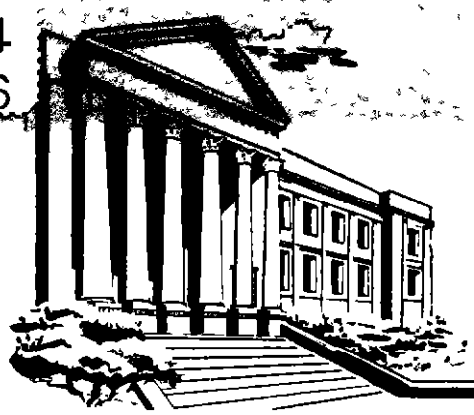

Final Report F-A2169-5

OPERATIONS ANALYSIS OF AIR TRAFFIC DELAYS IN THE NEW YORK AND WASHINGTON AIR ROUTE TRAFFIC CONTROL CENTER AREAS ON AUGUST 1, 1958

by

C C Bogart
G E Cothren, Jr
O M Patton

Prepared for

OPERATIONS ANALYSIS DIRECTORATE,
BUREAU OF RESEARCH AND DEVELOPMENT,
FEDERAL AVIATION AGENCY

Under

Contract No FAA/BRD-14

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ABSTRACT

The delay data contained in this report reveals that 900 delays occurred in the New York and Washington ARTC Center areas on August 1, 1958, which were concentrated in and between the New York and Washington metropolitan areas. The nature of the data indicates that the Washington and Idlewild Airports had an excessive number of delays of an appreciable magnitude in length. The delays at Newark, LaGuardia and Philadelphia Airports, although totaling a considerable number, were considered of little or no consequence because of their generally quite short duration.

A significant concentration of delays was also noted in the Coyle-Dover area where twice as many delays occurred as had been found in previous analyses. Throughout the remainder of the New York and Washington ARTC Center areas, delays were few in number and widely scattered, hence considered of little significance.

FOREWORD

This report presents the results of an analysis of delays imposed on aircraft within the New York and Washington Air Route Traffic Control Center areas on August 1, 1958 and was performed under Task No. 5 of Contract FAA/BRD-14. The purpose of the report is to analyze and portray the geographic distribution, temporal magnitude, and causes of delay suffered by aircraft on this day and to compare the results with similar analyses performed by The Franklin Institute Laboratory and the Airborne Instruments Laboratory covering the January 28 and February 28, 1958 delays within the confines of the New York ARTC Center area.

The results of the previous analyses are presented in The Franklin Institute Laboratory Report F-A2123 titled "Operations Analysis of Air Traffic Demands and Delays in the New York ARTCC area on January 28 and February 28, 1958" and the Airborne Instruments Laboratory Report 4851-1 titled "Terminal Area and Airport Surface Traffic, New York: Winter 1957-1958."

These reports have been prepared for the Operations Analysis Directorate of the Airways Modernization Board (now known and hereinafter referred to as the Bureau of Research and Development of the Federal Aviation Agency).

Task No. 5 of Contract FAA/BRD-14 also provided for an analysis of the number of updates or revisions made on flight strips by ARTC Center personnel to provide a realistic appraisal of the required update capacity of the General Precision Laboratory computer currently undergoing development to assist in the control of air traffic in the New York area. The results of this analysis are to be presented in a subsequent report per contractual agreement.

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1. INTRODUCTION

On August 1, 1958, a BRD aircraft departing from The National Aviation Facilities Experimental Center (NAFEC) at Pomona, New Jersey was delayed for three hours enroute to Washington, D.C. The radio communications monitored during the delay indicated that many other aircraft were being held, from which the implication was drawn that an abnormally large number of delays were occurring that day. The BRD subsequently requested the FIL to conduct a detailed analysis of the airborne delays that day in both the New York and Washington ARTCC areas and, further, to compare the results with the results of previous analyses performed by FIL(1) and the Airborne Instruments Laboratory(2).

This task was accepted by the Laboratory. Then, after the investigation was underway, the BRD requested FIL to contact certain representative Air Carriers to ascertain if their flight crew records might be of assistance in conducting this analysis. This request was complied with and the results indicated that these records would be of considerable value in the analysis. Therefore, the scope of the contract was extended by BRD to include this source of data as well as the available data from the Air Traffic Control system. As a direct consequence of this action, ground delays resulting from air traffic conditions are also included in the report as well as airborne delays.

2. DISCUSSION

It should be noted that time throughout this report is given in terms of Greenwich Mean Time (GMT).

The purpose of this project was to examine the delay structure in the New York and Washington ARTC Center areas on August 1, 1958 with prime emphasis placed on the coastal airways between New York City and Washington D.C. where a large number of delays were known to have occurred and then to compare the results with previous investigations of a similar nature.

Initially, the sources of data were to be much the same as for the previous investigations. These include:

(1) Flight strips from the New York and Washington ARTC Centers.

(2) Flight strips from the Newark, Idlewild, LaGuardia, Philadelphia, Atlantic City, and Washington National Control Towers*.

(3) Landline recordings from the New York* and Washington ARTC Centers.

(4) Air-ground recordings from the Atlantic City tower and the New York Center's coastal frequencies and such others as were available.

(5) Flow logs from the New York and Washington Centers and the radio log of the Millville communications station.

Subsequently, the scope of the contract was extended at the request of the BRD to include analysis of the flight crew records of the principal air carriers operating in the area. This approach proved quite profitable in that it provided data from which a measure of the ground delays caused by air traffic conditions could be obtained. In addition, this data served as a source of useful supplementary information to permit a better interpretation of the ATC system data and also partially compensated for the almost complete lack of data from the Washington Control Tower.

It should be noted that a point-by-point comparison of the results of this analysis cannot be made with the results of the previous analyses. The previous reports(1,2) were concerned primarily with the New York control area. The Washington control area was checked only for holds resulting from New York ATC conditions and it should be mentioned that this type of hold was found to be practically nonexistent within the Washington center on the days analyzed previously. Furthermore, the

* Unfortunately, the flight strips from the Washington National Control Tower and the landline recordings from the New York center were not available for analysis.

terminal area analysis previously made used photographs of the New York center radar screens and ground observers as sources of data from which a precise reconstruction of the traffic movements particularly on the ground could be made. This procedure enabled a comprehensive breakdown of all movements of the aircraft by various types of delay one of which, as an example, was termed a Type 1 ground departure delay. (This type of delay was defined as the interval between clearance onto the active runway and clearance for take-off.) The ground departure delays within this report can be defined only as the total delay on the ground. Consequently, the comparison of data must be limited to some extent. The reader is referred to Reference 2 for a complete description of ground delays.

A. Methods of Analysis

As was done in the previous analyses, the flight progress strips were used as the basic source of information. The strips were carefully examined for all indications of holds such as "HWIRT" (Hold West - One Minute Right Turn), "F" for a short clearance, "W" for warning of possible conflict, etc. The preceding and succeeding fixes were then checked as required, to verify holds and to assist in the calculation of delays where the strips were incomplete, confusing or unreadable.

In this connection it should be mentioned that flight progress strips are very poor sources of data for research purposes. This is due mainly to the large number of non-standard marking procedures which are used. Strip markings are found to deviate considerably from the standard and also vary between ATC units and even between controllers within the same unit. In addition, in some instances, certain boxes do not contain any entries at all. All of this, of course, makes the accurate recording of data extremely difficult, and makes the results less accurate. Recordings of landline and air-ground communications were also checked for clues to holds and then correlated with the particular flight strips involved.

The records secured from the air carriers were found to be quite useful in the search for holds, although the degree of usefulness varied from one carrier to another. It was found that many of the carriers maintain rather complete records of all types of delays covering airport surface delays, ATC departure, enroute and arrival delays, weather delays, carrier operational delays, etc., for their own use. Generally speaking, the major carriers have comprehensive records regarding delays suffered, the smaller carriers do not. It is noteworthy, however, to realize that all carriers maintain a log of their ramp times, departing and arriving, as well as take-off and landing times. And, as will be shown below, useful delay information can be extracted from this data. Recommendations concerning the use of carrier records are discussed further in the Recommendations section of this report.

The carrier records were used first to augment and complement the flight strip information as far as the airborne delays were concerned. Then the records were searched to yield ground delays caused by ATC conditions as and when noted by the pilot. During the course of this search, it became apparent that many ground holds were not being recorded by the pilots as may be indicated by the following, which closely resembles an actual instance. XYZ flight No. 10 departed from the gate at 2000 and took off at 2050 noting on his crew record "a 40 minute hold for ATC..." Thereafter, XYZ flight No. 20 - at the same airport and using the same runway - departed from the gate at 2030, took off at 2110 and did not make any notation whatsoever on his crew record regarding the reason for the excessive length of time between ramp departure and take-off. In this example, it is most probable that the second aircraft was also delayed because of the same conditions.

In view of the foregoing, a second approach to the determination of the number and magnitude of the ground delays was used. Differences in time between ramp departure and take-off in excess of ten minutes were recorded as ground delays although the pilot had made no statement to that effect. This procedure was considered justifiable as ref-

erence to the logs of both the New York and Washington centers indicated that departure delays were occurring almost continuously during the day and a departure without a delay was apparently the exception rather than the rule. The figure of ten minutes allowed is thought to be a reasonably representative figure for all airports in the area, although minimum times as low as five minutes were observed from ramp departure to take-off.

Because of the variable sources of data; e.g., strips, airline records, etc., it was considered desirable to divide the delays into three main groups, as follows:

Type A - Enroute Holds
Type B - Calculated Delays
Type C - Ground Delays

In addition, it was decided to sub-divide the Type B delays into three further groups:

(1) Approach Area Delays
(2) Departure Area Delays
(3) Enroute Delays

In determining the group into which each delay should be placed, the following procedure was used:

Type A - When it was found that a flight progress strip contained an initial time over the fix and the time at which the fix was left, the difference was used as the Enroute Hold Time.

Type B1 - When flight progress strips on an arriving flight indicated an excessive flight time as determined by the arrival time, this was compared to the time it was calculated that the aircraft would have landed had it not been held or diverted. The resultant figure is classed as a Calculated Delay.

Type B2 - This group is comprised of those delays to departing aircraft as determined by calculation in a manner similar to Type B1.

Type B3 - Delays included in this group are those incurred by en-route flights but are determined by calculation alone. This technique was used when it was determined that the flight time between fixes was in excess of that normally required. All pertinent strips were then examined and the resulting delay placed in this group. It should be noted that this type may include some delays which should be in Type A, but the appropriate strips were not marked so as to indicate this.

Type C - This class contains ground delays, both inbound and outbound. As was explained above, airline records were used extensively to determine such delays as the methods used in marking departure strips, render their use for this purpose very difficult and in some cases useless.

B. Results and Analysis

The principal results emanating from this investigation are summarized below and then amplified in the ensuing discussion:

(1) The departure delays at Idlewild Airport were of a high absolute magnitude in both total number and lengths of delay. 157 departure delays were noted that generally fell in the time range of 10-40 minutes with a few in excess of one hour. Inbound flights to Idlewild suffered a total of 68 delays and the delays were frequently of a duration in excess of 10 minutes.

(2) Departure delays at the LaGuardia and Newark Airports totalled 68 and 40, respectively, which are considered appreciable totals. However, they were of a much shorter duration (generally less than 10 minutes) and in comparison to Idlewild delays, were of no consequence. Approach control fixes serving LaGuardia and Newark had very few delays.

(3) The 106 departure delays at Washington National Airport were less than those at Idlewild and appreciably more than those at LaGuardia and Newark with respect to both total number and duration, and were considered of a severe magnitude. The number of holds imposed on inbound flights to the Washington airport totalled 98 and the length of delay generally ran in excess of 10 minutes.

(4) There were 113 delays along the primary airways between Washington and New York which was more than twice as many as noted in a previous analysis of heavy IFR traffic delays.

(5) Delays in the outlying areas of both the Washington and New York ARTC Centers were relatively few and far between with one exception, and were considered of no significance. The exception was the Philadelphia area where 80 delays were found. However, the severity of this total is considered of lesser significance because of the particular characteristics of the delays.

In the discussion of the results below, it should be borne in mind that the delays tabulated must be regarded as understated and only a measure of the true situation. The picture presented, however, gives a good idea of the degree of seriousness of the delay structure on the day analyzed and should be considered in that respect.

The probable understating of the total number of delays comes about because of three major reasons. One, the unavailability of Washington tower strips; two, the securing of only the records of the principal carriers operating in the two centers (with no private or military records available), and three, the inadequacy of flight strip markings - particularly in the approach control areas - as a source of basic delay information in general. The reason for using only records of the major carriers was the fact that the use of carrier records was initiated after the start of the project. It was thought wise by BRD, in view of the late starting date and pertinent time factor, to optimize this phase of the project to secure the most data for a given expenditure of effort rather than to secure all possible data by an all-out expenditure of effort.

A Delay Map of the New York and Washington ARTC Center areas (Fig. 1) illustrates pictorially the fixes where delays occurred and the number of delays at each fix. The figure also shows the concentration of delays at the New York and Washington terminal areas and in the Coyle-Dover area lying essentially between the two metropolitan areas.

New York and Washington Terminal Areas

The two most significant facts coming from this data are that the Idlewild and Washington National Airports sustained a large number of delays on the ground and at the approach fixes serving these airports, and in addition, the lengths of these delays were excessive.

The ground delay situation at the three New York airports, Washington National and also Philadelphia International, is shown in Figure 2 where the distribution and duration of the departure delays have been plotted from the data of Table 1, Delay Investigation Data. (An explanation of the data within this table immediately precedes the table itself.) The severity of the Idlewild delay structure is evidenced particularly by the contrast of the relative heights of the Idlewild, LaGuardia and Newark delays where it may be noted that the lengths of delay at LaGuardia and Newark were very small, both absolutely and when compared to those at Idlewild. It is also evident, of course, that Idlewild was experiencing substantially greater numbers of delay throughout the day.

It may be further noted in Figure 2 that the departure delays at Washington National were considerably higher than those at LaGuardia and Newark in both quantity and duration of delay. The delays were not quite as severe as those at Idlewild as far as total numbers were concerned, but approached the same magnitudes with respect to duration of delay, and the duration was considered excessive in nature.

Philadelphia departure delays are also included in Figure 2 and compared roughly in numbers to those at Newark. The duration of holds at Philadelphia was generally less than 10 minutes, again comparable to Newark.

Table 2 summarizes the delay data contained in Table 1. This table lists, under the individual headings of the New York and Washington Terminal Area, the number of delays at the particular airports and at the associated terminal area fixes serving the airports.

The significance of the data tabulated for the New York area is that of the fixes where an appreciable number of aircraft were held, the Hadley fix was the only one not being used to support Idlewild operations. (The holds at Hadley were for Newark bound aircraft.) Or, in other words, the delays at the Colt's Neck (COL), Scotland (RIS), Lido (LDO) and St. James (SJX) fixes were given to Idlewild inbounds and the holds at Woolf (XWF) to Idlewild outbounds. In summary total, 68 delays were sustained by flights inbound to Idlewild, 13 on inbounds to Newark and 8 on inbounds to LaGuardia. The contrast of these numbers again reflects the severity of the delay situation at Idlewild.

In the Washington area, there were 98 delays given to flights inbound to Washington National and 16 delays on inbound flights to the military air fields, Bolling AFB and Auacostia NAS, that are in close proximity to Washington National Airport. The delays in this area occur at 9 major fixes, namely, Plains (ANS), Springfield (SRI), Andrews (ADW), Potomac (POM), Clifton Intersection (CPX), Huntington (HNT), Shadyside (SHZ), Riverdale (RVD) and Westminster (EMI).

The terminal area data is shown graphically in Figure 3 which presents on an hourly basis the number of airport ground delays at satellite fixes serving these airports. This figure shows the high sustained number of delays at Idlewild and Washington throughout the day and contrasts strongly with the comparatively low level delay situation at Newark and LaGuardia. Figure 4, the Queuing Effect Resulting from Idlewild Departure Delays, serves to delineate the number of aircraft in queue at any interval of time throughout the time period shown. As may be seen from this plot, there were very few times throughout the day when there were not at least two or three aircraft lined up awaiting take-off clearance at Idlewild.

It should perhaps be noted in passing that the delay situation in the New York and Washington terminal areas is associated almost entirely with the airport capability problem. Very few delays were suffered by through flights in the terminal areas.

To determine if the differences in the delay structure noted above might have been a function of the number of operations handled by each field, Figure 5 was drawn up from the data of Table 3, Runway Use Data (at Idlewild, LaGuardia, and Newark). This figure presents a breakdown of arrivals, departures and total operations at each airport for fifteen minute segments throughout the day. A comparison of the number of operations at Idlewild to those at LaGuardia indicates that LaGuardia was accommodating roughly the same load factor as Idlewild; hence, this factor cannot be considered to be of any primary importance. The runway use data also revealed the fact that both LaGuardia and Newark were handling their landing and take-off operations using a common runway throughout the day while Idlewild was using one runway for take-off and another for landing. The Idlewild runways were not mutually independent of course. Table 1 also includes weather information at the New York airports and examination of this data indicates that weather was not a factor in the situation at New York.

Excerpts from the Air Traffic Control Facility Logs deemed pertinent to air traffic control procedures of the August 1, 1958 day are listed in Table 4. Of these excerpts, the entry made at 1340 hours appeared to have a possible tie-in with the longer departure delays found at Idlewild during that portion of the day. This entry concerned rocket firing in the New York Oceanic Area with the rerouting of aircraft filing through that area a possibility. Consequently, the particular delay data concerned, namely delay Nos. 65 through 79 on page 51 of Table 1, were checked closely to determine if the closed area had been a factor. The data disclose that the aircraft delayed the longest, ranging from 50-80 minutes, all had a common destination, the South, namely Florida, Bermuda, and San Juan, hence the routing of these aircraft presumably would be affected by the blocked oceanic area to the South of Idlewild. Therefore, flight plans and flight progress strips were examined to see if in this instance the fundamental cause of delay was the problem of rerouting several aircraft headed in the same general

direction at about the same time of day. However, no conclusions could be reached from that source of data and it can only be presumed that the blocked oceanic route was fundamentally the cause of the longer delay. (It should be noted that the departure control tape from the Idlewild Tower was of no assistance as it did not record any information throughout the day because of malfunctioning equipment.)

Two other excerpts from the Facility Logs which may have a bearing on the situation are: (1) the New York Center radar was out of commission from 0629 to 1709, and (2) the 1630 entry that "Due to runway construction Idlewild Tower is able to use only runways where the arrival and departure patterns conflict. This causes delays to arrivals." It is thought that the Center radar had a relatively negligible effect considering the good weather and the fact that the delay picture did not show any significant changes that could be attributed to the lack of radar after the resumption of radar operations. The adverse effects resulting from the conflicting patterns noted in the second comment cannot be estimated from the data available but needless to say, are important.

The causes behind the Washington National Airport departure delays and hence the approach control delays surrounding the airport are a combined result of poor weather conditions, runway 15 out of operation and two lost aircraft during the late afternoon peak traffic period coupled with the knowledge that the airport is approaching its maximum traffic handling capacity with present day peak traffic loads under even ideal conditions.

The weather conditions at Washington National are shown in Table 1, pages 37-39. As will be noted, the weather conditions hovered around the borderline conditions which distinguish VFR/IFR traffic throughout the greater part of the day. These conditions, from the controllers' point of view, are among the most difficult conditions with which they must contend. The loss of runway 15, while a North operation is being run at Washington National, reduces aircraft handling capacity also.

The restriction placed on Bolling, Anacostia, and Andrews airports of 6 departures per hour at 1155 GMT should also be noted in conjunction with the delays at Washington Airport. Restrictions placed on military flights that early in the morning was, in effect, advance acknowledgement by the Washington Center that delays could be expected.

Coyle-Dover Area

There were 113 delays within the Coyle-Dover area (defined in the Introduction and Explanation of Table 1*and shown on the Delay Map, Fig. 1) on August 1, 1958 compared to totals of 55 and 43 on January 28 and February 28, 1958, respectively, the days investigated in Reference 1. Previously it was shown that most of the delays in this area were suffered by military aircraft and the same trend is again shown in Figure 6 where the aircraft category data emphasizes the preponderance of military aircraft delayed.

The basic reason behind the delays previously was attributed to the difficulties of introducing the military aircraft operating from military airfields in the area, such as Dover AFB, into the heavily congested V16 and V1 airways. The same problem is again apparent in this analysis as indicated by the delay data at the Port Norris (PNR) fix and to a lesser extent at the Atlantic City (ACY) fix. The Port Norris fix was again used as a transition departure fix for departures from Dover AFB. As was noted in Reference 1, aircraft were allowed to depart from Dover cleared to Port Norris at a low altitude. At Port Norris, the aircraft were then cleared to the requested altitude or, at those times when traffic was heavy at the requested altitude, to an acceptable alternate altitude. When space became available, they were then injected into the ATC system.

However, this type of delay in the Coyle-Dover area does not appear to have increased in sufficient numbers to have accounted for more than double the number of delays in this area. Hence, the flow restrictions imposed by the Washington ARTC Center and the general delay

*See page 30.

situation in and around the Washington National Airport were examined to ascertain the degree to which these conditions contributed to the delays.

The Washington Center imposed a flow restriction of six aircraft per hour entering the Washington ARTC area from the New York ARTC area at 2029 hours. (In addition to this, other Centers adjoining Washington were restricted as noted in Table 4.) This restriction continued in effect until about 2400. During this 3-1/2 hour period, there were 18 delays imposed to Washington Center-bound aircraft in the Coyle-Dover area as well as 5 other delays imposed at the Ingleside fix which, although within the Washington Center area, is included within the Coyle-Dover area for all practical purposes. (As may be seen in Figure 1, Ingleside is just South of the New York-Washington border line.) Of this total of 23 delays, 19 were associated with inbounds to the Washington metropolitan area and represent, of course, the feedback from the delays in the metropolitan area.

In addition to the flow restriction problems noted above, the landline communications indicated that problems of altitude saturation were being encountered, beginning around the 1800 hour. This condition made it difficult for the controllers to clear aircraft through the boundary fixes. The extent of this saturation or the degree to which it affected the traffic flow could not be determined from the landline communications alone and traffic density data would be required to yield the desired answers. However, this type of difficulty might well be expected once the flow restrictions had been imposed.

The conclusion reached in consideration of the above is that the flow restrictions into the Washington Center from 2029-2400 hours can account for only a part of the sharply increased number of delays in the Coyle-Dover area. In addition, the breakdown of the delay data shown below indicates that the Washington terminal area delays had relatively little direct effect on the C-D delays throughout the remainder of the day as only 12 aircraft inbound to the Washington Center

were delayed during that time. What indirect effects may have been felt from the Washington terminal area delays cannot be ascertained from the data presently available. It may be noted that the 78 delayed aircraft which did not enter the Washington Center from the New York Center are still quite appreciably in excess of the 55 and 43 delays noted on January 28 and February 28, 1958, respectively. In this case it would be of interest to secure the traffic density data to observe if increased usage during the summer months may have contributed to the additional number of delays. In consideration of either the figure of 78 or 113 delays, however, the delay situation in the Coyle-Dover area is appreciably worse than that shown in Reference 1.

Total Delays in C-D Area	No. of Delays to Aircraft Inbound to Washington Center			No. of Delays to Aircraft Other than Washington Center Bound		
	*Time A	Time B	Total	Time A	Time B	Total
113	23	12	35	15	63	78

*Time A - flow restriction period from 2029-2400 hours (GMT)
Time B - remainder of day, 0500-2029 plus 2400-0459 hours

The 37 departure delays at Philadelphia International Airport were examined to see if they might be associated with heavy North and South bound traffic along the V16 and V123 airways. The results, however, indicated that 23 of these delayed aircraft were headed primarily towards the Cleveland and Pittsburgh ARTC Centers and that only 14 of the delayed aircraft could possibly be associated with the heavy V16 and V123 traffic.

New York X-Area

With the exception of delays at and around Philadelphia, the delay pattern throughout the greater part of the New York X-Area was essentially comparable to the data of Reference 1 in that delays were relatively few in total number, widely scattered with no significant concentration of delays at any fix and of no relative importance. The

exception consists of the delays at the Philadelphia (PHL), Valley Forge (VFG), Gap (GAP) and North Philadelphia (PNE) fixes, where 80 delays were found. Table 2 totals 123 delays in the New York X-Area which includes these 80 delays. When the 80 delays are subtracted from the 123 delays, 43 delays remain. This figure of 43 is of the same order of magnitude in the X-Area as observed in the data of Reference 1 when, it should be noted, delays at the four fixes mentioned above were virtually nonexistent.

The 80 delays at and around Philadelphia were not caused by the same reasons. Of the 13 aircraft delayed at Gap, 10 were bound for Washington National Airport, and 8 of the 10 were delayed during the flow restriction period caused by the Washington terminal area traffic situation. Hence this appears to be the predominant cause of delay at Gap. The delays at North Philadelphia were generally scattered throughout the day, of a random nature, and were not caused or influenced by Philadelphia International Airport conditions as might be suspected because of their proximity.

The Philadelphia airport experienced 37 ground departure delays as noted previously and 10 aircraft were held over Philadelphia awaiting landing clearance during the day. In addition, 7 other aircraft were held at Valley Forge, a Philadelphia approach control fix, awaiting landing clearance at Philadelphia. Of the 7 aircraft held at Valley Forge, it may be noted that 5 of them were held in the time interval from 1331-1348, indicating perhaps a temporary jam in the acceptance rate at Philadelphia.

As has been mentioned previously, the delays at Philadelphia were usually short in duration and apparently not seriously affected by traffic along V16 or V123 as evidenced by the fact that more aircraft headed Westbound were delayed than those headed North or South along V123 or V16. The weather conditions at Philadelphia on this day, though VFR, were none too good as may be observed in Table 1, page 60. This fact,

coupled with the ASR radar being temporarily out of commission for modernization, may have caused sufficient difficulties to explain the delay situation at Philadelphia.

Washington Y-Area

This outlying area, as was generally the case with the New York X-Area, exhibited no significant delay characteristics as delays were small in number and widely scattered except for the Gordonsville (GVE) fix where 9 delays occurred. Of these 9 delays at Gordonsville, 6 of the aircraft were inbound to Washington National during the peak activity of late afternoon, hence the delays apparently reflect the traffic situation in the terminal area.

3. FINDINGS AND RECOMMENDATIONS

This analysis of delays to aircraft under the control of the New York and Washington ARTC centers has uncovered 900 delays from which the following conclusions may be drawn:

(1) The Idlewild and Washington National Airports had an excessive number of ground departure delays and approach control delays at satellite fixes which were also excessive in length.

(2) The LaGuardia, Newark and Philadelphia Airports had an excessive number of ground departure delays (though appreciably less than either Idlewild or Washington) which, however, were of such short length as to be of little consequence.

(3) Idlewild and LaGuardia were handling about the same amount of traffic but only Idlewild was experiencing delays of any significant consequence.

(4) There were twice as many delays in the Coyle-Dover area, between New York and Washington, as has been observed previously, and these delays were again sustained primarily by military aircraft.

(5) Relatively few delays were observed throughout the outlying regions of the New York and Washington centers, and these delays were widely scattered with no significant concentration of delays, with one minor exception considered to be of little or no consequence.

The statements above reveal three trouble spots in the system: the Idlewild and Washington airports and the Coyle-Dover area.

In consideration of the delay situation at and around Washington National Airport, it appears evident that a combination of permanent and temporary conditions resulted in an extremely large number of ground departure and inbound-to-the-airport approach control delays. The permanent condition is the generally accepted premise that the airport is approaching its maximum traffic handling capacity under present day peak traffic conditions. The temporary conditions consisted of runway 15 out of commission for the greater part of the day coupled with poor weather conditions throughout the day, and also two lost aircraft during the late afternoon traffic peak.

The Idlewild Airport delays were not caused by either weather conditions, which were generally quite good in the New York area throughout the day, or by an excessive traffic load as LaGuardia Airport, handling roughly the same amount of traffic as Idlewild, was able to move its traffic with relatively little delay inconvenience. No underlying causes of the delays were found other than a temporarily blocked oceanic route which, it is thought, merely lengthened the delay of affected aircraft rather than being the initiating cause.

In recent months, however, the FAA has uncovered reasons for the delays by conducting "Operation Speedup" at the airport. Operation Speedup was a detailed operations analysis of the delay problems at Idlewild performed by a team of FAA personnel well versed in airport tower problems. This team delineated problem areas involving ground operations, communications and personnel, and put into motion means to alleviate or eliminate these problems through the combined efforts of FAA, airport management (the Port of New York Authority) and the air carriers. The reader is referred to the minutes of this Operations Speedup team for a complete description of the variety of reasons causing delays at this airport, none of which could be singled out as predominant causes.

It is recommended that BRD personnel concerned with future airport design configurations, as well as those concerned with ATC, study the problems encountered at Idlewild carefully. It appears that many of the delay problems being encountered would not have occurred if long range airport planning accomplished in the past had been more expertly done. The practical, invaluable experience to be gained by those concerned with airport design should not be lost. Also, the impending modernization of LaGuardia Airport, and the consequent shifting of part of the air traffic load to Idlewild, should be even further cause for close surveillance of the Idlewild situation by BRD personnel.

