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SONIC-BOOM EXPOSURES DURING OKLAHOMA CITY COMMUNITY RESPONSE STUDIES FOR THE PERIOD FEBRUARY THROUGH MAY 1964

By David A. Hilton, Vera Huckel, Roy Steiner,
and Domenic J. Maglieri

Langley Research Center
Langley Station, Hampton, Va.

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

July 1, 1964

NASA review completed

Approved For Release 2005/05/16 : CIA-RDP71B00822R000100280002-6

Approved For Release 2005/05/16 : CIA-RDP71B00822R000100280002-6

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I. E. Garrick, Chief
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LANGLEY RESEARCH CENTER

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Approved For Release 2005/05/16 : CIA-RDP71B00822R000100280002-6

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INTRODUCTION

The effects of sonic booms are an important consideration in the overland operation of supersonic aircraft. Of particular significance in the operation of proposed supersonic transports is the reaction of communities to sonic-boom exposures from repeated flights. Only a limited amount of information relative to this repeated exposure problem is available. This has led to the Oklahoma City experiments sponsored by the Federal Aviation Agency and participated in by other agencies and organizations, the NASA being responsible for the measurement of sonic boom exposures in the test area. The material of this paper is thus primarily concerned with these latter measurements. In addition to describing the sonic-boom exposure of the community, the data illustrate some of the effects of the atmosphere during sonic-boom propagation.

In previous experiments, some variations of wave shape and overpressure values were found to exist and were ascribed to atmospheric effects (see ref. 1). These effects were noted to be related to conditions of the atmosphere near the earth's surface. Such results were obtained during a rather limited series of studies both in terms of number of flights and time duration of the program. The Oklahoma City experiments have provided the opportunity to evaluate possible effects on the sonic-boom signatures of the atmosphere and weather for an extended period of time and for a relatively large number of flights.

The purpose of this paper is to document the sonic-boom pressure exposures during the above experiments and, in particular, at three measuring stations for about 800 flights in the time period February 3, 1964 to June 1, 1964 Data are tabulated for each flight so that they may be correlated with information generated by other organizations participating in this program. Included are analyses of some specific sets of data such as categorizations of waveforms and statistical breakdowns of overpressures and positive impulses.

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APPARATUS AND METHODS

Test Conditions

Test flights for which data are presented were made in the Greater Oklahoma City area along the track indicated in figure 1. This general area has an elevation of about 1,700 feet above sea level and includes a population of about 750,000 people in its urban, suburban, and rural regions. Several flights per day were made starting in February 1964. The data of this paper are from those flights accomplished up to June 1, 1964. The program is scheduled to continue through the month of July, and hence the additional data results will be reported subsequently.

Test Airplanes

Photographs of the airplanes of the types used in these tests are shown in figure 2. Airplane A has an overall length of 54.5 feet and a gross weight varying from 14,000 to 19,000 pounds. Airplane B has an overall length of 57.5 feet and a gross weight varying from 34,000 to 45,000 pounds. Airplane C has an overall length of 96.8 feet and a gross weight varying from 100,000 to 116,000 pounds. Aircraft of these types have been used in other sonic-boom flight test programs and details such as area distributions, fineness ratios, and shape factors are given in references 1 and 2. The airplanes were maintained and operated by U. S. Air Force personnel.

Aircraft Operations and Positioning

The aircraft were operated in the altitude range 21,000 to 50,000 feet and the Mach number range 1.4 to 2.0. The airplanes in all cases were positioned over the test area and along the prescribed ground track (see fig. 1) by means of ground-control procedures with the aid of radar tracking. The ground controller was located in Fort Worth, Texas, and the radar antenna was located within the Oklahoma City area (see fig. 1). The majority of the flights were made on a heading of 049° magnetic. On February 19 and 29 the flights were made on a heading of 229° magnetic: on April 28 the heading for flights 1 through 4 was 310° magnetic, and flights 5 through 8 were on 130° magnetic; on April 29 flights 1 through 4 were made on a heading of 170° magnetic and flights 5 through 8 on 350° magnetic. Flights on March 7 were conducted on the 049° magnetic heading, but the airplane was displaced 8 miles to the north of the original track. Radar plotting-board overlays were obtained for all flights, and the data were used to provide information on aircraft plan position and ground velocity. Altitude was obtained from a GCI station located in Oklahoma City. All altitude values listed in the data tables are with reference to mean sea level.

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Each aircraft was directed on the flight track such that the desired Mach number and altitude conditions were reached when the aircraft was in the vicinity of Minco and were maintained to the general vicinity of Arcadia. When the above procedures were used, the sonic booms observed at the measuring stations indicated in figure 1 were associated with steady-level flight conditions of the aircraft. In some cases the acceleration portion was extended beyond the point shown in figure 1 to permit two passes to be made during one flight. For some of these latter flights, acceleration effects (see ref. 3) were noted to exist in the Oklahoma City test area.

Atmospheric Soundings

Rawinsonde observations from the U. S. Air Force weather facility located at Will Rogers Field (see fig. 1) were taken within 1 hour of the times of all of the supersonic flights. Measured values of temperature and pressure, along with the calculated speed-of-sound and humidity values and wind velocity and direction values, were provided up to at least the airplane test altitude.

In addition to the 4 Rawinsonde observations which were obtained during each day, surface measurements of temperatures, winds, etc. were obtained along with information relayed by the pilots during their ascent to altitude and during the actual supersonic run. The type of information obtained from the pilots included indications of turbulence, cloud cover, and precipitation.

Pressure Instrumentation

The main components of the measurement systems used for sonic-boom pressures are the same as for reference 1. Each channel of the system as used in the experiments consisted of a specially-modified microphone, tuning unit, DC amplifier, and oscillograph recorder. The usable frequency range was from 0.1 to 5,000 cps, and this applies to all of the data presented herein. The microphones have a dynamic range from about 70 to about 150 db. They were field-calibrated statically before each test by means of a pressure bellows and a sensitive manometer. Prior to field installation, frequency response curves were obtained for all microphones.

Sonic boom pressure measurements were made both inside and outside all 3 test buildings. Each outside microphone was shock mounted at ground level in the surface of a plywood reflecting board, as shown in figure 9 of reference 1. Wind screens designed so as not to affect the pressure measurements were used at all times. When making measurements during precipitation, a thin plastic cover was draped loosely over the wind screens.

For the inside measurements, each microphone was shock mounted at approximately 5 feet from the floor level near the center of the room. The above setups were used to make inside and outside measurements at each of the 3 measuring stations noted in figure 1.

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In order to obtain information on the scale and correlation of ground overpressure fluctuations, a special multiple array of microphones was used for simultaneous measurements at selected locations. Simultaneous recordings from each of 5 microphones were made for several flights for microphone separation distances from 50 to 200 feet in straight lines parallel to and perpendicular to the flight track of the aircraft. These data were taken in open areas at locations near the ground track and also at lateral distances of about 8 miles to either side of it.

RESULTS AND DISCUSSION

Wave Shapes

The type of experimental data obtained in the measurements of the present studies is illustrated in figure 3, which shows sample outside and inside sonic-boom pressure signatures. The outside pressure signature is of the N-wave type, whereas the inside pressure signature has the general appearance of a damped sine wave. The peak overpressure values in either case are defined as the maximum positive deviation from local atmospheric pressure, as indicated in the figure.

From a study of the data obtained, it was found that the outside pressure traces varied markedly in character such that it was useful to categorize them as indicated in figure 4. The characteristic wave shapes are presented on the left-hand side of the figure, with word descriptions on the right-hand side. In cases where wave shapes did not fall naturally into one of the categories illustrated, a two-letter designation was assigned. For instance, a type "NP" was judged to be intermediate between type "N" and type "P". Also shown on the figure are definitions of such quantities as positive impulse I_o and the duration of the positive phase of the wave Δt_o, which are listed in the main data tables along with peak overpressure and wave shape categories.

Tabulations of Data

The measured data as determined from time-history records such as those of figures 3 and 4 are listed in tables I through XIV. The data in each table are listed chronologically for each aircraft and altitude combination. In addition to the sonic-boom signature data for the 3 measurement stations, some associated weather and aircraft operating condition information is included. Where there are no entries in the table, either the data do not exist or could not be properly interpreted. Symbols, definitions, and units applicable to the information of tables I through XIV are included in table XV.

For convenience of the reader, table XVI has been prepared to include the number of data records at each measuring station for various flight conditions, along with the number of the appropriate table (see I through XIV) in which the

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data are included. It is obvious from an inspection of table XVI that a much larger number of flights was conducted for some test conditions than for others, and thus these results may be of greater statistical significance.

Variations for a Series of Flights

Some of the data of tables I through XIV, for which a large number of data points are available, have been studied in detail to determine the manner in which the peak overpressure and impulse values vary. The results of these studies are included in figures 5 through 7. In these figures the data have been plotted as relative cumulative frequency distributions and thus, on the ordinate scales, give the probability of equaling or exceeding the given values of the abscissae.

The data of figure 5 illustrate the variation of the peak overpressures for altitudes of 28,000, 30,000, and 32,000 feet for airplane A at a Mach number of 1.5 for measuring stations 1, 3, and 4. The data have been plotted on semi-log paper to emphasize the variations or differences between the higher values of the distributions. Curves have been faired through the data points as an aid in interpreting the data. As an example, in figure 5(a) for station 1 it can be seen that for the 28,000-foot altitude condition, there is a probability of equaling or exceeding an overpressure value of 1.6 lbs/sq ft approximately 9% of the time. It can be seen that as altitude increases, the probability of exceeding a certain value of overpressure decreases.

It is believed that if the aircraft speed and altitude were held absolutely constant and there were no effects of the atmosphere, the overpressure values would be equal for all flights. It can be seen that the overpressure values from one flight to another are not constant, but rather vary in amplitude over a considerable range. These variations may be due to such factors as small variations in aircraft flight conditions, small variations due to measuring technique and instrument accuracies, and variations due to the weather. For the data illustrated, the weather effects are judged to be dominant.

Similar data are presented in figures 5(b) and 5(c) for measuring stations 3 and 4, respectively. Although the probability values are somewhat different than those of figure 5(a), the same general trends of the data are evident.

In figure 6(a) the data for the 32,000-foot condition of figure 5 are plotted for comparison of the measurements at the 3 measuring stations. It can be noted that the pressure exposures are very similar at stations 1 and 3 and are generally less severe at station 4. This was the general pattern of the data. During the experiments at 28,000 feet, however, as may be noted in figure 6(b), the faired curves for the data of stations 3 and 4 have a different shape and higher overpressures were experienced than at station 1. These differences in shape were noted to be associated with the data at the lateral stations for which the ray paths were longer for a given flight condition. It is not known whether the above changes in shape are due to sampling variations, a longer ray path in the presence of turbulence, a shifting of the exposure

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pattern because of crosswinds (see ref. 4), or some combination of these phenomena.

In figures 5 and 6 the relative cumulative frequency distributions have been plotted on semi-log paper with curves faired through the higher values of overpressure. This manner of plotting is not intended to imply the type of distribution which would best describe the data. Although a log-normal distribution may be suggested from a theoretical consideration, no one type of distribution has given a satisfactory fit for these data over the entire range of the data.

The positive impulse functions have been determined for the experiments of figure 5 and are presented in figure 7. Semi-log plots are presented, and the data are coded in the same way as for figure 5. The variations are noted to be similar in nature to those of the overpressures illustrated in figure 5. The variation from the mean value, however, is markedly less than for the overpressures.

The data of table XVII are included as a brief summary of the overpressure and positive impulse results of the above studies for the groups of data of tables I through XIV having the highest number of data points. Included in the table are the median values (50% probability) and the values at 1% probability for each of the 3 measuring stations. Also included in the table for comparison are nominal values calculated by the method of reference 5 for conditions of a standard atmosphere with zero wind. One of the most obvious results which is illustrated by the data of the table is that the median values are generally lower than the calculated nominal values. This trend may be expected based on energy conservation considerations (see ref. 6).

Variations for a Given Flight

The data presented in tables I through XIV and in figures 5 through 7 indicate the type of variations of the pressure exposures at discrete measuring points over a period of time during which atmospheric changes occurred. In order to provide some information relative to the variations occurring in specific areas on the ground as a result of a single flight, experiments were performed with a special microphone array in which the individual microphones were accurately spaced and oriented relative to the flight track. Sample data obtained in this manner are presented in figures 8 and 9.

The data of figure 8 represent an overall calibration of the individual microphones in the array. They were placed within a few inches of each other for one of the flights in order to check for repeatability and to determine the amount of variation inherent in the field use of these instruments. Tracings were made of the pressure-time history records, and these are presented in the figure. It is obvious that the wave shapes are nearly identical, and this would be expected because the systems are closely matched in frequency response and are closely grouped to minimize atmospheric effects. As illustrated in the figure, the variation in the results from the average value which may be ascribed to instrument differences and calibration and reading errors is noted

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to be less than about ± 7%.

For this experiment the sensitive diaphragm element of the microphone was located about 6 inches above and parallel to the reflecting surface, and this thus accounts for the small steps in the steeply rising portions of the waves at both the initial and final compressions. The same microphone positioning scheme was used to obtain the data of figure 9.

In figure 9 are presented tracings of the measured waveforms from the above accurately-calibrated and oriented array of matched microphones. These data illustrate the variations of waveforms obtained for given flights for which the aircraft operating conditions are essentially constant. The waveforms are presented in the proper time sequence and are directly comparable in amplitude. All data of the figure were recorded for microphone separation distances of 200 feet. Data are presented for flights at times 2 hours apart on the same day. It can be seen that a wide variation in wave shape occurred even over a distance on the ground of a few hundred feet, and that the variations were different for the 2 flights. The widest variation occurred for the data of figure 9(a), where a definite progression was noted from a highly peaked wave of relatively large overpressure at the first measuring point to a rounded-off wave of relatively low overpressure. The data of figure 9(b) also suggest a definite progression of events. A study of a series of recordings such as these and others of a similar nature taken during the experiments suggests a rising and falling of the peak overpressure values along with corresponding wave shape changes as a function of distance along the ground. The peak overpressure value rises and falls as a function of distance in much the same manner as the surface level of the ocean in the presence of waves. Although not shown in the figure, significant differences in wave shape were measured at separation distances as small as 50 feet. Such variations as these, which have also been observed on other occasions (see ref. 1), are believed to result from temperature and velocity anamolies in the atmosphere, particularly the lower layers. The fact that the measured median values of table XVII are generally lower than the calculated values for a standard atmosphere is believed to result directly from the scattering effects of the atmosphere.

Lateral-Spread Patterns

In order to summarize the results pertaining to the lateral-spread patterns in the test area, the comparable pressure data are plotted in figure 10 as a function of distance from the ground track of the aircraft. Data are included for 8 flights during a particular day and include measurements made at 3 permanent measurement stations and with the use of a mobile recording station at an 8-mile distance on the opposite side of the track. For each of the permanent recording stations, 1 data point was obtained for each flight, whereas 5 data points were recorded for each flight at the mobile recording station. There is noted to be some scatter in the overpressure values at all measuring stations. The most scatter and the highest overpressures occur at station 3 for this particular day's operations. From an inspection of similar data for other days of operation, it was noted that the largest scatter and highest overpressures do not always occur at station 3, but also might occur at any of

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the other stations. Also shown on the figure is a calculated curve of nominal overpressure values for these flight conditions, along with the calculated cut-off points for atmospheric refraction assuming a zero wind condition (see ref. 7). For the data shown in the figure, there was a prevailing wind generally from left to right (northwest to southeast). Such a wind occurred on the majority of the days of operation. There is a possibility of a shifting of the whole pressure pattern, generally to the right, for such wind conditions. Such a shift of the pressure pattern is judged to have occurred on some occasions when waveforms of type c (see fig. 4) were measured at the upwind measuring station. Such waveforms are consistently measured near the edge of the pressure pattern. Another result which suggests some shifting of the pressure pattern is the fact that in many cases, as for instance those of figure 10, measured overpressures at station 3 were as high as or higher than those at station 1.

Correlation Between Inside and Outside Measurements

The measured data have been analyzed for the purpose of establishing some correlation, if possible, between the inside measurements and the outside measurements. There is reason to believe that the inside microphone may give an indication of the overall dynamic response of the building since it integrates all of the pressure fluctuations in its vicinity due to motions of the building components. Such a measurement might, therefore, be significant with regard to judgements of acceptability by indoor observers. One of the findings of the above studies is illustrated in figure 11. In the upper part of the figure are shown 2 markedly different waveforms as measured for airplane A at the outside microphone measuring location of station 1. Even though the overpressure values and the associated wave shapes differ, the wavelengths are nearly the same. The bottom traces are the corresponding pressure-time histories measured at the inside microphone location of the test house. The most obvious result is that the inside pressure traces are very nearly identical despite the marked differences in the outside pressure traces.

The results of figure 11, of course, apply to a particular aircraft. Different results are obtained, as illustrated in figure 12, for different aircraft. In the top part of the figure are the outside pressure traces for aircraft A and C, and in the lower part of the figure are the corresponding inside pressure traces. Although the outside pressure traces differ in some detail, the major difference is in the wavelength. The inside pressure traces are seen to differ markedly in character, the trace with the fluctuations of lower frequency being associated with the outside wave of longer duration or wavelength.

The above results suggest that the peak pressure alone is not the dominant factor in building response, but that a combination of peak pressure and time duration (impulse) may be important. Figure 13 contains a presentation of the comparable inside and outside measurements to illustrate a possible correlation of these data. Inside peak overpressures are plotted as a function of positive impulse values as determined from outside pressure measurements and as listed in tables I through XIV. The large number of data points for aircraft A are represented by the hatched area, whereas the relatively few data for aircraft B

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are shown as circles. The inside pressure values are noted to increase generally as the outside impulse values increase, and thus are higher for the larger aircraft.

CONCLUDING REMARKS

The material of this paper includes interim tabulations and analyses of the sonic-boom pressure data measured in the Oklahoma City community response experiments. The results were characterized by variations in both the peak overpressures and the impulse functions of the sonic-boom signatures due to the effects of the atmosphere. The median values of the measurements are generally lower than those predicted based on a standard atmosphere. It has not been determined at this time what type of statistical distribution describes these phenomena.

Langley Research Center,
National Aeronautics and Space Administration,
Langley Station, Hampton, Va., July 1, 1964.

Approved For Release 2005/05/16 : CIA-RDP71B00822R000100280002-6

Approved For Release 2005/05/16 : CIA-RDP71B00822R000100280002-6

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Table I.- Summary Of Sonic Boom Data For Various Flights Of Airplane A For An Altitude Range Of 36,000 To 41,000 Feet

OPERATING CONDITIONS				WEATHER				SONIC BOOM PRESSURE SIGNATURE DATA																
								Station 1					Station 3					Station 4				
Date	Flight No.	Time	Mach No.	Surface Temp.	Surface Winds	Cloud Cover	Precip-itation	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape
41,000 FT.																						
4-21-64	1/24	956	1.0	51°	360/5	○	None	1.07	–	0.047	0.0447	NP	0.91	–	0.045	0.0448	NR	1.0	–	0.047	0.0425	N
"	2/25	900	1.0	65°	040/5	"	"	.77	–	.048	.0401	NR	1.07	–	.046	.0443	NR	1.15	–	.040	.0135	N
"	3/26	910	1.0	"	"	"	"	.65	–	.046	.0154	R	1.17	–	.036	.0445	NR	1.17	–	.043	.0174	NR
38,000 FT.																						
1-7-64	3/11	1456	1.5	33°	340/10	○	None	1.00	0.36	0.054	0.0455	NP	0.83	0.30	0.054	0.0463	NR	0.83	0.38	0.046	0.0137	I
"	4/12	1530	1.5	38°	330/15	"	"	.90	.40	.051	.0451	NR	.47	.17	.058	.0151	R	.51	.44	.054	.0145	N1
"	5/13	1605	1.5	37°	330/10	"	"	.73	.41	.054	.0433	NR	.80	.39	.050	.0448	N	.66	.38	.046	.0144	NP
1-13-64	1/20	1547	1.5	38°	350/10	"	"	.79	.38	.051	.0461	NR	.67	.47	.045	.0445	NR	–	–	–	–	–
"	2/21	1629	1.5	45°	360/10	"	"	.81	.41	.047	.0446	NR	.63	.37	.050	.0196	NR	.64	.36	.053	.0174	NP
"	3/22	1455	1.5	54°	350/15	"	"	1.16	.45	.041	.0485	N	.96	.31	.050	.0430	NP	.71	.30	.064	.0147	NR
"	4/23	1525	1.5	56°	340/15	"	"	.84	.40	.046	.0445	NR	.58	.37	.048	.0190	NR	.79	.38	.054	.0164	P
"	5/24	1601	1.5	50°	350/10	◐	"	.88	.41	.045	.0441	NR	.75	.31	.047	.0441	NR	.96	.39	.046	.0125	P
"	6/25	1755	1.5	"	"	"	"	.66	.39	.046	.0464	NR	.54	.30	.053	.0403	NR	.54	.30	.056	.0161	N1
1-12-64	1/26	700	1.5	31°	330/15	"	"	–	–	–	–	–	.69	.34	.053	.0419	NR	–	.35	–	–	–
"	2/27	758	1.5	"	"	"	"	.90	.36	.051	.0433	NP	.68	.38	.054	.0177	N	.44	.33	.060	.0134	R
37,000 FT.																						
1-4-64	1/1	1049	1.5	39°	080/10	⊕	None	0.77	0.54	0.056	0.0487	R	–	–	–	–	–	–	–	–	–	–
1-5-64	1/5	1456	1.5	38°	360/15	"	RW	.94	.54	.051	.0477	NR	–	0.19	–	–	–	0.34	0.43	0.066	0.0100	R
"	2/4	1524	1.5	39°	340/10	"	"	.77	.51	.055	.0474	NR	0.84	.31	0.050	0.0445	N	.47	.36	.055	.0150	NR
1-6-64	4/8	1754	1.5	38°	360/5	"	None	.86	.39	.044	.0443	NR	.83	.38	.043	.0174	N	.57	.31	.050	.0147	NP
1-7-64	1/9	849	1.5	40°	330/5	◐	"	1.30	.46	.044	.0485	P	.98	.39	.046	.0435	N	.74	.36	–	–	P
"	2/10	1047	1.5	36°	"	"	"	.86	.31	.045	.0434	NP	1.04	.31	.047	.0473	N	.74	.37	.051	.0150	P
36,000 FT.																						
1-5-64	1/3	1254	1.5	35°	360/15	⊕	RW	0.59	0.45	0.054	0.0476	–	–	–	–	–	–	0.39	0.60	0.060	0.0112	○
1-6-64	1/5	1032	1.5	40°	350/15	○	None	70	.45	.047	.0471	NR	1.06	0.45	0.054	0.0186	N	1.01	.30	–	–	P
"	2/6	1459	1.5	45°	"	⊕	"	1.17	.40	.046	.0474	NP	.87	.45	.047	.0411	N	.65	.45	.048	.0151	NP
"	3/7	1541	1.5	41°	360/10	"	"	1.03	.39	.044	.0473	NP	.77	.47	.047	.0410	NR	.55	.40	.054	.0171	NR
1-8-64	1/14	1246	1.5	38°	340/10	⊕	"	.84	.39	.045	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	40°	300/15	○	[illegible]	[illegible]	[illegible]	.047	[illegible]	[illegible]	70	.46	.041	.0161	NR	.63	.39	.041	.0164	NP
"	2/16	1300	1.5	50°	315/10	"	"	.93	.42	.045	[illegible]	[illegible]	.65	.31	.047	.0414	N	.50	.34	.046	.0155	–
"	4/17	1547	1.5	45°	"	"	"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.64	[illegible]	[illegible]	[illegible]	NR	[illegible]	[illegible]	–	[illegible]	–
"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–
"	[illegible]	[illegible]	[illegible]	35°	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Approved For Release 2005/05/16 : CIA-RDP71B00822R000100280002-6

Approved For Release 2005/05/16 : CIA-RDP71B00822R000100280002-6

Table II.- Summary Of Sonic Boom Data For Various Flights Of Airplane A For An Altitude Range Of 33,000 To 35,000 Feet

OPERATING CONDITIONS				WEATHER				SONIC BOOM PRESSURE SIGNATURE DATA																
								Station 1					Station 3					Station 4						
Date	Flight No.	Time	Mach No.	Surface Temp.	Surface Winds	Cloud Cover	Precip-itation	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape
35,000 FT.																								
[illegible]	[illegible]	[illegible]	1.5	82°	240/[illegible]	⦶	None	1.15	0.25	0.043	0.0219	NR	0.74	0.26	0.046	0.0171	NR	0.55	0.11	[illegible]	[illegible]	NR
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]°	[illegible]	C	"	.97	.25	.042	0059	R	.45	.21	.046	.0067	NR	.45	.21	.059	.010	NR
[illegible]	[illegible]	[illegible]	1.5	63°	160/15	⦶	"	1.46	.35	.040	.0074	N	1.53	.31	.039	.0057	NR	.66	.22	.051	.0159	NR
[illegible]	[illegible]	[illegible]	1.5	[illegible]°	310/10	C	"	1.32	.27	.048	0039	NR	.98	.33	.042	.0070	N	.94	.21	.051	.0174	
[illegible]	[illegible]	[illegible]	1.5	"	"	"	"	1.10	.25	.042	.0061	NR	1.33	.21	.043	.0070	NR	1.13	.18	.044	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	1.5	81°	240/[illegible]	⊕	RW	.58	.19	.064	.0160	—	1.74	.52	.040	.0062	R	.42	.11	.052	.0152	R
"	[illegible]	[illegible]	1.5	"	"	"	"	1.16	.29	.052	.0071	NR	.74	.35	.053	.0101	NR	.42	.11	.053	[illegible]	R
[illegible]	[illegible]	[illegible]	1.5	40°	250/15	⦶	None	.71	.26	.059	0044	R	.31	.57	.061	.0145	R	.55	.10	.046	.0115	R
[illegible]	[illegible]	[illegible]	1.5	70°	160/5	⦶	"	.88	.35	.045	.0067	R	1.04	.36	.042	.0062	N	.22	.26	.042	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	1.5	"	"	"	"	1.07	.32	.050	.0040	NR	.97	.36	.047	.0071	NR	.51	.29	.042	.0062	N
[illegible]	[illegible]	[illegible]	1.5	3°	270/10	⦶	"	1.32	.29	.042	.0050	N	.15	.25	.040	.0062	N	71	.22	.040	.0155	NR
[illegible]	[illegible]	[illegible]	1.5	"	"	"	"	1.06	.33	.041	0061	R	1.04	.35	.040	.0096	N	.75	.34	.044	.0174	NR
[illegible]	[illegible]	[illegible]	1.5	70°	180/10	⦶	"	.96	.28	.047	.0045	NR	.76	.29	.050	.0199	N	—	—	—	—	—
"	[illegible]	[illegible]	1.5	"	"	"	"	.90	.30	.044	.0067	NR	.83	.35	.050	.0125	NR	.54	.20	.045	.0157	R
[illegible]	[illegible]	[illegible]	1.5	18°	360/10	○	"	1.05	.42	.043	.0204	NR	1.04	.40	.040	.0045	N	1.03	.37	.041	.0093	N
"	[illegible]	[illegible]	1.5	"	"	"	"	.97	.41	.045	.0047	NR	1.01	.35	.040	.0097	N	.69	.28	.044	.0145	NR
[illegible]	[illegible]	[illegible]	1.5	38°	180/15	⦶	"	.87	.37	.046	.0058	NR	.97	.37	.042	.0057	R	.99	.36	.046	.0140	N
"	[illegible]	[illegible]	1.5	"	"	"	"	.85	.38	.046	.0063	NR	.73	.28	—	—	NR	.70	.24	.046	.0175	NR
"	[illegible]	[illegible]	1.5	39°	"	⦶	"	.74	.29	.046	.0040	NR	.88	.39	—	—	NR	1.00	.37	.050	.0161	N
"	[illegible]	[illegible]	1.5	54°	100/[illegible]	"	RW	1.61	.30	.041	.0095	R	1.83	.44	.040	—	N	.90	.13	.068	.0094	R
"	[illegible]	[illegible]	1.5	"	"	"	"	.67	.21	.049	.0090	R	1.01	.25	.041	.0042	NR	.73	.32	.050	.0175	R
[illegible]	[illegible]	[illegible]	1.5	51°	170/10	⦶	RWF	.81	.21	.051	.0034	R	.70	.25	.052	.0076	R	1.19	.45	.041	.0104	N
"	[illegible]	[illegible]	1.5	"	"	"	"	1.35	.34	.044	.0045	N	1.35	.41	.044	.0063	R	.50	.14	.052	.0140	NR
"	[illegible]	[illegible]	1.5	55°	"	"	RWTF	1.11	.27	.049	.0062	R	.76	.37	.047	.0056	NR	.78	—	.051	.0140	NR
"	[illegible]	[illegible]	1.5	"	"	"	"	1.34	.25	.043	.0056	NR	1.03	.34	.041	.0043	NR	1.16	—	.050	.0105	R
[illegible]	[illegible]	[illegible]	1.5	[illegible]°	240/15	⦶	None	1.51	.44	.052	.0052	R	1.11	.27	.040	.0019	N	.75	.24	.060	.0110	C
"	[illegible]	[illegible]	1.7	"	"	"	"	.95	.45	.044	.0015	R	1.11	.42	.044	[illegible]	NR	[illegible]	.21	[illegible]	[illegible]	R
[illegible]	[illegible]	[illegible]	1.0	51°	360/5	○	"	1.02	—	.042	.0065	NR	1.35	—	.039	.0040	N	.97	—	.041	.0093	N
34,000 FT.																								
[illegible]	[illegible]	[illegible]	1.5	[illegible]°	[illegible]/10	⦶	"	[illegible]	[illegible]	[illegible]	[illegible]	R	1.05	[illegible]	[illegible]	[illegible]	N	[illegible]	[illegible]	[illegible]	[illegible]	R
33,000 FT.																								
[illegible]	[illegible]	[illegible]	1.5	[illegible]	[illegible]	⦶	"	1.46	0.43	0.057	[illegible]	R	1.15	0.34	0.041	0.0150	N	1.73	0.35	0.030	0.0123	F
[illegible]	[illegible]	[illegible]	1.5	[illegible]	[illegible]	⦶	"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.46	[illegible]	[illegible]	[illegible]	[illegible]	.24	047	0175	NR
[illegible]	[illegible]	[illegible]	1.7	"	"	"	"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Approved For Release 2005/05/16 : CIA-RDP71B00822R000100280002-6

