,	60.0,	60.0,	60.0,	
6.3 K -	60.0,	62.3,	70.0,	69.5,	60.0,	60.0,	60.0,	
8.0 K -	60.0,	60.0,	68.8,	61.8,	60.0,	60.0,	60.0,	
10.0K -	60.0,	60.0,	61.5,	60.0,	60.0,	60.0,	60.0,	
12.5K -	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	
16.0K -	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	
20.0K -	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	60.0,	
FLAT -	81.0,	83.5,	88.5,	90.3,	90.3,	89.3,	86.3,	
A-WEIGHT -	76.8,	80.5,	87.0,	86.3,	77.0,	72.8,	68.0,	

(1) Integration periods are first 1/2 second of consecutive 2 second intervals.

Figure C-36. 1/3 Octave Frequency Spectra-Noise Level Data-Event No. 18. Takeoff Boeing 707 - Runway 15R, Toolshed - Inside, Logan International Airport, Boston MA. June 17, 1974 - 0816 Hours. See Fig. C-35 for Frequency Spectra of Outside Noise Data for Coincident 1/2 Second Time Periods

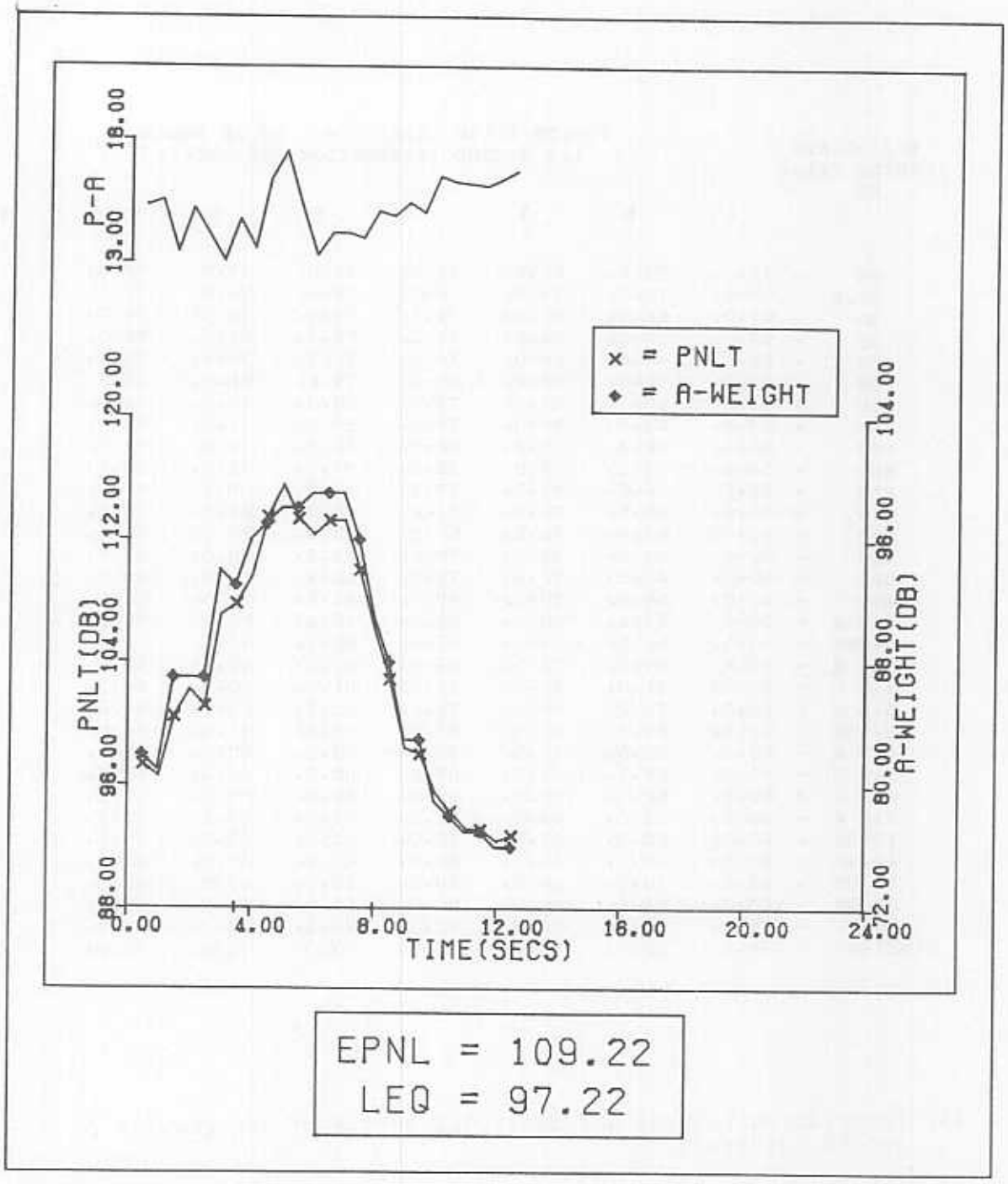


Figure C-37. EPNL/PNLT History - Event 10.
Landing Concorde F-WTSA - Runway 4R, Field Office - Outside, Logan International Airport, Boston MA

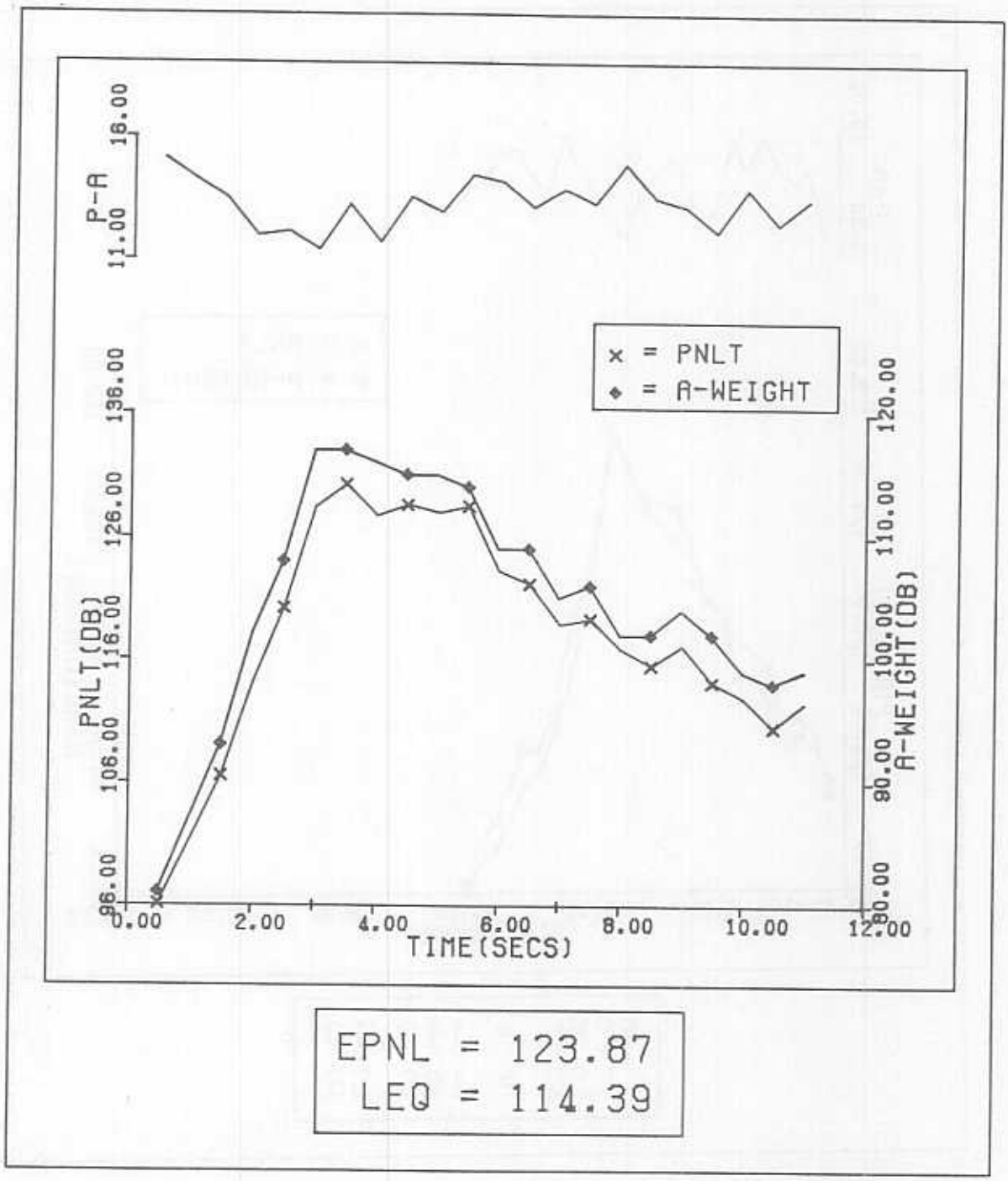


Figure C-38. EPNL/PNLT History - Event 19.
Takeoff Concorde F-WTSA - Runway 15R, Toolshed - Outside, Logan International Airport, Boston MA

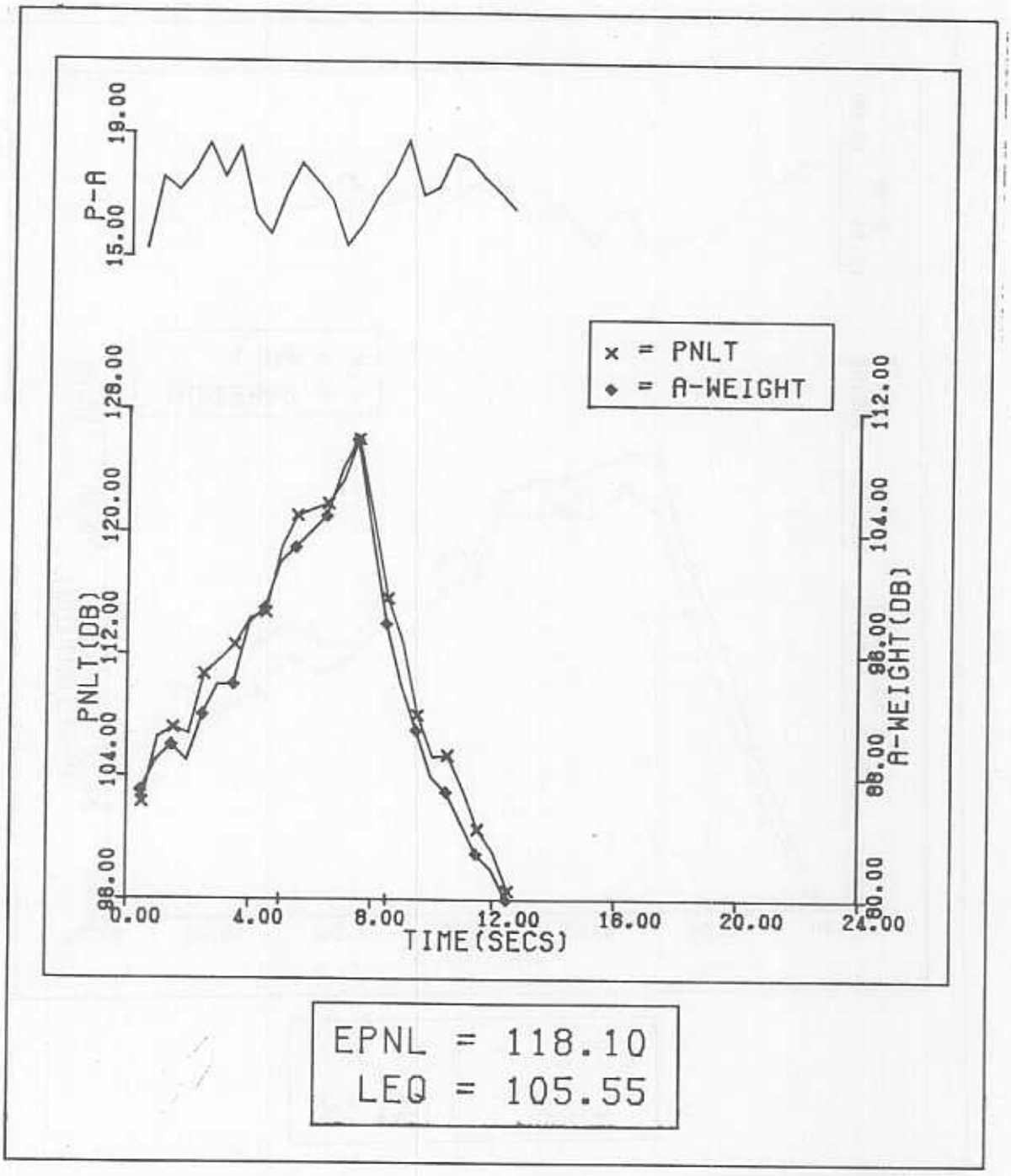


Figure C-39. EPNL/PNLT History - Event 7.
Landing Boeing 707 - Runway 4R, Field Office - Outside, Logan International Airport, Boston MA

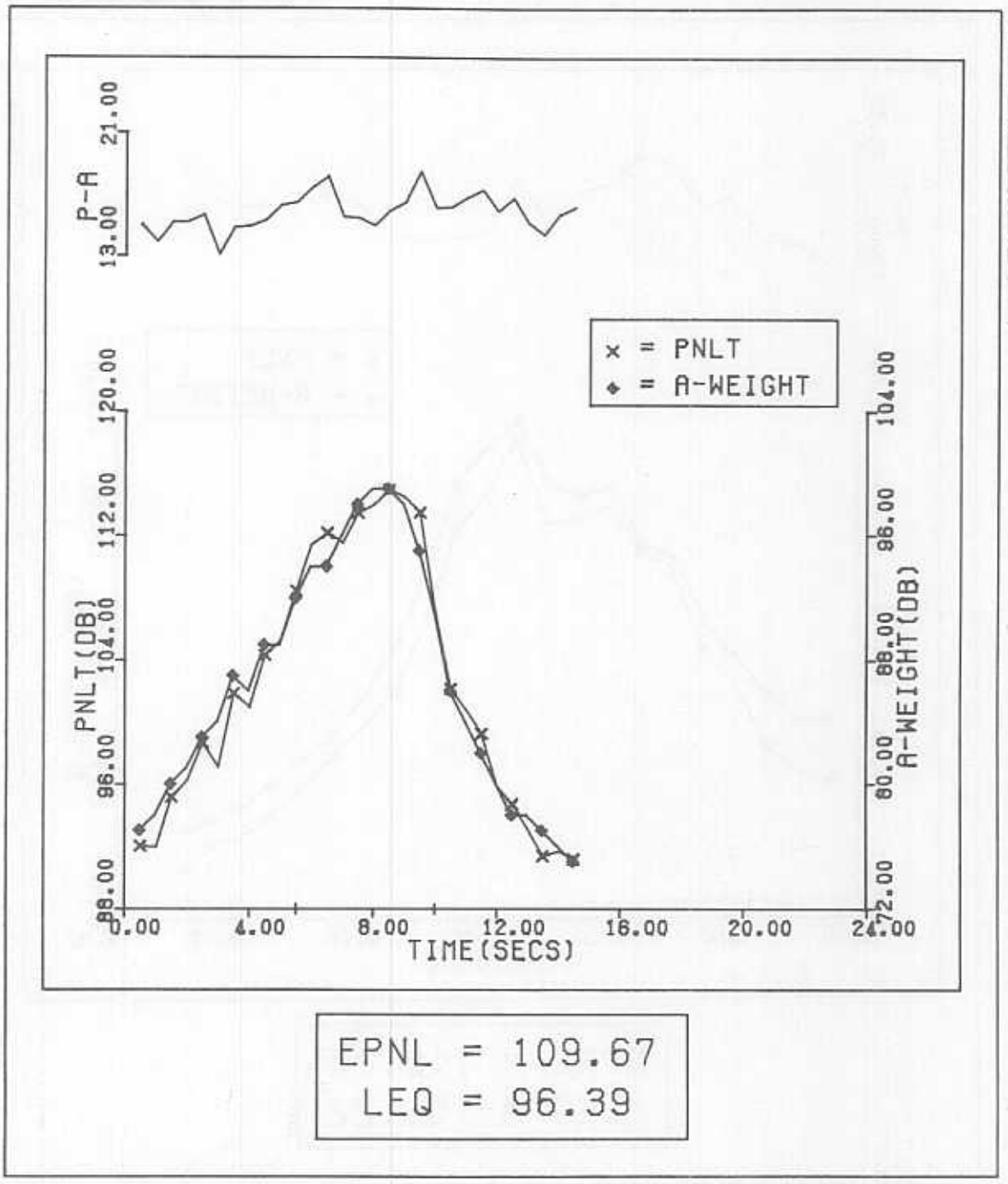


Figure C-40. EPNL/PNLT History - Event 8.
Landing Boeing 747 - Runway 4R, Field Office - Outside, Logan International Airport, Boston MA

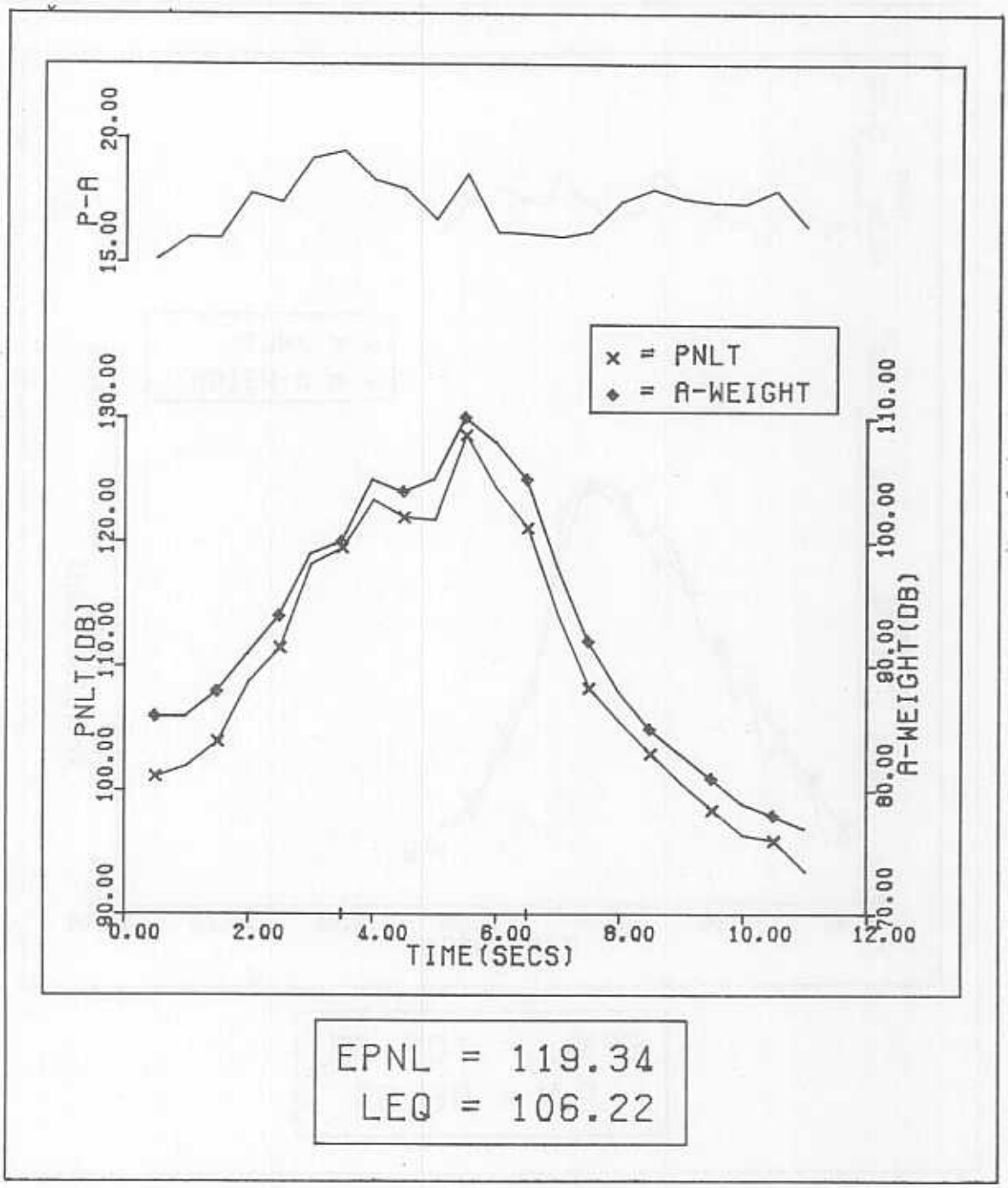


Figure C-41. EPNL/PNLT History - Event 9.
Landing Douglas DC-8 - Runway 4R, Field Office - Outside, Logan International Airport, Boston MA

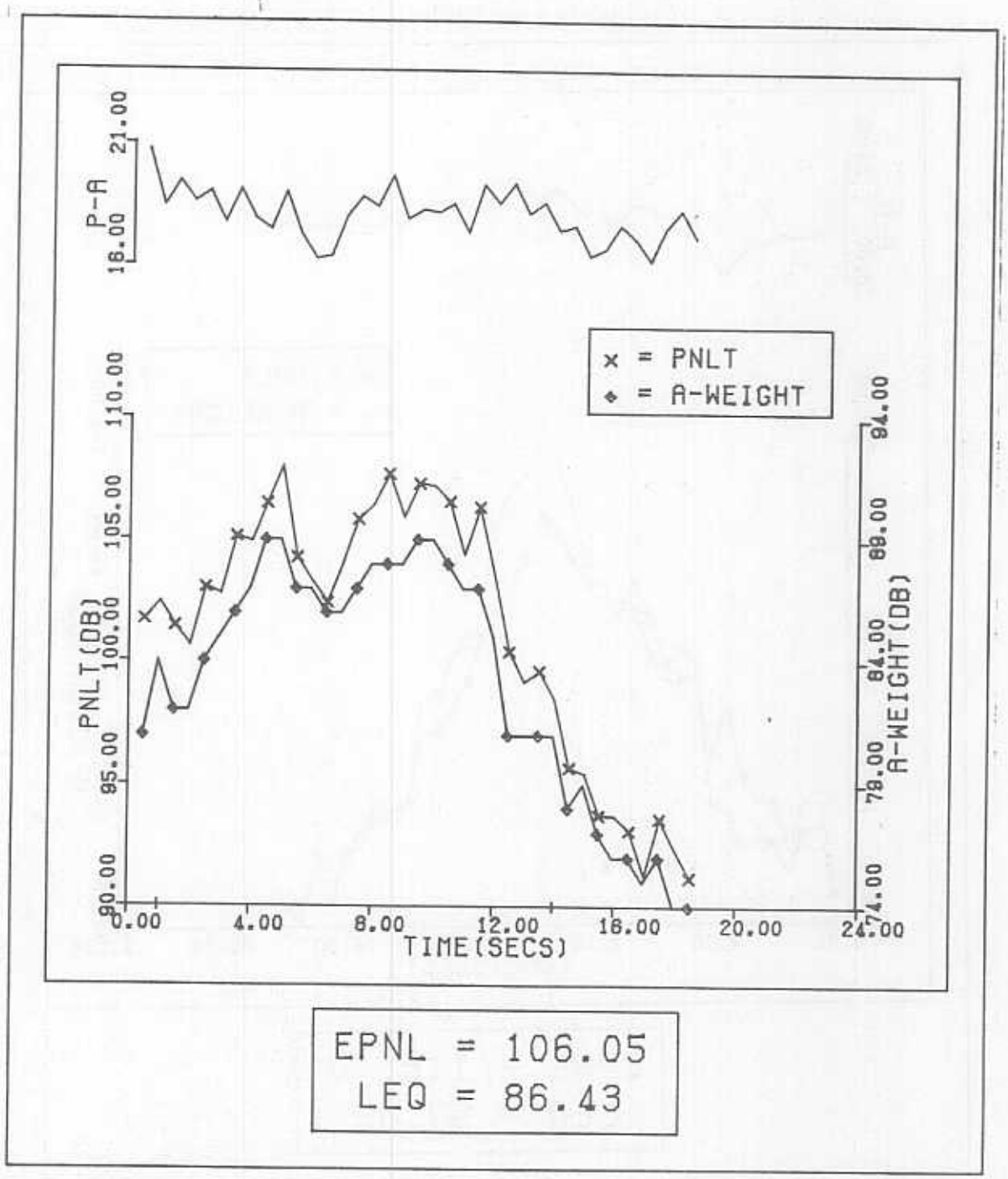


Figure C-42. EPNL/PNLT History - Event No. 16.
Takeoff Douglas DC-10 - Runway 15R, Toolshed - Outside, Logan International Airport, Boston MA

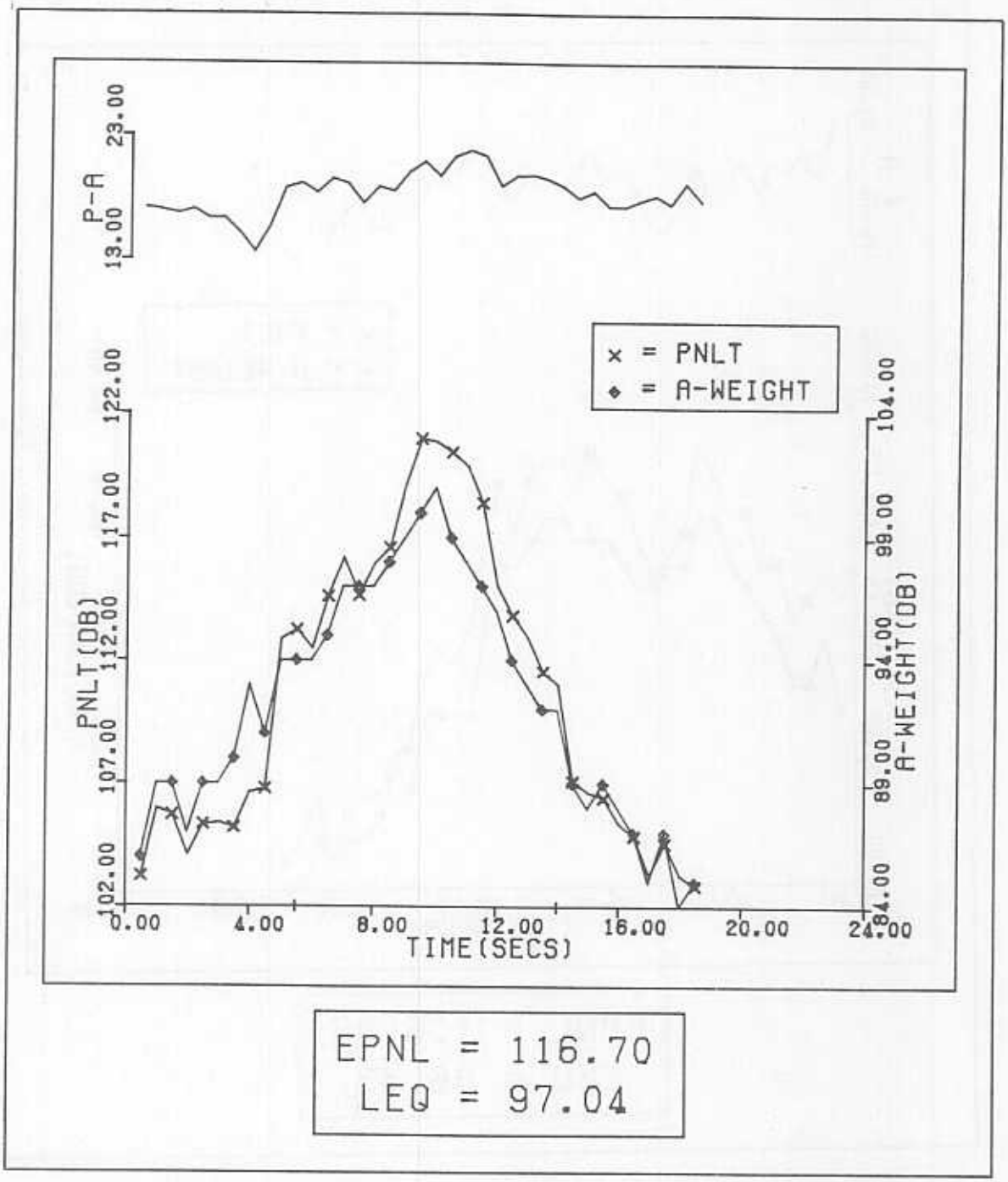


Figure C-43. EPNL/PNLT History - Event 21.
Takeoff Lockheed L1011 - Runway 15R, Toolshed - Outside, Logan International Airport, Boston MA

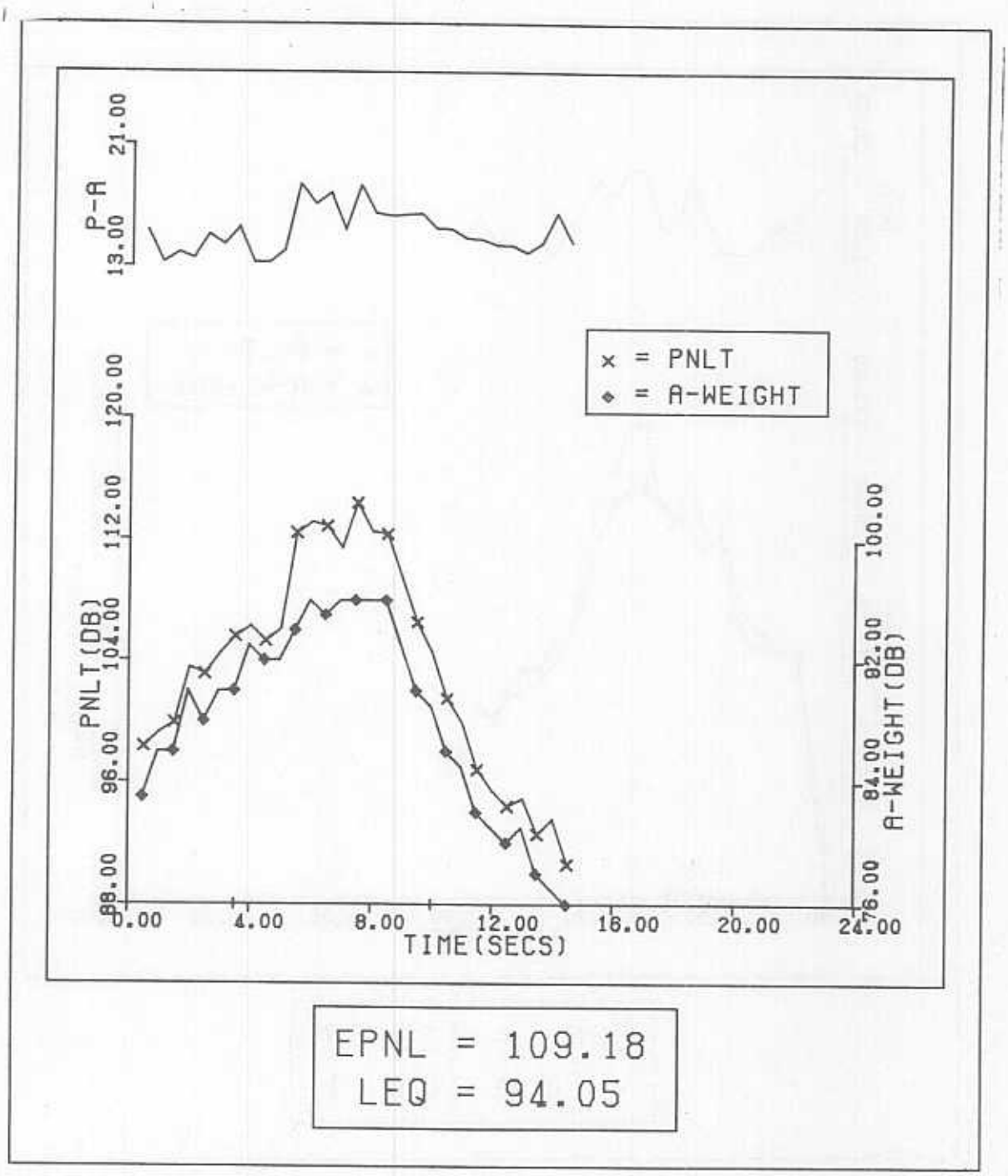


Figure C-44. EPNL/PNLT History - Event No. 29.
Takeoff Boeing 747 - Runway 15R, Toolshed - Outside, Logan International Airport, Boston MA