The delays in the Coyle-Dover area, ordinarily influenced by two potent factors - the heavy air traffic between New York and southern terminals and the military traffic entering the ATC system in this area from military bases such as Dover AFB - more than doubled over the number of delays observed in previous analyses. It can be shown that roughly one half of the additional delays were a direct feedback of the Washington terminal area delays which had resulted in the imposition of flow restrictions on the New York Center. Regardless of this consideration, however, delays increased appreciably in this area. The reasons therefore are unknown, but one factor among others may be considered as worthwhile evaluating, namely: was there a greater density of air traffic in the area compared to that observed before (possibly summertime traffic contrasted to wintertime traffic).

The increased number of delays in the Coyle-Dover area found herein emphasizes the fact that this is a problem area, and it is understood that considerable attention is being given to revising the airway structure in this area. Therefore, additional concentrated analysis of only the Coyle-Dover area and the associated fringe areas such as Philadelphia and the northern portion of the Washington ARTC center area should be considered in order to secure flow-density data over this heavily traversed area. This data would be supplementary to that previously obtained and it should be selected carefully to cover repre-

sentative, high-activity periods of time. The resultant data would then provide broad-based traffic density flows to verify the adequacy of any new airway structure intended to relieve the congestion now apparent in this region.

The outlying areas of the New York and Washington ARTC centers suffered few delays, and require no concerted effort to eliminate bottlenecks because of the absence of any concentration of delays other than those at the Philadelphia Airport. The delays at Philadelphia could not be associated with any particular airways flow of traffic, and were thought caused by local weather conditions and temporary absence of the ASR radar.

The air carrier records used in this analysis were found useful in the manner that they were used herein. However, it is recommended that the BRD consider the possibilities of more effective use of this potentially quite valuable source of data. Besides their usefulness in analyses of this nature, they could be used to maintain a continuous surveillance of known congested airways to locate sources of trouble when and where the trouble develops.

G.E. Cothren, Jr.
Project Engineer

Approved by:

R.S. Grubmeyer, Head
Aeronautics Branch

Lewis P. Tabor
Technical Director

Nicol H. Smith
Director of Laboratories

REFERENCES

1. Operations Analysis of Air Traffic Demands and Delays in the New York ARTCC Area on January 28 and February 28, 1958. Franklin Institute Laboratories Report F-A2123.

2. Terminal Area and Airport Surface Traffic, New York: Winter 1957-58. Airborne Instruments Laboratory Report 4851-1.

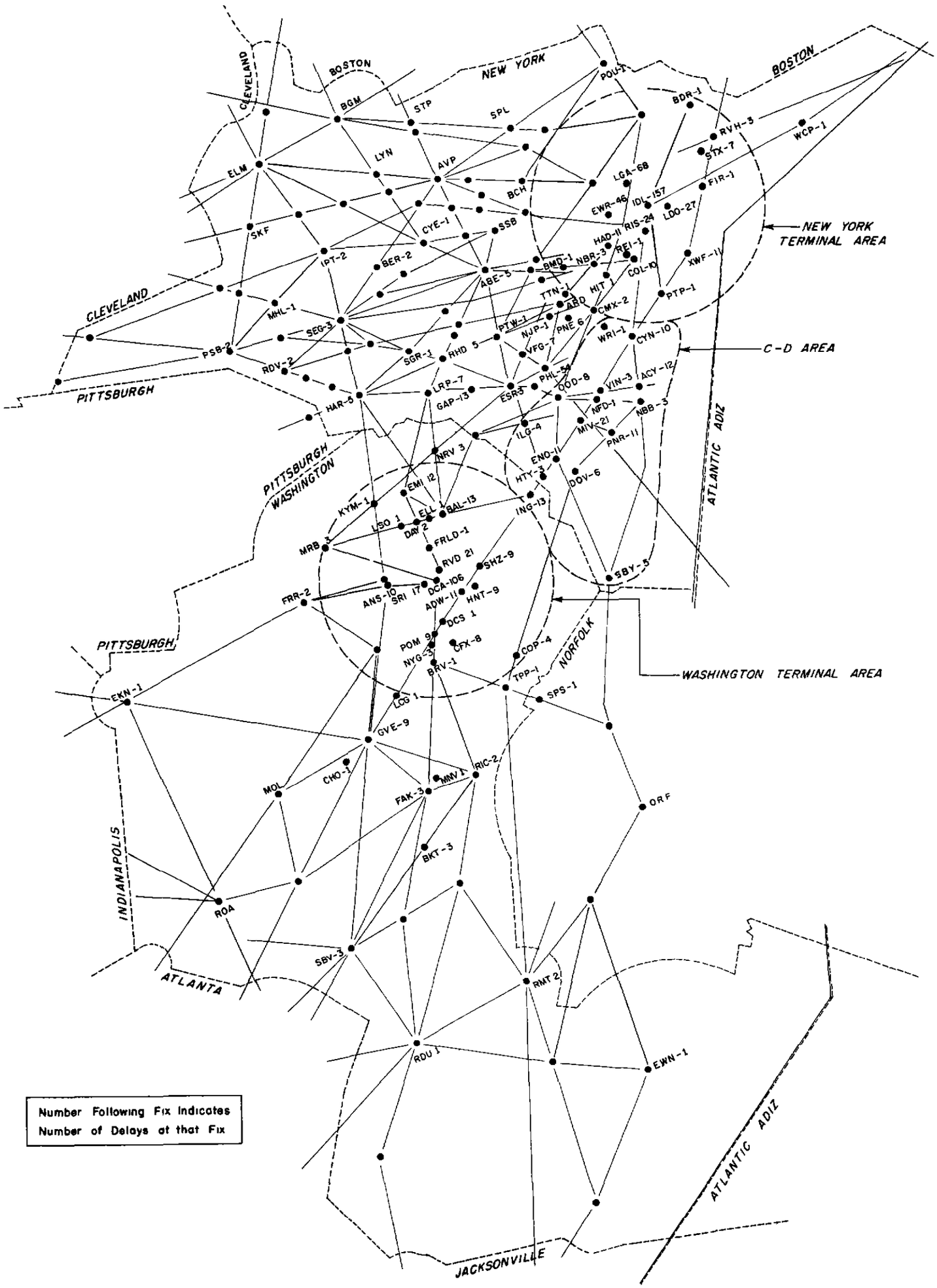

FIGURE I. DELAY MAP OF NEW YORK AND WASHINGTON ARTC CENTER AREAS

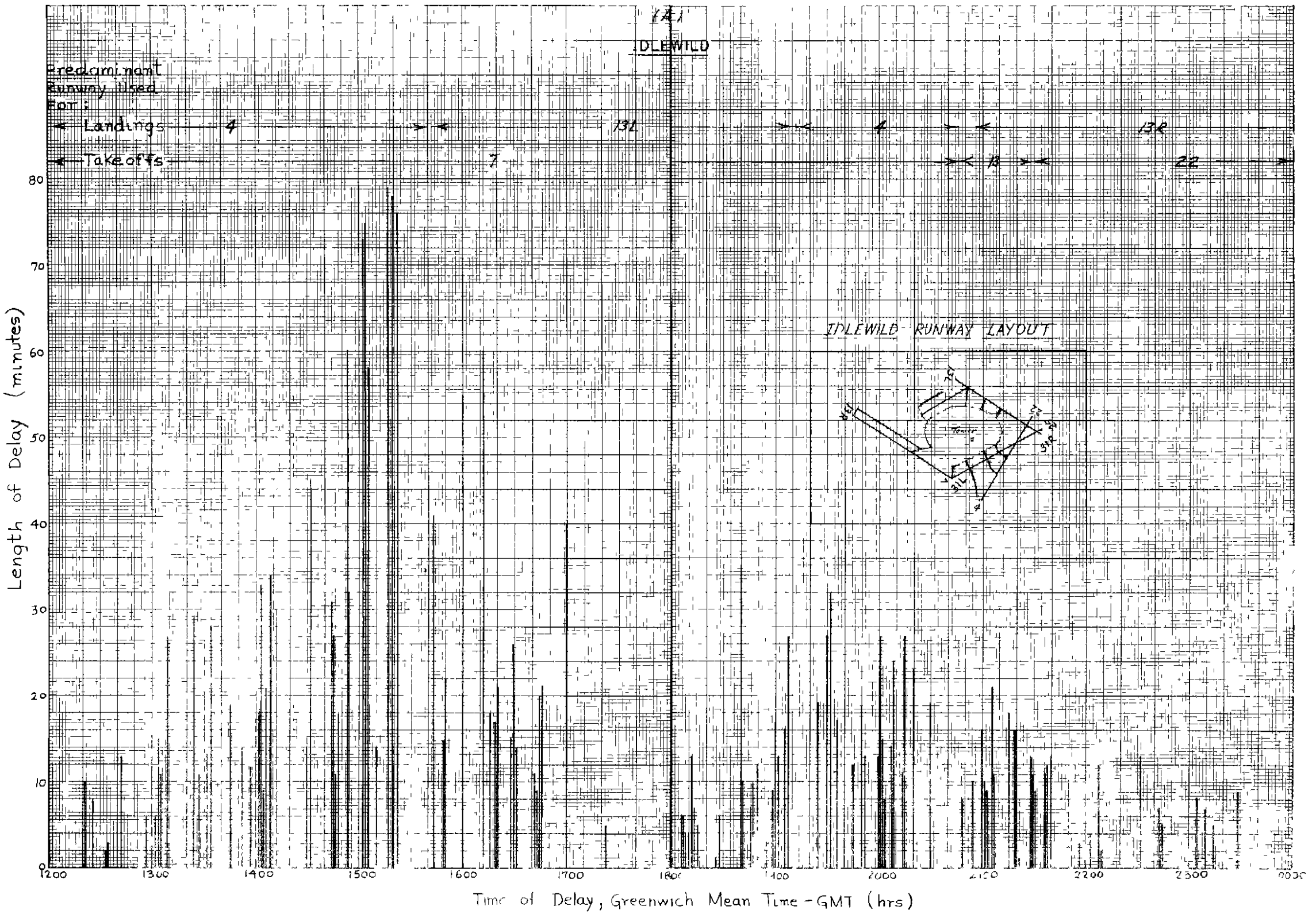

FIGURE 2 DISTRIBUTION AND DURATION OF AIRPORT DEPARTURE DELAYS

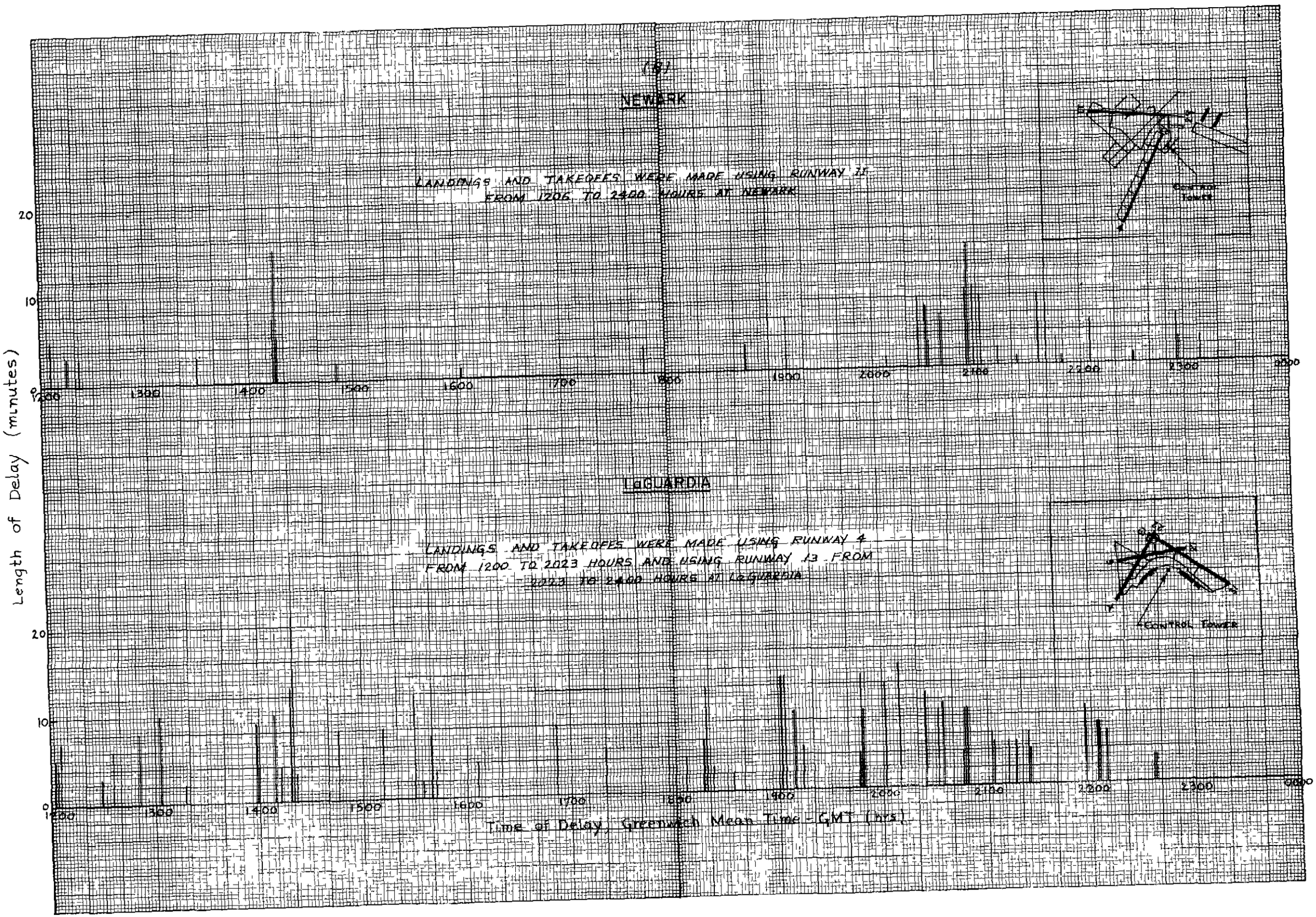

FIGURE 2 DISTRIBUTION AND DURATION OF AIRPORT DEPARTURE DELAYS

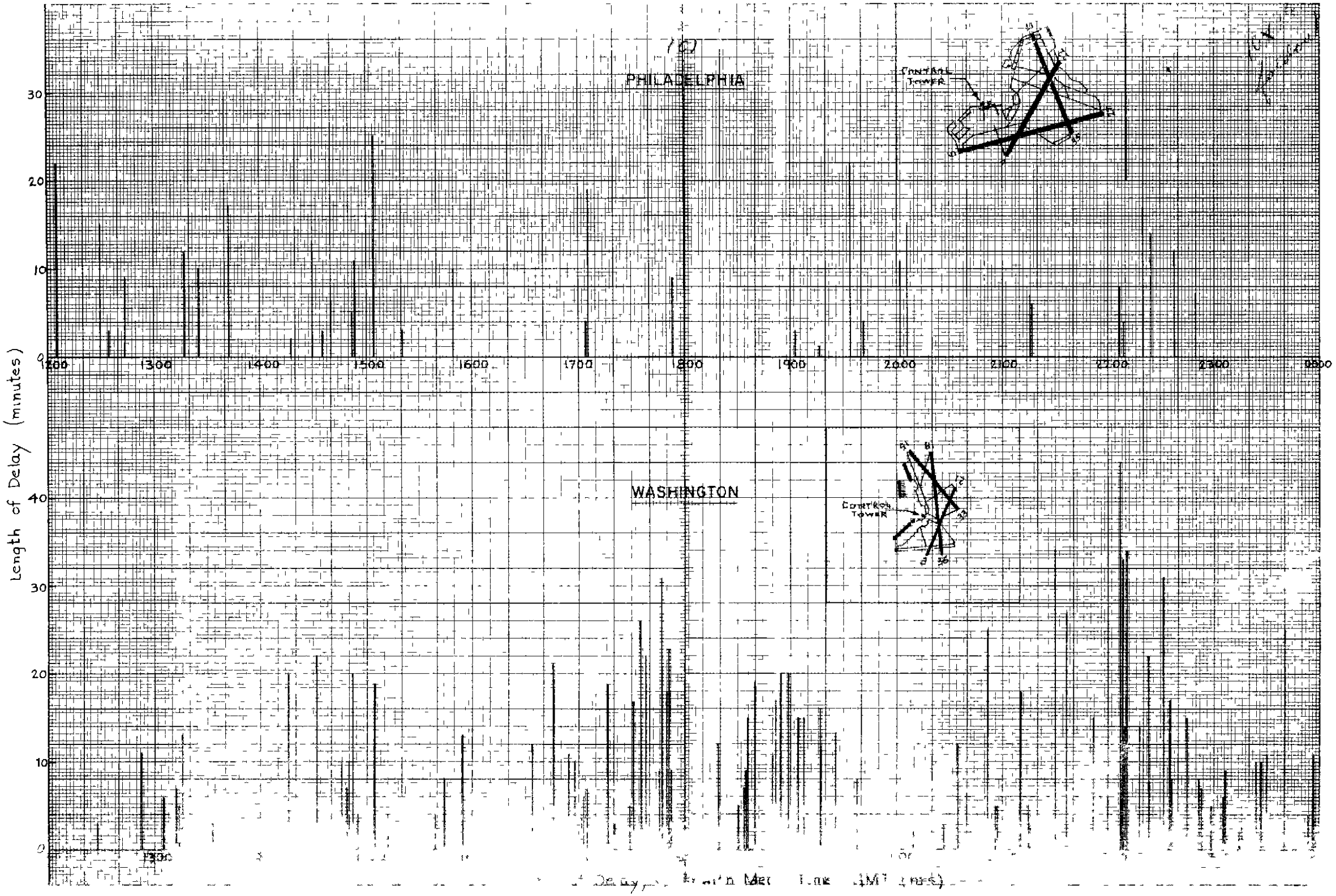

FIGURE 2 DISTRIBUTION AND DURATION OF AIRPORT DEPARTURE DELAYS

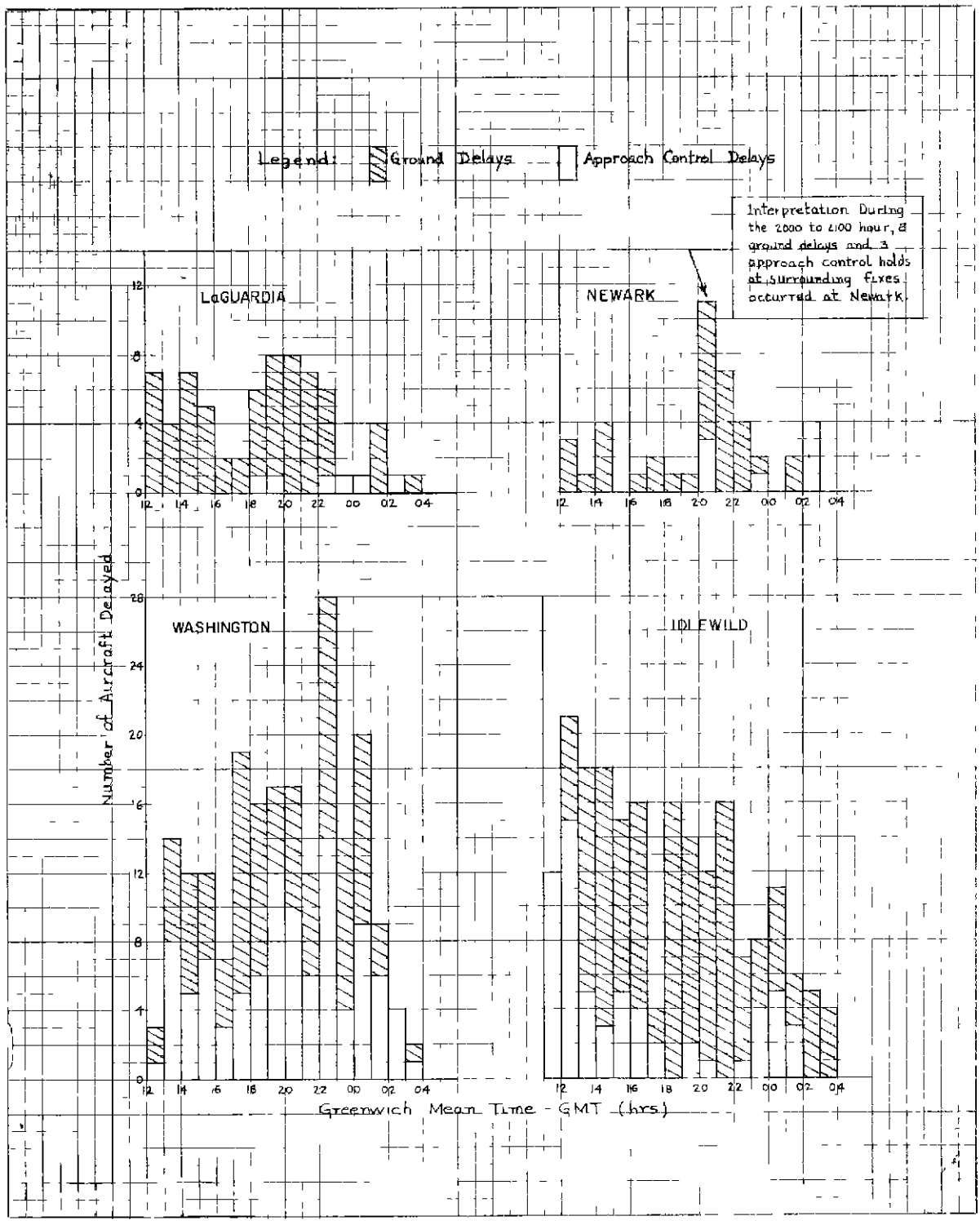

FIGURE 3 NUMBER OF DELAYS PER HOUR WITHIN THE NEW YORK AND WASHINGTON TERMINAL AREAS

F-A2169-5

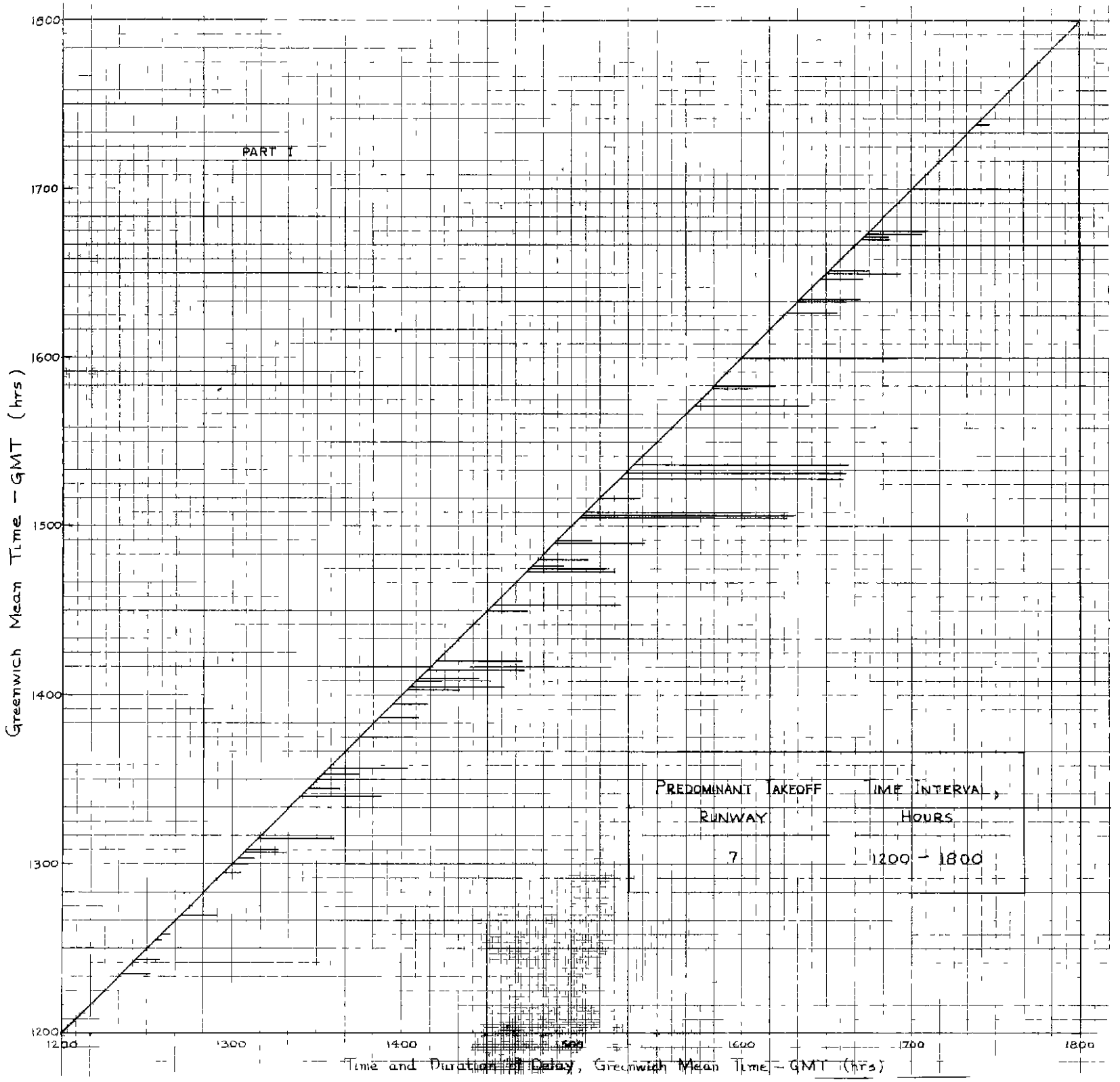

FIGURE 4 QUEUING EFFECT RESULTING FROM IDLEWILD DEPARTURE DELAYS

F-A2169-5

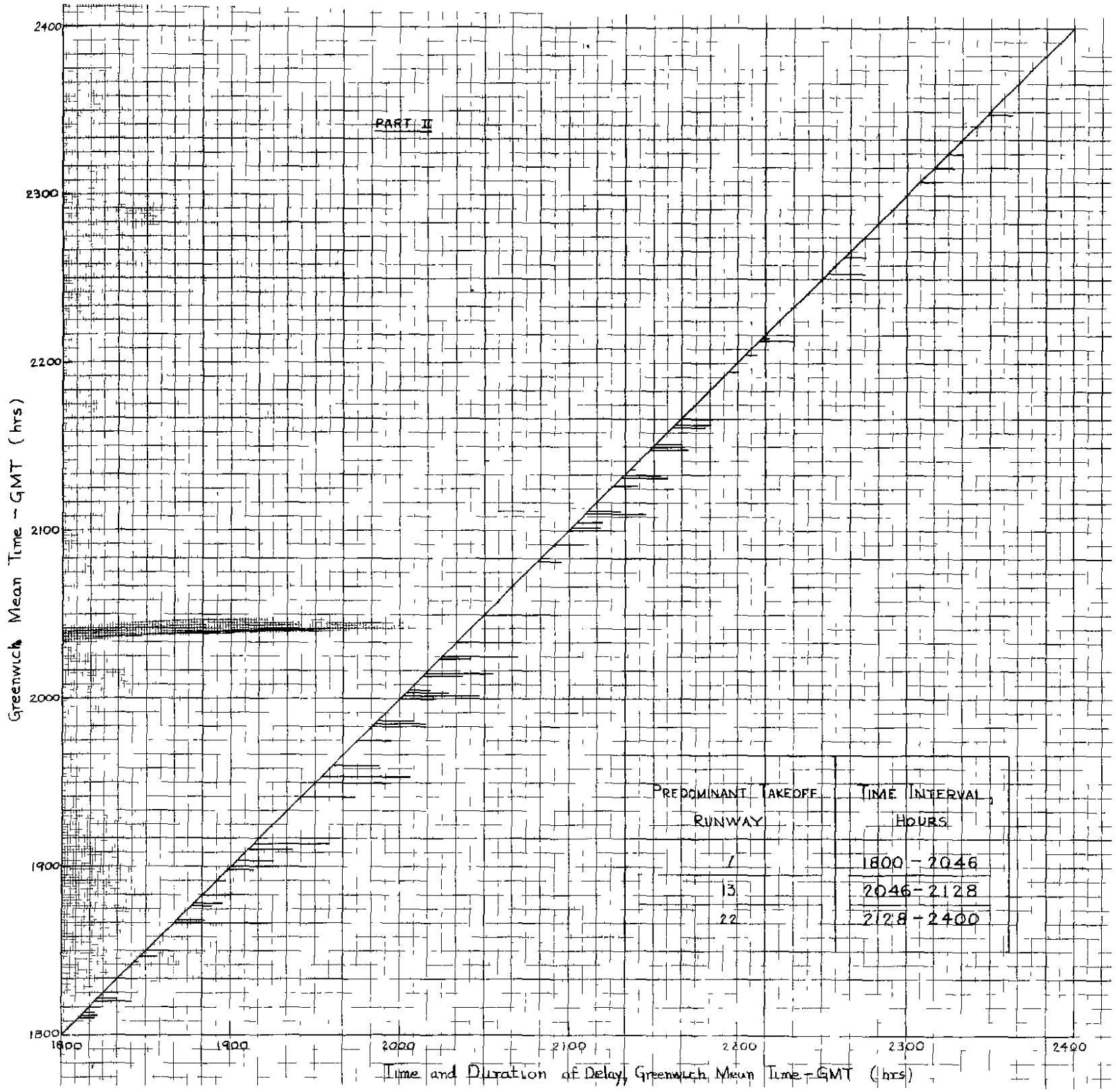

FIGURE 4 QUEUING EFFECT RESULTING FROM IDLEWILD DEPARTURE DELAYS

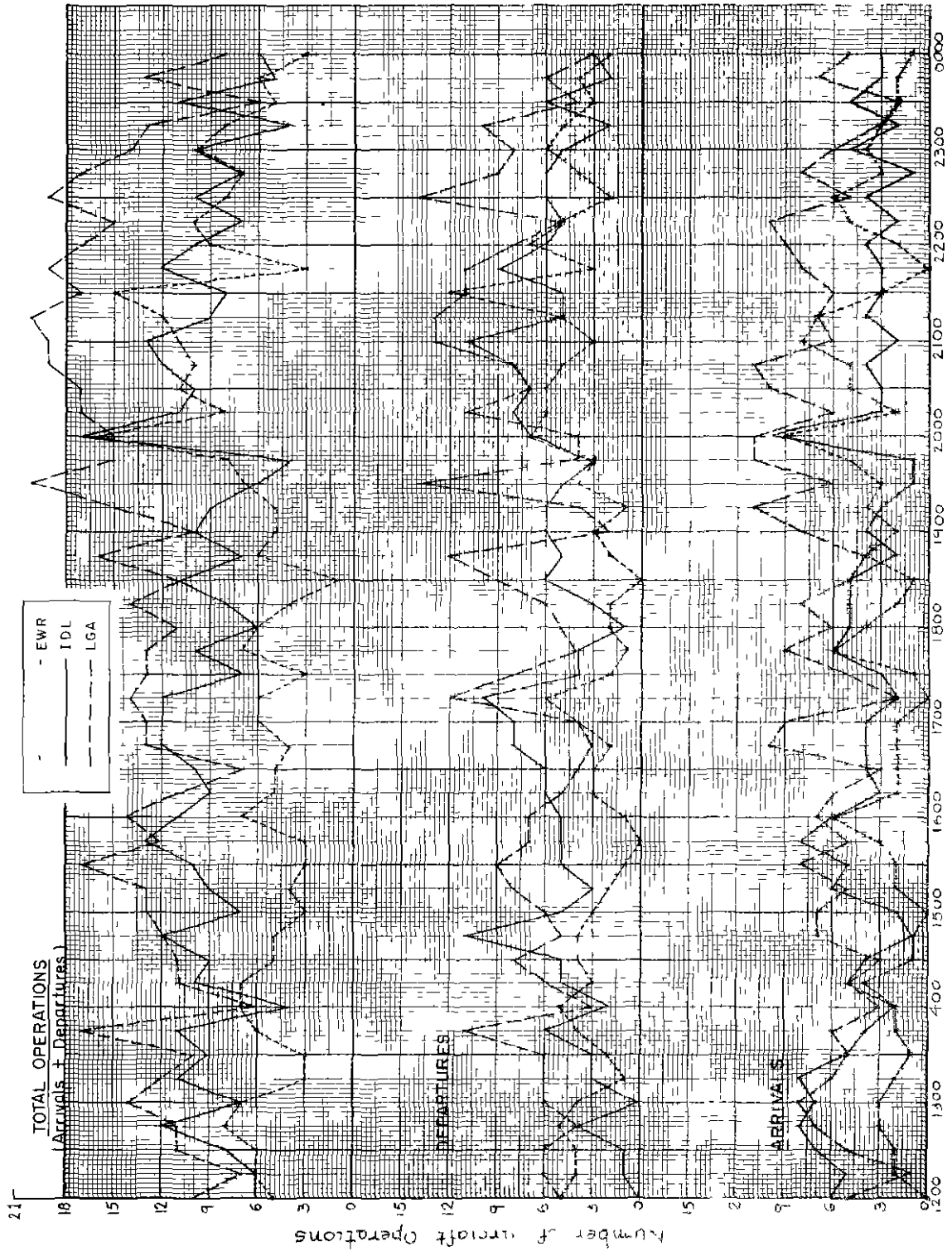

FIGURE 2 NUMBER OF DEPARTURES AND ARRIVALS AT NEWARK, IDLEWILD AND LAGUARDIA FOR 5 MINUTE PERIODS
(Total Operations)