Approved For Release 2005/05/16 : CIA-RDP71B00822R000100280002-6

Table III. - Summary Of Sonic Boom Data For Various Flights Of Airplane A

For An Altitude Of 32,000 Feet

OPERATING CONDITIONS				WEATHER				SONIC BOOM PRESSURE SIGNATURE DATA														
								Station 1					Station 3					Station 4				
Date	Flight No.	Time	Mach No.	Surface Temp.	Surface Winds	Cloud Cover	Precip-itation	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape
[illegible]-64	3/[illegible]	7[illegible]	1.5	37°	350/1[illegible]	⦶	None	1.10	0.41	0.047	0.0[illegible]24	N	1.46	0.3[illegible]	0.04[illegible]	0.0[illegible]	[illegible]	0.72	0.[illegible]1	0.046	[illegible]	N
"	4/[illegible]	1[illegible]	1.5	"	"	"	"	1.34	.4[illegible]	.048	.0[illegible]54	NP	1.[illegible]4	.37	.040	[illegible]	C	1.03	.[illegible]8	.05[illegible]	.01[illegible]	NI
"	5/[illegible]	12[illegible]6	1.5	5[illegible]°	350/15+[illegible]	"	"	.72	[illegible]	.052	.0[illegible]10	R	[illegible]	.3[illegible]	.04[illegible]	.0[illegible]8	F	1.0[illegible]	.31	.049	[illegible]	[illegible]
"	[illegible]	12[illegible]	1.5	"	"	"	"	1.0[illegible]	.44	.056	.0[illegible]16	NP	1.11	.33	.04	.0[illegible]47	NP	.91	.[illegible]8	.048	[illegible]	N
"	7/[illegible]	1[illegible]	1.5	50°	350/10	"	"	.91	.36	.061	.0[illegible]98	N[illegible]	1.11	.34	.030	.0[illegible]48	NP	.93	.[illegible]1	.044	[illegible]	N[illegible]
"	[illegible]	1[illegible]1	1.5	"	"	"	"	.72	.3[illegible]	.052	.0[illegible]19	R	1.3[illegible]	.36	.047	.0[illegible]	NP	.91	.[illegible]1	.05[illegible]	[illegible]17	N
[illegible]-64	1/[illegible]	7[illegible]1	1.5	58°	120/10	"	"	1.10	.47	.044	.0[illegible]64	N	.[illegible]	.37	.04[illegible]	.0[illegible]14	N	.61	.[illegible]1	.051	[illegible]	N[illegible]
"	[illegible]/33	7[illegible]1	1.5	"	"	"	"	—	—	—	—	—	.[illegible]	.34	.040	[illegible]	N	.[illegible]1	.[illegible]	.047	.01[illegible]	[illegible]
"	3/[illegible]7	7[illegible]0	1.5	36°	"	"	"	.97	.34	.045	.0[illegible]3[illegible]	NR	1.04	.3[illegible]	.044	.0[illegible]	NR	.[illegible]7	.[illegible]3	.050	[illegible]	N[illegible]
"	4/3[illegible]	[illegible]	[illegible]	"	"	"	"	1.1[illegible]	.3[illegible]	.043	.0[illegible]75	N	1.3[illegible]	.43	.040	.0[illegible]	NP	.4[illegible]	.36	.0[illegible]1	[illegible]	N
"	[illegible]/3[illegible]	[illegible]	1.5	45°	"	⦶	"	1.19	.36	.043	.0[illegible]63	N	1.15	.3[illegible]	.04[illegible]	.0[illegible]61	N.	.90	.[illegible]1	.04[illegible]	.014[illegible]	N[illegible]
"	[illegible]/40	1[illegible]59	1.6	"	"	"	"	.81	.33	.045	.0[illegible]8	R	1.15	.43	.037	.0[illegible]31	N	.65	.[illegible]3	.048	.01[illegible]	N[illegible]
[illegible]-64	1/43	7[illegible]	1.5	3[illegible]°	340/15	⊕	"	.68	.[illegible]8	.053	.0199	R	—	—	—	—	—	[illegible]4	.10	.0[illegible]6	.0117	R
"	[illegible]/44	7[illegible]	1.5	"	"	"	"	.87	.[illegible]9	.045	.0191	R	—	—	—	—	—	.67	.[illegible]	.046	.0151	[illegible]
"	3/4[illegible]	[illegible]	1.5	4[illegible]°	[illegible]0/15+[illegible]	"	L	.65	.[illegible]6	.04[illegible]	.0173	R	—	—	—	—	—	.49	.16	.051	.013[illegible]	[illegible]
"	4/46	7[illegible]9	1.5	"	"	"	"	1.40	.35	.041	.0[illegible]76	P	—	—	—	—	—	.79	.17	.043	.0124	N[illegible]
[illegible]-13-64	1/47	7[illegible]0	1.5	35°	340/10+15	⦶	None	.81	.35	.047	.0[illegible]57	R	.66	.[illegible]5	.056	.0165	R	—	—	—	—	—
"	[illegible]/48	7[illegible]8	1.5	"	"	"	"	1.0[illegible]	.38	.045	.0[illegible]84	R	.87	.38	.04[illegible]	.0[illegible]39	R	—	.36	—	—	—
"	7/52	1559	1.5	45°	0[illegible]0/4	"	"	1.1[illegible]	—	.043	.0[illegible]7[illegible]	R	1.[illegible]	.35	.041	.0[illegible]57	NP	1.1[illegible]	.[illegible]1	.045	.01[illegible]3	NP
"	8/54	1[illegible]20	1.5	"	"	"	"	1.[illegible]5	—	.043	.0[illegible]87	NR	.9[illegible]	.[illegible]9	.047	.0[illegible]08	NR	.70	.30	.050	.0167	N[illegible]
[illegible]-14-64	1/54	7[illegible]1	1.5	30°	160/10	○	"	.96	—	—	—	—	1.18	.33	.041	.0[illegible]0[illegible]	N	.[illegible]8	.34	.043	.0[illegible]15	N[illegible]
"	[illegible]/5[illegible]	7[illegible]1	1.5	"	"	"	"	—	—	—	—	—	1.[illegible]3	.34	.039	.0[illegible]08	N	.9[illegible]	.[illegible]5	.039	.0176	NI
"	3/56	1[illegible]	1.5	36°	180/10+15	"	"	1.07	—	—	—	—	.[illegible]5	.3[illegible]	.054	.0[illegible]53	N[illegible]	.73	.31	.044	.0160	N[illegible]
"	4/57	[illegible]3	1.5	"	"	"	"	1.37	.[illegible]8	.041	.0[illegible]38	NP	.70	.[illegible]7	.039	.0135	N	.71	.[illegible]8	.04[illegible]	.015[illegible]	N[illegible]
"	5/58	13[illegible]9	1.5	53°	1[illegible]0/[illegible]0	⦶	"	1.3[illegible]	.39	.043	.0[illegible]59	NP	—	—	—	—	—	1.37	.30	.04[illegible]	.0[illegible]1[illegible]	[illegible]
"	6/5[illegible]	1[illegible]59	1.5	"	"	"	"	1.[illegible]	.34	.04[illegible]	.0[illegible]16	NR	—	—	—	—	—	1.44	.36	.050	.0[illegible]19	F
"	7/60	1558	1.5	"	"	"	"	1.04	.3[illegible]	.043	.0[illegible]	NR	.[illegible]	.30	.040	.0190	N[illegible]	.6[illegible]	.[illegible]8	.051	.017[illegible]	—
"	8/61	16[illegible]7	1.5	"	"	"	"	.87	.[illegible]5	.043	.0[illegible]49	NR	.[illegible]3	.[illegible]8	.046	.019[illegible]	N[illegible]	.47	.1[illegible]	.077	.017[illegible]	[illegible]
[illegible]-15-64	1/63	7[illegible]1	1.5	33°	[illegible]0/10	⦶	"	1.[illegible]	.30	.050	.0[illegible]71	NP	.[illegible]5	.3[illegible]	.04[illegible]	.0[illegible]60	N[illegible]	.47	.[illegible]3	.050	.0141	N[illegible]
"	[illegible]/64	7[illegible]1	1.[illegible]	"	"	"	"	1.11	.36	.047	.0[illegible]7	N[illegible]	1.1[illegible]	.3[illegible]	.044	.0[illegible]54	N	.70	[illegible]	.047	.01[illegible]	N[illegible]
"	3/6[illegible]	1[illegible]	1.5	38°	340/15+3[illegible]	⦶	"	1.14	.37	.045	.0[illegible]	F	1.1[illegible]	.36	.041	.0[illegible]	N	.48	[illegible]	.0[illegible]0	.0141	[illegible]
"	5/[illegible]	1557	1.5	40°	[illegible]30/15+[illegible]5	⊕	"	.[illegible]	.[illegible]1	.040	.0[illegible]	[illegible]	.5[illegible]	[illegible]	.04[illegible]	.01[illegible]	[illegible]	.30	.1[illegible]	.039	.01[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	1.5	"	"	"	"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]-64	[illegible]/7[illegible]	7[illegible]	1.5	[illegible]1°	Calm	○	"	.[illegible]8	.[illegible]	[illegible]	[illegible]	N	.[illegible]7	[illegible]	[illegible]	[illegible]	[illegible]	.66	.17	.049	.01[illegible]	N[illegible]
[illegible]	3/71	1[illegible]	[illegible]	[illegible]4°	1[illegible]0/4	[illegible]	"	1.[illegible]5	[illegible]	.047	[illegible]	N[illegible]	.[illegible]0	[illegible]	.04[illegible]	[illegible]	N[illegible]	.[illegible]	.[illegible]	.0[illegible]	.0151	N[illegible]
[illegible]	4/7[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.[illegible]5	[illegible]	.04[illegible]	[illegible]	N[illegible]	[illegible]	[illegible]	.04[illegible]	[illegible]	N[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	N[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.[illegible]1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.0[illegible]	.01[illegible]	N

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Table III.- Continued.

OPERATING CONDITIONS				WEATHER				SONIC BOOM PRESSURE SIGNATURE DATA														
								Station 1					Station 3					Station 4				
Date	Flight No.	Time	Mach No.	Surface Temp.	Surface Winds	Cloud Cover	Precip-itation	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape
[illegible]	[illegible]	[illegible]	1.5	[illegible]	160/15+25	⦶	None	1.31	0.21	0.046	0.0214	NF	1.21	0.32	[illegible]	[illegible]	NP	1.12	0.25	0.047	0.0192	[illegible]
"	[illegible]	[illegible]	1.5	50°	"	⊕	RW	[illegible]	[illegible]	.047	.0271	NR	.87	.26	.041	.0177	N	.78	.19	.052	.0125	[illegible]
"	[illegible]	[illegible]	1.5	"	"	"	"	[illegible]	.37	.042	.0214	NP	.71	.33	.047	.0197	NR	.81	.22	.053	.0167	[illegible]
[illegible]	[illegible]	[illegible]	1.5	42°	120/10	"	"	.95	[illegible]	.048	[illegible]	NK	.76	.32	.053	.0169	NK	.62	.20	.051	.0141	[illegible]
[illegible]	[illegible]	[illegible]	1.5	28°	320/15	○	None	1.21	.40	.042	.0314	NP	.76	.30	.041	[illegible]	NK	.78	—	.048	[illegible]	[illegible]
"	[illegible]	[illegible]	1.5	"	"	"	"	1.32	.33	.045	.0327	N	.71	.35	.044	[illegible]	NK	.70	—	.052	[illegible]	[illegible]
	[illegible]	[illegible]	1.5	50°	320/20+35	"	"	1.70	.28	.047	.0265	P	1.01	.35	.046	.0181	N	[illegible]	.15	[illegible]	[illegible]	[illegible]
	[illegible] 10	[illegible]	1.5	"		"	"	.76	.35	.050	.0256	R	1.95	.24	.046	[illegible]	O	[illegible]	.19	.047	[illegible]	[illegible]
	[illegible] 11	1559	[illegible]	"	"	⦶	"	1.21	.29	.060	.0242	O	1.73	.29	.040	.0207	O	.59	.22	.051	[illegible]	[illegible]
	[illegible] 12	1623	1.5	"	"	"	"	1.23	.33	.044	[illegible]	NP	1.05	.31	.048	.0200	O	.72	.26	[illegible]	.0227	—
[illegible]	3 [illegible]	921	1.5	32°	200/10+25	"	"	[illegible]	.28	.049	.0252	NR	.91	.56	.045	[illegible]	N	.42	.12	.064	.0124	[illegible]
	4/[illegible]	[illegible]	1.5	"	"	"	"	1.18	.31	.045	.0214	NR	1.25	.56	.041	[illegible]	NP	.37	[illegible]	.054	.0166	[illegible]
"	7 [illegible]	[illegible]	1.5	45°	320/10	"	"	1.22	.34	.050	.0252	NF	.86	.56	.051	.0218	N	.63	.17	[illegible]	.0117	[illegible]
[illegible]	1/100	700	1.5	33°	020/15	⦶	"	1.18	.27	.052	.0273	NR	1.31	.48	.052	.0293	P	.48	.11	.066	.0170	[illegible]
	2/101	[illegible]	1.5	"	"	"	"	1.01	.27	.050	.0276	NR	1.94	.29	.046	.0207	[illegible]	.41	.09	.066	.0166	[illegible]
	3 102	721	1.5	31°	010/16+19	⊕	S	1.17	.24	.049	.0296	NR	.90	.49	.055	.0285	NR	.45	.14	[illegible]	[illegible]	[illegible]
	4 103	[illegible]	1.5	"	"	"	"	.82	.33	.060	.0264	R	1.24	.35	.051	.0225	P	.36	.12	.067	[illegible]	[illegible]
	5 104	[illegible]	1.5	27°	250/15+25	⦶	None	.75	.26	.056	.0283	R	1.25	.38	.062	.0213	[illegible]	.21	.10	.067	.0152	[illegible]
	6 105	1400	1.5	"	"	"	"	.90	.29	.055	.0277	R	.96	.48	.051	.0281	NR	.19	.05	.066	[illegible]	[illegible]
[illegible]	1 [illegible]	658	1.5	20°	250/5	⦶	"	—	—	—	—	—	1.00	.33	.042	.0194	N	.70	.24	.047	.0159	N
	2 108	730	1.5	"	"	"	"	1.36	.40	.043	.0316	N	1.19	.35	.041	.0247	N	.91	.27	.050	[illegible]	N
	3 109	[illegible]	[illegible]	"	"	"	"	1.29	.41	.045	.0306	NR	1.18	.42	.045	.0272	N	1.02	.30	.049	.0215	NI
"	4 110	[illegible]	1.5	"	"	"	"	1.16	.34	.042	.0242	NR	1.30	.43	.043	.0244	N	.90	.21	.050	.0221	NI
"	5 111	[illegible]	1.5	32°	260/10	"	"	1.14	.39	.052	.0201	NR	.92	.33	[illegible]	.0249	NR	.60	.20	.057	.0133	NI
"	6/112	1400	1.5	"	"	"	"	1.77	.47	.045	.0345	P	.85	.30	.046	.0212	N	.62	.20	.051	.0122	NK
"	7/113	1601	1.5	26°	"	"	"	.90	.42	.052	.0219	K	.56	.32	.056	.0120	K	1.32	.33	.051	.0216	[illegible]
	8 114	[illegible]	1.5	"	"		"	.68	.36	.052	[illegible]	K	.60	.27	.047	.0181	NK	[illegible]	.21	[illegible]	.0227	NI
[illegible]	3 [illegible]	921	[illegible]	25°	150/15	⦶		—	—	—	—	—	[illegible]	.42	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.046	[illegible]	II
	4 [illegible]	1000	[illegible]					[illegible]	[illegible]	[illegible]	[illegible]	N	1.24	.39	.046	[illegible]	N	[illegible]	[illegible]	[illegible]	.0116	III
	5 [illegible]	[illegible]	[illegible]	42°	100/10+10	○	"	[illegible]	.56	[illegible]	[illegible]	N	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	"				[illegible]	[illegible]	[illegible]	[illegible]	N	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	120/10+15	⦶		[illegible]	.41	.049	[illegible]	NK	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.10	.41	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

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Table III.- Concluded.

OPERATING CONDITIONS				WEATHER				SONIC BOOM PRESSURE SIGNATURE DATA														
								Station 1					Station 3					Station 4				
Date	Flight No.	Time	Mach No.	Surface Temp.	Surface Winds	Cloud Cover	Precip-itation	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape
[illegible]	7 121	1600	1.5	37°	360/15	⦶	None	1.12	0.34	0.044	0.0250	NR	0.93	0.26	0.043	0.02[illegible]	N	0.59	0.25	0.043	0.0177	N
	8 122	1601	1.5	"	"	"	"	1.34	.25	.039	.0231	NR	.69	.26	.026	.0152	R	.47	.11	.050	.0141	R
[illegible]	3 123	931	1.5	27°	120/10	"	"	1.03	.35	.052	.0256	NR	.93	.39	.050	.0237	N	.57	.24	.058	.0165	N[illegible]
	4 124	1000	1.5					1.22	.30	.045	.0284	NT	.90	.33	.042	.0202	NT	1.04	.27	.050	.0221	[illegible]
	[illegible] 125	1000	1.5	49°	130/15	⦶		1.37	.37	.049	.0278	R	.93	.27	.055	.0201	N	1.42	.20	.050	.0142	[illegible]
	6 126	1400	1.5	"		"		.98	.34	.055	.0267	NR	1.49	.38	.046	.0261	[illegible]	.57	.19	.061	.0174	R
	7 127	1500	1.5	55°	200/10			1.52	.37	.048	.0205	NT	.74	.28	.054	.0219	NR	.63	.20	.052	.0222	R
[illegible]	[illegible] 141	900	1.5	22°	240/10			.92	.36	.045	.0252	NR	.95	.36	.038	.0215	NR	.70	.22	.044	.017[illegible]	NR
	4 142	1000	1.5	"		"	"	1.12	.42	.046	.0252	NP	1.24	.25	.044	.0254	NP	1.19	.23	.033	[illegible]	N[illegible]
[illegible]	1 143	700	1.5	27°	170/5+10	○	"	.10	.34	.044	.0236	NR	.87	.35	.044	.0177	NR	.54	.22	.052	.0141	NR
	2 145	730	1.5	"		"	"	.72	.40	.044	.0241	NR	1.14	.41	.041	.0276	NP	.72	.25	.044	.0158	NR
	7 152	1600	1.5	45°	170/5+7	⊕	"	1.70	.36	.039	.0229	P	1.86	.42	.040	.0267	P	.53	.17	.061	.0147	—
	7 154	1610	1.5	"	"	"	"	1.63	.37	—	—	P	1.06	.32	.042	.0194	—	.20	.10	.060	.0011	R
[illegible]	1 156	700	1.5	28°	320/10+15	○	"	1.03	.50	.046	.0244	NP	1.10	.37	.044	.0260	N	.81	.29	.051	.0260	NR
	2 157	721	1.5	"	"	"	"	.90	.49	.047	.0244	NR	1.06	.36	.046	.0243	N	.71	.27	.052	.0187	N
	3 158	921	1.5	37°	"	-	"	.81	.48	.052	.0223	NR	.83	.35	.048	.0258	N	.84	.29	.050	.0215	N
	4 159	921	1.5	"	"	"	"	.89	.41	.045	.0216	N	.95	.38	.044	.0284	NR	.59	.23	.049	.0173	NR
[illegible]	1 172	900	1.5	44°	200/15+20	"	"	.99	.38	.044	.0234	NR	1.27	.32	.041	.0267	NP	1.10	.30	.026	.0182	N[illegible]
	2 173	1111	1.5	"	"	"	"	.16	.38	.043	.0210	NR	1.34	.34	.043	.0250	NP	.79	.27	.046	.0187	N
	3 174	1100	1.5	54°	210/15+20	"	"	1.16	.42	.040	.0220	NP	.97	.34	.044	.0258	NR	.69	.24	.053	.0123	NR
	4 175	1119	1.5	"	"	"	"	.70	.34	.047	.0170	R	1.06	.34	.047	.0251	N	.78	.26	.047	.0169	N
	5 176	1201	1.5	60°	"	"	"	.73	.36	.047	.0269	R	.94	.32	.043	.0212	N	.98	.27	.049	.0196	N
	6 177	1220	1.5	"	"	"	"	.10	.36	.043	.0224	NR	1.02	.34	.045	.0267	N	1.21	.33	.032	.0188	[illegible]
[illegible]-64	5/182	1100	1.5	55°	170/15+20	⊕	F	1.31	.40	.046	.0338	NR	.79	.29	.041	.0191	N	.65	.19	.048	[illegible]	NR
	6/183	1120	1.5	"	"		"	1.48	.39	.047	.0209	NP	1.07	.32	.043	.0239	N	.75	.19	.052	.0203	NR
[illegible]-64	1/154	700	1.5	48°	170/10	⦶	None	1.00	.40	.046	.0220	NR	1.15	.33	.045	.0226	N	.72	.24	.050	.0160	N
	2/15[illegible]	720	1.5	"	"	"	"	.76	.28	.049	.0217	R	1.19	.32	.040	.0199	N	.61	.24	.048	.0114	N
	3/160	1000	1.5	52°	170/15	"	"	.56	.30	.048	.0155	R	1.11	.42	.049	.0272	NR	.94	.26	.050	.0201	NR
	4/167	720	1.5	"		"	"	.56	[illegible]	.049	.0162	R	1.40	.41	.044	.0208	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	N[illegible]
	[illegible]	1021	1.5	61°	170/20+25	⊕		[illegible]	[illegible]	.045	.0252	P	.80	.33	[illegible]	.0220	NR	.65	.20	[illegible]	.0147	NR
	6 [illegible]	1120	1.5					[illegible]	.34	[illegible]	.0248	[illegible]	.80	.30	[illegible]	.0237	—	.75	.27	[illegible]	.0212	NR
	7 [illegible]	1200	1.5					[illegible]	.41	[illegible]	.0240	[illegible]	1.77	.54	[illegible]	.0204	[illegible]	.38	.20	.060	.0127	R
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible] 111	[illegible]	[illegible]	[illegible]	[illegible]		E[illegible]	—	[illegible]	—	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible] 112	[illegible]	[illegible]	[illegible]	"		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	—	—	[illegible]	—	—
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Approved For Release 2005/05/16 : CIA-RDP71B00822R000100280002-6

Approved For Release 2005/05/16 : CIA-RDP71B00822R000100280002-6

Table IV.- Summary Of Sonic Boom Data For Various Flights Of Airplane A

For An Altitude Of 31,000 Feet

OPERATING CONDITIONS				WEATHER				SONIC BOOM PRESSURE SIGNATURE DATA														
								Station 1					Station 3					Station 4				
Date	Flight No.	Time	Mach No.	Surface Temp.	Surface Winds	Cloud Cover	Precip-itation	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape
[illegible]	[illegible]	1220	1.5	40°	170/15+25	◐	None	1.05	0.38	0.047	0.0276	R	1.14	0.29	0.045	0.0255	NR	0.52	0.21	0.051	0.0167	NR
	[illegible]	1351	1.5	"	"	"	"	1.13	.33	.048	.0248	NR	1.31	.36	.045	.0249	NR	.68	.24	.050	[illegible]	NR
	[illegible]	1551	1.5	50°				1.45	.33	.051	.0314	NP	.82	.25	.029	.0143	NR	.78	.29	.044	.0172	NR
	[illegible]	1631	1.5	"	"	"	"	1.69	.34	.047	.0316	NP	1.03	.33	.039	.0248	NR	.67	.23	.050	.0162	NR
[illegible]	[illegible]	927	1.5	35°	160/15+25	◍	"	1.43	.36	.044	.0236	NP	1.46	.33	.042	.0222	P	.84	.22	.048	.0161	N
	[illegible]	1630	1.5	42°	150/10	⊕	LW	.97	.20	.046	.0251	R	.74	.26	.051	.0128	R	.31	.12	.066	.0091	R
[illegible]	[illegible]	1220	1.5	42°	320/15	◐	None	1.18	.24	.051	.0306	NR	1.38	.70	.047	.0314	P	.85	.18	.056	[illegible]	[illegible]
	[illegible]	[illegible]	1.5	"	"		"	1.65	.33	.050	.0311	P	.90	.58	.051	.0225	N	.38	.12	.067	.0127	R
[illegible]	[illegible]	[illegible]	1.5	34°	360/10	○	"	1.28	.45	.042	.0292	N	1.24	.34	.041	.0264	P	1.08	.28	.036	.0183	NR
	[illegible]	[illegible]	1.5	"	"	"	"	1.31	.39	.038	.0261	N	.91	.25	.039	.0221	NR	1.40	.27	.037	.0221	[illegible]
[illegible]	[illegible]	[illegible]	1.5	28°	130/10	"	"	.88	.41	.046	.0248	N	1.04	.35	.041	.0257	N	1.13	.32	.044	.0117	[illegible]
	[illegible]	[illegible]	1.5	"	"	"	"	.94	.47	.046	.0242	NR	1.34	.41	.041	.0267	NP	1.04	.27	.049	.0191	[illegible]
[illegible]	[illegible]	1100	1.5	41°	320/10+15	"	"	.68	.47	.051	.0221	R	.97	.34	.048	.0241	NR	.92	.24	.052	.0161	NR
	[illegible]	[illegible]	1.5	"	"	"	"	.76	.44	.052	.0201	NR	1.05	.34	.048	.0274	N	.67	.21	.053	.0160	NR
	[illegible]	1301	1.5	45°	300/15	"	"	1.12	.44	.051	.0222	NP	1.03	.43	.047	.0282	NR	2.15	.41	.049	.0283	[illegible]
[illegible]	5/168	1100	1.5	47°	300/20+35	◍	"	.99	.34	.042	.0234	NP	1.30	.42	.039	.0241	N	1.18	.30	.046	.0167	NR
	[illegible]	1120	1.5	"	"	"	"	1.41	.33	.040	.0222	P	1.62	.39	.041	—	NP	.81	.24	.045	.0181	NR

Approved For Release 2005/05/16 : CIA-RDP71B00822R000100280002-6

Approved For Release 2005/05/16 : CIA-RDP71B00822R000100280002-6

Table V.- Summary Of Sonic Boom Data For Various Flights Of Airplane A

For An Altitude Of 30,000 Feet

OPERATING CONDITIONS				WEATHER				SONIC BOOM PRESSURE SIGNATURE DATA														
								Station 1					Station 3					Station 4				
Date	Flight No.	Time	Mach No.	Surface Temp.	Surface Winds	Cloud Cover	Precip-itation	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape
[illegible]	1/41	1551	1.5	45°	170/10	⦶	None	1.10	0.33	0.040	0.0252	N	1.15	0.41	0.045	0.0287	N	1.10	0.35	0.042	0.0242	NR
"	2/41	1628	1.8				"	.64	.27	.053	.0207	NR	1.56	.33	.048	.0209	P	—	—	—	—	—
[illegible]	3/41	929	1.5	35°	240/12+1	⦶	"	1.78	.44	.028	.0365	N	.90	.35	.029	.0211	NR	.72	.29	—	—	—
"	4/50	1?8	1.5	"	"	"	"	1.02	.41	.050	.0286	N	.97	.27	.045	.0166	C	.76	.31	.042	.0182	NR
"	5/51	1328	1.5	42°	220/10	"	"	—	—	—	—	—	1.88	.37	.036	.0274	T	1.60	.33	—	—	T
	6/52	1400	1.5	"	"	"	"	1.36	—	.046	.0328	N	2.28	.47	.039	.0294	P	.50	.24	.058	.0143	N
[illegible]	7/145	[illegible]	1.5	40°	200/8	○	"	1.38	.47	.042	.0293	NT	1.25	.33	.039	.0210	C	.43	.18	.052	.0128	NR
"	8/145	1?00	1.5	"	"	"	"	1.17	.46	.046	.0269	NP	1.51	.29	.037	.0254	P	.61	.24	.051	.0286	—
[illegible]	5/151	1330	1.5	44°	VAR 5	⦶	"	1.07	.39	.047	.0256	NR	1.12	.38	.047	.0261	NR	.58	.27	.062	.0111	NR
"	6/152	1400	1.5	"	"	"	"	1.48	.47	.043	.0258	P	2.35	.42	.028	.0240	P	.96	.23	.049	[illegible]	N
[illegible]	8/153	1320	1.5	45°	300/15	○	"	1.29	.39	.041	.0210	NP	1.03	.34	.053	.0244	NR	.46	.18	.062	.0140	R
[illegible]	3/115	1000	1.5	28°	210/4	"	"	1.14	.44	.044	.0238	N	1.49	.41	.041	.0218	N	.88	.26	.040	.0173	N
	4/1??	1?20	1.7	"	"	.	"	1.08	.39	.043	.0225	N	1.15	.37	.036	.0245	N	1.05	.27	.037	.0181	NI
"	5/117	1100	1.5	50°	200/10	.	"	.98	.42	.046	.0247	NR	1.14	.44	.042	.0264	N	.88	.28	.047	.0184	NI
	6/118	1119	1.7	"	"	"	"	.87	.38	.044	.0218	NR	1.48	.43	.041	.0252	NP	.76	.18	.040	.0171	NR
	7/1??	1200	1.5	56°	200/10+20	"	"	.75	.37	.051	.0225	R	1.23	.43	.042	.0271	N	.96	.16	.047	.0168	NI
"	8/200	13?0	1.7	"	"	"	"	1.25	.35	.041	.0195	NP	1.32	.43	.050	.0243	P	.79	.23	.042	.0188	NR
[illegible]	1/200	920	1.5	49°	180/15+25	"	"	.75	.35	.049	.0203	R	.95	.30	.044	.0219	NR	.67	.23	.049	.0164	NR
"	2/201	920	1.7	"	"	"	"	1.40	.38	.041	.0219	NP	1.13	.35	.041	.0228	N	.90	.27	.046	.0187	NI
"	3/202	900	1.5	53°	180/20+25	⦶	"	.66	.36	.049	.0208	R	.91	.32	.044	.0244	NR	1.02	.32	.048	.0209	NI
"	4/203	9?0	1.7	.	"	"	.	1.21	.33	.042	.0197	NP	1.02	.39	.047	.0258	R	.88	.24	.065	.0215	C
	5/204	1100	1.5	62°	200/20+25	"	"	.94	.35	.044	.0274	N	1.06	.29	.036	.0178	NR	.79	.22	.047	.0166	NR
"	6/205	1150	1.7	"	"	"	"	1.34	.36	.043	.0250	NP	1.14	.35	.040	.0261	NR	.57	.21	.054	.0164	NR
"	7/206	1200	1.5	66°	"	○	"	1.83	.58	.042	.0249	P	.73	.33	.049	.0221	R	.49	.17	.052	.0131	R
"	8/207	1319	1.7	"	"	"	"	1.03	.45	.042	.0190	NP	1.11	.34	.039	.0226	NP	.80	.19	.034	.0131	C
3-7-64	1/208	701	1.7	34°	020/15+20	⊕	RW	.32	.13	.045	.0085	R	.38	.16	.056	.0127	—	—	—	—	—	.
"	2/209	720	1.7	"	"	"	"	.46	—	.049	.0121	R	.45	.18	.048	.0104	R	.28	.12	.055	.0081	R
"	3/210	100	1.5	36°	050/15+10	"	L	—	—	—	—	—	.50	.29	.049	.0149	R	.78	.12	.049	.0157	P
	4/211	—	1.5	"	"	"	"	.56	.22	.047	.0117	R	.61	.31	.052	.0147	NI	.41	.18	.051	.0126	R
"	5/212	?00	[illegible]	"	060/15+10		"	.53	.21	.057	.0116	R	.78	.21	.051	.0151	R	—	—	—	—	—
"	6/213	1?20	1.7	"	"			.54	.24	[illegible]	[illegible]	NR	.42	.28	.050	.0144	R	.52	.17	.042	.0111	—
"	7/214	1200	1.5	46°	270/12			.57	.22	.042	.0110	N	.32	.20	.052	.0101	R	.28	.11	.061	.0081	R
"	8/215	1?00	1.7	"		"		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	1/216	[illegible]	1.5	22°	[illegible]	⊕	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NR	[illegible]	[illegible]	[illegible]	[illegible]	NI	[illegible]	[illegible]	[illegible]	[illegible]	—
[illegible]	2/[illegible]	[illegible]	1.7	[illegible]	[illegible]	○		[illegible]	.41	.043	[illegible]	NI	[illegible]	[illegible]	.040	[illegible]	N	.63	.21	.048	.0146	R
	3/[illegible]		1.5	42°	[illegible]	.	"	[illegible]	[illegible]	[illegible]	[illegible]	NR	.44	.41	.04?	[illegible]	N	[illegible]	[illegible]	.044	[illegible]	NR

Approved For Release 2005/05/16 : CIA-RDP71B00822R000100280002-6

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Table V.- Continued.