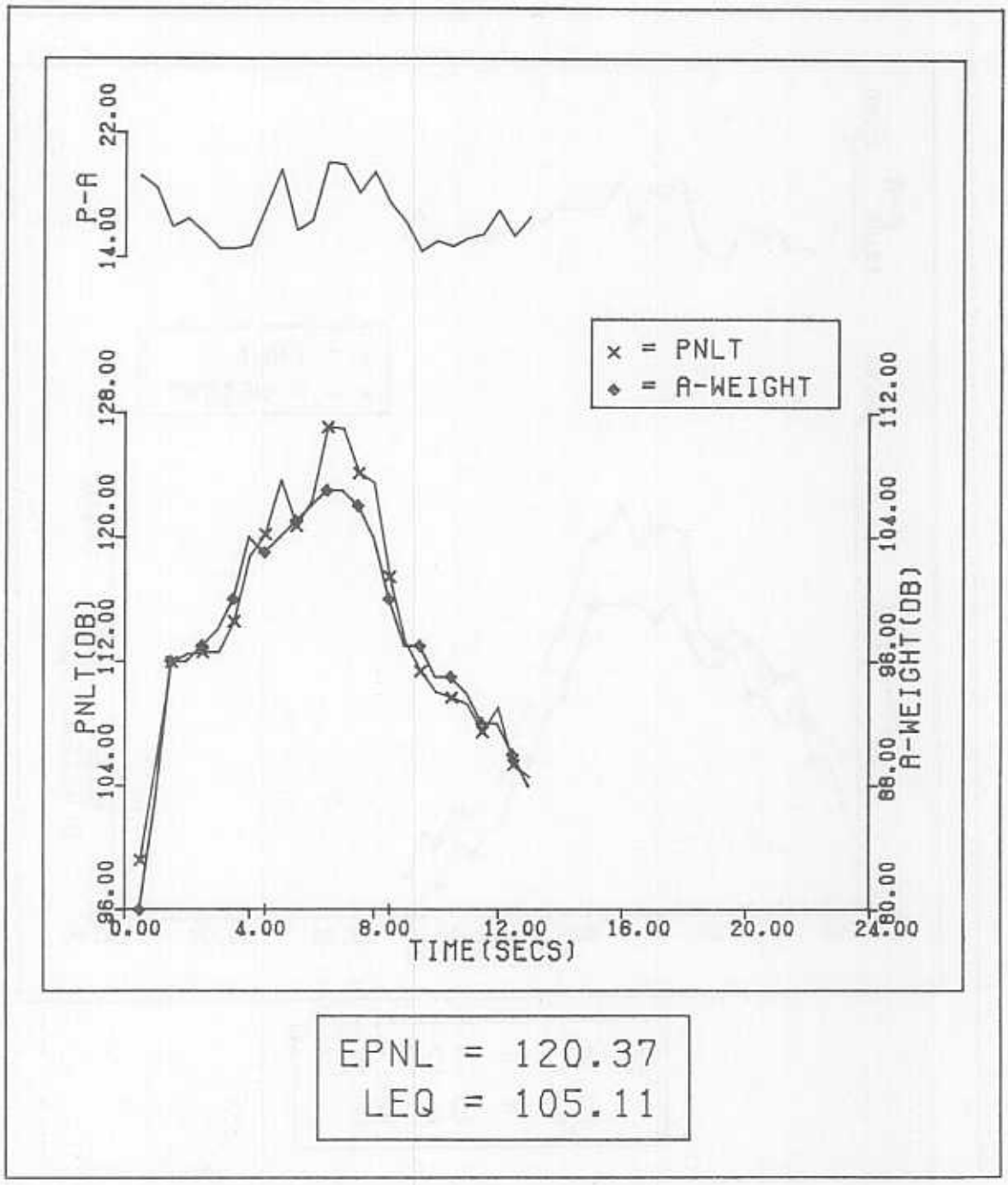


Figure C-45. EPNL/PNLT History - Event No. 18.
Takeoff Boeing 707 - Runway 15R, Toolshed - Outside, Logan International Airport, Boston MA

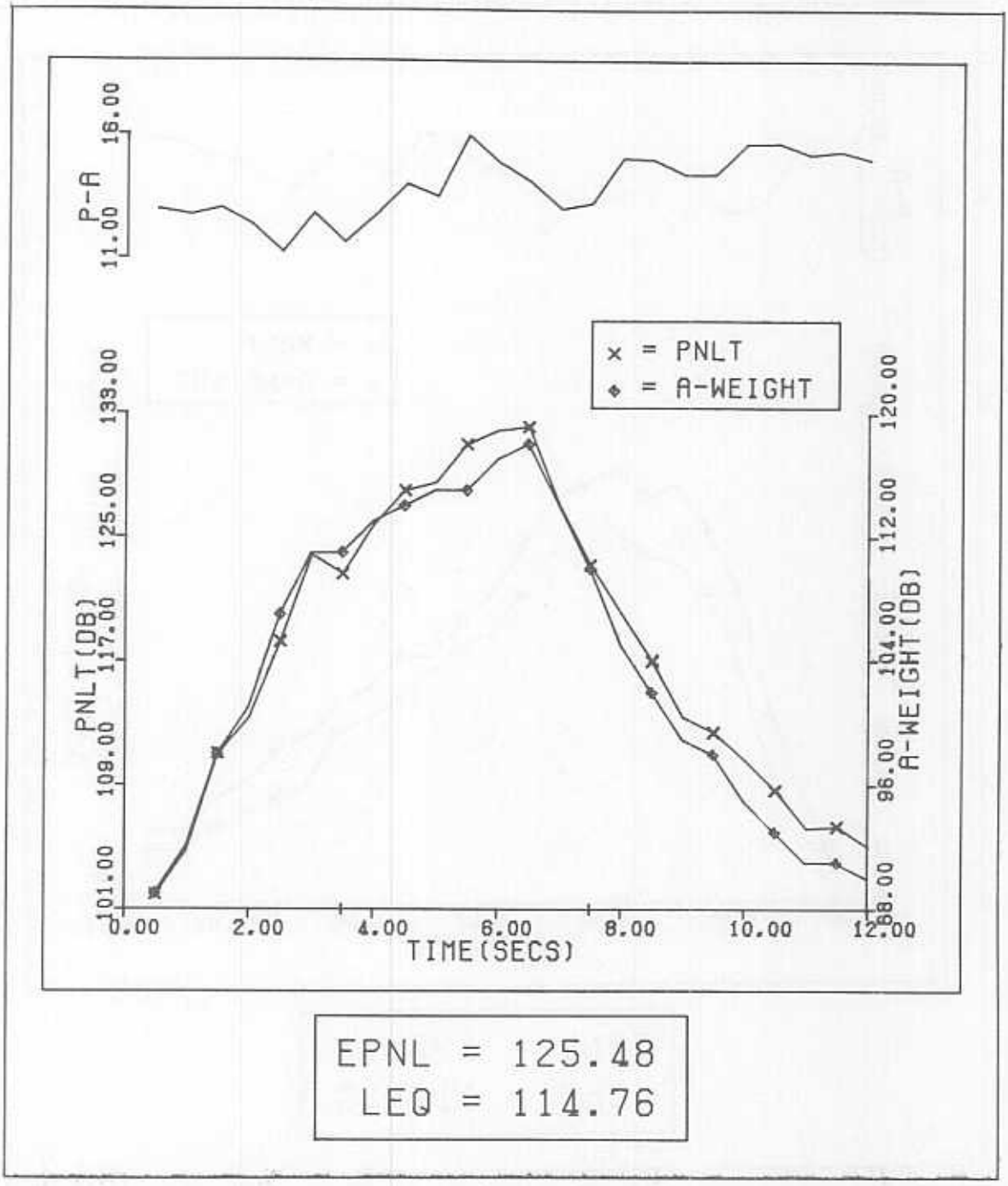


Figure C-46. EPNL/PNLT History - Event No. 14.
Takeoff Concorde F-WTSA - Runway 15R, Toolshed - Outside, Logan International Airport, Boston MA

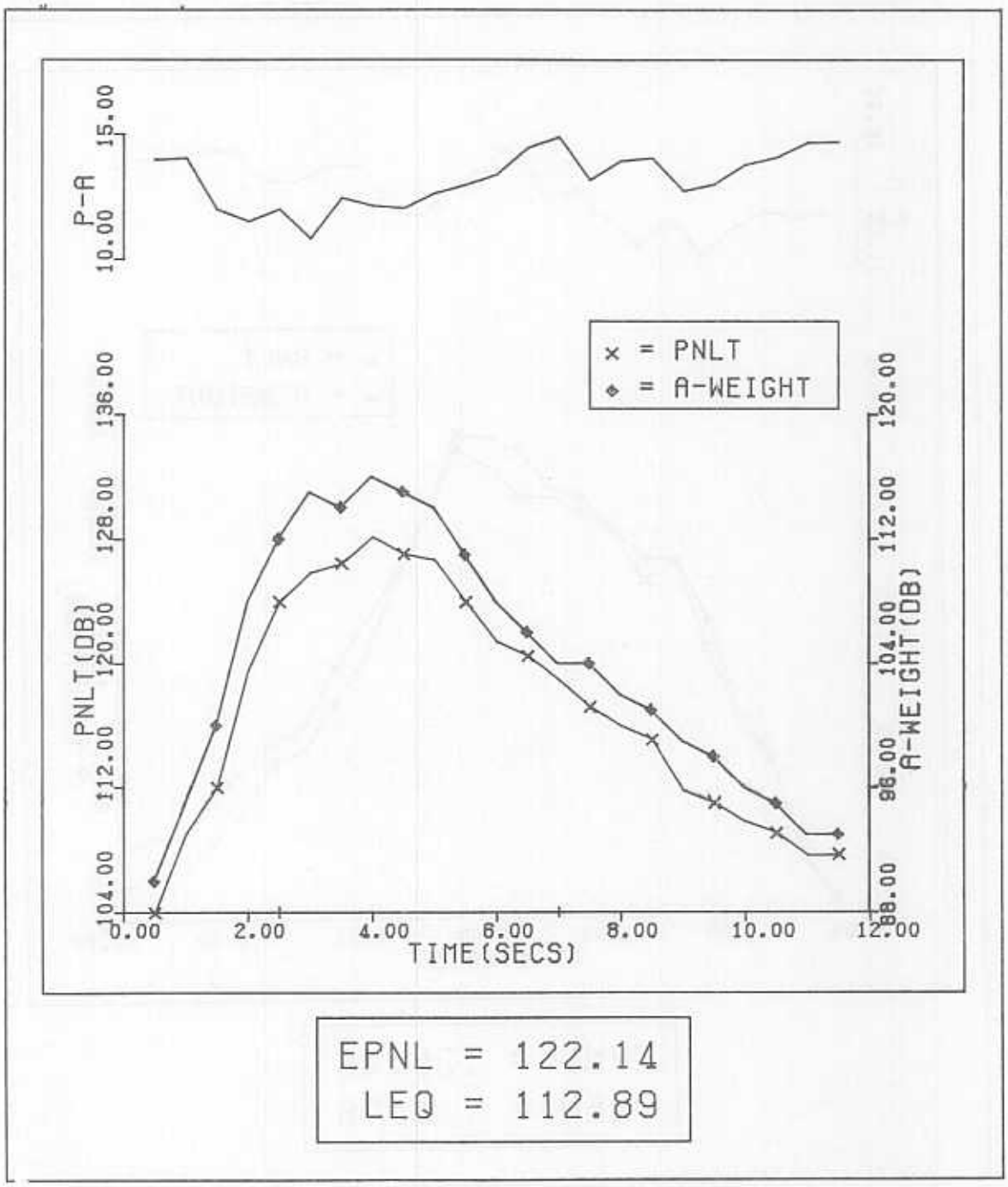


Figure C-47. EPNL/PNLT History - Event No. 23.
Takeoff Concorde F-WTSA - Runway 15R, Toolshed - Outside, Logan International Airport, Boston MA

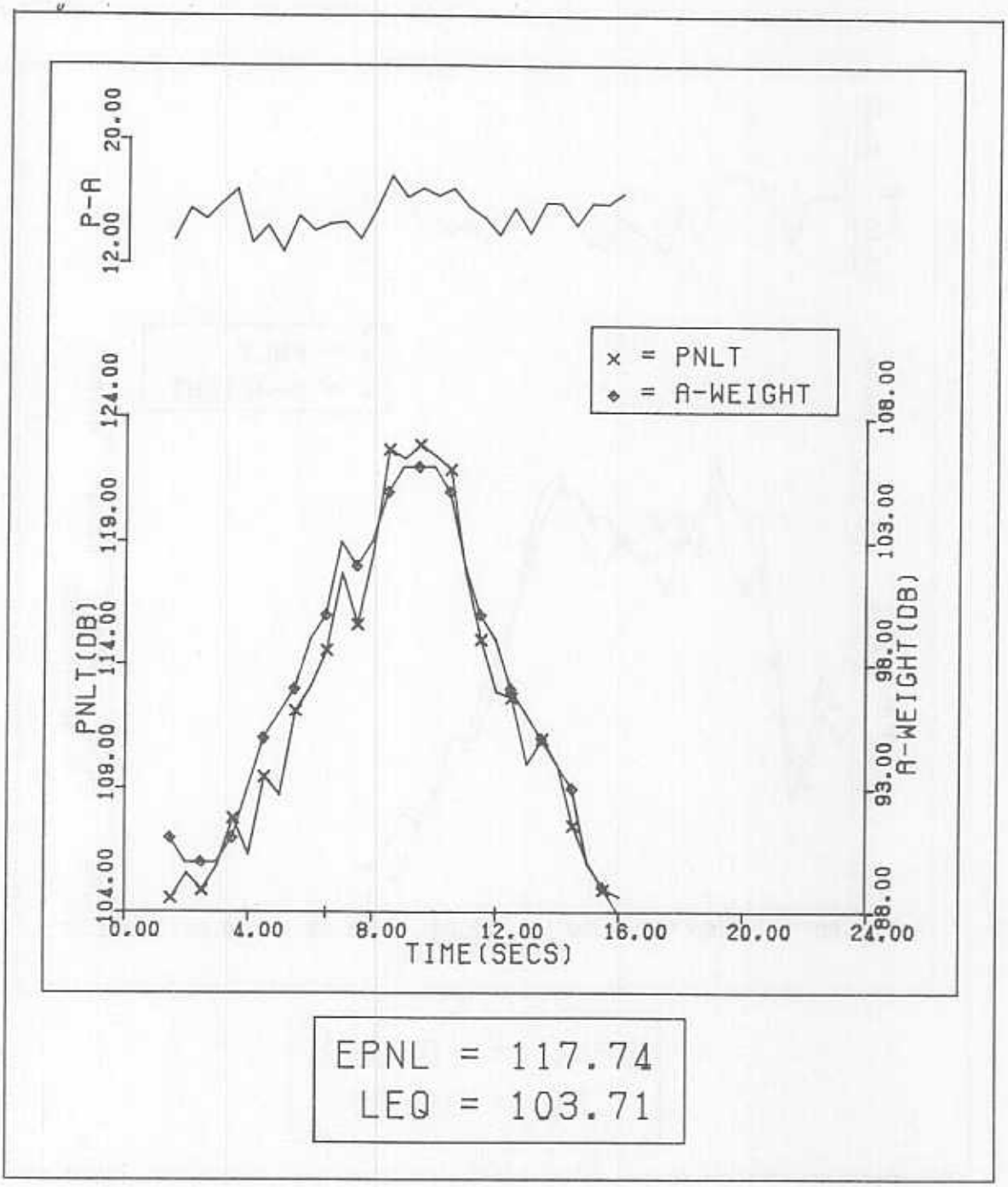


Figure C-48. EPNL/PNLT History - Event 11.
Takeoff Boeing 707 - Runway 15R, Toolshed - Outside, Logan International Airport, Boston MA

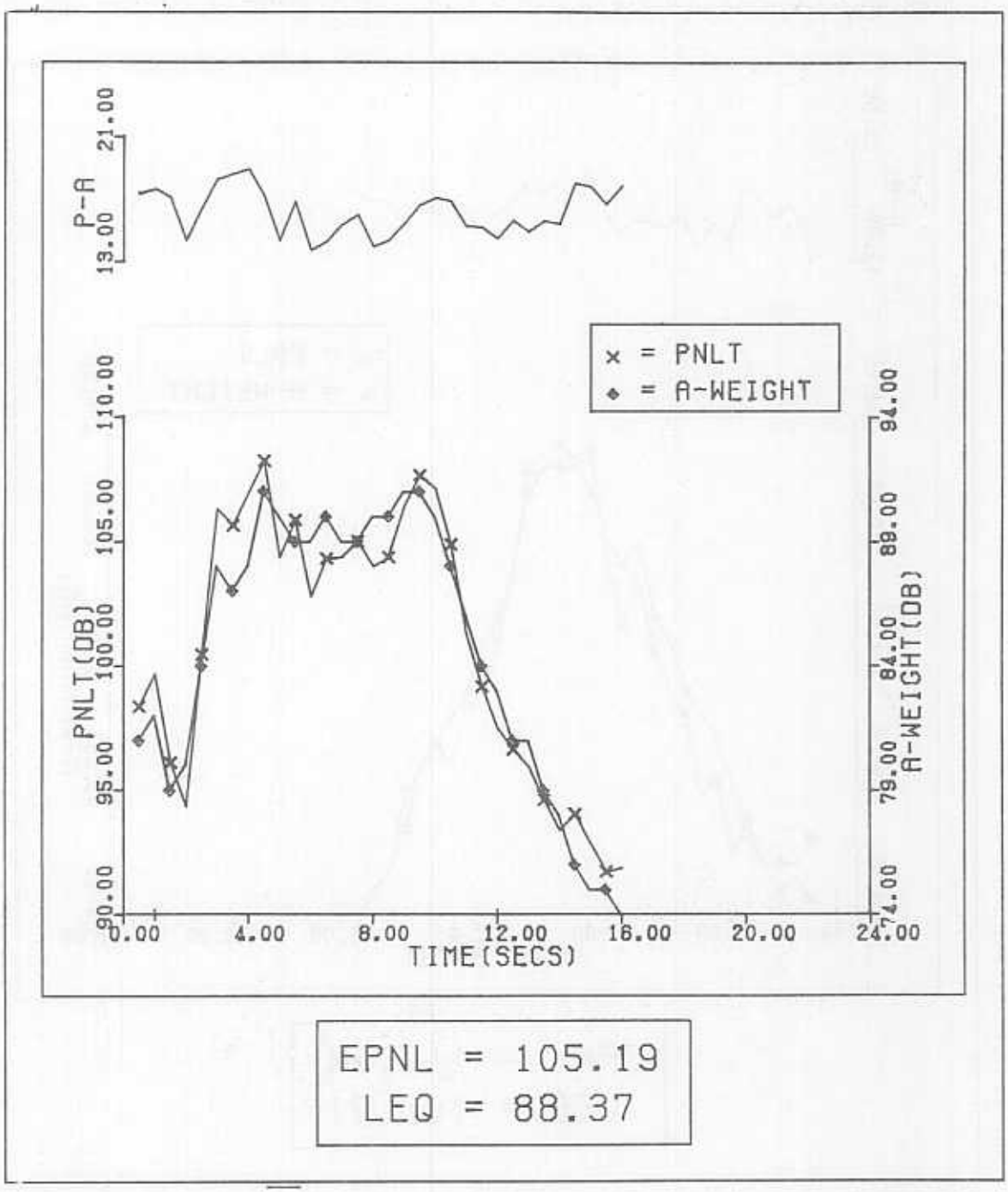


Figure C-49. EPNL/PNLT History - Event No. 12.
Takeoff Douglas DC-10 - Runway 15R, Toolshed - Outside, Logan International Airport, Boston MA

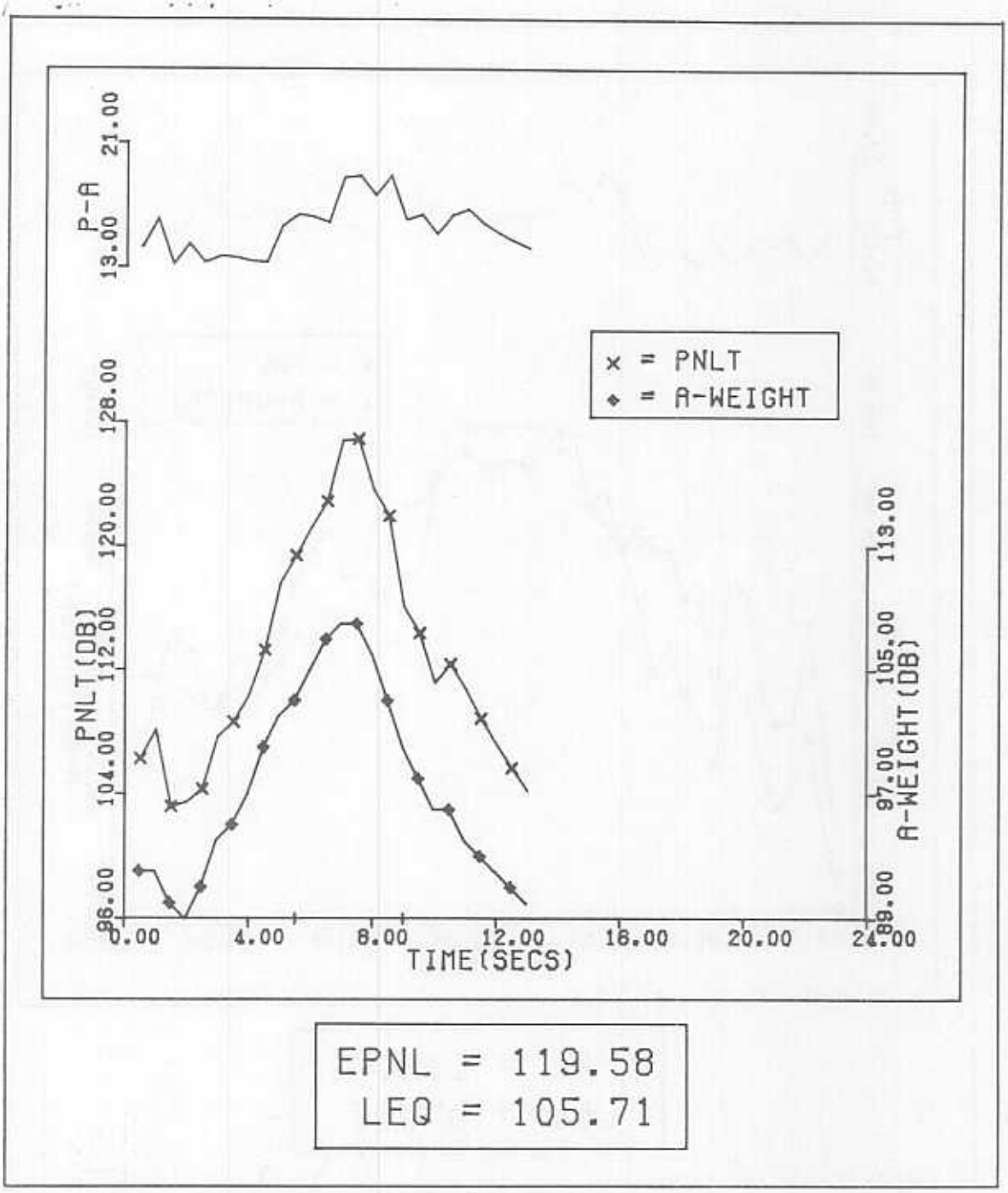


Figure C-50. EPNL/PNLT History - Event No. 13.
Takeoff Boeing 707 - Runway 15R, Toolshed - Outside, Logan International Airport, Boston MA

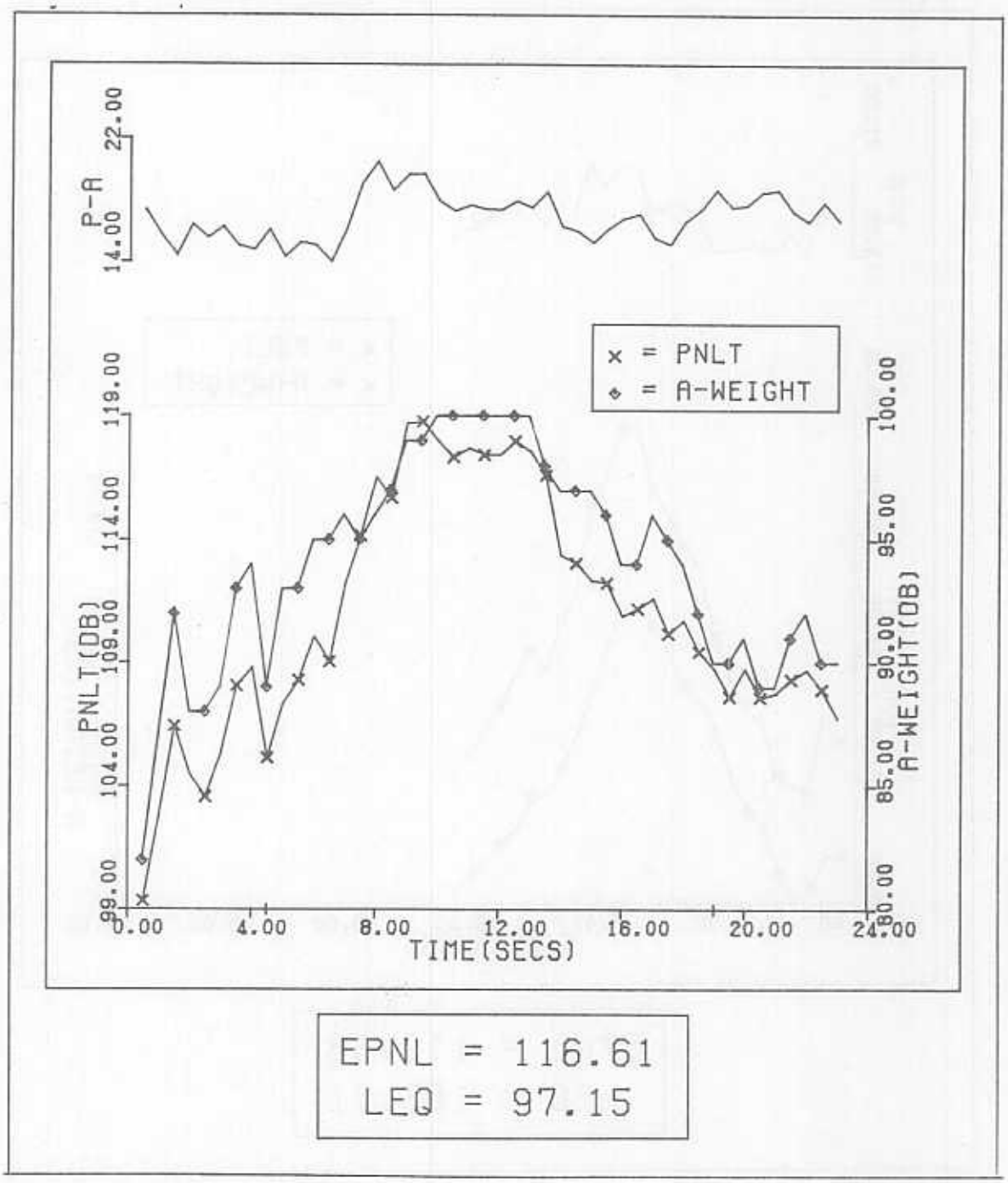


Figure C-51. EPNL/PNLT History - Event No. 17.
Takeoff Boeing 707 - Runway 15R, Toolshed - Outside, Logan International Airport, Boston MA

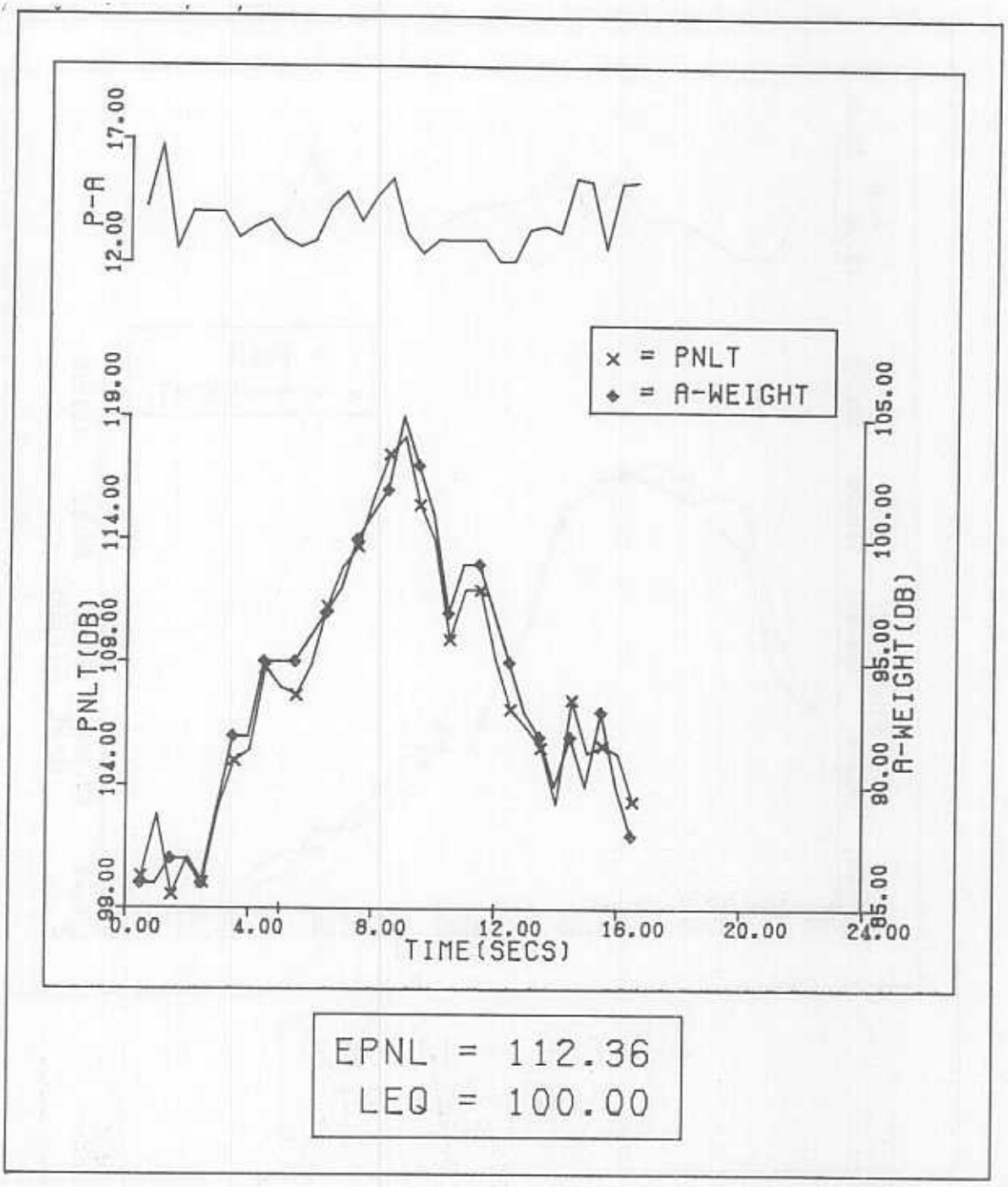


Figure C-52. EPNL/PNLT History - Event No. 20.
Takeoff Boeing 707 - Runway 15R, Toolshed - Outside, Logan International Airport, Boston MA

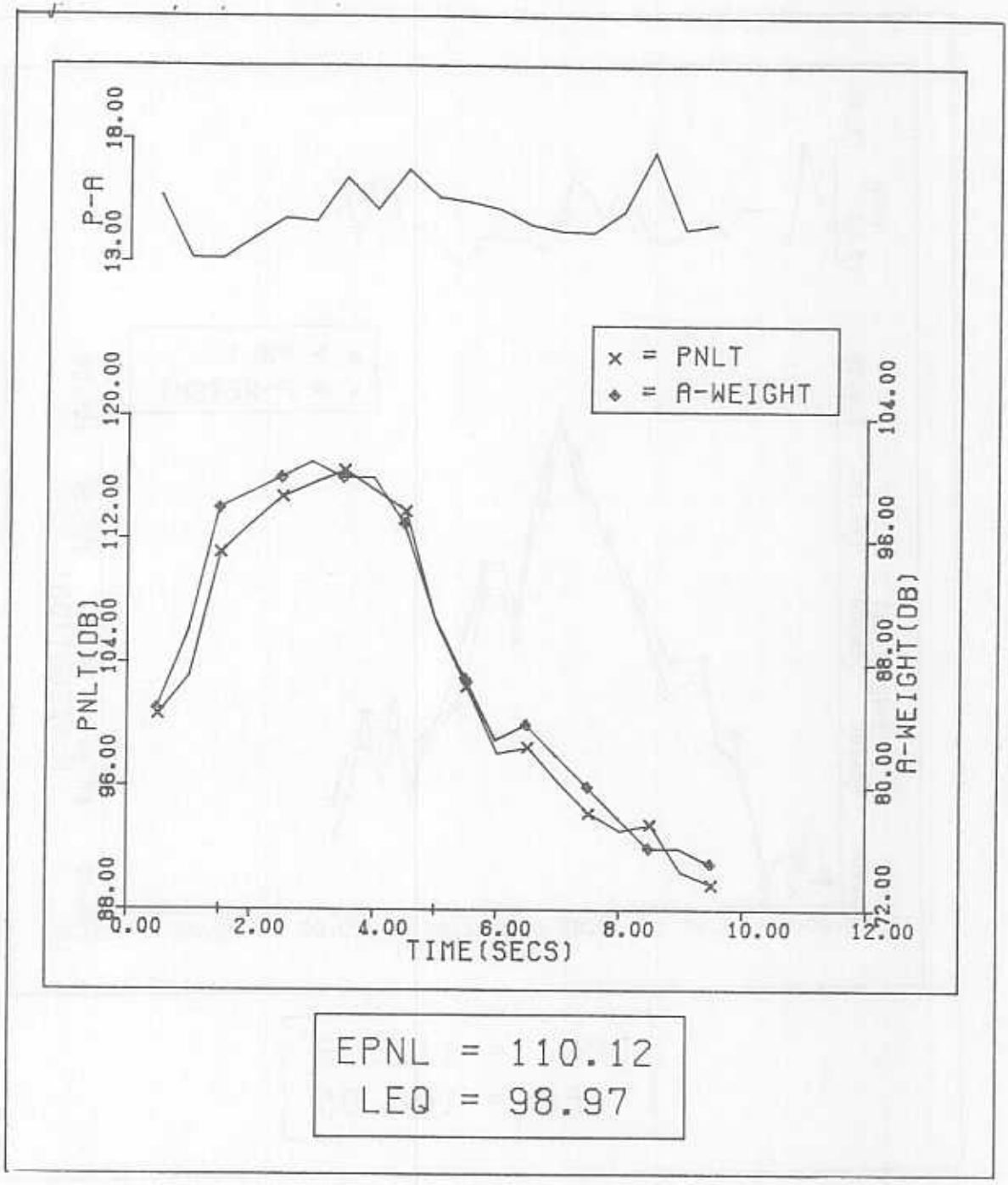


Figure C-53. EPNL/PNLT History - Event No. 24.
Takeoff Boeing 747 - Runway 15R, Toolshed - Outside, Logan International Airport, Boston MA