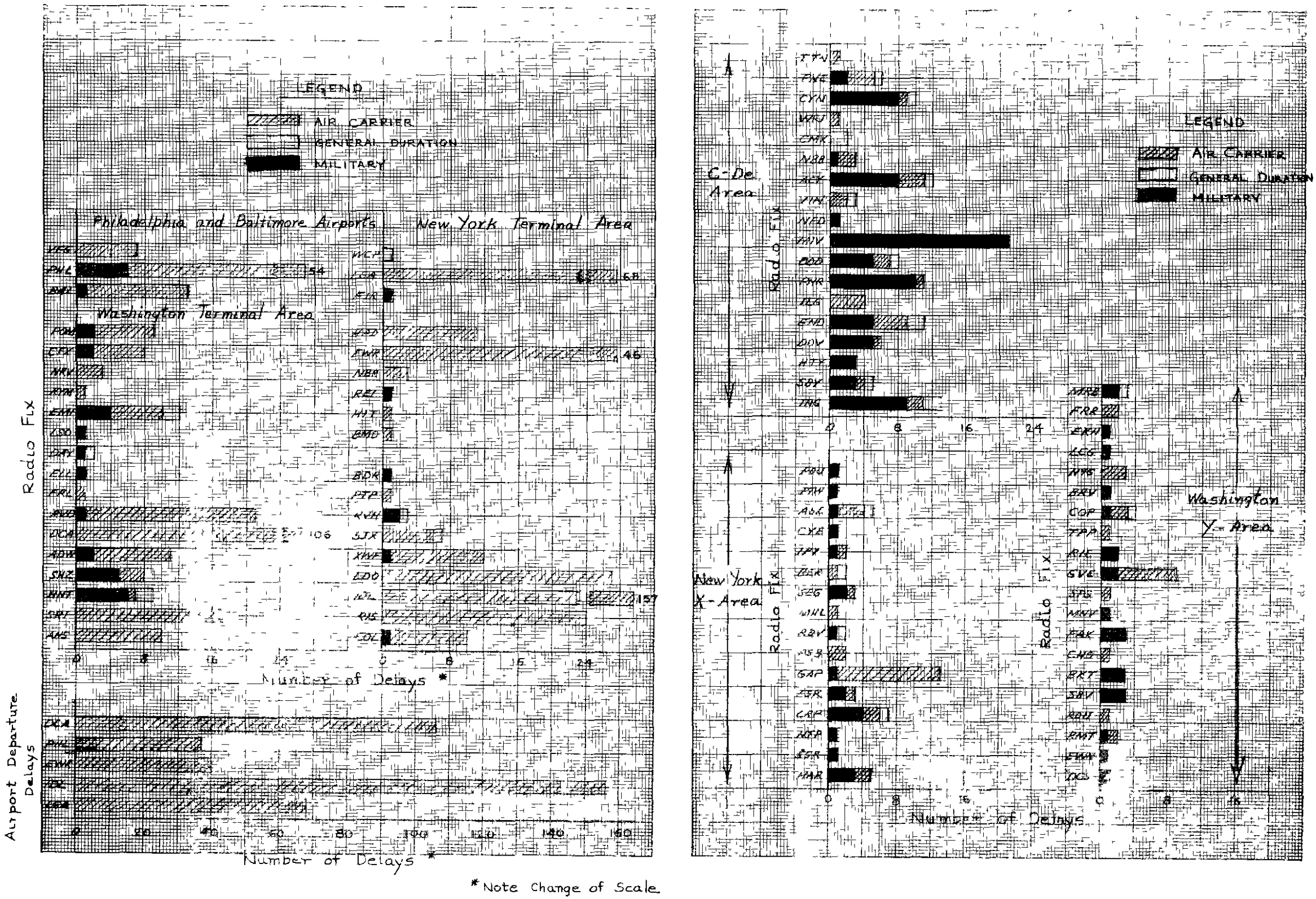

FIGURE 6. DISTRIBUTION OF DELAYS BY AIRCRAFT CATEGORY AND RADIO FIX

Table 1

INTRODUCTION AND EXPLANATION

Table 1 is to a large degree self-explanatory. However, a brief review of the form of the table may be helpful.

Identification of the various codes used for fix identifiers, weather, owner category and type of aircraft are given in subsequent pages immediately prior to Table 1.

The listing of the delay data was done in a manner to essentially link together delays at terminal areas and delays along airway paths and finally miscellaneous delays scattered over large outlying areas. The term "large outlying area" means two major areas, one within the New York center area and one within the Washington center area that have been arbitrarily called the X and Y areas respectively. The New York X-area encompasses all the area exclusive of the New York terminal area and the broad coastal airway path previously called the Coyle-Dover (C-D) area in Reference 1. This broad coastal airway path was previously defined to encompass an area bounded roughly by the Victor 16 (V16) and Victor 1 (V1) airways and the Coyle-Dover fixes. The common denominator serving to define this area was that the delays were affected primarily by the traffic along airways V16 and V1. The Coyle-Dover (C-D) area is delineated by the dashed lines on the Delay Map of the New York and Washington ARTC center areas (Fig. 1). The Washington Y-area encompass all the Washington ARTC center area except for the Washington, D.C. terminal area also shown on Figure 1.

As well as could be determined from the various sources of data available, the Altitude column lists the altitude at which the aircraft left the fix and the Time at Fix column lists the initial time of arrival at the fix.

Table 1

TABLE OF CONTENTS

Delay Fixes

Table 1

IDENTIFICATION OF FIXES WHERE DELAYS OCCURRED*

ABE	Allentown, Pa.	LDO	Lido, N.Y.
ACY(NBB)	Atlantic City, N.J.	LGA	LaGuardia Airport, N.Y.
ADW	Andrews AFB, Va.	LRP	Lancaster, Pa.
ANS	Plains, Va.	LSO	Lisbon, Md.
BAL	Baltimore, Md.	MHL	Mill Hall, Pa.
BDR	Bridgeport, Conn.	MIV	Millville, N.J.
BER	Berwick, Pa.	MNV	Manakin, Va.
BKT	Blackstone, Va.	MRB	Martinsburg, W. Va.
BMD	Belle Mead, N.J.	NBR	New Brunswick, N.J.
BRV	Brooke, Va.	NFD	Newfield, N.J.
CFX	Clifton Intersection, Md.	NJP	Johnsville, Pa. NAS
CHO	Charlottesville, Va.	NRV(NVR)	Norris, Md.
CMX	Columbus, N.J.	NYG	Quantico, Va.
COL	Colts Neck, N.J.	OOD	Woodstown, N.J.
COP	Coles Point, Va.	PHL	Phila. Internat'l Airport, Pa.
CYE	Crystal Lake, Pa.	PNE	North Philadelphia, Pa.
CYN	Coyle, N.J.	PNR	Port Norris, N.J.
DAY	Dayton, Md.	POM	Potomac, Va.
DCA	Washington Nat'l Airport, D.C.	POU	Poughkeepsie, N.Y.
DCS	Doncaster, Md.	PSB	Philipsburg, Pa.
DOV	Dover, Del.	PTW	Pottstown, Pa.
EKN	Elkins, W. Va.	RDU	Raleigh, N.C.
ENO	Kenton, Del.	RDV	Reedsville, Pa.
ELL	Ellicott City, Md.	REI	Regan Intersection, N.J.
EMI	Westminster, Md.	RIC	Richmond, Va.
ESR	West Chester, Pa.	RIS	Scotland, N.Y.
EWN	New Bern, N.C.	RMT	Rocky Mount, N.C.
EWR	Newark, N.J.	RVD	Riverdale, Md.
FAK	Flat Rock, Va.	RVH	Riverhead, N.Y.
FRLD	Fairland, Md.	SBV	South Boston, Va.
FRR	Front Royal, Va.	SBY	Salisbury, Md.
FIR	Fire Island, N.Y.	SEG	Selinsgrove, Pa.
GAP	Gap, Pa.	SGR	Sanger, Pa.
GVE	Gordonsville, Va.	SHZ	Shadyside, Md.
HAD	Hadley, N.J.	SJX	St. James, N.Y.
HAR	Harrisburg, Pa.	SPS	Sharps, Va.
HIT	Hightstown, N.J.	SRI	Springfield, Va.
HNT	Huntingtown, Md.	TPP	Tappahannock, Va.
HTY	Hartly, Del.	TTN	Trenton, N.J.
IDL	Idlewild Internat'l Airport, N.Y.	WCP	White Cap, N.Y.
ILG	Wilmington (New Castle), Del.	WRI	Maguire AFB
ING	Ingleside, Md.	XWF	Woolf Intersection, N.Y.
IPT	Williamsport, Pa.	VFG	Valley Forge, Pa.
KYM	Keymar, Md.	VIN	Vineland, N.J.
LCG	Locust Grove, Va.		

*For identification of origin and destination fixes contained in Table 1, refer to ATC Manual "Location Identifiers."

Table 1

WEATHER INFORMATION CODES

Sky Cover Symbols:

0	Clear
◐	Scattered cloud layer
◑	Broken cloud layer
⊕	Overcast
X	Obscuration (surface layer)
-◐	Thin scattered
-◑	Thin broken
-⊕	Thin overcast
+	Heavy, or in excess of value shown
-	Light
--	Very light
/	Unknown, usually applied to distance to cloud layer
V	Variable
R	Rain
RW	Rain showers
F	Fog
GF	Ground hog
K	Smoke
H	Haze
C	Calm
L	Drizzle
E	Estimated
M	Measured
B	Balloon sounding
A	Aircraft pilot observation

Applies to sky cover entries

Ceiling is indicated in HUNDREDS of feet.
Visibility is indicated in statute miles.
Wind direction is indicated by alphabetic abbreviation.
Wind velocity is indicated numerically in knots.

Example:

10◐23⊕ 4L--F NNE10

Translation: Scattered clouds at 1000 feet, overcast at 2300 feet, visibility 4 miles, very light drizzle with fog, wind from north northeast at 10 knots.

Table 1

IDENTIFICATION CODES

Aircraft Identification Abbreviations

E	Eastern Airlines	AS	Slick Airlines
P	Capital Airlines	F	Trans Canada Airlines
S	National Airlines	CB	Cabana Airlines
L	Allegheny Airlines	OH	Aviance Airlines
D	Delta Airlines	AD	Mohawk Airlines
T	Trans-World Airlines	SP	BOAC
U	United Airlines	IL	Italia
AT	Flying Tiger Airlines	PH	KLM
G	Pan American Airlines	EL	EL-AL
A	American Airlines	DLN	Lufransa
SBW	Seaboard & Western Airlines	LAV	Argentina
TOA	Trans-Ocean Airlines	RDL	Riddle Airlines
M	Northeast Airlines	SAS	Scandinavian Air System
K	Piedmont Airlines	ICE	Icelandic
B	Braniff Airlines	SHAM	Shamrock
FB	Air France Airlines	ARG	Argentine
N	Northwest Airlines	CU	Cubana
		SAB	Sabena
X	General Aviation	R	Army
AF	Air Force	V	Navy
VM	Marine	Q	Coast Guard
AG	Air Guard	PAE	Priority Air Evacuation Aircraft
MATS	Military Air Transport Service	AE	Air Evacuation

Aircraft Designators

2	Martin 202	9	Constellation
3	DC3	9S	Super Constellation
S3	Super DC3	9C	Turbo Constellation
4	DC4	B	Beechcraft
5	Convair	TB	Twin Beech
6	DC6	BA	Bonanza
6B	DC6B	10	Boeing 377
7	DC7	L	Lodestar
8	Martin 404	11,V	Viscount

TIME AT FIX ENTRIES ARE GREENWICH MEAN TIME (Z)

TABLE I - DELAY INVESTIGATION DATA

AUGUST 1 - 1958

NO	A/C IDENT	TYPE & SPEED	OPR CAT	ORIG	DEST	FIX	ALT (X100')	TIME AT FIX	DUR MIN	TYPE DEL	SKY & CEILING VISIBILITY WIND
1	P800	V 300	AC	MDW	DCA	ANS	50	0623	13	B1	
2	P816	V 300	AC	MKE	DCA	ANS	40	0705	13	B1	
3	P112	V 300	AC	MKE	DCA	ANS	50	1545	11	B1	
4	P10	V 280	AC	MDW	DCA	ANS	40	1914	8	B1	
5	U728	D7 300	AC	MDW	DCA	ANS	60	1956	19	B1	
6	P14	V 300	AC	MDW	DCA	ANS	70	2114	14	B1	
7	T1176	9 250	AC	CMH	DCA	ANS	50	2136	4	B1	
8	P16	V 270	AC	MDW	DCA	ANS	50	2219	11	B1	
9	P414	4 185	AC	PIT	DCA	ANS	40	2258	12	B1	
10	P18	V 270	AC	MDW	DCA	ANS	40	2328	6	B1	
1	U736	D7 320	AC	MKC	DCA	SRI	50	0010	07	B1	
2	P20	V 290	AC	MDW	DCA	SRI	40	0018	13	B1	
3	U704	D7 310	AC	SFO	DCA	SRI	--	0019	12	B1	
4	U124	D7 320	AC	ORD	DCA	SRI	40	0038	06	B1	
5	E410	7 310	AC	STL	DCA	SRI	50	0116	8	B1	
6	P914	2 260	AC	CLE	DCA	SRI	40	0215	9	B1	
7	P516	3 145	AC	PIT	DCA	SRI	70	0513	14	B1	
8	T1	9 210	AC	LGA	DCA	SRI	90	1310	18	B1	
9	U720	D7 300	AC	MDW	DCA	SRI	50	1532	05	B1	
10	P4	V 300	AC	MDW	DCA	SRI	40	1649	6	B1	
11	S507	D6 230	AC	PBI	DCA	SRI	40	1841	28	B1	
12	P102	V 260	AC	PIT	DCA	SRI	50	1906	12	B1	
13	P174	V 280	AC	ATL	DCA	SRI	40	1910	51	B1	
14	P206	V 263	AC	CLE	DCA	SRI	50	1921	31	B1	
15	P912	2 250	AC	YIP	DCA	SRI	50	2054	21	B1	
16	P463	4 180	AC	PIT	DCA	SRI	40	2202	6	B1	
17	P276	V 265	AC	INT	DCA	SRI	50	2210	10	B1	

'TIME AT FIX ENTRIES ARE GREENWICH MEAN TIME (Z)

TABLE I - DELAY INVESTIGATION DATA (cont'd)

AUGUST 1 - 1958

NO.	A/C IDENT	TYPE	SPEED	OPR CAT	ORIG.	DEST	FIX	ALT (X100')	TIME AT FIX	DUR MIN	TYPE DEL	SKY & CEILING	VISIBILITY	WIND
1	P478	4	180	AC	ORF	DCA	HNT	35	0031	15	A			
2	AG52877	C45	145	MIL	HAB	FNT	HNT	70	1603	10	B3			
3	V39256	SNB5	135	MIL	O/CAH	DCA	HNT	60	1722	24	A			
4	V7153	R4D	180	MIL	NGU	NSF	HNT	50	1849	13	A			
5	V9815	SNB	130	MIL	NSF	NSF	HNT	60	1903	8	A			
6	AF30653	B25	170	MIL	O/RDV	ADW	HNT	40	1907	10	A			
7	X66Y	3	160	GA	CMP	DCA	HNT		2016	45	A			
8	AF82123	L27	180	MIL	O/RIC	BOF	HNT	70	2040	41	A			
9	CAAX2	3	160	GA	DCA	IPT	HNT	70	2340	4	B3			
1	V67116	SNB	130	MIL	O/SHZ	NSF	SHZ	45	1353	4	A			
2	V41005	R4Y	210	MIL	HEM	NSF	SHZ	45	1751	4	A			
3	V49563	R4Y	200	MIL	RVH	NSF	SHZ	110	2041	33	A			
4	AF45935	C47	140	MIL	DOV	BOF	SHZ	45	2050	47	A			
5	Q1282	M404	200	MIL	BPA	DCA	SHZ	110	2101	16	A			
6	X40CE	DC3	155	GA	CYN	DCA	SHZ	60	2230	5	A			
7	S701	D7B	290	AC	IDL	DCA	SHZ		2230	5	A			
8	E531	9	240	AC	IDL	DCA	SHZ	70	2231	15	A			
9	E847	D7	280	AC	BOS	DCA	SHZ	100	2253	2	A			
1	P109	V	260	AC	ORF	DCA	ADW	35	0012	8	A			
2	P976	9	245	AC	HSU	DCA	ADW	35	0133	21	A			
3	P439	4	180	AC	ORF	DCA	ADW	35	0148	11	B1			
4	P523	3	140	AC	PHF	DCA	ADW		0334	9	A			
5	E407	9G	237	AC	IDL	DCA	ADW	45	1446	10	B1			
6	P411	4	180	AC	PHF	DCA	ADW	35	1820	27	A			
7	E991	6	245	AC	IDL	DCA	ADW	80	1927	17	B1			
8	E325	D7B	275	AC	IDL	DCA	ADW	35	2210	39	A			
9	V46027	TF	180	MIL	FBT	ADW	ADW	40	2214	11	A			
10	AF16065	C47	140	MIL	ACY	BOF	ADW	45	2217	30	B1			
11	E847	D7	280	AC	BOS	DCA	ADW	45	2258	18	B1			

"TIME AT FIX ENTRIES ARE GREENWICH MEAN TIME (Z)

TABLE I - DELAY INVESTIGATION DATA (cont'd)

AUGUST 1 - 1958

NO	A/C IDENT	TYPE & SPEED	OPR CAT	ORIG	DEST	FIX	ALT (X100')	TIME AT FIX	DUR MIN	TYPE DEL	SKY & CEILING	VISIBILITY	WIND
1	P375	V 270	AC	DCA	RDV	DCA	0	0001	8	C	41D80E	8	NE4
2	A570	5 210	AC	DCA	LGA	DCA	0	0010	9	C	"	"	"
3	P201	V 270	AC	DCA	ORF	DCA	0	0010	3	C	"	"	"
4	S503	D6 220	AC	DCA	PBI	DCA	0	0019	29	C	"	"	"
5	E583	M404	AC	DCA	GSO	DCA	0	0020	12	C	"	"	"
6	E461	M404	AC	DCA	HTS	DCA	0	0021	5	C	"	"	"
7	E845	6B	AC	DCA	JAX	DCA	0	0022	10	C	"	"	"
8	E406	S9G	AC	DCA	PHL	DCA	0	0047	8	C	"	"	"
9	P27	V 260	AC	DCA	MDW	DCA	0	0055	5	C	"	"	"
10	U704	D7 310	AC	DCA	PHL	DCA	0	0102	3	C	85E	7	WNW4
11	E577	M404	AC	DCA	RIC	DCA	0	0104	6	C	"	"	"
12	E652		AC	DCA	BDL	DCA	0	0107	1	C	"	"	"
13	E352		AC	ATL	DCA	DCA	0	0315	6	C	85E	8	WNW3
14	U504	D6 235	AC	DCA	EWR	DCA	0	0432	2	C	100E	8	C
15	P469	4 185	AC	DCA	BAL	DCA	0	1150	2	C	120E	7	ENE7
16	P911	2 220	AC	DCA	PIT	DCA	0	1228	3	C	9D60D120E	5F	ENE10
17	S365	5 205	AC	DCA	RIC	DCA	0	1253	11	C	"	"	"
18	U730	D7 310	AC	DCA	BAL	DCA	0	1305	6	C	11D16D120E	4KH	ENE8
19	A401	5 210	AC	DCA	TYS	DCA	0	1313	7	C	"	"	"
20	P101	V 270	AC	DCA	YIP	DCA	0	1314	5	C	"	"	"
21	U715	D7 300	AC	DCA	MDW	DCA	0	1316	13	C	"	"	"
22	E535	S9	AC	DCA	CLT	DCA	0	1333	4	C	"	"	"
23	U509	D6 235	AC	DCA	ORD	DCA	0	1349	2	C	"	"	"
24	E517	9	AC	DCA	GSO	DCA	0	1416	20	C	"	"	"
25	E65	M404	AC	DCA	RDV	DCA	0	1432	22	C	"	"	"
26	E405	S9G	AC	DCA	LOU	DCA	0	1446	10	C	"	"	"
27	E76	M404	AC	DCA	LGA	DCA	0	1449	7	C	"	"	"
28	P175	9 265	AC	DCA	ATL	DCA	0	1450	10	C	"	"	"
29	E347		AC	DCA	RDU	DCA	0	1452	20	C	"	"	"
30	P271	V 265	AC	DCA	INT	DCA	0	1455	4	C	"	"	"
31	P416	4 187	AC	DCA	ORF	DCA	0	1505	19	C	11D18E	3H	ENE8
32	E849		AC	DCA	MIA	DCA	0	1512	4	C	"	"	"
33	S323	5 210	AC	DCA	MIA	DCA	0	1539	4	C	"	"	"
34	P9	V 270	AC	DCA	MDW	DCA	0	1545	8	C	"	"	"
35	S375	5 205	AC	DCA	JAX	DCA	0	1555	13	C	"	"	"
36	E53	9	AC	DCA	RDU	DCA	0	1634	12	C	14D20E	2½R-F	E7
37	P463	4 180	AC	DCA	PIT	DCA	0	1646	21	C	"	"	"
38	E573	M404	AC	DCA	RIC	DCA	0	1655	11	C	"	"	"
39	P170	V 265	AC	DCA	EWR	DCA	0	1658	10	C	"	"	"

TIME AT FIX ENTRIES ARE GREENWICH MEAN TIME (Z)

TABLE I - DELAY INVESTIGATION DATA (cont'd)

AUGUST 1 - 1958

NO	A/C IDENT	TYPE & SPEED	OPR CAT	ORIG	DEST	FIX	ALT (X100')	TIME AT FIX	DUR MIN	TYPE DEL	SKY & CEILING	VISIBILITY	WIND
40	E404	S9G	AC	DCA	EWR	DCA	0	1702	4	C	9V⊕	2R-F	ENE13
41	E90	M404	AC	DCA	BOS	DCA	0	1705	6	C	"	"	"
42	L1705	D7 275	AC	DCA	SFO	DCA	0	1707	7	C	"	"	"
43	E463	M404	AC	DCA	CRW	DCA	0	1717	19	C	"	"	"
44	E47	M404	AC	DCA	RIC	DCA	0	1721	3	C	"	"	"
45	E582	M404	AC	DCA	BAL	DCA	0	1729	5	C	"	"	"
46	U711	D7 295	AC	DCA	MDW	DCA	0	1731	17	C	"	"	"
47	A578	5 215	AC	DCA	LGA	DCA	0	1735	26	C	"	"	"
48	E614		AC	DCA	LGA	DCA	0	1738	22	C	"	"	"
49	U334	5 220	AC	DCA	BAL	DCA	0	1746	9	C	"	"	"
50	E586	M404	AC	DCA	LGA	DCA	0	1747	31	C	"	"	"
51	P408	4 185	AC	DCA	RIC	DCA	0	1750	18	C	"	"	"
52	A244	D6 250	AC	DCA	LGA	DCA	0	1750	23	C	"	"	"
53	E663	M404	AC	DCA	RDU	DCA	0	1752	7	C	"	"	"
54	E844	6B	AC	DCA	IDL	DCA	0	1819	12	C	11V⊕	3R--F	NNE12
55	P565	5	AC	DCA	HAR	DCA	0	1831	5	C	"	"	"
56	S700	D7B 305	AC	DCA	IDL	DCA	0	1835	7	C	"	"	"
57	U739	D7 280	AC	DCA	MKC	DCA	0	1835	9	C	"	"	"
58	E38		AC	DCA	ABE	DCA	0	1835	15	C	"	"	"
59	P15	V 260	AC	DCA	MDW	DCA	0	1840	19	C	"	"	"
60	E688	M404	AC	DCA	BAL	DCA	0	1850	11	C	"	"	"
61	U747	D7 295	AC	DCA	DEN	DCA	0	1852	17	C	"	"	"
62	A566	5 210	AC	DCA	LGA	DCA	0	1855	20	C	"	"	"
63	P975	9 233	AC	DCA	HSV	DCA	0	1859	20	C	"	"	"
64	E610	7B	AC	DCA	PHL	DCA	0	1905	15	C	8V⊕	2¼L--F	NNE12
65	E568	M404	AC	DCA	NBB	DCA	0	1908	15	C	"	"	"
66	E532	9	AC	DCA	IDL	DCA	0	1918	16	C	"	"	"
67	S506	D6 230	AC	DCA	EWR	DCA	0	1926	12	C	"	"	"
68	E415	9	AC	DCA	CRW	DCA	0	1938	8	C	"	"	"
69	P17	V 263	AC	DCA	MDW	DCA	0	2010	2	C	10⊕23⊕	4L	NNE10
70	E991	6	AC	DCA	MIA	DCA	0	2027	3	C	"	"	"
71	P174	V 280	AC	DCA	PHL	DCA	0	2035	12	C	"	"	"
72	P19	V 260	AC	DCA	MDW	DCA	0	2040	7	C	"	"	"
73	E87	9	AC	DCA	RDU	DCA	0	2052	25	C	"	"	"
74	E565	5	AC	DCA	RIC	DCA	0	2056	5	C	"	"	"

TIME AT FIX ENTRIES ARE GREENWICH MEAN TIME (Z)

TABLE I - DELAY INVESTIGATION DATA (cont'd)