OPERATING CONDITIONS				WEATHER				SONIC BOOM PRESSURE SIGNATURE DATA																
								Station 1					Station 3					Station 4						
Date	Flight No.	Time	Mach No.	Surface Temp.	Surface Winds	Cloud Cover	Precip-itation	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape
[illegible]	[illegible]	[illegible]	1.7	45°	170/15	○	None	1.31	0.35	0.045	0.0570	NP	1.33	0.45	0.025	0.0524	N	1.11	0.30	0.040	0.0175	[illegible]
"	[illegible]	1100	1.5	57°	200/15+10	"	"	1.31	.47	.051	.0561	NT	1.40	.42	.049	.0337	T	1.96	.35	.036	.0321	[illegible]
"	[illegible]	1170	1.7	"	"	"	"	1.45	.41	.036	.0504	T	1.46	.43	.039	.0568	NP	.91	.33	.055	[illegible]	[illegible]
"	[illegible]	1201	1.5	62°	170/15+25	◑	"	.75	.46	.054	.0571	N	1.41	.47	.050	.0340	NP	1.69	.53	.036	[illegible]	[illegible]
"	[illegible]	1270	1.7	"	"	"	"	.94	.47	.046	.0195	N	1.35	.35	.041	.0343	T	1.35	.33	.038	.0175	[illegible]
[illegible]	[illegible]	700	1.5	45°	170/10	"	"	1.53	.44	.043	.0344	N	1.45	.41	.041	.0371	N	.74	.27	.050	[illegible]	[illegible]
"	[illegible]	[illegible]	1.7	"	"	"	"	1.07	.41	.047	.0256	NT	1.47	.40	.040	.0390	NT	.97	.33	.047	[illegible]	[illegible]
[illegible]	[illegible]	1200	1.7	"	250/10	○	"	1.09	.53	.047	.0339	NT	1.66	.51	.050	.0365	T	.56	.35	.064	[illegible]	[illegible]
[illegible]	[illegible]	700	1.5	50°	170/15	⇑	"	1.15	.45	.039	.0376	NR	1.43	.44	.041	.0310	N	1.05	.30	.047	.0171	[illegible]
"	[illegible]	750	1.7	"	"	"	"	1.00	.43	.040	.0300	N	1.10	.39	.043	.0394	NR	1.43	.39	.043	[illegible]	[illegible]
"	[illegible]	[illegible]	1.7	40°	"	"	"	1.51	.45	.041	.0363	NR	1.61	.36	.036	.0347	NP	.88	.35	.049	.0197	[illegible]
"	[illegible]	750	[illegible]	"	"	"	"	1.51	.39	.043	.0371	N	1.93	.41	.047	.0367	T	1.43	.37	.039	.0197	[illegible]
"	[illegible]	1100	1.5	45°	"	○	"	1.16	.41	.043	.0346	R	-	-	-	-	-	.93	.37	.053	.0307	[illegible]
"	[illegible]	1170	1.7	"	"	"	"	1.43	.37	.040	.0314	T	1.34	.34	.039	.0369	N	-	-	-	-	[illegible]
"	[illegible]	1200	1.5	60°	150/10+20	"	"	.74	.27	.048	.0301	R	1.01	.43	.044	.0363	NR	.55	.37	.055	.0124	[illegible]
"	[illegible]	1219	1.7	"	"	"	"	1.09	.36	.040	.0125	NR	1.65	.44	.057	.0307	R	.77	.35	.046	[illegible]	[illegible]
[illegible]	[illegible]	700	1.5	57°	170/10+20	⊕	"	1.14	.39	.044	.0360	NR	1.32	.39	.047	.0346	N	1.51	.30	.035	.0191	[illegible]
"	[illegible]	750	1.5	"	"	"	"	1.18	.65	-	-	-	1.17	.47	.057	.0197	NT	.64	.30	.059	.0145	[illegible]
"	[illegible]	750	1.5	55°	"	◑	"	1.06	.40	-	-	-	1.34	.40	.060	.0376	N	.92	.16	.045	.0197	[illegible]
"	[illegible]	1100	1.5	62°	150/10+[illegible]	"	"	1.47	.45	.043	.0396	NP	1.07	.39	.048	.0321	NR	.56	.37	.056	.0179	[illegible]
"	[illegible]	1170	1.7	"	"	"	"	1.57	.66	.041	.0316	NP	1.22	.73	.040	.0393	NT	.74	.30	.045	[illegible]	[illegible]
"	[illegible]	1200	1.5	65°	200/10+25	"	"	.86	.40	.049	.0377	NR	1.59	.36	.045	.0341	NT	.71	.37	.053	.0176	[illegible]
"	[illegible]	1270	1.7	"	"	"	"	1.37	.71	.047	.0371	NR	1.07	.21	.043	.0379	R	.84	.37	.041	.0161	[illegible]
[illegible]	[illegible]	700	1.5	60°	170/10+20	⊕	F	1.27	.57	.043	.0365	NT	1.30	.36	.040	.0375	N	.69	.37	.054	.0153	[illegible]
"	[illegible]	750	1.7	"	"	"	"	1.35	.21	.039	.0359	NR	1.57	.76	.039	.0361	NT	.76	.39	.047	.0131	[illegible]
"	[illegible]	900	1.5	61°	170/15	◑	None	1.07	.36	.044	.0126	NR	1.37	.47	.044	.0377	NT	1.09	.26	.050	[illegible]	[illegible]
"	[illegible]	950	1.7	"	"	"	"	1.37	.71	.037	[illegible]	NT	1.30	.75	.037	.0305	T	1.07	.21	.047	.0103	[illegible]
"	[illegible]	1100	1.5	65°	170/10+20	"	"	.70	.55	.047	.0357	R	.66	.29	.055	.0149	R	1.20	.30	.034	.0159	[illegible]
"	[illegible]	1111	1.5	"	"	"	"	.70	.21	.047	.0315	NR	1.10	.23	.043	.0376	N	[illegible]	.14	.065	.0171	[illegible]
"	[illegible]	1111	1.7	47°	140/15+15	⊕	L	1.07	.41	.040	.0341	NR	1.21	.41	.035	.0364	N	1.06	.27	.040	.0108	[illegible]
"	[illegible]	1270	[illegible]	"	"	"	"	.29	[illegible]	.046	.0340	R	1.14	.61	.039	.0309	NR	-	-	-	-	[illegible]
[illegible]	[illegible]	1100	1.7	46°	160/15+10	"	LF	1.26	.45	.041	.0347	NT	1.25	-	[illegible]	[illegible]	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	1.7	"	[illegible]	"	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]	1.63	-	[illegible]	[illegible]	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]
"	[illegible]	[illegible]	1.7	45°	140/10+[illegible]	"	LF	[illegible]	-	[illegible]	[illegible]	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]

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Table V.- Continued.

OPERATING CONDITIONS				WEATHER				SONIC BOOM PRESSURE SIGNATURE DATA													
								Station 1					Station 3					Station 4				
Date	Flight No.	Time	Mach No.	Surface Temp.	Surface Winds	Cloud Cover	Precip-itation	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos	Wave Shape
[illegible]	[illegible]	900	1.7	74°	Calm	O	None	1.16	–	0.040	0.0765	NR	1.04	–	0.039	0.0763	NR	0.96	–	0.041	0.0179	N
	[illegible]	1100	1.5	82°	020/5	"	"	1.30	–	.048	.0576	NP	1.58	–	.047	.0759	N	1.50	–	.040	.0117	NR
	[illegible]	1119	1.7	"	"	"	"	–	–	–	–	–	1.34	–	.037	.0759	NP	.93	–	.040	.0175	NR
	[illegible]	1200	1.5	40	150/5	"	"	1.16	–	.041	.0794	NR	.96	–	.047	.0731	NR	.75	–	.048	.0160	[illegible]
	[illegible]	1320	1.7	"	"	"	"	1.56	–	.040	.0756	NP	.99	–	.045	.0735	NR	1.35	–	.039	[illegible]	[illegible]
	[illegible]	659	1.5	89°	010/10	"	"	1.14	–	.043	.0755	NR	1.56	–	.047	.0739	N	1.07	–	[illegible]	[illegible]	[illegible]
	[illegible]	719	1.7	"	"	"	"	1.17	–	.055	.0780	NR	.79	–	.049	.0190	N	.81	–	.055	.0154	[illegible]
	[illegible]	900	1.7	44°	90/10	1 ⊕	"	.81	–	.047	.0734	K	1.59	–	.039	.0378	NP	1.07	–	.040	.0172	[illegible]
	5/243	1101	1.5	57°	220/10	C	"	–	–	–	–	–	.47	–	.047	.0745	N	.86	–	.044	.0727	[illegible]
	[illegible]	1130	1.7	"	"	"	"	–	–	–	–	–	1.54	–	.039	.0711	N	1.39	–	.039	[illegible]	[illegible]
	[illegible]	1200	1.5	58°	010-270/3	"	"	1.40	–	.047	.0771	NP	.90	–	.041	.0786	N	1.15	–	.034	.0761	[illegible]
	[illegible]	1271	1.7	"	"	"	"	1.33	–	.038	.0797	NP	1.56	–	.040	.0781	N	1.07	–	.047	.0746	[illegible]
[illegible]	[illegible]	700	1.5	36°	010/15+25	1 ⊕	"	1.03	–	.040	.0703	K	1.04	–	.046	.0784	C	.61	–	.044	[illegible]	[illegible]
	[illegible]	7[illegible]	1.7	"	"	"	"	1.59	–	.042	.0779	NP	.78	–	.047	.0772	K	.46	–	.048	.0147	K
	[illegible]	900	1.5	"	"	⊕	F	.99	–	.045	.0737	NR	1.53	–	.046	.0741	N	.61	–	.040	.0172	[illegible]
	4/250	919	1.7	"	"	"	"	1.35	–	.041	.0766	NP	1.71	–	.039	.0767	NP	1.07	–	.047	.0766	N
"	5/251	1101	1.5	51°	010/15+20	O	None	1.35	–	.044	.0719	NR	1.30	–	.047	.0749	P	.79	–	.042	.0155	[illegible]
"	[illegible]	1130	1.7	"	"	"	"	.96	–	.042	.0759	R	1.43	–	.038	.0755	N	.61	–	.047	.0172	R
"	7/253	[illegible]	1.5	"	"	"	"	1.31	–	.048	.0760	NR	1.45	–	.039	.0769	N	.36	–	.054	[illegible]	[illegible]
"	8/254	1319	1.7	"	"	"	"	.19	–	.042	.0756	NP	.68	–	.047	.0174	R	.82	–	.046	.0152	[illegible]
[illegible]	[illegible]	[illegible]	1.5	74°	100/10	C	"	.95	–	.042	.0749	NR	1.32	–	.044	.0745	N	1.30	–	.047	.0172	[illegible]
"	2/256	719	1.7	"	"	"	"	.77	–	.047	.0155	NR	1.43	–	.041	.0734	N	.89	–	.047	.0195	[illegible]
"	3/257	900	1.5	78°	"	⊕	TRW	1.10	–	.047	.0769	NR	.79	–	.044	.0726	NR	.56	–	.047	.0153	R
"	4/258	920	1.7	"	"	"	"	1.01	–	.044	.0777	NR	1.58	–	.038	.0746	NP	.74	–	.050	.0125	[illegible]
	5/259	1059	1.7	84°	150/10	⊕	"	1.04	–	.046	.0755	NR	.75	–	.051	.0152	C	.75	–	.060	.0190	[illegible]
	6/260	1120	1.7	"	"	"	"	.54	–	.049	.0153	R	1.17	–	.050	.0117	C	–	–	–	–	–
	7/261	1200	1.7	88°	170/10	"	"	1.76	–	.042	.0781	P	[illegible]	–	[illegible]	[illegible]	[illegible]	.84	–	.039	.0147	[illegible]
	8/262	1320	1.7	"	"	"	"	.66	–	.054	.0721	R	[illegible]	–	.054	[illegible]	–	.84	–	.038	[illegible]	[illegible]
[illegible]	1/263	700	1.7	66°	170/15+25	⊕	TRW	1.00	–	.046	.0724	NR	[illegible]	–	.041	.0781	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
	2/264	[illegible]	1.7	"	"	"	"	1.04	–	.042	[illegible]	[illegible]	.75	–	.049	[illegible]	–	.61	–	.052	[illegible]	[illegible]
	3/265	[illegible]	1.5	68°	17[illegible]/15+20	⊕	[illegible]	.47	–	.045	[illegible]	[illegible]	[illegible]	–	.046	–	[illegible]	.70	–	.052	.0175	[illegible]
	4/266	[illegible]	1.7	"	"	"	"	.00	–	.042	.0742	[illegible]	.72	–	.041	.0172	R	.61	–	.052	[illegible]	[illegible]
	[illegible]	[illegible]	1.5	79	140/20+20	"	"	[illegible]	–	.044	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	1.7					[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	–	.047	–	[illegible]	[illegible]	–	[illegible]	.0167	
	[illegible]	[illegible]	1.7					[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	–	.047	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	

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Table V.- Concluded.

OPERATING CONDITIONS				WEATHER				SONIC BOOM PRESSURE SIGNATURE DATA														
								Station 1					Station 3					Station 4				
Date	Flight No.	Time	Mach No.	Surface Temp.	Surface Winds	Cloud Cover	Precip-itation	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape
5-1-64	1/637	700	1.5	52°	040/5	⦶	None	1.04	–	0.047	0.0216	N	1.07	–	0.046	0.0266	NR	0.91	–	0.046	[illegible]	[illegible]
"	2/638	719	1.7	"	"	"	"	1.32	–	.041	.0251	N	1.02	–	.043	.0254	NR	1.01	–	.046	[illegible]	[illegible]
"	3 639	839	1.5	64°	140/10+15	"	"	1.16	–	.046	.0251	N	1.24	–	.046	.0219	NP	1.67	–	.052	[illegible]	[illegible]
"	4 640	919	1.7	"	"	"	"	1.16	–	.044	.0242	N	.90	–	[illegible]	.0227	R	.92	–	.053	[illegible]	[illegible]
"	5 641	1100	1.5	70°	"	"	"	.76	–	.045	.0205	NR	1.31	–	[illegible]	.0229	NR	.75	–	.059	.0246	[illegible]
"	6 642	1251	1.5	"	"	"	"	.86	–	.052	.0229	R	1.52	–	.041	.0218	NP	.76	–	.048	[illegible]	[illegible]
"	7 643	1320	1.7	72°	140/10	"	"	1.19	–	.045	.0263	NR	1.02	–	.042	.0290	N	1.19	–	[illegible]	[illegible]	[illegible]
5-[illegible]-64	1 644	700	1.[illegible]	57°	120/5	"	"	.53	–	.053	.0152	R	.76	–	.046	.0262		2.04	–	.041	.0120	[illegible]
	[illegible]	7[illegible]	1.7	"	"		"	1.02	–	.048	.0207	NR	2.41	–	.029	.0266	[illegible]	.42	–	.050	[illegible]	[illegible]
"	[illegible]	829	1.7	64°	[illegible]/5		RW	.49	–	.054	.0151	R	.89	–	[illegible]	.0151	–	.42	–	.060	[illegible]	[illegible]
	[illegible] 41	[illegible]	[illegible]		"		"	1.24	–	.079	.0216	C	.76	–	.051	.0260	–	1.04	–	.072	[illegible]	[illegible]
"	[illegible]	700	1.7	56°	220/10		None	1.02	–	.028	.0202	N	1.08	–	.042	.0266	N	.85	–	.042	[illegible]	[illegible]
	[illegible]	719	1.7	"			"	1.11	–	.041	.0251	NR	1.23	–	.040	.0191	NP	.87	–	.026	.0121	[illegible]
	[illegible]	[illegible]	1.7	61°			"	.93	–	.043	.0275	NR	[illegible]	–	.042	.0224	N	.82	–	.044	[illegible]	[illegible]
	[illegible]	919	1.7	"				1.06	–	.041	.0230	NR	1.32	–	.040	.0220	NP	1.11	–	[illegible]	[illegible]	[illegible]
	[illegible]	1051	1.7	62°			"	1.02	–	.042	.0241	N	1.02	–	.041	.0241	N	.55	–	.049	[illegible]	[illegible]
	[illegible]	1200	1.5	[illegible]	210/10		"	1.14	–	.044	.0295	N	1.27	–	.042	.0202	NP	.59	–	.056	.0129	[illegible]
"	7 654	1320	1.7	"	"	"	"	1.40	–	.041	.0254	P	.92	–	.042	.0251	NR	.66	–	.053	.0127	[illegible]
5-1[illegible]-64	1/[illegible]	700	1.5	58°	010/10	⊕	RW	.65	–	.051	.0242	R	.42	–	.058	.0144	R	[illegible]	–	.076	.0147	[illegible]
	2/[illegible]	720	1.7	"	"	"	"	.54	–	.048	.0139	R	.55	–	.052	.0127	R	.52	–	.043	.0122	[illegible]
	3/[illegible]	[illegible]	[illegible]	"	240/15+25	"	T RW	.53	–	.047	.0243	R	1.11	–	.046	.0270	NR	.54	–	.052	[illegible]	[illegible]
	4/[illegible]	[illegible]	[illegible]	"	"	"	"	.92	–	.048	.0234	NR	.92	–	.044	.0126	NR	–	–	–	–	
"	[illegible]	[illegible]	[illegible]	62°	330/15+25	⦶	None	1.07	–	.052	.0124	R	.63	–	.050	.0237	R	1.01	–	.052	.0172	[illegible]
	[illegible]	[illegible]	1.[illegible]	"	"	"		1.16	–	.045	.0262	NR	1.09	–	.051	.0202	NR	.66	–	.053	.0122	[illegible]
"	1/[illegible]	1200	1.5	64°	"		"	[illegible]	–	.048	.0281	NR	1.41	–	.045	.0283	C	.33	–	.063	.0147	[illegible]
	2/[illegible]	[illegible]	1.7	"	"	"	"	1.10	–	.044	.0212	R	1.16	–	.052	.0244	C	.47	–	.056	.0142	[illegible]
5-14-64	[illegible]	700	1.5	53°	210/5	○	"	.77	–	.046	.0227	R	1.01	–	.051	.0212	N	.50	–	.049	.0122	[illegible]
"	[illegible]	720	1.7	"		"	"	.77	–	.045	.0228	NR	1.14	–	.048	.0194	NP	.85	–	.045	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	63°		"	"	.92	–	[illegible]	.0214	NR	.96	–	.055	.0247	N	.74	–	.050	.0100	[illegible]
"	[illegible]	[illegible]	1.7	"		"	"	1.20	–	.042	.0196	R	1.64	–	[illegible]	[illegible]	NP	[illegible]	–	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	61°		"	"	[illegible]	–	.052	.0227	R	.57	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	1.7			"	"	[illegible]	–	.045	.0262	NR	.74	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	○	[illegible]	[illegible]	–	.44	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	–	[illegible]	–	–	[illegible]	[illegible]

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Table VI.- Summary Of Sonic Boom Data For Various Flights Of Airplane A

For An Altitude Of 29,000 Feet

Operating Conditions: Date	Flight No.	Time	Mach No.	Weather: Surface Temp.	Surface Winds	Cloud Cover	Precipitation	Station 1: Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Station 3: Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Station 4: Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape
[illegible]-64	3/218	900	1.5	30°	020/15-20	⊕	F	0.77	0.35	0.048	0.0208	NR	0.69	0.27	0.050	0.0179	NR	0.25	0.14	0.052	0.0102	R
"	4/219	920	1.7	"	"	"	"	.98	.35	.047	.0181	NP	.43	.16	.067	.0158	—	.24	.10	.091	[illegible]	R
3-6-64	1/220	700	1.5	26°	200/5	⊖	GF	1.15	.46	—	—	—	1.24	.40	.040	.0276	N	.88	.26	.047	.0115	NR
"	2/221	720	1.7	"	"	"	"	1.31	.41	—	—	—	1.08	.38	.037	.0238	N	.64	.19	.046	.0155	NR
"	3/222	900	1.5	[illegible]°	150/10	"	None	1.31	.55	—	—	—	.96	.39	.043	.0122	NR	.66	.23	.052	[illegible]	NR
	4/223	920	1.7	"			"	1.25	.41	—	—	—	1.56	.46	.041	.0262	NP	.75	.20	.046	.0161	N
	5/224	1100	1.5	40°	150/15	○	"	1.12	.41	.046	.0262	N	1.31	.46	.042	.0284	NP	.62	.21	.053	[illegible]	NR
	6/225	1120	1.7	"		"	"	1.73	.38	.043	.0251	P	1.25	.49	.042	.0271	NP	1.21	.20	.041	.0211	[illegible]
	7/226	1200	1.5	55°	170/15-20	"	"	.83	.41	.051	.0232	NR	.92	.38	.047	.0251	NR	1.07	.26	.045	.0198	NP
	8/227	1220	1.7	"		"	"	1.44	.46	.045	.0292	P	1.20	.36	.036	.0227	N	.57	.23	.052	.0110	R
[illegible]-64	1/228	700	1.5	35°	210/20	○	"	1.43	.49	.043	.0243	NP	.82	.32	.047	.0226	R	.71	.19	.029	[illegible]	—
	2/229	719	1.7		"			.88	.44	.046	.0251	R	1.04	.42	.044	.0279	R	.75	.22	.043	.0134	[illegible]
"	3/230	900	1.5	42°	"	⊕	"	1.50	.44	.044	.0259	N	.87	.31	.057	.0212	R	.34	.14	.056	.0110	—
	4/231	920	1.7		"			1.41	.42	.040	.0294	NP	1.63	.49	.035	.0208	P	1.11	.20	.053	.0211	N[illegible]
"	5/232	1100	1.5	48°	240/15-20	⊕	"	1.67	.48	.042	.0263	P	1.71	.44	.040	.0292	NP	.47	.21	.060	.0155	NR
"	6/233	1120	1.7	"	"		"	1.14	.45	.042	.0202	N	.99	.43	.052	.0321	R	1.13	.29	.042	.0220	NP
"	7/234	1200	1.5	54°	330/15	○	"	.66	.35	.047	.0206	NR	1.06	.38	.046	.0249	NR	.46	.19	.054	.0168	R
	8/235	1220	1.7	"	"	"	"	.82	.38	.052	.0252	R	1.44	.45	.044	.0327	C	1.07	.33	.045	.0288	NP
3-12-64	1/236	700	1.5	36°	160/5	"	"	1.30	.49	.044	.0244	NP	.97	.38	.041	.0229	N	1.07	.26	.048	.0188	NP
"	2/237	720	1.7	"	"	"	"	1.09	.47	.042	.0229	N	1.16	.39	.041	.0249	N	.88	.25	.049	.0187	NR
"	3/238	900	1.5	40°	170/15	"	"	1.30	.49	.043	.0256	N	1.21	.37	.045	.0277	N	.82	.26	.051	.0115	NR
"	4/239	920	1.7	"	"	"	"	1.44	.45	.042	.0234	NP	1.21	.44	.040	.0297	N	.84	.24	.050	.0207	NR
"	5/240	1100	1.5	60°	180/15-25	"	"	.89	.48	.047	.0211	NR	1.26	.39	.048	.0312	N	1.10	.30	.048	.0220	NP
"	6/241	1119	1.7	"	"	"	"	.94	.44	.046	.0191	NR	1.49	.40	.040	.0250	NP	1.81	.31	.044	.0256	P
"	7/242	1200	1.5	"	"	"	"	1.19	.44	.047	.0228	NP	1.15	.46	.047	.0319	NR	1.00	.36	.054	.0270	NP
"	8/243	1220	1.7	"	"	"	"	1.16	.44	.039	.0207	NP	1.43	.47	.043	.0347	N	1.42	.32	.044	.0227	P
3-13-64	1/244	700	1.5	50°	160/15-20	"	"	.92	.60	.046	.0264	NR	1.20	.37	.045	.0278	N	.78	.30	.040	.0188	NR
	2/245	720	1.7	"	"	"	"	1.80	.41	.021	.0207	P	.87	[illegible]	.041	.0217	NR	.64	.19	.050	.0156	NR
"	3/246	[illegible]	1.5	56°	"	⊖	"	1.04	[illegible]	.043	[illegible]	N	1.70	.40	.027	.0283	P	.54	[illegible]	[illegible]	.0174	NR
"	4/247	[illegible]	1.7	"	"	"	"	1.31	.34	.046	.0256	NR	—	—	—	—	—	[illegible]	.17	[illegible]	[illegible]	R
"	5/248	1100	1.5	60°	[illegible]	⊖	"	1.25	.40	.046	[illegible]	P	[illegible]	.37	[illegible]	.0265	[illegible]	.90	.26	.048	[illegible]	NR
"	6/249	[illegible]	1.7	[illegible]	[illegible]	[illegible]	"	[illegible]	[illegible]	[illegible]	[illegible]	NR	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	32°	[illegible]			1.00	[illegible]	.043	.0281	N	[illegible]	.28	.047	.0218	[illegible]	1.08	[illegible]	.054	.0187	[illegible]
"	[illegible]	1220	1.7	"	"	"	"	[illegible]	.42	[illegible]	[illegible]	NR	1.15	.38	.046	[illegible]	NR	.78	.32	.060	[illegible]	[illegible]

Approved For Release 2005/05/16 : CIA-RDP71B00822R000100280002-6

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Table VI.- Continued.