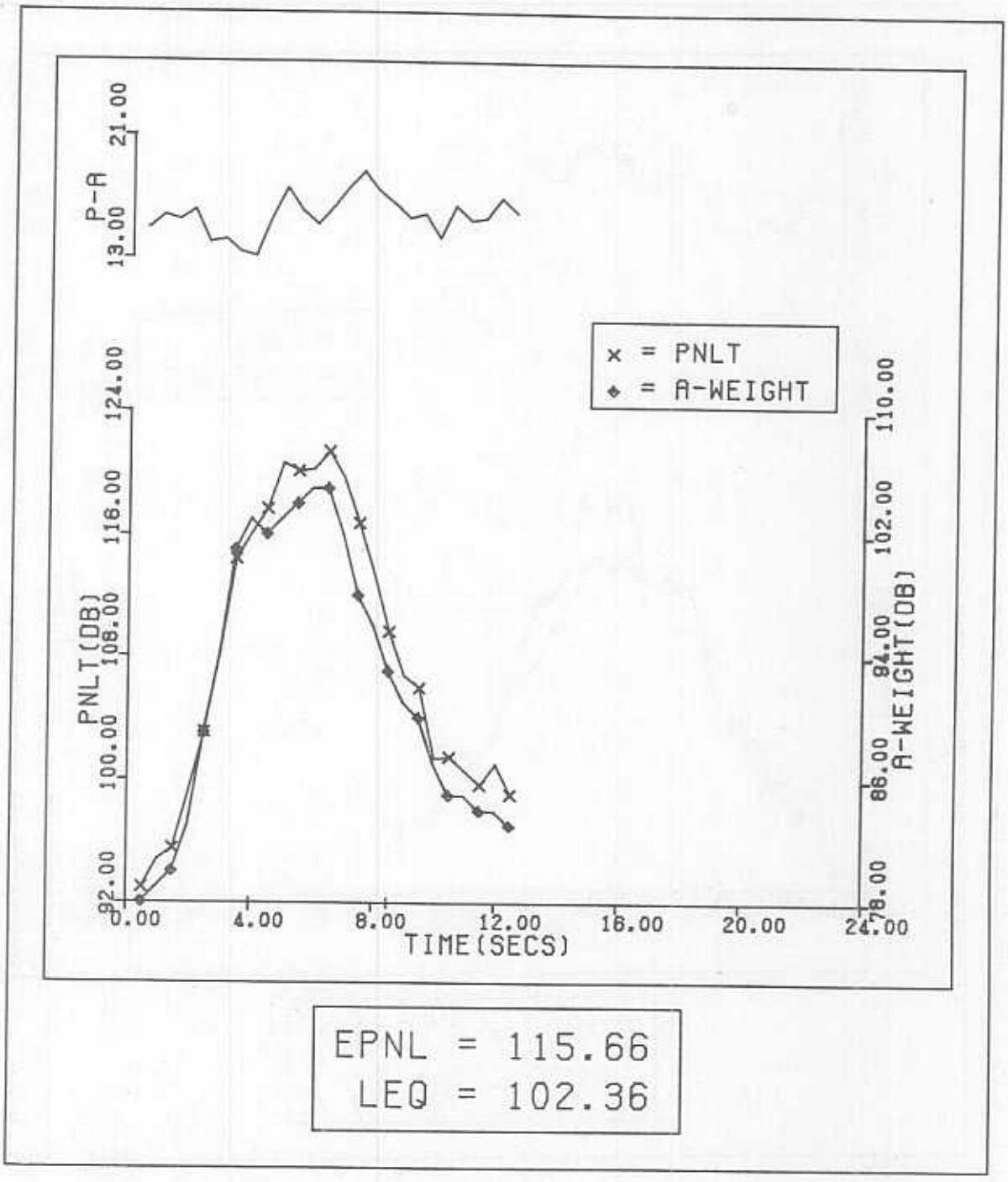


Figure C-54. EPNL/PNLT History - Event No. 25.
Takeoff Douglas DC-8 - Runway 15R, Toolshed - Outside, Logan International Airport, Boston MA

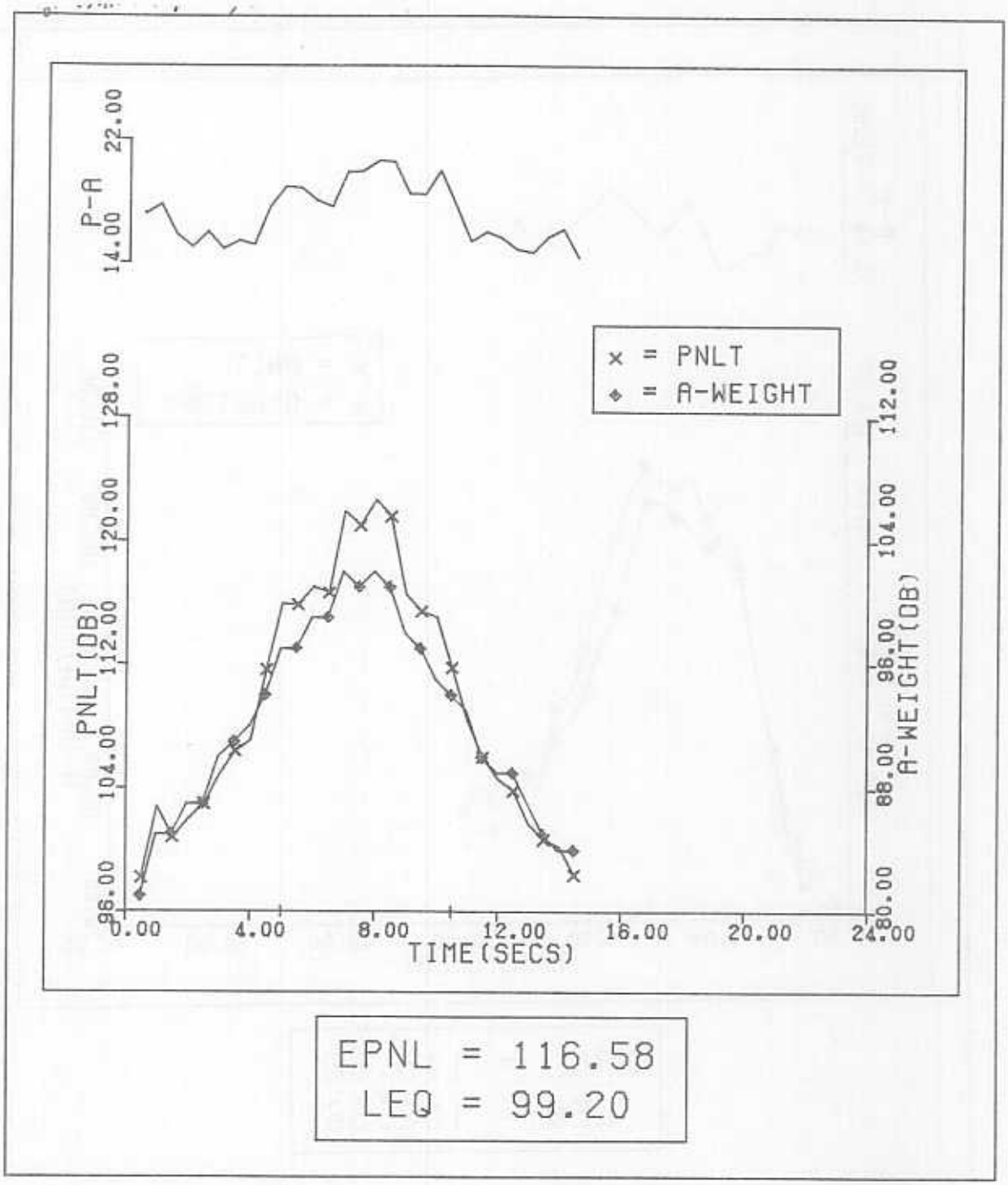


Figure C-55. EPNL/PNLT History - Event No. 27.
Takeoff Douglas DC-8 - Runway 15R, Toolshed - Outside, Logan International Airport, Boston MA

APPENDIX D
BUILDING STRUCTURAL VIBRATION LEVELS MEASURED AT TWO LOCATIONS LOGAN INTERNATIONAL AIRPORT BOSTON, MASSACHUSETTS

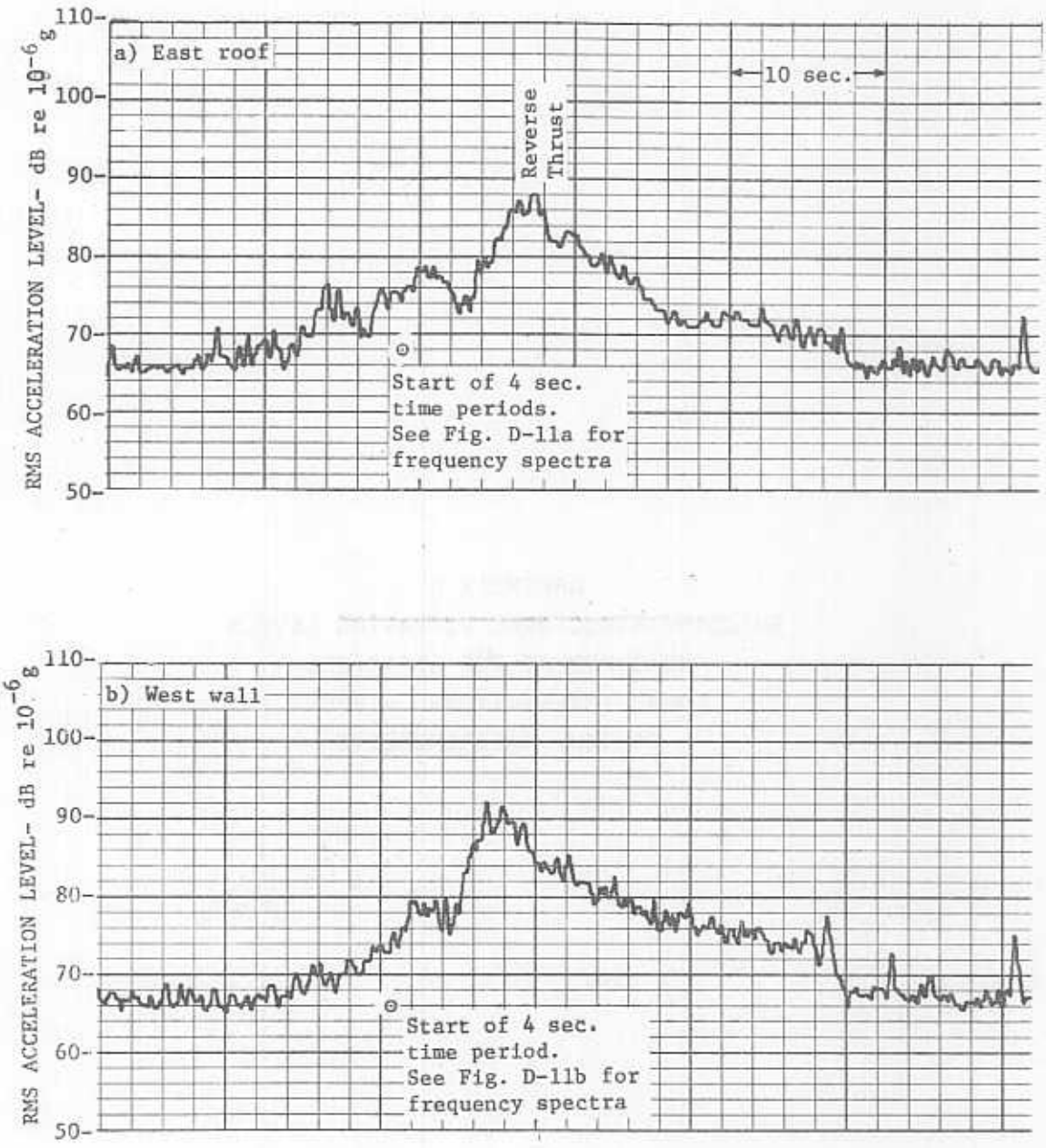


Figure D-1. Coincident Time Histories - Event No. 5.
Building Structural Vibration Levels
Toolshed - Single Room Building
Landing Concorde F-WTSA - Runway 33L
Logan International Airport, Boston MA
June 13, 1974 - 0916 Hours

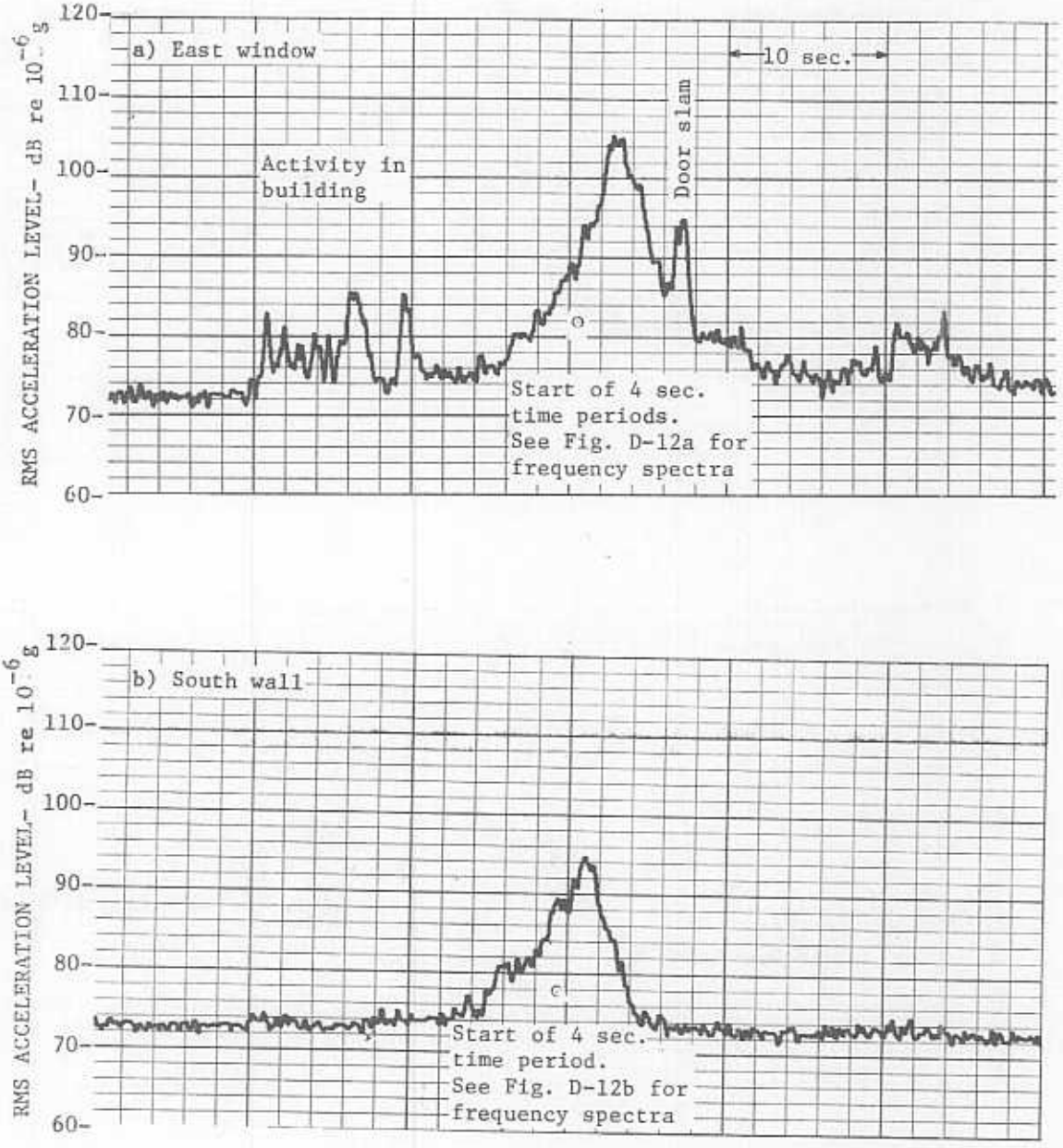


Figure D-2. Coincident Time Histories - Event No. 10.
Building Structural Vibration Levels
Field Office - Single Room Building
Landing Concorde F-WTSA - Runway 4R
Logan International Airport, Boston MA
June 14, 1974 - 1404 Hours

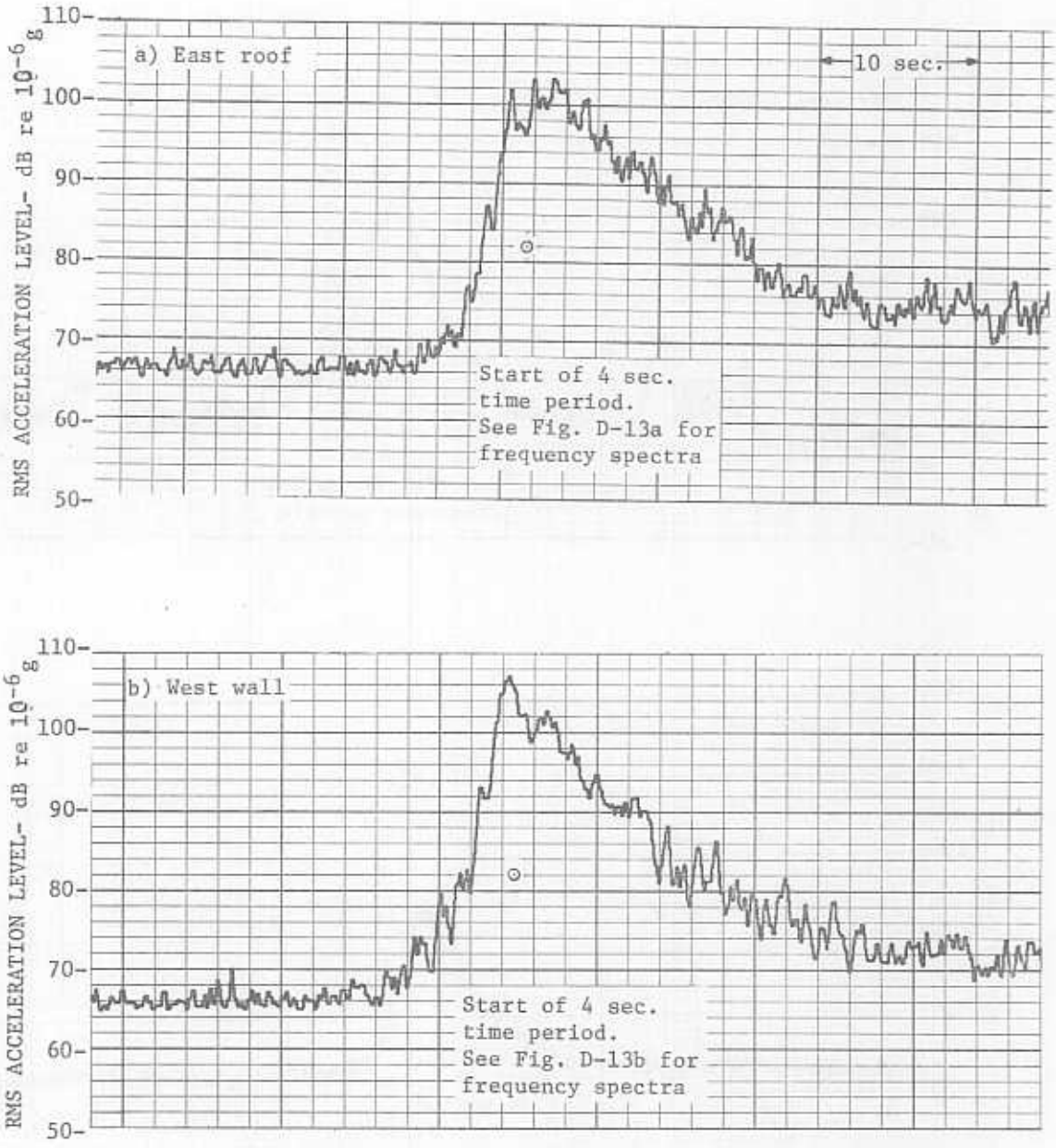


Figure D-3. Coincident Time Histories - Event No. 19.
Building Structural Vibration Levels
Toolshed - Single Room Building
Takeoff Concorde F-WTSA - Runway 15L
Logan International Airport, Boston MA
June 17, 1974 - 0822 Hours

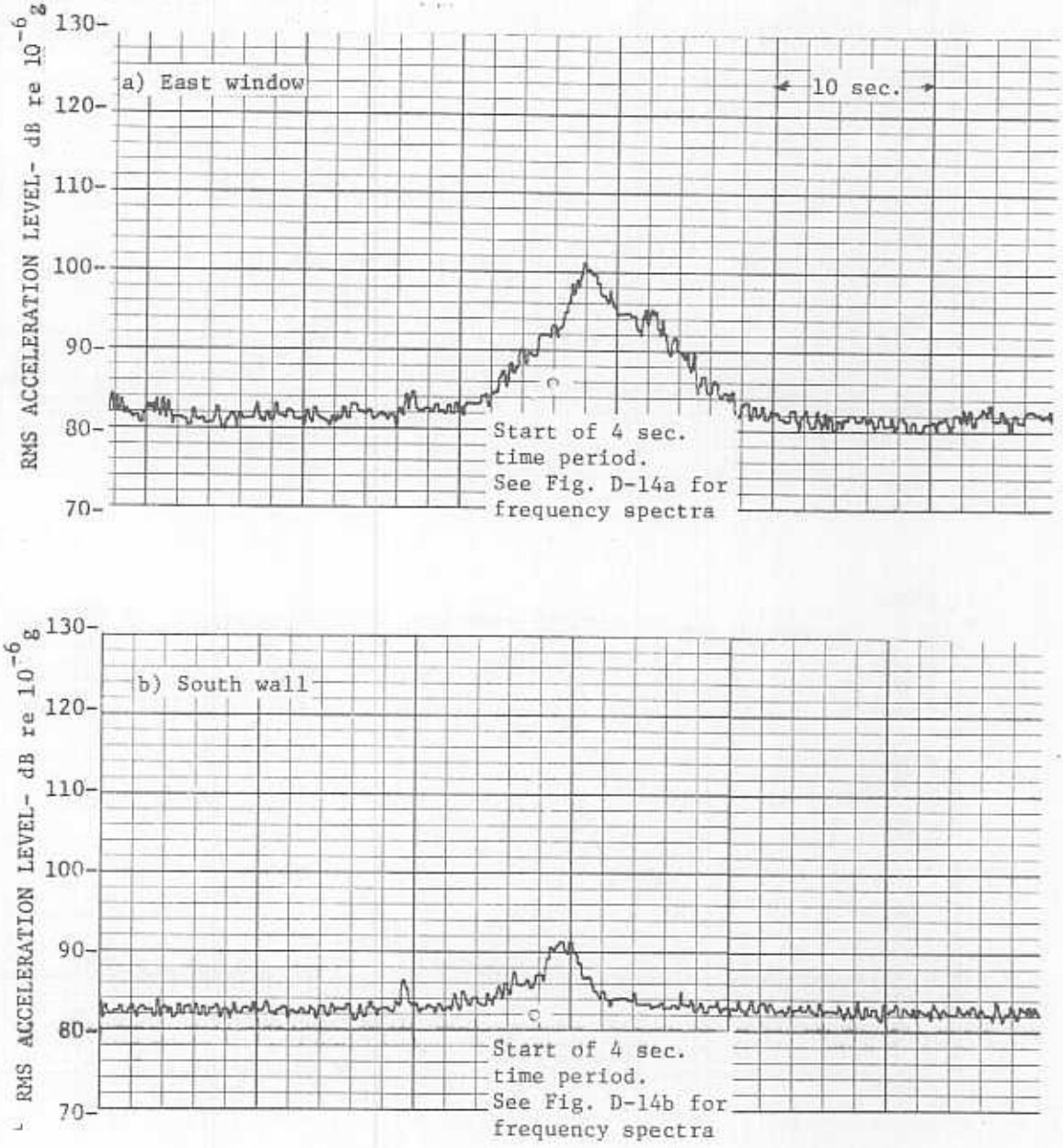


Figure D-4. Coincident Time Histories - Event No. 7.
Building Structural Vibration Levels
Field Office - Single Room Building
Landing Boeing 707 - Runway 4R
Logan International Airport, Boston MA
June 13, 1974 - 0954 Hours

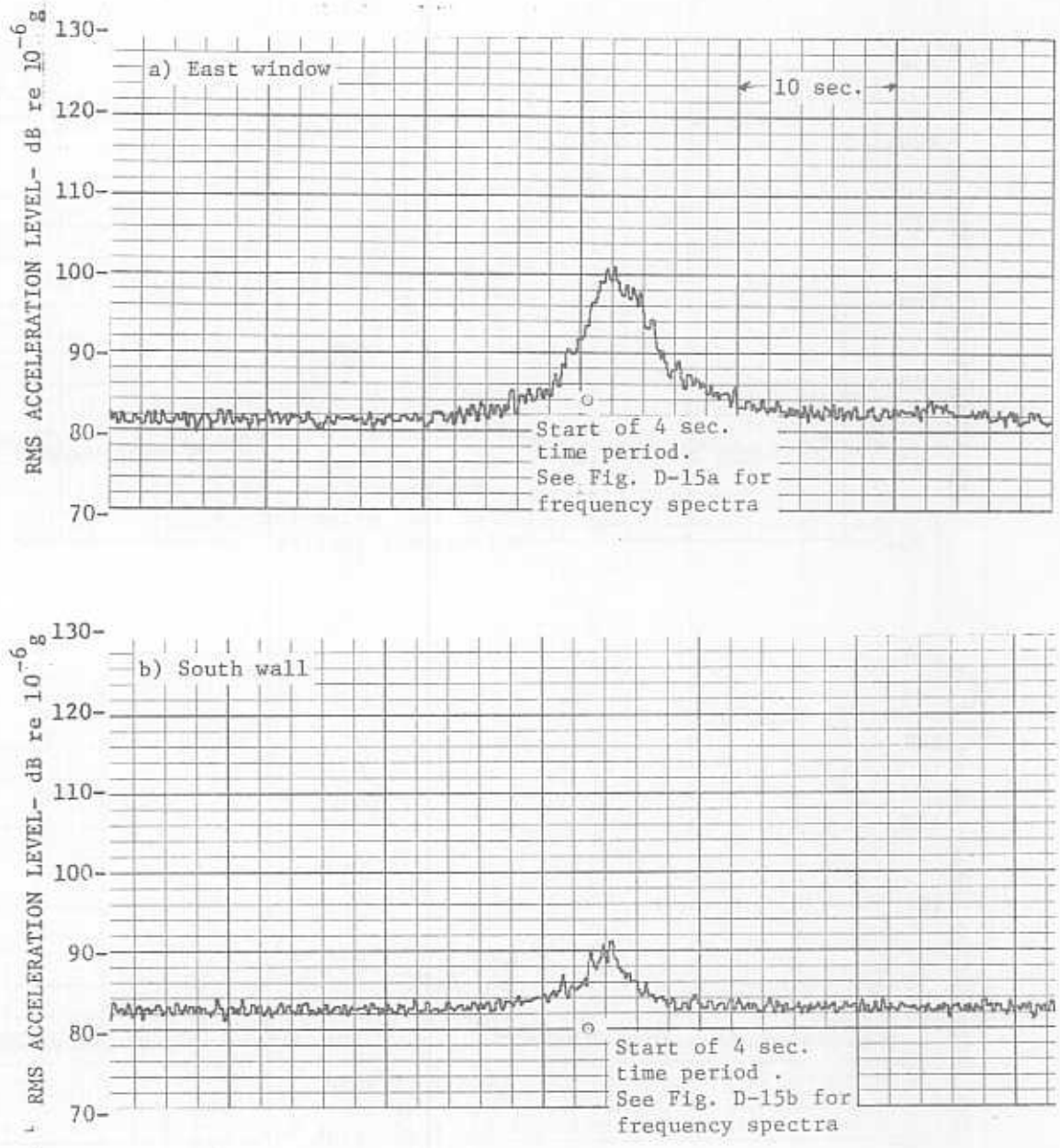


Figure D-5. Coincident Time Histories - Event No. 8.
Building Structural Vibration Levels
Field Office - Single Room Building
Landing Boeing 747 - Runway 4R
Logan International Airport, Boston MA
June 13, 1974 - 0957 Hours

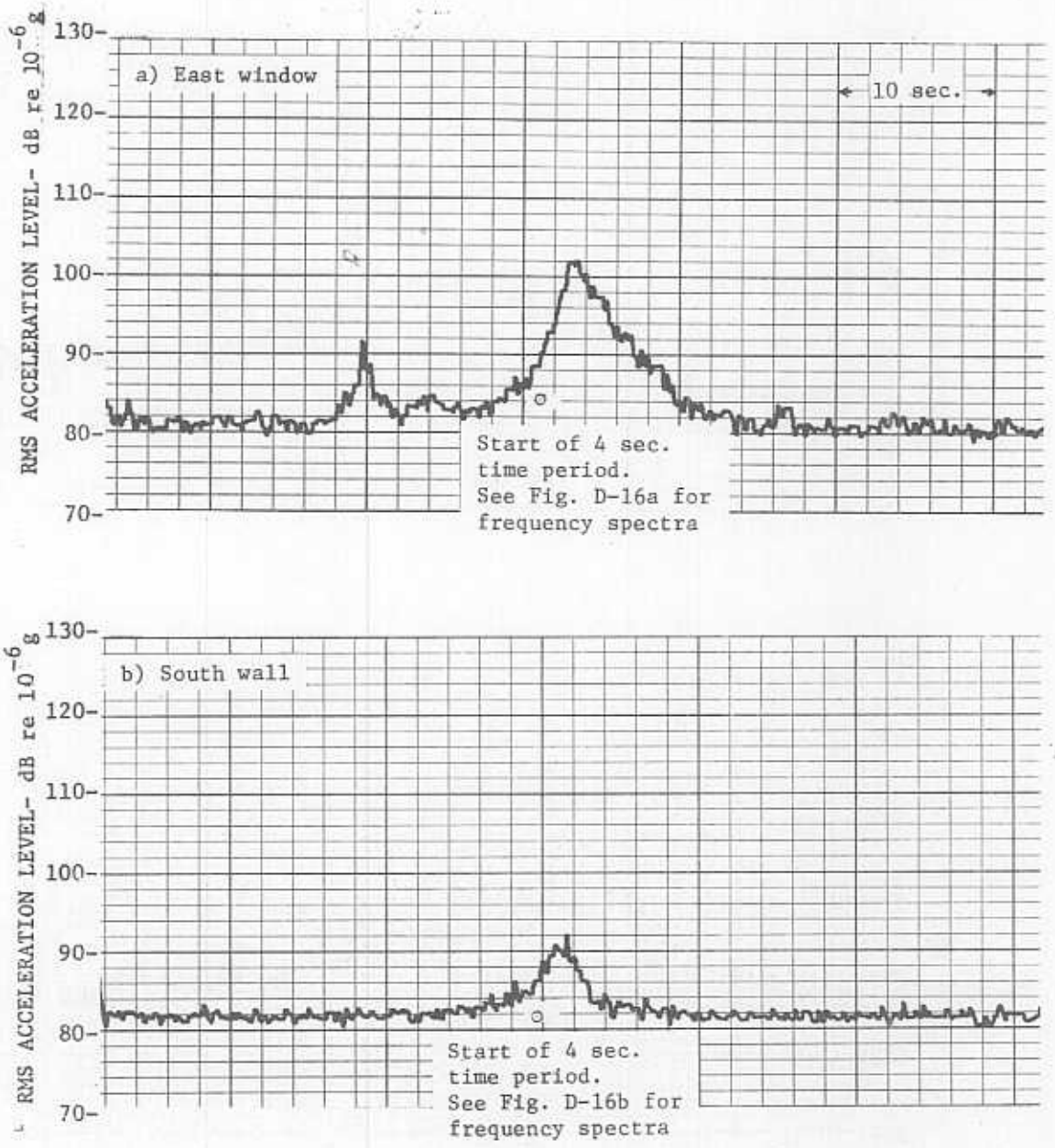


Figure D-6. Coincident Time Histories - Event No. 9.
Building Structural Vibration Levels
Field Office - Single Room Building
Landing Douglas DC-8 - Runway 4R
Logan International Airport, Boston MA
June 13, 1974 - 1010 Hours

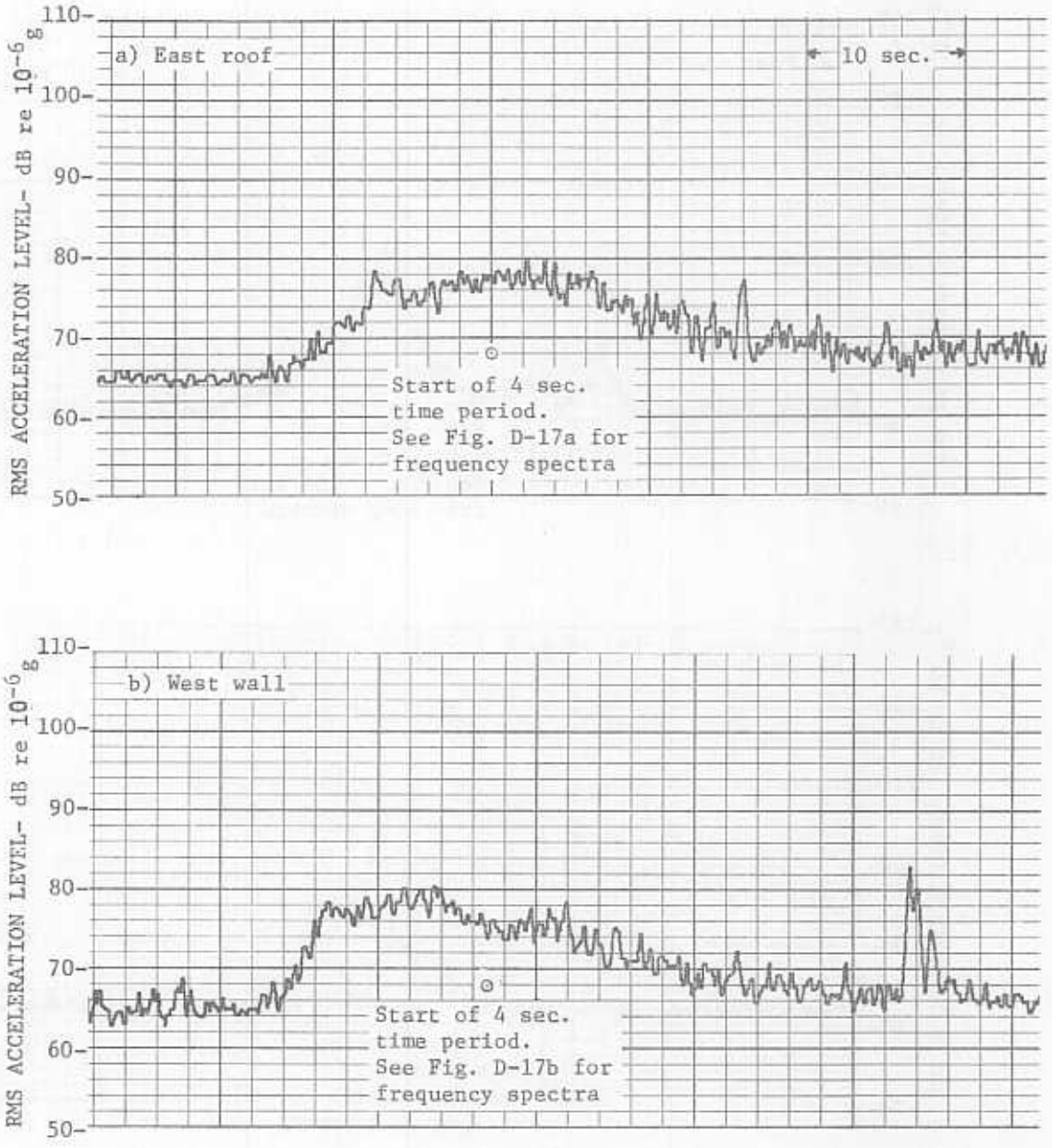


Figure D-7. Coincident Time Histories - Event No. 16.
Building Structural Vibration Levels
Toolshed - Single Room Building
Takeoff Douglas DC-10 - Runway 15R
Logan International Airport, Boston MA
June 17, 1974 - 0801 Hours