AUGUST 1 - 1958

NO	A/C IDENT	TYPE &	SPEED	OPR CAT	ORIG	DEST	FIX	ALT (X100')	TIME AT FIX	DUR MIN	TYPE DEL	SKY & CEILING	VISIBILITY	WIND
75	B4	6	230	AC	DCA	EWR	DCA	0	2057	5	C	10@23@	4L	NNE10
76	E460	M4O4		AC	DCA	LGA	DCA	0	2111	18	C	26@48@	4F	N10
77	E662	M4O4		AC	DCA	BAL	DCA	0	2115	5	C	"	"	"
78	P419	4	185	AC	DCA	BAL	DCA	0	2116	3	C	"	"	"
79	U333	5	200	AC	DCA	TOL	DCA	0	2130	34	C	"	"	"
80	E549			AC	DCA	CHA	DCA	0	2136	27	C	"	"	"
81	E687	M4O4		AC	DCA	FLO	DCA	0	2152	15	C	"	"	"
82	T53	9	274	AC	DCA	SFO	DCA	0	2200	26	C	40@	6H	NNE11
83	P919	9	235	AC	DCA	CLE	DCA	0	2207	44	C	"	"	"
84	P21	V	273	AC	DCA	MDW	DCA	0	2208	33	C	"	"	"
85	U727	D7	300	AC	DCA	MDW	DCA	0	2209	14	C	"	"	"
86	S322	5	205	AC	DCA	BOS	DCA	0	2210	34	C	"	"	"
87	E52	9		AC	DCA	SYR	DCA	0	2218	14	C	"	"	"
88	E470	M4O4		AC	DCA	LGA	DCA	0	2223	22	C	"	"	"
89	F119	V	263	AC	DCA	MSP	DCA	0	2232	31	C	"	"	"
90	E522	9		AC	DCA	PHL	DCA	0	2235	17	C	"	"	"
91	E865	M4O4		AC	DCA	RIC	DCA	0	2237	8	C	"	"	"
92	E403	9C		AC	DCA	SDF	DCA	0	2245	15	C	"	"	"
93	E36			AC	DCA	BAL	DCA	0	2252	8	C	"	"	"
94	E510	S9G		AC	DCA	EWR	DCA	0	2252	7	C	"	"	"
95	E846			AC	DCA	BOS	DCA	0	2259	5	C	"	"	"
96	P276	V	265	AC	DCA	EWR	DCA	0	2305	6	C	38@120@	8	NE8
97	A569	5	210	AC	DCA	CRW	DCA	0	2305	9	C	"	"	"
98	P414	4	185	AC	PIT	DCA	DCA	0	2315	2	C	"	"	"
99	P444	4	180	AC	DCA	ORF	DCA	0	2315	3	C	"	"	"
100	E325	7B		AC	DCA	ATL	DCA	0	2324	10	C	"	"	"
101	P179	V	260	AC	DCA	ATL	DCA	0	2327	10	C	"	"	"
102	E509			AC	DCA	CLT	DCA	0	2330	11	C	"	"	"
103	P25	V	256	AC	DCA	YIP	DCA	0	2340	25	C	"	"	"
104	E465	M4O4		AC	DCA	CRW	DCA	0	2354	4	C	"	"	"
105	E531			AC	DCA	ATL	DCA	0	2357	11	C	"	"	"
106	T101	9	243	AC	DCA	STL	DCA	0		22	C	"	"	"

TIME AT FIX ENTRIES ARE GREENWICH MEAN TIME (Z)

TABLE I - DELAY INVESTIGATION DATA (cont'd)

AUGUST 1 - 1958

NO	A/C IDENT	TYPE &	SPEED	OPR CAT	ORIG	DEST	FIX	ALT (X100')	TIME AT FIX	DUR MIN	TYPE DEL	SKY & CEILING	VISIBILITY	WIND
1	E7	8	185	AC	AVP	DCA	RVD	60	0007	6	B1			
2	E577	M4O4	192	AC	LGA	DCA	RVD	50	0023	4	B1			
3	P274	V	259	AC	EWR	DCA	RVD	50	0108	5	A			
4	E841	7B	265	AC	BOS	DCA	RVD	60	0534	33	B1			
5	E535	S9G	250	AC	EWR	DCA	RVD	50	1246	7	B1			
6	E517	L49	230	AC	LGA	DCA	RVD	80	1324	25	B1			
7	E405	9	240	AC	BOS	DCA	RVD	80	1355	20	B1			
8	E849	D7B	270	AC	BDL	DCA	RVD	50	1423	7	B1			
9	E501	DC7	275	AC	EWR	DCA	RVD	50	1437	8	B1			
10	D721	7	266	AC	PHL	DCA	RVD	100	1444	2	A			
11	AF16141	C47	150	MIL	MDT	DCA	RVD	100	1525	9	A			
12	P461	4	180	AC	ROC	DCA	RVD	60	1527	6	A			
13	E53	9	248	AC	SYR	DCA	RVD	50	1547	14	B1			
14	E663	8	190	AC	ILG	DCA	RVD	50	1722	3	B1			
15	P975	9	229	AC	EWR	DCA	RVD	50	1809	10	A			
16	P270	V	260	AC	GSO	DCA	RVD	50	1825	49	A			
17	A117	D6	245	AC	LGA	DCA	RVD	50	2026	30	A			
18	E52	9	245	AC	RDU	DCA	RVD	50	2055	43	B1			
19	E509	9	265	AC	EWR	DCA	RVD	50	2209	31	B1			
20	A119	D6	245	AC	LGA	DCA	RVD	50	2244	20	A			
21	E461	8	190	AC	LGA	DCA	RVD	50	2331	3	B1			
1	P173	V	263	AC	EWR	DCA	FRLD	50	1940	19	B3			
1	E648			AC	BAL	IDL	BAL	0	0116	14	C			
2	E64	M4O4		AC	BAL	LGA	BAL	0	1200	1	C			
3	U715	D7	300	AC	BAL	DCA	BAL	0	1207	9	C			
4	P301	V	260	AC	BAL	DCA	BAL	0	1237	8	C			
5	AF11654	C45	145	MIL	DOV	BTL	BAL	90	1348	12	B3			
6	E31	M4O4		AC	BAL	DCA	BAL	0	1521	7	C			
7	E649			AC	BAL	MIA	BAL	0	1601	25	C			
8	U711	D7	295	AC	BAL	DCA	BAL	0	1606	6	C			
9	S326	5	220	AC	BAL	BOS	BAL	0	1730	19	C			
10	E582	M4O4		AC	BAL	EWR	BAL	0	1812	18	C			
11	E688	M4O4		AC	BAL	ILG	BAL	0	1935	12	C			
12	U333	5	200	AC	BAL	DCA	BAL	0	2035	3	C			
13	P23	V	259	AC	BAL	DCA	BAL	0	- -	13	C			

TIME AT FIX ENTRIES ARE GREENWICH MEAN TIME (Z)

TABLE I - DELAY INVESTIGATION DATA (cont'd)

AUGUST 1 - 1958

NO	A/C IDENT	TYPE & SPEED		OPR CAT	ORIG	DEST	FIX	ALT (X100')	TIME AT FIX	DUR MIN	TYPE DEL	SKY & CEILING VISIBILITY WIND
1	AF6255	C47	140	MIL	O/ELL	MXF	ELL	90	2135	9	A	
1	V1066	SNB	145	MIL	NXX	NSF	DAY	80	2000	14	B3	
2	X3	DC3	160	GA	LGA	DCA	DAY	80	2147	13	A	
1	LOG9892F	C46	165	MIL	DT	CHS	LSO	100	1949	19	A	
1	AF00635	C47	135	MIL	BOF	BOF	EMI	90	0112	6	A	
2	E345	7	270	AC	EWR	DCA	EMI	60	0525	19	B3	
3	X6297B	AERO C	175	GA	RDG	DCA	EMI	60	1312	23	A	
4	U509	D6	235	AC	EWR	DCA	EMI		1318	05	B3	
5	E347	S9G	245	AC	EWR	DCA	EMI	70	1346	20	B3	
6	X5C	TVT	260	GA	LGA	DCA	EMI	80	1355	8	A	
7	SAM80609	9	220	MIL	O/EMD	DCA	EMI	60	1529	5	A	
8	E53	9	248	AC	SYR	DCA	EMI	100	1532	6	B3	
9	U705	D7	275	AC	PHL	DCA	EMI	120	1607	24	B3	
10	R64023	L26	170	MIL	DAA	ABE	EMI		1732	15	A	
11	E38	8	188	AC	DCA	ABE	EMI	70	1920	7	A	
12	AF50292	5	200	MIL	LGA	BOF	EMI	80	2017	2	A	
1	X502	DC3	160	GA	DCA	BUF	KYM	80	1548	14	A	
1	E535	S9G	250	AC	EWR	DCA	NRV	60	1227	6	A	
2	U509	DC6	205	AC	EWR	DCA	NRV	60	1229	17	A	
3	E583	M404	191	AC	EWR	DCA	NRV	60	2326	10	B1	

TIME AT FIX ENTRIES ARE GREENWICH MEAN TIME (Z)

TABLE I - DELAY INVESTIGATION DATA (cont'd)

AUGUST 1 - 1958

NO	A/C IDENT	TYPE & SPEED		OPR CAT	ORIG	DEST	FIX	ALT (X100')	TIME AT FIX	DUR MIN	TYPE DEL	SKY & CEILING VISIBILITY WIND
1	E58	9	245	AC	RDU	DCA	CFX	40	0112	10	B1	
2	E76	8	190	AC	RDU	DCA	CFX	40	1406	4	B1	
3	E698	8	190	AC	RDV	DCA	CFX	90	1746	22	B1	
4	S402	6B	230	AC	MIA	DCA	CFX	40	0230	10	A	
5	VM29587	SNB	140	MIL	NSF	NSF	CFX	50	1911	10	A	
6	X59M	T/B	160	GA	SAV	DCA	CFX	70	1947	36	A	
7	S368	5	205	AC	RIC	DCA	CFX	40	2123	28	A	
8	V1208	SNB	150	MIL	SSC	NSF	CFX	40	2150	58	A	
1	R6642L	L20	110	MIL	DAA	PHF	BRV	40	1238	7	A	
1	E534	9	265	AC	ATL	DCA	NYG	40	0921	5	B1	
2	P408	4	185	AC	DCA	RIC	NYG		1831	11	B3	
3	P480	4	185	AC	RIC	DCA	NYG	40	2200	26	A	
1	X57C	T/B	165	GA	O/IRB	DCA	MRB		1332	39	B3	
2	AG00578	C47	160	MIL	O/GSO	MRB	MRB		1509	13	B3	
3	AF58886	B25	180	MIL	ADW	SYR	MRB	100	1653	13	A	
1	E666	8	192	AC	GSO	DCA	POM	40	0036	7	B1	
2	E516	9	250	AC	CLT	DCA	POM	40	0213	4	B1	
3	E352	9S	260	AC	ATL	DCA	POM	60	0230	10	B1	
4	E532	9G	275	AC	ATL	DCA	POM	110	1813	24	B1	
5	V39117	R4D	190	MIL	NBG	NSF	POM	110	1957	13	A	
6	V56547	R5D	190	MIL	NBG	NSF	POM	120	2011	12	B3	
7	A208	6	250	AC	O/TRI	DCA	POM	130	2011	27	A	
8	P276	V	265	AC	INT	DCA	POM	90	2156	15	A	
9	E578	8	190	AC	INT	DCA	POM	80	2357	10	B1	
1	P480	4	185	AC	RIC	DCA	DCS	40	2234	11	A	
1	V51091	SNB	100	MIL	NGU	NSF	COP	50	1503	7	A	
2	X106	C47	145	GA	LFI	DCA	COP	70	1906	12	B3	
3	S322	5	205	AC	PHF	DCA	COP	50	2023	47	A	
4	P519	3	145	AC	PHF	DCA	COP	60	2355	10	A	

TIME AT FIX ENTRIES ARE GREENWICH MEAN TIME (Z)

TABLE I - DELAY INVESTIGATION DATA (cont'd)

AUGUST 1 - 1958

NO	A/C IDENT	TYPE & SPEED		OPR CAT	ORIG	DEST	FIX	ALT (X100')	TIME AT FIX	DUR MIN	TYPE DEL	SKY & CEILING VISIBILITY WIND
1	V12437	R4D	180	MIL	IAG	VKZ	ING	110	1255	9	A	
2	Q1282	RM1	190	MIL	DCA	GON	ING	110	1436	3	A	
3	G4000	B23	210	AC	DCA	HPN	ING	130	1444	10	A	
4	X5Y	TB	160	GA	BAL	FFS	ING	110	1525	21	A	
5	S326	5	220	AC	BAL	BOS	ING	50	1808	05	A	
6	V56542	R5D	200	MIL	MTP	FBT	ING	110	2031	18	B3	
7	V46027	TF	180	MIL	FBT	ADW	ING	140	2134	27	A	
8	AF16065	C47	140	MIL	ACY	BOF	ING	80	2153	6	A	
9	X40CE	DC3	155	GA	O/CYN	DCA	ING	60	2203	13	A	
10	AF12612	C119	190	MIL	MHT	ADW	ING	80	2243	15	A	
11	PAE54751	C131	210	MIL	ADW	WR1	ING	30	2255	20	B3	
12	AF12545	C119	180	MIL	MHT	ADW	ING	80	2320	2	A	
13	AF48135	C47	145	MIL	ADW	HEM	ING	50	2327	10	A	
1	V12437	R4D	180	MIL	NHZ	ELM	SBY	110	1555	16	B3	
2	V67268	SNB	140	MIL	NKZ	JSV	SBY	30	2012	30	A	
3	V2354	SNB	150	MIL	NGU	NXX	SBY	70	2014	30	A	
4	X65A	LODE	180	GA	O/SBY	PHF	SBY	60	2323	3	A	
5	S385	5	205	AC	IDL	ORF	SBY	40	2327	15	A	
1	AF10579	C45	140	MIL	ADW	HEM	HTY	70	0024	17	A	
2	AF10534	C45	140	MIL	HEM	BOF	HTY	40	2035	3	A	
3	AF16065	C47	140	MIL	ACY	BOF	HTY	80	2142	7	B3	
1	AF34741	B26	240	MIL	BIX	HEM	DOV	110	0016	23	A	
2	V40996	R4Y	195	MIL	NHK	MDT	DOV	60	0218	7	A	
3	SBW1221V	4	185	AC	DOV	IDL	DOV	0	1024	12	C	
4	V67268	SNB	144	MIL	O/ENO	NKZ	DOV	40	1810	7	A	
5	AF15774	C47	150	MIL	LFI	HEM	DOV	110	1822	13	A	
6	VM33298	AD4	195	MIL	NYG	NZW	DOV	90	2239	5	A	

TIME AT FIX ENTRIES ARE GREENWICH MEAN TIME (Z)

TABLE I - DELAY INVESTIGATION DATA (cont'd)

AUGUST 1 - 1958

NO	A/C IDENT	TYPE &	SPEED	OPR CAT	ORIG.	DEST	FIX	ALT (X100')	TIME AT FIX	DUR MIN	TYPE DEL	SKY & CEILING VISIBILITY WIND
1	AF20005	C124	200	MIL	DOV	RME	ENO	50	0423	5	A	
2	LOG48070V	C46		MIL	ADW	WRI	ENO	50	0457	4	A	
3	V56543	R5D	175	MIL	NXX	NGU	ENO	50	1720	3	A	
4	X52925	DC3	160	GA	CLT	HYA	ENO	90	1751	10	A	
5	X67251	SNB	140	GA	WRI	ADW	ENO		2105	15	A	
6	V2354	SNB	150	MIL	NGU	NXX	ENO	70	2116	51	A	
7	B5	D7C	290	AC	IDL	DAL	ENO	180	2209	4	A	
8	E531	9	240	AC	IDL	DCA	ENO	120	2214	2	A	
9	E847	D7	280	AC	BOS	DCA	ENO	100	2228	12	A	
10	E845	D6B	240	AC	IDL	DCA	ENO	60	2303	16	A	
11	PAE54751	C121	210	MIL	ADW	WRI	ENO	30	2320	16	A	
1	E581	S9B	270	AC	ILG	DCA	ILG	0	1230	18	C	
2	E663	8	190	AC	ILG	DCA	ILG	0	1600	10	C	
3	E688	8	190	AC	ILG	IDL	ILG	0	2031	3	C	
1	M21073	C124	205	MIL	DOV	NGU	PNR	50	0015	21	A	
2	AF30048	C124	200	MIL	DOV	SBD	PNR	80	0215	33	B3	
3	SBW1221V	4	185	AC	DOV	IDL	PNR	80	1058	7	A	
4	M30006	C124	200	MIL	DOV	YR	PNR	70	1101	17	A	
5	AF72605	C54	175	MIL	MDT	CBDA	PNR	70	1219	24	A	
6	AF11654	C45	145	MIL	DOV	BTL	PNR	100	1247	22	A	
7	AF49698	C47	145	MIL	DOV	OFF	PNR	100	1315	12	A	
8	AG51044	C47	135	MIL	DOV	TOL	PNR	80	1503	18	B3	
9	AF90171	C119	180	MIL	DOV	ILN	PNR	100	1826	13	A	
10	M30029	C124	200	MIL	DOV	SKF	PNR	50	1916	16	A	
11	AF45935	C47	140	MIL	DOV	BOF	PNR	60	1957	13	B3	

TIME AT FIX ENTRIES ARE GREENWICH MEAN TIME (Z)

TABLE I - DELAY INVESTIGATION DATA (cont'd)

AUGUST 1 - 1958

NO	A/C IDENT	TYPE & SPEED		OPR CAT	ORIG	DEST	FIX	ALT (X100')	TIME AT FIX	DUR MIN	TYPE DEL	SKY & CEILING VISIBILITY WIND
1	V12431	R4D	185	MIL	BNA	NJU	OOD	80	0036	4	A	
2	V40996	R4Y	195	MIL	NHK	MDT	OOD	60	0235	5	B3	
3	E522	9	230	AC	PHL	BOS	OOD	60	0511	10	A	
4	AG51044	C47	135	MIL	DOV	TOL	OOD	100	1643	12	A	
5	V12437	R4D	180	MIL	NKZ	IAG	OOD	110	1649	9	A	
6	AF45562	C54	185	MIL	BOF	LGA	OOD	70	1811	5	A	
7	X90428	4		GA	PHL	NGU	OOD	60	1901	13	A	
8	E90	8	190	AC	DCA	BOS	OOD	130	2255	12	A	
1	AF49503	C47	140	MIL	RDU	HEM	MIV	70	0017	12	B3	
2	AF34741	B26	240	MIL	BIX	HEM	MIV	110	0040	7	A	
3	AF30483	B25	190	MIL	ADW	ADW	MIV	90	0151	4	A	
4	AF01028	C47	140	MIL	HEM	HEM	MIV	70	0203	5	A	
5	AF72605	C54	175	MIL	MDT	CBDA	MIV	70	1210	5	A	
6	M30035	C124	200	MIL	CSLA	DOV	MIV	60	1336	7	A	
7	V8191	T28	200	MIL	O/CYN	NHK	MIV	40	1354	16	A	
8	Q1282	RM1	190	MIL	DCA	GON	MIV	110	1451	9	A	
9	AG51044	C47	135	MIL	DOV	TOL	MIV	90	1525	10	B3	
10	M21051	C124	200	MIL	BGR	DOV	MIV	100	1542	3	A	
11	AF1734	C45	153	MIL	CEF	NXX	MIV	80	1543	19	A	
12	M33882			MIL		PHL	MIV	70	1604	13	A	
13	V31407	P2V	180	MIL	NHZ	NGU	MIV	80	1632	11	A	
14	M3302	C48	210	MIL	WRI	ADW	MIV	40	1708	11	A	
15	Q66469	JRB	140	MIL	O/MIV	ADW	MIV	20	2030	34	B3	
16	AF16065	C47	140	MIL	ACY	BOF	MIV	80	2100	35	B3	
17	AF12612	C119	190	MIL	MHT	ADW	MIV	80	2224	5	A	
18	AF82114	L27	160	MIL	DOV	ADW	MIV	40	2245	11	A	
19	AF12545	C119	180	MIL	MHT	ADW	MIV	80	2250	12	A	
20	AF49497	C47	140	MIL	BED	ADW	MIV	80	2329	17	A	
21	AF48135	C47	145	MIL	ADW	HEM	MIV	90	2354	18	A	
1	AF1734	C45	153	MIL	CEF	NXX	NFD	80	1531	6	A	
1	E554	D7B	260	AC	DCA	IDL	VIN	90	1440	1	A	
2	X60C	DC6	240	GA	O/MIV	IDL	VIN		2207	20	A	
3	E539	9C	260	AC	IDL	BAL	VIN	60	2342	5	A	

'TIME AT FIX ENTRIES ARE GREENWICH MEAN TIME (Z)

TABLE I - DELAY INVESTIGATION DATA (cont'd)

AUGUST 1 - 1958

NO	A/C IDENT	TYPE & SPEED		OPR CAT	ORIG	DEST	FIX	ALT (X100')	TIME AT FIX	DUR MIN	TYPE DEL	SKY & CEILING VISIBILITY WIND
1	M13830	C118	240	MIL	DOV	QY	ACY	80	0030	13	A	
2	M21022	C124	200	MIL	DOV	JT	ACY	90	0054	8	A	
3	M21064	C124	200	MIL	DOV	YR	ACY	110	0147	12	A	
4	M30050	C124	200	MIL	DOV	JT	ACY	90	0231	13	A	
5	X342	C46	190	GA	MIA	IDL	ACY		1110	6	B3	
6	E347	S9G	245	AC	EWR	DCA	ACY	60	1301	13	B3	
7	E305	DC7	260	AC	EWR	PHL	ACY	30	1348	8	B3	
8	V67323	SNB	150	MIL	FBT	NGU	ACY	60	1841	22	A	
9	AF16065	C47	140	MIL	ACY	BOF	ACY	80	1906	100	A	
10	L802	2	194	AC	ACY	PIT	ACY	0	1935	20	C	
11	MAE5782	C131	205	MIL	WRI	NGU	ACY	40	2052	7	B2	
12	M21054	C124	200	MIL	DOV	JT	ACY	90	2210	6	A	
1	E61	M404		AC	NBB	DCA	NBB	0	1422	32	C	
2	AF75902	L27	185	MIL	MTC	HEM	NBB	90	1424	4	A	
3	E469	8	185	AC	EWR	NBB	NBB			6	B1	
1	X386	TBCFT		GA	PHL	LGA	CMX		1303	7	B3	
2	X956	B26	270	GA	DCA	LGA	CMX		1332	6	B3	
1	RE9067	4	176	AC	WRI	MDT	WRI	0	0833	4	C	
1	LOG67977	C46	175	MIL	DOV	IDL	CYN	60	1059	3	A	
2	AF49277	C47	130	MIL	LFI	FMH	CYN	70	1112	1	B3	
3	AF10960	C45	145	MIL	HEM	SSC	CYN	100	1222	18	A	
4	V8191	T28	200	MIL	O/CYN	NHK	CYN	40	1336	5	B3	
5	V12359	SNB	135	MIL	FBT	NGU	CYN	60	1800	5	A	
6	V29602	SNB	140	MIL	NCO	NSF	CYN	100	1948	44	B3	
7	AF12612	C119	190	MIL	MHT	ADW	CYN	80	2156	16	A	
8	AF12545	C119	180	MIL	MHT	ADW	CYN	80	2230	10	A	
9	X60C	DC6		GA	O/MIV	IDL	CYN	40	2234	7	A	
10	S502	S9	250	AC	MIA	IDL	CYN	110	2354	45	B3	

"TIME AT FIX" ENTRIES ARE GREENWICH MEAN TIME (Z)

TABLE I - DELAY INVESTIGATION DATA (cont'd)

AUGUST 1 - 1958

NO.	A/C IDENT	TYPE & SPEED		OPR CAT	ORIG.	DEST	FIX	ALT (X100')	TIME AT FIX	DUR MIN	TYPE DEL	SKY & CEILING VISIBILITY WIND
1	U108	D7		AC	SFO	IDL	COL	70	0001	15	A	
2	U708	D7		AC	LAX	IDL	COL	90	0024	18	B3	
3	U700	D7		AC	SFO	IDL	COL	170	0025	12	A	
4	U90	D6	242	AC	DCA	IDL	COL	70	0111	4	B3	
5	E648	7B	270	AC	BAL	IDL	COL	70	0110	5	A	
6	U702	D7	330	AC	SFO	IDL	COL	110	1305	29	A	
7	E633	L49	230	AC	EWR	MIA	COL	120	1421	34	A	
8	U710	D7	298	AC	CLE	IDL	COL	190	1642	4	B3	
9	A32	D7		AC	MDW	IDL	COL		2336	8	A	
10	AF93518	C47	135	MIL	FFO	HEM	COL	80	2345	3	A	
1	T84	9		AC	DAY	IDL	RIS	90	0019	4	A	
2	E408	S9	290	AC	SDV	IDL	RIS	40	0028	7	B1	
3	T98	S9G	290	AC	STL	IDL	RIS	90	0107	5	A	
4	SBW1005C	S9	260	AC	CHS	IDL	RIS	20	1108	4	A	
5	U106	D7	320	AC	SFO	IDL	RIS	50	1130	3	A	
6	U100	D7	320	AC	LAX	IDL	RIS	80	1134	4	A	
7	SBW1221V	4	185	AC	DOV	IDL	RIS	50	1139	10	A	
8	IL517	D7	270	AC	EINN	IDL	RIS	100	1206	29	A	
9	U706	D7	320	AC	LAX	IDL	RIS	80	1215	17	A	
10	FB071	S9		AC	FFOL	IDL	RIS	15	1228	17	A	
11	F200	V	260	AC	YZ	IDL	RIS	50	1233	16	A	
12	T90	S9	270	AC	LAX	IDL	RIS	60	1256	4	A	
13	T44	S9G	300	AC	SFO	IDL	RIS	50	1318	4	A	
14	E554	D7B	260	AC	DCA	IDL	RIS	90	1452	7	B1	
15	T8	S9	250	AC	LAX	IDL	RIS	100	1500	2	A	
16	A684	D7	310	AC	MDW	IDL	RIS	60	1550	9	A	
17	F204	V		AC	YZ	IDL	RIS	70	1554	9	A	
18	E658	D7B	270	AC	MIA	IDL	RIS	110	1639	3	B1	
19	E830	D7B	260	AC	TPA	IDL	RIS	60	1735	3	B1	
20	N520	D6	275	AC	MDW	IDL	RIS	40	1753	8	B1	
21	A84	D7	300	AC	DAL	IDL	RIS	70	1929	5	A	
22	E508	7B	305	AC	HOU	IDL	RIS	70	1934	9	B1	
23	A106	D6	290	AC	YZ	IDL	RIS	50	2348	10	A	
24	T154	S9G		AC	MDW	IDL	RIS	50	2357	5	A	
1	S408	D7	270	AC	MIA	IDL	PTP	40	0232	8	B3	

"TIME AT FIX ENTRIES ARE GREENWICH MEAN TIME (Z)

TABLE I - DELAY INVESTIGATION DATA (cont'd)

AUGUST 1 - 1958

NO	A/C IDENT	TYPE &	SPEED	OPR CAT	ORIG.	DEST	FIX	ALT (X100')	TIME AT FIX	DUR MIN	TYPE DEL	SKY & CEILING	VISIBILITY	WIND
1	SP549	D7	270	AC	GALA	IDL	LDO	60	1118	10	A			
2	SP509	D7	290	AC	QX	IDL	LDO	60	1126	10	A			
3	T769	S9	230	AC	GALA	IDL	LDO	60	1130	10	A			
4	T863	S9	210	AC	QX	IDL	LDO	80	1138	19	A			
5	T725	S9	240	AC	FFOL	IDL	LDO	90	1140	16	A			
6	T50	S9G	300	AC	SFO	IDL	LDO	50	1142	12	A			
7	FB045	S9		AC	FFOL	IDL	LDO	15	1149	24	A			
8	G71	7C	250	AC	GALA	IDL	LDO	40	1153	24	A			
9	SAS911	D7	270	AC	OYCH	IDL	LDO	110	1205	31	A			
10	G115	D7		AC	KF	IDL	LDO	50	1211	21	A			
11	FB041	S9		AC	QX	IDL	LDO	15	1212	12	A			
12	G155	D7C	256	AC	CSPT	IDL	LDO	70	1220	15	A			
13	G67	7		AC	QX	IDL	LDO	60	1222	20	A			
14	SAS913	D7		AC	DDHF	IDL	LDO	70	1238	11	A			
15	G77	D6B	200	AC	QX	IDL	LDO	50	1249	7	A			
16	T8863	S9		AC	DDFR	IDL	LDO	90	1253	19	A			
17	F320	V		AC	UL	IDL	LDO	70	1255	21	A			
18	SHAM103	S9		AC	QX	IDL	LDO	80	1257	13	A			
19	SAS909	6B		AC	QX	IDL	LDO	80	1304	19	A			
20	SWR840	D6		AC	QX	IDL	LDO	60	1317	10	A			
21	PHLDG	S9		AC	QX	IDL	LDO	60	1348	6	A			
22	G161	D6		AC	KF	IDL	LDO	30	1506	6	A			
23	IL511	D7C	265	AC	BOS	IDL	LDO		1529	4	A			
24	FB057	S9		AC	BOS	IDL	LDO	15	1600	9	A			
25	M225	D6B		AC	EWB	IDL	LDO		1612	5	A			
26	PH61	D6		AC	UL	IDL	LDO	80	2033	5	A			
27	SP541	D7C		AC	BOS	IDL	LDO	60	2250	10	A			
1	E655	7B	285	AC	IDL	MIA	XWF	180	0645	5	B2			
2	E515	9	270	AC	IDL	MSY	XWF	140	1330	5	B2			
3	E631	D7B	290	AC	IDL	MIA	XWF	160	1410	5	B2			
4	D133	6	261	AC	IDL	CLT	XWF	160	1425	7	A			
5	G211	D7B	278	AC	IDL	SJU	XWF	170	1445	10	B3			
6	E311	D7B	290	AC	IDL	HOU	XWF	120	1540	10	B2			