OPERATING CONDITIONS				WEATHER				SONIC BOOM PRESSURE SIGNATURE DATA														
								Station 1					Station 3					Station 4				
Date	Flight No.	Time	Mach No.	Surface Temp.	Surface Winds	Cloud Cover	Precip-itation	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape
2-14-64	1/251	701	1.5	40°	330/10+10	⦶	None	1.16	0.41	0.044	0.0231	N	1.88	0.36	0.030	0.0241	T	0.57	0.19	0.052	0.0152	T
"	2/252	719	1.7	"	"	"	"	1.38	.39	.037	.0224	NP	1.48	.46	.039	.0209	N	1.19	.27	.042	.0224	N
"	3/254	900	1.5	46°	340/15+25	⦷	"	1.09	.38	.040	.0240	N	.89	.30	.045	.0249	NR	.78	.24	.054	.0178	N
	4/255	920	1.7	"	"	"	"	1.16	.40	.037	.0215	NR	1.34	.41	.041	.0292	NP	1.12	.26	.052	.0223	N
"	5/256	1100	1.5	55°	360/20+25	⊕	"	1.33	.44	.041	.0255	N	1.13	.34	.042	.0219	NP	.40	.16	.061	.0139	T
	6/257	1119	1.7	"	"	"	"	.75	.38	.042	.0197	R	2.25	.45	.037	.0298	P	.87	.22	.046	.0179	N
	7/258	1257	1.5	"	"	⦷	"	2.24	.50	.038	.0260	P	2.10	.48	.038	.0200	P	2.03	.36	.027	.0282	[illegible]
	8/259	1320	1.7	"	"	"	"	.78	.39	.044	.0183	R	1.69	.47	.043	.0224	P	—	—	—	—	
[illegible]	1/273	700	1.5	35°	330/5	○	"	1.17	.45	.044	.0262	N	.99	.38	.042	.0274	NR	.55	—	—	—	
	2/274	719	1.7	"	"	"	"	.95	.39	.044	.0228	N	1.47	.42	.037	.0259	NP	1.01	—	—	—	
	3/275	900	1.5	35°	270/2	"	"	1.48	.64	.042	.0286	N	.99	.38	.051	.0259	N	.59	.19	.046	.0103	N
"	4/276	919	1.7	"	"	"	"	.97	.45	.042	.0201	N	1.29	.41	.041	.0274	N	.72	.24	.044	.0144	N
2-18-64	1/281	700	1.5	46°	170/8	⦷	"	1.18	.50	.044	.0197	N	1.42	.50	.046	.0338	N	1.08	[illegible]	.041	.0221	N
	2/282	720	1.7	"	"	"	"	1.14	.50	.042	.0244	NR	1.31	.48	.037	.0256	N	.74	.22	.044	.0152	N
[illegible]	4/292	922	1.55	30°	350/20+35	⊕	S	.79	.28	.045	.0205	R	.98	.32	.029	.0188	R	.66	.17	.051	.0136	T
2-21-64	7/301	1320	1.7	43°	350/10	○	None	1.10	.47	.046	.0266	NR	1.39	.44	.039	.0264	NP	.85	.27	.051	.0224	N
2-21-64	1/362	700	1.5	25°	180/10	1-⦶	"	.99	—	.048	.0273	NR	1.17	—	.045	.0258	N	—	—	—	—	
"	2/364	719	1.7	"	"	"	"	1.24	—	.042	.0249	N	1.30	—	.040	[illegible]	N	—	—	—	—	
	3/[illegible]	900	1.5	50	200/10	⦷	"	1.22	—	.045	.0274	N	1.35	—	.044	.0203	N	—	—	—	—	
"	4/366	920	1.8	"	"	"	"	1.06	—	.044	.0269	NR	1.20	—	.038	.0246	NR	—	—	—	—	
"	5/367	1100	1.5	57°	"	"	"	1.03	—	.048	.0269	NR	1.22	—	.044	.0233	N	—	—	—	—	
"	6/368	1119	1.7	"	"	"	"	1.20	—	.046	.0287	N	.90	—	.040	.0200	NR	.94	—	.046	.0174	N
"	7/369	1200	1.5	66°	"	"	"	1.14	—	.052	.0229	NT	1.23	—	.047	.0283	NP	.79	—	.052	.0148	N
"	8/370	1219	1.7	"	"	"	"	1.03	—	.051	.0232	NR	2.10	—	.044	.0264	P	1.42	—	.051	.0217	N

Approved For Release 2005/05/16 : CIA-RDP71B00822R000100280002-6

Approved For Release 2005/05/16 : CIA-RDP71B00822R000100280002-6

Table VII.- Summary Of Sonic Boom Data For Various Flights Of Airplane A

For An Altitude Of 28,000 Feet

OPERATING CONDITIONS				WEATHER				SONIC BOOM PRESSURE SIGNATURE DATA																
								Station 1					Station 3					Station 4						
Date	Flight No.	Time	Mach No.	Surface Temp.	Surface Winds	Cloud Cover	Precip-itation	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	None	1.09	0.51	0.048	0.0119	NR	1.16	[illegible]	[illegible]	[illegible]	N	0.55	0.75	0.050	0.0145	N
	[illegible]	[illegible]	[illegible]					1.11	.55	.043	.0129	N	1.04	.47	.039	.0176	NP	1.04	.87	.044	.0110	N
	[illegible]	[illegible]	[illegible]	[illegible]			"	1.07	.74	.049	.0148	NR	1.10	.47	.043	.0176	NR	.55	.72	.050	[illegible]	N
	[illegible]	[illegible]	[illegible]	"			"	1.02	.55	.041	.0128	N	1.18	.41	.039	.0145	N	.77	.72	.044	[illegible]	N
[illegible]	[illegible]	[illegible]	[illegible]	.57	120/15	Φ	"	1.07	.59	.042	.0131	N	1.17	.47	.047	.0145	N	1.05	.87	.047	.0124	N
[illegible]	[illegible]	[illegible]	[illegible]	55°	100/15			.81	-	.045	.0104	N	1.09	-	.045	.0109	N	1.02	-	.044	[illegible]	N
	[illegible]	[illegible]	[illegible]					1.12	-	.043	.0171	NP	1.20	-	.040	.0102	NP	1.18	-	.047	.0 52	
	[illegible]	[illegible]	[illegible]	55	100/10+10	"	"	1.19	-	.049	.0141	N	1.35	-	.043	.0156	N	1.18	-	.042	.0176	N
	[illegible]	[illegible]	[illegible]	"		"	"	1.10	-	.049	.0140	N	1.16	-	.040	.0158	NR	.32	-	.061	.0137	N
	[illegible]	[illegible]	[illegible]	55	100/15+10	"	"	1.21	-	.047	.0162	N	.92	-	.050	.0193	NR	.51	-	.064	.0121	N
	[illegible]	[illegible]	[illegible]	"		"	"	1.21	-	.043	.0152	N	1.11	-	.041	.0154	NR	.76	-	.049	.0153	N
	[illegible]	[illegible]	[illegible]	54	100/10+25	"	"	1.44	-	.047	.0231	NR	1.92	-	.040	.0324	P	1.09	-	.050	.0176	N
	[illegible]	[illegible]	[illegible]	"	"	"	"	.81	-	.052	.0127	R	.92	-	.049	.0182	NR	.49	-	.054	.0157	R
[illegible]	[illegible]	[illegible]	[illegible]	62°	100/15+25	Φ	"	.95	-	.047	.0152	NR	.94	-	.045	.0180	R	.59	-	.054	.0159	R
	[illegible]	710	1.1	"	"	"	"	1.10	-	.043	.0264	N	1.59	-	.038	.0269	R	.60	-	.050	.0126	N
	[illegible]	[illegible]	1.1	67	"		"	1.14	-	.043	.0275	N	1.74	-	.040	.0269	NP	.69	-	.052	.0152	N
	[illegible]	[illegible]	1.1	"	"		"	1.19	-	.043	.0276	N	1.46	-	.040	.0246	C	1.70	-	.032	.0236	C
[illegible]	[illegible]	[illegible]	1.5	58°	190/15	Φ	FW	1.56	-	.041	.0259	NP	1.12	-	.039	.0201	C	.64	-	.060	.0111	C
	[illegible]	710	1.1	"		"	"	1.02	-	.047	.0233	NR	.92	-	.039	.0235	NR	1.04	-	.047	.0211	C
	[illegible]	900	1.5	67°	190/15	Φ	None	1.30	-	.044	.0230	N	.08	-	.039	.0169	NR	1.33	-	.024	.0102	N
	[illegible]	[illegible]	[illegible]	"	"	"	"	1.07	-	.043	.0227	NR	.90	-	.041	.0122	NR	1.00	-	.040	.0216	N
	[illegible]	1659	1.7	68°	150/15		"	.97	-	.044	.0246	NR	1.68	-	.038	.0226	NP	.79	-	.048	.0131	N
	[illegible]	1120	1.5			"	"	1.86	-	.043	.0219	N	1.12	-	.032	.0292	N	.55	-	.050	.0126	N
	[illegible]	1300	1.5	72°	1[illegible]/1[illegible]	"	"	1.35	-	.047	.0155	NP	.60	-	.052	.0213	R	.76	-	.055	.0159	N
	8/296	1200	1.7	"	"	"	"	.76	-	.048	.0201	R	.93	-	.049	.0221	R	1.77	-	.038	.0202	R
[illegible]	1/271	650	1.1	40°	240/10	X	F	1.54	-	.041	.0223	NR	.92	-	.039	.0202	NR	.95	-	.071	.0112	R
	[illegible]	710	1.1	"		"	"	1.04	-	.044	.0196	NR	1.60	-	.037	.0279	NR	.67	-	.049	.0129	N
	[illegible]	551	1.1	41°	240/[illegible]	Φ	"	.92	-	.044	.0243	NR	.84	-	.046	.0216	NR	.64	-	.051	.0144	NR
	[illegible]	[illegible]	[illegible]	"	"		"	.69	-	.044	.0204	NR	.12	-	.037	.0254	NR	.74	-	.052	[illegible]	N
	[illegible]	[illegible]	1.1	41	210/10	P	[illegible]	.21	-	.052	.0141	R	.61	-	.041	.0196	R	.60	-	.046	.0171	NR
	[illegible]	[illegible]	1.1			"	"	.54	-	.044	.0201	R	.61	-	.032	.0174	R	.74	-	.044	.0157	N
	[illegible]	[illegible]	[illegible]	[illegible]	210/10+15	"	"	90	-	.051	.0177	R	.11	-	.034	.0237	R	.45	-	.065	[illegible]	R
	[illegible]	[illegible]	[illegible]	[illegible]	"	"	"	.76	-	.040	.0202	R	.13	-	[illegible]	[illegible]	R	.54	-	.052	.0177	R

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Table VII.- Continued.

OPERATING CONDITIONS				WEATHER				SONIC BOOM PRESSURE SIGNATURE DATA														
								Station 1					Station 3					Station 4				
Date	Flight No.	Time	Mach No.	Surface Temp.	Surface Winds	Cloud Cover	Precip-itation	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape
4-6-64	1/[illegible]	659	1.5	50°	170/10	O	None	1.11	-	0.043	0.0205	N	1.43	-	0.047	0.0294	N	1.07	-	0.046	0.0166	N
"	2/400	719	1.7	"	"	"	"	1.57	-	.039	.0231	N	1.14	-	.040	.0248	N	1.08	-	.037	.0143	N
"	3/4[illegible]	900	1.5	55°	190/15+25	"	"	.96	-	.041	.0209	NR	2.95	-	.040	.0257	NP	1.17	-	.041	.0117	N
"	4/402	919	1.7	"	"	"	"	1.32	-	.040	.0264	NR	1.54	-	.038	.0240	NR	.65	-	.046	.0176	N
"	5/403	1100	1.5	70°	210/15+25	"	"	.96	-	.045	.0325	NR	1.91	-	.039	.0275	NP	1.76	-	.031	.0215	N
"	6/404	1119	1.7	"	"	"	"	1.11	-	.042	.0226	NR	1.41	-	.038	.0258	NP	.59	-	.043	.0136	N
"	7/405	1200	1.5	75°	"	"	"	.77	-	.047	.0212	R	.53	-	.038	.0163		.79	-	.051	.0171	N
"	8/406	1218	1.7	"	"	"	"	1.27	-	.042	.0213	NP	1.28	-	.039	.0250	N	1.06	-	.048	.0132	N
4-[illegible]-64	1/401	659	1.5	45°	360/15+25	◑	"	1.40	-	.040	.0270	N	1.98	-	.040	.0267	NP	.55	-	.051	.0140	N
"	2/402	719	1.7	"	"	"	"	1.58	-	.040	.0249	N	.99	-	.038	.0258	R	.56	-	.049	.0177	N
"	3/403	859	1.5	42°	"	◐	"	1.17	-	.046	.0274	NR	1.06	-	.037	.0273	R	.62	-	.040	.0177	N
"	4/404	919	1.7	"	"	"	"	1.15	-	.042	.0244	NR	1.75	-	.036	.0254	N	.94	-	.036	.0173	N
"	5/411	1059	1.5	47°	360/20+30	⊕	"	1.11	-	.044	.0259	NR	1.94	-	.038	.0262	NP	2.54	-	.031	.0241	
"	6/412	1120	1.7	"	"	"	"	1.46	-	.043	.0241	NP	1.91	-	.040	.0257	NP	1.45	-	.038	.0245	
"	7/413	1321	1.5	"	350/19+28	"	"	1.65	-	.044	.0252	NP	1.47	-	.041	.0243	NR	1.15	-	.051	.0202	N
"	8/414	1319	1.7	"	"	"	"	1.72	-	.040	.0175	NP	1.33	-	.042	.0274	N	.83	-	.057	.0193	N
4-8-64	1/415	700	1.5	49°	350/10	O	"	1.09	-	.041	.0231	NP	1.16	-	.036	.0285	N	.62	-	.041	.0151	N
"	2/416	721	1.7	"	"	"	"	1.25	-	.039	.0210	N	1.35	-	.041	.0240	N	1.13	-	.032	.0267	N
"	3/417	900	1.5	37°	"	"	"	1.27	-	.044	.0259	NR	1.33	-	.042	.0219	NR	1.08	-	.040	.0177	N
"	4/418	[illegible]	1.7	"	"	"	"	.86	-	.041	.0222	R	1.39	-	.040	.0293	NP	1.04	-	.042	.0246	N
"	5/419	1100	1.5	43°	360/15	"	"	1.43	0.73	.044	.0259	NR	1.14	-	.042	.0269	NR	.64	-	.024	.0117	
"	6/420	1119	1.7	"	"	"	"	1.00	.84	.045	.0263	NR	1.77	-	.039	.0282	NP	.57	-	.049	.0159	
"	1/421	1200	1.5	51°	360/15+20	"	"	1.59	.90	.040	.0275	NP	1.65	-	.040	.0274	NP	.83	-	.028	.0195	
"	2/422	1220	1.7	"	"	"	"	1.26	.83	.042	.0269	NP	1.28	-	.040	.0279	NR	1.05	-	.052	.0284	
4-9-64	1/423	700	1.5	52°	190/10	"	"	-	-	-	-	-	1.05	-	.040	.0273	N	.83	-	.048	.0192	
"	2/424	719	1.7	"	"	"	"	1.48	.86	.041	.0277	NP	1.37	-	.039	.0272	N	.91	-	.032	.0172	
"	3/425	900	1.5	46°	190/15	"	"	1.17	.92	.043	.0232	N	2.35	-	.038	.0298	NP	1.04	-	.040	.0172	
"	4/426	920	1.7	"	"	"	"	1.31	.79	.046	.0250	N	1.14	-	.045	.0251	N	-	-	-	-	
"	5/427	1100	1.5	57°	210/15	"	"	1.75	.89	.042	.0222	NP	2.31	-	.042	.0204	NP	.72	-	.045	.0170	
"	6/428	1119	1.7	"	"	"	"	1.01	.74	.040	.0219	NR	1.62	-	.040	.0204	NP	1.06	-	.032	.0195	
"	1/429	1200	1.5	52°	"	"	"	1.12	.82	.045	.0254	NR	2.56	-	.030	.0261	P	.31	-	.062	.0137	
"	2/430	1220	1.7	"	"	"	"	.90	.77	.052	.0248	N	1.14	-	.049	.0229	NR	.54	-	.054	.0107	
4-10-64	1/431	700	1.5	44°	170/10	◐	"	1.12	.52	.047	.0234	NR	1.47	-	.052	.0298	NR	.76	-	.046	.0192	
"	2/432	[illegible]	1.5	"	"		"	1.25	.57	.045	.0247	NP	1.49	-	.044	.0287	N	.87	-	.050	.0172	
"	3/433	900	1.5	52°	170/10+15		"	1.14	[illegible]	.053	.0247	NR	1.41	-	.046	.0271	N	1.70	-	[illegible]	[illegible]	

Approved For Release 2005/05/16 : CIA-RDP71B00822R000100280002-6

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Table VII.- Continued.

OPERATING CONDITIONS				WEATHER				SONIC BOOM PRESSURE SIGNATURE DATA															
								Station 1					Station 3					Station 4					
Date	Flight No.	Time	Mach No.	Surface Temp.	Surface Winds	Cloud Cover	Precip-itation	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape
[illegible]	1/474	700	1.5	55°	150/15+25	○	None	1.01	-	0.049	0.0770	NR	1.14	-	0.048	0.0797	R	0.87	-	0.050	0.0700	[illegible]
"	2/[illegible]	720	1.5	"	"	"	"	.97	-	.048	.0677	NR	1.04	-	.043	.0734	R	.97	-	.046	.0177	[illegible]
"	3/[illegible]	900	1.5	69°	150/10+20	◑	"	.85	-	.054	.0766	R	1.53	-	.041	.0771	N	.57	-	.057	.0713	[illegible]
	4/477	[illegible]	1.5	"	"	"	"	.87	-	.057	.0745	NR	1.55	-	.047	.0307	N	1.07	-	.048	.0745	[illegible]
	5/478	1100	1.5	74°	"	◐	"	.83	-	.051	.0765	NR	1.04	-	.055	.0745	C	.31	-	.078	.0149	[illegible]
	6/471	1120	1.5	"	"	"	"	.75	-	.049	.0750	R	1.53	-	.050	.0796	NP	.70	-	.050	.0710	[illegible]
	7/475	1200	1.5	75°	"	"	"	.93	-	.048	.0761	NR	1.15	-	.043	.0763	R	.40	-	.000	.0100	[illegible]
	8/471	1240	1.5	"	"	"	"	1.16	-	.051	.0757		1.10	-	.051	.0707	NR	.51	-	.061	.0151	[illegible]
[illegible]	1/482	500	1.5	63°	190/15+25	⊕	"	1.31	-	.042	.0755	NP	1.97	-	.043	.0766	NP	.44	-	.074	.0143	[illegible]
"	2/483	700	1.5	"	"	"	"	1.13	-	.045	.0718	NP	1.52	-	.044	.0301	N	.49	-	.056	.0150	[illegible]
	3/484	1100	1.5	67°	190/10+25	◑	"	1.13	-	.044	.0711	NP	1.16	-	.041	.0736	N	1.06	-	.048	.0771	[illegible]
	4/485	1140	1.5	"	"	"	"	1.77	-	.040	.0787	P	.51	-	.059	.0127	-	.68	-	.052	.0161	[illegible]
	5/486	1200	1.5	75°	190/15+25	"	"	.92	-	.047	.0765	N	1.32	-	.051	.0733	C	1.39	-	.032	.0160	[illegible]
"	6/487	1219	1.5	"	"	"	"	.85	-	.055	.0725	NR	.96	-	.047	.0743	NR	.49	-	.066	.0148	[illegible]
[illegible]	1/485	700	1.5	67°	170/10	⊕	F	.74	-	.045	.0778	NR	1.38	-	.041	.0710	NP	-	-	-	-	
"	2/486	720	1.5	"	"	"	"	1.03	-	.052	.0736	NR	1.81	-	.041	.0756	NP	-	-	-	-	
"	3/490	850	1.5	70°	150/15	"	None	.90	-	.047	.0194	NR	1.32	-	.048	.0749	NR	-	-	-	-	
"	4/491	900	1.5	"	"	"	"	.56	-	.050	.0164	R	1.41	-	.046	.0735	N	-	-	-	-	
"	5/492	1100	1.5	75°	"	"	"	.95	-	.050	.0760	R	1.40	-	.047	.0154	C	.81	-	.055	.0104	
"	6/493	1120	1.5	"	"	"	"	.66	-	.053	.0165	R	.78	-	.045	.0154	R	.96	-	.051	.0127	
"	7/494	1259	1.5	"	"	◑	"	1.09	-	.049	.0753	NR	1.04	-	.048	.0749	C	.55	-	.059	.0172	
"	8/495	1320	1.5	"	"	"	"	1.05	-	.050	.0719	NR	1.19	-	.050	.0798	R	.51	-	.064	.0170	
4-19-64	1/496	659	1.5	68°	170/10+20	⊕	L	.88	-	.049	.0187	NR	2.54	-	.044	.0342	P	.62	-	.058	.0102	
"	2/497	720	1.5	"	"	"	"	1.06	-	.048	.0748	NR	1.90	-	.047	.0307	P	.69	-	.059	.0100	
"	3/498	850	1.5	69°	150/15+25	"	None	1.00	-	.048	.0768	NR	1.01	-	.051	.0742	R	.55	-	.031	.0117	
"	4/499	919	1.5	"	"	"	"	1.48	-	.044	.0738	P	1.74	-	.023	.0306	P	.56	-	.023	.0158	
"	5/500	1059	1.5	71°	190/10+30	"	"	.96	-	.048	.0748	NR	1.12	-	.047	.0199	NR	.42	-	.048	.0078	
"	[illegible]	1120	1.5	"	"	"	"	.98	-	.046	.0727	NR	1.27	-	.032	.0309	NR	.53	-	.044	.0852	
"	[illegible]	[illegible]	1.5	74°	"	◑	"	[illegible]	-	.042	.0730	P	.65	-	.046	.0130	NR	.52	-	.024	.0074	
"	[illegible]	[illegible]	1.5	"	"	"	"	1.04	-	.049	.0732	NR	1.72	-	.042	.0172	T	.71	-	.032	.0051	
[illegible]	[illegible]	[illegible]	1.5	70°	150/15+25	⊕	"	.75	-	.045	.0786	R	[illegible]	-	.052	[illegible]	NR	-	-	-	-	
	[illegible]	[illegible]	1.5	"				[illegible]	-	.041	.0715	N	[illegible]	-	.046	[illegible]	NR	-	-	-	-	
	[illegible]	[illegible]	1.5	"	150/14+25	"	"	.79	-	.045	.0193	R	.67	-	.059	.0172	R	-	-	-	-	
	[illegible]	[illegible]	1.5	"	"	"	"	.79	-	.050	.0745	R	.73	-	.059	.0223	R	-	-	-	-	

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Table VII.- Continued.

OPERATING CONDITIONS				WEATHER			SONIC BOOM PRESSURE SIGNATURE DATA																	
							Station 1								Station 3						Station 4			
Date	Flight No.	Time	Mach No.	Surface Temp.	Surface Winds	Cloud Cover	Precip-itation	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape
4-27-71	2-12/4	0941	1.1	65°	160°/20 kts	⊕	Clone	0.1	0.5	0.051	0.052	NP	1.12	-	0.054	0.052	N	1.12	-	0.051	0.052	N
"	2-12/5	1121	1.1	"	260°/20 kts	"	"	1.1	1.7	0.054	0.054	NR	1.5	-	0.056	0.054	N	1.2	-	0.056	0.054	N
"	2-12/6	1111	1.1	"	260°/25 kts	⊕	Hail	1.1	1.7	0.054	0.054	N	1.3	-	0.054	0.054	N	1.1	-	0.054	0.054	N
"	2-12/7	1100	1.1	"	"	⊕	"	1.1	1.7	0.054	0.054	-	1.4	-	0.054	0.054	N	1.1	-	0.054	0.054	N
"	2-12/8	1111	1.1	69°	260°/20 kts	⊖	Clone	1.1	1.7	0.054	0.054	-	1.1	-	0.054	0.054	N	1.1	-	0.054	0.054	N
4-27-71	2-13/1	0911	1.1	65°	160°/20 kts	⊕	F	1.1	1.7	0.054	0.054	N	1.1	-	0.054	0.054	N	1.1	-	0.054	0.054	N
"	2-13/2	0921	1.1	"	160°/20 kts	"	Clone	1.1	1.7	0.054	0.054	N	1.1	-	0.054	0.054	N	1.1	-	0.054	0.054	N
"	2-13/3	0941	1.1	65°	160°/20 kts	⊕	"	1.1	1.7	0.054	0.054	N	1.1	-	0.054	0.054	N	1.1	-	0.054	0.054	N
"	2-13/4	0951	1.1	"	"	"	"	1.1	1.7	0.054	0.054	N	1.1	-	0.054	0.054	N	1.1	-	0.054	0.054	N
"	2-13/5	0951	1.1	"	"	"	"	1.1	1.7	0.054	0.054	N	1.1	-	0.054	0.054	N	1.1	-	0.054	0.054	N
"	2-13/6	0951	1.1	"	"	"	"	1.1	1.7	0.054	0.054	N	1.1	-	0.054	0.054	N	1.1	-	0.054	0.054	N
"	2-13/7	0951	1.1	"	"	"	"	1.1	1.7	0.054	0.054	N	1.1	-	0.054	0.054	N	1.1	-	0.054	0.054	N
"	2-13/8	0951	1.1	"	"	"	"	1.1	1.7	0.054	0.054	N	1.1	-	0.054	0.054	N	1.1	-	0.054	0.054	N
4-27-71	2-14/1	1131	1.1	64°	260°/20 kts	⊕	"	1.1	1.7	0.054	0.054	N	1.1	-	0.054	0.054	N	1.1	-	0.054	0.054	N
"	2-14/2	1111	1.1	"	260°/20 kts	"	"	1.1	1.7	0.054	0.054	N	1.1	-	0.054	0.054	N	1.1	-	0.054	0.054	N
"	2-14/3	1121	1.1	"	"	"	"	1.1	1.7	0.054	0.054	N	1.1	-	0.054	0.054	N	1.1	-	0.054	0.054	N
"	2-14/4	1111	1.1	"	"	"	"	1.1	1.7	0.054	0.054	N	1.1	-	0.054	0.054	N	1.1	-	0.054	0.054	N
"	2-14/5	1111	1.1	"	"	"	"	1.1	1.7	0.054	0.054	N	1.1	-	0.054	0.054	N	1.1	-	0.054	0.054	N
"	2-14/6	1111	1.1	"	"	"	"	1.1	1.7	0.054	0.054	N	1.1	-	0.054	0.054	N	1.1	-	0.054	0.054	N
"	2-14/7	1111	1.1	"	"	"	"	1.1	1.7	0.054	0.054	N	1.1	-	0.054	0.054	N	1.1	-	0.054	0.054	N
"	2-14/8	1111	1.1	"	"	"	"	1.1	1.7	0.054	0.054	N	1.1	-	0.054	0.054	N	1.1	-	0.054	0.054	N
4-27-71	2-15/1	1121	1.1	64°	260°/20 kts	⊕	"	1.1	1.7	0.054	0.054	N	1.1	-	0.054	0.054	N	1.1	-	0.054	0.054	N
"	2-15/2	1131	1.1	"	260°/20 kts	"	"	1.1	1.7	0.054	0.054	N	1.1	-	0.054	0.054	N	1.1	-	0.054	0.054	N
"	2-15/3	1141	1.1	"	"	"	"	1.1	1.7	0.054	0.054	N	1.1	-	0.054	0.054	N	1.1	-	0.054	0.054	N
"	2-15/4	1151	1.1	"	"	"	"	1.1	1.7	0.054	0.054	N	1.1	-	0.054	0.054	N	1.1	-	0.054	0.054	N
"	2-15/5	1151	1.1	"	"	"	"	1.1	1.7	0.054	0.054	N	1.1	-	0.054	0.054	N	1.1	-	0.054	0.054	N
"	2-15/6	1151	1.1	"	"	"	"	1.1	1.7	0.054	0.054	N	1.1	-	0.054	0.054	N	1.1	-	0.054	0.054	N
"	2-15/7	1151	1.1	"	"	"	"	1.1	1.7	0.054	0.054	N	1.1	-	0.054	0.054	N	1.1	-	0.054	0.054	N
"	2-15/8	1151	1.1	"	"	"	"	1.1	1.7	0.054	0.054	N	1.1	-	0.054	0.054	N	1.1	-	0.054	0.054	N
4-27-71	2-16/1	1141	1.1	64°	260°/20 kts	⊕	"	1.1	1.7	0.054	0.054	N	1.1	-	0.054	0.054	N	1.1	-	0.054	0.054	N
"	2-16/2	1151	1.1	"	260°/20 kts	"	"	1.1	1.7	0.054	0.054	N	1.1	-	0.054	0.054	N	1.1	-	0.054	0.054	N
"	2-16/3	1141	1.1	"	"	"	"	1.1	1.7	0.054	0.054	N	1.1	-	0.054	0.054	N	1.1	-	0.054	0.054	N
"	2-16/4	1151	1.1	"	"	"	"	1.1	1.7	0.054	0.054	N	1.1	-	0.054	0.054	N	1.1	-	0.054	0.054	N
"	2-16/5	1151	1.1	"	"	"	"	1.1	1.7	0.054	0.054	N	1.1	-	0.054	0.054	N	1.1	-	0.054	0.054	N
"	2-16/6	1151	1.1	"	"	"	"	1.1	1.7	0.054	0.054	N	1.1	-	0.054	0.054	N	1.1	-	0.054	0.054	N
"	2-16/7	1151	1.1	"	"	"	"	1.1	1.7	0.054	0.054	N	1.1	-	0.054	0.054	N	1.1	-	0.054	0.054	N
"	2-16/8	1151	1.1	"	"	"	"	1.1	1.7	0.054	0.054	N	1.1	-	0.054	0.054	N	1.1	-	0.054	0.054	N

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Table VII.- Continued.