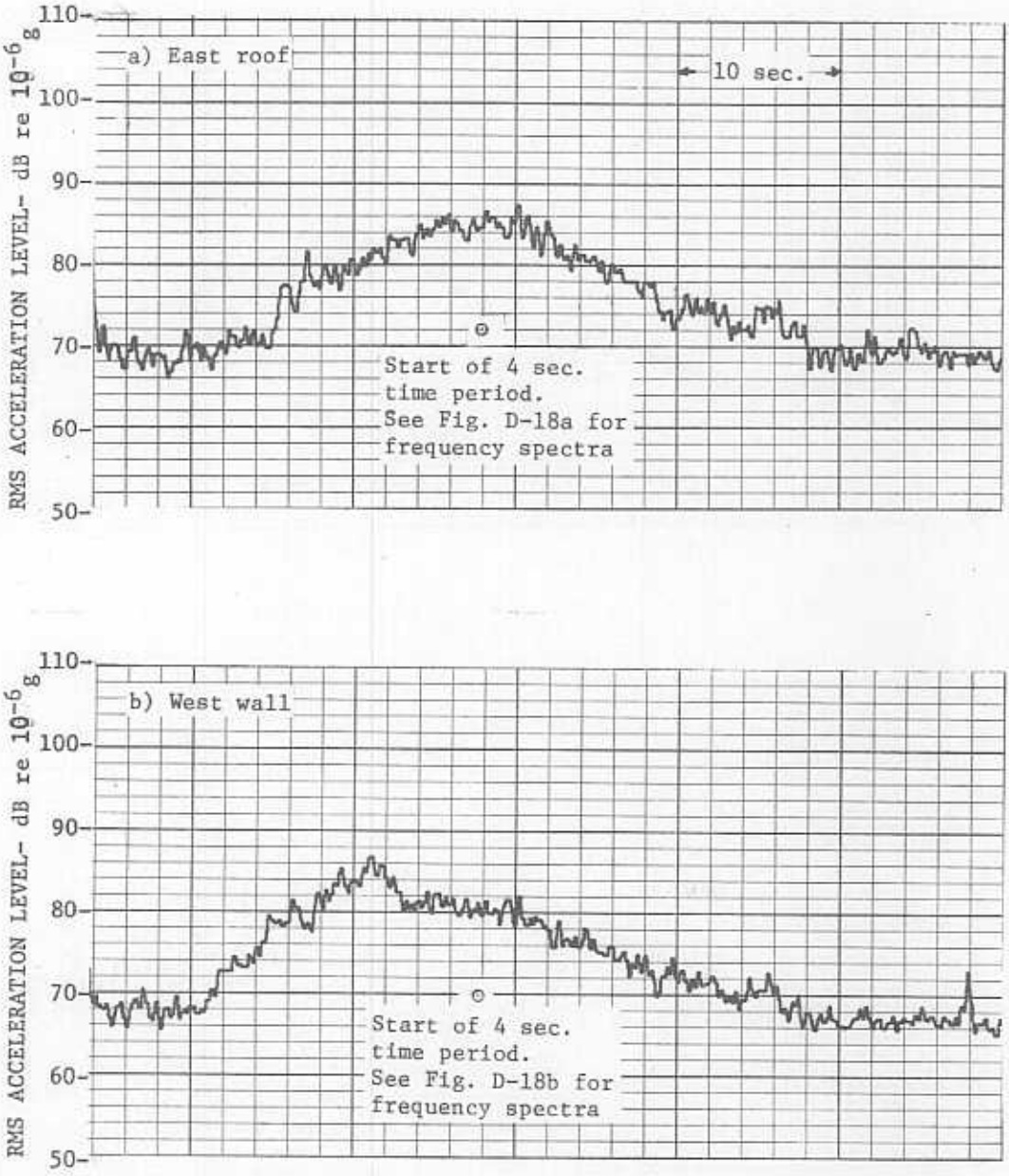


Figure D-8. Coincident Time Histories - Event No. 21.
Building Structural Vibration Levels
Toolshed - Single Room Building
Takeoff Lockheed L-1011 - Runway 15R
Logan International Airport, Boston MA
June 17, 1974 - 0835 Hours

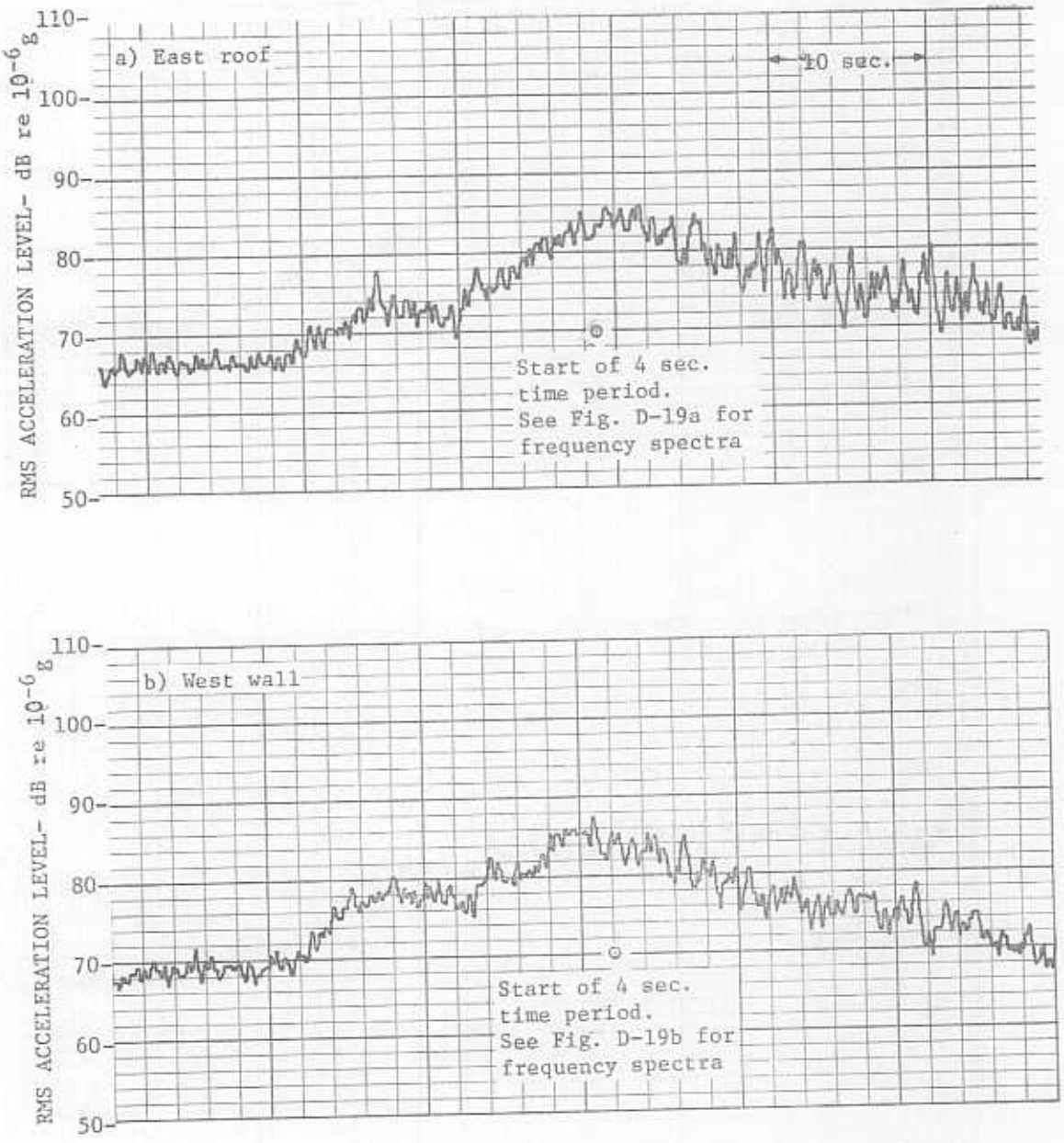


Figure D-9. Coincident Time Histories - Event No. 29.
Building Structural Vibration Levels
Toolshed - Single Room Building
Takeoff Boeing 747 - Runway 15R
Logan International Airport, Boston MA
June 18, 1974 - 1515 Hours

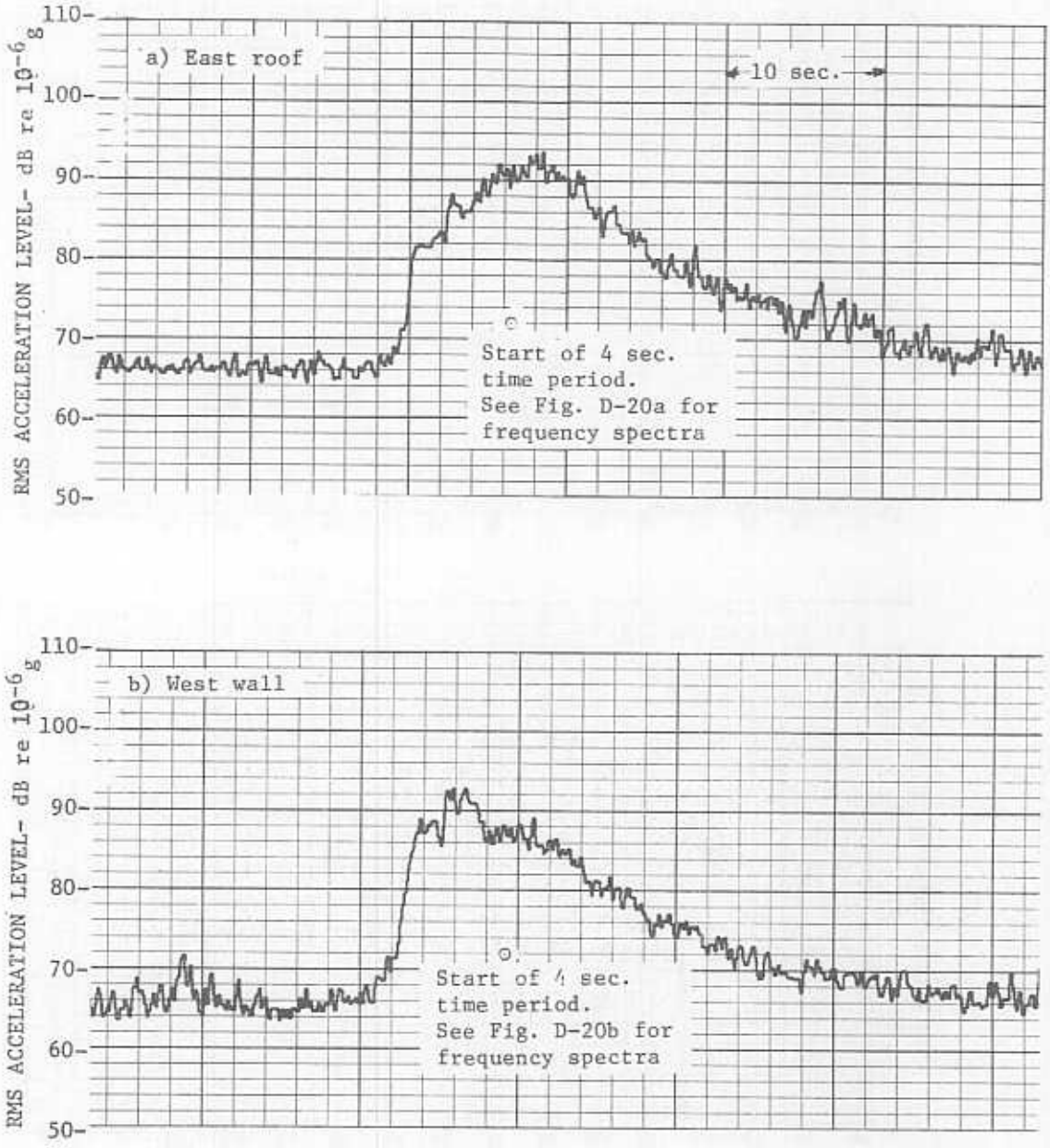


Figure D-10. Coincident Time Histories - Event No. 18.
Building Structural Vibration Levels
Toolshed - Single Room Building
Takeoff Boeing 707 - Runway 15R
Logan International Airport, Boston MA
June 17, 1974 - 0816 Hours

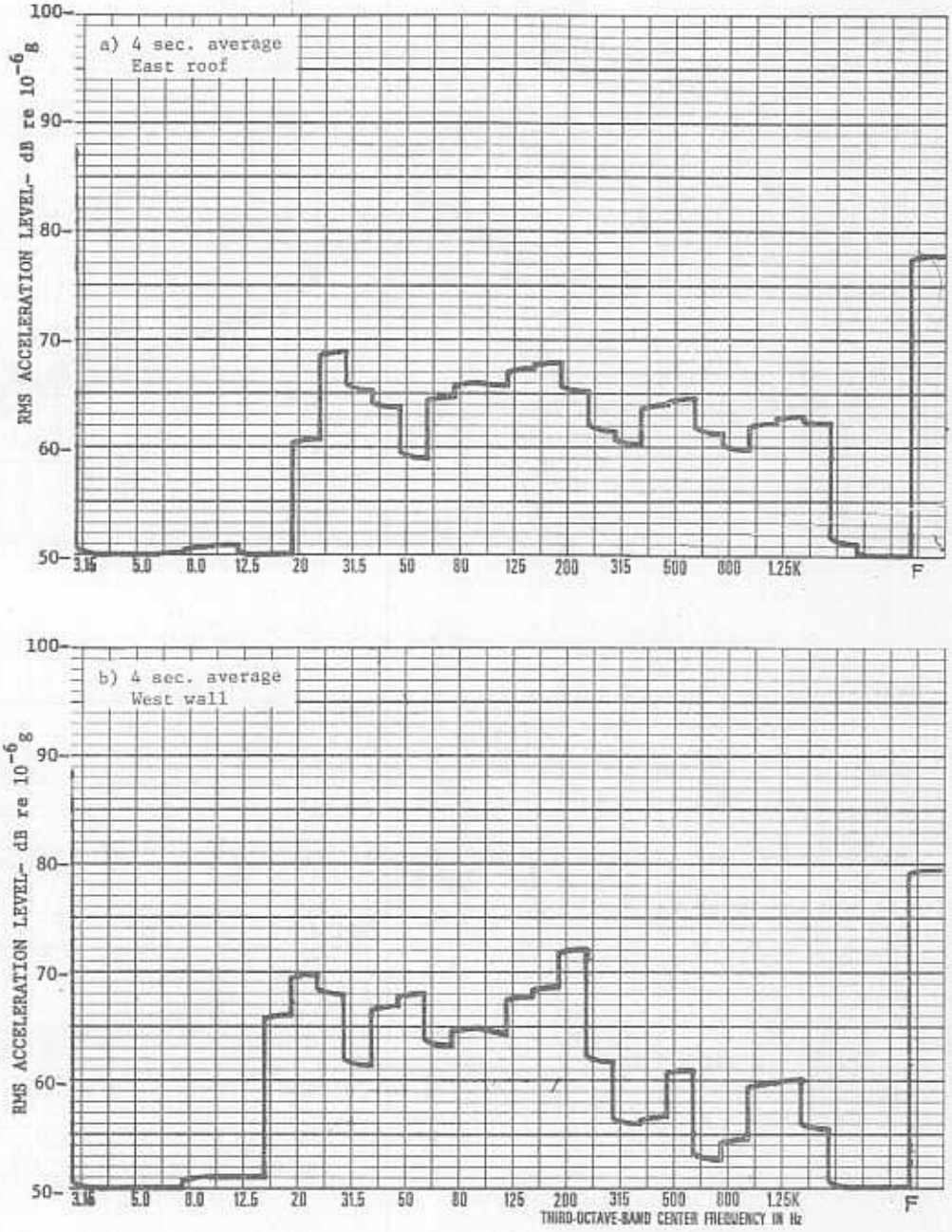


Figure D-11. 1/3 Octave Frequency Spectra - Event No. 5.
Building Structural Vibration Levels
Toolshed - Single Room Building
Landing Concorde F-WTSA - Runway 33L
Logan International Airport, Boston MA
June 13, 1974 - 0916 Hours
See Fig. D-1 for Time History of Vibration Levels

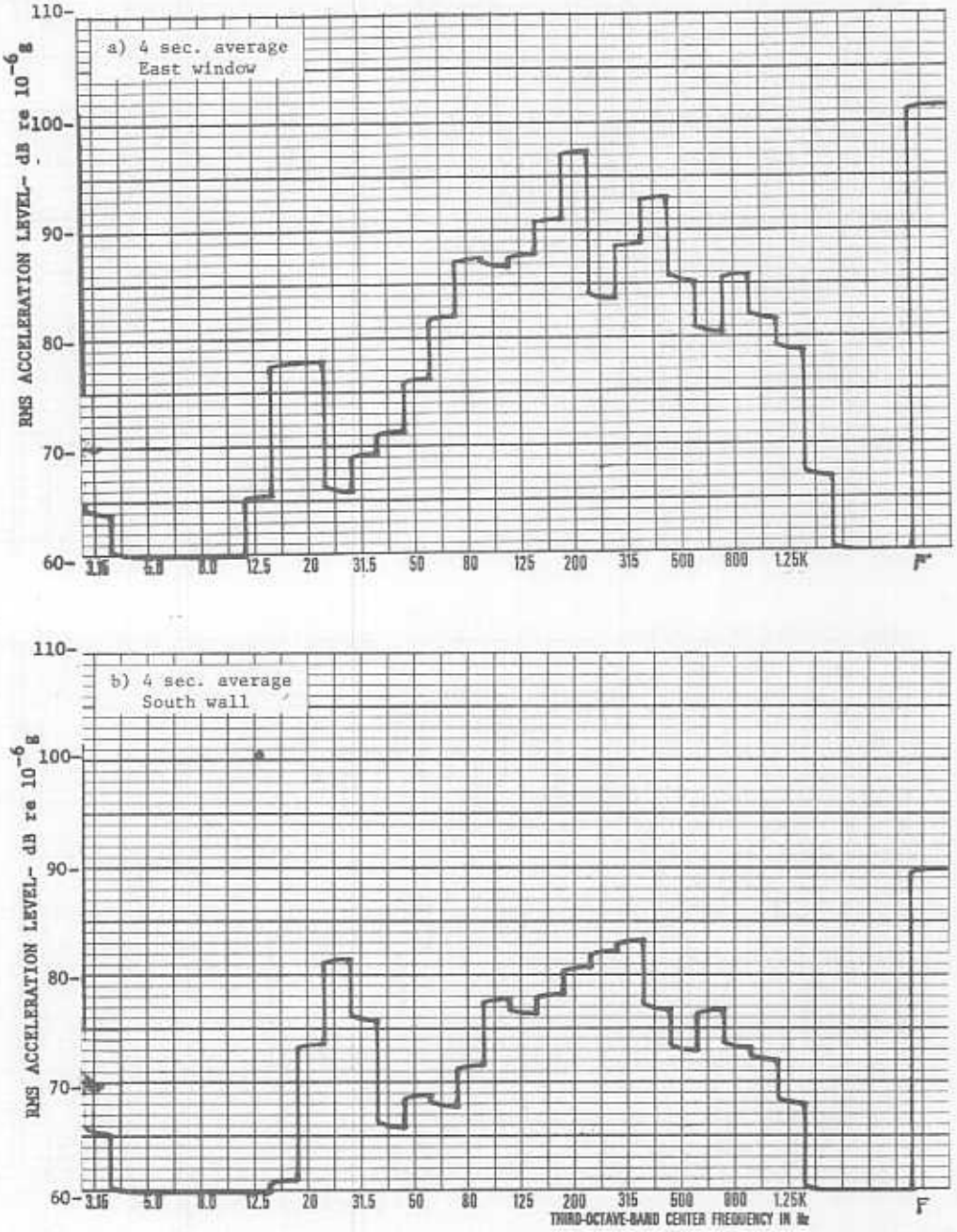


Figure D-12. 1/3 Octave Frequency Spectra - Event No. 10.
Building Structural Vibration Levels
Field Office - Single Room Building
Landing Concorde F-WTSA - Runway 4R
Logan International Airport, Boston MA
June 14, 1974 - 1404 Hours
See Fig. D-2 for Time History of Vibration Levels

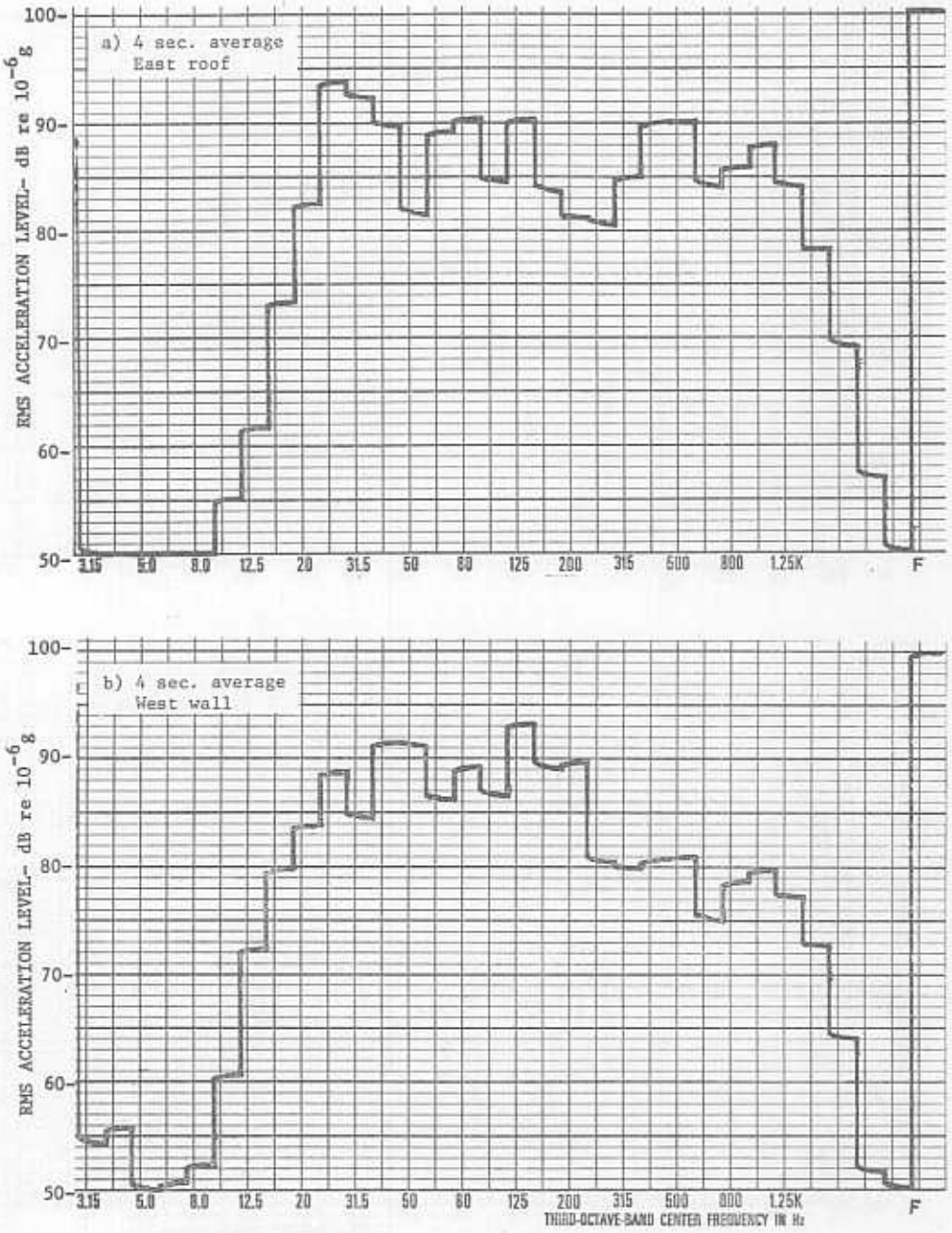


Figure D-13. 1/3 Octave Frequency Spectra - Event No. 19.
Building Structural Vibration Levels
Toolshed - Single Room Building
Takeoff Concorde F-WTSA - Runway 15L
Logan International Airport, Boston MA
June 17, 1974 - 0822 Hours
See Fig. D-3 for Time History of Vibration Levels

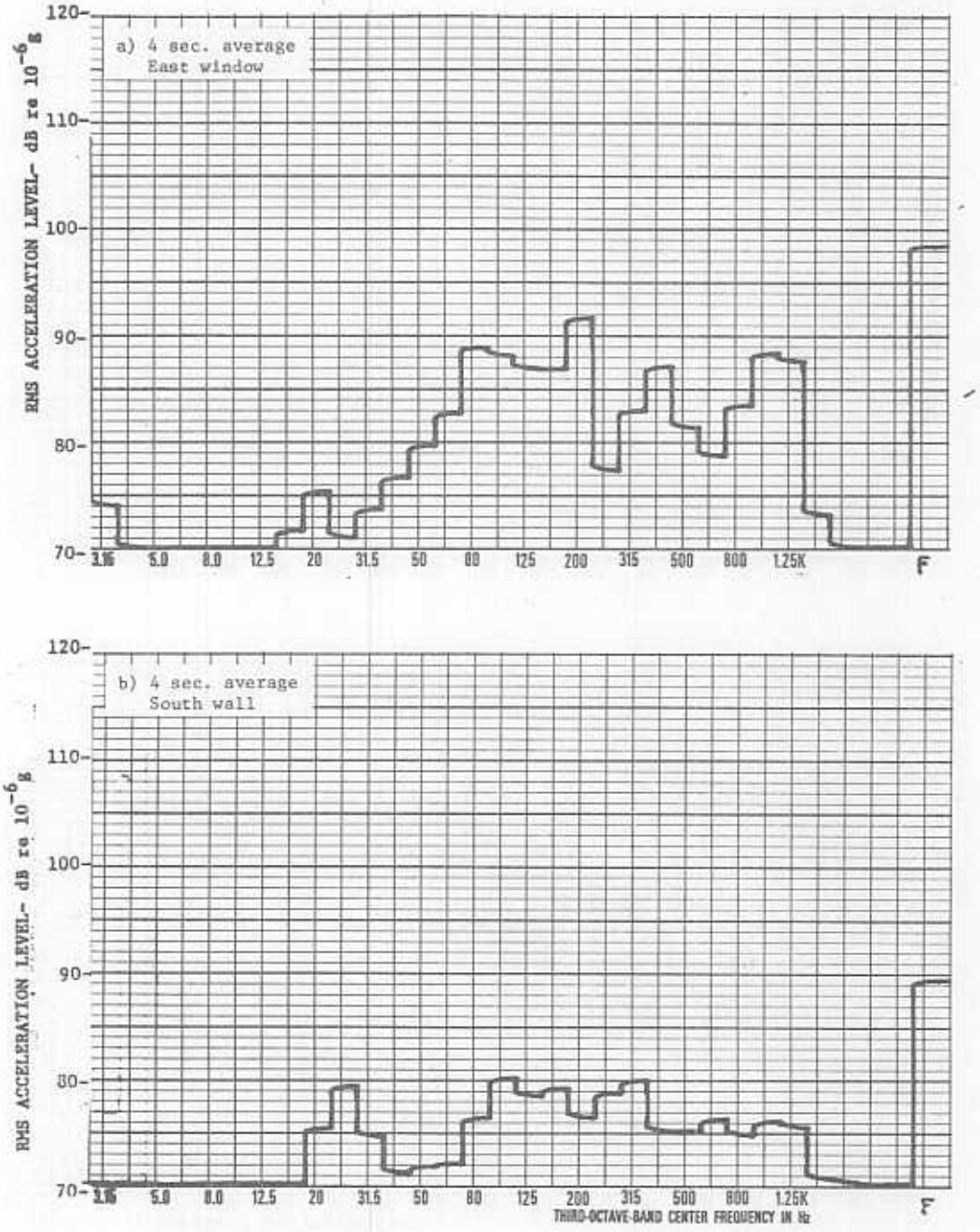


Figure D-14. 1/3 Octave Frequency Spectra - Event No. 7.
Building Structural Vibration Levels
Field Office - Single Room Building
Landing Boeing 707 - Runway 4R
Logan International Airport, Boston MA
June 13, 1974 - 0954 Hours
See Fig. D-4 for Time History of Vibration Levels

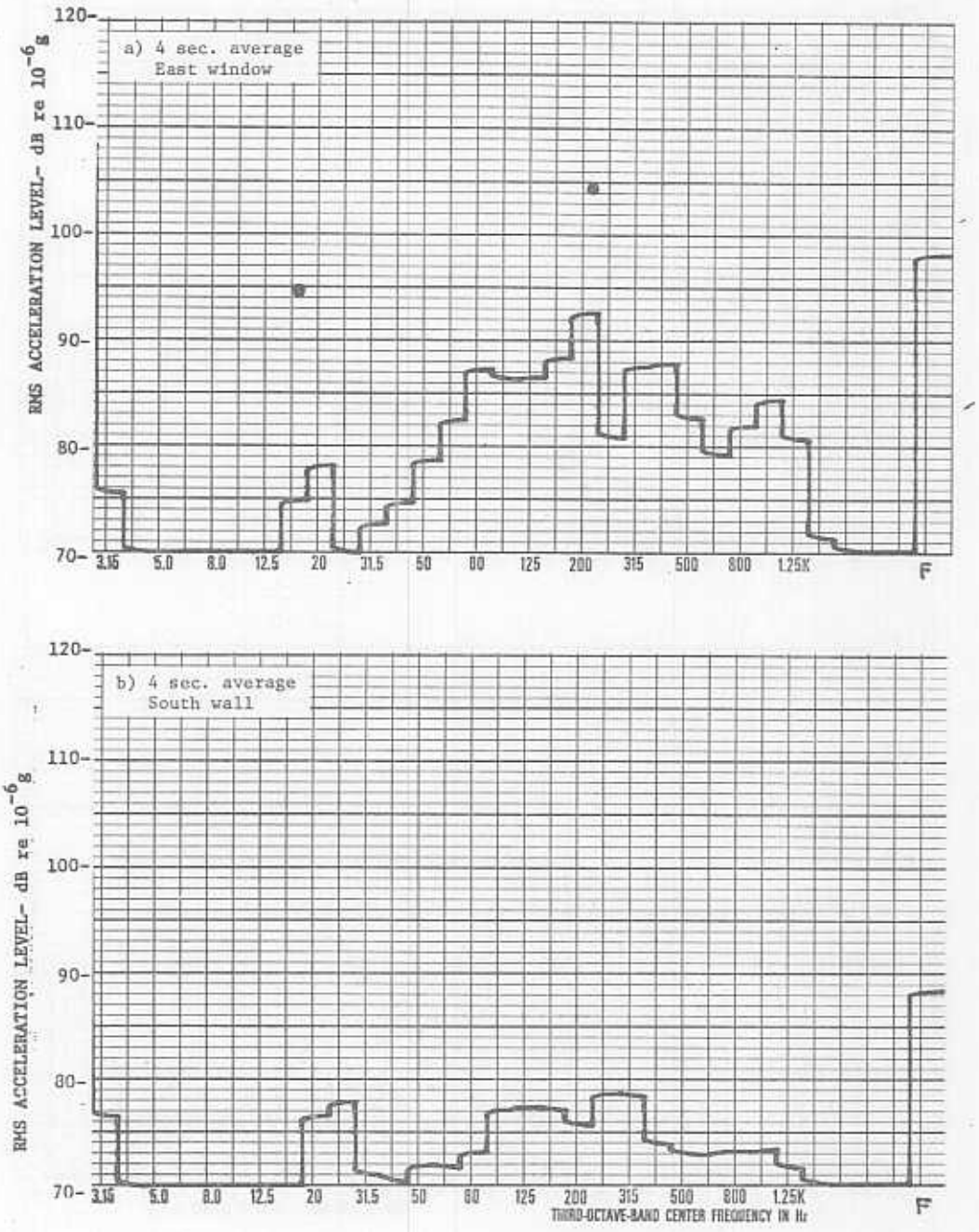


Figure D-15. 1/3 Octave Frequency Spectra - Event No. 8.
Building Structural Vibration Levels
Field Office - Single Room Building
Landing Boeing 747 - Runway 4R
Logan International Airport, Boston MA
June 13, 1974 - 0957 Hours
See Fig. D-5 for Time History of Vibration Levels