TIME AT FIX ENTRIES ARE GREENWICH MEAN TIME (Z)

TABLE I - DELAY INVESTIGATION DATA (cont'd)

AUGUST 1 - 1958

NO.	A/C IDENT	TYPE & SPEED		OPR CAT	ORIG	DEST	FIX	ALT (X100')	TIME AT FIX	DUR MIN	TYPE DEL	SKY & CEILING	VISIBILITY	WIND
7	E825	9C	265	AC	IDL	JAX	XWF	180	1608	11	B2			
8	SP481	V	245	AC	IDL	ZQBN	XWF	140	1641	6	A			
9	E301	D7B	280	AC	IDL	MEX	XWF	140	1659	9	B2			
10	E601	S9C	290	AC	IDL	MIA	XWF	180	1854	7	B2			
11	E569	5	195	AC	IDL	DCA	XWF	120	1909	10	B2			
12	V45963	R4Y	210	MIL	O/RVH	NSF	XWF	120	1954	7	B3			
1	N215	D6	264	AC	IDL	MKE	IDL	0	0004	3	C	⌀	15	S8
2	G70	D7C	270	AC	IDL	GALA	IDL	0	0025	9	C	"	"	"
3	U541	D6	244	AC	IDL	CLE	IDL	0	0030	4	C	"	"	"
4	F2217			AC	IDL	YZ	IDL	0	0037	3	C	"	"	"
5	SP558	D7	257	AC	IDL	GGBA	IDL	0	0037	6	C	"	"	"
6	IL510	D7C	270	AC	IDL	GALA	IDL	0	0053	5	C	"	"	"
7	E831	6B	225	AC	IDL	SJU	IDL	0	0119	4	C	⌀	15	SW5
8	PH640	D7	275	AC	IDL	PAAM	IDL	0	0128	10	C	"	"	"
9	F337	V	269	AC	IDL	UL	IDL	0	0128	2	C	"	"	"
10	EL208	BRIT	310	AC	IDL	GALA	IDL	0	0201	20	C	⌀	10	SW5
11	T49	S9G	270	AC	IDL	MDW	IDL	0	0208	7	C	"	"	"
12	S105	9	255	AC	IDL	MIA	IDL	0	0210	8	C	"	"	"
13	DLH041	DC4	184	AC	IDL	QX	IDL	0	0213	10	C	"	"	"
14	U137	D7	305	AC	IDL	MDW	IDL	0	0223	7	C	"	"	"
15	F221	V	259	AC	IDL	YZ	IDL	0	0301	5	C	⌀	12	SW6
16	LAV253	9	268	AC	IDL	YUMI	IDL	0	0313	4	C	"	"	"
17	U717	D7	298	AC	IDL	MDW	IDL	0	0325	3	C	"	"	"
18	S719	D6B	250	AC	IDL	MIA	IDL	0	0315	6	C	"	"	"
19	N527	D4	186	AC	IDL	YIP	IDL	0	0419	3	C	O"	15	SW4
20	RDL341	C46	170	AC	IDL	MIA	IDL	0	0459	4	C	"	"	"
21	G271	D6	232	AC	IDL	SJU	IDL	0	0500	8	C	8⌀38⌀	5H	N7
22	U707	D7	275	AC	IDL	LAX	IDL	0	0507	5	C	"	"	"
23	T108	S9	240	AC	IDL	BOS	IDL	0	0508	8	C	"	"	"
24	T43	JS9	265	AC	IDL	SFO	IDL	0	0532	3	C	"	"	"
25	CH771	S9	262	AC	IDL	MIA	IDL	0	0532	5	C	"	"	"
26	U541	D6	260	AC	IDL	CLE	IDL	0	0544	5	C	"	"	"
27	U91	D6	250	AC	IDL	MDW	IDL	0	0548	4	C	"	"	"

"TIME AT FIX ENTRIES ARE GREENWICH MEAN TIME (Z)

TABLE I - DELAY INVESTIGATION DATA (cont'd)

AUGUST 1 - 1958

NO.	A/C IDENT	TYPE & SPEED		OPR CAT	ORIG.	DEST	FIX	ALT (X100')	TIME AT FIX	DUR MIN	TYPE DEL	SKY & CEILING	VISIBILITY	WIND
28	N527	D4	186	AC	IDL	YIP	IDL	0	0549	9	C	8Ⓞ38⊕	5H	N7
29	G297	6	232	AC	IDL	SJU	IDL	0	0555	18	C	"	"	"
30	SBW1221V	4	175	AC	IDL	DOV	IDL	0	0618	8	C	6Ⓞ38⊕	5H	NNE7
31	T1824	S9G	246	AC	IDL	YR	IDL	0	0721	7	C	7⊕6Ⓞ⊕	6R-H	N6
32	T91	S9G	245	AC	IDL	MKC	IDL	0	0740	6	C	"	"	"
33	SBW1006C	S9H	242	AC	IDL	QX	IDL	0	0944	6	C	100⊕	8	N6
34	F321	V	262	AC	IDL	UL	IDL	0	1221	10	C	80Ⓞ100⊕	12	NNE5
35	S375	5	205	AC	IDL	BAL	IDL	0	1226	8	C	"	"	"
36	N1	377	250	AC	IDL	YIP	IDL	0	1233	2	C	"	"	"
37	S393	5	210	AC	IDL	ORF	IDL	0	1235	3	C	"	"	"
38	G293	D6	232	AC	IDL	SJU	IDL	0	1242	13	C	"	"	"
39	SP581	BRIT	300	AC	IDL	KSFO	IDL	0	1257	6	C	"	"	"
40	E515	9	270	AC	IDL	AMSY	IDL	0	1300	5	C	80Ⓞ130⊕	11	NNE7
41	B1	D7	295	AC	IDL	DAL	IDL	0	1302	6	C	"	"	"
42	A31	D7	285	AC	IDL	MDW	IDL	0	1304	15	C	"	"	"
43	T97	S9G	247	AC	IDL	DAY	IDL	0	1305	11	C	"	"	"
44	U703	D7	290	AC	IDL	SFO	IDL	0	1309	27	C	"	"	"
45	T755	9	264	AC	IDL	ORH	IDL	0	1324	29	C	"	"	"
46	E407	9G	237	AC	IDL	DCA	IDL	0	1327	11	C	"	"	"
47	U123	D7	300	AC	IDL	ORD	IDL	0	1330	7	C	"	"	"
48	E631	D7B	290	AC	IDL	MIA	IDL	0	1332	13	C	"	"	"
49	F203	V	260	AC	IDL	YZ	IDL	0	1334	28	C	"	"	"
50	D133	6	261	AC	IDL	CLT	IDL	0	1345	19	C	"	"	"
51	E88	8	185	AC	IDL	BOS	IDL	0	1352	14	C	"	"	"
52	M124	D6		AC	IDL	BOS	IDL	0	1357	12	C	"	"	"
53	U749	D7	290	AC	IDL	DEN	IDL	0	1402	18	C	70⊕	11	NNE7
54	T85	S9G	276	AC	IDL	LAX	IDL	0	1403	33	C	"	"	"
55	S405	D7	295	AC	IDL	MIA	IDL	0	1405	9	C	"	"	"
56	G211	D7B	283	AC	IDL	SJU	IDL	0	1406	21	C	"	"	"
57	U101	D7	277	AC	IDL	LAX	IDL	0	1409	34	C	"	"	"
58	E1	9C	265	AC	IDL	BDA	IDL	0	1412	30	C	"	"	"
59	S859	D7B	290	AC	IDL	JAX	IDL	0	1430	14	C	"	"	"
60	E311	D7B	290	AC	IDL	HOU	IDL	0	1432	45	C	"	"	"
61	U103	D7	275	AC	IDL	SFO	IDL	0	1444	31	C	"	"	"
62	M815	D6B		AC	IDL	TPA	IDL	0	1445	27	C	"	"	"
63	E573	S93		AC	IDL	RIC	IDL	0	1446	11	C	"	"	"

"TIME AT FIX ENTRIES ARE GREENWICH MEAN TIME (Z)

TABLE I - DELAY INVESTIGATION DATA (cont'd)

AUGUST 1 - 1958

NO	A/C IDENT	TYPE & SPEED	OPR CAT	ORIG	DEST	FIX	ALT (X100')	TIME AT FIX	DUR MIN	TYPE DEL	SKY & CEILING	VISIBILITY	WIND
64	SP492	V 247	AC	IDL	BDA	IDL	0	1448	18	C	7??	11	NNE7
65	E825		AC	IDL	JAX	IDL	0	1453	60	C	"	"	"
66	T782	9A 224	AC	IDL	BOS	IDL	0	1454	32	C	"	"	"
67	G132		AC	IDL	BDA	IDL	0	1454	12	C	"	"	"
68	SP481	V 245	AC	IDL	ZQBN	IDL	0	1504	73	C	??/?	15	NNE9
69	PH992	9 238	AC	IDL	PJCU	IDL	0	1504	75	C	"	"	"
70	M831	D6B	AC	IDL	MIA	IDL	0	1504	58	C	"	"	"
71	E511	7B 270	AC	IDL	ATL	IDL	0	1510	14	C	"	"	"
72	E817	D7B 275	AC	IDL	TPA	IDL	0	1517	79	C	"	"	"
73	E301	D7B 280	AC	IDL	MEX	IDL	0	1519	78	C	"	"	"
74	SP490	7C 290	AC	IDL	ZQUK	IDL	0	1522	76	C	"	"	"
75	SP542	7C	AC	IDL	BOS	IDL	0	1543	41	C	"	"	"
76	F205	V 262	AC	IDL	YZ	IDL	0	1549	15	C	"	"	"
77	U723	D7 296	AC	IDL	CLE	IDL	0	1550	22	C	"	"	"
78	E637	D7B 280	AC	IDL	MIA	IDL	0	1600	55	C	"	"	"
79	E835		AC	IDL	SJU	IDL	0	1612	60	C	??/?	13	NNE9
80	U709	D7 270	AC	IDL	LAX	IDL	0	1616	18	C	"	"	"
81	E18	9 245	AC	IDL	ALB	IDL	0	1620	17	C	"	"	"
82	U739	D7 280	AC	IDL	DCA	IDL	0	1620	21	C	"	"	"
83	T3	S9G 267	AC	IDL	LAX	IDL	0	1628	15	C	"	"	"
84	SAS900	D6B 240	AC	IDL	GGBA	IDL	0	1630	26	C	"	"	"
85	E603	D7B 280	AC	IDL	MIA	IDL	0	1630	14	C	"	"	"
86	SBW6504C	S9D 244	AC	IDL	QX	IDL	0	1642	11	C	"	"	"
87	U793	D7 285	AC	IDL	SEA	IDL	0	1643	9	C	"	"	"
88	ARG305	D6 210	AC	IDL	CMHA	IDL	0	1643	20	C	"	"	"
89	E609	D7B 290	AC	IDL	MIA	IDL	0	1645	21	C	"	"	"
90	T47	9 273	AC	IDL	LAX	IDL	0	1700	40	C	????	15	NNE6
91	U701	D7 290	AC	IDL	SFO	IDL	0	1723	5	C	"	"	"
92	U107	D7 285	AC	IDL	SFO	IDL	0	1800	3	C	?"	15 +	ENE7
93	E601	S9C 290	AC	IDL	MIA	IDL	0	1806	6	C			
94	PH608	S9 260	AC	IDL	QX	IDL	0	1807	6	C	"	"	"
95	ICE300	4 180	AC	IDL	QX	IDL	0	1807	4	C	"	"	"
96	E830	D7B 260	AC	IDL	BOS	IDL	0	1810	4	C	"	"	"
97	E991	6 245	AC	IDL	DCA	IDL	0	1812	13	C	"	"	"

TIME AT FIX ENTRIES ARE GREENWICH MEAN TIME (Z)

TABLE I - DELAY INVESTIGATION DATA (cont'd)

AUGUST 1 - 1958

NO	A/C IDENT	TYPE & SPEED	OPR CAT	ORIG	DEST	FIX	ALT (X100')	TIME AT FIX	DUR MIN	TYPE DEL	SKY & CEILING	VISIBILITY	WIND
98	G74		AC	IDL	DDFR	IDL	0	1812	7	C	○	15+	NE9
99	E11	S9 250	AC	IDL	BDA	IDL	0	1815	5	C	"	"	"
100	E565		AC	IDL	DCA	IDL	0	1826	1	C	"	"	"
101	SAS914	D7C 265	AC	IDL	GOBA	IDL	0	1828	6	C	"	"	"
102	SHAM102	S9 256	AC	IDL	EINN	IDL	0	1840	35	C	"	"	"
103	G76		AC	IDL	DDFR	IDL	0	1840	10	C	"	"	"
104	N77	D7 258	AC	IDL	SEA	IDL	0	1846	7	C	"	"	"
105	G154	D7C 278	AC	IDL	CSPT	IDL	0	1847	10	C	"	"	"
106	G201	G201	AC	IDL	YUMI	IDL	0	1850	12	C	"	"	"
107	F209	V 260	AC	IDL	YZ	IDL	0	1855	3	C	"	"	"
108	S851	D7B 290	AC	IDL	HAV	IDL	0	1900	9	C	○	15+	ENE7
109	E602	D7B 265	AC	IDL	YUL	IDL	0	1900	17	C	"	"	"
110	U506	D6 240	AC	IDL	BOS	IDL	0	1902	13	C	"	"	"
111	1117	D6 245	AC	IDL	DCA	IDL	0	1906	16	C	"	"	"
112	T862	S9G 250	AC	IDL	EINN	IDL	0	1908	27	C	"	"	"
113	S511	S9 270	AC	IDL	MIA	IDL	0	1925	19	C	"	"	"
114	G138		AC	IDL	BDA	IDL	0	1930	27	C	"	"	"
115	A105	D6 245	AC	IDL	YZ	IDL	0	1932	32	C	"	"	"
116	SAS912	D7C	AC	IDL	OYCH	IDL	0	1936	17	C	"	"	"
117	S389	5 210	AC	IDL	ORF	IDL	0	1945	12	C	"	"	"
118	T7	S9G 254	AC	IDL	MDW	IDL	0	1950	19	C	"	"	"
119	G102	D7 240	AC	IDL	GALA	IDL	0	1952	13	C	"	"	"
120	S401	D7 290	AC	IDL	MIA	IDL	0	2000	13	C	1-Ⓓ	15+	ENE7
121	SAS922	D7C 280	AC	IDL	OYCH	IDL	0	2001	27	C	"	"	"
122	G100	D7 238	AC	IDL	GALA	IDL	0	2001	15	C	"	"	"
123	T17	9 224	AC	BOS	LGA	IDL	120	2003	8	A	"	"	"
124	M835	D6B	AC	IDL	MIA	IDL	0	2008	14	C	"	"	"
125	CU999	S9G 255	AC	IDL	CMHA	IDL	0	2008	24	C	"	"	"
126	DLH423	S9 260	AC	IDL	DDLO	IDL	0	2014	11	C	"	"	"
127	SAB548	9 256	AC	IDL	EINN	IDL	0	2015	27	C	"	"	"
128	U735	D7 290	AC	IDL	DEN	IDL	0	2020	23	C	"	"	"
129	FT18C	L49 250	AC	IDL	YZ	IDL	0	2030	19	C	"	"	"
130	T722	S9 264	AC	IDL	FFOL	IDL	0	2049	8	C	"	"	"
131	S701	D7B 290	AC	IDL	DCA	IDL	0	2055	10	C	"	"	"
132	G64		AC	IDL	BOS	IDL	0	2100	16	C	45Ⓓ	15+	S6

TIME AT FIX ENTRIES ARE GREENWICH MEAN TIME (Z)

TABLE I - DELAY INVESTIGATION DATA (cont'd)

AUGUST 1 - 1958

NO	A/C IDENT	TYPE & SPEED		OPR CAT	ORIG	DEST	FIX	ALT (X100')	TIME AT FIX	DUR MIN	TYPE DEL	SKY & CEILING	VISIBILITY	WIND
133	E325	D7B	290	AC	IDL	DCA	IDL	0	2100	10	C	4BO	15+	S6
134	SP510	7	217	AC	IDL	GALA	IDL	0	2103	9	C	"	"	"
135	OOSFC	D7C	263	AC	IDL	GGBA	IDL	0	2106	21	C	"	"	"
136	G295	6B	232	AC	IDL	SJU	IDL	0	2106	11	C	"	"	"
137	SWR887	D7C	265	AC	IDL	CSPT	IDL	0	2116	18	C	"	"	"
138	PH632	D7C	275	AC	IDL	GGBA	IDL	0	2119	16	C	"	"	"
139	S821	D7	290	AC	IDL	TPA	IDL	0	2120	12	C	"	"	"
140	E531	S9C	240	AC	IDL	DCA	IDL	0	2122	1	C	"	"	"
141	PH602	S9	260	AC	IDL	QX	IDL	0	2129	13	C	"	"	"
142	E610	7B	270	AC	IDL	UL	IDL	0	2130	11	C	"	"	"
143	D771	D7	300	AC	IDL	HOU	IDL	0	2130	9	C	"	"	"
144	N523	D6	244	AC	IDL	MDW	IDL	0	2137	11	C	"	"	"
145	G72	D7C	270	AC	IDL	DDFR	IDL	0	2138	12	C	"	"	"
146	T830	S9A	240	AC	IDL	FFOL	IDL	0	2140	13	C	"	"	"
147	FB044	S9	260	AC	IDL	FFOL	IDL	0	2157	3	C	"	"	"
148	SAS902	6	238	AC	IDL	QX	IDL	0	2203	4	C	10	14	S9
149	G114	D7	235	AC	IDL	FFOL	IDL	0	2208	12	C	"	"	"
150	T119	L49	251	AC	IDL	DAY	IDL	0	2208	2	C	"	"	"
151	OOSFE	D7C	270	AC	IDL	OWBR	IDL	0	2232	13	C	"	"	"
152	G66	D7C	270	AC	IDL	FFOL	IDL	0	2243	7	C	"	"	"
153	F333	V	262	AC	IDL	UL	IDL	0	2245	5	C	"	"	"
154	AZ518	D7C	278	AC	IDL	FFOL	IDL	0	2305	8	C	10	1	SW6
155	D131	6	245	AC	IDL	DCA	IDL	0	2310	7	C	"	"	"
156	FB070	S9	269	AC	IDL	FFOL	IDL	0	2315	5	C	"	"	"
157	ECAIN	9	245	AC	IDL	CSPT	IDL	0	2329	9	C	"	"	"
1	E535	S9G	250	AC	EWR	DCA	BMD	60	1201	5	A			
1	A274	6	240	AC	DCA	LGA	HIT	40	1217	5	A			
1	L153	3		AC	EWR	EWR	NBR	30	0503	8	A			
2	P242	V	270	AC	BUF	EWR	NBR		1223	9	A			
3	N250			AC	MKE	IDL	NBR		2051	2	A			
1	AF11841	C45	135	MIL	FFO	FBT	REI	80	2359	10	A			

TIME AT FIX ENTRIES ARE GREENWICH MEAN TIME (Z)

TABLE I - DELAY INVESTIGATION DATA (cont'd)

AUGUST 1 - 1958

NO	A/C IDENT	TYPE & SPEED		OPR CAT	ORIG.	DEST	FIX	ALT (X100')	TIME AT FIX	DUR MIN	TYPE DEL	SKY & CEILING	VISIBILITY	WIND
1	B10	D7C	270	AC	DCA	EWR	HAD	100	0215	6	A			
2	AT11C	S9H	280	AC	MDW	EWR	HAD	40	0242	6	A			
3	D32A	C47	160	AC	CLT	EWR	HAD	40	0244	6	A			
4	L708	3		AC	PHL	EWR	HAD	30	0504	11	A			
5	E466	8	190	AC	DCA	EWR	HAD	40	0551	4	B1			
6	D76	D7	270	AC	DCA	EWR	HAD	40	1131	5	A			
7	B542	D7	270	AC	DCA	EWR	HAD	50	1134	5	A			
8	E514	D7	300	AC	HOU	EWR	HAD	70	2039	12	B1			
9	S514	D6	230	AC	PHL	EWR	HAD	40	2041	4	A			
10	D728	7B	325	AC	ATL	EWR	HAD		2050	4	A			
11	P246	V		AC	PIT	EWR	HAD	120	2318	5	A			
1	U608	D6		AC	MDW	LGA	EWR	110	CC01	9	A	55Ⓞ/-Ⓞ	15+	SSE6
2	E414	9		AC	EWR	BOS	EWR	0	0117	2	C	40Ⓞ/-Ⓞ	15	S6
3	E57	7B		AC	EWR	DCA	EWR	0	0157	1	C	"	"	"
4	A226	6	275	AC	MDW	LGA	EWR	80	0253	7	A	/-Ⓞ	15	S6
5	E355	9C		AC	EWR	ATL	EWR	0	0627	1	C	30Ⓞ100Ⓔ	6KH	NNE9
6	AT6913C	S9H	255	AC	EWR	MDW	EWR	0	0841	10	C	35Ⓞ100Ⓔ	8	N10
7	T551	L49	215	AC	EWR	PHL	EWR	0	0949	4	C	35Ⓞ90Ⓔ	9	NNW8
8	L601	DC3	148	AC	EWR	HZL	EWR	0	1103	2	C	45Ⓞ80Ⓔ	9	NNE7
9	US090428	DC4	175	AC	EWR	NCO	EWR	0	1119	7	C	"	"	"
10	U731	D6	250	AC	EWR	MDW	EWR	0	1206	5	C	60Ⓞ90Ⓔ	7	NNE8
11	E80	9		AC	EWR	BDL	EWR	0	1215	3	C	"	"	"
12	U643	D6	235	AC	EWR	ABE	EWR	0	1222	3	C	"	"	"
13	E44	7B		AC	EWR	YUL	EWR	0	1330	3	C	"	"	"
14	P241	V	260	AC	EWR	ROC	EWR	0	1417	7	C	60Ⓞ60Ⓔ	10	NNE11
15	U209	5	190	AC	EWR	PHL	EWR	0	1417	15	C	"	"	"
16	P223	V	260	AC	EWR	YIP	EWR	0	1418	5	C	"	"	"
17	D725	DC7	302	AC	EWR	ATL	EWR	0	1451	2	C	"	"	"
18	P945	L49	224	AC	EWR	PIT	EWR	0	1603	1	C	120Ⓞ	14	NE9
19	T417	M404	193	AC	EWR	RDG	EWR	0	1700	3	C	120Ⓞ	15+	ENE9
20	U1729	D7	295	AC	EWR	MDW	EWR	0	1748	3	C	"	"	"
21	T403	M404	193	AC	EWR	ABE	EWR	0	1847	3	C	Ⓞ	15	NE7

TIME AT FIX ENTRIES ARE GREENWICH MEAN TIME (Z)

TABLE I - DELAY INVESTIGATION DATA (cont'd)

AUGUST 1 - 1958

NO	A/C IDENT	TYPE & SPEED		OPR CAT	ORIG	DEST	FIX	ALT (X100')	TIME AT FIX	DUR MIN	TYPE DEL	SKY & CEILING	VISIBILITY	WIND
22	U532	D6	245	AC	CLE	LGA	EWR	80	1854	3	A	Ⓞ	15	NE7
23	T10	9	255	AC	MKC	LGA	EWR	90	1902	10	A	5ⓄⓄ	15	ENE8
24	E62	9		AC	EWR	BOS	EWR	0	1910	6	C	"	"	"
25	P245	V	260	AC	EWR	BUF	EWR	0	2008	1	C	5ⓄⓄ	15+	ENE8
26	E563	M404		AC	EWR	NBB	EWR	0	2027	8	C	"	"	"
27	E509	S9G		AC	EWR	DCA	EWR	0	2039	6	C	"	"	"
28	P65	V	260	AC	EWR	YIP	EWR	0	2031	7	C	"	"	"
29	P249	V	270	AC	EWR	ROC	EWR	0	2032	3	C	"	"	"
30	U621	D6	250	AC	EWR	CAK	EWR	0	2054	9	C	"	"	"
31	U247	5	210	AC	EWR	CLE	EWR	0	2054	14	C	"	"	"
32	P377	V	270	AC	EWR	CHW	EWR	0	2058	9	C	"	"	"
33	E657			AC	EWR	MIA	EWR	0	2102	8	C	5ⓄⓄ	15+	NNE4
34	E321	S9G		AC	EWR	ATL	EWR	0	2112	2	C	"	"	"
35	P247	V	260	AC	EWR	PIT	EWR	0	2123	1	C	"	"	"
36	P49	V	263	AC	EWR	MDW	EWR	0	2136	8	C	"	"	"
37	U321	5	215	AC	EWR	FWA	EWR	0	2140	12	C	"	"	"
38	D727	DC7	300	AC	EWR	ATL	EWR	0	2146	3	C	"	"	"
39	P925	L49	224	AC	EWR	BUF	EWR	0	2149	1	C	"	"	"
40	U609	D6B	240	AC	EWR	MDW	EWR	0	2206	5	C	5ⓄⓄ	15+	NNE4
41	E411	7B		AC	EWR	SDF	EWR	0	2231	1	C	"	"	"
42	A614	6	275	AC	MDW	LGA	EWR	80	2242	8	A	"	"	"
43	U337	5	205	AC	EWR	YNG	EWR	0	2256	5	C	"	"	"
44	E309	9		AC	EWR	CLT	EWR	0	2256	3	C	"	"	"
45	T377	M404	203	AC	EWR	PIT	EWR	0	2310	3	C	5ⓄⓄ/-Ⓞ	15+	SSW8
46	T144	9	248	AC	PIT	LGA	EWR	100	2327	10	A	"	"	"
1	T29	L49	221	AC	LGA	PIT	LGA	0	0115	2	C	1ⓄⓄⓄ/Ⓞ	10	S7
2	E77	M404		AC	LGA	PHL	LGA	0	0129	1	C	"	"	"
3	T27	L49	229	AC	LGA	STL	LGA	0	0132	3	C	"	"	"
4	P149	V	260	AC	LGA	PIT	LGA	0	0135	3	C	"	"	"
5	T37	L49	225	AC	LGA	YIP	LGA	0	0335	1	C	1ⓄⓄⓄ	10	SSW5
6	T597	DC4	177	AC	LGA	PHL	LGA	0	0538	3	C	12Ⓞ3Ⓞ⊖	5R-H	NE6
7	E10	8	185	AC	LGA	ALB	LGA	0	1110	1	C	6ⓄⓄ9ⓄⓄ	7	NE8
8	U639	D6	256	AC	LGA	PIT	LGA	0	1137	4	C	"	"	"
9	E14	M404		AC	LGA	ALB	LGA	0	1155	3	C	"	"	"

"TIME AT FIX ENTRIES ARE GREENWICH MEAN TIME (Z)

TABLE I - DELAY INVESTIGATION DATA (cont'd)