OPERATING CONDITIONS				WEATHER				SONIC BOOM PRESSURE SIGNATURE DATA																
								Station 1					Station 3					Station 4						
Date	Flight No.	Time	Mach No.	Surface Temp.	Surface Winds	Cloud Cover	Precip-itation	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape
[illegible]	[illegible]	[illegible]	[illegible]	72°	170/[illegible]	⊕	None	1.13	–	0.045	0.0149	NR	1.06	–	0.041	0.0143	NR	–	–	–	–	–
"	[illegible]	[illegible]	[illegible]	"	"	"	"	1.15	–	.043	.0195	C	.57	–	.037	.0209	N	–	–	–	–	–
"	[illegible]	[illegible]	[illegible]	77°	150/10+25	"	"	1.15	–	.041	.0250	N	1.49	–	.047	.0256	NR	–	–	–	–	–
[illegible]	[illegible]	[illegible]	[illegible]	63°	320/10	⦶	"	1.22	–	.047	.0251	N	1.50	–	.043	.0250	NR	0.89	–	0.047	0.0143	[illegible]
"	[illegible]	[illegible]	[illegible]	"	"	"	"	.91	–	.047	.0246	NR	1.45	–	.043	.0280	N	.97	–	.057	.0181	[illegible]
"	[illegible]	[illegible]	[illegible]	70°	170/10	⦶	"	1.27	–	.043	.0281	N	1.03	–	.045	.0250	NR	1.05	–	.045	.0206	[illegible]
"	[illegible]	[illegible]	[illegible]	"	"	"	"	1.21	–	.045	.0249	N	1.12	–	.038	.0276	NR	.87	–	.052	.0171	[illegible]
"	[illegible]	[illegible]	[illegible]	60	100/10+15	⦶	"	1.27	–	.043	.0231	NR	.90	–	.057	.0191	R	.66	–	.054	.0194	[illegible]
"	[illegible]	[illegible]	[illegible]	"	"	"	"	1.47	–	.047	.0204	NR	1.35	–	.037	.0219	N	1.15	–	.033	.0215	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	70°	150/10+20	⊕	"	1.25	–	.041	.0216	N	.75	–	.043	.0196	NR	.41	–	.060	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	"	"	"	"	.96	–	.045	.0234	N	1.64	–	.038	.0259	R	1.81	–	.036	.0244	[illegible]
"	[illegible]	[illegible]	[illegible]	76°	160/10+25	⦶	"	.93	–	.047	.0236	N	.80	–	.050	.0224	NR	1.25	–	.031	.0212	NR
"	[illegible]	[illegible]	[illegible]	"	"	"	"	1.44	–	.047	.0236	NR	1.34	–	.049	.0296	NR	.86	–	.051	.0243	NR
[illegible]	[illegible]	[illegible]	[illegible]	65°	170/10+20	⊕	F	1.02	–	.041	.0207	N	1.47	–	.048	.0232	N	1.16	–	.045	.0181	R
"	[illegible]	[illegible]	[illegible]	"	"	"	"	.81	–	.043	.0192	NR	1.18	–	.045	.0235	N	1.02	–	.048	.0230	N
"	[illegible]	[illegible]	[illegible]	"	"	⦶	"	.95	–	.045	.0241	NR	.80	–	.052	.0199	NR	.78	–	.055	.0194	NR
"	[illegible]	[illegible]	[illegible]	"	"	"	"	1.13	–	.046	.0240	NR	.87	–	.044	.0206	R	.85	–	.054	.0171	NR
"	[illegible]	[illegible]	[illegible]	75°	150/15+20	"	None	.90	–	.047	.0260	NR	.67	–	.058	.0195	R	.57	–	.062	.0226	NR
"	[illegible]	[illegible]	[illegible]	"	"	"	"	.73	–	.053	.0202	R	1.23	–	.045	.0196	NR	.67	–	.051	.0192	NR
"	[illegible]	[illegible]	[illegible]	80°	150/10+15	⊕	"	1.11	–	.046	.0215	NR	1.14	–	.033	.0181	NR	.43	–	.054	.0113	N
"	[illegible]	[illegible]	[illegible]	"	"	"	"	1.42	–	.050	.0240	NR	1.05	–	.049	.0213	NR	.91	–	.047	.0116	NR
[illegible]	[illegible]	[illegible]	[illegible]	68°	150/10	⦶	"	.64	–	.048	.0185	R	1.25	–	.047	.0192	NR	.48	–	.049	.0134	R
"	[illegible]	[illegible]	[illegible]	"	"	"	"	.20	–	.052	.0168	R	1.69	–	.044	.0227	N	.61	–	.060	.0124	N
"	[illegible]	[illegible]	[illegible]	"	"	⊕	"	.21	–	.047	.0187	NR	1.21	–	.040	.0254	N	.59	–	.044	.0143	NR
"	[illegible]	[illegible]	[illegible]	"	"	"	"	1.14	–	.046	.0228	NR	1.32	–	.043	.0206	NR	.62	–	.055	.0142	NR
"	[illegible]	[illegible]	[illegible]	69°	150/15	"	"	1.21	–	.043	.0255	N	.94	–	.045	.0251	NR	.62	–	.049	.0181	NR
"	[illegible]	[illegible]	[illegible]	"	"	"	"	1.10	–	.050	.0225	N	[illegible]	–	.050	.0210	NR	.89	–	.051	.0202	NR
"	[illegible]	[illegible]	[illegible]	70°	150/10	⦶	"	1.31	–	.047	.0236	NR	1.52	–	.047	.0271	NR	.95	–	.049	.0222	NR
"	[illegible]	[illegible]	[illegible]	"	"	"	"	.21	–	.050	.0234	R	.62	–	.051	.0266	R	.59	–	.045	.0172	NR
[illegible]	[illegible]	[illegible]	[illegible]	60°	150/15	⊕	[illegible]	[illegible]	–	.047	[illegible]	NR	1.11	–	.043	.0264	N	.52	–	.045	.0242	[illegible]
"	[illegible]	[illegible]	[illegible]	"	"	"	"	[illegible]	–	.043	.0264	NR	1.40	–	.040	.0232	N	1.34	–	.052	.0232	[illegible]
"	[illegible]	[illegible]	[illegible]	69°	100/15+20	"	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	1.11	–	.045	.0256	NR	.79	–	.051	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	"	"	"	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	.75	–	.058	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	"	"	.14	–	.047	.0271	N	[illegible]	–	.047	.0247	[illegible]	.57	–	.060	.0154	[illegible]
"	[illegible]	[illegible]	[illegible]	"	"	"	"	[illegible]	–	.045	[illegible]	NR	[illegible]	–	.045	[illegible]	[illegible]	.78	–	[illegible]	[illegible]	[illegible]

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Table VII.- Concluded.

OPERATING CONDITIONS				WEATHER				SONIC BOOM PRESSURE SIGNATURE DATA																
								Station 1					Station 3					Station 4						
Date	Flight No.	Time	Mach No.	Surface Temp.	Surface Winds	Cloud Cover	Precip-itation	Δp_o	Δp_I	Δt_o Pos	I_o Pos	Wave Shape	Δp_o	Δp_I	Δt_o Pos	I_o Pos	Wave Shape	Δp_o	Δp_I	Δt_o Pos	I_o Pos	Wave Shape
4-[illegible]-64	1/[illegible]	859	1.5	68°	190/10+25	⦶	None	1.36	-	0.043	0.0200	N	1.09	-	0.044	0.0251	NR	0.54	-	0.050	0.0153	NR
"	2/[illegible]	900	1.5	"	"	"	"	1.30	-	.044	.0193	NR	1.25	-	.039	.0223	NP	.77	-	.056	.0212	NR
"	3/545	1059	1.5	"	210/20	"	"	68	-	.050	.0200	R	.76	-	.058	.0199	R	.34	-	.060	.0130	
"	4/546	1119	1.5	"	"	"	"	.98	-	.054	.0186	R	.91	-	.065	.0213	R	.51	-	.062	.0165	
4-[illegible]-64	1/547	615	1.5	52°	200/10	⦶	"	1.25	-	.045	.0249	N	.98	-	.048	.0212	N	1.56	-	.042	.0177	I
"	2/548	719	1.5	"	"	"	"	1.25	-	.049	.0215	N	1.62	-	.044	.0229	NP	.77	-	.056	.0236	NR
"	3/549	900	1.5	66°	210/15+25	"	"	1.43	-	.044	.0260	NP	1.47	-	.046	.0232	NP	.79	-	.057	.0211	
"	4/550	119	1.5	"	"	"	"	.55	-	.057	.0216	R	1.59	-	.047	.0237	NR	1.44	-	.045	.0212	I
	5/551	1251	1.5	69°	300/10+25	⦶	"	1.09	-	.049	.0256	C	.64	-	.055	.0160	R	.66	-	.062	.0114	
	6/552	1111	1.5	"	"	"	"	1.20	-	.043	.0249	P	1.10	-	.052	.0181	NP	.72	-	.052	.0172	
	7/553	1320	1.5	72°	"	⦶	"	1.47	-	.050	.0269	NP	1.07	-	.054	.0254	C	.52	-	.056	.0162	
	8/554	1420	1.5	"	"	"	"	.97	-	.046	.0251	NR	.72	-	.045	.0181	R	.94	-	.034	.0157	
4-[illegible]-64	1/555	700	1.5	54°	210/15+20	○	"	1.29	-	.045	.0295	NP	1.23	-	.051	.0255	N	1.56	-	.054	.0412	NR
"	2/556	113	1.5	"	"	"	"	1.35	-	.048	.0246	NP	1.61	-	.050	.0297	NP	1.67	-	.051	.0288	I
"	3/557	859	1.5	60°	210/20+30	⦶	"	.75	-	.059	.0249	R	1.79	-	.048	.0262	P	1.25	-	.054	.0294	NR
	4/558	920	1.5	"	"	"	"	1.51	-	.051	.0244	P	1.64	-	.052	.0266	NP	1.33	-	.059	.0224	NI
	5/559	1101	1.5	62°	○	"	"	.72	-	.052	.0181	R	.80	-	.055	.0196	P	1.36	-	.058	.0232	NI
"	6/560	1120	1.5	"	"	"	"	1.29	-	.043	.0297	NP	1.61	-	.041	.0246	NP	1.77	-	.044	.0264	I
	7/561	1251	1.5	60°	"	⦶	"	1.01	-	.047	.0214	C	2.24	-	.049	.0205	P	1.56	-	.045	.0263	NI
"	8/562	1320	1.5	"	"	"	"	.72	-	.048	.0177	R	2.13	-	.055	.0250	P	1.58	-	.045	.0222	NI
4-[illegible]-64	5/563	1101	1.5	64°	060/10	⦶	"	2.00	-	.044	.0261	P	1.24	-	.047	.0284	C	2.03	-	.050	.0270	P
"	6/564	1120	1.5	"	"	"	"	1.56	-	.045	.0277	P	1.69	-	.050	.0285	NP	1.29	-	.054	.0244	P
4-[illegible]-64	1/565	659	1.5	56°	140/10	⦶	"	1.04	-	.045	.0264	N	1.52	-	.040	.0261	NP	.72	-	.058	.0172	NR
"	2/566	719	1.5	"	"	"	"	.68	-	.045	.0153	R	1.18	-	.036	.0226	C	.68	-	.055	.0175	NR
"	3/567	859	1.5	62°	180/10	"	"	.68	-	.047	.0193	R	1.30	-	.041	.0222	NP	1.59	-	.058	.0232	I
"	4/568	919	1.5	"	"	"	"	.52	-	.047	.0254	R	1.36	-	.045	.0214	C	.85	-	.050	.0179	I
"	5/569	1059	1.5	70°	"	"	RW	1.60	-	.045	.0267	P	1.26	-	.047	.0201	N	1.14	-	.050	.0242	I
"	6/570	1120	1.5	"	"	"	"	.71	-	.059	.0215	R	1.21	-	.046	.0201	NR	1.48	-	.054	.0247	P
"	7/571	1300	1.5	72°	"	"	"	.60	-	.052	.0251	R	1.05	-	.052	.0232	NR	1.59	-	.056	.0221	I
"	8/572	1319	1.5	"	"	"	"	.72	-	.040	.0246	P	1.07	-	.040	.0262	NR	1.42	-	.052	.0200	I
5-1-64	4/550	111	1.5	62°	160/10+15	⊕	"	1.00	-	.045	.0241	NR	1.57	-	.042	.0259	C	1.06	-	.056	.0258	-

Approved For Release 2005/05/16 : CIA-RDP71B00822R000100280002-6

Approved For Release 2005/05/16 : CIA-RDP71B00822R000100280002-6

Table VIII.- Summary Of Sonic Boom Data For Various Flights Of Airplane A For An Altitude Range Of 26,000 To 27,000 Feet

OPERATING CONDITIONS				WEATHER				SONIC BOOM PRESSURE SIGNATURE DATA																		
								Station 1					Station 3					Station 4				
Date	Flight No.	Time	Mach No.	Surface Temp.	Surface Winds	Cloud Cover	Precip-itation	Δp_o	Δp_i	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_i	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_i	Δt_o Pos.	I_o Pos.	Wave Shape
27,000 FT.																						
3-15-64	4/564	910	1.7	57°	170/5	⊕	None	1.54	0.51	0.025	0.0517	N	1.61	0.50	0.041	0.0343	N	1.15	0.37	0.044	0.0157	N
"	5/[illegible]	1100	1.5	65°	130/10	"	"	1.59	.66	.050	.0318	NP	1.74	.47	.057	.0271	NP	.67	.35	.067	.0181	NR
"	[illegible]	1150	1.5	"	"	"	"	1.46	.56	.029	.0253	NP	1.35	.49	.041	.0277	NR	.90	.35	.057	.0109	NR
"	[illegible]/569	1159	1.5	"	170/10	"	"	.98	.56	.040	.0305	R	1.50	.48	.045	.0323	NR	1.31	.30	.040	[illegible]	[illegible]
"	7/565	1310	1.7	"	"	"	"	1.10	.45	.046	.0171	P	1.58	.47	.048	.0363	NR	1.51	.36	.044	.0316	[illegible]
3-20-64	1/561	700	1.7	49°	310/10+25	◐	"	.88	.49	.041	.0156	R	1.18	.54	.051	.0173		.17	.06	.043	.0037	N
	2/510	910	1.7	"	"	"	"	.96	.38	.043	.0197	R	1.51	.47	.027	.0338	NP	.93	.35	.041	.0155	NR
	3/571	905	1.7	30°	350/10+25	⊕	S	.98	.30	.047	.0318	NR	1.37	.33	.058	.0181	NP	1.57	.36	.040	.0327	[illegible]
"	5/573	1059	1.5	34°	370/15+40	"	"	1.57	.40	.040	.0314	NP	1.10	.35	.047	.0337	NR	.40	.16	.064	.0155	R
"	6/574	1170	1.5	"	"	"	"	.91	.40	.044	.0154	NR	1.48	.34	.039	.0271	N	.91	.30	.056	.0156	
3-21-64	1/575	659	1.5	54°	360/10	O	None	1.57	.50	.046	.0266	NR	1.17	.39	.047	.0267	NR	.70	.36	.057	.0171	N
"	2/596	859	1.5	56°	"	"	"	1.70	.44	.041	.0327	NR	1.53	.45	.043	.0303	N	.78	.38	.046	.0197	NR
"	4/598	1100	1.5	37°	"	"	"	1.15	.47	.047	.0277	NR	.90	.36	.041	.0318	R	.59	.35	.059	.0155	R
5-2-64	2/595	900	1.3	75°	150/15+30	"	"	.93	-	.053	.0329	R	1.00	-	.036	.0157		.69	-	.061	.0175	R
"	4/596	930	1.3	"	"	"	"	.96	-	.057	.0340	R	.69	-	.057	.0167	R	.47	-	.060	.0175	R
"	5/597	1100	1.3	80°	190/15+25	"	"	1.63	-	.046	.0350	NP	.48	-	.059	.0189	R	.74	-	.066	.0105	NR
"	6/598	1170	1.3	"	"	"	"	1.56	-	.063	.0447	R	-	-	-	-	-	-	-	-	-	-
"	7/599	1300	1.3	84°	"	"	"	.93	-	.050	.0307	R	1.53	-	.050	.0361	NR	1.59	-	.059	.0319	[illegible]
26,000 FT.																						
3-21-64	3/597	930	1.5	37°	360/10	O	"	1.10	0.44	0.043	0.0333	NR	1.47	0.43	0.045	0.0329	N	0.65	0.35	0.048	0.0184	NR
	5/599	1170	1.5	"	"	"	"	1.35	.44	.045	.0318	NR	.97	.31	.041	.0326	R	.43	.37	.056	.0167	R

Approved For Release 2005/05/16 : CIA-RDP71B00822R000100280002-6

Approved For Release 2005/05/16 : CIA-RDP71B00822R000100280002-6

Table IX.- Summary Of Sonic Boom Data For Various Flights Of Airplane A

For An Altitude Of 24,000 Feet

OPERATING CONDITIONS				WEATHER				SONIC BOOM PRESSURE SIGNATURE DATA														
								Station 1					Station 3					Station 4				
Date	Flight No.	Time	Mach No.	Surface Temp.	Surface Winds	Cloud Cover	Precip-itation	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape
[illegible]	[illegible]	700	1.5	58°	150/10	◐	RW	1.41	-	0.046	0.0266	N	1.43	-	0.040	0.0251	NR	0.88	-	0.052	0.0261	NR
	[illegible]	[illegible]	1.5	"	"	"	"	.95	-	.049	.0251	R	1.06	-	.053	.0247	-	.97	-	.049	.0181	NR
	[illegible]	700	1.5	62°	160/10+15	⊕	"	1.16	-	.046	.0230	N	1.22	-	.046	.0311	NR	.84	-	.050	.0231	[illegible]
[illegible]	[illegible]	700	1.3	65°	160/15+20	◐	None	1.49	-	.051	.0247	N	.89	-	.055	.0203	R	.34	-	.128	.0190	-
	[illegible]	719	1.4	"	"	"	"	1.66	-	.047	.0253	NR	1.19	-	.045	.0213	N	1.02	-	.050	.0160	NR
[illegible]	[illegible]	700	1.4	66°	170/10+20	◐	"	1.27	-	.048	.0277	N	.96	-	.055	.0237	R	.65	-	[illegible]	[illegible]	R
	[illegible]	720	1.4	"	"	"	"	1.71	-	.020	.0272	NP	1.20	-	.049	.0212	NR	.49	-	.053	.0172	NR
	[illegible]	859	1.4	75°	170/15+20	⊕	"	.97	-	.051	.0233	NR	1.03	-	.046	.0237	NR	.75	-	.060	.0222	NR
	[illegible]	920	1.5	"	"	"	"	1.62	-	.041	.0264	NP	1.14	-	.029	.0277	NR	1.07	-	.043	.0261	NR
	[illegible]	1100	1.4	78°	180/15+25	"	"	1.23	-	.041	.0193	NR	1.16	-	.041	.0251	N	.39	-	.064	.0111	R
	6/605	1120	1.5	"	"	"	"	1.13	-	.050	.0264	N	1.30	-	.045	.0257	R	.78	-	.053	.0201	NR
	7/[illegible]	1300	1.4	80°	"	"	"	.88	-	.055	.0240	NR	.75	-	.059	.0187	R	.80	-	.058	.0180	-
	8/[illegible]	1319	1.4	"	"	"	"	.95	-	.048	.0237	NR	1.55	-	.042	.0268	N	.72	-	.057	.0161	N
[illegible]	1/608	700	1.4	68°	170/15+25	"	"	1.94	-	.044	.0326	NP	1.01	-	.051	.0177	R	-	-	-	-	-
	2/609	720	1.5	"	"	"	"	.65	-	.051	.0195	R	1.33	-	.042	.0258	N	1.04	-	.059	.0222	-
	3/610	904	1.5	73°	"	"	"	1.20	-	.046	.0284	N	1.56	-	.028	.0250	-	.99	-	.053	.0201	NR
"	4/611	920	1.5	"	"	"	"	.97	-	.057	.0286	R	.71	-	.055	.0210	R	1.12	-	.046	.0267	-
	5/612	1120	1.5	76°	170/20+30	"	"	2.19	-	.049	.0282	P	1.40	-	.050	.0280	NR	.95	-	.046	.0201	-
	6/613	1120	1.5	"	"	"	"	.67	-	.051	.0253	R	.90	-	.052	.0238	R	.45	-	.063	.0155	R
	7/614	1258	1.5	75°	"	◐	"	1.62	-	.050	.0270	NP	.99		.050	.0249	R	2.08	-	.020	.0296	P

Approved For Release 2005/05/16 : CIA-RDP71B00822R000100280002-6

Approved For Release 2005/05/16 : CIA-RDP71B00822R000100280002-6

Table X.- Summary Of Sonic Boom Data For Various Flights Of Airplane A For An Altitude Range Of 21,000 To 23,000 Feet

OPERATING CONDITIONS				WEATHER				SONIC BOOM PRESSURE SIGNATURE DATA														
								Station 1					Station 3					Station 4				
Date	Flight No.	Time	Mach No.	Surface Temp.	Surface Winds	Cloud Cover	Precip-itation	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape
23,000 FT.																						
[illegible]	[illegible]	1100	[illegible]	70°	160/10+15	⊕	RW	0.74	-	0.050	[illegible]	[illegible]	0.62	-	0.042	0.0141	R	[illegible]	-	0.073	[illegible]	-
	[illegible]	1113	1.	"	"	"	"	.67	-	.054	.0182	R	.60	-	[illegible]	.0141	-	.52	-	[illegible]	[illegible]	-
	[illegible]	1221	1.	75°	140/15	"	None	1.34	-	[illegible]	.0207	NR	1.11	-	[illegible]	[illegible]	NR	.50	-	[illegible]	[illegible]	[illegible]
	[illegible]	1220	[illegible]	"	"	"	"	1.21	-	.051	.0221	C	1.5[illegible]	-	.033	.0201	NR	.60	-	.052	[illegible]	[illegible]
[illegible]	[illegible]	700	1.2	56°	140/10	◑	"	-	-	-	-	-	1.22	-	.050	.0128	N	1.2[illegible]	-	.040	[illegible]	[illegible]
	[illegible]	[illegible]	1.4	"	"	"	"	-	-	-	-	-	1.36	-	.041	.0172	N	1.66	-	.040	.0232	-
	[illegible]	[illegible]	1.2	65°	150/10	C	"	-	-	-	-	-	2.43	-	.033	.0290	N	1.27	-	[illegible]	[illegible]	[illegible]
	4/[illegible]	[illegible]	1.4	"	"	•	"	-	-	-	-	-	1.68	-	.043	.0214	N	1.43	-	.042	[illegible]	NR
	[illegible]	[illegible]	1.2	70°	150/10+20	T	"	1.21	-	.056	.0202	N	1.33	-	.038	.0203	-	.68	-	.047	[illegible]	NR
	[illegible]	1119	1.2	"	"	"	"	1.07	-	.050	.0258	NR	1.66	-	.044	.0295	N	1.70	-	.037	[illegible]	[illegible]
	[illegible]	[illegible]	1.4	75°	"	O	"	1.07	-	.052	.0254	NR	1.54	-	.031	.0261	N	1.55	-	.044	[illegible]	
	8/5[illegible]	1320	1.4	"	"	"	"	1.07	-	.048	.0260	NR	1.75	-	.044	.0249	NR	1.10	-	[illegible]	[illegible]	N[illegible]
[illegible]	[illegible]	[illegible]	1.2	65°	160/10+15	◑	RW	1.33	-	.046	.0238	N	1.07	-	.034	.0265	R	[illegible]	-	.056	.0172	[illegible]
"	[illegible]	724	1.6	"	"	"	"	1.43	-	.044	.0301	N	1.01	-	.037	.0337	R	.70	-	.045	.0177	[illegible]
"	3/[illegible]	900	1.3	78°	210/15	"	None	1.33	-	.045	.0284	N	1.52	-	.034	.0247	N	.41	-	[illegible]	.0166	[illegible]
"	4/[illegible]	919	1.3	"	"	"	"	1.56	-	.047	.0288	N	1.14	-	.035	.0275	NR	.83	-	.043	[illegible]	NR
"	5/[illegible]	1057	[illegible]	76°	220/15	"	"	1.67	-	.044	.0285	NP	1.71	-	.032	.0287	N	.75	-	.055	.0217	NR
"	[illegible]	1119	1.5	"	"	"	"	1.72	-	.041	.0259	NR	1.27	-	.029	.0292	N	1.19	-	.045	[illegible]	[illegible]
"	7/[illegible]	1251	1.3	80°	"	"	"	1.04	-	.051	.0260	R	1.26	-	.046	.0226	R	1.02	-	.042	[illegible]	-
"	[illegible]	[illegible]	1.5	"	"	"	"	1.16	-	.049	.0312	R	.59	-	.052	.0177	R	-	-	-	-	-
21,000 FT.																						
5-7-[illegible]	1/[illegible]	659	1.5	68°	170/15	⊕	L	1.40	-	.044	.0212	N	1.10	-	.029	.0207	R	.71	-	.056	.0197	[illegible]
"	2/[illegible]	719	1.5	"	"	"	"	1.21	-	.048	.0247	NR	1.12	-	.033	.0297	NR	.42	-	.043	.0196	NR
"	3/[illegible]	900	1.5	72°	180/15+20	"	None	.77	-	.054	[illegible]	R	1.67	-	[illegible]	.0276	NR	.29	-	.072	.0119	[illegible]
"	4/[illegible]	1100	1.4	"	"	"	"	1.57	-	.046	[illegible]	N	1.16	-	[illegible]	.0243	R	[illegible]	-	.019	[illegible]	[illegible]
"	5/[illegible]	1120	1.4	75°	"	"	"	1.64	-	.052	[illegible]	C	2.10	-	[illegible]	-	[illegible]	[illegible]	-	.078	[illegible]	R
"	6/[illegible]	1301	1.4	"	"	"	"	[illegible]	-	[illegible]	[illegible]	N[illegible]	1.32	-	.047	.0209	N	1.56	-	.055	.0177	-

Approved For Release 2005/05/16 : CIA-RDP71B00822R000100280002-6

Approved For Release 2005/05/16 : CIA-RDP71B00822R000100280002-6

Table XI.- Summary Of Sonic Boom Data For Various Flights Of Airplane B

For An Altitude Of 46,000 Feet

OPERATING CONDITIONS				WEATHER				SONIC BOOM PRESSURE SIGNATURE DATA													
								Station 1					Station 3					Station 4				
Date	Flight No.	Time	Mach No.	Surface Temp.	Surface Winds	Cloud Cover	Precip-itation	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape
[illegible]	1/[illegible]	700	1.4	60°	170/10	①	F	0.57	–	0.051	0.0449	NR	1.05	–	0.071	0.0485	NR	1.41	–	0.057	0.0475	N
"	2/[illegible]	719	1.4	"	"	"	"	1.10	–	.056	.0457	NR	1.10	–	.056	.0603	NR	1.61	–	.080	.0475	N
"	3/[illegible]	900	1.4	75°	"	"	None	1.58	–	.073	.0550	NR	.84	–	.111	.0674	R	.75	–	.105	.0475	[illegible]
"	4/[illegible]	919	1.4	"	"	"	"	–	–	–	–	–	1.75	–	.075	.0600	NR	1.84	–	.075	.0676	[illegible]
"	5/[illegible]	1101	1.4	70°	200/15	①	"	1.00	–	.090	.0586	NR	1.57	–	.075	.0558	NR	2.38	–	.130	.1143	C
"	[illegible]	1121	1.4	"	"	"	"	.69	–	.065	.0411	NR	1.94	–	.080	.0599	C	.45	–	.104	.0450	C
"	7/[illegible]	1300	1.4	75°	210/10+10	"	"	1.47	–	.065	.0440	C	1.71	–	.069	.0570	C	.71	–	.010	.0475	C
"	8/[illegible]	1219	1.4	"	"	"	"	.94	–	.079	.0465	NR	.79	–	.088	.0420	R	1.87	–	.069	.0444	C
[illegible]	1/[illegible]	701	1.5	66°	120/10	①	"	1.09	–	.075	.0417	NR	1.11	–	.066	.0470	NR	.93	–	.079	.0405	NR
"	2/[illegible]	721	1.5	"	"	"	"	1.07	–	.086	.0467	N	1.04	–	.084	.0484	N	1.13	–	.077	.0594	N
"	3/[illegible]	858	1.5	79°	"	"	"	1.11	–	.077	.0437	NR	1.71	–	.067	.0577	NR	1.54	–	.071	.0541	[illegible]
"	4/[illegible]	957	1.5	"	"	"	"	1.16	–	.071	.0456	N	1.18	–	.068	.0473	N	1.73	–	.076	.0471	[illegible]
"	5/[illegible]	1059	1.5	85°	210/10	"	"	1.00	–	.068	.0483	NR	1.40	–	.076	.0573	NR	1.37	–	.096	.0503	[illegible]
"	6/[illegible]	1120	1.5	"	"	"	"	.89	–	.090	.0585	C	1.71	–	.074	.0567	NR	1.56	–	.075	.0577	[illegible]
"	7/[illegible]	1200	1.5	85°	180/10	"	"	.96	–	.088	.0453	NR	1.14	–	.084	.0426	NR	1.40	–	.077	.0471	[illegible]
"	8/[illegible]	1277	1.5	"	"	"	"	1.77	–	.079	.0591	N	.67	–	.096	.0331	R	.77	–	.088	.0424	R
5-11-64	1/714	700	1.5	67°	180/16	①	"	1.57	–	.083	.0545	N	1.48	–	.076	.0587	N	1.46	–	.085	.0595	N
"	2/715	719	1.5	"	"	"	"	1.36	–	.079	.0581	NR	1.51	–	.076	.0457	NR	1.31	–	.073	.0419	N
"	3/716	900	1.5	75°	"	"	"	1.54	–	.090	.0511	NR	1.41	–	.071	.0516	N	1.57	–	.076	.0523	N
"	4/717	951	1.5	"	"	"	"	1.01	–	.078	.0485	NR	1.58	–	.073	.0451	N	1.06	–	.078	.0455	N
"	5/718	1101	1.5	70°	"	"	"	1.01	–	.106	.0545	NR	1.85	–	.094	.0560	NR	1.11	–	.097	.0646	N
"	6/719	1157	1.5	"	"	"	"	1.49	–	.081	.0547	N	1.57	–	.065	.0559	NR	.70	–	.118	.0460	[illegible]
"	7/720	1200	1.5	85°	190/10+20	"	"	1.03	–	.097	.0584	R	.77	–	.103	.0464	–	.59	–	.098	.0453	[illegible]
"	8/721	1321	1.5	"	"	"	"	1.77	–	.064	.0505	N	1.37	–	.091	.0461	NR	2.23	–	.083	.0447	R
5-12-64	1/722	659	1.5	68°	180/17	①	"	1.77	–	.080	.0595	N	1.74	–	.070	.0513	NR	1.41	–	.093	.0547	C
"	2/723	721	1.5	"	"	"	"	.98	–	.078	.0458	N	.92	–	.076	.0434	NR	.27	–	.085	.0387	N
5-13-64	1/726	1200	1.5	82°	120/20+20	"	"	2.41	–	.077	.0593	R	1.18	–	.076	.0412	NR	.70	–	.081	.0221	NR
"	2/727	1[illegible]	1.5	"	"	"	"	.93	–	.130	.0520	R	.16	–	.061	.0407	R	1.19	–	.086	.0427	NR
[illegible]	5/[illegible]	[illegible]	1.5	72°	120/20+20	④	F 1.77	1.76	–	.087	.05[illegible]	NR	2.10	–	.072	.0642	C	.55	–	.100	.0256	R

Approved For Release 2005/05/16 : CIA-RDP71B00822R000100280002-6

Approved For Release 2005/05/16 : CIA-RDP71B00822R000100280002-6

Table XII.- Summary Of Sonic Boom Data For Various Flights Of Airplane B

For An Altitude Of 44,000 Feet

OPERATING CONDITIONS				WEATHER				SONIC BOOM PRESSURE SIGNATURE DATA													
								Station 1					Station 3					Station 4				
Date	Flight No.	Time	Mach No.	Surface Temp.	Surface Winds	Cloud Cover	Precip-itation	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos	I_o Pos.	Wave Shape
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	None	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	"	"	"	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	[illegible]	"	[illegible]	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	"	"	"	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	[illegible]	"	"	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	"	"	"	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	"	–	–	–	–	–	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	"	"	"	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	"	"	"	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]
"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	"	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]

Approved For Release 2005/05/16 : CIA-RDP71B00822R000100280002-6

Approved For Release 2005/05/16 : CIA-RDP71B00822R000100280002-6

Table XII.- Concluded.