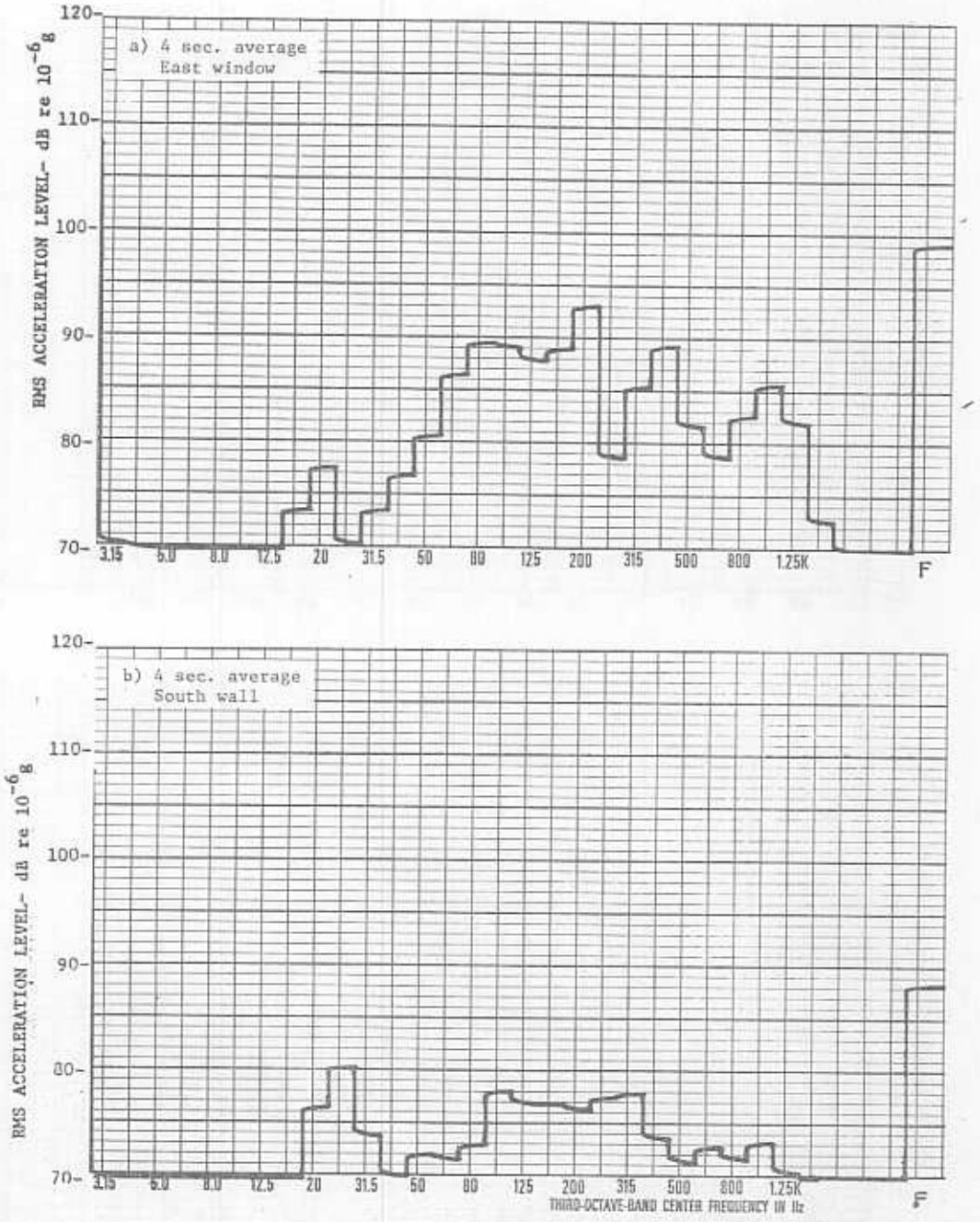


Figure D-16. 1/3 Octave Frequency Spectra - Event No. 9.
Building Structural Vibration Levels
Field Office - Single Room Building
Landing Douglas DC-8 - Runway 4R
Logan International Airport, Boston MA
June 13, 1974 - 1010 Hours
See Fig. D-6 for Time History of Vibration Levels

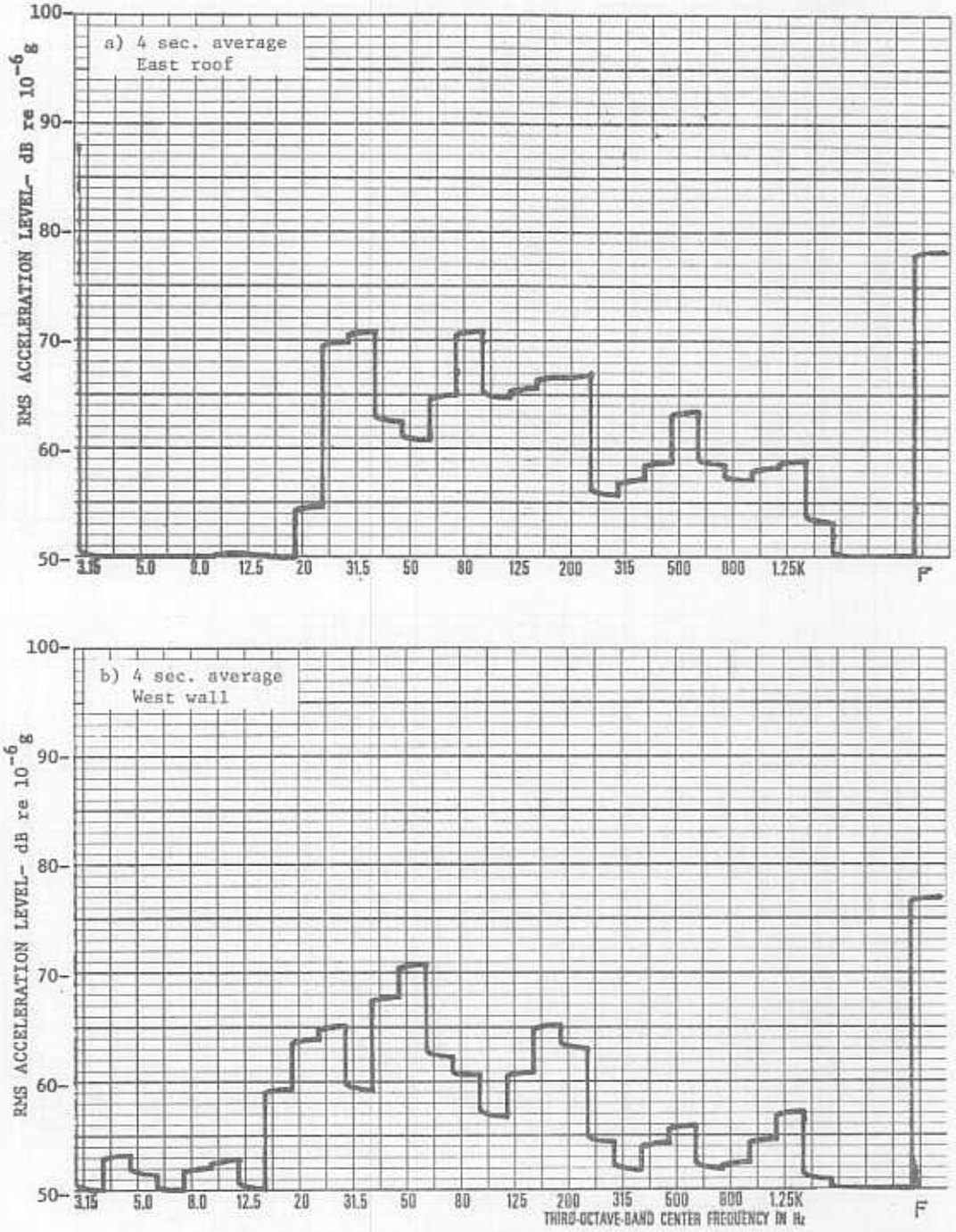


Figure D-17. 1/3 Octave Frequency Spectra - Event No. 16.
Building Structural Vibration Levels
Toolshed - Single Room Building
Takeoff Douglas DC-10 - Runway 15R
Logan International Airport, Boston MA
June 17, 1974 - 0801 Hours
See Fig. D-7 for Time History of Vibration Levels

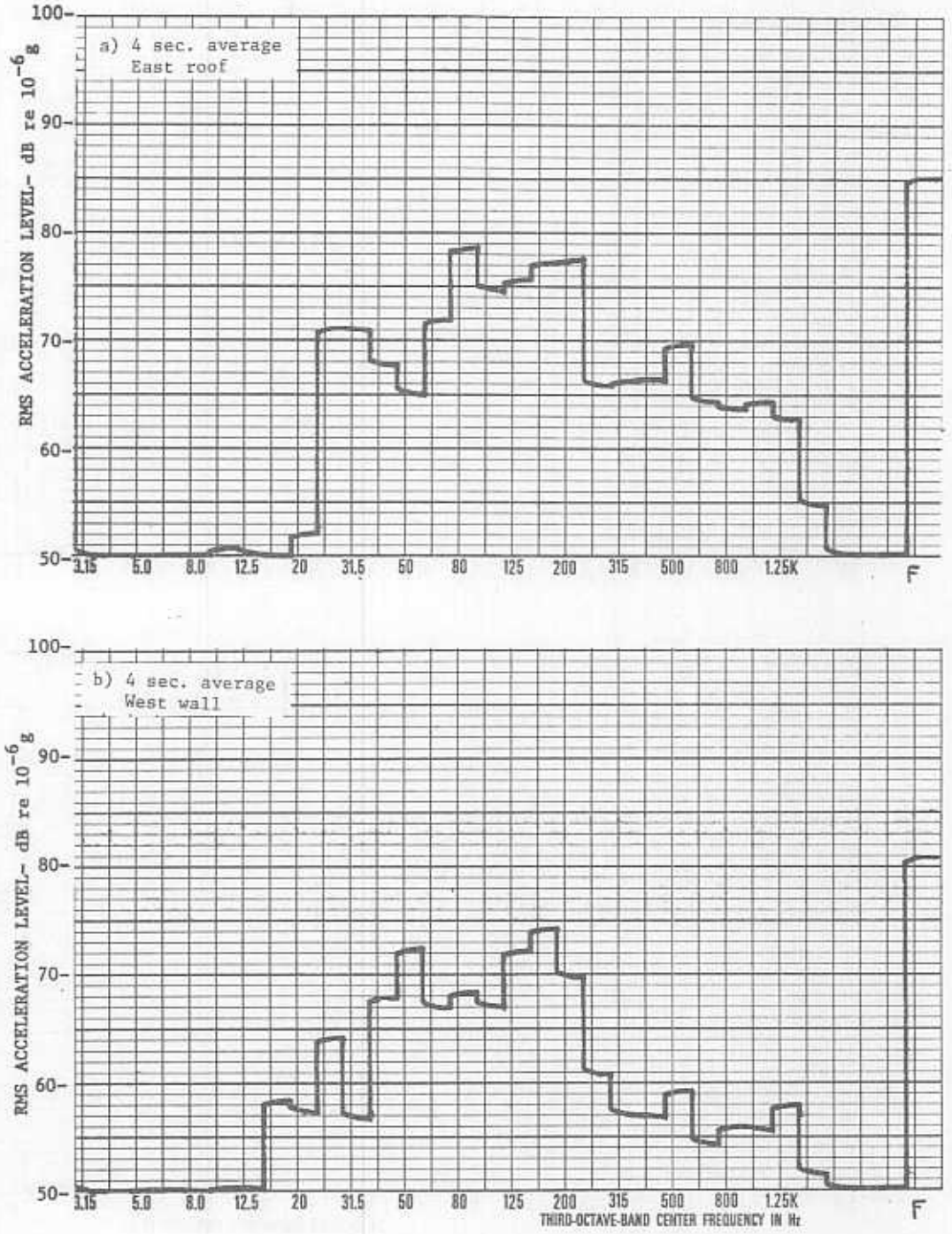


Figure D-18. 1/3 Octave Frequency Spectra - Event No. 21.
Building Structural Vibration Levels
Toolshed - Single Room Building
Takeoff Lockheed L-1011 - Runway 15R
Logan International Airport, Boston MA
June 17, 1974 - 0835 Hours
See Fig. D-8 for Time History of Vibration Levels

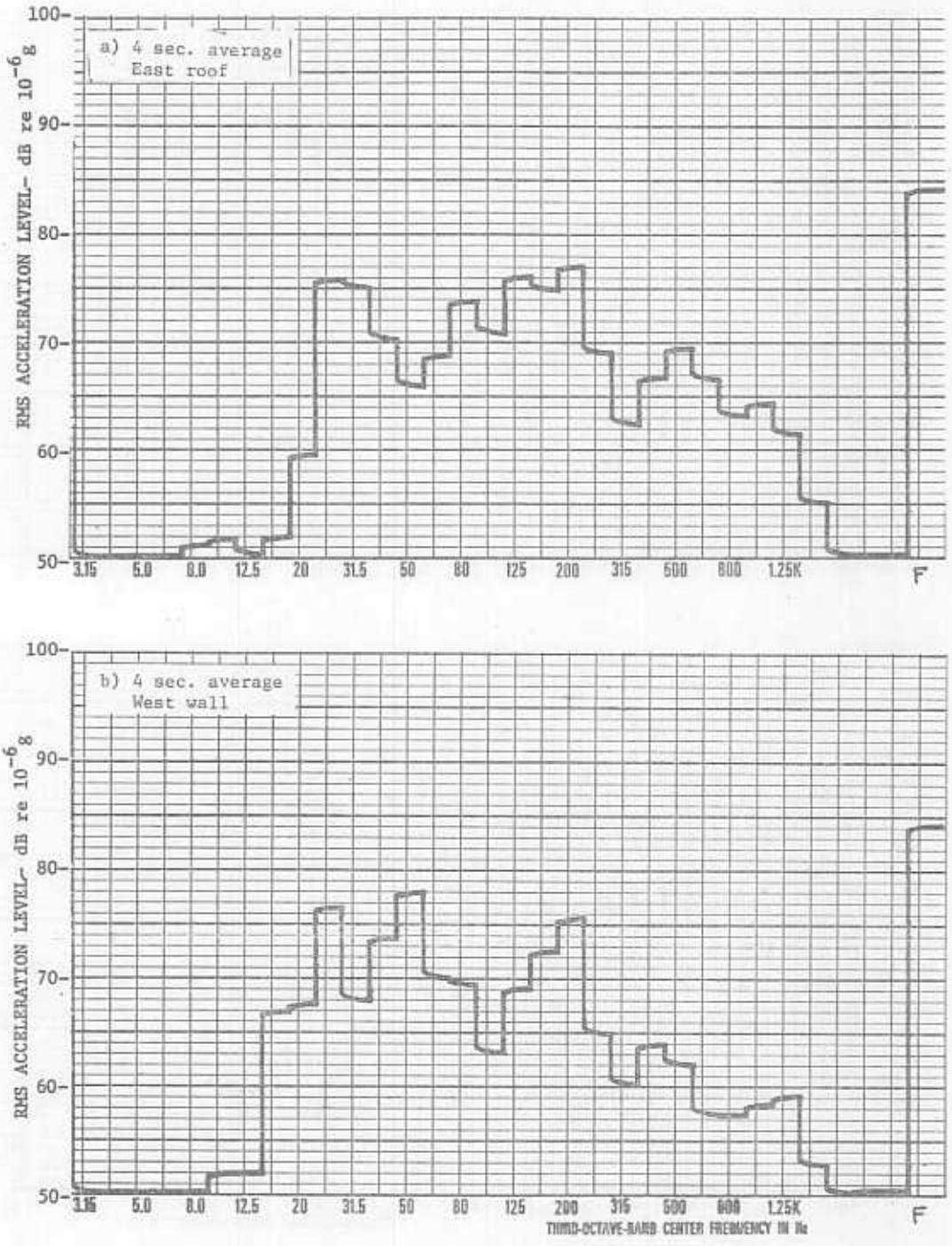


Figure D-19. 1/3 Octave Frequency Spectra - Event No. 29.
Building Structural Vibration Levels
Toolshed - Single Room Building
Takeoff Boeing 747 - Runway 15R
Logan International Airport, Boston MA
June 18, 1974 - 1519 Hours
See Fig. D-9 for Time History of Vibration Levels

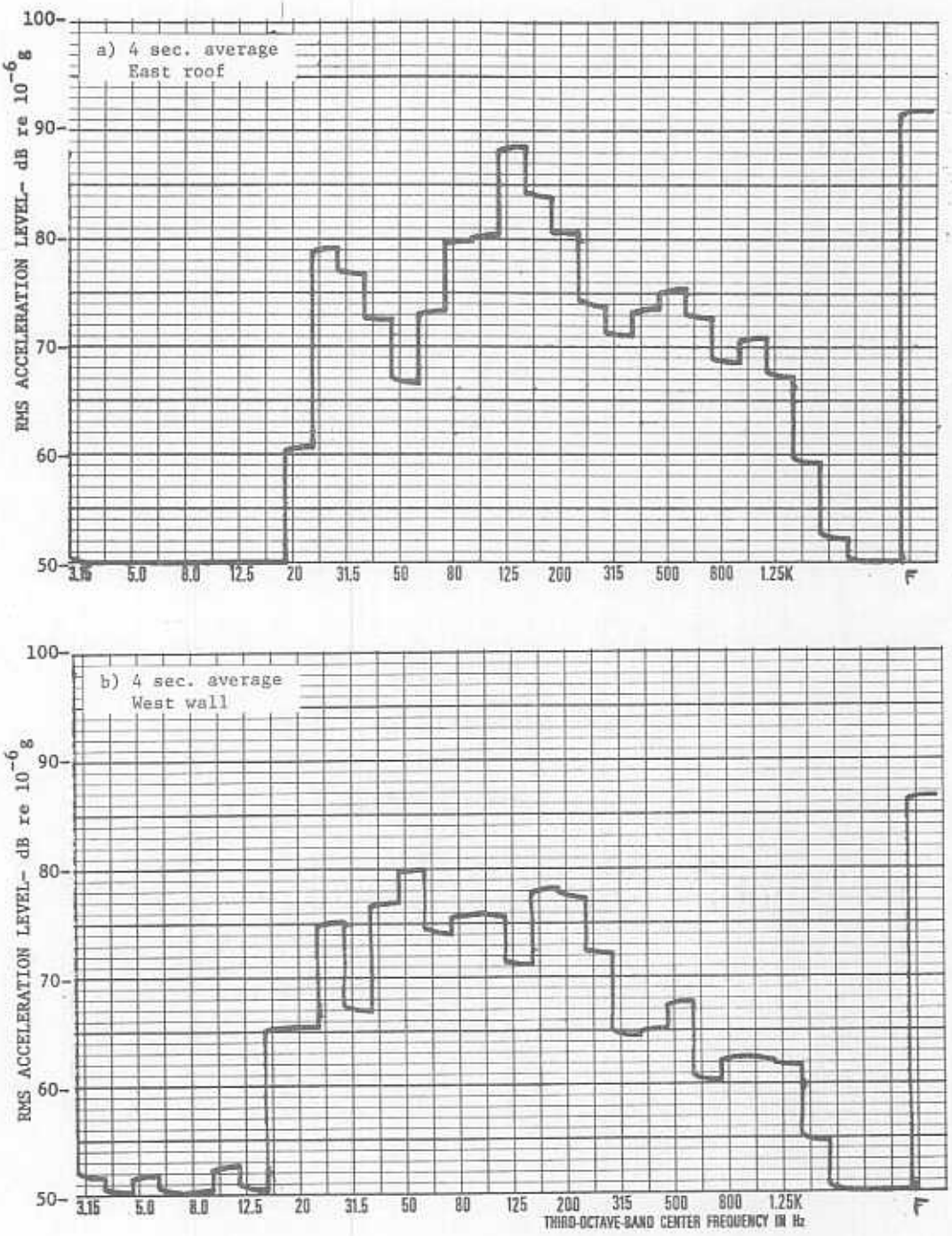


Figure D-20. 1/3 Octave Frequency Spectra - Event No. 18.
Building Structural Vibration Levels
Toolshed - Single Room Building
Takeoff Boeing 707 - Runway 15R
Logan International Airport, Boston MA
June 17, 1974 - 0816 Hours
See Fig. D-10 for Time History of Vibration Levels

APPENDIX E

MEASURING SITE LOCATIONS AND PHOTOGRAPHS

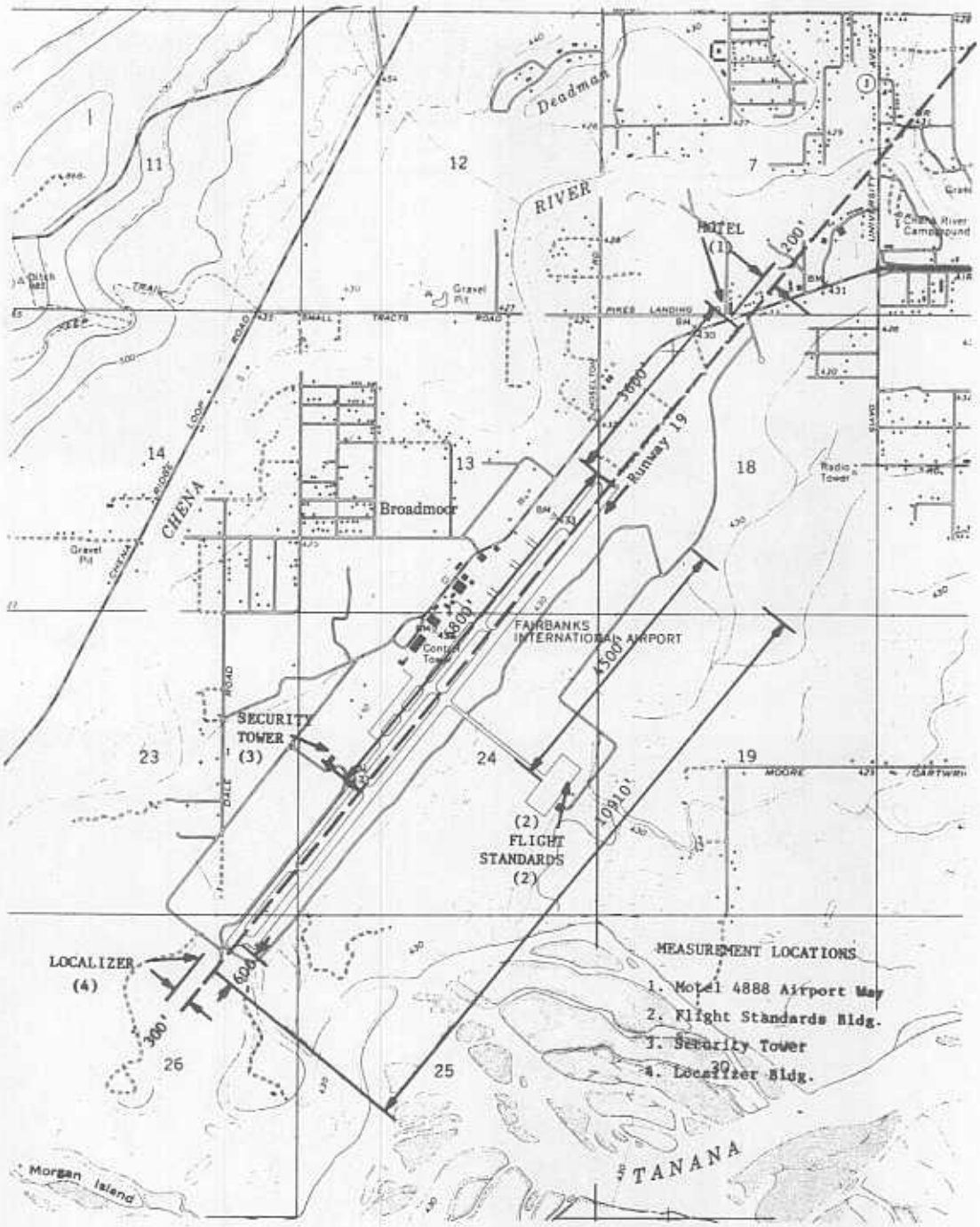
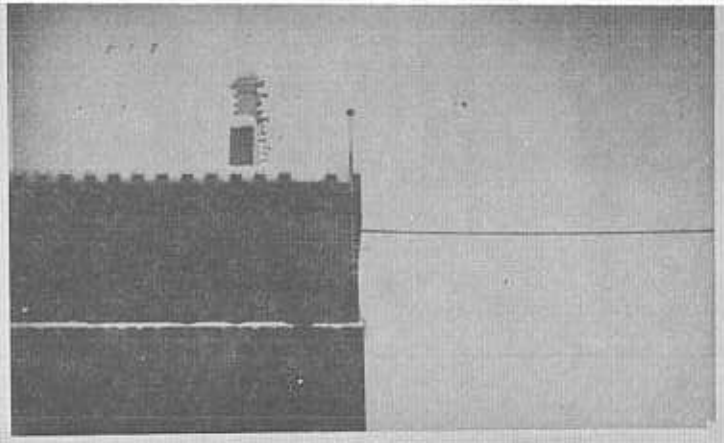
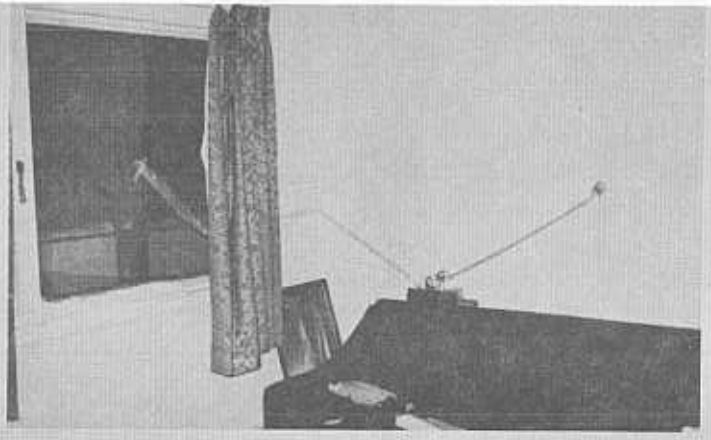


Figure E-1. Measurement Locations-Fairbanks International Airport, Fairbanks, Alaska



a) Northerly



c) Inside (Easterly)

b) Southerly, Event No. 24

d) Westerly

Figure E-2. Photographs Motel Meas. Location, Fairbanks Int. Airport, Fairbanks, Alaska

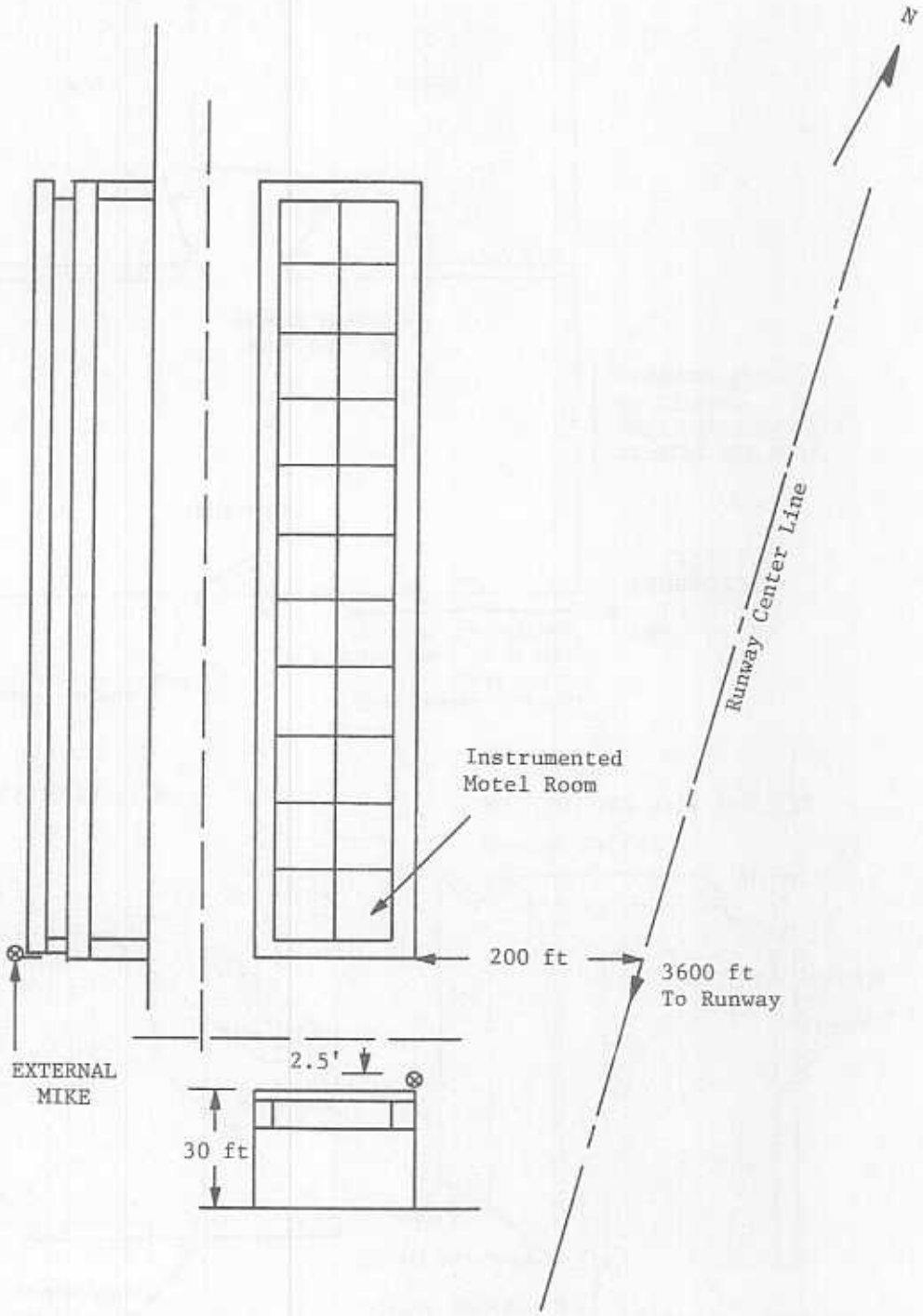
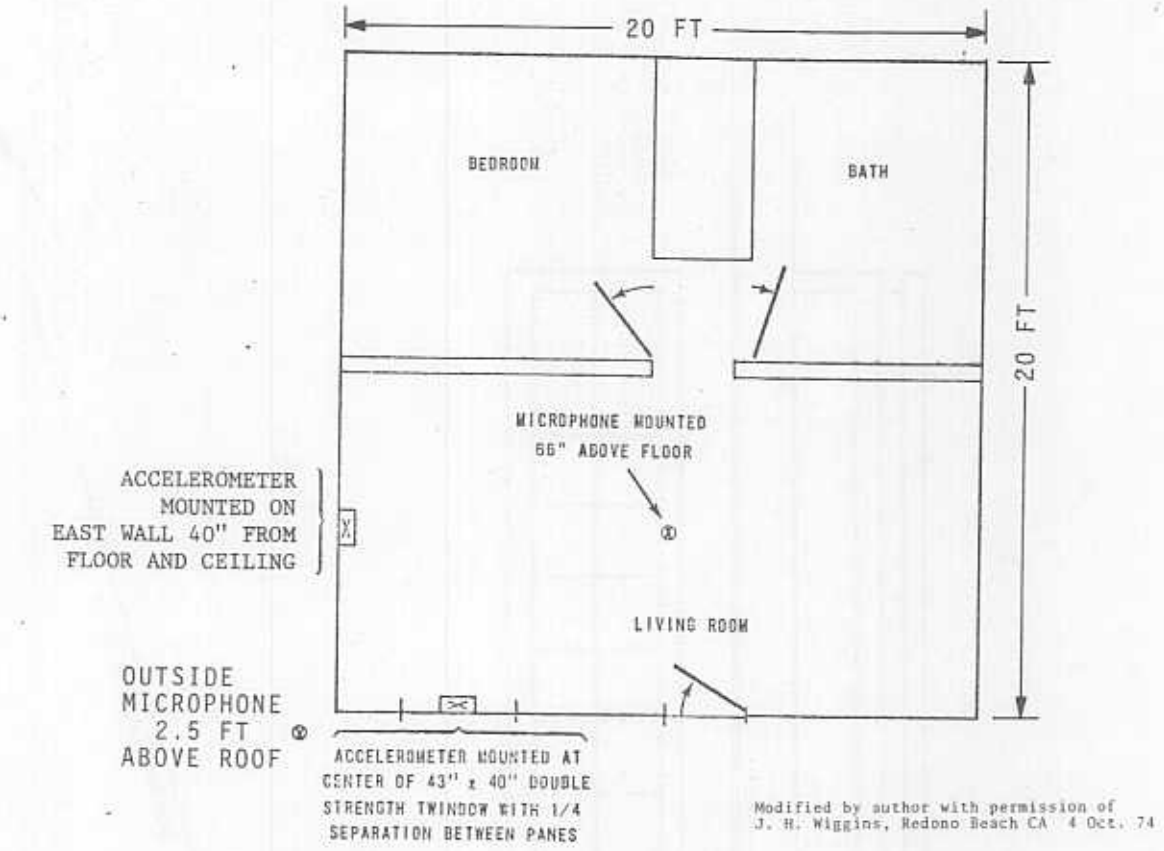


Figure E-3. Motel Plan



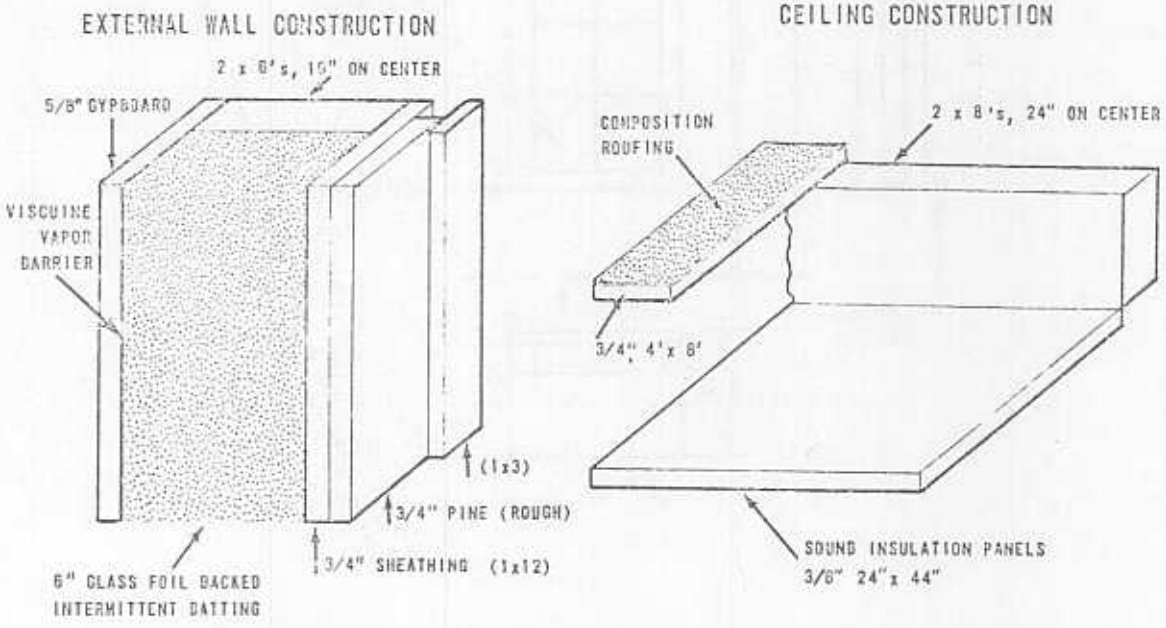
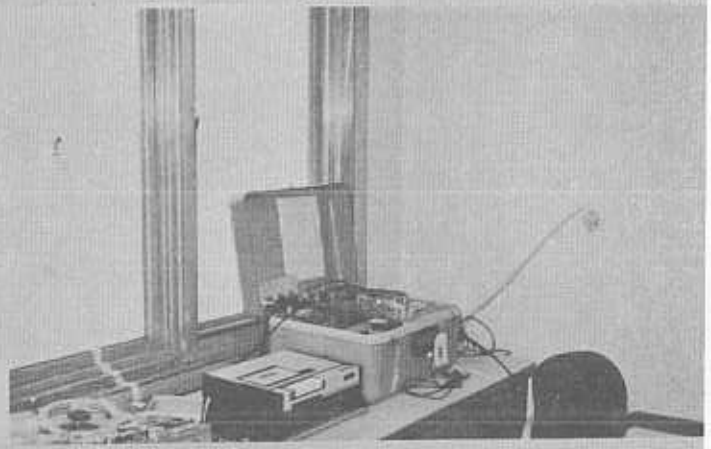


Figure E-4. Motel Room Layout and Construction

a) Easterly

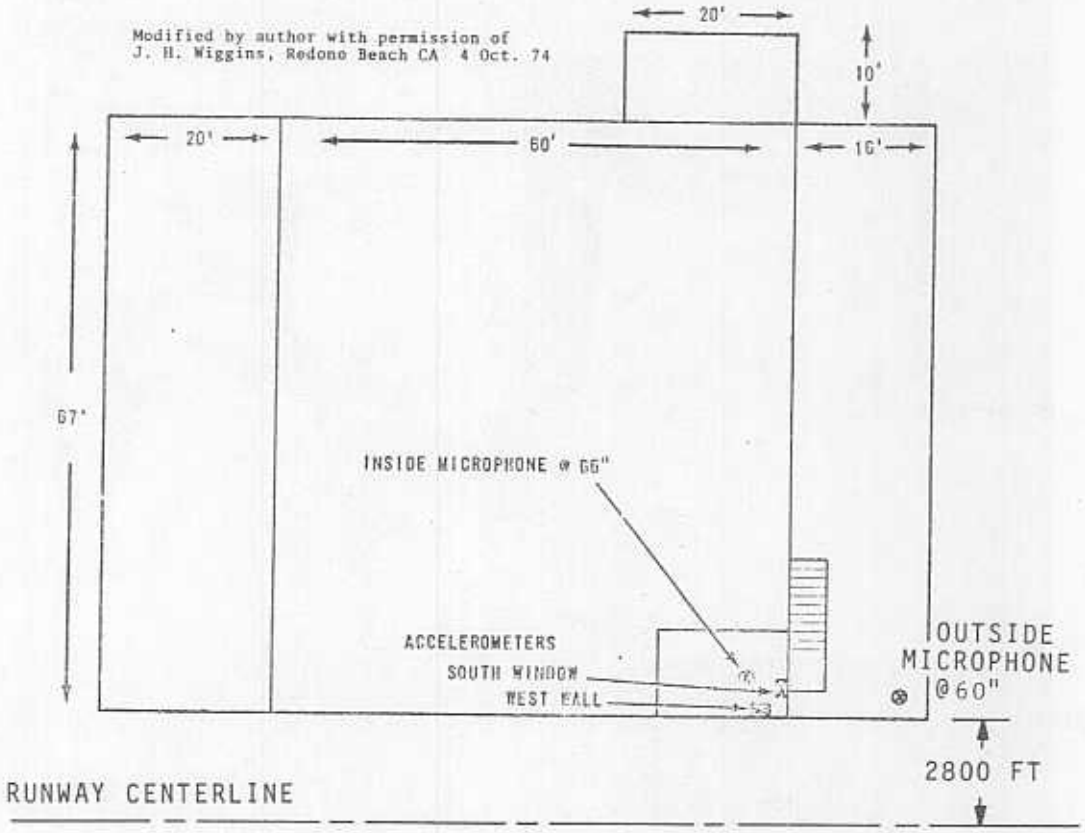
b) Inside (Southerly)

b) Westerly, Event No. 17



d) Inside (Southeasterly)

Figure E-5. Photographs, Flight Standards Meas. Location, Fairbanks Int. Airport, Fairbanks, Alaska.