AUGUST 1 - 1958

NO	A/C IDENT	TYPE & SPEED		OPR CAT	ORIG	DEST	FIX	ALT (X100')	TIME AT FIX	DUR MIN	TYPE DEL	SKY & CEILING	VISIBILITY	WIND
10	T161	L49	227	AC	LGA	PIT	LGA	0	1203	5	C	80Ø90Ø	7	NE8
11	P133	V	260	AC	LGA	CLE	LGA	0	1203	4	C	"	"	"
12	A215	D6	250	AC	LGA	MDW	LGA	0	1206	7	C	"	"	"
13	U617	D6	265	AC	LGA	MDW	LGA	0	1208	7	C	"	"	"
14	A405	5	210	AC	LGA	DCA	LGA	0	1229	3	C	"	"	"
15	P31	V	259	AC	LGA	MDW	LGA	0	1236	6	C	"	"	"
16	T177	L49	228	AC	LGA	STL	LGA	0	1251	8	C	"	"	"
17	P71	V	256	AC	LGA	ATL	LGA	0	1303	10	C	80Ø120Ø	7	NE8
18	P121	V	265	AC	LGA	YIP	LGA	0	1318	2	C	"	"	"
19	P171	V	265	AC	LGA	PIT	LGA	0	1359	9	C	"	"	"
20	A467	5	210	AC	LGA	PHL	LGA	0	1359	4	C	"	"	"
21	U533	D6	250	AC	LGA	ORD	LGA	0	1409	10	C	100Ø	8	NE7
22	A203	D6	240	AC	LGA	MDW	LGA	0	1413	4	C	"	"	"
23	U531	D6	250	AC	LGA	YIP	LGA	0	1419	13	C	"	"	"
24	A771	5	210	AC	LGA	SYR	LGA	0	1419	21	C	"	"	"
25	A637	6	240	AC	LGA	DCA	LGA	0	1422	3	C	"	"	"
26	E463	M404		AC	LGA	PHL	LGA	0	1440	1	C	"	"	"
27	E663	M404		AC	LGA	ILG	LGA	0	1446	8	C	"	"	"
28	T509	M404	221	AC	LGA	PIT	LGA	0	1512	8	C	120Ø	13	NE9
29	A761			AC	LGA	ORD	LGA	0	1530	12	C	"	"	"
30	P37	V	271	AC	LGA	MDW	LGA	0	1535	2	C	"	"	"
31	A255	D6	250	AC	LGA	DCA	LGA	0	1540	7	C	"	"	"
32	U527	D6	250	AC	LGA	PIT	LGA	0	1542	3	C	"	"	"
33	U629	D6	250	AC	LGA	MDW	LGA	0	1606	4	C	120Ø	15+	NE10
34	A419	CVR4	210	AC	LGA	DCA	LGA	0	1652	8	C	"	"	"
35	P125			AC	LGA	YIP	LGA	0	1720	5	C	0	15+	NE10
36	T331	L49	241	AC	LGA	PIT	LGA	0	1756	6	C	"	"	"
37	T87	L49	244	AC	LGA	MDW	LGA	0	1807	4	C	50Ø140Ø	15+	NE10
38	P63	V	262	AC	LGA	YIP	LGA	0	1817	6	C	"	"	"
39	E78	M404		AC	LGA	BDL	LGA	0	1818	12	C	"	"	"
40	E87	9		AC	LGA	BAL	LGA	0	1822	3	C	"	"	"
41	T355	S9G	251	AC	LGA	IND	LGA	0	1834	2	C	"	"	"
42	E63	M404		AC	LGA	PHL	LGA	0	1902	13	C	50Ø	15+	NE10
43	T145	L49	245	AC	LGA	PIT	LGA	0	1904	13	C	"	"	"
44	U637	D6	250	AC	LGA	CLE	LGA	0	1909	9	C	"	"	"

TIME AT FIX ENTRIES ARE GREENWICH MEAN TIME (Z)

TABLE I - DELAY INVESTIGATION DATA (cont'd)

AUGUST 1 - 1958

NO	A/C IDENT	TYPE & SPEED		OPR CAT	ORIG	DEST	FIX	ALT (X100')	TIME AT FIX	DUR MIN	TYPE DEL	SKY & CEILING	VISIBILITY	WIND
45	P127	V	260	AC	LGA	YIP	IG	0	1914	5	C	50Ø	15+	NE10
46	P45	V	270	AC	LGA	MDW	LGA	0	1947	4	C	"	"	"
47	T109	L49	249	AC	LGA	CMH	LGA	0	1948	13	C	"	"	"
48	E614	9		AC	LGA	ALB	LGA	0	1949	9	C	"	"	"
49	E523	9		AC	LGA	ATL	LGA	0	2002	12	C	55Ø	15+	ENE9
50	A241	D6	235	AC	LGA	DCA	LGA	0	2010	14	C	"	"	"
51	T57	9	250	AC	LGA	STL	LGA	0	2025	11	C	"	"	"
52	E323			AC	LGA	GSO	LGA	0	2032	9	C	"	"	"
53	P47	V	270	AC	LGA	MDW	LGA	0	2035	10	C	"	"	"
54	T17	L49	228	AC	LGA	MDW	LGA	0	2046	4	C	"	"	"
55	A163	D6	250	AC	LGA	MDW	LGA	0	2047	9	C	"	"	"
56	P87	V	270	AC	LGA	PIT	LGA	0	2047	9	C	"	"	"
57	E2026			AC	LGA	SLN	LGA	0	2102	6	C	55Ø/Ø	15+	ENE9
58	E66	M404		AC	LGA	ALB	LGA	0	2104	5	C	"	"	"
59	U601	D6	250	AC	LGA	MDW	LGA	0	2112	5	C	"	"	"
60	E26			AC	LGA	GFL	LGA	0	2117	5	C	"	"	"
61	T453	L49	237	AC	LGA	PIT	LGA	0	2124	6	C	"	"	"
62	P229	V	259	AC	LGA	YIP	LGA	0	2125	4	C	"	"	"
63	T63	L49	258	AC	LGA	MKC	LGA	0	2157	9	C	"	"	"
64	T375	M404	199	AC	LGA	PIT	LGA	0	2204	7	C	55Ø/Ø	15+	E5
65	A407	CVR2	208	AC	LGA	DCA	LGA	0	2205	7	C	"	"	"
66	U507	D6	250	AC	LGA	MDW	LGA	0	2209	6	C	"	"	"
67	T371	L49	231	AC	LGA	CMH	LGA	0	2236	3	C	"	"	"
68	U631	D6	255	AC	LGA	CLE	LGA	0	2236	3	C	"	"	"
1	M50632	C54	175	MIL	WRI	SCLA	FIR	90	1746	4	A			
1	X50NA	4	175	GA	IDL	QX	WCP	110	0914	18	A			

"TIME AT FIX ENTRIES ARE GREENWICH MEAN TIME (Z)

TABLE I - DELAY INVESTIGATION DATA (cont'd)

AUGUST 1 - 1958

NO	A/C IDENT	TYPE &	SPEED	OPR CAT	ORIG.	DEST	FIX	ALT (X100')	TIME AT FIX	DUR MIN	TYPE DEL	SKY & CEILING VISIBILITY WIND
1	X30F	9	170	GA	QX	IDL	SJX	60	1021	2	A	
2	FB041	S9		AC	QX	IDL	SJX	90	1155	10	B3	
3	PH607	S9	220	AC	QX	IDL	SJX	20	1216	15	A	
4	SAS913	D7		AC	DHF	IDL	SJX	110	1225	4	A	
5	SAS909	6B		AC	QX	IDL	SJX	10	1256	5	A	
6	ELAL207			AC			SJX		1348	10	A	
7	M815	D6B		AC	BOS	IDL	SJX		1350	1	A	
1	X2648B	AC	148	GA	BOS	FLO	RVH	80	1526	14	B3	
2	AF12612	C119	190	MIL	HT	ADW	RVH	80	2122	5	A	
3	VM1693	R4Y	200	MIL	YT	NKT	RVH	80	2249	6	A	
1	AF11881	C45	135	MIL	BTV	WRI	BDR	180	1832	8	A	
1	AF11881	C45	135	MIL	BTV	WRI	POU	100	1808	5	B3	
1	L362	3	148	AC	HAR	AVP	HAR	0	1344	18	C	
2	T403	8	196	AC	HAR	PIT	HAR	0	2036	5	C	
3	V36549	S2F	165	MIL	NBU	NEL	HAR	90	2136	2	A	
4	AF15573	C47	140	MIL	ADW	ADW	HAR	60	2337	31	A	
5	AF8476	C47	140	MIL	O/IDL	BOF	HAR	80	2346	15	A	
1	AF7634	C118	240	MIL	ABE	WRI	SGR	90	1443	7	A	
1	RCN1507			MIL	NJP	YZ	NJP	0	1513	16	C	
1	P321	V	260	AC	PHL	CLE	RHD	160	1248	8	A	
2	P341	V	263	AC	PHL	YIP	RHD	100	1303	5	B3	
3	D721	D7	266	AC	PHL	DCA	RHD	100	1444	2	A	
4	T83	S9G	270	AC	PHL	LAX	RHD	140	1649	4	A	
5	V51263	SNB	145	MIL	PHL	CMH	RHD	100	1829	21	A	

TIME AT FIX ENTRIES ARE GREENWICH MEAN TIME (Z)

TABLE I - DELAY INVESTIGATION DATA (conf'd)

AUGUST 1 - 1958

NO	A/C IDENT	TYPE & SPEED		OPR CAT	ORIG	DEST	FIX	ALT (X100')	TIME AT FIX	DUR MIN	TYPE DEL	SKY & CEILING VISIBILITY WIND
1	LOG1300N	C46	160	MIL	MDT	DOV	LRP	60	1111	7	A	
2	AF72605	C54	175	MIL	MDT	ZQUR	LRP	70	1132	7	A	
3	AF15678	C47	160	MIL	CEF	SYN	LRP	100	1259	16	A	
4	LOG8964	C46	165	MIL	DOV	MDT	LRP	60	1602	5	A	
5	X14282	LODE	180	GA	ABE	BAL	LRP	60	1930	10	A	
6	E5	M404		AC	LRP	BAL	LRP	0	2026	17	C	
7	L804	2		AC	PIT	ACY	LRP	90	2320	6	A	
1	AF72605	C54	135	MIL	BDA	MDT	ESR	70	0104	13	A	
2	V17283	R4D	145	MIL	IAG	NKX	ESR	70	0323	5	A	
3	U146	D7	330	AC	YIP	PHL	ESR	50	1508	11	A	
1	SAM80609	9	220	MIL	O/BMD	DCA	GAP	80	1500	16	A	
2	E663	8	190	AC	ILG	DCA	GAP	80	1646	9	A	
3	P322	V	280	AC	CLE	PHL	GAP		1655	6	A	
4	U316	5	220	AC	YIP	PHL	GAP	70	1830	10	A	
5	E509	9	265	AC	EWR	DCA	GAP	80	2123	12	A	
6	U318	5	220	AC	CLE	PHL	GAP	60	2229	2	A	
7	E461	8	190	AC	LGA	DCA	GAP	100	2231	23	A	
8	P375	V	270	AC	EWR	DCA	GAP		2233	27	A	
9	P375	V	270	AC	EWR	DCA	GAP	120	2251	27	A	
10	A407	CVR2	208	AC	LGA	DCA	GAP	110	2255	5	A	
11	S503	D6	220	AC	EWR	DCA	GAP	80	2259	35	B3	
12	E583	M404	191	AC	EWR	DCA	GAP	90	2257	21	A	
13	A375	5	210	AC	BOS	DCA	GAP	110	2311	12	A	
1	L600	2	195	AC	PIT	PSB	PSB	40	1250	11	A	
2	L603			AC	IPT	PSB	PSB	0	1423	2	C	

TIME AT FIX ENTRIES ARE GREENWICH MEAN TIME (Z)

TABLE I - DELAY INVESTIGATION DATA (cont'd)

AUGUST 1 - 1958

NO	A/C IDENT	TYPE & SPEED		OPR CAT	ORIG	DEST	FIX	ALT (X100')	TIME AT FIX	DUR MIN	TYPE DEL	SKY & CEILING	VISIBILITY	WIND
1	U719	D7	265	AC	PHL	YIP	PHL	0	0239	04	C	60Ⓓ/Ⓓ	12	SSE4
2	U93	D6	250	AC	PHL	YIP	PHL	0	0419	02	C	120Ⓓ/-Ⓓ	12	SW3
3	M81	D6		AC	BOS	PHL	PHL		0533	13	A	O	12	SSW4
4	T121	M404	193	AC	LGA	PHL	PHL	50	0604	6	A	11⊕	4FK	NE5
5	M80	D6		AC	MIA	PHL	PHL		0853	5	A	9Ⓓ15⊕	4KH	NNE8
6	U547	D6	245	AC	PHL	PIT	PHL	0	1135	03	C	15Ⓓ80Ⓓ150⊕	3KH	ENE10
7	U633	D6	250	AC	PHL	CLE	PHL	0	1140	5	C	"	"	"
8	U743	D7	290	AC	PHL	YIP	PHL	0	1205	22	C	21Ⓓ90Ⓓ150⊕	5RW--KH	ENE10
9	P321	V	260	AC	PHL	CLE	PHL	0	1230	15	C	"	"	"
10	E8	M404		AC	PHL	AVP	PHL	0	1235	3	C	"	"	"
11	M150	5		AC	DCA	PHL	PHL		1242	8	A	"	"	"
12	P341	V	263	AC	PHL	YIP	PHL	0	1244	9	C	"	"	"
13	AF2611	C54	180	MIL	WRI	BLV	PHL	120	1250	10	B3	"	"	"
14	AF7637	C118	220	MIL	WRI	WRI	PHL	70	1303	56	A	18Ⓓ130⊕	5RW--KH	ENE12
15	S381	5	210	AC	IDL	PHL	PHL	40	1310	18	B3	"	"	"
16	M150	5		AC	PHL	BOS	PHL	0	1317	12	C	"	"	"
17	E33	M404		AC	PHL	DCA	PHL	0	1325	10	C	"	"	"
18	S381	5	210	AC	PHL	PHF	PHL	0	1343	17	C	"	"	"
19	D721	7	266	AC	PHL	DCA	PHL	0	1418	2	C	18Ⓓ130⊕	4RW-KH	ENE10
20	E305	7B		AC	PHL	DCA	PHL	0	1430	13	C	"	"	"
21	M807	D6B		AC	PHL	MIA	PHL	0	1435	3	C	"	"	"
22	U705	D7	275	AC	PHL	DCA	PHL	0	1440	06	C	"	"	"
23	M3254	C118	210	MIL	WRI	MDT	PHL	110	1440	8	A	"	"	"
24	U218	5	195	AC	PHL	EWR	PHL	0	1452	05	C	"	"	"
25	UNIV 108	D4	185	AC	PHL	MIA	PHL	0	1452	11	C	"	"	"
26	P335			AC	PHL	MDW	PHL	0	1505	25	C	100Ⓓ	5KH	ENE11
27	AF0769	C47	145	MIL	WRI	BLV	PHL	100	1515	5	A	"	"	"
28	U209	5	190	AC	PHL	YNG	PHL	0	1521	03	C	"	"	"
29	P342	V	300	AC	YIP	PHL	PHL		1530	12	A	"	"	"
30	U745	D7	290	AC	PHL	YIP	PHL	0	1550	10	C	"	"	"
31	V1066	SNB		MIL		NXX	PHL	90	1557	13	A	"	"	"
32	U121	D7	286	AC	PHL	YIP	PHL	0	1705	04	C	100Ⓓ	8	E8
33	S507	D6	220	AC	PHL	MIA	PHL	0	1705	19	C	"	"	"
34	AF5540	C47	140	MIL	WRI	CEF	PHL	100	1748	8	B3	"	"	"
35	T123	9	240	AC	PHL	PIT	PHL	0	1753	9	C	"	"	"
36	P464	4	185	AC	ROC	PHL	PHL		1845	6	A	100Ⓓ	5KH	E7

"TIME AT FIX ENTRIES ARE GREENWICH MEAN TIME (Z)

TABLE I - DELAY INVESTIGATION DATA (cont'd)

AUGUST 1 - 1958

NO.	A/C IDENT	TYPE & SPEED		OPR CAT	ORIG	DEST	FIX	ALT (X100')	TIME AT FIX	DUR MIN	TYPE DEL	SKY & CEILING	VISIBILITY	WIND
37	U536	D6	240	AC	PHL	LGA	PHL	0	1903	03	C	38Ø100⊕	6KH	SSE7
38	E35	M4O4		AC	PHL	DCA	PHL	0	1917	1	C	"	"	"
39	T23	9		AC	PIT	PHL	PHL		1934	7	A	"	"	"
40	U207	5	190	AC	PHL	ABE	PHL	0	1934	22	C	"	"	"
41	S514	D6	230	AC	PHL	EWR	PHL	0	1941	04	C	"	"	"
42	M149	5		AC	BOS	PHL	PHL		1942	18	A	"	"	"
43	T407	9	234	AC	PHL	PIT	PHL	0	2002	11	C	40Ø100Ø	5KH	SSE5
44	P465	4	180	AC	PHL	BUF	PHL	0	2006	15	C	"	"	"
45	M824	D6B		AC	DCA	PHL	PHL		2007	8	A	"	"	"
46	T149	9	237	AC	PHL	PIT	PHL	0	2116	7	C	35Ø90⊕	3KH	E8
47	U317	5	210	AC	PHL	YIP	PHL	0	2116	06	C	"	"	"
48	T415	8	193	AC	PHL	PIT	PHL	0	2207	8	C	35Ø90⊕	5KH	SSE7
49	E32	M4O4		AC	PHL	AVP	PHL	0	2209	4	C	"	"	"
50	U641	D6	262	AC	PHL	MDW	PHL	0	2220	17	C	"	"	"
51	E375	5		AC	PHL	CLT	PHL	0	2225	14	C	"	"	"
52	P337	V	260	AC	PHL	MDW	PHL	0	2238	12	C	"	"	"
53	U92	D6	230	AC	PHL	EWR	PHL	0	2250	07	C	"	"	"
54	P328	V	262	AC	PIT	PHL	PHL		2346	5	A	35Ø60Ø	6KH	SSE10
1	V6548	S2F	145	MIL	NGU	NXX	PNE	30	0211	4	A			
2	P976	9	245	AC	DCA	EWR	PNE	80	0259	6	A			
3	XL9363	DC3	168	GA	ILG	EWR	PNE		1139	15	B3			
4	V67333	JRB	140	MIL	NJP	NGU	PNE	60	1321	12	A			
5	D728T	DC7B	300	AC	ATL	EWR	PNE	130	2035	5	B3			
6	B4	DC6		AC	DCA	EWR	PNE		2036	13	B3			
1	L301	3	145	AC	TTN	LRP	TTN	0	1231	5	C			
1	D29X	C46	175	AC	EWR	PHL	VFG	40	0639	6	A			
2	E529	9	240	AC	BDL	PHL	VFG	60	1331	8	B1			
3	S323	5	210	AC	BOS	PHL	VFG	0	1337	16	A			
4	N807			AC	BOS	PHL	VFG		1342	16	A			
5	A361	5	210	AC	BOS	PHL	VFG	60	1346	7	A			
6	M807	D6B		AC	BOS	PHL	VFG		1348	14	A			
7	U648	D6	265	AC	MDW	PHL	VFG	60	1755	04	A			

TIME AT FIX ENTRIES ARE GREENWICH MEAN TIME (Z)

TABLE I - DELAY INVESTIGATION DATA (cont'd)

AUGUST 1 - 1958

NO.	A/C IDENT	TYPE & SPEED		OPR CAT	ORIG	DEST	FIX	ALT (X100')	TIME AT FIX	DUR MIN	TYPE DEL	SKY & CEILING	VISIBILITY	WIND
1	X9911B	CSNA	135	GA	ERI	LNS	RDV	70	1505	6	A			
2	AF16277	C47	130	MIL	PSB	WRI	RDV	90	1653	12	A			
1	T483	8	195	AC	IPT	PIT	MHL	80	1444	5	A			
1	T356	9		AC	IND	LGA	SIG	170	0113	6	A			
2	AF00673	C47	140	MIL	MDT	HME	SEG	60	1414	10	A			
3	AF10775	C45	120	MIL	PSN	MDT	SEG	50	1619	30	A			
1	X906	VIC	265	GA	AVP	DCA	BER	50	2031	13	A			
2	E7	8	185	AC	AVP	DCA	BER	100	2319	6	A			
1	L600	2	195	AC	IPT	AVP	IPT	0	1341	4	C			
2	AF30135	B25	190	MIL	CEF	FFO	IPT	80	1447	11	A			
1	AF10611	C45		MIL	BTL	SWF	CYE	70	2010	16	A			
1	AF3290	C118	240	MIL	WRI	WRI	ABE	100	1205	4	A			
2	U643	D6	235	AC	ABE	YNG	ABE	0	1315	7	C			
3	X68415	AC	175	GA	O/PSB	EWR	ABE	50	1321	18	B3			
4	U207	5	190	AC	ABE	CLE	ABE	0	2031	10	C			
5	U620	D6	260	AC	MDW	EWR	ABE	140	2051	7	B3			
1	AF7637	C118	220	MIL	O/ABE	WRI	PTW	80	1539	8	A			

TIME AT FIX ENTRIES ARE GREENWICH MEAN TIME (Z)

TABLE I - DELAY INVESTIGATION DATA (cont'd)

AUGUST 1 - 1958

NO.	A/C IDENT	TYPE & SPEED		OPR CAT	ORIG	DEST	FIX	ALT (X100')	TIME AT FIX	DUR MIN	TYPE DEL	SKY & CEILING VISIBILITY WIND
1	K81	DC3	145	AC	DCA	CHO	GVE	30	0030	16	A	
2	V67222	SNB	140	MIL	NYG	BKT	GVE	40	1253	5	A	
3	D726	DC7	305	AC	ATL	DCA	GVE	110	1912	7	A	
4	D130	DC6	275	AC	ATL	DCA	GVE	150	1932	8	A	
5	E324	9	240	AC	GSO	DCA	GVE	70	2020	34	A	
6	E510	9	270	AC	CLT	DCA	GVE	110	2056	34	B3	
7	P276	V	265	AC	INT	DCA	GVE	130	2116	25	A	
8	V51165	SNB	145	MIL	NKT	NYG	GVE	40	2142	7	A	
9	E548	7B	295	AC	CHA	DCA	GVE	90	2146	53	B3	
1	AF23836	C47	155	MIL	SVN	BOF	RIC	70	2106	51	A	
2	V34467	AD	160	MIL	NTU	NUN	RIC	80	2157	9	B3	
1	P480	4	185	AC	RIC	DCA	TPP	40	2133	23	C	
1	V39081	R4D8	210	MIL	GRE	NSF	LCG		2045	10	A	
1	AF30628	B25	190	MIL	ADW	NQA	EKN	100	2344	1	A	
1	E466	8	190	AC	CRW	DCA	FRR	40	0413	41	B3	
2	E450	9	250	AC	SDF	DCA	FRR	110	0822	30	B3	

TIME AT FIX ENTRIES ARE GREENWICH MEAN TIME (Z)

TABLE I - DELAY INVESTIGATION DATA (cont'd)

AUGUST 1 - 1958

NO	A/C IDENT	TYPE &	SPEED	OPR CAT	ORIG.	DEST	FIX	ALT (X100')	TIME AT FIX	DUR MIN	TYPE DEL	SKY & CEILING	VISIBILITY	WIND
1	P407	4	170	AC	PHF	DCA	SPS	50	2145	34	B3			
1	AF82115	L27	175	MIL	BOF	BOF	EWN	50	1613	10	B3			
1	S859	D7B	290	AC	IDL	JAX	RMT	160	1616	07	A			
2	PAE5792	C131	205	MIL	ADW	CHS	RMT	60	2311	2	A			
1	P571	3	145	AC	ORF	RDU	RDU		0720	10	A			
1	AF18348	C47	140	MIL	BOF	MXF	SBV	80	0137	9	A			
2	AF34610	B26	230	MIL	ADW	CLT	SBV	70	1635	30	A			
3	V67303	SNB	145	MIL	NSF	NCQ	SBV	70	2228	7	A			
1	V1101	SNB	140	MIL	NSF	NGU	BKT	50	0008	6	A			
2	AF76431	C47	120	MIL	BOF	BOF	BKT	70	1422	15	A			
3	V3467	AD	160	MIL	NTU	NAS	BKT	120	2212	10	A			
1	K14			AC	LYH	CHO	CHO		2331	3	A			
1	TUR32	B47	430	MIL	SAV	MGE	FAK		1445	30	A			
2	V04719	SNB	150	MIL	NSF	SEM	FAK	70	1847	6	A			
3	AF63988	F100	480	MIL	LFI	LFI	FAK	310	2129	3	A			
1	AF51043	C47	138	MIL	BOF	BOF	MNV	40	1500	57	B1			

"TIME AT FIX ENTRIES ARE GREENWICH MEAN TIME (Z)

TABLE I - DELAY INVESTIGATION DATA (cont'd)

AUGUST 1 - 1958

NO	A/C IDENT	TYPE	& SPEED	OPR CAT	ORIG	DEST	FIX	ALT (X100')	TIME AT FIX	DUR MIN	TYPE DEL	SKY & CEILING VISIBILITY WIND
	MISCELLANEOUS ENROUTE DELAYS DETERMINED BY CALCULATION. THE LOCATION OF THESE DELAYS COULD NOT BE DETERMINED DUE TO LACK OF ADEQUATE DATA.											
1	P519	3	145	AC	PHF	DCA		45	0010	10	B3	
2	S388	5	200	AC	PHF	PHL		100	0059	7	B3	
3	PAE25792	C131	205	MIL	CHS	ADW		50	0105	13	B3	
4	S387	5	205	AC	IDL	PHL		40	0119	17	B3	
5	S387	5	205	AC	PHL	PHF		60	0130	12	B3	
6	S388	5	200	AC	PHL	IDL		100	0330	10	B3	
7	S382	5	200	AC	PHF	DCA		50	1300	10	B3	
8	AG38103	C119	170	MIL	FMH	GRE		90	1417	7	B3	
9	S381	5	210	AC	PHL	PHF		50	1419	13	B3	
10	P300	V	285	AC	PIT	BAL		90	1555	12	B3	
11	V90393	R5D	185	MIL	NIP	NSF		50	1623	8	B3	
12	S700	D7B	305	AC	DCA	IDL		110	1935	14	B3	
13	S506	D7	230	AC	DCA	BWR		80	2026	10	B3	
14	P336	V		AC	MDW	PHL		60	2100	24	B3	
15	S701	D7B	290	AC	IDL	DCA		80	2155	56	B3	
16	S386	5	210	AC	ORF	IDL		110	2200	8	B3	
17	AG31255	F86	480	MIL	SAV	ILG		OTP	2204	8	B3	
18	AG31359	F86	480	MIL	O/CHS	ILG		OTP	2212	10	B3	
19	AG31501	F86	485	MIL	O/CHS	ILG		OTP	2237	8	B3	
20	P175	9	265	AC	PHL	DCA				16	B3	

Table II

SUMMARY OF DELAY DATA

FIX	TOTAL DELAYS	MIL	AC	GA	A	B1	B2	B3	C
Washington Terminal Area:									
ANS	10		10			10			
SRI	17		17			17			
HNT	9	6	1	2	7			2	
SHZ	9	5	3	1	9				
ADW	11	2	9		6	5			
DCA	106		106						106
RVD	21	1	20		8	13			
FRLD	1		1					1	
BAL	13	1	12					1	12
ELL	1	1			1				
DAY	2	1		1	1			1	
LSO	1	1			1				
EMI	12	4	6	2	7			5	
KYM	1			1	1				
NRV	3		3		2	1			
DCS	1		1		1				
COP	4	1	2	1	3			1	
BRV	1	1			1				
NYG	3		3		1	1		1	
CFX	8	2	5	1	5	3			
MRB	3	2		1	1			2	
PQM	9	2	7		3	5		1	
Total 1	246	30	206	10	58	55		15	118
Coyle-Dover Area:									
ING	13	9	2	2	11			2	
SBY	5	3	1	1	4			1	
HTY	3	3			2			1	
DOV	6	5	1		5				1
ENO	11	5	4	2	11				
ILG	3		3						3
PNR	11	10	1		8			3	
OOD	8	5	2	1	7			1	
MIV	21	21			17			4	
NFD	1	1			1				
VIN	3		2	1	3				
ACY	12	8	3	1	7		1	3	1
NBB	3	1	2		1	1			1
CMX	2			2				2	
WRI	1		1						1
CYN	10	8	1	1	6			4	
Total 2	113	79	23	11	83	1	1	21	7

FIX	TOTAL DELAYS	MIL	AC	GA	A	B1	B2	B3	C
New York Terminal Area:									
COL	10	1	9		7			3	
RIS	24		24		19	5			
PTP	1		1					1	
LDO	27		27		27				
XWF	11	1	10		2		8	1	
IDL	157		157		1				156
BMD	1		1		1				
HIT	1		1		1				
NBR	3		3		3				
REI	1	1			1				
HAD	11		11		9	2			
EWR	46		46		6				40
LGA	68		68						68
FIR	1	1			1				
WCP	1			1	1				
SJX	7		6	1	6			1	
RVH	3	2		1	2			1	
BDR	1	1			1				
Total 3	374	7	364	3	88	7	8	7	264
New York X-Area									
HAR	5	3	2		3				2
SGR	1	1			1				
NJP	1	1							1
RHD	5	1	4		4			1	
LRP	7	4	2	1	6				1
ESR	3	2	1		3				
GAP	13	1	12		12			1	
PHL	54	6	48		14			3	37
PNE	6	2	3	1	3			3	
TTN	1		1						1
VFG	7		7		6	1			
PSB	2		2		1				1
RDV	2	1		1	2				
MHL	1		1		1				
SEG	3	2	1		3				
BER	2		1	1	2				
IPT	2	1	1		1				1
CYE	1	1			1				
ABE	5	1	3	1	1			2	2
PTW	1	1			1				
POU	1	1						1	
Total 4	123	29	89	5	65	1		11	46

FIX	TOTAL DELAYS	MIL	AC	GA	A	B1	B2	B3	C
Washington Y-Area									
EWN	1	1						1	
RMT	2	1	1		2				
RDU	1		1		1				
SBV	3	3			3				
BKT	3	3			3				
CHO	1		1		1				
FAK	3	3			3				
MNV	1	1				1			
SPS	1		1					1	
GVE	9	2	7		7			2	
RIC	2	2			1			1	
TIP	1		1						1
LCG	1	1			1				
FKN	1	1			1				
FRR	2		2					2	
Total 5	32	18	14		23	1		7	1