OPERATING CONDITIONS				WEATHER				SONIC BOOM PRESSURE SIGNATURE DATA																							
								Station 1					Station 3					Station 4													
Date	Flight No.	Time	Mach No.	Surface Temp.	Surface Winds	Cloud Cover	Precip-itation	Δp_o	Δp_I	Δt_o Pos.	I_o Pos	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape
[illegible]	1/760	658	1.5	72°	120/10+15	⦶	None	1.38	–	0.615	0.0472	N	1.06	–	0.627	0.0462	NR	1.33	–	0.632	0.0487	N
	2/761	720	1.5	"	"	"	"	1.05	–	.076	.0470	NR	1.31	–	.059	.0486	T	1.15	–	.625	.0399	N
	3/762	859	1.5	71°	190/10+15	"	"	.75	–	.084	.0460	NR	1.21	–	.076	.0415	NP	1.12	–	.625	.0421	N
	4/764	1057	1.5	"	"	⊕	TRW	1.24	–	.085	.0496	NR	1.19	–	.067	.0551	R	.97	–	.084	.0425	NR
	5/765	1119	1.5	"	"	"	"	1.19	–	.090	.0470	NR	1.15	–	.072	.0512	R	1.27	–	.081	.0471	N
	6/766	1258	1.5	74°	"	"	"	1.14	–	.078	.0481	NR	1.22	–	.072	.0487	R	1.35	–	.072	.0522	NR
[illegible]	1/768	658	1.5	56°	360/15	"	None	.79	–	.091	.0427	NR	1.21	–	.068	.0447	NR	.78	–	.072	.0367	NR
	2/769	721	1.5	"	"	"	"	1.16	–	.081	.0527	NR	.82	–	.076	.0367	NR	.65	–	.100	.0310	–
	3/770	859	1.5	"	"	"	"	1.30	–	.072	.0434	N	1.25	–	.070	.0421	N	.90	–	.094	.0470	NR
	4/772	1259	1.5	59°	"	"	"	.90	–	.090	.0411	NR	1.06	–	.076	.0423	NR	.79	–	.086	.0365	[illegible]
	5/773	1119	1.5	"	"	"	"	1.61	–	.072	.0362	NR	.87	–	.087	.0421	NR	1.75	–	.070	.0405	[illegible]
	6/774	1258	1.5	62°	"	"	"	1.12	–	.079	.0410	NR	1.71	–	.068	.0521	NP	2.02	–	.069	.0440	[illegible]
[illegible]	1/775	700	1.5	59°	090/10	"	TRW	.72	–	.173	.0419	–	.49	–	.094	.0421	R	.96	–	.120	.0177	–
	2/776	719	1.5	"	"	"	"	.62	–	.100	.0251	C	.56	–	.166	.0321	–	.42	–	.096	.0171	–
	3/777	900	1.5	55°	"	"	"	.49	–	.090	.0205	R	.49	–	.114	.0201	R	.56	–	.116	.0196	–
	4/778	920	1.5	"	"	"	"	.32	–	.098	.0199	–	.60	–	.095	.0215	R	.19	–	.152	.0115	–
	5/779	1200	1.5	58°	VAR/5	"	"	1.80	–	.082	.0522	C	1.52	–	.069	.0467	NP	.66	–	.094	.0164	–
[illegible]	4/783	1300	1.5	65°	050/10	⊕	None	.46	–	.100	.0349	R	1.10	–	.062	.0507	NR	.66	–	.098	[illegible]	R
	5/784	1320	1.5	"	"	"	"	1.60	–	.069	.0488	NR	1.02	–	.084	.0459	NR	.32	–	.124	.0166	R
[illegible]	1/785	700	1.5	53°	360/10	⦶	RWF	1.37	–	.076	.0547	NR	1.55	–	.066	.0541	N	1.14	–	.078	.0445	N
	2/786	720	1.5	"	"	"	"	1.11	–	.092	.0481	NR	1.24	–	.077	.0442	N	1.44	–	.086	.0418	NP
	3/787	900	1.5	"	050/10	"	"	1.44	–	.087	.0516	N	1.51	–	.072	.0426	NP	1.24	–	.079	.0526	N
	4/788	931	1.5	"	"	"	RW	1.01	–	.090	.0547	NR	2.29	–	.068	.0523	NP	1.16	–	.062	.0535	–
	5/789	1059	1.5	56°	020/10	"	"	1.53	–	.072	.0591	NR	1.24	–	.077	.0458	NR	2.10	–	.060	.0641	T
	6/790	1201	1.5	66°	050/15	"	None	1.16	–	.082	.0542	NR	1.72	–	.078	.0552	NP	.61	–	.115	.0282	R
	7/791	1321	1.5	"	"	"	"	1.48	–	.094	.0495	NP	1.27	–	.070	.0490	NR	.76	–	.106	.0463	R

Approved For Release 2005/05/16 : CIA-RDP71B00822R000100280002-6

Approved For Release 2005/05/16 : CIA-RDP71B00822R000100280002-6

Table XIII.- Summary of Sonic Boom Data For Various Flights Of Airplane B For An Altitude Range of 33,000 To 42,000 Feet

OPERATING CONDITIONS				WEATHER				SONIC BOOM PRESSURE SIGNATURE DATA														
								Station 1					Station 3					Station 4				
Date	Flight No.	Time	Mach No.	Surface Temp.	Surface Winds	Cloud Cover	Precip-itation	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape
42,000 FT.																						
[illegible]	[illegible]	[illegible]	1.4	[illegible]	170/15	O	None	0.96	–	[illegible]	[illegible]	NR	0.96	–	0.013	0.0457	–	0.00		[illegible]	[illegible]	–
	[illegible]	[illegible]	1.4	"	"	"	"	.96	–	[illegible]	.0474	NR	1.34	–	[illegible]	[illegible]	NR	[illegible]		[illegible]	[illegible]	–
	[illegible]	[illegible]	1.4	"	170/15	O	"	1.39	–	[illegible]	.0551	NR	[illegible]	–	[illegible]	[illegible]	NR	–	–	–	–	–
	[illegible]	[illegible]	[illegible]	"	"	"	"	[illegible]	–	[illegible]	[illegible]	NR	.16	–	[illegible]	[illegible]	NR	[illegible]	–	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]/5	[illegible]	L WF	1.16	–	[illegible]	[illegible]	–	[illegible]	–	[illegible]	[illegible]	–	[illegible]	–	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]/10	[illegible]	None	1.64	–	[illegible]	[illegible]	NR	[illegible]	–	[illegible]	[illegible]	N	[illegible]	–	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	"	"	"	"	[illegible]	–	[illegible]	[illegible]	NR	[illegible]	–	[illegible]	[illegible]	N	47	–	[illegible]	[illegible]	[illegible]
40,000 FT.																						
[illegible]	[illegible]	[illegible]	1.4	[illegible]	[illegible]/10	C	Clone	1.64	–	0.071	0.0547	NP	1.79	–	0.026	0.0627	NR	–	–	–	–	–
[illegible]	[illegible]	[illegible]	1.4	75°	170/15	"	"	1.69	–	.075	.0605	NP	1.16	–	.083	.0483	NR	[illegible]	–	[illegible]	[illegible]	–
	[illegible]	[illegible]	1.4	"	"	"	"	1.19	–	.076	.0458	NR	1.58	–	.087	.0460	C	1.9	–	.146	[illegible]	C
38,000 FT.																						
[illegible]	[illegible]	1321	1.4	76°	180/15	D	None	1.83	–	0.079	0.0437	NR	1.53	–	0.085	–	R	1.50	–	[illegible]	0.0415	N
5-16-64	5/679	1059	1.4	"	180/15	"	"	1.44	–	.079	.0497	NR	1.39	–	.081	–	–	1.01	–	[illegible]	[illegible]	[illegible]
"	6/[illegible]	1121	1.4	"	"	"	"	1.01	–	.091	.0406	R	.94	–	.087	0.0461	R	1.05	–	[illegible]	.0459	[illegible]
"	7/681	1305	1.4	80°	200/15	O	"	1.45	–	.075	.0477	NP	1.56	–	.065	.0615	P	1.00	–	.059	[illegible]	N
"	8/675	1370	1.4	"	"	"	"	1.00	–	.085	.0677	P	1.09	–	–	–	–	1.16	–	[illegible]	[illegible]	NR
5-17-64	1/685	701	1.4	65°	180/15	D	"	1.44	–	.071	.0461	NR	1.44	–	.065	.0595	NP	1.61	–	.079	.0411	N
"	2/687	719	1.4	"	"	"	"	1.55	–	.067	.0459	N	1.52	–	.069	.0576	NR	1.00	–	[illegible]	[illegible]	N
"	3/695	900	1.4	70°	"	O	"	1.55	–	.076	.0444	N	1.60	–	.083	.0587	N	.82	–	.079	.0445	NR
"	4/686	910	1.4	"	"	"	"	.97	–	.083	.0442	NR	1.15	–	.073	–	P	1.40	–	.084	.0571	NR
"	5/679	1100	1.4	75°	190/15	"	"	[illegible]	–	.084	.0557	R	1.10	–	.069	–	NR	1.50	–	.079	[illegible]	I
"	6/658	1121	1.4	"	"	"	"	[illegible]	–	.082	.0458	R	1.31	–	–	–	–	1.67	–	.074	[illegible]	N
5-18-64	1/610	651	1.4	62°	170/15	"	"	1.03	–	.086	.0458	NR	1.01	–	.085	0.0426	N	.19	–	[illegible]	[illegible]	–
	[illegible]	910	1.4	"	"	"	"	[illegible]	–	.077	.0565	NR	[illegible]	–	.083	–	–	1.17	–	[illegible]	[illegible]	[illegible]
34,000 FT.																						
[illegible]	[illegible]	900	1.4	59°	[illegible]	D	None	1.24	1.4	[illegible]	[illegible]	NR	[illegible]	–	[illegible]	[illegible]	NR	1.61	–	[illegible]	[illegible]	I
"	[illegible]	[illegible]	[illegible]		"		"	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	–	[illegible]	[illegible]	I	[illegible]	–	[illegible]	[illegible]	I
"	[illegible]	[illegible]	[illegible]	"	[illegible]	"		[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	–	[illegible]	[illegible]	–	[illegible]	–	[illegible]	[illegible]	–
33,000 FT																						
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	D	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	[illegible]	[illegible]	[illegible]

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Table XIV.- Summary Of Sonic Boom Data For Various Flights Of Airplane C

For An Altitude Of 49,900 Feet

OPERATING CONDITIONS				WEATHER				SONIC BOOM PRESSURE SIGNATURE DATA																
								Station 1					Station 3					Station 4						
Date	Flight No.	Time	Mach No.	Surface Temp.	Surface Winds	Cloud Cover	Precip-itation	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape	Δp_o	Δp_I	Δt_o Pos.	I_o Pos.	Wave Shape
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	None	1.61	1.15	-	-	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.70	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	SLF	1.34	1.10	-	-	NR	1.03	-	.105	[illegible]	[illegible]	1.03	-	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	None	[illegible]	-	-	-	N	1.69	-	[illegible]	[illegible]	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.46	-	-	-	[illegible]	1.74	-	[illegible]	[illegible]	NR	1.47	-	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.24	-	.1059	[illegible]	NR	1.67	-	[illegible]	[illegible]	N	1.65	-	[illegible]	[illegible]	N
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	"	1.44	-	[illegible]	[illegible]	N	1.77	-	[illegible]	[illegible]	N	1.13	-	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.26	-	.110	[illegible]	N	1.49	-	.100	[illegible]	NR	1.71	-	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	"	1.51	-	.1005	[illegible]	N	1.62	-	[illegible]	.0659	N	.99	-	[illegible]	[illegible]	[illegible]

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TABLE XV.- SYMBOLS AND UNITS OF TABLES I THROUGH XIV

SURFACE TEMPERATURE ----- IN DEGREES FAHRENHEIT

SURFACE WINDS ---------- FIRST NUMBER IN COLUMN IS DIRECTION FROM WHICH WIND IS BLOWING

SECOND NUMBER IN COLUMN IS WIND VELOCITY IN KNOTS

PLUS SIGN INDICATES GUSTY

LAST NUMBER FOLLOWING PLUS SIGN IS MAXIMUM VELOCITY

COVER ---------- ○ CLEAR

◐ SCATTERED

◑ BROKEN

⊕ OVERCAST

X OBSCURATION

WX ---------- E SLEET

F FOG

L DRIZZLE

R RAIN

RW RAIN SHOWERS

S SNOW

T THUNDERSTORM

ZL FREEZING DRIZZLE

ZR FREEZING RAIN

SONIC BOOM DATA -------- ΔP_o PEAK POSITIVE OUTSIDE GROUND OVERPRESSURE IN LB/SQ FT

ΔP_I PEAK POSITIVE INSIDE OVERPRESSURE, LB/SQ FT

$\Delta t_{o_{pos}}$ TIME DURATION OF POSITIVE PHASE OF THE OUTSIDE OVERPRESSURE SIGNATURE, SEC

$I_{o_{pos}}$ POSITIVE IMPULSE OF THE OUTSIDE OVERPRESSURE SIGNATURE, LB SEC/SQ FT

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TABLE XVI.- THE NUMBER OF DATA RECORDS AT EACH MEASURING STATION FOR VARIOUS FLIGHT CONDITIONS OF EACH TYPE AIRPLANE

TABLE NUMBER	AIRPLANE TYPE	ALTITUDE, FEET	MACH NUMBER	TOTAL NUMBER OF DATA RECORDS		
				STATION 1	STATION 2	STATION 3
I	A	41,000	2.0	3	3	3
		38,000	1.5	8	9	8
		37,600		1	1	1
		37,500		1	1	—
		37,000		6	4	5
		36,000		10	9	10
II		35,000	2.0	1	1	1
			1.7	1	1	1
			1.5	26	26	25
		34,000	1.8	1	1	1
		33,000	1.7	1	1	1
			1.5	2	2	2
III		32,000	1.8	3	3	3
			1.5	103	101	106
IV		31,000		17	17	17
V		30,000	1.8	2	2	1
			1.7	76	78	74
			1.5	68	70	69
VI		29,000	1.8	1	1	—
			1.7	27	26	25
			1.5	29	29	26
			1.55	1	1	1
VII		28,000	1.7	34	33	34
			1.5	168	169	155
VIII		27,000	1.7	5	5	5
			1.5	8	8	8
			1.3	5	4	4
		26,000	1.5	2	2	2
IX		24,000		11	11	11
			1.4	8	8	7
			1.3	1	1	1
X		23,000	1.6	1	1	1
			1.5	2	2	1
			1.4	2	4	4
			1.3	11	13	13
		21,000	1.5	3	3	3
			1.4	3	3	3
XI	B	46,000	1.5	21	21	21
			1.4	7	8	8
XII		44,000	1.5	57	58	58
XIII		42,000		3	3	3
			1.4	4	4	3
		40,000		3	3	2
		38,000		13	13	13
		34,000		3	3	3
		33,000		2	3	2
XIV	C	49,900	2.0	8	8	8

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TABLE XVII.- SUMMARY OF MEASURED AND CALCULATED OUTSIDE SONIC BOOM OVERPRESSURES AND IMPULSES FOR THREE MEASURING STATIONS

(DATA ARE FOR AIRPLANE "A" AND FOR THOSE CONDITIONS WHERE A LARGE NUMBER OF DATA POINTS EXIST)

AIRPLANE TYPE	ALTITUDE FEET (MSL)	MACH NO.	STATION 1						STATION 3						STATION 4					
			OUTSIDE OVERPRESSURE ΔP_o, LB/SQ FT			OUTSIDE IMPULSE POSITIVE $I_{o_{pos}}$, LB-SEC/SQ FT			OUTSIDE OVERPRESSURE ΔP_o, LB/SQ FT			OUTSIDE IMPULSE POSITIVE $I_{o_{pos}}$, LB-SEC/SQ FT			OUTSIDE OVERPRESSURE ΔP_o, LB/SQ FT			OUTSIDE IMPULSE POSITIVE $I_{o_{pos}}$, LB-SEC/SQ FT		
			CALC. NOMINAL	MEDIAN @ 50%	MEDIAN @ 1%	CALC. NOMINAL	MEDIAN @ 50%	MEDIAN @ 1%	CALC. NOMINAL	MEDIAN @ 50%	MEDIAN @ 1%	CALC. NOMINAL	MEDIAN @ 50%	MEDIAN @ 1%	CALC. NOMINAL	MEDIAN @ 50%	MEDIAN @ 1%	CALC. NOMINAL	MEDIAN @ 50%	MEDIAN @ 1%
A	28,000	1.5	1.59	1.12	2.02	0.0372	0.0245	0.0345	1.23	1.24	2.72	0.0311	0.0255	0.0385	0.88	0.80	2.28	0.0229	0.0165	0.0400
A	30,000	1.5	1.45	1.04	1.78	.0347	.0240	.0350	1.15	1.20	—	.0300	.0250	.0380	0.83	0.80	2.28	.0219	.0170	.0310
A	32,000	1.5	1.31	1.08	1.87	.0322	.0260	.0375	1.06	1.04	2.00	.0280	.0235	.0345	0.78	0.74	1.44	.0208	.0175	.0260
A	30,000	1.7	1.53	0.90	2.10	.0357	.0235	.0310	1.22	0.94	2.36	.0390	.0245	.0345	0.87	0.82	1.57	.0241	.0175	.0265

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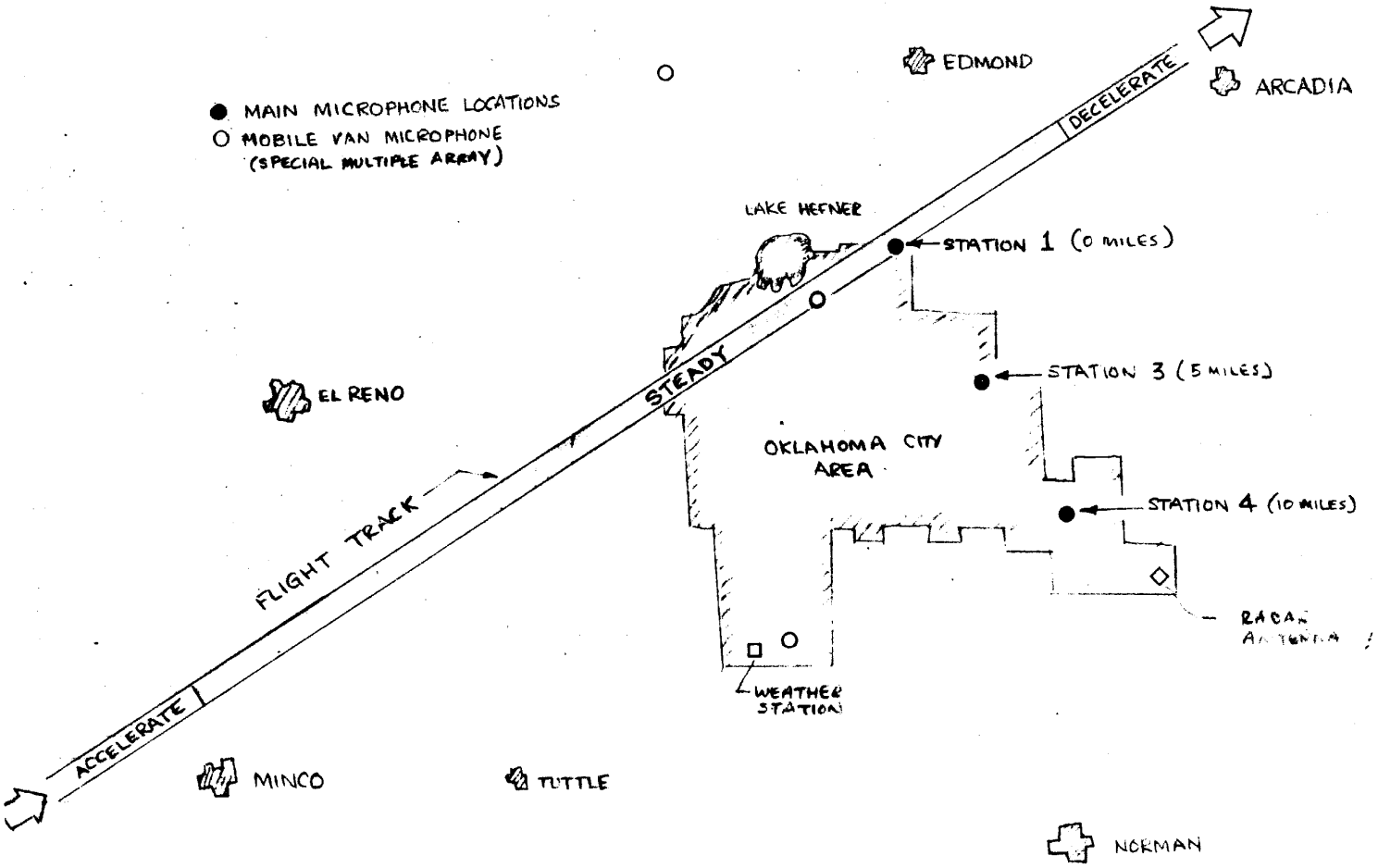

Figure 1. - Planview sketch of test area showing flight track, measuring stations and facilities.

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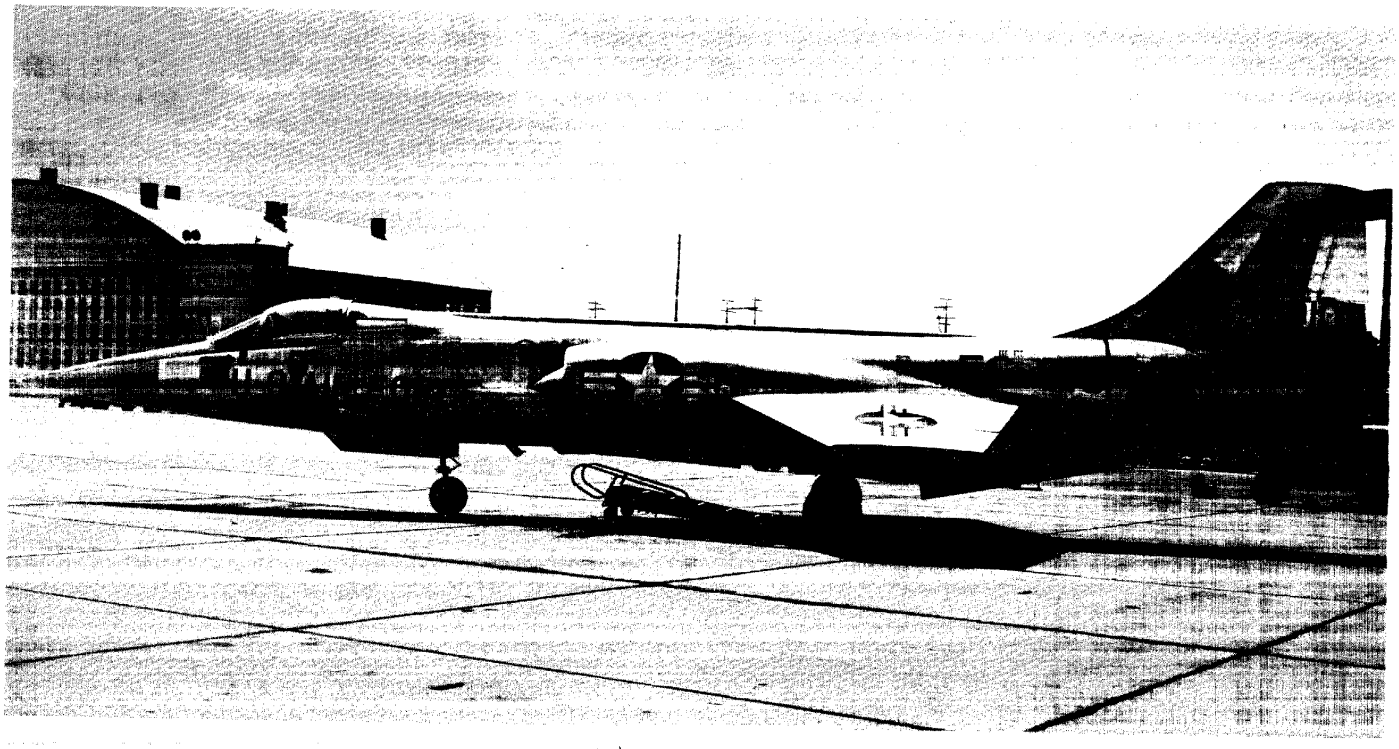

(a) Airplane A.

Figure 2. - Photographs of airplanes of the types used for the Sonic Boom Flight Tests.

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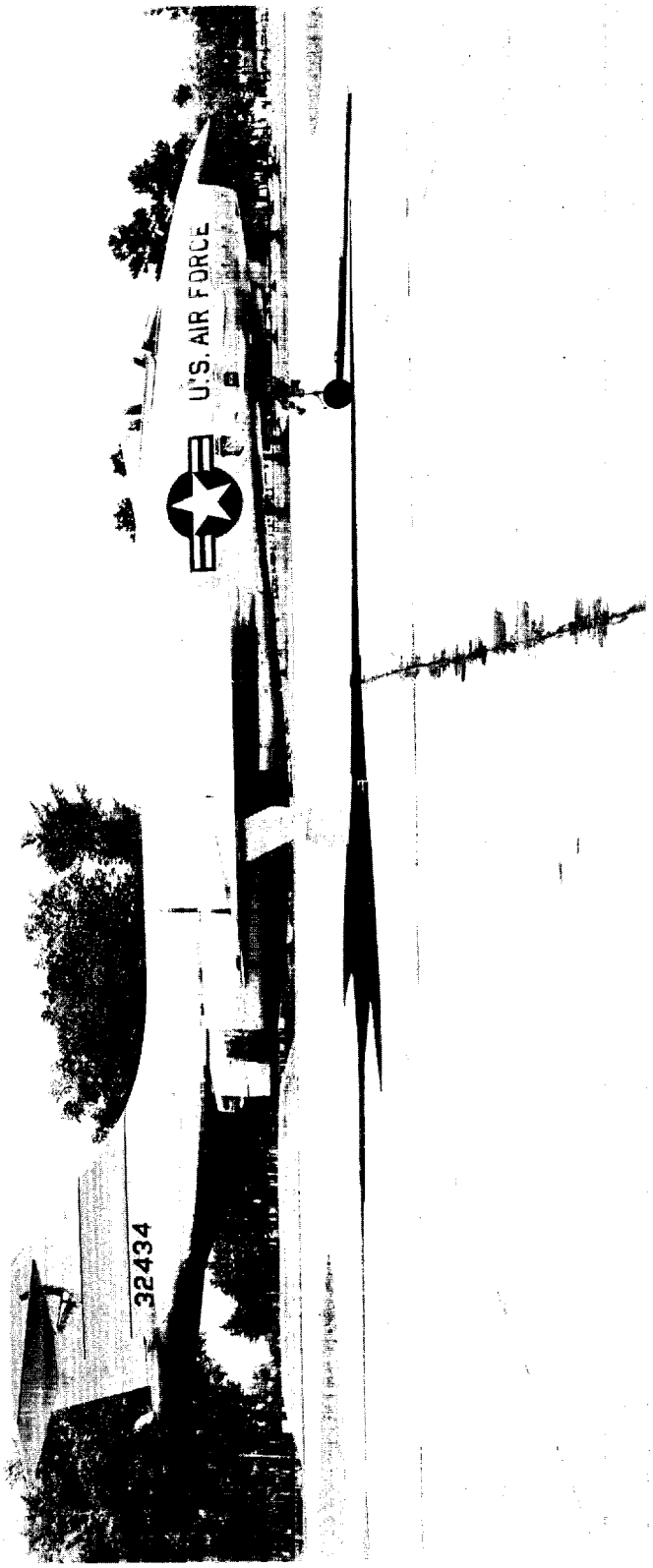

(b) Airplane B.

Figure 2. - Continued.

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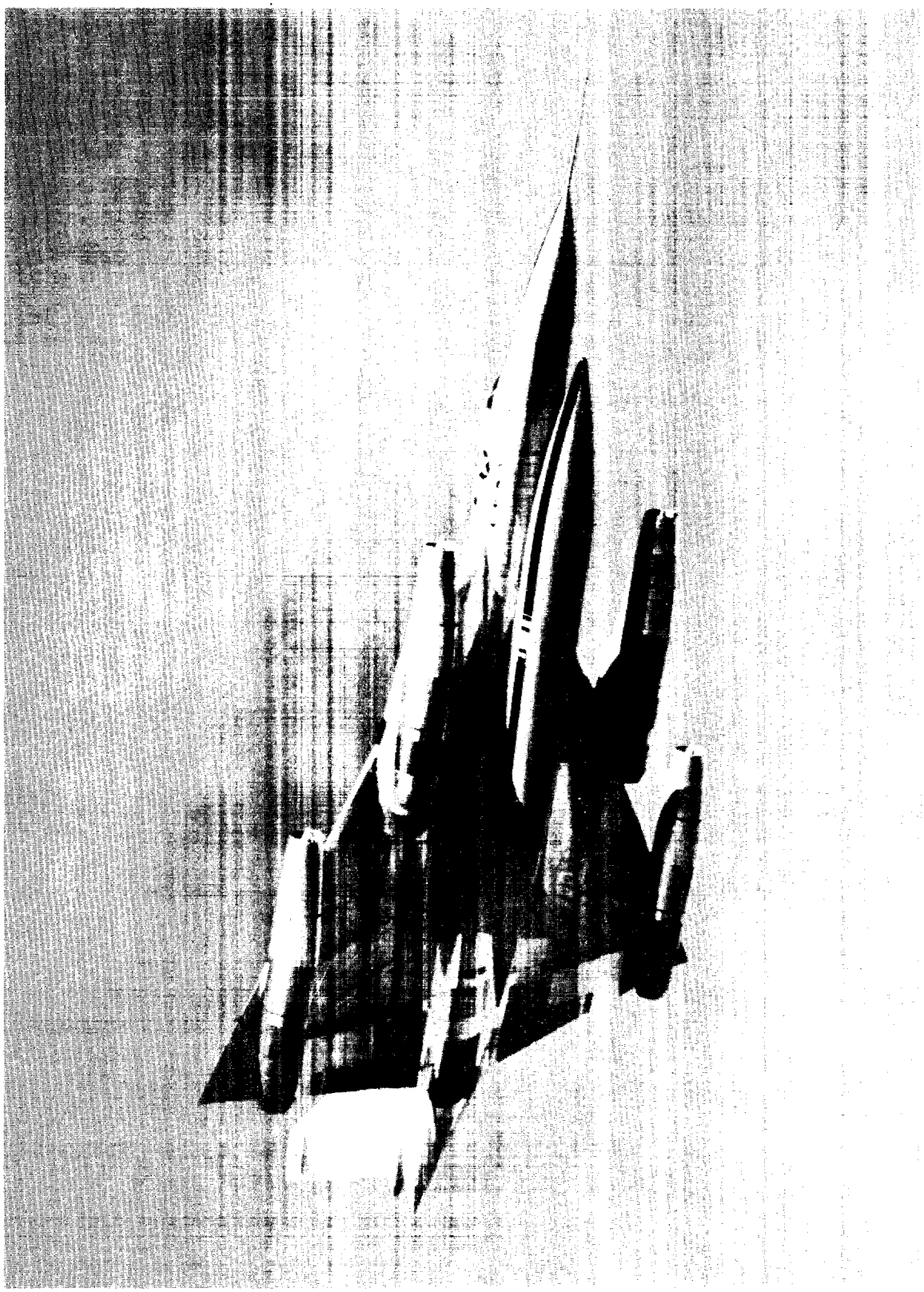

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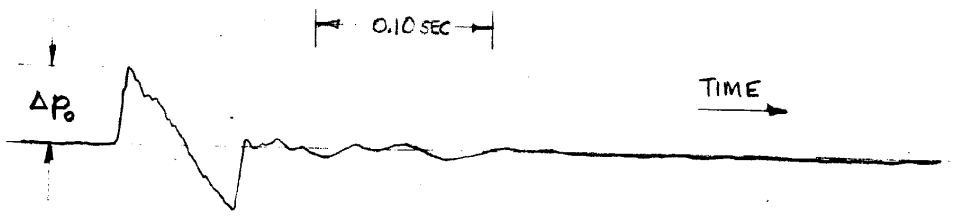

(a) Outside microphone.