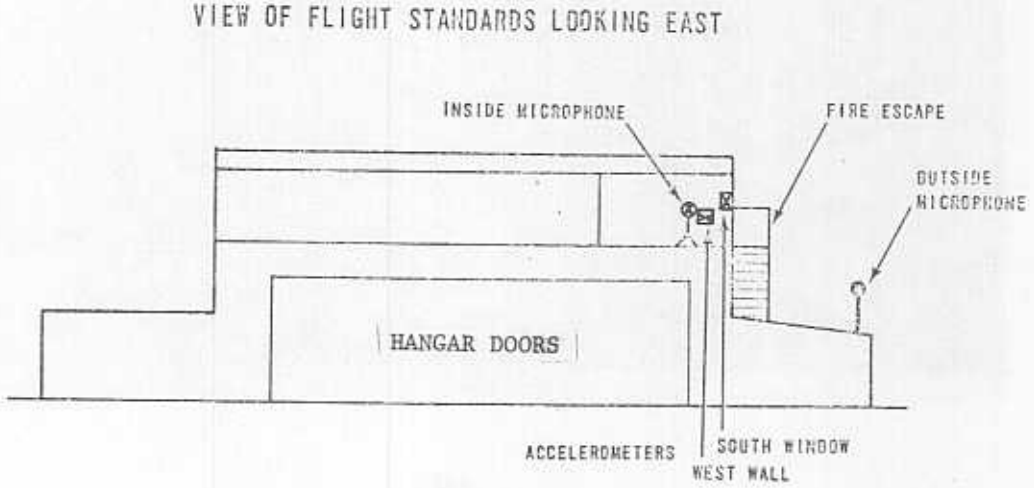
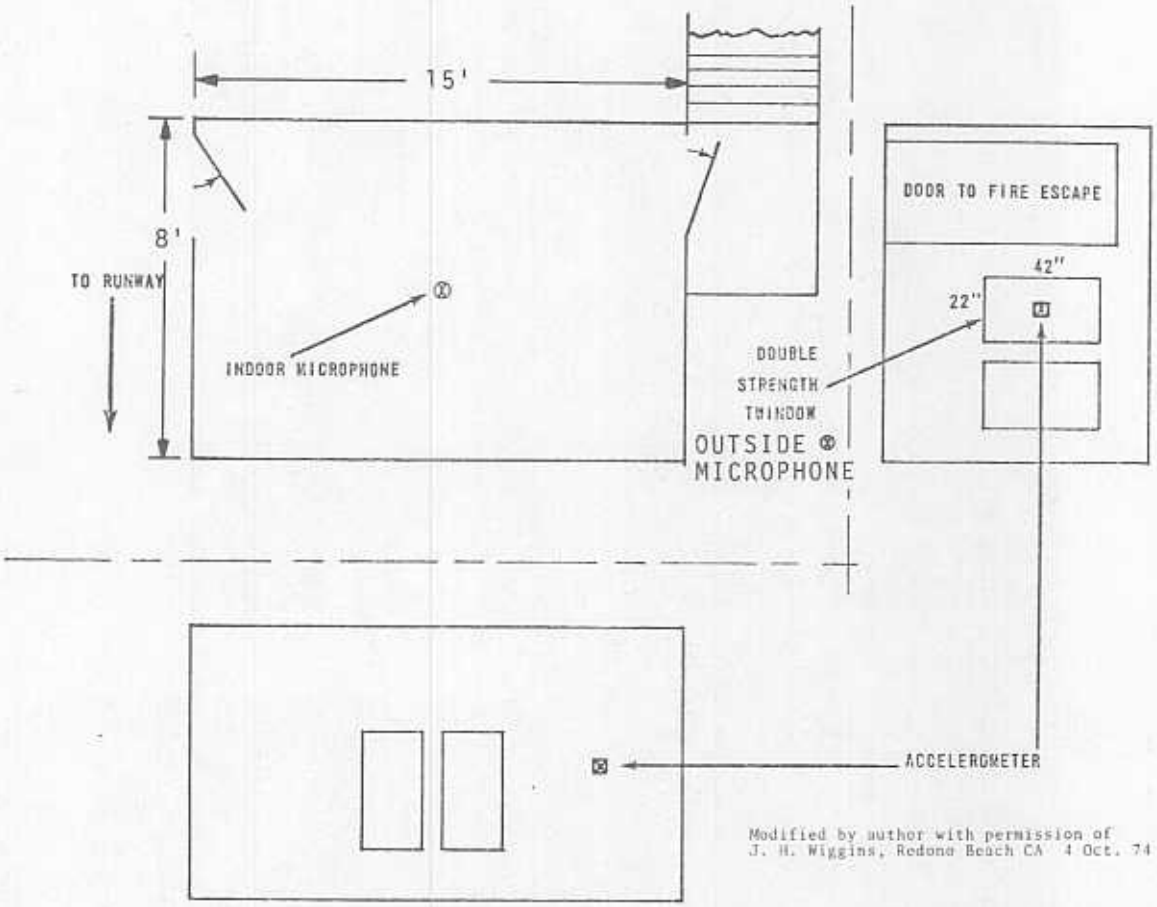


Figure E-6. Flight Standards Plan



INSTRUMENTATION LOCATIONS FOR FLIGHT STANDARDS

SCHEDULE

CEILING IN OFFICE AREA:
- 5/8" ASBESTOS CEILING TILE
- 7" FIBERGLASS INSULATION
- 2"x 6" TRUSSES ON 24 ON CENTER
- 4' SPACE TO ROOF
- 5/8" PLYWOOD ROOFING
- DOUBLE LAYERS OF 30lb FELT AND HOT MOP

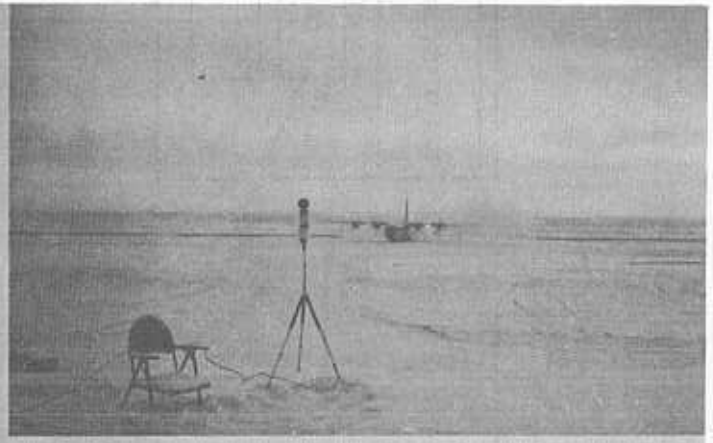
WALLS:
- 5/8" GYPBOARD
- 7" FIBERGLASS INSULATION
- 2"x 6", 16" ON CENTER STUDS
- 1/2" PLYWOOD SHEATHING
- 28 GAGE STEEL SIDING

FLOOR:
- OZITE CARPET WITH FOAM BACKING
- 5/8" PLYWOOD
- 1/2" SOUND BOARD
- 5/8" PLYWOOD
- 7" FIBERGLASS INSULATION
- 2"x 12"ON 16" CENTERS
- 5/8" GYPBOARD

BEAMS SUPPORTING HANGER AREA:
- 12 1/2"x 54" GLUELAMS
- 16'6" ON CENTERS

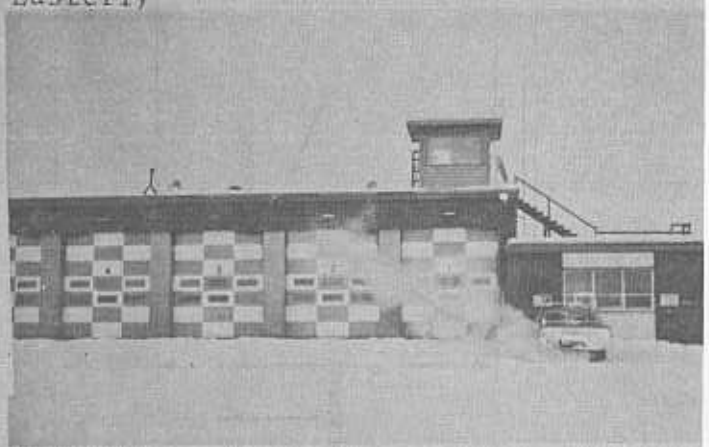
Figure E-7. Flight Standards Office Layout and Construction

a) Northerly



c) Easterly

b) Southerly



d) Westerly

Figure E-8. Photographs-Security Tower Meas. Location, Fairbanks Int. Airport, Fairbanks, Alaska

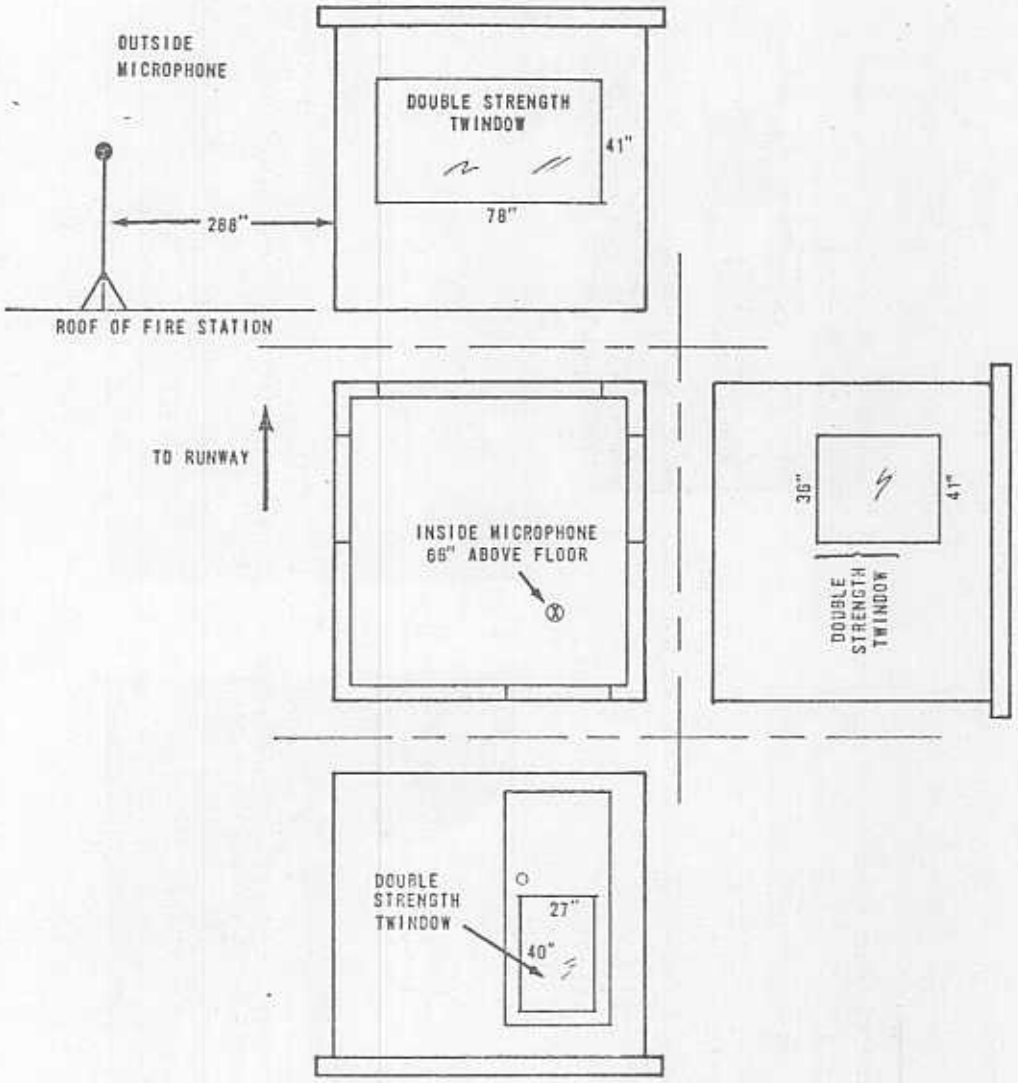
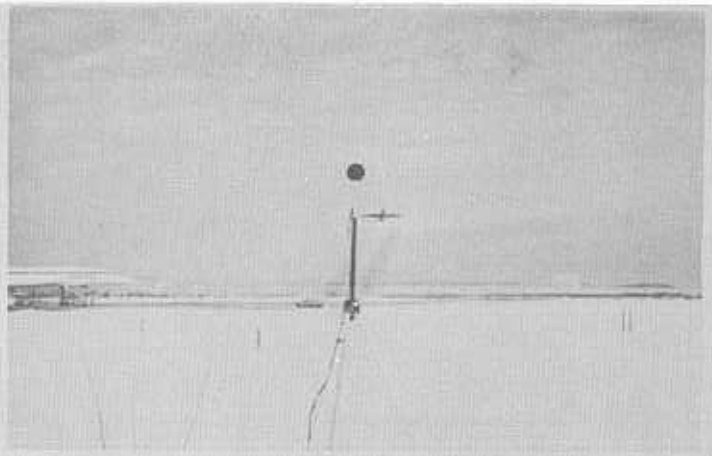
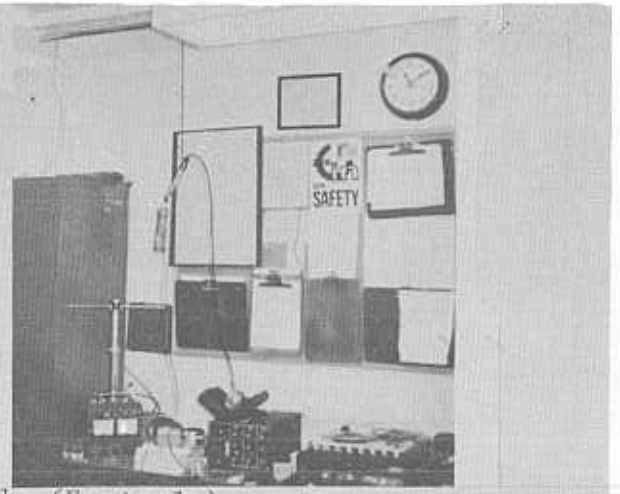


Figure E-9. Schematic of Security Tower

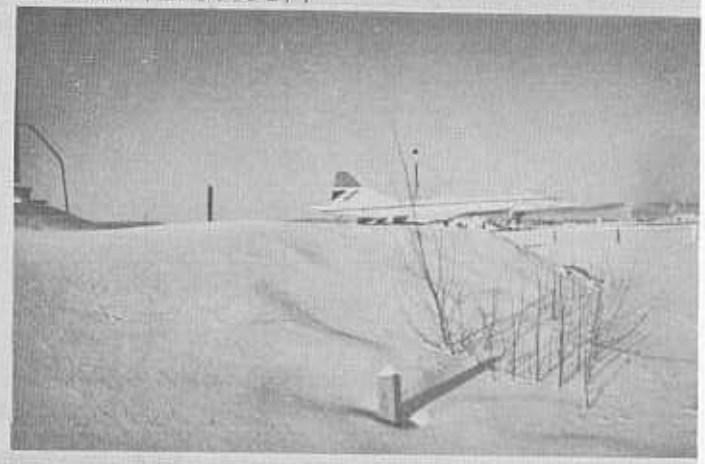


a) Northerly



c) Inside (Easterly)

b) Easterly



d) Westerly-Engine Run Up Tests

Figure E-10. Photographs-Localizer Measuring Location, Fairbanks Int. Airport, Fairbanks, Alaska

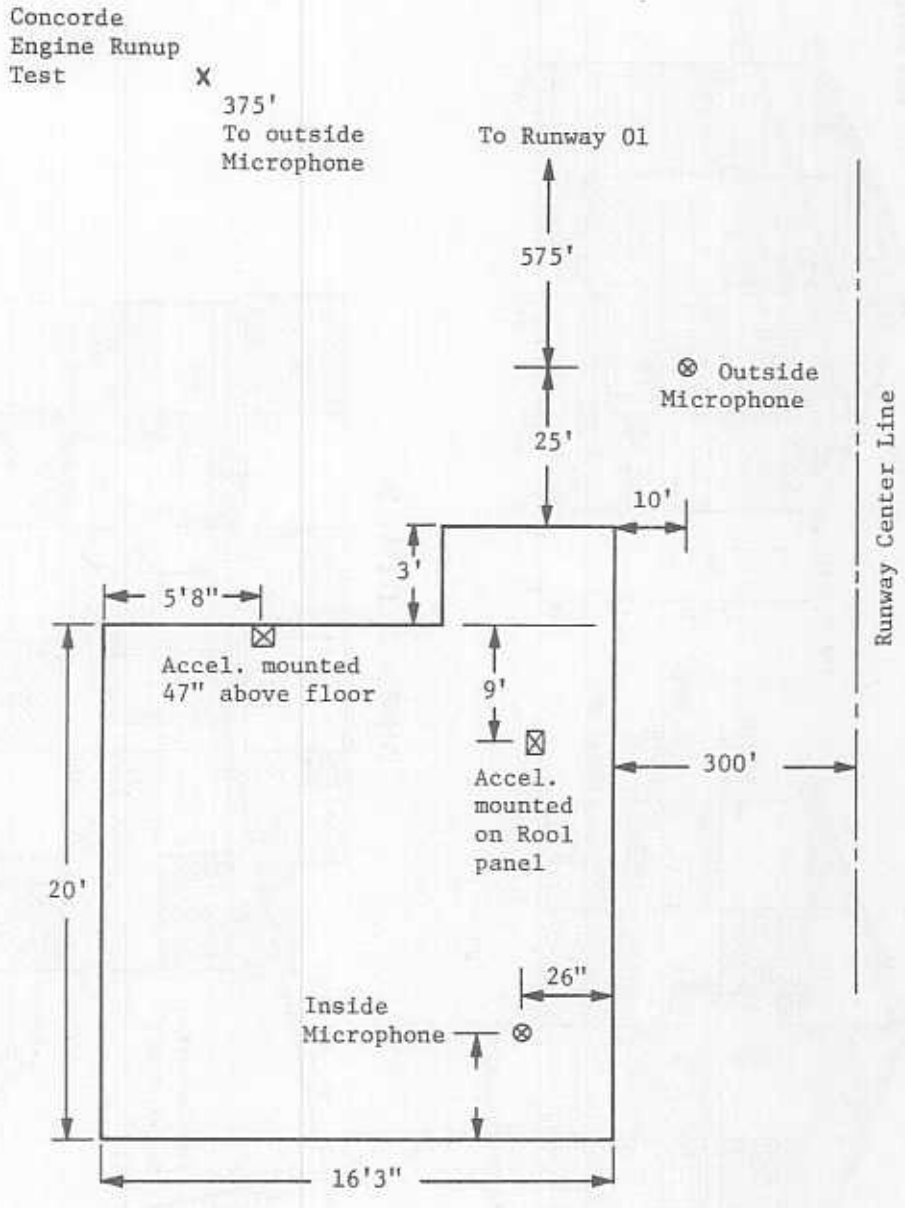


Figure E-11. Localizer Plan, Fairbanks Int. Airport, Fairbanks Alaska

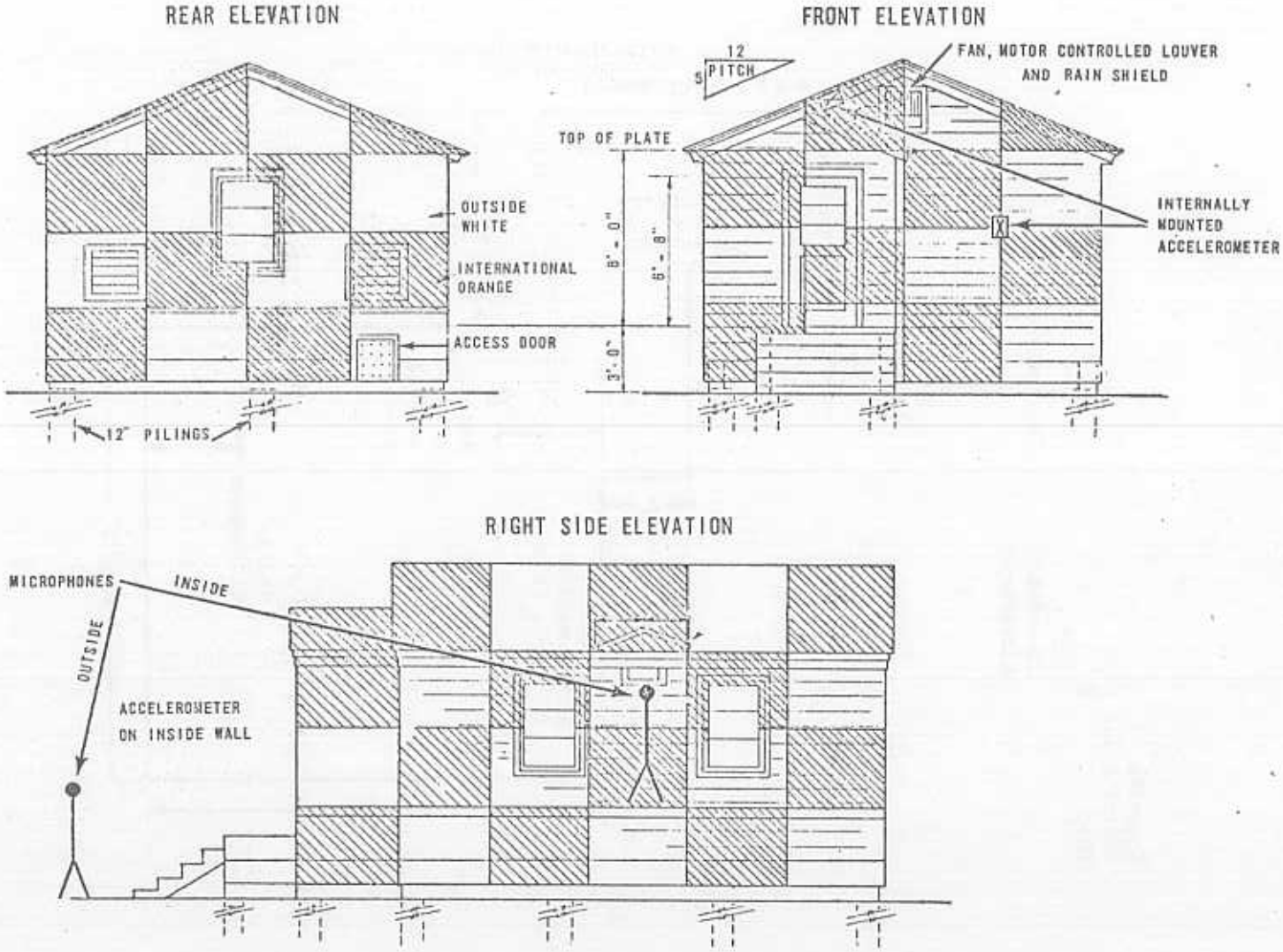


Figure E-12. Localizer Building Elevation Plan, Fairbanks Int. Airport, Fairbanks, Alaska

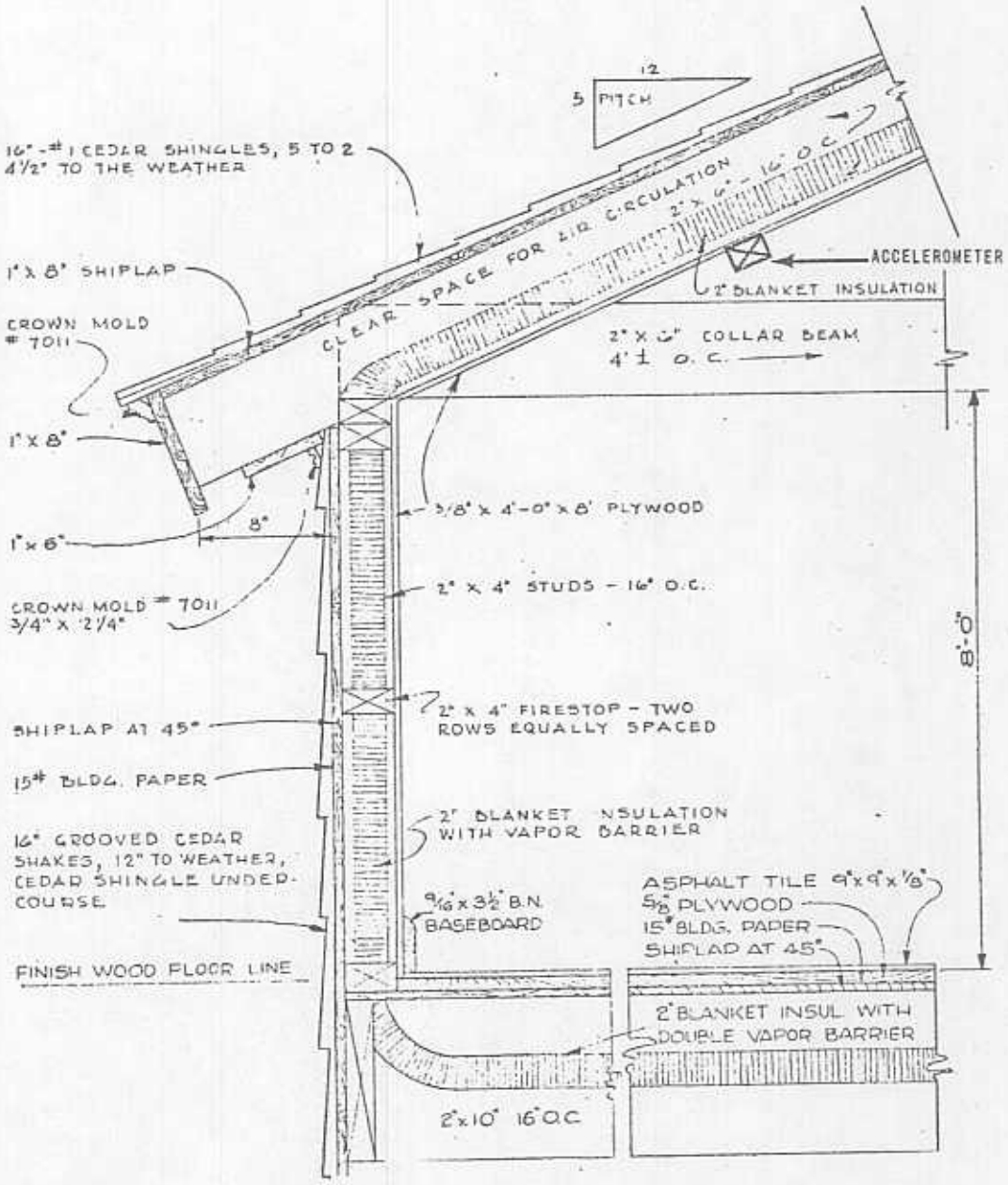


Figure E-13. Localizer Building Details, Fairbanks Int. Airport, Fairbanks, Alaska

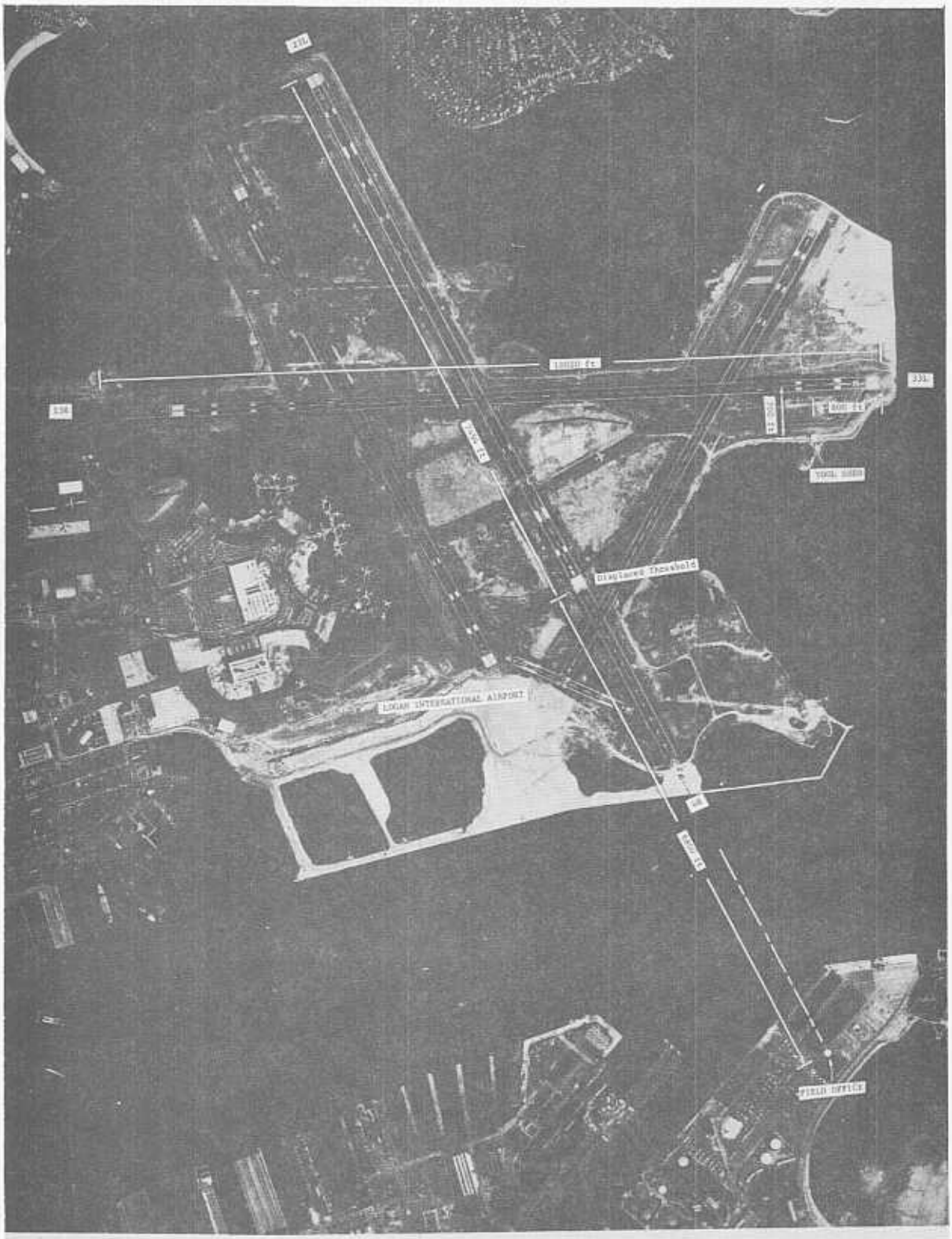


Figure E-14. Measurement Locations, Logan International Airport, Boston, Mass.

a) Westerly

c) Northerly

b) Easterly

d) Southerly, Event No. 23

Figure E-15. Photographs-Toolshed Meas. Location, Logan Int. Airport, Boston, Mass.