Table III

F-A2169-5

RUNWAY USE DATA AT IDLEWILD, LaGUARDIA AND NEWARK AIRPORTS

AUGUST 1, 1958

Idlewild: 0502-1312

A/C Ident	Time Off	Time On	Rnwy Used
E839	0502		31L
RL341	0508		31L
AX415	0510		31L
U807	0512		31L
G301	0515		31L
G271	0518		31L
T108	0521		31L
E639	0500		31L
M135		0531	4
T43	0540		31L
HR271	0542		31L
D6545	0544		31L
X50B		0545	4
U541	0549		31L
U91	0552		31L
N527	0603		31L
E853	0607		31L
N6210A		0607	4
A38		0609	4
G297	0619		31L
S&W21V	0631		31L
E2839	0634		31L
E635	0636		31L
S106		0713	4
U9101		0727	4
T91	0746		31L
G751		0755	4
S720		0804	4
U491	0831		31L
X650NA	0836		31L
R1208		0851	4
S114		0902	4
E684		0904	4
E852		0919	4
E834		0939	4
S&WQ6C	0955		7IR
G290		0956	4
E852	1021		7IR
E7456	1028		7R
SC921		1030	4

A/C Ident.	Time Off	Time On	Rnwy Used
TO30F		1035	4
T751		1041	4
S101		1044	4
N526*		1053	4
Y104*		1053	Pad
G302		1057	4
Y104*	1057		Pad
E534		1058	4
GA581		1104	4
G708		1107	4
GA551		1113	4
S&W05C		1118	4
CE301		1122	4
E986		1123	4
AX67927		1126	4
G326		1128	4
U106		1130	4
GA549		1132	4
U100		1134	4
Y101*		1135	Pad
E544		1136	4
TO30	1137		7R
GA509		1139	4
M122	1140		7R
X8192B		1141	4
G160	1142		7R
T769		1143	4
00SFC		1146	4
Y101*	1151		Pad
SW214		1153	4
T863	1153		4
RL342		1157	4
PH639		1158	31R
T725		1159	4
AX10416		1702	4
T50		1205	4
A4		1206	4
E42	1208		7R
A672		1207	4
U706		1214	4

A/C Ident.	Time Off	Time On	Rnwy Used
00SFE		1217	4
Y100*		1218	Pad
S351	1219		7R
FB045		1220	4
G71		1223	4
M623		1225	4
E242		1226	4
CL90&C		1226	4
Y104*		1227	Pad
T97		1228	4
FB041		1330	4
Y100*	1231		Pad
N506		1231	4
CU901C		1233	4
S375	1234		7R
A301		1235	4
E321	1236		7R
G115		1237	4
S393	1238		7R
G155		1239	4
N1	1240		7R
SC911		1241	4
IL517		1244	4
G67		1247	4
Y104*	1248		Pad
PH607		1248	4
FB071		1250	4
DA040		1250	4
E573		1255	4
F200		1257	4
SC913		1258	4
G293	1300		7R
G77		1301	4
X2713Y		1304	4
U702		1305	4
T90		1307	4
E88		1308	4
GA581	1309		7R
T8864		1310	4
A93		1312	4

*Helicopter Operation

Table III (Con't)

F-A2169-5

Idlewild: 1313-1605

A/C Ident	Time Off	Time On	Rnwy Used
B1	1313		7R
SAAM103		1304	4
T97	1316		7R
T8863		1316	4
Y101*		1319	Pad
E515	1309		7R
U724		1319	4
A301	1320		7R
F320		1323	4
E511		1324	4
PH633		1326	4
T44		1328	4
Y101*	1329		Pad
SC909		1330	4
A31	1332		7R
HB840		1332	4
A75	1335		7R
U703	1336		7R
U123	1337		7R
G73		1340	4
X2767B		1341	4
N71	1341		7R
RB95V		1342	4
A671	1343		7R
X67B*	1248		Pad
E407	1349		7R
X81B		1353	4
E631	1355		7R
PHTOG		1351	4
00551		1400	4
E573	1401		7R
T785	1403		7R
M121		1406	4
4X207		1404	4
M815		1408	4
D133*	1409		7R
DA420		1400	4
F203	1412		7R
M124*	1414		7R
Y104*		1414	Pad

A/C Ident.	Time Off	Time On	Rnwy Used
E817		1415	4
E88	1417		7R
F322		1408	4
U749	1420		7R
S405	1422		7R
X93	1421		7R
RB90B		1424	4
G65		1427	4
Y104*	1429		Pad
E801	1429		7R
X81B	1430		7R
X134	1430		7R
X95V	1432		7R
G211	1432		7R
T85	1434		7R
F323	1445		7R
T45	1437		7R
A1	1437		7R
E55		1442	4
X90B	1442		31R
U101	1443		7R
G3132	1440		7R
U122		1446	4
E603		1447	4
A505	1441		7R
X37	1450		7R
X50B	1451		7R
E1	1452		7R
S859	1453		7R
F202		1500	4
Y101*		1502	Pad
S527	1503		7R
E554		1505	4
T8		1508	4
T781		1509	4
GA492	1511		7R
U709		1510	4
RB6BD		1513	13L
A87	1514		7R
Y101*	1514		7R

A/C Ident.	Time Off	Time On	Rnwy Used
U103	1515		7R
M816	1517		7R
G161		1518	4
Y37		1521	4
T120		1522	4
X17BB		1523	4
M93	1525		7R
E311	1527		7R
N528	1527		7R
A28		1529	4
T782	1531		7R
PH601		1532	4
X98B		1532	25
T951		1533	4
E511	1534		4
G705	1535		4
X90D*	1535		Pad
T951		1537	7R
IL511		1538	7R
N74		1540	4
F325	1541		7R
G75		1542	4
HB846		1544	4
N74		1545	4
630	1545		31R
E815	1547		7R
Y104*		1548	Pad
X300A		1549	4
G705		1551	25
A39	1551		7R
E825	1553		7R
RB9K		1557	13L
G705		1558	22
E7815		1559	13L
B337	1559		7R
X58092	1600		7R
F205	1608		7R
Y104*		1603	Pad
M831	1604		7R
A684		1605	13L

*Helicopter Operation

Table III (Con't) F-A2169-5

Idlewild: 1607-1902

A/C Ident	Time Off	Time On	Rnwy Used
G705		1607	13L
X46B	1610		7R
U723	1611		7R
F204		1613	13L
S325	1614		7R
G132	1616		7R
F324		1618	13L
FB657		1616	13L
FB071	1620		7R
E564		1621	13L
GA481	1623		7R
PH992	1625		7R
M225		1626	13L
X300A	1621		7R
GA542	1629		7R
G205	1630		7R
T306	1632		7R
U709	1633		7R
T16		1644	13L
G15C	1637		7R
Y101*		1637	Pad
Y52P		1637	13L
N208		1639	13L
U739	1640		7R
E817	1642		7R
U710		1642	13L
73	1643		7R
GA490	1644		7R
T107	1645		7R
E301	1646		7R
E658		1647	13L
E18	1648		7R
E91		1649	13L
16C	1650		7R
U793	1652		7R
A305		1653	13L
E603	1655		7R
Y101*	1655		Pad
E564	1656		7R
SC901		1657	13L

A/C Ident.	Time Off	Time On	Rnwy Used
SW04C	1659		7R
T95	1700		7R
SC900	1701		7R
TC416	1702		7R
F207	1704		7R
E637	1705		7R
S20		1707	13L
LV315	1708		7R
Y100*		1709	Pad
Y73SF	1709		7R
E835	1711		7R
X405D		1712	13L
M138	1714		7R
M521	1714		7R
E609	1715		7R
A37	1717		7R
X11		1719	13L
E101		1720	13L
T155	1722		7R
X416K		1724	13L
Y104*		1727	13L
U701	1728		7R
GEN768		1731	13L
E601		1732	13L
T43	1733		7R
E580		1735	13L
F327	1738		7R
46K	1740		7R
X650	1742		13L
G139	1743		13L
SWS847	1743		7R
E830		1744	13L
Y104*	1745		Pad
N10		1747	13L
ECAIN		1748	13L
U119	1754		7R
T933		1756	13L
S354		1751	13L
F206		1759	13L
U107	1801		7R

A/C Ident.	Time Off	Time On	Rnwy Used
F326		1807	13L
A624		1802	13L
T707	1808		7R
A104		1810	13L
E580	1800		7R
X630NA		1811	13L
N570		1813	13L
U516		1815	13L
CE300	1816		7R
PH608	1819		7R
Y100*	1820		Pad
CU998		1821	13L
E601	1822		7R
Y37C		1823	13L
E830	1824		7R
Y101*		1825	Pad
S400		1825	13L
G74	1826		7R
E602		1828	13L
A9	1829		7R
E11	1831		7R
X90B		1803	13L
E991	1835		7R
E638	1837		7R
Y101*	1839		Pad
M836		1839	13L
8C914	1841		7R
E565	1842		7R
T323	1845		7R
A625	1846		7R
A74		1848	13L
G201	1858		7R
M125		1852	13L
X73B	1854		7R
S384	1854		7R
X630		1856	13L
N77	1851		7R
S380		1859	13L
G76	1900		7R
F208		1902	13L

* Helicopter Operation

Table III (Con't) F-A2169-5

A/C Ident	Time Off	Time On	Rnwy Used
G154	1903		7R
F209	1905		7R
G24K		1906	4
N522*		1909	4
Y104*		1911	4
E102	1912		7R
X90B	1913		7R
T930	1914		7R
U506	1915		7R
S851	1918		7R
X756P		1920	4
Sham102	1921		7R
AR709A	1926		7R
Y104*	1927		Pad
F602	1927		7R
X450	1932		13L
G294		1934	4
T866		1936	4
G206		1936	4
A84		1938	4
E844		1940	4
T862	1941		7R
E508		1943	4
S511	1944		7R
S700		1945	4
M131		1947	4
GWL768	1949		7R
S850		1950	4
F328		1951	4
N213	1953		7R
T105	1954		7R
M128	1955		7R
D770		1957	4
SC912	1958		7R
X828	1959		7R
X321	1959		7R
X none	2000		7R
V323	2002		7R
B2		2002	4
E838		2004	4

A/C Ident.	Time Off	Time On	Rnwy Used
Y101*		2005	Pad
A763	2005		7R
G138	2006		13L
S389	2007		7R
A105	2009		7R
OOFB	2011		7R
T7	2013		7R
G202		2014	4
A23	2016		7R
N551	2018		13L
Y101*	2018		Pad
G102	2019		7R
X4050		2021	4
X01L		2022	4
S401	2023		7R
F211	2025		13L
E325		2026	4
M835	2027		7R
A3	2028		7R
DA423	2030		7R
F329	2031		13L
SC972	2033		7R
X01L	2034		13L
X98N	2034		13L
E532		2036	4
CH999	2038		7R
TL40L		2039	4
G100			7R
PH61		2042	4
U735	2043		7R
V323		2044	4
F331	2045		13L
00548	2047		7R
X63D	2048		31L
A683	2049		7R
N7	2050		13L
FB040	2051		7R
FB058	2053		7R
FT18C	3053		13L
G16C	2055		13R

Idlewild: 1903-2151

A/C Ident.	Time Off	Time On	Rnwy Used
E610		2055	13L
T866	2056		13L
M228	2058		13R
X90B		2058	13L
X93		2100	13L
X405D	2101		13L
T722	2102		13L
X90B	2105		31R
N210		2109	13R
X5447K		2110	13R
T823		2111	13R
A95	2112		22
Y104*		2112	Pad
S701	2114		22
GA510	2118		22
A62		2119	13R
E325*	2119		22
Y104*	2121		Pad
G295	2122		22
E688		2124	13R
G64	2125		22
B5	2127		
X630		2128	22
OOSFC	2130		22
X75B	2131		22
G216	2133		13R
X47K	2134		31R
E531	2134		22
FB070		2135	13R
X75GP	2136		22
HB887	2138		22
E2		2140	13R
PH632	2141		22
S821	2142		22
D771	2144		22
F330		2147	13R
PH602	2148		22
G3133		2150	13R
E610	2150		22
X630	2151		31R

*Helicopter Operation

Table III (Con't) F-A2169-5

Idlewild: 2152-0116

A/C Ident	Time Off	Time On	Rnwy Used
Y101*		2152	Pad
N523	2153		22
G72	2155		22
T830	2157		22
E630		2159	13R
S385		2159	13L
Y101*	2203		Pad
FB044	2206		22
X9K	2206		22
XA400		2210	13R
E300		2211	13R
SC902	2212		22
E507	2213		22
T119	2215		22
E688	2217		22
F210		2218	13R
E837	2219		22
P130		2222	13R
M137		2222	13R
LAV252		2224	13R
E845	2224		22
G114	2226		13R
G205	2228		22
X02P		2330	13R
G216	2231		22
F7215	2233		22
S385	2234		22
N209	2236		22
X02D	2240		31R
A61	2240		22
Y104*		3244	Pad
X010	2247		22
F332		2248	13R
00SFE	2250		22
G24K	2252		22
G133		2253	13R
Y104*	2254		Pad
E51		2255	13R
F333	2254		22
G66	2256		22

A/C Ident.	Time Off	Time On	Rnwy Used
G60C		2257	13R
T319		2259	13R
E7230		2301	13R
GA541		2307	13R
E539	2310		22
M830	2313		22
X630NA	2315		22
X95V		2317	13R
F212		2317	13R
IL518	2318		22
N520		2318	13R
Y101*		2318	Pad
T744	2321		22
D131	2322		22
GA491		2323	13R
F215	2304		22
FB070	2325		22
U541		2329	13R
Y101*	2331		Pad
S386	2336		13R
T602	2337		22
S320		2339	13R
X630		2341	13R
ECAIN	2343		22
F335	2347		22
X630	2348		22
M129		2348	13R
A32	2353		13R
X650NA	2354		22
F2212		2354	13R
U101		0001	13R
N76		0003	13R
A106		0007	13R
Y104*		0007	Pad
G160		0010	13R
T154		0011	13R
N215	0012		22
A2		0012	13R
T972	0014		22
E848		0014	13R

A/C Ident.	Time Off	Time On	Rnwy Used
E46	0015		22
X630		0015	25L
S502		0017	13R
S369		0019	13R
F217	0019		22
Y104*	0020		Pad
U709		0022	13R
U700		0025	13R
X630NA		0030	13R
S387			22
S958		0031	13R
X630	0032		22
T84		0032	13R
E985	0033		22
U541	0034		22
M816		0035	13R
F336		0035	13R
E408		0040	13R
G70	0043		22
F334		0043	13R
F2217	0045		22
E832		0046	13R
T4		0047	13R
GA558	0050		22
M134	0051		22
A36	0053		13L
E604		0055	22
Y101*		0057	Pad
M834		0057	13R
E7767		0101	13R
A107	0103		13R
U130		0103	13R
IL510	0104		22
E836		0105	13R
X952	0106		22
A96		0107	13R
U90		0111	13R
M916	0114		22
U708	0118		22
E818		0116	13R

*Helicopter Operation

Table III (Con't) F-A2169-5

A/C Ident	Time Off	Time On	Rnwy Used
X19M		0117	22
T94		0118	13R
Y101*	0118		Pad
F214		0121	13R
E43	0122		22
G298A		0125	13R
E12		0126	13R
N550		0128	13R
S324	0129		22
E831	0133		22
F337	0135		22
U722		0136	13R
A96	0139		22
E604	0141		22
PH640	0143		22
GA482		0149	13R
G298		0155	13R
U748		0200	13R
F339	0201		22
G736		0201	13R
E310		0203	13R
N200		0205	13R
G24R		0207	13R
G215		0212	13R
M99	0212		22
T168		0213	13R
G213	0215		22
F342		0216	13R
S105	0217		22
E100		0218	13R
E578		0219	13R
T49	0221		22
S408		0222	13R
F219	0222		22
E634		0224	13R
E406		0225	13R
4R201	0226		22
E641		0228	13R
DA041	0229		22
S330		0230	13R

A/C Ident.	Time Off	Time On	Rnwy Used
U137	0230		22
E95		0231	13R
M66		0234	13R
G212		0276	13R
N72		0240	13R
Y101*		0241	Pad
E512		0241	13R
OOSFD		0244	13R
A670		0245	13R
F378		0249	13R
X19M	0250	22	
G212		0252	13R
B336		0254	13R
T108	0254	22	22
Y101*	0253	22	Pad
A10		0255	13R
A692		0257	13R
S394		0259	13R
8391		0304	13R
S1518		0309	13R
T74		1311	13R
F221	0311	22	
B6		0313	13R
G15C		0315	13R
E578	0318		22
LAV253	0325		22
HV743		0326	13R
U717	0327		22
S719	0330		22
M650	0331		22
E95	0332		22
E512	0334		22
E638		0334	13R
E537	0335		22
E647	0343		22
GA550	0345		22
G215	0349		22
N212		0350	13R
G273	0355		22
P132		0355	13R

Idlewild: 0117-0457

A/C Ident.	Time Off	Time On	Rnwy Used
S115	0359		22
T12			13R
X630NA	0403		22
U138		0404	13R
TCH01	0404		22
G297A	0413		22
A38		0416	13R
U91	0417		22
M135		0418	13R
AG87	0419		22
T950	0421		22
G297	0425		22
N527	0427		22
E839	0429		22
S2105	0432		22
T91	0433		22
F218		0434	13R
AX185ON	0434		22
E155	0439		22
U707	0447		22
SW01C		0455	25L
E839	0457		22

*Helicopter Operation

Table III (Con't)

F-A2169-5

LaGuardia: 0501-1248

A/C Ident	Time Off	Time On	Rnwy Used
A855	0501		31
E541	0505		31
M277		0510	31
E857		0513	31
X01B		0519	31
M255	0520		31
A420		0522	31
T121	0527		31
T18		0534	31
T597	0546		31
A242		0547	31
A654		0549	31
U99	0553		31
E857	0555		31
P258		0605	31
1443		0614	31
A377		0618	31
A116	0619		31
A114		0620	31
P830		0629	31
A863	0630		31
A853	0655		31
E578	0706		31
MC100*	0735		Pad
MC100*		0736	Pad
MC100*	0746		Pad
U548		0801	31
U96		0829	31
A726		0901	31
MC100*		0903	Pad
M84		0941	31
E854		0958	31
MC100*	1001		Pad
X337		1025	31
A765	1033		31
MC101*	1035		Pad
E7456		1025	31
A336	1036		31
MC101*		1039	Pad
MC100*		1039	Pad

A/C Ident.	Time Off	Time On	Rnwy Used
MC104*	1040		Pad
MC104*		1042	Pad
MC101*	1044		Pad
X67B		1046	31
MC104*	1047		Pad
P876		1049	31
MC100*	1055		Pad
A750	1054		31
M562	1100		31
MC104*		1104	Pad
A280	1107		31
A401	1108		31
P151	1110		31
MC103*	1113		Pad
A112		1114	31
MC101*		1119	Pad
X4CP		1120	31
A16	1121		31
E70	1122		31
M564	1123		31
X67B	1124		31
MC101*	1127		Pad
F581	1131		31
X337	1132		31
P143	1135		31
M242	1136		31
T92		1137	31
A281	1138		31
G4000	1140		4
U639	1141		31
E552		1144	31
P872		1148	31
A405		1150	31
M660	1151		31
A658	1152		31
T1	1153		31
X6846B		1155	31
T60		1156	31
A133	1157		31
X4CP	1158		31

A/C Ident.	Time Off	Time On	Rnwy Used
A273		1158	31
MC101*		1158	Pad
M224	1204		31
MC100*		1205	Pad
X5635D	1205		31
E14	1209		4
MC101*	1210		Pad
P123	1210		4
MC100*	1211		Pad
MC104*		1211	Pad
T161	1211		4
X63D	1212		4
A770		1214	4
U617	1215		4
P71		1216	4
MC104*	1218		Pad
A215	1218		4
E65	1220		4
A766		1221	4
X61A		1223	4
E517	1224		4
X83CP		1225	4
P221	1227		4
E552	1228		4
X296		1229	4
X20A		1230	4
A272	1232		4
M761		1233	4
A274		1235	4
A405	1237		4
U635	1238		4
T32		1240	4
X956		1247	4
X705M		1243	4
X133A		1244	4
A727	1244		4
X630		1245	4
P31	1246		4
X3X	1247		4
A283	1248		4

* Helicopter Operation

Table III (Con't) F-A2169-5

LaGuardia: 1249-1501

A/C Ident.	Time Off	Time On	Rnwy Used
E60		1249	4
M265		1250	4
X2969	1251		4
A282		1252	4
A540		1253	4
X63M		1255	4
A653		1255	4
M199	12	1257	4
X5C	1258		4
MC104*		1208	Pad
MC100*		1258	Pad
A500	1259		4
[illegible]		1300	4
X87B		1301	4
A250	1303		4
P142		1304	4
T177	1304		4
A115	1306		4
MC104*	1306		Pad
E64		1307	4
MC101*		1307	Pad
X67B*	1307		Pad
X63D	1308		4
X83CP	1310		4
MC101*	1311		Pad
X705	1311		4
E93		1312	4
A467		1314	4
A770	1315		4
X63M	1316		4
X54E		1318	4
X50F		1319	4
A540	1322		4
X952		1324	4
P121	1325		4
P71	1328		4
A505	1328		4
P132		1329	4
X8866B	1330		4
A321		1330	4

A/C Ident.	Time Off	Time On	Rnwy Used
X5000N		1331	4
X386		1332	4
X700L	1333		4
T32	1335		4
M266	1335		4
X95V	1336		4
X86N	1336		4
A308		1337	4
X379		1338	4
MC101*		1339	Pad
X50F	1340		4
A251	1340		4
A611	1341		4
T19	1343		4
M145		1343	4
X46B	1344		4
M780	1345		4
MG101*	1347		Pad
X67985	1350		4
X81G		1355	4
X70443	1356		4
X91025		1357	4
X84V		1359	4
MC104*		1359	Pad
A252	1400		4
A253		1401	4
E663		1402	4
X108	1404		4
MC104*	1405		4
T79	1405		4
E463		1407	4
A467	1408		4
X30D		1410	4
X5X	1410		4
M661		1412	4
P171	1414		4
X5000N	1415		4
X9101	1415		4
X2700R	1417		4
M563		1418	4

A/C Ident.	Time Off	Time On	Rnwy Used
U533	1419		4
A201		1421	4
SAM609	1422		4
A203	1424		4
A308	1426		4
X86N		1426	4
T21	1428		4
E527		1431	4
A637	1430		4
U531	1432		4
M243		1433	4
A410		1434	4
X2700R		1435	4
X7H	1437		4
M642	1438		4
MC104*		1439	Pad
F47		1439	4
X888B*		1440	Pad
X69A	1440		4
X37B		1441	4
MC101*		1442	Pad
X195		1444	4
A771	1445		4
U626		1446	4
X90B		1447	4
MC104*	1448		Pad
A248	1449		4
M566	1450		4
X242	1451		4
F463	1452		4
X83CP		1453	4
X1234G	1454		4
MC101*	1455		Pad
A255		1455	4
X905		1456	4
A254	1457		4
X98B		1458	4
X86N	1500		4
X90B	1500		4
X30M		1501	4

* Helicopter Operation

Table III (Con't) F-A2169-5

LaGuardia· 1502-1709

A/C Ident.	Time Off	Time On	Rnwy Used
A535		1502	4
A315		1503	4
E663	1504		4
X84V	1505		4
X300D	1505		4
P135	1507		4
R63713		1509	4
F20	1510		4
A609	1512		4
X3702B		1513	4
X37B	1515		4
A567		1515	4
P142		1516	4
X440		1517	4
X497		1519	4
X2700R	1520		4
M244	1521		4
A286		1521	4
X69A		1522	4
A120		1524	4
T509	1525		4
X02D		1525	4
X3MC	1526		4
X78B	1527		4
A121	1527		4
X98C	1528		4
A183	1529		4
MC101*		1529	Pad
X02B	1530		4
E527	1531		4
P60		1532	4
MC101*	1533		Pad
MC104*		1533	Pad
M570	1534		4
E47	1534		4
X905	1536		4
X86N		1537	4
X69A	1538		4
X02D	1539		4
MC104*	1540		Pad

A/C Ident.	Time Off	Time On	Rnwy Used
X40A		1541	4
X2700R		1542	4
X384		1543	4
U527	1545		4
P37	1546		4
A758		1547	4
A799	1547		4
M565		1549	4
X100L		1551	4
A255	1551		4
A249		1553	4
A256	1554		4
X67B		1554	4
X87D		1555	4
X3X		1556	4
X10A	1556		4
A567	1557		4
M147		1602	4
X4000		1603	4
T374		1605	4
X191		1606	4
A217	1607		4
X215C		1608	4
E76		1609	4
U629	1611		4
X892	1611		4
X2700R	1613		4
X65A	1614		4
MC104*		1614	Pad
M574	1615		4
MC101*		1616	Pad
X83CP	1616		4
P225	1617		4
X12C		1619	4
MC104*	1621		Pad
A726		1622	4
T34		1626	4
MC101*	1628		Pad
E16	1629		4
A227		1630	4

A/C Ident.	Time Off	Time On	Rnwy Used
P30		1633	4
X78B*		1633	Pad
P120		1634	4
X98B*	1634		Pad
X66G		1635	4
X2966A		1636	4
M643		1637	4
E76	1638		4
X111E		1639	4
P39	1640		4
X2700R		1641	4
A606		1642	4
E2016	1643		4
A284		1644	4
T20		1646	4
E415		1647	4
T446		1648	4
X191	1950		4
X90B		1650	4
R63713	1651		4
A323		1653	4
A257		1654	4
MC100*	1655		Pad
A214		1655	4
X30P		1657	4
X7668B		1658	4
M246	1658		4
M268	1659		4
A332	1700		4
X115	1701		4
A240	1702		4
MC100*	1702		Pad
X4000	1703		4
A126		1704	4
A419	1705		4
A743	1706		4
X90B	1707		4
MC101*		1708	Pad
A327	1708		4
T72		1709	4

* Helicopter Operation

Table III (Con't) F-A2169-5

LaGuardia. 1711-1908

A/C Ident.	Time Off	Time On	Rnwy Used
X1822	1711		4
X30M	1711		4
X12C	1712		4
X2700R	1714		4
T87		1715	4
MC104*		1715	Pad
A258		1716	4
X800SC		1718	4
X63D		1718	4
MC101*	1718		Pad
MC104*	1719		Pad
A747	1720		4
X768	1721		4
M154	1722		4
X66G	1722		4
X888G*	1723		Pad
T20	1723		4
P32		1724	4
P125	1725		4
E115	1726		4
X20P	1726		4
X17337		1730	4
X74B		1732	4
X2700R		1734	4
A162		1735	4
A257	1736		4
U460		1737	4
A348	1738		4
M245		1739	4
A220		1740	4
A165	1741		4
E87		1742	4
P250		1743	4
T72	1744		4
P41	1746		4
X196	1747		4
X62B		1748	4
X386	1750		4
U636		1751	4
X79V		1753	4
T24		1755	4
MC104*		1756	Pad
A259		1756	4
A135	1757		4
A258	1758		4
M781		1759	4
X83D		1800	4
X99P		1801	4
X695		1802	4
A210		1804	4
T331	1805		4
MC104*	1805		Pad
X20R	1806		4
X696		1807	4
A207	1808		4
X200L	1809		4
MC101*		1810	Pad
X 10	1810		4
X43P		1811	4
A773	1812		4
X42A		1813	4
T707		1814	4
T87	1816		4
X191		1816	4
MC101*	1817		Pad
X668B	1817		4
X69C	1818		4
A169	1821		4
MC100*	1822		Pad
AF292		1823	4
F63		1824	4
P34		1825	4
X83B		1827	4
P63	1827		4
A223	1829		4
X536*		1830	Pad
MC100*		1830	Pad
A142		1830	4
P62		1831	4
M680	1832		4
MC102*		1832	Pad
M774B	1833		4
T174		1834	4
E87	1835		4
X80191	1836		4
X54B	1836		4
X20130	1837		4
MC100*	1837		Pad
F137	1838		4
X3143P	1838		4
MC100*		1840	Pad
X81G	1840		4
T355	1841		4
X42A	1842		4
X98B		1843	4
XYX	1844		4
X99P	1845		4
X27P		1845	4
X666C	1847		4
X101*		1849	Pad
X104*		1851	Pad
AF562	1852		4
U532		1854	4
A212		1854	4
Y101*	1854		Pad
A261		1856	4
M571		1857	4
X78B*	1858		Pad
X48K		1858	4
X9060		1859	4
X41A		1900	4
A260	1901		4
Y104*	1902		Pad
A224		1903	4
X910BS		1904	4
M575		1905	4
F687		1906	4
Y100*		1907	Pad
X30Y		1907	4
L78	1908		4

*Helicopter Operation

Table III (Con't) F-A2169-5

LaGuardia 1909-2044

A/C Ident.	Time Off	Time On	Rnwy Used
A136		1909	4
X23M	1910		4
E614		1910	4
X27P	1911		4
A578		1913	4
X88B*		1913	Pad
X628		1913	4
M269		1914	4
P36		1915	4
X497		1916	4
A123	1917		4
X98V		1918	4
U637	1918		4
T10		1919	4
X38D	1919		4
AF50292	1920		4
A244		1921	4
T145	1922		4
A615	1922		4
A414		1923	4
L63	1924		4
X2700R	1925		4
T372		1926	4
A117	1927		4
X800SC	1928		4
P127	1928		4
X9000	1929		4
M2774	1929		4
M2147		1930	4
A347		1931	4
A143	1932		4
A241		1932	4
X205	1933		4
X88SB*	1934		Pad
E586		1934	4
U536		1935	4
A168		1936	4
M247		1937	4
X104*		1938	Pad
X5000N		1939	4