(b) Inside microphone.

Figure 3. - Sample sonic boom pressure time histories for both inside and outside microphone locations. (Data are for airplane A at station 1)

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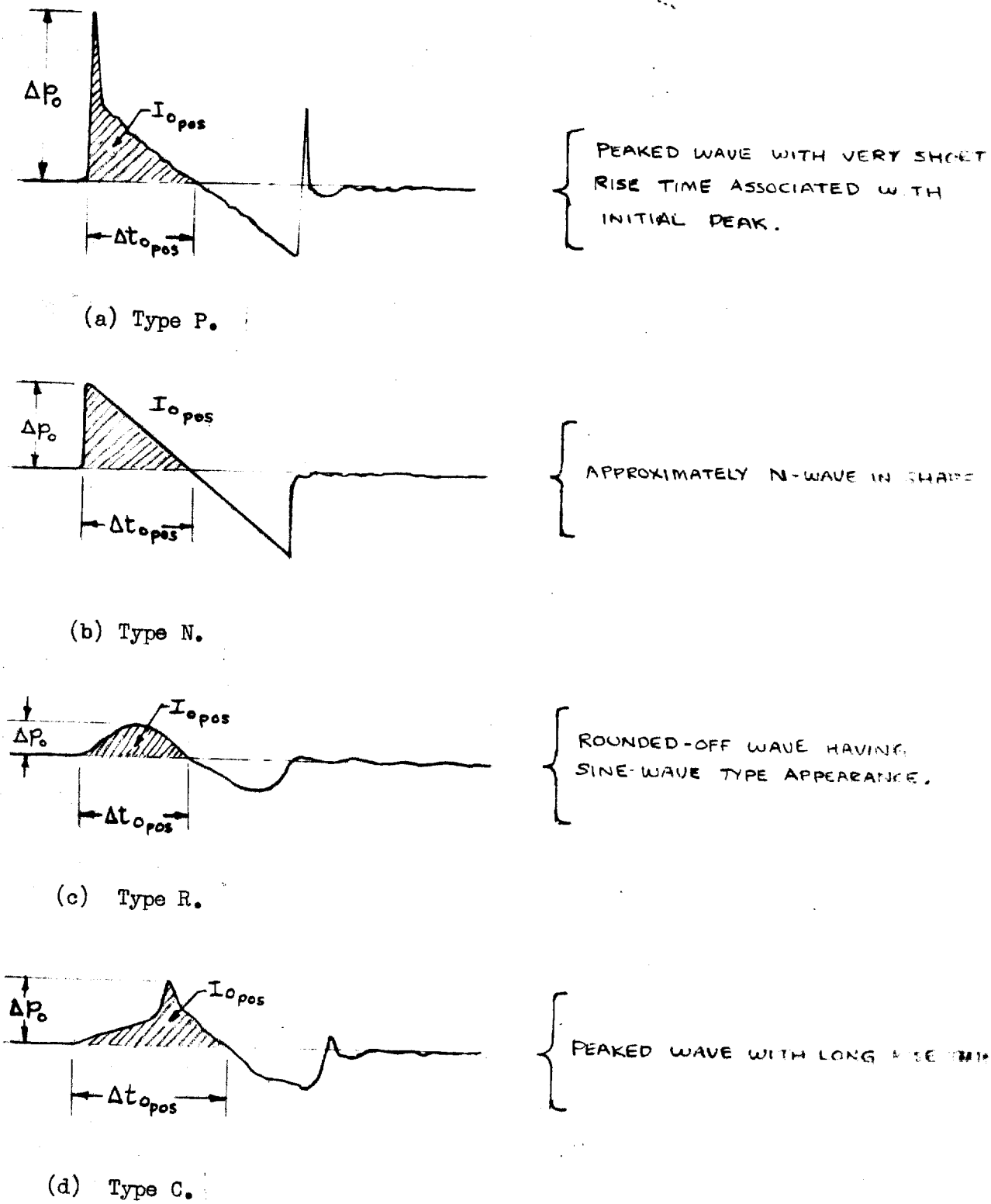

Figure 4. - Schematic diagrams showing some categories of waveforms measured at ground level during the tests.

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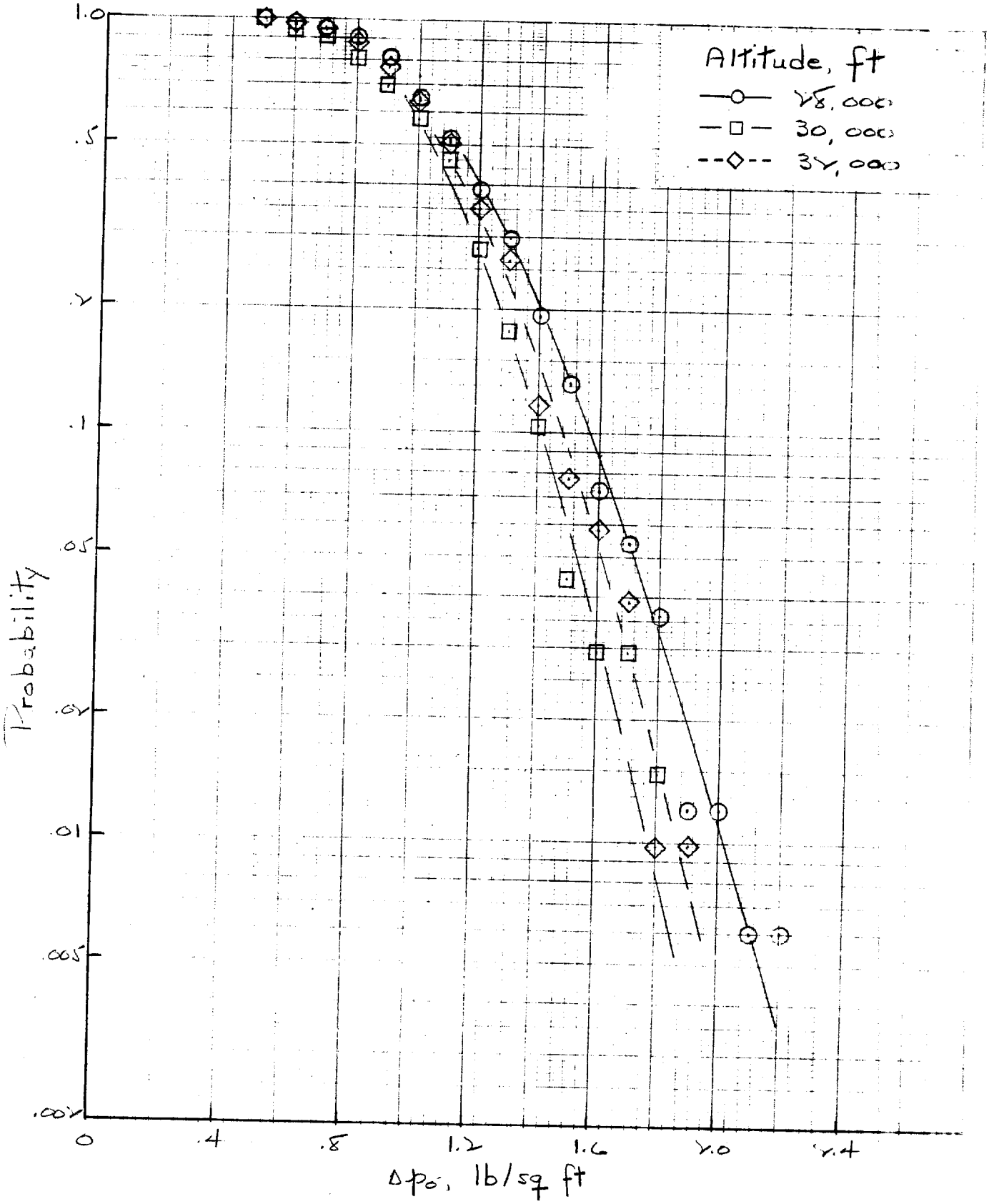

(a). Measuring station 1.

Figure 5. - Probability of equaling or exceeding a given sonic boom ground overpressure. Data for airplane A at Mach No. 1.5.

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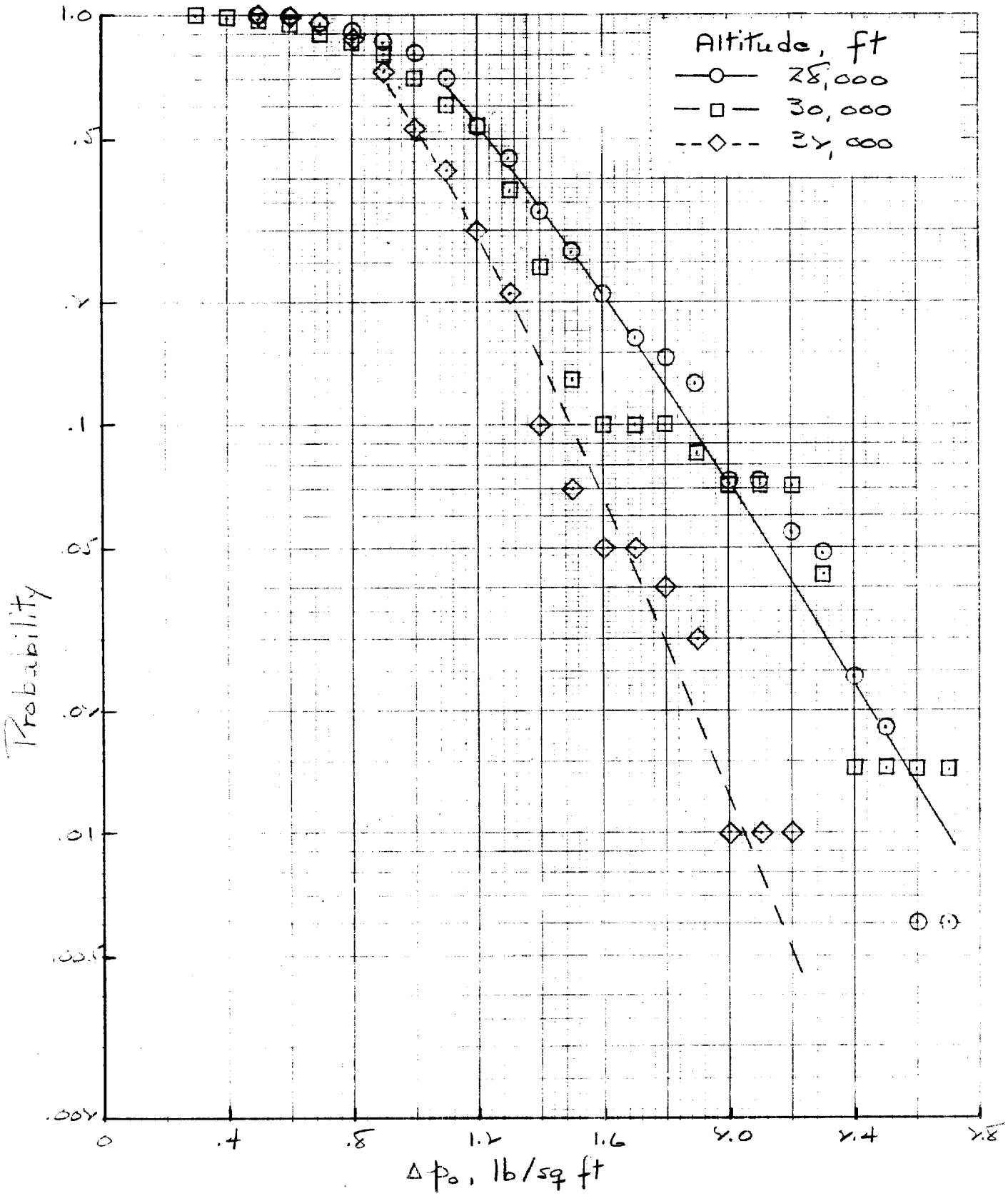

(b) Measuring station 3.

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Figure 5. - Continued.

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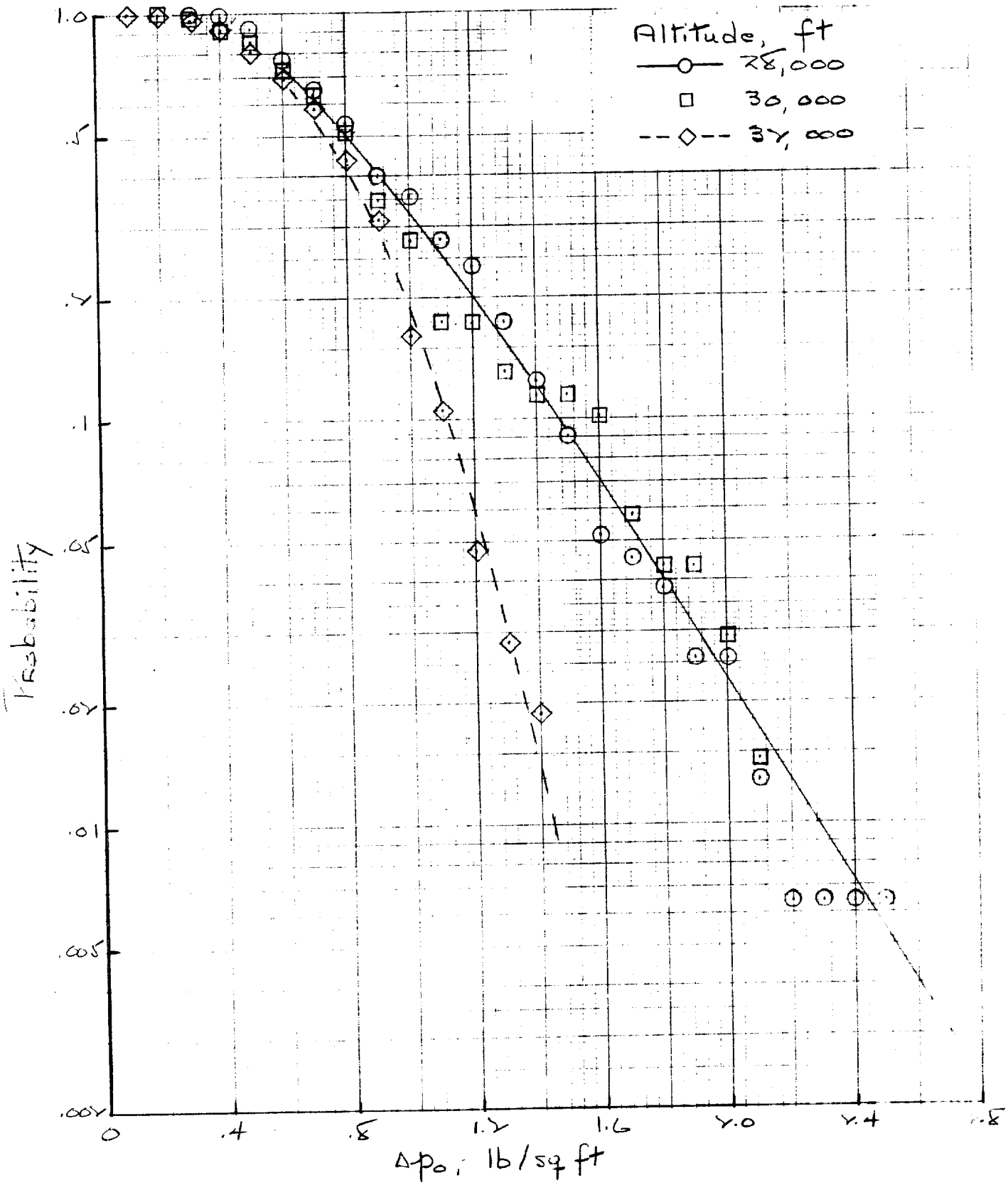

(c) Measuring station 4.

Figure 5.- Concluded.

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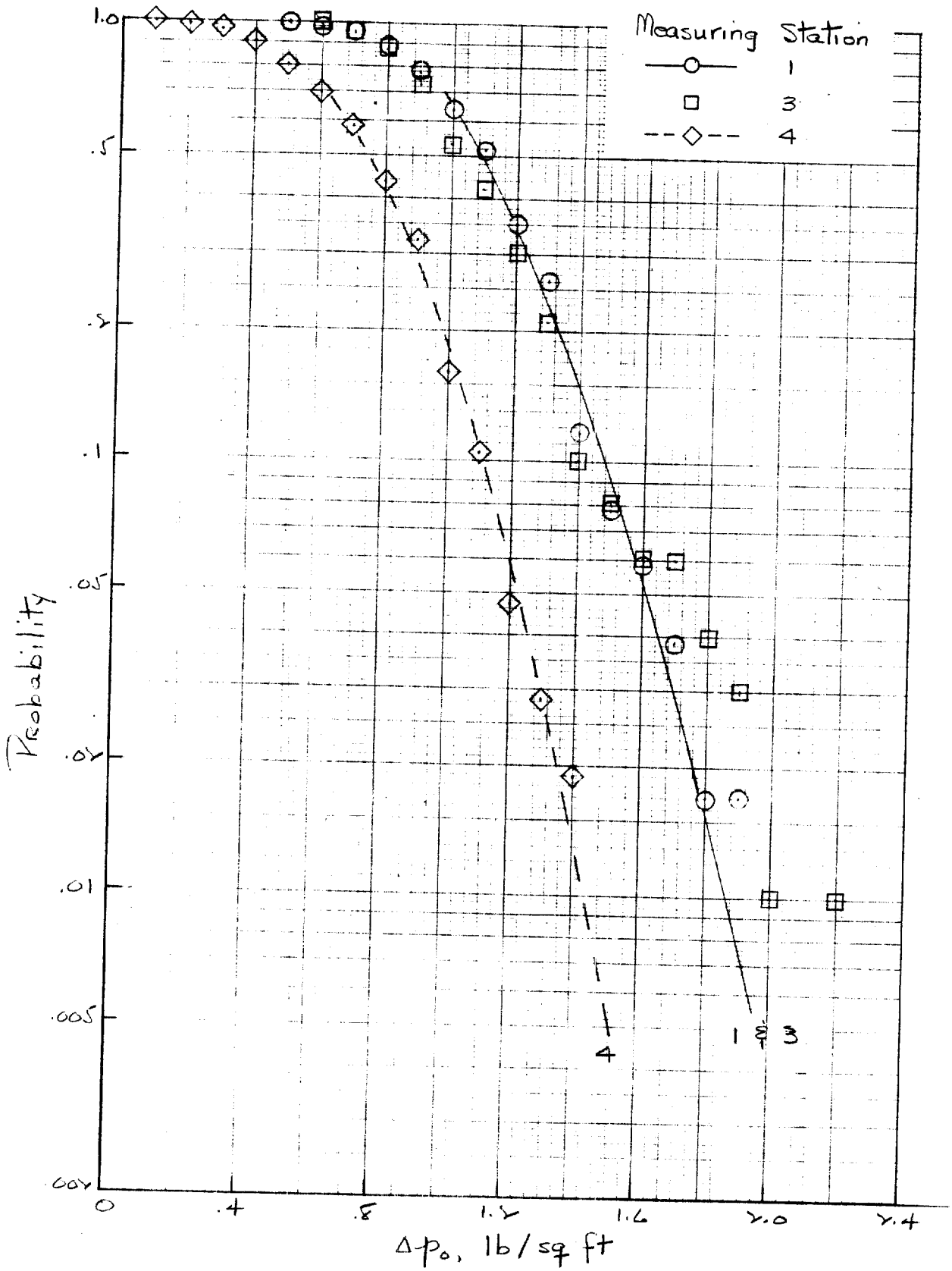

(a) Airplane altitude 32,000 feet.

Figure 6. - Probability of exceedance for sonic boom overpressure. Data are for airplane A at a Mach number of 1.5.

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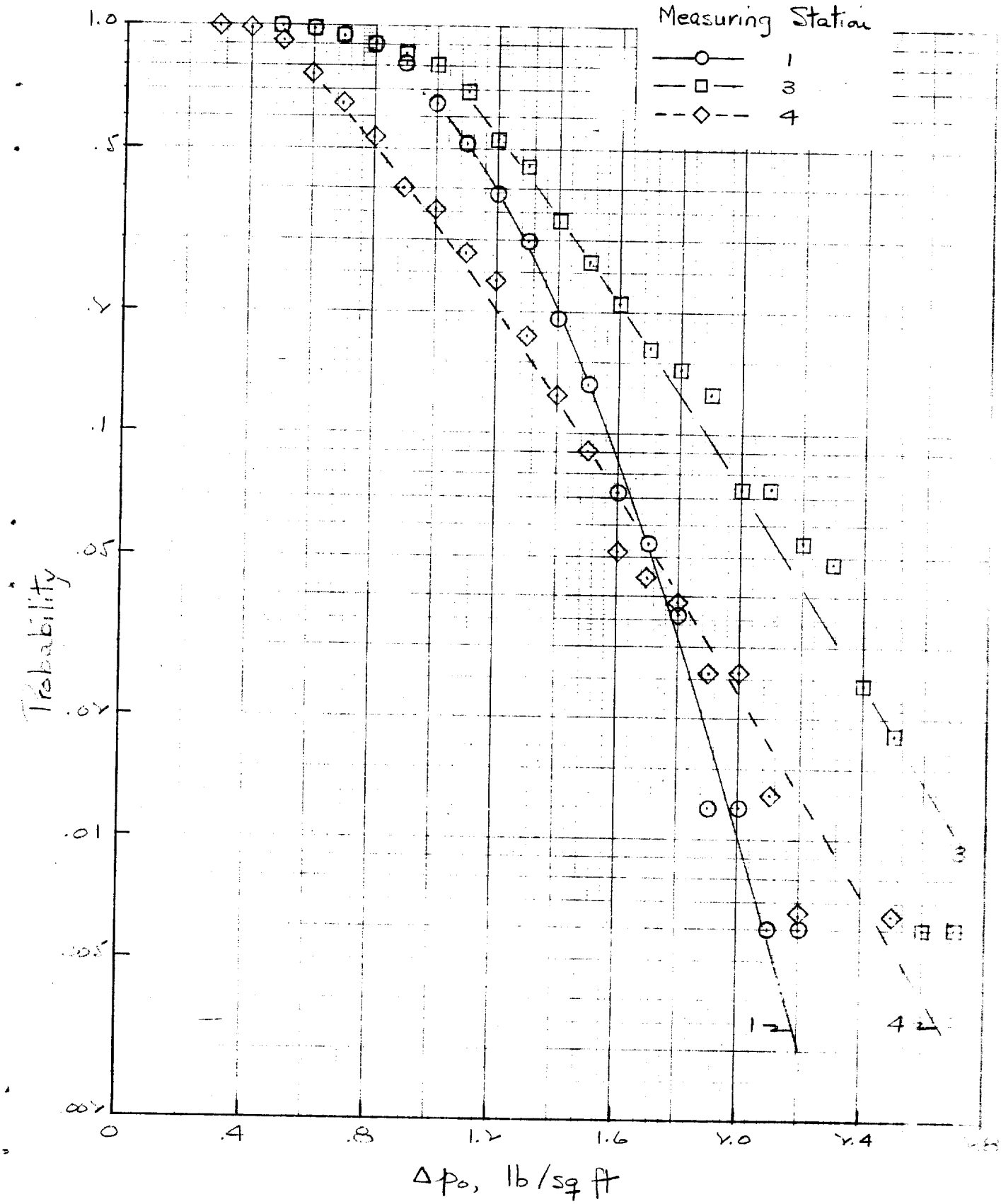

(b) Airplane altitude 28,000 feet.

Figure 6.- Concluded.

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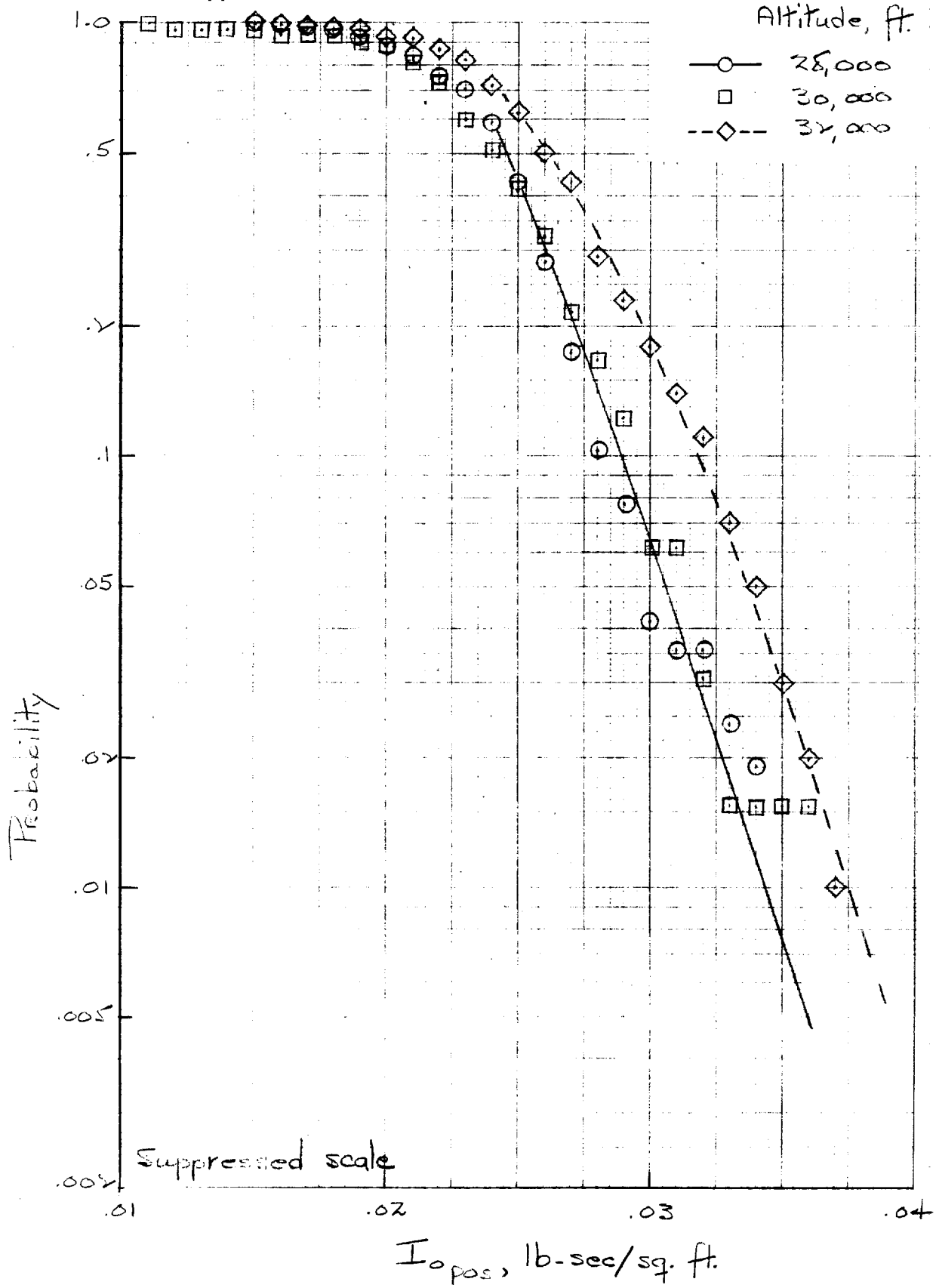

(a) Measuring station 1.

Figure 7. - Probability of equaling or exceeding a given positive impulse. Data are for airplane A at a Mach number of 1.

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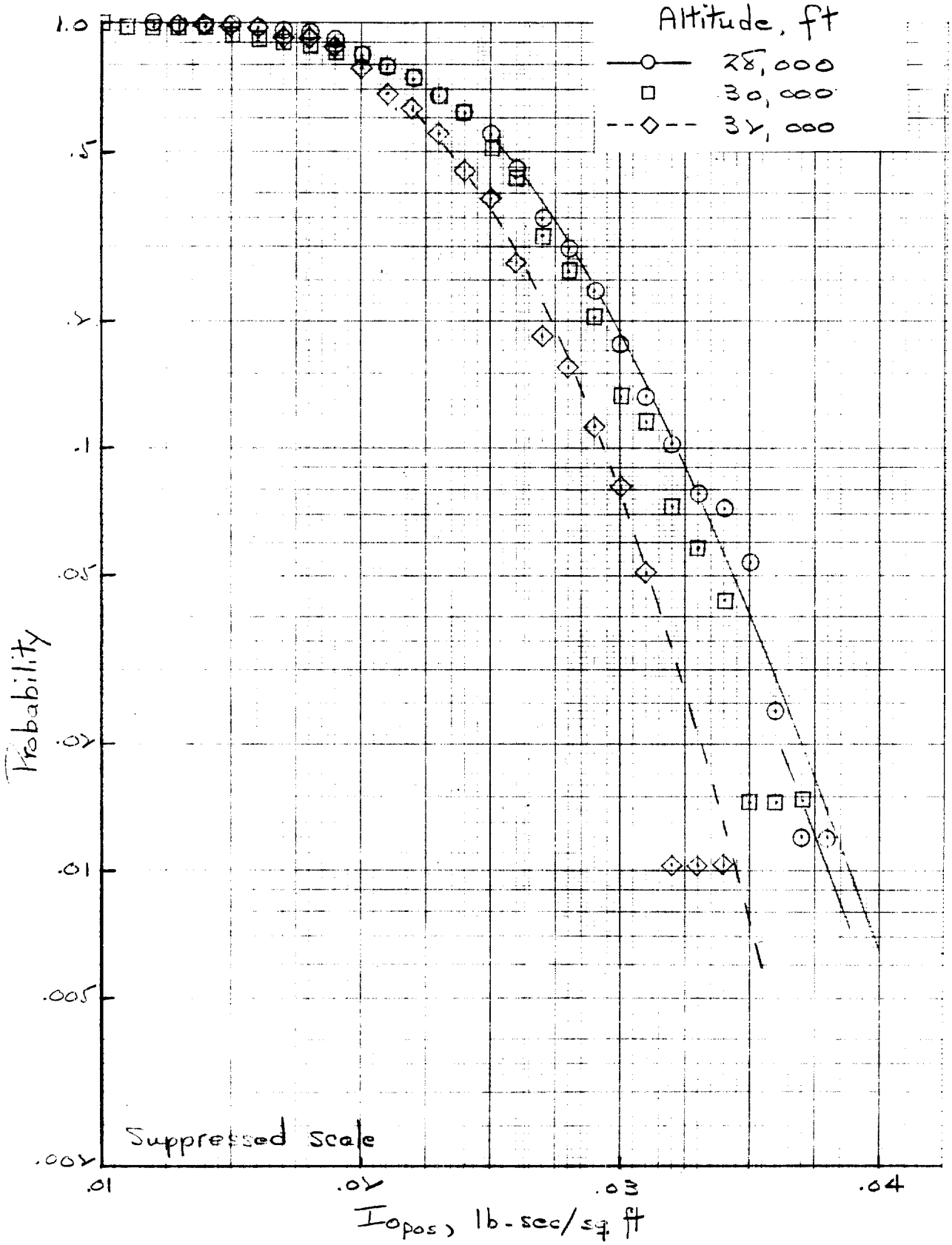

(b) Measuring station 3.