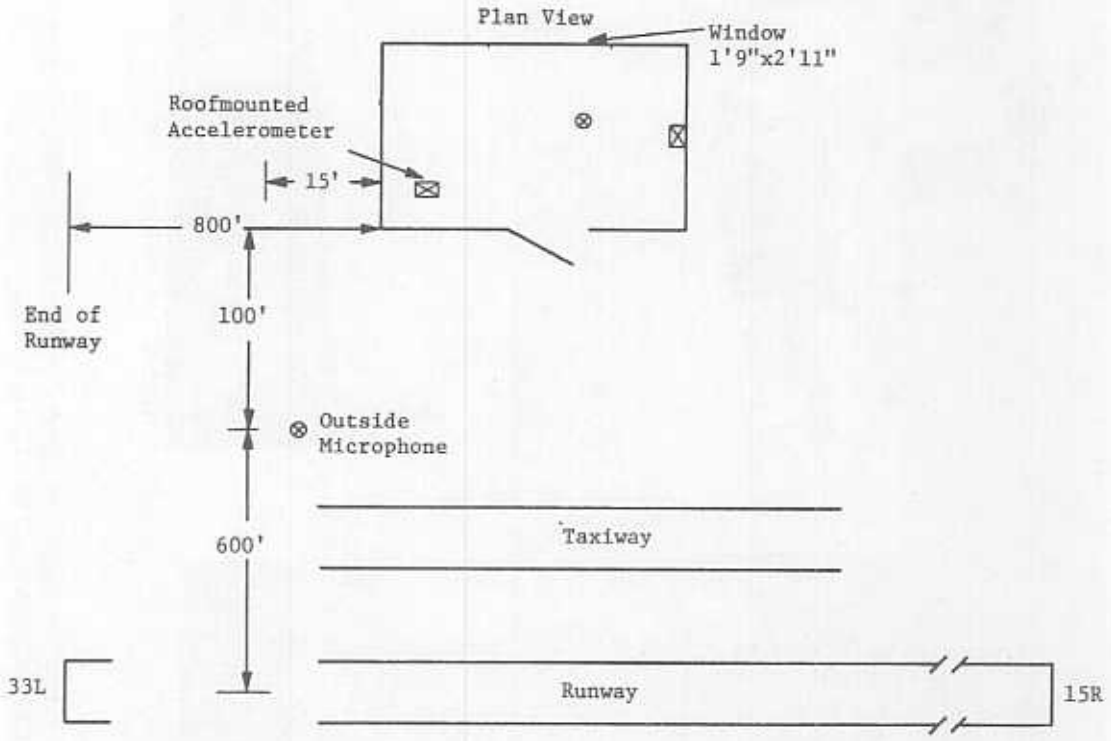
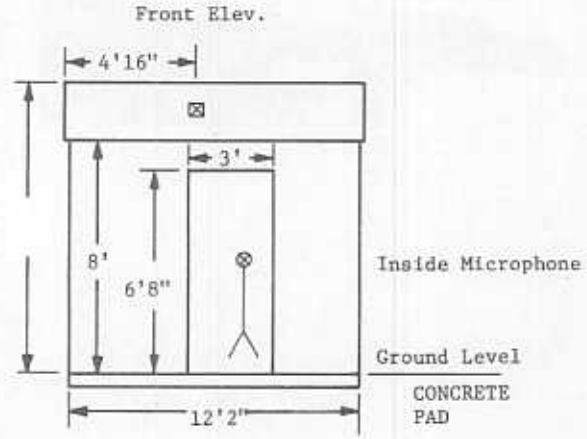


Figure E-16. Toolshed Plan-Logan Int. Airport, Boston, Mass.



Building Construction

Plywood Exterior
Asphalt Shingle Roof

Interior:
2"x4" - 16" on Centers
2x4" Collar beams 4' on Centers
1/2" Plaster board walls & ceilings
Sheet rock insulation
Cathedral ceiling 9'6" high

Floor: Poured concrete

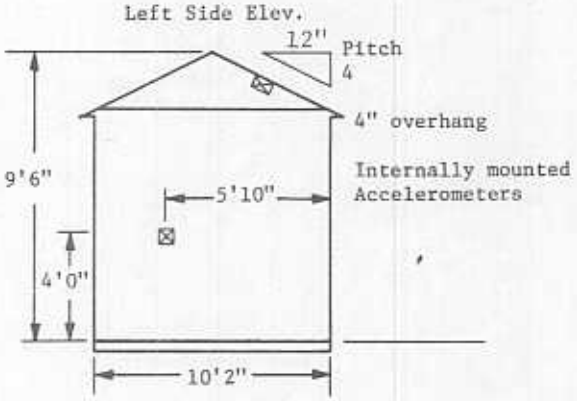
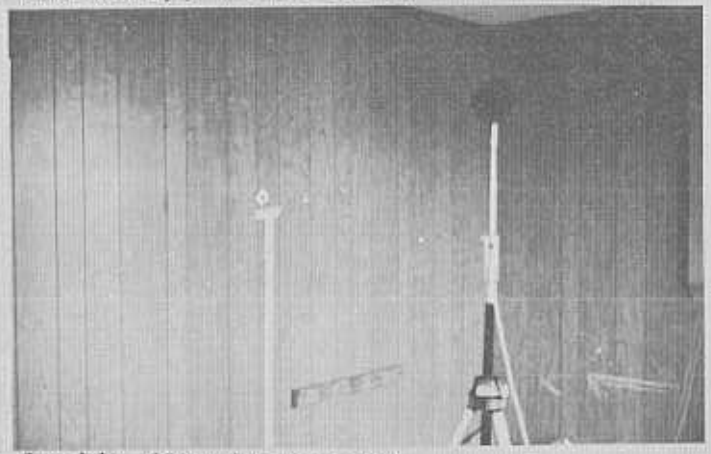


Figure E-17. Toolshed-Layout and Construction-Logan Int. Airport, Boston, Mass.

a) Southerly, Event No. 8



b) Inside (Southwesterly)

c) Westerly

d) Easterly

Figure E-18. Photographs-Portable Field Office Meas.
Location-Logan Int. Airport, Boston Mass.

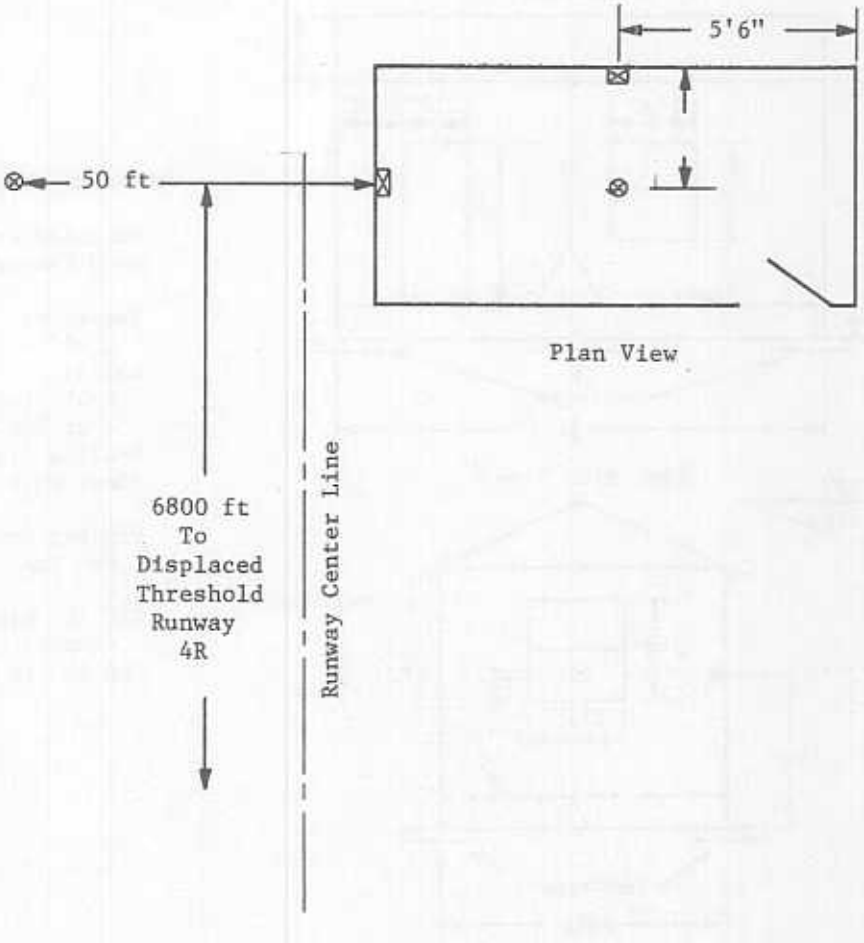
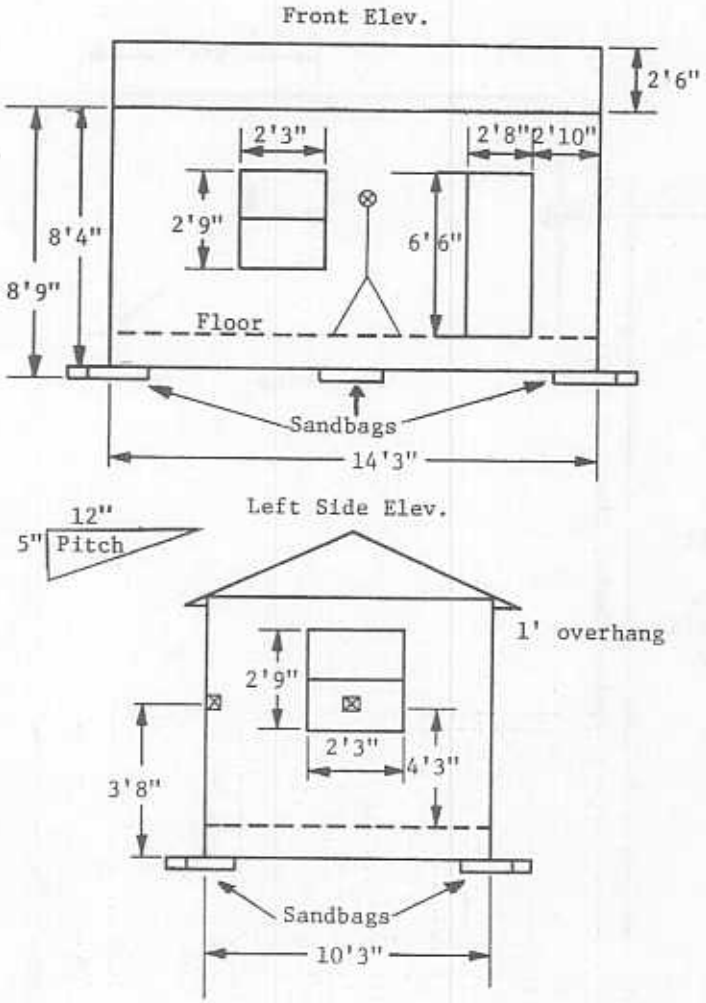


Figure E-19. Field Office Plan (Castle Island)-
Logan Int. Airport, Boston, Mass.



Building Construction

Shingled Roof
Wood Veneer Exterior

Interior:
2"x4" - 16" on Centers
Walls:
1/4" Plywood Panelling
over 3/8" plaster board
Ceiling 3/8" plaster board
Sheer rock insulation

Sandbag foundation on
Hot Top

210 lb sandbag in each
corner inside with
280 lb in center of floor

Figure E-20. Field Office-Layout & Construction-
Logan Int. Airport, Boston, Mass

APPENDIX F

MEASUREMENT AND DATA REDUCTION SYSTEMS

F.1 NOISE MEASURING SYSTEMS

Figures F-1 through F-4 depict, respectively, the noise data gathering systems used at the Motel, Localizer, Flight Standards and Security Tower measuring sites at the Fairbanks International Airport, Fairbanks, Alaska, and at the Toolshed and Field Office measuring sites at Logan International Airport, Boston, Massachusetts.

Data were recorded on magnetic tape on multichannel instrumentation tape recorders at all measurement area. The measurement and recording systems were essentially flat from 30Hz to 16 KHz, with a dynamic range in excess of 50dB overall.

Prior to each run, a short verbal annotation was recorded on tape giving the following: event, date, time, location, tape number, tape recorder channels used, and gain setting for each channel.

A calibration signal of 250 Hz at a level of 124dB re 20 microPascal or 114dB at 1000 Hz was recorded on tape to provide a reference level for the data reduction instrumentation and to detect any system instability. The calibrator was placed on the microphone, and the resultant signal at the specified sound pressure level was fed through the system and recorded on tape. In addition, a passive microphone simulator was substituted for the microphone to determine the minimum discernible sound pressure level (noise floor) for the system. This signal was also preserved on tape.

The measuring and analysis systems conforms to Society of Automotive Engineers' Standard SAE J184.

Because of the relative locations of the measurement areas at Fairbanks (Figure E-1) data for particular events were simultaneously recorded at more than one location. Through a radio link between areas each tape recorder was synchronized to one another as follows: Just prior to an event instructions were transmitted from Flight Standards to turn on all recorders. When all areas acknowledged a vocal time mark was transmitted. This mark was picked up by

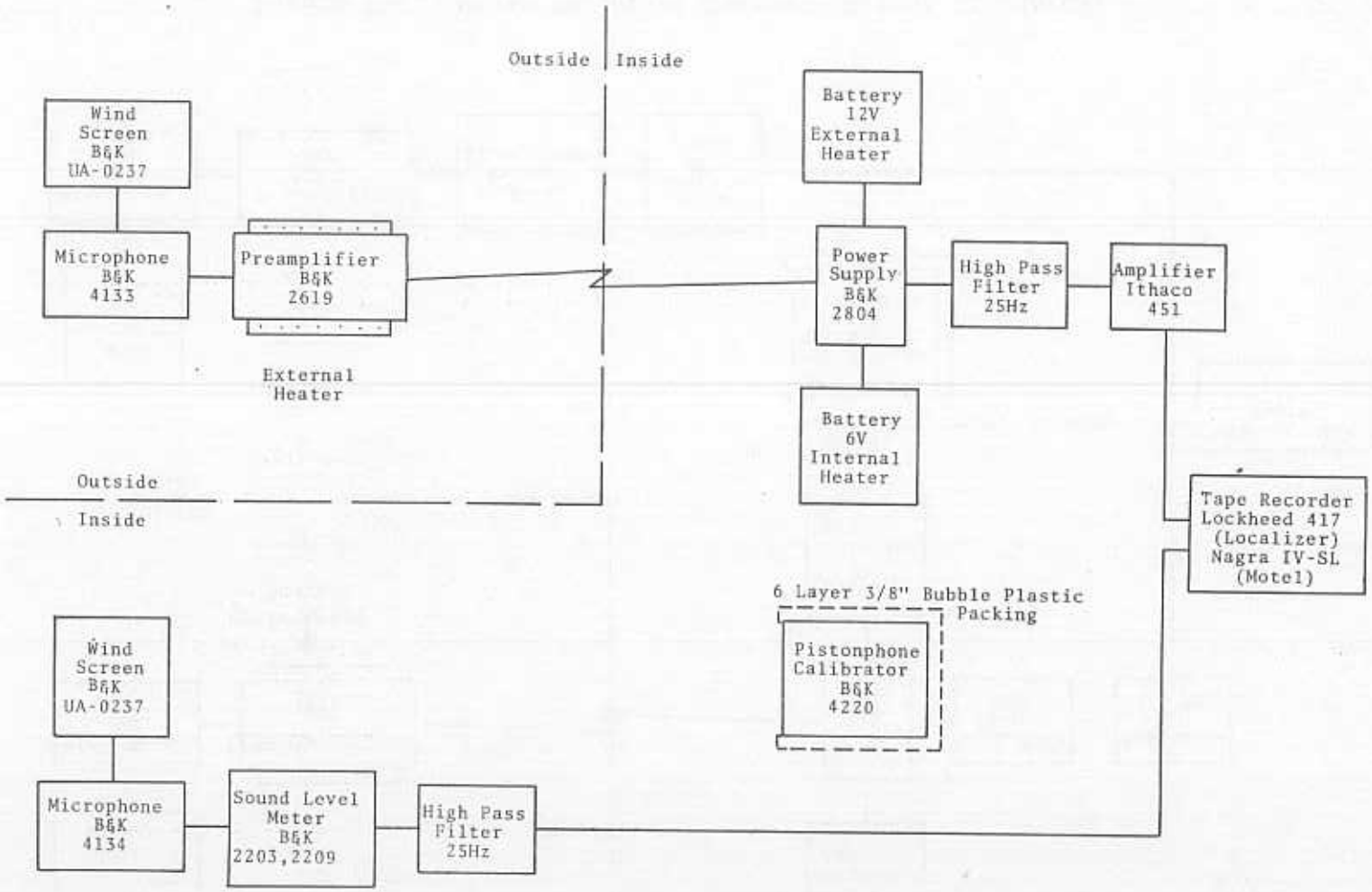


Figure F-1. Noise Measuring System - Motel and Localizer, Fairbanks International Airport

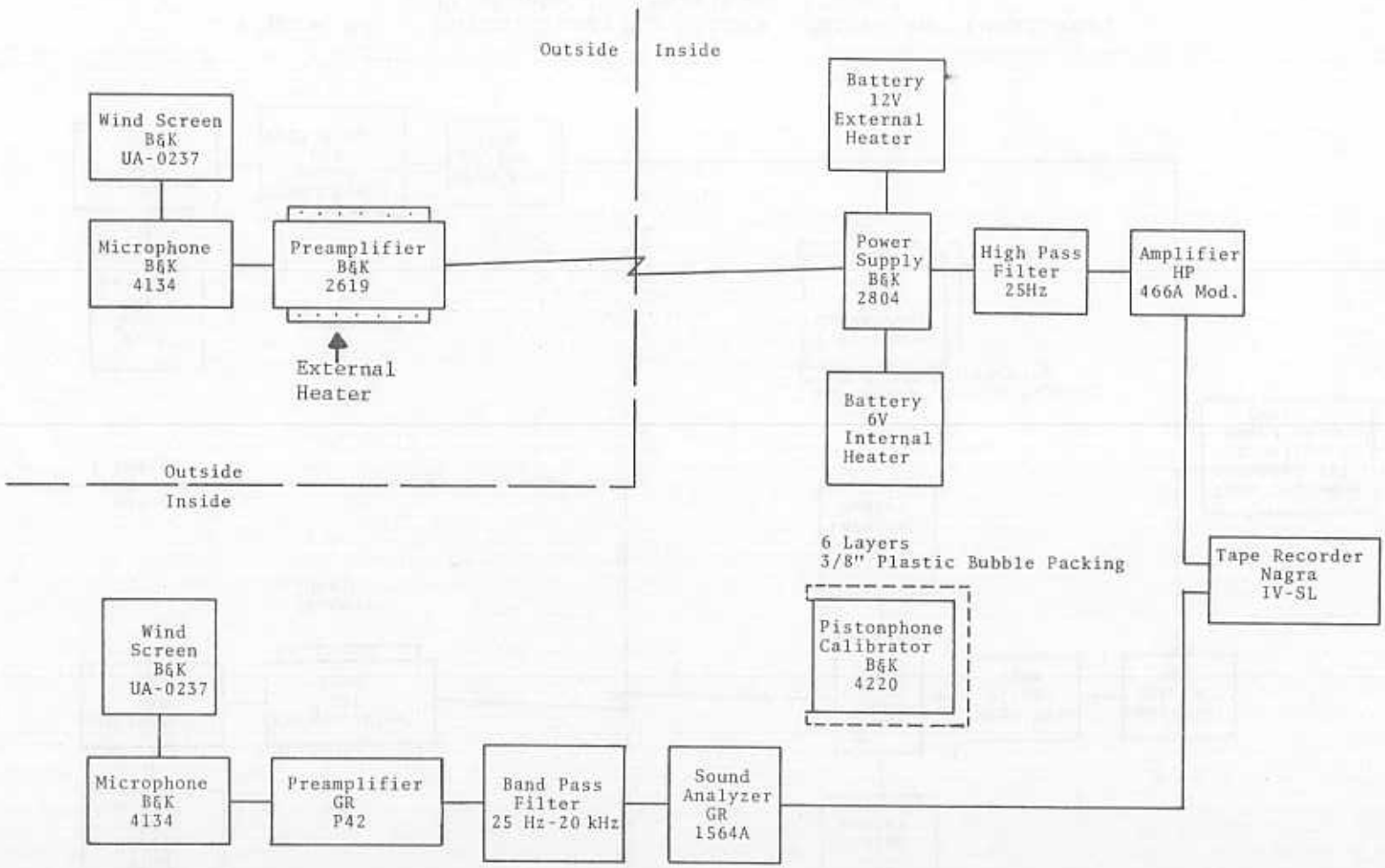


Figure F-2. Noise Measuring System - Flight Standards, Fairbanks International Airport

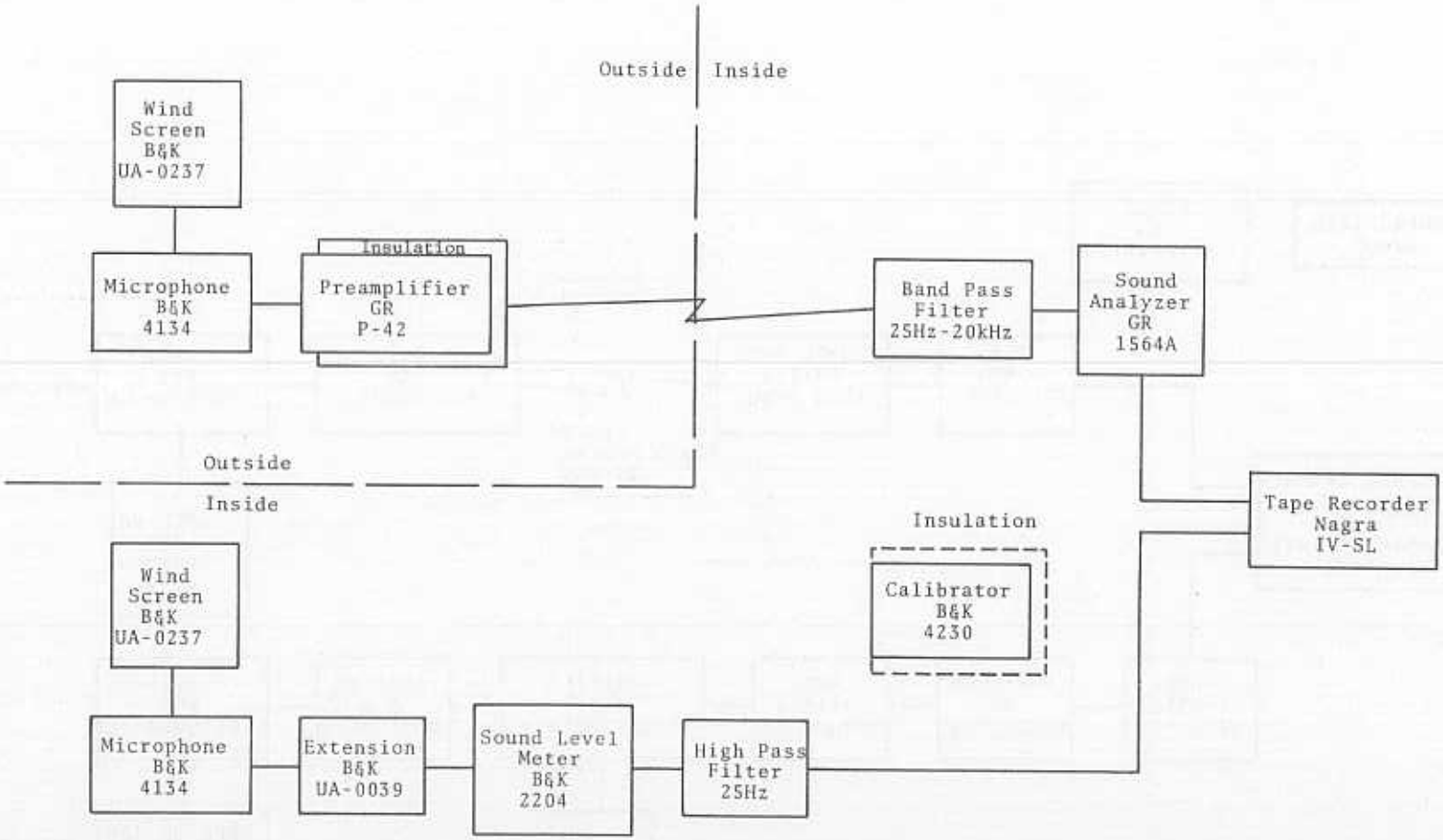


Figure F-3. Noise Measuring System - Security Tower, Fairbanks International Airport

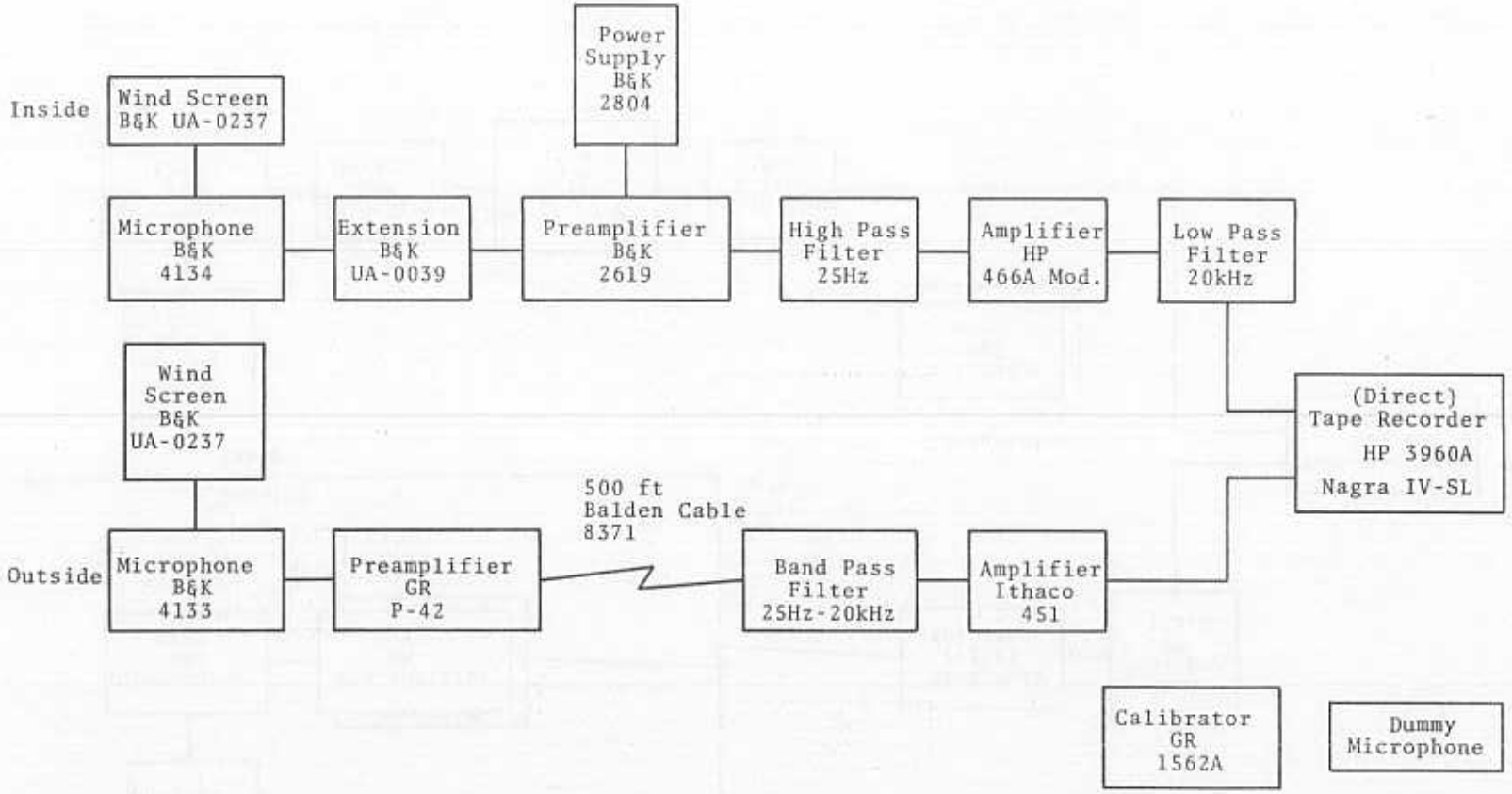


Figure F-4. Noise Measuring System - Toolshed and Field Office, Logan International Airport

the transceiver in each of the buildings, and in turn the audio was picked up by the sensitive inside data microphone and recorded automatically on the data channel. The data recorded at the Boston Airport were not syncronized between measurement sites.

Special precautions were taken during the measurements at Fairbanks, Alaska because of the February cold. All equipment was housed and operated inside heated buildings, with the exception of the outside microphone system, which included a wind screen, condenser microphone system, preamplifier and cable and intermittant use of a pistonphone acoustic calibrator.

To insure operation of the microphone preamplifier in the subzero cold an enternal heater was designed. The heater, rated at one watt, was wrapped around the body of the preamplifier, along with a thin layer of foam insulation. This supplemented the 0.3 watts internal heater built into the preamplifier. The 3-1/2 inch polyurethane wind screen covered most of the body of the preamplifier and provided additional insulation. The preamplifier at the security tower location had neither an internal heater nor was any external heat supplied since it was a last minute system to be deployed. To preserve the preamplifiers' internal heat, the unit was wrapped with approximately two inches of 3/8 inch bubble plastic packing material.

No adverse effects were expected from the operation of the condenser microphones in the subzero cold; however, the possibility of accumulated moisture freezing on the diaphragm was always present. To prevent any moisture build up due to condensation, the microphones were never brought inside the heated buildings. At the conclusion of measurement day the microphone was removed from the preamplifier sealed in a plastic bag and left out of doors until the next measurement day. Spare microphones were left in the trunk of one of the vehicles.

Cables became very brittle in the cold and had to be handled with extreme care. They were unwound in the heated buildings and then strung out to the outside microphone to keep any flexing to a minimum. When brought in for the evening the cables were pulled

into the building without bending, allowed to warm up and coiled for convenient storage.

To insure operation of the pistonphone calibrator in the subzero cold, special precautions were taken based upon several tests made in a temperature chamber back in the laboratory. It was found that subjecting the pistonphone calibrator, with batteries, to -30°F for just 2 minutes was sufficient to cause the unit to malfunction. The heat loss through its metal body caused the mercury batteries to degrade almost immediately. It was found that by wrapping the pistonphone in several layers of bubble plastic packing material, leaving clear the coupler end for insertion of the microphone, the body heat loss was slowed sufficiently that the battery operated pistonphone could be operated for an extended period of time in the subzero cold without malfunctioning. To insure non degraded operation of the calibrator onsite the following procedure was instituted:

The insulated pistonphone was kept in the heated building until needed. The inside microphone system was first calibrated with the pistonphone and the internal meter indications noted. The calibrator was then carried to the outside microphone, protected from the cold by the operator body warmth, placed on the outside system and the calibration level recorded on the tape recorder which was already running to conserve time. After approximately 1 minute of recording, the calibrator was revoved from the microphone, and while still energized, was carried back into the building still protected by the operator, and again placed on the inside microphone system and the reading noted to insure no changes in the calibrator level.

Polyurethane wind screens were also protected from condensed moisture and snow flurries. A plastic bag was placed over the wind screen between events and removed just prior to data recording. In the evening, as with the condenser microphone, the wind screen was sealed in a plastic bag and left out of doors. Thus, although the plastic became ridgid because of the cold, the air chambers in the porous sponge remained clear, insuring proper

operation of the wind screen. An opportunity arose to test characteristics of the frozen wind screen during an engine runup test of the Concorde. The Concorde was at the south end of the airport, 375 feet from the outside microphone at the Localizer (see figure E-10d). During the runup tests of one of the port engines, the noise emissions were recorded with and without the frozen wind screen on the microphone. Figure F-5a is the 1/3 octave frequency spectra of noise data measured with a frozen wind screen during the same engine runup test. Figure F-5b is the difference in the noise level spectra measured during the same runup test but without a wind screen on the microphone, showing the influence of the frozen wind screen on the measured data. Noise emissions from the Concorde port engine were assumed to be constant before and after removal of the frozen wind screen.

The difference spectra attributed to the wind screen is in close agreement with the manufacturers data for the wind screen used under more normal conditions.