A/C Ident.	Time Off	Time On	Rnwy Used
X59B		1940	4
X2X		1941	4
X3460B	1942		4
X1503		1944	4
G687	1944		4
X806		1946	4
X5V		1947	4
Y104*	1947		Pad
X94B		1948	4
X38D		1949	4
Y101*		1949	Pad
Y19T		1950	4
Y86N	1951		4
E323		1952	4
P45	1955		4
X90B		1955	4
X95B		1956	4
Y101*	1956		Pad
U622		1956	4
M770	1957		4
A659		1958	4
X5242A	1959		4
G4000		1959	4
E2019		2001	4
X191		2002	4
X3702B	2002		4
X12C		2003	4
X393		2004	4
A244	2004		4
UFRY697	2005		4
A414	2006		4
T129	2006		4
X2X	2008		4
X13H	2009		4
E614	2008		4
T17		2010	4
A262	2011		4
Y100*		2012	Pad
A191	2013		4
X888B*		2013	Pad

A/C Ident.	Time Off	Time On	Rnwy Used
X48R	2013		4
X40CE		2014	4
X886S		2015	4
X628	2016		4
U623	2016		4
X9543		2017	4
T6092		2018	4
X54E	2019		4
X1501		2019	4
E19		2021	4
X67B*		2022	Pad
Y100*	2022		Pad
Y100*		2023	Pad
P72		2023	13
E523	2023		13
M252	2024		13
A703		2025	13
A118		2027	13
Y101*		2027	Pad
T312		2028	13
X80Q	2028		13
A241	2030		13
A566		2030	13
X98V	2031		13
X65D	2032		13
A812		2033	13
T373		2033	13
X10X		2034	13
X84B	2035		13
Y100*	2036		Pad
X5000N	2031		13
A232		2036	13
M567		2058	13
X472		2038	13
X86N		2040	13
E66		2040	13
T57	2041		13
X1503	2043		13
X66A	2043		13
M2249		2044	13

* Helicopter Operation

Table III (Con't)

F-A2169-5

LaGuardia: 2044-2216

A/C Ident	Time Off	Time On	Rnwy Used
X01C		2044	13
X12C	2045		13
A7200		2045	13
X393	2046		13
A761	2047		13
A638		2048	13
X95V	2049		13
A197	2049		13
P47	2050		13
323	2050		13
A175	2051		13
M681		2052	13
X44A	2054		13
M180	2055		13
T17	2056		13
X5X		2057	13
X38D	2057		13
Y104*		2058	Pad
P636		2058	13
X117		2059	13
X30Y	2059		13
T162		2100	13
A163	2101		13
A216		2102	13
X6HL	2102		13
P87	2104		13
A263		2104	13
Y104	2104		Pad
A634	2105		13
E6646	2100		13
X40CE	2107		13
X01C	2107		13
T823	2107		13
X191	2108		13
U644		2108	13
X1850L		2110	13
X910BS	2111		13
X80F		2111	13
X19T	2112		13
X53N	2114		13

A/C Ident.	Time Off	Time On	Rnwy Used
X86S	2114		22
E461		2114	13
X10K	2115		13
M776	2116		13
X98B*		2116	Pad
U601	217		13
E2026	2118		13
E66	2118		13
A520		2119	13
A193	2120		13
A122		2121	13
X32PT		2122	13
A804		2123	13
A569	2124		13
X41D		2125	13
X321A		2126	13
P229	2127		13
A1501	2128		13
T6092	2129		13
X117	2129		13
Y104*		2130	Pad
M580	2130		13
A582		2130	13
E26	2132		13
UFRY655		2132	13
X558B	2133		13
A802		2133	13
Y104*	2134		Pad
X41D	2134		22
X59P		2135	13
T453	2135		13
P222		2136	13
X1850L	2137		13
A407	2138		13
Y101*		2138	Pad
X90B		2139	13
T366		2140	13
A127	2141		13
A2367	2142		13
M582	2143		13

A/C Ident.	Time Off	Time On	Rnwy Used
X33A	2144		13
Y101*	2144		Pad
A119	2144		13
A182		2145	13
M644	2146		13
E27		2146	13
P75	2147		13
X4X		2148	13
E461	2149		13
X12MW		2150	13
X61A	2151		13
T373	2152		13
A265		2152	13
A222		2153	13
X2PT	2154		13
A650		2155	13
A797	2156		13
X90B	2158		22
V6497		2158	13
X628		2159	13
A264	2201		13
X705M		2202	13
X98B		2203	13
A21792		2205	13
X3248B		2206	13
X5000N		2207	13
Y100*	2207		Pad
Y100*		2208	Pad
X1199P		2208	13
P82		2208	13
X89D		2209	13
Y101*		2211	Pad
X33P	2211		13
T63	2211		13
X59P	2212		13
X83CP		2212	13
A295	2213		13
A243		2214	13
U507	2215		13
T375	2216		13

* Helicopter Operation

Table III (Con't) F-A2169-5

LaGuardia 2217-0018

A/C Ident	Time Off	Time On	Rnwy Used
A407	2217		13
X375	2218		13
X695	2218		13
A182	2219		13
Y101*	2219		Pad
Y61393		2219	13
X321R	2220		13
X89D	2221		22
X19M		2221	13
X705M	2222		22
X98B	2222		13
X21792	2222		13
M271		2223	13
X99P	2224		13
A177	2225		13
A276		2227	13
Y104*		2228	Pad
P129	2227		13
X717		2228	13
A792	2230		13
M251		2231	13
T311	2232		13
P42		2233	13
A794		2234	13
X48B	2235		13
E21		2235	13
Y100*	2236		Pad
Y104*	2237		Pad
X68148		2238	13
U631	2239		13
X63D		2239	13
P124		2240	13
X393	2241		22
X17337	2241		13
X628	2242		13
X24Z	2243		13
X500N	2243		22
T371	2244		13
E6460		2245	13
XCFGHL		2246	13

A/C Ident.	Time Off	Time On	Rnwy Used
X83CP	2247		13
X717	2248		13
A804	2251		13
P51	2252		13
X12M	2252		22
A266	2252		13
A267		2253	13
M775		2254	13
A175	2256		13
A614		2257	13
T5	2258		13
E662		2259	13
A314		2300	13
A903	2301		13
A176		2302	13
A739	2302		13
M274	2303		13
Y104*		2304	Pad
A276	2304		13
X63D	2304		22
M254	2305		13
Y101*		2306	Pad
E577	2309		13
X171	2310		13
Y101*	2311		Pad
Y104*	2311		Pad
A208		2312	13
X19M	2313		13
P67	2314		13
A268		2316	13
A744		2318	13
T11	2320		13
A246	2322		13
A619	2323		13
A507	2323		13
P44		2332	13
A139	2332		13
M253		2333	13
M276	2334		13
E662	2334		13

A/C Ident.	Time Off	Time On	Rnwy Used
M645		2336	13
Y101*		2338	Pad
U634		2338	13
A267	2339		13
T144		2340	13
P53	2340		13
E2614	2341		13
X30P		2341	13
P226		2342	13
A389	2346		13
T30		2347	13
Y102*	2347		Pad
Y102*		2349	Pad
Y101*	2349		Pad
Y100*		2350	Pad
A635		2350	13
E585		2353	13
Y104*		2355	Pad
A268	2355		13
X907		2356	13
X472*	2357		Pad
Y100*	2358		Pad
X9659B	2358		13
Y104*	2359		Pad
A730		2359	13
U608		0001	13
A192	0004		13
E470		0006	13
M646	0006		13
A198		0008	13
A657	0009		13
A247	0009		13
E28	0010		13
A178		0011	13
X30P	0012		13
X33P		0013	13
X9980F	0014		13
T181	0015		13
M581		0017	13
A297		0018	13

*Helicopter Operation

Table III (Con't) F-A2169-5

LaGuardia 0020-0318

A/C Ident	Time Off	Time On	Rnwy Used
P69	0020		13
Y102*	0021		Pad
A907	0022		13
T426		0022	13
A132		0026	13
M258	0028		13
X05B	0029		13
Y104*		0030	Pad
A586		0031	13
X63D		0032	13
U619	0033		13
E576		0034	13
Y104*	0035		Pad
T27		0035	13
Y101*		0037	Pad
P68		0037	13
X63D	0038		13
E585	0040		13
Y101*	0049		Pad
A583		0049	13
A275		0051	13
P138		0052	13
A194		0052	13
Y100*		0054	Pad
A132	0054		13
A269		0055	13
E68		0056	13
E576	0058		13
A297	0058		13
T370		0059	13
T930		0101	13
A719	0102		13
A164		0102	13
Y100*	0102		Pad
Y100*		0103	Pad
E77		0105	13
A2742		0108	13
T426		0111	13
A245		0113	13
A129	0114		13

A/C Ident.	Time Off	Time On	Rnwy Used
P48		0117	13
E29		0119	13
E68	0119		13
A655	0119		13
A174		0121	13
T29	0122		13
M777		0123	13
U600		0125	13
X5111		0127	13
Y104*		0129	Pad
A570		0129	13
Y101*		0130	Pad
E470	0130		13
M782	0131		13
T22		0134	13
P239	0136		13
Y101*	0137		Pad
Y101*		0137	Pad
E77	0139		13
T27	0140		13
Y104*	0140		Pad
Y104*		0142	Pad
A128		0142	13
A588		0142	13
A805	0144		13
T510		0145	13
P149	0146		13
A304	0147		13
T172		0149	13
A270	0154		13
T356		0155	13
A271		0157	13
X760AC		0201	13
M647		0203	13
E58		0204	13
A608		0205	13
A328	0208		13
XL383B	0213		13
P823	0214		13
E9	0216		13

A/C Ident.	Time Off	Time On	Rnwy Used
A287	0220		13
Y104*	0223		Pad
Y102*		0224	Pad
Y104*		0225	Pad
E666		0226	13
Y101*	0227		Pad
Y101*		0227	Pad
X60AC	0230		13
A621	0231		13
Y104*	0231		Pad
M277		0232	13
Y101*	0233		Pad
E58	0234		13
A742		0234	13
Y102*	0235		Pad
Y102*		0236	Pad
M288	0236		13
M275		0237	13
A402		0238	13
A211	0239		13
T358		0240	13
M183		0243	13
X79B	0245		13
A855		0246	13
U638		0248	13
P374		0249	13
A279		0253	13
A740		0254	13
M2290		0258	13
X103*	0303		Pad
M294	0308		13
X101*	0310		Pad
X60P*	0310		Pad
X60P*		0310	Pad
M259		0312	13
P228		0312	13
A226		0315	13
P74		0316	13
X104*		0318	Pad
P52		0318	13

* Helicopter Operation

Table III (Con't)

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LaGuardia 0319-0459

A/C Ident	Time Off	Time On	Rnwy Used
A803	0319		13
U530		0320	13
E7108		0322	13
A353		0327	13
X7916		0329	13
A337	0334		13
A784	0335		13
X104*	0336		Pad
E2004		0338	13
A390	0339		13
P128		0340	13
T37	0341		13
P873	0343		13
A622		0347	13
A342	0350		13
E516		0351	13
E349		0352	13
A184		0354	13
X101*		0355	Pad
Y101*	0401		Pad
Y101*		0402	Pad
E54	0407		13
P877	0413		13
A355		0418	13
A622	0423		13
E664		0430	13
A420		0431	13
X100J	0439		13
E349	0445		13
Y104*		0450	13
A377		0451	13
A855	0453		13
T33	0454		13
A654		0458	13
A600		0459	13

A/C Ident.	Time Off	Time On	Rnwy Used

A/C Ident.	Time Off	Time On	Rnwy Used

*Helicopter Operation

Table III (Con't) F-A2169-5

Newark: 0512-1454

A/C Ident.	Time Off	Time On	Rnwy Used
E99		0512	4
B543	0512		4
L153		0515	4
L708		0517	4
U504		0526	4
E855	0540		4
E659	0542		4
E466		0559	4
AT13C		0621	4
D298X	0627		4
U565L		0628	4
E355	0639		4
U632		0651	4
P830		0733	4
P822		0811	4
Y100*		0811	Pad
Y100*	0840		Pad
AT13C	0854		4
P874		0916	4
E656		0923	4
E538		0933	4
X90428		0942	4
T551	0958		4
E450		1004	4
E656	1012		4
E642		1028	4
E469	1039		4
Y101*		1058	Pad
Y101*	1104		Pad
T55	1107		4
T551		1109	4
L601	1110		4
X97A		1113	4
P271	1115		4
E546		1122	4
A785	1123		4
A15	1126		4
Y104*			Pad
X41N		1129	4
X90428	1131		4

A/C Ident.	Time Off	Time On	Rnwy Used
D76		1139	4
B542		1142	4
E535	1144		4
AD241	1147		4
U509	1150		4
Y104*	1152		Pad
L174	1153		4
AD201	1154		4
E84	1157		4
L174		1202	4
E94	1208		4
T421	1210		4
U731	1211		11
L301		1212	11
AD943	1213		11
X41N	1215		11
X29363		1217	11
X67807	1223		11
U643	1224		11
AD950		1227	11
E80	1228		11
AD230		1231	11
Y101*			Pad
X63D	1235		11
X4141		1236	11
X3947C	1238		11
L603	1239		11
P242		1240	11
B7	1241		11
T77	1242		11
E347	1245		11
L701	1247		11
X100A	1249		11
AD202		1250	11
Y101*	1250		Pad
X97A	1251		11
X016		1253	11
E44		1255	11
E61		1301	11
X63P		1306	11

A/C Ident.	Time Off	Time On	Rnwy Used
U519	1309		11
X6016	1316		11
RB63D		1317	11
X4141	1323		11
Y104*		1326	Pad
E305	1332		11
E303		1336	11
X75A		1339	11
E61	1340		11
Y104*	1341		Pad
AD231	1342		11
E44	1343		11
X63217D	1344		11
P33	1348		11
X63P	1349		11
E501	1350		11
X49363	1351		11
P870		1355	11
A816		1359	11
X6841S		1401	11
L601		1403	11
X49C		1404	11
AD211	1407		11
Y101*		1408	Pad
E98		1410	11
E633	1413		11
X5294C	1414		11
E303	1416		11
Y101*	1423		Pad
E689		1426	11
P241	1425		11
P223	1428		11
X420L	1429		11
X6841S	1431		11
U209	1435		11
E98	1439		11
T354		1440	11
X52A	1444		11
X93**	14 53		4
X46X	1454		11

* Helicopter Operation
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Table III (Con't)

Newark 1456-1946

A/C Ident	Time Off	Time On	Rnwy Used
E689	1456		11
D725	1458		11
X54B		1501	11
RB63D	1502		11
L600		1503	11
Y104*		1506	Pad
A816	1514		11
X93Y**	15	14	4
Y104*	1518		Pad
X46X		1521	11
X88K	1523		11
U218		1524	11
X93**	15	28	4
X41D		1534	11
X48UC		1534	11
L362		1539	11
X93**	15	44	4
U738		1545	11
X2DM		1546	11
Y101*		1546	Pad
X41D	1548		11
A762		1551	11
X3005P		1552	11
S382		1554	11
RB95V		1556	11
X93	15	58	4
X8736B	1602		11
Y101*	1602		Pad
L76		1604	11
X420L		1604	11
L607	1609		11
P945	1611		11
S507	1616		11
P232		1617	11
L105	1619		11
X93**	16	21	4
X661		1624	11
E86	1629		11
X93**	16	31	4
P370		1630	11

A/C Ident.	Time Off	Time On	Rnwy Used
Y104*		1633	Pad
X33S		1636	11
P285	1639		11
L705	1640		11
X93*	16	44	4
X54B	1645		11
X048		1648	11
X661	1650		11
Y104*	1653		Pad
X04D		1655	11
S383	1657		11
E549	1658		11
X5098P	1701		11
X93**	17	01	4
X2DM	1704		11
A789	1706		11
X93**	17	07	4
T417	1708		11
AD203	1709		11
P975	1711		11
X6841S		1717	11
P147	1725		11
X05P	1729		11
P220		1731	11
X8736B		1732	11
X93		1733	11
A732		1735	11
Y101*		1739	Pad
L302		1741	11
A756		1742	11
P235	1744		11
X3363P		1745	11
X6313A		1746	11
Y101*	1751		Pad
U729	1751		11
E67		1752	11
P170		1754	11
X3004S	1756		11
X144B		1800	11
X48UC	1802		11

A/C Ident.	Time Off	Time On	Rnwy Used
P484		1804	11
X6313A	1814		11
AD234		1821	11
Y104*		1822	Pad
E856		1830	11
Y104*	1834		Pad
P43	1837		11
X63M		1840	11
AG8160		1840	11
X33S	1842		11
AD214		1843	11
P70		1846	11
AG8160	1851		11
P173	1853		11
X1V		1854	11
T403	1855		11
AD144		1907	11
AG125		1908	11
Y48UC		1909	11
L5	1910		11
AD704		1911	11
Y101*		1916	Pad
U8007	1920		11
E865		1922	11
X93	1924		11
RB90B		1926	11
E62	1926		11
AG125	1928		11
A20		1929	11
X4042D	1930		11
Y101*	1930		Pad
X1V	1931		11
E582		1933	11
AD932		1938	11
AD40P	1939		11
E646		1940	11
F463		1942	11
A704		1943	11
AD233	1945		11
AF15C		1946	11

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Table III (Con't) F-A2169-5

Newark: 1947-2224

A/C Ident	Time Off	Time On	Rnwy Used
B390B	1947		11
P285		1948	11
RB39V	1947		11
X41N		1949	11
P277		1950	11
X3073D		1951	11
A793	1992		11
L604		1953	11
AG113		1954	11
X9804B		1955	11
A386	1956		11
X46B	1957		11
E809		1958	11
AD205	1959		11
X44K		2000	11
X46K	2003		11
E882	2004		11
E265	2004		11
X41N	2006		11
P7922		2007	11
X25115B	2008		11
L305	2009		11
P38		2015	11
Y104*		2016	Pad
U6975		2016	11
X952		2017	11
P245	2017		11
S514		2018	11
X3073D	2020		11
X98B		2021	11
U420		2021	11
E403	2022		11
U925	2025		11
X48UC	2026		11
T405	2029		11
F506		2031	11
Y104*	2032		Pad
P66		2036	11
AG8158		2037	11
P249	2038		11

A/C Ident.	Time Off	Time On	Rnwy Used
X952	2039		11
AD251	2040		11
X7341D		2041	11
X64B	2042		11
X3472B		2044	11
P65	2044		11
E563	2045		11
S506		2046	11
P270		2048	11
X93**	20	48	4
X4709V		2049	11
X98B*	2051		Pad
U650		2051	11
U321		2052	11
Y101*		2053	Pad
U6555		2054	11
E509	2055		11
AD35	2057		11
E568		2058	11
RB63D		2059	11
E514		2100	11
X98B*		2100	Pad
D728		2101	11
X98B*	2102		Pad
E318		2102	11
X63M	2103		11
U621	2104		11
P46		2105	11
E465		2106	11
X605		2108	11
U247	2109		11
B4		2111	11
P377	2112		11
X734D	2113		11
AD975	2115		11
Y101*	2116		Pad
A27	2115		11
X63P	2116		11
P752		2117	11
RF63D	2118		11

A/C Ident.	Time Off	Time On	Rnwy Used
X3472B	2119		11
X6841S	2120		11
E657	2121		11
U6555	2122		11
E321	2124		11
L702		2125	11
X605	2126		11
X4409V	2127		11
X144B	2128		11
X7019		2129	11
P247	2130		11
A567	2132		11
E851	2136		11
U212		2147	11
P49	2148		11
E465	2149		11
Y104*		2151	Pad
U521	2152		11
X190	2152		11
D727	2154		11
L605	2155		11
P925	2156		11
AD206		2159	11
S915	2200		11
X096*		2202	Pad
Y104*	2203		Pad
P236		2203	11
AD236		2205	11
B3	2205		11
E627		2207	11
E505	2208		11
A432		2210	11
L707	2210		11
U609	2211		11
E583	2219		11
R6323		2220	11
X18P		2221	11
X63D		2222	11
L360		2223	11
E309		2224	11

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Table III (Con't) F-A2169-5

Newark: 2225-0318

A/C Ident	Time Off	Time On	Rnwy Used
P375	2225		11
T412		2229	11
X63D	2230		11
X21792		2231	11
S503	2233		11
AD272		2234	11
Y101*		2235	Pad
X3A8P	2240		11
E411	2242		11
AD946		2243	11
AD16*		2246	11
Y101	2247		Pad
X12A		2248	11
P237	2249		11
A482		2250	11
AD237	2251		11
E7230	2252		11
X12A	2255		11
AD207	2256		11
E637	2257		11
L606		2258	11
P254		2300	11
U337	2301		11
X421	2302		11
X44K	2308		11
E309	2309		11
R6373	2310		11
AD248		2311	11
X63D		2314	11
T377		2314	11
U92		2319	11
L307	2322		11
AD937	2324		11
U318		2326	11
Y104*		2329	Pad
RB63D	2330		11
E374		2332	11
A725	2334		11
P77	2339		11
Y104*	2341		Pad

A/C Ident.	Time Off	Time On	Rnwy Used
P246		2341	11
L77	1344		11
U318	2355		11
AD19	2356		11
E510		2358	11
X63D		0000	11
A711	0001		11
P276		0003	11
E75		0004	11
RB63D	0005		11
AD957	0007		11
Y101*		0010	Pad
E8767		0012	11
E324	0014		11
U732		0014	11
AD956		0017	11
E548		0020	11
P279	0021		11
P46		0023	11
Y101*	0024		Pad
X300A		0028	11
E510	0036		11
P277	0038		11
U612		0040	11
X420L		0042	11
E75	0046		11
L706		0048	11
E7767	0050		11
Y104*		0051	Pad
X31B		0054	11
E414		0055	11
P377		0057	11
A311		0103	11
E608		0109	11
U904		0110	11
E328		0114	11
Y104*	0115		Pad
E306		0116	11
AD208		0119	11
AD239	0121		11

A/C Ident.	Time Off	Time On	Rnwy Used
B59	0124		11
AD209	0126		11
X31B	0126		11
E57		0128	11
E414	0129		11
P126		0143	11
U200		0145	11
E56		0147	11
L4		0149	11
P257	0150		11
F396		0155	11
L608		0157	11
A808		0158	11
AD238		0200	11
P248		0200	11
L106		0202	11
E57	0208		11
E56	0215		22
U605	0216		22
T36	0221		29
P50		0202	29
B10		0225	29
P238		0229	29
L203	0230		22
E308		0237	29
A42		0238	29
U93	0238		22
E2027		0240	29
E79		0241	29
P871	0242		22
Y102*		0249	Pad
E410		0250	29
AT11C		0253	29
D32X		0256	29
P924		0258	29
Y104*	0306		Pad
E7108	0309		22
AT15C	0312		22
E502		0315	29
P821	0318		22

*Helicopter Operation

Table III (Con't) F-A2169-5

Newark. 0323-0456

A/C Ident	Time Off	Time On	Rnwy Used
P976		0323	29
Y101*		0328	Pad
L708		0336	29
E674		0343	29
U518		0343	29
Y101*	0313		Pad
T362	0344		29
E533	0345		22
E99		0346	29
P821	0354		22
E352		0405	29
S504		0413	29
Y104*		0415	Pad
A8017	0416		22
E604	0420		22
T166		0420	29
P843	0422		22
Y104*	0425		Pad
E543	0433		22
E659		0439	29
D1722		0441	29
E345	0419		22
E451	0456		22

A/C Ident.	Time Off	Time On	Rnwy Used

A/C Ident.	Time Off	Time On	Rnwy Used

*Helicopter Operation

Table IV

EXCERPTS FROM ATC FACILITY LOGS
(August 1, 1958)

Location Identifiers

ZDC	Washington ARTC Center	ZTL	Atlanta ARTC Center
ZID	Indianapolis ARTC Center	DCA	Washington National
ZNY	New York ARTC Center	EWR	Newark Airport
ZOF	Norfolk ARTC Center	IDL	New York International Airport
ZJX	Jacksonville ARTC Center	LGA	LaGuardia Airport
ZPT	Pittsburgh ARTC Center		

0500Z (DCA Tower) Runway 15 closed for take-off. Taxiway 8 closed for run-ups on block 15.

0629Z (LGA Tower) New York Center radar inoperative.

1110Z (IDL Tower) Runway 13R-31L closed. Runway 7R-25L closed except 7R for take-off.

1130Z (LGA Tower) Runway 31 closed for landing traffic. Runway 13 closed to all operations.

1155Z (ZDC) Center restricts Bolling, Anacostia and Andrews airports to 6 departures per hour with Andrews permitted 2 additional jets.

1215Z (EWR Tower) Runway 4-22 closed for paving.

1300Z (LGA Tower) Runway 13-31 closed to all operations.

1330Z (DCA Tower) Flow restrictions on military fields 6 per hour each.

1340Z (ZNY) Due to rocket firing between 1430Z and 1500Z in New York Oceanic area from shoreline bounded by 3600N and 4000N and extending to 6200W all aircraft filing through this area may expect to be rerouted.

1345Z (ZDC) Aircraft departing Andrews AFB delayed up to 1-1/2 hours.

1417Z (ZNY) Average departure delays of 25-30 minutes at Idlewild.

1433Z (ZNY) Advised by ZDC to block 11000' and above between Ingleside and Baltimore on Victor airways 44 and 17 until further notice.

1446Z (ZNY) Restrictions due to rocket firing imposed at 1430Z cancelled.

1559Z (ZNY) Departure delays up to one hour at Idlewild.

1625Z (ZDC) Restrictions imposed at 1155Z cancelled.

1629Z (ZDC) Atlanta restrictions, 30 minutes same altitude, 8000 or above over Greenville, S.C., 10,000' or above over Bristol, Tenn.

1630Z (ZDC) Requested ZOF and ZJC to use 30 minutes separation for traffic at same altitude through ZDC area.

1630Z (ZNY) Due to runway construction Idlewild tower is able to use only runways where the arrival and departure patterns conflict. This causes delays to arrivals.

1641Z (ZNY) Delays of more than one hour being experienced by McGuire AFB departures. Control using Medford Lakes radiobeacon as clearance limit. Instructed to use other routes.

1709Z (ZNY) Center radar resumed normal operations.

1754Z (ZNY) Requested by ZOF to clear flights through this area at 9000' or above.

1755Z (ZDC) ZTL requested to use 30 minute separation regardless of altitude for all aircraft landing Washington metropolitan area.

1800Z (ZDC) Requested by ZOF to clear traffic through their area at 9000' or above.

1927Z (ZNY) Anticipate outbound delays next hour to average 30-40 minutes. Expect inbound delays to be 15 minutes or less.

1946Z (ZNY) LaGuardia radar to be unserviceable for approximately 20 minutes.

2000Z (LGA Tower) Runway 13-31 resumed normal operation.

2011Z (ZNY) Inbound flights to all terminals delayed under 15 minutes. Expect 20 minute delays to flights departing LaGuardia, Idlewild and Newark for next hour because of volume of traffic.

2020Z (ZDC) No delays to departures. 40 minute delays to arrivals and expect this to increase to 50 minutes by 2100Z.

2029Z (ZDC) Placed flow restrictions on adjacent centers until further notice, as follows: ZNY-6 per hour; ZPT-5 per hour; ZOF-2 per hour; ZTL-3 per hour; ZID-2 per hour; ZJX-2 per hour.

2035Z (IDL Tower) Runway 13R - 31L open.

2043Z (ZNY) Flights inbound to Washington delayed 1 hour.

2055Z (EWR Tower) Runway 4 - 22 open for take-off only.

2058Z (IDL Tower) Runway 4 ILS and 22 resumed normal operation.

2101Z (ZDC) 27,000' and 28,000' altitudes blocked in part of ZDC area for 7 hours.

2104Z (ZNY) LaGuardia radar back in operation.

2116Z (ZDC) Flights inbound to Washington delayed 1-1/2 to 2 hours due to 2 lost military aircraft. V32442 one of the two AD's arrived at LFI 2025.S/R alerted on V2670AD still overdue.

2130Z (IDL Tower) Runway 7 - 25 resumed normal operation.

2140Z (ZNY) Idlewild and Newark departure control issuing short clearances to westbound departures due to loss of targets on radar.

2157Z (ZNY) Targets now normal - restrictions cancelled.

2200Z (ZDC) Restrictions imposed at 1630 on ZOF and ZJX traffic cancelled.

2202Z (ZNY) Clearing aircraft to ZDC boundary fixes because of ZDC restrictions. Delays are expected up to 30 minutes.

2218Z (ZNY) Delays of less than 15 minutes now being experienced by aircraft departing metropolitan airports.

2253Z (ZNY) Delays of 15-20 minutes to northeast-bound flights departing Idlewild.

2300Z (ZDC) Restrictions imposed at 1755Z cancelled.

2340Z (ZNY) Holding 5 aircraft at boundary fixes for next hour because of ZDC restrictions.

2350Z (ZNY) Restrictions imposed at 2340Z cancelled. ZNY has no backlog.

2350Z (DCA Tower) Taxiway 8 and Runway 15 open.

2359Z (ZDC) Restrictions imposed on ZOF at 1800Z cancelled.

0005Z (ZNY) No delays expected to aircraft enroute to ZDC area while in ZNY area.

0300Z (ZNY) ZDC flow restrictions cancelled.

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