Figure 7. Continued.

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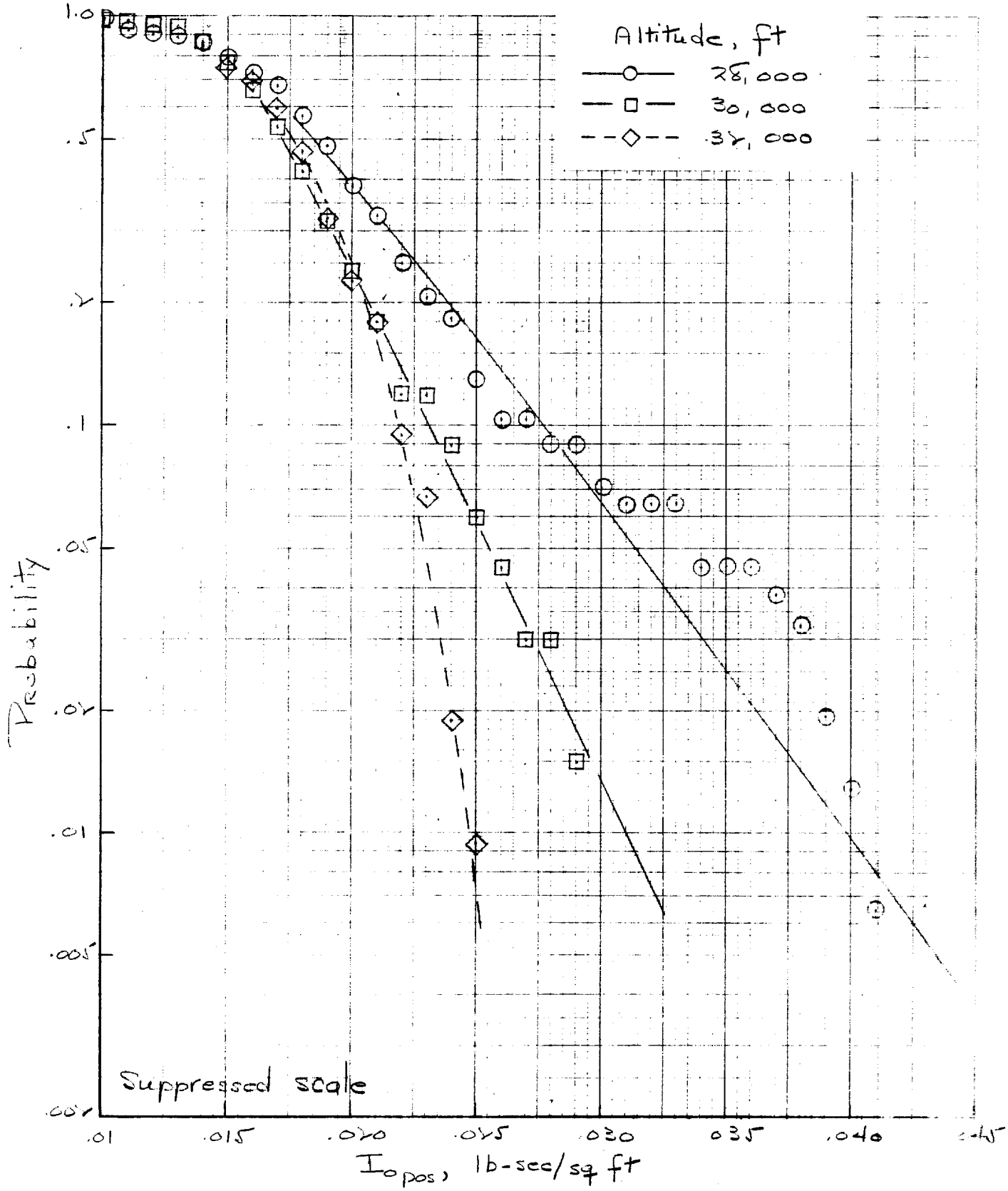

(c) Measuring station 4.

Figure 2 Concluded.

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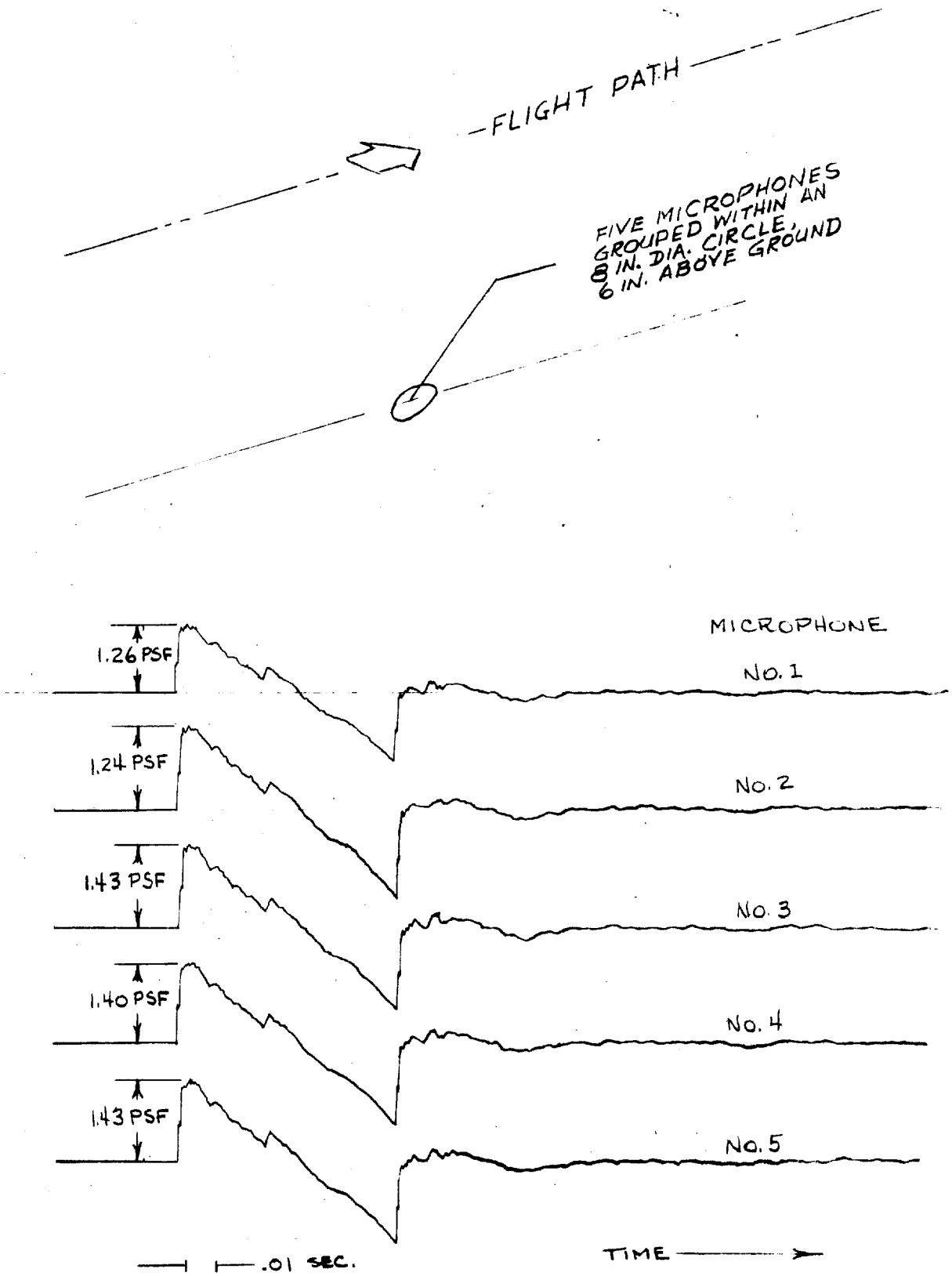

Figure 8. - Sonic boom pressure signatures for airplane A at an altitude of 28,000 feet and a Mach number of 1.5 from five microphones grouped within 8 inches of the ground.

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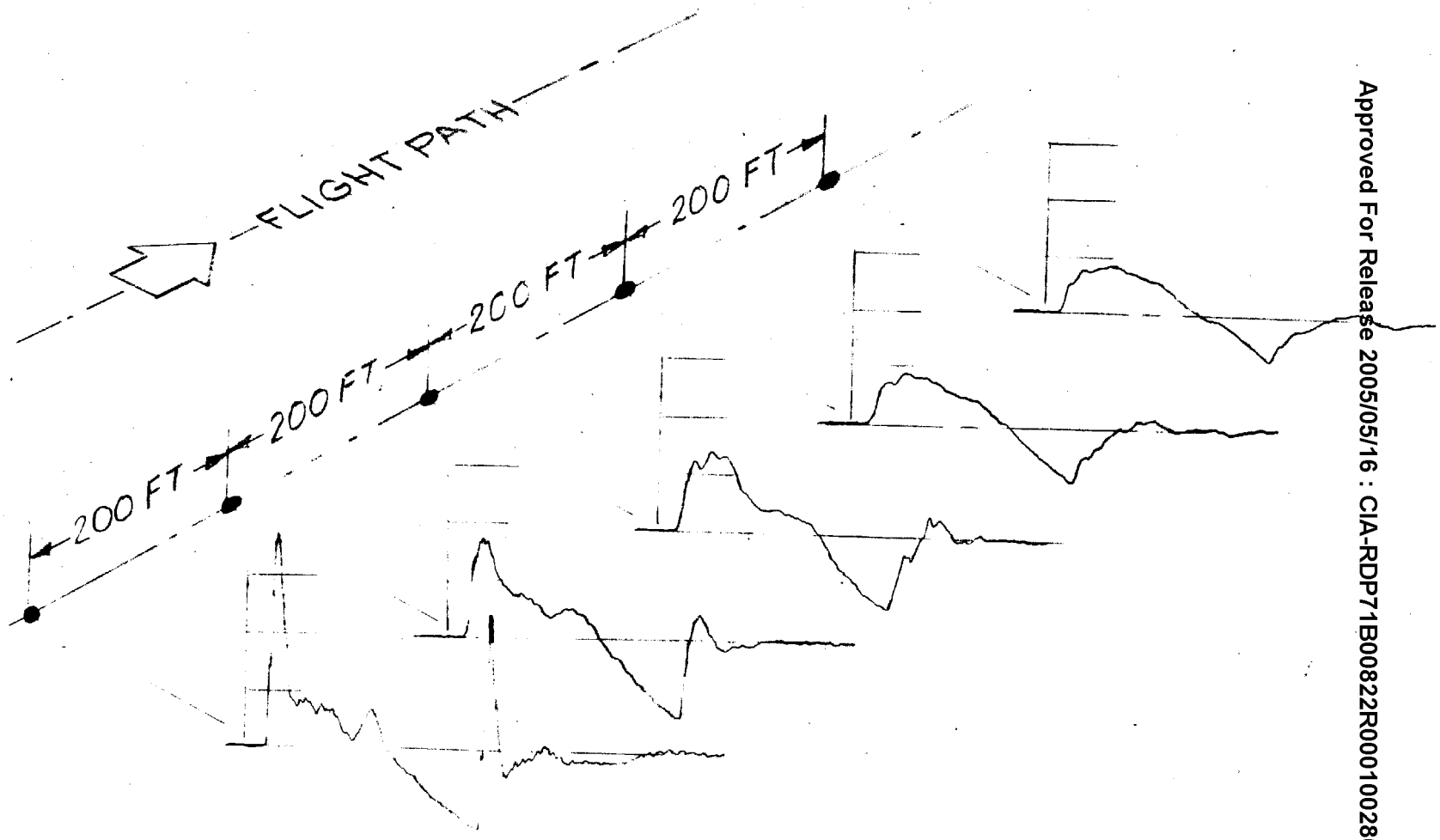

(a). Time of flight 0730 hours.

Figure [illegible]. - Measured sonic boom pressure signatures at several points along the ground track of airplane A in steady-level flight at Mach number 1.7 and an altitude of 28,000 feet at different times of day.

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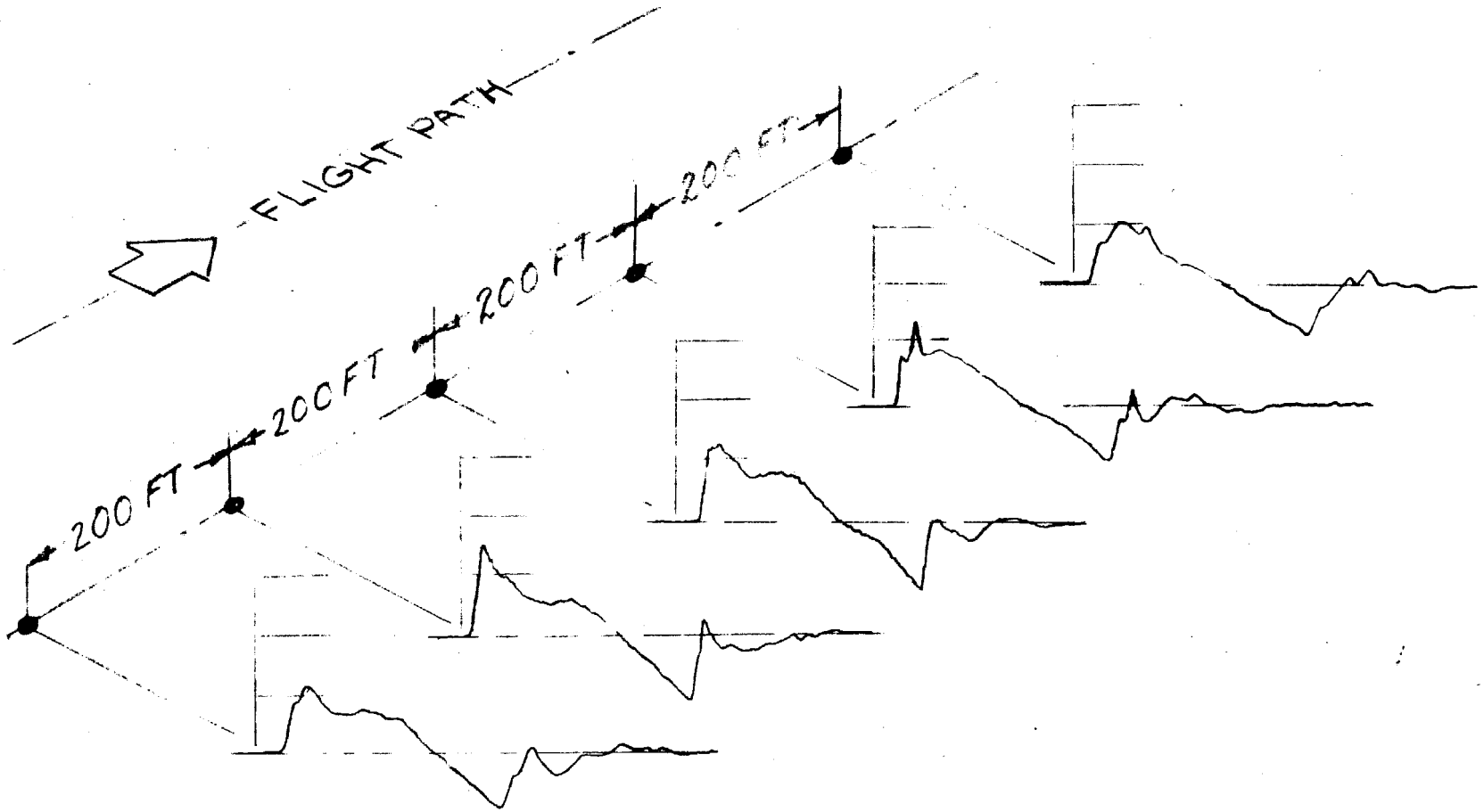

(b) Time of flight 0030 hours.

Figure 9. - Concluded.

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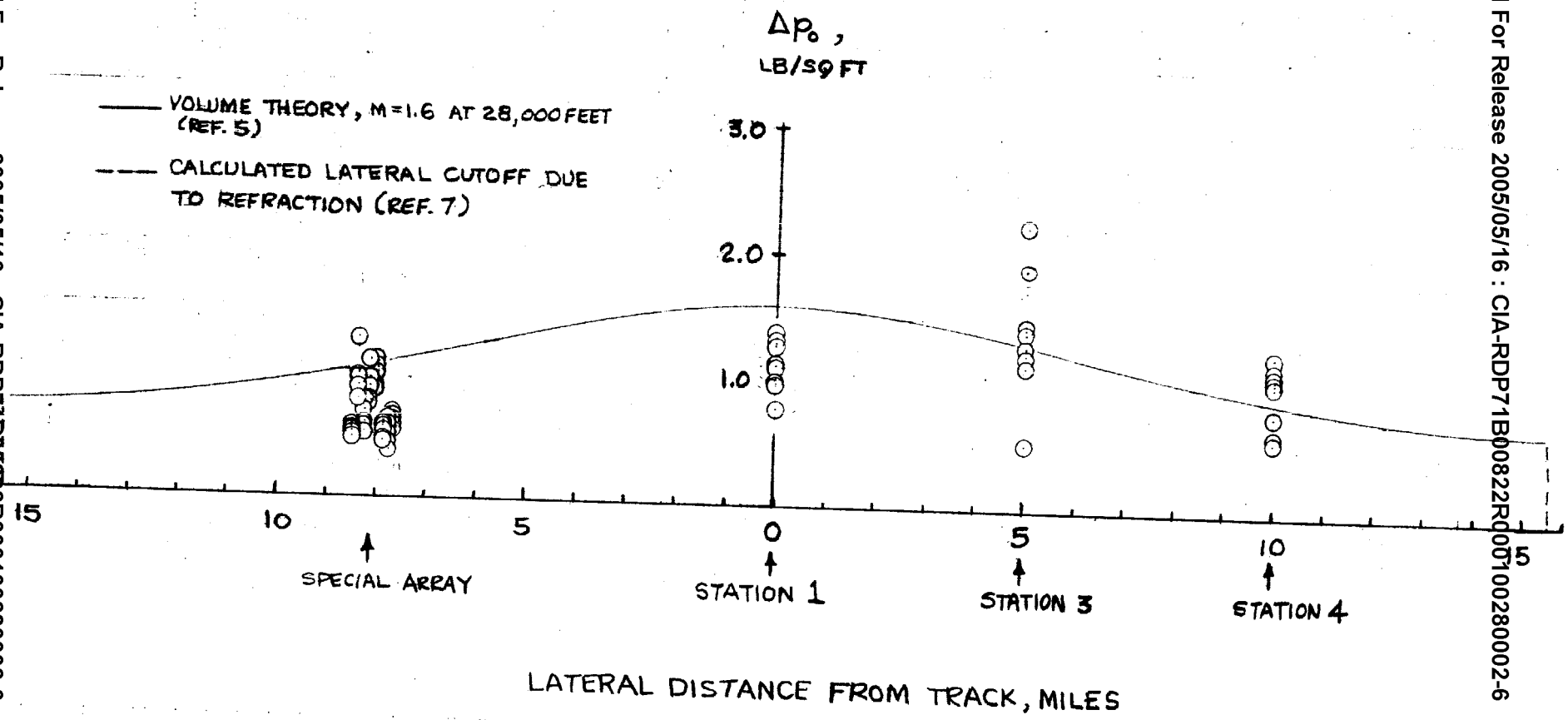

Figure 10. - Measured ground overpressures at several measuring stations at different distances from the ground track. Data are for eight flights of airplane A on April 6, 1964 for an altitude of 28,000 feet at Mach numbers of 1.5 and 1.7.

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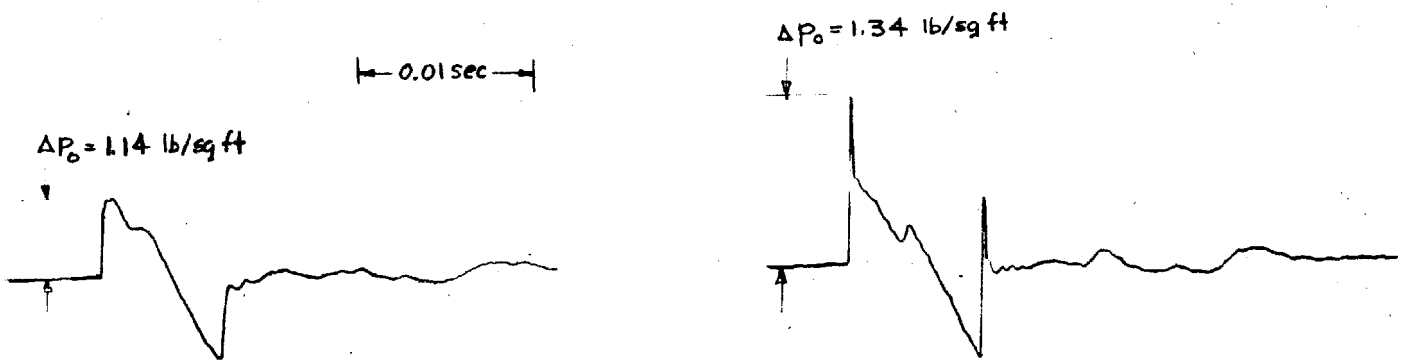
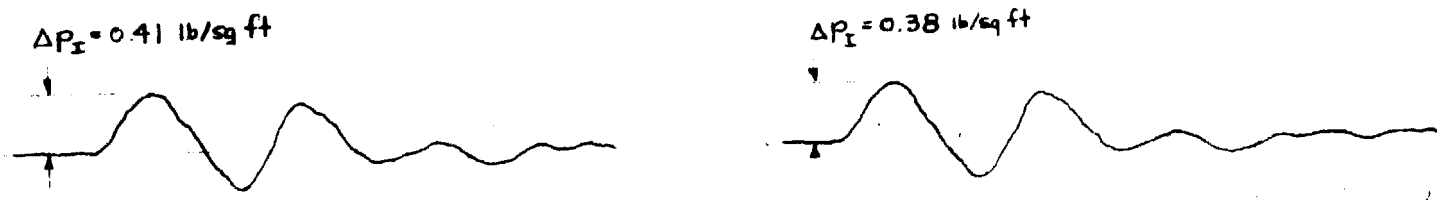


(a). Outside microphone.



(b). Inside microphone.

Figure 11. - Measured outside and inside pressure traces at station 1 for two different flights of airplane A.

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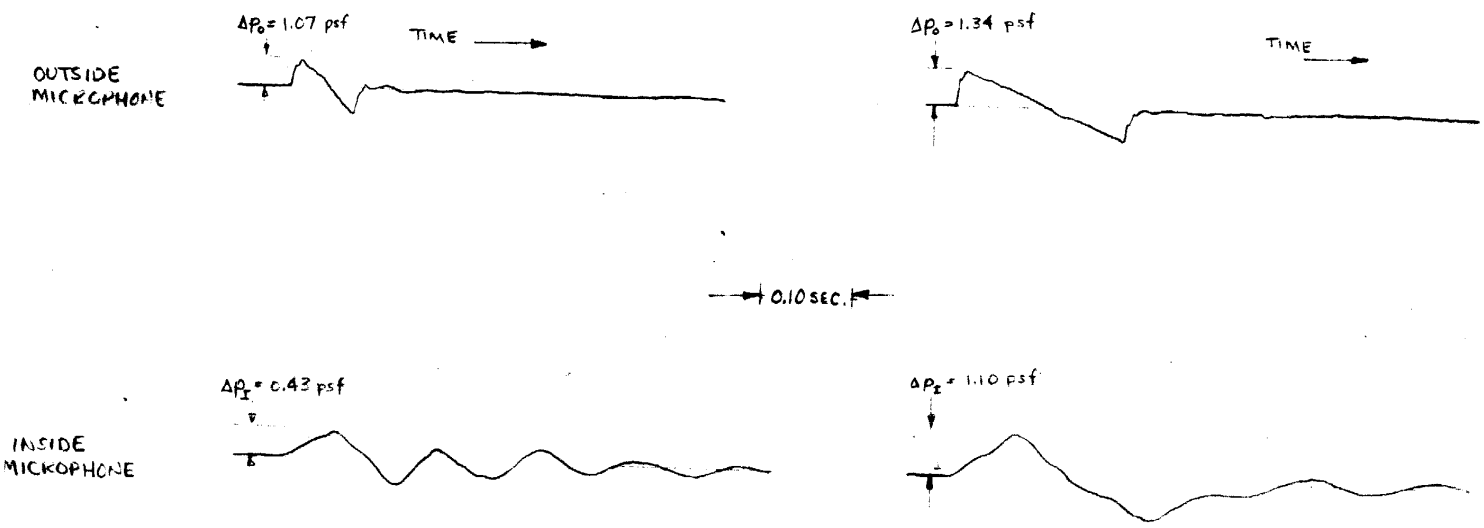

(a) Airplane A.

(b) Airplane C.

Figure 12. - Measured outside and inside pressure traces at station 1 for airplanes A and C.

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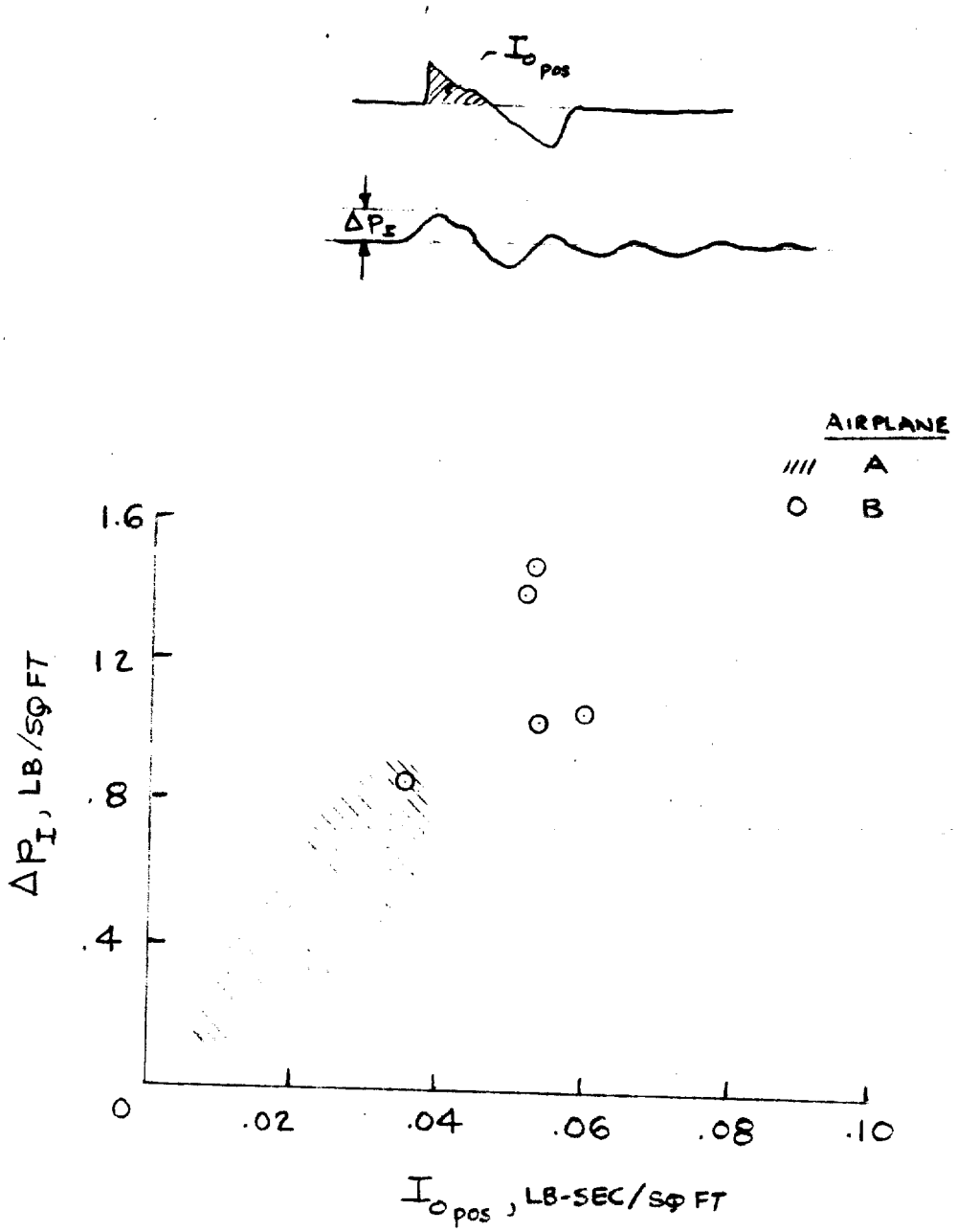

Figure 13. - Measured inside peak overpressure as a function of outside positive impulse as measured at station 1 for airplanes A and B.

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