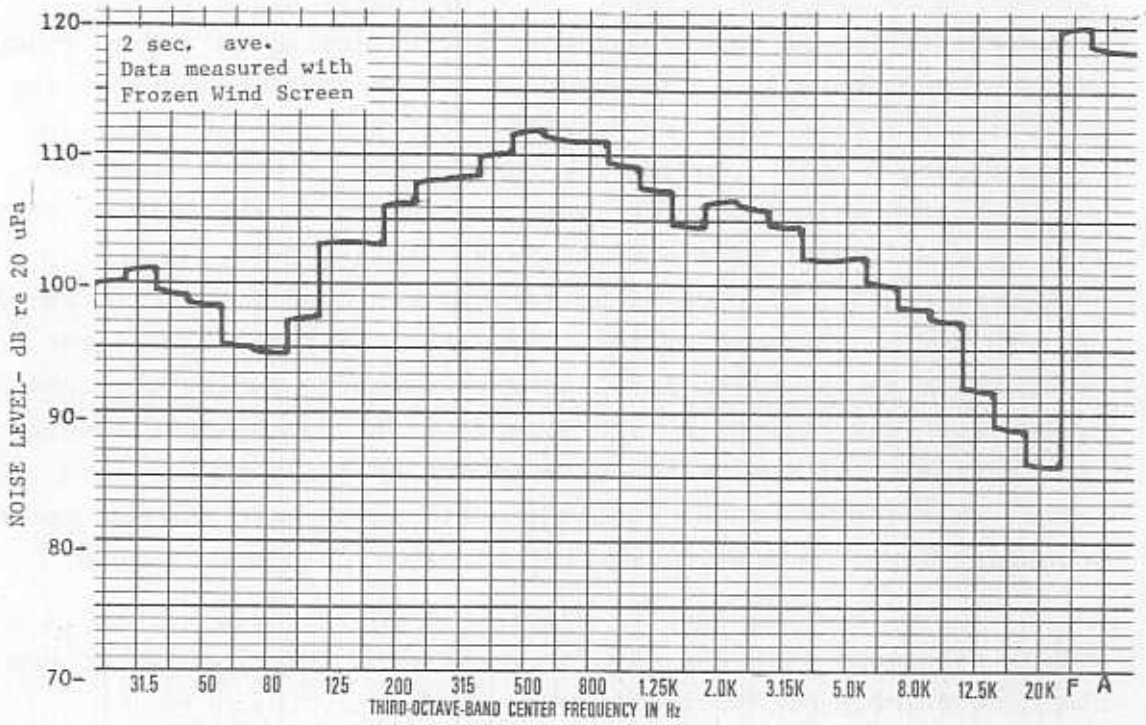


Figure F-5a. 1/3 Octave Frequency Spectra-Noise Level Data Concorde Port Engine Run-up Test Localizer Building - Outside Fairbanks Int. Airport, Fairbanks,Alaska Feb.11, 1974

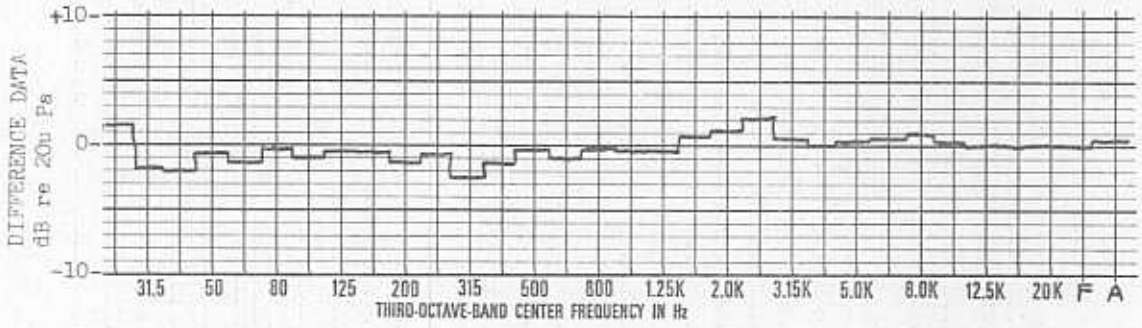


Figure F-5b. 1/3 Octave Frequency Spectra-Measured influence of frozen wind screen on noise level data (Fig. F-5a) Measured During Port Engine Run-up Test (Engine Emissions Assumed to be Constant Before and After Removal of Wind Screen)

F.2 NOISE-DATA REDUCTION

The configuration of the noise data reduction system is shown in Figure F-6. The noise data plus the calibration signal recorded on magnetic tape at the test site were reproduced and fed to a General Radio (GR) 1921 Real Time Analyzing System made up of a GR 1925 Multifilter and a GR 1926 Multichannel RMS Detector. The necessary gain adjustments were made in the multifilter and graphic level recorder with the calibration signals.

The GR 1921 multifilter contains a set of 39 parallel one-third octave band filter channels, ranging form 3.15Hz to 20KHz, plus additional channels with a standard "A" sound level meter weighting network and an unfiltered channel with a flat frequency response "F." The output of the "A" weighted channel was selected and fed to the graphic level recorder to produce a chart of noise level versus time (time history) of all recorded data. The graphic level recorder was adjusted for a writing speed of 100dB per second.

All outputs from the multifilter are fed into the multichannel detector. The multichannel detector simulatneously computes the root-mean-square (rms) level for each channel and converts this level to a digital output. Single integration or measurement periods are adjustable from 1/8 to 32 seconds.

Special selected events are analyzed in detail for their one-third octave band frequency spectra using this equipment and the GR 1522 dc Recorder, which in conjunction with the GR1926 Multichannel rms Detector provides a hard copy bar graph of level (dB) versus one-third octave frequency bands from 25Hz to 20KHz, including the flat "F" and "A" weighted outputs.

The multichannel detector is programmed to integrate over the time interval of the selected event or portion thereof, compute the level in dB for all 32 channels, and provide a DC output to the recorder. The recorder provides a hard copy of level (dB) versus one-third octave bands (frequency spectra)

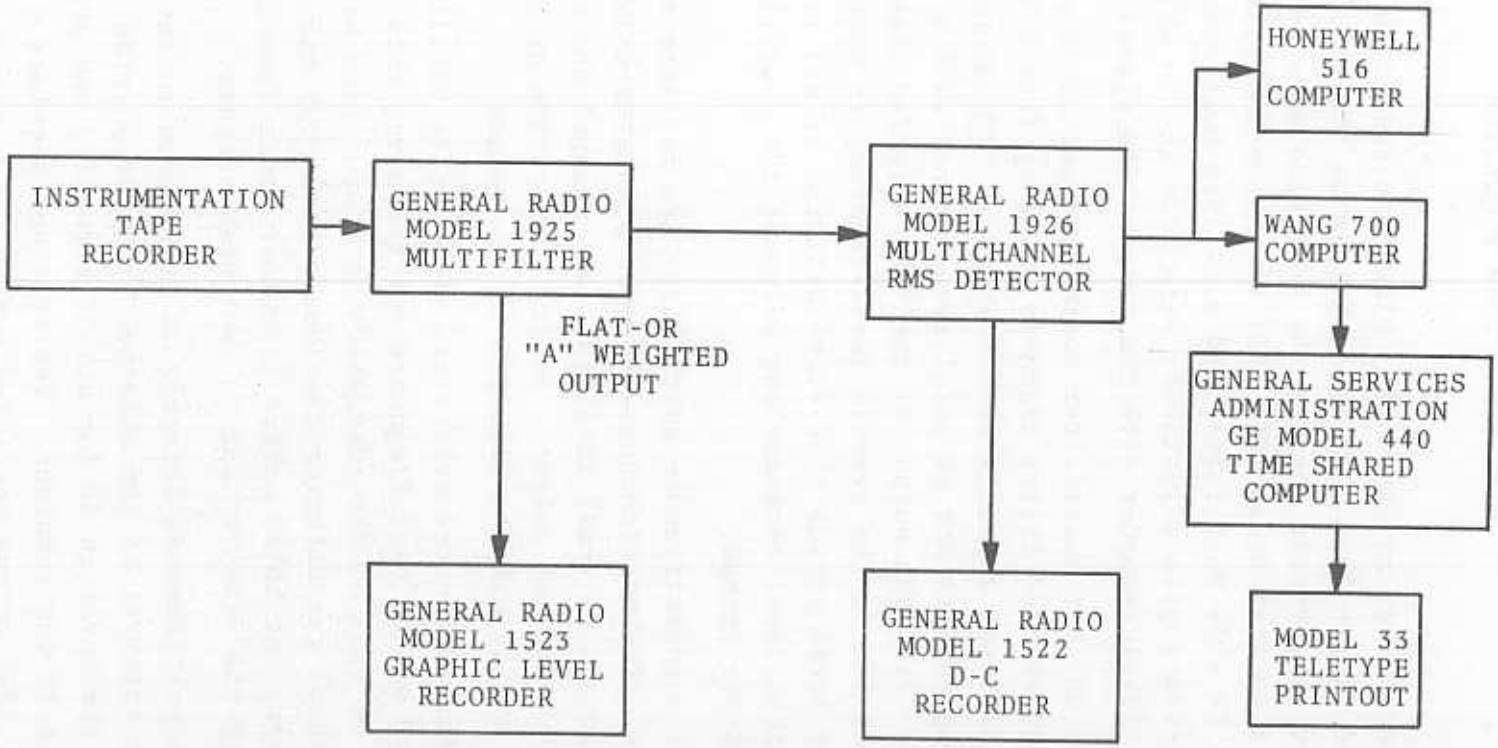


Figure F-6. Noise and Vibration Data-Reduction System

for the event.

A spectral time history of 1/2 second "snap shots" of data can be obtained with this equipment, using the binary coded decimal output of the GR1926 detector and the Wang 700 computing calculator. The detector is externally programmed to initiate a 1/2 second integration period at the start of consecutive 2 second intervals over a selected portion of an event. The digital output at the end of each 1/2 second integration is fed to and stored in the Wang 700. At the end of the programmed period the data is outputed from the Wang 700 by means of a teletypewriter and a tabular printout provided of 1/3 octave bands (25Hz to 20KHz) versus 1/2 second snapshots of data. The start of each integration period is noted and numbered on the graphic level time history recordings.

With the GR1926 detector programmed to integrate over consecutive 1/2 second periods, and the binary-coded decimal outputs in the 1/3 octave frequency bands from 50Hz to 10Khz fed to a Honeywell 516 computer, calculations are performed per FAR-36 of the tone corrected perceived noise level (PNLT) and single number index effective perceived noise level (EPNL) for specific events. In addition a measure of Leq is calculated over the interval specified in FAR-36 for the EPNL calculation. An EPNL/PNLT History is ploted with a Calcomp plotter showing the single number indexes EPNL and Leq and time histories of PNLT and "A" weighted levels along with their difference curve.

F.3 VIBRATION MEASURING SYSTEMS

Figures F-7 and F-8 depict respectively the vibration data gathering systems used at Flight Standards and the Motel, and at the Localizer measuring sites at the Fairbanks International Airport, Fairbanks, Alaska and at the Toolshed and Field Office measuring sites at Logan International Airport, Boston, Massachusetts.

Vibrating measurements were to be made at two locations inside a building at each measurement site. Accelerometers were mounted on a 1/4" x 2" x2" aluminum plate screwed into a structural stud located in either the roof or wall panel. Eastman 910 adhesive was used to secure the accelerometer directly to the window pane at the Flight Standards and Field Office measurement sites in lieu of a roof measurement.

Data were recorded on magnetic tape using multichannel FM tape recorders at all measurements sites. The measurement and recording systems were essentially flat from 1Hz to 1.25KHz, with a dynamic range of 60dB.

Prior to each run, a short verbal annotation was recorded on tape giving the following: event, date, time, location, tape number, tape recorder channels used and gain settings for each channel.

A dynamic calibration signal of 100Hz at 1g was recorded on tape to provide a reference level for the data reduction instrumentation and to detect any system instabilities. The GR 1557A Vibration Calibrator was used to provide this on-the-spot calibration of the vibration measuring system, including the accelerometer. The accelerometer was replaced by a short circuit to determine the minimum discernable acceleration level (noise floor) for the measuring system and is preserved on tape.

The vibration data on tape were synchronized to the noise data utilizing a time mark simultaneously annotated into the noise channel of each recorder after the recorders had come up to speed.

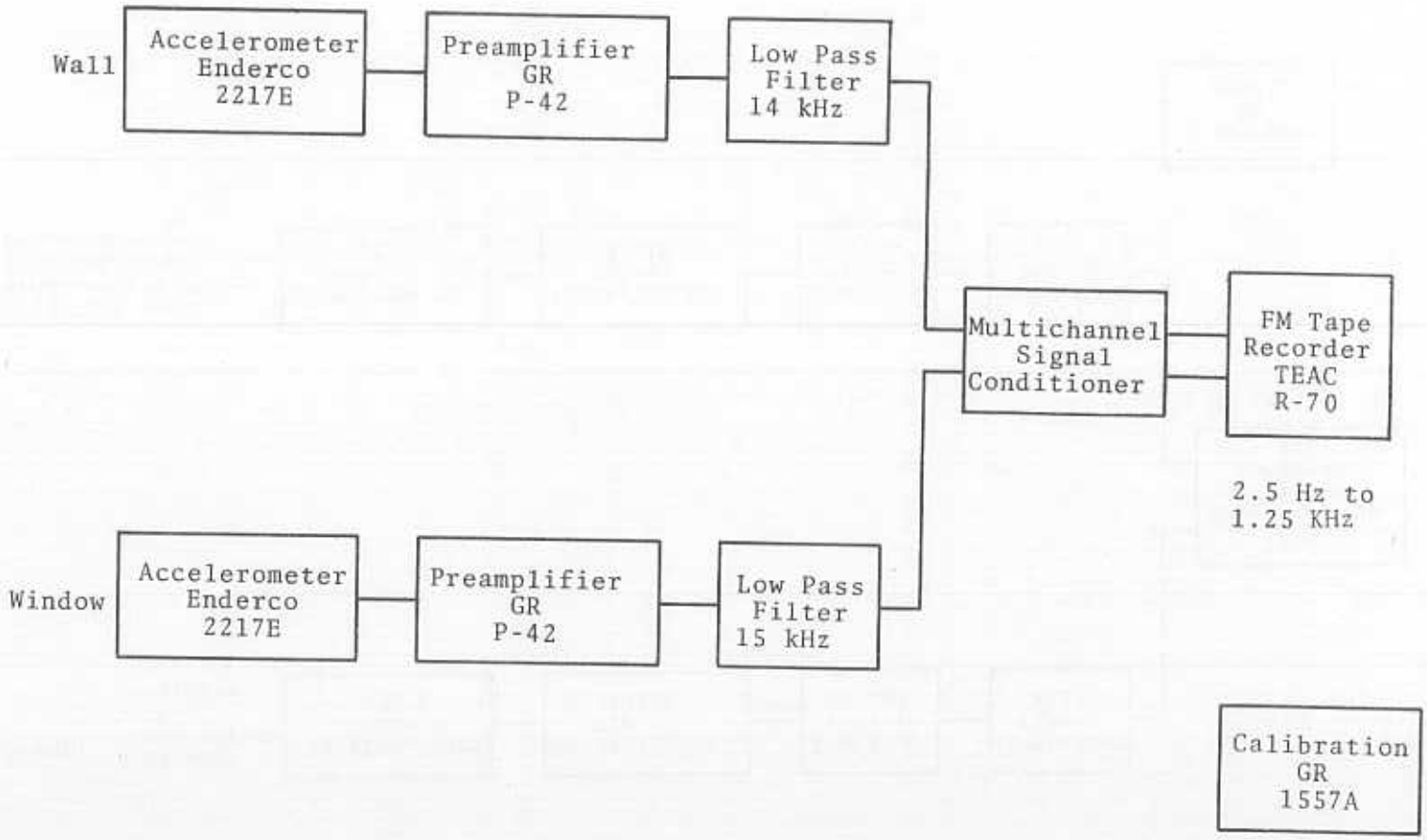


Figure F-7. Vibration Measuring System, Flight Standards, Fairbanks International Airport

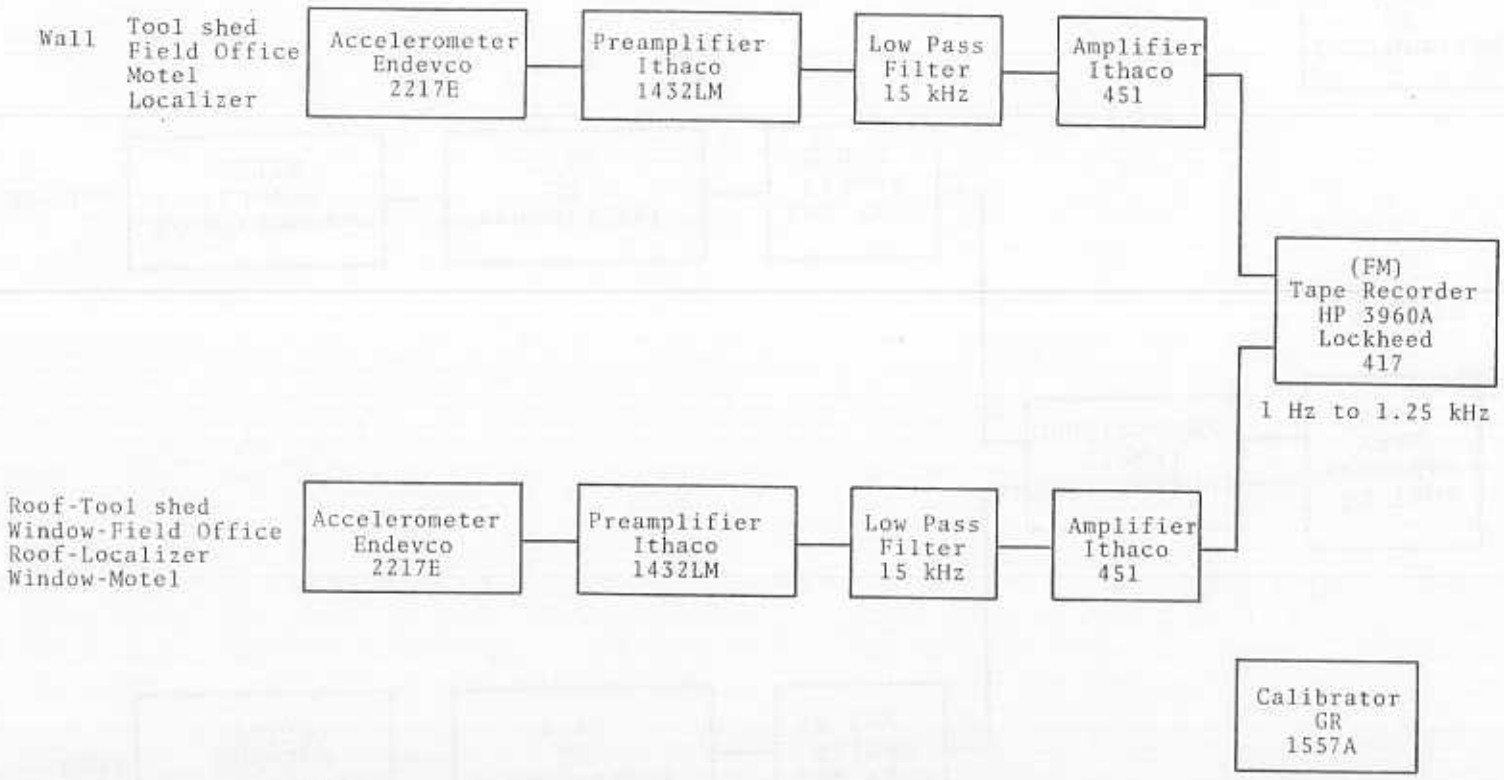


Figure F-8. Vibration Measuring System, Toolshed and Field Office, Logan International Airport. Motel and Localizer, Fairbanks International Airport

F.4 VIBRATION DATA REDUCTION

The configuration of the vibration data reduction system is shown in Figure F-6. It is noted that this is the identical system described above for noise data reduction.

Special events (as in the noise data reduction section) are analyzed in detail for their 1/3 octave frequency spectra.

The GR1926 is programmed to integrate for a 4 second interval over the period of the selected event. A hard copy bargraph of level (db re 1 µg) versus 1/3 octave frequency bands from 3.15Hz to 1.25 KHz, plus an unfiltered or flat (F) output, is produced with the GR1522 recorder in conjunction with the GR1926 Detector. A graphic level recorder simultaneously provides an unweighted level time history of the event analyzed with time marks automatically placed on the history showing the start of the integration period. The graphic level reorder was adjusted to a writing speed of 50dB per second.

APPENDIX G

METEROLOGICAL DATA

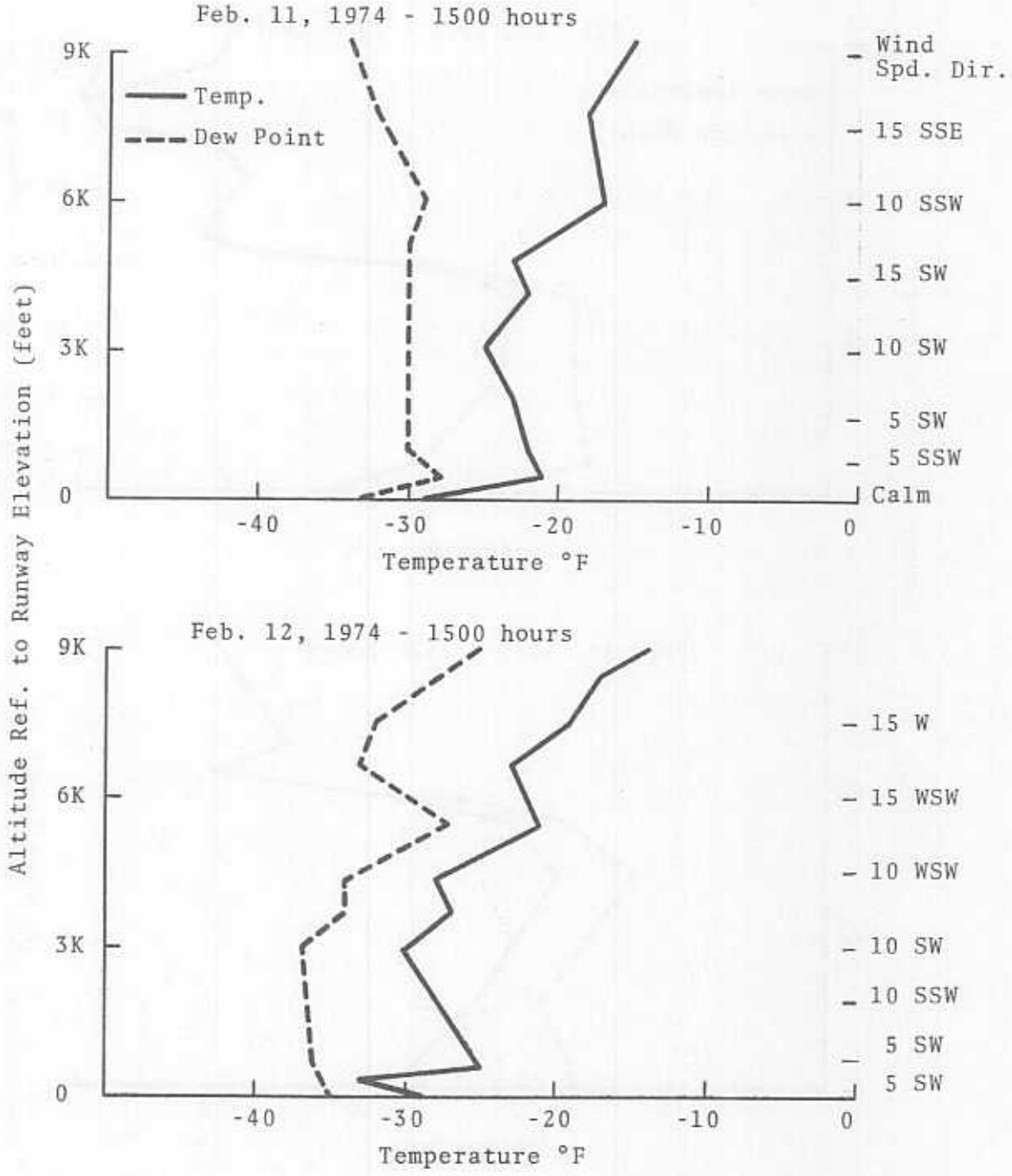


Figure G-1. Temperature and Dew Point vs. Altitude, Fairbanks International Airport, Fairbanks Alaska, Feb.11-12, 1974 (Data from Pseudo-Adiabatic Chart, Fairbanks Weather Bureau)

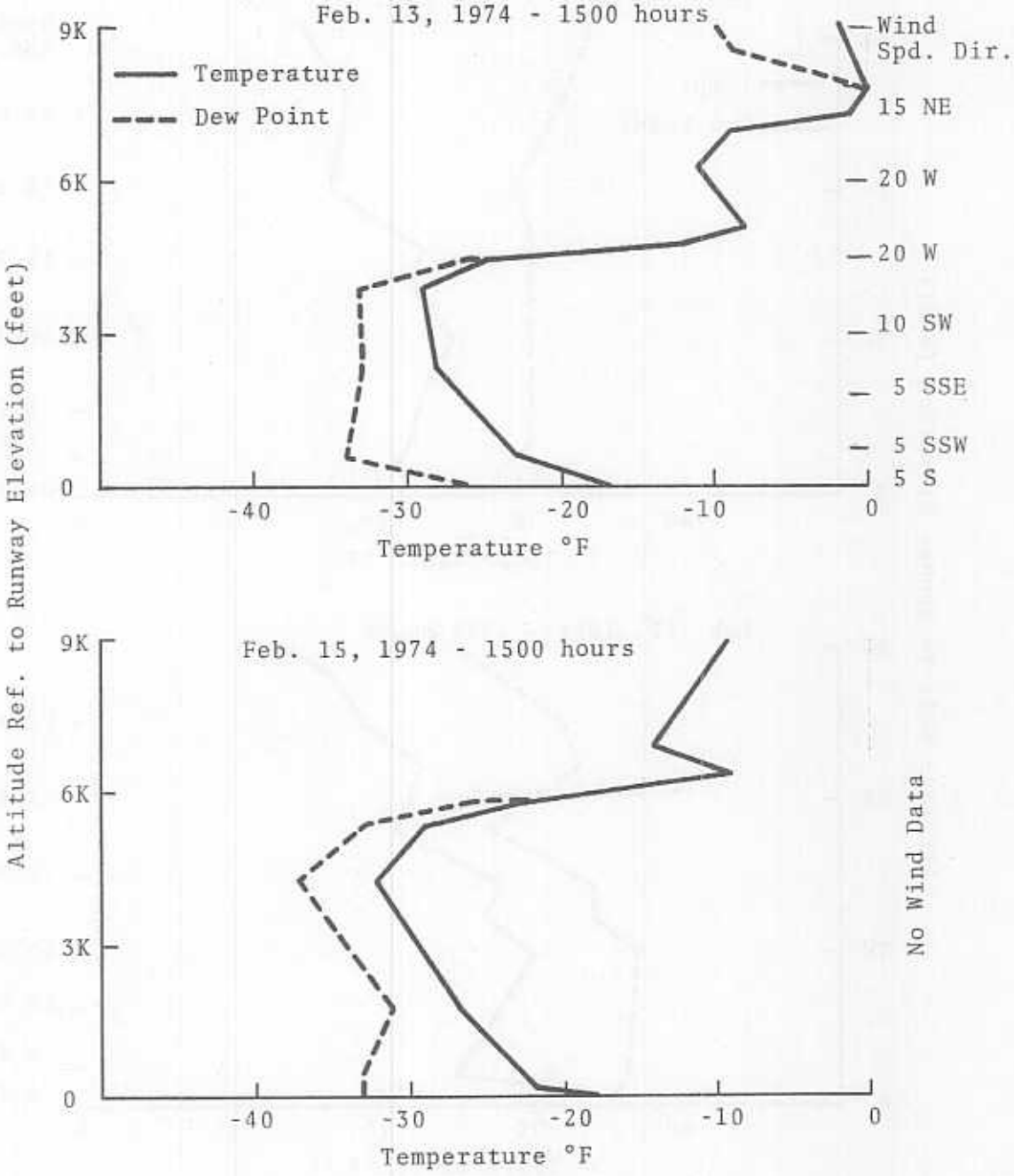


Figure G-2. Temperature and Dew Point vs. Altitude, Fairbanks International Airport, Fairbanks Alaska, Feb. 13-15, 1974 (Data from Pseudo-Adiabatic Chart, Fairbanks Weather Bureau)

TABLE G-1. SURFACE METEOROLOGICAL DATA
FAIRBANKS INTERNATIONAL AIRPORT,
FAIRBANKS, ALASKA

Date (1974)	Time (hours)	Temperature (°F)	Rel. Hum. (%)	Abs. Hum. (grams/H_2O/kg Air)	Wind		Barometric Pressure (mmH_g)
					Spd (mph)	Dir.	
Feb. 10	1353	-10	60	0.35	7	S	748.5
	1507	-11	63	0.32	7	SSW	749.0
	1732	-17	63	0.24	4	SSW	751.0
Feb.11	1245	-27	75	0.17	4	S	754.5
	1642	-28	73	0.16	calm		753.0
	1725	-31	75	0.14	calm		753.5
Feb. 12	1155	-31	75	0.14	5	S	745.5
	1259	-28	73	0.16	5	SW	745.0
	1411	-26	74	0.18	4	SW	745.0
Feb 13	1255	-16	57	0.24	5	SSW	752.5
	1355	-15	56	0.26	5	S	753.5
	1615	-17	65	0.26	3	SSW	753.5
	1910	-20	67	0.22	4	SSW	753.0
Feb. 14	0910	-28	76	0.16	2	SSW	746.0
	1718	-20	52	0.17	5	S	751.0

TABLE G-2. SURFACE METEOROLOGICAL DATA
LOGAN INTERNATIONAL AIRPORT,
BOSTON, MASS.

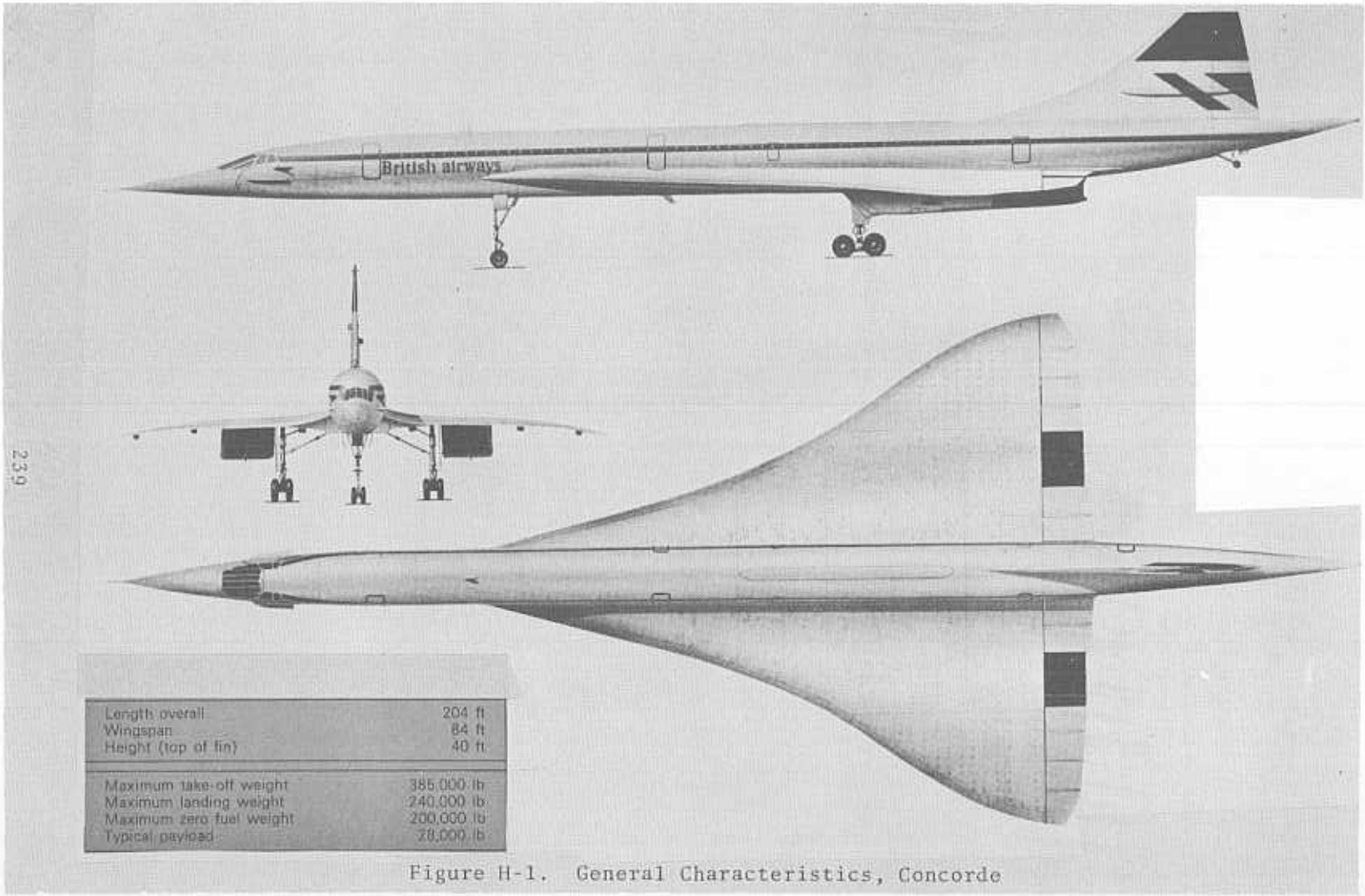
Date (1974)	Time (hours)	Temperature (°F)	Rel. Hum. (%)	Wind		Barometric Pressure (mmH_g)
				Spd. (mph)	Dir.	
June 13	0900	62	36	5	WNW	759.0
	0950	62	40	2	NW	757.0
	1015	64	38	4	N	758.0
June 14	0840	58	62	2	S	762.0
	0950	60	60	5	SE	762.0
	1345	72	38	5-10	E	759.0
June 17	0836	64	90	5-15	SSE	751
	1450	74	54	10-15	S	744
June 18	0832	65	79	3-5	S	754
	1150	75	70	7	SSW	758
	1452	77	67	10	SW	758
	1554	79	65	10	SW	758

APPENDIX H

DESCRIPTION OF CONCORDE

Concorde is a supersonic transport aircraft designed for long range airline operations. It is a delta-winged aircraft and is basically of aluminium alloy construction. It cruises at Mach 2 (about 1,350 mph) and is powered by four Rolls-Royce (Bristol)/ Snecma Olympus 593 engines mounted in pairs in underwing nacelles. The Olympus 593 is a 2-spool turbojet, and is designed for Mach 2.0 cruise. It is fitted with a simple afterburner to give a modest amount of reheat for takeoff and transonic acceleration.

Takeoff thrust, SL. static, Reheat on	38,050 lb
Cruise thrust (60,000', ISA + 5°C, M=2)	6,791 lb
Cruise fuel consumption (lb/lb thrust/hour)	1.189
Cruise engine pressure ratio	11.6:1



Length overall	204 ft
Wingspan	84 ft
Height (top of fin)	40 ft
Maximum take-off weight	385,000 lb
Maximum landing weight	240,000 lb
Maximum zero fuel weight	200,000 lb
Typical payload	28,000 lb

Figure H-1. General Characteristics, Concorde